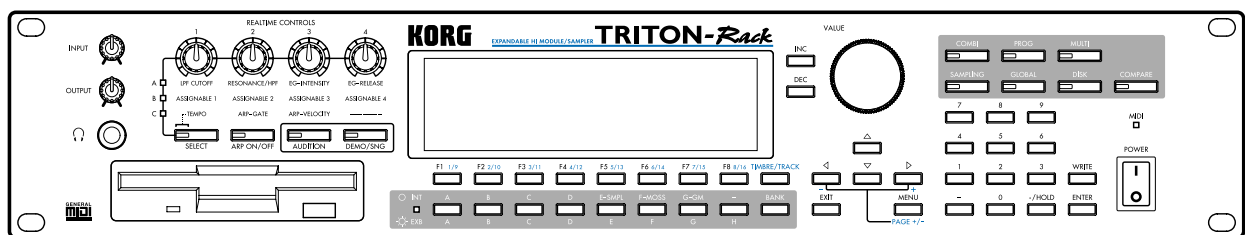


TRITON-Rack

EXPANDABLE HI MODULE/SAMPLER

Parameter Guide



About this manual

This “**Parameter Guide**” contains explanations and other information regarding the operations of the parameters and settings on the TRITON-Rack. The explanations are organized by mode, page, and tab. Explanations and other information on the effects and their parameters are also provided for each effect.

Refer to this guide when an unfamiliar parameter appears in the display, or when you need to know more about a particular function.

Conventions in this manual

Abbreviations for the manuals

BG, **PG**, **VNL**

References to the manuals included with the TRITON-Rack are abbreviated as follows.

BG: Basic Guide

PG: Parameter Guide

VNL: Voice Name List

Switches and knobs []

References to the keys, dials, and knobs on the TRITON-Rack’s panel are enclosed in square brackets []. References to **buttons** or **tabs** indicate objects in the LCD display screen.

Parameters in the LCD display screen “ ”

Parameters displayed in the LCD screen are enclosed in double quotation marks “ ”.

Boldface type

Parameter values are printed in boldface type.

Content that is of particular importance is also printed in boldface type.

Procedure steps ① ② ③ ...

Steps in a procedure are listed as ① ② ③ ...

☞ **p.■**, ☞ **BG p.■**, ☞ **■.■ - ■**

From the left, these symbols indicate a reference page in the Parameter Guide, a reference page in the Basic Guide, and a parameter number.

Symbols , **note**, **MIDI**, **AMSource**, **D^{mod}**, **Sync**

These symbols respectively indicate cautions, advice, MIDI-related explanations, a parameter that can be selected as an alternate modulation source, a parameter that can be selected as a dynamic modulation source, and a parameter that can use the BPM/MIDI Sync function.

Example screen displays

The values of the parameters shown in the example screens of this manual are only for explanatory purposes, and may not necessary match the values that appear in the LCD screen of your instrument.

MIDI-related explanations

CC# is an abbreviation for Control Change Number.

In explanations of MIDI messages, **numbers in square brackets []** always indicate hexadecimal numbers.

How to read the “Parameter Guide”

(example)

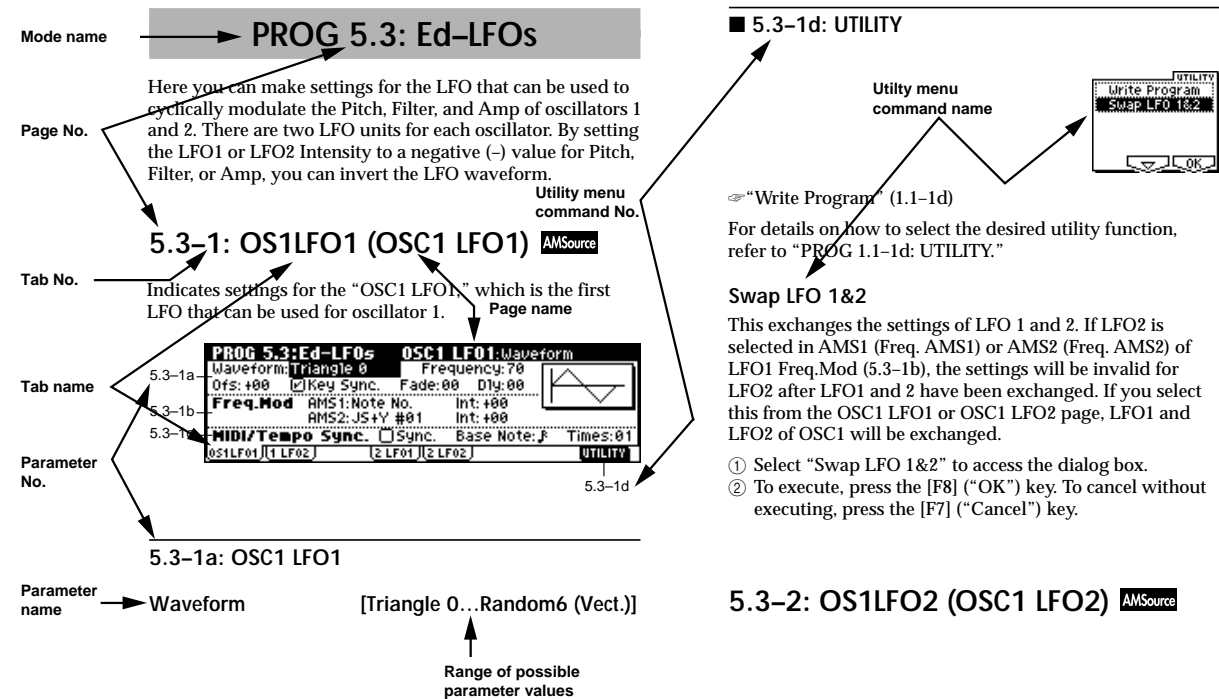


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1. Program mode

PROG PAGE MENU

Use the following procedure to select the desired page within the mode.

- ① Press the [MENU] key to access the “PAGE MENU.” The “PAGE MENU” will show an abbreviated name for each page.
- ② Use the [F1]–[F7] keys at the bottom of the page to select the desired page. Pressing the same key will move downward. You can also move by using the [◀], [△], [▽], [▶] keys.
- ③ Press the [F8] (“Open”) key to access the page.
- ④ If the selected page contains two or more tab pages, press the nearest [F1]–[F7] key below the tabs to select the desired tab page.

note Other ways to select a page

- You can also move to the desired page by holding down the [MENU] key and using numeric keys [0]–[9] to enter a two-digit page number. For example if you wish to access the 5.3: Ed-LFOs page, hold down the [MENU] key and consecutively press numeric keys [5] and then [3].
- By holding down the [MENU] key and using the cursor keys [◀](-) or [▶](+), you can step through the pages forward or backward in the order of 1.1→2.1→2.2→3.1, etc.



Play	1.1: Play	Select and play programs. Use the Performance Editor for easy editing, and to do simple editing of arpeggio patterns. (⇨p.2)
Basic	2.1: Ed-Basic	Set basic program parameters such as Oscillator and Multisample, and make settings for the Audition function. (⇨p.5)
Ctrl	2.2: Ed-Ctrl	Controller settings. (⇨p.9)
OSC	2.3: Ed-OSC	This will be displayed when you select bank I–F if the optional EXB-MOSS is installed. OSC settings for the MOSS tone generator. (⇨p.10)
Pitch	3.1: Ed-Pitch	Pitch settings. Pitch EG settings. (⇨p.10)
Flt1	4.1: Ed-Filter1	Filter 1 (tone) settings. Filter EG settings. (⇨p.14)
Flt2	4.2: Ed-Filter2	Filter 2 (tone) settings. Filter EG settings. (⇨p.19)
Amp1	5.1: Ed-Amp1	Amp 1 (volume) settings. Amp EG, pan (position) settings. (⇨p.19)
Amp	5.1: Ed-Amp	This will be displayed when you select bank I–F if the optional EXB-MOSS is installed. Amp (volume) settings. Amp EG, pan (position) settings.
Amp2	5.2: Ed-Amp2	Amp 2 (volume) settings. Amp EG, pan (position) settings. (⇨p.22)
EG	5.2: Ed-EGs	This will be displayed when you select bank I–F if the optional EXB-MOSS is installed. EG settings.
LFO	5.3: Ed-LFOs	Type and speed settings etc. for the two LFOs provided for each oscillator. (Make settings in the pitch, filter, and amp pages to specify the depth of the LFO settings you make here.) (⇨p.23)
Arp	6.1: Ed-Arp.	Arpeggiator settings. (Shared with 1.1: Play parameters. You may edit either.) (⇨p.24)
BUS	7.1: Ed-BUS	Select the BUS and master effect send level for the oscillator output. (⇨p.26)
IFX	7.2: Ed-InsertFX	Insert Effect routing, selection and settings. (⇨p.28)
MFX	7.3: Ed-MasterFX	Master Effect selection and settings. Master EQ settings. (⇨p.29)

PROG 1.1: Play

In this display page you can select and play programs.

MIDI All MIDI data in PROG 1.1: Play is transmitted and received on the Global MIDI Channel (≡GLOBAL 2.1-1a).

1.1-1: Program



1.1-1a: Bank, Program Select, Category, Cat. Hold, 10's Hold, J

Bank (Bank Select)

[INT-A...INT-F, G, g(1)...g(9), g(d), EXB-A...EXB-H]

This is the program bank display.

Use the [BANK], [A]–[H] keys to select the bank.

To select programs from internal banks INT-A–g(d), press the [BANK] key to make the INT/EXB indicator go dark, and use the [A]–[G] keys to select the bank.

For bank G, the following banks will be selected successively each time you press the BANK [G–GM] key.

G→g(1)→g(2)→g(3)→g(4)→g(5)→g(6)→g(7)→g(8)→g(9)→g(d)→G

note Bank INT-F can be selected if you have installed the separately sold EXB-MOSS option. When installed, the 128 EXB-MOSS programs will be available.

To select programs from external banks EXB-A–EXB-H, press the [BANK] key to make the INT/EXB indicator light, and use the [A]–[H] keys to select the bank.

note Banks EXB-A–H are normally used when a separately sold EXB-PCM series option is installed.

The program area consists of several banks. INT-A–E and EXB-A–H each contain 128 programs (total 1,664), which can be overwritten (RAM). Additionally, there is a non-rewritable (ROM) bank, G (containing GM2 capital programs, banks g(1)–g(9) [variation programs], and bank g(d) [drums]). (For a list of the factory-set programs, refer to the separate VNL.)

INT-A...INT-D	(I-A...I-D)	for preloaded programs
INT-E	(I-E)	User programs, such as programs that use multisamples created in Sampling mode.
INT-F	(I-F)	(for EXB-MOSS programs)
G		GM2 capital program
g(1)–g(9)		GM2 variation programs*
g(d)		GM2 drums program
EXB-A...EXB-H	(E-A...E-H)	(for user programs, and EXB-PCM series programs)

* For banks with no variation sounds, the GM basic sounds will be recalled. (An * will be added at the beginning of the program name.)

Program Select [(I-A...I-F, E-A...E-H)0...127: name, (G...g(d))1...128: name]

Selects a program. Choose this parameter, and use the [INC], [DEC] keys, numeric keys [0]–[9], and the [VALUE] dial to select a program.

You can select programs by category, or by using “10’s Hold.” (≡“Category,” “Cat. HOLD,” “10’s HOLD”)

MIDI You can also select a program by sending a MIDI program change from a connected external MIDI device. (≡p.221)

Category [00...15: Name]

Selects the program category.

All programs are classified into one of sixteen categories.

You can select the desired category, and then choose programs from that category.

For the procedure of selecting programs from a category, refer to “Cat. HOLD” and “Select by Category.”

note To assign a category to each program, use the “Write Program” (1.1-1d) dialog box. To change the name of a category, use “Category Name Prog. 00–07, 08–15” (≡GLOBAL 4.1-1/2).

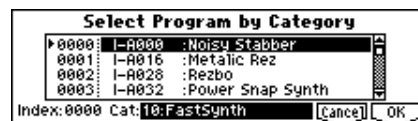
Cat. HOLD (Category Hold)

- Press the [./HOLD] key to display **Cat. HOLD**. The category will be held (fixed).
- Use “Category” to select the desired category.
- Choose “Program Select,” and use the [INC], [DEC] keys or the [VALUE] dial to select programs sequentially within the specified category.
- To cancel, press the [./HOLD] key twice to turn off the **Cat. HOLD** display.

note If you press the [./HOLD] key in PROG 1.1: Play, the selection will cycle in the order of **Cat. HOLD** → **10’s HOLD** → Cancel.

Select by Category

- Press the [F8] (“UTILITY”) key to access the Utility menu.
- Press the [F7] key or the [△], [▽] keys to choose “Select by Category,” and then press the [F8] key. The Select Program by Category dialog box will appear. The programs in that category will be shown in the framed list.



- Select “Cat.” and use the [INC], [DEC] keys or [VALUE] dial to choose the category that includes the program you wish to select.
- Use the [△], [▽] keys to select a program from the list. Alternatively, you can use the [◀], [▶] keys to select “Index,” and use the [INC], [DEC] keys or [VALUE] dial to make your selection. At this time, you can play the keyboard etc. of a connected MIDI device to hear the selected sound.
- Press the [F8] (“OK”) key to finalize your selection, or press the [F7] (“Cancel”) key to cancel your selection.

10’s HOLD

- Press the [./HOLD] key to display **10’s HOLD**. The ten’s place of the program number will be held (fixed).

- ② When you press a numeric key [0]–[9], the one’s place of the program number will be input with a single action.
- ③ You can use the [INC], [DEC] keys to change the ten’s place.
- ④ To cancel, press the [./HOLD] key to turn off the **10’S HOLD** display.

♪ (Tempo) [040...240, EXT]

This sets the tempo of the arpeggiator. The tempo can also be adjusted by the REALTIME CONTROLS C-mode [TEMPO] knob.

A display of **EXT** indicates that the “MIDI Clock” setting (GLOBAL 2.1–1a) has been set to **External**, and that the arpeggiator will synchronize to MIDI Clock messages received from an external MIDI device.

This parameter is linked with “Tempo” (6.1: Ed-Arp).

1.1–1b: Program Information

This displays the functions that are assigned to the “SW1,” “SW2,” and REALTIME CONTROLS B mode [ASSIGNABLE 1]–[ASSIGNABLE 4] knobs for the selected program.

■ **1.1–1c: SW1, SW2**

This turns the SW1 and SW2 functions assigned to the program on (**OSW1**) or off (**OSW2**). (⇒2.2: Ed-Ctrl)

■ **1.1–1d: UTILITY**



Use the following procedure to select the desired utility.

- ① Press the [F8] (“UTILITY”) key to access the Utility menu.
- ② Press the [F7] key or the [◀], [△], [▽], [▶] keys to select the desired utility.
- ③ Press the [F8] (“OK”) key to access the dialog box.

note Utilities up to number 10 can also be selected by holding down the [ENTER] key and pressing the corresponding numeric key [0]–[9] to access the dialog box.

Write Program

If you wish to keep a program, be sure to write it into memory.

An edited program cannot be recovered if you fail to write it before turning off the power or selecting another program.

- ① Select “Write Program” to access the dialog box.



- ② The upper line shows the bank name and program name.
- ③ In “Category,” specify the category of the program that you are writing. The category selected here can be used to find this program when selecting a program in Program, Combination and Multi modes. With the factory settings, the program categories have been given the names of instruments etc., but you can use “Category Name Prog.00–07, 08–15” (GLOBAL 4.1–1/2) to modify these category names.
- ④ Press “To” to specify the writing destination.

MIDI You can also use the [BANK] and [A]–[H] keys to select a bank.

! It is not possible to write to banks INT–G–g(d). If you have edited a program from banks G–g(d) and wish to write it, you must write to banks INT–A–INT–E, EXB–A–EXB–H.

- ⑤ If you wish to change the program name, press the [F5] (“Name”) key to move to the text dialog box, and input the name. (⇒BG p.38)

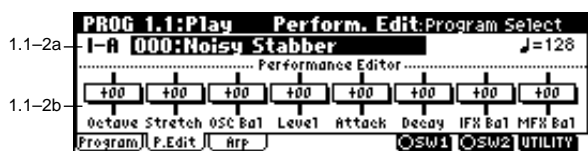
- ⑥ To write the program, press the [F8] (“OK”) key. To cancel without writing, press the [F7] (“Cancel”) key.

note When you press the [WRITE] key, the Update Program dialog box will appear. Here too, you can write to the currently selected program.

Select by Category

You can select a program by category. (⇒p.2)

1.1–2: P.Edit (Performance Editor)



1.1–2c

1.1–2a: Bank, Program Select, ♪ (Tempo)

Select a program. The bank, number, and name of the program will be displayed (⇒p.2). “♪” sets the tempo. (⇒p.3)

1.1–2b: Performance Editor

The Performance Editor lets you edit major program parameters without moving to the PROG 2.1–7.3 Ed (Edit) pages. This edits multiple program parameters within the currently selected program, allowing you to make broad adjustments easily.

You can use the Performance Editor when you wish to adjust the depth of effects etc. while you are playing, or to make the initial rough settings to begin the process of creating a new sound.

Editing that you do here will affect the values of the program parameters in the edit buffer.

If you wish to keep the results of your editing, you must write (save) the program (⇒BG p.37).

! Editing done using the Performance Editor will occur within the range of the corresponding parameter. If after using the Performance Editor to modify a value, you move to another page or mode and then return, the sound will remain in its edited state but the value shown in the LCD screen by the Performance Editor will be +00. You may do further editing from this state if you wish.

Since editing done using the Performance Editor is not as detailed as conventional editing, the balance between parameters may be lost. If this occurs, use 2.1: Ed-Basic–7.3: Ed-MasterFx to make fine adjustments.

MIDI If the “Exclusive” (GLOBAL 2.1-1b) setting is checked, MIDI exclusive parameter changes will be transmitted whenever you operate the Performance Editor. If these messages are received by a TRITON-Rack whose “Exclusive” setting is checked, the Performance Editor corresponding to that message will be modified.

Octave [-03...+00...+03]

An adjustment of +01 will raise the pitch one octave. An adjustment of -01 will lower the pitch one octave. This setting cannot adjust the pitch higher than 4' (feet) or lower than 32' (feet).

Stretch (Pitch Stretch) [-12...+00...+12]

This simultaneously adjusts the Transpose and Tune of the oscillator. This lets you produce a variety of tonal changes and variations without losing the character of the original sound.

At the +00 setting, the value of the program parameters will be unchanged.

An adjustment of +01 will lower the Transpose value by 1, and simultaneously raise the Tune value by 100.

An adjustment of -01 will raise the Transpose value by 1, and simultaneously lower the Tune value by 100.

However, it is not possible for the Transpose value to exceed the range of ±12, nor the Tune value to exceed the range of ±1200.

This Performance Edit function cannot be used for bank I-F.

OSC Bal (OSC Balance) [-10...+00...+10]

This adjusts the level balance between oscillators 1 and 2. At the +00 setting, the value of the program parameters will be unchanged.

Positive (+) settings will lower the oscillator 2 level. With an adjustment of +10, the oscillator 2 level will be 0.

The oscillator 1 level will not change.

Negative (-) settings will lower the oscillator 1 level.

With an adjustment of -10, the oscillator 1 level will be 0. The oscillator 2 level will not change.

For programs whose “Mode (Oscillator Mode)” (2.1-1a) setting is **Single**, oscillator 2 will not sound. Only the level of oscillator 1 will change. For a **Drums** program, this performance editor will have no effect.

Level (Amp Level) [-10...+00...+10]

This adjusts the amp level.

With an adjustment of +00, the value of the program parameters will be unchanged.

Positive (+) settings will increase the amp level above the value that was set.

With an adjustment of +10, the amp level will be 127 (maximum).

Negative (-) settings will lower the amp level below the value that was set.

With an adjustment of -10, the amp level will be 0.

Attack (Attack Time) [-10...+00...+10]

This adjusts the attack times of the filter EG and amp EG.

With an adjustment of +00, the value of the program parameters will be unchanged.

Positive (+) settings will lengthen the attack times beyond the values that were set.

With an adjustment of +10, the attack times will be 90.

Negative (-) settings will shorten the attack times.

With an adjustment of -10, the attack times will be 0.

When you modify “Attack Time,” the EG Start Level, Attack Level, Start Level Modulation, and Attack Time Modulation of the amp EG will also be adjusted simultaneously, to allow the maximum effect to be obtained.

Decay (Decay Time) [-10...+00...+10]

This adjusts the Decay Time and Slope Time of the filter EG and amp EG.

With an adjustment of +00, the value of the program parameters will be unchanged.

Positive (+) settings will lengthen the Decay Time and Slope Time beyond the values that were set. With an adjustment of +10, the times will be 99.

Negative (-) settings will shorten the Decay Time and Slope Time. With an adjustment of -10, the times will be 0.

IFX Bal (IFX Balance) [-10...+00...+10]

This adjusts the “W/D(Wet/Dry)” setting of insertion effects 1-5 as a whole.

With an adjustment of +00, the value of the program parameters will be unchanged.

Positive (+) settings will raise the Wet levels above the program setting, and lower the Dry levels. With an adjustment of +10, the setting will be “Wet.”

Negative (-) settings will lower the Wet levels below the program setting, and raise the Dry levels. With an adjustment of -10, the setting will be “Dry.”

MFX Bal (MFX Balance) [-10...+00...+10]

This adjusts the master effect “Rtn1 (Return1)” and “Rtn2 (Return2)” (7.3-1a) settings as a whole.

With an adjustment of +00, the value of the program parameters will be unchanged.

Positive (+) settings will raise the return levels above the program setting. With an adjustment of +10, the setting will be 127 (maximum).

Negative (-) settings will lower the return levels below the program setting.

With an adjustment of -10, the setting will be 0.

Octave	Octave of OSC 1 and 2
Stretch	Transpose and Tune of OSC 1 and 2
OSC Bal	High Level and Low Level of OSC1 and 2
Level	Amp1 Level, Amp2 Level
Attack	Amp EG Attack Time, Start Level, Attack Level, Level Modulation St, Time Modulation At of Amp 1 and 2, and Filter EG Attack Time of Filter 1 and 2
Decay	AmpEG Decay Time, Slope Time of Amp 1 and 2, Filter EG Decay Time and Slope Time of Filter 1 and 2
IFX Bal	W/D(Wet/Dry) balance of the IFX1/2/3/4/5 effects
MFX Bal	Master Effect RTN1, 2(Return1, 2)

For the **bank I-F** programs that can be used when the separately sold EXB-MOSS option is installed, different program parameters will be adjusted. (⇒EXB-MOSS owner’s manual & p.251 “EXB-MOSS option”)

■ 1.1-2c: UTILITY

⇨ “Write Program,” “Select by Category” (1.1-1d)

1.1-3: Arp (Arp. Play)

While arpeggiator parameters are for the most part edited in PROG 6.1: Ed-Arp., Some major parameters can be edited here as well. When you are playing in PROG 1.1: Play, you can edit the arpeggiator in realtime, such as changing the arpeggio pattern etc.

You can also use the REALTIME CONTROLS C-mode [TEMPO], [ARP-GATE], and [ARP-VELOCITY] knobs to edit the arpeggio in realtime (⇒BG p.21).



1.1-3a: Arpeggiator

Pattern	[P000...P004, U000(I-A/B)...U327(E-H)]
Reso (Resolution)	[♪ ₃ , ♪, ♪ ₃ , ♪, ♪ ₃ , ♪]
Octave	[1, 2, 3, 4]
Sort	[Off, On]
Latch	[Off, On]
Key Sync.	[Off, On]
Keyboard	[Off, On]

Make settings for the program arpeggiator (⇒“PROG: Ed-Arp.”). These parameters can also be set from 6.1: Ed-Arp. Arp.” (⇒6.1-1a).

■ 1.1-3b: UTILITY

⇒“Write Program,” “Select by Category” (1.1-1d)

PROG 2.1: Ed-Basic

Make basic settings for the oscillator(s) that will be used.

2.1-1: Basic (Prog Basic)



2.1-1a: Oscillator

Mode (Oscillator Mode) [Single, Double, Drums]

Specifies the basic program type; whether it will use one or two oscillators, or a drum kit.

Single: The program will use **one oscillator** (Oscillator 1, Filter 1, Amplifier 1). In this case the program will have a **maximum of 60-note polyphony**.

Double: The program will use **two oscillators** (Oscillator 1/2, Filter 1/2, Amplifier 1/2). Allowing you to create more complex sounds. In this case the program will have a **maximum of 30-note polyphony**.

Drums: The program will use **one oscillator** (as when **Single** is selected), but Oscillator 1 will be assigned a drum kit instead of a multisample. In this case the program will have a **maximum of 60-note polyphony**.

2.1-1b: Voice Assign

Mode (Voice Assign Mode) [Poly, Mono]

Poly: The program will play polyphonically, allowing you play chords.

Mono: The program will play monophonically, producing only one note at a time.

Hold [Off, On]

On (Checked): Hold is **On**. Even when you take your finger off of the key, the note will continue sounding as if it continued to be held. Unless the “Amp1 EG”, “Amp2 EG” (5.1-3a, 5.2-3) “S (Sustain Level)” is set to **0**, the sound will continue playing.

This is ideal for playing drum sounds, and when you set “Mode (Oscillator Mode)” (2.1-1a) to **Drums**, you should turn **Hold On**.

Off (Unchecked): Hold is **Off**. Except for drum programs, you should normally set **Hold Off**.

🔊 If you turn “Hold” **On** for a drum program, keys of the selected drum kit whose “Enable Note Off” parameter (GLOBAL 5.1-3a) is unchecked will be set to Hold On. Keys that are checked will be set to Hold Off. If you select Hold Off, the keys will be set to Hold Off regardless of their “Enable Note Off” setting.

Single Trigger [Off, On]

This is available when the “Mode (Voice Assign Mode)” setting is set to **Poly**.

On (Checked): When the same note is played repeatedly, the previous note will be silenced before the next note is sounded, so that the notes do not overlap.

Legato [Off, On]

This is available when the “Mode (Voice Assign Mode)” setting is set to **Mono**.

On (Checked): Legato is on. When multiple note-on’s occur, the first note-on will retrigger the sound, and the second and subsequent note-on’s will not retrigger.

Off (Unchecked): Legato is off. Notes will always be retriggered when note-on occurs.

When legato is on, multiple note-on’s will not retrigger the voice. If one note is already on and another note is turned on, the first voice will continue sounding. The oscillator sound, envelope, and LFO will not be reset, and only the pitch of the oscillator will be updated. This setting is effective for wind instrument sounds and analog synth-type sounds.

When legato is off, multiple note-on’s will retrigger the voice at each note-on. The oscillator sound, envelope, and LFO will be reset (and retriggered) according to the settings of the program.

⚠ If “Legato” is checked, certain multisamples or keyboard locations may produce an incorrect pitch.

Priority [Low, High, Last]

This parameter is valid when “Mode (Voice Assign Mode)” is set to **Mono**.

It specifies which note will be given priority to play when two or more notes are played simultaneously.

Low: Lowest note will take priority.

High: Highest note will take priority.

Last: Last note will take priority.

2.1-1c: Scale

Type (Scale Type)

[Equal Temperament...User Octave 15]

Select the basic scale for the internal tone generator.

Equal Temperament: This is the most widely used scale, where each semitone step is spaced at equal pitch intervals.

Pure Major: In this temperament, major chords of the selected tonic will be perfectly in tune.

Pure Minor: In this temperament, minor chords of the selected tonic will be perfectly in tune.

Arabic: This scale includes the quarter-tone scale used in Arabic music.

Pythagoras: This scale is based on ancient Greek musical theory, and is especially effective for playing melodies.

Werkmeister (Werkmeister III): This is an equal tempered scale that was used since the later Baroque period.

Kirnberger (Kirnberger III): This scale was created in the 18th century, and is used mainly to tune harpsichords.

Slendro: This is an Indonesian gamelan scale in which an octave consists of five notes.

When “Key” is set to C, use the C, D, F, G and A notes. (Other keys will sound equal-tempered pitches.)

Pelog: This is an Indonesian gamelan scale in which an octave consists of seven notes.

When “Key” is set to C, use the white keys. (The black keys will sound the equal tempered pitches.)

Stretch: This tuning is used for acoustic pianos.

User All Notes: This is the full-range scale (C-1 – G9) that was specified in “User All Notes Scale” (GLOBAL3.1-2a).

User Octave 00-15: These are the single-octave scales that were specified in “User Octave Scale” (GLOBAL3.1-1a).

Key [C...B]

Select the tonic note of the specified scale.

This setting is not valid for **Equal Temperament, Stretch, and User All Notes Scale**.

Random [0...7]

As this **value is increased**, a greater variance will be applied to the pitch when each note is sounded. Normally you will set this to **0**. This parameter is used when simulating instruments that have natural instability in pitch, such as tape-mechanism organs or acoustic instruments.

⚠ If a scale other than Equal Temperament is selected, the combination of the selected scale and the “Key” setting may skew the tuning of the base key (for example A=440 Hz). If this occurs, use “Master Tune” (GLOBAL 1.1-1a) to correct the pitch.

2.1-1d: UTILITY



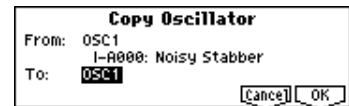
☞ “Write Program” (1.1-1d)

For details on how to select the desired utility function, refer to “PROG 1.1-1d: UTILITY.”

Copy Oscillator

This function copies oscillator settings to the currently selected program.

① Select “Copy Oscillator” to access the dialog box.



② In “From,” select the oscillator that you wish to copy and the copy source program. You can use the [BANK] and [A]-[H] keys to select the bank.

③ In “To,” select the copy destination oscillator.

④ To execute the Copy Oscillator operation, press [F8] (“OK”) key. To cancel, press the [F7] (“Cancel”) key.

Swap Oscillator

This command exchanges the settings of oscillators 1 and 2.

① Select “Swap Oscillator” to access the dialog box.



② To execute the Swap Oscillator operation, press [F8] (“OK”) key. To cancel, press the [F7] (“Cancel”) key.

note This can be selected only if “Mode (Oscillator Mode)” (2.1-1a) is **Double**.

2.1-2: OSC1

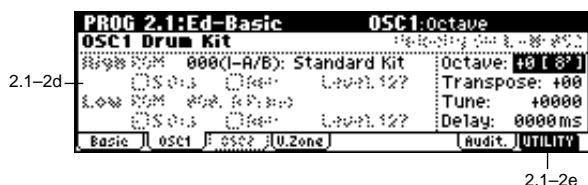
The multisample(s) (waveform) or drum kit on which the program will be based can be selected here for oscillator 1 and/or oscillator 2.

Internal ROM contains **425** different multisamples (preset multisamples) and **153** drum kits. By selecting a RAM multisample, you can use a multisample that you created in Sampling mode or that you loaded in Disk mode. If an EXB-PCM series option has been installed, you will be able to select multisamples from the installed option.

The following illustration shows a LCD screen where "Mode (Oscillator Mode)" (2.1-1a) has been set to **Double**. If this is set to **Single**, the OSC2 page parameter will not appear and cannot be set.



The following illustration shows the display when "Mode (Oscillator Mode)" (2.1-1a) has been set to **Drums**.



2.1-2a: OSC1 Multisample

Velocity SW L→H [001...127]

The oscillator 1 High and Low multisamples that you specify in "High, Low" (2.1-2b) will be switched at the velocity value that you specify here. When a note with a velocity higher than this value is received from a connected MIDI device, the High multisample will sound.

2.1-2b: High, Low

Here you can select a multisample. You can select different multisamples for High and Low, and use velocity to switch between the two multisamples. Start Offset, Reverse, and Level can be adjusted independently for the High and Low multisamples.

High:

High MS Bank [ROM, RAM, EXB* ...]
High Multisample [000...424, 000...999]

Specifies the bank and multisample number of the High multisample. The multisample you select here will sound by velocities greater than the value of the "Velocity SW L→H" (2.1-2a) parameter. If you do not wish to use velocity switching, set the value to **001**, and select only the High multisample.

ROM: Select a preset multisample.

Use "High Multisample" to select from **000-424**.

RAM: Select a multisample that you created in Sampling mode or that you loaded in Disk mode.

Use "High Multisample" to select from **000-999**.

EXB*: Multisamples from a separately sold EXB-PCM series option board can be selected. "*" will indicate the type of installed option.

The multisample number for "High Multisample" will depend on the options that are installed.

⚠ The **EXB*** display will differ depending on the type of option board.

⚠ If a program that uses a multisample from a separately sold EXB-PCM series board is selected, but the necessary multisample is not available because the corresponding EXB-PCM (expansion board) is not installed, the "High MS Bank" field will indicate "ROM." In this case, the program will not sound. By re-selecting the multisample bank, you can make the program sound.

⚠ Each multisample has an upper limit, and may not produce sound when played above that limit.

S.Ofs (High Start Offset) [Off, On]

This specifies the point at which the multisample will begin sounding. For some multisamples this parameter will have no effect.

On (Checked): The sound will start from the start offset location that is pre-determined for each multisample.

However when a RAM bank is selected, this will depend on the selected multisample. If you select a multisample that includes one of the following types of sample, checking this item will cause playback to start from the Loop Start Address.

- A sample that was recorded (sampled) in Sampling mode
- A sample whose Loop Start Address was edited in Sampling mode after the sample was loaded in Disk mode
- A sample whose Loop Start Address was specified automatically when it was loaded as an AKAI, AIFF, or WAVE file in Disk mode

Off (Unchecked): The sound will start from the beginning of the multisample waveform.

Rev (High Reverse) [Off, On]

The multisample will be played in reverse. In the case of ROM or optional (EXB-PCM series) multisamples that were originally specified to loop, or in the case of multisamples that were set to loop in Sampling mode, the multisample will be played back in "one-shot" reverse mode. If the multisample was originally set to reverse, it will playback without change.

On (Checked): The multisample will playback in reverse.

Off (Unchecked): The multisample will playback normally.

Level (High Level) [0...127]

Specifies the level of the multisample.

⚠ Depending on the multisample, high settings of this parameter may cause the sound to distort when a chord is played. If this occurs, lower the level.

Low:

Specifies the OSC1 Low multisample.

The Low multisample will sound when the velocity is less than the "Velocity SW L→H" (2.1-2a) setting.

Low MS Bank

Low Multisample

S.Ofs (Low Start Offset)

Rev (Low Reverse)

Level (Low Level)

☞ Refer to the corresponding item in "High."

2.1-2c: Octave, Transpose, Tune, Delay

Octave [-2[32'], -1[16'], +0[8'], +1[4']

Adjusts the pitch in octave units. The normal octave of the multisample is 8' (feet).

Transpose [-12...+12]

Adjusts the pitch in semitone steps over a range of ±1 octave.

Tune [-1200...+1200]

Adjusts the pitch of the sample in one-cent steps (a semitone is 100 cents) over a range of ±1 octave.

Delay [0ms...5000ms, KeyOff]

Specifies a delay time from note-on until the note will sound.

With a setting of **KeyOff**, the sound will begin when note-off occurs. This is used to create sounds such as the “click” that is heard when a harpsichord note is released. In this case, set the “Amp1 EG”, “Amp2 EG” (5.1-3a, 5.2-3) “S (Sustain Level)” parameter to 0.

2.1-2d: OSC1 Drum Kit

Drum Kit [00(I-A/B)...143(E-H), 144(GM)...152(GM)]

Selects a drum kit.

00(I-A/B)–15(I-A/B): Preloaded Drum kits.
16(E-A)–31(E-A), 32(E-B)–47(E-B), 48(E-C)–63(E-C), 64(E-D)–79(E-C), 80(E-E)–95(E-E), 96(E-F)–111(E-F), 112(E-G)–127(E-G), 128(E-H)–143(E-H): (for user drum kits, EXB-PCM series drum kits)
144(GM)–152(GM): Preset drum kits compatible with GM2.

Octave [-2[32'], -1[16'], +0[8'], +1[4']

Adjusts the pitch in octave units. When using a drum kit, set the Octave to 8'.

⚠ When editing a drum program, you must set this parameter to 8'. With other settings, the sounds of the drum kit will be assigned to the wrong notes of the keyboard.

Transpose [-12...+12]

This adjusts the location of the instruments in the selected drum kit. Unless you need to change this, leave it at 0.

Tune [-1200...+1200]

This adjusts the pitch in one-cent units.
The pitch of each drum kit can be adjusted in GLOB 5.1: DKit.

Delay [0ms...5000ms, KeyOff]

This specifies a delay time from note-on until the sound will begin.

With a setting of **KeyOff**, the sound will begin when note-off occurs. In this case, set the “Amp1 EG” parameter “S (Sustain Level)” (5.1-3a) to 0.

2.1-2e. UTILITY



☞ “Write Program” (1.1-1d), “Copy Oscillator,” “Swap Oscillator” (2.1-1d)

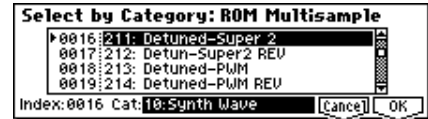
For details on how to select the desired utility function, refer to “PROG 1.1-1d: UTILITY.”

Select by Category

Selects multisamples by category.

For the procedure, refer to “Select by Category” (⇨p.2).

note This command is valid if “Mode (Oscillator Mode)” (2.1-1a) is **Single** or **Double**, and you are selecting the “High MS Bank,” “High Multisample,” “Low MS Bank,” or “Low Multisample” of OSC1 or OSC2 for which **ROM** was selected for “High MS Bank” or “Low MS Bank.”



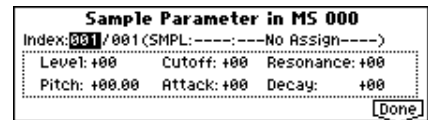
Sample Parameters

This command lets you adjust the sample playback level, cutoff, resonance, pitch, attack, and decay for each index of a RAM multisample.

note This command is valid if “Mode (Oscillator Mode)” (2.1-1a) is **Single** or **Double**, and you are selecting the “High MS Bank,” “High Multisample,” “Low MS Bank,” or “Low Multisample” of OSC1 or OSC2 for which **RAM** was selected for “High MS Bank” or “Low MS Bank.”

⚠ The setting will apply to the selected multisample. The setting will also be used when that multisample is selected by another oscillator or program.

① Select “Sample Parameters” to access the dialog box.



② **Index:** Specifies the index for which you wish to make settings. The number following “/” is the total number of indexes in the selected multisample.

SMPL: Indicates the sample number and name for the index.

③ For each index, you can make the following settings.

Level: Adjusts the volume. Relative to the settings of “Level (High, Low Level)” (2.1-2b) and “Level (Amp1, 2 Level)” (5.1-1a, 5.2-1), **negative (-) values** will decrease the levels, and **positive (+) values** will increase the levels. A setting of +99 will double the volume, and at a setting of -99 there will be no sound. This parameter is linked to the “Level” (SMPL 4.1-2a). The value that was specified in Sampling mode will be displayed here.

Cutoff: Adjusts the filter cutoff. This adjustment will be added to the value specified for “Frequency” (4.1-1b/1c, 4.2-1) of Filter 1 and 2.

Resonance: Adjusts the resonance level of the filter. This adjustment will be added to the value specified for “Resonance” (4.1-1b, 4.2-1) of Filter 1 and 2.

Pitch: Adjusts the playback pitch in one-cent steps. A setting of +12.00 raises the pitch one octave, and a setting of -12.00 will lower the pitch one octave. This parameter is linked with the parameter “Pitch” (SMPL 4.1-2a). The value that was specified in Sampling mode will be displayed here.

Attack: Adjust the attack times of the filter EG and amp EG. This adjustment will be added to the “A (Attack Time)” of “Filter 1 EG,” “Filter 2 EG,” “Amp 1 EG,” and “Amp 2 EG” (4.1-5a, 4.2-5, 5.1-3a, 5.2-3).

Decay: Adjusts the decay times of the filter EG and amp EG. This adjustment will be added to the “D (Decay Time)” of “Filter 1 EG,” “Filter 2 EG,” “Amp 1 EG,” and “Amp 2 EG.”

- ④ Press the [F8] (“Done”) key to execute, and close the dialog box.

! Please be aware that the Compare function is not available for this command.

2.1-3: OSC2

This will appear when “Mode (Oscillator Mode)” (2.1-1a) is set to **Double**.

For details on the settings and function of the parameter, refer to “2.1-2: OSC1.”

2.1-4: V.Zone (Velocity Zone)

Specifies the range of velocities that will sound oscillator 1 and 2. By using these settings in conjunction with the “Velocity SW L→H” (2.1-2a) setting of each oscillator, you can specify the velocity ranges for the High and Low multi-samples or drum kits.

! It is not possible to set the Bottom Velocity greater than the Top Velocity, nor the Top Velocity less than the Bottom Velocity.



2.1-4b

2.1-4a: OSC 1/2 Velocity Zone

OSC1 Bottom [001...127]

Sets the minimum velocity value that will sound oscillator 1.

OSC1 Top [001...127]

Sets the maximum velocity value that will sound oscillator 1.

OSC2 Bottom [001...127]

Sets the minimum velocity value that will sound oscillator 2.

OSC2 Top [001...127]

Sets the maximum velocity value that will sound oscillator 2.

note You can hold down the [ENTER] key and play a note on a connected MIDI device to input these values.

2.1-4b: UTILITY

☞ “Write Program” (1.1-1d), “Copy Oscillator,” “Swap Oscillator” (2.1-1d)

2.1-5: Audit. (Audition)

When selecting preloaded programs, you can play back a pre-specified riff (phrase) that is suitable for the sound of that program. This is called the **Audition** function.

When you press the [AUDITION] key to turn it on, the audition riff will play back repeatedly. This allows you to verify a program or edit it even when a MIDI keyboard is not connected.

Here you can select the audition riff and specify the transposition.



2.1-5b

2.1-5a: Audition Riff, Transpose

Audition Riff [000: Off...382: Name]

Selects the audition riff. The TRITON-Rack contains 382 audition riffs suitable for a variety of instruments and musical genres. (☞ “VNL”)

With a setting of **000: Off**, no riff will be played.

Transpose [-24...+24]

Adjusts the pitch of the audition riff in semitone steps.

! It is not possible to change the playback tempo of the audition riff. Nor is it possible to set the arpeggiator tempo while the audition riff is playing.

! The arpeggiator will be turned off while the audition riff is playing.

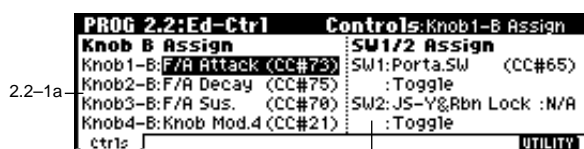
2.1-5b: UTILITY

☞ “Write Program” (1.1-1d)

PROG 2.2: Ed-Ctrl

These settings specify the B-mode functions of REALTIME CONTROLS knobs [1]-[4] in Program mode, and “the functions of the SW1,” the “SW2.”

2.2-1: Ctrls (Controls)



2.2-1b

2.2-1c

2.2-1a: Knob B Assign

Here you can Assign functions (mainly various types of control change) to the B-mode of the REALTIME CONTROLS knobs [1]-[4] (☞ p.214 “Realtime Control Knobs B Assign List”).

The functions you set here will take effect when you operate the REALTIME CONTROLS knobs [1]-[4] in B-mode.

Knob1-B (Knob1-B Assign) **AMSource** [Off, ..., MIDI CC#95]
 Knob2-B (Knob2-B Assign) **AMSource** [Off, ..., MIDI CC#95]
 Knob3-B (Knob3-B Assign) **AMSource** [Off, ..., MIDI CC#95]
 Knob4-B (Knob4-B Assign) **AMSource** [Off, ..., MIDI CC#95]

2.2-1b: SW1/2 Assign

These settings assign functions to [SW1] and [SW2] keys (⇒p.213 “SW1, SW2 Assign List”).

SW1 Assign **AMSource** [Off, ..., AfterT Lock :N/A]

Here you can assign a function to the “SW1.”
 The on/off status of the switch is saved when the program is written. When you change the function, it will be reset to the “off” state.

SW1 Mode [Toggle, Momentary]

Specifies the on/off state that will occur when you press the [F6] (“SW1”) key in 1.1:Play.

Toggle: The key will alternate on/off each time you press [F6] (“SW1”).

Momentary: The key will be on only while you continue holding [F6] (“SW1”).

SW2 Assign **AMSource** [Off, ..., AfterT Lock :N/A]

SW2 Mode [Toggle, Momentary]

Here you can assign a function to “SW2.”
 The functions that can be assigned to SW2 are the same as for SW1, with the exception of **SW2 Mod. (CC#81)** instead of **SW1 Mod. (CC#80)**.

note Although the following values can be selected for “SW1 Assign” and “SW2 Assign,” they will have no effect in actuality.

Data is compatible between the TRITON-Rack and the TRITON/TRITONpro/TRITONproX (keyboard models of the TRITON). Programs created on the TRITON-Rack can be used by a TRITON keyboard model, and vice versa.

In order to maintain compatibility, you are able to set these “invalid” parameters on the TRITON-Rack.

N/A indicates Not Available.

Octave Down	:N/A
Octave Up	:N/A
JS X Lock	:N/A
JS+Y Lock	:N/A
JS-Y Lock	:N/A
Ribbon Lock	:N/A
JS X&Rbn Lock	:N/A
JS+Y&Rbn Lock	:N/A
JS-Y&Rbn Lock	:N/A
AfterT Lock	:N/A

■ 2.2-1c: UTILITY

⇒ “Write Program” (1.1-1d), “Copy Oscillator,” “Swap Oscillator” (2.1-1d)

PROG 2.3: Ed-OSC

This page will be displayed when you select bank I-F if the separately sold EXB-MOSS option is installed.
 (⇒EXB-MOSS owner’s manual & p.251 “EXB-MOSS option”)

PROG 3.1: Ed-Pitch

Here you can make pitch modulation settings for oscillators 1 and 2.

3.1-1: OSC1

Specifies how the keyboard location will affect the pitch of oscillator 1, and select the controller that will modify the pitch and the depth of this effect. Here you can also specify the amount of pitch change caused by the pitch EG, and set the portamento on/off and mode settings.



3.1-1a: Pitch

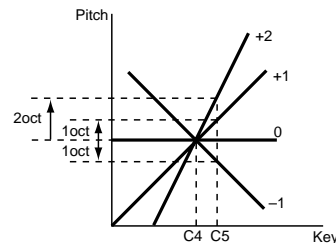
Pitch Slope [-1.0...+2.0]

Normally you will leave this at +1.0.

Positive (+) values will cause the pitch to rise as you play higher on the keyboard, and **negative (-) values** will cause the pitch to fall as you play higher on the keyboard.

With a value of **0**, there will be no change in pitch, and the C4 pitch will sound regardless of the keyboard location you play.

How the Pitch Slope and pitch are related



Ribbon (#16) [-12...+12]

Specifies in semitone units how the pitch will change when CC#16 is received (or when the ribbon controller is pressed on a TRITON or other instrument connected to MIDI IN).

12 steps equal one octave. With positive (+) values, the pitch will rise when you press the right half of a ribbon controller. With negative (-) values, the pitch will fall.

For example, with a setting of +12, pressing the far right edge of the ribbon controller will raise the pitch one octave. With a setting of -12, pressing the far right edge of the ribbon controller will lower the pitch one octave.

At the center of the ribbon controller, the original pitch will remain, so you can use this in conjunction with pressing the ribbon at its right edge to simulate the “hammering-on” techniques used by guitarists.

JS (+X) [-60...+12]

Specifies in semitone units how the pitch will change when a pitch bender message is received (or when the joystick is moved to the right on a TRITON or other instrument connected to MIDI IN) (⇒p.222).

12 steps equal one octave.

For example, if you set this to **+12** and move the joystick all the way to the right, the pitch will rise one octave above the original pitch.

JS (-X) [-60...+12]

Specifies in semitone units how the pitch will change when a pitch bender message is received (or when the joystick is moved to the left on a TRITON or other instrument connected to MIDI IN). (p.222)
12 steps equal one octave.

For example, if you set this to **-60** and move the joystick all the way to the left, the pitch will fall five octaves below the original pitch. This can be used to simulate the downward swoops that a guitarist produces using the tremolo arm.

AMS (Pitch AMS) [Off, (FEG, AEG, EXT)]

Selects the source that will modulate the pitch of oscillator 1 (p.206 "AMS List").

Intensity (AMS Intensity) [-12.00...+12.00]

Specifies the depth and direction of the effect produced by "AMS (Pitch AMS)."

With a setting of **0**, no modulation will be applied. With a setting of **12.00**, the pitch will change up to one octave.

For example, if you set "AMS (Pitch AMS)" to **AfterT** and press down on the keyboard of a connected MIDI instrument, the pitch will rise if you have set this parameter to a positive (+) value, or will fall if you have set this parameter to a negative (-) value. The range is a maximum of one octave. (p.208)

3.1-1b: Pitch EG

Intensity [-12.00...+12.00]

Specifies the depth and direction of the modulation that the pitch EG specified in "EG (Pitch EG)" (3.1-5) page will apply to the pitch.

With a setting of **12.00**, the pitch will change a maximum of ± 1 octave.

AMS (Pitch EG AMS) [Off, (KT, EXT)]

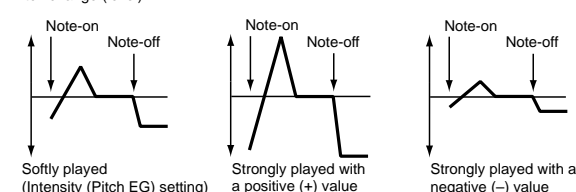
Selects the source that will control the pitch modulation applied by the pitch EG (p.206 "AMS List").

Intensity (AMS Intensity) [-12.00...+12.00]

Specifies the depth and direction of the effect that "AMS (Pitch EG AMS)" will have.

For example, if you set "AMS (Pitch EG AMS)" to **Velocity** and set this value to **+12.00**, the velocity will control the range of pitch change produced by the pitch EG in a range of ± 1 octave (p.208). As you play more softly, the pitch change will draw closer to the pitch EG levels.

Pitch change (level)



note "Intensity" and "AMS (Pitch EG AMS)" will be added to determine the depth and direction of the pitch modulation applied by the pitch EG.

3.1-1c: Portamento

This turns the portamento effect (smooth change in pitch from one note to the next) on/off, and specifies how it will be applied. If SW 1 or 2 are set to **Porta.SW(CC#65)**, turning SW1 or SW2 on/off will apply portamento (p.206 "AMS List" SW1 CC#80, SW2 CC#81, Prta.SWCC#65).

MIDI Portamento will also be switched when CC#65 (Portamento SW) is received.

Enable (Porta. Enable) [Off, On]

On (Checked): Portamento will be applied.
Off (Unchecked): Portamento will not be applied.

Fingered (Porta. Fingered) [Off, On]

This parameter is available when "Enable (Porta. Enable)" is checked.

On (Checked): Portamento will be applied when you continue holding the previous note as you press the next note (legato playing).

Off (Unchecked): Portamento will always be applied, regardless of how you play.

Time (Porta. Time) [000...127]

This parameter is available when "Enable (Porta. Enable)" is checked.

This sets the portamento time. Increasing the value will produce a slower change in pitch.

3.1-1d: UTILITY

Write Program" (1.1-1d), "Copy Oscillator," "Swap Oscillator" (2.1-1d)

3.1-2: OS1lfo (OSC1 LFO)

Specifies the amount of pitch change produced by LFO1 and LFO2 for oscillator 1.

PROG 3.1:Ed-Pitch		OSC1 LFO:LF01 Intensity	
Pitch LFO1/2 Modulation			
LF01 Intensity:	+00.00	AMS:	AfterT
JS+Y Int.:	+01.00	Intensity:	+00.25
LF02 Intensity:	+00.00	AMS:	Off
JS+Y Int.:	+00.00	Intensity:	+00.00
OSC1	OSC2	EG	UTILITY

3.1-2a

3.1-2b

3.1-2a: Pitch LFO1/2 Modulation

LFO1:

Intensity (LFO1 Intensity) [-12.00...+12.00]

Specifies the depth and direction of the pitch modulation applied by the OSC 1 LFO1 settings you made in "OS1LFO1" page (5.3-1).

With a setting of **12.00**, a maximum of ± 1 octave of pitch modulation will be applied. **Negative (-) values** will invert the LFO waveform.

JS+Y Int. (LFO1 JS+Y Int.) [-12.00...+12.00]

Specifies the depth of pitch modulation that will be applied by OSC1 LFO1 when CC#1 is received (or when the joystick is moved in the +Y direction on a TRITON or other instrument connected to MIDI IN).

As this **value is increased**, moving the joystick in the +Y direction will cause the OSC1 LFO1 to produce deeper pitch modulation. With a setting of **12.00** a maximum of ± 1 octave of pitch modulation will be applied. **Negative (-) values** will invert the LFO waveform.

AMS (LFO1 AMS) [Off, (PEG, FEG, AEG, KT, EXT)]

Selects the source that will control the depth of pitch modulation produced by the OSC1 LFO1 (p.206 "AMS List").

Intensity (AMS Intensity) [-12.00...+12.00]

Specifies the depth and direction of the effect that "AMS (LFO1 AMS)" will have. With a setting of **0**, modulation will not be applied. With a setting of **12.00**, the OSC1 LFO1 will apply a maximum of ± 1 octave of pitch modulation. **Negative (-) settings** will invert the LFO waveform.

For example, if you set "AMS (LFO1 AMS)" to **AfterT** and press down on the keyboard of a connected MIDI instrument, OSC1 LFO1 will apply positive-phase pitch modulation if you have set this parameter to a positive (+) **value**, or will apply negative-phase pitch modulation if you have set this parameter to a negative (-) **value**.

The "Intensity (LFO1 Intensity)," "JS+Y Int. (LFO1 JS+Y Int.);" and "AMS (LFO1 AMS)" settings will be added to determine the depth and direction of the pitch modulation applied by OSC1 LFO1 (p.208).

LFO2:

Intensity (LFO2 Intensity) [-12.00...+12.00]

JS+Y Int. (LFO2 JS+Y Int.) [-12.00...+12.00]

AMS (LFO2 AMS) [Off, (PEG, FEG, AEG, KT, EXT)]

Intensity (AMS Intensity) [-12.00...+12.00]

Refer to the preceding section "LFO1."

■ **3.1-2b: UTILITY**

☞ "Write Program" (1.1-1d), "Copy Oscillator," "Swap Oscillator" (2.1-1d)

3.1-3: OSC2

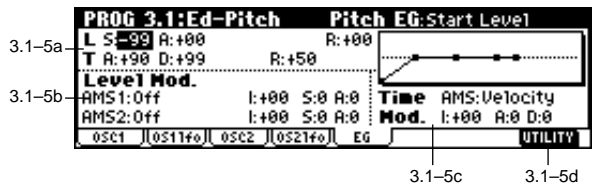
Specifies how the keyboard location will affect the pitch of oscillator 2, and select the controller that will affect the pitch and specify the depth of control. Here you can also specify the amount of pitch change produced by the pitch EG, and set the portamento on/off status and mode. For details on each parameter, refer to the preceding "3.1-1: OSC1."

3.1-4: OS2lfo (OSC2 LFO)

Specifies the amount of pitch change produced by LFO1 and LFO2 for oscillator 1. For an explanation of each parameter, refer to the preceding "3.1-2: OS1lfo."

3.1-5: EG (Pitch EG) **AMS**Source

Here you can make settings for the pitch EG, which creates time-variant changes in the pitch of oscillators 1 and 2. The depth of pitch change produced by these EG settings on oscillator 1 (2) is adjusted by "Pitch EG" (3.1-1b, 3.1-3).



3.1-5a: Pitch EG

These settings specify how the pitch will change over time.

L (Level):

These parameters specify the amount of pitch change. The actual amount of pitch change will depend on the "Pitch EG" (3.1-1b, 3.1-3) parameter "Intensity." For example with an "Intensity" setting of **+12.00**, a "Level" setting of **+99** would raise the pitch one octave, and a "Level" setting of **-99** would lower the pitch one octave.

S (Start Level) [-99...+99]

Specifies the amount of pitch change at note-on.

A (Attack Level) [-99...+99]

Specifies the amount of pitch change when the attack time has elapsed.

R (Release Level) [-99...+99]

Specifies the amount of pitch change when the release time has elapsed.

T (Time):

These parameters specify the time over which the pitch change will occur.

A (Attack Time) [0...99]

Specifies the time over which the pitch will change from note-on until it reaches the pitch specified as the attack level.

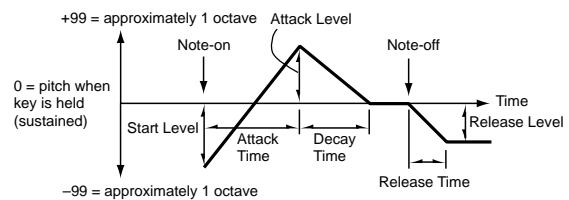
D (Decay Time) [0...99]

Specifies the time over which the pitch will change after reaching the attack level until it reaches the normal pitch.

R (Release Time) [0...99]

Specifies the time over which the pitch will change from note-off until it reaches the pitch specified as the release level.

Time-varying pitch settings (when Pitch EG Intensity = +12.00)



3.1-5b: Level Mod. (Level Modulation)

These settings allow the pitch EG “L (Level)” parameters to be controlled by alternate modulation.

AMS1 (Level Mod. AMS1) [Off, (KT, EXT)]

Selects the source that will control the pitch EG “L (Level)” parameters (⇨p.206 “AMS List”).

I (AMS1 Intensity) [-99...+99]

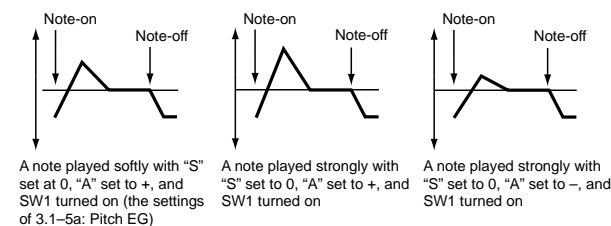
Specifies the depth and direction of the effect applied by “AMS1 (Level Mod. AMS1).”

With a setting of **0**, the levels specified by “Pitch EG” (3.1-5a) will be used.

For example, if “AMS1 (Level Mod. AMS1)” is **SW1 #80**, pressing the “SW1” to turn it on will change the “Level” parameters of the Pitch EG. (“SW1/2 Assign”: 2.2-1b) to **SW1 Mod. (CC#80)**. As the absolute value of “I (AMS1 Intensity)” is increased, the pitch EG levels will change more greatly when the “SW1” is turned on. The direction of the change is specified by “S (AMS1 SW Start)” and “A (AMS1 SW Attack).” When the “SW1” ([F6] key) is turned off, the pitch EG levels will return to their own settings.

If “AMS1” is set to **Velocity**, increasing the absolute value of “Intensity” will produce increasingly wider change in pitch EG levels for strongly-played notes. The direction of the change is specified by “S (AMS1 SW Start)” and “A (AMS1 SW Attack).” As you play more softly, the pitch change will draw closer to the pitch EG levels.

Pitch EG change (level) (AMS=SW1/Velocity, Intensity= positive (+) value)



S (AMS1 SW Start) [-, 0, +]

Specifies the direction of change in “S (Start Level)” caused by “AMS1 (Level Mod. AMS1).” If “I (AMS1 Intensity)” is a **positive (+)** value, a setting of + will raise the EG level, and a setting of - will decrease it. With a setting of **0** there will be no change.

A (AMS1 SW Attack) [-, 0, +]

Specifies the direction of change in “A (Attack Level)” caused by “AMS1 (Level Mod. AMS1).” If “I (AMS1 Intensity)” is a **positive (+)** value, a setting of + will raise the EG level, and a setting of - will decrease it. With a setting of **0** there will be no change.

AMS2 (Level Mod. AMS2) [Off, (KT, EXT)]

I (AMS2 Intensity) [-99...+99]

S (AMS2 SW Start) [-, 0, +]

A (AMS2 SW Attack) [-, 0, +]

Refer to the preceding paragraphs “AMS1 (Level Mod. AMS1)”-“A (AMS1 SW Attack).”

3.1-5c: Time Mod. (Time Modulation)

These parameters let you use alternate modulation to control the “T (Time)” parameters of the pitch EG.

AMS (Time Mod. AMS) [Off, (KT, EXT)]

Selects the source that will control the “T (Time)” parameters of the pitch EG (⇨p.206 “AMS List”).

I (AMS Intensity) [-99...+99]

Specifies the depth and direction of the effect that “AMS (Time Mod. AMS)” will have.

With a setting of **0**, the pitch EG times will be just as specified by the “Pitch EG” (3.1-5a) settings.

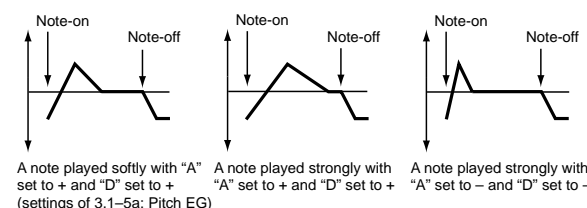
The alternate modulation value at the moment that the EG reaches each point will determine the actual value of the EG time that comes next.

For example, the decay time will be determined by the alternate modulation value at the moment that the attack level is reached.

When this parameter is set to values of **16, 33, 49, 66, 82, or 99**, the specified EG times will speed up as much as 2, 4, 8, 16, 32, or 64 times respectively (or slowed down to 1/2, 1/4, 1/8, 1/16, 1/32, or 1/64 of the original time).

For example if “AMS (Time Mod. AMS)” is set to **Velocity**, increasing the absolute value of “I (AMS Intensity)” will allow strongly-played notes to increase the changes in pitch EG “T (Time)” values. The direction of the change is specified by “A (AMS SW Attack)” and “D (AMS SW Decay).” As you play more softly, the pitch EG times will more closely approach the actual settings of the pitch EG.

Pitch EG changes (Time) (AMS = Velocity, Intensity = positive (+) value)



A (AMS SW Attack) [-, 0, +]

Specifies the direction in which “AMS (Time Mod. AMS)” will affect the “A (Attack Time).” With **positive (+)** values of “I (AMS Intensity),” a setting of + will cause the time to be lengthened, and a setting of - will cause the time to be shortened. With a setting of **0** there will be no change.

D (AMS SW Decay) [-, 0, +]

Specifies the direction in which “AMS (Time Mod. AMS)” will affect the “D (Decay Time).” With **positive (+)** values of “I (AMS Intensity),” a setting of + will cause the time to be lengthened, and a setting of - will cause the time to be shortened. With a setting of **0** there will be no change.

■ 3.1-5d: UTILITY

⇨ “Write Program” (1.1-1d), “Copy Oscillator,” “Swap Oscillator” (2.1-1d)

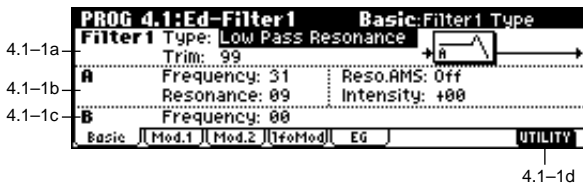
PROG 4.1: Ed-Filter1

Indicates settings for filter 1 that controls the tone of oscillator 1. You can select either a 24 dB/oct low pass filter with resonance, or a 12 dB/oct low pass filter and 12 dB/oct high pass filter connected in series.

When “Mode (Oscillator Mode)” (2.1-1a) is **Single, Drums** you can use filter 1. When it is **Double**, you can use filters 1 and 2. In the case of **Single, Drums** the filter 2 pages cannot be selected.

4.1-1: Basic

Here you can specify the basic type for filter 1 (used by oscillator 1), and set the cutoff frequency and resonance.



4.1-1a: Filter1

Type (Filter1 Type)

[Low Pass Resonance, Low Pass & High Pass]

Selects the type for filter 1.

Low Pass Resonance: 24 dB/octave low pass filter with resonance



Low Pass & High Pass: 12 dB/octave low pass filter and 12 dB/octave high pass filter in series



Trim

[00...99]

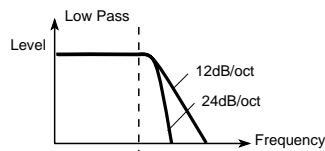
Adjusts the level at which the audio signal output from OSC1 is input to filter 1A.

⚠ If this value is raised, the sound may be distorted if Resonance is set to a high value or when you play a chord.

4.1-1b: Filter A

This filter cuts the high-frequency range above the cutoff frequency. This is the most common type of filter, which cuts the overtone structure to make a bright (sharp) tone darker (mellow).

When “Type (Filter1 Type)” is **Low Pass Resonance**, the cut will have a steeper curve.



Frequency (A Frequency)

[00...99]

Specifies the cutoff frequency of filter 1A.

Resonance (A Resonance)

[00...99]

This emphasizes the overtone components that lie in the region of the cutoff frequency specified by “Frequency (A Frequency),” producing a more distinctive sound. Increasing this value will produce a stronger effect.

Reso.AMS (Resonance AMS)

[Off, (PEG, FEG, AEG, LFO, KT, EXT)]

Selects the source that will control the “Resonance (A Resonance)” level (see p.206 “AMS List”).

Intensity (AMS Intensity)

[-99...+99]

Specifies the depth and direction of the effect that “Reso.AMS (Resonance AMS)” will have on the resonance level specified by “Resonance (A Resonance).”

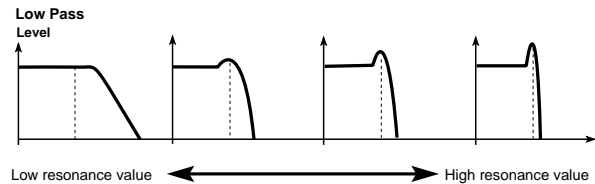
For example, if **Velocity** has been selected, changes in keyboard velocity will affect the resonance.

With **positive (+) values**, the resonance will increase as you play more strongly, and as you play more softly the resonance will approach the level specified by the “Resonance (A Resonance)” setting.

With **negative (-) values**, the resonance will decrease as you play more strongly, and as you play more softly the resonance will approach the level specified by the “Resonance (A Resonance)” setting.

The resonance level is determined by adding the “Resonance (A Resonance)” and “Intensity (AMS Intensity)” values.

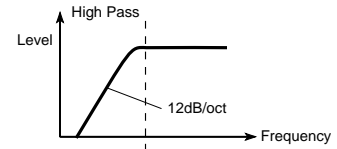
The effect of resonance



4.1-1c: Filter B

This filter cuts the low-frequency range that lies below the cutoff frequency.

By cutting the lower overtones, it lightens the tone.



Frequency (B Frequency)

[00...99]

Specifies the cutoff frequency of filter 1B.

This will be displayed if “Type (Filter1 Type)” (4.1-1a) is **Low Pass & High Pass**.

4.1-1d: UTILITY

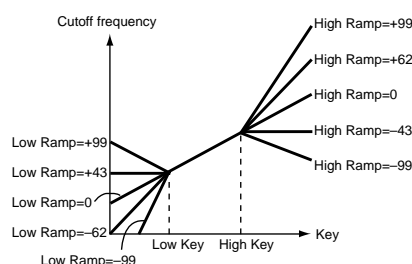
☞ “Write Program” (1.1-1d), “Copy Oscillator,” “Swap Oscillator” (2.1-1d)

4.1-2: Mod.1 (Filter1 Modulation1)

Indicates settings for keyboard tracking which modifies the tone by modulating the filter 1 cutoff frequency “Frequency (A/B Frequency),” and intensity settings for the filter 1 EG, etc.



How cutoff frequency is affected by keyboard location and the Ramp setting (“Int. to A,” “Int. to B”=+50)



Int. to A (KBDTrk Int. to A) [-99...+99]

Specifies the depth and direction of the effect on filter 1A produced by keyboard tracking settings “Low (KBDTrk Key Low),” “High (KBDTrk Key High),” “Low (KBDTrk Ramp Low),” and “High (KBDTrk Ramp High).”

With **positive (+)** settings, the effect will be in the same direction as the keyboard tracking settings. With **negative (-)** settings, the effect will be in the opposite direction.

Int. to B (KBDTrk Int. to B) [-99...+99]

Specifies the depth and direction of the effect on filter 1B produced by keyboard tracking. (≠ “Int. to A”)

4.1-2a: Keyboard Track AMSource

These settings specify keyboard tracking for the cutoff frequency of filter 1. The way in which the cutoff frequency is affected by the keyboard location you play can be specified by the Key: “Low” and “High,” Ramp: “Low” and “High” parameters.

Key:

Specifies the note numbers at which keyboard tracking will begin to apply, and set the “Int. to A” and “(Int. to B)” parameters to specify the depth and direction of the change applied to filter 1 A and B.

For the range of notes between “Low (KBDTrk Key Low)” and “High (KBDTrk Key High),” the cutoff frequency will change according to the keyboard location (pitch).

note You can also input the note number by holding down the [ENTER] key and playing a note on a connected MIDI device.

Low (KBDTrk Key Low) [C-1...G9]

Keyboard tracking will apply to the range below the specified note number.

High (KBDTrk Key High) [C-1...G9]

Keyboard tracking will apply to the range above the specified note number.

Ramp (Ramp Setting):

Specifies the angle of keyboard tracking.

Low (KBDTrk Ramp Low) [-99...+99]

High (KBDTrk Ramp High) [-99...+99]

If “Int. to A (KBDTrk Int. to A)” and “Int. to B (KBDTrk Int. to B)” are set to +50, “Low (KBDTrk Ramp Low)” is set to -62 and “High (KBDTrk Ramp High)” is set to +62, the angle of the change in cutoff frequency will correspond to the keyboard location (pitch). This means that the oscillation that occurs when you increase the “Resonance (A Resonance)” (4.1-1b) will correspond to the keyboard location.

If you set “Low (KBDTrk Ramp Low)” to +43 and “High (KBDTrk Ramp High)” to -43, the cutoff frequency will not be affected by keyboard location. Use this setting when you do not want the cutoff frequency to change for each note.

4.1-2b: Filter EG

Int. to A (Intensity to A) [-99...+99]

Specifies the depth and direction of the effect that the time-varying changes created by the filter 1 EG will have on the filter 1A cutoff frequency.

With **positive (+)** settings, the sound will become brighter when the EG levels set by Filter 1 EG “L (Level)” and “T (Time)” parameters (4.1-5a) are in the “+” area, and darker when they are in the “-” area.

With **negative (-)** settings, the sound will become darker when the EG levels set by Filter 1 EG “L (Level)” and “T (Time)” parameters are in the “+” area, and brighter when they are in the “-” area.

Int. to B (Intensity to B) [-99...+99]

Specifies the depth and direction of the effect that the time-varying changes created by the filter 1 EG will have on the filter 1B cutoff frequency.

≠ (“Int. to A” Intensity to A)

Vel to A (Velocity to A) [-99...+99]

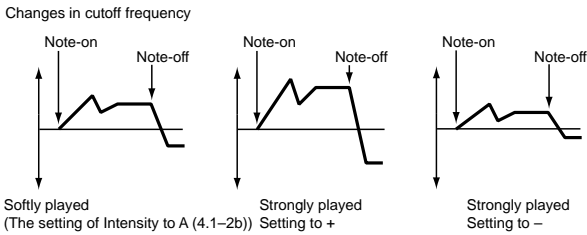
This parameter specifies the depth and direction of the effect that velocity will have on the time-varying changes created by the filter 1 EG (as set by “Filter 1 EG” 4.1-5) to control the filter 1A cutoff frequency.

With **positive (+) values**, playing more strongly will cause the filter 1 EG to produce greater changes in cutoff frequency. With **negative (-) values**, playing more strongly will also cause the filter 1 EG to produce greater changes in cutoff frequency, but with the polarity of the EG inverted.

Vel to B (Velocity to B) [-99...+99]

This parameter specifies the depth and direction of the effect that velocity will have on the time-varying changes created by the filter 1 EG to control the filter 1B cutoff frequency.

≠ (“Vel to A” Velocity to A).



AMS (Filter EG AMS) [Off, (EXT)]
 Selects the source that will control the depth and direction of the effect that the time-varying changes produced by the filter 1 EG will have on the cutoff frequency of filters 1A and 1B (⇨p.206 “AMS List”).

Int. to A (AMS Int. to A) [-99...+99]
 Specifies the depth and direction of the effect that “AMS (Filter EG AMS)” will have on filter 1A. For details on how this will apply, refer to “Int. to A (Intensity to A).”

Int. to B (AMS Int. to B) [-99...+99]
 Specifies the depth and direction of the effect that “AMS (Filter EG AMS)” will have on filter 1B. For details on how this will apply, refer to “Int. to A (Intensity to A).”

MIDI The sum of the settings for “Int. to A (B),” “Vel to A (B),” and “Int. to A (B) (AMS Int. to A/B)” will determine the depth and direction of the effect produced by the filter EG.

■ 4.1-2c: UTILITY

⇨ “Write Program” (1.1-1d), “Copy Oscillator,” “Swap Oscillator” (2.1-1d)

4.1-3: Mod.2 (Filter1 Modulation2)

Indicates settings for the controller that will modify the tone by applying modulation to the filter 1 cutoff frequency “Frequency (A/B Frequency).”
 If “Type (Filter Type)” (4.1-1a) is **Low Pass Resonance**, the filter B parameters will not be displayed.

4.1-3a

PROG 4.1:Ed-Filter1 Mod.2:Filter A AMS1	
Filter Modulation	
Filter-A	AMS1: Velocity Intensity: +55
	AMS2: Ribbon #16 Intensity: +49
Filter-B	AMS1: JS % Intensity: +88
	AMS2: AfterT Intensity: +88

4.1-3b

4.1-3a: Filter Modulation

Filter-A:

AMS1 (Filter A AMS1) [Off, (PEG, AEG, EXT)]
 Selects the source that will control modulation of the filter 1A cutoff frequency (⇨p.206 “AMS List”).

Intensity (A AMS1 Intensity) [-99...+99]
 Specifies the depth and direction of the effect that “AMS1 (Filter A AMS1)” will have.
 When “AMS1 (Filter A AMS1)” is JS X, a **positive (+) value** for this parameter will cause the cutoff frequency to rise when the joystick is moved toward the right, and fall when the joystick is moved toward the left. With a **negative (-) value** for this parameter, the opposite will occur.

This value is added to the setting of the Filter A “Frequency (A Frequency)” (4.1-1b).

AMS2 (Filter A AMS2) [Off, (PEG, AEG, EXT)]
Intensity (A AMS2 Intensity) [-99...+99]
 Selects “AMS2 (Filter A AMS2),” and specify the depth and direction of the effect that the selected source will have (⇨“AMS1,” “Intensity”).

Filter-B:

This will be displayed when “Type (Filter Type)” (4.1-1a) is **Low Pass & High Pass**.
 Two alternate modulation sources can be used to modulate the cutoff frequency of filter 1B (⇨“Filter A”).

■ 4.1-3b: UTILITY

⇨ “Write Program” (1.1-1d), “Copy Oscillator,” “Swap Oscillator” (2.1-1d)

4.1-4: lfoMod (LFO Modulation)

Here you can use the filter 1 LFO to apply cyclic modulation to the cutoff frequency of filter 1 (for oscillator 1) to create cyclical changes in tone.

4.1-4a

PROG 4.1:Ed-Filter1 LFO Mod.:LFO1 Int. to A			
Filter LFO1/2 Modulation			
LFO1	Intensity to A: +00	to B: +00	AMS: Off
	JS-Y Int. to A: +00	to B: +00	Int. to A: +00 B: +00
LFO2	Intensity to A: +00	to B: +00	AMS: AfterT
	JS-Y Int. to A: +30	to B: +30	Int. to A: +00 B: +00

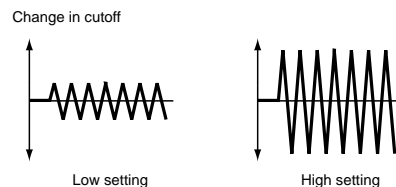
4.1-4b

4.1-4a: Filter LFO1/2 Modulation

LFO1

Intensity to A (LFO1 Int. to A) [-99...+99]
 Specifies the depth and direction of the modulation that OSC1 LFO1 (set by “OSC1 LFO1” 5.3-1a) will have on the cutoff frequency of filter 1A.
Negative (-) settings will invert the phase.

Intensity to B (LFO1 Int. to B) [-99...+99]
 Specifies the depth and direction of the modulation that OSC1 LFO1 will have on the cutoff frequency of filter 1B (⇨“Intensity to A”).



JS-Y Int. to A (LFO1 JS-Y Int. to A) [-99...+99]
 By receiving CC#2 (or by moving the joystick in the -Y direction on a TRITON or other instrument connected to MIDI IN), you can control OSC1 LFO1 to modulate the cut-off frequency of filter 1A.
 Specify the depth and direction of the effect.

For example, as this **value is raised**, OSC1 LFO1 will have a correspondingly greater effect on filter 1 when the joystick is moved in the -Y direction.

JS-Y Int. to B (LFO1 JS-Y Int. to B) [-99...+99]

By receiving CC#2 (or by moving the joystick in the -Y direction on a TRITON or other instrument connected to MIDI IN), you can control OSC1 LFO1 to modulate the cutoff frequency of filter 1B.

Specify the depth and direction of the effect. (⇨“JS -Y Int. to A”)

AMS (LFO1 AMS) [Off, (PEG, FEG, AEG, KT, EXT)]

Selects a source that will control the depth and direction of cutoff frequency change for both filters 1A and 1B (⇨p.206 “AMS List”).

Int. to A (LFO1 AMS Int. to A) [-99...+99]

Specifies the depth and direction of the effect that “AMS” will have on filter 1A.

For example, if “AMS” is **AfterT**, **higher** settings of this parameter will allow greater change to be applied to OSC1 LFO1 when you apply pressure to the keyboard of a connected MIDI instrument.

Int. to B (LFO1 AMS Int. to B) [-99...+99]

Specifies the depth and direction of the effect that “AMS” will have on filter 1B (⇨“Int. to A”).

LFO 2

Adjusts the depth of the cyclic modulation applied by OSC1 LFO2 (set by “OSC1 LFO 2” 5.3-2) to the cutoff frequency of filters 1A and 1B (⇨“LFO 1” 4.1-4a).

Intensity to A (LFO2 Int. to A) [-99...+99]

Intensity to B (LFO2 Int. to B) [-99...+99]

JS-Y Int. to A (LFO2 JS-Y Int. to A) [-99...+99]

JS-Y Int. to B (LFO2 JS-Y Int. to B) [-99...+99]

AMS (LFO2 AMS) [Off, (PEG, FEG, AEG, KT, EXT)]

Int. to A (LFO2 AMS Int. to A) [-99...+99]

Int. to B (LFO2 AMS Int. to B) [-99...+99]

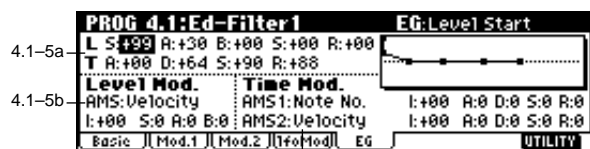
■ **4.1-4b: UTILITY**

⇨“Write Program” (1.1-1d), “Copy Oscillator,” “Swap Oscillator” (2.1-1d)

4.1-5: EG (Filter1 EG) AMSource

Here you can make settings for the EG that will produce time-varying changes in the cutoff frequency of filters 1A and 1B.

The depth of the effect that these settings will have on the filter 1 cutoff frequency is determined by “Filter EG” (4.1-2b).



4.1-5a: Filter1 EG

Specifies the time-varying change produced by the filter 1 EG.

L (Level):

The result will depend on the filter that was selected in “Type (Filter Type)” (4.1-1a). For example with the **Low Pass Resonance** filter, **positive (+)** values of “Int. to A” (4.1-2b) will cause the tone to be brightened by **positive (+) levels**, and darkened by **negative (-) levels**.

S (Start Level) [-99...+99]

Specifies the change in cutoff frequency at the time of note-on.

A (Attack Level) [-99...+99]

Specifies the change in cutoff frequency after the attack time has elapsed.

B (Break Point Level) [-99...+99]

Specifies the change in cutoff frequency after the decay time has elapsed.

S (Sustain Level) [-99...+99]

Specifies the change in cutoff frequency that will be maintained from after the slope time has elapsed until note-off occurs.

R (Release Level) [-99...+99]

Specifies the change in cutoff frequency that will occur when the release time has elapsed.

T (Time):

These parameters specify the time over which each change will occur.

A (Attack Time) [00...99]

Specifies the time over which the level will change from note-on until the attack level is reached.

D (Decay Time) [00...99]

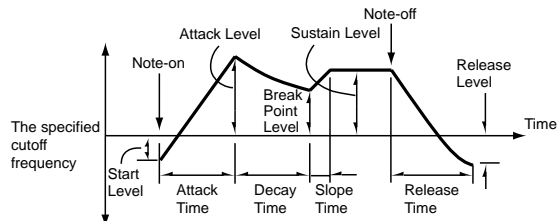
Specifies the time over which the level will change from the attack level to the break point level.

S (Slope Time) [00...99]

Specifies the time over which the level will change after the decay time has elapsed until the sustain level is reached.

R (Release Time) [00...99]

Specifies the time over which the level will change after note-on occurs until the release level is reached.



4.1-5b: Level Mod. (Level Modulation)

These settings let you use alternate modulation to control the “L (Level)” parameters of the filter 1 EG.

AMS (Level Mod. AMS) [Off, (KT, EXT)]

Selects the source that will control the “L (Level)” parameters of the filter 1 EG (⇨p.206 “AMS List”).

I (AMS Intensity) [-99...+99]

Specifies the depth and direction of the effect that “AMS (Level Mod. AMS)” will have.

For example, if “AMS (Level Mod. AMS)” is **Velocity**, and you set “S (AMS SW Start),” “A (AMS SW Attack)” and “B (AMS SW Break)” to + and set “I (AMS Intensity)” to a **positive (+) value**, the EG levels will rise as you play more strongly. If “Intensity” is set to a **negative (-) values**, the EG levels will fall as you play more strongly.

With a setting of **0**, the levels specified by “Filter 1 EG” (4.1-5a) will be used.

S (AMS SW Start) [-, 0, +]

Specifies the direction in which “AMS (Level Mod. AMS)” will affect “S (Start Level).” When “I (AMS Intensity)” has a **positive (+) value**, a setting of + for this parameter will allow “AMS” to raise the EG level, and a setting of - will allow “AMS” to lower the EG level. With a setting of **0** there will be no change.

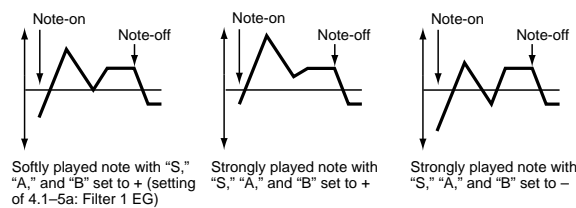
A (AMS SW Attack) [-, 0, +]

Specifies the direction in which “AMS (Level Mod. AMS)” will affect “A(Attack Level).” When “I (AMS Intensity)” has a **positive (+) value**, a setting of + for this parameter will allow “AMS” to raise the EG level, and a setting of - will allow “AMS” to lower the EG level. With a setting of **0** there will be no change.

B (AMS SW Break) [-, 0, +]

Specifies the direction in which “AMS (Level Mod. AMS)” will affect “B (Break Point Level).” When “I (AMS Intensity)” has a **positive (+) value**, a setting of + for this parameter will allow “AMS” to raise the EG level, and a setting of - will allow “AMS” to lower the EG level. With a setting of **0** there will be no change.

Filter 1 EG changes (level) (AMS = Velocity, Intensity = a positive (+) value)



4.1-5c: Time Mod. (Time Modulation)

These settings let you use alternate modulation to control the “T (Time)” parameters of the filter 1 EG.

AMS1 (Time Mod. AMS1) [Off, (KT, EXT)]

Selects the source that will control the “T (Time)” parameters of the filter 1 EG (⇨p.206 “AMS List”).

I (AMS1 Intensity) [-99...+99]

Specifies the depth and direction of the effect that “AMS1 (Time Mod. AMS1)” will have.

For example, if “AMS1 (Time Mod. AMS1)” is set to **Flt KTr +/-**, the EG “T (Time)” parameters will be controlled by the Keyboard Track (4.1-2a) settings. With **positive (+) values** of

this parameter, **positive (+) values** of “Ramp (Ramp Setting)” (4.1-2a) will lengthen the EG times, and **negative (-) values** of “Ramp (Ramp Setting)” will shorten the EG times. The direction of change is specified by “A (AMS1 SW Attack),” “D (AMS1 SW Decay),” “S (AMS1 SW Slope),” and “R (AMS1 SW Release).”

With a setting of **0**, the times specified by “Filter1 EG” (4.1-5a) will be used.

If “AMS1 (Time Mod. AMS1)” is set to **Velocity**, **positive (+) values** of this parameter will cause EG times to lengthen as you play more strongly, and **negative (-) values** will cause EG times to shorten as you play more strongly.

With a setting of **0**, the times specified by “Filter1 EG” will be used.

A (AMS1 SW Attack) [-, 0, +]

Specifies the direction in which “AMS1 (Time Mod. AMS1)” will affect the attack time. With **positive (+) values** of “I (AMS1 Intensity),” setting this parameter to + will allow AMS1 to lengthen the time, and setting this parameter to - will allow AMS1 to shorten the time. With a setting of **0** there will be no change.

D (AMS1 SW Decay) [-, 0, +]

Specifies the direction in which “AMS1 (Time Mod. AMS1)” will affect the decay time. With **positive (+) values** of “I (AMS1 Intensity),” setting this parameter to + will allow AMS1 to lengthen the time, and setting this parameter to - will allow AMS1 to shorten the time. With a setting of **0** there will be no change.

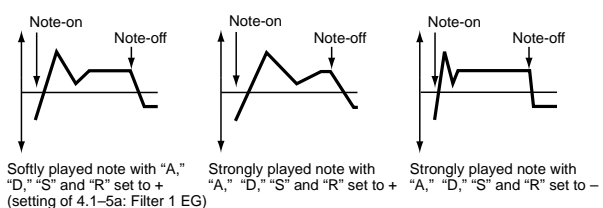
S (AMS1 SW Slope) [-, 0, +]

Specifies the direction in which “AMS1 (Time Mod. AMS1)” will affect the slope time. With **positive (+) values** of “I (AMS1 Intensity),” setting this parameter to + will allow AMS1 to lengthen the time, and setting this parameter to - will allow AMS1 to shorten the time. With a setting of **0** there will be no change.

R (AMS1 SW Release) [-, 0, +]

Specifies the direction in which “AMS1 (Time Mod. AMS1)” will affect the release time. With **positive (+) values** of “I (AMS1 Intensity),” setting this parameter to + will allow AMS1 to lengthen the time, and setting this parameter to - will allow AMS1 to shorten the time. With a setting of **0** there will be no change.

Filter 1 EG changes (Time) (AMS = Velocity, Intensity = a positive (+) value)



AMS2 (Time Mod. AMS2) [Off, (EXT, KT)]

I (AMS2 Intensity) [-99...+99]

A (AMS2 SW Attack) [-, 0, +]

D (AMS2 SW Decay) [-, 0, +]

S (AMS2 SW Slope) [-, 0, +]

R (AMS2 SW Release) [-, 0, +]

These parameters are the settings for “AMS2” to control the “Time” parameters of the filter 1 EG (⇨“AMS1”-“R”).

4.1-5d: UTILITY



☞ “Write Program” (1.1-1d), “Copy Oscillator,” “Swap Oscillator” (2.1-1d)

Sync Both EGs

If you select “Sync Both EGs” from the Utility menu and press the [F8] key, a check mark will appear at the left of “Sync Both EGs.” In this state, the filter 1 EG and the filter 2 EG can be edited simultaneously. (Editing either one will cause the other to change.)

note “Sync Both EGs” cannot sync the filter EG and amp EG independently. For example if you sync in 5.1-3d, it will be synced here as well.

note This can be selected only if “Mode (Oscillator Mode)” (2.1-1a) is **Double**.

PROG 4.2: Ed-Filter2

4.2-1: Basic

4.2-2: Mod.1 (Filter2 Modulation1)

4.2-3: Mod.2 (Filter2 Modulation2)

4.2-4: lfoMod (LFO Modulation)

4.2-5: EG (Filter2 EG) **AMS**Source

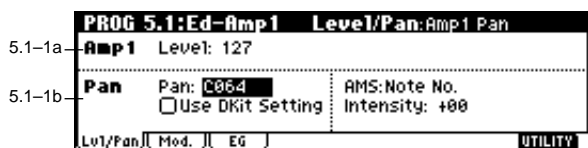
Indicates settings for filter 2, which controls the tone of oscillator 2. You can select either a 24 dB/oct low pass filter with resonance, or a 12 dB/oct low pass filter and 12 dB/oct high pass filter connected in series. Filter 2 can be used when “Mode (Oscillator Mode)” (2.1-1a) is **Double**. (☞“PROG 4.1: Ed-Filter 1”)

PROG 5.1: Ed-Amp1

Indicates settings for amp 1 which controls the volume of oscillator 1. Pan settings are also made here.

5.1-1: Lvl/Pan (Level/Pan)

These parameters control the volume and pan of oscillator 1.



5.1-1c

5.1-1a: Amp1 Level

Level (Amp1 Level) [0...127]

Sets the volume of oscillator 1.

MIDI The volume of a program can be controlled by CC#7 (volume) and CC#11 (expression). The resulting level is determined by multiplying the values of CC#7 and CC#11. The Global MIDI channel “MIDI Channel” (GLOBAL 2.1-1a) is used for control.

5.1-1b: Pan

Pan (Amp1 Pan) [Random, L001...C064...R127]

Sets the pan (stereo location) of oscillator 1.

A setting of **L001** places the sound at far left, **C064** in the center, and **R127** to far right.

Random: The sound will be heard from a different location at each note-on.

MIDI This can be controlled by CC#10 (panpot). A CC#10 value of 0 or 1 will place the sound at the far left, a value of 64 will place the sound at the location specified by the “Pan” setting for each oscillator, and a value of 127 will place the sound at the far right. This is controlled on the global MIDI channel “MIDI Channel” (GLOBAL 2.1-1a).

Use DKit Setting [Off, On]

This is valid when “Mode (Oscillator Mode)” (2.1-1a) is set to **Drums**.

On (Checked): The sound will be output at the “Pan” setting that has been made for each key of the drum kit (GLOBAL 5.1-3a). When “Mode (Oscillator Mode)” is **Drums**, you will normally use this setting.

Off (Unchecked): All notes will be output as specified by the “Pan (Amp1 Pan)” setting.

AMS (Pan AMS) [Off, (PEG, FEG, AEG, LFO, KT, EXT)]

Selects the source that will modify pan (☞p.206 “AMS List”). This change will be relative to the “Pan (Amp1 Pan)” setting.

Intensity [-99...+99]

Specifies the depth of the effect produced by “AMS (Pan AMS).”

For example, if “Pan (Amp1 Pan)” is set to **C064** and “AMS (Pan AMS)” is **Note Number**, **positive (+) values** of this parameter will cause the sound to move toward the right as the note numbers increase beyond the C4 note (i.e., as you play higher), and toward the left as the note numbers decrease (i.e., as you play lower). **Negative (-) values** of this parameter will have the opposite effect.

5.1-1c: UTILITY

☞ “Write Program” (1.1-1d), “Copy Oscillator,” “Swap Oscillator” (2.1-1d)

5.1-2: Mod. (Amp1 Modulation)

These settings allow you to apply modulation to amp 1 (for oscillator 1) to modulate the volume.

PROG 5.1:Ed-Amp1		Mod.:KBDTrk Key Low	
5.1-2a	Keyboard Track	Key Low:F#4	High:F#4
		Ramp Low:+04	High:+00
5.1-2b	Amp Mod.	Velocity Int:+50	AMS:AfterT Int:+00
	LFO1 Mod.	Intensity:+00	AMS:Off Int:+00
	LFO2 Mod.	Intensity:+00	AMS:Off Int:+00
	Lvl/Fan/Mod.	EG	UTILITY

5.1-2c

5.1-2a: Keyboard Track

These parameters let you use keyboard tracking to adjust the volume of oscillator 1. Use the “Key” and “Ramp” parameters to specify how the volume will be affected by the keyboard location that you play.

Key (Keyboard Track Key):

Specifies the note number at which keyboard tracking will begin to apply.

The volume will not change between “Low (KBDTrk Key Low)” and “High (KBDTrk Key High).”

note You can also input the note number by holding down the [ENTER] key and playing a note on a connected MIDI device.

Low (KBDTrk Key Low) [C-1...G9]

Keyboard tracking will apply to the range of notes below the note number you specify here.

High (KBDTrk Key High) [C-1...G9]

Keyboard tracking will apply to the range of notes above the note number you specify here.

Ramp (Ramp Setting):

Specifies the angle of the keyboard tracking.

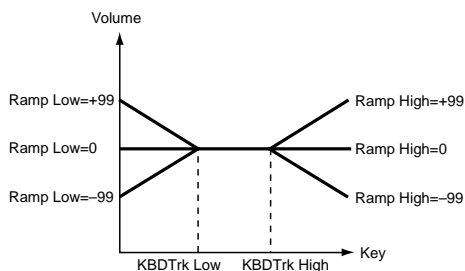
Low (KBDTrk Ramp Low) [-99...+99]

With **positive (+) values** of this parameter, the volume will increase as you play notes below the “Low (KBDTrk Key Low)” note number. With **negative (-) values**, the volume will decrease.

High (KBDTrk Ramp High) [-99...+99]

With **positive (+) values** of this parameter, the volume will increase as you play notes above the “High (KBDTrk Key High)” note number. With **negative (-) values**, the volume will decrease.

Volume change produced by keyboard location and Ramp settings



5.1-2b: Amp Mod., LFO1 Mod., LFO2 Mod.

Indicates settings to specify how the volume of oscillator 1 will be controlled by velocity, OSC1 LFO1, and OSC1 LFO2.

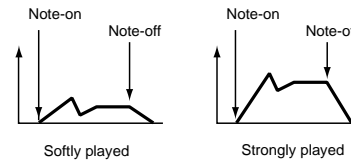
Amp Mod. (Amp Modulation)

Velocity Int. (Amp Velocity Int.) [-99...+99]

With **positive (+) values**, the volume will increase as you play more strongly.

With **negative (-) values**, the volume will decrease as you play more strongly.

Volume change (with positive (+) values of this parameter)



AMS (Amp AMS) [Off, (PEG, FEG, EXT)]

Selects the source that will control the volume of amp 1 (see p.206 “AMS List”) (EXT) **Velocity** cannot be selected.

Int. (AMS Intensity) [-99...+99]

Specifies the depth and direction of the effect that “AMS (Amp AMS)” will have.

The actual volume will be determined by multiplying the value of the changes produced by the amp EG with the values of Alternate Modulation etc., and if the levels of the amp EG are low, the modulation applied by Alternate Modulation will also be less.

For example, if you set “AMS (Amp AMS)” to **AfterT** and press down on the keyboard of a connected MIDI instrument, the volume will increase if you have set this parameter to a **positive (+) value**. However if the volume is already at maximum due to the EG settings etc., it will not be possible to increase the volume any further. If you have set this parameter to a **negative (-) value**, pressing down on the keyboard will decrease the volume.

LFO1 Mod. (LFO1 Modulation)

Intensity (LFO1 Intensity) [-99...+99]

These parameters let you use “OSC1 LFO1” (5.3-1) to control the oscillator 1 volume.

Negative (-) values will invert the LFO waveform.

AMS (LFO1 AMS) [Off, (PEG, FEG, AEG, KT, EXT)]

Selects a source that will control the depth by which “OSC1 LFO1” will modulate the volume of oscillator 1 (see p.206 “AMS List”).

Int. (AMS Intensity) [-99...+99]

Specifies the depth and direction of the effect that “OSC1 LFO1” will have on the volume of oscillator 1. **Negative (-) values** will invert the LFO waveform.

LFO2 Mod. (LFO2 Modulation)

Intensity (LFO2 Intensity) [-99...+99]

AMS (LFO2 AMS) [Off, (PEG, FEG, AEG, KT, EXT)]

Int. (AMS Intensity) [-99...+99]

Specifies the depth and direction of the effect that “OSC1 LFO2” (5.3-2) will have on the volume of oscillator 1. Refer to the preceding sections “LFO1 Mod. (LFO1 Modulation).”

■ 5.1-2c: UTILITY

☞ “Write Program” (1.1-1d), “Copy Oscillator,” “Swap Oscillator” (2.1-1d)

5.1-3: EG (Amp1 EG) AMSource

Indicates settings to specify how Amp 1 will cause the volume of oscillator 1 to change over time.

PROG 5.1:Ed-Amp1 EG:Start Level

L S:000 A:+99 B:+99 S:+66

T A:+00 D:+72 S:+85 R:+27

Level Mod. **Time Mod.**

AMS:Velocity AMS1:Note No. I:+00 A:0 D:0 S:0 R:0

I:+00 S:0 A:0 B:0 AMS2:Velocity I:+00 A:0 D:0 S:0 R:0

Lu1/Fan Mod. Eg UTILITY

5.1-3a
5.1-3b
5.1-3c
5.1-3d

5.1-3a: Amp1 EG

These parameters specify how the amp 1 EG will change over time.

L (Level):

S (Start Level) [00...99]

Specifies the volume level at note-on.
If you want the note to begin at a loud level, set this to a high value.

A (Attack Level) [00...99]

Specifies the volume level that will be reached after the attack time has elapsed.

B (Break Point Level) [00...99]

Specifies the volume level that will be reached after the decay time has elapsed.

S (Sustain Level) [00...99]

Specifies the volume level that will be maintained from after the slope time has elapsed until note-off occurs.

Time:

A (Attack Time) [00...99]

Specifies the time over which the volume will change after note-on until it reaches the attack level.
If the start level is 0, this will be the rise time of the sound.

D (Decay Time) [00...99]

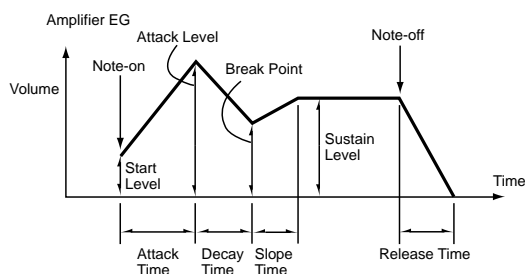
Specifies the time over which the volume will change from when it reaches the attack level until it reaches the break point level.

S (Slope Time) [00...99]

Specifies the time over which the volume will change from when it reaches the break point level until it reaches the sustain level.

R (Release Time) [00...99]

Specifies the time over which the volume will change after note-off until it reaches 0.



5.1-3b: Level Mod. (Level Modulation)

These parameters let you use AMS to control the amp 1 EG levels that were specified in "Amp 1 EG" (5.1-3a).

AMS (Level Mod. AMS) [Off, (KT, EXT)]

Selects the source that will control the "Level" parameters of the amp 1 EG (⇨p.206 "AMS List").

I (AMS Intensity) [-99...+99]

Specifies the depth and direction of the effect that "AMS (Level Mod. AMS)" will have.

For example, if "AMS (Level Mod. AMS)" is **Velocity**, setting "S (AMS SW Start)," "A (AMS SW Attack)," and "B (AMS SW Break)" to + and setting "Intensity" to a **positive (+) value** will cause the amp 1 EG volume levels to increase as you play more strongly. Setting "Intensity" to a **negative (-) value** will cause the amp 1 EG volume levels to decrease as you play more strongly. With a setting of 0, the levels will be as specified in "Amp 1 EG" (5.1-3a).

S (AMS SW Start) [-, 0, +]

Specifies the direction in which "AMS (Level Mod. AMS)" will change "S (Start Level)." If "I (AMS Intensity)" is set to a **positive (+) value**, setting this parameter to + will allow AMS to increase the EG level, and setting this parameter to - will allow AMS to decrease the EG level. With a setting of 0, no change will occur.

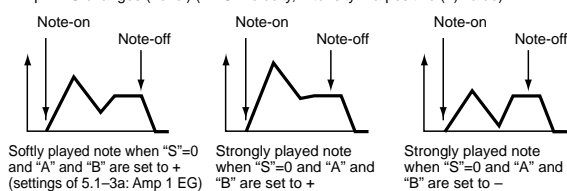
A (AMS SW Attack) [-, 0, +]

Specifies the direction in which "AMS (Level Mod. AMS)" will change "A (Attack Level)." If "I (AMS Intensity)" is set to a **positive (+) value**, setting this parameter to + will allow AMS to increase the EG level, and setting this parameter to - will allow AMS to decrease the EG level. With a setting of 0, no change will occur.

B (AMS SW Break) [-, 0, +]

Specifies the direction in which "AMS (Level Mod. AMS)" will change "B (Break Point Level)." If "I (AMS Intensity)" is set to a **positive (+) value**, setting this parameter to + will allow AMS to increase the EG level, and setting this parameter to - will allow AMS to decrease the EG level. With a setting of 0, no change will occur.

Amp 1 EG changes (Level) (AMS=Velocity, Intensity = a positive (+) value)



5.1-3c: Time Mod. (Time Modulation)

You can use two AMS sources to control the Amp 1 EG times that were specified in "Amp 1 EG" (5.1-3a).

AMS1 (Time Mod. AMS1) [Off, (EXT, KT)]

Selects the source that will control the "Time" parameters of Amp 1 EG. (⇨p.206 "AMS List")

I (AMS1 Intensity) [-99...+99]

Specifies the depth and direction of the effect that "AMS1 (Time Mod. AMS1)" will have.

For example, if "AMS1 (Time Mod. AMS1)" is **Amp KT +/-**, the (Amp) "Keyboard Track" settings (5.1-2a) will control the EG "Time" parameters. With **positive (+) values** of this

parameter, **positive (+) values** of “Ramp (Ramp Setting)” will cause EG times to be lengthened, and **negative (-) values** of “Ramp (Ramp Setting)” will cause EG times to be shortened. The direction of the change is specified by “A (AMS1 SW Attack),” “D (AMS1 SW Decay),” “S (AMS1 SW Slope),” and “R (AMS1 SW Release).”

When “AMS1 (Time Mod. AMS1)” is **Velocity**, **positive (+) values** will cause EG times to lengthen as you play more strongly, and **negative (-) values** will cause EG times to shorten as you play more strongly. With a setting of **0**, the EG times will be as specified in “Amp1 EG” (5.1–3a).

A (AMS1 SW Attack) [-, 0, +]

Specifies the direction of the effect that “AMS1 (Time Mod. AMS1)” will have on “A (Attack Time).” With **positive (+) values** of “I (AMS1 Intensity),” setting this parameter to + will allow AMS1 to lengthen the time, and setting it to - will allow AMS1 to shorten the time. With a setting of **0** there will be no effect.

D (AMS1 SW Decay) [-, 0, +]

Specifies the direction of the effect that “AMS1 (Time Mod. AMS1)” will have on “D (Decay Time).” With **positive (+) values** of “I (AMS1 Intensity),” setting this parameter to + will allow AMS1 to lengthen the time, and setting it to - will allow AMS1 to shorten the time. With a setting of **0** there will be no effect.

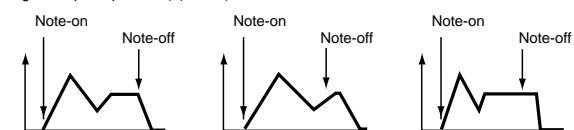
S (AMS1 SW Slope) [-, 0, +]

Specifies the direction of the effect that “AMS1 (Time Mod. AMS1)” will have on “S (Slope Time).” With **positive (+) values** of “I (AMS1 Intensity),” setting this parameter to + will allow AMS1 to lengthen the time, and setting it to - will allow AMS1 to shorten the time. With a setting of **0** there will be no effect.

R (AMS1 SW Release) [-, 0, +]

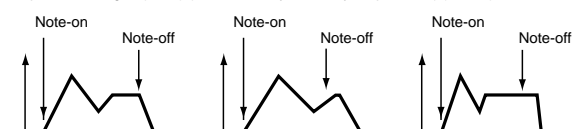
Specifies the direction of the effect that “AMS1 (Time Mod. AMS1)” will have on “R (Release Time).” With **positive (+) values** of “I (AMS1 Intensity),” setting this parameter to + will allow AMS1 to lengthen the time, and setting it to - will allow AMS1 to shorten the time. With a setting of **0** there will be no effect.

Amp 1 EG changes (Time)
(AMS=Amp KTrk +/+, Intensity = a positive (+) value)
(When Amp Keyboard Track (5.1–2a) Low Ramp= a positive (+) value, and High Ramp = a positive (+) value)



Settings of 5.1–3a: Amp 1 EG
Low-pitched note played with “A,” “D,” “S,” and “R” at +
High-pitched note played with “A,” “D,” “S,” and “R” at -

Amp 1 EG changes (Time) (AMS=Velocity, Intensity= a positive (+) value)



Softly played note with “A,” “D,” “S” and “R” at + (settings “A,” “D,” “S” and “R” at + of 5.1–3a: Amp 1 EG)
Strongly played note with “A,” “D,” “S” and “R” at +
Strongly played note with “A,” “D,” “S” and “R” at -

AMS2 (Time Mod. AMS2)	[Off, (EXT, KT)]
I (AMS2 Intensity)	[-99...+99]
A (AMS2 SW Attack)	[-, 0, +]
D (AMS2 SW Decay)	[-, 0, +]
S (AMS2 SW Slope)	[-, 0, +]
R (AMS2 SW Release)	[-, 0, +]

These parameters specify how “AMS2 (Time Mod. AMS2)” will control the amp 1 EG “Time” parameters (⇨ “AMS1 (Time Mod. AMS1)” – “R(AMS1 SW Release)”).

■ 5.1–3d: UTILITY



⇨ “Write Program” (1.1–1d), “Copy Oscillator,” “Swap Oscillator” (2.1–1d)

Sync Both EGs

If you select “Sync Both EGs” from the Utility menu and press the [F8] key, a check mark will appear at the left of “Sync Both EGs.” In this state, the amp 1 EG and the amp 2 EG can be edited simultaneously. (Editing either one will cause the other to change.) (⇨ 4.1–5d **note**)

PROG 5.1: Ed–Amp

This page is displayed if the separately sold EXB-MOSS option is installed.
(⇨ EXB-MOSS owner’s manual & p.251 “EXB-MOSS option”)

PROG 5.2: Ed–Amp2

Indicates settings for amp 2 which controls the volume of oscillator 2. Pan settings are also made here.

5.2–1: Lvl/Pan (Level/Pan)

5.2–2: Mod. (Amp2 Modulation)

5.2–3: EG (Amp2 EG) **AMSource**

These will appear when “Mode (Oscillator Mode)” (2.1–1a) is **Double**. (⇨ “5.1: Ed–Amp1”)

PROG 5.2: Ed–EGs

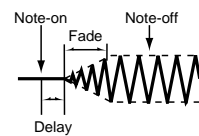
This page is displayed if the separately sold EXB-MOSS option is installed.
(⇨ EXB-MOSS owner’s manual & p.251 “EXB-MOSS option”)

PROG 5.3: Ed-LFOs

Here you can make settings for the LFO that can be used to cyclically modulate the Pitch, Filter, and Amp of oscillators 1 and 2. There are two LFO units for each oscillator. By setting the LFO1 or LFO2 Intensity to a **negative (-) value** for Pitch, Filter, or Amp, you can invert the LFO waveform.

5.3-1: OSC1LFO1 (OSC1 LFO1) AMSource

Indicates settings for the “OSC1 LFO1,” which is the first LFO that can be used for oscillator 1.



Key Sync. [Off, On]

On (Checked): Key Sync. will be **On**. The LFO will start each time you play a note, and an independent LFO will operate for each note.

Off (Unchecked): Key Sync. will be **Off**, and the LFO effect that was started by the first-played note will continue to be applied to each newly-played note. (In this case, Delay and Fade will be applied only to the LFO when it is first started.)

Fade [00...99]

Specifies the time from when the LFO begins to apply until it reaches the maximum amplitude. When “Key Sync.” is **Off**, the fade will apply only when the LFO is first started.

How “Fade” affects the LFO (when “Key Sync.” is **On**)

Dly (Delay) [0...99]

Specifies the time from note-on until the LFO effect begins to apply.

When “Key Sync.” is **Off**, the delay will apply only when the LFO is first started.

5.3-1a: OSC1 LFO1

Waveform [Triangle 0...Random6 (Vect.)]

Selects the LFO waveform.

The numbers that appear at the right of some of the LFO waveforms indicate the phase at which the waveform will begin.

Triangle 0		Step Triangle - 4	
Triangle 90		Step Triangle - 6	
Triangle Random		Step Saw - 4	
	Phase will change randomly at each key-in	Step Saw - 6	
Saw 0			
Saw 180			
	Sawtooth down ↓		
Square		Random1 (S/H):	Conventional sample & hold (S/H) in which the level changes randomly at fixed intervals of time
Sine		Random2 (S/H):	Both the levels and the time intervals will change randomly.
Guitar		Random3 (S/H):	The maximum level and minimum level will alternate at random intervals of time (i.e., a square wave with random period).
Exp.Triangle		Random4 (Vect.)	
Exp.Saw Down		Random5 (Vect.)	
Exp.Saw Up		Random6 (Vect.)	
			These types cause Random 1-3 to change smoothly. They can be used to simulate the instability of acoustic instruments etc.

Frequency [00...99]

Sets the LFO frequency. A setting of **99** is the fastest.

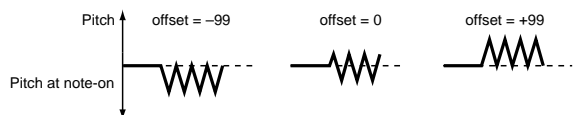
Ofs (Offset) [-99...+99]

Specifies the central value of the LFO waveform.

For example, with a setting of **0** as shown in the following diagram, the vibrato that is applied will be centered on the note-on pitch. With a setting of **+99**, the vibrato will only raise the pitch above the note-on pitch, in the way in which vibrato is applied on a guitar.

When “Waveform” is set to **Guitar**, the modulation will occur only in the positive (+) direction even if you set “Offset” to **0**.

Offset settings and pitch change produced by vibrato



5.3-1b: Freq.Mod (Frequency Modulation)

You can use two alternate modulation sources to adjust the speed of the OSC1 LFO1.

AMS1 (Freq. AMS1)

[Off, (PEG, FEG, AEG, LFO2, KT, EXT)]

Selects the source that will adjust the frequency of the oscillator 1 LFO1 (see p.206 “AMS List”). OSC1 LFO1 can be modulated by OSC1 LFO2.

Int (AMS1 Intensity) [-99...+99]

Specifies the depth and direction of the effect that “AMS1 (Freq. AMS1)” will have.

When this parameter is set to a value of **16, 33, 49, 66, 82, or 99**, the LFO frequency being can be increased by a maximum of 2, 4, 8, 16, 32, or 64 times respectively (or decreased by 1/2, 1/4, 1/8, 1/16, 1/32, or 1/64 respectively).

For example, if “AMS1 (Freq. AMS1)” is **Note No.**, **positive (+) values** of this parameter will cause the oscillator 1 LFO to speed up as you play higher notes. **Negative (-) values** will cause the oscillator 1 LFO to slow down as you play higher notes. This change will be centered on the C4 note. If “AMS1 (Freq. AMS1)” is **JS+Y #01**, higher values of this setting will cause the OSC1 LFO speed to become corresponding faster when a joystick is operated on a TRITON etc. connected to MIDI IN. With a setting of **+99**, moving the joystick all the way away from yourself will increase the LFO speed by approximately 64 times.

AMS2 (Freq. AMS2)

[Off, (PEG, FEG, AEG, LFO2, KT, EXT)]

Int (AMS2 Intensity) [-99...+99]

Indicates settings for a second alternate modulation source that will adjust the frequency of the oscillator 1 LFO1.

☞ “AMS1 (Freq. AMS1),” “Int. (AMS1 Intensity)”

5.3-1c: MIDI/Tempo Sync. (Frequency MIDI/Tempo Sync.)

Sync. (MIDI/Tempo Sync.) [Off, On]

On (Checked): The LFO frequency will synchronize to the tempo (MIDI Clock). In this case, the values you specified for “Frequency” (5.3-1a) and “Freq.Mod” (5.3-1b) will be ignored.

Base Note (Sync. Base Note)

[♩, ♪, ♪♩, ♪♩♩, ♪♩♩♩, ♪♩♩♩♩, ♪♩♩♩♩♩, ♪♩♩♩♩♩♩]

Times (Sync. Times) [01...16]

When “Sync. (MIDI/Tempo Sync.)” is checked, these parameters specify a note length “Base Note (Sync. Base Note)” relative to “♪ (Tempo)” and the multiple “Times (Sync. Times)” that will be applied to it. These parameters will determine the frequency of the OSC1 LFO1. For example if “Base Note (Sync. Base Note)” is ♪ (quarter note) and “Times (Sync. Times)” is 04, the LFO will perform one cycle every four beats.

Even if you change the “♪ (Tempo)” setting of the arpeggiator, the LFO will always perform one cycle every four beats.

■ 5.3-1d: UTILITY



⇨ “Write Program” (1.1-1d)

For details on how to select the desired utility function, refer to “PROG 1.1-1d: UTILITY.”

Swap LFO 1&2

This exchanges the settings of LFO 1 and 2. If LFO2 is selected in AMS1 (Freq. AMS1) or AMS2 (Freq. AMS2) of LFO1 Freq.Mod (5.3-1b), the settings will be invalid for LFO2 after LFO1 and 2 have been exchanged. If you select this from the OSC1 LFO1 or OSC1 LFO2 page, LFO1 and LFO2 of OSC1 will be exchanged.

- ① Select “Swap LFO 1&2” to access the dialog box.
- ② To execute, press the [F8] (“OK”) key. To cancel without executing, press the [F7] (“Cancel”) key.

5.3-2: OS1LFO2 (OSC1 LFO2) AMSource

Here you can make settings for the OSC1 LFO2, which is the second LFO that can be applied to oscillator 1. (⇨ “5.3-1: OS1LFO1 (OSC1 LFO1)”) However, it is not possible to use the LFO to apply modulation in “AMS1 (Freq. AMS1)” or “AMS2 (Freq. AMS2)” of Freq. Mod.

5.3-3: OS2LFO1 (OSC2 LFO1) AMSource

This can be used when “Mode (Oscillator Mode)” (2.1-1a) is set to **Double**. Here you can make settings for the OSC2 LFO1, which is the first LFO that can be applied to oscillator 2 (⇨ “5.3-1: OS1LFO1 (OSC1 LFO1)”).

5.3-4: OS2LFO2 (OSC2 LFO2) AMSource

This can be used when “Mode (Oscillator Mode)” (2.1-1a) is set to **Double**. Here you can make settings for the OSC2 LFO2, which is the second LFO that can be applied to oscillator 2 (⇨ “5.3-1: OS1LFO1 (OSC1 LFO1)” and “5.3-2: OS1LFO2 (OSC1 LFO2)”).

PROG 6.1: Ed-Arp. (Arpeggiator)

Here you can make settings for the arpeggiator used by the program.

These arpeggiator settings can be linked when you switch programs. To link, check the **Program** item in “Auto Arp. “Program” (GLOBAL 1.1-1c): **On**.

The arpeggiator can be switched on/off by the [ARP ON/OFF] key. When on, the key LED will light.

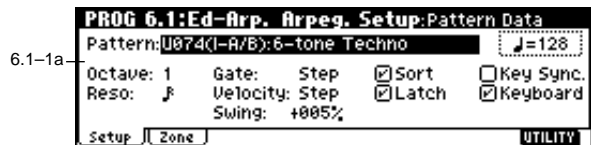
The settings of the REALTIME CONTROLS C-mode [TEMPO] knob, [ARP-GATE] knob, [ARP-VELOCITY] knob, and [ARP ON/OFF] key can be saved for each program.

These settings will be valid when Auto Arp. “Program” is **On**.

MIDI You can control the arpeggiator from an external sequencer, or record arpeggio note data on an external sequencer. (⇨ p.228)

note “Pattern,” “Resolution,” “Octave,” “Sort,” “Latch,” “Key Sync.,” “Keyboard,” and “♪ (Tempo)” can also be set in the Arp. Play page of 1.1:Play.

6.1-1: Setup (Arpeg. Setup)



6.1-1a 6.1-1b

6.1-1a: Arpeggiator Setup

⇨ Refer to BG p.85.

Pattern* [P000...P004, U000(I-A/B)...U327(E-H)]

Selects the arpeggio pattern.

P000: UP	Preset Arpeggio Pattern
P001: DOWN	Preset Arpeggio Pattern
P002: ALT1	Preset Arpeggio Pattern
P003: ALT2	Preset Arpeggio Pattern
P004: RANDOM	Preset Arpeggio Pattern
U000(I-A/B)...U199(I-A/B)	(for Preloaded User Arpeggio Pattern)
U200(E-A)...U215(E-A), U216(E-B)...U231(E-B), U232(E-C)...U247(E-C), U248(E-D)...U263(E-D), U264(E-E)...U279(E-E), U280(E-F)...U295(E-F), U296(E-G)...U311(E-G), U312(E-H)...U327(E-H)	(for EXB-PCM series, User Arpeggio Pattern)

P000-P004 are preset arpeggio patterns, **U000 (I-A/B)-U327(E-H)** are user arpeggio patterns. User arpeggio patterns can be created in GLOBAL 6.1.

note Arpeggio patterns **U000 (I-A/B)–U327(E-H)** can be selected using the numeric keys [0]–[9] and the [ENTER] key.

Octave* [1, 2, 3, 4]

Specifies the number of octaves in which the arpeggio will be played.

If a user arpeggio pattern is selected, the range of the arpeggio will depend on the “Octave Motion” (GLOBAL 6.1–1c) setting.

Reso (Resolution)* [♪₃, ♪, ♪₃, ♪, ♪₃, ♪]

Specifies the timing resolution of the arpeggio. The notes of the arpeggio will be played at the interval you specify: ♪₃, ♪, ♪₃, ♪, ♪₃, or ♪. The speed of the arpeggio pattern is determined by the “♪(Tempo)” and the “Resolution.”

Gate [000...100(%), Step]

Specifies the length (gate time) of each note in the arpeggio.
000–100(%): Each note will be played with the specified gate time.

Step: This is available when an user arpeggio pattern **U000 (I-A/B)–U327 (E-H)** is selected for “Pattern.” When this is selected, the gate time specified for each step will be used.

The gate time can also be controlled by the [ARP-GATE] knob. Rotating the knob toward the left will shorten the gate time, and rotating it toward the right will lengthen the gate time. When the knob is at the 12 o’clock position, the gate time will be as specified here.

Velocity [001...127, Key, Step]

Specifies the velocity of the notes in the arpeggio.

001–127: Each note will sound with the specified velocity value.

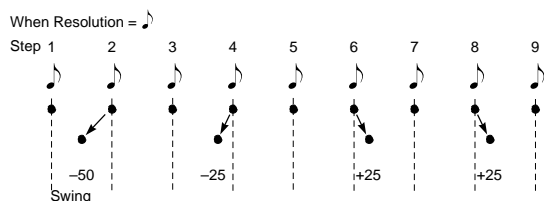
Key: Each note will sound with the velocity value at which it was actually played.

Step: This is available when an user arpeggio pattern **U000 (I-A/B)–U327 (E-H)** is selected for “Pattern.” When this is selected, the velocity specified for each step will be used.

The velocity can also be controlled by the [ARP-VELOCITY] knob. Rotating the knob toward the left will decrease the velocity, and rotating it toward the right will increase the velocity. When the knob is at the 12 o’clock position, the velocity will be as specified here.

Swing [–100...+100(%)]

This parameter shifts the timing of the odd-numbered notes of the arpeggio.



Sort* [Off, On]

This specifies the order in which the notes you press will be arpeggiated.

On (Checked): Notes will be arpeggiated in the order of their pitch, regardless of the order in which you pressed them.

Off (Unchecked): Notes will be arpeggiated in the order in which you pressed them.

Latch*

Specifies whether or not the arpeggio will continue playing after you take your hand off the keyboard of a connected MIDI instrument.

On (Checked): The arpeggio will continue playing after you remove your hand from the keyboard.

Off (Unchecked): The arpeggio will stop when you remove your hand from the keyboard.

Key Sync.* [Off, On]

Specifies whether the arpeggio pattern will begin when you press a key on a connected MIDI instrument, or whether it will always follow the “♪(Tempo)” setting.

On (Checked): The arpeggio pattern will start playing from the beginning when a note-on occurs from a condition where no keys are pressed. This setting is suitable when you are playing in realtime and want the arpeggio to play from the beginning of the measure.

Off (Unchecked): The arpeggio pattern will always play according to the “♪(Tempo).”

Keyboard*

This specifies whether the notes you play on the keyboard of a connected MIDI instrument will be sounded as usual in addition to being sounded as part of the arpeggio.

On (Checked): The notes you play will be sounded on their own, in addition to being sounded as part of the arpeggio. For example if you simultaneously press two or more notes, they will be sounded as usual in addition to being played as arpeggiated notes.

Off (Unchecked): Only the arpeggiated notes will be heard.

* These parameters can also be set in “1.1–3: Arp.”

6.1–1b: Arpeggiator Tempo

♪ (Tempo) [040...240, EXT]

Sets the tempo.

This can also be set by the [TEMPO] knob. When “MIDI Clock” (GLOBAL 2.1–1a) is **External**, this will indicate **EXT**, and the arpeggiator will synchronize to MIDI Clock messages received from an external MIDI device.

■ 6.1–1c: UTILITY



☞ “Write Program” (1.1–1d)

For details on how to select the desired utility function, refer to “PROG 1.1–1d: UTILITY.”

Copy Arpeggiator

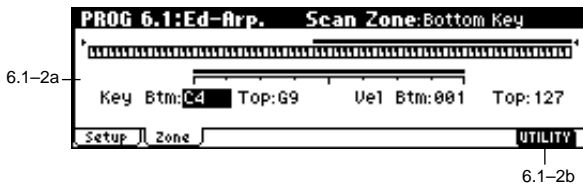
This command copies arpeggio settings.

- ① Select “Copy Arpeggiator” to access the dialog box.



- ② In “From” specify the copy source arpeggio settings (mode, bank, number).
- ③ If you are copying from Combination or Multi mode, specify whether you wish to copy from **A** or **B**.
- ④ To execute the Copy Arpeggio operation, press the [F8] (“OK”) key. To cancel, press the [F7] (“Cancel”) key.

6.1-2: Zone (Scan Zone)



6.1-2a: Scan Zone

Zone Map

This shows the “Scan Zone” setting.

Key:

Btm (Bottom Key) [C-1...G9]

Top (Top Key) [C-1...G9]

These parameters specify the range of notes (keys) for which the arpeggiator will function. “Top” is the upper limit, and “Btm” is the lower limit.

Vel:

Btm (Bottom Velocity) [001...127]

Top (Top Velocity) [001...127]

Specifies the range of velocities for which the arpeggiator will function. “Top” is the upper limit, and “Btm” is the lower limit.

note The note number and velocity can also be specified by holding down the [ENTER] key and pressing a note on the keyboard of a connected MIDI device.

6.1-2b: UTILITY

☞ “Write Program” (1.1-1d), “Copy Arpeggiator” (6.1-1c)

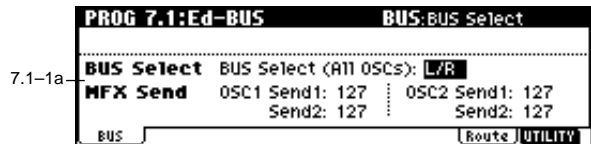
PROG 7.1: Ed-BUS

These settings specify the bus on which the output of the oscillator will be sent, and adjust the send levels to the master effects.

☞ For details on insertion effects, refer to p.141 “8. Effect Guide.”

7.1-1: BUS

The following diagram shows the LCD screen when “Mode (Oscillator Mode)” (2.1-1a) is set to **Single** or **Double**.



7.1-1a: BUS

BUS Select

BUS Select (All OSCs)

[L/R, IFX1...5, 1...4, 1/2, 3/4, Off]

Specifies the bus to which oscillators 1 and 2 will be sent.

▲ If this is set to **1/2** or **3/4**, the oscillator pan settings (5.1-1b, 5.2-1) will be used to output the sound in stereo from AUDIO OUTPUT (INDIVIDUAL) 1/2 or 3/4. When the oscillator pan is controlled by CC#10 (pan) or AMS (Alternate Modulation Source), the sound will be output with the pan setting that is in effect at note-on. Unlike the case when this is set to **L/R** to output the sound from (MAIN) L/MONO and R, the pan of a sounding note will not change in realtime.

If you wish to adjust the pan in realtime during a note and output the sound from AUDIO OUTPUT (INDIVIDUAL) 1/2 or 3/4, set “BUS Select” to **IFX1** (or **IFX2-IFX5**), set “IFX1” (or **IFX2-IFX5** (7.2-1a)) to **000: No Effect**, and set the “BUS Select” (7.2-1a) after passing through IFX to **1/2** or **3/4**.

MFX Send

OSC1 Send1 [000...127]

Sets the volume (send level) at which the output of OSC1 will be sent to master effect 1. This is valid when “BUS Select” is set to **L/R** or **Off**.

If “BUS Select” is set to **IFX1**, **IFX2**, **IFX3**, **IFX4** or **IFX5**, the send levels to master effect 1 and 2 are set by “S1 (Send1(MFX1))” and “S2 (Send2(MFX2))” (7.2-1a) after passing through IFX 1/2/3/4/5 of the InsertFX pages.

OSC1 Send2 [000...127]

Sets the volume (send level) at which the output of OSC1 will be sent to master effect 2 (☞ “OSC1 Send1”).

OSC2 Send1 [000...127]

OSC2 Send2 [000...127]

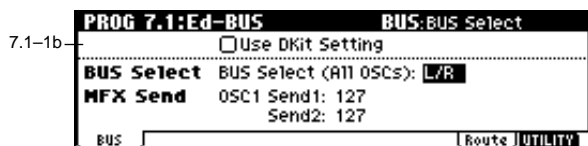
Sets the volume (send level) at which the output of OSC2 will be sent to master effects 1 and 2. These parameters will be valid when “Mode (Oscillator Mode)” (2.1-1a) is set to **Double** and “BUS Select” is set to **L/R** or **Off**.

MIDI CC#93 will control the Send 1 level for OSC 1 and 2, and control change #91 will control the Send 2 level for OSC 1 and 2. These are controlled on the global MIDI channel "MIDI Channel" (GLOBAL 2.1-1a).

The actual send level is determined by multiplying these values with the send level setting of each oscillator.

7.1-1b: Use DKit Setting

The LCD screen shown below is for when "Mode (Oscillator Mode)" (2.1-1a) is set to **Drums**.



Use DKit Setting

[Off, On]

This will be available when "Mode (Oscillator Mode)" is set to **Drums**.

On (Checked): The "BUS (BUS Select)" (GLOBAL 5.1-3a) setting for each key of the selected drum kit will be used. Check this when you want to apply an insert effect to an individual drum instrument, or to output an individual drum instrument to one of the AUDIO OUTPUT (INDIVIDUAL) jacks.

If the "Mode (Oscillator Mode)" is **Single** or **Double**, this setting has no effect.

Off (Unchecked): The setting of the "BUS Select," "MFX Send" (7.1-1c) parameter described below will be used. All drum instruments will be sent to the specified bus.

7.1-1c: UTILITY



☞ "Write Program" (1.1-1d)

For details on how to select the desired utility function, refer to "PROG 1.1-1d: UTILITY."

Copy Insert Effect

This command copies effect settings from Program, Combination, Multi, or Sampling mode.

- 1 Select "Copy Insert Effect" to access the dialog box.



- 2 In "From" select the copy source mode, bank, and number.

note You can use the [BANK] and [A]-[H] keys to select the bank.

- 3 Select the effect that you wish to copy. You can also copy from a master effect. If "All" is **checked**, all effect settings will be copied (i.e., the contents of the InsertFX page and the effect parameters of IFX 1-5, but not "Ctrl Ch").

⚠ If you are copying from a master effect, the result may not be identical, due to differences in the routing and level settings of a master effect.

- 4 Select the copy destination insert effect. If you **check** "Post IFX Mixer Setting," the "Chain," "Pan (CC#8)," "BUS Select," "S1 (Send1(MFX1))" and "S2 (Send2(MFX2))" settings that follow the copy source insert effect will also be copied. If this is **unchecked**, only the effect type and its parameters will be copied.
- 5 To execute the Copy Insert Effect command, press the [F8] ("OK") key. To cancel, press the [F7] ("Cancel") key.

Swap Insert Effect

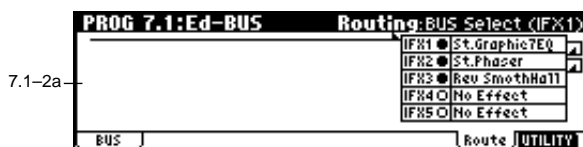
This command swaps (exchanges) insert effect settings.

- 1 Select "Swap Insert Effect" to access the dialog box.



- 2 In "Source 1" and "Source 2," select each of the insert effects that you wish to swap.
- 3 To execute the Swap Insert Effect command, press the [F8] ("OK") key. To cancel, press the [F7] ("Cancel") key.

7.1-2: Route (Routing)

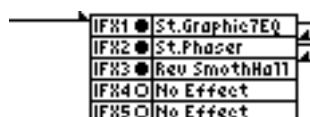


7.1-2a

7.1-2b

7.1-2a: Routing

This displays the setting status of the insert effects.



This shows the insert effect routing, the names of the selected effects, their on/off setting, and chain status. The insert effect type, on/off, and chain settings can be made in the Setup page of 7.2: Ed-InsertFx.

You can use the [INC], [DEC] keys and [VALUE] dial to set "BUS Select" (☞7.1-1a).

7.1-2b: UTILITY

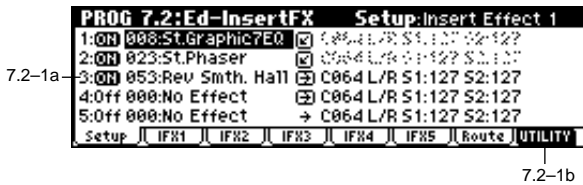
☞ "Write Program" (1.1-1d), "Copy Insert Effect," "Swap Insert Effect" (7.1-1c)

PROG 7.2: Ed-InsertFX

7.2-1: Setup

Here you can select the type of each insert effect, turn it on/off, and make chain settings.

The direct sound (Dry) of an insert effect is always stereo input and output. The input/output of the effect sound (Wet) will depend on the effect type (p.142).



7.2-1b

7.2-1a: InsertFX Setup

IFX1 On/Off — IFX5 On/Off [Off, ON]

Selects the insert effect on/off.

When this is **Off**, the input will be output without change. (For **000: No Effect**, on/off will produce the same result.)

MIDI Separately from this setting, you can use control change #92 to turn off all insert effects together. A value of 0 will be off, and a value of 1-127 will be the original setting. This message is received on the global MIDI channel specified by “MIDI Channel” (GLOBAL 2.1-1a).

Insert Effect 1, 5 [000...089: name]

Insert Effect 2, 3, 4 [000...102: name]

Selects the type of each insert effect.

For “Insert Effect 1” and “Insert Effect 5” you can select from 90 types of effect: **000: No Effect** – **089: Reverb-Gate**. Double-size effects cannot be used.

For “Insert Effect 2,” “Insert Effect 3” and “Insert Effect 4” you can select from 103 types of effect: **000: No Effect** – **102: Hold Delay**.

If you select a double-size effect, the next insert effect will be unavailable for use. For example if you select a double-size effect for IFX2, IFX3 cannot be used. A maximum of two double-size effects can be used (normal size for IFX1, double size for IFX2 and IFX4) (p.142).

These effects can also be selected by category in Utility “Select by Category” (7.2-1b).

Chain [(Off), (ON)]

Selects “chain” on/off for each insert effect.

For example if “Chain” for IFX1 is set to (ON), IFX1 and IFX2 will be connected in series. If “BUS Select” (7.1-1a) is set to **IFX1**, IFX1 and IFX2 will be inserted in series.

A maximum of five insert effects (IFX1-IFX5) can be inserted in series. When effects are chained, the “Pan (CC#8),” “BUS Select,” “S1 (Send1(MFX1))” and “S2 (Send2(MFX2))” settings that follow the last IFX in the chain will be used.

Pan(CC#8) (Post IFX Pan CC#8) [L000...C064...R127]

Sets the pan after the sound has passed through the insert effect. This setting is valid only when the following “BUS Select” is set to **L/R** (p.145).

MIDI CC#8 will control.

BUS Select [L/R, 1, 2, 3, 4, 1/2, 3/4, Off]

Specifies the bus to which the sound will be sent after passing through the insert effect. Normally you will set this to **L/R**. If you wish to output to **AUDIO OUTPUT (INDIVIDUAL)**, set this to **1, 2, 3, 4, 1/2, or 3/4**. The **Off** setting is used when you wish to use “S1 (Send1(MFX1))” and “S2 (Send2(MFX2))” and in addition connect to the master effects in series.

S1 (Send1 (MFX1)) [000...127]

S2 (Send2 (MFX2)) [000...127]

Sets the send levels to the master effects 1 and 2 for the sound that has passed through the insert effect. These settings are valid when “BUS Select” (7.1-1a) has been set to **L/R** or **Off**.

MIDI Control change CC#93 will control the Send 1 level, and control change CC#91 will control the Send 2 level. These messages are received on the global MIDI channel specified by “MIDI Channel” (GLOBAL 2.1-1a).

7.2-1b: UTILITY



“Write Program” (1.1-1d), “Copy Insert Effect,” “Swap Insert Effect” (7.1-1c)

Select by Category

Selects insert effects by category.

For the procedure, refer to “Select by Category” (p.2).

note This command can be used when selecting “Insert Effect 1” – “Insert Effect 5.”



7.2-2: IFX 1

7.2-3: IFX 2

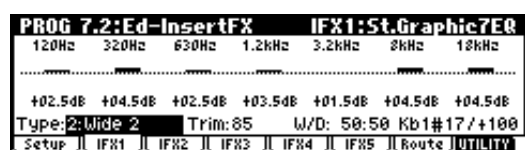
7.2-4: IFX 3

7.2-5: IFX 4

7.2-6: IFX 5

Here you can set the effect parameters for the IFX 1/2/3/4/5 that were selected in the Setup page (p.151).

MIDI Effect dynamic modulation (Dmod) is controlled on the global MIDI channel “MIDI Channel” (GLOBAL 2.1-1a). (p.211 “D.mod”)



7.2-2a

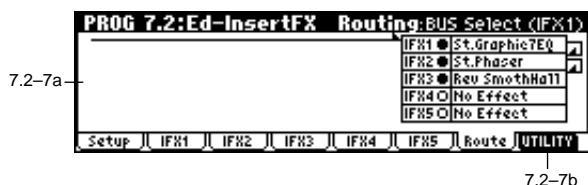
■ 7.2-2(...6)a: UTILITY

☞ “Write Program” (1.1-1d)

7.2-7: Routing

7.2-7a: Routing

This shows the status of the insert effect settings. (☞7.1-2a)



7.2-7a

7.2-7b

■ 7.2-1b: UTILITY

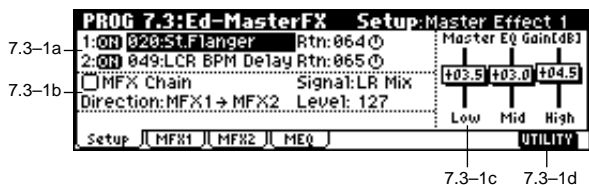
☞ “Write Program” (1.1-1d), “Copy Insert Effect,” “Swap Insert Effect” (7.1-1c)

PROG 7.3: Ed-MasterFX

☞ For details on the master effects, refer to p.146.

7.3-1: Setup

Here you can select the master effect types, switch them on/off, specify chaining, and set the master EQ.



7.3-1a

7.3-1b

7.3-1c 7.3-1d

7.3-1a: Master Effect Setup

The master effects do not output the direct sound (Dry). The return level (“Rtn 1, 2”) sends the effect sound (Wet) to the L and R bus, and this is mixed with the direct sound (“BUS Select” L/R: 7.1-1a, 7.2-1a).

The master effects are monaural input. The sound that is panned to L and R after passing through the oscillator and insert effects is mixed to a monaural signal as adjusted by the “S1 (Send1 (MFX1))” and “S2 (Send2 (MFX2))” levels, and input to the master effects.

⚠ The master effects are **mono-in stereo-out**. Even when a stereo-input type effect is selected, the input will be monaural.

MFX1 On/Off, MFX2 On/Off [Off, ON]

Switch master effect 1, 2 on/off. When off, the output will be muted.

MIDI Separately from this setting, you can use CC#94 to switch master effect 1 on/off, CC#95 to switch master effect 2 on/off. A value of 0 will be off, and a value of 1-127 will be the original setting. This is controlled on the global MIDI channel “MIDI Channel” (GLOBAL 2.1-1a).

Master Effect 1, 2 [000...089: name]

Selects the effect type for master effect 1, 2. You can select from 90 types of effect: **000: No Effect-089: Reverb-Gate**. (Double-size effects cannot be selected.) If **000: No Effect** is selected, the output from the master effect will be muted.

Rtn 1, 2 (Return 1, 2) [000...127]

Adjusts the return levels from the master effects to the L/R bus (main output L/MONO, R).

7.3-1b: Chain

MFX Chain [Off, On]

On (Checked): Chain (series connection) will be turned on for MFX1 and MFX2. (☞p.148)

Direction (Chain Direction)

[MFX1→MFX2, MFX2→MFX1]

Specifies the direction of the connection when MFX1 and MFX2 are chained.

MFX1→MFX2: Connect from MFX1 to MFX2.

MFX2→MFX1: Connect from MFX2 to MFX1.

Signal (Chain Signal) [LR Mix, L Only, R Only]

When chain is On, this parameter specifies how the stereo output signal of the first master effect will be connected to the input (mono) of the next master effect.

L/R Mix: The stereo output L/R of the first master effect will be mixed before being input to the next master effect.

L Only, R Only: Only the left or right channel of the output will be input to the next master effect.

Level (Chain Level) [000...127]

Sets the send level from the first master effect to the next master effect when chain is turned on.

7.3-1c: Master EQ Gain [dB]

Sets the gain for the three-band EQ located immediately before the sound of the L/R bus is sent from the AUDIO OUTPUT (MAIN OUT) L/MONO and R jacks. This is linked with the various "Gain" parameters of Master EQ (7.3-4).

- Low [-18.0...+18.0]
- Mid [-18.0...+18.0]
- High [-18.0...+18.0]

The cutoff frequency for "Low," "Mid" and "High" and the "Q" of "Mid" can be adjusted in the MEQ page. These settings are in "dB" units.

7.3-1d: UTILITY



⇨ "Write Program" (1.1-1d)

For details on how to select the desired utility function, refer to "PROG 1.1-1d: UTILITY."

Copy Master Effect

This command lets you copy any desired effect settings from Program, Combination, Multi or Sampling modes.

- ① Select "Copy Master Effect" to access the dialog box.



- ② In "From," select the copy source mode, bank, and number.

note You can use the [BANK] and [A]-[H] keys to select the bank.

- ③ Select the effect that you wish to copy. If you select **MFX 1** or **2**, "Rtn (Return)" (return level) will be copied at the same time. If you select **Master EQ**, only the master EQ settings will be copied. You can also copy from an insert effect. If you check "All," all settings of the master effects and master EQ will be copied.

⚠ If you copy from an insert effect the result may not be identical, due to differences in routing and level settings.

- ④ Select the copy destination master effect.
- ⑤ To execute the Copy Master Effect command, press the [F8] ("OK") key. To cancel, press the [F7] ("Cancel") key.

Swap Master Effect

This command swaps (exchanges) the settings of MFX1 and MFX2.

- ① Select "Swap Master Effect" to access the dialog box.
- ② To execute the Swap Master Effect command, press the [F8] ("OK") key. To cancel, press the [F7] ("Cancel") key.

Select by Category

Selects master effects by category. (⇨p.2)

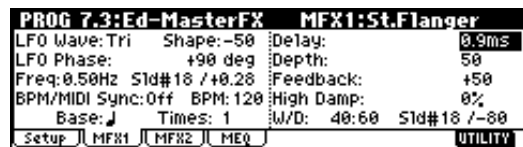
note This command can be used when selecting "Master Effect 1"-"Master Effect 2."



7.3-2: MFX 1

7.3-3: MFX 2

Indicates effect parameter settings for the MFX1 and 2 effects that were selected in the Setup page (⇨p.151).



7.3-2b

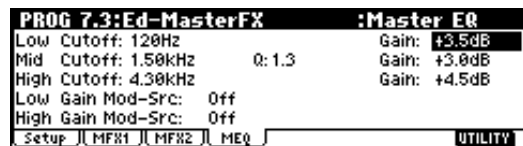
(⇨p.211 "D.mod")

7.3-2(3)a: UTILITY

⇨ "Write Program" (1.1-1d)

7.3-4: MEQ (Master EQ)

The master EQ is a three-band stereo EQ. It is used to adjust the overall tonality of the sound immediately before the L/R bus is output to the AUDIO OUTPUT (MAIN OUT) L/MONO and R jacks (⇨p.203).



7.3-4a

7.3-4a: UTILITY

⇨ "Write Program" (1.1-1d)

2. Combination mode

COMBI PAGE MENU

For details on how to select pages in Combination mode, refer to p.1.



Play	1.1: Play	Select and play combinations. Select a program for each timbre, and set status, pan, and level. Select an arpeggio pattern and make settings. (☞p.31)
P/M	2.1: Ed-Prog/Mix	Select a program for each timbre, and set pan and level. (Same as the 1.1: Play parameters; can be edited from either page.) (☞p.35)
Ctrl	2.2: Ed-Ctrl	Controller settings. (☞p.36)
MOSS	2.3: Ed-MOSS	Displayed if the separately sold EXB-MOSS option is installed. Set EXB-MOSS parameters. (☞p.36)
Prm1	3.1: Ed-Param1	MIDI, OSC, and Pitch settings for each timbre. (☞p.36)
Prm1	3.2: Ed-Param2	Delay and scale settings for each timbre. (☞p.38)
KeyZ	3.3: Ed-Key Zone	Key zone settings for each timbre. (☞p.39)
VelZ	3.4: Ed-Vel Zone	Velocity zone settings for each timbre. (☞p.40)
MIDI1	4.1: Ed-MIDI Filter1	MIDI message transmission/reception filter settings for each timbre, such as Prog Change and After Touch. (☞p.41)
MIDI2	4.2: Ed-MIDI Filter 2	Filter settings such as JS and Ribbon Ctrl. (☞p.41)
MIDI3	4.3: Ed-MIDI Filter 3	Filter settings; Realtime Control Knob (☞p.42)
MIDI4	4.4: Ed-MIDI Filter 4	Filter settings; SW, Other Ctrl Change (☞p.42)
Arp	6.1: Ed-Arp	Arpeggiator settings. (Same as the 1.1: Play parameters; can be edited from either page.) (☞p.43)
BUS	7.1: Ed-BUS	Bus and master effect send level settings for each timbre. (☞p.45)
IFX	7.2: Ed-InsertFX	Insert effect routing, selection, and settings. (☞p.47)
MFX	7.3: Ed-MasterFX	Master effect selection and settings. Master EQ settings. (☞p.48)

COMBI 1.1: Play

In this display page you can select and play Combinations.

1.1-1: Combi (Combination)



1.1-1a: Bank, Combi Select, Category, Cat.Hold, 10's Hold, ↓

Bank (Bank Select) [INT-A...INT-E, EXB-A...EXB-H]

This indicates the combination bank. Use the [BANK] and [A]–[H] keys to select the bank. To select combinations from an internal bank INT-A–INT-E, press the [BANK] key to make the INT/EXB indicator go dark, and press one of the [A]–[E] keys to select the bank. To select combinations from an external bank EXB-A–EXB-H, press the [BANK] key to make the INT/EXB indicator light, and press one of the [A]–[H] keys to select the bank.

All banks can be rewritten. Each bank contains 128 combinations, providing a total of 1,664 combination programs.

INT-A...INT-D	(I-A...I-D)	Preloaded combinations
INT-E	(I-E)	User combinations, EXB-MOSS combinations
EXB-A...EXB-H	(E-A...E-H)	User combinations, EXB-PCM series combinations

! If you have selected the “Program Select” (1.1-2c) edit cell for a timbre 1–8 in the Prog page, BANK [A]–[D] will switch the program banks for timbres 1–8.

Combi Select (Combination Select) [0...127: name]

Select a combination. Select this parameter, and use the [INC], [DEC] keys, numeric keys [0]–[9], or the [VALUE] dial to select a combination. You can also select combinations by category, or using “10’s Hold.” (☞“Category,” “Cat.HOLD,” “10’s HOLD”)

MIDI You can also select combinations by transmitting a MIDI program change message from a connected external MIDI device. (☞p.221)

Category [00...15: name]

This is the combination category display. All combinations are organized into sixteen categories. You can select a category, and then select from combinations that belong to that category. To select combinations by category, use “Cat.HOLD” and Utility “Select by Category.” (☞PROG 1.1-1a)

note To specify the category for a combination, use Utility “Write Combination” (1.1-1d). To modify a category name, use “Category Name Comb. 00–07, 08–15” (GLOBAL 4.1-3/4).

Cat.HOLD

Press the [./HOLD] key and the display will indicate **Cat. HOLD**. The category will be held (fixed). (⇨PROG 1.1-1a)

10's HOLD

When you press the [./HOLD] key, the display will indicate **10's HOLD**, and the ten's place of the combination number will be fixed. (⇨PROG 1.1-1a)

♪ (Tempo) [040...240, EXT]

Sets the tempo of the arpeggiator. This can be adjusted by the REALTIME CONTROLS C-mode [TEMPO] knob. **EXT** will be displayed if "MIDI Clock" (GLOBAL 2.1-1a) is set to **External**, and the arpeggiator will synchronize to the MIDI clock received from an external MIDI device. This parameter can also be set from 6.1: Ed-Arp.

1.1-1b: Combination Information

This displays information for the selected combination. The functions assigned to "SW1," "SW2," and REALTIME CONTROLS B mode [ASSIGNABLE 1-4] knobs will be displayed.

■ 1.1-1c: SW1, SW2

The functions of SW1 and SW2 assigned to the combination can be switched on (**OSW1**) or off (**OSW1**). (⇨2.2: Ed-Ctrl)

■ 1.1-1d: UTILITY



For details on how to select the desired utility function, refer to "PROG 1.1-1d: UTILITY."

Write Combination

This command writes an edited combination into the TRITON's internal memory. Be sure to write any combination that you wish to keep. If the power is turned off or a different combination selected before you write an edited combination, your edits cannot be recovered.

For the procedure, refer to "Write Program" (PROG 1.1-1d).



If you use "Category" to specify a category for the combination that you are writing, you will be able to select it by category when selecting combinations in COMBI 1.1: Play.

note When you press the [WRITE] key, the "Update Combination" dialog box will appear. Here also you can write to the currently selected combination.

Solo Selected Timbre

The Solo function will alternately be switched on/off each time you select "Solo Selected Timbre."

- From the utility menu, choose "Solo Selected Timbre," and press the [F8] ("OK") key to execute the command. When you execute this, a check mark will appear at the left of the "Solo Selected Timbre" menu item, and the Solo function will be on.

- To select the timbre that will be soloed, select a tab or page that displays parameters specific to a timbre. (e.g., 1.1: Play, Prog page "Program Select") When you play a note on a connected MIDI instrument, only the selected timbre will sound, and the remaining timbres will be muted. "Solo" will be displayed in "Selected Timbre Information" (1.1-2c) of each tab or page.

To solo a different timbre, select one of the above parameters for the desired timbre.

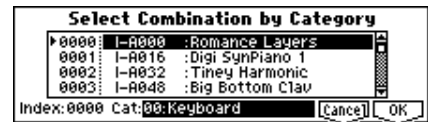
note You can move to timbres "T1"-"T8" by holding down the [TIMBRE/TRACK] key and pressing one of the [F1](1/9)-[F8](8/16) keys.

- To defeat the Solo function, choose "Solo Selected Timbre" from the utility menu once again, and press the [F8] ("OK") key to cancel it.

⚠ If a timbre that is muted by the Solo function has been set to a "Status" (3.1-1a) of **EXT** or **EX2**, MIDI note-on/off messages will not be transmitted by that timbre.

Select by Category

Selects a combination by category. (⇨p.2)



1.1-2: Prog (Timbre Program)

Selects the program that will be used by each timbre.



1.1-2a: Bank, Combi Select, Cat.Hold, 10's Hold, ♪

Bank (Bank Select) [I-A...I-E, E-A...E-H]

Combi Select (Combination Select) [0...127: name]

Cat. (Cat. HOLD)

10's (10's HOLD)

♪ (Tempo) [040...240, EXT]

In the same way as in the Combi page, select a combination and set the tempo of the arpeggiator. (⇨1.1-1a)

1.1-2b: Timbre Number & Category

Timbre Number & Category 1...8

This displays the timbre number and an abbreviated category name.

1.1-2c: Program Select, Program Name

Program Select [I-A000...E-H127]


Selects the program that will be used by each timbre.


When "Program Select" is selected, you can use the [BANK] key, numeric keys [0]–[9], [VALUE] dial, and [INC], [DEC] keys to select a program.

You can move to timbres "T1"–"T8" by holding down the [TIMBRE/TRACK] key and pressing one of the [F1](1/9)–[F8](8/16) keys.

"Program Select" settings can also be made in the Prog page of 2.1: Ed-Prog/Mix.

You can also use Utility "Select by Category" to select programs by category.

 **Bank I-F** can be selected if you have installed the separately sold EXB-MOSS option. When installed, the 128 special EXB-MOSS programs will be available.

 If bank select and program change messages are received on a MIDI channel that matches the MIDI channel of a timbre whose "Status" is **INT**, the program of that timbre will change. However if the MIDI channel of the incoming message matches the global MIDI channel "MIDI Channel," then the combination will change.

If you do not want the combination to change, you can either change the global MIDI channel so that it does not match the channel on which the program change messages are being received, or you can **uncheck** "Combi (Combi Change)" (GLOBAL 2.1-1b). Alternatively, you can **uncheck** "Bank (Bank Change)" (GLOBAL 2.1-1b) so that only the program number will change and the bank will remain the same.

If you wish to change a program without changing the combination, you can also set "Program Change" (4.1-1a) so that the program will change on certain timbres but not on others.

When you select a combination on the TRITON-Rack, a MIDI program change for the selected combination number will be transmitted on the global MIDI channel "MIDI Channel" (GLOBAL 2.1-1a). At the same time, bank select, program change, and volume (CC#7) messages will be transmitted on the MIDI channel specified for each timbre that is set to "Status" (3.1-1a) of **EXT** or **EX2**. However, these messages will not be transmitted for timbres that are set to the same MIDI channel as the global MIDI channel. In this case, **EX2** timbres will show the "Program Select" Bank as "-", and will transmit the bank number that was specified in "Bank (EX2) MSB" and "Bank (EX2) LSB" (3.1-1a).

MIDI messages transmitted when you operate the TRITON are transmitted on the global MIDI channel. At the same time, timbres whose "Status" is **EXT** or **EX2** will transmit the same messages on their own MIDI channel.

Program Name

This displays part of the program name selected for the timbre. In the case of the GM2 variation bank or the GM2 drums bank, the variation bank (1)–(9) or drums bank (d) will be indicated.

1.1-2d: Selected Timbre Information

This shows information on the timbre (1–8) that is currently selected for editing.

Timbre No.: Bank No., Prog No.: and name

This shows the timbre number, and the program bank, number and name selected for that timbre.

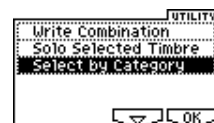
Status (INT, Off, EXT, EX2)

This shows the MIDI and internal tone generator status for each track.

Ch (01...16, Gch)

This is the MIDI channel number specified for the timbre.

■ 1.1-2e: UTILITY



☞ "Write Combination," "Solo Selected Timbre" (1.1-1d)

For details on how to select the desired utility function, refer to "PROG 1.1-1d: UTILITY."

Select by Category

Combinations or the programs used by each timbre can be selected by category.

If you have selected "**Combi Select**," selecting Utility "Select by Category" will access the Select Combination by Category dialog box, allowing you to select a combination by category. (☞ p.32)

If you have selected "**Program Select**," selecting Utility "Select by Category" will access the Select Program by Category (Timbre) dialog box, allowing you to select a program for each timbre by category.

For the procedure of selecting by category, refer to p.2.

1.1-3: Mix (Mixer)

Here you can set the pan and volume for each timbre 1-8.

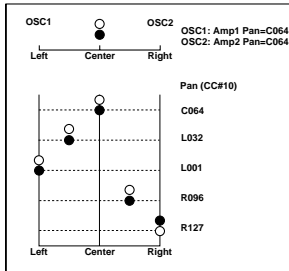
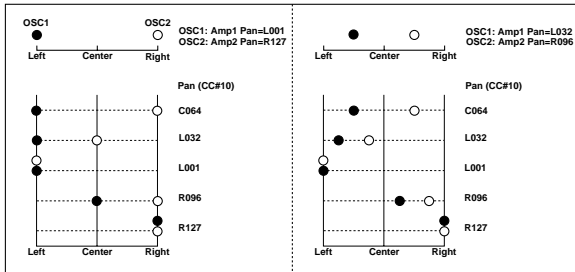


1.1-3a: Pan, Volume

Pan [RND, L001...C064...R127]

Sets the pan for each timbre 1-8. (This parameter can also be set from the Mixer page of 2.1: Ed-Prog/Mix.)

L001...C064...R127: A setting of **L001** is far left and **R127** is far right. A setting of **C064** will reproduce the pan setting that was made for the oscillator in Program mode.



If a mono-type insertion effect is inserted, the setting you make here will be ignored. In this case, the “Pan (CC#8)” parameter in 7.2: Ed-InsertFX, Setup page will adjust the panning of the sound after the insertion effect (⇨p.145 “3. Mixer”).

RND: The oscillator pan will change randomly at each note-on.

MIDI If “Status” (3.1-1a) has been set to **INT**, MIDI control change #10 (panpot) messages can be received to control the setting. CC#10 values of 0 or 1 will place the sound at far left, 64 at center, and 127 at far right. Pan can be controlled by messages received on the “MIDI Channel” (3.1-1a).

Volume [000...127]

Adjusts the volume of each timbre 1-8. (This parameter can also be set from the Mixer page of 2.1: Ed-Prog/Mix.)

MIDI The volume of each timbre is determined by multiplying this volume value with the MIDI volume (CC#7) and expression (CC#11). If “Status” (3.1-1a) has been set to **INT**, incoming MIDI CC#7 or CC#11 messages will control the volume of a timbre. (However these messages will not affect the setting of this parameter.)

If “Status” is **EXT** or **EX2**, the value of this parameter will be transmitted as MIDI CC#7 when the combination is changed. However this will not be transmitted

by a timbre that is set to the same MIDI channel as the global MIDI channel. This message is transmitted on the “MIDI Channel” (3.1-1a) specified for each timbre.

1.1-3b: UTILITY



⇨ “Write Combination,” “Solo Selected Timbre,” “Select by Category” (1.1-1d)

For details on how to select the desired utility function, refer to “PROG 1.1-1d: UTILITY.”

Hold Balance

Adjusts the volume of the Combi while preserving the volume balance between timbres 1-8.

Selects the “Volume” of any timbre, select “Hold Balance” from the Utility menu, and press the [F8] (“OK”) key. A check mark will appear at the left of “Hold Balance.” (The upper left of the LCD screen will indicate [Hold Bal.]) In this state, adjusting any “Volume” value will simultaneously change the volume of the other timbres as well, while preserving the volume balance between timbres 1-8.

1.1-4: Arp. A (Arpeggio Play A)

1.1-5: Arp. B (Arpeggio Play B)

Here you can make arpeggiator settings for the combination. A combination can run two arpeggiators simultaneously. Arpeggiator parameters can be edited in 6.1: Edit-Arp., but certain major parameters can be edited in these pages as well. You can edit these parameters in realtime, for example by changing the arpeggio pattern while playing in COMBI 1.1: Play.

To save the edits you make, use “Write Combination.” The arpeggiator can also be edited in realtime by the REALTIME CONTROLS C-mode [TEMPO] knob, [ARP-GATE] knob, and [ARP-VELOCITY] knob.



1.1-4(5)a: Arpeggiator Run, Timbre assign

Arpeggiator Run A, B (Run A, B) [Off, On]

When the [ARP ON/OFF] key is on, the arpeggiator that is checked here will run if it is assigned to a timbre in “Assign” (6.1-1b).

Even if the arpeggiator is on, you can turn A and B on/off independently.

(This parameter can also be set from the 6.1: Ed-Arp. Setup page.)

Timbre assign

This displays the timbres 1-8 to which arpeggiators A and B are assigned. This can be set in “Assign” (6.1-1b).

1.1-4(5)b: Arpeggiator A(B)

Pattern	[P000....P004, U000(I-A/B)...U327(E-H)]
Reso (Resolution)	[♪ ₃ , ♪, ♪ ₃ , ♪, ♪ ₃ , ♪]
Octave	[1, 2, 3, 4]
Sort	[Off, On]
Latch	[Off, On]
Key Sync.	[Off, On]
Keyboard	[Off, On]

Sets the various parameters of the combination arpeggiator (☞“PROG: Ed–Arp.”). These parameters can also be set in COMBI 6.1: Ed–Arp.

■ 1.1-4(5)c: UTILITY

☞“Write Combination,” “Solo Selected Timbre,” “Select by Category” (1.1-1d)

COMBI 2.1: Ed–Prog/Mixer

2.1-1: Prog (Timbre Program)

Selects the bank and program for each timbre 1-8. These parameters can also be set from the 1.1: Play, Prog page.



2.1-1a

2.1-1b

2.1-1a: Program Select, Program Name

Program Select

Selects the program that will be used by each timbre. (☞1.1-2c)

Program Name

This displays part of the program name selected for each timbre. (☞1.1-2c)

■ 2.1-1b: UTILITY

☞“Write Combination,” “Solo Selected Timbre” (1.1-1d), “Select by Category”: Select Program by Category (Timbre) (1.1-2e)

2.1-2: Mix (Mixer)

Specifies the pan and volume for each timbre 1-8. These parameters can also be set from the 1.1: Play, Mixer page.



2.1-2a

2.1-2b

2.1-2a: Pan, Volume

Pan

Sets the pan of each timbre 1-8. (☞1.1-3a)

Volume

Sets the volume of each timbre 1-8. (☞1.1-3a)

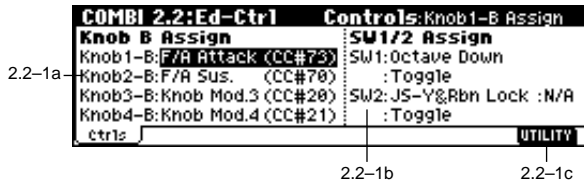
■ 2.1-1b: UTILITY

☞“Write Combination,” “Solo Selected Timbre” (1.1-1d)

COMBI 2.2: Ed-Ctrl

Here you can set the Combination mode functions of the B-mode functions of REALTIME CONTROLS knobs [1]–[4], and “SW1,” “SW2.”

2.2–1: Ctrls (Controls)



2.2–1a: Knob B Assign

These settings assign functions (mainly various control changes) to the “B” mode of the REALTIME CONTROLS knobs [1]–[4] (see p.214 “Realtime Control Knobs B Assign List”). The functions you specify here will be controlled when you operate the REALTIME CONTROLS knobs [1]–[4] in “B” mode.

Since the REALTIME CONTROLS knob [1]–[4] function of the B-mode assignments made for the program assigned to each timbre are not valid for the combination, they must be newly set by these parameters.

Knob1–B (Knob1–B Assign) **AMSource** [Off, ..., MIDI CC#95]
 Knob2–B (Knob2–B Assign) **AMSource** [Off, ..., MIDI CC#95]
 Knob3–B (Knob3–B Assign) **AMSource** [Off, ..., MIDI CC#95]
 Knob4–B (Knob4–B Assign) **AMSource** [Off, ..., MIDI CC#95]

2.2–1b: SW1/2 Assign

These settings assign the function of the “SW1” and “SW2” (see p.213 “SW1, SW2 Assign List”).

Since the function assignments of the “SW1” and “SW2” made for the program assigned to each timbre are not valid for the combination, they must be newly set by these parameters.

SW1 (SW1 Assign) **AMSource** [Off, ..., AfterT Lock :N/A]
 SW1 Mode [Toggle, Momentary]
 SW2 (SW2 Assign) **AMSource** [Off, ..., AfterT Lock :N/A]
 SW2 Mode [Toggle, Momentary]
 (see PROG 2.2–1b)

2.2–1c: UTILITY

see “Write Combination,” “Solo Selected Timbre” (1.1–1d)

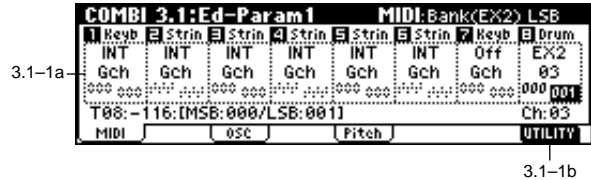
COMBI 2.3: Ed-MOSS

This page is displayed if the separately sold EXB-MOSS option is installed.
 (see EXB-MOSS owner’s manual & p.251 “EXB-MOSS option”)

COMBI 3.1: Ed-Param1

3.1–1: MIDI

Here you can make MIDI settings for each timbre.



3.1–1a: Status, MIDI Channel, Bank(EX2) MSB/LSB

Status [INT, Off, EXT, EX2]

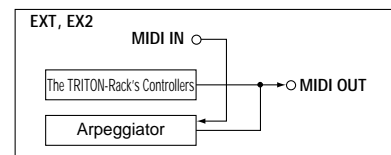
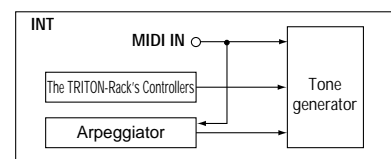
Specifies the status of MIDI and the internal tone generator for each track.

INT: The TRITON-Rack will produce sound in response to MIDI messages from a connected MIDI device. MIDI data will not be transmitted. If the arpeggiator has been specified for a timbre that is set to **INT**, only the internal tone generator will sound, and MIDI messages will not be transmitted to an external device.

Off: The program will not sound, nor will MIDI messages be transmitted.

EXT: The TRITON-Rack will not produce sound, but will transmit MIDI messages to an external device. If the arpeggiator has been specified for a timbre that is set to **EXT**, MIDI messages will be transmitted, but the internal tone generator will not sound. If you operate the controllers of the TRITON-Rack, the internal tone generator will not be controlled, but MIDI messages will be transmitted to control an external MIDI device.

EX2: “Bank (EX2) MSB” and “Bank (EX2) LSB” (3.1–1a) will be enabled. Instead of the bank numbers for I–A–E–H that can be selected on the TRITON-Rack, the bank numbers you specify here will be transmitted via MIDI. In other respects this is the same as **EXT**.



MIDI Channel [01...16, Gch]

Set the MIDI transmit/receive channel for each timbre 1–8.
Gch: The timbre will use the channel that has been selected as the global MIDI channel “MIDI Channel” (GLOBAL 2.1–1a).

When “Status” is **INT**, MIDI messages will be received on the channel you specify here. If this is set to **EXT** or **EX2**, playing the TRITON-Rack will transmit MIDI messages on the MIDI channel specified here. (Messages will also be transmitted simultaneously on the global MIDI channel.)

Bank(EX2) MSB [000:000...127:127]
 Bank(EX2) LSB [000:000...127:127]

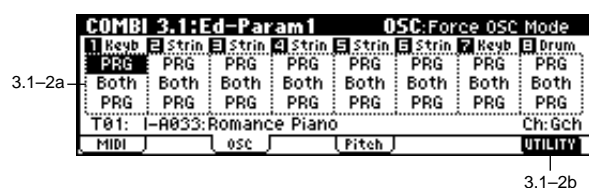
Specifies the bank number that will be transmitted when "Status" is set to **EX2**. If "Status" is not set to **EX2**, this setting has no effect.

3.1-1b: UTILITY

☞ "Write Combination," "Solo Selected Timbre" (1.1-1d)

3.1-2: OSC

These settings specify how each timbre will be sounded.



3.1-2b

3.1-2a: Force OSC Mode, OSC Select, Portamento

Force OSC Mode [PRG, Poly, Mono, LGT]

Specifies the "Mode (Voice Assign Mode)" (PROG 2.1-1b) of the program selected for each timbre 1-8.

PRG: The settings of the program will be used.

Poly: The timbre will play polyphonically, regardless of the settings of the program.

Mono: The timbre will play monophonically, regardless of the settings of the program.

LGT (Legato): The timbre will play monophonically, with single triggering (legato).

With settings of **Mono** or **LGT**, the note priority will be according to the "Priority" (PROG 2.1-1b) setting of the program.

OSC Select [Both, OSC1, OSC2]

Specify the "Mode (Oscillator Mode)" (PROG 2.1-1a) of the program selected for each timbre 1-8. If the "Mode (Oscillator Mode)" is **Double**, you can specify that either or both oscillators sound.

Both: OSC1 and 2 will sound as specified by the settings of the program.

OSC1: Only OSC1 will sound.

OSC2: Only OSC2 will sound. If "Mode (Oscillator Mode)" is **Single** or **Drums**, there will be no sound.

Portamento [PRG, Off, 001...127]

Indicates portamento settings for each timbre 1-8.

PRG: Portamento will be applied as specified by the program settings.

Off: Portamento will be off, even if the original program settings specified for it to be on.

001...127: Portamento will be applied with the portamento time you specify here, even if it is turned off by the program settings.

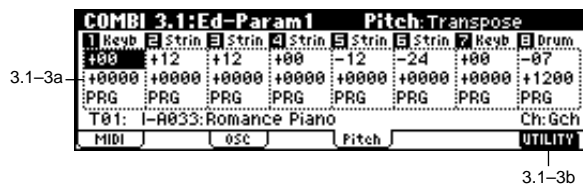
MIDI If the "Status" (3.1-1a) is set to **INT**, CC#05 (portamento time) and CC#65 (portamento switch) messages will be received to control and change this setting. (If the setting is **PRG**, CC#05 portamento time will not be received.) These messages will be received on the MIDI channel specified for each timbre by "MIDI Channel" (3.1-1a).

3.1-2b: UTILITY

☞ "Write Combination," "Solo Selected Timbre" (1.1-1d)

3.1-3: Pitch

Here you can make pitch-related settings for each timbre.



3.1-3b

3.1-3a: Transpose, Detune, Bend Range

Transpose [-24...+24]

Adjusts the pitch of each timbre in semitone steps. 12 units equal one octave.

Detune (BPM Adj) [-1200...+1200]

Adjusts the pitch of each timbre in one-cent units. 0: Normal pitch.

note You can also use the Utility "Detune BPM Adj." (3.1-3b) page menu command to automatically make a detune setting from a calculation in BPM units.

MIDI "Transpose" and "Detune" can be controlled via MIDI RPN messages. Depending on the "Mode (Oscillator Mode)" (PROG 2.1-1a) settings of the programs used by timbres 1-8, they can be controlled as follows. When "Mode (Oscillator Mode)" is **Single** or **Double** MIDI RPN Coarse Tune can be received to control and change the setting of "Transpose," and RPN Fine Tune can be received to control and change the setting of "Detune."

When "Mode (Oscillator Mode)" is **Drums** MIDI RPN Coarse Tune and Fine Tune can be received to control and change the setting of "Detune." The controllable range is ± 1 octave for coarse tune and fine tune together.

Bend Range [PRG, -24...+24]

Specifies the range of pitch change that will occur when pitch bend changes are received, in semitone units.

PRG: The pitch range specified by the program will be used. -24+24: This setting will be used regardless of the setting in the program.

MIDI The MIDI RPN Pitch Bend Change message can be received to control this and change the setting. (However it will not be received if this parameter is set to **PRG**.) This message is received on the MIDI channel for each timbre set by "MIDI Channel" (3.1-1a).

■ 3.1-3b: UTILITY



⇨ “Write Combination,” “Solo Selected Timbre” (1.1-1d)

For details on how to select the desired utility function, refer to “PROG 1.1-1d: UTILITY.”

Detune BPM Adj. (Detune BPM Adjust)

If the program of a timbre uses a phrase or rhythm loop multisample or sample that was created in Sampling mode to a specific BPM (or was loaded in Disk mode), you can use this Utility to modify its BPM value. “Detune BPM Adj.” changes the BPM of a phrase or rhythm by modifying its pitch.

This is valid for a track when timbre “Detune” is selected. When this Utility is executed, the selected “Detune” value will be set automatically. (⇨PROG 2.1-2c, 2.1-3, GLOBAL 5.1-1b, 5.1-2)

- ① Select “Detune BPM Adj.” to access the dialog box.



- ② In “From” specify the original BPM value. In “To” specify the desired BPM value. The appropriate “Detune” value will be calculated automatically from these two values. For example if you set “From” to **60bpm** and “To” to **120bpm**, the “Detune” parameter will be set to +1200 (one octave up).
- ③ To execute the Detune BPM Adjust command, press the [F8] (“OK”) key. To cancel, press the [F7] (“Cancel”) key.

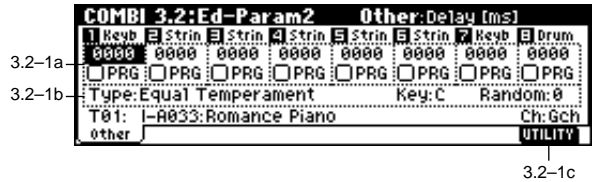
⚠ The detune value that is calculated when you execute this command will be added to “Detune” +0000. You must set the “From” BPM value to the value when “Detune” is +0000. For example if you execute “From” **60bpm** “To” **120bpm**, and then execute “From” **120bpm** “To” **60bpm**, will not return to the original result. (Rather, this will set Detune= -1200, which is one octave down.)

note This command is valid when “Detune” (3.1-3a) is selected.

COMBI 3.2: Ed-Param2

3.2-1: Other

Specifies the delay from note-on until sound is produced for each timbre. Also specifies the scale.



3.2-1a: Delay [ms], Use Prog's Scale

Delay [ms] [0000...5000, KeyOff]

Specifies a delay time from note-on until the sound begins for each timbre.

KeyOff: The note will begin sounding at note-off. In this case, the sound will not die away if the sustain level of the program’s amp EG is other than 0. This setting is used when creating harpsichord sounds. Normally you will set this to 0.

Use Prog's Scale [Off, On]

Each timbre can use the scale that is specified by “Scale” (PROG 2.1-1c).

On (Checked): The scale specified by the program will be used.

Off (Unchecked): The scale specified by “Type (Combi’s Scale)” (3.2-1b) will be used.

3.2-1b: Combi's Scale, Key, Random

Specifies the scale that the combination will use.

Type (Combi's Scale) [Equal Temperament...User Octave15]

Selects the type of scale .

⇨ “Type (Scale Type)” (PROG 2.1-1c)

Key [C...B]

Selects the tonic key of the selected scale.

⇨ “Key” (PROG 2.1-1c)

Random [0...7]

As this **value is increased**, an increasingly random deviation will be added to the pitch at each note-on.

⇨ “Random” (PROG 2.1-1c)

■ 3.2-1c: UTILITY

⇨ “Write Combination,” “Solo Selected Timbre” (1.1-1d)

COMBI 3.3: Ed-Key Zone

These settings specify the keyboard range in which each timbre will sound.

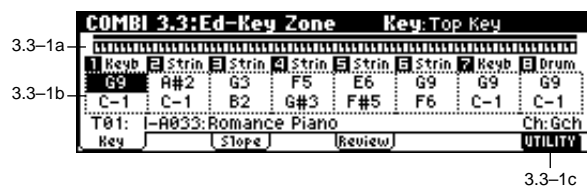
The top/bottom key parameters specify the range of notes in which **timbres 1–8** will sound, and the top/bottom slope parameters specify the range over which the original volume will be reached.

By setting timbres of different sounds to ranges that do not overlap, you can play different sounds in different ranges of the keyboard (**Key Split**).

By setting the ranges to overlap, you can play two or more sounds with a single note (**Layer**).

If you set the slopes (the grayed portion) to overlap, the sounds will overlap, and the proportion of the overlap will change according to the keyboard location (**Positional Cross-fade**).

3.3–1: Key (Key Zone)



3.3–1a: Key Zone Map (1)

This displays the range of note data that will sound the currently selected track. The range of notes sounded is shown as a line, and the slope portion is shaded.

3.3–1b: Top Key, Bottom Key

Top Key [C–1...G9]

Specifies the top key (upper limit) of the notes that will sound each timbre 1–8.

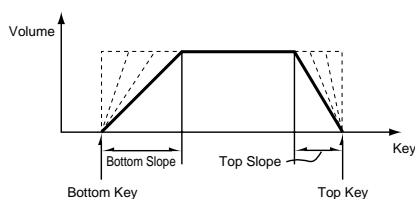
Bottom Key [C–1...G9]

Specifies the bottom key (lower limit) of the notes that will sound each timbre 1–8.

note You can also set this parameter by holding down the [ENTER] key and playing a note on a connected MIDI instrument.

! It is not possible to set the bottom key above the top key of the same timbre. Nor is it possible for the top and bottom slopes to overlap.

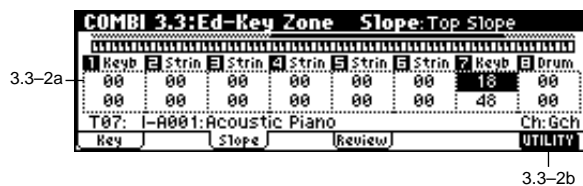
How volume will change according to keyboard location



■ 3.3–1c: UTILITY

☞ “Write Combination,” “Solo Selected Timbre” (1.1–1d)

3.3–2: Slope (Key Slope)



3.3–2a: Top Slope, Bottom Slope

Top Slope [00...72]

Specifies the range of keys (12 is one octave) over which the volume will be reached starting from the top key.

0: The volume will be at the original level from the top key.

12: The volume will increase gradually as you play downward, and will reach the original volume one octave below the top key.

60: The volume will increase gradually as you play downward, and will reach the original volume five octaves below the top key.

Bottom Slope [00...72]

Specifies the range of keys (12 is one octave) over which the volume will be reached starting from the bottom key.

0: The volume will be at the original level from the bottom key.

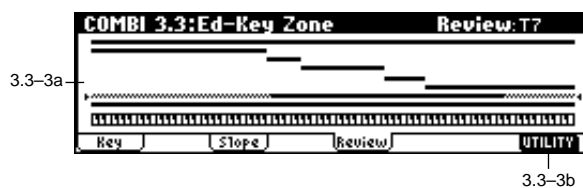
12: The volume will increase gradually as you play upward, and will reach the original volume one octave above the bottom key.

60: The volume will increase gradually as you play upward, and will reach the original volume five octaves above the bottom key.

■ 3.3–2b: UTILITY

☞ “Write Combination,” “Solo Selected Timbre” (1.1–1d)

3.3–3: Review



3.3–3a: Key Zone Map (All)

T1...T8

This displays the range of note data that will sound timbres 1–8. The range of notes sounded is shown as a line, and the slope portion is shaded.

■ 3.3–3b: UTILITY

☞ “Write Combination,” “Solo Selected Timbre” (1.1–1d)

COMBI 3.4: Ed-Vel Zone

(Velocity Zone)

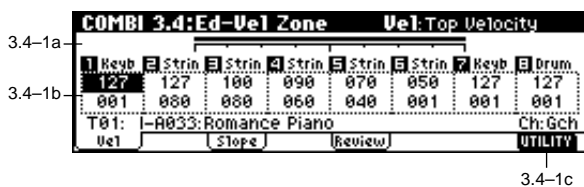
Sets the Top/Bottom Velocity parameters to specify the range of velocities that will sound each timbre 1-8, and sets the Top/Bottom Slope parameters to specify the range over which the volume will change.

By setting two or more timbres to velocity zones that do not overlap, you can use variations in playing dynamics to play different sounds (**Velocity Switch**).

If you set two or more timbres to velocity zones that overlap, the sounds will be heard together (**Layer**).

If the slope ranges (gray line) overlap, different sounds will be sounded together, and your playing dynamics will determine the proportion of each sound (**Velocity Cross-fade**).

3.4-1: Vel (Velocity Zone)



3.4-1c

3.4-1a: Velocity Zone Map (1)

This displays the range of velocities that will sound the currently selected timbre. The range of velocities sounded is shown as a line, and the slope portion is shaded.

3.4-1b: Top Velocity, Bottom Velocity

Top Velocity [1...127]

Specifies the maximum velocity value that will sound each timbre 1-8.

Bottom Velocity [1...127]

Specifies the minimum velocity value that will sound each timbre 1-8.

note You can also set this parameter by holding down the [ENTER] key and playing a note on a connected MIDI instrument.

! It is not possible to set the bottom velocity greater than the top velocity for the same timbre. Nor can the top slope and the bottom slope overlap.

■ 3.4-1c: UTILITY

⇨ "Write Combination," "Solo Selected Timbre" (1.1-1d)

3.4-2: Slope (Velocity Slope)



3.4-2b

3.4-2a: Top Slope, Bottom Slope

Top Slope [0...120]

Specifies the number of velocity steps over which the original volume will be reached, starting from the Top Velocity.

0: The volume will be at the original value from the top velocity.

120: The volume will decrease as the velocity approaches the top velocity.

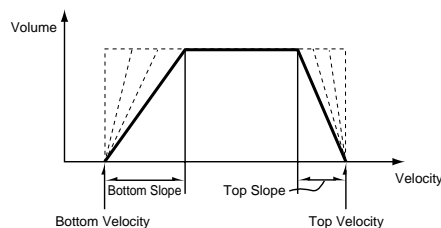
Bottom Slope [0...120]

Specifies the number of velocity steps over which the original volume will be reached, starting from the Bottom Velocity.

0: The volume will be at the original value from the bottom velocity.

120: The volume will decrease as the velocity approaches the bottom velocity.

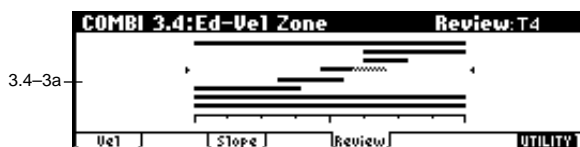
How volume will change according to keyboard location



■ 3.4-2b: UTILITY

⇨ "Write Combination," "Solo Selected Timbre" (1.1-1d)

3.4-3: Review



3.4-3b

3.4-3a: Velocity Zone Map (All)

T1...T8

Specify the range of velocities for which each timbre will sound.

The range of velocities sounded is shown as a line, and the slope portion is shaded.

■ 3.4-3b: UTILITY

⇨ "Write Combination," "Solo Selected Timbre" (1.1-1d)

COMBI 4.1: Ed-MIDI Filter1

These settings allow you to apply filters to the MIDI data that will be transmitted and received by each timbre 1–8. For example even if two timbres are being played by the same MIDI channel, you can make settings so that the damper pedal will apply to one but not the other.

On (Checked): Transmission and reception of MIDI data is enabled.

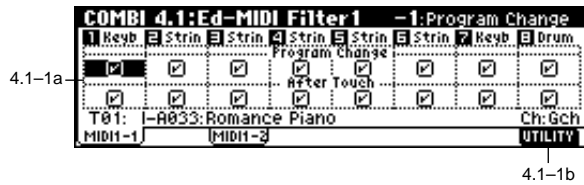
When “Status” (3.1–1a) is **INT**, operations of the built-in controllers or incoming MIDI data will apply the effect of the checked item to the program of the corresponding timbre. (The effect dynamic modulation function is not affected by this setting.) When “Status” is **EXT** or **EX2**, operations of the built-in controllers will transmit MIDI data on the channel of that timbre. MIDI transmission and reception settings for the entire TRITON are made in “MIDI Filter” (GLOBAL 2.1–1b).

The MIDI 3 and MIDI 4 pages contain MIDI filters for assignable controllers (whose function can be set by the user), and if these are assigned to MIDI control changes, the filter settings will affect those control changes.

If the function of the REALTIME CONTROLS knobs, “SW1,” and “SW2” has been assigned to a MIDI control change, the MIDI filters for these controllers (MIDI Filter 3, 4) will apply to those control changes. However if these coincide with the control changes of MIDI Filter 1, 2, the MIDI Filter 1, 2 settings will be given priority. Furthermore, if the same control change has been assigned to two or more controllers, the setting will be valid for that control change if any single item is checked in either MIDI Filter 3 or 4.

Off (Unchecked): Transmission and reception of MIDI data is disabled.

4.1–1: MIDI 1–1 (MIDI Filter 1–1)



4.1–1a: Program Change, After Touch

Program Change [Off, On]

Specifies whether or not MIDI program change messages will be transmitted and received.

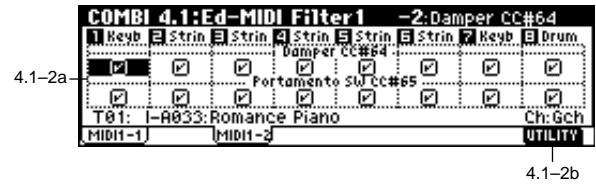
After Touch [Off, On]

Specifies whether or not MIDI after touch messages will be received.

■ 4.1–1b: UTILITY

☞ “Write Combination,” “Solo Selected Timbre” (1.1–1d)

4.1–2: MIDI 1–2 (MIDI Filter 1–2)



4.1–2a: Damper CC#64, Portamento SW CC#65

Damper CC#64 [Off, On]

Specifies whether or not MIDI control change message #64 hold (damper pedal) messages will be transmitted and received.

Portamento SW CC#65 [Off, On]

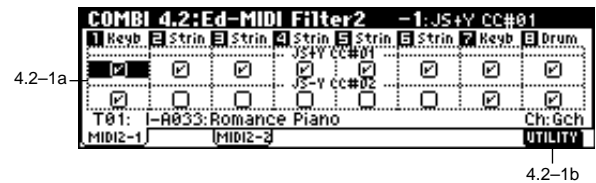
Specifies whether or not MIDI control change message #65 portamento on/off messages will be transmitted and received.

■ 4.1–2b: UTILITY

☞ “Write Combination,” “Solo Selected Timbre” (1.1–1d)

COMBI 4.2: Ed-MIDI Filter2

4.2–1: MIDI 2–1 (MIDI Filter 2–1)



4.2–1a: JS+Y CC#01, JS–Y CC#02

JS+Y CC#01 [Off, On]

Specifies whether MIDI control change message #1 (selected as assignment B for REALTIME CONTROLS [1]–[4] knobs, or the +Y axis of the joystick on a TRITON etc.) will be transmitted and received.

JS–Y CC#02 [Off, On]

Specifies whether MIDI control change message #2 (selected as assignment B for REALTIME CONTROLS [1]–[4] knobs, or the –Y axis of the joystick on a TRITON etc.) will be transmitted and received.

■ 4.2–1b: UTILITY

☞ “Write Combination,” “Solo Selected Timbre” (1.1–1d)

4.2-2: MIDI 2-2 (MIDI Filter 2-2)



4.2-2a: JS X/Bend as AMS, Ribbon CC#16

JS X/Bend as AMS [Off, On]

Specifies whether MIDI pitch bend messages (the X axis of the joystick on a TRITON etc.) will be received as the AMS (p.205 “Alternate Modulation Source”) for which JS X is selected. (This is not a filter for MIDI pitch bend message reception.)

Ribbon CC#16 [Off, On]

Specifies whether MIDI control change message #16 (selected as assignment B for REALTIME CONTROLS [1]–[4] knobs, or assigned to the ribbon controller of a TRITON etc.) will be received.

4.2-2b: UTILITY

☞ “Write Combination,” “Solo Selected Timbre” (1.1-1d)

COMBI 4.3: Ed-MIDI Filter3

Specifies whether the A and B mode effects of REALTIME CONTROLS knobs [1], [2], [3], and [4] will be transmitted and received. The A mode of each knob is fixed as a MIDI control message. For B mode, you can assign a message in 2.2: Ed-Ctrl.

4.3-1: MIDI 3-1 (MIDI Filter 3-1)

4.3-2: MIDI 3-2 (MIDI Filter 3-2)



4.3-1a: Realtime Control Knob 1, 2

Knob1 [Off, On]

Specifies whether MIDI control change message #74 (internal low pass filter cutoff frequency) for the A mode of knob [1] and the MIDI control change message assigned to the B mode of knob [1] will be transmitted and received.

Knob2 [Off, On]

Specifies whether MIDI control change message #71 (internal low pass filter resonance or high pass filter cutoff frequency) for the A mode of knob [2] and the MIDI control change message assigned to the B mode of knob [2] will be transmitted and received.

4.3-2a: Realtime Control Knob 3, 4

Knob3 [Off, On]

Specifies whether MIDI control change message #79 (internal filter EG intensity) for the A mode of knob [3] and the MIDI control change message assigned to the B mode of knob [3] will be transmitted and received.

Knob4 [Off, On]

Specifies whether MIDI control change message #72 (internal filter and amp EG release time) for the A mode of knob [4] and the MIDI control change message assigned to the B mode of knob [4] will be transmitted and received.

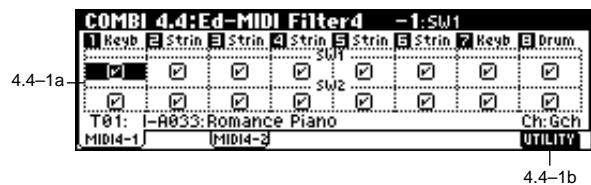
4.3-1(2)b: UTILITY

☞ “Write Combination,” “Solo Selected Timbre” (1.1-1d)

COMBI 4.4: Ed-MIDI Filter4

Specifies whether the effects of “SW1” and “SW2” will be transmitted and received. “SW1” and “SW2” correspond to the messages specified in 2.2: Ed-Ctrl. You can also specify whether other control change messages will be transmitted and received.

4.4-1: MIDI 4-1 (MIDI Filter 4-1)



4.4-1a: SW1, SW2

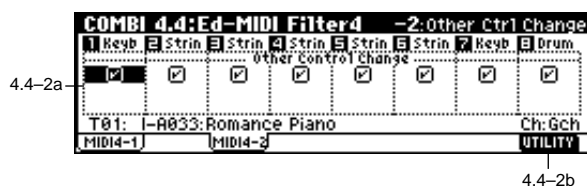
SW1, SW2 [Off, On]

Specifies whether or not the effect of the “SW1” and “SW2” will be transmitted and received. This filter setting is valid for settings of SW1 Mod.(CC#80), SW2 Mod.(CC#81), or Porta.SW(CC#65).

4.4-1b: UTILITY

☞ “Write Combination,” “Solo Selected Timbre” (1.1-1d)

4.4-2: MIDI 4-2 (MIDI Filter 4-2)



4.4-2a: Other Control Change

Other Ctrl Change [Off, On]

Specifies whether or not MIDI control change message not covered in the preceding items MIDI Filter 1-4 will be transmitted and received.

4.4-2b: UTILITY

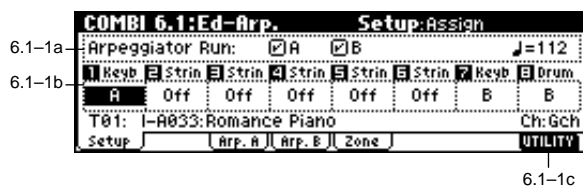
☞ “Write Combination,” “Solo Selected Timbre” (1.1-1d)

COMBI 6.1: Ed-Arp. (Arpeggiator)

These parameters specify how the arpeggiator will function within the combination. Two arpeggiators can be running simultaneously.

This offers a variety of possibilities, such as applying separate arpeggio patterns to two sounds that have been assigned as a keyboard split, or using velocity to switch between two arpeggio patterns.

6.1-1: Setup



6.1-1a: Arpeggiator Run, ♩

Arpeggiator Run A, B (Run A, B)

When the [ARP ON/OFF] key is on, the arpeggiator(s) checked here will run if they are assigned to a timbre by “Assign” (6.1-1b). (☞1.1-4(5)a)

♩ (Tempo) [040...240, EXT]

Set the tempo of the arpeggiator. This can also be adjusted by the [TEMPO] knob. (☞1.1-1a)

6.1-1b: Assign

Assign [Off, A, B]

Assigns arpeggiator A or B to each timbre 1-8. When the [ARP ON/OFF] key is on, the arpeggiator specified for each timbre will operate according to “Arpeggiator Run” and these settings.

Off: The arpeggiator will not operate.

A: Arpeggiator A will operate. Make settings in the Arp. A page to select the arpeggio pattern and set parameters.

B: Arpeggiator B will operate. Make settings in the Arp. B page to select the arpeggio pattern and set parameters.

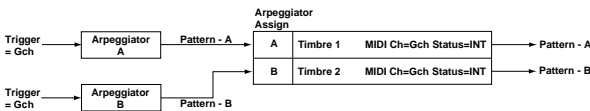
MIDI If the “Status” (3.1-1a) of the timbre is INT, each timbre 1-8 to which arpeggiator A or B is assigned will be sounded by the note data generated by the arpeggiator, regardless of the “MIDI Channel” (3.1-1a) setting of the timbre. If a timbre is set to EXT or EX2, MIDI note data will be transmitted on the “MIDI Channel” of each timbre.

In this case, the arpeggiator can be triggered (operated) by any MIDI channel specified for the “MIDI Channel” parameter of any timbre 1-8 assigned to arpeggiator A or B.

MIDI You can control the arpeggiator from an external sequencer, or use an external sequencer to record arpeggio note data. (☞p.228)

Example 1)

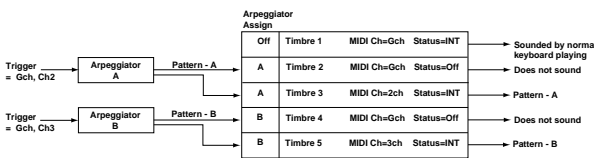
- ① Set the “MIDI Channel” (3.1–1a) of timbres 1 and 2 to **Gch**, and set “Status” (3.1–1a) to **INT**.
- ② Assign arpeggiator A to timbre 1 and arpeggiator B to timbre 2, and check “Arpeggiator Run” (1.1–4a/5a, 6.1–1a).
- ③ Set the MIDI channel of the external MIDI device transmitting the note data to match the Global MIDI channel “MIDI Channel” (GLOBAL 2.1–1a).
- ④ When the [ARP ON/OFF] key is off, playing the keyboard of the connected MIDI device will sound timbres 1 and 2 simultaneously (Layer).
When the [ARP ON/OFF] key is on, playing the keyboard of the connected MIDI device will cause arpeggiators A and B to independently control and play timbres 1 and 2 respectively.



Example 2)

- ① The “MIDI Channel” (3.1–1a) of timbres 1, 2, 3, 4, and 5 are set respectively to **Gch**, **Gch**, **02**, **Gch**, and **03**. Their “Status” (3.1–1a) is set respectively to **INT**, **Off**, **INT**, **Off**, and **INT**.
- ② Assign arpeggiator A to timbres 2 and 3, assign arpeggiator B to timbres 4 and 5, and check “Arpeggiator Run” (1.1–4a/5a, 6.1–1a).
- ③ Set the MIDI channel of the external MIDI device transmitting the note data to match the Global MIDI channel “MIDI Channel” (GLOBAL 2.1–1a).
- ④ When the [ARP ON/OFF] key is off, playing the keyboard of a connected MIDI device will sound only timbre 1. Timbres 2 and 4 are receiving the Gch, but they will not sound since their “Status” is **Off**.
When you turn on the [ARP ON/OFF] key, arpeggiator A will operate for timbres 2 and 3, and arpeggiator B will operate independently for timbres 4 and 5. (Arpeggiators A and B are triggered by receiving note data on any MIDI channel of an assigned timbre, but in this example they are being triggered from the **Gch**.)

When you play the keyboard of a connected MIDI device, arpeggiator A will operate for timbres 2 and 3, but only timbre 3 whose “Status” is **INT** will sound. Similarly, arpeggiator B will operate for timbres 4 and 5, but only timbre 5 whose “Status” is **INT** will sound. In this way, you can make settings so that a timbre does not sound when the arpeggiator is off, but sounds only when the arpeggiator is on.



■ 6.1–1c: UTILITY



⇨ “Write Combination,” “Solo Selected Timbre” (1.1–1d)

For details on how to select the desired utility function, refer to “PROG 1.1–1d: UTILITY.”

Copy Arpeggiator

This command copies arpeggiator settings.

- ① Select “Copy Arpeggiator” to access the dialog box.



- ② In “From” select the copy source (mode, bank, number) arpeggiator.
If you are copying from Combination, or Multi mode, select either **A** or **B** if you wish to copy settings from only one arpeggiator, or select **A&B** if you wish to copy the settings of both arpeggiators.
- ③ If you are copying from a Program, or are copying either A or B from Combination, or Multi mode, select either A or B as the “To” copy destination.
- ④ To execute the Copy Arpeggiator command, press the [F8] (“OK”) key. To cancel without executing, press the [F7] (“Cancel”) key.

6.1–2: Arp. A (Arpeggiator A)

6.1–3: Arp. B (Arpeggiator B)

The Arp. A pages you make settings for arpeggiator A. The Arp. B pages you make settings for arpeggiator B.

note You can also use Utility “Copy Arpeggiator” (6.1–1c) to copy settings from another mode such as Program mode.



6.1–2(3)a: Arpeggiator-A(B) Setup

Pattern*	[P000...P004, U000(I-A/B)...U327(E-H)]
Octave*	[1, 2, 3, 4]
Reso (Resolution)*	[1/8, 1/4, 1/2, 1, 2, 4]
Gate	[000...100%, Step]
Velocity	[001...127, Key, Step]
Swing	[-100...+100%]
Sort*	[Off, On]
Latch*	[Off, On]
Key Sync.*	[Off, On]
Keyboard*	[Off, On]

These parameters are the arpeggiator A settings for the combination.
(⇨PROG 6.1: Ed-Arp.)

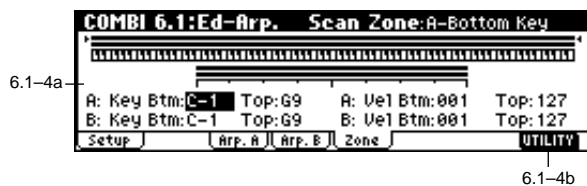
* These parameters can also be set in “1.1–4: Arp. A, 1.1–5: Arp. B”

■ 6.1–2(3)b: UTILITY

⇨ “Write Combination,” “Solo Selected Timbre” (1.1–1d), “Copy Arpeggiator” (6.1–1c)

6.1-4: Zone (Scan Zone)

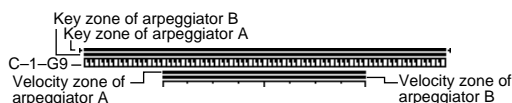
These settings specify the note and velocity ranges that will operate arpeggiators A and B.



6.1-4a: Scan Zone A/B

Zone Map

This shows the “Scan Zone” for each arpeggiator, A and B.



A: Key

Btm (A-Bottom Key) [C-1...G9]

Top (A-Top Key) [C-1...G9]

Specifies the range of notes (keys) that will operate arpeggiator A. “Top” specifies the upper limit, and “Btm” specifies the lower limit.

A: Vel (Velocity)

Btm (A-Bottom Velocity) [001...127]

Top (A-Top Velocity) [001...127]

Specifies the range of velocities that will operate arpeggiator A. “Top” specifies the upper limit, and “Btm” specifies the lower limit.

B: Key

Btm (B-Bottom Key) [C-1...G9]

Top (B-Top Key) [C-1...G9]

B: Vel (Velocity)

Btm (B-Bottom Velocity) [001...127]

Top (B-Top Velocity) [001...127]

Specify the range of notes (keys) and velocities that will operate arpeggiator B (⇨ “A: Key,” “A: Vel”).

note You can also set this parameter by holding down the [ENTER] key and playing a note on a connected MIDI instrument.

6.1-4b: UTILITY

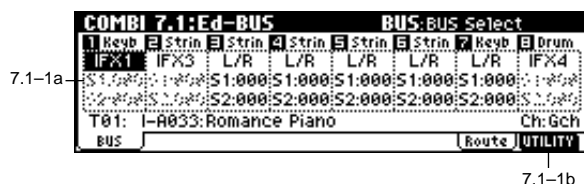
⇨ “Write Combination,” “Solo Selected Timbre” (1.1-1d), “Copy Arpeggiator” (6.1-1c)

COMBI 7.1: Ed-BUS

Here you can specify the output bus for the program oscillator of each timbre 1-8. You can also specify the send level to the master effects.

⇨ For details on insertion effects, refer to p.141 “8. Effect Guide.”

7.1-1: BUS



7.1-1a: BUS Select, Send1(MFX1), Send2(MFX2)

BUS Select [DKit, L/R, IFX1...5, 1...4, 1/2, 3/4, Off]

Specifies the output bus for the program oscillator of each timbre 1-8. The current setting status can be viewed in the Route page.

DKit: This can be selected only if the program for which settings are being made is a drum program “Mode (Oscillator Mode) **Drums**” (PROG 2.1-1a). With a setting of **DKit**, the “BUS Select” (GLOBAL 5.1-3a) setting made for each key of the drum kit will be used.

For example, if the “BUS Select” settings of the drum kit have assigned Snare sounds to IFX1 and Kick sounds to IFX2, setting this parameter to **DKit** will send the Snare sounds to IFX1 and Kick sounds to IFX2. If you wish to modify these routings, use Utility “DKit IFX Patch” (7.1-1b).

⚠ If this is set to **1/2** or **3/4**, the programs of timbres 1-8 will be sent in stereo from AUDIO OUTPUT (INDIVIDUAL) 1/2 or 3/4. If the pan of the program oscillator is controlled by MIDI control change #10 (pan) or AMS (Alternate Modulation Source), the sound will be output with the pan setting that is in effect at the moment of note-on. Unlike the case when this parameter is set to **L/R** to output the sound from (MAIN) L/MONO and R, the pan of a sounding note will not change in real-time.

If you wish to move the pan of a sounding note in real-time and output it from AUDIO OUTPUT (INDIVIDUAL) 1/2 or 3/4, you must set “BUS Select” to **IFX1** (or **IFX2-IFX5**), select **000: No Effect** for “IFX1” (or **IFX2-IFX5**) (7.2-1a), and for the sound that has passed through the IFX, set “BUS Select” (7.2-1a) to either **1/2** or **3/4**.

S1 (Send1(MFX1)) [000...127]

S2 (Send2(MFX2)) [000...127]

For each timbre 1-8, these parameters set the send level to master effects 1 and 2. These settings are valid when “BUS Select” is set to **L/R** or **Off**. When **IFX 1, 2, 3, 4** or **5** are selected, the send levels to master effects 1 and 2 are set by the “S1 (Send1(MFX)),” “S2 (Send2(MFX))” parameters of the 7.2: Ed-InsertFX, Setup page, after the sound has passed through IFX1-5.

If “BUS Select” is set to **1, 2, 3, 4, 1/2, or 3/4**, these settings are ignored.

MIDI Control change #93 can be used to control the Send 1 level, and #91 to control the Send 2, and modify their respective settings. These messages will be received on the MIDI channel specified for each timbre in the 3.1: Ed-Param1, MIDI page.

The actual send levels are determined by multiplying this value with the send level “S1 (Send1(MFX)),” “S2 (Send2(MFX))” (PROG 7.2-1a) for each oscillator of the program selected for the timbre.

7.1-1b: UTILITY



☞ “Write Combination,” “Solo Selected Timbre” (1.1-1d)

For details on how to select the desired utility function, refer to “PROG 1.1-1d: UTILITY.”

Copy Insert Effect

☞ PROG 7.1-1c

However, the MIDI control channel specified for “Control Channel” of the 7.2: Ed-InsertFX, Setup page will not be copied.

Swap Insert Effect

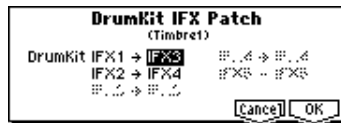
☞ PROG 7.1-1c

However, the MIDI control channel specified for “Control Channel” of the 7.2: Ed-InsertFX, Setup page will not be copied.

DKit IFX Patch (DrumKit IFX Patch)

This command applies a patch to the “BUS Select” settings of each key of the drum kit, allowing you to temporarily change the connections to the insert effects. This command is available only if a drum program has been selected for the timbre and the “BUS Select” (7.1-1a) parameter is set to **Dkit**. Furthermore, this command can be executed only if the “BUS Select” (GLOBAL 5.1-3a) for the individual keys of that drum kit are set to **IFX1-5**.

① Select “DKit IFX Patch” to access the dialog box.



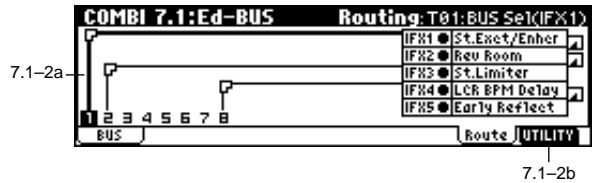
② In the right side of “DrumKit IFX 1-5→”, select the insert effect to which you want to patch.

③ To execute the Drum Kit Insert Effect Patch command, press the [F8] (“OK”) key. To cancel without executing, press the [F7] (“Cancel”) key.

To restore the condition of the drum kit, execute IFX1→IFX1, IFX2→IFX2, IFX3→IFX3, IFX4→IFX4, and IFX5→IFX5.

7.1-2: Route (Routing)

Specifies the bus to which the program used by each timbre 1-8 will be sent. Here you can also set the send levels to the master effects.



7.1-2a: Routing Map, BUS Select

Routing Map

This shows the status of the insert effects. For each insert effect, this indicates the routing, the name of the selected effect, the on/off status, and chain status. The effect type, on/off status and chain status can be modified in the 7.2: Ed-InsertFX, Setup page.

T01...8: BUS Sel

[DKit, L/R, IFX1...5, 1...4, 1/2, 3/4, Off]

You can specify the bus to which the program oscillator of each timbre 1-8 will be sent, while viewing a map of the settings.

Use the [<], [>] keys to select the timbre, and use the [INC], [DEC] key or [VALUE] dial to set “BUS Select” (7.1-1a).

These settings can also be made in “BUS Select” (7.1-1a).

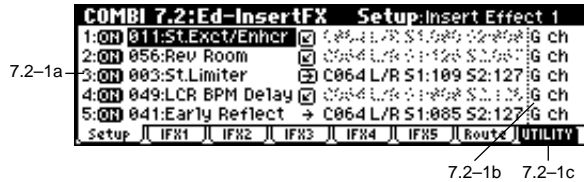
7.1-2b: UTILITY

☞ “Write Combination,” “Solo Selected Timbre” (1.1-1d), “Copy Insert Effect,” “Swap Insert Effect,” “DKit IFX Patch” (7.1-1b)

COMBI 7.2: InsertFX

7.2-1: Setup

Here you can select the type of each insert effect, turn it on/off, and make chain settings etc.



7.2-1a: Ed-InsertFX Setup

IFX1 On/Off — IFX5 On/Off
 Insert Effect 1, 5 [000...089: name]
 Insert Effect 2, 3, 4 [000...102: name]
 Chain [] (Off), [] (ON)
 Pan(CC#8) [L000...C064...R127]
 BUS Select [L/R, 1, 2, 3, 4, 1/2, 3/4, Off]
 S1 (Send1 (MFX1)) [000...127]
 S2 (Send2 (MFX2)) [000...127]

These parameters are the same as in Program mode. (⇨PROG 7.2-1)

However, dynamic modulation (Dmod) of the insert effects and the “Pan (CC#8), “Send 1 (MFX1),” and “Send 2 (MFX2)” that follow the insert effects will be controlled on the “Control Channel” (7.2-1b) MIDI channel, unlike in Program mode. The control changes used are the same as in Program mode.

7.2-1b: Control Channel

Control Channel [Ch01...16, G ch, All Rt.]

MIDI Specifies the MIDI channel on which dynamic modulation (Dmod) of the insert effects and the “Pan (CC#8), “Send 1 (MFX1),” and “Send 2 (MFX2)” that follow the insert effects will be controlled.

The channel number of the timbre routed through this IFX will be followed by a “*” displayed at the right of **Ch01-16**. If two or timbres with different MIDI channel settings are routed through the same IFX, this parameter specifies which of these channels will be used to control the effect.

G ch: The global MIDI channel “MIDI Channel” (GLOBAL 2.1-1a) will be used to control the effect. Normally you will set this to **G ch**.

All Rt. (All Routed): The channel of any timbre routed through this effect can be used to control the effect. (Channels of each routed timbre will be indicated by “*”).

🔊 If the “BUS Select” (7.1-1a) of a timbre for which a drum program is selected is set to **DKit**, the MIDI channel of that timbre will be valid if any IFX1-5 is set to **All Routed**, regardless of the “BUS Select” (GLOBAL 5.1-3a) settings or the settings of the Utility “DrumKit IFX Patch” (7.1-1b).

7.2-1c: UTILITY

⇨ “Write Combination,” “Solo Selected Timbre” (1.1-1d), “Copy Insert Effect,” “Swap Insert Effect” (7.1-1b), “Select by Category” (PROG 7.2-1b)

7.2-2: IFX 1

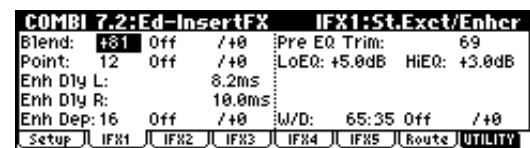
7.2-3: IFX 2

7.2-4: IFX 3

7.2-5: IFX 4

7.2-6: IFX 5

These are the parameters for IFX 1, 2, 3, 4, and 5 that were selected in the Setup page (⇨p.151).

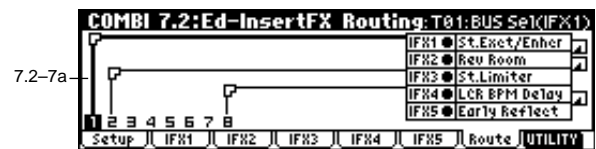


7.2-1a

7.2-2(...6)a: UTILITY

⇨ “Write Combination” (1.1-1d)

7.2-7: Route (Routing)



7.2-7a

7.2-2b

7.2-7a: Routing Map

This shows the status of the insert effects. This shows the same content as the 7.1: BUS, Routing page. (⇨7.1-2a)

7.2-7b: UTILITY

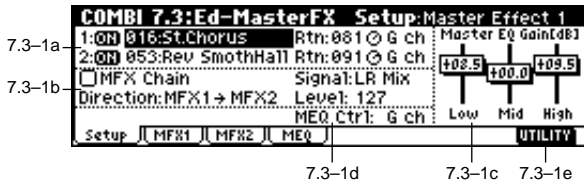
⇨ “Write Combination,” “Solo Selected Timbre” (1.1-1d), “Copy Insert Effect,” “Swap Insert Effect,” “DKit IFX Patch” (7.1-1b)

COMBI 7.3: Ed-MasterFX

☞ For details on master effects, refer to p.146.

7.3-1: Setup

Here you can select the type of each master effect, turn it on/off, and make chain and master EQ settings. With the exception of “MFX1 Control Ch,” “MFX2 Control Ch,” and “MEQ Control Ch,” this is the same as in Program mode. (☞PROG 7.3: Ed-MasterFX)



7.3-1a: MasterFX Setup

MFX1 On/Off, MFX2 On/Off [Off, ON]
 Master Effect 1, 2 [000...089: name]
 Rtn 1, 2 (Return 1, 2) [000...127]

These are the same as in Program mode. Refer to “PROG 7.3-1: Setup.” However, the master effects will be controlled on the “MFX 1, 2 Control Ch” MIDI channel, unlike in Program mode. The control changes used are the same as in Program mode.

MFX 1, 2 Control Ch [Ch001...16, G ch]

MIDI Selects the MIDI channel that will control dynamic modulation (Dmod) for the master effects.

G ch: The global MIDI channel “MIDI Channel” (GLOBAL 2.1-1a) will be used for control. Normally you will set this parameter to **G ch**.

7.3-1b: MasterFX Chain

MFX Chain
 Direction (Chain Direction) [MFX1→MFX2, MFX2→MFX1]
 Signal (Chain Signal) [LR Mix, L Only, R Only]
 Level (Chain Level) [000...127]

These are the same as in Program mode. (☞“PROG 7.3-1: Setup”)

7.3-1c: Master EQ Gain [dB]

Low [-18.0...+18.0]
 Mid [-18.0...+18.0]
 High [-18.0...+18.0]

These are the same as in Program mode. (☞“PROG 7.3-1: Setup”)

7.3-1d: MEQ Ctrl

MEQ Ctrl (MEQ Control Ch) [Ch01...16, G ch]

MIDI Selects the MIDI channel that will control dynamic modulation (Dmod) for the master EQ.

G ch: The global MIDI channel “MIDI Channel” (GLOBAL 2.1-1a) will be used for control. Normally you will set this parameter to **G ch**.

7.3-1e: UTILITY



☞ “Write Combination,” “Solo Selected Timbre” (1.1-1d), “Select by Category” (PROG 7.3-1d)

Copy Master Effect

(☞PROG 7.3-1d)

Note, the MIDI control channel that is specified by “MFX1, 2 Control Ch” (7.3-1a) will not be copied.

Swap Master Effect

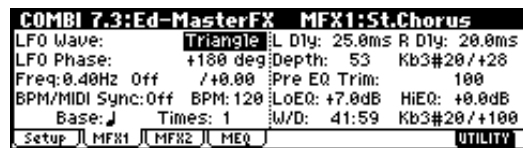
(☞PROG 7.3-1d)

Note, the MIDI control channel that is specified by “MFX1, 2 Control Ch” (7.3-1a) will not be swapped.

7.3-2: MFX1 (Master Effect1)

7.3-3: MFX2 (Master Effect2)

Here you can set the parameters for the “Master Effect1” and “Master Effect2” effects that were selected in the Setup page (☞p.151).



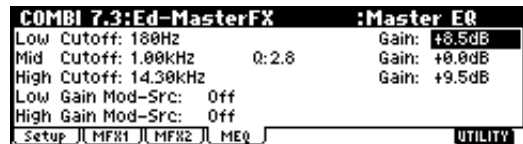
7.3-2a

7.3-2(3)a: UTILITY

☞ “Write Combination” (1.1-1d)

7.3-4: MEQ (Master EQ)

The master EQ is a three-band stereo EQ. It is located immediately before the AUDIO OUTPUT (MAIN OUT) L/ MONO and R from the L/R bus, and adjusts the overall tonal character of the sound (☞p.203).



7.3-4a

7.3-4a: UTILITY

☞ “Write Combination” (1.1-1d)

3. Multi mode

In Multi mode, the TRITON-Rack functions as a multi-timbral MIDI tone generator that can receive and play multiple channel of MIDI messages from an external MIDI sequencer.

A “Multi” has sixteen tracks for playing back musical data. You can assign a separate program and MIDI channel etc. to each track, so that multiple programs can sound simultaneously.

In Multi mode you can also play patterns and use RPPR (Realtime Pattern Play/Recording) or the arpeggiator, so that these functions can be played in synchronization with an external MIDI sequencer.

As patterns, the TRITON-Rack provides 150 preset patterns that are ideal for drum tracks, and 100 user patterns that you can record and edit or even use for recording with the arpeggiator.

note When you execute the Sampling mode command “Time Slice” (SMPL 3.1–2e), a pattern will be created for the divided samples and this pattern will be assigned to RPPR automatically.

By time-slicing two or more rhythm loop samples of differing tempo and assigning them to RPPR, you can match the tempo of the rhythm loop samples without changing their pitch. Then you can use the keyboard of a connected MIDI instrument to turn these rhythm loop samples on/off, and use the REALTIME CONTROLS [TEMPO] knob in C-mode to adjust the tempo in real-time.

! When you turn off the power, the settings and user pattern data will be erased. If there is data that you wish to keep, you must save it on a floppy disk, external SCSI device, or data filer before turning off the power. Then after you turn the power on again, you will need to load the data that you saved. (☞p.133, 113, BG p.40)

MULTI PAGE MENU

For details on how to select pages in Multi mode, refer to p.1.



Play	1.1: Play	Select multis. Select a program for each track, and make pan and level settings. (☞p.50)
Ctrl	2.2: Controller	Controller settings. (☞p.53)
MOSS	2.3: MOSS	Displayed if the separately sold EXB-MOSS option is installed. Make EXB-MOSS parameter settings. (☞p.54)
Prm1	3.1: Param1	MIDI, voice mode, and pitch settings for each track. (☞p.56)
Prm2	3.2: Param2	Delay and scale settings for each track. (☞p.56)
KeyZ	3.3: Key Zone	Key zone settings for each track. (☞p.56)
VelZ	3.4: Vel Zone	Velocity zone settings for each track. (☞p.57)
MIDI1	4.1: MIDI Filter1	MIDI message transmission/reception filter settings for each track: Prog Change, After Touch etc. (☞p.58)
MIDI2	4.2: MIDI Filter2	Filter settings: JS, Ribbon Ctrl etc. (☞p.59)
MIDI3	4.3: MIDI Filter3	Filter settings: Realtime Control Knob (☞p.60)
MIDI4	4.4: MIDI Filter4	Filter settings: SW, Other Ctrl Change (☞p.60)
RPPR	5.1: RPPR	Pattern recording and editing. RPPR settings. (☞p.61)
Arp	6.1: Arp.	Arpeggiator settings. (☞p.67)
BUS	7.1: BUS	Set BUS and master effect send level for each track.(☞p.69)
IFX	7.2: InsertFX	Insert effect routing, selection, and settings. (☞p.70)
MFX	7.3: MasterFX	Master effect selection and settings. Master EQ settings. (☞p.71)

MULTI 1.1: Play

Here you can select multis, and make basic settings such as selecting the program used by each track.

1.1-1: Multi

Selects a multi, and the track that will be controlled by the REALTIME CONTROLS. Here you can also turn RPPR on/off.

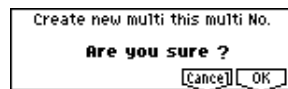


1.1-1a: Multi Select, Control Track, ♪, RPPR

Multi Select [000...199: name]

Selects the multi that you wish to use.

To create a new multi, use numeric keys [0]–[9] to specify a new multi number, and press the [ENTER] key. A dialog box will appear. Press the [F8] (“OK”) key to create a new multi.



MIDI If “MIDI Clock” (GLOBAL 2.1-1a) is set to **Internal**, a song select message will be transmitted when you change multis. If it is set to **External**, the multi will change when you transmit a song select message from the specified source. When the multi number changes, tracks whose “Status” (3.1-1a/2a) is **EXT**, **EX2** or **BTH** will transmit bank select, program change, volume, pan, portamento, send 1 and 2, post IFX pan, and post IFX send 1 and 2 messages on the MIDI channel of that track.

Control Track [T01...T16: name]

Selects the track that will be controlled by the B mode functions of the TRITON-Rack’s REALTIME CONTROLS knobs [1]–[4], “SW1,” “SW2,” and RPPR.

In the 5.1 RPPR page, “Control Track” is used as the track that will record/play pattern data.

This parameter can also be set from the 5.1 RPPR, Pattern, RPPR Setup pages.

note Track names can be specified in Utility “Rename Track” (1.1-1c).

MIDI When you operate the controllers of the TRITON-Rack, the corresponding controller message will be transmitted on the MIDI channel specified for that track (if “Status” 3.1-1a/2a is **EXT**, **EX2** or **BTH**).

RPPR On/Off [Off, On]

This turns the RPPR (Realtime Pattern Play/Recording) function on/off. RPPR is a function that lets you assign user patterns or preset patterns to each key of a multi, so that the patterns can be played simply by pressing a key on a connected MIDI instrument. The patterns played can be recorded on an external sequencer etc.

On (Checked): The RPPR function will be on. If a pattern is assigned to each key in the 5.1: RPPR, RPPR Setup page, pressing that key will play the assigned pattern.

MIDI This is controlled on the MIDI channel of the track selected by “Control Track.” If you wish to use the RPPR function, set the MIDI channel of the external MIDI device to the same MIDI channel as the channel of the “Control Track,” and play the patterns by sending the note numbers that correspond to the pattern assigned to each key.

♪ (Tempo) [040...240, EXT]

Specifies the tempo of the RPPR (patterns) and arpeggiator.

040...240: This will be displayed if “MIDI Clock” (GLOBAL 2.1-1a) is **Internal**. The tempo you specify here will be used. **EXT:** This will be displayed if “MIDI Clock” is **External**. The tempo of the TRITON-Rack will synchronize to the MIDI clock messages received from an external sequencer etc.

This parameter can also be set from the 5.1: RPPR, RPPR Setup page.

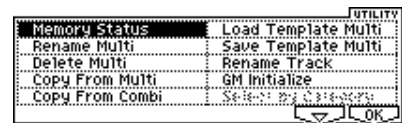
Multi Information

This displays the functions assigned to “SW1,” “SW2,” and REALTIME CONTROLS B mode [ASSIGNABLE 1-4] knobs for the selected multi.

■ 1.1-1b: SW1, SW2

This turns the functions of SW1 and SW2 on (**OSW1**) or off (**OSW2**). (⇨ 2.2: Controller)

■ 1.1-1c: UTILITY



For details on how to select the desired utility function, refer to “PROG 1.1-1d: UTILITY.”

Memory Status

Selects “Memory Status,” access the dialog box and view the remaining amount of memory for patterns etc.

Rename Multi

Selects “Rename Multi,” access the dialog box and rename the selected multi. Up to sixteen characters can be input. (⇨ BG p.38)

Delete Multi

This command deletes the currently selected multi.

- ① Select “Delete Multi” to access the dialog box.
- ② If you wish to execute the Delete Multi command, press the [F8] (“OK”) key. To cancel, press the [F7] (“Cancel”) key. When you execute this command, setting data, and patterns etc. of the currently selected multi will be erased, and the memory area allocated to that multi will be freed.

Copy From Multi

This command copies all setting data and pattern data from the specified multi to the currently selected multi.

- ① Select “Copy From Multi” to access the dialog box.



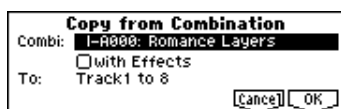
- ② In “From,” specify the copy source multi number.

- Select the data that you wish to copy.
All: will copy all pattern data and musical data.
“**Without Patterns:**” Multi settings other than pattern data and RPPR settings will be copied.
- To execute the Copy Multi operation, press the [F8] (“OK”) key. To cancel without executing press the [F7] (“Cancel”) key. If you execute “**All,**” all settings and pattern data of the currently selected multi will be deleted and replaced by the copy source data. If you execute “**Without Patterns,**” all setting data other than the pattern data and RPPR settings of the currently selected multi will be deleted and replaced by the copy source data.

Copy From Combi (Copy from Combination)

This command copies the parameters of the specified combination to the currently selected multi.

- Select “Copy From Combi” to access the dialog box.



- In “Combi,” select the copy source destination.
- If you check “with Effects,” the insertion effect, master effect, and master EQ settings will also be copied.
- In “To,” select the copy destination tracks (1–8 or 9–16).
- To execute the Copy From Combi command, press the [F8] (“OK”) key. To cancel, press the [F7] (“Cancel”) key. Be aware that when you execute this command, the setting data of the currently selected multi will be erased, and overwritten by the data of the selected combination.

Load Template Multi

This command loads a template multi into the multi mode. The TRITON-Rack contains sixteen **preset template multis** (P00–15) with program and effect settings appropriate for various styles of music. You can also create sixteen **user template multis** (U00–15) with the programs, track parameters, and effects etc. that you use frequently. (⇨“Save Template Multi”)

- Select “Load Template Multi” to access the dialog box.



- In “From,” specify the template multi that you wish to load.
- To load the template multi, press the [F8] (“OK”) key. To cancel, press the [F7] (“Cancel”) key. When you execute the command, multi setting data other than pattern data and RPPR will be copied.

Save Template Multi (Save as User Template Multi)

This command saves the program selections, track parameters, and effect settings etc. of the multi as a user template multi U00–15.

- Select “Save Template Multi” to access the dialog box.



- In “To,” specify the user template multi (U00–15) in which the data will be saved.
- To save the template multi, press the [F8] (“OK”) key. To cancel, press the [F7] (“Cancel”) key. Be aware that when you execute this command, all setting data of the save destination User Template Multi will be erased and rewritten.

Rename Track

Selects “Rename Track,” access the dialog box and rename the selected multi. Up to sixteen characters can be input. (⇨BG p.38)

GM Initialize

This command resets each track to settings appropriate for GM. (⇨See the table at the bottom of the next page.)

MIDI When a GM System On message is received from an external device in Multi mode, the TRITON-Rack will be reset to GM settings in the same way as when this command is executed. (However in these cases, the various 7.3: MasterFx parameters will not be reset.)

1.1–2: Prog..8 (Track Program T01...08)

1.1–3: Prog..16 (Track Program T09...16)

Specifies the program used by each track.



1.1–2(3)a: Track Number & Category

Track Number & Category

This shows the track number and the abbreviated name of the program category.

1.1–2(3)b: Program Select

Program Select

[I-A...F/E-A...H 000...127, G...g 001...128: name]

Selects the program used by each track.

If the “Status” (3.1–1a/2a) is **EX2**, a “-” will be displayed before the program number.

note By holding down the [TIMBRE/TRACK] key and pressing a [F1](1/9)–[F8](8/16) key you can move to the corresponding track “T1”–“T16.”

The program bank can also be selected directly by using the [A]–[H] keys and the [BANK] key.

You can also use the “Select by Category” utility to select programs by category.

MIDI If the “Status” (3.1–1a/2a) is either **INT** or **BTH**, programs can be selected by receiving MIDI program change messages. Also, when the multi is changed, tracks whose “Status” is **EXT**, **EX2** or **BTH** will transmit the bank and program numbers via MIDI. Tracks whose “Status” is **EX2** will transmit the bank number that was selected in the “Bank(EX2) LSB,” “Bank(EX2) MSB” (3.1–1a).

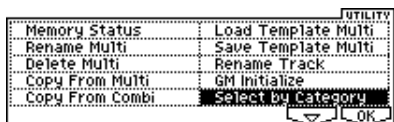
The lower line shows part of the program name used by the track. For GM2 variation banks or the GM2 drums bank, the variation bank (1)–(9) or drums bank (d) will be shown.

1.1–2(3)c: Track Information

Track Information

This shows the currently selected track, program bank, number, name, and MIDI channel.

1.1–2(3)d: UTILITY



⇨ “Memory Status,” “Rename Multi,” “Delete Multi,” “Copy From Multi,” “Copy From Combi,” “Load Template Multi,” “Save Template Multi,” “Rename Track,” “GM Initialize” (1.1–1c)

Select by Category

You can select the program for each track by category. This command can be selected when a Program page (Prog..8, Prog..16) is displayed. (⇨PROG 1.1–1a)

1.1–4: Mix..8 (Mixer T01...08)

1.1–5: Mix..16 (Mixer T09...16)

Here you can set the pan and volume of each track.



1.1–4a

1.1–4b

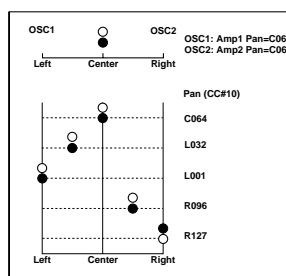
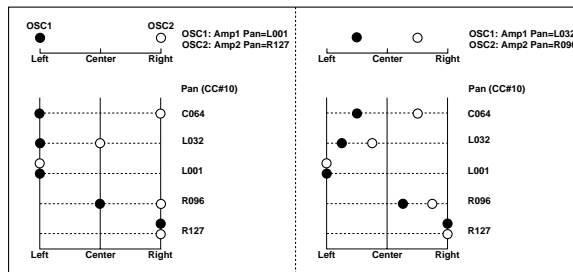
1.1–4(5)a: Pan, Volume

Pan

[RND, L001...C064...R127]

Sets the pan of tracks 1–16.

L001...C064...R127: A setting of **L001** is far left, and **R127** is far right. A setting of **C064** will reproduce the pan setting of the oscillator in Program mode.



GM Initialize Parameters

	Parameter	Track1–9, 11–16	Track10	
1.1	Program Select	G001:Acoustic Piano	g(d)001:STANDARD Kit	
	Pan	C064	C064	
	Volume	100	100	
3.1	Status	–	–	The setting remains unchanged
3.2	Use Program's Scale	–	–	The setting remains unchanged
6.1	Arpeggiator Assign	–	–	The setting remains unchanged
	Other Arpeggiator parameters	–	–	The setting remains unchanged
7.1	IFX/Indiv.Out BUS Select	L/R	DKit	
	Send1(MFX1)	0	0	
	Send2(MFX2)	40	40	
7.2	IFX1–5	–	–	The setting remains unchanged
	Pan(CC#8)	–	–	The setting remains unchanged
	BUS Select	–	–	The setting remains unchanged
	Send1	–	–	The setting remains unchanged
	Send2	–	–	The setting remains unchanged
	Other Insert Effect parameters	–	–	The setting remains unchanged
7.3	MFX1	–	–	016: St.Chorus
	MFX2	–	–	053: Rev Smth. Hall
	Return1	–	–	127
	Return2	–	–	050
	Other Master Effect and Master EQ parameters	–	–	Default settings

If a mono-type insertion effect is inserted, this setting will be ignored. In this case, the 7.2: Insert FX, Setup page “Pan (CC#8)” setting will adjust the pan of the sound following the insertion effect.

RND: The sound will be panned randomly at each note-on.

MIDI If “Status” (3.1–1a/2a) is **INT** or **BTH**, CC#10 Panpot can be received to control the panning. When receiving CC#10, a value of 0 or 1 is far left, 64 is center, and 127 is far right. When you change the multi, tracks whose “Status” is **EXT**, **EX2** or **BTH** will transmit the pan you specify here as a MIDI message (except for **RND**).

Volume [000...127]

Sets the volume of tracks 1–16.

MIDI When “Status” (3.1–1a/2a) is **INT** or **BTH**, CC#7 Volume can be received to control the volume. The volume of a track is determined by multiplying the MIDI Volume (CC#7) and Expression (CC#11) values. When you change the multi, tracks whose “Status” is **EXT**, **EX2** or **BTH** will transmit the volume you specify here as a MIDI Volume message.

■ 1.1–4(5)b: UTILITY

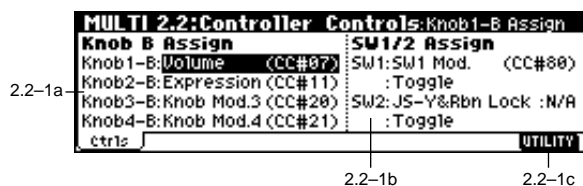
☞ “Memory Status,” “Rename Multi,” “Delete Multi,” “Copy From Multi,” “Copy From Combi,” “Load Template Multi,” “Save Template Multi,” “Rename Track,” “GM Initialize” (1.1–1c)

MULTI 2.2: Controller

2.2–1: Ctrls (Controllers)

Selects the B-mode functions of REALTIME CONTROLS knobs [1]–[4] and the functions of “SW1” and “SW2” in Multi mode.

MIDI When you operate these controllers on the MIDI channel of the “Control Track,” the MIDI messages assigned here will be transmitted (if “Status” 3.1–1a/2a is **EXT**, **EX2**, or **BTH**).



2.2–1a: Knob B Assign

Here you can set the B-mode functions (mainly various control changes) that the REALTIME CONTROLS knobs [1]–[4] will have (☞p.214 “Realtime Control Knobs B Assign List”).

When the REALTIME CONTROLS are in B-mode, the functions you specify here will be controlled on the track and MIDI channel of the “Control Track” (1.1–1a) when you operate knobs [1]–[4].

The functions you specify here will operate when you rotate the REALTIME CONTROLS knobs [1]–[4] in B-mode.

Knob1–B (Knob1–B Assign) **AMSource** [Off, ..., MIDI CC#95]

Knob2–B (Knob2–B Assign) **AMSource** [Off, ..., MIDI CC#95]

Knob3–B (Knob3–B Assign) **AMSource** [Off, ..., MIDI CC#95]

Knob4–B (Knob4–B Assign) **AMSource** [Off, ..., MIDI CC#95]

2.2–1b: Switch1/2 Assign

Assigns functions to the “SW1” and “SW2” (☞p.213 “SW1, SW2 Assign List”).

Since the “SW1” and “SW2” function assignments of the program assigned to each track are ignored when the program is used in a multi, you must make new assignments here for the multi.

SW1 (SW1 Assign) **AMSource** [Off, ..., AfterT Lock :N/A]
SW1 Mode [Toggle, Momentary]

SW2 (SW2 Assign) **AMSource** [Off, ..., AfterT Lock :N/A]
SW2 Mode [Toggle, Momentary]

(☞PROG 2.2–1b)

■ 2.2–1c: UTILITY

☞ “Memory Status,” “Rename Multi,” “Delete Multi,” “Copy From Multi,” “Copy From Combi,” “Load Template Multi,” “Save Template Multi” (1.1–1c)

MULTI 2.3: MOSS

2.3-1: MOS..8 (MOSS T01-08)

2.3-2: MOS..16 (MOSS T09-16)

This page is displayed when the separately sold EXB-MOSS option has been installed.

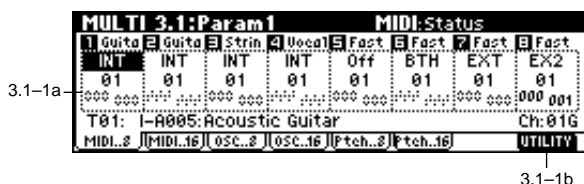
(⇨EXB-MOSS owner's manual & p.251 "EXB-MOSS option")

MULTI 3.1: Param1 (Parameter1)

3.1-1: MIDI..8 (MIDI T01-08)

3.1-2: MIDI..16 (MIDI T09-16)

Here you can make MIDI-related settings for each track.



3.1-1b

3.1-1(2)a: Status, MIDI Channel, Bank(EX2) MSB/LSB

Status [INT, Off, BTH, EXT, EX2]

This sets the status of MIDI and the internal tone generator for each track.

INT: The tone generator will sound in response to incoming MIDI messages from a connected external MIDI device. MIDI messages will not be transmitted. If RPPR or the arpeggiator are assigned to a track that is set to INT, only the TRITON-Rack will sound; MIDI data will not be transmitted to an external device (i.e., the external MIDI device will not sound). If the TRITON-Rack's controllers are operated on the track specified as the "Control Track" (1.1-1a), only the TRITON-Rack will be controlled, and MIDI messages will not be transmitted.

Off: The program will not sound, nor will MIDI data be transmitted.

BTH: The operations of both INT and EXT will be performed. If RPPR or the arpeggiator is specified for a track set to BTH, the TRITON-Rack will sound and MIDI messages will also be transmitted. If the TRITON-Rack's controllers are operated on the track specified as the "Control Track" (1.1-1a), the TRITON-Rack will be controlled and the same data will also be transmitted via MIDI.

EXT: MIDI messages will be transmitted without sounding the internal program. If RPPR or the arpeggiator are assigned to a track that is set to EXT, MIDI data will be transmitted to an external device, but the tone generator of the TRITON-Rack will not sound. If the TRITON-Rack's controllers are operated on the track specified as the "Control Track" (1.1-1a), MIDI messages will also be transmitted to control the external device, but the TRITON-Rack itself will not be controlled.

When you switch the multi, tracks that are set to EXT will transmit program change, volume, panpot, portamento,

send 1, 2, post IFX pan, and post IFX send 1, 2 MIDI messages.

EX2: "Bank Select" will be enabled. Instead of the I-A-E-H bank numbers that can be selected on the TRITON-Rack, the bank number you specify here will be transmitted. In other respects this is the same as EXT.

MIDI MIDI data is transmitted and received on the MIDI channel that is specified separately for each track by "MIDI Channel."

Status	Data from RPPR or Arp. Operations on the TRITON-Rack		Received data	
	Internal tone generator	MIDI OUT	Internal tone generator	MIDI OUT
INT	●	×	●	—
EXT, EX2	×	●	×	—
BTH	●	●	●	—

MIDI Channel [01...16]

Specifies the MIDI channel that the track will use to transmit and receive note data. Tracks set to INT which have the same MIDI channel will sound and be controlled identically when they receive MIDI data or RPPR data.

Bank(EX2) MSB [000...127]

Bank(EX2) LSB [000...127]

When "Status" is set to EX2, this sets the bank number that will be transmitted. When "Status" is other than EX2, this setting has no effect.

■ 3.1-1(2)b: UTILITY

⇨ "Memory Status," "Rename Multi," "Delete Multi," "Copy From Multi," "Copy From Combi," "Load Template Multi," "Save Template Multi" (1.1-1c)

3.1-3: OSC..8 (OSC T01-08)

3.1-4: OSC..16 (OSC T09-16)

Indicates settings for each track.



3.1-3b

3.1-3(4)a: Force OSC Mode, OSC Select, Portamento

Force OSC Mode [PRG, Poly, Mono, LGT]

Selects the "Mode (Voice Assign Mode)" (PROG 2.1-1b) of the program selected for each track 1-8, 9-16.

(⇨COMBI 3.1-2a)

OSC Select [Both, OSC1, OSC2]

Specifies the "Mode (Oscillator Mode)" (PROG 2.1-1a) of the program selected for each track 1-8, 9-16. If the "Mode (Oscillator Mode)" is **Double**, you can use this setting to make only one or the other oscillator sound (⇨COMBI 3.1-2a).

Portamento [PRG, Off, 001...127]

Specifies the portamento effect for each track 1–8, 9–16.
(⇨COMBI 3.1–2a)

MIDI When the track whose “Status” (3.1–1a/2a) is **INT** or **BTH**, MIDI control change CC#05 (Portamento Time) and CC#65 (Portamento Switch) can be received to control this and change the setting. (If the setting is **PRG**, CC#05 Portamento Time will not be received.)

Tracks whose “Status” is **BTH**, **EXT**, or **EX2** will transmit these settings via MIDI when you change this setting or when you change multis.

If this is **Off**, CC#65 with a value of 0 will be transmitted. If this is **001–127**, a CC#65 of 127 and CC#05 of 001–127 will be transmitted.

If this is set to **PRG**, nothing will be transmitted.

This data is transmitted on the MIDI channel specified for each track by “MIDI Channel” (3.1–1a/2a).

3.1–3(4)b: UTILITY

⇨ “Memory Status,” “Rename Multi,” “Delete Multi,” “Copy From Multi,” “Copy From Combi,” “Load Template Multi,” “Save Template Multi” (1.1–1c)

3.1–5: Ptch..8 (Pitch T01–08)**3.1–6: Ptch..16 (Pitch T09–16)**

Here you can make pitch-related settings for each track.



3.1–5b

3.1–5(6)a: Transpose, Detune, Bend Range**Transpose** [–24...+24]

Adjusts the pitch of each track in semitone steps.
12 steps are one octave.

Detune (BPM Adj.) [–1200... +1200]

Adjusts the pitch of each track in one-cent steps from the normal pitch.

0: Normal pitch.

note You can use the Utility “Detune BPM Adj.” (3.1–5/6b) to make a calculation in BPM units and set Detune automatically.

MIDI “Transpose” and “Detune” settings do not affect the note data that is transmitted via MIDI. “Transpose” and “Detune” are controlled by received MIDI RPN messages. The “Mode (Oscillator Mode)” (PROG 2.1–1a) of the programs selected for tracks 1–16 will be controlled as follows.

- If “Mode (Oscillator Mode)” is **Single** or **Double**, MIDI RPN Coarse Tune messages can be received to control and change the “Transpose” setting, and Fine Tune messages to control and change the “Detune” setting.
- If “Mode (Oscillator Mode)” is **Drums**, MIDI RPN Coarse Tune and Fine Tune messages can be received

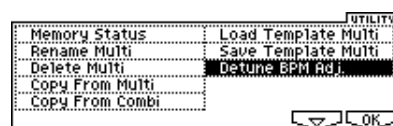
to control and change the “Detune” setting. The range of control will be ± 1 octave when Coarse Tune and Fine Tune are added. These messages will be received on the MIDI channel that is specified for each track by “MIDI Channel” (3.1–1a/2a).

Bend Range [PRG, –24...+24]

Specifies the range of pitch change that will occur when the MIDI Pitch Bend Change message is received.

PRG: The pitch range specified by the program will be used. **–24+24:** Regardless of the setting of the program, pitch bending will use the range you specify here.

MIDI This setting can be controlled and changed by received MIDI RPN Pitch Bend Range messages. (These messages will not be received if the setting is **PRG**.) This is controlled on the MIDI channel specified for each track by “MIDI Channel” (3.1–1a/2a).

3.1–5(6)b: UTILITY

⇨ “Memory Status,” “Rename Multi,” “Delete Multi,” “Copy From Multi,” “Copy From Combi,” “Load Template Multi,” “Save Template Multi” (1.1–1c)

For details on how to select the desired utility function, refer to “PROG 1.1–1d: UTILITY.”

Detune BPM Adj. (Detune BPM Adjust)

If a drum program uses a multisample or sample of a phrase or rhythm loop etc. that was created in Sampling mode (or loaded in Disk mode) to match a specific BPM, you can use this utility command to modify its BPM. “Detune BPM Adj.” changes the BPM of a phrase or rhythm by modifying its pitch.

This command is available for a track if the track “Detune” parameter is selected. When you execute this command, the selected “Detune” value will be set automatically (⇨PROG 2.1–2c, 2.1–3, GLOBAL 5.1–1b, 5.1–2).

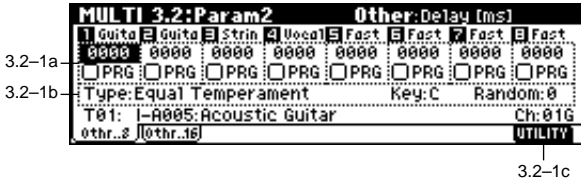
For the procedure, refer to “Detune BPM Adj.” (COMBI 3.1–3b).

MULTI 3.2: Param2 (Parameter2)

3.2-1: Othr..8 (Other T01-08)

3.2-2: Othr..16 (Other T09-16)

For each track, specify the delay time from note-on until the sound is heard, and select the scale.



3.2-1c

3.2-1(2)a: Delay [ms] , Use Prog's Scale

Delay [ms] [0000...5000, KeyOff]

Specifies a delay time from when a track receives a note-on until it actually sounds.

KeyOff: The sound will begin when note-off occurs. In this case, the sound will continue indefinitely unless the amp EG Sustain Level of the program is other than 0. This setting is useful for simulating harpsichord sounds.

Normally you will leave this at 0.

Use Prog's Scale [Off, On]

Each track can use the scale that is specified for the program by "Scale" (PROG 2.1-1c).

On (Checked): The scale of the program will be used.

Off (Unchecked): The scale specified by "Type (Multi's Scale)" (3.2-1b/2b) will be used.

3.2-1(2)b: Scale

Specifies the scale that will be used for the multi.

Type (Multi's Scale) [Equal Temperament...User Octave15]

Selects the type of scale.

☞ "Type (Scale Type)" (PROG 2.1-1c)

Key [C...B]

Selects the tonic key of the selected scale.

☞ "Key" (PROG 2.1-1c)

Random [0...7]

As this **value is increased**, an increasingly random deviation will be added to the pitch at each note-on.

☞ "Random" (PROG 2.1-1c)

■ 3.2-1(2)c: UTILITY

☞ "Memory Status," "Rename Multi," "Delete Multi," "Copy From Multi," "Copy From Combi," "Load Template Multi," "Save Template Multi" (1.1-1c)

MULTI 3.3: Key Zone

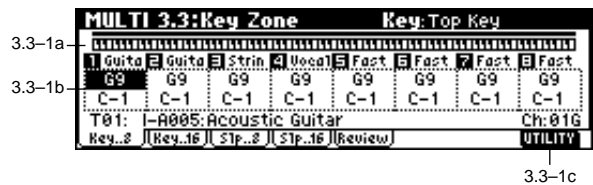
Here you can specify the range of keys that will be sounded by each track.

Top/Bottom Key settings specify the range of notes that will be sounded by tracks 1-8, 9-16, and Top/Bottom Slope settings specify the range from the top/bottom key until the original volume is reached.

MIDI This setting does not affect MIDI transmission. All note data produced by RPPR and the arpeggiator will be transmitted.

3.3-1: Key..8 (Key Zone T01-08)

3.3-2: Key..16 (Key Zone T09-16)



3.3-1c

3.3-1(2)a: Key Zone Map (1)

This shows the range of note data that will sound the currently selected track. The note range that will be sounded is shown as a line, and the slope portion is grayed.

3.3-1(2)b: Top Key, Bottom Key

Top Key [C-1...G9]

Specifies the top key (upper limit) that will be sounded by each track 1-8, 9-16.

Bottom Key [C-1...G9]

Specifies the bottom key (lower limit) that will be sounded by each track 1-8, 9-16.

For a diagram of Key and Slope parameters, refer to "COMBI 3.3: Ed-Key Zone."

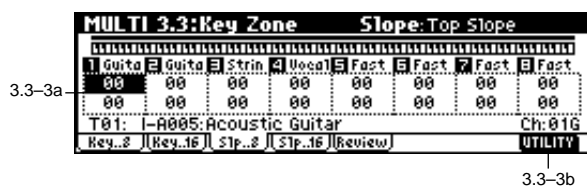
note The value of these parameters can also be set by holding down the [ENTER] key and playing a note on a connected MIDI instrument.

■ 3.3-1(2)c: UTILITY

☞ "Memory Status," "Rename Multi," "Delete Multi," "Copy From Multi," "Copy From Combi," "Load Template Multim," "Save Template Multi" (1.1-1c)

3.3-3: Slp..8 (Key Slope T01-08)

3.3-4: Slp..16 (Key Slope T09-16)



3.3-3(4)a: Top Slope, Bottom Slope

Top Slope [00...72]

Specifies the key range (12 is one octave) from the top key of track 1-8, 9-16 until the original volume is reached.

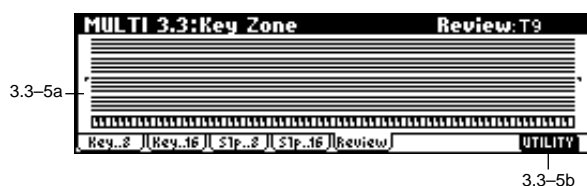
Bottom Slope [00...72]

Specifies the key range (12 is one octave) from the bottom key of track 1-8, 9-16 until the original volume is reached.

■ 3.3-3(4)b: UTILITY

☞ “Memory Status,” “Rename Multi,” “Delete Multi,” “Copy From Multi,” “Copy From Combi,” “Load Template Multi,” “Save Template Multi” (1.1-1c)

3.3-5: Review



3.3-5a: Key Zone Map (All)

T1...T16

This shows the range of note data that will be sounded by tracks 1-16. The note range that will be sounded is shown as a line, and the slope portion is grayed.

■ 3.3-5b: UTILITY

☞ “Memory Status,” “Rename Multi,” “Delete Multi,” “Copy From Multi,” “Copy From Combi,” “Load Template Multi,” “Save Template Multi” (1.1-1c)

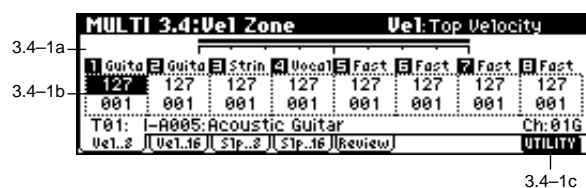
MULTI 3.4: Vel Zone (Velocity Zone)

Specifies the range of velocities that will sound each track. Set the Top/Bottom Velocity parameters to set the range of velocities that will sound tracks 1-8 and 9-16, and set the Top/Bottom Slope parameters to specify the range over which the volume will change.

MIDI These settings do not affect MIDI transmission. All note data produced by RPPR and the arpeggiator will be transmitted.

3.4-1: Vel..8 (Velocity Zone T01-08)

3.4-2: Vel..16 (Velocity Zone T09-16)



3.4-1(2)a: Velocity Zone Map (1)

This shows the range of velocities that will sound the currently selected track. The velocity range that will be sounded is shown as a line, and the slope portion is grayed.

3.4-1(2)b: Top Velocity, Bottom Velocity

Top Velocity [1...127]

Specifies the maximum velocity that will be sounded by each track 1-8, 9-16.

Bottom Velocity [1...127]

Specifies the minimum velocity that will be sounded by each track 1-8, 9-16.

note The value of these parameters can also be set by holding down the [ENTER] key and playing a note on a connected MIDI instrument.

■ 3.4-1(2)c: UTILITY

☞ “Memory Status,” “Rename Multi,” “Delete Multi,” “Copy From Multi,” “Copy From Combi,” “Load Template Multi,” “Save Template Multi” (1.1-1c)

3.4-3: Slp..8 (Velocity Slope T01-08)

3.4-4: Slp..16 (Velocity Slope T09-16)



3.4-3(4)a: Top Slope, Bottom Slope

Top Slope [0...120]

Specifies the range of values over which the volume will be adjusted from the top velocity until the original volume is reached.

Bottom Slope [0...120]

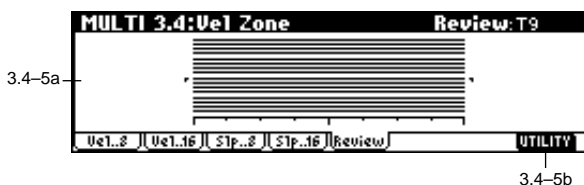
Specifies the range of values over which the volume will be adjusted from the bottom velocity until the original volume is reached.

For a diagram of these parameters, refer to “COMBI 3.4: Ed-Vel Zone.”

3.4-3(4)b: UTILITY

☞ “Memory Status,” “Rename Multi,” “Delete Multi,” “Copy From Multi,” “Copy From Combi,” “Load Template Multi,” “Save Template Multi” (1.1-1c)

3.4-5: Review



3.4-5a: Velocity Zone Map (All)

T1...T16

This shows the range of velocity that will be sounded by tracks 1-16. The note range that will be sounded is shown as a line, and the slope portion is grayed.

3.4-5b: UTILITY

☞ “Memory Status,” “Rename Multi,” “Delete Multi,” “Copy From Multi,” “Copy From Combi,” “Load Template Multi,” “Save Template Multi” (1.1-1c)

MULTI 4.1: MIDI Filter1

Here you can select whether or not to apply filtering to the MIDI data received by tracks 1-16. For example, even if two tracks are receiving the same MIDI channels, one can be made to respond to damper pedal activity while the other does not.

note These settings affect the MIDI messages that are transmitted when you adjust program, pan, volume, portamento and send 1/2 parameters of a track whose “Status” (3.1-1a/2a) is set to **BTH**, **EXT**, or **EX2**.

On (Checked): Reception of MIDI data is enabled. Tracks whose “Status” (3.1-1a/2a) is **INT** or **BTH** will receive MIDI messages whose channel matches and whose types are checked. The types of effect that are checked will be applied to the program of each track when the TRITON-Rack’s controllers are operated or when MIDI data is received. (The effect dynamic modulation function is not affected by these settings.) Settings that regulate MIDI transmission/reception of the TRITON-Rack itself are made in “MIDI Filter” (GLOBAL 2.1-1b).

If MIDI control changes have been assigned as the function of the REALTIME CONTROLS knobs or of “SW1” and “SW2,” the MIDI filter for these controllers (MIDI Filter 3, 4) will affect these control changes. However if these are the same as the control changes of MIDI Filter 1, 2, the MIDI Filter 1, 2 settings will take priority. Furthermore, if the same control change has been assigned to two or more controllers, checking any one of the MIDI Filter 3 or 4 parameters will cause the setting to apply to that control change.

Off (Unchecked): Reception of MIDI data is disabled.

4.1-1: M1-1..8 (MIDI Filter1-1 T01-08)

4.1-2: 1-1..16 (MIDI Filter1-1 T09-16)



4.1-1(2)a: Program Change, After Touch

Program Change [Off, On]

Specifies whether or not MIDI program change messages will be received.

After Touch [Off, On]

Specifies whether or not MIDI after touch messages will be received.

4.1-1(2)b: UTILITY

☞ “Memory Status,” “Rename Multi,” “Delete Multi,” “Copy From Multi,” “Copy From Combi,” “Load Template Multi,” “Save Template Multi” (1.1-1c)

4.1-3: 1-2..8 (MIDI Filter1-2 T01-08)

4.1-4: 1-2..16 (MIDI Filter1-2 T09-16)



4.1-3b

4.1-3(4)a: Damper CC#64, Portamento SW CC#65

Damper CC#64 [Off, On]

Specifies whether or not MIDI control change message #64 Hold (damper pedal) will be received.

Portamento SW CC#65 [Off, On]

Specifies whether or not MIDI control change message #65 Portamento On/Off will be received.

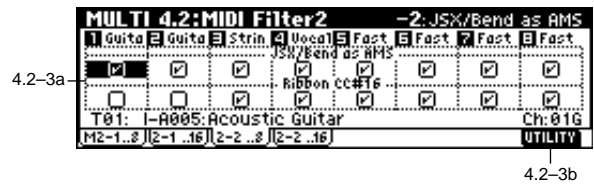
■ 4.1-3(4)b: UTILITY

☞ “Memory Status,” “Rename Multi,” “Delete Multi,” “Copy From Multi,” “Copy From Combi,” “Load Template Multi,” “Save Template Multi” (1.1-1c)

MULTI 4.2: MIDI Filter2

4.2-3: 2-2..8 (MIDI Filter2-2 T01-08)

4.2-4: 2-2..16 (MIDI Filter2-2 T09-16)



4.2-3b

4.2-3(4)a: JSX/Bend as AMS, Ribbon CC#16

JSX/Bend as AMS [Off, On]

This parameter specifies whether the effect of the AMS (☞p.205 “Alternate Modulation Source”) assigned to **JS X** will be received when MIDI pitch bend messages (the X-axis of the TRITON’s joystick, etc.) are received. (This is not a reception filter for MIDI pitch bend messages.)

Ribbon CC#16 [Off, On]

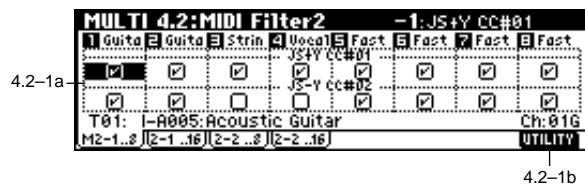
Specifies whether MIDI control change message #16 (specified as the B-mode assignment of REALTIME CONTROLS knobs [1]-[4], or the ribbon controller of a TRITON etc.) will be received.

■ 4.2-3(4)b: UTILITY

☞ “Memory Status,” “Rename Multi,” “Delete Multi,” “Copy From Multi,” “Copy From Combi,” “Load Template Multi,” “Save Template Multi” (1.1-1c)

4.2-1: M2-1..8 (MIDI Filter2-1 T01-08)

4.2-2: 2-1..16 (MIDI Filter2-1 T09-16)



4.2-1b

4.2-1(2)a: JS+Y CC#01, JS-Y CC#02

JS+Y CC#01 [Off, On]

Specifies whether MIDI control change message #1 (specified as the B-mode assignment of REALTIME CONTROLS knobs [1]-[4], or the +Y direction of a joystick on a TRITON etc.) will be received.

JS-Y CC#02 [Off, On]

Specifies whether MIDI control change message #2 (specified as the B-mode assignment of REALTIME CONTROLS knobs [1]-[4], or the -Y direction of a joystick on a TRITON etc.) will be received.

■ 4.2-1(2)b: UTILITY

☞ “Memory Status,” “Rename Multi,” “Delete Multi,” “Copy From Multi,” “Copy From Combi,” “Load Template Multi,” “Save Template Multi” (1.1-1c)

MULTI 4.3: MIDI Filter3

Specifies whether the A- and B-mode operations of REAL-TIME CONTROLS knobs [1]–[4] will be received. MIDI control messages are fixed as the A-mode operation of each knob. In B-mode the knobs correspond to the messages you assign in the 2.2: Controller Ctrls page.

4.3–1: M3–1..8 (MIDI Filter3–1 T01–08)

4.3–2: 3–1..16 (MIDI Filter3–1 T09–16)

4.3–3: 3–2..8 (MIDI Filter3–2 T01–08)

4.3–4: 3–2..16 (MIDI Filter3–2 T09–16)



4.3–1(2)a: Realtime Control Knob 1, 2

Knob1 [Off, On]

Specifies whether or not the A-mode [1] knob MIDI control change message #74 (the TRITON-Rack’s low pass filter cut-off frequency) and the B-mode [1] knob MIDI control change message will be received.

Knob2 [Off, On]

Specifies whether or not the A-mode [2] knob MIDI control change message #71 (the TRITON-Rack’s low pass filter resonance or high pass filter cutoff frequency) and the B-mode [2] knob MIDI control change message will be received.

4.3–3(4)a: Realtime Control Knob 3, 4

Knob3 [Off, On]

Specifies whether or not the A-mode [3] knob MIDI control change message #79 (the TRITON-Rack’s filter EG intensity) and the B-mode [3] knob MIDI control change message will be received.

Knob4 [Off, On]

Specifies whether or not the A-mode [4] knob MIDI control change message #72 (the release time of the TRITON-Rack’s filter and amp EG’s) and the B-mode [4] knob MIDI control change message will be received.

■ 4.3–1(2)b, 4.3–3(4)b: UTILITY

☞ “Memory Status,” “Rename Multi,” “Delete Multi,” “Copy From Multi,” “Copy From Combi,” “Load Template Multi,” “Save Template Multi” (1.1–1c)

MULTI 4.4: MIDI Filter4

Specifies whether the operations of “SW1” and “SW2” will be received. “SW1” and “SW2” correspond to the messages you assigned in 2.2: Controller. Here you can also specify whether other control changes will be received.

4.4–1: M4–1..8 (MIDI Filter4–1 T01–08)

4.4–2: 4–2..16 (MIDI Filter4–1 T09–16)



4.4–1(2)a: SW1, SW2

SW1, SW2 [Off, On]

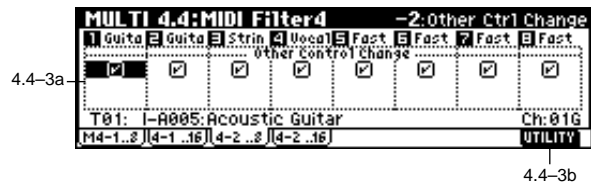
Specifies whether the operations of “SW1” and “SW2” will be received. This setting is valid if you have selected **SW1 Mod. (CC#80)**, **SW2 Mod. (CC#81)**, or **Porta.SW (CC#65)**.

■ 4.4–1(2)b: UTILITY

☞ “Memory Status,” “Rename Multi,” “Delete Multi,” “Copy From Multi,” “Copy From Combi,” “Load Template Multi,” “Save Template Multi” (1.1–1c)

4.4–3: 4–2..8 (MIDI Filter4–2 T01–08)

4.4–4: 4–2..16 (MIDI Filter4–2 T09–16)



4.4–3(4)a: Other Control Change

Other Ctrl Change [Off, On]

Specifies whether or not MIDI control change messages other than those included in MIDI Filter 1–4 will be received.

■ 4.4–3(4)b: UTILITY

☞ “Memory Status,” “Rename Multi,” “Delete Multi,” “Copy From Multi,” “Copy From Combi,” “Load Template Multi,” “Save Template Multi” (1.1–1c)

MULTI 5.1: RPPR

On the TRITON-Rack you can use **preset patterns P00–149**, and **user patterns U00–99**. One multi can contain up to one hundred user patterns. Preset patterns suitable for use in a drum track are provided in memory, and can be selected from any multi.

Preset patterns cannot be edited, but you may copy a preset pattern to a user pattern, and edit.

User patterns can be created by realtime recording (including recording that uses the arpeggiator), step recording, or the Copy Pattern command (copying from another pattern) (☞BG p.57).

You can use the RPPR (Realtime Pattern Play/Recording) function to assign these patterns to individual keys, and then play these patterns by pressing a key on a connected MIDI instrument, or even record the pattern playback on an external sequencer (☞5.1–2: RPPR).

note When you execute the Sampling mode command Utility “Time Slice” (SMPL 3.1–2e), the sample will be divided, and at the same time a pattern for the divided sample will be created and assigned to RPPR.

note Individual tracks of SMF data can be loaded into a user pattern. (☞p.128)

5.1–1: Pattern

Here you can record and edit patterns.



For details on the recording procedure for pattern data, refer to 5.1–1c. BG p.63

5.1–1a: Location, Multi Select, Control Track

Location

This shows the current location (in measures) within the currently selected pattern.

Multi Select [000...199: name]

Selects the multi that you wish to use. (☞1.1–1a)

Control Track [T01...T16: name]

Selects the track that will record/play the pattern data.

(☞1.1–1a)

The program bank, number, and name of the selected track will be displayed at the right.

5.1–1b: Pattern, Metronome

Pattern

Pattern Bank [Preset, User]

Selects the pattern bank.

Preset: These are preset patterns. You can use “Pattern Select” to select 150 patterns suitable for drum tracks. Preset patterns cannot be edited or recorded. If you wish to create a new pattern based on a preset pattern, use the “Copy Pat-

tern” or “Bounce Pattern” utilities to copy the pattern to a user pattern, and then edit it.

User: These are user patterns. You can use “Pattern Select” to select 100 patterns. Each multi can have 100 of its own user patterns. (In contrast, preset patterns are shared by all multis.)

Select a user pattern if you wish to record or edit the pattern.

Pattern Select [P00...149, U00...U99]

Selects a pattern.

If you selected **Preset** for “Pattern Bank,” you can choose from preset patterns P00–149. If you selected **User** for “Pattern Bank,” you can choose from user patterns U00–99. The user pattern name can be renamed using the “Rename Pattern” utility.

J(Tempo) [040...240, EXT]

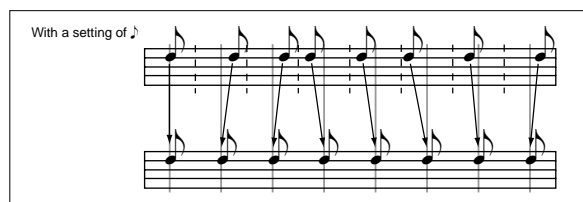
Specifies the playback tempo of the pattern. ☞“J(Tempo)” (1.1–1a).

Reso (Realtime Quantize Resolution) [Hi, $\frac{1}{3}$... $\frac{1}{4}$]

Specifies how the timing will be adjusted during realtime recording of a pattern. (The already-recorded data will not be adjusted.)

Hi (High Resolution): The timing will not be adjusted; data will be recorded at the highest resolution ($\frac{1}{192}$).

$\frac{1}{3}$... $\frac{1}{4}$: Data will be adjusted to the nearest interval of the specified timing. For example if you set this to $\frac{1}{3}$, data will be adjusted to the nearest 32nd triplet. If you set this to $\frac{1}{4}$, data will be adjusted to the nearest quarter note.



Since all performance data during recording will be adjusted to the specified timing interval, coarse settings of this parameter will cause continuous controller values such as pitch bend to be recorded in a stair-step fashion.

In such cases, you may wish to record the data with a setting of **Hi**, and then use the “Event Edit” (5.1–1e) utility to edit only the necessary data (e.g., note data), or record without using an excessively coarse resolution.

Remove Data [Off, On]

On (Checked): This lets you delete unneeded performance data while recording. When this is checked, press and hold a key (note number) on a connected MIDI instrument while you record; only the note numbers you press will be deleted from the previously-recorded data.

Controller data can also be removed in this way. For example while you move the joystick in the X (horizontal) direction, pitch bend data will be removed. While you apply pressure to the keyboard, after touch data will be removed. Alternatively, you can hold down the [F4] (“REC”) key to delete all musical data for as long as you continue holding down the key.

Metro.

Indicate settings for the metronome.

Metronome Sound [REC Only, REC/Play, Off]

Specifies whether the metronome will sound during recording or playback.

REC Only: The metronome will sound only during recording.

REC/Play: The metronome will sound during recording or playback.

Off: The metronome will not sound. However, a pre-count will be heard before recording begins.

Precount [0...2]

Specifies the length of the pre-count when recording. With a setting of 0, recording will start the instant you press the [F5] ("START") key after pressing [F4] ("REC").

Level [000...127]

Sets the volume of the metronome.

BUS (BUS Select) [L/R, L, R, 1, 2, 3, 4, 1/2, 3/4]

Specifies the output destination of the metronome sound.

L/R, L, R: Output from the OUTPUT (MAIN) L/Mono and/or R jacks.

1, 2, 3, 4, 1/2, 3/4: Output from the OUTPUT (INDIVIDUAL) 1, 2, 3, 4 jacks respectively.

■ 5.1-1c: REC, START/STOP

Realtime-record or play patterns.

Use the [F4] ("REC") key and [F5] ("START/STOP") key to record.

REC START: Normal mode.

REC START: Press the [F4] ("REC") key to enter record-ready mode. To cancel recording, press the [F4] ("REC") key once again. In record-ready mode, pressing the [F5] ("START") key will start recording. At this time, recording will begin after counting the number of measures specified by "Precount."

If you wish to **delete previously-recorded data** while you record, press the [F4] ("REC") key. Data will be deleted as long as you continue holding down this key. If you wish to **delete specific data**, use "Remove Data" (5.1-1b).

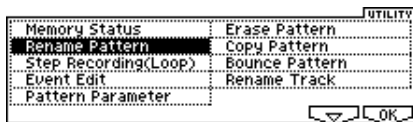
REC START: Playback will start when you press the [F5] ("START") key from normal mode.

REC STOP: Pressing the [F5] ("STOP") key during playback will stop playback.

■ 5.1-1d: SW1, SW2

This switches the function of SW1 and SW2 on (**OSW1**) or off (**OSW1**). During recording of a pattern/playback, you can use SW1 and SW2 to control the functions assigned to them.

■ 5.1-1e: UTILITY



⇨ "Memory Status," "Rename Track" (1.1-1c)

For details on how to select the desired utility function, refer to "PROG 1.1-1d: UTILITY."

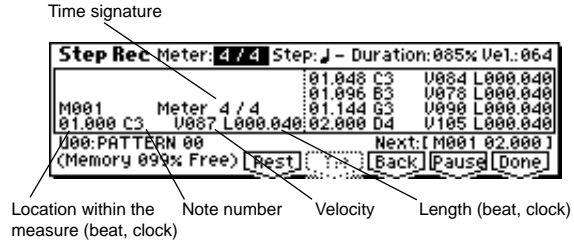
Rename Pattern

Specifies "Rename Pattern" to access the dialog box, and rename the selected pattern. You may input up to sixteen characters. (⇨BG p.38)

Step Recording(Loop)

Here you can perform step recording into a pattern. This is available when a user pattern is selected.

- ① In "Pattern Bank" and "Pattern Select," specify the pattern. By default, the pattern length is one measure. If you wish to change the number of measures in the pattern, set the Utility "Pattern Parameter".
- ② Select the "Step Recording (Loop)" to access the dialog box.



- ③ In "Meter," set the time signature. This will show the time signature that has already been set for the measure.

If you change the time signature setting, the time signature data of the measures you record will change.

- ④ In "Step (Step Time)," specify the length of the basic step that you wish to input, in terms of a note value. The number of clocks in each note value is shown below.

(0:24)	(0:48)	(0:96)	(1:00)	(2:00)	(4:00)
(0:36)	(0:72)	(0:144)	(1:96)	(3:00)	(6:00)
(0:16)	(0:32)	(0:64)	(0:128)	(1:64)	(2:128)

- ⑤ In "Duration," specify the length that the note will actually be held, relative to the "Step." In general, 100% will be tenuto, 85% will be normal, and 50% will be staccato.
- ⑥ Use "Vel. (Velocity)" to specify the velocity value (keyboard playing strength) of the note data. When the [F7] ("PAUSE") key is pressed, you can hold down the [ENTER] key and play a note on a connected MIDI instrument to specify the velocity value. If you set this to **Key**, the actual velocity at which you played the key will be input.
- ⑦ Using the keyboard of a connected MIDI instrument or by selecting parameters at the bottom of the dialog box, input note events as follows.

• **Inputting notes**

When you play a note on a connected MIDI instrument, that note number will be input with the note length that is specified by ④.

When you press a chord on the keyboard, those note numbers will be input as chords of the length specified in ④. Since each of the note numbers you press before releasing all of the keys will be input at the same location, the notes will be input as a chord even if they are actually played at different times.

Each time you press and release the keyboard, the location will advance by the length specified in ④.

• **Inputting rests**

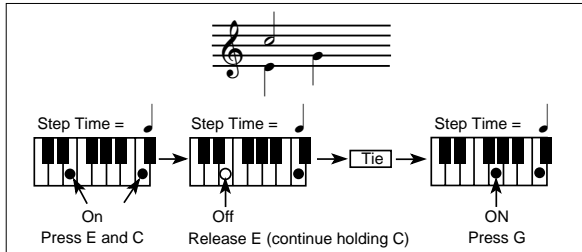
Press the [F4] ("Rest") key to input a rest of the length specified in ④.

- **Inputting a tie**

If you press the [F5] (“Tie”) key without pressing the keyboard, the previously-input note will be tied, and lengthened by the amount specified in ④.

If you press the [F5] (“Tie”) key while holding down a note, the note you are playing will be tied, and lengthened by the amount specified in ④.

You can even input notes as shown in the following diagram.



- **Deleting a note or rest**

To delete a note or rest, press the [F6] (“Back”) key. The location will move backward by the amount specified in ④, and the data in that interval will be deleted.

- **Auditioning the next note before input**

If you wish to verify the note you intend to enter next, press the [F7] (“Pause”) key. In this condition, playing a key will produce sound, but a note will not be recorded. Press the [F7] (“Pause”) key once again to defeat pause and resume input.

- ⑧ When you reach the end of the pattern you will return to the beginning. Recording will continue, allowing you to add more data.
- ⑨ When you are finished with step recording, press the [F8] (“Done”) key. If you press the [COMPARE] key, you will return to the condition of before you began step recording.

Event Edit

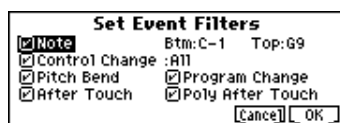
Here you can edit individual events of music data that were input.

- ① Use “Pattern Bank” and “Pattern Select” to specify the pattern that you wish to edit.
- ② Select the “Event Edit,” and access the **Set Event Filters** dialog box.

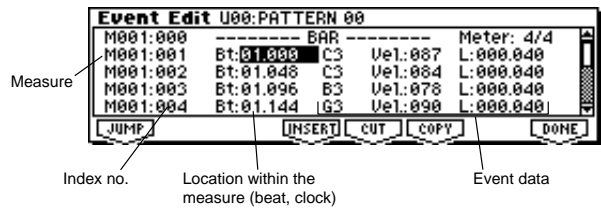
The Set Event Filters dialog box displays an event editing screen, and allows you to select the type of events (musical data) to be edited. Check the events that you wish to view.

For “Note,” you can set “Bottom” and “Top” to specify the range of notes that will be edited. You can also input these values by holding down the [ENTER] key and playing a note on a connected MIDI instrument. Normally you will set this to **C-1** and **G9**.

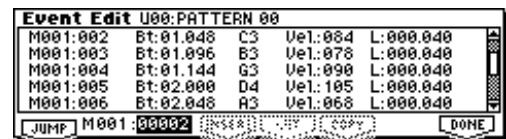
“Control Change” specifies the control change numbers that will be edited. Normally you will set this to **ALL**. You can also check various other events (“Pitch Bend,” “Program Change,” “After Touch,” and “Poly After Touch”).



- ③ Press the [F8] (“OK”) key to open the Event Edit dialog box.



- ④ Use the [◀], [△], [▽], [▶] keys to select the event that you wish to edit. You can also press the [F1] (“JUMP”) key and use “M (Measure)” and “Index” so that the events of the measure being edited and the index number within that measure are displayed at the beginning of the dialog box.



- ⑤ Select the event that you wish to edit, and use the [VALUE] dial etc. to modify its value(s).
- By modifying the value of the “Bt” (Beat. Tick) location within the measure, you can move the event within the measure.
- You can edit each event by modifying its data value(s). When you select a note event, it will sound.
- ⑥ You can press the buttons located at the bottom of the dialog box to edit events as follows.
 - **Inserting an event**
Select the location “Bt” at which you wish to insert an event, and press the [F4] (“INSERT”) key to insert an event.
 - **Deleting an event**
Select the event that you wish to delete, and press the [F5] (“CUT”) key to delete the event.
 - **Moving an event**
You can use the [F5] (“CUT”) key and [F4] (“INSERT”) key to move an event (by “cut and paste”). Use the [F5] (“CUT”) key to delete the event that you wish to move, then use the [F4] (“INSERT”) key to insert it at the desired location. You can also move an event by modifying its “Bt” value.
 - **Copying an event**
Select the event that you wish to copy, and press the [F6] (“Copy”) key. Then select the copy destination and press the [F4] (“INSERT”) key to insert the event at that location.
- ⑦ The end of the pattern is indicated as **End of Pattern**. When you are finished event editing, press the [F8] (“DONE”) key. If you press the [COMPARE] key, you will return to the state before you began event editing.

The following table shows the types of musical data that can be edited by “Event Edit” and the range of their values.

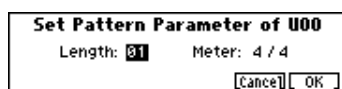
BAR (displayed only) (Measure line)		Meter: 1/4...16/16 (Time signature)
C-1...G9 (Note data)	Vel: 1...127 (Velocity)	L: 000.000...1584.000 (Length: beats, clocks)
P.Aft (Polyphonic after touch)	C-1...G9 (Note number)	Val: 0...127 (Value)
Ctl.C (Control change)	#: 0...101 (Control change number)	Val: 0...127 (Value)
PROG (Program change)	Bnk: I-A...I-F, 000...127, G, g(1)..g(9) g(d), - - -, E- A...E-H (Program bank)	No.: 0...127, 1...128 (G, g(1)..g(d)) (Program number)
AftT (After Touch)	0...127 (value)	
BEND (Pitch bend)	-8192...+8191 (value)	

note Note data and velocity values can also be entered by holding down the [ENTER] key and playing a note on a connected MIDI instrument.

Pattern Parameter

This command specifies the number of measures and the time signature of the selected pattern.

- Use “Pattern Bank” and “Pattern Select” to specify the pattern.
- Select “Pattern Parameter” to access the dialog box.

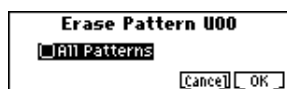


- In “Length,” specify the number of measures in the pattern.
- In “Meter,” specify the time signature of the pattern.
- To execute the Pattern Parameter settings, press the [F8] (“OK”) key. To cancel, press the [F7] (“Cancel”) key.

Erase Pattern

This command erases the musical data from the selected pattern.

- Use “Pattern Bank” and “Pattern Select” to specify the pattern.
- Select “Erase Pattern” to access the dialog box.



- If you **check** “All Pattern,” all user patterns in the multi will be erased. If “All Patterns” is **not checked**, only the pattern specified in ① will be erased.
- To execute the Erase Pattern command, press the [F8] (“OK”) key. To cancel, press the [F7] (“Cancel”) key.

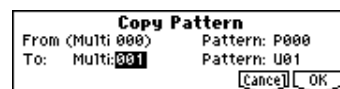
Copy Pattern

This command copies the settings and musical data of the selected pattern to another pattern.

User patterns belong to a particular multi, but you can use the Copy Pattern command to use a pattern in another multi.

While preset patterns cannot be edited, you can copy a preset pattern to a user pattern and then edit and save it as a user pattern. Be aware that when you execute the Copy Pattern operation, the pattern settings and musical data of the copy destination will be erased.

- Select “Copy Pattern” to access the dialog box.

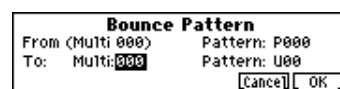


- In From: “Pattern,” specify the copy source pattern. (By default, this will be the pattern that was selected in the page.)
- In To: “Multi” and “Pattern,” specify the copy destination multi and pattern. For “Pattern,” only user patterns **U00-U99** can be specified.
- To execute the Copy Pattern command, press the [F8] (“OK”) key. To cancel, press the [F7] (“Cancel”) key.

Bounce Pattern

This command combines the musical data of the bounce source pattern and bounce destination pattern, and places the combined musical data in the bounce destination. The time signature and length of the pattern following execution will be according to the settings of the bounce destination. If MIDI control data exists in the selected pattern and in the bounce destination pattern, the resulting playback following the bounce operation may produce unexpected results. We recommend that you use “Event Edit” (5.1-1e) to prepare the MIDI control data of the two patterns before executing the Bounce Pattern command.

- Use “Pattern Bank” and “Pattern Select” to specify the bounce source pattern.
- Select “Bounce Pattern” to access the dialog box.



- In From “Pattern,” select the bounce source pattern. (By default, the pattern that are selected in the page will be chosen.)
- In To: “Multi” and “Pattern,” select the bounce destination multi and pattern. For “Pattern,” only user patterns **U00-U99** can be specified.
- To execute the Bounce Pattern command, press the [F8] (“OK”) key. To cancel, press the [F7] (“Cancel”) key.

5.1-2: RPPR (RPPR Setup)

Indicates settings for the RPPR (Realtime Pattern Play/Recording) function. RPPR allows you to assign the patterns of a multi to individual keys, and play the patterns by pressing keys on a connected MIDI instrument. This playback can also be recorded on an external sequencer.

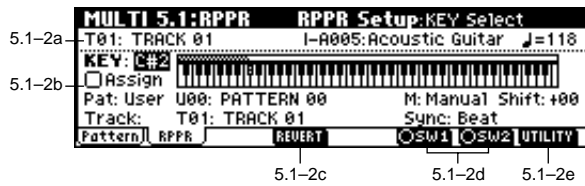
For each multi, you can assign either a preset pattern or a user pattern to the 72 keys in the range of C#2-C8. For each key you can specify the pattern, track number, and how the pattern will be played.

MIDI Patterns are triggered on the channel of the track that is currently selected as the “Control Track.”

🔊 You can also control RPPR from an external sequencer, or record note data from RPPR onto an external sequencer. (⇒p.227, 228)

🔊 The arpeggiator will not be applied to the RPPR pattern playback. When RPPR is on, keys to which no pattern is assigned will sound as usual. At this time, the arpeggiator that is turned on for that track (arpeggiator A or B) will function. The notes produced by the arpeggiator will not trigger RPPR.

 In the 5.1: RPPR, RPPR Setup page, RPPR will automatically be on. If you want RPPR to operate in the 1.1: Play page, check the “RPPR On/Off” check box.




5.1-2a: Control Track,

Control Track [T01...T16: name]

Selects the track that will trigger RPPR. When note data is received on the MIDI channel of the selected track, the corresponding pattern will play. (☞1.1-1a)

The program bank, number, and name of the selected track will be displayed at the right.

(Tempo) [040...240, EXT]

Specifies the playback tempo for RPPR. Refer to “ (Tempo)” (☞1.1-1a).

5.1-2b: RPPR Setup

KEY (Key Select) [C#2...C8]

Specifies the key that will trigger an RPPR pattern. The parameters listed below will apply to the key you specify here.

You can also select a key by holding down the [ENTER] key and playing a note on a connected MIDI instrument.

Assign [Off, On]

On (Checked): When you play the key specified by “KEY,” the pattern selected in “Pat (Pattern Bank),” “Pattern Select” will be triggered.

Off (Unchecked): The pitch of that key will sound, as in the normal state of Multi mode.

Pat (Pattern Bank) [Pre (Preset), User]

Pattern Select [P000...149, U00...99]

Selects the RPPR pattern for the key selected in “KEY.” If the selected user pattern contains no musical data, there will be no sound when you press that key.

Track [T01...T16: name]

Selects the track that will be used for the RPPR pattern selected for the “KEY.” When you play the key, the pattern will be played according to the settings of the track you select here. Track settings are made in 1.1: Play-4.4: MIDI Filter4.

Mode [Once, Manual, Endless]

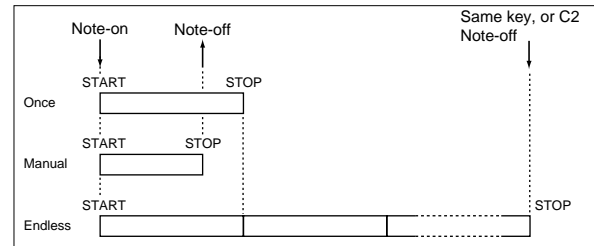
Specifies how the pattern specified for a key will be played when the corresponding note is played on a connected MIDI instrument (i.e., when note data is received).

Once: When you press the key, the pattern will playback only once to the end.

Manual: The pattern will continue repeating as long as you continue holding the key, and will stop when you release the key.

Endless: The pattern will continue repeating even after you release the key. To stop the pattern playback, press any note

below C2, or press the same key once again.



Shift [-12...+12]

Adjusts the playback pitch of the pattern for the specified “KEY” in semitone steps over a range of ± 1 octave. With a setting of 0, the pattern will be played at its original pitch.

Sync [Off, Beat, Measure, ARP(SEQ)]


Specifies how pattern playback will be synchronized when the corresponding key is played on a connected MIDI instrument (i.e., when note data is received).

Off: The pattern will begin playing at the moment you press the note.

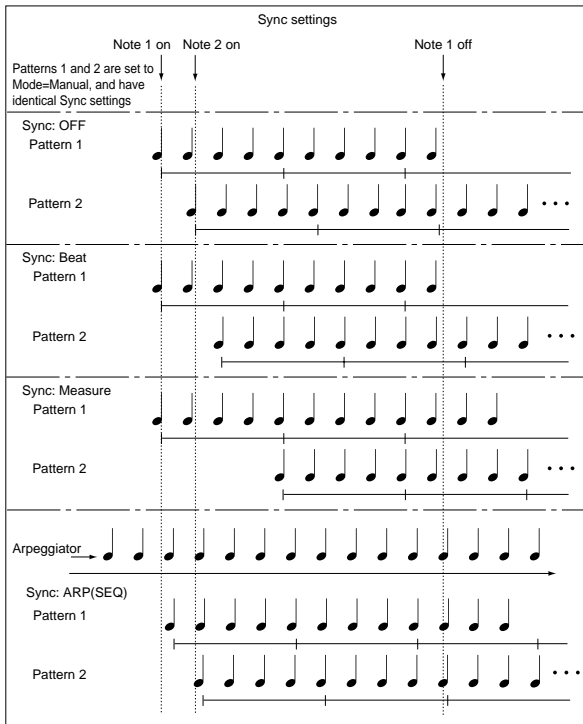
Beat: The pattern will synchronize to the beats of the pattern that was started by the first key (i.e., the first note-on that occurs from a condition where no notes of the keyboard are pressed). This setting is suitable when you wish to play phrase patterns in unison.

Measure: The pattern will synchronize to the measures of the pattern that was started by the first key. This setting is suitable for rhythm, bass or drum patterns.

ARP (SEQ): The pattern will be synchronized to the (quarter note) timing of the arpeggiator. Use this setting when you want RPPR to start in synchronization with the arpeggiator. (☞BG p.93)

 Data compatibility is maintained between the TRITON-Rack and the TRITON/TRITONpro/TRITONproX (TRITON keyboard models). On TRITON keyboard models, setting “Sync” to **SEQ** allows you to synchronize to the currently-playing song in addition to synchronizing to the arpeggiator.

Data that is set to “ARP (SEQ)” on the TRITON-Rack will be displayed as “SEQ” in Sequencer mode of the TRITON keyboard models. Conversely, data that is set to “SEQ” on TRITON keyboard models will be displayed as “ARP (SEQ)” in Multi mode of the TRITON-Rack.



- When **Beat** or **Measure** are selected, pattern playback will begin when you press the first key. The second and subsequent patterns that are triggered from the keyboard will synchronize to the pattern that was started by the first key; with a setting of **Beat** they will synchronize in steps of a beat, and with a setting of **Measure** they will synchronize in steps of a measure.
- **Beat**, **Measure**, and **ARP (SEQ)** will cause the pattern to start immediately if you play the key within a thirty-second note of the timing of the respective beat or measure, but if you play the key later than this, the start of the pattern will be delayed by a beat.

Stopping playback of a RPPR pattern

By playing C2 or a lower note on the keyboard of a connected MIDI device, you can stop all patterns currently being played by RPPR.

The patterns of keys whose "Sync" setting is **Off** will stop immediately, but the playback of other keys will stop at the beginning of the next beat or measure. Pattern playback of keys whose "Sync" setting is other than **Off** can be stopped immediately by rapidly pressing C2 or any lower note twice in succession.

Keyboard & Assigned drawing

This shows the selected key, and the keys to which a pattern has been assigned by the RPPR function.



■ 5.1-2c: REVERT

Revert

This copies "Pattern Bank," "Pattern Select" and "Track" settings from the previously-edited "KEY" whose "Assign" is checked to the currently-edited "KEY."

Example)

Using RPPR to assign preset patterns P00, P01, and P02 to keys

Before you begin, assign a drum program such as I-A036 to track 1.

- ① Select C#2 as the "KEY." Check "Assign," and set "Pattern Bank" and "Pattern Select."



- ② Select D2 as the "KEY."
- ③ Press the [F4] ("Revert") key, and the "Pattern Bank," "Pattern Select" (Pat: Pre, P01: Pop&Balad 2/Std) and "Track" (T01: Drums) that you selected in step ① will be copied automatically.
- ④ Change only the "Pattern Select." Select "Pattern Select," and press the [INC] key to select P01: Pop&Balad 2/Std.
- ⑤ Select D#2 as the "KEY."
- ⑥ Press the [F4] ("Revert") key, and the "Pattern Bank," "Pattern Select" (Pat: Pre, P01: Pop&Balad 2/Std) and "Track" (T01: Drums) that you selected in step ④ will be copied automatically.
- ⑦ As you did in step ④, set "Pattern Select" to P02: Pop&Balad 3/Std.

In this way you can use the "Revert" to efficiently assign "Pattern Bank," "Pattern Select" and "Track" to each "KEY" of an RPPR Setup. This function is particularly convenient when the patterns you are assigning to each key are numbered consecutively or close to each other, and are used in the same track, as in the example shown above.

■ 5.1-2d: SW1, SW2

This switches the function of SW1 and SW2 on (**OSW1**) or off (**OSW2**). During RPPR playback, you can use SW1 and SW2 to control the functions assigned to them.

■ 5.1-2e: UTILITY

- ☞ "Memory Status," "Rename Track" (1.1-1c)


MULTI 6.1: Arpeggiator

Here you can specify how the arpeggiator will operate in Multi mode. These settings can be made for each multi. In Multi mode (as in Combination mode), you can run the two arpeggiators simultaneously.

This allows you to apply different arpeggio patterns to two sounds that have been split across the keyboard, or use velocity to switch between two different arpeggio patterns, etc.

In Multi mode, the musical data generated by the arpeggiator during pattern realtime-recording can be recorded.

While you record, you can modify the arpeggio pattern and parameters, and adjust the REALTIME CONTROLS C-mode [ARP-GATE] knob and [ARP-VELOCITY] knob etc.

 The tempo of the arpeggiator and RPPR (patterns) cannot be specified independently.

When “MIDI Clock” (GLOBAL 1.1:1-1a) is set to **Internal**, the arpeggiator can be synchronized to the timing at which patterns start.

In 5.1: RPPR, Pattern page if you turn on the [ARP ON/OFF] key and press the [F5] (“START”) key, the arpeggiator will synchronize to the timing of the pattern. If you then press the [F5] (“STOP”) key, both pattern playback and the arpeggiator will stop. If you wish to stop only the arpeggiator, turn off the [ARP ON/OFF] key. If the arpeggiator “Key Sync” is off, turning on the [ARP ON/OFF] key and playing the keyboard of a connected MIDI device to start the arpeggiator during the pre-count before pattern recording will cause the arpeggio to be recorded from the beginning of the pattern at the instant that recording begins. (⇒BG p.93)

6.1-1: Set..8 (Setup T01-08)

6.1-2: Set..16 (Setup T09-16)




6.1-1(2)a: Arpeggiator Run,

Arpeggiator Run A, B (Run A, B)

When the [ARP ON/OFF] key is on, the arpeggiator(s) that are checked here will function for the track(s) to which they are assigned by “Assign.” When the arpeggiator is on, A and B can be turned on/off independently.

 (Tempo) [040...240, (EXT)]

Specify the tempo of the arpeggiator. Refer to “ (Tempo)” (⇒1.1-1a).

6.1-1(2)b: Assign

Assign

[Off, A, B]


This assigns arpeggiator A or arpeggiator B to each track 1-8, 9-16. When the [ARP ON/OFF] key is turned on, the arpeggiator specified for each track will run, subject to the “Arpeggiator Run” settings and setting here.

Off: The arpeggiator will not operate.


A: Arpeggiator A will operate. Use the Arp. A page to select the arpeggio pattern and set the parameters.

B: Arpeggiator B will operate. Use the Arp. B page to select the arpeggio pattern and set the parameters.

If you wish to realtime-record the arpeggio pattern into a pattern, assign either arpeggiator **A** or **B** to the track.

 If a track 1-16 to which arpeggiator A or B has been assigned is set to a track “Status” (3.1-1a/2a) of **INT** or **BTH**, the note data generated by the arpeggiator will sound the TRITON-Rack without regard to the “MIDI Channel” (3.1-1a/2a) setting of each track. If the “Status” is **BTH**, **EXT**, or **EX2**, MIDI note data will be transmitted on the “MIDI Channel” of each track.

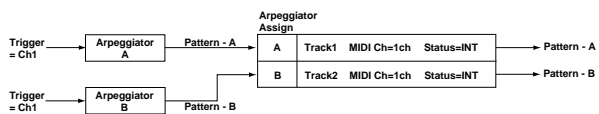
At this time, the arpeggiator can be triggered by the “MIDI Channel” of any track 1-16 assigned to arpeggiator A or B respectively.

 The TRITON-Rack’s arpeggiator can be controlled from an external sequencer, and the note data generated by the arpeggiator can be recorded on an external sequencer. (⇒p.228)

Example 1)

- For tracks 1 and 2, set the “MIDI Channel” (3.1-1a) to **01** and the “Status” (3.1-1a) to **INT**.
- Assign arpeggiator A to track 1 and arpeggiator B to track 2, and check “Arpeggiator Run” (6.1-1a).
- Select MIDI channel 1 on the external MIDI device that will be transmitting note data.
- If the [ARP ON/OFF] key is off, playing the keyboard of a connected MIDI device will sound tracks 1 and 2 simultaneously.

If the [ARP ON/OFF] key is on, playing the keyboard of a connected MIDI device will cause arpeggiator A to play track 1 and arpeggiator B to play track 2 independently of each other.



Example 2)

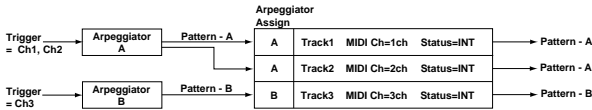
- For tracks 1, 2, and 3, set “MIDI Channel” (3.1-1a) to **01**, **02**, and **03**, and set “Status” (3.1-1a) to **INT**.
- Assign arpeggiator A to tracks 1 and 2, assign arpeggiator B to track 3, and check “Arpeggiator Run” (6.1-1a).
- When the MIDI channel of the external MIDI device transmitting note data is set to each channel listed below, playing its keyboard (i.e., transmitting note data) will have the following results.

• MIDI channel: 1
If the [ARP ON/OFF] key is off, playing the keyboard will sound track 1.
If the [ARP ON/OFF] key is on, playing the keyboard will trigger arpeggiator A for tracks 1 and 2, causing them to sound.

• MIDI channel: 2
If the [ARP ON/OFF] key is off, playing the keyboard will sound track 2.

If the [ARP ON/OFF] key is on, playing the keyboard will trigger arpeggiator A for tracks 1 and 2, causing them to sound.

- MIDI channel: 3
If the [ARP ON/OFF] key is off, playing the keyboard will sound track 3.
If the [ARP ON/OFF] key is on, playing the keyboard will trigger arpeggiator B for track 3, causing it to sound.



■ 6.1-1(2)c: UTILITY

⇨ “Memory Status,” “Rename Multi,” “Delete Multi,” “Copy From Multi,” “Copy From Combi” (1.1-1c), “Copy Arpeggiator” (COMBI 6.1-1c)

6.1-3: Arp. A (Arpeggiator A)

6.1-4: Arp. B (Arpeggiator B)

Indicates settings for arpeggiator A in the Arp. A page, and for arpeggiator B in the Arp. B page.

note You can use the “Copy Arpeggiator” utility to copy settings from another mode such as Program mode.



6.1-3b

6.1-3(4)a: Arpeggiator-A(B) Setup

Pattern	[P000...P004, U000(I-A/B)...U327(E-H)]
Octave	[1, 2, 3, 4]
Reso (Resolution)	[♪ ₃ , ♪, ♪ ₃ , ♪, ♪ ₃ , ♪]
Gate	[000...100(%) , Step]
Velocity	[001...127, Key, Step]
Swing	[-100...+100(%)]
Sort	[Off, On]
Latch	[Off, On]
Key Sync.	[Off, On]
Keyboard	[Off, On]

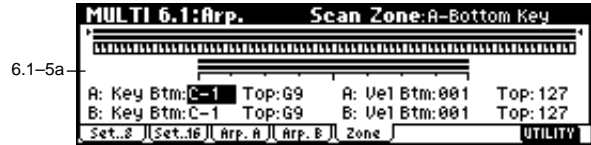
These are the arpeggiator parameters for the multi.
(⇨PROG 6.1: Ed-Arp.)

■ 6.1-3(4)b: UTILITY

⇨ “Memory Status,” “Rename Multi,” “Delete Multi,” “Copy From Multi,” “Copy From Combi” (1.1-1c), “Copy Arpeggiator” (COMBI 6.1-1c)

6.1-5: Zone (Scan Zone)

Specifies the range of notes and velocities that will trigger each arpeggiator A and B.



6.1-5b

6.1-5a: Scan Zone A/B

Zone Map

This shows the “Scan Zone” settings for arpeggiators A and B (⇨COMBI 6.1-4a).

A: Key

Btm (A-Bottom Key) [C-1...G9]
Top (A-Top Key) [C-1...G9]

Specifies the range of notes (keys) that will trigger arpeggiator A. “Top” is the upper limit, and “Btm” is the lower limit.

A: Vel (Velocity)

Btm (A-Bottom Velocity) [001...127]
Top (A-Top Velocity) [001...127]

Specifies the range of velocities that will trigger arpeggiator A. “Top” is the upper limit, and “Btm” is the lower limit.

B: Key

Btm (B-Bottom Key) [C-1...G9]
Top (B-Top Key) [C-1...G9]

B: Vel (Velocity)

Btm (B-Bottom Velocity) [001...127]
Top (B-Top Velocity) [001...127]

Specifies the range of notes (keys) and velocities that will trigger arpeggiator B (⇨“A: Key,” “A: Vel”).

note The value of these parameters can also be set by holding down the [ENTER] key and playing a note on a connected MIDI instrument.

■ 6.1-5b: UTILITY

⇨ “Memory Status,” “Rename Multi,” “Delete Multi,” “Copy From Multi,” “Copy From Combi” (1.1-1c), “Copy Arpeggiator” (COMBI 6.1-1c)

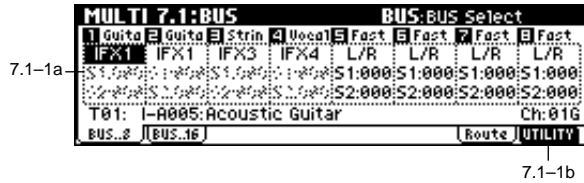
MULTI 7.1: BUS

Specifies the bus to which the program oscillator(s) of each track 1–8, 9–16 will be sent. You can also set the amount of signal that will be sent to the master effects.

☞ For details on insert effects, refer to “8. Effect Guide” p.146.

7.1–1: BUS..8 (BUS T01–08)

7.1–2: BUS..16 (BUS T09–16)



Copy Insert Effect

(☞PROG 7.1–1c)

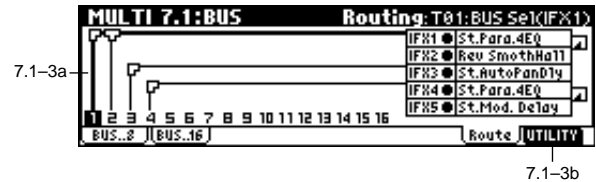
Note, the MIDI control channel specified in “Control Channel” of the 7.2: Insert FX, Setup page will not be copied.

Swap Insert Effect

(☞PROG 7.1–1c)

Note, the MIDI control channel specified in “Control Channel” of the 7.2: Insert FX, Setup page will not be swapped.

7.1–3: Route (Routing)



7.1–1(2)a: BUS Select, Send1(MFX1), Send2(MFX2)

BUS Select [DKit, L/R, IFX1...5, 1...4, 1/2, 3/4, Off]

Specifies the output bus for the program oscillators of tracks 1–8 and 9–16.

The state of the settings can be viewed in the Route page.

(☞COMBI 7.1–1a)

S1 (Send1(MFX1)) [000...127]

S2 (Send2(MFX2)) [000...127]

Here you can adjust the send levels from tracks 1–8, 9–16 to master effects 1 and 2. This is valid when “BUS Select” is set either to **L/R** or **Off**. If **IFX 1, 2, 3, 4, or 5** is selected, the send level to the master effects 1 and 2 is set by the “S1 (Send1(MFX1))” and “S2 (Send2(MFX2))” parameters located in the 7.2: Insert FX1, Setup page, after the signal passes through IFX 1–5.

These settings have no effect if “BUS Select” is set to **1, 2, 3, 4, 1/2 or 3/4**.

MIDI If “Status” (3.1–1a/2a) is either **INT** or **BTH**, CC#93 and #91 can be received to control send 1 and 2 respectively and change their settings. When you switch multi, tracks whose “Status” is **EXT**, **EX2** or **BTH** will transmit these settings via MIDI. This data will be transmitted on the MIDI channel of each track as set by “MIDI Channel” (3.1–1a/2a). The actual send level is determined by multiplying the value of these parameters with the send level settings of the oscillator(s) of the program used by the track (“S1 (Send1(MFX1))” and “S2 (Send2(MFX2))” PROG 7.2–1a).

7.1–1(2)b: UTILITY



☞ “Memory Status” (1.1–1c), “DKit IFX Patch” (COMBI 7.1–1b)

7.1–3a: Routing Map, BUS Select

This shows the status of the insert effects: the insert effect routing, the names of the selected effects, the on/off status, and chaining. The effect type, on/off, and chain settings can be made in the 7.2: Insert FX, Setup page.

T01...16: BUS Sel

[DKit, L/R, IFX1...5, 1...4, 1/2, 3/4, Off]

You can specify the bus to which the program oscillators of tracks 1–16 will be sent, while viewing a map of the current settings.

Use the [◀], [▶] keys to select the track, and use the [INC], [DEC] keys or the [VALUE] dial to set “BUS Select” (7.1–1a/2a).

These settings can also be made from “BUS Select” (7.1–1/2).

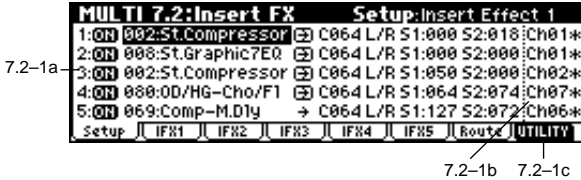
7.1–3b: UTILITY

☞ “Memory Status” (1.1–1c), “Copy Insert Effect,” “Swap Insert Effect” (7.1–1b/2b), “DKit IFX Patch” (COMBI 7.1–1b)

MULTI 7.2: Insert FX

7.2-1: Setup

Here you can select the type of the insert effects, turn them on/off, and make chain settings.



7.2-1a: Insert FX Setup

IFX1 On/Off — IFX5 On/Off

Insert Effect 1, 5 [000...089: name]

Insert Effect 2, 3, 4 [000...102: name]

Chain [(Off), (ON)]

Pan(CC#8) [L000...C064...R127]

BUS Select [L/R, 1, 2, 3, 4, 1/2, 3/4, Off]

S1 (Send1 (MFX1)) [000...127]

S2 (Send2 (MFX2)) [000...127]

These functions are the same as in Program mode. (⇨PROG 7.2-1)

However, unlike in Program mode, the “Control Channel” (7.2-1b) will be the MIDI channel that controls insert effect dynamic modulation (Dmod) and the “Pan (CC#8),” “Send 1 (MFX1)” and “Send 2 (MFX2)” that follow the insert effects. The control changes used are the same as in Program mode.

MIDI If “Status” (3.1-1a/2a) is **INT** or **BTH**, incoming CC#8, #93, or #91 will control and change the settings of the Pan, Send 1, and Send 2 parameters that follow each insert effect. When you change multis, tracks with a “Status” of **BTH**, **EXT**, or **EX2** will transmit and receive these settings on the MIDI channel specified by “Control Channel” (7.2-1a).

7.2-1b: Control Channel

Control Channel [Ch01...16, All Rt.]

MIDI Select the MIDI channel that will control effect dynamic modulation (Dmod), pan following the insert effect “Pan (CC#8),” “Send 1 (MFX1),” and “Send 2 (MFX2).”

An asterisk “*” will be displayed at the right of the channel number **Ch01-16** for tracks that are routed to an IFX. If multiple tracks with differing MIDI channel settings are routed, these channels specify the channel that will be used to control the effect.

All Rt. (All Routed): Control can be performed from any of the MIDI channels of the tracks that are routed.

🔊 If “BUS Select” (7.1-1a/2a) is set to **DKit** for a track in which a drum program is selected, the MIDI channel of that track will be valid if any IFX1-5 is set to **All Rt.**, regardless of the drum kit “BUS (BUS Select)” (GLOBAL 5.1-3a) setting or the utility setting “DrumKit IFX Patch.”

7.2-1c: UTILITY

⇨ “Memory Status” (1.1-1c), “Copy Insert Effect,” “Swap Insert Effect” (7.1-1b/2b), “Select by Category” (PROG 7.2-1b)

7.2-2: IFX1

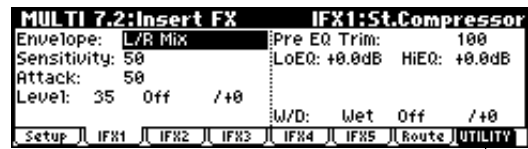
7.2-3: IFX2

7.2-4: IFX3

7.2-5: IFX4

7.2-6: IFX5

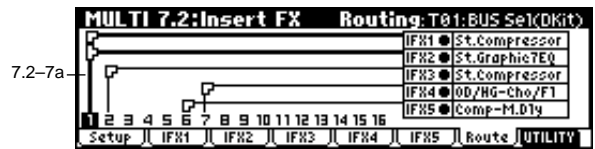
Sets the parameters for the effects selected for IFX 1-5 in the Setup page (⇨p.151).



7.2-2(...6)a: UTILITY

⇨ “Memory Status” (1.1-1c)

7.2-7: Route (Routing)



7.2-7a: Routing Map

This shows the status of the insert effects. This displays the same contents as the 7.1: BUS, Routing page. (⇨7.1-3)

7.2-7b: UTILITY

⇨ “Memory Status” (1.1-1c), “Copy Insert Effect,” “Swap Insert Effect” (7.1-1b/2b), “DKit IFX Patch” (COMBI 7.1-1b)

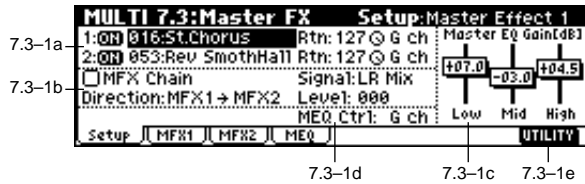
MULTI 7.3: Master FX

☞ For details on the master effects, refer to p.146.

7.3-1: Setup

Here you can select the type of master effects, turn them on/off, and make chain and master EQ settings.

This is the same as Program mode with the exception of “MFX1 Control Ch,” “MFX2 Control Ch,” and “MEQ Control Ch.” (☞PROG 7.3: Ed-MasterFX)



7.3-1a: Master FX Setup

MFX1 On/Off, MFX2 On/Off [Off, ON]
 Master Effect 1, 2 [000...089: name]
 Rtn 1, 2 (Return 1, 2) [000...127]

This is the same as in Program mode. Refer to “PROG 7.3-1: Setup.” However, unlike Program mode, the master effects will be controlled by the MIDI channel specified by “MFX 1, 2 Control Ch.” The control changes used are the same as in Program mode.

MFX1, 2 Control Ch [Ch01...16, G ch]

MIDI Specifies the MIDI channel that will control dynamic modulation (Dmod) for the master effects.

G ch: The effect will be controlled on the global MIDI channel “MIDI Channel” (GLOBAL 2.1-1a).

7.3-1b: Master FX Chain

MFX Chain
 Direction (Chain Direction) [MFX1→MFX2, MFX2→MFX1]

Signal (Chain Signal) [LR Mix, L Only, R Only]
 Level (Chain Level) [000...127]

This is the same as in Program mode. Refer to “PROG 7.3-1: Setup.”

7.3-1c: Master EQ Gain [dB]

Low [-18.0...+18.0]
 Mid [-18.0...+18.0]
 High [-18.0...+18.0]

This is the same as in Program mode. (☞PROG 7.3-1: Setup)

7.3-1d: MEQ Ctrl

MEQ Ctrl (MEQ Control Ch) [Ch01...16, G ch]

MIDI Specifies the MIDI channel that will control dynamic modulation (Dmod) for the master EQ.

G ch: The effect will be controlled on the global MIDI channel “MIDI Channel” (GLOBAL 2.1-1a).

■ 7.3-1e: UTILITY



☞ “Memory Status” (1.1-1c), “Select by Category” (PROG 7.3-1d)

Copy Master Effect

(☞PROG 7.3-1d)

Note, the MIDI control channel specified in “Control Channel” of the MFX 1 and 2 pages will not be copied.

Swap Master Effect

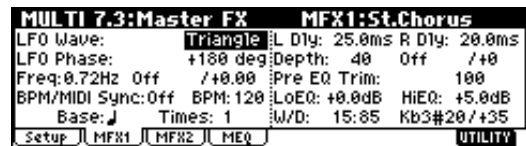
(☞PROG 7.3-1d)

Note, the MIDI control channel specified in “Control Channel” of the MFX 1 and 2 pages will not be swapped.

7.3-2: MFX1

7.3-3: MFX2

Here you can set the parameters of the “Master Effect1” and “Master Effect2” effects that were selected in the Setup page (☞p.151).



7.3-2a

■ 7.3-2(3)a: UTILITY

☞ “Memory Status” (1.1-1c)

7.3-4: Master EQ

The master EQ is a three-band stereo EQ. It is used to perform overall equalizing (tonal adjustment) on the sound from the L/R bus immediately before it is output to AUDIO OUTPUT (MAIN OUT) L/MONO and R (☞p.203).

MULTI 7.3:Master FX		:Master EQ	
Low Cutoff: 60Hz		Gain: +7.0dB	
Mid Cutoff: 600Hz	Q: 2.2	Gain: -3.0dB	
High Cutoff: 8.00kHz		Gain: +4.5dB	
Low Gain Mod-Src: Off			
High Gain Mod-Src: Off			
Setup	MF1	MF2	MEQ
			UTILITY

7.3-4a

■ 7.3-4a: UTILITY

☞ “Memory Status” (1.1-1c)

4. Sampling mode

Sampling mode gives you the capability to record 48 kHz 16 bit samples.

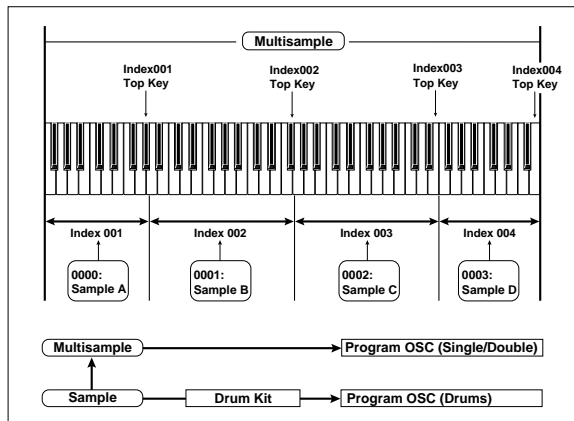
On the TRITON-Rack, “sampling” refers to a process in which analog audio signals from a mic or audio device connected to the AUDIO INPUT jack are converted into digital form and recorded into internal memory. The sound that is converted into digital form can be processed by an insert effect is being sampled.

The TRITON-Rack comes with 16 Mbytes of sample data (waveform data). This allows approximately 2 minutes 54 seconds of monaural sampling, or approximately 1 minute 27 seconds of stereo sampling. By installing additional 72 pin SIMM modules, you can expand the memory to a maximum of 96 Mbytes (three 32 Mbyte SIMM modules; the included 16 Mbyte module must be replaced by a 32 Mbyte module). In this case, six monaural samples of up to 2 minutes 54 seconds (or stereo samples of up to 1 minute 27 seconds) can be recorded, for a total of 17 minutes 28 seconds of monaural sampling (or 8 minutes 44 seconds of stereo sampling). (Refer to p.243 for details on installing 72 pin SIMM modules.)

In Sampling mode, samples that have been sampled or loaded from storage media can be assigned to an index (zone) to create a multisample. One multisample can contain many indexes.

A multisample can easily be converted into a program. (“Conv. To Prog” 1.1–3g). Once the multisample is converted it can be played and programmed like any other program sound. This program can also be used in Combination or Multi mode.

Samples can also be used as drum samples in a drum kit.



note Sampling (recording a sample) is performed using the [F4] (“REC”) and [F5] (“START/STOP”) keys in each page in the Sampling mode.1.1: Recording of the Sampling mode (For details on sampling procedure, refer to BG p.68.)

note In any page, the selected multisample or sample will sound when you play the keyboard of a connected MIDI instrument, letting you hear the results of your editing in that page.

⚠ When you turn off the power, all multisample and sample data in Sampling mode will be lost. Before you turn off the power, be sure to save important data to floppy disk or external SCSI device (BG p.40). If a separately sold EXB-SCSI option is installed, data can be saved on an external SCSI device. Immediately after the power is turned on, memory will contain no multisamples or samples, so you will first need to load previously-saved data from a floppy disk or external SCSI device before you can playback or edit it.

⚠ There is no Compare function that allows you to restore edited data to the state before it was edited. If you wish to preserve the unedited state of the data, use “Copy MS” or “Copy SMPL” (1.1–3g) etc. to make a copy of the multisample or sample before you begin editing.

For some of the utility menu commands in 2.1: Sample Edit or 3.1: Loop Edit, executing the command **without checking** “Overwrite” in the dialog box allows you to save the unedited sample data while you edit. (2.1–2e: UTILITY “About Overwrite”)

⚠ When executing a sample edit operation or when you finish recording a stereo sample, you may hear a slight noise. This does not affect the audio data that has been edited or sampled.

⚠ Cautions regarding sample data

- The sample data memory areas Bank 1–6 each contain 16 MB. Of this 16 MB (8,388,608 samples), sixteen samples (the first and last eight samples) are used as internal work area.
- The first and last samples of each sample are used as internal work area. These two samples are added automatically when a sample is recorded or when an .AIFF or .WAVE file is loaded. This means that if you record a sample of one second, this will result in 48,000 samples of data, but four samples will be added to this, so that sampling memory will actually contain 48,004 samples of data.

How the [Audition] key will function in Sampling mode

2.1: Sample Edit, Edit2 page

The sample will be played in one-shot mode in the range between “S (Edit Range Start)” and “E (Edit Range End)” as long as you hold down the [AUDITION] key. The sample will sound at the pitch of the currently selected key (the key displayed in gray in “Keyboard & Index”: 1.1–1a).

Pages other than the above

The sample of the currently selected “Index” will be played at the pitch of the currently selected key (the key displayed in gray in “Keyboard & Index”: 1.1–1a) as long as you hold down the [AUDITION] key.

Time Slice and Time Stretch dialog boxes

In the Slice Sample dialog box of Utility “Time Slice” (3.1–2e) and in the Stretch Sample dialog box of Utility “Time Stretch” (3.1–2e), the sample of the currently selected “Index” will be played at the original key as long as you hold down the [AUDITION] key.

SMPL PAGE MENU

For details on selecting pages in Sampling mode, refer to p.1.



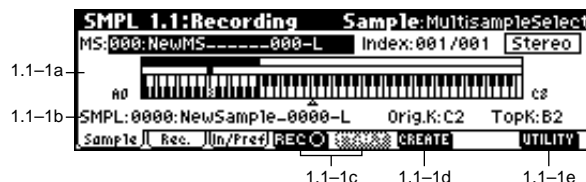
Rec	1.1: Recording	Record samples. Select the sample or multisample to record, and make various recording settings and AUDIO INPUT settings. (☞p.74)
Smp1	2.1: Sample Edit	Perform waveform editing and other editing on recorded samples or samples that were loaded into internal memory in Disk mode. (☞p.84)
Loop	3.1: Loop Edit	Set sample playback parameters. Set start, loop start, end address, and turn loop or reverse playback on/off. (☞p.91)
MS	4.1: Multisample	Edit multisamples. Set and edit sample assign, zone, and original key etc. (☞p.101)
Mem	5.1: Memory	View the remaining memory available for multisamples and samples. (☞p.103)
Ctrl	5.2: Controller	Controller settings. (☞p.103)
IFX	7.2: Insert Effect	Select the insert effects used for sampling, and make settings for them. (☞p.104)

SMPL 1.1: Recording

Here you can set the input level and make other basic settings for sampling (sample recording), and make basic settings for multisamples and samples. Normally you will record samples in this page.

1.1-1: Sample

Select the multisample and index sample for sampling, and make basic settings.



1.1-1a: MS (Multisample Select), Index, Keyboard & Index

MS (Multisample Select) [000...999]

Selects the multisample.

Each multisample consists of the samples for one or more indexes (an "index" is a range or zone of keys).

This parameter can also be set from 2.1: Sample Edit-4.1: Multisample.

Here's how to **create a new multisample**.

- Use numeric keys [0]-[9] to specify the new multisample number, and press the [ENTER] key to open the "Create New Multisample" dialog box.



- If you wish to create a stereo multisample, **check** "Stereo."
- To create the multisample, press the [F8] ("OK") key. To cancel, press the [F7] ("Cancel") key.

A multisample will be created as follows (example).

```
Mono    001: NewMS_000_001
Stereo  001: NewMS_000_001-L,
        002: NewMS_000_001-R
```

Index [xxx (001...128)/yyy (001...128)]

Select s the index that you wish to sample, or to which you wish to assign a sample.

Each zone within a multisample is called an "index." For example if a 61-note MIDI keyboard is connected and you want to divide the multisample into octaves (12 keys), you would create six zones. Each of these zones is an "index." You can assign a sample to each index.

xxx: The selected index. Choose the desired index.

yyy: The total number of indexes in the multisample.

note To select an index, hold down the [ENTER] key and play a note on the keyboard of a connected MIDI instrument. The index that includes the note you played will be selected. The specified key will be the base key, and will be displayed in gray in "Keyboard & Index" (☞"Keyboard & Index").

This parameter can also be set in 2.1: Sample Edit–4.1: Multisample. The sampling and editing that you perform in these pages will apply to the index you select here.

Immediately after the power is turned on, this will be **001/001**. This indicates that only one index exists. To increase the number of indexes, use “CREATE” in this page. When you press the [F6] (“CREATE”) key, indexes will automatically be added from the left-most zone, as **002/002**, **003/003**, ... The position, zone width, and original key location of the index that is created when you press the [F6] (“CREATE”) key can be set in “Create(Create Zone Preference)” (1.1–3b, 4.1–3a). You are also free to modify the zone width and original key location later.

Stereo

A “Stereo” indication will appear at the top right of LCD display if you have selected a stereo multisample or sample, or if you recorded a sample with “Mode (Sample Mode)” (1.1–2a) set to **Stereo**.

About stereo multisamples and stereo samples

Stereo multisamples: Under the following conditions, two multisamples will be handled as a stereo multisample.

- If you checked “Stereo” when creating a new multisample (i.e., selected a new multisample in “MS” 1.1–1a)
- If you executed the Utility “MS To Stereo” (1.1–3g)
- If you sampled with “Mode (Sample Mode)” (1.1–2a) set to **Stereo**

In these cases, a stereo multisample that meets the following conditions will be created automatically.


1. The last two characters of the two multisample names will be -L and -R respectively, and the earlier portion of the names are identical.
2. The two multisamples will have the same number of indexes, and their zone settings are identical.


Stereo samples: Under the following condition, two samples will be handled as a stereo sample.

- When the samples were recorded with a “Mode (Sample Mode)” (1.1–2a) setting of **Stereo**.
- If you executed the Utility “SMPL To Stereo” (1.1–3g)

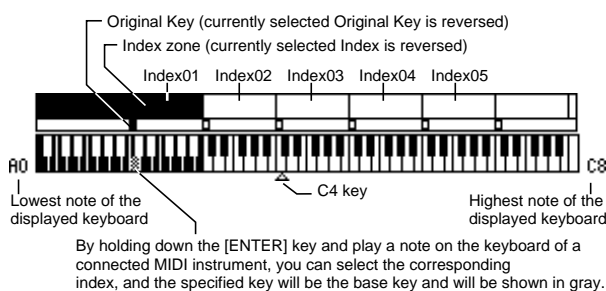
In this case, a stereo sample that meets the following conditions will be created automatically.

1. The last two characters of the sample name will be -L and -R respectively, and the earlier portion of the names are identical.
2. Two samples that satisfy condition 1. for stereo multisamples are selected.

 Stereo multisamples and samples are distinguished internally by their multisample name or sample name. If you use Utility “Rename MS” or “Rename SMPL” (1.1–3g) etc. to modify the multisample name or sample name, please pay attention to the above conditions.

 As a condition of a stereo sample, the sampling rates must be identical. You can verify the sampling rate of a sample by using the Utility “Rate Convert” (2.1–2e). Be aware that if you use Utility “Rate Convert” to convert the -L and -R samples to differing sampling rates, they will not be handled as a stereo sample.

Keyboard & Index



This shows the zones and original key locations of the currently selected multisample. The white triangle indicates the C4 key. The note numbers at left and right are the range of notes displayed.

note The key displayed in gray is called the base key, and functions as follows.

- In the 2.1: Sample Edit, Edit2 page, pressing the [AUDITION] key will play the sample of the selected “Index” from “S (Edit Range Start)” to “E (Edit Range End)” in one-shot mode. At this time, the sample will sound at the pitch of the base key. In pages other than the 2.1: Sample Edit, Edit 2 page, the sample of the currently selected “Index” will continue playing at the pitch of the base key as long as you hold down the [AUDITION] key.
- The grid display in 2.1: Sample Edit and the 3.1: Loop Edit Edit2 page is displayed relative to the playback pitch at the base key and the specified tempo BPM/resolution (set in the “Grid” utility).
- The Utility “Pitch BPM Adj.” (4.1–3b) function is relative to the playback pitch of the base key.

You can use Utility “Keyboard Disp.” (1.1–3g) to change the displayed range of the keyboard.

1.1–1b: SMPL, Orig.K, TopK

Here you can set the sample, original key, and range of the selected index.

SMPL (Sample Select)

[----: ---No Assign----, 0000...3999]

Selects a sample that you recorded or that you loaded in Disk mode. That sample will sound when you play a note within the index range on a connected MIDI instrument.

This parameter can also be set in 2.1: Sample Edit–4.1: Multisample. The sampling and editing operations that you perform in these pages will affect the sample you select here.

----: ---No Assign----: A sample has not been assigned to the index. Playing a note on a connected MIDI instrument will not produce sound.

To record a sample, select a vacant sample such as **0000**. When you record a sample, data will be loaded into the selected sample.

The sample name (such as NewSample_0000) will be shown beside the number. This sample name can be modified using the Utility “Rename SMPL” (1.1–3g).

You can also record a sample even when ----:---No Assign---- is displayed. In this case, a sample number will be selected automatically.

Even if you record to a sample that already contains data, the selected sample will not be overwritten –the data will automatically be sampled to a vacant sample number, and the newly recorded sample will replace the previous sample in the index. If you wish to delete a sample, execute the Utility “Delete SMPL” (1.1–3g).

Orig.K (Original Key) [C-1...G9]

Specifies the key that will play the sample at its original pitch (i.e., the pitch at which it was recorded). The pitch will change in semitone steps relative to the original key.

For example, suppose that you set "Orig.K" to **F2**, and recorded a sample. If the index zone is **C2-B2**, playing the **F2** key on a connected MIDI instrument will sound the sample at its actual pitch. Playing the **F#2** key will sound the sample a semitone higher. Playing the **E2** key will sound the sample a semitone lower. This sampled sound will change pitch in semitone steps in the range from **B2** down to **C2**, centered at **F2**.

The location of the original key can also be viewed in "Keyboard & Index."

🔍 If "Constant Pitch" (4.1-2a) is **checked**, the sample will be sounded at its original pitch by all notes in the zone.


TopK (Top Key) [C-1...G9]


Specifies the highest key in the zone of the index. The zone is defined by this "TopK."

For example, suppose that you set a "TopK" of **B2** for index 001/002, and a "TopK" of **B3** for index 002/002. This means that the zone of index 001 will be **B2** and lower, and the zone of index 002 will be **C3-B3**.

■ 1.1-1c: REC, START/STOP


This is where you sample (i.e., record a sample). Use the [F4] ("REC") key and [F5] ("START/STOP") keys to sample.

RECO : This is the normal state.

RECO START : Press the [F4] ("REC") key to enter sampling standby mode. To **cancel** recording, press the [F4] ("REC") key once again.

When "Mode (REC Mode)" is **Manual**, pressing the [F4] ("REC") key will enter sampling standby mode. Then when you press the [F5] ("START") key, recording will begin. (⇨ "Mode (REC Mode)," "Count Down")

When "Mode (REC Mode)" is **Auto**, pressing the [F4] ("REC") key and then the [F5] ("START") key will enter sampling standby mode. Recording will begin when the input level exceeds the "Threshold" value. (⇨ "Mode (REC Mode)," "Threshold")

RECO STOP : Press the [F5] ("STOP") key to stop recording.

🔍 In the **RECO** state, it is not possible to edit using the Utility commands.

■ 1.1-1d: CREATE

Here you can create an index. Use this when you wish to add a sample to a multisample.

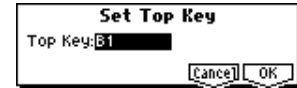
When you press the [F6] ("CREATE") key, a new index will be created according to the settings of the Create (Create Zone Preference) (1.1-3b, 4.1-3a) parameters "Pstn (Position)," "Range (Zone Range)," and "Orig.K (Orig.K Position)."

If you wish to delete an existing index or to exchange indices, use 4.1: Multisample.

note "CREATE" will be displayed if the 1.1: Recording, Sample page or the 4.1: Multisample, Edit 1, Edit 2 pages are selected.

🔍 If when you execute "CREATE" (1.1-1d, 4.1-1c) or "INSERT" (4.1-1c) it is not possible to create a new index according to your Create (Create Zone Preference) settings, one of the following dialog boxes will appear. If you wish to create a new index, perform the following procedure.

- **Set Top Key:** Select "Index" **001**, set "Pstn (Position)" (1.1-3b, 4.1-3a) to **L (Left)**, and execute "CREATE" or "INSERT" to open the dialog box. So that a new index can be created at the left of index 001, reset the "Top Key" setting, and press the [F8] ("OK") key.



- **Set Zone Range:** If you execute "CREATE" when it is not possible to create a new index according to the Create (Create Zone Preference) settings, the following dialog box will appear. This dialog box will also appear if you execute "INSERT" when it is not possible to create a new index with the contents of the "CUT" or "COPY" (4.1-1c). Reset the "Range (Zone Range)" (1.1-3b, 4.1-3a), and press the [F8] ("OK") key.



■ 1.1-1e: UTILITY

⇨ "Delete SMPL," "Copy SMPL," "Move SMPL," "Rename SMPL," "SMPL To Stereo," "Delete MS," "Copy MS," "Move MS," "Rename MS," "MS To Stereo/MS To Mono," "Conv. To Prog," "Keyboard Disp." (1.1-3g)

1.1-2: Rec. (Recording)



1.1-2a: Sample Setup

Here you can select the memory bank into which you will sample, specify the sampling time, and select either mono or stereo sampling.

Time (Sample Time)

Specifies the time that you wish to sample. This can be set in 0.001 second increments. Immediately after the power is turned on, this will show the remaining memory (available sampling time) of the selected memory bank. If you record a sample in this condition ("REC" → "START" → "STOP"), the change in time will be displayed automatically.

If you have sufficient memory, it is a good idea to set an ample "Time (Sample Time)," and to use the Utility "Truncate" (2.1-2e, 3.1-2e) after you sample to delete unwanted portions of the sample and reduce it to the minimum size necessary. You can also press the [F5] ("START/STOP") key to stop recording after you have recorded the desired material (⇨ For details on the sampling procedure, refer to BG p.67).

The remaining amount of memory will depend on the following conditions.

1. The amount of memory that is installed.
2. Whether the sample is stereo or mono. When the “Mode (Sample Mode)” (1.1-2a) is set to **Stereo**, the memory capacity will be halved.
3. The time specified for “Pre Trigger” (1.1-2b: a function that automatically samples the sound even before you begin sampling) will be subtracted from the amount of memory that actually remains.


Bank (RAM Bank) [1...6]

Selects the memory bank into which you will sample. The sample data memory is organized into six banks, each with 16 Mbytes. The TRITON-Rack comes with 16 Mbytes of memory (SIMM) installed as standard. In this case, **(RAM)1** will always be selected as the memory bank, and it will not be possible to select **(RAM)2, 3, 4, 5 or 6**.

By installing separately sold 72-pin SIMM boards you can expand the memory to a maximum of 96 Mbytes (three 32 Mbyte SIMM boards) (⇒p.243).

Installed SIMM boards and available banks

SIMM Slot No.	SIMM	Bank (RAM Bank)
Slot1	16 Mbyte (factory-installed)	1
	32Mbyte	1, 2
Slot2	16Mbyte	3
	32Mbyte	3, 4
Slot3	16Mbyte	5
	32Mbyte	5, 6

 On the TRITON-Rack, a 16 Mbyte SIMM is factory-installed in slot 1. For “Bank (RAM Bank)” you can select 1. For example if slot 1 contains the factory-installed 16 Mbyte SIMM and you have installed a 32 Mbyte SIMM in slot 2 and a 16 Mbyte SIMM in slot 3, “Bank (RAM Bank)” can be set to 1 (16 Mbyte), 3 (16 Mbyte), 4 (16 Mbyte), or 5 (16 Mbyte). Banks are in 16 Mbyte units.
(If 32 Mbyte SIMMs are installed in slot 1, slot 2, and slot 3, you will be able to select all banks, and the total capacity will be 96 Mbytes.)

Mode (Sample Mode) [L-Mono, R-Mono, Stereo]

Select s the channel(s) to be sampled, to specify whether a mono or a stereo sample will be recorded. Depending on the “Input1, Input2” (1.1-3a) settings, the external source from the AUDIO INPUT 1 and 2 jacks will be sent, either as direct sound without being routed through an effect, or as effect-processed sound routed through an insertion effect, to the L/R bus and sampled from the internal L and R channels.

L-Mono: The sound of the internal L channel will be sampled in mono.

R-Mono: The sound of the internal R channel will be sampled in mono.

Stereo: The sound of the internal L and R channels will be sampled in stereo. When you sample in stereo, a stereo multsample or sample will be created.

Example 1: Sampling a monaural source connected to AUDIO INPUT 1 without applying internal effects

Input1 “Lvl (Level)”	(1.1-3a)	127
Input1 “Pan”	(1.1-3a)	L000
Input1 “BUS (BUS(IFX)Select)”	(1.1-3a)	L/R
“Recording Level”	(1.1-2c, 1.1-3e)	as appropriate
“Mode (Sample Mode)”	(1.1-2a)	L-Mono

Example 2: A monaural source connected to AUDIO INPUT 1 routed through the internal insertion effect IFX 052: Rev Hall, and sampled in stereo


Input1 “Lvl (Level)”	(1.1-3a)	127
Input1 “Pan”	(1.1-3a)	C064
Input1 “BUS (BUS(IFX)Select)”	(1.1-3a)	IFX1
IFX	select (7.2) 052: Reverb Hall	and make settings
“Recording Level”	(1.1-2c, 1.1-3e)	as appropriate
“Mode (Sample Mode)”	(1.1-2a)	Stereo

Example 3: A stereo source connected to AUDIO INPUT 1 and 2, and sampling without applying internal effects

Input1 “Lvl (Level)”	(1.1-3a)	127
Input1 “Pan”	(1.1-3a)	L000
Input1 “BUS (BUS(IFX)Select)”	(1.1-3a)	L/R
Input2 “Lvl (Level)”	(1.1-3a)	127
Input2 “Pan”	(1.1-3a)	R127
Input2 “BUS (BUS(IFX)Select)”	(1.1-3a)	L/R
“Recording Level”	(1.1-2c, 1.1-3e)	as appropriate
“Mode (Sample Mode)”	(1.1-2a)	Stereo

Example 4: A stereo source connected to AUDIO INPUT 1 and 2, routed through internal insertion effect IFX1 008: St.Graphic 7EQ, and sampled in stereo

Input1 “Lvl (Level)”	(1.1-3a)	127
Input1 “Pan”	(1.1-3a)	L000
Input1 “BUS (BUS(IFX)Select)”	(1.1-3a)	IFX1
Input2 “Lvl (Level)”	(1.1-3a)	127
Input2 “Pan”	(1.1-3a)	R127
Input2 “BUS (BUS(IFX)Select)”	(1.1-3a)	IFX1
IFX1	select (7.2) 008: St.Graphic 7EQ	and make settings
“Recording Level”	(1.1-2c, 1.1-3e)	as appropriate
“Mode (Sample Mode)”	(1.1-2a)	Stereo

 When you finish recording a stereo sample, you may hear a slight noise. This does not affect the audio data that has been sampled.


1.1-2b: REC Setup

Mode (REC Mode) [Manual, Auto]

Select s the method by which sampling will be started.

Manual: Sampling will start when you press the [F5] (“START”) key from the sampling standby condition.

- ① Press the [F4] (“REC”) key to enter sampling standby mode.
- ② Use the “Recording Level” (1.1-2c, 1.1-3e) slider to adjust the sampling level.

 Be careful of changes in the monitoring volume level (⇒“Recording Level”).

- ③ Sampling will begin when you press the [F5] (“START”) key. If you use the “Count Down” function, pressing the [F5] (“START”) key will cause sampling to begin after the metronome sounds a count-down.
- ④ To stop sampling, press the [F5] (“STOP”) key once again. Sampling will end automatically if you continue sampling to the end of the “Time (Sample Time)” (1.1-2a).

Auto: Sampling will begin automatically when the input level exceeds the “Threshold” setting.

- ① Perform steps ① and ② described above.
- ② Adjust the “Threshold” setting. The black triangles at both sides of the “Recording Level” level bar display will indicate the “Threshold” level. Normally, this should be set as low as possible without allowing noise to trigger sampling.
- ③ Press the [F5] (“START”) key. Sampling will automatically begin when the input level exceeds the “Threshold” setting.
- ④ To stop sampling, perform step ⑤ described above.

Threshold [-63dB...0dB]

When performing auto sampling (“Mode (REC Mode)” **Auto**), this sets the level at which sampling will begin (⇐“Mode (REC Mode)” **Auto**, step ③).

note This will not be displayed if “Mode (REC Mode)” is set to **Manual**.

Count Down (Count Down REC) [Off, 4, 8, 3, 6]

When you begin sampling with “Mode (REC Mode)” set to Manual, this parameter specifies whether there will be a count-down before sampling begins.

Off: When you press the [F5] (“START/STOP”) key from sampling standby mode, sampling will begin immediately.
4, 8, 3, 6: When you press the [F5] (“START/STOP”) key from sampling standby mode, sampling will begin after a count-down of the specified length, based on the tempo of “♪ (Tempo).” If you specify 4, the count will be 4-3-2-1-0, and sampling will begin on the count of 0.

note This will not be displayed if “Mode” is set to **Auto**.

♪ (Tempo) [040...240]

This sets the tempo of the count-down when “Count Down” is used.

The tempo specified here will also be used when the LFO or delay time of the insert effect is controlled by the BPM/MIDI SYNC function during sampling (⇐p.212). This can also be set by the REALTIME CONTROLS C-mode [TEMPO] knob.

Pre Trigger (Pre Trigger REC) [000...500ms]

When sampling the sound that occurs before sampling is actually triggered, this setting specifies the time length that will be “pre-sampled.”

When sampling in auto mode (“Mode (REC Mode)” **Auto**), sampling will begin when the input signal exceeds the specified threshold level “Threshold” (1.1-2b). However depending on the “Threshold” settings, the early portion of the attack sound may be lost, and in such cases you can use “Pre Trigger.”

Also, when sampling manually (“Mode (REC Mode)” **Manual**) and using “Count Down,” you may intend to play your instrument etc. at precisely the downbeat but actually be slightly ahead of the beat. In such cases, you can use Pre Trigger REC to sample without losing the beginning of the note.

▲ If you increase this value, you will always be sampling more than you need. Normally you should leave this set at **000ms**, and set it to a minimal value only when necessary.

1.1-2c: Recording Level

Recording Level [-inf, -72.0... 0.0...+18.0dB]

Adjust the final level of the signal that will be sampled.

note This can also be set in the Input/Pref page.

When you press the [F4] (“REC”) key you will enter sampling standby mode, and you will be able to adjust the signal level.

Initially you should set this to **0.0**, and make adjustments so that the level of the bar is as high as possible without exceeding 0 dB. If 0 dB is exceeded, “CLIP!” will be displayed. This indicates that the sampling signal level is excessive. Adjust the level so that “CLIP!” does not appear.

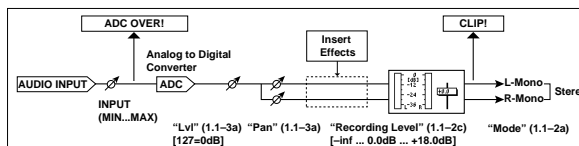
note In order to sample with the maximum dynamic range, use the [INPUT] knob to adjust the level as high as possible without making “ADC OVER!” appear. Then set “Lvl” (Input/Pref page) to **127**, and adjust “Recording Level” (Recording page, Input/Pref page) as high as possible without making the “CLIP!” indication appear.

▲ In the sampling standby condition after you press the [F4] (“REC”) key, the sound that is output from the AUDIO OUTPUT L/MONO, R and from the headphones will be adjusted by the “Recording Level,” but when you cancel sampling standby condition or cancel sampling, the sound will be output at the **0 dB** level. If you have lowered the “Recording Level” below **0 dB**, please be careful of sudden changes in volume.

▲ If the sound is still distorted even if you lower the “Recording Level,” it is possible that distortion is occurring in the input stage of the AUDIO INPUT, or that distortion is being caused by the settings of the internal effect.

Excessive signal levels in the input stage of the AUDIO INPUT can be verified in the Recording page, Input/Pref page. If an indication of “ADC OVER!” appears above the “Recording Level” bar display, the distortion is due to excessive levels in the input stage of the AUDIO INPUT. Adjust the [INPUT] knob until the “ADC OVER!” display no longer appears.

If there is still distortion even after [INPUT] has been lowered, it is possible that the distortion is being caused by the settings of the internal effect. Lower the Input 1, 2 “Lvl” (Input/Pref page), or adjust the effect settings.



note If you have sampled at a low input level, you can execute **Normalize** in Utility “Norm./Level Adj.” (2.1-2e) to amplify the level to the maximum possible without clipping.

■ 1.1-2d: SW1, SW2

Effect dynamic modulation for the functions assigned to “SW1” and “SW2” can be controlled in realtime while you sample. This setting is made in 5.2: Ctrl Setup.

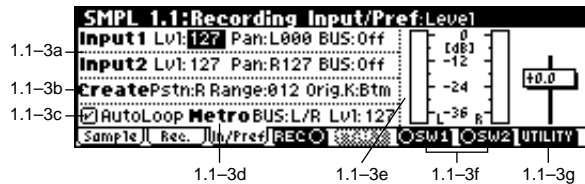
OSW1: On, **OSW2**: Off

■ 1.1-2e: UTILITY

☞ “Delete SMPL,” “Copy SMPL,” “Move SMPL,” “Rename SMPL,” “SMPL To Stereo,” “Delete MS,” “Copy MS,” “Move MS,” “Rename MS,” “MS To Stereo/MS To Mono,” “Conv. To Prog,” “Keyboard Disp.” (1.1-3g)

1.1-3: In/Pref (Input/Preference)

Specify the input level from the rear panel AUDIO INPUT 1, 2, and set pan and balance. You can also set other setup parameters.



1.1-3a: Input1, Input2

Here you can make adjustments for the input stage of the audio signal received at AUDIO INPUT 1 and 2.

▲ These settings are valid only in Sampling mode. These settings will also be valid when you move from Sampling mode to Global mode.

In modes other than Sampling mode, settings for Audio Input 1 and 2 are made in “Audio In (Setup for COMBI, PROG, MULTI)” (GLOBAL 1.1: System, Audio In).

Lvl (Level) [000...127]

Specifies the level of the signal immediately after the analog audio signal from AUDIO INPUT 1 and 2 is converted into a digital signal. Normally you will set this to 127.

If you hear distortion even after lowering this level, it is possible that the distortion is occurring before the A/D converter. Adjust the [INPUT] knob or the output level of your external sound source so that the “ADC OVER!” indication above the “Recording Level” display does not appear.

Pan [L000...C064...R127]

Sets the panning of the analog audio signal from AUDIO INPUT 1 and 2. Normally you will set Input 1 to L000 and Input 2 to R127. This allows you to sample a stereo audio source in stereo (☞ For example settings, p.77, BG p.68).

BUS (BUS(IFX) Select) [L/R, IFX1...5, Off]

Select s the bus.

L/R: Select this when you wish to sample the incoming analog audio signal without applying an insert effect. Normally you will select L/R.

IFX1...5: Select one of these when you wish to apply an insert effect to the incoming audio sample as you sample it (☞ p.144).

Off: The analog audio signal will not be input.

1.1-3b: Create (Create Zone Preference)

These settings determine the initial state of the indexes that are created when you press the [F6] (“CREATE”) key (1.1-1d, 4.1-1c). Each new index will be created according to the settings you make here, but you are free to modify the settings later.

Pstn (Position) [R, L]

Specifies whether the new index will be created at the right or left of the selected index.

R (Right): The new index will be created at the right of the currently selected index.

L (Left): The new index will be created at the left of the currently selected index.

Range (Zone Range) [001...127]

Specifies the key range of the zone of the newly created index.

001: A single note of the keyboard will be the index. The sample of the index will sound at its original key when you play that note. This setting can be used similarly to pad (keyboard) type samplers.

002...127: The sample will change pitch in semitone steps across the specified number of keys, centered on the original key “Orig.K” (1.1-1b, 4.1-1b). If “Constant Pitch” (4.1-2a) is checked, the pitch will not change.

Orig.K (Original Key Position) [Btm, Cntr, Top]

Specifies where the original key will be located in the zone (specified by “Zone Range”) for a newly created index.

Btm (Bottom): The lowest key in the zone will be the original key.

Cntr (Center): The middle key in the zone will be the original key.

Top: The top key in the zone will be the original key.

1.1-3c: Auto Loop

Auto Loop (Auto Loop On) [Off, On]

On (Checked): The recorded sample will automatically be played with looping turned on (☞ “3.1: Loop Edit”).

1.1-3d: Metro (Count Down REC Metronome)

BUS (Metronome BUS) [L/R, 1, 2, 3, 4]

Specifies the output destination of the metronome sound played by “Count Down” (1.1-2b).

L/R: The metronome will be output from OUTPUT (MAIN) L/Mono, R, and the headphones.

1, 2, 3, 4: The metronome will be output from OUTPUT (INDIVIDUAL) 1, 2, 3, or 4 respectively.

Lvl (Metronome Level) [000...127]

Specifies the level of the metronome sound played by “Count Down.”

1.1-3e: Recording Level

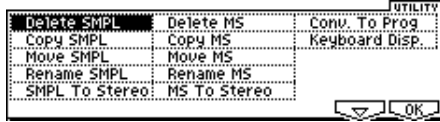
[-inf, -72.0... 0.0...+18.0]

Adjusts the signal level at the final stage of sampling (☞ 1.1-2c).

■ 1.1-3f: SW1, SW2

Effect dynamic modulation for the functions assigned to “SW1” and “SW2” can be controlled in realtime while you sample. (⇒1.1-2d)

■ 1.1-3g: UTILITY



For details on how to select the desired utility function, refer to “PROG 1.1-1d: UTILITY.”

Delete SMPL (Delete Sample)

This command deletes the currently selected sample, or samples that are not mapped to (i.e., used by) any multisample or drum kit, or all samples.

- 1 Select “Delete SMPL” to open the following dialog box.



- 2 Use the [INC], [DEC] keys or the [VALUE] dial to select the sample(s) that you wish to delete.

Selected: The currently selected sample will be deleted. The sample assignment for “Index” (1.1-1a) will change to ---No Assign---

Unmapped Samples: Delete all samples that are not mapped to (used by) any multisample or drum kit.

All Samples: All samples in memory will be deleted. The sample assignments of all multisamples will change to ---No Assign---
- 3 To execute the Delete Sample command, press the [F8] (“OK”) key. To cancel, press the [F7] (“Cancel”) key.

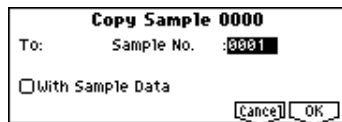
⚠ If the sample data (waveform data) of the sample you delete is being used by another sample, the sample data itself will not be deleted. Only the sample will be deleted.

Copy SMPL (Copy Sample)

This command copies the currently selected sample to another sample.

note The sample number of the copy destination will automatically be added to the sample name. If necessary, use “Rename SMPL” (1.1-3g) to rename it. At this time, be careful that the name is not identical to any other sample. (The sample name is used to distinguish stereo samples. ⇒p.75)

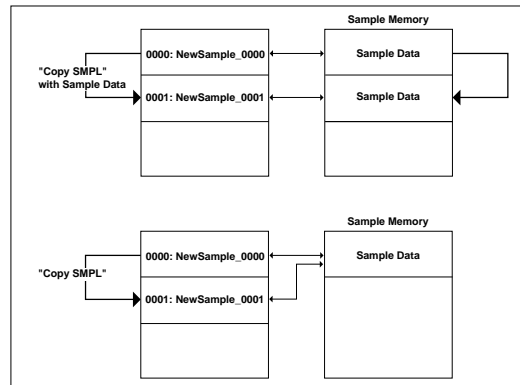
- 1 Use “SMPL” (1.1-1b) to select the copy source sample.
- 2 Select “Copy SMPL” to open the following dialog box.



- 3 Use “To: Sample No.” to specify the copy destination sample number.

[Stereo] When copying a stereo sample, specify both the L and R channels for the copy destination sample number.

- 4 If you **check** “with Sample Data”: Executing the copy will simultaneously copy the sample data (waveform data) as well. The copy source and copy destination samples will exist as completely independent samples. For example, you would use this when you wish to start with the same sample data, and edit it separately in 2.1: Sample Edit to create two or more different types of sample. If you do **not check** “with Sample Data”: Executing the copy will not copy the sample data (waveform data). The newly created sample will share the sample data of the copy source sample. For example, you would use this when you wish to use 3.1: Loop Edit to create two or more versions of the same sample data with different loop addresses. Sample memory area will not be consumed by this type of copy. If you use 2.1: Sample Edit to edit the sample data, the results will affect all samples that share this sample data.

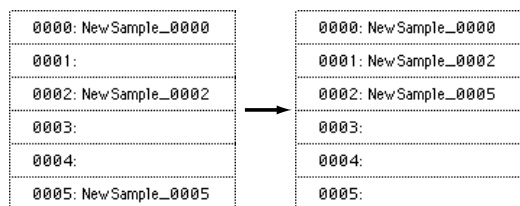


- 5 To execute the Copy Sample command, press the [F8] (“OK”) key. To cancel, press the [F7] (“Cancel”) key.

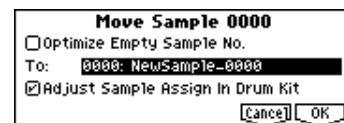
Move SMPL (Move Sample)

This command lets you move the currently selected sample to the specified number (i.e., to change the sample number), or to rearrange the sample numbers so that they start from 0000 after samples have become discontinuous as a result of creating or editing. (⇒Following illustration)

When you reassign the sample numbers, the sample numbers within the multisamples and drum kits that use these sample will also be automatically reassigned. (This means that the samples of the multisamples and drum kits need not be reassigned following this operation.)



- 1 Use “SMPL” (1.1-1b) to select the copy source sample.
- 2 Select “Move SMPL” to open the following dialog box.



- 3 Use “To” to specify the move destination sample number.

[Stereo] When moving a stereo sample, you must move the samples individually.

If you wish to reassign (pack) all sample numbers starting at 0000, **check** “Optimize Empty Sample No.”

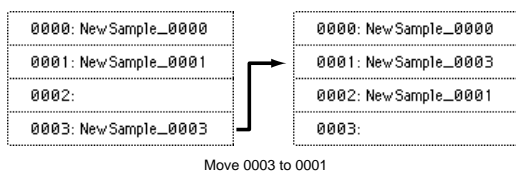
- ④ If “**Adjust Sample Assign in Drum Kit**” is checked, and if the samples being moved are mapped to (used by) a drum kit, those sample numbers will also be automatically modified. Normally you will leave this checked.

Samples mapped to (used by) multisamples will be automatically changed to the new sample numbers regardless of this setting.

- ⑤ To execute the Move Sample operation, press the [F8] (“OK”) key. To cancel without executing, press the [F7] (“Cancel”) key.

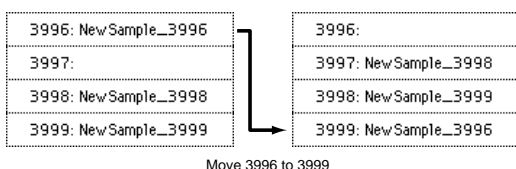
Example)

If data already exists at the move destination sample number, the sample will not be overwritten; instead, all subsequent samples will be renumbered upward.



Example)

If there is no empty sample number and forward movement is not possible, samples will be renumbered downward.



Rename SMPL (Rename Sample)

This command renames the currently selected sample.

- ① Use “SMPL” (1.1-1b) to select the sample whose name you wish to change.
- ② Select “Rename SMPL” to open the following dialog box.

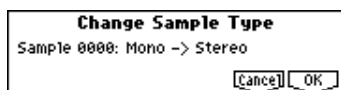


- ③ Press the [F5] (“Name”) key to move to the text dialog box, and input the sample name (maximum of sixteen characters).
 Stereo If the multisample is stereo and a stereo sample is selected, you can input up to fourteen characters for the sample name. This is because the last two characters are reserved for -L and -R. If you rename up to fourteen characters of the sample of either the L or the R channel, the other sample will automatically be renamed.
- ④ To execute the Rename Sample command, press the [F8] (“OK”) key. To cancel, press the [F7] (“Cancel”) key.

SMPL To Stereo (Change Sample Type)

This command changes a mono sample into a stereo sample. This can be executed only if the selected sample is mono.

- ① Use “SMPL” (1.1-1b) to select the sample that you wish to convert to stereo.
- ② Select “SMPL To Stereo” to open the following dialog box.



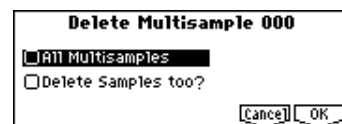
- ③ To execute the Change Sample Type command, press the [F8] (“OK”) key. To cancel, press the [F7] (“Cancel”) key. When you execute this command, the sample type will change as follows.


- The selected sample will become a stereo sample. “-L” will be overwritten into the last two characters of the sample name.
- An identically named sample will be created with “-R” as the last two characters of the sample name. Also, if the selected multisample is mono, it will change to stereo.
- The last two characters of the multisample name will be overwritten as “-L”.
- A new multisample will be created with the same name, but whose last two characters are “-R”.
- The stereo sample that was created will be assigned automatically.

Delete MS (Delete Multisample)

This command deletes the currently selected multisample or all multisamples.

- ① Use “MS” (1.1-1a) to select the multisample that you wish to delete.
- ② Select “Delete MS” to open the following dialog box.



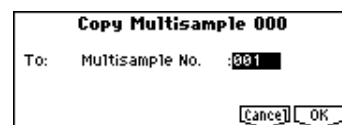
- ③ **All Multisamples:** Check this if you wish to delete all multisamples.
 - ④ **Delete Samples too?:** Check this if you wish to simultaneously delete the samples that are included in the multisample being deleted. However, samples that are mapped to (used by) other multisamples or drum kits will not be deleted.
 - ⑤ To execute the Delete Multisample command, press the [F8] (“OK”) key. To cancel, press the [F7] (“Cancel”) key.
-  Even if you also choose to delete the samples that are included in the deleted multisample(s), any sample data (waveform data) used by these samples that is shared with other samples will not be deleted. Only the sample itself will be deleted.

Copy MS (Copy Multisample)

This command copies the selected multisample to another multisample.

- note** The copy destination multisample number will automatically be included in the multisample name of the copy destination. If necessary, use “Rename MS” (1.1-3g) to rename it. When doing so, make sure that the name is not identical to any other multisample name. (The multisample name is used to distinguish stereo multisamples. [p.75](#))

- ① Use “MS” (1.1-1a) to select the copy source multisample.
- ② Select “Copy MS” to open the following dialog box.



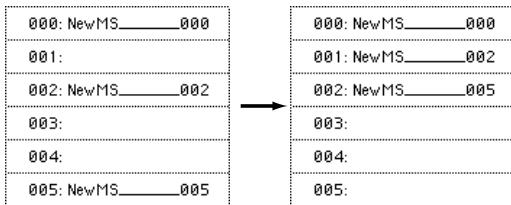
- ③ Use “To: Multisample No.” to specify the copy destination multisample number.
 Stereo When copying a stereo multisample, copy both the L and R channels of the copy destination multisample number.

- To execute the Copy Multisample command, press the [F8] (“OK”) key. To cancel, press the [F7] (“Cancel”) key. When a multisample is copied, the samples assigned to the multisample will also be copied at the same time. At this time, they will be automatically copied to vacant sample numbers. The sample data (waveform data) will be shared between the copy source and copy destination. (Additional sample memory area will not be consumed.)

Move MS

This command lets you move the currently selected multisample to the specified number (i.e., to change the multisample number), or to rearrange the multisample numbers so that they start from 000 after multisamples have become discontinuous as a result of creating or editing. (⇒ Following illustration)

When you reassign the multisample numbers, the multisample numbers within the programs that use these multisamples will also be automatically reassigned. (This means that you do not need to reselect the multisamples in Program mode following this operation.)



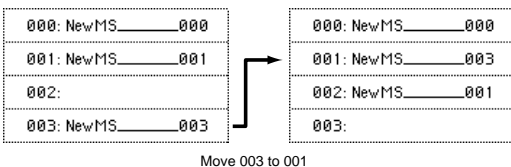
- Use “MS” (1.1–1a) to select the multisample that you wish to move.
- Select “Move MS” to open the following dialog box.



- In “To,” specify the move destination multisample number.
[Stereo] When moving a stereo multisample, you will need to move each part separately. If you wish to rearrange all multisamples consecutively, check “Optimize Empty Multisample No.”
- If “Adjust Multisample Assign In Program” is checked and if the multisamples being moved are used in programs, the multisample numbers of the programs will also be reassigned automatically. Normally you will leave this checked.
- To execute the Move Multisample command, click the [F8] (“OK”) key. If you decide not to execute, click the [F7] (“Cancel”) key.

Example)

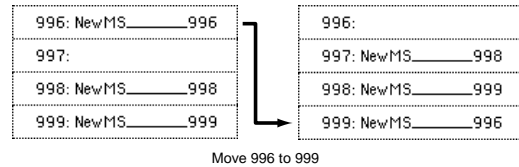
If data already exists at the move destination multisample number, the multisample will not be overwritten; instead, all subsequent multisamples will be renumbered upward.



Move 003 to 001

Example)

If there is no empty multisample number and forward movement is not possible, multisamples will be renumbered downward.



Move 996 to 999

Rename MS (Rename Multisample)

This command modifies the name of the currently selected multisample.

- Use “MS” (1.1–1a) to select the multisample that you wish to rename.
- Select “Rename MS” to open the following dialog box.



- Press the [F5] (“Name”) key to move to the text dialog box, and input the multisample name (up to sixteen characters).
[Stereo] If the selected multisample is stereo, up to fourteen characters can be input as the multisample name. This is because the last two characters are reserved for -L and -R. If you rename up to fourteen characters of the multisample of either the L or the R channel, the other multisample name will automatically be renamed.
- To execute the Rename Multisample command, press the [F8] (“OK”) key. To cancel, press the [F7] (“Cancel”) key.

MS To Stereo/MS To Mono (Change Multisample Type)

This command converts a mono multisample to stereo, or a stereo multisample to mono. If the selected multisample is mono, the dialog box will allow you to execute “MS To Stereo.” If the selected multisample is stereo, the dialog box will allow you to execute “MS To Mono.”

- Use “MS” (1.1–1a) to select the multisample that you wish to change to stereo or mono.
- Select either “MS To Stereo” or “MS To Mono” to open the dialog box.



- To execute the Change Multisample Type command, press the [F8] (“OK”) key. To cancel, press the [F7] (“Cancel”) key.

When you execute this command, the multisample type and sample assignment will change as follows.

MS To Stereo

- The selected multisample will be converted to stereo. The last two characters of the multisample name will be overwritten as -L.
- An identical multisample will be newly created, but with the last two characters of the multisample name overwritten as -R.
- Mono samples assigned to the original multisample will be assigned to both -L and -R multisamples.
- If samples assigned to the original multisample are part of a stereo pair of samples, the -L and -R samples will be assigned to the -L and -R multisamples.

Stereo: MS To Mono

- The selected multisample will be converted to mono. The -L or -R at the end of the multisample name will be deleted.
- Multisamples that are stereo pairs of the selected multisample will be deleted.

Conv. To Prog (Convert Multisample To Program)

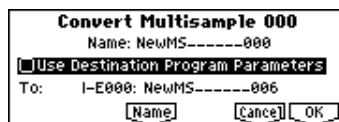
This command converts the selected multisample into a program.

If you have recorded a sample or created a multisample and would like to play it in Program mode, Combination mode, or Multi mode, you must create a program that uses that multisample for its oscillator.

It is possible to set the Program mode OSC1 and OSC2 parameters “High, Low” (PROG 2.1–2a) to select a RAM bank, so that a multisample that you created in Sampling mode can be used in the program, and then to make program settings to specify how the multisample will be sounded.

However by executing this “Conv. To Prog” command, you can quickly and easily convert the Sampling mode settings into the desired program, without having to make Program mode settings as described above.


- ① Use “MS” (1.1–1a) to select the multisample that you wish to convert to a program.
- ② Choose “Conv. To Prog” to open the dialog box.



- ③ Press the [F5] (“Name”) key to move to the text dialog box, and input the program name (up to sixteen characters). By default, the multisample name will be specified.
- ④ If “Use Destination Program Parameters” is **unchecked**: Executing the command will replace the multisample of the convert destination program with the multisample that is selected here, and will initialize the settings of the remaining program parameters. The sound that you hear in Sampling mode will be accurately reproduced by the program.

A monaural multisample will be converted into a program with an “Mode (Oscillator Mode)” (PROG 2.1–1a) of **Single**, and a stereo multisample will be converted into a **Double** program.


If “Use Destination Program Parameters” is **checked**: Executing this command will replace the multisample of the convert destination program with the multisample that is selected here, and will not initialize the settings of the remaining program parameters. Use this setting if you wish to use the parameter settings of a preset program, etc.

 If you **check** “Use Destination Program Parameters,” be aware of the following points.

- If the selected multisample is mono, the “Mode (Oscillator Mode)” of the convert destination program must be **Single**. Conversely, if the selected multisample is stereo, the “Mode (Oscillator Mode)” of the convert destination program must be **Double**. If you attempt to execute this command when these conditions are not satisfied, a message will indicate “Oscillator Mode conflicts.” You will need to change the “Mode (Oscillator Mode)” setting of the convert destination program.

- **Stereo** If the selected multisample is stereo and the program pan setting “Pan (Amp1 Pan)” is **L000** and “Pan (Amp2 Pan)” is **R127** (PROG 5.1–1b and 5.2–1), the stereo position of the multisample in Sampling mode will be reproduced by the program.

- ⑤ Use “To” to select the convert destination program. You can use the [BANK] keys, numeric keys [0]–[9], [VALUE] dial, and [INC], [DEC] keys to make your selection.

 We recommend that you use **bank I-E** as the program bank for Sampling mode. Although you can specify any bank I-A–I-E, E-A–E-H for the convert destination program, the factory-preset preloaded programs and preloaded combinations are stored in banks I-A–I-D. We also recommend that you use banks E-A–E-H to store programs/combinations for the separately sold EXB-PCM series options. Since the above banks are used for these specific purposes, you should use bank I-E for Sampling mode.

- ⑥ To execute the Convert Multisample To Program command, press the [F8] (“OK”) key. To cancel, press the [F7] (“Cancel”) key.

Keyboard Disp. (Keyboard Display)

This command selects the range of the keyboard display. Normally you will select **88Key Normal (A0–C8)**.

- ① Select “Keyboard Disp.” to access the dialog box.



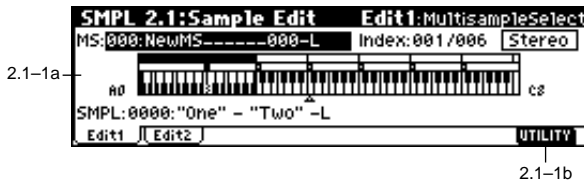
- ② Use the [INC], [DEC] key to select the displayed range.
- ③ To execute the Keyboard Display command, press the [F8] (“OK”) key. To cancel, press the [F7] (“Cancel”) key.

SMPL 2.1: Sample Edit

Here you can edit the sample data (waveform data) that you sampled or loaded in Disk mode.

Editing operations such as deleting unwanted portions of the waveform, reversing the waveform, or lowering the sampling frequency can be performed in detail while viewing the “sample waveform display.”

2.1-1: Edit1



2.1-1a: MS, Index, Keyboard & Index, SMPL

MS (Multisample Select) [000...999]
Select s the multisample that contains the sample you wish to edit (⇨1.1-1a).

Index [xxx (001...128)/yyy (001...128)]
Selects the index of the sample you wish to edit. Your editing will affect the sample of the index that you select here, and the waveform will appear in the “sample waveform display” (2.1-2a) (⇨1.1-1a).

note To select an index, hold down the [ENTER] key and play a note on the keyboard of a connected MIDI instrument. The index that includes the note you played will be selected. The specified key will be the base key, and will be displayed in gray in “Keyboard & Index” (⇨“Keyboard & Index” 1.1-1a).

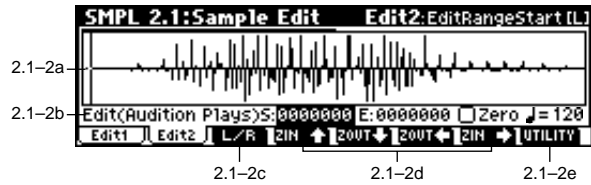
Keyboard & Index
(⇨1.1-1a)

SMPL (Sample Select) [----: ---No Assign----, 0000...3999]
Selects the sample for the selected index. When you change “Sample,” the selected sample will be assigned to the specified index. (⇨1.1-1b)

■ 2.1-1b: UTILITY

⇨ “Delete SMPL,” “Copy SMPL,” “Move SMPL,” “Rename SMPL,” “SMPL To Stereo,” “Delete MS,” “Copy MS,” “Move MS,” “Rename MS,” “MS To Stereo/MS To Mono,” “Conv. To Prog,” “Keyboard Disp.” (1.1-3g)

2.1-2: Edit2



2.1-2a: Sample waveform display

Sample waveform display

This displays the waveform of the selected sample. The horizontal axis is the sample address (time axis), and the vertical axis is the sample level.

The bold line in the display indicates the portion of the entire sample waveform that is currently shown in the screen. As you zoom-in on the time axis, you will see that a smaller proportion of the waveform is shown in the screen.

2.1-2b: Edit (Audition Plays), Zero, J

S (Edit Range Start) [0000000...]
E (Edit Range End) [0000000...]

This specifies the range (start address and end address) of the sample that will be edited by UTILITY menu commands. (This is shown in sample address units.)

The range you specify here will be highlighted in the “sample waveform display.”

note To hear the sound of the specified range, press the [AUDITION] key. The sample will sound from the “S (Edit Range Start)” to the “E (Edit Range End)” points, at the pitch of the base key (displayed in gray). (⇨“Keyboard & Index” 1.1-1a)

Zero (Use Zero) [Off, On]

On (Checked): When setting “S (Edit Range Start)” and “E (Edit Range End),” it will be possible to select these only to locations where the waveform level is ± 0 (i.e., where the waveform crosses the center line of the “sample waveform display”). You can use the [VALUE] dial, and [INC], [DEC] keys to automatically search for zero-cross addresses. By using the numeric keys [0]-[9] you can search for the zero-cross address nearest to the value that you input.

Off (Unchecked): “S (Edit Range Start)” and “E (Edit Range End)” can be set in increments of one. This is the normal setting.

J (Grid Tempo) [040...480(BPM)]
(⇨3.1-2b)

■ 2.1-2c: L/R

This is valid only if a stereo sample is selected.

This switches the display between the L channel and R channel of a stereo sample.

Each time you press the [F3] (“L/R”) key, the display will alternate between the L channel and the R channel.

The currently-displayed channel of the sample is shown in the upper right of the screen ([L] for the L channel, [R] for the R channel).

■ 2.1–2d: ZOOM

These buttons let you zoom-in and zoom-out the “sample waveform display” in the horizontal axis (sample addresses) or vertical axis (sample level).

ZIN : Press the [F4] key to zoom-in vertically.

ZOUT : Press the [F5] key to zoom-out vertically.

ZOUT : Press the [F6] key to zoom-out horizontally.

ZIN : Press the [F7] key to zoom-in horizontally.

If you continue holding each key, zoom-in/out will occur repeatedly.

By zooming-in on the horizontal direction, you can move from the overall display where the waveform is shown as a solid line (1x magnification) to 2x or 4x magnification. (With 1x magnification, the display resolution of the LCD will be the same as the resolution of the sample addresses. For example if you change the sample address by one, the vertical line in the LCD that indicates the sample address will move in steps of one pixel.) In the vertical axis, you can zoom-in from 1x (full-range display) to 512x.

Zoom-In/zoom-out will occur starting at the “S (Edit Range Start)” or “E (Edit Range End)” points you specify. (If a different parameter is selected when you zoom-in or -out, the zoom-in/out will be based on the last-selected point. If you re-select the “S (Edit Range Start)” or “E (Edit Range End)” points when the display is zoomed in or out, the display range will be adjusted so as to show the selected point.)

If the zoom ratio is low (1x or less), the “sample waveform display” may differ slightly from the displayed waveform before and after waveform editing, but this does not affect the playback sound. If this occurs, raising the zoom ratio will make the display accurate.

■ 2.1–2e: UTILITY

Before using the utility commands “Truncate” – “Volume Ramp” to edit sample waveform data, you must set “S (Edit Range Start)” and “E (Edit Range End)” to specify the range to be edited. Then select the desired utility menu command and execute it.

The various utilities in this page can be selected from the Edit2 page “UTILITY.” (They cannot be selected in the Edit1 page.) For the procedure of selecting a utility command, refer to PROG 1.1–1d: UTILITY.

There is no compare function that lets you return the edited result to the state before editing. If you wish to preserve the unedited sample, **uncheck** the “Overwrite”^{*1} item in the dialog box of each UTILITY menu command before you execute.

note For stereo samples, the L channel and R channel samples are edited simultaneously. If you wish to edit only the L channel or R channel, select a mono multisample, and select either the L channel or R channel sample for editing.

note If you “Copy” a mono sample into the buffer, and then “Insert,” “Mix,” or “Paste” it to a stereo sample, the data will be inserted, mixed, or pasted into both the L and R sides. (The result will be that a stereo sample will be created.)

If you “Copy” a stereo sample into the buffer, and then “Insert,” “Mix,” or “Paste” it to a mono sample, the L- and R-side data in the buffer will be mixed to mono, and then inserted, mixed, or pasted. (The result will be that a mono sample will be created.)

You can also use these commands if you wish to mono-mix a stereo sample and use it as a mono sample. However, be aware that once a sample has been mixed to mono, it is no longer possible to return it to a stereo sample.

note The playback “S (Start)” (start address), “LpS (Loop Start)” (loop start address), and “E (End)” (end address) of the sample waveform data are specified in 3.1: Loop Edit, Edit2. If the above parameters are within the range of sample addresses deleted or moved by the editing command, their addresses will automatically be moved.

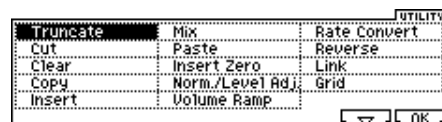
*1: About “Overwrite”

When “Overwrite” is **unchecked**: When the command is executed, the edited sample will be saved in a different sample number. The unedited sample will remain without change.

When “Overwrite” is **checked**: When the command is executed, the edited sample will be overwritten onto the original sample (number). The original sample will be modified.

note Normally, you will leave “Save to No.” at its default setting, and execute without checking “Overwrite.” When you execute, both the data before and after editing will be preserved, and the sample number of the edited data will be assigned as the sample of that index.

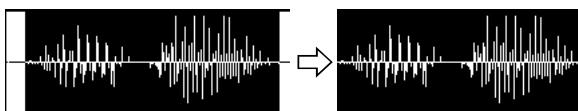
“LpS (Loop Start)” and “E (End)” (3.1–2b) must be located at least eight addresses apart. If as a result of executing the Utility “Truncate,” “Cut,” or “Rate Convert” (2.1–2e), the “LpS (Loop Start)” and “E (End)” would be separated by less than eight addresses, the display will indicate “Sample length is shorter than minimum.” Please set the “S (Edit Range Start)” and “E (Edit Range End)” appropriately.



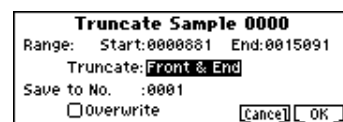
Truncate

This command deletes unwanted data that lies beyond the “S (Edit Range Start)” and “E (Edit Range End).” Use this command when you wish to delete silence at the beginning or end of the waveform data.

note If you wish to delete unneeded (unplayed) sample data after setting the start address, loop start address, and end address, use the Utility “Truncate” found in 3.1: Loop Edit, Edit2 page.



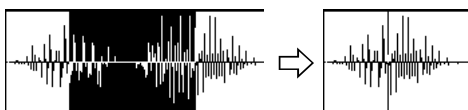
- Use “SMPL” (2.1–1a) to select the sample that you wish to edit, and use “S (Edit Range Start)” and “E (Edit Range End)” (2.1–1b) to specify the editing range. You can press the [AUDITION] key to hear the portion that will be left by the “Truncate” command.
- Select “Truncate” to open the following dialog box.



- ③ The editing range will be shown in Range “Start” and “End.”
- ④ Use “Truncate” to select the portion that will be deleted.
Front & End: The sample data that lies before the “S (Edit Range Start)” and after the “E (Edit Range End)” will be deleted.
Front: The sample data that lies before the “S (Edit Range Start)” will be deleted.
End: The sample data that lies after the “E (Edit Range End)” will be deleted.
- ⑤ In “Save to No.,” specify the save destination sample number. By default, an unused sample number will be selected. If you have checked “Overwrite,” this cannot be set.
[Stereo] For a stereo sample, “Save to No.(L)” and “(R)” will be displayed. Specify the save destination sample number for the L channel and R channel respectively.
- ⑥ If you wish to delete the original sample data and overwrite it with the edited sample data, **check** “Overwrite”. Normally, you will leave “Save to No.” at its default setting, and execute **without checking** “Overwrite.” (⇒p.85 “*”: About “Overwrite”)
- ⑦ To execute the Truncate command, press the [F8] (“OK”) key. To cancel, press the [F7] (“Cancel”) key.

Cut

This command deletes the data between the “S (Edit Range Start)” and “E (Edit Range End).” Sample data located after the deleted portion will be moved forward.



- ① Use “SMPL” (2.1-1a) to select the sample that you wish to edit, and use “S (Edit Range Start)” and “E (Edit Range End)” (2.1-1b) to specify the editing range.

note You can press the [AUDITION] key to hear the portion that will be deleted by the “Cut” command.

- ② Select “Cut” to open the following dialog box.

Cut Sample 0000

Range: Start:0004111 End:0011221

Save to No. : 0002

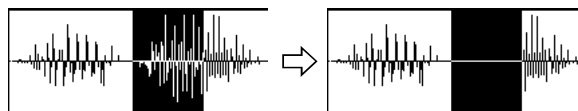
Overwrite

[Cancel] [OK]

- ③ The range to be edited is shown by Range “Start” and “End.”
- ④ In “Save to No.,” specify the save destination sample number. By default, an unused sample number will be selected. If you have checked “Overwrite,” this cannot be set.
[Stereo] For a stereo sample, “Save to No.(L)” and “(R)” will be displayed. Specify the save destination sample number for the L channel and R channel respectively.
- ⑤ If you wish to delete the original sample data and overwrite it with the edited sample data, **check** “Overwrite”. Normally, you will leave “Save to No.” at its default setting, and execute **without checking** “Overwrite.” (⇒p.85 “*”: About “Overwrite”)
- ⑥ To execute the Cut command, press the [F8] (“OK”) key. To cancel, press the [F7] (“Cancel”) key.

Clear

This command converts the data between “S (Edit Range Start)” and “E (Edit Range End)” to zero values. Sample data before and after the edited range will not move.



- ① Use “SMPL” (2.1-1a) to select the sample that you wish to edit, and use “S (Edit Range Start)” and “E (Edit Range End)” (2.1-1b) to specify the editing range.

note You can press the [AUDITION] key to hear the portion that will be changed to zero-level by the “Clear” command.

- ② Select “Clear” to open the following dialog box.

Clear Sample 0000

Range: Start:0007478 End:0011403

Save to No. : 0003

Overwrite

[Cancel] [OK]

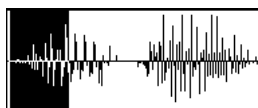
- ③ The range to be edited is shown by Range “Start” and “End.”
- ④ In “Save to No.,” specify the save destination sample number. By default, an unused sample number will be selected. If you have checked “Overwrite,” this cannot be set.
[Stereo] For a stereo sample, “Save to No.(L)” and “(R)” will be displayed. Specify the save destination sample number for the L channel and R channel respectively.
- ⑤ If you wish to delete the original sample data and overwrite it with the edited sample data, **check** “Overwrite”. Normally, you will leave “Save to No.” at its default setting, and execute **without checking** “Overwrite.” (⇒p.85 “*”: About “Overwrite”)
- ⑥ To execute the Clear command, press the [F8] (“OK”) key. To cancel, press the [F7] (“Cancel”) key.

note Normally you will leave “Save to No.” at the default setting, and execute without checking “Overwrite.” When you execute, the original data and the edited data will both be preserved, and the sample number after editing will be assigned to the sample of the index.

Copy

This command copies the sample data from the area between “S (Edit Range Start)” and “E (Edit Range End)” into the sample data buffer. This data can then be used by the “Insert,” “Mix” or “Paste” commands.

note When “Copy” is executed, the data that is loaded into the buffer simply references the data of the original sample. After using “Copy,” do not delete the copy source sample until you “Insert,” “Mix” or “Paste” the copied data.



- ① Use “SMPL” (2.1-1a) to select the sample that you wish to edit, and use “S (Edit Range Start)” and “E (Edit Range End)” (2.1-1b) to specify the editing range.

note You can press the [AUDITION] key to hear the portion that will be copied by the “Copy” command.

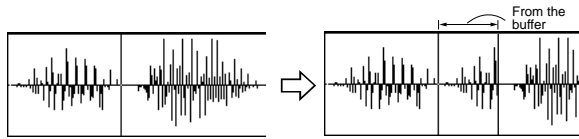
- ② Select "Copy" to open the following dialog box.



- ③ The range to be copied is shown by Range "Start" and "End."
- ④ To execute the Copy command, press the [F8] ("OK") key. To cancel, press the [F7] ("Cancel") key.

Insert

When you execute the "Insert" command, the sample data that was loaded into the buffer by the "Copy" command will be inserted starting at the "S (Edit Range Start)" address. The data that had been at that location will be moved backward.



- ① Use "SMPL" (2.1-1a) to select the sample that you wish to edit, and set "S (Edit Range Start)" to specify the starting address. The "E (Edit Range End)" (2.1-1b) setting is ignored.
- ② Select "Insert" to open the following dialog box.



- ③ To "Start" will indicate the starting address at which the data will be inserted.
- ④ In "Save to No.," specify the save destination sample number. By default, an unused sample number will be selected. If you have checked "Overwrite," this cannot be set.

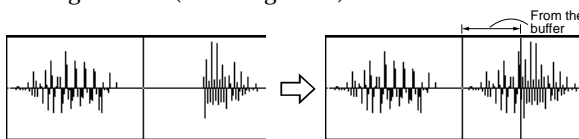
[Stereo] For a stereo sample, "Save to No.(L)" and "(R)" will be displayed. Specify the save destination sample number for the L channel and R channel respectively.

- ⑤ If you wish to delete the original sample data and overwrite it with the edited sample data, **check** "Overwrite". Normally, you will leave "Save to No." at its default setting, and execute **without checking** "Overwrite." (⇨p.85 "**": About "Overwrite")
- ⑥ To execute the "Insert" command, press the [F8] ("OK") key. To cancel, press the [F7] ("Cancel") key.

⚠ If the buffer into which data was placed by the "Copy" command contains no data, the display will indicate "Source sample is empty."

Mix

When you execute the "Mix" command, the sample that was loaded into the buffer by the "Copy" command will be mixed with the selected sample data. The data will be mixed starting at the "S (Edit Range Start)" address.



- ① Use "SMPL" (2.1-1a) to select the sample that you wish to edit, and set "S (Edit Range Start)" (2.1-1b) to specify the starting address. The "E (Edit Range End)" setting is ignored.

- ② Select "Mix" to open the following dialog box.



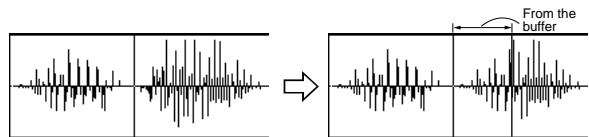
- ③ To "Start" will indicate the starting address at which the data will be mixed.
- ④ In "Save to No.," specify the save destination sample number. By default, an unused sample number will be selected. If you have checked "Overwrite," this cannot be set.
- [Stereo]** For a stereo sample, "Save to No.(L)" and "(R)" will be displayed. Specify the save destination sample number for the L channel and R channel respectively.
- ⑤ If you wish to delete the original sample data and overwrite it with the edited sample data, **check** "Overwrite". Normally, you will leave "Save to No." at its default setting, and execute **without checking** "Overwrite." (⇨p.85 "**": About "Overwrite")
- ⑥ To execute the "Mix" command, press the [F8] ("OK") key. To cancel, press the [F7] ("Cancel") key.

⚠ If the buffer into which data was placed by the "Copy" command contains no data, the display will indicate "Source sample is empty."

Paste

Beginning at the "S (Edit Range Start)" address, this command places the sample data that was loaded into the buffer by "Copy" command. The original data will be deleted, and overwritten by the sample data from the buffer. You can also place sample data into a blank sample. This is convenient when you wish to "Copy" part of a sample and create a new sample based on it.

Pasting to a sample that contains sample data



- ① Use "SMPL" (2.1-1a) to select the sample that you wish to edit, and set "S (Edit Range Start)" (2.1-1b) to specify the starting address. The "E (Edit Range End)" setting is ignored.
- ② Select "Paste" to open the following dialog box.



- ③ To "Start" will indicate the starting address at which the data will be pasted.
- ④ In "Save to No.," specify the save destination sample number. By default, an unused sample number will be selected. If you have checked "Overwrite," this cannot be set.
- [Stereo]** For a stereo sample, "Save to No.(L)" and "(R)" will be displayed. Specify the save destination sample number for the L channel and R channel respectively.
- ⑤ If you wish to delete the original sample data and overwrite it with the edited sample data, **check** "Overwrite". Normally, you will leave "Save to No." at its default setting, and execute **without checking** "Overwrite." (⇨p.85 "**": About "Overwrite")
- ⑥ To execute the "Paste" command, press the [F8] ("OK") key. To cancel, press the [F7] ("Cancel") key.

⚡ If the buffer into which data was placed by the “Copy” command contains no data, the display will indicate “Source sample is empty.”

Pasting to a sample that contains no sample data

① Select the vacant sample number that you wish to paste. If you select ---:---**No Assign**--- for “Sample” and then access the dialog box for this command, a vacant sample number will be selected automatically.

⚡ The “S (Edit Start Range)” and “E (Edit Range End)” (2.1-1b) settings will be ignored, and will have no effect. The beginning of the sample will be placed at address 0.

② Select “Paste” to open the following dialog box.



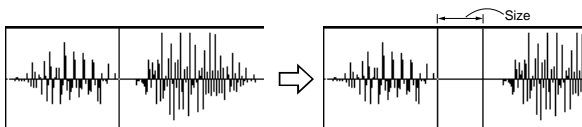
③ In “Save to No.,” specify the save destination sample number. If you wish to change it, re-specify the desired number.

[Stereo] If the sample data loaded into the buffer by “Copy” is stereo, the display will indicate “Save to No.(L)” and “(R).” Specify the save destination sample number for the L channel and the R channel.

④ To execute the “Paste” command, press the [F8] (“OK”) key. To cancel without executing, press the [F7] (“Cancel”) key.

Insert Zero

This command inserts zero-level sample data (silence), beginning at the “S (Edit Range Start)” address. The data that previously occupied that location will be moved backward.



① Use “SMPL” (2.1-1a) to select the sample that you wish to edit, and set “S (Edit Range Start)” (2.1-1b) to specify the starting address. The “E (Edit Range End)” setting is ignored.

② Select “Insert Zero” to open the following dialog box.



③ To “Start” will indicate the starting address at which the data will be inserted.

④ In “Size,” specify the length of the data that will be inserted.

⑤ In “Save to No.,” specify the save destination sample number. By default, an unused sample number will be selected. If you have checked “Overwrite,” this cannot be set.

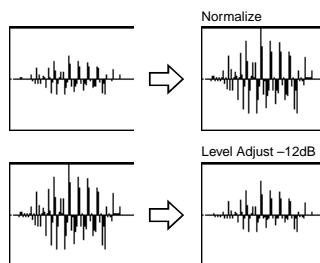
[Stereo] For a stereo sample, “Save to No.(L)” and “(R)” will be displayed. Specify the save destination sample number for the L channel and R channel respectively.

⑥ If you wish to delete the original sample data and overwrite it with the edited sample data, **check** “Overwrite”. Normally, you will leave “Save to No.” at its default setting, and execute **without checking** “Overwrite.” (p.85 “*”: About “Overwrite”)

⑦ To execute the “Insert Zero” command, press the [F8] (“OK”) key. To cancel, press the [F7] (“Cancel”) key.

Norm./Level Adj. (Normalize/Level Adjust)

This command uniformly modifies the data values (volume) of the data between the “S (Edit Range Start)” and “E (Edit Range End).” “Normalize” will amplify the level of the sample data as far as possible without allowing it to clip (distort). If the level of the sampled data is too low, you can execute this command to increase the dynamic range. “Level” allows you to raise or lower the level as desired.



① Use “SMPL” (2.1-1a) to select the sample that you wish to edit, and use “S (Edit Range Start)” and “E (Edit Range End)” (2.1-1b) to specify the editing range.

note You can press the [AUDITION] key to hear the portion that will be normalized or level-adjusted.

② Select “Norm./Level Adj.” to open the following dialog box.



③ The range to be edited is shown by Range “Start” and “End.”

④ If you **check** “Normalize” and execute, the data will be normalized. In this case, the “Level” setting will be ignored.

If you wish to specify “Level” to modify the level of the sample data, do **not check** “Normalize.”

note Each increase of **+6 dB** will approximately double the height of the waveform shown in the LCD. **+12 dB** will be an increase of approximately 4X, and **+18 dB** will be approximately 8X. Conversely, each decrease of **-6 dB** will halve the level, so that **-6 dB** will be 1/2X and **-12 dB** will be approximately 1/4X. Executing the “Level” command with positive (+) settings may cause the sound to clip (i.e., distort at the point that amplification beyond the maximum level is impossible). Once the sample data has been boosted beyond the clipping point, re-executing this command with negative (-) settings of “Level” will simply lower the overall level of the clipped signal –the waveform will remain distorted.

Also, if executing “Level” with negative (-) settings causes any portion of the sample data to reach a zero level, the zero data will not return to its original state even if you re-execute “Level” with positive (+) settings.

⑤ In “Save to No.,” specify the save destination sample number. By default, an unused sample number will be selected. If you have checked “Overwrite,” this cannot be set.

[Stereo] For a stereo sample, “Save to No.(L)” and “(R)” will be displayed. Specify the save destination sample number for the L channel and R channel respectively.

⑥ If you wish to delete the original sample data and overwrite it with the edited sample data, **check** “Overwrite”. Normally, you will leave “Save to No.” at its default set-

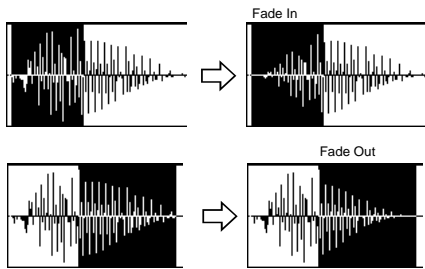
ting, and execute **without checking** "Overwrite." (⇨p.85 "*" : About "Overwrite")

- ⑦ To execute the Normalize/Level Adjust command, press the [F8] ("OK") key. To cancel, press the [F7] ("Cancel") key.

⚠ Be aware that if sample data of an extremely low level is normalized, any noise included in the sample will also be amplified.

Volume Ramp

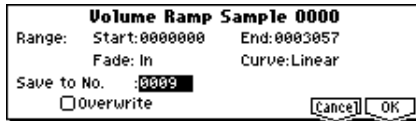
This command modifies the data values (volume) between the "S (Edit Range Start)" and "E (Edit Range End)." You can make the volume gradually increase (Fade In) or decrease (Fade Out) from the "S (Edit Range Start)" to the "E (Edit Range End)."



- ① Use "SMPL" (2.1-1a) to select the sample that you wish to edit, and use "S (Edit Range Start)" and "E (Edit Range End)" (2.1-1b) to specify the editing range.

note You can press the [AUDITION] key to hear the portion on which "Volume Ramp" will be executed.

- ② Select "Volume Ramp" to open the following dialog box.



- ③ The range to be edited is shown by Range "Start" and "End."
- ④ Use "Fade" to select the type of volume ramp.
In: The volume will be zero at Range "Start," and will gradually increase toward the "End" volume.
Out: The volume will gradually decrease from the Range "Start" volume, and will reach zero at the "End" volume.
- ⑤ In "Curve," specify the way in which the volume will change.
Linear: The volume will change linearly. For normal fade-in or fade-out, select **Linear**.
Power: The volume will change non-linearly. When you use "Mix" (2.1-2e) to combine a faded-in waveform with a different faded-out waveform (i.e., crossfade), using a **Linear** fade-in/out may produce an impression that the volume has dropped in the middle of the curve. In such cases, use **Power** to perform the fade-in/out.
- ⑥ In "Save to No.," specify the save destination sample number. By default, an unused sample number will be selected. If you have checked "Overwrite," this cannot be set.
[Stereo] For a stereo sample, "Save to No.(L)" and "(R)" will be displayed. Specify the save destination sample number for the L channel and R channel respectively.
- ⑦ If you wish to delete the original sample data and overwrite it with the edited sample data, **check** "Overwrite". Normally, you will leave "Save to No." at its default setting, and execute **without checking** "Overwrite." (⇨p.85 "*" : About "Overwrite")
- ⑧ To execute the Volume Ramp command, press the [F8] ("OK") key. To cancel, press the [F7] ("Cancel") key.

Rate Convert

This command lowers the sampling rate (frequency) of the sampled data by 2/3, 1/2, 1/3, 1/4, or 1/6. The sampling frequency of input is fixed at 48 kHz, but you can use this command to create "down-sampling" effects. The sample data is thinned to convert it into sample data of a lower sampling frequency.

The "Rate Convert" command is always executed on all waveform data of the selected sample, regardless of the "S (Edit Range Start)" and "E (Edit Range End)" (2.1-1b) settings.

- ① Use "SMPL" (2.1-1a) to select the sample that you wish to edit.
- ② In the Edit2 page "UTILITY," choose "Rate Convert" to open the following dialog box.



- ③ The sampling rate of the selected sample is shown at the right of "Rate." At the right of the "->" you can select the desired amount of the sampling rate conversion: 2/3, 1/2, 1/3, 1/4, 1/6. The sampling rate following conversion will be displayed.
- ④ In "Save to No.," specify the save destination sample number. By default, an unused sample number will be selected. If you have checked "Overwrite," this cannot be set.
[Stereo] For a stereo sample, "Save to No.(L)" and "(R)" will be displayed. Specify the save destination sample number for the L channel and R channel respectively.
- ⑤ If you wish to delete the original sample data and overwrite it with the edited sample data, **check** "Overwrite". Normally, you will leave "Save to No." at its default setting, and execute **without checking** "Overwrite." (⇨p.85 "*" : About "Overwrite")
- ⑥ To execute the Insert Zero command, press the [F8] ("OK") key. To cancel, press the [F7] ("Cancel") key.

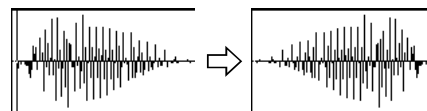
⚠ This command cannot be executed on a sample whose sampling rate is less than 11.025 kHz.

⚠ Stereo samples must have the same sampling rate. Although it is possible to select mono multisamples for -L and -R and convert their sampling rate separately, they can no longer be handled as a stereo sample in this case.

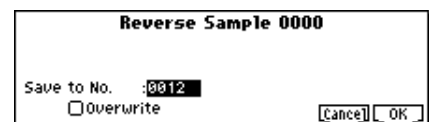
Reverse

This command reverses the sample data (i.e., exchanges the beginning and end).

The "Reverse" command is always executed on all waveform data of the selected sample, regardless of the "S (Edit Range Start)" and "E (Edit Range End)" (2.1-1b) settings.



- ① Use "SMPL" (2.1-1a) to select the sample that you wish to edit.
- ② In the Edit2 page "UTILITY," choose "Reverse" to open the following dialog box.



- ③ In "Save to No.," specify the save destination sample number. By default, an unused sample number will be selected. If you have checked "Overwrite," this cannot be set.

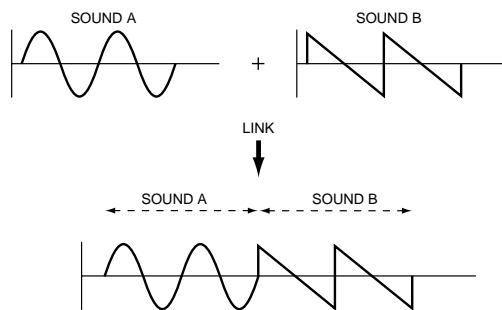
[Stereo] For a stereo sample, "Save to No.(L)" and "(R)" will be displayed. Specify the save destination sample number for the L channel and R channel respectively.

- ④ If you wish to delete the original sample data and overwrite it with the edited sample data, **check** "Overwrite". Normally, you will leave "Save to No." at its default setting, and execute **without checking** "Overwrite." (⇒p.85 "*" : About "Overwrite")
- ⑤ To execute the Reverse command, press the [F8] ("OK") key. To cancel, press the [F7] ("Cancel") key.

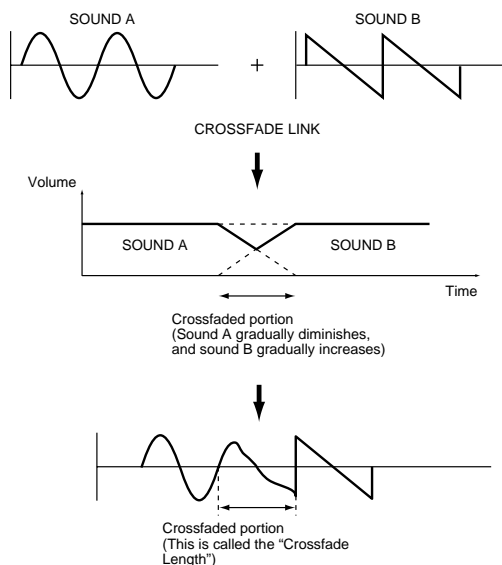
note When you execute this command, the entire sample data will be rewritten backward. By using 3.1: Loop Edit "Rev (Reverse)" (3.1-1b), you can reverse the playback direction without affecting the sample data itself.

Link

This command connects the currently selected sample with another sample.

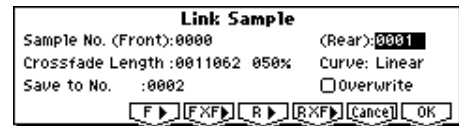


The volume of the two samples can be changed gradually at the transition to gradually mix the samples with each other. This is called **crossfade**, and can be used to produce a natural-sounding transition between the two sounds.



"Link" will be executed for all of the selected sample data, regardless of the "S (Edit Range Start)" and "E (Edit Range End)" (2.1-1b) settings.

- ① Use "SMPL" (2.1-1a) to select the sample that will be placed in front by the Link command.
- ② In the Edit2 page "UTILITY," choose "Link" to open the following dialog box.



- ③ The sample number selected for "Sample No. (Front)" will be displayed. When the command is executed, this sample will be placed in front. While you hold down the [F3] ("F►") key, the entire sample will play back. After the entire sample has played back, it will stop. **[Stereo]** If you select one side of a stereo sample, it will automatically be detected as a stereo sample, and the other side of the sample will also be processed by the Link command. If the "Front" Sample is mono and the Rear Sample is stereo, the L and R of the "Rear" Sample will be mixed to mono before linking. If the "Front" Sample is stereo and the "Rear" Sample is mono, the identical sample will be placed in L and R of the "Rear" Sample before linking.
- ④ Use "Sample No. (Rear)" to select the sample number that will be linked. When the command is executed, this sample will be placed in back. While you hold down the [F5] ("R►") key, the entire sample will play back. After the entire sample has played back, it will stop.
- ⑤ In "Crossfade Length," specify the length over which the crossfade will occur. If you specify a % value, the proportion in relation to the entire "Front" Sample will be calculated automatically. If you specify 50%, the last half of the "Front" Sample will crossfade.

note If the rear sample is short, the "Crossfade Length" cannot be set any longer than the length of the "Rear" sample. In this case, it will not be possible to specify a value up to 100%.

If you set "Crossfade Length" to other than 0, "F X F►" and "R X F►" will be displayed. By holding down one of these buttons, you can play back just the crossfaded portion of the front or rear sample. Playback will stop after the length specified by "Crossfade Length." If you do not wish to crossfade, set this to 0.

note



After selecting a sample in step ①, you can set "S (Edit Range Start)" and specify the beginning of the crossfade while viewing the waveform. Set "E (Edit Range End)" to the end of the sample. If you specify these, "Crossfade Length" will indicate the length determined by "S (Edit Range Start)" and "E (Edit Range End)."

- ⑥ In "Curve," specify how you want the volume to change in the crossfaded portion.

Linear: The volume will change linearly.

Power: The volume will change non-linearly. In some cases, "Linear" may sound as though the volume diminishes in the middle of the curve. If this occurs, use "Power."

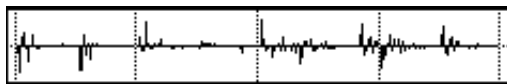
- ⑦ In “**Save to No.**,” specify the save destination sample number. An unused sample number will be selected by default. If “Overwrite” is checked, this cannot be set. **[Stereo]** In the case of a stereo sample, “Save to No.(L)” and “(R)” will be displayed. You must specify the save destination sample for both the L channel and R channel.
- ⑧ If you wish to delete the original sample data and overwrite it with the edited sample data, **check** “Overwrite”. Normally, you will leave “Save to No.” at its default setting, and execute **without checking** “Overwrite.” (⇒p.85 “*”: About “Overwrite”)
- ⑨ To execute the Link command, press the [F8] (“OK”) key. To cancel without executing, press the [F7] (“Cancel”) key.

⚠ If you link samples of different sampling rates (such as created by “Rate Convert” ⇒2.1-2e), the newly created sample will have the sampling rate of the “Front” sample.

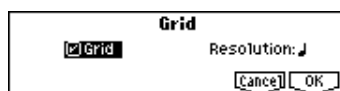
⚠ One vacant sample is used in order to execute Link. Be aware that if there are no vacant samples, an error will occur.

Grid

This command displays a grid in the “sample waveform display.” If you check “Grid” and execute, vertical dotted lines will appear in the “sample waveform display,” according to the resolution and tempo specified by “Resolution” and “♩ (Grid Tempo)” (2.1-2b). You can use this when cutting or editing sample data according to BPM values or beats. The vertical dotted lines are displayed starting at the address specified by the “S (Start)” (when Loop Off) or “LpS (Loop Start)” (when Loop On) settings of the 3.1: Loop Edit, Edit 2 page, and show the timing when the currently selected key (displayed in gray) is played. (⇒“Keyboard & Index” 1.1-1a)



- ① Use “SMPL” (2.1-1a) to select a sample.
- ② In the Edit2 page “UTILITY,” choose “Grid” to open the following dialog box.

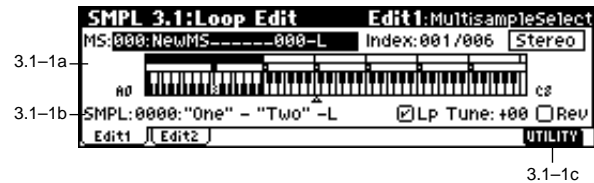


- ③ Check “Grid” to turn on the grid display.
- ④ Set “Resolution” to the desired grid interval ♩-♩. The spacing of the grid will be determined by this setting and by “♩ (Grid Tempo)” (2.1-2b).
- ⑤ To execute the setting, press the [F8] (“OK”) key. To cancel without executing, press the [F7] (“Cancel”) key.

SMPL 3.1: Loop Edit

Here you can specify the portion of the sample that will be played back, set sample parameters for playback loop etc., and edit the sample. Sample parameters that were loaded into internal sampling memory in Disk mode can also be edited in the same way. You can make detailed edits in single-sample steps while watching the sample waveform display.

3.1-1: Edit1



3.1-1a: MS, Index, Keyboard&Index

MS (Multisample Select) [000...999]

Select s the multisample whose loop and other sample parameters you wish to edit (⇒1.1-1a).

Index [xxx (001...128)/yyy (001...128)]

Select s the index whose loop and other sample parameters you wish to edit. Your edits will apply to the sample of the index selected here, and the waveform will appear in the “sample waveform display” (⇒1.1-1a).

To select an index, hold down the [ENTER] key and play a note on the keyboard of a connected MIDI instrument. The index that includes the note you played will be selected. The specified key will be the base key, and will be displayed in gray in “Keyboard & Index.”

Keyboard & Index

(⇒1.1-1a)

3.1-1b: SMPL, Lp, Tune, Rev

SMPL (Sample Select)

[----: ---No Assign----, 0000...3999]

This shows the sample number and name, and the range of the selected index. If you change “SMPL,” the sample you specify will be assigned to this index. The sample you select here will appear in the “sample waveform display” (⇒1.1-1a).

Lp (Loop)

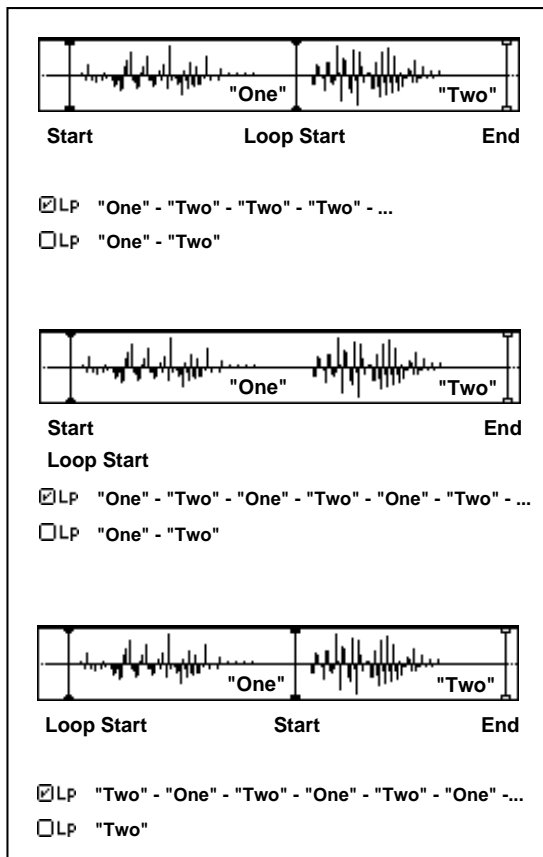
[Off, On]

Specify whether the sample will be looped.

On (Checked): The sample will play back repeatedly from “LpS (Loop Start)” to “E (End)”; i.e., “S (Start)” → “E (End)” → “LpS (Loop Start)” → “E (End)” → “LpS (Loop Start)” → ... (⇒3.1-2b)

Off (Unchecked): The sample will playback once (“one-shot”) from “S (Start)” → “E (End).”

This will be checked automatically if “Auto Loop” (1.1-3c) was checked when you sampled.



Tune (Loop Tune) [-99...+99]

When looping is on ("Lp" is checked), you can adjust the playback pitch of the loop from "S (Start)" to "E (End)" over a range of ± 99 cents. When you loop data that was sampled from a musical instrument etc., the pitch of the looped portion may sometimes be incorrect. Use this parameter to compensate for such cases.

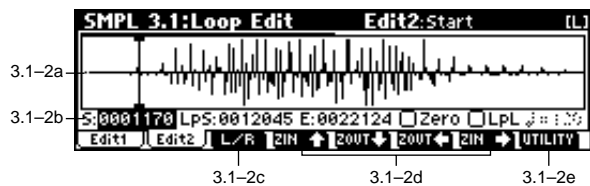
Rev (Reverse) [Off, On]

On (Checked): The sample will be played backward, from "E (End)" (end address) to "LpS (Loop Start)" (loop start address).

3.1-1c: UTILITY

☞ "Delete SMPL," "Copy SMPL," "Move SMPL," "Rename SMPL," "SMPL To Stereo," "Delete MS," "Copy MS," "Move MS," "Rename MS," "MS To Stereo/MS To Mono," "Conv. To Prog," "Keyboard Disp." (1.1-3g)

3.1-2: Edit2



3.1-2a: Sample waveform display

Sample waveform display

The waveform of the "SMPL (Sample)" is displayed here (☞ 2.1-2a).

3.1-2b: Sample Address, Zero, LpL, J

S (Start) [0000000...]

Specifies the starting address for sample playback. This value is in units of a sample address.

LpS (Loop Start) [0000000...]

Specifies the loop start address for sample playback. This is valid when Loop is On. This value is in units of a sample address, (☞ "S.Ofs" PROG 2.1-2b).

E (End) [0000000...]

Specifies the ending address for sample playback. This value is in units of a sample address.

⚠ Loop Start Address and End Address must be located at least eight addresses apart. This setting will be applied automatically when you set the addresses.

Zero (Use Zero) [Off, On]

On (Checked): "S (Start)," "E (End)," and "LpS (Loop Start)" parameters can be set only at "zero-cross" addresses where the waveform level crosses ± 0 (the center line of the waveform display). (☞ 2.1-2b)

Off (Unchecked): "S," "E," and "LpS" can be set in steps of 1. This is the normal setting.

LpL (Loop Lock) [Off, On]


This fixes the length of the loop being edited.

On (Checked): When the "LpS (Loop Start)" or "End" address is edited, the "E (End)" or "LpS" will be automatically adjusted so that the distance between "LpS" and "E (End)" (i.e., the loop length) does not change. This is convenient when you are creating a rhythm loop to match a specific tempo.

J (Grid Tempo) [040...480(BPM)]

This displays vertical dotted lines in the "sample waveform display" to indicate the resolution and tempo. Use this when you wish to cut or edit the sample data based on a BPM value or beat.

The grid will be displayed if you **check** and execute the "Grid" (2.1-2e/3.1-2e) utility command. The spacing of the grid is determined by the "Resolution" setting of the "Grid" page menu command, relative to the playback pitch of the base key (the key displayed in gray in "Keyboard & Index" 1.1-1a) at the tempo value you specify here. The grid will begin at the "S (Start)" address (when looping is off) or at the "LpS (Loop Start)" address (when looping is on). This parameter can also be set from the 2.1: Sample Edit, Edit2 page.

 This is not related to the setting of the REALTIME CONTROLS C-mode [TEMPO] knob.

■ 3.1-2c: L/R

This is valid only if a stereo sample is selected. It switches the display between the L channel and R channel of a stereo sample. (⇨2.1-2c)

■ 3.1-2d: ZOOM

These buttons let you zoom-in and zoom-out the “sample waveform display” in the horizontal axis (sample addresses) or vertical axis (sample level). (⇨2.1-2d)

■ 3.1-2e: UTILITY

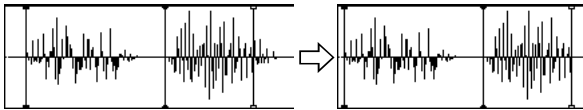


For details on selecting utility commands, refer to “2.1-2e: UTILITY.”

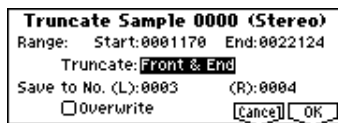
⇨ “Grid” (2.1-2e)

Truncate

This command deletes unwanted data that lies outside of the “S (Start),” “LpS (Loop Start),” and “E (End)” (3.1-2d). After setting the start address, loop start address, and end address of the sample, use this command to delete unwanted sample data.



- ① Use “SMPL” (3.1-1b) to select the sample that you wish to edit, and use “S (Start)” or “LpS (Loop Start)” and “E (End)” (3.1-2b) to specify the editing range. You can press the [AUDITION] key to hear the portion that will be left by the “Truncate” command.
- ② In the Edit2 page “UTILITY,” choose “Truncate” to open the following dialog box.



- ③ Range “Start” and “End” will show the range of data that will be edited.
- ④ Use “Truncate” to select the portion that will be deleted.
 - Front & End:** The sample data that lies before the “Start” and after the “End” will be deleted.
 - Front:** The sample data that lies before the “Start” (start address) will be deleted.
 - End:** The sample data that lies after the “End” (end address) will be deleted.
- ⑤ In “Save to No.,” specify the save destination sample number. By default, an unused sample number will be selected.
 - [Stereo]** For a stereo sample, “Save to No.(L), (R)” will be displayed. Specify the save destination sample number for the L channel and R channel respectively.

- ⑥ If you wish to delete the original sample data and overwrite it with the edited sample data, **check** “Overwrite”. Normally, you will leave “Save to No.” at its default setting, and execute **without checking** “Overwrite.” (⇨p.85 “*”: About “Overwrite”)
- ⑦ To execute the Truncate command, press the [F8] (“OK”) key. To cancel, press the [F7] (“Cancel”) key.

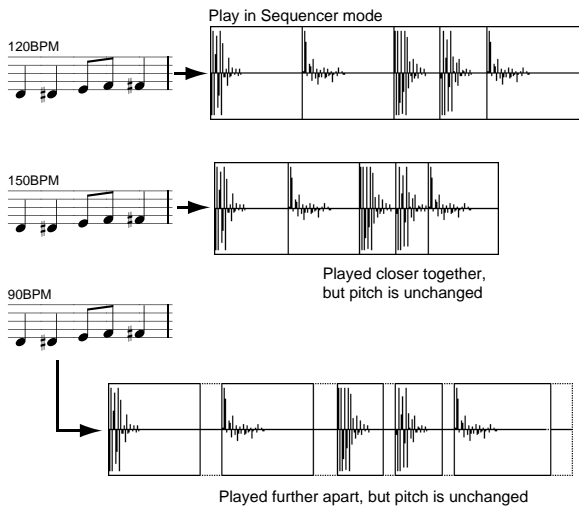
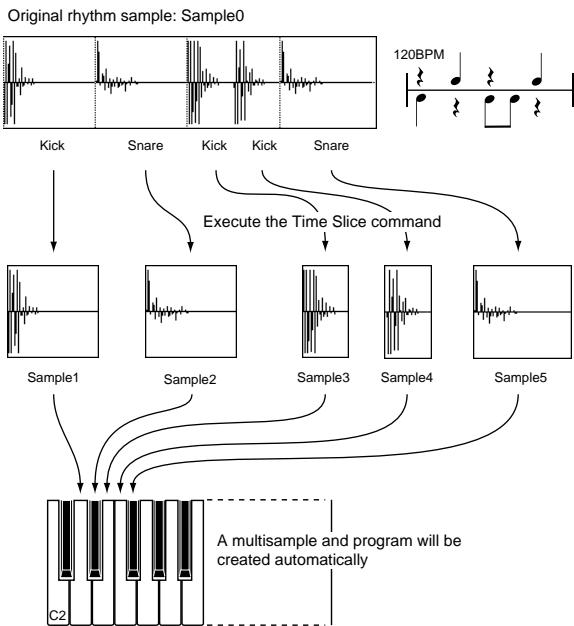
Time Slice

Time Slice detects the attacks (e.g., kick and snare) within a rhythm loop sample (a sample that loops a drum pattern, etc.), and automatically divides the sample into individual percussion instrument notes. The divided percussion instrument notes will be created as individual samples, and automatically assigned as a multisample and program. Song performance data corresponding to the divided samples will also be created, so that in Multi mode you can adjust the tempo of the song to change only the tempo of the rhythm loop without affecting the pitch. Pattern data and RPPR assignments for the sliced samples can also be created automatically. The performance data that is created will use notes D2 and above, corresponding to the newly created samples of individual percussion instruments. By means of this function in Multi mode RPPR, multiple rhythm loop samples of differing tempo can be matched to the desired tempo without changing their pitch (⇨BG p.74, 75). You can also use the keyboard of a connected MIDI device to start/stop multiple rhythm loop samples, or use the REALTIME CONTROLS C-mode [TEMPO] knob to modify the tempo in realtime.

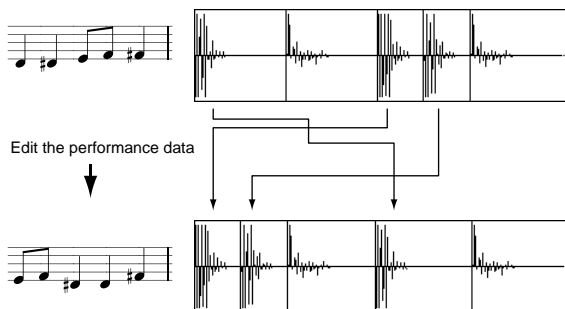
In addition to changing only the tempo of the rhythm loop without affecting the pitch, this makes it possible for you to exchange note numbers, to change the timing, or to edit the sequence data to freely recreate the original rhythm loop.

The pattern data you create can also be written as SMF data, allowing you to send note data from an external MIDI sequencer etc. to the TRITON-Rack to play it. This command can also be executed on stereo samples.

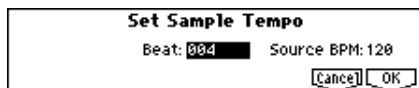
note As an alternative to Utility “Time Slice,” the Utility “Time Stretch” (3.1-2e) command can also be used to change the tempo without affecting the pitch of a rhythm loop sample etc. “Time Stretch” is suitable when you do not need to divide the sample or to create multi playback data for the divided sample.



* You can also use the Time Stretch command to control the compression of each sample to optimize the "spacing" to match the tempo. Ⓣ



- ① Use "SMPL" (3.1-1b) to select the sample that you wish to Time Slice.
- ② From the Edit2 page "UTILITY," choose "Time Slice" to open the following dialog box.



- ③ Specifies the number of quarter-note beats and tempo of the currently selected sample. If you know the BPM of the original waveform, set "Source BPM." If you do not know the BPM, specify "Beat" and the BPM will be calculated automatically. The setting you make here will be used as the reference value when detecting the attack, when performing Time Stretch in step ③b, and when saving the pattern data in step ⑩.

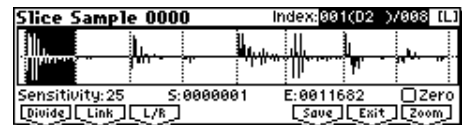
Beat: Specify the number of quarter-note beats. When you specify "Beat," the "Source BPM" will indicate the playback BPM at the original key. This BPM value will automatically be calculated from the start address to the end address (if loop is off) or from the loop start address to the end address (if loop is on) of the selected sample. If you know the BPM and it is different than the displayed value, change "Source BPM" to the correct value. For example in the case of a 120 BPM sample of one measure of 4/4 time, set "Beat" to 4. The "Source BPM" will be calculated automatically. If the "Source BPM" is not set to 120, due to inaccuracies in the start address (or loop start address) and end address, change the "Source BPM" to 120.

Source BPM: Specifies the tempo at the original key of the source waveform.

- ④ To execute Time Slice, press the [F8] ("OK") key. To cancel without executing, press the [F7] ("Cancel") key. When you press the [F8] ("OK") key, the attacks will be detected, the sample will automatically be sliced, and a dialog box will appear.

[Stereo] In the case of a stereo sample in which L and R have different lengths, silent data will automatically be added to the end of the shorter sample so that the two samples will be the same length.

- ⑤ If you want to reset "Beat" and "Source BPM" after pressing the [F8] ("OK") key, you can do so in step ③a.



- ⑤ Listen to the samples that were divided by detecting their attacks. The sample before slicing is assigned to the C2 note of the keyboard, and the sliced samples are assigned to notes D2 and above. When you change the "Index," the corresponding display will be highlighted, allowing you to view the sliced waveforms.

note To select an index, hold down the [ENTER] key and play a note on the keyboard of a connected MIDI instrument. The index that includes the note you played will be selected.

note To hear the sliced sounds, you can either press the corresponding note on the keyboard of a connected MIDI instrument, or change the index to select the desired sample and then press the [AUDITION] key. When you press the [AUDITION] key, the sample in the range between the specified "S (Start)" and "E (End)" will be played at the original key.

Index

[Source(C2), xxx: 001...090(zzz: D2...G9)/yyy: 001...090]: Select the sample index.

If this is set to **Source**, the original waveform before time slicing will be selected.

By selecting **xxx(zzz)/yyy** you can specify individual samples that were sliced. **xxx** indicates the selected sample, and **yyy** indicates the total number of samples that were sliced. **zzz** indicates the number of notes that are

assigned to the selected index. A maximum of 90 samples can be assigned to the keyboard. If more than 90 samples were sliced, this will display 90.

Sample waveform display: This displays a dotted vertical line at the locations where the sample was sliced, and a solid vertical line at the “S (Start),” “LpS (Loop Start),” and “E (End)” locations. When “Index” is xxx(zzz)/yyy, the sample of the selected index will be highlighted.

[Stereo] In the case of a stereo sample, you can press the [F3] (“L/R”) key to switch the display between the L channel and R channel of the sample data. (⇨2.1-2c)

ZOOM: When you press the [F8] (“Zoom”) button the zoom buttons will appear, allowing you to zoom-in or zoom-out vertically or horizontally on the sample waveform display (⇨2.1-2d). Press the [F8] (“Zoom”) key once again to return to the previous display.

- ⑥ If the slice locations are not appropriate, you can adjust “Sensitivity” to change the sensitivity at which the attacks are detected, in order to change the slice locations.

Sensitivity [00...30]: Adjusts the sensitivity at which the attacks are detected. By increasing this value, you can detect attacks at even lower levels, to create more finite slices.

- 🔍 The “level” in this case does not necessarily correspond to the “waveform level.”

Depending on the sample, the desired slicing may not occur even if you increase the “Sensitivity.” If the attack portion of the following sample has overlapped into the end of the sample, or if the sample contains two sounds, make adjustments in step ⑦.

- ⑦ Make adjustments where the automatic attack detection did not occur correctly. Change “Index” to select the sample that you wish to adjust. Make adjustments by changing “S (Start)” and “E (End),” and by executing “Divide” or “Link” to adjust the slice location.

S (Start): Specifies the start address for the sample of the currently selected “Index.” At the same time, the end address of the sample for the preceding “Index” will also be adjusted.

E (End): Specifies the end address for the sample of the currently selected “Index.” At the same time, the start address of the sample for the next “Index” will also be adjusted.

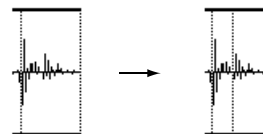
- 🔍 If “Index” is set to **Source**, the address of the original waveform will be modified. If you change the start address, the loop start address will also be changed at the same time.

note When adjusting the “S (Start)” and “E (End)” addresses of the divided samples, use “ZOOM” to increase the magnification (×1 or more) so that the sample waveform is displayed accurately when you make adjustments. (⇨2.1-2d)

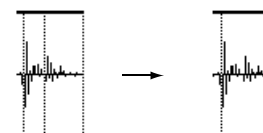
Zero (Use Zero): (⇨2.1-2b)

note If you wish to adjust the “S (Start)” or “E (End)” address of a divided sample, it is best to first check “Use Zero.” In general, using zero-cross points to specify sample addresses will make it less likely that clicks or pops will occur, particularly at the end address.

Divide: This splits the sample of the currently selected “Index” into two. Use this when you wish to add another location to slice the sample. Modify “E (End)” or “S (Start)” to adjust the divided sample.



Link: This joins the sample of the currently selected “Index” to the sample of the next “Index.” Use this when you wish to merge together two sliced locations.



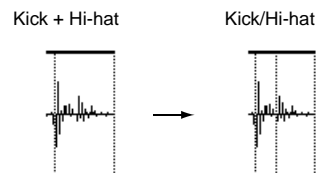
- 🔍 Be aware that if you change the “Sensitivity” after adjusting the slice location, the attacks will be re-detected and the sample will automatically be sliced again.

note When you use Time Slice on a rhythm loop sample, the quality of the playback pattern in Multi mode will depend largely on the “cutoff” of each percussion instrument sound that was sliced.

What kind of slices will produce the best result?

A. Divide the separate percussion instrument notes as finely as possible

For example in the case of a sample where the decay of the kick is overlapped by the hi-hat, the attack sound of the kick and the attack sound of the hi-hat should be sliced to create two samples. If these sounds are left as one sample (containing both kick and hi-hat), their rhythm may become incorrect when the sample is played at a different tempo.



If the sample is not sliced appropriately even after you adjust the “Sensitivity,” use “Divide” to divide the sample into halves, and adjust “E (End)” and “S (Start)” as needed.

B. Make sure that each divided sample has a clear attack

The attack portion is vital for percussion sounds. Slice the sample at a point where the attack will be sounded crisply.

C. Avoid the noise that can occur toward the end of each divided sample

For example as shown in the above right illustration, noise can be present at the end of the kick sample. Adjust the end address of the kick sample so that the noise is not obtrusive.

In this case, adjusting the end address will also affect the start address of the hi-hat sample. While listening to the two samples, make adjustments so that the noise at the end of the kick sample is as inconspicuous as possible, and also that the hi-hat attack is heard cleanly.

Pay attention to these points as you adjust “Sensitivity.” If necessary, use the methods described above to edit each sample.

The noise occurring at the end of the sample in “C.” will be automatically reduced when you execute steps ⑧ and following. You should adjust “Sensitivity” while paying particular attention to sections “A” and “B,” and then execute step ⑨. If the noise is still obtrusive, then you can adjust the end address.

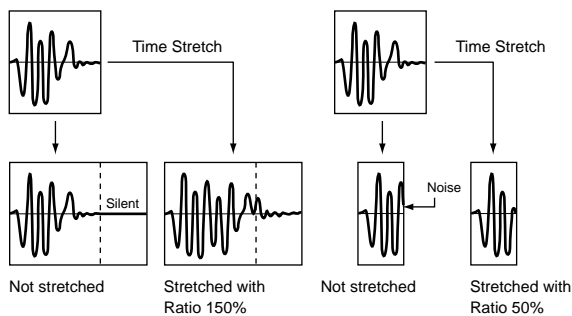
- ⑧ Save the sliced samples to the multisample to which they have been assigned. When you press the [F6] (“Save”) key, the “Save Smpl/MS” dialog box will appear.



- ⑨ Use “Stretch” to adjust the length of the sliced samples. When you press the [F5] (“Strch”) key, Time Stretch (a function that expands or shrinks the length of a sample without affecting its pitch) will be applied to the sliced sample.

If you wish to save the sliced sample as it is, proceed to step ⑩ without executing Time Stretch.

When a sliced sample is played in Multi mode, or when saved pattern data is played from an external MIDI sequencer, slowing down the playback tempo may produce an unnatural impression, such as the silent portion between samples becoming more noticeable, or noise being heard. The length of the samples will automatically be optimized according to the “Ratio” and “New BPM” settings.



note If you execute Time Stretch at 100%, the sample length will not change but the end of the sample will be faded out, reducing the noise.

- a) Set “Beat” and “Src BPM (Source BPM).” The method is the same as in step ③. If you wish to change the value you set in step ③, you can change it here.
- b) Specify the length of the sample that will be created by Time Stretch.

- **To specify the length as a ratio**
Set “Ratio.” The available range is 50.00–200.00%. If you specify 50.00%, the sample length will be halved. (The tempo will double.) If you specify 200.00%, the sample length will double. (The tempo will be halved.)
- **To match an existing BPM tempo value**
Use “New BPM” to specify the BPM value of the sample you wish to create. The “Ratio” will automatically be calculated from the “Src BPM (Source BPM)” and the “New BPM” values.

⚠ It is not possible to make settings that would cause “Src BPM (Source BPM)” or “New BPM” to exceed the range of 40–480.
It is not possible to make settings that would cause “Ratio” to exceed the range of 50.00–200.00.

Press the [F5] (“Strch”) key to execute Time Stretch. When you execute, the time-stretched samples will automatically be assigned to keys D2 and above, so that you can audition them by playing the keyboard of a connected MIDI device or by changing “Index” and pressing the [AUDITION] key. You can also keep trying various settings for “Ratio” and “New BPM.”

Index: Select s the index of the sample that will be sounded by the [AUDITION] key. After Time Stretch is executed, the time-stretched samples will sound. However, it will not be possible to select Source (C2).

note Audition the time-stretched samples. The sounds that you hear are the divided samples that will be played in Multi mode etc. If there is obtrusive noise or if the attack is not sound cleanly, return to step ⑦ and adjust the “S (Start)” and “E (End)” addresses, etc.

- ⑩ When you execute Save, use “With” to specify the data that will be created simultaneously.

Program: If this check box is checked, the multisample will be converted to a program when you save it. Specify the destination program number.

[Stereo] In the case of a stereo sample, the program pan will automatically be set. This allows the stereo position in Sampling mode to be reproduced by the program.

Seq.Event: If this check box is checked, pattern data to play the sliced samples will be created when you save. Set “Multi,” “Pattern,” and “Meter” to specify the multi number, pattern number, and time signature that will be created.

When you create pattern data, Multi mode “Tempo” (MULTI 1.1–1a) will be set to the value specified by “New BPM” if Time Stretch is executed, or to the value specified by “Src BPM (Source BPM)” if Time Stretch is not executed.

RPPR: If you check the check box, pattern data to play the sliced samples will be assigned to RPPR when you save. Use “Key” and “Track” to specify the key and track that will be created.

You can hear the results immediately by selecting the specified multi and pattern in Multi mode and playing it. If you have specified RPPR, the pattern will play when you press the specified note on a connected MIDI instrument.

Normally you will check both “Program” and “Seq.Event”

note In some cases, the sample End address setting etc. may increase the number of measures in the pattern, so that it no longer loops precisely. In such cases, re-specify the “Length” in Multi mode “Pattern Parameter” (MULTI 5.1–1e: UTILITY).

- ⑪ If you wish to save, press the [F8] (“Save”) key. If you decide not to save, press the [F7] (“Cancel”) key. When you save, the samples and multisample will automatically be saved to vacant samples and multisamples.
[Stereo] In the case of stereo samples, the samples and multisample will be saved in stereo.
- ⑫ By repeating steps ⑥–⑪ you can create as many samples and multisamples as desired.
- ⑬ Press the [F7] (“Exit”) key to exit the Time Slice command.

⚠ Be aware that the created samples and multisample will be lost if you exit Time Slice without saving the samples or multisample (“Save” in the Save dialog box).

Note Before executing Time Slice on a long sample, you should first divide the sample into measures. In some cases, it may not be possible to assign the sample to the note number or create pattern data.

Time Slices requires vacant samples, multisamples, and relative parameters in order to execute. Be sure that there is sufficient free area before you execute. If there is insufficient free area, an error will occur.

Note If you open the Time Slice dialog box on the same sample, it will be sliced in the same way as previously. These slice locations will also be used if you execute **Slice** in “Time Stretch” (⇨3.1-2e), so that you can execute Time Stretch without having to make the settings again.

If you wish to detect the attacks again or to re-do the operation, change the “Sensitivity” after you open the dialog box.

Time Stretch

Time Stretch is a function that modifies the tempo by lengthening or shortening a sample without changing its pitch. This is a convenient way to modify the tempo of a drum rhythm loop or a melodic sample such as voice/string/wind so that it matches the tempo of another sample or pattern, or the tempo of an external MIDI sequencer. The TRITON-Rack provides two ways in which Time Stretch can be executed. This command also supports stereo samples.

Sustaining

This type is suitable for sustained sounds such as vocal or instruments. Using it to change the tempo of phrases such as guitar or piano will also produce good results.

Slice

This type is suitable for decay-type instruments such as drums. Using it to change the tempo of drum or percussion loops will produce good results with minimal effect on the attack.

Note There is a way to change the pitch as well when changing the tempo of a rhythm loop sample (“Pitch BPM Adj.” SMPL 4.1-3b, “Detune BPM Adj.” COMBI 3.1-3b, MULTI 3.1-5b, -6b). You can create unique effects by raising or lowering the pitch of drums etc.

To use Time Stretch (Sustaining)

- Use “SMPL” (3.1-1b) to select the sample that you wish to time stretch as **Sustaining**.
- From the Edit2 page “UTILITY,” choose “Time Stretch” to open the following dialog box.



- Select “**Sustaining**” as the time stretch method. Press the [F8] (“OK”) key to execute Time Stretch, or press the [F7] (“Cancel”) key to cancel without executing. **Stereo** If the L and R of a stereo sample are different in length, blank data will automatically be added to the end of the shorter sample so that it matches the longer side.
- A dialog box for executing Time Stretch will appear.



- Set “**Quality**” to specify the desired audio quality of the sample produce by Time Stretch. The range is 0-7. Although it will depend on the sample, higher settings will produce better results. However, be aware that higher settings will also require a longer time to execute. Since you can try this as many times as you like, you should normally start with about 4, and raise or lower the setting gradually.
- Set the proportional length of the sample that will be created by Time Stretch.

• To specify the length as a ratio

Set “**Ratio**.” The available range is 50.00%–200.00%. If you specify 50.00%, the sample length will be halved. (The tempo will double.) If you specify 200.00%, the sample length will double. (The tempo will be halved.)

• To match an existing BPM tempo value

Set “**Beat**” as the number of quarter-note beats. When you change “Beat,” the “Source BPM” value will be changed automatically.

“**Source BPM**” will indicate the playback BPM value at the original key. This BPM value is automatically calculated according to the length from the start address to the end address (if loop is off) or from the loop start address to the end address (if loop is on). If you already know the BPM value and the calculated value is incorrect, change it to the correct value.

Use “**New BPM**” to specify the BPM value of the sample you wish to create. “Ratio” will automatically be calculated from the “Source BPM” and “New BPM” values.

For example if you have a one-measure 120 BPM sample in 4/4 time, and would like to change it to 150 BPM, you would set “Beat” to 4. The “Source BPM” will be calculated automatically. If the “Source BPM” is not calculated as 120 due to inaccuracies in the start address (or loop start address) or end address, adjust “Source BPM” to the correct value of 120.

Next, set “New BPM” to 150. The “Ratio” will be calculated automatically.

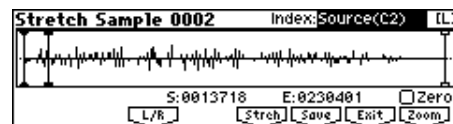
Note It is not possible to make settings that would cause “Source BPM” or “New BPM” to exceed the range of 40–480.

It is not possible to make settings that would cause “Ratio” to exceed the range of 50.00–200.00.

Note Depending on the sample, the length may not be exactly as you specify, due to limitations in processing accuracy.

- To execute the Time Stretch operation, press the [F8] (“OK”) key. To cancel without executing, press the [F7] (“Cancel”) key.

When you press the [F8] (“OK”) key, the Time Stretch dialog box will appear.



- Audition the sample that was created by Time Stretch. The sample before being time-stretched is assigned to the note number C2 of the keyboard, and the sample that was time-stretched is assigned to note number C#2. You can change the “Index” to check the waveform.

Index

[Source(C2), Result(C#2)]:

Select the index for the sample whose waveform you wish to display.

If you select **Source**, the original waveform before time-stretching will be selected.

If you select **Result**, the time-stretched sample will be selected.

note To select an index, hold down the [ENTER] key and play a note on the keyboard of a connected MIDI instrument. The index that includes the note you played will be selected.

Sample waveform display: This shows the waveform of the selected sample. As in 3-1: Loop Edit, Edit2 page, “S (Start),” “LpS (Loop Start),” and “E (End)” addresses are shown by a solid line.

[Stereo] In the case of a stereo sample, you can press the [F3] (“L/R”) key to switch the display between the L channel and R channel of the sample data. (⇨2.1-2c)

S (Start):

E (End):

Specifies the start address and end address of the sample for the currently selected index.

When you execute Time Stretch, the addresses will be specified automatically, but the playback may be slightly skewed due to inaccuracies in the end address, etc. If this occurs, you can correct the addresses manually.

When you change the start address, the loop start address will also be changed simultaneously. If you wish to independently adjust the start address and loop start address, save the data in step ⑩, and then make settings in the 3.1: Loop Edit Edit2 page.

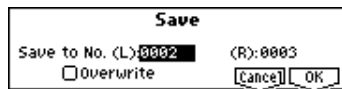
note To audition the sound in the specified range, play the keyboard of a connected MIDI instrument or press the [AUDITION] key. When you press the [AUDITION] key, the sample in the range specified by “S (Start)” and “E (End)” will sound at the original key.

Zero (Use Zero): (⇨2.1-2b)

L/R: (⇨2.1-2c)

ZOOM: When you press the [F8] (“Zoom”) button the zoom buttons will appear, allowing you to zoom-in or zoom-out vertically or horizontally on the sample waveform display (⇨2.1-2d). Press the [F8] (“Zoom”) key once again to return to the previous display.

- ⑨ If you press the [F5] (“Strch”) key, the Time Stretch dialog box will appear, and you can re-do the time stretch once again. Execute Time Stretch as described in step ⑥.
- ⑩ Save the sample that you created. Press the [F6] (“Save”) key, and the Save dialog box will appear.



In “Save to No.,” specify the save destination sample number. By default, an unused sample number will be selected. If “Overwrite” is checked, this cannot be selected.

If you wish to delete the original sample data and overwrite it with the edited sample data, **check** “Overwrite”. Normally, you will leave “Save to No.” at its default setting, and execute **without checking** “Overwrite.” (⇨p.85 “*”: About “Overwrite”)

[Stereo] In the case of a stereo sample, the dialog box will indicate “To Sample No. (L)” and “To Sample No. (R).” Specify the save destination sample for the L channel and R channel.

To execute the Save operation, press the [F8] (“OK”) key. To cancel without saving press the [F7] (“Cancel”) key.

- ⑪ By repeating steps ⑨–⑩ you can create more samples as desired.

- ⑫ Press the [F7] (“Exit”) key to exit the Time Stretch operation.

The index will specify the last-saved sample number.

note If you wish to use the saved sample in Program mode or Multi mode, you must either execute “Conv. To Prog” (⇨1.1-3g), or use Program mode “Multisample Select” (⇨PROG 2.1-2b, 2.1-3) to select the multisample and create a program.

Be aware that the created sample will be lost if you exit Time Stretch without saving the sample in the Save dialog box.

Time Stretch requires vacant samples, multisamples, and relative parameters in order to execute. Before you execute, make sure that there is sufficient free space. If there is not, an error will occur.

To use Time Stretch (Slice)

- ① Use “SMPL” (3.1-1b) to select the sample that you wish to time stretch as **Slice**.
- ② From the Edit2 page “UTILITY,” choose “Time Stretch” to open the following dialog box.



- ③ Select “Slice” as the time stretch method. Press the [F8] (“OK”) key to execute Time Stretch, or press the [F7] (“Cancel”) key to cancel without executing.

[Stereo] If the L and R of a stereo sample are different in length, blank data will automatically be added to the end of the shorter sample so that it matches the longer side.

- ④ A dialog box for executing Time Stretch will appear.



- ⑤ Specify the number of quarter note beats and tempo of the currently selected sample. If you already know the BPM value, set “Source BPM.” If you do not know the BPM, setting “Beat” will cause the BPM to be calculated automatically. The settings here are also used as the reference values when detecting the attacks at which the sample is divided.

Beat: Specify the number of quarter note beats. When you change “Beat,” the “Source BPM” will indicate the BPM value for playback at the original key. This BPM value is automatically calculated according to the length from the start address to the end address (if loop is off) or from the loop start address to the end address (if loop is on). If you already know the BPM value and the calculated value is incorrect, change “Source BPM” to the correct value.


For example if you have a one-measure 120 BPM sample in 4/4 time, you would set “Beat” to 4. The “Source BPM” will be calculated automatically. If the “Source BPM” is not calculated as 120 due to inaccuracies in the start address (or loop start address) or end address, adjust “Source BPM” to the correct value of 120.

Source BPM: Specify the tempo at the original key of the original waveform.

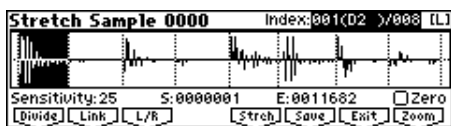
“Source BPM” cannot be set or displayed outside the range of 40–480.

- ⑥ Set the proportional length of the sample that will be created by Time Stretch.

- **To specify the length as a ratio**
Set “**Ratio**.” The available range is **50.00%–200.00%**. If you specify **50.00%**, the sample length will be halved. (The tempo will double.) If you specify **200.00%**, the sample length will double. (The tempo will be halved.) The tempo of the sample created by execution will be calculated automatically from the “**Ratio**” and “**Source BPM**,” and displayed in “**New BPM**.”
- **To match a desired BPM tempo value**
Set “**New BPM**” to the desired BPM value of the sample that will be created. “**Ratio**” will automatically be calculated from the “**Source BPM**” and “**New BPM**” values.

 It is not possible to set or display “**New BPM**” outside the range of 40–480. It is not possible to set or display “**Ratio**” outside the range of 50.00–200.00.

- ⑦ To execute Time Stretch, press the [F8] (“OK”) key. To cancel without executing, press the [F7] (“Cancel”) key. When you press the [F8] (“OK”) key, the attacks will be detected and the sample will be divided automatically, and time stretch will be performed. The Time Stretch dialog box will appear.




- ⑧ Audition the results that were created by Time Stretch. The sample before being time-stretched is assigned to the C2 note of the keyboard. The time-stretched sample is assigned to C#2. Sliced (divided) samples will be assigned consecutively upward, starting from D2 on the keyboard.

Index [Source(C2), Result(C#2), xxx: 001...090(zzz: D2...G9)/yyy: 001...090]:

Select s the index for the sample whose waveform you wish to display. If you select **Source**, the original waveform before time-stretching will be selected. If you select **Result**, the time-stretched sample will be selected. If you set this to **xxx(zzz)/yyy**, an individually sliced sample will be selected. **xxx** is the selected index, and **yyy** indicates the total number of sliced samples. **zzz** indicates the number of notes that are assigned to the selected index. A maximum of 90 samples can be assigned to the keyboard. If the sample was sliced into more than 90 samples, this will be displayed as 90.

note To select an index, hold down the [ENTER] key and play a note on the keyboard of a connected MIDI instrument. The index that includes the note you played will be selected.

 When you execute Time Stretch, the addresses will be specified automatically. However, playback may be slightly offset due to inaccuracies in the end address, etc. If this occurs, set “**Index**” to **Result**, and use “**S (Start)**” and “**E (End)**” to re-specify the addresses.

Sample waveform display: This displays the waveform of the selected sample. If the “**Index**” is other than **Result**, the locations at which the sample is sliced will be indicated by a dotted line (vertical). If “**Index**” is set to **xxx(zzz)/yyy**, the sample of the selected index will be highlighted. If “**Index**” is other than **xxx(zzz)/yyy**, the Start, Loop Start, and End addresses will be indicated by solid lines (vertical).

Stereo In the case of a stereo sample, you can press the [F3] (“L/R”) key to switch the display between the L channel and R channel of the sample data. (≒2.1–2c)

ZOOM: When you press the [F8] (“Zoom”) button the zoom buttons will appear, allowing you to zoom-in or zoom-out vertically or horizontally on the sample waveform display (≒2.1–2d). Press the [F8] (“Zoom”) key once again to return to the previous display.

- ⑨ If the slice locations are not appropriate, use “**Sensitivity**” to modify the sensitivity at which the attacks are detected, thus changing the slice locations.

Sensitivity [00...30]:

S (Start):

E (End):

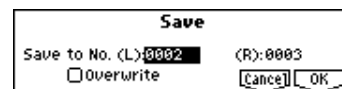
Zero (Use Zero):

Divide:


Link:

Refer to “Time Slice” steps ⑥ and ⑦.

- ⑩ When you press the [F5] (“Strch”) key, the Time Stretch dialog box will appear, and you can re-do the time stretch. Execute Time Stretch using the same procedure as in step ④–⑦. If the sample slice locations are not appropriate, this will also affect the result of Time Stretch. For details on setting the slice locations, refer to “Time Slice,” steps ⑥ and ⑦.
- ⑪ Save the sample you created. Press the [F6] (“Save”) key, and the Save dialog box will appear.



In “**Save To No.**,” specify the save destination sample number. By default, an unused sample number will be selected. If “**Overwrite**” is checked, this cannot be set. If you wish to delete the original sample data and overwrite it with the edited sample data, **check** “**Overwrite**”. Normally, you will leave “**Save to No.**” at its default setting, and execute **without checking** “**Overwrite**.” (≒p.85 “*”: About “**Overwrite**”)

 If you execute this command with “**Overwrite**” **checked**, the original sample data will be deleted, and overwritten by the edited sample data. Thus, in the Time Stretch dialog box that appears after execution, the edited sample data will automatically have its attacks detected and sliced, and displayed in “**Index Source**.”

Stereo In the case of a stereo sample, the display will show “**To Sample No. (L)**” and “**To Sample No. (R)**.” Specify the L channel and R channel save destination sample numbers respectively.

To execute the Save, press the [F8] (“OK”) key. To cancel without executing, press the [F7] (“Cancel”) key.

- ⑫ By repeating steps ⑩–⑪ you can create more samples as desired.
- ⑬ Press the [F7] (“Exit”) key to end the Time Stretch operation. The last-saved sample number will be set for the index.

note If you wish to use the saved sample in Program mode or Multi mode, you must either execute “**Conv. To Prog**” (≒1.1–3g), or use Program mode “**Multisample Select**” (≒PROG 2.1–2b, 2.1–3) to select the multisample and create a program.

⚠ Be aware that the created sample will be lost if you exit Time Stretch without saving the sample in the Save dialog box.

⚠ Before executing Time Stretch on a long sample, you should first divide the sample into measures. In some cases, it may not be possible to assign the sample to the note number or edit the **slice** locations.

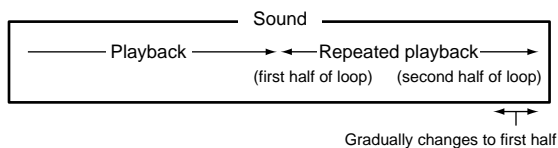
Time Stretch requires vacant samples, multisamples, and relative parameters in order to execute. Before you execute, make sure that there is sufficient free space. If there is not, an error will occur.

note If you open the time slice (Slice) dialog box on the same sample, it will be sliced in the same way as previously. These slice locations will also be used if you execute “Time Slice” (⇒3.1-2e), so that you can execute time stretch without having to make the settings again. If you wish to detect the attacks again or to re-do the operation, change the “Sensitivity” after you open the dialog box.

Crossfade Loop

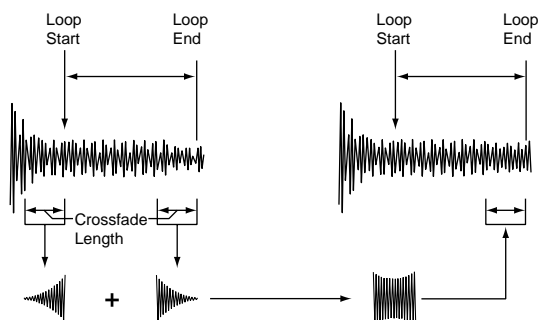
When pitched instrumental samples such as strings or winds are looped to sustain a note, the sound will “jump” or “skip” repeatedly during playback if there is a significant difference between the waveforms at the loop start and loop end locations.

In order to solve such problems, Crossfade Loop causes the sound to change gradually from the end to the beginning of the loop.



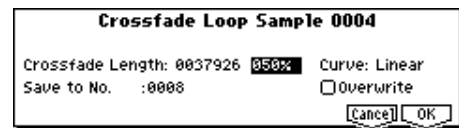
In actuality, the sample data is created as follows. A specific length (the “Crossfade Length”) of the waveform immediately before the beginning of the loop is taken and mixed with the end portion.

At this time, the waveform level of the portion immediately before the end (the length specified by “Crossfade Length”) will gradually decrease, and the waveform level immediately before the beginning of the loop will gradually increase as the two are mixed.



① Use “SMPL” (3.1-1b) to select the sample that you wish to crossfade.

② From the Edit2 page “UTILITY,” choose “Crossfade Loop” to open the following dialog box.



③ In “**Crossfade Length**,” specify the length of the sample that you wish to crossfade. If you set this as %, “Crossfade Length” will be calculated automatically. Specify the proportion of the “Crossfade Length” relative to the length between the loop start and loop end. If you set this to 50%, crossfade will be performed on the second half of the region between loop start and loop end.

⚠ If the length from the beginning of the sample to the loop start is shorter than the length from the loop start to the loop end, “Crossfade Length” can be set only up to the length from the beginning of the sample to the loop start. In this case, a setting of 100% will not be possible.

④ Set “**Curve**” to specify how the volume will change in the crossfaded region.

Linear: The volume will change linearly.

Power: The volume will change non-linearly. Sometimes a setting of Linear will produce the impression that the volume has dropped in the middle of the curve. In such cases, use Power.

⑤ In “**Save To No.**,” specify the save destination sample number. By default, an unused sample number will be selected. If “Overwrite” is checked, this cannot be set. **Stereo** In the case of a stereo sample, the display will indicate “Save to No.(L)” and “Save to No.(R).” Specify the save destination sample numbers for the L channel and R channel respectively.

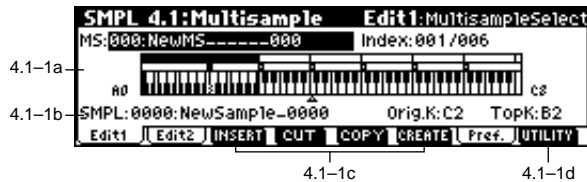
If you wish to delete the original sample data and overwrite it with the edited sample data, **check** “Overwrite”. Normally, you will leave “Save to No.” at its default setting, and execute **without checking** “Overwrite.” (⇒p.85 “*”: About “Overwrite”)

⑥ To execute Crossfade Loop, press the [F8] (“OK”) key. To cancel without executing, press the [F7] (“Cancel”) key.

SMPL 4.1: Multisample

Here you can make settings for multisamples. You can create indexes for a multisample, and then assign a sample to each index. (These basic settings can also be performed in 1.1: Recording page.) In addition, you can delete, copy, or insert an index, and perform detailed editing such as adjusting the level and pitch of the sample for each index.

4.1-1: Edit1



4.1-1a: MS, Index, Keyboard & Index

MS (Multisample Select) [000...999]

Selects the multisample that you wish to edit (⇨1.1-1a).

Index [xxx (001...128)/yyy (001...128)]

Select s the index that you wish to edit (⇨1.1-1a).

To select an index, hold down the [ENTER] key and play a note on the keyboard of a connected MIDI instrument. The index that includes the note you played will be selected. The specified key will be the base key, and will be displayed in gray in “Keyboard & Index.”

Keyboard & Index

(⇨1.1-1a)

4.1-1b: SMPL, Orig.K, TopK

SMPL (Sample Select) [----: ---No Assign---, 0000...3999]

This shows the number and name of the sample that is assigned to the selected index. You can also select a sample here (⇨1.1-1b).

Orig.K (Original Key) [C-1...G9]

Specifies the original key of the sample (⇨1.1-1b).

TopK (Top Key) [C-1...G9]

Specifies the highest key in the zone of the index. The zone is defined by this “Top Key” (⇨1.1-1b).

■ 4.1-1c: INSERT, CUT, COPY, CREATE

INSERT

This creates an index. When you press the [F3] (“INSERT” key, a new index will be created according to the “Pstn (Position)” setting (1.1-3b, 4.1-3a). At this time, the contents of the index that was cut or copied by “CUT” or “COPY” (i.e., the “Zone Range,” “Orig.K Position,” “Level” and “Pitch”) will be assigned at the same time. (The sample will automatically be copied or assigned to a different number.)

⚠ If it is not possible to create a new index when you execute “CREATE” or “INSERT,” a dialog box will appear. If this occurs, refer to “CREATE” (1.1-1d).

⚠ If you have not yet executed “CUT” or “COPY,” such as immediately after power-on, the new index will be created according to the “Create (Create Zone Preference)” settings (1.1-3b, 4.1-3a) “Position,” “Zone Range,” and “Orig.K Position” as same as “CREATE.”

CUT

When you press the [F4] (“CUT”) key, this deletes the selected index. At the same time, the contents of the deleted index are copied to the “INSERT” buffer.

COPY

When you press the [F5] (“COPY”) key, this copies the content of the selected index to the “INSERT” buffer.

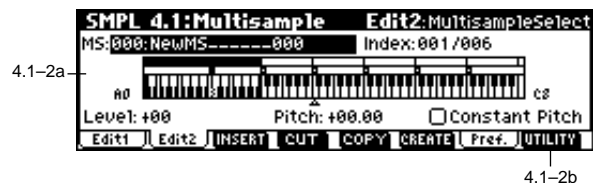
CREATE

This creates an index. When you press the [F6] (“CREATE”) key, a new index will be created according to the settings of “Position,” “Zone Range,” and “Orig.K Position” (1.1-3b, 4.1-3a) (⇨1.1-1d).

■ 4.1-1d: UTILITY

⇨ “Delete SMPL,” “Copy SMPL,” “Move SMPL,” “Rename SMPL,” “SMPL To Stereo,” “Delete MS,” “Copy MS,” “Move MS,” “Rename MS,” “MS To Stereo/MS To Mono,” “Conv. To Prog,” “Keyboard Disp.” (1.1-3g), “Pitch BPM Adj.” (4.1-3b)

4.1-2: Edit2



4.1-2a: Level, Pitch, Constant Pitch

Level [-99...+99]

Adjusts the playback level of the sample. Use this when you need to adjust the level balance between samples within a multisample.

0: Unity level

-: The level will be lowered. At a setting of -99 there will be no sound.

+: The level will be raised.

⚠ Since in Sampling mode the playback unity level will normally be the maximum level, adjustments in the + direction will have no effect. If **Volume (CC#07)** or **Expression (CC#11)** has been assigned to as the B-mode function of a REALTIME CONTROLS knob [1]-[4] and these controllers have been operated, or if these MIDI messages have been received to lower the playback unity level, then adjustments in the + direction will be valid (PROG 2.1-2e Sample Parameter: Level).

Pitch [-64.00...+63.00]

Adjusts the playback pitch of the sample in one-cent steps.

0: The sample will sound at the original pitch when the original key is played.

-: The pitch will be lowered. At a setting of -12.00 the pitch will be one octave lower.

+: The pitch will be raised. At a setting of +12.00 the pitch will be one octave higher.

You can also use "Pitch" to make fine adjustments in the length of a rhythm loop. For example with a setting of +12.00, the playback speed will be doubled, and the loop playback time will be 1/2.

(⇨PROG 2.1-2e Sample Parameter: Pitch)

note The "Pitch BPM Adj." lets you set the playback time in terms of a BPM value (⇨4.1-3b).

Constant Pitch [Off, On]

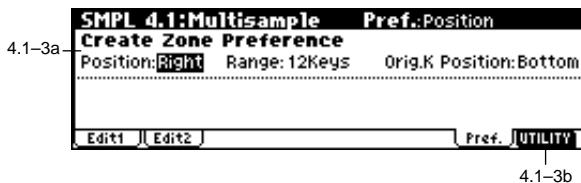
On (Checked): All notes in the zone of the index will sound at the pitch of the original key. Use this setting when you have sampled a drum sound or a rhythm loop, and want it to always playback at the original pitch.

Off (Unchecked): The pitch will change in semitone steps, based on the original key. Use this setting when you have sampled a musical instrument sound etc. and would like to play it conventionally from the keyboard.

■ 4.1-2b: UTILITY

⇨ "Delete SMPL," "Copy SMPL," "Move SMPL," "Rename SMPL," "SMPL To Stereo," "Delete MS," "Copy MS," "Move MS," "Rename MS," "MS To Stereo/MS To Mono," "Conv. To Prog," "Keyboard Disp." (1.1-3g), "Pitch BPM Adj." (4.1-3b)

4.1-3: Pref. (Preference)



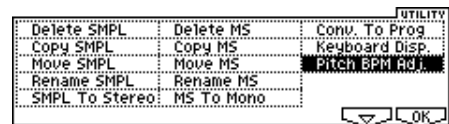
4.1-3a: Create Zone Preference

Here you can specify the default settings for indices that are created by executing "CREATE" (4.1-1c, 1.1-1d). New indexes will be created according the settings you specify here. You are free to modify the settings of an index later. Also, when you execute "INSERT" (4.1-1c), the "Position" setting specified here will be used (⇨1.1-3b).

Position [Right, Left]
Range (Zone Range) [1key...127keys]
Orig.K Position (Original Key Position) [Bottom, Center, Top]

(⇨ 1.1-3b: However, the parameter name and value name are shown differently.)

■ 4.1-3b: UTILITY



⇨ "Delete SMPL," "Copy SMPL," "Move SMPL," "Rename SMPL," "SMPL To Stereo," "Delete MS," "Copy MS," "Move MS," "Rename MS," "MS To Stereo/MS To Mono," "Conv. To Prog," "Keyboard Disp." (1.1-3g)

Pitch BPM Adj. (Pitch BPM Adjust)

This command sets the "Pitch" (4.1-2a) of the selected index on the basis of a BPM value. Raising the pitch of sample playback will increase the playback speed. Lowering the pitch will slow down the playback speed. This can be used to match the loop length etc. of the sample to a tempo of the desired BPM value.

- ① Use "SMPL" (4.1-1b) to select the sample that you wish to edit.
- ② From the Edit2 page "UTILITY," choose "Pitch BPM Adj" to open the following dialog box.



- ③ Specify "Beat." This is specified in quarter-note beats.
- ④ "Current BPM" will show the BPM value at the base key (displayed in gray). This BPM value is calculated automatically from the start address to the end address of the sample (if looping is off) or from the loop start address to the end address (if looping is on). For example if the start and end address of the sample are two seconds apart, the original key is specified as the base key, and "Beat" is set to 4, "Current BPM" would be 120. If "Beat" is set to 2, the display would indicate "Current BPM" as 60.

⚠ It is not possible for this display to exceed the range of 40-480.

- ⑤ In "New BPM," specify the BPM value that will result from the conversion of the "Current BPM" value.
- ⑥ To execute the Pitch BPM Adjust command, press the [F8] ("OK") key. To cancel, press the [F7] ("Cancel") key. When you execute this command, the "Pitch" (4.1-2a) value will be set automatically. For example if you modify a quarter-note 120 BPM sample to 240 BPM, the "Pitch" will be set to +12.00.

⚠ This calculation is performed within the TRITON-Rack's limits of precision. Minor discrepancies may occur in the final BPM calculation.

SMPL 5.1: Memory

5.1-1: Memory (Free Memory)

5.1-1a

SMPL 5.1:Memory		Free Memory					
	RAM1	RAM2	RAM3	RAM4	RAM5	RAM6	
	160.3s	000.0s	000.0s	000.0s	000.0s	000.0s	
	15,050KB	00,000KB	00,000KB	00,000KB	00,000KB	00,000KB	
	091%	100%	100%	100%	100%	100%	
Memory	No.						UTILITY

5.1-1b

5.1-1a: Free Memory

This shows the remaining amount of memory (the time available for sampling, the size of the sample files that can be loaded in Disk mode, or the size available for editing) in RAM banks 1-6. The amount is shown in seconds, bytes, and a percentage (%). The display will depend on the amount of memory that is installed (⇨ “Bank” 1.1-2a).

■ 5.1-1b: UTILITY

⇨ “Delete SMPL,” “Delete MS” (1.1-3g)

5.1-2: No. (Free Number)

5.1-2a

SMPL 5.1:Memory		Free Number	
Multisample(MS)	:	0999 / 1000	099% free
Sample	:	3993 / 4000	099% free
Sample in MS	:	3994 / 4000	099% free
Memory	No.		UTILITY

5.1-2b

5.1-2a: Free Number

This shows the maximum number of samples available in Sampling mode for multisamples and samples. The remaining number is also shown as a percentage (%) of the maximum.

Multisample(MS)	[0000...0999/1000	000...099%]
Sample	[0000...4000/4000	000...100%]
Sample in MS	[0000...3999/4000	000...099%]

■ 5.1-2b: UTILITY

⇨ “Delete SMPL,” “Delete MS” (1.1-3g)

SMPL 5.2: Controller

5.2-1: Ctrl's (Controls)

Specifies the functions that the “SW1,” “SW2” key, and the B-mode functions of the REALTIME CONTROLS knobs [1]-[4] will have in Sampling mode. These controllers can be used to make realtime changes in effect dynamic modulation functions etc. while you sample.

⚠ In Sampling mode, it is not possible to use AMS to control program parameters.

5.2-1a

SMPL 5.2:Controller		Controls:Knob1-B Assign	
Knob B Assign		SW1/2 Assign	
Knob1-B:Knob Mod.1 (CC#17)		SW1:SW1 Mod.	(CC#00)
Knob2-B:Knob Mod.2 (CC#19)			:Toggle
Knob3-B:Knob Mod.3 (CC#20)		SW2:SW2 Mod.	(CC#81)
Knob4-B:Knob Mod.4 (CC#21)			:Toggle
Ctrl's			UTILITY

5.2-1b

5.2-1c

5.2-1a: Knob B Assign

Here you can assign the B-mode functions (mainly various types of control change) for the front panel REALTIME CONTROLS knobs [1]-[4] (⇨ p.214 “Realtime Control Knobs B Assign List”). The functions you specify here will operate when the front panel REALTIME CONTROLS knobs [1]-[4] are operated in B-mode.

Knob1-B (Knob1-B Assign)	AMSource	[Off...MIDI CC#95]
Knob2-B (Knob2-B Assign)	AMSource	[Off...MIDI CC#95]
Knob3-B (Knob3-B Assign)	AMSource	[Off...MIDI CC#95]
Knob4-B (Knob4-B Assign)	AMSource	[Off...MIDI CC#95]

Example settings

Here's how you can assign knob [1] (B-mode) to control the “Wet/Dry” balance of the 044: St/Cross Dly effect selected for IFX1, and use knob [2] (B-mode) to control the “Pan” after the IFX in realtime while you sample.

- ① Set “BUS (IFX) Select” (1.1-3a) to **IFX1**.
- ② Select **044: St/Cross Dly** for “IFX1” (7.2-1).
- ③ Set “IFX1 On/Off” (7.2-1) to **ON**.
- ④ Set the IFX1 page “W/D” setting to **Dry**, “Src” to **Kb1[+]**, and “Amt” to **+50.**” (7.2-2)
- ⑤ In Knobs B Assign, set “Knob 1-B” to **Knob Mod.1 (CC#17)**, and set “Knob 2-B” to **IFX Pan (CC#08)**.
- ⑥ Press the [SELECT] key to make the “B” LED light.
- ⑦ Rotate knob [1], [2] and the panning of the external input sound and the delay level will change. You can sample the sound while you modify it.

5.2-1b: SW1/2 Assign

Here you can assign the functions of the “SW1” and “SW2” (⇨ p.213 “SW1, SW2 Assign List”).

SW1 (SW1 Assign)	AMSource	[Off...AfterT Lock :N/A]
SW1 Mode		[Toggle, Momentary]
SW2 (SW2 Assign)	AMSource	[Off...AfterT Lock :N/A]
SW2 Mode		[Toggle, Momentary]

(⇨ PROG 2.2-1b)

■ 5.2-1c: UTILITY


⇨ “Delete SMPL,” “Copy SMPL,” “Move SMPL,” “Rename SMPL,” “SMPL To Stereo,” “Delete MS,” “Copy MS,” “Move MS,” “Rename MS,” “MS To Stereo/MS To Mono,” “Conv. To Prog,” “Keyboard Disp.” (1.1-3g)

SMPL 7.2: Insert Effect

Here you can make insert effect settings for use in Sampling mode.

When you set “BUS” (1.1-3a) to **IFX1, 2, 3, 4, or 5**, the external input sound from the rear panel AUDIO INPUT 1 and 2 jacks will be sent to IFX1, 2, 3, 4, or 5 (insert effects 1, 2, 3, 4, 5) respectively. By selecting insert effects and making settings for them in this page, you can apply insert effects to the sound of the external input, and sample the result.

⇨ For details on insert effects, refer to p.142 “8. Effect Guide.”

 In Sampling mode, master effects 1 and 2 and the master EQ cannot be used.

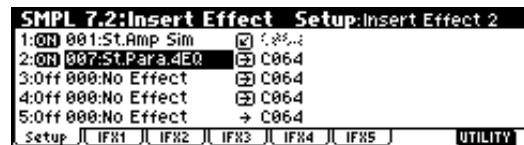
note Insertion effect settings in Sampling mode are not backed up when the power is turned off. If you wish to keep the insertion effect settings, you can use “Copy Insert Effect” (7.2-1a).

For example, you can copy the insertion effect settings of Sampling mode to a program or combination in order save them. When you write the program or combination, the settings will be saved in internal memory. In Sampling mode, you can use “Copy Insert Effect” (7.2-1a) to copy these effect settings from the program or combination back into Sampling mode and use them.

7.2-1: Setup

Here you can select insert effects, switch them on/off, make chain settings, and specify the pan of the sound after passing through the insert effect.

These parameters are the same as in Program mode. ⇨ Program mode “7.2-1: Setup”



7.2-1a

■ 7.2-1a: UTILITY

⇨ “Copy Insert Effect,” “Swap Insert Effect” (PROG 7.1-1d), “Select by Category” (PROG 7.2-1b)

7.2-2: IFX1

7.2-3: IFX2

7.2-4: IFX3

7.2-5: IFX4

7.2-6: IFX5


Sets the effect parameters for the IFX 1, 2, 3, 4 and 5 effects that you selected in the Setup page (⇒p.151).

note Effect Dmod (dynamic modulation) is controlled by the global MIDI channel specified in “MIDI Channel” (GLOBAL 2.1-1a).



5. Global mode

In Global mode you can make settings that affect the entire instrument, such as master tuning, MIDI, and memory protect. You can also edit user scales, drum kit setups, and user arpeggio patterns.

 If you want the settings you make in Global mode to be backed up when the power is turned off, you must write them into memory. To write your settings, use the Utility “Write Global Setting,” “Write Drum Kits,” or “Write Arpeggio Patterns.”

By pressing the [WRITE] key, you can access “Update Global Setting,” “Update Drum Kits,” and “Update Arpeggio Patterns.” These commands will simultaneously write the edited content.

GLOBAL PAGE MENU

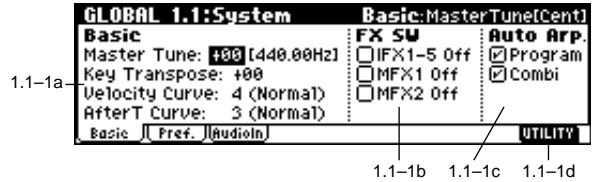
For details on selecting pages and parameters, refer to Program mode “PROGRAM PAGE MENU” p.1.



Sys.	1.1: System	Basic settings for the entire TRITON-Rack. AUDIO INPUT settings for other than Sampling mode. (☞p.107)
MIDI	2.1: MIDI	MIDI settings for the entire TRITON-Rack. (☞p.111)
U.Scl	3.1: User Scale	Scale settings created by the user. You can specify 16 types of octave scale, and one full-range scale. (☞p.114)
U.Cat	4.1: Category Name	Edit category names for programs and combinations. (☞p.115)
DKit	5.1: DKit	Edit drum kits. (☞p.116)
Arp	6.1: Arp.Pattern	Edit user arpeggio patterns. (☞p.119)

GLOBAL 1.1: System

1.1-1: Basic




1.1-1a: Basic

Master Tune (Master Tune [Cent])

[−50cent (427.47Hz)...+50cent (452.89Hz)]


This adjusts the overall tuning of the entire TRITON-Rack in one-cent units (semitone = 100 cents) over a range of ±50 cents. With a setting of 0, the frequency of A4 will be 440 Hz.

 The A4 pitch given here is when **Equal Temperament** is selected as the scale. If a different scale is selected, A4 may not be 440 Hz.

Key Transpose

[−12...+12]

This adjusts the pitch in semitone steps over a ±1 octave range.

 In Program, Combination, and Multi modes, the tuning of each program, timbre (Combination mode) or track (Multi mode) can be adjusted relative to the “Master Tune” setting by using MIDI RPN Fine Tune messages. Transpose can be adjusted relative to the “Key Transpose” value by using MIDI RPN Coarse Tune messages. In Program mode, these messages are received on the global MIDI channel specified by “MIDI Channel” (2.1-1a). In other modes, these messages are received on the MIDI channel of the individual timbre (Combination mode) or track (Multi mode). (☞“Detune”: COMBI 3.1-3a, MULTI 3.1-5a/6a)

“Master Tune” can be controlled by the MIDI universal system exclusive message Master Fine Tuning (F0, 7F, nn, 04, 03, vv, mm, F7: nn=MIDI channel, vv/mm=value).

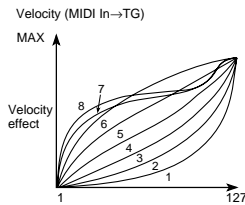
“Key Transpose” can be controlled by the MIDI universal system exclusive message Master Coarse Tuning (F0, 7F, nn, 04, 04, vv, mm, F7: nn=MIDI channel, vv/mm=value).

These messages are received on the global MIDI channel specified by “MIDI Channel” (2.1-1a).

Velocity Curve

[1...8]

This specifies the way in which the volume and/or tone will change in response to variations in keyboard playing dynamics (velocity). The effect of velocity will change according to the received velocity as shown in the diagram below. If the notes played on an external keyboard or sequencer and sounded by the TRITON-Rack are too bright or too muted overall, you can select an appropriate velocity curve here.



1: These curves produce an effect for strongly-played notes.

2, 3: |

4(Nomal): These are the standard curves.

5: |

6: An effect will be obtained even if you do not play very strongly

7: A certain amount of effect will be obtained even for softly-played notes

8: This curve produces the most regular effect. This setting is suitable when you do not need velocity sensitivity, or when you wish to make the notes more consistent. However with this curve, control of softly-played notes will be more difficult, so use the curve that is most appropriate for your playing strength and style, and the effect that you wish to produce.

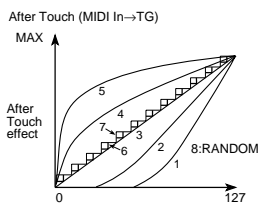
With the factory settings, this is set to 4.

AfterT Curve (AfterTouch Curve)

[1...8]

This specifies the way in which the volume and/or tone will change in response to variations in pressure (after touch).

Incoming aftertouch messages (pressure applied to the keyboard) will control the aftertouch effect as shown in the diagram below.



1: These curves produce an effect for strongly-applied pressure.

2: |

3(Nomal): These are the standard curves.

4: |

5: This curve produces change even when light pressure is applied

6, 7: These curves produce change in 24 or 12 steps respectively. Curve number 7 allows change over twelve steps, so when using after touch to modify the pitch, you can set the range of modification to one octave, and use after touch to vary the pitch in semitone steps.

8: This is a random curve. Use this when you wish to create special effects, or to use after touch to apply unpredictable modulation.

With the factory settings, this is set to 3.

note Since the “Velocity Curve” and “AfterT Curve” settings are applied immediately before the TRITON-Rack’s internal tone generator, they will affect how incoming MIDI data is played, but will not affect the MIDI data that is transmitted.

1.1-1b: FX SW

IFX1-5 Off

[Off, On]

On (Checked): All insert effects IFX1-5 will be off.

Off (Unchecked): The Setup tab page (7.2-1) “IFX1 On/Off”-“IFX5 On/Off” settings of Program, Combination, Multi, and Sampling modes will be valid.

MFX1 Off

[Off, On]

On (Checked): MFX1 will be off.

Off (Unchecked): The Master Effect Setup tab page (7.3-1) “MFX1 On/Off” settings of Program, Combination, and Multi modes will be valid.

MFX2 Off

[Off, On]

On (Checked): MFX2 will be off.

Off (Unchecked): The Master Effect Setup tab page (7.3-2) “MFX2 On/Off” settings of Program, Combination, and Multi modes will be valid.

MIDI When “IFX1 On/Off”-“IFX5 On/Off,” or “MFX1 On/Off,” “MFX2 On/Off” settings are switched, control change messages CC#92 (effect control 2), CC#94 (effect control 4), and CC#95 (effect control 5) will be transmitted respectively. The transmitted data will be 0 for off, and 127 for on.

1.1-1c: Auto Arp. (Auto Arpeggiator)

Program (Auto Arp. Program)

[Off, On]

On (Checked): When a different program is selected, the arpeggiator settings stored in that program will automatically take effect.

Off (Unchecked): The arpeggiator settings will not change when the program is switched. Use this setting when you wish to keep the same arpeggiator pattern running while you select different program sounds.

Combi (Auto Arp. Combi)

[Off, On]

On (Checked): When a different combination is selected, the arpeggiator settings stored in that combination will automatically take effect.

Off (Unchecked): The arpeggiator settings will not change when the combination is switched. Use this setting when you wish to keep the same arpeggiator pattern running while you select different combination sounds.

1.1-1d: UTILITY



For details on how to select the desired utility function, refer to “PROG 1.1-1d: UTILITY.”

Write Global Setting

This command writes Global mode settings (except for Drum Kits and User Arpeggio Patterns).

- 1 Select "Write Global Setting" to access the dialog box.



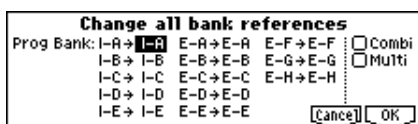
- 2 To write the data, press the [F8] ("OK") key. To cancel without writing, press the [F7] ("Cancel") key. You can also use the [WRITE] key to write data in the same way as the "Write Global Setting" command. Press the [WRITE] key to access the "Update Global Setting" dialog box, and press the [F8] key to write the data.

To write a drum kit or user arpeggio pattern, execute the appropriate utility. (⇒ 5.1-1d "Write Drum Kits," 6.1-1d "Write Arpeggio Patterns")

Change all bank references

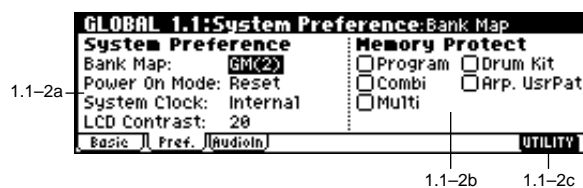
This command changes all program banks specified for timbres in combinations or tracks of multis.

- 1 Select "Change all bank references" to access the dialog box.



- 2 To execute this command for combinations, check "Combi." To execute this command for multis, check "Multi." If you check "Multi," the program banks within the event data of the multis will also be changed.
 - 3 Specify the banks to be changed ("Program Bank").
 - 4 To execute the Change All Bank References command, press the [F8] ("OK") key. To cancel without executing, press [F7] ("Cancel") key.
- ⚠** If you change two or more different banks to the same bank, it will not be possible to use this function to change them back to different banks. Be careful that the change destination banks do not overlap.

1.1-2: Pref. (System Preference)



1.1-2a: System Preference

Bank Map [KORG, GM(2)]

Specifies the mapping of programs and combinations relative to Bank Select control change messages (CC#0 upper byte and CC#32 lower byte).

The bank select messages shown in the following table can be received (R) or transmitted (T), corresponding to Program banks I-A...I-F (only for the separately sold EXB-MOSS option), banks G, g (1)–g(9), g(d), E-A...E-H and Combination banks I-A...I-E and E-A...E-H.

Bank	Bank Map: KORG	Bank Map: GM(2)
I-A	00.00 R/T	3F.00 R/T
I-B	00.01 R/T	3F.01 R/T
I-C	00.02 R/T	3F.02 R/T
I-D	00.03 R/T	3F.03 R/T
I-E	00.04 R/T	3F.04 R/T
I-F	00.05 R/T	3F.05 R/T
G, g (0)...g (9)	79.00, 79.01...09 R/T 38.00 R	79.00, 79.01...09 R/T 38.00 R 00.00, 00.01...(XG) R 00.00, 01.00...(GS) R
g (d)	78.00 R/T 3E.00 R	78.00 R/T 3E.00 R 3F.7F R (→Korg MUTE)
E-A	00.08 R/T	3F.08 R/T
E-B	00.09 R/T	3F.09 R/T
E-C	00.0A R/T	3F.0A R/T
E-D	00.0B R/T	3F.0B R/T
E-E	00.0C R/T	3F.0C R/T
E-F	00.0D R/T	3F.0D R/T
E-G	00.0E R/T	3F.0E R/T
E-H	00.0F R/T	3F.0F R/T

Power On Mode [Reset, Memorize]

Specifies the condition at power-on.

Reset: The TRITON-Rack will be in Combination mode COMBI 1.1: Play, and Combination I-A000 will be selected.

Memorize: The location (mode and page) where you were when the power was last turned off, and the last-selected program or combination number will be selected.

- ⚠** This function does not memorize the contents of any parameters that were edited. Before turning off the power, be sure to write your data or save it in Disk mode.

System Clock [Internal, Word Clock]

This sets the system clock of the TRITON-Rack.

Internal: The TRITON-Rack will operate according to its own internal clock. Normally you will use this setting.

Word Clock: The TRITON-Rack will operate according to the system clock of a connected ADAT Optical format-compatible device.

Word Clock can be selected only if the optional EXB-DI is connected.

The “System Clock” setting is stored by the Utility menu “Write Global Setting” command.

note If the optional EXB-DI is not installed, it will not be possible to switch this parameter to **Word Clock**.

▲ If “System Clock” has been written to the **Word Clock** setting, but no valid clock is being input when the power is turned on, an error message will blink in the status bar, and the TRITON-Rack will not sound correctly. For details on handling the EXB-DI option (⇒p.273 “EXB-DI option”).

LCD Contrast [0...62]

This sets the contrast of the LCD screen. Higher values will increase the contrast.

note If because of the temperature or other reasons, the LCD screen is unreadable when the power is turned on, use the following procedure to adjust the contrast.

- 1 Press the [EXIT] key three times, and then press the [GLOBAL] key.
- 2 Hold down the [EXIT] key, and press the [WRITE] key.
- 3 Rotate the [VALUE] dial to adjust the contrast.

1.1–2b: Memory Protect

Program [Off, On]

This setting protects the internal program memory.

On (Checked): Internal program memory will be protected, and the following write operations cannot be performed.

Writing a program
Receiving program data via MIDI data dump
Loading program data from disk

Off (Unchecked): Data can be written to internal program memory.

Combi (Combination) [Off, On]

This setting protects the internal combination memory.

On (Checked): Internal combination memory will be protected, and the following write operations cannot be performed.

Writing a combination
Receiving combination data via MIDI data dump
Loading combination data from disk

Off (Unchecked): Data can be written to internal combination memory.

Multi [Off, On]

This setting protects the internal multi memory.

However, when the power is turned off, the data in multi memory will be lost regardless of this setting.

On (Checked): Internal multi memory will be protected, and the following write operations cannot be performed.

Execution of pattern recording, editing, or other utility editing
Receiving multi data via MIDI data dump
Loading multi data from disk

Off (Unchecked): Data can be written to internal multi memory.

Drum Kit [Off, On]

This setting protects the internal drum kit memory.

On (Checked): Internal drum kit memory will be protected, and the following write operations cannot be performed.

Writing a drum kit
Receiving drum kit data via MIDI data dump
Loading drum kit data from disk

Off (Unchecked): Data can be written to internal drum kit memory.

Arp. UsrPat (Arp. User Pattern) [Off, On]

This setting protects the internal user arpeggio pattern memory.

On (Checked): Internal user arpeggio pattern memory will be protected, and the following write operations cannot be performed.

Writing an user arpeggio pattern
Receiving user arpeggio pattern data via MIDI data dump
Loading user arpeggio pattern data from disk

Off (Unchecked): Data can be written to internal user arpeggio pattern memory.

■ 1.1–2c: UTILITY

☞ “Write Global Setting,” “Change all bank references”(1.1–1d)

1.1–3: AudioIn (Audio In)

For the rear panel AUDIO INPUT 1 and 2 inputs, make settings for level, pan, bus selection, and send levels to the master effects.

These settings are valid in Combination, Program, and Multi modes.

Insert effects, master effects, and master EQ can be applied to an audio signal from an external audio source. This allows you to use the TRITON-Rack as a two-in six-out effect processor, in conjunction with its internal tone generator. (Effect 093: Vocoder can also be used as a vocoder effect that controls an internal sound from an external mic input.)

▲ These settings will have no effect in Sampling mode. If you move from Sampling mode to Global mode, the “Audio Input” settings of Sampling mode will be maintained, and it will not be possible to view settings. Please move here from a mode in which external audio signals can be input (Combination, Program, or Multi mode). In Sampling mode, the rear panel AUDIO INPUT 1 and 2 settings can be made in the same way as here, using the parameters in “Input1,” “Input2” (SMPL 1.1–3). In Sampling mode, you can record while applying insert effects to the external audio source that is input from AUDIO INPUT 1 and 2. (The master effects and master EQ cannot be used.)



1.1-3a: Input1

1.1-3b: Input2

Level (Input Level) [0...127]

The analog audio signal from AUDIO INPUT 1 and 2 is converted by an AD converter from an analog signal to a digital signal. This parameter sets the signal level immediately after the sound has been converted into a digital signal. Normally you will set this to **127**. If the sound is still distorted even after this level is lowered significantly, it is possible that the sound is distorting before the AD converter. Adjust the [INPUT] knob or the output level of the external audio source.

Pan (Input Pan) [L000...C064...R127]

Sets the panning of the signal from AUDIO INPUT 1 and 2. When inputting a stereo audio signal, you will normally set Input 1 to **L000** and Input 2 to **R127** (or, Input 1 to **R127** and Input 2 to **L000**). When inputting a monaural audio signal, normally set this to **C064**.

BUS(IFX/Indiv.) Select (Input BUS Select) [L/R, IFX1...5, 1, 2, 3, 4, 1/2, 3/4, Off]

In the same way as for the oscillators of a program, this parameter specifies the bus to which the external input of AUDIO INPUT 1 and 2 will be sent (see 8. Effect Guide, Insert Effect "2-4. Audio Input").

Send1(Input Send1), Send2(Input Send2) [000...127]

In the same way as for the oscillators of a program, this parameter specifies the send levels from the external input of AUDIO INPUT 1 and 2 to the master effects. If "BUS (IFX/Indiv.) Select" is set so that an insert effect is being applied to the external input, the send levels to the master effects are set after the signal passes through IFX1-5 by "S1 (Send1 (MFX1)," "S2 (Send2 (MFX2))" (7.1-1). (see 8. Effect Guide, Master Effect "2-4. Audio Input.")

When the "BUS (IFX/Indiv.) Select" setting is other than **Off** and the "Level" value is raised, the external input sound will be input to the TRITON-Rack. If audio cables are connected to the rear panel AUDIO INPUT 1 and 2 jacks at this time, noise will be input (even if there is no incoming audio signal) into the TRITON-Rack, and, depending on your settings, in some cases may be output from the AUDIO OUTPUT L/MONO, R, 1, 2, 3, 4 jacks. If you are not using an external audio input source, and are only playing programs, combinations, or multi etc. that use the TRITON-Rack's internal sounds, turn "BUS (IFX/Indiv.) Select" **Off**, or set "Level" to **0**.

If audio cables are not connected to the rear panel AUDIO INPUT 1 and 2 jacks, the input data that passes from the AD converter into the TRITON-Rack will be forced to zero, so that no noise will be input.

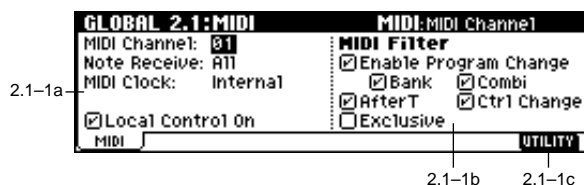
1.1-3c: UTILITY

☞ "Write Global Setting," "Change all bank references" (1.1-1d)

GLOBAL 2.1: MIDI

2.1-1: MIDI

Here you can make MIDI-related settings that affect the entire TRITON-Rack.



2.1-1a: MIDI Setup

MIDI Channel [1...16]

Sets the global MIDI channel.

The global MIDI channel is used in the following cases.

- When transmitting and receiving performance data in Program (PROG 1.1: Play) and Sampling modes.
- When selecting combinations via MIDI in Combination mode (COMBI 1.1: Play)
- When controlling timbres or effects that have been set to **Gch** in various modes
- When transmitting and receiving system exclusive messages

About MIDI reception

In Program (PROG 1.1: Play) and Sampling modes, MIDI data is received on the global MIDI channel, but in Combination mode (COMBI 1.1: Play) or Multi mode, MIDI data is received on the MIDI channel specified for each timbre or track.

In Combination mode (COMBI 1.1: Play), program changes received on the global MIDI channel will switch the combination.

Use the global MIDI channel to switch IFX 1-5, MFX1 and MFX2 on/off. To control the pan following IFX, sends 1/2, MFX 1/2 and MEQ, use the global MIDI channel in Program or Sampling mode; in Combination, or Multi mode, use the channel specified separately by Setup page (7.2-1) "Control Channel" for IFX1-5, MFX1, MFX2, and MEQ. By setting "Control Channel" to **Gch**, you can control these parameters from the global MIDI channel.

MIDI transmission when the TRITON-Rack's controllers are operated

In Program and Sampling modes, this data will be transmitted on the global MIDI channel. In Combination mode, data will be transmitted simultaneously on the global MIDI channel and on the MIDI channels of timbres whose "Status" (COMBI 3.1-1) is set to **EXT** or **EX2**.

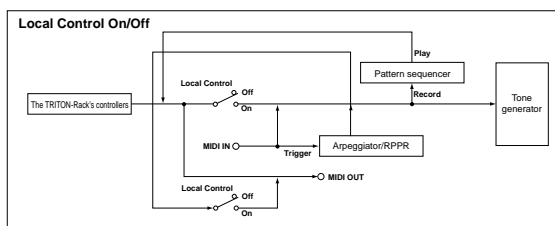
In Multi mode, this data will be transmitted on the channel specified for the track (with a "Status" of **BTH**, **EXT**, or **EX2**) that is selected as the "Control Track" (MULTI 1.1-1).

Local Control On

On (checked) (**Local Control On**): The REALTIME CONTROLS knobs [1]-[4], "SW1" and "SW2" of the TRITON-Rack will control the internal tone generator. When the arpeggiator is running, note-on/off messages from the arpeggiator will be transmitted.

Off (unchecked) (**Local Control Off**): The REALTIME CONTROLS knobs [1]-[4], "SW1" and "SW2" of the TRITON-Rack will be disconnected from the internal tone generator. When the arpeggiator is running, note-on/off messages

from the arpeggiator will not be transmitted.



Note Receive [All, Even, Odd]

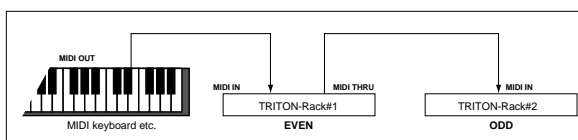
This specifies which of the incoming note numbers will be sounded. If you wish to connect another TRITON-Rack or TRITON series instrument to double the polyphony, set one unit to **Even** and the other unit to **Odd** so that one or the other unit will sound.

All: All note numbers will be received. Normally you will leave this set to **All**.

Even: Even-numbered notes (C, D, E, F#, G#, A#) will sound.

Odd: Odd-numbered notes (C#, D#, F, G, A, B) will sound.

MIDI This setting has no effect on the MIDI data that is received.



MIDI Clock [Internal, External]

Set this parameter when you wish to synchronize an external MIDI device (sequencer or rhythm machine etc.) with the arpeggiator, pattern sequencer, or RPPR function of the TRITON-Rack.

Internal: The arpeggiator, pattern sequencer, and RPPR function will synchronize to the TRITON-Rack's own internal clock.

Select the **Internal** setting when using the TRITON-Rack by itself, or when you want the TRITON-Rack to be the **master** (controlling device) so that another connected external MIDI device will synchronize to the MIDI Clock messages transmitted from the TRITON-Rack.

External: The arpeggiator, pattern sequencer, and RPPR function of the TRITON-Rack will synchronize to MIDI Clock messages transmitted from an external MIDI device connected to the MIDI IN connector.

Select the **External** setting when using the TRITON-Rack as a **slave** (controlled) device so that it will synchronize to another connected external MIDI device. The TRITON-Rack will respond to MIDI Realtime messages (Start, Stop, Continue, Song Select) from an external sequencer.

⚠ During Audition playback or Demo song playback, the playback will use the specified tempo regardless of the "MIDI Clock" setting.

2.1-1b: MIDI Filter

Enable Program Change [Off, On]

On (Checked): Program changes will be transmitted and received.

In Program mode (PROG 1.1: Play), the program will be switched when a program change message is received on the global MIDI channel specified by "MIDI Channel" (2.1-1a). When you switch programs, a program change message

will be transmitted on the global MIDI channel.

In Combination mode (COMBI 1.1: Play), the combination will be switched when a program change message is received on the global MIDI channel. However, it is possible to set the "Combi (Combi Change)" parameter so that the combination is not switched. When a program change is received on the channel specified for each timbre by "MIDI Channel" (COMBI 3.1-1a), the program of that timbre will be switched. However, the program changes for each timbre will be affected by the setting of the "Program Change" parameter (COMBI 4.1-1a).

When you switch combinations, a program change message will be transmitted on the global MIDI channel, and also transmitted simultaneously on the channel of timbres whose "Status" (COMBI 3.1-1a) is set to **EXT** or **EX2**.

In Multi mode, incoming program change messages on a channel that corresponds to a track whose "Status" (MULTI 3.1-1/2a) is set to **INT** or **BTH** will switch programs on that track. When you select a multi or playback pattern data, program changes will be transmitted on the channels of tracks whose "Status" is set to **BTH**, **EXT**, or **EX2**.

Off (Unchecked): Program changes will not be transmitted or received.

Bank (Bank Change) [Off, On]

On (Checked): The Bank Select control change message will be transmitted together with program change messages.

This is valid when "Enable Program Change" is checked.

Off (Unchecked): Bank Select messages will not be transmitted or received.

Combi (Combi Change) [Off, On]

On (Checked): When in COMBI 1.1: Play, an incoming program change message on the global MIDI channel set by "MIDI Channel" (2.1-1a) will switch combinations. This is valid when "Enable Program Change" is checked. An incoming program change on a channel other than the global MIDI channel will switch the program of any timbre that matches that MIDI channel.

Off (Unchecked): An incoming program change message on the global MIDI channel will switch the program of any timbre whose "MIDI Channel" (COMBI 3.1-1a) matches the global MIDI channel. The combination will not be switched. The program changes for each timbre will be affected by the setting of the "Program Change" parameter (COMBI 4.1-1a).

AfterT (After Touch) [Off, On]

On (Checked): MIDI after touch messages will be received.

Off (Unchecked): MIDI after touch messages will not be received.

Ctrl Change (Control Change) [Off, On]

On (Checked): Control change messages will be received.

Off (Unchecked): Control change messages will not be received.

Exclusive [Off, On]

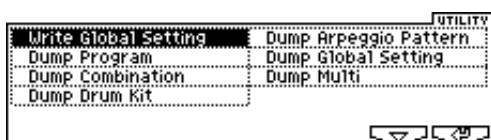
On (Checked): System exclusive data will be transmitted and received.

Check this setting when you wish to use a connected computer etc. to edit the TRITON, or vice versa.

Off (Unchecked): System exclusive data will neither be transmitted nor received. Normally you will leave this unchecked.

However, system exclusive data will be transmitted and received while the Utility ("Dump Program" - "Dump Multi") of this page are displayed.

■ 2.1-1c: UTILITY



☞ “Write Global Setting” (1.1-1d)

Dump Program

Dump Combination

Dump Drum Kit

Dump Arpeggio Pattern

Dump Global Setting

Dump Multi

These commands allow the TRITON-Rack’s data to be transmitted to another connected TRITON-Rack, MIDI data filter, or computer in the form of system exclusive data.

Select the data to be dumped from the Utility menu (see the table below) to access the dialog box.

As necessary, select the bank and number of the data to be dumped, and press [F8] (“OK”) key.

Dump Program	Programs of the specified bank, or one program
Dump Combination	Combinations of the specified bank, or one combination
Dump Drum Kit	All drum kits, or one drum kit
Dump Arpeggio Pattern	All arpeggio patterns, or one arpeggio pattern
Dump Global	Global settings (except for the Drum Kits and User Arpeggio Patterns of Global mode)
Dump Multi	All Multi data

Transmission

⚠ Do not touch the TRITON-Rack’s switches or turn off the power while data is being transmitted.

Data dump transmission procedure

① Connect the TRITON-Rack to the device that will receive the data dump.

If you are using a computer that is able to receive MIDI exclusive data, connect the computer’s MIDI interface (connected to the computer) to the MIDI OUT connector of the TRITON-Rack. (☞BG p.14)

If you are using a MIDI data filter etc., connect the TRITON-Rack’s MIDI OUT connector to the MIDI IN connector of the MIDI data filter.

② Select Global mode 2.1: MIDI.

③ In the Utility menu, select the data that you wish to dump.

If you wish to dump data for an individual bank, set “Program” to **Bank**, and specify the bank number below it. If you wish to dump data for an individual program, set “Program” to **Single**, and specify the program number below it.



④ Press the [F8] (“OK”) key to transmit the data.

While the data is being transmitted, the display will indicate “Now transmitting data.”

The data size and the time required for transmission will depend on the type of data.

For the size and the time required to dump each type of data, refer to the table below.

⚠ When you save data dumps from the TRITON-Rack to a MIDI data file, do not save multiple data dumps together. If this data is saved together, there will be insufficient time for the TRITON-Rack to write each received portion into memory before the next portion of data arrives, so that it will be impossible to receive all of the data correctly.

Type of data dumped	Data size (kByte)		Time required (Sec)	
	TRITON-Rack	EXB-MOSS is installed	TRITON-Rack	EXB-MOSS is installed
Program Bank (I-A...I-E, E-A...E-H)	69.1	---	22.1	---
Program Bank (I-F)	---	77.3	---	24.7
Program Single (I-A...I-E, E-A...E-H)	0.5	---	0.2	---
Program Single (I-F)	---	0.6	---	0.2
Combination Bank	57.3	←	18.4	←
Combination Single	0.4	←	0.2	←
Drum Kit All	592.1	←	189.5	←
Drum Kit Single	4.1	←	1.3	←
Arpeggio Pattern All	105.0	←	33.6	←
Arpeggio Pattern Single	0.3	←	0.1	←
Global Setting	0.8	←	0.3	←
Multi Data	9.4-845.4	←	3.0-270.5	←

Reception

- ⚠ Do not touch the TRITON-Rack's switches or turn off the power while data is being received.
- ⚠ After a data dump is received, the TRITON-Rack will require up to 16 seconds to process the data and write it into memory. During this time, the display will indicate "Now writing into internal memory." While this display is shown, you must under no circumstances turn off the power of the TRITON-Rack. If the power is turned off during this time, the TRITON-Rack may fail to operate correctly when the power is turned on again. If this occurs, hold down the [MENU] key and the [9] key while you turn on the power. However when this is done, the contents of memory will be initialized. Transmission and reception of MIDI data is also impossible during this time. When receiving multiple data dumps in succession, you must allow an interval between the transmission of each data dump.

Type of data dumped	Processing time for writing into memory
One Combination Bank	Approximately 4–8 seconds
One Program Bank	Approximately 4–8 seconds
All Drum Kits	Approximately 16 seconds
All Arpeggio Patterns	Approximately 4 seconds
Global Setting	Approximately 4 seconds
Multi	Approximately 1 seconds

- ⚠ While the TRITON-Rack is writing the data into memory, transmission of Active Sensing (FEh) messages from the MIDI OUT connector will stop.

Data dump reception procedure

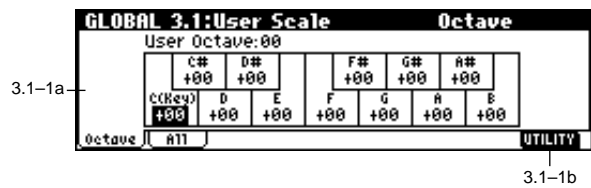
- ① Connect the TRITON-Rack and the device that will receive the data dump.
If you are using a computer that is able to transmit MIDI exclusive data, connect the computer's MIDI interface (connected to the computer) to the MIDI IN connector of the TRITON-Rack. (⇒BG p.14)
If you are using a MIDI data filer, connect the MIDI OUT connector of the data filer to the MIDI IN connector of the TRITON-Rack.
- ② Set the MIDI channel of the MIDI device to match the global MIDI channel "MIDI Channel" (2.1-1a) of the TRITON-Rack. If data that was previously transmitted to the MIDI device is now going to be received again by the TRITON-Rack, set the global MIDI channel of the TRITON-Rack to the same global MIDI channel setting that was used when transmitting the data.
To set the MIDI channel of the transmitting device, refer to the owner's manual for that device.
- ③ Turn **check** the "Exclusive" setting (2.1-1b).
- ④ Transmit the data from the other device. For the procedure, refer to the owner's manual for the device you are using.

GLOBAL 3.1: User Scale

Here you can create sixteen User Octave Scales and one User All Notes Scale. The user scales you create here can be selected in the PROG 2.1-1, COMBI 3.2-1, MULTI 3.2-1.

- ⚠ If you wish to keep an edited user scale after the power is turned off, be sure to write (save) your settings. This data is written by the Utility "Write Global Setting." Alternatively, you can press the [WRITE] key to access the Write Global Setting dialog box, and press the [F8] ("OK") key to write the edited data.

3.1-1: Octave



3.1-1a: User Octave Scale

User Octave [User Octave 00...15]
Select the user octave scale that you wish to edit.

Tune [-99...+99]

Specifies the scale for one octave of notes. When you adjust the pitch of each note in the octave (C–B) in one-cent steps, your settings will be applied to all octaves. This adjustment is relative to equal temperament.

A setting of **-99** lowers the pitch approximately a semitone below normal pitch.

A setting of **+99** raises the pitch approximately a semitone above normal pitch.

note You can select the key by holding down the [ENTER] key and playing a note on your connected keyboard.

3.1-1b: UTILITY



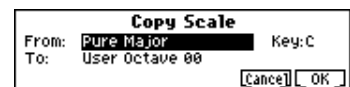
⇨ "Write Global Setting" (1.1-1d)

For details on how to select the desired utility function, refer to "PROG 1.1-1d: UTILITY."

Copy Scale

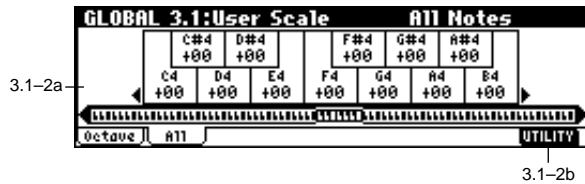
This command copies a preset scale or user scale to the user scale that you wish to edit. For details on the preset scales, refer to "Type" (PROG 2.1-1c).

- ① Select "Copy Scale" to access the dialog box.



- ② Select the copy source scale (“From”).
If you select **Pure Major** or **Pure Minor**, you must also specify the “Key” selection located at the right.
Stretch can be selected only if “To” is the **User All Notes Scale**.
- ③ Select the copy destination scale (“To”).
- ④ To execute the Copy Scale command press the [F8] (“OK”) key. To cancel without executing press the [F7] (“Cancel”) key.

3.1-2: All Notes



3.1-2a: User All Notes Scale

Tune [-99...+99]

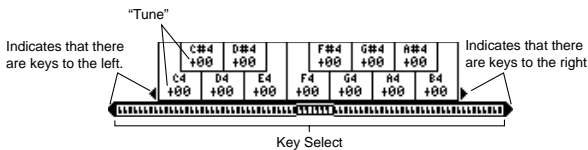
Here, you can make independent pitch settings for each of the 128 notes.
Adjust the pitch of each of the 128 notes (C-1 – G9) in one-cent steps. This adjustment is relative to equal temperament.
A setting of -99 lowers the pitch approximately a semitone below normal pitch.
A setting of +99 raises the pitch approximately a semitone above normal pitch.

In the case of the “User All Notes Scale,” you can select **Stretch** in the Utility menu command “Copy Scale” (3.1-1b).

note Use the [◀], [▶] keys to select the key that you wish to set. You can also select the key by holding down the [ENTER] key and playing a note on the keyboard of a connected MIDI instrument.

Key Select [C-1...G9]

This indicates the location of the key displayed in “Tune.” You can use the [◀], [▶] keys to move in one-octave steps.



3.1-2b: UTILITY

☞ “Write Global Setting” (1.1-1d), “Copy Scale” (3.1-1b)

GLOBAL 4.1: Category Name

4.1-1: P.0..7 (Prog.00-07)

4.1-2: P.8..15 (Prog.08-15)

4.1-3: C.0..7 (Comb.00-07)

4.1-4: C.8..15 (Comb.08-15)

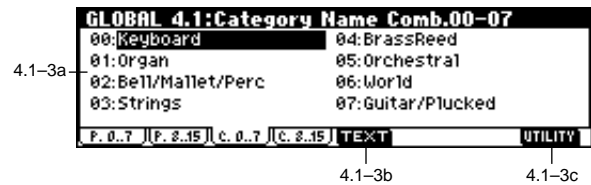
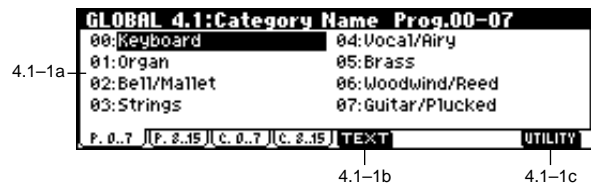
Here you can assign names to the program and combination categories.

Select the category whose name you wish to modify, press the [F5] (“TEXT”) key to access the text dialog box, and input the name.

A maximum of 16 characters can be input (☞BG p.38).
The category names you edit here can be selected in the dialog box when you write a program or combination.
With the factory settings, these are classified by type of instrument.

You can specify sixteen categories each for programs and combinations.

note The category names you edit here can be specified when you write data in the “Write Program dialog box” (PROG 1.1-d: UTILITY) or “Write Combination dialog box” (COMBI 1.1-d: UTILITY), and used in the respective “Select by Category” function to select programs or combinations by category.



⚠ If you want the edited user categories to be backed up when the power is turned off, you must write them into memory. Select the Utility “Write Global Setting” to access the Write Global Setting dialog box, or press the [WRITE] key to display the Update Global settings dialog box and press the [F8] (“OK”) key to write the edited settings.

4.1-1 (...4)a: Category

Selects the category name that you wish to edit.

4.1-1 (...4)b: TEXT

Edits the category name.
Press the [F5] (“TEXT”) key to access the text dialog box.
For the editing procedure refer to BG p.38.

4.1-1 (...4)c: UTILITY

☞ “Write Global Setting” (1.1-1d)

GLOBAL 5.1: DKit (Drum Kit)

Here you can create a drum kit by assigning a drum instrument (drumsample) to each key.

A drum kit you edit here can be selected in Program mode PROG 2.1: Ed-Basic OSC1 tab “Drum Kit” (when “Oscillator Mode” is **Drums**) as an oscillator, and processed through the filter, amp and effects in the same way as a “multisample” (when “Oscillator Mode” is **Single** or **Double**).

When you wish to edit a drum kit, enter Program mode, select a program that uses a drum kit (i.e., whose “Oscillator Mode” is **Drums**), and then move to this page. A program that uses a drum kit will already have filter, amp, and effect settings etc. suitable for drum sounds. (Programs in the separate *Voice Name List* that use a drum kit are indicated by a **Ⓢ** symbol.)

Even if a program with an “Oscillator Mode” of **Single** or **Double** is selected in Program mode, the program will sound using its own filter and amp settings etc. Effects will sound according to the settings of the program you selected. You must set “Octave” (PROG 2.1-2b) to **+0[8]**. With any setting other than **+0[8]**, the key locations and drum sounds will not correspond correctly.

MIDI If “Exclusive” (2.1-1b) is checked, the drum kit can be edited using exclusive data.

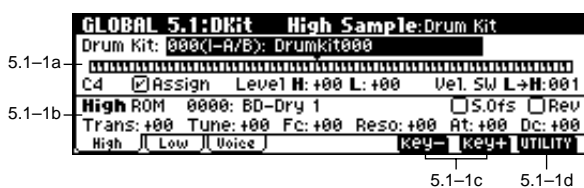
⚡ When a drum kit is edited, all programs that use that drum kit will be affected.

⚡ If you want the edited drum kit settings to be backed up after you turn off the power, you must write them into memory. Select the Utility “Write Drum Kits” to access the Write Drum Kits dialog box, or press the [WRITE] key to access the Update Drum Kits dialog box, and press the [F8] (“OK”) key to write the edited settings.

☞ For details on creating a drum kit, refer to BG p.78.

5.1-1: High (High Sample)

Here you can select a drum kit, assign High and Low drumsamples to each key, and set parameters for the High and Low drumsamples.



5.1-1a: Drum Kit, Key, Assign, Level H, Level L, Vel. SW L→H

Drum Kit [000 (I-A/B)...143 (E-H)]

Selects the drum kit that you wish to edit.

If you wish to modify the drum kit name, use the “Rename Drum Kit” Utility menu command.

00(I-A/B) ...15(I-A/B)	Preload drum kits
16(E-A)...31(E-A) 32(E-B)...47(E-B) 48(E-C)...63(E-C) 64(E-D)...79(E-D) 80(E-E)...95(E-E) 96(E-F)...111(E-F) 112(E-G)...127(E-G) 128(E-H)...143(E-H)	(for user drum kits and EXB-PCM series drum kits)

Key [C-1...G9]

Selects the key to which you will assign a drumsample (and its settings).

To select the key, use the [F6] (“Key-”), [F7] (“Key+”) keys. Alternatively if an external MIDI keyboard is connected via MIDI, you can hold down the [ENTER] key and play a note on the external MIDI keyboard.

All 5.1: DKit parameters except for “Drum Kit” will apply to the key you assign here.

Two drumsamples, High and Low, can be assigned to each key, and you can switch between them by velocity as you play.

Assign [Off, On]

On (Checked): The drumsamples you assigned for High (5.1-1b) and Low (5.1-2a) will sound. Normally you will check this parameter.

Off (Unchecked): The selected drumsamples will be invalid, and the drumsamples of the key to the right will sound. At this time, the pitch will be a semitone lower than the pitch of the key to the right. Uncheck this parameter when you wish to play a drumsample at differing pitches.

Level H (Level High) [-99...+99]

Level L (Level Low) [-99...+99]

Specify the volume of the High and Low drumsamples.

Keys that are set to **+99** will sound at a volume double that of the amp level of the program that uses this drum kit. Keys that are set to **0** will sound at the amp level of the program that uses this drum kit. Keys that are set to **-99** will not sound.

Vel. SW L→H (Velocity SW Lo→Hi) [001...127]

Specifies the velocity value at which you will switch from the Low drumsample to the High drumsample. Velocities above this value will sound the High drumsample, and velocities below this value will sound the Low drumsample. If you do not wish to use velocity switching, set this to **001** and specify only the High drumsample (☞ “Velocity SW L→H” PROG 2.1-2/3).

5.1-1b: High (High Sample)


Drumsample Bank [ROM, RAM, EXB* ...]


Specifies the bank of the High drumsample.

ROM: Select preset Drumsamples. In “Drumsample,” you can choose from **00: BD-Dry 1 – 412: Amp Noise**. (☞VNL)

RAM: Selects samples that you created in Sampling mode or loaded in Disk mode. Select the RAM bank when you want to use this sample data to create a drum kit.

EXB*: Drumsamples from a separately sold EXB-PCM series option board can be selected. This can be selected only if an option board containing drumsamples is installed. "*" will indicate the type of installed option.

 If a drum kit that uses a drumsample from a separately sold EXB-PCM series board is selected, but the necessary drumsample is not available because the corresponding EXB-PCM (expansion board) is not installed, the "Bank" field will indicate ROM. In this case, that drumsample will not sound. By re-selecting the drum-sample bank, you can make it sound.


 The EXB* display will depend on the type of option board.

Drumsample [0000...3999: name]

Selects the High drumsample. The sample selected here will be sounded by velocities above the "Vel. SW L→H" value. (⇒For details on each drumsample, refer to VNL.)

UTILITY Select by Category:

When **ROM** is selected as the "Bank," you can use the Utility "Select by Category" to select drumsamples by category (⇒5.1-1d).

 It is not possible to edit the category name of a drum-sample, or to re-specify its category.

S.Ofs (Start Offset) [Off, On]

On (Checked): The sample waveform will start playback from a location later than the beginning of the drumsample waveform. If the bank is **ROM** or **EXB***, the location of the Start Offset is pre-determined for each drumsample. This sample is not valid for drumsamples which have no Start Offset.


However when a RAM bank is selected, this will depend on the selected drumsample. If you select a drumsample that includes one of the following types of sample, checking this item will cause playback to start from the Loop Start Address.


- A sample that was recorded (sampled) in Sampling mode
- A sample whose Loop Start Address was edited in Sampling mode after the sample was loaded in Disk mode
- A sample whose Loop Start Address was specified automatically when it was loaded as an AKAI, AIFF, or WAVE file in Disk mode

Off (Unchecked): Playback will start from the beginning of the drumsample waveform.

Rev (Reverse) [Off, On]

On (Checked): The drumsample waveform will playback in "one-shot" reverse. If the bank is **ROM** or **EXB***, the location at which the reverse playback will start and end is pre-determined for each drumsample.

 If the drumsample is already preset for reverse playback or reverse loop playback, checking this setting will not change its playback direction. In the case of a drumsample from the **RAM** bank, the sample will play (in reverse) from "E (End)" (SMPL 3.1-2b) to "S (Start)."

 This parameter will not change the playback direction of a sample for which "Rev (Reverse)" is checked.

Trans (Transpose) [-64...+63]

Adjusts the pitch in semitone steps. +12 is one octave up, and -12 is one octave down.

Tune [-99...+99]

Adjusts the pitch in one-cent steps.

Fc (Cutoff) [-64...+63]

Adjusts the cutoff frequency of the filter. The cutoff frequency for each key is determined by adding this value to the filter "Frequency" (PROG 4.1-1b, 4.2-1b) of the program that uses this drum kit.

Reso (Resonance) [-64...+63]

Adjusts the filter resonance. The filter resonance for each key is determined by adding this value to the filter "Resonance" (PROG 4.1-1b, 4.2-1b) of the program that uses this drum kit. (When the "Type" (PROG 4.1-1a, 4.2-1a) is **Low Pass & High Pass**, there will be no resonance effect.)

At (Attack) [-64...+63]

Adjusts the attack time of the volume (Amplifier). The attack time for each key is determined by adding this value to the amp EG Attack Time of the program that uses this drum kit.

Dc (Decay) [-64...+63]

Adjusts the decay time of the volume (Amplifier). The decay time for each key is determined by adding this value to the amp EG Decay Time of the program that uses this drum kit.

■ 5.1-1c: Key-, Key+

Selects the key to which you will assign a drumsample (and its settings).

⇒ "Key" (5.1-1a)

■ 5.1-1d: UTILITY



For details on how to select the desired utility function, refer to "PROG 1.1-1d: UTILITY."


Write Drum Kits

This command writes all drum kits 000 (I-A/B)-143 (E-H).

- ① Select "Write Drum Kits" to access the dialog box.
- ② To execute the Write command press the [F8] ("OK") key. To cancel without executing press the [F7] ("Cancel") key.

You can also use the [WRITE] key to write the data in the same way as this command.

Press the [WRITE] key to access the "Update Drum Kits" dialog box, and press the [F8] key to write the data.

 **Drum kits 016 (E-A)-143 (E-H)** are for the drum kits of some of the separately sold EXB-PCM series options.

Rename Drum Kit

This command renames the selected drum kit. You can input a name of up to sixteen characters. (⇒BG p.38)

Copy Drum Kit

This command copies the settings of another drum kit to the currently-edited drum kit. Drum kits 144 (GM)–152 (GM) cannot be edited, but you may copy them to another drum kit and then edit them.

- 1 Select “Copy Drum Kit” to access the dialog box.



- 2 Select the copy source drum kit (“From”).
- 3 To execute the Copy Drum Kit command press the [F8] (“OK”) key. To cancel without executing press the [F7] (“Cancel”) key.

Copy Key Setup

This command copies the settings of an individual key to another key. You can also copy settings from two or more contiguous keys at once.

- 1 Select “Copy Key Setup” to access the dialog box.



- 2 Specify the beginning of the range of keys to be copied (“From Key”).
- 3 Select the copy destination key (“To Key”). If you selected multiple keys in “From Key,” they will be copied sequentially, starting at “To Key” and extending upward.
- 4 To execute the Copy Key Setup operation, press the [F8] (“OK”) key. To cancel without executing press the [F7] (“Cancel”) key.

Select by Category

If ROM is selected for “Bank,” you can select drumsamples by category.

All drumsamples are grouped into one of fifteen categories. For the procedure, refer to “Select by Category” (⇒p.2)

- It is not possible to edit the name of a drumsample category or to change the assigned category of a drumsample.

5.1–2: LOW (Low Sample)



5.1–2a

5.1–2b

5.1–2a: Low (Low Sample)

Drumsample Bank [ROM, RAM, EXB* ...]

Specifies the bank of the Low drumsample (⇒“Bank” 5.1–1b).

Drumsample [0000...3999: Name]

Selects the Low drumsample. This will be sounded by velocities lower than the value set for “Vel. SW L→H” (5.1–1a). (⇒For details on each drumsample, refer to VNL.)

The drumsample can be selected using the Utility “Select by Category” (⇒5.1–1d).

S.Ofs (Start Offset) [Off, On]

Rev (Reverse) [Off, On]

Trans (Transpose) [–64...+63]

Tune [–99...+99]

Fc (Cutoff) [–64...+63]

Reso (Resonance) [–64...+63]

At (Attack) [–64...+63]

Dc (Decay) [–64...+63]

⇒ “High” (5.1–1b)

■ 5.1–2b: UTILITY

⇒ “Write Drum Kits,” “Rename Drum Kit,” “Copy Drum Kit,” “Copy Key Setup,” “Select by Category” (5.1–1d)

5.1-3: Voice (Voice/Mixer)

For each key of a drum kit, you can set voice assign, pan, and effect routing etc.



5.1-3a: Voice Assign Mode/Mixer

Voice Assign Mode

Single Trig (Single Trigger) [Off, On]

On (Checked): Even when the same key (note) is played repeatedly, the previous note will be halted before the new note is begun, so that the notes will not overlap. Normally you will leave this unchecked.

Excl Group (Exclusive Group) [Off, 001...127]

001-127: This allows you to group keys to which a drum-sample is assigned. Keys to which the same group number is assigned will be treated as a single group, and will be played monophonically with last-note priority. For example you might assign closed and open hi-hat sounds to the same group so that two or more hi-hat sounds can not sound simultaneously.

Off: Keys will not be grouped. Normally you will set this **Off**.

Enable Note On (Note On Receive) [Off, On]

On (Checked): Note-on messages will be received. Normally you will check this, but you can uncheck it if you do not want specific notes to sound.

Enable Note Off (Note Off Receive) [Off, On]

On (Checked): Note-off messages will be received. Normally you will uncheck this. This parameter is valid when "Hold" (PROG 2.1-1b) is checked (**Hold On**). In the case of a drum program, you will normally select **Hold On**. In this case if "Enable Note Off" is checked, note-off messages will be received, and the sound will stop (the release segment of the EG will begin) when the key of a connected MIDI instruments released.

Mixer

Pan [Rndm, L001...C064...R127]

Specifies the panning for each key. With a setting of **Rndm** (**Random**), the panning of the drumsample will change randomly for each note-on.

BUS (Bus Select) [L/R, IFX1...5, 1...4, 1/2, 3/4, Off]

Specifies the bus to which each key will be sent. For example you can send Snare sounds to **IFX1** and Kick sounds to **IFX2** so that insert effects are applied, and send the remaining sounds to **L/R** so that no insert effects are applied.

S1 (Send1 (to MFX1)) [000...127]

S2 (Send2 (to MFX2)) [000...127]

For each key, specify the send levels to master effects 1 and 2. These settings are valid when "BUS Select" (5.1-3b) is set to **L/R** or **Off**.

If "BUS Select" is set to **IFX1-5**, the send level to master effects 1 and 2 will be determined by the Program, Combi-

nation, or Multi mode 7.2-1 Setup pages S1 (Send1 (MFX1), "S2 (Send2 (MFX2))" which are located after the sound passes through IFX1, 2, 3, 4, or 5.

Drum kits will sound using the settings of the program that is selected in Program mode. These settings are valid only if "Use DKit Setting" (Program PROG 5.1-1b) and "Use DKit Setting" (Program PROG 7.1-1a) are turned **checked**. Be aware that the results of editing a drum kit will not be reflected unless these settings have been made.

5.1-3b: UTILITY

☞ "Write Drum Kits," "Rename Drum Kit," "Copy Drum Kit," "Copy Key Setup" (5.1-1d)

GLOBAL 6.1: Arp.Pattern

Here you can create user arpeggio patterns. In this page, the TRITON-Rack will sound as it did in the mode you were in before entering Global mode.

If you moved here from Program mode: Your editing will apply to the arpeggio pattern that is selected by the program. Even if you moved from a program in which the arpeggiator is turned off, it can be turned on by the [ARP ON/OFF] key.

If you moved here from Combination mode: Your editing will apply to the arpeggio pattern that is selected by the combination. Even if you moved from a combination in which the arpeggiator is turned off, it can be turned on by the [ARP ON/OFF] key.

However, it is not possible to turn on an arpeggiator for which the **A** or **B** parameter is unchecked in "Arpeggiator Run" (COMBI 1.1-4a/5a, COMBI 6.1-1a). Also, the arpeggiator will not run unless it has been assigned to a timbre in "Assign" (COMBI 6.1-1b).

If you moved here from Multi mode: Your editing will apply to the arpeggio pattern specified for the selected multi.

Even if you moved here from settings in which the arpeggiator was turned off, you can use the [ARP ON/OFF] key to turn it on. However, it is not possible to turn on an arpeggiator for which the "Arpeggiator Run" (MULTI 6.1-1(2)a) parameter A or B is not checked. Also, the arpeggiator will not operate if it has not been assigned to a timbre in "Assign" (MULTI 6.1-1(2)b).

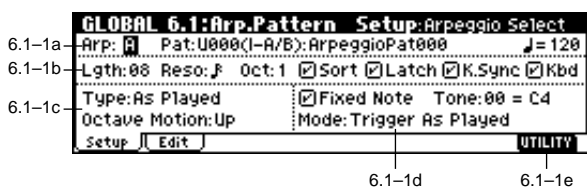
In each of the above cases, you can modify the settings of the arpeggio pattern even if the arpeggiator is not turned on. When editing a pattern, it is a good idea to turn on the arpeggiator and make sure that it is the pattern that you wish to edit.

If you moved here from Sampling mode: The arpeggiator will not turn on, nor will it be possible to edit the arpeggio pattern.

If you want the edited user arpeggio pattern settings to be backed up even when the power is turned off, you must write them into memory. Select the Utility "Write Arpeggio Pattern" to access the Write Arpeggio Pattern dialog box. Alternatively, press the [WRITE] key to access the "Update Arpeggio Patterns" dialog box. Then press the [F8] ("OK") key to write the edited data.

☞ For details on creating an arpeggio pattern, refer to BG p.89.

6.1-1: Setup



6.1-1a: Arp, pat (Pattern), ♩

Arp (Arpeggio Select) [A, B]

If you have moved from Combination mode or Multi mode and edit an arpeggio pattern, you must select either arpeggiator A or B as the pattern to edit. Your editing will apply only to the selected one.

B will not be displayed if you moved here from Program mode.

Pat (Pattern) [P00...P04, U000(I-A/B)...U327(E-H)]

Selects the pattern that you wish to edit.

♩ (Tempo) [040...240, EXT]

Specify the tempo.

This can also be adjusted by the REALTIME CONTROLS C-mode [TEMPO] knobs. If "MIDI Clock" (2.1-1a) is **External**, the display will indicate **EXT** and the arpeggiator will synchronize to MIDI Clock messages from an external MIDI device.

6.1-1b: Lgth, Reso, Oct, Sort, Latch, K.Sync, Kbd

Lgth (Length) [01...48]

Specify the length of the arpeggio pattern. After the note value specified by "Reso" occurs for the number of times specified here, the pattern will return to the beginning. This parameter is not valid for preset patterns **P00-04**.

Reso (Resolution) [♩₃, ♩, ♩₃, ♩, ♩₃, ♩]

Oct (Octave) [1, 2, 3, 4]

Sort [Off, On]

Latch [Off, On]

K.Sync (Key Sync.) [Off, On]

Kbd (Keyboard) [Off, On]

⇨ PROG 6.1: Ed-Arpeggio. "Setup(Arpeggio Setup)"

⚠ "Pat," "♩ (Tempo)," "Oct," "Reso," "Sort," "Latch," "K.Sync," and "Kbd" are parameters that can be set in Program, Combination, Multi, but you can also set them here.

If you move here from Program or Combination mode and set these parameters, you must return to the original mode and write them. These parameters cannot be written by the "Write Arpeggio Patterns" command in this page.

6.1-1c: Arpeggio Pattern Setup

⚠ These parameters are not valid for preset patterns **P00-P04**.

Type (Arpeggio Type) [As Played...Up&Down]

Specifies the correspondence between the arpeggio notes specified from the keyboard of the connected MIDI instrument and the Tone at each step.

As Played: If there are more **Tones** in a step than arpeggio notes specified (notes played on the keyboard), those steps will not sound.

As Played (Fill): If there are more **Tones** in a step than arpeggio notes specified (notes played on the keyboard), the last arpeggio note (the last-played note if "Sort" is **Off**, or the highest note if "Sort" is **On**) will sound for those steps.

Running Up: If there are more **Tones** in a step than arpeggio notes specified (notes played on the keyboard), the arpeggio will return to the first note (the first-pressed note if "Sort" is **Off**, or the lowest note if "Sort" is **On**) and sound it.

Up&Down: If there are more **Tones** in a step than arpeggio notes specified (notes played on the keyboard), the arpeggio will return in reverse direction from the last arpeggio note back toward the first.

Example

If you set "Lgth" to **04**, "Step" **01** to **Tone0**, "Step" **02** to **Tone1**, "Step" **03** to **Tone2**, "Step" **04** to **Tone3**, and simultaneously play three notes to produce an arpeggio, the following results will be produced depending on the "Type."

As Played: 0 → 1 → 2 → rest → 0 → 1 → 2 → rest → 0 ...

As Played (Fill): 0 → 1 → 2 → 2 → 0 → 1 → 2 → 2 → 0 ...

Running Up: 0 → 1 → 2 → 0 → 0 → 1 → 2 → 0 → 0 ...

Up&Down: 0 → 1 → 2 → 1 → 0 → 1 → 2 → 1 → 0 ...

Octave Motion [Up, Down, Both, Parallel]

Specifies the operation when "Oct" is set to 2-4 octaves.

Up: Notes will repeatedly ascend within the specified range of octaves.

Down: Notes will repeatedly descend within the specified number of octaves.

Both: Notes will repeatedly ascend and descend within the specified number of octaves.

Parallel: The notes of the specified octaves will sound simultaneously.

6.1-1d: Fixed Note, Mode, Tone No., Fixed Note No.

Fixed Note [Off, On]

Specifies the **Tone** type (the "●" or "○" displays in 6.1-2) of the arpeggio pattern.

Off (Unchecked): This is the normal arpeggiator type. The Tone pitches will be expanded into an arpeggio based on the note number played on the keyboard of the connected MIDI instrument.

On (Checked): You can specify the note number for each **Tone**. The note numbers from the keyboard of a connected MIDI instrument will be ignored for the purposes of the **Tone** pitch, and the arpeggio will be sounded using the note numbers specified for each **Tone**. The note numbers from the keyboard will only control the timing at which the arpeggiator is triggered. This setting is suitable for arpeggio patterns used for drum patterns etc.

Mode (Fixed Note Mode)

[Trigger As Played, Trigger All Tones]

Specifies how tones will be triggered when “Fixed Note” is checked.

Trigger As Played: The **Tones** will be triggered according to the number of keys pressed.

Trigger All Tones: Pressing a single key will trigger all **Tones**.

Example)

Here’s how the drums pattern will sound when “Fixed Note” is checked. **Tone 1** is assigned a note number that plays a kick sound, **Tone 2** a snare, and **Tone 3** a hi-hat. With a setting of **Trigger As Played**, pressing one key will sound only **Tone 1** (kick). Pressing two keys will sound **Tone 1** (kick) and **Tone 2** (snare). Pressing three keys will sound all three Tones 1–3 (kick, snare, hi-hat). If the “Vel (Velocity)” of each **Tone** is set to **Key**, each **Tone** will be sounded at the velocity with which each key was played.

With a setting of **Trigger All Tones**, playing one key is sufficient to sound all three; **Tone 1** (kick), **Tone 2** (snare), and **Tone 3** (hi-hat). If the “Vel (Velocity)” of each **Tone** is set to **Key**, the **Tones** will be sounded at the corresponding velocity each time a key is pressed.

Tone No. [00...11]

This is valid only if “Fix Note” (6.1–1d) is checked. It selects the **Tone**.

Fixed Note No. [C–1...G9]

Specifies the note number for the selected **Tone**. You can also input this value by holding down the [ENTER] key and pressing a note on the keyboard.

6.1–1e: UTILITY



For details on how to select the desired utility function, refer to “PROG 1.1–1d: UTILITY.”

Write Arpeggio Patterns

This command writes user arpeggio patterns U000 (I–A/B)–U327 (E–H).

- ① Select “Write Arpeggio Patterns” to access the dialog box.
- ② To execute the Write command press the [F8] (“OK”) key. To cancel without executing press the [F7] (“Cancel”) key.

You can also write the same data as “Write Arpeggio Patterns” by pressing the [WRITE] key.

Press the [WRITE] key to access the “Update Arpeggio Patterns” dialog box, and press the [F8] to write the data.

▲ “Pat,” “Tempo,” “Oct,” “Reso,” “Sort,” “Latch,” “K.Sync,” and “Kbd” are parameters that are set in Program, Combination, and Multi modes. The Write operation executed here does not save these parameters.

If you move here from Program or Combination mode and set these parameters, you must return to the original mode and write them.

▲ **Patterns U200 (E–A)–U327 (E–H)** are for the patterns of some EXB-PCM series option boards (sold separately).

Rename Arpeggio Pattern

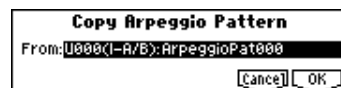
This command renames the selected user arpeggio pattern. Up to sixteen characters can be input. Preset patterns P00–P04 cannot be selected (⇨BG p.85).



Copy Arpeggio Pattern

This command copies the settings of another user arpeggio pattern to the currently selected arpeggio pattern. It is not possible to copy from a preset arpeggio pattern P00–P04.

- ① Select “Copy Arpeggio Pattern” to access the dialog box.

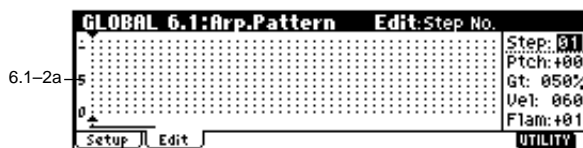


- ② Select the copy source arpeggio pattern “From.”
- ③ To execute the Copy Arpeggio Pattern command press the [F8] (“OK”) key. To cancel without executing press the [F7] (“Cancel”) key.

6.1–2: Edit

Here you can input **Tones 0–11** for each step 01 to 48. “Step” can be a maximum of 48 steps, and **Tone** corresponds to up to twelve notes for the (up to) twelve keys pressed simultaneously. If “Sort” (6.1–1b) is checked, the notes that were pressed will correspond in ascending order of pitch to **Tones 0, 1**, etc. If “Sort” (6.1–1b) is unchecked, the notes that were pressed will correspond to **Tones 0, 1**, etc. in the order in which they were pressed.

▲ These parameters are not valid for preset patterns P00–P04.



6.1–2b

6–2a: Step, Ptch, Gt, Vel, Flam

Step (Step No.) [01...48]

Select the step that you wish to edit, and set/reset each **Tone**.

When the “Step” is selected, use the numeric keys to input the **Tones**. Numeric keys [0]–[9] correspond to **Tones 0–9**, [–] corresponds to **Tone 10**, and [./HOLD] to **Tone 11**. Each time you press a key, the **Tone** will be set or reset.

If “Fix Note” (6.1–1d) is checked, this will be displayed as “●.” If unchecked, this will be displayed as “○.”

To delete all **Tones** of a step, use the Utility “Delete Step.” To insert a blank step, use the Utility “Insert Step.”

Ptch (Pitch Offset) [–48...+48]

For each step, the pitch corresponding to the **Tone** can be raised or lowered in semitone steps. This lets you make settings for the same tone in each step to create a melody, or to make settings for two or more tones in each step to play parallel chords.

Gt (Gate) [Off, 001...100%, LGT]

Off: That step will not sound even if **Tones** have been specified.

LGT: Notes will continue sounding until the same **Tone** is sounded next, or until the pattern returns to the beginning. At this time, the display will change to "■" or "□."

This setting is valid when the Program, Combination, or Multi parameter "Gate" (PROG 6.1-1a, COMBI 6.1-2(3)a, MULTI 6.1-3(4)a) is set to **Step**. When making this setting, make sure that "Gate" is set to **Step** in the mode from which you arrived here.

Vel (Velocity) [001...127, Key]

Key: The Tone of the step will sound with the velocity at which the key was played.

001-127: The specified velocity value will always be used. This setting is valid when the Program, Combination, or Multi parameter "Velocity" (PROG 6.1-1, COMBI 6.1-2/3, MULTI 6.1-3(4)a) is set to **Step**.

When making this setting, make sure that "Velocity" is set to **Step** in the mode from which you arrived here.

Flam [-99...+99]

Specifies how the note timing will be skewed when two or more **Tones** are specified in the same step.

00: All **Tones** will sound simultaneously.

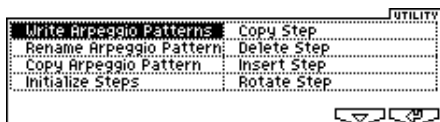
+01-+99: The timing of the notes will be skewed in the order of the **Tone** number. (When "Sort" is **ON**, from low note to high note. When "Sort" is **OFF**, in the order in which keys were pressed.)

-01- -99: The timing of the notes will be skewed in the opposite direction as "+."

To simulate chords strummed on a guitar, it is effective to set "+" values for odd-numbered steps and "-" values for even-numbered steps.

This setting is not valid for preset patterns P00-P04.

■ 6.1-2b: UTILITY



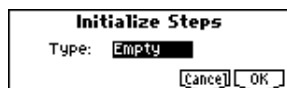
⇐ "Write Arpeggio Patterns," "Rename Arpeggio Pattern," "Copy Arpeggio Pattern" (6.1-1e)

For details on how to select the desired utility function, refer to "PROG 1.1-1d: UTILITY."

Initialize Steps

This command initializes the step parameters ("Tone," "Ptch," "Gt," "Vel," "Flam") of the arpeggio pattern.

- 1 Select "Initialize Steps" to access the dialog box.

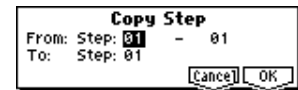


- 2 Select the type "Type" of initialize.
Empty will initialize all tones to a blank state. **Full** will initialize all tones to a full state.
- 3 To execute the Initialize Steps operation, press the [F8] ("OK") key. To cancel without executing, press the [F7] ("Cancel") key.

Copy Step

This command copies the settings of a specific step. The settings of two or more adjacent steps can also be copied together.

- 1 Select "Copy Step" to access the dialog box.

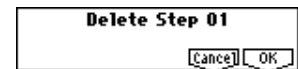


- 2 Select the range of steps that you wish to copy ("From Step").
- 3 Select the copy destination step "To Step".
If you selected more than one step in "From Step," the steps will be copied starting at "To Step" and continuing through the steps to the right.
- 4 To execute the Copy Step command, press the [F8] ("OK") key. To cancel without executing, press the [F7] ("Cancel") key.

Delete Step

This command deletes the step parameters ("Tone," "Ptch," "Gt," "Vel," "Flam") of the currently selected step number. Subsequent steps will move one column toward the left.

- 1 Select "Delete Step" to access the dialog box.

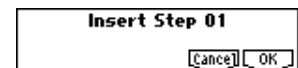


- 2 To execute the Delete Step operation, press the [F8] ("OK") key. To cancel without executing, press the [F7] ("Cancel") key.

Insert Step

This command inserts an empty step into the currently selected step number. Subsequent steps will be moved one step to the right.

- 1 Select "Insert Step" to access the dialog box.

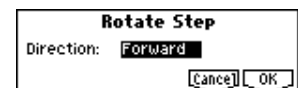


- 2 To execute the Insert Step operation, press the [F8] ("OK") key. To cancel without executing, press the [F7] ("Cancel") key.

Rotate Step

This command rotates the step settings.

- 1 Select "Rotate Step" to access the dialog box.




- 2 Select the type "Direction" of rotation.
For example, suppose there is a pattern of "Length" 4. If you select **Forward**, the settings of Step 1 will be rewritten to 2, Step 2 → 3, Step 3 → 4, Step 4 → 1. If you select **Backward**, the settings of Step 1 will be rewritten to 4, Step 2 → 1, Step 3 → 2, Step 4 → 3.
- 3 To execute the Rotate Step operation, press the [F8] ("OK") key. To cancel without executing, press the [F7] ("Cancel") key.

6. Disk mode

In Disk mode you can save and load internal memory data to and from a floppy disk or a connected external SCSI device (if the separately sold EXB-SCSI option is installed). You can also make various settings related to saving and loading.

The TRITON-Rack can use MS-DOS format 3.5 inch 2HD or 2DD floppy disks. After a floppy disk has been formatted on the TRITON-Rack, a 2HD disk will have a capacity of 1.44 MB (18 sectors/track), and a 2DD disk will have a capacity of 720 KB (9 sectors/track). When the EXB-SCSI option is installed, up to 4 GB can be formatted on an external SCSI device.

 The TRITON-Rack cannot format media with a format of other than 512 bytes/block (such as 640 MB, 1.3 GB MO disks etc.).

For details on connecting external SCSI devices and setting the ID, refer to the EXB-SCSI owner's manual.

ISO9660 format is supported. ISO9660 level 1 CD-ROM discs can be read. (Multi-session data can be read only if the first session is in ISO 9660 format.)

Files, directories, and icons

The TRITON-Rack manages data on disks and other media in a hierarchical manner, using files and directories. The contents of a file (whether it is a file or a directory) are indicated not only by the name but also graphically by an icon. Files and directories have differently shaped icons.


On the TRITON-Rack, files and directories that can be recognized by MS-DOS (i.e., read by an MS-DOS computer) are

referred to as DOS files and DOS directories.

Various types of DOS files are distinguished by the extension that is added to the filename.

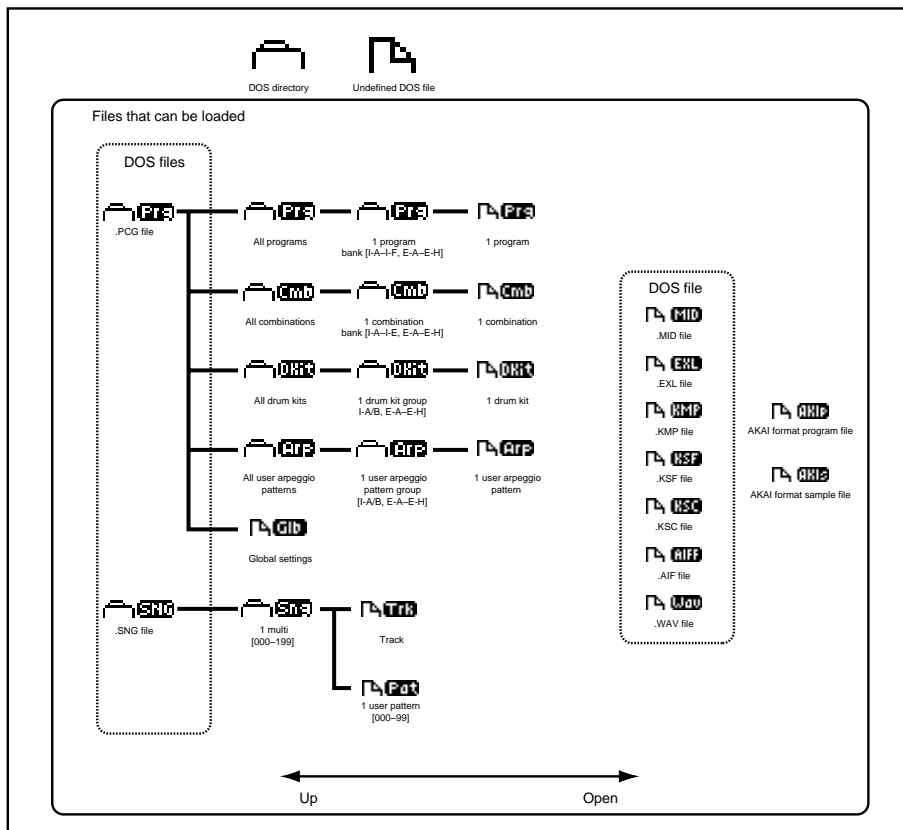
In the case of a DOS file with an extension other than listed below, selecting "Load selected" to access the dialog box will cause the file to be considered to be a Standard MIDI File (SMF). However, non-SMF files cannot be loaded.

When you save a file on the TRITON-Rack, one of these file-name extensions will automatically be added as appropriate for the type of data.

 If you change the filename extension of the following files, they will be handled as undefined files when you attempt to load them again; they will not be loaded correctly.

Extension	Type
.PCG	Program, combination, drum kit, user arpeggio pattern, global settings (TRITON format)
.SNG	Multi (Song)
.MID	Standard MIDI File (SMF)
.EXL	MIDI exclusive data
.KMP	Korg Multisample Parameter file (Korg format)
.KSF	Korg Sample File (Korg format)
.KSC	Korg Script File (Korg format)
.AIF	AIFF file
.WAV	WAVE file

Files handled by the TRITON-Rack have the following structure. Since .PCG and .SNG files can be opened to divide their contents, they are displayed as directory icons.



DISK PAGE MENU

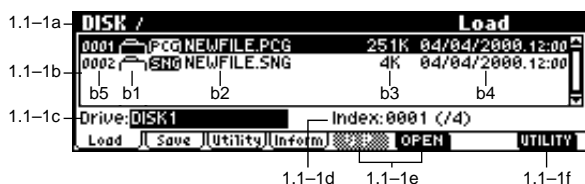
In Disk mode you can press the [F1]–[F4] keys located below the tab to select the desired page.

Load	Load the contents of the selected file or directory into internal memory. (☞p.124)
Save	Save various from internal memory to disk or other media. (☞p.133)
Utility	Rename, copy, or delete a selected disk or file, create a new directory, or specify the date and time. (☞p.136)
Media Information	View information on the selected media. (☞p.138)

1.1–1: Load

Here you can load a selected file or directory into internal memory.

Use the [F5] (“UP”) key and [F6] (“OPEN”) key to select the desired file or directory. Then use the Utility “Load selected” (1.1–1f) to select and load the data.



1.1–1a: Current directory

The directory currently selected for processing is referred to as the “current directory.”

The LCD screen will show the full path name of the directory. A slash “/” character is used as the delimiter between directory levels. To change the current directory, use the [F5] (“UP”) key and [F6] (“OPEN”) key.

1.1–1b: Directory window

Directory window

File information for the current directory is shown here. You can select a file or directory in this window.

b1: File/icon

The icon indicates the type of file.

For details on icons, ☞p.123.

b2: File name

This is the name of the file (DOS file).

If the Utility “Translation” (1.1–1f) is **checked**, the DOS file-name of a .KMP (Korg multisample parameter) file or .KSF (Korg sample file) that is loaded will be replaced in the display by the multisample name or sample name that you specified in Sampling mode.

b3: Size

This is the size of the file (in bytes).

b4: Save date and time

This shows the date and time when the file was saved. From the left, this is shown as day, month, year, hours and minutes.

However since the TRITON-Rack does not contain an internal calendar or clock, you must use “Set Date/Time” (1.1–3a) to set the date and time before saving the file.

b5: File index

This displays the file index.

1.1–1c: Drive select

Selects the device (floppy disk or hard disk etc.) that will be used for loading and saving.

When you press the [SELECT], [ARP ON/OFF], [AUDITION], [DEMO/SNG] key or any key other than a mode key to make the TRITON-Rack recognize media (floppy disk, hard disk etc.), the volume label of that media will be displayed. For media that has no volume label, the display will indicate “no label.” For unformatted media, the display will indicate “Unformatted.”

If the EXB-SCSI option is not installed, only the floppy disk can be selected.

1.1–1d: File select

The file/directory selected in the directory window will be shown in “Index:” The total number of files in the current directory is shown in “(/).”

Use the [◀], [▶] keys to choose File Select, and use the numeric keys to directly select the file or directory to be edited.

■ 1.1–1e: UP, OPEN

Select the current directory.

Use the [F5] (“UP”) key and [F6] (“OPEN”) key to select the current directory.

UP : Move to the higher directory.

OPEN : Move to a lower directory.

■ 1.1–1f: UTILITY



For details on how to select the desired utility function, refer to “PROG 1.1–1d: UTILITY.”

Hide unknown file

Select “Hide unknown file” in the utility menu and press the [F8] key. A check mark will appear at the left of “Hide unknown file.” With this setting, undefined files will not be displayed in the directory window. However, this is effective only if the current directory is a DOS directory.

Translation

Select “Translation” in the utility menu and press the [F8] key. A check mark will appear at the left of “Translation.” With this setting, .KMP (Korg multisample parameter) files and .KSF (Korg sample file) DOS file names will be displayed as the multisample name or sample name used in Sampling mode etc.

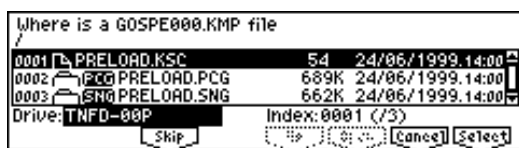
Load selected

This command loads into internal memory the file or directory that was selected in the "directory window" (1.1-1b). When you choose "Load Selected" from the Utility menu, a dialog box will appear. The dialog box will differ depending on the type of file to be loaded.

If the file to load cannot be found, or when loading a file that was saved in parts

If the file that you need to load is not found in the current directory or in a directory below it, a dialog box (Where is a ...) shown below will appear. This will appear in the following cases.

- If when loading a .KSC file, a .KMP file used by it cannot be found.
- If when loading a .KMP file, a .KSF file cannot be found
- If when loading an AKAI S1000/S3000 format Program file, a Sample file cannot be found.
- If loading a .KSF file that was larger than the media capacity and was therefore saved on multiple media, when the first media has been loaded and the second disk etc. needs to be specified.
- When loading a .PCG file that was split across two or more volumes of media, when the first volume has been loaded and the second disk etc. is now required.
- When loading a .PCG file and also simultaneously loading a .SNG file and .KSC file, if the identically-named .SNG/.KSC files are not found in the current directory after loading the .PCG file.



If this dialog box appears, take the following action.

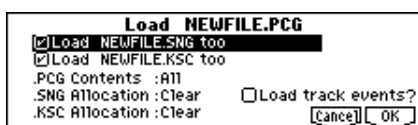
- ① Select the directory that contains the file requested by "Where is a ...". If the specified file is on another disk, exchange disks and press the [SELECT], [ARP ON/OFF], [AUDITION], [DEMO/SNG] key or any key other than a mode key to make the TRITON-Rack detect the new disk. Then select the appropriate directory.

⚠ It is not possible to open .PCG or .SNG files in the "Where is a ..." dialog box. The [F6] ("OPEN") key cannot be used for .PCG or .SNG files.

- ② Press the [F8] ("Select") key to resume loading. If you press the [F7] ("Cancel") key, loading will be halted. If you press the [F3] ("Skip") key, the specified files will be skipped, and the next file will be loaded. Except for special cases in which the disk containing the specified file has been damaged or is unavailable, press the [F8] ("Select") key to continue loading.

1) Load .PCG:  selected icon

All data in the .PCG file will be loaded.



- ① Use the "Load *****.SNG too" and "Load *****.KSC too" check boxes to select the .SNG file and .KSC file.
 - If you check "Load *****.SNG too," the file with an identical name to the .PCG file and an extension of .SNG will also be loaded.

- If you check "Load *****.KSC too," the file with an identical name to the .PCG file and an extension of .KSC will also be loaded.

If this file does not exist in the current directory, load it as described in the above procedure "If the file to load cannot be found,..."

- ② In ".PCG Contents," specify the data to be loaded.

All: Load all data from the .PCG file.

Bank IA-IE, EA-EH: Load data of the specified bank. In this case, use "To" to specify the load destination bank. When you execute the load, the combinations, programs, drum kits, and user arpeggio pattern data of only the specified bank will be loaded to the load destination bank. Global settings will not be loaded.

The bank of the programs used by combinations, the numbers of user arpeggio pattern used by combinations/programs, and the number of the drum kits used by the Programs will be corrected automatically so that they are appropriate.

Similarly if a .SNG file is loaded simultaneously, the bank of the programs used by tracks of the Multi (or if there are track/pattern events, the bank of the program within the event) will be corrected automatically so that they are appropriate.

⚠ If data of the specified bank is completely absent from the .PCG file, an error of "No readable data" will be displayed, and the load operation will be halted.

⚠ If no program data of the specified bank is found in the .PCG file, the program banks of the combination or multi timbres/tracks will not be set automatically.

⚠ If no user arpeggio patterns of the specified bank are found in the .PCG file, the user arpeggio pattern numbers of combinations, programs (/Multi) will not be set automatically.

⚠ If no drum kits of the specified bank are found in the .PCG file, the drum kit number of the programs will not be set automatically.

⚠ If you specify banks I-C/I-D/I-E when loading a TRITON-Rack .PCG file, drum kits and user arpeggio patterns will not be loaded.

⚠ If you use All to load a .PCG file from the TRITON/TRITONpro/TRITONproX, the following dialog box will appear if that .PCG file contains either Drumkit Bank C/Bank D/Bank User or User Arpeggio Pattern Bank C/Bank D. In this dialog box you can specify the loading destination for each bank. Only banks existing in the .PCG file are valid. **Unless you check** the check box of a valid bank, that bank will not be loaded. Press the [F8] ("OK") key to execute loading, or press the [F7] ("Cancel") key to cancel without loading.



- ③ If “Load *****.SNG too” is **checked**, you can use “Select .SNG Allocation” to specify how multi data within the .SNG file will be loaded.

Append: The multi data will be loaded starting at the number that follows the last multi data in memory. The multi data within the .SNG file that is being loaded will be packed into the available locations (⇨“.SNG Allocation” diagram in “Load .SNG too”). Select this method when you wish to load multi data from disk without erasing the multi data that is already in memory.

Clear: All multi data existing in memory will be erased, and the multi data of the file will be loaded with the same configuration in which it was saved (⇨“.SNG Allocation” diagram in “Load .SNG too”). Select this method when you wish to reproduce the exact state that was saved, such as immediately after the power is turned on.

- ④ If “Load *****.SNG too” is **checked**, you can use “Load track events?” to specify how track events within the .SNG file will be loaded.

On (Checked): Track events and user pattern events in the .SNG file will be loaded.

Off (Unchecked): Only user pattern events will be loaded; track events will not be loaded.

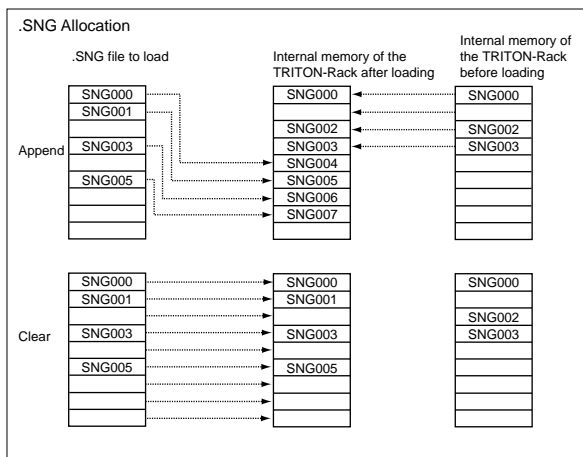
Normally you will leave this Off.

note Track events are recorded in .SNG files saved by the TRITON/TRITONpro/TRITONproX, but cannot be used by the Multi mode of the TRITON-Rack even if they are loaded.

However, track events loaded into Multi mode can be converted into demo song data using the DEMO/SNG Utility “Make Demo Data.” If you wish to do so, “Load track events?” **checked** to load the track events.

For the procedure of creating demo song data, refer to p.139 “Make Demo Song.”

- ⚠ If the .SNG file does not contain any events to load, only the Multi track settings will be loaded.



- ⑤ “.KSC Allocation” is valid if “Load *****.KSC too” has been **checked**. You can specify how the multisamples and samples in the .KSC file will be loaded.

Append: Samples will be loaded starting at the first unoccupied number following the last multisample or sample that currently exists in memory (i.e., by having been sampled or loaded). At this time, only the valid multisamples or samples will be loaded, and they will be organized in numerical order. (⇨“.SNG Allocation” diagram)

At the same time, programs within the .PCG file that use multisamples from the .KSC file will automatically have the multisample settings for their oscillators rewritten so that each program uses the correct multisample. Drum

kits in the .PCG file that use samples from the .KSC file will automatically have the sample settings for the drum kit rewritten so that the drum kit uses the correct samples.

Clear: All multisamples and samples currently in memory will be erased, and the multisamples and samples will be loaded in the same configuration in which they were saved. (⇨“.SNG Allocation” diagram)

If memory already contains multisamples or samples that you wish to keep, and you wish to load additional multisamples or samples from disk, select **Append**.

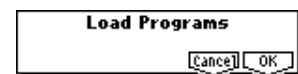
If the power has just been turned on, or you want to reproduce the state that was saved, select **Clear**.

- ⑥ To load the data, press the [F8] (“OK”) key. To cancel without loading, press the [F7] (“Cancel”) key.

2) Load Programs:

selected icon

All program data from a .PCG file will be loaded.

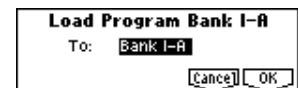


- ① To load the data, press the [F8] (“OK”) key. To cancel without loading, press the [F7] (“Cancel”) key.

3) Load Program Bank [I-A...I-E, E-A...E-H]:

selected icon

All program data of the selected bank will be loaded into the bank you specify.



- ① In “To,” select the loading destination bank.

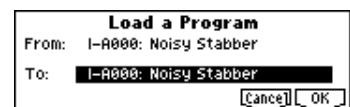
⚠ Bank I-F program data can be loaded only into bank I-F. If you select bank I-A...I-E, E-A...E-H, it will not be possible to select bank I-F in “To.”

- ② To load the data, press the [F8] (“OK”) key. To cancel without loading, press the [F7] (“Cancel”) key.

4) Load a Program:

selected icon

Data for the selected program will be loaded into the program number you specify.




- ① If you wish to load a program other than the one already selected, use “From” to select the program that you wish to load.

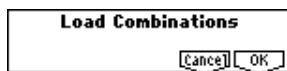
- ② In “To,” select the bank and program into which the data will be loaded.

⚠ Data for one bank I-F program can be loaded only into bank I-F. If bank I-A - I-E or E-A - E-H is selected in “From,” bank I-F cannot be selected in “To.”

- ③ To load the data, press the [F8] (“OK”) key. To cancel without loading, press the [F7] (“Cancel”) key.

5) Load Combinations: selected icon 

All combinations in the .PCG file will be loaded.



- 1 To load the data, press the [F8] ("OK") key. To cancel without loading, press the [F7] ("Cancel") key.

6) Load Combination Bank [I-A...I-E, E-A...E-H] :

selected icon 

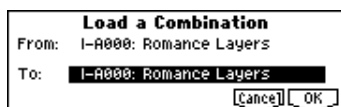
All combinations in the selected bank will be loaded into the bank you specify.



- 1 In "To," specify the loading destination bank.
- 2 To load the data, press the [F8] ("OK") key. To cancel without loading, press the [F7] ("Cancel") key.

7) Load a Combination: selected icon 

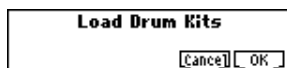
The combination you select will be loaded into the loading destination combination number you specify.




- 1 If desired, use "From" to re-select the combination to be loaded.
- 2 In "To," select the bank and combination into which the data will be loaded.
- 3 To load the data, press the [F8] ("OK") key. To cancel without loading, press the [F7] ("Cancel") key.

8) Load Drum Kits: selected icon 

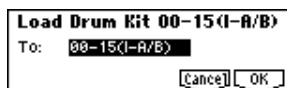
All drum kits in the .PCG file will be loaded.



- 1 To load the data, press the [F8] ("OK") key. To cancel without loading, press the [F7] ("Cancel") key.

9) Load Drum Kit [00-15(I-A/B), 16-31(E-A)...128-143(E-H)]:
selected icon 

All drum kit data of the selected drum kit block will be loaded into the drum kit block you specify as the loading destination.



- 1 In "To," select the drum kit block into which the data will be loaded.
- 2 To load the data, press the [F8] ("OK") key. To cancel without loading, press the [F7] ("Cancel") key.

10) Load a Drum Kit: selected icon 

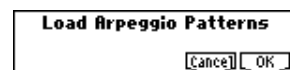
The selected drum kit will be loaded into the drum kit number you specify as the loading destination.




- 1 If desired, use "From" to re-select the drum kit to be loaded.
- 2 In "To," select the loading destination drum kit.
- 3 To load the data, press the [F8] ("OK") key. To cancel without loading, press the [F7] ("Cancel") key.

11) Load Arpeggio Patterns: selected icon 

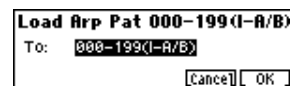
All user arpeggio pattern data in the .PCG file will be loaded.




- 1 To load the data, press the [F8] ("OK") key. To cancel without loading, press the [F7] ("Cancel") key.

12) Load Arpeggio Pattern [000-199(I-A/B), 200-215(E-A)...312-327(E-H)]: selected icon 

All user arpeggio pattern data in the selected user arpeggio pattern block will be loaded into the user arpeggio pattern block you specify as the loading destination.



- 1 In "To," select the loading destination user arpeggio pattern block.

 If you select user arpeggio pattern block 000-199 (I-A/B) as the destination for loading either 200(E-A)-327(E-H), user arpeggio patterns 000-015 will be loaded. If you select 200(E-A)-327(E-H) as the loading destination for 000-199 (I-A/B), the data will be loaded into user arpeggio patterns 000-015.


- 2 To load the data, press the [F8] ("OK") key. To cancel without loading, press the [F7] ("Cancel") key.

13) Load an Arpeggio Pattern: selected icon 

The selected user arpeggio pattern data will be loaded into the user arpeggio pattern number that you specify as the loading destination.



- 1 If desired, use "From" to re-select the user arpeggio pattern to be loaded.
- 2 In "To," specify the loading destination user arpeggio pattern.
- 3 To load the data, press the [F8] ("OK") key. To cancel without loading, press the [F7] ("Cancel") key.

14) Load Global Setting: selected icon 

Global setting data in the .PCG file will be loaded.

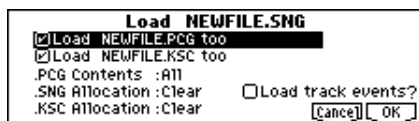
- ⚠ This includes Global mode parameters other than drum kits and user arpeggio patterns. Memory protect, LCD screen contrast, and system clock settings will not be loaded.



- ① To load the data, press the [F8] ("OK") key. To cancel without loading, press the [F7] ("Cancel") key.


15) Load .SNG: selected icon 

All data in the .SNG file will be loaded.



- ① Set ".SNG Allocation" to specify how the multi data of the .SNG file will be loaded.
 - ☞ "1) Load .PCG: ③"
- ② Set "Load track events?" to specify whether the track events of the .SNG file will be loaded.
 - ☞ "1) Load .PCG: ④"
- ③ If a .PCG file or .KSC file of the same name exists in the current directory, you can select the "Load *****.PCG too" and "Load *****.KSC too" check boxes.
 - ☞ "1) Load .PCG: ①"
- ④ If you checked "Load *****.PCG too," set ".PCG Contents" to specify the bank of the .PCG file.
 - ☞ "1) Load .PCG: ②"
- ⑤ If you checked "Load *****.KSC too," set ".KSC Allocation" to specify how the multisamples and samples in the .KSC file will be loaded.
 - ☞ "1) Load .PCG: ⑤"
- ⑥ To load the data, press the [F8] ("OK") key. To cancel without loading, press the [F7] ("Cancel") key.

- ⚠ When loading a .SNG file from a TRITON/TRITONpro/TRITONproX, the song data will be used as data for the corresponding multi. In this case, the cue list file will not be loaded. Also, if you select a TRITON/TRITONpro/TRITONproX cue list file, it will not be possible to execute "Load selected."

16) Load a Multi: selected icon 

The selected multi data will be loaded into the multi number you specified as the load destination.



- ① If you wish to load a multi other than the selected multi, use "From" to re-select the multi to be loaded.
- ② In "To," select the loading destination multi.
- ③ Use "Load track events?" to specify whether track events within the multi data will be loaded.
 - ☞ "1) Load .PCG: ④"
- ④ To load the data, press the [F8] ("OK") key. To cancel without loading, press the [F7] ("Cancel") key.

17) Load tracks: selected icon 

The selected Track file will be loaded into the multi you specify as the loading destination. However, it is not possible to specify an uncreated multi as the loading destination.



- ① In "To," specify the loading destination multi.
- ② To load the data, press the [F8] ("OK") key. To cancel without loading, press the [F7] ("Cancel") key.

- ⚠ When loading a TRITON/TRITONpro/TRITONproX .SNG file, song file, or track file, the track file data (events of all tracks) cannot be used by the multi. However, TRITON/TRITONpro/TRITONproX .SNG files loaded into Multi mode can be converted into demo song data using the DEMO/SNG Utility "Make Demo Data." This allows you to play the track file data (events of all tracks) in the DEMO/SNG Play page.

18) Load Pattern Data: selected icon 

The selected user pattern will be loaded into a user pattern of the selected loading destination multi. However, it is not possible to specify an uncreated multi as the loading destination.



- ① If you wish to load a user pattern other than the one already selected, use "From" to re-select the user pattern that you wish to load.
- ② In "To" and "Pattern," select the loading destination multi and user pattern.
- ③ To load the data, press the [F8] ("OK") key. To cancel without loading, press the [F7] ("Cancel") key.

19) Load Standard MIDI File: selected icon 

This command loads the selected Standard MIDI File into the user patterns of the multi that you select as the loading destination.



- ① Use "To" to select the loading destination multi. The data will be loaded starting at the number following the last user pattern that was recorded or loaded into internal memory.
- ② To load the data, press the [F8] ("OK") key. To cancel without loading, press the [F7] ("Cancel") key.

- ⚠ If you select an undefined file and select "Load Selected," the file will be assumed to be a Standard MIDI File, and the "Load Standard MIDI File" dialog box will appear. When you execute loading, the data will be loaded into the user patterns of the multi you specified as the loading destination. However if the file format is not appropriate, the operation will be invalid, and an error message will be displayed.

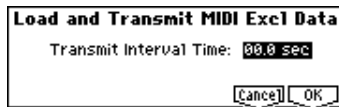
The program bank and program numbers loaded into the multi will follow the “Bank Map (GLOBAL 1.1-2a) setting. If “Bank Map” is **KORG**, bank I-A will be selected for bank select 00.00 (MSB.LSB). If “Bank Map” is **GM(2)**, bank I-G will be selected.

It is not possible to load a Standard MIDI File longer than 99 measures. In the case of a Format 1 Standard MIDI File containing more than 16 tracks, identical channels may be combined into a single pattern.

20) Load and Transmit MIDI Exclusive Data:

selected icon

Load all data from the .EXL file and transmit it from MIDI OUT.



- ① If the .EXL file contains two or more exclusive data items, use “Transmit Interval Time” to specify the time interval that will be inserted between each item of exclusive data. If you are transmitting the data to another TRITON-Rack, the required time interval will depend on the type of data. After transmitting all .PCG data, you must allow an interval of approximately 16 seconds. For details refer to the Global mode section on Damp (⇨GLOBAL 2.1-1c). For other MIDI devices, refer to their owner’s manual.
- ② To load the data, press the [F8] (“OK”) key. To cancel without loading, press the [F7] (“Cancel”) key.

note The data size that can be transmitted will depend on the amount of unused multi memory. The maximum is 840,000 bytes.

Loading sample data

The paragraphs 21) **Load .KSC**, 22) **Load .KMP**, and 23) **Load .KSF** which follow explain how Korg format PCM data files are loaded into the sample data RAM of the TRITON-Rack.

About the sample data RAM

The TRITON-Rack is shipped from the factory with 16 Mbytes of sample data RAM. (One 16 Mbyte SIMM is installed in a 72 pin SIMM slot.) By installing SIMM modules in three of the 72 pin slots, you can expand the sample data RAM to a maximum of 96 Mbytes (three 32 Mbyte SIMM’s).

It is not possible to load an individual sample that is larger than 16 Mbytes.

Limitations on the maximum number that can be loaded

- Multisamples: up to 1,000
- Samples: up to 4,000
- Samples used by multisamples: up to 4,000

About Korg format PCM data files

KSC files

Files with an filename extension of KSC (Korg SScript) contain the names of .KMP and .KSF files.

When a .KSC file is loaded, the .KMP and .KSF files whose names it contains will also be loaded. This is a convenient way to load multiple multisamples and samples at once. When this file is saved, a directory will be created with the same name as the .KSC file, and the .KMP and .KSF files listed in the .KSC file will be saved in that directory.

KMP files

Files with a filename extension of KMP (Korg Multisample Parameter) contain the parameters which make up a single multisample. These parameters also include the filename of the .KSF files that are used by that multisample, so when a .KMP file is loaded, the necessary .KSF files will also be loaded at the same time.

When this file is saved, a directory will be created with the same name as the .KMP file, and the .KSF files used by the multisample will be saved in that directory.

KSF files

Files with a filename extension of KSF (Korg Sample File) contain the parameters and waveform data which make up a single sample.

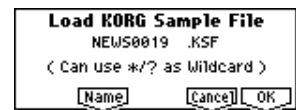
A .KSF file can be used as one of the samples used by a multisample. A .KSF file can also be selected and used as a drum sample for a drum kit.

Loading multiple files

You can use wild cards to simultaneously load two or more .KMP, .KSF, .AIF, .WAV., AKAI Program, or AKAI Sample files from a directory.

note You can use Utility 22) Load .KMP, 23) Load .KSF, 24) Load .AIF, 25) Load .WAV, 26) Load AKAI Sample File, 27) Load AKAI Program File.

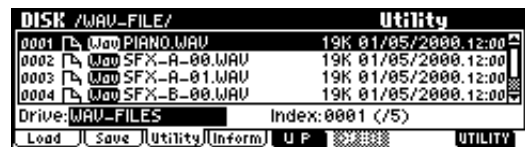
In the dialog box, you can press the [F5] (“Name”) key to display the text input dialog box and use the wild cards “*” and “?” in the selected filename so that multiple sample files with the same extension (i.e., of the same format) will be loaded simultaneously.



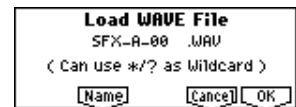
Example)

When a folder contains the following files, you have selected “SFX_A_00.WAV,” and want to use wild cards to load multiple files simultaneously

PIANO.WAV, SFX_A_00.WAV, SFX_A_01.WAV, SFX_B_00.WAV, SFX_B_01.WAV, SFX_C_00.WAV



Select “SFX_A_00.WAV,” and choose the Utility “Load selected” to display the dialog box.



Press the [F5] (“Name”) key to access the text input dialog box, and specify a wild card. (For the renaming procedure, refer to BG p.38.)

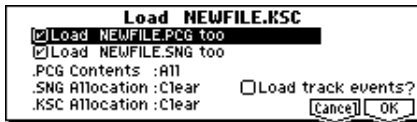



The wild card “*” matches all subsequent characters. The wild card “?” matches only one character.

- 1) If you specify **SFX_A*** and execute loading, the following files will be loaded.
SFX_A_00.WAV, SFX_A_01.WAV
- 2) If you specify **SFX_?_00** and execute loading, the following files will be loaded.
SFX_A_00.WAV, SFX_B_00.WAV, SFX_C_00.WAV
- 3) If you specify **SFX_*_00** and execute loading, the result will be the same as if you had specified "SFX_*" and the following files will be loaded.
SFX_A_00.WAV, SFX_A_01.WAV, SFX_B_00.WAV
SFX_B_01.WAV, SFX_C_00.WAV
- 4) If you specify ***** and execute loading, all .WAV files will be loaded, as follows.
PIANO.WAV, SFX_A_00.WAV, SFX_A_01.WAV,
SFX_B_00.WAV, SFX_B_01.WAV, SFX_C_00.WAV

21) Load .KSC: selected icon 

The .KMP files and .KSF files listed in the .KSC file will be loaded as multisamples and samples respectively.




 The .KMP files and .KSF files listed in the .KSC file are saved in a directory of the same name that is created automatically at the same time as the .KSC file.

- ① "KSC Allocation" allows you to specify how the multisamples and samples in the .KSC file will be loaded.
Append: The multisamples and samples will be loaded following the last multisample or sample number that already exists in the memory of the TRITON-Rack (i.e., by having been sampled or loaded). The valid multisamples and samples that are loaded at this time will be packed into consecutive numbers. (see p.126 ".SNG Allocation" diagram in "Load .SNG too")
If "Load *****.PCG too" is **checked** when you load the data, programs within the .PCG file that use multisamples from the .KSC file will automatically have the multisample settings for their oscillators rewritten so that each program uses the correct multisample. Drum kits in the .PCG file that use samples from the .KSC file will automatically have the sample settings for the drum kit rewritten so that the drum kit uses the correct samples.
Clear: All multisamples and samples currently in memory will be erased, and the multisamples and samples will be loaded in the same configuration in which they were saved (see p.126 ".SNG Allocation" diagram in "Load .SNG too").

If memory already contains multisamples or samples that you wish to keep, and you wish to load additional multisamples or samples from disk, select **Append**. If the power has just been turned on, or you want to reproduce the state that was saved, select **Clear**.

- ② If the current directory contains a .PCG file or .SNG file of the same filename, you will be able to select the "Load *****.PCG too" and/or "Load *****.SNG too" checkboxes.
 - If you **check** "Load *****.PCG too," the .PCG file of the same name as the .KSC file will also be loaded.
 - If you **check** "Load *****.SNG too," the .SNG file of the same name as the .KSC file will also be loaded.
☞ "Load.SNG: ③"
- ③ To load the data, press the [F8] ("OK") key. To cancel without loading, press the [F7] ("Cancel") key.


If the .KSF files used by the .KMP file are not in the current directory or below it, a dialog box will appear, allowing you to specify the directory. Use the procedure "If the file to load cannot be found..." (see p.125) to load the required .KSF files.

-  Since PCM memory overflow checking is performed when loading each .KSF file, an overflow may occur during the loading process.


22) Load .KMP: selected icon 

The selected .KMP file will be loaded as a multisample. The .KSF files used by the .KMP will also be loaded as samples.



 The .KSF files used by the .KMP file will be saved in an identically-named directory that is created automatically when the .KMP file is created.

- ① To load the data, press the [F8] ("OK") key. To cancel without loading, press the [F7] ("Cancel") key. Samples will be loaded starting at the first unoccupied number following the last multisample or sample that currently exists in TRITON-Rack's memory by having been sampled or loaded. Only valid multisamples or samples will be loaded (Append load).
If the .KSF files used by the .KMP file are not in the current directory or below it, a dialog box will appear, allowing you to specify the directory. Use the procedure "If the file to load cannot be found..." (see p.125) to load the required .KSF files.

-  Since PCM memory overflow checking is performed when loading each .KSF file, an overflow may occur during the loading process.

23) Load .KSF: selected icon 

The selected .KSF file will be loaded as a sample.



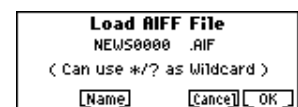
- ① To load the data, press the [F8] ("OK") key. To cancel without loading, press the [F7] ("Cancel") key. The sample will be loaded following the last multisample or sample that currently exists in the TRITON-Rack's memory by having been sampled or loaded (Append load).

Loading AIFF files and WAVE files

The TRITON-Rack can load AIFF format or WAVE format files, which are formats used to save audio data on personal computers etc. The loaded data can be used as a sample.

24) Load .AIF: selected icon 

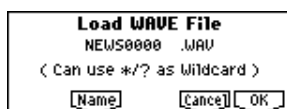
The selected AIFF file will be loaded as a sample.




- ① To load the data, press the [F8] ("OK") key. To cancel without loading, press the [F7] ("Cancel") key. The sample will be loaded following the last-numbered sample that currently exists in memory by having been sampled or loaded (Append load).


25) Load .WAV:  selected icon


The selected WAVE file will be loaded as a sample.



① To load the data, press the [F8] (“OK”) key. To cancel without loading, press the [F7] (“Cancel”) key. The sample will be loaded following the last-numbered sample that currently exists in memory by having been sampled or loaded (Append load).

 Files with an extension of other than .AIF/.WAV cannot be recognized as AIFF/WAVE files. In this case, use the Utility “Rename” (1.1–3a) to change the last four characters of the filename to “.AIF”/“.WAV”

 If the data that is loaded as a sample contains a loop point, you can set “S.Ofs(Start Offset)” (PROG 2.1–2b/3b) on the TRITON-Rack so that the sound will begin from the loop point.

 If data whose sample size is 8 bits or less is loaded, it will be converted into 16 bit data inside the TRITON-Rack. This will mean that the amount of internal memory consumed will be approximately twice as large as the file size. The increase in size resulting from this conversion may mean that it is impossible to save that data on a floppy disk.

Loading AKAI S1000/S3000 format Sample files and Program files


The TRITON-Rack can load AKAI S1000/S3000 format Sample files and Program files. The loaded Sample or Program file data can be used as a sample or multisample respectively. When the loaded data is then saved to storage media, it will be saved as a Korg format .KSF file or .KMP file respectively.

AKAI S1000/S3000 format stereo Sample files and Program files whose names end in “-L” and “-R” can be loaded into the TRITON-Rack as stereo samples and multisamples. When the above files are loaded, “-L” and “-R” will automatically be moved to the end of the sample name or multisample name (15th and 16th character) so that they can automatically be recognized as stereo samples or multisamples.

26) Load AKAI Sample File:  selected icon

The selected Sample will be loaded as a sample.

① To load the data, press the [F8] (“OK”) key. To cancel without loading, press the [F7] (“Cancel”) key. The sample will be loaded following the last multisample or sample that currently exists in the TRITON-Rack’s memory by having been sampled or loaded (Append load). If the loaded data is then saved to storage media, it will be saved as a Korg format .KSF file. (possible to export as a .AIF, .WAV format ⇒p.135 “Export Smpl AIF/WAV”)


 If the data that is loaded as a sample contains a loop point, you can set “S.Ofs(Start Offset)” (PROG 2.1–2/3b) on the TRITON-Rack so that the sound will begin from the loop point.

note If the end (11th and 12th characters) of the sample name is “-L” and “-R,” the “-L” and “-R” will automatically be moved to the end of the TRITON-Rack’s sample name (15th and 16th characters).

When you load two files whose sample names are identical except for ending in “-L” and “-R,” and assign them to a stereo multisample in Sampling mode, they will be recognized as a stereo sample.


Sample files

Parameter	AKAI S1000/S3000 format	TRITON-Rack format after loading
Loop points	Multiple settings possible	Of the multiple loop points, the settings for the first HOLD loop are used. If there is no HOLD loop, use the longest loop
Loop length	Settable with resolution of less than one sample	Resolution of less than one sample is ignored

27) Load AKAI Program File:  selected icon

The selected Program file will be loaded as a multisample. When the loaded data is saved to storage media, a Program file will be saved as a .KMP file, and a Sample file will be saved as a .KSF file.

① To load the data, press the [F8] (“OK”) key. To cancel without loading, press the [F7] (“Cancel”) key. Samples will be loaded starting at the first unoccupied number following the last multisample or sample that currently exists in TRITON-Rack’s memory by having been sampled or loaded. Only valid Program files or Samples files will be loaded (Append load). If the Sample files used by the Program file are not in the current directory or below it, a dialog box will appear, allowing you to specify the directory. Use the procedure “If the file to load cannot be found...” (⇒p.125) to load the required Sample files.

 Since PCM memory overflow checking is performed when loading each sample file, an overflow may occur during the loading process.

note If a loaded multisample is assigned samples whose sample names end in “-L” and “-R,” an “-L” and “-R” will automatically be added to the end (15th and 16th characters) of the multisample name.

When you load two multisamples whose multisample names are identical except for ending in “-L” and “-R,” they will be recognized in Sampling mode as a stereo multisample.

About AKAI Program files

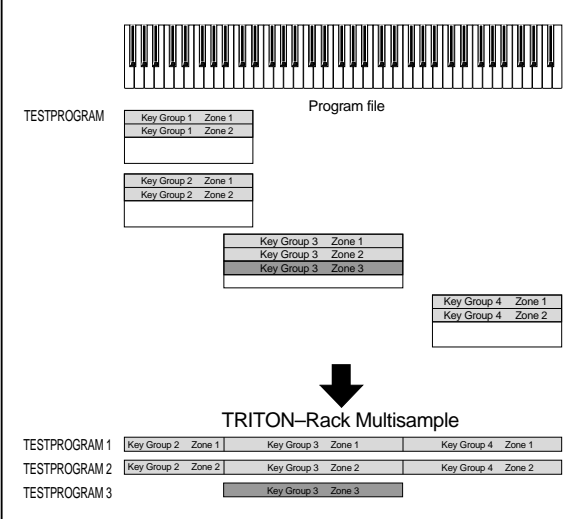
The TRITON-Rack will load only the key-map related parameters from the Program file.

AKAI format uses the concept of “key groups.” For each key zone, up to four samples can be assigned, and these four can be switched or crossfaded by velocity. Key zones can also be crossfaded.

On the TRITON-Rack, in contrast, there is one sample for each key zone, and you can use up to four multisamples to create a key map in the order of the velocity of each key group. It is not possible to crossfade key zones.

Example)

An AKAI format Program file “TESTPROGRAM” consists of four key groups, and each key group consists of up to three velocity zones. Key groups 1 and 2 are a layer whose low range is the same. When this is loaded into the TRITON-Rack, three multisamples will be created, collected by velocity zone, and the numerals 1, 2, and 3 will be appended to each multisample name. At this time, the top key will be determined by the bottom key of the sample that is assigned at the right, and if the bottom key is the same (key groups 1 and 2 in the diagram), the higher-numbered key group will be used.



Load to Demo Song

This command converts the TRITON/TRITONpro/TRITONproX .SNG file selected in the directory window (1.1-1b) into demo data, and loads it into internal memory.

When a .SNG file is converted into demo song, the .SNG file is first loaded as multi data and then converted, meaning that the multi data will be overwritten. If you wish to keep the multi data, use the Disk mode Utility “Save Multi” (1.1-2a) to save it on external media.

Execution of the “Load to Demo data” command uses the memory area occupied by the drum kits and user arpeggio patterns. The data in the drum kit and user arpeggio pattern memory area will be cleared, and then reloaded from internal memory after the command is executed. (See BG p.39 “About Global mode memory”) If you wish to keep the drum kits and user arpeggio patterns that you edited, use the Utility in Global mode GLOBAL 5.1: DKit (See p.117) and Global mode GLOBAL 6.1: Arp. Pattern (See p.121) to write them before you execute the “Load to Demo data” command.

As an alternative method to “Load to Demo Song,” you can also load demo data using the utility “Make Demo Song” (See p.139 DEMO/SNG 1.1-1d). With this method, you can load a TRITON/TRITONpro/TRITONproX .SNG file into Multi mode by checking “Load track events?” in “Load .SNG” etc., and execute the DEMO/SNG page utility “Make Demo Song” to convert it into a demo song.

By using this method, you can delete songs within a .SNG file loaded in Multi mode, change the order of the songs etc., edit song parameters such as the song name, and edit track parameters such as the program number/bank on the TRITON-Rack, and finally convert the data into a demo song.

The internal demo data memory has a capacity of 975,186 bytes. When you use “Load to Demo Song” or “Make Demo Song” to load a TRITON/TRITONpro/TRITONproX as demo data, data equal to the number of songs × 678 bytes (track and effect settings) plus the events converted into SMF data format will be loaded into the internal demo data memory. At this time, the pattern events of the .SNG will be loaded in expanded form, meaning that if the song makes frequent use of patterns, the loaded size will be larger than the size of the .SNG file. In this way, there may be cases in which the data cannot be loaded even though the size of the .SNG file is less than the size of internal demo data memory. The size of the events loaded in SMF data format is the same as the size of the file created when the Disk mode Utility “Save to Std MIDI File” is executed with Format0 on the TRITON/TRITONpro/TRITONproX.

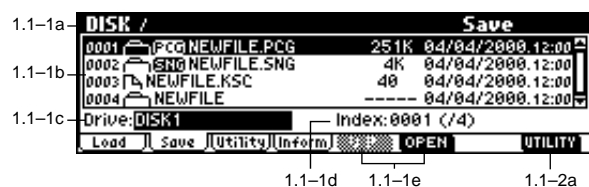
The “SOLO ON/OFF” and “Track Play Loop -related parameters” in a TRITON/TRITONpro/TRITONproX song will be ignored.

1.1-2: Save

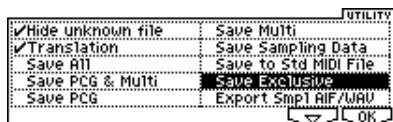
Here you can save various data from internal memory to media such as disk. Use the [F5] (“UP”) key and [F6] (“OPEN”) key to move to the desired directory (i.e., change the current directory), and then select the Utility menu command [F8].

When you execute a Save operation, the data will be saved in the same level of the disk hierarchy as the files that are displayed.

The date and time with which the saved file is stamped is specified by “Set Date/Time” (1.1-3a).



1.1-2a: UTILITY



☞ “Hide unknown file,” “Translation” (1.1-1f)

For details on how to select the desired utility function, refer to “PROG 1.1-1d: UTILITY.”

⚠ When saving combinations with “Save All,” “Save PCG & Multi,” or “Save PCG,” you should also try to save the programs used by each timbre (and the drum kits used by the programs) and the user arpeggio patterns at the same time.

Similarly when saving programs, you should also save the drum kit used by the program and the user arpeggio pattern at the same time.

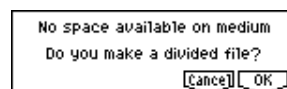
⚠ If multisamples or samples created in Sampling mode are used in a program or drum kit, we recommend that you save the data as “Save All.”

Also when using “Save PCG” or “Save Sampling Data” to save an individual program, drum kit, or multisample or sample created in Sampling mode, we recommend that you save the data in the same directory with the same filename.

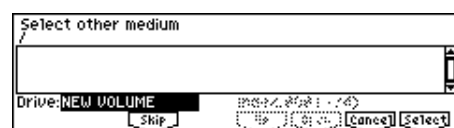
When using “Load PCG” to load a .PCG file, the .KSC file of the same name will be loaded at the same time so that the correct multisamples/samples with which the program or drum kit was saved will correspond correctly.

If the data does not fit on the media when saving

If you are saving .PCG, .KSC, .KMP, and .KSF files and the data does not fit on a single floppy disk (or other type of media), a dialog box will indicate “No space available on medium.”



- 1 Make sure that you have additional floppy disks etc., and press the [F8] (“OK”) key. Saving will begin.
- 2 When the disk is full, the following dialog box will appear. Remove the floppy disk, insert the next floppy disk, and press the [SELECT], [ARP ON/OFF], [AUDITION], [DEMO/SNG] key or any key other than a mode key to make the TRITON-Rack recognize the media. If you wish to specify another SCSI device, select it using “Drive Select” (1.1-1c). (If the EXB-SCSI option is installed)



- 3 Use the [INC], [DEC] keys etc. to set Drive Select to the save destination media.
- 4 Press the [F8] (“Select”) key. If you press the [F7] (“Cancel”) key the save operation will be cancelled. If you wish to end the save operation at this point, press the [F8] (“OK”) key. If you press the [F3] (“Skip”) key, the specified file will be skipped, and the next file will be saved.

Save All (PCG, SNG and KSC)

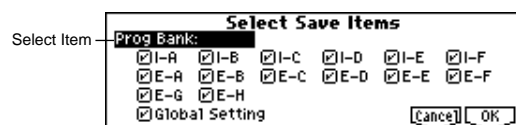
This command saves all internal memory programs, combinations, drum kits, user arpeggio patterns, and global settings as a .PCG file, multi as a .SNG file, and multisamples and samples created in Sampling mode as a .KSC file to the specified media.

This command is valid only when the current directory is a DOS directory.

- 1 Select “Save All” to access the following dialog box.



- 2 Use the [F5] (“Name”) key to move to the text dialog box, and specify the filename (☞BG p.38). For example if you specify NEWFILE and execute the save command, files named NEWFILE.PCG, NEWFILE.SNG, and NEWFILE.KSC will be saved to the media.
- 3 Press the [F6] (“S.Item”) key to move to the dialog box where you will specify the data to be saved. In “Select Item,” choose Prog Bank, Combi Bank, Drum Kit, and Arpeggio Pattern, and check the check boxes for the bank(s) or Global Setting that you wish to save. Banks whose check boxes are **unchecked** will not be saved.



- 4 To save the data, press the [F8] (“OK”) key. To cancel without saving, press the [F7] (“Cancel”) key. If the data does not fit on a single floppy disk (or other type of media), the “No space available on medium” dialog box will appear. Refer to “If the data does not fit on

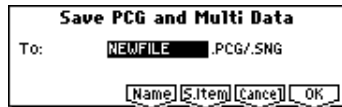
the media when saving,” and use the procedure given there to save the data.
 When you save, files will be created in the current directory. If the data you save extends across two or more disks, these files will be divided. In addition to the .PCG, .SNG, and .KSC files that will be created with the specified filename, one directory will also be created. The files listed in NEWFILE.KSC will be saved in this directory.



Save PCG & Multi

This command saves all internal memory programs, combinations, drum kits, user arpeggio patterns, and global settings as a .PCG file, and saves multi to a .SNG file on the specified media.
 This command is valid only when the current directory is a DOS directory.

- 1 Select “Save PCG & Multi” to access the following dialog box.

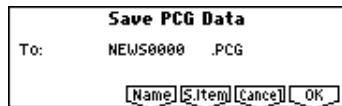


- 2 Use the [F5] (“Name”) key to move to the text dialog box, and specify the filename (⇒BG p.38). For example if you specify NEWFILE and execute the save command, files named NEWFILE.PCG and NEWFILE.SNG will be saved to the media.
- 3 Press the [F6] (“S.Item”) key to move to the dialog box where you will specify the data to be saved, and **check** the check boxes for the banks that you wish to save. Banks whose check boxes are **unchecked** will not be saved.
 ⇒ Save All (PCG, SNG and KSC): ③
- 4 To save the data, press the [F8] (“OK”) key. To cancel without saving, press the [F7] (“Cancel”) key.

Save PCG

This command saves all internal memory programs, combinations, drum kits, user arpeggio patterns, and global settings as a .PCG file.
 This command is valid only when the current directory is a DOS directory.

- 1 Select “Save PCG” to access the following dialog box.



- 2 Use the [F5] (“Name”) key to move to the text dialog box, and specify the filename (⇒BG p.38). For example if you specify NEWFILE and execute the save command, a file named NEWFILE.PCG will be saved to the media.
- 3 Press the [F6] (“S.Item”) key to move to the dialog box where you will specify the data to be saved, and **check** the check boxes for the banks that you wish to save. Banks whose check boxes are **unchecked** will not be saved.
 ⇒ Save All (PCG, SNG and KSC): ③
- 4 To save the data, press the [F8] (“OK”) key. To cancel without saving, press the [F7] (“Cancel”) key.

Save Multi

This command saves all multi from internal memory as a .SNG file.
 This command is valid only when the current directory is a DOS directory.

- 1 Select “Save Multi” to access the following dialog box.



- 2 Use the [F5] (“Name”) key to move to the text dialog box, and specify the filename. For example if you specify NEWFILE and execute the save command, a file named NEWFILE.SNG will be saved to the media.
- 3 To save the data, press the [F8] (“OK”) key. To cancel without saving, press the [F7] (“Cancel”) key.

Save Sampling Data (Multisamples and Samples)

When this command is executed, the following multisample and sample data will be saved to media as Korg format .KMP files, .KSF files, and a .KSC file that collects these files. This is valid only when the current directory is a DOS directory.

- Multisample and sample data recorded or edited in Sampling mode
- Multisample and sample data loaded in Disk mode
- Multisample and sample data in internal sampling RAM memory

- 1 Select “Save Sampling Data” to access the following dialog box.



- 2 Use “To” to specify the contents that will be saved. (All content will be saved in Korg format.)
All: All multisamples and samples from the TRITON-Rack’s internal memory will be saved as .KMP files and .KSF files. Simultaneously, a .KSC file and a directory to contain these files will also be created and saved.

The filename will be the .KSC filename and the directory name.

All Multisamples: All multisamples and samples (i.e., samples used by the multisamples) will be saved as .KMP files and .KSF files. Simultaneously, a .KSC file and a directory to contain these files will also be created and saved.

The filename will be the .KSC filename and the directory name.

All Samples: All samples will be saved as .KSF files. Simultaneously, a .KSC and directory to contain these files will also be created and saved.

The filename will be the .KSC filename and the directory name.

One Multisample: The selected multisample will be saved as a .KMP file. Simultaneously, a directory will also be created, and the samples used by the multisample will be saved in that directory.

The filename will be the .KMP filename and the directory name.

Initially, the filename will automatically be set to the first five characters (uppercase) of the sixteen-character multi-sample name + the multisample number.

[Examples]

- 000: NewMS_____000 → NEWS000.KMP
- 001: 108bpmDrLoop00 → 108BP001.KMP

One Sample: The selected sample will be saved as a .KSF file.

The filename will be the .KSF filename name.

Initially, the filename will automatically be set to the first four characters (uppercase) of the sixteen-character sample name + the sample number.

[Examples]

0000: NewSample_0000 → NEWS0000.KSF

0001: C#3-EGuitar → C#3-0001.KSF

note If you wish to export the data in AIFF (.AIF) or WAVE (.WAV) format, select the Utility “Export Smpl AIF/WAV.”

- Press the [F5] (“Name”) key to move to the text dialog box, and specify the filename (⇒BG p.38).
- To save the data, press the [F8] (“OK”) key. To cancel without saving, press the [F7] (“Cancel”) key.

! If the Utility “Translation” (1.1-1f) is **checked**, the names of .KMP files and .KSF files you save will be displayed as the multisample name or sample name. This is convenient when you are searching for the desired files on disk.

Save to Std MIDI File (Save Song as Standard MIDI File)

This command saves the selected user pattern of multi from internal memory to storage media as a .MID file (Standard MIDI File).

The data will be on MIDI channel 1.

This command is valid only when the current directory is a DOS directory.

- Select “Save to Std MIDI File” to access the following dialog box.



- In “Multi,” select the multi that contains the pattern you wish to save, and use “Pattern” to select the user pattern that you wish to save.
- Use the [F5] (“Name”) key to access the text dialog box, and specify the filename (⇒BG p.38). By default, the first eight characters (uppercase) of the song name will be assigned.
- In “Format,” select the Standard MIDI File format in which you wish to save.
If you select **0**, data such as time signature and tempo will be saved together with the event data in a single track.
If you select **1**, time signature and tempo etc. and event data will be saved in separate tracks.
- To save the data, press the [F8] (“OK”) key. To cancel, press the [F7] (“Cancel”) key.
The song data you save here can be played back on a device that supports Standard MIDI Files. However if you intend to playback the data on the TRITON-Rack, we recommend that you use “Save Multi” to save the data, since this will allow a higher degree of reproducibility.

Save Exclusive (Receive and Save MIDI Exclusive Data)

This command temporarily accumulates incoming exclusive data in the remaining free area used by Multi mode, and then saves this data to media as an .EXL file. (The remaining amount of internal memory depends on how much data is used in Multi mode.)

This command is valid only when the current directory is a DOS directory.

- When you select “Save Exclusive” from the Utility menu, the TRITON-Rack will be ready to receive exclusive data. The following dialog box will appear.



- Transmit the exclusive data that you wish to save to the TRITON-Rack. While the data is being received, the display will indicate “Status=RECEIVING MIDI DATA.” When reception ends, the size of the received data and the size of the remaining free area will be rewritten. The display will change to “Status=AWAITING MIDI DATA,” and you can continue transmitting exclusive data to the TRITON-Rack. During reception, the [F7] (“Cancel”) key and the [F8] (“OK”) key cannot be pressed.
- Press the [F5] (“Name”) key to access the text dialog box, and specify the filename (⇒BG p.38).
- To save the data, press the [F8] (“OK”) key. To cancel without saving, press the [F7] (“Cancel”) key.

Export Smpl AIF/WAV (Export Samples as AIFF/WAVE)

Sample data in internal sampling RAM that was recorded or edited in Sampling mode, or loaded in Disk mode, can be exported (written) to media as an AIFF or WAVE format sample file.

This is valid only when the current directory is a DOS directory.

note Normally, it is recommended that you use Save All or Save Sampling Data to save sample data in Korg format (.KSC, .KMP, .KSF). This will allow you to save the data in a way that preserves the state of the multisamples (and the samples that they use) as they exist in internal sampling RAM memory.

Use “Export Smpl AIF/WAV” if you wish to use an AIFF or WAVE format compatible application on your computer to work with samples that were recorded or edited on the TRITON-Rack.

! “Export Smpl AIF/WAV” does not export multisample files. The exported AIFF or WAVE format samples can be re-loaded, but if the sample number when saving is different than the sample number when loading, you may need to re-make settings, such as selecting the sample for each index of a multisample. Furthermore, the following parameters set in Sampling mode are lost by “Export Smpl AIF/WAV.”

- Sample Name
- Loop Tune (SMPL 3.1-1b. “Tune: Loop Tune”)
- Reverse (SMPL 3.1-1b. “Rev: Reverse”)

! Samples that are handled by the TRITON-Rack as stereo will be exported as two independent L and R files.

- ① Select "Export Smpl AIF/WAV" to access the following dialog box.



- ② In "Format," select either AIFF or WAVE as the file format for export.
- ③ Press the [F5] ("Name") key to move to the text dialog box, and specify the filename (see BG p.38).
- ④ In "To," specify the content that will be exported.

One Sample: The single selected sample will be exported. The filename will be the filename of the .AIF or .WAV file. Initially, the filename will automatically be set to the first four characters (uppercase) of the sixteen-character sample name + the sample number.

[Examples]

0000: NewSample_0000 → NEWS0000.AIF
 0001: C#3-EGuitar → C#3-0001.WAV

- ⚠ If the sample data being exported will not fit on a single volume of media (e.g., floppy disk), it cannot be exported.

All Samples: All samples will be exported. It will not be possible to specify the filename. The filename will automatically be assigned as the first four characters (uppercase) of the sixteen-character sample name + the sample number.

Samples in One Multisample: All samples used by the selected multisample will be exported. Only five characters of the filename can be specified. The five-character filename + the index number (001-128) in the multisample will be assigned automatically.

Initially, the filename will automatically be set to the first five characters (uppercase) of the sixteen-character multisample name.

[Examples]

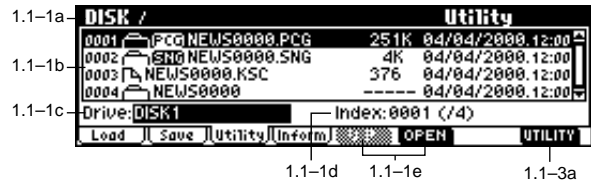
000: NewMS___000:
 Sample selected for index 001 → NEWMS001.AIF
 Sample selected for index 002 → NEWMS002.AIF
 001: 108bpmDrLoop00:
 Sample selected for index 001 → 108BP001.AIF
 Sample selected for index 002 → 108BP002.AIF

- ⚠ When exporting **All Samples** or **Samples in One Multisample**, and all of the sample data does not fit on one volume of media (e.g., floppy disk), another dialog box will appear, directing you to specify the next media. (see p.133 "If the data does not fit on the media when saving") However at this time if a single sample is larger than the capacity of the media, the sample cannot be exported. Either specify media with a larger capacity, or press "Skip" to omit exporting that sample and proceed to exporting the next sample.

- ⑤ To export the data, press the [F8] ("OK") key. To cancel without exporting, press the [F7] ("Cancel") key.

1.1-3: Utility

Here you can rename, copy, or delete the selected disk or file, create a new directory, and set the date and time. After selecting a disk or file, select the Utility menu [F8].



■ 1.1-3a: UTILITY



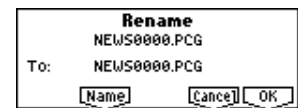
- ⇨ "Hide unknown file," "Translation" (1.1-1f)

For details on how to select the desired utility function, refer to "PROG 1.1-1d: UTILITY."

Rename

This command renames the selected file or directory. This command is valid only when a DOS file or a DOS directory is selected.

- ① Select "Rename" to access the following dialog box.

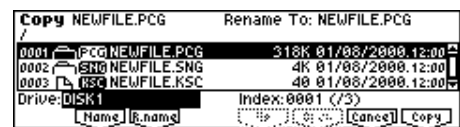


- ② Press the [F5] ("Name") key to access the text dialog box, and modify the name (see BG p.38).
- ③ To rename the file or directory, press the [F8] ("OK") key. To cancel, press the [F7] ("Cancel") key.

Copy

This command copies the selected file or directory. This command is valid only when a DOS file or a DOS directory is selected.

- ① Select "Copy" to access the following dialog box.



- ② In the upper left of the dialog box, "Copy" indicates the selected file and directory name. If you wish to change the file or directory that will be copied, use the [F5] ("Name") key to move to the text dialog box, and specify the filename that you wish to copy (see BG p.38). (Can use */? as Wildcard): When you use the [F2] ("Name") key to access the text dialog box and specify the name of the file or directory to be copied, you can use "*" and "?" characters as wildcards. For example, if in the above example you specify **PRELOAD1.*** (instead of **PRELOAD1.PCG**), all filenames of PRELOAD1. with any filename extension will be copied at the same time: i.e., PRELOAD1.PCG, PRELOAD1.SNG, PRELOAD1.KSC, ...

[Example]

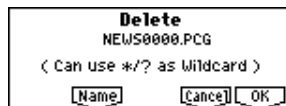
PRELOAD1.* : PRELOAD1.PCG, PRELOAD1.SNG,
PRELOAD1.KSC, ...
PRELOAD?.PCG : PRELOAD1.PCG, PRELOAD2.PCG,
PRELOAD3.PCG, ...

- ④ When wildcards are used, only files will be subject to copying. Directories will not be copied.
- ③ Use the [F5] (“UP”) key and [F6] (“OPEN”) key to select the copy destination directory. If you wish to specify a different SCSI device, use “Drive Select” (1.1-1c) to select it (if the EXB-SCSI option has been installed).
- ④ It is not possible to open .PCG or .SNG files while you are selecting the copy destination directory. The [F6] (“OPEN”) key cannot be used for .PCG or .SNG files.
- ④ If you wish to copy the file or directory with a different name, use the [F3] (“R.Name”) key (in the lower line) to access the text dialog box, and specify the name with which the file or directory will be copied (⇒BG p.38). If you are using wildcards to simultaneously copy multiple files, it is not possible to modify the filename.
- ⑤ To copy the data, press the [F8] (“OK”) key. To cancel without copying, press the [F7] (“Cancel”) key.
- ④ If the drive that you selected in “Drive Select” is removable media (floppy disk, MO disc, removable hard disk etc.), it is not possible to copy to different media on the same drive.

Delete

This command deletes the selected file or directory. If a directory is selected, it can be deleted only if no files exist within that directory. This command is valid only if a DOS file or directory is selected.

- ① Select “Delete” to access the following dialog box.



- ② “Delete” will indicate the name of the selected file or directory. If you wish to change the file or directory that is to be deleted, use the [F5] (“Name”) key to access the text dialog box, and specify the name of the file or directory that you wish to delete (⇒BG p.38). (Can use */? as Wildcard) : When you use the [F5] (“Name”) key to access the text dialog box and specify the name of the file to be deleted, you can use the “*” or “?” characters as wildcards. This allows you to simultaneously delete multiple files with identical filenames and different extensions, or files whose names are partially identical (⇒“Copy” (1.1-3a)).
- ④ When wildcards are used, only files will be subject to deletion. Directories will not be deleted.
- ③ To delete the selected file or directory, press the [F8] (“OK”) key. To cancel without deleting, press the [F7] (“Cancel”) key.

Create Directory

This command creates a new directory within the current directory.

- ① Select “Create Directory” to access the following dialog box.



- ② Use the [F5] (“Name”) key to access the text dialog box, and specify the name of the new directory (⇒BG p.38).
- ③ To create the directory, press the [F8] (“OK”) key. To cancel without creating the directory, press the [F7] (“Cancel”) key.

Set Date/Time

This command sets the date and time that will be used to time-stamp files that are saved.

- ① Select “Set Date/Time” to access the following dialog box.



- ② Set each parameter.
 - “Year” 1980-2079
 - “Month” 1-12
 - “Day” 1-31
 - “Hour” 0-23
 - “Minute” 0-59
 - “Second” 0-59 (only even-numbered second values will be assigned to a file)
- ③ To set the date and time, press the [F8] (“OK”) key. To cancel, press the [F7] (“Cancel”) key.

- ④ The seconds (“Second”) will not be displayed in the directory window.

Format

This command formats the selected media, such as a floppy disk or external SCSI device (if the EXB-SCSI option has been installed). The volume label (a name for the entire disk) you specify will be assigned to the disk. The volume label you assign here will be displayed in “Drive Select” (1.1-1c). The volume label can be a maximum of eleven characters.

- ④ When you format, all data saved on that media will be erased. Be sure to double-check before you format.
- ④ After formatting, it is not possible to press the [COMPARE] key to return to the previous state.

- ① To format a floppy disk, insert the floppy disk to be formatted into the floppy disk drive.
- ② In “Drive Select” (1.1-1c), select the media that you wish to format. (If no external SCSI device is connected via the EXB-SCSI option, ignore this step.)
- ③ Select “Format” to access the following dialog box.



- ④ Press the [F5] (“Name”) key to move to the text dialog box, and specify the “Volume Label” (⇒BG p.38).

When the dialog box appears, "Volume Label" will show the volume label that had been specified before formatting. If a disk that has no volume label or a non-DOS disk is inserted, this will indicate "NEW VOLUME."

Specify the initialization format. Normally you should use **Quick Format** to initialize the disk, and use **Full Format** if an error message of "Disk not Formatted" appears.

Quick Format: Selects this if the media has already been physically formatted. Since only the system area of the media need be formatted, this will require less time.

Full Format: Selects this when formatting media that has not been physically formatted. You should also select this type of formatting if writing errors occur frequently with this media.

note It is not necessary to perform a **Full Format** on SCSI media that has been physically formatted at 512 bytes/block. Perform the **Quick Format** for such media.

The TRITON-Rack cannot format media with a format of other than 512 bytes/block (such as 640 MB, 1.3 GB MO disks etc.).

To format the media, press the [F8] ("OK") key. To cancel without formatting, press the [F7] ("Cancel") key. After a floppy disk has been formatted by the TRITON-Rack, a 2HD floppy will hold 1.44 MB (18 sectors/track), and a 2DD floppy will hold 720 KB (9 sectors/track). A maximum of 4 GB can be formatted on an external SCSI device connected via the EXB-SCSI (sold separately).

1.1-4: Media Information



1.1-4b

1.1-4a: Drive (Drive select)

This displays information on the media that is selected by "Drive Select."

⇒ 1.1-1c: Drive select

Vol. Label (Volume Label):

The volume label of the media.

SCSI ID:

The specified SCSI ID. If the TRITON-Rack's internal floppy disk drive is selected, "-" will be displayed.

Dev. Type (Device Type):

The type of media.

Product ID:

The vendor ID, product, and product version, etc.

Format (Format Type):

The type of format. If not formatted, this will indicate "Unformatted."

Total Size:

The capacity of the media (in bytes).

Free Size:

The free capacity of the media (in bytes).

Write Protect:

The write protect status of the media. This will indicate "On" if protected, or "Off" if not protected.

Removable (Supports Removable):

This will indicate "Yes" if the media of the selected device can be removed (e.g., floppy disk, MO disc, removable hard disk). If the media is fixed, this will be "No."

1.1-4b: UTILITY



Scan SCSI device

This command allows you to re-mount a connected SCSI device if the EXB-SCSI option is installed.

From the Utility menu, select "Scan SCSI device." The currently-connected SCSI devices will be re-scanned (if the EXB-SCSI option is installed). Once scanning is completed, any valid SCSI device can be selected in "Drive Select."

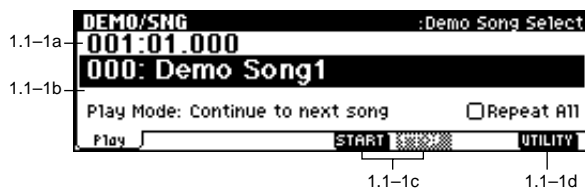
Never connect or disconnect a SCSI cable while the power of the TRITON-Rack or of a SCSI device is turned on. Doing so can cause irreparable malfunctions.

7. Demo/Song

DEMO/SNG

The TRITON-Rack contains demo songs as preloaded data. Here's how to hear the demo songs.

- ① Press the [DEMO/SNG] key to turn it on (the LED will light); you will enter the DEMO/SONG page.
- ② Press the [F5] ("START") key to start the demo song.
- ③ Press the [F6] ("STOP") key to stop the demo song.
Alternatively, you can exit the DEMO/SNG page by pressing the [DEMO/SNG] key or by pressing any one of the mode keys [COMBI], [PROG], [MULTI], [SMPL], [GLOBAL], or [DISK]. (The LED will go dark.)



note In addition to playing the preloaded data songs, the DEMO/SNG page of the TRITON-Rack can also be used to load and play a .SNG file that was created in the Sequencer mode of the TRITON/TRITONpro/TRITONproX. To load this data, use the "Make Demo Song" or "Load to Demo Song" utility (DISK 1.1-1f).

1.1-1a: Location

Location

While the demo song is playing, this indicates the current position within the song. This is only for viewing, and cannot be edited.

1.1-1b: Demo Song Select, Play Mode, Repeat All

Demo Song Select [000... : name]
Select the demo song that you wish to play.

Play mode

[Continue to next song, Stop at end of selected song]

Specify whether the demo songs will be played consecutively, or whether only one song will be played.

Continue to next song:

After the currently selected demo song has finished playing, the next demo song number will be selected and played automatically.

Stop at end of selected song:

Playback will stop after the currently selected demo song has finished playing.

Repeat All [Off, On]

This is valid only if "Play Mode" is set to **Continue to next song**.

On (Checked):

All songs will be played endlessly in succession. To stop the playback, press the [F6] ("STOP") key.

Off (Unchecked):

Playback will stop automatically after the last demo song has finished playing.

■ 1.1-1c: START, STOP

Start or stop the demo song playback.

START [F5]: Demo song playback is stopped.

The demo song will start when you press [F5] ("START") key.

STOP [F6]: The demo song is playing.

The demo song will stop when you press [F6] ("STOP") key.

MIDI • In the DEMO/SNG page, MIDI Clock (system realtime message) are not received. The song will play at its own individually specified tempo regardless of the GLOBAL 2.1 "MIDI Clock" setting.

• In the DEMO/SNG page, Song Position, Song Select (system common messages), Start, Continue, and Stop (system realtime messages) are not received or transmitted.

■ 1.1-1d: UTILITY



For details on how to select the desired utility function, refer to "PROG 1.1-1d: UTILITY."

Make Demo Song

By using this command, you can convert a TRITON/TRITONpro/TRITONproX .SNG file into a demo song. With this method, you can use Multi mode to delete a song from the loaded .SNG file, change the order of the songs, or edit the song name, program numbers/bank numbers etc. before converting the data into a demo song.

note The converted song will be saved in place of the preloaded demo song in internal memory. This data will also be saved even when the power is turned off.

note As an alternative to "Make Demo Song," you can also execute the "Load to Demo Song" (DISK 1.1-1f) utility in the Disk mode Load page to load a TRITON/TRITONpro/TRITONproX .SNG file as a demo song. With this method, the demo song will be created directly, just by a single Load operation in Disk mode. **Normally you will use "Load to Demo Song."**

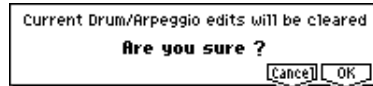
However if you wish to edit the song in Multi mode before loading it, or if there is insufficient demo song memory (see "Note" in "Load to Demo Song," p.132) to load the data using "Load to Demo Song," you will have to load the data in Multi mode, reduce the amount of data by deleting unwanted songs etc., and then use "Make Demo Song."

For the procedure of using "Load to Demo Song" (DISK 1.1-1f) to load, refer to p.132.

① In the Disk mode Load page, select a .SNG file that was saved by the TRITON/TRITONpro/TRITONproX. Select the "Load Selected" utility (DISK 1.1-1f) to access the dialog box. In the dialog box, check "Load track events?" and execute the load command.

note In order to execute "Make Demo Song," you must first load the song in Multi mode.

-
- ② The song data will be loaded as the corresponding multi data. In Multi mode, you can edit the data by deleting multis (songs) and rearranging the order; edit multi (song) parameters such as the multi (song) name; and edit track parameters such as the program number/bank.
 - ③ Press the [DEMO/SNG] key (LED lit) to enter the DEMO/SNG page.
 - ④ Select the “Make Demo Song” utility to access the dialog box.



- ⑤ To execute, press the [F8] (“OK”) key. To cancel without executing, press the [F7] (“Cancel”) key.
- ⚠ When you execute this operation, drum kits and user arpeggio patterns will be reset to the state in which they were written. (⇒BG p.40 “About Global mode memory”)
- If you wish to save your edited drum kits or user arpeggio patterns, write them into memory using the GLOBAL 5.1: DKit (⇒p.117) or GLOBAL 6.1: Arp.Pattern (⇒p.121) utility menu commands before you execute “Make Demo Song.”
- ⚠ The “Solo ON/OFF” and “Track Play Loop” -related parameters specified for TRITON/TRITONpro/TRITONproX songs will be ignored.

8. Effect Guide

Overview

The effects section of the TRITON-Rack consists of five-channel **Insert Effects**, two-channel **Master Effects**, a single-channel **Master EQ** (stereo, three-band EQ) and a **Mixer section** that controls the effect routings.

You can select any of 102 digital Insert Effects or 89 digital Master Effects, as listed below:

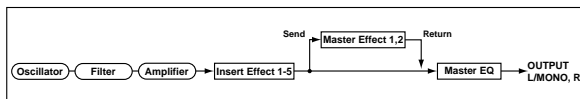
Classification of 102 effects

000–015	Filters and dynamics effect, such as EQ and compression
016–031	Pitch modulation and phase modulation effects, such as chorus and phaser
032–040	Other modulation and pitch-shifting effects, such as rotary speaker and pitch shifter
041–051	Early reflection and delay effects
052–057	Reverb effects
058–089	Mono effects and mono chain effects, in which two mono effects are internally connected in series
090–102	Double-size effects

⚠ Effects **000–089** can be selected for IFX 1, 2, 3, 4, and 5, and MFX 1 and 2. Effects **090–102** are double-size effects and use twice the area, compared to other effects. They are selectable only for IFX 2, 3, and 4 positions.

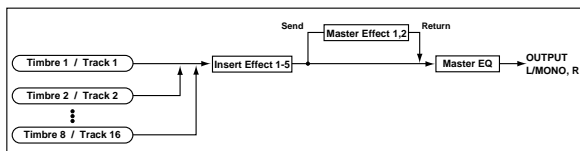
1. Effects in each mode

In **Program mode**, you can process sounds using **Insert Effects**. This is something like processing an oscillator (OSC) output sound using a filter and an amplifier. Then, you can apply a modulation and reverb effect or other **Master Effect** to the processed sound to add ambience and space. Finally, before the sound is output from the OUTPUT (MAIN) L/MONO, and R connectors, you can fine-tune the tonal quality using the stereo, three-band **Master EQ**. You can adjust these settings for each Program individually.

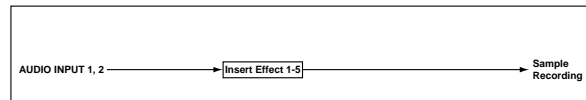


In **Combination mode** and **Multi mode**, you may process Program sounds for each timbre and track using the **Insert Effects**, add ambience and space to the entire sound using the **Master Effects**, and adjust the overall tonal quality using the **Master EQ**.

You can make these settings for each Combination in Combination mode and for each multi in Multi mode individually.

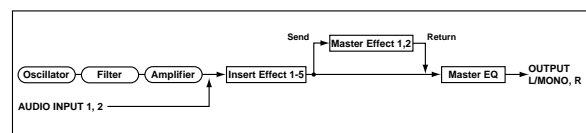


Sampling mode enables you to sample sound by applying the **Insert Effects** to the incoming signals at AUDIO INPUTS 1 and 2. To do so, use the SMPL 1.1: Recording, Input/Pref (SMPL1.1–3) parameters. The settings here are effective only in Sampling mode.



The external input from **AUDIO INPUT 1** and **2** is also valid in **modes** other than Sampling mode. In Program, Combination and Multi modes, the **insert effects**, **master effects**, and **master EQ** can be used. Settings for the external in from **AUDIO INPUT 1/2** are made in GLOBAL 1.1: System, Audio In (Setup for COMBI, PROG, MULTI) (GLOBAL 1.1–3).

In these modes, the TRITON-Rack can function as a 2-in 6-out effect processor for the external input signal from **AUDIO INPUT 1** and **2**, or you can use the external audio signal in conjunction with the sounds of the internal tone generator. (**093: Vocoder** can be used as a vocoder effect in which an external mic input is used to control the sounds of the TRITON-Rack.)



⚠ When you apply effects to the external audio signal from **AUDIO INPUT 1** and **2**, oscillation may be heard depending on the effect type and the parameter settings. If this occurs, adjust the input level, output level, and effect parameters. In particular, please exercise caution when using high-gain effects.

2. Dynamic modulation (Dmod)

Dynamic modulation (Dmod) is a function that lets you use the controllers of the TRITON-Rack or MIDI messages to control specific effect parameters*1, allowing realtime control while you play.

The BPM/MIDI Sync function*2 is provided as another way to control effect parameters. This allows parameters such as the LFO speed of modulation-type effects or the delay time of delay-type effects to be synchronized to the tempo of the arpeggiator.


For details on these two functions, refer to “Dynamic Modulation Source (Dmod)” (p.211).

*1 These effect parameters are marked with **D^{mod}** (p.151-).

*2 The effect parameters marked with **Sync** support this function (p.156-).

3. Effect I/O

To achieve the best tonal quality, signals sent to the Insert Effects and the Master Effects should be output at the maximum level without clipping. Also, use the “W/D” parameter for the Insert Effects and the “Output Level” or “Rtn (Return1, 2)” parameter for the Master Effects to adjust the effect output level.

 The TRITON-Rack does not have an input level meter that monitors the input level of the effect. If the input level is insufficient, the S/N ratio will decrease. If the input level is excessive, distortion may occur.

The following table shows the parameters related to the level settings:

Program mode

Input	OSC1/2 High, Low Level	(PROG 2.1)
	Filter1/2 Trim	(PROG 4.1)
	Amp1/2 Level	(PROG 5.1)
	OSC1/2 Send1/2	(PROG 7.1)
	Effect Trim parameter *1	(PROG 7.2, 7.3)
Output	Effect W/D parameter	(PROG 7.2, 7.3)
	Rtn1/2 (Return1, 2)	(PROG 7.3)

Combination mode

Input	Volume	(COMBI 1.1, 2.1)
	S1/2 (Send1/2)	(COMBI 7.1)
	Effect Trim parameter *1	(COMBI 7.2, 7.3)
Output	Effect W/D parameter	(COMBI 7.2, 7.3)
	Rtn1/2 (Return1, 2)	(COMBI 7.3)

Multi mode

Input	Volume	(MULTI 1.1)
	S1/2 (Send1/2)	(MULTI 7.1)
	Effect Trim parameter*1	(MULTI 7.2, 7.3)
Output	Effect W/D parameter	(MULTI 7.2, 7.3)
	Rtn1/2 (Return1, 2)	(MULTI 7.3)

Sampling mode

Input	AUDIO INPUT	
	Input1/2 Lvl (Level)	(SMPL 1.1)
	Effect Trim parameter *1	(SMPL 7.2)
Output	Effect W/D parameter	(SMPL 7.2)

Global mode *2

Input	AUDIO INPUT	
	Input1/2 (Level)	(GLOBAL 1.1)
	Input1/2 Send1/2	(GLOBAL 1.1)

*1 Some effects may not have these parameters.

*2 Use this parameter to set the Audio Input Level in all modes other than Sampling mode.

Insert Effects (IFX 1, 2, 3, 4, 5)

1. In/Out


Insert Effects (IFX 1, 2, 3, 4, 5) have a **stereo input** and a **stereo output**. If you select **Dry** (no effect) for the “W/D” parameter, the stereo input signal will be output in stereo without being processed by the effect. If you select **Wet** (effect applied), the processed signal will be output in one of the following ways:



If you select **000: No Effect**, stereo input signals are output in stereo without being processed.

The possible routing of effect inputs and outputs is indicated in the upper left corner of the block diagram.

These can be switched **on/off** by the “On/Off” settings in 7.2: Ed-Insert FX, Setup pages IFX1–5 in each mode. When **off**, the effect will be bypassed. In the same way as for **000: No Effect**, the stereo input sound will be output in stereo without modification.

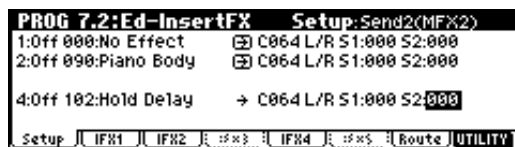
 Separately from this “On/Off” setting, MIDI control change CC#92 can be received to turn all IFX1–5 effects off. A value of 0 is off, and a value of 1–127 restores the original setting. You can also use “FX SW” (GLOBAL 1.1–1b) to turn off IFX1–5 in the same way. This is controlled on the global MIDI channel “MIDI Channel” (GLOBAL 2.1–1a).

Double-size effects

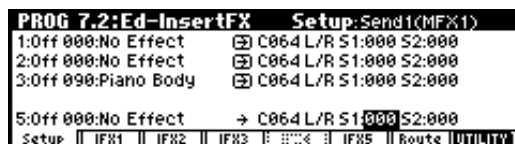
Double-size effects 090–102 use twice the area of what other effects use.

You can select them for **Insert Effects IFX2, IFX3, and IFX4**. Note that if you select a double-size effect for IFX2, you cannot use IFX3. In the same way, if you select a double-size effect for IFX3 or IFX4, you cannot use IFX4 or IFX5 respectively.

Selecting double-size effects for IFX2 and IFX4



Selecting a double-size effect for IFX3



2. Routing

You can use up to five channels (IFX 1, 2, 3, 4, and 5) for the **Insert Effects** in any mode.

2-1. Program mode

Use **"BUS Select"** (PROG 7.1-1a) to set the destination bus of the oscillator output.

L/R: The signal is not sent to the Insert Effects. Instead, it is sent to AUDIO OUTPUT (MAIN) L/MONO and R after the Master EQ.

IFX1-5: The signal is sent to Insert Effects IFX 1, 2, 3, 4, 5, 1, 2, 3, 4, 1/2, 3/4: The signal is sent to AUDIO OUTPUT (INDIVIDUAL) 1, 2, 3, 4 (⇨p.149 "Individual Outputs"). The signal is not sent to the Insert Effects, Master Effects, and or Master EQ.

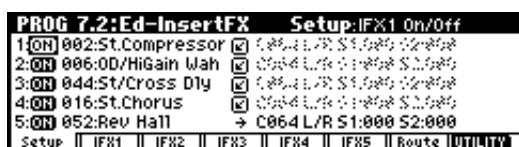
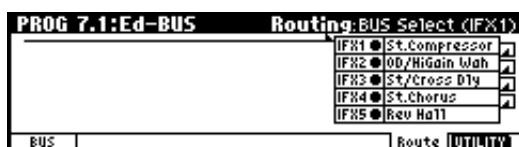
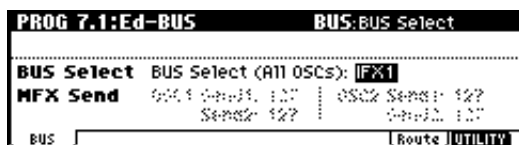
Off: The signal is not sent to AUDIO OUTPUT (MAIN L/MONO, R, (INDIVIDUAL) 1, 2, 3, or 4. (After the Master Effects, the signal is output to AUDIO OUTPUT (MAIN).) Select this option if you connect the Insert Effects with the Master Effects in series, with the send level specified by "MFX1 Send1" and "MFX2 Send2."

Use **MFX1 Send "Send1"** and **"Send2"** (PROG 7.1-1a) to specify the send level for the Master Effects. This setting is effective if "BUS Select" (PROG 7.1-1a) is set to **L/R** or **Off**. If "BUS Select" is set to **IFX1-5**, use "S1 (Send1(MFX1))" and "S2 (Send2(MFX2))" (PROG 7.2-1) for the post-IFX signal (⇨"3. Mixer").

MIDI Send Level 1 can be controlled by MIDI Control Change CC#93, and Send Level 2 can be controlled by MIDI Control Change CC#91. At this time, the actual send level is determined by multiplying the Send Level 1 or 2 value of the oscillator with the Send Level 1 or 2 value received via MIDI.

If you wish to connect IFX in series, make "Chain" (PROG 7.2-1a) settings. If you set "Chain" of IFX1 to , the output of IFX1 will be sent to the input of IFX2. When effects are connected in series, the "Pan (CC#8)," "BUS Select," "S1 (Send 1 (MFX1))," and "S2 (Send 2 (MFX2))" following the last IFX will be used (⇨"3. Mixer").

In the example shown in the following illustration, the output of oscillator 1 and 2 is sent to IFX1. By setting all "Chain" settings to , IFX1→IFX2→IFX3→IFX4→IFX5 are connected in series. The "Pan (CC#8)," "BUS Select," "S1 (Send 1 (MFX1))," and "S2 (Send 2 (MFX2))" settings following the IFX5 will be used.



— Settings for drum programs —

If you have selected **"Drums"** for "Oscillator Mode" (PROG 2.1-1a) of a Program, the "Use DKit Setting" box (PROG 7.1-1b) becomes available. If you **check** this box, "BUS Select" (GLOBAL 5.1-3a) for each key of the selected DrumKit becomes effective. For example, you can send a snare sound to IFX1 to apply the Gate effect, a kick sound to IFX2 to apply EQ, and other sounds to AUDIO OUTPUT (MAIN) L/MONO and R without applying any Insert Effects. If you **de-select the box**, all drum instrument outputs are sent to the bus specified by "BUS Select" (PROG 7.2-1a). You may apply any Insert Effects to all drum instruments, regardless of the DrumKit settings.

2-2. Combination, Multi mode

Use **"BUS Select"** (COMBI 7.1-1a, MULTI 7.1-1(2a)) for timbres (Combination) and tracks (Multi) to select an Insert Effect to apply to the corresponding timbres and tracks. You can route multiple timbres and tracks to a single Insert Effect.

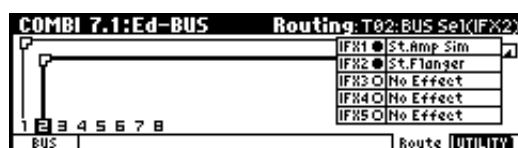
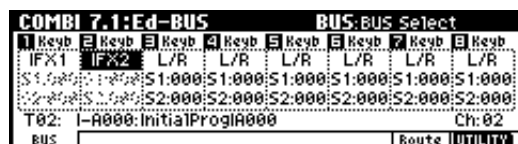
As with Program mode, select **L/R, IFX1-5, 1-4, 1/2, 3/4, or Off** for each timbre and track.

"S1 (Send1(MFX1))," "S2 (Send2(MFX2))" become available if "BUS Select" has been set to **L/R** or **Off**.

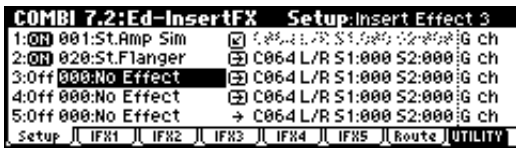
If **IFX1-5** is selected, use "S1 (Send1(MFX1))" and "S2 (Send2(MFX2))" for the post-IFX signal (⇨"3. Mixer").

MIDI Send level 1 is controlled by MIDI control change CC#93, and send level 2 by MIDI control change CC#91. At this time, the actual send level will be the send level 1 or 2 of the program oscillator used by the timbre/track multiplied by the send level 1 or 2 that is set via MIDI. ("Send Level" ⇨p.145, 147)

The following figure shows an example of Combination mode. The Timbre 1 output is sent to **IFX1** and the Timbre 2 output is sent to **IFX2** according to the "BUS Select" setting. Other timbres are sent to **L/R**. The output signal passes through the Master EQ, then goes to AUDIO OUTPUT (MAIN) L/MONO and R. It is not routed to the Insert Effects.



The following illustration shows the IFX1 “Chain” set to so that the output of IFX1 will be sent to IFX2. “IFX1: 001:St.Amp Sim” and “IFX2: 020: St.Flanger” are inserted to Timbre 1. “IFX2:020: St.Flanger” is inserted to Timbre 2. The figure above (Routing page) shows these settings. (In this example, IFX 3, 4, and 5 are not being used.)

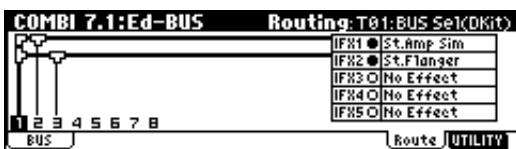
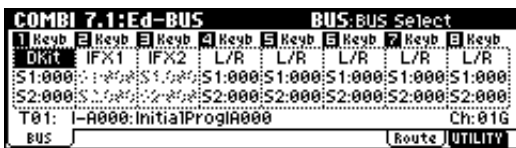


— Settings for drum Programs —

If a drum Program (“OSC Mode” DrumKit) is selected for timbres in **Combination mode** and for tracks in **Multi mode**, you can select “DKit” for “BUS Select.” If you select “DKit,” the “BUS Select” (GLOBAL 5.1–3a) settings for each key become effective, and each drum instrument sound will be routed to the corresponding buses (e.g.: the snare sound is sent to IFX1, kick sound to IFX2, and other sounds to L/ MONO and R). If you select anything other than **DKit**, you may apply any Insert Effects to all drum instruments, regardless of the DrumKit settings.

If “BUS Select” is set to **DKit**, you will be able to select the Utility “DKit IFX Patch.” This temporarily patches the “BUS Select” settings for each key to temporarily change the connections to the insert effects. For example if you have made settings for the keys of the drum kit so that snare-type sounds are sent to IFX1 and kick-type sounds are sent to IFX2, but IFX 1 and 2 are being used by other timbre/track programs, you can change the bus send destinations from IFX1 to IFX3 and from IFX2 to IFX4 for each key of the drum kit. (In this case, the snare sounds will be sent to IFX3 and the kick sounds will be sent to IFX4.) Patching is possible only for drum kit keys whose “BUS Select” has been set to **IFX1–5**. The setting status can also be verified in the Routing page. After setting “DKit IFX Patch,” press the [F8] (“OK”) key to execute. To return to the original settings of the drum kit, select IFX1→IFX1, IFX2→IFX2, IFX3→IFX3, IFX4→IFX4, IFX5→IFX5.

In the following example, Drum Program is assigned to Timbre 1, and normal Programs are assigned to Timbres 2 and 3. “BUS Select” is set to **DKit** for Timbre 1, **IFX1** for Timbre 2, and **IFX2** for Timbre 3. With Timbre 1, the “BUS Select” (GLOBAL 5.1–3a) for DrumKit setting becomes effective.

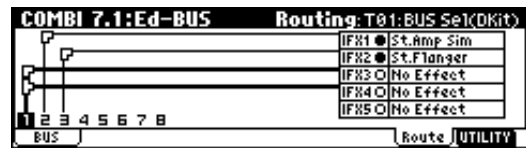


For example, if the snare-type sounds are set to IFX1 and the kick-type sounds are set to IFX2, and you wish to use different effects than timbres 2 and 3 as the drum program effects, you can use “DrumKit IFX Patch.” Select “DKit IFX Patch” from the Utility, and temporarily send the drum kit IFX1 to IFX3 and IFX2 to IFX4. When you execute the command, snare sounds will be sent to IFX3 and kick sounds to IFX4 so that these effects can be applied.

DrumKit IFX Patch dialog



After setting the parameters



2–3. Sampling mode

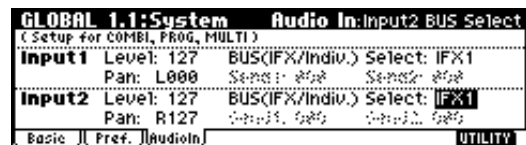
You can sample sound while applying the Insert Effects to the signal input from AUDIO INPUTS 1 and 2. Use “BUS (IFX) Select” (SMPL 1.1–3a) to set Inputs 1/2, and the buses by selecting from L/R, **IFX1–5**, and **Off**. You cannot select 1, 2, 3, 4, 1/2, or 3/4 (output to OUTPUTS 1, 2, 3, 4).

In the following example, input signals at Inputs 1 and 2 are routed to **IFX1**. The Insert effect parameters are set in “SMPL 7.2: Insert Effect” and the Insert effects are applied to the input signals for sampling.



2–4. Audio Input

In Program, Combination and Multi modes, you can apply the Insert Effects, Master Effects and Master EQ to the signals input from AUDIO INPUTS 1 and 2. These signals are routed to the TRITON-Rack’s effects, according to the GLOBAL 1.1: System, Audio In page setting.



Use “BUS (IFX/Indiv.) Select” (GLOBAL 1.1–3a/b) to set Inputs 1/2 buses by selecting from L/R, **IFX1–5**, 1–4, 1/2, 3/4, and **Off**.

“Send1” and “Send2” become effective only when “BUS (IFX/Indiv.) Select” (GLOBAL 1.1–3a/b) is set to L/R or **Off**. If **IFX1–5** is selected, use “S1 (Send1(MFX1))” and “S2 (Send2(MFX2))” for the post-IFX signal (⇨“3. Mixer”).


⚠ This setting is ignored in Sampling mode. Refer to “2–3. Sampling Mode” for information on the Sampling mode settings.

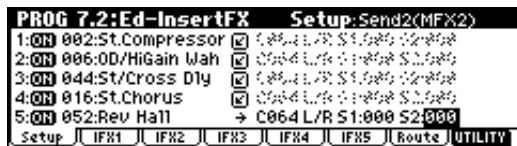
Use “7.2: Ed-InsertFX (or Insert FX)” in Program, Combination, or Multi mode to set up the Insert Effects. You can apply 2-in/6-out effects to the incoming signal from Inputs 1 and 2. You may also combine these signals with the internal sound.

For example, in Program mode or Combination mode, you can route the incoming signal from AUDIO INPUTS 1 and 2 and the oscillator sound to “Insert Effect 093: Vocoder” in order to set up a vocoder effect in which the internal sound is controlled by the mic inputs (p.197 “093: Vocoder”).

3. Mixer

For each mode, use 7.2: Ed-InsertFX (or Insert FX) Setup page parameters “Pan (CC#8),” “BUS Select,” “S1 (Send 1 (MFX1)),” and “S2 (Send 2 (MFX2))” to specify the pan, bus select, and the send levels to master effects MFX1 and MFX2 for the signals that have passed through the insert effects. If you have set “Chain” to to connect insert effects in series, the parameters listed above will be applied after the signal has passed through the last insert effect.

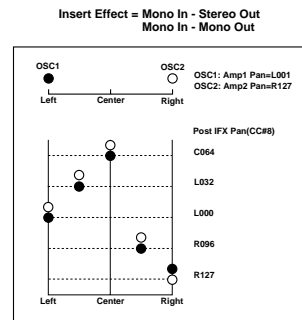
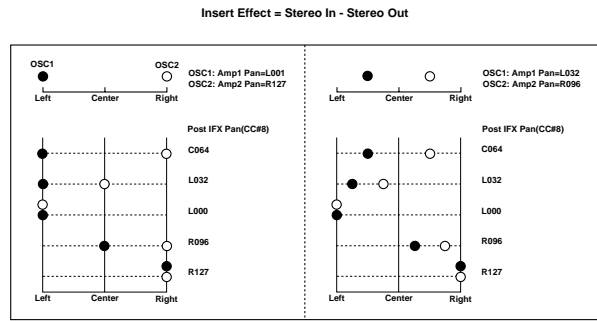
 In Sampling mode, you cannot use the Master Effects or route signals to INDIVIDUAL 1, 2, 3, and 4. You can set only the pan setting for the post-IFX signals.




3-1. Pan (CC#8)

Specifies the pan after passing through the insert effect. If the insert effect is a **Stereo In-Stereo Out** type (p.197 “In/Out”), setting this parameter to **C064** will allow the “Pan” settings of the oscillator (PROG 5.1-1, PROG 5.2-1), timbre (COMBI 1.1-3, 2.1-2), track (MULTI 1.1-4/5) or audio input (SMPL 1.1-3, GLOBAL 1.1-3) to be used.

If the insert effect is a **Mono In-Stereo Out** or **Mono In-Mono Out** type (p.197 “In/Out”), the “Pan” of the oscillator, timbre, track, or audio input (see above) will be ignored, and the sound will always be panned to the center. In this case, the “Pan (CC#8)” (7.2-1) that follows the insert effect will determine the final panning. **L001** is far left and **R127** is far right.



 You can control these parameters via MIDI Control Change CC#8.

3-2. BUS Select


This parameter enables you to specify the destination bus for the post-IFX signals.

“L/R” is a common setting to send signals to the Master EQ before they are routed to the OUTPUT L/R outputs. Select **1, 2, 3, 4, 1/2, or 3/4** to route the signals to AUDIO OUTPUT (INDIVIDUAL) 1, 2, 3, or 4 (p.197 “Individual Output”). Select “Off” so that no signals will be output to L/MONO, R, 1, 2, 3, or 4. In this case, the signals are routed from the Master Effects to AUDIO OUTPUT (MAIN). This setting is used when you are connecting the Insert Effects with the Master Effects in series using “S1 (Send1(MFX1))” and S2 (Send2(MFX2)).”

3-3. Send level

These parameters enable you to set the send level of the signals routed to Master Effects MFX1 and MFX2. These settings are effective only when “BUS Select” is set to **L/R** or **Off**.

If you are not using insert effects, set the PROG 7.1-1 MFX Send “Send 1” and “Send 2” parameters, the COMBI 7.1-1 “S1 (Send 1 (MFX1))” and “S2 (Send 2 (MFX2))” parameters, or the Multi mode MULTI 7.1-1/2 “S1 (Send 1 (MFX1))” and “S2 (Send 2 (MFX2))” to set the send levels to master effects MFX1 and MFX2. (Send levels of the audio input are set in GLOBAL 1.1-3a/b.)

 Send Level 1 can be controlled by MIDI Control Change CC#93 and Send Level 2 can be controlled by MIDI Control Change CC#91

4. Controlling the Insert Effects via MIDI

Using the Dynamic Modulation (Dmod) function enables you to control all effect parameters in real-time during performance from the controllers of the TRITON-Rack or a connected MIDI sequencer. You can also control the “**Pan (CC#8)**,” “**S1 (Send 1 (MFX1))**,” and “**S2 (Send 2)**” of the post-IFX signals in the same way.

4-1. Program mode, Sampling mode

You can control the parameters on MIDI Global channel (MIDI Channel” (GLOBAL 2.1-1a).

4-2. Combination mode

Use Setup page “Control Channel” to set up the control channels for IFX1, 2, 3, 4, and 5. Select an appropriate option from **Ch01-16**, **Gch**, and **All Rt**.

Ch01-16: Selects this option if you wish to control the parameters for each Insert Effect on different channels. The “*” mark appears on the right of the number of the channel routed to the corresponding Insert Effects.

Gch: Selects this option if you wish to control the parameters on MIDI Global channel “MIDI Channel” (GLOBAL 2.1-1a). This is a common setting.

All Rt.: Select this option to control the parameters on the channels (Cho1-16 that have a “*” mark) for the timbres that are routed to the corresponding Insert Effects.

4-3. Multi mode

Use Setup page “Control Channel” to set up the control channels for IFX1, 2, 3, 4, and 5. Select an appropriate option from **Ch01-16** and **All Rt.**

Ch01-16: Selects this option if you wish to control the parameters for each Insert Effect on different channels. The “*” mark appears at the right of the channel number of the track that is routed to the corresponding Insert effects. This option is suitable if multiple tracks on different MIDI channels are sent to the Insert Effects and you wish to control the parameters using one of the tracks.

All Rt.: Selects t this option to control the parameters on the channel numbers (Cho1-16 that have a “*” mark) for the tracks that are routed to the corresponding Insert Effects. “**All Rt.**” is a typical option. If you wish to control the parameters on a channel, select one from **Ch01-16**.

Master Effects (MFX1, 2)

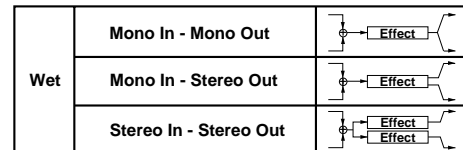
1. In/Out

The I/Os of **Master Effects MFX1** and **MFX2** are **mono-in/stereo-out**. “Send Level 1” and “Send Level 2” determine the send level to the Master Effects (⇔“Routing” and “Mixer”). Stereo signals will be combined to a mono signal automatically and sent to the effects.

The Master Effects do not output any **Dry** signals (signals that are not processed by the effects). Therefore, they output only **Wet** (signals that are processed by the effects) signals (set via the “W/D” of the “MFX1” and “MFX2” page). The output signals from the Master Effects are routed to the **L/R** bus with the output level specified by “Rtn (Return1, Return2).” These output signals are mixed with the output signals from the bus specified by **BUS** page **L/R**, or with the output signals from the bus specified by “**BUS Select**” (Setup page in each mode) **L/R**, then routed to the Master EQ.



Selecting “**000: No Effect**” will mute the output. The processed signal will be output in one of the following ways, according to the type of **effects 001-089**.



The possible routing of effect signal inputs and outputs is indicated in the upper left corner of the block diagram.

MFX1 and 2 are switched **on/off** by the “On/Off” parameter in the 7.3: Ed-MasterFX (or Master FX) Setup page “On/Off” of each mode. When **off** is selected, the output will be muted in the same way as for **000: No Effect**.

MIDI Separately from this “On/Off” setting, MIDI control changes CC#94 (MFX1) and CC#95 (MFX2) can be received to turn each master effect off. A value of 0 is off, and a value of 1-127 restores the original setting. You can also use “FX SW” (GLOBAL 1.1-1b) to turn off MFX1 and MFX2 in the same way. This is controlled on the global MIDI channel “MIDI Channel” (GLOBAL 2.1-1a).

Double-size effects

You cannot select double-size effects for **Master Effects MFX1** and **MFX2**.

2. Routing

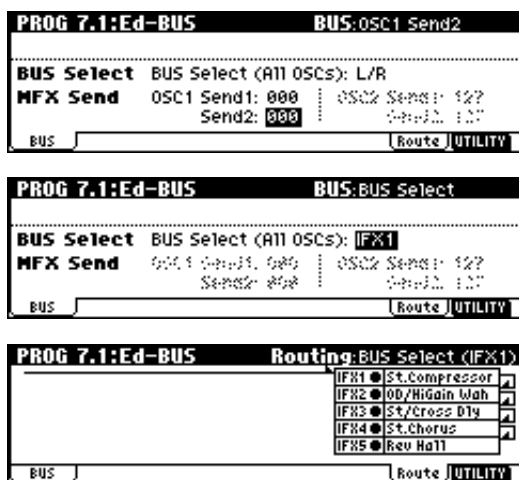
You can use up to two channels (MFX1 and 2) for the Master Effects in any mode other than in Sampling mode. (You cannot use the Master Effects in Sampling mode.) If you are not using any Insert Effects in any mode, the Master Effects send levels are determined by the “Send Level 1/2 (MFX2)” parameters specified independently for the oscillators (Program), timbres (Combination), tracks (Multi), and audio inputs (Global). For example, you can apply substantial reverberation to a piano sound assigned to the timbre and tracks, a small amount of reverberation to the strings sound, and no reverberation to the bass sound. If you are using the Insert Effects, set the “S1 (Send1(MFX1))” and “S2 (Send2(MFX2))” parameters for the post-IFX signals.

2-1. Program mode

The PROG 7.1-1a MFX Send parameters “Send 1” and “Send 2” or the PROG 7.2-1a “S1 (Send 1 (MFX1))” and “S2 (Send 2 (MFX2))” parameters that follow IFX1-5 determine the send levels to the master effects.

The PROG 7.1-1a MFX Send “Send 1” and “Send 2” settings are used when “BUS Select” is set to **L/R** or **Off**. Each can be set for oscillator 1 and 2.

The PROG 7.2-1a “S1 (Send 1 (MFX1))” and “S2 (Send 2 (MFX2))” settings that follow IFX1-5 are used when “BUS Select” is set to IFX1-5. If the insert effects are chained (connected in series), the “S1 (Send 1 (MFX1))” and “S2 (Send 2 (MFX2))” that follows the last-connected IFX will be used. If “BUS Select” is **1**, **2**, **3**, **4**, **1/2**, or **3/4**, the oscillator will be directly output to AUDIO OUTPUT (INDIVIDUAL)1, 2, 3, 4 (⇒“Individual Output”). Send levels 1/2 will be ignored, and the master effects will not be applied.



MIDI Send Level 1 can be controlled by MIDI Control Change CC#93 and Send Level 2 can be controlled by MIDI Control Change CC#91 on MIDI Global channel “MIDI Channel” (GLOBAL 2.1-1a). At this time, the actual send level uses the value of the Send 1 and 2 settings for Oscillators 1 and 2, multiplied by the Send Level 1 and 2 values received via MIDI.

If the program “Oscillator Mode” (PROG 2.1-1a) is **Drums**, the “USE DKit Setting” (PROG 7.1-1b) will be used.

If this is **checked**, the setting for each key of the selected drum kit will be used. The drum instrument for a key whose drum kit “BUS (Bus Select)” (GLOBAL 5.1-3a) parameter is set to **L/R** or **Off** will use the “S1 (Send 1 (MFX1))” and “S2 (Send 2 (MFX2))” (GLOBAL 5.1-3a) settings. If **IFX1-5** is used, the “S1 (Send 1 (MFX1))” and “S2 (Send 2 (MFX2))” (PROG 7.2-1a) after passing through IFX1-5 will be used. If this is **not checked**, the “Send 1” and “Send 2” (PROG 7.1-1a, MFX Send) settings or the “S1 (Send 1 (MFX1))” and “S2 (Send 2 (MFX2))” (PROG 7.2-1a) settings after passing through IFX1-5 will be used for all drum instruments. (This is the same as when “Oscillator Mode” is **Single** or **Double**.)

2-2. Combination, Multi mode

Use “S1 (Send 1 (MFX1))” and “S2 (Send 2 (MFX2))” (7.1-1(2)a) for timbres (Combination) and tracks (Multi) to set the Send level for each timbre and track. As with Program mode, if “BUS Select” is set to **L/R** or **Off**, “S1 (Send 1 (MFX1))” and “S2 (Send 2 (MFX2))” become effective. In this case, the actual send level will be the setting of the program (PROG 7.1-1a) used by the timbre/track multiplied by the send level you specify here.

– Send level –

For example, if a Program’s “OSC1 Send1” is set to **127**, “Send2” set to **064**, “OSC2 Send1” set to **064**, “Send2” set to **127**, a Combination’s “Send1” set to **064**, and “Send2” set to **127**, the actual send levels of the combination are calculated as follows:

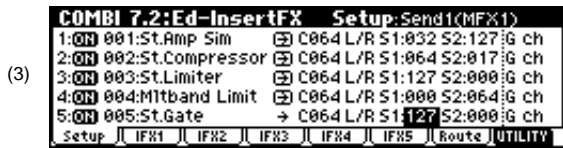
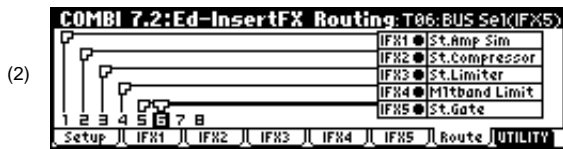
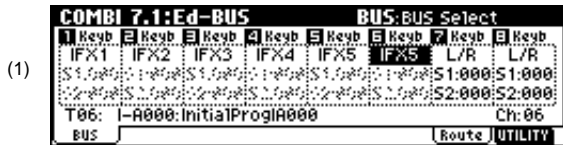
$$\begin{aligned} \text{OSC1 Send1} &= 127 (100\%) * 064 (50\%) = 064 (50\%) \\ \text{OSC1 Send2} &= 064 (50\%) * 127 (100\%) = 064 (50\%) \\ \text{OSC2 Send1} &= 064 (50\%) * 064 (50\%) = 032 (25\%) \\ \text{OSC2 Send2} &= 127 (100\%) * 127 (100\%) = 127 (100\%) \end{aligned}$$

If **IFX1-5** is selected for “BUS Select”, use the “S1 (Send1(MFX1))” and “S2 (Send2(MFX2))” parameters for the post-IFX signals.

If **1**, **2**, **3**, **4**, **1/2**, or **3/4** is selected instead, these settings are ignored and the Master Effect is not applied.

MIDI Send Level 1 responds to MIDI Control Change CC#93, and Send2 Level responds to MIDI Control Change CC#91. If “Send1 (MFX1)” and “Send2(MFX2)” for each timbre/track are effective, the parameter will be controlled on the MIDI channels set for the corresponding timbres and tracks. If the “Send1(MFX1)” and “Send2(MFX2)” parameters for the post-IFX1-5 signals are effective, they can be controlled on the MIDI channels assigned to IFX1-5.

The following examples are in Combination mode. In figure (1), “BUS Select” is set so that Timbre 1 is routed to **IFX1**, Timbre 2 to **IFX2**, Timbre 3 to **IFX3**, Timbre 4 to **IFX4**, Timbres 5 and 6 to **IFX5**, and Timbres 7 and 8 to **L/R**. In this case, use “S1 (Send1(MFX1))” and “S2 (Send2(MFX2))” for the post-IFX1(001: **St. Amp Simulation**) signal in figure (3) to set the send level of the Timbre 1 routed to the Master Effect. (In this example they are set to **032** and **127**.) In the same way, use “S1 (Send1(MFX1))” and “S2 (Send2(MFX2))” for the post-IFX2, 3, and 4 signals to set the send levels of Timbres 2, 3, and 4, and use the “S1 (Send1(MFX1))” and “S2 (Send2(MFX2))” parameters for the post-IFX5 signal to set the send levels of Timbres 5 and 6. For Timbres 7 and 8, the settings of “S1 (Send1(MFX1))” and “S2 (Send2(MFX2))” in figure (1) will be effective. (At this time, the actual send levels use these Send 1 and 2 values multiplied by the Send 1 and 2 settings for Program oscillators.)



If a drum program has been selected for a timbre in Combination mode or for a track in Multi mode, you will be able to select **DKit** for the “BUS Select” parameter. If this is selected, the “BUS (BUS Select)” (GLOBAL 5.1-3a) settings for each individual key will be used, and will be sent to the bus for each drum instrument. In this case, the send level will be determined by multiplying the value of the “S1 (Send 1 (MFX1))” and “S2 (Send 2 (MFX2))” settings of each key in the drum kit by the value of the “S1 (Send 1 (MFX1))” and “S2 (Send 2 (MFX2))” settings that you make here. (For the drum instruments of keys whose drum kit “BUS (BUS Select)” parameter is set to **IFX1-5**, this is determined by “S1 (Send 1 (MFX1))” and “S2 (Send 2 (MFX2))” after the signal has passed through IFX1-5.) If **L/R** or **Off** is selected, the send levels specified by PROG 7.1-1a “OSC1 Send 1” and “Send 2” will be multiplied by the “S1 (Send 1 (MFX1))” and “S2 (Send 2 (MFX2))” settings that you make here. (This is the same as when “Oscillator Mode” is **Single** or **Double**.) If **IFX1-5** are selected, the “S1 (Send 1 (MFX1))” and “S2 (Send 2 (MFX2))” after the specified insert effect will be used. If 1, 2, 3, 4, 1/2, or 3/4 are selected, “S1 (Send 1 (MFX1))” and “S2 (Send 2 (MFX2))” will be ignored.

2-3. Sampling Mode

You cannot use the Master Effects and Master EQ in Sampling mode.

2-4. Audio Input

In Program, Combination, and Multi modes, you can apply the Insert Effects, Master Effects and Master EQ to the signals input from AUDIO INPUTS 1 and 2. These signals are routed to the TRITON-Rack’s effects, according to the GLOBAL 1.1: System, Audio In page setting.

The send levels from input 1 and 2 to the master effects are specified by the “Send 1” and “Send 2” (GLOBAL 1.1-3a/b) values. These settings become effective only when “BUS Select” is set to **L/R** or **Off**. If **IFX1-5** is selected, use the “S1 (Send1(MFX1))” and “S2 (Send2(MFX2))” parameters (≡ “3. Mixer”). If 1, 2, 3, 4, 1/2, or 3/4 is selected, the Send Level 1 and Send 2 settings are ignored.

⚠ These settings are ignored in Sampling mode.

Use 7.3: Ed-MasterFX (or Master FX) in Program, Combination, and Multi modes to set the Master Effects and Master EQ.

3. Mixer

The send levels determine the input levels of oscillators (Program), timbres (Combination), tracks (Multi), and audio inputs (GLOBAL 1.1: System, Audio In page) that are routed to the Master Effects. The 7.3: Ed-MasterFX (or Master FX) in all modes enable you to set the output levels and Master EQ gain values, and connect the Master Effects in series (chain).

3-1. Rtn (Return1, Return2)

These specify the output levels from MFX1 and MFX2 respectively. The left value of the “W/D” specified for the effect selected in MFX 1 or 2 will be the output level of the master effect; e.g., 25% for **25:75**, 100% for **Wet**, and 0% for **Dry**. This level multiplied by the “Rtn (Return 1, Return 2)” value will be sent to the L/R bus, and will be mixed with the 7.1-1a “BUS Select” **L/R** or 7.2-1a “BUS Select” **L/R** output sound.

For example, with MFX1 “W/D” set to **50:50** (50%) and “Rtn (Return1)” set to **64** (50%), the resultant effect level will be 25%. The effect level is maximum (100%) when “W/D” is set to **Wet** and “Rtn (Return1)” is set to **127**.

3-2. MFX Chain

Specify the routing between MFX1 and MFX2.

The following figure indicates that the output from “MFX1:016: **Stereo Chorus**” is added to “MFX2: 052: **Reverb Hall**” input.



3-3. Chain Direction

If you have checked the “MFX Chain” box, you can specify the direction of the connection between MFX1 and MFX2 here.

3-4. Chain Signal

This parameter enables you to select signals routed between MFX1 and 2. If the chain direction (order) is from **MFX1** to **MFX2**, selecting **LR Mix** will cause the stereo L/R outputs from MFX1 to be mixed and input to MFX2. This setting is useful when you wish to serially connect delays that are panned to L and R (e.g., “**043: LCR Delay**”). Selecting **L Only** or **R Only** will cause only one channel of stereo outputs from MFX1 to be input to MFX2. This setting is suitable for a chain connection of a reverb effect and a modulation effect such as **016: St. Chorus**.

3-5. Chain Level

This parameter determines the level of signals routed from one MFX to the other MFX in a chain connection.

3-6. Master EQ Gain[dB]

These parameters are used to set the gain of the Low, Mid, and High stereo three-band EQ that is located right before AUDIO OUTPUT (MAIN) L/Mono and R. Low and High EQs are of the shelving type, and Mid EQ is a band type equalizer. These slider settings are linked with the Low, Mid, and High “Gain” parameters of the MEQ page. Use this MEQ page to set the center frequency, band width (for Mid), and dynamic modulation of the EQ bands.

4. Controlling the Master Effects via MIDI

You can use the Dynamic Modulation (Dmod) function to control all Master Effects parameters in real-time from the TRITON-Rack’s controllers or from an external MIDI sequencer.

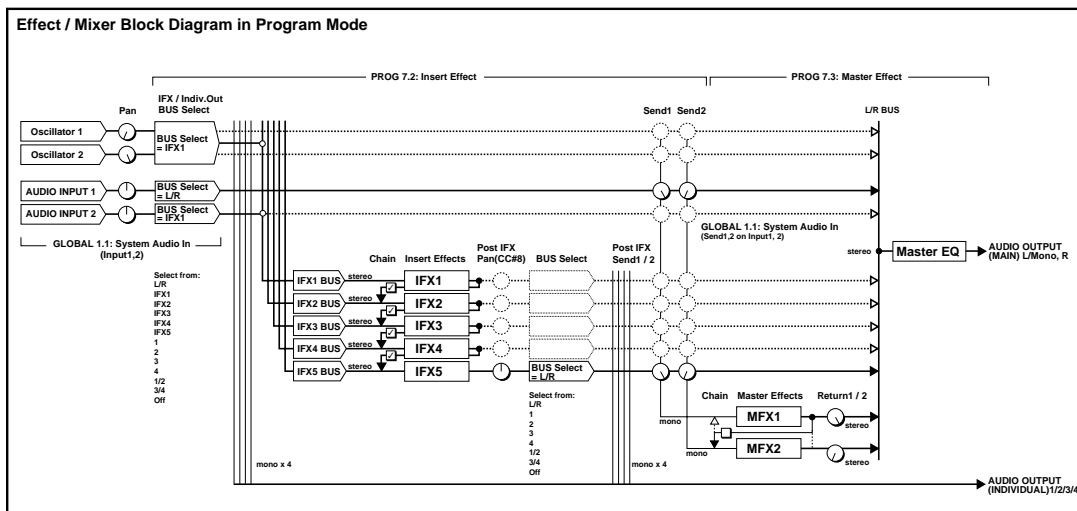
In **Program mode**, the parameters are controlled on MIDI Global channel “MIDI Channel” (GLOBAL 2.1-1a).

In **Combination mode**, and **Multi mode**, you can set the control channels for MFX1 and MFX2 using the Setup page “Control Channel” parameters of the “MFX1-2” tabs. Select the desired option from **Ch01-16**, and **Gch**.

Ch01-16: Select this option if you wish to control the parameters for each Master Effect on different channels.

Gch: Select this option if you wish to control the parameters on MIDI Global channel “MIDI Channel” (GLOBAL 2.1-1a). This is the normal setting.

Program mode



Master EQ

The Master EQ (stereo, three-band EQ) is located right before AUDIO OUTPUT (MAIN) L/MONO, R. Low and High EQs are of the shelving type, and Mid EQ is a peaking type equalizer. You can control the Low Gain and High Gain parameters using the Dynamic Modulation function. The Master EQ (stereo, three-band EQ) is applied to the signal input from the L/R bus. For more information on the parameters, see p.203.

Individual Outputs

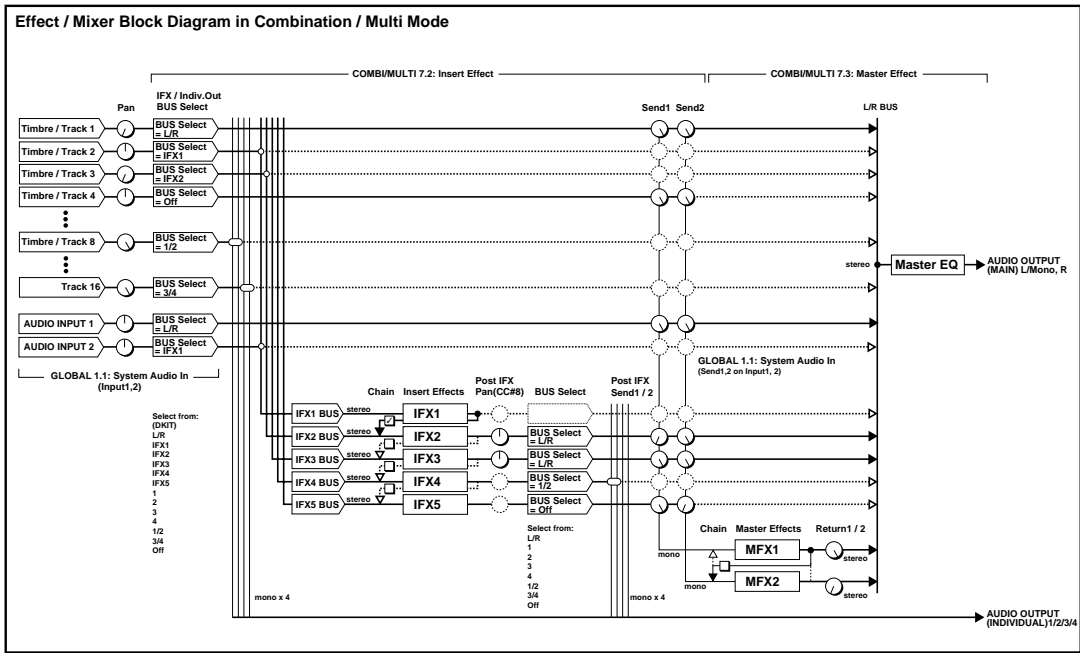
The TRITON-Rack is equipped with four individual AUDIO OUTPUTS (INDIVIDUALS). You can route the oscillator (Program), timbre (Combination), and track (Multi) output or the post-IFX signals to these four individual outputs. Use “BUS Select” (7.1-1a) of the P8: “Routing” tab in Program, Combination, or Multi mode to route the oscillators (Program), timbres (Combination), or tracks (Multi) to AUDIO OUTPUTS (INDIVIDUAL).

If you are using the Insert Effects, use “BUS Select” of the 7.2: Ed-InsertFX (or Insert FX), and Setup page to route the post-IFX signals.

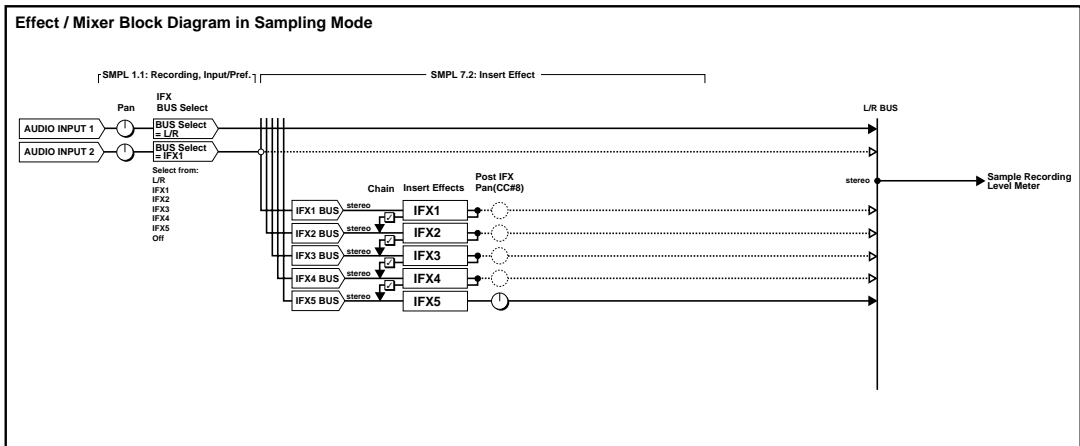
1, 2, 3, 4: Monaural signals are routed to AUDIO OUTPUTS (INDIVIDUAL).

1/2, 3/4: Stereo signals are routed to AUDIO OUTPUTS (INDIVIDUAL). Use AUDIO OUTPUTS (INDIVIDUAL) 1/2 in stereo for 1/2, and use AUDIO OUTPUTS (INDIVIDUAL) 3/4 in stereo for 3/4.

Combination, Multi mode



Sampling mode



Filter/Dynamic

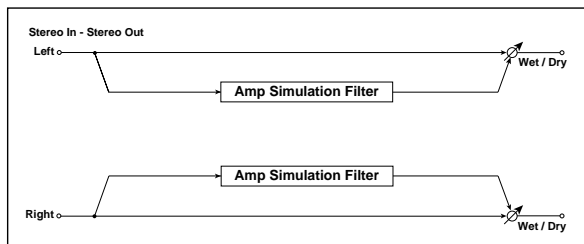
Filter and dynamics control effects

000: No Effect

Select this option when you do not wish to use any effects. The Insert Effect section outputs unprocessed signals and the Master Effect section mutes the output.

001: St.Amp Sim (Stereo Amp Simulation)

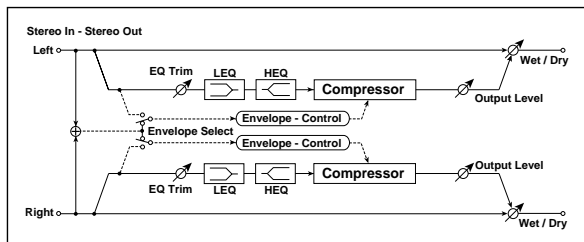
This effect simulates the frequency response characteristics of guitar amplifiers. It is also effective for organ and drum sounds.



a	Amplifier Type Selects the type of guitar amplifier	SS, EL84, 6L6
b	W/D (Wet/Dry) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D^{mod}
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	-100...+100

002: St.Compressor (Stereo Compressor)

This effect compresses the input signal to regulate the level and give a “punchy” effect. It is useful for guitar, piano, and drum sounds. This is a stereo compressor. You can link left and right channels, or use each channel separately.



a	Envelope (Envelope Select) Determines whether the left and right channels are linked or used separately	L/R Mix, L/R Individually
b	Sensitivity Sets the sensitivity	1...100
c	Attack Sets the attack level	1...100

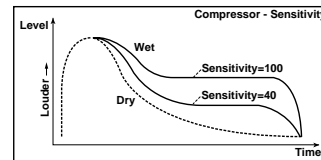
d	Level (Output Level) Sets the output level of the compressor	0...100 D^{mod}
	(Source) Selects the modulation source for the compressor output level	Off...Tempo
	(Amount) Sets the modulation amount of the compressor output level	-100...+100
e	Pre EQ Trim Sets the EQ input level	0...100
f	LoEQ (Pre Low EQ Gain) Sets the gain of Low EQ	-15.0...+15.0dB
	HiEQ (Pre High EQ Gain) Sets the gain of High EQ	-15.0...+15.0dB
g	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D^{mod}
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	-100...+100

a: Envelope

This parameter selects whether the left and right channels are linked to control both signals simultaneously, or whether each channel is controlled independently.

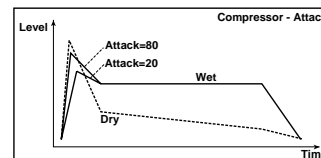
b: Sensitivity, d: Level

The “Sensitivity” parameter sets the sensitivity of the compressor. If this parameter is set to a higher value, lower level sounds will be boosted. With a higher Sensitivity, the overall volume level is higher. To adjust the final volume level, use the “Level” parameter.



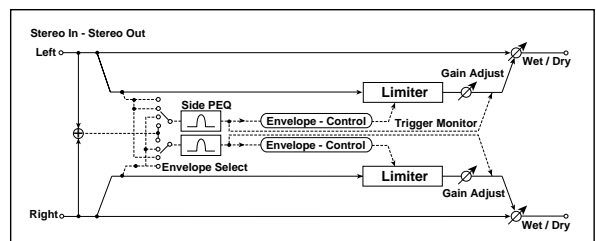
c: Attack

This parameter controls the attack level.



003: St.Limiter (Stereo Limiter)

The Limiter regulates the input signal level. It is similar to the Compressor, except that the Limiter compresses only signals that exceed the specified level to lower unnecessary peak signals. The Limiter applies a peaking-type EQ to the trigger signal (which controls the degree of the Limiter effect), allowing you to set any band width to be covered. This effect is a stereo limiter. You can link left and right channels, or use each channel individually.



a	Envelope (Envelope Select) L/R Mix, L Only, R Only, L/R Individually Selects from linking both channels, controlling only from left channel, only from the right channel, or controlling each channel individually	
b	Ratio Sets the signal compression ratio	1.0:1...50.0:1, Inf:1
c	Threshold Sets the level above which the compressor is applied	-40...0dB
d	Attack Sets the attack time	1...100
e	Release Sets the release time	1...100
f	Side PEQ Insert Toggles between on/off of the trigger signal's EQ	Off, On
g	Trigger Monitor Switches between effect output monitor and trigger signal monitor	Off, On
h	EQ (Side PEQ Cutoff) Sets the EQ center frequency for the trigger signal	20...12.00kHz
	Q Sets the EQ bandwidth for the trigger signal	0.5...10.0
	G (Gain) Sets the EQ gain for the trigger signal	-18.0...+18.0dB
i	G.Adj (Gain Adjust) Sets the output gain	-Inf, -38...+24dB
	(Source) Selects the modulation source for the output gain	Off...Tempo
	(Amount) Sets the modulation amount of the output gain	-63...+63
j	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	-100...+100

a: Envelope

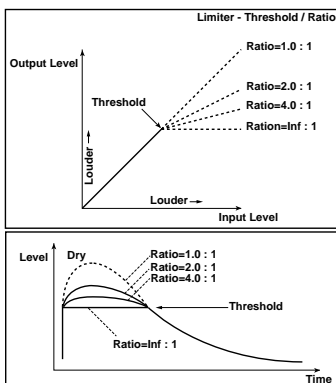
When **L/R Mix** is selected for this parameter, the left and right channels are linked to control the Limiter using the mixed signal. If **L Only** (or **R Only**) is selected, the left and right channels are linked, and the Limiter is controlled via only the left (or right) channel.

With **L/R individually**, the left and right channels control the Limiter individually.

b: Ratio, c: Threshold, i: G.Adj

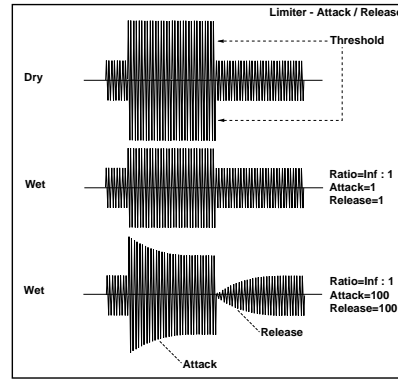
This parameter sets the signal compression "Ratio". Compression is applied only when the signal level exceeds the "Threshold" value.

Adjust the output level using the "G.Adj" parameter, since compression causes the entire level to be reduced.



d: Attack, e: Release

These parameters set the attack time and release time. A higher attack time will cause the compression to be applied more slowly.



f: Side PEQ Insert, h: EQ, h: Q, h: G

These parameters are used to set the EQ applied to the trigger signal.

The Limiter determines whether the compression is applied or not, based on the post-EQ trigger signal. Setting the equalizer allows you to set the Limiter to respond to any frequency band.

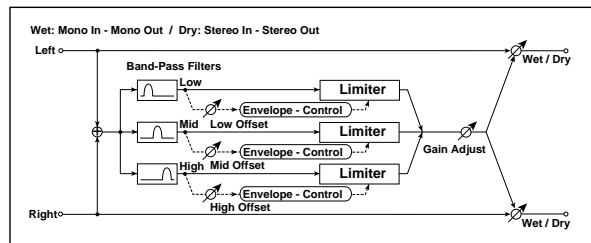
g: Trigger Monitor

Setting this parameter **On** will cause the trigger signal to be output, instead of the effect sound. Use this parameter to check the trigger signal with EQ applied. Usually, set this to **Off**.

004: Mltband Limit

(Multiband Limiter)

This effect applies the Limiter to the low range, mid range, and high range of the input signal. You can control dynamics for each range to adjust the sound pressure of the low range, mid range, and high range in a different way from the EQ.



a	Ratio Sets the signal compression ratio	1.0:1...50.0:1, Inf:1
b	Threshold Sets the level above which the compressor is applied	-40...0dB
c	Attack Sets the attack time	1...100
d	Release Sets the release time	1...100
e	Low Offset Gain of the low-range trigger signal	-40...0dB
f	Mid Offset Gain of the mid-range trigger signal	-40...0dB
g	High Offset Gain of the high-range trigger signal	-40...0dB
h	G.Adj (Gain Adjust) Sets the output gain	-Inf, -38...+24dB
	(Source) Selects the modulation source for the output gain	Off...Tempo
	(Amount) Sets the modulation amount of the output gain	-63...+63

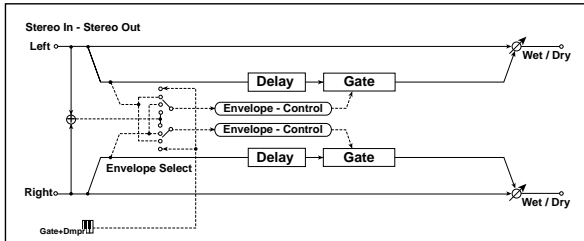
i	W/D (Wet/Dly)	Dry, 1:99...99:1, Wet	D^{mod}
	(Source)	Off...Tempo	
	(Amount)	-100...+100	

e: Low Offset, f: Mid Offset, g: High Offset

These parameters set the gain of the trigger signal. For example, if you do not want to apply compression to the high range, reduce the "High Offset" value down below the "Threshold" level. In this way, the high range limiter will not respond, and compression will not be applied.

005: St.Gate (Stereo Gate)

This effect mutes the input signal if its level is lower than the specified level. It also reverses the on and off operation of the gate, and uses Note On and Off messages to turn the gate on and off.



a	Envelope (Envelope Select)	Dmod, L/R Mix, L Only, R Only	D^{mod}
b	Env. Dmod Src (Envelope Dmod Source)	Off...G2+Dmp	
c	Threshold	0...100	
d	Attack	1...100	
e	Release	1...100	
f	Polarity	+ , -	
g	Delay (Delay Time)	0...100ms	
h	W/D (Wet/Dly)	Dry, 1:99...99:1, Wet	D^{mod}
	(Source)	Off...Tempo	
	(Amount)	-100...+100	

a: Envelope, b: Env. Dmod Src

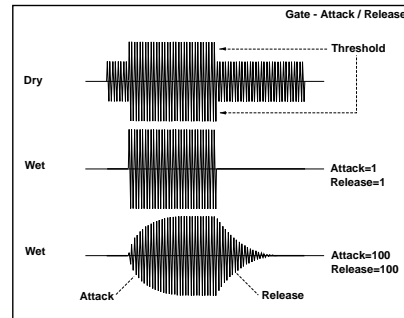
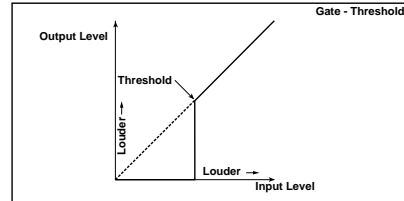
The "Envelope" parameter selects whether the gate on/off is triggered by the level of the input signal, or controlled directly by the modulation source. The Src parameter specifies the modulation source, selected from **Off** to **G2+Dmod**. With "Envelope" = **L/R Mix**, the left and right channel signal mixture will trigger the gate on/off. When **L Only** or **R Only** is selected, the gate is controlled by either of the channel signals.

f: Polarity

This parameter reverses the Gate on/off operation. With a **negative** value, the gate is closed when the input signal level exceeds the Threshold. The gate operation controlled by the modulation source is also reversed.

c: Threshold, d: Attack, e: Release

This parameter sets the signal level below which Gate is applied when "Envelope" is set to **L/R Mix, L Only, or R Only**. The Attack and Release parameters set the Gate attack time and release time.

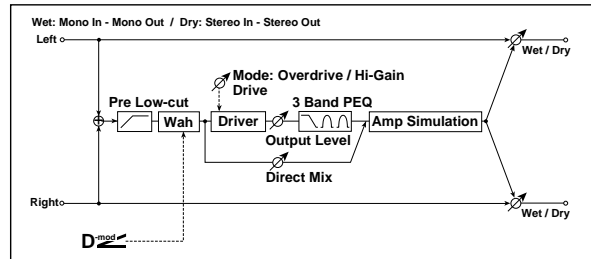


g: Delay

This parameter sets the delay time of the Gate input. If the sound has a very fast attack, increase the delay time so that the signal has not yet faded after the Gate is opened. This will preserve the attack part of the sound.

006: OD/HiGain Wah (Overdrive/Hi.Gain Wah)

This distortion effect utilizes an Overdrive mode and a Hi-Gain mode. Controlling the wah effect, the 3-band EQ, and the amp simulation will allow you to create versatile distortion sounds. This effect is suitable for guitar and organ sounds.



a	Wah	Off, On	D^{mod}
	(Source)	Off...Tempo	
	(Sw)	Tggl, Mmnt	
b	Sweep Rng (Wah Sweep Range)	-10...+10	D^{mod}
	Src (Source)	Off...Tempo	
c	Mode (Drive Mode)	Overdrive, Hi-Gain	
	Drive	1...100	

d	Pre Low-cut Sets the low range cut amount of the distortion input	0...10
e	Level (Output Level) Sets the output level	0...50
	(Source) Selects the modulation source for the output level	Off...Tempo
	(Amount) Sets the modulation amount of the output level	-50...+50
f	Lo (Low Cutoff) Sets the center frequency for Low EQ (shelving type)	20...1.0kHz
	G (Gain) Sets the gain of Low EQ	-18...+18dB
g	M1 (Mid1 Cutoff) Sets the center frequency for Mid/High EQ 1 (peaking type)	300...10.00kHz
	Q Sets the band width of Mid/High EQ 1	0.5...10.0
	G (Gain) Sets the gain of Mid/High EQ 1	-18...+18dB
h	M2 (Mid2 Cutoff) Sets the center frequency for Mid/High EQ 2 (peaking type)	500...20.00kHz
	Q Sets the band width of Mid/High EQ 2	0.5...10.0
	G (Gain) Sets the gain of Mid/High EQ 2	-18...+18dB
i	Direct Mix Sets the amount of the dry sound mixed to the distortion	0...50
	SpSim (Speaker Simulation) Switches the speaker simulation on/off	Off, On
j	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	-100...+100

a: Wah

The Wah parameter switches the wah effect on/off.

a: (Sw)

This parameter sets how the wah effect is switched on and off via the modulation source.

When "(Sw)" = **Mmnt (Moment)**, the wah effect is usually turned off, and will be on only while you press the pedal or operate the joystick of a connected MIDI instrument.

MIDI When a value for the modulation source is less than 64, "off" speed is selected, and when the value is 64 or higher, "on" is selected.

When "(Sw)" = **Tgg1 (Toggle)**, the wah effect is switched between on and off each time you press the pedal or operate the joystick.

MIDI The switch will be turned on/off each time the value of the modulation source exceeds 64.

b: SweepRng, b: Src

This parameter sets the sweep range of the wah center frequency. A negative value will reverse the direction of sweep. The wah center frequency can be controlled by the modulation source specified in the "Src" parameter.

d: Drive, e: Level

The degree of distortion is determined by the level of input signal and the setting of "Drive". Raising the "Drive" setting will cause the entire volume level to increase. Use the "Level" parameter to adjust the volume level. The "Level" parameter uses the signal level input to the 3-Band EQ. If clipping occurs at the 3-Band EQ, adjust the "Level" parameter.

d: Pre Low-cut

Cutting the signal in the low range before it is input to the Distortion will create a sharp distortion.

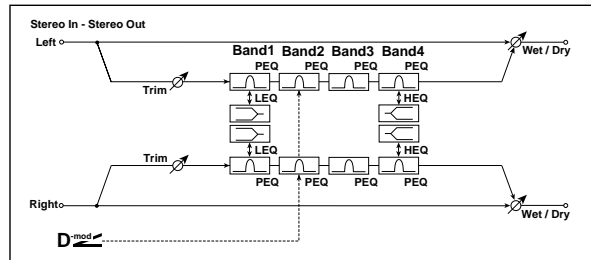
g: Q, h: Q

These parameters set the bandwidth of each equalizer. The higher the value, the narrower the band becomes.

007: St.Para.4EQ

(Stereo Parametric 4-Band EQ)

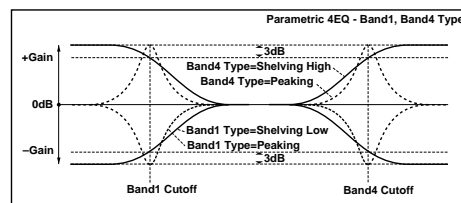
This is a stereo 4-band parametric equalizer. You can select peaking type or shelving type for Band 1 and 4. The gain of Band 2 can be controlled by dynamic modulation.



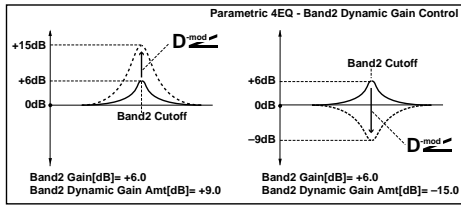
a	Trim Sets the input level	0...100
b	B1 Type (Band1 Type) Selects the type of Band 1	Peaking, Shelving-Low
c	B4 Type (Band4 Type) Selects the type of Band 4	Peaking, Shelving-High
d	B2 Dyn.G Src (Band2 Dynamic Gain Source) Selects the modulation source of the Band 2 gain	Off...Tempo
	(Amount) Sets the modulation amount of Band 2 gain	-18...+18dB
e	B1 (Band1 Cutoff) Sets the center frequency of Band 1	20...1.00kHz
	Q Sets the bandwidth of Band 1	0.5...10.0 Fx:006
	G (Gain) Sets the gain of Band 1	-18.0...+18.0dB
f	B2 (Band2 Cutoff) Sets the center frequency of Band 2	50...10.00kHz
	Q Sets the bandwidth of Band 2	0.5...10.0 Fx:006
	G (Gain) Sets the gain of Band 2	-18.0...+18.0dB D-mod
g	B3 (Band3 Cutoff) Sets the center frequency of Band 3	300...10.00kHz
	Q Sets the bandwidth of Band 3	0.5...10.0 Fx:006
	G (Gain) Sets the gain of Band 3	-18.0...+18.0dB
h	B4 (Band4 Cutoff) Sets the center frequency of Band 4	500...20.00kHz
	Q Sets the bandwidth of Band 4	0.5...10.0 Fx:006
	G (Gain) Sets the gain of Band 4	-18.0...+18.0dB
i	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	-100...+100

b: B1 Type, c: B4 Type

Selects a filter type for Band 1 and 4.

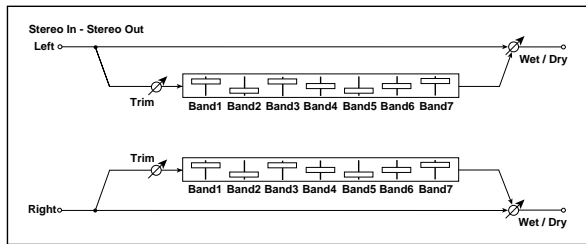


d: B2 Dyn.G Src, d: (Amount), f: G
 You can control the gain of Band 2 using the modulation source.



008: St.Graphic7EQ (Stereo Graphic 7-Band EQ)

This is a stereo 7-band graphic equalizer. The bar graph of the gain setting for each band gives you a clear, visual idea of frequency responses. You can select a center frequency setting for each band from twelve types, according to the sound.



a	Type 1:Wide 1, 2:Wide 2, 3:Wide 3, 4:Half Wide 1, 5:Half Wide 2, 6:Half Wide 3, 7:Low, 8:Wide Low, 9:Mid, 10:Wide Mid, 11:High, 12:Wide High Selects a combination of center frequencies for each band	
b	Trim Sets the input level	0...100
c	(Band1) Sets the gain of Band 1	-18.0...+18.0dB
d	(Band2) Sets the gain of Band 2	-18.0...+18.0dB
e	(Band3) Sets the gain of Band 3	-18.0...+18.0dB
f	(Band4) Sets the gain of Band 4	-18.0...+18.0dB
g	(Band5) Sets the gain of Band 5	-18.0...+18.0dB
h	(Band6) Sets the gain of Band 6	-18.0...+18.0dB
i	(Band7) Sets the gain of Band 7	-18.0...+18.0dB
j	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	-100...+100

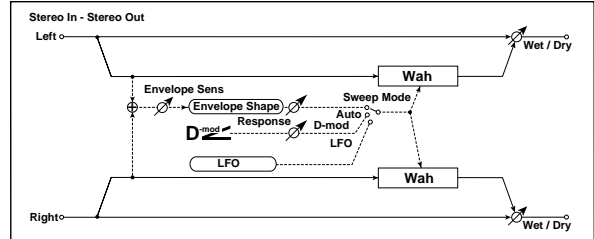
a: Type

This parameter selects a combination of center frequencies for each band. Select a combination of center frequencies for each band. The center frequency of each band is shown at the top of the LCD screen.

You can configure a 21-Band Graphic EQ ranging from 80Hz to 18kHz if you route three Graphic 7Band EQ effects in series, with a setting of **7:Low, 9:Mid, and 11:High** for each EQ.

009: St.Wah/AutoW (Stereo Wah/Auto Wah)

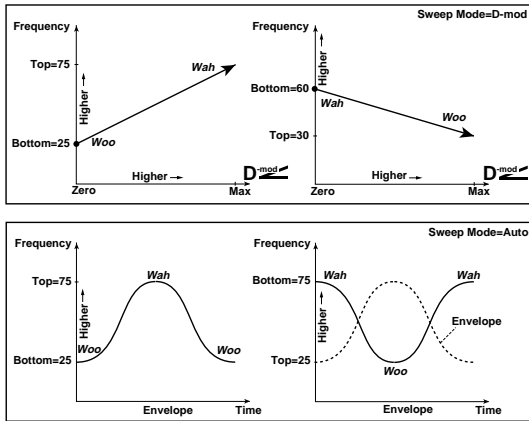
This stereo wah effect allows you to create sounds from vintage wah pedal simulation to auto-wah simulation, and much broader range settings.



a	FreqBottom (Frequency Bottom) Sets the lower limit of the wah center frequency	0...100
	FreqTop (Frequency Top) Sets the upper limit of the wah center frequency	0...100
b	Swp Mode (Sweep Mode) Selects the control from auto-wah, modulation source, and LFO	Auto, Dmod, LFO
	Src (Source) Selects the modulation source for the wah when Swp Mode=Dmod	Off...Tempo
c	Response Sets the response speed when Swp Mode = Auto or Dmod	0...100
d	Envelope Sens (Envelope Sensitivity) Sets the sensitivity of auto-wah	0...100
e	Envelope Shape Sets the sweep curve of auto-wah	-100...+100
f	lfoF (LFO Frequency) Sets the LFO speed	0.02...20.00Hz
	(Source) Selects the modulation source of LFO speed	Off...Tempo
	(Amount) Sets the modulation amount of LFO speed	-20.00...+20.00Hz
g	BPM/MIDI Sync Switches between using the frequency of the LFO speed and using the tempo and notes	Off, On
	BPM Selects MIDI Clock and assigns tempo	MIDI, 40...240
	Base (Base Note) Selects the type of notes that specify the LFO speed	
	Times Sets the number of notes that specify the LFO speed	x1...x16
h	Resonance Sets the resonance amount	0...100
	LPF (Low Pass Filter) Switches the Wah Low Pass Filter on and off	Off, On
i	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	-100...+100

a: FreqBotm, a: FreqTop

The sweep width and direction of the wah filter are determined by the “FreqBotm” and “FreqTop” settings.



b: Swp Mode

This parameter changes the wah control mode. Setting “Swp Mode” to **Auto** will select an auto-wah that sweeps according to envelope changes in the input signal level. Auto-wah is frequently used for funk guitar parts and clav sounds.

When “Swp Mode” is set to **Dmod**, you can control the filter directly via the modulation source in the same way as a wah pedal.

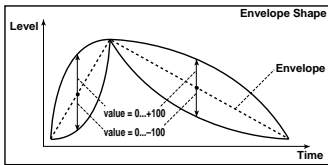
When “Swp Mode” is set to **LFO**, the effect uses LFO to sweep in cycle.

d: Envelope Sens

This parameter sets the sensitivity of auto-wah. Increase the value if the input signal is too low to sweep. Reduce the value if the input signal is so high that the filter is stopped temporarily.

e: Envelope Shape

This parameter determines the sweep curve for auto-wah.



f: lfoF, g: BPM/MIDI Sync

When “BPM/MIDI Sync”=**Off**, the LFO speed uses the lfoF parameter setting. When “BPM/MIDI Sync”=**On**, the LFO speed follows the “BPM”, “Base”, and “Times” settings.

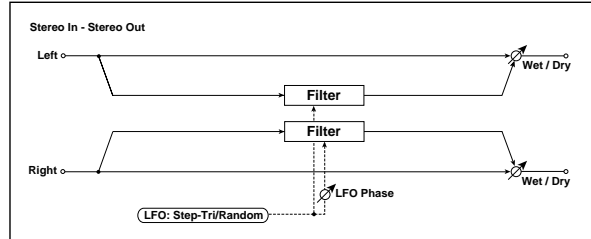
g: BPM, g: Base, g: Times

One cycle of LFO sweep is obtained by multiplying the length of a note (♩, ♪, ♫) (selected for “Base”, in relation to the tempo specified in “BPM”, or the MIDI Clock tempo if “BPM” is set to **MIDI**) by the number specified in the Times parameter.

010: St.Random Filter

(Stereo Random Filter)

This stereo band pass filter uses a step-shape waveform and random LFO for modulation. You can create a special effect from filter oscillation.

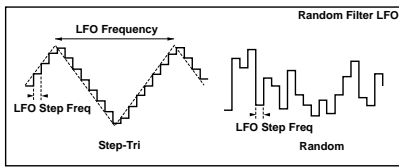


a	LFO Wave (LFO Waveform) Selects LFO Waveform	Step-Tri, Random
b	LFO Phase Sets the LFO phase difference between the left and right	-180...+180deg
c	Freq (LFO Frequency) Sets the LFO speed	0.02...20.00Hz
	(Source) Selects the modulation source used for both LFO speed and step speed	Off...Tempo
d	(Amount) Sets the modulation amount of LFO speed	-20.00...+20.00Hz
	Step (LFO Step Frequency) Sets the LFO step speed (speed that changes in steps)	0.05...50.00Hz
e	(Amount) Sets the modulation amount of LFO step speed	-50.00...+50.00Hz
	Manual Sets the filter center frequency	0...100
f	Resonance Sets the resonance amount	0...100
	BPM/MIDI Sync Switches between using the frequency of the LFO speed and using the tempo and notes	Off, On
g	BPM Selects MIDI Clock and assigns tempo	MIDI, 40...240
	Base (Base Note) Selects the type of notes that specify the LFO speed	♩, ♪, ♫, ♮, ♯, ♭, ♭♭, ♯♯, ♮, ♮
	Times Sets the number of notes that specify the LFO speed	x1...x16
h	StepBase (Step Base Note) Selects the type of notes to specify the LFO step speed	♩, ♪, ♫, ♮, ♯, ♭, ♭♭, ♯♯, ♮, ♮
	Times Sets the number of notes to specify the LFO step speed	x1...x32
	Depth Sets the modulation depth of filter center frequency	0...100
i	(Source) Selects the modulation source of filter modulation	Off...Tempo
	(Amount) Sets the modulation amount of filter modulation	-100...+100
	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	-Wet...-1:99, Dry, 1:99...Wet
i	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	-100...+100

a: LFO Wave, c: Freq, d: Step

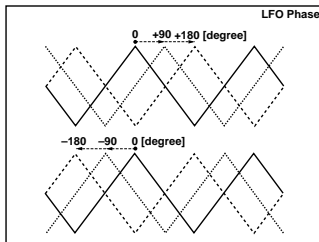
When “LFO Wave” is set to **Step-Tri**, LFO is a step-shape, triangle waveform. The “Freq” parameter sets the original triangle waveform speed. Changing the “Step” parameter enables you to adjust the width of the steps.

When "LFO Wave" is set to **Random**, the "Step" parameter uses a random LFO cycle.



b: LFO Phase

Offsetting the left and right phases alters how modulation is applied to the left and right channels, creating a swelling affect.



f: BPM, g: StepBase, g: Times

The width of an LFO step, or a cycle of random LFO, is obtained by multiplying the length of a note (1/note) (selected for "Step-Base", in relation to the tempo specified in "BPM," or the MIDI Clock tempo if "BPM" is set to MIDI) by the number specified in the "Times" parameter.

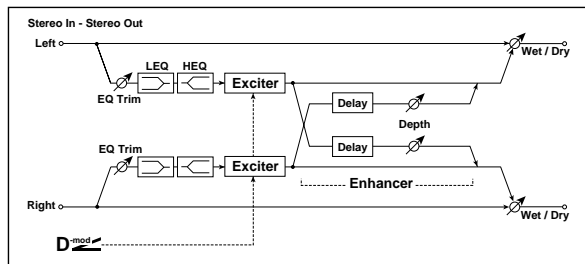
j: W/D

The effect sound's phase will be reversed when you set this parameter in the range of values from **-Wet to -1:99**.

011: St.Exct/Enhcr

(Stereo Exciter/Enhancer)

This effect is a combination of the Exciter, which adds a punch to the sound and the Enhancer, which adds spread and presence.



a	Blend (Exciter Blend) Sets the intensity (depth) of the Exciter effect	-100...+100
	(Source) Selects the modulation source of the Exciter intensity	Off...Tempo
	(Amount) Sets the modulation amount of the Exciter intensity	-100...+100
b	Point (Emphatic Point) Sets the frequency to be emphasized	0...70
	(Source) Selects the modulation source of the frequency to be emphasized	Off...Tempo
	(Amount) Sets the amount of modulation of the frequency to be emphasized	-70...+70
c	Enh Dly L (Enhancer Delay L) Sets the delay time for the Enhancer left channel	0.0...50.0ms
d	Enh Dly R (Enhancer Delay R) [msec] Sets the delay time for the Enhancer right channel	0.0...50.0ms

e	Enh Dep (Enhancer Depth) Sets the determines to what degree the Enhancer effect is applied	0...100
	(Source) Selects the modulation source of the Enhancer width	Off...Tempo
	(Amount) Sets the modulation amount of the Enhancer width	-100...+100
f	Pre EQ Trim Sets the EQ input level	0...100
g	LoEQ (Pre Low EQ Gain) Sets the gain of Low EQ	-15.0...+15.0dB
	HiEQ (Pre High EQ Gain) Sets the gain of High EQ	-15.0...+15.0dB
h	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	-100...+100

a: Blend

This parameter sets the depth (intensity) of the Exciter effect. Positive values give a frequency pattern (to be emphasized) different from negative values.

b: Point

This parameter sets the frequency to be emphasized. Higher values will emphasize lower frequencies.

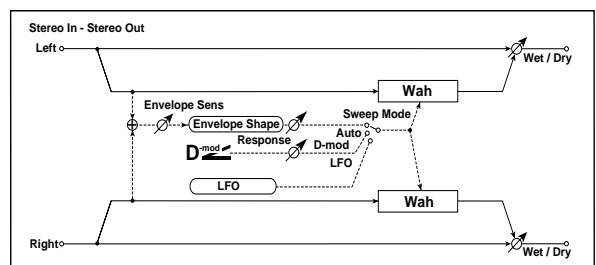
c: Enh Dly L, d: Enh Dly R

These parameters set the delay time for the Enhancer left and right channel. Specifying a slightly different delay time for the left and right channel will add a stereo image, depth, and width to the sound.

012: St.Sub OSC

(Stereo Sub Oscillator)

This effect adds very low frequencies to the input signal. It is very useful when simulating a roaring drum sound or emphasizing powerful low range. This effect is different from the equalizer in that you can add very low range harmonics. You can also adjust the oscillator frequency to match a particular note number, for use as an octaver.



a	OSC Mode Determines whether the oscillator frequency follows the note number or whether it is fixed	Note (Key Follow), Fixed
b	Note Interval Sets the pitch difference from the note number when OSC Mode=Note (Key Follow)	-48...0
c	Fine (Note Fine) Fine adjustment of the oscillator frequency	-100...+100
d	Fixed (Fixed Frequency) Sets the oscillator frequency when OSC Mode=Fixed	10.0...80.0Hz
	(Source) Selects the modulation source for the oscillator frequency when OSC Mode=Fixed	Off...Tempo
	(Amount) Sets the oscillator frequency modulation amount when OSC Mode=Fixed	-80...+80Hz

e	Envelope Pre LPF Sets the upper limit of the frequency range for which very low harmonics are added	1...100
f	Envelope Sens (Envelope Sensitivity) Sets the sensitivity with which very low harmonics are added	0...100
g	Envelope Shape Sets the oscillator's volume envelope curve	-100...+100
h	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	-100...+100

a: OSC Mode, b: Note Interval, c: Fine

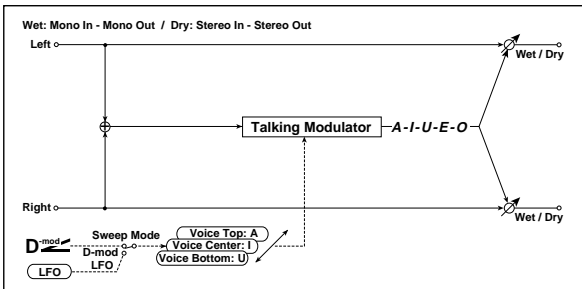
The "OSC Mode" parameter selects the oscillator operation mode. When **Note (Key Follow)** is selected, the oscillator's frequency is determined based on the note number, allowing you to use it as an octaver. The "Note Interval" parameter sets the pitch offset from the original note number by semitone steps. The "Fine" parameter allows you to fine-tune in steps of cents.

e: Envelope Pre LPF

This parameter sets the upper limit of the frequency range to which very low harmonics are added. Adjust this parameter if you do not want to add lower harmonics to the higher range.

013: Talking Mod (Talking Modulator)

This effect adds an unusual character, like a human voice, to the input signal. Modulating the tone via dynamic modulation, you can create an interesting effect that sounds as if the guitar or synthesizer is talking.



a	Sweep Mode Switches between modulation source control and LFO control	Dmod, LFO
b	Voice Control Voice pattern control	Bottom, 1...49, Center, 51...99, Top
c	Control Src (Control Source) Selects the modulation source that controls the voice pattern	Off...Tempo
d	Top (Voice Top) Selects a vowel sound at the top end of control	A, I, U, E, O
	Center (Voice Center) Selects a vowel sound in the center of control	A, I, U, E, O
	Bottom (Voice Bottom) Selects a vowel sound at the bottom end of control	A, I, U, E, O
e	Formant Shift Sets the frequency to which the effect is applied	-100...+100
f	lfoF (LFO Frequency) Sets the LFO speed	0.02...20.00Hz
	(Source) Selects the modulation source of LFO speed	Off...Tempo
	(Amount) Sets the modulation amount of LFO speed	-20.00...+20.00Hz

g	BPM/MIDI Sync Switches between using the frequency of the LFO speed and using the tempo and notes	Off, On
	BPM Selects MIDI Clock and assigns tempo	MIDI, 40...240
	Base (Base Note) Selects the type of notes that specify the LFO speed	Fx:009
h	Times Sets the number of notes that specify the LFO speed	1...16
	Resonance Sets the Level of resonance of the voice pattern	0...100
	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet
i	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	-100...+100

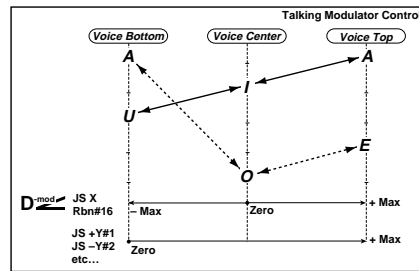
d: Top, d: Center, d: Bottom

These parameters assign vowels to the top, center, and bottom position of the controller.

E.g.: When "Top"=A, "Center"=I, and "Bottom"=U:

If "Sweep Mode" is set to **Dmod** and "Control Src" is set to **JSX**, moving the joystick of a connected MIDI instrument from the far right to the far left will make the voice change from "a" to "i" then "u."

If Sweep Mode is set to **LFO**, the sound will change cyclically from "a" to "i," "u," "i," then "a."



e: Formant Shift

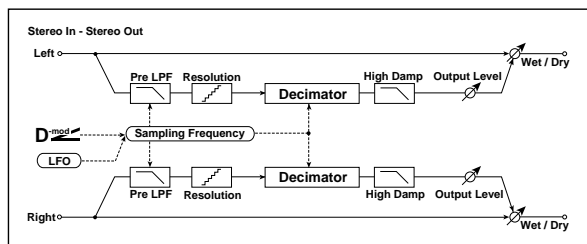
This parameter adjusts the frequency level to which the effect is applied. If you wish to apply the effect to a higher-range sound, set this parameter to a higher value; to apply the effect to a lower-range sound, set this to a lower value.

h: Resonance

This parameter sets the intensity of resonance for the voice pattern. A larger value will add more character to the sound.

014: St.Decimator (Stereo Decimator)

This effect creates a rough sound like a cheap sampler by lowering the sampling frequency and data bit length. You can also simulate noise unique to a sampler (aliasing).



a	Pre LPF Selects whether the harmonic noise caused by a decrease in sampling frequency is generated or not	Off, On
b	High Damp Sets the ratio of cut of the high range	0...100%
c	Fs (Sampling Frequency) Sets the sampling frequency	1.00k...48.00kHz D^{mod}
	(Source) Selects the modulation source of the sampling frequency	Off...Tempo
d	Resolution Sets the data bit length	4...24
	(Amount) Sets the modulation amount of the sampling frequency	-48.00k...+48.00kHz
e	Level (Output Level) Sets the output level	0...100 D^{mod}
	(Source) Selects the modulation source for the output level	Off...Tempo
f	(Amount) Sets the modulation amount of the output level	-100...+100
	lfoF (LFO Frequency) Sets the LFO speed	0.02...20.00Hz D^{mod}
g	(Source) Selects the modulation source of LFO speed	Off...Tempo
	(Amount) Sets the modulation amount of LFO speed	-20.00...+20.00Hz
h	Depth Sets the depth of the sampling frequency LFO modulation	0...100 D^{mod}
	(Source) Selects the LFO modulation source of the sampling frequency	Off...Tempo
i	(Amount) Sets the LFO modulation amount of the sampling frequency	-100...+100
	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D^{mod}
j	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	-100...+100

a: Pre LPF

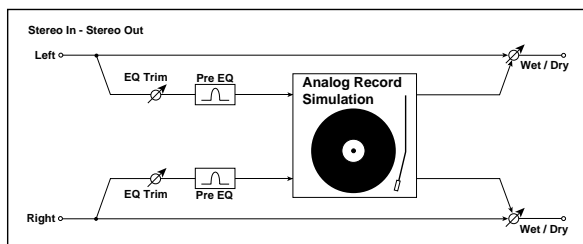
If a sampler with a very low sampling frequency receives very high-pitched sound that could not be heard during playback, it could generate pitch noise that is unrelated to the original sound. Set "Pre LPF" to ON to prevent this noise from being generated. If you set the "Fs" to about 3kHz and set "Pre LPF" to OFF, you can create a sound like a ring modulator.

d: Resolution, e: Output Level

If you set a smaller value for the "Resolution" parameter, the sound may be distorted. The volume level may also be changed. Use "Level" to adjust the level.

015: St.AnalogRecd (Stereo Analog Record)

This effect simulates the noise caused by scratches and dust on analog records. It also reproduces some of the modulation caused by a warped turntable.



a	Speed Sets the r.p.m. of a record	33 1/3, 45, 78RPM
b	Flutter Sets the modulation depth	0...100 D^{mod}
c	Pre EQ Trim Sets the EQ input level	0...100
d	EQ (Pre EQ Cutoff) Sets the EQ center frequency	300...10.00kHz
	Q Sets the EQ band width	0.5...10.0
	G (Gain) Sets the EQ gain	-18.0...+18.0dB
e	Noise Density Sets the noise density	0...100
f	Noise Tone Sets the noise tone	0...100
g	NoiseLvl (Noise Level) Sets the noise level	0...100 D^{mod}
	(Source) Selects the modulation source for the noise level	Off...Tempo
h	(Amount) Sets the modulation amount of the noise level	-100...+100
	ClickLvl (Click Level) Sets the click noise level	0...100 D^{mod}
i	(Source) Selects the modulation source for the click noise level	Off...Tempo
	(Amount) Sets the modulation amount of the click noise level	-100...+100
j	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D^{mod}
	(Source) Selects the modulation source of the effect balance	Off...Tempo
k	(Amount) Sets the modulation amount of the effect balance	-100...+100

b: Flutter

This parameter enables you to set the depth of the modulation caused by a warped turntable.

h: ClickLvl

This parameter enables you to set the level of the click noise that occurs once every rotation of the turntable. This simulation reproduces record noise, and the noise generated after the music on a vinyl record finishes.

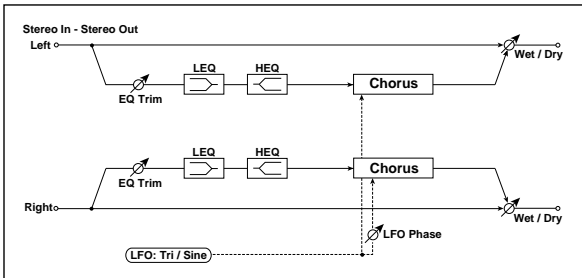
Pitch/Phase Mod.

Pitch/phase modulation effects

016: St.Chorus

(Stereo Chorus)

This effect adds thickness and warmth to the sound by modulating the delay time of the input signal. You can add spread to the sound by offsetting the phase of the left and right LFOs from each other.



a	LFO Wave (LFO Waveform) Selects LFO Waveform	Triangle, Sine
b	LFO Phase Sets the LFO phase difference between the left and right	-180...+180deg Fx:010
c	Freq (LFO Frequency) Sets the LFO speed	0.02...20.00Hz Fx:009,
	(Source) Selects the modulation source of LFO speed	Off...Tempo
d	(Amount) Sets the modulation amount of LFO speed	-20.00...+20.00Hz
	BPM/MIDI Sync Switches between using the frequency of the LFO speed and using the tempo and notes	Off, On Fx:009,
	BPM Selects MIDI Clock and assigns tempo	MIDI, 40...240 Fx:009
	Base (Base Note) Selects the type of notes that specify the LFO speed	Fx:009
e	Times Sets the number of notes that specify the LFO speed	1...16 Fx:009
	L Dly (L Pre Delay) Sets the delay time for the left channel	0.0...50.0ms
f	R Dly (R Pre Delay) Sets the delay time for the right channel	0.0...50.0ms
	Depth Sets the depth of LFO modulation	0...100
g	(Source) Selects the modulation source of the LFO modulation depth	Off...Tempo
	(Amount) Sets the modulation amount of the LFO modulation depth	-100...+100
h	Pre EQ Trim Sets the EQ input level	0...100
	LoEQ (Pre Low EQ Gain) Sets the gain of Low EQ	-15.0...+15.0dB
i	HiEQ (Pre High EQ Gain) Sets the gain of High EQ	-15.0...+15.0dB
	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	-Wet...-1:99, Dry, 1:99...Wet Fx:010,
j	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	-100...+100

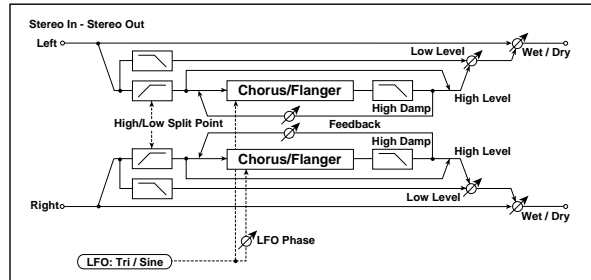
e: L Dly, e: R Dly

Setting the left and right delay time individually allows you to control the stereo image.

017: St.HarmonicCho

(Stereo Harmonic Chorus)

This effect applies chorus only to higher frequencies. This can be used to apply a chorus effect to a bass sound without making the sound thinner. You can also use this chorus block with feedback as a flanger.



a	LFO Wave (LFO Waveform) Selects LFO Waveform	Triangle, Sine
b	LFO Phase Sets the LFO phase difference between the left and right	-180...+180deg Fx:010
c	Freq (LFO Frequency) Sets the LFO speed	0.02...20.00Hz Fx:009,
	(Source) Selects the modulation source of LFO speed	Off...Tempo
d	(Amount) Sets the modulation amount of LFO speed	-20.00...+20.00Hz
	BPM/MIDI Sync Switches between using the frequency of the LFO speed and using the tempo and notes	Off, On Fx:009,
	BPM Selects MIDI Clock and assigns tempo	MIDI, 40...240 Fx:009
	Base (Base Note) Selects the type of notes that specify the LFO speed	Fx:009
e	Times Sets the number of notes that specify the LFO speed	1...16 Fx:009
	Dly (Delay Time) Sets the delay time from the original sound	0.0...50.0ms
f	Hi/Lo Split (High/Low Split Point) Sets the frequency split point between the high and low range	1...100
	Depth Sets the depth of LFO modulation	0...100
g	(Source) Selects the modulation source of the LFO modulation depth	Off...Tempo
	(Amount) Sets the modulation amount of the LFO modulation depth	-100...+100
h	Feedback Sets the feed back amount of the chorus block	-100...+100
	HiDamp (High Damp) Sets the high range damping amount of the chorus block	0...100%
i	Lo Level (Low Level) Sets the low range output level	0...100
	Hi Level (High Level) Sets the high range (chorus) output level	0...100
j	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet
	(Source) Selects the modulation source of the effect balance	Off...Tempo
k	(Amount) Sets the modulation amount of the effect balance	-100...+100

e: Hi/Lo Split

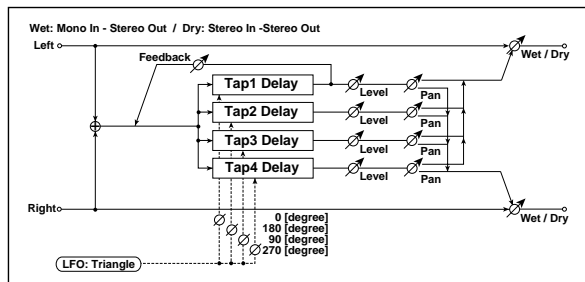
This parameter sets the frequency that splits the high and low range. Only the high range will be sent to the chorus block.

g: Feedback

Sets the feedback amount of the chorus block. Increasing the feedback will allow you to use the effect as a flanger.

018: MltTap ChoDly
(Multitap Chorus/Delay)

This effect has four chorus blocks with a different LFO phase. You can create a complex stereo image by setting each block's delay time, depth, output level, and pan individually. You can also fix some of the chorus blocks to combine the chorus and delay effects.

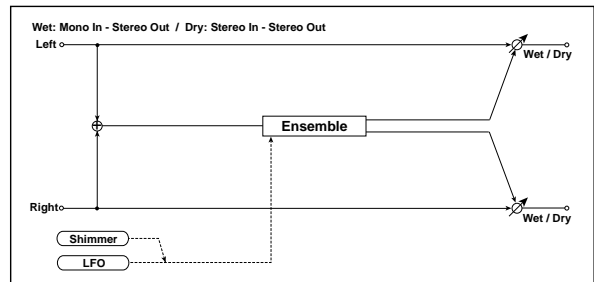


a	LFO Freq (LFO Frequency) Sets the LFO speed	0.02...13.00Hz
b	T1(000) (Tap1 Delay) Sets the Tap1 (LFO phase=0 degrees) delay time	0...570ms
	D (Depth) Sets the Tap1 chorus depth	0...30
	L (Level) Sets the Tap1 output level	0...30
	P (Pan) Sets the Tap1 stereo image	L6...L1, C, R1...R6
c	T2(180) (Tap2 Delay) Sets the Tap2 (LFO phase=180 degrees) delay time	0...570ms
	D (Depth) Sets the Tap2 chorus depth	0...30
	L (Level) Sets the Tap2 output level	0...30
	P (Pan) Sets the Tap2 stereo image	L6...L1, C, R1...R6
d	T3(090) (Tap3 Delay) Sets the Tap3 (LFO phase=90 degrees) delay time	0...570ms
	D (Depth) Sets the Tap3 chorus depth	0...30
	L (Level) Sets the Tap3 output level	0...30
	P (Pan) Sets the Tap3 stereo image	L6...L1, C, R1...R6
e	T4(270) (Tap4 Delay) Sets the Tap4 (LFO phase=270 degrees) delay time	0...570ms
	D (Depth) Sets the Tap4 chorus depth	0...30
	L (Level) Sets the Tap4 output level	0...30
	P (Pan) Sets the Tap4 stereo image	L6...L1, C, R1...R6
f	T1 Fb (Tap1 Feedback) Sets the Tap1 feedback amount	-100...+100 D ^{mod}
	(Source) Selects the modulation source of Tap1 feedback amount and effect balance	Off...Tempo
	(Amount) Sets the Tap1 feedback amount and modulation amount	-100...+100

g	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D ^{mod}
	(Amount) Sets the modulation amount of the effect balance	-100...+100

019: Ensemble

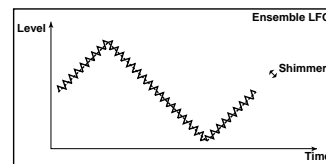
This Ensemble effect has three chorus blocks that use LFO to create subtle shimmering, and gives three dimensional depth and spread to the sound, because the signal is output from the left, right, and center.



a	Speed Sets the LFO speed	1...100 D ^{mod}
	(Source) Selects the modulation source of LFO speed	Off...Tempo
	(Amount) Sets the modulation amount of LFO speed	-100...+100
b	Depth Sets the depth of LFO modulation	0...100 D ^{mod}
	(Source) Selects the modulation source of the LFO modulation depth	Off...Tempo
	(Amount) Sets the modulation amount of the LFO modulation depth	-100...+100
c	Shimmer Sets the amount of shimmering of the LFO waveform	0...100
d	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D ^{mod}
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	-100...+100

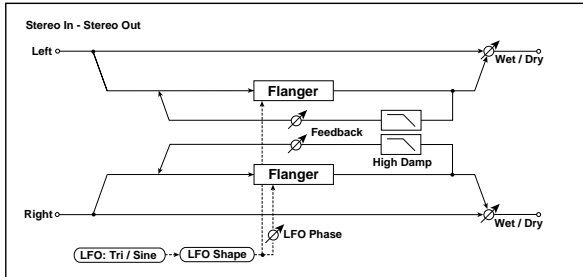
c: Shimmer

This parameter sets the amount of shimmering of the LFO waveform. Increasing this value adds more shimmering, making the chorus effect more complex and richer.



020: St.Flanger (Stereo Flanger)

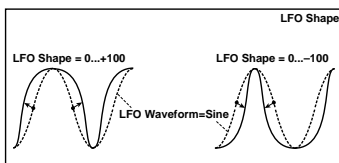
This effect gives a significant swell and movement of pitch to the sound. It is more effective when applied to a sound with a lot of harmonics. This is a stereo flanger. You can add spread to the sound by offsetting the phase of the left and right LFOs from each other.



a	LFO Wave (LFO Waveform) Selects LFO Waveform	Tri, Sine
	Shape (LFO Shape) Determines how much the LFO waveform is changed	-100...+100
b	LFO Phase Sets the LFO phase difference between the left and right	-180...+180deg Fx:010
c	Freq (LFO Frequency) Sets the LFO speed	0.02...20.00Hz Fx:009, D ^{mod}
	(Source) Selects the modulation source of LFO speed	Off...Tempo
	(Amount) Sets the modulation amount of LFO speed	-20.00...+20.00Hz
d	BPM/MIDI Sync Switches between using the frequency of the LFO speed and using the tempo and notes	Off, On Fx:009, Sync
	BPM Selects MIDI Clock and assigns tempo	MIDI, 40...240 Fx:009
	Base (Base Note) Selects the type of notes that specify the LFO speed	1...16 Fx:009
	Times Sets the number of notes that specify the LFO speed	1...16 Fx:009
e	Delay (Delay Time) Sets the delay time from the original sound	0.0...50.0ms
f	Depth Sets the depth of LFO modulation	0...100
g	Feedback Sets the feedback amount	-100...+100
h	High Damp Sets the feedback damping amount in the high range	0...100%
i	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	-Wet...-1:99, Dry, 1:99...Wet Fx:010, D ^{mod}
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	-100...+100

a: Shape

Changing the LFO waveform shape controls the peak sweep of flanging effects.



g: Feedback, i: W/D

The peak shape of the positive and negative "Feedback" value is different. The harmonics will be emphasized when the effect sound is mixed with the dry sound if you set a positive value for

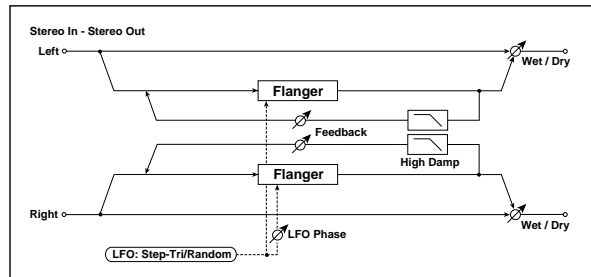
both "Feedback" and "W/D", and if you set a negative value for both "Feedback" and "W/D".

h: High Damp

This parameter sets the amount of damping of the feedback in the high range. Increasing the value will cut high-range harmonics.

021: St.Rndm Flang (Stereo Random Flanger)

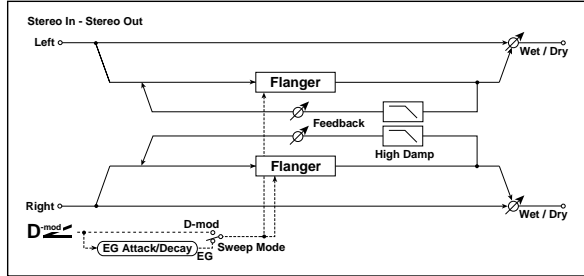
The stereo effect uses a step-shape waveform and random LFO for modulation, creating a unique flanging effect.



a	LFO Wave (LFO Waveform) Selects LFO Waveform	Step-Tri, Random Fx:010
b	LFO Phase Sets the LFO phase difference between the left and right	-180...+180deg Fx:010
c	Freq (LFO Frequency) Sets the LFO speed	0.02...20.00Hz Fx:010, D ^{mod}
	(Source) Selects the modulation source used for both LFO speed and step speed	Off...Tempo
	(Amount) Sets the modulation amount of LFO speed	-20.00...+20.00Hz
d	Step (LFO Step Frequency) Sets the LFO step speed (speed that changes in steps)	0.05...50.00Hz Fx:010, D ^{mod}
	(Amount) Sets the modulation amount of LFO step speed	-50.00...+50.00Hz
e	Delay (Delay Time) Sets the delay time from the original sound	0.0...50.0ms
	Depth Sets the depth of LFO modulation	0...100
f	BPM/MIDI Sync Switches between using the frequency of the LFO speed and using the tempo and notes	Off, On Fx:009, Sync
	BPM Selects MIDI Clock and assigns tempo	MIDI, 40...240 Fx:009, 010
	Base (Base Note) Selects the type of notes that specify the LFO speed	1...16 Fx:009
	Times Sets the number of notes that specify the LFO speed	1...16 Fx:009
g	Step Base (Step Base Note) Selects the type of notes that specify the LFO step speed	1...32 Fx:010, Sync
	Times Sets the number of notes to specify the LFO step speed	1...32 Fx:010
h	Feedback Sets the feedback amount	-100...+100 Fx:020
	HiDamp (High Damp) Sets the feedback damping amount in the high range	0...100% Fx:020
i	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	-Wet...-1:99, Dry, 1:99...Wet Fx:010, 020, D ^{mod}
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	-100...+100

022: St.Env.Flanger (Stereo Envelope Flanger)

This Flanger uses an envelope generator for modulation. You will obtain the same pattern of flanging each time you play. You can also control the Flanger directly using the modulation source.



a	L Dly Bottom (L Delay Bottom) Sets the lower limit of the delay time on the left channel	0.0...50.0ms Fx:009
b	L Dly Top (L Delay Top) Sets the upper limit of the delay time on the left channel	0.0...50.0ms Fx:009
c	R Dly Bottom (R Delay Bottom) Sets the lower limit of the delay time on the right channel	0.0...50.0ms Fx:009
d	R Dly Top (R Delay Top) Sets the upper limit of the delay time on the right channel	0.0...50.0ms Fx:009
e	Swp Mode (Sweep Mode) Determines whether the flanger is controlled by the envelope generator or by the modulation source	EG, Dmod D-mod
	Src (Source) Selects the modulation source that triggers the EG (when EG is selected for Swp Mode), or modulation source that causes the flanger to sweep (when Dmod is selected for Swp Mode)	Off...Tempo
f	EG Attack Sets the EG attack speed	1...100
g	EG Decay Sets the EG decay speed	1...100
h	Feedback Sets the feedback amount	-100...+100 Fx:020
i	High Damp Sets the feedback damping amount in the high range	0...100% Fx:020
j	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	-Wet...-1:99, Dry, 1:99...Wet Fx:010, 020, D-mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	-100...+100

e: Swp Mode, e: Src

This parameter switches the flanger control mode. With "Swp Mode" = EG, the flanger will sweep using the envelope generator. This envelope generator is included in the envelope flanger, and not related to the Pitch EG, Filter EG, or Amp EG.

The "Src" parameter selects the source that starts the envelope generator. If you select, for example, Gate, the envelope generator will start when the note-on message is received.

When "Swp Mode" = Dmod, the modulation source can control the flanger directly. Select the modulation source using the "Src" parameter.

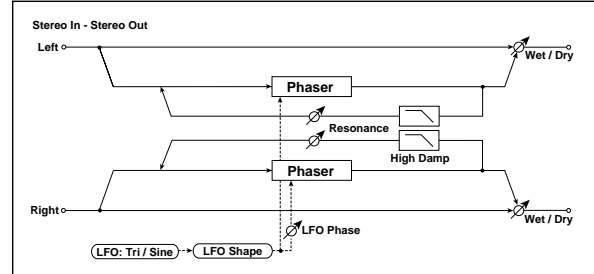
MIDI The effect is off when a value for the modulation source specified for the "Src" parameter is smaller than 64, and the effect is on when the value is 64 or higher. The Envelope Generator is triggered when the value changes from 63 or smaller to 64 or higher.

f: EG Attack, g: EG Decay

Attack and Decay speed are the only adjustable parameters on this EG.

023: St.Phaser (Stereo Phaser)

This effect creates a swell by shifting the phase. It is very effective on electric piano sounds. You can add spread to the sound by offsetting the phase of the left and right LFOs from each other.



a	LFO Wave (LFO Waveform) Selects LFO Waveform	Tri, Sine
	Shape (LFO Shape) Determines how much the LFO waveform is changed	-100...+100 Fx:020
b	LFO Phase Sets the LFO phase difference between the left and right	-180...+180deg Fx:010
c	Freq (LFO Frequency) Sets the LFO speed	0.02...20.00Hz Fx:009, D-mod
	(Source) Selects the modulation source of LFO speed	Off...Tempo
	(Amount) Sets the modulation amount of LFO speed	-20.00...+20.00Hz
d	BPM/MIDI Sync Switches between using the frequency of the LFO speed and using the tempo and notes	Off, On Fx:009, Sync
	BPM Selects MIDI Clock and assigns tempo	MIDI, 40...240 Fx:009
	Base (Base Note) Selects the type of notes that specify the LFO speed	♪, ♪, ♫, ♪, ♫, ♪, ♫, ♪, ♫
	Times Sets the number of notes that specify the LFO speed	1...16 Fx:009
e	Manual Sets the frequency to which the effect is applied	0...100
f	Depth Sets the depth of LFO modulation	0...100 D-mod
	(Source) Selects the modulation source for the LFO modulation depth	Off...Tempo
	(Amount) Sets the modulation amount of the LFO modulation depth	-100...+100
g	Resonance Sets the resonance amount	-100...+100
h	High Damp [%] Sets the resonance damping amount in the high range	0...100%
i	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	-Wet...-1:99, Dry, 1:99...Wet Fx:010, D-mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	-100...+100

g: Resonance, i: W/D

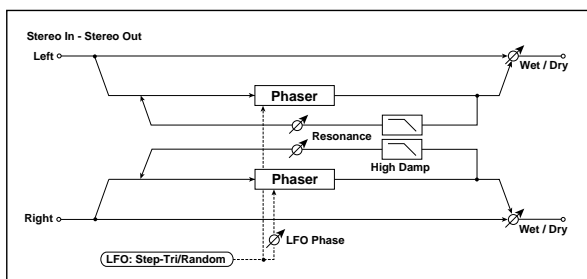
The peak shape of the positive and negative Feedback value is different. The harmonics will be emphasized when the effect sound is mixed with the dry sound, if you set a positive value for both "Resonance" and "W/D", and if you set a negative value for both "Resonance" and "W/D".

h: High Damp

This parameter sets the amount of damping of the resonance in the high range. Increasing the value will cut high-range harmonics.

024: St.Rndm Phasr (Stereo Random Phaser)

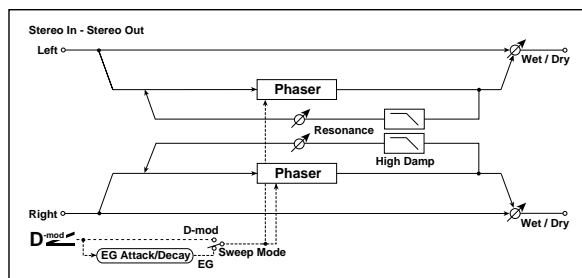
This is a stereo phaser. The effect uses a step-shape waveform and random LFO for modulation, creating a unique phasing effect.



a	LFO Wave (LFO Waveform) Selects LFO Waveform	Step-Tri, Step-Sin, Random Fx:010
b	LFO Phase Sets the LFO phase difference between the left and right	-180...+180deg Fx:010
c	Freq (LFO Frequency) Sets the LFO speed	0.02...20.00Hz Fx:010, D ^{mod}
	(Source) Selects the modulation source commonly used for LFO speed and step speed	Off...Tempo
d	(Amount) Sets the modulation amount of LFO speed	-20.00...+20.00Hz
	Freq (LFO Step Frequency) Sets the LFO step speed	0.05...50.00Hz Fx:010, D ^{mod}
e	(Amount) Sets the modulation amount of LFO step speed	-50.00...+50.00Hz
	Manual Sets the frequency to which the effect is applied	0...100
f	Depth Sets the depth of LFO modulation	0...100
	BPM/MIDI Sync Switches between using the frequency of the LFO speed and using the tempo and notes	Off, On Fx:009, S ^{ync}
	BPM Selects MIDI Clock and assigns tempo	MIDI, 40...240 Fx:009, 010
	Base (Base Note) Selects the type of notes that specify the LFO speed	1...16 Fx:009
g	Times Sets the number of notes that specify the LFO speed	1...32 Fx:010, S ^{ync}
	Step Base (Step Base Note) Selects the type of notes to specify the LFO step speed	1...32 Fx:010, S ^{ync}
h	Resonanc (Resonance) Sets the resonance amount	-100...+100 Fx:023
	HiDamp (High Damp) Sets the resonance damping amount in the high range	0...100% Fx:023
i	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	-Wet...-1:99, Dry, 1:99...Wet Fx:010, 023, D ^{mod}
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	-100...+100

025: St.Env.Phaser (Stereo Envelope Phaser)

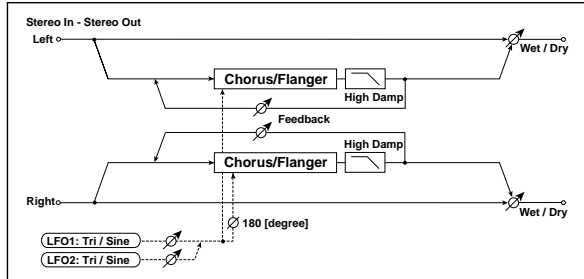
This stereo phaser uses an envelope generator for modulation. You will obtain the same pattern of phasing each time you play. You can also control the Phaser directly using the modulation source.



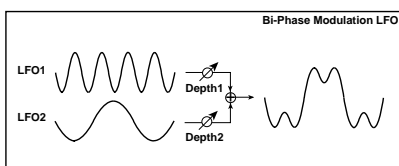
a	L Manu Bottom (L Manual Bottom) Sets the lower limit of the frequency range for the effect on the left channel	0...100 Fx:009
b	L Manu Top (L Manual Top) Sets the upper limit of the frequency range for the effect on the left channel	0...100 Fx:009
c	R Manu Bottom (R Manual Bottom) Sets the lower limit of the frequency range for the effect on the right channel	0...100 Fx:009
d	R Manu Top (R Manual Top) Sets the upper limit of the frequency range for the effect on the right channel	0...100 Fx:009
e	Swp Mode (Sweep Mode) Determines whether the flanger is controlled by the envelope generator or by the modulation source	EG, Dmod Fx:022, D ^{mod}
	Src (Source) Selects the modulation source that triggers the EG (when EG is selected for Swp Mode), or modulation source that causes the flanger to sweep (when Dmod is selected for Swp Mode)	Off...Tempo
f	EG Attack Sets the EG attack speed	1...100 Fx:022
g	EG Decay Sets the EG decay speed	1...100 Fx:022
h	Resonance Sets the resonance amount	-100...+100 Fx:023
i	High Damp Sets the resonance damping amount in the high range	0...100% Fx:023
j	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	-Wet...-1:99, Dry, 1:99...Wet Fx:010, 023, D ^{mod}
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	-100...+100

026: St.BiphaseMod (Stereo Biphase Modulation)

This stereo chorus effect adds two different LFOs together. You can set the Frequency and Depth parameters for each LFO individually. Depending on the setting of these LFOs, very complex waveforms will create an analog-type, unstable modulated sound.

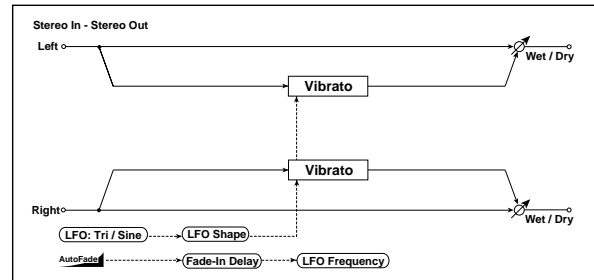


a	LFO1 Wave (LFO1 Waveform) Selects LFO1 waveform	Triangle, Sine
b	LFO2 Wave (LFO2 Waveform) Selects LFO2 waveform	Triangle, Sine
c	LFO Phase Sw Switches the LFO phase difference between left and right	0, 180degree
d	F1 (LFO1 Frequency) Sets the LFO1 speed	0.02...30.00Hz D^{mod}
	(Source) Selects the modulation source of LFO1&2 speed	Off...Tempo
	(Amount) Sets the modulation amount of LFO1 speed	-30.00...+30.00
e	F2 (LFO2 Frequency) Sets the LFO2 speed	0.02...30.00Hz D^{mod}
	(Amount) Sets the modulation amount of LFO2 speed	-30.00...+30.00
f	L Dly (L Pre Delay) Sets the delay time for the left channel	0.0...50.0ms Fx:016
	R Dly (R Pre Delay) Sets the delay time for the right channel	0.0...50.0ms Fx:016
g	Depth1 Sets the depth of LFO1 modulation	0...100 D^{mod}
	(Source) Selects the modulation source of LFO1&2 modulation depth	Off...Tempo
	(Amount) Sets the modulation amount of LFO1 modulation depth	-100...+100
h	Depth2 Sets the depth of LFO2 modulation	0...100 D^{mod}
	(Amount) Sets the modulation amount of LFO2 modulation depth	-100...+100
i	Feedback Sets the feedback amount	-100...+100 Fx:017
	HiDamp (High Damp) Sets the damping amount in the high range	0...100%
j	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	-Wet...-1:99, Dry, 1:99...Wet Fx:010, D^{mod}
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	-100...+100



027: St.Vibrato (Stereo Vibrato)

This effect causes the pitch of the input signal to shimmer. Using the AutoFade allows you to increase or decrease the shimmering speed.



a	LFO Wave (LFO Waveform) Selects LFO Waveform	Triangle, Sine
	Shape (LFO Shape) Determines how much the LFO waveform is changed	-100...+100 Fx:020
b	LFO Freq Mod (LFO Frequency Mod) Switches between Dmod and AUTOFADE for the LFO frequency modulation	Dmod, AUTOFADE
c	Freq (LFO Frequency) Sets the LFO speed	0.02...20.00Hz Fx:009, D^{mod}
	(Source) Selects the modulation source of LFO speed	Off...Tempo
	(Amount) Sets the modulation amount of LFO speed	-20.00...+20.00Hz
	BPM/MIDI Sync Switches between using the frequency of the LFO speed and using the tempo and notes	Off, On Fx:009, Sync
d	BPM Selects MIDI Clock and assigns tempo	MIDI, 40...240 Fx:009
	Base (Base Note) Selects the type of notes that specify the LFO speed	Fx:009
	Times Sets the number of notes that specify the LFO speed	1...16 Fx:009
e	Depth Sets the depth of LFO modulation	0...100 D^{mod}
	(Source) Selects the modulation source of the LFO modulation depth	Off...Tempo
	(Amount) Sets the modulation amount of the LFO modulation depth	-100...+100
f	AUTOFADE Src (AUTOFADE Source) Selects the modulation source that starts AutoFade	Off...Tempo Fx:009, D^{mod}
g	Fade Rate (Fade-In Rate) Sets the rate of fade-in	1...100 Fx:009
	Dly (Fade-In Delay) Sets the fade-in delay time	00...2000ms Fx:009
h	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D^{mod}
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	-100...+100

b: LFO Freq Mod, f: AUTOFADE Src, g: Fade Rate, g: Dly

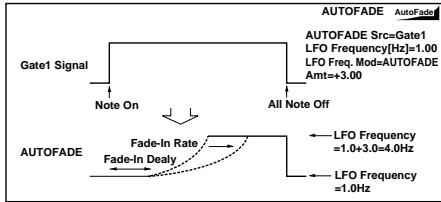
When "LFO Freq Mod" is set to **AUTOFADE**, you can use the modulation source selected in "AUTO FADE Src" as a trigger to automatically fade in the modulation amount. When "BPM/MIDI Sync" is set to **On**, you cannot use this.

The "Fade Rate" parameter specifies the rate of fade-in. The "Dly" parameter determines the time from AutoFade modulation source ON until the fade-in starts.

The following is an example of fade-in where the LFO speed is increased from "1.0Hz" to "4.0Hz" when a note-on message is received.

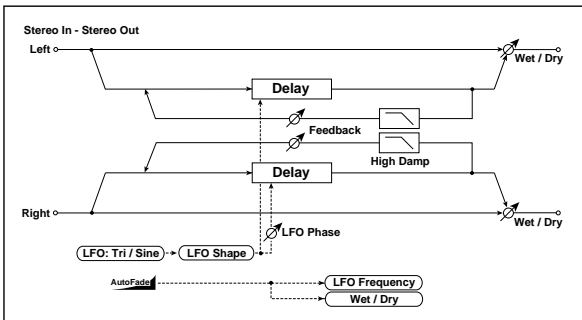
“AUTOFADE Src”=Gate1, “Freq”=1.00 Hz
 “LFO Freq Mod”=AUTOFADE, “(Amount)”=+3.00

MIDI The effect is off when a value for the dynamic modulation source specified for the “AUTOFADE Src” parameter is smaller than 64, and the effect is on when the value is 64 or higher. The AutoFade function is triggered when the value changes from 63 or smaller to 64 or higher.



028: St.AutoFd Mod (Stereo Auto Fade Modulation)

This stereo chorus/flanger effect enables you to control the LFO speed and effect balance using auto fade, and you can spread the sound by offsetting the phase of the left and right LFOs from each other.

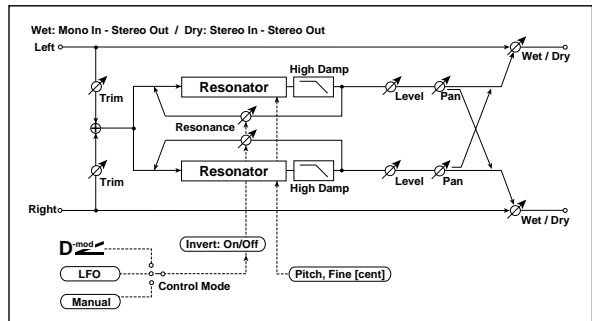


a	LFO Wave (LFO Waveform) Selects LFO Waveform	Tri, Sine
	Shape (LFO Shape) Determines how much the LFO waveform is changed	-100...+100 Fx:020
b	LFO Phase Sets the LFO phase difference between the left and right	-180...+180deg Fx:010
c	Freq (LFO Frequency) Sets the LFO speed	0.02...20.00Hz D-mod
	(Source) Selects the modulation source of LFO speed	Off...Tempo
	(Amount) Sets the modulation amount of LFO speed	-20.00...+20.00Hz
d	L Dly (L Pre Delay) Sets the left channel delay time	0.0...500.0ms
	R Dly (R Pre Delay) Sets the right channel delay time	0.0...500.0ms
e	Dep (Depth) Sets the depth of LFO modulation	0...200
	Fb (Feedback) Sets the feedback amount	-100...+100 Fx:020
	HD (High Damp) Sets the feedback damping amount in the high range	0...100% Fx:020
f	AUTOFADE Src (AUTOFADE Source) Selects the modulation source that starts AutoFade	Off...Tempo Fx:027, D-mod
g	Fade Rate (Fade-In Rate) Sets the rate of fade-in	1...100 Fx:027
	Dly (Fade-In Delay) Sets the fade-in delay time	00...2000ms Fx:027

h	Freq Mod (LFO Frequency Mod) Switches between D-mod and AUTOFADE for the LFO frequency modulation	D-mod, AUTOFADE Fx:027
i	W/D Mod (Wet/Dry Mod) Switches between D-mod and AUTOFADE for the effect balance modulation	D-mod, AUTOFADE Fx:027
j	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	-Wet...-1:99, Dry, 1:99...Wet Fx:010, 020, D-mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	-100...+100

029: 2Voice Reso (2Voice Resonator)

This effect resonates the input signal at a specified pitch. You can set the pitch, output level, and pan settings for two resonators individually. You can control the resonance intensity via an LFO.



a	Ctrl (Control Mode) Switches the controls of resonance intensity	Manual, LFO, Dmod D-mod
	Invert (LFO/Dmod Invert) Reverses the Voice 1 and 2 control when LFO/Dmod is selected	Off, On Fx:027
b	lfoF (LFO Frequency) Sets the LFO speed	0.02...20.00Hz
	Dmod (Dmod Source) Selects the modulation source that controls resonance intensity	Off...Tempo
c	Mod Dep (Mod Depth) Sets the amount of resonance intensity control via LFO/Dmod	-100...+100
	Trim Sets the input level at the resonator	0...100
d	V1 Pitch (Voice1 Pitch) Sets the voice1 Pitch for resonance	C0...B8
	Fine Fine-adjusts the voice 1 pitch for resonance	-50...+50cent
e	V1 Reso (Voice1 Resonance) Sets the intensity of resonance when Control Mode = Manual	-100...+100 Fx:027
	HiDamp (High Damp) Sets the damping amount of resonant sound in the high range	0...100% Fx:027
f	V1 Level (Voice1 Level) Sets the Voice1 output level	0...100
	Pan Sets the Voice1 stereo image	L6...R6
g	V2 Pitch (Voice2 Pitch) Sets the Voice2 Pitch for resonance	C0...B8
	Fine Fine-adjusts the voice 2 pitch for resonance	-50...+50cent
h	V2 Reso (Voice2 Resonance) Sets the intensity of resonance when Control Mode = Manual	-100...+100 Fx:027
	HiDamp (High Damp) Sets the damping amount of resonant sound in the high range	0...100% Fx:027

i	V2 Level (Voice2 Level) Sets the Voice2 output level	0...100
	Pan Sets the Voice2 stereo image	L6...R6
j	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D ^{mod}
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	-100...+100

a: Ctrl, e: V1 Reso, h: V2 Reso

This parameter determines the resonance intensity. When "Ctrl" = **Manual**, the "Reso" parameter sets the intensity of resonance. If the "Reso" parameter has a negative value, harmonics will be changed, and resonance will occur at a pitch one octave lower.

When "Ctrl" = **LFO**, the intensity of resonance varies according to the LFO. The LFO sways between positive and negative values, causing resonance to occur between specified pitches an octave apart in turn.

When "Ctrl" = **Dmod**, the resonance is controlled by the dynamic modulation source. If **JS X** or **Rbn#16** is assigned as the modulation source, the pitch an octave higher and lower can be controlled, similar to when LFO is selected for Control Mode.

a: Invert

When "Ctrl" = **LFO** or **Dmod**, the controlled phase of either Voice 1 or 2 will be reversed. When the resonance pitch is set for Voice 1 (Resonance has a positive value), Voice 2 will resonate at a pitch an octave below (Resonance has a negative value).

d: V1 Pitch, d: Fine, g: V2 Pitch, g: Fine

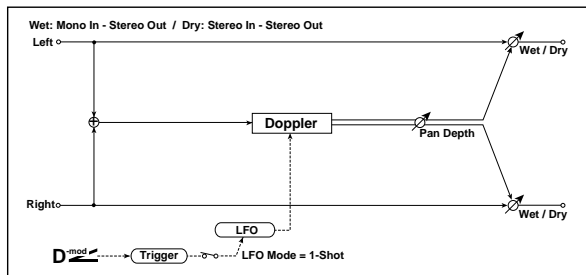
The Pitch parameter specifies the pitch of resonance by note name. The "Fine" parameter allows for fine adjustment in steps of cents.

e: HiDamp, h: HiDamp

This parameter sets the damping amount of resonant sound in the high range. Lower values will make a metallic sound with a higher range of harmonics.

030: Doppler

This effect simulates the "Doppler effect" of a moving sound with a changing pitch, similar to the siren of an passing ambulance. Mixing the effect sound with the dry sound will create a unique chorus effect.



a	Mode (LFO Mode) Switches LFO operation mode	Loop, 1-Shot D ^{mod}
	Src (Source) When LFO Mode is set to 1-Shot, this modulation source triggers the LFO	Off...Tempo
b	LFO Sync Switches between LFO reset on and off when LFO Mode is set to Loop	Off, On

c	Freq (LFO Frequency) Sets the LFO speed	0.02...20.00Hz Fx:009, D ^{mod}
	(Source) Selects the modulation source of LFO speed	Off...Tempo
d	(Amount) Sets the modulation amount of LFO speed	-20.00...+20.00Hz
	BPM/MIDI Sync Switches between using the frequency of the LFO speed and using the tempo and notes	Off, On Fx:009, S ^{Sync}
	BPM Selects MIDI Clock and assigns tempo	MIDI, 40...240 Fx:009
e	Base (Base Note) Selects the type of notes that specify the LFO speed	♪, ♪, ♫, ♬, ♭, ♮, ♯, ♭, ♮, ♯, ♭, ♮, ♯
	Times Sets the number of notes that specify the LFO speed	1...16 Fx:009
f	Pitch Dep (Pitch Depth) Sets the pitch variation of the moving sound	0...100 D ^{mod}
	(Source) Selects the modulation source of pitch variation	Off...Tempo
g	(Amount) Sets the modulation amount of pitch variation	-100...+100
	Pan Dep (Pan Depth) Sets the panning of the moving sound	-100...+100 D ^{mod}
h	(Source) Selects the modulation source of panning	Off...Tempo
	(Amount) Sets the modulation amount of panning	-100...+100
i	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D ^{mod}
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	-100...+100

a: Mode, a: Src, b: LFO Sync

The "Mode" parameter switches LFO operation mode. When **Loop** is selected, the Doppler effect will be created repeatedly. If "LFO Sync" is set to **On**, the LFO will be reset when the modulation source specified with the "Src" parameter is turned on. When "Mode" is set to **1-Shot**, the Doppler effect is created only once when the modulation source specified in the "Src" field is turned on. At this time if you do not set the "Src" parameter, the Doppler effect will not be created, and no effect sound will be output.

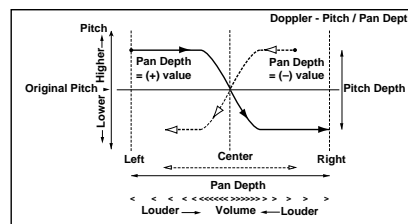
MIDI The effect is off when a value for the modulation source specified for the "Src" parameter is smaller than 64, and the effect is on when the value is 64 or higher. The Doppler effect is triggered when the value changes from 63 or smaller to 64 or higher.

e: Pitch Dep

With the Doppler effect, the pitch is raised when the sound approaches, and the pitch is lowered when the sound goes away. This parameter sets this pitch variation.

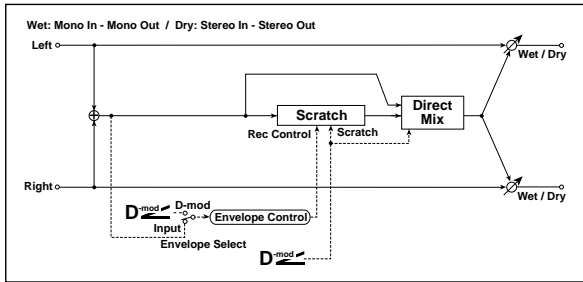
f: Pan Dep

This parameter sets the width of the stereo image of the effect sound. With larger values, the sound seems to come and go from much further away. With positive values, the sound moves from left to right; with negative values, the sound moves from right to left.



031: Scratch

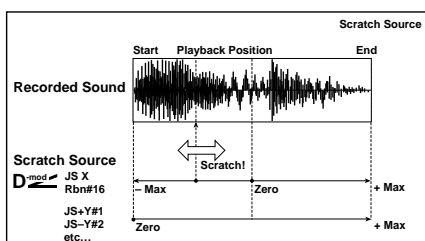
This effect is applied by recording the input signal and moving the modulation source. It simulates the sound of scratches you can make using a turntable.



a	Scratch Source Selects the modulation source for simulation control	Off...Tempo ☞, D ^{mod}
b	Response(Scratch) Sets the speed of the response to the Scratch Source	0...100 ☞
c	Envelope (Envelope Select) Selects whether the start and end of recording is controlled via the modulation source or the input signal level	Dmod, Input ☞, D ^{mod}
	Src (Source) Selects the modulation source that controls recording when Envelope is set to Dmod	Off...Tempo ☞
d	Threshold Sets the recording start level when Envelope is set to Input	0...100 ☞
e	Response(Env) Sets the speed of the response to the end of recording	0...100 ☞
f	Direct Mix Selects how a dry sound is mixed	Always On, Always Off, Cross Fade ☞
g	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D ^{mod}
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	-100...+100

a: Scratch Source, b: Response(Scratch)

The Scratch Source parameter enables you to select the modulation source that controls simulation. The value of the modulation source corresponds to the playback position. The Response(Scratch) parameter enables you to set the speed of the response to the modulation source.



c: Envelope, c:Src, d: Threshold

When "Envelope" is set to **Dmod**, the input signal will be recorded only when the modulation source value is 64 or higher. When "Envelope" is set to **Input**, the input signal will be recorded only when its level is over the Threshold value. The maximum recording time is 1365msec. If this is exceeded, the recorded data will start being erased from the top.

e: Response(Env)

This parameter enables you to set the speed of the response to the end of recording. Set a smaller value when you are recording a phrase or rhythm pattern, and set a higher value if you are recording only one note.

f: Direct Mix

With **Always On**, a dry sound is usually output. With **Always Off**, dry sounds are not output. With **Cross Fade**, a dry sound is usually output, and it is muted only when scratching. Set W/D to **Wet** to use this parameter effectively.

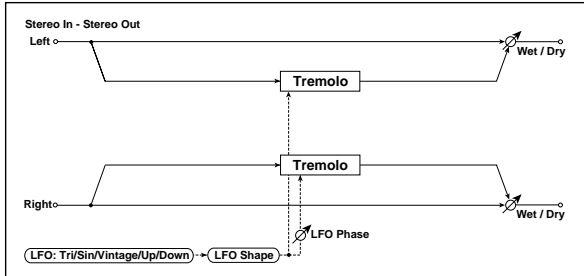
Mod./P.Shift

Other modulation and pitch shift effects

032: St.Tremolo

(Stereo Tremolo)

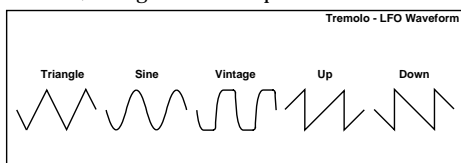
This effect modulates the volume level of the input signal. The effect is stereo, and offsetting the LFO of the left and right phases from each other produces a tremolo effect between left and right.



a	LFO Wave (LFO Waveform) Selects LFO Waveform	Tri, Sine, Vintg, Up, Down
	Shape (LFO Shape) Determines how much the LFO waveform is changed	-100...+100 Fx:020
b	LFO Phase Sets the LFO phase difference between the left and right	-180...+180deg
c	Freq (LFO Frequency) Sets the LFO speed	0.02...20.00Hz Fx:009, D ^{mod}
	(Source) Selects the modulation source of LFO speed	Off...Tempo
	(Amount) Sets the modulation amount of LFO speed	-20.00...+20.00Hz
d	BPM/MIDI Sync Switches between using the frequency of the LFO speed and using the tempo and notes	Off, On Fx:009, Sync
	BPM Selects MIDI Clock and assigns tempo	MIDI, 40...240 Fx:009
	Note (Base Note) Selects the type of notes that specify the LFO speed	1...16 Fx:009
	Times Sets the number of notes that specify the LFO speed	1...16 Fx:009
e	Depth Sets the depth of LFO modulation	0...100 D ^{mod}
	(Source) Selects the modulation source of the depth of modulation	Off...Tempo
	(Amount) Sets the modulation amount of the depth of modulation	-100...+100
f	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D ^{mod}
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	-100...+100

a:LFO Wave

This parameter selects the LFO waveform. **Vintg (Vintage)** wave simulates the characteristics of the tremolo created on a guitar amplifier. Combining this effect with the Amp Simulation will make a realistic, vintage tremolo amplifier sound.



b: LFO Phase

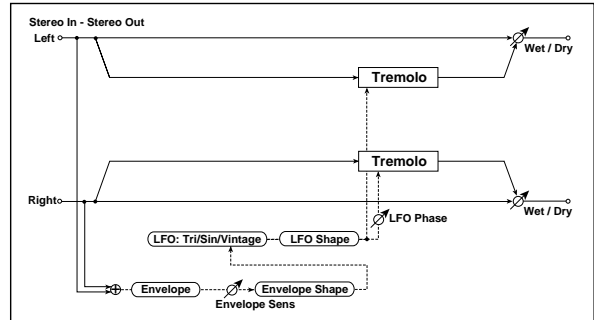
This parameter determines the difference between the left and right LFO phases. A higher value will simulate the auto-pan effect

in which the sound is panned between left and right.

033: St.Env. Tremlo

(Stereo Envelope Tremolo)

This effect uses the input signal level to modulate a stereo tremolo. You can simulate a tremolo effect that becomes deeper as it fades out while the level gets lower.



a	Envelope Sens (Envelope Sensitivity) Sets the envelope sensitivity of the input signal	0...100
	Envelope Shape Sets the envelope curve shape of the input signal	-100...+100
c	LFO Wave (LFO Waveform) Selects LFO Waveform	Tri, Sine, Vintg
	Shape (LFO Shape) Determines how much the LFO waveform is changed	-100...+100 Fx:020
d	LFO Phase Sets the LFO phase difference between the left and right	-180...+180deg Fx:032
e	Freq (LFO Frequency) Sets the LFO speed	0.02...20.00Hz
	(Envelope Amount) Sets the changes of the LFO speed according to the input signal level	-20.00...+20.00Hz
f	Depth Sets the depth of LFO modulation	0...100
	(Envelope Amount) Sets the changes of the modulation depth according to the input signal level	-100...+100
g	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D ^{mod}
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	-100...+100

e: Freq, e: (Envelope Amount), f: Depth, f: (Envelope Amount)

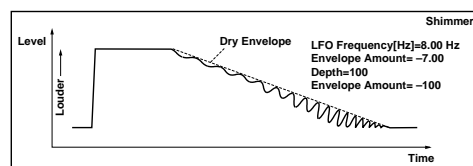
These parameters set the modulation via an envelope (input signal level).

The "LFO speed" is obtained by adding the "Freq" value to the "(Envelope Amount)" value multiplied by the input signal. The LFO modulation depth is obtained by adding the Depth value to the "(Envelope Amount)" value multiplied by the input signal level.

- The following example indicates that the "Depth" is 0 with an LFO Frequency of 1.0Hz and the maximum input, and that the "Depth" is 100 with a Frequency of 8.0 Hz with zero input.

"Freq"=8.00 Hz, "Envelope Amount"=-7.00

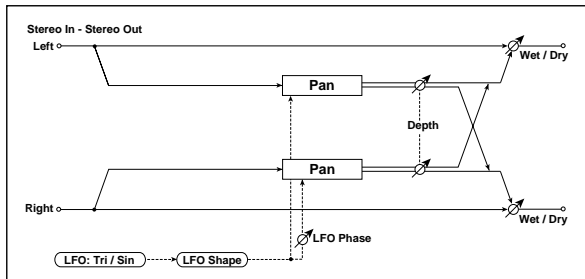
"Depth"=100, "Envelope Amount"=-100



034: St.Auto Pan

(Stereo Auto Pan)

This Auto Pan effect pans sound between left and right. It is stereo, and shifting the left and right LFO phases from each other will simulate the sound of the left and right channels crossing over each other by turns, or chasing each other.



a	LFO Wave (LFO Waveform) Selects LFO Waveform	Tri, Sine
	Shape (LFO Shape) Determines how much the LFO waveform is changed	-100...+100
b	LFO Phase Sets the LFO phase difference between the left and right	-180...+180deg
	<td>Freq (LFO Frequency) Sets the LFO speed</td> <td>0.02...20.00Hz</td>	Freq (LFO Frequency) Sets the LFO speed
c	(Source) Selects the modulation source of LFO speed	Off...Tempo
	(Amount) Sets the modulation amount of LFO speed	-20.00...+20.00Hz
d	BPM/MIDI Sync Switches between using the frequency of the LFO speed and using the tempo and notes	Off, On
	BPM Selects MIDI Clock and assigns tempo	MIDI, 40...240
	Base (Base Note) Selects the type of notes that specify the LFO speed	MIDI, 40...240
e	Depth Sets the depth of LFO modulation	0...100
	(Source) Selects the modulation source of the depth of modulation	Off...Tempo
	(Amount) Sets the modulation amount of the depth of modulation	-100...+100
f	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	-100...+100

a: Shape

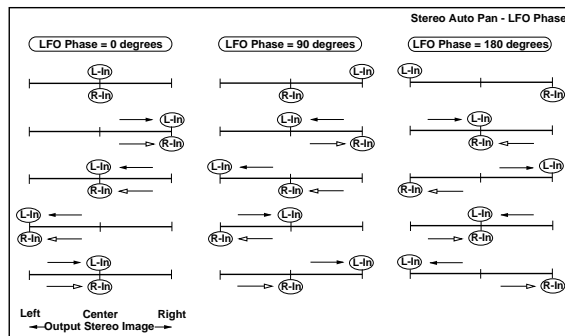
You can change the panning curve by modifying the LFO waveform.

b: LFO Phase

This parameter determines the difference in the left and right LFO phases. When you change the value gradually from 0, the sound from the left and right channels will chase each other around. If you set the parameter to +180 or -180, the sound from each channel will cross over each other.

You need to input different sounds to each channel in order for

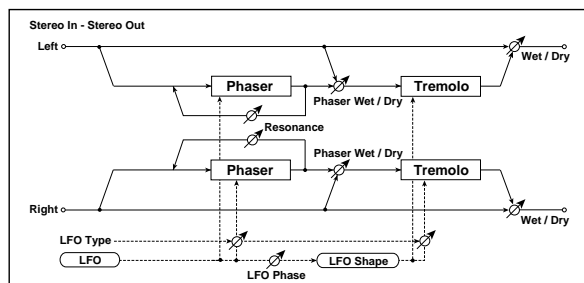
this parameter to be effective.



035: St.Phasr+Trml

(Stereo Phaser + Tremolo)

This effect has a stereo phaser and tremolo LFOs linked together. Swelling phaser modulation and tremolo effects synchronize with each other, creating a soothing modulation effect. It is suitable for electric piano type sounds.



a	Type: Selects the type of the tremolo and phaser LFOs	Phs - Trml...Phs LR - Trml LR
	LFO Phase Sets the phase difference between the tremolo and phaser LFOs	-180...+180deg
c	Freq (LFO Frequency) Sets the LFO speed	0.02...20.00Hz
	(Source) Selects the modulation source of LFO speed	Off...Tempo
d	(Amount) Sets the modulation amount of LFO speed	-20.00...+20.00Hz
	BPM/MIDI Sync Switches between using the frequency of the LFO speed and using the tempo and notes	Off, On
	BPM Selects MIDI Clock and assigns tempo	MIDI, 40...240
e	Base (Base Note) Selects the type of notes that specify the LFO speed	MIDI, 40...240
	Times Sets the number of notes that specify the LFO speed	1...16
f	P Manu (Phaser Manual) Sets the phaser frequency range	0...100
	Resonanc (Resonance) Sets the phaser resonance amount	-100...+100
f	P Dep (Phaser Depth) Sets the phaser modulation depth	0...100
	(Source) Selects the modulation source for the phaser modulation depth	Off...Tempo
	(Amount) Sets the modulation amount for the phaser modulation depth	-100...+100

g	P W/D (Phaser W/D)	-Wet...-2:99, Dry, 2:99...Wet	
	Sets the balance between the phaser effect and dry sounds		
h	T Shape (Tremolo Shape)	-100...+100	
	Sets the degree of the tremolo LFO shaping		
h	T Dep (Tremolo Depth)	0...100	
	Sets the tremolo modulation depth		
	(Source)	Off...Tempo	
(Amount)			-100...+100
Sets the modulation amount of the tremolo modulation depth			
i	W/D (Wet/Dly)	Dry, 1:99...99:1, Wet	
	Sets the balance between the effect and dry sounds		
	(Source)	Off...Tempo	
(Amount)			-100...+100
Sets the modulation amount of the effect balance			

a: Type, b: LFO Phase

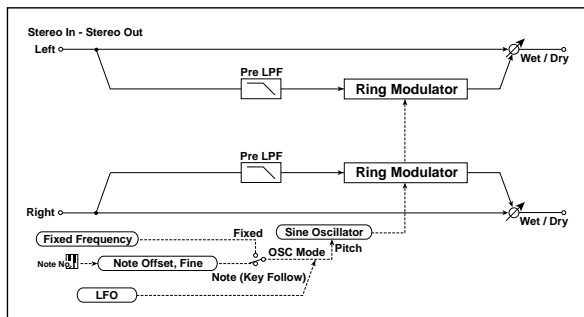
Select the type of phaser LFO and tremolo LFO for the “Type” parameter. How the effect sound moves or rotates depends on the type of LFO. Selecting “LFO Phase” enables you to offset the timing of the phaser peak and control a subtle movement and rotation of the sound.

f: P W/D, i: W/D

The “P W/D” parameter sets the balance between the phaser output and the dry sound. The “W/D” parameter sets the balance between the final phaser and tremolo output level and the dry sound.

036: St.Ring Mod (Stereo Ring Modulator)

This effect creates a metallic sound by applying the oscillators to the input signal. Use the LFO or Dynamic Modulation to modulate the oscillator to create a radical modulation. Matching the oscillator frequency with a note number will produce a ring modulation effect in specific key ranges.



a	Pre LPF	0...100	
	Sets the damping amount of the high range input to the ring modulator		
b	OSC Mode	Fixed, Note (Key Follow)	
	Switching between specifying the oscillator frequency and using a note number		
c	F (Fixed Frequency)	0...12.00kHz	
	Sets the oscillator frequency when OSC Mode is set to Fixed		
	(Source)	Off...Tempo	
(Amount)			-12.00...+12.00kHz
Sets the modulation amount of the oscillator frequency when OSC Mode is set to Fixed			

d	Note Offset	-48...+48	
	Sets the pitch difference from the original note when OSC Mode is set to Note (Key Follow)		
e	Fine (Note Fine)	-100...+100	
	Fine-adjusts the oscillator frequency		
e	lfoF (LFO Frequency)	0.02...20.00Hz	
	Sets the LFO speed of the oscillator frequency modulation		
	(Source)	Off...Tempo	
(Amount)			-20.00...+20.00Hz
Sets the modulation amount of LFO speed			
f	BPM/MIDI Sync	Off, On	
	Switches between using the frequency of the LFO speed and using the tempo and notes		
	BPM	MIDI, 40...240	
	Sets MIDI Clock and assigns tempo		
g	Base (Base Note)		
	Selects the type of notes that specify the LFO speed		
	Times	1...16	
Sets the number of notes that specify the LFO speed			
g	Depth (LFO Depth)	0...100	
	Sets the depth of LFO modulation for the oscillator frequency		
	(Source)	Off...Tempo	
(Amount)			-100...+100
Sets the modulation amount of the depth of modulation			
h	W/D (Wet/Dly)	Dry, 1:99...99:1, Wet	
	Sets the balance between the effect and dry sounds		
	(Source)	Off...Tempo	
(Amount)			-100...+100
Sets the modulation amount of the effect balance			

a: Pre LPF

This parameter enables you to set the damping amount of the high range sound input to the ring modulator. If the input sound contains lots of harmonics, the effect may sound dirty. In this case, cut a certain amount of high range.

b: OSC Mode

This parameter determines whether or not the oscillator frequency follows the note number.

c: F

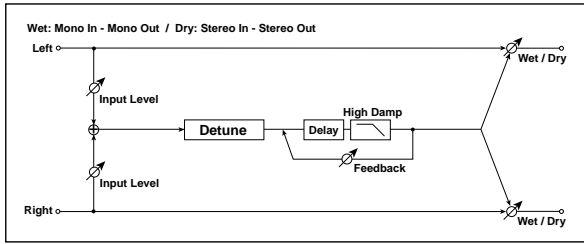
This parameter sets the oscillator frequency when “OSC Mode” is set to Fixed.

d: Note Offset, d: Fine

These parameters for the oscillator are used when “OSC Mode” is set to Note (Key Follow). The “Note Offset” sets the pitch difference from the original note in semitone steps. The “Fine” parameter fine-adjusts the pitch in cent steps. Matching the oscillator frequency with the note number produces a ring modulation effect in the correct key.

037: Detune

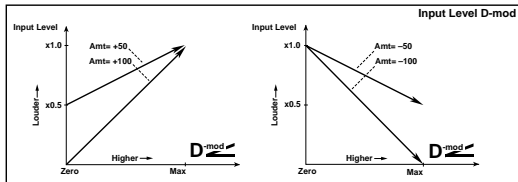
Using this effect, you can obtain a detune effect that offsets the pitch of the effect sound slightly from the pitch of the input signal. Compared to the chorus effect, a more natural sound thickness will be created.



a	Sft (Pitch Shift) Sets the pitch difference from the input signal	-100...+100cent	
	(Source) Selects the modulation source of the pitch shift	Off...Tempo	
	(Amount) Sets the modulation amount of the pitch shift	-100...+100cent	
b	Delay (Delay Time) Sets the delay time	0...1000ms	
c	Feedback Sets the feedback amount	-100...+100	
d	High Damp Sets the damping amount in the high range	0...100%	
e	InLvl Mod (Input Level Dmod [%]) Sets the modulation amount of the input level	-100...+100	
	Src (Source) Selects the modulation source for the input level	Off...Tempo	
f	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet	
	(Source) Selects the modulation source of the effect balance	Off...Tempo	
	(Amount) Sets the modulation amount of the effect balance	-100...+100	

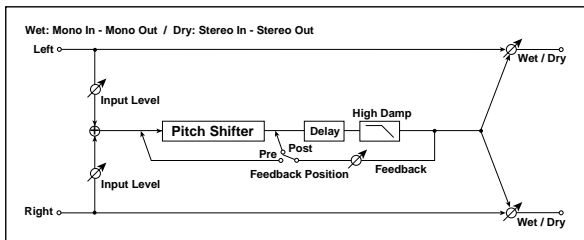
e: InLvl Mod, e: Src

This parameter sets the dynamic modulation of the input level.



038: Pitch Shifter

This effect changes the pitch of the input signal. You can select from three types: Fast (quick response), Medium, and Slow (preserves tonal quality). You can also create an effect in which the pitch is gradually raised (or dropped) using the delay with feedback.



a	Mode Switches Pitch Shifter mode	Slow, Medium, Fast	
b	Shift (Pitch Shift) Sets the pitch shift amount by steps of a semitone	-24...+24	
	(Source) Selects the modulation source of pitch shift amount	Off...Tempo	
	(Amount) Sets the modulation amount of pitch shift amount	-24...+24	
c	Fine Sets the pitch shift amount by steps of a cent	-100...+100cent	
	(Amount) Sets the modulation amount of pitch shift amount	-100...+100cent	
d	Delay (Delay Time) Sets the delay time	0...1000ms	
e	Feedback Position Switches the feedback connection.	Pre, Post	
f	Feedback Sets the feedback amount	-100...+100	
	HiDamp (High Damp) Sets the damping amount in the high range	0...100%	
g	InLvl Mod (Input Level Dmod [%]) Sets the modulation amount of the input level	-100...+100	
	Src (Source) Selects the modulation source for the input level	Off...Tempo	
h	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet	
	(Source) Selects the modulation source of the effect balance	Off...Tempo	
	(Amount) Sets the modulation amount of the effect balance	-100...+100	

a: Mode

This parameter switches the pitch shifter operating mode. With **Slow**, tonal quality will not be changed too much. With **Fast**, the effect becomes a Pitch Shifter that has a quick response, but may change the tone. **Medium** is in between these two. If you do not need to set too much pitch shift amount, set this parameter to **Slow**. If you wish to change the pitch significantly, use **Fast**.

b: Shift, b: (Source), b: (Amount), c: Fine, c: (Amount)

The amount of pitch shift will use the value of the "Shift" plus the "Fine" value. The amount of modulation will use the c: (Amount) value plus d: " (Amount)."

Modulation Source is used both for "Shift" and "Fine."

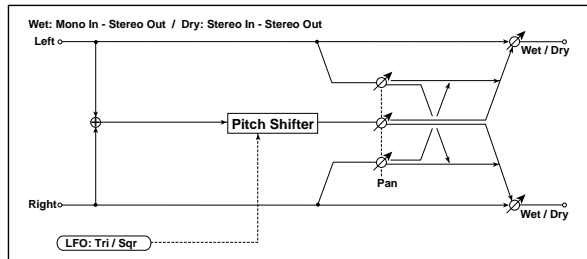
e: Feedback Position, f: Feedback

When "Feedback Position" is set to **Pre**, the pitch shifter output is again input to the pitch shifter. Therefore, if you specify a higher value for the Feedback parameter, the pitch will be raised (or lowered) more and more each time feedback is repeated.

If "Feedback Position" is set to **Post**, the feedback signal will not pass through the pitch shifter again. Even if you specify a higher value for the Feedback parameter, the pitch-shifted sound will be repeated at the same pitch.

039: PitchShft Mod (Pitch Shift Modulation)

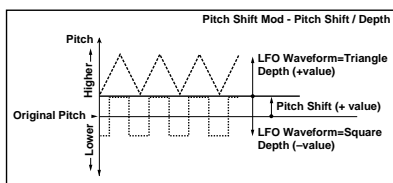
This effect modulates the detuned pitch shift amount using an LFO, adding a clear spread and width to the sound by panning the effect sound and dry sound to the left and right. This is especially effective when the effect sound and dry sound output from stereo speakers are mixed.



a	Pitch Shift Sets the pitch difference from the input signal	-100...+100cent
b	LFO Wave (LFO Waveform) Selects LFO Waveform	Triangle, Square
c	Freq (LFO Frequency) Sets the LFO speed	0.02...20.00Hz Fx:009, D^{mod}
	(Source) Selects the modulation source of LFO speed	Off...Tempo
d	(Amount) Sets the modulation amount of LFO speed	-20.00...+20.00Hz
	BPM/MIDI Sync Switches between using the frequency of the LFO speed and using the tempo and notes	Off, On Fx:009, D^{sync}
e	BPM Selects MIDI Clock and assigns tempo	MIDI, 40...240 Fx:009
	Base (Base Note) Selects the type of notes that specify the LFO speed	Fx:009
	Times Sets the number of notes that specify the LFO speed	1...16 Fx:009
f	Depth Sets the LFO modulation depth for pitch shift amount	-100...+100 D^{mod}
	(Source) Selects the modulation source of the depth of modulation	Off...Tempo
g	(Amount) Sets the modulation amount of the depth of modulation	-100...+100
	Pan Sets the panning effect sound and dry sound separately	L, 1:99...99:1, R
g	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D^{mod}
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	-100...+100

a: Pitch Shift [cent], e: Depth

These parameters set the amount of pitch shift and amount of modulation by means of the LFO.

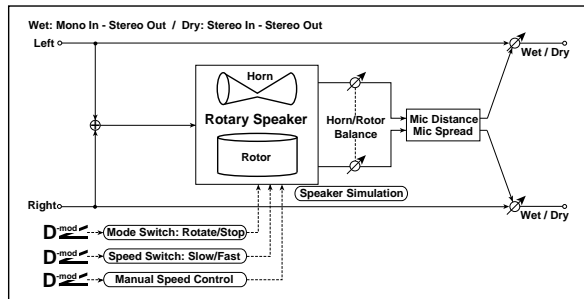


f: Pan, g: W/D

The Pan parameter pans the effect sound and dry sound to the left and right. With L, the effect sound is panned left, and the dry sound is panned right. With a W/D = Wet setting, the effect and dry sound will be output in a proportion of 1:1.

040: Rotary SP (Rotary Speaker)

This effect simulates a rotary speaker, and obtains a more realistic sound by simulating the rotor in the low range and the horn in the high range separately. The effect also simulates the stereo microphone settings.



a	Mode (Mode Switch) Switches between speaker rotation and stop	Rotate, Stop D^{mod}
	(Source) Selects the modulation source that toggles between rotation and stop	Off...Tempo
b	(Sw) Selects switching mode of the modulation source that toggles between rotation and stop	Tggl, Mmnt
	Speed (Speed Switch) Switches the speaker rotation speed between slow and fast	Slow, Fast D^{mod}
c	(Source) Selects the modulation source that toggles between slow and fast	Off...Tempo
	(Sw) Selects switching mode of the modulation source that toggles between slow and fast	Tggl, Mmnt
d	H/R.Bal (Horn/Rotor Balance) Sets the level balance between the high-range horn and low-range rotor	Rot, 1...99, Hrn
	ManuSp (Manual Speed Control) Selects the modulation source in case the rotation speed is changed directly	Off...Tempo D^{mod}
e	Horn Accel (Horn Acceleration) How quickly the horn rotation speed in the high range is switched	0...100
	Ratio (Horn Ratio) Adjusts the (high-range side) horn rotation speed. Standard value is 1.00. Selecting "Stop" will stop the rotation	Stop, 0.50...2.00
f	Rotor Accel (Rotor Acceleration) Determines how quickly the rotor rotation speed in the low range is switched	0...100
	Ratio (Rotor Ratio) Adjusts the (low-range side) rotor rotation speed. Standard value is 1.00. Selecting "Stop" will stop the rotation	Stop, 0.50...2.00
g	MicDistance Sets the distance between the microphone and rotary speaker	0...100
	Spread (Mic Spread) Sets the angle of left and right microphones	0...100
g	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D^{mod}
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	-100...+100

a: (Sw)

This parameter sets how the modulation source switches between rotation and stop.

If "(Sw)" is set to **Tggl (Toggle)**, the speaker will alternately switch between rotating and stopped states each time you press a pedal or move a joystick on a connected MIDI instrument.

MIDI Each time the value for the modulation source exceeds 64, the speaker rotates or stops alternately.

When "(Sw)" = **Mmnt (Moment)**, the speaker is rotating. It stops

only when you press the pedal or operate the joystick.

MIDI Rotation will occur when the value of the modulation source is less than 64, and will stop when the value is 64 or greater.

b: (Sw)

This parameter sets how the rotation speed (slow and fast) is switched via the modulation source.

When "(Sw)" = **Tgg1 (Toggle)**, the speed is switched between slow and fast each time you press the pedal or operate the joystick.

MIDI Slow/fast will alternate each time the value of the modulation source exceeds 64.

When "(Sw)" = **Mmnt (Moment)**, the speed is usually slow. It becomes fast only when you press the pedal or operate the joystick.

MIDI When a value for the modulation source is less than 64, "slow" speed is selected, and when the value is 64 or higher, "fast" is selected.

c: ManuSp

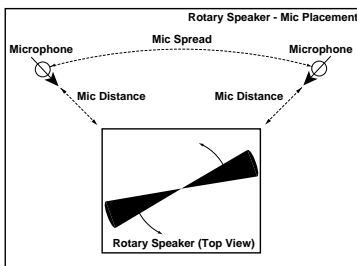
If you wish to control the speaker rotation speed manually, not switching between Slow and Fast, select the modulation source in the "ManuSp" field. If manual control is not necessary, set this field to **Off**.

d: Horn Accel, e: Rotor Accel

On a real rotary speaker, the rotation speed is accelerated or decelerated gradually after you switch the speed. The "Horn Accel" parameter sets the speed at which the rotation is accelerated or decelerated.

f: MicDistance, f: Spread

This is a simulation of stereo microphone settings.

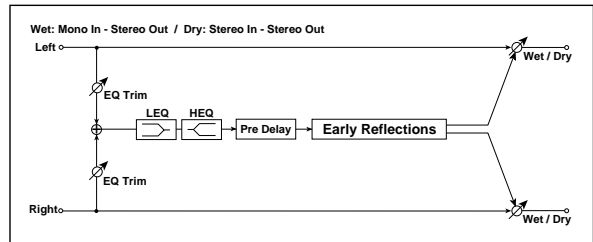


ER/Delay

Early reflection and delay effects

041: Early Reflect (Early Reflections)

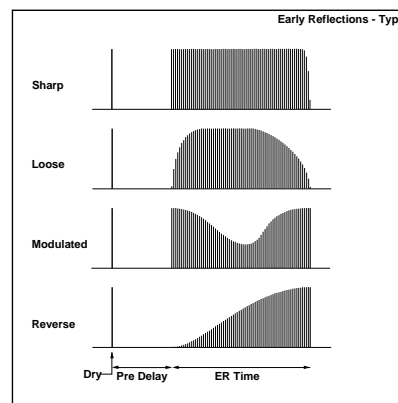
This effect is only the early reflection part of a reverberation sound, and adds presence to the sound. You can select one of the four decay curves.



a	Type Selects the decay curve for the early reflection	Sharp, Loose, Modulated, Reverse
b	ER Time Sets the time length of early reflection	10...800ms
c	Pre Delay Sets the time taken from the original sound to the first early reflection	0...200ms
d	Pre EQ Trim Sets the input level of EQ applied to the effect sound	0...100
e	LoEQ (Pre Low EQ Gain) Sets the gain of Low EQ	-15.0...+15.0dB
	HiEQ (Pre High EQ Gain) Sets the gain of High EQ	-15.0...+15.0dB
f	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	-100...+100

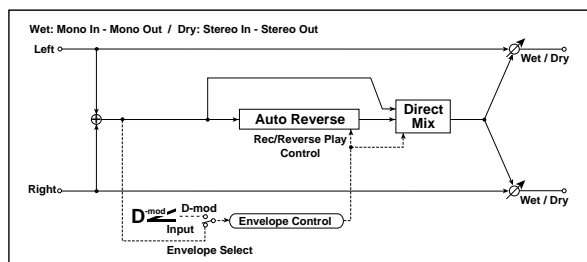
a: Type

This parameter selects the decay curve for the early reflection.



042: Auto Reverse

This effect records the input signal and automatically plays it in reverse (the effect is similar to a tape reverse sound).



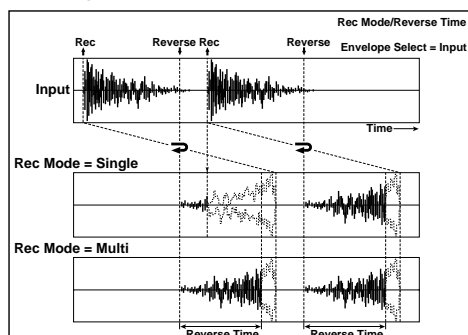
a	Rec Mode Sets the recording mode	Single, Multi
b	Reverse Time Sets the maximum duration of the reverse playback	20...1320ms
c	Envelope (Envelope Select) Selects whether the start and end of recording is controlled via the modulation source or the input signal level	Dmod, Input
	Src (Source) Selects the modulation source that controls recording when Envelope is set to Dmod	Off...Tempo
d	Threshold Sets the recording start level when Envelope is set to Input	0...100
e	Response Sets the speed of the response to the end of recording	0...100 Fx:031
f	Direct Mix Always On, Always Off, Cross Fade Selects how a dry sound is mixed	Always On, Always Off, Cross Fade Fx:031
g	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	-100...+100

a: Rec Mode, b: Reverse Time

When "Rec Mode" is set to **Single**, you can set up to 1320msec for "Reverse Time." If recording starts during the reverse playback, the playback will be interrupted.

When "Rec Mode" is set to **Multi**, you can make another recording during the reverse playback. However, the maximum Reverse Time is limited to 660msec.

If you wish to record a phrase or rhythm pattern, set "Rec Mode" to **Single**. If you record only one note, set "Rec Mode" to **Multi**. The "Reverse Time" parameter specifies the maximum duration of the reverse playback. The part in excess of this limit will not be played in reverse. If you wish to add short pieces of the reverse playback of single notes, make the "Reverse Time" shorter.



c: Envelope, c: Src, d: Threshold

These parameters select the source to control the start and end of recording.

When "Envelope" is set to **Dmod**, the input signal will be recorded only when the value of the modulation source selected

by the Src parameter is 64 or higher.

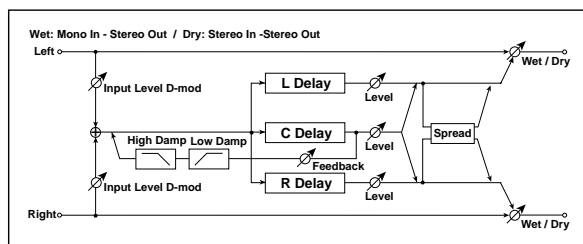
When "Envelope" is set to **Input**, the input signal will be recorded only when its level exceeds the Threshold level.

When recording is completed, reverse playback starts immediately.

043: LCR Delay

(L/C/R Delay)

This multitap delay outputs three Tap signals to the left, right, and center respectively. You can also adjust the left and right spread of the delay sound.



a	L Delay (L Delay Time) Sets the delay time of TapL	0...1360ms
	Level Sets the output level of TapL	0...50
b	C Delay (C Delay Time) Sets the delay time of TapC	0...1360ms
	Level Sets the output level of TapC	0...50
c	R Delay (R Delay Time) Sets the delay time of TapR	0...1360ms
	Level Sets the output level of TapR	0...50
d	C Fb (C Delay Feedback) Sets the feedback amount of TapC	-100...+100
	(Source) Selects the modulation source of the TapC feedback amount	Off...Tempo
	(Amount) Sets the modulation amount of the TapC feedback amount	-100...+100
e	HiDamp (High Damp) Sets the damping amount in the high range	0...100%
	LoDamp (Low Damp) Sets the damping amount in the low range	0...100%
f	InLvl Mod (Input Level Dmod [%]) Sets the modulation amount of the input level	-100...+100 Fx:037, Dmod
	Src (Source) Selects the modulation source for the input level	Off...Tempo Fx:037
	Spread Sets the width of the stereo image of the effect sound	0...50
g	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	-100...+100

e: HiDamp, e: LoDamp

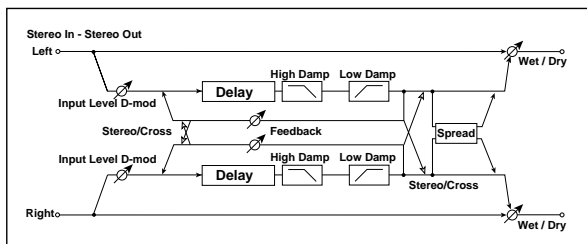
These parameters set the damping amount of high range and low range. The tone of the delayed sound becomes darker and lighter as it feeds back.

g: Spread

This parameter sets the pan width of the effect sound. The stereo image is widest with a value of **50**, and the effect sound of both channels is output from the center with a value of **0**.

044: St/Cross Dly (Stereo/Cross Delay)

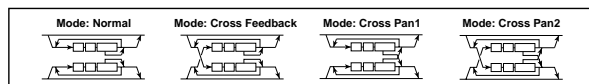
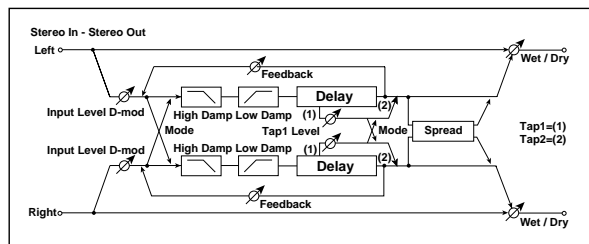
This is a stereo delay, and can be used as a cross-feedback delay effect in which the delay sounds cross over between the left and right by changing the feedback routing.



a	Stereo/Cross Switches between stereo delay and cross-feedback delay	Stereo, Cross
b	L Delay (L Delay Time) Sets the delay time for the left channel	0.0...680.0ms
c	R Delay (R Delay Time) Sets the delay time for the right channel	0.0...680.0ms
d	L Fb (L Feedback) Sets the feedback amount for the left channel	-100...+100
	(Source) Selects the modulation source of feedback amount	Off...Tempo
e	(Amount L) Sets the modulation amount of the left channel feedback	-100...+100
	R Fb (R Feedback) Sets the feedback amount for the right channel	-100...+100
f	(Amount R) Sets the modulation amount of the right channel feedback	-100...+100
	HiDamp (High Damp) Sets the damping amount in the high range	0...100% Fx:043
g	LoDamp (Low Damp) Sets the damping amount in the low range	0...100% Fx:043
h	InLvl Mod (Input Level Dmod [%]) Sets the modulation amount of the input level	-100...+100 Fx:037,
	Src (Source) Selects the modulation source for the input level	Off...Tempo Fx:037
i	Spread Sets the width of the stereo image of the effect sound	-50...+50 Fx:043
j	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	-100...+100

045: St.MltTap Dly (Stereo Multitap Delay)

The left and right Multitap Delays have two taps respectively. Changing the routing of feedback and tap output allows you to create various patterns of complex effect sounds.



a	Mode Switches the left and right delay routing	Normal, Cross Feedback, Cross Pan1, Cross Pan2
b	Tap1 Time Sets the Tap1 delay time	0.0...680.0ms
c	Tap2 Time Sets the Tap2 delay time	0.0...680.0ms
d	Tap1 Level Sets the Tap1 output level	0...100
	Fb(T2) (Tap2 Feedback) Sets the Tap2 feedback amount	-100...+100
e	(Source) Selects the modulation source of the Tap2 feedback amount	Off...Tempo
	(Amount) Sets the modulation amount of the Tap2 feedback amount	-100...+100
f	HiDamp (High Damp) Sets the damping amount in the high range	0...100% Fx:043
	LoDamp (Low Damp) Sets the damping amount in the low range	0...100% Fx:043
g	InLvl Mod (Input Level Dmod [%]) Sets the modulation amount of the input level	-100...+100 Fx:037,
	Src (Source) Selects the modulation source for the input level	Off...Tempo Fx:037
h	Spread Sets the width of the stereo image of the effect sound	-100...+100 Fx:043,
	(Source) Selects the modulation source of the effect sound's stereo image width	Off...Tempo
	(Amount) Sets the modulation amount of the effect sound's stereo image width	-100...+100
i	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	-100...+100

a: Mode

You can change how the left and right delay signals are panned by modifying the routing of the left and right delay as shown in the figure above. You need to input different sounds to each channel in order for this parameter to be effective.

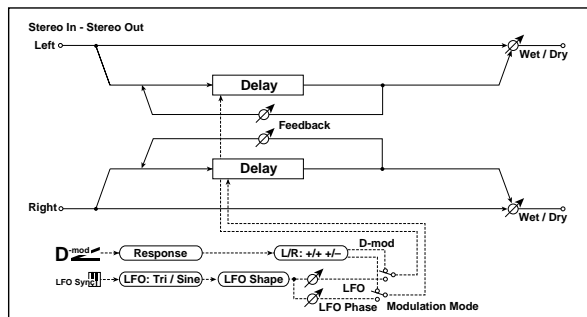
d: Tap1 Level

This parameter sets the output level of Tap1. Setting a different level from Tap2 will add a unique touch to a monotonous delay and feedback.

046: St.Mod. Delay

(Stereo Modulation Delay)

This stereo delay uses an LFO to sweep the delay time. The pitch also varies. You will obtain a delay sound with swell and shimmering. You can also control the delay time using a modulation source.



a	Mod Mode (Modulation Mode)	LFO, Dmod
	Switches between LFO modulation control and modulation source control	
b	Src (Source)	Off...Tempo
	Selects the modulation source that controls delay time	
c	Dmod	L/R: +/+, L/R: +/-
	Reversed L/R control by modulation source	
d	Response (Response)	0...30
	Sets the rate of response to the modulation source	
e	LFO Wave (LFO Waveform)	Tri, Sine
	Selects LFO Waveform	
f	Shape (LFO Shape)	-100...+100
	Determines how much the LFO waveform is changed	
g	LFO Freq (LFO Frequency)	0.02...20.00Hz
	Sets the LFO speed	
h	LFO Sync	Off, On
	Switches LFO reset off/on	
i	Src (Source)	Off...Tempo
	Selects the modulation source that resets the LFO	
j	L Phase (L LFO Phase)	-180...+180
	Sets the phase obtained when the left LFO is reset	
k	R Phase (R LFO Phase)	-180...+180
	Sets the phase obtained when the right LFO is reset	
l	L Depth	0...200
	Sets the depth of the left LFO modulation	
m	R Depth	0...200
	Sets the depth of the right LFO modulation	
n	L Dly (L Delay Time)	0.0...500.0
	Sets the left delay time	
o	R Dly (R Delay Time)	0.0...500.0
	Sets the right delay time	
p	L Fb (L Feedback)	-100...+100
	Sets the feedback amount of left delay	
q	R Fb (R Feedback)	-100...+100
	Sets the feedback amount of right delay	
r	W/D (Wet/Dly)	-Wet...-1:99, Dry, 1:99...Wet
	Sets the balance between the effect and dry sounds	
s	(Source)	Off...Tempo
	Selects the modulation source of the effect balance	
t	(Amount)	-100...+100
	Sets the modulation amount of the effect balance	

b: Dmod

When the modulation source is used for control, this parameter reverses the left and right modulation direction.

e: LFO Sync, e: Src, f: L Phase, f: R Phase

The LFO can be reset via a modulation source.

The "Src" parameter sets the modulation source that resets the LFO. For example, you can assign Gate as a modulation source so that the sweep always starts from the specified point.

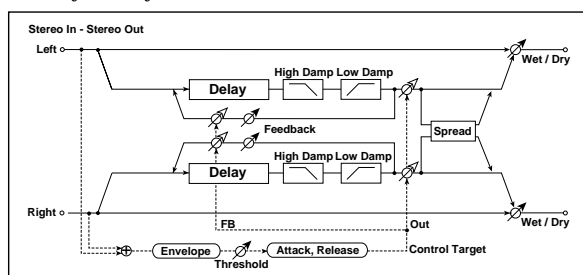
"L Phase" and "R Phase" set the phase obtained when the left and right LFOs are reset. In this way, you can create changes in pitch sweep for the left and right channels individually.

MIDI The effect is off when a value of the modulation source specified in the "Src" parameter is 63 or smaller, and the effect is on when the value is 64 or higher. The LFO is triggered and reset to the "L Phase" and "R Phase" settings when the value changes from 63 or smaller to 64 or higher.

047: St.DynamicDly

(Stereo Dynamic Delay)

This stereo delay controls the level of delay according to the input signal level. You can use this as a ducking delay that applies delay to the sound only when you play keys at a high velocity or only when the volume level is low.



a	Ctrl Target (Control Target)	None, Out, FB
	Selects from no control, output, and feedback	
b	Pol (Polarity)	+, -
	Reverses level control	
c	Threshold	0...100
	Sets the level to which the effect is applied	
d	Offset	0...100
	Sets the offset of level control	
e	Attack	1...100
	Sets the attack time of level control	
f	Release	1...100
	Sets the release time of level control	
g	L Delay (L Delay Time)	0.0...680.0ms
	Sets the delay time for the left channel	
h	R Delay (R Delay Time)	0.0...680.0ms
	Sets the delay time for the right channel	
i	Feedback	-100...+100
	Sets the feedback amount	
j	HiDamp (High Damp)	0...100%
	Sets the damping amount in the high range	
k	LoDamp (Low Damp)	0...100%
	Sets the damping amount in the low range	
l	Spread	-100...+100
	Sets the width of the stereo image of the effect sound	
m	W/D (Wet/Dly)	Dry, 1:99...99:1, Wet
	Sets the balance between the effect and dry sounds	
n	(Source)	Off...Tempo
	Selects the modulation source of the effect balance	
o	(Amount)	-100...+100
	Sets the modulation amount of the effect balance	

a: Ctrl Target

This parameter selects no level control, delay output control (effect balance), or feedback amount control.

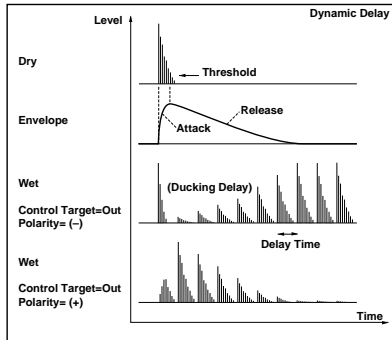
a: Pol, b: Threshold, b: Offset, c: Attack, d: Release

The "Offset" parameter specifies the value for the "Ctrl Target" parameter (that is set to None), expressed as the ratio relative to the parameter value (the "W/D" value with "Ctrl Target"=Out, or the "Feedback" value with "Ctrl Target"=FB).

When "Pol" is **positive**, the "Ctrl Target" value is obtained by multiplying the parameter value by the "Offset" value (if the input level is below the threshold), or equals the parameter value if the input level exceeds the threshold.

When "Pol" is **negative**, Ctrl Target value equals the parameter value if the input level is below the threshold, or is obtained by multiplying the parameter value by the "Offset" value if the level exceeds the threshold.

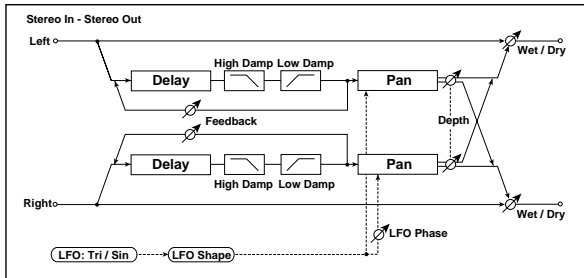
The "Attack" and "Release" parameters specify attack time and release time of delay level control.



048: St.AutoPanDly

(Stereo Auto Panning Delay)

This stereo delay effect pans the delay sound left and right using the LFO.



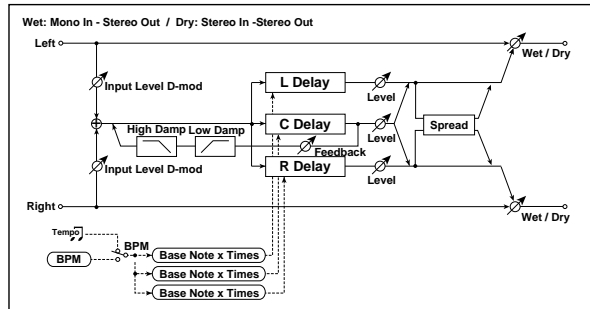
a	L Delay (L Delay Time)	0.0...680.0ms
	Sets the delay time for the left channel	
b	R Delay (R Delay Time)	0.0...680.0ms
	Sets the delay time for the right channel	
c	L Feedback	-100...+100
	Sets the feedback amount for the left channel	
d	R Feedback	-100...+100
	Sets the feedback amount for the right channel	
e	HiDamp (High Damp)	0...100% Fx:043
	LoDamp (Low Damp)	0...100% Fx:043
f	LFO Wave (LFO Waveform)	Tri, Sine
	Shape (LFO Shape)	-100...+100 Determines how much the LFO waveform is changed Fx:020
g	LFO Phase	-180...+180deg
	Sets the LFO phase difference between the left and right	Fx:034

h	Pan Freq (Panning Frequency)	0.02...20.00Hz
	Sets the panning speed	
i	Pan Dep (Panning Depth)	0...100
	Sets the panning width	<input type="checkbox"/> mod
	(Source)	Off...Tempo
j	(Amount)	-100...+100
	W/D (Wet/Dly)	Dry, 1:99...99:1, Wet
	Sets the balance between the effect and dry sounds	<input type="checkbox"/> mod
k	(Source)	Off...Tempo
	(Amount)	-100...+100
	Sets the modulation amount of the effect balance	

049: LCR BPM Delay

(L/C/R BPM Delay)

The L/C/R delay enables you to match the delay time with the song tempo. You can also synchronize the delay time with the arpeggiator or sequencer. If you program the tempo before performance, you can achieve a delay effect that synchronizes with the song in real-time. Delay time is set by notes.



a	BPM	MIDI, 40...240
	Selects MIDI Clock and assigns tempo	<input type="checkbox"/> Sync
b	L Bs (L Delay Base Note)	Selects the type of notes to specify the delay time for TapL
	Times	1...16
c	Level	0...50
	Sets the output level of TapL	
d	C Bs (C Delay Base Note)	Selects the type of notes to specify the delay time for TapC
	Times	1...16
e	Level	0...50
	Sets the output level of TapC	
f	R Bs (R Delay Base Note)	Selects the type of notes to specify the delay time for TapR
	Times	1...16
g	Level	0...50
	Sets the output level of TapR	
h	C Fb (C Delay Feedback)	-100...+100
	(Source)	Off...Tempo
	(Amount)	-100...+100
i	Time Over? >	----, OVER!
	Displays an error message when the delay time exceeds the upper limit	<input type="checkbox"/> Sync

g	HiDamp (High Damp)	0...100%	☞ Fx:043
	Sets the damping amount in the high range		
h	InLvl Mod (Input Level Dmod [%])	-100...+100	☞ Fx:037, D ^{mod}
	Sets the modulation amount of the input level		
i	Spread	0...50	☞ Fx:043
	Sets the width of the stereo image of the effect sound		
j	W/D (Wet/Dly)	Dry, 1:99...99:1, Wet	D ^{mod}
	(Source)	Off...Tempo	
	(Amount)	-100...+100	

a: BPM, b: L Bs, b: Times, c: C Bs, c: Times, d: R Bs, d: Times

The delay time is the length of the note obtained by multiplying the "Bs" parameter by the Times value, in relation to the tempo specified by the "BPM" parameter (or the MIDI Clock tempo if "BPM" is set to **MIDI**).

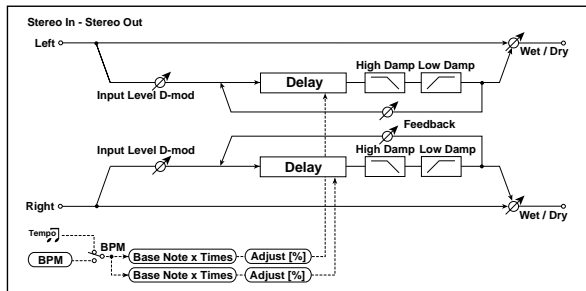
f: Time Over? >

You can set the delay time up to 1365msec. If the delay time exceeds this limit, the error message "OVER!" appears in the display. Set the delay time parameters so that this message will not appear. "Time Over?>" is only a display parameter.

050: St.BPM Delay

(Stereo BPM Delay)

This stereo delay enables you to set the delay time to match the song tempo.



a	BPM	MIDI, 40...240	☞ Fx:049, Sync
	Selects MIDI Clock and assigns tempo		
b	L Bs (L Delay Base Note)	♪, ♪, ♫, ♬, ♭, ♮, ♯, ♯	☞ Fx:049, Sync
	Selects the type of notes to specify the left channel delay time		
	Times	1...16	☞ Fx:049
c	R Bs (R Delay Base Note)	♪, ♪, ♫, ♬, ♭, ♮, ♯, ♯	☞ Fx:049, Sync
	Selects the type of notes to specify the right channel delay time		
	Times	1...16	☞ Fx:049
	Adj (Adjust)	-2.50...+2.50%	
d	L Fb (L Feedback)	-100...+100	D ^{mod}
	Sets the feedback amount for the left channel		
	(Source)	Off...Tempo	
e	(Amount L)	-100...+100	
	Sets the modulation amount of the left channel feedback		

e	R Fb (R Feedback)	-100...+100	D ^{mod}
	Sets the feedback amount for the right channel		
f	(Amount R)	-100...+100	
	Sets the modulation amount of the right channel feedback		
g	HiDamp (High Damp)	0...100%	☞ Fx:043
	Sets the damping amount in the high range		
h	LoDamp (Low Damp)	0...100%	☞ Fx:043
	Sets the damping amount in the low range		
i	InLvl Mod (Input Level Mod [%])	-100...+100	☞ Fx:037, D ^{mod}
	Sets the modulation amount of the input level		
	(Source)	Off...Tempo	
j	W/D (Wet/Dly)	Dry, 1:99...99:1, Wet	D ^{mod}
	(Source)	Off...Tempo	
	(Amount)	-100...+100	

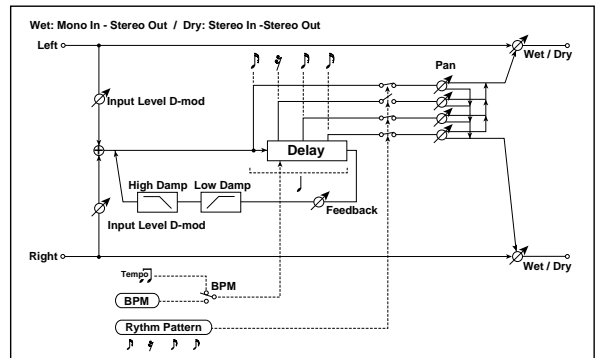
f: Time Over? L >, f: R >

You can set the delay time up to 682msec. If the delay time exceeds this limit, the error message "OVER!" appears in the display. Set the delay time parameters so that this message will not appear. "Time Over?>" is only a display parameter.



051: Sequence Dly

(Sequence Delay)

This four-tap delay enables you to select a tempo and rhythm pattern to set up each tap.



a	BPM	MIDI, 44...240	☞ Sync
	Selects MIDI Clock and assigns tempo		
b	Rhythm (Rhythm Pattern)	♪ --- ... ♪ 3	☞ Sync
	Selects a rhythm pattern		
c	Tap1 Pan	L, 1...99, R	
d	Tap2 Pan	L, 1...99, R	
e	Tap3 Pan	L, 1...99, R	
f	Tap4 Pan	L, 1...99, R	
g	Fb (Feedback)	-100...+100	D ^{mod}
	Sets the feedback amount		
	(Source)	Off...Tempo	
h	(Amount)	-100...+100	
	Sets the modulation amount of the feedback		

g	HiDamp (High Damp) Sets the damping amount in the high range	0...100% Fx:043
	LoDamp (Low Damp) Sets the damping amount in the low range	0...100% Fx:043
h	InLvl Mod (Input Level Mod [%]) Sets the modulation amount of the input level	-100...+100 Fx:037, 
	Src (Source) Selects the modulation source for the input level	Off...Tempo Fx:037
i	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet 
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	-100...+100

a: BPM, a: Rhythm

With the tempo specified by the “BPM” parameter (or the MIDI Clock tempo if “BPM” is set to **MIDI**), the length of one beat equals the feedback delay time, and the interval between taps becomes equal. Selecting a rhythm will automatically turn the tap outputs on and off. When “BPM” is set to **MIDI**, the lower limit of the “BPM” is **44**.

Reverb

Reverb effects

These effects simulate the ambience of reverberation in concert halls.

052: Rev Hall

(Reverb Hall)

This hall-type reverb simulates the reverberation of mid-size concert halls or ensemble halls.

053: Rev SmoothHall

(Reverb Smooth Hall)

This hall-type reverb simulates the reverberation of larger halls and stadiums, and creates a smooth release.

054: Rev Wet Plate

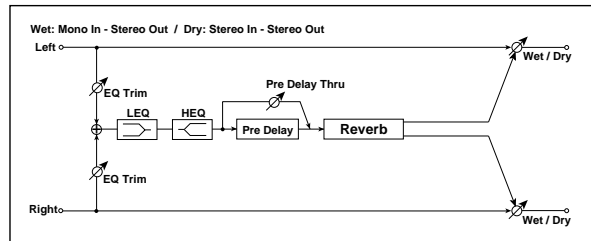
(Reverb Wet Plate)


This plate reverb simulates warm (dense) reverberation.

055: Rev Dry Plate

(Reverb Dry Plate)

This plate reverb simulates dry (light) reverberation.

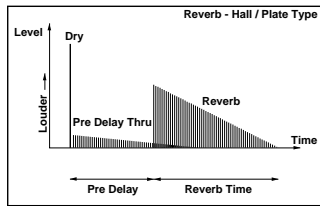


a	Reverb Time Sets the reverberation time	0.1...10.0s
b	High Damp Sets the damping amount in the high range	0...100%
c	Pre Delay Sets the delay time from the dry sound	0...200ms Fx
d	Pre Delay Thru Sets the mix ratio of non-delay sound	0...100% Fx
e	Pre EQ Trim Sets the EQ input level	0...100
f	LoEQ (Pre Low EQ Gain) Sets the gain of Low EQ	-15...+15dB
	HiEQ (Pre High EQ Gain) Sets the gain of High EQ	-15...+15dB
g	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet 
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	-100...+100

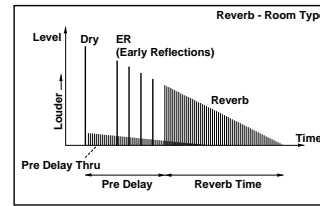
c: Pre Delay, d: Pre Delay Thru

The “Pre Delay” sets the delay time to the reverb input, allowing you to control spaciousness. Using the “Pre Delay Thru” parameter, you can mix the dry sound

without delay, emphasizing the attack of the sound.



wall, and a larger "Reverb Level" simulates a soft wall.

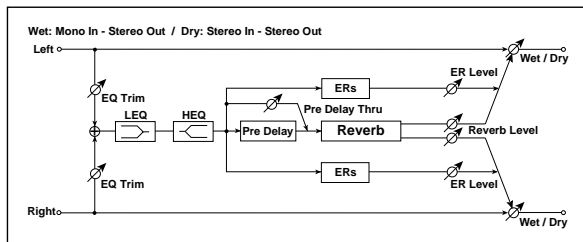


056: Rev Room (Reverb Room)

This room-type reverb emphasizes the early reflections that make the sound tighter. Changing the balance between the early reflections and reverb sound allows you to simulate nuances, such as the type of walls of a room.

057: Rev BrightRoom (Reverb Bright Room)

This room-type reverb emphasizes the early reflections that make the sound brighter. See 056: Reverb Room.



a	Reverb Time Sets the reverberation time	0.1...3.0sec
b	High Damp Sets the damping amount in the high range	0...100%
c	Pre Delay Sets the delay time from the dry sound	0...200ms Fx:052
d	Pre Delay Thru Sets the mix ratio of non-delay sound	0...100% Fx:052
e	Pre EQ Trim Sets the EQ input level	0...100
f	LoEQ (Pre Low EQ Gain) Sets the gain of Low EQ	-15...+15dB
	HiEQ (Pre High EQ Gain) Sets the gain of High EQ	-15...+15dB
g	ER Level Sets the level of early reflections	0...100 Fx
h	Reverb Level Sets the reverberation level	0...100 Fx
i	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D ^{mod}
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	-100...+100

g: ER Level, h: Reverb Level

These parameters set the early reflection level and reverb level. Changing these parameter values allows you to simulate the type of walls in the room. That is, a larger "ER Level" simulates a hard

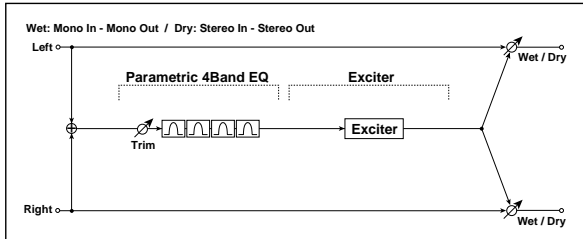
Mono – Mono Chain

Effects that combine two mono effects connected in series

058: P4EQ–Exciter

(Parametric 4-Band EQ – Exciter)

This effect combines a mono-type four-band parametric equalizer and an exciter.

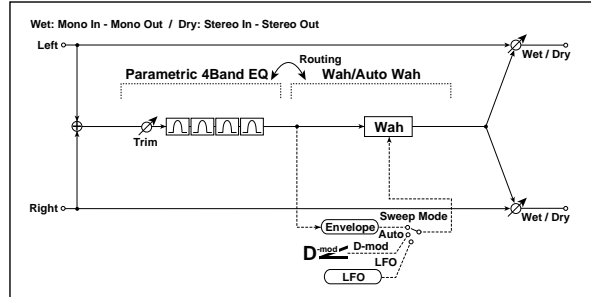


a	[PEQ] Trim Sets the parametric EQ input level	0...100
b	B1 (Band1 Cutoff) Sets the center frequency of Band 1	20...1.00kHz
	Q Sets the bandwidth of Band 1	0.5...10.0 Fx:006
	G (Gain) Sets the gain of Band 1	-18...+18dB
c	B2 (Band2 Cutoff) Sets the center frequency of Band 2	50...5.00kHz
	Q Sets the bandwidth of Band 2	0.5...10.0 Fx:006
	G (Gain) Sets the gain of Band 2	-18...+18dB
d	B3 (Band3 Cutoff) Sets the center frequency for Band 3	300...10.00kHz
	Q Sets the bandwidth of Band 3	0.5...10.0 Fx:006
	G (Gain) Sets the gain of Band 3	-18...+18dB
e	B4 (Band4 Cutoff) Sets the center frequency for Band 4	500...20.00kHz
	Q Sets the bandwidth of Band 4	0.5...10.0 Fx:006
	G (Gain) Sets the gain of Band 4	-18...+18dB
f	[XCT] Blend (Exciter Blend) Sets the intensity (depth) of the Exciter effect	-100...+100 Fx:011
g	Emphatic Point Sets the frequency range to be emphasized	0...70 Fx:011
h	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	-100...+100

059: P4EQ–Wah

(Parametric 4-Band EQ – Wah/Auto Wah)

This effect combines a mono-type four-band parametric equalizer and a wah. You can change the order of the connection.

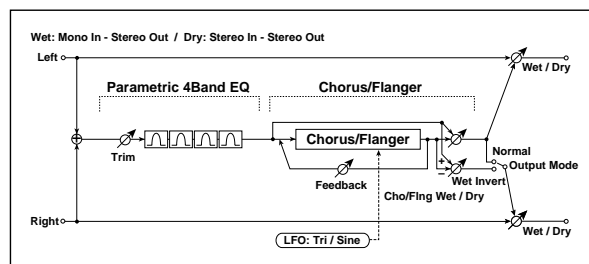


a	[PEQ] Trim Sets the parametric EQ input level	0...100
b	B1 (Band1 Cutoff) Sets the center frequency of Band 1	20...1.00kHz
	Q Sets the bandwidth of Band 1	0.5...10.0 Fx:006
	G (Gain) Sets the gain of Band 1	-18...+18dB
c	B2 (Band2 Cutoff) Sets the center frequency of Band 2	50...5.00kHz
	Q Sets the bandwidth of Band 2	0.5...10.0 Fx:006
	G (Gain) Sets the gain of Band 2	-18...+18dB
d	B3 (Band3 Cutoff) Sets the center frequency for Band 3	300...10.00kHz
	Q Sets the bandwidth of Band 3	0.5...10.0 Fx:006
	G (Gain) Sets the gain of Band 3	-18...+18dB
e	B4 (Band4 Cutoff) Sets the center frequency for Band 4	500...20.00kHz
	Q Sets the bandwidth of Band 4	0.5...10.0 Fx:006
	G (Gain) Sets the gain of Band 4	-18...+18dB
f	[WAH] FreqBtm (Frequency Bottom) Sets the lower limit of the wah center frequency	0...100 Fx:009
	Top (Frequency Top) Sets the upper limit of the wah center frequency	0...100 Fx:009
g	Swp Mode (Sweep Mode) Selects the control from auto-wah, modulation source, and LFO	Auto, Dmod, LFO Fx:009, D-mod
	Src (Source) Selects the modulation source for the wah when Sweep Mode=D-mod	Off...Tempo
h	lfoF (LFO Frequency) Sets the LFO speed	0.02...20.00Hz
	Res (Resonance) Sets the resonance amount	0...100
	LPF (Low Pass Filter) Switches the wah low pass filter on and off	Of, On
i	[Routing] Changes the order of the parametric equalizer and wah connection	PEQ → WAH, WAH → PEQ
j	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	-100...+100

060: P4EQ-Cho/FI

(Parametric 4-Band EQ – Chorus/Flanger)

This effect combines a mono-type four-band parametric equalizer and a chorus/flanger.



a	[PEQ] Trim Sets the parametric EQ input level	0...100
b	B1 (Band1 Cutoff) Sets the center frequency of Band 1	20...1.00kHz
	Q Sets the bandwidth of Band 1	0.5...10.0 Fx:006
	G (Gain) Sets the gain of Band 1	-18...+18dB
c	B2 (Band2 Cutoff) Sets the center frequency of Band 2	50...5.00kHz
	Q Sets the bandwidth of Band 2	0.5...10.0 Fx:006
	G (Gain) Sets the gain of Band 2	-18...+18dB
d	B3 (Band3 Cutoff) Sets the center frequency for Band 3	300...10.00kHz
	Q Sets the bandwidth of Band 3	0.5...10.0 Fx:006
	G (Gain) Sets the gain of Band 3	-18...+18dB
e	B4 (Band4 Cutoff) Sets the center frequency for Band 4	500...20.00kHz
	Q Sets the bandwidth of Band 4	0.5...10.0 Fx:006
	G (Gain) Sets the gain of Band 4	-18...+18dB
f	[CH/FL] LFO (LFO Waveform) Selects the LFO waveform of the chorus/flanger	Tri, Sine
	F (LFO Frequency) Sets the LFO speed	0.02...20.00Hz
g	Dly (Delay Time) Sets the delay time	0.0...50.0ms
	Dep (Depth) Sets the depth of LFO modulation	0...100
	Fb (Feedback) Sets the feedback amount	-100...+100 Fx:020
h	C/F W/D (Cho/Fing Wet/Dry) Sets the effect balance of the chorus/flanger	-Wet...-2:98, Dry, 2:98...Wet Fx:010, 020
	Out (Output Mode) Selects the output mode for the chorus/flanger	Normal, Wet Inv Fx:
i	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D ^{mod}
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	-100...+100

h: Out

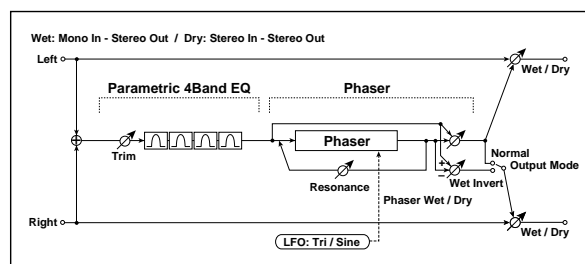
When **Wet Inv** is selected, the right channel phase of the chorus/flanger effect sound is inverted. This creates pseudo-stereo effects and adds spread.

However, if a mono-input type effect is connected after this effect, the left and right sounds may cancel each other, eliminating the chorus/flanger effects.

061: P4EQ-Phaser

(Parametric 4-Band EQ – Phaser)

This effect combines a mono-type four-band parametric equalizer and a phaser.

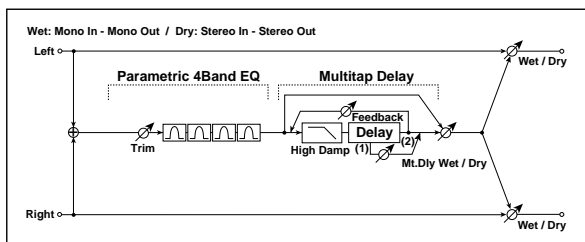


a	[PEQ] Trim Sets the parametric EQ input level	0...100
b	B1 (Band1 Cutoff) Sets the center frequency of Band 1	20...1.00kHz
	Q Sets the bandwidth of Band 1	0.5...10.0 Fx:006
	G (Gain) Sets the gain of Band 1	-18...+18dB
c	B2 (Band2 Cutoff) Sets the center frequency of Band 2	50...5.00kHz
	Q Sets the bandwidth of Band 2	0.5...10.0 Fx:006
	G (Gain) Sets the gain of Band 2	-18...+18dB
d	B3 (Band3 Cutoff) Sets the center frequency for Band 3	300...10.00kHz
	Q Sets the bandwidth of Band 3	0.5...10.0 Fx:006
	G (Gain) Sets the gain of Band 3	-18...+18dB
e	B4 (Band4 Cutoff) Sets the center frequency for Band 4	500...20.00kHz
	Q Sets the bandwidth of Band 4	0.5...10.0 Fx:006
	G (Gain) Sets the gain of Band 4	-18...+18dB
f	[PHS] LFO (LFO Waveform) Selects the LFO waveform of the phaser	Tri, Sine
	F (LFO Frequency) Sets the LFO speed	0.02...20.00Hz
g	Manu (Manual) Sets the frequency to which the effect is applied	0...100
	Dep (Depth) Sets the depth of LFO modulation	0...100
	Res (Resonance) Sets the resonance amount	-100...+100 Fx:023
h	Phs W/D (Phaser Wet/Dry) Sets the phaser effect balance	-Wet...-2:98, Dry, 2:98...Wet Fx:010, 023
	Output Mode Selects the phaser output mode	Normal, Wet Inv Fx:060
i	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D ^{mod}
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	-100...+100

062: P4EQ-M.Dly

(Parametric 4-Band EQ – Multitap Delay)

This effect combines a mono-type four-band parametric equalizer and a multitap delay.

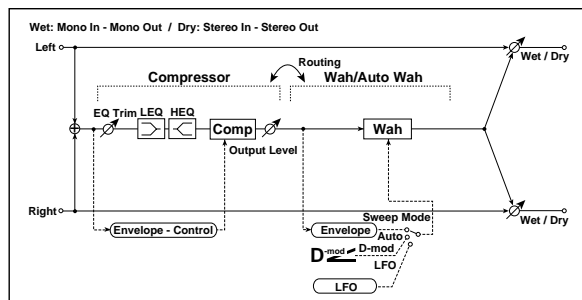


a	[PEQ] Trim Sets the parametric EQ input level	0...100
b	B1 (Band1 Cutoff) Sets the center frequency of Band 1	20...1.00kHz
	Q Sets the bandwidth of Band 1	0.5...10.0 Fx:006
	G (Gain) Sets the gain of Band 1	-18...+18dB
c	B2 (Band2 Cutoff) Sets the center frequency of Band 2	50...5.00kHz
	Q Sets the bandwidth of Band 2	0.5...10.0 Fx:006
	G (Gain) Sets the gain of Band 2	-18...+18dB
d	B3 (Band3 Cutoff) Sets the center frequency for Band 3	300...10.00kHz
	Q Sets the bandwidth of Band 3	0.5...10.0 Fx:006
	G (Gain) Sets the gain of Band 3	-18...+18dB
e	B4 (Band4 Cutoff) Sets the center frequency for Band 4	500...20.00kHz
	Q Sets the bandwidth of Band 4	0.5...10.0 Fx:006
	G (Gain) Sets the gain of Band 4	-18...+18dB
f	[DLY] T1 (Tap1 Delay) Sets the Tap1 delay time	0...680ms
	T2 (Tap2 Delay) Sets the Tap2 delay time	0...680ms
g	T1 Level (Tap1 Level) Sets the Tap1 output level	0...100 Fx:045
	T2 Fb (Tap2 Feedback) Sets the Tap2 feedback amount	-100...+100
h	Dly W/D (Delay Wet/Dry) Sets the multitap delay effect balance	Dry, 2:98...98:2, Wet
	HiDamp (High Damp) Sets the damping amount in the high range	0...100% Fx:043
i	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	-100...+100

063: Comp-Wah

(Compressor – Wah/Auto Wah)

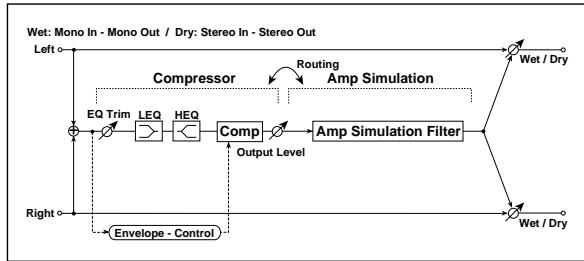
This effect combines a mono-type compressor and a wah. You can change the order of the connection.



a	[CMP] Sensitivity Sets the sensitivity	1...100 Fx:002
b	Attack Sets the attack level	1...100 Fx:002
	Level (Output Level) Sets the compressor output level	0...100 Fx:002
c	Pre EQ Trim Sets the EQ input level	0...100
d	LoEQ (Pre Low EQ Gain) Sets the gain of Low EQ	-15...+15dB
	HiEQ (Pre High EQ Gain) Sets the gain of High EQ	-15...+15dB
e	[WAH] FreqBtm (Frequency Bottom) Sets the lower limit of the wah center frequency	0...100 Fx:009
	Top (Frequency Top) Sets the upper limit of the wah center frequency	0...100 Fx:009
f	Swp Mode (Sweep Mode) Selects the control from auto-wah, modulation source, and LFO	Auto, Dmod, LFO Fx:009, D-mod
	Src (Source) Selects the modulation source for the wah when Swp Mode=Dmod	Off...Tempo
g	IfoF (LFO Frequency) Sets the LFO speed	0.02...20.00Hz
	Res (Resonance) Sets the resonance amount	0...100
h	LPF (Low Pass Filter) Switches the wah low pass filter on and off	Of, On
	[Routing] Switches the order of the compressor and wah connection	CMP → WAH, WAH → CMP
i	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	-100...+100

064: Comp-AmpSim (Compressor - Amp Simulation)

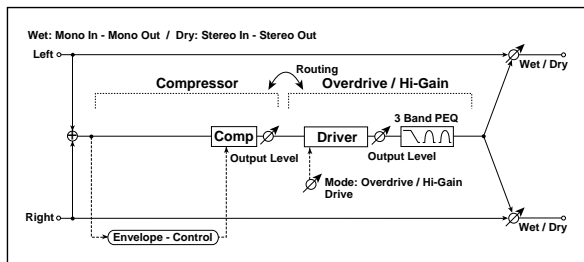
This effect combines a mono-type compressor and an amp simulation. You can change the order of the effect connection.



a	[CMP] Sensitivity Sets the sensitivity	1...100 Fx:002
b	Attack Sets the attack level	1...100 Fx:002
	Level (Output Level) Sets the compressor output level	0...100 Fx:002
c	Pre EQ Trim Sets the EQ input level	0...100
d	LoEQ (Pre Low EQ Gain) Sets the gain of Low EQ	-15...+15dB
	HiEQ (Pre High EQ Gain) Sets the gain of High EQ	-15...+15dB
e	[AMP] Amplifier Type Sets the type of guitar amplifier	SS, EL84, 6L6
f	[Routing] Switches the order of the compressor and amp simulation connection	CMP → AMP, AMP → CMP
g	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D ^{mod}
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	-100...+100

065: Comp-OD/HG (Compressor - Overdrive/Hi-Gain)

This effect combines a mono-type compressor and an overdrive/high-gain distortion. You can change the order of the effect connection.

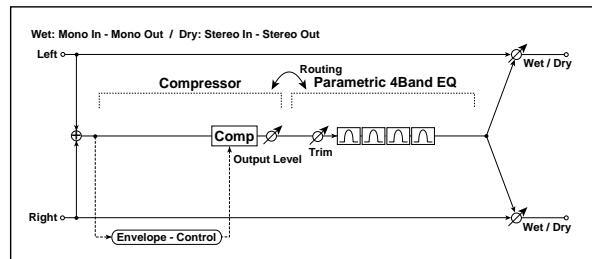


a	[CMP] Sensitivity Sets the sensitivity	1...100 Fx:002
b	Attack Sets the attack level	1...100 Fx:002
	Level (Output Level) Sets the compressor output level	0...100 Fx:002
c	[OD] Mode (Drive Mode) Switches between overdrive and high-gain distortion	OverD, Hi-Gain
	Drive Sets the degree of distortion	1...100 Fx:006

d	Level (Output Level) Sets the overdrive output level	0...50 Fx:006, D ^{mod}
	(Source) Selects the modulation source for the overdrive output level	Off...Tempo
	(Amount) Sets the modulation amount of the overdrive output level	-50...+50
e	Lo (Low Cutoff) Sets the center frequency for Low EQ (shelving type)	20...1.00kHz
	G (Gain) Sets the gain of Low EQ	-18...+18dB
f	M1 (Mid1 Cutoff) Sets the center frequency for Mid/High EQ 1 (peaking type)	300...10.00kHz
	Q Sets the band width of Mid/High EQ 1	0.5...10.0 Fx:006
	G (Gain) Sets the gain of Mid/High EQ 1	-18...+18dB
g	M2 (Mid2 Cutoff) Sets the center frequency for Mid/High EQ 2 (peaking type)	500...20.00kHz
	Q Sets the band width of Mid/High EQ 2	0.5...10.0 Fx:006
	G (Gain) Sets the gain of Mid/High EQ 2	-18...+18dB
h	[Routing] Switches the order of the compressor and overdrive connection	CMP → OD, OD → CMP
i	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D ^{mod}
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	-100...+100

066: Comp-P4EQ (Compressor - Parametric 4-Band EQ)

This effect combines a mono-type compressor and a four-band parametric equalizer. You can change the order of the effect connection.



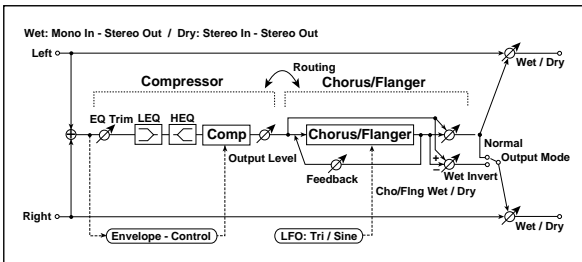
a	[CMP] Sensitivity Sets the sensitivity	1...100 Fx:002
b	Attack Sets the attack level	1...100 Fx:002
	Level (Output Level) Sets the compressor output level	0...100 Fx:002
c	[PEQ] Trim Sets the parametric EQ input level	0...100
d	[Routing] Switches the order of the compressor and parametric EQ connection	CMP → PEQ, PEQ → CMP
e	B1 (Band1 Cutoff) Sets the center frequency of Band 1	20...1.00kHz
	Q Sets the bandwidth of Band 1	0.5...10.0 Fx:006
	G (Gain) Sets the gain of Band 1	-18...+18dB

f	B2 (Band2 Cutoff) Sets the center frequency of Band 2	50...5.00kHz
	Q Sets the bandwidth of Band 2	0.5...10.0 Fx:006
	G (Gain) Sets the gain of Band 2	-18...+18dB
g	C/F W/D (Cho/Fing Wet/Dry) Sets the center frequency for Band 3	300...10.00kHz
	Q Sets the bandwidth of Band 3	0.5...10.0 Fx:006
	G (Gain) Sets the gain of Band 3	-18...+18dB
h	B4 (Band4 Cutoff) Sets the center frequency for Band 4	500...20.00kHz
	Q Sets the bandwidth of Band 4	0.5...10.0 Fx:006
	G (Gain) Sets the gain of Band 4	-18...+18dB
i	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	-100...+100

h	[Routing] Switches the order of the compressor and chorus/flanger connection	CMP → CF/FL, CH/FL → CMP D-mod
	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
i	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	-100...+100

067: Comp-Cho/FI (Compressor – Chorus/Flanger)

This effect combines a mono-type compressor and a chorus/flanger. You can change the order of the effect connection.



a	[CMP] Sensitivity Sets the sensitivity	1...100 Fx:002
	Attack Sets the attack level	1...100 Fx:002
b	Level (Output Level) Sets the compressor output level	0...100 Fx:002
	Pre EQ Trim Sets the EQ input level	0...100
d	LoEQ (Pre Low EQ Gain) Sets the gain of Low EQ	-15...+15dB
	HiEQ (Pre High EQ Gain) Sets the gain of High EQ	-15...+15dB
e	[CH/FL] LFO (LFO Waveform) Selects the LFO waveform of the chorus/flanger	Tri, Sine
	F (LFO Frequency) Sets the LFO speed	0.02...20.00Hz
f	Dly (Delay Time) Sets the delay time	0.0...50.0ms
	Dep (Depth) Sets the depth of LFO modulation	0...100
	Fb (Feedback) Sets the feedback amount	-100...+100 Fx:020
g	[F] Cho/Fing W/D Sets the effect balance of the chorus/flanger	-Wet...-2:98, Dry, 2:98...Wet Fx:010, 020
	Out (Output Mode) Selects the output mode for the chorus/flanger	Normal, Wet Inv D-mod

g: Out, h: [Routing]

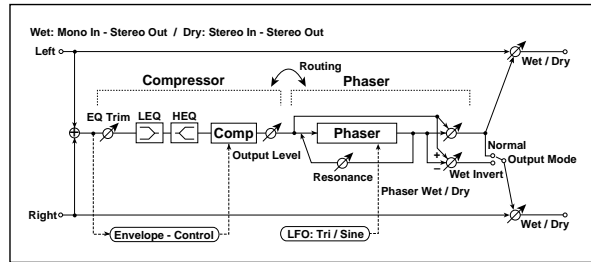
When **Wet Inv** is selected, the right channel phase of the chorus/flanger effect sound is inverted. This creates pseudo-stereo effects and adds spread.

However, if a mono-input type effect is connected after this effect, the left and right sounds may cancel each other, eliminating the chorus/flanger effects.

When “[Routing]” is set to **CH/FL→CMP**, “Out” will be set to **Normal**.

068: Comp-Phaser (Compressor – Phaser)

This effect combines a mono-type compressor and a phaser. You can change the order of the effect connection.

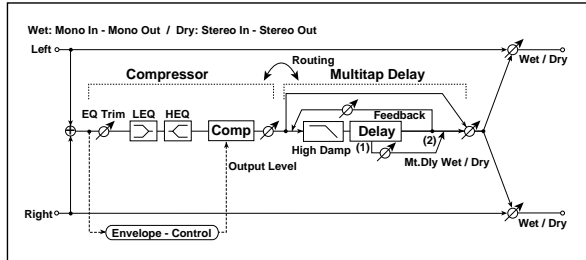


a	[CMP] Sensitivity Sets the sensitivity	1...100 Fx:002
	Attack Sets the attack level	1...100 Fx:002
b	Level (Output Level) Sets the compressor output level	0...100 Fx:002
	Pre EQ Trim Sets the EQ input level	0...100
d	LoEQ (Pre Low EQ Gain) Sets the gain of Low EQ	-15...+15dB
	HiEQ (Pre High EQ Gain) Sets the gain of High EQ	-15...+15dB
e	[PHS] LFO (LFO Waveform) Selects the LFO waveform of the phaser	Tri, Sine
	F (LFO Frequency) Sets the LFO speed	0.02...20.00Hz
f	Manu (Manual) Sets the frequency to which the effect is applied	0...100
	Dep (Depth) Sets the depth of LFO modulation	0...100
	Res (Resonance) Sets the resonance amount	-100...+100 Fx:023
g	Phs W/D (Phaser Wet/Dry) Sets the phaser effect balance	-Wet...-2:98, Dry, 2:98...Wet Fx:010, 023
	Out (Output Mode) Selects the phaser output mode	Normal, Wet Inv Fx:067
h	[Routing] Switches the order of the compressor and phaser connection	CMP→PHS, PHS→CMP D-mod
		Fx:067

i	W/D (Wet/Dly)	Dry, 1:99...99:1, Wet	D ^{mod}
	(Source)	Off...Tempo	
	(Amount)	-100...+100	

069: Comp-M.Dly (Compressor - Multitap Delay)

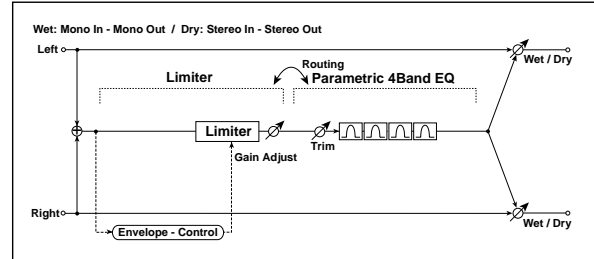
This effect combines a mono-type compressor and a multitap delay. You can change the order of the effect connection.



a	[CMP] Sensitivity Sets the sensitivity	1...100 Fx:002
b	Attack Sets the attack level	1...100 Fx:002
	Level (Output Level) Sets the compressor output level	0...100 Fx:002
c	Pre EQ Trim Sets the EQ input level	0...100
d	LoEQ (Pre Low EQ Gain) Sets the gain of Low EQ	-15...+15dB
	HiEQ (Pre High EQ Gain) Sets the gain of High EQ	-15...+15dB
e	[DLY] T1 (Tap1 Delay) Sets the Tap1 delay time	0...680msec
	T2 (Tap2 Delay) Sets the Tap2 delay time	0...680msec
f	T1 Level (Tap1 Level) Sets the Tap1 output level	0...100 Fx:045
	T2 (Tap2 Delay) Sets the Tap2 feedback amount	-100...+100
g	Dly W/D (Delay Wet/Dry) Sets the multitap delay effect balance	Dry, 1:99...99:1, Wet
	HiDamp (High Damp) Sets the damping amount in the high range	0...100% Fx:043
h	[Routing] Switches the order of the compressor and multitap delay connection	CMP→DLY, DLY→CMP
i	W/D (Wet/Dly)	Dry, 1:99...99:1, Wet
	(Source)	Off...Tempo
	(Amount)	-100...+100

070: Limiter-P4EQ (Limiter - Parametric 4-Band EQ)

This effect combines a mono-type limiter and a four-band parametric equalizer. You can change the order of the effect connection.

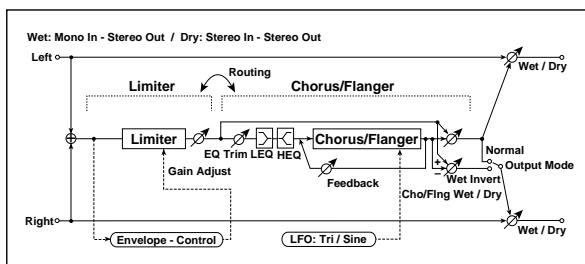


a	[LMT] Ratio Sets the signal compression ratio	1.0:1...50.0:1, Inf:1 Fx:003
b	Threshold (Threshold) Sets the level above which the compressor is applied	-40...0dB Fx:003
	G.Adj (Gain Adjust) Sets the limiter output gain	-Inf, -38...+24dB Fx:003
c	Attack Sets the attack time	1...100 Fx:003
	Release Sets the release time	1...100 Fx:003
d	[PEQ] Trim Sets the parametric EQ input level	0...100
e	[Routing] Switches the order of the limiter and parametric EQ connection	LMT→PEQ, PEQ→LMT
f	B1 (Band1 Cutoff) Sets the center frequency of Band 1	20...1.00kHz
	Q Sets the bandwidth of Band 1	0.5...10.0 Fx:006
	G (Gain) Sets the gain of Band 1	-18...+18dB
g	B2 (Band2 Cutoff) Sets the center frequency of Band 2	50...5.00kHz
	Q Sets the bandwidth of Band 2	0.5...10.0 Fx:006
	G (Gain) Sets the gain of Band 2	-18...+18dB
h	B3 (Band3 Cutoff) Sets the center frequency for Band 3	300...10.00kHz
	Q Sets the bandwidth of Band 3	0.5...10.0 Fx:006
	G (Gain) Sets the gain of Band 3	-18...+18dB
i	B4 (Band4 Cutoff) Sets the center frequency for Band 4	500...20.00kHz
	Q Sets the bandwidth of Band 4	0.5...10.0 Fx:006
	G (Gain) Sets the gain of Band 4	-18...+18dB
j	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet
	(Source) Sets the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	-100...+100

071: Limit-Cho/FI

(Limiter - Chorus/Flanger)

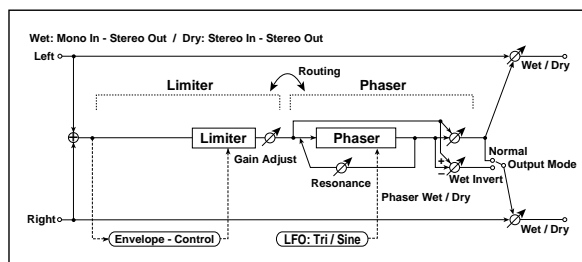
This effect combines a mono-type limiter and a chorus/flanger. You can change the order of the effect connection.



a	[LMT] Ratio Sets the signal compression ratio	1.0:1...50.0:1, Inf:1 Fx:003
b	Threshld (Threshold) Sets the level above which the compressor is applied	-40...0dB Fx:003
	G.Adj (Gain Adjust) Sets the limiter output gain	-Inf, -38...+24dB Fx:003
c	Attack Sets the attack time	1...100 Fx:003
	Release Sets the release time	1...100 Fx:003
d	[CH/FL] LFO (LFO Waveform) Selects the LFO waveform of the chorus/flanger	Tri, Sine
	F (LFO Frequency) Sets the LFO speed	0.02...20.00Hz
e	Dly (Delay Time) Sets the delay time	0.0...50.0ms
	Dep (Depth) Sets the depth of LFO modulation	0...100
	Feedback Sets the feedback amount	-100...+100 Fx:020
f	[F] EQ Trim Sets the EQ input level	0...100
g	[F] Pre LEQ Gain [dB] Sets the gain of Low EQ	-15...+15dB
	Pre HEQ Gain [dB] Sets the gain of High EQ	-15...+15dB
h	[F] Cho/Fing W/D Sets the effect balance of the chorus/flanger	-Wet...-2:98, Dry, 2:98...Wet Fx:010, 020
	Output Mode Selects the output mode for the chorus/flanger	Normal, Wet Inv Fx:067
i	Routing Switches the order of the limiter and chorus/flanger connection	LMT→CH/FL, CH/FL→LMT Fx:067
j	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D ^{mod}
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	-100...+100

072: Limit-Phaser

This effect combines a mono-type limiter and a phaser. You can change the order of the effect connection.

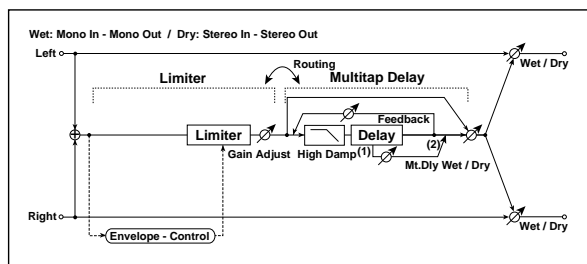


a	[LMT] Ratio Sets the signal compression ratio	1.0:1...50.0:1, Inf:1 Fx:003
b	Threshld (Threshold) Sets the level above which the compressor is applied	-40...0dB Fx:003
	G.Adj (Gain Adjust) Sets the limiter output gain	-Inf, -38...+24dB Fx:003
c	Attack Sets the attack time	1...100 Fx:003
	Release Sets the release time	1...100 Fx:003
d	[PHS] LFO (LFO Waveform) Selects the LFO waveform of the phaser	Tri, Sine
	F (LFO Frequency) Sets the LFO speed	0.02...20.00Hz
e	Manu (Manual) Sets the frequency to which the effect is applied	0...100
	Dep (Depth) Sets the depth of LFO modulation	0...100
	Resonance Sets the resonance amount	-100...+100 Fx:023
f	[P] Phaser W/D Sets the phaser effect balance	-Wet...-2:98, Dry, 2:98...Wet Fx:010, 023
	Output Mode Selects the phaser output mode	Normal, Wet Inv Fx:067
g	Routing Switches the order of the limiter and phaser connection	LMT→PHS, PHS→LMT Fx:067
h	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D ^{mod}
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	-100...+100

073: Limiter-M.Dly

(Limiter – Multitap Delay)

This effect combines a mono-type limiter and a multitap delay. You can change the order of the effect connection.

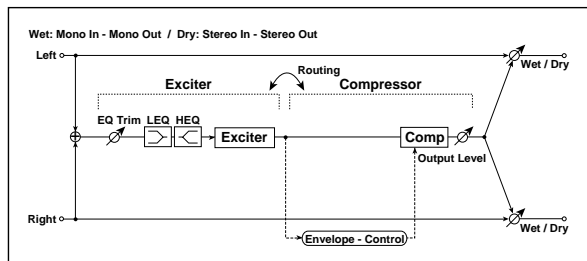


a	[LMT] Ratio Sets the signal compression ratio	1.0:1...50.0:1, Inf:1 Fx:003
b	Threshld (Threshold) Sets the level above which the compressor is applied	-40...0dB Fx:003
	G.Adj (Gain Adjust) Sets the limiter output gain	-Inf, -38...+24dB Fx:003
c	Attack Sets the attack time	1...100 Fx:003
	Release Sets the release time	1...100 Fx:003
d	[DLY] T1 (Tap1 Delay) Sets the Tap1 delay time	0...680ms
	T2 (Tap2 Delay) Sets the Tap2 delay time	0...680ms
e	T1 Level (Tap1 Level) Sets the Tap1 output level	0...100 Fx:045
	T2 Fb (Tap2 Feedback) Sets the Tap2 feedback amount	-100...+100
f	Dly W/D (Delay Wet/Dry) Sets the multitap delay effect balance	Dry, 1:99...99:1, Wet
	HiDamp (High Damp) Sets the damping amount in the high range	0...100% Fx:043
g	[Routing] Switches the order of the limiter and multitap delay connection	LMT→DLY, DLY→LMT
h	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D ^{mod}
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	-100...+100

074: Exct-Comp

(Exciter – Compressor)

This effect combines a mono-type exciter and a compressor. You can change the order of the effect connection.



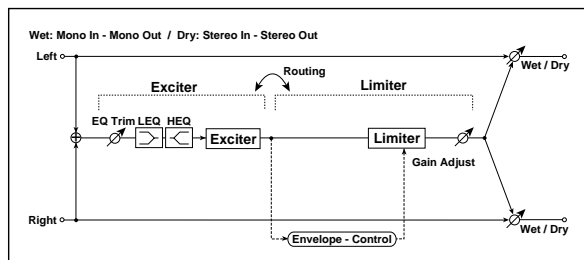
a	[XTC] Blend (Exciter Blend) Sets the intensity (depth) of the Exciter effect	-100...+100 Fx:011
b	Emphatic Point Sets the frequency range to be emphasized	0...70 Fx:011

c	Pre EQ Trim Sets the EQ input level	0...100
d	LoEQ (Pre Low EQ Gain) Sets the gain of Low EQ	-15...+15dB
	HiEQ (Pre High EQ Gain) Sets the gain of High EQ	-15...+15dB
e	[CMP] Sensitivity Sets the sensitivity	1...100 Fx:002
f	Attack Sets the attack level	1...100 Fx:002
	Level (Output Level) Sets the compressor output level	0...100 Fx:002
g	[Routing] Switches the order of the exciter and compressor connection	XCT→CMP, CMP→XCT
h	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D ^{mod}
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	-100...+100

075: Exct-Limiter

(Exciter Limiter)

This effect combines a mono-type exciter and a limiter. You can change the order of the effect connection.

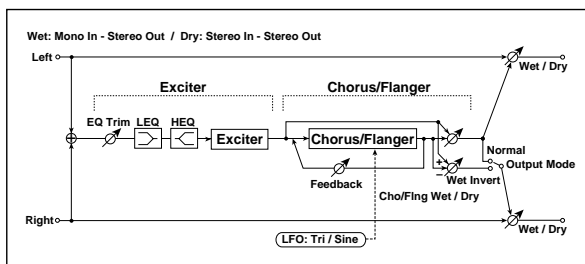


a	[XTC] Blend (Exciter Blend) Sets the intensity (depth) of the Exciter effect	-100...+100 Fx:011
b	Emphatic Point Sets the frequency range to be emphasized	0...70 Fx:011
c	Pre EQ Trim Sets the EQ input level	0...100
d	LoEQ (Pre Low EQ Gain) Sets the gain of Low EQ	-15...+15dB
	HiEQ (Pre High EQ Gain) Sets the gain of High EQ	-15...+15dB
e	[LMT] Ratio Sets the signal compression ratio	1.0:1...50.0:1, Inf:1 Fx:003
f	Threshld (Threshold) Sets the level above which the compressor is applied	-40...0dB Fx:003
	G.Adj (Gain Adjust) Sets the limiter output gain	-Inf, -38...+24dB Fx:003
g	Attack Sets the attack time	1...100 Fx:003
	Release Sets the release time	1...100 Fx:003
h	[Routing] Switches the order of the exciter and limiter connection	XCT→LMT, LMT→XCT
i	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D ^{mod}
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	-100...+100

076: Exct-Cho/Fl

(Exciter - Chorus/Flanger)

This effect combines a mono-type limiter and a chorus/flanger.

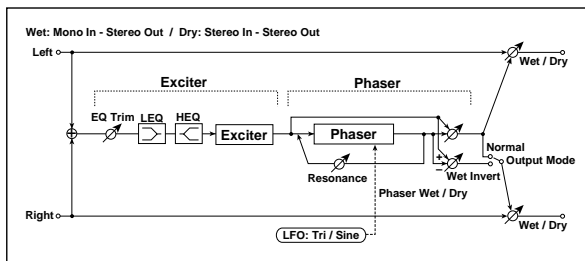


a	[XCT] Blend (Exciter Blend) Sets the intensity (depth) of the Exciter effect	-100...+100 Fx:011
b	Emphatic Point Sets the frequency range to be emphasized	0...70 Fx:011
c	Pre EQ Trim Sets the EQ input level	0...100
d	LoEQ (Pre Low EQ Gain) Sets the gain of Low EQ	-15...+15dB
	HiEQ (Pre High EQ Gain) Sets the gain of High EQ	-15...+15dB
e	[CH/FL] LFO (LFO Waveform) Selects the LFO waveform of the chorus/flanger	Tri, Sine
	F (LFO Frequency) Sets the LFO speed	0.02...20.00Hz
f	Dly (Delay Time) Sets the delay time	0.0...50.0ms
	Dep (Depth) Sets the depth of LFO modulation	0...100
g	Fb (Feedback) Sets the feedback amount	-100...+100 Fx:020
	C/F W/D (Cho/Fing Wet/Dry) Sets the effect balance of the chorus/flanger	-Wet...-2:98, Dry, 2:98...Wet Fx:010, 020
h	Out (Output Mode) Selects the output mode for the chorus/flanger	Normal, Wet Inv Fx:060
	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D ^{mod}
h	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	-100...+100

077: Exct-Phaser

(Exciter - Phaser)

This effect combines a mono-type limiter and a phaser.



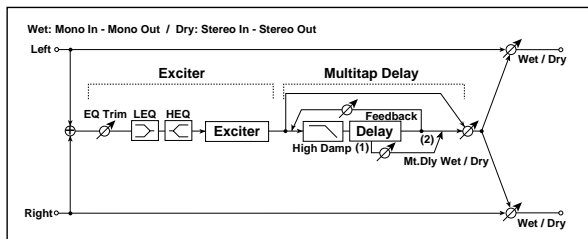
a	[XCT] Blend (Exciter Blend) Sets the intensity (depth) of the Exciter effect	-100...+100 Fx:011
b	Emphatic Point Sets the frequency range to be emphasized	0...70 Fx:011
c	Pre EQ Trim Sets the EQ input level	0...100

d	LoEQ (Pre Low EQ Gain) Sets the gain of Low EQ	-15...+15dB
	HiEQ (Pre High EQ Gain) Sets the gain of High EQ	-15...+15dB
e	[PHS] LFO (LFO Waveform) Selects the LFO waveform of the phaser	Tri, Sine
	F (LFO Frequency) Sets the LFO speed	0.02...20.00Hz
f	Manu (Manual) Sets the frequency to which the effect is applied	0...100
	Dep (Depth) Sets the depth of LFO modulation	0...100
g	Res (Resonance) Sets the resonance amount	-100...+100 Fx:023
	Phs W/D (Phaser Wet/Dry) Sets the phaser effect balance	-Wet...-2:98, Dry, 2:98...Wet Fx:010, 023
h	Out (Output Mode) Selects the phaser output mode	Normal, Wet Inv Fx:060
	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D ^{mod}
h	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	-100...+100

078: Exct-M.Dly

(Exciter - Multitap Delay)

This effect combines a mono-type exciter and a multitap delay.

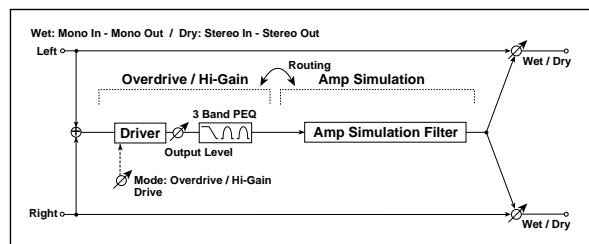


a	[XCT] Blend (Exciter Blend) Sets the intensity (depth) of the Exciter effect	-100...+100 Fx:011
b	Emphatic Point Sets the frequency range to be emphasized	0...70 Fx:011
c	Pre EQ Trim Sets the EQ input level	0...100
d	LoEQ (Pre Low EQ Gain) Sets the gain of Low EQ	-15...+15dB
	HiEQ (Pre High EQ Gain) Sets the gain of High EQ	-15...+15dB
e	[DLY] T1 (Tap1 Delay) Sets the Tap1 delay time	0...680ms
	T2 (Tap2 Delay) Sets the Tap2 delay time	0...680ms
f	T1 Level (Tap1 Level) Sets the Tap1 output level	0...100 Fx:045
	T2 Fb (Tap2 Feedback) Sets the Tap2 feedback amount	-100...+100
g	Dly W/D (Delay Wet/Dry) Sets the multitap delay effect balance	Dry, 1:99...99:1, Wet
	HiDamp (High Damp) Sets the damping amount in the high range	0...100% Fx:043
h	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D ^{mod}
	(Source) Selects the modulation source of the effect balance	Off...Tempo
h	(Amount) Sets the modulation amount of the effect balance	-100...+100

079: OD/HG–AmpSim

(Overdrive/Hi.Gain – Amp Simulation)

This effect combines a mono-type overdrive/high-gain distortion and an amp simulation. You can change the order of the effect connection.

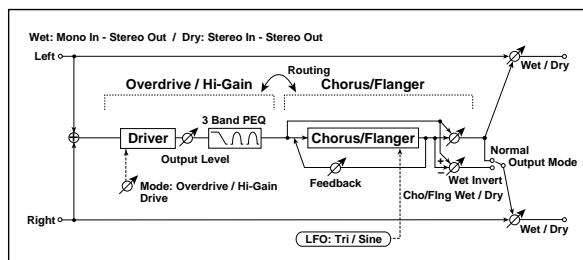


a	[OD] Mode (Drive Mode)	OverD, Hi-Gain
	Switches between overdrive and high-gain distortion	
b	Drive	1...100 Sets the degree of distortion Fx:006
	Level (Output Level)	0...50 Sets the overdrive output level Fx:006, D ^{mod}
c	(Source)	Off...Tempo Selects the modulation source for the overdrive output level
	(Amount)	-50...+50 Sets the modulation amount of the overdrive output level
d	Lo (Low Cutoff)	20...1.00kHz Sets the center frequency for Low EQ (shelving type)
	G (Gain)	-18...+18dB Sets the gain of Low EQ
e	M1 (Mid1 Cutoff)	300...10.00kHz Sets the center frequency for Mid/High EQ 1 (peaking type)
	Q	0.5...10.0 Sets the band width of Mid/High EQ 1 Fx:006
f	M2 (Mid2 Cutoff)	500...20.00kHz Sets the center frequency for Mid/High EQ 2 (peaking type)
	G (Gain)	-18...+18dB Sets the gain of Mid/High EQ 2
g	[AMP] Amplifier Type	SS, EL84, 6L6 Selects the type of guitar amplifier
h	[Routing]	OD→AMP, AMP→OD Switches the order of the overdrive and amp simulation connection
i	W/D (Wet/Dly)	Dry, 1:99...99:1, Wet Sets the balance between the effect and dry sounds D ^{mod}
	(Source)	Off...Tempo Selects the modulation source of the effect balance
	(Amount)	-100...+100 Sets the modulation amount of the effect balance

080: OD/HG–Cho/Fl

(Overdrive/Hi.Gain – Chorus/Flanger)

This effect combines a mono-type overdrive/high-gain distortion and a chorus/flanger. You can change the order of the effect connection.

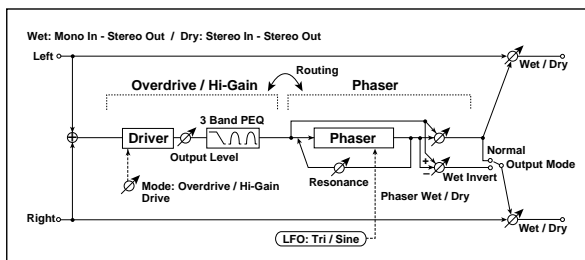


a	[OD] Mode (Drive Mode)	OverD, Hi-Gain
	Switches between overdrive and high-gain distortion	
b	Drive	1...100 Sets the degree of distortion Fx:006
	Level (Output Level)	0...50 Sets the overdrive output level Fx:006, D ^{mod}
c	(Source)	Off...Tempo Selects the modulation source for the overdrive output level
	(Amount)	-50...+50 Sets the modulation amount of the overdrive output level
d	Lo (Low Cutoff)	20...1.00kHz Sets the center frequency for Low EQ (shelving type)
	G (Gain)	-18...+18dB Sets the gain of Low EQ
e	M1 (Mid1 Cutoff)	300...10.00kHz Sets the center frequency for Mid/High EQ 1 (peaking type)
	Q	0.5...10.0 Sets the band width of Mid/High EQ 1 Fx:006
f	M2 (Mid2 Cutoff)	500...20.00kHz Sets the center frequency for Mid/High EQ 2 (peaking type)
	G (Gain)	-18...+18dB Sets the gain of Mid/High EQ 2
g	[CH/FL] LFO (LFO Waveform)	Tri, Sine Selects the LFO waveform of the chorus/flanger
h	F (LFO Frequency)	0.02...20.00Hz Sets the LFO speed
	Dly (Delay Time)	0.0...50.0ms Sets the delay time
i	Dep (Depth)	0...100 Sets the depth of LFO modulation
	Fb (Feedback)	-100...+100 Sets the feedback amount Fx:020
j	C/F W/D (Cho/Flng Wet/Dry)	-Wet...-2:98, Dry, 2:98...Wet Sets the effect balance of the chorus/flanger Fx:010, 020
	Out (Output Mode)	Normal, Wet Inv Selects the output mode for the chorus/flanger Fx:067
k	[Routing]	OD → CH/FL, CH/FL → OD Switches the order of the overdrive and chorus/flanger connection Fx:067
	W/D (Wet/Dly)	Dry, 1:99...99:1, Wet Sets the balance between the effect and dry sounds D ^{mod}
	(Source)	Off...Tempo Selects the modulation source of the effect balance
l	(Amount)	-100...+100 Sets the modulation amount of the effect balance

081: OD/HG-Phaser

(Overdrive/Hi.Gain – Phaser)

This effect combines a mono-type overdrive/high-gain distortion and a phaser. You can change the order of the effect connection.

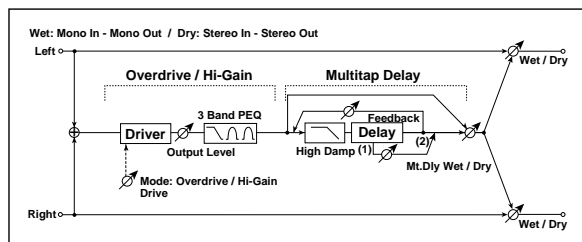


a	[OD] Mode (Drive Mode)	OverD, Hi-Gain
	Switches between overdrive and high-gain distortion	
b	Drive	1...100
	Sets the degree of distortion Fx:006	
c	Level (Output Level)	0...50
	Sets the overdrive output level Fx:006, 	
	(Source)	Off...Tempo
d	Selects the modulation source for the overdrive output level	
	(Amount)	-50...+50
e	Sets the modulation amount of the overdrive output level	
	Lo (Low Cutoff)	20...1.00kHz
	Sets the center frequency for Low EQ (shelving type)	
f	G (Gain)	-18...+18dB
	Sets the gain of Low EQ	
	M1 (Mid1 Cutoff)	300...10.00kHz
g	Sets the center frequency for Mid/High EQ 1 (peaking type)	
	Q	0.5...10.0
	Sets the band width of Mid/High EQ 1 Fx:006	
h	G (Gain)	-18...+18dB
	Sets the gain of Mid/High EQ 1	
	M2 (Mid2 Cutoff)	500...20.00kHz
i	Sets the center frequency for Mid/High EQ 2 (peaking type)	
	Q	0.5...10.0
	Sets the band width of Mid/High EQ 2 Fx:006	
j	G (Gain)	-18...+18dB
	Sets the gain of Mid/High EQ 2	
	[PHS] LFO (LFO Waveform)	Tri, Sine
k	Selects the LFO waveform of the phaser	
	F (LFO Frequency)	0.02...20.00Hz
l	Sets the LFO speed	
	Manu (Manual)	0...100
m	Sets the frequency to which the effect is applied	
	Dep (Depth)	0...100
n	Sets the depth of LFO modulation	
	Res (Resonance)	-100...+100
o	Sets the resonance amount Fx:023	
	Phs W/D (Phaser Wet/Dry)	-Wet...-2:98, Dry, 2:98...Wet
p	Sets the phaser effect balance Fx:010, 023	
	Out (Output Mode)	Normal, Wet Inv
q	Selects the phaser output mode Fx:067	
	[Routing]	OD → PHS, PHS → OD
r	Switches the order of the overdrive and phaser connection Fx:067	
	W/D (Wet/Dly)	Dry, 1:99...99:1, Wet
s	Sets the balance between the effect and dry sounds 	
	(Source)	Off...Tempo
t	Selects the modulation source of the effect balance	
	(Amount)	-100...+100
Sets the modulation amount of the effect balance		

082: OD/HG-M.Dly

(Overdrive/Hi.Gain – Multitap Delay)

This effect combines a mono-type overdrive/high-gain distortion and a multitap delay.

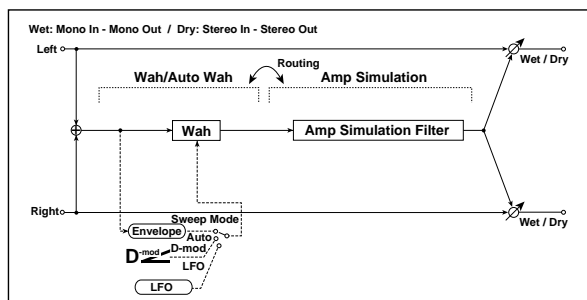


a	[OD] Mode (Drive Mode)	OverD, Hi-Gain
	Switches between overdrive and high-gain distortion	
b	Drive	1...100
	Sets the degree of distortion Fx:006	
c	Level (Output Level)	0...50
	Sets the overdrive output level Fx:006, 	
	(Source)	Off...Tempo
d	Selects the modulation source for the overdrive output level	
	(Amount)	-50...+50
e	Sets the modulation amount of the overdrive output level	
	Lo (Low Cutoff)	20...1.00kHz
	Sets the center frequency for Low EQ (shelving type)	
f	G (Gain)	-18...+18dB
	Sets the gain of Low EQ	
	M1 (Mid1 Cutoff)	300...10.00kHz
g	Sets the center frequency for Mid/High EQ 1 (peaking type)	
	Q	0.5...10.0
	Sets the band width of Mid/High EQ 1 Fx:006	
h	G (Gain)	-18...+18dB
	Sets the gain of Mid/High EQ 1	
	M2 (Mid2 Cutoff)	500...20.00kHz
i	Sets the center frequency for Mid/High EQ 2 (peaking type)	
	Q	0.5...10.0
	Sets the band width of Mid/High EQ 2 Fx:006	
j	G (Gain)	-18...+18dB
	Sets the gain of Mid/High EQ 2	
	[DLY] T1 (Tap1 Delay)	0...680ms
k	Sets the Tap1 delay time	
	T2 (Tap2 Delay)	0...680ms
l	Sets the Tap2 delay time	
	T1 Level (Tap1 Level)	0...100
m	Sets the Tap1 output level Fx:045	
	T2 Fb (Tap2 Feedback)	-100...+100
n	Sets the Tap2 feedback amount	
	Dly W/D (Delay Wet/Dry)	Dry, 2:98...98:2, Wet
o	Sets the multitap delay effect balance	
	HiDamp (High Damp)	0...100%
p	Sets the damping amount in the high range Fx:043	
	W/D (Wet/Dly)	Dry, 1:99...99:1, Wet
q	Sets the balance between the effect and dry sounds 	
	(Source)	Off...Tempo
r	Selects the modulation source of the effect balance	
	(Amount)	-100...+100
Sets the modulation amount of the effect balance		

083: Wah-AmpSim

(Wah/Auto Wah – Amp Simulation)

This effect combines a mono-type wah and an amp simulation. You can change the order of the effect connection.

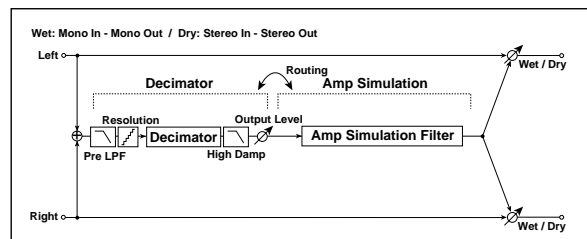


a	[WAH] Freq Btm (Frequency Bottom) Sets the lower limit of the wah center frequency	0...100 Fx:009
	Top (Frequency Top) Sets the upper limit of the wah center frequency	0...100 Fx:009
b	Swp Mode (Sweep Mode) Selects the control from auto-wah, modulation source, and LFO	Auto, Dmod, LFO Fx:009, D ^{mod}
	Src (Source) Selects the modulation source for the wah when Swp Mode=Dmod	Off...Tempo
c	lfoF (LFO Frequency) Sets the LFO speed	0.02...20.00Hz
d	Resonance Sets the resonance amount	0...100
	LPF (Low Pass Filter) Switches the wah low pass filter on and off	Off, On
e	[AMP] Amplifier Type Selects the type of guitar amplifier	SS, EL84, 6L6
f	[Routing] Switches the order of the wah and amp simulation connection	WAH → AMP, AMP → WAH
g	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D ^{mod}
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	-100...+100

084: Deci-AmpSim

(Decimator – Amp Simulation)

This effect combines a mono-type decimator and an amp simulation. You can change the order of the effect connection.



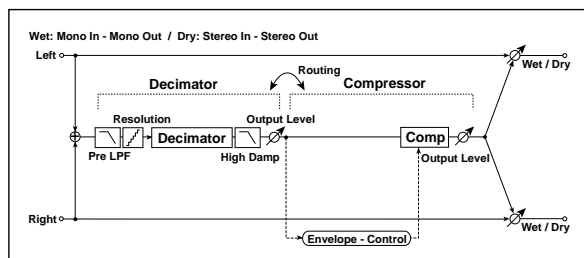
a	[DECI] Pre LPF Turn the harmonic noise caused by lowered sampling on and off	Off, On Fx:014
b	High Damp Sets the ratio of high-range damping	0...100%
c	Sampling Freq (Sampling Frequency) Sets the sampling frequency	1.00k...48.00kHz

d	Resolution Sets the data bit length	4...24 Fx:014
e	Level (Output Level) Sets the decimator output level	0...100 Fx:014
f	[AMP] Amplifier Type Selects the type of guitar amplifier	SS, EL84, 6L6
g	[Routing] Switches the order of the wah and amp simulation connection	DECI → AMP, AMP → DECI
h	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D ^{mod}
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	-100...+100

085: Deci-Comp

(Decimator – Compressor)

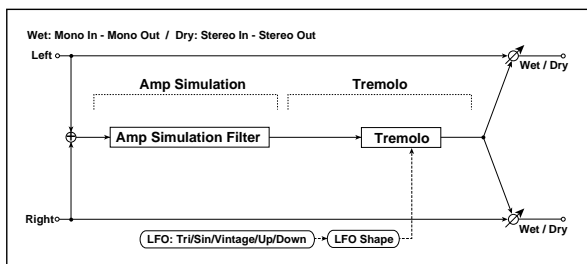
This effect combines a mono-type decimator and a compressor. You can change the order of the effect connection.



a	[DECI] Pre LPF Turn the harmonic noise caused by lowered sampling on and off	Off, On Fx:014
	High Damp Sets the ratio of high-range damping	0...100%
b	Sampling Freq (Sampling Frequency) Sets the sampling frequency	1.00k...48.00kHz
c	Resolution Sets the data bit length	4...24 Fx:014
d	Level (Output Level) Sets the decimator output level	0...100 Fx:014
e	[CMP] Sensitivity Sets the sensitivity	1...100 Fx:002
f	Attack Sets the attack level	1...100 Fx:002
	Level (Output Level) Sets the compressor output level	0...100 Fx:002
g	[Routing] Switches the order of the decimator and compressor connection	DECI → CMP, CMP → DECI
h	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D ^{mod}
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	-100...+100

086: AmpSim-Trml (Amp Simulation – Tremolo)

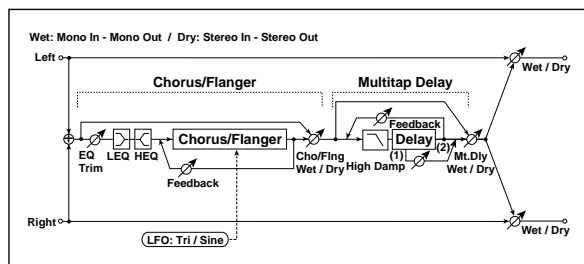
This effect combines a mono-type amp simulation and a tremolo.



a	[AMP] Amplifier Type Selects the type of guitar amplifier	SS, EL84, 6L6
b	[TRML] LFO Wave (LFO Waveform) Selects LFO Waveform	Triangle, Sine, Vintage, Up, Down Fx:032
c	LFO Shape Determines how much the LFO waveform is changed	-100...+100 Fx:020
d	Freq (LFO Frequency) Sets the LFO speed	0.02...20.00Hz
e	Depth Sets the depth of LFO modulation	0...100
f	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D ^{mod}
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	-100...+100

087: Cho/Fl-M.Dly (Chorus/Flanger – Multitap Delay)

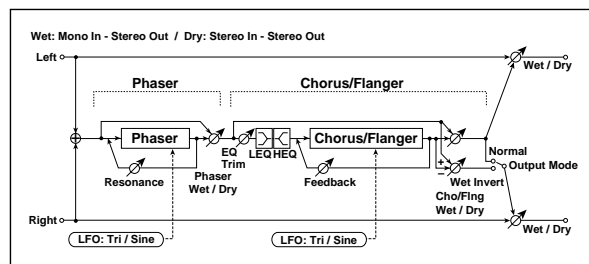
This effect combines a mono-type chorus/flanger and a multitap delay.



	[CH/FL] LFO (LFO Waveform) Selects the LFO waveform of the chorus/flanger	Tri, Sine
a	F (LFO Frequency) Sets the LFO speed	0.02...20.00Hz
b	Dly (Delay Time) Sets the delay time	0.0...50.0ms
	Dep (Depth) Sets the depth of LFO modulation	0...100
	Fb (Feedback) Sets the feedback amount	-100...+100 Fx:020
c	Pre EQ Trim Sets the EQ input level	0...100
d	LoEQ (Pre Low EQ Gain) Sets the gain of Low EQ	-15...+15dB
	HiEQ (Pre High EQ Gain) Sets the gain of High EQ	-15...+15dB
e	C/F W/D (Cho/Flng Wet/Dry) Sets the effect balance of the chorus/flanger	-Wet...-2:98, Dry, 2:98...Wet Fx:010, 020
f	[DLY]T1 (Tap1 Delay) Sets the Tap1 delay time	0...680ms
	T2 (Tap2 Delay) Sets the Tap2 delay time	0...680ms
g	T1 Level (Tap1 Level) Sets the Tap1 output level	0...100 Fx:045
	T2 Fb (Tap2 Feedback) Sets the Tap2 feedback amount	-100...+100
h	Dly W/D (Delay Wet/Dry) Sets the multitap delay effect balance	Dry, 1:99...99:1, Wet
	HiDamp (High Damp) Sets the damping amount in the high range	0...100% Fx:043
i	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D ^{mod}
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	-100...+100

088: Phasr-Cho/FI (Phaser – Chorus/Flanger)

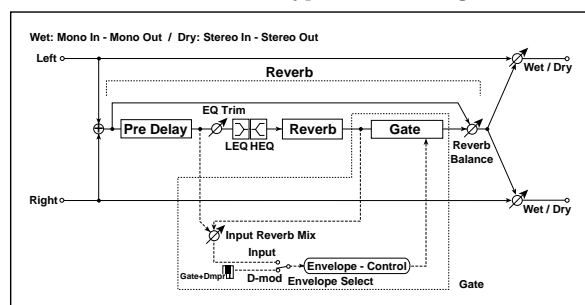
This effect combines a mono-type phaser and a chorus/flanger.



a	[PHS] LFO (LFO Waveform) Selects the LFO waveform of the phaser	Tri, Sine
	F (LFO Frequency) Sets the LFO speed	0.02...20.00Hz
b	Manu (Manual) Sets the frequency to which the effect is applied	0...100
	Dep (Depth) Sets the depth of LFO modulation	0...100
	Res (Resonance) Sets the resonance amount	-100...+100 Fx:023
c	Phs W/D (Phaser Wet/Dry) Sets the phaser effect balance	-Wet...-2:98, Dry, 2:98...Wet Fx:010, 023
d	[CH/FL] LFO (LFO Waveform) Selects the LFO waveform of the chorus/flanger	Tri, Sine
	F (LFO Frequency) Sets the LFO speed	0.02...20.00Hz
e	Dly (Delay Time) Sets the delay time	0.0...50.0ms
	Dep (Depth) Sets the depth of LFO modulation	0...100
	Fb (Feedback) Sets the feedback amount	-100...+100 Fx:020
f	Pre EQ Trim Sets the EQ input level	0...100
g	LoEQ (Pre Low EQ Gain) Sets the gain of Low EQ	-15...+15dB
	HiEQ (Pre High EQ Gain) Sets the gain of High EQ	-15...+15dB
h	C/F W/D (Cho/Fing Wet/Dry) Sets the effect balance of the chorus/flanger	-Wet...-2:98, Dry, 2:98...Wet Fx:010, 020
	Out (Output Mode) Selects the output mode for the chorus/flanger	Normal, Wet Inv Fx:060
i	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D ^{mod}
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	-100...+100

089: Reverb-Gate

This effect combines a mono-type reverb and a gate.



a	[REV] Reverb Time Sets the reverberation time	0.1...10.0sec
b	HiDamp (High Damp) Sets the damping amount in the high range	0...100%
	Pre Dly (Pre Delay) Sets the delay time of the reverb sound and gate control signal	0...200ms
c	Pre EQ Trim Sets the EQ input level	0...100
d	LoEQ (Pre Low EQ Gain) Sets the gain of Low EQ	-15...+15dB
	HiEQ (Pre High EQ Gain) Sets the gain of High EQ	-15...+15dB
e	Rev Balance (Reverb Balance) Sets the reverb effect balance	Dry, 1:99...99:1, Wet
f	[GATE] In Rev Mix (Input Reverb Mix) Sets the balance between the dry and reverb sounds of the gate control signal.	Dry, 1:99...99:1, Wet Fx
g	Envelope (Envelope Select) Switches between modulation source control and input signal control	Dmod, Input Fx
	Src (Source) Selects the modulation source that controls the gate when Envelope is set to Dmod	Off...G2+Dmp Fx
h	Threshold Sets the gate threshold level	0...100 Fx
	Polarity Switches between non-invert and invert of the gate on/off state	+ , - Fx:005
i	Attack Sets the attack time	1...100 Fx:005
	Release Sets the release time	1...100 Fx:005
j	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D ^{mod}
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	-100...+100

g: Envelope, g:Src, f: In Rev Mix, h: Threshold

The “Envelope” parameter enables you to select whether turning the gate on and off is triggered by the input signal level or controlled directly by the modulation source. You can select from **Off** to **G2+Dmp** for the Source parameter to specify the modulation source.

When “Envelope” is set to **Input**, the gate is controlled by the level of signals that are the combination of the dry sound and the reverb sound. When the signal level exceeds the threshold, the gate opens and the reverb sound is output.

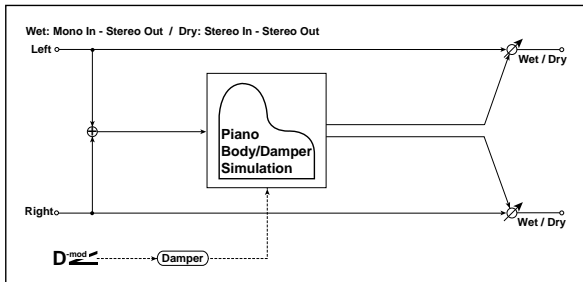
Normally, set “In Rev Mix” to **Dry** (the gate is controlled only by the dry sound). If you wish to extend the gate time, set the “In Rev Mix” value higher and adjust the “Threshold” value.

Double Size

Double-size effects
(Available for Insert Effects IFX2, 3, and 4)

090: Piano Body (Piano Body/Damper Simulation)

This effect simulates the resonance of the piano sound board caused by the string vibration, and also simulates the resonance of other strings that are not being played when you press the damper pedal. It will create a very realistic sound when applied to acoustic piano sounds.



a	Sound Board Depth Sets the intensity of resonance of the sound board	0...100
b	DamperDep (Damper Depth) Sets the intensity of the string resonance created when the damper pedal is pressed	0...100
	Src (Source) Selects the modulation source of damper effect	Off...Tempo
c	Tone Sets tonal quality of effect sound	1...100
d	Mid Shape Sets the mid range of tonal quality	0...36
e	Tune Fine tuning	-50...+50
f	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	-100...+100

a: Sound Board Depth

This parameter sets the intensity of resonance of the piano sound board.

b: DamperDep, b: Src

Specify the strength with which the other strings will vibrate sympathetically when the damper pedal of a connected MIDI instrument is pressed. The "Src" parameter selects the modulation source from which the damper effect is applied. Usually, select **Dmp #64** (Damper pedal).

MIDI The effect is off when a value for the modulation source specified for the "Src" parameter is 63 or smaller, and the effect is on when the value is 64 or higher.

c: Tone, d: Mid Shape

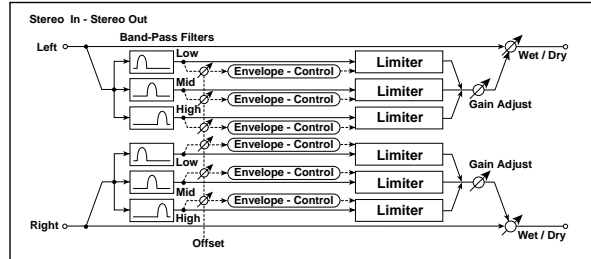
These parameters control the tonal quality of the effect sound.

e: Tune

Since this effect simulates the resonance of the strings, the sound varies depending on the pitch. If you have changed tuning using the "Master Tune" (GLOBAL 1. 1-1a), adjust this parameter value.

091: St.MltbandLmt (Stereo Multiband Limiter)

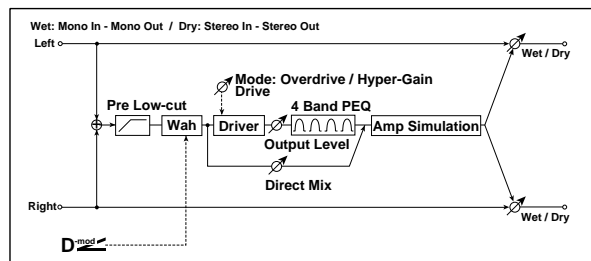
This is a stereo multiband limiter.



a	Ratio Sets the signal compression ratio	1.0:1...50.0:1, Inf:1
b	Threshold Sets the level above which the compressor is applied	-40...0dB
c	Attack Sets the attack time	1...100
d	Release Sets the release time	1...100
e	Low Offset Sets the low range gain of trigger signal	-40...0dB
f	Mid Offset Sets the mid range gain of trigger signal	-40...0dB
g	High Offset Sets the high range gain of trigger signal	-40...0dB
h	G.Adj (Gain Adjust) Sets the output gain	-Inf, -38...+24dB
	(Source) Selects the modulation source for the output gain	Off...Tempo
i	(Amount) Sets the modulation amount of the output gain	-63...+63
	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet
j	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	-100...+100

092: OD/HyprG Wah (Overdrive/Hyper Gain Wah)

This distortion effect has two modes: overdrive and hyper-gain that produces a strong distortion. A higher high-gain setting is required for this effect relative to a normal-size effect.

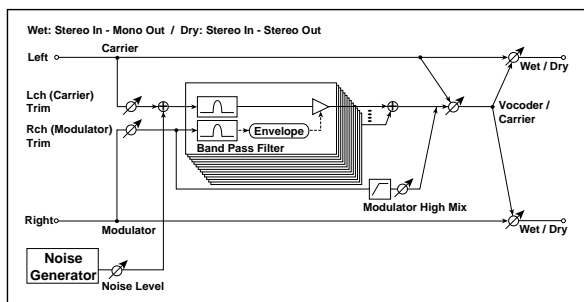


a	Wah Switches Wah on/off	Off, On
	(Source) Selects the modulation source that switches the Wah on and off	Off...Tempo
	(Sw) Selects the switching mode for the modulation source that switches the Wah on and off	Tggl, Mmnt

b	SweepRng (Wah Sweep Range) Sets the range of Wah	-10...+10 Fx:006, D^{mod}
	Src (Source) Selects the modulation source that controls the Wah	Off...Tempo
c	Mode (Drive Mode) Switching between overdrive and hyper-gain mode	Overdrive, HyperGain
	Drive Sets the degree of distortion	1...120 Fx:006
d	Pre Low-cut Sets the low range cut amount of the distortion input	0...10 Fx:006
e	Level (Output Level) Sets the output level	0...50 Fx:006, D^{mod}
	(Source) Selects the modulation source for the output level	Off...Tempo
	(Amount) Sets the modulation amount of the output level	-50...+50
f	Lo (Low Cutoff) Sets the center frequency for Low EQ (shelving type)	20...1.00kHz
	G (Gain) Sets the gain of Low EQ	-18...+18dB
g	M1 (Mid1 Cutoff) Sets the center frequency for Mid/High EQ 1 (peaking type)	300...10.00kHz
	Q Sets the band width of Mid/High EQ 1	0.5...10.0 Fx:006
	G (Gain) Sets the gain of Mid/High EQ 1	-18...+18dB
h	M2 (Mid2 Cutoff) Sets the center frequency for Mid/High EQ 2 (peaking type)	500...20.00kHz
	Q Sets the band width of Mid/High EQ 2	0.5...10.0 Fx:006
	G (Gain) Sets the gain of Mid/High EQ 2	-18...+18dB
i	Direct Mix Amount of the dry sound mixed to the distortion	0...50
	SpSim (Speaker Simulation) Speaker simulation on/off	Off, On
j	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D^{mod}
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	-100...+100

093: Vocoder

This effect applies the character of the right channel signal (Modulator) to the left channel signal input (Carrier). A common use of this effect is to produce the sound of various instruments by inputting a voice to the Modulator via a microphone. A special effect is also achieved by using rhythm or effect sounds. Strings or distortion guitar sounds with a lot of harmonics are suitable as a Carrier.



a	L (Carrier) Trim Sets the input level of left channel (Carrier)	0...100
b	R (Modulator) Trim Sets the input level of right channel (Modulator)	0...100

c	Formant Shift Sets the height of the frequency for the vocoder effect	-2...+2
d	Response Sets the speed of the response to the modulator input	0...100
e	LoGain (Low Gain) Sets the low-range output level of the vocoder	-12...+12
	HiGain (High Gain) Sets the high-range output level of the vocoder	-12...+12
f	Noise (Noise Level) Sets the noise mix level to the Carrier	0...100 Fx:006, D^{mod}
	(Source) Selects the modulation source for the noise mix level	Off...Tempo
	(Amount) Sets the modulation amount for the noise mix level	-100...+100
g	Modulator High Mix Sets the high-range output level of the modulator	0...100
h	V/C (Vocoder/Carrier) Sets the balance between the vocoder output and the Carrier	Carrier, 1:99...99:1, Vocoder Fx:006, D^{mod}
	(Source) Selects the modulation source for the balance between the vocoder output and the carrier	Off...Tempo
	(Amount) Sets the modulation amount of the balance between the vocoder output and the carrier	-100...+100
i	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet Fx:006, D^{mod}
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	-100...+100

c: Formant Shift

By offsetting the Carrier filter, you can adjust the height of the frequency range to which the vocoder effect is applied. The tonal quality will change significantly.

f: Noise

This parameter enables you to mix white noise with the Carrier.

g: Modulator High Mix

This parameter sets the high-range output level of the right channel sound (Modulator). If the modulator is a human voice, it will make the words more clear.

h: V/C, i: W/D

The "V/C" parameter sets the balance between the vocoder sound and the left channel sound (Carrier). The "W/D" parameter sets the balance between the effect and dry sound.

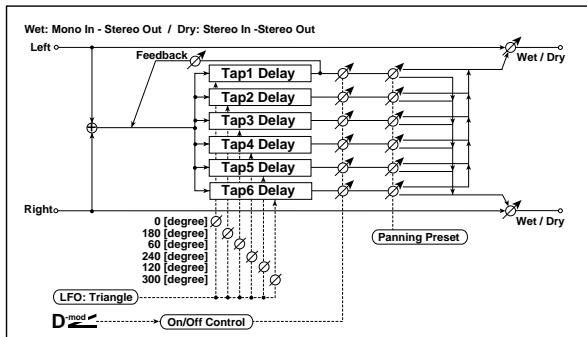
If you wish to change the intensity of the vocoder effect, select **Wet** for "W/D", and adjust the balance using the "V/C" parameter.

Using a voice from a microphone as a modulator (Vocoder is selected for IFX2 in Program mode)

- Set "Pan" (PROG 5. 1-1b) to **L001** for Amp1 Level/Pan so that the Carrier sound will be input only to the left channel. When Mode (PROG 2. 1-1a) is set to **Double**, set Pan for Amp2 Level/Pan to **L001**.
- To set up the input, use the Audio In (GLOBAL 1. 1-3). Connect a microphone to AUDIO INPUT1 or INPUT 2 connector, and set the [LEVEL] switch to **MIC**. While talking into the microphone, adjust the [INPUT] knob so that the level is high enough, but the sound will not be distorted. For the Audio Input for the microphone, set Pan to **R127** and BUS (IFX/Indiv.) Select to **IFX2**. Now the voice from the microphone is input to the modulator channel. You can create the sound of a "talking" instrument when you talk into the microphone while playing.

094: MltTap ChoDly (Multitap Chorus/Delay)

This effect has six chorus blocks with different LFO phases. You can produce a complex stereo image by setting a different delay time and depth for each block. You can control the delay output level via a modulation source.



a	LFO Freq (LFO Frequency) Sets the LFO speed	0.02...13.00Hz
b	T1(000) (Tap1 Delay) Sets the Tap1 (LFO phase=0 degrees) delay time	0...570ms
	D (Depth) Sets the Tap1 chorus depth	0...30
	S (Staus) Selects on, off, or modulation source for the control of Tap1 output	On, Off, On→Off, Off→On D-mod
c	T2(180) (Tap2 Delay) Sets the Tap2 (LFO phase=180 degrees) delay time	0...570ms
	D (Depth) Sets the Tap2 chorus depth	0...30
	S (Staus) Selects on, off, or modulation source for the control of Tap2 output	On, Off, On→Off, Off→On D-mod
d	T3(060) (Tap3 Delay) Sets the Tap3 (LFO phase=60 degrees) delay time	0...570ms
	D (Depth) Sets the Tap3 chorus depth	0...30
	S (Staus) Selects on, off, or modulation source for the control of Tap3 output	On, Off, On→Off, Off→On D-mod
e	T4(240) (Tap4 Delay) Sets the Tap4 (LFO phase=240 degrees) delay time	0...570ms
	D (Depth) Sets the Tap4 chorus depth	0...30
	S (Staus) Selects on, off, or modulation source for the control of Tap4 output	On, Off, On→Off, Off→On D-mod
f	T5(120) (Tap5 Delay) Sets the Tap5 (LFO phase=120 degrees) delay time	0...570ms
	D (Depth) Sets the Tap5 chorus depth	0...30
	S (Staus) Selects on, off, or modulation source for the control of Tap5 output	On, Off, On→Off, Off→On D-mod
g	T6(300) (Tap6 Delay) Sets the Tap6 (LFO phase=300 degrees) delay time	0...570ms
	D (Depth) Sets the Tap6 chorus depth	0...30
	S (Staus) Selects on, off, or modulation source for the control of Tap6 output	On, Off, On→Off, Off→On D-mod
h	Panning (Panning Preset) Specifies the stereo image of each Tap	1, 2, 3, 4

i	T1 Fb (Tap1 Feedback) Sets the Tap1 feedback amount	-100...+100 D-mod
	(Source) Selects the modulation source for the Tap output level, feedback amount, and effect balance	Off...Tempo
	(Amount) Sets the modulation amount of Tap1 feedback amount	-100...+100
j	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	(Amount) Sets the modulation amount of the effect balance	-100...+100

b: S, c: S, d: S, e: S, f: S, g: S

These parameters set the output status of each Tap.

On: Output is always on. (No modulation)

Off: Output is always off. (No modulation)

On→Off: Output level is switched from on to off depending on the modulation source.

Off→On: Output level is switched from off to on depending on the modulation source.

Combining these parameters, you can change from 4-phase chorus to two-tap delay by crossfading them gradually via the modulation source during a performance.

h: Panning

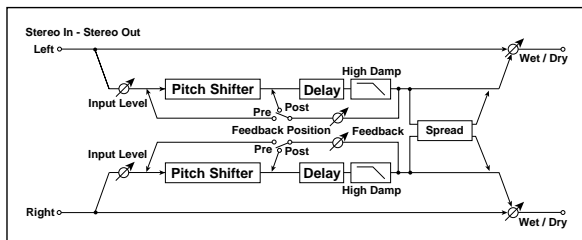
This parameter selects combinations of stereo images of the tap outputs.

i: (Source), i: (Amount), j: (Amount)

Tap output level, feedback amount and effect balance are controlled simultaneously via a modulation source.

095: St.Pitch Shift (Stereo Pitch Shifter)

This is a stereo pitch shifter. The pitch shift amount for the left and right channels can be reversed from each other.



a	Mode Switches Pitch Shifter mode	Slow, Medium, Fast Fx:038
	L/R (L/R Pitch) Determines whether or not the L/R pitch shift amount is inverted	Normal, Up/Down
b	Shift (Pitch Shift) Sets the pitch shift amount in steps of a semitone	-24...+24 Fx:038, D-mod
	(Source) Selects the modulation source of pitch shift amount	Off...Tempo Fx:038
	(Amount) Sets the modulation amount of pitch shift amount	-24...+24 Fx:038
c	Fine Sets the pitch shift amount in steps of one cent	-100...+100cent Fx:038, D-mod
	(Amount) Sets the modulation amount of pitch shift amount	-100...+100cent Fx:038
d	L Delay (L Delay Time) Sets the delay time for the left channel	0...1000ms
e	R Delay (R Delay Time) Sets the delay time for the right channel	0...1000ms
f	Feedback Position Switches the feedback connection	Pre, Post Fx:038

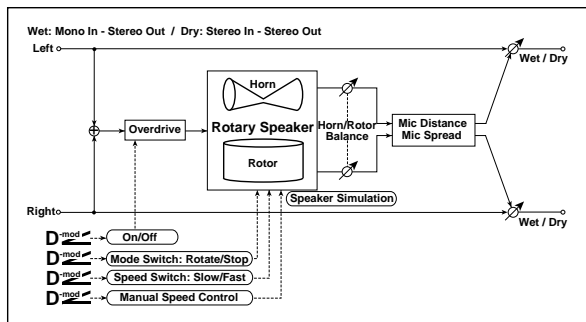
g	Feedback Sets the feedback amount	-100...+100 Fx:038
	HiDamp (High Damp) Sets the damping amount in the high range	0...100%
h	InLvl Mod (Input Level Dmod [%]) Sets the modulation amount of the input level	-100...+100 Fx:037, D ^{mod}
	Src (Source) Selects the modulation source for the input level	Off...Tempo Fx:037
i	Spread Sets the width of the stereo image of the effect sound	-100...+100 Fx:043
j	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D ^{mod}
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	-100...+100

a: L/R

When you select **Up/Down** for this parameter, the pitch shift amount for the right channel will be reversed. If the pitch shift amount is positive, the pitch of the left channel is raised, and the pitch of the right channel is lowered.

096: Rotary SP OD (Rotary Speaker Overdrive)

This is a stereo rotary speaker effect. It has an internal speaker simulator that simulates overdrive (recreating the amp distortion) and characteristics of the rotary speaker, producing a very realistic rotary speaker sound.



a	OD (Overdrive) Switches overdrive on/off.	Off, On D ^{mod}
	(Source) Selects the modulation source that switches overdrive on/off	Off...Tempo
	(Sw) Selects the switching mode of the modulation source that switches overdrive on/off	Tggl. Mmnt Fx:
b	OD Gain (Overdrive Gain) Determines the degree of distortion	0...100
	Level (Overdrive Level) Sets the overdrive output level	0...100
c	OD Tone (Overdrive Tone) Sets the tonal quality of overdrive	0...15
	SpSim (Speaker Simulation) Switches speaker simulation on/off	Off, On
d	Mode (Mode Switch) Switches between speaker rotation and stop	Rotate, Stop D ^{mod}
	(Source) Selects the modulation source that toggles between rotation and stop	Off...Tempo
	(Sw) Selects the switching mode of the modulation source that toggles between rotation and stop	Tggl. Mmnt Fx:040

e	Speed (Speed Switch) Switches the speaker rotation speed between slow and fast.	Slow, Fast D ^{mod}
	(Source) Selects the modulation source that toggles between slow and fast	Off...Tempo
f	(Sw) Selects the switching mode of the modulation source that toggles between slow and fast	Tggl. Mmnt Fx:040
	H/R.Bal (Horn/Rotor Balance) Sets the volume level balance between the high-range horn and low-range rotor	Rot, 1...99, Hrn
g	ManuSp (Manual Speed Control) Sets the modulation source in case the rotation speed is changed directly	Off...Tempo Fx:040, D ^{mod}
	Horn Accel (Horn Acceleration) How quickly the horn rotation speed in the high range is switched	0...100 Fx:040
h	Ratio (Horn Ratio) Adjusts the (high-range side) horn rotation speed. Standard value is 1.00. Selecting "Stop" will stop the rotation	Stop, 0.50...2.00
	Rotor Accel (Rotor Acceleration) Determines how quickly the rotor rotation speed in the low range is switched	0...100 Fx:040
i	Ratio (Rotor Ratio) Adjusts the (low-range side) rotor rotation speed. Standard value is 1.0. Selecting "Stop" will stop the rotation	Stop, 0.50...2.00
	MicDistance Distance between the microphone and rotary speaker	0...100 Fx:040
j	Spread (Mic Spread) Angle of left and right microphones	0...100 Fx:040
	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D ^{mod}
j	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	-100...+100

a: (Sw)

This parameter determines how to switch on/off the overdrive via a modulation source.

When "(Sw)" = **Tggl (Toggle)**, overdrive is turned on/off each time the pedal or joystick is operated.

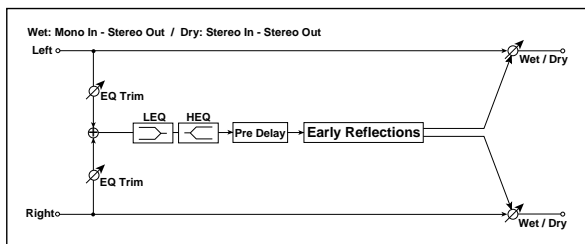
MIDI Overdrive will be switched on/off each time the value of the modulation source exceeds 64.

When "(Sw)" = **Mmnt (Moment)**, overdrive is applied only when you press the pedal or operate the joystick.

MIDI Only when the value for the modulation source is 64 or higher, the overdrive effect is applied.

097: Early Reflect (Early Reflections)

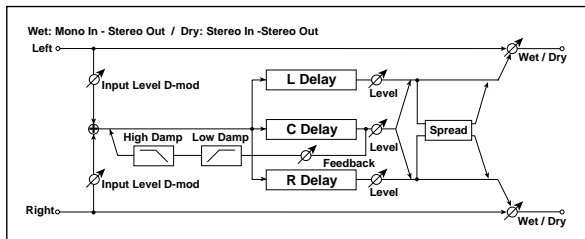
This early reflection effect has more precise early reflections with twice the maximum length of a normal-size effect (Fx:041). You can create a very smooth and dense sound.



a	Type Selects the decay curve for the early reflection	Sharp, Loose, Modulated, Reverse Fx:041
b	ER Time Sets the time length of early reflection	10...1600ms
c	Pre Delay Sets the time taken from the original sound to the first early reflection	0...200ms
d	Pre EQ Trim Sets the input level of EQ applied to the effect sound	0...100
e	LoEQ (Pre Low EQ Gain) Sets the gain of Low EQ	-15.0...+15.0dB
	HiEQ (Pre High EQ Gain) Sets the gain of High EQ	-15.0...+15.0dB
f	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	-100...+100

098: LCR Long Delay (L/C/R Long Delay)

This multitap delay outputs three Tap signals to left, right and center respectively. You can set a maximum of 2,730msec for the delay time.

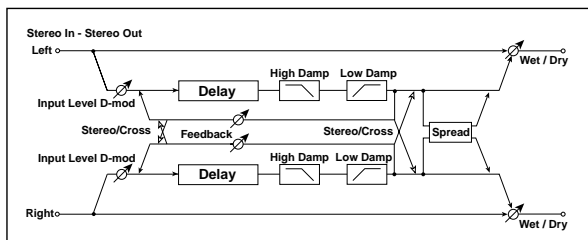


a	L Delay (L Delay Time) Sets the delay time of TapL	0...2730ms
	Level Sets the output level of TapL	0...50
b	C Delay (C Delay Time) Sets the delay time of TapC	0...2730ms
	Level Sets the output level of TapC	0...50
c	R Delay (R Delay Time) Sets the delay time of TapR	0...2730ms
	Level Sets the output level of TapR	0...50
d	C Fb (C Delay Feedback) Sets the feedback amount of TapC	-100...+100 D-mod
	(Source) Selects the modulation source of the TapC feedback amount	Off...Tempo
	(Amount) Sets the modulation amount of the TapC feedback amount	-100...+100

e	HiDamp (High Damp) Sets the damping amount in the high range	0...100% Fx:043
	LoDamp (Low Damp) Sets the damping amount in the low range	0...100% Fx:043
f	InLvl Mod (Input Level Dmod [%]) Sets the modulation amount of the input level	-100...+100 Fx:037, D-mod
	Src (Source) Selects the modulation source for the input level	Off...Tempo Fx:037
g	Spread Sets the width of the stereo image of the effect sound	0...50 Fx:043
h	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	-100...+100

099: St/Cross LDly (Stereo/Cross Long Delay)

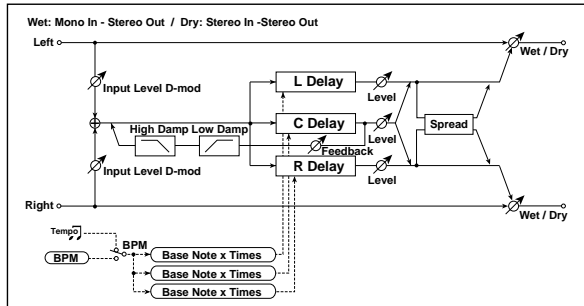
This is a stereo delay, and can be used as a cross-feedback delay effect in which the delay sounds cross over between left and right by changing the feedback routing. You can set a maximum of 1,360msec for the delay time.



a	Stereo/Cross Switches between stereo delay and cross-feedback delay	Stereo, Cross
b	L Delay (L Delay Time) Sets the delay time for the left channel	0.0...1360.0ms
c	R Delay (R Delay Time) Sets the delay time for the right channel	0.0...1360.0ms
d	L Fb (L Feedback) Sets the feedback amount for the left channel	-100...+100 D-mod
	(Source) Selects the modulation source of feedback amount	Off...Tempo
	(Amount L) Sets the modulation amount of the left channel feedback	-100...+100
e	R Fb (R Feedback) Sets the feedback amount for the right channel	-100...+100 D-mod
	(Amount R) Sets the modulation amount of the right channel feedback	-100...+100
f	HiDamp (High Damp) Sets the damping amount in the high range	0...100% Fx:043
g	LoDamp (Low Damp) Sets the damping amount in the low range	0...100% Fx:043
h	InLvl Mod (Input Level Dmod [%]) Sets the modulation amount of the input level	-100...+100 Fx:037, D-mod
	Src (Source) Selects the modulation source for the input level	Off...Tempo Fx:037
i	Spread Sets the width of the stereo image of the effect sound	-50...+50 Fx:043
j	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet D-mod
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	-100...+100

100: LCR BPM LDIy (L/C/R BPM Long Delay)

The L/C/R delay enables you to match the delay time with the song tempo. You can set the delay time up to 2,730msec.



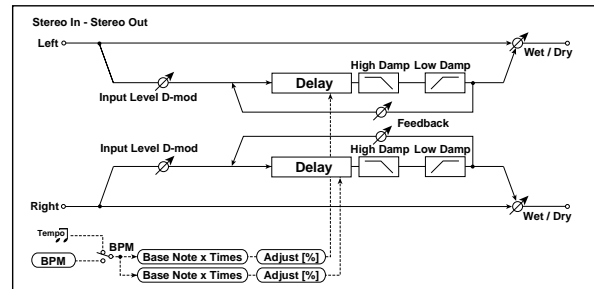
a	BPM Selects MIDI Clock and assigns tempo	MIDI, 40...240 Fx:049,
b	L Bs (L Delay Base Note) Selects the type of notes to specify the delay time for TapL	Fx:049,
	Times Sets the number of notes to specify the delay time for TapL	1...16 Fx:049
	Level Sets the output level of TapL	0...50
c	C Bs (C Delay Base Note) Selects the type of notes to specify the delay time for TapC	Fx:049,
	Times Sets the number of notes to specify the delay time for TapC	1...16 Fx:049
	Level Sets the output level of TapC	0...50
d	R Bs (R Delay Base Note) Selects the type of notes to specify the delay time for TapR	Fx:049,
	Times Sets the number of notes to specify the delay time for TapR	1...16 Fx:049
	Level Sets the output level of TapR	0...50
e	C Fb (C Delay Feedback) Sets the feedback amount of TapC	-100...+100
	(Source) Selects the modulation source for the TapC feedback	Off...Tempo
	(Amount) Sets the modulation amount of the TapC feedback	-100...+100
f	Time Over? > Displays an error message when the delay time exceeds the upper limit	----, OVER!
g	HiDamp (High Damp) Sets the damping amount in the high range	0...100% Fx:043
	LoDamp (Low Damp) Sets the damping amount in the low range	0...100% Fx:043
h	InLvl Mod (Input Level Dmod [%]) Sets the modulation amount of the input level	-100...+100 Fx:037,
	Src (Source) Selects the modulation source for the input level	Off...Tempo Fx:037
i	Spread Sets the width of the stereo image of the effect sound	0...50 Fx:043
j	W/D (Wet/Dly) Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet
	(Source) Selects the modulation source of the effect balance	Off...Tempo
	(Amount) Sets the modulation amount of the effect balance	-100...+100

f: Time Over? >

You can set the delay time up to 2,730msec. If the delay time exceeds this limit, the error message "OVER!" appears on the display. Set the delay time parameters so that this message will not appear. "Time Over?>" is only a display parameter.

101: St.BPM LDelay (Stereo BPM Long Delay)

The stereo delay enables you to match the delay time with the song tempo. You can set the delay time up to 1365msec.



a	BPM Selects MIDI Clock and assigns tempo	MIDI, 40...240 Fx:049,
b	L Bs (L Delay Base Note) Selects the type of notes to specify the left channel delay time	Fx:049,
	Times Sets the number of notes to specify the left channel delay time	1...16 Fx:049
	Adj (Adjust) Fine-adjust the left channel delay time	-2.50...+2.50%
c	R Bs (R Delay Base Note) Selects the type of notes to specify the right channel delay time	Fx:049,
	Times Sets the number of notes to specify the right channel delay time	1...16 Fx:049
	Adj (Adjust) Fine-adjust the right channel delay time	-2.50...+2.50%
d	L Fb (L Feedback) Sets the feedback amount for the left channel	-100...+100
	(Source) Selects the modulation source of feedback amount	Off...Tempo
	(Amount L) Sets the modulation amount of the left channel feedback	-100...+100
e	R Fb (R Feedback) Sets the feedback amount for the right channel	-100...+100
	(Amount R) Sets the modulation amount of the right channel feedback	-100...+100
f	Time Over? L > Display the error message if the left channel delay time exceeds the upper limit	----, OVER!
	R > Display the error message if the right channel delay time exceeds the upper limit	----, OVER!
g	HiDamp (High Damp) Sets the damping amount in the high range	0...100% Fx:043
	LoDamp (Low Damp) Sets the damping amount in the low range	0...100% Fx:043
h	InLvl Mod (Input Level Dmod [%]) Sets the modulation amount of the input level	-100...+100 Fx:037,
	Src (Source) Selects the modulation source for the input level	Off...Tempo Fx:037

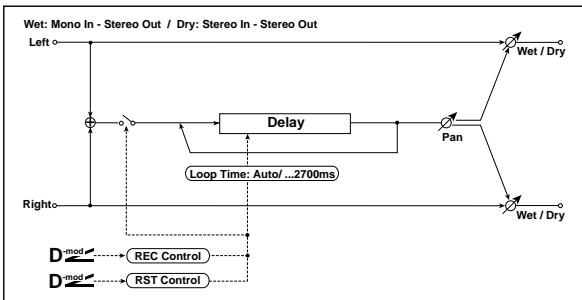
i	W/D (Wet/Dly)	Dry, 1:99...99:1, Wet	
	Sets the balance between the effect and dry sounds		
	(Source)	Off...Tempo	
Selects the modulation source of the effect balance			
(Amount)	-100...+100		
Sets the modulation amount of the effect balance			

f: Time Over? L >, f: R >

You can set the delay time up to 1365msec. If the delay time exceeds this limit, the error message "OVER!" appears on the display. Set the delay time parameters so that this message will not appear. "Time Over?>" is only a display parameter.

102: Hold Delay

This effect records the input signal and plays it back repeatedly. You can control the start of recording and reset via a modulation source. Easy to use for real-time performances.



a	Loop Time	Auto, 1...2700ms	
	Sets Automatic loop time setup mode or specifies loop time		
b	REC Control Src	Off...Tempo	
	Selects control source for recording		
c	RST Control Src	Off...Tempo	
	Selects control source for reset		
d	Manual REC Ctrl	REC Off, REC On	
	Sets the recording switch		
e	Manual RST Ctrl	Off, RESET	
	Sets the reset switch		
f	Pan	L100...L1, C, R1...R100	
	Sets the stereo image of the effect		
	(Source)	Off...Tempo	
Selects the modulation source of stereo image of the effect			
(Amount)	-100...+100		
Sets the modulation amount of stereo image of the effect			
g	W/D (Wet/Dly)	Dry, 1:99...99:1, Wet	
	Sets the balance between the effect and dry sounds		
	(Source)	Off...Tempo	
Selects the modulation source of the effect balance			
(Amount)	-100...+100		
Sets the modulation amount of the effect balance			

a: Loop Time

With **Auto**, the loop time is automatically set. Otherwise, you can specify the loop time.

When **Auto** is selected, the Loop Time is automatically set to the time it takes for a performance recorded while the Modulation Source or "Manual REC Ctrl" is on. However, if the time length exceeds 2,700msec, the loop time will be automatically set to 2,700msec.

b: REC Control Src, d: Manual REC Ctrl

"REC Control Src" selects the modulation source that controls recording.

If this modulation is on, or if "Manual REC Ctrl" is set to **REC On**, you can record the input signal. If a recording has already been carried out, additional signals will be overdubbed.

The effect is off when a value for the modulation source specified for the "REC Control Src" parameter is 63 or smaller, and the effect is on when the value is 64 or higher.

c: RST Control Src, e: Manual RST Ctrl

The "RST Control Src" parameter specifies the modulation source that controls the reset operation.

When you set this modulation source to On, or "Manual RST Ctrl" to **RESET**, you can erase what you recorded. If the Loop Time parameter has been set to Auto, the loop time is also reset.

The effect is off when a value for the modulation source specified for the "RST Control Src" parameter is 63 or smaller, and the effect is on when the value is 64 or higher.

"Hold" procedure (when Loop Time = Auto)



Select the following options for each parameter:

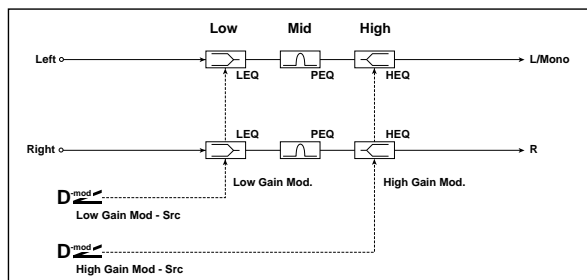
- "Loop Time [msec]"=**Auto**
"REC Control Src"=**JS +Y#1**
"RST Control Src"=**JS -Y#2**
"Manual REC Ctrl"=**REC Off**
"Manual RST Ctrl"=**RESET**
It should be noted that all recordings will be deleted while Reset is On.
- "Manual RST Ctrl"=**Off**
Reset is cancelled and the unit enters Rec ready mode.
- Push the joystick of a connected MIDI instrument in the +Y direction (forward) and play a phrase you wish to hold. When you pull the joystick to its original position, the recording will be finished and the phrase you just played will be held. Loop Time is automatically set only for the first recording after resetting. If the time length exceeds 2,700msec, Loop Time will be automatically set to 2,700msec. (If you have set "Loop Time" to **1-2,700msec**, the specified loop time will be used regardless of the time taken from pushing the joystick forward until it is pulled back. However, the recording method remains the same. The phrase being played while the joystick is pushed forward will be held.)
- If you made a mistake during recording, pull the joystick in the -Y direction (back) to reset. In this way, the recording will be erased. Repeat step ③ again.
- The recorded phrase will be repeated again and again. You can use this to create an accompaniment.
- By pushing the joystick in the +Y direction (forward), you can also overdub performances over the phrase that is being held.



Master EQ

Master EQ

Use 7.3–4: Master EQ in Program, Combination, Multi modes.

-  You cannot use the Master EQ in Sampling mode.
-  You cannot use the Master EQ for the Insert Effects or Master Effects.



a	Low Cutoff Sets the cutoff frequency of Low EQ (shelving type)	20...1.00KHz
	Gain Sets the gain of Low EQ	-18.0...+18.0 (0.5step)dB 
b	Mid Cutoff Sets the cutoff frequency of Mid EQ (peaking type)	300...10.00KHz
	Q Sets the band width of Mid EQ. With a higher value, the band become narrower.	0.5...10.0 (0.1step)
	Gain Sets the gain of Mid EQ	-18.0...+18.0 (0.5step)dB
c	High Cutoff Sets the cutoff frequency of High EQ (shelving type)	500...20.00KHz
	Gain Sets the gain of High EQ	-18.0...+18.0 (0.5step)dB 
d	Low Gain Mod-Src Selects the modulation source for Low Gain	Off...Tempo
e	High Gain Mod-Src Selects the modulation source for High Gain	Off...Tempo

a: Gain, b: Gain, c: Gain

These parameters are linked with the “Master EQ Gain [dB]” (7.3-1c) parameter of the Master FX.

d: Low Gain Mod-Src

For example, when this parameter is set to **Kb1#17**, you can control the EQ gain in the range from -18dB to +18dB during performance using the [REALTIME CONTROLS] knob. At this time, set Knob 1-B to **Knob Mod1 (CC#17)** for “Knob B-Assign” (Program, Combination, Multi 2.2-1a). The 12 o’clock position of the knob corresponds to the “Low Gain” value here.

e: High Gain Mod-Src

For example, when this parameter is set to **Kb2#19**, you can control the EQ gain in the range from -18dB to +18dB during performance using the [REALTIME CONTROLS] knob. At this time, set Knob 2-B to **Knob Mod2 (CC#19)** for “Knob B-Assign” (Program, Combination, Multi 2.2-1a). The 12 o’clock position of the knob corresponds to the High Gain value here.



9. Appendices

Alternate Modulation Source (AMS)

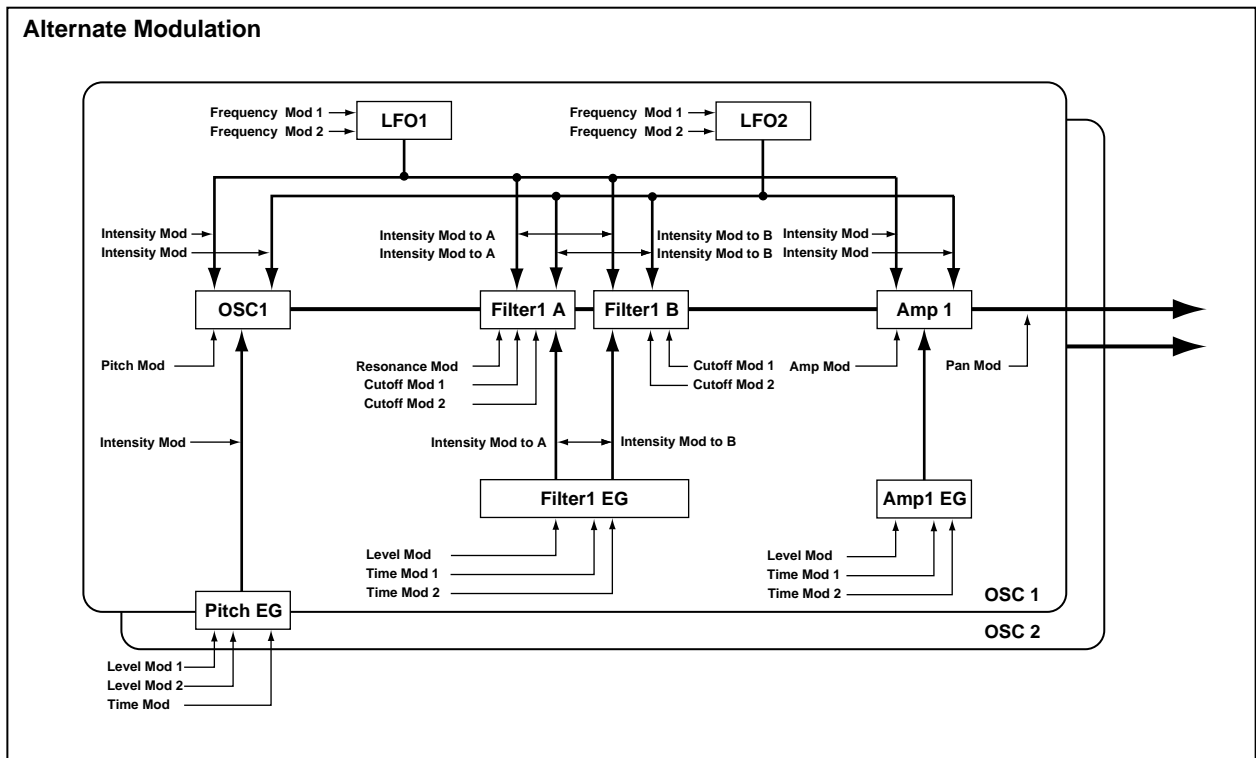
About Alternate Modulation

Alternate Modulation can be specified for the following 29 types, in total, 55 alternate modulation destinations shown in the diagram below. (Pitch EG is common to OSC 1 and 2.) AMS (Alternate Modulation Source) can be selected independently for each of these to apply modulation.

About Alternate Modulation Sources

There are 42 Alternate Modulation sources (AMS) that can control Alternate Modulation destinations. If you select two or more Alternate Modulation destinations for control by the same AMS, a single source will apply modulation to each of the specified destinations.

Frequently-used settings such as controlling the pitch by the joystick X-axis (MIDI pitch bend messages) of a connected MIDI instrument such as the TRITON are already provided as special parameters, without your having to make Alternate Modulation settings.



Different types of Alternate Modulation are used to control the bank F programs (which can be used when the separately sold EXB-MOSS option is installed). (⇒EXB-MOSS owner's manual & p.251 "EXB-MOSS option")

AMS (Alternate Modulation Source) List

Off	do not use Alternate Modulation
(PEG) Pitch EG	pitch EG
(FEG) Filter EG	filter EG within the same oscillator
(AEG) Amp EG	amp EG within the same oscillator
(LFO) LFO1	LFO1 within the same oscillator
(LFO) LFO2	LFO2 within the same oscillator
(KT) Flt KT +/- (Filter Keyboard Track +/-)	filter keyboard tracking within the same oscillator (≈p.207)
(KT) Flt KT +/- (Filter Keyboard Track +/-)	filter keyboard tracking within the same oscillator (≈p.207)
(KT) Flt KT 0/+ (Filter Keyboard Track 0/+)	filter keyboard tracking within the same oscillator (≈p.207)
(KT) Flt KT +/0 (Filter Keyboard Track +/0)	filter keyboard tracking within the same oscillator (≈p.207)
(KT) Amp KT +/- (Amp Keyboard Track +/-)	amp keyboard tracking within the same oscillator (≈p.207)
(KT) Amp KT +/- (Amp Keyboard Track +/-)	amp keyboard tracking within the same oscillator (≈p.207)
(KT) Amp KT 0/+ (Amp Keyboard Track 0/+)	amp keyboard tracking within the same oscillator (≈p.207)
(KT) Amp KT +/0 (Amp Keyboard Track +/0)	amp keyboard tracking within the same oscillator (≈p.207)
(KT) Note No. (Note Number)	note number
(EXT) Velocity	velocity
(EXT) Poly After (Poly After Touch)	MIDI poly aftertouch
(EXT) AfterT (After Touch)	MIDI channel aftertouch (aftertouch*)
(EXT) JS X (Joy Stick X)	MIDI pitch bend (joystick X= horizontal axis*)
(EXT) JS+Y #01 (Joy Stick +Y: CC#01)	MIDI CC#01: modulation 1 (joystick +Y= vertical axis upward*)
(EXT) JS-Y #02 (Joy Stick -Y: CC#02)	MIDI CC#02: modulation 2 (joystick -Y= vertical axis downward*)
(EXT) JS+Y&AT/2 (Joy Stick +Y & After Touch/2)	MIDI CC#01: modulation 1 and channel aftertouch (≈p.207)
(EXT) JS-Y&AT/2 (Joy Stick -Y & After Touch/2)	MIDI CC#02: modulation 2 and channel aftertouch (≈p.207)
(EXT) Pedal #04 (Foot Pedal: CC#04)	MIDI CC#04: foot controller (assignable foot pedal*)
(EXT) Ribbon #16 (Ribbon: CC#16)	MIDI CC#16: controller (ribbon controller*)
(EXT) Slider #18 (Value Slider: CC#18)	MIDI CC#18: controller (value slider*)
(EXT) KnobM1#17 (Knob Mod1: CC#17)	realtime control knob 1 in B-mode (knob modulation 1 CC#17) (≈p.207)
(EXT) KnobM2#19 (Knob Mod2: CC#19)	realtime control knob 2 in B-mode (knob modulation 2 CC#19) (≈p.207)
(EXT) KnobM3#20 (Knob Mod3: CC#20)	realtime control knob 3 in B-mode (knob modulation 3 CC#20) (≈p.207)
(EXT) KnobM4#21 (Knob Mod4: CC#21)	realtime control knob 4 in B-mode (knob modulation 4 CC#21) (≈p.207)
(EXT) KnobM1 [+] (Knob Mod1: CC#17 [+])	realtime control knob 1 in B-mode [+] (≈p.207)
(EXT) KnobM2 [+] (Knob Mod2: CC#19 [+])	realtime control knob 2 in B-mode [+] (≈p.207)
(EXT) KnobM3 [+] (Knob Mod3: CC#20 [+])	realtime control knob 3 in B-mode [+] (≈p.207)
(EXT) KnobM4 [+] (Knob Mod4: CC#21 [+])	realtime control knob 4 in B-mode [+] (≈p.207)
(EXT) Damper#64 (Damper: CC#64)	MIDI CC#64: damper (damper pedal*)
(EXT) Prta.SW#65 (Portamento Switch: CC#65)	MIDI CC#65: portamento on/off
(EXT) Soste.#66 (Sostenuto: CC#66)	MIDI CC#66: sostenuto on/off
(EXT) Soft #67 (Soft Pedal: CC#67)	MIDI CC#67: soft pedal
(EXT) SW 1 #80 (SW1 Mod.: CC#80)	Assignable switch 1 (SW1 modulation CC#80) (≈p.207)
(EXT) SW 2 #81 (SW2 Mod.: CC#81)	Assignable switch 2 (SW2 modulation CC#81) (≈p.207)
(EXT) FootSW#82 (Foot Switch: CC#82)	MIDI CC#82: foot switch (assignable foot switch*)
(EXT) MIDI CC#83	MIDI CC#83
(EXT) Tempo	tempo (tempo data from internal clock or external MIDI clock)

In the above table, the parentheses () indicate the type of source that can be used for each AMS.

For example, the “AMS” value for OSC1 Pitch (PROG 3.1-1a) can be [Off, (FEG, AEG, EXT)] (≈p.10). This means that you can select Off, and (FEG), (AEG), or (EXT) sources.

CC#: This is the control change number.

*: This indicates a controller or a function assigned to a controller on the TRITON/TRITONpro/TRITONproX. The controller and the type of MIDI messages it transmits will depend on the type of connected MIDI instrument.

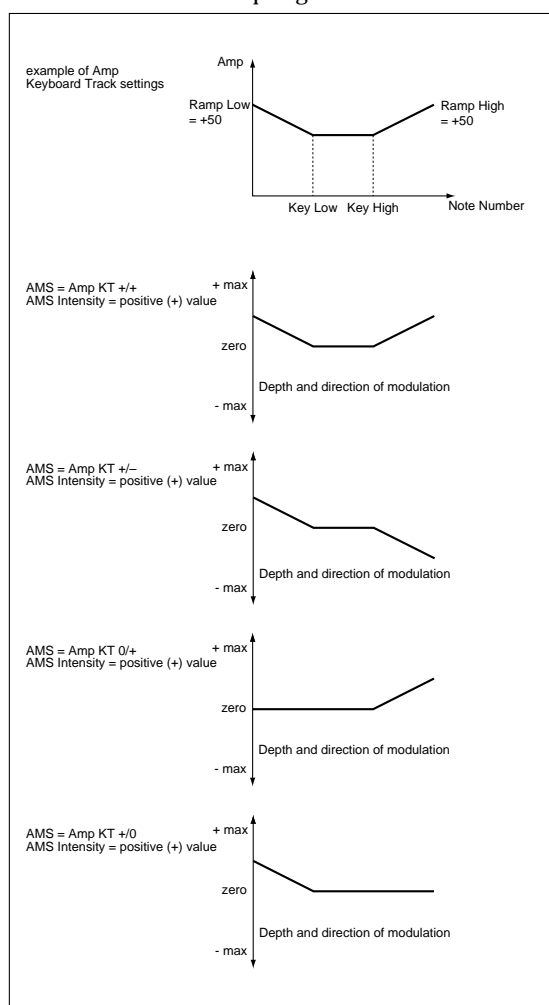
Flt KT +/- (Filter Keyboard Track +/-)
 Flt KT +/- (Filter Keyboard Track +/-)
 Flt KT 0/+ (Filter Keyboard Track 0/+)
 Flt KT +/-0 (Filter Keyboard Track +/-0)
 Amp KT +/- (Amp Keyboard Track +/-)
 Amp KT +/- (Amp Keyboard Track +/-)
 Amp KT 0/+ (Amp Keyboard Track 0/+)
 Amp KT +/-0 (Amp Keyboard Track +/-0)

+/-: The direction of the effect will be determined by the sign (positive or negative) of the “Ramp Low” or “Ramp High” setting.

+/-: The direction of the effect will be determined by the sign of the “Ramp Low” setting, and by the opposite sign of the “Ramp High” setting (-50 for a setting of +50, and +50 for a setting of -50).

0/+: “Ramp Low” will have no AMS effect. The sign of the “Ramp High” setting will determine the direction of its effect.

+0/: The sign of the “Ramp Low” setting will determine the direction of its effect. “Ramp High” will have no AMS effect.



JS+Y&AT/2 (Joy Stick +Y & After Touch/2)

The effect will be applied by the joystick +Y axis (vertical upward) or aftertouch (MIDI CC#01: modulation 1 or channel aftertouch) from a connected TRITON or other instrument.

JS-Y&AT/2 (Joy Stick-Y & After Touch/2)

The effect will be applied by the joystick -Y axis (vertical downward) or aftertouch (MIDI CC#02: modulation 2 or channel aftertouch) from a connected TRITON or other instrument.

KnobM1#17 (Knob Mod1: CC#17)

KnobM2#19 (Knob Mod2: CC#19)

KnobM3#20 (Knob Mod3: CC#20)

KnobM4#21 (Knob Mod4: CC#21)

If you wish to use a REALTIME CONTROLS knob [1]–[4] as an AMS, make settings in Program, Combination, or Multi modes to set the 2.2: Ed-Ctrl Controls page parameter “Knob B Assign” to the following settings respectively: “Knob1-B” to **Knob Mod.1(CC#17)**, “Knob2-B” to **Knob Mod.2(CC#19)**, “Knob3-B” to **Knob Mod.3(CC#20)**, or “Knob4-B” to **Knob Mod.4(CC#21)**. (☞p.214 “Knob 1...4 B Assign”)

When you set REALTIME CONTROLS to B-mode and operate knobs [1]–[4], the specified modulation will apply.

If AMS intensity is set to a **positive (+)** value, moving the knob to the 12 o'clock position will produce an AMS effect of 0. Rotating the knob toward the right will produce a positive change in the effect, and rotating it toward the left will produce a negative change. (With **negative (-)** settings, the opposite effect will result.)

KnobM1 [+] (Knob Mod1: CC#17 [+])

KnobM2 [+] (Knob Mod2: CC#19 [+])

KnobM3 [+] (Knob Mod3: CC#20 [+])

KnobM4 [+] (Knob Mod4: CC#21 [+])

These differ from **KnobM1#17–KnobM4#21** in the knob position and direction of the effect. If AMS intensity is set to a **positive (+)** value, rotating the knob to the far right will produce an AMS effect of 0. Rotating the knob toward the right will apply an effect only in the positive direction. (With **negative (-)** settings, the opposite effect will result.)

SW 1 #80 (SW1 Mod.: CC#80)

SW 2 #81 (SW2 Mod.: CC#81)

If you wish to use the “SW1” or “SW2” button as an AMS, make settings in Program, or Multi modes to set the 2.2: Ed-Ctrl/Controller, Controls page parameter “SW1/2 Assign” to the following values respectively: “SW1” to **SW1 Mod.(CC#80)**, or “SW2” to **SW2 Mod.(CC#81)** (☞“SW1/2 Assign”).

These are controlled by the “SW1” or “SW2” buttons (F6 and F7 keys).

Alternate Modulation settings

When you receive or operate an AMS (Alternate Modulation Source), the modulation destination will be affected as shown in the table below.

By using alternate modulation, you can create complex systems of modulation in which EG, LFO, keyboard tracks, and controllers work together.

- You can apply complex change to an LFO or EG, for example by using the pitch/filter/amp EG to control the frequency or intensity of an LFO that modulates the pitch/filter/amp, or by using LFO2 to control the frequency of LFO1.
- The tone, EG, and LFO etc. can also be controlled by the REALTIME CONTROLS knobs of the TRITON-Rack or by velocity, joystick, switches, or pedals of a connected TRITON or other MIDI instrument.
- Panning can be controlled in realtime from a controller, EG, or LFO etc.
- The filter EG can also be used to control pitch or volume at the same time as it controls the filter.
- Controllers etc. can be used to control EG levels or times. This lets you shape the EG in realtime.
- Filter/amp keyboard tracking or note number can be used to control the EG or LFO according to the keyboard pitch that is played.
- Pitch, tone, EG, or LFO can be controlled by the tempo of the arpeggiator, pattern/RPPR, or an external sequencer.

Notes for the table

- *1 If **Note No.** is selected as an “AMS,” the base value will be **C4**.
- *2 EXT(+): Velocity, Poly After, After Touch, JS+Y:CC#01, JS(-Y):CC#02, JS+Y & AT/2, JS -Y & AT/2, Pedal:CC#04, Slider:CC#18, KnobMod1[+], KnobMod2[+], KnobMod3[+], KnobMod4[+], Damper:#64, Porta:SW:#65, Sostenuito:#66, Soft:CC#67, SW1:CC#80, SW2:CC#81, Foot SW:CC#82, MIDI:CC#83
- *3 EXT(-): KnobMod1:#17, KnobMod2:#19, KnobMod3:#20, KnobMod4:#21
- *4 If **Tempo** is selected as an AMS, the base value will be **J=120**. For example if the AMS for “Pitch” is set to **Tempo**, and “AMS Intensity” is set to **12.00**, doubling the tempo value (J=120 → 240) will raise the pitch one octave, and halving the tempo (J=120 → 60) will lower the pitch one octave.
- *5 A dedicated parameter is also provided.
- *6 This will be added to the “Filter Frequency” value. As the “Frequency” value increases by **10**, the cutoff frequency will double (rise one octave).
- *7 This will be added to the “Pan” setting.
- *8 It is possible to control LFO “Frequency” by using **Tempo** and “AMS Intensity.” However if you use the “MIDI/Tempo Sync.” function (PROG 5.3-1c), the LFO frequency can be synchronized to the tempo and note value.

The effect of alternate modulation on various parameters, and example applications

Pitch (PROG 3.1-1a)

Pitch can be controlled by the filter/amp EG, controllers, or tempo etc.

- If you select **Filter EG** or **Amp EG** as the “AMS (Pitch AMS)” and set “Intensity (AMS Intensity)” to **+12.00**, the pitch will change up to ±1 octave in synchronization with the EG.
- If you select **Tempo** as the “AMS (Pitch AMS)” and set “Intensity (AMS Intensity)” to **+12.00**, doubling the tempo (based on J=120) will raise the pitch one octave, and halving the tempo will lower the pitch one octave.

Pitch EG Intensity (PROG 3.1-1b)

Pitch EG intensity can be controlled by keyboard tracking, controllers, or tempo.

- If you select **JS+Y#01** as the “AMS (Pitch EG AMS)” and set “Intensity (AMS Intensity)” to **+12.00**, moving the joystick on the connected MIDI instrument, such as the TRITON, in the +Y direction will gradually increase the effect of the Pitch EG to a maximum of ±1 octave. If “Intensity (AMS Intensity)” has a **negative value**, the effect of the Pitch EG will be inverted.

Pitch LFO1/2 Intensity (PROG 3.1-2a, 3.1-3)

Pitch modulation intensity of the LFO1/2 can be controlled by an EG, keyboard tracking, controllers, or tempo etc.

- If you select **EG** as the “AMS (LFO1/2 AMS),” the pitch change width of LFO modulation etc. can be controlled in synchronization with the level changes of the EG. With **positive (+)** settings of “Intensity (AMS Intensity),” the vibrato effect will gradually deepen as the EG level rises, or gradually lessen as the EG level decreases. With **negative (-)** settings of “Intensity (AMS Intensity),” the LFO phase will be inverted.
- If you select a controller such as **SW1** or **2** as the “AMS,” you can press the “SW1” or “SW2” button when desired to turn on the vibrato effect.

Filter (Cutoff) Frequency (PROG 4.1-3a)

The cutoff frequency of filter A/B can be controlled by the pitch/amp EG, controllers, or tempo. For each filter A and B you can specify “AMS1 (Filter A/B AMS1),” Intensity (A/B AMS1 Intensity), “AMS2 (Filter A/B AMS2),” “Intensity (A/B AMS2 Intensity).”

Parameter	AMS → AMS Value → AMS Intensity	PEG/FEG -99...0...+99	AEG 0...+99
Pitch	(+12.00)	-1...0...+1[Octave]	0...+1[Octave]
Pitch EG Int.	(+12.00)	-	-
Pitch LFO1/2 Int.	(+12.00)	-1...0...+1[Octave]	0...+1[Octave]
Filter Frequency *6	(+99)	-99...0...+99	0...+99
Resonance	(+99)	-99...0...+99	0...+99
Filter EG Int.	(+99)	-	-
Filter LFO1/2 Int.	(+99)	-99...0...+99	0...+99
Amp	(+99)	value x(0...1...8)	-
Amp LFO1/2 Int.	(+99)	-99...0...+99	0...+99
Pan *7	(+50)	-63...0...+63	0...+63
EG Level	(+66)	-	-
EG Time	(+49)	-	-
LFO Frequency	(+99)	value x(1/64...1...64)	value x(1...64)

- If you select **JS X** or **Ribbon#16** as the “AMS1 (Filter A AMS1)” and set “Intensity (A AMS1 Intensity)” to a **positive (+)** value, moving the joystick or ribbon controller on the connected MIDI instrument, such as the TRITON, toward the right will raise the cutoff frequency, and moving it toward the left will lower the cutoff frequency. **Negative (-)** settings will have the opposite effect.
- If you select the same controller as an AMS and set separate intensities for Filter A (Low Pass Filter) “Intensity (A AMS1/2 Intensity)” and Filter B (High Pass Filter) “Intensity (B AMS1/2 Intensity),” you can operate a single controller to simultaneously control the cutoff frequencies of both filters.

Resonance (PROG 4.1–1b)

This can be used when the “Type (Filter1/2 Type)” is **Low Pass Resonance**. The resonance level can be controlled by EG, LFO, keyboard tracking, controllers or tempo etc.

- If you select **Filter KT** or **Amp KT** as the “Reso.AMS (Resonance AMS),” you can use the filter or amp keyboard tracking settings to control the resonance level. For example if the amp keyboard tracking parameters “Low (KBDTrk Ramp Low)” and “High (KBDTrk Ramp High)” are set to **positive (+)** values, **Amp KT** +/- is selected as the “Reso.AMS(Resonance AMS),” and “Intensity (AMS Intensity)” it set to a **positive (+)** value, playing toward either end of the keyboard will cause amp keyboard tracking to increase the volume, and “Reso.AMS(Resonance AMS)” to raise the resonance level.
- You can select a controller as the “Reso.AMS (Resonance AMS),” and apply resonance when desired by operating the controller.
- You can select LFO1 or 2 as the “Reso.AMS (Resonance AMS),” and use the LFO to modulate the resonance level.

Filter EG Intensity (PROG 4.1–2b)

Filter EG intensity can be controlled by a controller or tempo etc. You can use “Int. to A (LFO1/2 AMS Int. to A)” and “Int. to B (LFO1/2 AMS Int. to B)” to independently specify the intensity for Filter A and B.

- If you select **JS-Y#02** as the “AMS (Filter EG AMS)” and set “Int. to A/B(AMS Int. to A/B)” to a **positive (+)** value, moving the joystick on the connected MIDI instrument, such as the TRITON, in the -Y direction will gradually increase the effect of the Filter EG. If you set “Int. to A/B(AMS Int. to A/B)” to a **negative (-)** value, the effect of the Filter EG will be inverted.
- If you select **Ribbon#16** as the “AMS (Filter EG AMS)” and set “Int. to A/B (AMS Int. to A/B)” to a **positive (+)** value, operating the ribbon controller on the connected

MIDI instrument, such as the TRITON, toward the right will gradually increase the effect of the Filter EG.

Operating the ribbon controller on the connected MIDI instrument, such as the TRITON, toward the left will gradually increase the effect of the Filter EG with an inverted phase.

Filter LFO 1/2 Intensity (PROG 4.1–4a)

The LFO 1/2 filter modulation intensity can be controlled by EG, keyboard tracking, controller, or tempo. You can use “Int. to A (LFO1/2 AMS Int. to A)” and “Int. to B (LFO1/2 AMS Int. to B)” to independently specify the intensity for Filter A and B.

- If you select **EG** as the “AMS(LFO1/2 AMS),” the auto-wah effect produced by LFO modulation will be controlled by the changes in EG level. If you set “Int. to A (LFO1/2 AMS Int. to A)” / “Int. to B(LFO1/2 AMS Int. to B)” to a **positive (+)** value, the wah effect will deepen as the EG level rises, and will lessen as the EG level falls. With **negative (-)** values of “Int. to A(LFO1/2 AMS Int. to A)” / “Int. to B(LFO1/2 AMS Int. to B),” the phase of the LFO will be inverted.
- If you use a controller such as **SW1** or **2** as the “AMS (LFO1/2 AMS),” you can apply the auto-wah effect when desired by pressing the “SW1” or “SW2” button.

Amp (PROG 5.1–2b)

The volume can be controlled by the pitch/filter EG, controllers, or tempo etc.

- If an EG or controller that changes with a **positive (+)** value (**Amp EG, EXT(+), EXT(SW)**) is selected as the “AMS (Amp AMS),” setting the “Int (AMS Intensity)” to **+99** will allow you to increase the volume to a maximum of eight times that of the current volume.
- If an EG, LFO, or controller that changes with a **± value (Pitch EG, Filter EG, LFO, KT, EXT(+/-))** is selected as the “AMS(Amp AMS),” setting the “Int (AMS Intensity)” to **+99** will allow you to increase the volume to a maximum of eight times that of the current volume (for positive (+) changes of the AMS), or to decrease the volume to zero (for negative (-) changes of the AMS).
- In addition to the time-variant changes in volume produced by the amp EG, you can also make the volume change in synchronization with the pitch/filter EG. Select **PitchEG** or **FilterEG** as the “AMS (Amp AMS),” and adjust “Int (AMS Intensity).” If you wish to cancel the effect of the AmpEG and use the pitch/filter EG to control the volume, set all levels of the AmpEG to **+99**.

Amp LFO 1/2 Intensity (PROG 5.1–2b)

The amp modulation intensity of LFO 1/2 can be controlled by EG, keyboard tracking, controllers, or tempo etc.

LFO1/2 -99...0...+99	KT(Fit KT, Amp KT) -99...0...+99	KT(Note No.) *1 ...36(C2)...60(C4)...84(C6) ...	JS X/Ribbon#16 -Max...0...+Max	EXT(+)*2 0...127	EXT(+/-)*3 -Max...0...+Max	EXT(Tempo)*4 (↓) = ...60...120...240...
dedicated parameter - -	-1...0...+1[Octave] -1...0...+1[Octave] -1...0...+1[Octave]	dedicated parameter ...-1...0...+1...[Octave] ...-1...0...+1...[Octave]	-1...0...+1[Octave]*5 -1...0...+1[Octave] -1...0...+1[Octave]	0...+1[Octave] 0...+1[Octave] 0...+1[Octave]	-1...0...+1[Octave] -1...0...+1[Octave] -1...0...+1[Octave]	...-1...0...+1...[Octave] ...-1...0...+1...[Octave] ...-1...0...+1...[Octave]
dedicated parameter -99x2...0...+99x2 - -	-99...0...+99 - -99...0...+99	...-99...0...+99... - ...-99...0...+99...	-99...0...+99 -99...0...+99 -99...0...+99 -99...0...+99	0...+99 0...+99 0...+99 0...+99	-99...0...+99 -99...0...+99 -99...0...+99 -99...0...+99	...-99...0...+99... ...-99...0...+99... ...-99...0...+99... ...-99...0...+99...
dedicated parameter - -127...0...+127	-99...0...+99 -63...0...+63	...-99...0...+99... ...-63...0...+63...	value x(0...1...8) -99...0...+99 -63...0...+63	value x(1...8) 0...+99 0...+63	value x(0...1...8) -99...0...+99 -63...0...+63	value x(0...1...8...) ...-99...0...+99... ...-63...0...+63...
- - value x(1/128...1...128)	-99...0...+99 value x(1/64...1...64) value x(1/64...1...64)	-99...0...+99 value x(...1/64...1...64...) value x(...1/64...1...64...)	-99...0...+99 value x(1/64...1...64) value x(1/64...1...64)	0...+99 value x(1...64) value x(1...64)	-99...0...+99 value x(1/64...1...64) value x(1/64...1...64)	-99...0...+99 value x(...1/64...1...64...) value x(...1/64...1...64...)*8

- If you select **EG** as the “AMS (LFO1/2 AMS),” the depth of the tremolo effect produced by LFO modulation will change in synchronization with the changes in EG level. If you set “Int. (AMS Intensity)” to a **positive (+)** value, the tremolo effect will deepen as the EG level rises, and lessen as the EG level falls. If “Int. (AMS Intensity)” is set to a **negative (-)** value, the phase of the LFO will be inverted.
- If select a controller such as **SW1** or **2** as the “AMS (LFO1/2 AMS),” you can apply the tremolo effect by pressing the “SW1” or “SW2” button when desired.

Pan (PROG 5.1–1b)

The oscillator pan can be controlled by EG, LFO, keyboard tracking, controllers, or tempo etc.

- If you select **Note No.** as the “AMS (Pan AMS)” and set “Intensity” to **+50**, panning will be controlled by the keyboard position on the connected MIDI instrument, such as the TRITON: center at the C4 note, far right at C6 or above, and far left at C2 or below.
- If EG is selected as the “AMS (Pan AMS),” the oscillator pan will be controlled in synchronization with the changes in EG level. If “Intensity” is set to a **positive (+)** value, the pan will move toward the right as the EG level increases, and toward the left as the EG level decreases. If “Intensity” is set to a **negative (-)** value, the opposite effect will occur.

- EG Level – Pitch EG (PROG 3.1–5b)**
– Filter EG (PROG 4.1–5b)
– Amp EG (PROG 5.1–3b)

EG levels can be controlled by keyboard tracking, controllers, or tempo etc.

Set the “I (AMS Intensity)” value, and select **+/-/0** for each EG segment (“S” start, “A” attack, “B” break) to specify the direction of the effect (if any) on that segment.

+: AMS will function according to the Intensity setting.

-: The sign of the Intensity setting will be inverted.

0: AMS will have no effect.

If “I (AMS Intensity)” is set to **+66**, the various EG levels can be controlled over a maximum range of **±99**.

- Set “AMS” to **Velocity** for Amp EG Level Modulation, “I (AMS Intensity)” to **+66**, “S” to **0**, “A” to **+**, and “B” to **-**. Set all Amp EG levels to **+00**. As you play with increasing velocity, the EG levels will change more greatly. At the maximum velocity, the Start Level will stay at **+00**, but the Attack Level will change to **+99** and the Break Level will change to **-99**.

- EG Time – Pitch EG (PROG 3.1–5c)**
– Filter EG (PROG 4.1–5c)
– Amp EG (PROG 5.1–3c)

EG times can be controlled by keyboard tracking, controllers, or tempo etc. Set the “I (AMS Intensity)” value, and select **+/-/0** for each EG segment (“A” attack, “D” decay, “S” slope, “R” release) to specify the direction of the effect (if any) on that segment.

+: AMS will function according to the Intensity setting.

-: The sign of the Intensity setting will be inverted.

0: AMS will have no effect.

Each EG time is determined by the Alternate Modulation value at the moment that the corresponding EG point is reached. For example, the Alternate Modulation value at the moment that the Attack Level is reached will determine the Decay Time.

If “I (AMS Intensity)” is set to a value of **8, 17, 25, 33, 41, or 49**, the corresponding time can be multiplied by a maximum

of **2, 4, 8, 16, 32, or 64** times (or divided by **1/2, 1/4, 1/8, 1/16, 1/32, 1/64**).

- Select **JS+Y#01** for “AMS,” and set “I (AMS Intensity)” to **+8**, “A” to **+**, “D” to **-**, and “S” and “R” to **0**. When you move the joystick in the **+Y** direction, the Attack Time will be lengthened by a maximum of **2** times. The Decay Time will be shortened by a maximum of **1/2**. The Slope and Release times will not change.

LFO Frequency (PROG 5.3–1b)

The frequency of LFO 1 or 2 can be controlled by EG, keyboard tracking, controllers, or tempo etc., You can even use the LFO2 frequency to modulate the LFO1 frequency.

If “AMS Intensity” is set to a value of **16, 33, 49, 66, 82, or 99**, the corresponding frequency can be multiplied by a maximum of **2, 4, 8, 16, 32, or 64** times (or divided by **1/2, 1/4, 1/8, 1/16, 1/32, 1/64**).

- Select **JS+Y#01** for “AMS1/2 (Freq. AMS1/2),” and set “Int (AMS1/2 Intensity)” to **+16**. When you move the joystick on the connected MIDI instrument, such as the TRITON, in the **+Y** direction, the LFO frequency will be increased by a maximum of **2** times. If you set “Int (AMS1/2 Intensity)” to **-16** and move the joystick in the **+Y** direction, the LFO frequency will be decreased by up to **1/2**.

Dynamic Modulation Source (Dmod)

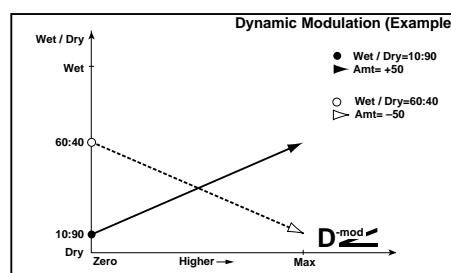
Specific effect parameters can be controlled while you play by the TRITON-Rack's REALTIME CONTROLS knobs or by the joystick or ribbon controller etc. of a connected TRITON or other MIDI device. Controlling effects in this way is referred to as **Dynamic Modulation**. For example, you can use After Touch to speed up the LFO of the chorus and flanger, or you can use the ribbon controller to activate the wah effect. In this way, you will be able to take full advantage of the effects as part of the expressive potential of your instrument.


Most of the parameters for dynamic modulation consist of parameter values for "(Source)" and "(Amount)." The "(Source)" field selects the modulation source, and "(Amount)" sets the amount of dynamic modulation effect. When the modulation source is set to the maximum value, the actual degree of the effect will be the parameter value plus the "(Amount)" value.

Example: "W/D (Wet/Dry)" 10:90, "(Source)" AfterT, "(Amount)" +50

In this case, the effect balance is 10:90. As you apply After Touch, the percentage of the effect sound will increase.

When After Touch is at its maximum, the effect balance will be 60:40.



 The dynamic modulation effect will not be affected if you modify the "Amt" value while dynamic modulation is being applied. The change will become effective when you operate the dynamic modulation source again.

Refer to the corresponding effect section for an explanation of other dynamic modulation parameters.

In the table of parameters for each effect, dynamic modulation parameters are marked by a **D^{mod}** symbol at the right of the parameter.

Dynamic Modulation Source List

Source name	Explanation
Off	dynamic modulation is not used
Gate1	note on/off (p.212)
G1+Dmp (Gate1+Damper)	note on + damper on/off (p.212)
Gate2	note on/off (retrigger) (p.212)
G2+Dmp (Gate2+Damper)	note on + damper on/off (retrigger) (p.212)
NoteNo. (Note Number)	note number
Vel (Velocity)	Velocity
AfterT (After Touch)	MIDI channel aftertouch (aftertouch*)
JS X (Joy Stick X)	MIDI pitch bend (joystick X= horizontal axis*)
JS+Y#1 (Joy Stick +Y: CC#01)	MIDI CC#01: modulation 1 (joystick +Y= vertical axis upward*)
JS-Y#2 (Joy Stick -Y: CC#02)	MIDI CC#02: modulation 2 (joystick -Y= vertical axis downward*)
Pd#4 (Foot Pedal: CC#04)	MIDI CC#04: foot controller (assignable foot pedal*)
FX1#12 (FX Control1: CC#12)	MIDI CC#12: effect control1
FX2#13 (FX Control2: CC#13)	MIDI CC#13: effect control2
Rbn#16 (Ribbon: CC#16)	MIDI CC#16: controller (ribbon controller*)
Sld#18 (Value Slider: CC#18)	MIDI CC#18: controller (value slider*)
Kb1#17 (Knob Mod1: CC#17)	realtime control knob 1 in B-mode (knob modulation 1 CC#17) (p.212)
Kb2#19 (Knob Mod2: CC#19)	realtime control knob 2 in B-mode (knob modulation 2 CC#19) (p.212)
Kb3#20 (Knob Mod3: CC#20)	realtime control knob 3 in B-mode (knob modulation 3 CC#20) (p.212)
Kb4#21 (Knob Mod4: CC#21)	realtime control knob 4 in B-mode (knob modulation 4 CC#21) (p.212)
Kb1[+] (Knob Mod1: CC#17 [+])	realtime control knob 1 in B-mode [+] (p.212)
Kb2[+] (Knob Mod2: CC#19 [+])	realtime control knob 2 in B-mode [+] (p.212)
Kb3[+] (Knob Mod3: CC#20 [+])	realtime control knob 3 in B-mode [+] (p.212)
Kb4[+] (Knob Mod4: CC#21 [+])	realtime control knob 4 in B-mode [+] (p.212)
Dmp#64 (Damper: CC#64)	MIDI CC#64: damper (damper pedal*)
Prt#65 (Portamento Switch: CC#65)	MIDI CC#65: portamento on/off
Sos#66 (Sostenuto: CC#66)	MIDI CC#66: sostenuto on/off
SW1#80 (SW1 Mod.: CC#80)	Assignable switch 1 (SW1 modulation CC#80) (p.212)
SW2#81 (SW2 Mod.: CC#81)	Assignable switch 2 (SW2 modulation CC#81) (p.212)
FSW#82 (Foot Switch: CC#82)	MIDI CC#82: foot switch (assignable foot switch*)
CC#83	MIDI CC#83
Tempo	tempo (internal clock or external MIDI clock tempo data) (p.212)

CC#: This is the control change number.

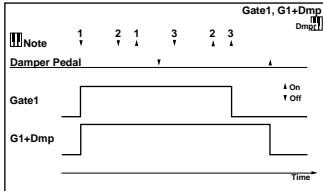
*: This indicates a controller or a function assigned to a controller on the TRITON/TRITONpro/TRITONproX. The controller and the type of MIDI messages it transmits will depend on the type of connected MIDI instrument.

MIDI In Program and Sampling modes, dynamic modulation of the insertion effects and master effects is controlled via the global MIDI Channel. (In Sampling mode, only the insertion effects can be used.)

In Combination, and Multi modes, dynamic modulation for the insertion effects and master effects is controlled on the MIDI channel independently specified by the “Control Channel” for IFX1–5, MFX1, and MFX2.

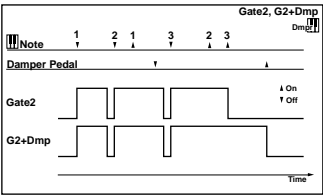
Gate1, G1+Dmp (Gate1+Damper)

The effect is at maximum during note-on, and will stop when all keys are released. With **G1+Dmp**, the effect will remain at maximum even after the keys are released, as long as the damper (sustain) pedal is pressed.



Gate2, G2+Dmp (Gate2+Damper)

This is essentially the same as for Gate 1 or G1+Dmp. However when **Gate 2** or **G2+Dmp** are used as a dynamic modulation source for the EG of 022: St.Env.Flanger etc. or the AUTOFADE of 027: St.Vibrato, a trigger will occur at each note-on. (In the case of Gate 1 and G1+Dmp, the trigger occurs only for the first note-on.)



Kb1#17 (Knob Mod1: CC#17)

Kb2#19 (Knob Mod2: CC#19)

Kb3#20 (Knob Mod3: CC#20)

Kb4#21 (Knob Mod4: CC#21)

If you wish to use a REALTIME CONTROLS knob [1]–[4] as a dynamic modulation source, make settings in Program, Combination, Multi, or Sampling modes to set the 5.2 (2.2): Ed-Ctrl/Controller page parameter “Knobs 1/2/3/4-B Assign” to the following settings respectively: “Knob1-B” to **Knob Mod.1 (CC#17)**, “Knob2-B” to **Knob Mod.2 (CC#19)**, “Knob3-B” to **Knob Mod.3 (CC#20)**, or “Knob4-B” to **Knob Mod.4 (CC#21)**. (⇒p.214 “Knob 1...4 B Assign”)

When you set REALTIME CONTROLS to B-mode and operate knobs [1]–[4], the effect will be controlled.

Moving the knob to the 12 o’clock position will produce an effect of 0 as the dynamic modulation source. If “(Amount)” is a **positive (+)** value, rotating the knob toward the right will produce a positive change in the effect, and rotating it toward the left will produce a negative change. (With **negative (-)** values, the opposite effect will result.)

Kb1[+] (Knob Mod1: CC#17 [+])

Kb2[+] (Knob Mod2: CC#19 [+])

Kb3[+] (Knob Mod3: CC#20 [+])

Kb4[+] (Knob Mod4: CC#21 [+])

These differ from Kb1#17 (Knob Mod1: CC#17)–Kb4#21 (Knob Mod4: CC#21) in the knob position and direction of the effect. If “(Amount)” is set to a **positive (+)** value, rotating the knob to the far right will produce an effect of 0 as the dynamic modulation source. Rotating the knob toward the right will apply an effect only in the positive direction. (With **negative (-)** settings, the opposite effect will result.)

SW1#80 (SW1 Mod.: CC#80)

SW2#81 (SW2 Mod.: CC#81)

If you wish to use the “SW1” or “SW2” button as a dynamic modulation source, make settings in Program, Multi, or Sampling modes to set the 5.2: Ed-Ctrl/Controller page parameter “SW1/2 Assign” to the following values respectively: “SW1” to **SW1 Mod. (CC#80)**, or “SW2” to **SW2 Mod.(CC#81)** (⇒p.213 “SW1/2 Assign”).

The functions can be controlled by operating the “SW1” or “SW2” buttons (F6, F7 keys) in the pages of each mode that allow such operations.

Tempo

Modulation sources other than **Tempo** are internally processed as a value of 0–127 (–128 – +127). In contrast, **Tempo** uses the tempo data (BPM value) of the internal clock or the external MIDI clock. This means that when “♪” is 127 (BPM), it will have the same result as the maximum value (+127) of other modulation sources.

About the BPM/MIDI SYNC function

BPM/MIDI SYNC can be used for most effects that have an LFO, such as **009: St.Wah/AutoW(Stereo Wah/Auto Wah)**, and for some delay-type effects such as **049: LCR BPM Delay**. You can apply modulation that is synchronized to the tempo, or specify the delay time in terms of a note value so that the effect will synchronize to the tempo of the arpeggiator pattern/RPPR, or external sequencer during a live performance even if you change the tempo.

Parameters that allow BPM/MIDI SYNC to be used are marked by a symbol at their right in the list of parameters for each effect.

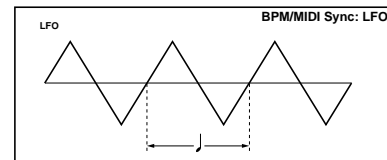
Example 1. LFO

“BPM/MIDI Sync” **On**

“Base (Base Note)” ♪

“Times” 1

In this case, each cycle of the LFO will be as long as one quarter note.



If you set “BPM” to **MIDI**, the LFO will synchronize to the tempo of the arpeggiator or pattern/RPPR (or to the external MIDI clock). If “BPM” is in the range of **40–240**, the specified value will be used.

Example 2. Delay Time

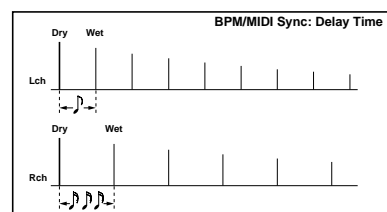
“L Bs (Base Note)” ♪

“Times” 1

“R Bs (Base Note)” ♪

“Times” 3

In this case, the delay time of the left channel will be the duration of an eighth note, and the delay time of the right channel will be the duration of a sixteenth note triplet.



When “BPM” is set to **MIDI**, the effect will synchronize to the tempo of the arpeggiator or the RPPR (or to an external MIDI clock). If “BPM” is in the range of **40–240**, the specified value will be used.

If the tempo, “Bs (Base Note),” and “Times” settings in conjunction would cause the maximum delay time to be exceeded, a warning such as “TimeOver? >OVER!” will appear in the display. Please modify your settings so that this setting does not appear. (The maximum delay time will depend on the effect type.)

SW1/2 Assign

The following functions can be assigned to “SW1” and “SW2.” These functions can be controlled by pressing the “SW1” or “SW2” buttons (F6, F7 keys) in the pages of each mode that allow such operations.

- For a program, combination, or multi, make the settings in 2.2: Ed-Ctrl/Controller page “SW1/2 Assign” (2.2–1b).
- In Sampling mode, make the settings in 5.2: Controls page “SW1/2 Assign” (5.2–1b).

SW1, SW2 Assign List

Off	no function
SW1 Mod.(CC#80) (SW1 Modulation:CC#80) SW2 Mod.(CC#81) (SW2 Modulation:CC#81)	Select this when using the switch as an Alternate Modulation or Effect Dynamic Modulation source. In this case, you must first specify the control destination. Each time the switch is turned On/Off, a CC#80 (or CC#81) message will be transmitted (Off: 0, On: 127). (⌘p.213)
Porta.SW(CC#65) (Portamento Switch:CC#65)	When you press SW1 (or SW2) to turn it on (LED lit), portamento will be applied. Each time this is turned On/Off, CC#65 will be transmitted (Off: 0, On: 127). (⌘p.213)
Octave Down :N/A	*
Octave Up :N/A	*
JS X Lock :N/A	*
JS+Y Lock :N/A	*
JS-Y Lock :N/A	*
Ribbon Lock :N/A	*
JS X&Rbn Lock :N/A	*
JS+Y&Rbn Lock :N/A	*
JS-Y&Rbn Lock :N/A	*
AfterT Lock :N/A	*

- * These values can be specified, but will have no actual effect. N/A indicates Not Available (i.e., invalid). Data compatibility is maintained between the TRITON-Rack and the TRITON/TRITONpro/TRITONproX (TRITON keyboard models). Programs created on the TRITON-Rack can be used on TRITON keyboard models, and the opposite is also true. In order to maintain compatibility, it is possible to specify these “invalid” parameters on the TRITON-Rack.

SW1 Mod.(CC#80) (SW1 Modulation:CC#80)

SW2 Mod.(CC#81) (SW2 Modulation:CC#81)

This effect differs between SW1 and SW2. SW1 is handled as CC#80, and SW2 is handled as CC#81.

Porta.SW(CC#65) (Portamento Switch:CC#65)

When PROG 2.1: Ed-Basic “Mode (Oscillator Mode)” (2.1–1a) is **Single**, turning the switch on (LED lit) will apply portamento regardless of the 3.1: Ed-Pitch “Enable (Porta. Enable)” (3.1–1c) setting, and turning the switch off will not apply portamento.

If “Mode (Oscillator Mode)” is **Double**, and if the “Enable (Porta. Enable)” setting is the same for OSC1 and 2 (i.e., **Enable** or **Disable** for both OSC1 and 2), then portamento will be applied to OSC1 and 2 when the switch is turned on, and portamento will not be applied to OSC1 and 2 when the switch is turned off.

If the “Enable (Porta. Enable)” setting is different for OSC1 and 2 (i.e., OSC1 is **Enable** and OSC2 is **Disable**, or OSC1 is **Disable** and OSC2 is **Enable**), then portamento will be applied to the OSC whose setting is **Enable** when the switch is turned on, and portamento will be applied to neither OSC when the switch is turned off.


Knob 1...4 B Assign

The following functions can be assigned to the REALTIME CONTROLS [1]-[4] knobs in B-mode.

- For programs, combinations, or multis, make these settings in 2.2: Ed-Ctrl/Controller page “Knob B Assign” (2.2-1a).
- In Sampling mode, make these settings in 5.2: Controls page “Knob B Assign” (5.2-1a).

Realtime Control Knobs B Assign List

Off	No function
Knob Mod. 1 (CC#17)	General purpose controller. Alternate Modulation or Effect Dynamic Modulation can be controlled. To use this, select KnobM1#17 for “AMS,” or Kb1#17 for “Dmod Src.” Simultaneously, CC#17 will be transmitted.
Knob Mod. 2 (CC#19)	General purpose controller. Alternate Modulation or Effect Dynamic Modulation can be controlled. To use this, select KnobM2#19 for “AMS,” or Kb2#19 for “Dmod Src.” Simultaneously, CC#19 will be transmitted.
Knob Mod. 3 (CC#20)	General purpose controller. Alternate Modulation or Effect Dynamic Modulation can be controlled. To use this, select KnobM3#20 for “AMS,” or Kb3#20 for “Dmod Src.” Simultaneously, CC#20 will be transmitted.
Knob Mod. 4 (CC#21)	General purpose controller. Alternate Modulation or Effect Dynamic Modulation can be controlled. To use this, select KnobM4#21 for “AMS,” or Kb4#21 for “Dmod Src.” Simultaneously, CC#21 will be transmitted.
Master Volume	Control the volume. Simultaneously, the universal system exclusive message Master Volume [FOH, 7FH, nn, 04, 01, vv, mm, F7H] will be transmitted to adjust the volume of all tracks or timbres (while preserving the volume balance between tracks or timbres).
Porta. Time (CC#05)	Control the portamento time. CC#5 will be transmitted.
Volume (CC#07)	Control the volume. Simultaneously, CC#7 will be transmitted.
IFX Pan (CC#08)	Control the panning after the insertion effect. Simultaneously, CC#8 will be transmitted.
Pan (CC#10)	Control the oscillator panning. Simultaneously, CC#10 will be transmitted.
Expression (CC#11)	Control the expression. Simultaneously, CC#11 will be transmitted.
FX Ctrl 1 (CC#12)	Control Effect Dynamic Modulation. When controlling this, set “Dmod Src” to FX1#12 . Simultaneously, CC#12 will be transmitted.
FX Ctrl 2 (CC#13)	Control Effect Dynamic Modulation. When controlling this, set “Dmod Src” to FX2#13 . Simultaneously, CC#13 will be transmitted.
Fit Cutoff (CC#74)	Control the cutoff frequency of the Filter (low pass filter). Simultaneously, CC#74 will be transmitted.
Fit Reso. (CC#71)	Control the resonance of the Filter, or the cutoff frequency of the high pass filter. If the program’s “Type (Filter1/2 Type)” is Low Pass Resonance , the resonance level will be controlled. If it is Low Pass & High Pass , the cutoff frequency of the high pass filter will be controlled. Simultaneously, CC#71 will be transmitted.
Fit EG Int. (CC#79)	Control the EG intensity of the Filter. Simultaneously, CC#79 will be transmitted.
F/A Attack (CC#73)	Control the EG attack of the Filter and Amplifier. Simultaneously, CC#73 will be transmitted.
F/A Decay (CC#75)	Control the EG decay time and slope time of the Filter and Amplifier. Simultaneously, CC#75 will be transmitted.
F/A Sus. (CC#70)	Control the EG sustain level of the Filter and Amplifier. Simultaneously, CC#70 will be transmitted.
F/A Rel. (CC#72)	Control the EG release time of the Filter and Amplifier. Simultaneously, CC#72 will be transmitted.
P LFO1 Spd (CC#76)	Control the frequency of LFO1. Simultaneously, CC#76 will be transmitted.
P LFO1 Dep (CC#77)	Control the LFO1 intensity of the pitch. Simultaneously, CC#77 will be transmitted.
P LFO1 Dly (CC#78)	Control the delay of LFO1. Simultaneously, CC#78 will be transmitted.
SW 1 Mod. (CC#80)	General-purpose controller. Alternate Modulation or Effect Dynamic Modulation can be controlled. To control these, set “AMS” or “Dmod Src” to SW 1 #80 . Simultaneously, CC#80 will be transmitted.
SW 2 Mod. (CC#81)	General-purpose controller. Alternate Modulation or Effect Dynamic Modulation can be controlled. To control these, set “AMS” or “Dmod Src” to SW 2 #81 . Simultaneously, CC#81 will be transmitted.
Foot Sw (CC#82)	General-purpose controller. Alternate Modulation or Effect Dynamic Modulation can be controlled. To use this, select FootSW#82 for “AMS,” or FSW#82 for “Dmod Src.” Simultaneously, CC#82 will be transmitted.
MIDI CC#83 (CC#83)	General-purpose controller. Alternate Modulation or Effect Dynamic Modulation can be controlled. To use this, select MIDI CC#83 for “AMS,” or CC#83 for “Dmod Src.” Simultaneously, CC#83 will be transmitted.
MFX Send 1 (CC#93)	Control the send level to Master Effect1. Simultaneously, CC#93 will be transmitted.
MFX Send 2 (CC#91)	Control the send level to Master Effect2. Simultaneously, CC#91 will be transmitted.
MIDI CC#00...CC#95	The specified MIDI control change (CC#) will be transmitted. If the TRITON-Rack is set so as to be controlled by the control change message, the corresponding control will occur.

 The A-mode functions of the REALTIME CONTROLS are fixed.

Knob1-A: LPF CUTOFF (Filter LPF Cutoff: CC#74)

Control the low pass filter cutoff frequency of the filter. Simultaneously, CC#74 will be transmitted.

Knob2-A: RESONANCE/HPF (Filter Resonance/HPF Cutoff: CC#71)

Control the resonance level or the cutoff frequency of the high pass filter. If the program "Filter Type" is **Low Pass Resonance**, the resonance level will be controlled. If "Filter Type" is **Low Pass & High Pass**, the cutoff frequency of the high pass filter will be controlled. Simultaneously, CC#71 will be transmitted.

Knob3-A: EG-INTENSITY (Filter EG Intensity: CC#79)

Control the filter EG intensity. Simultaneously, CC#79 will be transmitted.

Knob4-A: EG-RELEASE (Filter, Amplifier EG Release: CC#72)

Control the release time of the filter and amplifier EG. Simultaneously, CC#72 will be transmitted.

MIDI transmission when the TRITON-Rack's controllers are operated

The following table shows the relation between the MIDI messages that are transmitted when the TRITON-Rack's controllers are operated, and the AMS (alternate modulation source) or DMS (dynamic modulation source) that correspond to each MIDI message. # indicates a fixed function, and * indicates an assignable function.

When you operate the controllers of the TRITON-Rack, the corresponding or specified control change will be transmitted. Operation in each mode is described below.

Program mode

When one of the TRITON-Rack's controllers is operated, a control change message will be transmitted on the global MIDI channel ("MIDI Channel" GLOBAL 2.1-1a).

- ▶ If a REALTIME CONTROLS B-mode knob [1]-[4] is set to **Master Volume**, the universal exclusive message Master Volume will be transmitted.

Combination mode

When one of the TRITON-Rack's controllers is operated, a control change message will be transmitted on the global MIDI channel ("MIDI Channel" GLOBAL 2.1-1a).

Simultaneously, the message will also be transmitted on the MIDI channel ("MIDI Channel" COMBI 3.1-1a) of any timbre whose "Status" (COMBI 3.1-1a) is **EXT** or **EX2**.

When one of the TRITON's controllers is operated, its effect will apply to any timbre whose "Status" is **INT** and whose "MIDI Channel" setting is either **Gch** or the same as the global MIDI channel.

- ▶ In the case of **Master Volume**, the universal exclusive message Master Volume will be transmitted only on the global MIDI channel.
- ▶ You can make settings for MIDI Filter (COMBI 4.1-4.4) to **enable** or **disable** control changes and controllers for each timbre. When **checked**, the above operations will be enabled.

Effect dynamic modulation can be controlled when the "Control Ch (Channel)" (COMBI 7.2-1b, 7.3-1a, 7.3-1d) setting for IFX1-5, MFX1, 2, or MEQ is either set to **Gch** or to the same channel as the global MIDI channel. (In the case of **All Routed**, control is possible on the MIDI channel of any routed timbre.)

Multi mode

When one of the TRITON's controllers is operated, its effect will apply to the track 1-16 that is selected by "Control Track" (MULTI 1.1-1a, 5.1-1a, 5.1-2a).

If the "Status" (MULTI 3.1-1a/2a) of the track selected by "Control Track" is **EXT**, **EX2**, or **BTH**, a control change message will be transmitted on the MIDI channel specified by "MIDI Channel" (MULTI 3.1-1a/2a).

If the "Status" is **INT** or **BTH**, operating one of the TRITON's controllers will affect only that track. Simultaneously, the same effect will also apply to any track with the same "MIDI Channel" setting.

- ▶ In the case of **Master Volume**, the universal exclusive message Master Volume will be transmitted.
- ▶ You can make settings for MIDI Filter (MULTI 4.1-4.4) to **enable** or **disable** control changes and controllers for each track. When checked, the operations effective for a "Status" of **INT** or **BTH** will be enabled. Tracks whose

"Status" is **EXT**, **EX2**, or **BTH** will transmit control changes regardless of this setting.

Effect dynamic modulation can be controlled when the "Control Ch (Channel)" (MULTI 7.2-1b, 7.3-1a, 7.3-1d) setting for IFX1-5, MFX1, 2, or MEQ matches the MIDI channel of the track selected by "Track Select." (In the case of **All Routed**, control is possible on the MIDI channel of all routed tracks.)

If one of the TRITON-Rack's controllers is operated during realtime recording, the corresponding or assigned control change will be recorded.

Sampling mode

When one of the TRITON-Rack's controllers is operated, a control change message will be transmitted on the global MIDI channel ("MIDI Channel" GLOBAL 2.1-1a).


- ▶ In the case of **Master Volume**, the universal exclusive message Master Volume will be transmitted.
- ▶ It is not possible to make "AMS" settings in Sampling mode.

		TRITON-Rack controller					Available for	Available for
		Realtime Controls A	Realtime Controls B	ARP-GATE (Realtime Controls B)	ARP-VELOCITY (Realtime Controls B)	SW1,2 ([F6] key-[F7] key)	AMS	DMOD
MIDI channel messages								
Note-off								
Note-on (note number)								
Note-on (velocity)								
Poly after touch								
CC#	0	Bank select (MSB)	*				*	*
	1	Modulation 1	*				*	*
	2	Modulation 2	*				*	*
	3	-	*					
	4	Foot controller	*				*	*
	5	Portamento time	*					
	6	Data entry (MSB)	*					
	7	Volume	*					
	8	Post insertion effect panpot	*					
	9	-	*					
	10	Panpot	*					
	11	Expression	*					
	12	Effect control 1	*					*
	13	Effect control 2	*					*
	14...15	-	*					
	16	Ribbon controller	*				*	*
	17	Knob modulation 1	*				*	*
	18	Controller (CC#18)	*				*	*
	19	Knob modulation 2	*				*	*
	20	Knob modulation 3	*				*	*
	21	Knob modulation 4	*				*	*
	22...31	-	*					
	32	Bank select (LSB)	*					
	33...37	-	*					
	38	Data entry (LSB)	*					
	39...63	-	*					
	64	Damper	*				*	*
	65	Portamento On/Off	*			*	*	*
	66	Sostenuto On/Off	*				*	*
	67	Soft	*				*	
	68...69	-	*					
	70	Sustain level	*					
	71	Filter resonance level/ High pass filter cutoff frequency	* (Knob2)	*				
	72	Release time	* (Knob4)	*				
	73	Attack time	*					
	74	Low pass filter cutoff frequency	* (Knob1)	*				
	75	Decay time	*					
	76	LFO1 speed	*					
	77	LFO1 depth (pitch)	*					
	78	LFO1 delay	*					
	79	Filter EG intensity	* (Knob3)	*				
	80	SW1 modulation On/Off	*			* (SW1)	*	*
	81	SW2 modulation On/Off	*			* (SW2)	*	*
	82	Foot switch On/Off	*				*	*
	83	Controller (CC#83)	*				*	*
	84...90	-	*					
	91	Effect depth 1 (send 2 level)	*					
	92	Effect depth 2 (insertion effect 1,2,3,4,5 On/Off)	*					
	93	Effect depth 3 (send 1 level)	*					
	94	Effect depth 4 (master effect 1 On/Off)	*					
	95	Effect depth 5 (master effect 2 On/Off)	*					
	96	Data increment						
	97	Data decrement						
	98	NRPN(LSB)						
		2: Arpeggiator on/off switch					#	
		10: Arpeggiator gate control		#				
		11: Arpeggiator velocity control		#				
	99	NRPN(MSB) 0		#	#		#	
	100	RPN(LSB)						
		0: Bend range						
		1: Fine tune						
		2: Coarse tune						
	101	RPN(MSB) 0						
	102...127	-						
		Program change					*	*
		Channel after touch					*	*
		Bender change					*	*
		Universal exclusive						
		Master volume	*					
		Master balance						
		Master fine tune						
		Master coarse tune						

TRITON-Rack operations when control changes are transmitted/received

The following table shows the operations that the TRITON-Rack will perform when control change messages are received, and the relation between settings and controller movements on the TRITON-Rack

CC#	Control	Value	Function	
0	Bank select (MSB)	0...127	bank select message MSB	*1
1	Modulation 1	0...127	Controls modulation (normally the vibrato effect), Alternate Modulation (corresponds to AMS: JS+Y#01), or Effect Dynamic Modulation (corresponds to Dmod Src: JS+Y#1)	
2	Modulation 2	0...127	Controls modulation (normally the wah effect), Alternate Modulation (corresponds to AMS: JS+Y#02), or Effect Dynamic Modulation (corresponds to Dmod Src: JS+Y#2)	
4	Foot controller	0...127	Controls Alternate Modulation (corresponds to AMS: Pedal #4) or Effect Dynamic Modulation (corresponds to Dmod Src: Pdl#4)	
5	Portamento time	0...127	portamento time	
6	Data entry (MSB)	0...127	MSB of RPN and NRPN data	*2
7	Volume	0...127	volume	*3
8	Post insertion effect panpot	0...127	pan after the insertion effect	
10	Panpot	0...127	pan	
11	Expression	0...127	volume	*3
12	Effect control 1	0...127	Controls Effect Dynamic Modulation (corresponds to Dmod Src: FX1#12)	
13	Effect control 2	0...127	Controls Effect Dynamic Modulation (corresponds to Dmod Src: FX2#13)	
16	Controller (CC#16)	0...127	Controls modulation, Alternate Modulation (corresponds to AMS: Ribbon #16), or Effect Dynamic Modulation (corresponds to Dmod Src: Rbn#16)	
17	Knob modulation 1	0...127	corresponds to when Knob Mod.1 is assigned as the B-mode function of a REALTIME CONTROLS knob	
18	Controller (CC#18)	0...127	Controls Alternate Modulation (corresponds to AMS: Slider #18) or Effect Dynamic Modulation (corresponds to Dmod Src: Sld#18)	
19	Knob modulation 2	0...127	corresponds to when Knob Mod.2 is assigned as the B-mode function of a REALTIME CONTROLS knob	
20	Knob modulation 3	0...127	corresponds to when Knob Mod.3 is assigned as the B-mode function of a REALTIME CONTROLS knob	
21	Knob modulation 4	0...127	corresponds to when Knob Mod.4 is assigned as the B-mode function of a REALTIME CONTROLS knob	
32	Bank select (LSB)	0...127	LSB of bank select message	*1
38	Data entry (LSB)	0...127	LSB of RPN or NRPN data	*2
64	Damper	0...127	damper effect	
65	Portamento On/Off	0...63(Off), 64...127(On)	turn the portamento effect on/off	
66	Sostenuto On/Off	0...63(Off), 64...127(On)	turn the sostenuto effect on/off	
67	Soft	0...127	soft pedal effect	
70	Sustain level	0...127	sustain levels of the filter EG and amp EG	*4
71	Filter resonance level	0...127	resonance level of the filter	*5
	High pass filter cutoff frequency	0...127	cutoff frequency of the high pass filter	*4
72	Release time	0...127	release times of the filter EG and amp EG	*4
73	Attack time	0...127	attack times of the filter EG and amp EG	*4
74	Low pass filter cutoff frequency	0...127	cutoff frequency of the low pass filter	*4
75	Decay time	0...127	decay times/slope times of the filter EG and amp EG	*4
76	LFO1 speed	0...127	LFO1 speed	*4
77	LFO1 depth	0...127	pitch LFO1 intensity	*4
78	LFO1 delay	0...127	LFO1 delay	*4
79	Filter EG intensity	0...127	filter EG intensity	*4
80	Panel switch 1 On/Off	0...63(Off), 64...127(On)	corresponds to on/off when the SW1 function is set to SW1 Mod.	
81	Panel switch 2 On/Off	0...63(Off), 64...127(On)	corresponds to on/off when the SW2 function is set to SW2 Mod.	
82	Foot switch On/Off	0...63(Off), 64...127(On)	Controls Alternate Modulation (corresponds to AMS: FootSW #82) or Effect Dynamic Modulation (corresponds to Dmod Src: FSW#82)	
83	Controller (CC#83)	0...127	Controls Alternate Modulation (corresponds to AMS: MIDI CC#83) or Effect Dynamic Modulation (corresponds to Dmod Src: CC#83)	
91	Effect 1 depth	0...127	send 2 level	
92	Effect 2 depth	0(Off), 1...127(On)	turn insertion effect 1, 2, 3, 4, 5 on/off	*6
93	Effect 3 depth	0...127	send 1 level	
94	Effect 4 depth	0(Off), 1...127(On)	master effect 1 on/off	*6
95	Effect 5 depth	0(Off), 1...127(On)	master effect 2 on/off	*6
96	Data increment	0		
97	Data decrement	0		
98	NRPN(LSB)	2 10 11	Corresponds to the arpeggiator on/off switch Corresponds to the arpeggiator gate control (REALTIME CONTROLS knob 2 C-mode) Corresponds to the arpeggiator velocity control (REALTIME CONTROLS knob 3 C-mode)	*7 *7 *7
99	NRPN(MSB)	0	MSB of NRPN	
100	RPN(LSB)	0 1 2	select the pitch bend range select Fine Tune select Coarse Tune	*2 *2 *2
101	RPN(MSB)	0	MSB of RPN	

 Any control change number (CC#00–95) can be assigned as the B-mode function of a REALTIME CONTROLS knob. In this case, the transmitted values will all be 0–127.

*1 For pattern data in Multi mode, bank select is normally specified using program change events (“Event Edit MULTI 5.1–1e). However, this may not be sufficient when you need to change banks on an external device. In such cases, use CC#00 and CC#32.

For information on the relation between bank select numbers and the banks of your external device, refer to the owner’s manual for your external device.

*2 Unlike conventional control changes, pitch bend range, fine tune, and coarse tune settings are made using RPC (Registered Parameter Control) messages. In Program, Combination, and Multi modes, you can use RPC messages to control the bend range and tuning for each program, combination (Combination), or track (Multi). The procedure is to use an RPN (Registered Parameter Number) message to select the parameter that you wish to edit, and then use Data Entry to input a value for that parameter. To select the parameter, use CC#100 (with a value of 00–02) and CC#101 (with a value of 00). Use CC#06 and CC#38 to enter the data.

The data entry values for each parameter and the corresponding settings are as follows.

RPN=0 (Pitch bend range)

CC#06	CC#38	Parameter value (Semitone steps)
00	00	0
01	00	+ 1
⋮	⋮	⋮
12	0	+12

RPN=1 (Fine tune)

CC#06	CC#38	Parameter value (1 cent steps)
32	00	-50
48	00	-25
64	00	0
⋮	⋮	⋮
96	00	+50

RPN=2 (Coarse tune)

CC#06	CC#38	Parameter value (Semitone steps)
40	00	-24
⋮	⋮	⋮
52	00	-12
64	00	0
⋮	⋮	⋮
88	00	+24

For example, if in Multi mode you wish to set a track that is receiving channel 1 to a transpose (coarse tuning) value of -12, you would first transmit [B0, 64, 02] (64H=CC#100) and [B0, 65, 00] (65H=CC#101) to the TRITON-Rack to select the RPN coarse tune. Then you would set this to -12 by transmitting [B0, 06, 34] (06H=CC#6), 34H=52 (corresponds to -12), and [B0, 26, 00] (26H=CC#38, 00H=0).

*3 The volume of the TRITON-Rack is determined by multiplying the Volume (CC#07) with the Expression (CC#11). When you select a multi in Multi mode, the volume will be set to the values specified for each track, and the expression will be set to the maximum value (127).

*4 A value of 64 will correspond to the value specified by the program parameter. 0 will be the minimum, and 127 will be the maximum. Changing from 63–1 or from 65–126 will adjust the effect from the program parameter setting

toward the minimum value or maximum value. The internal program parameters listed in (*4, *5) will be controlled.


*5 If the filter type of the corresponding program is **Low Pass Resonance**, the filter resonance level will be controlled. If the filter type is **Low Pass & High Pass**, the cutoff frequency of the high pass filter will be controlled.

*4, *5

CC#70–79 correspond to the following program parameters of the TRITON-Rack.

In Program mode, when CC#70–79 is received on the global MIDI channel (“MIDI Channel” GLOBAL 2.1–1a), or when a REALTIME CONTROLS [1]–[4] knob is operated in A-mode or in B-mode when the function is assigned to CC#70–79, the corresponding program parameter will be edited temporarily. You can execute “Write Program” (PROG 1.1–1d) to save that state (except for some parameters). When you execute “Write Program,” the values of the corresponding program parameters will be rewritten.

In Sampling mode when playing the currently selected multisample on the keyboard, the same control changes or knob operations as in Program mode will temporarily edit the corresponding program parameters. You can use “Conv. To Program (Convert Multisample To Program)” (Sampling 1.1–3g) to save that state as a program (except for some parameters).

 In Combination, and Multi modes, the program parameters of the program for the timbre/track of the corresponding MIDI channel will change, but this state can not be saved directly in the program.

CC#70: Sustain level

Corresponds to “Filter/Amp EG Sustain Level” (PROG 4.1/2: Ed-Filter1/2, EG page, 5.1/2: Ed-Amp1/2, EG page).

CC#71: Filter resonance level/High pass filter cutoff frequency

Corresponds to “Filter A Resonance” (PROG 4.1/2: Ed-Filter1/2, Basic page).

Corresponds to “Filter B Frequency” (PROG 4.1/2: Ed-Filter1/2, Basic page).

CC#72: Release time

Corresponds to “Filter/Amp EG Release Time” (PROG 4.1/2: Ed-Filter1/2, EG page, 5.1/2: Ed-Amp1/2, EG page).

CC#73: Attack time

Corresponds to “Filter/Amp EG Attack Time” (PROG 4.1/2: Ed-Filter1/2, EG page, 5.1/2: Ed-Amp1/2, EG page)

Corresponds to “Amp EG Start Level” (PROG 5.1/2: Ed-Amp1/2, EG page).

Corresponds to “Amp EG Attack Level” (PROG 5.1/2: Ed-Amp1/2, EG page).

Corresponds to “Amp EG Level Modulation Start” (PROG 5.1/2: Ed-Amp1/2, EG page).

Corresponds to “Amp EG Time Modulation Attack” (PROG 5.1/2: Ed-Amp1/2, EG page).

CC#74: Low pass filter cutoff frequency

Corresponds to “Filter A Frequency” (PROG 4.1/2: Ed-Filter1/2, EG page).

Corresponds to “Filter B Frequency” (PROG 4.1/2: Ed-Filter1/2, EG page).

CC#75: Decay time

Corresponds to “Filter/Amp EG Decay Time” (PROG 4.1/2: Ed-Filter1/2, EG page, 5.1/2: Ed-Amp1/2, EG page)

Corresponds to “Filter/Amp EG Slope Time” (PROG 4.1/2: Ed-Filter1/2, EG page, 5.1/2: Ed-Amp1/2, EG page)

CC#76: LFO1 speed

Corresponds to “LFO 1 Frequency” (PROG 5.3: Ed-LFOs, OSC1/2, LFO1 page).

CC#77: LFO1 depth (pitch LFO1 intensity)

Corresponds to “Pitch LFO1 Intensity” (PROG 3.1: Ed-Pitch, OSC1LFO page).

CC#78: LFO1 delay

Corresponds to “LFO1 Delay” (PROG 5.3: Ed-LFOs, OSC1/2, LFO1 page).

CC#79: Filter EG intensity

Corresponds to “Filter EG Intensity to A, B” (PROG 4.1/2: Ed-Filter1/2, Mod.1 page).

Different parameters are controlled for the bank F programs that are available when the separately sold EXB-MOSS option is installed. (⇒EXB-MOSS owner’s manual & p.251 “EXB-MOSS option”)

***6** Controlled on the global MIDI channel.

***7** NRPN (Non Registered Parameter Number) and Data Entry can be used to control the following parameters.

Arpeggiator on/off

[Bn 63 00 Bn 62 02 Bn 06 nn] (nn:00–3F off, 40–7F on)

Arpeggiator gate control

[Bn 63 00 Bn 62 0A Bn 06 nn] (nn:00–7F)

Arpeggiator velocity control

[Bn 63 00 Bn 62 0B Bn 06 nn] (nn:00–7F)

MIDI applications

■ About MIDI

MIDI stands for Musical Instrument Digital Interface, and is a world-wide standard for exchanging various types of musical data between electronic musical instruments and computers. When MIDI cables are used to connect two or more MIDI devices, performance data can be exchanged between the devices, even if they were made by different manufacturers.

■ Messages transmitted and received by the TRITON-Rack

[...] indicates hexadecimal notation

□ MIDI channels

MIDI messages can be exchanged when the transmitting and receiving devices are set to the same MIDI channel. MIDI uses sixteen channels, numbered 1–16. The way in which channels are handled will differ depending on the mode.

Program mode and Sampling mode

- Transmission/reception is performed on the global MIDI channel*.

* The **global MIDI channel** is the basic channel that the TRITON-Rack uses for MIDI transmission/reception, and is set by “MIDI Channel” (GLOBAL 2.1–1a).

Combination mode

- The global MIDI channel is used to transmit/receive messages for selecting a combination and turning effects on/off, and to transmit/receive exclusive data.
- The MIDI channel specified for each timbre (in MIDI channel (COMBI 3.1–1a)) is used to transmit/receive MIDI data for each timbre.
- The MIDI channel specified for each of the insert effects and master effects is used to control dynamic modulation, and to control the pan and send 1/2 after the sound has passed through the insert effects.
- When you operate the controllers of the TRITON-Rack, messages will be transmitted on the global MIDI channel, and will also be transmitted on the MIDI channel of any timbre whose “Status” (COMBI 3.1–1a) is set to **EXT** or **EX2**.
- Channel messages will be received if they match the MIDI channel of a timbre whose “Status” is set to **INT** (☞p.36 “Status” and “MIDI Channel”).

Multi mode

- The global MIDI channel is used to transmit/receive exclusive data and for messages that switch effects on/off.
- MIDI data of each track is transmitted/received on the MIDI channel specified for each track (in the MULTI 3.1–1a/2a).
- When you operate the controllers of the TRITON-Rack, messages will be transmitted on the MIDI channel selected by “Control Track.” However, messages will be transmitted only if the track selected by “Control Track” has a “Status” of **BTH**, **EXT**, or **EX2**.

- When pattern/RPPR is played back, musical data of tracks whose “Status” is **BTH**, **EXT**, or **EX2** will be transmitted on the specified MIDI channels.
- Tracks whose “Status” (MULTI 3.1–1a/2a) is **INT** or **BTH** will receive channel messages of the matching MIDI channel (☞p.54, “Status” and “MIDI Channel”).

□ Note on/off

Note-on [9n, kk, vv]

Note-off [8n, kk, vv]*

(n: channel, kk: note number, vv: velocity)

The TRITON-Rack can receive note-on/off messages to sound its tone generator. When the arpeggiator is running, the arpeggiator will transmit note-on/off messages. When Local Control is Off, note-on/off data from the arpeggiator will not be transmitted. (“Local Control On” ☞p.111, 228)

* Most devices do not transmit or receive note-off velocity, and the TRITON-Rack does not transmit or receive this data either.

□ Program Change/Bank Select

Changing the program/bank

Program change [Cn, pp]

(n: channel, pp: program number that allows 128 sounds to be selected)

- Programs 000–127 in banks I–A–I–F, E–A–E–H correspond to program changes [Cn, 00]–[Cn, 7F].
- Programs 001–128 in banks G, g(1)–g(9), g(d), and g(d) correspond to program changes [Cn, 00]–[Cn, 7F].

Bank select MSB (CC#0) [Bn, 00, mm],

Bank select LSB (CC#32) [Bn, 20, bb]

(n: channel, mm: bank number upper byte, bb: bank number lower byte)

- The internal banks that correspond to each bank select number will depend on the “Bank Map” setting (GLOBAL 1.1–2a). With the factory settings, this will be **GM(2)**. (☞p.109 “Bank Map”)

Simply receiving a Bank Select message will not cause the program or bank to change. The program or bank will actually change when a Program Change message is received.

Program mode

- In Program PROG 1.1: Play, program change and bank select messages are transmitted and received on the global MIDI channel. These messages are not received in 2.1: Ed–Basic–7.3: Ed–MasterFX.

Combination and Multi modes

- Program change and bank select messages can be received on the MIDI channel specified for each timbre/track to select programs on that timbre/track.
- When you select a combination, program change and bank select messages will be transmitted by timbres whose “Status” is **EXT** or **EX2**.
In Multi mode, program change or bank select messages will be transmitted by tracks whose “Status” is **BTH**, **EXT**, or **EX2** when you select the “Program Select” (MULTI 1.1–2b/3b), when you select a song, or when you return to the beginning of a measure. (☞p.33, 51 “Program Select”–“MIDI”)
- In Combination and Multi modes, transmission/reception can be switched on/off for each timbre/track. (☞p.41, 58 “Program Change”).

Selecting combinations

You can use program change and bank select messages to select combinations in the same way that you select programs.

- Combinations 000–127 in banks I-A–I-F, E-A–E-H correspond to program changes [Cn, 00]–[Cn, 7F].
- Similarly as for program banks, the internal banks that correspond to each bank select number will depend on the “Bank Map” setting (GLOBAL 1.1–2a). (☞p.109 “Bank Map”)
- In COMBI 1.1: Play, program change and bank select messages are transmitted/received on the global MIDI channel. They are not received in 2.1: Ed–Prog/Mix – 7.3: Ed–MasterFX.

note All program changes can be turned off in GLOBAL 2.1: MIDI “MIDI Filter.”

As needed, you can independently turn all program changes on/off, specify whether or not incoming messages will be able to change combinations, and turn reception/transmission of bank select messages on/off.

- If “Combi” is unchecked, the combination will not change even if a program change on the global MIDI channel is received in COMBI 1.1: Play. In this case, the program of the timbre that matches the MIDI channel of the received message will change.
- If “Bank” is unchecked, bank select messages will not be transmitted or received (☞p.112 “MIDI Filter”).

□ After touch

Channel after touch [Dn, vv]
(n: channel, vv: value)

When this message is received, the aftertouch effect will be applied. The specified alternate modulation or dynamic modulation effect will also be applied.

- After touch for the entire instrument can be turned off in GLOBAL 2.1: MIDI “MIDI Filter.”
- In Combination and Multi modes, after touch can be switched on/off independently for each timbre/track (☞p.41, 58 “After Touch”).

Polyphonic key pressure [An, kk, vv]
(n: channel, kk: note number, vv: value)

There is another type of after touch called Polyphonic Key Pressure, which allows after touch to be applied independently for individual keys. This message can be used as an alternate modulation source. It can also be used as event data within a pattern in Multi mode. The after touch mentioned in this manual refers to Channel After Touch.

□ Pitch bender

Pitch bender change [En, bb, mm]
(n: channel, bb: lower byte of the value, mm: upper byte of the value, together expressing a value of 16,384 steps where 8,192 [bb, mm = 00H, 40H] is the center value)

When this message is received, a pitch bend effect will be applied. The specified alternate modulation or dynamic modulation effect will also be applied.

note The range of pitch change that is produced by pitch bend messages can also be adjusted via MIDI. (☞p.225 “Changing the pitch bend range”)

□ Control change

[Bn, cc, vv]
Transmitted and received as (n: channel, cc: control change no., vv: value)

Refer to “MIDI transmission when the TRITON-Rack’s controllers are operated” (☞p.216) and “TRITON-Rack operations when control changes are transmitted/received” (☞p.218).

- Control changes can be turned on/off as a whole in GLOBAL 2.1: MIDI “MIDI Filter.”
- In Combination and Multi mode, you can turn transmission and reception on/off for each timbre/track by making settings in the 4.1: (Ed-) MIDI Filter 1, –2–4.4: (Ed-) MIDI Filter 4, –2 pages. For the assignable controllers (“SW1,” “SW2,” REALTIME CONTROLS [1]–[4] knobs), MIDI filter settings will apply to the control change number to which each controller is assigned. “Other Control Change” applies to control changes that are not covered by the items of the other check boxes (☞p.41, 58 “MIDI Filter”).

note MIDI CC#00–CC#95 can be selected for the B-mode of REALTIME CONTROLS [1]–[4] knobs.

Selecting program/combination banks

Bank select (CC#00, CC#32)
☞p.221 “Program Change/Bank Select”

Using the joystick of a connected TRITON or other MIDI device to apply modulation

Modulation 1 depth (CC#01) [Bn, 01, vv]
When this message is received, a vibrato effect (pitch LFO) will normally be applied. The specified alternate modulation or dynamic modulation effect will also be applied.

- In Combination and Multi modes, transmission/reception can be switched on/off for each timbre/track. (☞p.41, 59 “JS+Y CC#01”)

Modulation 2 depth (CC#02) [Bn, 02, vv]
When this message is received, a wah effect (filter LFO) will normally be applied. The specified alternate modulation or dynamic modulation effect will also be applied.

- In Combination and Multi modes, transmission/reception can be switched on/off for each timbre/track. (☞p.41, 59 “JS–Y CC#02”)

note Other manufacturers use this message for other purposes (e.g., breath controller, etc.)

Controlling the portamento effect

Portamento time (CC#05) [Bn, 05, vv]
When the above CC# is assigned as a B-mode function for one of the REALTIME CONTROLS [1]–[4] knobs, rotating that knob will transmit Portamento Time messages, and will modify the speed at which the portamento pitch changes. When this message is received, the result will be the same as when the controller is operated.

Portamento switch (CC#65) [Bn, 41, vv]
When the above CC# is assigned to “SW1,” “SW2,” operating that switch will transmit vv=127 [7F] for ON or vv=0 [00] for OFF, and the portamento effect will be switched on/off. The specified alternate modulation or dynamic modulation effect will also be applied. When this message is received, the result will be the same as when the controller is operated. (vv of 63 [3F] or less will be OFF, and 64 [40] or greater will be ON.) (☞p.213 “SW1, SW2 Assign List”)

- In Combination and Multi modes, transmission/reception of this message can be turned on/off independently for each timbre/track. (☞p.41, 59 “Portamento SW CC#65”)
- In Multi mode, portamento time/switch messages will be transmitted by each track whose “Status” is **BTH**, **EXT**, or **EX2** when you set “Portamento” (3.1–3a/4a), re-select a song or SMF, or return to the beginning of a measure. (☞p.55 “Portamento”-“MIDI”)

Controlling the volume

Volume (CC#07) [Bn, 07, vv]

If you assign the above CC# to the B-mode function of a REALTIME CONTROLS [1]–[4] knob, and operate the corresponding controller of the TRITON-Rack, volume messages will be transmitted and the volume will change. When this message is received, the result will be the same as when the controller is operated.

Expression (CC#11) [Bn, 0B, vv]

If you assign the above CC# to the B-mode function of a REALTIME CONTROLS [1]–[4] knob, and operate the corresponding controller of the TRITON-Rack, expression messages will be transmitted and the volume will change. When this message is received, the result will be the same as when the controller is operated.

The volume of the TRITON-Rack is determined by multiplying the value of the **Volume message** with the value of the **Expression message**.

If adjusting the Volume message does not increase the volume as you expect, or if there is no sound, transmit MIDI messages from an external device to reset the value of the Expression message (set vv to 127). In Multi mode, this will be reset when you re-select the multi.

- In Combination mode, Volume messages will be transmitted by each timbre whose “Status” is **EXT** or **EX2** when you re-select the combination.
- When you change the “Volume” setting (MULTI 1.1–4a/5a) in Multi mode, or when you re-select the song or return to the beginning of the song in Multi mode, volume messages will be transmitted by each track whose “Status” is **BTH**, **EXT**, or **EX2**.

note Regardless of the “Status” settings, re-selecting a multi, or returning to the beginning will reset the internal Volume value to the value specified by each track (the starting settings), and will reset the Expression value to the maximum.

note The volume can be controlled independently for each track. You should use Volume messages to set the volume in the track setting data, and normally use Expression messages within the musical data of an external sequencer etc. to create changes in dynamics during a song. (☞p.35, 53 “Volume”-“MIDI”)

By using the universal exclusive Master Volume message, you can adjust the overall volume without changing the volume balance between timbres or tracks. (☞p.226 “About system exclusive messages”)

Controlling panpot (stereo position)

Panpot (CC#10) [Bn, 0A, vv]

(vv: value, where 00 is far left, 64 is center, and 127 is far right)

When the above CC# is assigned to the ASSIGNABLE PEDAL or as the B-mode function of a REALTIME CONTROLS knob [1]–[4], operating that controller will transmit

Panpot messages, and the panning will change. When this message is received, the result will be the same as when the controller is operated.

- When you set the “Pan” (1.1–4a/5a) in Multi mode, or re-select the multi or return to the beginning of the measure in Multi mode, Panpot messages (except for RND) will be transmitted by each track whose “Status” is **BTH**, **EXT**, or **EX2** (☞p.52 “Pan” - “MIDI”).

Post insert effect panpot (CC#08)

[Bn, 08, vv] (vv: value, where 00 is far left, 64 is center, and 127 is far right)

When the above CC# is assigned as the B-mode function of a REALTIME CONTROLS knob [1]–[4], operating that controller will transmit Post Insert Effect Panpot messages, and the panning of the sound following the insert effect will change. When this message is received, the result will be the same as when the controller is operated.

- In Program mode and Sampling mode, this message is transmitted/received on the global MIDI channel. In Combination, and Multi modes, this message is transmitted/received on the MIDI channel specified for each insert effect.
- When you set “Pan (CC#8)” (MULTI 7.2–1a) in Multi mode, or when you re-select the song or return to the beginning of the measure in Multi mode, Post Insert Effect Panpot messages will be transmitted by each track whose “Status” is **BTH**, **EXT**, or **EX2** (☞p.70 “Insert FX Setup” - “MIDI”).

Effect control

Effect control 1 (CC#12) [Bn, 0C, vv]

Effect control 2 (CC#13) [Bn, 0D, vv]

When the above CC# is assigned as the B-mode function of a REALTIME CONTROLS knob [1]–[4], operating that controller will transmit Effect Control 1/2 messages, and the specified dynamic modulation will be controlled. When this message is received, the result will be the same as when the controller is operated.

Although various types of control change can be selected as dynamic modulation sources, Effect Control 1 (CC#12) and 2 (CC#13) are dedicated for dynamic modulation.

Effect 1 depth (Send 2) (CC#91) [Bn, 5B, vv]

Effect 3 depth (Send 1) (CC#93) [Bn, 5D, vv]

When the above CC# is assigned as the B-mode function of a REALTIME CONTROLS knob [1]–[4], operating that controller will transmit Effect 1 Depth (Send 2) or Effect 3 Depth (Send 1) messages, and the send level 1 or 2 to the master effects MFX1 or MFX2 will be controlled respectively. When this message is received, the result will be the same as when the controller is operated.

On the corresponding MIDI channels, this will simultaneously control the timbre/track setting as well as the setting following the insertion effect.

- In Combination, and Multi modes, the actual send level of the timbre/track is determined by multiplying this value with the send 1/2 settings for each oscillator (PROG 7.1–1a). (☞p.26, 47, 70 “Send 1, 2” - “MIDI”)
- When you adjust “S1 (Send1(MFX1))” or “S2 (Send2(MFX2))” (MULTI 7.1–1a/2a, 7.2–1a) in Multi mode, or when you re-select a song or return to the beginning of the measure in Multi mode, Send 1/2 will be transmitted by each track whose “Status” is **BTH**, **EXT**, or **EX2**. (☞p.69 “Send 1, 2,” “Insert FX” - “MIDI”).

Effect 2 depth (IFX1–5 on/off) (CC#92) [Bn, 5C, vv]
 Effect 4 depth (MFX1 on/off) (CC#94) [Bn, 5E, vv]
 Effect 5 depth (MFX2 on/off) (CC#95) [Bn, 5F, vv]
 Separately from the effect on/off settings in each mode, GLOBAL 1.1: System, Basic page “FX SW” allows you to turn off insert effects IFX1–5 and master effects MFX1 and MFX2. If you **check** “IFX1–5 Off,” “MFX1 Off” or “MFX2 Off,” the corresponding message will be transmitted with vv=0 [00]. If you **uncheck** these settings, the corresponding message will be transmitted with vv=127 [7F]. If you check these settings, the corresponding effect(s) will be turned off as a group. If you uncheck these settings, the on/off settings of each mode will be used. The same applies to reception. (vv of 00 is off, and 01 or greater is the original setting.) These messages are transmitted/received on the global MIDI channel. (⇒p.28, 29 “ON/OFF” - “MIDI”)

note These messages are defined simply for use in adjusting the effect levels, and may not have the same function on another instrument connected to the TRITON-Rack.

Using various controllers for control

Knob modulation 1, 2, 3, 4 (CC#17, 19, 20, 21) [Bn, 11, vv], [Bn, 13, vv], [Bn, 14, vv], [Bn, 15, vv]

If you assign the above CC# to the B-mode function of a REALTIME CONTROLS [1]–[4] knob, and operate the corresponding controller of the TRITON-Rack, the assigned alternate modulation or dynamic modulation will be controlled. When this message is received, the result will be the same as when the controller is operated.

- In Combination and Multi modes, transmission/reception of this message can be turned on/off independently for each timbre/track (⇒p.42, 60 “Realtime Control Knob1, 2, 3, 4”).

Controller (CC#83) [Bn, 53, vv]

If you assign the above CC# to the B-mode function of a REALTIME CONTROLS [1]–[4] knob, and operate the corresponding controller of the TRITON-Rack, the assigned alternate modulation or dynamic modulation will be controlled. When this message is received, the result will be the same as when the controller is operated.

SW1 modulation (CC#80) [Bn, 50, vv]

SW2 modulation (CC#81) [Bn, 51, vv]

If the above CC# are assigned as the function of “SW1” or “SW2,” operating the switch will transmit this message with vv=127 [7F] for ON, and vv=00 [00] for OFF, the assigned alternate modulation or dynamic modulation will be controlled. When this message is received, the result will be the same as when the controller is operated. Off when vv is 63 [3F] or lower, and On when vv is 64 [40] or higher. (This can also be set as a B-mode function of the REALTIME CONTROLS knobs [1]–[4].)

- In Combination and Multi modes, transmission/reception of these messages can be turned on/off independently for each timbre/track (⇒p.42, 60 “SW1,” “SW2”)

Using controllers of a connected TRITON or other MIDI device for control

The controllers of a connected TRITON or other MIDI device, or the control changes assigned to controllers, can be received to control alternate modulation or dynamic modulation. The controllers and the MIDI messages they transmit will depend on the type of MIDI device that is connected. As B-mode functions of the TRITON-Rack’s REALTIME CONTROLS [1]–[4] knobs, you can select and control MIDI CC#00–CC#95.

Foot controller (CC#04) [Bn, 04, vv]

When this message is received, the effect that is assigned (alternate modulation or dynamic modulation etc.) will be applied.

Ribbon controller (CC#16) [Bn, 10, vv]

When this message is received, the effect that is assigned (alternate modulation or dynamic modulation etc.) will be applied.

- In Combination or Multi mode, transmission and reception of this message can be turned on/off for each timbre/track. (⇒p.42, 59 “Ribbon CC#16”)

Controller (CC#18) [Bn, 12, vv]

When this message is received, the effect that is assigned (alternate modulation or dynamic modulation etc.) will be applied.

Foot switch (CC#82) [Bn, 52, vv]

When this message is received, the effect that is assigned (alternate modulation or dynamic modulation etc.) will be applied.

Damper pedal (CC#64) [Bn, 40, vv]

When this message is received, the damper effect will be applied. If this is controlled from a device that has half-damper functionality, such as the TRITON, the half-damper effect will be applied. Alternatively, the assigned alternate modulation or dynamic modulation effect will be applied.

- In Combination and Multi modes, transmission/reception of this message can be turned on/off independently for each timbre/track (⇒p.41, 59 “Damper CC#64”).

Sostenuto (CC#66) [Bn, 42, vv]

When this message is received, the sostenuto effect will be turned on/off. (Off when vv is 63 [3F] or lower, and On when vv is 64 [40] or higher.)

Soft pedal (CC#67) [Bn, 43, vv]

When this message is received, the soft pedal effect will be applied. Alternatively, the assigned alternate modulation effect will be applied.

Controlling the tone/envelope of a program

CC#70-78 control specific parameters of a program. For details on the program parameters that correspond to each control change, and how the TRITON-Rack will respond in each mode when these are received, refer to “TRITON-Rack operations when control changes are transmitted/received” (⇒p.218).

Low pass filter cutoff (CC#74) [Bn, 4A, vv]

Resonance level/High pass filter cutoff (CC#71) [Bn, 47, vv]

Filter EG intensity (CC#79) [Bn, 4F, vv]

Release time (CC#72) [Bn, 48, vv]

These messages are transmitted when you operate the TRITON-Rack’s REALTIME CONTROLS [1]–[4] knobs in A-mode. (They can also be set as B-mode functions.)

Sustain level (CC#70) [Bn, 46, vv]

Attack time (CC#73) [Bn, 49, vv]

Decay time (CC#75) [Bn, 4B, vv]

LFO 1 speed (CC#76) [Bn, 4C, vv]

LFO 1 depth (pitch) (CC#77) [Bn, 4D, vv]

LFO 1 delay (CC#78) [Bn, 4E, vv]

These messages are transmitted when assign the above CC# to the REALTIME CONTROLS [1]–[4] knobs in B-mode and operate them.

When you operate these, the corresponding program parameters will be controlled, and the sound and envelope will change. When these messages are received, the result will be the same as when the controller is operated. (When

the message has a value vv=64 [40], the setting will have the value that was set by the program parameter.)

- In Combination and Multi modes, transmission/reception can be turned on/off independently for each timbre/track (see p.42, 60 “Realtime Control Knob1, 2, 3, 4”).

note In Program mode, the corresponding program parameters will be temporarily edited by these messages. You can Write the program to save the modified state (except for certain parameters). The Write operation can also be performed by a MIDI exclusive Program Write Request message, in addition to the usual method of using the TRITON-Rack’s switches. When you write the data, the values of the corresponding program parameters will be rewritten.

note The results of receiving these messages will depend on the instrument. The operation may be different when a device other than the TRITON-rack is connected.

Silencing all notes on a specific channel

All note off (CC#123) [Bn, 7B, 00] (value 00)

When this is received, all currently-sounding notes on that channel will be turned off (as though the keys had been released). However, the release portion of the notes will remain.

All sound off (CC#120) [Bn, 78, 00] (value 00)

When this is received, all currently-sounding notes on that channel will be silenced. While the All Note Off message allows the release portion of the notes to remain, the All Sound Off message will silence the notes immediately.

However, these messages are provided for emergency use, and are not something that you will use while performing.

Resetting all controllers on a specific channel

Reset all controllers (CC#121) [Bn, 79, 00] (value 00)

When this is received, the value of all controllers on that channel will be reset.

Using RPN to edit

RPN (Registered Parameter Number) is a type of message that allows settings to be made in a way that is common between instrument manufacturers. (NRPN (Non-registered Parameter Numbers) and exclusive messages can be freely used in non-compatible ways by different manufacturers and models of instrument.)

RPN messages can be used for editing with the following procedure.

- ① Use RPN MSB (CC#101) [Bn, 65, mm] and RPN LSB (CC#100) [Bn, 64, rr] (n: channel, mm, rr: upper and lower bytes of the parameter number) messages to select the parameter.
- ② Use data entry MSB (CC#6) [Bn, 06, mm] and data entry LSB (CC#38) [Bn, 26, vv] (n: channel, mm, vv: upper and lower bytes of the value, together expressing 16,384 levels) to specify the value.
- ③ You can use data increment (CC#96) [Bn, 60,00] or data decrement (CC#97) [Bn, 61, 00] (n: channel, value is fixed at 00) to change the value in steps of one.

The TRITON-Rack can receive the following three RPN messages (tuning, transpose, and pitch bend range).

Tuning

RPN fine tune [Bn, 65, 00, 64, 01]

This RPN message can be used to adjust the detuning for a program or timbre (in Combination mode), or for a track (in Multi modes).

The procedure is as follows.

- ① [Bn, 65, 00, 64, 01]: Select RPN parameter 01.
- ② [Bn, 06, mm, 26, vv]: Use data entry to set the value. A value of 8192 [mm, vv=40, 00] is center; 0 [mm, vv=00, 00] is -100 cents, and 16383 [mm, vv=7F, 7F] is +100 cents.

note You can use the universal exclusive Fine Tune message to adjust the overall tuning that corresponds to the GLOBAL 1.1-1a “Master Tune” parameter. (see p.226 “About system exclusive messages”)

Transposing

RPN coarse tune [Bn, 65, 00, 64, 02]

This RPN message can be used to adjust the transposition for a program or timbre (in Combination mode), or for a track (in Multi mode).

The procedure is as follows.

- ① [Bn, 65, 00, 64, 02]: Select RPN parameter 02.
- ② [Bn, 06, mm, 26, vv]: Use data entry to set the value. Normally only the upper byte is used.

A value of 8192 [mm, vv=40, 00] is center, 6656 [mm, vv=34, 00] is -12 semitones, and 9728 [mm, vv=4C, 00] is +12 semitones.

note You can use the universal exclusive Coarse Tune message to adjust the overall tuning that corresponds to the GLOBAL 1.1-1a “Key Transpose” parameter. (see p.226 “About system exclusive messages”)

Changing the pitch bend range

RPN pitch bend range [Bn, 64, 00, 65, 00]

This RPN message can be used to adjust the pitch bend range for a program or timbre (in Combination mode) or for a track (in Multi modes).

The procedure is as follows.

- ① [Bn, 65, 00, 64, 00]: Select RPN parameter 00.
- ② [Bn, 06, mm, 26, vv]: Use data entry to set the value. Normally only the upper byte is used.

A value of 0 [mm, vv=00, 00] is +00, and a value of 1536 [mm, vv=0C, 00] is +12 (one octave). Although it is possible to set a negative value for a timbre/track, only positive values can be set using RPN messages.

Controlling the arpeggiator (NRPN)

Arpeggiator operations can be controlled using NRPN (Non Registered Parameter Number) messages. NRPN messages can be freely used in non-compatible ways by different manufacturers and models of instrument.

The procedure for using NRPN messages is the same as for RPN, but you will use NRPN MSB (CC#99) [Bn, 63, mm] and NRPN LSB (CC#98) [Bn, 62, rr] messages (n: channel, mm, rr: upper and lower bytes of the parameter number) to specify the parameter.

NRPN arpeggiator on/off

[Bn, 63, 00, Bn, 62, 02, Bn, 06, mm]

This message will be transmitted when you press the [ARP ON/OFF] key. When the switch is turned ON the data will be mm=127 [7F], and when turned OFF the data will be mm=0 [00], and the arpeggiator will be turned on/off accordingly.

Similarly, the arpeggiator will be turned on/off when this message is received. (ON when mm is 64 [40] or greater, and OFF when 63 [3F] or less.)

NRPN arpeggiator gate control

[Bn, 63, 00, Bn, 62, 0A, Bn, 06, mm]

This message will be transmitted when you operate the [ARP-GATE] knob (REALTIME CONTROLS [2] knob in C-mode), and the arpeggiator gate will change. The same effect will be applied when this message is received.

NRPN arpeggiator velocity control

[Bn, 63, 00, Bn, 62, 0B, Bn, 06, mm]

This message will be transmitted when you operate the [ARP-VELOCITY] knob (REALTIME CONTROLS [3] knob in C-mode), and the arpeggiator velocity will change. The same effect will be applied when this message is received.

□ About system exclusive messages

Since the way in which these messages are used is left up to each manufacturer, they are mainly used to transmit and receive sound data and editing data for parameters that are unique to a particular instrument. The TRITON-Rack's system exclusive message format is [F0, 42, 3n, 50, ff, F7]

F0: exclusive status

42: Korg ID

3d: [n=0-F] global MIDI channel 1-16

50: TRITON model ID

ff: function ID (type of message)

- ...

F7: end of exclusive

All models of the TRITON series use the same model ID. Exclusive data can be exchanged between models of the TRITON series.

note The TRITON-Rack uses the same model ID as the TRITON/TRITONpro/TRITONproX (TRITON keyboard models). Exclusive data can be exchanged between various models of the TRITON series. (☞p.235 "Data compatibility")

note To obtain a copy of the "MIDI Implementation" which includes MIDI exclusive format information, please contact your Korg distributor.

Universal system exclusive

Certain of the system exclusive messages are publicly defined for a specific use, and these are called universal system exclusive messages.

The TRITON-Rack uses the following six universal system exclusive messages.

Inquiry message request [F0, 7E, nn, 06, 01, F7]

Inquiry message [F0, 7E, nn, 06, 02, (nine bytes), F7]

When an inquiry message request is received, the TRITON will respond by transmitting an inquiry message that means "I am a Korg TRITON series instrument, with system version ..."

GM system on [F0, 7E, nn, 09, 01, F7]

When this message is received in Multi mode, the TRITON-Rack will be initialized for GM playback.

Master volume [F0, 7F, nn, 04, 01, vv, mm, F7]

(vv: lower byte of the value, mm: upper byte of the value, together indicating 16384 steps)

This message is transmitted if you assign **Master Volume** as a B-mode function of a REALTIME CONTROLS [1]-[4] knob and operate the controller. This will adjust the overall volume balance without changing the relative volume balance between timbres/tracks. When this message is received, the result will be the same as when the controller is operated.

Master balance [F0, 7F, nn, 04, 02, vv, mm, F7]

(vv: lower byte of the value, mm: upper byte of the value, together indicating 16384 steps, where 8192 is the default position, and lower values will move the sound toward the left)

When this is received, the overall panning will be adjusted without changing the relative panning between timbres/tracks.

Master fine tuning [F0, 7F, nn, 04, 03, vv, mm, F7]

(A value of 8192 [mm, vv=40, 00] is center, 4096 [mm, vv=20, 00] is -50 cents, and 12288 [mm, vv=60, 00] is +50 cents.)

When this is received, the GLOBAL 1.1-1a "Master Tune" parameter will be set.

Master coarse tuning [F0, 7F, nn, 04, 04, vv, mm, F7]

(Normally only the upper byte mm is used. A value of 8192 [mm, vv=40, 00] is center, 6656 [mm, vv=34, 00] is -12 semitones, and 9728 [mm, vv=4C, 00] is +12 semitones.)

When this is received, the GLOBAL 1.1-1a "Key Transpose" parameter will be set.

Transmitting sound settings data (Data Dump)

Data for programs, combinations, drum kits, user arpeggio patterns, global settings, and multi data can be transmitted as MIDI exclusive messages. The operation of sending this system exclusive data to an external device is called a "data dump."

By performing a data dump, you can store the TRITON-Rack's sounds and settings on an external device, or rewrite the sounds and settings of another TRITON series instrument.

There are the following three types of data dump.

- When you use the GLOBAL 2.1-1c "Dump" page menu command to dump data, various types of internal memory data will be transmitted. If this data is received by the TRITON-Rack, the data will be written directly into internal memory, and it will not be necessary to perform the Write operation. (☞p.113, 114 "Transmission," "Reception")
- If the GLOBAL 2.1-1b "MIDI Filter" - "Exclusive" setting is checked, selecting a combination in COMBI 1.1: Play will transmit data for one combination. Selecting a program in PROG 1.1: Play will transmit data for one program.

This data is the edit buffer data for the currently selected combination or program. If this data is received by the TRITON-Rack, the data will be written into the edit buffer, so if you wish to save it to internal memory, you will need to perform the Write operation. The Write operation can also be performed by a MIDI exclusive Program Write Request or Combination Write Request message, in addition to the usual method of using the TRITON's switches. (☞BG p.36 "Saving data")

- If the GLOBAL 2.1-1b "MIDI Filter" - "Exclusive" setting is checked, data will also be dumped in response to a Dump Request message. This data is transmitted and received on the global MIDI channel.

Editing sounds etc.

By using various MIDI exclusive data dumps, you can rewrite all programs or an individual program. By using parameter change messages, you can edit individual parameters as follows.

Parameter changes

- In Program mode, all parameters other than the program name can be edited. Performance editor parameters are included.
- In Combination mode, parameters other than the combination name can be edited.
- In Multi mode, you can edit parameters other than multi name, "Control Track," "RPPR On/Off," "J (Tempo)" of the 1.1: Play-4.4: MIDI Filter 4 pages, and the parameters of 6.1: Arp., 7.1 BUS, 7.2: Insert FX, and 7.3: Master FX.

Drum kit parameter change/User arpeggio pattern parameter change

- In Global mode, you can edit drum kits and user arpeggio patterns.

Since other global parameters cannot be edited, use data dump to change their setting. Data dumping of Sampling mode data is not supported.

The global MIDI channel is used to transmit and receive this data.

First check GLOBAL 2.1-1b "MIDI Filter" - "Exclusive," so that exclusive data can be transmitted and received. When you change modes on the TRITON-Rack, a mode change message will be transmitted. When you change programs or combinations, the parameters for one program or one combination will be transmitted together with the program change. When you edit individual parameters, parameter change, drum kit parameter change, or user arpeggio pattern (parameter change and multi parameter change) messages will be transmitted.

When these messages are received, the same editing operation will be performed as on the transmitted device.

After MIDI exclusive data has been received and processed, a Data Load Completed message will be transmitted. The control master device must not transmit the next message until this message is received (or until a sufficient interval of time has elapsed).

When you change programs or combinations, or use parameter changes to edit, the changes will affect the data in the edit buffer and will not be stored in internal memory unless you Write, so that the changes will be lost if you re-select the program or combination. The Write operation can be performed by a MIDI exclusive Program Write Request or Combination Write Request message, in addition to the usual method of using the TRITON-Rack's switches. (☞BG p.36 "Saving data")

It is not necessary to write a multi, but it will not be backed up when the power is turned off. If you wish to keep the data, save it on external media before turning the power. (☞BG p.40 "Saving on external media")

If notes are "stuck"

If for some reason, notes become "stuck" and will not stop sounding, you can usually stop the sound by changing the mode. If notes played via MIDI are stuck, you can disconnect the MIDI cable.

MIDI transmits a message called Active Sensing [FE] at regular intervals. A device that receives this message will be aware that an external MIDI device is transmitting to it. Sub-

sequently, if no MIDI messages are received for a certain interval of time, the receiving device will decide that the connection has been broken, and will turn off any notes that had been sounded via MIDI and reset its controller values.

Playing the TRITON-Rack multi-timbrally from an external device

The TRITON-Rack can be connected to an external device and played multi-timbrally in the following ways.

- MIDI messages from the external device can play a combination (8-part multi-timbral performance). You can change the overall settings (programs, levels, and effects) by using program change messages to switch combinations.
- MIDI messages from the external device can be used to play a multi (16-part multi-timbral performance). Overall settings (programs, levels, effects etc.) can be changed by using a Song Select message to switch multis. (Song Select messages can be received if "MIDI Clock": GLOBAL 2.1-1a is set to **EXT**.)

Synchronizing the playback of the arpeggiator or pattern/RPPR

The choice of whether the TRITON-Rack will be the master (the controlling device) or the slave (the controlled device) is made by GLOBAL 2.1-1a "MIDI Clock."

Using the external MIDI device as master and the TRITON-Rack as slave

Connect the TRITON-Rack's MIDI IN connector to the MIDI OUT connector of the external MIDI device. (☞BG p.13).

- When you set "MIDI Clock" (GLOBAL 2.1-1a) to **External**, the TRITON-Rack will be the **slave** device.

Arpeggiator: The tempo will follow the MIDI timing clock. If you playback the external sequencer, the TRITON-Rack's arpeggiator will synchronize to the external timing clock. (☞p.93)

Even if "MIDI Clock" is **External** and the TRITON-Rack is being controlled from the external device, the performance of the arpeggiator will still be transmitted via MIDI. (In Combination and Multi modes, the arpeggiator performance will be transmitted from timbres/tracks whose "Status" is **BTH**, **EXT**, or **EX2**.)

Pattern/RPPR: The tempo will follow the MIDI timing clock. You can play back an external sequencer, and synchronize the pattern/RPPR to the MIDI timing clock that it transmits. Even if "MIDI Clock" is set to **External** and the TRITON-Rack is being controlled from an external device, musical data will be transmitted by tracks whose "Status" is **BTH**, **EXT**, or **EX2**.

Using the TRITON-Rack as master and the external MIDI device as slave

Connect the MIDI OUT connector of the TRITON-Rack to the MIDI IN connector of the external MIDI device. (☞BG p.13)

- When you set "MIDI Clock" to **Internal**, the TRITON-Rack will be the master device, and will transmit MIDI timing clock messages.

Arpeggiator: The tempo can be controlled from the TRITON-Rack. Simultaneously, the performance of the arpeggiator will be transmitted via MIDI. (In Combination, and Multi modes, data will be transmitted by timbres/tracks whose "Status" is **BTH**, **EXT**, or **EX2**.) An

external tone generator connected to MIDI OUT will sound, and the tempo of an external sequencer can be controlled.

Pattern/RPPR: The musical data can be played back and controlled on the TRITON-Rack. Simultaneously, the pattern/RPPR playback will be transmitted via MIDI from tracks whose "Status" is **BTH**, **EXT**, or **EX2**. An external tone generator connected to MIDI OUT will sound, and the tempo of an external sequencer can be controlled.

□ **Recording the MIDI output of the TRITON-Rack's controllers, arpeggiator, and RPPR on an external sequencer/computer**

If you wish to record the MIDI output of the TRITON-Rack's controllers, arpeggiator, and RPPR on an external sequencer or computer and use the TRITON-Rack as the monitoring and playback tone generator while you record, you must turn off the TRITON-Rack's Local Control setting ("Local Control On": GLOBAL 2.1-1a), and set your external sequencer/computer for echo-back (a function by which the data received at MIDI IN is retransmitted without change from MIDI OUT) so that the data from the TRITON-Rack's controllers, arpeggiator and RPPR will not be applied in duplicate to the tone generator.

Using the REALTIME CONTROLS [1]-[4] knobs to record MIDI control changes on an external MIDI sequencer/computer

Set the TRITON-Rack to **Local Control Off**. Set the external MIDI sequencer/computer to **Echo Back On**. With these settings, recording and playback will occur correctly, and the control changes will not be applied to the tone generator in duplicate.

Recording the arpeggiator or RPPR on an external MIDI sequencer/computer

If the arpeggiator is on, it will operate on the notes received at MIDI IN. The arpeggiator will transmit notes from MIDI OUT depending on the local control setting ("Local Control On": GLOBAL 2.1-1a) as described below.

When the RPPR function is on, RPPR will function for notes that are received on the MIDI channel of the track that is selected as the "Control Track." Notes will be transmitted by RPPR from MIDI OUT according to the local control setting ("Local Control On": GLOBAL 2.1-1a) as described below.

Local Control On: Notes from the arpeggiator or RPPR will be transmitted from MIDI OUT. Normally you will use this setting.

Local Control Off: Notes from the arpeggiator or RPPR will not be transmitted from MIDI OUT. The arpeggiator or RPPR will only sound the notes (on the TRITON-Rack).

Setting example 1

Record the note messages generated by the arpeggiator or RPPR on the external MIDI sequencer/computer

Turn on the TRITON-Rack's arpeggiator or RPPR function. Set the TRITON-Rack to **Local Control On**.

Turn Local Control On for the TRITON-Rack.

Turn **Echo Back Off** on your external sequencer/computer. By turning echo back off, you will prevent the arpeggiator or RPPR from performing duplicate processing on the monitored notes during recording.

During playback, turn off the arpeggiator and RPPR functions of the TRITON-Rack.

Setting example 2

Use the external MIDI sequencer/computer to record only the notes that trigger the arpeggiator or RPPR, and operate the TRITON-Rack's arpeggiator or RPPR for monitoring while recording, and during playback.

Turn on the TRITON-Rack's arpeggiator or RPPR function. Set the TRITON-Rack to **Local Control Off**. The note messages generated by the arpeggiator or RPPR will not be output. On your external MIDI sequencer/computer, turn **echo back on**. With these settings, the data will be recorded and played correctly, and the arpeggiator will not be applied in duplicate.

□ **About GM/GS/XG**

The TRITON-Rack supports the GM standard. It also supports the GM2 sound map (including bank select) with 256 programs and 9 drum programs provided in ROM banks G, g(1)-g(9), and g(d). (Banks g(1)-g(9) are GM2 variation programs, and g(d) contains drum programs.)

GM is a standard that ensures basic compatibility of sounds etc. between different GM-compatible instruments made by different manufacturers, but you need to be aware of the following.

- The GM System On message is received only in Multi mode. (p.51 "GM Initialize")

Roland GS and Yamaha XG are specifications by which these respective manufacturers have extended the GM standard.

The TRITON-Rack automatically converts the GS/XG sound maps to the GM2 sound map, and supports some of their messages. In Multi mode etc., GS/XG music data can be played back from an external sequencer.

▲ Since the TRITON-Rack does not support all of the GS/XG sound maps or messages, some data may not be played back correctly.

If you wish to play music data from an external GM/GS/XG compatible sequencer, or to load it into a pattern (multi), set "Bank Map" (GLOBAL 1.1-2a) to **GM(2)**.

Converting the GS/XG bank/program maps to the GM2 bank/program map

- When bank select/program change messages used by GS/XG are received, they will automatically be converted to the G, g(1)-g(9), g(d) bank/program map of the TRITON-Rack.
- The same conversion is performed when a SMF is loaded into a pattern (multi) in Disk mode.

▲ For banks that are used in common by GS/XG, GS Reset/XG System ON will be received to automatically convert to the optimal bank/program map for each.

Support for GS/XG part mode exclusive messages

- In Multi mode when GS/XG part mode exclusive messages Drum or MDrm 1-4 are received, bank g(d) (GM2 drum bank) will be selected for the specified track. Until this part mode state is defeated, bank select messages will no longer be received for the specified track.
- When an SMF is loaded into a pattern (multi) in Disk mode, any bank select messages in a track that is set to a part mode of Drum or MDrm 1-4 will be ignored, and will not be loaded.

Support for NRPN messages used in GS/XG music data

The following NRPN messages can be received to modify the sound.

Vibrato Rate	[Bn, 63, 01, Bn, 62, 08, Bn, 06, mm]
Vibrato Depth	[Bn, 63, 01, Bn, 62, 09, Bn, 06, mm]
Vibrato Delay	[Bn, 63, 01, Bn, 62, 0A, Bn, 06, mm]
Filter Cutoff	[Bn, 63, 01, Bn, 62, 20, Bn, 06, mm]
Resonance	[Bn, 63, 01, Bn, 62, 21, Bn, 06, mm]
EG Attack Time	[Bn, 63, 01, Bn, 62, 63, Bn, 06, mm]
EG Decay Time	[Bn, 63, 01, Bn, 62, 64, Bn, 06, mm]
EG Release Time	[Bn, 63, 01, Bn, 62, 66, Bn, 06, mm]
Drum Filter Cutoff	[Bn, 63, 14, Bn, 62, kk, Bn, 06, mm]
Drum Filter Resonance	[Bn, 63, 15, Bn, 62, kk, Bn, 06, mm]
Drum EG Attack Time	[Bn, 63, 16, Bn, 62, kk, Bn, 06, mm]
Drum EG Decay Time	[Bn, 63, 17, Bn, 62, kk, Bn, 06, mm]
Drum Coarse Tune	[Bn, 63, 18, Bn, 62, kk, Bn, 06, mm]
Drum Fine Tune	[Bn, 63, 19, Bn, 62, kk, Bn, 06, mm]
Drum Volume	[Bn, 63, 1A, Bn, 62, kk, Bn, 06, mm]
Drum Panpot	[Bn, 63, 1C, Bn, 62, kk, Bn, 06, mm]*
Drum Rev Send(Send2)	[Bn, 63, 1D, Bn, 62, kk, Bn, 06, mm]
Drum Cho Send(Send1)	[Bn, 63, 1E, Bn, 62, kk, Bn, 06, mm]

kk: Drum Inst No. ([0C...6C] corresponds to C0...C8)

* [00, 01...7f] corresponds to Random, L000...R127)

□ About standard MIDI files

Standard MIDI files (SMF) make it possible for different computer programs or musical instruments made by different manufacturers to exchange time-based MIDI data. Each standard MIDI file contains one song.

On the TRITON-Rack, Standard MIDI files (SMF) provide a way by which MIDI data for user patterns that were recorded in Multi mode or automatically created in Sampling mode by "Time Slice" (SMPL 3.1-2e) can be played or edited in an external MIDI sequencer or computer.

The TRITON-Rack supports format 0 (type 0) in which all of the MIDI data is combined into one track, and format 1 (type 1) in which the data is separated by track.

- When you load SMF data in Disk mode as a pattern, the data will be loaded separately by channel and track. If the SMF contains multiple channels and tracks, it will be loaded as multiple patterns. In the case of a Format 1 Standard MIDI File that contains more than 16 tracks, data of the same channel may be combined into a single pattern. Standard MIDI files longer than 99 measures cannot be loaded.

When data is loaded as a pattern, the program banks converted into program change events will differ depending on the "Bank Map" (GLOBAL 1.1-2a) setting. When loading GM/GS/XG-compatible SMF data, set "Bank Map" to **GM(2)**.

- When a multi pattern is saved as SMF in Disk mode, the MIDI channel will be 1.

If you wish to exchange sequence data such as patterns between the TRITON-Rack and TRITON keyboard models, we recommend that you save the data in the normal TRITON-Rack format ("Save Multi"). If the data is saved in the normal TRITON format, more of the TRITON's unique settings will be preserved than if you saved the data as SMF ("Save to Std MIDI File").

□ Using the TRITON-Rack as a MIDI data filer

MIDI exclusive data sent from an external MIDI device can be received by the TRITON-Rack, and then saved on a floppy disk or a connected external SCSI device (if the separately sold EXB-SCSI option is installed). (This is called the Data Filer function.) Select "Save Exclusive" (DISK 1.1-2a) to perform this operation. (⇨p.135)

Various messages

A

Are you sure ?

Meaning: This message asks you to confirm execution. To execute press the [F8] (“OK”) key. To cancel, press the [F7] (“Cancel”) key.

C

Can't copy/swap double size effect

Meaning: When copying or swapping an insertion effect, you attempted to place a double-size effect in IFX1 or IFX5.

Action: Modify your settings so that a double-size effect is not moved to IFX1 or 5, and execute again.

Completed

Meaning: Execution of the command ended normally.

D

Destination and source are identical

Meaning: When copying or bouncing, the same Multi or pattern was selected for both the source and destination.

Action: Select a different Multi or pattern for the source and destination.

Destination is empty

Meaning: When editing, the pattern that was specified as the destination contains no musical data.

Action: Select a pattern that contains musical data.

Destination multi is empty

Meaning: The multi that was specified as the copy destination or bounce destination does not exist.

Action: Execute the Create New Multi command in the dialog box that appears when a new multi is selected before copying or bouncing.

Destination multisample already exists

Meaning: A multisample already exists at the destination (save location) multisample.

Action: Either delete the multisample at the destination (save location), or change the save destination multisample number.

Destination multisample and source multisample are identical

Meaning: The same multisample is selected for the source and destination.

Action: Select different multisamples for the source and destination.

Destination sample already exists

Meaning: A sample already exists at the destination (save location).

Action: Either delete the sample at the destination (save location), or change the save destination sample number.

Destination sample data used in source sample

Meaning: Since the sample data at the destination (save location) is also used by the source sample, it cannot be overwritten.

Action: Without using Overwrite, specify a different sample for the destination (save location).

Destination sample is empty

Meaning: The sample for editing is empty.

Directory is not empty

Meaning: When deleting a directory, files or directories exist within that directory.

Action: Delete all directories or files within the directory.

Disk not formatted

Meaning: When you attempted to perform a high-level format (quick format) of media, the media had not been physically formatted yet.

Action: Execute the Disk mode Utility “Format” to physically format the media (full format).

E

Error in formatting medium

Meaning: An error occurred while performing a physical format (full format) or high-level format (quick format) of the media.

Action: Use other media.

Error in reading from medium

Meaning: An error occurred while reading data from a medium.

Action: Execute the reading operation once again. If the same error occurs, it is possible that the data on the disk has been damaged.

Error in writing to medium

Meaning: An error occurred while writing data to a medium. (Verify error)

Action: It is possible that the floppy disk has been physically damaged. Try another disk. Avoid using the floppy disk that produced the error.

F

File already exists

Meaning: When executing a Create Directory or File Rename operation, a directory or file of the same name already exists on the disk.

Meaning: When executing the Disk mode Utility “Copy” command without using wild cards, the copy destination contained a file of the same name as the copy source.

Meaning: Meaning: When you executed the Disk mode utility “Save Sampling Data” with a setting of All, All Multisamples, All Samples, or One Multisample, a directory with the same name as the directory that the TRITON-Rack attempted to create already existed on the disk.

Action: Either delete the existing directory or file, or specify a different filename.

File contains unsupported data

Meaning: For an AIFF file etc., you attempted to load a file format that the TRITON series does not support.

Action: If possible, use a computer etc. to convert the data into a format supported by the TRITON series, and load it.

File is read-only protected

Meaning: You attempted to write to a file or to delete a file that had a read-only attribute.

Meaning: You attempted to save a file to a floppy disk that contained a read-only file of the same name.

Action: Save the file with a different name.

File unavailable

Meaning: You attempted to load or open a file whose format was incorrect.

File/path not found

Meaning: When loading a sample file in Disk mode, the file name specified in the dialog box for selecting a directory hierarchy or other media did not exist in the specified location.

Meaning: When executing the Disk mode Utility command "Delete," the specified file did not exist.

Meaning: When executing the Disk mode Utility command "Copy" and you used a wild card to specify the copy file name, the specified file was not found. Alternatively, the length of the copy source path name exceeded 76 characters.

Meaning: In Disk mode when you used the [F6] ("Open") key to open a directory, the path length including the selected directory name exceeded 76 characters.

Action: Check the file or directory.

Front sample data used in rear sample Can't overwrite

Meaning: When executing the Sampling mode function Sample Edit "Link," the sample data of the front sample was also used by the rear sample, and thus could not be overwritten.

Action: Do not use Overwrite; specify a different sample as the save destination.

I

Illegal file description

Meaning: The filename that you specified when saving a file or creating a directory contained invalid characters.

Action: Change the filename you are specifying. Filenames not permitted by MS-DOS cannot be used as a filename.

Illegal SMF data

Meaning: You attempted to load a file that was not a Standard MIDI File.

Illegal SMF division

Meaning: You attempted to load a Standard MIDI File that was timecode-based.

Illegal SMF format

Meaning: You attempted to load a Standard MIDI File of a format other than 0 or 1.

M

Measure size over limit

Meaning: When loading a Standard MIDI File, the number of events in a measure exceeded the maximum (approximately 10,000 events).

Meaning: The attempted edit operation would cause the maximum number of events in a measure (approximately 10,000) to be exceeded.

Action: Use event editing etc. to delete unwanted data.

Medium changed

Meaning: When executing the Disk mode Utility "Copy," the media was exchanged or ejected, and it was not possible to copy between separate media on the same drive.

Medium write protected

Meaning: The floppy disk or other media to which you attempted to save is write-protected.

Action: Turn off write protect on the floppy disk or other media, and execute the command once again.

Memory full

Meaning: In Multi mode when editing a multi or pattern, etc. the total data of all multi has used up all of the sequence data memory, and further editing is not possible.

Action: Delete other multi data etc. to increase the amount of free memory.

Meaning: While realtime recording in Multi mode, there is no more free memory to accommodate the recorded data, so recording has been forcibly halted.

Action: Delete other multi data etc. to increase the amount of free memory.

Meaning: In Disk mode when loading a Standard MIDI File, the sequence memory has filled up.

Action: Delete multi data. (If necessary, save the data before deleting it.)

Memory overflow

Meaning: In Disk mode when using "Save Exclusive" to receive exclusive data, the sequence memory has filled up.

Action: If you are receiving two or more sets of exclusive data, transmit them separately to the TRITON-Rack.

Meaning: In Disk mode, you attempted to load more sample waveform data than there was free memory capacity.

Action: In Sampling mode, execute Delete sample to create free space in the sample waveform data area, and re-load the data.

Meaning: When you executed the Disk mode command "Load to Demo Song" or the DEMO/SNG page "Make Demo Song," the size of the demo song data exceeded the capacity of the Demo Song area.

- Action:
- Edit the .SNG file
In Sequencer mode of the TRITON, edit the song data so that it will fit in the Demo Song area, create the .SNG file, and use the TRITON-Rack's Disk mode to execute "Load to Demo Song."
 - Reduce the number of songs in the .SNG file
In Disk mode, load the .SNG file with its track event data (see p.126, 128). Then execute "Delete Multi" in Multi mode so that the data will fit into the Demo Song area, and execute the DEMO/SNG page command "Make Demo Song." For details on the size of the Demo Song area, refer to p.132.

Memory protected

- Meaning: The internal program, combination, multi, drum kit, or user arpeggio pattern is protected.
- Action: In Global mode, turn off write-protect, and execute the write or load operation once again.

Multisample L and R are identical

- Meaning: Since the destination (save location) L and R multisample numbers are the same, the editing operation could not be executed.
- Action: Select a different multisample number for the L and R of the destination (save location).

N

No data

- Meaning: When loading a Standard MIDI File, the file contained no events.
- Meaning: When you executed Disk mode "Load to Demo Song" or DEMO/SNG page "Make Demo Song," event data did not exist in the track.
- Action: Load a .SNG file that contains track event data.
- Meaning: When you executed "Export Samples as AIFF/WAVE" for Samples in One Multisample, there were no samples.
- Action: Create sample data.

No medium

- Meaning: When executing a command in Disk mode, no media (floppy disk etc.) was inserted in the drive.
- Action: Insert media such as a floppy disk, or mount the drive.

No space available on medium

- Meaning: When you attempted to save a file or create a director, the medium (floppy disk etc.) contained no free space.
- Action: Either delete an existing file, or exchange the medium with one that has sufficient free space.

Not enough memory

- Meaning: When starting realtime recording in Multi mode, the minimum amount of free memory (such as memory for the BAR events up to the recording start location) could not be allocated.
- Action: Delete other multi data etc. to increase the amount of free memory.

Meaning: When executing "Save Exclusive" in Disk mode, there was no remaining sequence memory. Alternatively, when executing "Load Exclusive," sufficient free sequence memory could not be allocated.

Action: Delete multi data. (If necessary, save the multi data before deleting it.)

Not enough memory to load

- Meaning: When you attempted to load a .SNG file in Disk mode, there was insufficient free memory.
- Action: Delete other multi data etc. to increase the amount of free memory.

Not enough multi locations available

- Meaning: When loading a .SNG file as "Append," you attempted to load a larger number of multis than could be added.
- Action: In Multi mode execute "Delete Multi" to increase the number of multis that can be used. Then reload the data.

Not enough multi memory

- Meaning: When executing the Sampling mode function Time Slice "Save," the total data for all multi has used up the entire sequence data memory, so saving is not possible.
- Action: Delete other multi data etc. to increase the free memory.

Not enough multisample memory

- Meaning: There is insufficient multisample memory. (The number of multisamples would exceed the maximum of 1,000.)
- Action: Delete multisamples to increase the amount of free memory.

Not enough pattern locations available

- Meaning: When loading an SMF file, you exceeded the remaining number of multi user patterns that could be added.
- Action: In Multi mode execute "Delete Pattern" to increase the number of user patterns that can be used. Then reload the data.

Not enough relative parameter memory

- Meaning: There is insufficient memory for relative parameters. (The number of samples in the multisamples would exceed the maximum of 4,000.)
- Action: Delete multisamples or indices of multisamples to increase the amount of free memory.

Not enough sample memory

- Meaning: There is insufficient sample memory (for sample parameters or sample waveform data).
- Action: Delete samples to increase the amount of free memory.

Not enough sample/multisample locations available

- Meaning: The data you attempted to load would exceed the maximum number of multisamples or samples.
- Action: In Sampling mode, execute "Delete Multisample" or "Delete Sample" to free a sufficient number, and reload the data.

O

Oscillator Mode conflicts (check PROG 2.1)

Meaning: In Sampling mode when you executed "Conv. To Program" with Use Destination Program Parameters checked, the conversion destination program "Mode (Oscillator Mode)" setting did not match.

Action: In Program mode, set the "Mode (Oscillator Mode)" of the conversion destination program. If converting a monaural multisample, select Single. If converting a stereo multisample, select Double.

P

Pattern used in song

Continue ?

Meaning: When editing, the specified pattern is used by RPPR. If you wish to execute, press the [F8] ("OK") key. If you decide not to execute, press the [F7] ("Cancel") key.

R

Rear sample is empty

Meaning: When executing the Sampling mode function Sample Edit "Link," the sample specified as the rear sample was empty.

Action: Specify a rear sample that contains data, and execute the function once again.

Root directory is full

Meaning: You attempted to create a file or directory in the root directory of the media, but this would exceed the maximum number of root directory entries.

Action: Either delete an existing file or directory, or exchange media.

S

Sample data used in other sample(s)

Continue ?

Meaning: Other sample(s) use the same sample data as the sample that you are editing. To continue editing, press the [F8] ("OK") key.

Sample L and R are identical

Meaning: The edit operation could not be executed because the destination (save location) L and R sample numbers are identical.

Action: Select different sample numbers for L and R of the destination (save location).

Sample length is shorter than minimum

Meaning: You attempted to execute an editing operation that would make the sample data shorter than 8 samples.

Action: Change the editing range so that the sample data will be longer than 8 samples.

Sample used in other multisample(s)

Continue ?

Meaning: The sample you are editing is used by other multisamples. To continue editing, press the [F8] ("OK") key.

Selected banks are the same

Meaning: This is a dialog box displayed when you load a TRITON .PCG file that contains drum kit banks C/D/User or user arpeggio banks C/D, and indicates that the specified loading destination bank is the same bank.

Action: Press the [F8] ("OK") key to acknowledge the error message, return to the dialog box where you specify the bank, and re-specify the loading destination bank.

Selected file/path is not correct

Meaning: When loading a KSF file that was split across multiple media, the order in which you attempted to load the files was incorrect.

Action: Load the KSF file in the correct order. To view the file number order in which the KSF files were saved, you can check the Utility "Translation." (The sample name and number of the first KSF file will be displayed.)

Slice point over limit

Can't divide

Meaning: The Sampling mode "Time Slice" function or the "Time Stretch" **Slice** function would divide the sample into more samples than the maximum (1000), so "Divide" cannot be executed.

Action: Use "Link" to connect any "Index" that does not need to be divided; then execute "Divide."

Source is empty

Meaning: No data exists in the pattern that you specified as the source.

Action: Specify a pattern that contains musical data.

Source sample is empty

Meaning: When executing Insert, Mix, or Paste, the source sample is empty.

Action: Execute the Copy operation before executing Insert, Mix, or Paste.

T

There is no readable data

Meaning: Either the file size is 0 or the file does not contain data that can be accessed by the load or open operation. Alternatively, the data is damaged etc., and cannot be loaded or accessed.

This file is already loaded

Meaning: When loading a divided .PCG file, you attempted to load a file that had already been loaded.

Action: Load the .PCG files that have not yet been loaded.

U

Unable to create directory

Meaning: You attempted to create a directory that would exceed the maximum pathname length (76 characters for the full pathname).

Unable to save file

Meaning: When executing the Disk mode Utility "Copy," the copy destination path length exceeded 76 characters.

Meaning: When saving a file in Disk mode, the save destination path exceeded 76 characters.

Y

You can't undo last operation Are you sure ?

Meaning: Once you enter event editing (even if you leave event editing without actually editing an event), it will no longer be possible to execute a Compare of the previous edit. If you wish to enter event editing, press the [F8] ("OK") key. To cancel, press the [F7] ("Cancel") key.

You can't undo this operation Are you sure ?

Meaning: When you exit recording or event editing in Multi mode, the memory area for Undo (Compare function) is not allocated. If you wish to keep the data that was just recorded or edited, press the [F8] ("OK") key. If you wish to return to the previous data (i.e., to delete the data that was just recorded or edited), press the [F7] ("Cancel") key.

Meaning: When editing in Multi mode, memory area for Undo (Compare function) cannot be allocated. If you wish to execute the edit, press the [F8] ("OK") key. (It will not be possible to return to the state before editing.) If you decide not to execute the edit, press the [F7] ("Cancel") key.

Action: In order to allocate memory area for Undo (Compare function), delete unneeded data such as multi, or patterns. We recommend that you save data to floppy disk before you execute the edit operation.

Data compatibility

For each of its data formats, the TRITON-Rack maintains data compatibility with the TRITON/TRITON-pro/TRITON-proX (TRITON keyboard models). Data can be exchanged by loading/saving via external media such as floppy disk, or via MIDI exclusive data dumps or parameter changes. However, caution is required in the following cases.

Parameters that are valid on the TRITON-Rack but ignored on the TRITON keyboard models

1. Program mode Audition Riff and Transpose (2.1-5a) settings

- **TRITON-Rack → TRITON keyboard models (.PCG file load/MIDI data dump/MIDI parameter change):** Parameter settings are maintained as internal data by TRITON keyboard models, but will be ignored by them. When a keyboard model TRITON saves this data as a .PCG file or transmits it via MIDI data dump, the same settings will be output as when the data was loaded or received via MIDI data dump.
- **TRITON keyboard models → TRITON-Rack (.PCG file load/MIDI data dump):** These parameters will be transmitted as “Off” and “+00” respectively.

2. Program, Combination, Multi mode, REALTIME CONTROLS [SELECT] C-mode settings

- **TRITON-Rack → TRITON keyboard models (.PCG file load/MIDI data dump/MIDI parameter change):** Parameter C settings are maintained as internal data by TRITON keyboard models, but are ignored by them; the keyboard model will operate using A or B settings. When a keyboard model TRITON saves this data as a .PCG file or transmits it via MIDI data dump, the same settings will be output as when the data was loaded or received via MIDI data dump.

3. Combination mode (1.1-2c, 2.1-1a), Multi mode (1.1-2b/3b), “Program Select” banks EXB-A, B, C, D, E, F, G, H settings

- **TRITON-Rack → TRITON keyboard models (.PCG/.SNG file load/MIDI data dump/MIDI parameter change):** Since TRITON keyboard models do not have these program banks, they will not sound or operate correctly.

4. Program mode OSC1 Drum Kit (2.1-2d) “073 (E-D)–152 (GM)” settings

- **TRITON-Rack → TRITON keyboard models (.PCG file load/MIDI data dump/MIDI parameter change):** Since TRITON keyboard models do not have these drum kit numbers, they will not sound or operate correctly.

5. Program mode (1.1-3a, 6.1-1a), Combination mode (1.1-4b/5b, 6.1-2a/3a), or Multi mode (6.1-3a/4a) arpeggio patterns U232 (E-C)–U327 (E-H) settings

- **TRITON-Rack → TRITON keyboard models (.PCG file load/MIDI data dump/MIDI parameter change):** Since TRITON keyboard models do not have these user arpeggio pattern numbers, they will not sound or operate correctly.

[Note for 3. 4. 5.]

The following table shows how the banks/numbers of Programs, Combinations, Drum Kits, and Arpeggio Patterns correspond between the TRITON-Rack and the TRITON/TRITON-pro/TRITON-proX (TRITON keyboard models). TRITON-Rack data for which TRITON keyboard models have no banks/numbers will not sound/operate correctly on TRITON keyboard models. Caution must be used when transferring such data from the TRITON-Rack to a TRITON keyboard model via file load/MIDI data dump/MIDI parameter change.

TRITON-Rack	TRITON/TRITONpro/TRITONproX
Program	Program
INT-A	A
INT-B	B
INT-C	C
INT-D	D
INT-E	E
INT-F	F
G, g(1)...g(d)	G, g(1)...g(d)
EXT-A	-
EXT-B	-
EXT-C	-
EXT-D	-
EXT-E	-
EXT-F	-
EXT-G	-
EXT-H	-
Combination	Combination
INT-A	A
INT-B	B
INT-C	C
INT-D	D
INT-E	-
EXT-A	-
EXT-B	-
EXT-C	-
EXT-D	-
EXT-E	-
EXT-F	-
EXT-G	-
EXT-H	-
Drum Kit	Drum Kit
000-015(I-A/B)	00-15(A/B)
016-031(E-A)	16-31(C)
032-047(E-B)	32-47(D)
048-063(E-C)	48-63(User)
064-079(E-D)	-
080-095(E-E)	-
096-111(E-F)	-
112-127(E-G)	-
128-143(E-H)	-
144-152(GM)	64-72(GM)

Arpeggio Pattern	
P000-004(Preset)	P000-004(Preset)
U000-199(I-A/B)	U000-199(A/B)
U200-215(E-A)	U200-215(C)
U216-231(E-B)	U216-231(D)
U232-247(E-C)	-
U248-263(E-D)	-
U264-279(E-E)	-
U280-295(E-F)	-
U296-311(E-G)	-
U312-327(E-H)	-

Parameters that are valid on the TRITON keyboard models but ignored on the TRITON-Rack

1. Global mode parameters of the TRITON keyboard models

PC I/F Baud Rate

Beep

Foot Switch Assign

Foot Pedal Assign

Damper Polarity

Foot Switch Polarity

- **TRITON keyboard models → TRITON-Rack (.PCG file load/MIDI data dump):**
Parameter settings are maintained as internal data by the TRITON-Rack, but will be ignored. When their state is saved as a .PCG file or transmitted via MIDI data dump by the TRITON-Rack, the same settings will be output as when the data was loaded or received via MIDI data dump.
- **TRITON-Rack → TRITON keyboard models (.PCG file load/MIDI data dump):**
The parameters will be transmitted with their default values.
Convert Position
- **TRITON keyboard models → TRITON-Rack (.PCG file load/MIDI data dump):**
The **PreMIDI** or **PostMIDI** setting of this parameter is saved in the TRITON-Rack as internal data, but will be ignored; the TRITON-Rack will operate as **PostMIDI**. When its state is saved as a .PCG file or transmitted via MIDI data dump by the TRITON-Rack, the same setting will be output as when the data was loaded or received via MIDI data dump.
- **TRITON-Rack → TRITON keyboard models (.PCG file load/MIDI data dump):**
The parameter will be set to "Post MIDI."
MIDI Clock
- **TRITON keyboard models → TRITON-Rack (.PCG file load/MIDI data dump):**
The setting of the **External PCI/F** parameter is saved in the TRITON-Rack as internal data, but will be ignored; the TRITON-Rack will operate as **External**. When its state is saved as a .PCG file or transmitted via MIDI data dump by the TRITON-Rack, the same setting will be output as when the data was loaded or received via MIDI data dump.

2. TRITON keyboard models Combination or Sequencer mode MIDI Filter "Enable Foot Pedal/Switch" parameter

- **TRITON keyboard models → TRITON-Rack (.PCG/.SNG file load/MIDI data dump):**
The parameter settings are saved as internal data in the TRITON-Rack, but will be ignored. When their state is saved as a .PCG/.SNG file or transmitted via MIDI data dump by the TRITON-Rack, the same settings will be output as when the data was loaded or received via MIDI data dump.
- **TRITON-Rack → TRITON keyboard models (.PCG/.SNG file load/MIDI data dump):**
The parameter will be set to "0."

3. TRITON keyboard models Sequencer mode parameters/data

Sequencer mode data of a TRITON keyboard model is compatible with Multi mode data of the TRITON-Rack via .PCG file or via MIDI data dump. However, caution must be used regarding the following parameters.

Meter

Tempo Mode

Track1-16 PLAY/MUTE

Track Play Loop

Track Play Loop Start Measure

Track Play Loop End Measure

Play Intro

- **TRITON keyboard models → TRITON-Rack (.SNG file load/MIDI data dump):**
These parameter settings are saved as internal data in the TRITON-Rack, but will be ignored. When their state is saved as a .SNG file or transmitted via MIDI data dump by the TRITON-Rack, the same settings will be output as when the data was loaded or received via MIDI data dump.
- **TRITON-Rack → TRITON keyboard models (.SNG file load/MIDI data dump):**
These parameters will be set to their default values.
Cue List data
- **TRITON keyboard models → TRITON-Rack (.SNG file load):** This data will not be loaded.
- **TRITON keyboard models → TRITON-Rack (MIDI data dump):**
This data is saved as Multi mode internal data in the TRITON-Rack, but will be ignored. When its state is transmitted via MIDI data dump by the TRITON-Rack, the same data will be output as when the data was received via MIDI data dump.
Track data (events of all tracks in the song)
- **TRITON keyboard models → TRITON-Rack (.SNG file load):**
This data will be loaded if Load track events? (☞ Load selected 15, 16" 1.1-1d) is checked. On the TRITON-Rack, this is saved as Multi mode internal data, but cannot be used in Multi mode. This data will be output when its state is saved as a .SNG file by the TRITON-Rack.
- **TRITON keyboard models → TRITON-Rack (MIDI data dump):**
On the TRITON-Rack, this data is saved as Multi mode internal data, but cannot be used in Multi mode. This data will be output when its state is transmitted via MIDI data dump by the TRITON-Rack.

Disk mode information

Chunks that are supported

When loading

AIFF files

When data is loaded into the TRITON-Rack, the following four chunks are referenced: Common chunk, Sound Data chunk, Marker chunk, and Instrument chunk. Other chunks are ignored.

Restrictions on the parameters in each chunk are described below.

Common chunk

Only one (mono) or two (stereo) channels are supported. Sample sizes of 1–16 bits are supported. If the sample data is 8 bits or less, it will be loaded as 16 bit data with the lower 8 bits always at 0.

Sound Data chunk

Offset and block size are ignored. (Block-Aligning Sound Data is not supported.)

Marker chunk

Up to eight markers are supported. The ninth and subsequent markers will be ignored.

Instrument chunk

If the loop play mode is ForwardBackwardLooping, this will be handled as ForwardLooping. baseNote, detune, lowNote, highNote, lowVelocity, highVelocity, gain, and releaseLoop will be ignored.

WAVE files

When loading, the TRITON-Rack references the Format Chunk, Sample Chunk, and Wave Data. Limitations are discussed below.

Format chunk

Standard PCM format is the only format category that is supported.

Only one (mono) or two (stereo) channels are supported. Sample sizes of 1–16 bits are supported. If the sample data is 8 bits or less, it will be loaded as 16 bit data with the lower 8 bits always at 0.

Sample Chunk

Only the loop data is referenced. If there is multiple loop data, the loop with the greatest number of loop playback times (Play Count) will be used. Even if the Type is Alternating or Backward, it will be handled as Forward Loop.

Wave data

The Wave List chunk is not supported.

When exporting

AIFF files

When exporting, the TRITON-Rack will use the Common Chunk, Sound Data Chunk, Marker Chunk, and Instrument Chunk.

Limitations on the parameters within each chunk are discussed below.

Common Chunk

The number of channels is fixed at 1 (mono). The sample size is fixed at 16 bits.

Marker Chunk

Two markers are used as Loop Start Address and End Address respectively.

Instrument Chunk

The loop play mode is fixed at Forward Looping. Zone data of the multisamples will not be exported.

WAVE files

When exporting, the TRITON-Rack will use the Format Chunk, Sample Chunk, and Wave Data. Restrictions are given below.

Format Chunk

The format category is fixed at standard PCM format. The number of channels is fixed at 1 (mono). The sample size is fixed at 16 bits.

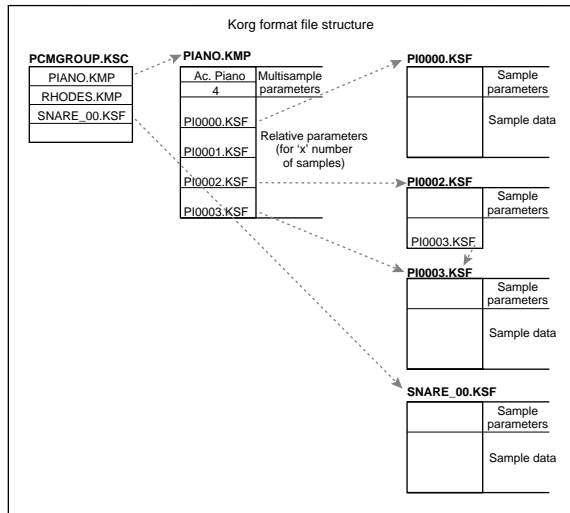
Sample Chunk

The Type is fixed at Forward Loop. Zone data of the multisamples will not be exported.

About KORG format files

KORG format file structure

There are three types of files: .KMP files for multisamples, .KSF files for samples, and .KSC files which handle the first two as a collection. Similar to the AIFF format, .KMP/.KSF files consist of chunks.



Unless stated otherwise, all data is MSByte first.

- When a Korg format file saved on the TRITON-Rack is loaded by the TRINITY,
 - Of the parameters for each song, the following parameters are ignored (the chunk that includes the parameter is given in parentheses)

Filter cutoff	(RLP1 chunk)
Transpose	(RLP2 chunk)
Resonance	(RLP2 chunk)
Attack	(RLP2 chunk)
Decay	(RLP2 chunk)
 - Of the parameters for each sample, reverse playback and loop off settings (included in the attribute parameters of the SMD1 chunk) will be ignored, and will be handled respectively as forward playback and loop on. Only the twelve types of sampling frequency supported by the Trinity will be loaded correctly, and if the frequency is unsupported, the next lowest frequency will be selected.
 - Split sample files cannot be loaded.
- When a Korg format file saved on the TRINITY is loaded into the TRITON-Rack,
 - Compressed sample files cannot be loaded.
 - Multisamples that use internal samples of the Trinity will be assigned identically-numbered RAM samples.

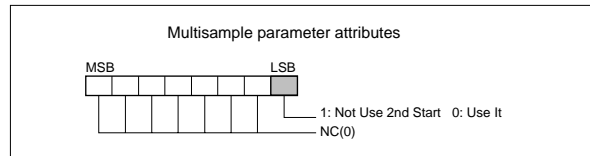
KMP (KORG Multisample Parameter) files

These consist of the following chunks.

- Multisample parameter chunk

Chunk ID ('MSP1')	[4 bytes]
Chunk size (fixed at 18)	[4 bytes]
Multisample name	[16 bytes]
Number of samples in the multisample	[1 byte]
Attributes	[1 byte]

Attributes



● Relative parameter chunk 1

- | | |
|--|---|
| Chunk ID ('RLP1') | [4 bytes] |
| Chunk size (18 × number of samples in the multisample) | [4 bytes] |
| Original key | [1 byte] |
| MSB 1: Non Transpose 0: Transpose | |
| bits 6-0 original key | |
| Top key (0-127) | [1 byte] |
| Tune (-99...+99 cents) | [1 byte] |
| Level (-99...+99 cents) | [1 byte] |
| Pan (0-127 currently unused) | [1 byte] |
| Filter cutoff (-99...+99 currently unused) | [1 byte] |
| KSF filename (including period and extension) | [12 bytes] × number of samples in the multisample |

If the .KSF filename is "SKIPPEDSAMPL", it will be treated as a sample skipped during loading.
If the .KSF filename is "INTERNALnnnn", internal samples will be used.

● Relative parameter chunk 2

- | | |
|-------------------------|-----------|
| Chunk ID ('RLP2') | [4 bytes] |
| Chunk size (4) | [4 bytes] |
| Transposing (-64...+63) | [1 byte] |
| Resonance (-99...+99) | [1 byte] |
| Attack (-99...+99) | [1 byte] |
| Decay (-99...+99) | [1 byte] |

● Multisample number chunk

- | | |
|-------------------------|-----------|
| Chunk ID ('MNO1') | [4 bytes] |
| Chunk size (4) | [4 bytes] |
| Multisample number (0-) | [4 bytes] |

KSF (KORG Sample File) files

There are four types of structure for these files. One consists of a Sample Parameter chunk, Sample Data chunk, and Sample Number chunk (SMP1 + SMD1 + SNO1). Another consists of a Sample Parameter chunk, Sample Data chunk, Sample Filename chunk, and Sample Number chunk (SMP1 + SMD1 + SMF1 + SNO1). The latter structure is in the case where the sample data of the Sample chunk is empty, and uses the sample data of the .KSF file specified by the Sample Filename chunk (shared sample data).

When saving to a floppy disk and a single disk cannot accommodate all of the data, it is possible to automatically divide the file and continue the save operation.

When a .KSF file is created in this way, the first file will consist of the Sample Parameter chunk, Sample Number chunk, a divided Sample Parameter chunk, and a divided Sample Data chunk (SMP1 + SNO1 + SPD1 + SDD1), and the second and subsequent files will consist of a divided Sample Data chunk (SDD1).

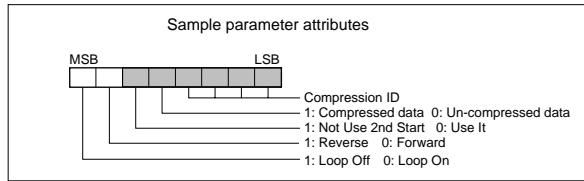
- **Sample parameter chunk**

Chunk ID ('SMP1')	[4 bytes]
Chunk size (32)	[4 bytes]
Sample name	[16 bytes]
Default bank (0-3)	[1 bytes]
Start address	[3 bytes]
2nd start address	[4 bytes]
Loop start address	[4 bytes]
Loop end address	[4 bytes]

- **Sample data chunk**

Chunk ID ('SMD1')	[4 bytes]
Chunk size (12 + number of sample databytes)	[4 bytes]
Sampling frequency	[4 bytes]
The sampling frequencies supported by the TRITON-Rack is 48000/47619/44100/32000/31746/31250/29400/24000/23810/22254/22050/21333/21164/20833/19600/16000/15873/15625/14836/14700/14222/14109/13889/13067/12000/11905/11127/11025/10667/10582/10417/9891/9800/9481/9406/9259/8711/8000/7937/7813/7418/7350/7111/7055/6945/6534/6000/5953/5564/5513/5333/5291/5208/4945/4900/4741/4703/4630/4356/4000/3968/3906/3709/3675/3556/3527/3472/3267/3000/2976/2782/2756/2667/2646/2604/2473/2450/2370/2352/2315/2178/2000/1984/1855/1838(Hz).	
Attributes	[1 byte]
Loop tune (-99...+99 cents)	[1 byte]
Number of channels (1)	[1 byte]
Sample size (8/16)	[1 byte]
Number of samples	[4 bytes]
Sample data	variable length

- **Attributes**



- **Sample number chunk**

Chunk ID ('SNO1')	[4 bytes]
Chunk size (4)	[4 bytes]
Sample number (0-)	[4 bytes]

- **Sample filename chunk**

Chunk ID ('SMF1')	[4 bytes]
Chunk size (12)	[4 bytes]
KSF filename	[12 bytes]

If the .KSF filename is "SKIPPEDSAMPL", it will be treated as a sample skipped during loading.

If the .KSF filename is "INTERNALnnnn", internal samples will be used.

- **Divided sample parameter chunk**

Chunk ID ('SPD1')	[4 bytes]
Chunk size (12)	[4 bytes]
The following up to the sample size is the same as in the SMD1 chunk	
Sampling frequency	[4 bytes]
Attributes	[1 byte]
Loop tune	[1 byte]
Number of channels	[1 byte]
Sample size	[1 byte]
Number of samples	[4 bytes]
Total number of samples in all divided files	

- **Divided sample data chunk**

Chunk ID ('SDD1')	[4 bytes]
-------------------	-----------

KSC(Korg SScript) file

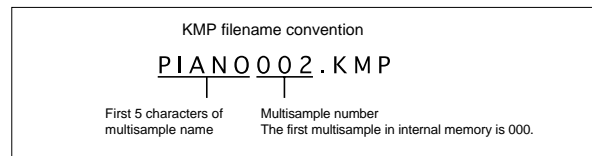
These files are text files which contain a list of filenames for .KMP/.KSF files which are to be handled together.

Lines beginning with # are ignored as comment lines.

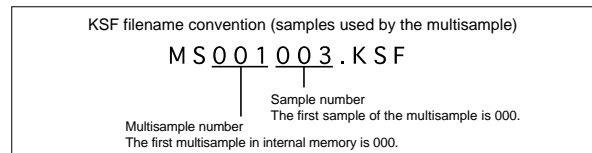
The first line of the file must begin with "#KORG Script Version 1.0" and subsequent lines (except for comment lines) consist only of filename. Only files with an extension of KMP/KSF are processed.

Filename conventions

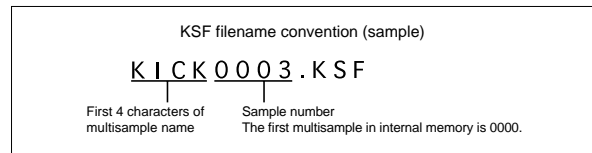
.KMP filename for "Save All" or "Save All Multisamples"



When data is saved using "Save All," "Save All Multisample" or "Save One Multisample," the individual .KSF files used by the Multisample (the .KMP file) are automatically given filenames according to the following convention.



Likewise, when data is saved using "Save All" or "Save All Samples," the individual .KSF files are automatically given filenames according to the following convention.



TRITON-Rack MIDI IMPLEMENTATION

21.Jun.2000

Consult your local Korg dealer for more information on MIDI System Exclusive implementation.

1. TRANSMITTED DATA

1-1 CHANNEL MESSAGES

[H] :Hex, [D] :Decimal

Status [Hex]	Second [H] [D]	Third [H] [D]	Description (Transmitted by)	ENA
8n	kk (kk)	40 (64)	Note Off (Sequence/Arpeggiator data)	A
9n	kk (kk)	vv (vv)	Note On (vv)=1-127 (Sequence/Arpeggiator data)	A
An	kk (kk)	vv (vv)	Poly Key Pressure (Sequence data)	T,Q
Bn	00 (00)	mm (mm)	Bank Select(MSB) (BANK keys, Prog/Combi change) *1	PB
Bn	01 (01)	vv (vv)	Modulation1 (Knob-B = MIDI CCH01)	C
Bn	02 (02)	vv (vv)	Modulation2 (Knob-B = MIDI CCH02)	C
Bn	04 (04)	vv (vv)	Foot Pedal (Knob-B = MIDI CCH04)	C
Bn	05 (05)	vv (vv)	Portamento Time (Knob-B = Porta.Time,M Chg)	C
Bn	06 (06)	vv (vv)	Data Entry (MSB) (ARP ON/OFF, GATE, VELOCITY) *2	C
Bn	07 (07)	vv (vv)	Volume (Knob-B = Volume, M/C Chg)	C
Bn	08 (08)	vv (vv)	Post IFX Panpot (Knob-B = IFX Pan,M Chg)	C
Bn	0A (10)	vv (vv)	Panpot (Knob-B = Pan,M Chg)	C
Bn	0B (11)	vv (vv)	Expression (Knob-B = Expression)	C
Bn	0C (12)	vv (vv)	Effect Control 1 (Knob-B = FX Ctrl 1)	C
Bn	0D (13)	vv (vv)	Effect Control 2 (Knob-B = FX Ctrl 2)	C
Bn	10 (16)	vv (vv)	Multi Purpose Ctrl1 (Knob-B = MIDI CCH16)	C
Bn	11 (17)	vv (vv)	Multi Purpose Ctrl2 (Knob-B = Knob Mod.1)	C
Bn	12 (18)	vv (vv)	Multi Purpose Ctrl3 (Knob-B = MIDI CCH18)	C
Bn	13 (19)	vv (vv)	Multi Purpose Ctrl4 (Knob-B = Knob Mod.2)	C
Bn	14 (20)	vv (vv)	(Knob-B = Knob Mod.3)	C
Bn	15 (21)	vv (vv)	(Knob-B = Knob Mod.4)	C
Bn	20 (32)	bb (bb)	Bank Select(LSB) (BANK keys, Prog/Combi change) *1	PB
Bn	40 (64)	vv (vv)	Hold1 (Knob-B = MIDI CCH64)	C
Bn	41 (65)	00/7F (00/127)	Portamento Off/On (SW1/SW2 = Porta.SW, M Chg)	C
Bn	42 (66)	vv (vv)	Sostenuto Off/On (Knob-B = MIDI CCH66)	C
Bn	43 (67)	vv (vv)	Soft Pedal (Knob-B = MIDI CCH67)	C
Bn	46 (70)	vv (vv)	Sound Controller 1 (Knob-B = F/A Sus.)	C
Bn	47 (71)	vv (vv)	Sound Controller 2 (Knob-2A, Knob-B = Flt Reso.)	C
Bn	48 (72)	vv (vv)	Sound Controller 3 (Knob-4A, Knob-B = F/A Rel.)	C
Bn	49 (73)	vv (vv)	Sound Controller 4 (Knob-B = F/A Attack)	C
Bn	4A (74)	vv (vv)	Sound Controller 5 (Knob-1A, Knob-B = Flt Cutoff)	C
Bn	4B (75)	vv (vv)	Sound Controller 6 (Knob-B = F/A Decay)	C
Bn	4C (76)	vv (vv)	Sound Controller 7 (Knob-B = P LF01 Spd)	C
Bn	4D (77)	vv (vv)	Sound Controller 8 (Knob-B = P LF01 Dep)	C
Bn	4E (78)	vv (vv)	Sound Controller 9 (Knob-B = P LF01 Dly)	C
Bn	4F (79)	vv (vv)	Sound Controller 10 (Knob-3A, Knob-B = Flt EG Int.)	C
Bn	50 (80)	00/7F (00/127)	Multi Purpose Ctrl15 (SW1 = SW1 Mod.)	C
Bn	51 (81)	00/7F (00/127)	Multi Purpose Ctrl16 (SW2 = SW2 Mod.)	C
Bn	52 (82)	vv (vv)	Multi Purpose Ctrl17 (Knob-B = Foot SW)	C
Bn	53 (83)	vv (vv)	Multi Purpose Ctrl18 (Knob-B = MIDI CCH83)	C
Bn	5B (91)	vv (vv)	Effect 1 Depth (Knob-B = MFX Send2, M Chg)	C
Bn	5C (92)	00/7F (00/127)	Effect 2 Depth (All Insert FX Off/On)	C
Bn	5D (93)	vv (vv)	Effect 3 Depth (Knob-B = MFX Send1, M Chg)	C
Bn	5E (94)	00/7F (00/127)	Effect 4 Depth (Master FX1 Off/On)	C
Bn	5F (95)	00/7F (00/127)	Effect 5 Depth (Master FX2 Off/On)	C
Bn	cc (cc)	vv (vv)	Control (cc)=0-95 (Knob-B = MIDI CCH00-95)	C
Bn	62 (98)	ss (ss)	NRPN Param No. (LSB) (ARP ON/OFF, GATE, VELOCITY) *2	C
Bn	63 (99)	tt (tt)	NRPN Param No. (MSB) (ARP ON/OFF, GATE, VELOCITY) *2	C
Bn	cc (cc)	vv (vv)	Control (cc)=0-101 (Sequence data)	Q
Cn	pp (pp)	-- --	Program Change (Prog/Combi change)	*1 P
Dn	vv (vv)	-- --	Channel Pressure (Sequence data)	T
En	bb (bb)	(bb)	Bender Change (Sequence data)	C

M Chg : Transmitted when change a Multi No. (Status = EXT,EX2,BTH)
 C/M Chg : Transmitted when change a Combination or Multi No. (Status = EXT,EX2,BTH)
 Sequence data : Pattern, Audition Riff and Demo data.

n : MIDI Channel No. (0 - 15) Usually Global Channel.
 When in Combination/Multi mode, each timbre's/track's channel.(Status = EXT,EX2 or BTH)
 g : Always Global Channel No. (0 - 15)
 Kk = 00 - 127

ENA = A : Always Enabled
 C : Enabled when Enable Control Change in Global mode is checked
 P : Enabled when Enable Program Change in Global mode is checked
 PB: Enabled when Enable Program and Bank Change in Global mode is checked
 T : Enabled when Enable After Touch in Global mode is checked
 Q : Enabled when Pattern is playing(transmit), recording(receive)

*1 : Program	Combination	MIDI Out[Hex]	(Bank Map is KOR)	(Bank Map is GM(2))
BankINT-A	000 - 127 : BankINT-A	000 - 127 : mm,bb,pp	= 00,00, 00 - 7F	= 3F,00, 00 - 7F
INT-B	000 - 127 : INT-B	000 - 127 : 00,01, 00 - 7F	00 - 7F	3F,01, 00 - 7F
INT-C	000 - 127 : INT-C	000 - 127 : 00,02, 00 - 7F	00 - 7F	3F,02, 00 - 7F
INT-D	000 - 127 : INT-D	000 - 127 : 00,03, 00 - 7F	00 - 7F	3F,03, 00 - 7F
INT-E	000 - 127 : INT-E	000 - 127 : 00,04, 00 - 7F	00 - 7F	3F,04, 00 - 7F
INT-F	000 - 127 :	00,05, 00 - 7F	00 - 7F	3F,05, 00 - 7F
G	001 - 128 :	79,00, 00 - 7F	00 - 7F	79,00, 00 - 7F
g(1)-(9)	001 - 128 :	79,01-09,00 - 7F	00 - 7F	79,01-09,00 - 7F
g(d)	001 - 128 :	78,00, 00 - 7F	00 - 7F	78,00, 00 - 7F
EXB-A	000 - 127 : BankEXB-A	000 - 127 :	00,08, 00 - 7F	3F,08, 00 - 7F
EXB-B	000 - 127 : BankEXB-B	000 - 127 :	00,09, 00 - 7F	3F,09, 00 - 7F
EXB-C	000 - 127 : BankEXB-C	000 - 127 :	00,0A, 00 - 7F	3F,0A, 00 - 7F
EXB-D	000 - 127 : BankEXB-D	000 - 127 :	00,0B, 00 - 7F	3F,0B, 00 - 7F
EXB-E	000 - 127 : BankEXB-E	000 - 127 :	00,0C, 00 - 7F	3F,0C, 00 - 7F
EXB-F	000 - 127 : BankEXB-F	000 - 127 :	00,0D, 00 - 7F	3F,0D, 00 - 7F
EXB-G	000 - 127 : BankEXB-G	000 - 127 :	00,0E, 00 - 7F	3F,0E, 00 - 7F
EXB-H	000 - 127 : BankEXB-H	000 - 127 :	00,0F, 00 - 7F	3F,0F, 00 - 7F

*2 : ARP ON/OFF : [Bn,63,00,Bn,62,02,Bn,06,mm] mm = 00(Off),7F(On)
 ARP-GATE (REALTIME CONTROLS C Knob2) : [Bn,63,00,Bn,62,0A,Bn,06,mm] mm = 00-7F
 ARP-VELOCITY (REALTIME CONTROLS C Knob3) : [Bn,63,00,Bn,62,0B,Bn,06,mm] mm = 00-7F

When in Program/Combination mode, Global channel.
 When in Multi mode, Control Track's channel.

1-2 SYSTEM COMMON MESSAGES

[H] :Hex, [D] :Decimal

Status [Hex]	Second [H] [D]	Third [H] [D]	Description (Transmitted when)
F3	ss (ss)		Song Select (Multi is selected) ss : Multi(0-127) No.

Transmits Song Select message when in Multi mode (Internal Clock)

1-3 SYSTEM REALTIME MESSAGES

Status[Hex]	Description (Transmitted when ...)
F8	Timing Clock (Always in Prog/Combi/Multi mode) *
FA	Start (START Pattern in Multi mode) *
FC	Stop (STOP Pattern in Multi mode) *
FE	Active Sensing (Always)

* Transmits these messages when MIDI Clock in Global mode is Internal.

1-4 SYSTEM EXCLUSIVE

1-4-1 UNIVERSAL SYSTEM EXCLUSIVE MESSAGE (NON REALTIME)

○ DEVICE INQUIRY REPLY (Transmits when received a INQUIRY MESSAGE REQUEST)
 [F0,7E,0g,06,02,42,50,00,1C,00,nn,00,vv,00,F7] 3rd byte g : Global Channel
 6th byte 42 : KORG ID
 7th byte 50 : TRITON series ID
 9th byte 1C : TRITON-Rack member code
 11th byte nn : System No. (01 -)
 13th byte vv : System Version (01 -)

1-4-2 UNIVERSAL SYSTEM EXCLUSIVE MESSAGES (REALTIME)

○ Master Volume
 [F0,7F,0g,04,01,vv,mm,F7] 3rd byte g : Global Channel
 6th byte vv : Value(LSB)
 7th byte mm : Value(MSB)
 mm,vv = 00,00 - 7F,7F : Min - Max

2.RECOGNIZED RECEIVE DATA

2-1 CHANNEL MESSAGES

[H]:Hex, [D]:Decimal

Status [Hex]	Second [H] [D]	Third [H] [D]	Description (Use)	ENA
8n	kk (kk)	xx (xx)	Note Off	A
9n	kk (kk)	00 (00)	Note Off	A
9n	kk (kk)	vv (vv)	Note On (vv)=1-127	A
An	kk (kk)	vv (vv)	Poly Key Pressure (as AMS)	T,Q
Bn	00 (00)	mm (mm)	Bank Select(MSB) (for Prog/Combi change)	*1 PB
Bn	01 (01)	vv (vv)	Modulation1 (as AMS & FX Dmod Src =JS+Y)	C
Bn	02 (02)	vv (vv)	Modulation2 (as AMS & FX Dmod Src =JS-Y)	C
Bn	04 (04)	vv (vv)	Foot Pedal (as AMS & FX Dmod Src =Pedal)	C
Bn	05 (05)	vv (vv)	Portamento Time	C
Bn	06 (06)	vv (vv)	Data Entry (MSB) (for RPC edit)	C
Bn	07 (07)	vv (vv)	Volume	C
Bn	08 (08)	vv (vv)	Balance Control (for Post IFX Panpot control)	*2 C
Bn	0A (10)	vv (vv)	Panpot	C
Bn	0B (11)	vv (vv)	Expression	C
Bn	0C (12)	vv (vv)	Effect Control 1 (as FX Dmod Src =FX1)	C
Bn	0D (13)	vv (vv)	Effect Control 2 (as FX Dmod Src =FX2)	C
Bn	10 (16)	vv (vv)	Multi Purpose Ctrl1 (as AMS & FX Dmod Src =Ribbon)	C
Bn	11 (17)	vv (vv)	Multi Purpose Ctrl2 (as AMS & FX Dmod Src =KnobM1)	C
Bn	12 (18)	vv (vv)	Multi Purpose Ctrl3 (as AMS & FX Dmod Src =Slider)	C
Bn	13 (19)	vv (vv)	Multi Purpose Ctrl4 (as AMS & FX Dmod Src =KnobM2)	C
Bn	14 (20)	vv (vv)	(as AMS & FX Dmod Src =KnobM3)	C
Bn	15 (21)	vv (vv)	(as AMS & FX Dmod Src =KnobM4)	C
Bn	20 (32)	bb (bb)	Bank Select(LSB) (for Prog / Combi change)	*1 PB
Bn	26 (38)	vv (vv)	Data Entry (LSB) (for RPC edit)	C
Bn	40 (64)	vv (vv)	Hold1 (as Damper)	C
Bn	41 (65)	≤3F/240 (≤63/264)	Portamento Off/On	C
Bn	42 (66)	≤3F/240 (≤63/264)	Sostenuto Off/On	C
Bn	43 (67)	vv (vv)	Soft Pedal	C
Bn	46 (70)	vv (vv)	Sound Controller 1 (for Sustain Level control)	C
Bn	47 (71)	vv (vv)	Sound Controller 2 (for Resonance/HPF Cutoff ctrl)	C
Bn	48 (72)	vv (vv)	Sound Controller 3 (for Release Time control)	C
Bn	49 (73)	vv (vv)	Sound Controller 4 (for Attack Time control)	C
Bn	4A (74)	vv (vv)	Sound Controller 5 (for LPF Cutoff control)	C
Bn	4B (75)	vv (vv)	Sound Controller 6 (for Decay Time control)	C
Bn	4C (76)	vv (vv)	Sound Controller 7 (for LFO1 Speed control)	C
Bn	4D (77)	vv (vv)	Sound Controller 8 (for LFO1 Pitch Depth control)	C
Bn	4E (78)	vv (vv)	Sound Controller 9 (for LFO1 Delay control)	C
Bn	4F (79)	vv (vv)	Sound Controller 10 (for Filter EG Intensity ctrl)	C
Bn	50 (80)	vv (vv)	Multi Purpose Ctrl5 (as AMS & FX Dmod Src =SW 1)	C
Bn	51 (81)	vv (vv)	Multi Purpose Ctrl6 (as AMS & FX Dmod Src =SW 2)	C
Bn	52 (82)	vv (vv)	Multi Purpose Ctrl7 (as AMS & FX Dmod Src =FootSW)	C
Bn	53 (83)	vv (vv)	Multi Purpose Ctrl8 (as AMS & FX Dmod Src)	C
Bn	58 (91)	vv (vv)	Effect 1 Depth (for Send 2 Level control)	C
Bg	5C (92)	00/≠00 (00/≠000)	Effect 2 Depth (for All Insert FX Off/On)	C
Bn	5D (93)	vv (vv)	Effect 3 Depth (for Send 1 Level control)	C
Bg	5E (94)	00/≠00 (00/≠000)	Effect 4 Depth (for Master FX1 Off/On)	C
Bg	5F (95)	00/≠00 (00/≠000)	Effect 5 Depth (for Master FX2 Off/On)	C
Bn	60 (96)	00 (00)	Data Increment (for RPC edit)	C
Bn	61 (97)	00 (00)	Data Decrement (for RPC edit)	C
Bn	62 (98)	ss (ss)	NRPN Param No.(LSB) (for NRPN select)	*3 C
Bn	63 (99)	tt (tt)	NRPN Param No.(MSB) (for NRPN select)	*3 C
Bn	64(100)	0r (0r)	RPN Param No. (LSB) (for RPN select)	*4 C
Bn	65(101)	00 (00)	RPN Param No. (MSB) (for RPN select)	*4 C
Bn	cc (cc)	vv (vv)	Control data (for Pattern recording (cc)=0-101)	C,Q
Bn	78(120)	00 (00)	All Sound Off	C
Bn	79(121)	00 (00)	Reset All Controllers	C
Bn	79(121)	00/7F (00/127)	Local Control Off/On	A
Bn	78(123)	00 (00)	All Notes Off	A
Bn	7C(124)	00 (00)	Omni Mode Off (as All Notes Off)	A
Bn	7D(125)	00 (00)	Omni Mode On (as All Notes Off)	A
Bn	7E(126)	00 (00)	Mono Mode On (as All Notes Off)	A
Bn	7F(127)	00 (00)	Poly mode On (as All Notes Off)	A
Ch	pp (pp)	-- --	Program Change (for Prog/Combi change)	*1 P
Dn	vv (vv)	-- --	Channel Pressure (as After Touch)	T
En	bb (bb)	bb (bb)	Bender Change	C

AMS : Alternate Modulation Source
FX Dmod Src: Effect Dynamic Modulation Source

n : MIDI Channel No. (0 - 15) Usually Global Channel.
When in Combination/Multi mode, each timbre's/track's channel.(Status is INT or BTH)
g : Always Global Channel No. (0 - 15)
x : Random
ENA : Same as Transmitted data

*1 : When Bank Map in Global mode is KORg:
MIDI In [Hex] Program Combination
mm,bb,pp = 00,00, 00 - 7F : Bank INT-A 000 - 127 : Bank INT-A 000 - 127
00,01, 00 - 7F : INT-B 000 - 127 : INT-B 000 - 127
00,02, 00 - 7F : INT-C 000 - 127 : INT-C 000 - 127
00,03, 00 - 7F : INT-D 000 - 127 : INT-D 000 - 127
00,04, 00 - 7F : INT-E 000 - 127 : INT-E 000 - 127
00,05, 00 - 7F : INT-F 000 - 127 : INT-F 000 - 127

00,08, 00 - 7F : EXB-A 000 - 127 : EXB-A 000 - 127
00,09, 00 - 7F : EXB-B 000 - 127 : EXB-B 000 - 127
00,0A, 00 - 7F : EXB-C 000 - 127 : EXB-C 000 - 127
00,0B, 00 - 7F : EXB-D 000 - 127 : EXB-D 000 - 127
00,0C, 00 - 7F : EXB-E 000 - 127 : EXB-E 000 - 127
00,0D, 00 - 7F : EXB-F 000 - 127 : EXB-F 000 - 127
00,0E, 00 - 7F : EXB-G 000 - 127 : EXB-G 000 - 127
00,0F, 00 - 7F : EXB-H 000 - 127 : EXB-H 000 - 127
79,00, 00 - 7F : G 001 - 128
79,01-09,00 - 7F : g(1)-g(9) 001 - 128
78,00, 00 - 7F : g(d) 001 - 128
38,00, 00 - 7F : G 001 - 128
3E,00, 00 - 7F : g(d) 001 - 128

When Bank Map in Global mode is GM(2):
MIDI In [Hex] Program Combination
mm,bb,pp = 3F,00, 00 - 7F : Bank INT-A 000 - 127 : Bank INT-A 000 - 127
3F,01, 00 - 7F : INT-B 000 - 127 : INT-B 000 - 127
3F,02, 00 - 7F : INT-C 000 - 127 : INT-C 000 - 127
3F,03, 00 - 7F : INT-D 000 - 127 : INT-D 000 - 127
3F,04, 00 - 7F : INT-E 000 - 127 : INT-E 000 - 127
3F,05, 00 - 7F : INT-F 000 - 127 : INT-F 000 - 127

3F,08, 00 - 7F : EXB-A 000 - 127 : EXB-A 000 - 127
3F,09, 00 - 7F : EXB-B 000 - 127 : EXB-B 000 - 127
3F,0A, 00 - 7F : EXB-C 000 - 127 : EXB-C 000 - 127
3F,0B, 00 - 7F : EXB-D 000 - 127 : EXB-D 000 - 127
3F,0C, 00 - 7F : EXB-E 000 - 127 : EXB-E 000 - 127
3F,0D, 00 - 7F : EXB-F 000 - 127 : EXB-F 000 - 127
3F,0E, 00 - 7F : EXB-G 000 - 127 : EXB-G 000 - 127
3F,0F, 00 - 7F : EXB-H 000 - 127 : EXB-H 000 - 127

79,00, 00 - 7F : G 001 - 128
79,01-09,00 - 7F : g(1)-g(9) 001 - 128
78,00, 00 - 7F : g(d) 001 - 128
00,00, 00 - 7F : G 001 - 128
38,00, 00 - 7F : G 001 - 128
3E,00, 00 - 7F : g(d) 001 - 128
3F,7F, 00 - 7F : Mute (KORG MUTE)
(XG) 00,01 - : Assign correspond program in G, g(1) - g(9)
(GS) 01,00 - : Assign correspond program in G, g(1) - g(9)

*2 : When in Program/Sampling mode, Global channel
When in Combination/Multi mode, each IFX's channel.

*3 : tt,ss = 00,02 : Arpeggiator Off/On
= 00,0A : Arpeggiator Gate control
= 00,0B : Arpeggiator Velocity control

When in Program/Combination mode, Global channel message is valid.
When in Multi mode, Control Track's channel message is valid.
Data Entry LSB value has no effect.

tt,ss = 01,08 : Vibrato Rate *
tt,ss = 01,09 : Vibrato Depth *
tt,ss = 01,0A : Vibrato Delay *
tt,ss = 01,20 : Filter Cutoff *
tt,ss = 01,21 : Filter Resonance *
tt,ss = 01,63 : EG Attack Time *
tt,ss = 01,64 : EG Decay Time *
tt,ss = 01,66 : EG Release Time *
tt,ss = 14,kk : Drum Filter Cutoff *
tt,ss = 15,kk : Drum Filter Resonance *
tt,ss = 16,kk : Drum EG Attack Time *
tt,ss = 17,kk : Drum EG Decay Time *
tt,ss = 18,kk : Drum Coarse Tune *
tt,ss = 19,kk : Drum Fine Tune *
tt,ss = 1A,kk : Drum Volume *
tt,ss = 1C,kk : Drum Panpot *
tt,ss = 1D,kk : Drum Rev Send(Send2) *
tt,ss = 1E,kk : Drum Cho Send(Send1) *

* Only valid when Part Mode is Drum, MDrm1 - Mdm4.
 kk: Drum Inst No. (CC - 6C = C0 - C8)
 Data Entry LSB value has no effect.

*4: r = 0 : Pitch Bend Sensitivity (Bend Range)
 = 1 : Detune)
 = 2 : Fine Tune (Transpose)
 = 3 : Coarse Tune
 For drum program, Both of Fine Tune and Coarse Tune affect to Detune.
 Data Entry LSB value has no effect for Pitch Bend Sensitivity and Coarse Tune.

2-2 SYSTEM COMMON MESSAGES

Status [Hex]	Second [H] [D]	Third [H] [D]	Description (Use for)
F2	ss (ss)	tt (tt)	Song Position Pointer (Arpeggiator Control) ss : Least significant [LSB] tt : Most significant [MSB]
F3	ss (ss)		Song Select (Multi select) ss : Multi(0-127)

Receive Song Position Pointer when in Program/Combination/Multi mode (External Clock)
 Receive Song Select when in Multi mode (External Clock)

2-3 SYSTEM REALTIME MESSAGES

Status[Hex]	Description (Use for.....)
F8	Timing Clock (Tempo, AMS, & FX Dmod Src) *
FA	Start (Arpeggiator Control) *
FB	Continue (Arpeggiator Control) *
FC	Stop (Arpeggiator Control) *
FE	Active Sensing (MIDI Connect check)

* Receive when MIDI Clock in Global mode is External.

2-4 SYSTEM EXCLUSIVE

- 2-4-1 UNIVERSAL SYSTEM EXCLUSIVE MESSAGE (NON REALTIME)
 - DEVICE INQUIRY (When received this message, transmits INQUIRY MESSAGE REPLY)
 - [F0,7E,nn,06,01,F7] 3rd byte nn : Channel = 0 - F : Global Channel = 7F : Any Channel
 - GM System On (Receive when in Multi mode)
 - [F0,7E,nn,09,01,F7] 3rd byte nn : Channel = 0 - F : Global Channel = 7F : Any Channel
- 2-4-2 UNIVERSAL SYSTEM EXCLUSIVE MESSAGES (REALTIME)
 - Master Volume
 - [F0,7F,09,04,01,vv,mm,F7] 3rd byte g : Global Channel
 6th byte vv : Value (LSB)
 7th byte mm : Value (MSB)
 mm,vv = 00,00 - 7F,7F : Min - Max
 - Master Balance
 - [F0,7F,09,04,02,vv,mm,F7] 3rd byte g : Global Channel
 6th byte vv : Value (LSB)
 7th byte mm : Value (MSB)
 mm,vv = 00,00:Left, 40,00:Center, 7F,7F:Right
 - Master Fine Tune (Control Master Tune(cent) in Global)
 - [F0,7F,09,04,03,vv,mm,F7] 3rd byte g : Global Channel
 6th byte vv : Value (LSB)
 7th byte mm : Value (MSB)
 mm,vv = 20,00:-50, 40,00:+00, 60,00:+50
 - Master Coarse Tune (Control Transpose (chromatic step) in Global)
 - [F0,7F,09,04,04,vv,mm,F7] 3rd byte g : Global Channel
 6th byte vv : Value (LSB)
 7th byte mm : Value (MSB)
 mm,vv = 34,00:-12, 40,00:+00, 4C,00:+12

Option boards/memory

Please read this before you begin installation

Safety precautions

Warnings

- When installing, repairing, or replacing the parts of this product, you must perform only those actions that the owner's manual directs, and no other.
- Do not apply excessive force to the electronic components or connectors of the circuit board(s), or attempt to disassemble them. This could cause electric shock, fire, or malfunction.
- Before installing this product, be sure to disconnect the power supply cable, and the connecting cables to any peripheral devices. Failure to do so could cause electrical shock or may damage this device.

Cautions

- Do not allow this product to become wet, and do not allow objects to be placed on top of it. Doing so could cause malfunction.
- Before touching this product, touch a metal component of the device into which it will be installed, to discharge any static electricity that may be present in your body. Static electricity may damage the electronic components.
- When handling this product, be careful not to touch the leads on the back side of the circuit board (the side opposite that on which the components are mounted). The sharp points may cause injury.
- When installing this product, never touch components or circuit boards that are not related to the connections you are required to make. Doing so may cause electrocution or malfunctions.
- When installing this product, be careful not to cut your hands on the sharp edges of the metal brackets etc. of this product or of the device into which it is being installed.
- When installing this product, be careful that screws or other parts do not fall into the device into which it is being installed.

Korg Inc. takes no responsibility for any malfunctions or damage that may occur from improper use or modification of this product. Nor will Korg Inc. be responsible for any damages resulting from the loss or destruction of data.

About option boards and memory


By installing option boards or memory into your TRITON-Rack, you can expand its functionality. The following six types of expansion are possible.

● EXB-MOSS (DSP synthesizer board)

This adds to the TRITON-Rack a MOSS tone generator that provides thirteen oscillator algorithms, including Standard, Ring Modulation, VPM, Resonance, Organ Model, and Electric Piano Model. This lets you use the MOSS tone generator in program, combination, multi modes. The MOSS tone generator has six-note polyphony.

● EXB-SCSI (SCSI interface board)

This adds a SCSI connector to the TRITON-Rack. In the same way that you save programs, combinations, sequence data and sample data etc. from the TRITON-Rack to a floppy disk, you can save/load this data to/from an external SCSI high-capacity storage device (hard disk, ZIP disk, JAZ disk, ORB disk, MO disk). This also allows you to load Akai (S1000/S3000), Korg, AIFF, and WAVE format sample files etc. from a CD-ROM drive.

 The TRITON-Rack cannot format media with a format of other than 512 bytes/block (such as 640 MB, 1.3 GB MO disks etc.).

CD-ROM formats that can be loaded

- AKAI (S1000/S3000) format
- ISO9660 Level 1 format (multisession data can be loaded only if the first session is in ISO9660 format)
- TRINITY format (only .KSC/.KMP/.KSF files can be loaded)

● EXB-DI (digital interface board)

The six channels of the TRITON-Rack's AUDIO OUTPUT jacks (MAIN) L/MONO, R, (INDIVIDUAL) 1-4 (analog audio outputs) will be output as 24 bit 48 kHz digital signals on channels 1-6 of the ADAT optical format. By using the WORD CLOCK IN jack, digital audio signals can be synchronized between the TRITON-Rack and a connected device.

● EXB-mLAN (mLAN Interface Board)

This is an option board for connecting the TRITON-Rack to an mLAN system. The TRITON-Rack with EXB-mLAN, other mLAN-compatible electronic musical instruments and computers can be connected easily using a IEEE 1394 cable, allowing high-volume transmission and reception of MIDI data and transmission of audio data (48kHz sampling Frequency audio data can be transmitted via TRITON-Rack's 6 OUT) --- a great convenience when using recording software on your computer. Included software allows the connection status of connected devices to be flexibly programmed from your computer, and OMS/ASIO drivers for Macintosh are also included.

● EXB-PCM series (PCM expansion boards)

Each of these boards adds 16 Mbytes of multisamples and drum samples to the TRITON-Rack. (The details will differ according to the series.)

EXB-PCM01: Piano/Classic Keyboards

EXB-PCM02: Studio Essentials

EXB-PCM03: Future Loop Construction

EXB-PCM04: Dance Extreme

EXB-PCM05: Vintage Archives (On sale from August 2000)

* As of July 2000

■ DRAM SIMM (sample data memory modules)

These can be used as sample data memory. Up to two 72-pin DRAM SIMM (either 16 Mbyte or 32 Mbyte) modules can be installed, providing a maximum of 64 Mbytes. (☞“Caution when purchasing DRAM SIMM modules”)

note DRAM SIMM boards are not a manufacturer option. Please purchase commercially-available boards that are sold for use in computers.

note In order to achieve the maximum 96 Mbyte capacity, you will need to remove the 16 Mbyte DRAM SIMM that is standard, and install three 32 Mbyte DRAM SIMM boards.

note The memory banks and sampling time will depend on the capacity of the DRAM SIMM boards you install, and on the slot locations. (☞p.77)

Please note when installing an option board/memory

- **Avoid touching exposed metal edges of the circuit board, or portions that need not be handled during installation.**
- So that static electricity in your body does not damage the electronic components, touch the ground wire of a grounded device or an unpainted metallic component to discharge any static electricity in your body before installing an option board or memory. Internal components of the TRITON-Rack and of the option/memory boards may be damaged by static electricity.
- Follow the installation procedure, and be sure that each part is installed correctly and in the correct orientation.
- Please use care in handling option boards/memory. Dropping them or applying pressure to them may damage the components.
- Be careful not to lose the screws (and washers) that you remove.
- Do not use screws other than those that are installed in the option board/memory and the TRITON-Rack. Using screws of a different shape or length may damage the unit or cause it to malfunction.
- Be sure to firmly tighten the screws used for attachment.
- Be sure that the option board/memory is inserted correctly into the connector or slot. After installation, be sure to check that the board is installed correctly. If the board is not inserted all the way, faulty contact or power supply shorts can occur, making the unit malfunction.
- Be careful not to drop parts or the option board/memory into the inside of the instrument.
If you are unable to retrieve a screw or part that was dropped inside the instrument, please contact your local Korg distributor.

Checking after installation

- When the TRITON-Rack is turned on, the currently installed option boards/memory will be shown in the LCD screen.
After installing an option board/memory, be sure to turn on the power and make sure that the option board/memory that you installed is displayed in the LCD screen.
If it is not displayed, the installation may not have been performed correctly. Check once again that the board is installed correctly.
If you have any questions regarding installation, please contact your local Korg distributor.

OPTIONS	SIMM	EXB-PCM		
EXB-MOSS	Slot1 (16MB)	Slot1 (EXB1)	Slot5 (EXB5)	
EXB-SCSI	Slot2 (32MB)	Slot2 (EXB2)	Slot6 ----	
EXB-DI	Slot3 ----	Slot3 (EXB3)	Slot7 ----	
EXB-mLAN		Slot4 (EXB4)	Slot8 ----	

OPTIONS

- **EXB-MOSS:** The EXB-MOSS option is installed.
- **EXB-SCSI:** The EXB-SCSI option is installed.
- **EXB-DI:** The EXB-DI option is installed.
- **EXB-mLAN:** The EXB-mLAN option is installed

SIMM

Slot 1...3 (MB):** SIMM's are installed in SIMM slots 1-3. The capacity of each SIMM is shown in parentheses. When shipped from the factory, a 16 MB SIMM is already installed in SIMM slot 1.

EXB-PCM

Slot 1...8 (**):** PCM expansion boards are installed in EXB-PCM series slots 1-8. The type of each board is shown in parentheses.

Caution when purchasing DRAM SIMM modules

- Some commercially available DRAM SIMM modules cannot be used on the TRITON-Rack. Before you purchase memory modules, please check the following points.

Types of DRAM SIMM modules that can be used on the TRITON

- 72-pin 16 Mbyte or 32 Mbyte
- Access time of 60 ns or less
- Address input 11 bit (A0-A10)
- Power supply voltage 5 V

DRAM SIMM modules that meet the above requirements can be used.

If you have any questions regarding the type of DRAM SIMM modules that can be used, please contact your local Korg distributor.

Option board/memory installation procedure

- ⚠ Before you perform the installation, be sure to read the foregoing section “Please note when installing an option board/memory.”

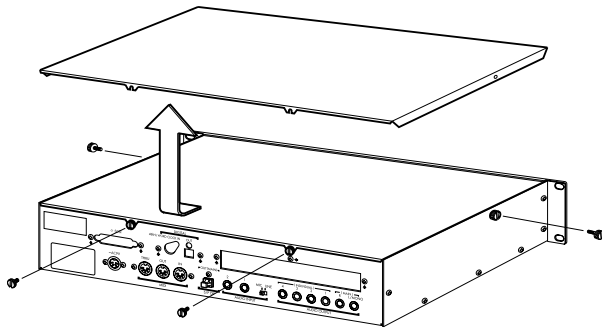
1. Preparations for installation

- ⚠ During the installation, be careful not to cut your hand on any sharp edges of the TRITON or of the option board/memory.

- ① You will need a “+” (plus) screwdriver.
- ② Turn off the TRITON, and disconnect the AC/AC power supply cable and any other cables by which other devices are connected.

2. Detaching the lid

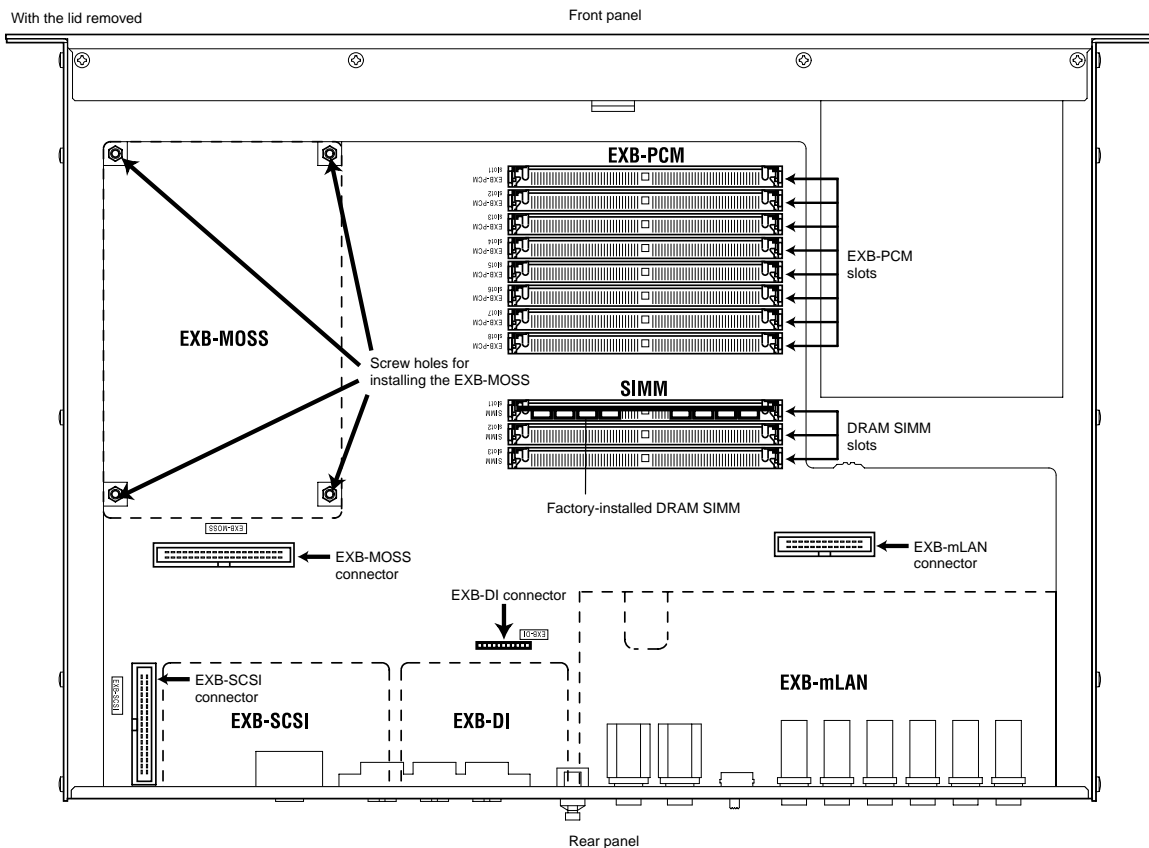
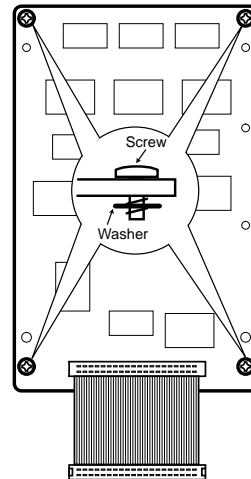
- ① Remove the four screws by hand.
- ② Pull the lid toward the back, and lift to remove it.



3-1. Installing the EXB-MOSS

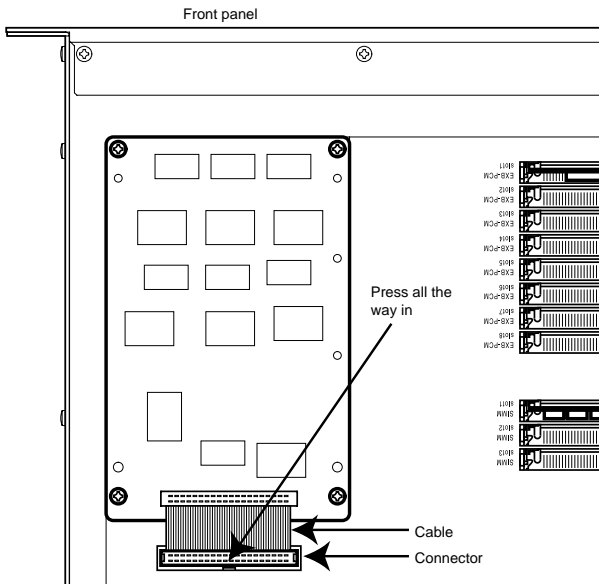
- ⚠ You must leave the AC/AC power supply disconnected until you finish the entire process of removing the lid, installing the option board or memory, and reattaching the lid.

- ① Verify the location where the EXB-MOSS will be installed. (See the lower diagram in “2. Detaching the lid”)
- ② Remove the EXB-MOSS from its bag.
- ③ Note that screws and washers are attached to the four corners of the board.



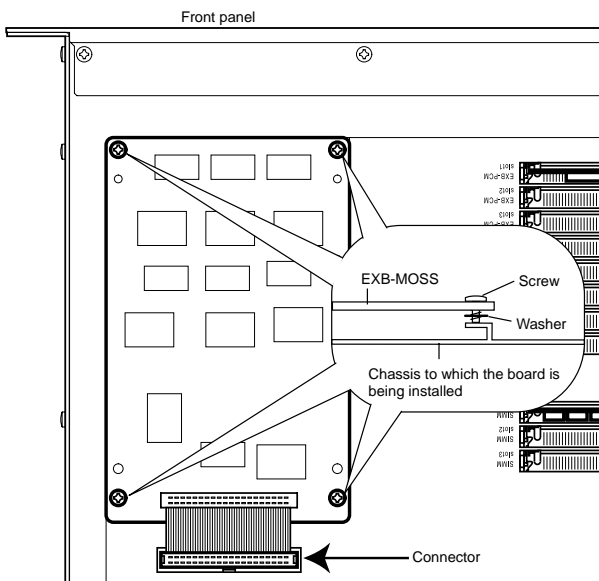
- Plug the cable into the connector as shown in the diagram. Press the cable firmly in until it stops.

⚠ Do not touch any part of the circuit board other than the connector in which the cable is being inserted.



- Use the four screws to attach the EXB-MOSS to the corresponding brackets inside the TRITON-Rack.

⚠ Before the screws are tightened, the EXB-MOSS will float slightly above the brackets. If at this time you apply excessive force to the EXB-MOSS, the screws or washers may come out.



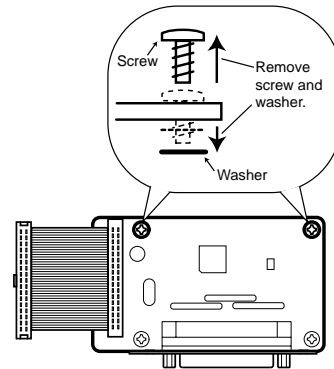
- Reattach the cover by reversing the steps by which you detached it.
- When all steps have been completed, turn on the power and make sure that the EXB-MOSS has been installed correctly. (→ "Checking after installation")

3-2. Installing the EXB-SCSI

⚠ You must leave the AC/AC power supply disconnected until you finish the entire process of removing the lid, installing the option board or memory, and reattaching the lid.

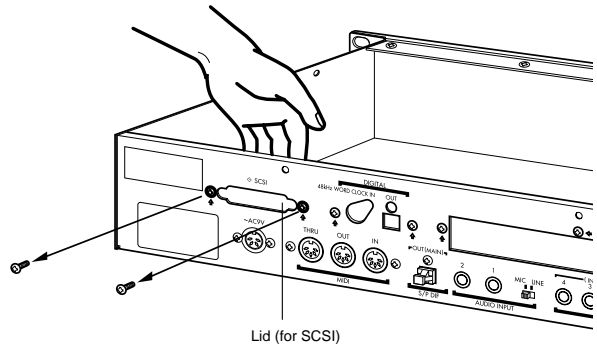
- Verify the location where the EXB-SCSI will be installed. (→ the lower diagram in "2. Detaching the lid")
- Remove the EXB-SCSI from its bag.
- Remove the two screws and washers from the two corners of the board

⚠ Be careful to save the screws that you remove. Some models that can use the EXB-SCSI, such as the TRITON/TRITONpro/TRITONproX, will require these two screws.



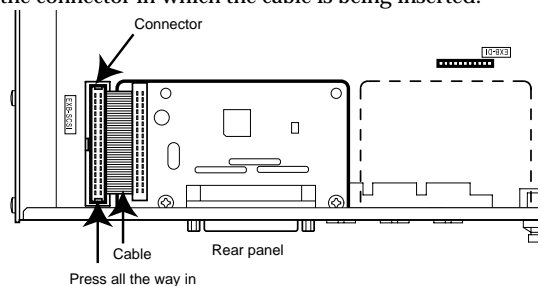
- Remove the two screws of the lid that covers the opening for the SCSI connector, and remove the lid of the SCSI connector opening. The two screws you removed will be used later to fasten the EXB-SCSI in place.

⚠ The cover of the SCSI connector opening will not be used. Be sure that it does not remain inside the TRITON-Rack.

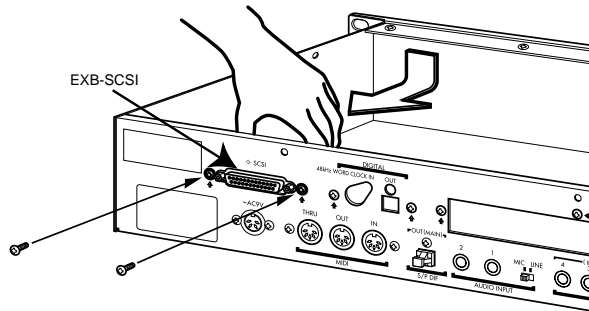


- Plug the cable into the connector as shown in the diagram. Press the cable firmly in until it stops.

⚠ Do not touch any part of the circuit board other than the connector in which the cable is being inserted.



- ⑥ Insert the SCSI connector of the EXB-SCSI through the opening so that it extends from the rear panel of the TRITON-Rack. Hold the EXB-SCSI with one hand, and use the two screws that you removed in step ④ to fasten the connector from the outside of the rear panel.



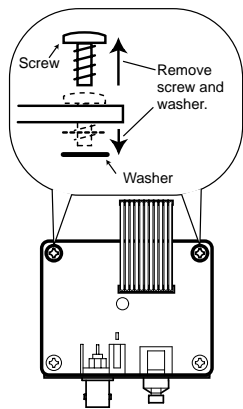
- ⑦ Reattach the cover by reversing the steps by which you detached it.
- ⑧ When all steps have been completed, turn on the power and make sure that the EXB-SCSI has been installed correctly. (⇨ "Checking after installation")

3-3. Installing the EXB-DI

⚠ You must leave the AC/AC power supply disconnected until you finish the entire process of removing the lid, installing the option board or memory, and reattaching the lid.

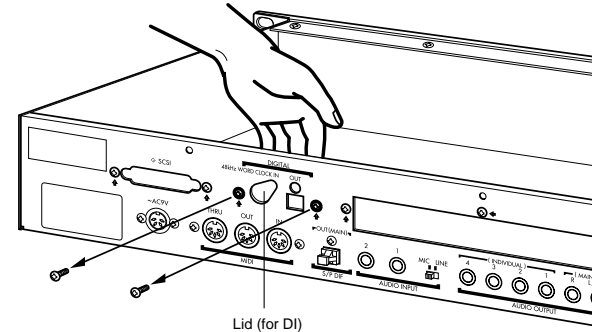
- ① Verify the location where the EXB-DI will be installed. (⇨ the lower diagram in "2. Detaching the lid")
- ② Remove the EXB-DI from its bag.
- ③ Remove the two screws and washers from the two corners of the board

⚠ Be careful to save the screws that you remove. Some models that can use the EXB-DI, will require these two screws.



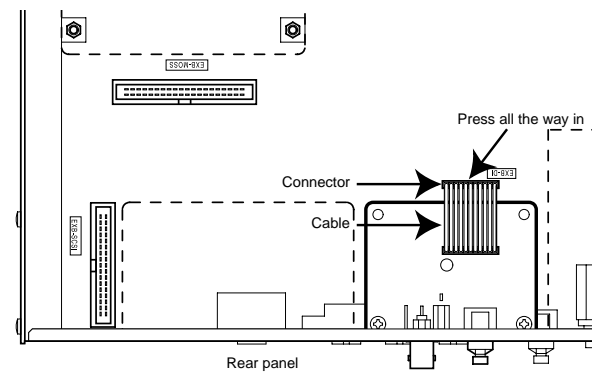
- ④ Remove the two screws holding the (DI) cover that blocks the installation opening of the EXB-DI, and remove the (DI) cover. The two screws you removed will be used to fasten the EXB-DI.

⚠ The (DI) cover you removed will not be used. Take it out so that it is not left inside the TRITON-Rack.

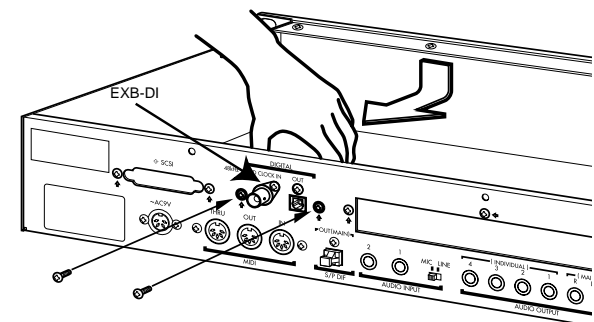


- ⑤ Attach the cable as shown in the diagram. Firmly press the cable all the way into the connector.

⚠ Do not touch any part of the circuit board other than the connector to which you are connecting the cable.



- ⑥ With the connectors of the EXB-DI protruding from the rear panel of the TRITON-Rack, support the EXB-DI with one hand and use the two screws you removed to fasten the EXB-DI from the rear of the TRITON-Rack.



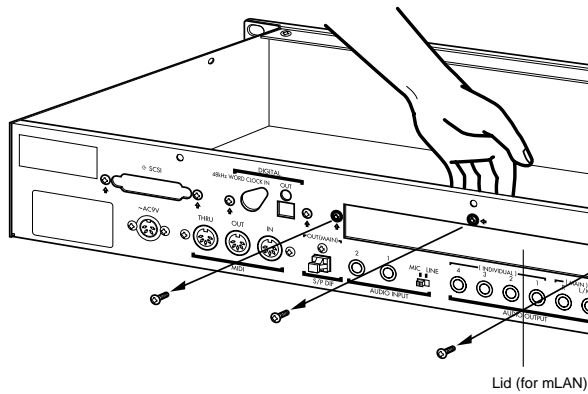
- ⑦ Reattach the cover by reversing the steps by which you detached it.
- ⑧ After you have completed all the above steps, turn on the power and verify that the EXB-DI has been installed correctly. (⇨ "Checking after installation")

3-4. Installing the EXB-mLAN.

⚠ You must leave the AC/AC power supply disconnected until you finish the entire process of removing the lid, installing the option board or memory, and reattaching the lid.

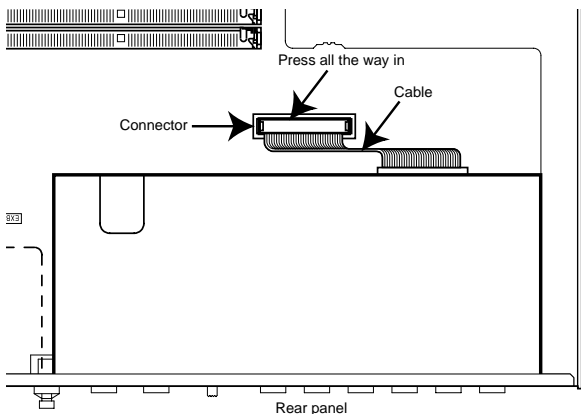
- ① Verify the location where the EXB-mLAN will be installed. (⇨ the lower diagram in "2. Detaching the lid")
- ② Remove the EXB-mLAN from its bag.
- ③ Remove the three screws holding the (mLAN) cover that blocks the installation opening of the EXB-mLAN, and remove the (mLAN) cover. The three screws you removed will be used to fasten the EXB-mLAN.

⚠ The (mLAN) cover you removed will not be used. Take it out so that it is not left inside the TRITON-Rack.

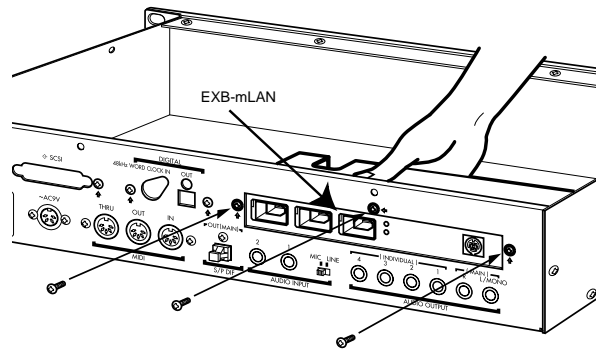


- ④ Attach the cable as shown in the diagram. Firmly press the cable all the way into the connector.

⚠ Do not touch any part of the circuit board other than the connector to which you are connecting the cable.



- ⑤ With the connectors of the EXB-mLAN protruding from the rear panel of the TRITON-Rack, support the EXB-mLAN with one hand and use the three screws you removed to fasten the EXB-mLAN from the rear of the TRITON-Rack.



- ⑥ Reattach the cover by reversing the steps by which you detached it.
- ⑦ After you have completed all the above steps, turn on the power and verify that the EXB-mLAN has been installed correctly. (⇨ "Checking after installation")

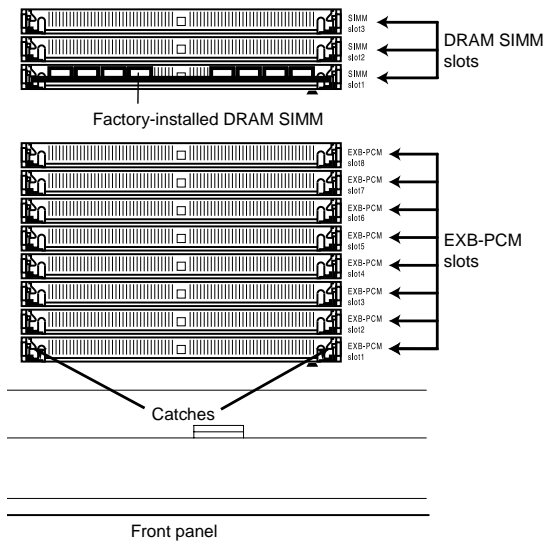
3-5. Installing an EXB-PCM

⚠ A maximum of eight EXB-PCM boards can be installed simultaneously.

If you are installing a single EXB-PCM, it will function correctly whether installed in either slot. For ease in installation, you may wish to use EXB-PCM slot 1 first.

⚠ You must leave the AC/AC power supply disconnected until you finish the entire process of removing the lid, installing the option board or memory, and reattaching the lid.

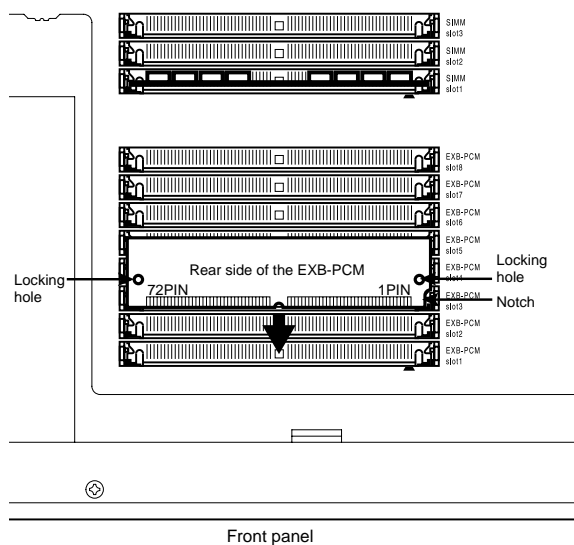
① Verify the location where the EXB-PCM will be installed. (☞ diagram below)



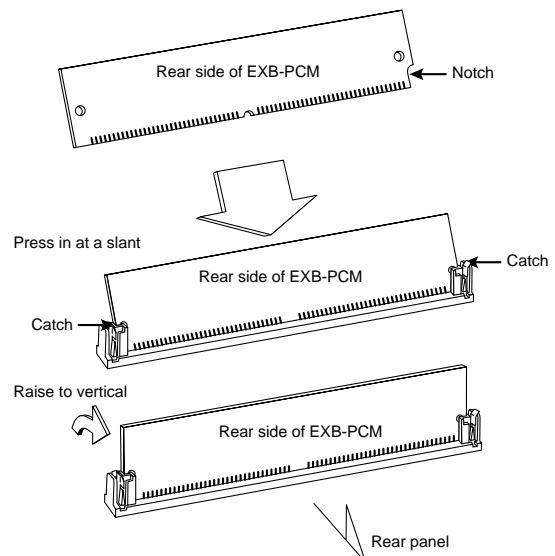
② Remove the EXB-PCM from its bag.

③ The notched side of the EXB-PCM is PIN 1. Install the EXB-PCM with its PIN 1 side aligned with the PIN 1 mark (⚡) of the slot.

⚠ The EXB-PCM slots and the DRAM SIMM slots are shaped identically. Be careful not to install a board in the wrong slot.



④ At a slant, press the EXB-PCM firmly all the way into the slot, and raise it to the vertical position until the catches of the slot click into the locking holes of the EXB-PCM. When doing so, pressing the catches of the slot apart to the left and right will help the board go in smoothly.



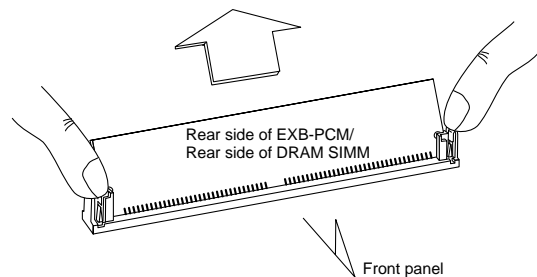
⑤ Reversing the procedure by which you removed cover, re-attach the cover.

⑥ When all steps have been completed, turn on the power and make sure that the EXB-PCM has been installed correctly. (☞ "Checking after installation")

Removing an EXB-PCM/DRAM SIMM

Spread the catches of the slot apart to the left and right, and (after removing the stoppers from the catches) tilt the EXB-PCM/DRAM SIMM and pull it out.

⚠ When you spread the catches of the slot apart, the EXB-PCM may pop out vigorously and fall into an opening (inside the instrument). Please be careful.



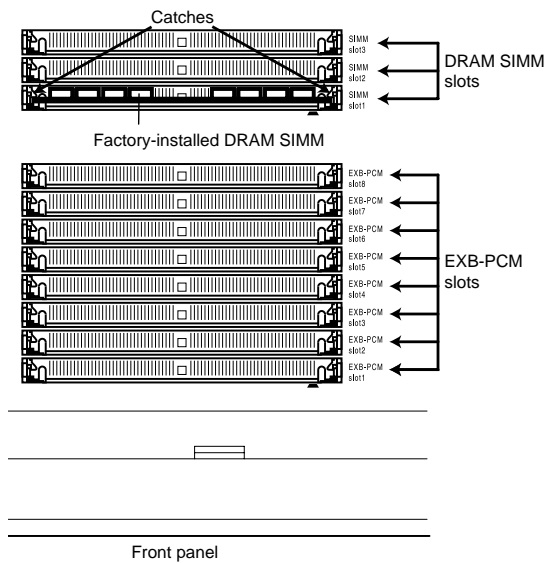
3-6. Installing a DRAM SIMM

➤ A maximum of three memory SIMMs can be installed. A DRAM SIMM will function correctly when installed in any slot. For greatest ease of installation, it is best to start with SIMM slot 2.

If you wish to use three 32 Mbyte DRAM SIMMs, you will need to remove the factory-installed 16 Mbyte DRAM SIMM as explained in "Removing an EXB-PCM/DRAM SIMM."

➤ You must leave the AC/AC power supply disconnected until you finish the entire process of removing the lid, installing the option board or memory, and reattaching the lid.

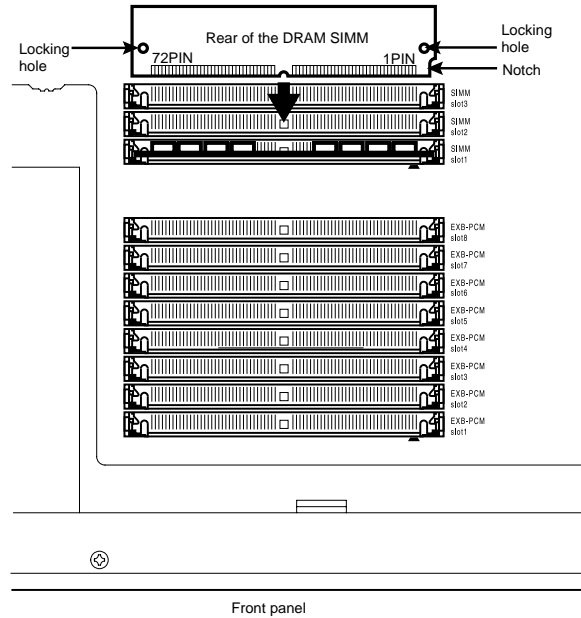
① Verify the location where the EXB SIMM will be installed. (☞ diagram below)



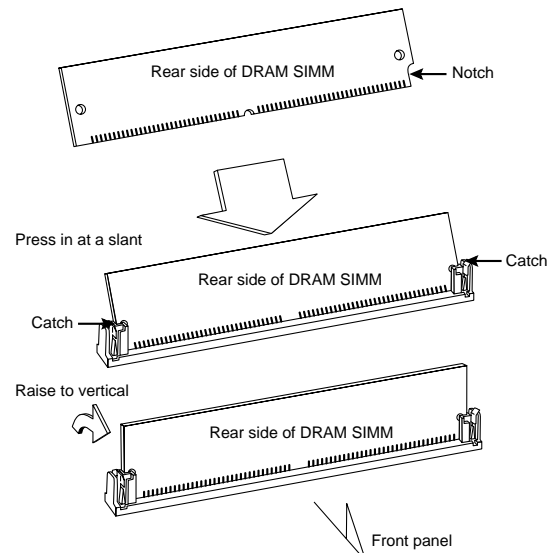
- ② Have the DRAM SIMM at hand.
- ③ A 16 Mbyte DRAM SIMM is factory-installed in **SIMM slot 1**. If you are adding one or two SIMMs, install them in the remaining two slots. If you wish to add three DRAM SIMMs, you will need to remove the factory-installed DRAM SIMM as explained in "Removing an EXB-PCM/DRAM SIMM" so that you can use all three slots.

④ The notched side of the DRAM SIM is PIN 1. Install the DRAM SIMM with its PIN 1 side aligned with the PIN 1 mark (←) of the slot.

➤ The DRAM SIMM slots and the EXB-PCM slots are shaped identically. Be careful not to install a board in the wrong slot.



⑤ At a slant, press the DRAM SIMM firmly all the way into the slot, and raise it to the vertical position until the catches of the slot click into the locking holes of the DRAM SIMM. When doing so, pressing the catches of the slot apart to the left and right will help the board go in smoothly.



- ⑥ Reversing the procedure by which you removed cover, re-attach the cover.
- ⑦ When all steps have been completed, turn on the power and make sure that the DRAM SIMM has been installed correctly. (☞ "Checking after installation")

EXB-MOSS option

By installing the separately sold EXB-MOSS option, you can add a MOSS tone generator to the TRITON-Rack, and add MOSS program bank INT-F. This section explains only the parameters of the MOSS tone generator. For details on other parameters, refer to the Parameter Guide and Basic Guide of the TRITON-Rack.

Before you use the EXB-MOSS, be sure to read the section “Safety precautions” included at the beginning of this manual.

Features of the EXB-MOSS

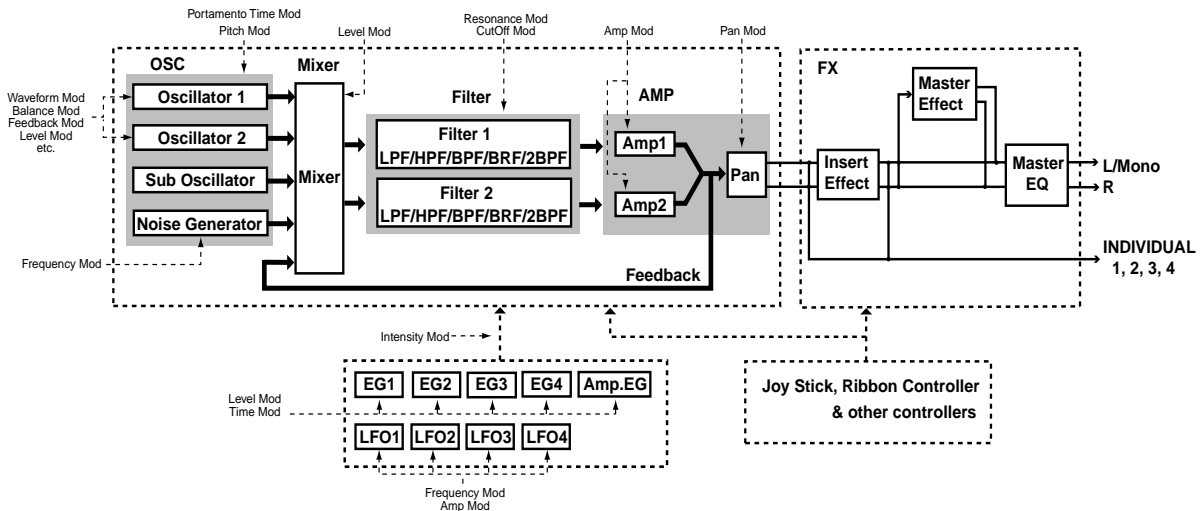
The EXB-MOSS is a MOSS (Multi-Oscillator Synthesis System) option board with six-voice polyphony. The MOSS tone generator is a physical modeling tone generator that uses Sondius-XG* technology. When the EXB-MOSS is installed in the TRITON-Rack, you will be able to use 128 MOSS tone generator programs in program bank INT-F (I-F). Bank INT-F (I-F) can be used as a dedicated bank for MOSS tone generator programs, and bank I-F programs can be selected for timbres/tracks in Multi mode. You can also create combinations or tracks that use these programs in conjunction with the programs of banks I-A-I-E and G, g(0)-g(9), g(d), and E-A-E-H.

Broadly speaking, a MOSS tone generator program consists of voice, EG, LFO, effect, and controller sections.

- The voice consists of an oscillator and a filter.
- The oscillator section provides two oscillators (oscillator 1 and 2, for which you can select from thirteen different oscillator algorithms, including standard, ring modulation, VPM, resonance, organ model, and electric piano model), plus a sub-oscillator and a noise generator.
 - The filter section lets you choose from five types of filter (two filter units), including a human voice that lets you simultaneously specify two center frequency points, and a dual band-pass filter that lets you simulate the body resonances of a violin or guitar.

By using five EG units and four LFO units to modulate this voice section you can apply a rich variety of pitch, tonal, and volume changes to each voice.

* Developed under license of physical modeling tone generator patents owned by Stanford University USA and Yamaha Corporation.



The structure of a MOSS tone generator program

A MOSS tone generator program is structured as follows.

OSC (oscillator)

This section produces the waveform that is the basis of the sound. These parameters are set in PROG 2.1: Ed-Basic, PROG 2.3: Ed-OSC, and PROG 3.1: Ed-Pitch.

- **Oscillator 1/2**
The EXB-MOSS provides thirteen methods of generating sound (13 oscillator types). You can combine two of these oscillator types, and specify the basic pitch and how oscillation will occur. However for some oscillator types, only one may be used at a time. These parameters are set in PROG 2.1: Ed-Basic, Prog Basic page and OSC Basic page, and in PROG 2.3: Ed-OSC.

- **Sub Oscillator**
You can select one of four basic waveforms. Pitch-related settings can be made in the same way as for Oscillator 1/2. These parameters are set in PROG 2.1: Ed-Basic, Prog Basic and OSC Basic pages.

- **Noise Generator**
This generates white noise. The noise can be sent through a multi-mode filter (low pass filter, high pass filter, band pass filter). These parameters are set in PROG 2.1: Ed-Basic, Noise Gen. page.

Mixer

Here, the signals from Oscillator 1/2, Sub Oscillator, Noise Generator, and the feedback from the AMP are mixed, and output to multi-mode filters 1/2 (Filter 1/2). These parameters are set in PROG 2.1: Ed-Basic, OSC Mixer1 and OSC Mixer2 pages.

Filter

This section contains two multi-mode filters. As the filter type, you can select low pass filter, high pass filter, band pass filter, band reject filter, or dual band pass filter. You can also select the routing between the two filters and the mixer and amp. These parameters are set in PROG 4.1: Ed-Filter.

AMP

This section contains two amps. The signal that is input to each will depend on the filter routing. In addition, the amp section provides an amp envelope generator (Amp EG) that can be used to control it.

These parameters are set in PROG 5.1: Ed-Amp.

FX (effects)

This section applies effects to the signal that is output from the amp. It has the same parameter structure as for the programs of other banks.

These parameters are set in PROG 7.1: Ed-BUS, PROG 7.2: Ed-InsertFX, and PROG 7.3: Ed-MasterFX.

LFO

This section provides four LFO units. These LFOs can be used as modulation sources for various parameters, applying cyclic change to the sound.

These parameters are set in PROG 5.3: Ed-LFOs.

EG

This section provides four general-purpose envelope generator (EG) units. The four EGs can be used as modulation sources for various parameters, applying time-variant change to the sound.

These parameters are set in PROG 5.2: Ed-EGs.

Arpeggiator

The arpeggiator can be used in the same way as for other program banks.

These parameters are set in PROG 6.1: Ed-Arp.

Program basic

Here you can make settings for scale, key assign, and controller functions (REALTIME CONTROL knobs, SW1, SW2). These parameters are set in PROG 2.1: Ed-Basic, PROG 2.2: Ed-Ctrl.

About the oscillators

For bank I-F, you can select from thirteen different oscillator types for Oscillator 1, and from nine different types for Oscillator 2.

In the PROG 2.1: Ed-Basic, Prog Basic page or OSC Basic page, you can select the type for Oscillators 1 and 2, and use them together.

If you have selected a Single Size oscillator type (Standard–E. Piano Model) for Oscillator 1, you will also be able to select a Standard–E. Piano Model oscillator for Oscillator 2. However, Oscillator 2 cannot be used if a Double Size oscillator type (Brass Model–Bowed String Model) is selected for Oscillator 1.

Standard

This simulates the oscillator of an analog synthesizer. You can obtain the same effects as on an analog synthesizer, such as using PWM (pulse width modulation). (☞p.258, “EXB-MOSS owner’s manual” p.14)

Comb Filter

This oscillator produces pitched frequency components from noise or an impulse. It can be used to generate a diverse array of sounds, ranging from noisy sounds to synth bass or string-like sounds. (☞p.259, “EXB-MOSS owner’s manual” p.17)

VPM (Variable Phase Modulation)

This oscillator uses phase modulation to generate overtones. You can produce rich overtones by using phase modulation between two oscillators and a wave shaping table to process the sound. (☞p.259, “EXB-MOSS owner’s manual” p.18)

Resonance

This oscillator is an application of filter oscillation, and is especially good for mallet sounds or pads. (☞p.260, “EXB-MOSS owner’s manual” p.20)

Ring Modulation

Cross Modulation

Sync Modulation

These are special oscillators that implement the modulation between oscillators that could be created on analog synthesizers. They are suitable for producing sounds with rich overtone structures, such as bells, metallic sounds, and gongs. (☞p.260–261, “EXB-MOSS owner’s manual” p.21–23)

Organ Model

This uses one oscillator to simulate an organ with three drawbars, or two oscillators to simulate an organ with six drawbars

Since a single drawbar can generate one of four waveforms that you choose, you can obtain a wide range of tones.

(☞p.261, “EXB-MOSS owner’s manual” p.23)

E. Piano Model (electric piano model)

This is a physical model that simulates a warm vintage piano sound. (☞p.261, “EXB-MOSS owner’s manual” p.24)

Brass Model

This is a physical model that simulates a brass instrument such as a trumpet or trombone. (☞p.262, “EXB-MOSS owner’s manual” p.25)

Reed Model

This is a physical model that simulates a wind instrument such as a sax or flute. (☞p.262, “EXB-MOSS owner’s manual” p.27)

Plucked String Model

This is a physical model that simulates a plucked string instrument such as a guitar or bass guitar. (☞p.263, “EXB-MOSS owner’s manual” p.29)

Bowed String Model

This is a physical model that simulates a bowed string. (☞p.263, “EXB-MOSS owner’s manual” p.31)

Loading the preloaded data

Load the data from the “MOSS00FD” floppy disk included with the EXB-MOSS.

The floppy disk contains the following data.

MOSS.PCG

Programs	Bank I-A, I-B, I-C, I-D, I-F
Combinations	Bank I-A, I-B, I-C, I-D
Drum Kits	00–15 (I-A/B)
Arpeggio Pattern	000–199 (I-A/B)
Global Settings	


MOSS.SNG

Cue List
Song (TRITON, TRITON Pro, TRITON ProX song file)
“Feet Hurt MOSS” by Scott Frankfurt
©1999 Bleach Bros. Music (breachbros@earthlink.net) – all rights reserved

Program bank I-F contains program data for the MOSS tone generator. Load this data into MOSS tone generator program bank I-F of the TRITON-Rack.

Combination bank I-B (000...063) contains combinations that use the bank I-F programs. Load this data into any combination bank I-E or E-A–E-H of the TRITON-Rack.

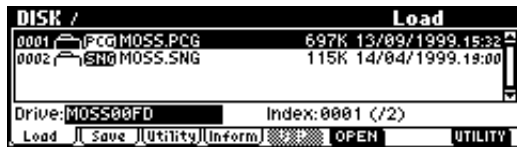
The remaining program banks I-A, I-B, I-C, I-D, combination banks I-A, I-C, I-D, drum kits, arpeggio patterns, global settings, and cue list is data for the TRITON.

 When loading the MOSS.PCG file into the TRITON-Rack, you must be sure to load only the data for Program Bank I-F and Combination Bank I-B. If you load any other data, the preloaded data of the TRITON-Rack will be overwritten. When you load MOSS.SNG, the Cue List will not be loaded into the TRITON-Rack.

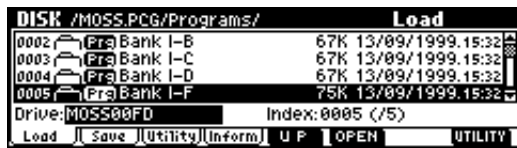
Loading from the included floppy disk

How to load the bank I-F programs

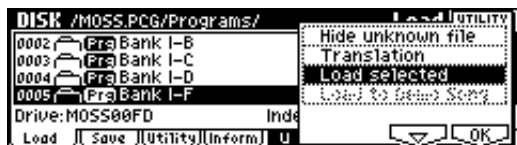
- 1 Insert the “MOSS00FD” floppy disk into the disk drive.
- 2 Press the [DISK] key to enter Disk mode.
The following display will appear in the LCD screen.



- 3 Select “Bank I-F” (bank I-F programs).
Use the [△], [▽] keys to select “MOSS.PCG,” and press the [F6] (“OPEN”) key to open the file. In the same way, select “Bank I-F” within “Programs.”



- 4 Press the [F8] (“UTILITY”) key to access the utility menu, press the [F7] key to choose “Load Selected,” and press the [F8] (“OK”) key.



The Load Program Bank F dialog box will appear.



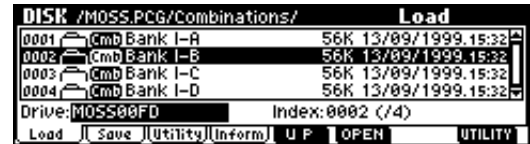
- 5 Press the [F8] (“OK”) key.
Only the program data of bank I-F from the “MOSS00FD” floppy disk will be loaded into program bank I-F of the TRITON-Rack.

How to load the bank I-B combinations

Here’s how to load the data into combination bank I-E.

- 1 If you have modified the program settings or the order of banks I-A or I-B, load banks I-A and I-B from the disk included with the TRITON-Rack. The EXB-MOSS combinations I-B use bank I-F programs as well as the preloaded program banks I-A and I-B. This means that if you load EXB-MOSS combinations I-B, you must also load the preloaded program banks I-A and I-B. (BG p.81 “Loading data”)
- 2 Use the [△], [▽] keys to select “Combinations,” and press the [F6] (“OPEN”) key.

- 3 Use the [△], [▽] keys to select “Bank I-B.”



- 4 Press the [F8] (“UTILITY”) key to access the utility menu, press the [F7] key to choose “Load Selected,” and press the [F8] (“OK”) key.
The Load Combination Bank I-B dialog box will appear.
- 5 Use the [INC], [DEC] keys to select Bank I-E for “To.”




note In consideration for loading the preloaded data and EXB-PCM series data, we recommend that you load this data into bank I-E.

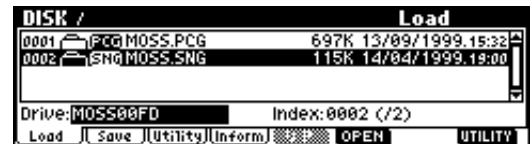
- 6 Press the [F8] (“OK”) key.
Only the bank I-B combination data from the “MOSS00FD” disk will be loaded into bank I-E of the TRITON-Rack.

How to load MOSS.SNG into the demo song

MOSS.SNG is a song file that uses the programs of bank I-F, etc. On the TRITON-Rack, you can load a song file as a demo song, and play it using Demo/SNG.

 When you load MOSS.SNG, all of the previous demo or multi memory will be overwritten and lost.

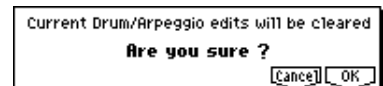
- 1 Perform steps ①–② of “How to load the bank I-F programs.”
- 2 Use the [△], [▽] keys to select “MOSS.SNG.”



- 3 Press the [F8] (“UTILITY”) key to access the utility menu, press the [F7] key to select “Load to Demo Song,” and press the [F8] (“OK”) key.



The following dialog box will appear.



- 4 If you wish to load the data, press the [F8] (“OK”) key.
The demo song will be loaded from the “MOSS00FD” disk into the TRITON-Rack.
- 5 Press the [DEMO/SNG] key to enter the DEMO/SNG page, and press the [F5] (“START”) key to play back the demo song.

Selecting programs/combinations

Programs/combinations can be selected in the same way as for banks I-A-I-E. (⇒ BG p.18, 19)

They can also be selected using the “Select by Category” utility.

For the program list of the included floppy disk, refer to the “Voice Name List” that begins on p.49 of the “EXB-MOSS owner’s manual.”

- ⚡ Depending on the oscillator type used by the program or on the combination of effect types, a certain amount of time may be required after a program is selected until it actually changes.

Editing a program

When a bank I-F MOSS tone generator program is selected in PROG 1.1: Play, you can use PROG 2.1–7.3 to edit the program parameters. For details on the program parameters, refer to “Parameter list” (p.256–) and “EXB-MOSS owner’s manual.”

- ⚡ The performance editor “Stretch” in the PROG 1.1: Play, Perform. Edit page cannot be used on bank I-F programs.

Editing a combination

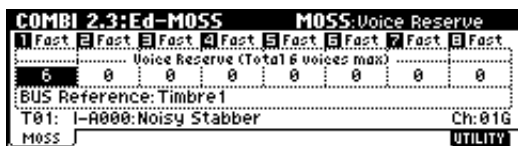
In a combination, you can combine bank I-F programs with programs from banks I-A-I-E and G, g(0)–g(9), g(d), E-A–E-H. You can also use two or more programs from bank I-F.

- ⚡ Insert/master effects and routing to independent audio outputs cannot be set independently for multiple timbres.
- ⚡ If you change programs while a bank I-F program is sounding, the bank I-F program will stop sounding.
- ⚡ When playing multi-timbrally, selecting a bank I-F program for a timbre that is numbered earlier than another timbre currently sounding a bank I-F program will cause noise to be heard in the currently-sounding bank I-F program.

Timbre settings

Here is the procedure for selecting a program for a timbre, and for setting the parameters that allow it to sound.

- ① Select COMBI 1.1: Play.
For details on how to enter each page, refer to BG p.34.
- ② Select the combination that you wish to edit.
- ③ Select COMBI 2.3: Ed-MOSS.
Before you select a bank I-F program, make settings here to specify how the MOSS tone generator will produce sound.



- ④ Use “Voice Reserve” to specify the number of voices that will sound the bank I-F program.
The programs of bank I-F can be sounded by a maximum of six voices.

For example, timbre 1 could use up to two voices for a MOSS tone generator bass program, and timbre 2 could use up to four voices for a MOSS tone generator electric piano program.

- ⚡ The “Voice Reserve” setting is ignored for the programs of banks I-A-I-E and G, g(0)–g(9), g(d), and E-A–E-H. If you change the program used from a bank I-F program to a bank I-A-I-E and G, g(0)–g(9), g(d), or E-A–E-H program, it will sound without regard to the “Voice Reserve” setting.
Conversely, when you change the program used from a bank I-A-I-E and G, g(0)–g(9), g(d), or E-A–E-H program to a bank I-F program, it will sound according to the “Voice Reserve” setting.

If you select a bank I-F program for a timbre whose “Voice Reserve” is set to 0, the program will not sound.

- ⑤ The “BUS Reference” parameter selects the timbre whose routing setting will be used by bank I-F programs. If more than one timbre uses a bank I-F program, the insert effect, master effect, and independent audio output routing settings cannot be specified independently for these timbres. All bank I-F programs used will use the routing settings of the timbre selected for “BUS Reference.”
The timbre you select for “BUS Reference” does not have to be using a bank I-F program.
Timbre routing is specified in COMBI 7.1: Ed-BUS.
Use the following procedure to make settings.

Example)

- ① Set “BUS Reference” to Timbre 1.
- ② In the COMBI 7.1: Ed-BUS, BUS page, set timbre 1 “BUS Select” to L/R.
All timbres that use a bank I-F program will be sent to L/R. They will not be sent to the insert effects.
If you wish to send them to an insert effect, set “BUS Select” to IFX1–IFX5.
If you wish to output them to (INDIVIDUAL) 1–4, select 1–4, 1/2, or 3/4.
- ③ In the COMBI 7.1: Ed-BUS, BUS page, set timbre 1 “S1” to 064, and set “S2” to 127.
All timbres that use a bank I-F program will be sent to the master effects at the send levels you specify here.
If you send the signal to an insert effect, set “S1” and “S2” in the COMBI 7.2: Ed-Insert FX, Setup page.

- note For timbres that use bank I-A-I-E, G, g(0)–g(9), g(d), or E-A–E-H programs, the actual send level is determined by multiplying the send levels specified by the timbre and the program. For timbres that use bank I-F programs, the send level value will itself be the actual send level.

- ⚡ The “BUS Reference” setting has no effect on programs of banks I-A-I-E, G, g(0)–g(9), g(d), and E-A–E-H.

- ④ Select the COMBI 2.1: Ed-Prog/Mix, Prog page.




- ⑤ For “Program Select,” choose a bank I-F program.
- ⑥ Select the COMBI 2.1: Ed-Prog/Mix, Mixer page.
- ⑦ Use “Pan” to adjust the panpot of the timbre.
If a bank I-F timbre is selected for a timbre, RND will be ignored. If the setting is RND, the signal will be panned to the center as for a setting of C064.
- ⑧ Use “Volume” to set the volume of the timbre.

- ⑨ Set parameters in other pages.
Set the various parameters in the same way as for timbres that do not use bank I-F programs (⇒p.31). However, the parameters listed below will function as follows if a bank I-F program is used by a timbre.
 - “OSC Select” will be ignored. (COMBI 3.1: Ed-Param1, OSC page)
 - The range of “Detune (BPM Adj.)” will be +/-100. Even if the absolute value of the setting is greater than 100, the actual detune value will be +/-100 cents. (COMBI 3.1: Ed-Param 1, Pitch page)
 - The Key Zone/Vel Zone “Top Slope” and “Bottom Slope” will be ignored. (COMBI 3.3: Key Zone, Slope page)

Multi mode

You can select bank I-F programs to be played by incoming data from an external sequencer etc. or from the keyboard of a connected MIDI instrument.

As for a combination, you can use separate bank I-F programs for multiple tracks. At this time, the bank I-F programs will have a **total polyphony of six voices**.

 As for a combination, the insert/master effect routing settings cannot be sent individually for multiple tracks.

The settings, parameter operation, and points of caution are the same as for combinations. Refer to p.254 “Editing a combination.”

Operation when transmitting/receiving control changes

In the same way as the bank I-A–I-E, G, g(0)–g(9), g(d), and E-A–E-H programs, the sound of bank I-F programs can be modified by incoming MIDI control changes CC#70–79, or by operating the REALTIME CONTROL knobs in A-mode or B-mode. (⇒p.218 “TRITON-Rack operations when control changes are transmitted/received”)

In Program mode, you can write the program to save it in its modified state.

CC#70: Sustain Level

“Sustain Level” (PROG 5.1: Ed-Amp, AmpEG page, PROG 5.2: Ed-EGs, EG1–4 pages).

note This affects the EG that is selected for Filter EG (PROG 4.1: Ed-Filter 1/2 page) and Amp Level EG (PROG 5.1: Ed-Amp, Amp 1/2 page).

CC#71: Filter Resonance Level

“Resonance to A,” “Resonance to B” (PROG 4.1: Ed-Filter, Filter 1/2 page)

CC#72: Release Time

“Release Time” (PROG 5.1: Ed-Amp, AmpEG page, PROG 5.2: Ed-EGs, EG1–4 pages)

note This affects the EG that is selected for Filter EG (PROG 4.1: Ed-Filter 1/2 page) and Amp Level EG (PROG 5.1: Ed-Amp, Amp 1/2 page).

CC#73: Attack Time

“Attack Time,” “T Mod A” (PROG 5.1: Ed-Amp, AmpEG page, PROG 5.2: Ed-EGs, EG1–4 pages)

note This affects the EG that is selected for Filter EG (PROG 4.1: Ed-Filter 1/2 page) and Amp Level EG (PROG 5.1: Ed-Amp, Amp 1/2 page).

CC#74: Low Pass Filter Cutoff Frequency

“Frequency to A,” “Frequency to B” (PROG 4.1: Ed-Filter, Filter 1/2 page)

CC#75: Decay Time

“Decay Time,” “Slope Time” (PROG 5.1: Ed-Amp, AmpEG page, PROG 5.2: Ed-EGs, EG 1–4 pages)

note This affects the EG that is selected for Filter EG (PROG 4.1: Ed-Filter 1/2 page) and Amp Level EG (PROG 5.1: Ed-Amp, Amp 1/2 page).

CC#76: Pitch LFO Speed

“LFO1–4 Frequency” (PROG 5.3: Ed-LFOs, LFO1–4 pages)

note If LFO1–4 is selected for Pitch AMS1, AMS2 (PROG 3.1: Ed-Pitch, OSC1/2 pages) or Common Pitch Mod. AMS (PROG 3.1: Ed-Pitch, Common page), this will affect the selected LFO.

CC#77: Pitch LFO Intensity

“Modulation AMS1 Intensity,” “Modulation AMS2 Intensity” (PROG 3.1: Ed-Pitch, OSC 1/2 page)
“Common Pitch Mod. AMS Intensity” (PROG 3.1: Ed-Pitch, Common page)

note If LFO 1–4 is selected for these AMS, this message will affect that LFO.

CC#78: Pitch LFO Delay

“LFO1/2, 3, 4 Fade” (PROG 5.3: Ed-LFOs, LFO1–4 page)

note If LFO1–4 is selected for Pitch AMS1, AMS2 (PROG 3.1: Ed-Pitch, OSC1/2 pages) or Common Pitch Mod. AMS (PROG 3.1: Ed-Pitch, Common page), this will affect the selected LFO.

CC#79: Filter EG Intensity

“EG Intensity to A,” “EG Intensity to B” (PROG 4.1: Ed-Filter, Filter 1/2 page)

Parameters

For details on the parameters, refer to the “EXB-MOSS owner’s manual” included with the EXB-MOSS. Parameter names given in the “EXB-MOSS owner’s manual” are the names used when the EXB-MOSS is installed in the TRITON/TRITONpro/TRITONproX, and will differ from the names when it is installed in the TRITON-Rack. However, the content of the explanations will remain the same.

Viewing the parameters

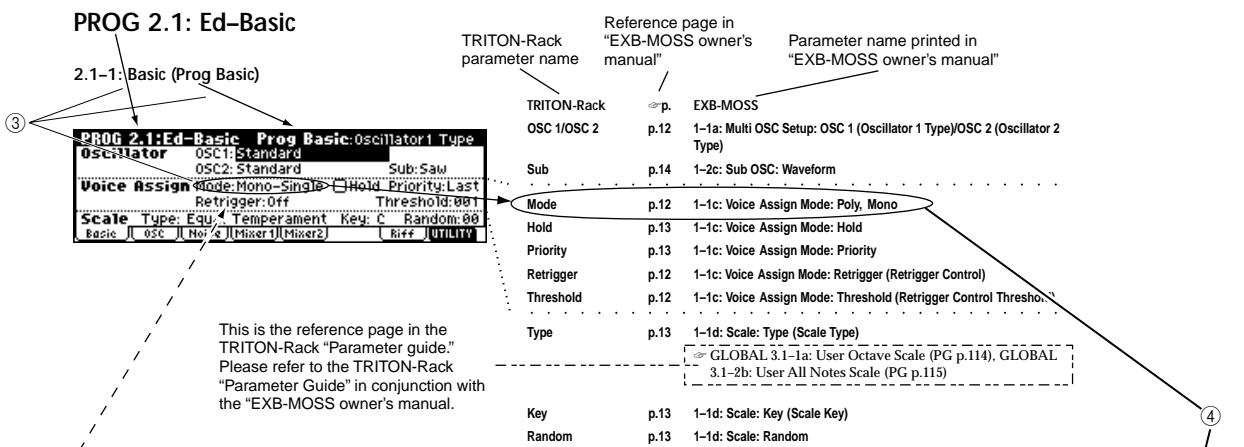
This manual provides the following information on the parameters.

- **TRITON-Rack Parameters (p.257–p.268)**
This shows the correspondence between the TRITON-Rack parameter names and the parameter names printed in the “EXB-MOSS owner’s manual.” Use the following procedure to find the explanation for a parameter.
 - ① In the LCD screen of the TRITON-Rack, find the parameter that you wish to learn about.
As an example, let’s suppose that you want to learn about the PROG 2.1: Ed-Basic, Prog Basic page “Mode” parameter.
 - ② In the index of this manual, find the mode name and page number shown in the LCD screen.
“Mode” →PROG 2.1: Ed-Basic →p. 257 of this manual

- ③ Find the desired parameter using the TRITON-Rack’s LCD screen and the LCD screen, mode name, and page number listed in this manual.
(See the solid lines with arrows in the diagram below.)
- ④ Use the reference page and parameter name listed beside the desired parameter name to find the relevant location in the “EXB-MOSS owner’s manual.” (See the solid lines with arrows in the diagram below.)

- **EXB-MOSS Parameter Index (p.269–p.272)**
You can perform a reverse-lookup to see which TRITON-Rack screen contains a parameter described in the “EXB-MOSS owner’s manual.” Use the following procedure.
 - ① In the “EXB-MOSS owner’s manual,” find the parameter name that you want to look up.
 - ② Use the page number and parameter name to find the parameter name in the EXB-MOSS Parameter Index.
(See the dashed lines with arrows in the diagram below.)
 - ③ Use the reference page and parameter name listed beside the desired parameter name to find the TRITON-Rack parameter name listed in TRITON-Rack Parameters.

p.257 of this manual, “TRITON-Rack Parameters”



p.269 of this manual, “EXB-MOSS Parameter Index”

Release (Release Time)	
Amp EG: Time	5.1-3: AmpEG: L ⇒p.266
EG1...4: Time	5.2-1...4: EG1...4: L ⇒p.266
Reso	
Reed Model: Bell Character	2.3-1: Reed: Bell ⇒p.262
Reso (Resonance)	
Resonance: BPF Parameters	2.3-2: Resonance: BPF ⇒p.260
Resonance	
Filter: Filter A	4.1-1/3: Filter1/2 ⇒p.265
Noise Generator	2.1-3: Noise Gen. ⇒p.258
Brass Model: Lip Character	2.3-1: Brass: Lip ⇒p.262
Retrigger (Retrigger Control)	
Prog Basic: Voice Assign Mode	2.1-1: Prog Basic: Voice Assign ⇒p.257
RI (Release Time AMS2 Intensity)	
Amp EG: Time Modulation	5.1-3: AmpEG: T Mod. ⇒p.266
EG1...4: Time Modulation	5.2-1...4: EG1...4: T Mod. ⇒p.266
Rosin	
Bowed String Model: Bow Speed	2.3-2: Bowed String: Bow: Bow Speed ⇒p.264
Routing	
Filter: Routing	4.1-1/3: Filter1/2 ⇒p.265

Page 12 of the “EXB-MOSS owner’s manual” included with EXB-MOSS

1-1a: Multi OSC Setup
Here, you can make settings for the oscillator. The parameters that are set in “1-3: OSC 1” and “1-4: OSC 2” will differ depending on the oscillator type that is selected here. (Link: 1-2a, 1-2b)

OSC 1 (Oscillator 1 Type)
[Standard...Bowed String Model]
Selects the oscillator type for oscillator 1. For details on the oscillator types, refer to “Features of the oscillator” on p. 4 of this manual.

Single Size
Standard
Comb Filter
VPM (Variable Phase Modulation)
Resonance
Ring Modulation
Cross Modulation
Sync Modulation
Organ Model
E. Piano Model

Double Size
Brass Model

Detune [...99]
Detunes the notes that are sounded simultaneously by the Unison function.

1-1c: Voice Assign Mode
Here, you can specify how notes will sound when keys are pressed.

Poly, Mono (Single, Multi)
Selects whether the sound will be played monophonically or polyphonically.
Poly: Polyphonic playing
Mono (Single): Single-triggered monophonic playing
Mono (Multi): Multi-triggered monophonic playing.

When Poly is selected, the Retrigger Control and Threshold parameters will be unavailable.

Retrigger (Retrigger Control) [Off...MIDI:CC#83]
“Retrigger” refers to the action of resetting the EG and LFO at the time of note-on (the EG will return to its start level, and the LFO will return to the beginning of the cycle of its waveform). Here you can select the controller which will specify whether or not the sound will be retriggered when a note-on occurs.

Program Mode

PROG 1.1: Play

1.1-1: Program

This is the same parameter as for programs of banks other than I-F.

☞ PG p.2 PROG 1.1-1: Program



1.1-3: Arp (Arp. Play)

This is the same parameter as for programs of banks other than I-F.

☞ p.5 PROG 1.1-3: Arp. Play



1.1-2: P Edit (Perform. Edit)

This is the same parameter as for programs of banks other than I-F.

However, "Stretch" has no effect for bank F programs.

☞ PG p.3 PROG 1.1-2: Perform Edit



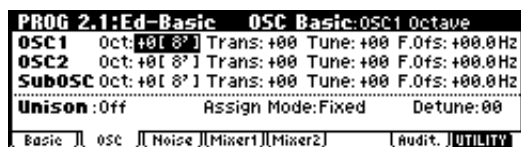
PROG 2.1: Ed-Basic

2.1-1: Basic (Prog Basic)



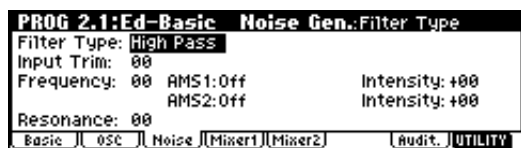
TRITON-Rack	☞ p.	EXB-MOSS
OSC 1/OSC 2	p.12	1-1a: Multi OSC Setup: OSC 1 (Oscillator 1 Type)/OSC 2 (Oscillator 2 Type)
Sub	p.14	1-2c: Sub OSC: Waveform
.....		
Mode	p.12	1-1c: Voice Assign Mode: Poly, Mono
Hold	p.13	1-1c: Voice Assign Mode: Hold
Priority	p.13	1-1c: Voice Assign Mode: Priority
Retrigger	p.12	1-1c: Voice Assign Mode: Retrigger (Retrigger Control)
Threshold	p.12	1-1c: Voice Assign Mode: Threshold (Retrigger Control Threshold)
.....		
Type	p.13	1-1d: Scale: Type (Scale Type)
		☞ GLOBAL 3.1-1a: User Octave Scale (PG p.114), GLOBAL 3.1-2b: User All Notes Scale (PG p.115)
Key	p.13	1-1d: Scale: Key (Scale Key)
Random	p.13	1-1d: Scale: Random

2.1-2: OSC (OSC Basic)



TRITON-Rack	☞ p.	EXB-MOSS
Oct	p.14	1-2a: OSC 1 Multi OSC Setup: Octave
Trans	p.14	1-2a: OSC 1 Multi OSC Setup Transpose
Tune	p.14	1-2a: OSC 1 Multi OSC Setup: Tune
F.Ofs	p.14	1-2a: OSC 1 Multi OSC Setup: F.Offset (Frequency Offset)
.....		
Unison	p.12	1-1b: Unison: Unison
Assign Mode	p.12	1-1b: Unison: Mode
Detune	p.12	1-1b: Unison: Detune

2.1-3: Noise (Noise Gen.)



TRITON-Rack	☞ p.	EXB-MOSS
Filter Type	p.33	1-5a: Noise Generator: Filter Type
Input Trim	p.33	1-5a: Noise Generator: Input Trim
Frequency	p.33	1-5a: Noise Generator: Frequency (Cutoff Frequency)
AMS1	p.34	1-5b: Frequency Modulation: AMS1 (Alternate Modulation Source 1)
Intensity	p.34	1-5b: Frequency Modulation: Intensity (Cutoff Frequency AMS1 Intensity)
AMS2	p.34	1-5b: Frequency Modulation: AMS2 (Alternate Modulation Source 2)
Intensity	p.34	1-5b: Frequency Modulation: Intensity (Cutoff Frequency AMS2 Intensity)
Resonance	p.33	1-5a: Noise Generator: Resonance

2.1-4: Mixer1/2.1-5: Mixer2



TRITON-Rack	⇒ p.	EXB-MOSS
OSC1 Level	p.34	1-6a: Mixer1: OSC1 (OSC1 Output Level)
AMS	p.34	1-6a: Mixer1: AMS (Alternate Modulation Source)
Int	p.34	1-6a: Mixer1: Intensity (Level AMS Intensity)
OSC2 Level	p.34	1-6a: Mixer1: OSC2 (OSC2 Output Level)
AMS	p.34	1-6a: Mixer1: AMS (Alternate Modulation Source)
Int	p.34	1-6a: Mixer1: Intensity (Level AMS Intensity)
SubOSC Level	p.34	1-6a: Mixer1: Sub OSC
AMS	p.34	1-6a: Mixer1: AMS (Alternate Modulation Source)
Int	p.34	1-6a: Mixer1: Intensity (Level AMS Intensity)
Noise Level	p.34	1-6a: Mixer1: Noise
AMS	p.34	1-6a: Mixer1: AMS (Alternate Modulation Source)
Int	p.34	1-6a: Mixer1: Intensity (Level AMS Intensity)
Feedback Level	p.34	1-6a: Mixer1: Feedback
AMS	p.34	1-6a: Mixer1: AMS (Alternate Modulation Source)
Int	p.34	1-6a: Mixer1: Intensity (Level AMS Intensity)

2.1-6: Audition

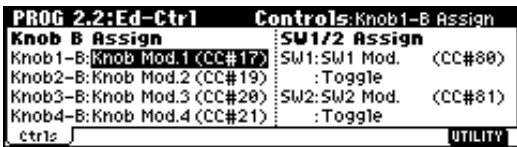
This is the same parameter as for programs of banks other than I-F.

⇒ PG p.9 PROG 2.1-5: Audition



PROG 2.2: Ed-Ctrl

2.2-1: Ctrls (Controls)



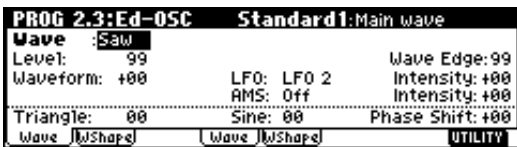
TRITON-Rack	⇒ p.	EXB-MOSS
Knob1-B		
Knob2-B	p.35	1-7b: Realtime Control Knobs B-Assign
Knob3-B		⇒ PROG 2.2-1a: Knob B Assign (PG p.9)
Knob4-B		
.....		
SW1		
SW1 Mode	p.35	1-7a: Panel Switch Assign
SW2		⇒ PROG 2.2-1b: SW1/2 Assign (PG p.10)
SW2 Mode		

PROG 2.3: Ed-OSC

Standard

⇒ p.14 "EXB-MOSS owner's manual"

2.3-1: Wave



TRITON-Rack	⇒ p.	EXB-MOSS
Main Wave	p.15	1-3a: Wave: Main Wave
Level	p.15	1-3a: Wave: Level
Wave Edge	p.15	1-3a: Wave: Wave Edge
Waveform	p.15	1-3b: Waveform: Waveform
LFO	p.15	1-3b: Waveform: LFO
Intensity	p.15	1-3b: Waveform: Intensity (Waveform Modulation LFO Intensity)
AMS	p.15	1-3b: Waveform: AMS (Alternate Modulation Source)
Intensity	p.15	1-3b: Waveform: Intensity (Waveform AMS Intensity)
.....		
Triangle	p.15	1-3a: Wave: Triangle Level
Sine	p.15	1-3a: Wave: Sine Level
Phase Shift	p.15	1-3a: Wave: Phase Shift (Triangle & Sine Phase Shift)

2.3-2: WShape (Wave Shape)

PROG 2.3:Ed-OSC		Standard1:WShape Input	
Wave Shape			
Input Level: 50	AMS: Off	Intensity: +00	
Table Type: Clip		Offset: +00	
Shape: 50	AMS: Off	Intensity: +00	
Balance: 00	AMS: Off	Intensity: +00	
Wave [WShape]	[Wave] [WShape]		UTILITY

TRITON-Rack	⇒ p.	EXB-MOSS
Input Level	p.15	1-3c: Wave Shape: Input (Input Level)
AMS	p.15	1-3c: Wave Shape: AMS (Alternate Modulation Source)
Intensity	p.16	1-3c: Wave Shape: Intensity (Input Level AMS Intensity)
Table Type	p.16	1-3c: Wave Shape: Type (Wave Shape Table Type)
Offset	p.16	1-3c: Wave Shape: Offset (Wave Shape Offset)
Shape	p.16	1-3c: Wave Shape: Shape
AMS	p.16	1-3c: Wave Shape: AMS (Alternate Modulation Source)
Intensity	p.16	1-3c: Wave Shape: Intensity (Shape AMS Intensity)
Balance	p.16	1-3c: Wave Shape: Balance
AMS	p.16	1-3c: Wave Shape: AMS (Alternate Modulation Source)
Intensity	p.16	1-3c: Wave Shape: Intensity (Balance AMS Intensity)

Comb Filter

⇒ p.17 "EXB-MOSS owner's manual"

2.3-1: Comb F

PROG 2.3:Ed-OSC		Comb F.1:Input	
Input :SUBOSC+Noise	Level:00	Noise Level:99	
	AMS: Off	Intensity: +00	
Feedback :90	AMS1:Off	Intensity: +00	
	AMS2:Off	Intensity: +00	
High Damp:50	AMS: Off	Intensity: +00	
Comb F]	[Comb F]		UTILITY

TRITON-Rack	⇒ p.	EXB-MOSS
Input	p.17	1-3a: Input: Input
Level	p.17	1-3a: Input: Level (Input Wave Level)
Noise Level	p.17	1-3a: Input: Noise Level
Pulse Width	p.17	1-3a: Input: Pulse Width
AMS	p.17	1-3a: Input: AMS (Alternate Modulation Source)
Intensity	p.17	1-3a: Input: Intensity (Input Wave Level AMS Intensity)
Feedback	p.17	1-3b: Feedback: Fbk (Feed Back)
AMS1	p.17	1-3b: Feedback: AMS1 (Alternate Modulation Source 1)
Intensity	p.17	1-3b: Feedback: Intensity (Feedback AMS1 Intensity)
AMS2	p.17	1-3b: Feedback: AMS2 (Alternate Modulation Source 2)
Intensity	p.17	1-3b: Feedback: Intensity (Feedback AMS2 Intensity)
High Damp	p.18	1-3c: High Damp: H. D (High Damp)
AMS	p.18	1-3c: High Damp: AMS (Alternate Modulation Source)
Intensity	p.18	1-3c: High Damp: Intensity (High Damp AMS Intensity)

VPM

⇒ p.18 "EXB-MOSS owner's manual"

2.3-1: Carrier

PROG 2.3:Ed-OSC		VPM1:carrier Wave	
Carrier :Sine	AMS1:Off	Intensity: +00	
Level: 99	AMS2:Off	Intensity: +00	
Wave Shape:00	AMS1:Off	Intensity: +00	
Type: 1	AMS2:Off	Intensity: +00	
Feedback :00			
Carrier [Mod.]	[Carrier] [Mod.]		UTILITY

TRITON-Rack	⇒ p.	EXB-MOSS
Carrier Wave	p.18	1-3a: Carrier: Wave
Level	p.18	1-3a: Carrier: Level
AMS1	p.18	1-3a: Carrier: AMS1 (Alternate Modulation Source 1)
Intensity	p.18	1-3a: Carrier: Intensity (Level AMS1 Intensity)
AMS2	p.18	1-3a: Carrier: AMS2 (Alternate Modulation Source 2)
Intensity	p.18	1-3a: Carrier: Intensity (Level AMS2 Intensity)
Wave Shape	p.18	1-3a: Carrier: Wave Shape
Type	p.19	1-3a: Carrier: Type (Wave Shape Type)
AMS1	p.19	1-3a: Carrier: AMS1 (Alternate Modulation Source 1)
Intensity	p.19	1-3a: Carrier: Intensity (Shape AMS1 Intensity)
AMS2	p.19	1-3a: Carrier: AMS2 (Alternate Modulation Source 2)
Intensity	p.19	1-3a: Carrier: Intensity (Shape AMS2 Intensity)
Feedback	p.19	1-3a: Carrier: Feedback

2.3-2: Mod. (Modulator)

PROG 2.3:Ed-OSC		UPM1:Modulator Wave	
Modulator	Sine	AMS1:Off	Intensity: +00
Level:	00	AMS2:Off	Intensity: +00
Frequency Coarse:	01	AMS1:Off	Intensity: +00
Fine:	+00	AMS2:Off	Intensity: +00
Carrier	Mod.	Carrier	Mod.
			UTILITY

TRITON-Rack	⇨p.	EXB-MOSS
Modulator Wave	p.19	1-3b: Modulator: Wave
Level	p.19	1-3b: Modulator: Level
.....		
AMS1	p.19	1-3b: Modulator: AMS1 (Alternate Modulation Source 1)
Intensity	p.19	1-3b: Modulator: Intensity (Level AMS1 Intensity)
AMS2	p.19	1-3b: Modulator: AMS2 (Alternate Modulation Source 2)
Intensity	p.19	1-3b: Modulator: Intensity (Level AMS2 Intensity)
.....		
Frequency Coarse	p.19	1-3b: Modulator: Frequency Coarse
Fine	p.19	1-3b: Modulator: Fine
.....		
AMS1	p.19	1-3b: Modulator: AMS1 (Alternate Modulation Source 1)
Intensity	p.19	1-3b: Modulator: Intensity (Frequency AMS1 Intensity)
AMS2	p.19	1-3b: Modulator: AMS2 (Alternate Modulation Source 2)
Intensity	p.19	1-3b: Modulator: Intensity (Frequency AMS2 Intensity)

Resonance

⇨p.20 "EXB-MOSS owner's manual"

2.3-1: Input

PROG 2.3:Ed-OSC		Resonance1:Input	
Input	Noise	AMS1:Off	Intensity: +00
Level:	99	AMS2:Off	Intensity: +00
Resonance Modulation		AMS: Off	Intensity: +00
Input	BFF	Input	BFF
			UTILITY

TRITON-Rack	⇨p.	EXB-MOSS
Input	p.20	1-3a: Input: Input
Level	p.20	1-3a: Input: Level
AMS1	p.20	1-3a: Input: AMS1 (Alternate Modulation Source 1)
Intensity	p.20	1-3a: Input: Intensity (Level AMS1 Intensity)
AMS2	p.20	1-3a: Input: AMS2 (Alternate Modulation Source 2)
Intensity	p.20	1-3a: Input: Intensity (Level AMS2 Intensity)
.....		
AMS	p.20	1-3c: Resonance Modulation: AMS (Alternate Modulation Source)
Intensity	p.20	1-3c: Resonance Modulation: Intensity (Resonance AMS Intensity)

2.3-2: BPF

PROG 2.3:Ed-OSC		Resonance1:BPF1 Level1				
Level:		F.Coarse:	AMS:	Int:	F.Fine:	Reso:
BPF1	00	01	Off	+00	+00	90
BPF2	99	02	Off	+00	+00	90
BPF3	99	03	Off	+00	+00	90
BPF4	99	04	Off	+00	+00	90
Input	BFF	Input	BFF			
						UTILITY

TRITON-Rack	⇨p.	EXB-MOSS
Level	p.20	1-3b: BPF Parameters: Level
.....		
F.Coarse	p.20	1-3b: BPF Parameters: Coarse
AMS	p.20	1-3b: BPF Parameters: AMS (Alternate Modulation Source)
Int	p.20	1-3b: BPF Parameters: Int (BPF Frequency AMS Intensity)
.....		
F.Fine	p.20	1-3b: BPF Parameters: Fine
.....		
Reso	p.20	1-3b: BPF Parameters: Reso (Resonance)

Ring Modulation

⇨p.21 "EXB-MOSS owner's manual"

2.3-1: Ring

PROG 2.3:Ed-OSC		Ring Mod.1:Input	
Input	SubOSC	Wave Edge:50	Type:1
Carrier	Sine	AMS1:Off	Intensity: +00
Mod. Depth	:99	AMS2:Off	Intensity: +00
Ring		Ring	
			UTILITY

TRITON-Rack	⇨p.	EXB-MOSS
Input	p.21	1-3a: Wave: Input
Carrier Wave	p.21	1-3a: Wave: Carrier
Wave Edge	p.21	1-3a: Wave: Wave Edge
Type	p.21	1-3a: Wave: Type
Modulation Depth	p.21	1-3b: Modulation Depth: Depth
AMS1	p.21	1-3b: Modulation Depth: AMS1 (Alternate Modulation Source 1)
Intensity	p.21	1-3b: Modulation Depth: Intensity (Modulation Depth AMS1 Intensity)
AMS2	p.21	1-3b: Modulation Depth: AMS2 (Alternate Modulation Source 2)
Intensity	p.21	1-3b: Modulation Depth: Intensity (Modulation Depth AMS2 Intensity)

Cross Modulation

⇒ p.22 "EXB-MOSS owner's manual"

2.3-1: Cross

PRG 2.3:Ed-OSC		Cross Mod.1:Input	
Input	:SUBOSC	Carrier	:Sine
Carrier Wave		Wave Edge	:50
Mod. Depth	:50	AMS1	:Off
		AMS2	:Off
		Intensity	:+00
		Intensity	:+00
Cross		UTILITY	

TRITON-Rack	⇒ p.	EXB-MOSS
Input	p.22	1-3a: Wave: Input
Carrier Wave	p.22	1-3a: Wave: Carrier
Wave Edge	p.22	1-3a: Wave: Wave Edge
Modulation Depth	p.22	1-3b: Modulation Depth: Depth
AMS1	p.22	1-3b: Modulation Depth: AMS1 (Alternate Modulation Source 1)
Intensity	p.22	1-3b: Modulation Depth: Intensity (Modulation Depth AMS1 Intensity)
AMS2	p.22	1-3b: Modulation Depth: AMS2 (Alternate Modulation Source 2)
Intensity	p.22	1-3b: Modulation Depth: Intensity (Modulation Depth AMS2 Intensity)

Sync Modulation

⇒ p.23 "EXB-MOSS owner's manual"

2.3-1: Sync

PRG 2.3:Ed-OSC		Sync Mod.1:Input	
Input	:SUBOSC	Slave	:Saw
Slave		Wave Edge	:50
Sync		UTILITY	

TRITON-Rack	⇒ p.	EXB-MOSS
Input	p.23	1-3a: Wave: Input
Slave Wave	p.23	1-3a: Wave: Slave
Wave Edge	p.23	1-3a: Wave: Wave Edge

Organ Model

⇒ p.23 "EXB-MOSS owner's manual"

2.3-1: Drwbar

PRG 2.3:Ed-OSC		Organ 1:Drawbar 1 Wave			
Drawbar1	:Sine1	Drawbar2	:Sine1	Drawbar3	:Sine1
2 (8 th)	:+00	4 (4 th)	:+00	6 (2 2/3 rd)	:+00
Level:	99	Level:	99	Level:	99
AMS:Off		AMS:Off		AMS:Off	
Intensity:	+00	Intensity:	+00	Intensity:	+00
Drwbar [Perc.]		Drwbar [Perc.]		UTILITY	

TRITON-Rack	⇒ p.	EXB-MOSS
Drawbar1...3 Wave	p.23	1-3a: Tone Generator: Drawbar1: Wave
Drawbar1...3 Coarse	p.23	1-3a: Tone Generator: Drawbar1: Coarse (Harmonics Coarse)
Drawbar1...3 Fine	p.23	1-3a: Tone Generator: Drawbar1: Fine (Harmonics Coarse Fine)
Level	p.23	1-3a: Tone Generator: Drawbar1: Level
AMS	p.23	1-3a: Tone Generator: Drawbar1: AMS (Alternate Modulation Source)
Intensity	p.24	1-3a: Tone Generator: Drawbar1: Intensity (Level AMS Intensity)

2.3-2: Perc.

PRG 2.3:Ed-OSC		Organ 1:Drawbar 1 Perc.			
Drawbar1		Drawbar2		Drawbar3	
Percussion:	00	Percussion:	00	Percussion:	00
Percussion Generator					
	Level AMS:Off		Intensity:	+00	
	Trigger: Multi		Decay:	90	
Drwbar [Perc.]		Drwbar [Perc.]		UTILITY	

TRITON-Rack	⇒ p.	EXB-MOSS
Percussion	p.24	1-3a: Tone Generator: Drawbar1: Percussion
Level AMS	p.24	1-3b: Percussion Generator: Level AMS (Level Alternate Modulation Source)
Intensity	p.24	1-3b: Percussion Generator: Intensity (Level AMS Intensity)
Trigger	p.24	1-3b: Percussion Generator: Trigger
Decay	p.24	1-3b: Percussion Generator: Decay

E. Piano Model

⇒ p.24 "EXB-MOSS owner's manual"

2.3-1: E.Piano

PRG 2.3:Ed-OSC		E.Piano 1:Hammer Frece			
Hammer	Force: 50	Vel.Curve	:50	Width:50	Click:00
Tone Generator		Decay:	80	Release:	00
Overtone	Level: 00	Frequency:	00	Decay:	00
Pickup	Location:30	AMS:Off		Intensity:	+00
Low EQ		Frequency:	00	Gain[dB]:	+00
E.Piano		E.Piano		UTILITY	

TRITON-Rack	⇒ p.	EXB-MOSS
Force	p.24	1-3a: Hammer: Force
Vel. Curve	p.24	1-3a: Hammer: Force Velocity Curve
Width	p.24	1-3a: Hammer: Width (Hammer Width)
Click	p.24	1-3a: Hammer: Click Noise Level
Decay	p.25	1-3b: Tone Generator: Decay
Release	p.25	1-3b: Tone Generator: Release
Level	p.25	1-3c: Overtone: Level
Frequency	p.25	1-3c: Overtone: Frequency
Decay	p.25	1-3c: Overtone: Decay
Location	p.25	1-3d: Pickup: Location
AMS	p.25	1-3d: Pickup: AMS (Alternate Modulation Source)
Intensity	p.25	1-3d: Pickup: Intensity (Pickup Location AMS Intensity)
Frequency	p.25	1-3e: Low EQ: Frequency
Gain[dB]	p.25	1-3e: Low EQ: Gain

Brass Model

☞p.25 “EXB-MOSS owner’s manual”

2.3–1: Brass

PROG 2.3:Ed-OSC		Brass:Inst Type	
Inst Type: Brass 1	Jump Bend: <input checked="" type="checkbox"/> JS(+X) <input checked="" type="checkbox"/> JS(-X)		
Breath Pres.EG:EG 1	Int: +80	Strength:00	Noise:00
Pres.AMS 1:Off	Int: +00	2:off	Int: +00
Lip:80 AMS:Off	Int: +00	Bell Tone:50	Reso: 10
Peaking EQ	Frequency:00	Q:00	Gain[dB]: +00
Brass			UTILITY

TRITON-Rack	☞p.	EXB-MOSS
Inst Type	p.25	1–3a: Inst Type: Inst Type
Jump.Bend JS(+X)	p.26	1–3a: Jump Bend: JX(+X) (Joystick +X)
Jump.Bend JS(-X)	p.26	1–3a: Jump Bend: JX(-X) (Joystick -X)
Pres.EG	p.26	1–3b: Breath Pressure: EG
Int	p.26	1–3b: Breath Pressure: Intensity (Pressure EG Intensity)
Strength	p.26	1–3b: Breath Pressure: Strength
Noise	p.26	1–3b: Breath Pressure: Breath Noise
Pres.AMS1	p.26	1–3b: Breath Pressure: AMS1 (Alternate Modulation Source1)
Int	p.26	1–3b: Breath Pressure: Intensity (Pressure AMS1 Intensity)
2	p.26	1–3b: Breath Pressure: AMS2 (Alternate Modulation Source2)
Int	p.26	1–3b: Breath Pressure: Intensity (Pressure AMS2 Intensity)
Lip	p.26	1–3c: Lip Character: Lip
AMS	p.26	1–3c: Lip Character: AMS (Alternate Modulation Source)
Int	p.26	1–3c: Lip Character: Intensity (Lip Character AMS Intensity)
Tone	p.26	1–3d: Bell Character: Tone
Reso	p.26	1–3d: Bell Character: Resonance
Frequency	p.26	1–3e: Peaking EQ: Frequency
Q	p.26	1–3e: Peaking EQ: Q
Gain[dB]	p.26	1–3e: Peaking EQ: Gain

Reed Model

☞p.27 “EXB-MOSS owner’s manual”

2.3–1: Reed

PROG 2.3:Ed-OSC		Reed:Inst Type	
Inst Type:Hard Sax 1	Jump Bend: <input checked="" type="checkbox"/> JS(+X) <input checked="" type="checkbox"/> JS(-X)		
Breath Pres.EG:EG 1	Int: +70	Noise:00	
Pres.AMS 1:Off	Int: +00	2:off	Int: +00
Reed AMS:EG 2	Int: +70	Bell Tone:30	Reso: 10
Peaking EQ	Frequency:00	Q:00	Gain[dB]: +00
Reed WShape			UTILITY

TRITON-Rack	☞p.	EXB-MOSS
Inst Type	p.27	1–3a: Inst Type: Inst Type
Jump.Bend JS(+X)	p.27	1–3a: Jump Bend: JX(+X) (Joystick +X)
Jump.Bend JS(-X)	p.27	1–3a: Jump Bend: JX(-X) (Joystick -X)
Pres.EG	p.27	1–3b: Breath Pressure: EG
Int	p.27	1–3b: Breath Pressure: Intensity (Pressure EG Intensity)
Noise	p.27	1–3b: Breath Pressure: Breath Noise
Pres.AMS 1	p.27	1–3b: Breath Pressure: AMS1 (Alternate Modulation Source1)
Int	p.27	1–3b: Breath Pressure: Intensity (Pressure AMS1 Intensity)
2	p.27	1–3b: Breath Pressure: AMS2 (Alternate Modulation Source2)
Int	p.27	1–3b: Breath Pressure: Intensity (Pressure AMS2 Intensity)
AMS	p.28	1–3c: Reed Character: AMS (Alternate Modulation Source)
Int	p.28	1–3c: Reed Character: Intensity (Reed AMS Intensity)
Tone	p.28	1–3d: Bell Character: Tone
Reso	p.28	1–3d: Bell Character: Reso
Frequency	p.28	1–3f: Peaking EQ: Frequency
Q	p.28	1–3f: Peaking EQ: Q
Gain[dB]	p.28	1–3f: Peaking EQ: Gain

2.3–2: WShape

PROG 2.3:Ed-OSC		Reed:WShape Table	
Wave Shape			
Table Type: Clip		Offset: +00	
Shape: 00	AMS: Off	Intensity: +00	
Reed WShape			UTILITY

TRITON-Rack	☞p.	EXB-MOSS
Table Type	p.28	1–3e: Wave Shape: Type (Wave Shape Table Type)
Offset	p.28	1–3e: Wave Shape: Offset
Shape	p.28	1–3e: Wave Shape: Shape
AMS	p.28	1–3e: Wave Shape: AMS (Alternate Modulation Source)
Intensity	p.28	1–3e: Wave Shape: Intensity (Shape AMS Intensity)

Plucked String Model

⇒ p.29 "EXB-MOSS owner's manual"

2.3-1: String

PROG 2.3:Ed-OSC		Plucked Str: Picking Point	
String	Picking Point: 80	AMS: Off	Int: +00
	Damp: 40	KTr: +40	AMS: Off
	Decay: 80	KTr: +00	Release: 40
	Dispersion: 50	AMS: Off	Int: +00
String] [Attack]		UTILITY	

TRITON-Rack	⇒ p.	EXB-MOSS
Picking Point	p.29	1-3c: String: Picking Point
AMS	p.30	1-3c: String: AMS (Alternate Modulation Source)
Int	p.30	1-3c: String: Intensity (Picking Point AMS Intensity)
Damp	p.30	1-3c: String: Damp
KTr	p.30	1-3c: String: KTr (Damp Keyboard Track)
AMS	p.30	1-3c: String: AMS (Alternate Modulation Source)
Int	p.30	1-3c: String: Intensity (Damp AMS Intensity)
Decay	p.30	1-3c: String: Decay
KTr	p.30	1-3c: String: KTr (Decay Keyboard Track)
Release	p.30	1-3c: String: Release
Dispersion	p.30	1-3c: String: Dispersion
AMS	p.30	1-3c: String: AMS (Alternate Modulation Source)
Int	p.30	1-3c: String: Intensity (Dispersion AMS Intensity)

2.3-2: Attack

PROG 2.3:Ed-OSC		Plucked Str: Attack Level	
Attack	Level: 99	Vel.: +00	Noise: 30
Curve	Up: 30	Vel.: +00	Down: 30
Harmonics	Point: 64	Ctrl: Off	Int: +00
Pickup: On	Location: 10	AMS: Off	Int: +00
Low EQ	Frequency: 00	Gain[dB]: +00	Boost: 00
String] [Attack]		UTILITY	

TRITON-Rack	⇒ p.	EXB-MOSS
Level	p.29	1-3a: Attack: Attack Level
Vel.	p.29	1-3a: Attack: Velocity (Attack Level Velocity Control)
Noise	p.29	1-3a: Attack: Noise Level
Vel.	p.29	1-3a: Attack: Velocity (Noise Level Velocity Control)
Up	p.29	1-3b: Attack Curve: Up (Curve Up)
Vel.	p.29	1-3b: Attack Curve: Velocity (Curve Up Velocity Control)
Down	p.29	1-3b: Attack Curve: Down (Curve Down)
Vel.	p.29	1-3b: Attack Curve: Velocity (Curve Down Velocity Control)
Point	p.30	1-3d: Harmonics: Point
Ctrl	p.31	1-3d: Harmonics: Ctrl (Control)
Int	p.31	1-3d: Harmonics: Intensity (Harmonics Control Intensity)
Pickup	p.31	1-3e: Pickup: Pickup
Location	p.31	1-3e: Pickup: Location
AMS	p.31	1-3e: Pickup: AMS (Alternate Modulation Source)
Int	p.31	1-3e: Pickup: Intensity (Pickup Location AMS (Alternate Intensity))
Frequency	p.31	1-3f: Low EQ: Frequency
Gain[dB]	p.31	1-3f: Low EQ: Gain
Boost	p.31	1-3f: Low EQ: Low Boost

Bowed String Model

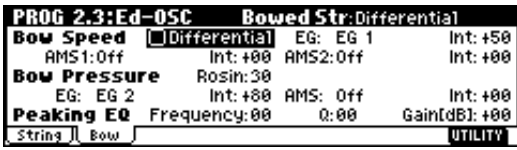
⇒ p.31 "EXB-MOSS owner's manual"

2.3-1: String

PROG 2.3:Ed-OSC		Bowed Str: Bowing Point	
String	Bowing Point: 80	AMS: Off	Int: +00
	Damp: 50	AMS: Off	Int: +00
	KTr Key: C4	Ramp Low: +00	High: +00
	Dispersion: 50	AMS: Off	Int: +00
	Bridge Reflection: 80	AMS: Off	Int: +00
String] [Bow]		UTILITY	

TRITON-Rack	⇒ p.	EXB-MOSS
Bowing Point	p.32	1-3c: String: Bowing Point
AMS	p.32	1-3c: String: AMS (Alternate Modulation Source)
Int	p.32	1-3c: String: Intensity (Bowing Point AMS Intensity)
Damp	p.32	1-3c: String: Damp
AMS	p.32	1-3c: String: AMS (Alternate Modulation Source)
Int	p.32	1-3c: String: Intensity (Damp AMS Intensity)
KTr Key	p.32	1-3c: String: Damp KTr Key (Damp Keyboard Track Key)
Ramp Low	p.32	1-3c: String: Ramp Low
Ramp High	p.33	1-3c: String: Ramp High
Dispersion	p.33	1-3c: String: Dispersion
AMS	p.33	1-3c: String: AMS (Alternate Modulation Source)
Int	p.33	1-3c: String: Intensity (Dispersion AMS Intensity)
Bridge Reflection	p.33	1-3c: String: Bridge Reflection
AMS	p.33	1-3c: String: AMS (Alternate Modulation Source)
Int	p.33	1-3c: String: Intensity (Bridge Reflection AMS Intensity)

2.3-2: Bow



TRITON-Rack	⊞p.	EXB-MOSS
Differential	p.32	1-3a: Bow Speed: Differential
EG	p.31	1-3a: Bow Speed: EG
Int	p.31	1-3a: Bow Speed: Int (Seed Modulation EG Intensity)
AMS1	p.31	1-3a: Bow Speed: AMS1 (Alternate Modulation Source 1)
Int	p.31	1-3a: Bow Speed: Intensity (Speed AMS1 Intensity)
AMS2	p.31	1-3a: Bow Speed: AMS2 (Alternate Modulation Source 2)
Int	p.32	1-3a: Bow Speed: Intensity (Speed AMS2 Intensity)
Rosin	p.32	1-3a: Bow Speed: Rosin
EG	p.32	1-3b: Bow Pressure: EG
Int	p.32	1-3b: Bow Pressure: Int (Pressure EG Intensity)
AMS	p.32	1-3b: Bow Pressure: AMS (Alternate Modulation Source)
Int	p.32	1-3b: Bow Pressure: Int (Pressure AMS Intensity)
Frequency	p.33	1-3d: Peaking EQ: Frequency
Q	p.33	1-3d: Peaking EQ: Q
Gain[dB]	p.33	1-3d: Peaking EQ: Gain

PROG 3.1: Ed -Pitch

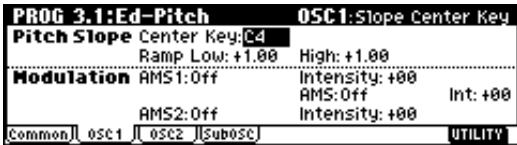
⊞p.36 "EXB-MOSS owner's manual"

3.1-1: Common



TRITON-Rack	⊞p.	EXB-MOSS
JS(+X)	p.37	2-4a: Pitch Bend: JS(+X) (Joystick Intensity +X)
Step	p.37	2-4a: Pitch Bend: Step (Joystick Step +X)
JS(-X)	p.37	2-4a: Pitch Bend: JS(-X) (Joystick Intensity -X)
Step	p.37	2-4a: Pitch Bend: Step (Joystick Step -X)
AMS	p.37	2-4b: Common Pitch Modulation: AMS (Alternate Modulation Source)
Intensity	p.37	2-4b: Common Pitch Modulation: Intensity (Common Pitch AMS Intensity)
.....		
Enable	p.37	2-4c: Portamento: Enable
Fingered	p.37	2-4c: Portamento: Fingered
Time	p.37	2-4c: Portamento: Time
AMS	p.37	2-4c: Portamento: AMS (Alternate Modulation Source)
Intensity	p.37	2-4c: Portamento: Intensity (Portamento Time AMS Intensity)

3.1-2...4: OSC1...SubOSC

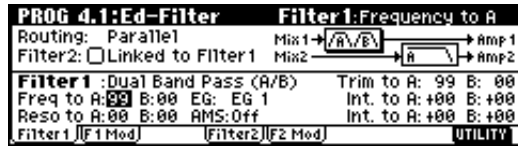


TRITON-Rack	⊞p.	EXB-MOSS
Center Key	p.36	2-1a: Pitch Slope: Center Key
Ramp Low	p.36	2-1a: Pitch Slope: Ramp Low
Ramp High	p.36	2-1a: Pitch Slope: Ramp High
.....		
AMS1	p.36	2-1b: Pitch Modulation: AMS1 (Alternate Modulation Source 1)
Intensity	p.36	2-1b: Pitch Modulation: Intensity (Pitch AMS1 Intensity)
AMS	p.36	2-1b: Pitch Modulation: AMS (AMS1 Intensity Alternate Modulation Source)
Int	p.36	2-1b: Pitch Modulation: Intensity (AMS1 Int AMS Intensity)
AMS2	p.36	2-1b: Pitch Modulation: AMS2 (Alternate Modulation Source 2)
Intensity	p.36	2-1b: Pitch Modulation: Intensity (Pitch AMS2 Intensity)

PROG 4.1: Ed-Filter

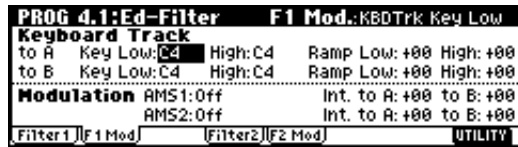
☞p.38 "EXB-MOSS owner's manual"

4.1-1: Filter1/4.1-3: Filter2



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.....		
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Freq to A	p.38	3-1c: Filter A: Frequency (Cutoff Frequency)
Freq to B	p.38	3-1c: Filter A: Frequency (Cutoff Frequency)
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Reso to A	p.39	3-1c: Filter A: Resonance
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AMS	p.39	3-1c: Filter A: AMS (Alternate Modulation Source)
Int. to A	p.39	3-1c: Filter A: Intensity (Resonance AMS Intensity)
Int. to B	p.39	3-1c: Filter A: Intensity (Resonance AMS Intensity)

4.1-2: F1 Mod/4.1-4: F2 Mod

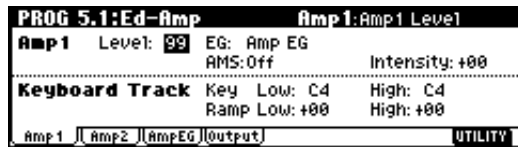


TRITON-Rack	☞p.	EXB-MOSS
to A Key Low	p.39	3-2a: Filter A/B Keyboard Track: Filter A: Key Low
to A Key High	p.39	3-2a: Filter A/B Keyboard Track: Filter A: Key High
to A Ramp Low	p.39	3-2a: Filter A/B Keyboard Track: Filter A: Ramp Low
to A Ramp High	p.39	3-2a: Filter A/B Keyboard Track: Filter A: Ramp High
to B Key Low	p.39	3-2a: Filter A/B Keyboard Track: Filter A: Key Low
to B Key High	p.39	3-2a: Filter A/B Keyboard Track: Filter A: Key High
to B Ramp Low	p.39	3-2a: Filter A/B Keyboard Track: Filter A: Ramp Low
to B Ramp High	p.39	3-2a: Filter A/B Keyboard Track: Filter A: Ramp High
.....		
AMS1	p.40	3-2b: Filter A/B Modulation: Filter A: AMS1 (Alternate Modulation Source 1)
Int. to A	p.40	3-2b: Filter A/B Modulation: Filter A: Intensity (Cutoff Frequency AMS1 Intensity)
to B	p.40	3-2b: Filter A/B Modulation: Filter A: Intensity (Cutoff Frequency AMS1 Intensity)
AMS2	p.40	3-2b: Filter A/B Modulation: Filter A: AMS2 (Alternate Modulation Source 2)
Int. to A	p.40	3-2b: Filter A/B Modulation: Filter A: Intensity
to B	p.40	3-2b: Filter A/B Modulation: Filter A: Intensity (Cutoff Frequency AMS2 Intensity)

PROG 5.1: Ed-Amp

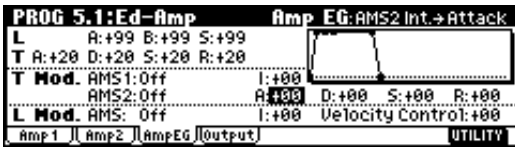
☞p.40 "EXB-MOSS owner's manual"

5.1-1: Amp1/5.1-2: Amp2



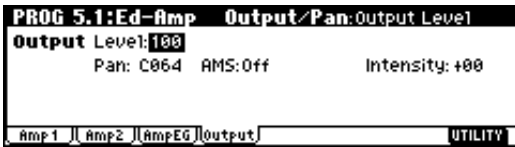
TRITON-Rack	☞p.	EXB-MOSS
Level	p.40	4-1a: Amp Level: Amp Level
EG	p.40	4-1a: Amp Level: EG (Amplitude Modulation EG)
AMS	p.40	4-1a: Amp Level: AMS (Alternate Modulation Source)
Intensity	p.40	4-1a: Amp Level: Intensity (Amplitude AMS Intensity)
.....		
Key Low	p.40	4-1b: Keyboard Track: Key Low
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Ramp Low	p.41	4-1b: Keyboard Track: Ramp Low
Ramp High	p.41	4-1b: Keyboard Track: Ramp High

5.1-3: AmpEG



TRITON-Rack	⇨p.	EXB-MOSS
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A (Attack Time)	p.41	4-3b: Time: Attack (Attack Time)
D (Decay Time)	p.41	4-3b: Time: Decay (Decay Time)
S (Slope Time)	p.41	4-3b: Time: Slope (Slope Time)
R (Release Time)	p.41	4-3b: Time: Release (Release Time)
.....		
AMS1	p.42	4-3d: Time Modulation: AMS1 (Alternate Modulation Source 1)
I (Intensity)	p.42	4-3d: Time Modulation: Intensity (EG Time AMS1 Intensity)
AMS2	p.42	4-3d: Time Modulation: AMS2 (Alternate Modulation Source 2)
A	p.42	4-3d: Time Modulation: At (Attack Time AMS2 Intensity)
D	p.42	4-3d: Time Modulation: Dc (Decay Time AMS2 Intensity)
S	p.42	4-3d: Time Modulation: Sl (Slope Time AMS2 Intensity)
R	p.42	4-3d: Time Modulation: Rl (Release Time AMS2 Intensity)
.....		
AMS	p.41	4-3c: Level Modulation: AMS (Alternate Modulation Source)
I (Intensity)	p.41	4-3c: Level Modulation: Intensity (EG Level AMS Intensity)
Velocity Control	p.42	4-3c: Level Modulation: Velocity Control

5.1-4: Output (Output/Pan)

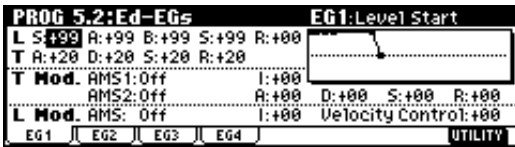


TRITON-Rack	⇨p.	EXB-MOSS
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Pan	p.42	4-4b: Pan: Pan
AMS	p.42	4-4b: Pan: AMS (Alternate Modulation Source)
Intensity	p.42	4-4b: Pan: Intensity (Panpot AMS Intensity)

PROG 5.2: Ed-EGs

⇨p.45 "EXB-MOSS owner's manual"

5.2-1...4: EG1...EG4

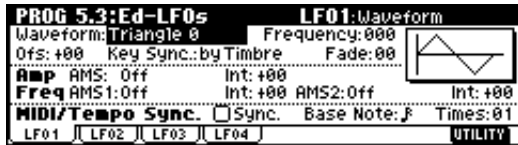


TRITON-Rack	⇨p.	EXB-MOSS
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B (Break Level)	p.45	6-1a: Level: Break (Break Level)
S (Sustain Level)	p.45	6-1a: Level: Sustain (Sustain Level)
R (Release Level)	p.45	6-1a: Level: Release (Release Level)
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S (Slope Time)	p.45	6-1b: Time: Slope (Slope Time)
R (Release Time)	p.45	6-1b: Time: Release (Release Time)
.....		
AMS1	p.45	6-1d: Time Modulation: AMS1 (Alternate Modulation Source 1)
I (Intensity)	p.45	6-1d: Time Modulation: Intensity (EG Time AMS1 Intensity)
AMS2	p.46	6-1d: Time Modulation: AMS2 (Alternate Modulation Source 2)
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D	p.46	6-1d: Time Modulation: Dc (Decay Time AMS2 Intensity)
S	p.46	6-1d: Time Modulation: Sl (Slope Time AMS2 Intensity)
R	p.46	6-1d: Time Modulation: Rl (Release Time AMS2 Intensity)
.....		
AMS	p.45	6-1c: Level Modulation: AMS (Alternate Modulation Source)
I (Intensity)	p.45	6-1c: Level Modulation: Intensity (EG Level AMS Intensity)
Velocity Control	p.45	6-1c: Level Modulation: Velocity Control

PROG 5.3: Ed-LFOs

☞ p.43 "EXB-MOSS owner's manual"

5.3-1...4: LFO1...LFO4



TRITON-Rack	☞ p.	EXB-MOSS
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Frequency	p.43	5-1a: LFO1: Frequency
Ofs	p.43	5-1a: LFO1: Offset
Key Sync	p.43	5-1a: LFO1: Key Sync
Fade	p.44	5-1a: LFO1: Fade
.....		
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Int	p.43	5-1a: LFO1: Intensity (Amplitude AMS Intensity)
AMS1	p.44	5-1b: Frequency Modulation: AMS1 (Alternate Modulation Source 1)
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AMS2	p.44	5-1b: Frequency Modulation: AMS2 (Alternate Modulation Source 2)
Int	p.44	5-b: Frequency Modulation: Intensity (Frequency AMS2 Intensity)
.....		
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		☞ GLOBAL 2.1-1a: MIDI, "MIDI Clock" (PG p.111)

PROG 6.1: Ed-Arp.

This is the same parameter as for programs of banks other than I-F.

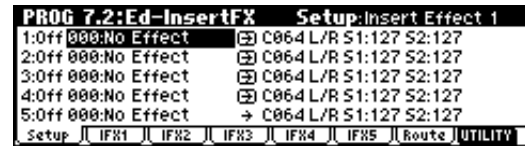
☞ PG p.24 PROG 6.1: Ed-Arp.



PROG 7.2: Ed-InsertFX

This is the same parameter as for programs of banks other than I-F.

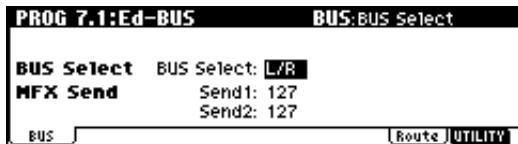
☞ PG p.28 PROG 7.2: Ed-InsertFX



PROG 7.1: Ed-BUS

This is the same parameter as for programs of banks other than I-F.

☞ PG p.26 PROG 7.1: Ed-BUS



PROG 7.3: Ed-MasterFX

This is the same parameter as for programs of banks other than I-F.

☞ PG p.29 PROG 7.3: Ed-MasterFX

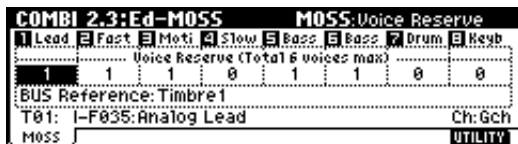


Combination Mode

COMBI 2.3: Ed-MOSS

2.3-1: MOSS

☞ p.254 "Editing a combination"



TRITON-Rack	☞ p.	EXB-MOSS
Voice Reserve	p.47	4-3: MOSS Setup: Voice Allocation Reserve (Total Max:6voices)
BUS Select Reference	p.47	4-3: MOSS Setup: MOSS BUS Select Reference

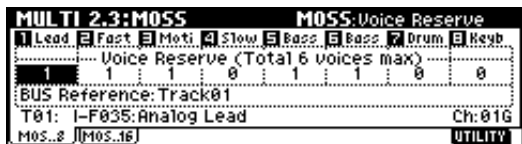
Multi Mode

MULTI 2.3: MOSS

2.3-1: MOSS

☞ p.254 “Editing a combination”

☞ p.255 “Multi mode”



Modulation Source List

Off

EG 1...EG 4

Amp EG

LFO 1...LFO 4

Portamento

Note# Line

Note# EXP.

Note/High

Note/Low

Vel. Sort

Vel. Med.

Vel.Hard

AfterT

JS X

JS+Y #01

JS-Y #02

JS+Y&AT/2*

JS-Y&AT/2*

Pedal #04

Ribbon #16

Rbn#16 +X

Rbn#16 -X

Slider #18

KnobM1#17

KnobM2#19

KnobM3#20

KnobM4#21

KnobM1 [+]

KnobM2 [+]

KnobM3 [+]

KnobM4 [+]

Damper #64

SW 1 #80

SW 2 #81

FootSW#82

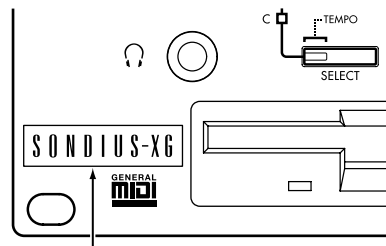
MIDI CC#83

* AT/2 is an aftertouch effect that is one half of After Touch.

Cautions when using bank I-F

☞ “EXB-MOSS owner’s manual” p.48 “Cautions when using bank F”

Affix the Sondius-XG label



Affix the label in this location.

EXB-MOSS Parameter Index

EXB-MOSS TRITON-Rack Parameters

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EXB-DI option

The separately sold EXB-DI option provides an ADAT™ Compatible Optical Output which digitally outputs the audio signal from the TRITON-Rack, and also allows the digital signal to be synchronized with another digital audio device.

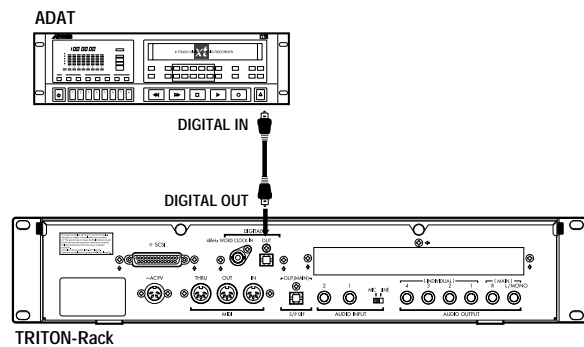
For an explanation of the DIGITAL OUT connector and WORD CLOCK IN connector, refer to BG p.8.

In this owner's manual, "ADAT" is used as a general designation for ADAT compatible multi-track recorders such as the Alesis ADAT.

Example connections

Digitally recording the sound of the TRITON-Rack to an ADAT

- 1 Use an ADAT-Optical cable (sold separately) to connect the TRITON-Rack's Digital OUT connector to the ADAT's Digital INPUT.
For connections, use an ADAT-Optical cable manufactured by Alesis Corporation or an optical cable for CD/DAT (both sold separately).
- 2 Set the TRITON-Rack's "System Clock GLOBAL 1.1-2a" to **Internal**.
- 3 Set the word clock source of the ADAT to "DIG 48 K." For details refer to the manual for the connected ADAT.



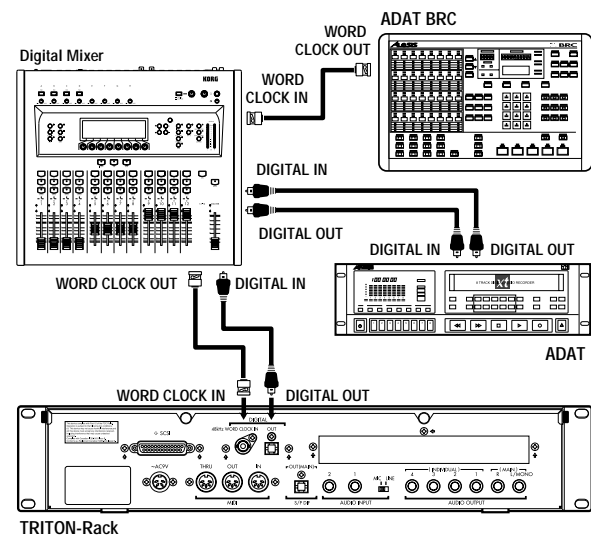
Digitally recording the sound of the TRITON-Rack that has been mixed on a digital mixer to the ADAT

- 1 Use an ADAT-OPTICAL cable to connect the TRITON-Rack's DIGITAL OUT connector to the ADAT OPTICAL IN connector of the ADAT Optical format-compatible mixer.
- 2 Use ADAT-OPTICAL cables to connect the respective IN and OUT connectors of the ADAT Optical format-compatible mixer and the ADAT.
- 3 Make connections as shown in the following diagram so that an Alesis BRC Remote Controller or other ADAT optical format compatible mixer or remote controller can be used as the master for digital signal synchronization, and connect the WORD CLOCK OUT connector of the mixer to the WORD CLOCK IN connector of the TRITON-Rack.
For connections, use a BNC Coax cable made by Alesis Corporation or a BNC cable made for video (both sold separately).
- 4 Set the TRITON-Rack's "System Clock" to **Word Clock**. The digital audio signal that is output from the DIGITAL OUT connector is output in synchronization with the clock signal received at the WORD CLOCK IN jack, allowing the digital signals of the two devices to be synchronized.

note If you wish to store the "System Clock" setting, use the "Write Global Setting" utility to write it.

- 5 Set the word clock source of the ADAT to "DIG 48 K." For details refer to the manual for the connected ADAT.

! If the clock cannot be detected correctly due to a disconnected BNC cable or for some other reason, a error message "Word Clock Error!" will appear in the LCD. If this occurs, check whether a problem has occurred with the BNC cable.
If "System Clock" has been written as **Word Clock**, the same error message will be displayed when the TRITON-Rack is powered-on if the correct clock is not being input.



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NOTICE

KORG products are manufactured under strict specifications and voltages required by each country. These products are warranted by the KORG distributor only in each country. Any KORG product not sold with a warranty card or carrying a serial number disqualifies the product sold from the manufacturer's/distributor's warranty and liability. This requirement is for your own protection and safety.

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