

**KORG Collection**



**TRITON Extreme**

**Owner's Manual**

E1

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# Introduction

Thank you for purchasing the KORG Collection - TRITON Extreme software synthesizer. To help you get the most out of your new instrument, please read this manual carefully.

## Main Features

This is a software synthesizer that revives and recreates the TRITON Extreme, KORG's music workstation released in 2004. This softsynth even replicates the tonal characteristics and distortion offered by the instrument's unique VALVE FORCE vacuum tube sounds.

### **Powerful sounds using a vacuum tube circuit**

The original TRITON Extreme was the definitive final version of the TRITON Series, featuring more new sounds as well as a massive armada of sounds that were carefully handpicked from the EXB-PCM. This music workstation and sampler also featured a "VALVE FORCE" vacuum tube circuit for a powerful sound that only analog circuitry could realize. This software synthesizer has a powerful sound engine with nearly 4,000 built-in sounds. Aside from VALVE FORCE, this softsynth also offers "DAC SETTINGS" functionality. This functionality brings you closer to the unique textures and sounds of all the TRITON hardware that were released over the years.

### **A user interface designed with ease of use in mind**

The TRITON Extreme Software synthesizer uses a specialized interface that matches its role as a plug-in instrument. The sound browser in this software synthesizer was designed so that you can instantly find and choose the sounds you want, by tonal color or name.

The EASY page features carefully-selected parameters that are essential for creating sounds. This provides the optimal workflow for finding the kind of sound you want in the sound browser and then adjusting it.

### **Programs can be edited in each mode**

Programs can be edited in Combination mode as well on the TRITON Extreme Software synthesizer. With the original TRITON, the user had to switch to Program mode to edit the parameters of a program, since the numbers of the programs being used were stored inside the Combination data as references. On the TRITON Extreme Software synthesizer, the program data is loaded into the edit buffer for each mode, so even if you edit a program in Combination mode, this has no effect on the source program outside of Combination mode.

# How the TRITON Extreme software synthesizer is Structured

## PROG (Program) mode

This mode is used for playing and editing a single program.

You can select from new sounds as well as from the sounds that were carefully handpicked from the EXB-PCM Series, for a total of 11 factory banks and 10 preset GM banks.

A program consists of five IFX (insert effects), two MFX (master effects), a master EQ and an arpeggiator.

There are three oscillator modes ([OSC MODE](#)) for each program.

### SINGLE

Uses a single oscillator. This consists of an OSC, FILTER, AMP and two LFOs.

### DOUBLE

Uses two oscillators. Each oscillator features an OSC, FILTER, AMP and two LFOs, for more complex sounds.

### DRUMS

Like when "SINGLE" is selected, the program will use a single oscillator, but a drum kit is allocated to the program instead of a multisample. This consists of an OSC, FILTER, AMP and two LFOs.

## COMBI (Combination) mode

With this mode, you can combine up to eight timbres to create a single sound.

Use this mode to layer multiple tones for a fat sound; or create a split sound that lets you play different sounds together, such as a drum kit and bass part along with a lead.

You can select from new sounds as well as from the sounds that were rigorously selected from the EXB-PCM Series, for a total of 10 preset banks.

Combinations consist of five IFX (insert effects), two MFX (master effects), a master EQ and two arpeggiators.

# Part Names and functions



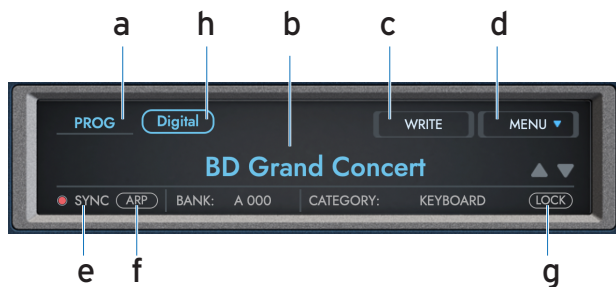
# Header

## 1. VALVE FORCE

Turns VALVE FORCE on/off. The settings for VALVE FORCE are on the V.FORCE page in COMBI, PROG.

## 2. Display

Shows information such as the current mode, the combinations that are installed and program names, instrument categories etc..



### a. Mode Name

Shows the current mode.

### b. Sound Name

Displays the names of the combinations and programs that are loaded.

Click the names to show the browser screen.

Use the ▼▲ buttons to switch to the programs and combinations that are previous or next in the list.

### c. WRITE

Saves the sound you are currently playing to the user bank.

### d. MENU

Displays a menu to access the various software settings and information. These settings let you change the screen size, as well as display the version information or display the Owner's Manual.

### e. Tempo

Displays the tempo of the arpeggiator etc.. Drag the value up or down to change the tempo settings. When “[SYNC TO HOST](#)” in [GLOBAL mode](#) is on, “SYNC” will be displayed.

### f. ARP

Switches the arpeggiator on/off.

### g. LOCK

Turning LOCK on and then changing the program or combination using the ▼▲ buttons will select only sounds belonging to the currently selected category.

### h. DAC SETTINGS

Each series of TRITON hardware had their own unique sounds. To bring you closer to those sounds, we've added a DAC (digital/analog converter) model to this softsynth. This will help you achieve the unique textures that the hardware offered at that time.

**Digital:** a natural mode that is equivalent to the digital output without passing through the DAC.

**Classic:** a mode that recreates the sonic texture of the DAC that was used in the original TRITON.

**Studio:** a mode that recreates the sonic texture of the DAC that was used in the TRITON Studio.

### 3. Mode Select switch

Selects the mode.

**BROWSER:** Displays a browser screen for selecting a combination or program.

**COMBI:** Enters [COMBI Mode](#).

**PROG:** Enters [PROG Mode](#).

**GLOBAL:** Enters [GLOBAL mode](#), where general software-related settings can be made such as master tune.

### 4. Assignable knobs

Adjusts the parameters assigned in a program or combination sound.

## Edit section

### 5. Page select tab

Switches between edit pages that are selected in Combination or Program modes.

The parameters for the selected pages are shown in the edit area.

### 6. Edit area

Here you can edit the parameters that are shown in each edit page. Drag or tap each controller to select it, and then edit its parameter.

### 7. Controllers

These are the on-screen controllers used when playing (keyboard, joystick, switches). When operating these controllers from an external MIDI device, it is convenient to set the MIDI control numbers in Global mode.



# Basic operations

Use the mouse to edit the values of various controllers and parameters.

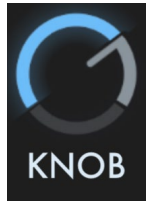
## Keyboard

- Click on the keyboard to play notes.

## Joystick

- Drag the joystick up, down, left and right to control it.

## Knob



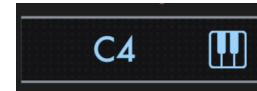
- Drag the knob to adjust its value.
- If you hold down the ALT (mac: Option) key while clicking, the parameter returns to its default value.

## Value slider



- Drag the value of the slider up and down to adjust a value.
- Double-click the value to input manually using a keyboard.
- If you hold down the ALT (mac: Option) key while clicking, the parameter returns to its default value.

## Value slider (keyboard icon)



- Change a value using this slider, in the same way as with the value slider.
- Press the keyboard icon to switch to MIDI input reception mode. This lets you directly adjust the value via MIDI notes.
- If you hold down the ALT (mac: Option) key while clicking, the parameter returns to its default value.

## Combo box



- Click on the combo box to select a value from the pop-up menu that appears.

## Sample selector



- This shows the name of the sample currently in use. Click here to show the sample browser and select a sample.

## Checkbox



- Click a checkbox to toggle the setting ON or OFF.

## Toggle buttons



- Click to toggle the setting ON or OFF.

## Menu button



- Click to select a command from the pop-up menu that appears.

## Graphical filter



- Drag a point to adjust its value (cutoff or resonance).

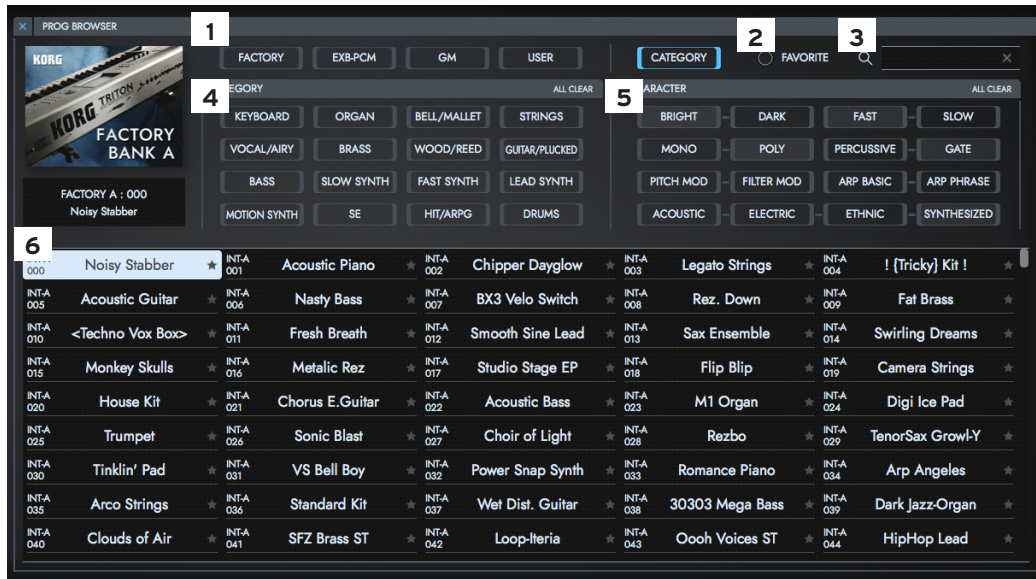
## Graphical envelope



- Drag each point to adjust its value (level or time).

# Browser functions

The TRITON Extreme Software synthesizer features a browser search function that lets you quickly find and choose the sounds you want out of the wide range of options, filtering by category and sound character.



## 1. BANK/CATEGORY button

Selects the method used to search for sounds.

**BANK:** Searches the FACTORY, EXB-PCM, GM and USER sound banks.

**CATEGORY:** Searches by instrument categories and sound character.

## 2. FAVORITE

You can register sounds you frequently use as favorites by selecting the star button next to each sound name in the sound list. Also, you can turn on FILTER FAVORITE to do a quick search.

### 3. SEARCH

Use your computer keyboard to input and search for a sound name.

### 4. BANK

Switch the BANK/CATEGORY button to BANK (FACTORY, EXB-PCM, GM, USER) in order to search by bank.

Switch the BANK/CATEGORY button to CATEGORY in order to search by an instrument type (category).

### 5. CHARACTER

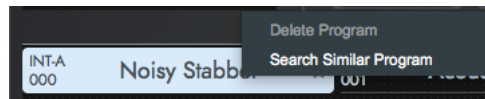
Select the instrument's character to drill down even further to find the sound you want.

### 6. Sound list

Displays the combination or program you select. Double-tap on the name displayed to apply the sound and close the browser.

When you click on a sound on the list to select it and a note-on is generated using the on-screen keyboard or an external MIDI device, the sound selected on the browser and the timbre (track) set for the same MIDI channel as the currently selected timbre (track) will sound. When the [SOLO](#) button is ON, only the sounds selected in the list can be heard.

### Browser Menu



Right-click a sound from the list in the browser and choose one of the following commands.

#### Delete Prog/Combi

Initializes the sound. This command can only be applied to the sounds in the user banks.

#### Search Similar Prog/Combi

Filters the list with the selected sound's category and characters.

# Quick Start

## Playing the synthesizer

Use the on-screen keyboard or an external MIDI keyboard to play sounds with the TRITON Extreme Software synthesizer.

1. Enter PROG mode by selecting PROG with the MODE SELECT switch.



2. Press BROWSER to open the browser screen.



3. Select the desired sound from the list, and tap "OK."  
Try playing around with the various sounds.

## Edit the Tone of the Synthesizer

Now, let's try editing sounds on the TRITON Extreme Software synthesizer.

1. Select sound #008, "Rez. Down" from the "FACTORYBANK J" bank on the browser, and tap "OK."
2. Tap the EASY button from the page select tab at the top of the screen.

The synth edit screen will be displayed. The main parameters necessary for editing are found on the EASY page.



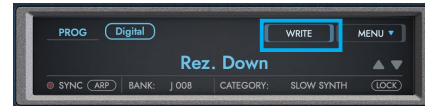
- Use the on-screen knobs and buttons to edit sounds.  
Try dragging the points on the graphical filter to move them as you like. By doing this, you'll hear how the sound changes in brightness.



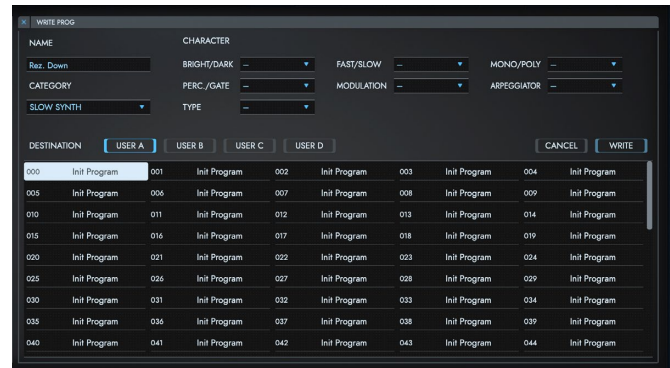
## Saving a sound

Save the sounds you create, so that you can recall them anytime.

- Press the WRITE button on the header display.



- Edit the name you will give to your sound in the dialog shown.



- Change the category and character of the sound as appropriate.
- In the "DESTINATION," select the bank and slot where the sound will be saved.
- Press the WRITE button.

# Parameters for each page

This explains the parameters used on the TRITON Extreme Software synthesizer. For details on the parameters, refer to the “TRITON Extreme Parameter Guide.” References to the “TRITON Extreme Parameter Guide” are marked as “PG [number]”. Download the PDF data from the Korg website.

## PROG Mode

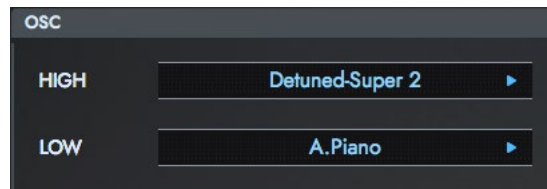
### EASY

This page is for editing the main parameters of a program. Click the EASY button to show this page.

The parameters that are not shown on this page can be configured using the pages from OSC to ARP.

### OSC

(→ page 20 “OSC”)



Sets the multisample (when [OSC MODE](#) is set to SINGLE or DOUBLE mode) or the drum kit (when [OSC MODE](#) is set to DRUMS) to assign to the HIGH, LOW or DRUM KIT oscillator.





## PITCH

(→ page 22 “OSC1, OSC2”)(→ page 23 “PITCH”)



### TRANSPOSE

Adjusts the pitch in semitones, over a range of one octave up or down.

### EG INT

Sets the depth and direction of the pitch modulation produced by the pitch EG, which is set on the [Pitch EG](#) page.

When this is set to “12.00,” the pitch will change up to a  $\pm 1$  octave range.

### PORTAMENTO

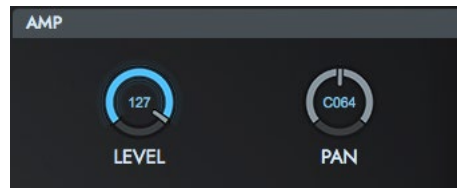
Portamento is a smooth change in pitch from one note to another. These parameters turn the portamento effect on/off, and specify how the effect is applied.

### BEND RANGE

Specifies how much the pitch will change (in semitones) when the pitch bend or joystick is used. A value of “12” is equal to one octave. You can set the amount of change for the pitch up and down respectively.

## AMP

(→ page 33 “AMP”)



### LEVEL

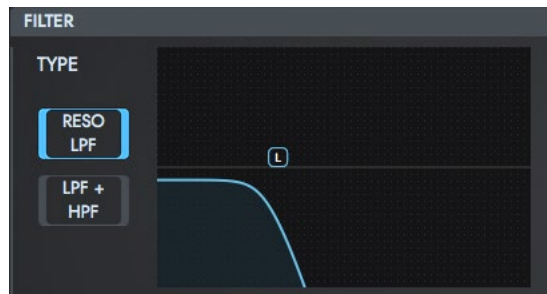
Sets the volume of the oscillators.

### PAN

Sets the pan (where the sound is located in the stereo field) of the oscillators.

## FILTER

(→ page 28 “FILTER”)



### TYPE

Selects the filter type.

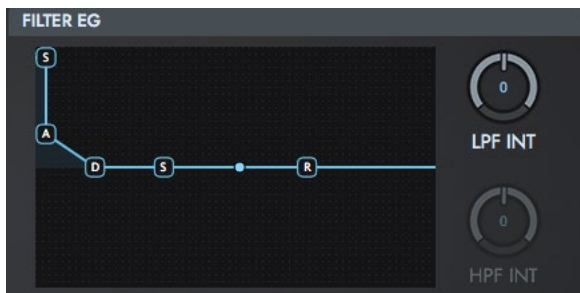
**RESO LPF** (Low Pass Resonance): This is a 24 dB/oct. low-pass filter with resonance.

**LPF + HPF** (Low Pass & High Pass): This connects a 12 db/oct. low-pass filter and 12 db/oct. high-pass filter in a series.

Adjusts the resonance of the filter using a graphical filter.

## FILTER EG

(→ page 28 "FILTER")



This sets the EG, which makes time-based changes to the cutoff frequency of the filter. The depth of the effect applied to the cutoff frequency of filter 1 with these settings is set using LPF INT/HPF INT, as explained next.

### LPF INT

Adjusts the depth and direction of the EG's effect on the low-pass filter.

### HPF INT

Adjusts the depth and direction of the EG's effect on the high-pass filter.

## AMP EG

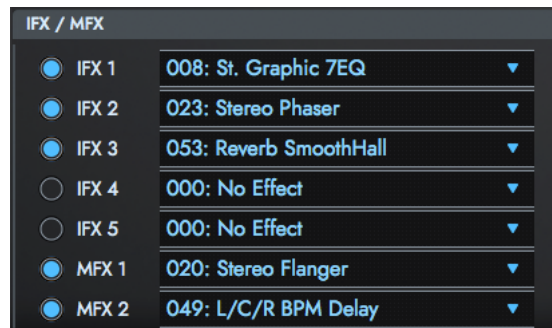
(→ page 33 "AMP")



This sets the amp EG, which makes time-based changes to the oscillator volume.

## IFX/MFX

(→ page 42 "IFX")



Turns the five IFX and the two MFX on/off, and sets the effect algorithms for the insert effects.

## MASTER EQ

(→ page 44 “MASTER EQ”)



The master EQ is a three-band stereo equalizer. This EQ comes just before the final output line, and is used to equalizing (changing the tonal character) of the overall sound.

### LOW

Sets the cutoff frequency and gain of the Low EQ (shelving type).

### MID

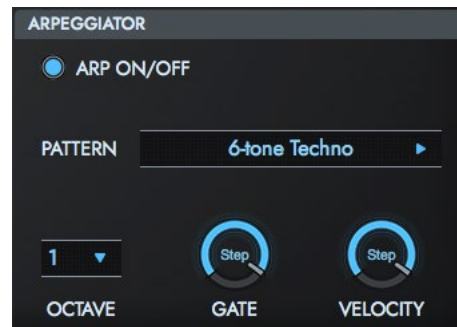
Sets the cutoff frequency, the bandwidth (Q) and gain of the Mid EQ (peaking type).

### HIGH

Sets the cutoff frequency and gain of the High EQ (shelving type).

## ARPEGGIATOR

(→ page 45 “ARP”)



Configures the settings for the arpeggiator used a program.

# OSC

Here you can adjust basic program settings, such as oscillator mode and scale type.

→ PG [Program P1: Edit-Basic]



## OSC MODE

Specifies the Program's oscillator assignment; whether it will use one or two oscillators, or a drum kit.

**SINGLE:** The program will use one oscillator (OSC1, OSC1 FILTER, OSC1 AMP, OSC1 LFO).

**DOUBLE:** The program will use two oscillators (OSC1/2, OSC1/2 FILTER, OSC1/2 AMP, OSC1/2 LFO). This lets you create more complex sounds.

**DRUMS:** The program will use one oscillator (as when SINGLE is selected), but OSC1 will be assigned a drum kit instead of a multisample.

## PROG BASIC

### MODE

**POLY:** The program will play polyphonically, allowing you to play chords.

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

### PRIORITY

This parameter is valid when "[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.

### LEGATO

This parameter is valid when "[MODE](#)" 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.

When legato is on, multiple note-on message will not retrigger the voice.

If one note is already on and another note is turned on, 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.

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

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.

**note** When the "[LEGATO](#)" radio button is selected, the correct pitch may not sound due to the multisample or the position on the keyboard.

## SINGLE TRIG

This parameter is valid when "[MODE](#)" 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.

## HOLD

**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. This is ideal for playing drum programs, and when you set "[OSC MODE](#)" to DRUMS, you should turn On.

**note** Unless the [AMP EG](#) "[Sustain Level \(S\)](#)" is set to 0, the sound will continue playing.

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

## SCALE

### TYPE

Selects 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 Scale:** This is the full-range scale (C-1-G9) that was specified in "[USER ALL NOTES SCALE](#)".

**User Octave Scale 00-15:** These are the single-octave scales that were specified in "[USER OCTAVE SCALE](#)".

### KEY

Selects the tonic note of the specified scale.

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

### RANDOM

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 tapemechanism organs or acoustic instruments.

**note** 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](#)” to correct the pitch.

## VELOCITY ZONE

Here you can specify the velocity range at which each oscillator will sound.

The “[VELOCITY SWITCH HIGH/LOW](#)” setting in conjunction with these “VELOCITY ZONE” settings will determine the velocity ranges in which the High and Low multisample or drum kit will sound.

### OSC1

Sets the minimum and maximum values for velocity within which oscillator 1 will sound.

### OSC2

Sets the minimum and maximum values for velocity within which oscillator 2 will sound.

## OSC1, OSC2

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.

There are around 1,400 preset multisamples and 79 drum kits that can be used.

**note** OSC2 Multisample cannot be set when “[OSC MODE](#)” is set to SINGLE.

### OCTAVE

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

## TRANSCOPE

Adjusts the pitch in semitone steps over a range of  $\pm 1$  octave.

## TUNE

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

## DELAY[ms]

**0-5000 ms:** Specifies a delay time from note-on until the note will sound.

**KEY OFF:** The note will sound when the key is released (note off). This is used for harpsichords and similar sounds. When using “KEY OFF,” set the “[Sustain Level \(S\)](#)” of [AMP EG](#) to “0”.

## HIGH, LOW

Each oscillator can have two multisamples (HIGH and LOW). Select the HIGH multisample from the sample categories and names. The multisample selected here will sound with a velocity value that is equal to or greater than the value set in “[VELOCITY SWITCH HIGH/LOW](#)”. If you cannot switch sounds due to the velocity value, set “[VELOCITY SWITCH HIGH/LOW](#)” to 1 and set only the HIGH multisample.

## REVERSE

The multisample will be played in reverse. This plays back preset multisamples that have been set to loop, in reverse at once. Multisamples that are already set to Reverse will simply play back that way.

**On** (checked): The multisample will playback in reverse.

**Off** (unchecked): The multisample will playback normally.

## START OFFSET

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.

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

## LEVEL

Specifies the level of the multisample.

**note** 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.

## VELOCITY SWITCH HIGH/LOW

The [HIGH](#) and [LOW](#) multisamples selected for oscillator 1 in "[OSC1](#), [OSC2](#)" will be switched at the velocity value that you specify here.

Notes played with a velocity stronger than this value will be sounded by the HIGH multisample.

# PITCH

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

→ PG [Program P2: Edit-Pitch]



## PITCH EG

This sets the temporal changes to the pitch EG of oscillators 1 and 2. The depth of pitch changes applied to the EG of oscillators 1 and 2 (which are set here) is adjusted using the "Pitch EG."

### Pitch EG

Sets the changes in pitch over time.

The EG parameters are configured using the graphical editor.

### Start Level (S)

Specifies the amount of pitch change at note-on.

### Attack Level (A)

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

## Attack Time (A)

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

## Decay Time (D)

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

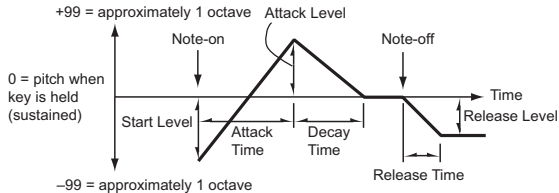
## Release Level (R)

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

## Release Time (R)

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)



## OSC1 EG INT

Specifies the depth and direction of the pitch modulation specified in [Pitch EG](#) will apply to the pitch.

With a setting of 12.00, the pitch will change a maximum of  $\pm 1$  octave.

## OSC2 EG INT

Sets the depth and direction of the pitch modulation for OSC2.

## OSC1 PITCH

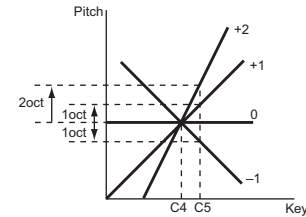
### PITCH

#### SLOPE

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 key you play.



## RIBBON

Specifies in semitone units how greatly the pitch will be changed when you press the ribbon controller.

With a value of 12, the pitch can be changed a maximum of one octave.

## 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.

When the [SW1] or [SW2] buttons are set to Porta.SW in [CONTROL ASSIGN](#), you can use the [SW1] and [SW2] buttons and the settings here to activate or deactivate the effect.



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

## ENABLE

**On** (checked): Portamento will be applied.

**Off** (unchecked): Portamento will not be applied.

## FINGERED

This parameter is available when “[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

This parameter is available when “[ENABLE](#)” is checked.

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

## BEND RANGE

### +X

Specifies in semitone units how the pitch will change when the joystick is moved all the way to the right. A setting of 12 produces 1 octave of change.

### -X

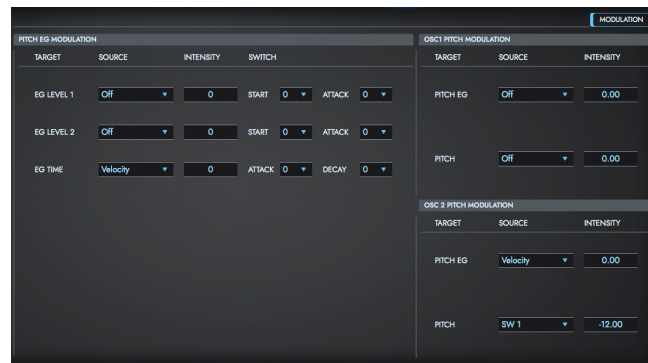
Specifies in semitone units how the pitch will change when the joystick is moved all the way to the left. A setting of 12 produces 1 octave of change.

## OSC2 PITCH

→ [OSC1 PITCH](#)

## MODULATION

This sets the alternate modulation for the pitch-related settings of oscillator 1.



## PITCH EG MODULATION

### When TARGET=EG LEVEL1, EG LEVEL2

The Attack or Start Level of the pitch EG is controlled via alternate modulation.

### SOURCE

Selects the source that will control the PITCH EG Levels 1 and 2.

### INTENSITY

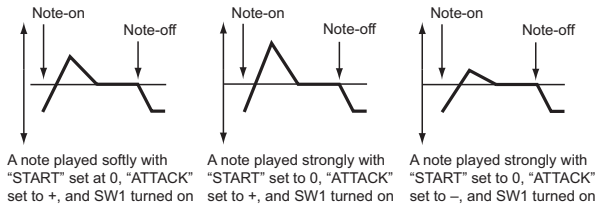
Adjusts the depth and direction of the effect.

When the value is “0”, this will operate at the level set in the “[PITCH EG](#)” parameter.

For instance, when the [SOURCE](#) is set to SW1 and the [SW1] button is on, you can change the “[LEVEL](#)” parameter of the [PITCH EG](#). As the absolute

value for INTENSITY is increased, the degree of change in the pitch EG level when the [SW1] button is on will be greater. Set the direction of change with the SWITCH parameter. When the [SW1] button is off, the value will be the level set for the pitch EG. Also, when the SOURCE parameter is set to "Velocity," as the absolute value for INTENSITY is increased, the degree of change in the pitch EG level will be greater when playing the keys harder. Set the direction of change with the SWITCH parameter. The lighter you play the keys, the closer to the pitch EG setting level that the degree of change will be.

**Pitch EG change (level)** (SOURCE=SW1/Velocity, INTENSITY= positive (+) value)



## SWITCH

**START:** This sets the direction of change for the Start Level according to the "Pitch EG". The EG level will rise in a positive direction when "INTENSITY" is a positive value; and the EG level will fall in a negative direction when "INTENSITY" is a negative value. The EG level will not change when the value is "0".

**ATTACK:** This sets the direction of change for the Attack Level according to the "Pitch EG". The EG level will rise in a positive direction when "INTENSITY" is a positive value; and the EG level will fall in a negative direction when "INTENSITY" is a negative value. The EG level will not change when the value is "0".

## When TARGET=EG TIME

The TIME, ATTACK TIME and DECAY TIME of the pitch EG are controlled via alternate modulation.

## SOURCE

Selects the source that will control the PITCH EG TIME.

## INTENSITY

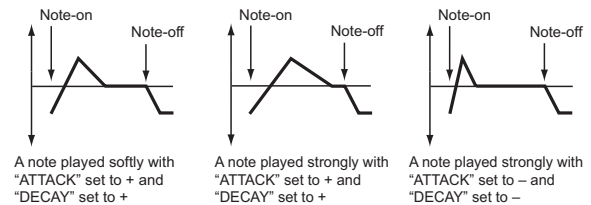
Adjusts the depth and direction of the effect.

When this is set to "0," the effect will operate at the time specified by the "TIME" parameter.

The EG time is determined by the next time after the alternate modulation value when each point has been reached.

For example, the delay time is determined by the alternate modulation value when the attack level has been reached. By setting the INTENSITY to 16, 33, 49, 66, 82 and 99, the setting times will be increased by a maximum factor of 2, 4, 8, 16, 32 and 64 (or 1/2, 1/4, 1/8, 1/16, 1/32 and 1/64). Another example: when the SOURCE parameter is set to "Velocity," as the absolute value for INTENSITY is increased, the degree of change in the pitch EG time will be greater when playing the keys harder. Set the direction of change with the SWITCH parameter. The lighter you play the keys, the closer to the pitch EG setting time that the degree of change will be.

**Pitch EG changes (Time)** (SOURCE = Velocity, INTENSITY = positive (+) value)



## SWITCH

**ATTACK:** This sets the direction of change for the Attack Time. The time will get longer when “[INTENSITY](#)” is a positive value; and the time will get shorter when “[INTENSITY](#)” is a negative value. The time will not change when the value is “0”.

**DECAY:** This sets the direction of change for the Decay Time. The time will get longer when “[INTENSITY](#)” is a positive value; and the time will get shorter when “[INTENSITY](#)” is a negative value. The time will not change when the value is “0”.

## OSC1 PITCH MODULATION

### When TARGET=PITCH EG

The INTENSITY of the pitch EG for OSC1 is controlled via alternate modulation.

### SOURCE

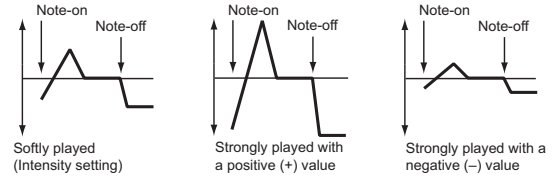
Selects the source that will control pitch EG OSC1 INT.

### INTENSITY

Adjusts the depth and direction of the effect.

For instance, when [SOURCE](#) is set to “Velocity” and this value is set to “12.00”, the pitch modulation caused by the pitch EG via velocity can be controlled within a range of  $\pm 1$  octaves. The lighter you play the keys, the closer to the pitch EG setting level that the degree of change will be.

Pitch change (level)



### When TARGET= PITCH.

The OSC1 pitch is controlled via alternate modulation.

### SOURCE

Selects the modulation source that is applied to the pitch of OSC1.

### INTENSITY

Adjusts the depth and direction of the effect. With a setting of 0, no modulation is applied. When this is set to “12.00,” the pitch will change over one octave. For example, when [SOURCE](#) is set to “After Touch” and aftertouch pressure is applied to the key (on keyboards with aftertouch), a positive value will cause the pitch to rise, and a negative value will cause the pitch to fall. The maximum range of pitch change is  $\pm 1$  octaves.

## OSC2 PITCH MODULATION

→ [OSC1 PITCH MODULATION](#)

# FILTER

→ PG [Program P3: Edit-Filter]

Here you can make settings for the filters that will be used by oscillators 1 and 2. You can select either a 24 dB/octave low pass filter with resonance, or a series connection of a 12 dB/octave low pass filter and a 12 dB/octave high pass filter.

When "**OSC MODE**" is set to SINGLE, filter 1 will be used, and when it is set to DOUBLE, filters 1 and 2 will be used.

**note** When this is set to "SINGLE," edits cannot be made to filter 2.



## OSC1 FILTER

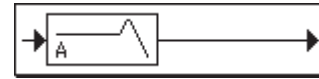
Here you can specify the basic filter type used by oscillator 1, and set the cutoff frequency and resonance.

## FILTER

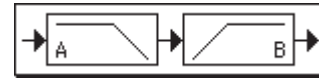
### FILTER TYPE

Selects the type for filter 1.

**RESO LPF (Low Pass Resonance):** 24 dB/octave low pass filter with resonance.



**LPF + HPF (Low Pass & High Pass):** 12 dB/octave low pass filter and 12 dB/octave high pass filter in series.

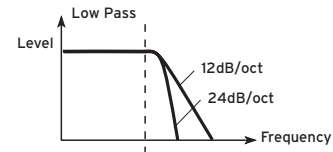


### Low Pass Filter (LPF)

This is a filter that cuts the high-frequency region above the cutoff frequency.

This is the most common type of filter, and is used to cut part of the overtone components, making an originally bright timbre sound more mellow (darker).

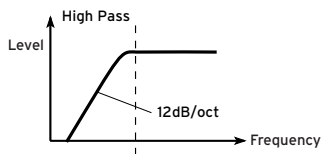
When the "**FILTER TYPE**" is Low Pass Resonance, the cutoff will have a steeper slope.



## **High Pass Filter (HPF)**

This parameter will be displayed when "[FILTER TYPE](#)" is set to Low Pass & High Pass.

This filter cuts the low-frequency range that lies below the cutoff frequency. By cutting the lower overtones, it lightens the tone.



## **CUTOFF**

## **RESONANCE**

The cutoff frequency and resonance of filter 1 are configured via graphical filter.

Resonance is used to add a distinctive character to the sound by emphasizing the overtone spectrum near the cutoff frequency that has been set. Increasing the value will strengthen the effect.

**note** When "[FILTER TYPE](#)" is set to LPF+HPF, the resonance cannot be set.

## **TRIM**

Adjusts the level at which the audio signal output from oscillator 1 is input to LPF.

**note** If the trim value is set too high, the sound may be distorted if Resonance is set to a high value or when you play a chord.

## **FILTER EG**

This sets the EG, which makes time-based changes to the cutoff frequency of the filter.

The EG parameters are configured using the graphical editor.

### **Start Level (S)**

Sets how much the cutoff frequency will change when a note is played (note on).

### **Attack Level (A)**

Sets how much the cutoff frequency will change after the attack time ends.

### **Attack Time (A)**

Sets how long it will take from note on until the attack level is reached.

### **Break Point Level (D)**

Sets how much the cutoff frequency will change after the decay time ends.

### **Decay Time (D)**

Sets how long it will take from when the attack level is reached until the break point level.

### **Sustain Level (S)**

Sets how much the cutoff frequency will change after the slope time until the note is released (note off).

### **Slope Time (S)**

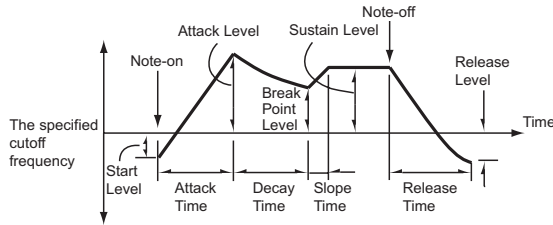
Sets how long it will take to reach the sustain level after the decay time is finished.

### **Release Level (R)**

Sets how much the cutoff frequency will change after the release time ends.

## Release Time (R)

Sets how long it will take from note off until the release level is reached.



## LPF INT

This sets the depth and direction of the effect applied by the EG to the cutoff frequency of the low-pass filter.

With a positive value, the tonal color will be brighter (sounding sharper) in the positive area of the EG level, and the tonal color will be darker (sounding more muted) in the negative area of the EG level.

With a negative value, the tonal color will be darker (sounding more muted) in the positive area of the EG level, and brighter (sounding sharper) in the negative area of the EG level.

## HPF INT

This sets the depth and direction of the effect applied by the EG to the cutoff frequency of the high-pass filter.

## LPF VEL INT

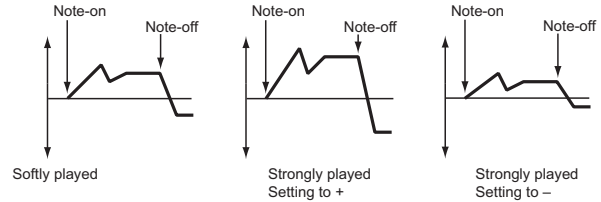
This uses velocity to control the effect applied by the EG to the low-pass filter's cutoff frequency. Sets the depth and direction of the effect.

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.

## HPF VEL INT

This uses velocity to control the effect applied by the EG to the high-pass filter's cutoff frequency. Sets the depth and direction of the effect.

### Changes in cutoff frequency



## KEYTRACK

This sets the keyboard tracking for the cutoff frequency of filter 1.

The setting adjusts how the cutoff frequency changes according to where you play on the keyboard, and controls the tonal color of the sound according to what keys you play.

Use this to set the note number (KEY) where the keyboard tracking effect will begin as well as the depth (slope) of the effect (RAMP), and use [LPF INT](#), [HPF INT](#) to control the overall effect.

## KEY LOW (KBDTrk Key Low)

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

## KEY HIGH (KBDTrk Key High)

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

## RAMP LOW (KBDTrk Ramp Low)

Sets the effect's depth (slope) in the note range below the note number set in KEY LOW.

## RAMP HIGH (KBDTrk Ramp High)

Sets the effect's depth (slope) in the note region above the note number set in KEY HIGH.

## LPF INT

Sets the depth and direction of the effect on the low-pass filter of the keyboard tracking that was set. The positive side works in the forward direction on the keyboard tracking settings, and the negative side works in the reverse direction on the keyboard tracking settings.

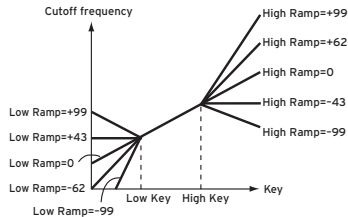
## HPF INT

Sets the depth and direction of the effect on the high-pass filter of the keyboard tracking that was set.

If "[LPF INT](#)" and "[HPF INT](#)" are set to +50, "[RAMP LOW \(KBDTrk Ramp Low\)](#)" is set to -62 and "[RAMP 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](#)" will correspond to the keyboard location.

If you set "[RAMP LOW \(KBDTrk Ramp Low\)](#)" to +43 and "[RAMP 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.



## OSC2 FILTER

Make settings for filter 2 which controls the sound of oscillator 2. Filter 2 can be used if "[OSC MODE](#)" is DOUBLE.

→ OSC 1 FILTER

## MODULATION



## OSC1 FILTER MODULATION

This sets the alternate modulation for filter-related settings of OSC1.

**When TARGET= RESONANCE, LPF EG DEPTH, LPF CUTOFF1/2, HPF EG DEPTH and HPF CUTOFF1/2**

### SOURCE

Selects the source that controls the modulation of each target.

### INTENSITY

Adjusts the depth and direction of the effect.

### When TARGET= EG LEVEL

Controls the START LEVEL, ATTACK LEVEL and BREAK POINT LEVEL of the filter EG via alternate modulation.

### SOURCE

Selects the source that will control the filter EG levels.

### INTENSITY

Selects the source that controls the modulation of each target.

For instance, when "[SOURCE](#)" is set to "Velocity" and all "[SWITCH](#)" parameters are set to "+", using a positive value for "INTENSITY" will cause the EG level to rise when playing the keys harder, and using a negative value for "INTENSITY" will cause the EG level to fall when playing the keys harder. When the value is "0", this will operate at the level set in the "[FILTER EG](#)" parameter.

### SWITCH

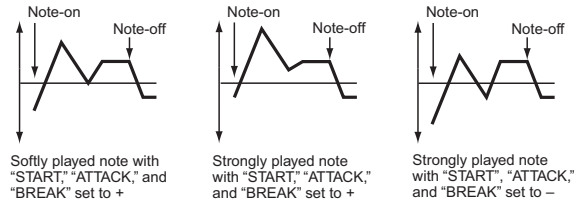
**START:** Specifies the direction in which "[SOURCE](#)" will affect "[Start Level \(S\)](#)." When "INTENSITY" has a positive (+) value, a setting of + for this parameter will allow "[SOURCE](#)" to raise the EG level, and a setting of - will allow "[SOURCE](#)" to lower the EG level. With a setting of 0 there will be no change.

**ATTACK:** Specifies the direction in which "[SOURCE](#)" will affect "[Attack Level \(A\)](#)." When "INTENSITY" has a positive (+) value, a setting of + for this parameter will allow "[SOURCE](#)" to raise the EG level, and a setting of - will allow "[SOURCE](#)" to lower the EG level. With a setting of 0 there will be no change.

**BREAK:** Specifies the direction in which "[SOURCE](#)" will affect "[Break Point Level \(D\)](#)." When "INTENSITY" has a positive (+) value, a setting of + for this parameter will allow "[SOURCE](#)" to raise the EG level, and a setting of - will allow "[SOURCE](#)" to lower the EG level. With a setting of 0

there will be no change.

**Filter 1 EG changes (level)** (SOURCE = Velocity, INTENSITY = a positive (+) value)



### When TARGET= EG TIME

These settings let you use alternate modulation to control the Time parameters of the filter EG.

### SOURCE

Selects the source that will control the attack time, decay time, slope time and release time of the filter EG.

### INTENSITY

Adjusts the depth and direction of the effect.

For example, when the "[SOURCE](#)" is set to FILTER KEY TRACK +/+, the EG time will be controlled by the keyboard tracking settings. Setting this to a positive value will make the EG time longer when the RAMP value is positive, and the EG time shorter when the RAMP value is negative. The directions of change can be each set in "[Attack Time \(A\)](#)", "[Decay Time \(D\)](#)", "[Slope Time \(S\)](#)" and "[Release Time \(R\)](#)". When the values are "0", this will operate using the time set in the "[FILTER EG](#)" parameter.

### SWITCH

**ATTACK:** Specifies the direction in which "[SOURCE](#)" will affect the attack time. With positive (+) values of "[INTENSITY](#)," setting this parameter to + will allow "[SOURCE](#)" to lengthen the time, and setting this



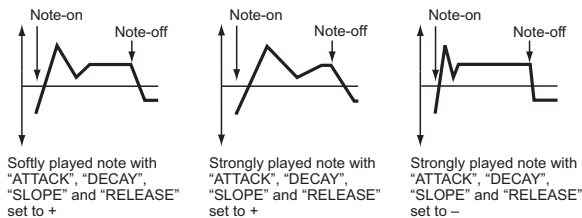
parameter to - will allow "[SOURCE](#)" to shorten the time. With a setting of 0 there will be no change.

**DECAY:** Specifies the direction in which "[SOURCE](#)" will affect the decay time. With positive (+) values of "[INTENSITY](#)," setting this parameter to + will allow "[SOURCE](#)" to lengthen the time, and setting this parameter to - will allow "[SOURCE](#)" to shorten the time. With a setting of 0 there will be no change.

**SLOPE:** Specifies the direction in which "[SOURCE](#)" will affect the slope time. With positive (+) values of "[INTENSITY](#)," setting this parameter to + will allow "[SOURCE](#)" to lengthen the time, and setting this parameter to - will allow "[SOURCE](#)" to shorten the time. With a setting of 0 there will be no change.

**RELEASE:** Specifies the direction in which "[SOURCE](#)" will affect the release time. With positive (+) values of "[INTENSITY](#)," setting this parameter to + will allow "[SOURCE](#)" to lengthen the time, and setting this parameter to - will allow "[SOURCE](#)" to shorten the time. With a setting of 0 there will be no change.

**Filter 1 EG changes (Time)** (SOURCE = Velocity, INTENSITY = a positive (+) value)



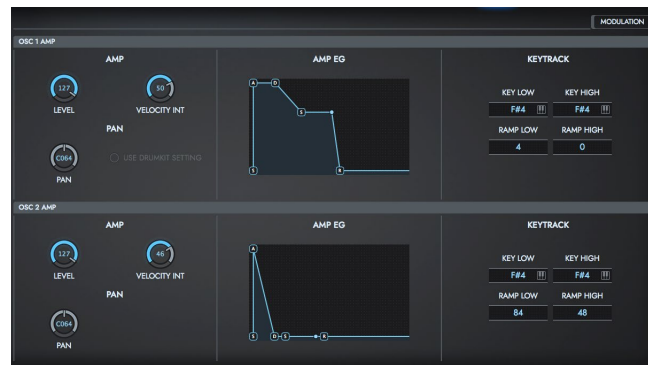
## OSC2 FILTER MODULATION

→ OSC1 FILTER MODULATION

## AMP

Make settings for amp 1 which controls the volume of oscillator 1, and amp 2 which controls the volume of oscillator 2. Pan settings are also made here.

→ PG Program P4: Edit-Amp



## OSC1 AMP

These parameters control the volume and pan of oscillator 1.

## AMP

### USE DRUMKIT SETTING

This option is available only when "[OSC MODE](#)" 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. When "[OSC MODE](#)" is DRUMS, you will normally use this setting.

**Off** (unchecked): All keys of the Drum Kit will use the "[PAN](#)" setting.

## LEVEL

Sets the volume of oscillator 1.

**TIP** The volume of a program can be controlled by CC#7 (volume) and #11 (expression). The resulting level is determined by multiplying the values of CC#7 and #11. The Global MIDI channel "[GLOBAL CH](#)" is used for control.

## PAN

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.

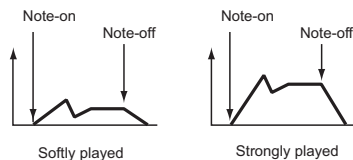
**TIP** This can be controlled by CC#10 (panpot). A CC#10 value of 0 or 1 will place the sound at the far left, a value of 64 will place the sound at the location specified by the "Pan" setting for each oscillator, and a value of 127 will place the sound at the far right. This is controlled on the global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

## VELOCITY INT

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

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

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



## AMP EG

These parameters specify how the amp 1 EG will change over time. This is configured in the graphical editor.

### Start Level (S)

Sets the volume level on note on. If you want the sound to begin sharply, set this to a high value.

### Attack Level (A)

Sets the volume level after the attack time ends.

### Attack Time (A)

Sets how long it will take from note on until the attack level is reached. When the start level is "0", this will be the time when the sound begins.

### Break Point Level (D)

Sets the volume level after the decay time ends.

### Decay Time (D)

Sets how long it will take from when the attack level is reached until the break point level.

### Sustain Level (S)

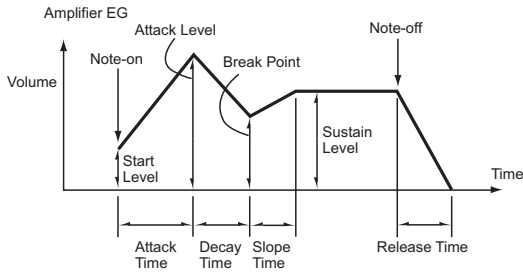
Sets the volume level from after the slope time ends until the note is released (note off).

### Slope Time (S)

Sets how long it will take from when the break point level is reached until the sustain level.

### Release Time (R)

Sets how long it will take for the level to fall to zero from note off.



## KEYTRACK

These parameters let you use keyboard tracking to adjust the volume of oscillator 1. Use this to set the two note numbers where the keyboard tracking effect will begin (KEY LOW, KEY HIGH), as well as the slope depth (RAMP LOW, RAMP HIGH) of the effect.

The volume will not change between "KEY LOW" and "KEY HIGH."

### KEY LOW (KBDTrk Key Low)

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

### KEY HIGH (KBDTrk Key High)

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

### RAMP LOW (KBDTrk Ramp Low)

With positive (+) values of this parameter, the volume will increase as you play notes below the "[KEY LOW \(KBDTrk Key Low\)](#)" note number.

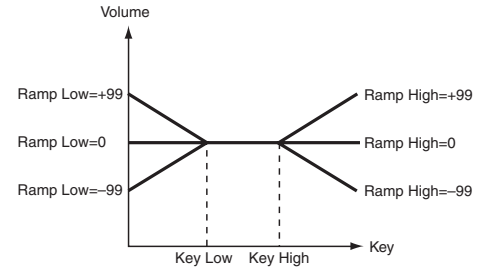
With negative (-) values, the volume will decrease.

### RAMP HIGH (KBDTrk Ramp High)

With positive (+) values of this parameter, the volume will increase as you play notes above the "[KEY HIGH \(KBDTrk Key High\)](#)" note number.

With negative (-) values, the volume will decrease.

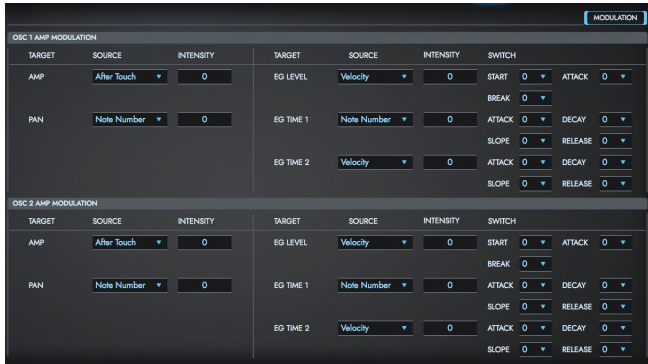
### Volume change produced by keyboard location and Ramp settings



## OSC2 AMP

→ OSC1 AMP

# MODULATION



## OSC1 AMP MODULATION

### When TARGET= PAN, AMP

The AMP pan and levels are controlled via alternate modulation.

### SOURCE

Selects the source that will control the target.

### INTENSITY

Adjusts the depth and direction of the effect.

The volume equals the change in volume caused by the AMP EG multiplied by the AMS AMP value. When each AMP EG level is small, the alternate modulation effect will also be small.

### When TARGET= EG LEVEL

The levels for START, ATTACK and BREAK of the amp EG are controlled via alternate modulation.

### SOURCE

Selects the source that will control the Level parameters of the amp EG.

### INTENSITY

Adjusts the depth and direction of the effect.

When the values are "0", they will operate at the level set in the [AMP EG](#).

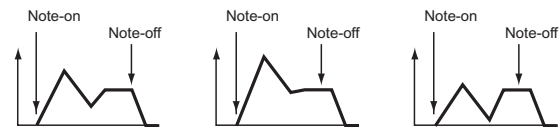
### SWITCH

**START:** Specifies the direction in which "[SOURCE](#)" will change "[Start Level \(S\)](#)." If "INTENSITY" is set to a positive (+) value, setting this parameter to + will allow "[SOURCE](#)" to increase the EG level, and setting this parameter to - will allow "[SOURCE](#)" to decrease the EG level. With a setting of 0, no change will occur.

**ATTACK:** Specifies the direction in which "[SOURCE](#)" will change "[Attack Level \(A\)](#)." If "INTENSITY" is set to a positive (+) value, setting this parameter to + will allow "[SOURCE](#)" to increase the EG level, and setting this parameter to - will allow "[SOURCE](#)" to decrease the EG level. With a setting of 0, no change will occur.

**BREAK:** Specifies the direction in which "[SOURCE](#)" will change "[Break Point Level \(D\)](#)." If "INTENSITY" is set to a positive (+) value, setting this parameter to + will allow "[SOURCE](#)" to increase the EG level, and setting this parameter to - will allow "[SOURCE](#)" to decrease the EG level. With a setting of 0, no change will occur.

**Amp 1 EG changes (Level)** (SOURCE=Velocity, INTENSITY=a positive (+) value)



Softly played note when "START"=0 and "ATTACK" and "BREAK" are set to +

Strongly played note when "START"=0 and "ATTACK" and "BREAK" are set to +

Strongly played note when "START"=0 and "ATTACK" and "BREAK" are set to -

### **When TARGET= PITCH EG TIME1, 2**

The times for ATTACK, DECAY, SLOPE and RELEASE of the AMP EG are controlled via alternate modulation.

## **SOURCE**

Selects the source that will control the EG TIME.

## **INTENSITY**

Adjusts the depth and direction of the effect.

When the values are "0", they will operate using the time set in the Amp1 EG.

The EG time is determined by the next time after the alternate modulation value when each point has been reached.

## **SWITCH**

**ATTACK:** Specifies the direction of the effect that "[SOURCE](#)" will have on "[Attack Time \(A\)](#)." With positive (+) values of "[INTENSITY](#)," setting this parameter to + will allow "[SOURCE](#)" to lengthen the time, and setting it to - will allow "[SOURCE](#)" to shorten the time. With a setting of 0 there will be no effect.

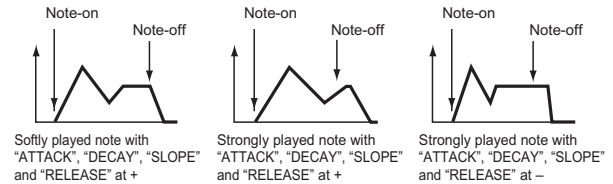
**DECAY:** Specifies the direction of the effect that "[SOURCE](#)" will have on "[Decay Time \(D\)](#)." With positive (+) values of "[INTENSITY](#)," setting this parameter to + will allow AMS1 to lengthen the time, and setting it to - will allow "[SOURCE](#)" to shorten the time. With a setting of 0 there will be no effect.

**SLOPE:** Specifies the direction of the effect that "[SOURCE](#)" will have on "[Slope Time \(S\)](#)." With positive (+) values of "[INTENSITY](#)," setting this parameter to + will allow "[SOURCE](#)" to lengthen the time, and setting it to - will allow "[SOURCE](#)" to shorten the time. With a setting of 0 there will be no effect.

**RELEASE:** Specifies the direction of the effect that "[SOURCE](#)" will have

on "[Release Time \(R\)](#)." With positive (+) values of "[INTENSITY](#)," setting this parameter to + will allow "[SOURCE](#)" to lengthen the time, and setting it to - will allow "[SOURCE](#)" to shorten the time. With a setting of 0 there will be no effect.

**Amp 1 EG changes (Time)** (SOURCE=Velocity, INTENSITY= a positive (+) value)



## **OSC2 AMP MODULATION**

→ OSC1 AMP MODULATION

# LFO

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.

→ PG [Program P5: Edit-Common LFO]



## OSC1 LFO

This configures the two LFOs (LFO1, LFO2) that can be used for oscillator 1. Switch between which LFO to configure by using the LFO1/LFO2 buttons.

### Waveform

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.

### KEY SYNC

**On** (checked): The LFO will start each time you press a key, and an independent LFO will run for each note.

**Off** (unchecked): The LFO effect that started when the first key was pressed will also apply to subsequently-played notes. (In this case, the delay and fade effects will apply only to the first-started LFO.)

### FREQ

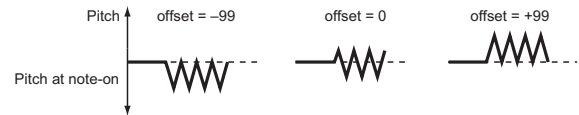
Sets the LFO frequency. A setting of 99 is the fastest.

### OFFSET

Specifies the central value of the LFO waveform.

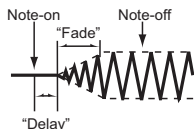
For example with a setting of 0 as shown in the following diagram, the vibrato that is applied will be centered on the note-on pitch. With a setting of +99, the vibrato will only raise the pitch above the note-on pitch, in the way in which vibrato is applied on a guitar.

When "[Waveform](#)" is set to Guitar, the modulation will occur only in the positive (+) direction even if you set "[OFFSET](#)" to 0.



### FADE

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.



## DELAY

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.

## TEMPO SYNC

**On** (checked): The LFO frequency will synchronize to the tempo (MIDI Clock). In this case, the values you specified for “[FREQ](#)” will be ignored.

## BASE NOTE / TIMES

When “TEMPO SYNC” is checked, these parameters set a note length relative (BASE NOTE) to Tempo and the multiple (TIMES) that will be applied to it. These parameters will determine the frequency of the LFO. For example if “BASE NOTE” is (quarter note) and “TIMES” is 04, the LFO will perform one cycle every four beats.

## PITCH MOD

### PITCH INT

Specifies the depth and direction of the pitch modulation applied by the OSC 1 LFO1 settings you made in “[OSCI LFO](#)”.

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

### PITCH JS+Y INT

Specifies the depth and direction of the effect that joystick movement in the +Y direction (away from yourself) will have on the pitch modulation

applied by the LFO.

With a setting of 12.00 a maximum of  $\pm 1$  octave of pitch modulation will be applied. Negative (-) values will invert the LFO waveform.

## FILTER MOD

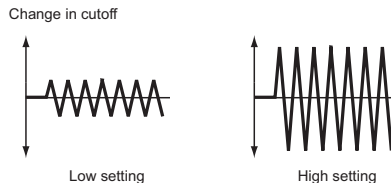
### LPF INT

This sets the depth and direction of the modulation applied by the LFO to the cutoff frequency of the low-pass filter.

Negative (-) settings will invert the phase.

### HPF INT

Specifies the depth and direction of the modulation that [OSCI LFO](#) will have on the cutoff frequency of HPF.



### LPF JS-Y INT

The joystick can be moved in the -Y direction (toward yourself) to control LFO, modulating the cutoff frequency of LPF.

This parameter specifies the depth and direction of control.

Higher settings of this parameter will cause [OSCI LFO](#) to have a greater effect on filter 1 when you move the joystick in the -Y direction (toward yourself).

## HPF JS-Y INT

The joystick can be moved in the -Y direction (toward yourself) to control LFO, modulating the cutoff frequency of HPF.

This parameter specifies the depth and direction of control.

## AMP MOD

## AMP INT

Adjusts the depth and direction of the OSC1 volume modulation by the LFO. A negative value will invert the LFO phase.

## OSC2 LFO

→ [OSC1 LFO](#)

## MODULATION



## OSC1 LFO MODULATION

Sets further modulation for the [OSC1 LFO](#).

### **When TARGET=FREQ MOD1, FREQ MOD2**

The speed at which the OSC1 LFO1 is modulated can be adjusted via two alternate modulations.

## SOURCE

Selects the source that will adjust the frequency of the oscillator 1 LFO1. OSC1 LFO1 can be modulated by OSC1 LFO2.

## INTENSITY

Adjusts the depth and direction of the effect.

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).



### **When TARGET=PITCH**

Also, this is set when using the LFO to modulate the pitch.

### **SOURCE**

Controls the depth of LFO pitch modulation.

### **INTENSITY**

Adjusts the depth and direction of the effect. With a value of "0", no modulation is applied.

For instance, when "[SOURCE](#)" is set to "Velocity" and this value is set to "12.00", the pitch modulation caused by the pitch EG via velocity can be controlled within a range of  $\pm 1$  octaves. The lighter you play the keys, the closer to the pitch EG setting level that the degree of change will be.

### **When TARGET=LPF, HPF**

Also, this can be set when the filter cutoff frequency is modulated by the LFO.

### **SOURCE**

Selects the source that controls the depth and direction of change in cutoff frequency for both the high-pass filter and the low-pass filter.

### **INTENSITY**

Sets the depth and direction of the effect on both the low-pass filter and the high-pass filter respectively.

### **When TARGET=AMP**

Also, this is set when using the LFO to modulate the volume of oscillator 1.

### **SOURCE**

Selects a source that will control the depth by which "[OSC1 LFO](#)" will modulate the volume of oscillator 1.

### **INTENSITY**

As the absolute value of this setting is increased, the effect of "[SOURCE](#)" on "[OSC1 LFO](#)" will increase. Negative (-) values will invert the LFO waveform.

## **OSC2 LFO MODULATION**

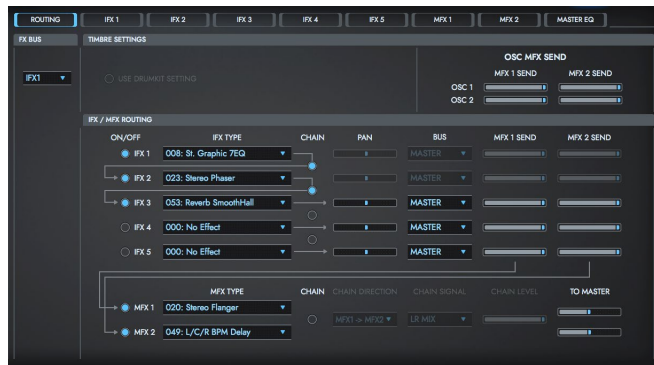
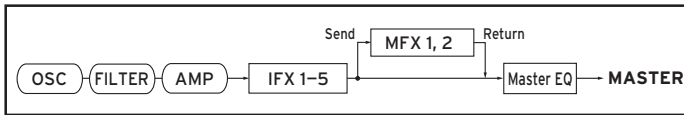
→ OSC1 LFO MODULATION

# IFX

→ PG [Program P8: Edit-Insert Effect], [8. Effect Guide]

Sets the insert effects, master effects, the master effect output destination and so on that are used by the program.

In [PROG 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, you can fine-tune the tonal quality using the stereo, three-band Master EQ. You can adjust these settings for each Program individually.



## ROUTING

This sets the oscillator output bus. This also sets the send level to the master effect.

## FX BUS

This sets the oscillator output bus.

When insert effects are not used, this sets the MASTER. The bus is directly connected to the [MASTER EQ](#).

**TIP** When using VALVE FORCE as an insert effect, select "SUB".

## TIMBER SETTINGS

### USE DRUMKIT SETTING

This will be available only when "[OSC MODE](#)" is set to DRUMS.

**On** (checked): The bus settings for each key in the currently selected drum kit will be enabled. Check this when you want to apply an insert effect to an individual drum instrument. If the "[OSC MODE](#)" is SINGLE or DOUBLE, this setting has no effect.

**Off** (unchecked): The setting of the "[FX BUS](#)", MFX 1 SEND, MFX 2 SEND parameter described below will be used. All drum instruments will be sent to the specified bus.

### MFX1 SEND

Sets the output levels (the send level) of oscillator 1 and 2 (when [OSC MODE](#) is set to "DOUBLE") that are sent to master effect 1. This is valid when "[FX BUS](#)" is set to MASTER or OFF.

If "[FX BUS](#)" is set to IFX1, IFX2, IFX3, IFX4 or IFX5, the send levels to master effect 1 and 2 are set by "[MFX 1 SEND, MFX 2 SEND](#)" after passing through "[IFX/MFX ROUTING](#)".

## MFX2 SEND

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 "[OSC MODE](#)" is set to DOUBLE and "BUS Select" is set to MASTER or OFF.

**TIP** CC#93 will control the Send 1 level for OSC 1/2, and control change CC#91 will control the Send 2 level for OSC 1/2. These are controlled on the global MIDI channel. The actual send level is determined by multiplying these values with the send level setting of each oscillator.

## IFX/MFX ROUTING

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.

### IFX1, 2, 3, 4, 5 On/Off

Switches the insert effect on/off.

When this is OFF, the input will be passed through unchanged. (For 000: No Effect, on/off will produce the same result.) Each time you press this, the setting will alternate between on/off.

**TIP** Control change #CC92 can be used to turn off all of the insert effects at once. 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 "[GLOBAL CH](#)".

### IFX TYPE

Selects the insert effect type. Select from 103 different effects, from "000:No Effect" to "102:Hold Delay".

For details on the insert effects, refer to the "8. Effect Guide" in the "TRITON Extreme Parameter Guide" (p. 205).

## CHAIN

Switch "CHAIN" on/off for each insert effect.

For example if the "Chain" checkbox between IFX1 and IFX2 is checked, IFX1 and IFX2 will be connected in series. If "[FX BUS](#)" 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](#)", "[BUS](#)", "MFX1 SEND" and "MFX2 SEND" settings that follow the last IFX in the chain will be used.

## PAN

Sets the pan after the sound has passed through the insert effect. This setting is valid only when the following "[BUS](#)" is set to MASTER.

**TIP** CC#8 will control the pan of the sound after it has passed through the insert effect.

## BUS

This sets which bus the signal will be sent to after passing through the insert effects. When set to "MASTER", the effect output will be connected to the [MASTER EQ](#).

When the setting is "OFF", the bus will not be connected to the [MASTER EQ](#). Normally, "MASTER" is selected.

## MFX1 SEND, MFX2 SEND

Sets the send levels to master effect 1 and 2 for the output of an insert effect. These settings are valid when "[BUS](#)" has been set to either "MASTER" or "OFF".

**TIP** 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 "[GLOBAL CH](#)".

## MASTER EFFECT

There are two master effect series, and you can use the send return balance to add color to the sound.

### MFX 1, 2 ON/OFF

Switches the master effects 1, 2 on/off. When off, the output will be muted. This will alternate between on and off each time it is pressed. CC#94 can be used to switch the MFX on and 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 "[GLOBAL CH](#)".

### MFX TYPE

Selects the effect type for master effect 1 and 2. You can select from 103 types of effect: 000: No Effect-102: Hold Delay.

For details on the effects, refer to the "8. Effect Guide" in the "TRITON Extreme Parameter Guide".

### CHAIN

**On** (checked): Chain (series connection) will be turned on for MFX1 and MFX2.

### CHAIN DIRECTION

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.

## CHAIN SIGNAL

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.

**LR 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.

**LR STEREO:** Sends the initial master effect output directly in stereo, without converting to mono.

## CHAIN LEVEL

When chain is On, this sets the level at which the sound is sent from the first master effect to the next master effect.

## TO MASTER

Adjusts the return levels from the master effects to the master bus .

## IFX 1, 2, 3, 4, 5

Configures the effect parameters for IFX 1, 2, 3, 4, and 5 respectively that were selected on the ROUTING page.

## MASTER EQ

The master EQ is a three-band stereo equalizer. This EQ comes just before the final output line, and is used to equalize (change the tonal character) of the overall sound.

# ARP

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



## ARPEGGIATOR COMMON

### ARP ON/OFF

**On** (checked): The arpeggiator plays when a key is played (key on).

These settings will not work if “[ENABLE ON PROG](#)” in the [ARPEGGIATOR SETTINGS](#) of [GLOBAL mode](#) is not set to “ON.”

### GATE OFFSET

This adjusts the gate time (note duration) of the arpeggiated notes. At the center position (12 o'clock), the gate time will be the same as the “[GATE](#)” parameter of the arpeggiator. Rotating the knob toward the left will shorten the gate time, and rotating it toward the right will lengthen the gate time.

### VELOCITY OFFSET

This adjusts the velocity (playing strength) of the arpeggiated notes. At the center position (12 o'clock), the velocity will be the same as the “[VELOCITY](#)” parameter of the arpeggiator.

Rotating the knob toward the left will decrease the velocity, and rotating it toward the right will increase the velocity.

## ARPEGGIATOR

### SETTING

#### Pattern

Selects the arpeggio pattern.

#### OCTAVE

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

#### RESOLUTION

Specifies the timing resolution of the arpeggio. The notes of the arpeggio will be played at the interval you specify: 16T, 16, 8T, 8, 4T, or 4.

The speed of the arpeggio pattern is determined by the Tempo and the “RESOLUTION.”

#### GATE

Specifies the length (gate time) of each note in the arpeggio.

**000-100(%):** Controls the note length of the steps in the arpeggio to uniformly be a certain percentage (%) long.

**Step:** When this is selected, the gate time specified for each step will be used.

## VELOCITY

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:** When this is selected, the velocity specified for each step will be used.

## SWING

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

## SORT

This expands all of the notes (keys) that are played together into an arpeggio, and sets the order in which they sound.

**On** (checked): The arpeggio is played in order of scale tones, regardless of the order in which the note-on signals were played.

**Off** (unchecked): The arpeggio is played in the order of the note-on signals that were played.

## KEY SYNC

Specifies whether the arpeggio pattern will begin when you press a key, or whether it will always follow the Tempo.

**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.

## LATCH

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.

## KEYBOARD

This specifies whether the notes you play on the keyboard 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.

## SCAN ZONE

This shows the Scan Zone setting.

## KEY TOP, KEY BOTTOM

These parameters specify the range of notes (keys) for which the arpeggiator will function. "KEY TOP" is the upper limit, and "KEY BOTTOM" is the lower limit.

## VELOCITY TOP, VELOCITY BOTTOM

Specifies the range of velocities for which the arpeggiator will function. "VELOCITY TOP" is the upper limit, and "VELOCITY BOTTOM" is the lower limit.

# VALVE FORCE

This configures the settings for VALVE FORCE when used in a program. You can combine and place VALVE FORCE with insert and master effects, or place it in the final stage of the program output to add a light boost or a unique vacuum tube-type overdrive feeling.



## VALVE FORCE

### INPUT TRIM

Sets the input level to Valve Force. Adjust this if unpleasant distortion occurs when you raise the “Ultra Boost” value.

This adjustment also affects the way in which the low frequencies are output by “Ultra Boost,” and the effect produced by the vacuum tubes.

### TUBE GAIN

Adjusts the input gain to the vacuum tube. The vacuum tube produces a distinctive tonality and distortion.

### ULTRA BOOST

Adjusts the mix level to the Ultra Boost (ultra-low-frequency boost)

circuit located in the beginning of Valve Force. With a setting of 000, the signal will not be sent through this; i.e., ultra boost will be bypassed. Raising this value will boost the ultra-low range and simultaneously emphasize the edge of the sound. This is particularly effective on the kick and bass drum.

### OUTPUT LEVEL

Sets the output level from Valve Force. This lets you adjust the signal level while maintaining the distinctive Valve Force tonal character.

# VALVE PLACEMENT

## PLACEMENT

Sets where VALVE FORCE is placed in the signal chain.

**FINAL:** This places VALVE FORCE after the analog signal converter, which comes after the MAIN output DAC (digital-to-analog converter). After the signal passes through VALVE FORCE, it is output to MASTER. Use VOLUME to adjust the signal level after it passes through VALVE FORCE.

Use this to add a light boost or a unique vacuum tube-type overdrive feeling to the sound that passes through VALVE FORCE at the final output stage.



**INSERT:** This places VALVE FORCE after the analog signal converter, which comes after the SUB output DAC (digital-to-analog converter). The SUB bus becomes the input for VALVE FORCE. After the signal passes through VALVE FORCE, it is converted to a digital signal by the ADC (analog-to-digital converter) and then sent to the insert effect, master effect, L/R or individual 1/2 bus, according to the "PAN," "BUS," MFX1 SEND" and "MFX2 SEND" settings.



You can configure the order in which VALVE FORCE, the insert effects and master effects are connected to create a variety of combinations. (→ Setting example)

## PAN

Sets the panning after the signal passes through VALVE FORCE. This is enabled when the following "BUS" is set to MASTER or IFX1...5.

## BUS

Sets what bus the signal is sent to after passing through VALVE FORCE.

## MFX1 SEND

## MFX2 SEND

Sets the send level to master effects 1 and 2 after passing through VALVE FORCE. This is enabled when "BUS" is set to MASTER or Off. You can control this using CC#93 and CC#91. Use the global MIDI channel that's set in "MIDI Channel" for these control change messages.



### Setting example

In this example, we insert VALVE FORCE in a desired position after the signal passes through the FX BUS or IFX, according to the BUS settings. Sets where VALVE FORCE outputs in the signal chain within the VALVE FORCE BUS.

- **OSC → Valve Force → audio output**  
"FX BUS": 3, 4, SUB  
Valve Force "BUS": MASTER
- **OSC → Valve Force → insert effect → master effects → audio output**  
"FX BUS": 3, 4, SUB  
Valve Force "BUS": IFX1...5  
Post-IFX "MFX1 SEND" or "MFX2 SEND": as desired  
"BUS" following IFX: MASTER
- **OSC → insert effect → Valve Force → master effects → audio output**  
"FX BUS": IFX1...5  
Post-IFX "BUS": 3, 4, SUB  
Valve Force "BUS": MASTER  
Valve Force "MFX1 SEND" or "MFX2 SEND": as desired
- **OSC → insert effect → Valve Force → insert effect → master effects → audio output**  
"FX BUS": IFX1...4  
Post-IFX "BUS": 3, 4, SUB  
Valve Force "BUS": IFX2...5  
Valve Force "MFX1 SEND" or "MFX2 SEND": as desired  
Post-IFX "BUS": MASTER

# COMBI Mode

In this display page you can select and play Combinations. A Combi allows you to use up to eight programs at once. In addition to editing the programs for each timbre, this is used to modify the particular settings used in Combination mode.



# Timbre Parameter

Sets the output level and so on for the programs used by each timbre, as well as for the timbres themselves.

## Timbre Select

Click the rectangular border around a timbre or the timbre number to select a timbre.

The program parameters used by the timbres you select here can be displayed on the edit area (right side of the screen) by using the Page Select switch, and these parameters can be edited.

## SOLO

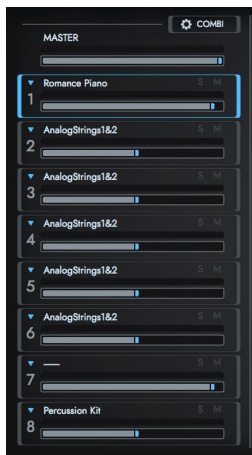
Only the timbres that have been switched ON will make sound.

## MUTE

Timbres that are ON will not make sound.

## VOLUME

Adjusts the volume of the timbre.



## Timbre Setting

Click the arrow in the upper left-hand corner and choose one of the following commands.

### Load Program

Lets you select a program. The browser will appear in the same way as when you click the [BROWSER] button.



### Copy

**Timbre:** Copies the parameters of the current timbre to the clipboard.

**OSC1 Set:** Copies the parameters of the current timbre's OSC1 to the clipboard.

**OSC2 Set:** Copies the parameters of the current timbre's OSC2 to the clipboard.

### Paste

**Timbre:** Pastes the program parameters that were copied to the clipboard.

**OSC1 Set:** Pastes the parameters that were copied to the clipboard into OSC 1.

**OSC2 Set:** Pastes the parameters that were copied to the clipboard into OSC 2.

### Clear

Clears the program parameters used by the timbre and resets the timbre parameters. Once cleared, the timbre will not be assigned a program, and will no longer sound.

Clearing a timbre will reduce the load on your computer's CPU, so we suggest that you execute this command on timbres you're not using.

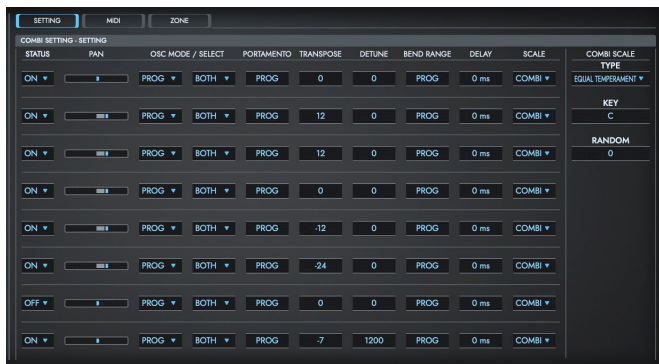
### Initialize

Initializes the parameters of the program used by the timbre. Execute this command if you want to create a sound from scratch.

## COMBI SETTINGS

Press the  button at top right to set the combinations.

## SETTING



### STATUS

This sets the status of MIDI for each track and for the internal tone generator.

**note** This product does not support MIDI OUT, so the statuses that were on the original TRITON (EXT, EX2) do not exist.

**ON:** When the TRITON Extreme Software synthesizer is operated, the timbre will sound, and the instrument will make sounds in response to the MIDI messages received from external MIDI devices.

The TRITON Extreme Software synthesizer will not transmit MIDI data.

**OFF:** The timbre will not sound, and MIDI data will not be transmitted.

### PAN

Sets the pan for each timbre 1-8.

**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 [PROG Mode](#). If a mono insert effect is in use, the settings you make here will be ignored. In this case, the "[PAN](#)" parameter in Insert FX page will adjust the panning of the sound after the insertion effect.

**RND:** The oscillator pan will change randomly at each note on.

**TIP** If "[STATUS](#)" 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 CH.](#)"

### OSC MODE

Specifies the [MODE](#) of the program selected for each timbre 1-8.

**PROG:** 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.

**LEGATO:** The timbre will play monophonically, with single triggering (legato).

When using MONO or LEGATO settings, the note priority will follow the "[PRIORITY](#)" setting of the program.

### SELECT

Specifies the [OSC MODE](#) of the program selected for each timbre 1-8. When the selected "[OSC MODE](#)" is DOUBLE, only one oscillator can be sounded.

**BOTH:** OSC 1 and 2 will sound according to the program settings.

**OSC1:** Only OSC1 will sound.

**OSC2:** Only OSC2 will sound. If "[OSC MODE](#)" is SINGLE or DRUMS When it does not sound.

## PORTAMENTO

Make portamento settings for each timbre 1-8.

**PROG:** 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.

**TIP** If the "[STATUS](#)" is set to INT, CC#05 (portamento time) and CC#65 (portamento switch) messages will be received and will control and change these settings. (If the setting is PROG, CC#05 portamento time will not be received.) These messages will be received on the MIDI channel specified for each timbre by "[MIDI CH.](#)"

## TRANSPOSE

Adjusts the pitch of each timbre in semitone steps.  
12 units equal one octave.

## DETUNE

Adjusts the pitch of each timbre in one-cent units.  
0: Normal pitch.

**TIP** "[TRANSPOSE](#)" and "[DETUNE](#)" can be controlled via MIDI RPN messages. Depending on the "[OSC MODE](#)" settings of the programs used by timbres 1-8, they can be controlled as follows. When "[OSC 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 "[OSC 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  $\pm 1$  octave for coarse tune and fine tune together.

## BEND RANGE

Specifies the amount of pitch change that will occur when the pitch bender is operated, in semitone units.

**PROG:** The pitch range specified by the program will be used.

**-24-+24:** This setting will be used regardless of the setting in the program.

**TIP** 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 PROG.) This message is received on the MIDI channel for each timbre set by "[MIDI CH.](#)"

## DELAY

For each timbre, this specifies a delay time from note-on until the sound begins.

**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.

## COMBI SCALE

This sets the range used by each timbre.

When this is set to PROG, the [SCALE](#) that was set within the program will be used.

When this is set to COMBI, the scale that was set in COMBI SCALE will be used.

COMBI SCALE can be set with the same structure ([TYPE](#), [KEY](#), [RANDOM](#)) that can be set for a program.

# MIDI



## MIDI CH

Sets the MIDI transmit/receive channel for each timbre 1-8.

**Global Ch:** The MIDI channels used by timbres will always be the same as the global MIDI channel that you can set in [GLOBAL mode](#).

When **“STATUS”** is INT, MIDI messages will be received on the channel you specify here.

## MIDI FILTER

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”** is INT, operation 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.)

The 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.

**OFF** (unchecked): Transmission and reception of MIDI data is disabled.

## ZONE

These settings specify the keyboard range and volume 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).

## KEY

### BOTTOM KEY

Specifies the bottom key (lower limit) of the notes that will sound each timbre 1-8.

### BOTTOM SLOPE

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.

### TOP KEY

Specifies the top key (upper limit) of the notes that will sound each timbre 1-8.

### TOP SLOPE

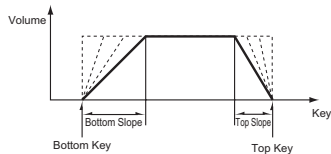
Specifies the range of keys (12 is one octave) over which the volume will be reached starting from the top key.

**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.

How volume will change according to keyboard location



## VELOCITY

### BOTTOM VELOCITY

Specifies the minimum velocity value that will sound each timbre 1-8. How volume will change according to keyboard location

### BOTTOM SLOPE

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.

### TOP VELOCITY

Specifies the maximum velocity value that will sound each timbre 1-8.

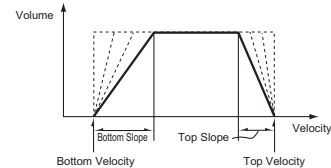
### TOP SLOPE

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.

How volume will change according to keyboard location



# EASY

This page is for editing the main parameters of the program for the selected timbre. Click the EASY button to show this page.

The parameters that are not shown on this page can be configured using the pages from OSC to ARP.

# OSC, PITCH, FILTER, AMP, LFO

Each of the parameters for the timbre selected in Timbre Select will be shown.

For more on each parameter, see [PROG Mode](#).





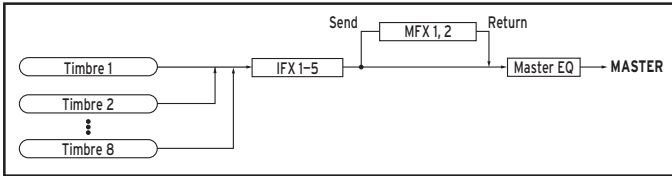
# IFX/MFX

Sets the insert effects, master effects, master effect output destination and so on to be used by the combination.

The parameters for the selected timbre will be shown.

For more on each parameter, see [PROG Mode](#).

This explains the unique parameters used in COMBI Mode.



## ROUTING



## FX BUS

This configures the program oscillator output bus for timbres 1-8. In COMBI mode, you can select “Drum Kit” in addition to “IFX1-5” and “OFF”. This can only be selected if the program you set is a drums program ([OSC MODE](#): DRUMS). The FX BUS for each key set in the drum kit will be enabled.

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 DRUMKIT will send the Snare sounds to IFX1 and Kick sounds to IFX2. If you wish to modify these routings, use the “DRUMKIT IFX PATCH” settings.

## TIMBRE SETTINGS

### MFX 1 SEND, MFX 2 SEND

This is enabled only when the FX BUS is set to MASTER or OFF. This sets the amount of signal sent to the MFX.

You cannot adjust the amount of signal sent for OSC 1 and 2 respectively, as you can do in [PROG Mode](#).

### DRUM KIT IFX PATCH

This settings 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 “FX BUS” parameter is set to DRUMKIT.

## IFX1-5, MFX1, 2, MASTER EQ

### CONTROL CH

If you've routed multiple timbres that have different MIDI channel settings, this specifies the channel on which they will be controlled.

**Global Ch:** The global MIDI channel "[GLOBAL CH](#)" will be used to control the effect. Normally you will set this to Global Ch.

## ARP

Sets how the arpeggiator operates for a combination. Two arpeggiators can be running at the same time.

You can make a variety of effective settings, such as applying separate arpeggio patterns to two different sounds separated by a key split; switching between two separate arpeggio patterns depending on the velocity and so on.

**TIP** The arpeggiator operating conditions are determined by this ASSIGN as well as the two arpeggiator switches (ARP ON/OFF) and the individual RUN switches for each arpeggiator, and also by the [ARPEGGIATOR SETTINGS](#) in the [GLOBAL mode](#).



## ASSIGN

Assigns arpeggiator A or B to each timbre 1-8.

**Off:** The arpeggiator will not operate.

**A:** Arpeggiator A will operate. Use the settings in the Arpeggiator A page to select the arpeggio pattern and to set parameters.

**B:** Arpeggiator B will operate. Use the settings in the Arpeggiator B page to select the arpeggio pattern and to set parameters.

If the “[STATUS](#)” of the timbre is INT, each timbre 1-8 will be sounded by the note data generated by the assigned arpeggiator, regardless of the “[MIDI CH](#)” setting of the timbre. |

**TIP** For more on the other parameters, see [PROG Mode](#).

## VALVE FORCE

Configures the settings for VALVE FORCE used in a combination. For more on each parameter, see “PROG Mode.”

# GLOBAL mode

This mode includes global settings for the KORG Collection-TRITON Extreme Software synthesizer, including master tune, transpose, global MIDI channel, MIDI filter, user scale and so on. Press the GLOBAL button to enter Global mode.



## MIDI SETTINGS

### GLOBAL CH

Specifies the global MIDI channel used by the KORG Collection-TRITON. The global MIDI channel is used when transmitting and receiving performance data in [PROG Mode](#); when switching combinations using MIDI in [COMBI Mode](#); and when controlling timbres or effects set for the Gch (global channel) in each mode.

- **Receiving MIDI data**

In [PROG Mode](#), MIDI data is received from the global MIDI channel. In [COMBI Mode](#), MIDI data is received from the MIDI channel that is set for each timbre or track. Also, combinations are changed using the program change messages received through the global MIDI channel.

The global MIDI channel is used when turning on/off IFX 1-5, MFX1 and MFX2 via MIDI. The pan, send 1/2, MFX 1/2 and MEQ after the signal passes through the IFX are controlled using the global MIDI channel in [PROG Mode](#). In [COMBI Mode](#), these are controlled by the “Ctrl Ch” (control channels) to which the IFX 1-5, MFX 1, MFX 2 and MEQ are assigned. When “Ctrl Ch” is set to “Gch,” the global MIDI channel is used for controlling these signals.

## CONTROL ASSIGN

Sets the MIDI CC number used by the combination or program to control the controllers.

## MIDI FILTER

### ENABLE CONTROL CHANGE/PITCH BEND

Specifies whether MIDI control change messages will be received. Turn this on to prevent receiving these messages.

**Off** (unchecked): Receive.

**On** (checked): Don't receive.

### ENABLE COMBI/PROG CHANGE

Specifies whether combination changes and program changes will be received. Turn this on to prevent receiving these messages.

**Off** (unchecked): Receive.

**On** (checked): Don't receive.

### ENABLE AFTER TOUCH

Specifies whether aftertouch will be received. Turn this on to prevent receiving these messages.

**Off** (unchecked): Receive.

**On** (checked): Don't receive.

# KEYBOARD SETTINGS

## MASTER TUNE

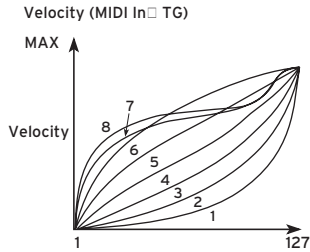
Adjusts the overall pitch of the TRITON software synthesizer in 1 Hz steps. This is shown as the pitch of the A4 (middle A) note.

## TRANSPOSE

Adjusts the overall pitch of the TRITON software synthesizer in semitone (100 cent) steps. The range is +/-2 octaves.

## VELOCITY CURVE

Sets how much the volume and tone will change in response to the keyboard velocity. The velocity effectiveness will change according to the velocity signal received, as shown in the diagram below.

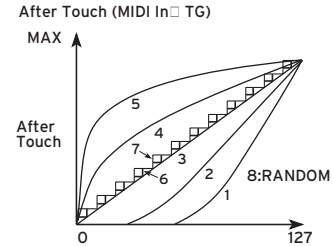


If the overall sound gets too bright or dark, select the appropriate velocity curve here.

**TIP** 4 (Normal): The normal curve

## A TOUCH CURVE

Sets how much the volume and tone will change in response to after-touch. The effectiveness will change according to the aftertouch signal received, as shown in the diagram below.



**TIP** 4 (Normal): The normal curve

## SCALE

### USER SCALE

Sets one of 16 User Octave scales and one User All Notes scale. The user scale set here can be selected using a program or combination. In addition to the user-defined scales that can be set here, you can select an equal temperament, pure major, pure minor or other scale.

### USER OCTAVE SCALE

#### TYPE

Select the User Octave Scale to edit.

#### TUNE

Sets the scale over one octave. When one of the pitches is changed from C to B (in units of cents) within the octave, that tuning will be reflected throughout the entire tonal range. Equal temperament tuning is used as a standard.

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.

### USER ALL NOTES SCALE

#### TUNE

This lets you independently set the pitch for each of the 128 notes. Move to the position on the keyboard indicated by the combo box, and tune the pitch of the 128 keys (from C-1 to G9) in cents. Equal temperament tuning is used as a standard.

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.

## SYSTEM SETTINGS

### MAXIMUM VOICE NUMBER

Specifies the maximum polyphony.

### OUTPUT GAIN

Adjusts the final output level.

## TEMPO SETTINGS

### SYNC TO HOST

Enable this when you want to sync the tempo of the TRITON Extreme Software synthesizer with your DAW.

When this is OFF, each combination and program will sound using their own tempo values.

## ARPEGGIATOR SETTINGS

### ENABLE ON COMBI

### ENABLE ON PROG

### ENABLE LATCH

Sets whether to operate the arpeggiator using a combination or a

program. When this is OFF, the arpeggiators will all be set to OFF, even if the arpeggiator is turned ON in the combination or program.

## EFFECT SETTINGS

Sets whether to operate each effect using a combination or a program. When this is OFF, the effect will be bypassed, even if the effect is used by the combination or program.

**ENABLE IFX 1-5**

**ENABLE MFX 1**

**ENABLE MFX 2**

## SAVE AS DEFAULT

The Global page settings will be written into memory as the initialized global data values used when starting up the TRITON Extreme Software synthesizer.

The written settings will take effect the next time the software is booted up.



# Appendices

## Troubleshooting

Please check the following points if you experience problems.

### No sound

- Have you made the appropriate settings in the [MENU] → [Audio/MIDI Settings]?
- Is the Master Level or any other volume-related parameters set to 0?
- Is your computer set to produce sound?  
If you're using Windows, open the Control Panel and check [Sound and Audio Device Properties].  
If you're using macOS, check [System Settings] → [Sound] and Application folder → Utility folder → [Audio MIDI Settings] → [Audio Devices].
- If you're using your computer's sound card, is the sound card set up correctly?
- If you've connected an audio device to your computer, is the audio device set up so that sound is being output from it?

### The sound has clicks, pops, or noise

You may experience clicks, pops, or noise if your computer's CPU is experiencing a heavy load.

If you are having this type of problem, try the following.

- If other applications are running, close them.
- Reduce the maximum polyphony of the synthesizer you're using.
- In the [MENU] → [Audio/MIDI Settings], increase the audio buffer size. However, increasing this too much will also increase the latency (delay before you hear sound).

### Sound is delayed

- Latency is determined by "the number of samples" x "the number of buffers." In the [MENU] → [Audio/MIDI Settings], set the "Audio buffer size" and the "Sample rate" to the lowest setting that still allows stable operation.

## Can't control the software synthesizer from a MIDI device connected to the computer

- Are your computer and MIDI device connected correctly?
- Is the connected MIDI device detected by your computer?  
If you're using Windows, open the Control Panel and check [Sound and Audio Device Properties] → [Hardware].  
If you're using macOS, open the Application folder → Utility folder → [Audio MIDI Settings] → [MIDI Device], and make sure that your MIDI device is detected.
- Are the correct settings made in the [MENU] → [Audio/MIDI Settings]?

# Specifications

- Maximum polyphony: 256 notes (depending on the computer's CPU)
- Number of parts: 8
- Presets: more than 4000
- Effects: 102 types
- Standalone operation or as a VST/AU plug-in instrument
- Realtime MIDI control and automation is supported

## Operating requirements

### for Mac

- OS: macOS 10.13 High Sierra or later (Latest updates)  
\* This software will not run on a 32-bit OS.
- CPU: Intel Core i5 or better (Core i7 or better recommended)
- Memory: 8 GB RAM or more (16 GB RAM or more recommended)
- Storage: 8 GB or more free space (SSD recommended)
- Internet connection
- Plug-in: AU, VST, AAX (Only 64bit plug-in is supported)

### for Windows

- OS: Windows 10 64bit\* or later (Latest updates)  
\* This software will not run on a 32-bit OS.
- CPU: Intel Core i5 or better (Core i7 or better recommended)
- Memory: 8 GB RAM or more (16 GB RAM or better recommended)
- Storage: 8 GB or more free space (SSD recommended)
- Internet connection
- Plug-in: VST, AAX (Only 64bit plug-in is supported)

\* Appearance and specifications of this product are subject to change without notice.

# Support and service

If you have questions about the product, please contact the Korg distributor for the country in which you purchased it.

## Information to provide when contacting us

In order for us to help you, we'll need the following information since product support cannot be provided without it:

- Your name
- The name and version of the product (How to check the version)
- The name of the device that you're using
- The version of the operating system
- Your question (provide as much detail as possible)

## Before you contact us

- Before you contact us, check whether this manual or KORG app Help Center has an answer for your question.
- Please be aware that we cannot answer questions about products that are not made by Korg, such as basic operation of your hardware device, or general questions about creating songs or sounds.

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