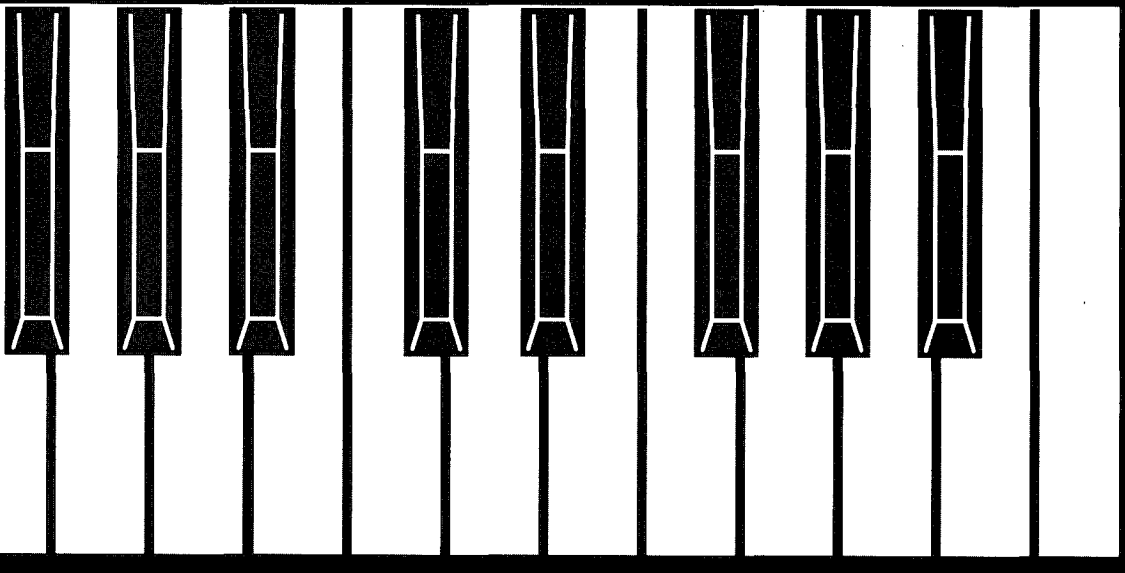
i5S

Interactive Music Workstation



GENERAL MIDI INSTRUMENT

Reference Guide

AI² Synthesis System

KORG

Ⓔ ③

Contents

Arrangement Play Mode

This is the main performance mode of the Korg ***i5S***. The ***i5S*** will automatically select this mode every time your turn the power ON.

In this mode, you can select the arrangements you will play when performing live with the ***i5S***. A total of **64 user arrangements** and **128 preset arrangements** are available in the ***i5S*** memory that can be used to compose original scores or to arrange existing scores for a performance.

The general procedures for editing parameters are outlined on page 5-1 "Watch the screen and operate the ***i5S***" of the User's Guide. For more details on arrangement performances, refer to page 3-4 of the User's Guide.

Refer to page 5 to set the MIDI channels for arrangement backing tracks of the Global Mode. The keyboard timbres will use the channels specified by the Global/Keyboard and KBD2 channels. (See page 5-14 of this manual for details.)

Arrangements can be edited (for example, changing the volume of each part) during a performance. However, keep in mind that all editing details up to that point will be lost when you switch to another mode or arrangement during editing procedures, after the performance.

Make a point to save all edited settings using the Write Function described on page 1-14.

Switching Page Display

Parameter functions are broken down into 8 display pages, as listed on the following page. Use the PAGE+/PAGE– keys to switch through display pages. If you have a certain display in mind, keep the ARR PLAY key held down, and press the ARRANGEMENT NUMBER key of the corresponding page number.

If, for example, you want to go directly to page 4, keep the ARR PLAY key depressed, and press ARRANGEMENT NUMBER key 4.

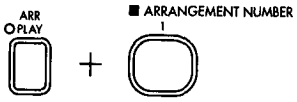
Functions in Arrangement Play Mode

The table below is a list of the Arrangement Play Mode functions, and indicates the title and main contents of each display page.

Display Page			Ref. Guide Page
1	*Performance Monitor*	*To select arrangements and to display tempo and chord.*	1-3
2	Style	Displays style.	1-6
3	Track Settings	Arrangement track, pan, and effect send settings.	1-7
4		Damper pedal editing, track status, wrap-around point, and octave settings.	1-9
5		Chord latch and variation change.	1-12
6	Effects	Effect type and effect balance.	1-13
7	Rename Arrangement	To change to arrangement name.	1-14
8	Write Arrangement	To write the arrangement to the user bank.	1-14

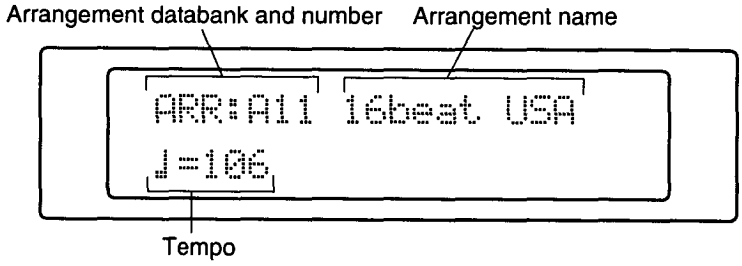
	Volume/Mute		1-15

Basic Settings and Performance Monitors



Page 1 Arrangement Play

A display like the one shown below will appear when you press the ARR PLAY key. You can use this display to adjust the playback tempo as you perform. While this display is showing, you can use the ARRANGEMENT keys to select arrangements that you want to perform with. Also, you can also use this display to adjust the playback tempo as you perform.



The arrangement name to be played back, and playback tempo and chord will be displayed here.

Use the track setting to select programs or change octaves for the two keyboard timbres.

☞ Track Setting page 1-9.

ARR: Arrangement Editing

The number of the current arrangement is selected with the **ARRANGEMENT NUMBER key** from the 192 arrangements programmed in the *i5S* memory. Refer to the User's Guide for more information on how to select arrangements.

☞ User's Guide page 2-13.

<Selecting arrangements while playing>

If you select a new arrangement while the *i5S* is playing, the new arrangement will start at the beginning of the next measure, and the Tempo setting will change to the tempo in the new arrangement. To prevent the tempo from changing when changing the arrangement, press the TEMPO lock key. Doing so will also retain the current setting of the TRANSPOSE key, keyboard timbre and the effects.

<To select arrangements with the footswitch>

You can also change the arrangement selection using a footswitch or one of the pedals on an EC5 External Controller. The arrangement selection will change every time you step on the footswitch connected. These methods for controlling the arrangement selection are enabled by Global Mode settings.

☞ Global Mode page 5-16.

To use a footswitch, set the ASSIGNABLE PEDAL parameter to either ARRANGEMENT UP or ARRANGEMENT DOWN (see page 5-17). The same applies for the EC5.

ARRANGEMENT UP: the arrangement number will **increase by one number every time** the footswitch is stepped on.

ARRANGEMENT DOWN: the arrangement number will **decrease by one number every time** the footswitch is stepped on.

Transpose Change

Transposition

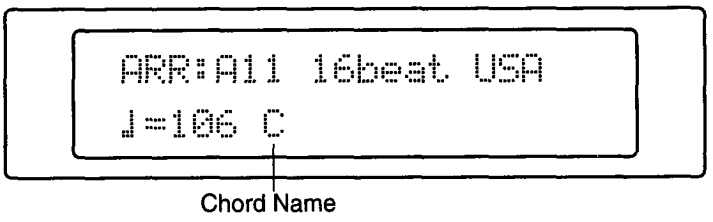
Press the **TRANSPOSE +1** or **–1 key** if you want to transpose during a performance.

☞ User's Guide page 3-6 "Transpose to an easier pitch for playing or singing"

With the ***i5S*** you can transpose up to a maximum of 11 steps in half-note increments. Using this function will transpose the timbre of the keyboard performance, the entire backing track and the chord detection function.

Display Chord Detected

Display the chord played



The arrangement chord currently performed is displayed.

This chord detection display will remain blank until an actual chord is performed, if you interrupt a performance to select a new arrangement. If you edit an arrangement during a performance, the new arrangement will continue with the chord played immediately before the change. To set the chords, play the keyboard with the chords you want to perform, within the chord detection range. The setting will be canceled when the RESET key is selected.

Refer to the page 3-9 "Now let's try playing and providing your own accompaniment" of the User's Guide for details on Chord Detection.

Tempo Change

The playback tempo of the arrangement is adjusted within the range of 40 to 240 beats per minute.

The **TEMPO/VALUE UP** and **DOWN keys** are used to change the tempo.

<Setting the tempo with TAP TEMPO>

The tempo can be set by actually tapping the keys, in addition to setting the tempo with a numerical figure.

Press the TAP TEMPO key several times according to the tempo you want to playback. The ***i5S*** will then compute the time interval between the tap and set the tempo. It requires experience to set the playback tempo in a numerical figure, but with this method, the tempo can be easily set. You can also see the numerical value of that tempo, since it will be displayed.

<External Clock Control>

EXT will appear in the tempo display area when the Global Mode Clock parameter (see page 5-11) is used to set a synchronous clock with the MIDI or HOST system. This indicates that the tempo of the ***i5S*** is being controlled by MIDI clock messages from an external sequencer or personal computer. You will not be able to change the tempo setting with the TEMPO key, at this time. If you want to adjust the tempo, make tempo adjustments through the external sequencer connected to the ***i5S***' MIDI input.

Keyboard Timbre Change

Each arrangement has two keyboard timbres: KB1 and KB2. To change the timbre, you must specify PROGRAM (timbre) using PROGRAM NUMBER keys 1 through 8.

You can select keyboard timbre KB2 only when you select the layer or split keyboard assign modes.

Bank	Programs	Comments	ROM/RAM
A	64	General MIDI programs 1-64	ROM
B	64	General MIDI programs 65-128	ROM
C	64	*i5S* preset programs 1-64	ROM
D	64	*i5S* preset programs 65-128	ROM
E	64	*i5S* preset programs 129-192	ROM
User	64	User programs 1-64	ROM
Drum	16	Drum kit	ROM(14)/RAM(2)

The programs (timbre) assigned to KB1:

- will be played across the entire keyboard when you use the single or layer keyboard assign modes.
- will be played on the upper keyboard including the split point keys when you use the split keyboard assign mode.

The programs assigned to KB2:

- will be played across the entire keyboard when you use the layer keyboard assign modes.
- will be played on the lower keyboard alone when you use the split keyboard assign mode.

Using the upper and lower keyboard separately

SPLIT: Split Point

This indicates the current keyboard split point. All of the keys from the split point on up are known as the upper keyboard, and those below it are known as the lower keyboard.

☞ User's Guide page 3-5 "Low notes don't sound"

The split point divides the upper and lower keyboards for the purpose of chord scanning based on the scanning modes set (See page 2-6 of the User's Guide for details). The mute keyboard range is determined by this split point in the mute function described on page 1-15 of this guide.

What's more, the split point will separate the two keyboard timbres when you use the split keyboard assign mode (with KB1 in the upper keyboard and KB2 in the lower).

<Setting Split Point>

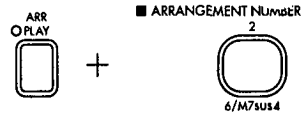
You can set the split point by pressing the note where you want the split point to occur, while holding down the SPLIT POINT key.

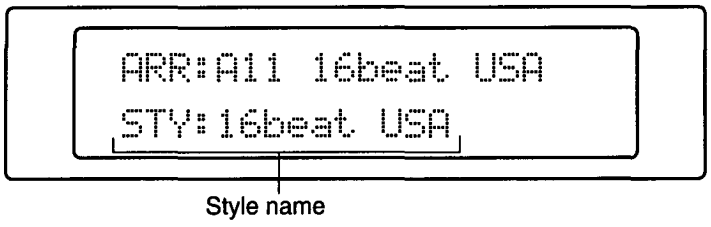
Octave

You can transpose a selected keyboard timbre up or down for a maximum of two octaves using the OCTAVE keys.

☞ User's Guide page 3-6 "Transpose to an easier pitch for playing or singing"

Page 2 Style Display

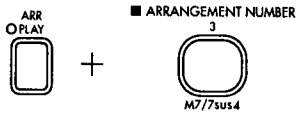




ST: Style

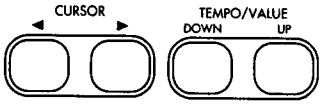
This displays the name of the style used in the current arrangement.

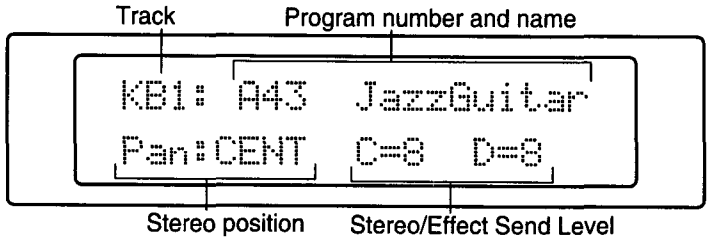
Track Setting



Page 3 Track Sound

The program (timbre) and stereo position distributed to the 8 arrangement tracks, and the volume level sending the 2-channel effect sounds can be set in this page.





Track [Drum, Perc, Bass, ACC1...ACC3, KB1, KB2]

Select the track setting you want to change.

The parameter can be selected by pressing the corresponding track key.

The volume/mute display will appear when the track key of the track displayed is pressed.

☞ Volume/Mute

Program

This parameter lets you select the program to be played by the corresponding track.

You can change the current program selection by selecting the PROGRAM BANK or PROGRAM NUMBER keys, while pressing the track to be changed, to display that track.

Pan: [OFF, L15...L01, CENT, R01...R15, PROG]

Stereo position of each track

This parameter sets the stereo position (panpot) of each track. It does this by adjusting the levels of channel A and B.

The CENT setting centers the track. L settings move the stereo position to the left, and R moves it to the right. The sound moves farther from the center to the left or right, as the numerical value of the setting increases.

The OFF setting lets you turn off the track's output to channels A and B. And the PROG setting allows you to use the panning specified by each program.

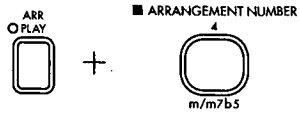
Effect Send Level C, D [0...9, P]

Level sent to Effect Processor

These parameters determine the levels of the backing track signals that are sent to the effects system through channels C or D.

You can set the level from 0 to 9 (maximum) for each channel. If you set these parameters to P, the *i5S* will use the effect send levels specified by the program's parameters.

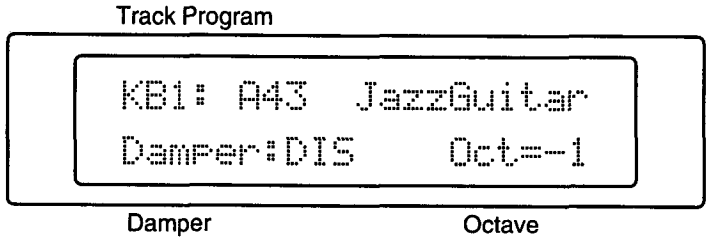
The *i5S* effect system comes with a total of 4 output channels for every arrangement including Serial, Parallel 1, Parallel 2, and Parallel 3, depending on how the two stereo effect processors are set up and the combination of the output signal path. For more details on the output channels refer to page 4-12 "Effect Placement (Output Channels)".



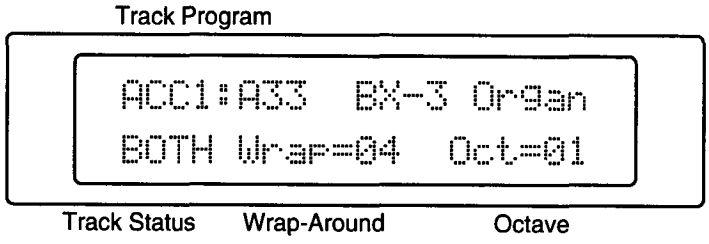
Page 4 Track Setting

In this page you can set the damper pedal modes, octave, wrap-around and other sound fields for each arrangement track.

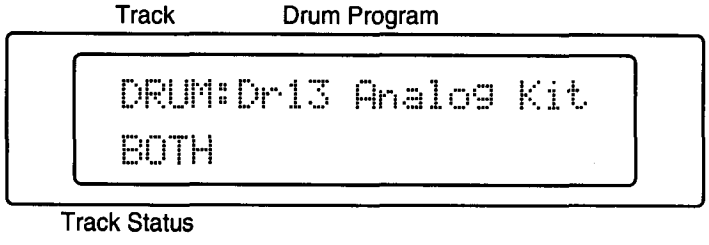
(Keyboard Track)



(Accompaniment Track)



(Drum Track)



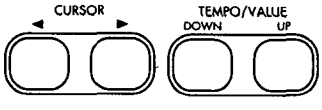
Track [Drum, Perc, Bass, ACC1...ACC3, KB1, KB2]

This parameter lets you choose which track's settings to adjust.

Program

This parameter lets you select the program to be played by the corresponding track.

You can change the current program selection by selecting the PROGRAM BANK or PROGRAM NUMBER keys, while pressing the track to be changed, to display that track.



Using damper with corresponding keyboard.

Damper (Keyboard Track only) [DIS, ENA]

This parameter lets you disable the damper switch for the corresponding keyboard timbre.

The damper will take effect when playing the keyboard in the ENA mode, and will disable the damper when playing the keyboard in the DIS mode.

This can be handy when you are playing two programs such as the organ and piano in the layer keyboard assign mode. By disabling the damper for the organ, you can enjoy damper effects on only the piano, as expected.

You may also want to prevent your damper switch from holding notes by disabling the damping effects, as it normally does during the Chord Latch function, if you will be controlling the damper switch with the Chord Latch function.

☞ See Page 1-12.

Octave [–2...0...+2]

This parameter lets you raise or lower the octave in which the bass track, accompaniment tracks, and keyboard timbres play, to a maximum of two octaves. A setting of 0 produces the standard pitch for the selected program. However, this parameter will not appear if DRUM or PERC is selected.

You can also use the front panel OCTAVE keys to change the octave setting for either of the two keyboard timbres.

☞ User's Guide page 2-7 "What happens when you press...? List of keys"

Track Status (Backing Track only) [OFF, INT, EXT, BOTH]

Use the MIDI system that is connected.

The functions of the Track Status settings are as follows:

- Backing performance is not available when you turn OFF the track parameter.
- Tracks set in INT will transmit (generally) the track's data from only the internal tone generator of the ***i5S***. It will not transmit tones to external tone generators from the MIDI OUT or TO HOST jacks.
- Tracks set in EXT will transmit a track's data to an external tone generator without the ***i5S*** playing the data itself.
- Tracks set in BOTH let you send track data to both MIDI OUT and TO HOST destinations. The ***i5S*** will also transmit the track's data to the internal tone generator of the ***i5S***.

This parameter will not appear when the keyboard track is selected.

Wrap-Around (ACC1, ACC2, ACC3, BASS only) [ORG, 1...12]

Adjusting the chord pitch for each track.

This parameter lets you specify a pitch at which the corresponding track will drop an octave. This prevents the backing tracks from rising to unnaturally high pitches when you play some chords.

This will set the backing track of the track played, by one octave. In other words, the performance will automatically drop one octave during a backing track performance, if you play a chord that is higher than the tonic chord specified. This prevents the backing tracks from rising to unnaturally high pitches.

You can set a pitch from one to twelve semitones above the tonic as the wrap-around point for the bass and each of the accompaniment tracks. You can also select ORG if you want a track to use the wrap-around setting of the style that is being played.

The number you select for the Wrap-Around parameter represents an interval relative to the key set for each chord variation in a specific style.

This parameter will not appear if DRUM, PERC, KB1 or KB2 is selected as the track field.

<Note>

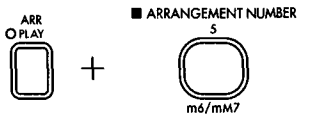
Set different wrap-around points for each track.

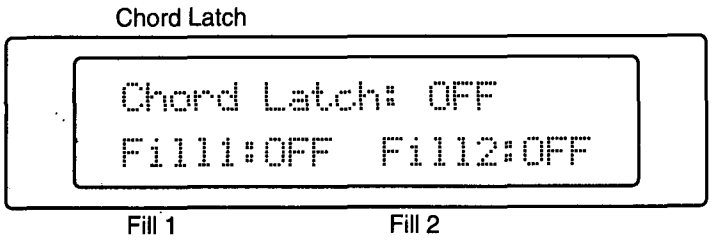
It is a good idea to set the wrap-around points to a different value for each track to make the chord progression sound more natural.

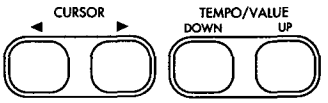
If you happen to set all of the wrap-around parameters to the same value, then all of the backing tracks will drop an octave at the same time, creating a musically unnatural situation.

When selecting wrap-around points for an arrangement, you may find it helpful to listen to one track only (mute all other tracks with the Mute function), and try out each wrap-around point while playing the chord progression you will use when performing. Do this for each track to create a more natural-sounding arrangement.

Page 5 Miscellaneous







Chord Latch [ON, OFF]

Maintain the chord with the damper switch.

This turns the Chord Latch function ON and OFF.

The Chord Latch function lets you use a damper switch to prevent the arrangement's chord setting from changing. Doing so will allow you to play the keyboard without changing the arrangement's chord setting.

You can use the DIS parameter, of the previous page, to prevent the damper switch from acting as a hold pedal for one or both keyboard timbres.

Fill 1, Fill 2: Variation Change

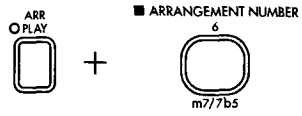
[OFF, →1...→4, 1&2...3&4, UP, DOWN]

Fill-in switches variations between fill-ins.

There are two Variation Change parameters: Fill 1 and Fill 2, as described below.

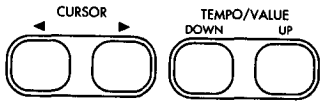
These Variation Changes let you specify which variation the arrangement should switch to after it plays each of the fill-ins.

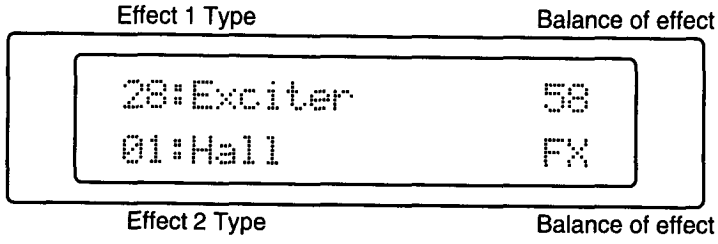
- Set these parameters to OFF when you want to continue with the variation that was playing before the fill.
- Settings preceded by a one-way arrow will always select the same variation. For example, if the Variation Change parameter of Fill 1 is set for →2, the *i5S* will always select Variation 2 after the fill-in plays, regardless of the variation played prior to Fill-in 1.
- Alternating between two variations...Let's say you insert a fill-in with Fill 1 for 2← →3. By putting this fill-in in a variation 2 performance, it will always select Variation 3 after the fill-in plays. If Fill-in 1 is selected again after that, the *i5S* will return to Variation 2 after the fill-in performance.
- The UP and DOWN settings tell the arrangement to follow each fill with the next variation in order, and then return to the original number. For example, if Fill 1 is set to UP and this fill-in is inserted during a Variation 1 performance, the *i5S* will switch to Variation 2 after the fill-in performance. Fill-in insertions thereafter will switch the variation to 2→3→4→1→2→...in numerical order between 1 and 4.



Page 6 Effects

This page details information on the effect settings that allow you to add a professional touch to your arrangements.





Here, you will use two digital signal processors to apply effects to your arrangements. Since both processors can apply two effects simultaneously, you can apply a variety of different effects to the programs playing the arrangement.

Selecting the effect type.

EFFECT TYPE

The *i5S* comes with two independent effect types for selection.

The selected effect can be adjusted of the Dry/Wet level and switched ON/OFF.

Determining the level of effect.

Dry/Wet (Effect level) [00...99, FX]

This parameter balances the volume of the sounds assigned with and without effect settings.

When the parameter is set to 00, there will be no effect output. The effect level increases (how much effect you hear) as the numerical value gets higher.

Setting the parameter to FX will allow for effect sound only.

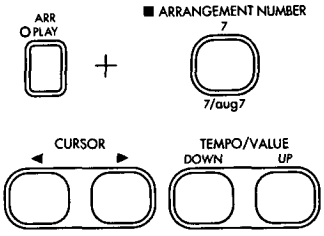
There is a need to find the optimal effect point by auditioning the programs through the numerical values if you want to add a certain level of reverb or reflection, if the optimal balance varies according to the effect type selected in 11. If you want to change the overall sound characteristics with chorus, flanger, enhancer or exciter, it is advised that the effect parameter is switched to FX to maximize the effect output to bring out the clearest effect results.

Refer to Chapter 4 "Effects" for more details on the effect types.

Utility

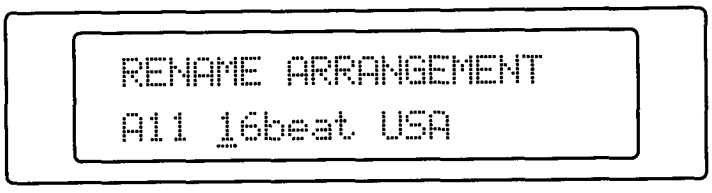
Display pages 7 and 8 contain functions that let you name your own arrangements or rename existing ones, and write them to the *i5S* memory.

Page 7 RENAME ARRANGEMENT

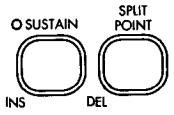


You can use this function to change the name of the arrangement you're editing. An arrangement name can consist of up to ten characters.

When you select this function, the current arrangement name will appear. Put the ◀ or ▶ cursor under the character that you want to change, and then change the character using the UP/DOWN key of the TEMPO/VALUE parameter.

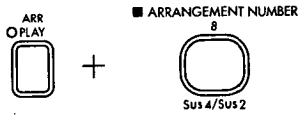


Name of current arrangement



There is a need to immediately save your new arrangement in the user bank by performing the write arrangement procedures indicated in page 8, after you change the name of your arrangement. Otherwise, your new name will return to the prior name when you switch arrangements or modes.

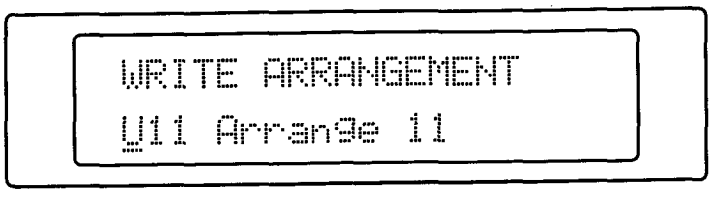
Page 8 Write Arrangement



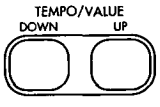
This function lets you store an arrangement you've edited in the memory of the *i5S*.

When you store an arrangement, the *i5S* will memorize not only the settings you have made in the 8 display pages of this mode, but also the current settings of all front panel keys that you can use to control your arrangement.

This, however, excludes the SYNCHRO START/STOP and TEMPO LOCK keys.



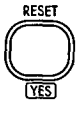
① Use the UP/DOWN keys of the TEMPO/VALUE to input the data number you want to write above the cursor.



At this time, you can not input the data number with the ARRANGEMENT BANK and ARRANGEMENT NUMBER keys.

② The arrangement name already saved will appear where the input number is. Check to see if it is okay to erase that name.

You can not restore an arrangement name that you have erased with the Write Arrangement function.



③ If it is okay to save that name press the RESET/YES key.

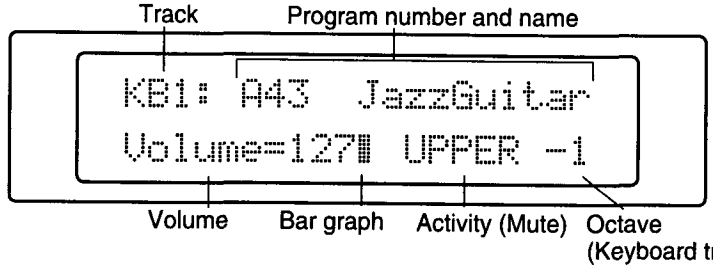
④ The prompt "Are you sure?" will appear on the *i5S* display. Press RESET/YES again if it is okay.

⑤ The data will be written in over the selected Arrangement number.

Volume/Mute

This parameter is used to set the volume and mute settings of the timbre program of each track.

This display will appear if you press any of the 8 VOLUME keys appearing in all arrangement play mode pages, at the bottom left of the LCD display.



Pressing the EXIT key after setting the parameters will bring you back to the original display.

The *i5S* will automatically return to the previous display if you leave it untouched for roughly 7 seconds after setting the parameters.

☞ User's Guide page 2-3 "VOLUME/MUTE"

Track [KB1, KB2, ACC1...3, BASS, PERC, DRUM]

Select the track in which you want to set the volume and mute parameters.

Press the VOLUME ▲/▼ key that corresponds to the track.

Adjusting the volume of the entire track.

Volume [000...127]

The volume will increase by 1-step every time you press the VOLUME UP key. The volume will continuously increase if this key is held down.

The volume will lower by 1-step every time you press the VOLUME DOWN key. The volume will continuously lower if this key is held down.

The volume is displayed in a numerical figure and a bar graph to the right of the numerical figure.

KB1 program and volume will be displayed on the LCD even if KB2 is pressed when the keyboard assign mode is in SINGLE or M.DRUM.

To make the track sound inaudible.

Track Activity [– – – –, (UPPER/LOWER/PLAY)]

You can switch between MUTE and UNMUTE track every time you simultaneously press the VOLUME ▲/▼ key that corresponds to that track.

PLAY will appear if the track is unmuted. However, KB1 and KB2 will indicate UPPER or LOWER, respectively.

A bar (– – – –) will be displayed for muted tracks.

Backing Sequence Mode

What Can the Backing Sequence Mode Do?

The Backing Sequence Mode lets you record and perform arrangements. At the heart of each backing sequence are three tracks known as arrangement tracks. Two of these tracks record performance information and key operations from the front panel, to control playback of style tracks using a selected arrangement.

The third arrangement track lets you add a melody line to the accompaniment using the keyboard timbres. You also have the option of leaving this track empty and using the keyboard timbres for live performances. You also have eight extra tracks in which you can additionally record eight additional parts of the score.

Switching Page Display

The Backing Sequence mode divides its parameters and functions among 14 pages, which are summarized on the following page of this manual. You can switch through these pages using the PAGE+ or PAGE– keys. You can select pages directly by holding down the BACKING SEQ key and pressing the upper row ARRANGEMENT NUMBER and PROGRAM NUMBER keys that correspond to that page number (pages 9-14). For example, to select page 4, hold the BACKING SEQ key and press (4) of the ARRANGEMENT NUMBER key. If you want to go directly to page 10, press (2) of the PROGRAM NUMBER key.

Always SAVE your data!

The ***i5S*** sequence memory can hold as many as ten backing sequences, up to a total of 40,000 steps of data. Each backing sequence track is limited to a maximum of 16,000 steps.

The contents of the sequence memory that is not saved will be lost forever when you turn OFF your ***i5S***. After every programming session, you should be sure to save your backing sequences on a disk using the SAVE function. It is also a good idea to periodically save data during the programming session, to prevent accidental data loss in case of a power failure.)

☞ Page 5-7

Using Other *i*-Series Disks

With the ***i5S***, you can use disks of other ***i***-Series models.

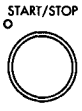
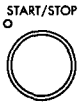
Any data storage disk for the ***i***-Series Korg Interactive Music Workstation can be inserted in the ***i5S*** disk drive to load arrangements, programs, backing sequences and drum programs into the ***i5S***.

Arrangement programs made on the ***i2***, ***i3***, ***i4S*** or ***i1*** can also be played back on the ***i5S***.

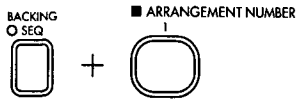
However, it is important to note that it may not be possible to playback the exactly same timbre or accompaniment made on other ***i***-Series models, depending on the program or style used.

Functions in the Backing Sequence Mode

The table below shows the layout of the *i5S* Backing Sequence Mode. For each display page we list the page name, a brief outline of the page's contents, and the numbers of the pages in this manual where you will find these contents described.

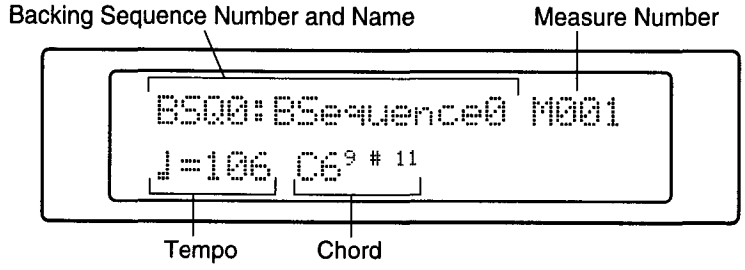
Display Page				Ref. Guide Page
1	Realtime Recording	Arrangement display.		2-3
		Volume/Mute		2-4
		Initial Setting 	Track, activity, quantize, metronome, extra track REC mode, START/END measure.	2-5
2	Step Recording	Selection of recording track.		2-10
		Recording 	Input performance data.	2-10
3	Erase Backing Sequence	Erase backing sequence.		2-13
4	Copy Backing Sequence	Copy backing sequence.		2-14
5	Delete Measure	Delete a measure.		2-15
	Insert Measure	Insert a measure.		2-16
	Erase Measure	Erase a measure.		2-17
6	Copy Measure	Copy a measure.		2-18
	Bounce Track	Bounce the track.		2-19
	Quantize	Adjust timing of the data to record.		2-20
7	Shift Note	Partial shift of a note.		2-21
8	Event Editing	Selecting a track to edit.		2-22
		Edit 	Correct event	
9	Extra Track	Selections of a track. Selection of a program.	MIDI channel, Transpose/detune.	2-23
10			Pan, effect, send level.	2-25
11	Effects	Effect type and level.		2-26
12	Next Backing Sequence	Selection of the next backing sequence to be played.		2-27
13	Rename Backing Sequence	Change the name of the backing sequence.		2-28
14	SMF Converter	Conversion into a standard MIDI file.		2-29

Realtime Recording



Page 1 Realtime

This parameter is used for initial REC/PLAYBACK settings.



Display of Arrangement

The arrangement currently used by the backing sequence will appear when the EXIT key is pressed in page 1.

You will return to the original display when the EXIT key is pressed once again, or if you leave the keys untouched for several seconds.

Selecting the backing sequence.

Backing Sequence Number [0...9]

This parameter is used to select the backing sequence to playback or record.

The name of the current backing sequence will appear at the top left of the display. The backing sequence name can be changed using the Rename Backing Sequence function.

Backing Sequence Name

This parameter displays the name of the backing sequence selected for playback or record. The backing sequence can be changed with the backing sequence number at the top of the cursor. Refer to page 2-11 of the User's Guide for more details on how to change the backing sequence.

M (Measure Number)

This indicates the location at which recording or playback is set to begin. Each track of a backing sequence can contain a maximum of 999 measures.

You can reset the measure point to 1 by pressing the RESET key. This point will automatically be reset whenever a backing sequence is played back to the end of the sequence.

Adjusting the tempo.

♩=Tempo [REC, AUT, 40...240]

This parameter is used to adjust the tempo of the backing sequence between 40 to 240 beats per minute.

This is a convenient feature if you want to playback a backing sequence at a faster tempo, when it was initially recorded at a slow tempo.

Tempo changes can also be recorded as you record the backing sequence.
☞ Page 2-8

Chord Display

This field indicates the chord that the backing sequence is currently playing. The arrangement will be played back according to these chords.

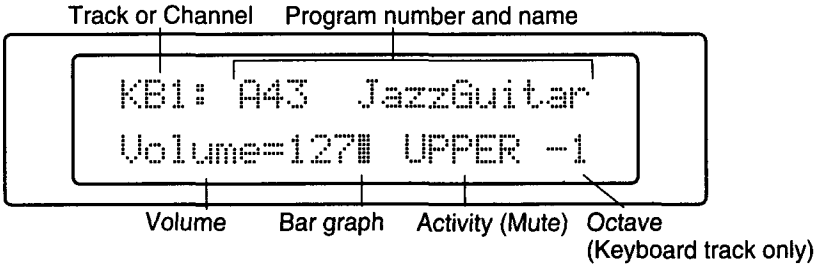
You can change the chord setting by playing a chord in the chord-scanning range of the keyboard. The setting will be canceled by pressing the RESET key.

Details of the Chord Scanning function that the ***i5S*** can recognize are detailed in the Appendix of the Refernce Guide.

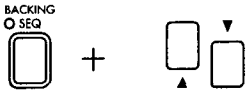
Volume/Mute

This parameter is used to set the volume and mute settings of the timbre program of each track.

This display will appear if you press any of the 8 VOLUME keys at the left of the LCD display, in page 1. The type of parameter displayed will vary slightly depending on the track type. Refer to the details of each parameter for more information on the parameters displayed.



Track [KB1, KB2, ACC1...3, BASS, PERC, DRUM, Etr1...Etr8]



Select the track in which you want to set the volume and mute parameters.

Press the VOLUME ▲ key or ▼ key that corresponds to the track.

Press the BACKING SEQ key once more when you want to select an external track. The LED for the BACKING SEQ will start blinking. You can select the corresponding external track if the ▲ key or ▼ key is pressed again at this time.

Program selection for each track is possible while in the banking sequence mode, by using the PROGRAM BANK or PROGRAM NUMBER for the two tracks KB1 and KB2, and 8 extra tracks Etr1 to Etr8. However, the preset arrangement programs can only be used for ACC1/2/3, BASS, PERC and DRUM tracks. Therefore, program selection is not possible for these tracks.

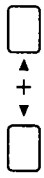
Track Volume [000...127]

Adjusting the volume of the entire track.

The volume will increase by 1-step every time you press the VOLUME ▲ key. The volume will continuously increase if this key is held down.

The volume will lower by 1-step every time you press the VOLUME ▼ key. The volume will continuously lower if this key is held down.

The volume is displayed in a numerical figure and a bar graph to the right of the numerical figure.



To make the track sound inaudible.

Track Activity (Arrangement Track only)

[– – – – –, (Upper/Lower/Play)]

You can switch between MUTE and UNMUTE track every time you simultaneously press the VOLUME ▲ key or ▼ key that corresponds to that track.

PLAY will appear if the track is unmuted. However, KB1 and KB2 will indicate UPPER or LOWER, respectively.

A bar (– – – –) will be displayed for muted tracks.

Octave (Keyboard Track only)

This parameter lets you raise or lower the octave of the keyboard timbre. A setting of 0 produces the standard pitch for the selected program.

You can also use the front panel OCTAVE keys or the track setting on page 4 of the arrangement play mode, to change the octave setting for the keyboard timbre.

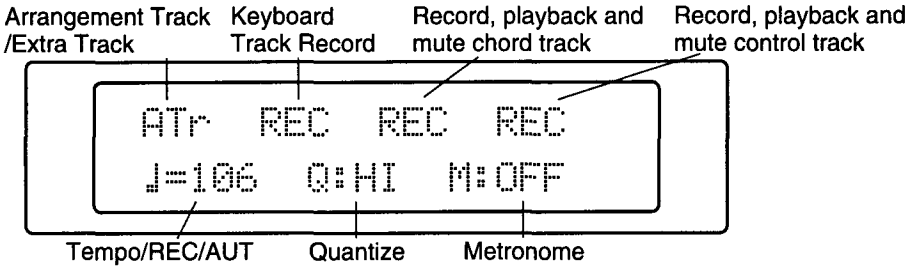
☞ Page 1-9 "Track Setting"

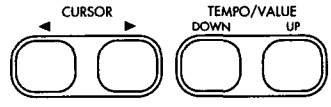
☞ User's Guide page 2-7

Realtime Recording

When the BACKING SEQ REC key is pressed after making initial parameter settings in page 1 of the Backing Sequence mode, the page containing parameters to set the track to record, recording quantize and metronome ON/OFF will appear.

The parameters for the recording track and quantize are set here.





Track [ATr, ETr1...ETr8]

This indicates the track to be recorded.

ATr: Arrangement Track

Use this parameter for realtime recording of the keyboard track, control track, or chord track.

ETr1...ETr8: Extra Track

Use this parameter for realtime recording of the extra track.

Track Activity (Arrangement Track only) [– – – –, REC, KBTr/CTRL/CHRD/MUTE]

Select the track to record or playback.

The track activity bars can be used to mute the keyboard, chord, and control tracks during recording or playback.

– – – –: This bar will appear when the track is empty. In this case you can select the REC function. However, playback and MUTE will not be available since there is no data in the track.

REC: Use this function when you want to enable realtime recording of a track.

The REC function can be selected whether or not there is data in the track.

However, it is important to note that recording on a track with existing data will overwrite the previous data. This means the previous data will be lost.

The *i5S* keyboard performance information is recorded on the keyboard track.

The control track consists of information regarding which arrangements, variations, etc. were recorded using the keys on the *i5S* panel to select or change the details.

The chord track consists of chords specified through the chord scanning mode or CHORD key.

KBTr/CTRL/CHRD:

The name of the track will appear as data exists in a track.

By keeping the track displayed you can prevent the track data from being recording during realtime recording. Only playback will be possible at this time.

MUTE: Muting the track will prevent data from being recorded in realtime, if data already exists in that track.

Record Mode Settings (Extra Track only)

4 Rec Modes

[OVWR, OVDB, AUTP, MANP]

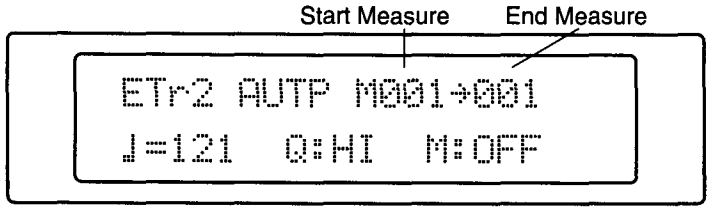
This parameter is used to select the realtime recording mode when recording new backing sequence data. There are four ways for realtime recording on extra tracks.

The easier way is to choose the OVWR (Overwrite Recording) setting to overwrite previous track data, or use the OVDB setting to overdub new data on top of the old.

Overwrite recording will replace all previous data with new data. However, overdub recording will allow for you to record over existing data. This means you will keep the previous data, while you record new data over it.

There are two types of punch-in recording methods if you want to record (add) a measure (punch in) in a backing sequence. Use AUTP (automatic punch recording) if you want the *i5S* to punch in and out of record mode automatically, or MANP (manual punch recording) if you would prefer to do it manually. ☞ Page 2-8

PUNCH IN/OUT for manual punch recording is controlled through the assignable pedal or EC5 external controller in the Global Mode. ☞ Page 5-17



Start Measure

[0...999]

This setting is displayed only when you set the Record Mode setting to AUTP. When you use autopunch recording, the *i5S* will begin recording at the start of the measure you select here.

End Measure

[0...999]

This setting is displayed only when you set the Record Mode setting to AUTP. When you use autopunch recording, the *i5S* will begin recording at the end of the measure you select here.

To record only one measure, set this parameter to the same value as the Start Measure parameter.

Adjust the timing of the performance.

Recording Quantize

[HI, 𝅘𝅥𝅯𝅘𝅥𝅯𝅘𝅥𝅯, 𝅘𝅥𝅯𝅘𝅥𝅯, 𝅘𝅥𝅯𝅘𝅥𝅯𝅘𝅥𝅯, 𝅘𝅥𝅯, 𝅘𝅥𝅯𝅘𝅥𝅯𝅘𝅥𝅯, 𝅘𝅥𝅯, ♩]

The Quantize parameter sets the degree of accuracy to which the *i5S* will adjust the timing of data as you record it.

You should select HI when you want your recorded data to reproduce precisely the timing of the original performance. When you use this setting, the *i5S* will record data using a resolution of 96 pulses per quarter note (PPQN).

Other settings will adjust the timing of all recorded data to the nearest interval specified by the setting. Thus, if you set this parameter to ♩, all of the notes you play will be recorded as quarter notes.

If you record pitch bends or other constantly changing control data with a rough quantization such as ♩ or 𝅘𝅥𝅯, the control change will produce an unnatural stepped sound when played back. To avoid this, record the data at HI, then use the Quantize function on page 6-3 of the Backing Sequence mode display to correct the timing of the note data only. ☞ Page 2-20

M (Metronome) [ON, OFF, REC]

Metronome sound to start performance.

This setting is used to turn the metronome ON or OFF.

ON ..... The metronome will sound while recording and playing.

REC ..... The metronome will sound during recording only.

Recording Tempo Change in Realtime

To record tempo changes to the Tempo Track, first press the BACKING SEQ REC keys. Next, adjust the cursor to the tempo display and simultaneously press the UP/DOWN key. The REC indication will appear in the tempo setting area. Now press the START/STOP key to begin recording. The REC indication will change back to the tempo setting, allowing you to adjust it with the TEMPO/ VALUE controls. The *i5S* will record all changes you make to the Tempo setting.

When you press the START/STOP key again to stop recording, the Tempo setting will automatically change to AUT, allowing you to hear the tempo changes you recorded, the next time you play the backing sequence.

External Clock Control

EXT will appear in place of a tempo when the Global Mode Clock Source parameter is set to HOST or MIDI. This indicates that the tempo of the *i5S* is being controlled by MIDI clock messages from an external sequencer that is connected to the *i5S*' MIDI input.You will not be able to change the tempo setting from the front panel when EXT is displayed.

Time Signature Change

If you want to change the time signature in the middle of a track, you must stop recording and adjust the beat parameter (time signature) using the Event Edit function.

When you are adding tracks to a backing sequence, the *i5S* will record the new data using the same beat as the existing tracks. If the existing tracks contain time signature changes in the middle of a backing sequence, the new track will follow these changes.

Be aware that any changes in the beat will apply to all tracks that contain data. If you change the beat for one track, the change will be reflected in the other tracks, as well.

If the tempo is set in AUT when the time signature is changed, the backing sequence will be played back in the new beat. To set the beat to AUT, set the cursor to the tempo display and press the UP/DOWN keys of the TEMPO/ VALUE at the same time.

There is no need to worry about a mistake in cutting the measure too short when changing the beat parameters. The Event Edit function can be used to restore the previous beat, which will also restore the parameters for the other tracks, as well.

The beat parameter cannot be changed during recording or playback functions.

Punch-In Recording

The punch-in method can be used to re-record one part of the backing sequence when it is being recorded.

The Backing Sequence mode display contains parameters for eight extra tracks. This lets you take several recordings for each track. This means you can select the best take and insert it later. This is done by setting the REC mode at the top of the realtime recording at the top of the display of the extra track. ☞ Page 2-4

If you know from what measure to what measure that you want to redo, you can use the Autopunch Recording (AUTP) setting. By designating the first and the last measures, you can automatically switch into the REC status when you reach that portion during playback. The recording will automatically end when you replay the correction on the ***i5S***.

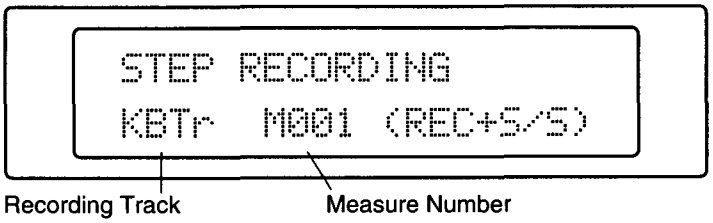
Manual Punch Recording allows realtime designation of the portion you want to redo. To use this feature, there is a need to previously assign a PUNCH IN/OUT setting with the assignable pedal or EC5 external controller, while in the Global Mode. ☞ P.5-17

Step on the pedal switch or controller assigned for PUNCH IN/OUT when you reach the portion you want to redo when you are playing back the measure. The ***i5S*** will immediately switch to the REC mode and allow you to record the new measure by playing the measure you want. The REC function will be canceled by stepping on the switch again.

Track Editing

Pages 2 through 8 of the Backing Sequence mode provide functions that let you record data in steps, and edit individual events within the backing sequence data you have recorded. These display pages also contain utilities that you can use to delete, erase, copy, or insert measures, and bounce whole tracks (operation to bundle multiple tracks into one).

Page 2 Step Recording



The Step Recording function lets you enter note, control, or chord data one step at a time. If you use this method to record any measures that already contain data, the old data will be replace by the new data you record.

Recording Track [KBTr, CHRD, CNTL, ETr1...ETr8]

Selecting the track to record.

This setting is used to select the track for step recording.

KBTr: The keyboard tracks are step recorded.

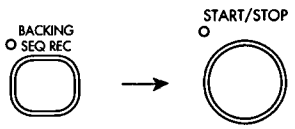
CHRD: The chord tracks are step recorded, creating the chord progression of the backing sequence.

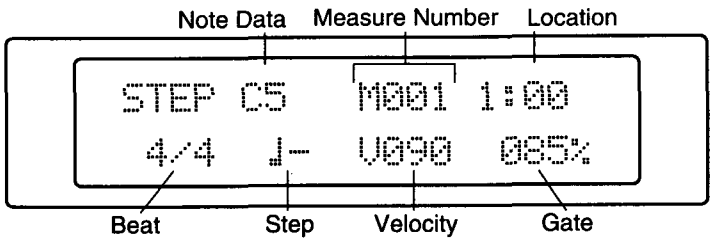
CNTL: The control track is step recorded.

This setting is used to record arrangement, variations or other front panel control changes used in the backing sequence.

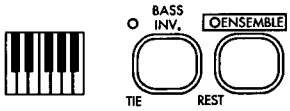
ETR1-ETR8: Eight of the extra tracks are step recorded.

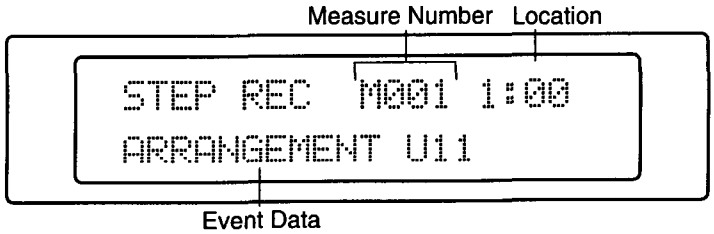
The following display will appear when you press the BACKING SEQ REC key, and then the START/STOP key. Select the parameter you want to change using the cursor and then specify the data using the UP/DOWN keys of the TEMPO/ VALUE. However, it is important to remember that data can be input other than with the UP/DOWN keys. Refer to the illustration of the keys in the outer margins of the page of the guide explaining the parameters. Please note that data that can be input will vary depending on the track you select.



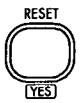


(during keyboard track or extra track)

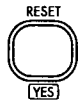


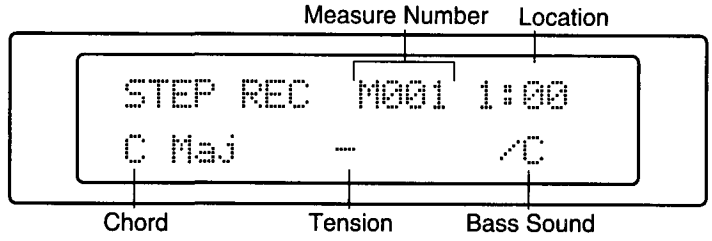


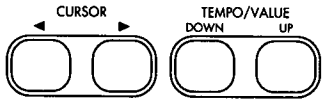
(during control track)

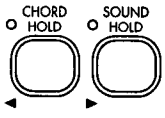


(during chord track)









Note Data (Keyboard Track, Extra Track only)

This indicates the name of the note of the newest data recorded.

Measure Number

This displays the current measure.

Location

This indicates the current location in which data can be recorded.

The numerical figure following the colon indicates the beat number within that measure.

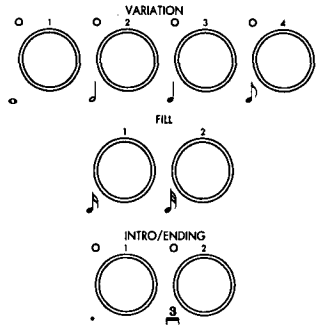
The double-digit figure on the right side indicates the length at 96 pulses per quarter note.

Beat (Keyboard Track, Extra Track only)

This displays the current beat that is set.

Step (Keyboard Track, Extra Track only)

[𝅝, 𝅗𝅥, ♩, ♪, 𝅘𝅥𝅯, 𝅘𝅥𝅰 / . / 3]



This setting is used to set the length of the step to progress for every data input.

The step is displayed as a musical note.

You can specify from semibreves 𝅝 (whole notes) to demisemiquaver 𝅘𝅥𝅰 (1/32 notes). Further they can each be played at 1.5 times the time signature of that note (.) or 2/3 the time signature of that note (3).

The step can be set using the UP/DOWN key of the TEMPO/VALUE or directly recorded using the style element key on the main panel.

☞ User's Guide page 2-8 "What happens when you press...? List of keys"

Velocity (Keyboard Track and Extra Track only)

[002...127, KEY]

This is used to set the velocity of the sound. The strength with which you hit the *i5S* keyboard will automatically be used for the velocity.

Gate (Keyboard Track and Extra Track only)

[001...100%]

The length will be set according to the ratio of the note set in the step and the length of the note (considered as 100) for the period of time the note is actually output. Decreasing this value will give you a rhythmical staccato.

Increasing this value will give you a lingering tenuto.

Event (Control and Track only)

This is used to specify the type of data to input in the control track. The usable events are as follows:

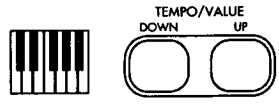
Event Type	Setting
Arrangement	11-88
Style Element	OFF, VAR1-VAR4, INT1, INT2, END1, END2, FIL1, FIL2
Keyboard Assign	SINGLE, LAYER SPLIT DRUM
Chord Scanning	OFF, LOWER, UPPER, FULL
Chord Hold	OFF, ON
Bass Inversion	OFF, ON
Transpose	-11...-1,00, +1...+11
DRUM Mute	PLAY, MUTE
PERC Mute	
BASS Mute	
ACC1 Mute	
ACC2 Mute	
ACC3 Mute	
Drum Map	1-16
KB1 Program	A11-A88, B11-B88, C11-C88, D11-D88, E11-E88, U11-U88, DR11-DR28
KB2 Program	
KB1 Octave	-2, -1, 0+1, +2
KB2 Octave	

Drum Map

This is a summary of patterns replacing some drum sounds in the drum map drum program with of other drum instruments. It can replace drums sounds with Latin percussion, snare drums with sandwich sounds, or hi-hat cymbals with ride cymbals. There are a total of 8 patterns available. It is possible to easily change the drum sounds by re-specifying the drum map, whether it be for the same drum program or same style element.

Refer to the Drum Map Table for more details on the sounds that you can replace with respective drum maps.

Chord (Chord Track only)



This is used to specify the chord to input in the chord track.

Tension (Chord Track only)

This is used to specify the tension to add to the chord.

Bass Sound (Chord Track only)

This is used to specify the bass sound separate from the chord route.

The chord progression can be recorded in two ways. The first is to chord scan the chords played on the keyboard to record the chord directly. The other method is to input chords using the chord key.

User's Guide page 2-12 "What happens when you press...? List of keys"

As so with input of other data, this can also be input using the UP/DOWN key of the TEMPO/VALUE setting.

Always turn ON the CHORD HOLD key when input chords using the chord key.

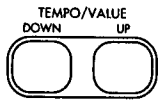
The step recording function will be canceled by pressing the START/STOP key after recording.

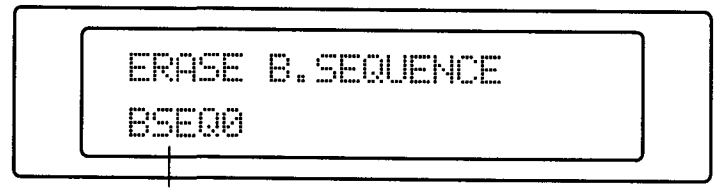
Erase Backing Sequence

Page 3 Erase Backing Sequence

Erase Backing Sequence

This feature will erase all data from the current backing sequence.

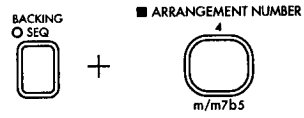




Backing sequence to erase

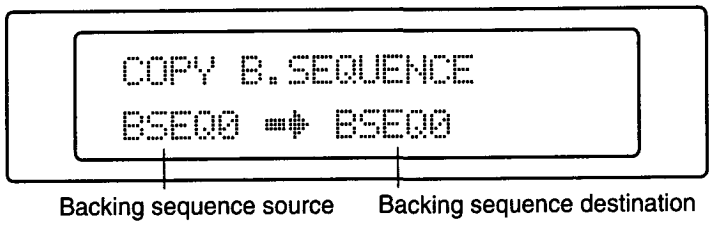
Specify the backing sequence to erase, then press the RESET/[YES] key. The *i5S* will ask you if it is okay to go ahead with the erase operation, and then it will go ahead and erase the backing sequence.

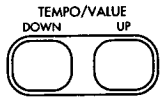
Page 4 Copy Backing Sequence



Copy Backing Sequence

This operation copies the current backing sequence to another backing sequence.





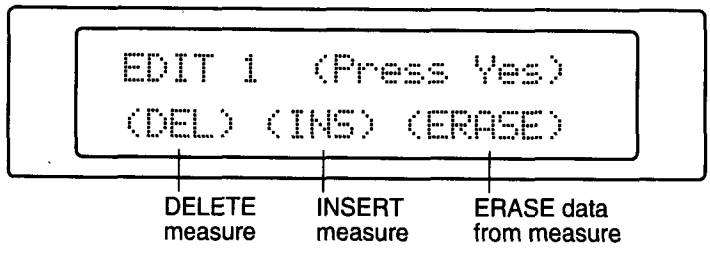
Use the TEMPO/VALUE key to specify the backing sequence to copy the current backing sequence to be copied.

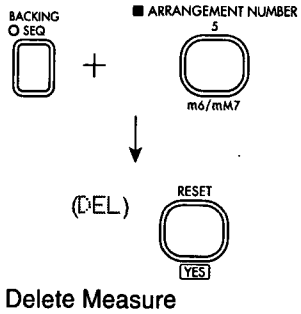
After specifying the backing sequence copy destination, press the RESET/[YES] key. The ***i5S*** will ask you if it is okay to go ahead with the copy operation, and then it will go ahead and copy the backing sequence.

If you specify the same backing sequence to be copied and to copy to, the copy operation will not be executed, even if you press the RESET/[YES] key.

Page 5 Edit 1

This page is used to select three functions: DELETE measure, INSERT measure or ERASE data from measure. Bring the cursor to the operation intended then press the RESET/[YES] key to open the sub-page to execute each command.





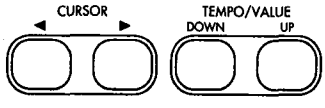
Delete Measure

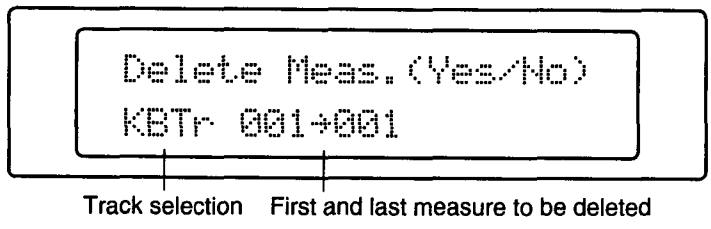
Page 5-1 Delete Measure

Delete Measure

This operation will delete a measure from the specified track. To use this function, select a track above the cursor. Choose ALL to cut measures from all tracks, including the chord, control, and tempo tracks.

Next, select the first and last measures to be deleted using the VALUE +/- key. (Set the same number for both to delete only one measure.)





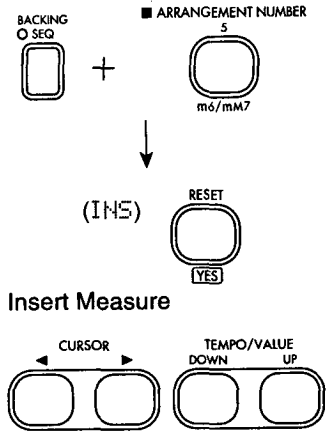
When you are sure of your choice press RESET/[YES]. The *i5S* will delete the measures after asking for confirmation.

<If the backing sequence includes changes in time signature>

Any measures following the deleted measure will be moved forward. If you delete measures from one track, the measures that are moved forward will use the same time signature as the corresponding measures of other tracks.

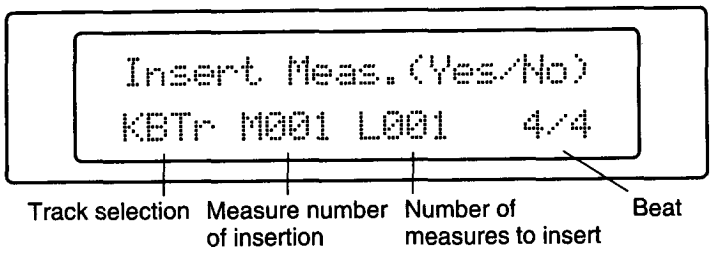
The renumbered measures may thus be truncated or expanded as a result of the deletion.

Page 5-2 Insert Measure



Insert Measure

This operation lets you insert measures at a specific portion of the track.



First, specify the track insertion point using the VALUE +/– key. Choose ALL to insert measures in all of the tracks, including the chord, control, and tempo tracks.

Next, specify the number of the measure before the one you want to insert the new measure after. You can also specify a time signature for the new measures but read the following precautions before doing so.

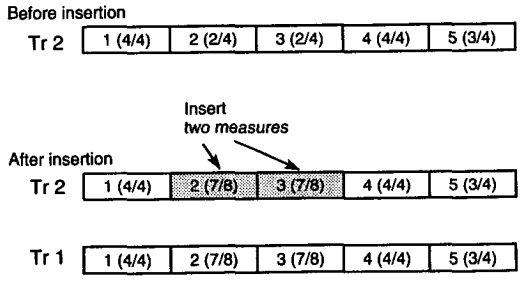
Press the RESET/[YES] key if the setting is okay. The *i5S* will insert the measures after asking for confirmation.

<If the backing sequence includes measures with varying time signatures>

You new time signature will take effect when the tempo is set to ♩ = AUT.

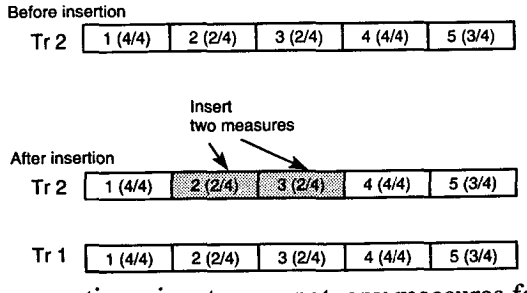
When varying time signatures are chosen the measures of all tracks will be truncated or expanded to match the time signature.

Time signature = insert two 7/8measures



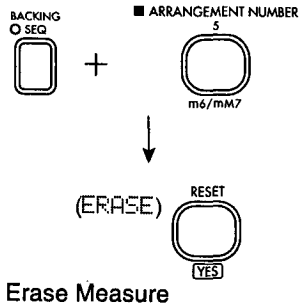
If varying time signatures are not specified the *i5S* will show **1** for this parameter, and the new measures will use the same time signature as the corresponding measures of other tracks that already contain data, or of the following measures if all other tracks are empty.

Time signature = **1**

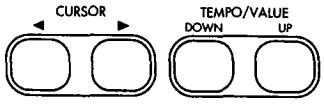


Whether you select a new time signature or not, any measures following the inserted measures will be pushed back. If you insert measures to one track only, the measures that are pushed back will use the same time signature as the corresponding measures of other tracks, as shown in the illustrations.

The renumbered measures may thus be truncated or expanded as a result of the insertion.



Erase Measure

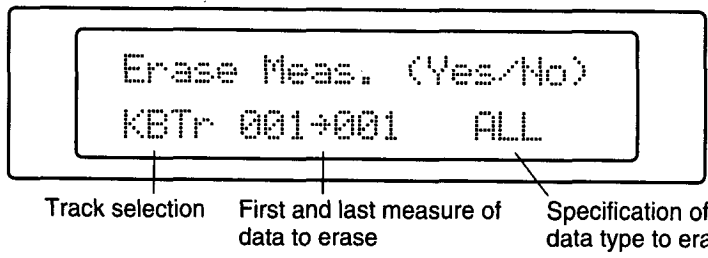


Page 5-3 Erase Measure

Erase Measure

This operation erases some or all data from one or more measures.

To use this function, first select a track above cursor key A. Choose ALL to erase data from all tracks, including the chord, control, and tempo tracks.



Next, set the first and last measures to be erased using the VALUE +/– key. (Set the same number for both to erase data from only one measure.)

Setting	Data Erased
ALL	All data.
NOTE	All note messages.
CTRL	All control change messages.
AFTT	All channel and polyphonic aftertouch messages.
BEND	All pitch bend messages.
PROG	All program change messages.

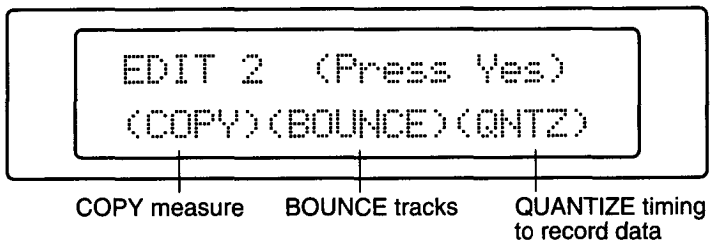
Press the RESET/YES key if the setting is okay. The ***i5S*** will erase the data from the specified measures after asking for confirmation.

<Erasing control changes>

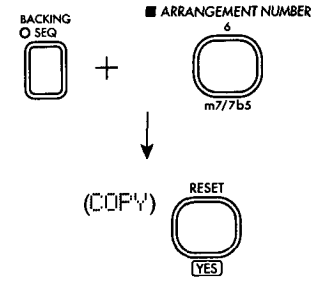
Some control changes such as damper changes or pitch bends, may "stick" if you erase the messages that turn them off. If this happens, you should either erase the messages that are sticking, or use the Event Edit function to correct the data. (see page 2-22 of this Reference Guide).

Page 6 Edit 2

This page is used to select three functions: COPY measure, BOUNCE tracks or QUANTIZE timing to record data. Bring the cursor to the operation intended then press the RESET/[YES] key to open the sub-page to execute each command.



Page 6-1 Copy Measure

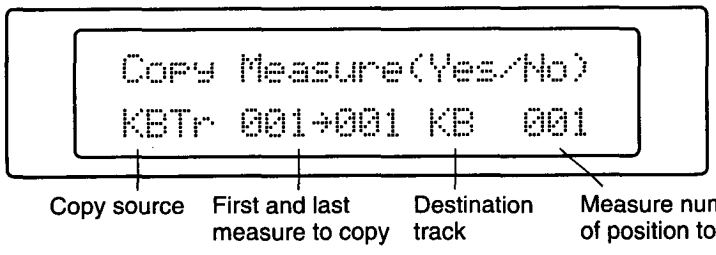


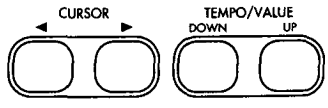
Copy Measure

Copy Measure

This operation copies measures, either within a track or between tracks.

To use this function, first specify the track containing the measures you want to copy above the cursor. Choose ALL to copy the data from all tracks, including the chord, control, and tempo tracks. Next, set the first and last measures to be copied using the VALUE +/– key. (Set the same number for both to copy data from only one measure.)





Next, select the destination track. (The *i5S* will select the ALL setting automatically if you have selected ALL above the cursor. If you want to copy data between the keyboard track and one of the extra tracks, first select the extra track, then press VALUE +/– to select the keyboard track.) Finally, enter the number of the measure where the *i5S* should place the first of the duplicate measures.

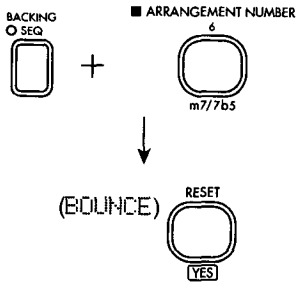
The copy operation will not take effect if the destination track and the copy source vary when CTRL (CTL) or CHORD (CHD) is specified.

Press the RESET/[YES] key if the setting is okay. The *i5S* will copy the data after asking for confirmation. All data already existing in the measures of the destination tracks will be replaced with these newly copied measures.

<If the backing sequence includes changes in time signature>

If tracks other than the destination track contain data for measures corresponding to the destination measures, the copied measures will use the same time signature as the other tracks.

The copied measures may thus be truncated or expanded as a result of the copy operation.



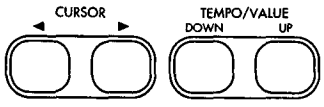
Bounce Track

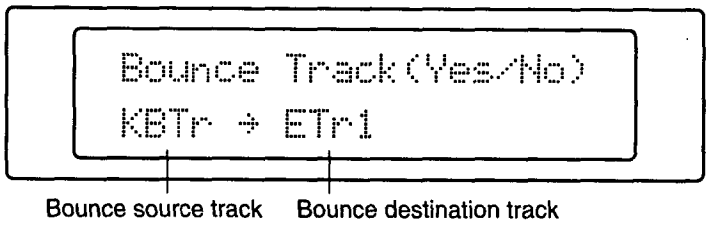
Page 6-2 Bounce Track

Bounce Track

This function merges the backing sequence data for one track with that of another. The resulting combined track will use the program assignment, MIDI channel, and other track settings for the destination track. All backing sequence data will be erased from the source track.

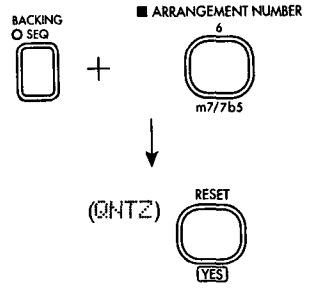
If both tracks contain pitch bends, damper changes, or other control change data, this data may create unexpected results when combined. You may want to use the Erase Measure function, described on page 2-17 of this Reference Guide, to delete all control change data from one of the tracks before combining them.



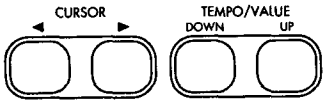


To use this function, select the source track at the bottom left of the LCD display. Then select the merge destination track on the right. (You can select only the keyboard track or one of the extra tracks for both of these parameters.) Press the RESET/[YES] key if the setting is okay. The *i5S* will merge the two tracks into one after asking for confirmation.

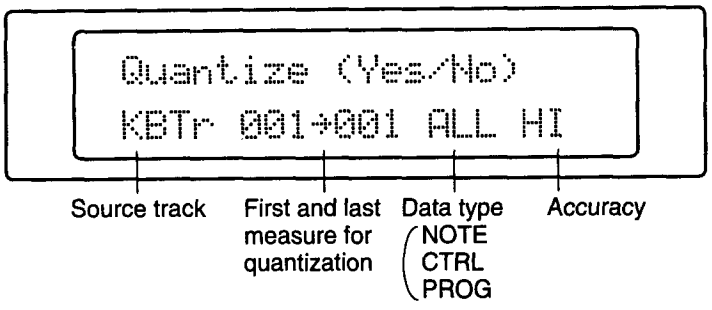
Page 6-3 Quantize



The timing of the recorded data is corrected.



You can use the Quantize function to adjust the timing of data you have already recorded.



This function is more flexible than the Quantize parameter on the Realtime Recording Page of the Backing Sequence Mode in that it lets you select a range of measures and a data type to quantize, leaving other measures or data types unaffected.

To use this function, first set the track to be quantized. (Select CHRD, CTRL, or TEMPO to quantize the chord, control, or tempo tracks, respectively.)

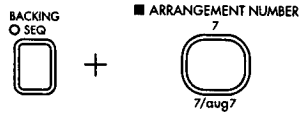
Next set the first and last measure to quantize.

If you have selected any track other than the chord, control, or tempo tracks, you can specify the type of data to be quantized. The table below lists your options.

Setting	Data quantized
ALL	All data.
NOTE	All note messages.
CTRL	All control change messages.
AFTT	All channel and polyphonic aftertouch messages.
BEND	All pitch bend messages.
PROG	All program change messages.

Finally, set the Quantize value. The Quantize parameter is the same as that used in realtime recording.

Press the RESET/[YES] key if the setting is okay. The *i5S* will quantize the data after asking for confirmation.

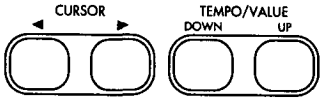


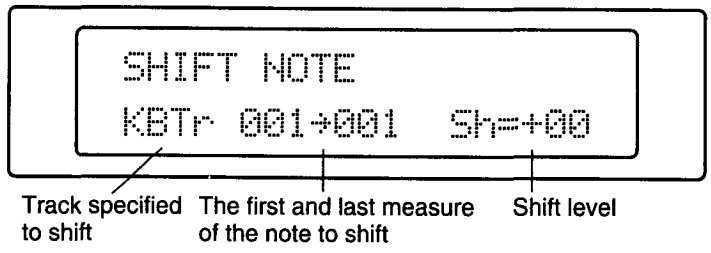
Shift notes within a specific range

Page 7 Shift Note

Shift Note

This operation shifts notes up or down. You can use it to transpose either a specified range of notes, or all notes.



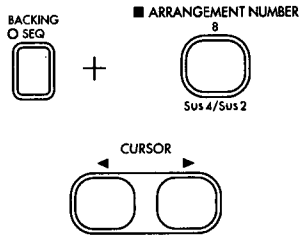


To use this function, first set the track whose notes you want to shift. (You can select the keyboard track or any of the extra tracks.) Then set the first and last measures to be affected.

Finally, set the level by which the notes will be shifted. You can shift notes up or down in semitones for up to a maximum of two octaves.

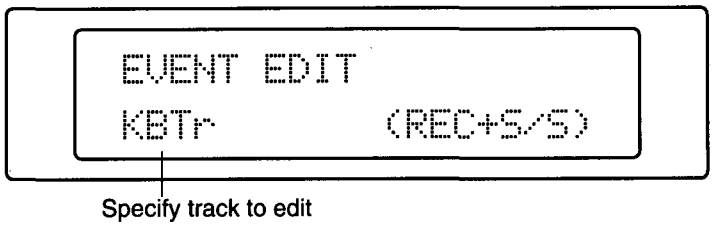
Press the RESET/[YES] key if the setting is okay. The *i5S* will shift the note of the specified range after asking for confirmation.

Page 8 Event Edit

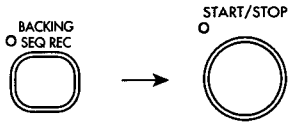


Event Edit

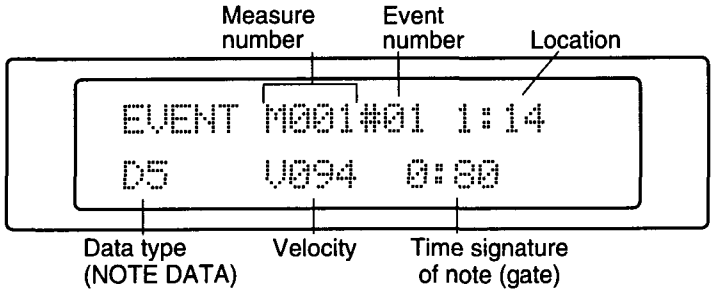
This function lets you modify the characteristics of individual musical events, such as notes or MIDI control changes.



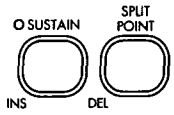
To use this function, select the track you want to edit with the cursor, and then press the BACKING SEQ REC key. Press START/STOP to begin editing. The *i5S* will switch to the display shown below. Use this display to edit the events you have selected.

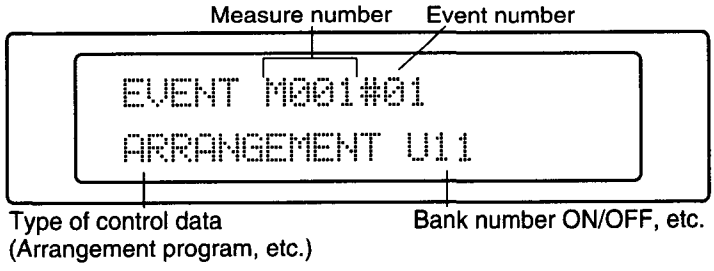


Refer to the Step Recording Section (page 2-10) for more details on the event features.

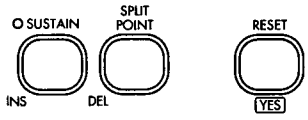


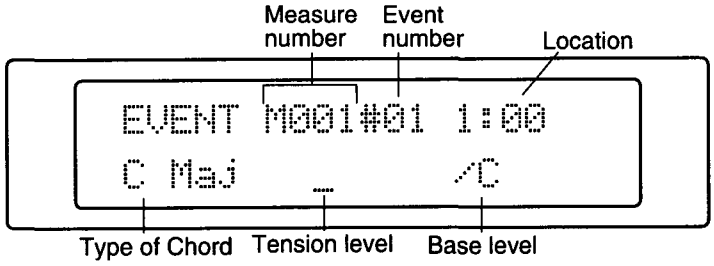
(Keyboard track and extra track only)



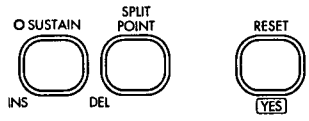


(for control track)

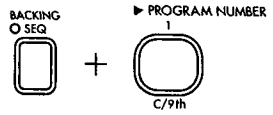




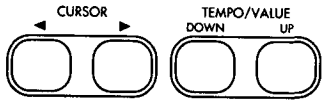
(for chord track only)



After editing press the START/STOP key again to exit the EVENT Edit function.

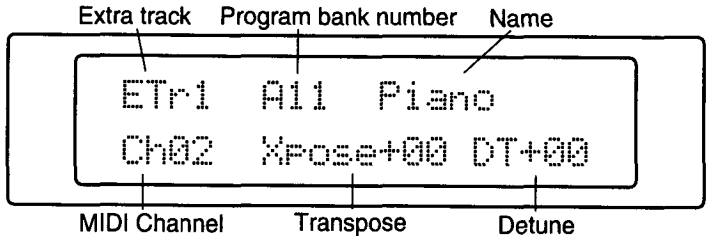


Eight extra tracks that can be used to record other musical parts or control information.



Page 9 Extra Track

Page 9 of the Backing Sequence Mode contains parameters for the eight extra tracks from ETr1 to ETr8 allowing you to select the MIDI channel used by each track and the program for track data. You can also transpose or detune each track.



This page does not let you make any transpose settings for the keyboard tracks. Instead, the current setting of the TRANSPOSE keys will be used to transpose the keyboard timbres.

Track [ETr1...ETr8]

This parameter lets you choose which extra track's settings to adjust.

Ch (Channel) [1...16]

This parameter sets the MIDI channel for each track. The track will use this channel to receive MIDI data from the keyboard , MIDI IN and TO HOST jacks. It will transmit data on this channel as long as its Track Status parameter has been set to EXT or BOTH (see page 1-10 of this Guide).

You can set two or more tracks to use a single MIDI channel. The tone generator will play, in unison, the programs assigned to all tracks set to this channel whenever you select one of the tracks for the Track parameter described above. (It will also play all of the programs when it receives data for that channel via the MIDI IN or TO HOST jacks.)

You can also set two or more tracks to use the same MIDI channel, then divide your performance data between the tracks. You might find it convenient, for example, to record note data in one track, and control data such as volume changes and pitch bends in another.

Setting the pitch range for each track.

Xpose (Transpose) [–24...+24]

This parameter lets you transpose tracks up or down in steps of one semitone, to a maximum of two octaves. A setting of 0 produces the standard pitch for the selected program.

<If a track won't play high notes...>

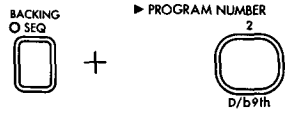
Since every program has an upper limit to its pitch range, some tracks may not produce any sound if you transpose them up and play notes in the higher ranges of the keyboard.

DT (Detune) [–50...+50]

Fine tuning the pitch of each track

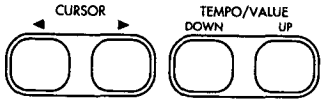
These parameters adjust the pitch of corresponding tracks in one-cent steps, to a maximum of 50 cents (one half-note). They are most effectively used to detune two tracks playing in unison, for a thicker sound.

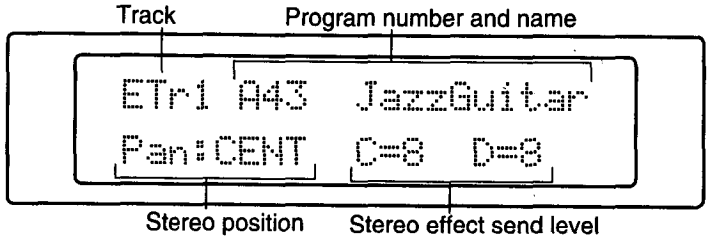
To achieve this effect, set the Channel parameter for two tracks to the same value, but record data on only one of these tracks. Then adjust the Detune parameters for both tracks in a inverse proportion, by raising one and lowering the other by the same amount. (If you detune only one track, the pair of tracks will produce an off-key sound.)



Page 10 Track Sound

The parameter on this page lets you set the program (timbre), stereo position, and send level of the sound input in the two channel effect systems assigned to the eight extra tracks.





Track [ETr1...8]

This parameter lets you choose which track's settings to adjust.

You can use this function by pressing the corresponding track key.

Program

This field lets you select the program (timbre) to be played by the corresponding track.

You can change the current program selection by pressing the track key you want to change and displaying that track on the LCD, or by using the PROGRAM BANK key or PROGRAM NUMBER key to change the program.

Stereo position of each track

Pan: [OFF, L15...L01, CENT, R01...R15, PROG]

This parameter is used to set the stereo position (pan) of each track. It does this by adjusting the levels of channel A and B.

The CENT setting centers the track. L settings will move the stereo position to the left, while R settings will move it to the right. The sound moves farther from the center as the numerical value of the setting increases.

The OFF setting lets you turn off the track's output to Channels A and B. The PROG setting will maintain the panning specified by the program.

Level to send to effects processor

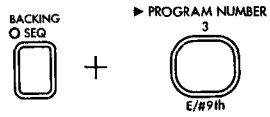
Effect Send Level C, D [0...9, P]

These parameters determine the levels of the backing track signals that are sent to the effects system through channels C or D.

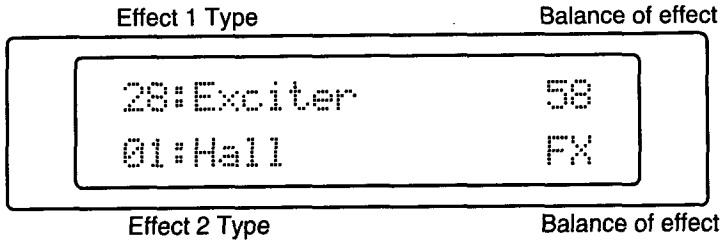
You can set the level from 0 to 9 (maximum) for each channel. If you set these parameters to P, the *i5S* will use the effect send levels specified by the program's parameters.

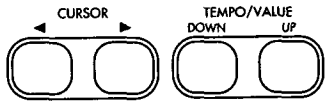
The *i5S* effect system comes with a total of 4 output channels for every arrangement including Serial, Parallel 1, Parallel 2, and Parallel 3, depending on how the two stereo effect processors are set up and the combination of the output signal path. For more details on the output channels refer to page 4-12 "Effect Placement (Output Channels)".

Page 11 Effects



Page 11 details information on the effect settings of the backing sequence mode that allow you to add a professional touch to your arrangements.





Here, you will use two digital signal processors to apply effects to your backing sequence. Since both processors can apply two effects simultaneously, you can apply a variety of different effects to the programs playing the backing sequence.

EFFECT TYPE

Selecting the effect type.

The *i5S* comes with two independent effect types for selection.

The selected effect can be adjusted by the Dry/Wet level and switched ON/OFF.

Dry/Wet (Effect level) [00...99, FX]

Determining the level of effect.

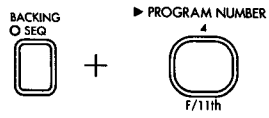
This parameter balances the volume of the sounds assigned with and without effect settings.

When the parameter is set to 00, there will be no effect output. The effect volume increases (increasing the effect intensity) as the numerical value gets higher.

Setting the parameter to FX will allow for effect sound only.

There is a need to find the optimal effect point by auditioning the programs through the numerical values if you want to add a certain level of reverb or reflection, if the optimal balance varies according to the effect type selected. If you want to change the overall sound characteristics with chorus, flanger, enhancer or exciter, it is advised that the effect parameter be switched to FX to maximize the effect output to bring out the clearest effect results.

Refer to Chapter 4 "Effects" for more details on the effect types.

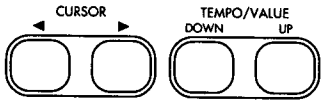


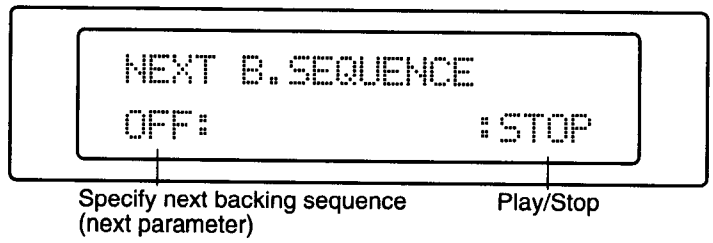
Continuously play several backing sequences.

Page 12 Next B. Sequence

Next Backing Sequence

This function lets you specify a backing sequence to be played after the currently selected backing sequence ends.



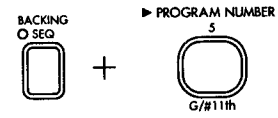


This function is composed of a pair of parameters. The Next parameter identifies the number of the backing sequence that you want to select when the ***i5S*** has finished playing the current backing sequence (BSEQ0-BSEQ9). (The name of each backing sequence will be displayed next to its number.) If you turn this parameter OFF, the current backing sequence will remain selected and stop.

The Play/Stop parameter indicates whether the ***i5S*** should start playing the specified backing sequence when the current backing sequence ends. If you set this parameter to STOP, the ***i5S*** will select the next backing sequence, but it will not play it back. If you set it to PLAY, the ***i5S*** will begin playback of the next backing sequence automatically. Playback will be ended when the Next parameter is turned OFF.

This function lets you set a chain of backing sequences that will play automatically. To create a continuous loop of backing sequences, just set the last backing sequences Next parameter to the number of the first backing sequence in the chain, and set the Play/Stop parameter to PLAY for all the backing sequences. For example, if you want the loop to repeat backing sequences 0 through 9, set backing sequence 9's Next parameter to BSEQ0.

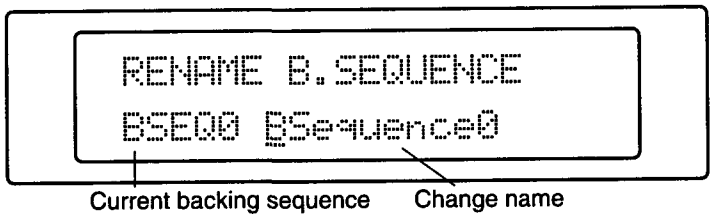
Page 13 Rename Backing Sequence

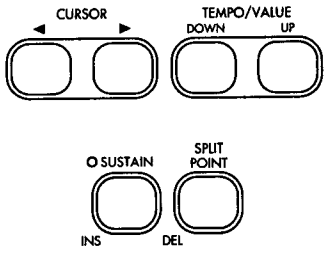


Change backing sequence name.

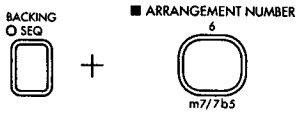
Rename Backing Sequence

You can use this function to change the name of the backing sequence you are editing. The backing sequence name can consist of up to ten characters.





When the Rename Backing Sequence function is selected, the name of the current backing sequence will appear at the bottom row of the LCD display. Rename the backing sequence accordingly.

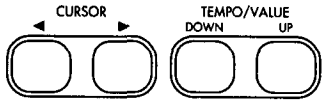


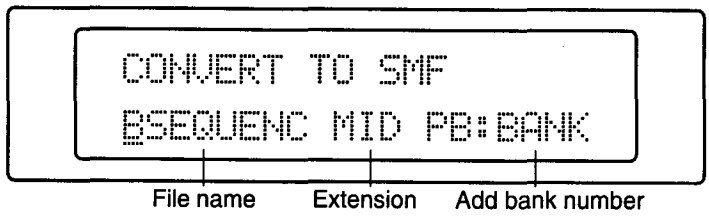
Using *i5S* data on the SMF device.

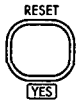
Page 14 Conversion into a Standard MIDI File

This function is used to convert the ***i5S*** backing sequence into a standard MIDI file.

As a result, all data created on this system can be read and played back by models compatible with standard MIDI files.







By selecting RESET/[YES], the ***i5S*** will display a confirmation message and then convert the backing sequence into a MIDI file.

<Standard MIDI File>

Sequence data created with electronic instruments were previously saved on disks according to the maker's original format. For this reason, it was not possible to playback sequences that were not made with the same model. The Standard MIDI File was created as a text format to read all types of sequence data. Currently, many systems are compatible with Standard MIDI Files, and thus sequence data created on a certain musical instrument can now be played back on various models.

PB: BANK A bank is added to the program change message. Use this feature to playback the Standard MIDI Files on *i*-Series and X-Series Korg instruments.

PB: NUM A bank is not added in the program change message.

Use this feature when using another GM sound source.

However, timbre compatibility is lost when using arrangement, keyboard timbre and extra tracks on programs other than bank A and B.

This feature is used to create a Standard MIDI File with sequence data of one backing sequence. The ***i5S*** will save the backing sequence data by extending all Style data into general sequence data.

The file name on this page display will use the first 8 characters of the backing sequence name. Though you use small letters for the backing sequence name, they will all appear in capital letters here. All symbols other than alphanumerics will be underlined.

The file name can be renamed to a new name with up to 8 characters, if necessary. A standard MIDI File extension (.MID) will appear to the right of the file name.

Please note that the backing sequence can only be saved in format 0 of the Standard MIDI File.

The ***i5S*** will assign the DRUM, PERC, BASS, ACC1, ACC2 and ACC3 tracks to the channel specified in page 4 and page 5 of the Global Mode display. The extra track will be assigned to the channel specified in page 9 of the Backing Sequence display.

KBD1 data will be assigned to the channel set in page 4 of the Global Mode display. The KB2 MIDI channel parameter in this display can be used to assign the channel of KBD2 data. However, it is important to note that the ***i5S*** will automatically assign the track to a channel that is not in use, if this channel is set to the same channel as other selected tracks.

Song Play Mode

What can the Song Play Mode do?

The *i5S* Song Play Mode lets you play song files stored in the Standard MIDI File format, directly from a floppy disk. (For more information regarding standard MIDI files, see page 8-4 of the User's Guide.)

Song Play Mode provides settings for program selection, volume, panning, and effect send level for each of the channels. Settings for tempo, transposition, and effect selection are provided, as well.

Switching Page Displays

The Song Play Mode divides its parameters and functions among four display pages summarized in the table on the following page. You can switch through these pages using the PAGE+ and PAGE– keys.

You can select pages directly by holding down the SONG PLAY key and pressing the ARRANGEMENT NUMBER key that corresponds to that page number. For example, to select page 3, press the SONG PLAY key and then press ARRANGEMENT NUMBER key (3).

The general procedures for editing parameters are outlined on page 5-1 "Watch the screen and operate the *i5S*" of the User's Guide.

Functions in Song Play Mode

The table below shows the layout of the *i5S* Song Play Mode. For each display page we list the page title, a brief outline of the page's contents, and the numbers of the pages in this manual where you will find these contents described.

Display Page			Ref. Guide Page
1	Basic Settings	Program selection, tempo and measure to start performance.	3-3
2	Channel Setting	Stereo position, effect send level	3-5
3	Transpose Position		3-6
4	Effect Setting		3-7

	Volume/Mute		3-8

If you should encounter an error message while using one of these functions, see Appendix A for the meaning of the message and remedies. Also refer to the cautions on page 7-1 of the User's Guide regarding proper care and handling of floppy disks.

MIDI Output of Program Bank

You can output the program bank through the MIDI system by specifying the PROGRAM filter in the MIDI FILTER Settings of the Global Mode.

☞ Page 5-15

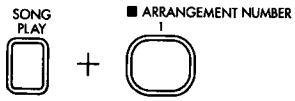
Set the MIDI FILTER to "**o**" when connecting the system to a Korg MIDI system.

Set the parameter to "**s**" or "**n**" when the performance is not satisfactorily output upon using other MIDI machines.

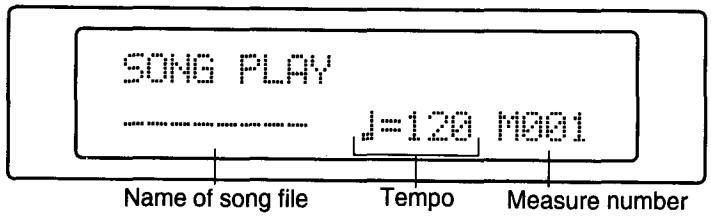
An "**n**" setting invalidates the program bank specification and thus, the bank number will not be output via the MIDI system.

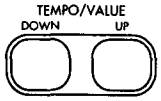
Basic Settings

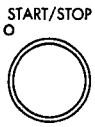
Pages 1 and 2 of the Song Play Mode display let you choose a standard MIDI file to play, and set its tempo, measure number, and the program, stereo position, and effect send level of each channel.

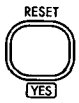


Page 1 PLAY









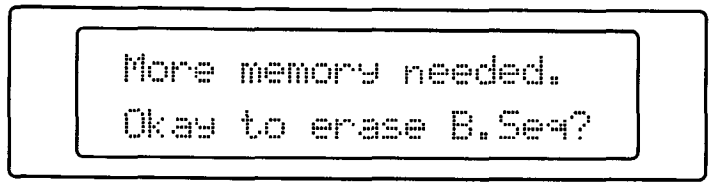
File Name

To play all the songs on the disk one after another, press the START/STOP key when the dashed lines are displayed. The songs will play in the order that they appear in the directory. To start playing from a specific song, select the song using the UP and DOWN key of the TEMPO/VALUE and then press the START/STOP key to start the song. You can pause the song by pressing the START/STOP key once again. By pressing the RESET key when the song is stopped, you will return to the beginning of the selected song and the tempo will also return to the initial set value (♩=120).

Format 1 and 0 standard MIDI files are different in that the former requires time to load all the data. When you press the START/STOP key and start the Format 1 standard MIDI file you will see the "Please wait a moment" message appear.

The tempo LED will rapidly flash during loading operations to indicate that data is being loaded. The performance will begin when all the song data has been loaded.

The Song Play Mode will playback Format 1 standard MIDI files. Therefore it will operate on the memory of the Backing Sequence Mode. If Backing sequence data exists in the memory, the ***i5S*** will confirm by prompting a message whether it is okay to erase the data in the backing sequence memory.



If YES if selected at this time, the song in the backing sequence memory will be erased, and then start playing the song newly programmed. If you do not want to erase the data in the backing sequence, save it on a floppy disk. Refer to page 5-7 of this manual for more details on how to save the backing sequence. If you select NO, the next song will be loaded.

If the file size loaded is larger than the memory buffer size (max. 156 K), you will see a warning message indicating "Can't play all tracks" appear when the loading operations are completed.

If YES is selected, the system will play the loaded data. If NO is selected, the system will stop.

<Can't find a file?>

The Song Play Mode will only recognize files with a .MID extension. If the *i5S* doesn't show the file name of a standard MIDI file created on another instrument or computer, chances are that the file was not created with a .MID extension.

Tempo [20...250]

This adjusts the song's playback tempo. The song will generally start playback with the tempo saved in the standard MIDI file. However, the tempo will be set between ♩=40-240 when using the TAP TEMPO function. The tempo will reset to ♩=120 when you press the RESET key or when the song performance is over.

Measure

Start playing from the middle of a song.

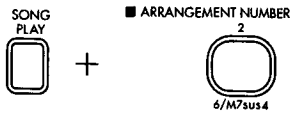
The measure number of the song is specified to be played back. This can be specified either when the file is playing back or when it is stopped.

Select the measure setting with the cursor key and the specify the corresponding measure with the UP/DOWN key. If this is done during playback, the tempo LED will rapidly flash while it looks for that specific measure.

If a number that is larger than the last measure number of the current song is selected during general playback, the system will stop after the last measure and then indicate a prompt "Measure does not exist? Continue?"

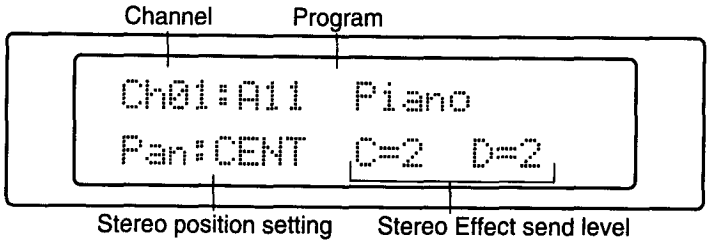
If YES is selected playback will be continued from the next song. If NO is selected the song will stop after the current song.

If tempo change or program change is included in the song data when you specify a measure, the tempo setting and the program settings of each channel will be updated to the values set in the measures of that song. However, muted channel settings will not be updated. If you want to update this channel setting, switch the MUTE setting of the channel to PLAY.



Page 2 Channel Sound

When playing a song file, the settings for each channel on this page will change to the values saved with the standard MIDI file. They will reset when the song has finished playing.



Ch (Channel) MIDI [1...16]

This parameter lets you choose which channel's settings to adjust using channel keys 1 to 8. The PLAY LED will flash by pressing the SONG PLAY key, allowing you to select channels 9 through 16. Pressing the SONG PLAY key once again will put you back in the mode to select channels 1 to 8. The keyboard timbre of the *i5S* will switch to the Ch timbre that you select here.

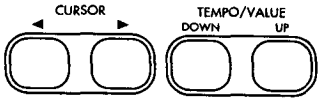
Change the timbre for each channel.

Program

This parameter lets you select the program to be played by the corresponding channel.

You can change the current program selection using the PROGRAM key.

Ch10 will always perform the DRUM bank program. (Change the timbre program when playing back standard MIDI files set with a program other than DRUM in Ch10.)



Pan:

[OFF, LEFT 15...LEFT1, CENTER, RIGHT1...RIGHT15, PROGRAM]

This parameter sets the stereo position of each channel. It does this by adjusting the levels of channel A and B.

The CENTER setting centers the channel. Settings preceded by LEFT move it to the left, whereas those preceded by RIGHT move it to the right. The sound moves farther from the center as the numerical value of the setting increases.

The OFF setting lets you turn off the channel's output to stereo channels A and B completely. A PROGRAM setting tells the *i5S* to use the panning specified by each respective program.

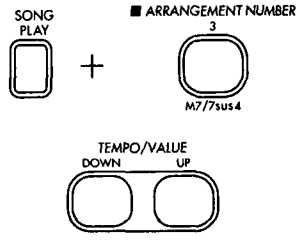
Effect Send Level C, D [0...9, P]

These parameters determine the volume of the standard MIDI file channels that are sent to the effects system through channels C or D.

You can set the level from 0 to 9 (maximum) for each channel. If you set these parameters to P, the *i5S* will use the effect send levels specified by the program's parameters.

The *i5S* effect system comes with a total of 4 output channels for every arrangement including Serial, Parallel 1, Parallel 2, and Parallel 3, depending on how the two stereo effect processors are set up and the combination of the output signal path. For more details on the output channels refer to page 4-12 "Effect Placement (Output Channels)".

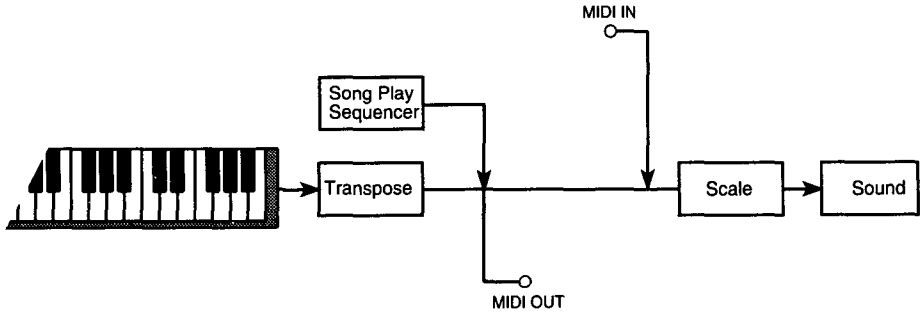
Page 3 TRANSPOSE POSITION



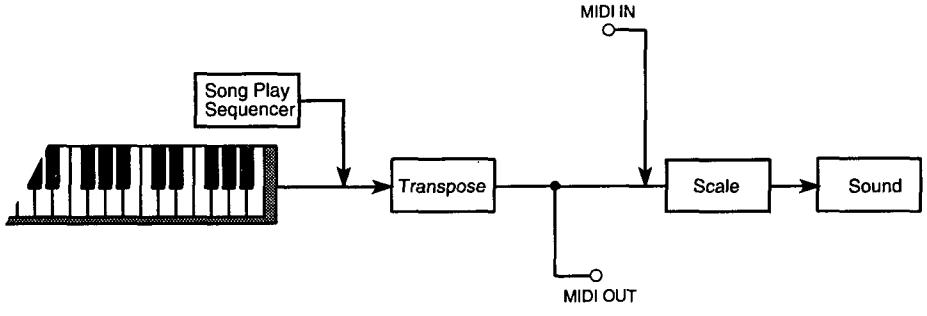
Transpose Position [KBD/MIDI, ALL/MIDI, ALL/INT]

The setting of the TRANSPOSE key will take effect on the sounds played on the keyboard, however, it must be set to take effect on playback sound or to be output from the MIDI OUT jack. This setting is valid only in the Song Play Mode, and the Xpose position set in the Global Mode at this time will be ignored.

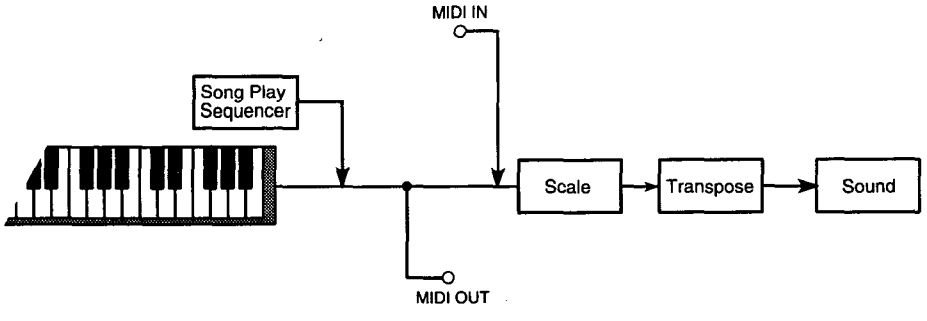
The OCTAVE key will not be affected by this setting and will always take effect only for the sound played on the keyboard.



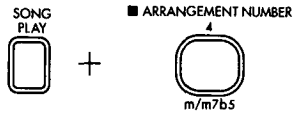
When the parameter is set to KBD/MIDI, the keyboard sounds will be transposed. For this reason, music instruments connected to both the sound source and the MIDI OUT jack will be transposed when played on the keyboard. Sounds played back by the sequencer and sounds received from the MIDI IN jack will not be transposed.



When the parameter is set to ALL/MIDI, both sounds played on the keyboard and reproduced by the sequencer will be transposed. For this reason, transposed sound will be sent to music instruments connected to the sound source and the MIDI OUT jack. The sound received from the MIDI IN jack will not be transposed.

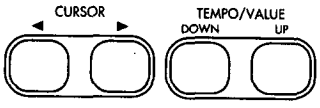


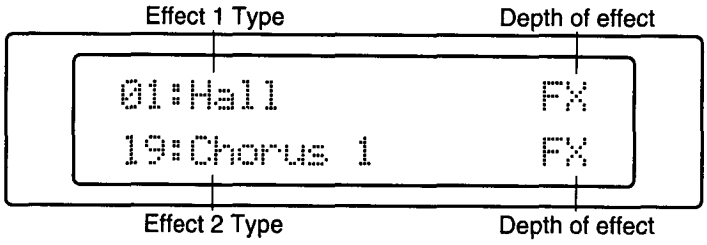
When the parameter is set to ALL/INT, the sound will be transposed immediately before it enters the sound source. For this reason, the transposed sounds will be played back. However, the sounds output from the MIDI OUT jack will not be transposed. All sounds received from the MIDI IN jack will be transposed.



Page 4 Effects

Page 4 contains the effect settings, which you can use to add a professional touch to your arrangements.





The effect feature is applied to songs by using two digital signal processors. Since both processors can apply two effects simultaneously, you can apply a variety of different effects to the programs playing the song.

Selecting the effect type.

EFFECT TYPE

The *i5S* comes with two independent effect types for selection.

The selected effect can be adjusted by the Dry/Wet level and switched ON/OFF.

Determining the level of effect.

Dry/Wet (Effect level) [00...99, FX]

This parameter balances the volume of the sounds assigned with and without effect settings.

When the parameter is set to 00, there will be no effect output. The effect volume increases (increasing the effect intensity) as the numerical value gets higher.

Setting the parameter to FX will allow for effect sound only.

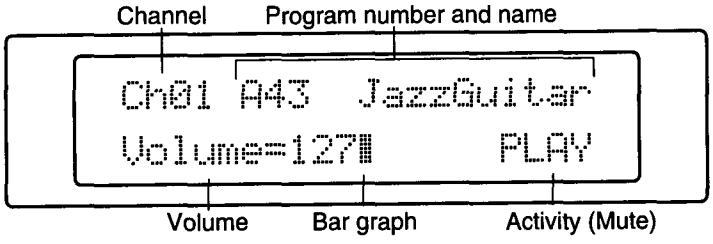
There is a need to find the optimal effect point by auditioning the programs through the numerical values if you want to add a certain level of reverb or reflection, if the optimal balance varies according to the effect type selected in 11. If you want to change the overall sound characteristics with chorus, flanger, enhancer or exciter, it is advised that the effect parameter be switched to FX to maximize the effect output to bring out the clearest effect results.

Refer to Chapter 4 "Effects" for more details on the effect types.

Volume/Mute

This parameter is used to set the volume and mute settings of the timbre program of each track.

This display will appear if you press any of the 8 VOLUME keys appearing in all song play mode pages, at the bottom left of the LCD display.



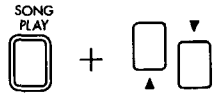
Channel [Ch01...16]

This parameter lets you choose which channel's volume, mute and program settings to adjust.

Press the VOLUME ▲ or ▼ key corresponding to the channel number.

If you want to select channels 9 through 16, press the SONG PLAY key once more.

The SONG PLAY LED will flash. If the ▲ or ▼ key is pressed once again at this time, you will enter the status to select channels 9 through 16.



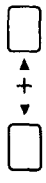
Volume [000...127]

Adjusting the volume of the entire track.

The volume will increase by 1-step every time you press the VOLUME ▲ key. The volume will continuously increase if this key is held down.

The volume will lower by 1-step every time you press the VOLUME ▼ key. The volume will continuously lower if this key is held down.

The volume is displayed in a numerical figure and a bar graph to the right of the numerical figure.



KB1 program and volume will be displayed on the LCD even if KB2 is pressed when the keyboard assign mode is in SINGLE or M.DRUM.

Channel Activity [– – –, PLAY]

To make the channel sound inaudible.

You can switch between MUTE and UNMUTE channel every time you simultaneously press the VOLUME ▲/▼ key that corresponds to that track.

PLAY will appear if the channel is unmuted.

A bar (– – –)will be displayed for muted tracks.

Effects

This chapter will explain the details of each effect type.

The arrangement, backing sequence and song modes all have their respective pages to set the effects parameters. You will find the effects to be a powerful tool that can help you achieve precisely the sound you need to create a "total sound".

Effects refers to the effects applied to sounds. Digital processing of individual sounds or the entire sounds played back will add depth or contour, or even dynamic character to finish your sound production.

The ***i5S*** comes complete with 47 effects, including reverb, chorus, exciter, enhancer and more.

Since the ***i5S*** is complete with a independent 2-channel effect processor, it is possible to simultaneously apply up to a maximum of two effects.

You can also use the foot pedal to switch between effect ON/OFF while you perform. (These parameters are set in the assignable pedal parameters in the Global Mode.)

The Effects Pages

There are a total of 47 effects available with the *i5S*, categorized into the following 25-types.

Effect Type	Effect Number
No Effect	0
Reverb	1-9
Early Reflection	10-12
Stereo Delay	13-14
Dual Delay	15
Multitap Delay	16-18
Chorus	19-20
Quadrature Chorus	21-22
Harmonic Chorus	23
Symphonic Ensemble	24
Flanger	25-27
Exciter	28
Enhancer	29
Distortion	30-31
Phaser	32-33
Rotary Speaker	34
Tremolo	35-36
Equalizer	37
Chorused/Flanged Delay	38-39
Delay & Reverb	40-41
Delay & Chorus	42
Delay & Flanger	43
Delay & Distortion	44-45
Delay & Phaser	46
Delay & Rotary Speaker	47

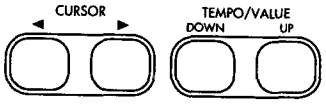
Dynamic Modulation

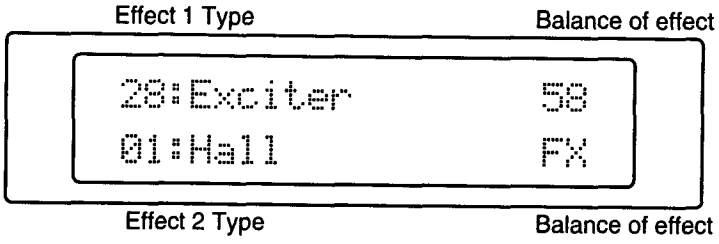
The effects can be controlled using a foot pedal by connecting an optional pedal controller, Korg XVP-10 or EXP-2 to the ASSIGN PDL/SW jack. The effect parameters that can be controlled include the balance between the raw and effect sounds, the speed of the sound depth, the frequency to be emphasized and others depending on the effect type.

The dynamic modulation effect may not be as prominent depending on the effect setting.

The dynamic modulation can be selected from the assignable pedal expressions on page 7 of the Global Mode.

☞ Page 5-18.





EFFECT TYPE

The *i5S* comes with two independent effect types for selection.

The selected effect can be adjusted by the Dry/Wet level or switched ON/OFF with the assignable pedal or EC5 external controller.

Dry/Wet (Effect level) [00...99, FX]

This parameter balances the volume of the sounds assigned with and without effect settings.

When the parameter is set to 00, there will be no effect output. The effect volume increases (increasing the effect intensity) as the numerical value gets higher.

Setting the parameter to FX will allow for effect sound only.

There is a need to find the optimal effect point by auditioning the programs through the numerical values if you want to add a certain level of reverb or reflection, if the optimal balance varies according to the effect type selected in 11. If you want to change the overall sound characteristics with chorus, flanger, enhancer or exciter, it is advised that the effect parameter is switched to FX to maximize the effect output to bring out the clearest effect results.

Switch [ON, OFF]

This turns the effect On and OFF while performing, using a footswitch.

To use this function, set the assignable parameter EFF 1 ON/OFF in the Global Mode or assign the EFF2 ON/OFF switch to the footswitch. At this time, you must also set the ON/OFF features of the two effects.

The effect ON/OFF can also be switched even when control change messages are sent from the MIDI sequencer. Control change messages 92 controls Effect 1 and 94 controls Effect 2.

Details of Each Effect Type

The following details the 25-types of effects available.

No Effect

00: No Effect

This setting lets you turn the *i5S* effects OFF during a performance. This setting is useful when you want to perform with a dry unprocessed sound.

Reverb

Reverb effects add ambience by simulating varied acoustic environment. This is the most commonly used effect type.

The *i5S* has nine reverb effects.

01: Hall

This simulates the acoustic ambience of a small concert hall where you might hear a string quartet or live jazz band.

02: Ensemble Hall

This simulates a larger hall suitable for string and brass ensembles.

03: Concert Hall

This gives you the setting for a full-fledged orchestra, with emphasized early reflections.

04: Room

This simulates the ambience of a typical room.

05: Large Room

This simulates a bigger room with emphasized density to produce results similar to gated reverb.

06: Live Stage

This produces sound like you would hear in a gymnasium, and is useful for recreating the sound of a live rock band.

07: Wet Plate

08: Dry Plate

This is commonly used to emphasize vocals and solo instruments to simulate the plate reverb unit. The difference between the two is that the Wet Plate is applied heavily and the Dry Plate only lightly.

09: Spring Reverb

This reproduces the sounds of the spring reverb device commonly used in guitar amplifiers.

Early Reflections

This reproduces only the early reflections of the natural reverb effects.

Early reflections play an important role in determining the acoustics of a given room and can be used to add depth to sounds, create echo-like reflections, or finish sounds with a unique and interesting touch.

10: Early Ref 1

This creates a gated reverb effect that emphasize the bass contents. It is an ideal effect for drum sounds.

11: Early Ref 2

The reflections will fade out slower.

12: Early Ref 3

This creates reflections that increase in volume (fade in), instead of fading out. Applying this effect to strong attack sounds will give you the results of playing a tape in reverse.

Stereo Delay

This effect is used to create echo patterns.

13: Stereo Delay

Feedback is applied independently to the left and right channels.

14: Cross Delay

The delay feedback is alternated from the right to left channel or vice versa, to obtain effects where the delay sounds shift between the left and right channels.

Dual Delay

15: Dual Delay

The dual delay effect runs the right and left channel signals through independent mono delays.

Multitap Delay

The multitap delay effects run the signals from each effect input through two independent delays. They create a multiple-echo effect that produces a pair of echoes in response to each note you play.

16: Multitap Dly 1

This is the standard multitap delay.

17: Multitap Dly 2

The signals are cross-panned, reversing the right and left channel signals with each echo.

18: Multitap Dly 2

Feedback signals cross between the channels, reversing the right and left channel signals with a pair of echoes.

Chorus

Chorus effects thicken signals by running them through a short delay and the delay length is modulated by a LFO (low frequency oscillator). This delay creates minute fluctuations in pitch, which, when combined with the original signal, produce the impression of two or more instruments playing in unison.

As with the reverb effect, chorus is also indispensable for music production using electronic music instruments. It is commonly used with strings, voice, chorus, synthesizer-pads etc. Chorus adds width to a sound, but it may create a flat sound that lacks expression. Therefore, it is important that the player selects this effect according to the musical style.

19: Chorus 1

This modulates the delay of the right and left channels with the opposite phase, giving the sound a shimmering stereo motion.

20: Chorus 2

This modulates the delay for both channels with the same phase.

Quadrature Chorus

Quadrature chorus effects are similar to the stereo choruses described in the previous section. They differ mainly in that the LFO modulates the delays for the right and left channels 90 degrees out of phase with each other.

21: Quad Chorus

This is the basic type that processes the left and right channels independently.

22: XOver Chorus

This mixes the chorused signal for each channel into the output of the other channel, producing a crossover effect.

Harmonic Chorus

23: Harmonic Cho.

The harmonic chorus effect is a type of quadrature chorus that uses a filter to split the input sound into high and low frequency ranges, then applies two choruses to the high range only. It works especially well with low frequency instruments such as basses.

Symphonic Ensemble

The symphonic ensemble effect works on the same basic principle as the chorus effect described in the preceding sections.

It is particularly effective when used with large ensemble sounds such as orchestra string sections.

24: Symphonic Ens.

This effect mixes the input from the right and left channels, then applies the ensemble effect to the mixed input. The effect signals are evenly output from both channels.

The following modulated effects cannot be used in combination with the Symphonic Ensemble.

Effect Type	Effect Number
Chorus	19-20
Quadrature Chorus	21-22
Harmonic Chorus	23
Symphonic Ensemble	24
Flanger	25-27
Phaser	32-33
Rotary Speaker	34
Tremolo	35-36
Chorused/Flanged Delay	38-39
Delay & Chorus	42
Delay & Flanger	43
Delay & Phaser	46
Delay & Rotary Speaker	47

Flanger

The flanger effect uses the same basic principle as chorusing, but adds a loop that feeds the output back into the delay. Flanging can create chorus-like effects, and also adds a sense of pitch to non-pitched sounds. It is effective when used to process sounds that contain a lot of high frequency energy, such as cymbals.

25: Flanger 1

This modulates the delays applied to the right and left channels in the same phase.

26: Flanger 2

This modulates the delays in the opposite phase, resulting in a wider stereo motion.

27: XOver Flanger

This also modulates the delays in inverse phases, but each flanger sends its feedback to the other channel.

Exciter

The exciter effect adds harmonics which emphasize a certain frequency of the sound, giving it greater definition and presence. You can use it most effectively with solo instruments such as electric guitars and lead synths, to bring them to the forefront.

28: Exciter

This excites the signals for the right and left channels individually.

Enhancer

The enhancer effect excites sounds by adding harmonics that make them clearer and more defined. It also applies a short inverse-phase delay to each channel, giving the sound a greater sense of width.

29: Enhancer

This enhances the signals for the right and left channels individually. It also runs the right and left channel signals through a two-level shelving equalizer before applying the exciter and delay effects.

Distortion

Originally devised for use with guitars, distortion effects simulate the distortion that occurs when a signal's gain exceeds an amplifier's input capacity. Distortion is often used with solo instruments, as it adds thickness to single notes. It produces a muddy sound when applied to an instrument playing chords and is an ideal for those that love its rock-like effects.

This also adds a wah-effect by slightly distorting the sounds.

30: Distortion

This creates a hard, solid-state distortion frequently used in hard rock and heavy metal. It is especially effective with solo instruments.

31: Overdrive

This simulates a warmer tube amp distortion. It produces a nice bluesy effect when used with guitar and organ sounds.

Phaser

Whereas chorus and flanger effects modulate delays, phasers modulate the phase of the input signal itself, creating an even clearer modulation effect. Phasers are formally called phase shifters. They are effective for electric pianos and guitars.

32: Phaser 1

This modulates the signals of the right and left channels in opposite phases, making the sound shift back forth in stereo.

33: Phaser 2

This modulates the right and left channel signals with the same phase.

Rotary Speaker

This effect simulates the sound produced by the rotary speakers used with electric organs. These rotary speakers have a motor which rotates the high range speaker horn at one of two speeds. There are many ways to use the rotary speaker however, the most common way is to shift the rotary speaker speed from low to high speed during the part of an organ timbre performance in which you want to create an exciting effect.

34: Rotary Speaker

This mixes the input from the right and left channels, then modulates the mixed input using a completely independent LFO (low-frequency oscillator). It does not equalize the input signal for either channel.

Tremolo

The tremolo effect uses a LFO (low-frequency oscillator) to modulate the volume of output sounds. It is extremely effective when applied to instruments playing languid melodies and broad chords. However, it is not as effective when used with detailed phrases.

35: Auto Pan

This modulates the volume of the right and left channels inversely, so that the sound moves as if it were being panned back and forth.

36: Tremolo

This modulates both channels with the same phase, for a common tremolo effect.

Equalizer

37: Equalizer

This is used to adjust and emphasize the audio frequencies.

Chorused or Flanged Delay

These are dual effects connected in series. Select from a mono-in, stereo-out chorus or flanger each with a stereo delay, to both the right and left channels. These effects are particularly useful with solo instruments.

38: Chorus-Delay

This serially connects a chorus with a delay.

39: Flanger-Delay

This connects a flanger with a delay. Both the chorus and the flanger use quadrature modulation. That is, the right and left channels are modulated 90 degrees out of phase with each other.

Delay & Reverb

This effect is a dual effect in which a mono-delay and mono-reverb are arranged in parallel.

40: Delay/Hall

This combines a delay with a hall reverb.

41: Delay/Room

This combines a delay with a room reverb.

Delay & Chorus

This combines a mono delay and a mono chorus in a parallel arrangement.

42: Delay/Chorus

This combines a mono delay and a mono chorus in a parallel arrangement.

Delay & Flanger

This combines a mono delay and a mono flanger in a parallel arrangement.

43: Delay/Flanger

This combines a mono delay and a mono flanger in a parallel arrangement.

Delay & Distortion

These effects combine mono delay and a mono distortion or overdrive in parallel arrangement. You can use them, for example, to apply a delay to a lead synth on one channel, and distortion to guitars on the other.

44: Delay/Dist

This combines delay with distortion.

45: Delay/Overdrv

This combines delay with overdrive. Both distortion and overdrive include a wah effect.

Delay & Phaser

This combines a mono delay and a mono phase in a parallel arrangement.

46: Delay/Phaser

This combines a mono delay and a mono phase in a parallel arrangement.

Delay & Rotary Speaker

This combines a mono delay and a rotary speaker in a parallel arrangement.

47: Delay/Rotary

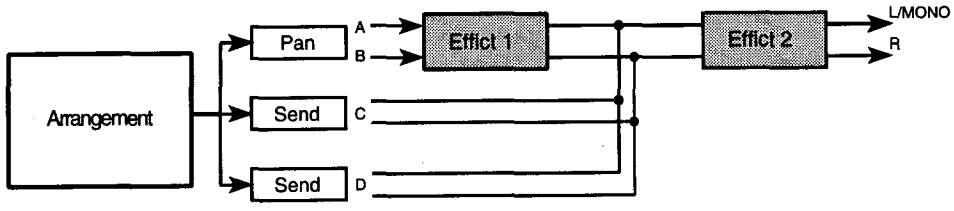
The mono rotary speaker produces a more intense tremolo than the stereo rotary speaker effect (34: Rotary Speaker).

Effects Placement (Output Channels)

The output channels, including effects, of the *i5S* vary depending on the effect arrangement.

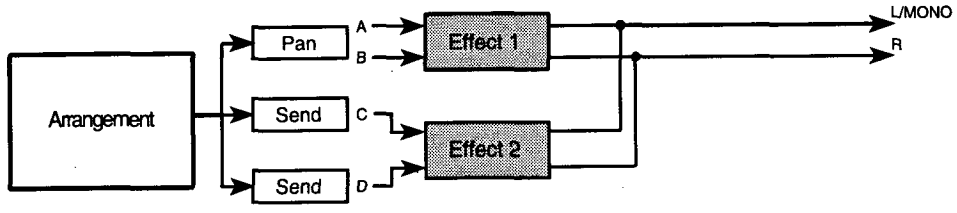
Each channel can be set with the following four output channels. Refer to the Arrangement List of the Performance Notes for more details on the settings.

① Serial



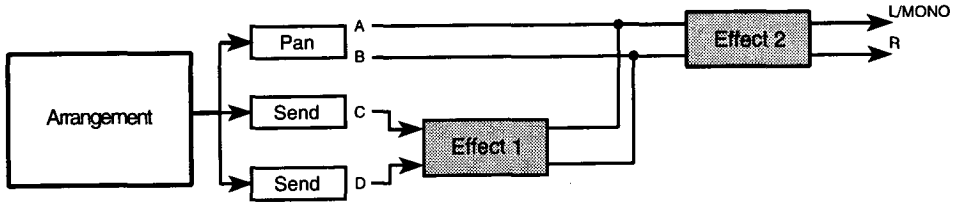
The Serial setting applies both signal processor Effect 1 and Effect 2 to channels A and B, in that order. Signals routed to channels C and D are mixed in after Effect 1, and so are processed by Effect 2 only.

② Parallel 1



The Parallel 1 setting applies Effect 1 to channels A and B, and effects 2 to channels C and D. It mixes the signals from the two processors for final output

③ Parallel 2

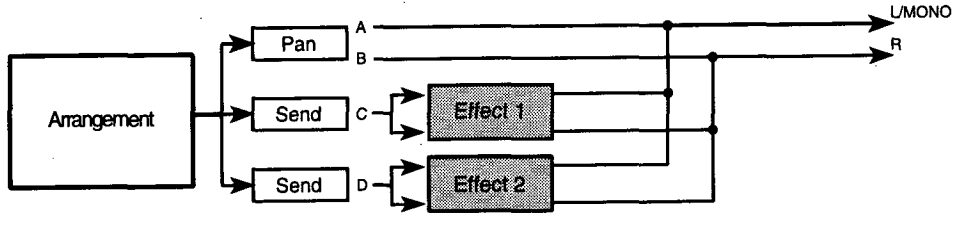


The Parallel 2 setting is the opposite of the Serial setting indicated in ①.

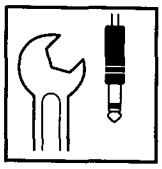
It applies effects 2 to channels C and D. It then mixes these output signals with the unprocessed signals of the Dry signals of channels A and B.

The resulting signals are then processed by effects 1 before final output.

④ Parallel 3



The Parallel 3 setting applies Effect 1 to channel C and Effect 2 to channel D. It then mixes the output of these channels with the unprocessed signals of channels A and B.



Global Mode

In Global mode you will find several settings that affect the overall performance of the *i5S*.

- **Save and write *i5S* data on a floppy disk**
- **Keyboard tuning parameters**
- **MIDI function settings**
- **Connected foot pedal settings**
- **External controller settings**
- **Sound hold settings**
- **Velocity curve settings**
- **Scale settings**
- **MIDI information send/receive control**

Switch page displays

The Global Mode has 14 display pages, whose functions and parameters are summarized in the table on the following page of this manual. You can switch through these pages using the PAGE+ and PAGE– keys. You can select pages directly by holding down the GLOBAL key and pressing the ARRANGEMENT NUMBER or PROGRAM NUMBER key that corresponds to that page number.

For example, to select page 4, press the GLOBAL key and then press the ARRANGEMENT NUMBER key 4.

Unlike program or arrangement data, you do not have to write Global Mode settings into memory. Exceptions include the Xpose Pos parameter detailed on page 5-9 of this manual, and the Local Control Clock, Clock Source and Host BR parameter explained on page 5-11 of this manual. The ***i5S*** will remember all other Global Mode settings, even when the power is turned off.

The ***i5S*** also saves its global settings to disk whenever you create a program file using the ALL or PROGRAM save functions described on page 5-7.

Functions in Global Mode

The table below shows the layout of the *i5S* Global Mode. For each display page we list the major contents of the page and the number of the corresponding page in this manual where you will find these contents described.

Display Page			Ref. Guide Page
1	DISK Parameter	Write disk data (ALL data, 1 Data)	5-3
		Write data in disk.	5-7
		Erase disk data, erase style, format disk.	5-8
2	Master tuning, transpose position		5-9
3	MIDI local control, MIDI clock source, TO HOST baud rate settings		5-11
4	MIDI channel settings	Global, keyboard track, chord track	5-13
5		Backing track	5-14
6	MIDI data filter		5-15
7	Assignable pedal settings		5-16
8	EC5 external controller settings		5-16
9	Damper switch polarity		5-19
10	Sound hold function, velocity curve		5-20
11	Main scale selection		5-22
12	Sub-Scale selection		5-22
13	User scale setting		5-24
14	MIDI *i5S* data dumping		5-25
15	Pitch bend switch		5-26

Data saved on disk

Almost all data created on the *i5S* can be saved on a 3.5 inch 2DD (double density) or 2HD (high density) floppy disk. The disk needs to be initialized in MS-DOS format and each disk can contain up to 112 files within a maximum memory space of 720k (2DD) or 1.44 M (2HD) bytes.

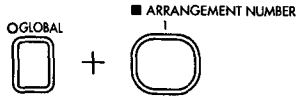
Since the *i5S* separates various files to save them, each file may contain varying data types. To identify these file types, place a period after the extension of the file name, followed by 3 English characters. The following table is a list of extension types, file types and memory size.

Data Type	Extension	Size (kB)
Arrangement	.ARR	9
Style	.STY	64 (max.)
Backing sequence	.BSQ	132 (max.)
Standard MIDI file	.MID	720 (max.)
Program	.PCG	14

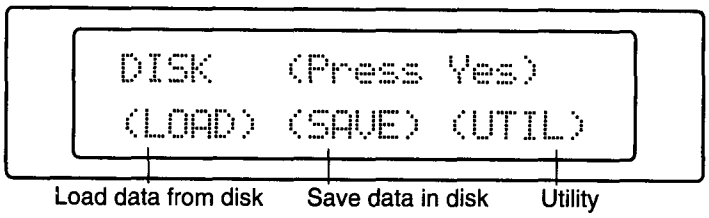
These extensions will appear on the LCD display during delete file operations.
☞ Page 5-8

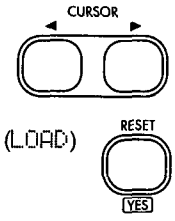
The *i5S* is complete with functions to create various files and to write data from these files. File erase and disk formatting is part of the utility functions.

To use data created on the *i5S* on the *i2/i3/i4S/i1* systems, there is a need to set the data mode on the data dump display of page 14.



Page 1 DISK PARAMETER



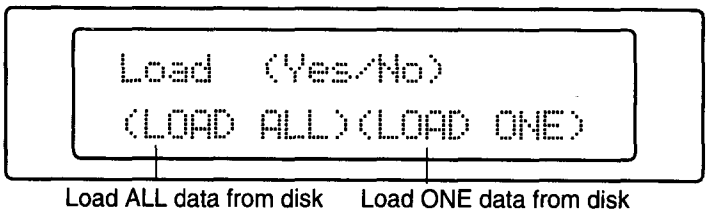


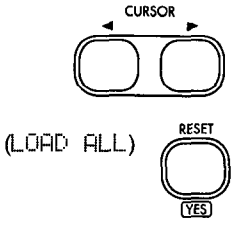
Read data from the floppy disk on the *i5S*

Page 1-1 LOAD Functions

The functions on the first display page in Disk mode load all of the data from the file you select into the *i5S*. The arrangement, style, backing sequence, or drum kit programs can be loaded.

There are two types of LOAD: ALL and LOAD ONE. Select the type of LOAD on the first page using the cursor key and then press the RESET/YES key to finalized the command.

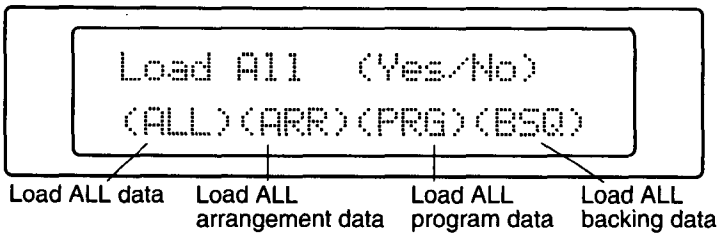


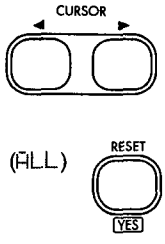


Page 1-1-1 LOAD ALL

Be sure to insert a disk in the floppy disk drive (FDD) before using any of these functions.

The *i5S* will display a "NO disk in drive" message if you attempt to select a file without first placing a disk in the FDD.





ALL

This function loads a complete set of data files into the *i5S*.

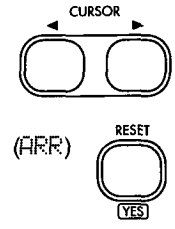
Insert a disk containing data in the FDD. Then select ALL. The *i5S* will indicate the files names of the program, arrangement, style and backing sequence on the disk. The extension will not appear at this time.

When you have made your file selection with the UP/DOWN key of the TEMPO/VALUE function, press RESET/[YES]. The *i5S* will then load that file. Always make sure the *i5S* does not contain any unsaved data that you want to keep before you load, as all your current data will be lost forever when the new file is loaded.

Press the TAP TEMPO/[NO] key to cancel loading.

This feature can come in handy when you want to load two or more related files (set of arrangements and the programs and styles they use or the backing sequence used to create the data) with only one load operation. To do this, you must first save the data using the SAVE ALL function on the SAVE display. (See page 5-7 of this manual for more details.)

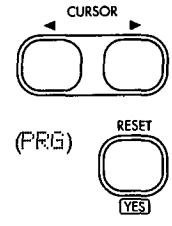
ARR (=ARRANGEMENT)



This function loads an arrangement file that contains a complete set of data for 64 arrangements. Also, it can load up to 4 styles in the user style memory, if there are style files of the same file name.

The procedure for using this function is the same as that described for the ALL load function, above. The *i5S* will display the names of only the arrangement files on the disk.

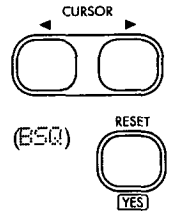
PROG (=PROGRAM)



This function loads all 64 program files and the program file with two user drum programs in Dr. 17 and Dr. 18. It also loads the Global parameters that contain two user drum kits.

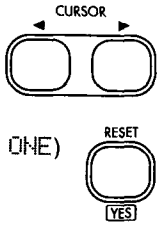
The procedure for using this function is the same as that described for the ALL load function, above. The *i5S* will display the names of only the program files on the disk.

BSQ

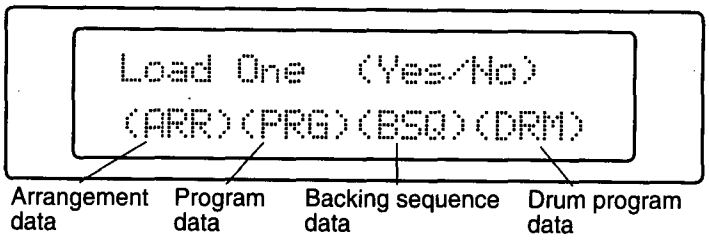


This function loads a backing sequence file which contains a complete set of data for ten backing sequences, into the *i5S*.

The procedure for using this function is the same as that described for the ALL load function, above. The *i5S* will display the names of only the backing sequence files on the disk.



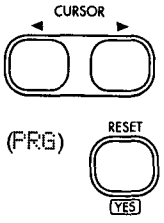
Page 1-1-2 LOAD ONE



The functions on Page1-2 of the Disk mode load a single program, arrangement, style, backing sequence, or drum kit from the file you select into the ***i5S***.

To load entire files, use the functions on page 1-1 LOAD ALL, described in the previous section.

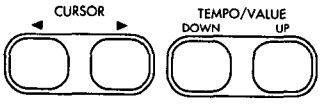
Be sure to insert a disk in the disk drive before using any of these functions. The ***i5S*** will display a "No disk in drive" message if you attempt to select a file without first placing a disk in the disk drive.

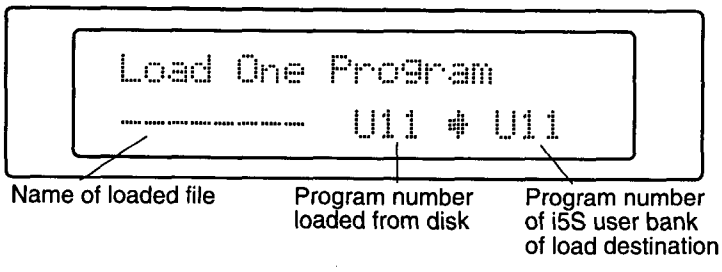


PRG (=PROGRAM)

This function loads a single program from a program file into the ***i5S***. It does not load any global parameters or drum kit settings.

After inserting a data disk in the disk drive, select the program file name using the UP/DOWN key of the TEMPO/VALUE setting. All the program files on the disk will appear.





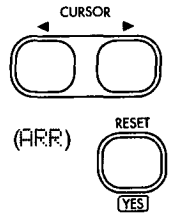
Next, select the bank, program number and the load destination program number using the UP/DOWN key of the TEMPO/VALUE setting.

Press RESET/YES if the selection is correct. The ***i5S*** will start loading the data after doing so. Make sure the destination you've selected doesn't contain any unsaved data you want to keep, as its current data will be lost forever when the new program is loaded.

This function does not load any global data. If you have changed the Scale parameters since you saved the program data, the resulting change in keyboard temperament could make the program you load sound different than it originally did. In this case, you should adjust the scale parameters to the settings you were using when you created the program file.

Likewise, a user drum program that you load may require different user kit settings than those currently available. If you load a drum program, you may also need to load the appropriate user drum kit using the DRUM load function, described on the following page.

ARR (=ARRANGEMENT)

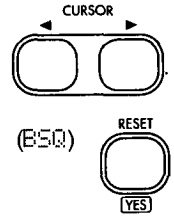


This function loads a single arrangement from an arrangement file into the ***i5S***.

If a user style is used for an arrangement, the corresponding style will be read from the style file with the same name as the arrangement file, and then written in the empty user style number. If there is no style file with the same file name a "Can't find file" message will appear, indicating that the corresponding style was not available.

The procedure for using this function is the same as that described above for the PROGRAM load function. The ***i5S*** will display the names of only the arrangement files on the disk.

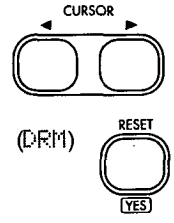
BSQ (=BACKING SEQUENCE)



This function loads a single backing sequence from a backing sequence file into the ***i5S***.

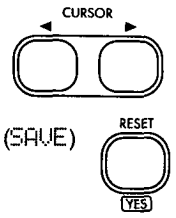
The procedure for using this function is the same as that described above for the PROGRAM load function. The ***i5S*** will display the names of only the backing sequence files on the disk.

DRM (USER DRUMS KIT)



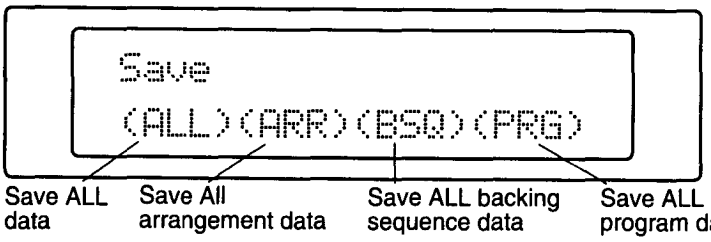
This function loads a single user drum kit from a program file into the ***i5S***.

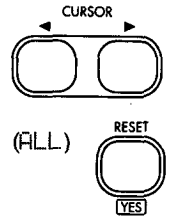
The procedure for using this function is the same as that described above for the PROGRAM load function. The ***i5S*** will display the names of only the program files on the disk.



This function creates a complete set of *i5S* data files on a disk.

Page 1-2 SAVE

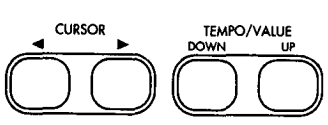




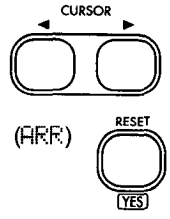
ALL

When you select this function, the *i5S* will display the most recently entered file name (or a default file name of NEW_FILE). If you wish, you can change this file name to any name consisting up to eight characters.

Press the RESET/YES key after inputting the file name. The *i5S* will save the data on the disk.



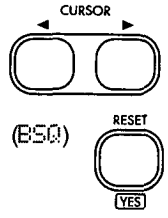
If the *i5S* finds a file on the disk with the same name as one it is about to save, it will warn you that it is about to replace that file. Make sure the old file does not contain any data you need, then go ahead with the operation. You are required to save the original file since failure to do so will erase all the data on that file.



ARR (=ARRANGEMENT)

This function creates an arrangement file and style file containing data for a complete set of 64 arrangements.

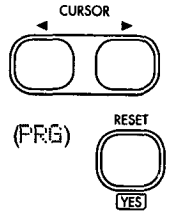
The procedure for using this function is the same as that described for the ALL save function, above. The *i5S* will save the arrangement file (with extension .ARR) and style file (with extension .STY) under the file name that you input.



BSQ (BACKING SEQUENCE)

This function saves a backing sequence file which contains a complete set of data for ten backing sequences, to a file on the disk.

The procedure for using this function is the same as that described for the ALL save function (with extension .BSQ) under the file name that you input.



PRG (PROGRAM)

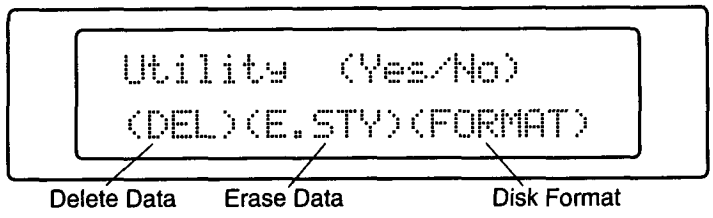
This function saves all 64 program files and the program file with two user drum programs in Dr. 17 and Dr. 18.

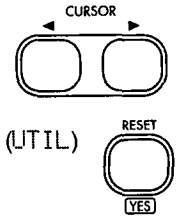
It also saves the Global parameters in this file.

The procedure for using this function is the same as that described for the ALL save function (with extension .PCG) under the file name that you input.

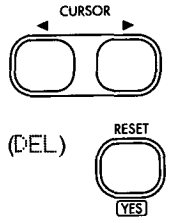
To use data created on the *i5S* on the *i2/i3/i4S/i1* systems, there is a need to set the data mode on the data dump display of page 14.

Page 1-3 UTILITIES





DEL (Delete File)

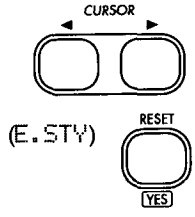


You can use this function to delete old files that you no longer need. This may come in handy when you need to make space on the disk to save new data.

Select the file to delete using the UP/DOWN key of the TEMPO/VALUE setting. The *i5S* will also display each file name (including extensions) on the disk.

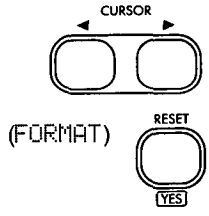
Select the file name and then press RESET/[YES]. The *i5S* will return an "Are you sure?" message before deleting the file. Be sure to confirm that there is no data that you need on the file to be deleted. All data will be lost forever once deleted.

E.STYLE (Erase Style)



The Erase Style function can be used to erase styles from the user-style memory. This is useful if the *i5S* presents you with a "Not enough memory" message when you try to load arrarngements using new user styles.

FORMAT (Format Disk)



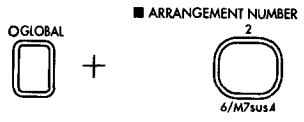
You should use this function to initialize all new disks for use by your *i5S*. You can also use it to erase and reformat old disks whose contents you no longer need.

Insert a disk in the disk drive then press the RESET/[YES] key. The *i5S* will check the disk and notify you of the presence of a file. It will prompt a message to go ahead with the function and then initialize the disk. Be sure to confirm that there is no data that you need on the disk being initialized. All data will be lost forever once the disk is initialized.

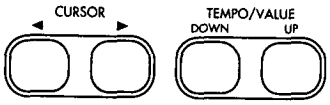
Basic Parameters

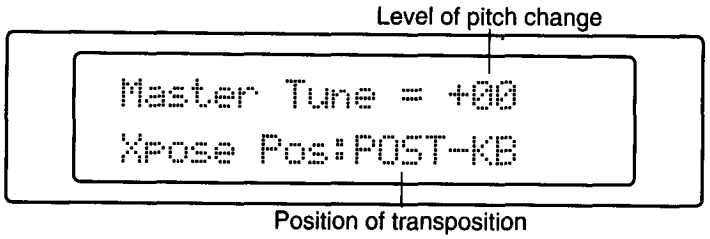
On the first page of the Global Mode display, you will find parameters for overall settings of the *i5S*.

In addition to the master tuning parameter that tunes the *i5S* are transpose parameters that adjust the pitch.



Page 2 MASTER TUNE/XPOSE POS





Adjusts the pitch of *i5S*

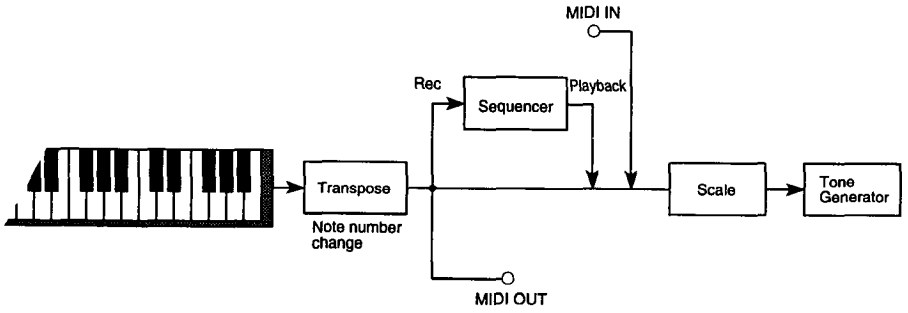
Master Tune [–50...+50]

This Parameter adjusts the pitch of all notes played by the *i5S*. You can raise or lower the tuning up to 50 cents (1/2 a semitone) to adjust it to that of other instruments.

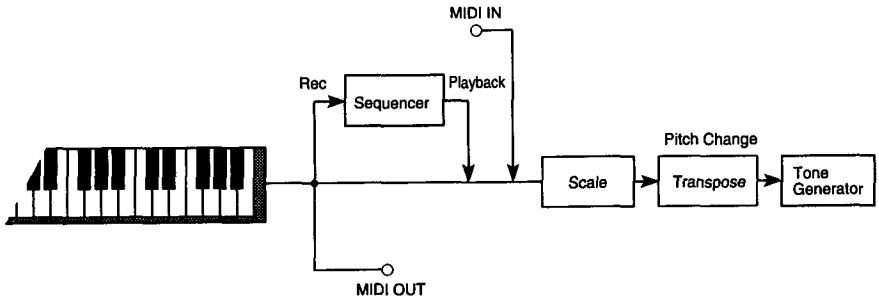
This pitch adjustment will not affect the pitch of notes that connected MIDI instruments play in response to note messages transmitted from the MIDI OUT jack.

Xpose Pos [POST-KB, PRE-OSC]

This parameter determines whether the TRANSPOSE keys will transpose note information from the keyboard before or after the notes are transmitted from the MIDI OUT jack.



When you set this parameter to POST-KBD, the *i5S* will transpose notes as they leave the keyboard. It will thus send transposed notes to both the tone generator and to any instruments connected to the MIDI OUT jack. It will not transpose any notes it receives from the MIDI IN jack.



When you use the PRE-OSC setting, the *i5S* will transpose the notes just before they reach the tone generator. It will thus play transposed notes, but send untransposed data from the MIDI OUT jack. It will also transpose any notes it receives from the MIDI IN jack.

Xpose Pos and the Scale settings

As the illustration on the other page shows, the Xpose Pos setting also affects the sequence of keyboard transposition relative to the scale parameters described on page 5-22 of this manual. Depending on the scale you use, this could produce unexpected results.

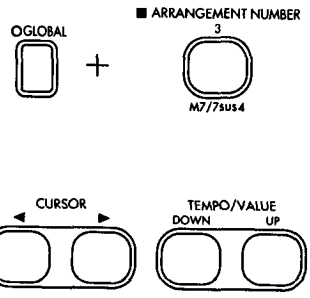
In the arrangement play mode and backing sequence mode, the OCTAVE key will always operate as when the transpose position is set to PRE-OSC.

The transpose position in the song play mode will take effect in the song play mode. ☞ Page 3-6

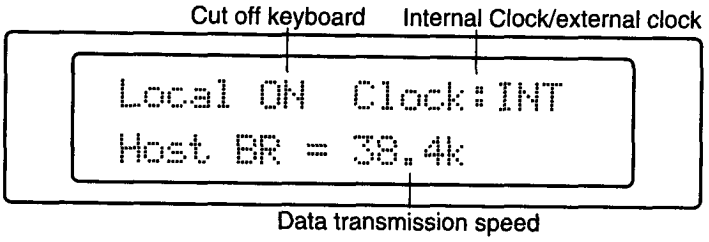
MIDI Parameter

Pages 3, 4, 5, and 6 contain various parameters that control the *i5S*.

Page 3 contains the Local Control and Clock source parameters. Use the parameters on page 4 and 5 to set the *i5S* MIDI channels. Page 6 contains MIDI data filter settings.



Page 3 LOCAL/CLOCK



Connect the *i5S* sound generator and the keyboard

Local Control [OFF, ON]

This parameter determines whether the *i5S* tone generator will respond to messages from local controllers.

When this parameter is turned ON, the *i5S* will respond normally to the local controllers. (Local controllers refer to the keyboard, bend wheel, modulation switch, foot pedal and other controllers.)

Switching this OFF will disconnect the tone generator from the local controllers. This will prevent the *i5S* backing sequencer from recording any data from these controllers. Likewise, the *i5S* music processor will not be able to scan the keyboard for chords in the arrangement play mode, and others.

You should use the OFF setting only to disable local control when you are using the *i5S* keyboard to control other MIDI devices. The *i5S* will set this parameter to ON whenever you turn the power ON.

Controls the START/STOP tempo from an external source

Clock Source [INT, MIDI, HOST]

This lets you synchronize the *i5S* to another MIDI sequencer.

When this parameter is set to INT, the *i5S* will set its own tempo. It will also transmit MIDI clock messages from the MIDI OUT jack whenever it is in a sequencing mode, so you can synchronize other MIDI sequencers to the *i5S*.

Switching this parameter to MIDI will tell the *i5S* to synchronize to the MIDI clock data it receives from another sequencer connected to the MIDI IN jack. The *i5S* will also respond to start, stop, continue song select, and song position pointer messages.

When set to HOST the *i5S* will synchronize to the MIDI clock data it receives from another sequencer connected to the TO HOST jack. The *i5S* will also respond to start, stop, continue song select, and song position pointer messages.

The *i5S* tempo settings will have no effect when you use the MIDI or HOST setting. This means the *i5S* will not be able to play sequence data on its own. You should not select MIDI IN or TO HOST if you have not connected a MIDI sequencer to the *i5S* MIDI IN or TO HOST jack.

The *i5S* will automatically set this parameter to INT whenever you turn the power ON.

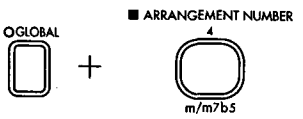
Operations resembling INT will take effect in the Song Play Mode, regardless of the setting of this parameter.

Host Baud Rate  [38.4k, 31.25k]

Exchange data with computer.

This parameter is used to set the data transmission speed between the personal computer or other devices connected to the TO HOST jack, and other equipment.

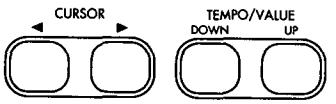
☞ User's Guide page 9-2 "Setting Computer Select"

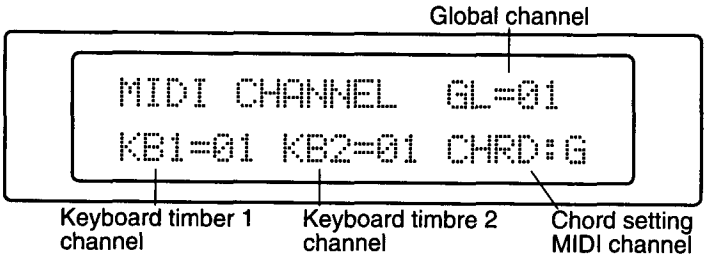


Page 4 MIDI CHANNEL [GLOBAL, KBD1, KBD2, CHORD]

There are a total of ten MIDI channel parameters that let you select the channels the *i5S* will use to send and receive MIDI messages. You may want to adjust these settings to match those of other instruments you connect to the *i5S* in order to ensure proper communication.

Please note that these settings pertain primarily to the Arrangement Play Mode and Backing Sequence Mode.





GL [1...16]

This selects the *i5S* Global MIDI Channel. It is normally set to channel 01.

The channel set in this Global parameter will be used when MIDI is used to perform the same operations as the *i5S* keyboard or controller, in the Arrangement Play and Backing Sequence modes.

The MIDI send channel of the keyboard is set with KB1 and KB2 parameters, mentioned later, when in the Arrangement Play mode.

The *i5S* will send this channel when played while the keyboard assign mode is in SINGLE, LAYER, or M.DRUMS while in Backing Sequence mode. This will also take place when the high notes are played on the keyboard while in Split Mode.

If the system exclusive message is not filtered, the *i5S* will receive this in the Global channel. System exclusive messages received through other channels will be ignored.

If the Global MIDI channel varies from KB1 or KB2, you can select and send arrangements of program change messages on this channel while in the Arrangement Play mode.

KB1 (KBD1) [1...16]

The *i5S* will transmit on this channel when you play the keyboard using the SINGLE, LAYER, or M.DRUMS in the Arrangement Play Mode. When in SPLIT Mode this parameter will specify the MIDI send/receive channel from the upper keyboard.

KB2 (KBD2) [1...16]

The MIDI send/receive channel from the lower keyboard will be specified with this parameter when the keyboard assign mode is SPLIT during the Arrangement Play or Backing Sequence modes.

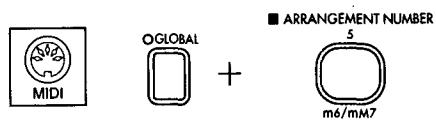
CHRD (CHORD) [G.M]

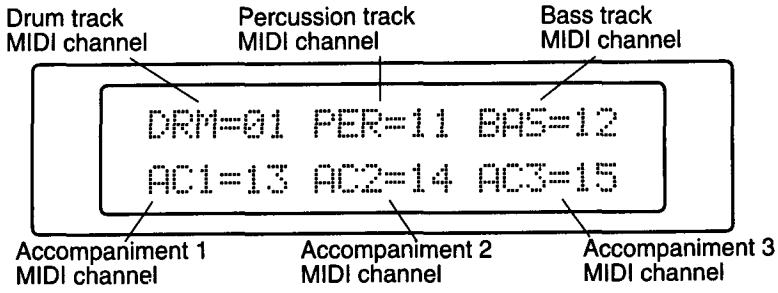
This parameter is used to specify what channel to use when specifying the chords of the note information received through MIDI in the Arrangement Play and Backing Sequence modes.

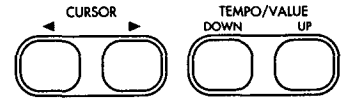
The G setting will use the channel specified by the Global MIDI channel. In this case, the Global MIDI channel note message will operate in the same manner as the *i5S* keyboard.

The M setting is used for all channels that are not defined in the Global Mode to be used for chord specification, in addition to the Global MIDI channel.

Page 5 MIDI CHANNEL
[DRUM, PERC, BASS, ACC1, ACC2, ACC3]







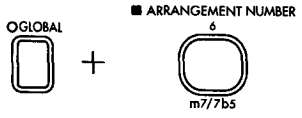
This parameter applies only to the Arrangement Play and Backing Sequence modes. Use this parameter to select the backing track whose MIDI channel you want to set, using the Backing Track Channel parameter.

Backing Track Channel [1...16]

This parameter applies to only the Arrangement Play and Backing Sequence modes. Use this parameter along with the Backing Track parameter, described above, to select channels the *i5S* will use to transmit data for the backing tracks. The backing tracks are normally set to channels 10 through 15.

The *i5S* will also respond to note information and program change messages it receives on these channels when it is in Arrangement Play or Backing Sequence mode.

For details on the backing tracks, please see the chapters describing the Arrangement Play and Backing Sequence modes.

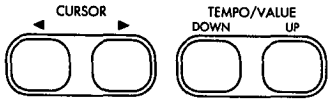


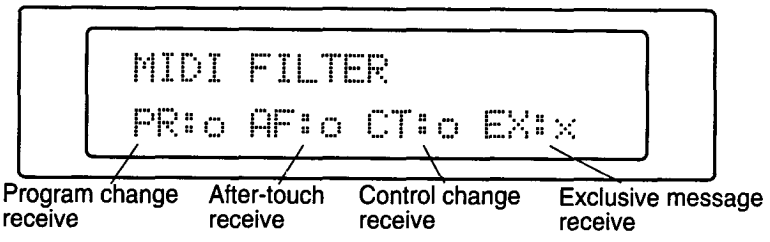
Page 6 MIDI FILTER

This display page contains four settings that let you filter incoming and outgoing MIDI data. You can use these filters to prevent the *i5S* from responding to certain types of MIDI data, such as program change and system exclusive messages.

You may also find them useful when recording, if you need to screen out memory-consuming messages, such as aftertouch and control change data that you don't need.

You can filter out a particular data type by setting the appropriate parameter to x. The *i5S* will neither record nor transmit data types which you disable with this setting. When playing back sequence data that has already been recorded in the backing sequence mode or backing track data playing an arrangement, this data will be transmitted regardless of this filter setting.





Program Change [x, o, n, s]

This parameter controls the program change message process. The program change messages will be handled normally when this parameter is set to o. Setting it to x will prevent the *i5S* from receiving or sending program changes on any channel. Setting it to n will ignore MIDI Bank Change messages. Setting it to s will send Bank A and B via MSB0/LSB0 and the DRUM bank via MSB0/LSB2.

Aftertouch [x, o]

This controls the response to aftertouch. The aftertouch will be handled normally when this parameter is set to o. You can set it to x to filter out unwanted aftertouch when recording from the *i5S* keyboard or another MIDI device.

Control Change [x, o]

This controls the response to the control changes such as pitch bend, volume, sustain pedal and other controller messages. These messages will be handled normally when set to o. You can set it to x to filter out unwanted control changes when recording from the *i5S* keyboard or another MIDI device. Doing so will also prevent the *i5S* from transmitting these messages to another device.

Exclusive [x, o]

This controls the *i5S*'s handling of system exclusive messages. These messages are used mainly by personal computer software designed to facilitate editing of the *i5S* program data.

The *i5S* will accept such messages, allowing the computer to change the *i5S*'s data, when this parameter is set to o. Setting it to x will prevent your *i5S* parameters from being changed.

Pedal Parameters

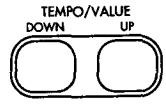
The parameters on page 7 and 8 let you assign functions to a footswitch or foot pedal, and an EC5 External Controller connected to the appropriate jacks on the rear of the *i5S*.

The setting on page 9 governs the operation of a damper pedal connected to the DAMPER jack on the rear panel of the *i5S*.

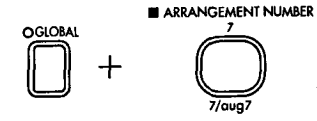
PEDAL FUNCTION

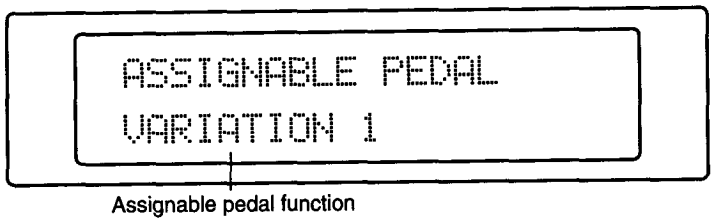
When you press the switch on the front panel while page 7 or 8 is displayed, the displayed pedal will be assigned to the displayed function, if appropriate.

The TEMPO/VALUE UP/DOWN key can be used to assign the functions.



Page 7 Assignable Pedal



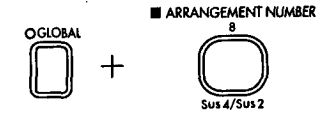


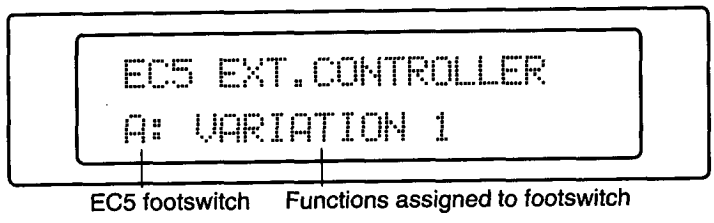
The ASSIGN PDL/SW jack on the rear of the *i5S* lets you control a variety of *i5S* functions with a footswitch or expression pedal. If you connect a pedal to this jack, you can set its function using the ASSIGNABLE PEDAL setting. Select pedal functions from the tables on the next page.

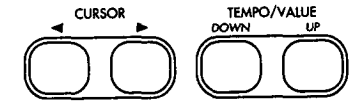
It is advised that you use a Korg XVP-10 or EXP-2 to control the functions in the expression pedal functions table.

Always check to see that the pedal is properly connected before performing, to change these settings. Turn OFF this setting if a pedal is not connected to the jack for a performance.

Page 8 EC5 EXT CONTROLLER A...E
EC5 Switch A...E







These five settings assign functions to the corresponding pedals on the EC5 External Controller. Select pedal functions from the Footswitch Functions table on the next page.

The EC5 External Controller is an optional control device consisting of five footswitches, which Korg has made available especially for use with the i-Series keyboards such as the *i5S*. Be sure to plug your EC5 into the EC5 jack before using any of the parameters on this display page.

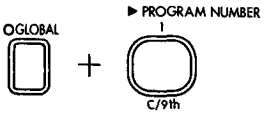
By stepping on footswitches A to E of the EC5 while in this display, you can assign the selected parameter to the desired footswitch, (A-E).

Expression Pedal Functions

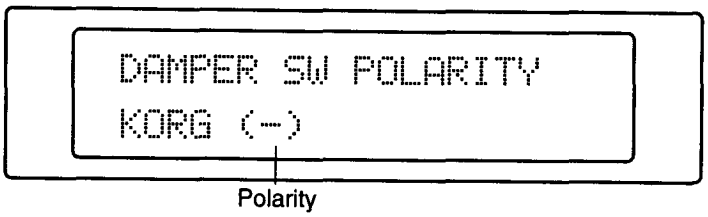
Setting	Functions
OFF	None
START/STOP	Same as START/STOP key.
SYNC START/STOP	Same as SYNCHRO START/STOP key.
RESET	Same as RESET key.
TAP TEMPO	Same as TEMPO key.
KBD LOCK	Same as KBD LOCK key.
INTRO/ENDING 1	Same as INTRO/ENDING 1 key.
INTRO/ENDING 2	Same as INTRO/ENDING 2 key.
FILL 1	Same as FILL 1 key.
FILL 2	Same as FILL 2 key.
VARIATION 1	Same as VARIATION 1 key.
VARIATION 2	Same as VARIATION 2 key.
VARIATION 3	Same as VARIATION 3 key.
VARIATION 4	Same as VARIATION 4 key.
CHORD HOLD	Same as CHORD HOLD key.
BASS INVERSION	Same as BASS INVERSION key.
SCALE CHANGE	Switches between main and sub scales.
ARRANGEMENT UP	Selects next arrangement.
ARRANGEMENT DOWN	Selects previous arrangement.
PROGRAM UP	Selects next program.
PROGRAM DOWN	Selects previous program.
VARIATION UP	Selects next variation.
VARIATION DOWN	Selects previous variation.
PUNCH IN/OUT	Punch-in recording switch.
EFFECT 1 ON/OFF	Turns EFFECT 1 ON/OFF.
EFFECT 2 ON/OFF	Turns EFFECT 2 ON/OFF.
DRUM MUTE	Mutes drum track.
PERC MUTE	Mutes percussion track.
BASS MUTE	Mutes bass track.
ACC1 MUTE	Mutes accompaniment track 1.
ACC2 MUTE	Mutes accompaniment track 2.
ACC3 MUTE	Mutes accompaniment track 2.
SOUND HOLD ON/OFF	Same as SOUND HOLD key.
SUSTAIN ON/OFF	Same as SUSTAIN key.
FADE IN/OUT	Same as FADE IN/OUT key.
ENSEMBLE ON/OFF	Same as ENSEMBLE ON/OFF key.

Expression Pedal Functions

Setting	Functions
KB VOLUME	Standard volume of program or selected track.
MASTER VOLUME	Master volume output from the *i5S*.
EXPRESSION	Relative volume of program or selected track.
VDF CUTOFF	VDF cutoff frequency (brightness).
EFFECT CONTROL	Dynamic modulation of effects.
DATA ENTRY	Entry of parameter values.



Page 9 DAMPER



Damper SW. Polarity [REVERSE (+), KORG (–)]

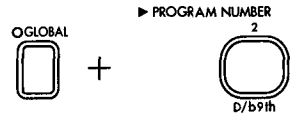
You can connect a footswitch to the DAMPER jack on the rear of the ***i5S*** for use as a sustain pedal. This resembles the damper pedal effects on the far right of an acoustic piano. When the switch is pressed prior to releasing a note, the note will continue to play as though you had not released it. To use this effect, there is a need to set the polarity of the footswitch in this page.

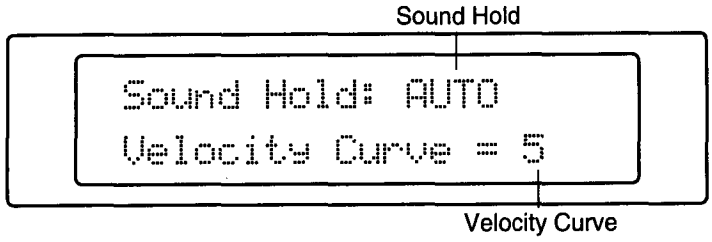
DS-1 and PS-1 Korg footswitches use an open polarity system. Select the KORG (–) setting when using one of these pedals.

The Korg DS-2 and many pedals made by other manufacturers use the opposite, or normally closed, polarity. Select the REVERSE (+) setting for these pedals.

If you use one of the Korg PS-2 pedals as a damper, select KORG (–) for the right-hand jack and REVERSE (+) for the left-hand jack of each pedal. If you have a pedal whose polarity you are not sure of, try using it with one setting, then switch it to the other if the ***i5S*** holds notes when you're not pressing the pedal.

Page 10 SOUND HOLD/VELOCITY CURVE





Sound Hold [ACTUAL; AUTO; BASS]

Set this parameter when the SOUND HOLD switch is ON.

This function can be used to sustain the sound of the lower keyboard when playing an arrangement or backing sequence. (The sound of the lower keyboard can be either one or two programs, depending on the current keyboard assign mode.)

When the ***i5S*** is stopped, the sound of the program assigned to the bass track will also play. This bass sound will play the root or bass inversion note of the scanned chord. This feature is particularly useful for song introductions.

There are three possible settings for this parameter: ACTUAL, AUTO and BASS.

When ACTUAL or AUTO is selected, the sound of the lower keyboard will sustain (as will the bass sound if the ***i5S*** is stopped).

The ACTUAL settings allows you to play your own chord voicing, whereas AUTO provides full chords, regardless of the actual notes you play in the lower half of the keyboard. For example, if you play a C (single note) in the ACTUAL setting, only this C note will be sustained. If this is similarly done in the AUTO setting, you will hear a C-E-G chord. (In either case, the ***i5S*** music processor will interpret this single note as a C major chord for the purposes of chord recognition.)

Note that when using the ACTUAL or AUTO settings, the bass and lower keyboard sounds will only sustain when the LOWER chord scanning mode is used. Furthermore, the LOWER mute button on the Mute page must be canceled for the sounds to sustain.

When this parameter is set to BASS, only the bass sound will sustain when the ***i5S*** is stopped. The sound of the lower keyboard will not sustain, whether the ***i5S*** is stopped or playing. The bass sound will sustain if you use the LOWER, UPPER, or FULL chord scanning modes. It will also sustain regardless of the setting of the LOWER mute button of the mute function.

When the CHORD HOLD function is OFF (CHORD HOLD key LED is unlit), operation is the same as described above, except that the sounds sustain only when you hold keys in the chord scanning range of the keyboard.

The sound hold function will have no effect during Intro 1 and Ending 1 performances.

<Regarding the Sound Hold Function and Backing Sequences>

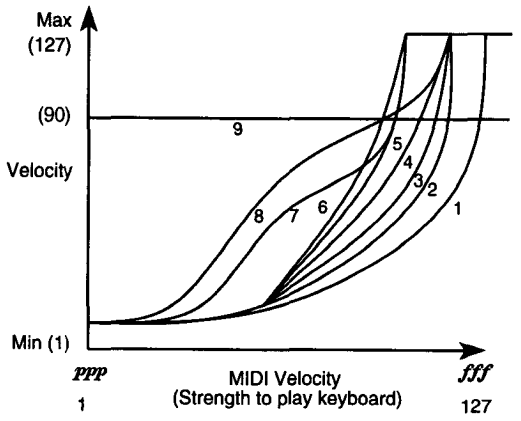
If you are using either ACTUAL or AUTO, the notes you play on the lower keyboard (or those that the *i5S* plays automatically) will be recorded to the Keyboard track as standard note data. Changing the setting of the Sound Hold parameter after recording a backing sequence will have no effect on this data.

Due to the nature of the Sound Hold function, the sound of the program assigned to the bass track will only sustain when the *i5S* is stopped, and therefore cannot be recorded into the backing sequence. You can re-create this effect by recording the bass part into one of the extra tracks.

Velocity Curve [1...9]

This parameter lets you select one of nine curves that modify the effect of key velocity on the volume or tone of the program you're playing. The curves adjust the performance of the *i5S* as shown in the illustration below.

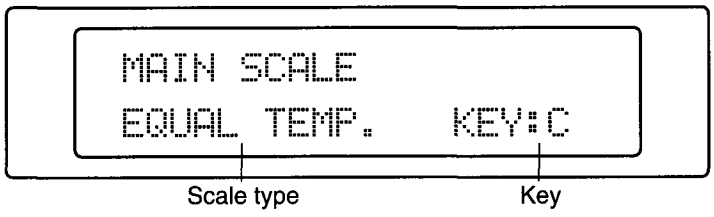
When this parameter is set to 9, all notes that you play from the keyboard will sound at a velocity of 90, regardless of the actual velocities you play. This setting is useful for turning off the *i5S*'s velocity sensitivity. Note that this does not affect the *i5S*'s sensitivity to incoming MIDI note velocities.

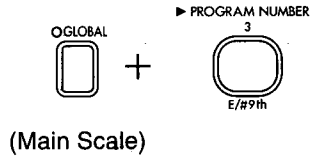


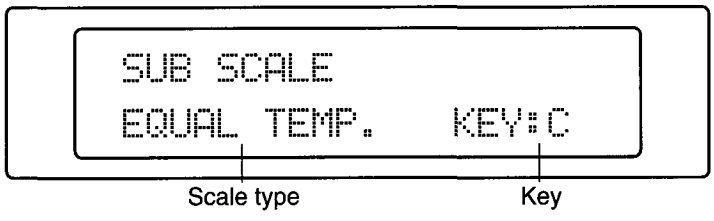
Scales

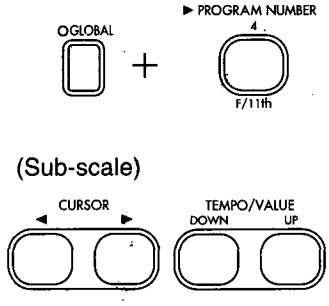
The parameters on pages 11, 12 and 13 let you specify the basic tuning temperaments used by the *i5S* tone generator. You can select main and sub scales, then switch between them using a footswitch or EC5 External Controller, or through a MIDI system.

In addition to a variety of traditional temperaments, many of which let you optimize the *i5S* tuning for playing a selected key, the *i5S* lets you create your own scale.









Page 11, 12 MAIN SCALE/SUB SCALE

To select the temperaments the *i5S* will use, first choose which scale you want to set using the MAIN SCALE/SUB SCALE setting. Then select the temperament using the Temperament setting, described below.

Temperament

This parameter lets you select which temperament the *i5S* will use for the main scale and the sub scale. The range of settings available is the same for both scales.

The key parameter appearing at the bottom right of the display should be set when the temperament of main and sub scales vary.

EQUAL TEMPERAMENT ..... This is the most widely used temperament, and every semitone consists of an equal change in pitch.

EQUAL TEMPERAMENT 2 ..... This adds slight, random pitch variations to an equal temperament. It is useful when simulating acoustic instruments with natural irregularities in pitch.

PURE MAJOR ..... This setting perfectly tunes major chords in the selected tonic key.

PURE MINOR ..... This setting perfectly tunes minor chords in the selected tonic key.

ARABIC ..... This setting perfectly tunes major chords in the selected tonic key.

PYTHAGOREAN ..... This setting simulates an ancient Greek tuning that is useful for playing melodies.

Classic Tunings ..... WERCKMEISTER is an essentially equal temperament used in the later Baroque period. KIRNBERGER is a harpsichord tuning developed in the 18th century.

Gamelan Tunings ..... SLENDRO and PELOG simulate Indonesia gamelan tunings. The former uses C, D, F, G, and A while the key parameters of the latter only use the white keys when the key parameter is set to C. (Other notes are set to standard pitches of the EQUAL TEMPERAMENT.)

USER SCALE ..... This setting lets you use the parameters on page 5-2 to adjust the pitch of each key over a range of ±50 cents. See the description of the following User Scale parameters.

<Xpose Pos and Scale Settings>

When you use a Scale setting other than EQUAL TEMPERAMENT or EQUAL TEMPERAMENT 2, the TRANSPOSE keys may shift the tuning away from the desired tonic key, depending on your setting for the Xpose Pos parameter.

Key [C...B]

The *i5S* will display a key parameter next to the TEMPERAMENT setting when you select a scale setting other than EQUAL TEMPERAMENT, EQUAL TEMPERAMENT 2, or USER SCALE. Use this parameter to choose a tonic key for the temperament you've selected.

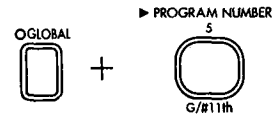
<To switch between the main scale and sub scale>

You can select the scales with the footswitch or MIDI controller messages.

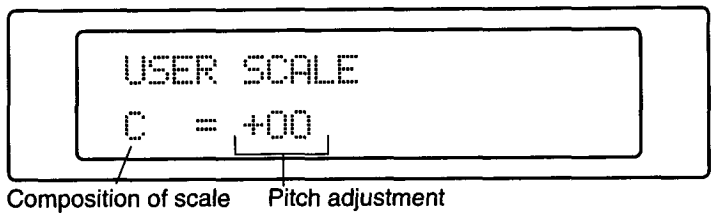
To use a footswitch, set the Assignable Pedal parameter to SCALE CHANGE (see page 5-17 of this manual). If you have an EC5, select this setting for the appropriate EC5 SWITCH parameter (see page 5-16).

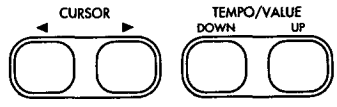
To select the scales via MIDI, use MIDI controller 4. Values from 0 to 63 will select the main scale, while values from 64 to 127 will select the sub scale.

Page 13 USER SCALE



Use the parameters on this page to adjust the settings of the User Scale. Note that you will not hear the effect of the settings you make here unless you have selected USER SCALE for the Temperament setting on Page 12.





Note [C...B]

Use this parameter to select the note whose pitch you want to change.

Tuning [–50...+50]

This parameter is used to adjust the tuning of the note selected with the key parameter. You can raise or lower the pitch of each note as much as 50 cents, or 1/2 semitone, from their standard (equal temperament) pitches. The *i5S* will apply these settings to the entire keyboard range.

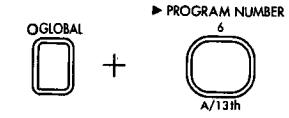
MIDI Data Dump

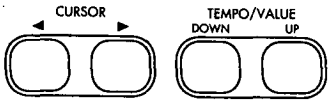
The functions on the last page of the Global mode display let you transmit data from the *i5S* internal memory to another MIDI device. This bulk dump capability lets you share your *i5S* data with another *i5S*, or store it in a computer or MIDI data filer that is capable of receiving exclusive data.

When this display page is showing, the *i5S* can transmit and receive MIDI data dumps regardless of the Exclusive filter setting on page 2-3 of Global mode. You should make a note of the Global/Kbd channel setting on page 2-2 for future reference. The *i5S* will recognize a data dump only if this channel setting is set to the same value as when the dump was originally sent.

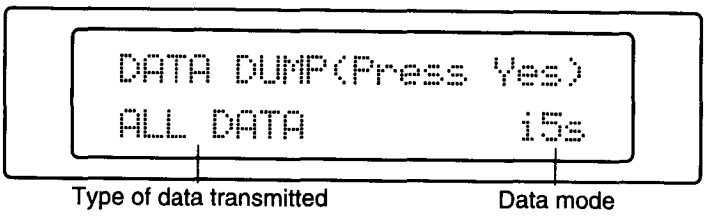
The *i5S* can receive data dumps at any time, as long as the Exclusive filter parameter mentioned above is set to o.

For details on the exclusive message data format, refer to the end of this manual.





Page 14 DATA DUMP



Dump Type

[ALL DATA, GLOBAL, ARRANGEMENT, BACKING SEQUENCE, PROGRAM]

ALL DATA ..... This setting transmits a complete set of all data transmitted by the dump settings described below. Press the RESET/[YES] key to execute data dumping. The *i5S* will transmit the data without a confirmation.

GLOBAL ..... This setting transmits all global parameters, except for the Local Control and Clock Source settings. Press the RESET/[YES] key to execute data dumping. The *i5S* will transmit the data without a confirmation.

ARRANGEMENT ..... This setting transmits data for 64 arrangements. Press the RESET/[YES] key to execute data dumping. The *i5S* will transmit the data without a confirmation.

BACKING SEQUENCE ..... This setting transmits data for 10 backing sequences. Press the RESET/[YES] key to execute data dumping. The *i5S* will transmit the data without a confirmation.

PROGRAM ..... This setting transmits the data for the 64 user programs, 2 drum programs, and the user drum kit.

Dump Type	Size (bytes)	Approximate Transmission time (sec.)
All Data	35166-155274	11.3-48.6
Program	13331	4.3
Global	32	—
Arrangement	14949-84462	4.8-27.1
Backing Sequence	2620-185477	0.8-58.0

Data Mode [i5S, CMP]

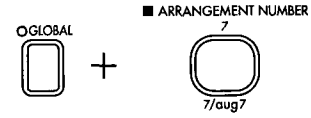
i5S ..... Dump data saved on disk can only be accepted on the *i5S*.

CMP ..... Dump data saved on disk can be used on other *i*-Series systems (*i2/i3/i4S/i1*).

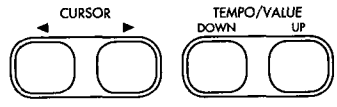
All data using arrangement (A11-B88), style, and program (D11-E88, Dr21-Dr28) available only on the *i5S* can not be used on the *i2/i3/i4S/i1* models though they are dumped or saved in the CMP mode.

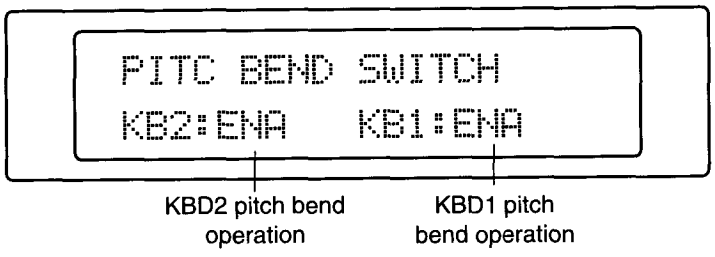
When using such data on the *i2/i3/i4S/i1* models it may cause a malfunction, therefore it is advised that you give proper care when using dump data in the CMP mode on other *i*-Series systems.

Page 15 PITCH BEND SWITCH



This page allows you to determine (for each of KB1 and KB2 keyboard timbres separately) whether the pitch bend wheel on a connected MIDI master keyboard will function.





KB2 (KB2 pitch bend switch) [ENA, DIS]

When ENA is selected, operating the pitch bend wheel will change the KB2 pitch. When DIS is selected, the pitch bend wheel will be disabled.

KB1 (KB1 pitch bend switch) [ENA, DIS]

When ENA is selected, operating the pitch bend wheel will change the KB1 pitch. When DIS is selected, the pitch bend wheel will be disabled.

With the ENA setting, some programs may not be affected by the pitch bend wheel operation.

Appendix A
Error Messages

Various types of displays appear on the *i5S'* LCD, which include settings and the status of certain modes. Pop-up displays also show for several seconds when changing a program, volume or transposition setting.

Prompt messages also appear. These include warning of an operation, confirmation and messages indicating that a selection is being processed.

If a warning message appears, you should immediately correct the condition or confirm the procedure before executing the function. Continuing operations when a warning message appears may result in loss of data.

Backing Seq. Troubleshooting

Empty measure.

There is no data in this measure. Therefore, the operation is invalid. Check to see that you have selected the correct measure.

Empty track.

There is no data in this track. Therefore, the operation is invalid. Check to see that you have selected the correct track.

Source is empty.

If this message appears during COPY MEASURE...

Make sure you are not trying to copy an empty measure to another measure. Select the proper measure and track.

If this message appears during BOUNCE TRACK...

Make sure you are not trying to bounce an empty track to another track. Select the proper track.

Empty B. Sequence.

There is no data in this track. Therefore, the operation is invalid.

Not enough memory.

There is not enough memory in the ***i5S*** to execute the command. Therefore, this operation is not valid.

Measure won't fit.

If the measure is copied or inserted as specified, there will be more than 999 measures in this track.

The ***i5S*** cannot contain more than 999 measures on one track. Please check the length of the measure that you want to copy or insert, the number of times you want to copy the measure and the length of the destination track.

Measure overlaps.

The measures you are trying to copy overlap with the destination measures.

Confirm the length and number of times the measures will be copied , as well as the destination measures. ☞ Page 2-18 "Copy Measure"

INTERACTIVE COMPOSITION (B. SEQ)

Replay (Yes/No)?

This message will appear immediately after recording or when you press the START/STOP key. It is asking whether you want to change the chord on the chord track using the interactive composition function. If you select YES, the chord will be replaced and playing will continue.

If NO is selected, the system will stop.

Erase Other (Yes/No)?

There is not enough memory available to change the chord on the chord track using the interactive composition function.

Erase backing sequence data on the ***i5S*** to free memory space.

If there is data on the ***i5S*** that you do not want to lose, it is advised that you save that data on a disk using the Save All B. Sequence function in the sub page of the Global Mode's disk page.

☞ Page 5-7 "Saving Backing Sequence Data"

Not enough memory.

Even after the backing sequence data was saved or erased, there is still not enough memory for the ***i5S*** to operate properly.

Therefore, the chord change was not executed.

Keyboard Track Empty.

There is no data in the keyboard track. Therefore, the specified operation is not possible. Either record or load data into the track.

SONG PLAY MODE Troubleshooting...

More memory needed. Okay to erase B. Seq?

There is not enough memory for the ***i5S*** to perform the data in SMF format 1.

Erase backing sequence data on the ***i5S*** to free necessary memory?

If there is data on the ***i5S*** that you do not want to lose, it is advised that you save that data on a disk using the Save All B. Sequence function in the sub page of the Global Mode disk page.

☞ Page 5-7 "Saving Backing Sequence Data"

Can't play all track. Continue?

There is not enough memory for the ***i5S*** to play all the tracks in the performance data specified. If you continue the command, you will not hear all the tracks.

Measure does not exist. Continue?

Have you specified the correct measure? The measure number specified does not exist.

Please wait a moment.

Song data is being accessed from the floppy disk.

Not SMF.

The designated file is not a Standard MIDI File. Therefore, this data cannot be loaded into the ***i5S***. Check to see that you have selected the correct file.

SMF Format 2

The designated file is not a format 2 Standard MIDI File. Therefore, this data cannot be loaded into the ***i5S***. Check to see that you have selected the correct file.

Corrupt SMF

The data in the Standard MIDI File that was selected is damaged. Therefore, this data cannot be loaded into the ***i5S***.

Disk Troubleshooting Messages

Completed.

The command has been completed. Now, you can start the next operation.

No disk in drive.

There is no floppy disk in the floppy disk drive. Insert a disk into the drive and continue.

Can't read disk.

The inserted floppy disk is not an ***i5S*** disk format. You cannot continue the current operation.

Check to see that the correct disk is inserted. This message may appear due to unstable current or voltage conditions.

Can't find file.

Have you changed disks after selecting a file during the load, delete or rename operations?

The necessary file does not exist on the floppy disk currently in the disk drive. Therefore, you cannot continue the function.

Check to see that the correct disk is inserted.

☞ Page 5-2 "Data saved on disk"

Directory full.

The directory is full and will not allow you to create another directory on that floppy disk. The command cannot be executed.

Either erase unnecessary files from the disk, or replace the disk with another disk that has more memory available.

Empty file.

There is no data available on the chosen file. The command cannot be executed.

Erroneous disk operations will result in creating an empty file on a disk.

If you find such a file on a disk, erase the file using the delete file (DEL) function in the utilities of the sub page in the Global Mode's disk page.

☞ Page 5-8 "DEL (Delete File)"

Corrupt file.

The data on the chosen file is destroyed. The command cannot be executed.

Check to see that the proper disk is inserted.

If you have a backup of the file, load the copy.

Disk protected.

The write protect tab of the disk is open. The command cannot be executed.

First, check to see if the proper disk is inserted. If you confirm that the disk can be overwritten, close the tab and resume the function.

File protected.

The selected file is a read only file. The command cannot be executed.

First, check to see that the proper disk is inserted. The file's protect status can be changed using a computer. However, it cannot be changed on the ***i5S***. Confirm that the file can be overwritten and insert the disk in the disk drive of a computer to change the file's protect status. Insert the disk back into the ***i5S*** and continue the procedure.

Refer to the owner's manuals for the computer and operating system (basic software) of the computer to change the file category.

Can't replace dir.

The file name specified is already used as a directory on the disk. The command cannot be executed.

Specify another file name and try the operation again.

Can't replace system.

The file name specified is already used as a system file on the disk. The command cannot be executed.

Specify another file name and try the operation again.

Not *i5S* file format.

The file specified is not an ***i5S*** file. The command cannot be executed.

Specify the proper file name and try the operation again.

Not enough memory. There is not enough memory available for the ***i5S*** to execute the operation.

You must erase backing sequence data to attain more memory.

If there is data on the ***i5S*** that you do not want to lose, it is advised that you save that data on a disk using the Save All B. Sequence function in the sub page of the Global Mode's disk page.

☞ Page 5-7 "Saving Backing Sequence Data"

Erase the backing sequence data using the Erase B. Sequence page of the Backing Seq Mode to attain enough memory. Then, try the operation again.

???????????? exists. The file name ???????????? that you specified as the new file name already exists for another file on the disk. Do you want to replace the file on the disk with the contents of the new file?

When the replace function is executed, all details of the old file will be lost from the disk.

Empty B. Sequence There is no data in the backing sequence specified. The current command cannot be executed.

Missing Arrangement. There is no arrangement file on the inserted disk.

Missing B. Sequence. There is no Backing Sequence file on the inserted disk.

Missing some files. There are several files missing on the inserted disk.

Wait a moment...
Now loading...
Now saving...
Now formatting... These messages indicate that the disk drive is currently engaged. Please wait a moment until the command is completed.

Already formatted. Continue? The disk specified to be formatted is already formatted and the prompt is requesting whether you want to format the disk. Executing the formatting command will erase all files on the disk. Check to see that the proper disk is inserted.

Disk has ??? file(s). Continue? The message is asking for confirmation whether to continue formatting the disk since it already contains ??? files. If you proceed with the format disk operation, you will lose all the data in these files. Check to see that the proper disk is set before executing the command.

Others

Battery Low The memory backup battery level within the ***i5S*** is low. Please have it replaced with a new battery as soon as possible. Otherwise, when you turn ON the ***i5S***, the arrangement, program, user styles and other data in the user bank may be lost. Contact your local Korg dealer or an authorized Korg service center. Never attempt to replace the battery yourself.

Appendix B

General Troubleshooting

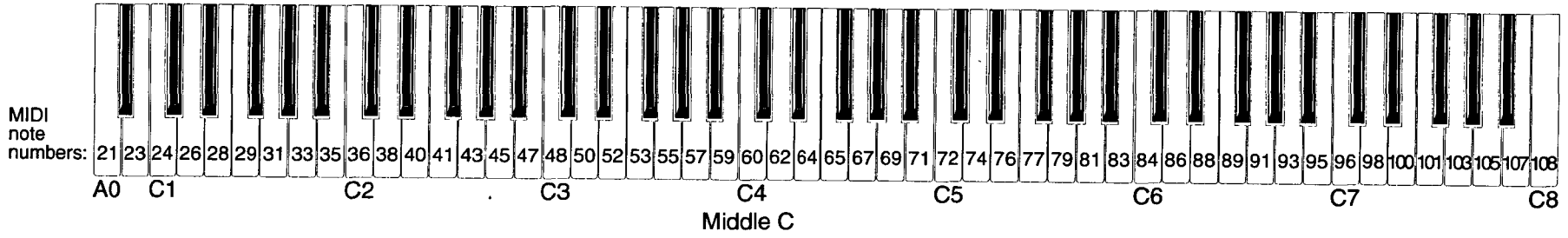
Trouble	What to do
The power cannot be turned on.	Check that the power cable is connected to a suitable AC socket.
	Is the *i5S* power switch ON?
	Contact your local Korg dealer if the above remedies will not correct the problem.
The *i5S* does not produce any sound.	If you are using a sound system, check to see that the amp and mixers are connected properly.
	If you are using a sound system, check to see if the amp and mixer are ON and properly connected.
	Is the MASTER VOLUME slider of the *i5S* up?
	Is the local control OFF? If so, turn it ON.
The wrong sounds are produced when playing an arrangement, style, backing sequence or song.	Have you changed any user bank (Bank U) programs or Dr17-Dr18 drum programs? Load the appropriate data.
	Have you modified either of the two user drum kits? Load the appropriate data.
	Have you modified the arrangement? Load the appropriate data.
The arrangement or backing sequence is playing the wrong song.	Does the arrangement or backing sequence use one of the user styles? If so, have you loaded different styles from the disk? Load the appropriate data.
The sound cannot be stopped.	Make sure that the damper switch polarity parameter is set correctly.
The selected arrangement or backing sequence cannot be played.	Make sure that the MIDI Clock source is set to INT. If you are using an external clock source, make sure that the MIDI Clock Source parameter is set to EXT, and the external device is sending the MIDI Clock data correctly.
Cannot record in the Backing Sequence mode.	Make sure that the MIDI Clock source is set to INT. If you are using an external clock source, make sure that the MIDI Clock Source parameter is set to EXT, and the external device is sending the MIDI Clock data correctly.
The *i5S* does not respond to the incoming MIDI data.	Check to see that all MIDI cables are connected properly.
	Make sure that the *i5S* is set to receive MIDI data on the channel that the sending device is using.
	Make sure that the *i5S* is not set to filter out the incoming MIDI data.
Cannot write a program.	Write programs only to Bank U or programs Dr27-Dr28.
Some drum sounds do not play.	Check the panpot and effect send level.
Keys do not play the specified drum sounds.	Check to see that the transpose function is set to +00.

Floppy Disk Troubleshooting

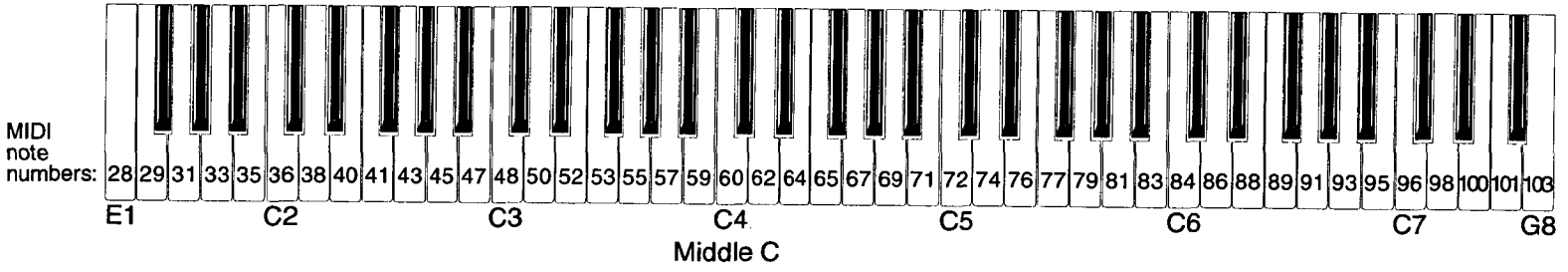
Trouble	What to do
Cannot format the floppy disk.	Are you using a 3.5 inch 2DD or 2HD floppy disk? Use only these types of disks.
	Is the disk inserted correctly?
	Make sure that the disk is not write protected with the tab set to protect.
Cannot save data to a floppy disk.	Is the disk inserted correctly?
	Make sure that the disk is not write protected with the tab set to protect.
Cannot load data from a floppy disk.	Is the disk inserted correctly?
	Does the disk contain any data?

Appendix C

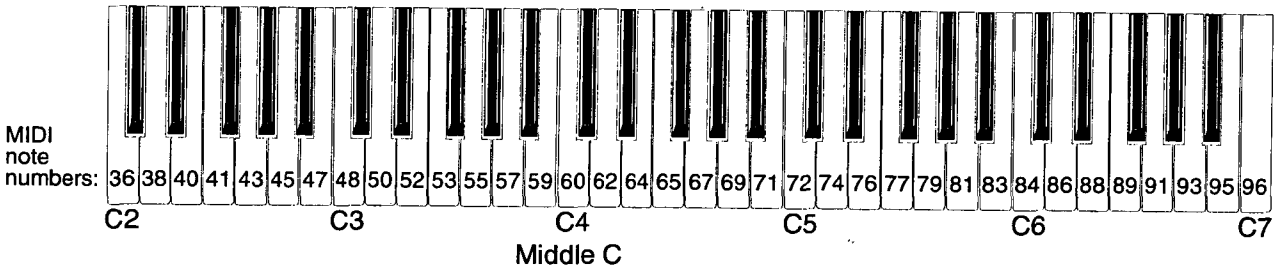
i1 keyboard (88 keys)



i2 keyboard (76 keys)



i3, i4S, i5S keyboard (61 keys)

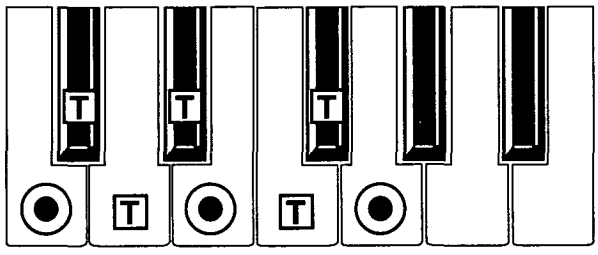


Recognized Chords

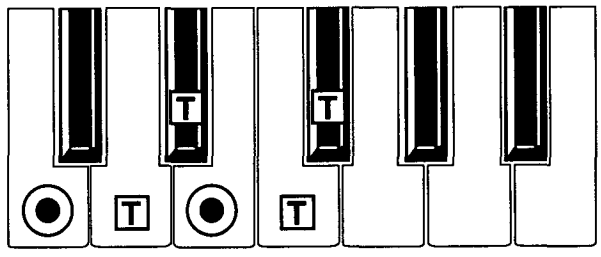
All chords are shown in root position, with a root of C. Please note that in order for the ***i5S*** to correctly recognize major 6th and minor 6th chords, you must play them in root position. This is necessary because these chords are made up of the same notes as minor 7th and minor 7th flat 5 chords in the relative minor (for example, C–E–G–A can be either C6 or Am7).

Major

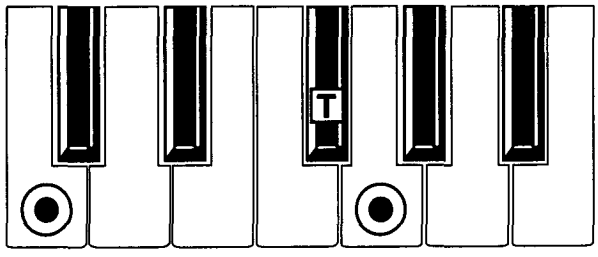
3-note



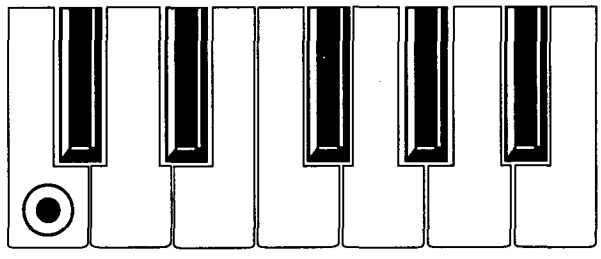
2-note



2-note

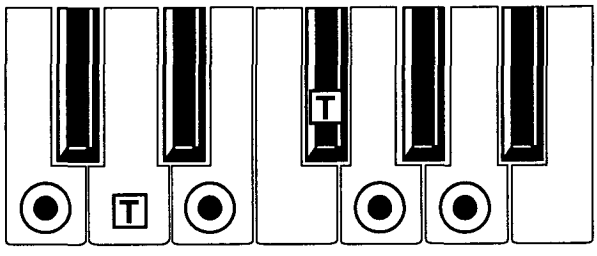


1-note

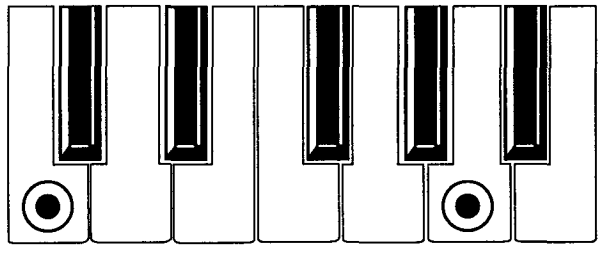


Major 6th

4-note

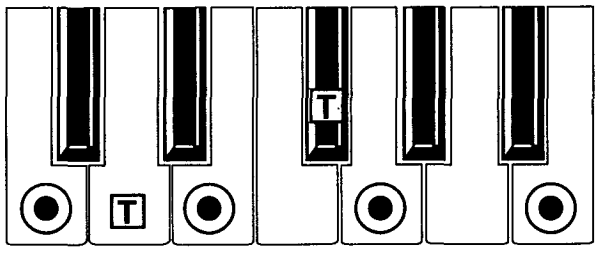


2-note

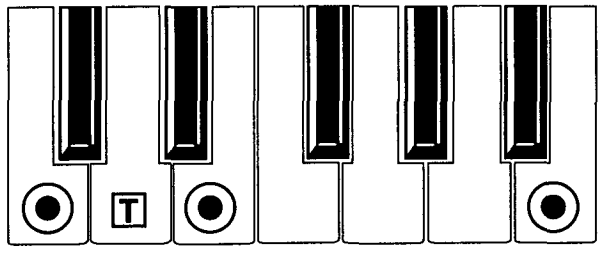


Major 7th

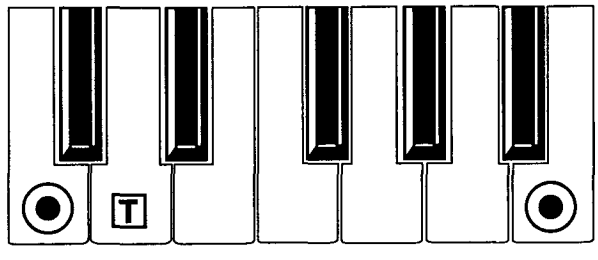
4-note



3-note



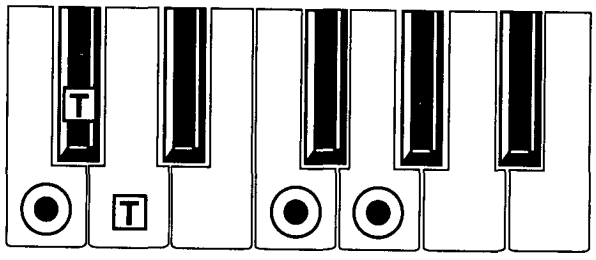
2-note



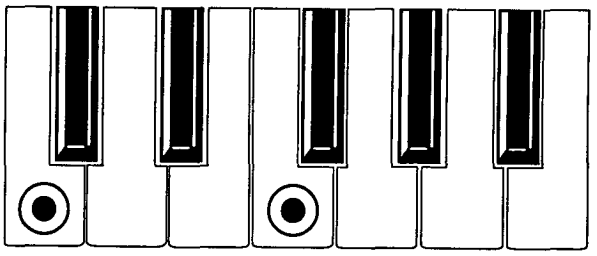
◉=chord tone T=available tension

Sus 4

3-note

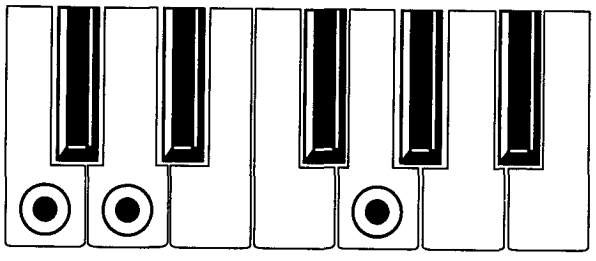


2-note



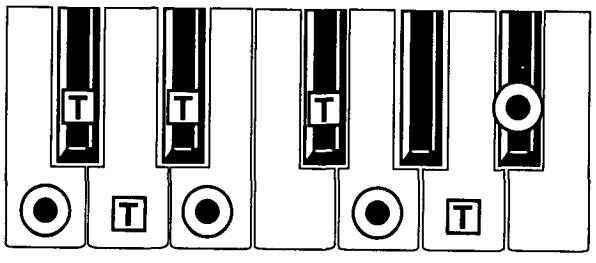
Sus 2

3-note

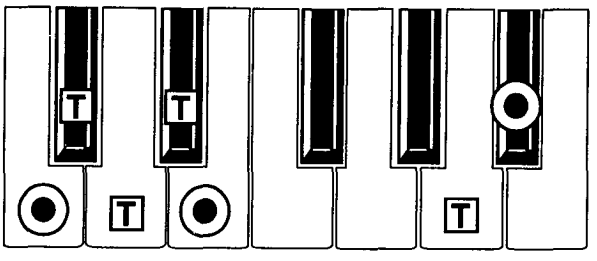


Dominant 7th

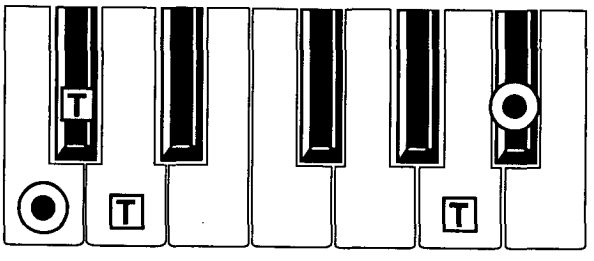
4-note



3-note

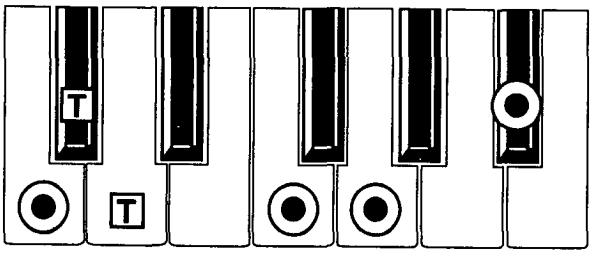


2-note

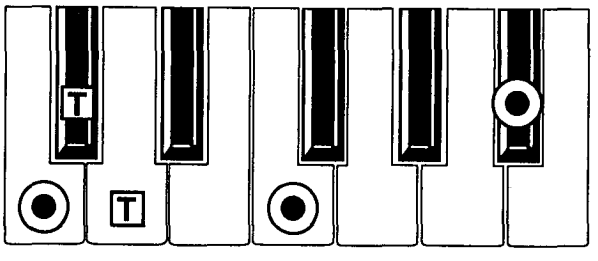


Dominant 7th Sus 4

4-note



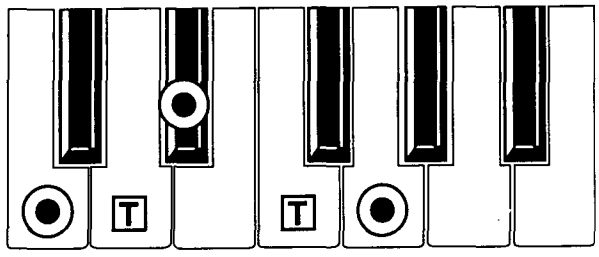
3-note



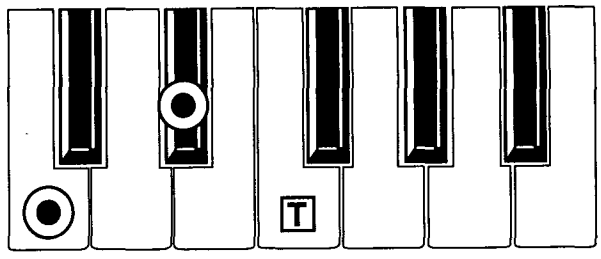
◉=chord tone T=available tension

Minor

3-note

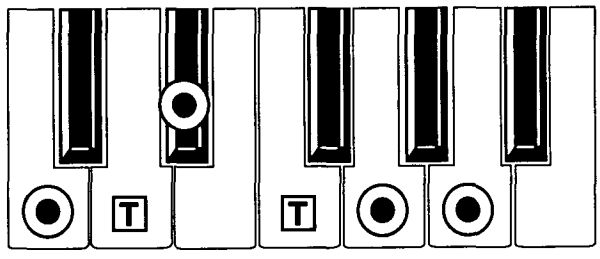


2-note



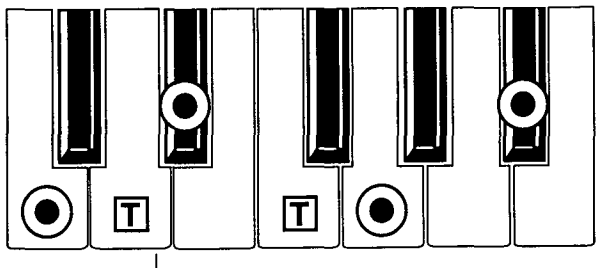
Minor 6th

4-note

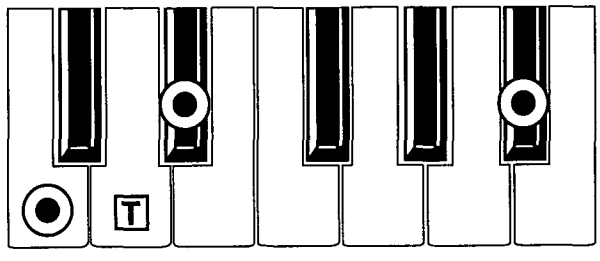


Minor 7th

4-note

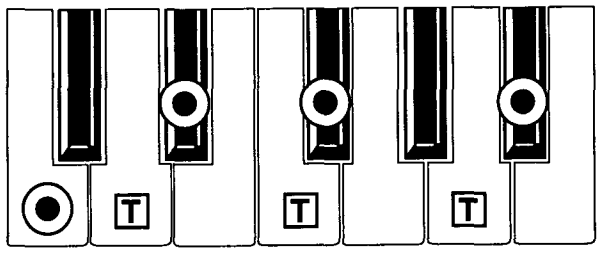


3-note



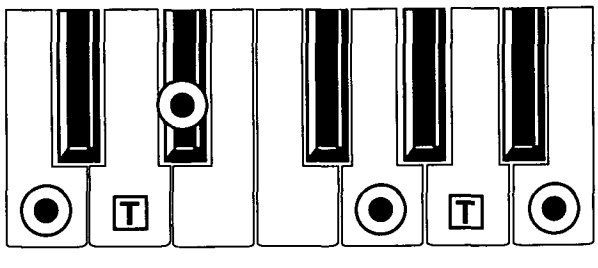
Minor 7th ♭5

4-note

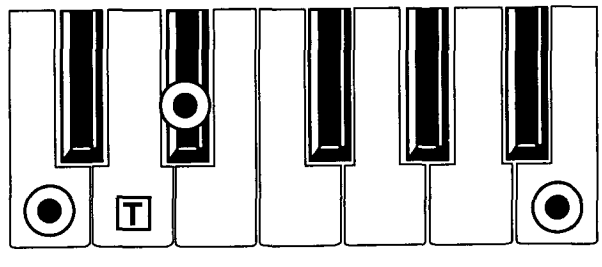


Minor-Major 7th

4-note

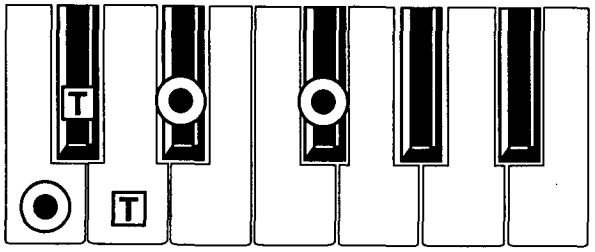


3-note

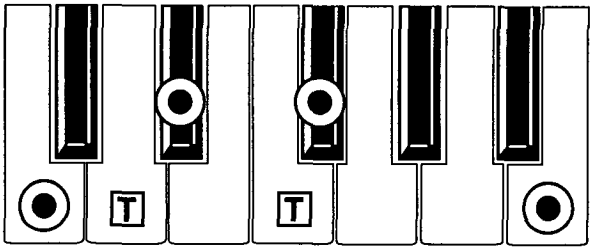


◉=chord tone T=available tension

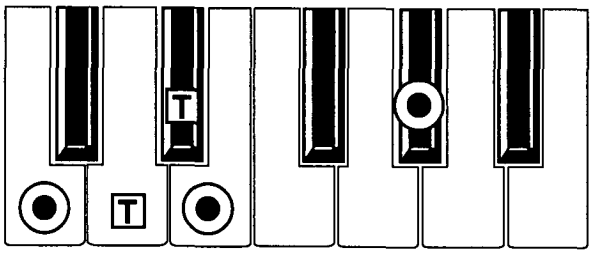
Diminished
3-note



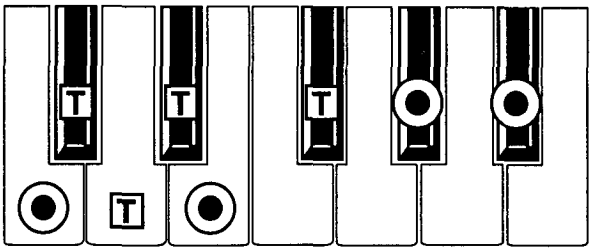
Diminished Major 7th
4-note



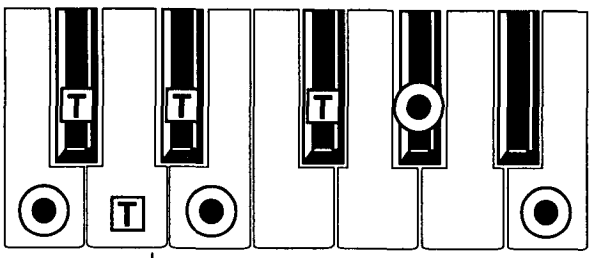
Augmented
3-note



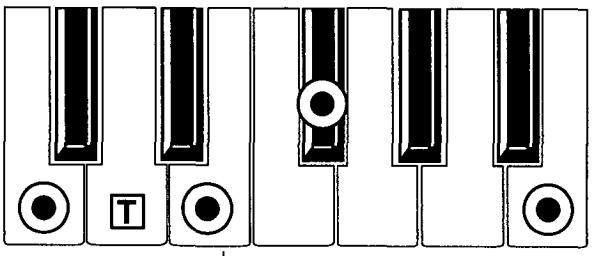
Augmented 7th
4-note



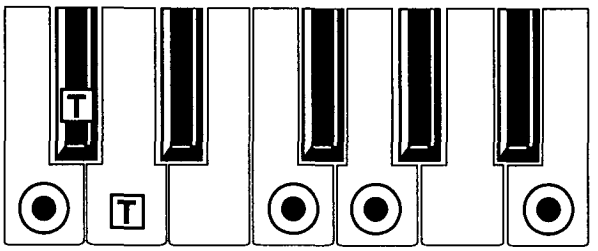
Augmented Major 7th
4-note



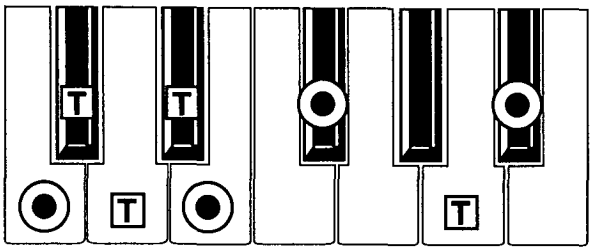
Major 7th ♭5
4-note



Major 7th Sus 4
4-note



Dominant 7th ♭5
4-note



◉=chord tone T=available tension

Drum Map Tables

These tables show how the specified drum sounds are changed when you select the drum maps. Drum sounds unaffected by the drum maps do not appear here. For this reason, drum map 5 is not listed, as all of the drum sounds remain unaffected when using this map.

Drum Map 1 (percussion)

Original note data	Re-mapped to:
Kick 1 (C2)	Clave
Kick 2 (B1)	Low Woodblock
Kick 3 (G1)	Hi Agogo
Kick 4 (E1)	Hi Bongo
Snare 1 (D2)	Cowbell
Snare 2 (E2)	Castanets
Snare 3 (A1)	Low Agogo
Snare 4 (F1)	Low Bongo

Original note data	Re-mapped to:
Sidestick (C#2)	Hi Woodblock
Snare Roll/Reversed Snare (A#1)	Bongo Slap
Closed Hi-hat (F#2)	Shaker
Accent Hi-hat (F#1)	Tambourine
Open Hi-hat (A#2)	Cabasa
Pedal Hi-hat (G#2)	Maracas
Ride 1 (D#3)	Muted Triangle
Ride 2 (B3)	Maracas
Ride Bell (F3)	Open Triangle

Original note data	Re-mapped to:
Crash 1 (C#3)	Vibraslap
Crash 2 (A3)	Bell Tree
China Crash (E3)	Bell Tree
Splash (G3)	Jingle
Hi Tom 1 (D3)	Hi Bongo
Hi Tom 2 (C3)	Lo Bongo
Mid Tom 1 (B2)	Mute Conga
Mid Tom 2 (A2)	Hi Conga
Low Tom 1 (G2)	Low Conga
Low Tom 2 (F2)	Low Timbale

Drum Map 2 (no snare)

Original note data	Re-mapped to:
Snare 1, 2, 3, 4 (D2, E2, A1, F1)	Pedal Hi-hat
Sidestick (C#2)	Closed Hi-hat
Snare Roll/Reversed Snare (A#1)	Closed Hi-hat

Drum Map 3 (sidestick and hi-hat)

Original note data	Re-mapped to:
Snare 1, 2, 3, 4 (D2, E2, A1, F1)	Sidestick
Sidestick (C#2)	*Snare 1, 2, 3, or 4
Snare Roll/Reversed Snare (A#1)	Sidestick

* The snare sound you hear will be determined by the Snare Designation setting in the current arrangement.

Drum Map 4 (sidestick and ride)

Original note data	Re-mapped to:
Snare 1, 2, 3, 4 (D2, E2, A1, F1)	Sidestick
Sidestick (C#2)	*Snare 1, 2, 3, or 4
Snare Roll/Reversed Snare (A#1)	Sidestick
Closed Hi-hat (F#2)	Ride 1
Accent Hi-hat (F#1)	Ride 2

Original note data	Re-mapped to:
Open Hi-hat (A#2)	Ride Bell
Ride 1 (D#3)	Closed Hi-hat
Ride 2 (B3)	Accent Hi-hat
Ride Bell (F3)	Open Hi-hat

* The snare sound you hear will be determined by the Snare Designation setting in the current arrangement.

Drum Map 6 (snare and ride)

Original note data	Re-mapped to:
Closed Hi-hat (F#2)	Ride 1
Accent Hi-hat (F#1)	Ride 2
Open Hi-hat (A#2)	Ride Bell

Original note data	Re-mapped to:
Ride 1 (D#3)	Closed Hi-hat
Ride 2 (B3)	Accent Hi-hat
Ride Bell (F3)	Open Hi-hat

Drum Map 7 (open hi-hat)

Original note data	Re-mapped to:
Closed Hi-hat (F#2)	Open Hi-hat
Accent Hi-hat (F#1)	Open Hi-hat

Original note data	Re-mapped to:
Ride 1 (D#3)	Open Hi-hat
Ride 2 (B3)	Open Hi-hat
Ride Bell (F3)	Open Hi-hat

Drum Map 8 (crash)

Original note data	Re-mapped to:
Accent Hi-hat (F#1)	Crash 2
Open Hi-hat (A#2)	Crash 1

MIDI Implementation Chart

Function		Transmitted	Recognized	Remarks
Basic Channel	Default	1 – 16	1–16	Memorized
	Changed	1 – 16	1–16	
Mode	Default		3	
	Messages	X	X	
	Altered	**********		
Note Number:		24–108	0–127	When sequencer data is sent: 0 – 127
	True Voice	**********	0–127	
Velocity	Note On	O 9n, V=1 – 127	O 9n, V=1 – 127	When sequencer data is sent: 2 – 126
	Note Off	X	X	
Aftertouch	Polyphonic (Key)	O	O	Sequencer can record and *A
	Monophonic (Channel)	O	O	play polyphonic aftertouch *A
Pitch Bend		O	O	*C
Control Change	0, 32	O	O	Bank Select (MSB, LSB) *P
	1, 2	O	O	Modulation (pitch, cutoff) *C
	4, 64	O	O	Pedal (scale, damper) *C
	6, 38	O	O	Data Entry (MSB, LSB) *E
	7, 11	O	O	Volume, Expression *C
	10, 91, 93	O	O	A:B panpot, send C, D *C
	12, 13	O	O	Effect controller 1, 2 *C
	72, 73, 74	O	O	EG time (Release, Attack), Brightness *C
	92 ,94	O	O	Effects 1, 2 on/off *C
	96, 97	O	O	Data Inc, Dec *E
	100, 101	X	O	RPN (LSB, MSB) *2
	120, 121	X	O	All sound off, Reset all Cntrls
	0 – 101	O	O	(Sequencer data)
Program Change	Variable Range	O 0 – 127	O 0 – 127	*P
		**********	0 – 127	
System Exclusive		O	O	*3 *E
System Common	Song Position	O	O	*1
	Song Select	O 0 – 9	O 0 – 9	*1
	Tune	X	X	
System Real Time	Clock	O	O	*1
	Command	O	O	*1
Aux Messages	Local On/Off	X	O	
	All Notes Off	X	O (123 – 127)	
	Active Sense	O	O	
	Reset	X	X	
Notes	*C, *P, *A, *E: Sent and received when MIDI Filter (Controller, Program Change, Aftertouch, System Exclusive) is set to ENA. *1: When clock is set to internal, sent but not received. When set to external, received but not sent. *2: LSB, MSB = 00,65: pitch bend range, =01,65: fine tune, =02,65: course tune *3: Includes Inquiry, GM Mode On/Off, Master Balance, and Master Volume messages.			

Mode 1:OMNI ON, POLY
Mode 2:OMNI ON, MONO
O: Yes
Mode 3:OMNI OFF, POLY
Mode 4:OMNI OFF, MONO
X: No

MIDI IMPLEMENTATION

1. TRANSMITTED DATA

1-1 CHANNEL MESSAGES

Status (Hex)	Second (Hex)	Third (Hex)	Description		ENA
1000 nnnn (8n)	0kkk kkkk (kk)	0100 0000 (40)	Note Off kkk kkkk=24～108	(61Keys+Transpose)	A
1001 nnnn (9n)	0kkk kkkk (kk)	0vvv vvvv (vv)	Note On kkk kkkk=24～108 vvv vvvv=1～127	(61Keys+Transpose)	A
1010 nnnn (An)	0kkk kkkk (kk)	0vvv vvvv (vv)	Poly Key Pressure	(Recorded Seq Data)	T.Q
1011 nnnn (Bn)	0000 0000 (00)	0mmm mmmm (mm)	Bank Select(MSB)	(BANK Key, etc) *1	P
1011 nnnn (Bn)	0000 0001 (01)	0vvv vvvv (vv)	Modulation 1	(Joystick(+Y))	C
1011 nnnn (Bn)	0000 0010 (02)	0vvv vvvv (vv)	Modulation 2	(Joystick(-Y))	C
1011 nnnn (Bn)	0000 0100 (04)	0000 0000 (00)	Foot Pedal	(Select Main Scale)	C
1011 nnnn (Bn)	0000 0100 (04)	0111 1111 (7F)	Foot Pedal	(Select Sub Scale)	C
1011 nnnn (Bn)	0000 0111 (07)	0vvv vvvv (vv)	Volume	(Assign Pedal, etc)	C
1011 nnnn (Bn)	0000 1010 (0A)	0vvv vvvv (vv)	Panpot	(by A:B Panpot)	C
1011 gggg (Bg)	0000 1100 (0C)	0vvv vvvv (vv)	Effect Control	(Assignable Pedal)	C
1011 nnnn (Bn)	0010 0000 (20)	0111 1111 (11)	Bank Select(LSB)	(BANK Key, etc) *1	P
1011 nnnn (Bn)	0100 0000 (40)	0000 0000 (00)	Hold 1 Off	(Damper Pedal)	C
1011 nnnn (Bn)	0100 0000 (40)	0111 1111 (7F)	Hold 1 On	(Damper Pedal)	C
1011 nnnn (Bn)	0ccc cccc (cc)	0vvv vvvv (vv)	Control Data ccc cccc=00～127	(Recorded Seq Data)	C.Q
1100 nnnn (Cn)	0ppp pppp (pp)	---- ----	Program Change	(Prog Change) *1	P
1101 nnnn (Dn)	0vvv vvvv (vv)	---- ----	Channel Pressure	(Aftertouch)	T
1110 nnnn (En)	0bbb bbbb (bb)	0bbb bbbb (bb)	Pitch Bend	(Joystick(X))	C

nnnn : MIDI Channel No.(0～15) Usually Global Channel. When using sequencer, each track's channel.
gggg : Always Global Channel No.(0～15)
vvvv : Value

ENA = A : Always Enabled
C : Enabled when Control Filter in GLOBAL Mode is ENA
P : Enabled when Program Filter in GLOBAL Mode is ENA
T : Enabled when Aftertouch Filter in GLOBAL Mode is ENA
Q : Enabled when sequencer is playing (transmitting) or recording (receiving)
T.Q: T and Q
C.Q: C and Q

*1 : Program : MIDI Out (Hex)
A11～A88: mm.ll.pp = 38.00.00～3F
B11～B88: 〃 38.00.40～7F
C11～C88: 〃 00.01.00～3F
U11～U88: 〃 00.01.40～7F
D11～D88: 〃 00.03.00～3F
E11～E88: 〃 00.03.40～7F
Dr11 : 〃 3E.00.00
Dr12 : 〃 3E.00.10
Dr13 : 〃 3E.00.19
Dr14 : 〃 3E.00.20
Dr15 : 〃 3E.00.28
Dr16 : 〃 3E.00.40
Dr17 : 〃 3E.00.18
Dr18 : 〃 3E.00.30
Dr21～28: 〃 3E.00.78～7F

1-2 SYSTEM COMMON MESSAGES

Status (Hex)	Second (Hex)	Third (Hex)	Description
1111 0010 (F2)	0sss ssss (ss)	0ttt tttt (tt)	Song Position Pointer sss ssss : Least significant (LSB) *2 ttt tttt : Most significant (MSB) *2
1111 0011 (F3)	0000 ssss (ss)	---- ----	Song Select ssss : Song No. = 0～9

Transmited when in Song mode (Internal Clock)
When the number is changed, the i2/i3 transmits [Song Select], then [Bank Select], [Program Change], [Volume], and [Panpot] for each track whose Status = EXT or BOTH. Then [Song Position Pointer].

*2 : For Example Time Signature = 4/4, 8/8
tt.ss = 00.10 / Measure

1-3 SYSTEM REALTIME MESSAGES

Status (Hex)	Description	
1111 1000 (F8)	Timing Clock	*3
1111 1010 (FA)	Start	*3
1111 1011 (FB)	Continue	*3
1111 1100 (FC)	Stop	*3
1111 1110 (FE)	Active Sensing	

*3 : Transmits when in Song or Backing Sequence mode (Internal Clock)

1-4 UNIVERSAL SYSTEM EXCLUSIVE MESSAGES (DEVICE INQUIRY REPLY)

Byte (Hex)	Description	
1111 0000 (F0)	Exclusive Status	
0111 1110 (7E)	Non Realtime Message	
0000 gggg (0g)	MIDI GLOBAL CHANNEL	(DEVICE ID)
0000 0110 (06)	INQUIRY MESSAGE	
0000 0010 (02)	IDENTITY REPLY	
0100 0010 (42)	KORG ID	(MANUFACTURERS ID)
0011 1001 (39)	i-series ID	(FAMILY CODE (LSB))
0000 0000 (00)		(〃 〃 (MSB))
0000 0100 (04)		(MEMBER CODE (LSB))
0000 0000 (00)		(〃 〃 (MSB))
0*** **** (**)	ROM No. 1～	(Minor Ver. (LSB))
0000 0000 (00)		(〃 〃 (MSB))
0*** **** (**)	SOFT VER. 1～	(Major Ver. (LSB))
0000 0000 (00)		(〃 〃 (MSB))
1111 0111 (F7)	END OF EXCLUSIVE	

Transmits when INQUIRY MESSAGE REQUEST Received

1-5 STRUCTURE OF KORG SYSTEM EXCLUSIVE MESSAGES

1st Byte = 1111 0000 (F0) : Exclusive Status
2nd Byte = 0100 0010 (42) : KORG ID
3rd Byte = 0011 gggg (3g) : Format ID g:Global ch.
4th Byte = 0011 1100 (3C) : i5S ID
} EX. Header
5th Byte = 0fff ffff (ff) : Function Code (See Func Code List)
6th Byte = 0ddd dddd (dd) : Data
: : :
LastByte = 1111 0111 (F7) : End of Exclusive ····· EOX

1-6 Transmited Function Code List

Func.	Description	R	D	E	C
42	MODE DATA	○			
4E	MODE CHANGE				○*4
53	DRUM KIT PARAMETER CHANGE				○*5
4C	ALL PROGRAM PARAMETER DUMP	○			
64	ALL ARRANGEMENT PARAMETER DUMP	○	○		
65	ALL STYLE DATA DUMP	○			
66	ALL BACKING SEQUENCE DATA DUMP	○	○		
51	GLOBAL DATA DUMP	○	○		
52	DRUMS DATA DUMP	○	○		
50	ALL DATA(GLB. DRM. PRG. ARR. STY. SEQ. BSQ)DUMP	○	○		
26	RECEIVED MESSAGE FORMAT ERROR	○		○	
23	DATA LOAD COMPLETED (ACK)			○	
24	DATA LOAD ERROR (NAK)			○	
67	CHORD				

Transmitted when

R : Request message is received

D : Data dump from Global mode (Doesn't respond to Exclusive ENA. DIS)

E : Exclusive message is received

C : Mode or No. is changed by switch

Some Request Messages are not received in some modes. See 2-6.

* When transmiting a series of exclusive messages to the i2/i3, wait until [DATA LOAD COMPLETED] or [WRITE COMPLETED] is received.

*4 : Transmited when Mode is changed.

*5 : Transmited when editing drum kit's parameters in GLOBAL mode.

2. RECOGNIZED RECEIVE DATA

2-1 CHANNEL MESSAGES

Status (Hex)	Second (Hex)	Third (Hex)	Description	ENA
1000 nnnn (8n)	0kkk kkkk (kk)	0xxx xxxx (xx)	Note Off	A
1001 nnnn (9n)	0kkk kkkk (kk)	0000 0000 (00)	Note Off	A
1001 nnnn (9n)	0kkk kkkk (kk)	0vvv vvvv (vv)	Note On	A
			vvv vvvv=1～127	
1010 nnnn (An)	0kkk kkkk (kk)	0vvv vvvv (vv)	Poly Key Pressure (For Seq. Recording)	T, Q
1011 nnnn (Bn)	0000 0000 (00)	0mmm mmmm (mm)	Bank Select(MSB) *1	P
1011 nnnn (Bn)	0000 0001 (01)	0vvv vvvv (vv)	Modulation1 Depth (Pitch Modulation)	C
1011 nnnn (Bn)	0000 0010 (02)	0vvv vvvv (vv)	Modulation2 Depth (Cutoff Modulation)	C
1011 nnnn (Bn)	0000 0100 (04)	00vv vvvv((40)	Foot Pedal Off (Select Main Scale)	C
1011 nnnn (Bn)	0000 0100 (04)	01vv vvvv()3F)	Foot Pedal On (Select Sub Scale)	C
1011 nnnn (Bn)	0000 0110 (06)	0vvv vvvv (vv)	Data Entry (MSB) (For RPN Edit)	C
1011 nnnn (Bn)	0000 0111 (07)	0vvv vvvv (vv)	Volume	C
1011 nnnn (Bn)	0000 1010 (0A)	0vvv vvvv (vv)	Panpot (A:B Panpot)	C
1011 nnnn (Bn)	0000 1011 (0B)	0vvv vvvv (vv)	Expression	C
1011 gggg (Bg)	0000 1100 (0C)	0vvv vvvv (vv)	Effect Control (Dyna Mod Src= PEDAL1)	C
1011 gggg (Bg)	0000 1101 (0D)	0vvv vvvv (vv)	Effect Control (Dyna Mod Src= PEDAL2)	C
1011 nnnn (Bn)	0010 0000 (20)	0111 1111 (11)	Bank Select(LSB) *1	P
1011 nnnn (Bn)	0010 0110 (26)	0vvv vvvv (vv)	Data Entry (LSB) (For RPN Edit)	C
1011 nnnn (Bn)	0100 0000 (40)	00xx xxxx((40)	Hold1 Off (Damper Off)	C
1011 nnnn (Bn)	0100 0000 (40)	01xx xxxx()3F)	" On (Damper On)	C
1011 nnnn (Bn)	0100 1000 (48)	0vvv vvvv (vv)	Release Time (Perf Edit Rel Time)*4	C
1011 nnnn (Bn)	0100 1000 (49)	0vvv vvvv (vv)	Attack Time (" " Atk Time)*4	C
1011 nnnn (Bn)	0100 1000 (4A)	0vvv vvvv (vv)	Brightness (" " Cutoff) *4	C
1011 nnnn (Bn)	0101 1011 (5B)	0vvv vvvv (vv)	Reverb Level (Send C Level)	C
1011 gggg (Bg)	0101 1100 (5C)	0000 0000 (00)	Effect1 Level (FX1 Off)	C
1011 gggg (Bg)	0101 1100 (5C)	0xxx xxxx()00)	" " (FX1 On)	C
1011 nnnn (Bn)	0101 1101 (5D)	0vvv vvvv (vv)	Chorus Level (Send D Level)	C
1011 gggg (Bg)	0101 1110 (5E)	0000 0000 (00)	Effect2 Level (FX2 Off)	C
1011 gggg (Bg)	0101 1110 (5E)	0xxx xxxx()00)	" " (FX2 On)	C
1011 nnnn (Bn)	0110 0000 (60)	0000 0000 (00)	DATA Increment (For RPN Edit)	C
1011 nnnn (Bn)	0110 0001 (61)	0000 0000 (00)	DATA Decrement (For RPN Edit)	C
1011 nnnn (Bn)	0110 0100 (64)	0000 00rr (0r)	RPN Parameter No.(LSB) *3	A
1011 nnnn (Bn)	0110 0101 (65)	0000 0000 (00)	RPN Parameter No.(MSB) *3	A
1011 nnnn (Bn)	0111 1000 (78)	0000 0000 (00)	All Sound Off	C
1011 nnnn (Bn)	0111 1001 (79)	0000 0000 (00)	Reset All Controllers	C
1011 nnnn (Bn)	0ccc cccc (cc)	0vvv vvvv (vv)	Control Data (For Seq. Recording)	C, Q
			ccc cccc=00～127	
1011 gggg (Bg)	0111 1010 (7A)	0000 0000 (00)	Local Control Off	A
1011 gggg (Bg)	0111 1010 (7A)	0111 1111 (7F)	Local Control On	A
1011 nnnn (Bn)	0111 1011 (7B)	0000 0000 (00)	All Notes Off	A
1011 nnnn (Bn)	0111 110x (7x)	0000 0000 (00)	Omni Mode Off/On (All Notes Off)	A
1011 nnnn (Bn)	0111 1110 (7E)	000m mmmm((11)	Mono Mode On (All Notes Off)	A
			m mmmm=0～16	
1011 nnnn (Bn)	0111 1111 (7F)	0000 0000 (00)	Poly mode On (All Notes Off)	A
1100 nnnn (Cn)	0ppp pppp (pp)	---- ----	Program Change (Prog. Comb CHG) *1, 2	P
1101 nnnn (Dn)	0vvv vvvv (vv)	---- ----	Channel Pressure (Aftertouch)	T
1110 nnnn (En)	0bbb bbbb (bb)	0bbb bbbb (bb)	Bender Change (Pitch Bend)	C

nnnn : MIDI Channel No.(0～15) ····· Usually Global Channel.
When in SONG Mode, each track's channel.

gggg : Always Global Channel No.(0～15)

x : Random

*1 :

mm, ll, pp =	MIDI In (Hex): Program
	00, 00, 00～3F : All～A88
	00, 00, 40～7F : Bll～B88
	00, 01, 00～3F : Cll～C88
	00, 01, 40～7F : Ull～U88
	00, 02, 00～0F : Drll
	00, 02, 10～17 : Dr12
	00, 02, 18 : Dr17
	00, 02, 19 : Dr13
	00, 02, 1A～1F : Dr17
	00, 02, 20～27 : Dr14
	00, 02, 28～2F : Dr15
	00, 02, 30～37 : Dr18
	00, 02, 38～3F : Drll
	00, 02, 40～47 : Dr16
	00, 02, 48～77 : Drll
	00, 02, 78～7F : Dr21～Dr28
	00, 03, 00～3F : Dll～D88
	00, 03, 40～7F : Ell～E88
	38, xx, 00～3F : All～A88
	38, xx, 40～7F : Bll～B88
	39, xx, 00～3F : All～A88
	39, xx, 40～7F : Bll～B88
	3E, xx, 00～0F : Drll
	3E, xx, 10～17 : Dr12
	3E, xx, 18 : Dr17
	3E, xx, 19 : Dr13
	3E, xx, 1A～1F : Dr17
	3E, xx, 20～27 : Dr14
	3E, xx, 28～2F : Dr15
	3E, xx, 30～37 : Dr18
	3E, xx, 38～3F : Drll
	3E, xx, 40～47 : Dr16
	3E, xx, 48～77 : Drll
	3E, xx, 78～7F : Dr21～Dr28
	3F, xx, xx : OFF

xx : Random

*2 : After processing (while Exclusive = ENA) transmits exclusive message [DATA LOAD COMPLETED] or [DATA LOAD ERROR].

*3 : rr = 0 : Pitch Bend Sensitivity
= 1 : Fine Tune (When Received Ch = Global Ch. Master Tune)
= 2 : Coarse Tune (Transpose)

*4 : vv (40: Fast or Dark
= 40: No change
) 40: Slow or Bright

2-2 SYSTEM COMMON MESSAGES

Status (Hex)	Second (Hex)	Third (Hex)	Description
1111 0010 (F2)	0sss ssss (ss)	0ttt tttt (tt)	Song Position Pointer
1111 0011 (F3)	000s ssss (ss)	---- ----	Song Select

Received when in SONG mode (External Clock)

2-3 SYSTEM REALTIME MESSAGES

Status (Hex)	Description	
1111 1000 (F8)	Timing Clock	*5
1111 1010 (FA)	Start	*5
1111 1011 (FB)	Continue	*5
1111 1100 (FC)	Stop	*5
1111 1110 (FE)	Active Sensing	

*5 : Received when in SONG mode (External Clock)

2-4 UNIVERSAL SYSTEM EXCLUSIVE MESSAGE (NON REALTIME)

Byte (Hex)	Description	
1111 0000 (F0)	EXCLUSIVE STATUS	
0111 1110 (7E)	NON REALTIME MESSAGE	
0ggg gggg (gg)	MIDI CHANNEL	*6
0000 aaaa (0a)	SUB ID 1	*7
0000 00bb (0b)	SUB ID 2	*7
1111 0111 (F7)	END OF EXCLUSIVE	

*6 : gg = 0～F : Received if Global Channel
= 7F : Received on any Channel

*7 : a, b = 06, 01 : INQUIRY MESSAGE REQUEST
= 09, 01 : GENERAL MIDI MODE ON
(Received anytime except when Seq playing/recording, or when DATA FILER page is selected)

2-5 UNIVERSAL SYSTEM EXCLUSIVE MESSAGE (REALTIME)

Byte (Hex)	Description	
1111 0000 (F0)	EXCLUSIVE STATUS	
0111 1111 (7F)	REALTIME MESSAGE	
0ggg gggg (gg)	MIDI CHANNEL	*6
0000 0100 (04)	SUB ID 1	
0000 00bb (0b)	SUB ID 2	*8
0vvv vvvv (vv)	VALUE(LSB)	*8
0mmm mmmm (mm)	VALUE(MSB)	*8
1111 0111 (F7)	END OF EXCLUSIVE	

*8 : b = 01 : MASTER VOLUME (mm, vv = 00, 00～7F, 7F : Min～Max)
= 02 : MASTER BALANCE (mm, vv = 00, 00～40, 00～7F, 7F : L～Center～R)

2-6 SYSTEM EXCLUSIVE MESSAGES

* Not received when Sequencer is playing, recording, or when the DATA FILER page is selected.

Function Code List

Func	Description	G	A	No.
12	MODE REQUEST	○	○	42
1C	ALL PROGRAM PARAMETER DUMP REQUEST	◎	○	4C
30	ALL ARRANGEMENT PARAMETER DUMP REQUEST	◎	○	64
31	ALL STYLE DATA DUMP REQUEST	◎	○	65
32	ALL BACKING SEQUENCE DATA DUMP REQUEST	◎	○	66
0E	GLOBAL DATA DUMP REQUEST	◎	○	51
0D	DRUMS DATA DUMP REQUEST	◎	○	52
0F	ALL DATA(GLB, DRM, PRG, ARR, STY, SEQ, BSQ)DUMP REQ	◎	○	50
4C	ALL PROGRAM PARAMETER DUMP	◎	○	23
64	ALL ARRANGEMENT PARAMETER DUMP	◎	○	23
65	ALL STYLE DATA DUMP	◎	○	23
66	ALL BACKING SEQUENCE DATA DUMP	◎	○	23
51	GLOBAL DATA DUMP	◎	○	23
52	DRUMS DATA DUMP	◎	○	23
50	ALL DATA(GLB, DRM, PRG, ARR, STY, SEQ, BSQ) DUMP	◎	○	23
4E	MODE CHANGE	○	○	23
41	PARAMETER CHANGE			23
53	DRUM KIT PARAMETER CHANGE	○		23
67	CHORD	○	○	

Received when in

G : GLOBAL Mode

(◎···Does not respond to Exclusive ENA, DIS on DATA DUMP page)

A : any other mode

No. : MIDI Out Function No.

(transmitted after the message has been received.)

3. MIDI EXCLUSIVE FORMAT (R : Receive, T : Transmit)

See 1-5 'STRUCTURE OF KORG SYSTEM EXCLUSIVE MESSAGES'

(1) MODE REQUEST R

Byte	Description
F0, 42, 3g, 39	EXCLUSIVE HEADER
0001 0010 (12)	MODE REQUEST 12H
1111 0111 (F7)	EOX

Receives this message, and transmits Func=42 message.

(2) ALL PROGRAM PARAMETER DUMP REQUEST R

Byte	Description
F0, 42, 3g, 39(3C)	EXCLUSIVE HEADER
0001 1100 (1C)	ALL PROGRAM PARAMETER DUMP REQUEST 1CH
1111 0111 (F7)	EOX

Receives this message, and transmits Func=4C or Func=24 message.

(3) ALL ARRANGEMENT PARAMETER DUMP REQUEST R

Byte	Description
F0, 42, 3g, 39(3C)	EXCLUSIVE HEADER
0011 0000 (30)	ALL ARRANGEMENT PARAMETER DUMP REQUEST 30H
1111 0111 (F7)	EOX

Receives this message, and transmits Func=64 or Func=24 message.

(4) ALL STYLE DATA DUMP REQUEST R

Byte	Description
F0, 42, 3g, 39(3C)	EXCLUSIVE HEADER
0011 0001 (31)	ALL STYLE DATA DUMP REQUEST 31H
1111 0111 (F7)	EOX

Receives this message, and transmits Func=65 or Func=24 message.

(5) ALL BACKING SEQUENCE DATA DUMP REQUEST R

Byte	Description
F0, 42, 3g, 39(3C)	EXCLUSIVE HEADER
0011 0010 (32)	ALL BACKING SEQUENCE DATA DUMP REQUEST 32H
1111 0111 (F7)	EOX

Receives this message, and transmits Func=66 or Func=24 message.

(6) GLOBAL DATA DUMP REQUEST R

Byte	Description
F0, 42, 3g, 39(3C)	EXCLUSIVE HEADER
0000 1110 (0E)	GLOBAL DATA DUMP REQUEST 0EH
1111 0111 (F7)	EOX

Receives this message, and transmits Func=51 or Func=24 message.

(7) DRUMS DATA DUMP REQUEST R

Byte	Description
F0, 42, 3g, 39(3C)	EXCLUSIVE HEADER
0000 1101 (0D)	DRUMS DATA DUMP REQUEST 0DH
1111 0111 (F7)	EOX

Receives this message, and transmits Func=52 or Func=24 message.

(8) ALL DATA(GLB, DRM, PRG, ARR, STY, SEQ, BSQ) DUMP REQUEST R

Byte	Description
F0, 42, 3g, 39(3C)	EXCLUSIVE HEADER
0000 1111 (0F)	ALL DATA DUMP REQUEST 0FH
1111 0111 (F7)	EOX

Receives this message, and transmits Func=50 or Func=24 message.

(9) ALL PROGRAM PARAMETER DUMP R, T

Byte	Description	
F0, 42, 3g, 39(3C)	EXCLUSIVE HEADER	
0100 1100 (4C)	ALL PROGRAM PARAMETER DUMP	4CH
0ddd dddd (dd)	Data	(NOTE 1.3)
⋮	⋮	
1111 0111 (F7)	EOX	

Receives this message & data. and transmits Func=23 or Func=24 message.
Receives Func=1C message. and transmits this message & data.

(10) ALL ARRANGEMENT PARAMETER DUMP R, T

Byte	Description	
F0, 42, 3g, 39(3C)	EXCLUSIVE HEADER	
0110 0100 (64)	ALL ARRANGEMENT PARAMETER DUMP	64H
0ddd dddd (dd)	Data	(NOTE1.4)
⋮	⋮	
1111 0111 (F7)	EOX	

Receives this message & data. and transmits Func=23 or Func=24 message.
Receives Func=30 message. and transmits this message & data.
Transmits this message & data when DATA DUMP is executed

(11) ALL STYLE DATA DUMP R, T

Byte	Description	
F0, 42, 3g, 39(3C)	EXCLUSIVE HEADER	
0110 0101 (65)	ALL STYLE DATA DUMP	65H
0ddd dddd (dd)	Style Header	(NOTE 1.5-1)
⋮	⋮	
0ddd dddd (dd)	Style Data	(NOTE 1.5-2)
⋮	⋮	
1111 0111 (F7)	EOX	

Receives this message & data. and transmits Func=23 or Func=24 message.
Receives Func=31 message. and transmits this message & data.

(12) ALL BACKING SEQUENCE DATA DUMP R, T

Byte	Description	
F0, 42, 3g, 39(3C)	EXCLUSIVE HEADER	
0110 0110 (66)	ALL BACKING SEQUENCE DATA DUMP	66H
0sss ssss (ss)	Backing Sequence Data Size	(NOTE 7-1)
⋮	⋮	
0ddd dddd (dd)	Control Data	(NOTE 1.7-2)
⋮	⋮	
0ddd dddd (dd)	Backing Sequence Data	(NOTE 1.7-3)
⋮	⋮	
1111 0111 (F7)	EOX	

Receives this message & data. and transmits Func=23 or Func=24 message.
Receives Func=32 message. and transmits this message & data.
Transmits this message & data when DATA DUMP is executed.

(13) GLOBAL DATA DUMP R, T

Byte	Description	
F0, 42, 3g, 39(3C)	EXCLUSIVE HEADER	
0101 0001 (51)	GLOBAL DATA DUMP	51H
0ddd dddd (dd)	Data	(NOTE 1.8)
⋮	⋮	
1111 0111 (F7)	EOX	

Receives this message & data. and transmits Func=23 or Func=24 message.
Receives Func=0E message. and transmits this message & data.
Transmits this message & data when DATA DUMP is executed.

(14) DRUMS DATA DUMP R, T

Byte	Description	
F0, 42, 3g, 39(3C)	EXCLUSIVE HEADER	
0101 0010 (52)	DRUMS DATA DUMP	52H
0ddd dddd (dd)	Data	(NOTE 1.9)
⋮	⋮	
1111 0111 (F7)	EOX	

Receives this message & data. and transmits Func=23 or Func=24 messsage.
Receives Func=0D message. and transmits this message & data.
Transmits this message & data when DATA DUMP is executed.

(15) ALL DATA(GLB, DRM, PRG, ARR, STY, SEQ, BSQ) DUMP R, T

Byte	Description	
F0, 42, 3g, 39(3C)	EXCLUSIVE HEADER	
0101 0000 (50)	ALL DATA DUMP	50H
0sss ssss (ss)	i2/i3 Sequence Data Size	(NOTE 6-1)
⋮	⋮	
0sss ssss (ss)	Backing Sequence Data Size	(NOTE 7-1)
⋮	⋮	
0ddd dddd (dd)	Data	(NOTE 1.10)
⋮	⋮	
1111 0111 (F7)	EOX	

Receives this message & data. and transmits Func=23 or Func=24 message.
Receives Func=0F message. and transmits this message & data.
Transmits this message & data when DATA DUMP is executed.

(16) MODE CHANGE R, T

Byte	Description	
F0, 42, 3g, 39	EXCLUSIVE HEADER	
0100 1110 (4E)	MODE CHANGE	4EH
0000 mmmm (0m)	Mode Data	(NOTE 11)
1111 0111 (F7)	EOX	

Receives this message & data. changes the Mode. and transmits Func=23 or Func=24.
When the mode is changed by switch. this message & data is transmitted.

(17) PARAMETER CHANGE R

Byte	Description	
F0, 42, 3g, 3C	EXCLUSIVE HEADER	
0100 0001 (41)	PARAMETER CHANGE	41H
0ppp pppp (pp)	Parameter No.	(TABLE 8)
0vvv vvvv (vv)	Value (LSB bit6～0)	(NOTE 12)
0vvv vvvv (vv)	Value (MSB bit13～7)	(NOTE 12)
1111 0111 (F7)	EOX	

Receives this message & data. and transmits Func=23 or Func=24 message.
When the Parameter No. is changed by switch. this message & data is transmitted.

(18) DRUM KIT PARAMETER CHANGE R, T

Byte	Description	
F0, 42, 3g, 39(3C)	EXCLUSIVE HEADER	
0101 0011 (53)	DRUM KIT PARAMETER CHANGE	53H
0000 000k (0k)	Drum Kit No.	(NOTE 14)
00ss ssss (ss)	Index No. (ss=00～59)	
0000 pppp (0p)	Parameter No.	(TABLE 9)
0vvv vvvv (vv)	Value (LSB bit6～0)	(NOTE 12)
0vvv vvvv (vv)	Value (MSB bit13～7)	(NOTE 12)
1111 0111 (F7)	EOX	

Receives this message & data, and transmits Func=23 or Func=24 message.

(19) MODE DATA T

Byte	Description	
F0, 42, 3g, 39	EXCLUSIVE HEADER	
0100 0010 (42)	MODE DATA	42H
0000 mmmm (0m)	Mode Data	(NOTE 11)
0000 0000 (00)		
1111 0111 (F7)	EOX	

Receives Func=12 message, and transmits this message & data.

(20) MIDI IN DATA FORMAT ERROR T

Byte	Description	
F0, 42, 3g, 39(3C)	EXCLUSIVE HEADER	
0010 0110 (26)	MIDI IN DATA FORMAT ERROR	26H
1111 0111 (F7)	EOX	

Transmits this message when there is an error in the MIDI IN message (for example, if data length is other than expected).

(21) DATA LOAD COMPLETED (ACK) T

Byte	Description	
F0, 42, 3g, 39(3C)	EXCLUSIVE HEADER	
0010 0011 (23)	DATA LOAD COMPLETED	23H
1111 0111 (F7)	EOX	

Transmits this message when DATA LOADING and PROCESSING have been completed.

(22) DATA LOAD ERROR (NAK) T

Byte	Description	
F0, 42, 3g, 39(3C)	EXCLUSIVE HEADER	
0010 0100 (24)	DATA LOAD ERROR	24H
1111 0111 (F7)	EOX	

Transmits this message when DATA LOADING and PROCESSING have not been completed (for example, if memory is protected).

(23) CHORD R, T

Byte	Description	
F0, 42, 3g, 39	EXCLUSIVE HEADER	
0110 0111 (67)	CHORD	67H
0000 rrrr (0r)	Root (C=0)	
0000 bbbb (0b)	Bass (C=0)	
0ccc cccc (cc)	Chord type (LSB)	(NOTE 15)
000c cccc (cc)	Chord type (MSB)	(NOTE 15)
0ttt tttt (tt)	Tension note(s) (LSB)	(NOTE 16)
000t tttt (tt)	Tension note(s) (MSB)	(NOTE 16)
1111 0111 (F7)	EOX	

NOTE 7 : ALL BACKING SEQUENCE DATA DUMP FORMAT

7-1: Backing Sequence Data Size (2Byte) 4Step(16Byte)/1Size (See 7-3)
[Data Size (bit6～0)],
[Data Size (bit13～7)]

7-2: Control Data Dump Format (2292Byte) (See TABLE 7-1, NOTE 1)
[Control Data (BSQ Size(195) x 10 = 1950Byte)],
[BSQ0-Tr.1 Addr (2Byte)],…,[BSQ0-Tr.16 Addr],[BSQ0-Tempo Track Addr],
[BSQ1-Tr.1 Addr],…,[BSQ9-Tr.16 Addr],[BSQ9-Tempo Track Addr] (340Byte),
[End Addr (2Byte)]

7-3: Backing Sequence Data Dump Format (See TABLE 7-2, NOTE 1)
[B.Sequence 1st Data(4Byte)],…,[BSQ nth Data]
n : BSQ Data Step = 0 ～ 40000
2292Byte+4x[BSQ Data Step]Byte = 7xA+B → 8xA+(1+B)Byte
∴ 7-1, 7-2, 7-3 = 2+8xA+(1+B)Byte (0.8～58.0Sec)

NOTE 8 : GLOBAL DATA DUMP FORMAT (See TABLE 2, NOTE 1)
[Global Data (28Byte)]
28 = 7x4+0 → 8x4 = 32Byte

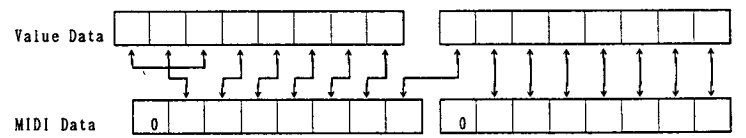
NOTE 9 : DRUMS DATA DUMP FORMAT (See TABLE 3, NOTE 1)
[Drum Kit Data (7x60x2Byte)]
840Byte = 7x120+0 → 8x120 = 960Byte (0.3Sec)

NOTE 10 : ALL DATA (GLB, DRM, PRG, ARR, STY, SEQ, BSQ) DUMP FORMAT (See NOTE 1)
[Global Data], (See NOTE 8)
[Drums Data], (See NOTE 9)
[All Program Parameters], (See NOTE 3)
[All Arrangement Parameters], (See NOTE 4)
[All Style Data], (See NOTE 5)
[All i2/i3 SONG Data] (See NOTE 6-2, 6-3)
[All Backing Sequence Data] (See NOTE 7-2, 7-3)
28+840+10824+8384+sty+3702+4x[Seq. Data Step]Byte+2292+4x[BSQ Data Step]
= 7xC+D → 8xC+(1+D)Byte (10.5～90.0Sec)

NOTE 11 : mmmm = 4 : GLOBAL 6 : SONG
10 : ARRANGEMENT 11 : BACKING SEQUENCE

NOTE 12 : VALUE DATA FORMAT (Use with PARAMETER CHANGE, DRUM KIT PARAMETER CHANGE)

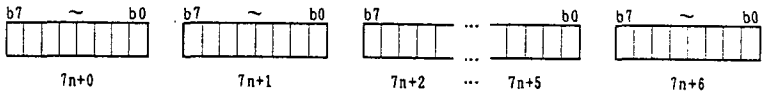
Bit15-13 of Value Data is the Sign Flag, and each bit has the same value



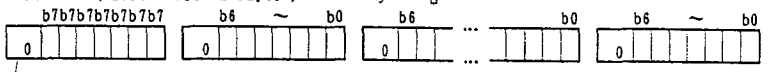
NOTE 13 : kk = 00: DrumKit1
01: 〃 2

NOTE 1 :
DUMP DATA CONVERT n=0～ for NOTE 2, 3, 4, 5-1, 5-2, 6-2, 6-3, 7-2, 7-3, 8, 9, 10

DATA (1set = 8bit x 7Byte)



MIDI DATA (1set = 7bit x 8Byte)



NOTE 2 : PROGRAM PARAMETER DUMP FORMAT (See TABLE 1, NOTE 1)
[Parameter No.00], ……, [Parameter No.163]
164Byte = 7x23+3 → 8x23+(1+3) = 188Byte

NOTE 3 : ALL PROGRAM PARAMETER DUMP FORMAT (See TABLE 1, NOTE 2)
[Prog.D11(164Byte)], ……, [Prog.D88(164Byte)],
[Prog.Dr7(164Byte)], [Prog.Dr8(164Byte)]
164x(64+2)Byte = 7x1546+2 → 8x1546+(1+2) = 12371Byte (4.0Sec)

NOTE 4 : ALL ARRANGEMENT PARAMETER DUMP FORMAT (See TABLE 5, NOTE 1)
[ARR11(131Byte)], ……, [ARR88(131Byte)]
131x64Byte = 7x1197+5 → 8x1197+(1+5) = 9582Byte (3.1Sec)

NOTE 5 : ALL STYLE DATA DUMP FORMAT

5-1: Style Header (24Byte) (See TABLE 6-3, NOTE 1)

5-2: Style Data (3328～65496Byte) (See TABLE 6-1, TABLE 6-2, NOTE 1)
∴ MIN= 24+3328Byte = 7x478+6 → 8x478+(1+6) = 3831Byte
MAX= 24+65496Byte = 7x9360+0 → 8x9360 = 74880Byte (1.2～24.0Sec)

NOTE 6 : ALL i2/i3 SONG DATA DUMP FORMAT

6-1: Sequence Data Size (2Byte) 4Step(16Byte)/1Size (See 6-3)
[Data Size (bit6～0)],
[Data Size (bit13～7)]

6-2: Control Data Dump Format (3702Byte) (See TABLE 4-1, NOTE 1)
[Control Data (Song Size(296) x 10 = 2960Byte)],
[Pattern Data (200Byte)],
[Song0-Tr.1 Addr (2Byte)], ···, [Song0-Tr.16 Addr], [Song0-Tempo Track Addr],
[Song1-Tr.1 Addr], ···, [Song9-Tr.16 Addr], [Song9-Tempo Track Addr] (340Byte),
[Pattern0 Addr (2Byte)], ···, [Pattern99 Addr] (200Byte),
[Pattern End Addr(2Byte)]

6-3: Sequence Data Dump Format (See TABLE 4-2, NOTE 1)
[Sequence 1st Data(4Byte)], ……, [Seq.nth Data]
n : Seq.Data Step = 0 ～ 40000
3702Byte+4x[Seq.Data Step]Byte = 7xA+B → 8xA+(1+B)Byte
∴ 6-1, 6-2, 6-3 = 2+8xA+(1+B)Byte (1.3～58.5Sec)

NOTE 14 : CHORD TYPE

Type	MSB	LSB
No Chord	0000 0000	0000 0000
dim	0000 0000	0100 1001
sus2	0000 0001	0000 0101
m	0000 0001	0000 1001
major	0000 0001	0001 0001
sus4	0000 0001	0010 0001
aug	0000 0010	0001 0001
m6	0000 0101	0000 1001
6	0000 0101	0001 0001
m7b5	0000 1000	0100 1001
7b5	0000 1000	0101 0001
m7	0000 1001	0000 1001
7	0000 1001	0001 0001
7sus4	0000 1001	0010 0001
aug7	0000 1010	0001 0001
dimM7	0001 0000	0100 1001
M7b5	0001 0000	0101 0001
mM7	0001 0001	0000 1001
M7	0001 0001	0001 0001
M7sus4	0001 0001	0010 0001
augM7	0001 0010	0001 0001

NOTE 15 : TENSION NOTE(S)

Tension	MSB	LSB
b9	0000 0000	0000 0010
9	0000 0000	0000 0100
#9	0000 0000	0000 1000
11	0000 0000	0010 0000
#11	0000 0000	0100 0000
b13	0000 0010	0000 0000
13	0000 0100	0000 0000

PROGRAM PARAMETERS (TABLE 1)

No.	PARAMETER	DATA(Hex) : VALUE
00 ⋮ 09	PROGRAM NAME (Head) ⋮ ⋮ ⋮ PROGRAM NAME (Tail)	20～7F : ' ' ～ ' ← '
	OSCILLATOR	
10	OSCILLATOR MODE	0, 1, 2 *1
11	ASSIGN	bit0=0:POL, =1:MON
	HOLD	bit1=0:OFF, =1:ON
12	OSC-1 M/D. SOUND(LSB)	0～???? : 0～????
13	OSC-1 M/D. SOUND(MSB)	*14
14	OSC-1 OCTAVE	FE～01 : 32' ～4'
15	OSC-2 M/D. SOUND(LSB)	0～???? : 0～????
16	OSC-2 M/D. SOUND(MSB)	*14
17	OSC-2 OCTAVE	FE～01 : 32' ～4'
18	INTERVAL	F4～0C : -12～12
19	DETUNE	CE～32 : -50～50
20	DELAY START	00～63 : 00～99
	PITCH EG	
21	START LEVEL	9D～63 : -99～99
22	ATTACK TIME	00～63 : 00～99
23	ATTACK LEVEL	9D～63 : -99～99
24	DECAY TIME	00～63 : 00～99
25	RELEASE TIME	00～63 : 00～99
26	RELEASE LEVEL	9D～63 : -99～99
27	TIME VELOCITY SENSE	9D～63 : -99～99
28	LEVEL VELOCITY SENSE	9D～63 : -99～99
	CUTOFF MG	
29	WAVEFORM	bit0～2 : 0～5 *2
	OSC-1 MG ENABLE	bit5=0:OFF, =1:ON
	OSC-2 MG ENABLE	bit6=0:OFF, =1:ON
	KEY SYNC	bit7=0:OFF, =1:ON
30	FREQUENCY	00～63 : 00～99
31	DELAY	00～63 : 00～99
32	INTENSITY	00～63 : 00～99
	AFTERTOUCH	
33	PITCH BEND RANGE	F4～0C : -12～12
34	VDF CUTOFF	9D～63 : -99～99
35	VDF MG INT	00～63 : 00～99
36	VDA AMPLITUDE	9D～63 : -99～99
	JOYSTICK	
37	PITCH BEND RANGE	F4～0C : -12～12
38	VDF SWEEP INT.	9D～63 : -99～99
39	VDF MG INT.	00～63 : 00～99
	OSC-1 PITCH EG	
40	PITCH EG INT	9D～63 : -99～99
	OSC-1 PITCH MG	
41	WAVEFORM	bit0～2 : 0～5 *2
	KEY SYNC	bit7=0:OFF, =1:ON
42	FREQUENCY	00～63 : 00～99
43	DELAY	00～63 : 00～99
44	FADE IN	00～63 : 00～99
45	INTENSITY	00～63 : 00～99
46	FREQ MOD BY KBD TRK	9D～63 : -99～99
47	INTENSITY MOD BY AT	00～63 : 00～99
48	INTENSITY MOD BY JS	00～63 : 00～99
49	FREQ MOD BY AT+JS	00～09 : 0～9

	VDF-1	
50	CUTOFF VALUE	00～63 : 00～99
51	KBD TRACK KEY	00～7F : C-1～G9
52	CUTOFF KBD TRACK	9D～63 : -99～99
53	EG INTENSITY	00～63 : 00～99
54	EG TIME KBD TRACK	00～63 : 00～99
55	EG TIME VEL. SENSE	00～63 : 00～99
56	EG INT. VEL. SENSE	9D～63 : -99～99
	VDF-1 EG	
57	ATTACK TIME	00～63 : 00～99
58	ATTACK LEVEL	9D～63 : -99～99
59	DECAY TIME	00～63 : 00～99
60	BREAK POINT	9D～63 : -99～99
61	SLOPE TIME	00～63 : 00～99
62	SUSTAIN LEVEL	9D～63 : -99～99
63	RELEASE TIME	00～63 : 00～99
64	RELEASE LEVEL	9D～63 : -99～99
	VDA-1	
65	OSCILLATOR LEVEL	00～63 : 00～99
66	KBD TRACK KEY	00～7F : C-1～G9
67	AMP. KBD TRACK INT.	9D～63 : -99～99
68	AMP. VELOCITY SENSE	9D～63 : -99～99
69	EG TIME KBD TRACK	00～63 : 00～99
70	EG TIME VEL. SENSE	00～63 : 00～99
	VDA-1 EG	
71	ATTACK TIME	00～63 : 00～99
72	ATTACK LEVEL	00～63 : 00～99
73	DECAY TIME	00～63 : 00～99
74	BREAK POINT	00～63 : 00～99
75	SLOPE TIME	00～63 : 00～99
76	SUSTAIN LEVEL	00～63 : 00～99
77	RELEASE TIME	00～63 : 00～99
	OSC-1 EG TIME KBD TRACK, VEL. SW & POLARITY	
78	F. EG TIME K. T SW&POL	bit0～7 *3
79	F. EG TIME VEL. SW&POL	bit0～7 *3
80	A. EG TIME K. T SW&POL	bit0～7 *3
81	A. EG TIME VEL. SW&POL	bit0～7 *3
	OSC-1 SEND	
82	D SEND LEVEL	bit0～3 : 0～9
	C SEND LEVEL	bit4～7 : 0～9
	COLOR-1	
83	INTENSITY	00～63 : 00～99
84	VELOCITY SENSE	9D～63 : -99～99
	VDF-1, VDA-1 KBD TRACK MODE	
85	F-1, A-1 KBD TRACK MODE	*4
	OSC-1 PANPOT	
86	A:B PAN	00～1E, FF *5
	OSC-2 PARAMETER	
87 ⋮ 133	SAME AS OSC-1(40～86)	
134	(RESERVE)	00
	EFFECT PARAMETER	
135 ⋮ 163		*20

GLOBAL PARAMETERS (TABLE 2)

No.	PARAMETER	DATA(Hex) : VALUE
	GLOBAL PARAMETER	
00	MASTER TUNE	CE～32 : -50～50
01	KEY TRANSPOSE	F4～0C : -12～12
02	DAMPER POLARITY	00 : ⊥, 01 : ⊤
03	ASSIGNABLE PEDAL 1	00～2B *8
04	ASSIGNABLE PEDAL 2	00～2B *8
05	MAIN SCALE TYPE	00～0A *9
06	MAIN SCALE KEY	00～0B : C～B
07 ⋮ 18	USER SCALE	CE～32 : -50～50
19	VELOCITY CURVE	0～7 : 1～8
20	AFTER TOUCH CURVE	0～7 : 1～8
21	SUB SCALE TYPE	00～0A *9
22	SUB SCALE KEY	00～0B : C～B
23 ⋮ 27	RESERVE	00

*1 : 0 : SINGLE
1 : DOUBLE
2 : DRUMS

*2 : 0 : TRIANGLE
1 : UP SAW
2 : DOWN SAW
3 : SQUARE1
4 : RANDOM
5 : SQUARE2

*3 : bit0 : ATTACK TIME SW =0:OFF, =1:ON
bit1 : DECAY TIME SW 〃
bit2 : SLOPE TIME SW 〃
bit3 : RELEASE TIME SW 〃
bit4 : ATTACK TIME POLARITY =0:+, =1:-
bit5 : DECAY TIME 〃 〃
bit6 : SLOPE TIME 〃 〃
bit7 : RELEASE TIME 〃 〃

DRUM PARAMETERS (TABLE 3)

No.	PARAMETER	DATA(Hex) : VALUE
	DRUM KIT 1-INDEX#0	
00	INST NO.	00:OFF, 01～:INT
01	KEY	0C～73 : C0～G8
02	A:B PAN	bit0～4 *10
	EXCLUSIVE ASSIGN	bit5～7 *10
03	TUNE	88～78 :-120～120
04	LEVEL	9D～63 : -99～99
05	DECAY	9D～63 : -99～99
06	D SEND LEVEL	bit0～3: 0～9
	C SEND LEVEL	bit4～7: 0～9
	DRUM KIT 1-INDEX#1 ～ DRUM KIT 2-#59	
07 ⋮ 839	SAME AS DRUM KIT 1-#0(00～06)x(60x2-1)	

*4 : bit0, 1 ··· VDF
bit4, 5 ··· VDA
0 : OFF
1 : LOW
2 : HIGH
3 : ALL

*5 : 00 : L15
⋮ ⋮
0F : CNT
⋮ ⋮
1E : R15
1F : PRG (When in SONG Mode)
FF : OFF

*6 : A11 ～A88 : 00～3F
B11 ～B88 : 40～7F
Dr11～Dr16: 80～85
C11 ～C88 : 86～C5
U11 ～U88 : 00～3F
Dr17～Dr18: 40～41

*7 : bit0 : PROGRAM CHANGE =0:DIS, =1:ENA
bit1 : DAMPER 〃
bit2 : AFTERTOUCH 〃
bit3 : CONTROL CHANGE 〃

bit7=1 : A11 ～A88
: B11 ～B88
: Dr11～Dr16
: C11 ～C88
=0 : U11 ～U88
: Dr17～Dr18

Program is selected by *6 and *7(bit7)

i2/i3 SEQUENCER CONTROL DATA (TABLE 4-1)

No.	PARAMETER	DATA(Hex) : VALUE
	SONG 0 CONTROL DATA	
00 ⋮ 15	MIDI Channel(Tr. 1) ⋮ MIDI Channel(Tr. 16)	00～0F : 1～16
16 ⋮ 31	STATUS (Tr. 1) ⋮ STATUS (Tr. 16)	*11
32 ⋮ 47	BEND RANGE (Tr. 1) ⋮ BEND RANGE (Tr. 16)	00～0C : 00～12
48	BEAT	*12
49	TEMPO	28～F0 : 40～240
50	PROTECT (Tr. 1) ⋮ PROTECT (Tr. 8)	bit0=0:OFF, =1:ON ⋮ bit7
51	PROTECT (Tr. 9) ⋮ PROTECT (Tr. 16)	bit0=0:OFF, =1:ON ⋮ bit7
52	NEXT SONG NO.	*13
53 ⋮ 62	SONG NAME (Head) ⋮ SONG NAME (Tail)	20～7F : ' '～'←'
63	(RESERVE)	00
64 ⋮ 92	EFFECT PARAMETER	*20
	TRACK 1 CONTROL DATA	
93	PROGRAM NO.	*6
94	OUTPUT LEVEL	00～7F : 00～127
95	KEY TRANSPOSE	E8～18 : -24～24
96	DETUNE	CE～32 : -50～50
97	A:B PAN	00～1E, 1F, FF *5
98	D SEND LEVEL C SEND LEVEL	bit0～3 : 0～9, PRG bit4～7 : 0～9, PRG
99	KEY WINDOW TOP	00～7F : C-1～G9
100	KEY WINDOW BOTTOM	00～7F : C-1～G9
101	VEL WINDOW TOP	01～7F : 01～127
102	VEL WINDOW BOTTOM	01～7F : 01～127
103	CONTROL FILTER	*7
104	MIDI CHANNEL	00～0F : 1～16
	TRACK 2～16 CONTROL DATA	
105 ⋮ 284	SAME AS TRACK 1(93～104) x 15	
285～290	(RESERVE)	00
291	METRONOME LEVEL	00～63 : 0～99
292	METRONOME PAN	00～1E *5
293	METRONOME LEAD IN	0～2 : 0～2
294	TEMPO TRACK ON/OFF	0:OFF, 1:ON
295	(RESERVE)	00
	SONG 1～9 CONTROL DATA	
296 ⋮ 2959	SAME AS SONG 0 (00～295) x 9	

	PATTERN 0 PARAMETERS	
2960	BEAT	*12
2961	LENGTH	01～63 : 1～99
	PATTERN 1～99 PARAMETERS	
2962 ⋮ 3159	SAME AS PATTERN 0(2960, 2961) x 99	
	SONG 0, TRACK 1 DATA ADDRESS	
3160	DATA ADDRESS(LSB)	0000 (Start Addr)
3161	〃 〃 (MSB)	
	SONG 0, TRACK 2 ～ TRACK 16 DATA ADDRESS	
3162 ⋮ 3191	SAME AS SONG 0, TRACK 1 ADDRESS(3160, 3161) x 15	
	SONG 0, TEMPO TRACK DATA ADDRESS	
3192	DATA ADDRESS (LSB)	
3193	〃 〃 (MSB)	
	SONG 1～9 TRACK DATA ADDRESS	
3194 ⋮ 3499	SAME AS SONG 0 TRACK ADDRESS(3160～3193) x 9	
	PATTERN 0 DATA ADDRESS	
3500	DATA ADDRESS (LSB)	
3501	〃 〃 (MSB)	
	PATTERN 1 ～ PATTERN 99 DATA ADDRESS	
3502 ⋮ 3699	SAME AS PATTERN 0(3500, 3501)	
3700	End Pattern Addr(L)	
3701	〃 〃 〃 (H)	

i2/i3 SEQUENCE DATA (TABLE 4-2)

No.	PARAMETER	DATA(Hex) : VALUE
	SEQUENCE DATA 1	
3702	DATA (1-L)	*15
3703	DATA (1-H)	*15
3704	DATA (2-L)	*15
3705	DATA (2-H)	*15
	SEQUENCE DATA 2 ～	
3706 ⋮	SAME AS SEQUENCE DATA 1(3702～3705)	

*8 : 0 : OFF
1 : START/STOP
2 : SYNC START/STOP
3 : RESET
4 : INTRO/ENDING 1
5 : INTRO/ENDING 2
6 : FILL 1
7 : FILL 2
8 : VARIATION 1
9 : VARIATION 2
A : VARIATION 3
B : VARIATION 4
C : CHORD HOLD
D : BASS INVERSION
E : SCALE CHANGE
F : ARRANGEMENT UP
10 : ARRANGEMENT DOWN
11 : PROGRAM UP
12 : PROGRAM DOWN
13 : VARIATION UP
14 : VARIATION DOWN
15 : PUNCH IN/OUT
16 : EFFECT 1 ON/OFF
17 : EFFECT 2 ON/OFF
18 : DRUM MUTE
19 : PERC MUTE
1A : BASS MUTE
1B : ACC1 MUTE
1C : ACC2 MUTE
1D : ACC3 MUTE
1E : KB VOLUME
1F : EXPRESSION
20 : VDF CUTOFF
21 : EFFECT CONTROL
22 : DATA ENTRY
23 : OFF
24 : OFF
25 : KBD LOCK
26 : TAP TEMPO
27 : SOUND HOLD ON/OFF
28 : SUSTAIN ON/OFF
29 : FADE IN/OUT
2A : ENSEMBLE ON/OFF
2B : MASTER VOLUME

*9 : 0 : EQUAL TEMP
1 : EQUAL TEMP 2
2 : PURE MAJOR
3 : PURE MINOR
4 : ARABIC
5 : PYTHAGOREAN
6 : WERKMEISTER
7 : KIRNBERGER
8 : SLENDRO
9 : PELOG
A : USER SCALE

*10 : bit0～4 = 00 : L15
0F : CNT
1E : R15
1F : OFF

bit5～7 = 0 : EX Off
1 : EX Group1
6 : EX Group6
7 : Self

*11 : bit0,1= 0 : OFF
1 : INT
2 : EXT
3 : BOTH
bit2,3= 0 : Play, = 1 : Mute, = 2 : Solo

*12 : bit0～5 10～18 : 1/4 ～ 9/4
20～2F : 1/8 ～ 16/8
30～3F : 1/16 ～ 16/16
bit7 = 0 : High Resolution
1 : Low Resolution

*13 : bit0～6 = 0 : Song0
9 : Song9
7F : OFF
bit7 = 0/1 → Auto Start OFF/ON

*14 : When set to Single/Double Mode
0000 : A.Piano 1
0153 : DJ Kit 2
0154 : A.Piano 3 (i2 only)

When set to Drum Mode
00 : User Kit 1
07 : Percussion

*15 : SEQUENCE DATA FORMAT

DATA(1-H)	DATA(1-L)	DATA(2-H)	DATA(2-L)
↓	↓	↓	↓

*15-1 NOTE ON/OFF

1vvv vvv t	tttt tttt	kkkk kkk g	gggg gggg
Velocity	Event Time	Key No.	Length

t = 30 : ♩, t = 1FE : Tie from previous bar
g = 30 : ♩, g = 1FE : Tie to next bar

*15-2 PITCH BEND

0001 000 t	tttt tttt	0 vvv vvvv	0 vvv vvvv
	Event Time	Value(H)	Value(L)

*15-3 AFTER TOUCH

0010 000 t	tttt tttt	0000 0000	0 vvv vvvv
	Event Time		Value

*15-4 PROGRAM CHANGE

0011 000 t	tttt tttt	0000 00bb	0ppp pppp
	Event Time	Bank	Program No.

b = 00～02
p = 00～7F

*15-5 CONTROL CHANGE

0100 000 t	tttt tttt	0vvv vvvv	0ccc cccc
	Event Time	Value	Control No.

c = 00～65 : Same as MIDI Control Change
= 66 : Assignable Pedal

*15-6 POLY KEY PRESSURE

0101 000 t	tttt tttt	0 vvv vvvv	0 kkk kkkk
	Event Time	Value	Key No.

*15-7 BAR

0110 00bb	bbbb bbbb	xx ss ssss	0ppp pppp
	Bar No.	Type Beat	Pattern No.

x = 00 : Pattern not used
= 10 : Pattern continued
= 11 : Pattern start
s = 10～18 : 1/4～9/4
= 20～2F : 1/8～16/8
= 30～3F :1/16～16/16

*15-8 TRACK END

0111 000 t	tttt tttt	0000 00bb	bbbb bbbb
	Event Time		Last Bar No.

ARRANGEMENT PARAMETERS

(TABLE 5)

No.	PARAMETER	DATA(Hex) : VALUE
00 ⋮ 09	ARRANGE NAME (Head) ⋮ ⋮ ⋮ ARRANGE NAME (Tail)	20～7F : ' ' ～ '←'
10 11	SYTLE NO.	00～37 : 11～68 : 71～84
12 13	INITIAL VARIATION	00～03 : VAR 1～4
14	INITIAL TEMPO	0A～D2 : 40～240
15	KEYBOARD ASSIGN	00～03 : *16
16	SPLIT POINT	24～60 : C2～C7
17	OCTAVE	FE～02 : -2～+2
18	TRANSPOSE	F5～0B : -C#～+B
19	MANUAL DRUM KIT	00～07 : Dr1～Dr8
SWITCHES		
20	DYNAMIC VELOCITY	bit0=0:OFF, =1:ON
	TEMPO LOCK	bit1=0:OFF, =1:ON
	KBD1 DAMPER ENABLE	bit2=0:OFF, =1:ON
	KBD2 DAMPER ENABLE	bit3=0:OFF, =1:ON
CHORD SCANNING TYPE		
21	CHORD SCAN LOW	bit0=0:OFF, =1:ON
	CHORD SCAN HIGH	bit1=0:OFF, =1:ON
	BASS INVERSION	bit2=0:OFF, =1:ON
	CHORD HOLD	bit3=0:OFF, =1:ON
	CHORD LATCH	bit4=0:OFF, =1:ON
22 ⋮ 25	DEFAULT DRUM MAPPING	00～07 : Dr1～Dr8
26 ⋮ 29	RESERVE	00
30 31	FILL1	00～0C :OFF～DOWN
32 33	FILL2	00～0C :OFF～DOWN
DRUM PARAMETERS		
34	PROG	*17
35	BANK	
36	VOL	00～7F : 0～127
37	PAN	*5
38	C SEND LEVEL	bit0～3 : 0～9,PRG
	D SEND LEVEL	bit4～7 : 0～9,PRG
39	OCTAVE	FE～02 : -2～+2
40	OUT STATUS	*11
41	WRAP-AROUND	FF～0B : STY～11
PERCUSSION PARAMETERS		
42 ⋮ 49	SAME AS DRUMS	
BASS PARAMETERS		
50 ⋮ 57	SAME AS DRUMS	
ACC 1～3 PARAMETERS		
58 ⋮ 81	SAME AS DRUMS	
KBD 1～2 PARAMETERS		
82 ⋮ 97	SAME AS DRUMS	
KBD1 VELOCITY WINDOW		
98	TOP	01～7F : 1～127
99	BOTTOM	01～7F : 1～127
KBD2 VELOCITY WINDOW		
100	TOP	01～7F : 1～127
101	BOTTOM	01～7F : 1～127
102 ⋮ 130	EFFECT PARAMETERS	*20

*16 : 00 : SINGLE
01 : LAYER
02 : SPLIT
03 : M.DRUMS

*17 : BANK = 00, PROG = 00～7F : A11～A88～B88
= 01, = 00～7F : C11～C88～U88
= 02, = 00～0F : Dr11～Dr28
= 03, = 00～7F : D11～E88

STYLE CONTROL DATA

No.	PARAMETER	DATA(Hex) : VALUE
00 ⋮ 09	STYLE NAME (Head) ⋮ ⋮ STYLE NAME (Tail)	20～7F : ' ' ～ ' ' ←
10	SYTLE TYPE	0. USER CREATED 1. BUILT-IN 2. CARD OR DISK
11	TEMPO	0A～D2 : 40～240
12	TIME SIGNATURE	Hi Res only *12
NOTE RETRIGGER SWITCH		
13	BASS	bit2=0:OFF, =1:ON
	ACC1	bit3=0:OFF, =1:ON
	ACC2	bit4=0:OFF, =1:ON
	ACC3	bit5=0:OFF, =1:ON
NOTE SHIFT UP RANGE		
14	BASS	00～0B : 0～11
15	ACC1	00～0B : 0～11
16	ACC2	00～0B : 0～11
17	ACC3	00～0B : 0～11
TENSION AVAILABLE		
18	ACC1	bit3=0:OFF, =1:ON
	ACC2	bit4=0:OFF, =1:ON
	ACC3	bit5=0:OFF, =1:ON
19 ⋮ 37	RESERVE	00
DRUM PARAMETERS		
38	PROG	*17
39	BANK	
40	VOL	00～7F : 0～127
41	PAN	*5
PERCUSSION PARAMETTERS		
42 ⋮ 45	SAME AS DRUMS	
BASS PARAMETERS		
46 ⋮ 49	SAME AS DRUMS	
ACC 1～3 PARAMETERS		
50 ⋮ 61	SAME AS DRUMS	
VARIATION1, CHORD VARIATION1 PARAMETERS		
62	KEY	*18
63	LENGTH	00～10 : 0～16
VARIATION1 CHORD VARIATION2～6 PARAMETERS		
64 ⋮ 73	SAME AS VARIATION1 CHORD VARIATION1	
VARIATION 2～4 PARAMETERS		
74 ⋮ 109	SAME AS VARIATION1	

(TABLE 6-1)

INTRO1 CHORD VARIATION1 PARAMETERS		
110	KEY	*18
111	LENGTH	00～10 : 0～16
INTRO1 CHORD VARIATION2 PARAMETERS		
112	KEY	*18
113	LENGTH	00～10 : 0～16
INTRO2 PARAMETERS		
114 ⋮ 117	SAME AS INTRO1	
ENDING 1～2 PARAMETERS		
118 ⋮ 125	SAME AS INTRO1	
FILL 1～2 PARAMETERS		
126 ⋮ 133	SAME AS INTRO1	
VARIATION 1 CHORD VARIATION TABLE		
134	Major	00～05 : 1～6
135	M6	00～05 : 1～6
136	M7	00～05 : 1～6
137	M7b5	00～05 : 1～6
138	sus4	00～05 : 1～6
139	sus2	00～05 : 1～6
140	M7sus4	00～05 : 1～6
141	minor	00～05 : 1～6
142	m6	00～05 : 1～6
143	m7	00～05 : 1～6
144	m7b5	00～05 : 1～6
145	mM7	00～05 : 1～6
146	7th	00～05 : 1～6
147	7b5	00～05 : 1～6
148	7sus4	00～05 : 1～6
149	dim	00～05 : 1～6
150	dimM7	00～05 : 1～6
151	aug	00～05 : 1～6
152	aug7	00～05 : 1～6
153	augM7	00～05 : 1～6
VARIATION 2～4 CHORD VARIATION TABLE		
154 ⋮ 213	SAME AS VARIATION1	

*18 : 00 : C MAJOR
01 : C MINOR
02 : C#MAJOR
03 : C#MINOR
⋮
16 : B MAJOR
17 : B MINOR

INTRO1 CHORD VARIATION TABLE		
214	Major	00～01 : 1～2
215	M6	00～01 : 1～2
216	M7	00～01 : 1～2
217	M7b5	00～01 : 1～2
218	sus4	00～01 : 1～2
219	sus2	00～01 : 1～2
220	M7sus4	00～01 : 1～2
221	minor	00～01 : 1～2
222	m6	00～01 : 1～2
223	m7	00～01 : 1～2
224	m7b5	00～01 : 1～2
225	mM7	00～01 : 1～2
226	7th	00～01 : 1～2
227	7b5	00～01 : 1～2
228	7sus4	00～01 : 1～2
229	dim	00～01 : 1～2
230	dimM7	00～01 : 1～2
231	aug	00～01 : 1～2
232	aug7	00～01 : 1～2
233	augM7	00～01 : 1～2
INTRO2 CHORD VARIATION TABLE		
234 ⋮ 253	SAME AS INTRO1	
ENDING 1～2 CHORD VARIATION TABLE		
254 ⋮ 293	SAME AS INTRO1	
FILL 1～2 CHORD VARIATION TABLE		
294 ⋮ 333	SAME AS INTRO1	
PATTERN 0 CONTROL DATA		
334	BEAT	: *12
335	LENGTH	01～63 : 1～99
PATTERN 1～99 CONTROL DATA		
336 ⋮ 533	SAME AS PATTERN 0	
VARIATION1 ACC1 DATA ADDRESS		
534	DATA ADDRESS (LSB)	
535	DATA ADDRESS (MSB)	
VARIATION1 ACC 2～3 DATA ADDRESS		
536 ⋮ 539	SAME AS VARIATION1 ACC1 DATA ADDRESS	
VARIATION1 BASS, DRUMS, PERC. DATA ADDRESS		
540 ⋮ 545	SAME AS VARIATION1 DATA ADDRESS	

VARIATION 2～4 DATA ADDRESS		
546 ⋮ 581	SAME AS VARIATION1 DATA ADDRESS	
ENDING 1～2 DATA ADDRESS		
582 ⋮ 605	SAME AS VARIATION1 DATA ADDRESS	
FILL 1～2 DATA ADDRESS		
606 ⋮ 629	SAME AS VARIATION1 DATA ADDRESS	
PATTERN 0 DATA ADDRESS		
630	DATA ADDRESS (LSB)	
631	DATA ADDRESS (MSB)	
PATTERN 1～99 DATA ADDRESS		
632 ⋮ 829	SAME AS PATTERN 0	
830	END PATTERN ADDR(L)	
831	END PATTERN ADDR(M)	

STYLE DATA

(TABLE 6-2)

No.	PARAMETER	DATA(Hex) : VALUE
STYLE 1 DATA		
0	DATA (1-L)	*15
1	DATA (1-H)	*15
2	DATA (2-L)	*15
3	DATA (2-H)	*15
STYLE 2 DATA ～		
4 ⋮	SAME AS STYLE1	

STYLE HEADER

(TABLE 6-3)

No.	PARAMETER	DATA(Hex) : VALUE
STYLE 1		
0 ⋮ 3	STYLE1 ADDRESS	
4 5	STYLE1 SIZE	
STYLE 2～4		
6 ⋮ 23	SAME AS STYLE1	

BACKING SEQUENCE CONTROL DATA (TABLE 7-1)

No.	PARAMETER	DATA(Hex) : VALUE
BSEQ 0 CONTROL DATA		
00 ⋮ 09	BSEQ NAME (Head) ⋮ BSEQ NAME (Tail)	20～7F : ' '～'←'
10 11	ARRANGEMENT NO.	00～3F : 11～88
12 13	STYLE NO.	00～37 : 11～68 71～84
14 15	VARIATION	00～03 : VAR 1～4
16	TEMPO	0A～D2 : 40～240
17	KEYBOARD ASSIGN	*16
	CHORD SCANNING TYPE	
18	CHORD SCAN LOW	bit0=0:OFF, =1:ON
	CHORD SCAN HIGH	bit1=0:OFF, =1:ON
	BASS INVERSION	bit2=0:OFF, =1:ON
	CHORD HOLD	bit3=0:OFF, =1:ON
	CHORD LATCH	bit4=0:OFF, =1:ON
19	KBD1 PROG	*17
20	KBD1 BANK	
21	KBD1 OCTAVE	FE～02 : -2～+2
22	KBD2 PROG	*17
23	KBD2 BANK	
24	KBD2 OCTAVE	FE～02 : -2～+2
25	KEYBOARD TRK STATUS	*21-1
26	CONTROL TRK STATUS	*21-1
27	CHORD TRK STATUS	*21-1
28	AUTOTEMPO	0A～D2 : 40～240
29	BEAT	Hi Res only *12
30	SPLIT POINT	24～60 : C2～C7
31	TRANSPOSE	F5～0B :-C#～+B
	SWITCHES	
32	DYNAMIC VELOCITY	bit0=0:OFF, =1:ON
33 ⋮ 39	RESERVE	00
40	METRONOME SWITCH	*21-2
41	METRONOME LEVEL	00～63 : 0～99
42	METRONOME PAN	*5
43	METRONOME LEAD-IN	0～2 : 0～2
44	NEXT BSEQ No.	*21-3
45	AUTO START	*21-4

	EXTRA TRACK 1 CONTROL DATA	
46	PROG	*17
47	BANK	
48	VOL	00～7F : 0～127
49	PAN	*5
50	C SEND LEVEL	bit0～3 : 0～9,PRG
	D SEND LEVEL	bit4～7 : 0～9,PRG
51	TRACK STATUS	*11
52	BEND RANGE	00～0C : 00～12
53	KEY TRANSPOSE	E8～18 : -24～24
54	DETUNE	CE～32 : -50～50
55	PROTECT	: OFF/ON
56	MIDI CHANNEL	00～0F : 1～16
57	VEL WINDOW TOP	01～7F : 1～127
58	VEL WINDOW BOTTOM	01～7F : 1～127
59	KEY WINDOW TOP	00～7F : C-1～G9
60	KEY WINDOW BOTTOM	00～7F : C-1～G9
	EXTRA TRACK 2～8 CONTROL DATA	
61 ⋮ 165	SAME AS TRACK 1	
166 ⋮ 194	EFFECT PARAMETER	*20
BSEQ 1～9 CONTROL DATA		
195 ⋮ 1949	SAME AS BSEQ 0	
BSEQ TRACK1 DATA ADDRESS		
1950	DATA ADDRESS (LSB)	
1951	DATA ADDRESS (MSB)	
BSEQ0 TRACK 2～16 DATA ADDRESS		
1952 ⋮ 1981	SAME AS BSEQ0 TRACK1 DATA ADDRESS	
BSEQ0 TEMPO TRACK DATA ADDRESS		
1982 1983	SAME AS BSEQ0 TRACK1 DATA ADDRESS	
BSEQ 1～9 DATA ADDRESS		
1984 ⋮ 2289	SAME AS BSEQ0 TRACK DATA ADDRESS	
2290	END ADDRESS (LSB)	
2291	END ADDRESS (MSB)	

*21-1 : Track Status

00 : MUTE
01 : PLAY

*21-2 : Metronome Switch

00 : OFF
01 : ON
02 : REC

*21-3 : Next BSeq No.

FF : OFF
00 : BSeq 0
:
09 : BSeq 9 art

*21-4 : Auto Start

00 : OFF
01 : ON

B. SEQUENCE DATA (TABLE 7-2)

No.	PARAMETER	DATA(Hex) : VALUE
BACKING SEQUENCE DATA 1		
0	DATA (1-L)	*19
1	DATA (1-H)	*19
2	DATA (2-L)	*19
3	DATA (2-H)	*19
BACKING SEQUENCE DATA 2～		
4 ⋮	SAME AS BACKING SEQUENCE DATA 1 (0～3)	

*19 : BACKING SEQUENCE DATA FORMAT

DATA(1-H) DATA(1-L) DATA(2-H) DATA(2-L)
↓ ↓ ↓ ↓

*19-1 : BACKING CONTROL EVENT

10ii iii t	tttt tttt	vvvv vvvv	vvvv vvvv
EventID	EventTime	Value 2	Value 1

	EventID	Value	
0	Arrangement	0～63	11～88
1	Style	0～55	*19-1-1
2	Variation	0～9	*19-1-2
3	Keyboard Assign	0～3	*19-1-3
4	Chord Scan	0～3	*19-1-4
5	Chord Hold	0／1	OFF／ON
6	Bass Inversion	〃	〃
7	Transpose	-11～+11	-11～+11
8	Drum Mute	0／1	MUTE／PLAY
9	Perc. Mute	〃	〃
10	Bass Mute	〃	〃
11	ACC1 Mute	〃	〃
12	ACC2 Mute	〃	〃
13	ACC3 Mute	〃	〃
14	Drum Map	0～7	1～8
15	KBD1 Prog	V1 = PROG	V2 = BANK
16	KBD2 Prog	〃	〃
17	KBD1 Octave	-2～+2	-2～+2
18	KBD2 Octave	-2～+2	-2～+2

*19-1-1 : 0～55 : P11～P68, U1～U4, C1～C4

*19-1-2 : 0 : Variation1
⋮
3 : Variation4
4 : Intro1
5 : Intro2
6 : Ending1
7 : Ending2
8 : Fill1
9 : Fill2

*19-1-3 : 0 : SINGLE
1 : LAYER
2 : SPLIT
3 : M.DRUM

*19-1-4 : 0 : OFF
1 : LOWER
2 : UPPER
3 : FULL

*19-2 : CHORD EVENT

1lii iii t	tttt tttt	nnnn nnnn	bbbb rrrr
ChordID	EventTime	TensionNote	Bass Root

ChordID = 0 : No Chord
1 : Major
2 : Major 6th
3 : Major 7th
4 : Major 7th Flatted 5th
5 : Suspended 4th
6 : Suspended 2nd
7 : Major 7th Suspended 4th
8 : Minor
9 : Minor 6th
10 : Minor 7th
11 : Minor 7th Flatted 5th
12 : Minor Major 7th
13 : Dominant 7th
14 : 7th Flatted 5th
15 : 7th Suspended 4th
16 : Diminished
17 : Diminished Major 7th
18 : Augmented
19 : Augmented 7th
20 : Augmented Major 7th

TensionNote = 0000 0001 : Flatted 9th
0000 0010 : 9th
0000 0100 : Sharped 9th
0000 1000 : 11th
0001 0000 : Sharped 11th
0010 0000 : Flatted 13th
0100 0000 : 13th

Bass = 0~11 (C~B)
Root = 0~11 (C~B)

ARRANGEMENT PARAMETERS (TABLE 8)

No.	TRACK	PARAMETER	VALUE
0	----	TEMPO	40~240
1	----	CHORD LATCH	0~1
2	----	SPLIT POINT	0~127
3	----	TRANSPOSE	-11~11
4	----	VARIATION BY FILL 1	0~12
5	----	VARIATION BY FILL 2	0~12
6	----	EFFECT 1 TYPE	0~47
7	----	EFFECT 1 LEVEL	0~100
8	----	EFFECT 2 TYPE	0~47
9	----	EFFECT 2 LEVEL	0~100
10	DRUM	PROGRAM	*1
11	DRUM	VOLUME	0~127
12	DRUM	PANPOT	-1~31
13	DRUM	C LEVEL	0~10
14	DRUM	D LEVEL	0~10
15	DRUM	MUTE	0~1
16	----	----	----
17	DRUM	OUTPUT STATUS	0~3
18	----	----	----
19	----	----	----
20	PERC	PROGRAM	*1
21	PERC	VOLUME	0~127
22	PERC	PANPOT	-1~31
23	PERC	C LEVEL	0~10
24	PERC	D LEVEL	0~10
25	PERC	MUTE	0~1
26	----	----	----
27	PERC	OUTPUT STATUS	0~3
28	----	----	----
29	----	----	----
30	BASS	PROGRAM	*1
31	BASS	VOLUME	0~127
32	BASS	PANPOT	-1~31
33	BASS	C LEVEL	0~10
34	BASS	D LEVEL	0~10
35	BASS	MUTE	0~1
36	BASS	OCTAVE	-2~2
37	BASS	OUTPUT STATUS	0~3
38	BASS	WRAP AROUND POINT	-1~11
39	----	----	----
40	ACC1	PROGRAM	*1
41	ACC1	VOLUME	0~127
42	ACC1	PANPOT	-1~31
43	ACC1	C LEVEL	0~10
44	ACC1	D LEVEL	0~10
45	ACC1	MUTE	0~1
46	ACC1	OCTAVE	-2~2
47	ACC1	OUTPUT STATUS	0~3
48	ACC1	WRAP AROUND POINT	-1~11
49	----	----	----
50	ACC2	PROGRAM	*1
51	ACC2	VOLUME	0~127
52	ACC2	PANPOT	-1~31
53	ACC2	C LEVEL	0~10

*1 : 0~63 = A11~A88
64~127 = B11~B88
128~191 = C11~C88
192~255 = U11~U88
256~319 = D11~D88
320~383 = E11~E88
384~399 = Dr11~Dr28

54	ACC2	D LEVEL	0~10
55	ACC2	MUTE	0~1
56	ACC2	OCTAVE	-2~2
57	ACC2	OUTPUT STATUS	0~3
58	ACC2	WRAP AROUND POINT	-1~11
59	----	----	----
60	ACC3	PROGRAM	*1
61	ACC3	VOLUME	0~127
62	ACC3	PANPOT	-1~31
63	ACC3	C LEVEL	0~10
64	ACC3	D LEVEL	0~10
65	ACC3	MUTE	0~1
66	ACC3	OCTAVE	-2~2
67	ACC3	OUTPUT STATUS	0~3
68	ACC3	WRAP AROUND POINT	-1~11
69	----	----	----
70	KBD1	PROGRAM	*1
71	KBD1	VOLUME	0~127
72	KBD1	PANPOT	-1~31
73	KBD1	C LEVEL	0~10
74	KBD1	D LEVEL	0~10
75	KBD1	MUTE	0~1
76	KBD1	OCTAVE	-2~2
77	----	----	----
78	----	----	----
79	KBD1	DAMPER ENABLE	0~1
80	KBD2	PROGRAM	*1
81	KBD2	VOLUME	0~127
82	KBD2	PANPOT	-1~31
83	KBD2	C LEVEL	0~10
84	KBD2	D LEVEL	0~10
85	KBD2	MUTE	0~1
86	KBD2	OCTAVE	-2~2
87	----	----	----
88	----	----	----
89	KBD2	DAMPER ENABLE	0~1

DRUM KIT PARAMETERS (TABLE 9)

No.	PARAMETER	No. from TABLE 3
0	INST No.	0+7n
1	KEY	1+7n
2	TUNE	3+7n
3	OUTPUT LEVEL	4+7n
4	DECAY	5+7n
5	EXCLUSIVE ASSIGN	2+7n b5~7
6	A:B PAN	2+7n b0~4
7	C SEND LEVEL	6+7n b4~7
8	D SEND LEVEL	6+7n b0~3

PARAM No. for DRUM PARAM CHANGE
n : 0~59 (Index)

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