

# Tyros4

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DIGITAL WORKSTATION

## Reference Manual

This Reference Manual explains advanced features of the Tyros4 that are not explained in the Owner's Manual. Please read the Owner's Manual first, before reading this Reference Manual.

# Contents

\* Each chapter in this Reference Manual corresponds to the relevant chapters in the Owner's Manual.

<b>1</b>	<b>Voices – Playing the Keyboard –</b>	<b>4</b>
	Voice Characteristics .....	4
	Selecting GM/XG or Other Voices from the Panel.....	5
	Effect-Related Settings .....	6
	Pitch-Related Settings .....	9
	Editing Voices (Voice Set) .....	11
	Editing Organ Flutes Parameters.....	16
	Creating Custom Voices (Voice Creator).....	17
<b>2</b>	<b>Styles – Playing Rhythm and Accompaniment –</b>	<b>34</b>
	Selecting the Chord Fingering Type .....	34
	Style Playback Related Settings.....	36
	Split Point Settings.....	38
	Memorizing the Original One Touch Setting .....	39
	Creating/Editing Styles (Style Creator) .....	40
<b>3</b>	<b>Songs – Recording Your Performances and Creating Songs –</b>	<b>53</b>
	Editing Music Notation Settings .....	53
	Editing Lyrics/Text Display Settings.....	55
	Using the Auto Accompaniment Features with the Song Playback .....	56
	Song Playback Related Parameters (Repeat settings, Channel settings, Guide Function) .....	57
	Creating/Editing Songs (Song Creator) .....	61
<b>4</b>	<b>Multi Pads – Adding Musical Phrases to Your Performance –</b>	<b>77</b>
	Multi Pad Creating (Multi Pad Creator) .....	77
	Multi Pad Editing.....	79
<b>5</b>	<b>Music Finder – Calling Up Ideal Panel Settings (Voice, Style, etc.) for Each Song –</b>	<b>80</b>
	Creating a Set of Favorite Records.....	80
	Editing Records.....	81
	Saving the Record as a Single File.....	82
	Viewing Record Information on the Internet (MUSIC FINDER Plus) .....	83
<b>6</b>	<b>Registration Memory – Saving and Recalling Custom Panel Setups –</b>	<b>84</b>
	Disabling Recall of Specific Items (Freeze) .....	84
	Calling Up Registration Memory Numbers in Order (Registration Sequence).....	85
<b>7</b>	<b>Audio Recorder/Player – Recording and Playback Audio Files –</b>	<b>87</b>
	Editing the Recorded Data (Multi Track Recording File).....	87
	Re-recording the Multi Track Recording File .....	89
	Setting the Start/End Points of the Audio (Multi Track Recording File) .....	92
	Playlist Mode.....	93
<b>8</b>	<b>Vocal Harmony – Adding Harmony Vocals and Synth Vocoder to Your Singing –</b>	<b>96</b>
	Setting up the Vocal Harmony Control Parameters .....	96
	Editing the Vocal Harmony Types.....	98
	Editing the Synth Vocoder Types.....	103

<b>9</b>	<b>Mixing Console – Editing the Volume and Tonal Balance –</b>	<b>107</b>
	Editing VOL/VOICE Parameters .....	107
	Editing FILTER Parameters .....	108
	Editing TUNE Parameters.....	108
	Editing EFFECT Parameters .....	109
	Editing EQ Parameters .....	112
	Line Out Settings .....	114
<b>10</b>	<b>Internet Direct Connection – Connecting the Tyros4 Directly to the Internet –</b>	<b>115</b>
	Editing the Browser Settings.....	115
	Registering Bookmarks of Your Favorite Pages .....	116
<b>11</b>	<b>Connections – Using Tyros4 with Other Devices –</b>	<b>118</b>
	Microphone Settings .....	118
	Footswitch/Foot Controller Settings .....	121
	MIDI Settings .....	124
<b>12</b>	<b>Utility – Making Global Settings –</b>	<b>132</b>
	CONFIG1 .....	132
	CONFIG2 .....	134
	MEDIA.....	135
	OWNER .....	136
	SYSTEM RESET .....	137
	<b>Index</b>	<b>139</b>

### Using the PDF manual

- To quickly jump to items and topics of interest, click on the desired items in the “Bookmarks” index to the left of the main display window. (Click the “Bookmarks” tab to open the index if it is not displayed.)
- Click the page numbers that appear in this manual to go directly to the corresponding page.
- Select “Find” or “Search” from the Adobe Reader “Edit” menu and enter a keyword to locate related information anywhere in the document.

#### NOTE

The names and positions of menu items may vary according to the version of Adobe Reader being used.

- The illustrations and LCD screens as shown in this manual are for instructional purposes only, and may appear somewhat different from those on your instrument. Note that all display examples shown in this manual are in English.
- The company names and product names in this manual are the trademarks or registered trademarks of their respective companies.

## Contents

Voice Characteristics .....	4
Selecting GM/XG or Other Voices from the Panel .....	5
Effect-Related Settings .....	6
• Setting the Touch Sensitivity of the Keyboard .....	6
• Selecting the Harmony/Echo type .....	7
Pitch-Related Settings .....	9
• Fine-tuning the Pitch of the Entire Instrument .....	9
• Scale Tuning .....	9
• Changing the Part Assignment of the TRANSPOSE Buttons .....	10
Editing Voices (Voice Set) .....	11
• Editable Parameters in the VOICE SET Displays .....	12
• Disabling Automatic Selection of Voice Sets (Effects, etc.) .....	15
Editing Organ Flutes Parameters .....	16
Creating Custom Voices (Voice Creator) .....	17
• Importing the Wave Data to the Optional Expansion Module .....	17
• Creating Normal Voices (Custom Voice) .....	20
• Creating Drum Voices (Custom Drum Voice) .....	24
• Re-Editing a Custom Voice .....	27
• Editing an Expansion Voice Bank—Library Edit .....	28
• Saving your Custom Voices to a Library—Library Save .....	30
• Loading a single Additional Voice to the Tyros4—Individual Load .....	31
• Loading a Library (Expansion Voice Bank) to the Tyros4—Library Load .....	32
• Editing a Custom Voice on your computer—Voice Editor .....	33

## Voice Characteristics

The Voice type and its defining characteristics are indicated above the Voice name in the Voice Selection display.

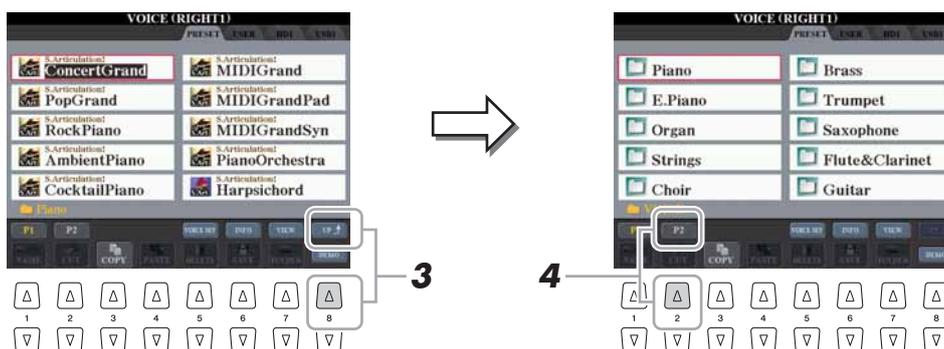
S.Articulation2! S.Articulation! MegaVoice	See the Owner's Manual.
Live!	These acoustic instrument sounds were sampled in stereo, to produce a truly authentic, rich sound—full of atmosphere and ambience.
Cool!	These Voices capture the dynamic textures and subtle nuances of electric instruments—thanks to a huge amount of memory and some very sophisticated programming.
Sweet!	These acoustic instrument sounds also benefit from Yamaha's sophisticated technology—and feature a sound so finely detailed and natural, you'll swear you're playing the real thing!
Drums	Various drum and percussion sounds are assigned to individual keys, letting you play the sounds from the keyboard.
SFX	Various special effect sounds and percussion sounds are assigned to individual keys, letting you play the sounds from the keyboard.
Organ Flutes!	This authentic organ Voice lets you use the Voice Set to adjust the various footages and craft your own original organ sounds. See <a href="#">page 16</a> for details.

Live!Drums	These are high-quality drum sounds taking full advantage of Stereo Sampling and Dynamic Sampling.
Live!SFX	These are various high-quality special effect sounds and percussion sounds taking full advantage of Stereo Sampling and Dynamic sampling.
Custom!	Custom Voices (including Custom Drum Voices) which you have created by using the Custom Voice function.
CustomWA!	Custom Voices (including Custom Drum Voices) which contain Wave data.

## Selecting GM/XG or Other Voices from the Panel

The GM/XG Voices cannot be directly called up from the VOICE category selection buttons. However, they can be called up via panel operation by following the procedure below.

- 1** Press one of the PART SELECT button to which you want to call up the desired Voice.
- 2** Press one of the VOICE category selection buttons to call up the Voice Selection display.
- 3** Press the [8 ▲] (UP) button to call up the Voice categories.



- 4** Press the [2 ▲] (P2) button to display Page 2.
- 5** Press the desired [A]–[J] button to call up the Voice Selection display of GM/XG Voices, GM2 Voices, etc.
- 6** Select the desired Voice.

### NOTE

You can find the "Legacy" folder in this display. This folder contains previous Yamaha keyboards' Voices (such as Tyros, Tyros2, Tyros3, etc.) for data compatibility with other models.

## Effect-Related Settings

### Setting the Touch Sensitivity of the Keyboard

You can adjust the touch response of the instrument (how the sound responds to the way you play the keys). The touch sensitivity type becomes the common setting for all Voices.

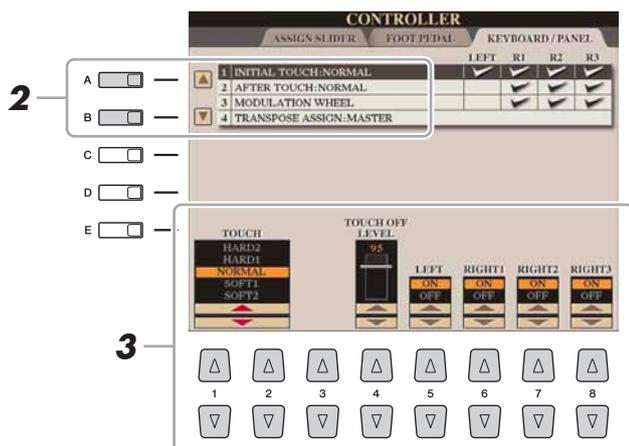
#### NOTE

Some Voices are purposely designed without touch sensitivity, in order to emulate the true characteristics of the actual instrument (for example, conventional organs, which have no touch response).

#### 1 Call up the operation display.

[FUNCTION] → [D] CONTROLLER → TAB [◀][▶] KEYBOARD/PANEL

#### 2 Use the [A]/[B] buttons to select the desired parameter: “1 INITIAL TOUCH” or “2 AFTER TOUCH.”



#### 3 Use the [1 ▲▼]–[8 ▲▼] buttons to specify the touch response.

##### 1 INITIAL TOUCH

[1 ▲▼]/ [2 ▲▼]	TOUCH	Determines the Initial Touch sensitivity setting. <b>HARD 2:</b> Requires strong playing to produce high volume. Best for players with a heavy touch. <b>HARD 1:</b> Requires moderately strong playing for higher volume. <b>NORMAL:</b> Standard touch response. <b>SOFT 1:</b> Produces high volume with moderate playing strength. <b>SOFT 2:</b> Produces relatively high volume even with light playing strength. Best for players with a light touch.
[4 ▲▼]	TOUCH OFF LEVEL	Determines the fixed volume level when Touch is set to “OFF.”
[5 ▲▼]– [8 ▲▼]	LEFT–RIGHT3	Turns Initial Touch on or off for each keyboard part.

##### 2 AFTER TOUCH

[1 ▲▼]/ [2 ▲▼]	TOUCH	Determines the Aftertouch sensitivity setting. <b>HARD:</b> Relatively strong aftertouch pressure is needed to produce changes. <b>NORMAL:</b> Produces a fairly standard aftertouch response. <b>SOFT:</b> Allows you to produce relatively large changes with very light aftertouch pressure.
[5 ▲▼]– [8 ▲▼]	LEFT–RIGHT3	Turns Initial Touch on or off for each keyboard part.

# Selecting the Harmony/Echo type

You can select the desired Harmony/Echo effect from a variety of types.

**NOTE**

When the [MONO] button is turned on or you use the SA/SA2 Voices, the Harmony/Echo effect may not work properly.

- 1** Turn the [HARMONY/ECHO] button on.
- 2** Call up the operation display.  
[FUNCTION] → [F] HARMONY/ECHO
- 3** Use the [1 ▲▼]–[3 ▲▼] buttons to select the Harmony/Echo type.

The Harmony/Echo types are divided into the following groups, depending on the particular effect applied.



**Harmony Types**

These types apply the harmony effect to notes played in the right-hand section of the keyboard according to the chord specified in the left-hand section of the keyboard. (Note that the "1+5" and "Octave" settings are not affected by the chord.)

**Multi Assign Type**

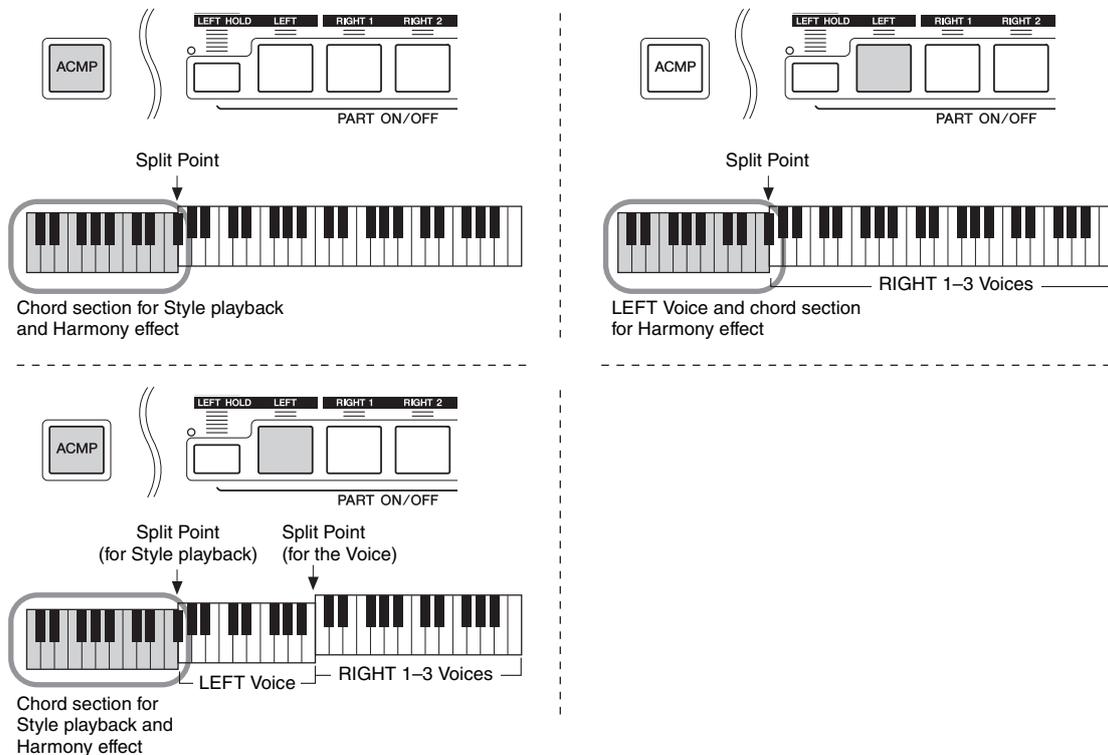
This type applies a special effect to chords played in the right-hand section of the keyboard.

**Echo Types**

These types apply echo effects to notes played in the right-hand section of the keyboard in time with the currently set tempo.

## ■ Harmony Types

When one of the Harmony Types is selected, the Harmony effect is applied to the note played in the right-hand section of the keyboard according to the type selected above and the chord specified in the chord section of the keyboard shown below.



## ■ Multi Assign Type

The Multi Assign effect automatically assigns notes played simultaneously on the right-hand section of the keyboard to separate parts (Voices). For example, if you play three consecutive notes, the first is played by the RIGHT 1 Voice, the second by the RIGHT 2 Voice, and the third by the RIGHT 3 Voice. The Multi Assign effect is not affected by the [ACMP] and LEFT part on/off status.

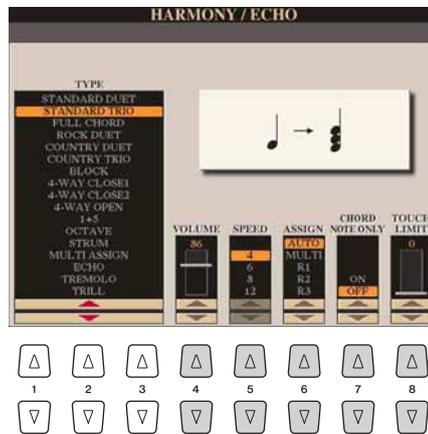


## ■ Echo Types

When one of the Echo Types is selected, the corresponding effect (echo, tremolo, trill) is applied to the note played in the right-hand section of the keyboard in time with the currently set tempo, regardless of the [ACMP] and the LEFT part on/off status. Keep in mind that Trill works when you hold down two notes on the keyboard simultaneously (last two notes if more than two notes are held), and it plays those notes alternately.

## 4 Use the [4 ▲▼]–[8 ▲▼] buttons to select various Harmony/Echo settings.

The available settings differ depending on the Harmony/Echo type.



[4 ▲▼]	VOLUME	This parameter is available for all types with the exception of “Multi Assign.” It determines the level of the harmony/echo notes generated by the Harmony/Echo effect.
[5 ▲▼]	SPEED	This parameter is only available when Echo, Tremolo, or Trill is selected in Type above. It determines the speed of the Echo, Tremolo, and Trill effects.
[6 ▲▼]	ASSIGN	This parameter is available for all types with the exception of “Multi Assign.” This lets you determine the keyboard part via which the harmony/echo notes will be sounded.
[7 ▲▼]	CHORD NOTE ONLY	This parameter is available when one of the Harmony Types is selected. When this is set to “ON,” the Harmony effect is applied only to the note (played in the right-hand section of the keyboard) that belongs to a chord played in the chord section of the keyboard.
[8 ▲▼]	TOUCH LIMIT	This parameter is available for all types with the exception of “Multi Assign.” It determines the lowest velocity value at which the harmony note will sound. This allows you to selectively apply the harmony by your playing strength, letting you create harmony accents in the melody. The harmony effect is applied when you play the key strongly (above the set value).

# Pitch-Related Settings

## Fine-tuning the Pitch of the Entire Instrument

You can fine-tune the pitch of the entire instrument—useful when you play the Tyros4 along with other instruments or CD music. Please note that the Tune function does not affect the Drum Kit or SFX Kit Voices and audio files.

### 1 Call up the operation display.

[FUNCTION] → [A] MASTER TUNE/SCALE TUNE → TAB [◀][▶] MASTER TUNE

### 2 Use the [4 ▲▼]/[5 ▲▼] buttons to set the tuning, from 414.8–466.8 Hz.

Press the both 4 or 5's [▲] and [▼] buttons simultaneously to reset the value to the factory setting of 440.0 Hz.

## Scale Tuning

You can select various scales for playing in custom tunings for specific historical periods or music genres.

### 1 Call up the operation display.

[FUNCTION] → [A] MASTER TUNE/SCALE TUNE → TAB [◀][▶] SCALE TUNE

### 2 Use the [A]/[B] buttons to select the desired scale.

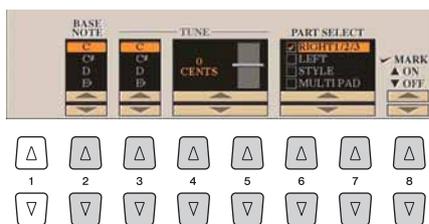


The tuning of each note for the currently selected scale is shown.

### ■ Preset Scale types

EQUAL	The pitch range of each octave is divided equally into twelve parts, with each half-step evenly spaced in pitch. This is the most commonly used tuning in music today.
PURE MAJOR, PURE MINOR	These tunings preserve the pure mathematical intervals of each scale, especially for triad chords (root, third, fifth). You can hear this best in actual vocal harmonies—such as choirs and a cappella singing.
PYTHAGOREAN	This scale was devised by the famous Greek philosopher and is created from a series of perfect fifths, which are collapsed into a single octave. The 3rd in this tuning are slightly unstable, but the 4th and 5th are beautiful and suitable for some leads.
MEAN-TONE	This scale was created as an improvement on the Pythagorean scale, by making the major third interval more “in tune.” It was especially popular from the 16th century to the 18th century. Handel, among others, used this scale.
WERCKMEISTER, KIRNBERGER	This composite scale combines the Werckmeister and Kirnberger systems, which were themselves improvements on the mean-tone and Pythagorean scales. The main feature of this scale is that each key has its own unique character. The scale was used extensively during the time of Bach and Beethoven, and even now it is often used when performing period music on the harpsichord.
ARABIC1, ARABIC2	Use these tunings when playing Arabic music.

### 3 Change the following settings as necessary.



#### NOTE

To register the Scale Tune settings to the Registration Memory, be sure to checkmark the SCALE item in the REGISTRATION MEMORY CONTENTS display.

[2 ▲▼]	BASE NOTE	Determines the base note for each scale. When the base note is changed, the pitch of the keyboard is transposed, yet maintains the original pitch relationship between the notes.
[3 ▲▼]– [5 ▲▼]	TUNE	Select the desired note to be tuned by using the [3 ▲▼] buttons and tune it in cents by using the [4 ▲▼]/[5 ▲▼] buttons.  NOTE In musical terms a “cent” is 1/100th of a semitone. (100 cents equal one semitone.)
[6 ▲▼]/ [7 ▲▼]	PART SELECT	Select the part to which the Scale Tune setting is applied by using the [6 ▲▼]/[7 ▲▼] buttons. Then press the [8 ▲] button to add a checkmark or press the [8 ▼] button to remove the checkmark.
[8 ▲▼]	MARK ON/OFF	

## Changing the Part Assignment of the TRANSPOSE Buttons

You can determine to which parts the TRANSPOSE [-]/[+] buttons are applied.

- 1 Call up the operation display.**  
[FUNCTION] → [D] CONTROLLER → TAB [◀][▶] KEYBOARD/PANEL
- 2 Use the [A]/[B] buttons to select “4. TRANSPOSE ASSIGN.”**
- 3 Press the [4 ▲▼]/[5 ▲▼] buttons to select the desired transpose type.**

KEYBOARD	When this is selected, the TRANSPOSE [-]/[+] buttons affect the pitch of keyboard played Voices, Style playback (controlled by the performance in the chord section of the keyboard), and Multi Pad playback (when Chord Match is on, and left-hand chords are indicated)—but they do not affect Song playback.
SONG	When this is selected, the TRANSPOSE [-]/[+] buttons affect only the pitch of Song playback.
MASTER	When this is selected, the TRANSPOSE [-]/[+] buttons affect the overall pitch of the instrument, except audio playback.

You can confirm the setting here by viewing the popup window called up via the TRANSPOSE [-]/[+] buttons.

## Editing Voices (Voice Set)

The Tyros4 has a Voice Set feature that allows you to create your own Voices by editing some parameters of the existing Voices. Once you've created a Voice, you can save it as a User Voice to the USER drive or external devices for future recall.

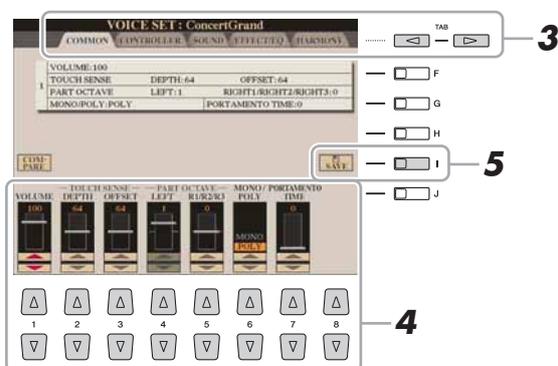
### 1 Select the desired Voice (other than an Organ Flutes Voice).

The editing method is different for the ORGAN FLUTES Voices compared to other Voices. For instructions on editing the ORGAN FLUTES Voices, see [page 16](#).

### 2 Press the [5 ▲] (VOICE SET) button to call up the VOICE SET display.

### 3 Use the TAB [◀][▶] buttons to call up the relevant setting display.

For information on the available parameters in each display, see the “Editable Parameters in the VOICE SET Displays” on [page 12](#).



### 4 As necessary, use the [A]/[B] buttons to select the item (parameter) to be edited and edit the Voice by using the [1 ▲▼]–[8 ▲▼] buttons or sliders.

By pressing the [D] (COMPARE) button, you can compare the sound of the edited Voice with the original (unedited) Voice.

### 5 Press the [I] (SAVE) button to save your edited Voice as a User Voice.

#### NOTICE

The settings will be lost if you select another Voice or turn the power to the instrument off without executing the Save operation.

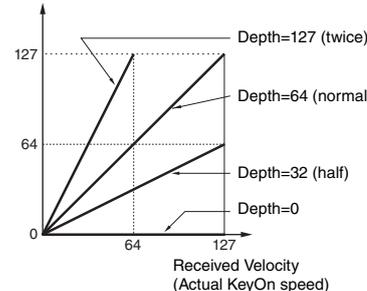
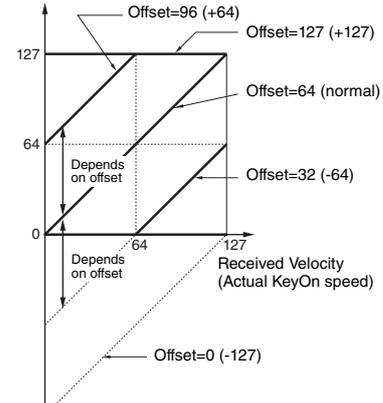
## Editable Parameters in the VOICE SET Displays

The Voice Set parameters are organized into five different displays. The parameters in each display are described separately, below.



The available parameters differ depending on the Voice.

### ■ COMMON Page

[1 ▲▼]	VOLUME	Adjusts the volume of the current edited Voice.
[2 ▲▼]/ [3 ▲▼]	TOUCH SENSE	<p>Adjusts the touch sensitivity (velocity sensitivity), or how greatly the volume responds to your playing strength.</p> <p><b>TOUCH SENSE DEPTH</b> Changes to velocity curve according to VelDepth (with Offset set to 64)</p> <p>Actual Velocity for tone generator</p>  <p><b>TOUCH SENSE OFFSET</b> Changes to velocity curve according to VelOffset (with Depth set to 64)</p> <p>Actual Velocity for tone generator</p>  <p><b>DEPTH:</b> Determines the velocity sensitivity, or how much the level of the Voice changes in response to your playing strength (velocity). <b>OFFSET:</b> Determines the amount by which received velocities are adjusted for the actual velocity effect.</p>
[4 ▲▼]/ [5 ▲▼]	PART OCTAVE	Shifts the octave range of the edited Voice up or down in octaves. When the edited Voice is used as any of the RIGHT 1–3 parts, the R1/R2/R3 parameter is available; when the edited Voice is used as the LEFT part, the LEFT parameter is available.
[6 ▲▼]	MONO/POLY	Determines whether the edited Voice is played monophonically or polyphonically. This setting can also be made from the VOICE EFFECT [MONO] button on the panel.
[7 ▲▼]	PORTAMENTO TIME	<p>Sets the portamento time (pitch transition time) when the edited Voice is set to “MONO” above.</p> <p><b>NOTE</b></p> <p>The Portamento Time determines the pitch transition time. Portamento is a function that creates a smooth transition in pitch from the first note played on the keyboard to the next.</p>

### ■ CONTROLLER Page

#### 1 MODULATION

The MODULATION wheel can be used to modulate the parameters below as well as the pitch (vibrato). Here, you can set the degree to which the MODULATION wheel modulates each of the following parameters.

[2 ▲▼]	FILTER	Determines the degree to which the MODULATION wheel modulates the Filter Cut-off Frequency. For details about the filter, see <a href="#">page 13</a> .
[3 ▲▼]	AMPLITUDE	Determines the degree to which the MODULATION wheel modulates the amplitude (volume).
[5 ▲▼]	LFO PMOD	Determines the degree to which the MODULATION wheel modulates the pitch, or the vibrato effect.
[6 ▲▼]	LFO FMOD	Determines the degree to which the MODULATION wheel modulates the Filter modulation, or the wah effect.
[7 ▲▼]	LFO AMOD	Determines the degree to which the MODULATION wheel modulates the amplitude, or the tremolo effect.

## 2 AFTER TOUCH

Aftersustain can be used to modulate the parameters below. Here, you can set the degree to which Aftersustain modulates each of the following parameters.

[2 ▲▼]	FILTER	Determines the degree to which Aftersustain modulates the Filter Cutoff Frequency. See below for details about Filter.
[3 ▲▼]	AMPLITUDE	Determines the degree to which Aftersustain modulates the amplitude (volume).
[5 ▲▼]	LFO PMOD	Determines the degree to which Aftersustain modulates the pitch, or the vibrato effect.
[6 ▲▼]	LFO FMOD	Determines the degree to which Aftersustain modulates the Filter modulation, or the wah effect.
[7 ▲▼]	LFO AMOD	Determines the degree to which Aftersustain modulates the amplitude, or the tremolo effect.

### ■ SOUND Page

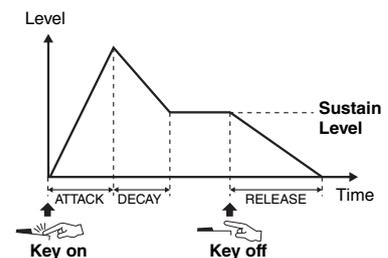
#### FILTER

Filter is a processor that changes the timbre or tone of a sound by either blocking or passing a specific frequency range. The parameters below determine the overall timbre of the sound by boosting or cutting a certain frequency range. In addition to making the sound either brighter or mellower, Filter can be used to produce electronic, synthesizer-like effects.

[1 ▲▼]	BRIGHT (Brightness)	Determines the cutoff frequency or effective frequency range of the filter (see diagram). Higher values result in a brighter sound.	
[2 ▲▼]	HARMO. (Harmonic content)	Determines the emphasis given to the cutoff frequency (resonance), set in BRIGHT above (see diagram). Higher values result in a more pronounced effect.	

#### EG

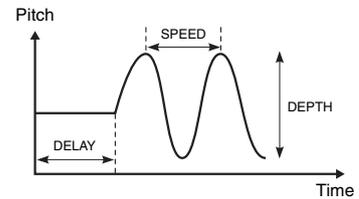
The EG (Envelope Generator) settings determine how the level of the sound changes in time. This lets you reproduce many sound characteristics of natural acoustic instruments—such as the quick attack and decay of percussion sounds, or the long release of a sustained piano tone.



[3 ▲▼]	ATTACK	Determines how quickly the sound reaches its maximum level after the key is played. The lower the value, the quicker the attack.
[4 ▲▼]	DECAY	Determines how quickly the sound reaches its sustain level (a slightly lower level than maximum). The lower the value, the quicker the decay.
[5 ▲▼]	RELES. (Release)	Determines how quickly the sound decays to silence after the key is released. The lower the value, the quicker the decay.

## VIBRATO

Vibrato is a quavering, vibrating sound effect that is produced by regularly modulating the pitch of the Voice.



[6 ▲▼]	DEPTH	Determines the intensity of the Vibrato effect. Higher settings result in a more pronounced Vibrato.
[7 ▲▼]	SPEED	Determines the speed of the Vibrato effect.
[8 ▲▼]	DELAY	Determines the amount of time that elapses between the playing of a key and the start of the Vibrato effect. Higher settings increase the delay of the Vibrato onset.

## ■ EFFECT/EQ Page

### 1 REVERB DEPTH/CHORUS DEPTH/DSP DEPTH/PANEL SUSTAIN

[1 ▲▼]/ [2 ▲▼]	REVERB DEPTH	Adjusts the reverb depth.
[3 ▲▼]/ [4 ▲▼]	CHORUS DEPTH	Adjusts the chorus depth.
[5 ▲▼]	DSP ON/OFF	Determines whether the DSP is on or off. This setting can also be made from the VOICE EFFECT [DSP] button on the panel.
[6 ▲▼]	DSP DEPTH	Adjusts the DSP depth. If you want to re-select the DSP type, you can do so in the “2 DSP” menu explained below.
[7 ▲▼]	PANEL SUSTAIN	Determines the sustain level applied to the edited Voice when the VOICE EFFECT [SUSTAIN] button on the panel is turned on.

### 2 DSP

[1 ▲▼]– [4 ▲▼]	DSP TYPE	Selects the DSP effect category and type. Select a type after selecting a category.
[5 ▲▼]– [8 ▲▼]	VARIATION	Two variations are provided for each DSP type. Here, you can edit the VARIATION on/off status and variation’s parameter value setting.
[5 ▲▼]	ON/OFF	Turns the DSP Variation on or off for the selected Voice. This setting can also be made from the VOICE EFFECT [VARIATION] button on the panel. (This button is effective only when the [DSP] button is on.)
	PARAMETER	Displays the variation parameter. (This differs depending on the effect type and cannot be changed.)
[6 ▲▼] –[8 ▲▼]	VALUE	Adjusts the value of the DSP variation parameter.

### 3 EQ

Determines the Frequency and Gain of the Low and High EQ bands. For information about EQ, refer to [page 112](#).

## ■ HARMONY Page

Same as in the [FUNCTION] → [F] HARMONY/ECHO display. See “Selecting the Harmony/Echo type” on [page 7](#).

# Disabling Automatic Selection of Voice Sets (Effects, etc.)

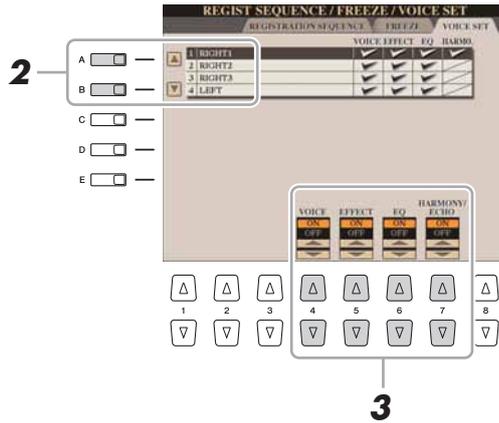
Each Voice is linked to its default VOICE SET parameter settings. Usually these settings are automatically called up when a Voice is selected. However, you can also disable this feature by the operation in the relevant display as explained below.

For example, if you want to change the Voice yet keep the same Harmony effect, set the HARMONY/ECHO parameter to OFF (in the display explained below).

## 1 Call up the operation display.

[FUNCTION] → [E] REGIST SEQUENCE/FREEZE/VOICE SET → TAB  
[◀][▶] VOICE SET

## 2 Use the [A]/[B] buttons to select a keyboard part.



## 3 Use the [4 ▲▼]–[7 ▲▼] buttons to enable/disable automatic calling up of the settings (ON or OFF) independently for each parameter group.

## Editing Organ Flutes Parameters

The Organ Flutes Voices selected from the [ORGAN FLUTES] button can be edited by adjusting the footage levers, adding the attack sound, applying effect and equalizer, etc.

### ■ FOOTAGE Page

Refer to the Owner's Manual, chapter 1.

### ■ VOLUME/ATTACK Page

#### NOTICE

After editing, go to the Voice Selection display by pressing the [I] (PRESETS) button and save the setting. The settings will be lost if you select another Voice or turn the power to the instrument off without executing the Save operation.



Same as the FOOTAGE Page.

[1 ▲▼]	VOL (Volume)	Adjusts the overall volume of the Organ Flutes. The longer the graphic bar, the greater the volume.
[2 ▲▼]	RESP (Response)	Affects both the attack and release (page 13) portion of the sound, increasing or decreasing the response time of the initial swell and release, based on the FOOTAGE controls. The higher the value, the slower the swell and release.
[3 ▲▼]	VIBRATO SPEED	Determines the speed of the vibrato effect controlled by the Vibrato On/Off ([F]/[G] buttons) and Vibrato Depth ([H] button).
[4 ▲▼]	MODE	The MODE control selects between two modes: FIRST and EACH. In the FIRST mode, attack (percussive sound) is applied only to the first notes played and held simultaneously; while the first notes are held, any subsequently played notes have no attack applied. In the EACH mode, attack is applied equally to all notes.
[5 ▲▼]– [7 ▲▼]	4', 2 2/3', 2'	These determine the attack sound volume of the ORGAN FLUTES Voice. The 4', 2-2/3' and 2' controls increase or reduce the volume of attack sound at the corresponding footages. The longer the graphic bar, the greater the attack sound volume.
[8 ▲▼]	LENG (Length)	Affects the attack portion of the sound producing a longer or shorter decay immediately after the initial attack. The longer the graphic bar, the longer the decay.

### ■ EFFECT/EQ Page

Same parameters as in the VOICE SET “EFFECT/EQ” Page explained on page 14.

## Creating Custom Voices (Voice Creator)

The powerful Voice Creator feature lets you create your own original Voices, Normal Voices (page 20) and Drum Voices (page 24) by using your favorite Wave files (audio samples in WAV or AIFF format).

In Drum Voice creating, you can also use the instruments (drum/percussion) sound assigned to each key of the Preset Drum Voices.

First, import Wave files from a USB storage device or hard disk drive to the optional flash memory expansion module. Second, assign the Wave to the Element (Normal Voice) or Key (Drum Voice). Finally, store the Voice as a Custom Voice.

If you want to create Drum Voices by using the instruments of Preset Drum Voices, you can skip the next section “Importing the Wave Data to the Optional Expansion Module” and proceed to “Creating Drum Voices (Custom Drum Voice)” on page 24.

### Importing the Wave Data to the Optional Expansion Module

#### 1 Install the expansion module to the Tyros4.

For information on installation, refer to the Appendix section in the Owner’s Manual.

#### 2 Prepare the Wave data you’ll be using for the new Voice.

Only WAV or AIFF format data can be used for the Voice Creator.

We recommend that you store the files to a single folder of a USB storage device or hard disk drive.

##### Notes for Available Wave Files

- This instrument cannot recognize the extension .aiff. When you use an AIFF file, change the extension to .aif.
- Only use uncompressed files.
- Wave data used for the Voice Creator can be of any sample rate or bit resolution. However, all Wave data of a resolution other than 16-bit is automatically converted to 16-bit resolution after being loaded.
- Only use Wave data having a frequency of 44100 Hz. Otherwise, the data may not play back at the correct pitch.
- Voice Creator supports and recognizes loops in the Wave data, letting you use up to one loop in each Wave file. (Some sample libraries have loops already programmed into the data; you can also use Wave (audio) editing software to program loops yourself. Keep in mind however, that multiple loops are not supported.)
- Audio files recorded with Multi Track recording of the Audio Recorder/Player function (.aud) cannot be used as is with the Voice Creator. If you want to use an .aud file, mix down the file in .wav data format. For information on the mixdown operation, refer to Chapter 7 in the Owner’s Manual.



### 3 Select the Wave file(s) on the USB or HD drive.

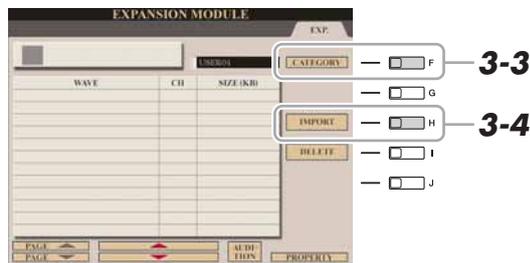
**3-1** Press the [VOICE CREATOR] button to call up the Voice Creator Menu.

**3-2** Press the [E] button to call up the Expansion Module display (page 19).

**3-3** Press the [F] button to call up the Category popup window (page 19), then select the desired Category as Import destination. The popup window disappears automatically after a while.

#### NOTE

If the expansion module is not installed properly, the [E] (EXPANSION MODULE) button is grayed out.

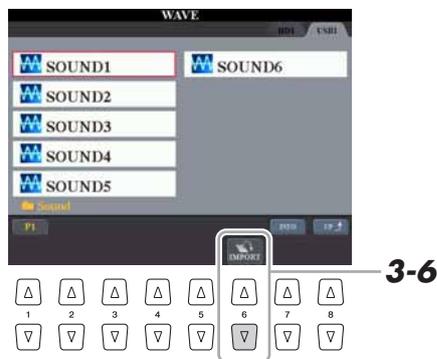


**3-4** Press the [H] (IMPORT) button to call up the Wave display.

**3-5** Press the TAB [◀][▶] buttons to select the location (USB or HD) then use the [A]–[J] buttons to select the folder in which the WAV/AIFF files are stored.

#### NOTE

You can call up the information for the selected file by pressing the [7 ▲] (INFO) button.



**3-6** Press the [6 ▼] (IMPORT) button to call up the popup window for the Import operation.

**3-7** Select the desired files by using the [A]–[J] buttons.

Press the same button again to cancel the selection.

Press the [6 ▼] (ALL) button to select all files of the current folder.

Press the [6 ▼] (ALL OFF) button to cancel the selection.

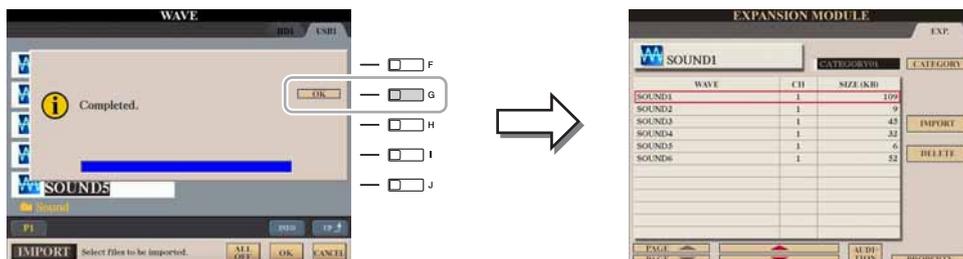
**3-8** Press the [7 ▼] (OK) button to confirm the selection.

### 4 Press the [F] (OK) button to actually start importing the selected Wave files.

As soon as the Import operation is finished, the “Completed” dialog appears.

### 5 Press the [G] (OK) button to return to the Expansion Module display.

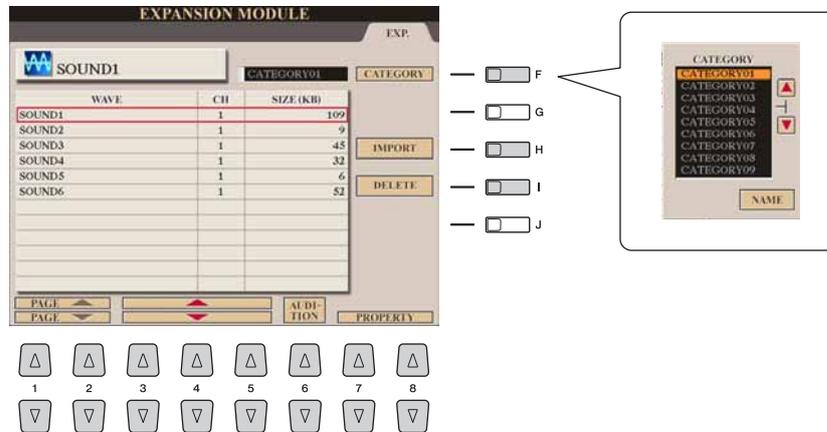
The Wave files imported from the USB or HD drive are shown.



## 6 Press the [EXIT] button several times to call up the Main display.

Now, you can start creating your own original Voices, Normal Voices (page 20) and Drum Voices (page 24) by using your own Waves.

### Expansion Module display

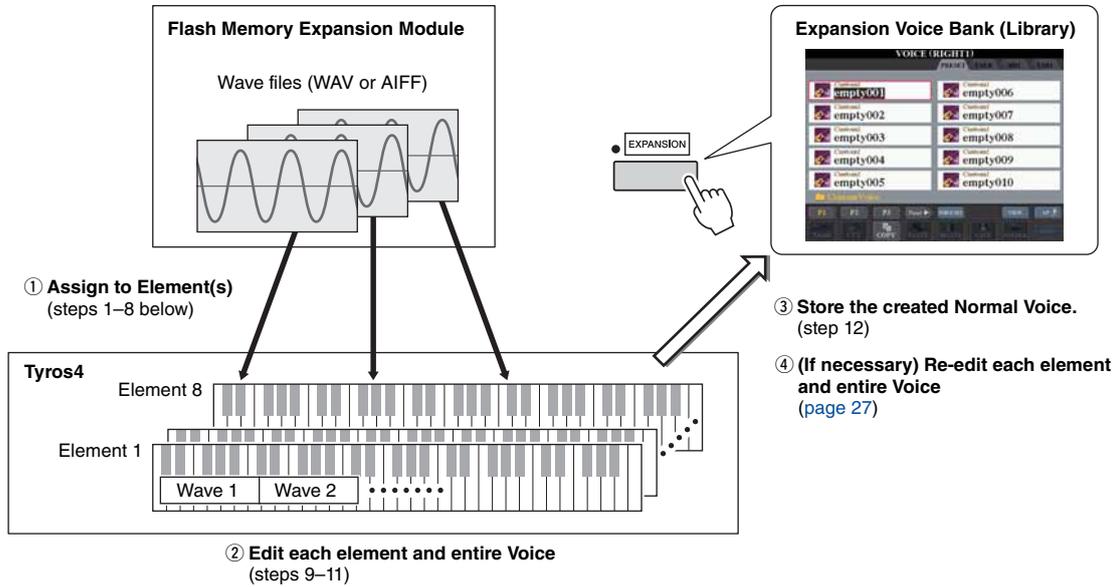


[F]	CATEGORY	<p>Calls up a popup window for categorizing the Wave files.</p> <p><b>[G]/[H]</b> Selects the desired category, CATEGORY01–20, NO CATEGORY or PREMIUM PACK.</p> <p><b>[J]</b> Changes the name of the selected category. Pressing this button calls up the display for entering characters.</p> <p><b>NOTE</b> You can also change the name after the Wave files are imported.</p>
[H]	IMPORT	Imports the Wave files from the USB or HD drive to the expansion module, as done in steps 3–4 (page 18). You can also import files after starting to assign files to the keys.
[I]	DELETE	<p>Calls up a popup window for the Delete operation.</p> <p><b>[5 ▲▼]</b> Selects the desired Wave files to be deleted.</p> <p><b>[6 ▲▼]</b> Confirms the selection. To cancel the selection, press the button again.</p> <p><b>[7 ▲▼]</b> Selects all files of the current category. To cancel the selection, press the button again.</p> <p><b>[8 ▲]</b> Executes the Delete operation.</p> <p><b>[8 ▼]</b> Cancels the Delete operation.</p>
[1 ▲▼]/ [2 ▲▼]	PAGE Up/Down	Selects the next or previous page in the list.
[3 ▲▼]– [5 ▲▼]	Up/Down	Selects the next or previous file.
[6 ▲▼]	AUDITION	Allows you to listen to the currently selected file.
[7 ▼]/ [8 ▼]	PROPERTY	Shows the Property display (page 29).

# Creating Normal Voices (Custom Voice)

By assigning Wave files, you can create your original Voices—not only create from scratch, but also add Waves to the existing Voices. A Voice consists of eight elements and you need to assign Wave files to each element (more than two Waves can be assigned to one element).

The resulting Voice is called a Custom Voice and can be selected and played in the same way as all other Tyros4 Voices.



## 1 Turn the PART SELECT [RIGHT 1] button to on, then select a Voice.

When you are creating a Custom Voice from scratch, select an “empty” Voice from the [EXPANSION] button. If you are creating a Voice by adding Wave files to an existing Voice, press the desired VOICE button and select the desired Voice.

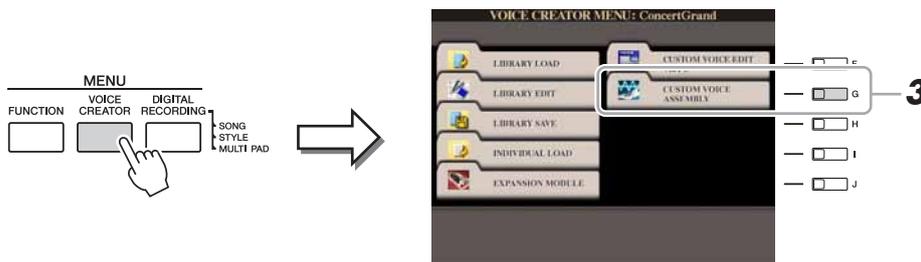
### NOTE

S.Articulation2!, S.Articulation!, Mega-Voice and Organ Flutes! Voices cannot be selected for creation of Custom Voices.

## 2 Press the [VOICE CREATOR] button to call up the Voice Creator Menu.

### NOTE

If you have selected the [PERC./SFX KIT] category, make sure NOT to select Drum Voice (“Drums/SFX/Live!Drums/Live!SFX” is displayed above the Voice name).



**NEXT PAGE**

**3** Press the [G] (CUSTOM VOICE ASSEMBLY) button to call up the Assembly display.

**4** Use the [A]–[D] and [F]–[I] buttons to select the desired Element to which Wave file(s) will be assigned.

The Key Mapping display of the selected Element will appear.

**NOTE**

You cannot assign Waves to preset Elements (instrument icon is shown).



**5** Assign the desired Wave to the selected Element.

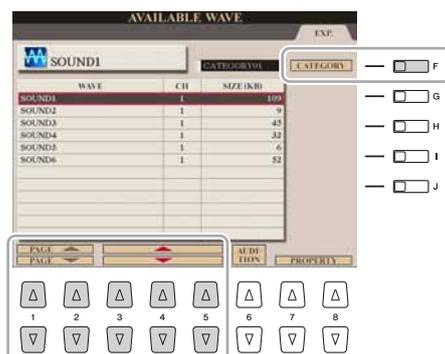
**5-1** Press the [F] button to call up the Add Wave display.

**5-2** Press the [F] button to call up the Select Wave display.

**5-3** Use the [F] button to select the category which contains the desired Wave file.

For information on category, refer to [page 19](#).

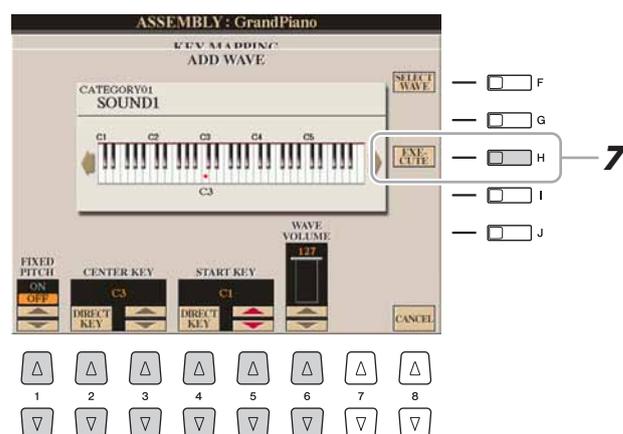
**5-4** Select the desired Wave file by using the [1 ▲▼]–[5 ▲▼] buttons, then press the [ENTER] button to confirm your selection.



**NEXT PAGE**

## 6 Set the parameters for the assigned Wave in the Add Wave display.

From this display, you can set a number of parameters related to how the sound will be mapped to the keyboard.



[1 ▲▼]	FIXED PITCH	When this is set to ON, all keys will play the Wave sound at the same pitch. When set to OFF, the pitch of the Wave sound changes according to the key played, based around the original pitch (set at Center Key below).
[2 ▲▼]/ [3 ▲▼]	CENTER KEY	This determines the key to which the original pitch of the sound is assigned. When Fixed Pitch (above) is set to OFF, keys below the Center Key play the sound progressively lower in pitch, while keys above play the sound progressively higher. Normally, you'll want to make sure that this is the same as the original sound; for example, if the original pitch of the audio was at C3, set Center Key to C3 for best results. When Fixed Pitch (above) is set to ON, this has no effect. You can specify this setting directly from the keyboard by simultaneously holding down the [2 ▲▼] (DIRECT KEY) button and pressing the desired key on the keyboard.
[4 ▲▼]/ [5 ▲▼]	START KEY	This determines the lowest key at which the Wave will sound. Use this with End Key (see step 9 on page 23) to set the key range for the Wave. You can specify this setting directly from the keyboard by simultaneously holding down the [4 ▲▼] (DIRECT KEY) button and pressing the desired key on the keyboard.
[6 ▲▼]	WAVE VOLUME	This determines the playback volume for the specific Wave. Normally, this should be set to the maximum (127); however, you can use it to adjust the level balance among multiple sounds in the Element.

## 7 Press the [H] (EXECUTE) button to actually assign the Wave.

Completion of the Assign operation will return to the Key Mapping display.

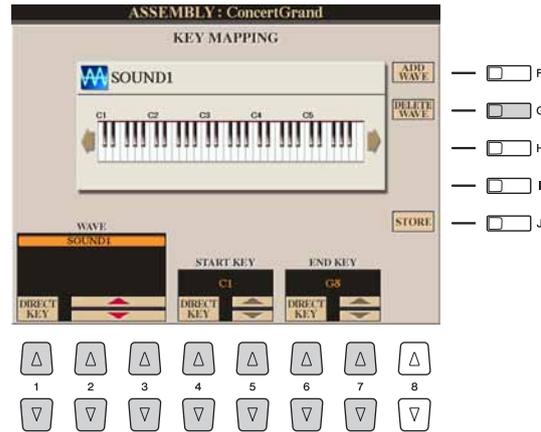
## 8 If you want to assign another Wave to this Element, repeat steps 5–7.

### NOTE

If you want to store the Voice at this point, press the [J] (STORE) button. The Custom Voice display will appear. Refer to step 12 on page 23 about the Custom Voice display. Each time you make some change (e.g., add a Wave to the Element or add an Element to the Voice), you should store the Voice.

NEXT PAGE

**9 Set the parameters for the currently selected Element in the Key Mapping display.**



[G]	DELETE WAVE	Deletes the Wave selected with the [1 ▲▼]–[3 ▲▼] (WAVE) buttons below.
[1 ▲▼]– [3 ▲▼]	WAVE	When more than one Wave has been assigned, select the desired one for editing. To select the Wave which is assigned to the key, simultaneously hold down the [1 ▲▼] (DIRECT KEY) button and press the appropriate key on the keyboard.
[4 ▲▼]/ [5 ▲▼]	START KEY	This determines the lowest key at which the Wave will sound. Use this with End Key (below) to set the key range for the Wave. You can specify this setting directly from the keyboard by simultaneously holding down the [4 ▲▼] (DIRECT KEY) button and pressing the desired key on the keyboard.
[6 ▲▼]/ [7 ▲▼]	END KEY	This determines the highest key at which the Wave will sound. Use this with Start Key (above) to set the key range for the Wave. You can specify this setting directly from the keyboard by simultaneously holding down the [6 ▲▼] (DIRECT KEY) button and pressing the desired key on the keyboard.

**10 Press the [EXIT] button to return to the Assembly display.**

If you want to edit another Element, repeat steps 4–9.

**11 Press the [8 ▲▼] (VOICE SET) button and edit the Voice Set parameters (page 12).**

After you finish editing the Voice Set parameters, press the [EXIT] button to show the Assembly display again.

**12 Store the created Normal Voice.**

Press the [J] (STORE) button to call up the Custom Voice display, then press the [6 ▼] (STORE) button to store the Voice.

**13 Press the [EXIT] button.**

If you want, you can continue adding Waves. Repeat steps 4–12.

(If necessary) You can re-edit the element and the entire Voice. For details, refer to the section “Re-Editing a Custom Voice” (page 27).

**NOTICE**

The created Voice will be lost if you change to another Voice or you turn the power off without executing the Store operation. Make sure to execute the Store operation.

**NOTE**

Do not use any special characters (umlaut, accent, etc.) in the Voice name.

# Creating Drum Voices (Custom Drum Voice)

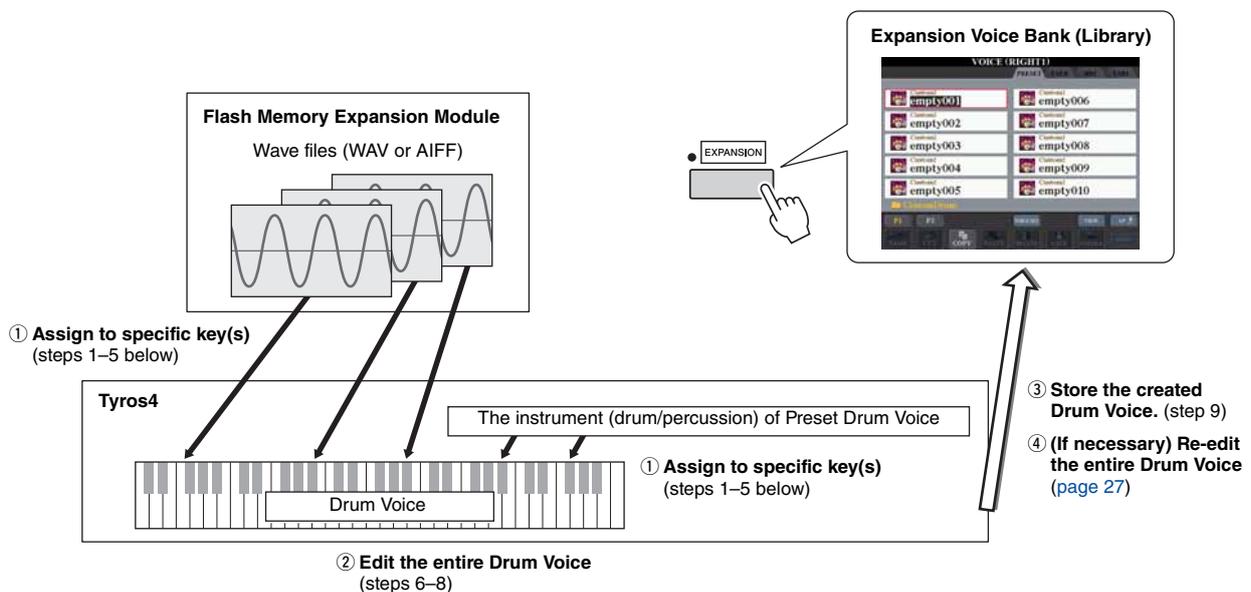
By assigning the instruments (drum/percussion) of Preset Drum Voices and Wave files to each key, you can create your original Drum Voices—not only by creating the Voice from scratch, but also by adding/replacing the instruments within existing Drum Voices with other instruments of Preset Drum Voice and your own Wave files, and by editing selected parameters of each key. The resulting Voice is called a Custom Drum Voice and can be selected and played in the same way as all other Tyros4 Voices.

## Drum Voice (Custom Drum Voice)

Creating from	Scratch	←	Add instrument from Preset Drum Voice
		←	Add your own Waves from Flash Memory Expansion Module
	Existing Voice	←	Replace with instrument from Preset Drum Voice
		←	Replace with your own Waves from Flash Memory Expansion Module

**NOTE**

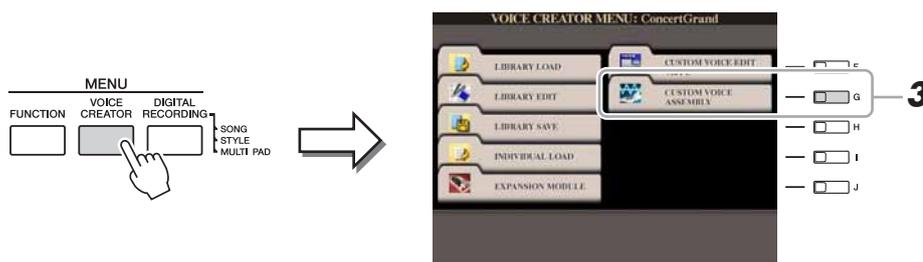
To create your original Drum Voices from Kit Edit of the Mixing Console function (Owner's Manual, Chapter 9), proceed to step 3.



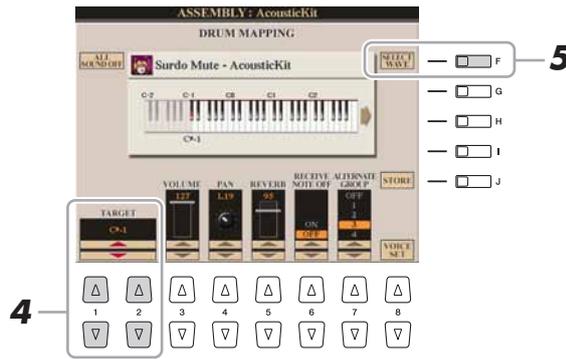
### 1 Turn the PART SELECT [RIGHT 1] button to on, then select a Drum Voice.

When you are creating a Custom Drum from scratch, select an “empty” drum Voice by pressing the [EXPANSION] button, then pressing the [8 ▲] (UP) button and selecting the “CustomDrum” category. If you are creating a Drum Voice by adding Wave files to an existing Drum Voice, press the [PERC./DRUM KIT] button and select the desired drum Voice.

### 2 Press the [VOICE CREATOR] button to call up the Voice Creator Menu.



**3** Press the [G] (CUSTOM VOICE ASSEMBLY) button to call up the Drum Mapping display.



**4** Specify the key to be edited.

Press the desired key on the keyboard or use the [1 ▲▼]/[2 ▲▼] (TARGET) buttons.

**5** Select the desired instrument (drum/percussion) of Preset Drum Voice or Wave to be assigned by following the procedure below.

**5-1** Press the [F] (SELECT WAVE) button.

**5-2** Use the TAB [◀|▶] buttons to select the desired tab page: PRESET or EXP.

- **PRESET:** contains the instrument of Preset Drum Voice
- **EXP.:** contains the Wave files in the expansion module

**5-3** If you selected Preset tab on step 5-2, use the [F] and [G] buttons to select the category which contains the desired instrument.

**5-4** Select the desired audio (instrument/Wave) files by using the [1 ▲▼]–[5 ▲▼] buttons, then press the [ENTER] button to confirm your selection.



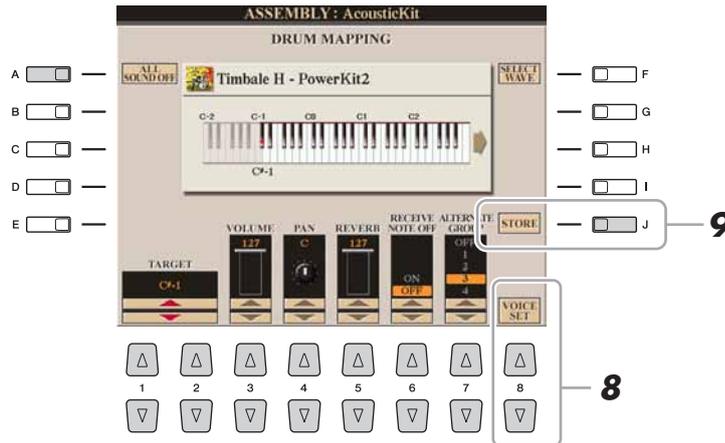
**PRESET**

[F]	CATEGORY	Calls up a popup window, allowing you to select the desired instrument (drum/percussion) category, if INST. is selected in KIT ⇔ INST. below, or the Drum Kit Voice, if KIT is selected. While the popup window appears, use the [G]/[H] buttons to make the selection.
[G]	KIT ⇔ INST.	<b>KIT:</b> Sorts the sounds according to the containing Drum Kit Voice. <b>INST.:</b> Sorts the sounds according to the instrument (drum/percussion) type.
[J]	EMPTY	Disables the selection.
[1 ▲▼]/ [2 ▲▼]	PAGE Up/Down	See <a href="#">page 19</a> .
[3 ▲▼]– [5 ▲▼]	Up/Down	
[6 ▲▼]	AUDITION	

**EXP.**

[F]	CATEGORY	See <a href="#">page 19</a> .
[J]	EMPTY	Disables the selection.
[1 ▲▼]/ [2 ▲▼]	PAGE Up/Down	See <a href="#">page 19</a> .
[3 ▲▼]- [5 ▲▼]	Up/Down	
[6 ▲▼]	AUDITION	

**6 Set the parameters for the selected key in the Drum Mapping display.**



[A]	ALL SOUND OFF	Stops all sounds.
[C]	VIEW NOTE	When this button is held down, the notes which are currently performed by the Style function are shown.  <b>NOTE</b> This button appears only when using Kit Edit of the Mixing Console function.
[1 ▲▼]/ [2 ▲▼]	TARGET	Selects a key to be edited.
[3 ▲▼]	VOLUME	Adjusts the volume.
[4 ▲▼]	PAN	Sets the stereo pan position: 0 (Random), 1 (Left)–64 (Center)–127 (Right).  <b>NOTE</b> When the [DSP] button is on, a setting of "0" here results in no panning.
[5 ▲▼]	REVERB	Adjusts the applied reverb effect.
[6 ▲▼]	RECEIVE NOTE OFF	Determines whether the key receives Note Off events or not. When this parameter is set to ON, Note Off events will be received. When this is set to OFF, Note Off events will not be received.
[7 ▲▼]	ALTERNATE GROUP	Assigns the key (TARGET) to a specific group. This lets you separate certain sounds, such as open and closed hi-hat sounds, so that one will cancel the other.

**7** Repeat steps 4–6 to edit each key.

**8** Press the [8 ▲▼] (VOICE SET) button and edit the Voice Set parameters ([page 12](#)).

After you finish editing the Voice Set parameters, press the [EXIT] button to show the Drum Mapping display again.

**9** Store the created Drum Voice.

Press the [J] (STORE) button to call up the Custom Voice display, then press the [6 ▼] (STORE) button to store the Voice.

**10** Press the [EXIT] button.

If you want, you can continue adding waves. Repeat steps 3–8.

(If necessary) You can re-edit the entire Voice. For details, refer to the section “Re-Editing a Custom Voice” below.

 **NOTE**

When you start creating a Drum Voice from Kit Edit of the Mixing Console function, the Voice Set button is not shown.

**NOTICE**

**The created Voice will be lost if you change to another Voice or you turn the power off without executing the Store operation. Make sure to execute the Store operation.**

 **NOTE**

Do not use any special characters (umlaut, accent, etc.) in the Voice name.

## Re-Editing a Custom Voice

**1** Turn the PART SELECT [RIGHT 1] button to on, then press the [EXPANSION] button.

**2** Use the [A]–[J] buttons to select a Custom Voice to be re-edited.

When you are selecting a Custom Drum Voice, press the [8 ▲] (UP) button and select the “CustomDrum” category.

**3** Press the [VOICE CREATOR] button to call up the Voice Creator Menu.

**4** Press the [G] (CUSTOM VOICE ASSEMBLY) button to call up the operation display.

The subsequent steps are the same as for creating the Custom Voice (Normal Voice: [page 20](#), Drum Voice: [page 24](#)).

## Editing an Expansion Voice Bank—Library Edit

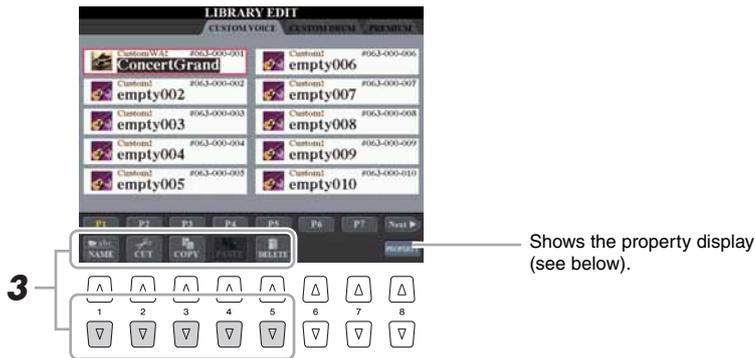
This function lets you organize the Voices in the Expansion Voice bank, renaming them, changing their location within in the bank, or even deleting them if desired.

### 1 Call up the operation display.

[VOICE CREATOR] → [B] LIBRARY EDIT

### 2 Use the TAB [◀][▶] buttons to select the desired tab page: Custom Voice, Custom Drum or Premium.

### 3 Select the desired Voice in the display and use the [1 ▼]–[5 ▼] buttons to edit the selected Voice.



#### NOTE

The Premium page is reserved for Voices obtained from the Internet website. The Voices in the Premium page cannot be edited but only deleted.

#### NOTE

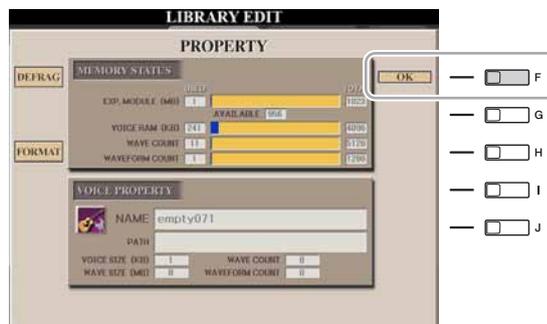
When you reorganize Voices in this display, you are simply organizing the paths of the Voices, not copying or moving the Voices themselves.

### 4 When you've finished editing, press the [EXIT] button.

NEXT PAGE

## Property display

When the available memory space has been taken up with large amounts of audio data, you may want to delete large Custom Voices to create space, yet not know which Voices are large and taking up much space. In the Property display, you can check the Memory Status, as well as the Voice/Wave Property of the currently selected Expansion Voice/Wave file.



### ● Memory Status

- **EXP. MODULE:** Memory size of the optionally installed flash memory expansion module. By optimizing the expansion module, you may be able to increase the memory capacity (depending on how fragmented the Wave files are). Press the [A] (DEFrag) button to optimize the expansion module. By formatting the expansion module, you can have all the space available. Press the [C] (FORMat) button to format the expansion module.

#### NOTICE

The format operation deletes any previously existing data. Make sure that the module you are formatting does not contain important data.

#### NOTE

If the expansion module is not installed the Defrag and Format buttons does not appear.

- **VOICE RAM:** Size of the internal memory for the Expansion Voices. This memory cannot be expanded. A maximum of 6,144 KB is available.
- **WAVE COUNT:** Total number of the wave files. A maximum of 8,192 mono files or 4,096 stereo files is available.
- **WAVEFORM COUNT:** Total number of Waveforms. The term Waveform refers to a set of wave assignment information. A maximum of 1,280 waveforms is available.

### ● Voice Property

- **NAME:** The name of the focused Custom Voice
- **PATH:** The path of the focused Custom Voice
- **VOICE SIZE (KB):** The size of the focused Custom Voice
- **WAVE SIZE (MB):** The Wave size of the focused Custom Voice
- **WAVE COUNT:** The number of Waves used in the focused Custom Voice
- **WAVEFORM COUNT:** The number of Waveforms in the focused Wave

### ● Wave Property

- **NAME:** The name of the focused Wave  
Pressing the [I] (NAME) button calls up the display for entering characters.
- **CATEGORY:** The category name which the focused Wave belongs to.  
By pressing the [J] (CATEGORY) button then the [ENTER] button, you can change the category.
- **USING:** If the focused Wave is used to the Custom Voice, “USE” is shown. If not, nothing is shown.
- **WAVE SIZE (MB):** The size of the focused Wave
- **WAVE COUNT:** For the focused Wave, the number of Waves which uses the expansion module memory space.
- **FREQUENCY (kHz):** The sampling frequency of the focused Wave
- **CHANNEL:** The number of channels of the focused Wave, MONO or STEREO
- **TIME:** The playback time of the focused Wave

To close the Property display, press the [F] (OK) button.

## Saving your Custom Voices to a Library—Library Save

Once you've created some Custom Voices (including Custom Drum Voices), you'll want to keep them together in a Library file. Library Save lets you create a Library file for storing your Custom Voices and keeping them organized for future use.

### 1 Call up the operation display.

[VOICE CREATOR] → [C] LIBRARY SAVE

### 2 Use the TAB [◀][▶] buttons to select the desired tab page: CUSTOM VOICE or CUSTOM DRUM.

### 3 By using the [A]–[J] buttons and [1 ▲]–[8 ▲] buttons, select the desired Voices.

You can continue to select additional Voices here, as many as desired—even a mixture of Normal and Drum Voices. To select all Voices in all tab pages, press the [6 ▼] (ALL) button.

### 4 Press the [7 ▼] (OK) button.

### 5 By using the TAB [◀][▶] buttons, select the destination for saving the data.

If necessary, create a folder by pressing the [7 ▼] (FOLDER) button.

### 6 Press the [6 ▼] (SAVE) button.

### 7 Enter the desired name for the Library file and press the [8 ▲] (OK) button.

A message appears prompting you to select the method for saving.

### 8 Press the [G] (OK) button to save the Library file.

To cancel, press the [H] (CANCEL) button.

#### NOTE

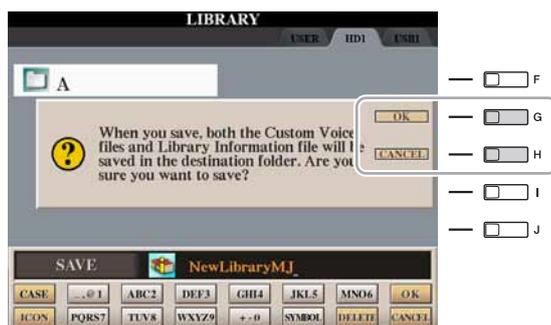
The Library file contains the path of the Custom Voices. Therefore, if you move or delete the Voices after creating the Library file, the Voices cannot be recalled from the Library file.

#### NOTE

Even though the User drive can be selected here, there is not enough memory space in the drive for storing Voice Creator data. Make sure to use one of the other destinations.

#### NOTE

You can check the available memory space of the selected storage location/device by pressing the [8 ▼] (PROPERTY) button here.



# Loading a single Additional Voice to the Tyros4—Individual Load

This operation allows you to load a single additional Voice (including from Custom Voices, Custom Drum Voices and downloaded Premium Voices) to the Expansion Voice bank in the instrument for playing or editing.

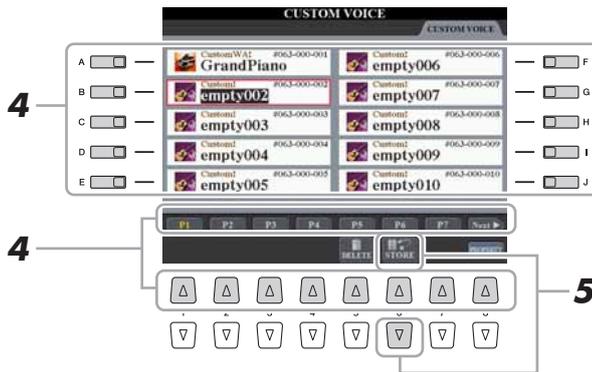
## 1 Call up the operation display.

[VOICE CREATOR] → [D] INDIVIDUAL LOAD

## 2 Use the TAB [◀][▶] buttons to select the location or device containing the desired Voice.

## 3 Select the desired Voice in the display.

If you select a Custom Voice/Custom Drum Voice, the Expansion Voice bank appears.



If you select a Voice which has been downloaded from the website, loading will automatically start and steps 4–7 are omitted.

## 4 By using the [A]–[J] buttons and [1 ▲]–[8 ▲] buttons, select the destination for the Voice.

## 5 Press the [6 ▼] (STORE) button.

## 6 If desired, enter a name for the Voice.

If a Voice with the same name already exists in the bank, you'll need to enter a new name for the Voice.

## 7 Press the [8 ▲] (OK) button to start loading.

To cancel, press the [8 ▼] (CANCEL) button.

After the loading is finished, you can select the Voice from the [EXPANSION] button.

### NOTE

File loading may take as little as a couple of seconds or as long as a few minutes, depending on how much data is contained in the Voice.

## Loading a Library (Expansion Voice Bank) to the Tyros4—Library Load

This operation lets you recall the Custom Voices you’ve saved to a Library file (in Library Save on [page 30](#)), and load them to the Tyros4.

### 1 Call up the operation display.

[VOICE CREATOR] → [A] LIBRARY LOAD

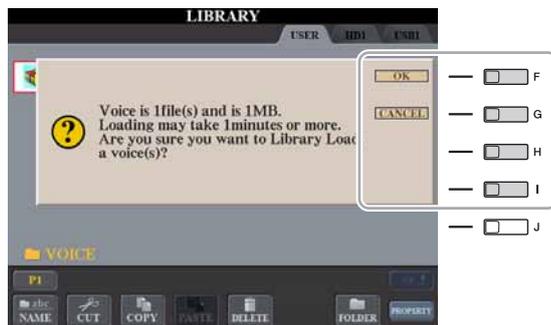
### 2 Use the TAB [◀][▶] buttons to select the location or device containing the desired Library file.

### 3 By using the [A]–[J] buttons, select the desired Library file.

If the instrument does not contain Library files, the selected file is automatically loaded. If the instrument contains Library files, a message appears prompting you to overwrite existing Voices.

#### NOTE

File loading may take several minutes, depending on how many Voices are in the Library and how much data they contain. Do not turn off the power or disconnect any devices during this operation.



YES	The current Custom Voice displayed in the prompt is replaced with the one in the Library file.
YES ALL	Current Custom Voices are replaced with all of the Voices in the Library file. You can use this after replacing some selected Voices one by one by using “YES” and replace all the rest.
NO	The displayed Voice in the prompt will not be replaced.
CANCEL	Cancels loading the Library file.

After the loading is finished, you can select the newly loaded Voices from the [EXPANSION] button.

## Editing a Custom Voice on your computer—Voice Editor

Once you've created a Custom Voice (including Custom Drum Voice) with the Voice Creator features, you can transfer that Voice to a computer and use the comprehensive Voice Editor software (included on the CD-ROM) to edit all the parameters from your computer. The Voices you create can be saved to the PRESET tab page on the Tyros4 as Custom Voices, and can be called up any time by pressing the [EXPANSION] button. After installing the software, edit Voices by following the steps below.

- 1 Make sure the Tyros4 is properly connected to the computer with a USB cable.**
- 2 Turn the computer's power on, then turn the Tyros4's power on.**
- 3 Start Voice Editor on the computer.**

The Custom Voice Edit Mode display is shown in the instrument. The Voice Editor can only be used when this display is shown.



If this display does not appear, call up this display by selecting [VOICE CREATOR] → [F] CUSTOM VOICE EDIT via PC.

- 4 Edit the Voice parameters on the computer to create your original Voice.**

For details, refer to the Owner's Manual of the Voice Editor on the included CD-ROM.
- 5 When you've finished editing, select the "Store" from the Edit menu to store the edited Voice on the Tyros4.**
- 6 Exit the Voice Editor.**
- 7 Select the edited Voice from the [EXPANSION] button and play it.**

### Contents

Selecting the Chord Fingering Type .....	34
Style Playback Related Settings .....	36
Split Point Settings.....	38
Memorizing the Original One Touch Setting .....	39
Creating/Editing Styles (Style Creator) .....	40
• Realtime Recording .....	41
• Step Recording .....	44
• Style Assembly.....	44
• Editing the Rhythmic Feel.....	46
• Editing Data for Each Channel.....	48
• Making Style File Format Settings.....	49

## Selecting the Chord Fingering Type

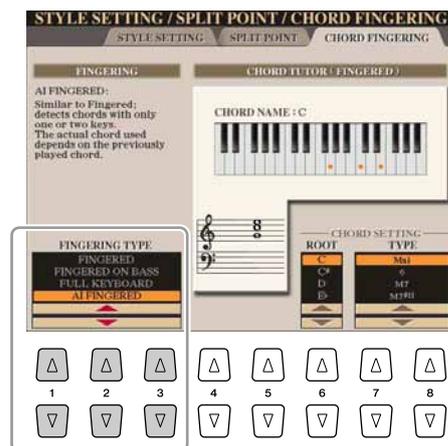
Style playback can be controlled by the chords you play in the chord section of the keyboard. There are seven types of fingering.

### 1 Call up the operation display.

[FUNCTION] → [C] STYLE SETTING/SPLIT POINT/CHORD FINGERING →  
TAB [◀|▶] CHORD FINGERING

### 2 Press the [1 ▲▼]–[3 ▲▼] buttons to select a fingering.

For information on each fingering type, see [page 35](#).



#### Chord Tutor

If you know the name of a chord but don't know how to play, you can have the instrument show you the notes to play. This is the Chord Tutor function.

On the CHORD FINGERING display, specify the Chord Root and Chord Type by using the [6 ▲▼]–[8 ▲▼] button. The notes you need to play are shown in the display.

#### NOTE

Depending on the chord, some notes may be omitted.

## Chord Fingering Types

SINGLE FINGER	<p>Makes it simple to produce orchestrated accompaniment using major, seventh, minor and minor-seventh chords by pressing a minimum number of keys on the Chord section of the keyboard. This type is available only for Style playback.</p> <p>The abbreviated chord fingerings described below are used:</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p><b>C</b></p> </div> <div style="text-align: center;">  <p><b>C7</b></p> </div> </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;">  <p><b>Cm</b></p> </div> <div style="text-align: center;">  <p><b>Cm7</b></p> </div> </div> <p><b>For a major chord</b>, press the root key only.</p> <p><b>For a seventh chord</b>, simultaneously press the root key and a white key to its left.</p> <p><b>For a minor chord</b>, simultaneously press the root key and a black key to its left.</p> <p><b>For a minor-seventh chord</b>, simultaneously press the root key and both a white and black key to its left.</p>
MULTI FINGER	Automatically detects Single Finger or Fingered chord fingerings, so you can use either type of fingering without having to switch fingerings types.
FINGERED	Lets you finger your own chords on the chord section of the keyboard, while the instrument supplies appropriately orchestrated rhythm, bass, and chord accompaniment in the selected Style. The Fingered type recognizes the various chord types which are listed on the Data List available at the Yamaha website and can be looked up using the Chord Tutor function on <a href="#">page 34</a> .
FINGERED ON BASS	Accepts the same fingerings as Fingered, but the lowest note played in the Chord section of the keyboard is used as the bass note, allowing you to play “on bass” chords. (In the Fingered mode, the root of the chord is always used as the bass note.)
FULL KEYBOARD	Detects chords in the entire key range. Chords are detected in a way similar to Fingered, even if you split the notes between your left and right hands—for example, playing a bass note with your left hand and a chord with your right, or by playing a chord with your left hand and a melody note with your right.
AI FINGERED	<p>Basically the same as Fingered, with the exception that less than three notes can be played to indicate the chords (based on the previously played chord, etc.).</p> <p> <b>NOTE</b></p> <p>“AI” stands for “Artificial Intelligence.”</p>
AI FULL KEYBOARD	<p>When this advanced fingering type is engaged, the instrument will automatically create appropriate accompaniment while you play just about anything, anywhere on the keyboard using both hands. You don’t have to worry about specifying the Style chords. Although the AI Full Keyboard type is designed to work with many songs, some arrangements may not be suitable for use with this feature. This type is similar to Full Keyboard, with the exception that less than three notes can be played to indicate the chords (based on the previously played style chord, etc.). 9th, 11th and 13th chords cannot be played. This type is available only for Style playback.</p> <p> <b>NOTE</b></p> <p>“AI” stands for “Artificial Intelligence.”</p>

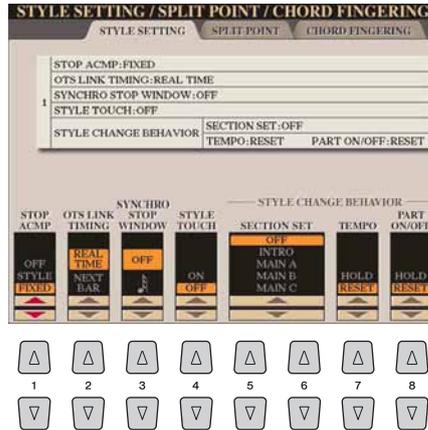
# Style Playback Related Settings

The Tyros4 has a variety of Style playback functions which can be accessed in the display below.

## 1 Call up the operation display.

[FUNCTION] → [C] STYLE SETTING/SPLIT POINT/CHORD FINGERING →  
TAB [◀][▶] STYLE SETTING

## 2 Use the [1 ▲▼]–[8 ▲▼] buttons for each setting.

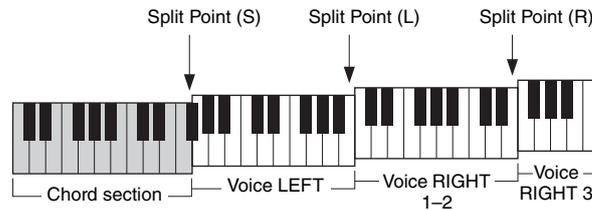


[1 ▲▼]	STOP ACMP	<p>When [ACMP] is turned on and [SYNC START] is off, you can play chords in the chord section of the keyboard with the Style stopped, and still hear the accompaniment chord. In this condition—called “Stop Accompaniment”—any valid chord fingerings are recognized and the chord root/type are shown in the display. Here, you can determine whether the chord played in the chord section will sound or not in the Stop Accompaniment status.</p> <p><b>OFF:</b> The chord played in the chord section will not sound.  <b>STYLE:</b> The chord played in the chord section will sound via the Voices for the Pad part and the Bass channel of the selected Style.  <b>FIXED:</b> The chord played in the chord section will sound via the specified Voice, regardless of the selected Style.</p> <p><b>NOTE</b>  When the selected Style contains MegaVoices, unexpected sounds may result when this is set to “STYLE.”</p> <p><b>NOTE</b>  When you record a song, the chord detected by playing the Stop Accompaniment can be recorded regardless of the setting here. Please note that both the Voice that is sounded and the chord data will be recorded when set to “STYLE,” and only the chord data will be recorded when set to “OFF” or “FIXED.”</p>
[2 ▲▼]	OTS LINK TIMING	<p>This applies to the OTS Link function. This parameter determines the timing in which the One Touch Settings change with the MAIN VARIATION [A]–[D] change. (The [OTS LINK] button must be on.)</p> <p><b>Real Time:</b> One Touch Setting is immediately called up when you press a MAIN VARIATION button.  <b>Next Bar:</b> One Touch Setting is called up at the next measure, after you press a MAIN VARIATION button.</p>
[3 ▲▼]	SYNCHRO STOP WINDOW	<p>This determines how long you can hold a chord before the Synchro Stop function is automatically cancelled. When the [SYNC STOP] button is turned on and this is set to a value other than “OFF,” this automatically cancels the Synchro Stop function if you hold a chord for longer than the time set here. This conveniently resets Style playback control to normal, letting you release the keys and still have the Style play. In other words, if you release the keys sooner than the time set here, the Synchro Stop function works.</p>

[4 ▲▼]	STYLE TOUCH	Turns touch response for the Style playback on/off. When this is set to “ON,” the Style volume changes in response to your playing strength in the chord section of the keyboard.
[5 ▲▼]/ [6 ▲▼]	SECTION SET	Determines the default section that is automatically called up when selecting different Styles (when Style playback is stopped). When set to “OFF” and Style playback is stopped, the active section is maintained even if the different Style is selected. When any of the MAIN A–D sections is not included in the Style data, the nearest section is automatically selected. For example, when MAIN D is not contained in the selected Style, MAIN C will be called up.
[7 ▲▼]	TEMPO	This determines whether the tempo changes or not when you change Styles during Style playback.  <b>HOLD:</b> The tempo setting of the previous Style is maintained. <b>RESET:</b> The tempo changes to that of the initial default tempo for the selected Style.
[8 ▲▼]	PART ON/OFF	This determines whether the Style Channel On/Off status changes or not when you change Styles.  <b>HOLD:</b> The Style Channel On/Off status of the previous Style is maintained. <b>RESET:</b> All Style Channels are set to On.

# Split Point Settings

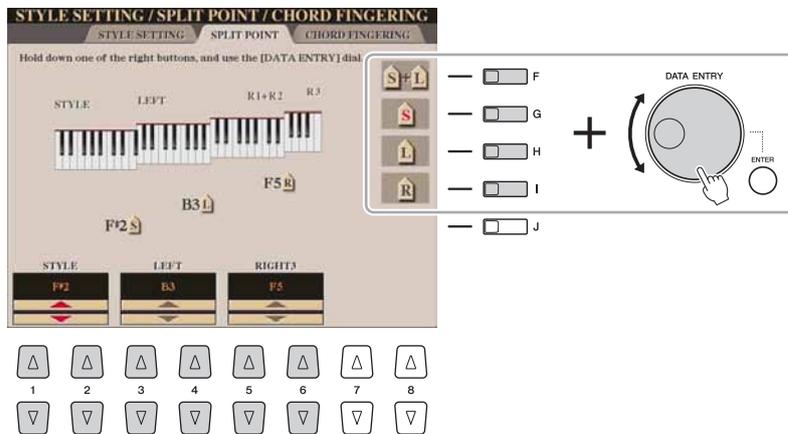
These are the settings (there are three Split Points) that separate the different sections of the keyboard: the Chord section, the LEFT part section, the RIGHT 1–2 section and RIGHT 3 section. The three Split Point settings (below) are specified as note names.

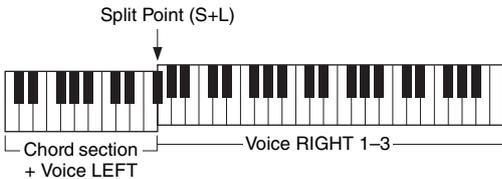


## 1 Call up the operation display.

[FUNCTION] → [C] STYLE SETTING/SPLIT POINT/CHORD FINGERING → TAB [◀][▶] SPLIT POINT

## 2 Set the Split Point.

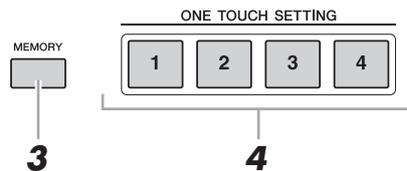


[F]	Split Point (S+L)	Sets the Split Point (S) and Split Point (L) to the same note. Press the [F] button and rotate the [DATA ENTRY] dial. You can also specify the Split Point directly from the keyboard by pressing the [DATA ENTRY] dial key on the keyboard while holding the [F] button. 
[G]	Split Point (S)	Sets each Split Point. Press one of the desired buttons and rotate the [DATA ENTRY] dial. You can also specify the Split Point directly from the keyboard by pressing the desired key on the keyboard while holding one of the [G]–[I] buttons. <b>NOTE</b> Split Point (L) cannot be set lower than Split Point (S), and Split Point (R) cannot be set lower than Split Point (L).
[H]	Split Point (L)	
[I]	Split Point (R)	
[1 ▲▼]/ [2 ▲▼]	STYLE	You can specify each Split Point by note name. “STYLE” indicates Split Point (S), “LEFT” indicates Split Point (L) and “RIGHT3” indicates Split Point (R).
[3 ▲▼]/ [4 ▲▼]	LEFT	
[5 ▲▼]/ [6 ▲▼]	RIGHT3	

## Memorizing the Original One Touch Setting

You can create your own One Touch Setting setups.

- 1** Select the desired Style to memorize your One Touch Setting.
- 2** Set up the panel controls (such as Voice, effects, and so on) as desired.
- 3** Press the [MEMORY] button.



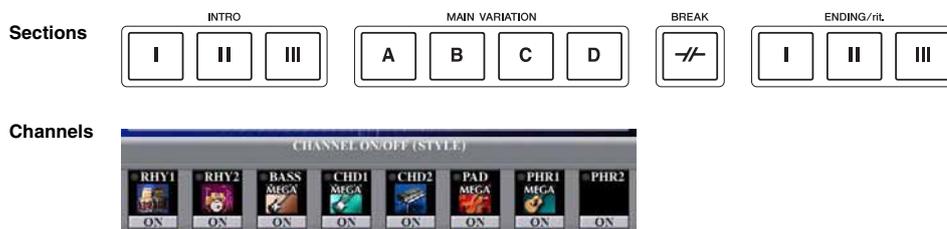
- 4** Press one of the ONE TOUCH SETTING [1]–[4] buttons.  
A message appears in the display prompting you to save the panel settings.
- 5** Press [F] (YES) button to call up the Style Selection display and save the panel settings as a Style file.

### **NOTICE**

The panel settings memorized to each OTS button will be lost if you change the Style or turn the power off without executing the Save operation.

## Creating/Editing Styles (Style Creator)

Styles are made up of the different sections (Intro, Main, Ending, etc.) and each section has eight separate channels. With the Style Creator feature, you can create a Style by separately recording the channels, or by importing pattern data from other existing Styles.

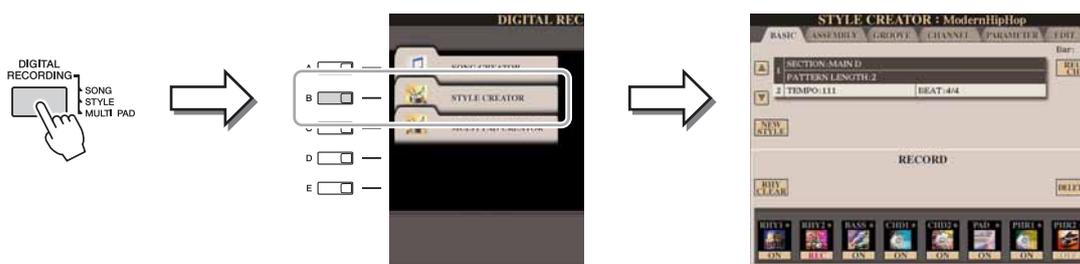


You can use one of the three different methods described below to create a Style. The created Style can also be edited.

- **Realtime Recording:** This method lets you record the Style by simply playing the keyboard. See [page 41](#).
- **Step Recording:** This method lets you enter each note individually. See [page 44](#).
- **Style Assembly:** This method lets you create a composite Style by combining various patterns from the internal preset Styles or Styles you have already created. See [page 44](#).

### Call up the operation display.

[DIGITAL RECORDING] → [B] STYLE CREATOR



There are six Pages (tabs) in the Style Creator display.

- **BASIC**..... Creates the basic settings of the Style. You can also record your performance in realtime to create a new Style (Realtime Recording). See [page 41](#).
- **ASSEMBLY** ..... Mixes the various parts (channels) from preset Styles or already created Style to create a new Style (Style Assembly). See [page 44](#).
- **GROOVE** ..... Changes the rhythmic feel of your created Style. See [page 46](#).
- **CHANNEL** ..... Edits data for each channel—quantizing, changing velocity, etc. See [page 48](#).
- **PARAMETER** ..... Changes the settings related for Style File Format. See [page 49](#).
- **EDIT** ..... Lets you enter notes one by one to create your Style (Step Recording). See [page 44](#).

### NOTE

The Style files created on the Tyros4 can only be played back on instruments which are compatible with SFF GE.

# Realtime Recording

In the BASIC Page, you can create a single Style by recording the individual channels one-by-one, using realtime recording.

## Realtime Recording Characteristics—Loop Recording and Overdub Recording

### ● Loop Recording

Style playback repeats the rhythm patterns of several measures in a “loop,” and Style recording is also done using loops. For example, if you start recording with a two-measure MAIN section, the two measures are repeatedly recorded. Notes that you record will play back from the next repetition (loop), letting you record while hearing previously recorded material.

### ● Overdub Recording

This method records new material to a channel already containing recorded data, without deleting the original data. In Style recording, the recorded data is not deleted, except when using functions such as Rhythm Clear (page 43) and Delete (page 42). For example, if you start recording with a two-measure MAIN section, the two measures are repeated many times. Notes that you record will play back from the next repetition, letting you overdub new material to the loop while hearing previously recorded material.

When creating a Style based on an existing internal Style, overdub recording is applied only to the rhythm channels. For all other channels (except rhythm), you need to delete the original data before recording.

**1** When you want to create a Style based on an existing Style, select the desired Style to serve as the basis for recording/editing before call up the Style Creator display.

**2** Call up the operation display.

[DIGITAL RECORDING] → [B] STYLE CREATOR

The BASIC Page is shown.

**3** If you want to create a new Style from scratch, press the [C] (NEW STYLE) button to delete all channel’s data.

**4** Use the [B] button to select the TEMPO/BEAT menu, then edit the data by using the [3 ▲▼]–[6 ▲▼] buttons.

**5** Use the [A] button to select the SECTION/PATTERN menu, then select the desired section (Intro, Main, Ending, etc.) for your new Style.

First close the RECORD display by pressing the [EXIT] button. Then use the [3 ▲▼]/[4 ▲▼] buttons to select the section to be recorded.

#### NOTE

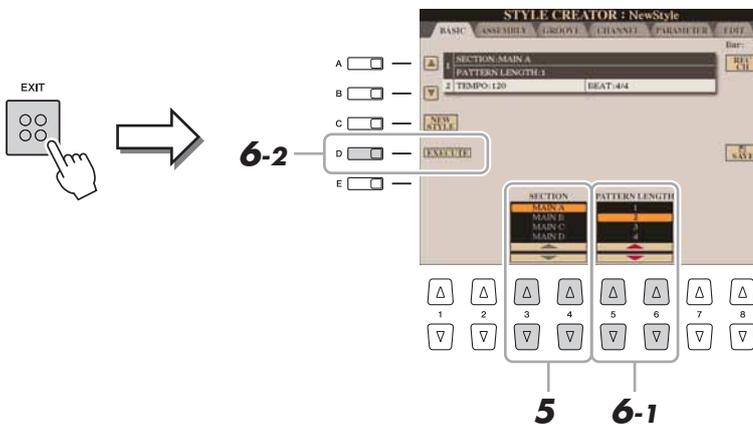
To call up the RECORD display again, press the [F] (REC CH) button.

#### NOTE

You can specify the sections to be recorded by using the Section buttons on the panel. Refer to step 3 on page 44.

#### NOTE

You cannot select INTRO 4 and ENDING 4 sections directly via the panel operation.



**6** Use the [5 ▲▼]/[6 ▲▼] buttons to determine the length (number of measures) of the selected section, then press the [D] (EXECUTE) button to actually enter the specified length.

**7** Specify the channel to be recorded by simultaneously holding down the [F] (REC CH) button and pressing the appropriate numbered button, [1 ▼]–[8 ▼].

To cancel the selection, press the corresponding [1 ▼]–[8 ▼] button again.



**8** Call up the Voice Selection display by using the [1 ▲]–[8 ▲] buttons and select the desired Voice for the corresponding recording channels.

Press the [EXIT] button to close the Voice Selection display.

#### Recordable Voices

- **RHY1 channel:** Any except your original Organ Flutes Voices are recordable.
- **RHY2 channel:** Only drum/SFX kits are recordable.
- **BASS–PHR2 channels:** Any except your original Organ Flutes and drum/SFX kits Voices are recordable.

#### NOTE

Preset Organ Flutes Voice can be recorded to the RHY1 and BASS–PHR2 channels.

**9** If necessary, delete a channel by simultaneously holding down the [J] (DELETE) button and pressing the appropriate numbered button, [1 ▲]–[8 ▲].

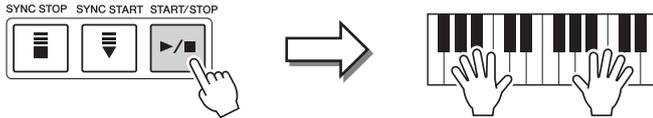
You can cancel the deletion by pressing the same numbered button again before releasing your finger from the [J] button.

#### NOTE

When recording channels BASS–PHR2 based on the existing Style, you have to delete the original data before recording.

NEXT PAGE

## 10 Start recording by pressing the STYLE CONTROL [START/STOP] button.



Playback of the specified section starts. Since the accompaniment pattern plays back repeatedly in a loop, you can record individual sounds one by one, listening to the previous sounds as they play. For information on recording to channels other than the rhythm channels (RHY1, 2), refer to the section “Rules when recording non-rhythm channels” below.

### NOTE

You can turn off the desired channels by pressing the corresponding [1 ▼]–[8 ▼] buttons.

### Deleting recorded notes in the rhythm channel

When you are recording the rhythm channel (RHY1 or RHY2), you can delete a specific instrument sound by simultaneously holding down the [E] (RHY CLEAR) button and pressing the appropriate key on the keyboard.

## 11 To continue recording with another channel, repeat steps 7–10.

## 12 Stop recording by pressing the STYLE CONTROL [START/STOP] button.

## 13 Press the [EXIT] button to close the RECORD display.

## 14 Press the [I] (SAVE) button to execute the Save operation.

### NOTICE

The edited Style will be lost if you change to another Style or turn the power to the instrument off without executing the Save operation.

### Rules when recording non-rhythm channels

- Use only the CM7 scale tones when recording the BASS and PHRASE channels (i.e., C, D, E, G, A, and B).
- Use only the chord tones when recording the CHORD and PAD channels (i.e., C, E, G, and B).



C = Chord note  
C, R = Recommended note

Using the data recorded here, the auto accompaniment (Style playback) is appropriately converted depending on the chord changes you make during your performance. The chord which forms the basis for this note conversion is called the Source Chord, and is set by default to CM7 (as in the example illustration above).

You can change the Source Chord (its root and type) from the PARAMETER display on [page 49](#). Keep in mind that when you change the Source Chord from the default CM7 to another chord, the chord notes and recommended notes will also change. For details on chord notes and recommended notes, see [page 50](#).

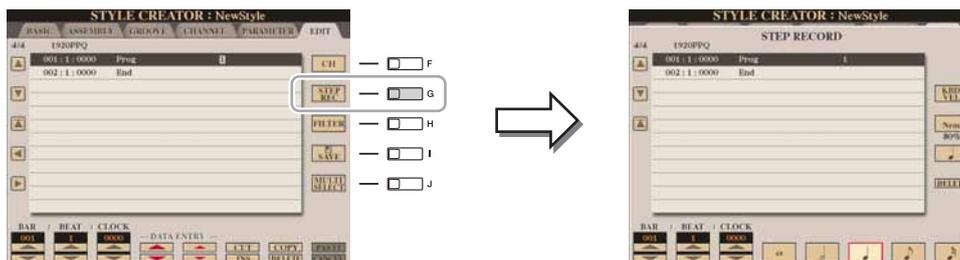
### NOTE

For the INTRO and ENDING sections, any appropriate chord or chord progression can be used.

## Step Recording

In the EDIT Page, you can record notes with absolutely precise timing. This Step Recording procedure is essentially the same as that for Song Recording (page 61) with the exception of the points listed below:

- In the Song Creator, the End Mark position can be changed freely; in the Style Creator, it cannot be changed. This is because the length of the Style is automatically fixed, depending on the selected section. For example, if you create a Style based on a section of four measures length, the End Mark position is automatically set to the end of the fourth measure, and cannot be changed in the Step Recording display.
- Recording channels can be changed in the Song Creator 1-16 tab display; however, they cannot be changed in the Style Creator. Select the recording channel in the BASIC tab display.
- In the Style Creator, the channel data can be entered and System Exclusive data can be edited (delete, copy, or move). You can switch between the two by pressing the [F] button. However, Chord, Lyrics, and System Exclusive data cannot be entered.



For instructions on Step Recording, refer to pages 61–64. For information on the EDIT display (Event List display), refer to page 73.

## Style Assembly

Style Assembly allows you to create a single Style by mixing the various patterns (channels) from existing internal Styles.

**1** Select the desired Style to serve as the basis for recording/editing before calling up the Style Creator display.

**2** Call up the operation display.

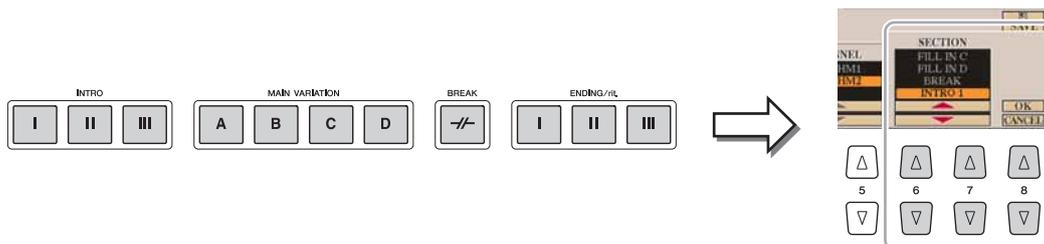
[DIGITAL RECORDING] → [B] STYLE CREATOR → TAB [◀][▶] ASSEMBLY

**3** Select the desired section (Intro, Main, Ending, etc.) for your new Style.

First call up the SECTION Selection display by pressing one of the Section buttons (INTRO, MAIN, ENDING, etc.) on the panel. Then change the section as desired by using the [6 ▲▼]/[7 ▲▼] buttons and actually enter the selection by pressing the [8 ▲] (OK) button.

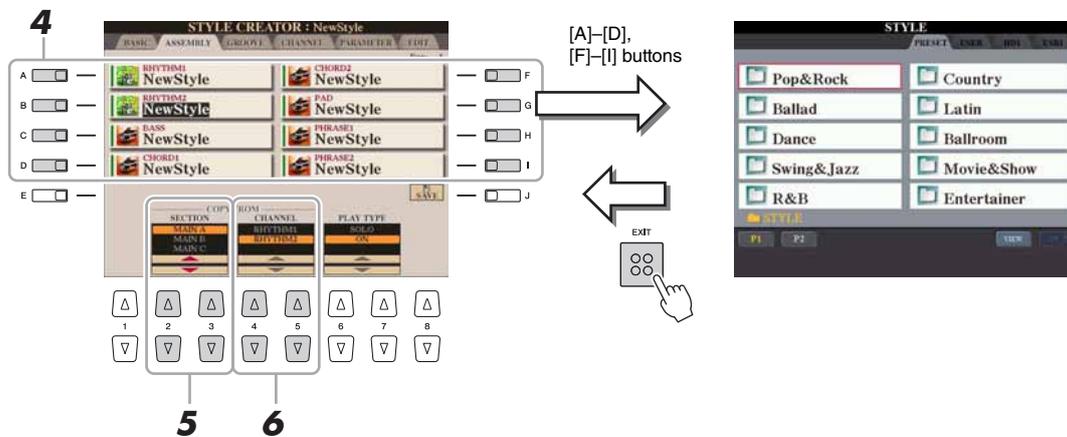
### NOTE

You cannot select INTRO 4 and ENDING 4 sections directly via the panel operation.



- 4 Select the channel for which you wish to replace the pattern by using the [A]–[D] and [F]–[I] buttons. Call up the Style Selection display by pressing the same button again. Select the Style containing the pattern you want to replace in the Style Selection display.

To return to the previous screen, press the [EXIT] button after selecting the Style.



- 5 Select the desired section of the newly imported Style (chosen in step 4) by using the [2 ▲▼]/[3 ▲▼] (SECTION) buttons.

- 6 Select the desired channel for the section (chosen in step 5) by using the [4 ▲▼]/[5 ▲▼] (CHANNEL) buttons.

Repeat steps 4–6 above to replace the patterns of other channels.

#### Playing the Style During Style Assembly

While you are assembling a Style, you can play back the Style and select the method of playback. Use the [6 ▲▼]/[7 ▲▼] (PLAY TYPE) buttons in the Style Assembly display to select the playback method.

- **SOLO:** Mutes all but the selected channel in the ASSEMBLY Page. Any channels set to ON in the RECORD display on the BASIC Page are played back simultaneously.
- **ON:** Plays back the selected channel in the ASSEMBLY Page. Any channels set to other than OFF in the RECORD display on the BASIC Page are played back simultaneously.
- **OFF:** Mutes the selected channel in the ASSEMBLY Page.

- 7 Press the [J] (SAVE) button to execute the Save operation.

#### NOTICE

The edited Style will be lost if you change to another Style or turn the power to the instrument off without executing the Save operation.

## Editing the Rhythmic Feel



**1** In the GROOVE Page, use the [A]/[B] buttons to select the edit menu, then edit the data by using the [1 ▲▼]–[8 ▲▼] buttons.

### 1 GROOVE

This lets you add swing to the music or change the “feel” of the beat by making subtle shifts in the timing (clock) of the Style. The Groove settings are applied to all channels of the selected Style.

[1 ▲▼]/ [2 ▲▼]	ORIGINAL BEAT	Specifies the beats to which Groove timing is to be applied. In other words, if “8 Beat” is selected, Groove timing is applied to the 8th notes; if “12 Beat” is selected, Groove timing is applied to 8th-note triplets.
[3 ▲▼]/ [4 ▲▼]	BEAT CONVERTER	Actually changes the timing of the beats (specified in the ORIGINAL BEAT parameter above) to the selected value. For example, when ORIGINAL BEAT is set to “8 Beat” and BEAT CONVERTER is set to “12,” all 8th notes in the section are shifted to 8th-note triplet timing. The “16A” and “16B” Beat Converter which appear when ORIGINAL BEAT is set to “12 Beat” are variations on a basic 16th-note setting.
[5 ▲▼]/ [6 ▲▼]	SWING	Produces a “swing” feel by shifting the timing of the back beats, depending on the ORIGINAL BEAT parameter above. For example, if the specified ORIGINAL BEAT value is “8 Beat”, the Swing parameter will selectively delay the 2nd, 4th, 6th, and 8th beats of each measure to create a swing feel. The settings “A” through “E” produce different degrees of swing, with “A” being the most subtle and “E” being the most pronounced.
[7 ▲▼]/ [8 ▲▼]	FINE	Selects a variety of Groove “templates” to be applied to the selected section. The “PUSH” settings cause certain beats to be played early, while “HEAVY” settings delay the timing of certain beats. The numbered settings (2, 3, 4, 5) determine which beats are to be affected. All beats up to the specified beat—but not including the first beat—will be played early or delayed (for example, the 2nd and 3rd beats, if “3” is selected). In all cases, “A” types produce minimum effect, “B” types produce medium effect, and “C” types produce maximum effect.



## 2 DYNAMICS

This changes the velocity/volume (or accent) of certain notes in the Style playback. The Dynamics settings are applied to each channel or all channels of the selected Style.

[1 ▲▼]/ [2 ▲▼]	CHANNEL	Selects the desired channel (part) to which Dynamics is to be applied.
[3 ▲▼]/ [4 ▲▼]	ACCENT TYPE	Determines the type of accent applied—in other words, which notes in the part(s) are emphasized with the Dynamics settings.
[6 ▲▼]	STRENGTH	Determines how strongly the selected Accent Type (above) will be applied. The higher the value, the stronger the effect.
[7 ▲▼]	EXPAND/COMP.	Expands or compresses the range of velocity values. Values higher than 100% expand the dynamic range, while values lower than 100% compress it.
[8 ▲▼]	BOOST/CUT	Boosts or cuts all velocity values in the selected section/channel. Values above 100% boost the overall velocity, while values below 100% reduce it.

### 2 Press the [D] (EXECUTE) button to actually enter the edits for each display.

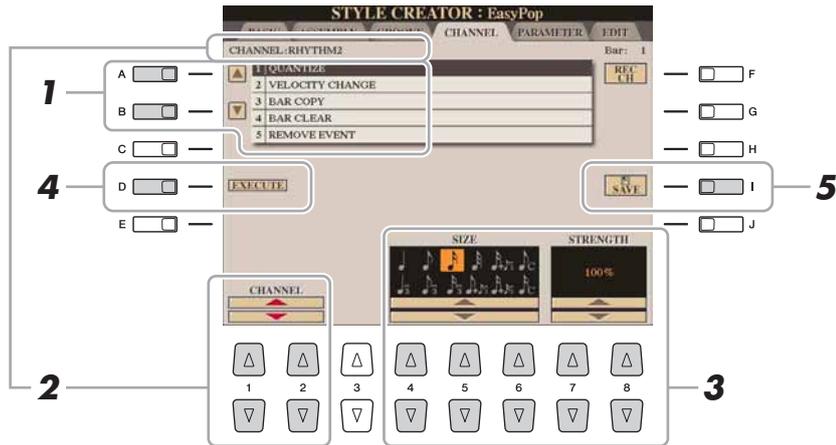
After the operation is completed, this button changes to “UNDO,” letting you restore the original data if you are not satisfied with the Groove or Dynamics results. The Undo function only has one level; only the previous operation can be undone.

### 3 Press the [I] (SAVE) button to execute the Save operation.

#### **NOTICE**

The edited Style will be lost if you change to another Style or turn the power to the instrument off without executing the Save operation.

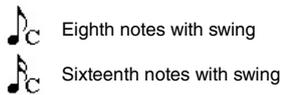
# Editing Data for Each Channel



## 1 In the CHANNEL Page, use the [A]/[B] buttons to select the edit menu.

### 1 QUANTIZE

Same as in the Song Creator (page 71), with the exception of the two additional available parameters below.



### 2 VELOCITY CHANGE

Boosts or cuts the velocity of all notes in the specified channel, according to the percentage specified here.

### 3 BAR COPY

This function allows data to be copied from one measure or group of measures to another location within the specified channel.

[4 ▲▼]	TOP	Specifies the first (TOP) and last (LAST) measures in the region to be copied.
[5 ▲▼]	LAST	
[6 ▲▼]	DEST	Specifies the first measure of the destination location, to which the data is to be copied.

### 4 BAR CLEAR

This function clears all data from the specified range of measures within the selected channel.

### 5 REMOVE EVENT

This function lets you remove specific events from the selected channel.

## 2 Use the [1 ▲▼]/[2 ▲▼] (CHANNEL) buttons to select the channel to be edited.

The selected channel is shown at the upper left of the display.

## 3 Use the [4 ▲▼]–[8 ▲▼] buttons to edit the data.

## 4 Press the [D] (EXECUTE) button to actually enter the edits for each display.

After the operation is completed, this button changes to “UNDO,” letting you restore the original data if you are not satisfied with the results of the edit. The Undo function only has one level; only the previous operation can be undone.

## 5 Press the [I] (SAVE) button to execute the Save operation.

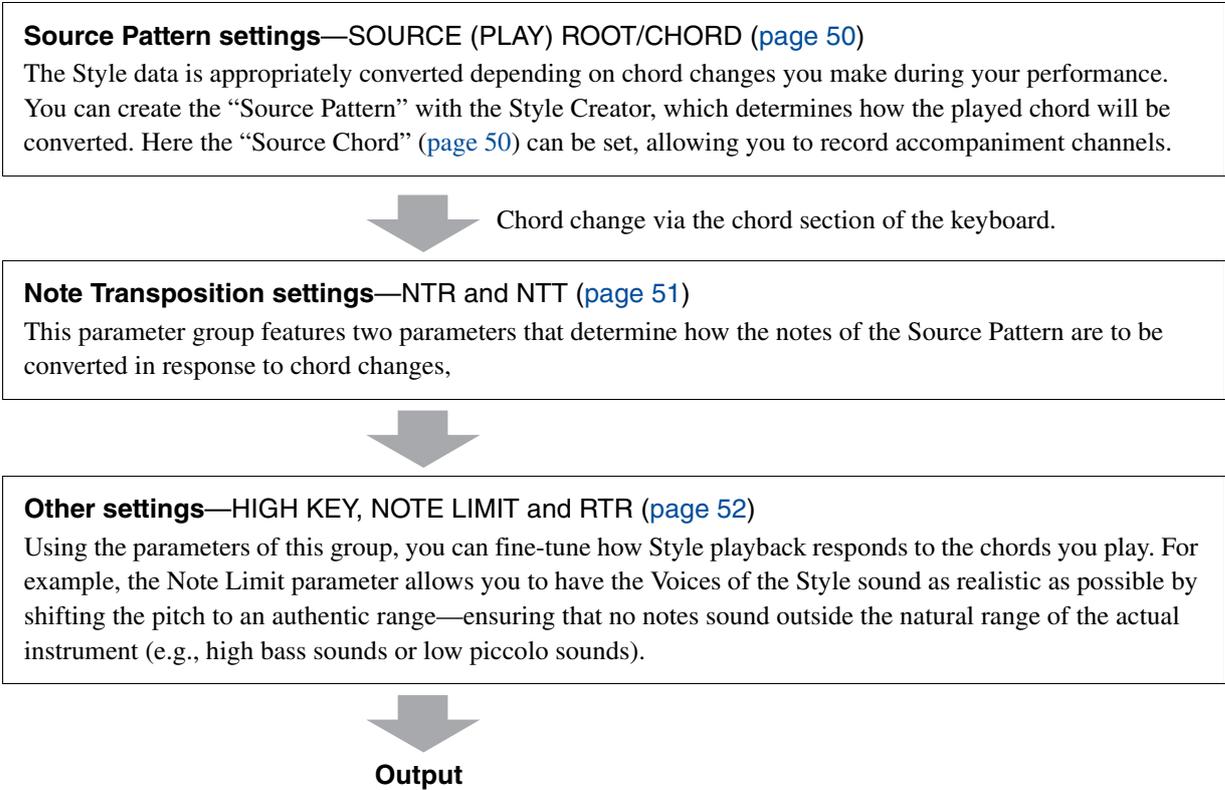
### NOTICE

The edited Style will be lost if you change to another Style or turn the power to the instrument off without executing the Save operation.

# Making Style File Format Settings

The Style File Format (SFF) combines all of Yamaha’s auto accompaniment (Style playback) know-how into a single unified format. By using the Style Creator, you can take advantage of the power of the SFF format and freely create your own Styles.

The chart shown below indicates the process by which the Style is played back. (This does not apply to the rhythm track.) These parameters can be set via the Style Creator feature, in the PARAMETER Page.



The Tyros4’s Styles are compatible with SFF GE—an enhanced format of the original SFF with especially rich, expressive guitar parts.

**NOTE**

The Style files created on the Tyros4 can only be played back on instruments which are compatible with SFF GE.

**1 In the PARAMETER Page, use the [A]/[B] buttons to select the edit menu.**

For details of the edit menu, see page 50.



**NEXT PAGE**

## 2 Use the [1 ▲▼]/[2 ▲▼] (CHANNEL) buttons to select the channel to be edited.

The selected channel is shown at the upper left of the display.

## 3 Use the [3 ▲▼]–[8 ▲▼] buttons to edit the data.

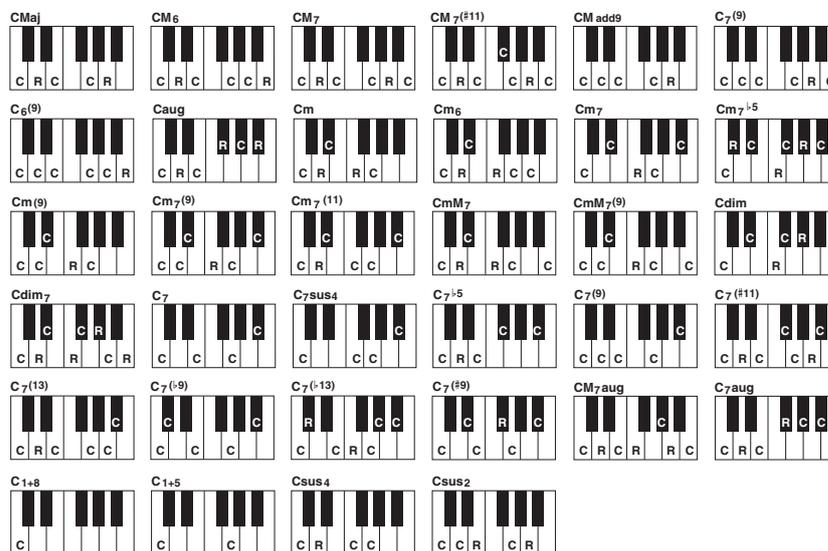
For details on editable parameters, see below continuing to [page 52](#).

## 4 Press the [I] (SAVE) button to execute the Save operation.

### 1 SOURCE (PLAY) ROOT/CHORD

These settings determine the original key of the source pattern (i.e., the key used when recording the pattern). The default setting of CM7 (with a Source Root of “C” and a Chord Type of “M7”), is automatically selected whenever the preset data is deleted prior to recording a new Style, regardless of the Source Root and Chord included in the preset data. When you change Source Root/Chord from the default CM7 to another chord, the chord notes and recommended notes will also change, depending on the newly selected chord type.

#### When the Source Root is C:



C = Chord notes  
C, R = Recommended notes

#### NOTICE

The edited Style will be lost if you change to another Style or turn the power to the instrument off without executing the Save operation.

#### NOTE

When NTR is set to “Root Fixed”, NTT is set to “Bypass” and NTT BASS is set to “OFF,” the “Source Root” and “Source Chord” parameters are changed to “Play Root” and “Play Chord,” respectively. In this case, you can change chords and hear the resulting sound for all channels.

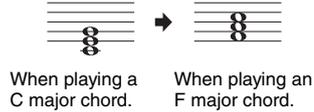
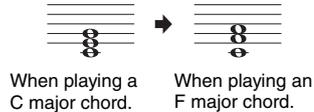
#### NOTE

This is not applied when NTR is set to GUITAR.

## 2 NTR/NTT

[3 ▲▼]/ [4 ▲▼]	NTR (Note Transposition Rule)	Determines the relative position of the root note in the chord, when converted from the Source Pattern in response to chord changes. Refer to the list below.
[5 ▲▼]- [7 ▲▼]	NTT (Note Transposition Table)	Sets the note transposition table for the source pattern. Refer to the list below.
[8 ▲▼]	NTT BASS ON/ OFF	The channel for which this is set to ON will be played back by the bass root note, when the on-bass chord is recognized by the instrument. When NTR is set to GUITAR and this parameter is set to ON, only the note which is assigned to bass will be played back by the bass root note.

### NTR (Note Transposition Rule)

ROOT TRANS (Root Transpose)	When the root note is transposed, the interval between notes is maintained. For example, the notes C3, E3 and G3 in the key of C become F3, A3 and C4 when they are transposed to F. Use this setting for channels that contain melody lines.	
ROOT FIXED	The note is kept as close as possible to the previous note range. For example, the notes C3, E3 and G3 in the key of C become C3, F3 and A3 when they are transposed to F. Use this setting for channels that contain chord parts.	
GUITAR	This is exclusively for transposing guitar accompaniment. Notes are transposed to approximate the chords played with natural guitar fingering.	

### NTT (Note Transposition Table)

When NTR is set to ROOT TRANS or ROOT FIXED

BYPASS	When NTR is set to ROOT FIXED, the transposition table used does not do any note conversion. When NTR is set to ROOT TRANS, the table used only converts the notes by maintaining the pitch relationship between notes.
MELODY	Suitable for melody line transposition. Use this for melody channels such as Phrase 1 and Phrase 2.
CHORD	Suitable for chordal parts transposition. Use this for the Chord 1 and Chord 2 channels, especially when they contain piano or guitar-like chordal parts.
MELODIC MINOR	When the played chord changes from a major to a minor chord, this table lowers the third interval in the scale by a semitone. When the chord changes from a minor to a major chord, the minor third interval is raised by a semitone. Other notes are not changed. Use this for melody channels of Sections which respond only to major/minor chords, such as Intros and Endings.
MELODIC MINOR 5th	In addition to the Melodic Minor transposition above, augmented and diminished chords affect the 5th note of the Source Pattern.
HARMONIC MINOR	When the played chord changes from a major to a minor chord, this table lowers the third and sixth intervals in the scale by a semitone. When the chord changes from a minor to a major chord, the minor third and flatted sixth intervals are raised by a semitone. Other notes are not changed. Use this for chord channels of Sections which respond only to major/minor chords, such as Intros and Endings.
HARMONIC MINOR 5th	In addition to the Harmonic Minor transposition above, augmented and diminished chords affect the 5th note of the Source pattern.
NATURAL MINOR	When the played chord changes from a major to a minor chord, this table lowers the third, sixth and seventh intervals in the scale by a semitone. When the chord changes from a minor to a major chord, the minor third, flatted sixth and flatted seventh intervals are raised by a semitone. Other notes are not changed. Use this for chord channels of Sections which respond only to a Major/minor chord such as Intros and Endings.

NATURAL MINOR 5th	In addition to the Natural Minor transposition above, augmented and diminished chords affect the 5th note of the Source pattern.
DORIAN	When the played chord changes from a major to a minor chord, this table lowers the third and seventh intervals in the scale by a semitone. When the chord changes from a minor to a major chord, the minor third and flatted seventh intervals are raised by a semitone. Other notes are not changed. Use this for chord channels of Sections which respond only to a Major/minor chord such as Intros and Endings.
DORIAN 5th	In addition to the Dorian transposition above, augmented and diminished chords affect the 5th note of the Source pattern.

When NTR is set to GUITAR

ALL-PURPOSE	This table covers both strummed- and arpeggio-played sound.
STROKE	Suitable for stroke-played sound of the guitar. Some notes may sound as if it is muted—this is normal condition when the chord is played on guitar by stroke.
ARPEGGIO	Suitable for arpeggio-played sound of the guitar. Using this table, four notes arpeggio sounds most beautiful.

### 3 HIGH KEY / NOTE LIMIT

[4 ▲▼]/ [5 ▲▼]	HIGH KEY	<p>This sets the highest key (upper octave limit) of the note transposition for the chord root change. Any notes calculated to be higher than the highest key are transposed down to the next lowest octave. This setting is available only when the NTR parameter (page 51) is set to “Root Trans.”</p> <p><b>Example—When the highest key is F.</b></p> <p>Root changes ➡ CM C#M . . . FM F#M . . .</p> <p>Notes played ➡ C3-E3-G3 C#3-E#3-G#3 F3-A3-C4 F#2-A#2-C#3</p>
[6 ▲▼]	NOTE LIMIT LOW	<p>These set the note range (highest and lowest notes) for Voices recorded to the Style channels. By judicious setting of this range, you can ensure that the Voices sound as realistic as possible—in other words, that no notes outside the natural range are sounded (e.g., high bass sounds or low piccolo sounds).</p> <p><b>Example—When the lowest note is C3 and the highest is D4.</b></p> <p>Root changes ➡ CM C#M . . . FM . . .</p> <p>Notes played ➡ E3-G3-C4 E#3-G#3-C#4 F3-A3-C4</p>
[7 ▲▼]	NOTE LIMIT HIGH	<p>Root changes ➡ CM C#M . . . FM . . .</p> <p>Notes played ➡ E3-G3-C4 E#3-G#3-C#4 F3-A3-C4</p>

### 4 RTR (Retrigger Rule)

These settings determine whether notes stop sounding or not and how they change pitch in response to chord changes.

STOP	The notes stop sounding.
PITCH SHIFT	The pitch of the note will bend without a new attack to match the type of the new chord.
PITCH SHIFT TO ROOT	The pitch of the note will bend without a new attack to match the root of the new chord.
RETRIGGER	The note is retriggered with a new attack at a new pitch corresponding to the next chord.
RETRIGGER TO ROOT	The note is retriggered with a new attack at the root note of the next chord. However, the octave of the new note remains the same.

### Contents

Editing Music Notation Settings.....	53
Editing Lyrics/Text Display Settings.....	55
Using the Auto Accompaniment Features with the Song Playback.....	56
Song Playback Related Parameters (Repeat settings, Channel settings, Guide Function).....	57
• Keyboard and Vocal Practice Using the Guide Function.....	58
• Playing Backing Parts with the Performance Assistant Technology.....	60
Creating/Editing Songs (Song Creator).....	61
• Recording Melodies (Step Recording).....	61
• Recording Chords (Step Recording).....	65
• Re-Recording a Specific Section—Punch In/Out.....	68
• Editing Channel Events.....	70
• Editing Chord Events, Notes, System Exclusive Events and Lyrics.....	73
• Editing Song Position Markers.....	76

## Editing Music Notation Settings

To view the music notation of the selected Song, press the [SCORE] button. You can change the notation display as desired to suit your personal preferences. The settings here are maintained even when the power is turned off.

### NOTE

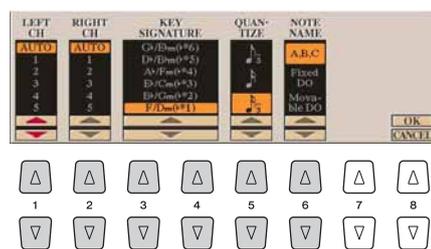
You can save the setting here as a part of a Song by accessing [DIGITAL RECORDING] → [A] SONG CREATOR → TAB [◀|▶] CHANNEL → [A]/[B] SETUP. See [page 72](#).



[1 ▲▼]	LEFT ON/OFF	Enables/disables display of the left-hand key range. Depending on other settings, this parameter may be unavailable and may appear grayed out. If this is the case, go to the detailed setting display (on <a href="#">page 54</a> ) and set the LEFT CH parameter to any channel except “AUTO.” Or, go to the display [FUNCTION] → [B] SONG SETTING and set the LEFT CH parameter to any channel except “OFF” ( <a href="#">page 57</a> ). RIGHT (next parameter) and LEFT cannot be turned off at the same time.
[2 ▲▼]	RIGHT ON/OFF	Enables/disables display of the right-hand key range. RIGHT and LEFT (above) cannot be turned off at the same time.
[3 ▲▼]	CHORD ON/OFF	Enables/disables display of the chords. If the selected Song does not contain chord data, chords are not displayed.

[4 ▲▼]	LYRICS ON/OFF	Enables/disables display of the lyrics. If the selected Song does not contain lyric data, lyrics are not displayed. When the Song contains Pedal events, pressing these buttons can display the Pedal events, instead of displaying Lyrics.
[5 ▲▼]	NOTE ON/OFF	Enables/disables display of the note name (pitch). The note name is indicated at the left of the note. When the space between the notes is too small, the indication may be moved to the top left of the note. When the Song contains Fingering events, pressing these buttons can display the fingering, instead of displaying note names.
[6 ▲▼]	COLOR ON/OFF	When this is set to ON, the notes in the display appear in color (C: red, D: yellow, E: green, F: orange, G: blue, A: purple, and B: gray).
[7 ▲▼]	SIZE	Determines the display resolution (or zoom level) of the notation.
[8 ▲▼]	SET UP	See below.

Pressing the [8 ▲▼] (SET UP) button calls up the detailed setting display. You can set the view type by using the [1 ▲▼]–[6 ▲▼] buttons, then press the [8 ▲] (OK) button.



[1 ▲▼]	LEFT CH	Determines which MIDI channel in the Song data is used for the left-hand/right-hand part. This setting returns to AUTO when a different Song is selected.  <b>AUTO:</b> The MIDI channels in the Song data for the right- and left-hand parts are assigned automatically—setting the parts to the same channel as the channel which is specified in the [FUNCTION] → [B] SONG SETTING (page 57).
[2 ▲▼]	RIGHT CH	<b>1–16:</b> Assigns the specified MIDI channel (1–16) to each of the left- and right-hand parts. <b>OFF (LEFT CH only):</b> No channel assignment. This disables display of the left-hand key range.
[3 ▲▼]/ [4 ▲▼]	KEY SIGNATURE	This lets you enter key signature changes in the middle of a Song, at the stopped position. This menu is useful when the selected Song contains no key signature settings for displaying notation.
[5 ▲▼]	QUANTIZE	This gives you control over the note resolution in the notation, letting you shift or correct the timing of all displayed notes so that they line up to a particular note value. Make sure to select the smallest note value used in the Song.
[6 ▲▼]	NOTE NAME	Selects the type of the note name indicated at the left of the note in the notation from among the following three types. The settings here are available when the NOTE ON/OFF parameter above is set to ON.  <b>A, B, C:</b> Note names are indicated as letters (C, D, E, F, G, A, B). <b>FIXED DO:</b> Note names are indicated in solfeggio and differ depending on the selected language. <b>MOVABLE DO:</b> Note names are indicated in solfeggio according to the scale intervals, and as such are relative to the key. The root note is indicated as Do. For example, in the key of G major the root note of “Sol” would be indicated as “Do.” As with “Fixed Do,” the indication differs depending on the selected language.

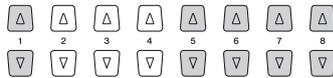
# Editing Lyrics/Text Display Settings

To view the lyrics of the selected Song, press the [LYRICS/TEXT] button. If the selected Song contains lyric data, you can have the lyrics shown in the display. Even if the Song does not contain lyrics data, you can show a text file (created on a computer, .txt file less than 60KB) in the display.

**NOTE**

When the lyrics are garbled or unreadable, you may need to change the Lyrics Language setting from the [FUNCTION] → [B] SONG SETTING.

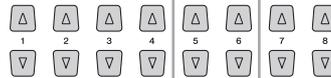
**Lyrics display**



Press [1 ▲▼] buttons



**Text display**



Press the [5 ▲▼]/[6 ▲▼] button to actually call up desired text file.

**NOTE**

Line feed (or “carriage return”) is not automatically done in the instrument. If a sentence is not displayed in its entirety because of limitations in the screen space, execute the line feed on your computer.

[1 ▲▼]	TEXT/LYRICS	Switches the screen between the Lyrics display (lyrics data in the Song is shown) and the Text display (a text file created on a computer is shown).
[2 ▲▼]	(Text display only) CLEAR	Clears the text from the screen (the text data itself is not erased).
[3 ▲▼]/ [4 ▲▼]	(Text display only) FIXED 16–PRO- PORTIONAL 28	Determines the text type (fixed or proportional) and font size. Fixed is suitable for displaying lyrics with chord names, since the positions of chord names are “fixed” to the corresponding lyrics. Proportional is suitable for displaying lyrics without chord names or explanatory notes. The numbers 16–28 indicate font sizes. This menu appears only when a text file is selected.
[5 ▲▼]/ [6 ▲▼]	TEXT FILE	Calls up the text File Selection display. After selecting, press the [EXIT] button to return back to the Lyrics/Text display.
[7 ▲▼]/ [8 ▲▼]	BACK GROUND	Allows changing of the background picture of the Lyrics/Text display. After making the setting, press the [EXIT] button to return back to the Lyrics/Text display.  <b>NOTE</b> When the background picture is specified in the Song data, the BACKGROUND setting cannot be changed.  <b>NOTE</b> For information on available image files, refer to the MAIN PICTURE parameter on <a href="#">page 136</a> .

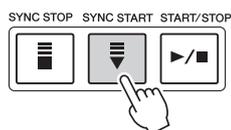
## Using the Auto Accompaniment Features with the Song Playback

When playing back a Song and a Style at the same time, channels 9-16 in the Song data are replaced with Style channels—allowing you to play the accompaniment parts of the Song yourself. Try playing chords along with the Song playback as shown in the instructions below.

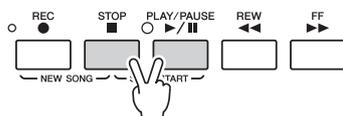
- 1** Select a Song.
- 2** Select a Style.
- 3** Press the **STYLE CONTROL [ACMP]** button to turn on the Auto Accompaniment function.



- 4** Press the **STYLE CONTROL [SYNC START]** button to enable standby—letting you simultaneously start the accompaniment as soon as you start playing.



- 5** While holding down the **SONG [STOP]** button, press the **[PLAY/PAUSE]** button to enable synchronized start.



- 6** Press the **STYLE CONTROL [START/STOP]** button or play chords with your left hand.

The Song and Style starts playing. When you play chords, pressing the **[SCORE]** button and turning **CHORD** on (page 53) allows you to see the chord information.

When the Song playback is stopped, the Style playback is also stopped at the same time.

### **NOTE**

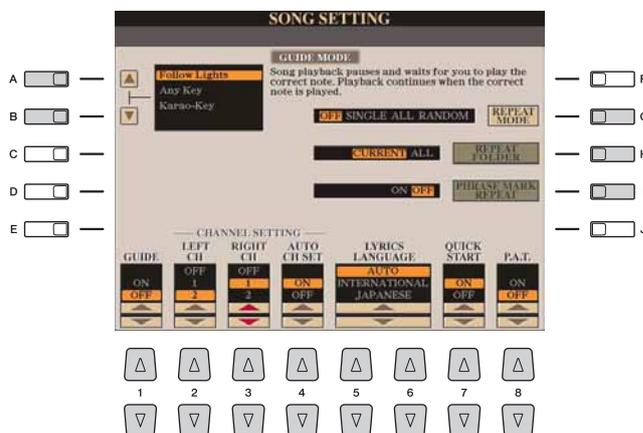
When playing back a Song and a Style at the same time, the tempo value set in the Song is automatically used.

## Song Playback Related Parameters (Repeat settings, Channel settings, Guide Function)

The Tyros4 has a variety of Song playback functions—repeat playback, various guide settings, etc.—which can be accessed in the display below.

### Call up the operation display.

[FUNCTION] → [B] SONG SETTING



[A]/[B]	GUIDE MODE	See <a href="#">page 58</a> .
[1 ▲▼]	GUIDE ON/OFF	
[G]	REPEAT MODE	Determines the method of repeat playback. <b>OFF:</b> Plays through the selected Song, then stops. <b>SINGLE:</b> Plays through the selected Song repeatedly. <b>ALL:</b> Continues playback through all the Songs in the specified folder repeatedly. <b>RANDOM:</b> Continues playback at random through all the Songs in the specified folder repeatedly.
[H]	REPEAT FOLDER	Determines the directory in which the Songs are played in sequence when the REPEAT MODE is set to “ALL” or “RANDOM.” Here, the directory refers to the path memorized to each of the SONG [I]–[IV] buttons. <b>CURRENT:</b> Sequentially plays all Songs in the directory containing the currently selected Song, starting with the currently selected Song. <b>ALL:</b> Sequentially plays all Songs in all directories (memorized to the SONG [I]–[IV] buttons). Playback starts with the currently selected Song, then the remainder of the Songs in the current directory, followed by the Songs in the other directories.
[I]	PHRASE MARK REPEAT	Phrase Mark is a pre-programmed part of some Song data, which specifies a certain location (set of measures) in the Song. When this is on, the section corresponding to the specified Phrase Mark number is repeatedly played back.
[2 ▲▼]	LEFT CH	These parameters determine which MIDI channel in the Song data is assigned to the Left- or Right-hand part of the Guide function and the Song Score function.
[3 ▲▼]	RIGHT CH	
[4 ▲▼]	AUTO CH SET	When set to “ON,” this automatically sets the proper MIDI channels for the Right- and Left hand parts pre-programmed in the commercially available Song data. Normally, this should be set to “ON.”
[5 ▲▼]/ [6 ▲▼]	LYRICS LANGUAGE	Determines the language of the displayed lyrics. <b>AUTO:</b> When the language is specified in the Song data, the lyrics are displayed accordingly. When the language is not specified in the Song data, the lyrics language is regarded as INTERNATIONAL below. <b>INTERNATIONAL:</b> Handles the displayed lyrics as a western language. <b>JAPANESE:</b> Handles the displayed lyrics as Japanese.

[7 ▲▼]	QUICK START	On some commercially available Song data, certain settings related to the Song (such as Voice selection, volume, etc.) are recorded to the first measure, before the actual note data. When Quick Start is set to “ON,” the Tyros4 reads all initial non-note data of the Song at the highest possible speed, then automatically slows down to the appropriate tempo at the first note. This allows you to start playback as quickly as possible, with a minimum pause for reading of data.
[8 ▲▼]	P.A.T. (Performance Assistant)	See <a href="#">page 60</a> .

## Keyboard and Vocal Practice Using the Guide Function

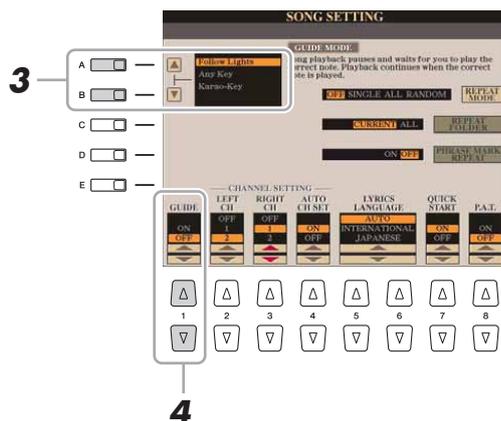
The Guide functions provide convenient learning and practicing tools to help you master the instrument. By pressing the [SCORE] button, you can have the notation of the Song displayed, showing the notes you should play and when you should play them, for ease in learning. The Tyros4 also features a convenient vocal practice tool that controls the timing of Song playback while you sing along (when singing into a connected microphone.)

**1** Select the desired Song for practicing the keyboard or singing.

**2** Call up the setting display.

[FUNCTION] → [B] SONG SETTING

**3** Use the [A]/[B] buttons to select the desired Guide function type.



### Guide menu for keyboard practice

- **Follow Lights:** When this is selected, Song playback pauses, waiting for you to play the notes correctly. When you play the correct notes, Song playback continues. Follow Lights was developed for the Yamaha Clavinova series. This function is used for practicing purposes, with built-in lamps on the keyboard indicating the notes to be played. Even though the Tyros4 does not have these lamps, you can use the same function by following the indications in the displayed notation with the Song Score function.
- **Any Key:** With this function, you can play the melody of a Song just by pressing a single key (any key is OK) in time with the rhythm. Song playback pauses and waits for you to play any key. Simply play a key on the keyboard in time with the music and Song playback continues.

**NEXT PAGE**

### Guide menu for singing

- **Karao-Key:** This function lets you control the Song playback timing with just one finger, while you sing along. Song playback pauses, waiting for you to sing. Simply play a key on the keyboard (any key is fine) and Song playback continues.

**4** Use the [1 ▲▼] button to turn the Guide function ON.

**5** Call up the Score display by pressing the [SCORE] button.

**6** Press the SONG [PLAY/PAUSE] button to start playback.

Practice playing the keyboard or singing, along with the Guide type selected in step 3.

**7** Press the [STOP] button to stop playback.

#### NOTE

When the Guide function is ON, an "G" indication appears in the Main display.

#### NOTE

You can save the Guide settings as a part of the Song data (page 72). For Songs to which the Guide settings have been saved, the Guide function will be automatically turned on and the related settings will be recalled when the Song is selected.

## Playing Backing Parts with the Performance Assistant Technology

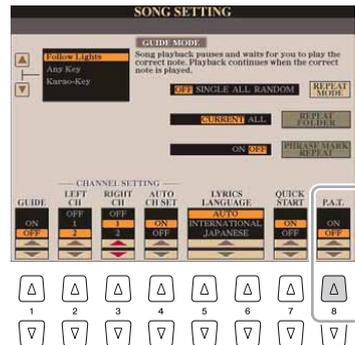
This feature makes it exceptionally easy to play the backing parts along with Song playback.

### 1 Select a Song.

### 2 Call up the operation display.

[FUNCTION] → [B] SONG SETTING

### 3 Press the [8 ▲] button to turn the [P.A.T.] (performance assistant technology) on.

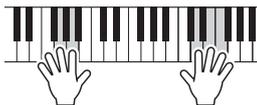


### 4 Press the [PLAY/PAUSE] button to start playback.

### 5 Play the keyboard.

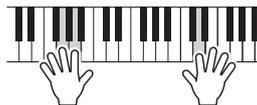
The instrument automatically matches your performance on the keyboard to the Song playback and chords, no matter what keys you play. It even changes the sound according to the way you play. Try playing in the three different ways below.

Playing the left and right hand together (method 1).



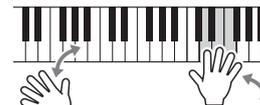
Play three notes at the same time with your right hand.

Playing the left and right hand together (method 2).



Play several notes one after the other with different fingers of your right hand.

Playing the left hand and right hand alternately.



Play three notes at the same time with your right hand.

### 6 Press the [STOP] button to stop playback.

### 7 Press the [8 ▼] button to turn the [P.A.T.] off.

#### NOTE

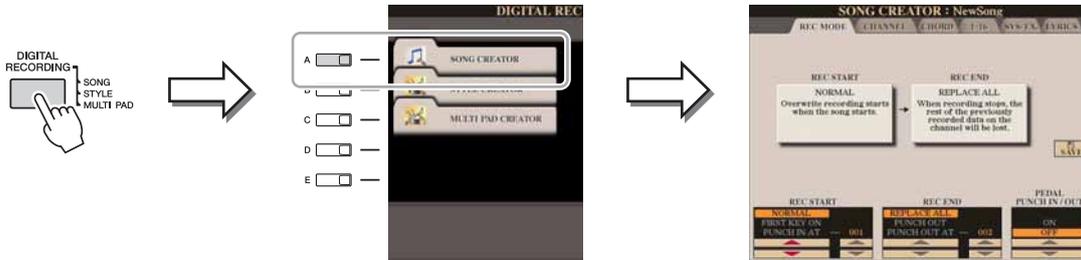
To use the performance assistant technology, the Song must contain chord data. If the Song contains this data, the current chord name will be displayed in the Main display during Song playback, letting you easily check whether the Song contains chord data or not.

# Creating/Editing Songs (Song Creator)

To create a Song, you can compose your performance by entering it one event at a time (called “Step Recording”), as well as recording your performance in real time (described in the Owner’s Manual). This section explains operations of Step Recording and re-recording or editing existing Song data.

## Call up the operation display.

[DIGITAL RECORDING] → [A] SONG CREATOR



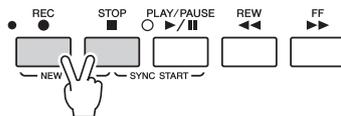
There are six Pages (tabs) in the Song Creator display.

- **REC MODE** ..... Re-records the Song. See [page 68](#).
- **CHANNEL** ..... Edits the Channel events. See [page 70](#).
- **CHORD** ..... Records the Chords and Sections with timing ([page 65](#)) or edits them ([page 74](#)).
- **1-16** ..... Records the melodies (Step Recording; see below) or edits the recorded melodies ([page 74](#)).
- **SYS/EX** ..... Edits the System Exclusive events (tempo, time signature, etc.). See [page 74](#).
- **LYRICS** ..... Inputs/edits the Song name and lyrics. See [page 74](#).

## Recording Melodies (Step Recording)

### 1 Press the SONG [REC] and SONG [STOP] buttons simultaneously.

A blank Song (“New Song”) is called up for recording.

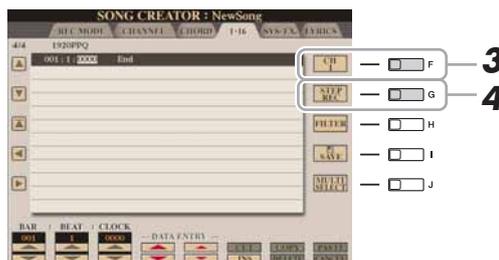


#### NOTE

Selecting a blank Song initializes the panel settings.

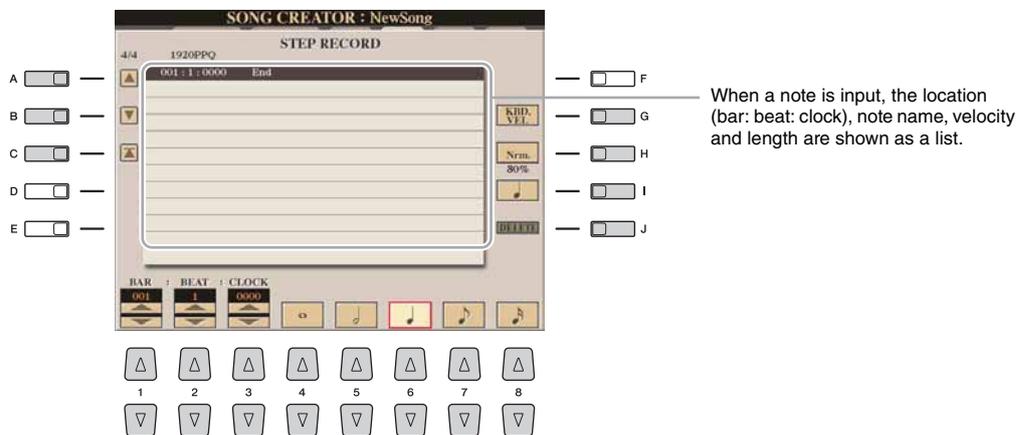
### 2 Call up the operation display.

[DIGITAL RECORDING] → [A] SONG CREATOR → TAB [◀|▶] 1-16



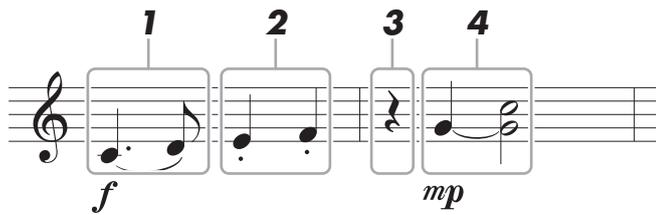
- 3** Press the [F] button to select the channel for recording.
- 4** Press the [G] (STEP REC) button to call up the STEP RECORD display.
- 5** Start Step Recording by using the [A]–[J] buttons and [1 ▲▼]–[8 ▲▼] buttons.

Refer to the example on [page 63](#) for specific instructions.



[A]/[B]/[C]		Moves the cursor in the list.
[G]		Determines the velocity (loudness) of the note to be entered. The velocity value can be specified within a range from 1 to 127. The higher the velocity value, the louder the sound becomes.  <b>KBD.VEL:</b> Actual resulting velocity <b>fff:</b> 127 <b>ff:</b> 111 <b>f:</b> 95 <b>mf:</b> 79 <b>mp:</b> 63 <b>p:</b> 47 <b>pp:</b> 31 <b>ppp:</b> 15
[H]		Determines the gate time (note length) of the note to be entered.  <b>Normal:</b> 80%  <b>Tenuto:</b> 99%  <b>Staccato:</b> 40%  <b>Staccatissimo:</b> 20%  <b>Manual:</b> The gate time can be set to any desired percentage by using the [DATA ENTRY] dial.
[I]		Determines the note type to be entered: normal, dotted or triplet.
[J]	DELETE	Deletes the selected data.
[1 ▲▼]	BAR	Sets the position of the note to be entered.
[2 ▲▼]	BEAT	
[3 ▲▼]	CLOCK	
[4 ▲▼]– [8 ▲▼]		Determines the note length to be entered: whole-note, half-note, quarter-note, eighth-note or sixteenth-note.

## Example of Step Recording—Melodies



\* The numbers shown in the illustration correspond to the following operation step numbers.

In this example, keep in mind that one of the steps involves holding down a key on the keyboard while executing the operation.

Select the Voice for recording after calling up the Step Recording display.

### NOTE

Since the music score displayed on the instrument is generated from the recorded MIDI data, it may not appear exactly the same as shown here.

## 1 Enter the first and second notes with a slur.

**1-1** Press the [G] button to select “f.”

**1-2** Press the [H] button to select “Tenuto.”

**1-3** Press the [I] button to select the “dotted” note type.

**1-4** Select the dotted quarter-note by using the [6 ▲▼] buttons.

**1-5** Play the C3 key.

The first note is entered.

**1-6** Press the [I] button to select the “normal” note type.

**1-7** Press the [7 ▲▼] button to select the eighth-note length.

**1-8** Play the D3 key.

The second note is entered.

## 2 Enter the next notes and apply staccato.

**2-1** Press the [H] button to select “Staccato.”

**2-2** Press the [6 ▲▼] button to select the quarter-note length.

**2-3** Play the keys E3 and F3 in order.

The first measure has been completed.

## 3 To enter a quarter-note rest, press the [6 ▲▼] button again.

To enter the rest, use the [4 ▲▼]–[8 ▲▼] buttons. (Press the button once to select the rest value, and once again to actually enter it.) A rest having the specified note length will be entered.

 NEXT PAGE

## 4 Enter the next notes and apply a tie.

**4-1** Press the [G] button to select “mp.”

**4-2** Press the [H] button to select “Normal.”

**4-3** While holding G3 key on the keyboard, press the [6 ▲▼] button.

Do not release the G3 key yet. Keep holding it while executing the following steps.

**4-4** While holding the G3 key, press the C4 key.

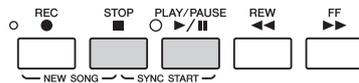
Do not release the G3 and C4 keys yet. Keep holding the notes while executing the following step.



**4-5** While holding the keys G3 and C4, press the [5 ▲▼] button.

After pressing the button, release the keys.

## 5 Press the SONG [STOP] button (or press the [C] button) to return to the top of the Song, then hear the newly entered Song by pressing the [PLAY/PAUSE] button.



## 6 Press the [EXIT] button to exit from the Step Recording display.

## 7 Press the [I] (SAVE) button to execute the Save operation.

### NOTICE

The recorded Song data will be lost if you select another Song or turn the power to the instrument off without executing the Save operation.

# Recording Chords (Step Recording)

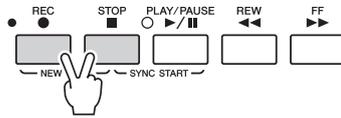
You can record Chords and Sections (Intro, Main, Ending, and so on) one at a time with precise timing. These instructions show how to record chord changes using the Step Record function.

- 1 Press the SONG [REC] and SONG [STOP] buttons simultaneously.**

A blank Song (“New Song”) is called up for recording.

**NOTE**

Selecting a blank Song initializes the panel settings.



- 2 Select the Style you want to use in the Song.**

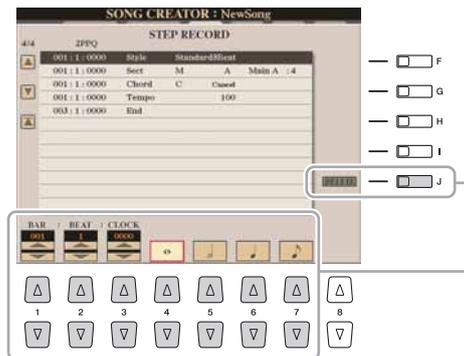
- 3 Call up the operation display.**

[DIGITAL RECORDING] → [A] SONG CREATOR → TAB [◀|▶] CHORD

- 4 Press the [G] (STEP REC) button to call up the STEP RECORD display.**



- 5 Start Step Recording.**



## Example of Step Recording—Chords

The diagram shows three sections of a step recording sequence in bass clef, 4/4 time. Section 1, labeled '1', is 'MAIN A' and contains three measures with chords C, F, and G. Section 2, labeled '2', is 'BREAK' and contains two measures with chords F and G7. Section 3, labeled '3', is 'MAIN B' and contains one measure with chord C.

\* The numbers shown in the illustration correspond to the following operation step numbers.

Before starting, make sure the [AUTO FILL IN] button is set to off.



This example uses a Style in 4/4 time.

### 1 Enter the chords for the Main A section.

- 1-1** Press the STYLE CONTROL [MAIN A] button,
- 1-2** Press the [5 ▲▼] button to select the half-note length.
- 1-3** Play the chord C, F and G in the chord section of the keyboard.

The diagram illustrates the steps for entering the Main A section. Step 1-1 shows the 'MAIN VARIATION' buttons (A, B, C, D) with a hand pointing to 'A'. Step 1-2 shows the 'STYLE CONTROL' panel with the [5 ▲▼] button highlighted. Step 1-3 shows three keyboard diagrams for chords C, F, and G, with arrows indicating the sequence of chords to be played.

### 2 Enter the chords for the Break section.

- 2-1** Press the STYLE CONTROL [BREAK] button.
- 2-2** Press the [6 ▲▼] button to select the quarter-note length.
- 2-3** Play the chords F, and G7 in the chord section of the keyboard.



To enter fill-ins, turn the [AUTO FILL IN] button to ON, and simply press the desired MAIN VARIATION [A]–[D] button.

The diagram illustrates the steps for entering the Break section. Step 2-1 shows the 'BREAK' button being pressed. Step 2-2 shows the 'STYLE CONTROL' panel with the [6 ▲▼] button highlighted. Step 2-3 shows two keyboard diagrams for chords F and G7, with an arrow indicating the sequence of chords to be played.

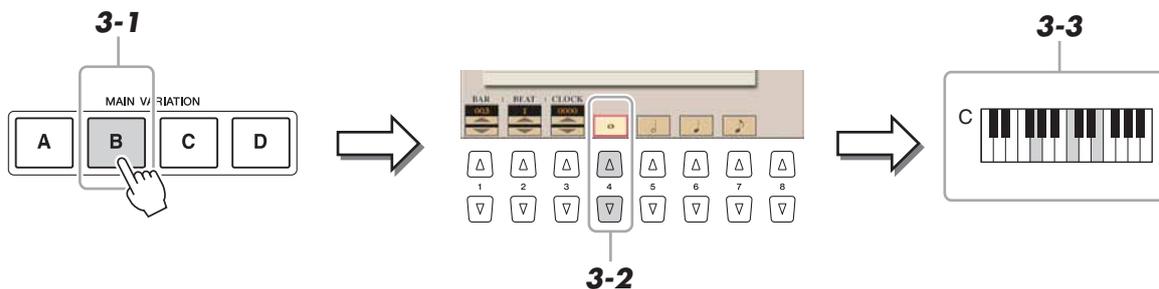
▶ NEXT PAGE

### 3 Enter the chords for the Main B section.

**3-1** Press the STYLE CONTROL [MAIN B] button.

**3-2** Press the [4 ▲▼] button to select the whole-note length.

**3-3** Play the chord C in the chord section of the keyboard.



### 4 Press the SONG [STOP] button (or press the [C] button) to return to the top of the Song, then hear the newly entered Song by pressing the [PLAY/PAUSE] button.



### 5 Press the [EXIT] button to exit from the Step Recording display.

### 6 Press the [F] (EXPAND) button to convert the input chord change data into the Song data.

### 7 Press the [I] (SAVE) button to execute the Save operation.

#### NOTICE

The recorded Song data will be lost if you select another Song or turn the power to the instrument off without executing the Save operation.

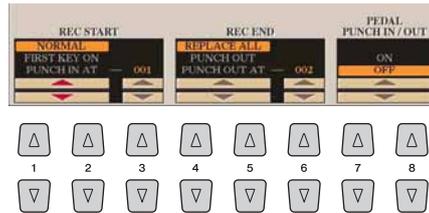
## Re-Recording a Specific Section—Punch In/Out

When re-recording a specific section of an already-recorded Song, use the Punch IN/OUT function. In this method, only the data between the Punch In point and the Punch Out point is overwritten with the newly recorded data. Keep in mind that the notes before and after the Punch In/Out points are not recorded over, although you will hear them play back normally to guide you in the Punch In/Out timing.

### 1 Call up the operation display.

[DIGITAL RECORDING] → [A] SONG CREATOR → TAB [◀][▶] REC MODE

### 2 Determine the settings for recording.



[1 ▲▼]– [3 ▲▼]	REC START (Punch In)	<p>Determines the Punch In timing.</p> <p><b>NORMAL:</b> Overwrite recording starts when pressing the SONG [PLAY/PAUSE] button or when you play the keyboard in the Synchro Standby mode.</p> <p><b>FIRST KEY ON:</b> The Song plays back normally, then starts overwrite recording as soon as you play the keyboard.</p> <p><b>PUNCH IN AT:</b> The Song plays back normally up to the beginning of the indicated Punch In measure, then starts overwrite recording at that point. You can set the Punch In measure by pressing the [3 ▲▼] button.</p>
[4 ▲▼]– [6 ▲▼]	REC END (Punch Out)	<p>Determines the Punch Out timing.</p> <p><b>REPLACE ALL:</b> This deletes all data after the point at which recording is stopped.</p> <p><b>PUNCH OUT:</b> The Song position at which recording is stopped is regarded as the Punch Out point. This setting maintains all data after the point at which recording is stopped.</p> <p><b>PUNCH OUT AT:</b> Actual overwrite recording continues until the beginning of the specified Punch Out measure (set with the corresponding display button), at which point recording stops and normal playback continues. This setting maintains all data after the point at which recording is stopped. You can set the Punch Out measure by pressing the [6 ▲▼] buttons.</p>
[7 ▲▼]/ [8 ▲▼]	PEDAL PUNCH IN/OUT	<p>When this is set to ON, you can use Foot Pedal 2 to control the Punch In and Punch Out points. While a Song is playing back, pressing (and holding) Foot Pedal 2 instantly enables Punch In recording, while releasing the pedal stops recording (Punch Out). You can press and release Foot Pedal 2 as often as you want during playback to punch in/out of overwrite recording. Note that the current function assignment of the Foot Pedal 2 is cancelled when the Pedal Punch In/Out function is set to ON.</p> <p><b>NOTE</b></p> <p>Pedal Punch In/Out operation may be reversed depending on the particular pedal you've connected to the instrument. If necessary, change the pedal polarity to reverse the control (page 121).</p>

**3** While holding the SONG [REC] button, select the desired track by using the [1 ▲▼]–[8 ▲▼] buttons and [C]/[D] buttons.

**4** Press the SONG [PLAY/PAUSE] button to start Punch In/Out recording.

Play the keyboard at the Punch In point and stop recording at the Punch Out point.

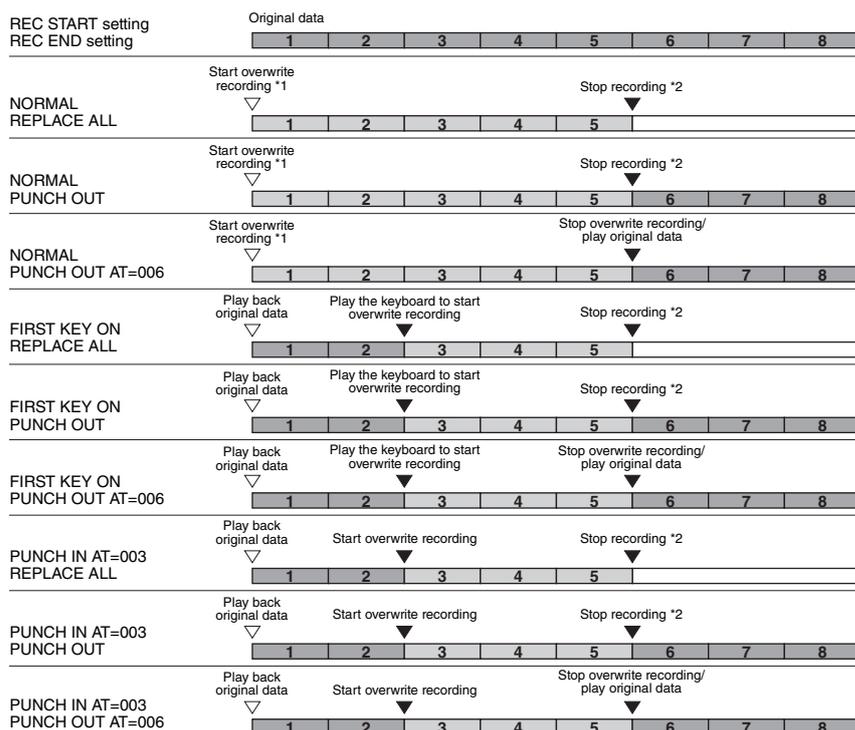
**5** Press the [I] (SAVE) button to execute the Save operation.

**NOTICE**

The recorded Song data will be lost if you select another Song or turn the power to the instrument off without executing the Save operation.

**Examples of re-recording with various Punch In/Out settings**

The Tyros4 features several different ways you use the Punch In/Out function. The illustrations below indicate a variety of situations in which selected measures in an eight-measure phrase are re-recorded.

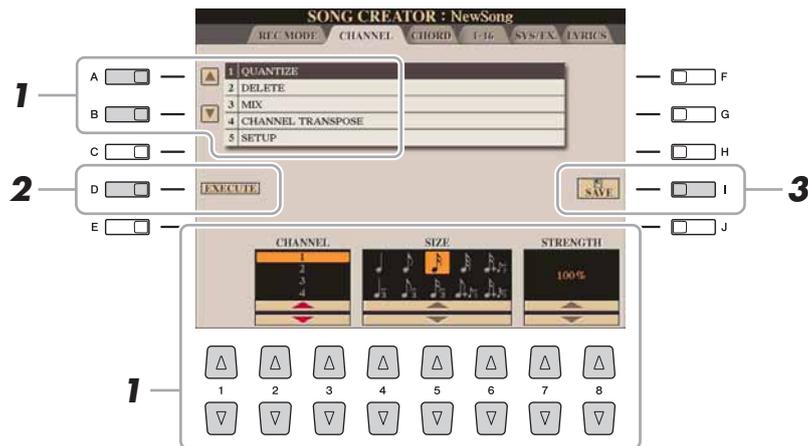


\*1 To avoid overwriting measures 1–2, start recording from measure 3.

\*2 To stop recording, press the [REC] button at the end of measure 5.

Legend:  
 [Dark Grey Box] Previously recorded data  
 [Light Grey Box] Newly recorded data  
 [White Box] Deleted data

## Editing Channel Events



- 1** In the CHANNEL Page, use the [A]/[B] buttons to select the edit menu, then edit the data by using the [1 ▲▼]–[8 ▲▼] buttons.

For details of the edit menu and available settings, see [page 71](#).

- 2** Press the [D] (EXECUTE) button to execute the operation for the current display.

After the operation (with the exception of the SETUP menu) is completed, this button changes to “UNDO,” letting you restore the original data if you are not satisfied with the operation results. The Undo function only has one level; only the previous operation can be undone.

- 3** Press the [I] (SAVE) button to execute the Save operation.

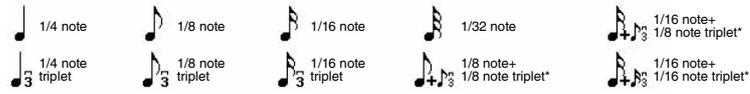
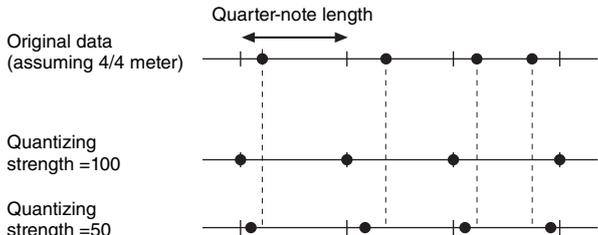
### NOTICE

The recorded Song data will be lost if you select another Song or turn the power to the instrument off without executing the Save operation.

## 1 QUANTIZE

The Quantize function allows you to align the timing of all the notes in a channel. For example, if you record the musical phrase shown at right, you may not play it with absolute precision, and your performance may have been slightly ahead of or behind the precise timing. Quantize is a convenient way of correcting for this.



[2 ▲▼]/ [3 ▲▼]	CHANNEL	Determines which MIDI channel in the Song data is to be quantized.
[4 ▲▼]- [6 ▲▼]	SIZE	<p>Selects the quantize size (resolution). For optimum results, you should set the Quantize size to the shortest note value in the channel. For example, if eighth notes are the shortest in the channel, you should use eighth note as the Quantize size.</p>  <p style="text-align: center;">After 1/8 note quantization</p> <p><b>Settings:</b></p>  <p>The three Quantize settings marked with asterisks (*) are exceptionally convenient, since they allow you to quantize two different note values at the same time. For example, when the straight eighth notes and eighth notes triplet are contained in the same channel, if you quantize by the straight eighth notes, all notes in the channel are quantized to straight eighth notes—completely eliminating any triplet feel. However, if you use the eighth note + eighth note triplet setting, both the straight and triplet notes will be quantized correctly.</p>
[7 ▲▼]/ [8 ▲▼]	STRENGTH	<p>Determines how strongly the notes will be quantized. A setting of 100% produces exact timing. If a value less than 100% is selected, notes will be moved toward the specified quantization beats according to the specified percentage. Applying less than 100% quantization lets you preserve some of the “human” feel in the recording.</p> 

## 2 DELETE

You can delete the data of the specified channel in the Song. Select the channel whose data to be deleted by using the [1 ▲▼]-[8 ▲▼] buttons, then press the [D] (EXECUTE) button to execute the operation.

### 3 MIX

This function lets you mix the data of two channels and place the results in a different channel. It also lets you copy the data from one channel to another.

[2 ▲▼]/ [3 ▲▼]	SOURCE 1	Determines the MIDI channel (1–16) to be mixed. All MIDI events of the channel specified here are copied to the destination channel.
[4 ▲▼]/ [5 ▲▼]	SOURCE 2	Determines the MIDI channel (1–16) to be mixed. Only note events of the channel specified here are copied to the destination channel. Besides the values 1–16, there is a “COPY” setting that allows you to copy the data from Source 1 to the destination channel.
[6 ▲▼]/ [7 ▲▼]	DESTINATION	Determines the channel into which the mix or copy results will be placed.

### 4 CHANNEL TRANSPOSE

This allows you to transpose the recorded data of individual channels up or down by a maximum of two octaves in semitone increments.

#### NOTE

Make sure not to transpose channels 9 and 10. In general, Drum kits are assigned to these channels. If you transpose the channels of Drum kits, the instruments assigned to each key will be changed.

[F]	CH 1–8/CH 9–16	Toggles between the two channel displays: Channels 1–8, and Channels 9–16.
[G]	ALL CH	To simultaneously set all channels to the same value, adjust the Channel Transpose for one of the channels while holding down this button.

### 5 SETUP

The current settings of the Mixing Console display and other panel settings can be recorded to the top position of the Song as the Setup data. The Mixing Console and panel settings recorded here are automatically recalled when the Song starts.

#### NOTE

Before executing the Setup operation, move the Song position to the top of the Song by pressing the SONG [STOP] button.



[1 ▲▼]– [7 ▲▼]	SELECT	<p>Determines which playback features and functions will be automatically called up along with the selected Song. The items selected here can be recorded only to the top position of the Song, except for the KEYBOARD VOICE.</p> <p><b>SONG:</b> Records the tempo setting and all settings made from the Mixing Console.</p> <p><b>KEYBOARD VOICE:</b> Records the panel settings, including the Voice selection of the keyboard parts (RIGHT 1, 2, 3, and LEFT) and their on/off status. Panel settings recorded here are same as the ones memorized to the One Touch Setting. This can be recorded at any point in a Song.</p> <p><b>SCORE SETTING:</b> Records the settings in the Score display.</p> <p><b>GUIDE SETTING:</b> Records the settings of the Guide functions including the Guide ON/OFF setting.</p> <p><b>LYRICS SETTING:</b> Records the settings in the Lyrics display.</p> <p><b>VH/MIC:</b> Records the Vocal Harmony and the microphone settings in the Mixing Console display.</p>
[8 ▲]	MARK ON	Add or remove a checkmark to the selected item. Checked items are recorded to the Song.
[8 ▼]	MARK OFF	

# Editing Chord Events, Notes, System Exclusive Events and Lyrics

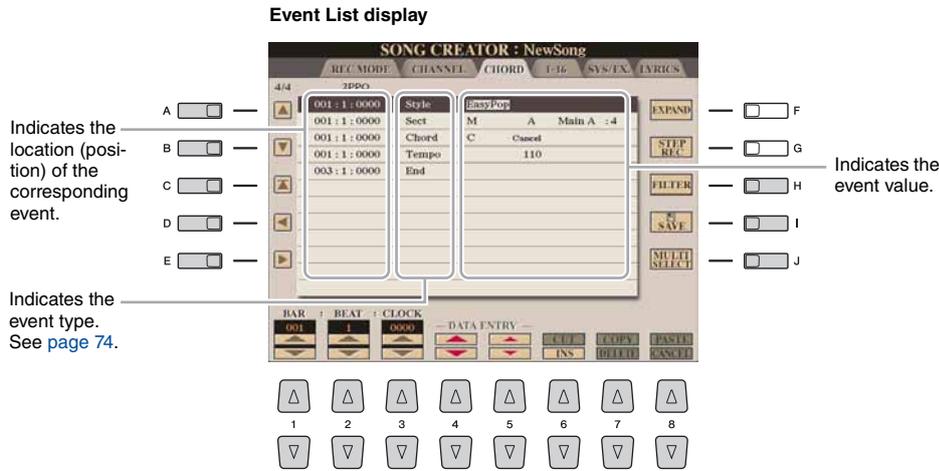
You can edit the chord events, note events, system exclusive events and lyrics in the same manner on the corresponding display: CHORD, 1-16, SYS/EX. and LYRICS. These displays are called “Event List display” because some events are shown in a list view.

**NOTE**

After you edit events in the CHORD tab display, press the [F] (EXPAND) button to convert the data into Song data.

**NOTE**

Chord section data recorded with Real-time Recording cannot be indicated and edited on this display.



[A]/[B]		Moves the cursor up/down and select the desired event.
[C]		Moves the cursor to the top (beginning of the Song).
[D]/[E]		Moves the cursor left/right and select the desired parameter of the highlighted event.
[H]	FILTER	Calls up the Filter display (page 75), letting you select only the events you wish to be shown in the event list.
[I]	SAVE	Press to save the edited Song.
[J]	MULTI SELECT	Holding this button while using the [A]/[B] buttons lets you select multiple events.
[1 ▲▼]	BAR	Determines the position (bar/beat/clock) of the data. One clock is equal to 1/1920th of a quarter note.
[2 ▲▼]	BEAT	
[3 ▲▼]	CLOCK	
[4 ▲▼]/ [5 ▲▼]	DATA ENTRY	Adjusts the event value. For coarse adjustment, use the [4 ▲▼] buttons. For fine adjustment, use the [5 ▲▼] buttons or [DATA ENTRY] dial.
[6 ▲]	CUT	Executes cut/copy/delete/paste operation.
[7 ▲]	COPY	
[7 ▼]	DELETE	
[8 ▲]	PASTE	
[6 ▼]	INS (INSERT)	Adds a new event.
[8 ▼]	CANCEL	Cancels editing and restores the original value.

## ■ Chord Events (CHORD Page)

Style	Style
Tempo	Tempo
Chord	Chord root, Chord type, On Bass Chord
Sect	Style Section (Intro, Main, Fill In, Break, Ending)
OnOff	On/off status for each part (channel) of the Accompaniment Style
CH.Vol	Volume for each part (channel) of the Accompaniment Style
S.Vol	Overall volume of the Accompaniment Style

## ■ Note Events (1-16 Page)

Note	An individual note within a Song. Includes the note number which corresponds to the key which was played, plus a velocity value based on how hard the key is played, and the gate time value (the length of a note).
Ctrl (Control Change)	Settings to control the Voice, such as volume, pan, filter and effect depth (edited via the Mixing Console described in chapter 9), etc.
Prog (Program Change)	MIDI program change number for selecting a Voice.
P.Bnd (Pitch Bend)	Data for changing the pitch of a Voice continuously. This event is generated by controlling the PITCH BEND wheel.
A.T. (Aftertouch)	This event is generated when pressure is applied to a key after the note is played.

## ■ System Exclusive Events (SYS/EX. Page)

ScBar (Score Start Bar)	Determines the top measure of a Song.
Tempo	Determines the tempo value.
Time (Time signature)	Determines the time signature.
Key (Key signature)	Determines the key signature, as well as the major/minor setting, for the music score shown on the display.
XGPrm (XG parameters)	Allows you to make various detailed changes to the XG parameters. Refer to the “MIDI Data Format” in the Data List for details. The Data List is available at the Yamaha website.
SYS/EX. (System Exclusive)	Displays the System Exclusive data in the Song. Keep in mind that you cannot create new data or change the contents of the data here; however, you can delete, cut, copy, and paste the data.
Meta (Meta event)	Displays the SMF meta events in the Song. Keep in mind that you cannot create new data or change the contents of the data here; however, you can delete, cut, copy, and paste the data.
Marker (Song Position Marker)	Displays the Song Position Marker (SPJ-01–04) in the Song. Keep in mind that you cannot create new data or change the contents of the data here; however, you can delete, cut, copy, and paste the data.
Audio (Audio Recorder/Player control)	This controls Audio Song playback via Song data. This event is used to playback a MIDI Song and Audio Song in succession; the Audio Song cannot be synchronized to the MIDI Song playback.

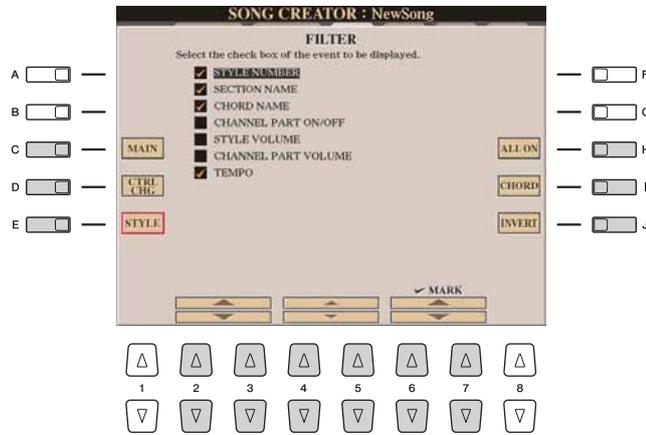
## ■ Lyrics Events (LYRICS Page)

Name	Allows you to enter the Song name.
Lyrics	Allows you to enter lyrics.
Code	<b>CR:</b> Enters a line break in the lyrics text. <b>LF:</b> Clears the currently displayed lyrics and displays the next set of lyrics.

## Displaying Specific Types of Events

In the Event List displays, various types of events are shown. It may sometimes be difficult to pinpoint the ones you want to edit. This is where the Filter function comes in handy. It lets you determine which event types will be shown in the Event List displays.

- 1** Press the [H] (FILTER) button in the CHORD, 1-16, SYS/EX. or LYRICS displays.
- 2** Checkmark the desired item to be displayed.



[C]	MAIN	Displays all main types of events.
[D]	CTRL. CHG	Displays all specific Control Change message events.
[E]	STYLE	Displays all types of Style playback related events.
[H]	ALL ON	Checkmarks all event types.
[I]	NOTE/ALL OFF/ CHORD	“NOTE” or “CHORD” selects only NOTE/CHORD data. “ALL OFF” removes all checkmarks.
[J]	INVERT	Reverses the checkmark settings for all boxes. In other words, this enters checkmarks to all boxes that were previously unchecked and vice versa.
[2 ▲▼]- [5 ▲▼]		Select and event type to be checked or unchecked.
[6 ▲]/ [7 ▲]	MARK ON	Enters/removes the checkmark for the selected event type. The checked event types can be shown on the CHORD, 1-16, SYS/EX. or LYRICS Page.
[6 ▼]/ [7 ▼]	MARK OFF	

- 3** Press the [EXIT] button to execute the settings.

## Editing Song Position Markers

This section covers two additional Marker-related features and details. For basic information on using the Markers for jump playback and loop playback, refer to the Owner's Manual.

### ■ Jump Markers

The Markers explained in the Owner's Manual are also called "Jump Markers." In the Event List display, they are indicated as "SPJ-01"–"SPJ-04" (page 74). In the Event List, they can be moved freely to other positions and can even be copied to create identical Marker numbers at other positions. When the same Marker number is contained at different locations in the Song, the latest occurring one is used as a "Loop End Marker" (below).

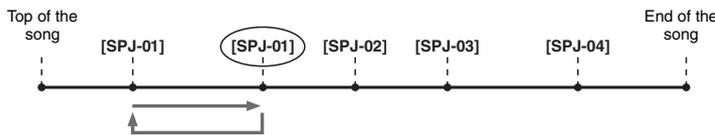
### ■ Loop End Marker

Loop End Markers can be used for putting additional Markers in Song data, providing even greater versatility. Creating a Loop End Marker is done within the Event List (and not with the [SP 1]–[SP 4] buttons on the panel), by simply copying one "SPJ" Jump Marker event to another position in the Song.

For basic information on loop playback between successive Jump Markers, refer to the Owner's Manual.

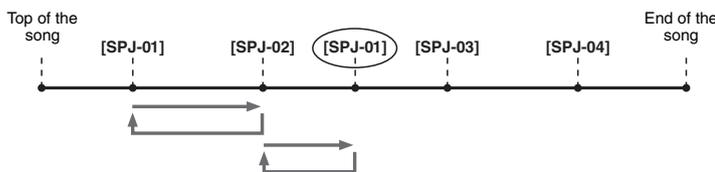
The examples below show how Loop End Markers can be used in Song playback.

#### Example 1



- If the Song is playing back between the two SPJ-01 points, turning on [LOOP] will result in a playback loop between those points.
- If the Song is playing back between the second SPJ-01 and SPJ-02 and [LOOP] is turned on, playback jumps back to the first SPJ-01 and loops between two SPJ-01 points.

#### Example 2



- If the Song is playing back between SPJ-02 and the second SPJ-01, turning on [LOOP] will result in a playback loop between those points.
- If the [LOOP] button is turned on while the Song is playing back between the top of the Song and SPJ-02, playback will loop between SPJ-01 and SPJ-02.
- If the Song is playing back between the second SPJ-01 and SPJ-03 and [LOOP] is turned on, playback jumps back to SPJ-02 and loops between SPJ-02 and the second SPJ-01 (Loop End Marker).

In the examples above, the actual data of the Loop End Marker is identical to the event it was copied from—only the location of the copied Marker provides it with this different function.

In Song playback, the markers formatted as "SPJ-xxxx" (xxxx: any character except 01–04 and any number of letters is OK) are handled as Loop End Markers. Since the Event List in the Song Creator function does not let you freely name Markers, the instructions above are recommended for creating new Markers. However, with sequence software on a computer, you can create new Markers and assign appropriate names to them. By naming Markers in this way, you can easily distinguish between Loop End Markers and Jump Markers in the Event List.

#### NOTE

Loop playback problems may occur if successive Markers are too close to one another.

#### NOTE

When the effect settings of the jump destination (the position you're jumping to) differ from those at the jump source, glitches or drop-outs in the sound may result. This is because of limitations in the effect processors of the Tyros4.

#### NOTE

When using the Guide function (page 58) with jump playback, keep in mind that the Guide indication may not be able to stay in time with the jumps.

### Contents

Multi Pad Creating (Multi Pad Creator).....	77
• Multi Pad Realtime Recording.....	77
• Multi Pad Step Recording (EDIT).....	78
Multi Pad Editing.....	79

## Multi Pad Creating (Multi Pad Creator)

This feature let you create your original Multi Pad phrases, and also allows you to edit existing Multi Pad phrases to create your own.

### Multi Pad Realtime Recording

- 1** Select a Multi Pad Bank to be edited or created from the display called up when you press the MULTI PAD CONTROL [SELECT] button.
- 2** Call up the operation display.  
[DIGITAL RECORDING] → [C] MULTI PAD CREATOR



- 3** If necessary, select the desired Voice from VOICE category selection buttons.  
Only the Right 1 part will be recorded.  
After selection, press the [EXIT] button to return to the previous display.
- 4** Select a particular Multi Pad for recording by pressing any of the [A], [B], [F] and [G] buttons. If you want to create the Multi Pad data from scratch, press the [C] (NEW BANK) button to call up an empty bank.
- 5** Press the [H] (REC) button to enter the recording standby status for the Multi Pad selected in step 4.

## 6 Start recording.

Recording begins automatically as soon as you play on the keyboard.

You can also start recording by pressing the STYLE CONTROL [START/STOP] button. This lets you record as much silence as you want before the start of the Multi Pad phrase.

If Chord Match is set to on for the Multi Pad to be recorded, you should record using the notes of the C major seventh scale (C, D, E, G, A and B).



C = Chord note  
C, R = Recommended note

### NOTE

The SA, SA2 and Organ Flutes Voices cannot be recorded. If one of these Voices is set for RIGHT1 part, it will be replaced with a Piano Voice.

## 7 Stop recording.

Press the [H] (STOP) button or the panel MULTI PAD CONTROL [STOP] button or the STYLE CONTROL [START/STOP] button to stop recording when you've finished playing the phrase.

## 8 Listen back to your newly recorded phrase, by pressing the appropriate MULTI PAD button, [1]–[4]. To re-record the phrase, repeat steps 5–7.

## 9 Turn Repeat of each pad On or Off by using the [1 ▲▼]–[4 ▲▼] buttons.

If the Repeat parameter is on for the selected pad, playback of the corresponding pad will continue until the MULTI PAD [STOP] button is pressed. When you press the Multi Pads for which Repeat is turned on during Song or Style playback, playback will start and repeat in sync with the beat.

If the Repeat parameter is off for the selected pad, playback will end automatically as soon as the end of the phrase is reached.

## 10 Turn Chord Match of each pad On or Off by using the [5 ▲▼]–[8 ▲▼] buttons.

If the Chord Match parameter is on for the selected pad, the corresponding pad is played back according to the chord specified in the chord section of the keyboard generated by turning [ACMP] on, or specified in the LEFT Voice section of the keyboard generated by turning [LEFT] on (when turning the [ACMP] off).

## 11 Press the [D] (NAME) button, then enter a name for each Multi Pad, as desired.

## 12 Press the [I] (SAVE) button, then save the Multi Pad data as a Bank containing a set of four Pads.

### NOTE

Multi Pads indicated with the following icon (hand on fretboard) are created with Guitar NTT (page 51) to produce the natural chord voicing of the guitar. Because of this, if the Chord Match setting is set to off, the Multi Pads may not sound appropriately.



## Multi Pad Step Recording (EDIT)

Step Recording can be executed in the EDIT page. After selecting a Multi Pad in step 4 on page 77, press the TAB [▶] button to select the EDIT Page.

The EDIT page indicates the Event list, which lets you record notes with absolutely precise timing. This Step Recording procedure is essentially the same as that for Song Recording (pages 61–64), with the exception of the points listed below:

- There is no LCD button for switching channels, since Multi Pads contain data for only a single channel.
- In the Multi Pad Creator, only the channel events and System Exclusive messages can be entered. Chord and Lyrics events are not available. You can switch between the two types of Event Lists by pressing the [F] button.

# Multi Pad Editing

From the MULTI PAD EDIT display, you can rename, copy or delete a Multi Pad.

- 1** Press the MULTI PAD CONTROL [SELECT] button to call up the Multi Pad Bank Selection display, then select a Bank to be edited.
- 2** Press the [8 ▼] (EDIT) button to call up the MULTI PAD EDIT display.
- 3** Select a particular Multi Pad to be edited by pressing any of the [A], [B], [F] and [G] buttons.
- 4** Edit the selected Pad as desired.



[1 ▼]	NAME	Changes the name of each Multi Pad.
[3 ▼]	COPY	Copies the Multi Pad(s). See below.
[5 ▼]	DELETE	Deletes the selected Multi Pads.

For details on the naming and deleting procedures, refer to the Owner's Manual.

### Copying the Multi Pad

- 1** Press the [3 ▼] button in step 4 above.
- 2** Select the Multi Pads to be copied by using the [A], [B], [F] and [G] buttons, then press the [7 ▼] (OK) button.  
The selected Multi Pad(s) is copied to the clipboard.
- 3** Select the destination location by using the [A], [B], [F] and [G] buttons. If you want to copy the selected Pad(s) to another bank, press the [8 ▲] (UP) button to call up the Multi Pad Bank Selection display, select the desired bank, press the [8 ▼] (EDIT) button, then select the destination.
- 4** Press the [4 ▼] (PASTE) button to execute the Copy operation.

# 5

# Music Finder

– Calling Up Ideal Panel Settings (Voice, Style, etc.) for Each Song –

## Contents

Creating a Set of Favorite Records .....	80
Editing Records.....	81
Saving the Record as a Single File.....	82
• Calling Up Music Finder Records Saved to USER/HD/USB .....	82
Viewing Record Information on the Internet (MUSIC FINDER Plus) .....	83

## Creating a Set of Favorite Records

As convenient as the Search function is in exploring the depths of the Music Finder records, you may want to create a custom “folder” of your favorite records—so you can quickly call up the panel settings and song data you use frequently.

- 1** Select the desired record from the MUSIC FINDER display.
- 2** Press the [H] (ADD TO FAVORITE) button to add the selected record to the FAVORITE display, then press the [G] (YES) button to actually add the record.



- 3** Call up the FAVORITE display by using the TAB [◀][▶] buttons, and check to see if the record has been added.

### Deleting Records from the FAVORITE Display

- 1** Select the record you want to delete from the FAVORITE display.
- 2** Press the [H] (DELETE FROM FAVORITE) button, then press the [G] (YES) button to actually delete the record.

# Editing Records

You can create a new record by editing the currently selected record. The newly created records are automatically saved in the internal memory.

- 1** Select the desired record to be edited in the MUSIC FINDER display.
- 2** Press the [8 ▲▼] (RECORD EDIT) button to call up the EDIT display.
- 3** Edit the record as desired.



[A]	MUSIC	Edits the song name. Pressing the [A] button calls up the popup window to enter the song name.
[B]	KEYWORD	Edits the keyword. Pressing the [B] button calls up the popup window to enter the keyword.
[C]	STYLE/SONG/ AUDIO	Changes the Style in case of STYLE record (panel settings). Pressing the [C] button calls up the Style Selection display. After selecting the desired Style, press the [EXIT] button to return back to the Edit display. For SONG or AUDIO records, this field cannot be edited.
[D]	BEAT	Changes the beat (time signature) of the record for search purposes. For SONG or AUDIO records, this field cannot be edited.  <b>NOTE</b> Keep in mind that the Beat setting made here is only for the Music Finder search function; this does not affect the actual Beat setting of the Style itself.
[E]	FAVORITE	Selects whether the edited record is entered to the FAVORITE display or not.
[1 ▲▼]	TEMPO	Changes the Tempo. For SONG or AUDIO records, this field cannot be changed.
[2 ▲▼]	SECTIONS	Selects the section that will automatically be called up set when the record is selected. This is useful, for example, when you want to have a selected Style automatically be set up to start with an Intro section. For SONG or AUDIO records, this field cannot be changed.
[4 ▲▼]		
[5 ▲▼]/ [6 ▲▼]	GENRE	Selects the desired genre.
[7 ▲▼]	GENRE NAME	Creates a new genre.
[I]	DELETE RECORD	Deletes the currently selected record.

## 4 Enter the edits you've made to the record as described below.

### Creating a new record

Press the [J] (NEW RECORD) button. The record is added to the ALL display. If you've entered the record to the FAVORITE display in step 3, the record is added to both the ALL display and the FAVORITE display.

### Overwriting an existing record

Press the [8 ▲] (OK) button. If you set the record as a Favorite in step 3, the record is added to the FAVORITE display. When you edit the record in the FAVORITE display, the record is overwritten.

To cancel and quit the Edit operation, press the [8 ▼] (CANCEL) button.

## Saving the Record as a Single File

The Music Finder feature handles all the Records including the presets and additionally created records as a single file. Keep in mind that individual records (panel settings and song data) cannot be handled as separate files.

### 1 Call up the Save display.

[MUSIC FINDER] → [7 ▲▼] FILES

### 2 Press the TAB [◀][▶] buttons to select the location for saving (USER/HD/USB).

### 3 Press the [6 ▼] (SAVE) button to save the file.

All records are saved together as a single file.

## Calling Up Music Finder Records Saved to USER/HD/USB

### 1 Call up the File Selection display.

[MUSIC FINDER] → [7 ▲▼] FILES

### 2 Use the TAB [◀][▶] buttons to select USER/HD/USB.

### 3 Press the [A]–[J] buttons to select the desired Music Finder file.

When the file is selected, a message is displayed according to the content of the file. Press the desired button.

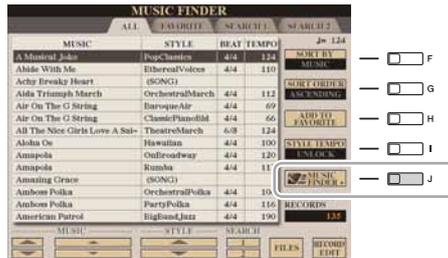
[F]	REPLACE	All Music Finder records currently in the instrument are deleted and replaced with the records of the selected file. <b>NOTICE</b> Selecting "REPLACE" automatically deletes all your original records from internal memory. Make sure that all important data has been archived to another location beforehand.
[G]	APPEND	The records called up are added to the record currently in the instrument.
[H]	CANCEL	Selecting this button aborts the operation (the selected file is not called up).

## Viewing Record Information on the Internet (MUSIC FINDER Plus)

- 1** Make sure that your instrument is connected to the Internet, and press the [MUSIC FINDER] button to call up the MUSIC FINDER display.
- 2** Select the record whose information you want to view by using the [1 ▲▼]–[5 ▲▼] buttons or the [DATA ENTRY] dial.
- 3** Press the [J] (MUSIC FINDER +) button to open the Web page.  
The information of the selected record is shown.

 **NOTE**

The available contents of the Music Finder Plus service are subject to change.



- 4** Press the [EXIT] button to exit the browser screen and return to the MUSIC FINDER display.

# 6

# Registration Memory

## – Saving and Recalling Custom Panel Setups –

### Contents

Disabling Recall of Specific Items (Freeze) .....	84
Calling Up Registration Memory Numbers in Order (Registration Sequence) .....	85
• Confirming the Registration Sequence Setting in the Main Display .....	86
• Saving the Registration Sequence Settings .....	86

## Disabling Recall of Specific Items (Freeze)

Registration Memory lets you recall all the panel setups you made with a single button press. However, there may be times that you want certain items to remain the same, even when switching Registration Memory setups. For example, you may want to switch Voices or effect settings while keeping the same accompaniment Style. This is where the Freeze function comes in handy. It lets you maintain the settings of certain items and leave them unchanged, even when selecting other Registration Memory buttons.

### 1 Call up the operation display.

[FUNCTION] → [E] REGIST SEQUENCE/FREEZE/VOICE SET → TAB  
[◀][▶] FREEZE

### 2 Determine the items to be “frozen.”

Select the desired item by using the [2 ▲▼]–[7 ▲▼] buttons, then enter or remove the checkmark by using the [8 ▲] (MARK ON)/[8 ▼] (MARK OFF) buttons.



### 3 Press the [EXIT] button to exit from the operation display.

### 4 Press the [FREEZE] button on the panel to turn the Freeze function on.

#### NOTICE

Settings in the REGISTRATION FREEZE display are automatically saved to the instrument when you exit from this display. However, if you turn the power off without exiting from this display, the settings will be lost.

# Calling Up Registration Memory Numbers in Order (Registration Sequence)

As convenient as the Registration Memory buttons are, there may be times during a performance when you want to quickly switch between settings—without having to take your hands from the keyboard. The convenient Registration Sequence function lets you call up the eight setups in any order you specify, by simply using the TAB [◀][▶] buttons or the pedal as you play.

**1** Select the desired Registration Memory bank to program a sequence.

**2** Call up the operation display.

[FUNCTION] → [E] REGIST SEQUENCE/FREEZE/VOICE SET → TAB [◀][▶] REGISTRATION SEQUENCE

**3** If you intend to use a pedal to switch Registration Memory settings, specify here how the pedal will be used—to advance or to reverse through the sequence.

Use the [C] (REGIST+ PEDAL) button to select the pedal for advancing through the sequence.

Use the [D] (REGIST- PEDAL) button to select the pedal for reversing through the sequence.

**NOTE**

If you assign the function to a pedal here, the other function set in the Foot Pedal display (page 121) becomes invalid.

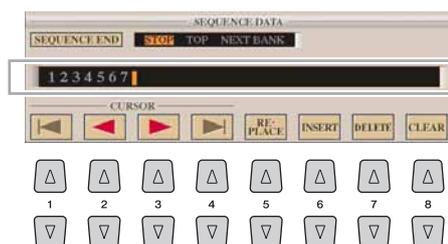


**4** Use the [E] (SEQUENCE END) button to determine how Registration Sequence behaves when reaching the end of the sequence.

- **STOP**..... Pressing the TAB [▶] button or the “advance” pedal has no effect. The sequence is “stopped.”
- **TOP**..... The sequence starts again at the beginning.
- **NEXT BANK** ..... The sequence automatically moves to the beginning of the next Registration Memory Bank in the same folder.

**5** Program the Sequence order, from left to right.

Press one of the REGISTRATION MEMORY [1]–[8] buttons on the panel, then press the [6 ▲▼] (INSERT) button to input the number.



[1 ▲▼]– [4 ▲▼]	CURSOR	Moves the cursor.
[5 ▲▼]	REPLACE	Replaces the number at the cursor position with the currently selected Registration Memory number.
[6 ▲▼]	INSERT	Inserts the number of the currently selected Registration Memory number before the cursor position.
[7 ▲▼]	DELETE	Deletes the number at the cursor position.
[8 ▲▼]	CLEAR	Deletes all numbers in the sequence.

**6** Press the [F] button to turn the Registration Sequence function on.

**7** Press the [EXIT] button to exit from the operation display.

**NOTICE**

Settings in the REGISTRATION SEQUENCE display are automatically saved to the instrument when you exit from this display. However, if you turn the power off without exiting from this display, the settings will be lost.

## Confirming the Registration Sequence Setting in the Main Display

In the Main display, you can confirm whether the Registration Memory numbers are called up according to the sequence programmed above.



The Registration Sequence is indicated at the top right of the Main display, letting you confirm the currently selected number.

To shift the Registration Memory numbers, use the TAB [◀][▶] buttons when the Main display is shown. When pedal operation has been set in step 3 on page 85, you can also use a pedal to select the Registration Memory numbers in order. The pedal can be used for Registration Sequence no matter which display is called up (except for the display in step 3 on page 85).

To return to the first Sequence, press the TAB [◀] and [▶] buttons simultaneously when the Main display is shown. This cancels the currently selected Sequence number (the box indicator at the top right goes out). The first Sequence will be selected by pressing one of the TAB [◀][▶] buttons or by pressing the pedal.

**NOTE**

The pedal can be used for Registration Sequence no matter which display is called up (except for the display in step 3 on page 84).

## Saving the Registration Sequence Settings

The settings for the Sequence order and how Registration Sequence behaves when reaching the end of the sequence (SEQUENCE END) are included as part of the Registration Memory Bank file. To store your newly programmed Registration Sequence, save the current Registration Memory Bank file.

**1** Press the REGIST BANK [+] and [-] buttons simultaneously to call up the REGISTRATION BANK Selection display.

**2** Press the [6 ▼] button to save the Bank file.

**NOTICE**

Keep in mind that all Registration Sequence data is lost when changing Registration Memory Banks, unless you've saved it with the Registration Memory Bank file.

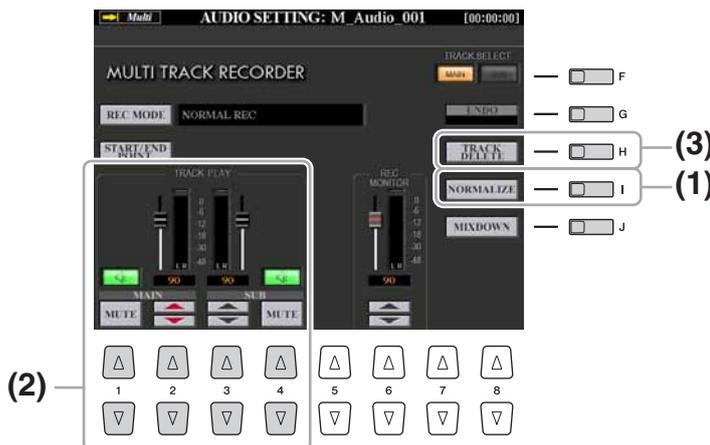
### Contents

Editing the Recorded Data (Multi Track Recording File) .....	87
• (1) Normalize .....	88
• (2) Adjusting the Volume Balance .....	88
• (3) Deleting a Track.....	88
Re-recording the Multi Track Recording File.....	89
• NORMAL REC / NORMAL REC (PLUS PLAYBACK) .....	89
• PUNCH IN OUT / PUNCH IN OUT (MERGE) .....	90
Setting the Start/End Points of the Audio (Multi Track Recording File) ..	92
Playlist Mode.....	93
• Creating a Playlist .....	93
• Playing a Playlist.....	93
• Playlist Controls .....	94

## Editing the Recorded Data (Multi Track Recording File)

You can edit the data which is recorded in Multi Track Recording.

- 1** Press the AUDIO RECORDER/PLAYER [SELECT] button several times to call up the Audio (Multi) File Selection display and select the recorded data to be edited.
- 2** Press the AUDIO RECORDER/PLAYER [SETTING] button to call up the Multi Track Recorder display.



### NOTICE

The data is automatically saved in the internal HDD, but you may want to backup your data before editing. Copying is the easiest way to do this. However, since copying within a folder in the HDD is not possible, you need to create a new folder. For details on file management, refer to the Owner's Manual.

## (1) Normalize

---

Normalize raises the volume of the recorded audio to the optimum level. Use this to make the recorded audio as loud as possible, without distortion. Technically, this operation scans the recorded file for the highest level, then raises the volume of the entire file so that the highest peak is set to the maximum, non-distorting level. Normalization is calculated for the loudest signal found in either channel of the stereo recording and the same gain is applied to both channels.

- 1** Press the [F] (TRACK SELECT) button to select the track to be normalized.
- 2** Press the [I] (NORMALIZE) button.
- 3** At the prompt, press the [G] (OK) button to start normalizing the selected track.

To cancel the operation, press the [H] (CANCEL) button.

## (2) Adjusting the Volume Balance

---

On the TRACK PLAY meter, you can adjust the volume of Main and Sub tracks separately. Use the [2 ▲▼]/[3 ▲▼] buttons or sliders to adjust the Main/Sub track volume. By using the [1 ▲▼]/[4 ▲▼] buttons, you can also mute the Main/Sub tracks.

### NOTE

To control overall volume of the audio file, press the [BALANCE] button once or twice to call up the BALANCE (2/2) display, then use the [5 ▲▼] slider or buttons.

## (3) Deleting a Track

---

- 1** Press the [F] (TRACK SELECT) button to select the track to be deleted.
- 2** Press the [H] (TRACK DELETE) button.
- 3** At the prompt, press the [G] (OK) button to start deleting the selected track.

If you want to undo the operation, press the [G] (UNDO) button just after pressing the [G] (OK) button.

## Re-recording the Multi Track Recording File

The created Multi Track recording data can be re-recorded in the following five ways.

- Replace the whole data: NORMAL REC .....See below
- Mix the recorded data: NORMAL REC (PLUS PLAYBACK).....See below
- Replace a certain range of the data: PUNCH IN/OUT .....See [page 90](#)
- Overdub a certain range of the data: PUNCH IN/OUT (MERGE) .....See [page 90](#)
- Merge the Main and Sub tracks to the Main track: BOUNCE  
.....See the Owner’s Manual.

### NOTE

Re-recording of the data repeatedly will result in deterioration of the sound quality.

### NOTICE

The data is automatically saved in the internal HDD, but you want to backup your data before re-recording. Copying is the easiest way to do this. However, since copying within a folder in the HDD is not possible, you need to create a new folder. For details on file management, refer to the Owner’s Manual.

## NORMAL REC / NORMAL REC (PLUS PLAYBACK)

You can replace the whole audio data of a track by NORMAL REC or mix the audio data with the previous one by NORMAL REC (PLUS PLAYBACK). The NORMAL REC (PLUS PLAYBACK) method does not add any tracks but simply mixes the new recording to the existing data. After stopping recording, the data will be erased from the stop point.

### NOTE

Since you will be overdubbing parts onto this audio, it’s best to keep the first recording simple. For example, you may want to record just a rhythm pattern (such as by playing back a Style) or a simple bass riff over which you can add other parts.

- 1** Execute Steps 1–2 in “Editing the Recorded Data (Multi Track Recording File)” on [page 87](#) to select the recorded data to be re-recorded.
- 2** Use the [F] (TRACK SELECT) button to select the track to be re-recorded.



- 3** Use the [B]/[C] buttons to select a recording method.
  - Replace the whole data: NORMAL REC
  - Mix the recorded data: NORMAL REC (PLUS PLAYBACK)
- 4** If you select “NORMAL REC (PLUS PLAYBACK),” play back the recorded audio and practice the part that you want to overdub while the audio is playing. Change the volume settings if necessary.

If you wish to add a keyboard-played Voice from the Tyros4, select the desired Voice. If you wish to record your singing voice or an external instrument, connect a microphone or instrument and make the appropriate settings. Adjust the Track Play and Rec Monitor levels here as desired.

- 5** Press the [REC] button to enable recording.

## 6 Press the [PLAY/PAUSE] button to start recording.

Play the keyboard (or sing, etc.) and record your performance.

## 7 When finished recording, press the [STOP] button.

After stopping recording, the data will be erased from the stop point.

## 8 To hear your new recording, press the [PLAY/PAUSE] button.

If you've made a mistake or you're not completely satisfied with your performance, press the [EXIT] button to return to the Multi Track Recorder display, then undo the NORMAL REC/NORMAL REC (PLUS PLAYBACK) operation by pressing the [G] (UNDO) button.

### NOTE

The playback sound of the other (not re-recorded) track is not recorded.

### NOTE

The Audio Recorder/Player automatically reduces the level of the previous track by a certain, slight amount to accommodate the new recording. This is done to minimize possible distortion. You can use the Normalize effect to maximize the volume of the overall sound. For details, see [page 88](#).

## PUNCH IN OUT / PUNCH IN OUT (MERGE)

This method of recording can only be used on an existing recording. It allows you to re-record over a specific part of the already-recorded material. You can replace the original part with the new recording by PUNCH IN/OUT, or keeping the original and mixing it with the new by PUNCH IN/OUT (MERGE). This lets you either correct a mistake in the recording or overdub new parts onto the original recording.

Keep in mind that the parts before and after the Punch In/Out section are not recorded over and remain as the original data—they play back normally to guide you in and out of the recording.



### NOTE

You can re-record over only one range at one time.

### NOTE

The beginning and ending of the recorded data using the Punch In/Out function is faded in/out automatically. This is done to minimize possible noise at the beginning and ending of the recorded data. We recommend that you specify the beginning and ending points at sections in the data where the volume is low.

## 1 Execute Steps 1–2 in “Editing the Recorded Data (Multi Track Recording File)” on [page 87](#) to select the recorded data to be re-recorded.

## 2 Use the [F] (TRACK SELECT) button to select the track to be re-recorded.



## 3 Use the [B]/[C] buttons to select a recording method.

- Replace a certain range of the data: PUNCH IN/OUT
- Overdub a certain range of the data: PUNCH IN/OUT (MERGE)

 NEXT PAGE

#### 4 Select the desired Punch In/Out Mode, using the [1 ▲▼]/[2 ▲▼] (MODE) buttons.



- **MANUAL** ..... This lets you manually execute Punch In/Out recording by using the Audio Recorder/Player transport buttons ([REC], [PLAY/PAUSE], etc.).
- **PEDAL**..... This lets you manually execute Punch In/Out recording by using a connected footswitch to the FOOT PEDAL 2 jack.
- **AUTO**..... This lets you specify the Punch In and Out points, allowing automatic Punch In/Out recording (see below).

#### Specifying the recording range in AUTO mode

If you select AUTO as the punch in/out recording method, specify the recording range and practice the recording by using the Rehearsal function.

**1** Specify the punch in/out range by pressing the [3 ▲▼]/[5 ▲▼] (SET) buttons at the punch in/out point during the audio song playback.

**2** If you move the punch in/out point slightly, use the Nudge function. In this Nudge function, you can move the punch in/out point slightly (even in millisecond units) while listening to the playback.

**2-1** Press the [7 ▲▼] (NUDGE) button to show the Nudge Play display.

**2-2** Use the [DATA ENTRY] dial and AUDIO RECORDER/PLAYER [PREV]/[NEXT] button to move the NUDGE DATA POSITION to the desired punch in/out position while listening to the playback (500 milliseconds loop playback before/after the specified point). The [DATA ENTRY] dial lets you adjust the point in seconds and the [PREV]/[NEXT] buttons lets you adjust in milliseconds.



**2-3** Press the [7 ▲▼] (MODE) button to select After/Before. “After” repeats 500 milliseconds after the Nudge Data Position and “Before” repeats 500 milliseconds before the Nudge Data Position when you playback the data in the next step.

**2-4** Press the [3 ▲▼]/[5 ▲▼] (SET) button to set the moved point. To reset the point to the start/end point of the data, press the [4 ▲▼]/[6 ▲▼] (RESET) button.

**2-5** Press the [8 ▲▼] (CLOSE) button.

#### NOTE

The smallest possible range of the Auto punch in/out function is 100 milliseconds.

**3** Use the REHEARSAL function to practice the recording before the actual recording.

**3-1** Press the [8 ▲▼] (REHEARSAL) button. “EXECUTING” is shown above the [8 ▲▼] buttons.

**3-2** Press the AUDIO RECORDER/PLAYER [REC] button and press the [PLAY/PAUSE] button. The audio song is played back repeatedly starting four seconds before the punch in point to four seconds after the punch out point. Play the keyboard or sing the desired part in practice. In this rehearsal function, recording is not started.

**3-3** Press the AUDIO RECORDER/PLAYER [STOP] button.

#### NOTE

Repeat playback of the rehearsal function is automatically stopped after playing back 99 times.

## 5 Record the specific part of the audio song using the one of the methods below.

### Manual

Press the AUDIO RECORDER/PLAYER [REC] button and press the [PLAY/PAUSE] button to engage the record mode, then press the [REC] and [PLAY/PAUSE] buttons simultaneously to actually record. To stop recording, press the AUDIO RECORDER/PLAYER [STOP] button. Pressing the AUDIO RECORDER/PLAYER [PLAY/PAUSE] button during recording pauses the recording.

### Pedal

Press the AUDIO RECORDER/PLAYER [REC] button and press the [PLAY/PAUSE] button to engage the record mode, then press and hold the footswitch. The point at which you press the footswitch is the punch in point and the point at which you release the pedal is the punch out point.

### Auto

Press the AUDIO RECORDER/PLAYER [REC] button and press the [PLAY/PAUSE] button. Recording automatically starts and stops at the specified point in “Specifying the recording range in AUTO mode” on [page 91](#). The audio song playback automatically stops four seconds after the punch out point.

## 6 To hear your new recording, press the [PLAY/PAUSE] button.

If you’ve made a mistake or you’re not completely satisfied with your performance, press the [EXIT] button to return to the Multi Track Recorder display then undo the Punch In/Out operation by pressing the [G] (UNDO) button.

### NOTE

The playback sound of the other (not recorded) track is not recorded.

## Setting the Start/End Points of the Audio (Multi Track Recording File)

This function lets you set the Start and End points for the audio file. This action is non-destructive and affects only the playback of the data; it does not actually delete any data from the start or end of the file.

**1** Execute Step 1–2 in “Editing the Recorded Data (Multi Track Recording File)” on [page 87](#) to select the desired audio data.

**2** Press the [C] (START/END POINT) button.

**3** Specify the Start/End point.

The operation of specifying the Start/End points is same as specifying the punch in/out points. For instructions, see “Specifying the recording range in AUTO mode” on [page 91](#).

**4** Press the [F] (OK) button to enter the new settings to the file.

To cancel the operation, press the [G] (CANCEL) button.

### NOTICE

The data is automatically saved in the internal HDD, but you want to backup your data before re-recording. Copying is the easiest way to do this. However, since copying within a folder in the HDD is not possible, you need to create a new folder. For details on file management, refer to the Owner’s Manual.

## Playlist Mode

The Playlist is a convenient feature within the Audio Recorder/Player that lets you collect and organize audio files (Simple and Multi Track files) for automatic playback in “juke-box” fashion. The Playlist mode can be active in the background (for example, when the Main display is selected), letting you play the listed files whenever you wish during your performance.

The “Multi/Simple/Playlist” indicator at the upper left of the display shows whether the Audio Recorder/Player is set to the Multi/Simple mode (playback of a single file) or the Playlist mode (automatic playback of multiple files).

### NOTE

The Simple and Multi Track files can be added to the Playlist, and from within the Playlist mode, the Simple and Multi Track files can be freely played back.

## Creating a Playlist

Once you have a number of audio files on the internal hard disk drive, you can add those files to the Playlist. The files can be put in any order and can be entered any number of times (in other words, a single file can have multiple instances in a Playlist).

### NOTE

A Playlist can contain a maximum of 500 audio files.

**1** Press the AUDIO RECORDER/PLAYER [SELECT] button several times to call up the desired Audio File Selection display (Audio (Multi) or Audio (Simple)).

**2** Use the TAB [◀][▶] buttons to select the location (HD or USB) of the desired audio file.

**3** Add the desired audio file to the Playlist.

**3-1** Press the [6 ▲] (ADD TO PLAYLIST) button.

The selected file name is highlighted. You can continue to select additional files here, as many as desired. If multiple pages (P1, P2, ...) are shown at the bottom, you can select files from these displays, too. To select all the files in the current folder, press the [6 ▼] (ALL) button.

**3-2** Press the [7 ▼] (OK) button to confirm the selection.

**4** Press the AUDIO RECORDER/PLAYER [SELECT] button several times to call up the Playlist display, then check the Playlist to confirm that the files have been added.

If the Playlist already has audio files, additional files are automatically put at the end of the list. Added files are also automatically selected (checkmarked) for playback.

**5** Save the Playlist.

Press the [1 ▲▼] (FILES) button, then save the Playlist to the USER drive, internal hard disk drive or USB flash memory.

### NOTE

If you want to select all but a few of the files in the folder, a quick method is to use the [6 ▼] (ALL) button to select all of the files, then use the [A]–[J] buttons to de-select specific files.

### NOTE

If you change the file icon after adding to the Playlist, the audio file cannot be recognized from the Playlist.

## Playing a Playlist

Once you’ve created and/or edited a Playlist and you’ve enabled the Playlist mode, you can play back the files in the list—at any time during your performance.

Keep in mind that playback of files is not instantaneous. Since the Audio Recorder/Player needs to load each file before playing it, playback pauses roughly one or two seconds between files.

**1** Press the AUDIO RECORDER/PLAYER [SELECT] button several times to call up the Playlist display.

**2** Press the [1 ▲▼] (FILES) buttons to call up the PLAYLIST FILE display, then select the desired Playlist by using the [A]–[J] buttons.

**NOTE**

The [SELECT] button toggles between the Audio and Playlist displays within the Audio Recorder/Player function.

**3** Press the [EXIT] button to return to the Playlist display.

**4** Use the [5 ▲▼]/[6 ▲▼] buttons to select a file for playback, then actually enter it by pressing the [7 ▲▼] (SELECT) button.

You can also use the [DATA ENTRY] dial to move the cursor and press the [ENTER] button to actually select the song.

To have the files play back from the beginning of the Playlist, select the first file. A check mark indicates the file is enabled for playback, a minus sign ( - ) indicates the file will be skipped, and an exclamation mark indicates the file does not contain data.

**5** Press the AUDIO RECORDER/PLAYER [PLAY/PAUSE] button to start playback of the Playlist from the selected file.

While the Playlist mode is active (the indicator at the top left of the display shows “Playlist”), the AUDIO RECORDER/PLAYER [PREV]/[NEXT] buttons function as Previous/Next controls for the Playlist. Pressing the appropriate button calls up a pop-up window and selects the previous or next audio file in the Playlist.

**6** Press the AUDIO RECORDER/PLAYER [STOP] button to stop playback.

To disengage the Playlist mode, press the AUDIO RECORDER/PLAYER [SELECT] button several times to call up the Audio File Selection display (Audio (Multi) or Audio (Simple)), then select an audio file.

## Playlist Controls

Shown here is a sample Playlist display, with short explanations of the various controls.



[A]	REPEAT	Determines how the audio files will be played back: All files are played in sequence once through to the end (no repeat). All files are played in sequence repeatedly. One selected file is played repeatedly.
[B]	SORT	Determines whether the audio files are sorted in ascending or descending order by name.
[C]	SHUFFLE	Pressing this button randomly rearranges the order of the files.
[D]	UNDO/REDO	Pressing this button (Undo) cancels the last action made to the Playlist. Pressing it again (Redo) restores the cancelled action. Only one level of Undo/Redo is available.

[E]	EXPORT AUDIO	Calls up the Export operation for exporting the selected audio file to a hard disk drive or USB storage devices. (See “Exporting an Audio File” in the Owner’s Manual.)
[F]	PROPERTY	Calls up the Property popup window which shows the file name and path of the audio song at the cursor position.
[G]–[J]		Playlist navigation controls. <b>[G]:</b> Moves cursor/selection to the top of the list. <b>[H]:</b> Moves cursor/selection one page up (when there are multiple pages). <b>[I]:</b> Moves cursor/selection one page down (when there are multiple pages). <b>[J]:</b> Moves cursor/selection to the bottom of the list (just below last entered file).
[1 ▲▼]	FILES	Opens the PLAYLIST FILE display. From this display, you can rename, copy, delete or save the playlists.
[2 ▲▼]	MOVE Up/Down	Use these buttons to move the selected file to another location in the list.
[3 ▲]	CUT	These operations let you copy or cut and paste individual list entries. Keep in mind that these have no effect on the actual audio data, but just entries in the list.
[3 ▼]	INSERT	
[4 ▲]	COPY	<p><b>Cut and Insert</b></p> <ol style="list-style-type: none"> <li>1 Press the [3 ▲] (CUT) button.</li> <li>2 Select the desired file entry by using the [5 ▲▼] buttons and press the [6 ▲▼] button to actually select it. Then press the [8 ▲] (OK) button. The entry is deleted.</li> <li>3 Move the cursor to the desired location in the list (with the [5 ▲▼]/[6 ▲▼] buttons) and press the [3 ▼] (INSERT) button.</li> </ol> <p><b>Copy and Insert</b></p> <ol style="list-style-type: none"> <li>1 Press the [4 ▲] (COPY) button.</li> <li>2 Select the desired file entry by using the [5 ▲▼] buttons and press the [6 ▲▼] button to actually select it. Then press the [8 ▲] (OK) button. The entry is copied.</li> <li>3 Move the cursor to the desired location in the list (with the [5 ▲▼]/[6 ▲▼] buttons) and press the [3 ▼] (INSERT) button.</li> </ol>
[4 ▼]	DELETE	Deletes files from the Playlist. Keep in mind that this does not affect the actual audio data, but simply deletes an entry of the file from the list.
[5 ▲▼]/ [6 ▲▼]	Up/Down	Use these buttons to move the cursor in the list. Use the [DATA ENTRY] dial to quickly move the cursor (red border) through the entries and press the [ENTER] button.
[7 ▲▼]	SELECT	Actually selects the file at the cursor position.
[8 ▲▼]	MARK	Adds or removes the checkmark to/from the selected data. Only the checkmarked files will be played. Holding this button adds (or removes) the checkmark to (or from) all files.

# 8

# Vocal Harmony

## – Adding Harmony Vocals and Synth Vocoder to Your Singing –

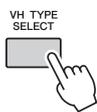
### Contents

Setting up the Vocal Harmony Control Parameters.....	96
Editing the Vocal Harmony Types .....	98
• Editing the Overview Tab Parameters .....	99
• Editing the Part Tab Parameters .....	101
• Editing the Detail Tab Parameters.....	102
Editing the Synth Vocoder Types .....	103
• Editing the Overview Tab Parameters .....	104
• Editing the Detail Tab Parameters.....	106

## Setting up the Vocal Harmony Control Parameters

The following parameters determine how the Vocal Harmony (Vocal Harmony and Synth Vocoder) is controlled. The setup is common for all types.

- 1 Press the [VH TYPE SELECT] button to call up the Vocal Harmony Type Selection display.

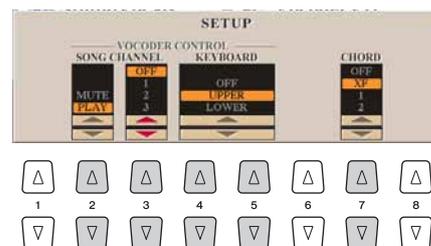


### NOTE

Check that the microphone is properly connected (Owner's Manual, chapter 11) and the settings (Reference Manual, page 118) are adjusted correctly before setting the Vocal Harmony Control parameters here.

- 2 Press the [8 ▲] (SETUP) button to call up the Setup display, then set the value by using the [2 ▲▼]–[5 ▲▼] and [7 ▲▼] buttons.

For information on each parameter, see [page 97](#).



▶ NEXT PAGE

### 3 Press the [EXIT] button to return to the Vocal Harmony Type Selection display.

#### ● Setup Parameters

[2 ▲▼]– [5 ▲▼]	VOCODER CONTROL	The Vocal Harmony effect in the Vocoder and Vocoder-Mono modes (Vocal Harmony) and in Synth Vocoder is controlled by the notes you play on the keyboard and/or Song data.
[2 ▲▼]	MUTE/PLAY	When set to “MUTE,” the channel selected below (to control Harmony) is muted (turned off) during song playback.
[3 ▲▼]	OFF/1–16	When set to “OFF,” song data control over harmony is turned off. When set to one of the values 1–16, note data (played from a Song on the Tyros4 or external MIDI sequencer) contained on the corresponding channel is used to control the harmony.
[4 ▲▼] /[5 ▲▼]	KEYBOARD	<p><b>OFF:</b> Keyboard control over harmony is turned off.</p> <p><b>UPPER:</b> Notes played to the right of the split point control the harmony.</p> <p><b>LOWER:</b> Notes played to the left of the split point control the harmony.</p> <p> <b>NOTE</b></p> <p>The separate point of the Keyboard settings (OFF/UPPER/LOWER) is Split Point (L). For details on Split Point Settings, refer to <a href="#">page 38</a>.</p> <p> <b>NOTE</b></p> <p>When the settings of both keyboard performance and Song data are applied, those settings are merged to control the harmony.</p>
[7 ▲▼]	CHORD	<p>In Chordal mode, the following parameters determine which data in a recorded Song is used for chord detection.</p> <p><b>OFF:</b> Chords are not detected from the Song data.</p> <p><b>XF:</b> Chords of XF format are used for the Vocal Harmony.</p> <p><b>1–16:</b> Chords are detected from note data in the specified Song channel.</p> <p> <b>NOTE</b></p> <p>Not available if the Song does not contain any chord data.</p>

## Editing the Vocal Harmony Types

This section explains briefly how to create your own Vocal Harmony types, and lists the detailed parameters for editing. A sum total of sixty types (Vocal Harmony and Synth Vocoder types) can be created and saved.

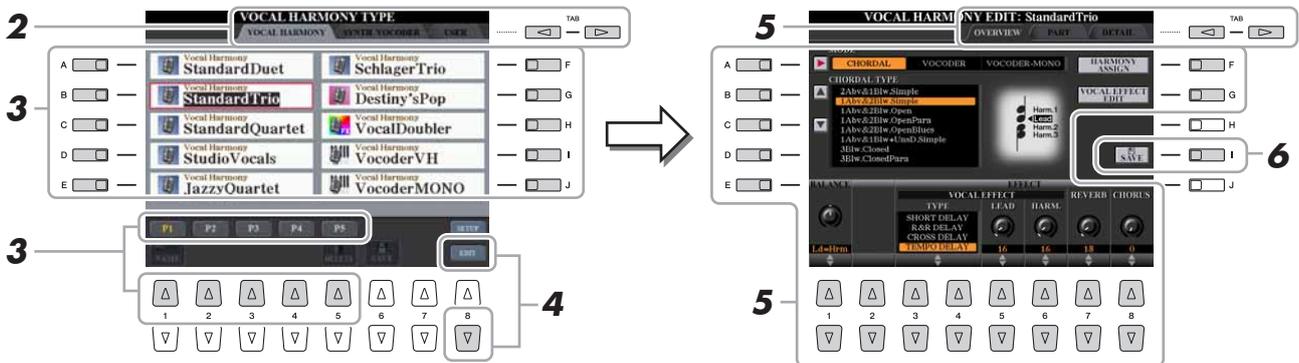


For information on "Editing the Synth Vocoder Types," refer to [page 103](#).

- 1 Press the [VH TYPE SELECT] button to call up the Vocal Harmony Type Selection display.



- 2 Use the TAB [◀][▶] buttons to select the Vocal Harmony tab.



- 3 Select a Vocal Harmony type to be edited by using the [A]–[J] buttons.

To call up the other display pages for further selections, press one of the [1 ▲]–[5 ▲] buttons or press the [VH TYPE SELECT] button again.

- 4 Press the [8 ▼] (EDIT) button to call up the Vocal Harmony Edit display.

- 5 Use the TAB [◀][▶] buttons to call up the desired tab, then edit the Vocal Harmony by using [A]–[G] buttons and [1 ▲▼]–[8 ▲▼] buttons or sliders.

There are three tabs in the Vocal Harmony Edit display; refer to [pages 99–102](#) for editing each tab.

- **OVERVIEW**..... Edits basic parameters for Vocal Harmony type, including mode, Chordal Type and Vocal Effect, etc.
- **PART** ..... Adjusts volume and panning, etc. for each part.
- **DETAIL**..... Detailed editing for Vocal Harmony type.

- 6 Press the [I] (SAVE) button to save your edited Vocal Harmony type.

### NOTICE

The settings here will be lost if you change to another Vocal Harmony type or you turn the power off without executing the save operation.

# Editing the Overview Tab Parameters

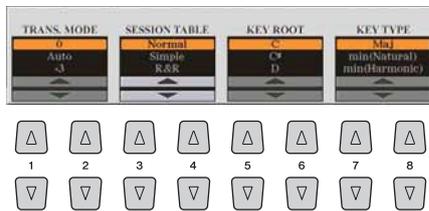


- 1** Set the value by using the [A]–[C] buttons, [1 ▲▼] and [3 ▲▼]–[8 ▲▼] buttons or sliders.

For information on each parameter, see [page 100](#).

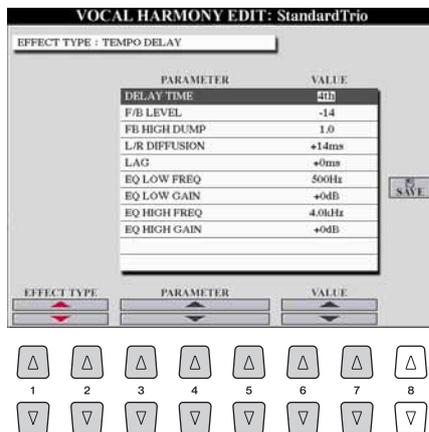
- 2** Press the [F] (HARMONY ASSIGN) button to set how the Vocal Harmony is applied to your voice.

For information on each parameter, see [page 100](#).



- 3** Press the [G] (VOCAL EFFECT EDIT) button to edit the Vocal Effect.

Use the [1 ▲▼]–[5 ▲▼] buttons to select the desired effect type and parameter, then set the value of the selected parameter by using the [6 ▲▼]/[7 ▲▼] buttons. For information on each parameter, refer to the Data List on the website.



## ● Overview Tab Parameters

[A]	MODE	Determines the mode of the Vocal Harmony effect: Chordal, Vocoder or Vocoder-Mono. Chordal is for conventional vocal harmonies, while Vocoder and Vocoder-Mono are for Vocoder effects. (Vocoder-Mono is for single-note melodies.) When Vocoder or Vocoder-Mono is selected, the Chordal Type parameter below is not available.
[B]/[C]	CHORDAL TYPE	Determines the particular notes and voicings used for generating the vocal harmonies. The harmony and lead notes are also shown as notation in the display. For a list of the Chordal Types, refer to the Data List on the website.
[1 ▲▼]	BALANCE	Lets you set the balance between the lead vocal (your own voice) and Vocal Harmony. Raising this value increases the volume of the Vocal Harmony and decreases that of the lead vocal. When this is set to L<H63 (L: Lead Vocal, H: Vocal Harmony), only the Vocal Harmony is output; when it is set to L63>H, only the lead vocal is output.
[3 ▲▼]– [6 ▲▼]	Vocal Effect	Determines the type of effect and the amount of the effect applied to the lead and harmony vocal sounds.
[3 ▲▼] –[4 ▲▼]	TYPE	Determines the specific type of effect applied to the lead and harmony vocal sounds. A wide range of reverb, delay, modulation, distortion and other special effects are available. For a list of the effect types, refer to the Data List on the website.
[5 ▲▼]	LEAD	Determines the amount of Vocal Effect that is applied to the lead vocal sound.
[6 ▲▼]	HARM. (Harmony)	Determines the amount of Vocal Effect that is applied to the harmony vocal sound.
[7 ▲▼]	REVERB	Determines the amount of reverb applied to the overall Vocal Harmony sound, both lead and harmony.
[8 ▲▼]	CHORUS	Determines the amount of chorus effect applied to the overall Vocal Harmony sound, both lead and harmony.

## ● HARMONY ASSIGN

For detailed information on each parameter, refer to the Data List on the website.

[1 ▲▼]/ [2 ▲▼]	TRANS. (TRANS- POSE) MODE	Determines the amount by which the harmony parts are transposed. A setting of “0” results in no transposition, while the “Auto” setting results in automatic transposition. When the mode is set to Vocoder or Vocoder-Mono, this parameter is available.  <b>Settings:</b> 0, Auto, -3 – +3
[3 ▲▼]/ [4 ▲▼]	SESSION TABLE	Determines how the harmonies will be voiced, or what type of chord will be used in creating the harmonies, according to different musical styles. This parameter is available only when the mode is set to Chordal and the type is set to something other than ScaleDiatonic or Parallel.  <b>Settings:</b> Normal, Simple, R&R, UrbanA, UrbanB, Blues7, UrbanC
[5 ▲▼]/ [6 ▲▼]	KEY ROOT	Determines the root key for the transposition. Use this in combination with Key Type below to enable modal scale harmony transposition. When the Chordal Type parameter is set to ScaleDiatonic, this parameter is available.  <b>Settings:</b> C, C#, D, D#, E, F, F#, G, G#, A, A#, B
[7 ▲▼]/ [8 ▲▼]	KEY TYPE	Determines the scale type for the transposition. Use this in combination with Key Root above to enable modal scale harmony transposition. When the Chordal Type parameter is set to ScaleDiatonic, this parameter is available.  <b>Settings:</b> Maj, Min (Natural), Min (Harmonic)

## Editing the Part Tab Parameters

The parameters are arranged in a matrix.



Use the [A]–[E] buttons to select the desired parameter, then edit each vocal part (Lead, Harmony 1, 2, 3) by using [3 ▲▼]–[8 ▲▼] buttons or sliders.

For information on each parameter, see below.

### ● TRANSPOSE (selected by [A] button)

Determines the pitch transposition for each part. The range for all parts is the same; however, the lead vocal sound can only be adjusted in octaves. When the Chordal Type is set to ScaleDiatonic, this parameter changes to Degree. When Pitch Correct is set to Off, the Lead part is not available. When the Vocoder or Vocoder-Mono mode is selected, the Harmony parts are not available.

#### TRANSPOSE Settings

Lead: -3 octaves – +3 octaves

Harmony 1, 2, 3: -36 semitones – +36 semitones

#### DEGREE Settings

Lead: -3 octaves – +3 octaves

Harmony 1, 2, 3: -3 octaves (-22 scale degrees) – Unison – +3 octaves (+22 scale degrees)

### ● DETUNE (selected by [B] button)

Determines the fine pitch setting for each part. Adjust this to produce a warm chorusing effect, or to achieve a natural, less-than-perfect vocal sound. When the Pitch Correct is set to Off, the Lead part is not available.

**Settings:** -50 cents – +50 cents

### ● FORMANT (selected by [C] button)

Determines the formant setting for each part. This parameter can be used to finely change the character of the vocal sound. The higher the value, the more “feminine” the harmony voice becomes. The lower the value, the more “masculine” the voice. When the Pitch Correct is set to Off, the Lead part is not available.

**Settings:** -62 – +62

### ● PAN (selected by [D] button)

Determines the pan position setting for each part. Setting each vocal part to a different pan position, with the lead vocal at center, for example, results in a naturally wide stereo sound.

**Settings:** L63 (Left) – C (Center) – R63 (Right)

### ● VOLUME (selected by [E] button)

Determines the volume setting for each part. Use this to adjust the relative level balance among the vocal parts.

**Settings:** 0–127

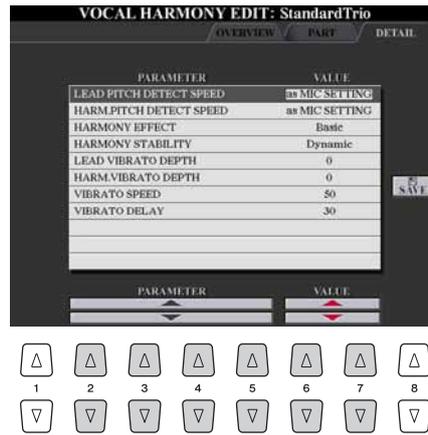
### ● PITCH CORRECT MODE (set by [7 ▲▼]–[8 ▲▼] buttons)

Determines how the Pitch Correct affects your voice. For information on each parameter, refer to the Data List on the website.

**Settings:** OFF, SOFT1, SOFT2, HARD

## Editing the Detail Tab Parameters

---



Use the [2 ▲▼]–[5 ▲▼] buttons to select the desired parameter, then set the value of the selected parameter by using the [6 ▲▼]/[7 ▲▼] buttons.

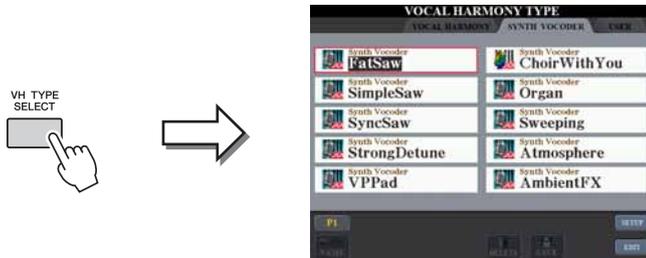
For information on each parameter, refer to the Data List on the website.

# Editing the Synth Vocoder Types

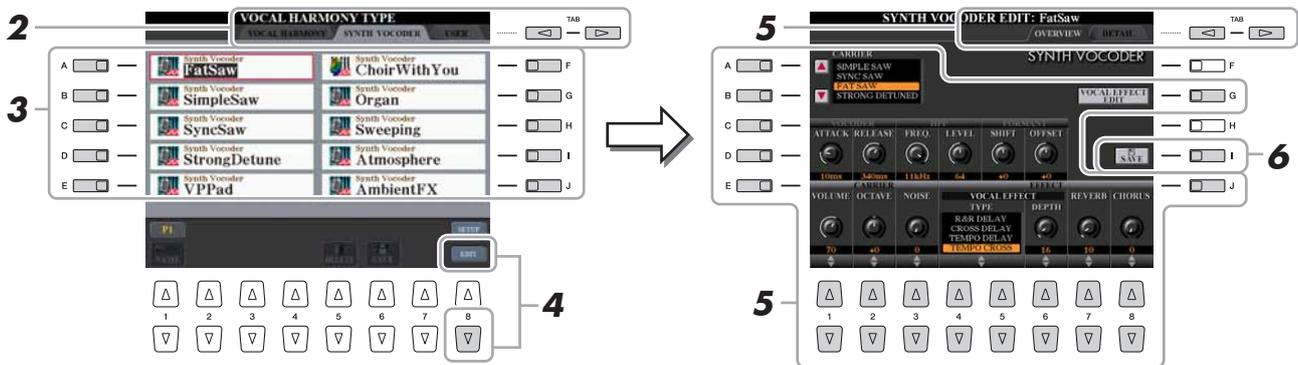
This section explains how to create your own Synth Vocoder types, and lists the detailed parameters for editing. A sum total of sixty types (Synth Vocoder and Vocal Harmony types) can be created and saved.

**NOTE**  
For information on “Editing the Vocal Harmony Types,” refer to page 98.

- 1 Press the [VH TYPE SELECT] button to call up the Vocal Harmony Type Selection display.



- 2 Use the TAB [◀][▶] buttons to select the Synth Vocoder tab.



- 3 Select a Synth Vocoder type to be edited by using the [A]–[J] buttons.
- 4 Press the [8 ▼] (EDIT) button to call up the Synth Vocoder Edit display.
- 5 Use the TAB [◀][▶] buttons to call up the desired tab, then edit the Synth Vocoder by using [A]–[E], [G] and [J] buttons and [1 ▲▼]–[8 ▲▼] buttons or sliders.

There are two tabs in the Synth Vocoder Edit display; refer to pages 104–106 for editing each tab.

**NOTICE**  
The settings here will be lost if you change to another Synth Vocoder type or you turn the power off without executing the save operation.

- **OVERVIEW**.....Edits basic parameters for Synth Vocoder type, including Carrier, Vocoder Attack/Release and HPF (High Pass Filter), etc.
- **DETAIL**.....Detailed editing for Synth Vocoder type.

- 6 Press the [I] (SAVE) button to save your edited Synth Vocoder type.

## Editing the Overview Tab Parameters

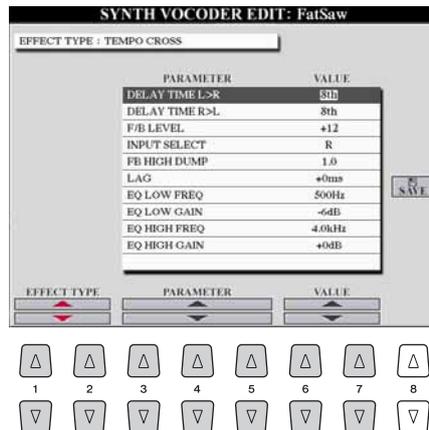


- 1 Use the [A]–[E] (or [J]) buttons to select the parameter to be adjusted, then set the value by using the [1 ▲▼]–[8 ▲▼] buttons or sliders.

For information on each parameter, see [page 105](#).

- 2 Press the [G] (VOCAL EFFECT EDIT) button to edit Vocal Effect.

Use the [1 ▲▼]–[5 ▲▼] buttons to select the desired effect type and parameter, then set the value of the selected parameter by using the [6 ▲▼]/[7 ▲▼] buttons. For information on each parameter, refer to the Data List on the website.



 NEXT PAGE

### ● CARRIER (set by [A]/[B] buttons)

Selects the musical instrument sound used as the source (Carrier) for the Synth Vocoder. (The Carrier serves as the basic sound over which the vocal characteristics are applied.)

### ● VOCODER parameters (selected by [C] or [D] button)

[1 ▲▼]	ATTACK	Determines the attack time of the Synth Vocoder sound. The higher the value, the slower the attack. <b>Settings:</b> 1ms – 200ms
[2 ▲▼]	RELEASE	Determines the release time of the Synth Vocoder sound. The higher the value, the slower the decay. <b>Settings:</b> 10ms – 3000ms

### ● HPF (High Pass Filter) parameters (selected by [C] or [D] button)

[3 ▲▼]	FREQ. (Frequency)	Determines the HPF cutoff frequency for the microphone input sound. Setting this to a low value results in a minimally processed input sound—in other words, close to the original. Setting this to higher values emphasizes the higher frequency consonant and sibilant sounds (making words easier to understand). <b>Settings:</b> Thru, 500Hz – 16kHz
[4 ▲▼]	LEVEL	Determines the level of the microphone sound output from the HPF. <b>Settings:</b> 0 – 127

### ● FORMANT parameters (selected by [C] or [D] button)

[5 ▲▼]	SHIFT	Determines the amount (in BPF) by which the cutoff frequency value of the BPFs (for the Inst Input) is shifted. This parameter can be used to change the character of the Vocoder sound. <b>Settings:</b> -2, -1, +0, +1, +2
[6 ▲▼]	OFFSET	Adjusts the cutoff frequencies of all BPFs (for the Inst Input) finely. This parameter can be used to finely change the character of the Vocoder sound. <b>Settings:</b> -63 – +0 – +63

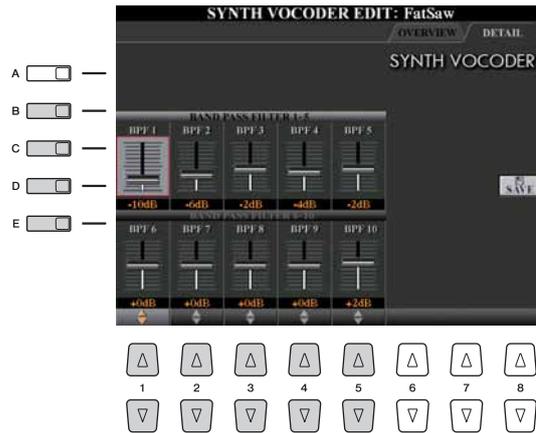
### ● CARRIER parameters (selected by [E] or [J] button)

[1 ▲▼]	VOLUME	Determines the level of the Carrier for the Synth Vocoder sound. <b>Settings:</b> 0–127
[2 ▲▼]	OCTAVE	Determines the octave setting of the Carrier for the Synth Vocoder sound. <b>Settings:</b> -2 – +2
[3 ▲▼]	NOISE	Determines the noise level which is input to the Synth Vocoder. This can be used to emphasize sibilant and plosive sounds, and make the speech-like characteristics more pronounced. <b>Settings:</b> 0 – 127

### ● EFFECT parameters (selected by [E] or [J] button)

[4 ▲▼]/ [5 ▲▼]	TYPE	Determines the specific type of effect applied to the lead Synth Vocoder sound. A wide range of reverb, delay, modulation, distortion and other special effects are available. You can edit the vocal effect by pressing the [G] (VOCAL EFFECT EDIT) button (step 2 on <a href="#">page 104</a> ). For a list of the effect types, refer to the Data List on the website.
[6 ▲▼]	DEPTH	Determines the amount of effect applied to the overall Synth Vocoder sound.
[7 ▲▼]	REVERB	Determines the amount of reverb applied to the overall Synth Vocoder sound.
[8 ▲▼]	CHORUS	Determines the amount of chorus effect applied to the overall Synth Vocoder sound.

## Editing the Detail Tab Parameters



Use the [B]–[E] buttons to select the **BAND PASS FILTER 1–5** or **6–10**, then set the value by using the [1 ▲▼]–[5 ▲▼] buttons or sliders.

 **NOTE**

Feedback (howling) may result depending on the setup settings. Be careful especially when you increase values.

● **BAND PASS FILTER 1–10 parameters**

Determines each output gain of the BPF 1 – 10 for the Inst Input (keyboard performance sound). The BPF 1 corresponds to the lowest Formant while the BPF 10 corresponds to the highest Formant.

**Settings:** -18dB – +18dB

### Contents

Editing VOL/VOICE Parameters .....	107
Editing FILTER Parameters .....	108
Editing TUNE Parameters .....	108
Editing EFFECT Parameters .....	109
• Selecting an Effect type .....	109
• Editing and Saving the effect .....	110
Editing EQ Parameters .....	112
• Editing and Saving the Selected Master EQ .....	113
Line Out Settings .....	114

## Editing VOL/VOICE Parameters



### NOTE

For information on available Voices for each Style channel, refer to [page 42](#).

### NOTE

When playing GM song data, channel 10 (in the SONG CH 9 to 16 page) can only be used for a Drum Kit Voice.

### NOTE

When changing the rhythm/percussion Voice (drum kits, etc.) of the Style and Song from the VOICE parameter, the detailed settings related to the drum Voice are reset, and in some cases you may be unable to restore the original sound. In the case of Song playback, you can restore the original sound by returning to the beginning of the Song and playing back from that point. In the case of Style play, you can restore the original sound by selecting the same Style again.

[C]/[H]	VOICE	Allows you to re-select the Voices for each part. When the Style channels are called up, neither Organ Flutes Voices nor User Voices can be selected. When the Song channels are called up, User Voices cannot be selected. Please note that the Voice of the Multi Pad cannot be changed via the Mixing Console.
[D]/[I]	PANPOT	Determines the stereo position of the selected part (channel).
[E]/[J]	VOLUME	Determines the level of each part or channel, giving you fine control over the balance of all the parts.

## Editing FILTER Parameters



[D]/[I]	HARMONIC CONTENT	Allows you to adjust the resonance effect (page 13) for each part.
[E]/[J]	BRIGHTNESS	Determines the brightness of the sound for each part by adjusting the cutoff frequency (page 13).

## Editing TUNE Parameters



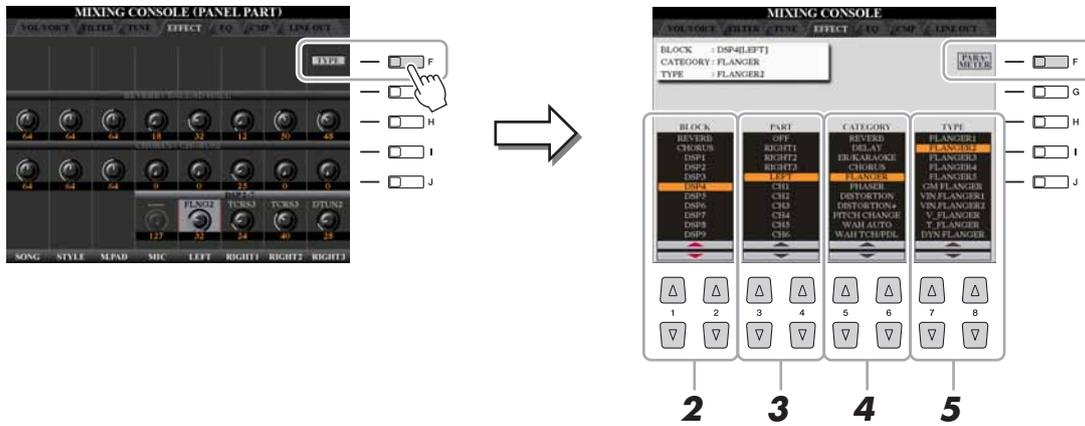
[A]/[B]/ [F]/[G]	PORTAMENTO TIME	Portamento is a function that creates a smooth transition in pitch from the first note played on the keyboard to the next. The Portamento Time determines the pitch transition time. Higher values result in a longer pitch change time. Setting this to “0” results in no effect. This parameter is available when the selected keyboard part is set to Mono.
[C]/[H]	PITCH BEND RANGE	Determines the range of the PITCH BEND wheel for each keyboard part. The range is from “0” to “12” with each step corresponding to one semitone.  <b>NOTE</b> If the Pitch Bend range is set to more than 1,200 cents (1 octave) via MIDI, the pitch of some Voices may not be raised or lowered completely.
[D]/[I]	OCTAVE	Determines the range of the pitch change in octaves, over two octaves up or down for each keyboard part. The value set here is added to the setting via the OCTAVE [-]/[+] buttons.
[E]/[J]	TUNING	Determines the pitch of each keyboard part.
[1 ▲▼]- [3 ▲▼]	TRANSCOPE	Allows you to set transposition for overall sound of the instrument (MASTER), Song playback (SONG), or the keyboard pitch (KEYBOARD), respectively. Please note that the “KEYBOARD” also transposes the keyboard pitch of Style playback and the Multi Pads (since these are also affected by keyboard play in the left-hand section).

# Editing EFFECT Parameters

## Selecting an Effect type

- 1 Press the [F] (TYPE) button in the EFFECT Page of the Mixing Console display.

The Effect Type Selection display is called up.



- 2 Use the [1 ▲▼]/[2 ▲▼] buttons to select the effect BLOCK.

Effect Block	Effect-applicable parts	Effect characteristics
REVERB	All parts	Reproduces the warm ambience of playing in a concert hall or jazz club.
CHORUS	All parts	Produces a rich, “fat” sound as if several parts are being played simultaneously. In addition, other type effects (such as reverb, delay, etc.) can also be selected in this effect block.
DSP1	STYLE PART, SONG CHANNEL 1–16	This effect is applied only to Style/Song parts.
DSP2, DSP3, DSP4, DSP5, DSP6	RIGHT 1, RIGHT 2, RIGHT 3, LEFT, SONG CHANNEL 1–16	Any unused DSP blocks are automatically assigned to the appropriate parts (channels) as needed. One DSP block is available only for one of the keyboard parts or Song parts.
DSP7	Microphone sound, SONG CHANNEL 1–16	This effect is applied to the MIC input (in addition to the Vocal Harmony effect)/Song parts.
DSP8, DSP9	STYLE PART	These effects are applied only to Style parts.

### NOTE

When the “Connection” parameter of the DSP1 (selected on step 3 of “Editing and Saving the effect” section on page 110) is set to “System,” the DSP1 effect will be applied overall to the Style and Song. When it is set to “Insertion,” the DSP1 effect will behave as same as other DSP blocks and be applied to only the part(s) selected in step 3.

- 3 Use the [3 ▲▼]/[4 ▲▼] buttons to select the part to which you want to apply the effect.

Please note that a category cannot be selected if REVERB, CHORUS or DSP1 is the selected block.

- 4 Use the [5 ▲▼]/[6 ▲▼] buttons to select the effect CATEGORY.

Please note that a category cannot be selected if REVERB is the selected block.

- 5 Use the [7 ▲▼]/[8 ▲▼] buttons to select the effect TYPE.

If you want to edit the effect parameters, go on to the next operation.

## Editing and Saving the effect

- 1 Press the [F] button to call up the display for editing the effect parameters.



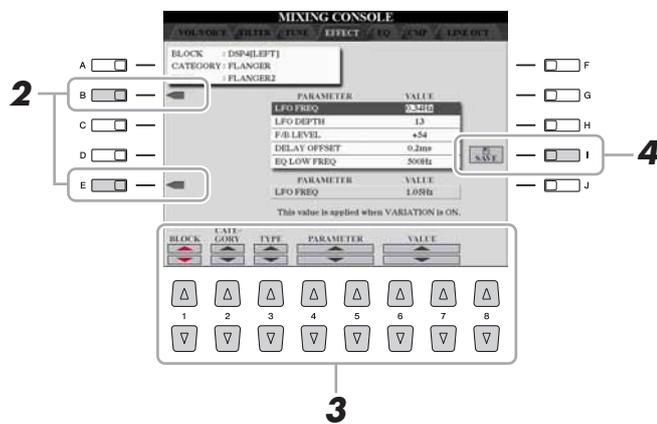
- 2 If you have selected one of the DSP2–9 effect blocks in step 2 of the section “Selecting an Effect type.”

You can edit its standard parameters as well as its variation parameter.

To select the standard type of parameters, press the [B] button. To select its variation parameter, press the [E] button.

### NOTE

“Variation parameter” is the one which can be turned on/off by pressing the [VARIATION] button on the panel.



- 3 Select one of the parameters you want to edit by using the [4 ▲▼]/[5 ▲▼] buttons, then adjust the value by using the [6 ▲▼]/[7 ▲▼] buttons.

If you have selected the REVERB, CHORUS or DSP1 effect block in step 2, you can adjust the Effect Return Level by pressing [8 ▲▼] button.

To re-select the Effect block, category and type, use the [1 ▲▼]–[3 ▲▼] buttons.

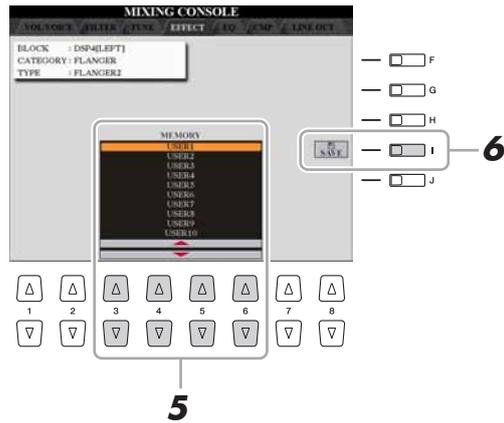
The re-selected effect configuration is displayed at the upper left side box in the display.

### NOTE

Keep in mind that in some cases noise may result if you adjust the effect parameters while playing the instrument.



- 4** Press the [I] (SAVE) button to call up the display for saving your original effect.



- 5** Use the [3 ▲▼]–[6 ▲▼] buttons to select the destination for saving the effect.

The maximum number for effects that can be saved differs depending on the effect block.

- 6** Press the [I] (SAVE) button to save the effect.

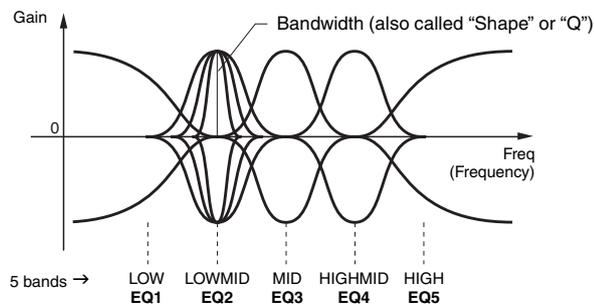
When recalling the saved effect, use the same procedure as in steps 4-5 of “Selecting an Effect type.”

## Editing EQ Parameters



[A]/[B]	TYPE	Selects the desired Master EQ type. This affects the overall sound of the instrument.
[F]	EDIT	For editing the Master EQ. See <a href="#">page 113</a> .
[D]/[I]	EQ HIGH	Boosts or attenuates the high EQ band for each part.
[E]/[J]	EQ LOW	Boosts or attenuates the low EQ band for each part.

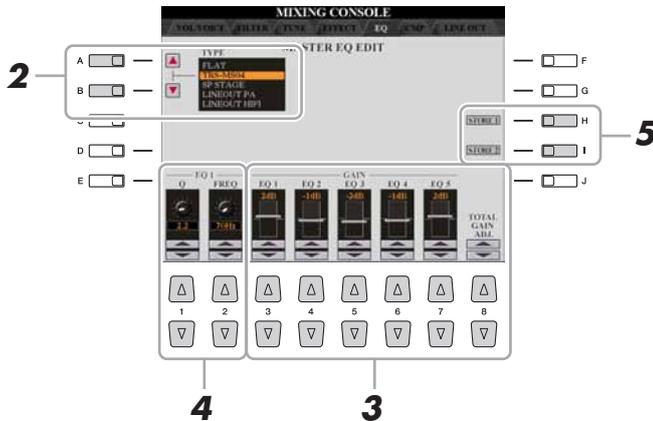
Equalizer (also called “EQ”) is a sound processor that divides the frequency spectrum into multiple bands that can be boosted or cut as required to tailor the overall frequency response. Usually an equalizer is used to correct the sound from speakers to match the special character of the room. For example, you can cut some of the low range frequencies when playing in large spaces where the sound is too “boomy,” or boost the high frequencies in rooms and close spaces where the sound is relatively “dead” and free of echoes. The Tyros4 possesses a high grade five-band digital EQ. With this function, a final effect—tone control—can be added to the output of your instrument. You can select one of the five preset EQ settings in the EQ display. You can even create your own custom EQ settings by adjusting the frequency bands, and save the settings to one of two User Master EQ types.



## Editing and Saving the Selected Master EQ

- 1 Press the [F] (EDIT) button in the EQ Page of the Mixing Console display.

The MASTER EQ EDIT display is called up.



- 2 Use the [A]/[B] buttons to select a preset EQ type.

The set parameters of the selected EQ type are automatically shown at the bottom of the display.

- 3 Use the [3 ▲▼]–[7 ▲▼] buttons or sliders to boost or cut each of the five bands.

Use the [8 ▲▼] buttons to boost or cut all the five bands at the same time.

- 4 Adjust the Q (bandwidth) and the FREQ (center frequency) of the band selected in step 3.

To adjust the bandwidth (also called “Shape” or “Q”), use the [1 ▲▼] buttons or slider. The higher the value of Q, the narrower the band width.

To adjust the FREQ (center frequency), use the [2 ▲▼] buttons or slider. The available FREQ range is different for each band.

- 5 Press the [H] or [I] (STORE 1 or 2) button to save the edited EQ type.

Up to two types of EQ can be created and saved. The saved EQ can be recalled from the EQ tab display by using the [A]/[B] buttons.

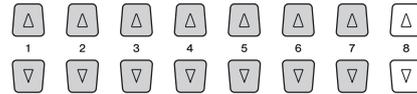
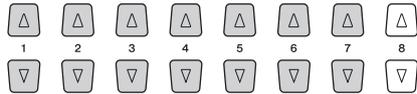
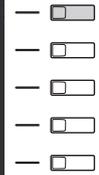
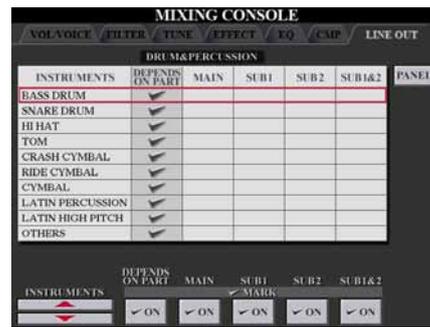
# Line Out Settings

PANEL Page



Press [F] button

DRUM & PERCUSSION Page



[F]	DRUM&PERC./ PANEL	Switches the displayed menu: PANEL parts or DRUM & PERCUSSION instruments.
[1 ▲▼]- [3 ▲▼]	PART (PANEL Page)	Selects the desired part/drum instrument.
[1 ▲▼]/ [2 ▲▼]	INSTRUMENTS (DRUM & PERCUSSION Page)	
[3 ▲▼]	DEPEND ON PART (DRUM & PERCUSSION Page)	Checking here, the selected drum instrument will be output via the jacks set from the PANEL page at left.
[4 ▲▼]	MAIN	Checking here, the selected part/drum instruments will be output from LINE OUT MAIN jacks, PHONES jacks, LOOP SEND jack, and optional speaker.
[5 ▲▼]	SUB1	Checking one of these columns (jacks), the selected part/drum instruments will be output from only the selected SUB jack(s). When you select “SUB1 & 2”, the sound will be output in stereo (SUB1: left, SUB2: right).
[6 ▲▼]	SUB2	<b>NOTE</b> When using one of the SUB Line Out settings, make sure that you've connected cables to the appropriate LINE OUT SUB jacks on the rear panel. If cables are only connected to the MAIN jacks, the sound of the Part will be output through the MAIN jacks, even if one of the SUB1/SUB2/SUB1&2 is checkmarked.
[7 ▲▼]	SUB1 & 2	<b>NOTE</b> Only the DSP2–9 and Vocal Harmony effects can be applied to the sound output from the SUB jacks. Other effects (Reverb, Chorus and DSP1) will not be applied. (If the “Connection” parameter of the DSP1 is set to “Insertion”, the DSP1 will also be applied.)

### Contents

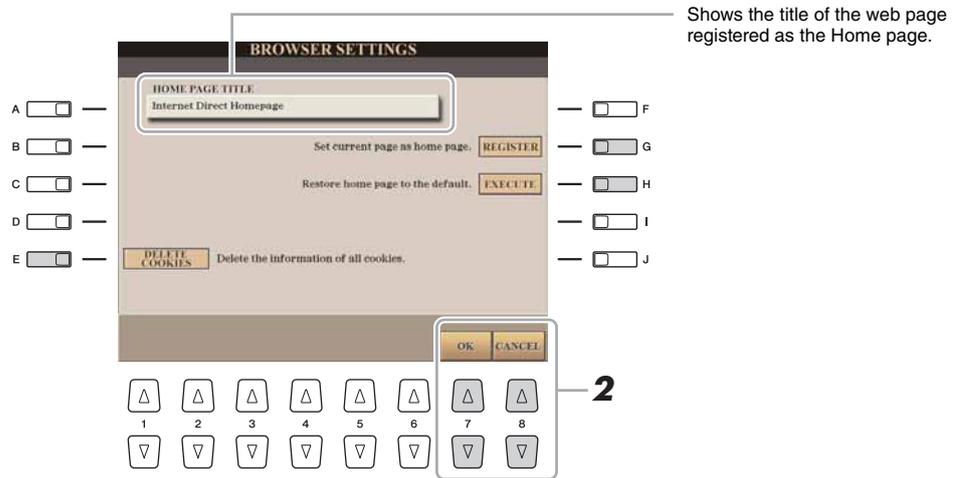
Editing the Browser Settings .....	115
Registering Bookmarks of Your Favorite Pages .....	116
• Editing Bookmarks.....	117

## Editing the Browser Settings

You can change the home page and delete cookies in the Browser setting display.

### 1 Call up the operation display.

[INTERNET] → [5 ▼] SETTING → [D] BROWSER SETTING



Shows the title of the web page registered as the Home page.

[E]	DELETE COOKIES	Deletes the cookies.
[G]	REGISTER	Register the currently selected page as the Home page.
[H]	EXECUTE	Restores the home page setting.

### 2 Press the [7 ▲▼] (OK) button to close the display.

To cancel, press the [8 ▲▼] (CANCEL) button.

## Registering Bookmarks of Your Favorite Pages

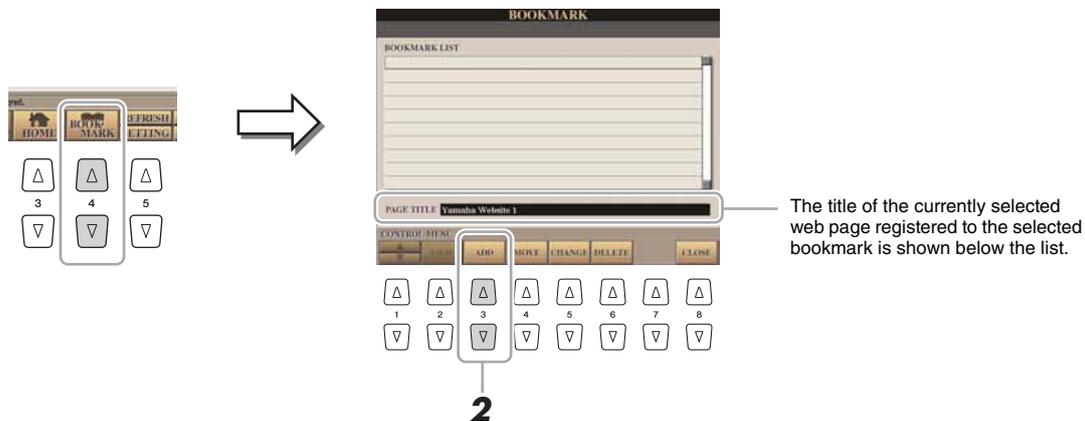
You can “bookmark” the page you’re viewing, and set up a custom link so the page can be instantly called up in the future.

- 1** With the desired page currently selected, press the [4 ▲▼] (BOOKMARK) button.

The Bookmark display appears, showing a list of the currently saved bookmarks.

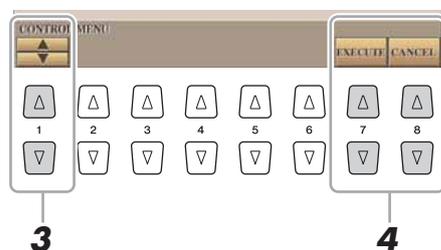
### NOTE

For information on Bookmark display, see [page 117](#).



- 2** Call up the display for registering bookmarks by pressing the [3 ▲▼] (ADD) button.

- 3** Select the position of the new bookmark by pressing the [1 ▲▼] button.



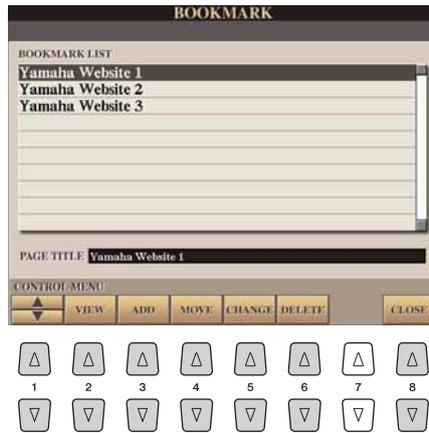
- 4** To save the bookmark, press the [7 ▲▼] (EXECUTE) button, or press the [8 ▲▼] (CANCEL) button to cancel.

- 5** Press the [8 ▲▼] (CLOSE) button to return to the browser.

The bookmarked page can be opened by pressing the [2 ▲▼] (VIEW) button in the Bookmark display.

## Editing Bookmarks

From the Bookmark display, you can change the names and rearrange the order of your bookmarks, as well as delete unnecessary bookmarks from the list.



[1 ▲▼]	(UP/DOWN)	Moves the selection position in the Bookmark list.
[2 ▲▼]	VIEW	Opens the web page of the selected bookmark.
[3 ▲▼]	ADD	Used when saving a bookmark ( <a href="#">page 116</a> ).
[4 ▲▼]	MOVE	<p><b>Changes the order of the bookmarks.</b></p> <ol style="list-style-type: none"> <li><b>1</b> Select the bookmark you wish to move, then press the [4 ▲▼] (MOVE) button. The lower part of the display changes, letting you select the new position for the bookmark.</li> <li><b>2</b> Select the intended position by pressing the [1 ▲▼] button.</li> <li><b>3</b> Move the bookmark to the selected position by pressing the [7 ▲▼] (EXECUTE) button.</li> </ol>
[5 ▲▼]	CHANGE	Changes the name of the selected bookmark. Pressing this button calls up the display for entering characters.
[6 ▲▼]	DELETE	Deletes the selected bookmark from the Bookmark list.
[8 ▲▼]	CLOSE	Closes the Bookmark display and returns to the browser display.

### Contents

Microphone Settings .....	118
• Overall Settings .....	118
• Saving the Microphone Settings.....	119
• VOCAL Page.....	119
• TALK Page .....	120
Footswitch/Foot Controller Settings.....	121
• Assigning Specific Functions to Each Foot Pedal.....	121
MIDI Settings .....	124
• MIDI System Settings .....	126
• MIDI Transmit Settings.....	127
• MIDI Receive Settings .....	128
• Setting the Bass Note for Style Playback via MIDI Receive .....	129
• Setting the Chord Type for Style Playback via MIDI Receive.....	129
• MFC10 Settings.....	130

## Microphone Settings

### Overall Settings

- 1 Press the [MIC SETTING] button to call up the MIC SETTING display.



- 2 Select the desired page, VOCAL or TALK, by pressing the [MIC SETTING] button, or by using the TAB [◀][▶] buttons.
- 3 Use the [A]–[E] buttons to select the specific row (or group) of parameters to be adjusted.
- 4 Set the value of specific parameters in the row by using the [1 ▲▼]–[6 ▲▼] buttons or sliders

For information on each parameter, see [page 119](#).

#### NOTE

The settings on the TALK page are microphone settings that are active when the Talk function is on.

#### NOTICE

After setting, go to the Mic Setting Memory display by pressing the [H] (USER MEMORY) button and save the settings (see [page 119](#)). The settings will be lost if you exit from this display or turn the power to the instrument off without executing the Save operation.

#### Turning the microphone sound on/off

Press the [F] button to turn the microphone sound on/off as desired. When this is on, the “lamp” is lit.

## Saving the Microphone Settings

All the settings (VOCAL/TALK pages) are saved together as a single file. Up to ten settings can be saved.

### 1 Call up the MIC SETTING MEMORY display.

[MIC SETTING] → [H] (USER MEMORY)

### 2 Press the [6 ▼] (SAVE) button to save the file to USER.

For details on the naming and deleting procedures, refer to the Basic Operation section in the Owner's Manual.

#### NOTE

The microphone setting memories are contained and saved in a User Effect File. For information about User Effect Files, refer to [page 138](#).

#### Calling Up the Microphone Settings Saved to USER

To call up the Microphone Settings you've saved to USER, follow the instructions below.

### 1 Call up the MIC SETTING MEMORY display.

[MIC SETTING] → [H] (USER MEMORY)

### 2 Press the [A]–[J] buttons to select the desired setting file.

## VOCAL Page

### ■ MIC/TALK indicator

Indicates whether MIC (singing settings) or TALK (announcement settings) is active. Pressing the [TALK] button toggles this setting.

### ■ INPUT LEVEL meter

Indicates the level of the microphone input signal. Adjust the [MIC GAIN] control so that the INPUT LEVEL meter lights in green or yellow. Make sure that the meter does not light in orange or red, since this indicates that the input level is too high.

### ■ 3BAND EQ (selected by [A] or [B] button)

EQ (Equalizer) is a processor that divides the frequency spectrum into multiple bands which can be boosted or cut as required to tailor the overall frequency response. The Tyros4 features a high-grade three-band (LOW, MID and HIGH) digital equalizer function for the microphone sound.

[1 ▲▼]/ [3 ▲▼]/ [5 ▲▼]	Hz	Adjusts the center frequency of the corresponding band.
[2 ▲▼]/ [4 ▲▼]/ [6 ▲▼]	dB	Boosts or cuts the level of the corresponding band by up to 12 dB.

### ■ NOISE GATE (selected by [C] or [D] button)

This effect mutes the input signal when the input from the microphone falls below a specified level. This effectively cuts off extraneous noise, allowing the desired signal (vocal, etc.) to pass.

[1 ▲▼]/	SW (Switch)	Turns the Noise Gate on or off.
[2 ▲▼]/	TH. (Threshold)	Adjusts the input level at which the gate begins to open.

## ■ COMPRESSOR (selected by [C] or [D] button)

This effect holds down the output when the input signal from the microphone exceeds a specified level. This is especially useful for smoothing out vocals that have widely varying dynamics. It effectively “compresses” the signal, making soft parts louder and loud parts softer. For a maximum compression effect, set **RATIO** to a high setting and adjust the **OUT** parameter for optimum volume.

[3 ▲▼]/	SW (Switch)	Turns the Compressor on or off.
[4 ▲▼]/	TH. (Threshold)	Adjusts the input level at which compression begins to be applied.
[5 ▲▼]	RATIO	Adjusts the compression ratio. Higher ratios result in a more compressed sound, with a reduced dynamic range.
[6 ▲▼]	OUT	Adjusts the final output level.

## ■ PITCH DETECT (selected by [E] button)

[1 ▲▼]/ [2 ▲▼]	VOCAL TYPE	Set this to obtain the most natural vocal harmony, depending on your voice. <b>LOW:</b> Setting for lower voices. This setting is also appropriate for growling and shouting. <b>MID:</b> Setting for mid-range voices. <b>HIGH:</b> Setting for higher voices. This setting is also appropriate for singing close to the microphone. <b>FULL:</b> Setting for vocalists having a wide range, from low to high.
[3 ▲▼]/ [4 ▲▼]	BACKGROUND NOISE CUT	<b>THRU, 200Hz, 300Hz, 400Hz, 500Hz</b> This allows you to filter out low noises that would interfere with the Vocal Harmony effect. A setting of “THRU” turns the noise filter off.
[5 ▲▼]/ [6 ▲▼]	SPEED	<b>1 (SLOW) – 4 (NORMAL) – 15 (FAST)</b> Adjusts the response of the Vocal Harmony effect, or how quickly harmonies are generated in response to your voice.  <b>NOTE</b> When one or both parts of Lead and Harm. Pitch Detect Speed of the Vocal Harmony are set to “as Mic Setting,” this parameter is effective. In other settings, the setting of the Vocal Harmony’s Pitch Detect Speed is effective.

## TALK Page

The settings on the TALK page are microphone settings that are active when the Talk function is on. All indications and parameters (with the exception of TALK MIXING below) are the same as in the VOCAL page. However, the settings are independent from those in the VOCAL page.



▶ NEXT PAGE

## ■ TALK MIXING (selected by [E] button)

[1 ▲▼]	VOLUME	Determines the output volume of the microphone sound.
[2 ▲▼]	PAN	Determines the stereo pan position of the microphone sound.
[3 ▲▼]	REVERB DEPTH	Determines the depth of the reverb effects applied to the microphone sound.
[4 ▲▼]	CHORUS DEPTH	Determines the depth of the chorus effects applied to the microphone sound.
[5 ▲▼]/ [6 ▲▼]	REDUCTION LEVEL	Determines the amount of reduction to be applied to the overall sound (excepting the microphone input)—allowing you to effectively adjust the balance between your voice and the overall instrument sound.

## Footswitch/Foot Controller Settings

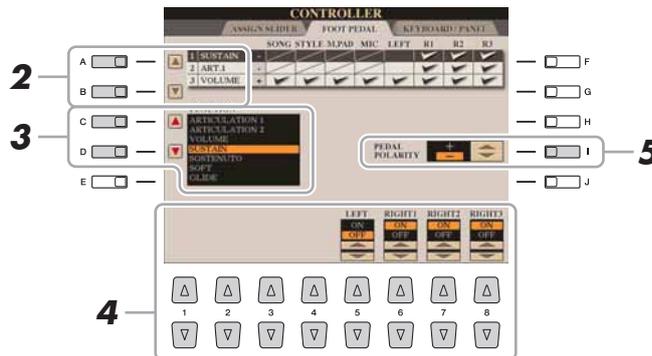
### Assigning Specific Functions to Each Foot Pedal

The functions assigned by default to the connected footswitch or foot controller can be changed—for example, letting you use the footswitch to start/stop Style playback, or use the foot controller to produce pitch bends.

- 1 Call up the operation display.**  
[FUNCTION] → [D] CONTROLLER → TAB [◀|▶] FOOT PEDAL
- 2 Use the [A]/[B] buttons to select one of three foot pedals to which the function is to be assigned.**

#### NOTE

For information on how to connect a foot pedal or what kinds of pedals can be connected, refer to the Owner's Manual, chapter 11.



- 3 Use the [C]/[D] buttons to select the function to be assigned to the pedal specified in step 2.**

For information on available parameters, see [pages 122–123](#).

- 4 Use the [1 ▲▼]–[8 ▲▼] buttons to set the details of the selected functions (the part for which the function is applied, etc.).**

The available parameters differ depending on the function selected in step 3.

- 5 If necessary, set the polarity of the pedal by using the [I] button.**

Pedal on/off operation may differ depending on the particular pedal you've connected to the Tyros4. For example, pressing down on one pedal may turn the selected function on, while pressing a different make/brand of pedal may turn the function off. If necessary, use this setting to reverse the operation.

#### NOTE

You can also assign the other functions to the pedal—punch in/out of Song/Audio Recorder/Player ([pages 68, 90](#)) and Registration Sequence ([page 85](#)). If you assign multiple functions to the pedal, the priority is: Punch in/out of Song or Audio Recorder/Player → Registration Sequence → Functions assigned here.

## ■ Assignable Pedal Functions

For functions indicated with “\*”, use only the foot controller; proper operation cannot be done with a footswitch.

ARTICULATION 1/2	When you use a Super Articulation Voice that has an effect assigned to the pedal/footswitch, you can enable the effect by pressing the pedal/footswitch. You can turn this function on or off for each keyboard part on this display.
VOLUME*	Allows you to use a foot controller to control the volume. You can turn this pedal function on or off for each part on this display.
SUSTAIN	Allows you to use a pedal to control the sustain. When you press and hold the pedal, all notes played on the keyboard have a longer sustain. Releasing the pedal immediately stops (damps) any sustained notes. You can turn this pedal function on or off for each keyboard part on this display.
SOSTENUTO	Allows you to use a pedal to control the Sostenuto effect. If you play a note or chord on the keyboard and press the pedal while holding the note(s), the notes will sustain as long as the pedal is held. However, all subsequent notes will not sustain. This makes it possible to sustain a chord, for example, while other notes are played staccato. You can turn this pedal function on or off for each keyboard part on this display.   <b>NOTE</b> This function will not affect any of the Organ Flutes and only some of the Super Articulation Voices, even if this has been assigned to the Foot Pedals.
SOFT	Allows you to use a pedal to control the Soft effect. Pressing this pedal reduces the volume and changes the timbre of the notes you play. This is effective only for certain appropriate Voices. You can turn this pedal function on or off for each keyboard part on this display.
GLIDE	When the pedal is pressed, the pitch changes, and then returns to normal pitch when the pedal is released. The following parameters can be set for this function on this display.  <b>UP/DOWN:</b> Determines whether the pitch change goes up (is raised) or down (is lowered). <b>RANGE:</b> Determines the range of the pitch change, in semitones. <b>ON SPEED:</b> Determines the speed of the pitch change when the pedal is pressed. <b>OFF SPEED:</b> Determines the speed of the pitch change when the pedal is released. <b>LEFT, RIGHT 1, 2, 3:</b> Turns this pedal function on or off for each keyboard part.
PORTAMENTO	The portamento effect (a smooth slide between notes) can be produced while the pedal is pressed. Portamento is produced when notes are played legato style (i.e., a note is played while the preceding note is still held). The portamento time can also be adjusted from the Mixing Console display (page 108). You can turn this pedal function on or off for each keyboard part on this display.   <b>NOTE</b> This function will not affect any of the Organ Flutes, Super Articulation 2 Voices and only some of the Super Articulation Voices, even if this has been assigned to the Foot Pedals.
PITCH BEND*	Allows you to bend the pitch of notes up or down by using the pedal. The following parameters can be set for this function on this display.  <b>UP/DOWN:</b> Determines whether the pitch change goes up (is raised) or down (is lowered). <b>RANGE:</b> Determines the range of the pitch change, in semitones. <b>LEFT, RIGHT 1, 2, 3:</b> Turns this pedal function on or off for each keyboard part.
MODULATION*	Applies vibrato and other effects to notes played on the keyboard. You can turn this pedal function on or off for each keyboard part on this display.
MODULATION (ALT)	As a variation on MODULATION, the effects (waveform) can be switched on/off by the pedal/footswitch. The effects (waveform) is alternately turned on and off each time the pedal/footswitch is pressed. You can turn this function on or off for each keyboard part on this display.
DSP VARIATION	Same as the [DSP VARIATION] button on the panel.
HARMONY/ECHO	Same as the [HARMONY/ECHO] button.
VOCAL HARMONY	Same as the [VOCAL HARMONY] button.
VOCAL EFFECT	Same as the [EFFECT] button.
TALK	Same as the [TALK] button.

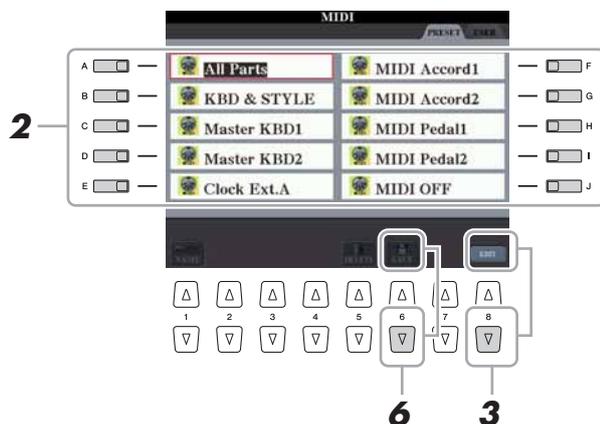
SCORE PAGE +/-	While the Song is stopped, you can turn to the next/previous score page (one page at a time).
LYRICS PAGE +/-	While the Song is stopped, you can turn to the next/previous lyrics page (one page at a time).
TEXT PAGE +/-	You can turn to the next/previous text page (one page at a time).
AUDIO PLAY/PAUSE	Same as the AUDIO RECORDER/PLAYER [PLAY/PAUSE] button.
SONG PLAY/PAUSE	Same as the SONG [PLAY/PAUSE] button.
STYLE START/STOP	Same as the STYLE CONTROL [START/STOP] button.
TAP TEMPO	Same as the [TAP TEMPO] button.
SYNCHRO START	Same as the [SYNC START] button.
SYNCHRO STOP	Same as the [SYNC STOP] button.
INTRO 1–3	Same as the INTRO [I]–[III] buttons.
MAIN A–D	Same as the MAIN VARIATION [A]–[D] buttons.
FILL DOWN	Plays a fill-in, which is automatically followed by the Main section of the button on the immediate left.
FILL SELF	Plays a fill-in.
FILL BREAK	Plays a break.
FILL UP	Plays a fill-in, which is automatically followed by the Main section of the button on the immediate right.
ENDING1–3	Same as the ENDING/rit. [I]–[III] buttons.
FADE IN/OUT	Same as the [FADE IN/OUT] button.
FINGERD/FING ON BASS	The pedal alternately switches between the Fingered and On Bass modes (page 35).
BASS HOLD	While the pedal is pressed, the Accompaniment Style bass note will be held even if the chord is changed during Style playback. If the fingering is set to “AI FULL KEYBOARD,” the function does not work.
PERCUSSION	<p>The pedal plays a percussion instrument selected by the [4 ▲▼]–[8 ▲▼] buttons. You can use the keyboard to select the desired percussion instrument.</p> <p> <b>NOTE</b></p> <p>When you select the percussion instrument by pressing a key on the keyboard, the velocity with which you press the key determines the percussion volume.</p>
RIGHT 1 ON/OFF	Same as the PART ON/OFF [RIGHT 1] button.
RIGHT 2 ON/OFF	Same as the PART ON/OFF [RIGHT 2] button.
RIGHT 3 ON/OFF	Same as the PART ON/OFF [RIGHT 3] button.
LEFT ON/OFF	Same as the PART ON/OFF [LEFT] button.
OTS +/-	Calls up the next/previous One Touch Setting.

## MIDI Settings

In this section, you can make MIDI-related settings for the Tyros4. The Tyros4 gives you a set of ten pre-programmed templates that let you instantly and easily reconfigure the instrument to match your particular MIDI application or external device. Also, you can edit the pre-programmed templates and save up to ten of your original templates to the USER display.

### 1 Call up the operation display.

[FUNCTION] → [H] MIDI



#### NOTE

You can save all your original templates as a single file to a USB storage device:  
[FUNCTION] → [I] UTILITY → TAB  
[◀][▶] SYSTEM RESET → [G] MIDI  
SETUP FILES. See [page 138](#).

### 2 Select a pre-programmed template from the PRESET Page ([page 125](#)).

If you have already created your original template and saved it to the USER Page, you can also select the template from the USER Page.

### 3 Press the [8 ▼] (EDIT) button to call up the MIDI display to edit the selected template.

### 4 Use the TAB [◀][▶] buttons to call up the relevant setting display.

- SYSTEM ..... MIDI System Settings ([page 126](#))
- TRANSMIT ..... MIDI Transmission Settings ([page 127](#))
- RECEIVE..... MIDI Reception Settings ([page 128](#))
- BASS ..... Settings for the bass note of chord for Style playback via MIDI reception data ([page 129](#))
- CHORD DETECT... Settings for the chord type for Style playback via MIDI reception data ([page 129](#))
- MFC10..... Settings for a connected MFC10 MIDI Foot Controller ([page 130](#))

### 5 When you've finished editing, press the [EXIT] button to return to the MIDI template Selection display.

### 6 Select USER tab display by using the TAB [◀][▶] buttons, then press the [6 ▼] (SAVE) button to save the edited template.

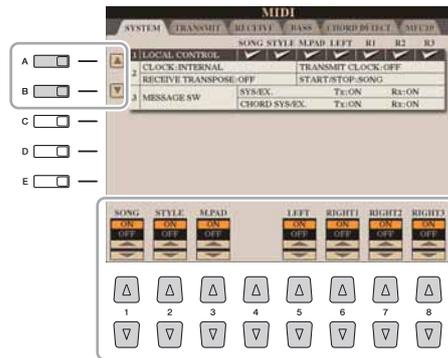
## ■ Pre-programmed MIDI Templates

All Parts	Transmits all parts including the keyboard parts (RIGHT 1, 2, 3, LEFT), with the exception of Song parts.
KBD & STYLE	Basically the same as “ALL PARTS” with the exception of how keyboard parts are managed. The right-hand parts are handled as a “UPPER” instead of RIGHT 1–3 and the left-hand part is handled as a “LOWER.”
Master KBD1	In this setting, the Tyros4 functions as a “master” keyboard, playing and controlling one or more connected tone generators or other devices (such as a computer/sequencer).
Master KBD2	Basically the same as “Master KBD1” above, with the exception that Aftertouch messages are not transmitted.
Clock Ext. A	Playback or recording (Song, Style, Multi Pad, etc.) synchronizes with an external MIDI clock instead of the Tyros4’s internal clock. This template should be used when you wish to set the tempo on the MIDI device connected to the Tyros4. Playback or recording of the Tyros4 synchronizes with an external clock received via MIDI A.
MIDI Accord 1	MIDI accordions allow you to transmit MIDI data and play connected tone generators from the keyboard and bass/chord buttons of the accordion. This template lets you play melodies from the keyboard and control Style playback on the Tyros4 with the left-hand buttons.
MIDI Accord 2	Basically the same as “MIDI Accord1” above, with the exception that the chord/bass notes you play with your left hand on the MIDI Accordion are recognized also as MIDI note events.
MIDI Pedal 1	MIDI pedal units allow you play connected tone generators with your feet (especially convenient for playing single note bass parts). This template lets you play/control the chord root in Style playback with a MIDI pedal unit (connected to MIDI B only).
MIDI Pedal 2	This template lets you play the bass part for Style playback by using a MIDI pedal unit (connected to MIDI B only).
MIDI OFF	No MIDI signals are sent or received.

# MIDI System Settings

The explanations here apply to the SYSTEM Page in step 4 on [page 124](#).

Use the [A]/[B] buttons to select the parameters (below), then set the ON/OFF status by using the [1 ▲▼]–[8 ▲▼] buttons.



## 1 Local Control

Turns the Local Control for each part on or off. When Local Control is set to “ON,” the keyboard of the Tyros4 controls its own (local) internal tone generator, allowing the internal Voices to be played directly from the keyboard. If you set Local to “OFF,” the keyboard and controllers are internally disconnected from the Tyros4’s tone generator section so that no sound is output when you play the keyboard or use the controllers. For example, this allows you to use an external MIDI sequencer to play the Tyros4’s internal Voices, and use the Tyros4 keyboard to record notes to the external sequencer and/or play an external tone generator.

## 2 Clock setting, etc.

### ■ CLOCK

Determines whether the Tyros4 is controlled by its own internal clock or a MIDI clock signal received from an external device. INTERNAL is the normal Clock setting when the Tyros4 is being used alone or as a master keyboard to control external devices. If you are using the Tyros4 with an external sequencer, MIDI computer, or other MIDI device, and you want to synchronize it to that device, set this parameter to the appropriate setting: MIDI A, MIDI B, USB 1, or USB 2. In this case, make sure that the external device is connected properly (e.g., to the Tyros4’s MIDI IN terminal), and that it is properly transmitting a MIDI clock signal.

### ■ TRANSMIT CLOCK

Turns MIDI clock (F8) transmission on or off. When set to OFF, no MIDI clock or Start/Stop data is transmitted even if a Song or Style is played back.

### ■ RECEIVE TRANSPOSE

Determines whether or not the Tyros4’s transpose setting is applied to the note events received by the Tyros4 via MIDI.

### ■ START/STOP

Determines whether incoming FA (start) and FC (stop) messages affect Song or Style playback.

## 3 MESSAGE SW (Message Switch)

### ■ SYS/EX.

The “Tx” setting turns MIDI transmission of MIDI System Exclusive messages on or off. The “Rx” setting turns MIDI reception and recognition of MIDI System Exclusive messages generated by external equipment on or off.

### ■ CHORD SYS/EX.

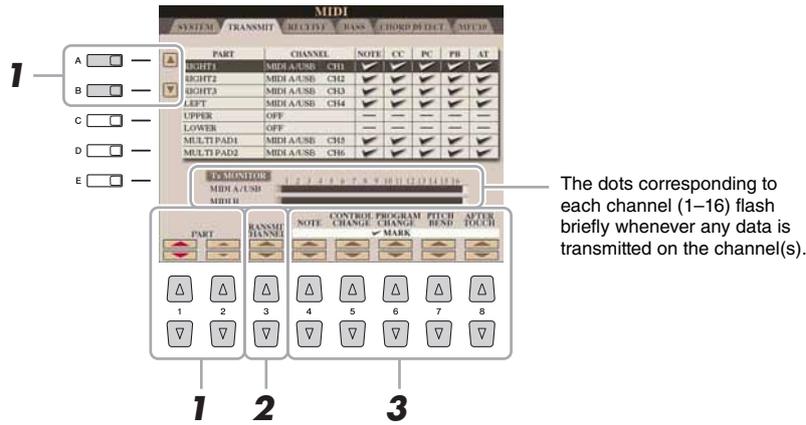
The “Tx” setting turns MIDI transmission of MIDI chord exclusive data (chord detect, root and type) on or off. The “Rx” setting turns MIDI reception and recognition of MIDI chord exclusive data generated by external equipment on or off.

### NOTE

If the Clock is set other than INTERNAL, the Style, Song or Multi Pad cannot be played from the panel buttons.

# MIDI Transmit Settings

The explanations here apply to the TRANSMIT Page in step 4 on [page 124](#). This determines which parts will be sent as MIDI data and over which MIDI channel the data will be sent.



## 1 Use the [A]/[B] buttons or [1 ▲▼]/[2 ▲▼] buttons to select the part for changing transmit settings.

With the exception of the two parts below, the configuration of the parts is the same as those already explained elsewhere in the Owner's Manual.

### UPPER

A keyboard part played on the right side of the keyboard from the Split Point for the Voices (RIGHT 1, 2, and 3).

### LOWER

A keyboard part played on the left side of the keyboard from the Split Point for the Voices. This is not affected by the on/off status of the [ACMP] button.

## 2 Use the [3 ▲▼] buttons to select a channel via which the selected part will be transmitted.

## 3 Use the [4 ▲▼]–[8 ▲▼] button to determine the types of data to be sent.

The following MIDI messages can be set on the TRANSMIT/RECEIVE display.

- NOTE (Note events) ..... [page 74](#)
- CC (Control Change)..... [page 74](#)
- PC (Program Change)..... [page 74](#)
- PB (Pitch Bend)..... [page 74](#)
- AT (Aftertouch)..... [page 74](#)

### NOTE

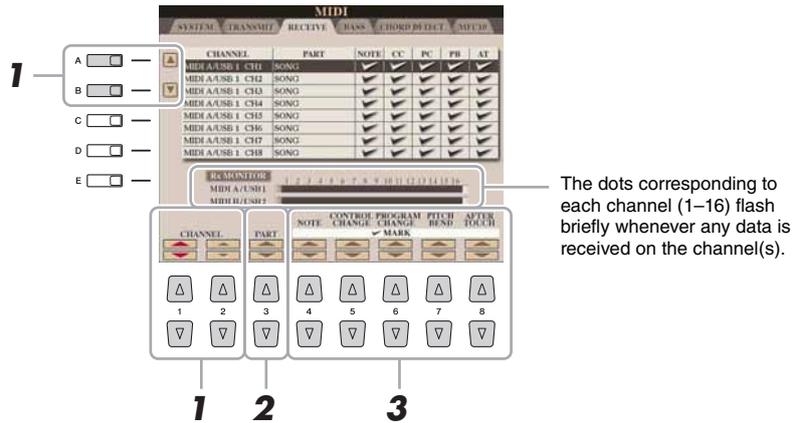
If the same transmit channel is assigned to several different parts, the transmitted MIDI messages are merged to a single channel—resulting in unexpected sounds and possible glitches in the connected MIDI device.

### NOTE

Protected Songs cannot be transmitted even if the proper Song channels 1–16 are set to be transmitted.

# MIDI Receive Settings

The explanations here apply to the RECEIVE Page in step 4 on [page 124](#). This determines which parts will receive MIDI data and over which MIDI channels the data will be received.



## 1 Use the [A]/[B] buttons or [1 ▲▼]/[2 ▲▼] buttons to select the channel to be received.

The Tyros4 can receive MIDI messages over 32 channels (16 channels x 2 ports) by USB connection.

## 2 Use the [3 ▲▼] buttons to select the part via which the selected channel will be received.

With the exception of the two parts below, the configuration of the parts is the same as those already explained elsewhere in the Owner's Manual.

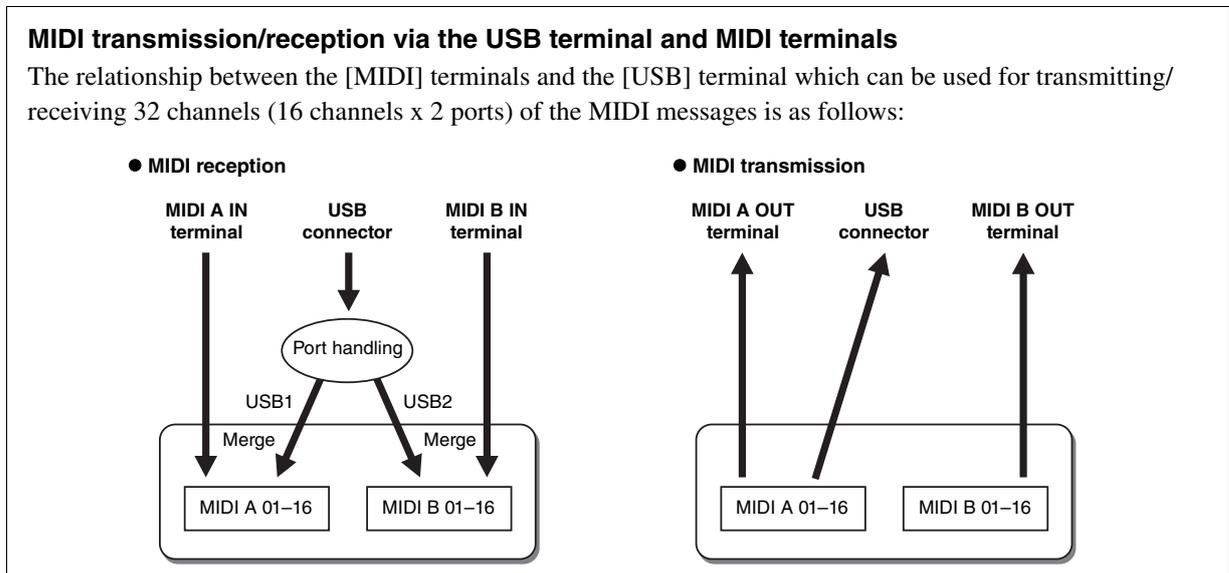
### KEYBOARD

The received note messages control the Tyros4's keyboard performance.

### EXTRA PART 1-4

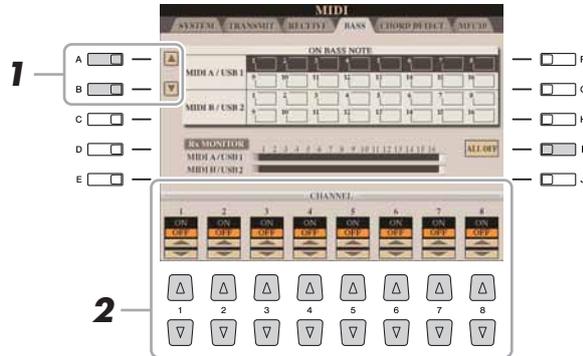
There are four parts specially reserved for receiving and playing MIDI data. Normally, these parts are not used by the instrument itself. The Tyros4 can be used as a 32-channel multi-timbral tone generator by using these four parts in addition to the parts (except for the microphone sound).

## 3 Use the [4 ▲▼]–[8 ▲▼] button to determine the types of data to be received.



## Setting the Bass Note for Style Playback via MIDI Receive

The explanations here apply to the BASS Page in step 4 on [page 124](#). These settings let you determine the bass note for Style playback, based on the note messages received via MIDI. The note on/off messages received at the channel(s) set to “ON” are recognized as the bass note of the chord of Style playback. The bass note will be detected regardless of the [ACMP] or split point settings. When several channels are simultaneously set to “ON,” the bass note is detected from merged MIDI data received over the channels.



**1** Use the [A]/[B] buttons to select the channel.

**2** Use the [1 ▲▼]–[8 ▲▼] button to set the desired channel to ON or OFF.

You can also set all channels to OFF by pressing the [I] (ALL OFF) button.

## Setting the Chord Type for Style Playback via MIDI Receive

The explanations here apply to the CHORD DETECT Page in step 4 on [page 124](#). These settings let you determine the chord type for Style playback, based on the note messages received via MIDI. The note on/off messages received at the channel(s) set to “ON” are recognized as the notes for detecting chords in Style playback. The chords to be detected depend on the fingering type. The chord types will be detected regardless of the [ACMP] or split point settings. When several channels are simultaneously set to “ON,” the chord type is detected from merged MIDI data received over the channels.



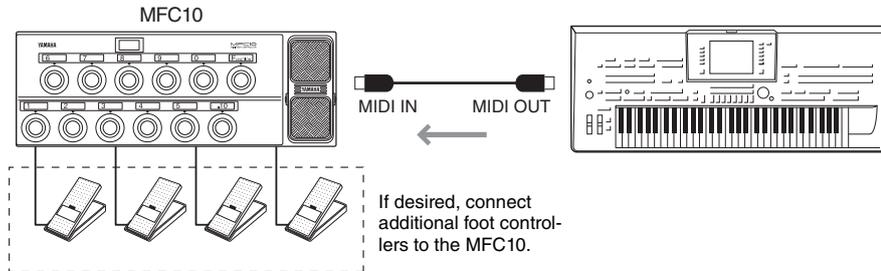
The operation procedure is basically the same as that of the BASS display above.

## MFC10 Settings

The explanations here apply to the MFC10 Page in step 4 on [page 124](#).

By connecting an optional MFC10 MIDI Foot Controller to the Tyros4, you can conveniently control a wide range of operations and functions by using your feet—perfect for changing settings and controlling the sound while you perform live. Different functions can be assigned to each of the footswitches and up to five foot controllers (optional) can be connected to the MFC10, for additional sound-shaping possibilities.

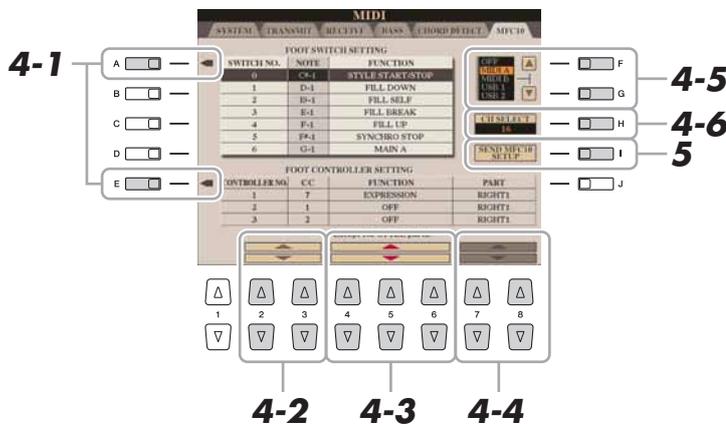
- 1** Connect the MIDI IN terminal of the MFC10 to one of the MIDI OUT terminals of the Tyros4 by using a MIDI cable.



- 2** Set the MFC10 to the normal mode and turn the [FUNCTION] lamp of the MFC10 on.

- 3** Perform steps 1–4 on [page 124](#) to call up the MFC10 Page.

- 4** Set the parameters on this display as desired.



On this display, two settings (below) can be made:

- Each footswitch (F00–F29) on the MFC10 sends a note number to the Tyros4, and the Tyros4 determines how it responds to (which function is executed by) that note number.
- Each foot controller on the MFC10 sends control change messages over a specific control change number to the Tyros4, and the Tyros4 determines how it responds to (which parameter is changed by) that control change number.

- 4-1** Use the [A]/[E] buttons to select “FOOTSWITCH” or “FOOT CONTROLLER.”



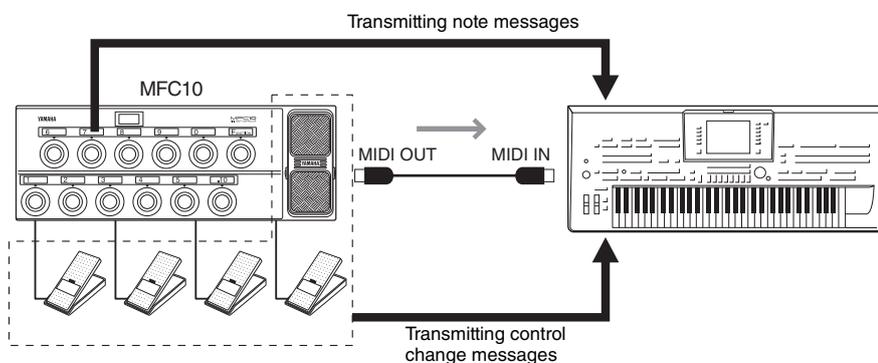
- 4-2** Use the [2 ▲▼]/[3 ▲▼] buttons to select a footswitch number (F00–F29) or a foot controller number (1–5) to which the function is assigned. Please note that a note number is assigned to each footswitch and a control change number is assigned to each foot controller beforehand and you cannot change the settings.
- 4-3** Use the [4 ▲▼]–[6 ▲▼] buttons to specify the function assigned to the footswitch (actually the note number), or the function assigned to the foot controller (actually the control change number). About the functions which can be assigned to the footswitch or foot controller, refer to [page 122](#).
- 4-4** (Only for the FOOT CONTROLLER Setting) Determine the part to which the function assigned to the foot controller is applied by using the [7 ▲▼]/[8 ▲▼] buttons.
- 4-5** Use the [F]/[G] buttons to determine the MIDI port which is to be used when communicating with the MFC10. Here, the USB port (USB1, USB2) can be selected even though the MFC10 does not have the USB connector. This is because the computer can be used instead of the MFC10. (The computer can transmit the data equivalent to the data the MFC10 transmits to the Tyros4. For details, see the bottom of the page.)
- 4-6** Use the [H] (CH SELECT) button to determine the MIDI channel which is to be used when communicating with the MFC10.

**5** Press the [I] (SEND MFC10 SETUP) button to send the settings here to the MFC10.

**6** Disconnect the MIDI cable from the Tyros4 and the MFC10, and connect the MIDI OUT terminal of the MFC10 to the MIDI IN terminal of the Tyros4 according to the setting above by using a MIDI cable.

 **NOTE**

Actually the pair of the footswitch number and the note number, the pair of the foot controller number and the control change number, and the MIDI channel for communication set above are transmitted to the MFC10.



**7** Operate the MFC10 to confirm whether you can properly control the Tyros4 from the MFC10 as set in step 4.

**8** Press the [EXIT] button to return to the MIDI template Selection display and save the settings above to the USER tab.

**Using a computer or another MIDI instrument instead of the MFC10**

The following two settings on the MFC10 Page can be saved not to the MFC10 but to the Tyros4 as a MIDI template.

- Note number/Tyros4 function assignment pairs
- Control change number/Tyros4 parameter change assignment pairs

If you are not using an MFC10, you can have note numbers and control change messages from any other appropriate MIDI device (such as a computer, sequencer or master keyboard) control the Tyros4. Make sure to set the appropriate channel in this display for control by the external device.

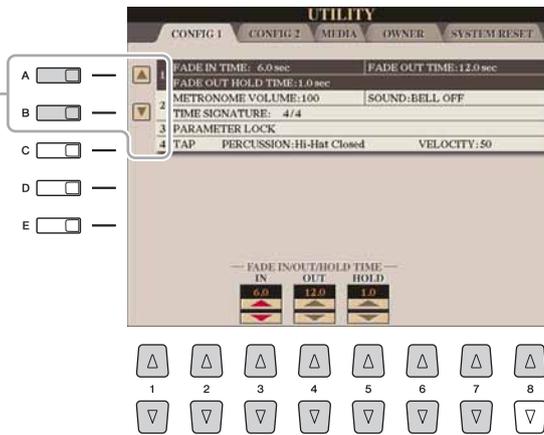
### Contents

CONFIG1 .....	132
CONFIG2 .....	134
MEDIA.....	135
OWNER.....	136
SYSTEM RESET .....	137
• Factory Reset—Restoring the Factory Programmed Settings.....	137
• Custom Reset—Saving and Recalling Your Original Settings as a Single File.....	138

## CONFIG1

Select the desired parameter:

- 1 Fade In/Out
- 2 Metronome
- 3 Parameter Lock
- 4 Tap



### 1 Fade In/Out

These parameters determine the behavior when the Style or Song playback is faded in/out by the [FADE IN/OUT] button.

[3 ▲▼]	FADE IN TIME	Determines the time it takes for the volume to fade in, or go from minimum to maximum (range of 0–20.0 seconds).
[4 ▲▼]	FADE OUT TIME	Determines the time it takes for the volume to fade out, or go from maximum to minimum (range of 0–20.0 seconds).
[5 ▲▼]	FADE OUT HOLD TIME	Determines the time the volume is held at 0 following the fade out (range of 0–5.0 seconds).

### 2 Metronome

[2 ▲▼]	VOLUME	Determines the level of the metronome sound.
[3 ▲▼]– [5 ▲▼]	SOUND	Determines whether a bell accent will be sounded or not at the first beat of each measure.
[6 ▲▼]/ [7 ▲▼]	TIME SIGNATURE	Determines the time signature of the metronome sound.

### 3 Parameter Lock

This function is used to “lock” specific parameters (effect, split point, etc.) to make them selectable only via the panel control—in other words, instead of being changed via Registration Memory, One Touch Setting, Music Finder, or Song and sequence data.

Use the [1 ▲▼]–[7 ▲▼] buttons to select the desired parameter, then lock it with the [8 ▲] (MARK ON) button.

### 4 Tap

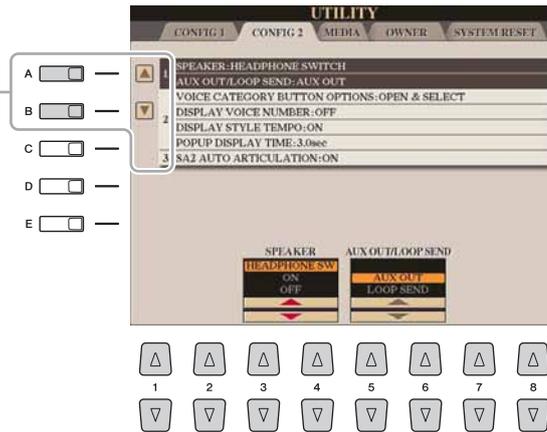
This allows you to set the drum sound and the velocity which will sound when the Tap function is used.

[2 ▲▼]– [4 ▲▼]	PERCUSSION	Selects the instrument.
[5 ▲▼]/ [6 ▲▼]	VELOCITY	Sets the velocity.

# CONFIG2

Select the desired parameter:

- 1 Speaker/AUX Out- Loop Send
- 2 Voice Category Button Options/Display-related Settings
- 3 SA2 Auto Articulation



## 1 Speaker/AUX Out-Loop Send

[3 ▲▼]/ [4 ▲▼]	SPEAKER	Determines whether or not the optionally installed speaker will sound.  <b>HEADPHONE SW:</b> Speaker sounds normally, but is cut off when headphones are inserted to the PHONES jack. <b>ON:</b> Speaker sound is always on. <b>OFF:</b> Speaker sound is off.
[5 ▲▼]/ [6 ▲▼]	AUX OUT/LOOP SEND	Selects the desired output type corresponding to the AUX OUT/LOOP SEND jack.

## 2 Voice Category Button Options/Display-related settings

[1 ▲▼]/ [2 ▲▼]	VOICE CATEGORY BUTTON OPTIONS	Determines how the Voice Selection display is opened when one of the VOICE buttons is pressed.  <b>OPEN &amp; SELECT:</b> Opens the Voice Selection display with the previously selected Voice in the Voice category automatically selected (when one of the VOICE buttons is pressed). <b>OPEN ONLY:</b> Opens the Voice Selection display with the currently selected Voice (when one of the VOICE buttons is pressed).
[3 ▲▼]/ [4 ▲▼]	DISPLAY VOICE NUMBER	Determines whether or not the Voice bank and number are shown in the Voice Selection display. This is useful when you want to check which bank select MSB/LSB values and program change number you need to specify when selecting the Voice from an external MIDI device.  <b>NOTE</b> The numbers displayed here start from "1." Accordingly the actual MIDI program change numbers are one lower, since that number system starts from "0."  <b>NOTE</b> For the GS Voices, the Display Voice Number is not available (the program change numbers are not shown).
[5 ▲▼]/ [6 ▲▼]	DISPLAY STYLE TEMPO	Selects whether or not the default tempo of each preset Style is displayed above the preset Style name in the Style Selection display.
[7 ▲▼]/ [8 ▲▼]	POPUP DISPLAY TIME	Determines the time in which the popup windows close. (Popup windows are displayed when you press buttons such as TEMPO, TRANSPOSE or UPPER OCTAVE, etc.)

## 3 SA2 Auto Articulation

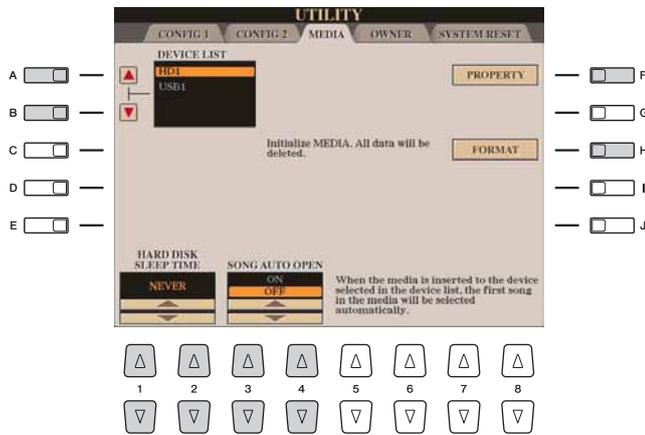
Determines whether articulation is added to SA2 Voices automatically.

### NOTE

This affects not only SA2 Voices of your keyboard performance, but also the SA2 Voices in Songs or Styles.

# MEDIA

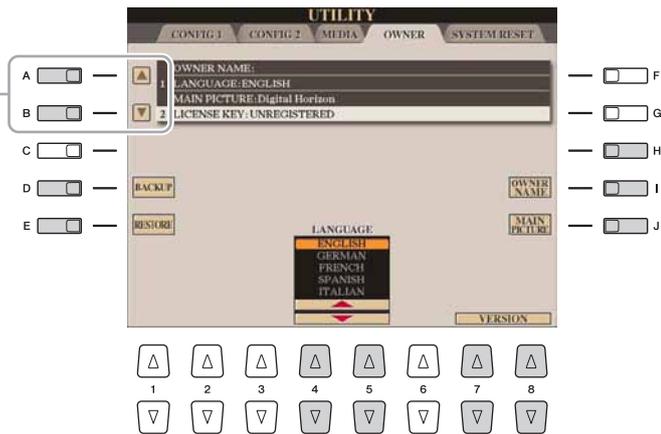
You can set or execute important media-related operations for the Tyros4. The word “media” refers to both the USB storage device and internal hard disk drive.



[A]/[B]	DEVICE LIST	Selects the desired media which you want to check the remaining memory (see “PROPERTY” below) or format the media (see the Owner’s Manual).
[F]	PROPERTY	Opens the Property display of the media selected by [A]/[B] buttons. You can check the amount of remaining memory on the media. <b>NOTE</b> The displayed remaining memory value is an approximate value.
[H]	FORMAT	Formats the media selected by [A]/[B] buttons. Refer to the Owner’s Manual, chapter 11.
[1 ▲▼]/ [2 ▲▼]	HARD DISK SLEEP TIME	The hard disk unit will go into a “sleep” mode after a specified time of inactivity, both to maximize the lifetime of the hard disk and to minimize unnecessary mechanical noise. This parameter determines the sleep time. <b>NOTE</b> When using the Audio Recorder/Player function, make sure to set this to “NEVER,” otherwise the Audio Recorder/Player may not function properly.
[3 ▲▼]/ [4 ▲▼]	SONG AUTO OPEN	Turns the Song Auto Open function on or off. When this is set to “ON” and the media selected in the Device List above is inserted, the Tyros4 automatically calls up the first Song in the media.

# OWNER

Select the desired parameter:  
**1** Owner Name/Language/  
 Main Picture  
**2** License Key



## 1 Owner Name/Language/Main Picture

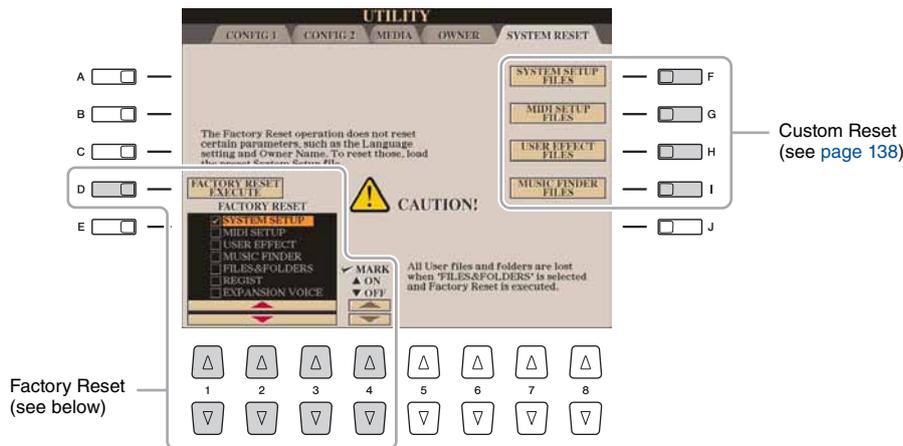
[D]	BACKUP	Lets you backup all data on the instrument to a USB storage device. Refer to the Owner's Manual.
[E]	RESTORE	Loads the backup file from the USB storage device.
[I]	OWNER NAME	Lets you enter your name as the owner. The Owner name is indicated on the opening display when you turn the power on. Refer to the Owner's Manual, Basic Operation for character-entry.
[J]	MAIN PICTURE	Lets you select background picture for the Main display. You can select a picture from among various pictures provided on the Preset Page. After selecting, press the [EXIT] button to close the Selection display. You can also use your original picture in the USB storage device or internal hard disk drive. Make sure the image file is bitmap file (.BMP) and no greater than 640 x 480 pixels. First copy the desired file from USB to USER Page, then select it on the USER Page. <b>NOTE</b> The explanation about picture compatibility above applies also to the background of the Song Lyric display (page 55).
[4 ▲▼]/ [5 ▲▼]	LANGUAGE	Determines the language used for the display messages. Once you change this setting, all messages will be shown in the selected language.
[7 ▲▼]/ [8 ▲▼]	VERSION	Displays the version number of this instrument.

## 2 License Key

When you want to purchase and install Premium Voices, Songs and Styles, etc. (called Premium Pack data), a license key may be needed. For details, refer to Chapter 1 in the Owner's Manual.

# SYSTEM RESET

There are two reset methods in the SYSTEM RESET display: Factory Reset and Custom Reset.



## Factory Reset—Restoring the Factory Programmed Settings

This function lets you restore the status of the Tyros4 to the original factory settings.

- 1** Select the desired item to be restored by using [1 ▲▼]–[3 ▲▼] buttons and add a checkmark to it by pressing the [4 ▲] (MARK ON) button.

To remove the checkmark, press the [4 ▼] (MARK OFF) button.

SYSTEM SETUP	Restores the System Setup parameters to the original factory settings. Refer to the Data List for details about which parameters belong to the System Setup.
MIDI SETUP	Restores the MIDI settings including the MIDI templates on the USER tab display to the original factory status.
USER EFFECT	Restores the User Effect settings including the user effect types, user master EQ types and user compressor types created via the Mixing Console display, as well as the user vocal harmony types and user microphone setting memories to the original factory settings.
MUSIC FINDER	Restores the Music Finder data (all records) to the original factory settings.
FILES & FOLDERS	Deletes all files and folders stored in the USER tab display.
REGIST	Temporarily deletes the current Registration Memory settings of the selected Bank. The same can be done also by turning the power on while holding the B5 key (right-most B key on the keyboard).
EXPANSION VOICE	Deletes all Expansion Voices.

- 2** Press the [D] (FACTORY RESET EXECUTE) button to execute the Factory Reset operation for all checkmarked items.

## Custom Reset—Saving and Recalling Your Original Settings as a Single File

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For the items below, you can save your Original Settings as a Single File for future recall.

**1** Make all desired settings on the instrument.

**2** Call up the operation display.

[FUNCTION] → [I] UTILITY → TAB [◀][▶] SYSTEM RESET

**3** Press one of the [F]–[I] buttons to call up the relevant display for saving your data.

[F]	SYSTEM SETUP FILES	Parameters set on the various displays such as the [FUNCTION] → [I] UTILITY and microphone setting display are handled as a single System Setup file. Refer to the Data List for details on which parameters belong to the System Setup.
[G]	MIDI SETUP FILES	The MIDI settings including the MIDI templates on the USER tab display are handled as a single file.
[H]	USER EFFECT FILES	The User Effect settings including the user effect types, user master EQ types and user compressor types created via the Mixing Console display, as well as the user vocal harmony types and user microphone setting memories are managed as a single file.
[I]	MUSIC FINDER FILES	All the preset and created records of the Music Finder are handled as a single file.

**4** Use the TAB [◀][▶] buttons to select one of the tabs (other than the PRESET) to which your settings will be saved.

**5** Press the [6 ▼] (SAVE) button to save your file.

**6** To recall your file, press the desired [F]–[I] buttons in the SYSTEM RESET display, then select the desired file.

When the file is selected, a message is displayed according to the content of the file. Press the desired button.

# Index

## Numerics

- 1-16..... 61
- 3BAND EQ..... 119

## A

- ACCENT TYPE ..... 47
- ADD TO FAVORITE..... 80
- Add Wave display ..... 21–22
- Additional Voice ..... 31
- AFTER TOUCH ..... 6, 13
- AI FINGERED ..... 35
- AI FULL KEYBOARD ..... 35
- ALL SOUND OFF ..... 26
- ALL-PURPOSE ..... 52
- ALTERNATE GROUP ..... 26
- AMPLITUDE..... 12–13
- Any Key ..... 58
- APPEND ..... 82
- ARABIC1 ..... 9
- ARABIC2 ..... 9
- ARPEGGIO ..... 52
- ASSEMBLY ..... 40, 44
- Assembly display ..... 21
- ASSIGN (Harmony/Echo) ..... 8
- ATTACK (Vocoder) ..... 105
- ATTACK (Voice Set) ..... 13
- Audio Recorder/Player..... 87
- AUDITION..... 19
- AUTO CH SET ..... 57
- AUX OUT/LOOP SEND ..... 134

## B

- BAND PASS FILTER..... 106
- BAR CLEAR..... 48
- BAR COPY ..... 48
- BASIC ..... 40–41
- BASS..... 124, 129
- BEAT CONVERTER ..... 46
- Bookmark..... 116
- BOOST/CUT ..... 47
- BRIGHT (Brightness)..... 13
- BRIGHTNESS ..... 108
- BROWSER SETTING..... 115
- BYPASS ..... 51

## C

- CARRIER..... 105
- CATEGORY ..... 18–19, 25
- CENTER KEY ..... 22
- CHANNEL (Song Creator) ..... 61, 70
- CHANNEL (Style Creator). 40, 47–48
- CHANNEL (Voice Creator)..... 29

- CHANNEL TRANSPOSE..... 72
- CHORD (Song Creator)..... 61, 65
- CHORD (Style Creator) ..... 50–51
- CHORD DETECT ..... 124, 129
- Chord Events ..... 74
- CHORD FINGERING ..... 34
- CHORD NOTE ONLY ..... 8
- CHORD SYS/EX..... 126
- Chord Tutor..... 34
- CHORDAL TYPE..... 100
- CHORUS..... 109
- CHORUS (Vocal Harmony). 100, 105
- CHORUS DEPTH ..... 14
- CHORUS DEPTH (Talk)..... 121
- CLOCK..... 126
- COMMON..... 12
- COMPARE..... 11
- COMPRESSOR..... 120
- CONFIG1..... 132
- CONFIG2..... 134
- CONTROLLER..... 6, 10, 121
- CONTROLLER (Voice Set) ..... 12
- Cool! ..... 4
- Custom Drum Voice ..... 24
- Custom Reset ..... 138
- Custom Voice..... 20
- CUSTOM VOICE ASSEMBLY. 21, 25
- CUSTOM VOICE EDIT via PC ..... 33
- Custom! ..... 5
- CustomWA!..... 5

## D

- DECAY ..... 13
- DEFRAG (Expansion Module)..... 29
- DELETE (Song Creator) ..... 71
- DELETE (Style Creator) ..... 42
- DELETE WAVE ..... 23
- Detail..... 102, 106
- DETUNE..... 101
- DIGITAL RECORDING..... 40, 61, 77
- DORIAN ..... 52
- DORIAN 5th ..... 52
- Drum Mapping display ..... 25
- Drums ..... 4
- DSP ..... 14, 109
- DYNAMICS..... 47

## E

- Echo Types ..... 7
- EDIT..... 40
- EFFECT ..... 105, 109
- EFFECT/EQ..... 14
- EG ..... 13

- EMPTY..... 25
- END KEY..... 23
- Envelope Generator ..... 13
- EQ ..... 14, 112
- EQUAL..... 9
- Equalizer ..... 112
- Event List display..... 44, 73
- EXPAND/COMP..... 47
- Expansion Module ..... 18–19

## F

- Factory Reset..... 137
- Fade In/Out..... 132
- Favorite ..... 80
- FILTER..... 12–13, 108
- FILTER (Event List display) ..... 75
- FINE ..... 46
- Fine-tuning..... 9
- FINGERED ..... 35
- FINGERED ON BASS..... 35
- FIXED DO ..... 54
- FIXED PITCH..... 22
- Flash Memory Expansion  
Module ..... 17, 20, 24
- Follow Lights..... 58
- Foot Controller ..... 121
- FOOT PEDAL ..... 121
- FOOTAGE ..... 16
- Footswitch ..... 121
- FORMANT..... 101, 105
- FORMAT (Expansion Module) ..... 29
- Freeze..... 84
- Frequency ..... 112
- FULL KEYBOARD ..... 35

## G

- Gain..... 112
- GLIDE ..... 122
- GM ..... 5
- GROOVE..... 40, 46
- Guide ..... 58
- GUITAR ..... 51

## H

- HARMO. (Harmonic content) ..... 13
- HARMONIC CONTENT..... 13, 108
- HARMONIC MINOR ..... 51
- HARMONIC MINOR 5th ..... 51
- HARMONY ..... 14
- HARMONY ASSIGN ..... 99–100
- Harmony Types..... 7
- Harmony/Echo type ..... 7
- HIGH KEY ..... 52

HPF (High Pass Filter)..... 105

**I**

IMPORT..... 18

INDIVIDUAL LOAD ..... 31

INITIAL TOUCH..... 6

INPUT LEVEL meter ..... 119

Internet Direct Connection..... 115

**J**

Jump Markers..... 76

**K**

Karao-Key..... 59

KBD.VEL (Keyboard Velocity) ..... 62

Key Mapping display ..... 23

KEY SIGNATURE..... 54

KEYBOARD (Transpose)..... 10

KEYBOARD (Vocal Harmony) ..... 97

KEYBOARD/PANEL..... 6, 10

KIRNBERGER..... 9

Kit Edit..... 27

KIT ↔ INST ..... 25

**L**

Language..... 136

Legacy..... 5

LENG (Length) ..... 16

LFO..... 12–13

LIBRARY EDIT ..... 28

LIBRARY LOAD..... 32

LIBRARY SAVE..... 30

License Key..... 136

Line Out..... 114

Live! ..... 4

Live!Drums..... 5

Live!SFX..... 5

Local Control ..... 126

LOOP..... 76

Loop End Marker ..... 76

Loop Recording ..... 41

LYRICS ..... 61

Lyrics display..... 55

Lyrics Event..... 74

LYRICS LANGUAGE..... 57

**M**

Main Picture ..... 136

MASTER (Transpose) ..... 10

Master EQ..... 113

MASTER TUNE..... 9

MEAN-TONE..... 9

MEDIA..... 135

MELODIC MINOR..... 51

MELODIC MINOR 5th ..... 51

MELODY ..... 51

MEMORY (OTS)..... 39

MESSAGE SW  
(Message Switch) ..... 126

Metronome..... 132

MFC10 ..... 130

MIC SETTING ..... 118–119

MIC/TALK indicator ..... 119

Microphone ..... 118

MIDI Settings..... 124

MIDI SETUP FILES..... 138

MIDI Templates ..... 125

MIX ..... 72

Mixing Console..... 107

MODE (Audio Recorder/Player)..... 91

MODE (Organ Flutes) ..... 16

MODE (Vocal Harmony) ..... 100

MODULATION (Pedal) ..... 122

MODULATION (Voice Set) ..... 12

MONO/POLY ..... 12

MOVABLE DO..... 54

Multi Assign Type ..... 7

MULTI FINGER ..... 35

Multi Pad ..... 77

Multi Pad Creator..... 77

MULTI PAD EDIT ..... 79

Music Finder ..... 80

MUSIC FINDER +..... 83

MUSIC FINDER FILES..... 138

Music Notation..... 53

**N**

NATURAL MINOR ..... 51

NATURAL MINOR 5th..... 52

NEW BANK..... 77

NEW STYLE ..... 41

NOISE GATE ..... 119

NORMAL REC ..... 89

NORMALIZE ..... 88

Notation..... 53

Note Events ..... 74

NOTE LIMIT ..... 52

NOTE NAME..... 54

Note Transposition..... 51

NTR ..... 51

NTT..... 51

NUDGE ..... 91

**O**

OCTAVE..... 108

OCTAVE (Vocal Harmony) ..... 105

One Touch Setting..... 39

Organ Flutes ..... 16

Organ Flutes! ..... 4

ORIGINAL BEAT ..... 46

OTS LINK TIMING ..... 36

Overdub Recording..... 41

Overview ..... 99, 104

OWNER..... 136

Owner Name..... 136

**P**

P.A.T..... 60

PAN (Talk) ..... 121

PAN (Vocal Harmony) ..... 101

PAN (Voice Creator) ..... 26

PANEL SUSTAIN ..... 14

PANPOT ..... 107

PARAMETER (Style Creator).. 40, 49

Parameter Lock..... 133

Part..... 101

PART OCTAVE..... 12

PART ON/OFF (Style Setting)..... 37

PEDAL POLARITY ..... 121

PEDAL PUNCH IN/OUT ..... 68

Performance Assistant ..... 60

PHRASE MARK REPEAT ..... 57

PITCH BEND ..... 122

PITCH BEND RANGE..... 108

PITCH CORRECT MODE..... 101

PITCH DETECT ..... 120

PITCH SHIFT ..... 52

PITCH SHIFT TO ROOT ..... 52

PLAY ROOT ..... 50

Playlist ..... 93

PORTAMENTO ..... 122

PORTAMENTO TIME ..... 108

PORTAMENTO TIME  
(Voice Set)..... 12

Premium Voices ..... 31, 136

Property ..... 29

Punch In/Out  
(Audio Recorder/Player) ..... 90

Punch In/Out (Song) ..... 68

PURE MAJOR..... 9

PURE MINOR ..... 9

PYTHAGOREAN..... 9

**Q**

QUANTIZE ..... 48, 54, 71

QUICK START ..... 58

**R**

Realtime Recording (Multi Pad)..... 77

Realtime Recording (Style) ..... 41

REC END ..... 68

REC MODE (Song Creator) .... 61, 68

REC START ..... 68

RECEIVE..... 124, 128

RECEIVE NOTE OFF ..... 26

RECEIVE TRANSPOSE..... 126

RECORD display..... 41

RECORD EDIT ..... 81

REDUCTION LEVEL (Talk) ..... 121

REGIST SEQUENCE/FREEZE/  
VOICE SET ..... 15, 84–85

Registration Memory .....	84
Registration Sequence .....	85
REHEARSAL.....	91
RELEASE (Vocal Harmony) .....	105
RELES. (Release).....	13
REMOVE EVENT .....	48
REPEAT FOLDER .....	57
REPEAT MODE.....	57
REPLACE .....	82
RESP (Response).....	16
RETRIGGER.....	52
RETRIGGER TO ROOT .....	52
REVERB.....	26, 109
REVERB (Vocal Harmony)..	100, 105
REVERB DEPTH.....	14
REVERB DEPTH (Talk).....	121
RHY CLEAR.....	43
ROOT FIXED .....	51
ROOT TRANS.....	51
RTR .....	52

## S

SA2 Auto Articulation.....	134
SCALE TUNE.....	9
Score.....	53
SECTION SET.....	37
SELECT WAVE .....	21, 25
SEQUENCE END .....	85
SET UP (Score).....	54
SETUP (Song Creator) .....	72
SETUP (Vocal Harmony) .....	96
SFF .....	49
SFF GE .....	49
SFX.....	4
SINGLE FINGER .....	35
SOFT.....	6, 122
Song.....	53
SONG (Transpose) .....	10
Song Creator.....	61
Song Position Markers.....	76
SONG SETTING.....	57
SOSTENUTO .....	122
SOUND .....	13
SOURCE ROOT .....	50
SP (Song Position).....	76
SPEAKER.....	134
SPEED (Harmony/Echo).....	8
SPEED (Vocal).....	120
SPLIT POINT .....	38
START KEY .....	22–23
Start/End Point .....	92
START/STOP (MIDI).....	126
STEP RECORD display.....	62
Step Recording (Multi Pad) .....	78
Step Recording (Song) .....	61, 65
Step Recording (Style).....	44
STOP (RTR).....	52
STOP ACMP .....	36

STORE.....	23, 27
STRENGTH .....	47
STROKE.....	52
Style.....	34
Style Assembly.....	44
Style Creator .....	40
Style File Format .....	49
STYLE SETTING.....	36
STYLE SETTING/SPLIT POINT/ CHORD FINGERING ....	34, 36, 38
STYLE TOUCH .....	37
Sweet! .....	4
SWING .....	46
SYNCHRO STOP WINDOW .....	36
SYS/EX. ....	61, 126
SYSTEM.....	124, 126
System Exclusive Events.....	74
SYSTEM RESET .....	137
SYSTEM SETUP .....	137
SYSTEM SETUP FILES .....	138

## T

TALK MIXING .....	121
TALK Page .....	120
Tap .....	133
TARGET .....	26
TEMPO (Style Setting) .....	37
Text display.....	55
TOUCH LIMIT .....	8
Touch response.....	6
TOUCH SENSE (Voice Set).....	12
Touch Sensitivity .....	6
TRACK DELETE .....	88
TRACK SELECT .....	88–90
TRANSMIT .....	124, 127
TRANSMIT CLOCK .....	126
TRANSPOSE .....	108
TRANSPOSE (Vocal Harmony)...	101
TRANSPOSE ASSIGN.....	10
TUNE .....	108
TUNING.....	108
Tuning.....	9

## U

USER EFFECT FILES.....	138
USER MEMORY .....	119
Utility .....	132

## V

VARIATION (DSP).....	14
VELOCITY CHANGE .....	48
VH TYPE SELECT.....	96, 98, 103
VIBRATO.....	14
VIBRATO SPEED.....	16
VIEW NOTE.....	26
VOCAL EFFECT EDIT .....	99, 104
Vocal Harmony.....	96

VOCAL Page .....	119
VOCODER .....	105
VOCODER CONTROL.....	97
Voice.....	4
VOICE (Mixing Console) .....	107
Voice Creator .....	17
Voice Editor .....	33
Voice Property (Voice Creator).....	29
VOICE RAM.....	29
VOICE SET .....	15
Voice Set.....	11
VOL (Organ Flutes) .....	16
VOL/VOICE .....	107
VOLUME (Audio Recorder/Player) .....	88
VOLUME (Harmony/Echo).....	8
VOLUME (Mixing Console).....	107
VOLUME (Talk).....	121
VOLUME (Vocal Harmony).....	101
VOLUME (Voice Creator) .....	26
VOLUME (Voice Set) .....	12
VOLUME/ATTACK .....	16

## W

WAVE COUNT.....	29
Wave Property .....	29
WAVE VOLUME.....	22
WAVEFORM COUNT .....	29
WERCKMEISTER .....	9

## X

XG.....	5
---------	---