



DIGITAL WORKSTATION

PSR-S650

Reference Manual

Explains advanced features of the PSR-S650. After reading the Owner's Manual and you want more detailed information about PSR-S650 features, refer to the Reference Manual.



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## 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 displays as shown in this manual are for instructional purposes only, and may appear somewhat different from those on your instrument.
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# Voice-Related Settings and Functions

When a Main, Dual or Left Voice is selected, suitable Voice parameters—such as Voice Volume or effect send level—for each Voice are automatically recalled. However, you can change these parameters as desired. This chapter explains how to set the Voice parameters for each Voice and how to make other settings related to the keyboard performance.

## Adjusting volume balance and timbre of the sounds for each Voice

You can adjust the volume balance or other Voice parameters among Main, Dual and Left Voices. You can also memorize the settings here to the Registration Memory for easy and convenient future recall.

### 1 Press the [FUNCTION] button to call up the Function display.

The currently selected item will appear in the display.

### 2 Press the CATEGORY [◀] and [▶] buttons repeatedly to select the item you want to change.

You can individually adjust the Voice setting (Volume, Octave, Pan, Reverb Level, Chorus Level, DSP Level and Dry Level) that is applied to the Main, Dual, and Left Voices. For example, if you wish to change the DSP Level for the Main Voice, select “Main DSP Level.”

Item (Display)	Value
<b>MAIN VOICE</b>	
Main Volume	000–127
Main Octave	-2–+2
Main Pan	000–64–127 (left–center–right)
Main Reverb Level	000–127
Main Chorus Level	000–127
Main DSP Level	000–127
Main Dry Level	000–127
<b>DUAL VOICE</b>	
Dual Volume	000–127
Dual Octave	-2–+2
Dual Pan	000–64–127 (left–center–right)
Dual Reverb Level	000–127
Dual Chorus Level	000–127
Dual DSP Level	000–127
Dual Dry Level	000–127
<b>LEFT VOICE</b>	
Left Volume	000–127
Left Octave	-2–+2
Left Pan	000–64–127 (left–center–right)
Left Reverb Level	000–127
Left Chorus Level	000–127
Left DSP Level	000–127
Left Dry Level	000–127

### 3 Use the dial or the [-/NO]/[+/YES] buttons to set the value as desired.

Play the keyboard and listen to the Voice.

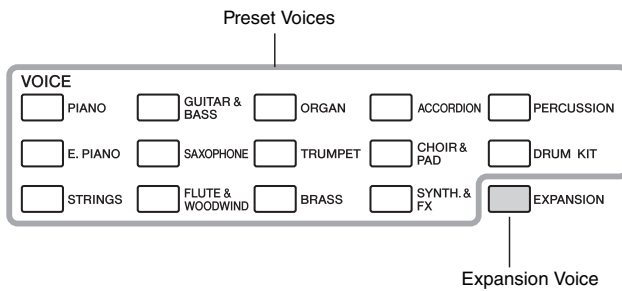
### 4 Memorize the settings here to the Registration Memory as desired.

If you select a different keyboard Voice without saving, the parameters will be reset and the ideal settings for the selected Voice will be automatically recalled.

## Voice Types

The following two types of Voices can be used by this instrument.

<b>Preset Voices</b>	Voices built into the instrument
<b>Expansion Voices</b>	Voices saved into the instrument by installing the Expansion Pack



## Voice Characteristics

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

- **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 extremely detailed, natural and authentic sound.
- **Kit** ..... Various drum and percussion sounds and special effect sounds are assigned to individual keys.
- **Mega** ..... Mega Voices make special use of velocity switching. Each velocity range (the measure of your playing strength) has a completely different sound. For example, a guitar Mega Voice includes the sounds of various performance techniques. In conventional instruments, different Voices having those sounds would be called up via MIDI and played in combination to achieve the desired effect. However, now with Mega Voices, a convincing guitar part can be played with just a single Voice, using specific velocity values to play the desired sounds. Because of the complex nature of these Voices and the precise velocities need to play the sounds, they're not intended for playing from the keyboard. They are, however, very useful and convenient when creating MIDI data—especially when you want to avoid using several different Voices just for a single instrument part.

#### NOTE 4

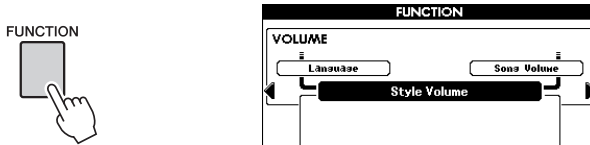
- Mega Voices are unique to this instrument and are not compatible with other models. Any Song or Style data you've created on this instrument using these Voices will not sound properly when played back on other instruments.
- Mega Voices sound differently depending on the keyboard range, velocity, touch, etc. Hence, if you apply effects, change the transpose setting or change the Voice parameters, unexpected or undesired sounds may result.

## Metronome Setting

### Muting the Bell

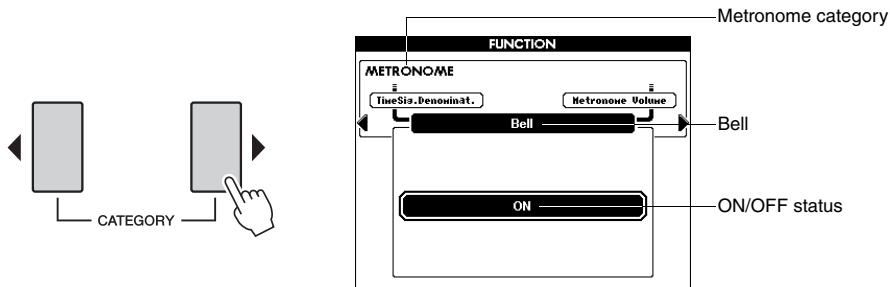
You can mute the Metronome bell which sounds at the first beat of each measure.

- 1 Press the [FUNCTION] button.



- 2 Press the CATEGORY [◀] and [▶] buttons repeatedly to call up Metronome category function “Bell.”

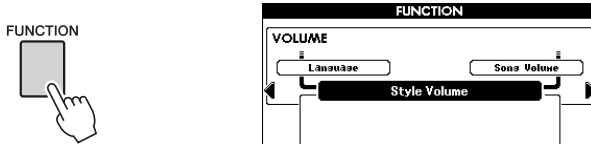
You can also call up Metronome category function display easily by holding the [METRONOME] button for longer than a second.



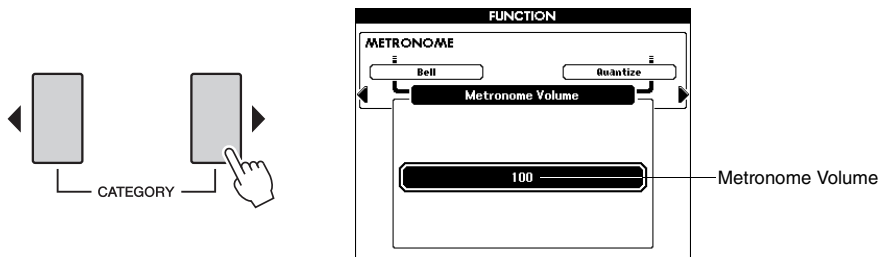
- 3 Rotate the dial and select ON (sound) or OFF (mute).

## Adjusting the Metronome Volume

- 1 Press the [FUNCTION] button.



- 2 Press the CATEGORY [◀] and [▶] buttons repeatedly to call up “Metronome Volume.”



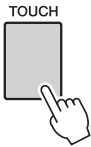
- 3 Use the dial to set the Metronome Volume.

# 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).

## 1 Confirm that Touch Response is on.

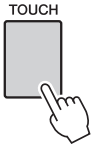
You can see the on/off status for Touch Response in the Main display. The [TOUCH] button alternately turns Touch Response on and off.



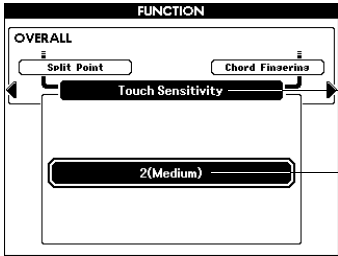
**TOUCH** Appears when Touch Response is on

When Touch Response is set to off, all notes will be played at the same volume no matter how hard or softly you play the keys.

## 2 Press and hold the [TOUCH] button for longer than a second to call up "Touch Sensitivity."



Hold for longer than a second



Touch Sensitivity

Value

## 3 Use the dial to select a Touch Sensitivity setting between 1 and 3.

**NOTE 1**  
• The initial default setting is 2.

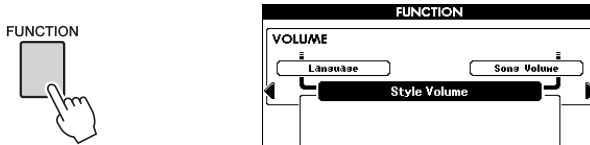
1 (Soft)	Produces high volume with moderate playing strength.
2 (Medium)	Standard touch response.
3 (Hard)	Requires moderately strong playing for higher volume.

## EQ settings

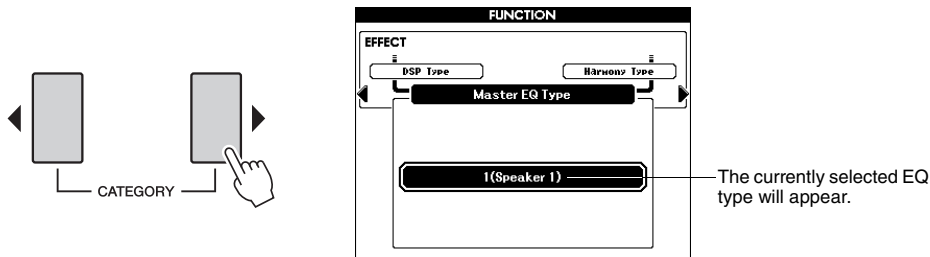
You can select one of five Master equalizer (EQ) settings which are provided to give you the best possible sound when listening through different reproduction systems: the instrument's built-in speakers, headphones and external speakers.

### 1 Press the [FUNCTION] button.

The currently selected function will appear in the display.



### 2 Press the CATEGORY [◀] and [▶] buttons repeatedly to call up Master EQ Type.



### 3 Use the dial to select an EQ Setting for the best sound.

Settings 1 and 2 are designed for optimum sound when using the built-in speakers of the instrument. Setting 1 provides balanced reproduction throughout the frequency spectrum, low to high. Setting 2 has a more powerful sound than 1, and is ideal for local music from South America and the Middle East. Setting 3 is designed for headphone listening, and has a relatively flatter response than 1.

Settings 4 and 5 are designed for use with a mixer and external speaker system. Setting 4 in particular has a flat response, and is suitable for relatively large-scale PA applications and recording using a mixer. Setting 5 is more suitable for small external speakers, and compared to 4, emphasizes the low and high frequencies.



# Harmony/Effect-Related Settings

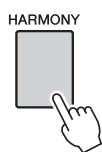
Harmony and Effect (Reverb, Chorus and DSP) have their own suitable preset types which are automatically recalled when a Main Voice or Style/Song is selected. However, you can change the effect type as desired. This chapter explains how to set the effect type.

## Selecting a Harmony type

This feature adds Harmony, Tremolo or Echo effects to the Main Voice when the Harmony is turned on. A suitable Harmony type is automatically selected when you select a Main Voice, but you can easily select a different Harmony type.

### 1 Press the [HARMONY] button to turn the Harmony function on.

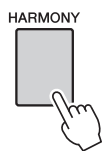
You can see the on/off status for the Harmony in the Main display. To turn Harmony off, press the [HARMONY] button again.



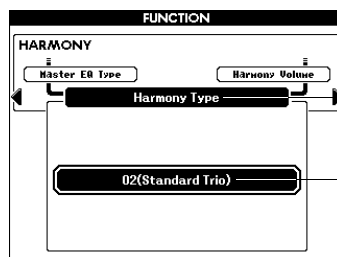
**HARMONY** Appears when Harmony is on

### 2 Press and hold the [HARMONY] button for longer than a second to call up the Harmony type select display.

The currently selected Harmony type will be displayed.



Hold for longer than a second



Harmony type

Selected Harmony type

### 3 Use the dial to select a Harmony type.

Refer to the Effect Type List in the separate Data List for information about the available Harmony types. Try playing the keyboard with the Harmony function. The effect and operation of each Harmony type is different—for details, refer to the section “How to play Each Harmony Type” in chapter 1 in the Owner’s Manual.

### 4 Memorize the settings here to the Registration Memory as desired.

If you select a different Main Voice without saving, the settings in steps 2–3 will be cleared.

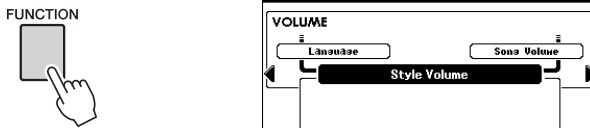
#### NOTE

- The Harmony notes can be added only to the Main Voice, not to Dual or Left Voices.
- The keys left of the Split Point of the keyboard produce no Harmony notes when the Auto Accompaniment is on ([ACMP] button lights).
- When chord fingering is set to Full Keyboard, the Harmony function is turned off automatically.

## Selecting a Reverb type

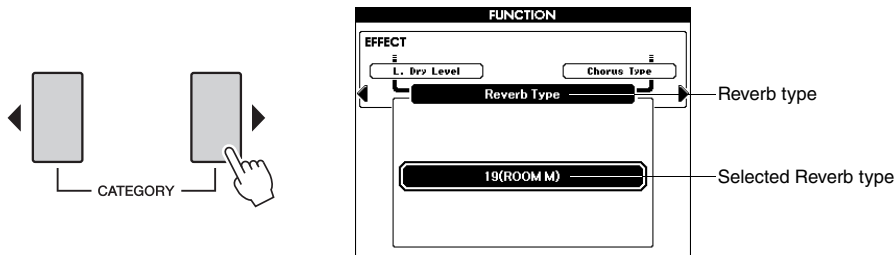
Reverb enhances the sound of the Voices with the rich ambience of a concert hall. When you select a Style or Song the optimum reverb type for the Voice used is automatically selected. If you want to select a different reverb type, use the operation described below.

- 1 Press the [FUNCTION] button to call up the Function display.



- 2 Press the CATEGORY [◀] and [▶] buttons repeatedly to call up "Reverb Type."

The currently selected Reverb type will be displayed.



- 3 Use the dial to select a Reverb type.

Refer to the Effect Type List in the separate Data List for information about the available Reverb types. Try playing the keyboard with the Reverb function.

### ■ Adjusting the Reverb Level

You can individually adjust the amount of reverb that is applied to the Main, Dual, and Left Voices (see [page 3](#)).

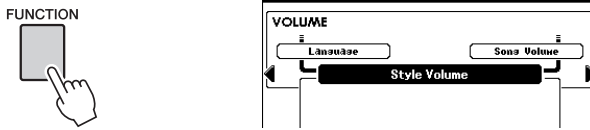
- 4 Memorize the settings here to the Registration Memory as desired.

If you select a different Style without saving, the settings in steps 3 will be cleared.

## Selecting a Chorus type

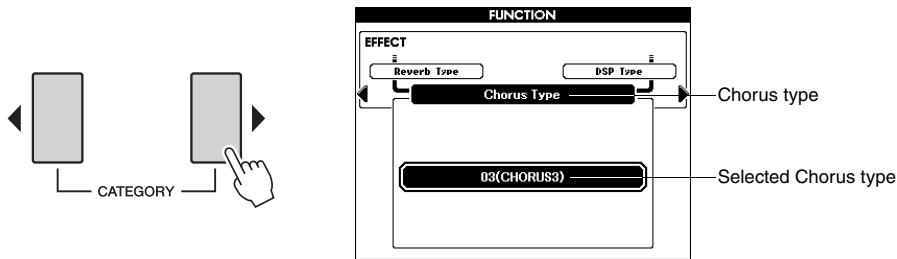
The Chorus effect creates a thick, textured sound that is similar to many of the same Voices being played in unison. When you select a Style or Song the optimum Chorus Type for the Voice used is automatically selected. If you want to select a different Chorus Type, use the procedure described below.

- 1 Press the [FUNCTION] button to call up the Function display.



- 2 Press the CATEGORY [◀] and [▶] buttons repeatedly to call up “Chorus Type.”

The currently selected Chorus type will be displayed.



- 3 Use the dial to select a Chorus type.

Refer to the Effect Type List in the separate Data List for information about the available Chorus types. Try playing the keyboard with the Chorus function.

### ■ Adjusting the Chorus Level

You can individually adjust the amount of Chorus that is applied to the Main, Dual, and Left Voices (See [page 3](#)).

- 4 Memorize the settings here to the Registration Memory as desired.

If you select a different Style without saving, the settings in steps 3 will be cleared.

## Selecting a DSP type

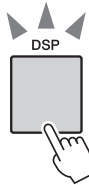
In addition to the Reverb and Chorus effects, a wide variety of DSP (Digital Signal Processor) effects let you enhance the sound, or completely transform it. Some DSP types can be applied only to notes you play on the keyboard while the Reverb and Chorus effects are applied to the entire instrument sound. When you select a Main Voice, the optimum DSP Type for the Voice used is automatically selected. If you want to select a different DSP type, use the procedure described below.

### NOTE 1

- DSP is an acronym for Digital Signal Processor and it uses a micro processor to change the audio in various ways.

### 1 Press the [DSP] button to turn the DSP function on.

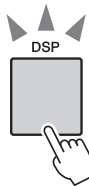
The [DSP] button lights when the DSP is turned on. To turn DSP off, press the [DSP] button again.



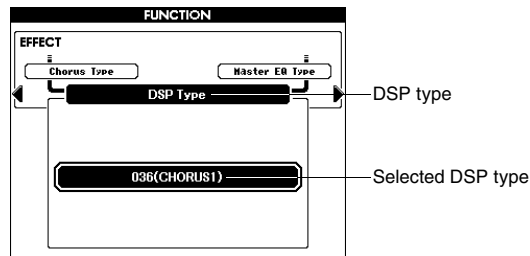
Lights when the DSP is turned on.

### 2 Press and hold the [DSP] button for longer than a second to call up the DSP type select display.

The currently selected DSP type will be displayed.



Hold for longer than a second



### NOTE 2

- The volume of the currently playing Voice changes when turning DSP on or off. This is not a malfunction. The amount of change differs depending on the selected Voice.
- The DSP type is an overall setting—only one type can be selected. For this reason, when you play a newly loaded Song or Style, for example, the currently playing Voices may not sound as expected. This is normal, since the Song or Style has its own DSP type which replaces any selection you've made before loading. A similar phenomenon occurs when you use the [▶▶], [◀◀] buttons or A-B Repeat function during Song playback.

### 3 Use the dial to select a DSP type.

Refer to the Effect Type List in the separate Data List for information about the available DSP types. Try playing the keyboard with the DSP function.

#### ■ Adjusting the DSP Level

You can individually adjust the amount of DSP that is applied to the Main, Dual, and Left Voices (see [page 3](#)).

### 4 Memorize the settings here to the Registration Memory as desired.

If you select a different Style without saving, the settings in steps 3 will be cleared.

**Voice Sound and Effect Type**

You can select one type from each effect (Reverb, Chorus and DSP) then individually adjust the amount of effect that is applied to the Main, Dual, and Left Voices. However, the effect type cannot be applied independently to each Main, Dual or Left Voice. Because of this, you should adjust the send level for each Voice when using effects.

When the DSP function is on, the overall sound may be wrong or unexpected if the Main Voice is changed. This is because the DSP type is automatically selected according to the currently selected Main Voice and the same effect is applied to the Dual Voice or Left Voice as well as the Main Voice. If you want to enhance the sound using the DSP, determine the Main Voice first, then adjust the send level of the DSP effect applied to each Voice.

The Reverb/Chorus type is automatically selected according to the currently selected Style or Song, and the same effect is applied to the Dual Voice or Left Voice as well as the Main Voice. If you want to create a custom sound using a favorite Voice, determine the Voices, effects and Voice parameters first, then memorize the settings to the Registration Memory without changing the Style or Song.

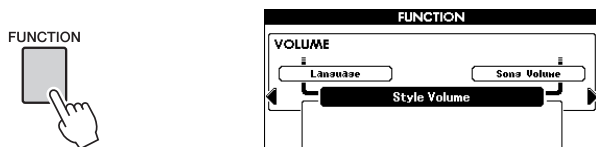
# Style-Related Settings

This section gives detailed information on the Style playback functions not covered in the Owner's Manual.

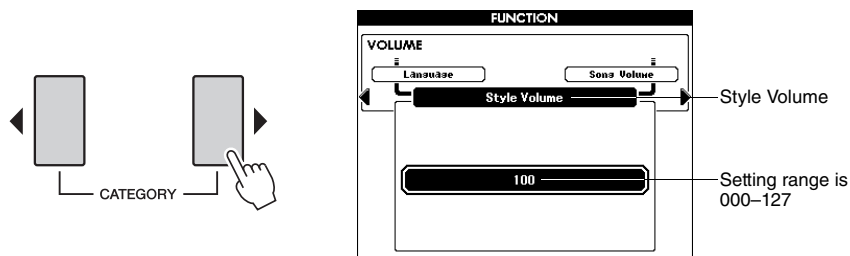
## Adjusting the Style Volume

This lets you adjust the volume balance between Style playback and the sound you play on the keyboard.

- 1 Press the [FUNCTION] button.



- 2 Press the CATEGORY [◀] and [▶] buttons repeatedly to call up "Style Volume."



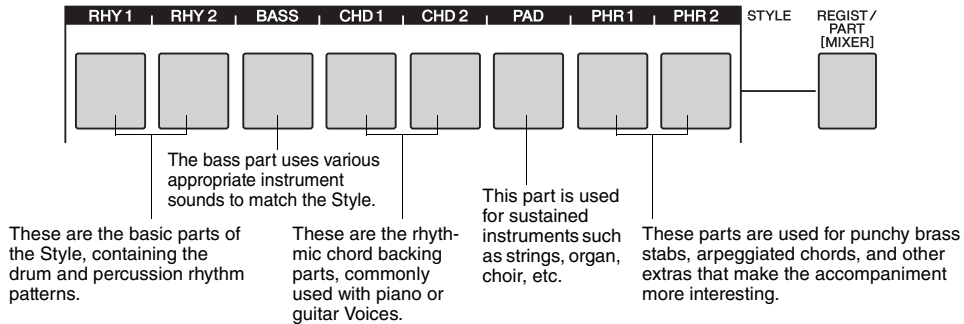
- 3 Use the dial to set the Style Volume.

### NOTE 1

- For instructions on adjusting the volume of the keyboard performance, see [page 3](#).

## Muting Independent Style Parts

Each “track” of a Style plays a different part of the Style—chord, bass, etc. You can mute individual tracks and play the muted part on the keyboard yourself, or simply mute tracks other than the ones you want to listen to. Use the [REGIST/PART [MIXER]] button to select the ACMP TR and use the STYLE PART [RHY 1]–[PHR 2] buttons to mute or un-mute the corresponding tracks. Each track button is lit in green when that track is not muted, and is unlit when the track is muted. Furthermore, the border around the track number in the display disappears when that track is muted.



### 1 Press the [REGIST/PART [MIXER]] button until the desired track is shown on the display.

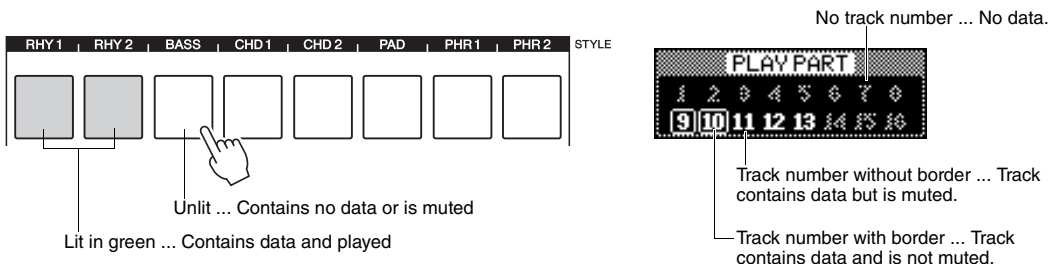
The following items are selected on the display when you press the [REGIST/PART [MIXER]] button. “REGIST” → “ACMP. TR”



In this state, you can use eight buttons as the Style track buttons.

### 2 Press the desired Track button(s) to set the mute track(s).

To cancel the mute, press the appropriate track button(s) again.



## Selecting Chord Fingering Type

When the Auto Accompaniment is turned on, you can select one of three Chord Fingering types which detect chords played with your left hand (in the auto accompaniment section of the keyboard).

**1 Press and hold the [ACMP] button for longer than a second to call up the Chord Fingering type select display.**

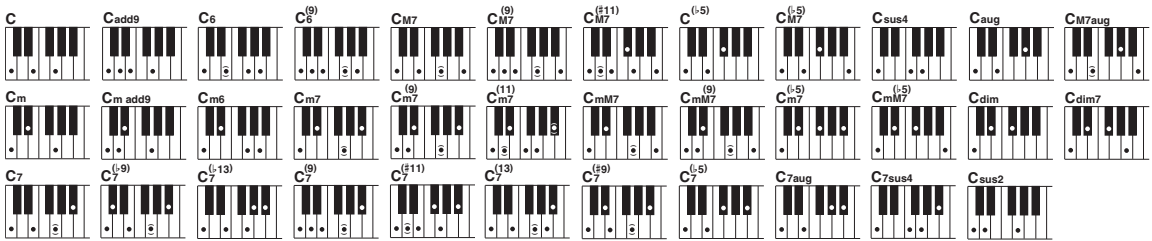
**2 Use the dial to select the type.**  
The default Fingering type is “Multi Finger.”

<b>1 Multi Finger</b>	Recognizes the various chord types which are listed on <a href="#">page 17</a> .
<b>2 FullKeyboard</b>	Detects chords in the entire key range. Chords are detected in a way similar to Multi Finger.
<b>3 AI Fingered</b>	Basically the same as Multi Finger, with the exception that less than three notes can be played to indicate the chords (based on the previously played chord, etc.). However, Easy chords described in chapter 2 in the Owner’s Manual cannot be detected in the AI Fingered mode.

“AI” stands for “Artificial Intelligence.”



## ■ Chord Types Recognized in the Multi Finger



\* Notes enclosed in parentheses ( ) are optional; the chords will be recognized without them.

Chord Name/[Abbreviation]	Normal Voicing	Display
Major [M]	1 - 3 - 5	C
Add ninth [(9)]	1 - 2 - 3 - 5	C add9
Sixth [6]	1 - (3) - 5 - 6	C6
Sixth ninth [6(9)]	1 - 2 - 3 - (5) - 6	C6 <sup>9</sup>
Major seventh [M7]	1 - 3 - (5) - 7	CM7
Major seventh ninth [M7(9)]	1 - 2 - 3 - (5) - 7	CM7 <sup>9</sup>
Major seventh add sharp eleventh [M7(#11)]	1 - (2) - 3 - #4 - 5 - 7 or 1 - 2 - 3 - #4 - (5) - 7	CM7 <sup>#11</sup>
Flatted fifth [(b5)]	1 - 3 - b5	C <sup>b5</sup>
Major seventh flatted fifth [M7b5]	1 - 3 - b5 - 7	CM7 <sup>b5</sup>
Suspended fourth [sus4]	1 - 4 - 5	Csus4
Augmented [aug]	1 - 3 - #5	Caug
Major seventh augmented [M7aug]	1 - (3) - #5 - 7	CM7aug
Minor [m]	1 - b3 - 5	Cm
Minor add ninth [m(9)]	1 - 2 - b3 - 5	Cm add9
Minor sixth [m6]	1 - b3 - 5 - 6	Cm6
Minor seventh [m7]	1 - b3 - (5) - b7	Cm7
Minor seventh ninth [m7(9)]	1 - 2 - b3 - (5) - b7	Cm7 <sup>9</sup>
Minor seventh add eleventh [m7(11)]	1 - (2) - b3 - 4 - 5 - (b7)	Cm7 <sup>11</sup>
Minor major seventh [mM7]	1 - b3 - (5) - 7	CmM7
Minor major seventh ninth [mM7(9)]	1 - 2 - b3 - (5) - 7	CmM7 <sup>9</sup>
Minor seventh flatted fifth [m7b5]	1 - b3 - b5 - b7	Cm7 <sup>b5</sup>
Minor major seventh flatted fifth [mM7b5]	1 - b3 - b5 - 7	CmM7 <sup>b5</sup>
Diminished [dim]	1 - b3 - b5	Cdim
Diminished seventh [dim7]	1 - b3 - b5 - 6	Cdim7
Seventh [7]	1 - 3 - (5) - b7 or 1 - (3) - 5 - b7	C7
Seventh flatted ninth [7(b9)]	1 - b2 - 3 - (5) - b7	C7 <sup>b9</sup>
Seventh add flatted thirteenth [7(b13)]	1 - 3 - 5 - b6 - b7	C7 <sup>b13</sup>
Seventh ninth [7(9)]	1 - 2 - 3 - (5) - b7	C7 <sup>9</sup>
Seventh add sharp eleventh [7(#11)]	1 - (2) - 3 - #4 - 5 - b7 or 1 - 2 - 3 - #4 - (5) - b7	C7 <sup>#11</sup>
Seventh add thirteenth [7(13)]	1 - 3 - (5) - 6 - b7	C7 <sup>13</sup>
Seventh sharp ninth [7(#9)]	1 - #2 - 3 - (5) - b7	C7 <sup>#9</sup>
Seventh flatted fifth [7b5]	1 - 3 - b5 - b7	C7 <sup>b5</sup>
Seventh augmented [7aug]	1 - 3 - #5 - b7	C7aug
Seventh suspended fourth [7sus4]	1 - 4 - 5 - b7	C7sus4
Suspended second [sus2]	1 - 2 - 5	Csus2

## Pattern Variation (Sections)

The instrument features a wide variety of Style “sections” that allow you to vary the arrangement of the accompaniment to match the Song you are playing.

### Play the Intro

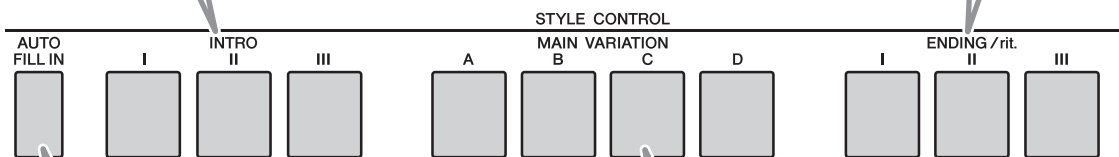
Press one of the INTRO [I]–[III] buttons to add an introduction as soon as Style Playback is started. When the Intro finishes playing, Style playback automatically shifts to the Main section.

### Play the Ending

Press one of the ENDING/rit. [I]–[III] buttons to begin playing an ending section. Playback will stop automatically when the ending has played all the way through.



You can have the ending gradually slow down (ritardando) by pressing the same ENDING/rit. button again while the ending is playing back.



### Play Fill-in

When the [AUTO FILL IN] button is turned on, pressing any of the MAIN VARIATION [A]–[D] buttons as you play automatically plays a fill-in section, spicing up the auto accompaniment. Even when the [AUTO FILL IN] is turned off, pressing the same button of the currently playing section automatically plays a fill-in before returning to the same Main section.

### Play Main section

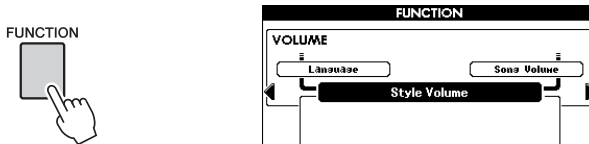
Pressing one of the MAIN VARIATION [A]–[D] buttons during playback switches to the other Main pattern. Press one of the MAIN VARIATION [A]–[D] buttons before starting Style playback to select the desired Main section for playing.

## Setting the Split Point

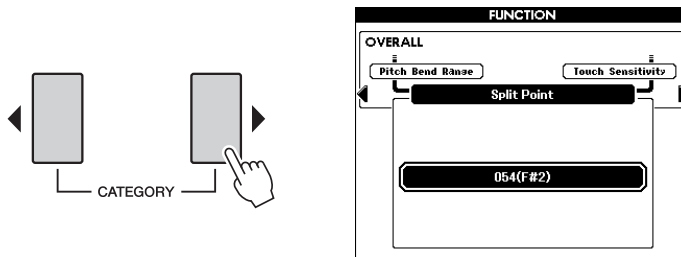
Set the point on the keyboard that separates the right and left-hand sections (Split Point). When Auto Accompaniment is off, keys played in the left-hand section are used for playing the Left Voice. When Auto Accompaniment is on, the left-hand section becomes the Chord section (Auto Accompaniment range) and the chords played in the Chord section produce an appropriate Auto Accompaniment playback, and add the Harmony effect to the notes played in the right-hand section.

The initial default Split Point is key number 54 (the F sharp 2 key), but you can change it to another key using the procedure described below.

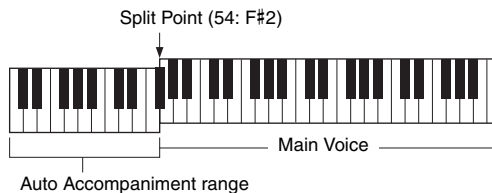
### 1 Press the [FUNCTION] button.



### 2 Use the CATEGORY [◀] and [▶] buttons repeatedly to call up “Split Point.”



### 3 Use the dial to set the Split Point to any key from 036 (C1) through 096 (C6).

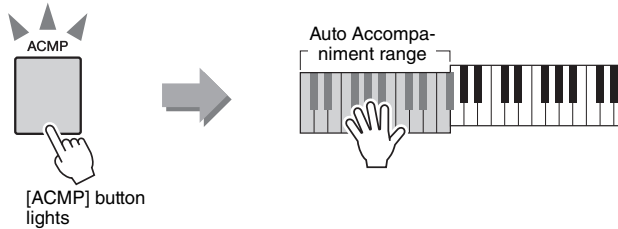


#### NOTE 1

- A specified “Split Point” key is included in the Auto Accompaniment range.
- You can also use the [-/NO] and [+ /YES] buttons to set the Split Point. The Split Point setting can be reset to the initial default value by pressing the [-/NO] and [+ /YES] buttons simultaneously.

## Stop Accompaniment function

When the Auto Accompaniment is turned on and Synchro Start is off, you can play chords in the Auto Accompaniment range 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. Since the instrument properly recognizes chords, you can also use the Harmony effect without having to play back a Style.

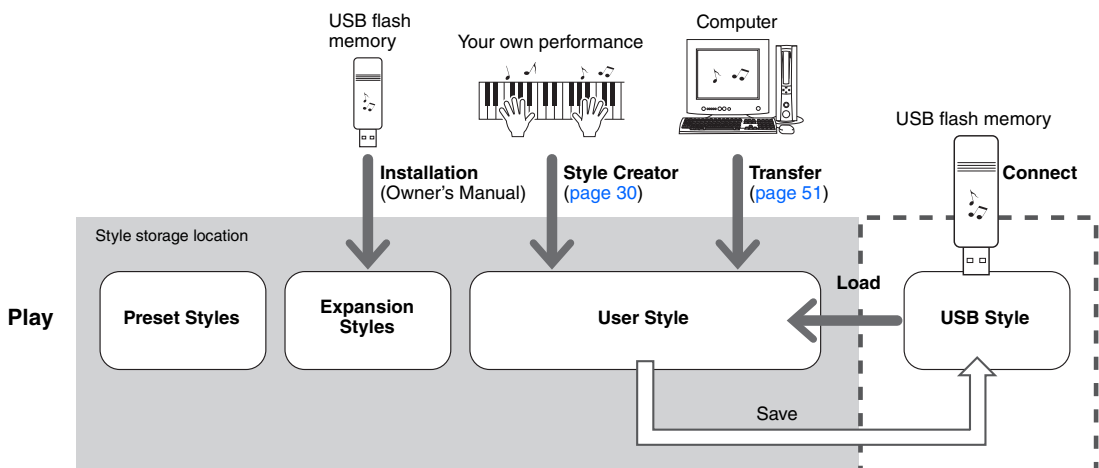


## Style Types

The following four types of Styles can be used by this instrument.

<b>Preset Styles</b>	Styles built into the instrument
<b>User Style</b>	Styles created by Style Creator function Styles transferred from a computer Styles loaded from the USB flash memory
<b>Expansion Styles</b>	Styles saved into the instrument by installing the Expansion Pack
<b>USB Style</b>	Styles in USB flash memory

The chart below shows the basic operation flow for using the preset Styles, User Styles, loaded Styles and USB Styles from storage to playback.



Expansion Styles and User Styles can be selected using the [EXPANSION/USER] button.

## Creating Your Own One Touch Setting Setups

You can create your own One Touch Setting setups and save the setups to the User Styles and USB Styles. Preset Styles and Expansion Styles cannot be used for the save destination.

The setups you created will be saved as part of Style data.

- 1 **Select the desired User Style or USB Style to which you want to save your settings.**
- 2 **Make the panel settings for the desired Style selected in step 1.**
- 3 **While holding the [MEMORY] button, press one of the ONE TOUCH SETTING [1]–[4] buttons to memorize the panel settings to the One Touch Setting contained in the selected Style.**

When the display prompts you whether you want to overwrite the existing file with the new One Touch Setting, press [EXECUTE] or [+ / YES] to overwrite the file, or the [- / NO] to cancel.

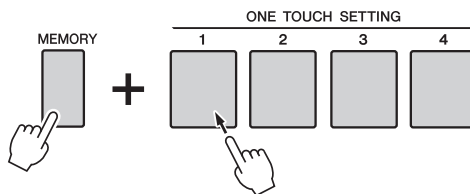
Press one of the ONE TOUCH SETTING [1]–[4] buttons to call up the new One Touch Setting in the Style.

### NOTICE

- **When the specified Style contains One Touch Setting, the previous One Touch Setting will be erased and replaced by the new data.**

### NOTE

- *Styles overwritten by the new One Touch Setting is automatically saved in SFF GE format.*



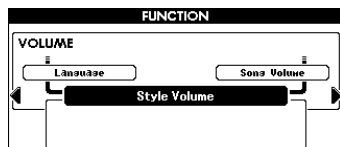
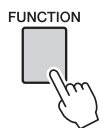
# Song-Related Settings

This section gives detailed information on the Song playback functions not covered in the Owner's Manual.

## Adjusting the Song Volume

This lets you adjust the volume balance between Song playback and the sound you play on the keyboard.

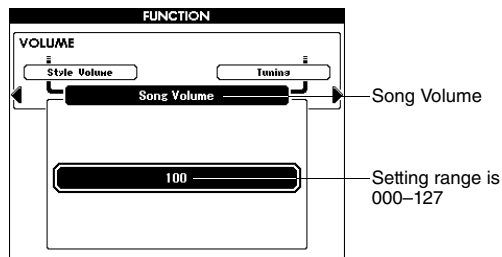
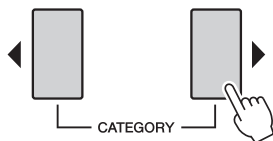
1 Press the [FUNCTION] button.



**NOTE 1**

- The explanations here only apply to the Song mode.

2 Press the CATEGORY [◀] and [▶] buttons repeatedly to call up "Song Volume."



3 Use the dial to set the Song Volume.

**NOTE 1**

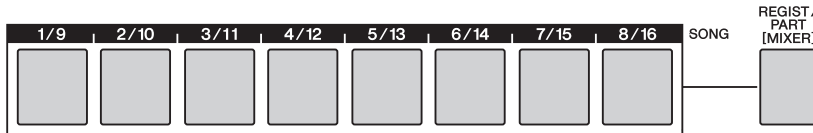
- For instructions on adjusting the volume of the keyboard performance, see [page 3](#).

# Muting Independent Song Parts

A Song consists of 16 tracks. Each “track” of a Song plays a different part of the Song—melody, percussion, accompaniment, etc.

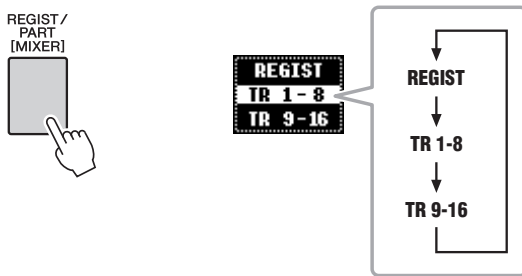
You can mute individual tracks and play the muted part on the keyboard yourself, or simply mute tracks other than the ones you want to listen to.

Use the [REGIST/PART [MIXER]] button to select the TR 1-8, TR 9-16 and use the SONG PART [1/9]–[8/16] buttons to mute or un-mute the corresponding tracks ([1]–[8], [9]–[16]). Each track button is lit in green when that track is not muted, and is unlit when the track is muted. Furthermore, the border around the track number in the display disappears when that track is muted.



## 1 Select a Song, then press and hold the [REGIST/PART [MIXER]] button until the desired track is shown on the display.

The following items are alternately selected on the display when you press the [REGIST/PART [MIXER]] button. “REGIST” → “TR 1-8” → “TR 9-16.”

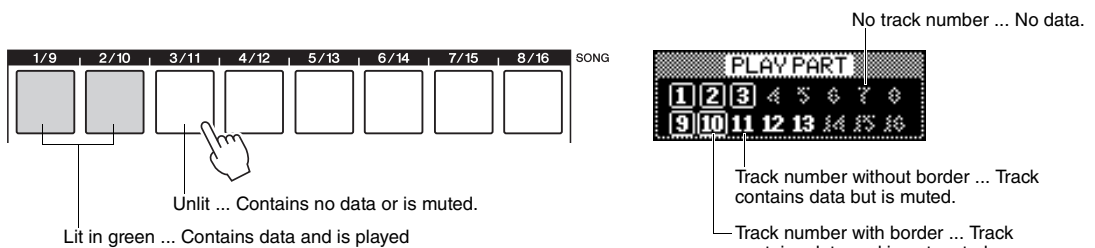


In this state, you can use the eight buttons as the Song track buttons.

## 2 Press the desired TRACK [1/9]–[8/16] buttons to set the mute track(s).

To cancel the mute, press the appropriate REGISTRATION MEMORY [1/9]–[8/16] buttons again.

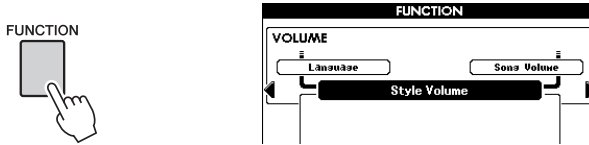
Display	Setting
TR 1-8	Specify the mute tracks of 1–8 by pressing the [1/9]–[8/16] buttons.
TR 9-16	Specify the mute tracks of 9–16 by pressing the [1/9]–[8/16] buttons.



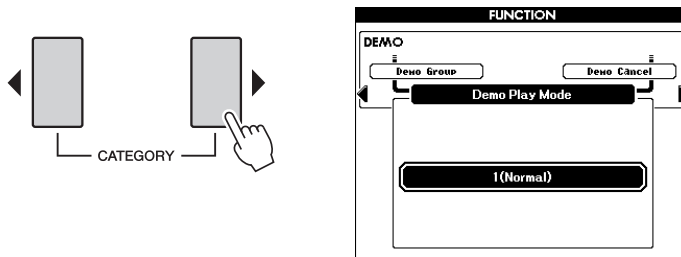
## Random Song Playback

This function lets you randomly play the Songs via the [DEMO] button—in other words, the Songs specified in the Demo Group (page 47). The explanations here do not applied when the Demo Group is set to “Demo.”

### 1 Press the [FUNCTION] button.



### 2 Press the CATEGORY [◀] and [▶] buttons repeatedly to call up “Demo Play Mode.”



### 3 Use the dial to select “Random.”

If you want to restore the normal playback mode, select “Normal.”

### 4 Press the [DEMO] button to start random playback.

The Songs specified as the Demo Group will play back in random order.

You can stop playback at any time by pressing the [DEMO] or [START/STOP] button.

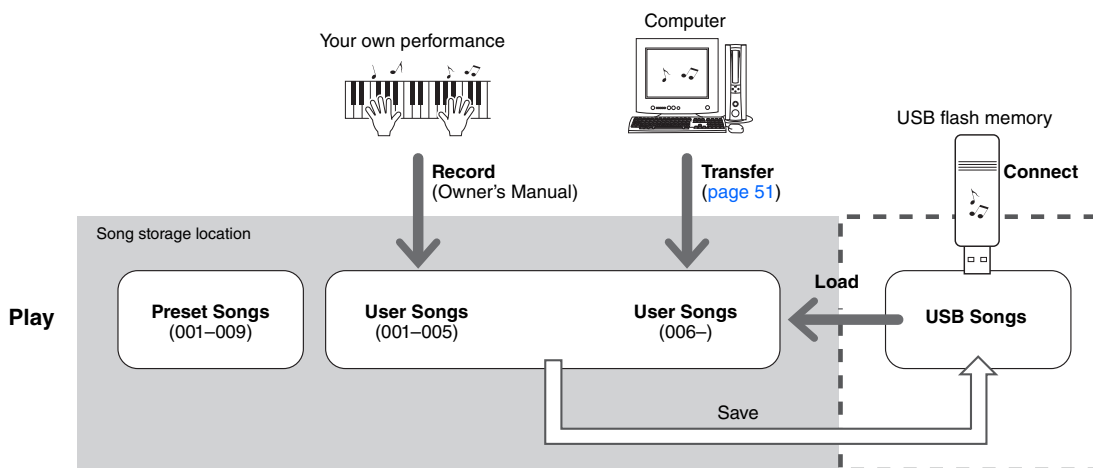


## Song Types

The following three types of Songs can be used by this instrument.

<b>Preset Songs</b>	Songs built into the instrument	Preset Song numbers 001–009
<b>User Song</b>	Songs you record yourself	User Song numbers 001–005
	Songs transferred from a computer Songs loaded from the USB flash memory	User Song numbers 006–
<b>USB Song</b>	Songs in USB flash memory	–

The chart below shows the basic operation flow for using the Preset Songs, User Songs and USB Songs from storage to playback.



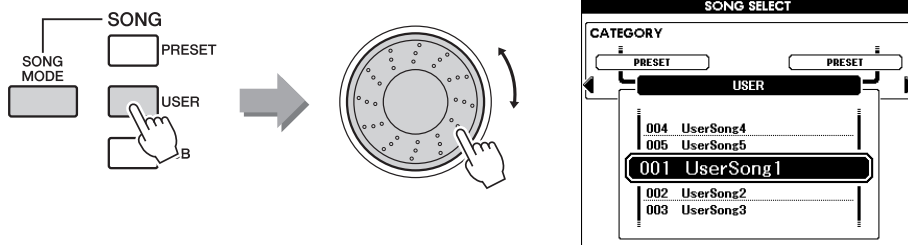
User Songs can be selected using the [USER] button.

# Editing Songs

As desired, edit the User Song and the USB Song for each track in the Song Edit function to finalize the Song data. Adjustable items (parameters) in the Song Edit function are Voice, Pitch and Quantize. In addition to these parameters, you can use the Mixer function to adjust individual track parameters and save the settings while the Song Edit function is engaged.

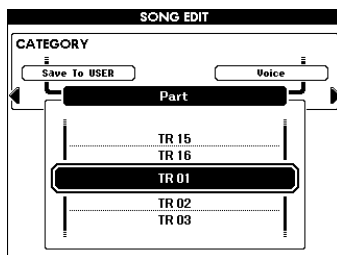
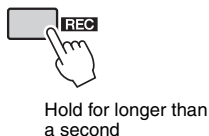
## 1 Select a User Song or a Song on a USB flash memory that contains the data you want to edit.

Available Songs are limited to SMF format with file extension: “.mid.” Preset Songs cannot be used for editing.



## 2 Press and hold the [REC] button for longer than a second to call up the Song Edit display.

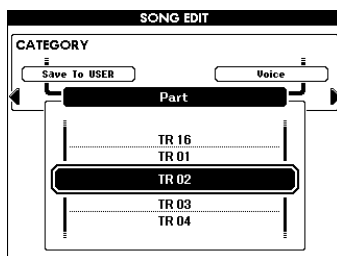
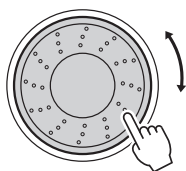
The track (Part) selection display appears.



### NOTE 1

- If there is not enough capacity left on the instrument to save the data, an appropriate message will appear in the display. Erase unwanted data from the instrument to make more memory available.
- If a GM2 Song is selected and step 2 is performed, a message prompting you to confirm conversion of the Song data to the format of this instrument will appear. Press the [+YES] button to convert the Song data, or the [-NO] button to cancel.

## 3 Use the dial to select the desired track for editing.



### NOTE 1

- In the Song Mode, you can edit Songs. If the [SONG MODE] button is unlit, press it to turn it on.

## 4 Edit the track selected in step 3, then press the [EXECUTE] button.

You can change the “Voice,” “Ch Transpose” and “Quantize” parameters for the selected track. Use the CATEGORY buttons [◀] and [▶] to select “Voice,” “Ch Transpose” or “Quantize,” then use the dial to adjust the value. As for “Ch Transpose” and “Quantize,” press the [EXECUTE] button to confirm the change. Repeat steps 3–4 to edit other tracks.

### ■ Voice

Change the Voice for the selected track. When a Voice is selected, the suitable Voice parameters (page 3) such as Voice Volume or effect send level for each Voice is automatically recalled. However, the DSP level is set to 0.

### ■ Ch Transpose

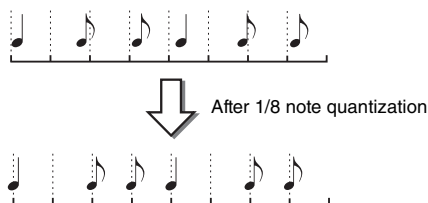
This allows you to transpose the recorded data of individual channels up or down by a maximum of two octaves in semitone increments.

### ■ Quantize

The Quantize function allows you to align the timing of all the notes in a track. For example, if you record the musical phrase shown below, 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.



Select the quantize size (resolution). For optimum results, you should set the Quantize size to the shortest note value in the track. For example, if eighth notes are the shortest in the track, you should use eighth note as the Quantize size.



#### 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.

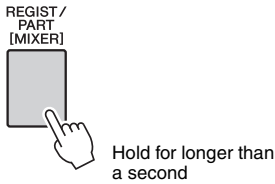
Settings	Display
1/4 note	1/4
1/4 note triplet	1/6
1/8 note	1/8
1/8 note triplet	1/12
1/16 note	1/16
1/16 note triplet	1/24
1/32 note	1/32
1/8 note + 1/8 note triplet*	1/8+1/12
1/16 note + 1/8 note triplet*	1/16+1/12
1/16 note + 1/16 note triplet*	1/16+1/24

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.

## 5 Edit the parameters in the Mixer display, and adjust the Tempo.

Press and hold the [REGIST/PART[MIXER]] button for longer than a second to call up the Mixer display. For details on operation in the Mixer display, refer to Chapter 6 in the Owner's Manual.

Use the TEMPO buttons to adjust the Tempo.



To return to the Song Edit display, press the [EXIT] button.

## 6 Press the [▶/■] button to hear the result of your settings.

Repeat steps 3–5 as desired.

## 7 To select a save destination, press the CATEGORY [◀] and [▶] buttons repeatedly to select “Save To USB” or “Save to USER.” Then press the [USB] button to switch the save destination, as desired.

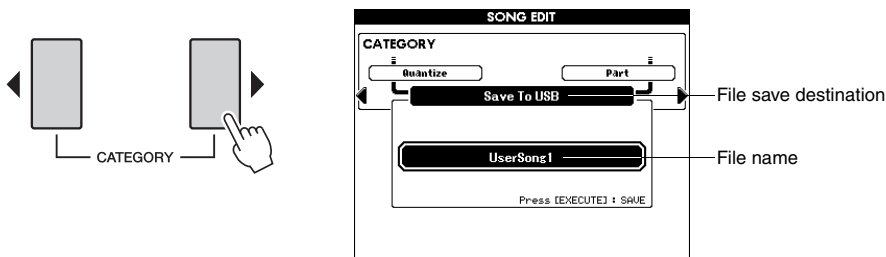
**NOTE**

- If you wish to save the file to a USB flash memory, ensure beforehand that it is connected to the instrument.

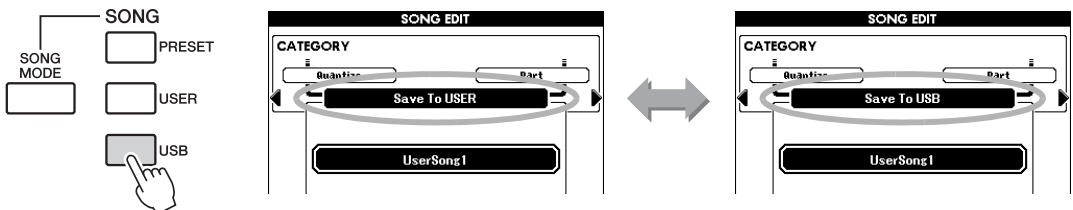
You can select a file save destination between USB flash memory and the instrument's internal memory. If you want to save to USB flash memory, select “Save To USB”; if you want to save to internal memory, select “Save To USER” in the display.

Pressing the [USB] button alternates the save destination between USB flash memory and internal memory.

The Song name selected in step one will automatically be displayed.



### Switching a save destination

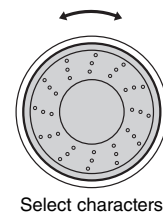
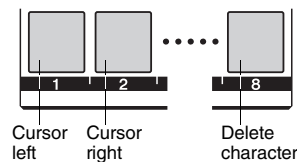
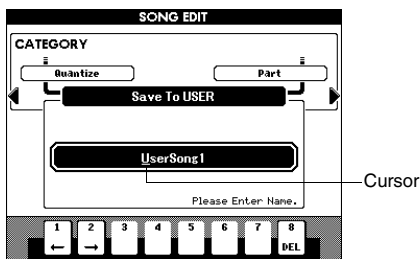


**8 Press the [EXECUTE] button to confirm the save destination.**

**9 Change the file name as necessary.**

A cursor will appear below the first character in the file name.

- The Registration Memory [1] button moves the cursor to the left, and the [2] button moves it to the right.
- Use the dial to select a character for the current cursor location. The following different types of characters are available:  
[A]–[Z], [a]–[z], [0]–[9], [!], [#], [\$], [%], [&], ['], [(, [)], [-], [^], [ @, [{, [}], [ \_], [ `]
- The Registration Memory [8] button deletes the character at the cursor location.



**10 Press the [EXECUTE] button. When the display prompts you for confirmation, press the [+ / YES] button to execute the save operation, or the [- / NO] button if you want to cancel.**

If an existing file name is specified, the display prompts you for confirmation. Press [EXECUTE] or [+ / YES] if it is OK to overwrite the file, or the [- / NO] to cancel. When the operation is complete, a “Completed” message appears briefly, then returns to the previous display.

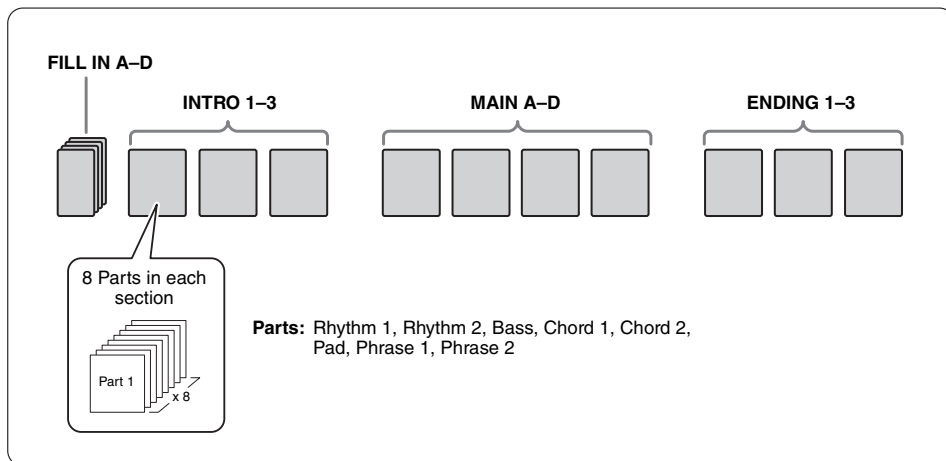
**11 Press the [EXIT] button to exit from the Song Edit display.**

# Creating Original Styles (Style Creator)

This instrument has a **Style Creator** feature that lets you record and save your own original Styles. Recorded Styles can be played in the same manner as the preset Styles.

## Style Structure

Style data consists of 14 sections, each of which has eight separate Parts.



With the Style Creator feature, you can create a Style by separately recording the parts, or by importing pattern data from other existing Styles. Here are some of the aspects in which Style recording differs from Song recording:

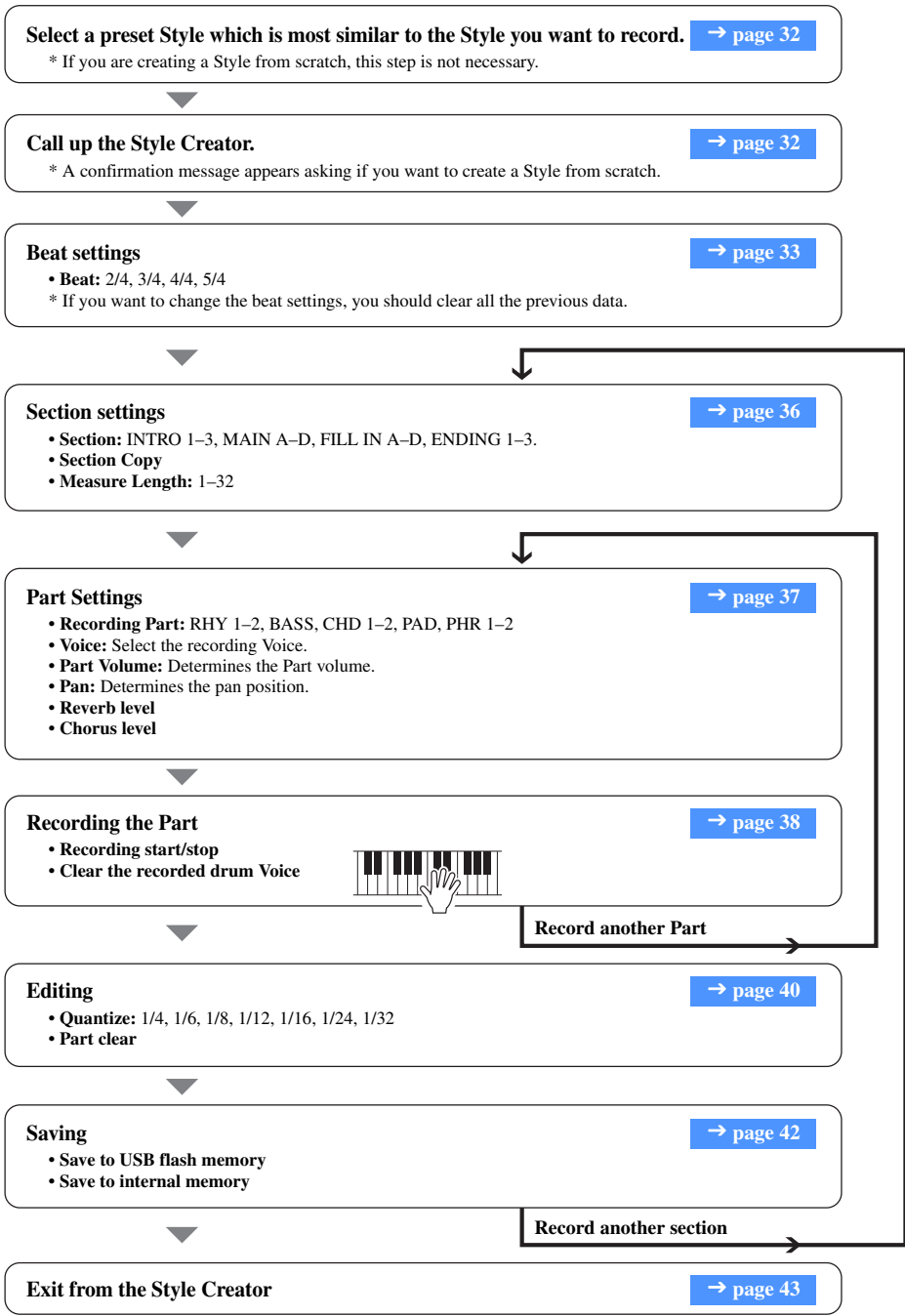
### • Loop Recording

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 39) and Part Clear (page 41). 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.

# Using the Style Creator



\* Press the [EXIT] button whenever you want to exit from the Style Creator (except during recording). When the saving operation of recorded data is finished, you can exit from the Style Creator. When the saving operation of recorded data is not finished, a confirmation message appears asking if you want to exit from the Style Creator without saving the data. Press the [+ / YES] button to exit, or the [- / NO] button to cancel.

# Calling up the Style Creator

## 1 Select a preset Style which is most similar to the Style you want to record.

You can also select a Style from the User Styles or Styles on a USB flash memory (page 20).

If you are creating a Style from scratch, this step is not necessary. Make sure to confirm that the instrument is in the Style Mode, then go on to the next step. (If the [Song Mode] button is lit, press the button to switch to the Style Mode.)

## 2 Press the [REC] button to enter the Style Creator display.



A confirmation message appears asking if you want to clear (discard) the original data and to create a Style from scratch.



**NOTE 1**

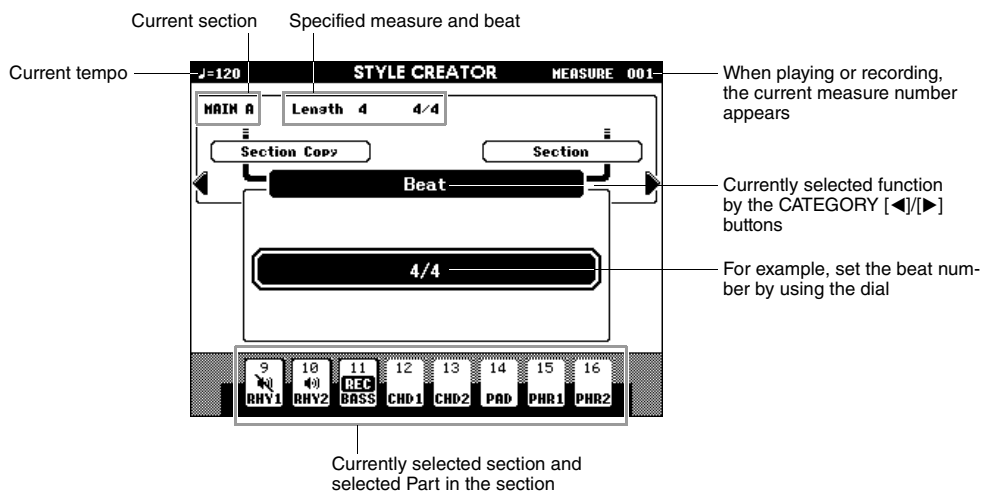
- If there is not enough capacity left on the instrument to save the data, an appropriate message will appear in the display. Erase unwanted data from the instrument to make more memory available.

**NOTE 2**

- **Adjust individual track volumes before recording.** You can use the Mixer function to adjust individual track volumes before proceeding with step 2. For details, refer to chapter 6 in the Owner's Manual.

## 3 If you are creating a Style from scratch, press the [+ / YES] button. If you are creating a Style by using data from a specified Style (step 1), press the [- / NO] button.

The Style Creator display will be shown.

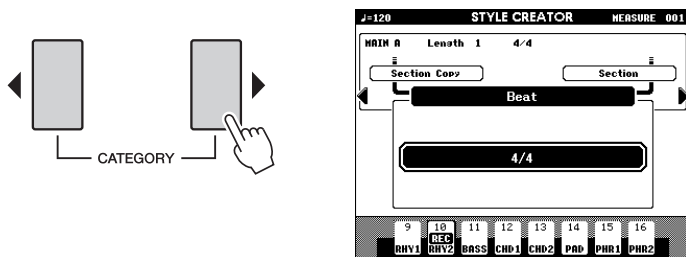




## Beat settings

If you create a new Style from scratch, you need to set the Beat. If you use an existing Style with its original Beat, no Beat setting is necessary; go on to “Section Setting.”

- 1 Press the CATEGORY [◀]/[▶] buttons repeatedly until “Beat” appears in the display.

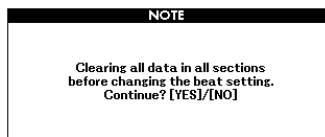


- 2 Rotate the dial and select the Beat number.

Range: 2/4, 3/4, 4/4, 5/4

- 3 Press the [EXECUTE] button to set the Beat.

When you create a Style based on an existing Style, the following message appears.



Press the [+ / YES] button to clear (discard) all sections in the Style.

## Section Settings

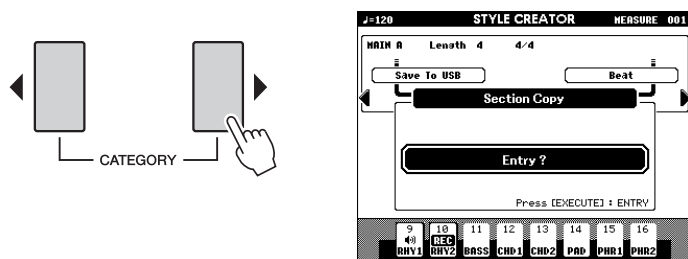
The Style Creator provides following two basic ways:

- **Record parts from the keyboard (using Realtime Recording)**
  - Perform “Select a section” and “Beat settings,” then go on to “Part Settings.”
- **Assemble various sections from existing Styles**
  - Perform “Section Copy.”

### Copying a Section

Use this function when you want to create your own section by changing an existing section, or by assembling sections from other existing Styles.

- 1 Press the CATEGORY [◀]/[▶] buttons repeatedly until “Section Copy” appears in the display.

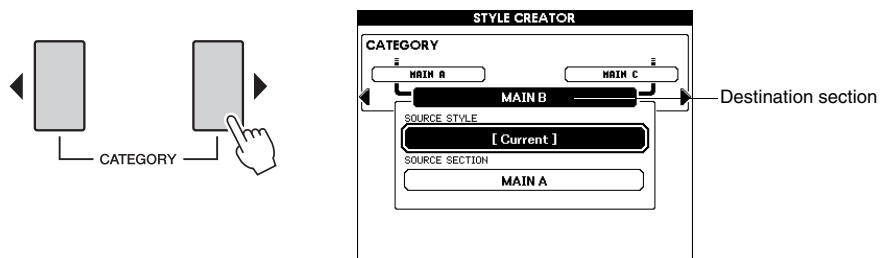


- 2 Press the [EXECUTE] button to enter the Section Copy function.



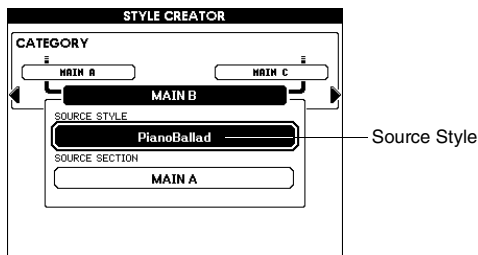
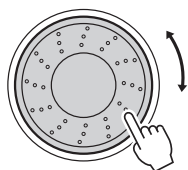
- 3 Press the CATEGORY [◀]/[▶] buttons or directly press the SECTION button in the STYLE CONTROL area to select the desired section to which you want to copy (destination).

Settings: INTRO 1–3, MAIN A–D, FILL IN A–D, ENDING 1–3



**4 Rotate the dial or directly press one the STYLE category buttons to select a source Style.**

You can select the currently edited Style. Use the dial to select [Current] in the display.

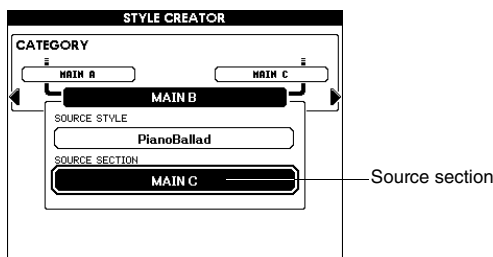


**NOTE 1**

• If the measure length differs between the copy source and copy destination sections, the copy source measure will be used. If the beats differ, the copy destination beats will be used.

**5 Press the [EXECUTE] button to set the source Style.**

Now you can select a source section.



**6 Rotate the dial to select a source section.**

Settings: INTRO 1–3, MAIN A–D, FILL IN A–D, ENDING 1–3

To cancel the Section Copy operation, press the [EXIT] button.

**7 Press the [EXECUTE] button to execute the Section Copy operation.**

**8 Press the [EXIT] button to exit from the Section Copy function.**

The display returns to the one in step 2 above.

**NOTE 1**

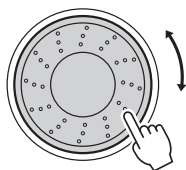
• Depending on the data size of source and destination sections, the source section may not be copied to the destination properly because of insufficient memory. In this case, some parts in the source section may be copied and other parts may not.

## Selecting a Section to be recorded

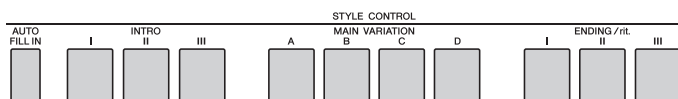
1 Press the CATEGORY [◀]/[▶] buttons repeatedly until “Section” appears in the display.

2 Rotate the dial or directly press the SECTION button in the STYLE CONTROL area to select a section to be recorded.

Settings: INTRO 1–3, MAIN A–D, FILL IN A–D, ENDING 1–3



or



### NOTE 1

- You can also select the desired FILL IN A–D section by pressing the [AUTO FILL IN] button and then select FILL IN A–D by using the dial.

3 Press the [EXECUTE] button to set the section.

The section button to be recorded lights in red. When you select the FILL IN A–D section to be recorded, the corresponding MAIN VARIATION A–D button flashes.

## Setting the Measure Length

Make sure to set the measure length when you want to create a Style from scratch. When using an existing Style, set as necessary. You cannot set the measure length for the FILL IN section because the FILL IN section is fixed at one measure.

1 Press the CATEGORY [◀]/[▶] buttons repeatedly until “Length” appears in the display.

2 Rotate the dial and select the Measure Length.

Range: 1–32

3 Press the [EXECUTE] button to set the Measure Length.

### NOTE 1

- If you set a length smaller than that of the previous one, any data existing beyond the new length will be deleted.

## Part Settings

### Selecting a Recording Part

- 1 Press the CATEGORY [◀]/[▶] buttons repeatedly until “Part” appears in the display.
- 2 Rotate the dial and select a recording Part.  
Range: RHYTHM 1–2, BASS, CHORD 1–2, PAD, PHRASE 1–2
- 3 Press the [EXECUTE] button to set the Part.  
The button corresponding to the Part to be recorded lights in red.

#### NOTE

- You can also select a part by pressing the Part button ([RHY 1]–[PHR 2]) while holding the [REC] button.

### Selecting a Voice

- 1 Press the CATEGORY [◀]/[▶] buttons repeatedly until “Voice” appears in the display.
- 2 Press a desired VOICE Category button to select the Voice category.
- 3 Rotate the dial to select a Voice.  
Range: When **RHY 1** is selected as the Part, all Voices can be selected.  
When **RHY 2** is selected as the Part, drum Voices can be selected.  
When **other Part** is selected, all Voices excepting drums can be selected.

### Part Volume

- 1 Press the CATEGORY [◀]/[▶] buttons repeatedly until “Part Volume” appears in the display.
- 2 Rotate the dial and set the Part Volume.  
Range: 0–127

### Pan

- 1 Press the CATEGORY [◀]/[▶] buttons repeatedly until “Pan” appears in the display.
- 2 Rotate the dial and set the Pan position.  
Range: 0–64–127

### Reverb Level

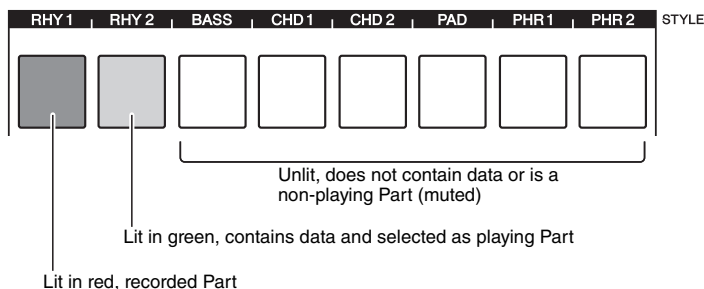
- 1 Press the CATEGORY [◀]/[▶] buttons repeatedly until “Reverb Level” appears in the display.
- 2 Rotate the dial and set the Reverb depth.  
Range: 0–127

### Chorus Level

- 1 Press the CATEGORY [◀]/[▶] buttons repeatedly until “Chorus Level” appears in the display.
- 2 Rotate the dial and set the Chorus depth.  
Range: 0–127

## Recording part

### Part buttons indications



## Rhythm Part recording

If you select a rhythm Part for recording on [page 37](#), follow the instructions below.

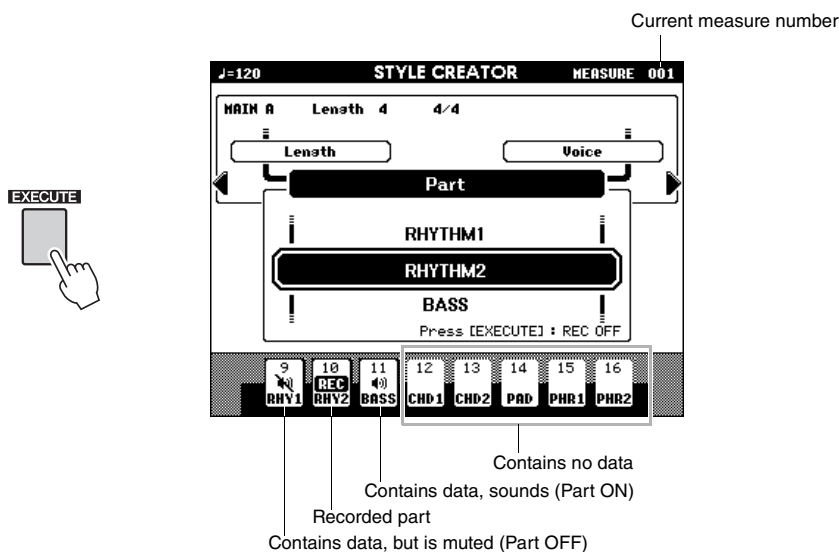
### 1 Make sure that the desired rhythm Part “RHY 1” or “RHY 2” is selected for recording.

The button corresponding to the Part to be recorded lights in red.

In this condition, a REC mark also appears at the recorded Part on the display.

#### NOTE 1

- The part you have selected may be changed if you select the section again.



Play the keyboard to check that the appropriate drum Voices can be heard. You can mute the Parts during recording (except for the Part you’re recording) by simply pressing the [PART] button so that the mute mark is indicated at the Part. In this condition, the [PART] button also changes from green to unlit.

If you want to rehearse a part before recording, press the [EXECUTE] button. The REC mark for the Part in the display will turn off. In this situation, you can start rehearsing by pressing the [START/STOP] button. Return to the Part record standby mode, after stopping rehearsal by pressing the [START/ STOP] button, and then press the [EXECUTE] button again.

### 2 Press the [START/STOP] button to begin recording.

### 3 Play the keyboard and record the drum Voices.

Since the entire Style plays repeatedly, you can record at any point you like.

### 4 Press the [START/STOP] button to stop recording.

#### ■ Clear the recorded drum Voices

To clear the recorded drum Voices, after starting recording (refer to step 2 of the recording operation above), follow the instructions below.

- 1 Press and hold the [-] button and play the key or keys that correspond to the cleared Voice.
- 2 Press the [START/STOP] button to exit from the clear operation.

**NOTE**

- Only the rhythm Part can be cleared in this operation; other Parts (e.g., bass or chord) cannot be cleared.

## Bass, Chord, Pad and Phrase Part recording

If you select Parts other than a rhythm Part for recording part on [page 38](#), follow the instructions below.

### 1 Make sure that the desired Part (other than rhythm) is selected for recording.

The button corresponding to the Part to be recorded lights in red. In this condition, a REC mark also appears at the recorded Part on the display.

**NOTE**

- The Part you have selected may be changed if you select the section again.

### 2 Press the [START/STOP] button to begin recording.

### 3 Play the keyboard and record your playing.

#### Rules for recording to non-rhythm Parts:

For information on recording to parts other than the rhythm parts (RHY1, 2), refer to the section below, and perform using notes that match the chord CM7.

- Use only the CM7 scale tones when recording the Bass and Phrase Parts (i.e., C, D, E, G, A, and B).
- Use only the C chord tones when recording the Chord and Pad Parts (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)

**NOTE**

- Any desired chord or chord progression can be used for the INTRO and ENDING sections. If you record each sections keeping in mind the section shifts (Intro → Main → Fill in → Main → Ending), you can achieve better results.

### 4 Press the [START/STOP] button to stop recording.

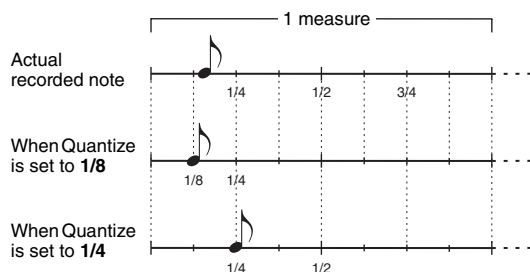
Record to other Parts in other sections.

### 5 Save the Style data ([page 42](#)).

## Editing (Quantize and part clear)

### Quantize

This function allows you to automatically align the timing of all recorded notes.



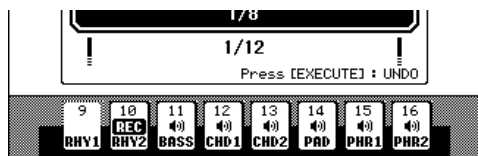
- 1 Press the CATEGORY [**◀**]/[**▶**] buttons repeatedly until “Quantize” appears in the display.
- 2 Rotate the dial and select the value.  
Settings: 1/4, 1/6, 1/8, 1/12, 1/16, 1/24, 1/32
- 3 Press the [EXECUTE] button.



**NOTE**

- If the recorded Part is not specified, Quantize cannot be set. Specify the Part for recording and then use the Quantize function.
- The undo icon on the display will disappear if you exit from the current display.

The “UNDO” message appears.



- 4 Press the [EXECUTE] button again if you want to replace with the previous Quantize value.



## Clearing a recorded Part

---

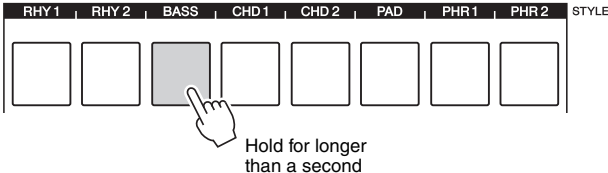
Select a desired section for clearing, and then follow the instructions below.

**1** Press the CATEGORY [◀]/[▶] buttons repeatedly until “Part Clear” appears in the display.

**2** To select a Part for clearing, press and hold the desired part button for longer than a second.

**NOTE**

- You can also select a Part by rotating the dial. In this case, press the [EXECUTE] button to clear.



A confirmation message appears.

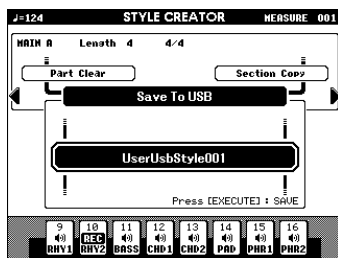
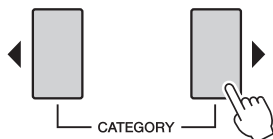
**3** Press the [+ / YES] button to clear the selected Part.

## Saving the data

Save the recorded data. You can select either USB flash memory or internal memory as the save destination. If you want to save to USB flash memory, connect an appropriate USB flash memory to the USB TO DEVICE terminal.

### 1 Press the CATEGORY [◀]/[▶] buttons repeatedly until “Save To USB” or “Save To USER” appears in the display.

A new User Style number is applied automatically and indicated in the display.



#### NOTICE

- If you select a User Style Number that already contains data, the previous data is deleted and overwritten by the new data.

#### NOTE 1

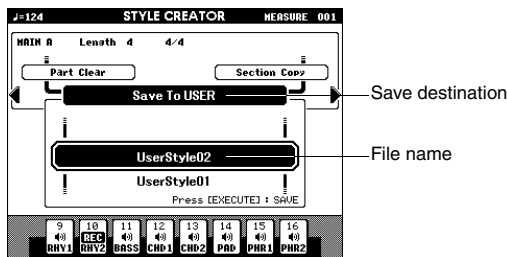
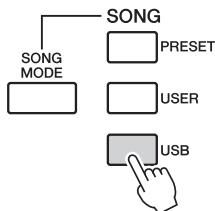
- If you want to exit from the Style Creator without saving, press the [EXIT] button then press the [+ / YES] button.
- A maximum of 50 Style files can be saved.

### 2 Press the [USB] button to select a save destination as desired.

Pressing the [USB] button alternates the save destination between USB flash memory and internal memory. If you want to save to USB flash memory, select “Save To USB”; if you want to save to internal memory, select “Save To USER” in the display.

A default file name will automatically be created.

If you select “Save To USER” as a save destination, the recorded data will be saved to the [EXPANSION/USER] button.

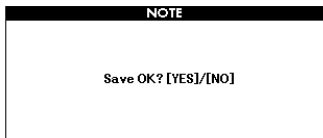


- If you want to overwrite the existing user Style file, select the file by using the dial, then go on to step 3.

**3 Press the [EXECUTE] button to set the save destination.**



A confirmation message appears.

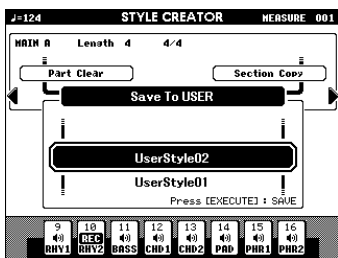


**4 Press the [+ / YES] button to execute the save operation.**

The following display appears when saving is complete. The Style is automatically saved in SFF GE format.

**NOTE 4**

• If you select a User Style Number that already contains data, an “Overwrite?” confirmation prompt appears. If you wish to save and overwrite, press the [+ / YES] button.



You can go back and set other sections with the Section Settings (page 34) and then record additional parts as desired.

## Exit from the Style Creator

Press the [EXIT] button to exit from the Style Creator.



If saving of the recorded data has not been done, a confirmation message appears asking if you want to exit from the Style Creator without saving the data. Press the [+ / YES] button if it is OK to exit, or the [- / NO] button to cancel.

**Deleting a User Style**

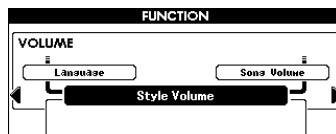
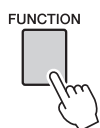
- 1 Press the [FILE MENU] button.
- 2 Press the CATEGORY [◀/|▶] buttons repeatedly until “User Delete” or “USB Delete” appears in the display. Select “User Delete” if you want to delete a User Style from a [EXPANSION / USER] button, or select “USB Delete” if you want to delete a User Style file on a USB flash memory.
- 3 Use the Dial to select the User Style data you want to delete.
- 4 Press the [EXECUTE] button.
- 5 Press the [+ / YES] button to delete the file.

# The Functions

The Function display lets you set the detailed settings for the instrument, such as fine tuning the pitch, adjusting the volume balance between playback and your performance, effect related settings, and more. A total of 60 items are available.

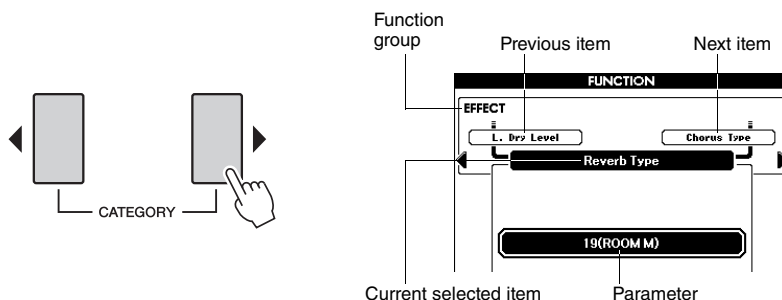
## Basic Operation

- 1 Press the [FUNCTION] button to call up the Function display.



- 2 Press the CATEGORY [◀] and [▶] buttons repeatedly until the function's display name appears in the display.

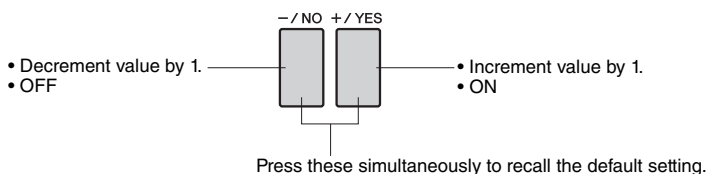
Take a look at the function list starting on [page 45](#). The name of the previous item in the list appears to the upper left, and the name of the next item in the list appears to the upper right of the currently selected item.



- 3 Use the dial or the [-/NO] and [+ /YES] buttons to set the parameters.

The [-/NO] and [+ /YES] buttons are used to make ON/ OFF type settings: [+ /YES] = ON, [-/NO] = OFF.

Press the [-/NO] and [+ /YES] buttons simultaneously to recall the default setting (excepting the initial setup of MIDI).



Some Function settings are stored in memory as soon as they are changed. To restore all initial factor default settings perform the "Backup Clear" procedure described in the "Initialization" section in the Owner's Manual.

## Function List

Item (Display)	Range/Settings	Default setting	Description
<b>VOLUME</b>			
Style Volume	000–127	100	Determines the volume of the Style.
Song Volume	000–127	100	Determines the volume of the Song.
<b>OVERALL</b>			
Tuning	415.3–466.2Hz	440.0Hz	Sets the pitch of the instrument's sound.
Pitch Bend Range	01–12	2	Sets the pitch bend range in semitone increments.
Split Point	036–096 (C1–C6)	054 (F#2)	Determines the highest key for the Split Voice and sets the Split "point"—in other words, the key that separates the Split (lower) and Main (upper) Voices. The Split Point setting and Accompaniment Split Point setting are automatically set to the same value.
Touch Sensitivity	1 (Soft), 2 (Medium), 3 (Hard)	2 (Medium)	Determines the keyboard touch sensitivity. Small values will produce a high volume level even if the key is hit softly. Large values require that the keys be played relatively hard to produce maximum loudness.
Chord Fingering	1 (Multi Finger), 2 (FullKeyboard), 3 (AI Finger)	1 (Multi Finger)	Sets the chord detection mode. In the Multi Finger mode, both normal chords and simple chords played to the left of the split point are detected. In the Full Keyboard mode normal chords played anywhere on the keyboard will be detected, and the notes played will sound as well. The AI Finger mode is basically the same as Multi Finger, except that less than three notes can be played to indicate the chords (based on the previously played chord, etc.). However, Easy chords described in the Owner's Manual cannot be detected in the AI Finger mode.
<b>SCALE TUNE</b>			
Scale	EQUAL, PURE MAJOR, PURE MINOR, PYTHAGOREAN, MEAN-TONE, WERCKMEISTER, KIRNBERGER, ARABIC1, ARABIC2	EQUAL	Sets the Scale. Details for each Scale are explained in the Owner's Manual.
Base Note	C, C#, D, Eb, E, F, F#, G, Ab, A, Bb, B	C	Selects the Base Note for Scale Tune.
Scale Tune	Note: C, C#, D, Eb, E, F, F#, G, Ab, A, Bb, B Cent: -64–63	Note: C Cent: 0	Sets Scale note pitches individually to create an original Scale.
Part Select	MAIN/DUAL: ON/OFF LEFT: ON/OFF STYLE: ON/OFF	MAIN/DUAL: ON LEFT: OFF STYLE: OFF	Selects the part to which the preset Scale Tune or original Scale will be applied. "MAIN/DUAL" and "LEFT" parts are keyboard Voices, and "STYLE" Part is Style playback.
External Scale Tune	OFF, ON (KEYBOARD)	Off	Selects the part to which the Scale Tune MIDI messages received from an external MIDI device will be applied. With the default setting of "OFF," MIDI messages are applied to Song channels 1–16, but not to the keyboard performance. If you set this to "ON (KEYBOARD)," the MIDI messages are applied to the keyboard performance as follows: Channel 1 = Main Voice, Channel 2 = Dual Voice, and Channel 3 = Left Voice; the other channels are not affected.
<b>REGIST FREEZE</b>			
Freeze Group Setting	STYLE: ON/OFF VOICE: ON/OFF TEMPO: ON/OFF TRANPOSE: ON/OFF SCALE: ON/OFF	STYLE: ON VOICE: OFF TEMPO: ON TRANPOSE: OFF SCALE: OFF	Sets a Freeze Group which is not to be recalled.
<b>MAIN VOICE</b>			
Main Volume	000–127	*	Determines the volume of the Main Voice.
Main Octave	-2→2	*	Determines the octave range for the Main Voice.
Main Pan	000–64–127 (Left - Center - Right)	*	Determines the pan position of the Main Voice in the stereo image. A value of "0" results in the sound being panned full left, while "127" results in the sound being panned full right.

Item (Display)	Range/Settings	Default setting	Description
Main Reverb Level	000–127	*	Determines how much of the Main Voice's signal is sent to the Reverb effect.
Main Chorus Level	000–127	*	Determines how much of the Main Voice's signal is sent to the Chorus effect.
Main DSP Level	000–127	*	Determines how much of the Main Voice's signal is sent to the DSP effect.
Main Dry Level	000–127	*	Determines how much of the Main Voice's unprocessed signal sounds (no Reverb, Chorus or DSP effect processing).
<b>DUAL VOICE</b>			
Dual Volume	000–127	*	Determines the volume of the Dual Voice.
Dual Octave	-2+2	*	Determines the octave range for the Dual Voice.
Dual Pan	000–64–127 (Left - Center - Right)	*	Determines the pan position of the Dual Voice in the stereo image. A value of "0" results in the sound being panned full left, while "127" results in the sound being panned full right.
Dual Reverb Level	000–127	*	Determines how much of the Dual Voice's signal is sent to the Reverb effect.
Dual Chorus Level	000–127	*	Determines how much of the Dual Voice's signal is sent to the Chorus effect.
Dual DSP Level	000–127	*	Determines how much of the Dual Voice's signal is sent to the DSP effect.
Dual Dry Level	000–127	*	Determines how much of the Dual Voice's unprocessed signal sounds (no Reverb, Chorus or DSP effect processing).
<b>LEFT VOICE</b>			
Left Volume	000–127	*	Determines the volume of the Left Voice.
Left Octave	-2+2	*	Determines the octave range for the Left Voice.
Left Pan	000–64–127 (Left - Center - Right)	*	Determines the pan position of the Left Voice in the stereo image. A value of "0" results in the sound being panned full left, while "127" results in the sound being panned full right.
Left Reverb Level	000–127	*	Determines how much of the Left Voice's signal is sent to the Reverb effect.
Left Chorus Level	000–127	*	Determines how much of the Left Voice's signal is sent to the Chorus effect.
Left DSP Level	000–127	*	Determines how much of the Left Voice's signal is sent to the DSP effect.
Left Dry Level	000–127	*	Determines how much of the Left Voice's unprocessed signal sounds (no Reverb, Chorus or DSP effect processing).
<b>EFFECT</b>			
Reverb Type	01–36	**	Determines the Reverb type, including off (36).
Chorus Type	01–45	**	Determines the Chorus type, including off (45).
DSP Type	001–239	*	Determines the DSP type, including off (239).
Master EQ Type	1 (Speaker 1), 2 (Speaker 2), 3 (Headphones), 4 (Line Out 1), 5 (Line Out 2)	1 (Speaker 1)	Selects one of five Master equalizer (EQ) settings which are provided to give you the best possible sound when listening through different reproduction systems: the instrument's built-in speakers, headphones and external speakers.
<b>HARMONY</b>			
Harmony Type	01–26	*	Determines the Harmony type.
Harmony Volume	000–127	*	Determines the volume of the Harmony effect.
<b>PC</b>			
PC Mode	PC1/PC2/OFF	OFF	Optimizes the MIDI settings for transmitting/receiving performance data (MIDI) in one convenient operation.
<b>MIDI</b>			
Local	ON/OFF	ON	Determines whether the instrument's keyboard controls the internal tone generator (ON) or not (OFF).
External Clock	ON/OFF	OFF	Determines whether the instrument synchronizes to the internal clock (OFF) or an external clock (ON).

Item (Display)	Range/Settings	Default setting	Description
Keyboard Out	ON/OFF	ON	Determines whether keyboard performance data of the instrument is transmitted (ON) or not (OFF).
Style Out	ON/OFF	OFF	Determines whether Style data is transmitted (ON) via USB TO HOST or not (OFF) during Style playback.
Song Out	ON/OFF	OFF	Determines whether Song data is transmitted (ON) via USB TO HOST or not (OFF) during Song playback.
Initial Setup	ON	–	Allows you to instantly send a MIDI data 'snapshot' of all panel settings to a computer or sequencer. Press [+ / YES] to send. Use this function before starting to record your keyboard performance to a sequencer (DAW, etc.) on the computer connected via USB TO HOST terminal. This ensures that all settings will be reproduced just as you made them, along with the rest of the recording.
<b>METRONOME</b>			
Time Signature – Numerator	01–60	**	Determines the time signature of the Metronome.
Time Signature – Denominator	2, 4, 8, 16	**	Sets the length of each Metronome beat.
Bell	ON/OFF	ON	Determines whether the Metronome bell sounds at the first beat in each measure or not.
Metronome Volume	000–127	100	Determines the volume of the Metronome.
<b>SCORE</b>			
Quantize	1 (1/4 note), 2 (1/4 note triplet), 3 (1/8 note), 4 (1/8 note triplet), 5 (1/16 note), 6 (1/16 note triplet), 7 (1/32 note), 8 (1/32 note triplet)	***	Depending on the Song data, you can make the score more readable by adjusting the timing of the notes. This determines the minimum timing resolution used in the Song. For example, if there are both quarter notes and eighth notes in the Song, you should set this value to "eighth note." Any notes or rests shorter than this value will not be shown in the score.
Right - Part	GuideTrack 1–16, OFF	CH1	Determines the guide track number for the right-hand part. This setting applies to all Songs except for preset Songs. Songs recorded on the instrument have the default setting.
Left - Part	GuideTrack 1–16, OFF	CH2	Determines the guide track number for the left-hand part. This setting applies to all Songs except for preset Songs. Songs recorded on the instrument have the default setting.
<b>DEMO</b>			
Demo Group	1 (Demo), 2 (Preset), 3 (User), 4 (Download), 5 (USB)	1 (Demo)	Determines the Songs played back via the [DEMO] button. Pressing the [DEMO] buttons will play the Songs specified here in sequence.
Demo Play Mode	1 (Normal), 2 (Random)	1 (Normal)	Determines the order of Song playback via the [DEMO] button.
Demo Cancel	ON/OFF	OFF	Determines whether Demo cancel is enabled or not. When this is set to ON, no Song will play back, even if the [DEMO] button is pressed.
<b>UTILITY</b>			
TG Mode	XG/Normal	NORMAL	Determines whether the external Song is played accurately in XG format or not. When it is set to XG, the external Song is played accurately in XG format, but the Song data may cause unintended changes to the sound of your keyboard played parts.
Auto Power off	OFF, 5, 10, 15, 30, 60, 120	30	Specifies the time that will elapse before the instrument's power is automatically turned off.
<b>LANGUAGE</b>			
Language	English/Japanese	English	Determines the display language for the Song file names, lyrics and certain display messages. All other messages and names are displayed in English. When this is set to Japanese, the file names are displayed in the Japanese font. The lyrics display follows the language setting originally made in the Song data; however, when no such setting exists, the setting here is used.

\* Different for each voice combination.

\*\* Different for each Song or Style combination.

\*\*\* Different for preset value in the Song. If no value, 6 (1/16 note triplet) is selected.

# Connecting to a Computer

This section gives detailed information on the MIDI settings necessary for transferring performance data (MIDI) between the instrument and a computer, and how to transfer a file. For details about connection with a computer and driver installation, refer to the chapter “Connecting to a Computer” in the Owner’s Manual.

## MIDI Settings for transferring performance data with a computer

### PC Mode

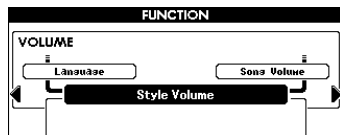
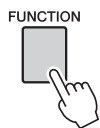
Setting “PC Mode” in the Function display makes the following multiple MIDI settings in one convenient operation. Three settings are available: PC1, PC2, and OFF.

	PC1	PC2	OFF
Local	OFF	OFF	ON
External Clock	ON	OFF	OFF
Song Out	OFF	OFF	OFF
Style Out	OFF	OFF	OFF
Keyboard Out	OFF	ON	ON

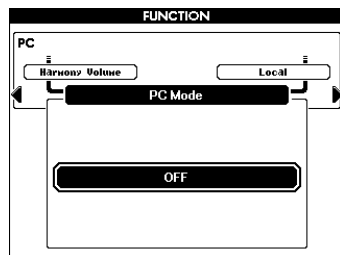
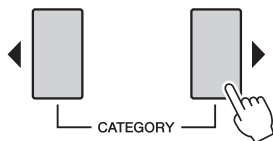
#### NOTE

- Preset Song data cannot be transmitted from the instrument by the Song Out function, but User Songs can.
- This setting is not necessary when transferring a file between the computer and the instrument.

1 Press the [FUNCTION] button.



2 Press the CATEGORY [◀] and [▶] buttons repeatedly to select “PC Mode.”



3 Use the dial to select PC 1, PC 2 or OFF.



## MIDI Settings

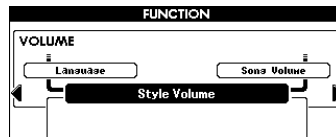
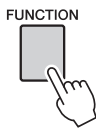
These settings pertain to performance data transmission and reception.

Item	Range/Settings	Description
Local	ON/OFF	Local control determines whether or not notes played on the instrument are sounded by its internal tone generator system: the internal tone generator is active when local control is on, and inactive when local control is off.
External Clock	ON/OFF	These settings determine whether the instrument is synchronized to its own internal clock (OFF), or to a clock signal from an external device (ON).
Song Out	ON/OFF	These settings determine whether Song data is transmitted (ON) or not (OFF) during Song playback.
Style Out	ON/OFF	These settings determine whether Style data is transmitted (ON) or not (OFF) during Style playback.
Keyboard Out	ON/OFF	These settings determine whether keyboard performance data of the instrument is transmitted (ON) or not (OFF).

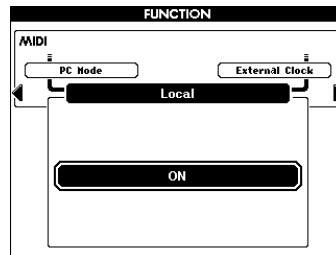
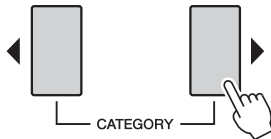
### NOTE 1

- If *Local* is set to *OFF*, the instrument will not produce any sound when the keyboard is played.
- If *External Clock* is *ON* and no clock signal is being received from an external device, the *Song*, *Style*, and *Metronome* functions will not start.

### 1 Press the [FUNCTION] button.



### 2 Use the CATEGORY [◀] and [▶] buttons to select the item whose value you want to change.



### 3 Use the dial to select ON or OFF.

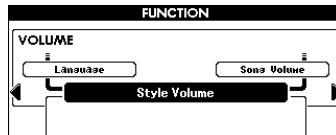
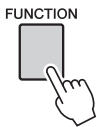
## Initial Setup

This function lets you send the panel setup data to an external sequencer or a computer. Before you record performance data to an external sequencer or a sequencer application running on your computer, it is a good idea to first send and record the panel setup data before the actual performance data. This makes it possible to restore the instrument panel setup and ensure that the same sound is produced upon playback.

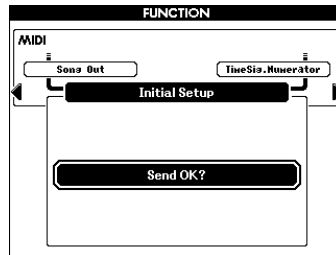
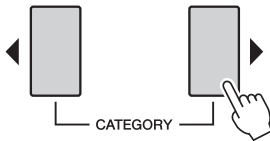
### NOTE 1

- The playback sound of the Drum Kit Voice may differ from recording sound.

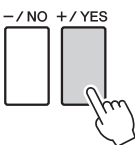
### 1 Press the [FUNCTION] button.



### 2 Use the CATEGORY [◀] and [▶] buttons to select "Initial Setup."



### 3 Press [+ / YES] to send.



## Transferring Data Between the Computer and Instrument

You can transfer data on the instrument, such as Songs and Styles you have recorded and the Backup data, to a computer to save them, or from a computer to the instrument. You can also transfer the external Style, Song and Music Database files on a computer to the instrument. In order to transfer files between your computer and the instrument, you will need to download the “Musicsoft Downloader” application (free of charge) and install it on your computer.

### Installing Musicsoft Downloader

You can download the “Musicsoft Downloader” application from the following website and install it on your computer. Make sure that your computer has an Internet connection.

<http://download.yamaha.com/>

Please visit the URL above to get the information on the computer system requirements for Musicsoft Downloader.

### Transferring Data by using the Musicsoft Downloader

For Musicsoft Downloader operating instructions see the Help menu: launch the Musicsoft Downloader application and click “Help.”

#### Data that can be transferred between the instrument and a computer

- Backup data (PSR-S650.BUP)
- Styles, Songs and Music Database other than preset data  
(Data capacity: approx. 1,130 KB)
  - Songs: (SMF format 0 and 1)
  - Style: (SFF/SFF GE)
  - Music Database: (.mfd)
- The number of files that can be shown on the display is as follows:
  - Songs: 100
  - Styles: 50
  - Music Database: 50

\* The SMF (Standard MIDI File) format is one of the most common and widely compatible sequence formats used for storing sequence data. Most commercially available MIDI sequence data is provided in SMF Format 0.

#### NOTE

- Visit the Yamaha website for more information on the latest version of Musicsoft Downloader (version 5.6.1 or higher) and how to install it.

#### NOTICE

- **Never turn the power off and never plug/unplug the AC power adaptor during data transmission. Not only will the data fail to be transferred and saved, but operation of the flash memory may become unstable and its contents may disappear completely when the power is turned on or off.**

#### NOTE

- Preset Style, Song and Music Database cannot be transmitted from the instrument.
- Even if the number of files transferred is less than the maximum allowed, if the amount of data exceeds 1,130 KB, the data cannot be transferred to the instrument.
- Before using Musicsoft Downloader application to access the instrument, make sure to return to the MAIN display, and stop playback if a Song or Style is being played back.
- Close the window to exit from the Musicsoft Downloader and re-enable control of the instrument.
- When the “Language” is set to English, files with names using double-byte characters cannot be transferred to the instrument.

## ■ Transferring Backup data to a computer

### Operation

Using Musicsoft Downloader, move the “PSR-S650.BUP” file from “System Drive” under “Electronic Musical Instruments” to a computer.

To recall the settings, move the “PSR-S650.BUP” file from a computer to “System Drive” under “Electronic Musical Instruments.”

## ■ Transferring Styles and Songs you have recorded on the instrument to a computer

### Operation

Using Musicsoft Downloader, move the file from “Flash Memory” under “Electronic Musical Instruments” to a computer.

To move a file back, move the file from a computer to “Flash Memory” under “Electronic Musical Instruments.”

## ■ Transferring Style, Song and Music Database files, downloaded from the Internet and saved on a computer, to the instrument

### Operation

Using Musicsoft Downloader, move the file from a computer to “Flash Memory” under “Electronic Musical Instruments.”

To move a file back, perform the same operation as in “Transferring Styles and Songs you have recorded on the instrument to a computer” above.

## NOTICE

- *The backup file is transmitted/received as a single file with the same name. As a result, all registration memory data on the instrument and the file saved on a computer will be overwritten every time you transmit or receive. Keep this in mind when transferring data.*
- *Do not rename the backup file on the computer. If you do so it will not be transferred to the instrument.*

### Using Songs with Notation

When using Songs with notation (SMF format 0/1 only) transferred from a computer for practice, you can specify which channels are to be played back as the right-hand and left-hand parts.

- 1 Press the [USER] button and select the Song residing in internal memory for which you want to set the guide track.
- 2 Press the [FUNCTION] button.
- 3 Use the CATEGORY [◀] and [▶] buttons to select the R-Part or L-Part item.
- 4 Use the dial to select the channel you want to play back as the specified right- or left-hand part.

We recommend that you select channel 1 for the right-hand part and channel 2 for the left-hand part.

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