

# FANTOM Version 2.00 Supplementary Manual

This manual explains the functions that were added in FANTOM version 2.00.

Read this in conjunction with the FANTOM's owner's manual, reference manual (PDF), Version 1.10 Supplementary Manual, 1.50 Supplementary Manual, and 1.60 Supplementary Manual.

## Enhancements to Sampling Functions

In addition to the existing Sample Pad feature that allows you to use the pads to play the samples you've recorded, FANTOM version 2.00 lets you bring in sampled sounds as waves that you can use in creating tones, and then play those sounds in different pitches across the keyboard, or assign multiple waves to the keyboard (using the multisample function).

### User Sample

Data that you sample on the FANTOM or import as audio files is called "user samples." There are two kinds of user samples: "Pad" samples and "Kbd" (keyboard) samples.

### Pad Sample

Pad samples are effective for playing long phrases, adding sound effects and so on.

### Kbd Sample

Kbd samples are effective for playing samples back in different pitches using the keyboard. Samples are treated as tone oscillators.

### Multisample

Multisamples combine multiple waves, treating them as one sound.

## About the SAMPLING MENU

The SAMPLING MENU screen has been added in version 2.00, and is categorized by objective.

### 1. Press the [SAMPLING] button.

The SAMPLING MENU screen appears.

Use the icons on the screen and the FUNCTION knobs according to your objective when you perform tasks on this unit.

Menu	Explanation
SAMPLING <To Pad>	This lets you sample and play back sounds using the pads, including the sounds you make when playing this unit or sounds from external devices.
SAMPLING <To Keyboard>	This lets you sample and play back sounds using the keyboard, including the sounds you make when playing this unit or sounds from external devices.
SAMPLING <To Storage>	This only saves samples without assigning them to the pads or keyboard.
IMPORT <To Pad>	Imports an audio file for you to play using the pads.
IMPORT <To Keyboard>	Imports an audio file for you to play using the keyboard.
IMPORT <To Multisample>	Creates a multisample using multiple audio files.
[E1] WAVE/EXP MEMORY INFO	Use this to check the status of data used by the Kbd samples or Expansion (such as the EXZ series). You can also use this to optimize Kbd sample data that needs to be consolidated.
[E4] PAD SAMPLE	Edits the Pad samples.
[E5] KBD SAMPLE	Edits the Kbd samples.
[E6] MULTISAMPLE	Edits the multisamples.

Refer to "05 Sampler: Sampling" in the Reference Manual (PDF) for details on the parameters and so forth along with the explanations that follow.

## Sampling (To Keyboard)

Refer to "05 Sampler: Sampling" in the Reference Manual (PDF) for explanations on the parameters and so forth along with this text.

### NOTE

Before sampling, make sure that there is enough memory remaining. You can still record samples all the way up the maximum length even if there is not enough memory, but the samples may not save, depending on how much memory is left.

### 1. Connect the device (audio device or mic) you want to sample as necessary to the MIC/LINE INPUT jacks 1 and 2.

#### MEMO

To sample an audio device in stereo, connect the left channel to MIC/LINE INPUT jack 1, and the right channel to MIC/LINE INPUT jack 2.

### 2. Press the [SAMPLING] button.

The SAMPLING MENU screen appears.

### 3. Touch SAMPLING <To Keyboard>.

The SAMPLING STANDBY (TO KBD) screen appears.

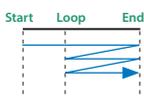
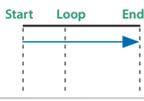
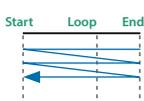
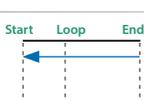


### 4. Touch <Sampling Mode> to select the sampling mode

### 5. Set the input volume as necessary.

### 6. Configure the sampling settings.

The parameters shown below were added to the SAMPLING STANDBY (TO KBD) screen.

Parameter	Value	Explanation
Destination Tone	0001 -	Select the number of the user tone that uses the wave you sampled.
Loop Mode	FWD	After the sample plays back from its start to end points, it repeatedly plays back from its loop start point to its end point. 
	ONE-SHOT	The sample plays back only once from its start to end point. 
	REV	The sample plays back repeatedly from its end to start point (in reverse). The loop is disabled in this case even if you have set it. 
	REV-ONE	The sample plays back only once from its end to start point (in reverse). 
Original Key	0(C -1) - 127(G 9)	Sets the note number that plays back the sample at the same pitch at which it was recorded.
Save To Internal Storage	OFF, ON	The sampled wave is saved in WAV format on internal storage (in the INT:KBD_SMPLE folder).

Parameter	Value	Explanation
Assign To Keyboard	OFF, ON	When this is "OFF," the sound is imported as a Kbd sample, but is not assigned to the tone of the current zone.
Emphasis	OFF, ON	When this is "ON," pre-emphasis (which emphasizes the high end of the sample) is applied to the imported sound.

**7. Play the device that you've connected to this unit, and touch <START> when you want to begin sampling.**

"NOW SAMPLING" displays while you are sampling, and the time counter advances.

**8. Touch <STOP> when you want to stop sampling.**

Sampling stops, and a dialog box appears.



Menu	Explanation
[E1] PREVIEW	Lets you listen to the wave you sampled to make sure it sounds the way you want.
[E1] RETRY	This is used to redo the sampling.
[E5] CANCEL	Interrupts the sampling and returns to the previous screen.
[E6] OK	Confirms the sampling and goes to the next screen.

**9. Select [E6] OK.**

The KBD SAMPLE WAVE EDIT screen appears.



Menu	Explanation
SAMPLE	Selects another sample.
START POINT[E1] knob	Changes the start point.
LOOP START POINT [E2] knob	Changes the loop start point.
END POINT [E3] knob	Changes the end point.
ZOOM HORZ[E4] knob	Changes the zoom factor of the horizontal axis (waveform time). (1/65536-1/1)
ZOOM VERT[E5] knob	Changes the zoom factor of the vertical axis (waveform amplitude). (x1-x128)
[E6] PREVIEW	You can preview the sample while pressing this knob.
<WRITE>	Saves the sample parameters.
<RELOAD>	Reloads the sample parameters.

Menu	Explanation
<MODIFY>	Adds various effects to the sample.
<UTILITY>	Displays the "Kbd Sample Utility"(p. 8).

**10. Edit the desired parameters.**

Parameter	Value	Explanation
START POINT	000000000-	This is the playback start position. Use this setting to skip unnecessary parts at the beginning of the waveform when it plays back.
LOOP START POINT	000000000-	This is the position where the sample starts again during repeating playback.
END POINT	000000010-	This is the playback end position. Use this setting to skip unnecessary parts of the at the end of the waveform when it plays back.
Gain	0, +6, +12 [dB]	Adjusts the sample gain. Use this to raise the volume if the level of the recorded sample seems too low.
Fine Tune	-50.0-+50.0 [cent]	Sets the pitch of the sampled sound in one-cent steps (±50 cents).
Level	0-127	Adjusts the sample volume.

**11. When you have finished making settings, select the [EXIT] button.**

A user tone is created using the sound you sampled, and the ZONE VIEW1 screen is shown with the current zone selected.

**12. Play the keyboard.**

You can play the sampled sound in the current zone, with the pitches matching the notes you play.

## Sampling (To Storage)

After you sample a sound, SAMPLING To Storage saves your samples to internal storage without assigning them to the pads or keyboard.

### NOTE

Before sampling, make sure that there is enough memory remaining. You can still record samples all the way up the maximum length even if there is not enough memory, but the samples may not save, depending on how much memory is left.

1. **Connect the device (audio device or mic) you want to sample as necessary to the MIC/LINE INPUT jacks 1 and 2.**

### MEMO

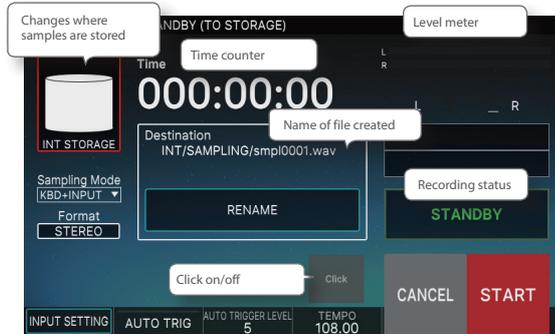
To sample an audio device in stereo, connect the left channel to MIC/LINE INPUT jack 1, and the right channel to MIC/LINE INPUT jack 2.

2. **Press the [SAMPLING] button.**

The SAMPLING MENU screen appears.

3. **Touch SAMPLING <To Storage>.**

The SAMPLING STANDBY(TO STORAGE) screen appears.



### MEMO

Touch <INT STORAGE> to change where you want to save the sample.

4. **Touch <Sampling Mode> to select the sampling mode.**
5. **Set the input volume as necessary.**
6. **Configure the sampling settings.**

The parameters shown below were added to the SAMPLING STANDBY(TO STORAGE) screen.

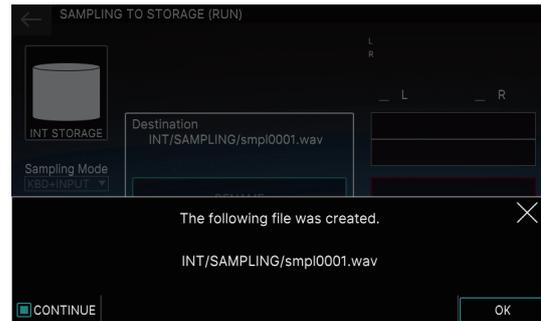
Parameter	Explanation
Destination	This is the filename used to save the wave after sampling. Touch <RENAME> to change the filename. You can change the first 12 characters of the filename. A four-digit number starting with "0001" and counting up is appended to the 12-character name after you change it.

7. **Play the device that you've connected to this unit, and touch <START> when you want to begin sampling.**

"NOW SAMPLING" will display while you are sampling, and the time counter will advance.

8. **Touch <STOP> when you want to stop sampling.**

Sampling will stop and a dialog box appears.



9. **Select [E6] OK.**

If the [E1] CONTINUE check box is selected, the unit returns to the SAMPLING STANDBY screen and you can continue sampling. If the check box is not selected, the unit returns to the SAMPLING MENU screen.

## Sampling (To Pad)

"SAMPLING To Pad" combines all of the steps you need to make the samples playable using the pads.

Refer to "05 Sampler: Sampling" in the Reference Manual (PDF) for details on how to do this.

## Importing an Audio File (To Keyboard)

"IMPORT To Keyboard" combines all of the steps you need to make the audio files you imported playable from the keyboard.

Use these steps to create a user tone at the same time that uses the audio files you import.

1. **To begin, put the audio files you want to import into the folder you choose on a USB flash drive.**

### NOTE

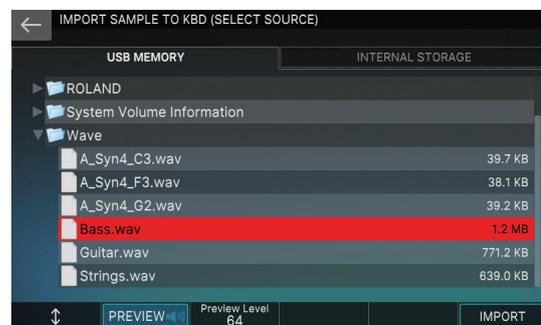
- Use a USB flash drive that you've already formatted on the FANTOM.
- This operation might take some time, depending on the size of the file to import.

2. **Press the [SAMPLING] button.**

The SAMPLING MENU screen appears.

3. **Touch IMPORT <To Keyboard>.**

The IMPORT SAMPLE TO KBD(SELECT SOURCE) screen appears.



Menu	Explanation
[E2] PREVIEW	You can preview the audio file while pressing this knob.
[E3] Preview Level	Sets the volume used for previewing. This is a system parameter. You can also set this from MENU->SYSTEM->SOUND.
[E6] IMPORT	Advances to the next operation.

#### 4. Select the file to be used.

**MEMO**

You can select the INTERNAL STORAGE tab and import the audio files in the LIBRARY folder.

**NOTE**

If a filename contains the following characters, that file cannot be imported into the FANTOM.  
 " \* , / ; : < > ? \ | ~

Also, files with double-byte characters and other special characters cannot be imported.

#### 5. Select [E6] IMPORT.

The IMPORT SAMPLE TO KBD(SETTING) screen appears.



#### 6. Edit the desired parameters.

Menu	Explanation
Destination Tone	Select the number of the user tone that uses the audio file you imported.
Emphasis	When this is "ON," pre-emphasis (which emphasizes the high end of the sample) is applied to the imported sound.
[E1] PREVIEW	You can preview the audio file while pressing this knob.
[E2] Loop Mode	Selects how the sample is played back (p. 1).
[E3] Original Key	Sets the note number that plays back the sample at the same pitch at which it was recorded.
[E4] APPLY EMPHASIS	When this is "ON," the high end of the imported sample's sound is emphasized.
[E5] SAVE TO STORAGE	The sampled wave is saved in WAV format on internal storage (in the INT:KBD_SMPL folder).
[E6] EXECUTE	Executes the operation.

#### 7. When you are finished making settings, select [E6] EXECUTE.

A confirmation message appears.

If you decide to cancel, choose [E6] CANCEL.

#### 8. Select [E5] OK.

The IMPORT operation is executed.

This creates a user tone that uses the imported waveform. The user tone that was created is selected in the current zone and shown on the screen (ZONE VIEW1 display).

#### 9. Play the keyboard.

You can play the imported sound in the current zone, with the pitches matching the notes you play.

### Importing an Audio File (To Pad)

"IMPORT To Pad" combines all of the steps you need to make the audio files you imported playable from the pad.

Refer to "05 Sampler: Sampling:Importing an Audio File" in the Reference Manual (PDF) for details on how to do this.

A preview was added to the file selection screen in version 2.00.

### Importing Multiple Audio Files (To Multisample)

"IMPORT To Multisample" combines the steps used to create a "multisample." This includes simultaneous importing of multiple audio files, assigning the audio files to the desired notes on the keyboard, and playing different waves for each note.

#### 1. To begin, put the audio files you want to import into the folder you choose on a USB flash drive.

**MEMO**

It's useful to first know the pitch of the sample that you are importing.

**NOTE**

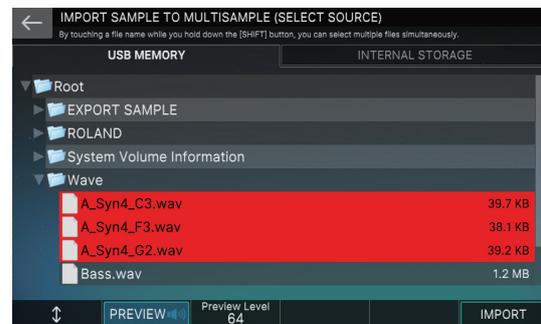
- Use a USB flash drive that you've already formatted on the FANTOM.
- This operation might take some time, depending on the size of the file to import.

#### 2. Press the [SAMPLING] button.

The SAMPLING MENU screen appears.

#### 3. Touch IMPORT <To Multisample>.

The IMPORT SAMPLE TO MULTISAMPLE (SELECT SOURCE) screen appears.



Menu	Explanation
[E2] PREVIEW	Lets you listen to the audio file to make sure it sounds the way you want.
[E3] Audio File Preview Level	Sets the volume used for previewing.
[E6] IMPORT	Advances to the next operation.

#### 4. Touch the filename of the file you imported to select it.

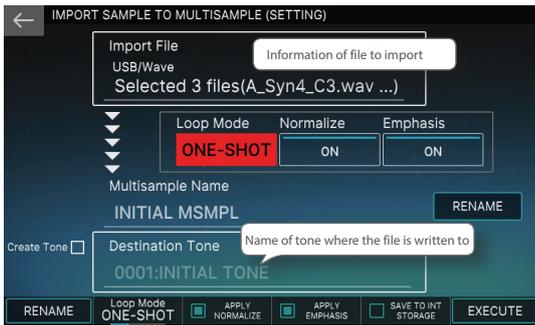
You can select multiple files at once by touching the filenames while holding down the [SHIFT] button, or by turning the VALUE dial while holding down the [SHIFT] button. When you select multiple files, the first file is previewed.

**MEMO**

You can select the INTERNAL STORAGE tab and import the audio files in the LIBRARY folder.

### 5. Select [E6] IMPORT.

The IMPORT SAMPLE TO MULTISAMPLE(SETTING) screen appears.



### 6. Edit the desired parameters.

Menu	Explanation
Destination Tone	If "Create Tone" is on, select the number of the user tone that uses the audio file you imported.
Create Tone	When this is on, a user tone is created with the multisample that is generated set as partial 1.
[E1] RENAME	Use this to assign a name to the multisample that is created by the import. When "Create Tone" is on, this also applies to the user tone that is generated at the same time.
[E2] Loop Mode	Selects how the sample is played back (p. 1).
[E3] APPLY NORMALIZE	When this is "ON," the imported sample's sound is normalized.
[E4] APPLY EMPHASIS	When this is "ON," the high end of the imported sample's sound is emphasized.
[E5] SAVE TO STORAGE	The sampled wave is saved in WAV format on internal storage (in the INT:KBD_SMPL folder).
[E6] EXECUTE	Executes the operation.

### 7. Select [E6] EXECUTE.

A confirmation message appears. If you decide to cancel, choose [E6] CANCEL.

### 8. Select [E5] OK.

The IMPORT operation is executed. When the import finishes, the IMPORTED SAMPLE LIST screen is shown.



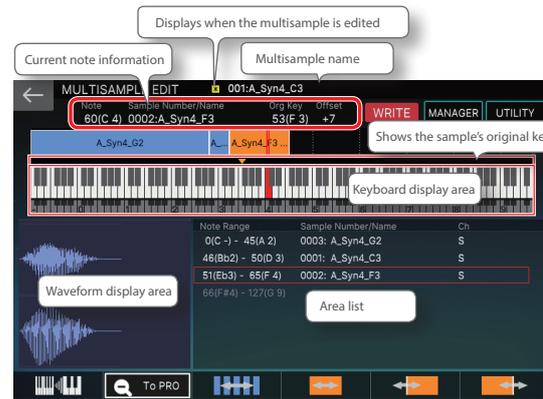
### 9. Edit the parameters as needed.

**MEMO**

- If you set the "Original Key" here for each sample, the samples are automatically assigned to the keys on the keyboard you set in the MULTISAMPLE EDIT screen. For this reason, we recommend that you set the approximate "Original Key" here on this screen.
- Play a key on the keyboard while pressing [SHIFT] to set the original key.
- You'll hear the currently selected tone when you play the keyboard. This is useful for checking the original key, along with the preview function.

### 10. Select [E6] NEXT.

The MULTISAMPLE EDIT screen appears.



Menu	Explanation
Area bar	Displays information for the sample/area currently assigned to the multisample. Touch the area to make it the current area. The color changes to orange. You can select multiple keys at the same time.
Keyboard display area	Upper row This shows the portion of the keyboard to which you zoomed-in by turning the [E1] knob. Drag the screen with your finger to select a range of keys.
	Lower row A 128-note keyboard is always shown. The lighter area turns into a scrollbar when the keyboard is magnified. Red keys: current note Green keys: range of multiple notes selected. This represents the area used for "Assign" or "No Assign" (p. 6).
Waveform display area	Shows the sample waveform assigned to the selected area.
Area list	Displays information for the samples/areas currently assigned to the multisample. Touch this to show the area where samples are assigned in the keyboard display area.
[E1] knob	Changes the scale of the onscreen keyboard. Press down on this knob while turning it to scroll the keyboard display area when zooming in.
[E2] To Pro/To Zoom	Switches between the Pro Edit and Zoom Edit screens.
[E3] knob	Shifts all samples assigned to the keyboard left or right.
[E4] knob	Shifts the sample of the current area left or right.
[E5] knob	Shifts only the bottom note of the sample of the current area.
[E6] knob	Shifts only the top note of the sample of the current area.
<WRITE>	Saves the multisample.
<MANAGER>	Accesses the MULTISAMPLE MANAGER screen.
<UTILITY>	This is the UTILITY menu for multisamples.

### 11. Edit the parameters as needed.

### 12. When you are finished making settings, press the [EXIT] button.

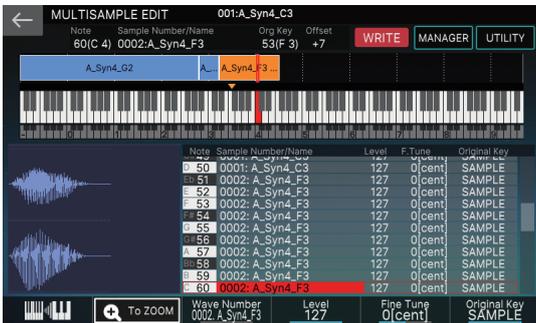
The screen returns to MULTISAMPLE VIEW.

**NOTE**

Any multisample that you have not saved is erased when the power is turned off. Use the WRITE operation to save your multisamples.

## Editing Parameters for Individual Keys (MULTISAMPLE EDIT PRO)

You can edit the parameters for individual keys in detail from the MULTISAMPLE PRO EDIT screen.

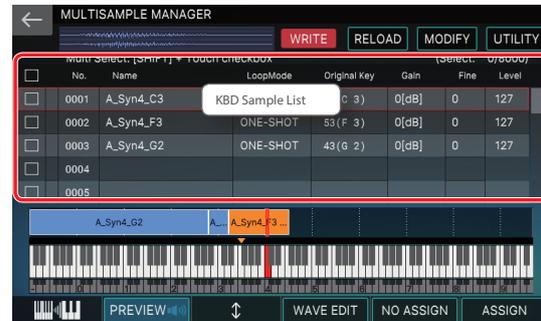


Menu	Explanation
[E1] knob	Changes the scale of the onscreen keyboard. Press down on this knob while turning it to scroll the keyboard display area when zooming in.
[E2] To Pro/To Zoom	Switches between the Pro Edit and Zoom Edit screens.
[E3] knob	Changes all sample numbers in the selected area. Turn the knob while pushing it down to make only the sample number for the key shown at the cursor point change.
[E4] knob	Changes the Level for all samples in the selected area. Turn the knob while pushing it down to change only the sample level for the key shown at the cursor point.
[E5] knob	Changes the Fine Tune for all samples in the selected area. Turn the knob while pushing it down to change only the "Fine Tune" of the sample belonging to the key shown at the cursor point.
[E6] knob	Changes the Original Key for all samples in the selected area. Turn the knob while pushing it down to change only the Original Key for the key shown at the cursor point. Pressing this knob while playing the keyboard changes the Original Key for all samples in the selected area to the note number you play on the keyboard.
<WRITE>	Saves the multisample.
<MANAGER>	Accesses the MULTISAMPLE MANAGER screen.
<UTILITY>	This is the UTILITY menu for multisamples.

## Managing Samples for Key Areas (MULTISAMPLE MANAGER)

You can call up this screen from the MULTISAMPLE EDIT/PRO EDIT screens. Here you can set the individual parameters of each sample that was assigned when the multisample was created.

You can also add, delete or change samples that are assigned to the keyboard.



Menu	Explanation
[E1] knob	Changes the scale of the onscreen keyboard. Press down on this knob while turning it to scroll the keyboard display area when zooming in.
[E2] PREVIEW	You can preview the samples selected in the KBD Sample List while pressing this knob.
[E3] knob	Scrolls the list up/down.
[E4] WAVE EDIT	Accesses the WAVE EDIT screen.
[E5] NO ASSIGN	Cancel the assignment of the selected sample to the keyboard.
[E6] ASSIGN	Assigns the selected sample to the keyboard.
<WRITE>	Saves the sample parameters.
<RELOAD>	Reloads the sample parameters.
<MODIFY>	Adds various effects to the sample.
<UTILITY>	Displays the "Kbd Sample Utility" (p. 8).

**MEMO**

You can select more than one sample in the Sample List (found in screens such as the MULTISAMPLE MANAGER and KBD SAMPLE) by tapping the check boxes at the far left of each sample row. Select the check box in the topmost (title) row to select or deselect all samples at once.

- Check boxes selected for all samples
- Check boxes selected for specific samples
- Check boxes cleared for all samples

## Using the UTILITY Functions

The <UTILITY> button found in the MULTISAMPLE EDIT/PRO EDIT screens shows a UTILITY menu where you can manage multisamples.



Menu	Explanation
<RELOAD>	Restores the multisample currently being edited to the way it was when it was last saved.
<INITIALIZE>	Initializes the current multisample settings. This removes the assignments for all samples.
<SORT>	All samples assigned to the multisample are reassigned according to the Original Key settings (the results being the same as "Create Multisample.")

## Managing Samples (KBD SAMPLE)

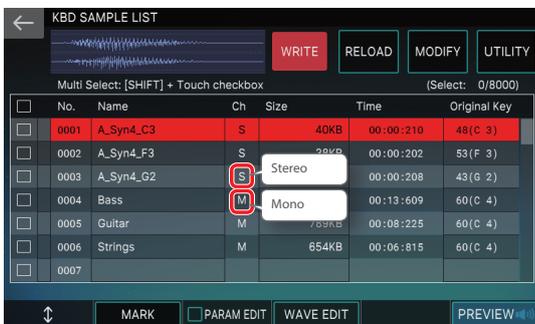
You can freely edit the parameters of samples that you created using SAMPLING To Keyboard or IMPORT To Keyboard, resort the samples or edit their waveforms after the fact.

### 1. Press the [SAMPLING] button.

The SAMPLING MENU screen appears.

### 2. Select [E5] KBD SAMPLE.

The KBD SAMPLE LIST screen appears.



Menu	Explanation
[E1] knob	Scrolls the list up/down.
[E2] MARK	Selects the check box of the sample indicated by the cursor, and moves the cursor to the next sample. If the check box is already selected, it is cleared and the cursor moves forward one item. If you press the knob while holding down the [SHIFT] button, the check boxes of samples marked for editing are selected as well.
[E3] PARAM EDIT	Switches to the SAMPLE PARAMETER screen.
[E4] WAVE EDIT	Switches to the KBD SAMPLE WAVE EDIT screen.
[E6] PREVIEW	Previews the sample selected by the cursor.
<WRITE>	Saves the sample parameters.
<RELOAD>	Reloads the sample parameters.
<MODIFY>	Adds various effects to the sample.
<UTILITY>	Displays the "Kbd Sample Utility" (p. 8).

### 3. Execute the desired operation.

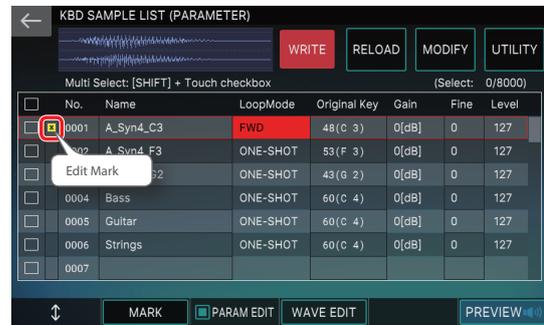
## Editing Parameters (SAMPLE PARAMETER)

You can edit the sample parameters in the list from the KBD SAMPLE LIST screen.

### 1. Display the KBD SAMPLE LIST screen.

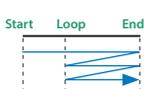
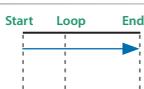
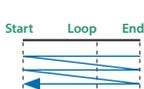
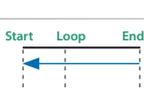
### 2. Select the [E3] PARAM EDIT check box.

The SAMPLE PARAMETER screen appears.



Menu	Explanation
[E1] knob	Scrolls the cursor up/down.
[E2] MARK	Selects the check box of the sample indicated by the cursor, and moves the cursor forward one item. If the check box is already selected, this clears it and moves the cursor forward one item. If you press the knob while holding down the [SHIFT] button, the check boxes of samples marked for editing are selected as well.
[E3] PARAM EDIT	Switches to the KBD SAMPLE LIST screen.
[E4] WAVE EDIT	Switches to the KBD SAMPLE WAVE EDIT screen.
[E6] PREVIEW	Previews the sample.
<WRITE>	Saves the sample parameters.
<RELOAD>	Reloads the sample parameters.
<MODIFY>	Adds various effects to the sample.
<UTILITY>	Displays the "Kbd Sample Utility" (p. 8).

### 3. Edit the desired parameters.

Parameter	Value	Explanation
Loop Mode	FWD	After the sample plays back from its start to end points, it repeatedly plays back from its loop start point to its end point. 
Loop Mode	ONE-SHOT	The sample plays back only once from its start to end point. 
Loop Mode	REV	The sample plays back repeatedly from its end to start point (in reverse). The loop point is disabled in this case even if you have set it. 
Loop Mode	REV-ONE	The sample plays back only once from its end to start point (in reverse). 
Original Key	0(C -1)–127(G 9)	Sets the note number that plays back the sample at the same pitch at which it was recorded.
Gain	0, +6, +12 [dB]	Adjusts the sample gain. Use this to raise the volume if the level of the recorded sample seems too low.
Fine Tune	-50.0–+50.0 [cent]	Sets the pitch of the sampled sound in one-cent steps (±50 cents).
Level	0–127	Adjusts the sample volume.

#### MEMO

Parameters that have been changed are marked with an edit mark.

## Using the SAMPLE UTILITY Functions

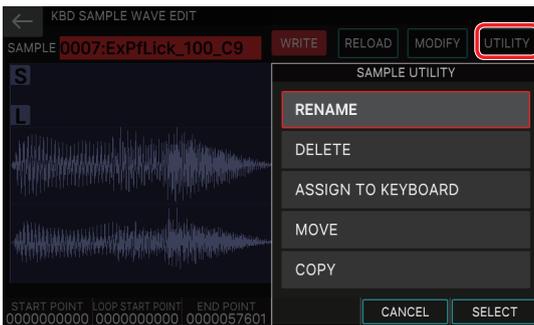
On some screens such as KBD SAMPLE WAVE EDIT, KBD SAMPLE LIST and SAMPLE PARAMETER, you can use the SAMPLE UTILITY function to perform various tasks like changing the names of samples, moving, copying and so on. The menu is different for each screen.

### 1. In a screen where the utility functions are available, select the desired sample(s).

You can select the check boxes of samples for multiple selections.

### 2. Touch <UTILITY>.

The KBD SAMPLE UTILITY screen appears.



### 3. Select and execute the desired function.

Menu	Explanation
CREATE MULTISAMPLE	Creates a multisample using samples whose check boxes are selected. Switches to the CREATE MULTISAMPLE screen.
ASSIGN TO KEYBOARD	Lets you use the keyboard to play the sample indicated by the cursor. Specify the Destination Tone in the dialog box that is displayed.
DELETE	Deletes the sample selected by the cursor. All samples whose check boxes are selected are deleted at once.
MOVE	Moves the sample selected by the cursor. Specify the destination in the dialog box that is displayed.
COPY	Copies the sample selected by the cursor. Specify the copy destination in the dialog box that is displayed.
IMPORT	Imports an audio file into the KBD SAMPLE LIST.
RENAME	Renames the sample.

\* The menu items that can be selected are different for each screen. Also, the menu items change depending on how many samples are selected.

## Using the SAMPLE MODIFY Functions

On some screens such as KBD SAMPLE WAVE EDIT, KBD SAMPLE LIST and SAMPLE PARAMETER, you can use the SAMPLE MODIFY function to add various effects to the samples.

#### MEMO

The sample parameters are automatically saved after you execute each function.

#### NOTE

You cannot undo this operation. If you are working on an important sample, copy it to a different sample number before executing the function.

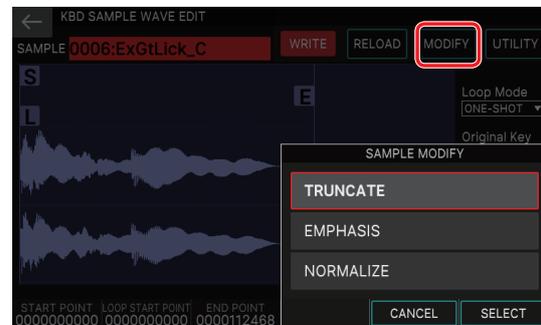
### 1. Select the sample in question on each screen.

#### NOTE

None of the SAMPLE MODIFY functions work when you have selected multiple samples (their icons will be grayed out). When using SAMPLE MODIFY, clear all of the sample check boxes and make sure the cursor is on the sample in question.

### 2. Touch <SAMPLE MODIFY> or <MODIFY>.

The SAMPLE MODIFY screen appears.



### 3. Select and execute the desired function.

Menu	Explanation
TRUNCATE	Sets the range over which the sample sounds (using the start and end points) and erases the unnecessary portions. Set the start and end points beforehand.
EMPHASIS	Emphasizes the high-end range of the sample. This can only be done from the "Kbd Sample Wave Edit" screen.
NORMALIZE	Raises the level of the entire sample without exceeding the maximum level.

## Creating a Tone with Multiple Multisamples (MULTISAMPLE VIEW)

You can combine more than one multisample that you created to make a single tone.

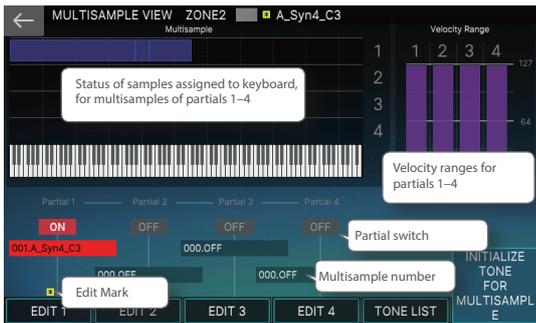
For example, you can create a tone using up to four multisamples, which captures the character of softly or strongly played notes on an instrument. Assign each multisample to a different partial, and then specify a different velocity range for each partial so that the keyboard velocity determines which multisample is heard. This gives you a high-quality sound that responds naturally to your playing.

### 1. Press the [SAMPLING] button.

The SAMPLING MENU screen appears.

### 2. Touch [E6] MULTI SMPL.

The MULTISAMPLE VIEW screen appears.



Menu	Explanation
[E1] EDIT1	
[E2] EDIT2	Switches to the MULTISAMPLE EDIT screen for the multisample selected in each partial.
[E3] EDIT3	
[E4] EDIT4	
[E5] TONE LIST	Opens the Tone List.
[E6] TONE INITIALIZE FOR MULTISAMPLE	Initializes the optimum settings to create a tone using multisamples.

**MEMO**

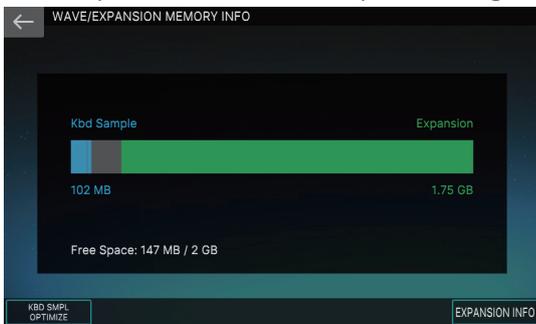
- You can also access this screen from Tone Edit → UTILITY → MULTISAMPLE EDIT for the Z-Core tone.
- You can also assign multisamples to partials 2-4. On the FANTOM, you can assign multisample waveforms to all four partials.

## WAVE/EXPANSION MEMORY INFO Screen Added

The WAVE/EXPANSION MEMORY INFO screen has been added to the UTILITY and SAMPLING menus, integrating the screens related to memory information.

### WAVE/EXPANSION MEMORY INFO screen

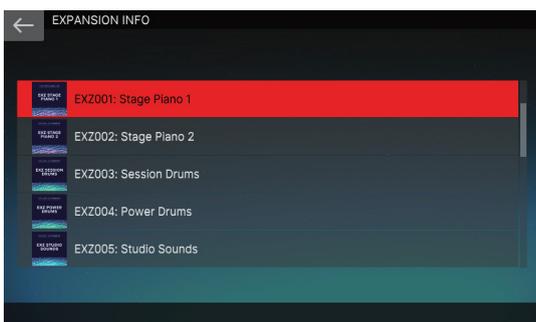
This shows a graph of how much of the internal memory the Kbd Samples and EXPANSION samples are using.



Menu	Explanation
[E1] KBD SMPL OPTIMIZE	Optimizes the memory used by the samples that were sampled using "Sampling To Keyboard."
[E6] EXPANSION INFO	Accesses the EXPANSION INFO screen.

### EXPANSION INFO screen

This displays information for the EXPANSION samples installed.



**NOTE**

You may not be able to install some contents, even if free memory is available.

## Optimizing the Sample Storage Area

You may find that you can't add new Kbd samples, as the free memory might be fragmented after many Kbd samples have been added and deleted.

Optimizing the memory improves the condition of the sample storage area.

### 1. Select [E1] KBD SMPL OPTIMIZE from the WAVE/EXPANSION MEMORY INFO screen.

A confirmation message appears.

If you decide to cancel, choose [E6] CANCEL.

### 2. Select [E5] OK.

This optimizes the Kbd sample storage area.

**NOTE**

Never turn off the power while you see the message "working.." on the screen.

## Importing Sample Data (IMPORT)

This imports FANTOM sample data from an .svz file on a USB flash drive.

### 1. Copy the file (with the ".svz" extension) to import onto your USB flash drive.

### 2. Insert the USB flash drive into the USB MEMORY port of the FANTOM.

### 3. Press the [MENU] button.

The MENU screen appears.

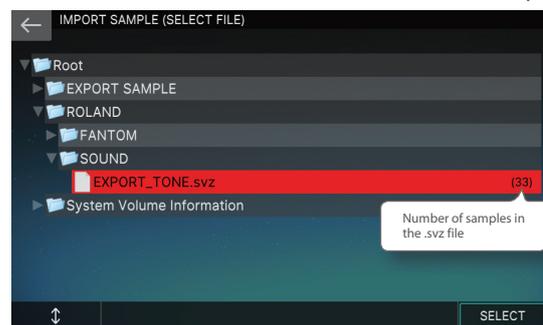
### 4. Touch <UTILITY>.

The UTILITY screen appears.

### 5. Touch <IMPORT>.

### 6. Touch <IMPORT SAMPLE>.

The folders and files on the USB flash drive are displayed.

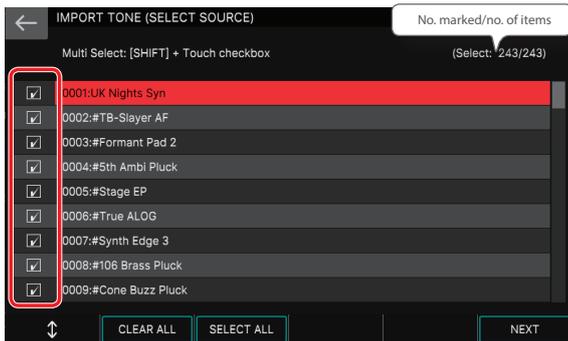


Menu	Explanation
[E1] knob	Scrolls the screen up/down.
[E6] SELECT	Selects the .svz file.

### 7. Touch the .svz file to import.

### 8. Select [E6] SELECT.

The IMPORT SAMPLE(SELECT SOURCE) screen appears.

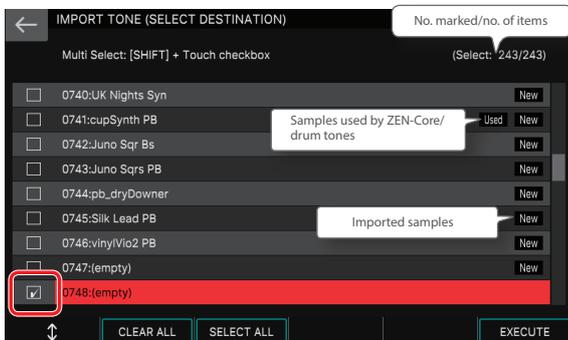


### 9. Touching the check box to the left of a sample selects it for import.

Menu	Explanation
[E1] knob	Scrolls the screen up/down.
[E2] CLEAR ALL	Clears all of the check boxes.
[E3] SELECT ALL	Selects all of the check boxes.
[E4] PREVIEW	Previews the sample selected by the cursor.
[E6] NEXT	Moves to the next operation.
Touching a check box while holding the [SHIFT] button	Selects the check boxes for multiple samples all at once, from the sample at the cursor position to the sample you touch while holding down the [SHIFT] button.

### 10. Select [E6] NEXT.

The IMPORT SAMPLE (SELECT DESTINATION) screen is displayed. This list shows the samples in the FANTOM.



### 11. Touch the check box to the left of a sample to select it as the import destination.

\* You can't select the check box if there is already a sample at that import destination.

### 12. Select [E6] EXECUTE.

A confirmation message appears.  
If you decide to cancel, choose [E6] CANCEL.

### 13. Select [E5] OK.

The sample is imported, and the unit returns to the IMPORT MENU screen.

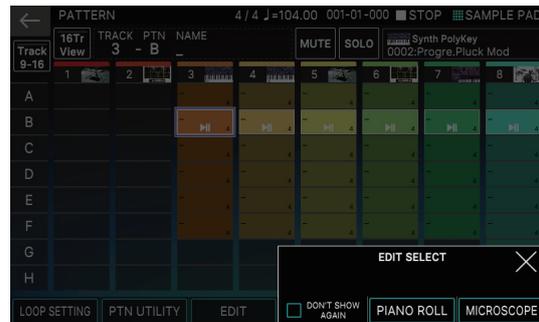
## Pattern Editing Functions Added

### Automation Added to Piano Roll

You can now input performance data such as control changes or pitch bends by tracing your finger on the screen.

#### 1. Select the pattern to edit on the PTN UTILITY screen and press <EDIT>.

The EDIT SELECT window appears.



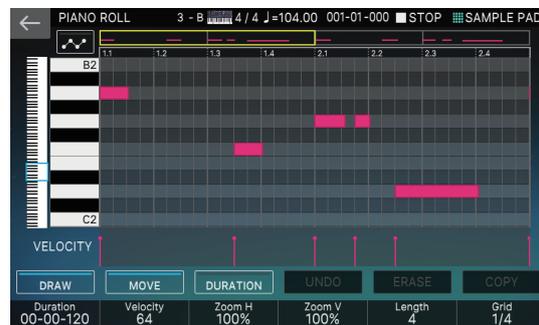
#### MEMO

If you select the "DON'T SHOW AGAIN" check box and then select the edit method, this is reflected as a setting in Sequencer Edit Mode (p. 16).

Sequencer Edit Mode is a system parameter. To save the settings, you must save the system settings.

#### 2. Select <PIANO ROLL>.

The PIANO ROLL screen appears.



#### 3. Touch <Automation> (Automation).

The automation view is displayed.



Menu	Explanation
Tap	Use this to input a single point of performance data. Tap the performance data point to show its position and value.
Drag	Drag a point up or down to change its performance data value. Drag a point left or right to move the performance data.

Menu	Explanation
 (Pencil)	Tap Use this to input a single point of performance data.
	Drag This lets you input performance data by tracing with your finger. Tracing on an area that already contains performance data overwrites that performance data.
 (Ruler)	Tap Use this to input a single point of performance data.
	Drag Trace with your finger to input the beginning (start point) and end (end point) of the performance data. Tracing on an area that already contains performance data erases the performance data within the start and end points.
<TARGET>	Selects the performance data to input.
	MODULATION (CC01)      Modulation
	VOLUME (CC07)          Volume
	PAN (CC10)              Pan
	Expression (CC11)
	GENERAL-1 (CC16)
	GENERAL-2 (CC17)      General 1-4
	GENERAL-3 (CC18)
	GENERAL-4 (CC19)
	HOLD (CC64)            Hold
	RESONANCE (CC71)      Resonance
	CUTOFF (CC74)         Cutoff
	CHANNEL AFTERTOUCH   Channel aftertouch
PITCH BEND             Pitch bend	
<MODE>	POINT      The performance data you input changes in steps when the pattern is played back.
	LINE        The performance data you input changes smoothly when the pattern is played back.
<DRAW>	Turns performance data input on/off.
<ERASE>	Erases the performance data. While the [SHIFT] button is pressed, ERASE changes to ALL ERASE, which erases all events.
<UNDO>/<REDO>	Undoes the edit you just made and returns to the previous state (UNDO). This is also used to redo an undo operation (REDO).
<ZOOM ADJUST>	Adjusts the pattern display by stretching it across the screen. * The entire pattern might not fit depending on the Length and Grid settings.
[INC] button [DEC] button [UP] [DOWN] button [VALUE] dial	Changes the value of the event you selected.
[◀] [▶] buttons	Changes the position of the event you selected.

**MEMO**

If you hold down the [SHIFT] button while changing the event position, you can move the event to a position outside of the grid.

- Use **TARGET** to select the performance data to input.
- Touch **<DRAW>** to turn it on.
- Touch **<  >** (Pencil).

## 7. Input performance data by tracing your finger on the grid.

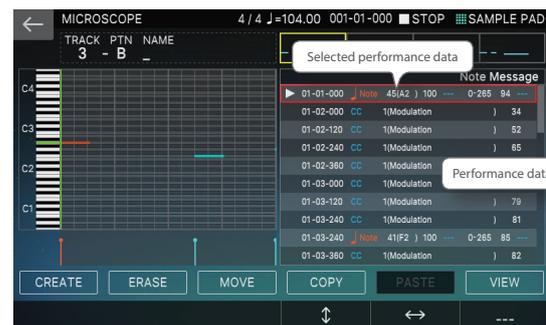
This inputs the performance data.



### Microscope Added

Use the microscope function to edit single points of performance data recorded in a pattern.

- Select the pattern to edit on the PTN UTILITY screen and press **<EDIT>**.  
The EDIT SELECT window appears.
- Select **<MICROSCOPE>**.  
The MICROSCOPE screen appears.



### 3. Select and execute the desired function.

Menu	Explanation
<CREATE>	Inputs the performance data. Select the performance data to input when the dialog box is displayed.
<ERASE>	Erases the performance data.
<MOVE>	Moves the performance data selected by the cursor. Specify the destination in the dialog box that is displayed.
<COPY>	Copies the performance data selected by the cursor.
<PASTE>	Specify the copy destination in the dialog box that is displayed.
<VIEW>	This lets you select the performance data to display.
[E4] knob, [▲] [▼] buttons	Selects the performance data.
[E5] knob, [◀] [▶] buttons	Selects the performance data parameter.
[E6] knob, [INC] [DEC] button [VALUE] dial	Adjusts the value of the selected parameter.
[ENTER] button	Transmits the selected performance data. If this includes a note message, you will hear the corresponding sound.

## Other Sequencer Functions Added

You can now perform the following operations while using the sequencer.

### Selecting tones with the category buttons

Press a tone category button [1]–[16] on the PATTERN screen or other screens to select the tone.

1. Accesses the PATTERN screen.
2. Select the current zone.
3. Press a tone category button [1]–[16].

The tone corresponding to the category of the button you pressed is selected.

#### MEMO

Pressing the same tone category button twice displays the TONE LIST screen. Press the same tone category button again to switch between category tabs within the same category group.

#### NOTE

This function cannot be used on some screens like the TR-REC screen.

## Functions Added to Scene Chain Screen

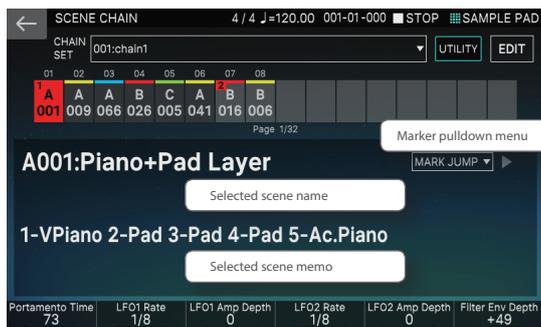
Several functions were added to the SCENE CHAIN screen to make it easier to use.

### Switching Between Screen Content

You can now switch between two screens with different items displayed in SCENE CHAIN.

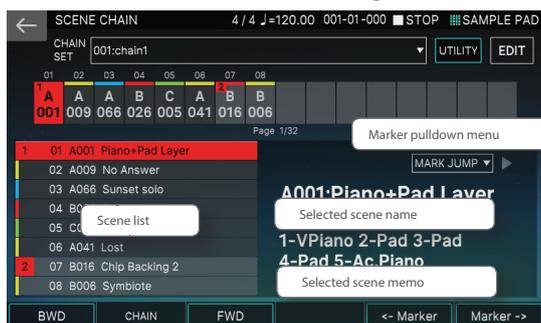
1. Press the [SCENE CHAIN] button.

The SCENE CHAIN screen appears.



2. Press the [SCENE CHAIN] button again.

The content shown on screen changes.

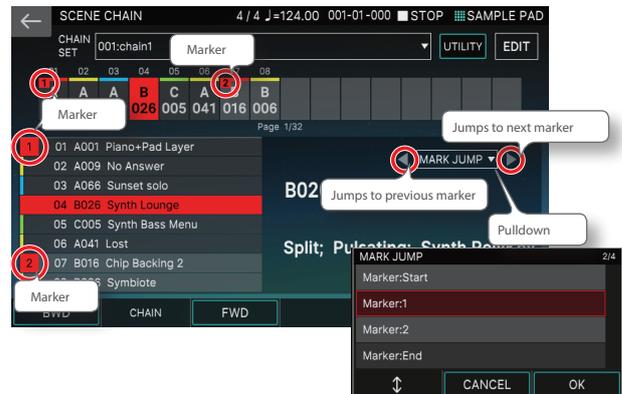


The screen display changes each time you press the [SCENE CHAIN] button.

Menu	Explanation
[◀] button, [DEC] button, [E1] BWD	Returns to the previous chain.
[▶] button, [INC] button, [E3] FWD	Advances to the next chain.
[▲] button, [E5] <-MARKER	Jumps to the previous marker.
[▼] button, [E6] MARKER->	Jumps to the next marker.
[SHIFT] + [▲] button	Selects the previous chain set.
[SHIFT] + [▼] button	Selects the next chain set.

## Scene Chain Marker Added

You can set markers at specific points in the scene chain and jump to the desired markers using the pulldown menu or the buttons.



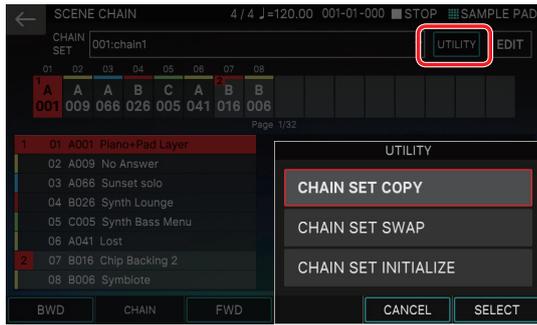
## Functions Added to SCENE CHAIN EDIT Screen

Markers can now be set, and SWAP has been added to the chain set edit function.

Menu	Explanation
[E1] knob	Sets a marker at the highlighted scene. You can use 62 markers from 0–9, A–Z and a–z.
<Swap>	Swaps the positions of two scenes.
INDIVIDUAL	Selects and swaps the two scenes.
MARKER SELECTION	Selects a given marker and all the scenes leading up to the next marker, and swaps them together.
[SHIFT] + [▲] button	Selects the previous chain set.
[SHIFT] + [▼] button	Selects the next chain set.
<<,>, [▲] button	Jumps to the previous marker.
>>,>, [▼] button	Jumps to the next marker.

## UTILITY function added to SCENE CHAIN Screen

A UTILITY function has been added for chain sets.



Menu	Explanation
CHAIN SET COPY	Copies the chain set.
CHAIN SET SWAP	Swaps chain sets.
CHAIN SET INITIALIZE	Initializes the chain set.

## TFX Added

A TFX (total effect) has been added to the system effects (MASTER FX).

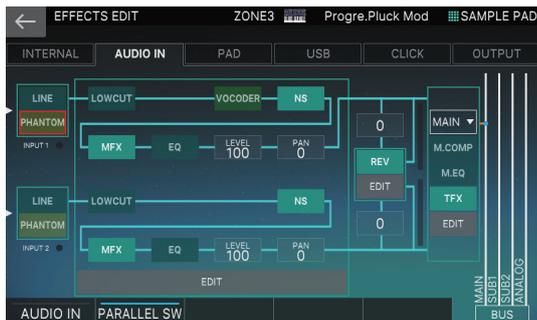
The TFX is located after the mastering compressor and mastering EQ in the effects chain. This is a multi-effect that can be applied to the overall sound of this unit.



- The effect types you can select on the TFX are the same as with the usual MFX, and you can apply effects just as with the MFX.
- The TFX is a system effect. To save the settings, you must save the system settings.

## INPUT MFX Added

INPUT MFX1/2 have been added to the system effects. You can sample sounds inputted through the AUDIO INPUT jack with the MFX applied, or apply the MFX to instrument tones you are playing that do not use effects.



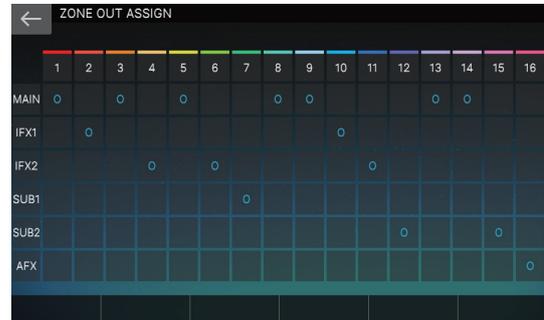
- You can use INPUT MFX2 when the PARALLEL SW is on.

## ZONE OUT ASSIGN Screen Added

A ZONE OUT ASSIGN screen has been added. This lets you check all of the output destinations at once for each zone.

1. Hold down the [SHIFT] button and press the EFFECTS[PARAM] button.

The ZONE OUT ASSIGN screen appears.



2. Touch the screen to change the outputs for each zone.

### MEMO

Touch the output destinations on the left side of the screen to switch the settings for all zones at once. This is useful when you want to apply the IFX or AFX to all zones.

## Changes to [MASTER FX] Button

The unit now works differently when you press the [MASTER FX] button.

### Previous

Control	Explanation
Press the [MASTER FX] button	Accesses the routing screen
Press the [SHIFT] + [MASTER FX] button	Accesses the Master EQ screen

### New

Control	Explanation
Press the [MASTER FX] button	Accesses the TFX ZOOM EDIT screen
Press the [SHIFT] + [MASTER FX] button	Accesses the routing screen

## Output Destination Added to Pads

INPUT1/2 has been added as a pad output destination (Sample Output Assign). You can use this to apply the Input FX to a pad's output, or as a carrier signal for the vocoder.

## OUTPUT ROUTING Destinations Added

MAIN+SUB1, MAIN+SUB2, SUB1+SUB2, and ALL have been added to the available choices when specifying the output destinations of Master Output Assign, SUB1 Output Assign, and SUB2 Output Assign in the OUTPUT tab of EFFECTS EDIT.

Parameter	Value	Explanation
Master Output Assign	MAIN, SUB1, SUB2, MAIN+SUB1, MAIN+SUB2, SUB1+SUB2, ALL	Determines the output destination for signals from the MAIN Bus.
SUB1 Output Assign	SUB1, SUB2, MAIN+SUB1, MAIN+SUB2, SUB1+SUB2, ALL	Determines the output destination for signals from the SUB1 Bus.
SUB2 Output Assign	SUB1+SUB2, ALL	Determines the output destination for signals from the SUB2 Bus.

## Zone Int/Ext Control Functions Expanded

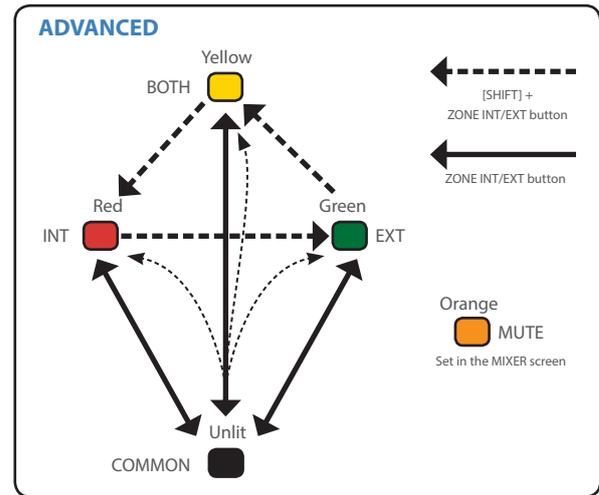
The Zone Int/Ext Control parameter has been added to the system parameters.

### System Parameters

#### Settings for this unit (GENERAL)

Parameter	Value	Explanation
Zone Int/Ext Control	BASIC	Each ZONE INT/EXT button works as before.
	ADVANCED	The following states are now available for each ZONE INT/EXT button when you push them: unlit, red (INT), green (EXT), orange (MUTE), yellow (BOTH). For the yellow (BOTH) state, both the internal sound engine and the external sound module play.

Button status	When the applicable zone is the current zone	When the applicable zone is <b>not</b> the current zone
Unlit (COMMON)	BASIC The internal sound engine and the external sound module both produce sound when you play the keyboard.	Neither the internal sound engine nor the external sound module produce sound when you play the keyboard. You can use the internal sequencer or MIDI data from an external device to play the internal sound engine.
	ADVANCED The internal sound engine and external sound module play only when the ZONE INT/EXT buttons for all zones are off (unlit) and you play the keyboard.	
Lit red (INT)	BASIC The internal sound engine produces sound when you play the keyboard.	Only if the ZONE INT/EXT button of another current zone is on (lit red or green), the internal sound engine produces sound when you play the keyboard.
	ADVANCED The internal sound engine produces sound when you play the keyboard.	
Lit green (EXT)	BASIC The external sound module produces sound when you play the keyboard.	Only if the ZONE INT/EXT button of another current zone is on (lit red or green), the external sound module produces sound when you play the keyboard.
	ADVANCED The external sound module produces sound when you play the keyboard.	
Lit yellow (BOTH) <small>ADVANCED only</small>	ADVANCED The internal sound engine and the external sound module both produce sound when you play the keyboard.	
Lit orange (MUTE)	The sound engine is muted. The internal sound engine does not produce sound.	



#### MEMO

When using the ADVANCED setting, the output destination of the internal sequencer follows the ZONE INT/EXT settings, even when the ZONE INT/EXT button is unlit.

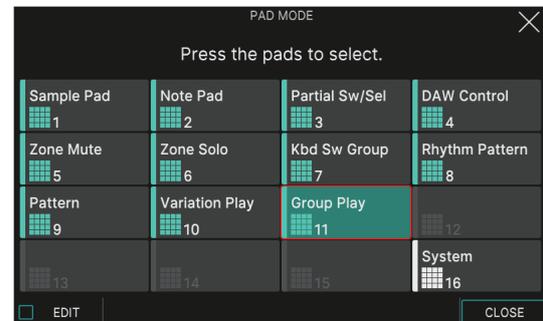
## Functions Added to PAD MODE

A "Group Play" function has been added to PAD MODE.

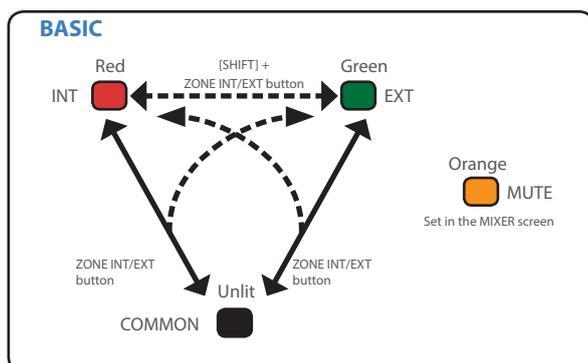
Pad	Function	Explanation
[11]	Group Play	Plays back the sequencer group.

### Playing Groups (Group Play)

Press a pad to directly play back the sequencer group.



- You can press the pad corresponding to a group you've already created to make it play back or stop.
- The group plays back using the "Group Length" cycle you set when the group was created.
- The colors shown to the left of the names in the Group List correspond to the colors used on the pads.
- You cannot use Group Play during normal pattern playback. Stop the pattern first and then press the pad.



## Changes to the Edit Screens

### Zoom Edit Added to Drum Kit

A Zoom Edit function was added to the edit screen of the drum kit. Touch the icon above the tab list to switch to the Pro Edit screen.

Use the Zoom Edit screen in the same way as Zoom Edit for tones.

### Zoom Edit Added to Effect Screen

Zoom Edit was added to the edit screen of the MFX, AUDIO IN MFX1/2, IFX1/2, and TFX. Touch the icon above the tab list to switch to the Pro Edit screen.

Use the Zoom Edit screen in the same way as Zoom Edit for tones.



## Changes for Selecting Partial

The unit now works differently when you select a partial. TONE EDIT screen

Control	Explanation
Press the Partial 1-4 tab	Selects the partial you press.
Press the [SHIFT] + Partial 1-4 tab	Selects multiple partials that you press.

When PAD MODE is set to "Partial Sw/Sel"

Control	Explanation
Press the pad [5]-[8]	Selects the partial you press.
Press pads [5]-[8] together	Selects the partials you press together.
Press the [SHIFT] + pad [5]-[8]	Selects multiple partials that you press.

## Other Functions Added

### APPLY KBD SAMPLE added to Factory Reset

Select the APPLY KBD SAMPLE check box when doing a factory reset to restore all sample data assigned to the keyboard to their default state.

### INCLUDE KBD SAMPLE added to Backup

Select the INCLUDE KBD SAMPLE check box when doing a backup to back up all sample data assigned to the keyboard.

### APPLY KBD SAMPLE added to Restore

Select the APPLY KBD SAMPLE check box when restoring to restore all sample data assigned to the keyboard to their default state.

## Wallpaper Function Added

A wallpaper function has been added. You can change the background image of screens like SCENE SELECT or the edit screens.



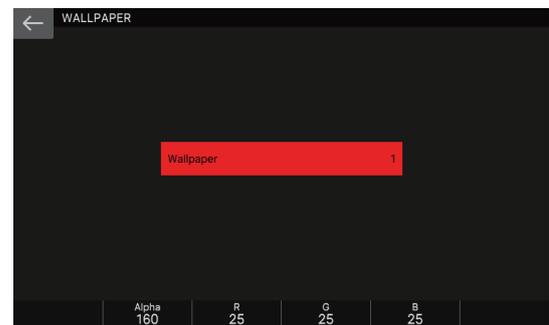
### 1. Press the [MENU] button.

The [MENU] screen appears.

### 2. Touch <UTILITY>.

### 3. Touch <WALLPAPER>.

The settings screen appears.



Menu	Explanation
[E2] Alpha	Adjusts the brightness of the wallpaper.
[E3] R	Adjusts the red hues of the wallpaper.
[E4] G	Adjusts the green hues of the wallpaper.
[E5] B	Adjusts the blue hues of the wallpaper.

### 4. Select a wallpaper.

### 5. Press the [EXIT] button to exit the screen.

The wallpaper settings are saved automatically.

## Parameters Added

### System Parameter

#### S1/S2/S3 settings (S1/S2/S3)

Parameter	Value	Explanation
S1-3 Switch Assign	START/STOP	Plays back the sequencer.
	GROUP PLAY DOWN	Selects the previous group in the group list.
	GROUP PLAY UP	Selects the next group in the group list.
	SONG LOOP SW	Turns the song loop on/off.
	TFX SW	Turn the TFX on/off.
	MASTER KEY DOWN	Adjusts the Master Key Shift value by -1.
	MASTER KEY UP	Adjusts the Master Key Shift value by +1.
	SCALE TUNE SW	Turns the SCALE TUNE on/off.
ANALOG DRV	Turns the Drive Switch of the Analog Filter on/off.	

#### Sound settings (SOUND)

Parameter	Value	Explanation
Audio File Preview Level	0-127	Sets the volume used for previewing audio files.

#### Sequencer settings (SEQUENCER)

Parameter	Value	Explanation
Sequencer Edit Mode		Sets what happens when editing with the sequencer.
	SELECT	A window appears that lets you select either piano roll or microscope view.
	PIANO ROLL	Accesses the piano roll screen.
	MICROSCOPE	Accesses the microscope screen.

### Scene Parameter

#### S1/S2/S3 settings (S1/S2/S3)

Parameter	Value	Explanation
S1-3 Switch Assign	Same as system parameters	

### Zone Parameter

#### PITCH

Parameter	Value	Explanation
Zone Transpose	-48-+48	Shifts the note numbers transmitted from the keyboard to the internal sound engine or external device.

## Changes to Parameter Settings

### System Parameter

#### KEYBOARD

Parameter	Value	Explanation
Aftertouch Sens	Before change: 0-100 After change: 0-127	Sets the aftertouch sensitivity. The larger the value, the more sensitive that the aftertouch is. This should normally be set to 100.

### ZEN-Core Tone Parameter

#### OSC

Parameter	Value	Explanation
Wave Group		Sets the wave group that plays when OSC Type is "PCM."
	INT	Uses the built-in waves.
	EXP	Uses the expansion waves.
	SAMP	Uses the samples as waves.
	MSAMP	Uses the multisamples as waves.

### Drum Kit Tone Parameter

#### INST COMMON

Parameter	Value	Explanation
Wave Tempo Sync	OFF, ON	Matches the wave playback to the tempo. This only works with waves for which the BPM is indicated. When this function is enabled, parameters related to pitch and FXM are disabled.

## Changes to Categories Where Settings Are Displayed

The following parameters on the DRUM TONE EDIT screen were moved from the INST AMP category to the INST WAVE category.

- Random Pan Depth
- Alternate Pan Depth