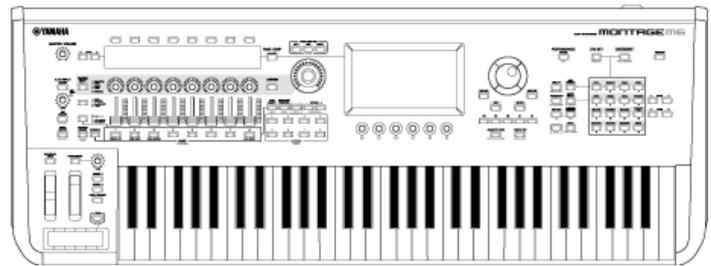# YAMAHA

MUSIC SYNTHESIZER

MONTAGE M6
MONTAGE M7
MONTAGE M8x

Operation Manual

EN

1

About this manual

Information

- The illustrations and LCD screens as shown in this Operation Manual are for instructional purposes only.

- Unless indicated otherwise, the illustrations and displays as shown in this Operation Manual are based on the MONTAGE M6 (in English).

- Lightning is the trademark of Apple Inc., registered in the U.S. and other countries.

- The company names and product names in this manual are the trademarks or registered trademarks of their respective companies.

Indications in this document

- **Model name**
  In this document, MONTAGE M6, MONTAGE M7, and MONTAGE M8x are collectively called "MONTAGE M."

- **Others**

Indication	Description
NOTICE	Indicates that malfunction, failure, or data loss may occur.
NOTE	Indicates supplemental information.

Using the MONTAGE M Operation Manual ☆

The information on how to use the Operation Manual (HTML) is shown below. For more information on how to use the PDF version, refer to the manual for your viewer software.

- **Searching**
  Enter the keyword in the search box on the upper right corner to search within the Operation Manual.

  | Search within this site | 🔍 |

- **Bookmarking**
  To add to the Bookmarks, click the star icon on the right of the heading title.
  To remove a bookmark, click the " ⊗ " on the right of the heading title.

- **Printing out**
- **Saving the page as a PDF file**
  Click or tap the icon at the bottom of the page and select the printer.

  🖨 **Print this page**

Firmware versions

v1.11 to v1.20

New features;

- Now supports *Expanded Softsynth Plugin for MONTAGE M.*

- You can now see the parameter values when operating the knobs while a graph is displayed on the Sub display.

- You can now make partial changes to the font size on the *Live Set* screen and the *Category Search* screen.

- Improvements have been made to the user interface.

v1.10 to v1.11

Fixed problems;

- Fixed a problem in which *Keyboard AT Mode* also affects MONTAGE M6/7.

- Fixed other minor problems.

v1.00 to v1.10

New features;

- New Performances have been added.

- Improvements have been made to the user interface.

Fixed problems;

- Fixed other minor problems.

Using the MONTAGE M

This chapter explains the basic structure of MONTAGE M and how to use it.

Contents

Basic structure

Setting up for Live Performance

Recording and playing back

Managing backup files of your Performances

Using microphones and audio devices

Connecting external MIDI instruments

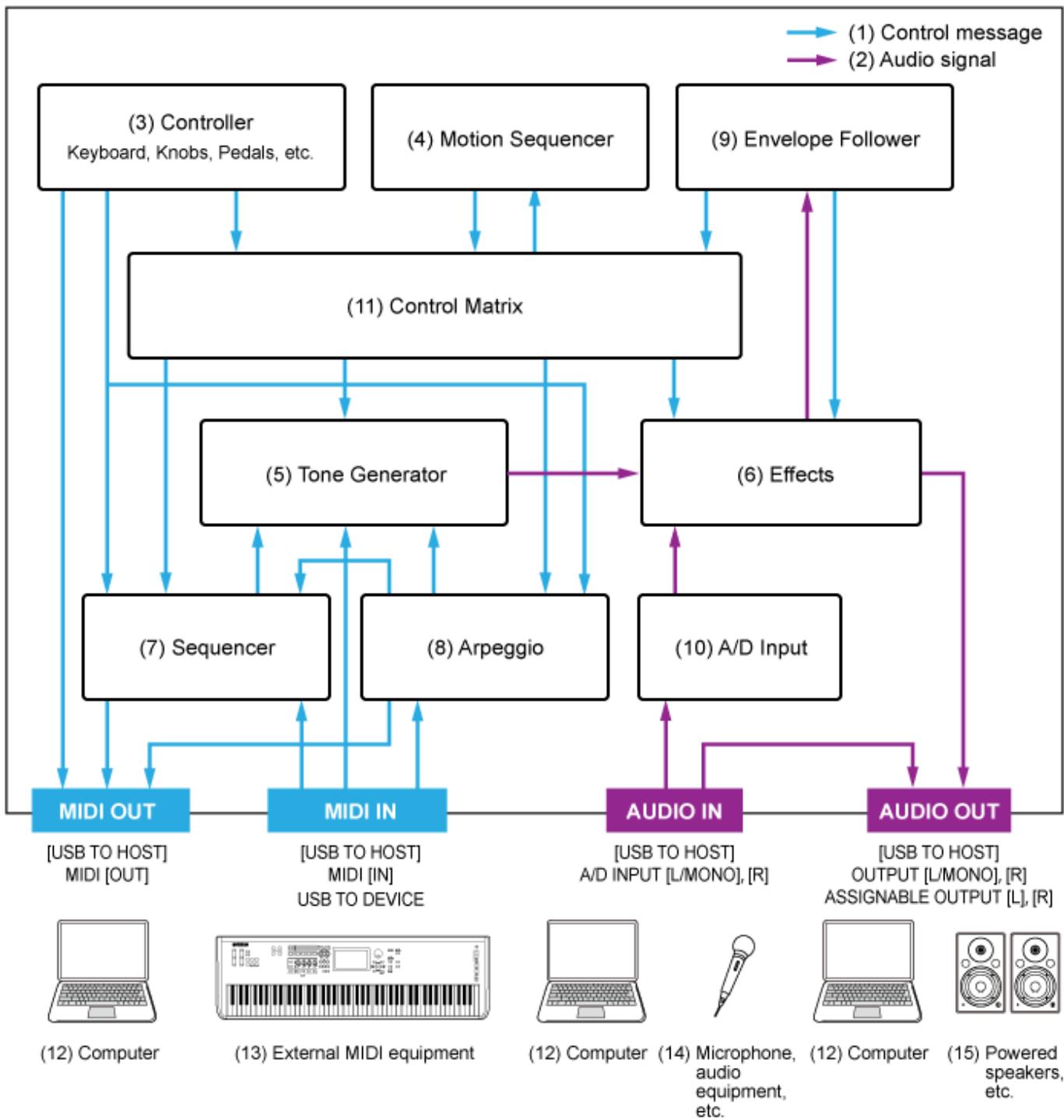# Basic structure

Contents

Block diagram and data flow

This instrument consists of eight main functional blocks: *Controller*, *Motion Sequencer*, *Tone Generator*, *Effects*, *Sequencer*, *Arpeggio*, *Envelope Follower*, and *A/D Input*.

(Click or tap the text in the functional block to jump to the corresponding page.)

(1)　Control message

(2)   Audio signal

(3)   Controller

(4)   Motion Sequencer

(5)   Tone Generator

(6)   Effects

(7)   Sequencer

(8)   Arpeggio

(9)   Envelope Follower

(10)   A/D Input

(11)   Control Matrix

(12)   Computer

(13)   External MIDI equipment

(14)   Microphone, audio equipment, etc.

(15)   Powered speakers, etc.
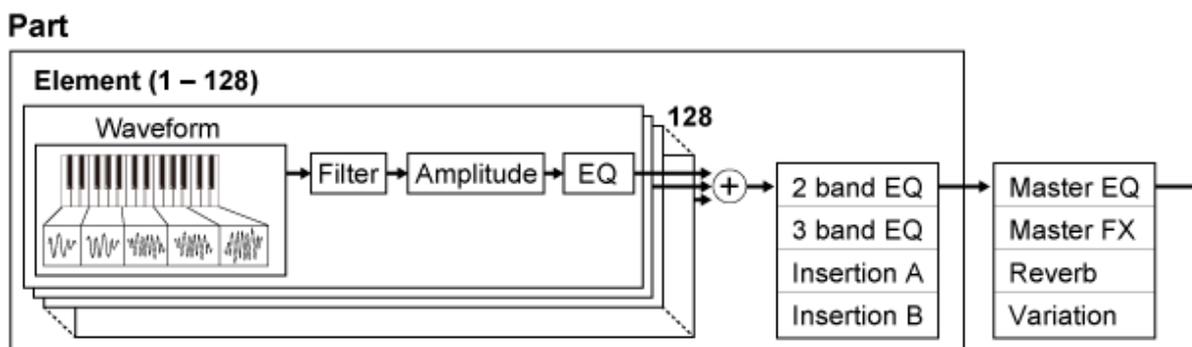
Tone generator block

The tone generator block is equipped with a hybrid sound engine combining three synthesis systems.
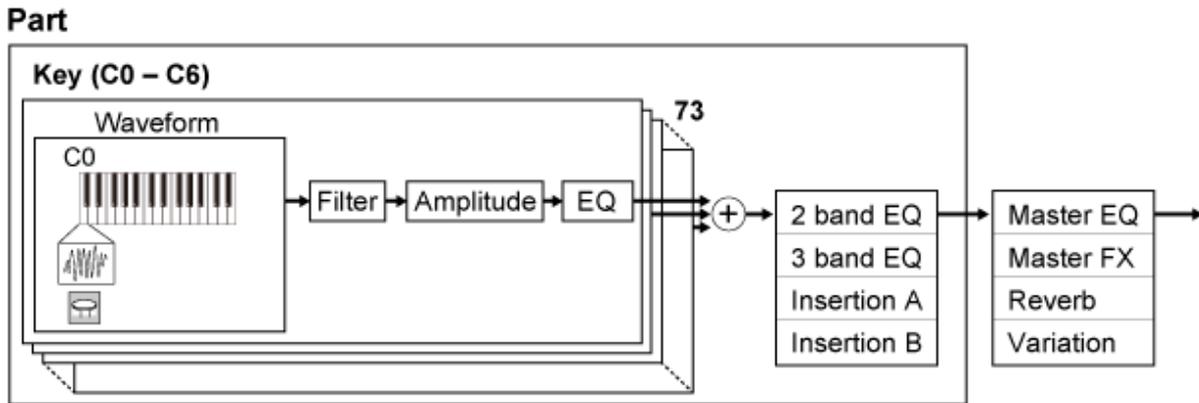
AWM2 sound engine

The AWM2 sound engine features waveforms containing sampled wave data you can assign to each element, and then modify the sound by using Filters and EGs (envelope generators). Each Normal Part uses up to 128 elements to generate a wide range of rich sounds that help you create expressive sounds. Since the "raw" waveforms sampled from the actual acoustic instruments have been processed to enable each note to be used for various music, this sound engine produces the realistic sound of musical instruments such as piano and wind instruments, for example. You can use this sound engine not just for reproducing realistic instrument sounds but also for creating completely new sounds by using filters and the EG. For the Drum Part, you can use up to 73 drum keys to assign the waveforms of percussion sounds to each key on the keyboard to create a desired drum kit.
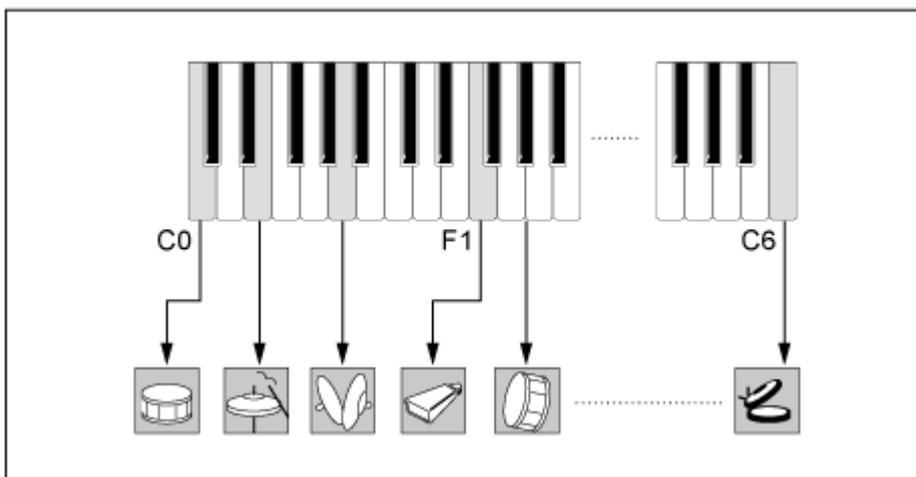
Normal Part

Drum Part

Part

Key (C0 – C6)

Waveform

C0

Filter → Amplitude → EQ → (+) →

73

2 band EQ	Master EQ
3 band EQ	Master FX
Insertion A	Reverb
Insertion B	Variation

The Drum Part has a maximum of 73 drum keys you can use for creating desired drum kits by assigning the waveforms of percussion sounds to each key on the keyboard.

Individual drum sounds (different for each key) (C0 to C6)

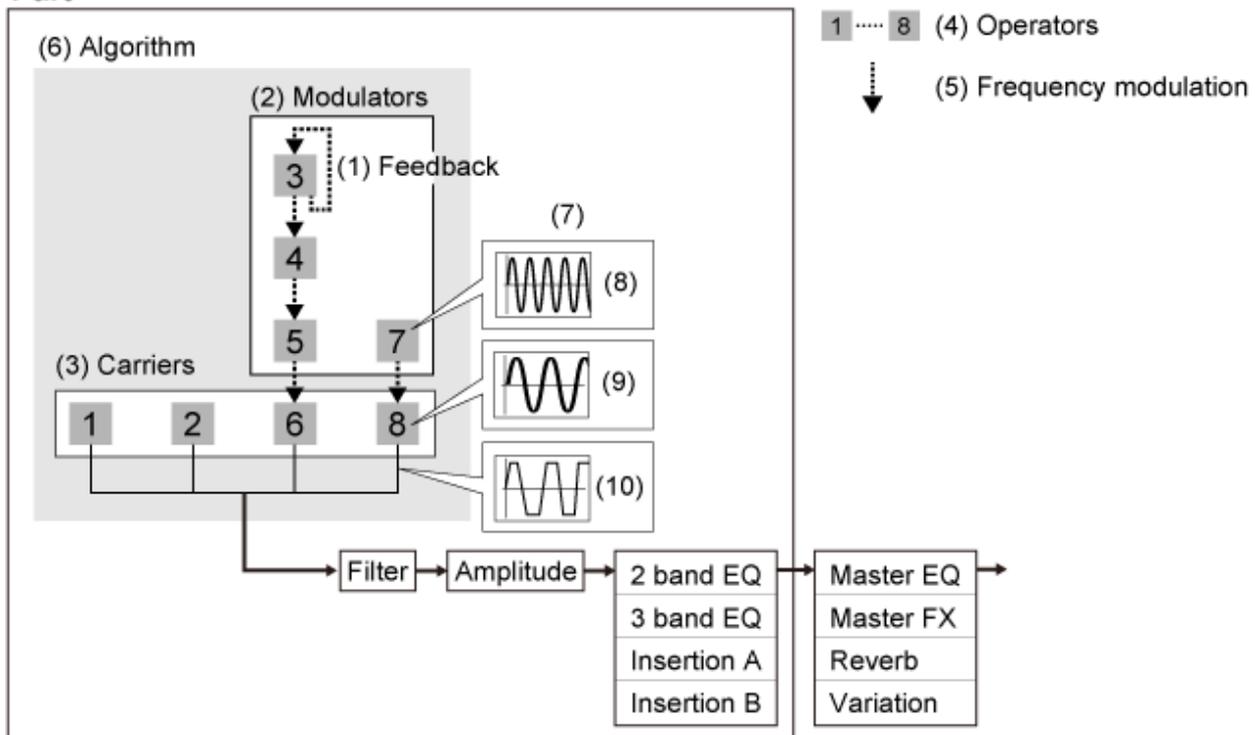C0   F1   C6

FM-X sound engine

The FM-X sound engine uses eight oscillators (Operators) to modulate the frequency of the waves generated by each Operator to create rich harmonic overtones.

The Operators are grouped into two roles: Carrier and Modulator. The Modulators modulate the next Operator while the Carriers generate the resulting sounds. The function in which the Operator modulates itself is called "feedback." The FM-X sound engine features pre-programmed Algorithms that have 88 different patterns for connecting the Operators. With this sound engine, you can use the parameters to control the harmonic overtones of the Operator waves and apply the same high-quality filters, effects, and EQ available in the AWM2 sound engine to create more complex sounds than possible with conventional FM sound engines.

(1)   Feedback

(2)   Modulator

(3)   Carrier

(4)   Operator

(5)   Frequency Modulation

(6)   Algorithm

(7)   Example of FM (Frequency Modulation)

(8)   Modulator wave

(9)   Carrier wave

(10)   Modulated wave
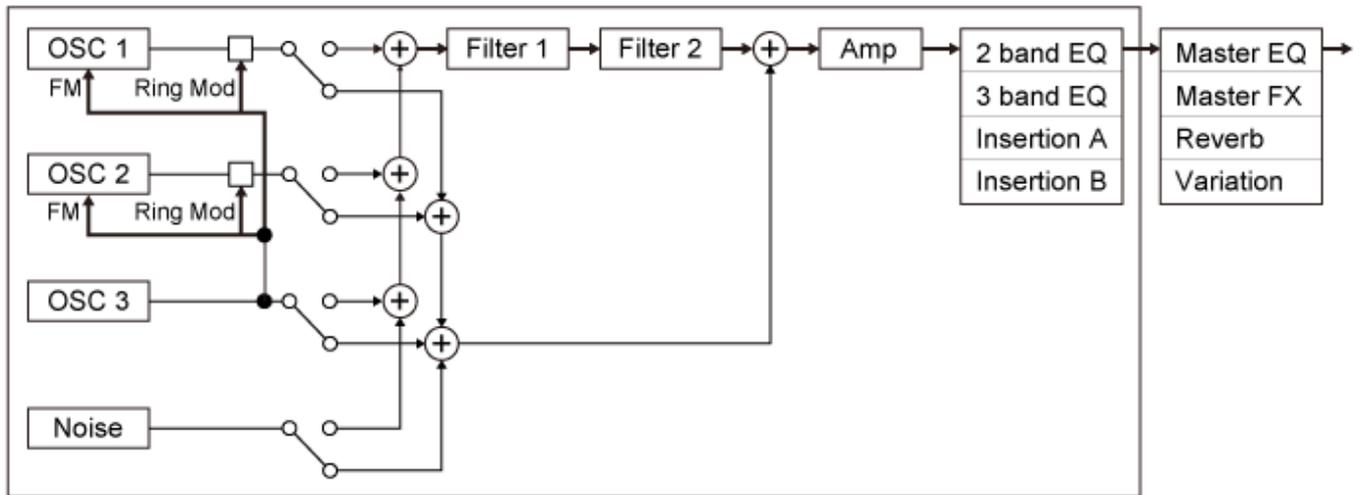
■ AN-X sound engine ★

The AN-X is a virtual analog sound engine that digitally reproduces the behavior of analog synthesizers in great detail.

With their traditional and innovative features, the oscillators of this next-generation AN sound engine provide more flexibility in modulation and wave-shaping functions so that you can create a wide variety of sounds—from "real" vintage to edgy and extreme.

● Features three Oscillators and one Noise generator.

● OSC3 modulates OSC1 and OSC2 (either with frequency modulation or ring modulation)

● Each OSC controls the shape of the waves by using *Pulse Width*, *OSC Self Sync*, or *Wave Shaper*.

● You can set each OSC to output before or after *Filter 1* and *Filter 2*.

Part
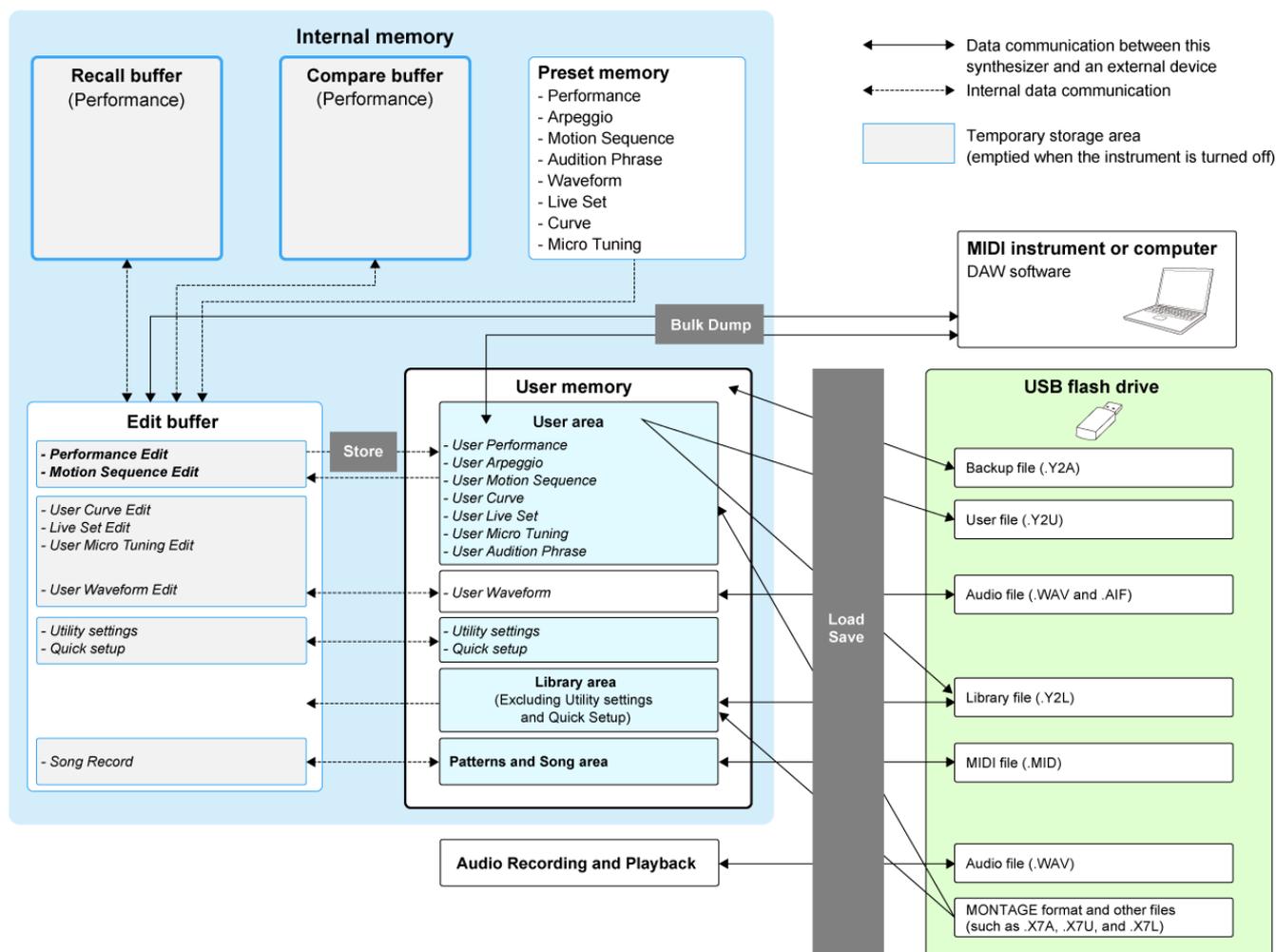
Internal memory ☆

The internal memory of this instrument holds the saved Performances, Live Sets, Songs, and other settings.
This chart shows the data flow between the internal memory and the external device.

(Click or tap to enlarge the image.)

Preset memory ★

Contains the Preset Performances, Preset Arpeggios, Preset Audition Phrases, and other settings.
You cannot overwrite the data in the Preset memory since it is read-only.

Edit buffer ★

The Edit buffer is the work area for editing Performances, Live Sets, Songs, and other settings. This work area allows both reading and writing, and the contents within this work area are erased when the instrument is turned off.
The edited Performances and Motion Sequences should be saved to the User Memory before selecting a different Performance or turning off the instrument.
(Other settings are saved automatically.)

User memory ★

The User memory has two areas: User and Library.

The User area holds the stored Performances and Motion Sequences, and other settings for the entire instrument, such as Utility settings and other User data edited in the Edit buffer.
When a User Performance is edited, you can store it as a new Performance or overwrite the existing Performance.

The Library area allows up to 16 library files (.Y2L) to be loaded from the USB flash drive. The settings saved in the Library area cannot be edited. To edit the settings in the Library area, send the data to the Edit buffer by selecting a Performance stored in the Library area or loading a Motion Sequence from the Library area. After editing, the data will be saved to the User area.

The User memory is used for reading and writing, and the data within this area will be retained after the instrument is turned off.

Recall buffer and Compare buffer ★

The Recall buffer and Compare buffer are areas used for temporarily saving the settings you are editing.

The Recall buffer is used as a backup for the Edit buffer.
If you accidentally changed to a different Performance without first storing the setting, you can use the Recall function to restore the temporarily saved settings from the Recall buffer to the Edit buffer.

The Compare buffer is the area for keeping settings before making edits. By using the Compare function, you can bring the settings temporarily saved in the Compare buffer to compare the edited and unedited sounds.

These buffers are for reading and writing data, but the settings will be lost when the instrument is turned off.

Setting up for Live Performance ☆

Shown below is a general workflow guide for the MONTAGE M.

1 Selecting a Performance

Select from the *Live set* screen or from the *Category Search* screen.

2 Editing the settings

3 Saving edited settings

4 Creating a Live Set

5 Selecting a Live Set

6 Playing the keyboard

Selecting a Performance from the *Live Set* screen

1 **Press the [LIVE SET] button.**

The *Live Set* screen appears.

2 **If necessary, press the [BANK] button and the [PAGE] button to select a different screen. Find a Performance you would like to use, and tap the Performance name on the screen to select it.**

Selecting a Performance from the *Category Search* screen ☆

The *Category Search* function allows you to search through Performances, Parts, Rhythm Patterns, Arpeggios, and Waveforms to find ones you would like to use.
To search for a desired Performance, open the *Performance* screen, and press the [CATEGORY] button to open the *Performance Category Search* screen.
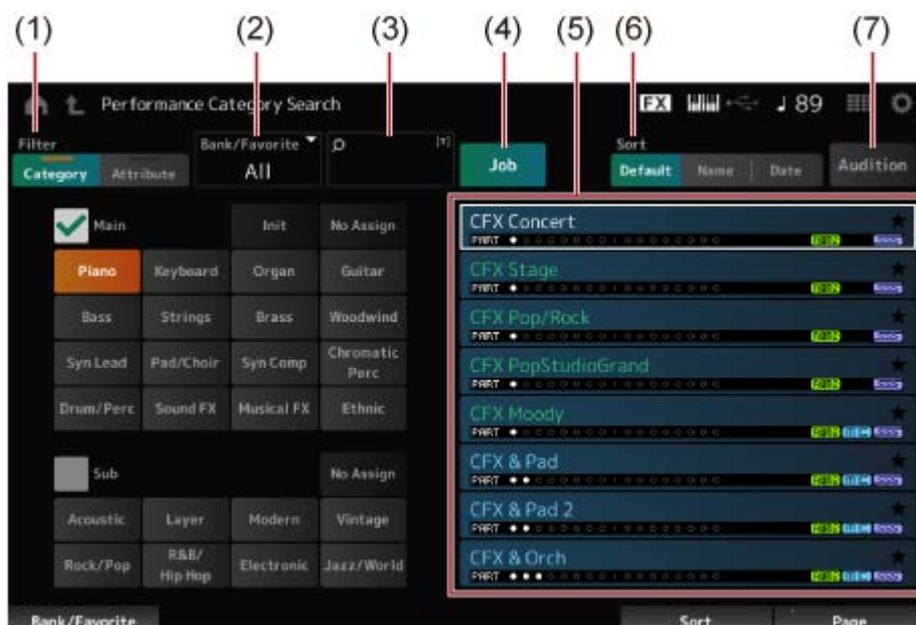
NOTE

You can also select a Performance by placing the cursor on the *Performance Name* on the *Home* screen and using the data dial, [INC/YES] button, and [DEC/NO] button.

1 **Press the [CATEGORY] button.**

The *Performance Category* screen appears.
You can also open the *Performance Category Search* screen by selecting *Category Search* from the context menu for the *Performance Name*.

(1)   *Filter*

You can use the filter to search through the list of Performances.

NOTE
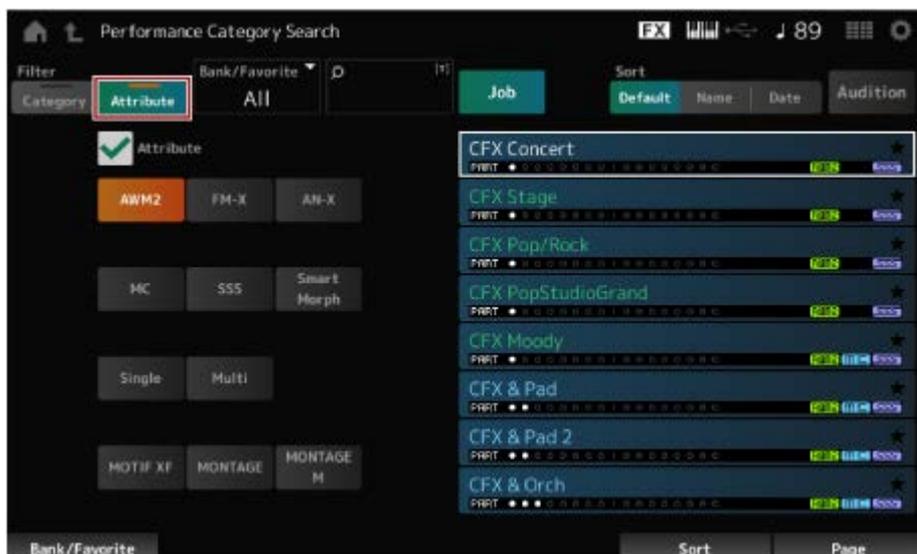
- You can use the OR condition for categories by pressing the appropriate Category name selection buttons.
  You can also set the OR condition by tapping the category name while holding the [SHIFT] button.
- You can select a Sub category also by simultaneously holding down the [SHIFT] button and pressing one of the Slot number and Category name selection buttons.

- *Category*

Select one from *Main* and *Sub*.

- *Attribute*

Select an attribute or combinations of attributes. Depending on the combination, the filter uses the conditions AND or OR.

Filter:

Exact match	· AWM2, FM-X, and AN-X
AND condition	· MC, SSS, and *Smart Morph*
OR condition	· *Single*, and *Multi* · MOTIF XF, MONTAGE, and MONTAGE M

(2) Bank

(3) Search by keyword

(4) Job

(5) The list of the Performances that correspond to the selected *Category* and *Attribute*

The current Performance is shown in white; the Single-Part Performances are shown in green; and the Multi-Part Performances are shown in blue.

(6) Changing the sort order

(7) Audition

2 Change the filter, bank, and sort order, as needed.

3 Select one from the list shown on the right.

Move the cursor by using the Data dial, up and down buttons, [INC] button, or [DEC] button.
By using the PAGE buttons or the Display knobs on the top panel, you can scroll down without changing the Performance.

NOTE

Simultaneously hold down the [SHIFT] button and use the slot number buttons 9 to 16 to select a specific Performance.

4 To close the *Performance Category Search* screen, press the [ENTER] button or [EXIT] button or [PERFORMANCE] button on the top panel, or tap the 🏠 (Home) icon or the ↰ (Exit) icon on the screen.

NOTE

You can use the *Part Category Search* function if you wish to change one of the Parts in a Multi-Part Performance (a Performance that has more than one Part).
To open the *Part Category Search* screen, select a Part you wish to change, and then press one of the [CATEGORY] buttons while holding down the [SHIFT] button.

Selecting an Initialized Performance or a Single-Part Performance using a ★ filter

- Select an Initialized Performance from the list shown by setting *Bank/Favorite* to *All* or *Preset* and the *Category* filter to *Init*.
- Select a single-part Performance from the list shown by setting the *Attribute* filter to *Single*.

Listening to the Audition phrases ★

By using the Audition Phrase, you can listen to the sound of the Performance and hear how the sound will change by operating the controllers, before the selection is finalized.

1 **Press the [AUDITION] button on the top panel or tap the *Audition* button on the *Category Search* screen.**

The Audition phrase of the current Performance will be played back.
If you select a new Performance in the middle of the audition phrase playback, the audition phrase of the new Performance will be played back.

If the [AUDITION] button is turned off, the audition function is not available for the selected Performance, and nothing happens when you press it.

2 **To stop the playback of the audition phrase, press the [AUDITION] button on the top panel once more, or tap the *Audition* button on the screen.**

Using overall functions for the entire Performance

There are other functions for adjusting the balance between Parts within the Performance or for quickly switching to different groups of settings that have been registered to the buttons in advance.

Contents

Adjusting the balance between Parts (Mixing)
    Procedure for mixing
Using Scenes
    Procedure for registering a Scene
        Registering Scenes from the *Scene* screen
        Registering the Scenes from other screens

Adjusting the balance between Parts (Mixing)

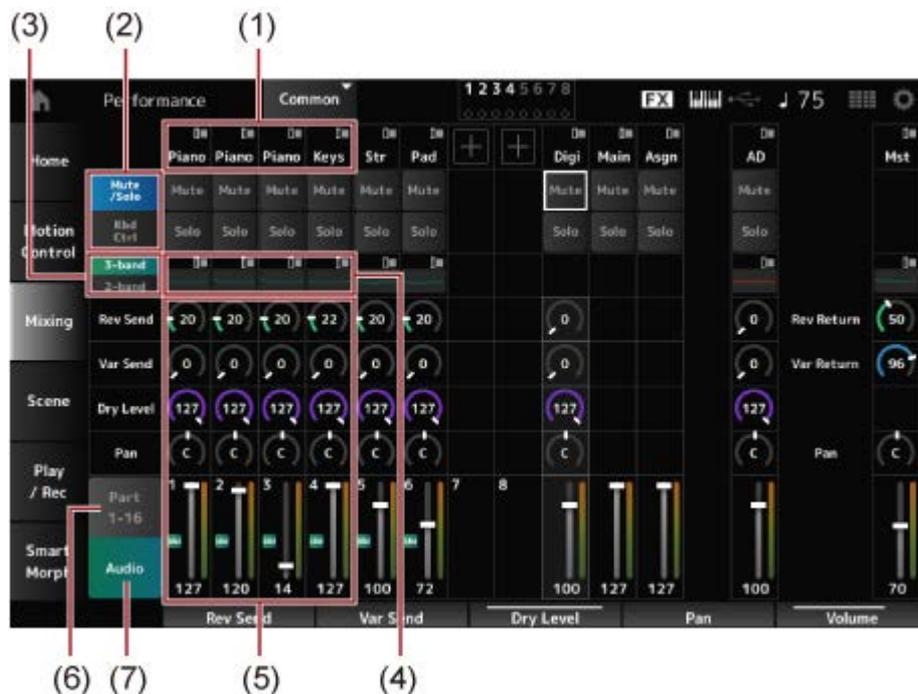The Mixing function allows you to adjust the balance between Parts.
The Pan, Volume, and other settings for all Parts are shown on one screen for ease in adjusting the *Mixing* parameters for the Performance.

Procedure for mixing

1 **Tap to open the screen from the [PERFORMANCE] → *Mixing*.**

The *Mixing* screen appears.

(1)   Main category for each Part

(2)   Switching views for *Solo*, *Mute*, and *Keyboard Control*

(3)   Switching between *3-band* EQ and *2-band* EQ views

(4)   EQ for each Part

(5)   Parameters for each Part

(6)   Switching to 16-part view

(7)   Audio part view (16-part view not shown)

   With the Audio part, you can set the parameters for the audio input from the A/D INPUT jacks
   and the [USB TO HOST] terminal (Digital* Part).

   * Refers to the audio set to Digital L/R in audio channels.

2   Select a parameter by using the PART buttons or cursor buttons on the top panel, or tap the icons and buttons on the screen.

3   Change the value by using the Data dial or relevant Display knob.

If you need to fine-adjust the value, press the [EDIT/ ⟳] button while the *Mixing* screen is shown on the display to open the *Edit* screen.

Using Scenes ★

The Scene is a "snapshot" of various settings, such as Arpeggio type, Motion sequence type, and Part parameters. By registering different Scenes to each of the eight SCENE buttons, you can use the SCENE buttons to recall different settings instantly.
This would be convenient, for example, when you wish to change only the Arpeggio and Motion

Sequence types, without changing the Performance, to follow the progression of a song, or to bring out a different aspect of a Performance.

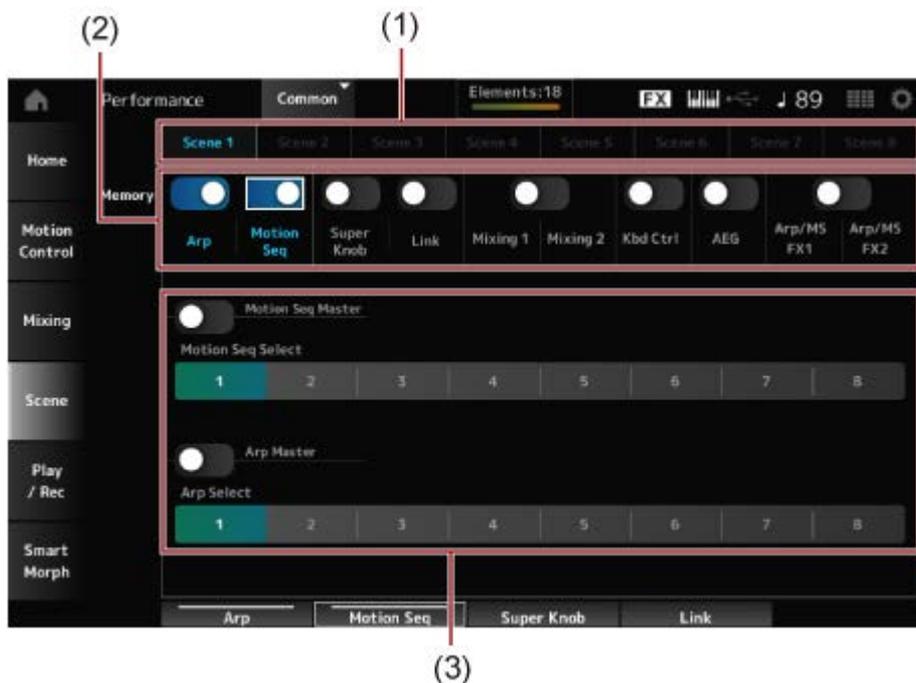## Procedure for registering a Scene

Registering Scenes from the *Scene* screen

1 **Open the screen from the [PERFORMANCE] → *Scene*.**

   The *Scene* screen appears.

(1) *Scene* tab

(2) Memorize switch

(3) Settings for the tab

   When the Memorize switch is On, the parameters for the function appear on the screen.

2 **Setup Scenes 1 to 8.**

   The functions to which *Memory* (Memorize Switch) has been set to On will be registered to the selected SCENE button.
   The newly set Scene now becomes active when you press the appropriate SCENE button.

3 **Press the [STORE] button to save the Scene settings to the Performance.**

NOTICE

Make sure to save (store) the Scene settings you have just edited before changing to a different Performance or turning off the instrument. Without performing the *Store* operation, the Scene settings will be lost.

Registering the Scenes from other screens ★

If a parameter that can be registered to a Scene is already assigned to a knob or a control slider, move the knob or the control slider. Then, simultaneously hold down the [SHIFT] button and press the SCENE button. After that, press the [STORE] button to save the Scene settings to the Performance.

Editing the settings ☆

Contents

Using Split and Layer

Split allows you to divide the keyboard into sections to play each section with a different sound, while Layer allows you to combine multiple sounds on top of each other on a Split section or across the entire keyboard.

To set up splits and layers on the MONTAGE M, use the Split Points to make the groups of keyboard sections and assign a Part to each group.

To open the *Split setting* screen, press the [SPLIT] button.

The *Split Job* screen for the Performance appears, allowing you to change the Split settings.

By tapping the items on the screen to specify the number and position for the Split Point, you can set the key range and select a sound for each Part.

By tapping the group button (A, B, C, D) on the screen while holding down the [SHIFT] button, you can set the Part for more than one group.

When the setup is finished, press the [EXIT] button on the top panel or tap *Done* on the screen.

Tapping ✖ on the upper left cancels the setup and closes the screen.

To change the note range, simultaneously hold down the [SHIFT] button and press the [SPLIT] button.

This calls up the *Part—Note* view of the *Performance* screen, allowing you to change the note range of each Part.

Set the value by using the built-in keyboard or Data dial.

Procedure for editing ★
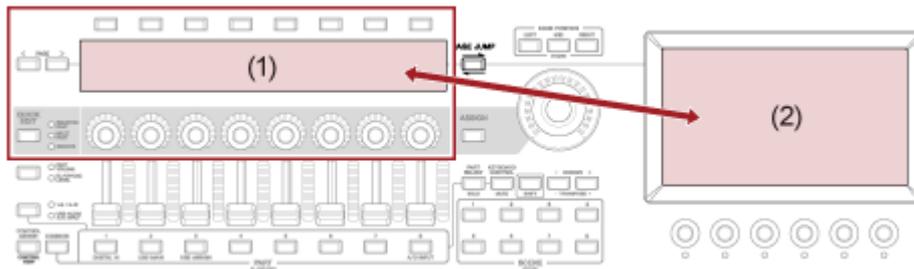
Editing refers to the Full Edit functions using the Main display and Quick Edit functions using the Sub display.

You can use Full Edit to access all editing functions and use Quick Edit to instantly access some frequently used parameters.

By using the [PAGE JUMP] button, you can edit the same parameter from Full Edit and the Quick Edit.

Also, you can use different screens for the Main display and the Sub display to monitor multiple parameters at once while switching between Full Edit and Quick Edit.

    (1)   Quick Edit (View the Sub display)
    (2)   Full Edit (View the Main display)

Procedure for Full Edit ☆

1 **Select a Performance.**

2 **On the *Performance* screen, move the cursor to the desired *Performance Name* or *Part*.**

3 **Press the [EDIT/ ⟲] button or tap Edit in the context menu.**

The *Common Edit* screen will appear when the cursor is on the *Performance Name*.
The *Part Edit* screen for the sound engine will appear when the cursor is on the *Part*.

4 **Select a tab on the first and the second rows to open the screen.**

For selecting a tab, you can simultaneously hold down the [SHIFT] button and use the appropriate Slot number and Category name selection buttons, or simply tap the tab on the screen. (Refer to the Quick Guide.)

Example: Normal Part (AWM2)

Changing the settings in each tab from the top to the bottom is recommended.

5   **Edit the settings by changing the parameters shown on the right of the tabs.**

6   **Continue editing the parameters on different tabs if necessary.**

The target for editing will be shown on the navigation bar.
Select *Common* for editing the settings for the entire Performance.
Select *Part Common* for editing the settings for the entire Part.
If you wish to go into detailed settings, select one of the following: *Element* 1 to 128, *Operator* 1 to 8, *Oscillator* 1 to 3, *Noise*, and C0 to C6 keys of the Part.

7   **When you've finished editing, press the [STORE] button to save the Performance.**

You can change the parameter to be edited by opening the *Edit* screen from:
[PERFORMANCE] → [EDIT/ ⟳] and selecting the desired item from the Navigation bar.

Using the *Navigation* screen ⭐

1   **Press the [NAVIGATION] button.**

The NAVIGATION screen appears.

When you press the [NAVIGATION] button during editing, you can easily find where you are 📍 on the map.

2 **Select the desired parameter for editing.**

Select *Part Common* for editing the settings for the entire Part.
If you wish to go into detailed settings, select one of the following: *Element* 1 to 128, *Operator* 1 to 8, *Oscillator* 1 to 3, *Noise*, and C0 to C6 keys of the Part.

3 **Select the icon for the setting you wish to change.**

Use the Cursor buttons to move the cursor and then press the [ENTER] button. Or, tap the icon on the screen.
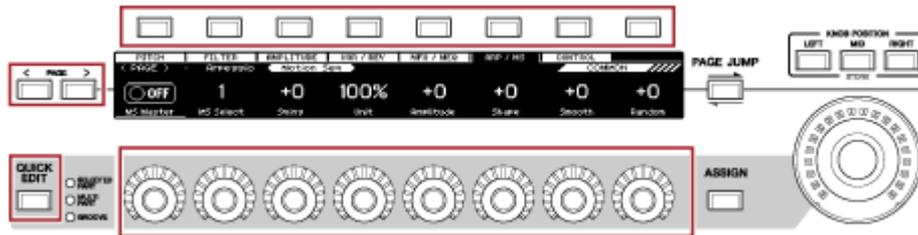
4 **Change the parameters shown on the screen.**

5 **Save the Performance.**

Procedure for Quick Edit ☆

1 **Use the [QUICK EDIT] button, Tab PAGE buttons, and Tab selection buttons to change pages and tabs on the Sub display.**

2   Use Knobs 1 to 8 to change settings.

3   To fine-adjust the settings, press the [PAGE JUMP] button to call up the corresponding parameter on the Main display.

NOTE

If you have changed to a different tab on the Main display, you can call up the corresponding parameter on the Sub display by simultaneously holding down the [SHIFT] button and pressing the [PAGE JUMP] button.
(The parameter may not appear in some cases.)
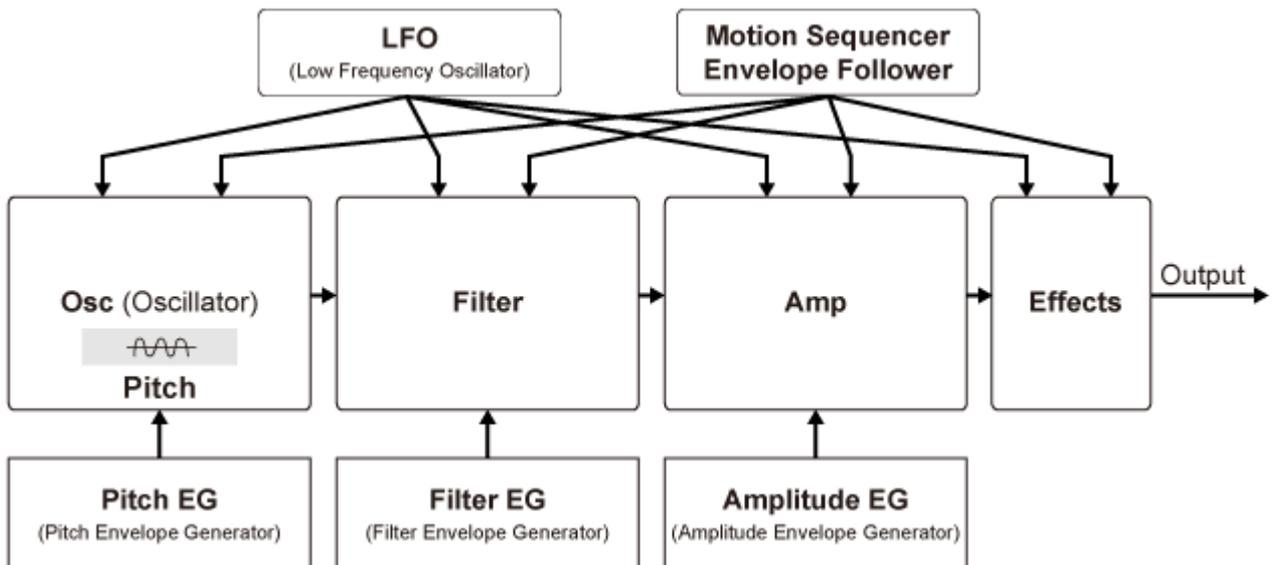
Creating tonal changes ★

For creating tonal changes, you can use Oscillators, filters, EGs (or Envelope Generators), LFOs (or Low-Frequency Oscillators), and effects. By changing those parameters, you can change the brightness, resonance, or other timbral qualities of the sound.
The available settings are different depending on the sound engine type. Some parameters (below) are commonly used for all sound engine types.
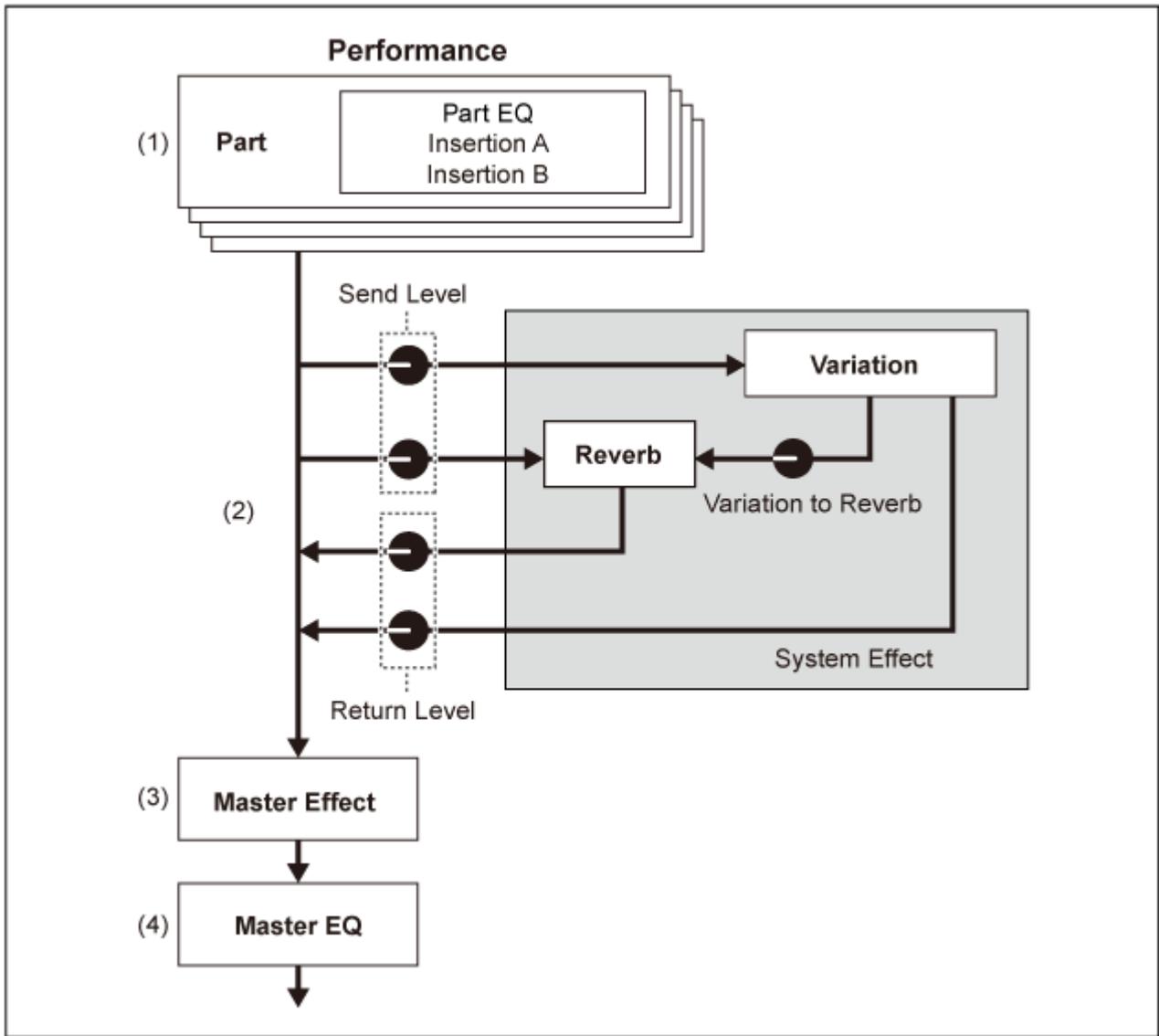
- *Oscillator (Osc)*: Creates the basic sound waves
- *Pitch*: Controls the pitch
- *Filter*: Controls the cutoff frequency
- EG: Determines how the sound changes over time
- LFO: Determines the cyclical change of the sound
- *Motion Sequencer*: Creates complex changes to the sound over time
- *Effects*: Processes the sound
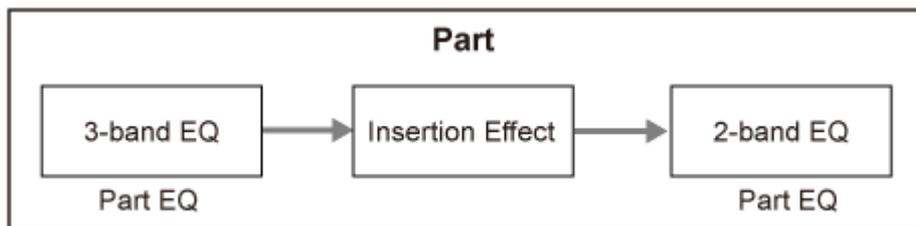
Effect connections and settings ☆

The effects available on the MONTAGE M include System effects which are applied to all Parts in the Performance, Insertion effects which are applied to each Part, Master effects which are applied to the final output, and Equalizers such as Part EQ and Master EQ. The signal flow diagram for the effects is shown below.

(1) Setting the Part EQ and Insertion effects

[PERFORMANCE] → *Part* selection → [EDIT/ ⟳] → *Effect*

(2) Setting the Variation and Reverb effects

[PERFORMANCE] → *Part* selection → [EDIT/ ⟳] → *Effect* → *Routing*

[PERFORMANCE] → *Common* selection → [EDIT/ ⟳] → *Effect* → *Variation*

[PERFORMANCE] → *Common* selection → [EDIT/ ⟳] → *Effect* → *Reverb*

(3) Setting the Master effect

[PERFORMANCE] → *Common* selection → [EDIT/ ⟳] → *Effect* → *Master FX*

(4)   Setting the Master EQ
        [PERFORMANCE] → *Common* selection → [EDIT/ ⮂] → *Effect* → *Master EQ*

NOTE

The effects for the audio input from the A/D INPUT jack can be set from: [PERFORMANCE] → *Common* selection → [EDIT/ ⮂] → *Audio In*.

For information on the effect category and effect types, see the <u>Effect types</u>.
For information on the Preset program for each effect type, refer to the *Data List*.

Changing the Effect settings ☆

You can change the effects using Full Edit and Quick Edit.
By pressing the [NAVIGATION] button while holding down the [SHIFT] button, the *FX Overview* screen will appear, and you can see an overview of the effect settings.
Tap the buttons on the effect names such as *Ins A* and *Var* to open the *Edit* screen.

Using Arpeggio ★

The Arpeggio function on the MONTAGE M allows you to play typical Arpeggios, as well as add more complicated rhythm patterns and backing tracks to your keyboard performance. It not only provides inspiration and full rhythmic passages in your live performances, but it gives you fully formed instrumental backing parts of various music genres for ease in creating songs.
You can assign the desired eight Arpeggio Types to each Part and simultaneously play back Arpeggios of up to eight Parts.
Also, you can set the note range (*Note Limit*) or the strength of the key pressure (*Velocity Limit*) for Arpeggio playback.
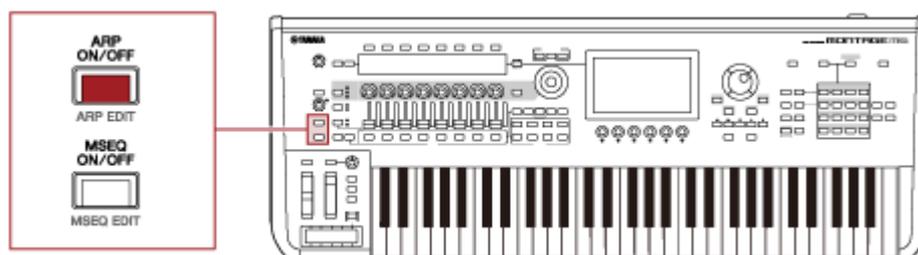
The Arpeggio function lets you play Accent Phrases (the sequence phrase played only when the keyboard is played at a higher velocity than the specified value) or effect sounds such as guitar fret noises using the Random SFX function. Some Preset Arpeggio Types are set to play back Accent Phrases and Random SFX sounds. You can find the Accent Phrases and Random SFX sounds by using the *Arpeggio Category Search* screen and checking *Accent* (Accent Phrase) or *Random SFX* for *Attribute*.

Turning Arpeggio on and off ☆

To turn the Arpeggio function on or off, press the [ARP ON/OFF] button on the top panel.
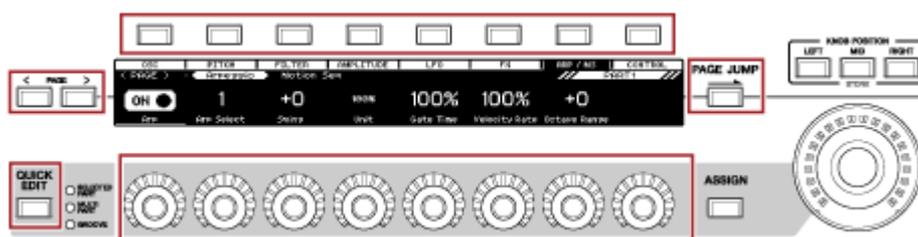
Changing Arpeggio by using the knobs ☆

By pressing the [QUICK EDIT] button to select SELECTED PART and then using the Tab selection buttons to select the ARP/MS tab, you can then use Knobs 1 to 7 to change the Arpeggios.
Modify the Arpeggios by turning the knobs and listening to the Arpeggio playback. Check the names of the parameters assigned to Knobs 1 to 7 on the Sub display.
If you wish to fine-tune the settings, press the [PAGE JUMP] button to switch to the Main display to continue editing.

Changing the way Arpeggio playback is turned on or off ☆

Normally the Arpeggio is played back while a key is being pressed. However, you can change the settings so that the Arpeggio continues to be played back after the finger is lifted off from the key.

The way the Arpeggio playback is turned on or off can be set with *Hold* and *Trigger Mode*.

- **Hold**

  [EDIT/ ⟳] → *Part* selection → *Common* → *Arpeggio* → *Common*

- **Trigger Mode**

  [EDIT/ ⟳] → *Part* selection → *Common* → *Arpeggio* → *Advanced*

Played back only while a key is being pressed	*Hold*: Off *Trigger Mode*: *Gate*
Playback continues after the finger is lifted off from the key	*Hold*: On *Trigger Mode*: *Gate*
Playback is turned on or off each time the key is pressed	*Trigger Mode*: *Toggle* (regardless of the *Hold* settings)
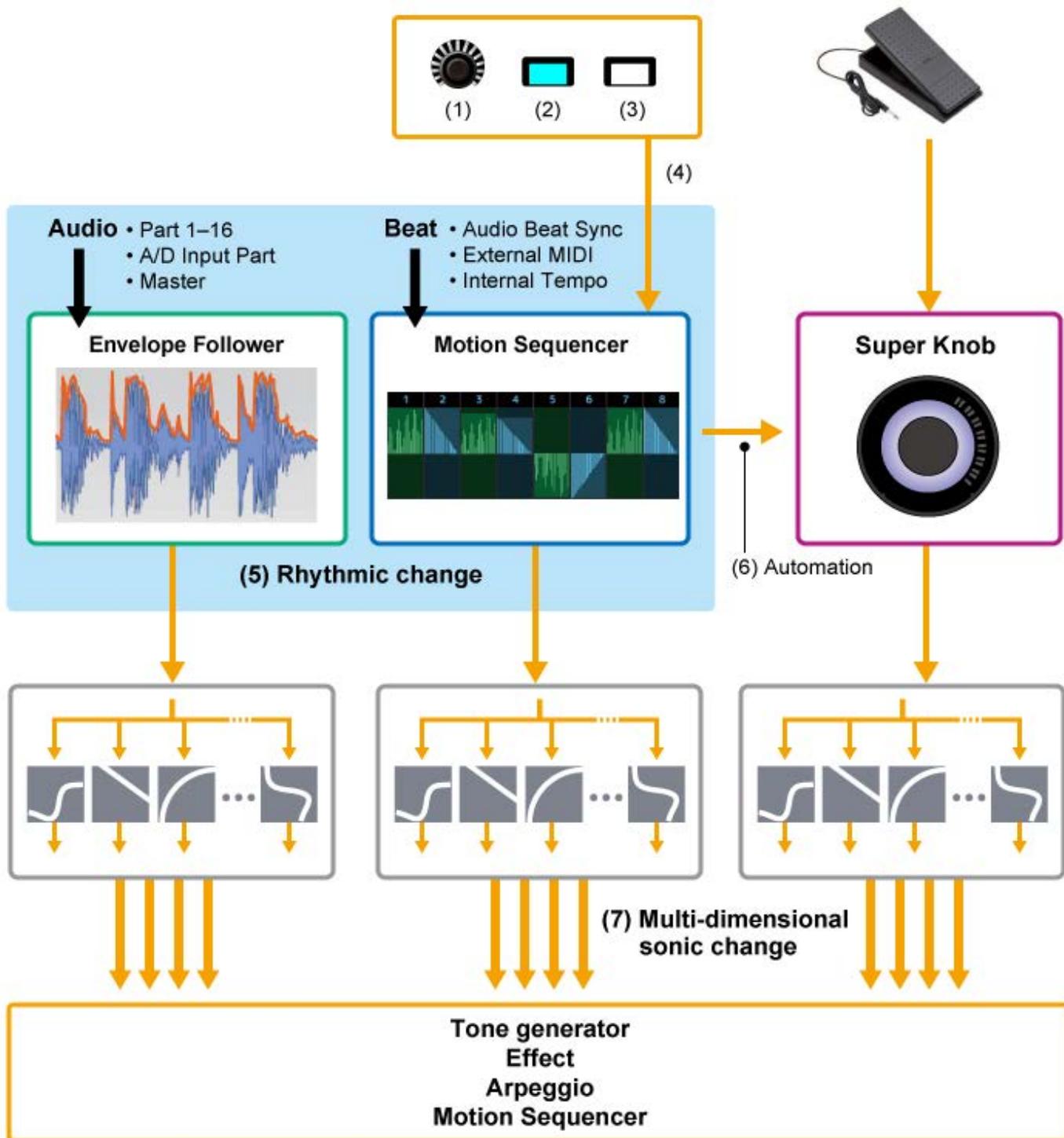
NOTE

When *Arp Master* and *Arp Part* are set to ON, you can turn on the [KEYBOARD HOLD] button on the top panel to achieve the same effect as setting Hold to ON.

Using Motion Control ★

The Motion Control function lets you create Motion (rhythmic and dynamic sound changes) in real-time, so you can find completely new ways of expression. This function allows you to make the settings in advance so that you can change the parameters without actually operating the pedals or wheels. This lets you create dramatic and powerful expressive changes that follow the beat of your music.

(1) Continuous control of Motion changes

(2) Switch between Motions

(3) Trigger

(4) Control the Motion Sequencer in real time

(5) Rhythmic change

(6) Automation

(7) Multi-dimensional sonic change

Basics for Motion Control ☆

Motion Control can be set by setting the *Source* for the Controller as well as the control target (*Destination* and *Parameter*) from the *Control Assign* screen.
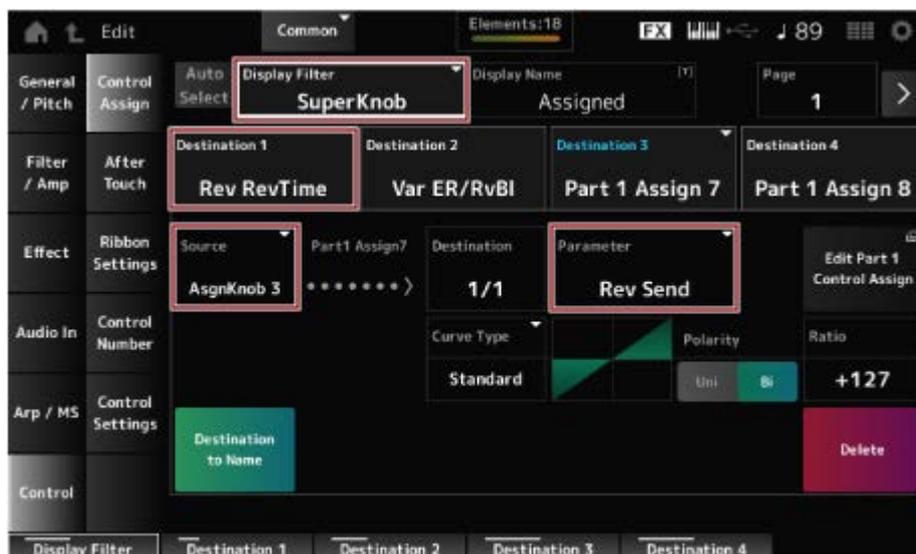
For Super Knob, set the *Display Filter* to *SuperKnob* and then set the *Source* (*AsgnKnob* 1–8) and *Destination*.
For Motion Sequence, set the *Source* to a *Motion Sequence Lane* from 1 to 4.
For Envelope Follower, set the *Source* to *EnvFollow*.

[PERFORMANCE] → *Common* selection → [EDIT/ ⌒] → *Control* → *Control Assign*
[PERFORMANCE] → *Part* selection → [EDIT/ ⌒] → *Mod/Control* → *Control Assign*

Customizing the Super Knob settings ☆

By using the Super Knob, you can simultaneously control the *Assign 1* to *8* values that are assigned to Knobs 1 to 8 that are common to all Parts.

Moving the Super Knob while playing the keyboard lets you modify sounds, and you can see the parameter values on the Sub display.
If the [ASSIGN] button is turned on (and the button is lit), you will see the changes to the Knobs 1 to 8 on the indicator and the Sub display.

By combining the Super Knob and the Motion Sequencer, you can achieve more complex sound changes.
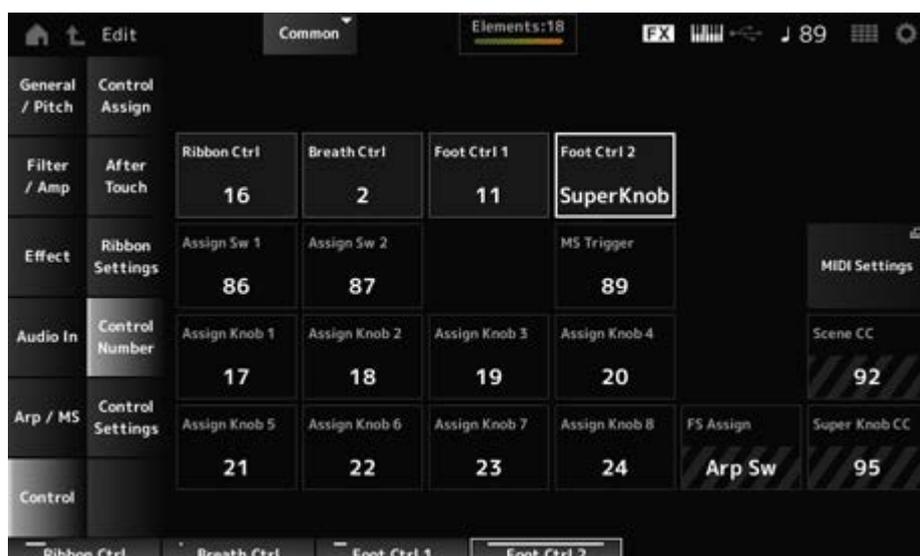
Controlling the Super Knob from the pedals ⭐

You can control the Super Knob from the separately sold Foot controller (FC7) connected to the MONTAGE M.
Follow the procedure shown below.

1   Connect the Foot Controller (FC7) to the FOOT CONTROLLER jack on the rear panel.

2   Open the screen from: [PERFORMANCE] → [EDIT/ ⟳] → *Control* → *Control Number*.

3   Select *SuperKnob* for *Foot Ctrl1* or *Foot Ctrl2*, depending on the jack you have connected the foot Controller to.

4   Close the screen to finish the setup.

An example of a Super Knob setting ⭐
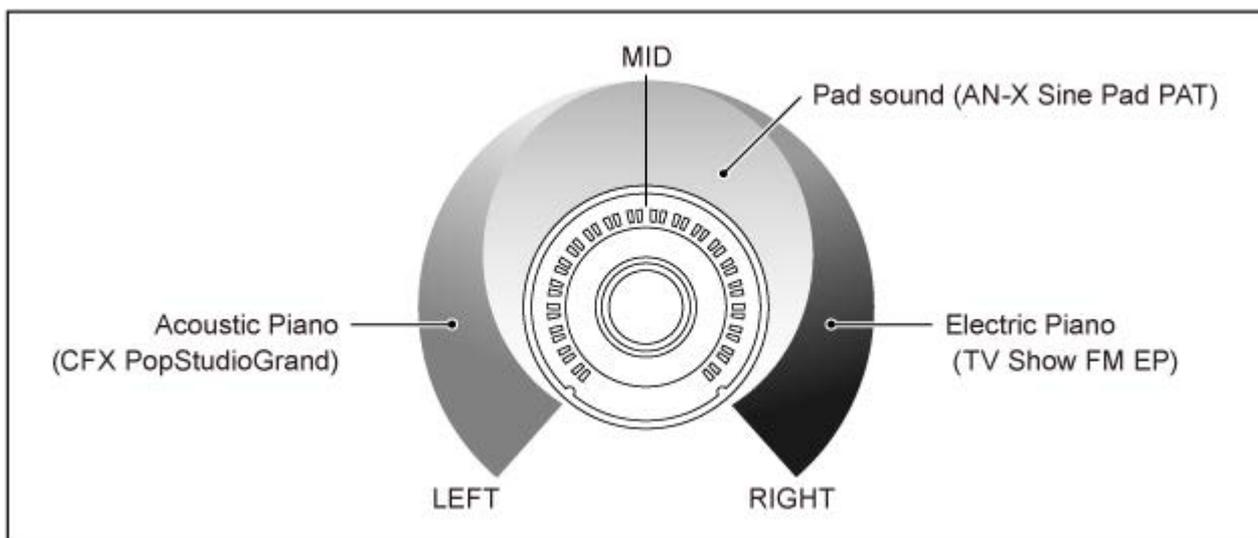
The Super Knob settings can be customized.
You can set two or three fixed values for using the Super Knob for morphing sounds. For setting three fixed values, you need to first enable the *Mid* setting.

An example of morphing using three fixed values:
Here, we will explain how to add morphing effects to the layered sound made with three Preset Performances (acoustic piano, pad sound, and electric piano) while keeping the original settings

for these Performances.

Workflow
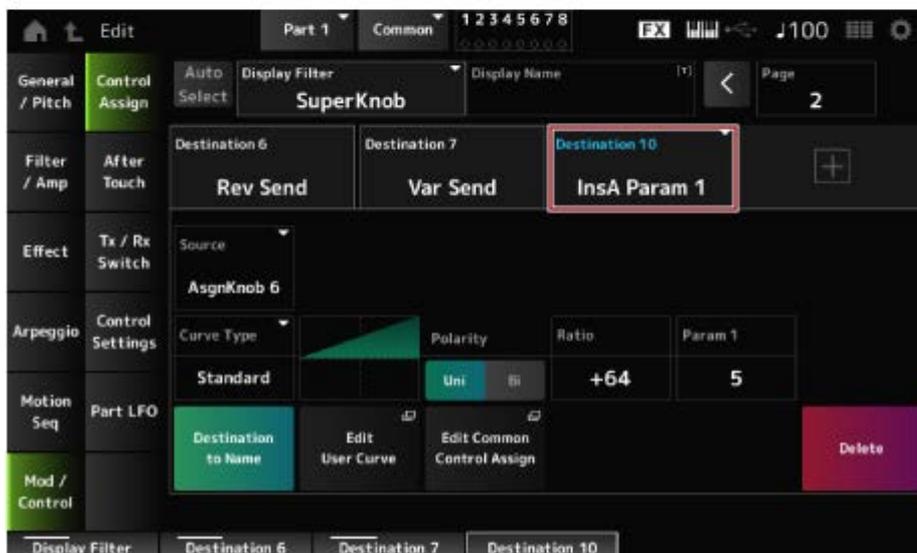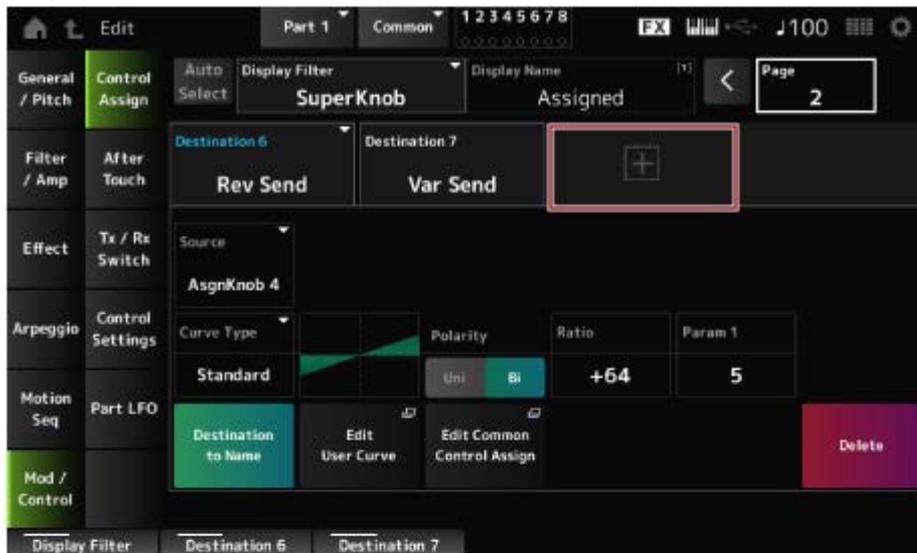
- Select sound for Parts 1 to 3 (Step 1)

- Set up the Super Knob to allow the control of the parameters for Parts 1 to 3 (Steps 2 to 4)

- Check the settings (Step 5)

- Set the parameters for the Super Knob for the leftmost, mid, and rightmost positions. (Steps 6 to 8)

1 Select sounds for Parts 1 to 3

1-1. Press the [CATEGORY] button and select *CFX PopStudioGrand*.

1-2. From the *Home* screen, tap the [+] icon Part 2 to open the *Part Category Search* screen and select *AN-X Sine Pad PAT*.

1-3. From the *Home* screen, tap the [+] icon on Part 3 to open the *Part Category Search* screen and select *TV Show FM EP*.
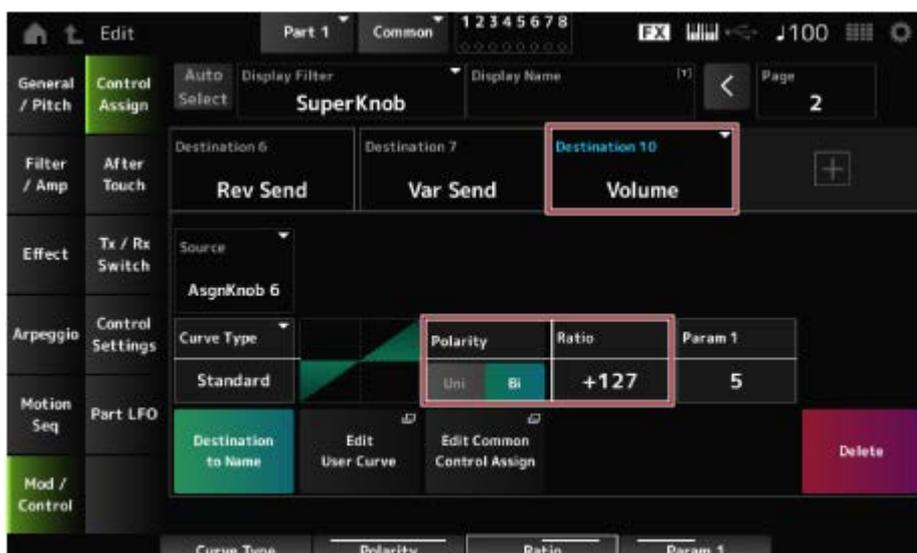
2 Set the parameters for Part 1.

2-1. Select Part 1.

2-2. Press the [CONTROL ASSIGN] button while holding down the [SHIFT] button.

The *Control View* screen appears.

2-3. Turn the Super Knob.

The *Control Assign* screen appears.

2-4. By tapping the [+] icon, *Destination 10* will be added.

2-5. Tap the *Destination 10* tab and select *Volume* from *Part Param*.

2-6. Set *Polarity* (*Curve Polarity*) to *Bi* and set *Ratio* (*Curve Ratio*) to +127.

3   Set the parameters for Part 2.

3-1.   **Select Part 2.**

3-2.   **Press the [CONTROL ASSIGN] button while holding down the [SHIFT] button and then turn the Super Knob.**

The *Control Assign* screen for Part 2 appears.

3-3.   **Tapping the [+] icon adds *Destination 7*.**

3-4.   **Tap the *Destination 7* tab and select *Volume* from *Part Param*.**

3-5.   **Set *Polarity* (*Curve Polarity*) to *Bi* and set *Ratio* (*Curve Ratio*) to +127.**

4   Set the parameters for Part 3.

4-1.   **Select Part 3.**

4-2.   **Press the [CONTROL ASSIGN] button while holding down the [SHIFT] button and then turn the Super Knob.**

The *Control Assign* screen for Part 3 appears.

4-3.   **Tapping the [+] icon adds *Destination 8*.**

4-4.   **Tap the *Destination 8* tab and select *Volume* from *Part Param*.**
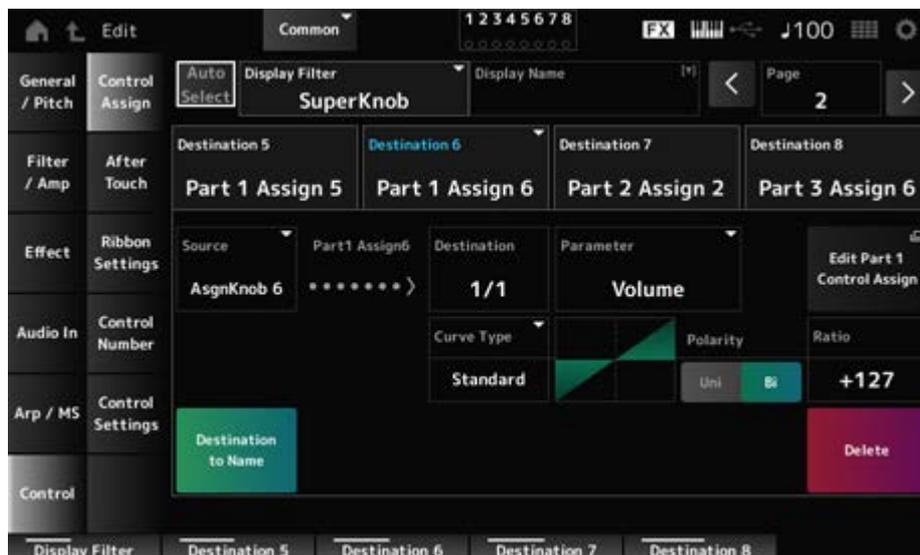
4-5.   **Set *Polarity* (*Curve Polarity*) to *Bi* and set *Ratio* (*Curve Ratio*) to +127.**

5   Check to make sure that the parameters for Parts 1 to 3 are set to Common Assignable Knob.

5-1.   **Press the COMMON button for Part select.**

5-2.   **Press the [CONTROL ASSIGN] button while holding down the [SHIFT] button and then turn the Super Knob.**

The *Control Assign* screen for the common part appears.

5-3. Tap each of the *Destination 6* to *8* tabs to check that the *Source* is set to *AsgnKnob* 6 to 8 respectively, and the *Destination Parameter* is set to Part 1 to 3 Volume.

6 Set the LEFT position on the Super Knob.

This makes the settings for the Super Knob when turned all the way to the left.

6-1. Press the KNOB POSITION [LEFT] button.

6-2. Make sure that the COMMON is selected for Part select and then press the [ASSIGN] button.

6-3. To set only the *CFX PopStudioGrand* on Part 1 to sound, turn Knob 6 (*Assign6*) all the way to the right (to the maximum value) and Knob 7 (*Assign7*) and Knob 8 (*Assign8*) all the way to the left (to the minimum value).

6-4. Save the settings by simultaneously holding down the [SHIFT] button and pressing the KNOB POSITION [LEFT] button.

7 Set the RIGHT position on the Super Knob.

This makes the settings for the Super Knob when turned all the way to the right.

7-1. Press the KNOB POSITION [RIGHT] button.

7-2. To set only the *TV Show FM EP* on Part 3 to sound, turn Knob 8 (*Assign8*) all the way to the right (to the maximum value) and Knob 6 (*Assign6*) and Knob 7 (*Assign7*) all the way to the left (to the minimum value).

7-3. Save the settings by simultaneously holding down the [SHIFT] button and pressing the KNOB POSITION [RIGHT] button.

8 Set the *Mid position* on the Super Knob.

Enable the *Mid position* and then turn the Super Knob to set the value for the middle position.

8-1. Hold down the [NAVIGATION] button.

The NAVIGATION screen appears.

8-2. Tap on SUPER KNOB and open the screen for the Super Knob settings.

8-3. Set the value 512 for the *Mid position*.

8-4. Press the KNOB POSITION [MID] button.

8-5. To set only the *AN-X Sine Pad PAT* on Part 2 to sound, turn Knob 7 (*Assign7*) all the way to the right (maximum value), and Knob 6 (*Assign6*) and Knob 8 (*Assign8*) all the way to the left (minimum value).

8-6. Save the settings by simultaneously holding down the [SHIFT] button and pressing the KNOB POSITION [MID] button.

The main setting is now complete.

- **Tweaking the settings**
  Adjust the *Curve type*, *Ratio*, and *Param* for each Part, LEFT, RIGHT, and MID for the KNOB POSITION if desired.

Using Motion Sequencer ☆

The Motion Sequencer function lets you create sound changes by controlling parameter times according to a sequence you create in advance.

It allows you to set up rhythmical changes that are in sync with the Performance tempo, Arpeggio, or the rhythms input from the connecting device and to control such changes interactively and in real-time according to the progression of the song.

With the Motion Sequencer, you can use up to four lanes per Part, or eight lanes for a Performance. You can use up to eight sequence patterns per lane.

You can also set the velocity range for playing the sequence, the way the sequence is played, or the number of Steps to play the same way you would with the Arpeggio.
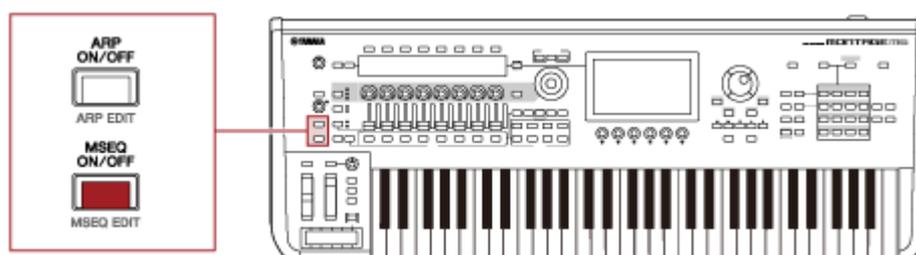
The parameters for each lane can be set in the procedure shown below.
[PERFORMANCE] → *Part* selection → [EDIT/ ⟳] → *Motion Seq* → *Lane*

Turning Motion Sequencer on or off ⭐
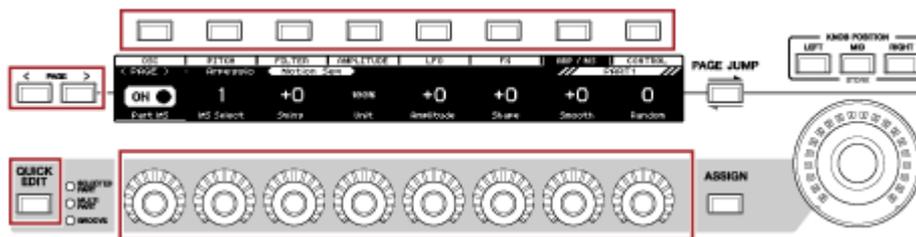
To turn Motion Sequencer on or off, press the [MSEQ ON/OFF] button on the top panel.

Changing Motion Sequencer by using the knobs ⭐

By pressing the [QUICK EDIT] button to select SELECTED PART and then using the Tab selection buttons to select the ARP/MS tab and using the Tab PAGE buttons to select Motion

Sequence, you can then use Knobs 1 to 8 to change the Motion Sequencer.
Modify the Motion Sequencer settings by turning the knobs and listening to the Motion
Sequencer playback. Check the names of the parameters assigned to Knobs 1 to 8 on the Sub
display.

Changing the way Motion Sequence is triggered

The way Motion Sequence is triggered can be set with the *LaneSw* and *Trigger* parameters.

- **LaneSw, Trigger**
  [PERFORMANCE] → *Part* selection → [EDIT/ ⟳] → *Motion Seq* → *Lane*

Plays back the Motion Sequence when you press a key	*LaneSw: On* *Trigger: Off*
Plays back the Motion Sequence when you press the [MSEQ TRIGGER] button	*LaneSw: On* *Trigger: On* *Sync*: Other than *Arp*

Editing the Motion Sequence

Motion Sequence is comprised of up to 16 steps.
Edit each Step from the *Edit Sequence* screen.

Using the Envelope Follower
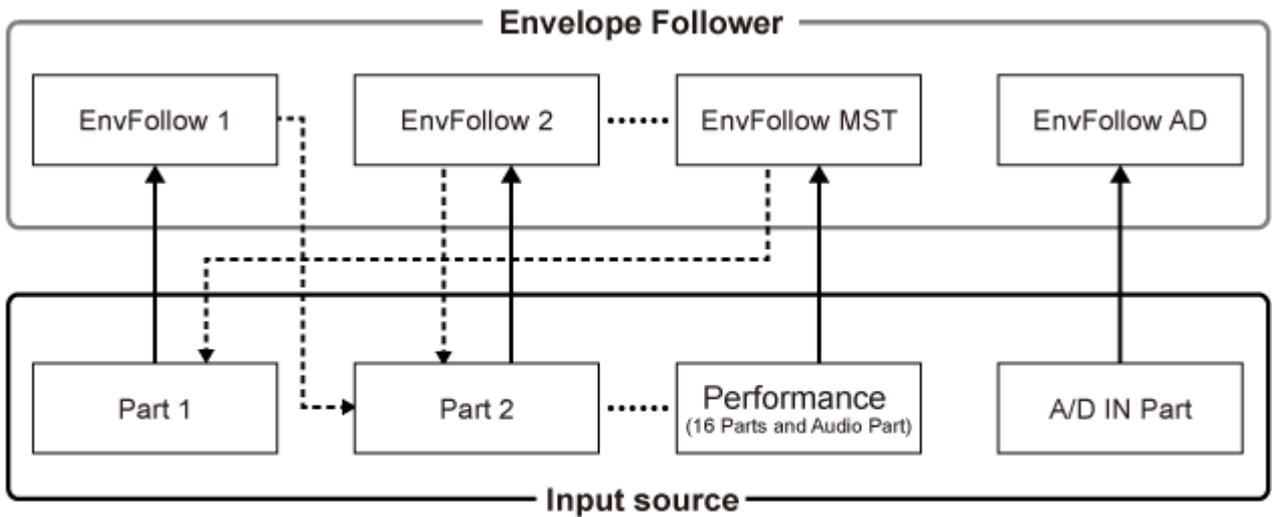
Envelope Follower is the function that extracts the envelope of the waveform from the audio input and is used as a controller for creating changes in the sound. It allows the output of Parts and the output from the external device connected to the A/D INPUT jack.

For example, you can set the Envelope Follower of the Part you have assigned a Rhythm Pattern as a *Source* to create changes in other Parts. It is useful, for example, when you wish to lower the volume of a Part while a certain other Part is being played (i.e., ducking).

Each Envelope Follower has its own input source, such as *EnvFollow 1* for Part 1, *EnvFollow 2* for Part 2, and *EnvFollow AD* for the Audio Part. The output from each Envelope Follower can be changed by selecting a different *Source* from the *Control Assign* screen.
For example, you can set up the Envelope Follower for Part 1 (*EnvFollow 1*) to create changes in Part 2. How the sound is modified by the output from each Envelope follower can be set from the *Control Assign* screen.

Envelope Follower

- EnvFollow 1
- EnvFollow 2 ······ EnvFollow MST
- EnvFollow AD

- Part 1
- Part 2 ······ Performance (16 Parts and Audio Part)
- A/D IN Part

Input source

← (1) Input signal to Envelope Follower (Fixed)

◄---- (2) Output signal from Envelope Follower (The Destination can be changed)

(1)   Input signal to Envelope Follower (Fixed)

(2)   Output signal from Envelope Follower (The Destination can be changed)

Settings for the Envelope Follower:

- [PERFORMANCE] →   *Common* selection → [EDIT/ ⟲] → *Effect → Routing → Envelope Follower* (*EnvFollow MST*)

- [PERFORMANCE] →   *Common* selection → [EDIT/ ⟲] → *Audio In → Routing → Envelope Follower* (*EnvFollow AD*)

- [PERFORMANCE] → *Part* selection → [EDIT/ ⟲] → *Effect → Routing → Envelope Follower* (*EnvFollow* 1–16)

48

An example of setting the Envelope Follower from the *Rhythm Pattern* screen ⭐
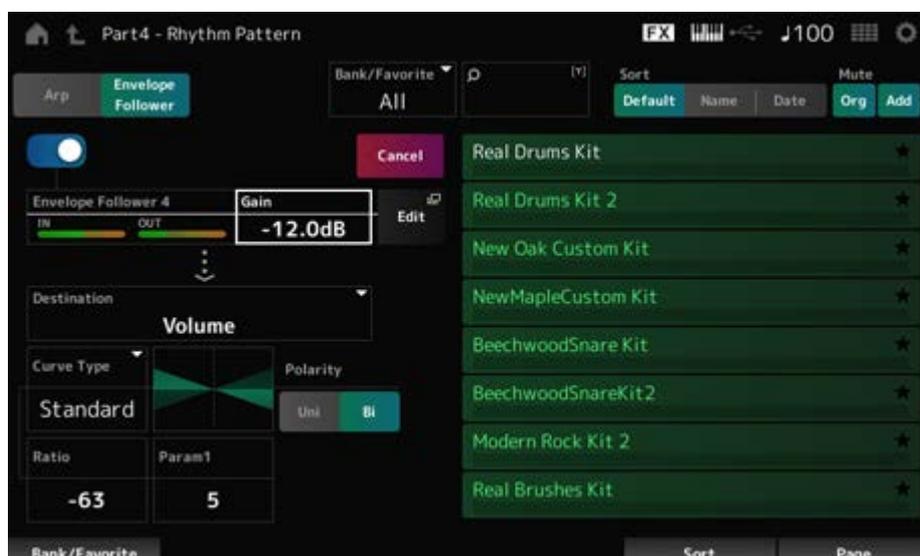
You can set the Envelope Follower from the *Rhythm Pattern* screen. This way, you can quickly access the Envelope Follower parameters often used for the Rhythm Patterns.

1 **Press the [SONG/PATTERN] button while holding down the [SHIFT] button to open the *Rhythm Pattern* screen.**

2 **Select a drum sound from the list shown on the left of the screen.**

3 **Tap the *Envelope Follower*.**

4 **Turn on the Envelope Follower switch.**

You can play the keyboard to hear the effect of the Envelope Follower.

5 **Change the settings as needed.**

Here, set *Polarity* (*Curve Polarity*) to *Bi*, *Ratio* (*Curve Ratio*) to −63, *Gain (Envelope Follower Gain)* to −12dB.

6 **If you wish to further edit the settings, tap Edit to open the screen for the Envelope Follower settings.**

You can select a new kit or Arpeggio type for the Rhythm Pattern by simultaneously holding down the [SHIFT] button and pressing the [SONG/PATTERN] button to go back to

the *Rhythm Pattern* screen. The Envelope Follower settings are retained after selecting a new kit or arpeggio for the Rhythm Pattern.

Using *Smart Morph* ★

Smart Morph is a function that morphs FM-X Parts using machine learning.
By using *Smart Morph*, you can create a new sound for Part 1 from multiple FM-X Parts to play on the keyboard.

The *Smart Morph* function analyzes each sound assigned to Parts 9 to 16 and plots one dot per Part on the map. Each dot on the map represents a sound, and the distance between dots shows the similarities of these sounds.
Pressing the *Learn* button automatically generates a dot for the new FM-X sound between the existing dots on the map.

When you tap the dot on the map, the sound for that dot will be selected for Part 1.
You can find a new place you like from the map and save its settings to create a new FM-X part.

Also, by dragging the dot on the map while playing the keyboard, or by moving the Super Knob with the movements of two to eight dots assigned beforehand, you can create completely new sounds.

Saving edited settings

Saving a Performance
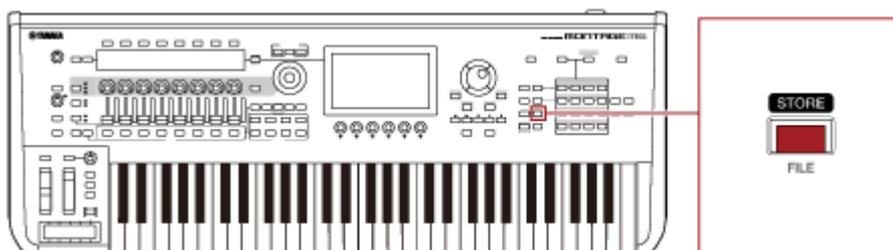
After editing, save the Performance you have created in the internal memory.
Saving the settings to internal memory is referred to as the "*Store*" operation.

> **NOTICE**
>
> - When you select a different Performance or turn off the instrument without first storing the Performance, you will lose the settings you are editing.
>
> - The existing Performances on the *User bank* will be lost when you overwrite them. When you save Performances you have edited, make sure not to overwrite existing Performances. Important settings you've made should be saved to a USB flash drive (*Save*). For the save operation, see "Saving settings to a USB flash drive as a backup file (*Save*)."

1 **Press the [STORE] button.**

When saving a new Performance, you will see the *Store As New Performance* message. If a Performance with the same name is already stored, you will see the *Overwrite Current Perf.* and *Store As New Performance* options.

2 **To save it as a new Performance, tap *Store As New Performance*.**

To overwrite the Performance already stored, tap *Overwrite Current Perf.*, and then tap *Store* (YES).

3 **Type in the Performance name on the Keyboard screen.**

Use the keyboard shown on the Main display. Up to 20 alphanumeric characters can be used for the name.

4 **Tap *Done* when you have finished entering the name.**

When the *Store* operation is complete, the *Performance* screen will be shown on the display.

Creating a Live Set ☆

Contents

The Live Set function is a convenient way to change among different Performances as you play songs on a setlist, for example.

On the MONTAGE M, you can create a Live Set simply by registering your favorite Performance to each slot.

Registering a Performance on the Live Set slot ★

You can register a Performance to the Live Set by following the procedure below.

NOTICE
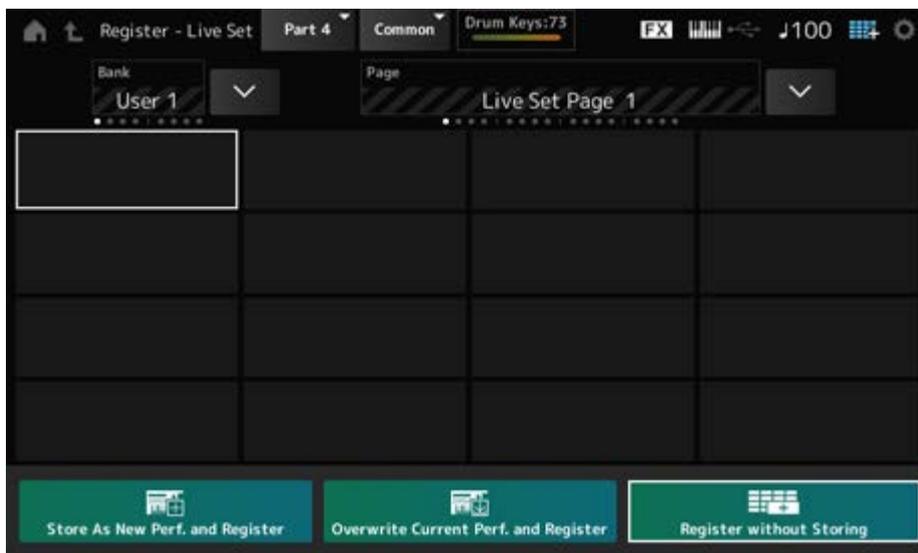
- Store the Performance you have just edited before registering the Performance to the Live Set. However, when you register to the Live Set and select *Store As New Perf. and Register* or *Overwrite Current Perf. and Register*, you do not need to store the Performance in advance.

- When you select a different Performance or turn off the instrument without first storing the Performance, you will lose the edited settings you have made.

1   Select a Performance from the *Performance* screen.

Here, the [LIVE SET] button needs to be fully lit or dimly lit.

2   Simultaneously hold down the [SHIFT] button and press the [LIVE SET] button.

The *Live Set Register* screen appears.

3 **Select a slot for registering the Performance.**

Move the cursor using the Slot number and Category name selection buttons, or tap the slot shown on the screen.

4 **Select one of the available store operations and press the [ENTER] button, or simply tap your selection on the screen.**

- *Store As New Perf. and Register*: Store as a New Performance and register to the slot
- *Overwrite Current Perf. and Register*: Overwrite the current Performance and register to the slot
- *Register without Storing*: Register without storing the Performance first

The selected Performance is registered to the slot.

Exchanging Performances registered to the Live Set Slots ★

You can exchange the contents of two slots.

1 **Open the screen from: [LIVE SET] (or Live Set icon) → *User Bank* selection → [EDIT/ ⟳].**

The *Live Set Edit* screen appears.
When the Live set page on the *Preset bank* or the *Library bank* is open, the *Live Set Edit* screen will not appear.

2 **Tap the JOB button on the screen.**

The JOB screen appears.

3   Tap the slot you wish to move the Performance from, and then tap the *Exchange* button on the screen.

4   Tap the slot you wish to move the Performance to.

The Performances of the two slots will be exchanged.

5   When the exchange is complete, tap *Done* to end the operation.

NOTE

If you wish the copy or exchange the entire bank or the entire Live set page, simultaneously hold down the [SHIFT] button and press the [EDIT/ ⌕] button. Then the dialog box will appear.

Registering a Pattern, Song, or Audio file to the Live Set slot ★

You can also add Patterns, Songs, or Audio files to Live Set slots. This way, you can select a slot for playing back a desired Pattern, Song, or Audio file, and then play the Performance on the keyboard along with it.

1   Open the screen from: [LIVE SET] (or Live Set icon) → *User Bank* selection → [EDIT/ ⌕].

The *Live Set Edit* screen appears.

2   **Select a slot or tap [+] on the screen.**

3   **Select one of the Slot Types.**

Slot Type	Type
Perform	Performance
Song	Song
Audio	Audio file
Pattern	Pattern

4   **Tap the *Pattern Name* or *Audio Name* to open the *Load* screen.**

5   **Select the desired pattern or file to register to the slot.**

6   **Tap *Done* to finish the setting.**

NOTE

You can also register a Pattern or Song to the Live Set slot by pressing the [SHIFT] and [LIVE SET] buttons if the recorded file is selected on the *Pattern* screen or *Song* screen.

Setting up a footswitch for changing the Live set slot   ★
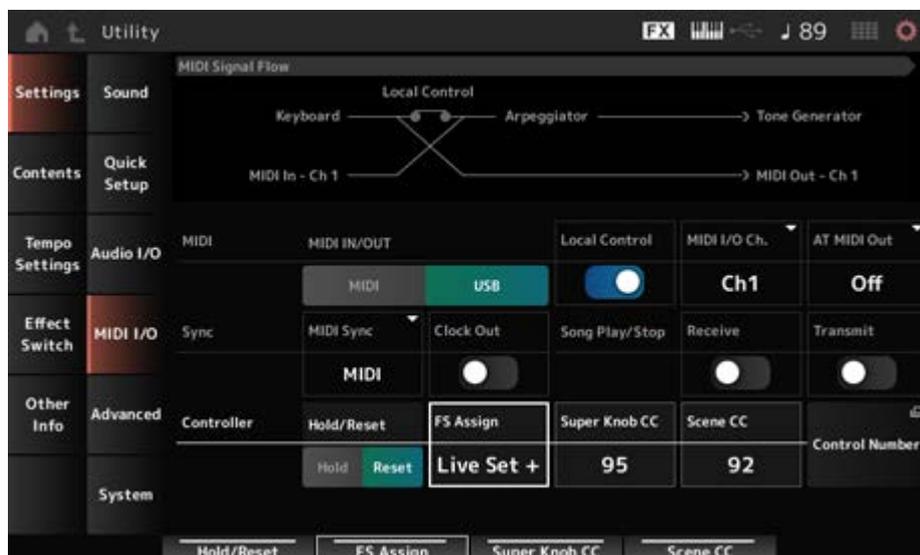
You can select a different Live Set slot by using a separately sold footswitch, such as the FC4 or FC5.
Follow the procedure below.

1 **Connect a foot switch (FC4 or FC5) to the ASSIGNABLE FOOT SWITCH jack.**

2 **Open the screen from: [UTILITY] → *Settings* → *MIDI I/O*.**

The *MIDI I/O* screen appears.

3 **Set *FS Assign* to *Live Set +* or *Live Set −*.**

With *Live Set +*, you can select the next Live set slot in forward order, and with *Live Set −*, you can select the next Live set slot in reverse order.

Selecting Performances for a setlist from the *Live Set* screen ☆
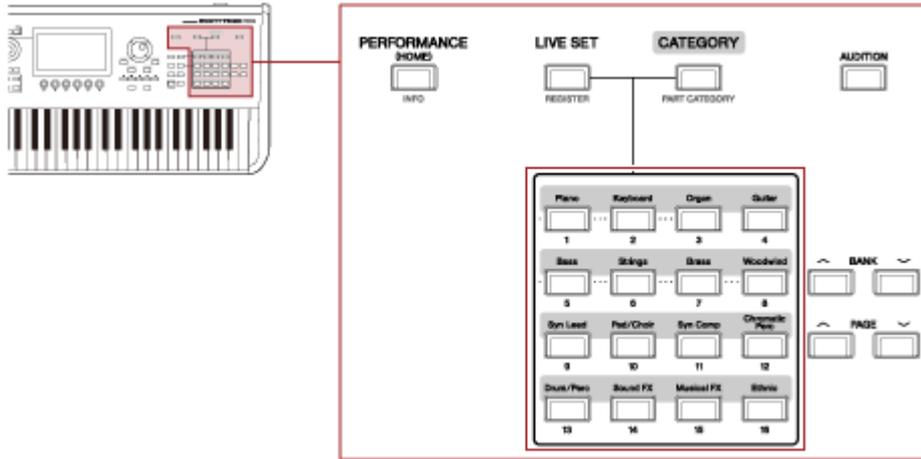
For ease and convenience in live performance situations, you can either use the *Live Set* screen or the *Home* screen while playing the keyboard. When using the *Home* screen, make sure to select a slot on the *Live Set* screen.

1 **Press the [LIVE SET] button to open the screen.**

2 **If necessary, change the bank and page.**

3 **Select a slot.**

On the *Live Set* screen, tap to select a slot on the page.

NOTE

Slot number and Category name selection buttons can be used for selecting items for the *Live Set* screen or the *Category Search* screen (or whichever screen was last called up).

This allows you to select a different Live Set slot while viewing the *Home* screen on the Main display.

Playing the keyboard

Make sure to select a Performance before playing the keyboard.
If desired, you can also play back a specific Pattern, Song, or Audio file (registered to a Live Set slot) along with your keyboard performance.

Playing back a Pattern, Song, or Audio file registered to a Live Set slot ★

You can play the keyboard along with the Pattern, Song, or Audio file registered to the slot.

NOTE
While the Song or Pattern is being played back, you cannot change the Performance or select a different slot. If you try to do so, an error message will be shown on the screen.

1   **Select a slot on the *Live Set* screen.**

2   **Press the [▶] (Play) button.**

The Pattern, Song, or Audio file registered to the selected slot will then play back.

NOTE
While the Pattern, Song, or Audio file is played back, pressing the [▶] (Play) button shows the same screen as the Pattern screen, Song screen, or Audio screen.

3   **To stop playback, press the [■] (Stop) button.**

Recording and playing back

You can use the MONTAGE M to record and play back Patterns, Songs, and Audio files. Patterns and Songs are recorded in the storage area within the instrument, while Audio files are recorded to a connected USB flash drive.

Contents

Terms for recording and playing back
 	
Recording a Pattern
 	
   Canceling the last recording action (*Undo* and *Redo*)
 	
Playing back the Pattern
 	
Recording a Song
 	
   Recording some parts again (Punch-in Punch-out recording)
 	
   Canceling the last recording action (*Undo* and *Redo*)
 	
Playing back the Song
 	
Recording the Audio
 	
Playing an audio file

Terms for recording and playing back

■ Patterns

Patterns are comprised of MIDI sequence data, containing short phrases recorded as MIDI events.

They can be played back in a loop or used with the Scene function.

The MONTAGE M can hold up to 128 Patterns within the memory area.

■ Songs

Songs are comprised of MIDI sequence data, containing information on the operation of the keyboard and other controllers recorded as MIDI events.

The MONTAGE M can hold up to 128 Songs within the memory area.

■ Tracks
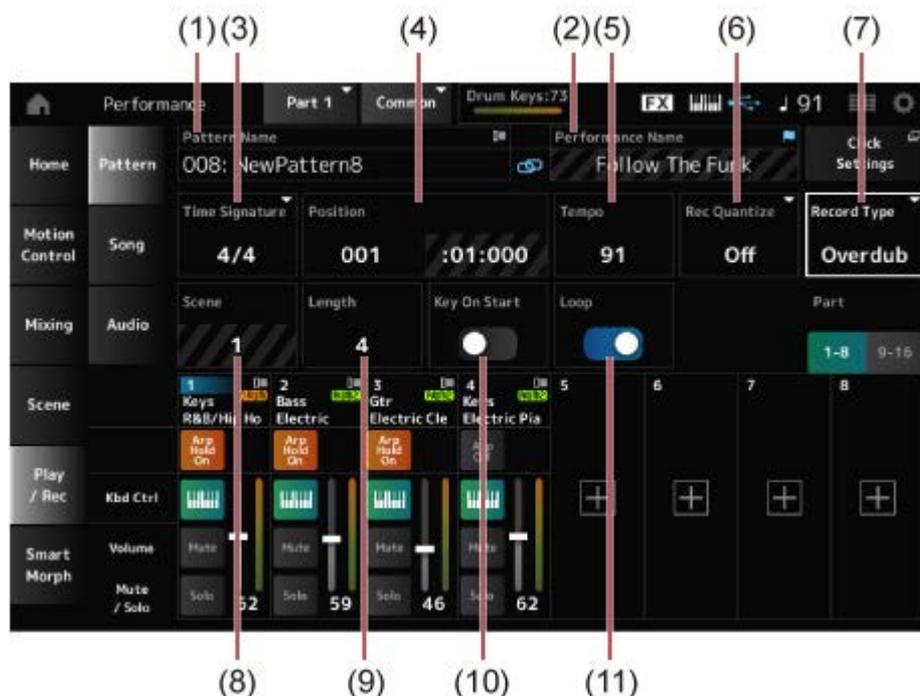
Tracks are separate storage locations for recording the keyboard performance. A track holds the information for one Part.

A maximum of 16 tracks are available on the MONTAGE M, so you can use up to 16 Parts for recording and playing back.

Recording a Pattern ☆

1 Select the desired sound for recording on Track 1.

2 Open the screen from: [SONG/PATTERN] → *Pattern*.

The *Pattern* screen appears.

NOTE

You can open the same screen from: [PERFORMANCE] → *Play/Rec* → *Pattern*.

3 Change the *Length* (of the Scene), *Tempo*, and other settings as needed.

4 Press one of the [SCENE] buttons to select the desired Scene for recording.

5 Press the [●] (Record) button.

Recording will be set to standby.

(1)   Pattern Name
(2)   Name of currently selected Performance
(3)   Measure

(4) Position for recording and playback

(5) Tempo

(6) Quantize

(7) Switching recording types (not shown when recording a new pattern)

(8) Scene

(9) Length of the pattern

(10) Turning on or off the function to start recording at key-on

(11) Turning the loop setting on or off

6 Press the [▶] (Play) button to start recording.

7 Play the keyboard.

When Loop is on, the recorded phrase is played back in a loop while on the recording screen. This way, you can continue to record new phrases to other tracks without having to stop and start the recorder each time.

NOTE

When you press the REC button during recording, the REC button will flash and Rehearsal mode is enabled. In Rehearsal mode, the Pattern will be played back but recording will be temporarily disabled, making it useful for practicing. During recording, you can switch between the Recording and Rehearsal modes by pressing the REC button.

8 Select the desired sound for recording on Track 2.

9 Play the keyboard along with the phrase you recorded on Track 1.

10 Record other tracks as needed.

Songs and Patterns are stored automatically when recorded.
If you wish to change the tempo or sound of the recorded Song or Pattern before storing it, select *StorePattern&Perf Settings* (or *Store Song&Perf Settings* for a Song).

NOTE

If you have edited any parameters for the Performance, you will need to store the Performance.

Canceling the last recording action (*Undo* and *Redo*) ★

Undo cancels the last recording action and deletes what has been just recorded.
Redo restore the recording that has been canceled by *Undo*.

- *Undo* **(does not appear when there are no recordings.)**
  Undo cancels the last recording action and restores the recording to its original state.

- *Redo* **(does not appear until** *Undo* **has been performed.)**
  By selecting *Redo*, the state before performing *Undo* will be restored.
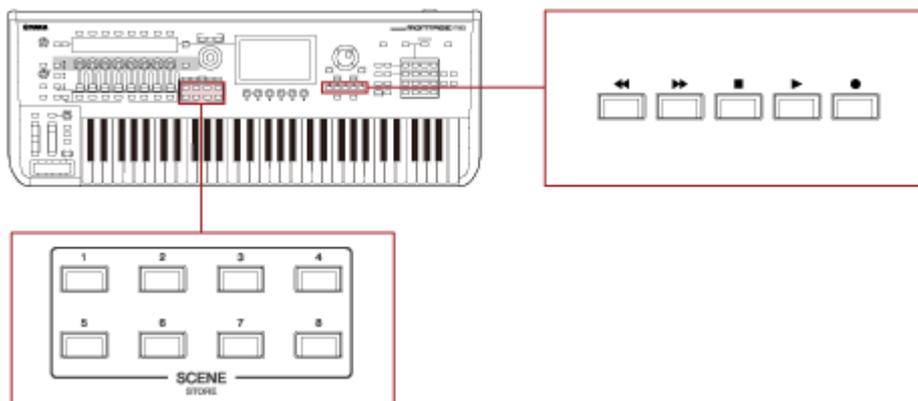
Playing back the Pattern

To play back the recorded Pattern, use the Sequencer Transport buttons.

You can use the SCENE buttons to select a Scene for playback.

Recording a Song ☆

In Song recording, the operations of the controllers and knobs as well as the keyboard performance are recorded to a track as MIDI data. For the keyboard performance, only Parts having the Keyboard Control switch set to On will be recorded.

For the knob operations, Control Change and Parameter Change messages will also be recorded.
For more information on Control Change, refer to the *Data List*.

NOTE

When *Arp Rec* is On, only the result of the Arpeggio playback is recorded.
When *Arp Rec* is Off, data of the entire keyboard performance is recorded, enabling you to change the Arpeggio patterns later.
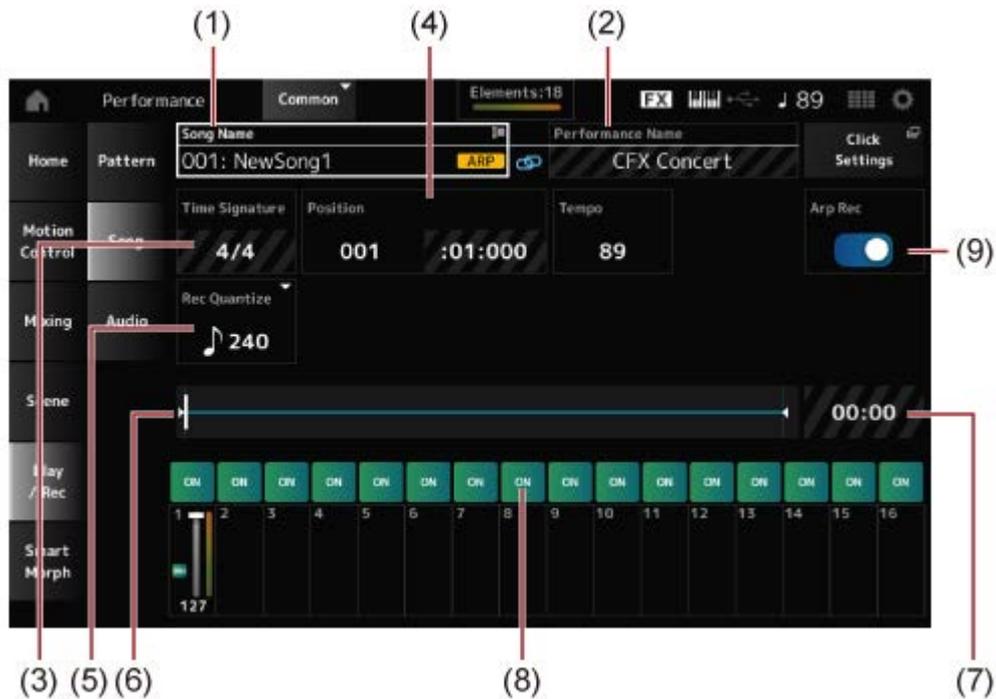
1   **Select a Performance.**

2   **Press the [SONG/PATTERN] button to open the *Play/Rec* screen and select the *Song* tab, and then press the [●] (Record) button.**

The [●] (Record) button flashes, and recording is set to standby.

NOTE

Recording can also be set to standby from: [PERFORMANCE] → *Play/Rec* → *Song* and by pressing the [●] (Record).

3   **Change the *Time Signature* and *Rec Quantize* as needed.**

(1)   Song Name

(2)   Name of the Performance currently selected

(3)   Beat

(4)   Position for starting playback and recording

(5)   Quantize

(6)   Shows the total length of the sequence and the current position for playback

(7)   Time for the entire sequence

(8)   Setting the track on or off for playback

(9)   Turning Arpeggio recording on or off (only for a new recording)

4   When the preparation is complete, press the [▶] (Play) button to start recording.

If the *Click Settings* is set, the precount starts when you press the [▶] (Play) button. Start playing the keyboard after the precount.

5   When the keyboard performance is finished, press the [■] (Stop) button to stop recording.

Recording some parts again (Punch-in Punch-out recording)   ★

There are three types of recording (*Record Type*) available on the MONTAGE M; *Replace*, *Overdub*, and *Punch*.

● *Replace*: overwrites the existing data.

● *Overdub*: adds a layer to the existing sound on the track.

● *Punch*: overwrites the specified section of the existing data.
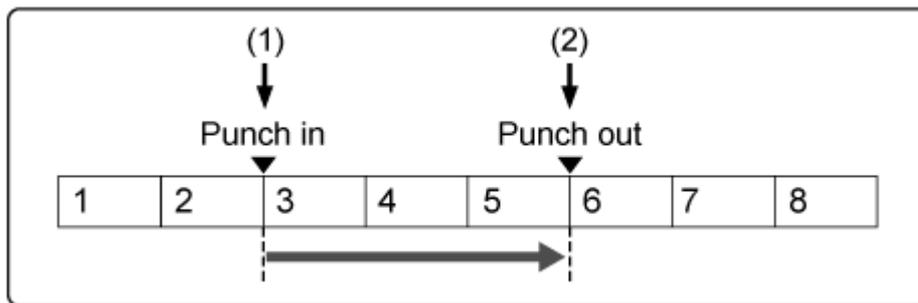
If you wish to rerecord a specified section, you can set up the Punch-in and Punch-out parameters for the Punch recording.
When you start the Punch recording, the recorded Song will be played back from the beginning. When the playback reaches the measure set for Punch-in, the recording starts automatically. The recording ends automatically when it reaches the measure set for Punch-out, and the rest of the recorded Song will be played back to the end. For example, if you wish to rerecord measures 3 to 5 of an eight-measure Song, follow the instructions shown below.
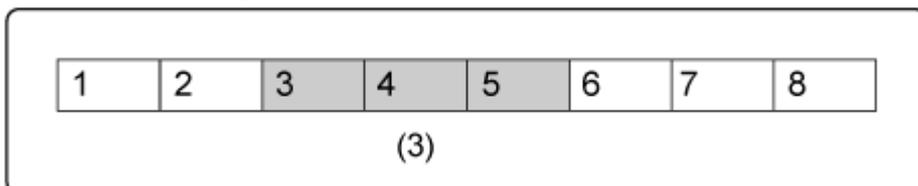
Before re-recording
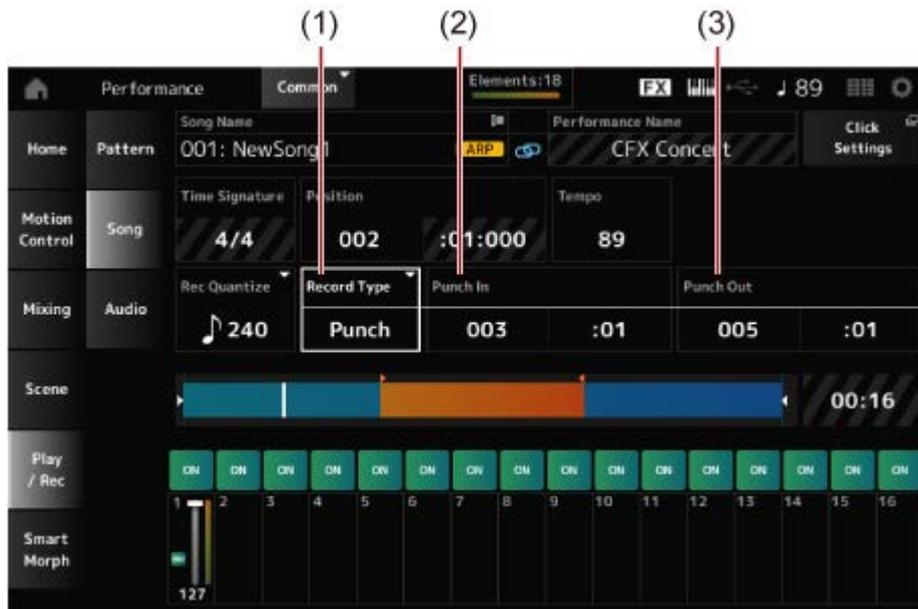
After re-recording

(1)   Start recording
(2)   Stop recording
(3)   Newly recorded data

For Punch-in Punch-out recording, set up the following parameters in the *Record Setup* screen.

(1) *Record Type = Punch*

(2) *Punch in* (measures and beats to start rerecording) = 003:01
Starting from the measure and beat specified here, the sound of the corresponding track will be turned off and your keyboard performance will be recorded.

(3) *Punch out* (measures and beats to end rerecording) = 005:01
Starting from the measure and beat specified here, the track will be played back.

Canceling the last recording action (*Undo* and *Redo*) ★

Undo cancels the last recording action and deletes what has been just recorded.
Redo restore the recording that has been canceled by *Undo*.

- *Undo* **(does not appear when there are no recordings.)**
  Tap to see the confirmation screen. *Continue* cancels the last recording action and restores the recorder to its original state.
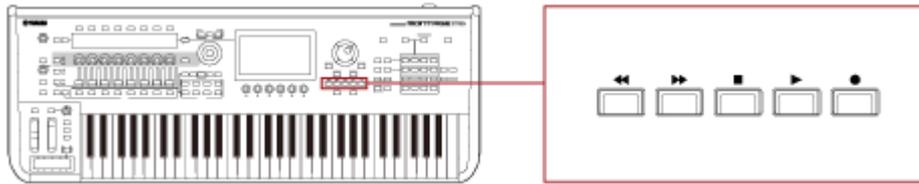
- *Redo* (does not appear until *Undo* has been done.)
Tap to see the confirmation screen. By selecting *Continue*, the state before performing *Undo* will be restored.

Playing back the Song ☆

To check the recorded Song, use the Sequencer Transport buttons.

Recording the Audio ☆

You can use the MONTAGE M to record and playback Audio files in stereo (44.1 kHz, 24-bit wav).

The recording level is fixed, and it is possible to record continuously for up to 74 minutes (assuming that the USB storage device has sufficient free memory).

1   Connect a USB flash drive to the USB TO DEVICE terminal ([1] or [2]) of the instrument.

2   Open the screen from: [PERFORMANCE] → *Play/Rec* → *Audio*.

The *audio recording* screen appears.

3   Press the [●] (Record) button.

The [●] (Record) button flashes, and recording is set to standby.

(1)	Position for recording
(2)	Shows the total length of the audio file and the current position for recording
(3)	Available recording time
(4)	Level meter
(5)	Trigger level

4   Set the *Trigger Level* (5).

If you set the *Trigger Level* to *manual*, recording will begin whenever you press the [▶] (Play) button.

Alternatively, if you set *Trigger Level* to a value between 1 and 127, recording will begin automatically after you have pressed the [▶] (Play) button and then whenever playback volume exceeds that level.

The level set here will be indicated by blue triangles in the level meter (4). For best results, set this parameter as low as possible to capture the entire signal, but not so low as to record unwanted noise.

5   Press the [▶] (Play) button.

If you have set the *Trigger Level* to *manual*, recording will begin immediately right after you press the [▶] (Play) button. While recording, the [●] (Record) button will light in red, and the [▶] (Play) button will light in green.

If you have set a value between 1 and 127 as the trigger level, the recording will begin automatically whenever the playback volume exceeds that level.

6   Play the keyboard.

If you set the *Trigger Level* to a value between 1 and 127, recording will begin automatically whenever the playback volume exceeds that level.

7   When you have finished playing, press the [■] (Stop) button.

The recorded audio file will be saved to the USB flash drive.
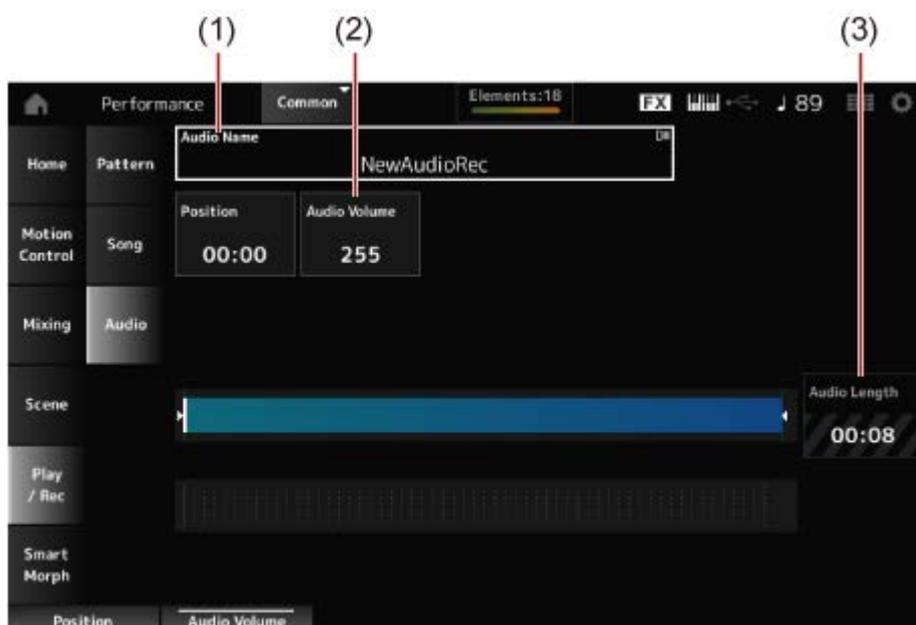
Playing an audio file ☆

As described below, the MONTAGE M can play audio files (44.1 kHz, 24-bit or 16-bit .wav in stereo) from a USB flash drive.
You can also play a Performance on the keyboard while playing back the audio file.

1 **Connect a USB flash drive to the USB TO DEVICE terminal ([1] or [2]) of the instrument.**

2 **Select *Load* from the context menu from: [PERFORMANCE] → *Play/Rec* → *Audio*, and tap *Audio Name*.**

3 **Select the USB flash drive and the desired folder for loading the audio data.**

4 **Select the desired wav file on the USB flash drive to load.**

(1)	Audio name
(2)	Volume for playback
(3)	Audio length

5 **Press the [▶] (Play) button.**

The audio file will play back.

6   **Move the cursor to** *Audio Volume* **(2), and then adjust the playback volume by using the Data dial.**

7   **Press the [■] (Stop) button to stop playback.**

Managing backup files of your Performances ☆

You can save backups of the Performances, Live sets, and the Utility settings you have created and saved (stored) on the instrument to a USB flash drive, as well as load settings from backup files from the USB flash drive to the instrument.

This section covers how to save all settings in the User memory to a USB flash drive and how to load your settings back to the instrument.

Contents
Available file formats
Saving settings to a USB flash drive as a backup file (*Save*)
Restoring settings from the backup file saved to the USB flash drive (*Load*)

Available file formats ⭐

Select the appropriate file format for the settings you wish to back up.

Saving to USB flash drive (*Save*) ⭐

■ MONTAGE M formats

- Backup file (.Y2A)

  Everything in User memory (including the User area, Library area, Songs, and Patterns)

- User files (.Y2U)

  Everything in the User area of User memory (including the Utility settings and Quick Setups)

- Library files (.Y2L)

  User area in User memory, excluding the Utility settings and Quick Setups (one bank for Live Sets)

If the file size is larger than approximately 2 GB, the file will be divided in two. The second file will have a different file extension, as shown below.

- Backup file (.Y2**B**)

- User files (.Y2**W**)

- Library files (.Y2**M**)

■ Generic file format

- Patterns and Songs (.MID)

  Patterns and Songs saved to User memory

Loading settings from a USB flash drive (*Load*) ⭐

■ Files saved on the MONTAGE M (.Y2A, .Y2U, .Y2L, .MID)

■ Generic file formats

- Audio file (.WAV and .AIF)

  Files used as User Waveforms

- MIDI file (.MID)

Files used as Patterns and Songs

■ **File formats used for older models**
- MOTIF XS (.X0A, .X0V, .X0G, .X0W)

- MOTIF XF (.X3A, .X3V, .X3G, .X3W)

- MOXF (.X6A, .X6V, .X6G, .X6W)

- MONTAGE (.X7A, .X7U, .X7L)

- MODX, MODX+ (.X8A, .X8U, .X8L)

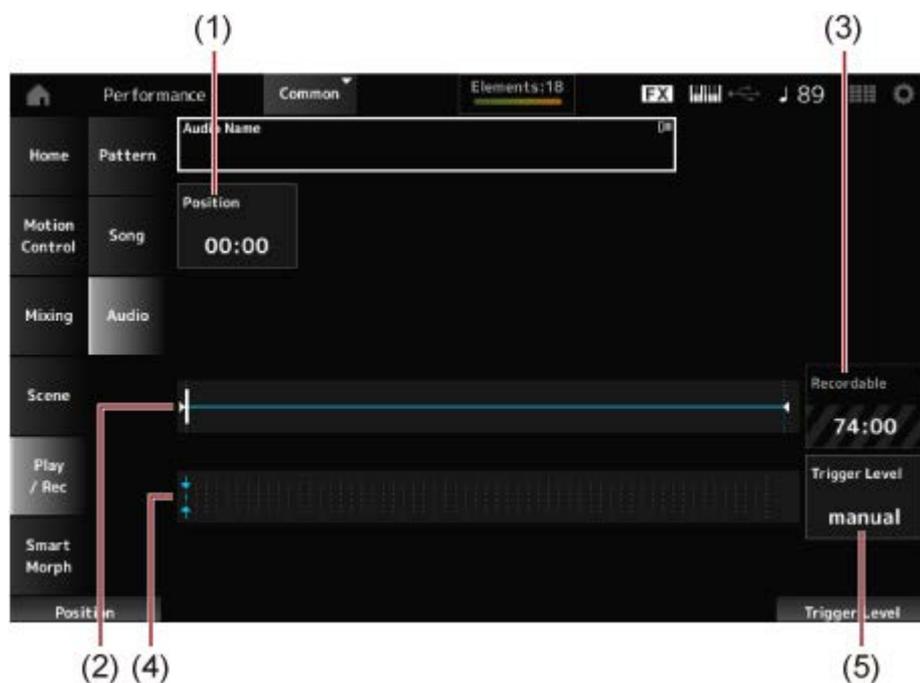# Saving settings to a USB flash drive as a backup file (*Save*) ☆
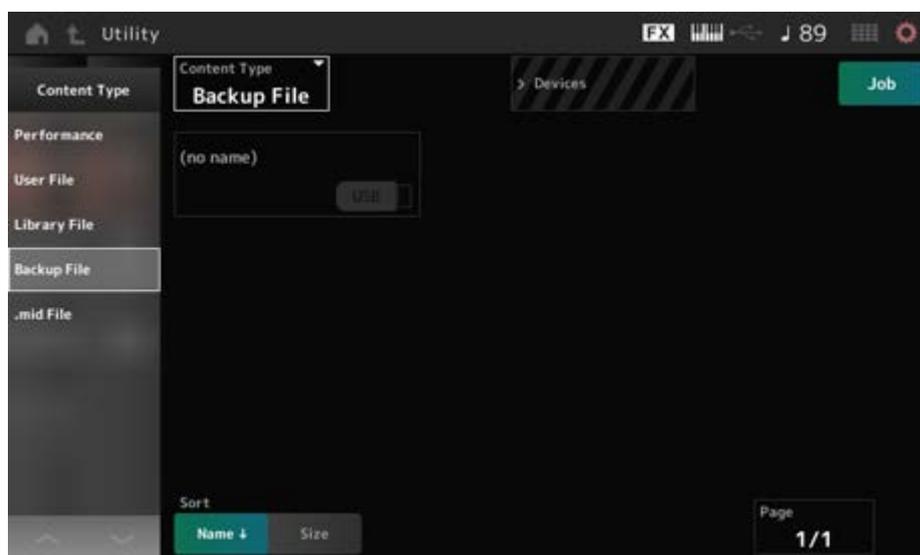
1   **Connect a USB flash drive to the USB TO DEVICE terminal ([1] or [2]) of the instrument.**
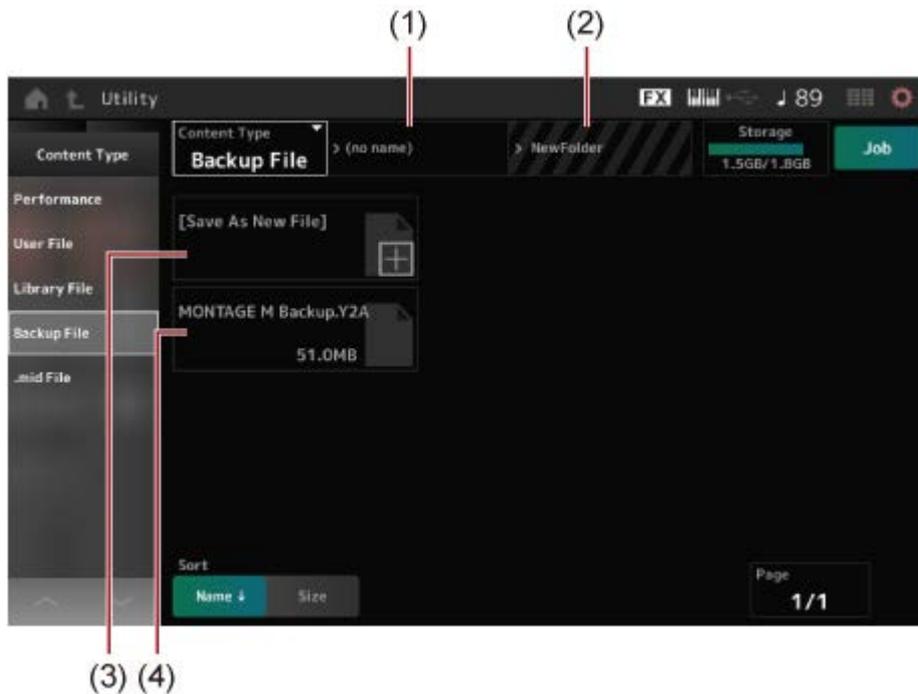
2   **Open the screen from: the [UTILITY] → *Contents* → *Save*.**

You can open the same screen by simultaneously holding down the [SHIFT] button and pressing the [STORE] button, and then selecting the *Save* tab.

3   **In the *Content Type*, select *Backup File*.**

4   **Select the USB flash drive and desired folder for saving the file.**

(1) Parent folder name

(2) Name of the destination folder currently selected in the USB flash drive

(3) Save to

(4) Files saved in the folder

5 Tap [+] for *Save As New File.*

This calls up the screen for entering names.

NOTE

To overwrite the existing file, confirm the process by tapping the file name on the screen. Tap YES to save the file.

6 Enter the file name you wish to use.

For specific information on how to enter file names, refer to the Quick Guide.

7 Tap *Done* to finish entering the name.

The backup file will then be saved to the USB flash drive (*Save*).
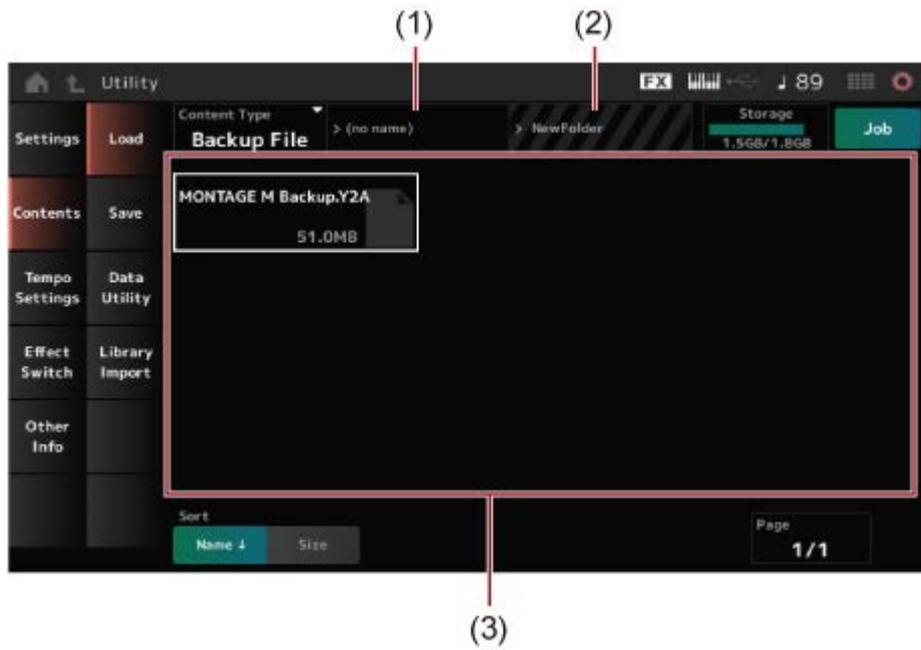
Restoring settings from the backup file saved to the USB flash drive (*Load*) ☆

NOTICE
When settings are loaded, the existing settings on the instrument will be overwritten and lost. Important settings you want to keep should be saved to a USB flash drive (*Save*) before loading the settings.

1 **Connect a USB flash drive to the USB TO DEVICE terminal ([1] or [2]) of the instrument.**

2 **Open the screen from: [UTILITY] → *Contents* → *Load*.**

You can open the same screen by simultaneously holding down the [SHIFT] button and pressing the [STORE] button.

3 **In the *Content Type*, select *Backup File*.**

4 **Select the desired source USB flash drive and folder that contains the settings.**

5 **Select the desired file on the USB flash drive for loading.**

(1)　　Parent folder name

(2)　　Name of desired folder currently selected in the USB flash drive

(3)　　Files saved in the folder

Performance settings can be backed up or shared using *Soundmondo* (sound management and sharing service).

- ***Soundmondo***
  https://www.yamaha.com/2/soundmondo

Using microphones and audio devices ☆

You can connect a microphone, audio equipment (such as a CD player), and an electronic musical instrument (such as a synthesizer) to the A/D INPUT jacks to play an audio input part (A/D INPUT Part).
Changes to the volume, pan, effects, and other settings for the audio input Part are applied and then mixed in with other Parts for the final output of this instrument.

Contents
Connecting microphones and audio devices **Using the Vocoder**   **Example: Vocoder**
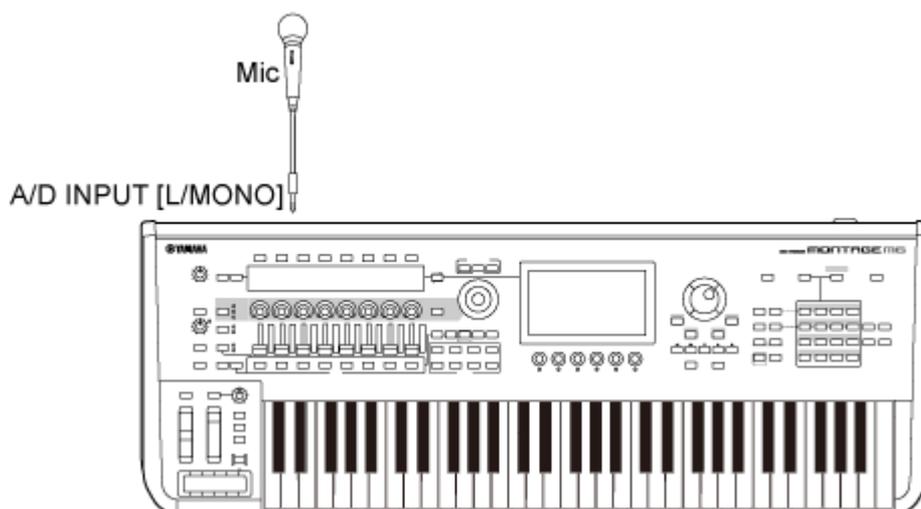
Connecting microphones and audio devices ☆
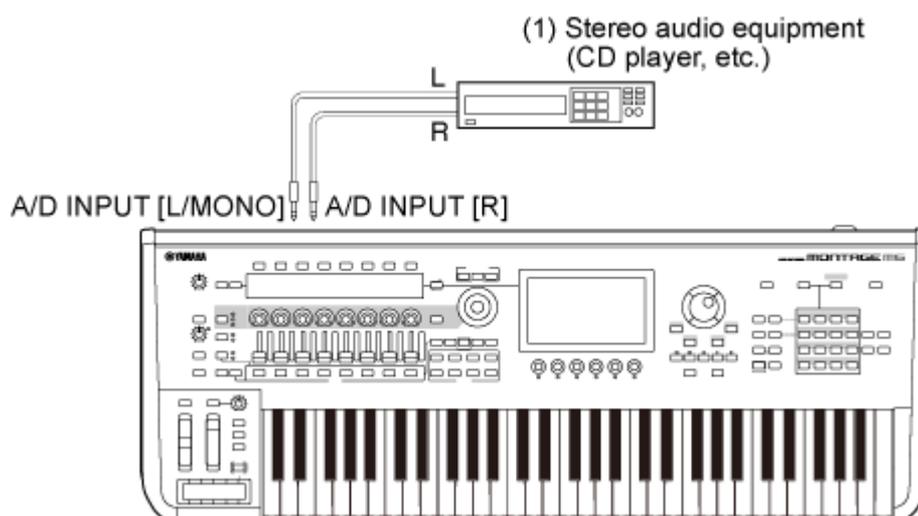
1 **Make sure to turn off the instrument and set the A/D INPUT [GAIN] knob to the minimum value.**

2 **Connect the external device to the A/D INPUT jack(s) on the rear panel.**

- **Connecting a microphone**

NOTE

Make sure to use a dynamic microphone. Condenser microphones cannot be used.

- **Connecting audio equipment or an electronic instrument**
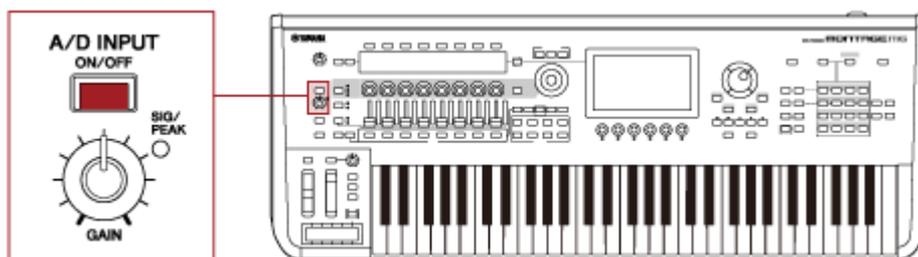
(1)   Stereo audio equipment (CD player, etc.)

3   **Turn on the connected device, and then turn on the MONTAGE M.**

4   **Open the screen from: [UTILITY] → *Settings* → *Audio I/O*.**

5   **Select the *A/D Input* setting for the device connected to the A/D INPUT jack(s).**

When a microphone or other equipment with a low output level is connected, set this parameter to *Mic.* When a synthesizer or a CD player or other equipment with a high output level is connected, set this parameter to *Line*.
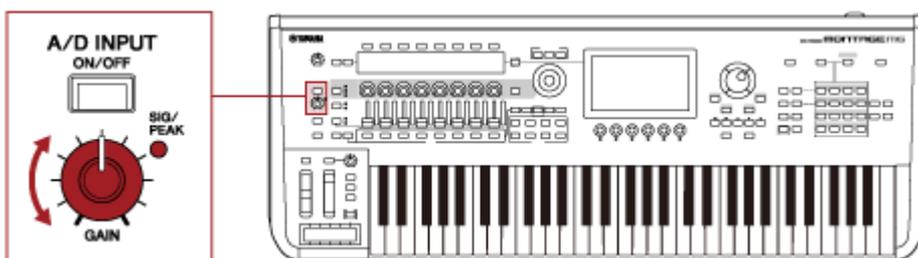
6   **Press the A/D INPUT [ON/OFF] button.**

The button lights up and the input from the audio equipment connected to the MONTAGE M is enabled.

7   **Listen to the sound from the external device connected to the MONTAGE M and turn the [GAIN] knob to adjust the gain.**

Adjust the knob so that the SIG/PEAK lamp lights up briefly in red only at the loudest input sounds.

8   **Press the [PERFORMANCE] button and select the Performance you wish to use with the external device connected to the MONTAGE M.**

9   **Play the keyboard while singing into the microphone or playing sounds with the audio equipment.**

Adjust the A/D INPUT volume on the Control sliders.

Using the Vocoder
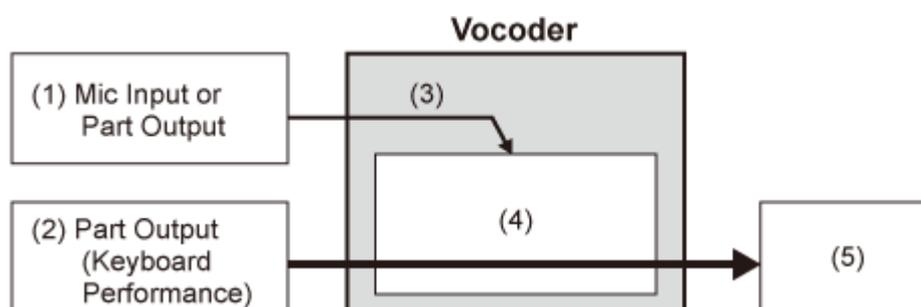
Example: Vocoder

This instrument is equipped with a Vocoder. The Vocoder is a powerful and popular effect processor that extracts the characteristics of the voice sung or spoken into the microphone to modify the keyboard sounds. For example, you can play the keyboard while talking into the microphone to make the instrument sound robotic.

The Vocoder modifies sound in a way that is similar to the mechanism for the generation of the human voice. The human voice consists of sounds generated from the vocal cords, which are then filtered by the throat, nose, and mouth. These resonant sections have specific frequency characteristics and they function effectively as a filter, creating many formants (harmonic content).

The Vocoder effect extracts the filter characteristics of the voice from the microphone input and recreates the vocal formants by the use of multiple bandpass filters. The machine-like 'robot' voice is created by passing the pitched sounds of musical instruments (such as a synthesizer sound) through the filters.

(1)   Mic Input or Part Output
(2)   Part Output (keyboard performance)
(3)   Extracting the characteristic of the input sound
(4)   Creating formants
(5)   Robot-like voice
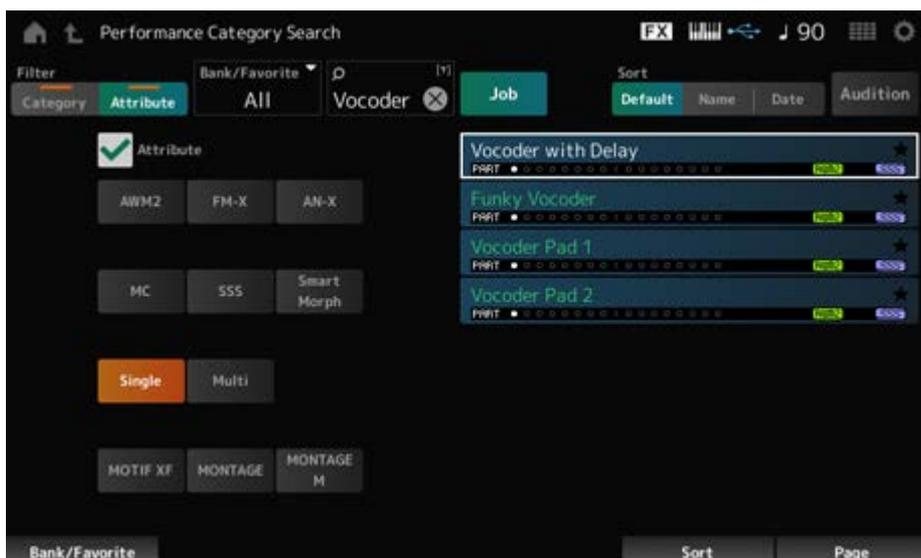
To use the Vocoder, connect the microphone, set the A/D Input settings in the *Utility* screen, and adjust the gain. Finally, select a Performance that uses the Vocoder effect, as shown below.

1   While the *Performance* screen is shown, press the [CATEGORY SEARCH] button.

2   Tap the button(s) on the screen to select the *Pad/Choir* category.

3   Tap the search box on the *Category Search* screen and enter "*Vocoder*."

4   Set the *Filter* to *Attribute* and select *Single*.

A list of Performances for Vocoder effects will be shown.

5   **Select the desired Performance and press the [ENTER] button to confirm.**

Connecting external MIDI instruments ☆

The USB and MIDI terminals on the rear panel are used for connecting to a computer and external MIDI devices. You can use these terminals to send Program Change messages to external MIDI devices when you change the Performance.

The Zone function is useful for setting up external MIDI devices.

Contents

Setting up the Zone function ☆

The Zone function enables control of multiple external devices from the built-in keyboard on this instrument.
On the MONTAGE M, you can use up to eight Zones per Performance.
For example, you can use this function to switch between the internal tone generator (tone generator block) and connected external sound modules by velocity or note range.

1 **Press the [PERFORMANCE] button to open the *Performance* screen.**

2 **Select a Part and open the screen from [EDIT/ ⟳] → *General/Pitch* → *Zone Settings*.**

The *Zone Settings* screen appears.

3 **Check the *Part Mode* setting.**

Select *Internal* to play the sound from the tone generator block, and *External* to play the sound from the external sound module.

NOTE

You can also use a shortcut for changing the *Part Mode* setting. When [PART SELECT] is on, quickly pressing the corresponding PART button twice (double-clicking) switches between *Internal* and *External* settings.

4 **If necessary, set the parameters for *Tx/Rx Ch* (*Transmit-Receive Channel*) and *Note Limit*.**

5   **Press the [STORE] button to save the Performance.**

Connecting and setting up a computer ☆

By connecting your computer to the MONTAGE M, you can use a DAW or sequencer software on the computer to create your own music.

The acronym DAW (digital audio workstation) refers to music software for recording, editing, and mixing audio and MIDI. The notable DAW applications include *Cubase*, *Logic*, *Pro Tools*, and *Live*.

Connecting a computer and setting up ★

By connecting a computer to the [USB TO HOST] terminal, you can send and receive audio signals and MIDI messages.

An AB-type USB cable and the driver for sending and receiving audio and MIDI are required for the connection.

You can install the *Yamaha Steinberg USB driver* or use a generic driver included in your computer's operating system.

Installing the *Yamaha Steinberg USB driver* ☆

1 **Download the latest driver from the URL shown below.**

https://download.yamaha.com/
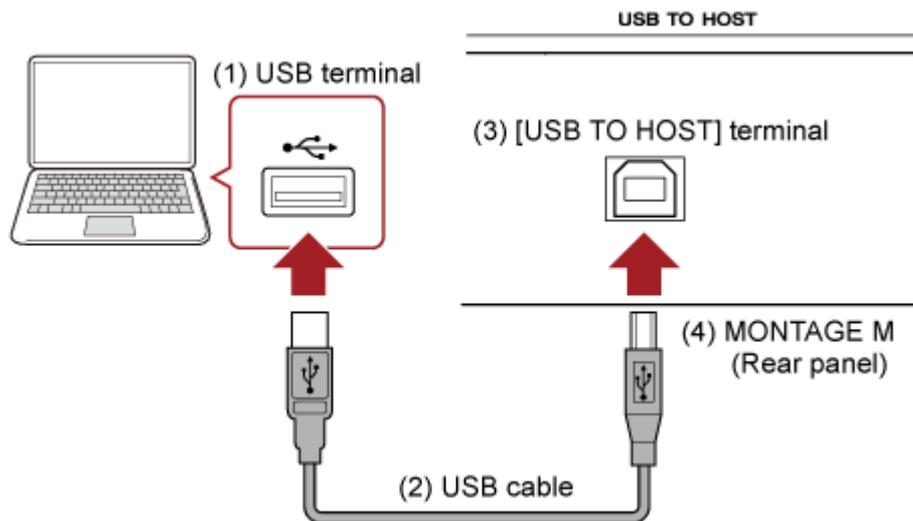
NOTE

- Information on the system requirements is also available at the above URL.
- The *Yamaha Steinberg USB driver* may be updated without prior notice.

2 **Extract the downloaded file and install the *Yamaha Steinberg USB driver* on your computer.**

For instructions on how to install the driver, refer to the Installation Guide included in the downloaded file.

When connecting this instrument to a computer, connect the USB cable to the [USB TO HOST] terminal of this instrument and the USB terminal of the computer as shown below.

(1) USB terminal
(2) USB cable
(3) [USB TO HOST] terminal
(4) MONTAGE M (Rear panel)

Setting up for sending and receiving audio and MIDI ☆

Connect the computer with a USB cable, and then set the parameters for handling audio and MIDI through the USB connection.
For audio, you only need to connect the cable. And, if necessary, change settings such as sampling frequency and gain.
For MIDI, connect the cable and then set the parameters for transmitting and receiving MIDI.

Transmission and reception of MIDI messages
● Open the screen from the [UTILITY] → *Settings* → *MIDI I/O* → *MIDI IN/OUT* and select USB.
  Set the instrument to enable the transmission and reception of MIDI through the [USB TO HOST] terminal.

● Open the screen from the [UTILITY] → *Settings* → *Advanced* → *USB Driver Mode*.
  Select *Vendor* for using the *Yamaha Steinberg USB driver*, and select *Generic* for using the generic driver.

About audio channels ★

For the output of audio signals, you can use the [USB TO HOST] terminal and the OUTPUT jacks.
If you wish to connect a computer directly to the instrument, use the [USB TO HOST] terminal.
This allows you to use up to 32 channels (or 16 stereo channels) at a sampling frequency of 44.1 kHz, or up to 8 channels (or 4 stereo channels) at a sampling frequency of 44.1 kHz to 192

kHz. To select which signal to output to a specific channel, open the screen from the [PERFORMANCE] → *Part* selection → [EDIT/ ⟳] → *General/Pitch* → *Part Settings*, and select the appropriate *Part Output*.

For the input of audio signals, you can use the [USB TO HOST] terminal and A/D INPUT jacks. Audio signals coming in through the [USB TO HOST] terminal can contain up to 6 channels (or 3 stereo channels), and *Digital In L/R*, *Main L/R*, and *Assign L/R* are used. These channels are used exclusively for monitoring when the instrument is connected to the DAW software, for example.

The signals received at *Main L/R* are output from the OUTPUT L/R jacks, while the signals received at the *Assign L/R* are output from the ASSIGNABLE OUT jacks.

The audio signals received at *Digital In L/R* can be changed as to volume, effect send, or output destination settings.

These settings are available also for the audio signals handled through the A/D INPUT jacks.

Audio channel (input)	Output destination
Main L/R or 1/2	OUTPUT L/R jacks
Digital L/R or 3/4	Digital In section
Assign L/R or 5/6	ASSIGNABLE OUT L/R jacks

MIDI channels and MIDI ports ★

There are 16 MIDI channels for playing 16 Parts on this instrument. When you wish to use more than 16 channels, you can use MIDI ports, which allow 16 channels per port. While a single MIDI cable is capable of handling MIDI data for one port (or 16 channels), a single USB cable is capable of handling MIDI data for up to 8 ports (or 128 channels) simultaneously.

On the MONTAGE M, the determined ports are provided for the USB terminals, as shown below.

- **Port 1**
  Dedicated for using the tone generator block of this instrument.

  Make sure to set to Port 1 on the external MIDI device or the computer, if you wish the tone generator block to be played on the external MIDI device or the computer.

- **Port 2**
  Dedicated for using the DAW remote control.

- **Port 3**

Dedicated for receiving MIDI messages from a MIDI device and sending them to another MIDI device (for *MIDI Thru*).

On Port 3, the MIDI messages received through the [USB TO HOST] terminal are treated as "*Thru*" on the MIDI [OUT] terminal, while the MIDI messages received through the MIDI [IN] terminal are treated as "*Thru*" on the [USB TO HOST] terminal.
For sending MIDI messages between the MONTAGE M and the computer through the USB cable, you need to select the appropriate MIDI Port as well as the MIDI channel. Set the Port settings on the external device suitable for the situation.

About music production using the computer ★

By connecting the MONTAGE M and the computer, you can use the DAW software as in the examples shown below.

● Using the DAW software on the computer to record your keyboard performance in MIDI or audio

● Using the tone generator block to play back the Song recorded on the DAW software

These instructions assume that the instrument and the computer are already connected. Shown below are some examples of using the DAW software and this instrument.

MIDI recording of your keyboard performance on the DAW ☆
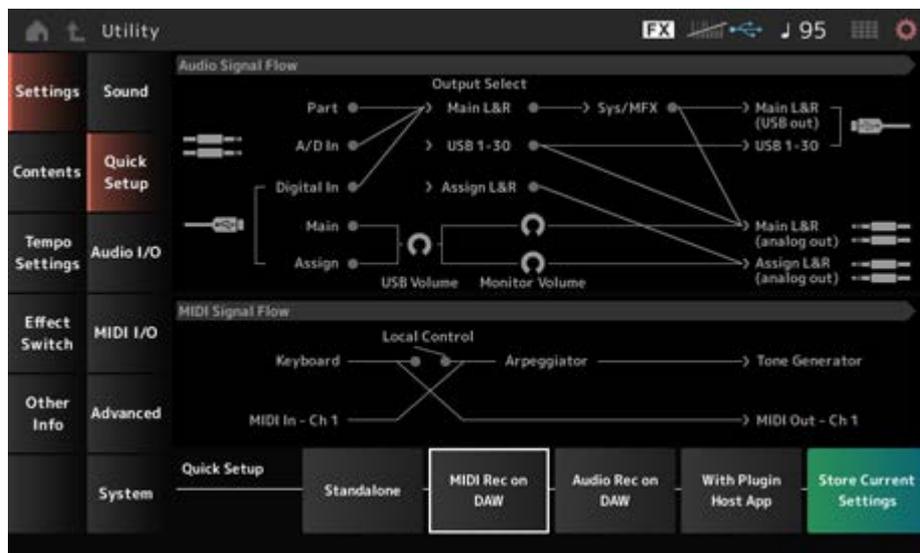
This shows how to record your keyboard performance on the DAW as MIDI data.

Settings on the MONTAGE M

1 **Open the screen from: [UTILITY] → *Settings* → *Quick Setup*.**

2 **Select *MIDI Rec on DAW*.**

> **NOTE**
> Alternately, you can simultaneously press the [QUICK SETUP] button and one of the Slot number and Category name selection buttons to select MIDI Rec on DAW.
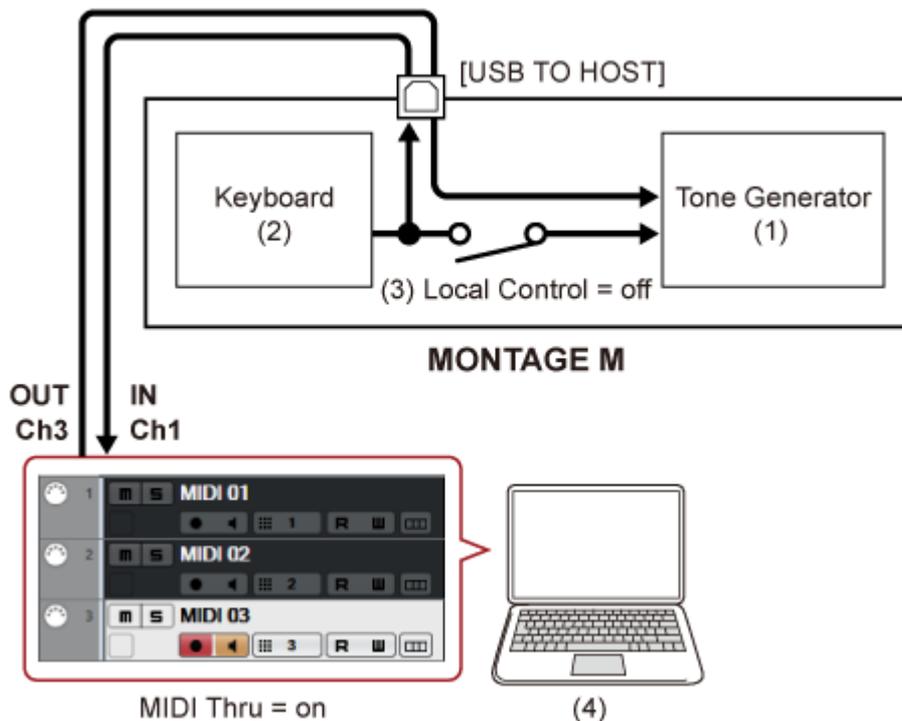
3 **Press the [EXIT] button to close the *Quick Setup* screen or press the [PERFORMANCE] button to open the *Performance* screen and select the desired Performance for recording.**

Settings on the DAW software

1 **Enable MIDI Thru.**

MIDI Thru is a setting used for sending MIDI messages from the built-in keyboard to the computer and back to the Tone generator block of the instrument according to the settings on the recording tracks.

As shown below, for example, the MIDI data entered from the MONTAGE M are sent to Channel 1. If MIDI Thru is set to ON on the computer, then the MIDI data is sent to Channel 3 from the computer to play the tone generator block at Channel 3. By using this setup, you can record the keyboard performance while listening to the same sound as the final output.

(1) Tone generator block
(recognizing data over MIDI Channel 3)

(2) Keyboard
(output via MIDI Channel 1)

(3) Local Control = off

(4) Computer (Cubase, etc.)

2   Record the keyboard performance on the DAW.

Using the tone generator block to play back Songs on the DAW ☆

This shows how to use the DAW software as a Multi-timbral sound generator.
It allows you to use the high-quality MIDI sound generator without placing too much load on your computer's CPU.

Settings on the MONTAGE M

1   Select a Performance.

After selecting a Performance, you may find it helpful to use the *Mixing* screen from: the [PERFORMANCE] → *Mixing* to mix Part 1 to 16.
Also, set *Kbd Ctrl Lock On* from the [UTILITY] → *Effect Switch* screen to set *Tx/Rx Ch.* of each Part to enable the reception of messages.

The setting on the DAW software

1 **With the tracks you wish to use for playing the tone generator block, set the MIDI output to Port 1 on the MONTAGE M.**

2 **Enter the MIDI data for each track.**

The sound engine that corresponds to each track on the MIDI channel should be controlled on the *Mixing* screen on the MONTAGE M.

Using the *Expanded Softsynth Plugin for MONTAGE M* ★

The *Expanded Softsynth Plugin (ESP) for MONTAGE M* features the same sound engine as the hardware MONTAGE M.
Since this software plugin works in sync with the hardware MONTAGE M, the same MONTAGE M sounds can be integrated seamlessly into your music production (where software is most convenient for a DAW), and into your live performance (where the actual instrument is used onstage). This lets you use either version of the MONTAGE M, depending on your personal preferences and specific application.

For more information on the installation and activation of the ESP, access the MONTAGE M Welcome page from the *Expanded Softsynth Plugin for MONTAGE M Download Information* leaflet included with the hardware MONTAGE M.

ESP Manual can be downloaded from the website below.
https://download.yamaha.com/

Using the *DAW Remote* function ★

The *DAW Remote* function allows you to control the DAW software from the controllers on the top panel of the MONTAGE M.
This function is available only when the instrument is connected to the computer with a USB cable. It cannot be used when connected with a MIDI cable.

Settings on the MONTAGE M

1 **Use an AB-type USB cable to connect a computer to the [USB TO HOST] terminal of the instrument.**

2 **Select the DAW software from: [DAW REMOTE] → *Settings* → *DAW*.**

Settings on the DAW software

This section explains how to set up the DAW software.

Depending on the version of your DAW software, the setup procedure may be different or the setup itself may not be possible. For details, please refer to the relevant owner's manual for the DAW software you are using.

NOTE

Once the connection between the computer and MONTAGE M is lost, the DAW software may not recognize MONTAGE M even after reconnection. If this happens, restart the DAW after the reconnection.

■ **Cubase**

1   *Device/Studio → Device Settings.../Studio Setup...* **to call up the dialog.**

2   **Select** *MIDI → MIDI Port Setup* **and uncheck the** *In All MIDI Inputs* **field of** *MONTAGE M-2* **or** *MONTAGE M Port 2.*

3   **Press the [+] button on the upper left corner of the dialog, and then select** *Mackie Control* **from the list.**

4   **Select** *Remote Devices → Mackie Control.*

5   **Set the** *MIDI Input* **and the** *MIDI Output* **to** *MONTAGE M-2* **or** *MONTAGE M Port2.*

6   **(Optional) Assign desired functions to F1–F8 of** *User Commands.*

■ **Logic Pro**

1   **Select** *Logic Pro X → Preferences → Advanced* **and check** *Show Advanced Tools.*

2   *Logic Pro X → Control Surfaces → Setup…* **to call up the dialog.**

3   **From** *New → Install…,* **select** *Mackie Control* **of** *Mackie Designs.*

4   **Set the** *Output Port* **and the** *Input Port* **of** *Mackie Control* **to** *MONTAGE M Port2.*

5   (Optional) *Logic Pro X → Control Surfaces → Controller Assignments...* to set *Zone* to *Control Surface: Mackie Control* and assign functions to *Control F1–F8.*

■ **Pro Tools**

1   *Setup → Peripherals…* to open the dialog.

2   Select the *MIDI Controllers* tab.

3   Set the *Type* to *HUI* and set *Receive From* and *Send To* to *MONTAGE M-2* or *MONTAGE M, Port2* of *Predefined.*

■ **Live**

1   *Live → Preferences…* to open the dialog.

2   Select the *Link/MIDI* tab.

3   Select *MackieControl* for the *Control Surface*.

4   Set the *Input* and the *Output* to *MONTAGE M-2* or *MONTAGE M Port2*.

5   (Optional) Assign desired functions to F1–F8 by setting the operation of MIDI notes F#2–C#3 in the *Edit MIDI Map* of the *Options* menu.

Connecting a smart device ☆

You connect a smart device such as a smartphone and a tablet to the MONTAGE M.
Smart device apps that are compatible with the MONTAGE M provide many more convenient and enjoyable ways to use this musical instrument.

For more information on the apps and supported devices, refer to the Yamaha website.

For details on how to connect the devices, refer to the "Smart Device Connection Manual," which is available on the Yamaha website. For audio signal transfer using iOS, refer to the connection instructions in the document that use a Lightning to USB Camera Adapter.

To connect a smart device, open the [UTILITY] → *Settings* screen to set the *USB Driver Mode* to *Generic*.

Connecting External MIDI Instruments ☆

Using USB cables and standard MIDI cables (that are commercially available), you can connect an external MIDI instrument to the MONTAGE M.
You can play an external MIDI instrument from the built-in keyboard, or play the tone generator block from an external MIDI keyboard or sequencer.

Make sure to match the MIDI Transmit Channel of the external MIDI instrument with the *MIDI Receive Channel* of the MONTAGE M.
To set the *MIDI Receive Channel* of the MONTAGE M, use *MIDI I/O Ch.* for Parts having Keyboard Control is set to On, and *Tx/Rx Ch.* for Parts having Keyboard Control set to Off. If the *Part Mode* is set to *External*, the Part will not receive MIDI messages from the external device.
For more information on MIDI Transmit Channel of the external MIDI keyboard, refer to the owner's manual of the MIDI Keyboard you are using.

Use the Zone function if you would like to play sounds from both the internal tone generator block and the external sound module.
When you wish to play the sound only from the external sound module, lower the volume on the MONTAGE M, or set Local Control to OFF from: [UTILITY] → *Settings* → *MIDI I/O*.
To set the receive channel on the external MIDI device, refer to the owner's manual of the MIDI Keyboard you are using.

The MIDI output channel on this instrument should be set to a different value, depending on whether there are any Parts with *Part Mode* set to *External*.
When there are no Parts with *Part Mode* set to *External*, *MIDI I/O Ch.* is used for Part Common or a Part with Keyboard Control set to On. *Tx/Rx Ch.* is used for a Part with Keyboard Control set to Off.
When there are any Parts with *Part Mode* set to *External*, *Tx Ch.* is used for Part Common or a Part with Keyboard Control set to On. *Tx Ch.* is used for the Part with the Keyboard Control set to Off. Any Parts with *Part Mode* set to *Internal* will not transmit MIDI messages.

NOTE
You can use either the [USB TO DEVICE] or MIDI terminals to connect the external MIDI instrument.

Connecting a USB MIDI keyboard to the [USB TO DEVICE] terminal ★

By connecting a USB MIDI keyboard to the [USB TO DEVICE] terminal, you can use the connected keyboard just like the built-in keyboard, depending on the specifications of that

keyboard.

> **NOTICE**
>
> - The rating of the USB TO DEVICE terminal is a maximum of 5 V/500 mA for each terminal. Do not connect USB devices having a rating above this, since this can cause damage to the instrument itself.
> - Use an AB-type USB cable of less than 3 meters.

Compatible MIDI devices ☆

- USB class-compliant MIDI devices
  USB MIDI keyboards

- Compatible Yamaha MIDI devices
  CP1, CP4 STAGE, CP40 STAGE, CP88, CP73, MODX, MODX+, MONTAGE, MOTIF XF, MOXF, MX, *reface*, YC

Special notes concerning MIDI communication ☆

MIDI communication with a device connected via the [USB TO DEVICE] terminal follows special rules for allowing the device to behave like a built-in keyboard.

- MIDI communication is one-way only (sent from the external MIDI device and received by the MONTAGE M).

- All MIDI data is received regardless of the *MIDI IN/OUT* and *MIDI I/O Ch.* settings.

- For Parts with Keyboard Control set to on, data received on all corresponding channels is shared.
  (For example, when Keyboard Control for Parts 1 to 3 is set to on, data received from any of channels 1 to 3 will be delivered to all Parts 1 to 3.)

- Each Part with Keyboard Control set to off receives the data of only the corresponding channel for the Part.

Connecting an external MIDI device to MIDI terminals ★

For using MIDI terminals, connect a device with MIDI cables, and then select *MIDI* from the [UTILITY] → *Settings* → *MIDI I/O*.

Screens and parameters ☆

This chapter gives descriptions of the parameters shown on the Main display.

Contents

Viewing the screens

***Performance* screen**

***Common Edit* screen**

***Part Edit (AWM2)* screen**

   Part Common Edit

   Element Edit

***Drum Part Edit (AWM2)* screen**

   Part Common Edit

   Key Edit

***Part Edit (FM-X)* screen**

   Part Common Edit

   Operator Edit

***Part Edit (AN-X)* screen**

   Part Common Edit

   Oscillator Edit

   Noise Edit

Category Search screen

Live Set screen

Utility screen

Screens shown by pressing specific buttons

Viewing the screens ☆

Information on the Main display ★
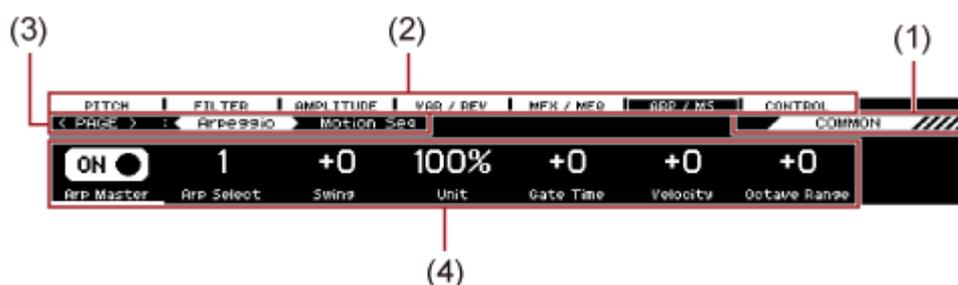
Refer to the Quick Guide for the information shown on the Main display.

Information on the Sub display ★

The information shown on the Sub display varies depending on what you are editing or what you selected with the [QUICK EDIT] button.

	Indicators	Description
1	What you are editing	Shows what you are editing with Quick Edit (such as a Performance or Part) on the Sub display.
2	Tabs	Shows the parameters for what you are editing. Use the Tab selection buttons to change tabs.
3	Page	Shows the pages on the tab. Use the Tab PAGE buttons to change pages.
4	Parameter area	Shows the values, switches, and parameter names. Use Knobs 1-8 to change the settings.

- **About the *Ring⇔FM* parameter**

  The *Ring⇔FM* parameter for AN-X Part Edit shown on the Sub display corresponds to the *Ring Level* and *FM Level* parameters shown on the Main display.

  By moving the knob, you can change the ratio of these modulations.

Performance screen

☆

The *Performance* screen lets you select a Performance for playing on the keyboard or modify the Performance settings to customize the Performance.
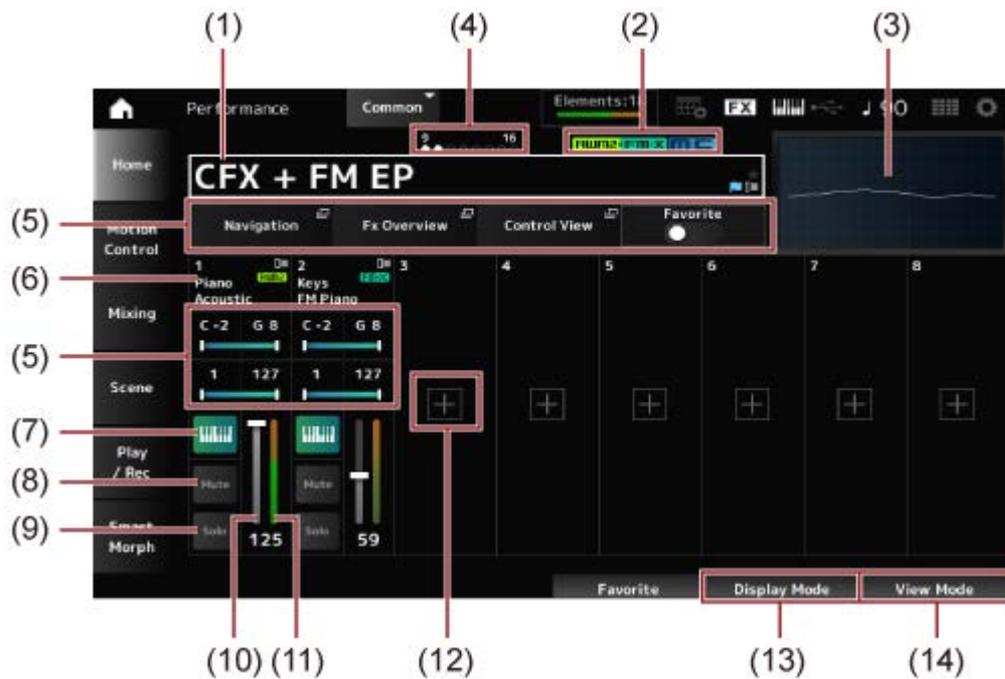
Home ★

Operation

- Press the [PERFORMANCE] button.
- Tap the 🏠 (*Home*) icon

(1)   Performance Name
Shows the name of the selected Performance.
Tapping on the name calls up the context menu for *Category Search*, *Edit*, and *Property*.
You can check the status of the Performance with the following flags.

● **Favorite Flag (⭐)**

A star will be shown when you turn on the *Favorite* switch. The same star will be shown
on the *Performance Category Search* screen.

● **Edit Flag (🚩)**

The blue flag will be shown when you change a parameter in the Performance. The Edit
flag will be turned off when you save the settings with the [STORE] button.

(2)   Performance Attribute
The Performance attributes will be shown.

Attribute	Description
AWM2	Performances using the AWM2 sound engine.
Fm-x (in one color)	Performances using the FM-X sound engine.
Fm-x (in two colors)	Performances using an FM-X Part containing the Smart Morph information
AN-X	Performances using the AN-X sound engine
▦▬	Performances featuring Motion Control

Attribute	Description
SSS	Performances that support *Seamless Sound Switching*

* Performances that combine multiple sound engine types are indicated with the "+" sign.

(3) Oscilloscope

Shows the waveform of the *Main L&R* output.

(4) Part Indicator

When the cursor is on the *Performance Name* or on Parts 1 to 8, the status for Parts 9 to 16 will be shown.

When the cursor is on Parts 9 to 16, the status for Parts 1 to 8 will be shown.

Nothing will be shown when Parts 9 to 16 are not used.

(5) View area for various parameters

Different parameters will be shown in this view area depending on the *Display Mode*.

(6) Part Name

Part Type and Category, or Part Name will be shown.

You will see the context menu for *Category Search*, *Edit*, *Copy*, and *Property* when you tap on the Part Name.

When a Part other than Part 1 is selected and the sound is already set for that Part, the context menu for *Category Search*, *Edit*, *Copy*, and *Delete* is shown.

Tap [+] to add a Part.

(7) Keyboard Control Switch

Keyboard Control is used for selecting Parts to play on the keyboard.

When Keyboard Control is set to On, Parts with Keyboard Control set to On can simultaneously be played, if the Part is set to *Common* or Keyboard Control for the Part is set to On.

When Keyboard Control is set to Off, you can play the Part on the keyboard only when that Part is selected.

Settings: Off, On

(8) Part Mute

Switches Part Mute on or off.

Settings: Off, On

(9) Part Solo

Switches Part Solo on or off.

Settings: Off, On

(10) Part Volume

Sets the volume for the Part.

Settings: 0–127

(11) Part Level Meter

Shows the audio output level for the Part.

(12) **[+] (Add)**

When you tap [+], the *Part Category Search* screen or the *Performance Merge* screen opens, allowing you to add a Part to the Performance.

(13)
(14)

Switching the *Display Mode* ★

When you change the *Display Mode*, different parameters will be shown in the view area of the *Home* screen.

You can select a different *Display Mode* by moving the corresponding display knob.

■ *Range*

Navigation

Opens the *Navigation* screen.

Fx Overview

Opens the *Fx Overview* screen.

Control View

Opens the *Control View* screen.

Favorite

Turns the *Favorite* switch on or off.

Settings: Off, On

Note Limit

Sets the note range (the lowest and the highest notes) for the Part.

When the first note specified is higher than the second (for example, C5 to C4), the notes in the ranges C−2 to C4 and C5 to G8 will be played.

Settings: C−2–G8

Velocity Limit

Sets the velocity range for the Part.

Settings: 1–127

■ *FX/Pan*

Var Return

Sets the output level (Return Level) of the signals processed by the Variation Effect.

Settings: 0–127

Rev Return

Sets the output level (Return Level) of the signals processed by the Reverb Effect.

Settings: 0–127

Pan

Sets the Pan of the selected Performance.

Settings: L63–C–R63

Volume

Sets the volume of the selected Performance.

Settings: 0–127

Var (Part Variation Send)

Sets the level of the signals sent to the Part Variation Effect.

Settings: 0–127

Rev (Part Reverb Send)

Sets the level of the signals sent to the Part Reverb Effect.

Settings: 0–127

Dry (Part Dry Level)

Sets the dry level (or the level of the signals not processed by the System Effect) of the Part.

Settings: 0–127

Pan (Part Pan)

Sets the Pan position (in the stereo field) for the Part.

Settings: L63–C–R63

■ *Arp/MS/Porta*

Arp Select

Changes the Arpeggio selection.

Settings: 1–8

MS Select

Changes the Motion Sequence selection.

Settings: 1–8

Portamento Switch

Sets Portamento on or off for Parts having the *Portamento Part Sw* set to On.

This switch is linked to the [PORTAMENTO] button on the top panel.

Settings: Off, On

Portamento Time

Sets the time length (or speed) for the pitch transition of Portamento.

This is specified as an offset value to the Part *Portamento time*.

Settings: −64–+63

Arp On/Off (Arpeggio Part Switch)

Sets the Arpeggio on or off for the Part.

When both Arpeggio and Arpeggio Hold are set to On, this is shown as "*Arp Hold On.*" When
the Arpeggio is set to on, you can switch *Arp Hold* On or Off by simultaneously holding down the
[SHIFT] button and tapping the *Arp On/Off* button on the screen.

Settings: Off, On

MS On/Off (Motion Sequencer Part Switch)

Sets Motion Sequencer for the Part on or off.

Settings: Off, On

Prt On/Off (Portamento Part Switch)

Sets Portamento for the Part on or off.

Settings: Off, On

Time (Portamento Part Time)

Sets the time length of the pitch transition for Portamento of the Part.

Settings: 0–127

■ *Mode/Transpose*

MIDI I/O Ch.

Sets the MIDI channel for input and output of the *Part Common* and the *Part* having the Keyboard Control Switch set to ON.

Settings: Ch1–Ch16

Octave Shift (Keyboard Octave Shift)

Shifts the pitch of the keys in octaves.

This is linked to the OCTAVE buttons on the top panel.

Settings: −3–+3

Transpose (Keyboard Transpose)

Shifts the pitch of the keys in semitones.

Settings: −11semi–+11semi

NOTE

For any notes outside the pitch range between C−2 and G8 (the range that can be played on this instrument), the resulting notes will sound one octave higher (or lower.)

Int/Ext (Part Mode)

Sets the Internal tone generator (*Int*) or the external sound module (*Ext*) for playing on the keyboard.

Settings: *Int, Ext*

Ch (Tx/Rx Ch)

Sets the channel for transmitting and receiving MIDI messages for the Zone when *Part Mode* is set to *Internal* and the Keyboard Control Switch is set to Off.

Settings: Ch1–Ch16, Off

Ch (Transmit Ch)

Sets the channel for transmitting and receiving MIDI messages for the Zone when *Part Mode* is set to *External*.

Settings: Ch1–Ch16

Oct (Zone Octave)

Shifts the pitch of the zone in octaves.

Settings: −3–+0 (standard)–+3 (in octaves)

Trans (Zone Transpose)

Shifts the pitch of the zone in semitones.

Settings: −11–+0 (standard)–+11

■ *Filter*

Cutoff (Cutoff Frequency)

Changes the sound by setting the cutoff frequency of the filter.

When the Low Pass Filter is selected, you can make the sound brighter by setting larger values here, or darker by setting smaller values.

This is specified as an offset value to the filter cutoff frequency for the Part.

Settings: −64–+63

Resonance

Adds characteristics to the sound by adjusting the signal level near the cutoff frequency.

This is specified as an offset value to the filter resonance for the Part.

Settings: −64–+63

FEG Depth

Sets the range of the cutoff frequency change by the FEG.

This is specified as an offset value to the *Part FEG Depth*.

Settings: −64–+63

Cut (Part Cutoff Frequency)

Changes the sound by setting the cutoff frequency of the filter. When the Low Pass Filter is selected, you can make a brighter sound by setting a larger value to this parameter, and a darker sound by setting a smaller value.

This is specified as an offset value to the filter cutoff frequency set on the *Filter Type* screen.

Settings: −64–+63

Res (Part Resonance)

Adds special tonal variation in the sound by adjusting the signal level near the cutoff frequency. This is specified as an offset value to the filter resonance set on the *Filter Type* screen.

Settings: −64–+63

FEG (Part FEG Depth)

Sets the range of the cutoff frequency change controlled by the *Filter EG* setting in the *Filter Type* screen.

When it is set to 0, the settings in the *Filter Type* screen will be used as is.

Settings: −64–+63

Changing the *View Mode* ★
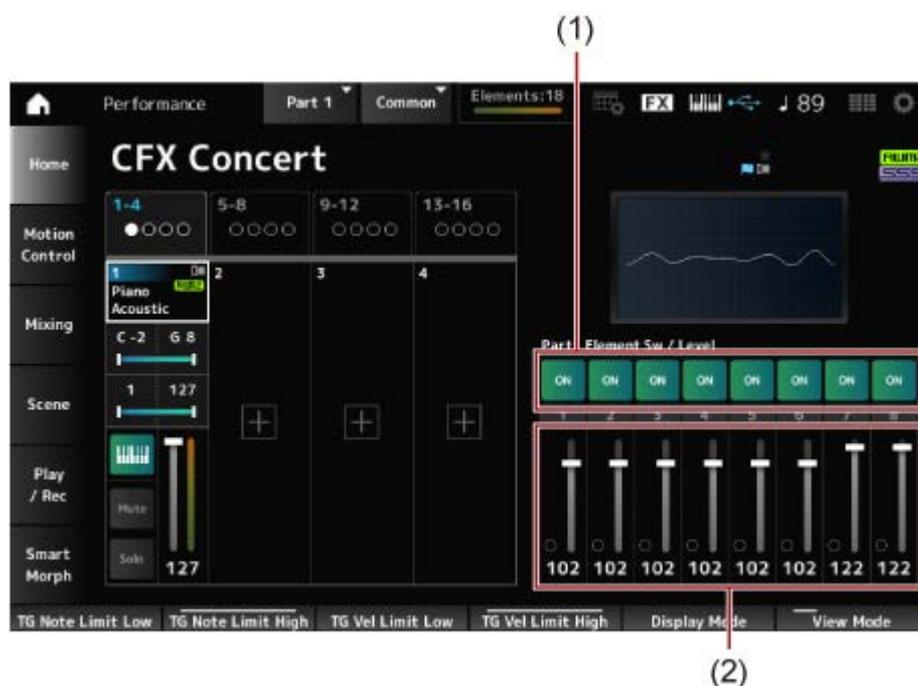
You can access more detailed information from the *Home* screen by using *View Mode*.

You can select a different *View Mode* by moving the corresponding display knob.

When the cursor is on the *Performance Name*, pressing the [PERFORMANCE] button also changes the view.

■ *Element Sw/Level*

Shown when the *View Mode* is set to *Part Info* and the current Part is a Normal Part (AWM2).

(1) Element Sw (Element Switch)
(2) Element Level

Element Sw (Element Switch)

Switches the Element On or Off.

Settings: Off, On

Element Level

Sets the output level for the Element.

Settings: 0–127

■ *Drum Key*

Shown when the *View Mode* is set to *Part Info* and the current Part is a Drum Part.

Drum Key Level

Sets the output level for the Drum Key.

Settings: 0–127

■ Algorithm

Shown when the *View Mode* is set to *Part Info* and the current Part is a Normal Part (FM-X).

Algorithm (Algorithm Number)

Changes the Algorithm.

Tapping the Algorithm image calls up the *Algorithm Search* screen.

Settings: Refer to the *Data List*.
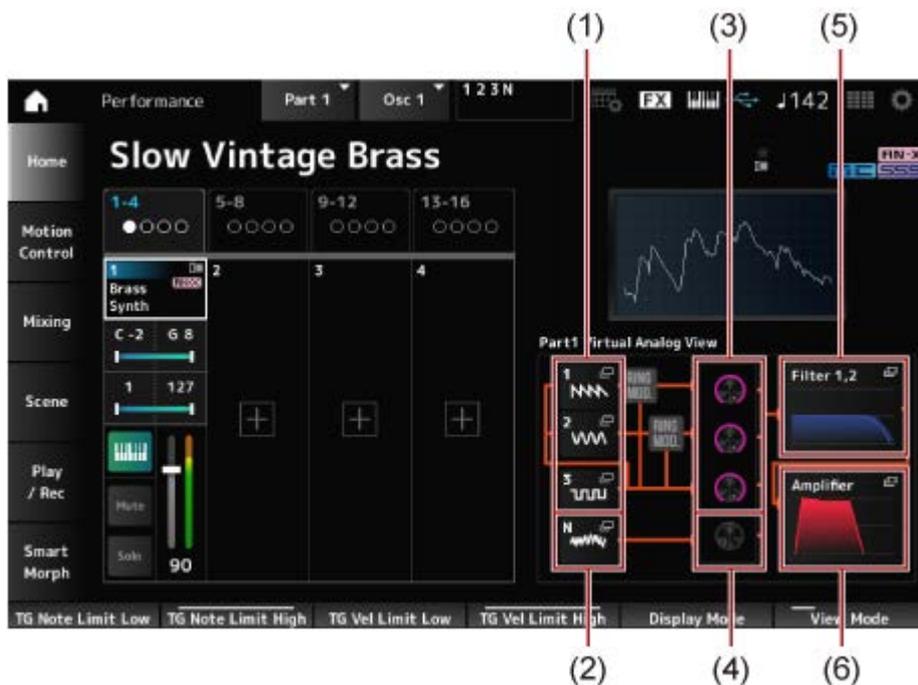
Feedback (Feedback Level)

Sets the feedback level.

Settings: 0–7

■ *Virtual Analog*

Shown when the *View Mode* is set to *Part Info* and the current Part is a Normal Part (AN-X).

(1)	*1–3 (Oscillator 1–3)*
(2)	*N (Noise)*
(3)	*Oscillator Level*
(4)	*Noise Level*
(5)	*Filter 1, 2*
(6)	*Amplifier*

Oscillator Level

Sets the output level for the Oscillator.

Settings: 0–511

Noise Level

Sets the noise level.

Settings: 0–511

1–3 (Oscillator 1–3)

Opens the *OSC/Tune* screen for Part Edit (AN-X).

N (Noise)

Opens the *Noise* screen for Part Edit (AN-X).

Filter 1, 2

Opens the *Filter Type* screen for Part Edit (AN-X).

Amplifier

Opens the *Amp EG* screen for Part Edit (AN-X).

■ *Smart Morph*

Shown when the *View Mode* is set to *Smart Morph*.
The map will not be shown when there is no *Smart Morph* information.

■ *Motion Seq*

Shown when the *View Mode* is set to *Motion Seq*.
Shows the lane set in the *View Lane* of the current Part.
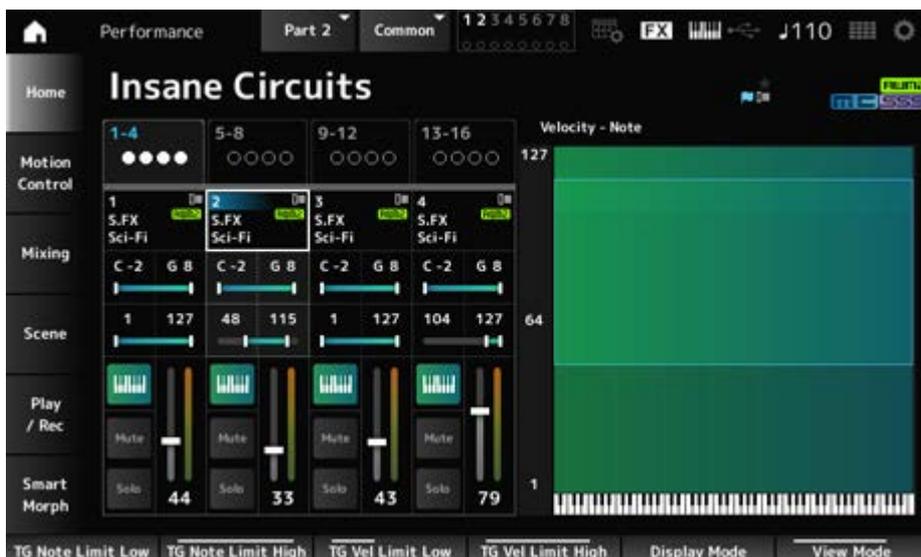
■ *Velocity—Note*

Shown when the *View Mode* is set to *Velocity—Note*.

This is convenient for setting velocity splits when using multiple Parts.

■ *Part—Note*

Shown when the *View Mode* is set to *Part—Note* or *Part Info* and the current Part is *Common*.

Motion Control ★

On the *Motion Control* screen, you can set the Motion Control settings applied to the entire Performance.

Super Knob ☆

In the *Super Knob* screen, you can set the values for controlling the Super Knob.
You can set a link between the Super knob and each of the assignable knobs.

Operation

[PERFORMANCE] → *Motion Control* → *Super Knob*

(1)   *Super Knob Link*
(2)   *Assignable Knob 1–8 Value*

(3)   *Assignable Knob 1–8 Value Left*

(4)   *Assignable Knob 1–8 Value Mid*

(5)   *Assignable Knob 1–8 Value Right*

MS Master (Motion Sequencer Master Switch)

Sets the Motion Sequencer for the entire Performance on or off.

This switch is linked to the [MSEQ ON/OFF] button on the top panel.

Settings: Off, On

Super Knob MS (Super Knob Motion Sequencer Switch)

Sets the Motion Sequencer used for the Super Knob on or off.

Settings: Off, On

LED Pattern

Sets the lighting pattern of the Super knob.

Settings: *Off, Type 1, Type 2-1, Type 2-2, Type 3-1, Type 3-2, Type 4-1, Type 4-2, Type 5-1, Type 5-2, Type 6, Type 7-1, Type 7-2, Type 8-1, Type 8-2, Type 9, Type 10, Type 11, Type 1B, Type 2-1B, Type 2-2B, Type 3-1B, Type 3-2B, Type 4-1B, Type 4-2B, Type 5-1B, Type 5-2B, Type 6B, Type 7-1B, Type 7-2B, Type 8-1B, Type 8-2B, Type 9B, Type 10B, Type 11B, Rotary 1, Rotary 2, Rotary 3, Rotary 4, Rotary 5, Rotary 6, Rotary 7, Rotary 8, Rotary 9, Rotary 10*

Super Knob (Super Knob Value)

Sets the Super Knob value.

Settings: 0–1023

Mid Position

Set the *Mid* value for the Super Knob.

Settings: *Off*, 1–1022

Edit Super Knob

Opens the *Common Edit Control Assign* screen for setting the parameters controlled by the Super Knob.

Super Knob Link

Sets the corresponding knob to link to the Super Knob.

When these switches are set to Off, the operation of the Super Knob will not affect the parameter of the knob.

Settings: Off, On

Assignable Knob 1–8 Value

Shows the current values for the Assignable knobs (Knobs 1 to 8).

Settings: 0–1023

Assignable Knob 1–8 Value Left

Shows the value of the assignable knobs (Knobs 1–8) when the *Super Knob Value* is set to 0 (or the Super Knob is turned all the way to the left).

Settings: 0–1023

Assignable Knob 1–8 Value Mid

Shows the value of the assignable knobs (Knobs 1–8) when the Super Knob Value is set to *Mid Position*.

This parameter is not available when the *Mid Position* is *Off*.

Settings: 0–1023

Assignable Knob 1–8 Value Right

Shows the value of the assignable knobs (Knobs 1–8) when the *Super Knob Value* is set to 1023 (or the Super Knob is turned all the way to the right).

Settings: 0–1023

NOTE

When you set Value Left to a smaller value and Value Right to a larger value, Knobs 1–8 will move in the same direction as the Super Knob.

When you set Value Right to a smaller value and Value Left to a larger value, Knobs 1–8 will move in the opposite direction to the Super Knob.

Knob Auto ☆

In the *Knob Auto* screen, you can set the Motion Sequencer for the *Super Knob (Super Knob Motion Sequencer)*.

You can set the Motion Sequencer to automatically control the Super Knob value.

Only one Lane can be used by the Super Knob.

NOTE

Up to eight Lanes can be used at the same time for the entire Performance. However, the Lane set for the Super Knob is not included in the eight referred to here.

Operation

[PERFORMANCE] → *Motion Control* → *Knob Auto*

Motion Seq Master Sw (Motion Sequencer Master Switch)

Sets the Motion Sequencer for the entire Performance on or off.

This switch is linked to the [MSEQ ON/OFF] button on the top panel.

Settings: Off, On

Super Knob MS Sw (Super Knob Motion Sequencer Switch)

Sets the Super Knob Motion Sequencer on or off.

Settings: Off, On

MS FX (Super Knob Motion Sequencer FX Receive)

Sets Knobs to be affected by the operation of the Super Knob.

Settings: Off, On

Trigger (Super Knob Motion Sequencer Trigger Receive)

Sets to receive the signals from the [MSEQ TRIGGER] button.

When set to On, the Motion Sequence will not be played back unless you press the [MSEQ TRIGGER] button.

Settings: Off, *On*

Sequence Select (Motion Sequence Select)

Changes the Motion Sequence type selection.

Settings: 1–8

SK MS Random (Super Knob Motion Sequencer Randomness)

Sets randomness of the changes in the Step value of the sequence.

Settings: 0–127

Edit Sequence

Opens the *Motion Sequence* screen.

■ *Sync/Speed* tab

Sync (Super Knob Motion Sequencer Sync)

Selects the speed and the timing for the playback of the Super Knob Motion Sequence.

Settings: *Off*, *Tempo*, *Beat*

> *Off*: Plays back the Super Knob Motion Sequencer alone.
>
> *Tempo*: Plays back at the Performance tempo.
>
> *Beat*: Plays back in sync with the beat.

● When *Sync* is set to *Off*

Speed (Super Knob Motion Sequencer Speed)

Sets the playback speed for the Motion Sequence.

This parameter is available when *Super Knob Motion Sequencer Sync* is set to *Off*.

Settings: 0–127

Delay Time (Super Knob Motion Seq Lane Key On Delay Time Length)

Sets the delay time for starting playback of the Motion Sequence when *Sync* is set to *Off*.

Settings: 0–127

Fade In Time (Super Knob Motion Seq Lane Fade In Time Length)

Sets the time to reach the maximum amplitude for the Motion Sequence when *Sync* is set to *Off*.

Settings: 0–127

● When *Sync* is set to something other than *Off*

Unit (Super Knob Motion Sequencer Unit Multiply)

Sets the percentage for stretching or compressing the Super Knob Motion Sequencer playback time.

This parameter is available when *Super Knob Motion Sequencer Sync* is set to something other than *Off*.

Settings: 50%–6400%, *Common*

> **200%**: The playback time is doubled, and the tempo is halved as a result.
>
> **100%**: The playback time is kept unchanged.
>
> **50%**: The playback time is halved, and the tempo is doubled as a result.
>
> *Common*: The *Unit Multiply* value set in the Common Edit is applied.

Delay Steps (Super Knob Motion Seq Lane Key On Delay Step Length)

Sets the delay time for starting the playback of the Motion Sequence when *Sync* is set to something other than *Off*.
Settings: 0–32

Fade In Steps (Super Knob Motion Seq Lane Fade In Step Length)

Sets the time to reach the maximum amplitude for the Motion Sequence when *Sync* is set to something other than *Off*.
Settings: 0–32

Vel Limit (Super Knob Motion Sequencer Velocity Limit)

Sets the velocity range (lowest and highest values) for playing back the Motion Sequence.
Settings: 1–127

■ *Loop/Length* tab

Key On Reset (Super Knob Motion Sequencer Key On Reset)

Resets the Motion Sequence playback when you press any key on the keyboard.
This parameter is not available when the *Trigger* is *On*.
Settings: *Off*, *Each-On*, *1st-On*

> **Each-On**: Each time you play any note, playback starts from the beginning.
> **1st-On**: When you play a note, the sequence will be reset at the first note, and playback starts from the beginning. When second or subsequent notes are played while the first note is held, the sequence is not reset until another first note is played.

Loop (Super Knob Motion Sequencer Loop)

Sets the Motion Sequence to loop playback (in repeats) or one-shot playback.
Settings: Off, On

Loop Start (Super Knob Motion Sequencer Loop Start)

Specifies the starting point for loop playback of the Motion Sequence.
Settings: 1–16 (should be below the *Length* setting)

Length (Super Knob Motion Sequence Length)

Sets the Motion Sequence length.
Settings: 1–16 (should be above the *Loop Start* setting)

MS Grid (Super Knob Motion Sequence Grid)

Sets the length of a step in the Motion Sequence (as a note value).
Settings: 60, 80, 120, 160, 240, 320, 480

The setting screen for the Super Knob Motion Sequencer.
You can create a sequence of up to 16 steps.

Loop Start (Super Knob Motion Sequencer Loop Start)
Specifies the starting point for the loop playback of the Motion Sequence.
Settings: 1–16 (should be below the *Length* setting)

Length (Super Knob Motion Sequence Length)
Sets the Motion Sequence length.
Settings: 1–16 (should be above the *Loop Start* setting)

MS Grid (Super Knob Motion Sequence Grid)
Sets the length of a step in the Motion Sequence (as a note value).
Settings: 60, 80, 120, 160, 240, 320, 480

Sequence Select (Motion Sequence Select)
Changes the Motion Sequence type selection.
Settings: 1–8

Polarity (Super Knob Motion Sequence Polarity)
Sets the polarity of the Motion Sequence.
Settings: *Unipolar*, *Bipolar*

> **Unipolar**: Only positive values are used for the parameter change.
> **Bipolar**: Both positive and negative values are used for the parameter change.

Amplitude (Super Knob Motion Sequence Amplitude)

Sets the degree of changes in the Motion Sequence.
Settings: 0–127

Smooth (Super Knob Motion Sequence Smoothness)

Sets the smoothness of the changes in the Motion Sequence over time.
Settings: 0–127

Job

Shows various Jobs.

Super Knob Motion Sequence Step Value

Sets the value for each step in the Motion Sequence.
You can use Control sliders 1 to 8 to change the values for Steps 1 to 8 and Steps 9 to 16.
Settings: 0–127

Super Knob Motion Sequence Step Type

Sets the type and direction of each step in the Motion Sequence.
Settings: *A*, *B*, *Reverse A*, *Reverse B*

Pulse A (Super Knob Motion Sequence Step Curve Type A)
Pulse B (Super Knob Motion Sequence Step Curve Type B)

Selects a parameter change curve for *Pulse A* and *Pulse B*.
Use the *Super Knob Motion Sequence Step Type* to select which of the curve types to use for each step.
The vertical axis represents the time while the horizontal axis represents the step value.
Settings: (When a preset bank is selected) *Standard, Sigmoid, Threshold, Bell, Dogleg, FM, AM, M, Discrete Saw, Smooth Saw, Triangle, Square, Trapezoid, Tilt Sine, Bounce, Resonance, Sequence, Hold, Harmonic, Steps*
  (When a user bank is selected) *User 1–32*
  (When a library file is loaded) Curves used in *Library* 1–16

Prm 1 (Super Knob Motion Sequence Step Curve Parameter 1)
Prm 2 (Super Knob Motion Sequence Step Curve Parameter 2)

Adjusts the shape of the step curve in the Motion Sequence.
This setting may not be available depending on the curve type. Also, the range for the parameter value differs depending on the curve type.

Control (Super Knob Motion Sequence Step Curve Shape Control Switch)

Enables or disables the use of the knobs for controlling the step curve shape of the Motion Sequence.

Shown only when *MS FX* is set to On. This setting may not be available depending on the curve type.
Settings: Off, On

Store Sequence
Saves (stores) the edited Motion Sequence.

Load Sequence
Loads the Motion Sequence.
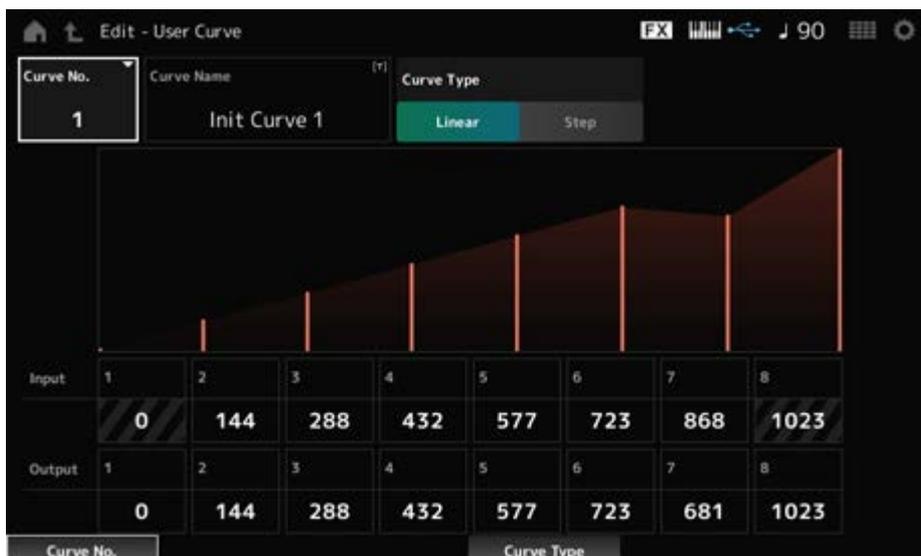
Copy Sequence
Copies the Motion Sequence.

User Curve Edit

This is the setting screen for the User Curve.
You can create either an 8-point linear curve or an 8-step curve.

Curve No. (Curve Number)
Indicates the current curve number.
Settings: 1–32

Curve Name
You can save the curve you are editing under a new name.
Tapping on the name calls up the onscreen keyboard, allowing you to enter a name.

Curve Type

Sets the Curve type.

Settings: *Linear, Step*

Input

Sets the input level for the curve.

Input 1 is fixed to the value 0.

Input 8 is fixed to the value 1023 when the *Curve Type* is set to *Linear*.

Settings: 0–1023

Output

Sets the output level for the curve.

Settings: 0–1023

Mixing ★

On the *Mixing* screen, you can change the mix by adjusting the volume of each Part and make effect settings.

The settings in the *Mixing* screen are saved (stored) in the Performance.

Operation

[PERFORMANCE] → *Mixing*

Part 1–16 (Part 1–16 Switch)
Audio (Audio Switch)
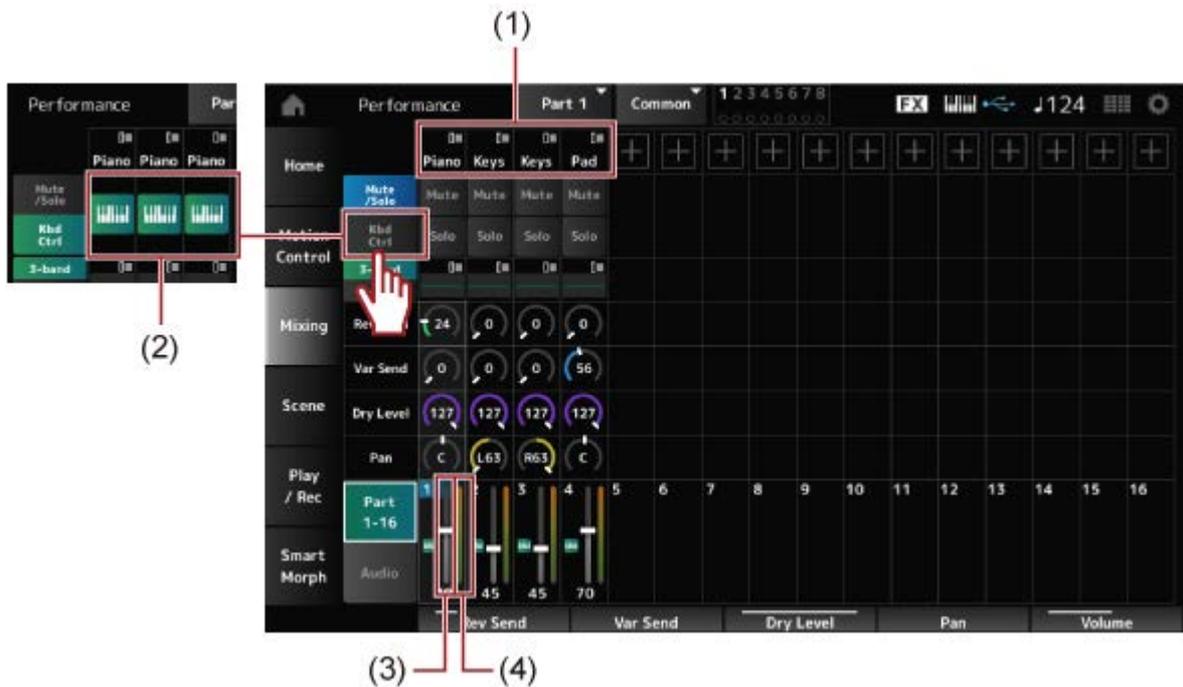
Changes the view.

Settings: *Part 1–16, Audio (Part 1–8, Audio part, Master)*

■ When the *Part 1–16* view is selected

Sets the mix for Parts 1 to 16.

(1)   *Part Category*

(2)   *Keyboard Control*

(3)   *Volume*

(4)   *Part Level Meter*

Part Category

The Main category of the selected Part is shown.

Tapping on the name calls up the context menu for *Category Search*, *Edit*, and *Property*.

When a Part other than Part 1 is selected and the sound is already set for that Part, the context menu for *Category Search*, *Edit*, *Copy*, and *Delete* appears.

Tap [+] to add a Part.

Settings: Refer to the *Data List*.

Mute/Solo Switch
Kbd Ctrl Switch

Switches between *Mute/Solo* view and Keyboard Control view.

Mute (Part Mute)
Solo (Part Solo)

Switches Mute and Solo for the Part on or off.

Settings: Off, On

Keyboard Control

Switches Keyboard Control on or off.

For Parts 9 to 16, the buttons will not be shown since Keyboard Control cannot be set to On for those Parts.

Settings: Off, On

3-band (3-band EQ Switch)
2-band (2-band EQ Switch)

Switches between the *2-band EQ* view and *3-band EQ* view of Parts 1 to 16.

Settings: *3-band*, *2-band*

EQ (Equalizer)

Shows the EQ setting either in *3-band* or *2-band* views.

Tapping on the area calls up the context menu of Part EQ.

Rev Send (Reverb Send)

Sets the level of the signals sent from Parts 1 to 16 to the Reverb Effect.

Settings: 0–127

Var Send (Variation Send)

Sets the level of the signals sent from Parts 1 to 16 to the Variation Effect.

Settings: 0–127

Dry Level

Sets the dry level (or the level of the signals not processed by the System Effect) of Parts 1 to 16.

Settings: 0–127

Pan

Sets the Pan position (in the stereo field) for Parts 1 to 16.

Settings: L63–C–R63

Volume

Sets the volume for Parts 1 to 16.
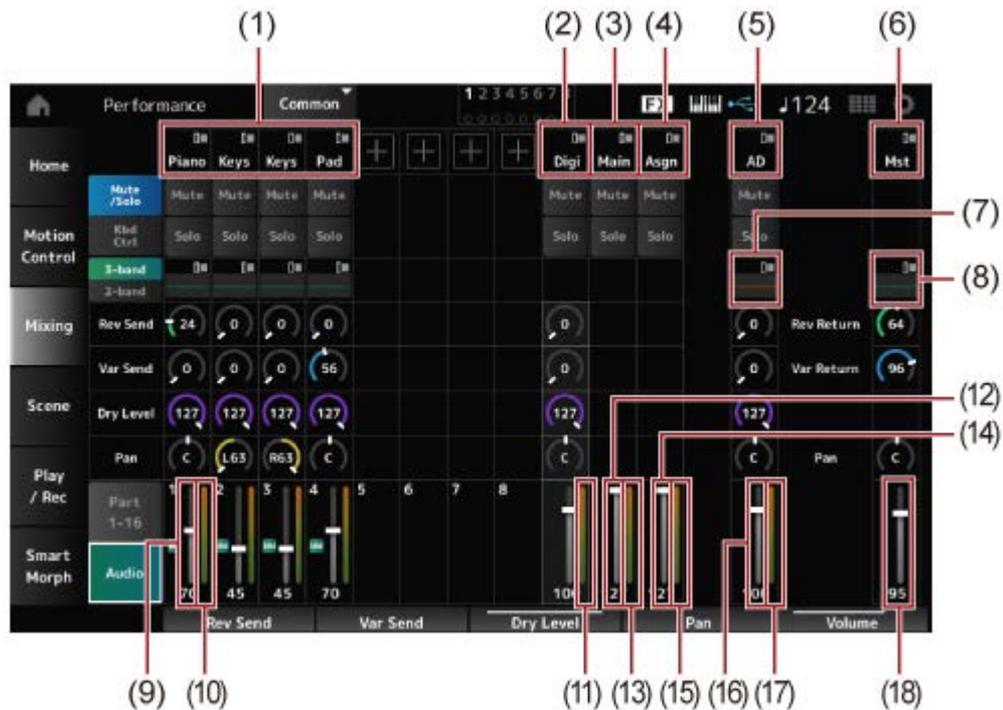
Settings: 0–127

Part Level Meter

Shows the level for Parts 1 to 16.

■ **When the *Audio* view is selected**

Sets the mix for the Audio Part.

(1) *Part Category*
(2) *Digi (Digital Part)*
(3) *Main (USB Main Part)*
(4) *Asgn (USB Assign Part)*
(5) *AD (A/D Part)*
(6) *Mst (Master)*
(7) *A/D Part EQ*
(8) *Master EQ*
(9) *Digital Part Volume*
(10) *Part Level Meter*
(11) *Digi (Digital Part Level Meter)*
(12) *USB Main Monitor Volume*
(13) *Main (Main L&R Level Meter)*
(14) *USB Assign Monitor Volume*
(15) *Asgn (Assign L&R Level Meter)*
(16) *A/D Part Volume*
(17) *AD (A/D Part Level Meter)*
(18) *Performance Volume*

Part Category

The Main category of the selected Part is shown.

Tapping on the name calls up the context menu for *Category Search*, *Edit*, and *Property*.

When a Part other than Part 1 is selected and the sound is already set for that Part, the context menu for *Category Search*, *Edit*, *Copy*, and *Delete* appears.

Tap [+] to add a Part.

Settings: Refer to the *Data List*.

Digi (Digital Part)
Main (USB Main Part)
Asgn (USB Assign Part)
AD (A/D Part)
Mst (Master)
Tapping on the name calls up the context menu for *Edit*.

Mute/Solo Switch
Kbd Ctrl Switch
Switches between the *Mute/Solo* view and *Keyboard Control* view.

Mute (Part Mute)
Solo (Part Solo)
Switches Mute and Solo for the Part on or off.
Settings: Off, On

A/D Part EQ
Tapping on the area calls up the context menu of Part EQ.

Digital Part Reverb Send
A/D Part Reverb Send
Sets the level of the signals sent from the Digital Part or A/D Part to the Reverb Effect.
Settings: 0–127

Digital Part Variation Send
A/D Part Variation Send
Sets the level of the signals sent from the Digital Part or A/D Part to the Variation Effect.
Settings: 0–127

Digital Part Dry Level
A/D Part Dry Level
Sets the dry level (or the level of the signals without the System Effect) of the Digital Part or A/D Part.
Settings: 0–127

Digital Part Pan
A/D Part Pan
Sets the Pan (location in the sound field) of the Digital Part or A/D Part.

Settings: L63–C–R63

Digital Part Volume
A/D Part Volume
USB Main Monitor Volume
USB Assign Monitor Volume
Sets the volume for the Audio Part.
Settings: 0–127

Master EQ
Shows the 5-band parametric EQ.
Tapping on the name calls up the context menu for *Master EQ Edit*.

Rev Return (Reverb Return)
Var Return (Variation Return)
Sets the output level (Return Level) of the signals processed by the Reverb or Variation Effect.
Settings: 0–127

Rev Send (Reverb Send)
Sets the level of the signals sent to the Reverb Effect.
Settings: 0–127

Var Send (Variation Send)
Sets the level of the signals sent to the Variation Effect.
Settings: 0–127

Pan (Performance Pan)
Sets the Pan (location in the sound field) of the Performance.
This parameter value offsets the pan setting for each Part.
Settings: L63–C–R63

Performance Volume
Sets the volume for the Performance.
Settings: 0–127

Part Level Meter
Digi (Digital Part Level Meter)
Main (Main L&R Level Meter)
Asgn (Assign L&R Level Meter)
AD (A/D Part Level Meter)

Shows the level of Parts 1 to 8 and Audio Part.

Scene ⭐

On the *Scene* screen, you can register the settings for the Arpeggio type, Motion Sequence type, and Part parameters to each of the SCENE buttons.
On this screen, set the appropriate *Memory (Memory Switch)* On, and edit the desired parameter values so that you can save the settings to the Scene.
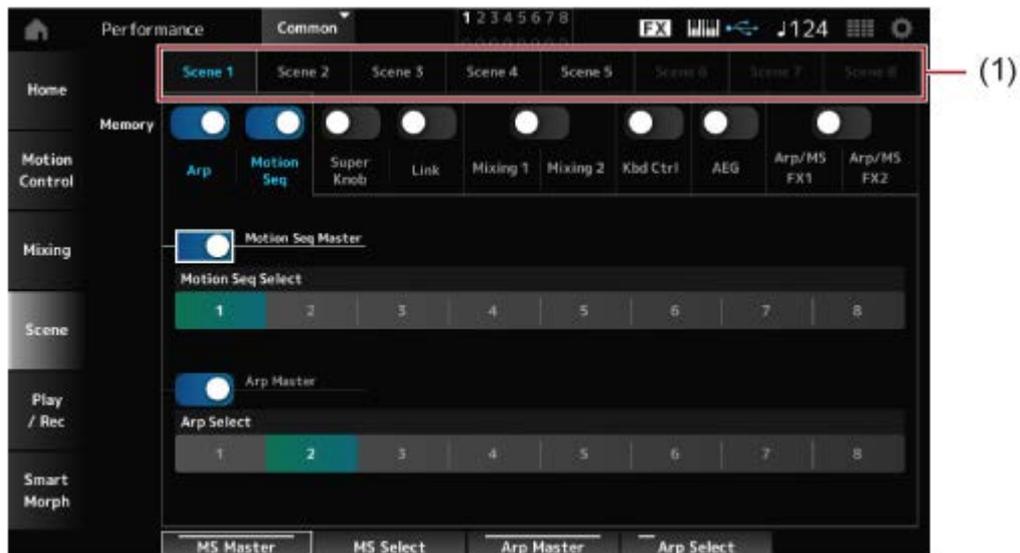
NOTE

The Scene function can be set from a screen other than *Scene*. You can change the assigned Scene parameters by moving the corresponding knobs and sliders and registering the settings by simultaneously holding down the [SHIFT] button and pressing the desired SCENE button.

Operation

[PERFORMANCE] → *Scene*

(1)   *Scene Select*

Scene Select

Select a *Scene* tab to register the settings.
The *Scene1* to *Scene8* tabs are linked to the SCENE buttons on the top panel.
Settings: 1–8

Memory (Memory Switch)

Selects each of the parameter values such as Arpeggio, Motion Sequencer, Super knob, Super knob link, Mixing, Keyboard Control, Amplitude EG, and Arp/MS FX to register to the Scene.
When these switches are set to Off, the parameter values will not be shown on the display even when the corresponding tabs are selected.

Settings: Off, On

Part 1–16 / Common

Changes the view between *Part 1–16* and *Common*.

The views are available in the *Mixing 1*, *Mixing 2*, *Kbd Ctrl*, *AEG*, *Arp/MS FX1*, and *Arp/MS FX2* tabs.

Offset (Scene Mixing / AEG Value Mode Switch)

By setting *Offset* to Off, you can use smaller increments to set some of the *Scene* parameters.

Shown on the *Mixing 1*, *Mixing 2*, and *AEG* tabs.

Settings: Off (Absolute), On (Offset)

■ When the *Memory Switches* for *Arp* and *Motion Seq* are set to On

Motion Seq Master (Motion Sequencer Master Switch)

Sets the Motion Sequencer on or off for the entire Performance.

Settings: Off, On

Motion Seq Select (Motion Sequence Select)

Changes the Motion Sequence Selection.

Settings: 1–8

Arp Master (Arpeggio Master Switch)

Sets the Arpeggio on or off for the entire Performance.

Settings: Off, On

Arp Select (Arpeggio Select)

Changes the Arpeggio selection.

Settings: 1–8

■ When the *Memory Switches* for *Super Knob* and *Link* are set to On

Super Knob (Super Knob Value)

Sets the Super Knob value.

Settings: 0–1023

Super Knob Link

Sets the link between the Super Knob and *Assignable Knobs 1–8*.

When this switch is set to Off, operation of the Super knob will not affect the parameters of the Assignable knobs.

Settings: Off, On

■ **When the *Memory Switches* for *Mixing 1* and *Mixing 2* are set to On**

■ *Mixing 1*

Part 1–16 view: *Scene* parameters for *Parts 1–16* are shown.

Common view: *Scene* parameters for *Parts 1–8* and *Common* are shown.

Common parameters are applied to the entire Performance.

Rev Send (Reverb Send)

Sets the Reverb Send for each Part.

Settings: 0–127

Var Send (Variation Send)

Sets the Variation Send for each Part.

Settings: 0–127

Dry Level

Sets the Dry Level of each Part.

Settings: 0–127

Pan

Sets the Pan for each Part.

Settings: L63 –C–R63

Volume (Part Volume)

Sets the Volume for each Part.

Settings: 0–127

Common view

Rev Return (Reverb Return)

Sets the Reverb Return.

Settings: 0–127

Var Return (Variation Return)

Sets the Variation Return.

Settings: 0–127

Pan (Performance Pan)

Sets the Pan for the Performance.

Settings: L63 –C–R63

■ *Mixing 2*

Part 1–16 view

● **When *Offset* is set to On**

Cutoff (Cutoff Frequency)

Sets the cutoff frequency for each Part.

Settings: −64–+63

Res (Filter Resonance/Width)

Sets the filter resonance or filter width for each Part.

Settings: −64–+63

FEG Depth

Sets the FEG depth for each Part.

Settings: −64–+63

● **When *Offset* is set to Off**

By setting *Offset* to Off, some *Scene* parameters can be finely-adjusted.

Cutoff

Settings: (FM-X, AN-X): 0–1023

Resonance

Settings: (FM-X): 0–127
Settings: (AN-X): 0–255

FEG

Settings: (AN-X): −9600–+9600

NOTE

It is recommended to set *Offset* to On when you wish to use both *Smart Morph* and *Scene*.

Mute (Part Mute)

Switches Mute for the Part on or off.

Settings: Off, On

Volume (Part Volume)

Sets the volume for the Part.

Settings: 0–127

Common view

Cutoff (Cutoff Frequency)

Sets the offset value for the cutoff frequency of the Part.

Settings: −64–+63

Res (Filter Resonance/Width)

Sets the offset value for the filter resonance or filter width of the Part.

Settings: −64–+63

FEG Depth

This is specified as an offset value to the Part FEG Depth.

Settings: −64–+63

■ **When the *Memory Switch* for *Kbd Ctrl* is set to On**

Kbd Ctrl (Part Keyboard Control Switch)

Switches Keyboard Control for the Part on or off.

When Keyboard Control for the Part is set to Off, no sound will be produced when you play the keyboard.

Settings: Off (gray), On (green)

■ **When the *Memory Switch* for AEG is set to On**

Part 1–16 view

● **When *Offset* is set to On**

Attack (AEG Attack Time)
Sets the AEG attack time for the Part.
Settings: −64–+63

Decay (AEG Decay Time)
Sets the AEG decay time for the Part.
Settings: −64–+63

Sustain (AEG Sustain Level)
Sets the AEG sustain level for the Part.
Settings: −64–+63

Release (AEG Release Time)
Sets the AEG release time for the Part.
Settings: −64–+63

● **When *Offset* is set to Off**
By setting *Offset* to Off, some Scene parameters can be finely-adjusted.

Attack
Settings: (AN-X): 0–255

Decay
Settings: (AN-X): 0–255

Sustain

Settings: (AN-X): 0–511

Release

Settings: (AN-X): 0–255

Common view

Attack

Sets the offset value to *Attack* for the Part.

Settings: −64–+63

Decay

Sets the offset value to *Decay* for the Part.

Settings: −64–+63

Sustain

Sets the offset value to *Sustain* for the Part.

Settings: −64–+63

Release

Sets the offset value to *Release* for the Part.

Settings: −64–+63

■ **When the *Memory Switches* for *Arp/MS FX 1* and *Arp/MS FX 2* are set to On**

■ *Arp/MS FX 1*

Part 1–16 view

Swing

Sets the swing value of the Arpeggio or Motion Sequencer for each Part.

Settings: −120–+120

Unit (Part Unit Multiply)

Sets the *Unit Multiply* value of the Arpeggio or Motion Sequencer for each Part.

Settings: 50%–400%, *Common*

> **200%**: The playback time is doubled, and the tempo is halved as a result.
> **100%**: The playback time is kept unchanged.
> **50%**: The playback time is halved, and the tempo is doubled as a result.
> **Common**: The value set in the *Unit Multiply* common to all Parts is applied.

Gate Time (Arp Gate Time Rate)

Sets the Arpeggio gate time rate for each Part.

Settings: 0%–200%

Velocity (Arp Velocity Rate)

Sets the Arpeggio velocity rate for each Part.

Settings: 0%–200%

Common view

Swing

Sets the offset value to *Swing* for each Part.

Settings: −120–+120

Unit (Common Unit Multiply)

Sets the *Unit Multiply* for all Parts.

Settings: 50%–400%

> **200%**: The playback time is doubled, and the tempo is halved as a result.
> **100%**: The playback time is kept unchanged.
> **50%**: The playback time is halved, and the tempo is doubled as a result.

Gate Time (Arp Gate Time Rate)

Sets the offset value to *Arpeggio Gate Time Rate* for each Part.

Settings: −100–+100

Velocity (Arp Velocity Rate)

Sets the offset value to *Arpeggio Velocity Rate* for each Part.

Settings: −100–+100

■ *Arp/MS FX 2*

Amp (Motion Sequencer Amplitude)

Sets the Motion Sequencer Amplitude for each Part.

Settings: −127–+127

Shape (Motion Sequencer Pulse Shape)

Sets the Motion Sequencer Pulse Shape for each Part.

Settings: −100–+100

Smooth (Motion Sequencer Smoothness)

Sets the Motion Sequencer Smoothness for each Part.

Settings: −127–+127

Random (Motion Sequencer Randomness)

Sets the Motion Sequencer Randomness for each Part.

Settings: 0–127

Common view

Amp (Motion Sequencer Amplitude)

Sets the offset value to *Motion Sequencer Amplitude* for each Part.

Settings: −127–+127

Shape (Motion Sequencer Pulse Shape)

Sets the offset value to *Motion Sequencer Pulse Shape* for each Part.

Settings: −100–+100

Smooth (Motion Sequencer Smoothness)

Sets the offset value to *Motion Sequencer Smoothness* for each Part.

Settings: −127–+127

Random (Motion Sequencer Randomness)

Sets the offset value to *Motion Sequencer Randomness* for each Part.

Settings: −127–+127

Play/Rec

On the *Play/Rec* screen, you can record Patterns and Songs to the Internal memory of this instrument, and Audio to a USB flash drive, and play back your recordings.

Pattern

■ **Playback and playback standby**

Operation

- [SONG/PATTERN] button → *Pattern*
- [PERFORMANCE] → *Play/Rec* → *Pattern*
- [▶] (Play) button → *Pattern*

(1)   Link Icon

Pattern Name

Shows the name of the selected Pattern.

By tapping on the name, you will see the context menu for *Load*, *Rename*, and *New Pattern*. You can select a Pattern by using the [INC/YES] and [DEC/NO] buttons when the cursor is on the *Pattern Name*.

Link Icon

The link icon is shown if the Performance used for recording the Pattern and the selected Performance are the same. If not, the broken link icon will be shown.

Performance Name

Shows the name of the selected Performance.

NOTE

The blue flag will be shown when you change a parameter in the Performance.

Click Settings

The *Tempo Settings* screen appears.

Time Signature

Shows the meter for the Pattern.

Position

Sets the position for starting playback and recording, as well as the current position of the playback.

The number shown on the left is the measure, and the numbers shown on the right are the beats and clicks.

Tempo

Sets the tempo for Pattern playback.

Settings: 5–300

Store Pattern & Perf Settings (Store Pattern and Performance Settings)

Saves the link between the edited Patterns and the Performance used.

NOTE

If you have edited the Performance parameters, you will also need to store the Performance.

Edit/Job

Opens the screen for Pattern edit and jobs.

Scene

Shows the name of the selected Scene.

This switch is linked to the SCENE buttons on the top panel.

Length

Sets the sequence length of the selected Scene.

Settings: 1–256

Key On Start

Sets the Pattern to start recording or playback the moment you press a key on the keyboard.

Settings: Off, On

Chain

Enables/disables chain playback.

Settings: Off, On

Undo

Undo cancels the last recording action and deletes what has been just recorded.

This button is active when you change any settings to a sequence.

Redo

Redo restores the recording that has been canceled by *Undo*. This button is active only after *Undo* has been used.

Part 1–8
Part 9–16

Switches between Part views.

■ **Recording standby**

Operation

- [SONG/PATTERN] button → *Pattern* → [●] (Record) button
- [PERFORMANCE] → *Play/Rec* → *Pattern* → [●] (Record) button

Time Signature

Sets the meter of the Scene.

Settings: 1/16–16/16, 1/8–16/8, 1/4–8/4

Rec Quantize (Record Quantize)

Quantize is a function that corrects the recorded notes to be on the exact fraction of the beat (in note values).

Settings: *Off*, 60 (thirty-second note), 80 (sixteenth note triplet), 120 (sixteenth note), 160 (eighth note triplet), 240 (eighth note), 320 (quarter note triplet), 480 (quarter note)

Loop

When Loop is set to On, Pattern recording continues in a loop.

Settings: Off, On

NOTE

Pressing the [●] (Record) button during Song recording sets the recorder to Rehearsal mode and makes the [●] (Record) button flash. In Rehearsal mode, playback of the Pattern continues but recording is temporarily paused, making it useful for practicing. During Song recording, you can press the [●] (Record) button to switch between the Recording mode and Rehearsal mode.

■ **Recording**

Operation

- [SONG/PATTERN] button → *Pattern* → [●] (Record) button → [▶] (Play) button
- [PERFORMANCE] → *Play/Rec* → *Pattern* → [●] (Record) button → [▶] (Play) button

Hold [SHIFT] + key to erase
Erase

You can delete specific note events by holding down the [SHIFT] button and pressing the key corresponding to the note you wish to delete.

Alternately, you can tap on the *Erase* button on the screen to turn on the function, and then press the corresponding key on the keyboard to delete the note event.

■ Overdub recording

When you operate a controller during overdub recording, you can delete the existing events of that controller and record the operation as new events.

Operation

[PERFORMANCE] → *Play/Rec* → *Pattern* → (with the Song already recorded) → [●] (Record) button → Tap *Record Type* → Select *Overdub* from the menu → [▶] (Play) button

Record Type
Selects from *Replace* or *Overdub* recording.
Settings: *Replace*, *Overdub*

Pattern Edit screen ☆

By using the Pattern function, you can register a sequence for each Scene.

■ Common operations for all tabs on the *Pattern Edit* screen

Undo
Undo cancels the last recording action and deletes what has been just recorded.
This button becomes available when one or more Jobs have been used after a sequence has been recorded.

Redo
Redo restores the recording that has been canceled by *Undo*. This button becomes available after *Undo* is used.

Execute
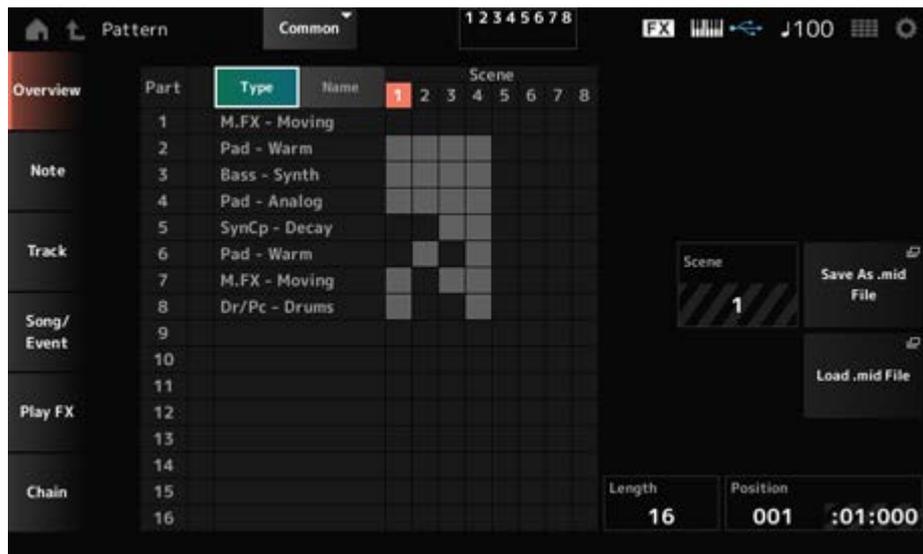
Carries out the selected Job to the MIDI sequence.

Overview

Type

Tap this button to see the Main and Sub categories of the Part.

It also changes the list shown on the *Play/Rec* screen.

Name

Tap to see the Part Name.

It also changes the list shown on the *Play/Rec* screen.

Part Mute Icon
Part Solo Icon

Shows the status of mute and solo settings for the Part.

Scene

Shows the selected Scene number.

Save As .mid File

Opens the *Save* screen. You can save the sequence of the selected Scene as a MIDI file.

Load .mid File

Opens the *Load* screen for loading a MIDI file.

After you have selected a MIDI file, select a Pattern and Scene in the load location.

Length

Sets the sequence length of the selected Scene.

Position

Shows the current position of the Scene playback, and lets you specify the playback position.

Settings: 001–256

Note ⭐
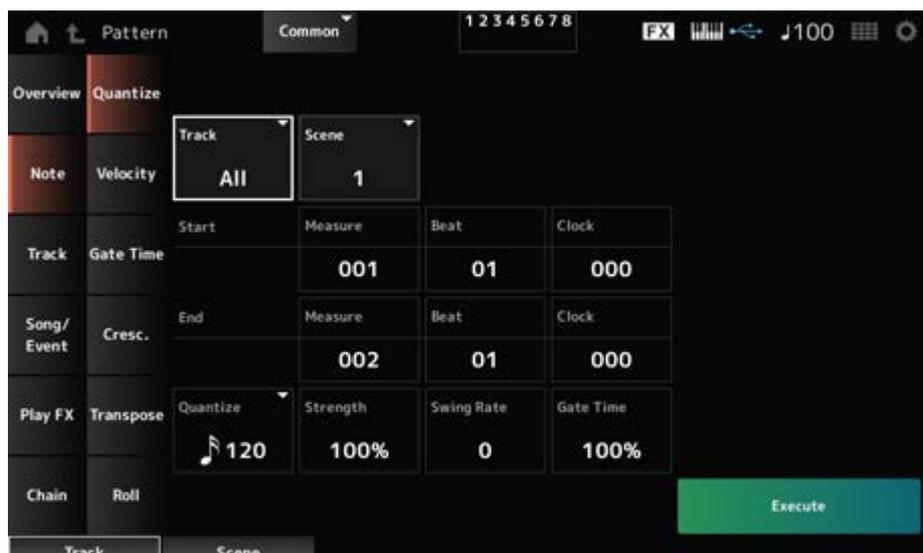
Quantize ☆

Quantization is the process of adjusting the timing of note events by moving them closer to the nearest exact beat. You can use this feature, for example, to improve the timing of a Pattern you have recorded in real time.

Operation

- [▶] (Play) button → *Pattern* → [EDIT/ ⟳] → *Note* → *Quantize*
- [PERFORMANCE] → *Play/Rec* → *Pattern* → *Edit/Job* → *Note* → *Quantize*

Track

Specifies the track for the *Quantize* operation.

Settings: *All*, 1–16

Scene

Specifies the Scene for the *Quantize* operation.
Settings: 1–8

Start Measure

Specifies the starting measure position for the *Quantize* operation.
Settings: 001–257

Start Beat

Specifies the starting beat position for the *Quantize* operation.
Settings: Depends on the *Time Signature* setting.

Start Clock

Specifies the starting clock position for the *Quantize* operation.
Settings: Depends on the *Time Signature* setting.

End Measure

Specifies the ending measure position for the *Quantize* operation.
Settings: 001–257

End Beat

Specifies the ending beat position for the *Quantize* operation.
Settings: Depends on the *Time Signature* setting.

End Clock

Specifies the ending clock position for the *Quantize* operation.
Settings: Depends on the *Time Signature* setting.

Quantize

Sets the quantization resolution (or a note to be used as a base for the quantization).
Settings: Thirty-second note, sixteenth note triplet, sixteenth note, eighth note triplet, eighth note, quarter note triplet, quarter note, sixteenth note + sixteenth note triplet, eighth note + eighth note triplet

Strength

Sets the "magnetic strength" of the quantization.
When this parameter is set to 100%, all notes will move to the position specified in *Quantize*.
A setting of 0% results in no quantization.
Settings: 0%–100%

Swing Rate

Changes the timing of the even-numbered beats (backbeats) counted from the value specified in *Quantize* to add a swing feel to the rhythms.

Settings: Depends on the *Quantize (quantization resolution)* setting.

> **When *Quantize* is set to quarter note, eighth note, sixteenth note, or thirty-second note:** 0 to half the grid
>
> **When *Quantize* is set to quarter note triplet, eighth note triplet, or sixteenth note triplet:** 1 to half the grid
>
> **When *Quantize* is set to eighth note + eighth note triplet, or sixteenth note + sixteenth note triplet:** 0 to half the triplet grid

Gate Time

Changes the gate time (or the actual time for the note to be played) of the even-numbered beats (backbeats) counted from the value specified in *Quantize* to add a swing feel to the rhythms.

Settings: 0%–200%

Velocity ☆

Changes the *Velocity* value, letting you change the volume of the notes in the specified range.
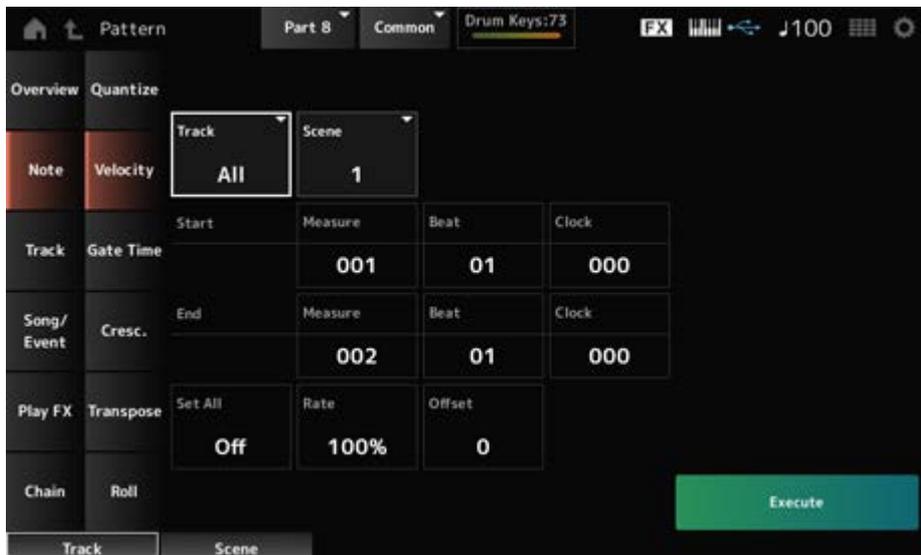
NOTE

Velocity is calculated by the formula as shown below.

Adjusted *Velocity* = (original *Velocity* × Rate) + Offset

If the result is 0 or less, the value is set to 1. If the result is higher than 128, the value is set to 127.

Operation

- [▶] (Play) button → *Pattern* → [EDIT/ ⟳] → *Note* → *Velocity*
- [PERFORMANCE] → *Play/Rec* → *Pattern* → *Edit/Job* → *Note* → *Velocity*

Set All

Sets the velocity of all notes in the selected section.

When set to *Off*, *Set All* will not work.

When set to other than *Off*, *Rate* and *Offset* will be disabled.

Settings: *Off*, 001–127

Rate

Sets the percentage for changing the velocity.

When set to 99% or lower, the velocity will be slower. When set to 101% or higher, the velocity will be faster.

At 100% the velocity will be kept unchanged.

This parameter cannot be changed when *Set All* is set to a value other than *Off*.

Settings: 0%–200%

Offset

Sets the value to add to or subtract from the original Velocity value.

When set to −1 or smaller, the velocity will be slower. When set to +1 or larger, the velocity will be faster.

When set to 0, the velocity will be kept unchanged.

This parameter cannot be changed when *Set All* is set to a value other than *Off*.

Settings: −127–+127

Gate Time ☆

Specifies the time for playing notes in the specified section (*Gate Time*).

NOTE
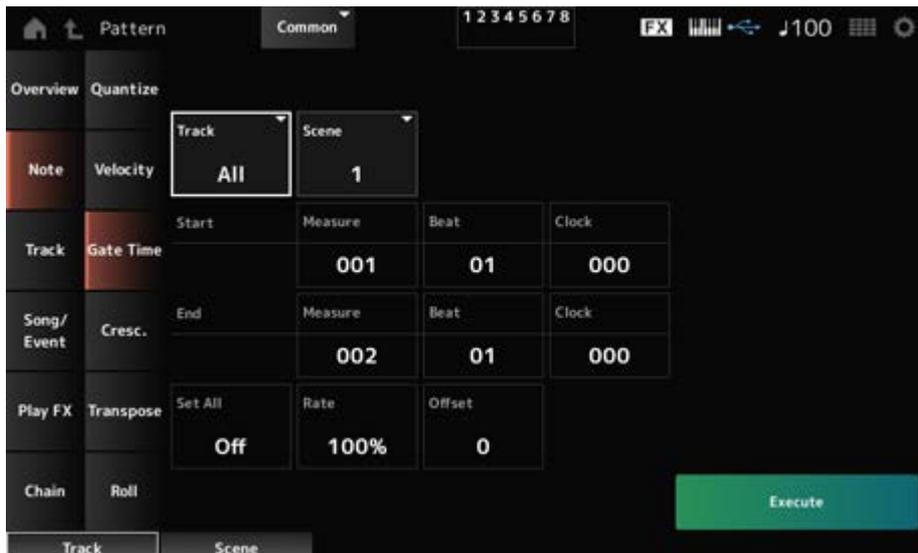
Gate Time is calculated by the formula as shown below.

Adjusted *Gate Time* = (Original *Gate Time* × *Rate*) + *Offset*

If the result is 0 or less, the value is set to 1.

Operation

- [▶] (Play) button → *Pattern* → [EDIT/ ⏏] → *Note* → *Gate Time*
- [PERFORMANCE] → *Play/Rec* → *Pattern* → *Edit/Job* → *Note* → *Gate Time*

The screen here is the same as the one opened from *Note* → *Velocity* on the *Pattern Edit*, except that the available *Set All* settings are different.

Set All
Settings: *Off*, 001–9999
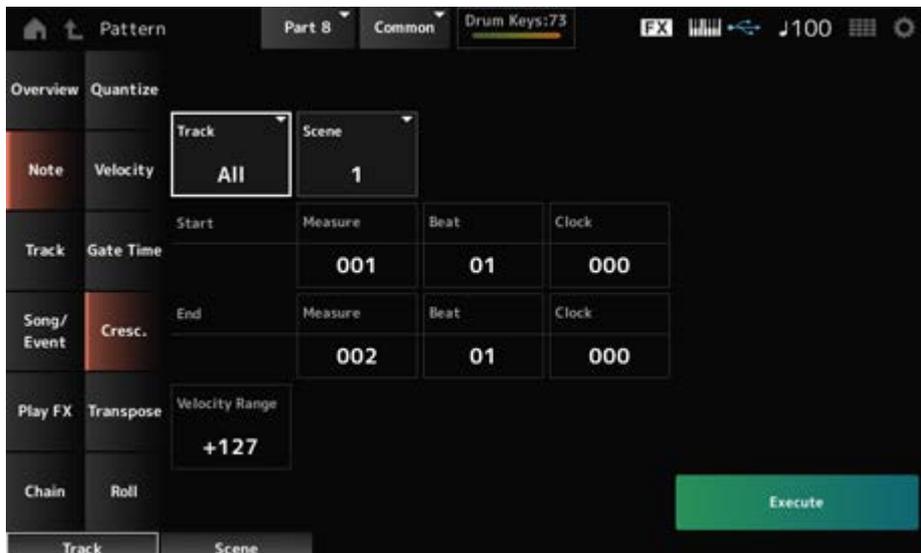
Cresc. (Crescendo) ☆

This Job lets you create a crescendo or decrescendo over a specified range of notes. (Crescendo is a gradual increase in volume, and decrescendo is a gradual decrease.)

Operation

- [▶] (Play) button → *Pattern* → [EDIT/ ⏏] → *Note* → *Cresc.*
- [PERFORMANCE] → *Play/Rec* → *Pattern* → *Edit/Job* → *Note* → *Cresc.*

Velocity Range

Sets the intensity of the crescendo or decrescendo. The velocity values of the notes in the specified range are gradually increased or decreased starting at the first note in the range. The velocity of the last note in the range becomes the original velocity of the note plus the *Velocity Range* value. If the resultant velocity is outside the 1–127 range, it is set to 1 or 127 accordingly. The setting of +1 or higher produces a crescendo, and the setting of −1 or lower produces a decrescendo. A setting of 0 produces no change.

Settings: −127–+127

Transpose   ☆
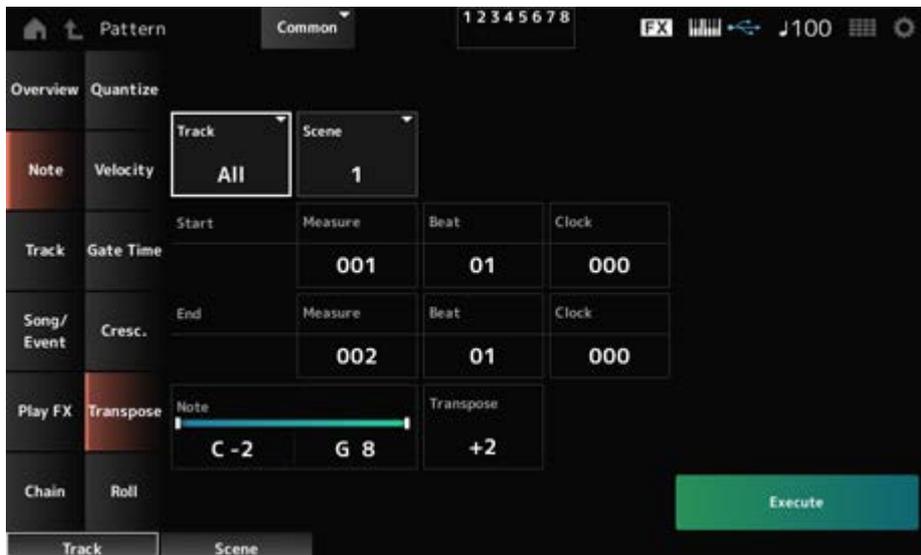
This Job lets you change the key or pitch of the notes in the specified range.

NOTE

When the *Transpose* job is carried out, any notes outside the allowed range of C−2–G8 will be automatically changed to fit within the range.

Operation

- [▶] (Play) button → *Pattern* → [EDIT/ ⟳] → *Note* → *Transpose*
- [PERFORMANCE] → *Play/Rec* → *Pattern* → *Edit/Job* → *Note* → *Transpose*

For the most part, the screen here is the same as the one opened from *Note → Quantize* on the *Pattern Edit*.

Note
Specifies the range of keys (notes) for transposing.
Tap to open the context menu and then set *Keyboard* On to use the keys on the keyboard to set the range.
Settings: C−2–G8

Transpose
Sets the range of notes to shift in semitones.
A setting of +12 transposes up one octave, while a setting of −12 transposes down an octave.
The value 0 produces no change.
Settings: −127–+127
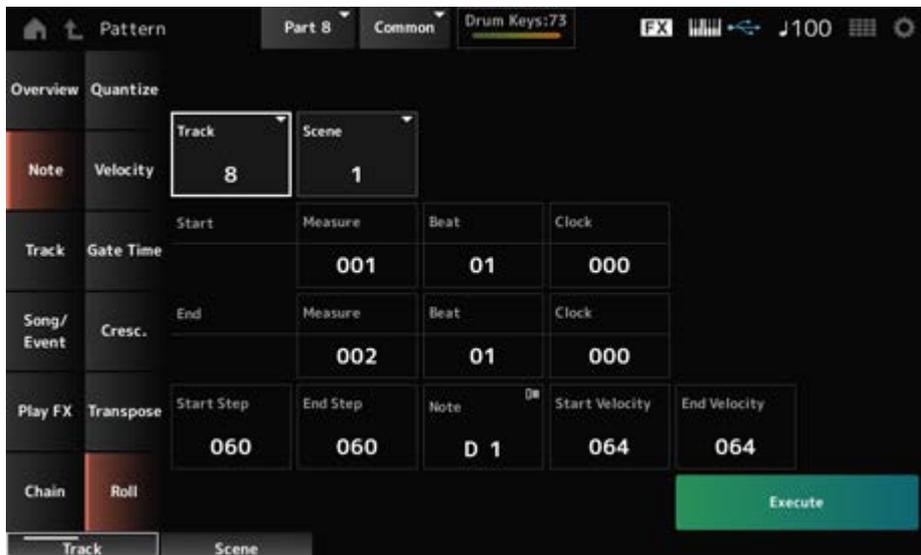
Roll ☆

This Job creates a series of repeated notes (like a drum roll) over the specified range.

Operation

- [▶] (Play) button → *Pattern* → [EDIT/ ⟳] → *Note* → *Roll*
- [PERFORMANCE] → *Play/Rec* → *Pattern* → *Edit/Job* → *Note* → *Roll*

For the most part, the screen here is the same as the one opened from *Note → Quantize* on the *Pattern Edit*, except that the available *Track* settings are different.

Track
Settings: 1–16

Start Step
Sets the size of the step (i.e., the number of clocks) between each note in the roll.
By setting a smaller value, you can play faster rolls.
The clock specified here is for the beginning of the range.
Settings: 015–999

End Step
Sets the size of the step (i.e., the number of clocks) between each note in the roll.
By setting a smaller value, you can play faster rolls.
The clock specified here is for the end of the range.
Settings: 015–999

Note
Sets the note for rolls.
Tap to open the context menu and then set the *Keyboard* On, so that you can use the key on the keyboard.
Settings: C−2–G8

Start Velocity
Sets the velocity for the strength of rolls.
The velocity specified here is for the beginning of the range.
Settings: 001–127

End Velocity

Sets the velocity for the strength of rolls.

The velocity specified here is for the end of the range.

Settings: 001–127

NOTE

By setting both *Start Velocity* and *End Velocity*, you can create crescendo or decrescendo for the rolls.

Track ★
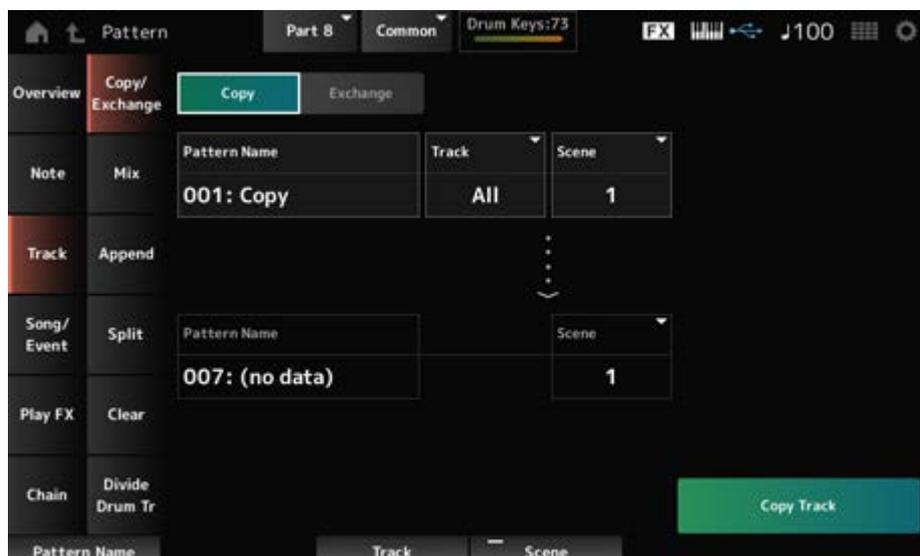
Copy/Exchange ☆

This Job copies data from a specified source track to the specified destination track or exchanges data between two specified tracks.

Operation

- [▶] (Play) button → *Pattern* → [EDIT/ ⟳] → *Track* → *Copy/Exchange*
- [PERFORMANCE] → *Play/Rec* → *Pattern* → *Edit/Job* → *Track* → *Copy/Exchange*

Copy

Copies data from the specified track to another track.

NOTICE

When *Copy Track* is carried out, the existing data on the destination track will be overwritten and lost.

Exchange

Exchanges data between two tracks.

Pattern Name *1 Source

Specifies the Pattern to copy from.

Track *1 Source

Specifies the track to copy from.

Settings: *All*, 1–16

Scene *1 Source

Specifies the Scene to copy from.

Settings: *All*, 1–8

Pattern Name *2 Destination

Specifies the Pattern to copy to.

Track *2 Destination

Specifies the track to copy to.

This parameter is not available when Source is set to *All*.

Settings: 1–16

Scene *2 Destination

Specifies the Scene to copy to.

This parameter is not available when Source is set to *All*.

Settings: 1–8

Copy Track

Carries out the *Copy* operation.

NOTE

When *Copy Track* is carried out with the track and *Scene* set to *All*, the Chain data will also be copied.

Exchange Track

Carries out the *Exchange* operation.

NOTE

When *Exchange Track* is carried out with the track and *Scene* set to *All*, the Chain data will also be exchanged.

Mix ⭐

Mixes (merges) the data from the specified track A and track B and places the result in track B.

Operation

- [▶] (Play) button → *Pattern* → [EDIT/ ⟳] → *Track* → *Mix*
- [PERFORMANCE] → *Play/Rec* → *Pattern* → *Edit/Job* → *Track* → *Mix*

Pattern Name *1 Source A

Specifies the first Pattern to mix.

Track *1 Source A

Specifies the track for the *Mix* operation.
Settings: 1–16

Scene *1 Source A

Specifies the Scene for the *Mix* operation.
Settings: *All*, 1–8

Pattern Name *2 Source B

Specifies the first Pattern to mix.

Track *2 Source B

Specifies the track for the *Mix* operation.
Settings: 1–16

Scene [*2 Source B]

Specifies the Scene for the *Mix* operation.

This parameter is not available when Source A is set to *All*.

Settings: 1–8

Pattern Name [*3 Destination B]

Shows the name of the Pattern to mix to.

Track [*3 Destination B]

Shows the track number for the *Mix* operation.

Scene [*3 Destination B]

Shows the Scene number for the *Mix* operation.

This parameter is not available when Source A is set to *All*.

Mix Track

Carries out the *Mix* operation.
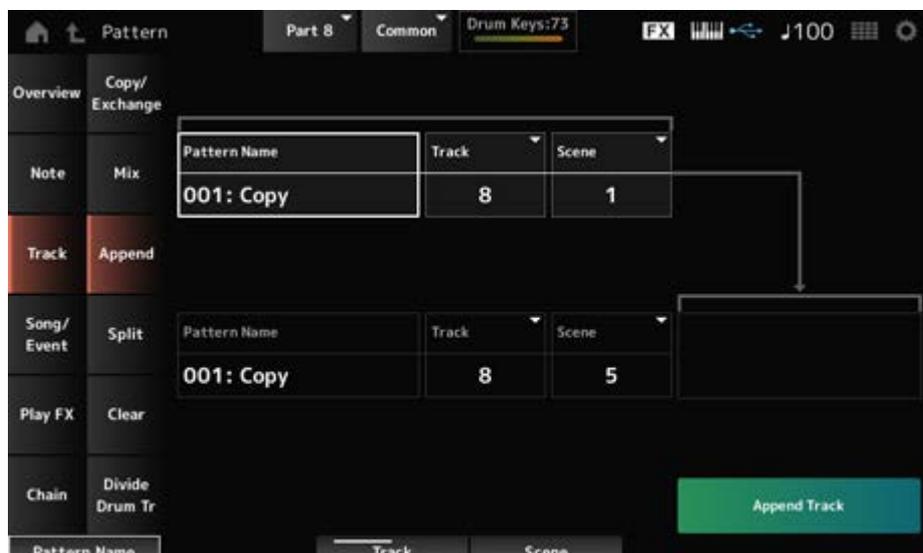
Append ☆

Adds the data in the specified track to the end of another track.

Operation

- [▶] (Play) button → *Pattern* → [EDIT/ ⟳] → *Track* → *Append*
- [PERFORMANCE] → *Play/Rec* → *Pattern* → *Edit/Job* → *Track* → *Append*

Pattern Name *1 Source

Specifies the Pattern to add from.

Track *1 Source

Specifies the track for the *Append* operation.
Settings: *All*, 1–16

Scene *1 Source

Specifies the Scene for the *Append* operation.
Settings: 1–8

Pattern Name *2 Destination

Specifies the Pattern to add to.

Track *2 Destination

Specifies the track for the *Append* operation.
This parameter is not available when Source is set to *All*.
Settings: 1–16

Scene *2 Destination

Specifies the Scene for the *Append* operation.
Settings: 1–8

Append Track

Carries out the *Append* operation.

Split ☆

Splits the data of the specified track at the specified measure and moves the second half to another specified track.

Operation

- [▶] (Play) button → *Pattern* → [EDIT/ ⟳] → *Track* → *Split*
- [PERFORMANCE] → *Play/Rec* → *Pattern* → *Edit/Job* → *Track* → *Split*

Pattern Name *1 Source

Specifies the Pattern to split.

Track *1 Source

Specifies the track for the *Split* operation.
Settings: *All*, 1–16

Scene *1 Source

Specifies the Scene for the *Split* operation.
Settings: 1–8

Measure *1 Source

Specifies the measure at which the data is to be split.
Settings: 2–256

Pattern Name

Shows the Pattern to split into.

Track

Shows the track for the *Split* operation.

Scene

Shows the Scene for the *Split* operation.

Pattern Name *2 Destination

Specifies the Pattern to which the split data is to be sent.

Track *2 Destination

Specifies the track for the *Split* operation.

This parameter is not available when Source is set to *All*.

Settings: 1–16

Scene *2 Destination

Specifies the Scene for the *Split* operation.

Settings: 1–8

Spilt Track

Carries out the *Split* operation.

Clear ☆

Deletes data of the specified track.

<div style="border:1px solid red; display:inline-block; padding:4px;">Operation</div>

- [▶] (Play) button → *Pattern* → [EDIT/ ⟳] → *Track* → *Clear*
- [PERFORMANCE] → *Play/Rec* → *Pattern* → *Edit/Job* → *Track* → *Clear*

Pattern Name

Specifies the pattern to delete.

Track

Specifies the track for the *Clear* operation.

Settings: *All*, 1–16

Scene
Specifies the Scene for the *Clear* operation.
Settings: 1–8

Clear Track
Carries out the *Clear* operation.

NOTE

When *Clear Track* is carried out with the track and *Scene* set to *All*, the Chain data will also be deleted.

Divide Drum Tr (Divide Drum Track) ☆
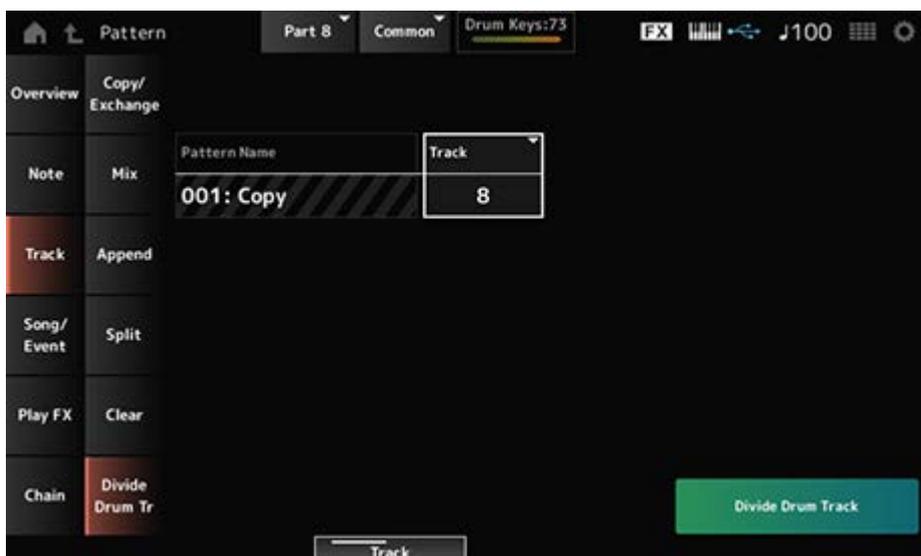
Takes the recorded drums from the specified track and assigns each Instrument (individual percussion instrument in the drum set) to Tracks 9 to 16.

NOTE

When there is existing data on Tracks 9 to 16 and Parts 9 to 16, carrying out the *Divide Drum Track* operation will overwrite the existing data. *Undo* and *Redo* cannot be used with this operation.

Operation

- [▶] (Play) button → *Pattern* → [EDIT/ ⟳] → *Track* → *Divide Drum Tr*
- [PERFORMANCE] → *Play/Rec* → *Pattern* → *Edit/Job* → *Track* → *Divide Drum Tr*

Pattern Name
Specifies the Pattern for the *Divide* operation.

Track

Specifies the track for the *Divide* operation.

Settings: 1–16

Divide Drum Track

Carries out the *Divide* operation.

Song/Event ⭐

Get Phrase ☆
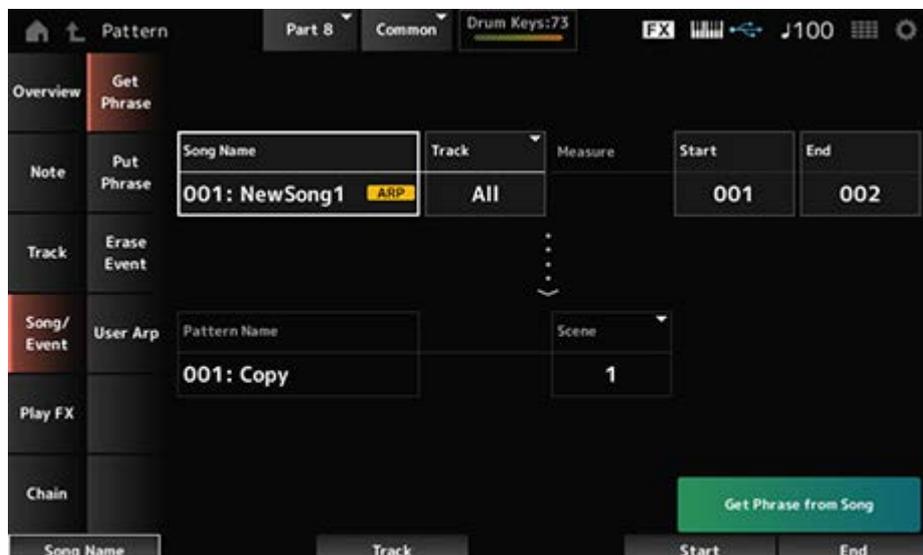
Copies a specific section of the Song to the specified track.

NOTICE
The existing data at the copy destination will be overwritten and lost.

Operation

- [▶] (Play) button → *Pattern* → [EDIT/ ⟳] → *Song/Event* → *Get Phrase*
- [PERFORMANCE] → *Play/Rec* → *Pattern* → *Edit/Job* → *Song/Event* → *Get Phrase*

Song Name

Specifies the Song to copy from.

Track *1 Source

Specifies the track for the *Get Phrase* operation.

Settings: *All*, 1–16

Start Measure

Specifies the starting measure position for the *Get Phrase* operation.

Settings: 001–998

End Measure

Specifies the ending measure position for the *Get Phrase* operation.

Settings: 002–999

Pattern Name

Specifies the Pattern to copy to.

Track *2 Destination

Specifies the track to copy to.

This parameter is not available when Source is set to *All*.

Settings: 1–16

Scene

Specifies the Scene to copy to.

Settings: 1–8

Get Phrase from Song

Carries out the *Get Phrase* operation.

Put Phrase ☆

Copies specified measures of the Pattern track to the specified Song track.

NOTE

The copied data will be merged into the existing data on the destination track.

Operation

- [▶] (Play) button → *Pattern* → [EDIT/ ⌒] → *Song/Event* → *Put Phrase*
- [PERFORMANCE] → *Play/Rec* → *Pattern* → *Edit/Job* → *Song/Event* → *Put Phrase*

Pattern Name

Specifies the Pattern to copy from.

Track *1 Source

Specifies the track for the *Put Phrase* operation.

Settings: 1–16

Scene

Specifies the Scene for the *Put Phrase* operation.

Settings: 1–8

Song Name

Specifies the Song to copy to.

Track *2 Destination

Specifies the track for the *Put Phrase* operation.

Settings: 1–16

Measure

Specifies the measure to copy to.

Settings: 001–999
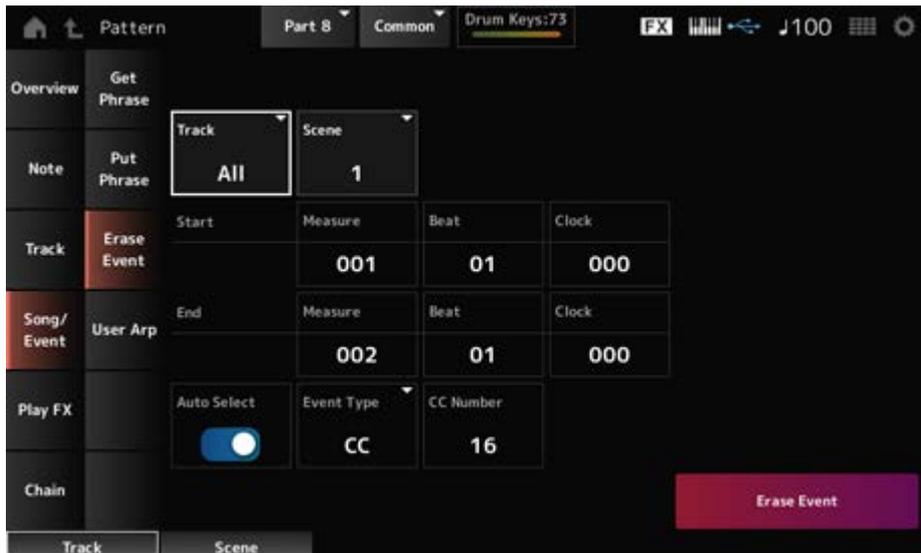
Put Phrase to Song

Carries out the *Put Phrase* operation.

Erase Event ☆

Erases the event.

For the most part, the screen here is the same as the one opened from *Note → Quantize* in *Pattern Edit*.

Auto Select
Switches the *Auto Select* setting of the *Event Type*.
When this is set to On, you can simply move the controller whose data you wish to erase, and the corresponding controller's event will automatically be set for *Event Type*.
Settings: Off, On

Event Type
Specifies the type of event you wish to erase.
Settings: *Note*, *Poly*, *CC*, *NRPN*, *RPN*, *PC*, *AfterTouch*, *PitchBend*, *SysEx*, *All*

CC Number
Shown when the *Event Type* is set to *CC*. Specify the Control Change number of the event to erase.
Settings: *All*, 1–127

Erase Event

Carries out the *Erase Event* operation.

User Arp (User Arpeggio) ☆
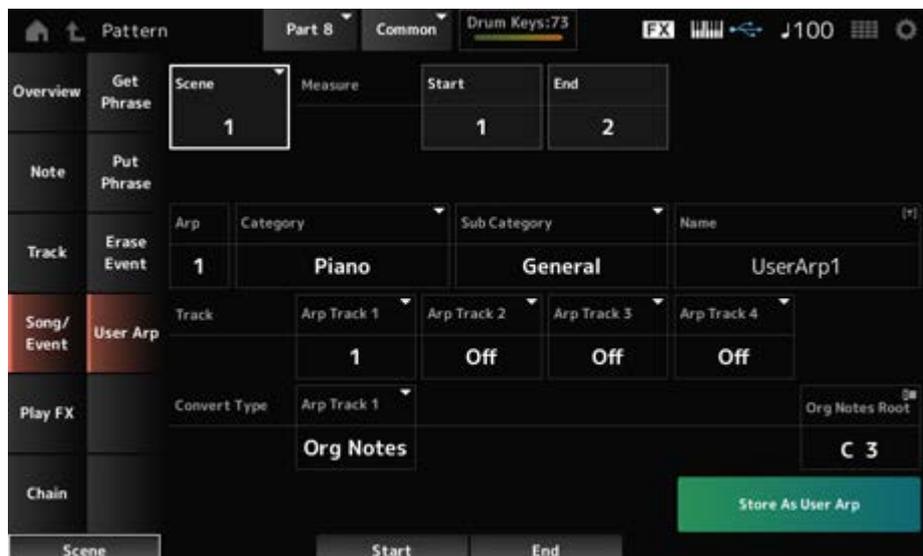
Registers the data in the specified measures of the Scene as a User Arpeggio.

NOTICE

The existing data at the Destination will be overwritten and lost.

Operation

- [▶] (Play) button → *Pattern* → [EDIT/ ⟳] → *Song/Event* → *User Arp*
- [PERFORMANCE] → *Play/Rec* → *Pattern* → *Edit/Job* → *Song/Event* → *User Arp*

Scene
Specifies the Scene for the *User Arpeggio* operation.
Settings: 1–8

Start Measure
Specifies the starting measure position for the *User Arpeggio* operation.
Settings: 1–256

End Measure
Specifies the ending measure position for the *User Arpeggio* operation.
Settings: 2–257

Arp (Arp Number)

Sets the Arpeggio Number of the User Arpeggio to convert to.

Initially, the lowest unused number will be set.

When you specify a number that is already used, the existing Arpeggio at the Destination will be lost.

Settings: 1–256

Category (Arpeggio Category)
Sub Category (Arpeggio Sub Category)

Sets the Main and Sub categories of the converted Arpeggio.

Settings: Refer to the *Data List*.

Name (Arpeggio Name)

Enter the Arpeggio Type Name. Up to 20 characters using alphanumeric characters can be used.

Track

Sets the track number to convert from for each Arpeggio track.

Settings: 1–16

Convert Type

Selects how the MIDI sequence recorded in the *Track* is to be converted to an Arpeggio.

You can use a different *Convert Type* for each Arpeggio track.

Settings: *Normal*, *Fixed*, *Org Notes*

> **Normal**: Only the MIDI sequence using the notes played on the keyboard (at the octave used) is played.
> **Fixed**: The same MIDI sequence is played back no matter how you play the keyboard.
> **Org Notes**: Basically the same as *Fixed*, but the MIDI sequence changes according to the chords you play on the keyboard.

Org Notes Root

Sets the root note when the *Convert Type* of any track is set to *Org Notes*.

This parameter is not available when there is no track set to *Org Notes*.

Settings: C−2–G8

Store As User Arp (Store As User Arpeggio)

Converts the Pattern to a User Arpeggio using the settings on the screen.

This button is not available when all tracks are set to *Off* because conversion is not possible.

Play FX (Play Effects) ★

Applies effects to the MIDI sequence during Pattern playback. Sets the range and level of the effect for each parameter of the specified track.

Operation

- [▶] (Play) button → *Pattern* → [EDIT/ ⏏] → *Play FX*
- [PERFORMANCE] → *Play/Rec* → *Pattern* → *Edit/Job* → *Play FX*

Track
Specifies the track to be normalized.
Settings: *All*, 1–16

Scene
Specifies the Scene to be normalized.
Settings: *All*, 1–8

Normalize Play FX
Fixes the effect specified in *Play FX* to the MIDI data.

Length
Sets the sequence length of the selected Scene.

Position
Shows the current position for the Scene playback, and lets you specify the playback position.
Settings: 001–256

Play FX1

Controls *Qntz Value*, *Qntz Str*, *Swing Vel*, *Swing Gate*, and *Swing Rate*.

Qntz Value (Quantize Value)

Sets the quantization resolution (or a note to be used as a base for the quantization).

Settings: *Off*, 60 (thirty-second note), 80 (sixteenth note triplet), 120 (sixteenth note), 160
(eighth note triplet), 240 (eighth note), 320 (quarter note triplet), 480 (quarter note)

Qntz Str (Quantize Strength)

Sets the "magnetic strength" of the quantization.

When this parameter is set to 100%, all notes will move to the position specified in the *Qntz Value (Quantize Value)*.

A setting of 0% results in no quantization.

Settings: 0%–100%

Swing Vel (Swing Velocity Rate)

Changes the velocity of the even-numbered beats (backbeats) counted from the value specified in *Qntz Value (Quantize Value)* to add a swing feel to the rhythms. This parameter is not available when the quantize resolution is set to *Off*.

Settings: 0%–200%

Swing Gate (Swing Gate Time Rate)

Changes the gate time (or the actual time for the note to be played) of the even-numbered beats (backbeats) counted from the value specified in *Qntz Value (Quantize Value)* to add a swing feel to the rhythms. This parameter is not available when the quantize resolution is set to Off.

Settings: 0%–200%

Swing Rate (Swing Offset)

Changes the timing of the even-numbered beats (backbeats) counted from the value specified in *Qntz Value (Quantize Value)* to add a swing feel to the rhythms. This parameter is not available when the quantize resolution is set to *Off*.

Settings: 0–Half of quantize resolution

Play FX2

Controls *Note Shift*, *Clock Shift*, *Gate Time*, *Velocity Rate*, and *Velocity Offset*.

Note Shift

Adjusts the pitch in semitones.

Settings: −99–+99

Clock Shift

Shifts the timing of the notes back or forward in clock increments.

Settings: −120–+120

Gate Time

Changes the gate time (the actual time for the sound of the note to be generated) of the note events.

Settings: 0%–200%

Velocity Rate

Changes the velocity by the specified percentage.

Settings: 0%–200%

Velocity Offset

Increases or decreases velocity by the specified value.

Settings: −99–+99

Chain ★

This Job chains Scenes for playback.

- [▶] (Play) button → *Pattern* → [EDIT/ ⟲] → *Chain*
- [PERFORMANCE] → *Play/Rec* → *Pattern* → *Edit/Job* → *Chain*

Chain
Enables chain playback.
Settings: Off, On

Measure
Specifies the starting measure position for Scene playback.
Settings: 001–999

Scene
Sets the Scene to play back at the specified measure.
Settings: 1–8, *End*

Page
When there are more than eight rows for the list of *Measure* and *Scene*, the up or down arrow will be shown.

Convert to Song
Saves the chain as a Song.

Length
Shows the length of the entire sequence.

Position

Shows the current position of chain playback, and lets you specify the playback position.
Settings: 001–999

Song ⭐

In the *Song* screen, you can record your keyboard performance in MIDI Song, and play back the Song.
The data of both the keyboard performance and the operation of controllers and knobs is recorded to the MIDI track.
You can also select Arpeggio playback to be recorded to the Song.
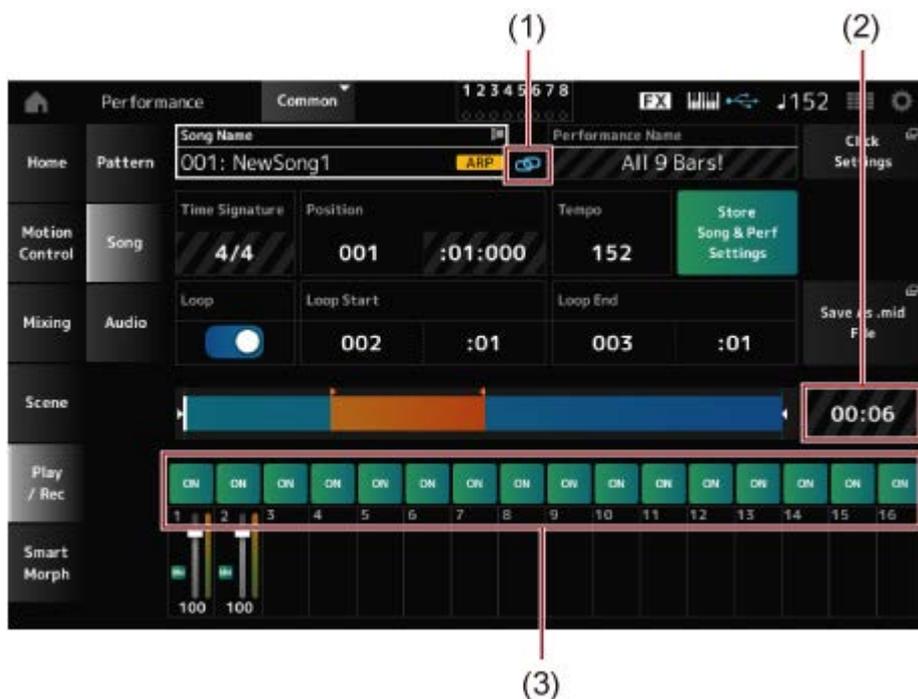
■ Playback and playback standby

Operation

- [SONG/PATTERN] button → *Song*
- [PERFORMANCE] → *Play/Rec* → *Song*
- [▶] (Play) button → *Song*

(1)   *Link Icon*
(2)   *Song Length*
(3)   *Track Play Switch*

Song Name
Shows the name of the selected Song.
Tapping on the name calls up the context menu for *Load*, *Rename*, *New Song*, and *User Arp*.

You can select a Song by using the [INC/YES] and [DEC/NO] buttons when the cursor is on the *Song Name*.

Performance Name
Shows the name of the selected Performance.

NOTE
The blue flag will be shown when you change a parameter in the Performance.

Link Icon
The link icon is shown if the Performance used for recording the Song and the selected Performance are the same. If not, a broken link icon will be shown.

Click Settings
This calls up the *Tempo Settings* screen.

Time Signature
Shows the meter for the Pattern.

Position
Sets the position for starting playback and recording, as well as the current playback position. The number shown on the left is the measure, and the numbers shown on the right are the beats and ticks.

Tempo
Sets the tempo for Song playback.
Settings: 5–300

Loop
Sets Loop playback on or off.
When set to On, the playback of a section between the *Loop Start* and *Loop End* points will be repeated.
Settings: Off, On

Loop Start / End
Sets the section for Loop playback. The number shown on the left is the measure, and the number shown on the right is the beat. This parameter is not available when *Loop* is set to Off.

Store Song & Perf Settings (Store Song and Performance Settings)
Saves the link between the edited Songs and the Performance used.

NOTE

If you have edited the Performance parameters, you will also need to store the Performance.

Save As .mid File

Pressing this button calls up the *Save* screen, allowing you to save the Song as a file.
Save As .mid File is not available in the following situations.

- For a new recording (when there is no Song)
- During playback
- When recording standby is enabled
- During recording

Song Length

Shows the length of the entire sequence.

Track Play Switch

Turns playback of each track on or off.
Settings: Off, On

■ Recording and recording standby

Operation

- [SONG/PATTERN] button → Song → [●] (Record) button
- [PERFORMANCE] → *Play/Rec* → *Song* → [●] (Record) button

New recording

When something has already been recorded

Time Signature
Shows the meter for the Song.
Settings: 1/16–16/16, 1/8–16/8, 1/4–8/4

Rec Quantize
Quantize is a function that corrects the recorded notes to be on the exact fraction of the beat (in note values).
Settings: *Off*, 60 (thirty-second note), 80 (sixteenth note triplet), 120 (sixteenth note), 160 (eighth note triplet), 240 (eighth note), 320 (quarter note triplet), 480 (quarter note)

Record Type
Selects a record type for the tracks already recorded. This parameter is not available for a new recording.
Settings: *Replace, Overdub, Punch*
> **Replace**: Overwrite and record in real-time. The existing data will be lost.
> **Overdub**: Overdub and record in real-time. The existing data will not be lost.
> **Punch**: Re-record a section and record in real-time. This overwrites the existing data of a specified section.

Punch In
Sets the *Punch in* point (specific measure and beat at which to start re-recording).
This parameter is available only when *Record Type* is set to *Punch*.

Punch Out
Sets the *Punch out* point (specific measure and beat at which to end re-recording).
This parameter is available only when *Record Type* is set to *Punch*.

Arp Rec

When *Arp Rec* is On, the results of Arpeggio playback are recorded. When set to Off, only the keyboard performance is recorded.

This parameter can be set for recording a new Song. The setting cannot be changed after the recording.

To add something to the Song recorded with *Arp Rec* set to Off, only *Replace* can be used for *Record Type*.

Settings: Off, On

NOTE

With the Song with *Arp Rec* set to Off, you can select a different Arpeggio for playback by changing the Arpeggio selection in the Performance.

Undo

Undo cancels the last recording action and deletes what has been just recorded.

This button is active when you change any settings to a sequence.

Redo

Redo restores the recording that has been canceled by *Undo*. This button is only active after *Undo* has been used.

Put Track to Arpeggio
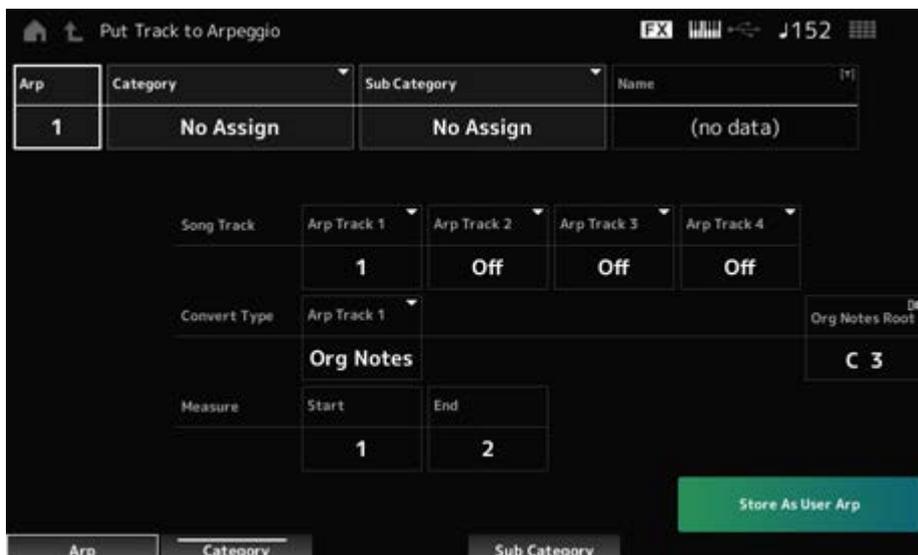
Converts the selected Song to a User Arpeggio.

Up to 16 different notes can be converted. (All notes with the same Note Number are counted as one.)

Make sure to use only up to 16 notes for a Song if you wish to convert it to a User Arpeggio, especially when you use multiple tracks.

Operation

Open the screen from the [PERFORMANCE] → *Play/Rec* → *Song* → Tap on the *Song Name* to open the context menu → *User Arp*

Arp (Arpeggio Number)

Sets the Arpeggio Number of the User Arpeggio for conversion.

Initially, the next unused number will be set.

Keep in mind that if you change this to a number already being used, the Arpeggio will be overwritten, meaning that you will lose the existing User Arpeggio for that number.

Settings: 1–256

Category (Arpeggio Category)
Sub Category (Arpeggio Sub Category)

Sets the Main and Sub categories of the converted Arpeggio.

Settings: Refer to the *Data List*.

Name (Arpeggio Name)

Sets the Arpeggio Name. You can use up to 20 alphanumeric characters.

Song Track

Sets the track number of the Song to convert from for each Arpeggio track.

Settings: 1–16

Convert Type

Selects how to convert the MIDI sequence recorded in the Song to the Arpeggio from three different settings.

You can use a different Convert Type for each Arpeggio track.

Settings: *Normal*, *Fixed*, *Org Notes*

> **Normal**: The Arpeggio is played back at the same octave as the recorded MIDI Sequence.
>
> **Fixed**: The recorded MIDI sequence is played back the same way no matter how you play the keyboard.

Org Notes: Basically, the same as Fixed; however, the playback of the MIDI sequence changes according to the chords you play on the keyboard.

Org Notes Root (Original Notes Root)

Sets the root note when the *Convert Type* of any track is set to *Org Notes*.

This parameter is not available when no track is set to *Org Notes*.

Settings: C−2–G8

Start Measure

Sets the starting measure for the conversion.

Settings: 1–998

End Measure

Sets the ending measure for the conversion.

Settings: 2–999

Store As User Arp

Converts the Song to a User Arpeggio with the settings specified on this screen.

This button is not available when all tracks are set to Off.

Audio ☆
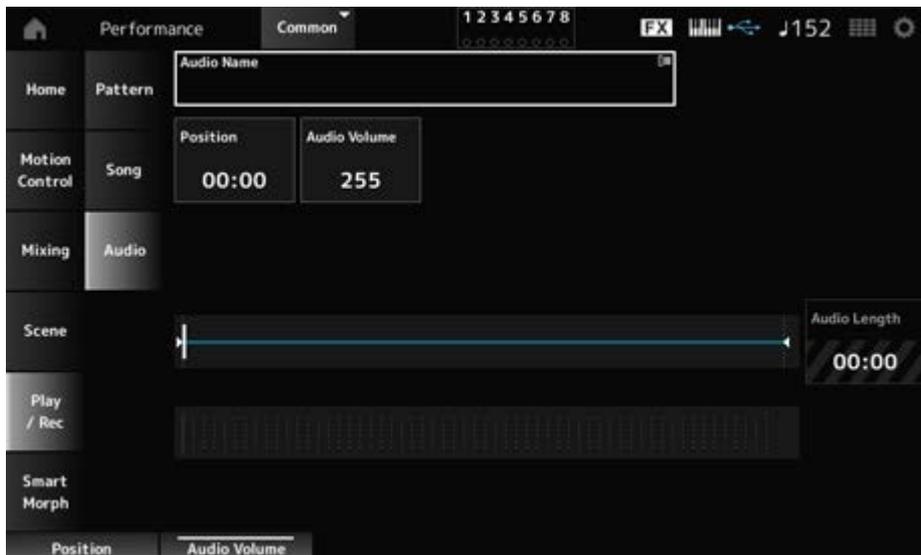
On the *Audio* screen, you can record your keyboard performance as an audio file in WAV (44.1-kHz, 24-bit stereo) to the USB flash drive. You can record up to 74 minutes or longer, to the maximum capacity of the USB flash drive.

■ Playback and playback standby

Operation

- [SONG/PATTERN] button → *Audio*
- [PERFORMANCE] → *Play/Rec* → *Audio*
- [▶] (Play) button → *Audio*

Audio Name

Shows the name of the selected Audio file.

Tapping on the name calls up the context menu for *Load*.

Position

Sets the position for starting playback, as well as the current playback position.

Audio Volume

Sets the position for starting playback. This parameter is not available during recording.

Settings: 0–255

Audio Length

Shows the total length of the audio file.
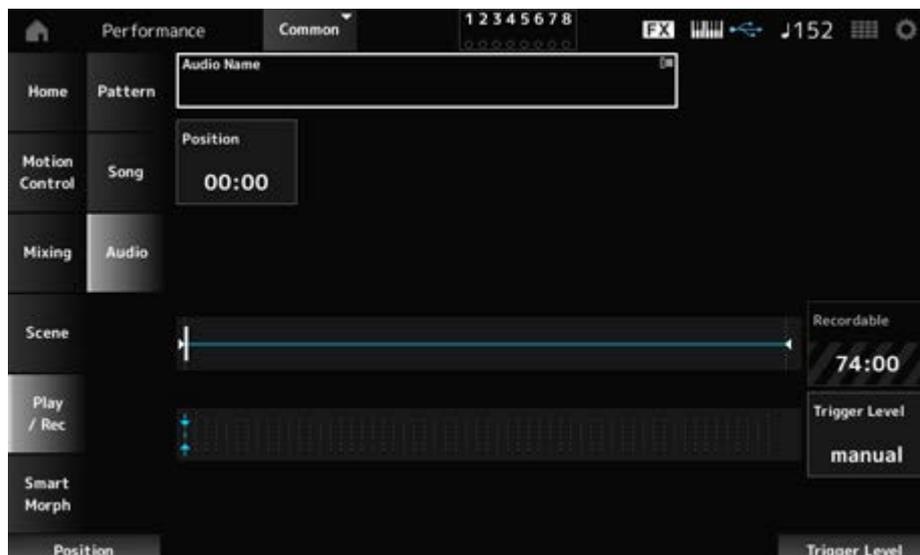
Level meter

Shows the audio input and output level.

■ Recording and recording standby

Operation

[PERFORMANCE] → *Play/Rec* → *Audio* → [●] (Record) button

Recordable (Audio Recordable Time)

Shows the recordable time for audio. This parameter is shown only while recording standby is enabled.

Trigger Level

Selects how to start recording. This parameter is shown only while recording standby is enabled.

When *Trigger Level* is set to manual, you can start recording by pressing the [▶] (Play) button.

When *Trigger Level* is set to a value between 1 to 127, you can start recording after you press the [▶] (Play) button and the signal level exceeds the specified value. The level set here will be indicated by blue triangles in the level meter.
For best results, set this parameter as low as possible to capture the entire signal, but not so low as to record unwanted noise.
Settings: *manual*, 1–127
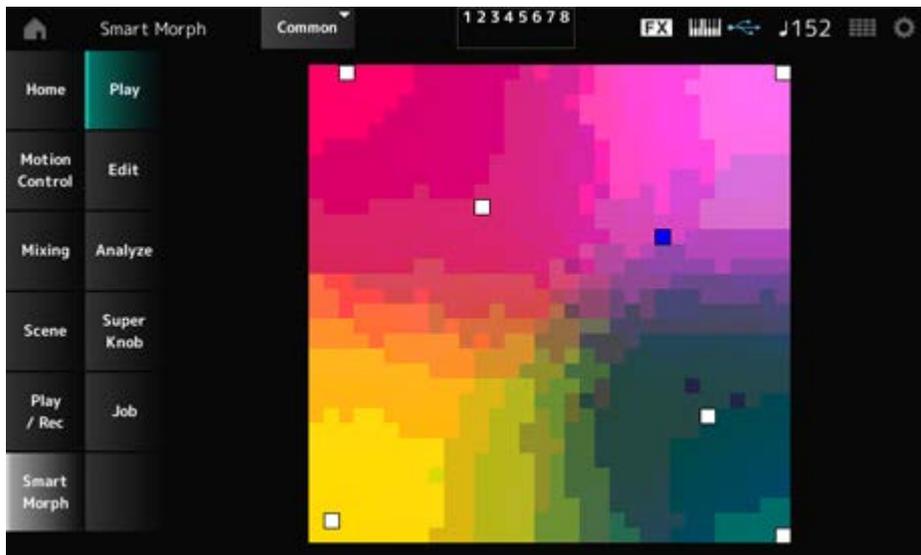
Smart Morph ★

Play ☆

Tap on the Smart Morph map, and create changes in the FM-X sound on Part 1.

Operation

[PERFORMANCE] → *Smart Morph* → *Play*
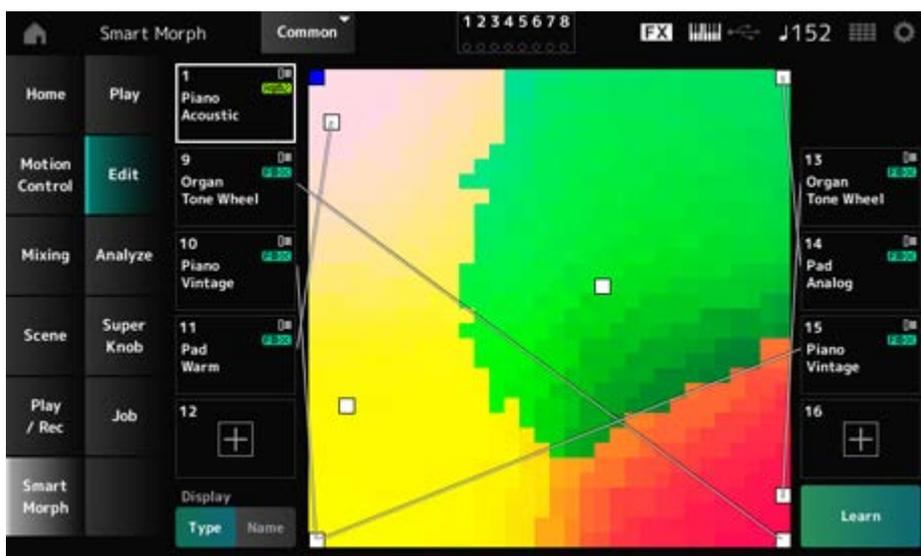
Edit ☆

Operation

[PERFORMANCE] → *Smart Morph* → *Edit*

Unused Part

Tap to open the *Part Category Search* screen for selecting an FM-X sound.

Part being used

Tapping on the name calls up the context menu for *Category Search*, *Edit*, and *Property*.

Display

Selects the *Part Main Category* view or *Part Name* view for Parts.

189

Learn

Tap the button to start machine learning (map creation).

This button will not be shown when there is no FM-X sound on Parts 9 to 16.

Undo
Redo

After the *Learn* operation, the *Undo* button will be shown on the upper right.

Use the *Undo* button to restore the original map before using machine learning.
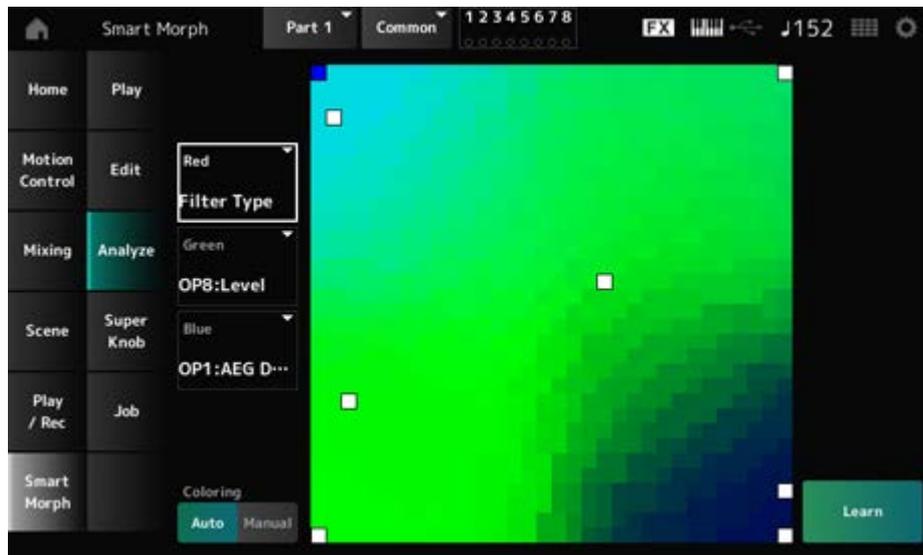
After the *Undo* operation, the *Redo* button will appear, and you can use it to restore the map before the *Undo* operation.

Analyze ☆

Operation

[PERFORMANCE] → *Smart Morph* → *Analyze*

Red

Each dot on the map represents the parameter value indicating a degree or level as a shade of red.

For the list of available parameters, see "Parameters that can be set for Red, Green, and Blue."

Green

Each dot on the map represents the parameter value indicating a degree or level as a shade of green.

For the list of available parameters, see "Parameters that can be set for Red, Green, and Blue."

Blue

Each dot on the map represents the parameter value indicating a degree or level as a shade of blue.

For the list of available parameters, see "Parameters that can be set for Red, Green, and Blue."

Coloring

When set to *Auto*, the Red, Green, and Blue are automatically reset for the *Learn* process.

When set to *Manual*, the Red, Green, and Blue are not reset automatically for the *Learn* process.

Settings: *Auto, Manual*

Learn

Tap the button to start machine learning (map creation).

Undo
Redo

After the *Learn* operation, the *Undo* button will be shown on the upper right.

Use the *Undo* button to restore the original map before using machine learning.

After the *Undo* operation, the *Redo* button will appear, and you can use it to restore the map before the *Undo* operation.

Parameters that can be set for Red, Green, and Blue
FM Common

Parameter Name	Display Name
Random Pan Depth	*Random Pan Depth*
Alternate Pan Depth	*Alternate Pan*
Scaling Pan Depth	*Scaling Pan Depth*
Key On Delay Time Length	*KeyOnDly Time*
Key On Delay Tempo Sync Switch	*KeyOnDly Sync*
Key On Delay Note Length	*KeyOnDly Note*
Pitch Velocity Sensitivity	*Pitch/Vel*
Random Pitch Depth	*Random Pitch Depth*
Pitch Key Follow Sensitivity	*Pitch/Key*
Pitch Key Follow Sensitivity Center Note	*Pitch/Key Center*
PEG Initial Level	*PEG Initial Lvl*
PEG Attack Level	*PEG Attack Lvl*
PEG Decay 1 Level	*PEG Decay 1 Lvl*
PEG Decay 2 Level	*PEG Decay 2 Lvl*
PEG Release Level	*PEG Release Lvl*
PEG Attack Time	*PEG Attack Tm*
PEG Decay 1 Time	*PEG Decay 1 Tm*
PEG Decay 2 Time	*PEG Decay 2 Tm*
PEG Release Time	*PEG Release Tm*
PEG Depth Vel Sensitivity	*PEG Depth/Vel*
PEG Depth	*PEG Depth*
PEG Time Key Follow	*PEG Time/Key*
2nd LFO Wave	*2nd LFO Wave*
2nd LFO Speed	*LFO Speed*
2nd LFO Phase	*LFO Phase*
2nd LFO Delay Time	*LFO Delay*

Parameter Name	Display Name
2nd LFO Key On Reset	*LFO Key On Reset*
2nd LFO Pitch Mod Depth	*LFO Pitch Mod*
2nd LFO Amp Mod Depth	*LFO Amp Mod*
2nd LFO Filter Mod Depth	*LFO Filter Mod*
Algorithm Number	*Algorithm Number*
Feedback Level	*Feedback Level*
LFO Speed Range	*LFO Speed Range*
LFO Extended Speed	*LFO Ex Speed*
Filter Type	*Filter Type*
Filter Cutoff Frequency	*Cutoff*
Filter Cutoff Vel Sensitivity	*Cutoff/Vel*
Filter Resonance/Width	*Resonance / Width*
Resonance Vel Sensitivity	*Res/Vel*
HPF Cutoff Frequency	*HPF Cutoff*
Distance	*Distance*
Filter Gain	*Filter Gain*
FEG Hold Time	*FEG Hold Tm*
FEG Attack Time	*FEG Attack Tm*
FEG Decay 1 Time	*FEG Decay 1 Tm*
FEG Decay 2 Time	*FEG Decay 2 Tm*
FEG Release Time	*FEG Release Tm*
FEG Hold Level	*FEG Hold Lvl*
FEG Attack Level	*FEG Attack Lvl*
FEG Decay 1 Level	*FEG Decay 1 Lvl*
FEG Decay 2 Level	*FEG Decay 2 Lvl*
FEG Release Level	*FEG Release Lvl*
FEG Depth	*FEG Depth*
FEG Time Velocity Sensitivity Segment	*FEG Segment*
FEG Time Vel Sensitivity	*FEG Time/Vel*
FEG Depth Vel Sensitivity	*FEG Depth/Vel*

Parameter Name	Display Name
FEG Depth / Vel Curve	*FEG Curve*
FEG Time Key Follow	*FEG Time/Key*
FEG Time Key Follow Sensitivity Center Note	*FEG Center*
Filter Cutoff Key Follow	*Flt Cutoff/Key*
Filter Cutoff Scaling Break Point 1	*Flt Break Point 1*
Filter Cutoff Scaling Break Point 2	*Flt Break Point 2*
Filter Cutoff Scaling Break Point 3	*Flt Break Point 3*
Filter Cutoff Scaling Break Point 4	*Flt Break Point 4*
Cutoff Scaling Offset 1	*Flt Cutoff Offset 1*
Cutoff Scaling Offset 2	*Flt Cutoff Offset 2*
Cutoff Scaling Offset 3	*Flt Cutoff Offset 3*
Cutoff Scaling Offset 4	*Flt Cutoff Offset 4*
HPF Cutoff Key Follow	*HPF Cutoff/Key*

Operator

Parameter Name	Display Name
Key On Reset	*Key On Reset*
Freq Mode	*Freq Mode*
Coarse	*Coarse*
Fine	*Fine*
Detune	*Detune*
Pitch/Key	*Pitch/Key*
Pitch/Vel	*Pitch/Vel*
Spectral	*Spectral*
Skirt	*Skirt*
Resonance	*Resonance*
Initial	*PEG Initial Lvl*
Attack	*PEG Attack Lvl*
Attack	*PEG Attack Tm*
Decay	*PEG Decay Tm*

Parameter Name	Display Name
Attack	*AEG Attack Lvl*
Decay 1	*AEG Decay 1 Lvl*
Decay 2	*AEG Decay 2 Lvl*
Rel(Hold)	*AEG Release Lvl*
Attack	*AEG Attack Tm*
Decay 1	*AEG Decay 1 Tm*
Decay 2	*AEG Decay 2 Tm*
Release	*AEG Release Tm*
Hold	*AEG Hold Tm*
Time/Key	*AEG Time/Key*
Level	*Level*
Break Point	*Lvl Break Point*
Lvl/Key Lo	*Lvl/Key Lo*
Lvl/Key Hi	*Lvl/Key Hi*
Curve Lo	*Curve Lo*
Curve Hi	*Curve Hi*
Level/Vel	*Level/Vel*
Depth Offset	*LFO PM Depth*
Depth Offset	*LFO AM Depth*
Pitch/Ctrl	*Pitch/Ctrl*
Level/Ctrl	*Level/Ctrl*

Super Knob ☆

Operation

[PERFORMANCE] → *Smart Morph* → *Super Knob*

Super Knob Link

When set to On, you can use the Super Knob for following the path on the map from start to end, instead of running your finger across the touchscreen.
Settings: Off, On

Start

Sets the position of the smallest Super Knob value on the map.
When the cursor is on *Start*, tap on the map to set the value for the Starting point.

End

Sets the position of the largest Super Knob value on the map.
When the cursor is on *End*, tap on the map to set the value of the ending point.

Waypoints

Sets the number of interspersed points (waypoints) between the start and end.
Settings: 0–6

Waypoint 1–Waypoint 6
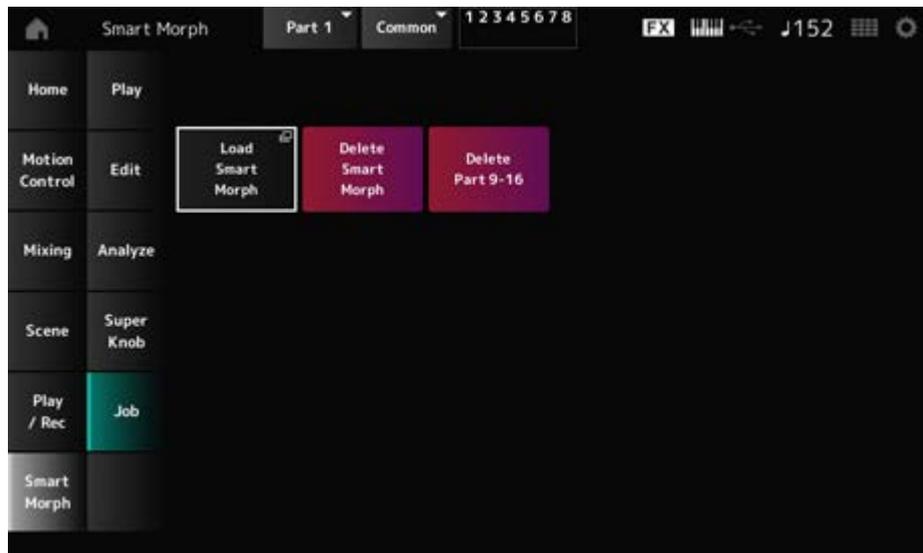
Sets the position on the map.

Job ☆

Operation

[PERFORMANCE] → *Smart Morph* → *Job*

Load Smart Morph

Opens the *Load* screen.

On the *Load* screen, you can select another Performance and import the Smart Morph settings from that Performance to the current Performance.

Delete Smart Morph

Deletes the Smart Morph settings from the selected Performance.

Delete Part 9–16

Deletes all Parts 9 to 16 at once to make these Parts unused.

When Parts 9 to 16 are set to unused, the SSS will be enabled.

Parts 9 to 16 are used for creating a Smart Morph map.

When you are finished adjusting the parameters and you no longer need to use the map, you can delete Parts 9 to 16.

Common Edit screen ☆

On the *Common Edit* screen, you can edit the parameters for the entire Performance as well as the parameters for the Audio Part.
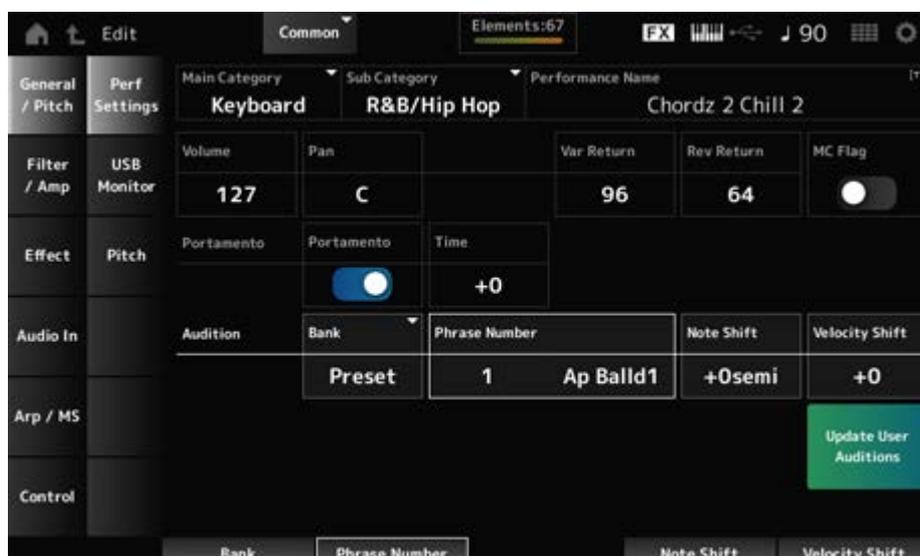
General/Pitch ★

Perf Settings ☆

On the *Perf Settings* screen, you can set general parameters for the Performance.

Operation

[PERFORMANCE] → *Common* selection → [EDIT/ ⟳] → *General/Pitch* → *Perf Settings*

Main Category
Sub Category
Sets the Main category and Sub category of the selected Performance.
Settings: Refer to the *Data List*.

Performance Name

You can save the Performance you are editing under a new name, using up to 20 alphanumeric characters.

Tapping on the name calls up the onscreen keyboard, allowing you to enter a name.

MC Flag (Motion Control Flag)

Sets an MC flag to the selected Performance.

When set to On, the *MC flag* appears on the *Performance* screen. Also, on the *Performance Category Search* screen, the Performance will be filtered by the MC attribute.

Settings: Off, On

Volume (Performance Volume)

Sets the volume of the selected Performance.

Settings: 0–127

Pan (Performance Pan)

Sets the Pan of the selected Performance.

Settings: L63–C–R63

Var Return (Variation Return)

Sets the output level (Return Level) of the signals processed by the Variation Effect.

Settings: 0–127

Rev Return (Reverb Return)

Sets the output level (Return Level) of the signals processed by the Reverb Effect.

Settings: 0–127

Portamento Master Sw (Portamento Master Switch)

Sets Portamento on or off for Parts having the *Portamento Part Sw* set to On.

This switch is linked to the [PORTAMENTO] button on the top panel.

Settings: Off, On

Portamento Time

Sets the time length (or speed) for the pitch transition of Portamento.

This is specified as an offset value to the Part Portamento time.

Settings: −64–+63

Update User Auditions

Converts all Songs saved to internal memory into User Auditions.

If any User Auditions already exist, all previous User Auditions will be overwritten.

Audition Bank

Selects the bank for the audition phrases.

Audition Phrase Number

Selects the audition phrase.

The preset Performances already have suitable audition phrases assigned.

By playing back the audition phrase, you can listen to the selected Performance in an appropriate musical context.

Settings: Refer to the *Data List*.

Audition Phrase Name

Shows the name of the audition phrase.

Note Shift (Audition Note Shift)

Adjusts the pitch of the notes in the audition phrase in semitones.

Settings: −24–+24

Velocity Shift (Audition Velocity Shift)

Adjusts the velocity of the notes in the audition phrase.

Settings: −63–+63

USB Monitor ☆

On the *USB Monitor* screen, you can adjust the volume of the audio signals input from the [USB TO HOST] terminals.
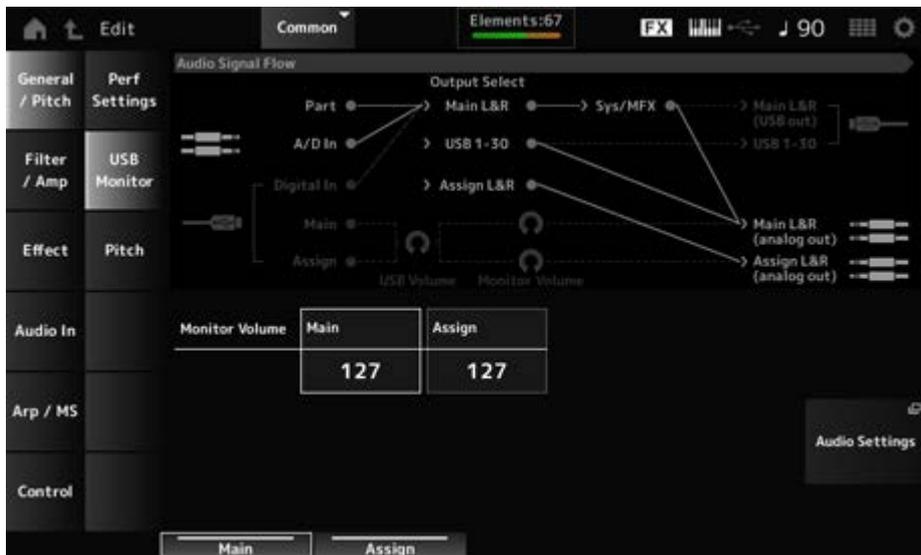
When you tap on the *USB Volume* in the *Audio Signal Flow*, the cursor moves to the *USB Volume* on the *Audio I/O* screen.

NOTE

USB Main Monitor Volume and *USB Assign Monitor Volume* are saved (stored) in the Performance.

Operation

[PERFORMANCE] → *Common* selection → [EDIT/ ⌒⌒] → *General/Pitch* → *USB Monitor*

Monitor Volume Main

Adjusts the volume of the audio signals input from the [USB TO HOST] terminal and output to the OUTPUT jacks.

Settings: 0–127

Monitor Volume Assign

Adjusts the volume of the audio signals input from the [USB TO HOST] terminal and output to the ASSIGNABLE OUTPUT (BALANCED) jacks.

Settings: 0–127

Audio Settings

Opens the UTILITY *Audio I/O* screen.

The same screen can be opened from [UTILITY]→*Settings*→*Audio I/O*.

Pitch ☆
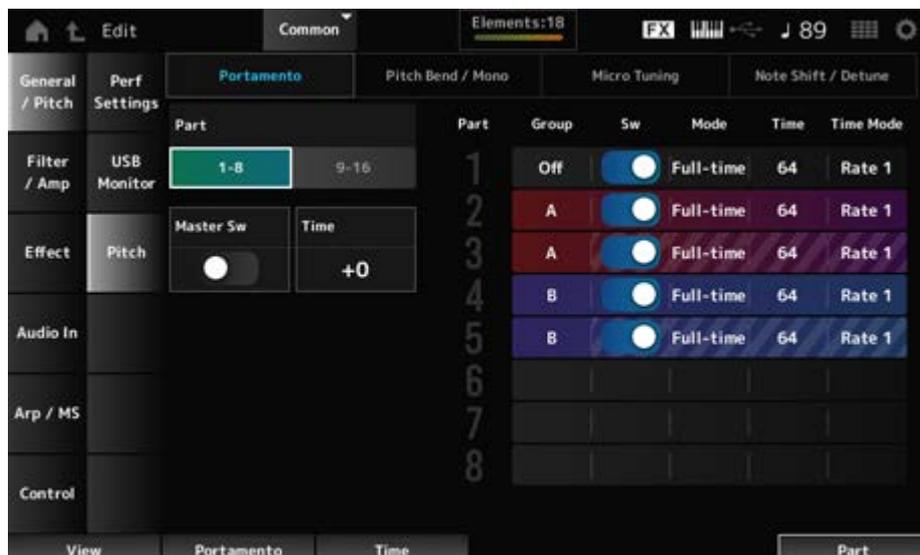
On the *Pitch* screen, you can make pitch settings.

Operation

- [PERFORMANCE] → *Common* selection → [EDIT/ 🔗] → *General/Pitch* → *Pitch*
- [SHIFT] + [PORTAMENTO]

■ *Portamento* View

Sw, Mode, Time, and *Time Mode* will not be shown for the Drum Part.

Part

Switches the view between Parts 1 to 8 and Parts 9 to 16.

Master Sw (Portamento Master Switch)

Sets Portamento to be applied to Parts having the *Portamento Part Switch* set to On.

This switch is linked to the [PORTAMENTO] button on the top panel.

Settings: Off, On

Time (Portamento Time)

Sets the time length (or speed) for the pitch transition of Portamento.

This is specified as an offset value to the Part Portamento time.

Settings: −64–+63

Group (Pitch Control Group)

The Parts in the same group are given the same pitch.

This is convenient when you wish to apply Portamento to a layered sound or have the same micro-tuning settings for multiple Parts at once.

Sw (Portamento Part Switch)

Sets Portamento on or off for the Part.

Settings: Off, On

Portamento Mode

Sets how Portamento is applied by the way you play the keyboard.

Settings: *Fingered*, *Full-time*

> **Fingered**: Portamento is applied only when you play legato (playing the next note before releasing the previous one).
>
> **Full-time**: Portamento is applied to all notes.

Time (Portamento Part Time)

Sets the time length (or speed) for the pitch transition of Portamento for the Part.

Settings: 0–127

Time Mode (Portamento Time Mode)

Sets how the pitch changes over time.

Settings: *Rate 1*, *Time 1*, *Rate 2*, *Time 2*
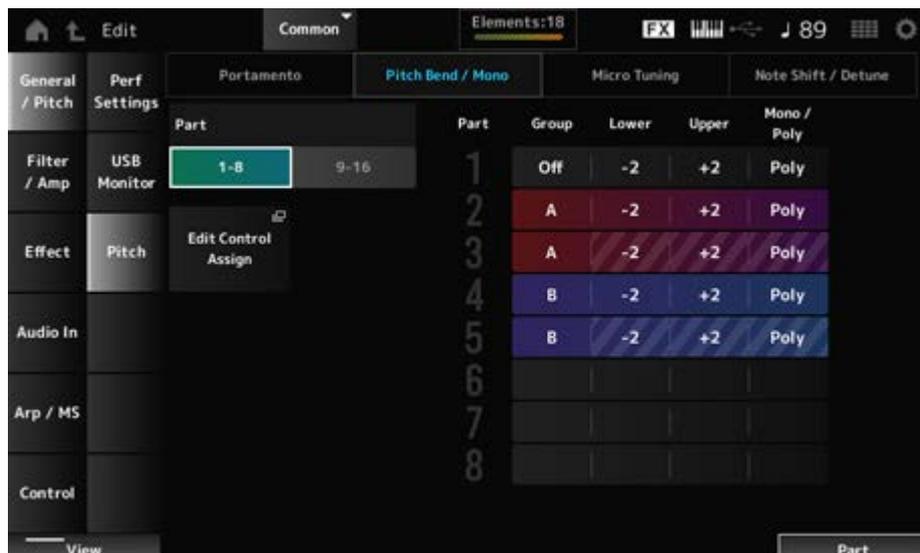
> **Rate 1**: Pitch changes at a specific rate.
>
> **Time 1**: Pitch changes at a specific time.
>
> **Rate 2**: Pitch changes at a specific rate within an octave.
>
> **Time 2**: Pitch changes at a specific time within an octave.

■ *Pitch Bend / Mono* View

Mono / Poly will not be shown for the Drum Part.

Lower (Pitch Bend Lower)
Upper (Pitch Bend Upper)

Sets the range of the changes created with the Pitch Bend wheel in semitones.

Settings: −48–+0–+24

Mono / Poly

Sets the tone generation mode for the keyboard.
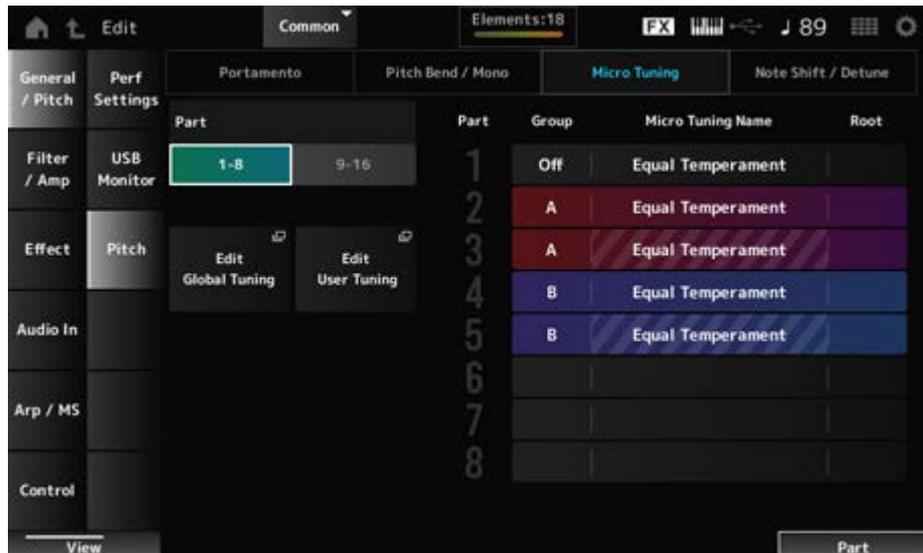
Mono is for playing single notes, and *Poly* is for playing multiple simultaneous notes.

Settings: *Mono*, *Poly*

Edit Control Assign

Opens the *Control Assign* screen for *Common Edit*.

■ *Micro Tuning* view

Micro Tuning Name and *Root* will not be shown for the Drum Part.

Micro Tuning Name

Sets the micro tuning (temperament) for the Part.

Settings: *Equal Temperament*, *Pure Major*, *Pure Minor*, *Werckmeister*, *Kirnberger*, *Vallotti & Young*, *1/4 shift*, *1/4 tone*, *1/8 tone*, *Indian*, *Arabic 1*, *Arabic 2*, *Arabic 3*, *User 1–8* (when a User bank is selected), *Library 1-1–16-8* (when a library file is loaded)

Root (Micro Tuning Root)

Sets the root note for the micro tuning.

This parameter is not shown when the selected type in *Micro Tuning Name* does not require a root note.
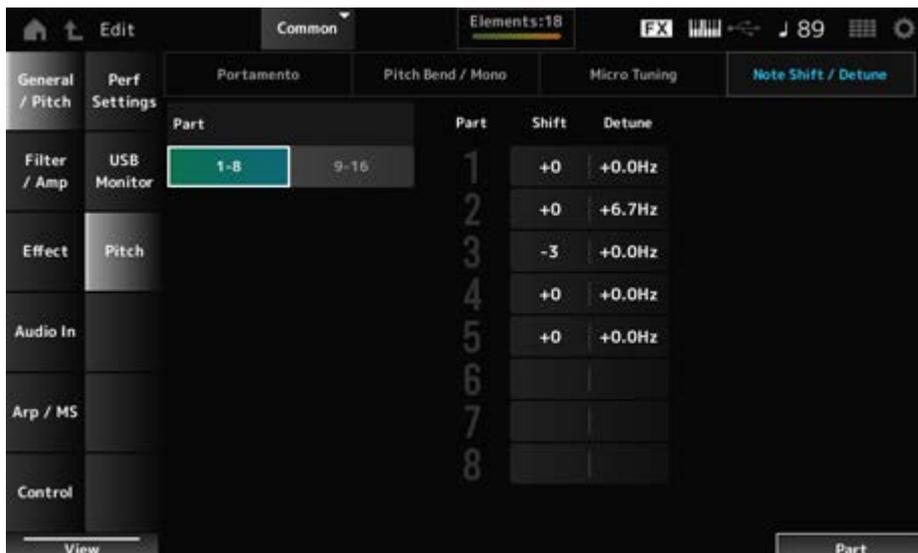
Settings: C–B

Edit Global Tuning

Opens the Global Tuning setting screen.

Edit User Tuning

Opens the User Tuning setting screen.

■ *Note Shift / Detune* View

Shift (Note Shift)
Adjusts the pitch in semitones.
Settings: −24–+0–+24
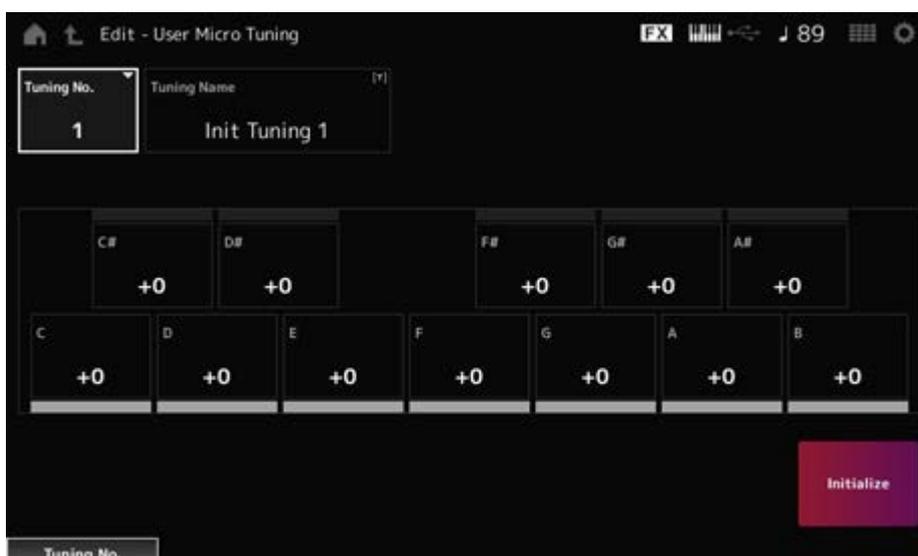
Detune
Adjusts the pitch of the Part in 0.1 Hz increments.
By slightly shifting the pitch, you can detune the sound.
Settings: −12.8Hz–+0.0Hz–+12.7Hz

Edit User Tuning ☆

This is the setting screen for User Micro Tuning.

Tuning No. (Micro Tuning Number)

Indicates the selected User Micro Tuning Number.

Settings: 1–8

Tuning Name (Micro Tuning Name)

You can save the User Micro Tuning you are editing under a new name.

Tapping on the name calls up the onscreen keyboard, allowing you to enter a name.

C, C♯, D, D♯, E, F, F♯, G, G♯, A, A♯, B

You can adjust the pitch of each note in cents to set the micro tuning.

Settings: −99–+99

Initialize

Initializes the selected User Micro Tuning.

Filter/Amp ★

Filter EG ☆
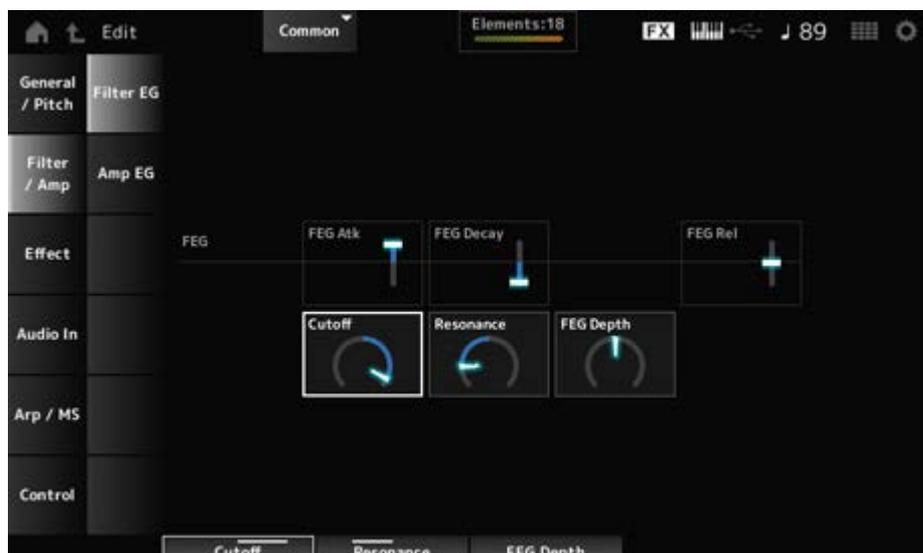
On the *Filter EG* screen, you can set the Filter Envelope Generator (FEG).
This lets you set the degree (or level) of changes to the cutoff frequency and how those changes evolve over time, starting from the moment you press a key on the keyboard to the moment the sound decays.

Operation

[PERFORMANCE] → *Common* selection → [EDIT/ ⟲] → *Filter/Amp* → *Filter EG*

FEG Atk (FEG Attack Time)

Sets the length of time it takes for the sound to change from the moment you press a key until when the Cutoff Frequency reaches the value set at *Attack Level*.

This is specified as an offset value to the Part FEG.

Settings: −64–+63

FEG Decay (FEG Decay Time)

Sets the length of time it takes for the Cutoff Frequency to change from the attack level. You can control the crispness or the decay speed of the sound.

This is specified as an offset value to the Part FEG.

Settings: −64–+63

FEG Rel (FEG Release Time)

Sets the length of time it takes for the Cutoff Frequency to fall to the Release level when you release the key.

This is specified as an offset value to the Part FEG.

Settings: −64–+63

Cutoff (Cutoff Frequency)

Changes the sound by setting the cutoff frequency of the filter.

When the Low Pass Filter is selected, you can make the sound brighter by setting this to a larger value, and darker by setting it to a smaller value.

This is specified as an offset value to the filter cutoff frequency for the Part.

Settings: −64–+63

Resonance

Adds special characteristics to the sound by adjusting the signal level near the cutoff frequency.

This is specified as an offset value to the filter resonance for the Part.

Settings: −64–+63

FEG Depth

Sets the depth range of the cutoff frequency change controlled by the FEG.

This is specified as an offset value to the *Part FEG Depth*.

Settings: −64–+63

Amp EG ☆

On the *Amp EG* screen, you can set the AEG (Amplitude Envelope Generator) time. By setting the *Amp EG*, you can set how the volume changes from the moment you press a key on the keyboard to when the sound decays.

[PERFORMANCE] → *Common* selection → [EDIT/ ⟳] → *Filter/Amp* → *Amp EG*

The settings on the *Amp EG* screen are offset values to the AEG for all Parts.

Attack (AEG Attack Time)

Sets the length of time it takes for the volume to change from the moment you press a key on the keyboard to when it reaches the maximum.

Settings: −64–+63

Decay (AEG Decay Time)

Sets the length of time it takes for the volume to change after it has reached the maximum.

Settings: −64–+63

Sustain (AEG Sustain Level)

Sets the volume that is maintained while the key is held down.

Settings: −64–+63

Release (AEG Release Time)
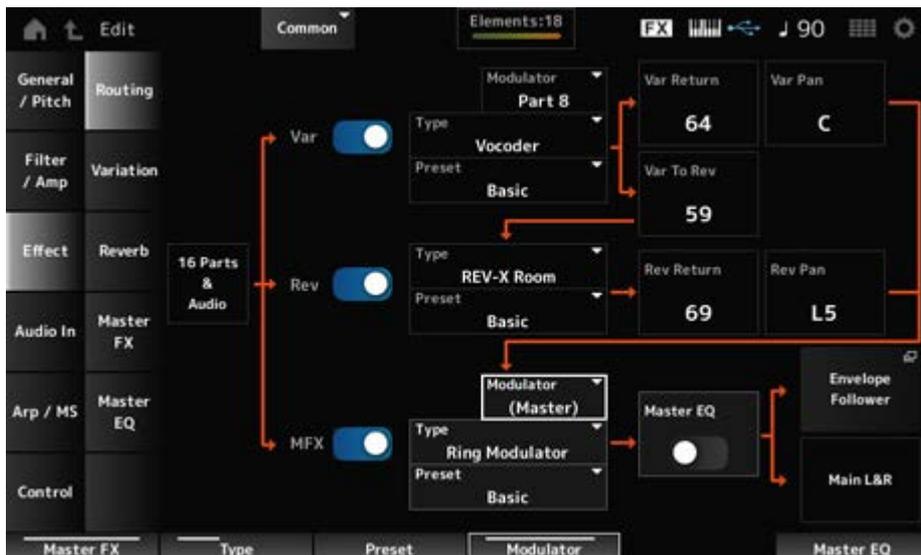
Sets the length of time it takes for the sound to decay after you have released the key.

Settings: −64–+63

Effect ⭐

Routing ☆

On this screen, you can set the System Effects applied to all Parts and view the signal flow of the Master Effects.

Operation

[PERFORMANCE] → *Common* selection → [EDIT/ 🔗] → *Effect* → *Routing*

Var (Variation Switch)
Rev (Reverb Switch)
MFX (Master Effect Switch)
Sets the Variation, Reverb, and Master Effects on or off.
Settings: Off, On

Var Type (Variation Type)
Rev Type (Reverb Type)
MFX Type (Master Effect Type)
Sets the type for the Variation, Reverb, and Master Effects.
Settings: See the Effect types.

Var Preset (Variation Preset Number)
Rev Preset (Reverb Preset Number)
MFX Preset (Master Effect Preset Number)
Selects a Preset from the Variation, Reverb, and Master Effects parameters.
Settings: Refer to the *Data List*.

Side Chain (Variation Side Chain Part)
Side Chain (Master Effect Side Chain Part)
Modulator (Variation Modulator Part)
Modulator (Master Effect Modulator Part)

Sets the Side Chain Part (or the Modulator depending on the effect type) for the Variation and Master Effects.

This parameter is not available when Master is set to the Modulator Part. In that case, the parameter value will be shown in parenthesis as in "(*Master*)."

Settings: *Part 1–16*, *A/D*, *Master*, *Off*

Var Return (Variation Return)
Rev Return (Reverb Return)

Sets the output level (Return Level) of the signals processed by the Variation or Reverb Effect.

Settings: 0–127

Var Pan (Variation Pan)
Rev Pan (Reverb Pan)

Sets the stereo location of the signals processed by the Variation or the Reverb Effect.

Settings: L63 (left)–C (center)–R63 (right)

Var to Rev (Variation To Reverb)

Sets the send level of the signals processed by the Variation Effect.

Settings: 0–127

Master EQ (Master EQ Switch)

Sets the Master EQ on or off.

Settings: Off, On

Envelope Follower

Opens the settings screen for Envelope Follower.

Variation ☆

Sets the Variation Effect.

Operation

[PERFORMANCE] → *Common* selection → [EDIT/ ⟳] → *Effect* → *Variation*

(1) *Variation Switch*

Variation Switch
Sets the Variation Effect on or off.
Settings: Off, On

Category (Variation Category)
Type (Variation Type)
Sets the category and type of the Variation Effect.
Settings: See the Effect types.

Preset (Variation Preset Number)
Selects one of the Preset effect parameters for each Effect Type.
Settings: Refer to the *Data List*.

Side Chain (Variation Side Chain Part)
Modulator (Variation Modulator Part)
Sets the Part for the Side Chain (or the Modulator depending on the effect type) for the Variation
Effect.
This parameter is not available when Master is set to the Modulator Part. In that case, the
parameter value will be shown in parenthesis as in "(*Master*)."
Settings: *Part 1–16*, *A/D*, *Master*, *Off*

Effect Parameter
The Effect Parameters differ depending on the effect type.
Settings: See the Effect parameters.

Reverb ☆

Sets the Reverb Effect.

Operation

[PERFORMANCE] → *Common* selection → [EDIT/ ⟳] → *Effect* → *Reverb*

(1)   *Reverb Switch*

Reverb Switch

Sets the Reverb Effect on or off.

Settings: Off, On

Category (Reverb Category)
Type (Reverb Type)

Sets the category and type of the Reverb Effect.

Settings: See the Effect types.

Preset (Reverb Preset Number)

Selects one of the Preset effect parameters for each Effect Type.

Settings: Refer to the *Data List*.

Effect Parameter
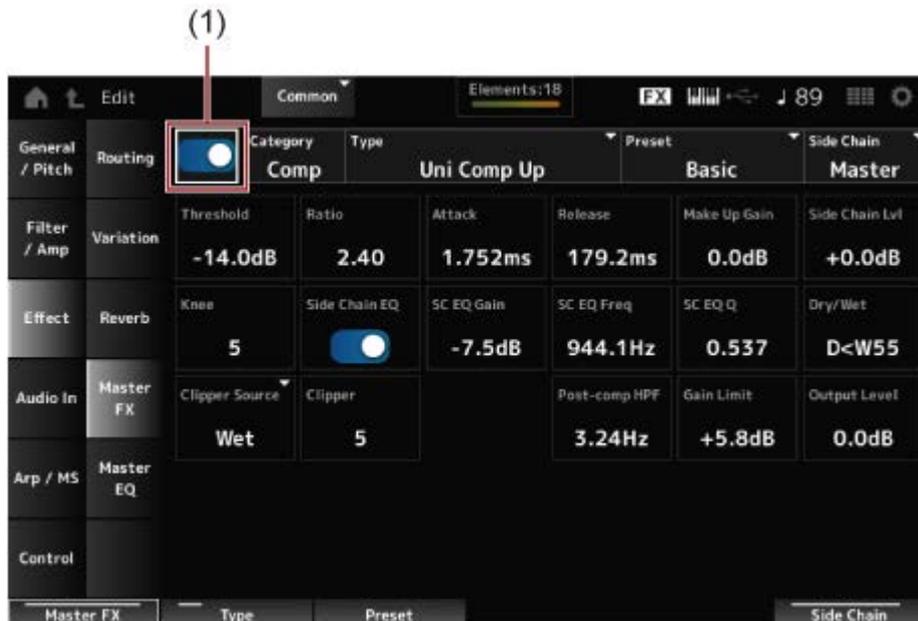
The Effect Parameters differ depending on the effect type.

Settings: See the Effect parameters.

Master FX

Sets the Master Effect.

Operation

[PERFORMANCE] → *Common* selection → [EDIT/ ⟳] → *Effect* → *Master FX*

(1)   *Master Effect Switch*

Master Effect Switch

Sets the Master Effect on or off.

Settings: Off, On

Category (Master Effect Category)
Type (Master Effect Type)

Sets the category and type of the Master Effect.

Settings: See the Effect types.

Preset (Master Effect Preset Number)

Selects one of the Preset effect parameters for each Effect Type.

Settings: Refer to the *Data List*.

Side Chain (Master Effect Side Chain Part)
Modulator (Master Effect Modulator Part)

Sets the Side Chain (or the Modulator depending on the effect type) for the Master Effects.

This parameter is not available when Master is set to the Modulator Part. In that case, the

parameter value will be shown in parenthesis as in "(*Master*)."
Settings: *Part 1–16, A/D, Master, Off*

Effect Parameter

The Effect Parameters differ depending on the effect type.
Settings: See the Effect parameters.
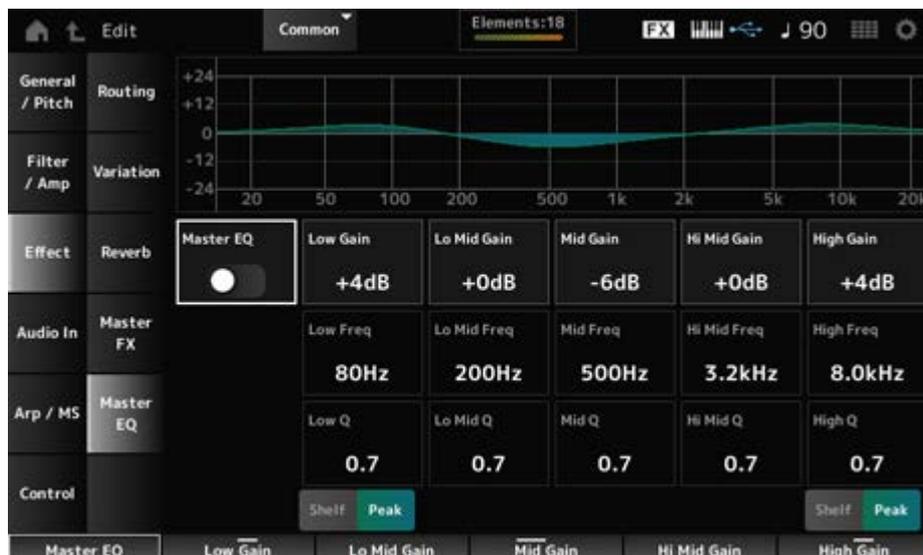
Master EQ ☆

Sets the Master EQ.

Operation

[PERFORMANCE] → *Common* selection → [EDIT/ ⟳] → *Effect* → *Master EQ*

Master EQ (Master EQ Switch)

Sets the Master EQ on or off.
Settings: Off, On

Low Gain (Master EQ Low Gain)

Sets the signal level of the *Low* band.
Settings: −12–+12 (dB)

Lo Mid Gain (Master EQ Low Mid Gain)

Sets the signal level of the *Lo Mid* band.
Settings: −12–+12 (dB)

Mid Gain (Master EQ Mid Gain)

Sets the signal level of the *Mid* band.

Settings: −12–+12 (dB)

Hi Mid Gain (Master EQ High Mid Gain)

Sets the signal level of the *Hi Mid* band.

Settings: −12–+12 (dB)

High Gain (Master EQ High Gain)

Sets the signal level of the *High* band.

Settings: −12–+12 (dB)

Low Freq (Master EQ Low Frequency)

Sets the frequency of the *Low* band.

Settings: 32 (Hz)–2.0 (kHz)

Lo Mid Freq (Master EQ Low Mid Frequency)

Sets the frequency of the *Lo Mid* band.

Settings: 100 (Hz)–10 (kHz)

Mid Freq (Master EQ Mid Frequency)

Sets the frequency of the *Mid* band.

Settings: 100 (Hz)–10 (kHz)

Hi Mid Freq (Master EQ High Mid Frequency)

Sets the frequency of the *Hi Mid* band.

Settings: 100 (Hz)–10 (kHz)

High Freq (Master EQ High Frequency)

Sets the frequency of the *High* band.

Settings: 500 (Hz)–16 (kHz)

Low Q (Master EQ Low Q)

Sets the bandwidth of the *Low* band.

This parameter is available only when *Low Shape (Master EQ Low Shape)* is set to *Peak*.

Settings: 0.1–12.0

Lo Mid Q (Master EQ Low Mid Q)

Sets the bandwidth of the *Lo Mid* band.

Settings: 0.1–12.0

Mid Q (Master EQ Mid Q)

Sets the bandwidth of the *Mid* band.

Settings: 0.1–12.0

Hi Mid Q (Master EQ High Mid Q)

Sets the bandwidth of the *Hi Mid* band.

Settings: 0.1–12.0

High Q (Master EQ High Q)

Sets the bandwidth of the *High* band.

This parameter is available only when *High Shape (Master EQ High Shape)* is set to *Peak*.

Settings: 0.1–12.0

Low Shape (Master EQ Low Shape)
High Shape (Master EQ High Shape)

Determines whether the EQ is set to a shelving type (that cuts or boosts the signals above or below a specified frequency setting) or a peaking type (that cuts or boosts the signals at a specified frequency) for the EQ.

Settings: Shelf, Peak

Envelope Follower Edit ★

Opens the settings screen for Envelope Follower.

Part (Input Source)

Shows the input source for the selected Envelope Follower.

Settings: *Master*, *AD*, *Part 1–16*

Gain (Envelope Follower Gain)

Sets the input gain on the input source set for the Part.

Settings: −24.0dB–0.0dB–+24.0dB

Attack (Envelope Follower Attack)

Sets the attack time for the envelope follower.

Settings: 1ms–40ms

Release (Envelope Follower Release)

Sets the release time for the envelope follower.

Settings: 10ms–680ms

Input Level

Shows the Input level for the signals input from the Input source of the Part you have selected.

Envelope Follower Output

Shows the output level of the Envelope Follower.

Edit

Opens the *Control Assign* screen for the selected Part.

Audio In ★

Mixing ☆

On the *Mixing* screen, you can mix the A/D Part (signals from the A/D INPUT jacks) and the Digital Part (signals from the [USB TO HOST] terminal*).

* Refers only to the audio for the Digital L/R of the device port.

Operation

- [PERFORMANCE] → *Common* selection → [EDIT/ ⟳] → *Audio In* → *Mixing*
- [SHIFT] + [A/D INPUT ON/OFF]

Input Mode (A/D Part Input Mode)
Input Mode (Digital Part Input Mode)

Determines the processing method for the input signals at the left and right channels.

Settings: *L Mono, R Mono, L+R Mono, Stereo*

> **L Mono**: Uses only the left channel.
> **R Mono**: Uses only the right channel.
> **L+R Mono**: Mixes the left and right channels and processes in mono.
> **Stereo**: Processes the stereo input in stereo.

NOTE

If the sound is input only from the [L/MONO] jack, it is processed in mono.

Volume (A/D Part Volume)
Volume (Digital Part Volume)

Sets the volume of the A/D Part or Digital Part.

Settings: 0–127

Pan (A/D Part Pan)
Pan (Digital Part Pan)

Sets the Pan position (in the stereo field) for the A/D Part or Digital Part.

Settings: L63–C–R63

Dry Level (A/D Part Dry Level)
Dry Level (Digital Part Dry Level)

Sets the dry level (or the level of the signals not processed by the System Effect) of the A/D Part or Digital Part.

This parameter is available only when *Output Select* is set to *MainL&R*.

Settings: 0–127

Var Send (A/D Part Variation Send)
Var Send (Digital Part Variation Send)
Sets the level of the signals sent from the A/D Part or Digital Part to the Variation Effect.

This parameter is available only when *Output Select* is set to *MainL&R*.

Settings: 0–127

Rev Send (A/D Part Reverb Send)
Rev Send (Digital Part Reverb Send)
Sets the level of the signals sent from the A/D Part or Digital Part to the Reverb Effect.

This parameter is available only when *Output Select* is set to *MainL&R*.

Settings: 0–127

Output Select (A/D Part Output Select)
Output Select (Digital Part Output Select)
Sets the output destination for the audio signals from the A/D Part or Digital Part.

Settings: *MainL&R*, *AsgnL&R*, *USB1&2–USB29&30*, *AsgnL*, *AsgnR*, *USB1–30*, *Off*

> **MainL&R**: Outputs in stereo (two channels) to the OUTPUT [L/MONO] and [R] jacks.
> **AsgnL&R**: Outputs in stereo (two channels) to the ASSIGNABLE OUTPUT [L] and [R] jacks.
> **USB1&2–USB29&30**: Outputs in stereo (channels 1 and 2, to channels 29 and 30) to the [USB TO HOST] terminal.
> **AsgnL**: Outputs in mono (one channel) to the ASSIGNABLE OUTPUT [L] jack.
> **AsgnR**: Outputs in mono (one channel) to the ASSIGNABLE OUTPUT [R] jack.
> **USB1–30**: Outputs in mono (channels 1 to 30) to the [USB TO HOST] terminal.
> **Off**: No output of the audio signal for the Part.

Routing ☆

On the *Routing* screen, you can set the effect routing of the A/D Part.

Operation

[PERFORMANCE] → *Common* selection → [EDIT/ ⏛] → *Audio In* → *Routing*

(1)

(2)

| (1) | *A/D Part Insertion FX A Switch* |
| (2) | *A/D Part Insertion FX B Switch* |

A/D In
Digital In

Switches the view for *A/D In* and *Digital In*.

When *Digital In* is selected, only the *Digital Part Reverb Send, Digital Part Variation Send*, and *Digital Part Output Select* are available.

A/D Part Insertion FX A Switch
A/D Part Insertion FX B Switch

Turns Insertion Effect A and Insertion Effect B on or off.

Settings: Off, On

Type (A/D Part Insertion Effect A Type)
Type (A/D Part Insertion Effect B Type)

Sets the Effect Type.

Settings: See the Effect types.

Preset (A/D Part Insertion Effect A Preset)
Preset (A/D Part Insertion Effect B Preset)

Selects one of the Preset effect parameters for each Effect Type.

By selecting a Preset, you can change the way effects are applied.

Settings: Refer to the *Data List*.

Side Chain (A/D Part Insertion Effect A Side Chain)
Side Chain (A/D Part Insertion Effect B Side Chain)
Modulator (A/D Part Insertion Effect A Modulator)
Modulator (A/D Part Insertion Effect B Modulator)

Sets the Side Chain Part (or the Modulator depending on the effect type) for the Insertion Effect A or Insertion Effect B.

This parameter is not available when the Part itself or Master is set to the Modulator. In those cases, the parameter value will be shown in parenthesis as in "(*Master*)."

Settings: *Part 1–16*, *A/D*, *Master*, *Off*

Ins Connect (A/D Part Insertion Effect Connect Type)

Sets the effect routing for Insertion Effect A and Insertion Effect B.

The diagram changes accordingly when the settings are changed.

Settings: *Ins A→B*, *Ins B→A*

2-band EQ

Opens the 2-band EQ for the A/D Part.

Rev Send (A/D Part Reverb Send)
Rev Send (Digital Part Reverb Send)

Sets the level of the signals (or bypass signals) sent from Insertion Effect A or Insertion Effect B to the Reverb Effect.

This parameter is available only when *Output Select* is set to *MainL&R*.

Settings: 0–127

Var Send (A/D Part Variation Send)
Var Send (Digital Part Variation Send)

Sets the level of the signals (or bypass signals) sent from Insertion Effect A or Insertion Effect B to the Variation Effect.

This parameter is available only when *Output Select* is set to *MainL&R*.

Settings: 0–127

Envelope Follower

Opens the settings screen for Envelope Follower.

Output Select (A/D Part Output Select)
Output Select (Digital Part Output Select)

Sets the output destination for the audio signals.

Settings: *MainL&R*, *AsgnL&R*, *USB1&2–USB29&30*, *AsgnL*, *AsgnR*, *USB1–30*, *Off*

       MainL&R: Outputs in stereo (two channels) to the OUTPUT [L/MONO] and OUTPUT

[R] jacks.

AsgnL&R: Outputs in stereo (two channels) to the ASSIGNABLE OUTPUT [L] and ASSIGNABLE OUTPUT [R] jacks.

USB1&2–USB29&30: Outputs in stereo (channels 1 and 2, to channels 29 and 30) to the [USB TO HOST] terminal.

AsgnL: Outputs in mono (one channel) to the ASSIGNABLE OUTPUT [L] jack.

AsgnR: Outputs in mono (one channel) to the ASSIGNABLE OUTPUT [R] jack.

USB1–30: Outputs in mono (channels 1 to 30) to the [USB TO HOST] terminal.

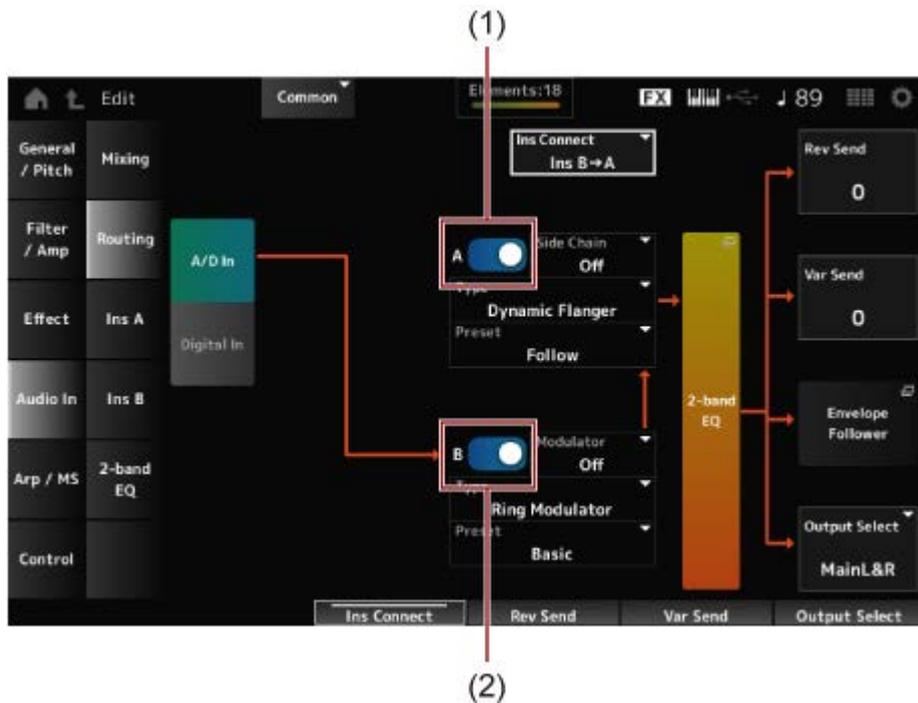**Off**: No output of the audio signal for the Part.

Ins A ☆
Ins B

On the *Ins A* and *Ins B* screens, you can set the Insertion Effects.

Operation

- [PERFORMANCE] → *Common* selection → [EDIT/ ⟳] → *Audio In* → *Ins A*
- [PERFORMANCE] → *Common* selection → [EDIT/ ⟳] → *Audio In* → *Ins B*

(1)　　*Insertion FX Switch*

Insertion FX Switch
Enables the Insertion Effect.
Settings: Off, On

Category (Insertion Effect A Category)
Category (Insertion Effect B Category)
Type (Insertion Effect A Type)
Type (Insertion Effect B Type)
Sets the category and type of the Insertion Effect.
Settings: See the <u>Effect types</u>.

Preset (Insertion Effect A Preset)
Preset (Insertion Effect B Preset)
Selects one of the Preset effect parameters for each Effect Type.
By selecting a Preset, you can change the way effects are applied.
Settings: Refer to the *Data List*.

Side Chain (Insertion Effect A Side Chain Part)
Side Chain (Insertion Effect B Side Chain Part)
Modulator (Insertion Effect A Modulator Part)
Modulator (Insertion Effect B Modulator Part)
Sets the Side Chain Part (or the Modulator depending on the effect type) for the Insertion Effect
A or Insertion Effect B.
This parameter is not available when the Part itself or Master is set to the Modulator. In those
cases, the parameter value will be shown in parenthesis as in "(*Master*)."
Settings: *Part 1–16*, *A/D*, *Master*, *Off*

Effect Parameter
The Effect Parameters differ depending on the effect type.
Settings: See the <u>Effect parameters</u>.

2-band EQ ☆

On the *2-band EQ* screen, you can set the Part EQ.

Operation

[PERFORMANCE] → *Common* selection → [EDIT/ ⟲] → *Common* → *Audio In* → *2-band EQ*

EQ1 Type (A/D Part 2-band EQ 1 Type)
EQ2 Type (A/D Part 2-band EQ 2 Type)

Selects the desired EQ type.

Settings: *Thru*, *LPF*, *HPF*, *Low Shelf*, *Hi Shelf*, *Peak/Dip*

> **Thru**: Bypasses the equalizer leaving the entire signal unaffected.
> **LPF**: Passes the signals above the cutoff frequency.
> **HPF**: Passes the signals below the cutoff frequency.
> **Low Shelf**: Cuts or boosts the signals below the specified frequency setting.
> **Hi Shelf**: Cuts or boosts the signals above the specified frequency setting.
> **Peak/Dip**: Cuts or boosts the signals at the specified frequency setting.

EQ 1 Freq (A/D Part 2-band EQ 1 Frequency)
EQ 2 Freq (A/D Part 2-band EQ 2 Frequency)

Sets the frequency to be cut or boosted.

This parameter is not available when the *EQ Type* is set to *Thru*.

Settings: 63.0Hz–18.0kHz

EQ 1 Gain (A/D Part 2-band EQ 1 Gain)
EQ 2 Gain (A/D Part 2-band EQ 2 Gain)

Sets the signal level of the frequency band set in *EQ1 Freq* or *EQ2 Freq*.

This parameter is not available when the *EQ Type* is set to *Thru, LPF*, or *HPF*.

Settings: −12.0dB–+12.0dB

EQ 1 Q (A/D Part 2-band EQ 1 Q)
EQ 2 Q (A/D Part 2-band EQ 2 Q)

Sets the bandwidth for cutting or boosting the volume of the frequencies set with *EQ1 Freq* or *EQ2 Freq*.

This parameter is available only when the *EQ Type* is set to *Peak/Dip*.

Settings: 0.1–12.0

Output Level (A/D Part 2-band EQ Output Level)

Sets the output gain of the 2-band EQ.

Settings: −12.0dB–+12.0dB

Arp/MS ★
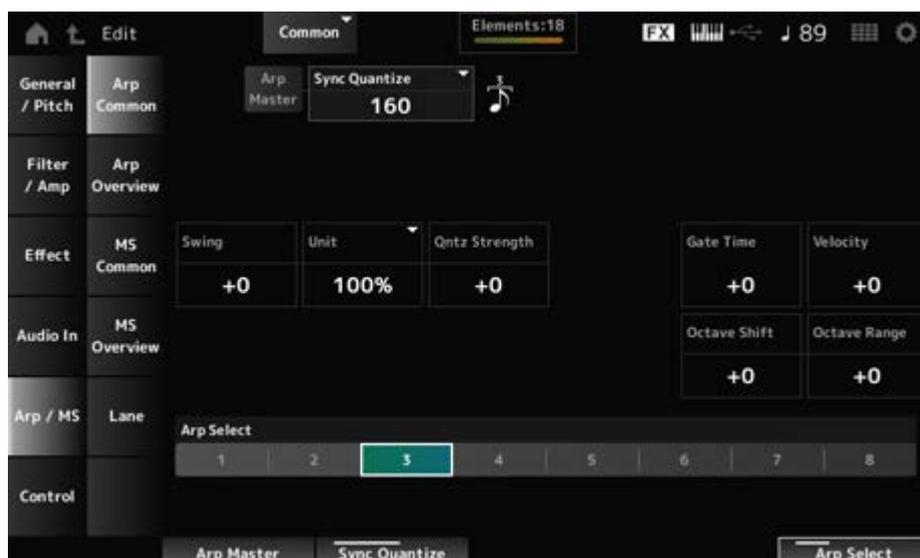
Arp Common ☆

On the *Arp Common* screen, you can set the Arpeggio parameters for the entire Performance.

Operation

[PERFORMANCE] → *Common* selection → [EDIT/ ⟲] → *Arp/MS* → *Arp Common*

Arp Master (Arpeggio Master Switch)

Sets the Arpeggio for the Performance on or off.

This switch is linked to the [ARP ON/OFF] button on the top panel.

Settings: Off, On

Sync Quantize (Arpeggio Sync Quantize Value)

Adjusts the timing for starting the next Arpeggio phrase while the first Arpeggio is being played back, when playing back Arpeggio phrases in multiple Parts. When set to *Off*, the Arpeggio is played back when the Part is played on the keyboard.

Settings: *Off*, 60 (thirty-second note), 80 (sixteenth note triplet), 120 (sixteenth note), 160 (eighth note triplet), 240 (eighth note), 320 (quarter note triplet), 480 (quarter note) (Numbers indicated here are clock values.)

Swing (Swing Offset)

Sets the swing value of the Arpeggio and Motion Sequencer for the Performance.

This is specified as an offset value to *Part Swing*.

Settings: −120–+120

Unit (Common Unit Multiply)

Sets the percentage for stretching or compressing the Arpeggio playback time for the entire Performance.

This parameter affects Parts for which *Unit (Arpeggio Unit Multiply)* is set to *Common*.

The subdivision of the beat and the tempo will change when you stretch or compress the playback time, so you can create a completely new feel for the originally selected Arpeggio.

Settings: 50%–400%

> **200%**: The playback time is doubled, and the tempo is halved as a result.
> **100%**: The playback time is kept unchanged.
> **50%**: The playback time is halved, and the tempo is doubled as a result.

Qntz Strength (Arpeggio Quantize Strength Offset)

Sets the strength of the quantize setting that is applied to the Arpeggio for the Performance.

This is specified as an offset value to *Part Qntz Strength (Arpeggio Quantize Strength)*.

Settings: −100–+100

Octave Shift (Arpeggio Octave Shift Offset)

Shifts the pitch of the Arpeggio for the Performance in octaves.

This is specified as an offset value to *Part Octave Shift (Arpeggio Octave Shift)*.

Settings: −20–+20

Octave Range (Arpeggio Octave Range Offset)

Shifts the range of the Arpeggio for the Performance in octaves.

This is specified as an offset value to *Part Octave Range (Arpeggio Octave Range)*.

Settings: −6–+6

Gate Time (Arpeggio Gate Time Rate Offset)

Sets the Arpeggio Gate Time Rate for the Performance.

This is specified as an offset value to *Part Gate Time (Arpeggio Gate Time Rate)*.

Settings: −100–+100

Velocity (Arpeggio Velocity Rate Offset)

Sets the Arpeggio Velocity Rate for the Performance.

This is specified as an offset value to *Part Velocity (Arpeggio Velocity Rate)*.

Settings: −100–+100

Arp Select (Arpeggio Select)

Changes the Arpeggio selection.

Settings: 1–8
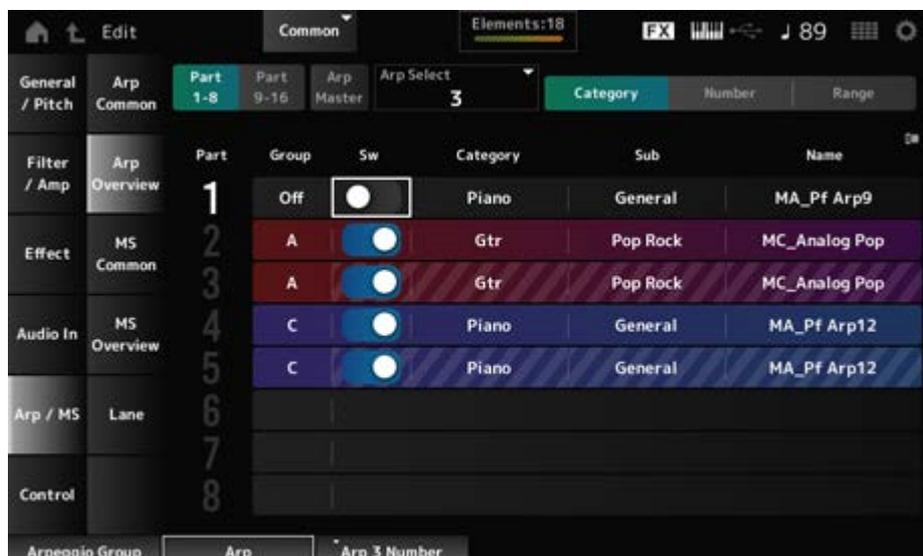
Arp Overview (Arpeggio Overview)   ☆

On the *Arp Overview* screen, you can set the Arpeggio types from the list of all Parts.

Operation

- [PERFORMANCE] → *Common* selection → [EDIT/ ⟳] → *Arp/MS* → *Arp Overview*
- (When a selected Part is *Common*) [SHIFT] + [ARP ON/OFF]

Part 1–8
Part 9–16

Switches the view for Parts.

Settings: *Part 1–8*, *Part 9–16*

Arp Master (Arpeggio Master Switch)

Sets the Arpeggio for the Performance on or off.

This switch is linked to the [ARP ON/OFF] button on the top panel.

Settings: Off, On

Group (Arpeggio Group)

Sets the Arpeggio Group for using the same Arpeggio with multiple Parts.

The Parts assigned to the same *Group* will have the same Arpeggio settings.

Arp Select (Arpeggio Select)

Changes the Arpeggio selection.
Settings: 1–8

Sw (Part Arpeggio Switch)
Sets the Arpeggio of each Part on or off.
Settings: Off, On

■ **When *View* is set to *Category***

  Category (Arpeggio Category)
  Sub (Arpeggio Sub Category)
  Name (Arpeggio Name)
  Settings: Refer to the *Data List*.

■ **When *View* is set to *Number***

  Bank (Arpeggio Bank)
  Number (Arpeggio Number)
  Name (Arpeggio Name)
  Settings: Refer to the *Data List*.

■ **When *View* is set to *Range***

  Name (Arpeggio Name)
  Settings: Refer to the *Data List*.

Velocity Limit (Arpeggio Velocity Limit)
Sets the velocity range (lowest and highest values) for playing back the Arpeggio.
When this is set so that the higher value is first and the lower value is second (for example, 93 to 34), the Arpeggio is played only for velocities of 1 to 34 and 93 to 127.
Settings: 1–127

Note Limit (Arpeggio Note Limit)
Sets the note range (the lowest and the highest notes) for playing back the Arpeggio. When the first note specified is higher than the second (for example, C5 to C4), the Arpeggio is played for notes in the ranges of C−2 to C4 and C5 to G8.
Settings: C−2–G8
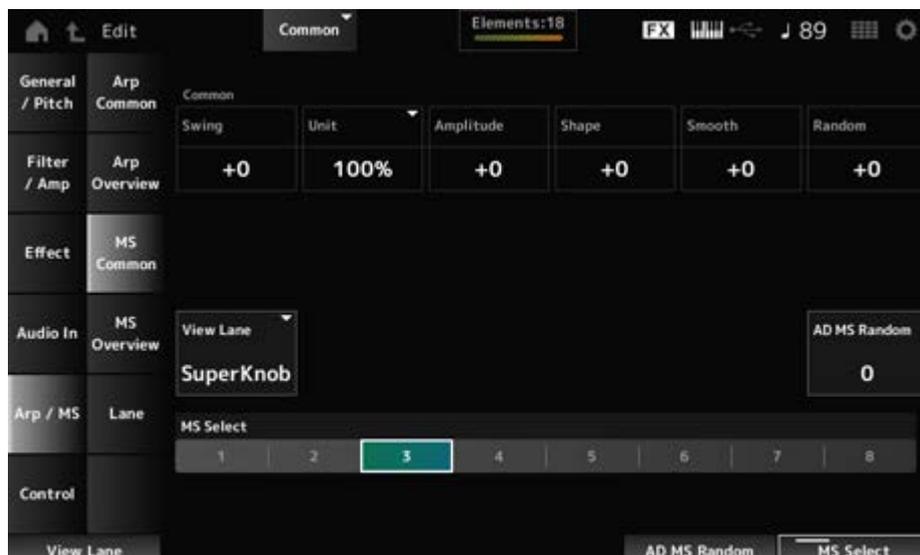
MS Common (Motion Sequencer Common) ☆

On the *MS Common* screen, you can set the Motion Sequencer parameters used for the entire Performance.

- [PERFORMANCE] → *Common* selection → [EDIT/ ⟳] → *Arp/MS* → *MS Common*
- (When a selected Part is *Common*) [SHIFT] + [MSEQ ON/OFF]

Common Swing (Swing Offset)

Sets the swing value of the Arpeggio and Motion Sequencer for the Performance.
This is specified as an offset value to the *Part Swing*.
Settings: −120–+120

Common Unit (Common Unit Multiply)

Sets the percentage for stretching or compressing the Motion Sequencer playback time for the entire Performance.
This parameter affects Lanes for which *Unit Multiply* is set to *Common*.
The subdivision of the beat and the tempo will change when you stretch or compress the playback time, so you can create a completely new feel for the originally selected Motion Sequencer.
Settings: 50%–400%

200%: The playback time is doubled, and the tempo is halved as a result.
100%: The playback time is kept unchanged.
50%: The playback time is halved, and the tempo is doubled as a result.

Common Amplitude (Motion Sequencer Amplitude Performance Offset)

Sets the Motion Sequencer Amplitude (or how much the Sequence changes) for the entire Performance.
This is specified as an offset value to the *Part Amplitude (Part Motion Sequencer Amplitude)*.
This parameter value offsets the Amplitude of the Lanes within the Performance if *MS FX* is set to On for the Lane.
Settings: −127–+127

Common Shape (Motion Sequencer Pulse Shape Performance Offset)

Sets the Motion Sequencer Pulse Shape (or the shape of the step curve) for the Performance.

This is specified as an offset value to the *Part Shape (Part Motion Sequencer Pulse Shape)*.

This parameter value offsets the parameters for the Lanes within the Performance if the *MS FX* is set to On for the lane and Control is set to On.

Settings: −100–+100

Common Smooth (Motion Sequencer Smoothness Performance Offset)

Sets the Motion Sequence Smoothness (or the smoothness of the changes in the sequence over time) for the entire Performance.

This is specified as an offset value to the *Part Motion Seq Smooth (Part Motion Sequencer Smoothness)*.

This parameter value offsets the Smoothness of the Lanes within the Performance if *MS FX* is set to On for the Lane.

Settings: −127–+127

Common Random (Motion Sequencer Randomness Performance Offset)

Sets the Motion Sequencer Randomness (or the randomness of the changes in the step value of the sequence) for the entire Performance.

This is specified as an offset value to the *Part Motion Seq Random (Part Motion Sequencer Randomness)*.

This parameter value offsets the Randomness of the Lanes within the Performance if *MS FX* is set to On for the Lane.

Settings: −127–+127

View Lane (Motion Seq View Lane)

Sets the Motion Seq Lane that is shown when the *View Mode* of the *Home* screen is set to *Motion Seq*.

Settings: Super Knob, 1–4

AD MS Random (A/D Part Motion Sequencer Randomness)

Sets the randomness of the changes in *A/D Part Motion Sequencer Step Value*.

Settings: 0–127

MS Select (Motion Sequence Select)

Changes the Motion Sequence selection.

Settings: 1–8

MS Overview (Motion Sequencer Overview)

On the *MS Overview* screen, you can set the Motion Sequencer from the list of all Parts.

Operation

[PERFORMANCE] → *Common* selection → [EDIT/ ⌒] → *Arp/MS* → *MS Overview*

MS Master (Motion Seq Master Switch)

Sets the Motion Sequencer for the entire Performance on or off.
This switch is linked to the [MSEQ ON/OFF] button on the top panel.
Settings: Off, On

Active (Active Motion Sequencer)

Shows the number of Lane switches set to On.
The number shown on the right side of the slash (/) indicates the maximum number of Lanes you can simultaneously set to On.

MS Select (Motion Sequence Select)

Changes the Motion Sequence selection.
Settings: 1–8

PartSw (Motion Sequencer Part Switch)

Sets the Motion Sequencer on or off for each Part.
Settings: Off, On

Lane Switch

Sets each Lane on or off.

You can use up to four Motion Sequencer Lanes in one Part, or up to eight Lanes in an entire Performance.

Settings: Off, On
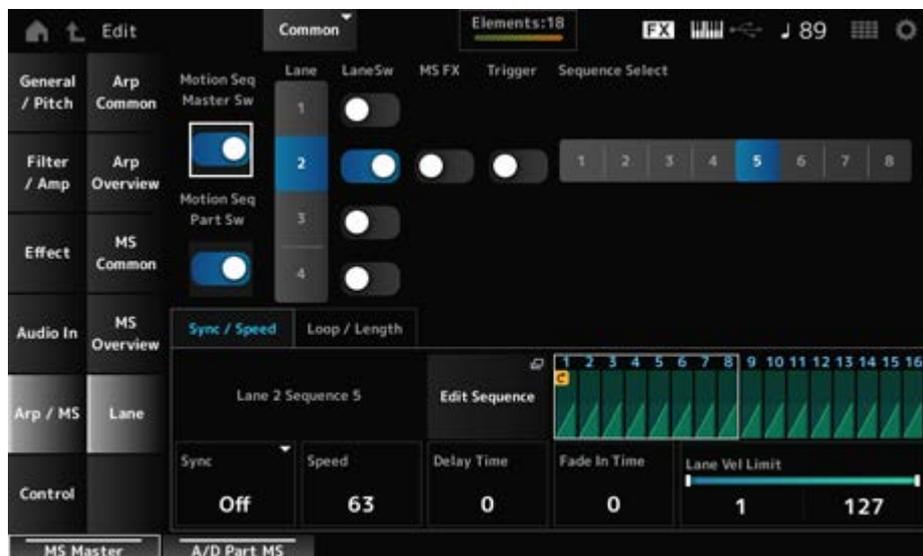
Lane ☆

On the *Lane* screen, you can set the Motion Sequencer parameters for each Lane.

Operation

[PERFORMANCE] → *Common* selection → [EDIT/ ⮂] → *Arp/MS* → *Lane*

Motion Seq Master Sw (Motion Sequencer Master Switch)

Sets the Motion Sequencer for the entire Performance on or off.

Settings: Off, On

Motion Seq Part Sw (Motion Sequencer Part Switch)

Sets the Motion Sequencer of the Part on or off.

Settings: Off, On

Lane (Lane Select)

Shows the parameters for the selected Lane.

Settings: 1–4

LaneSw (Lane Switch)

Sets each Lane on or off.

You can use up to four Motion Sequencer Lanes in one Part, or up to eight Lanes in an entire

Performance.

When set to Off, the parameters for that Lane will not be shown.

Settings: Off, On

MS FX (Lane FX Receive)

Sets Knobs to be affected by the operation of the Super Knob.

Settings: Off, On

Trigger (Lane Trigger Receive)

Sets whether the selected Lane receives signals from the [MSEQ TRIGGER] button or not.

When set to On, the Motion Sequence will not be played back unless you press the [MSEQ TRIGGER] button.

Settings: Off, On

Sequence Select (Motion Sequence Select)

Changes the Motion Sequence selection.

Settings: 1–8

Target Sequence

Shows the selected Lanes and sequences.

Edit Sequence

Opens the *Motion Sequence* screen.

You can create a sequence of up to 16 steps.

Motion Seq Step n Value

Shows the step curve for the selected sequence.

■ *Sync/Speed* tab

Sync (Lane Sync)

Sets the playback of the Motion Sequence set to the *Destination* in the *Control Assign* screen to synchronize to the Performance tempo or beat.

Settings: *Off*, *Tempo*, *Beat*, *Lane1* (when Lanes 2–4 are selected)

> *Off*: Plays back the Lane Motion Sequencer alone.
>
> *Tempo*: Plays back the Lane Motion Sequencer in sync with the Performance tempo.
>
> *Beat*: Plays back in sync with the beat.
>
> *Lane1*: Plays back the Lane Motion Sequencer in sync with *Lane 1*.

● When *Sync* is set to *Off*

Speed (Lane Speed)

Sets the playback speed for the Motion Sequence.

This parameter is available when *Sync (Lane Sync)* is set to *Off*.

Settings: 0–127

Delay Time (A/D Part Motion Seq Lane Key On Delay Time Length)

Sets the delay time for starting playback of the Motion Sequence when *Sync* is set to *Off*.

Settings: 0–127

Fade In Time (A/D Part Motion Seq Lane Fade In Time Length)

Sets the time for the Motion Sequence to reach maximum amplitude when *Sync* is set to *Off*.

Settings: 0–127

● **When *Sync* is set to something other than *Off***

Unit (A/D Part Motion Seq Lane Unit Multiply)

Sets the percentage for stretching or compressing the Motion Sequencer playback time for the current Lane.

This parameter is available when *Sync (Lane Sync)* is set to *Off* or something other than *Lane 1*.

Settings: 50%–6400%, *Common*

200%: The playback time is doubled, and the tempo is halved as a result.

100%: The playback time is kept unchanged.

50%: The playback time is halved, and the tempo is doubled as a result.

Common: The value set in the *Unit Multiply* common to all Parts is applied.

Delay Steps (A/D Part Motion Seq Lane Key On Delay Step Length)

Sets the delay time for starting the playback of the Motion Sequence when *Sync* is set to something other than *Off* or *Lane1*.

Settings: 0–32

Fade In Steps (A/D Part Motion Seq Lane Fade In Step Length)

Sets the time to reach the maximum amplitude for the Motion Sequence when *Sync* is set to something other than *Off*.

Settings: 0–32

Lane Vel Limit (Lane Velocity Limit)

Sets the velocity range (lowest and highest values) for playing back the Motion Sequence of the selected Lane.

This parameter is available when *Sync (Lane Sync)* is set to something other than *Lane 1*.

When this is set to a range from the highest value to the lowest value, the Motion Sequence will

only be played back from two velocity ranges: from the maximum to the highest value, and from the lowest value to the minimum.
Settings: 1–127

■ *Loop/Length* **tab**

Key On Reset (Lane Key On Reset)
Resets the Motion Sequence playback when you press any key on the keyboard.
This parameter is available when *Sync (Lane Sync)* is set to something other than *Lane 1*.
This parameter is not available when *Trigger* is set to On.
Settings: Off, *Each-On, 1st-On*

> **Each-On**: The sequence will be reset each time you play any note, and playback starts from the beginning.
>
> **1st-On**: The sequence will be reset at the first note, and playback starts from the beginning. The sequence will not be reset when a second note is played while the first note is being played.

Loop (Lane Loop)
Sets the Motion Sequence to loop (repeat) playback or one-shot playback.
This parameter is available when *Sync (Lane Sync)* is set to something other than *Lane 1*.
Settings: Off, On

Loop Start (Lane Loop Start)
Specifies the starting point for loop playback of the Motion Sequence.
Settings: 1–16 (should be below the *Length* setting)

Length (Motion Seq Length)
Sets the number of steps in the Motion Sequence.
Settings: 1–16 (should be above the *Loop Start* setting)

MS Grid (Motion Sequencer Grid)
Sets the length of a step in the Motion Sequence.
Settings: 60, 80, 120, 160, 240, 320, 480

Motion Sequence Edit ☆

Opens the setting screen for the Motion Sequence.
You can create a sequence of up to 16 steps.

Loop Start (Lane Loop Start)

Specifies the starting point for loop playback of the Motion Sequence.

Settings: 1–16 (should be below the *Length* setting)

Length (Motion Sequence Length)

Sets the Motion Sequence length.

Settings: 1–16 (should be above the *Loop Start* setting)

MS Grid (Motion Sequencer Grid)

Sets the length of a step in the Motion Sequence.

Settings: 60, 80, 120, 160, 240, 320, 480

Sequence Select (Motion Sequence Select)

Changes the Motion Sequence type selection.

Settings: 1–8

Lane Select

Changes the Lane selection.

Settings: 1–4

Polarity (Motion Sequence Polarity)

Sets the polarity of the Motion Sequence.

Settings: *Unipolar*, *Bipolar*

> **Unipolar**: Only positive values are used for the parameter change.
>
> **Bipolar**: Both positive and negative values are used for the parameter change.

Amplitude (Motion Sequence Amplitude)

Sets the degree of changes in the Motion Sequence.
Settings: 0–127

Smooth (Motion Sequence Smoothness)
Sets the smoothness of the changes in the Motion Sequence over time.
Settings: 0–127

Job
Shows various Jobs.

Motion Sequence Step Value
Sets the value for each step in the Motion Sequence.
You can use Control sliders 1 to 8 to change the values for Steps 1 to 8 and Steps 9 to 16, depending on the cursor position.
Settings: 0–127

Motion Sequence Step Type
Sets the type and direction of each step in the Motion Sequence.
Settings: *A*, *B*, *Reverse A*, *Reverse B*

Pulse A (Motion Sequence Step Curve Type A)
Pulse B (Motion Sequence Step Curve Type B)
Selects a parameter change curve for *Pulse A* and *Pulse B*.
Use the *Motion Sequence Step Type* to select which of the curve types to use for each step.
The vertical axis represents the time while the horizontal axis represents the step value.
Settings: (When a preset bank is selected) *Standard, Sigmoid, Threshold, Bell, Dogleg, FM, AM, M, Discrete Saw, Smooth Saw, Triangle, Square, Trapezoid, Tilt Sine, Bounce, Resonance, Sequence, Hold, Harmonic, Steps*
(When a user bank is selected) *User 1–32*
(When a library file is loaded) Curves used in *Library 1–16*

Prm 1 (Motion Sequence Step Curve Parameter 1)
Prm 2 (Motion Sequence Step Curve Parameter 2)
Adjusts the shape of the step curve in the Motion Sequence.
This setting is not available depending on the curve type. The range of the parameter value differs depending on the curve type.

Control (Motion Sequence Step Curve Shape Control Switch)
Enables or disables the use of the knobs for controlling the step curve shape of the Motion Sequence.

Shown only when *MS FX* is set to On. This setting may not be available depending on the curve type.
Settings: Off, On

Store Sequence

Saves (stores) the edited Motion Sequence.

Load Sequence

Loads the Motion Sequence.

Copy Sequence

Copies the Motion Sequence.

Control ★

Control Assign ☆
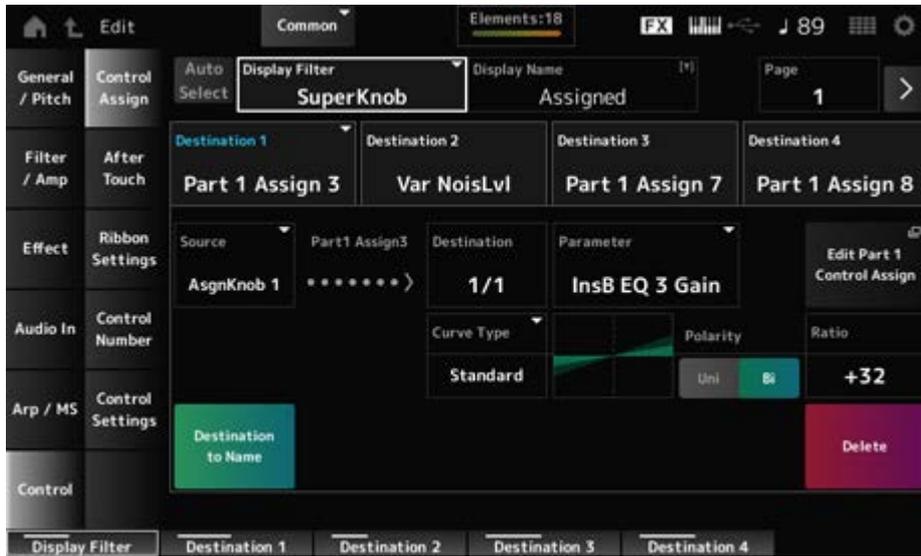
The *Control Assign* screen lets you set the Controllers for all Parts.
By assigning a parameter (*Destination*) to a controller (*Source*), you can control the sound in a large variety of ways. You can use physical controllers such as the Pitch Bend wheel and knobs as well as the Motion Sequencer and Envelope Follower.
Up to 32 controllers can be assigned simultaneously to a Part.

<div style="border:1px solid red; color:red; display:inline-block; padding:2px 8px;">**Operation**</div>

- [PERFORMANCE] → *Common* selection → [EDIT/ ⟳] → *Control* → *Control Assign*
- Tap *Edit Super Knob* on the *Super Knob* screen

Auto Select

Sets the auto select of the *Display Filter* on or off.

When set to On, moving the controller you wish to set to *Source* automatically sets the controller to the *Display Filter*.

Settings: Off, On

Display Filter

Selects the controller for showing the settings on the screen.

When you select *Super Knob*, all settings for Knobs 1 to 8 having the *Super Knob Link* set to On will be shown.

Settings: *PitchBend*, *ModWheel*, *Ch. AT*, *FootCtrl 1*, *FootCtrl 2*, *FootSwitch*, *Ribbon*, *Breath*,
AsgnKnob 1–8, *Super Knob*, *AsgnSw 1*, *AsgnSw 2*, *MS Lane 1–4*, *EnvFollow 1–16*,
EnvFollowAD, *EnvFollowMst*, *All*

Display Name (Assignable Knob Name)

This allows you to enter a new name for Knobs 1 to 8 to show on the Sub display.

This parameter is not shown when *Source* is set to something other than *AsgnKnob 1–8*.

Edit Pitch Bend

Opens the *General/Pitch → Pitch* screen.

This parameter is not available when *Source* is set to something other than *PitchBend*.

Edit Motion Sequencer

Opens the setting screen for the Motion Sequence.

This parameter is not available when *Source* is set to something other than *MS Lane 1–4*.

Edit Envelope Follower

Opens the settings screen for Envelope Follower.

This parameter is not available when *Source* is set to something other than *EnvFollow 1–16*, *EnvFollowAD*, or *EnvFollowMst*.

Destination

Sets the parameter to the Destination. Tapping the [+] icon allows you to add a new Destination. When *Source* is set to *AsgnKnob 1–8*, *Part1–16 Assign1–8* is added to the settings. In that case, *Curve Type* and *Curve Ratio* are not available.

Source

Sets the controller for controlling the parameters set to the *Destination*.

When *Destination* is set to *Part1–16 Assign1–8*, only *AsgnKnob 1–8* will be available. Other controllers cannot be used.

Settings: *PitchBend*, *ModWheel*, *Ch. AT*, *FootCtrl 1*, *FootCtrl 2*, *FootSwitch*, *Ribbon*, *Breath*, *AsgnKnob 1–8*, *AsgnSw 1*, *AsgnSw 2*, *MS Lane 1–4*, *EnvFollow 1–16*, *EnvFollowAD*, *EnvFollowMst*

Destination to Name

Copies the parameters set to *Destination* to *Display Name*.

This parameter is not shown when *Source* is set to something other than *AsgnKnob 1–8*.

Delete

Deletes the selected *Destination*.

Destination (Part Assignable Knob Destination)

Sets the parameter to show when you try to set *Part1–16 Assign1–8* to the *Destination* and multiple Destinations are already assigned to *Part Assign*.

Parameter (Part Assignable Knob Parameter)

Sets the Part parameter to the *Destination*.

Settings: Refer to the *Data List*.

The parameters shown below appear only when *Destination 1–32* is set to *Part1–16 Assign1–8*. Also, only the shortcut buttons are available on the screens when Part Knobs 1–8 cannot be found in *Destination*.

Edit (Part) Control Assign

Opens the *Control Assign* screen for the selected Part.

Curve Type

Sets the change curve of the parameter set to *Destination*.

The horizontal axis represents the controller value set in *Source* while the vertical axis represents the parameter value.

Settings: *Standard*, *Sigmoid*, *Threshold*, *Bell*, *Dogleg*, *FM*, *AM*, *M*, *Discrete Saw*, *Smooth Saw*, *Triangle*, *Square*, *Trapezoid*, *Tilt Sine*, *Bounce*, *Resonance*, *Sequence*, *Hold*, *Harmonic*, *Steps*, *User 1–32* (when a User bank is selected), *Library 1–16* (when a Library file is loaded)

Polarity (Curve Polarity)

Sets the polarity of the curve set in *Curve Type*.

Settings: *Uni*, *Bi*

> *Uni*: Parameter changes occur only within the positive range or the negative range according to the curve shape.
> *Bi*: Parameter changes occur both in positive and negative ranges according to the curve shape.

Ratio (Curve Ratio)

Sets the ratio of the parameter values.

Settings: −128–+127

Param 1 (Curve Parameter 1)
Param 2 (Curve Parameter 2)

Adjusts the curve shape.

This setting is not available depending on the curve type.

Edit User Curve

Opens the setting screen for User Curve.

You can create either an 8-point linear curve or an 8-step curve.

After Touch ☆

Selects the keyboard Aftertouch settings sent from the Performance to the internal tone generator on MONTAGE M8x.

Settings: The output of Aftertouch to an external device should be set from [UTILITY] → *Settings* → *MIDI I/O* → *AT MIDI Out*.

The MONTAGE M8x has a built-in keyboard that supports polyphonic aftertouch.
The built-in keyboards on the MONTAGE M6 and MONTAGE M7 support only Channel
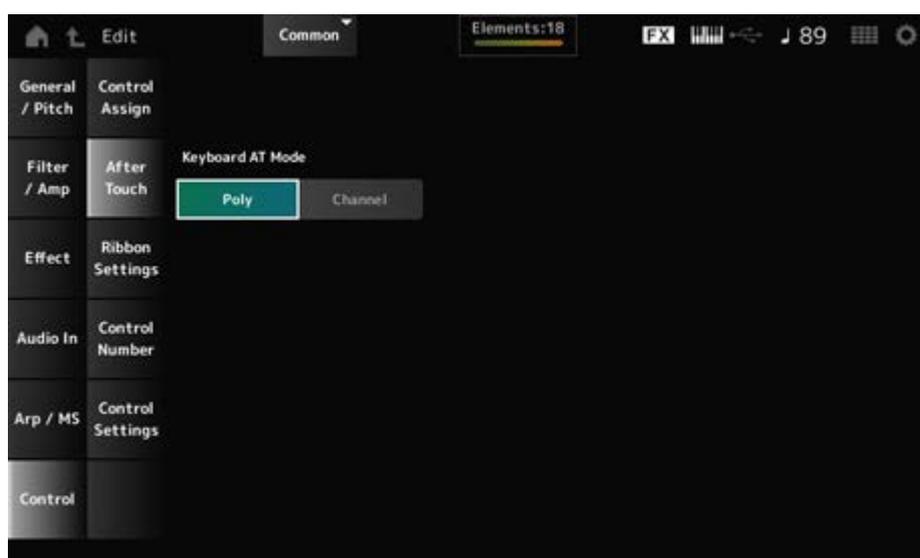
Aftertouch; however, their internal tone generator supports polyphonic aftertouch, allowing you to use polyphonic aftertouch for playing back Songs and Patterns, as well as for receiving MIDI messages from an external device compatible with polyphonic aftertouch.

To set Aftertouch reception with the internal tone generator, set the parameter on the *Tx/Rx Switch* screen.
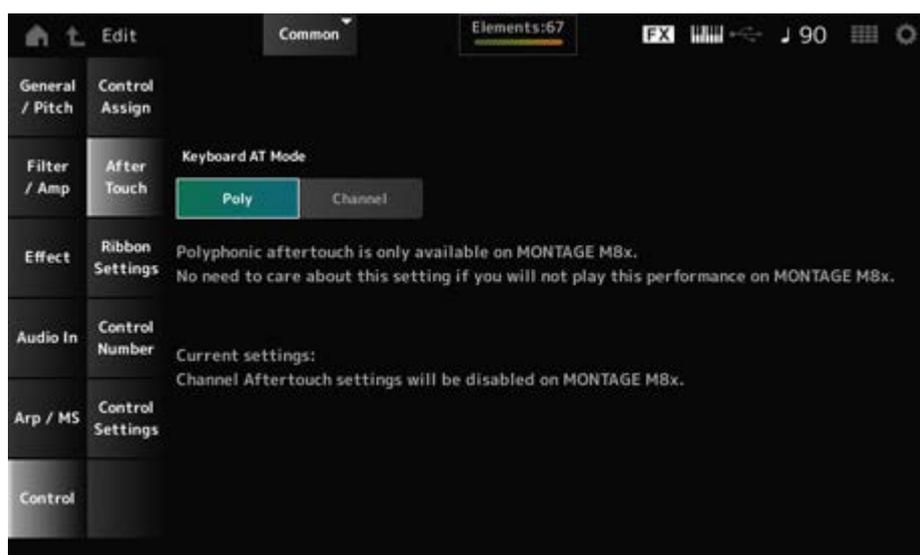
Operation

[PERFORMANCE] → *Common* selection → [EDIT/ ⟳] → *Control* → *After Touch*

■ **MONTAGE M8x**

■ **MONTAGE M7 and MONTAGE M6**

Keyboard AT Mode (After Touch Mode)

Selects the mode for sending Aftertouch messages from the keyboard to the internal tone generator.

This parameter is set to *Channel* on MONTAGE M6 and MONTAGE M7, regardless of the setting here.

Settings: *Poly* (polyphonic aftertouch), *Channel* (channel aftertouch)
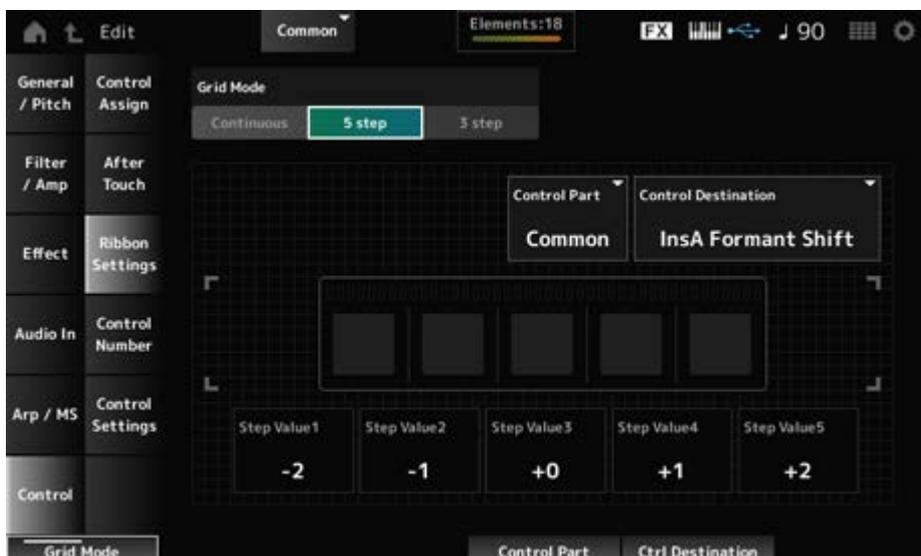
Ribbon Settings ☆

Sets the Ribbon controller.

Operation

- [PERFORMANCE] → *Common* selection → [EDIT/ 🔗] → *Control* → *Ribbon Settings*
- [SHIFT] + [HOLD]

Ribbon Grid Mode

Sets the grid mode for the Ribbon controller.

Settings: *Continuous*, *5 step*, *3 step*

NOTE

Set to *Continuous* if you wish to use the Ribbon Controller setting you have set on the *Control Assign* screen.

■ *Continuous* mode

Ribbon Mode (Ribbon Controller Mode)

Sets the way the Ribbon Controller functions.

Settings: *Hold*, *Reset*

> *Hold*: Retains the value of the position at which you release your finger from the Ribbon Controller.
> *Reset*: Automatically resets the value to the mid position when you release your finger from the Ribbon Controller.

■ *5-step* mode

■ *3-step* mode

Control Part
Selects the Part to be controlled with the Ribbon Controller.
Settings: 1–16, *Common*

Control Destination
Settings: Refer to the *Control Box Destination* section on the *Data List*.

Step Value 1–5
Settings: Depends on the *Destination*

Control Number   ☆

Sets the Control Change number for the entire Performance.
You can assign specific MIDI Control Change numbers to the Knobs on the top panel and controllers on the external device.

NOTE

As for controllers not included on this instrument, you can use an external sequencer or external MIDI controllers.

Operation

[PERFORMANCE] → *Common* selection → [EDIT/ ⏾] → *Control* → *Control Number*

Ribbon Ctrl (Ribbon Controller Control Number)

Sets the Control Change number generated by the operation of the Ribbon Controller.
When this instrument receives a MIDI Control Change message of the number set with this parameter from the external device, the message is treated the same as the operation of the built-in Ribbon Controller.
Settings: *Off*, 1–95

Breath Ctrl (Breath Controller Control Number)
Sets the Control Change number for the Breath Controller to be received from the external device.
When this instrument receives a MIDI Control Change message of the number set with this parameter from the external device, the message is treated the same as the operation of the Breath Controller.
Settings: *Off*, 1–95

Foot Ctrl 1 (Foot Controller 1 Control Number)
Foot Ctrl 2 (Foot Controller 2 Control Number)
Sets the Control Change number generated by the operation of the Foot Controller connected to the FOOT CONTROLLER jack.
When this instrument receives a MIDI Control Change message of the number set with this parameter from the external device, the message is treated the same as the operation of the Foot Controller.
Settings: *Off*, 1–95, *Super Knob*

Assign Sw 1 (Assignable Switch 1 Control Number)
Assign Sw 2 (Assignable Switch 2 Control Number)
Sets the Control Change number generated by the operation of the [ASSIGN 1] and [ASSIGN 2] buttons.
When this instrument receives a MIDI Control Change message of the number set with this parameter from the external device, the message is treated the same as the operation of the [ASSIGN 1] and [ASSIGN 2] buttons.
Settings: *Off*, 1–95

MS Triger (Motion Sequencer Trigger Switch Control Number)
Sets the Control Change number generated by the operation of the [MSEQ TRIGGER] button.
When this instrument receives a MIDI Control Change message of the number set with this parameter from the external device, the message is treated the same as the operation of the [MSEQ TRIGGER] button.
Settings: *Off*, 1–95

Assign Knob (Assignable Knob Control Number)

Sets the Control Change number generated by the operation of Knobs 1 to 8.

When this instrument receives a MIDI Control Change message of the number set with this parameter from the external device, the message is treated the same as the operation of Knobs 1 to 8.

Settings: *Off*, 1–95

MIDI Settings

Opens the *MIDI settings* screen.

The same screen can be opened from the [UTILITY] → *Settings* → *MIDI I/O*.

FS Assign (Foot Switch Assign Control Number)

Shows the Control Change number generated by the operation of the footswitch connected to the FOOT SWITCH [ASSIGNABLE] jack. When this instrument receives a MIDI Control Change message of the number set with this parameter from the external device, the message is treated the same as the operation of the footswitch.

Scene CC (Scene Control Change Number)

Shows the Control Change number generated by the operation of the SCENE buttons. When this instrument receives a MIDI Control Change message of the number set with this parameter from the external device, the message is treated the same as the operation of the SCENE buttons.

Super Knob CC (Super Knob Control Change Number)

Shows the Control Change number generated by the operation of the Super Knob. When this instrument receives a MIDI Control Change message of the number set with this parameter from the external device, the message is treated the same as the operation of the Super Knob.

NOTE
- When *Scene CC* and *Super Knob CC* are set to Off, System Exclusive (SysEx) is used for handling MIDI messages.
- *FS Assign, Scene CC*, and *Super Knob CC* are used for the entire instrument. If desired, change these settings from the *Utility MIDI Settings* screen.

Control Settings ☆
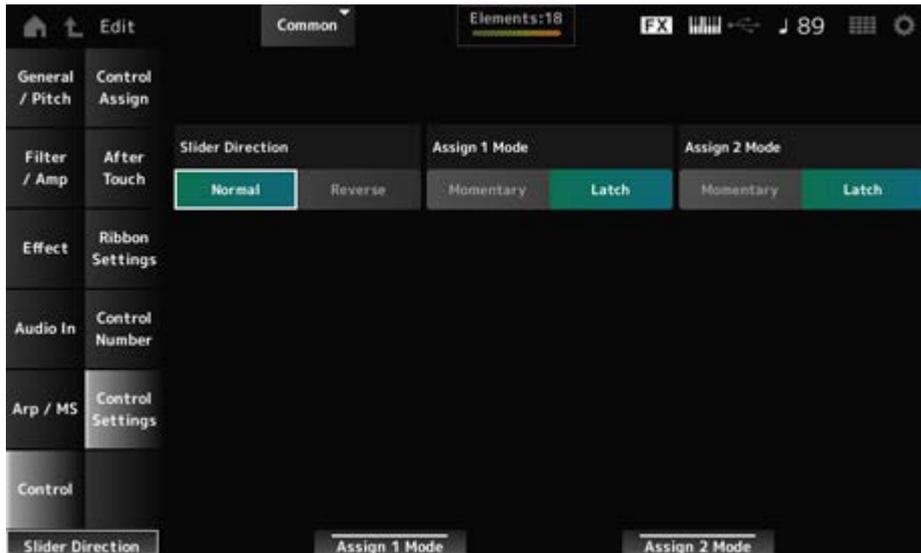
Sets the controller mode.

Operation

- [PERFORMANCE] → *Common* selection → [EDIT/ ⌕] → *Control* → *Control Settings*
- [SHIFT] + [ASSIGN 1]

● [SHIFT] + [ASSIGN 2]

Slider Direction Part 1–8

Sets the direction of the Control sliders 1 to 8 when the slider mode is set to PART.

Settings: *Normal* (up from the bottom), *Reverse* (down from the top)

Assignable Switch 1 Mode

Assignable Switch 2 Mode

Sets the [ASSIGN 1] and [ASSIGN 2] buttons for **Latch** or **Momentary** setting.

Settings: *Latch*, *Momentary*

> **Latch**: Sets to On when you press the button and sets to Off when you press the button again.
>
> **Momentary**: Sets to On while you are holding down the button and sets to Off when you release the button.

Part Edit (AWM2) screen ☆

A Normal Part (AWM2) consists of up to 128 elements.

Part Edit (AWM2) includes *Part Common Edit* (for setting parameters for the entire Part) and *Element Edit* (for setting parameters for each Element in the Part).

Part Common Edit ☆

Contents

Part Settings ☆

On the *Part Settings* screen, you can set general parameters (such as the Part names and tone generation system) for the Part.

Operation

[PERFORMANCE] → *Part Common* selection → [EDIT/ ⌘] → *General/Pitch* → *Part Settings*

Main Category (Part Main Category)
Sub Category (Part Sub Category)
Sets the Main category and Sub category of the selected Part.
Settings: Refer to the *Data List*.

Part Name
You can save the Part you are editing under a new name, using up to 20 alphanumeric characters.
Tapping on the name calls up the onscreen keyboard, allowing you to enter a name.

Volume
Sets the volume of the selected Part.
Settings: 0–127

Pan
Sets the Pan for the selected Part.
Settings: L63–C (center)–R63

Dry Level

Sets the Dry Level of the selected Part.

This parameter is available only when *Part Output* is set to *MainL&R*.

Settings: 0–127

Var Send (Variation Send)

Sets the Variation Send of the selected Part.

This parameter is available only when *Part Output* is set to *MainL&R*.

Settings: 0–127

Rev Send (Reverb Send)

Sets the Reverb Send of the selected Part.

This parameter is available only when *Part Output* is set to *MainL&R*.

Settings: 0–127

Part Output (Part Output Select)

Sets the output destination for the audio signals of the selected Part.

Settings: *MainL&R*, *AsgnL&R*, *USB1&2–USB29&30*, *AsgnL*, *AsgnR*, *USB1–30*, *Off*

> ***MainL&R***: Outputs in stereo (two channels) to the OUTPUT [L/MONO] and [R] jacks.
> ***AsgnL&R***: Outputs in stereo (two channels) to the ASSIGNABLE OUTPUT [L] and ASSIGNABLE OUTPUT [R] jacks.
> ***USB1&2–USB29&30***: Outputs in stereo (channels 1 and 2, to channels 29 and 30) to the [USB TO HOST] terminal.
> ***AsgnL***: Outputs in mono (one channel) to the ASSIGNABLE OUTPUT [L] jack.
> ***AsgnR***: Outputs in mono (one channel) to the ASSIGNABLE OUTPUT [R] jack.
> ***USB1–30***: Outputs in mono (channels 1 to 30) to the [USB TO HOST] terminal.
> ***Off***: No output of the audio signal for the Part.

Mono/Poly

Sets the tone generation mode of the current Part. *Mono* is for playing single notes, and *Poly* is for playing multiple simultaneous notes.

When using the *Mono* setting for playing the keyboard in Legato, you can create a smooth transition of sounds from one note to another.

Settings: *Mono, Poly*

Key Assign (Key Assign Mode)

Determines the method for producing the sound when the internal tone generator receives a Note On message of the same sound twice in a row.

The *Multi* setting is recommended for most cases. However, the *Multi* setting uses up many

notes in the maximum polyphony, so it is recommended to change to *Single* if sounds in other Parts are dropped or not played properly.

Settings: *Single*, *Multi*

> **Single**: Stops the first note and then plays the same note again. This is convenient for repeating the same note on the same channel.
>
> **Multi**: Plays the second note over the first note. This setting makes rolls and repeated notes sound natural, with crash cymbals or other percussion instruments having a long decay.

Arp Play Only (Arpeggio Play Only)

Sets the Part to play only in response to the Arpeggio.

Any Part set to On will be played by the Note On messages sent from the Arpeggio.

Settings: Off, On

Element Pan (Element Pan Switch)

Sets the Pan to On or Off from the *Element Edit* ([EDIT/ ⟳]→*Part* selection→*Element* selection→*Amplitude*→*Level/Pan*→*Pan*).

When set to Off, the Pan in the *Element Edit* will be set to C (center).

Settings: Off, On

TG Note Limit (Note Limit)

Sets the note range (lowest and highest notes) for the Part.

When the first note of *Note Limit* is set higher than the second (for example, C5 to C4), the notes in the ranges C−2 to C4 and C5 to G8 will be played.

Settings: C−2–G8

TG Vel Limit (Velocity Limit)

Sets the velocity range (lowest and highest values) for the Part.

When this is set so that the higher value is first and the lower value is second (for example, 93 to 34), the notes are played only for velocities of 1 to 34 and 93 to 127.

Settings: 1–127

Velocity Offset (Velocity Sensitivity Offset)

Increases or decreases the velocity value that is sent to the internal tone generator.

Settings: 0–127

When Depth (above) = 64 and Offset = 32	When Depth (above) = 64 and Offset = 64	When Depth (above) = 64 and Offset = 96

(1) Actual resulting velocity (affecting the tone generator)

(2) Velocity with which you play a note

Velocity Depth (Velocity Sensitivity Depth)

Sets how the level of the velocity value that is sent to the internal tone generator responds to Velocity or the strength of the keystroke.

Settings: 0–127

When Offset (below) is set to 64:

(1) Actual resulting velocity (affecting the tone generator)

(2) Velocity with which you play a note

Zone Settings ☆

On the *Zone Settings* screen, you can set the parameters for the Zone function.

This function allows you to divide the entire keyboard into a maximum of eight sections (Zones) and independently assign a separate channel to each Zone. This way, you only need one keyboard to play the sounds of multiple keyboards. You can play multiple Parts on an external multi-timbral sound module or play both the internal tone generator and any connected external sound modules.

[PERFORMANCE] → *Part Common* selection → [EDIT/ ↺] → *General/Pitch* → *Zone Settings*

Keyboard Sw (Keyboard Control Switch)

Keyboard Control is used for selecting Parts to be played from the keyboard.

When this switch is set to On, you can simultaneously play all Parts having Keyboard Control set to On, if the Part is set to *Common* or Keyboard Control for the Part is set to On.

When Keyboard Control is set to Off, you can play the Part on the keyboard only when that Part is selected.

Settings: Off, On

Zone Vel Limit (Zone Velocity Limit)

Sets the velocity range (lowest and highest values) for the Zone.

When this is set so that the higher value is first and the lower value is second (for example, 93 to 34), the notes are played only for velocities of 1 to 34 and 93 to 127.

Settings: 1–127

Zone Note Limit

Sets the note range (lowest and highest notes) for the Zone.

When the first note of *Note Limit* is set higher than the second (for example, C5 to C4), the notes in the ranges C−2 to C4 and C5 to G8 will be played.

Settings: C−2–G8

Octave Shift

Shifts the pitch of the zone in octaves.

Settings: −3–+0 (standard)–+3 (in octaves)

Transpose

Shifts the pitch of the zone in semitones.

Settings: −11–+0 (standard)–+11

Part Mode

Switches the Part Mode.

Settings: *Internal*, *External*

> **Internal**: Uses the internal tone generator.
> **External**: Uses the external sound generator. Any Part set to *External* does not
> receive MIDI messages from the external device.

Tx/Rx Ch (Transmit/Receive Channel)

Sets the channel for transmitting and receiving MIDI messages when the *Part Mode* is set to *Internal*.

Settings: Ch1–Ch16, *Off*

Transmit Ch

Sets the channel for transmitting and receiving MIDI messages when the *Part Mode* is set to *External*.

Settings: Ch1–Ch16

MIDI I/O Ch (MIDI Input/Output Channel)

Shows the channel for controlling the Part set to *Common* and the Part with the Keyboard Sw set to On.

This setting is common to the entire instrument. The setting can be changed on the *Utility MIDI Settings* screen.

When using *Tx/Rx Ch* and *Transmit Ch*, do not use the same channel specified in *MIDI I/O Ch.* If the same channel is set to *Tx/Rx Ch* and *Transmit Ch*, the setting in *MIDI I/O Ch* will take priority.

Settings: Ch1–Ch16

MIDI Settings

Opens the same screen as the *Utility → Settings → MIDI I/O*.

MIDI Send

When this parameter is set to On, the MIDI Bank, MIDI Pgm Number, MIDI Volume, and MIDI Pan settings are transmitted to the external device by following the transmit switch settings.

This parameter is not available when all four transmit switches are set to Off.

This parameter is available only when *Part Mode* is set to *External*.

Settings: Off, On

Bank Select (Transmit Bank Select)

The transmit switch for sending MIDI Bank MSB and MIDI Bank LSB to the external device.

This parameter is available only when *Part Mode* is set to *External*.

Settings: Off, On

MIDI Bank MSB
MIDI Bank LSB

Selects the bank for transmitting the Performance selection. You can specify the MSB and LSB messages.

This parameter is not available when the *Transmit Bank Select* is set to Off, and is available only when *Part Mode* is set to *External*.

Settings: MSB and LSB: 000–127

Pgm Change (Transmit Program Change)

This is the transmit switch for sending Program Change messages to the external device.

This parameter is available only when *Part Mode* is set to *External*.

Settings: Off, On

MIDI Pgm Num (MIDI Program Number)

Selects the Program Change number for transmitting the Performance selection.

This parameter is not available when the Transmit Program Change is set to Off, and is available only when *Part Mode* is set to *External*.

Settings: 001–128

Vol/Exp (Transmit Volume/Expression)

This is the transmit switch for sending the volume setting to the external device.

This parameter is available only when *Part Mode* is set to *External*.

Settings: Off, On

MIDI Volume

Sets the volume for transmitting the Performance selection.

This parameter is available only when *Part Mode* is set to *External*.

Settings: 0–127

Pan (Transmit Pan)

This is the transmit switch for sending the pan setting to the external device.

This parameter is available only when *Part Mode* is set to *External*.

Settings: Off, On

MIDI Pan

Sets the pan for transmitting the Performance selection.

This parameter is not available when the *Transmit Pan* is set to Off.

Settings: L64–C–R63

Edit Tx/Rx Switch

Opens the *Tx/Rx Switch* screen.

Element Settings ☆

Sets the maximum number of Elements to use.

Operation

[PERFORMANCE] → *Part Common* selection → [EDIT/ ⟲] → *General/Pitch* → *Element Settings*

Ex Elem Sw (Extended Element Switch)

Enables the extension of Element capacity.

When set to Off, only up to eight elements are available.

Settings: Off, On

Element Count

Sets the maximum number of elements to use.

Settings: 8–128
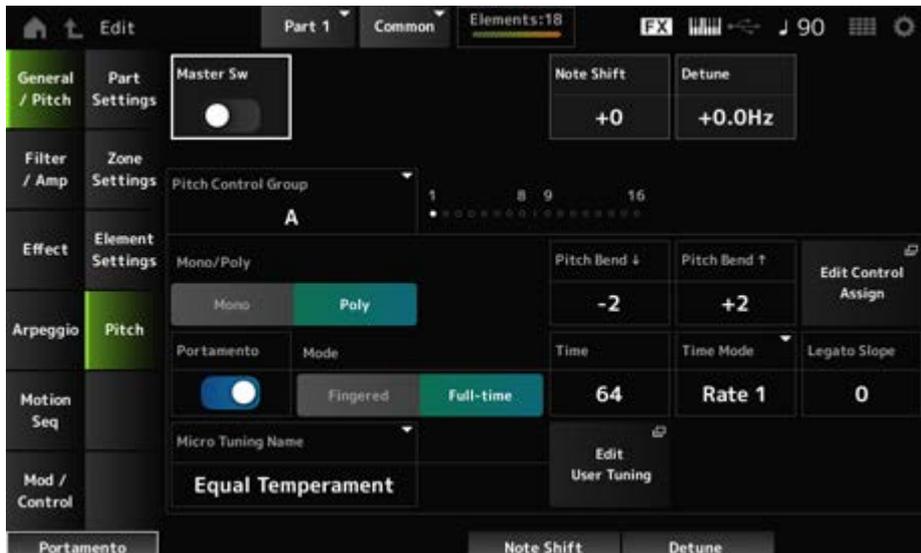
NOTE

Even when *Element Sw* is set to Off, the number set in *Element Count* is saved.

Pitch ☆

On the *Pitch* screen, you can set the pitch for the Part.

Operation

[PERFORMANCE] → *Part Common* selection → [EDIT/ ⌕] → *General/Pitch* → *Pitch*

Master Sw (Portamento Master Switch)

Portamento is a function for creating a smooth transition between two notes.

By setting this parameter to On, you can apply Portamento to Parts having the *Portamento Part Switch* set to On.

This switch is linked to the [PORTAMENTO] button on the top panel.

Settings: Off, On

Note Shift

Adjusts the pitch in semitones.

Settings: −24–+0–+24

Detune

Adjusts the pitch of the Part in 0.1 Hz increments.

By slightly shifting the pitch, you can detune the sound.

Settings: −12.8Hz–+0.0Hz–+12.7Hz

Pitch Control Group

Parts assigned to the same group are given the same pitch.

Mono/Poly

Sets the tone generation mode of the current Part. *Mono* is for playing single notes, and *Poly* is for playing multiple simultaneous notes.

When using the *Mono* setting for playing the keyboard in Legato, you can create a smooth transition of sounds from one note to another.

Settings: *Mono, Poly*

Pitch Bend↓ (Pitch Bend Range Lower)
Pitch Bend↑ (Pitch Bend Range Upper)

Sets the range of the changes created with the pitch bend wheel in semitones.

Settings: −48–+0–+24

Edit Control Assign

Opens the *Control Assign* screen with the *DisplayFilter* set to *PitchBend*.

Portamento (Portamento Part Switch)

Sets Portamento on or off for the Part.

Settings: Off, On

Mode (Portamento Mode)

Sets the way Portamento is applied according to your keyboard performance.

Settings: *Fingered*, *Full-time*

> **Fingered**: Portamento is applied only when you play legato (playing the next note before releasing the previous one).
>
> **Full-time**: Portamento is applied at all times.

Time (Portamento Time)

Sets the time length (or speed) for the pitch transition of Portamento.

Settings: 0–127

Time Mode (Portamento Time Mode)

Sets how the pitch changes over time.

Settings: *Rate 1*, *Time 1*, *Rate 2*, *Time 2*

> **Rate 1**: Pitch changes at a specific rate.
>
> **Time 1**: Pitch changes at a specific time.
>
> **Rate 2**: Pitch changes at a specific rate within an octave.
>
> **Time 2**: Pitch changes at a specific time within an octave.

Legato Slope (Portamento Legato Slope)

Sets the attack of the legato notes when *Mono/Poly* is set to *Mono*.

When set to *Mono*, the attack of the note may sound unnatural depending on the attack speed of the waveform assigned to the Part. If this is the case, use this parameter to adjust the attack. In most cases, it is recommended to set this parameter to a smaller value for waveforms having a short attack, and a larger value for waveforms having a long attack.

Settings: 0–7

Micro Tuning Name

Sets the micro tuning (temperament) for the Part.

Settings: *Equal Temperament*, *Pure Major*, *Pure Minor*, *Werckmeister*, *Kirnberger*, *Vallotti & Young*, *1/4 shift*, *1/4 tone*, *1/8 tone*, *Indian*, *Arabic 1*, *Arabic 2*, *Arabic 3*, *User 1–8* (when a User bank is selected), *Library 1-1–16-8* (when a library file is loaded)

Equal Temperament	Each octave is divided into 12 intervals of equal size. This is the most commonly used tuning in music today.
Pure Major Pure Minor	These tunings preserve the pure mathematical intervals of each scale, especially for triad chords (root, third, fifth). You can hear this best in actual vocal harmonies, such as choirs and *a cappella* singing.
Werckmeister Kirnberger Vallotti & Young	Each of the scales combines the mean-tone and Pythagorean scales. The main feature of these scales is that each key has its unique character. These scales were used extensively during the time of Bach and Beethoven, and even now they are often used when performing period music on the harpsichord.
1/4 shift	The equal-tempered scale shifted up 50 cents. You can create tension in your music by mixing this setting with Equal Temperament.
1/4 tone	Twenty-four equally spaced notes per octave. Playing twenty-four consecutive keys on the keyboard makes up an octave.
1/8 tone	Forty-eight equally spaced notes per octave. Playing forty-eight consecutive keys on the keyboard makes up an octave.
Indian	Usually observed in Indian music. Play white keys only.
Arabic	Usually observed in Arabic music.

Root (Micro Tuning Root)

Sets the root note for the micro tuning.

This parameter is shown only when micro tuning that requires a root note is selected.

Settings: C–B

Edit User Tuning

Opens the setting screen for User Micro Tuning.

Filter EG ☆

On the *Filter EG* screen, you can set the Filter Envelope Generator (FEG) for the Part.
The FEG lets you set the degree (or level) of changes to the cutoff frequency and how those changes evolve over time, starting from the moment you press a key on the keyboard to the moment the sound decays.

Operation

[PERFORMANCE] → *Part Common* selection → [EDIT/ ⟳] → *Filter/Amp* → *Filter EG*

FEG Atk (FEG Attack Time)

Sets the length of time it takes for the sound to change from the moment you press a key to when the Cutoff Frequency reaches the value set at *Attack Level*.
This is specified as an offset value to the *Element FEG*.
Settings: −64–+63

FEG Decay (FEG Decay Time)

Sets the length of time it takes for the Cutoff Frequency to change from the attack level. You can control the crispness or the decay speed of the sound.
This is specified as an offset value to the *Element FEG*.
Settings: −64–+63

FEG Sus (FEG Sustain Level)

Sets the Cutoff Frequency level that follows the end of the decay segment (or the level that is maintained while the key is held down).

This is specified as an offset value to the *Element FEG*.

Settings: −64–+63

FEG Rel (FEG Release Time)

Sets the length of time it takes for the Cutoff Frequency to fall to the Release level when you lift your finger from the key.

This is specified as an offset value to the *Element FEG*.

Settings: −64–+63

Cutoff (Filter Cutoff Frequency)

Changes the sound by setting the cutoff frequency of the filter. When the Low Pass Filter is selected, you can make the sound brighter by setting this to a larger value, and darker by setting it to a smaller value.

This is specified as an offset value to the cutoff frequency for the Element.

Settings: −64–+63

Resonance (Filter Resonance)

Adds special characteristics to the sound by adjusting the signal level near the cutoff frequency.

This is specified as an offset value to the filter resonance or filter width for the Element.

Settings: −64–+63

FEG Depth

Sets the depth range of the cutoff frequency controlled by the FEG for the Element.

When it is set to 0, the settings in the Element will be used with no change.

Settings: −64–+63

Amp EG ☆

On the *Amp EG* screen, you can set the AEG (Amplitude Envelope Generator) for the Part. This lets you determine how the volume changes from the moment you press a key on the keyboard to when the sound decays.

Operation

[PERFORMANCE] → *Part Common* selection → [EDIT/ ↻] → *Filter/Amp* → *Amp EG*

AEG Attack (AEG Attack Time)

Sets the length of time it takes for the volume to change from the moment you press a key on the keyboard to when it reaches the maximum.

This is specified as an offset value to the *Element AEG*.

Settings: −64–+63

AEG Decay (AEG Decay Time)

Sets the length of time it takes for the volume to change after it has reached the maximum.

This is specified as an offset value to the *Element AEG*.

Settings: −64–+63

AEG Sustain (AEG Sustain Level)

Sets the volume that is maintained after the decay time.

Settings: −64–+63

AEG Release (AEG Release Time)

Sets the length of time it takes after you have released the key to when the sound decays.

This is specified as an offset value to the *Element AEG*.

Settings: −64–+63

Effect ★
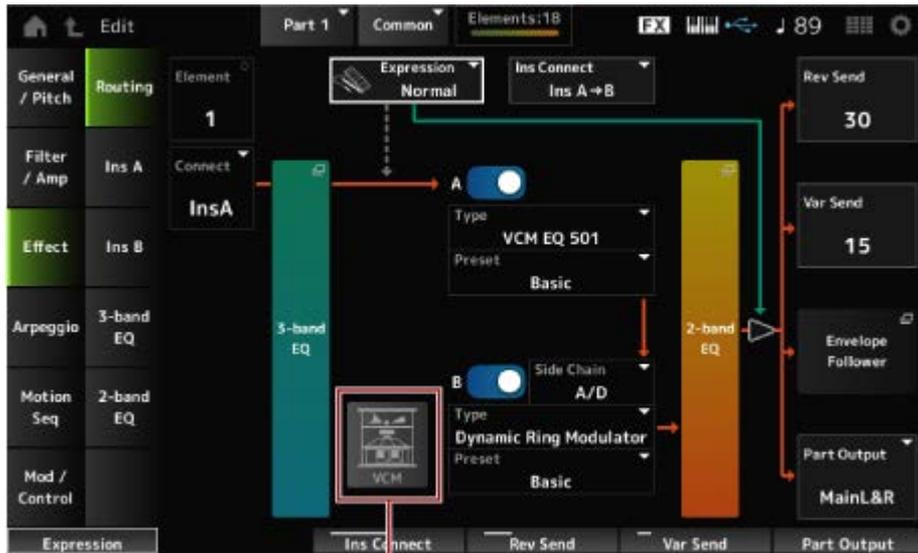
Routing ☆

On the *Routing* screen, you can set the effect routing for the Part.

Operation

(1)　　VCM Rotary Speaker Switch

Element (Element Select)

Shows the name of the selected Element.

When *Ex Elem Sw* (*General/Pitch → Element Settings*) is set to Off, or when there are less than eight elements, the numbers 1 to 8 are shown.

Settings: 1–128 (up to the *Element Count* setting)

Connect (Element Connection Switch)

Sets the Element to be output to Insertion Effect A or Insertion Effect B.

Setting it to *Thru* bypasses the Insertion Effects.

Settings: *Thru*, *InsA*, *InsB*

3-band EQ

Opens the setting screen for the 3-band EQ.

2-band EQ

Opens the setting screen for the 2-band EQ.

Expression (Expression Type)

Sets the position in the signal flow when using the Expression pedal.

Settings: *Normal*, *Pre FX*

　　　　Normal: Applied after the 2-band EQ

　　　　Pre FX: Applied before the Insertion Effects. This setting is effective when used with non-linear effects such as Distortion. Example of using it with Distortion: When set to

Normal, the output of Distortion changes. While the distortion level stays the same and only the volume will change. When set to Pre FX, the input of Distortion changes, so both the distortion level and the volume will change.

Exp. Curve (Expression Curve)

Sets the way the expression effect is applied when *Expression Type* is set to *Pre FX*.

Settings: ***Normal***: Volume curve of normal characteristics

Organ: Volume curve of the characteristics simulating a vintage organ

VCM Rotary Speaker Switch

Sets the VCM Rotary Speaker effect, which simulates the characteristics of a rotary speaker by utilizing VCM technology.

This parameter is available only for Part 1.
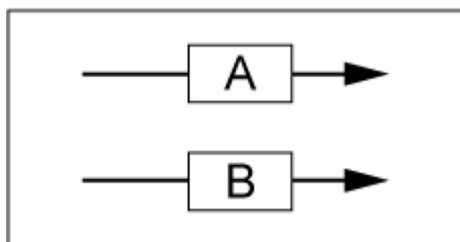
Settings: Off, On

Ins Connect (Insertion Connection Type)
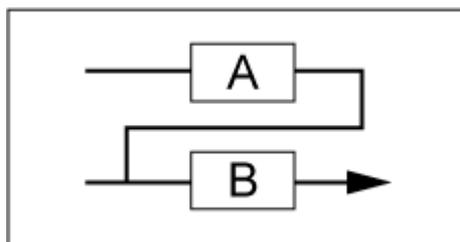
Sets the effect routing for Insertion Effect A and Insertion Effect B. The diagram changes accordingly when the settings are changed.

Settings: *Parallel*, *Ins A→B*, *Ins B→A*

Parallel: (for Normal Part (AWM2) and Drum Part): The output from Insertion Effect A and Insertion Effect B are individually sent to the Master Effect, Master EQ, Reverb, Variation, and Envelope Follower.

Ins A→B: The output from Insertion Effect A is sent to Insertion Effect B, and the output from Insertion Effect B is sent to the Master Effect, Master EQ, Reverb, Variation, and Envelope Follower.

Ins B→A: The output from Insertion Effect B is sent to Insertion Effect A, and the output from Insertion Effect A is sent to the Master Effect, Master EQ, Reverb, Variation, and Envelope Follower.

A (Insertion Effect A Switch)
B (Insertion Effect B Switch)
Turns Insertion Effect A and Insertion Effect B on or off.
Settings: Off, On

Type (Insertion Effect Type)
Sets the Effect Type.
Settings: See the Effect types.

Preset (Insertion Effect Preset)
Selects one of the Preset effect parameters for each Effect Type.
By selecting a Preset, you can change the way effects are applied.
Settings: Refer to the *Data List*.

Side Chain (Insertion Side Chain Part)
Modulator (Insertion Modulator Part)
Sets the Side Chain Part (or the Modulator depending on the effect type) for the Insertion Effect A or Insertion Effect B.
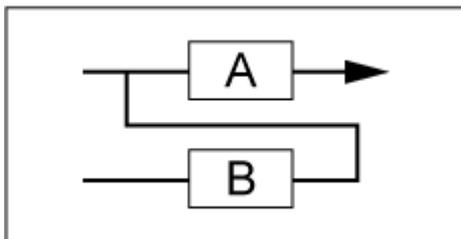This parameter is not available when the Part itself or Master is set to the Modulator. In that case, the parameter value will be shown in parenthesis as in "(*Master*)."
Settings: *Part 1–16*, *A/D*, *Master*, *Off*

Rev Send (Reverb Send)
Sets the level of the signals (or bypass signals) sent from Insertion Effect A or Insertion Effect B to the Reverb Effect. This parameter is available only when *Part Output* is set to *MainL&R*.
Settings: 0–127

Var Send (Variation Send)
Sets the level of the signals (or bypass signals) sent from Insertion Effect A or Insertion Effect B to the Variation Effect. This parameter is available only when *Part Output* is set to *MainL&R*.

Settings: 0–127

Part Output (Part Output Select)

Sets the output destination for the audio signals.

Settings: *MainL&R, AsgnL&R, USB1&2–USB29&30, AsgnL, AsgnR, USB1–30, Off*

> **MainL&R**: Outputs in stereo (two channels) to the OUTPUT [L/MONO] and OUTPUT [R] jacks.
>
> **AsgnL&R**: Outputs in stereo (two channels) to the ASSIGNABLE OUTPUT [L] and [R] jacks.
>
> **USB1&2–USB29&30**: Outputs in stereo (channels 1 and 2, to channels 29 and 30) to the [USB TO HOST] terminal.
>
> **AsgnL**: Outputs in mono (one channel) to the ASSIGNABLE OUTPUT [L] jack.
>
> **AsgnR**: Outputs in mono (one channel) to the ASSIGNABLE OUTPUT [R] jack.
>
> **USB1–30**: Outputs in mono (channels 1 to 30) to the [USB TO HOST] terminal.
>
> **Off**: No output of the audio signal for the Part.

Envelope Follower

Opens the settings screen for the Envelope Follower.

Ins A
Ins B   ☆

On the *Ins A* and *Ins B* screens, you can set the Insertion Effects.

Operation

- [PERFORMANCE] → *Part Common* selection → [EDIT/ ⟲] → *Effect* → *Ins A*
- [PERFORMANCE] → *Part Common* selection → [EDIT/ ⟲] → *Effect* → *Ins B*
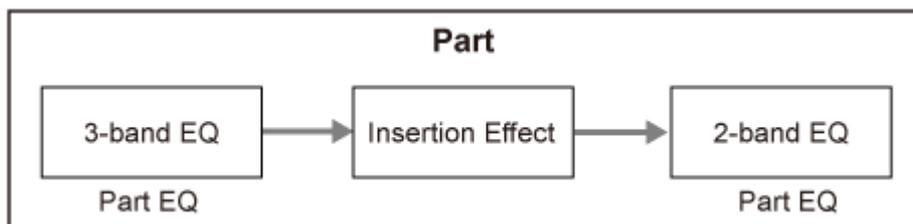
The same as *Audio In → Ins A* or *Ins B* in *Common Edit*.

3-band EQ

On the *3-band EQ* screen, you can set the Part EQ. The 3-band EQ can be applied before the Insertion Effect.

Operation

[PERFORMANCE] → *Part Common* selection → [EDIT/ ⟳] → *Effect → 3-band EQ*

Shown below is the setting screen for 3-band EQ.

EQ Low Freq (3band EQ Low Frequency)

Sets the frequency of the *Low* band.

Settings: 50.1Hz–2.00kHz

EQ Low Gain (3band EQ Low Gain)

Sets the signal level of the *Low* band.

Settings: −12.00dB–+12.00dB

EQ Mid Freq (3band EQ Mid Frequency)

Sets the frequency of the *Mid* band.

Settings: 139.7Hz–10.1kHz

EQ Mid Gain (3band EQ Mid Gain)

Sets the signal level of the *Mid* band.

Settings: −12.00dB–+12.00dB

EQ Mid Q (3band EQ Mid Q)

Sets the bandwidth of the *Mid* band.

Settings: 0.7–10.3

EQ Hi Freq (3band EQ High Frequency)

Sets the frequency of the *High* band.
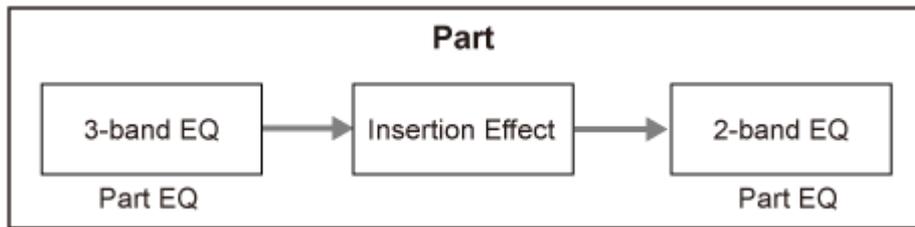
Settings: 503.8Hz–14.0kHz

EQ Hi Gain (3band EQ High Gain)

Sets the signal level of the *High* band.

Settings: −12.00dB–+12.00dB
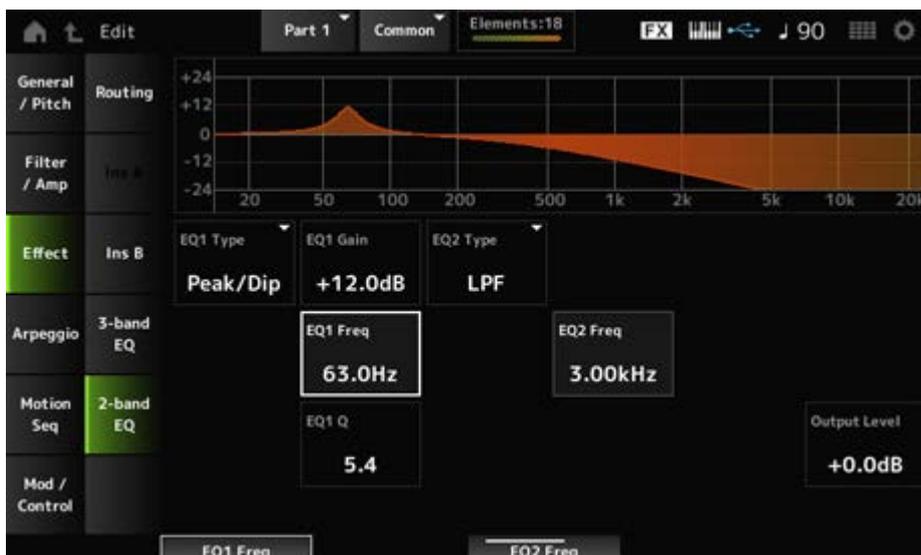
2-band EQ

On the *2-band EQ* screen, you can set the Part EQ.

The 2-band EQ can be applied after the Insertion Effect.

Shown below is the setting screen for 2-band EQ.

EQ1 Type (2band EQ 1 Type)
EQ2 Type (2band EQ 2 Type)

Selects the desired EQ type.

Settings: *Thru, LPF, HPF, Low Shelf, Hi Shelf, Peak/Dip*

> **Thru**: Passes the signals with no effects being applied.
> **LPF**: Cuts the signals above the cutoff frequency.
> **HPF**: Cuts the signals below the cutoff frequency.
> **Low Shelf**: Cuts or boosts the signals below the specified frequency setting.
> **Hi Shelf**: Cuts or boosts the signals above the specified frequency setting.
> **Peak/Dip**: Cuts or boosts the signals at the specified frequency setting.

EQ 1 Freq (2band EQ 1 Frequency)
EQ 2 Freq (2band EQ 2 Frequency)

Sets the frequency to be cut or boosted.

This parameter is not available when the *EQ Type* is set to *Thru*.

Settings: 63.0Hz–18.0Hz

EQ 1 Gain (2band EQ 1 Gain)
EQ 2 Gain (2band EQ 2 Gain)

Sets the signal level of the frequency band set in *EQ1 Freq* or *EQ2 Freq*.

This parameter is not available when the *EQ Type* is set to *Thru*, LPF, or HPF.

Settings: −12.0dB–+12.0dB

EQ 1 Q (2band EQ 1 Q)
EQ 2 Q (2band EQ 2 Q)

Sets the bandwidth for cutting or boosting the volume of the frequencies set with *EQ1 Freq* or *EQ2 Freq*.

This parameter is available only when the *EQ Type* is set to Peak/Dip.

Settings: 0.1–12.0

Output Level (2band EQ Output Level)

Sets the output gain of the 2-band EQ.

Settings: −12.0dB–+12.0dB

Arpeggio ★

Common ☆

On the *Common* screen, you can set the Arpeggio for the entire Part.

Operation

[PERFORMANCE] → *Part Common* selection → [EDIT/ ⟳] → *Arpeggio* → *Common*

Arp Part (Part Arpeggio Switch)

Sets the Arpeggio for the Part on or off.

Settings: Off, On

Arp Master (Arpeggio Master Switch)

Sets the Arpeggio for the Performance on or off.

Settings: Off, On

Sync Quantize (Arpeggio Sync Quantize Value)

Adjusts the timing for starting the next Arpeggio phrase when playing back Arpeggio phrases in multiple Parts.

When set to *Off*, Arpeggio playback starts when the Part is played on the keyboard.

The value shown here is in clocks.

Settings: *Off*, 60 (thirty-second note), 80 (sixteenth note triplet), 120 (sixteenth note), 160 (eighth note triplet), 240 (eighth note), 320 (quarter note triplet), 480 (quarter note)

Arpeggio Group

Sets the *Arpeggio Group* for using the same Arpeggio on multiple Parts.

The Parts set in the same Group will have the same Arpeggio settings.

Indicator

This Indicator is set to On for the Part that is in the same Group as the selected Part.

Hold (Arpeggio Hold)

Enables or disables the Hold function which continues to repeatedly play back the Arpeggio even after you release the key on the keyboard.

Settings: *Sync-Off*, *Off*, *On*

Sync-Off: Repeats Arpeggio playback in the background while your fingers release

the keys and resumes playback when you press any key on the keyboard.

Off: Plays back the Arpeggio only while any key is being held.

On: Repeats Arpeggio playback even after you release the key on the keyboard.

Change Timing (Arpeggio Change Timing)

Sets the timing for changing the Arpeggio type while another Arpeggio phrase is still being played back. You can select *Real-time* for switching to a new Arpeggio phrase immediately or *Measure* for switching to a new Arpeggio phrase at the top of the next measure.

Settings: *Real-time*, *Measure*

Key Mode (Arpeggio Key Mode)

Sets the way Arpeggio is played back.

Settings: *Sort*, *Thru*, *Direct*, *Sort+Drct*, *Thru+Drct*

Sort: Plays back the same Arpeggio regardless of the order of keys played.

Thru: Plays back the Arpeggio differently depending on the order of keys played.

Direct: Does not play back the Arpeggio. Only your keyboard performance will be played. However, this setting allows you to create sound changes through Control Change messages such as pan and brightness, depending on the Arpeggio. As such, it is useful for Arpeggio types that use Control Change or for Arpeggio types included in the Control category.

Sort+Drct: Plays back the Arpeggio according to the *Sort* setting, as well as the notes played on the keyboard.

Thru+Drct: Plays back the Arpeggio according to the *Thru* setting, as well as the notes played on the keyboard.

Loop (Arpeggio Loop)

Selects loop (repeat) playback while holding the key on the keyboard, or one-shot playback for the Arpeggio every time you press a key.

Settings: Off, On

Arp Play Only (Arpeggio Play Only)

Sets the Part to play only with the Arpeggio.

Parts set to On will be played by the Note On messages sent for the Arpeggio.

Settings: Off, On

Swing

Changes the timing of even-numbered beats (backbeats) counted from the value specified in *Quantize Value* to add a swing feel to the Arpeggio playback.

- +1 and higher: Moved behind the beat.

- -1 and lower: Moved ahead of the beat.

- 0: Does not change the even-numbered beats or add any swing feel.

  This setting is useful for creating desired rhythms for playing in swing, shuffle, and bounce feels.

Settings: −120–+120

Unit (Arpeggio Unit Multiply)

Sets the percentage for stretching or compressing the Arpeggio playback time.
The subdivision of the beat and the tempo will change when you stretch or compress the playback time, so you can create a completely new feel for the originally selected Arpeggio.
Settings: 50%, 66%, 75%, 100%, 133%, 150%, 200%, 266%, 300%, 400%, *Common*

    200%: The playback time is doubled, and the tempo is halved as a result.
    100%: The playback time is kept unchanged.
    50%: The playback time is halved, and the tempo is doubled as a result.
    Common: The value set in the *Unit Multiply* common to all Parts is applied.

Quantize Value (Arpeggio Quantize Value)

Sets the reference note for using quantize and swing.
The value shown here is in clocks.
Settings: *Off*, 60 (thirty-second note), 80 (sixteenth note triplet), 120 (sixteenth note), 160 (eighth note triplet), 240 (eighth note), 320 (quarter note triplet), 480 (quarter note)

Qntz Strength (Arpeggio Quantize Strength)

Sets the strength of the quantize setting (or how close the notes are to the reference note set in *Quantize Value*). A setting of 100% shifts the timing completely to that set in *Quantize Value*, while a setting of 0% results in no quantization.
Settings: 0%–100%

Gate Time (Arpeggio Gate Time Rate)

Sets the rate for the Gate Time (or time length for playing the notes) of Arpeggio playback. If the Gate Time is set to the value 0 as a result, the setting will be changed to the value 1.
Settings: 0%–200%

Velocity Rate (Arpeggio Velocity Rate)

Sets the velocity rate of Arpeggio playback. If the Velocity is set to the value 0 as a result, the setting will be changed to a value of 1. When it is set to a value larger than 128, the setting will be changed to a value of 127.
Settings: 0%–200%

Arp Vel Limit (Arpeggio Velocity Limit)

Sets the velocity range (lowest and highest values) for Arpeggio playback.

When this is set so that the higher value is first and the lower value is second (for example, 93 to 34), the Arpeggio is played only for velocities of 1 to 34 and 93 to 127.

Settings: 1–127

Arp Note Limit (Arpeggio Note Limit)

Sets the note range (the lowest and the highest notes) for Arpeggio playback.

When the first note specified is higher than the second (for example, C5 to C4), the notes in the ranges C−2 to C4 and C5 to G8 will be played.

Settings: C−2–G8

Octave Shift (Arpeggio Output Octave Shift)

Shifts the pitch of the Arpeggio in octaves.

Settings: −10–+0–+10

Octave Range (Arpeggio Octave Range)

Shifts the range of the Arpeggio in octaves.

Settings: −3–+0–+3

Arp Select (Arpeggio Select)

Selects the Arpeggio.
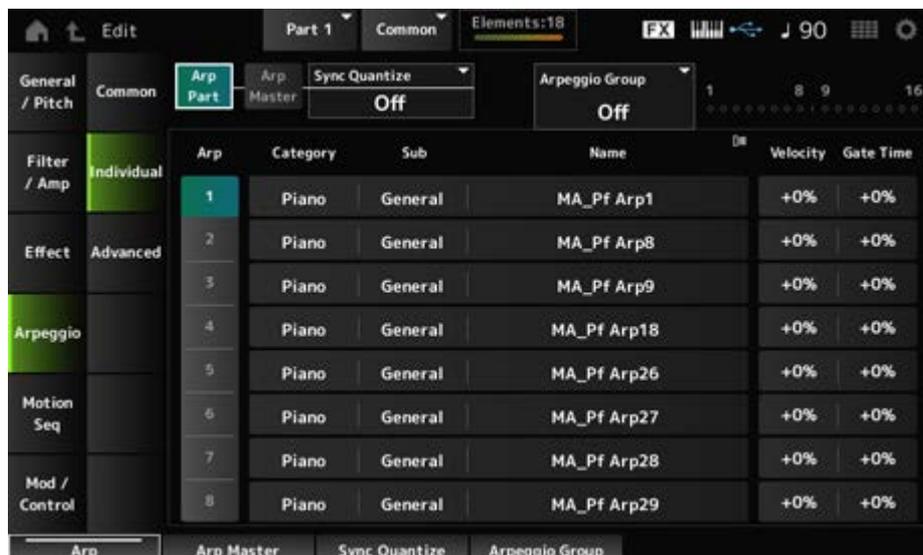
Settings: 1–8

Individual ☆

On the *Individual* screen, you can set the Arpeggio type parameters for Arpeggio Select 1 to 8. Tapping the *Arpeggio Type* setting calls up the menu. Selecting *Search* opens the *Arpeggio Category Search* screen. Selecting *Number* allows you to specify the Arpeggio Type by number.

Operation

- [PERFORMANCE] → *Part Common* selection → [EDIT/ ⌢] → *Arpeggio* → *Individual*
- (When a selected Part is something other than *Common*) [SHIFT] + [ARP ON/OFF]

Arp Part (Part Arpeggio Switch)
Arp Master (Arpeggio Master Switch)
Sync Quantize (Arpeggio Sync Quantize Value)
Arp Group
Indicator
The same as the *Common* screen.

Arp (Arpeggio Select)
Selects the Arpeggio.
Settings: 1–8

Category (Arpeggio Category)
Shows the Category of the selected Arpeggio.
Settings: Refer to the *Data List*.

Sub (Arpeggio Sub Category)
Shows the Sub category of the selected Arpeggio.
Settings: Refer to the *Data List*.

Name (Arpeggio Name)
Shows the name of the selected Arpeggio.
Settings: Refer to the *Data List*.

Velocity (Arpeggio Velocity Rate)
Sets the velocity rate of the Arpeggio playback.
If the *Velocity* is set to the value of 0 as a result, the setting will be changed to a value of 1.
When it is set to a value larger than 128, the setting will be changed to a value of 127.
Settings: −100%–+100%

Gate Time (Arpeggio Gate Time Rate)

Sets the Gate Time (or time length for playing the notes) for Arpeggio playback.

If the Gate Time is set to a value of 0 as a result, the setting will be changed to a value of 1.

Settings: −100%–+100%
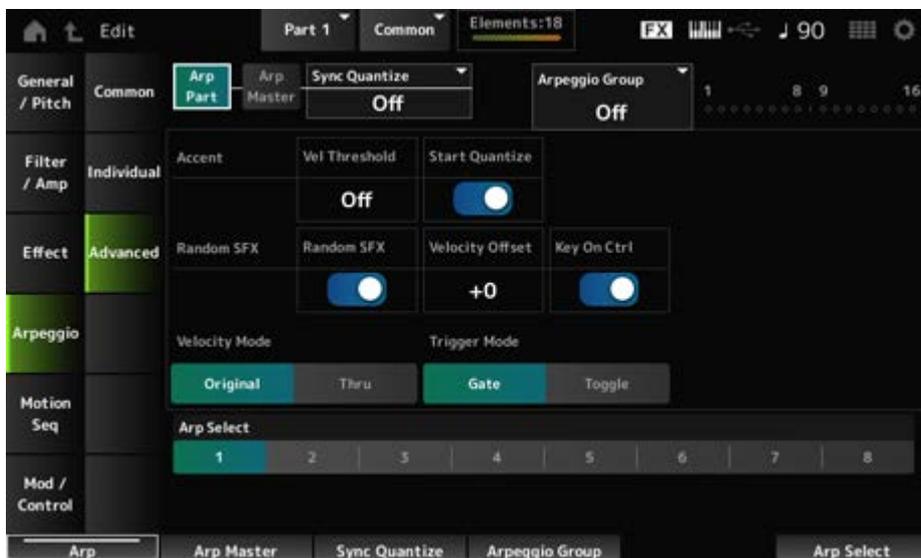
Advanced ☆

On the *Advanced* screen, you can set the Arpeggio parameters.

Operation

[PERFORMANCE] → *Part Common* selection → [EDIT/ ⟳] → *Arpeggio* → *Advanced*

Arp Part (Part Arpeggio Switch)
Arp Master (Arpeggio Master Switch)
Sync Quantize (Arpeggio Sync Quantize Value)
Arp Group
Indicator

The same as the *Common* screen.

Accent Vel Threshold (Arpeggio Accent Velocity Threshold)

Sets the velocity level for triggering an Accent Phrase.

Accent Phrases are sequence phrases that have been programmed to certain types of Arpeggio patterns to be played back only when the keys are played at a fast velocity. Accent Phrases are triggered when the velocity is faster than *Accent Vel Threshold (Arpeggio Accent Velocity Threshold)*.

If the Accent Phrase is not triggered properly, try lowering the *Accent Vel Threshold (Arpeggio Accent Velocity Threshold)* value.

For more information on the Arpeggio types that support this function, refer to the *Data List*.
Settings: Off, 1–127

Accent Start Quantize (Arpeggio Accent Start Quantize)

Sets the Accent Phrase to be triggered when a key is pressed at the velocity value larger than the *Accent Vel Threshold (Arpeggio Accent Velocity Threshold)* (set to On) or triggered at the timing set in the selected Arpeggio type (set to Off).
Settings: Off, On

Random SFX (Arpeggio Random SFX)

Enables the Random SFX function.
The Random SFX function triggers special sounds included in some Arpeggio types. There are various types of special sounds you can use. For example, you can use this function to add guitar fret noises when you release your finger from the key.
Settings: Off, On

NOTE
For more information on the Arpeggio types that support this function, refer to the *Data List*.

Random SFX Velocity Offset (Arpeggio Random SFX Velocity Offset)

Sets the velocity value for triggering special sounds for the Random SFX function.
Settings: −64–+0–+63

Random SFX Key On Ctrl (Arpeggio Random SFX Key On Control)

Sets special sounds to be triggered by the velocity level for pressing keys or by the velocity level automatically set.
Settings: Off, On

Velocity Mode (Arpeggio Velocity Mode)

Sets the velocity for playing back the Arpeggio.
Settings: *Original*, *Thru*

> **Original**: Follows the velocity level set in the Arpeggio Type.
> **Thru**: Follows the velocity level of the keystroke.

Trigger Mode (Arpeggio Trigger Mode)

Sets the *Trigger Mode* to the *Gate* setting that starts and stops the Arpeggio playback by pressing a key, or to the *Toggle* setting that alternates start and stop by pressing a key.
Settings: *Gate*, *Toggle*

Arp Select (Arpeggio Select)

Changes the Arpeggio selection.

Settings: 1–8

Motion Seq ⭐
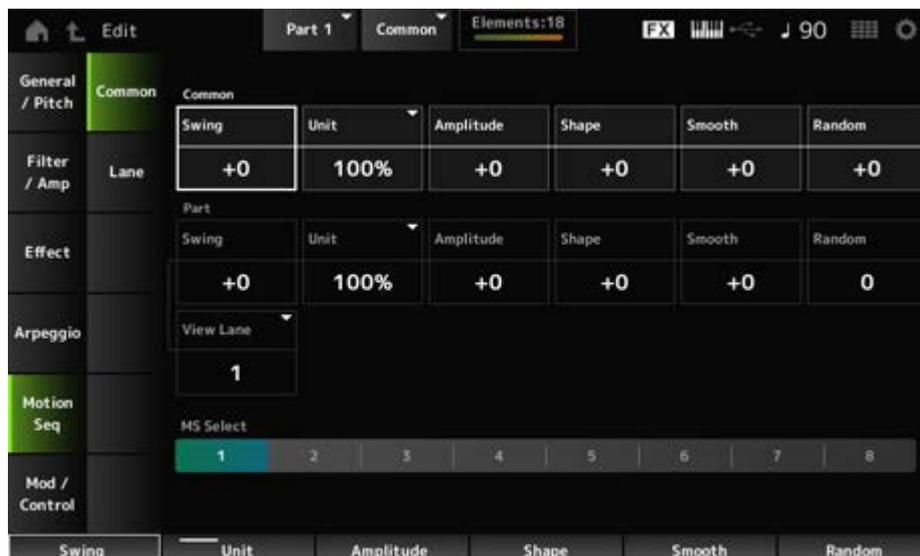
Common ☆

On the *Common* screen, you can set the Motion Sequencer parameters for the entire Part.

Operation

- [PERFORMANCE] → *Part Common* selection → [EDIT/ ⟳] → *Motion Seq* → *Common*
- (When a selected Part is something other than *Common*) [SHIFT] + [MSEQ ON/OFF]

Common Swing (Common Swing Offset)

Sets the swing value of the Arpeggio and Motion Sequencer for the Performance.

This is specified as an offset value to the Part Swing.

Settings: −120–+120

Common Unit (Common Unit Multiply)

Sets the percentage for stretching or compressing the Arpeggio and Motion Sequencer playback time for the entire Performance.

This parameter is effective on the Lane for which *Unit Multiply* is set to *Common*.

The subdivision of the beat and the tempo will change when you stretch or compress playback time, so you can create a completely new feel for the Motion Sequence you have originally selected.

Settings: 50%–400%

        200%: The playback time is doubled, and the tempo is halved as a result.

        100%: The playback time is kept unchanged.

        50%: The playback time is halved, and the tempo is doubled as a result.

Common Amplitude (Common Motion Sequencer Amplitude Performance Offset)

Sets the Motion Sequencer Amplitude for the entire Performance.

This is specified as an offset value to the Motion Sequencer Amplitude for the Part.

Amplitude here is the degree of changes to the Motion Sequence.

This parameter value offsets the Amplitude of the Lanes within the Performance if *MS FX* is set to On for the lane.

Settings: −127–+127

Common Shape (Common Motion Sequencer Pulse Shape Performance Offset)

Sets the Motion Sequencer Pulse Shape for the Performance.

This is specified as an offset value to the Motion Sequencer Pulse Shape for the Part.

This parameter changes the shape of the step curve that makes up the sequence.

This parameter value offsets the parameters for the Lanes within the Performance if the *MS FX* is set to On for the lane and *Control* is set to On.

Settings: −100–+100

Common Smooth (Common Motion Sequencer Smoothness Performance Offset)

Sets the Motion Sequencer Smoothness for the Performance.

This is specified as an offset value to the Motion Sequencer Smoothness for the Part.

Smoothness here is the smoothness of the changes in the sequence over time.

This parameter value offsets the Smoothness of the Lanes within the Performance if the *MS FX* is set to On for the lane.

Settings: −127–+127

Common Random (Common Motion Sequencer Randomness Performance Offset)

Sets the Motion Sequencer Randomness for the Performance.

This is specified as an offset value to the Motion Sequencer Randomness for the Part.

This parameter indicates the randomness of changes in the step value of the sequence.

This parameter value offsets the Randomness of the Lanes within the Performance if the *MS FX* is set to On for the lane.

Settings: −127–+127

Part Swing (Part Swing)

Changes the timing of the even-numbered beats (backbeats) counted from the value specified in *MS Grid* to add a swing feel to the Motion Sequencer playback.

- +1 and higher: Moved behind the beat.

- -1 and lower: Moved ahead of the beat.

- 0: Does not change the even-numbered beats or add any swing feel.
  This setting is useful for creating desired rhythms for playing swing, shuffle, and bounce feels.

Settings: −120–+120

Part Unit (Arpeggio Unit Multiply)

Sets the percentage for stretching or compressing the Arpeggio playback time for the Part.

The parameter setting is effective when the *Unit Multiply* of each Lane is set to *Arp*.

Settings: 50%–400%, *Common*

200%: The playback time is doubled, and the tempo is halved as a result.
100%: The playback time is kept unchanged.
50%: The playback time is halved, and the tempo is doubled as a result.
Common: The value set in the *Unit Multiply* common to all Parts is applied.

Part Amplitude (Part Motion Sequencer Amplitude)

Sets the Motion Sequencer Amplitude for the Part.

This is specified as an offset value to the Motion Sequencer Amplitude for each Lane.

This parameter value offsets the Amplitude of the Lanes within the Part if the *MS FX* is set to On for the lane.

Settings: −127–+127

Part Shape (Part Motion Sequencer Pulse Shape)

Sets the Motion Sequencer Pulse Shape for the Part.

This is specified as an offset value to the Motion Sequencer Step Curve parameter for each Lane.

This parameter value offsets the parameters for the Lanes within the Part if the *MS FX* is set to On for the lane and *Control* is set to On.

Settings: −100–+100

Part Motion Seq Smooth (Part Motion Sequencer Smoothness)

Sets the Motion Sequencer Smoothness for the Part.

This is specified as an offset value to the Motion Sequencer Smoothness for each Lane.

This parameter value offsets the Smoothness of the Lanes within the Part if *MS FX* is set to On for the Lane.

Settings: −127–+127

Part Motion Seq Random (Part Motion Sequencer Randomness)

Sets the Motion Sequencer Randomness for the Part.

Sets randomness of the changes in the Step value of the sequence.

Settings: 0–127

Motion Seq View Lane

Sets the Motion Seq Lane to show when the *View Mode* of the *Home* screen is set to *Motion Seq*.

MS Select (Motion Sequence Select)

Selects the Motion Sequence to playback.

Settings: 1–8

Lane ☆

On the *Lane* screen, you can set the parameters for each Motion Sequencer Lane.

Operation

[PERFORMANCE] → *Part Common* selection → [EDIT/ ⏺] → *Motion Seq* → *Lane*

Motion Seq Master Sw (Motion Sequencer Master Switch)

Sets the Motion Sequencer for the entire Performance on or off.

Settings: Off, On

Motion Seq Part Sw (Motion Sequencer Part Switch)

Sets the Motion Sequencer of the Part on or off.

Settings: Off, On

Lane Select

Selects a Lane.
Settings: 1–4

Target Sequence

Indicates the Lane and the Sequence.

Edit Sequence

Opens the *Motion Sequence* screen.

You can create a sequence of up to 16 steps.

Motion Seq Step Value

Sets the value for each step in the Motion Sequence.

You can use Control sliders 1 to 8 to change the values for Steps 1 to 8 and Steps 9 to 16, depending on the cursor position.

Settings: 0–127

LaneSw (Lane Switch)

Sets each Lane on or off.

You can use up to four Motion Sequencer lanes in one Part, or up to eight lanes in an entire Performance. When set to Off, the parameters for that lane will not be shown.

Settings: Off, On

MS FX (Lane FX Receive)

Sets the selected Lane to receive the signals from the knobs for changing the Motion Sequencer parameters such as *Swing* and *Smooth*.

Settings: Off, On

Trigger (Lane Trigger Receive)

Sets the selected Lane to receive the signals from the [MSEQ TRIGGER] button.

When set to On, the Motion Sequence will not be played back unless you press the [MSEQ TRIGGER] button.

Settings: Off, On

Sequence Select (Motion Sequence Select)

Changes the Motion Sequence selection.

Settings: 1–8

■ Sync/Speed tab

Sync (Lane Sync)

Sets the speed and the timing of the playback of the Motion Sequence set for the *Destination* in the *Control Assign* screen.

Settings: *Off*, *Tempo*, *Beat*, *Arp*, *Lane1* (when *Lanes 2–4* are selected)

> *Off*: Plays back the Lane Motion Sequencer alone.
>
> *Tempo*: Plays back the Lane Motion Sequencer at the Performance tempo.
>
> *Beat*: Plays back in sync with the beat.
>
> *Arp*: Plays back the Lane Motion Sequencer in sync with the top of the Arpeggio playback.
>
> *Lane1*: Plays back the Lane Motion Sequencer in sync with *Lane 1*.

● **When *Sync* is set to *Off***

Speed (Lane Speed)

Sets the playback speed for the Motion Sequence.

This parameter is available when Lane Motion Sequencer is set to Off.

Settings: 0–127

Delay Time (Lane Key On Delay Time Length)

Sets the delay time for starting the playback of the Motion Sequence when *Sync* is set to *Off*.

Settings: 0–127

Fade In Time (Lane Fade In Time Length)

Sets the time to reach the maximum amplitude for the Motion Sequence when *Sync* is set to *Off*.

Settings: 0–127

● **When *Sync* is set to something other than *Off***

Unit Multiply (Lane Unit Multiply)

Sets the percentage for stretching or compressing the Motion Sequencer playback time for the current Lane.

This parameter is available when Lane Motion Sequencer is set to *Off* or something other than *Lane 1*.

Settings: 50%–6400%, *Common*, *Arp*

> **200%**: The playback time is doubled, and the tempo is halved as a result.
>
> **100%**: The playback time is kept unchanged.
>
> **50%**: The time length is halved, and the tempo is doubled as a result.
>
> *Common*: The value set in the *Unit Multiply* common to all Parts is applied.
>
> *Arp*: The value set in the *Unit Multiply* of the Part Arpeggio is applied.

Lane Key On Delay (Lane Key On Delay Time Length)

Sets the delay time for starting the playback of the Motion Sequence when *Sync* is set to something other than *Off* or *Lane1*.

Settings: 0–32

Lane Fade In (Lane Fade In Time Length)

Sets the time to reach the maximum amplitude for the Motion Sequence when *Sync* is set to something other than *Off*.

Settings: 0–32

Lane Vel Limit (Lane Velocity Limit)

Sets the velocity range (lowest and highest values) for playing back the Motion Sequence of the selected Lane.

This parameter is available when Lane Motion Sequencer is set to something other than *Lane 1*.

When the *Velocity Limit* is set to a range from the highest value to the lowest value, the Motion Sequence will be played back in two velocity ranges: from the maximum to the highest value, and from the lowest value to the minimum.

Settings: 1–127

■ *Loop/Length* tab

Key On Reset (Lane Key On Reset)

Resets the Motion Sequence playback when you press any key on the keyboard.

This parameter is available when Lane Motion Sequencer is set to *Arp* or something other than *Lane 1*.

This parameter is not available when *Trigger* is set to On.

Settings: *Off*, *Each-On*, *1st-On*

> **Each-On**: Each time you play any note, the sequence will be reset and the playback starts from the beginning.
>
> **1st-On**: Playback starts from the beginning at the first note you play. If the first note is held while a second note is played, the sequence is not reset at the second or any subsequent notes.

Loop (Lane Loop)

Sets the Motion Sequence to loop (repeat) playback or one-shot playback.

This parameter is available when Lane Motion Sequencer is set to something other than *Lane 1*.

Settings: Off, On

Loop Start

Sets the step for starting playback the second time or later when repeating Motion Sequence playback.

Settings: *1–Length (Loop Length)*

Length (Motion Sequence Length)
Sets the number of steps in the Motion Sequence.
Settings: *Loop Start (Lane Loop Start) –16*

MS Grid (Motion Sequencer Grid)
Sets the length of a step in the Motion Sequence.
Settings: 60, 80, 120, 160, 240, 320, 480

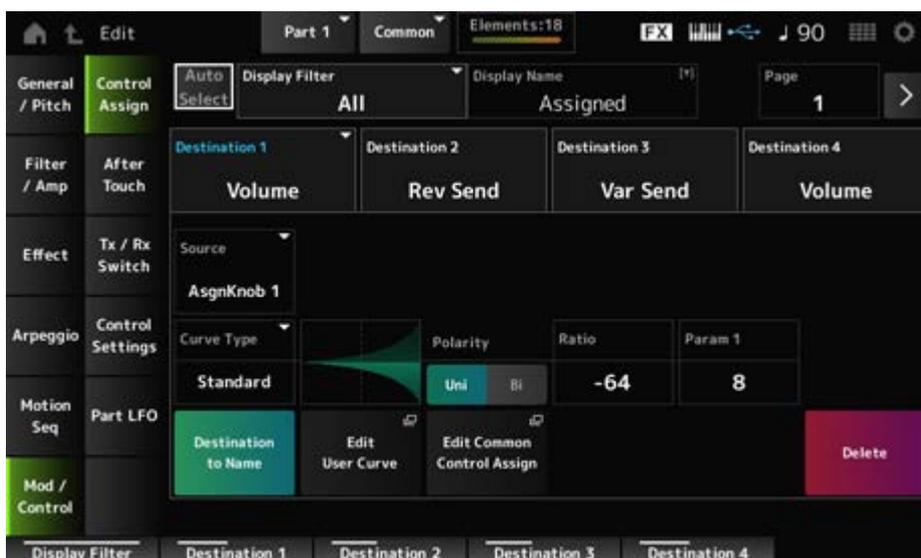## Mod/Control ⭐

Control Assign ☆

The *Control Assign* screen lets you set the Controllers for the Part.
By assigning a parameter (*Destination*) to a controller (*Source*), you can control the sound in a large variety of ways. You can use physical controllers such as the Pitch Bend wheel and knobs as well as the Motion Sequencer and Envelope Follower.
Up to 32 controllers can be assigned simultaneously to a Part.

Operation

[PERFORMANCE] → *Part Common* selection → [EDIT/ ⟳] → *Mod/Control* → *Control Assign*

When *Display Filter* is set to *Super Knob*, tapping [+] shows the message in the upper area of the display and automatically adds the *Control Assign* settings for the *Common Edit*.

Auto Select

Sets the auto select of the *Display Filter* on or off.

When set to On, moving the controller you wish to set to *Source* automatically sets the controller to the *Display Filter*.

Settings: Off, On

Display Filter

Selects the controller for showing the settings on the screen.

When you select *Super Knob*, all settings having the *Super Knob Link* set to On will be shown.

Settings: *PitchBend*, *ModWheel*, *AfterTouch*, *FootCtrl 1*, *FootCtrl 2*, *FootSwitch*, *Ribbon*, *Breath*, *AsgnKnob 1–8*, *Super Knob*, *AsgnSw 1*, *AsgnSw 2*, *MS Lane 1–4*, *EnvFollow 1–16*, *EnvFollowAD*, *EnvFollowMst*, *All*

NOTE

If the controller set to *Display Filter* is used by other Parts, the corresponding PART buttons will flash.

Edit Pitch Bend

This calls up the Pitch settings screen.

The screen shown here is the same as the one opened from [EDIT/ ⟳] → *General/Pitch* → *Pitch*.

This parameter is not available when *Source* is set to something other than *PitchBend*.

Display Name (Assignable Knob Name)

This allows you to enter a new name for Knobs 1 to 8 to show on the Sub display.

This parameter is not shown when *Source* is set to something other than *AsgnKnob 1–8*.

Edit Motion Sequencer

Opens the *Motion Sequence* screen.

You can create a sequence of up to 16 steps.

This parameter is not available when *Source* is set to something other than *MS Lane 1–4*.

Edit Envelope Follower

Opens the settings screen for the Envelope Follower.

This parameter is not available when *Source* is set to something other than *EnvFollow 1–16*, *EnvFollowAD*, or *EnvFollowMst*.

Page

Selects the next page when there are more than four Destinations. The next page does not appear when the Destinations are four or fewer.
Settings: 1–8

Destination
Sets the parameter to the Destination. Tapping the [+] icon allows you to add a new Destination.

Source
Sets the controller for controlling the parameters set to the *Destination*.
Settings: *PitchBend*, *ModWheel*, *Ch. AT*, *FootCtrl 1*, *FootCtrl 2*, *FootSwitch*, *Ribbon*, *Breath*, *AsgnKnob 1–8*, *AsgnSw 1*, *AsgnSw 2*, *MS Lane 1–4*, *EnvFollow 1–16*, *EnvFollowAD*, *EnvFollowMst*

Element Sw (Element Switch) 1–128
You can set the controller setting for each Element on or off.
This parameter is shown only when the selected *Destination* is related to Elements.
When the *ExElemSw* on the *General/Pitch - ElementSettings* screen is set to On, you can change the switch number by changing the *Display Element*.
The actual range of numbers you can use in the switch depends on the value set in *ElementCount* on the *General/Pitch - ElementSettings* screen.
Settings: Off, On

Display Element
Shown only when *ExElemSw* on the *General/Pitch - ElementSettings* screen is set to On.
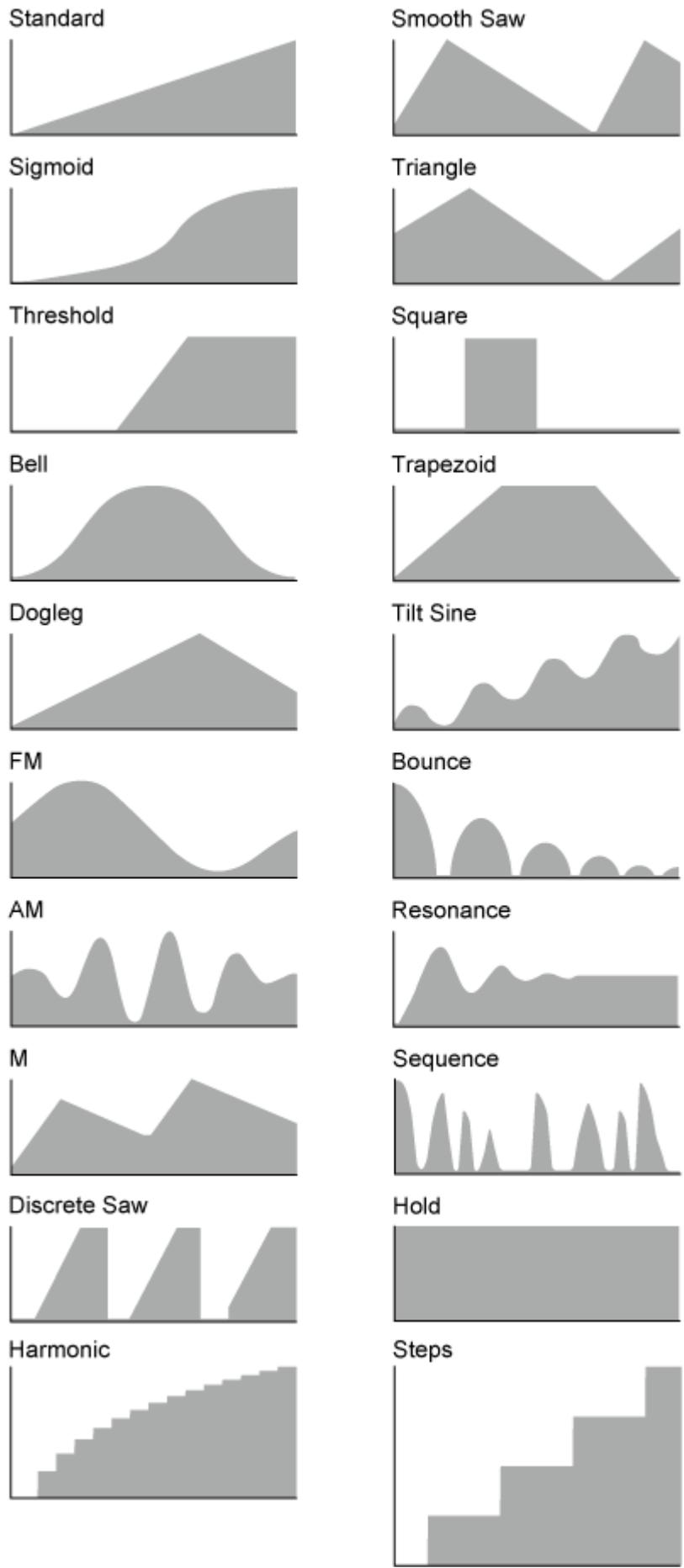You can select a different group of eight elements corresponding to *ElementSw*.
Settings: 1–8, 9–16, ..., 121–128 (up to the *Element Count* setting)

Curve Type
Sets the change curve of the parameter set to *Destination*.
The horizontal axis represents the controller value set in *Source* while the vertical axis represents the parameter value set in *Destination*.
Settings: *Standard*, *Sigmoid*, *Threshold*, *Bell*, *Dogleg*, *FM*, *AM*, *M*, *Discrete Saw*, *Smooth Saw*, *Triangle*, *Square*, *Trapezoid*, *Tilt Sine*, *Bounce*, *Resonance*, *Sequence*, *Hold*, *Harmonic*, *Steps*, *User 1–32* (when a User bank is selected), *Library 1–16* (when a Library file is loaded)

Standard	Smooth Saw
Sigmoid	Triangle
Threshold	Square
Bell	Trapezoid
Dogleg	Tilt Sine
FM	Bounce
AM	Resonance
M	Sequence
Discrete Saw	Hold
Harmonic	Steps

Param 1 (Curve Parameter 1)
Param 2 (Curve Parameter 2)

Adjusts the curve shape.

This setting may not be available depending on the curve type.

Destination to Name

Copies the parameters set to *Destination* to *Display Name*.

This parameter is not shown when *Source* is set to something other than *AsgnKnob 1–8*.

Edit User Curve

Opens the setting screen for User Curve.

You can create either an 8-point linear curve or an 8-step curve.

Edit Common Control Assign

Opens the *Control Assign* screen for *Common Edit*.

Delete

Deletes the selected *Destination*.

After Touch ☆

Operation

[PERFORMANCE] → *Part Common* selection → [EDIT/ ⌒] → *Mod/Control* → *After Touch*

Keyboard AT Mode (After Touch Mode)

Selects the mode for sending Aftertouch messages from the keyboard to the internal tone generator.

This parameter is set to *Channel* on the MONTAGE M6 and MONTAGE M7, regardless of the setting here.

Settings: *Poly* (polyphonic aftertouch), *Channel* (channel aftertouch)

Destination

Sets the parameter for the Destination. Tapping the [+] icon lets you add a new Destination.

Source

Cannot be changed from this screen.

This parameter is fixed to *Poly AT*.

Element Sw (Element Switch) 1–128

You can set the controller setting for each Element on or off.

This parameter is shown only when the selected *Destination* is related to Elements.

When the *ExElemSw* on the *General/Pitch - ElementSettings* screen is set to On, you can change the switch number by changing the *Display Element*.

The actual range of numbers you can use in the switch depends on the value set in the *ElementCount* on the *General/Pitch - ElementSettings* screen.

Settings: Off, On

Display Element

Shown only when *ExElemSw* on the *General/Pitch - ElementSettings* screen is set to On.

You can select a different group of eight elements corresponding to *ElementSw*.
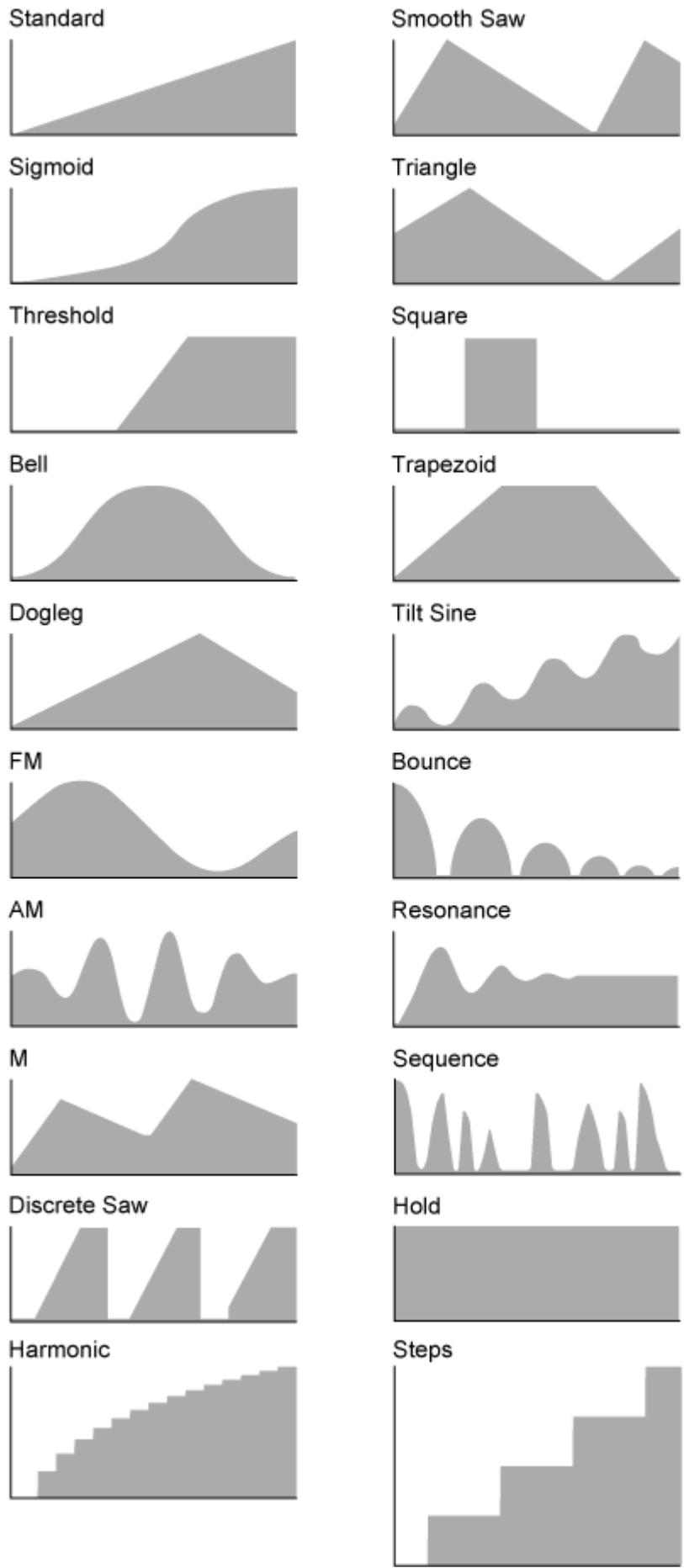
Settings: 1–8, 9–16, ..., 121–128 (up to the *Element Count* setting)

Curve Type

Sets the change curve of the parameter set to *Destination*.

The horizontal axis represents the controller value set in *Source* while the vertical axis represents the parameter value set in *Destination*.

Settings: *Standard*, *Sigmoid*, *Threshold*, *Bell*, *Dogleg*, *FM*, *AM*, *M*, *Discrete Saw*, *Smooth Saw*, *Triangle*, *Square*, *Trapezoid*, *Tilt Sine*, *Bounce*, *Resonance*, *Sequence*, *Hold*, *Harmonic*, *Steps*, *User 1–32* (when a User bank is selected), *Library 1–8* (when a Library file is loaded)

Standard

Smooth Saw

Sigmoid

Triangle

Threshold

Square

Bell

Trapezoid

Dogleg

Tilt Sine

FM

Bounce

AM

Resonance

M

Sequence

Discrete Saw

Hold

Harmonic

Steps

Polarity (Curve Polarity)

Sets the polarity of the curve set in *Curve Type*.

Settings: *Uni, Bi*

> *Uni*: Parameter changes occur only within the positive range or the negative range according to the curve shape.
>
> *Bi*: Parameter changes occur both in positive and negative ranges according to the curve shape.

Ratio (Curve Ratio)

Sets the ratio of the parameter values.

Settings: −64–+63

Edit User Curve

Opens the setting screen for User Curve.

You can create an 8-point linear curve or an 8-step curve.

Delete

Deletes the current *Destination*.

Tx/Rx Switch   ☆

On the *Tx/Rx Switch* screen, you can set the switch for transmitting or receiving MIDI messages (such as Control Change) on or off.

NOTE

When CC (Control Change) is set to Off, the parameters related to Control Change messages cannot be set.

> **Operation**
>
> [PERFORMANCE] → *Part Common* selection → [EDIT/ ↻] → *Mod/Control* → *Tx/Rx Switch*

Transmit Sw (Transmit Switch)

Shows the transmit switch.

This parameter is available only when *Part Mode* is set to *External* or when *Keyboard Sw* is set to Off.

Receive Sw (Receive Switch)

This parameter is available only when *Part Mode* is set to *Internal*.

Keyboard Sw (Keyboard Control Switch)

Keyboard Control is used for selecting Parts to be played on the keyboard.

When Keyboard Control is set to On, you can simultaneously play Parts having Keyboard Control set to On, if the Part is set to *Common* or Keyboard Control for the Part is set to On.

When Keyboard Control is set to Off, you can play the Part on the keyboard only when that Part is selected.

Settings: Off, On

Tx/Rx Channel (Transmit/Receive Channel)

Sets the channel for transmitting and receiving MIDI messages when *Part Mode* is set to *Internal*.

Settings: *Ch1–Ch16*, *Off*

MIDI I/O Ch. (MIDI In-Out Channel)

Shows the channel for transmitting and receiving MIDI messages.

Transmit Ch.

Sets the channel for receiving MIDI messages when *Part Mode* is set to *External*.

Zone Settings

This calls up the Zone settings screen.

The screen shown here is the same as the one opened from [EDIT/ ⟲] → *General/Pitch* → *Zone Settings*.

PC (Program Change)

Sets the transmission and reception of Program Change messages on or off.

Settings: Off, On

BankSelect (Bank Select)

Sets the transmission and reception of Bank Select MSB and LSB messages on or off.

This parameter is not available when *CC (Control Change)* is set to Off.

Settings: Off, On

Pitch Bend

Sets the transmission and reception of MIDI Pitch Bend messages on or off.

Settings: Off, On

CAT (Channel After Touch)

Sets the transmission and reception of Channel Aftertouch on or off.

Settings: Off, On

PAT (Polyphonic After Touch)

Sets the transmission and reception of Polyphonic Aftertouch on or off.

Settings: Off, On

CC (Control Change)

Sets the transmission and reception of Control Change messages on or off.

Settings: Off, On

Vol/Exp (Volume/Expression)

Sets the transmission and reception of the Volume setting on or off.

This parameter is not available when *CC (Control Change)* is set to Off.

Settings: Off, On

Pan

Sets the transmission and reception of the Pan setting on or off.

This parameter is not available when *CC (Control Change)* is set to Off.

Settings: Off, On

MW (Modulation Wheel)

Sets the transmission and reception of MIDI Modulation wheel messages on or off.

This parameter is not available when *CC (Control Change)* is set to Off.

Settings: Off, On

Sustain

Sets the transmission and reception of MIDI Sustain and Sostenuto messages on or off.

This parameter is not available when *CC (Control Change)* is set to Off.

Settings: Off, On

FC1 (Foot Controller 1)
FC2 (Foot Controller 2)

Sets the transmission and reception of MIDI messages for the separately sold foot controllers on or off.

This parameter is not available when *CC (Control Change)* is set to Off.

Settings: Off, On

FS (Foot Switch)

Sets the transmission and reception of MIDI messages for the separately sold foot switch on or off.

This parameter is not available when *CC (Control Change)* is set to Off.

Settings: Off, On

A. Sw 1 (Assignable Function Switch 1)
A. Sw 2 (Assignable Function Switch 2)

Sets the transmission and reception of MIDI messages for the [ASSIGN 1] and [ASSIGN 2] buttons on or off.

This parameter is not available when *CC (Control Change)* is set to Off.

Settings: Off, On

MS Trigger (Motion Sequencer Trigger)

Sets the transmission and reception of MIDI messages for the [MSEQ TRIGGER] button on or off.

This parameter is not available when *CC (Control Change)* is set to Off.

Settings: Off, On

RB (Ribbon Controller)

Sets the transmission and reception of MIDI Ribbon Controller messages on or off.

This parameter is not available when *CC (Control Change)* is set to Off.

Settings: Off, On

BC (Breath Controller)

Sets the transmission and reception of MIDI Breath Controller messages on or off.

This parameter is not available when *CC (Control Change)* is set to Off.

Settings: Off, On

Porta Sw (Portamento Switch)

Sets the transmission and reception of MIDI messages for the [PORTAMENTO] button on or off.

This parameter is not available when *CC (Control Change)* is set to Off.

Settings: Off, On

Porta Time (Portamento Time)

Sets the transmission and reception of MIDI messages for the PORTAMENTO [TIME] knob on or off.

This parameter is not available when *CC (Control Change)* is set to Off.

Settings: Off, On

A. Knob 1–8 (Assignable Knob)

Sets the transmission and reception of MIDI messages for Knobs 1 to 8 on or off.

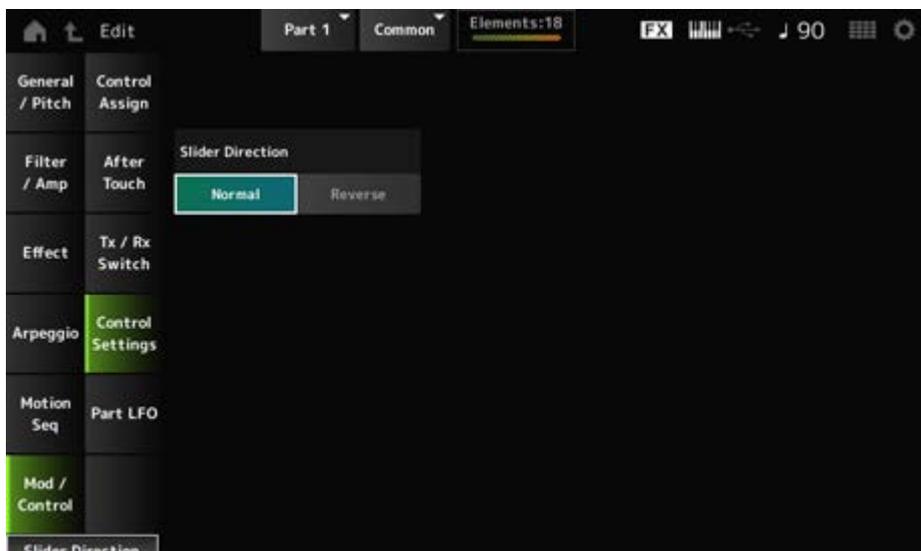This parameter is not available when *CC (Control Change)* is set to Off.

Settings: Off, On

Control Settings ☆

Operation

[PERFORMANCE] → *Part Common* selection → [EDIT/ ⟳] → *Mod/Control* → *Control Settings*

Slider Direction

Sets the direction of the Control sliders 1 to 8 for this Part when the slider mode is set to ELEM/OP/OSC.

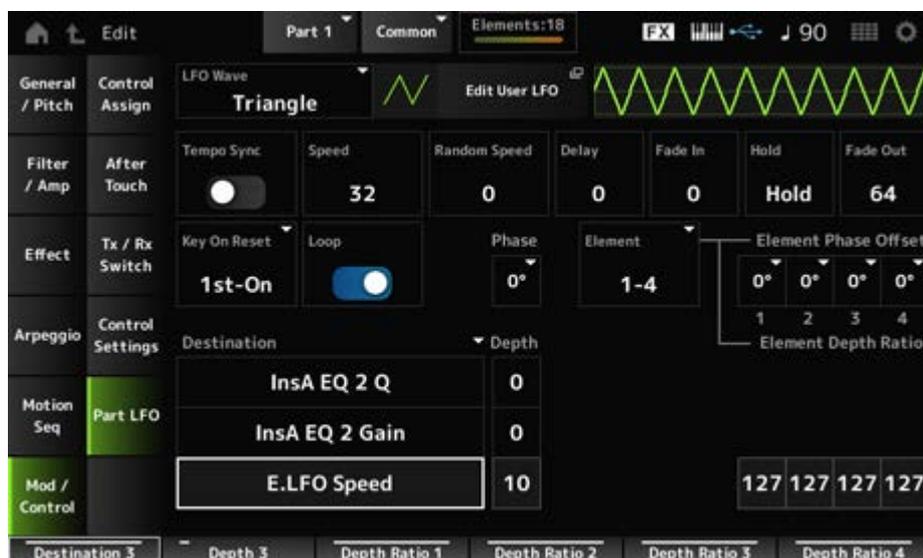**Settings**: *Normal* (up from the bottom), *Reverse* (down from the top)

Part LFO ☆

The *Part LFO* screen lets you make settings for the Part LFO.

Operation

[PERFORMANCE] → *Part Common* selection → [EDIT/ ⌕] → *Mod/Control* → *Part LFO*

LFO Wave

Selects the LFO Wave and sets the type of cyclical changes to the LFOs.

Settings: *Triangle*, *Triangle+*, *Saw Up*, *Saw Down*, *Squ1/4*, *Squ1/3*, *Square*, *Squ2/3*, *Squ3/4*, *Trapezoid*, *S/H1*, *S/H2*, *User*

Edit User LFO

Opens the setting screen for the User LFO.

You can create an LFO waveform of up to 16 steps.

Tempo Sync (LFO Tempo Sync)

Sets the speed of the *LFO Wave* changes to synchronize to Arpeggio or Song playback.

Settings: Off (not synchronized), On (synchronized)

■ When *Tempo Sync* is set to Off

Speed (LFO Speed)

Sets the speed of *LFO Wave* changes.

This parameter is not available when *Tempo Sync* is set to On.

Settings: 0–63

Random Speed (Part LFO Random Speed Depth)

Changes the *LFO Speed* randomly.

This parameter is not available when *Tempo Sync* is set to On.

Settings: 0–127

■ **When *Tempo Sync* is set to On**

Tempo Speed (LFO Tempo Speed)

This parameter is available when *Tempo Sync* is set to On. You can sync the speed of changes in *LFO Wave* by using musical note values.

Settings: 1/16 (sixteenth notes), 1/8 Tri. (eighth-note triplets), 1/16 Dot. (dotted sixteenth notes), 1/8 (eighth notes), 1/4 Tri. (quarter-note triplets), 1/8 Dot. (dotted eighth notes), 1/4 (quarter notes), 1/2 Tri. (half-note triplets), 1/4 Dot. (dotted quarter notes), 1/2 (half notes), Whole Tri. (whole-note triplets), 1/2 Dot. (dotted half notes), 1/4 × 4 (quarter-note quadruplets; four quarter notes to the beat), 1/4 × 5 quarter-note quintuplets; five quarter notes to the beat), 1/4 × 6 (quarter-note sextuplets; six quarter notes to the beat), 1/4 × 7 (quarter-note septuplets; seven quarter notes to the beat), 1/4 × 8 (quarter-note octuplets; eight quarter notes to the beat), 1/4 × 16 (sixteen quarter-notes to the beat), 1/4 × 32 (32 quarter notes to the beat), 1/4 × 64 (64 quarter notes to the beat)

Delay (LFO Delay Time)

Sets the delay time between the moment you press a key on the keyboard and the moment the LFO comes into effect.

The larger the value, the longer the delay time, or the time that elapses before the LFO comes into effect.
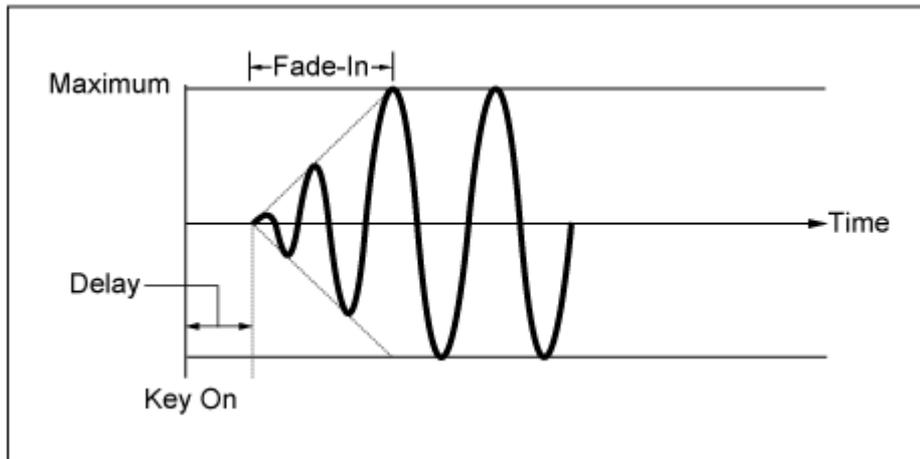
Settings: 0–127

Fade In (LFO Fade In Time)

Sets the amount of time for the LFO effect to fade in after the delay time set in *Delay (LFO Delay Time)* has elapsed.
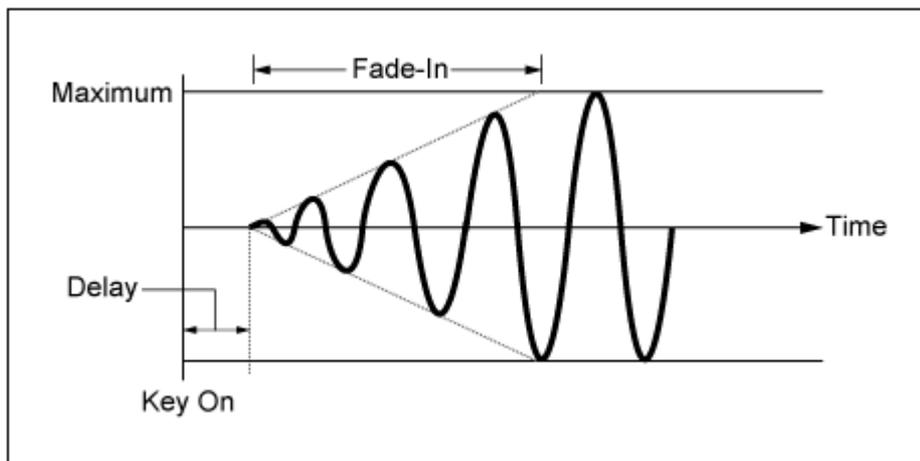
Settings: 0–127

The larger the value, the longer it takes for the LFO effect to reach the maximum.

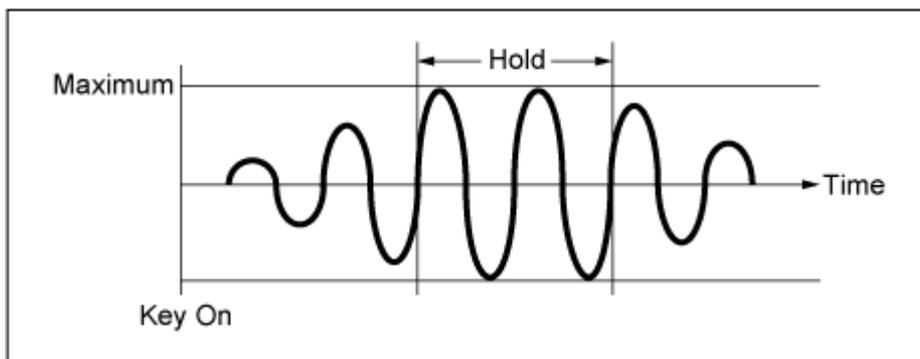**0**: LFO changes to the maximum value without any fade-in.

Low value: Fast fade-in

High value: Slow fade-in

Hold (LFO Hold Time)

Sets the time for maintaining the LFO effect after the maximum level had been reached.

Settings: 0–126, *Hold*

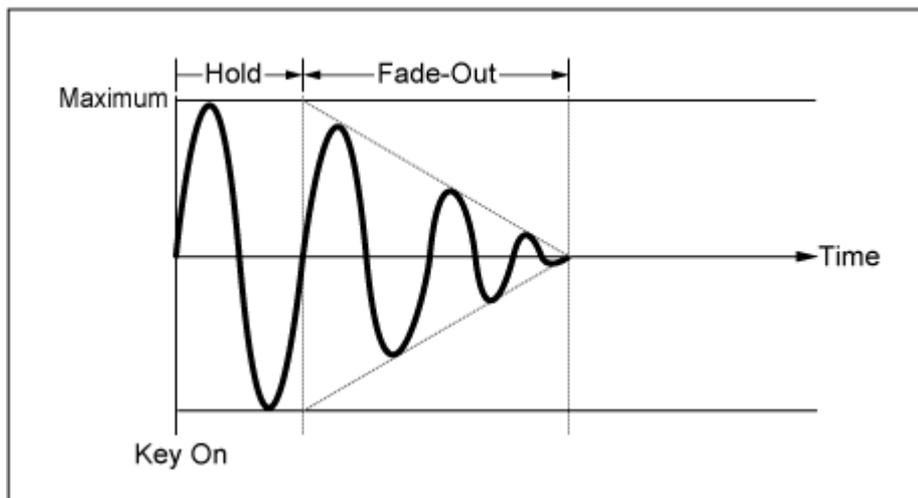> *Hold*: Does not fade out

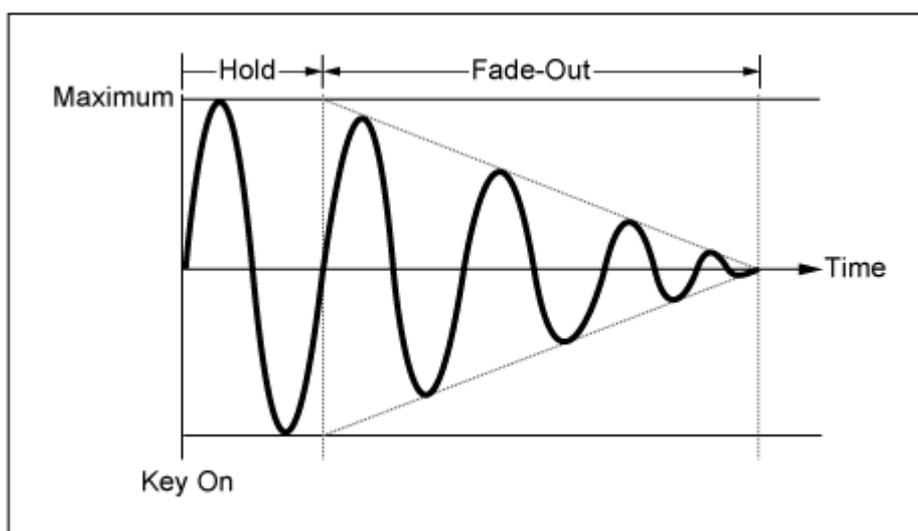### Fade Out (LFO Fade Out time)

Sets the amount of time for the LFO effect to fade out after the hold time set in *Hold (LFO Hold Time)* has elapsed.

The larger the value, the longer it takes for the LFO effect to fade out.

Settings: 0–127
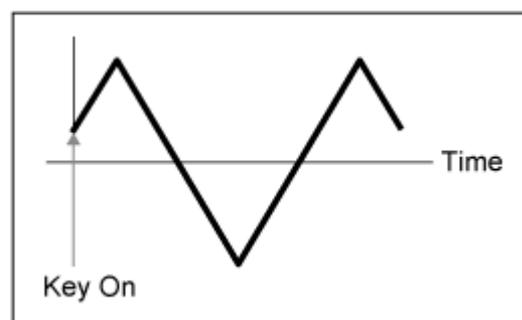

Low value: Fast fade-out

High value: Slow fade-out

Key On Reset (LFO Key On Reset)

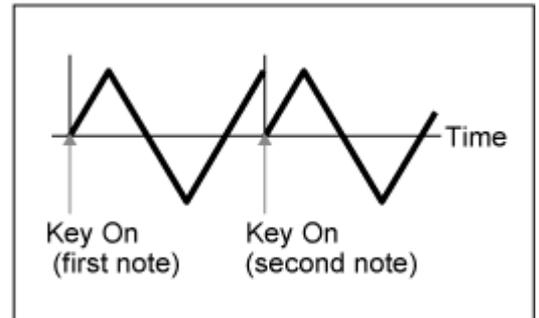Resets the oscillation of the LFO when a key is pressed.
Settings: *Off*, *Each-on*, *1st-on*

Off	Does not reset the oscillation of the LFO. Pressing a key starts the LFO wave at whatever phase the LFO happens to be at that moment.

Each-on	Resets the oscillation of the LFO every time a key is pressed and starts the waveform at the phase specified by the *Phase* parameter.	

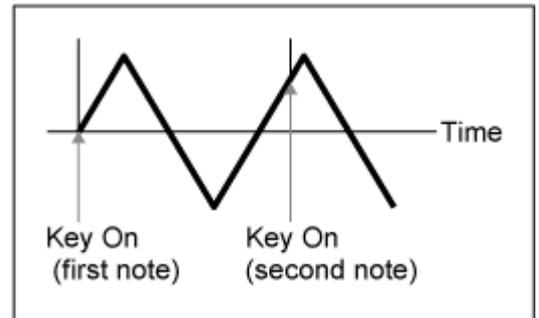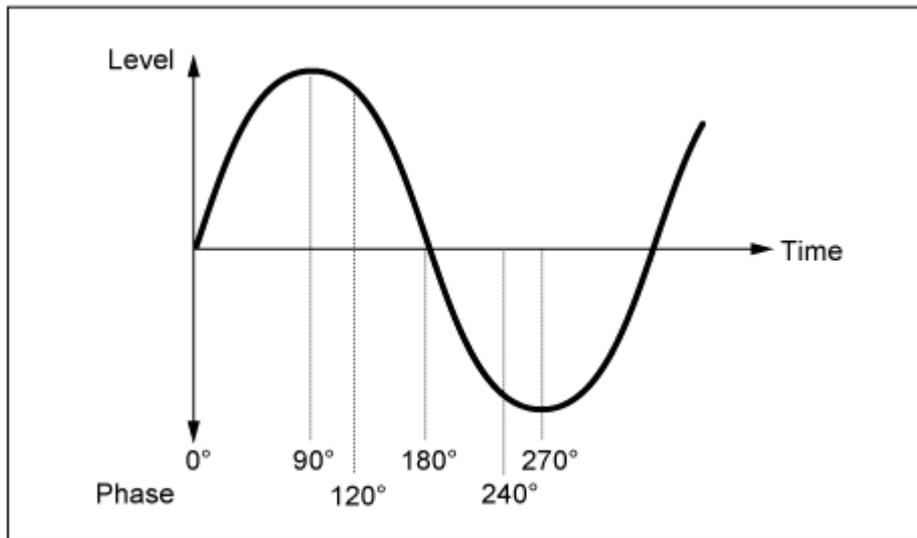| *1st-on*	Resets the oscillation of the LFO every time a key is pressed and starts the waveform at the phase specified by the *Phase* parameter. When a second note is played while the first note is held, playback will not be reset.	

Loop (LFO Loop Switch)
Sets the *LFO Wave* to loop (repeat) playback or one-shot playback.
Settings: Off, On

Phase (LFO Phase)
You can set the initial phase for the time *LFO Wave* is reset.
Settings: 0°, 90°, 120°, 180°, 240°, 270°

Element Phase Offset (LFO Element Phrase Offset)
Sets the offset value to *Phase* for each Element.
Settings: 0°, 90°, 120°, 180°, 240°, 270°

Display Element
Shown only when *ExElemSw* on the *General/Pitch - ElementSettings* screen is set to On.
You can select a different number for the group of four elements corresponding to the
ElementPhaseOffset and *ElementDepthRatio*.
Settings: 1–8, 9–16, ..., 121–128 (up to the *Element Count* setting)

Element Phase Offset (LFO Element Phase Offset)
This is specified as an offset value to the *Phase (LFO Phase)* for each Element.
You can set the initial phase for each Element when *LFO Wave* is reset.
When the *ExElemSw* on the *General/Pitch - ElementSettings* screen is set to On, you can
change the element number by changing the *Display Element*.
The actual range of numbers you can use for *Element Phase Offset* depends on the value set in
ElementCount on the *General/Pitch - ElementSettings* screen.

Destination (LFO Destination)
Sets the function to be controlled by the *LFO Wave*.
Settings: *Insertion Effect A Parameter 1–24*, *Insertion Effect B Parameter 1–24*, *Level*, *Pitch*,
       Cutoff, *Resonance*, *Pan*, *E.LFO Speed*

Depth (LFO Depth)
Sets the depth of the *LFO Wave* control for each *Destination*.
Settings: 0–127

Element Depth Ratio (LFO Element Depth Ratio)

Adjusts the Depth for each Element.

Set this parameter to *Off* to turn off the LFO.

This parameter is shown only when the selected *Destination* is related to Elements.

When the *ExElemSw* on the *General/Pitch - ElementSettings* screen is set to On, you can change the element number set to *Depth* by changing the *Display Element*.

The actual range of numbers you can use for the Depth depends on the value set in *ElementCount* on the *General/Pitch - ElementSettings* screen.

Settings: *Off*, 0–127

User LFO Edit

Opens the setting screen for User LFO.

You can create an LFO waveform of up to 16 steps.

Cycle
Sets the number of LFO steps.

Settings: *2 steps*, *3 steps*, *4 steps*, *6 steps*, *8 steps*, *12 steps*, *16 steps*

Slope
Sets the changes to the slope of the waveform currently shown on the screen.

Settings: *Off* (no slope), *Up*, *Down*, *Up&Down*

User LFO Step Value
Sets the value for each step.

Settings: −64–+63

Template
Selects the template for the LFO waveform.

Element Edit ☆

Contents

Osc/Tune (Oscillator/Tune) ★

On the *Osc/Tune* screen, you can set the Oscillator for the Element.
Here, you can select the Waveform used as the basis for the sound and set the key range and velocity range of the Element.

Operation

[PERFORMANCE] → [EDIT/ ⏻] → *Part* selection → *Element* selection → *Osc/Tune*

Element Switch

Sets the selected Element on or off.

Settings: Off, On

Waveform Select

Bank (Waveform Bank)
Number (Waveform Number)
Category (Waveform Category)
Sub Category (Waveform Sub Category)
Name (Waveform Name)

Shows the name of the Waveform selected for the Element.

Bank indicates the type of Waveform (Preset, User, and Library) assigned to the Element.

Settings: Refer to the *Data List*.

XA Control

XA (Expanded Articulation) is a function for creating realistic sounds like those on acoustic instruments as well as creating new synth sounds.

You can create such sounds by setting the *XA Control* to specify the way the Element is played.

Example of *XA Control* setting

- Creating smooth legato
  Make the Element alternate between one element with *XA Control* set to *Normal* and another element with the *XA Control* set to *Legato*.

- Producing sounds when releasing fingers from the keys.
  Create an Element with *XA Control* set to *Key Off*.

- Creating randomness for the same note
  Make the Element with *XA Control* set to Cycle and another one with *XA Control* set to

Random.

● Producing sounds unique to acoustic instruments

Some examples of sound unique to acoustic instruments include harmonics and palm mute on the guitar, flutter-tonguing on the flute, and growl on the saxophone.

Set up an Element with *XA Control* set to *A.Sw1 On* or *A.Sw2 On*, or *A.Sw Off*, and control from the [ASSIGN 1] and [ASSIGN 2] buttons on the top panel.

NOTE

The [ASSIGN 1] and [ASSIGN 2] buttons can be set to On or Off by sending the Control Change number set in the *Control → Control Number* of the Common Audio Edit screen from an external device.

Settings: *Normal*, *Legato*, *Key Off*, *Cycle*, *Random*, *A.Sw1 On*, *A.Sw2 On*, *A.Sw Off*

　　　　　Normal: Played as a normal Element.

　　　　　Legato: Played when *Mono/Poly* is set to *Mono*. When you play in Legato, the Element set to *Legato* will be played instead of the Element set to *Normal*.

　　　　　Key Off: Played when a finger is lifted off from the key.

　　　　　Cycle: Played when there are a series of Elements set in *Cycle*.

　　　　　Random: Plays the Elements randomly when multiple Elements are set to *Random*.

　　　　　A.Sw Off: Played when both [ASSIGN 1] and [ASSIGN 2] buttons are set to Off.

　　　　　A.Sw1 On: Played when the [ASSIGN 1] button is set to On.

　　　　　A.Sw2 On: Played when the [ASSIGN 2] button is set to On.

Elem Group (Element Group Number)

This parameter is for sorting Elements having the same *XA Control* setting into groups.

When *XA Control* of all Elements is set to *Normal*, this setting is not effective.

Settings: 1–8

Elem Connect (Element Connection Switch)

Sets the output of the Element to Insertion Effect A or Insertion Effect B.

Setting it to *Thru* bypasses the Insertion Effects.

Settings: *Thru*, *InsA*, *InsB*

New Waveform

Loads the audio file saved on the USB flash drive as a Waveform.

Edit Waveform appears when a Waveform is loaded.

Edit Waveform

Opens the *Waveform Edit* screen.

Coarse (Course Tune)

Shifts the pitch of the Element in semitones.

Settings: −48–+48

Fine (Fine Tune)

Finely adjusts the pitch of the Element.

Settings: −64–63

Pitch/Vel (Pitch Velocity Sensitivity)

Sets how the pitch change responds to Velocity or the strength of the keystroke.

Settings: −64–63

> **Positive value**: Faster Velocity values produce a higher pitch.
> **Negative value**: Faster Velocity values produce a lower pitch.
> **0**: No change in pitch.

Fine/Key (Fine Tune Key Follow Sensitivity)

Sets how the pitch change in the Fine Tuning responds to the position of the key.

Settings: −64–63

> **Positive values**: The pitch goes down when you press a key in the bass section, and the pitch goes up when you press a key in the treble section.
> **Negative values**: The pitch goes up when you press a key in the bass section, and the pitch goes down when you press a key in the treble section.

Random (Random Pitch Depth)

Changes the pitch of the Element randomly each time a key is pressed.

Set the parameter to a larger value to create more pitch changes. When the value is set to 0, the pitch is kept unchanged.
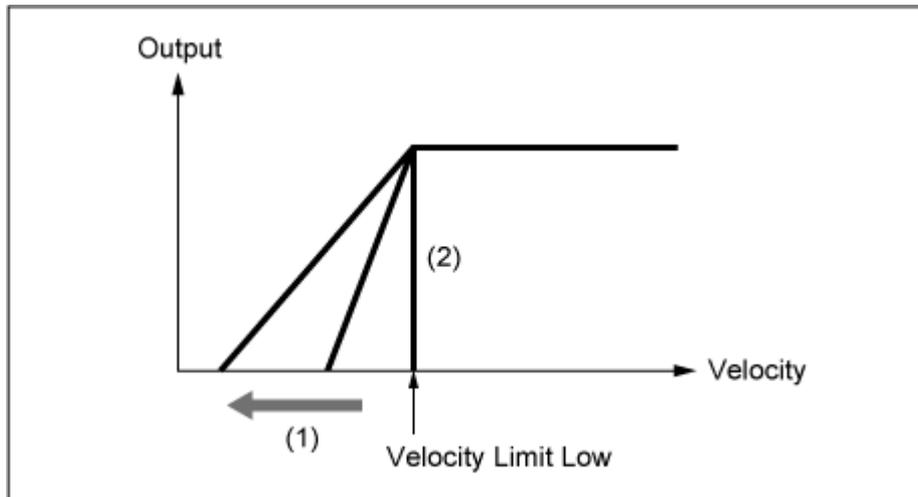
Settings: 0–127

Vel Cross Fade (Velocity Cross Fade)

Sets the output level of the Oscillator to become lower as keystroke Velocity values become further from the value set in *Velocity Limit*.

When set to 0, no sound is produced if the velocity is outside the *Velocity Limit*. The larger the value, the more gradually the way the output level of the Oscillator decreases.

Settings: 0–127

When *Level/Vel* is set to +0

(1)   When a larger value is used, the slope will be shifted to the left.

(2)   When *Vel Cross Fade* is set to 0, no sound is produced outside the *Velocity Limit*.

Tempo Sync (Key On Delay Tempo Sync Switch)

Sets the timing of the *Key On Delay* to synchronize with the tempo.

Settings: Off, On

Length (Key On Delay Time Length)

Sets the delay time from when the key is pressed to when sound is produced.

This parameter is not available when *Tempo Sync* is set to On.

Settings: 0–127

Length (Key On Delay Note Length)

This parameter is available when *Tempo Sync* is set to On. You can set the timing for *Key On Delay* by using musical notes.

Settings: 1/16 (sixteenth notes), 1/8 Tri. (eighth-note triplets), 1/16 Dot. (dotted sixteenth notes), 1/8 (eighth notes), 1/4 Tri. (quarter-note triplets), 1/8 Dot. (dotted eighth notes), 1/4 (quarter notes), 1/2 Tri. (half-note triplets), 1/4 Dot. (dotted quarter notes), 1/2 (half notes), Whole Tri. (whole-note triplets), 1/2 Dot. (dotted half notes), 1/4 × 4 (quarter-note quadruplets; four quarter notes to the beat), 1/4 × 5 (quarter-note quintuplets; five quarter notes to the beat), 1/4 × 6 (quarter-note sextuplets; six quarter notes to the beat), 1/4 × 7 (quarter-note septuplets; seven quarter notes to the beat), 1/4 × 8 (quarter-note octuplets; eight quarter notes to the beat)

Velocity Limit

Sets the velocity range (lowest and highest values) for playing the Element wave.

When this is set so that the higher value is first and the lower value is second (for example, 93 to 34), the Element sounds only for velocities of 1 to 34 and 93 to 127.

Settings: 1–127

Note Limit

Sets the note range (lowest and highest notes) for the Element.

When the first note specified is higher than the second (for example, C5 to C4), the Element is played in the ranges C−2 to C4 and C5 to G8.

Settings: C−2–G8

Center Key (Pitch Key Follow Sensitivity Center Key)

Sets the reference note for *Pitch/Key (Pitch Key Follow Sensitivity)*.

The key set with the note number here is played at the normal pitch regardless of the *Pitch/Key* setting.

Settings: C−2–G8

Pitch/Key (Pitch Key Follow Sensitivity)

Sets the difference in pitch between two adjacent keys. The reference point is the key specified in *Center Key*.

This parameter is useful for playing unpitched sounds, such as special effects, or for playing a percussion instrument as a Normal Part, or for any other cases where the pitch difference does not have to be in semitones.
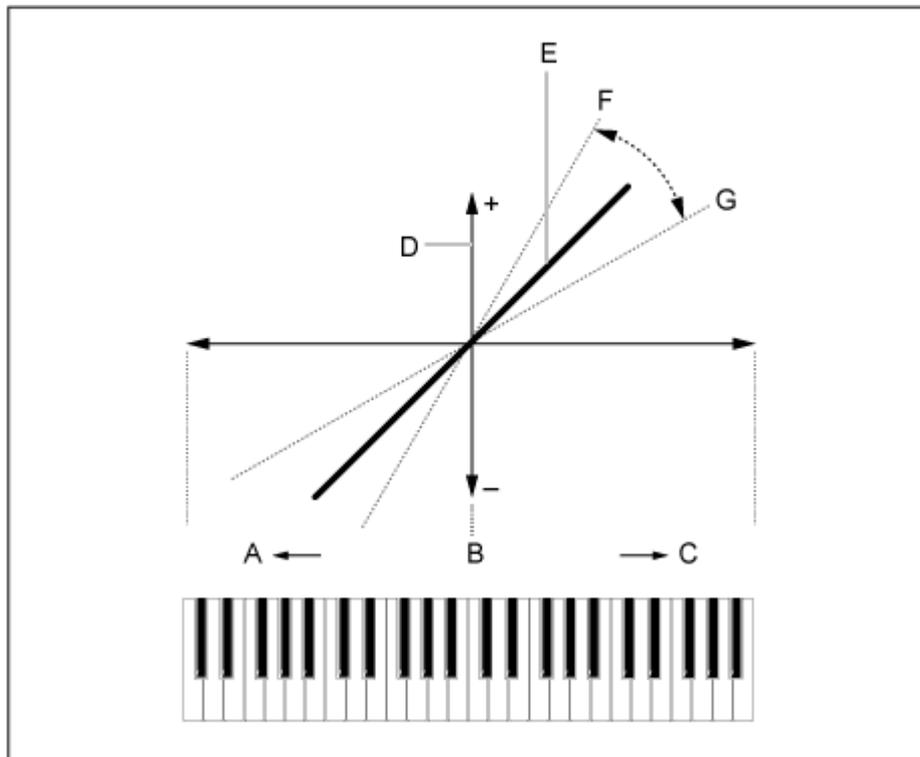
Settings: −200%–+0%–+200%

+100% (normal setting): Pitch difference between the two keys next to each other is set to a semitone.

0%: No pitch difference between the two keys, and all keys are played at the pitch set *in Center Key*.

Negative value: Sets an opposite pitch response such that lower notes result in higher pitch, and higher notes result in lower pitch.

Pitch/Key and Center Key

311

A: Lower notes

B: *Center Key*

C: Higher notes

D: Difference in pitch

E: When *Pitch/Key (Pitch Key Follow Sensitivity)* is set to +100%.

F: Larger

G: Smaller

Waveform Edit ★

Opens the *Waveform Edit* screen.

Here, you can set the various Key Banks that make up a Waveform.

- **Key Banks**

  A Key Bank is digital data comprised of a short audio segment, such as vocals or other sounds, loaded into the instrument. It has the same characteristics as a *wav* file; however, to avoid confusion a different name is used to distinguish it from the Waveform.
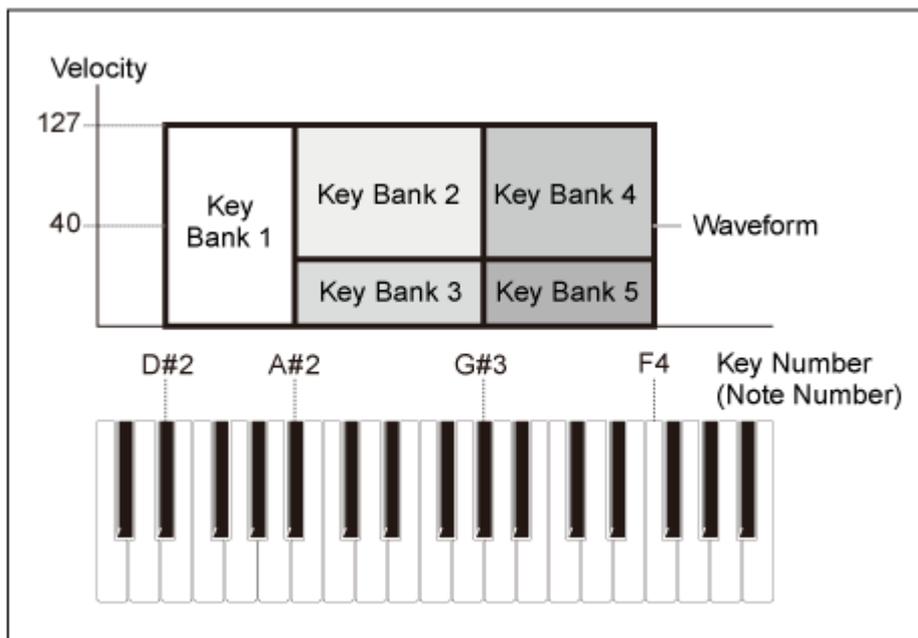
- **Key Banks and Waveforms**

  Key Banks are always saved as a part of a Waveform.

  One Waveform is capable of holding multiple Key Banks. You can save even a few dozen Key Banks, for example, in one Waveform. If you are saving multiple Key Banks in one waveform, you can assign a key range and velocity range for each Key Bank by specifying the *Note Limit*

and *Velocity Limit*. By setting up multiple Key Banks, you can play various Key Bank sounds depending on the section of the keyboard you use and the strength of your keystroke.

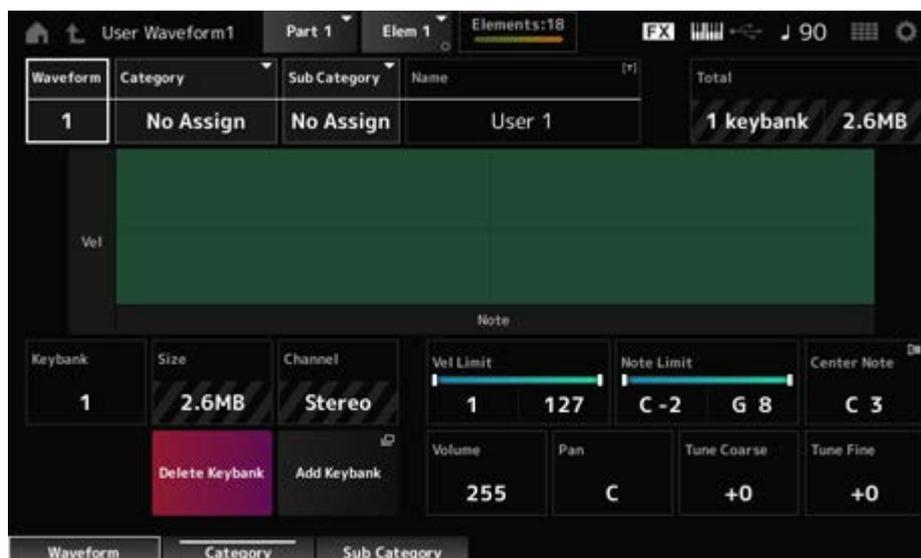Example of Key Bank and Waveform setup

- **Parts and waveforms**

  A Waveform must be loaded into a Part before it can be played.
  You can assign a Waveform to an AWM2 Part from Element Edit in Part Edit (AWM2), or to a Drum Part from Key Edit in Drum Part Edit (AWM2).

Waveform

Shows the name of the selected Waveform.

Category (Waveform Category)
Sub Category (Waveform Sub Category)

Sets the Main category and Sub category of the selected *Waveform*.
Settings: Refer to the *Data List*.

Name (Waveform Name)

You can save the Waveform you are editing under a new name, using up to 20 alphanumeric characters. Tapping on the name calls up the onscreen keyboard, allowing you to enter a name.

Total

Shows the number of Key Banks in the waveform and the total size of the data capacity.

Keybank (Keybank Number)

Shows the Key Bank number.

Size (Keybank Size)

Shows the total size of data capacity.

Channel (Keybank Channel)

Shows whether the Key Bank is stereo or mono.

Velocity Limit

Sets the velocity range (lowest and highest values) for playing the Key Bank.
Settings: 1–127

Note Limit

Sets the note range (lowest and highest notes) for playing the Key Bank.
Settings: 1–127

Center Note

Sets the key (pitch) of the original waveform data.
Settings: C−2–G8

Volume

Sets the volume of the Key Bank.
Settings: 0–255

Pan

Sets the Pan position (in the stereo field) of the Key Bank.
Settings: L63 (left)–C (center)–R63 (right)

Tune Coarse (Coarse Tune)

Shifts the pitch of the Key Bank in semitones.

Settings: −64–+63

Tune Fine (Fine Tune)

For fine pitch adjustment of the Key Bank.

Settings: −64–+63

Delete Keybank

Deletes the Key Bank.

Add Keybank

Adds a Key Bank to the waveform.

Pitch EG ★

The *Pitch EG* screen lets you set the Envelope Generator for the Oscillator.
By setting the PEG (Pitch Envelope Generator) time and level (the amount of pitch change), you can set how the sound changes from the moment you press a key on the keyboard to when the sound decays to silence.

Operation

[PERFORMANCE] → [EDIT/ ⟳] → *Part* selection → *Element* selection → *Pitch EG*

Hold Time (PEG Hold Time)

Sets the length of time it takes for keeping the pitch at *Hold Level* starting from the moment you press a key on the keyboard.

Settings: 0–127

Attack Time (PEG Attack Time)

Sets the length of time it takes for the pitch to change from the end of the *Hold Time* to the *Attack Level*.

Settings: 0–127

Decay1 Time (PEG Decay 1 Time)

Sets the length of time it takes for the pitch to change from the *Attack Level* to the *Decay 1 Level*.

Settings: 0–127

Decay2 Time (PEG Decay 2 Time)

Sets the length of time it takes for the pitch to change from the *Decay 1 Level* to the *Decay 2 Level*.

Settings: 0–127

Release Time (PEG Release Time)

Sets the length of time it takes for the pitch to change from the moment you release the key until it reaches the *Release Level*.

Settings: 0–127

Hold Level (PEG Hold Level)

Sets the pitch level for the moment you press the key.

Settings: −128–+127

Attack Level (PEG Attack Level)

Sets the pitch to change from the *Hold Level* or the moment you press a key.

Settings: −128–+127

Decay1 Level (PEG Decay 1 Level)

Sets the next pitch value to change from the *Attack Level*.

Settings: −128–+127

Decay2 Level (PEG Decay 2 Level)

Sets the next pitch value to change from the *Decay 1 Level*.

Settings: −128–+127

Release Level (PEG Release Level)

Sets the final pitch to reach after you have released the key.

Settings: −128–+127

Center Note (PEG Time Key Follow Sensitivity Center Note)

Sets the reference note (or a key to press) for *Time/Key*.

With the note (key) set here, the resulting sound of the pitch change set in PEG is played.

Settings: C−2–G8

Time/Key (PEG Time Key Follow Sensitivity)

Sets how the pitch change speed of the PEG responds to the position of the key.

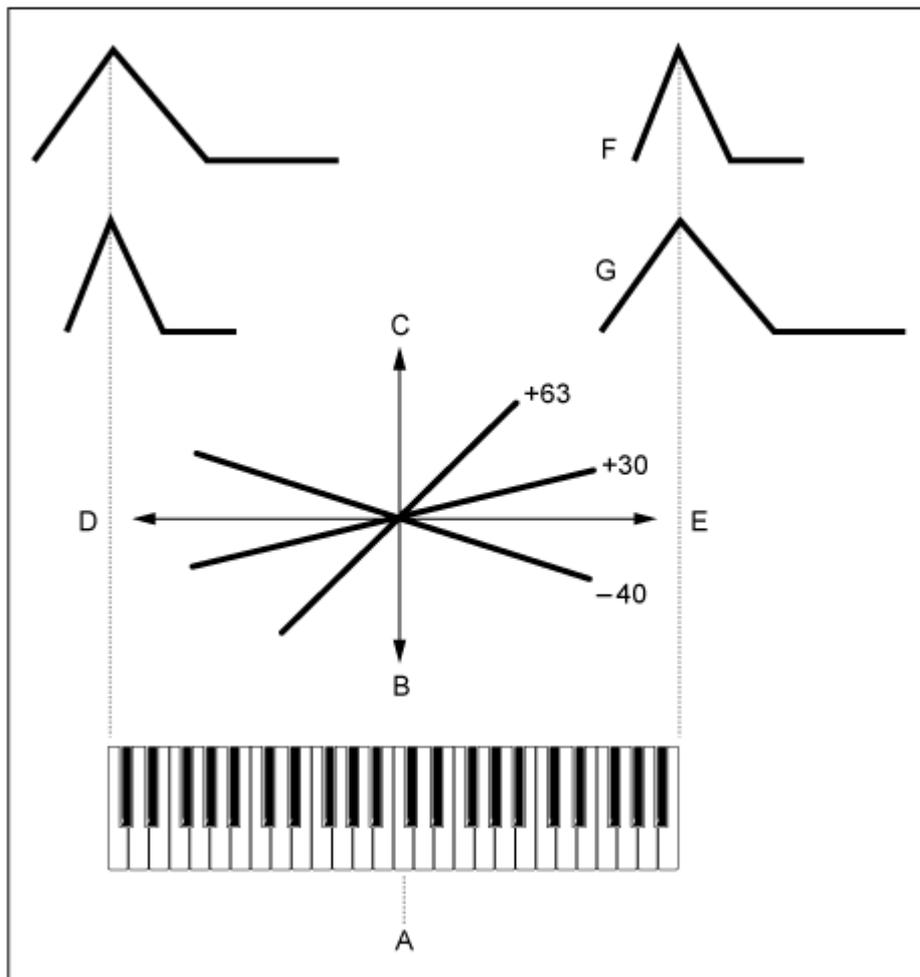The change speed in PEG is used for the specified key in *Center Key*.

Settings: −64–+63

> **Positive value**: The higher the key pressed, the faster the pitch changes of the PEG.
>
> **Negative value**: The higher the key pressed, the slower the pitch changes of the PEG.
>
> **0**: No PEG changes regardless of the key position.

Time/Key and *Center Note*

A: *Center Note*

B: Slow

C: Fast

D: Low key

E: High key

F: Positive value

G: Negative value

Time/Vel (PEG Time Velocity Sensitivity)
Segment (PEG Time Velocity Sensitivity Segment)

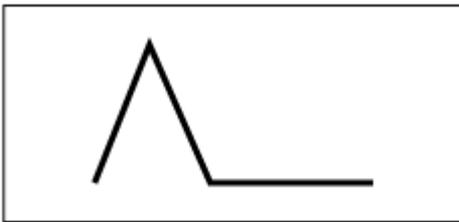Sets how the pitch change speed of the PEG responds to Velocity or the strength of the keystroke.

First, set the time value in *Segment* and then set the velocity sensitivity value in *Time/Vel*.
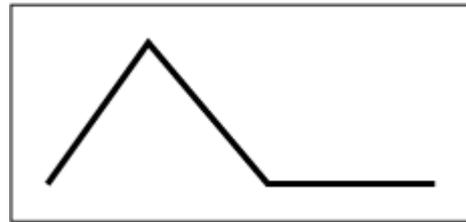
Settings: *Time/Vel*: −64–+63

Positive value: The faster the velocity, the faster the changes in the PEG.

Negative value: The faster the velocity, the slower the changes in the PEG; slow velocities result in faster PEG changes.

0: No PEG changes regardless of the velocity setting.

Fast velocity (pitch change is fast)   Slow velocity (pitch change is slow)

Settings: *Segment*: *Attack*, *Atk+Dcy*, *Decay*, *Atk+Rls*, *All*

Attack: *Time/Vel* value affects the *Attack Time*

Atk+Dcy: The *Time/Vel* value affects the *Attack Time* and *Decay 1 Time*.

Decay: The *Time/Vel* value affects the *Decay Time*.

Atk+Rls: The *Time/Vel* value affects the *Attack Time* and *Release Time*.

All: The *Time/Vel* value affects the time-related settings in PEG.

PEG Depth

Sets the depth range of pitch changes controlled by the PEG.

Settings: −64–+63

0: No pitch change.

The further the depth is from a value of 0, the wider the pitch change becomes.

Negative value: Pitch change is inverted.

Depth/Vel (PEG Depth Velocity Sensitivity)
Curve (PEG Depth Velocity Sensitivity Curve)

Sets how the depth range of the pitch change controlled by the PEG responds to Velocity or the strength of the keystroke.
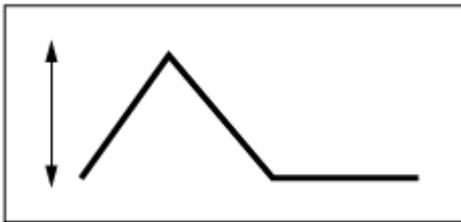
Also, with the *Curve* setting, you can set how the *PEG Depth* responds to the velocity. The vertical axis represents velocity while the horizontal axis represents the depth range of the pitch changes.

Settings: *Depth/Vel*: −64–+63

> **Positive value**: Fast velocity widens the depth range of the PEG, while slow velocity narrows the depth range.
>
> **Negative value**: Fast velocity narrows the depth range of the PEG, while slow velocity widens the depth range.
>
> **0**: No PEG changes regardless of the velocity setting.
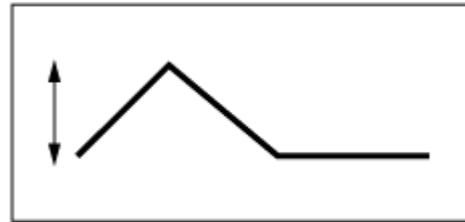
Fast velocity	Slow velocity
(the depth range in pitch change is wider)	(the depth range in pitch change is narrower)

Settings: *Curve*: 0–4

Filter ★

Type ☆

On the *Type* screen, you can select a filter type for the Element.
The available parameters differ depending on the filter type you have selected here.

Operation

[PERFORMANCE] → [EDIT/ ⟲] → *Part* selection → *Element* selection → *Filter* → Type

Filter Type

Sets the filter for the Element.

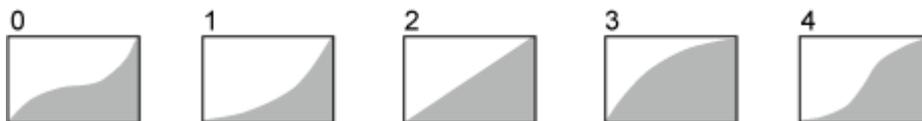The filters available on this instrument are grouped into four types: LPF, HPF, BPF, and BEF.
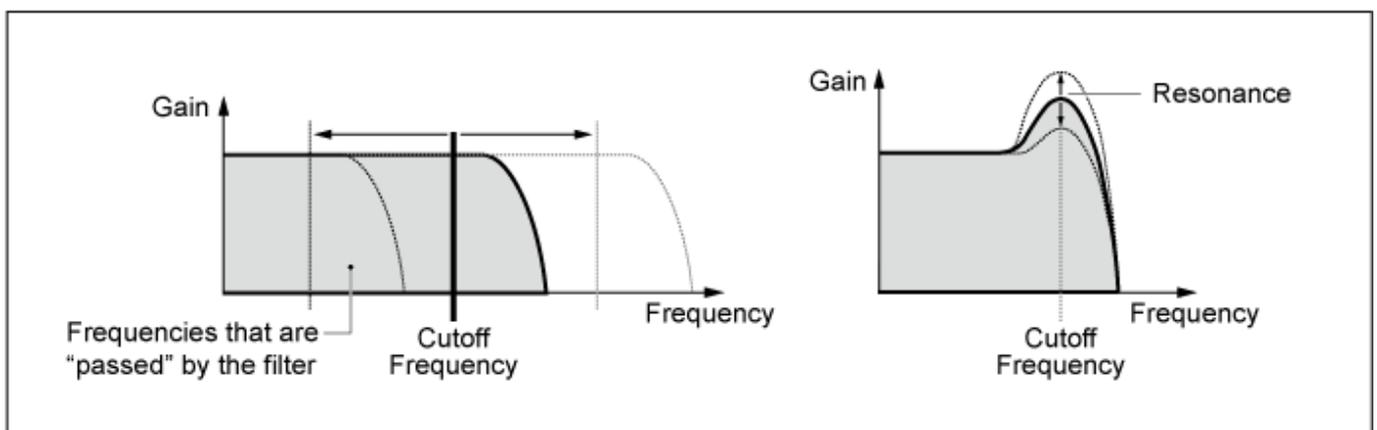
Settings: *LPF24D*, *LPF24A*, *LPF18*, *LPF18s*, *LPF12+HPF12*, *LPF6+HPF12*,
         HPF24D, *HPF12*, *BPF12D*, *BPFw*, *BPF6*, *BEF12*, *BEF6*, *DualLPF*, *DualHPF*,
         DualBPF, *DualBEF*, *LPF12+BPF6*, *Thru*

- **LPF**
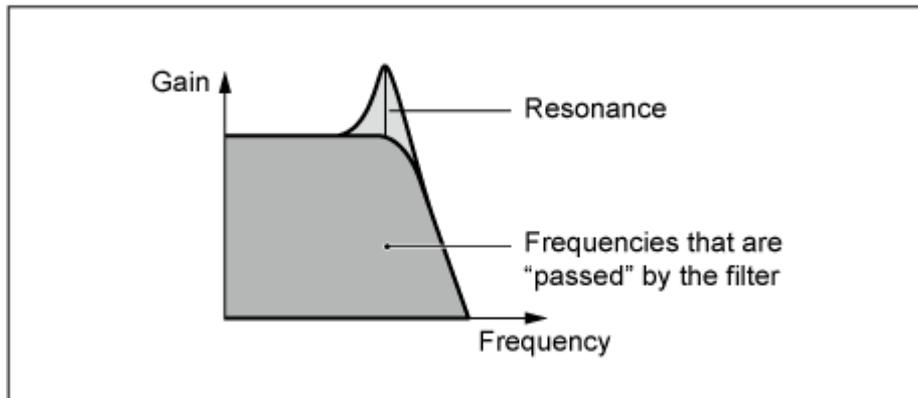
   This Filter Type cuts the signals above the value set in *Cutoff Frequency*.
   The sound becomes brighter as you raise the Cutoff Frequency, because more high-frequency signals are passed by the filter; conversely, it becomes darker as you lower the Cutoff Frequency, because more high-frequency signals are cut or blocked by the filter. You can produce a distinctive "peaky" sound by raising the *Resonance* or boosting the signal level near the Cutoff Frequency.
   This Filter Type is very popular and useful for producing classic synthesizer sounds.

LPF24D: A dynamic −24 dB/oct Low-Pass Filter with a characteristic digital sound. Compared to the LPF24A type, this filter can produce a more pronounced Resonance effect.

LPF24A: A digital dynamic Low-Pass Filter with characteristics similar to a 4-pole analog synthesizer filter.
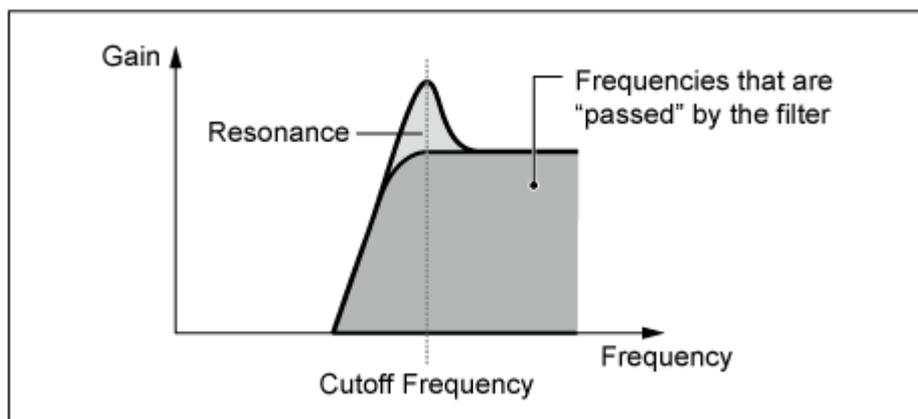
LPF18: 3-pole −18 dB/oct Low-Pass Filter.

LPF18s: 3-pole −18 dB/oct Low-Pass Filter. This filter has a smoother cutoff slope than the LPF18 type.

● **HPF**

This Filter Type only passes signals above the Cutoff Frequency.
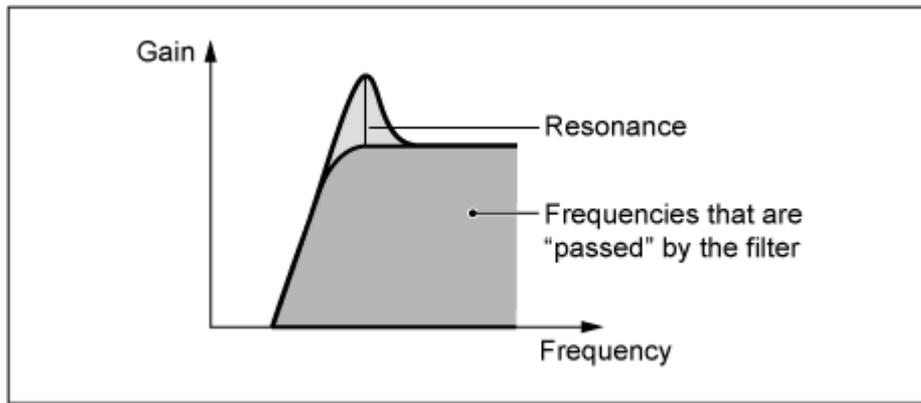
You can produce a distinctive "peaky" sound by raising the *Resonance* or boosting the signal level near the Cutoff Frequency.

LPF12+HPF12: A combination of a −12 dB/oct Low-Pass Filter and a −12 dB/oct High-Pass Filter connected in serial. When this Filter Type is selected, *HPF Cutoff* and *HPF Key Follow Sensitivity* can be set.

LPF6+HPF12: A combination of a −6 dB/oct Low-Pass Filter and a −12 dB/oct High-Pass Filter connected in serial. When this Filter Type is selected, *HPF Cutoff* and *HPF Key Follow Sensitivity* can be set.
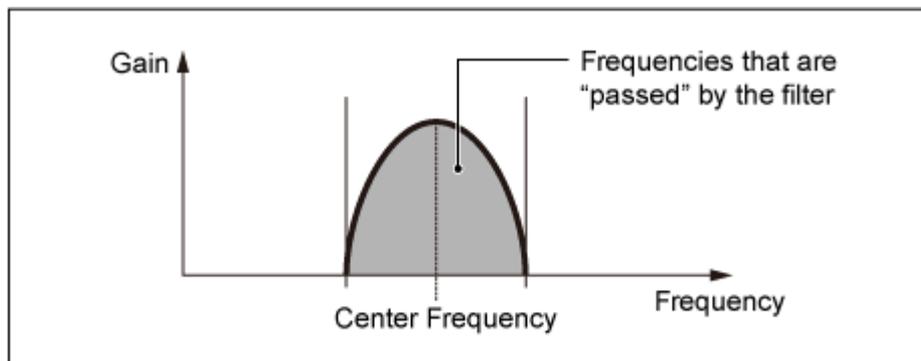
HPF24D: A dynamic −24 dB/oct High-Pass Filter with a characteristic digital sound. This filter can produce a pronounced Resonance effect.
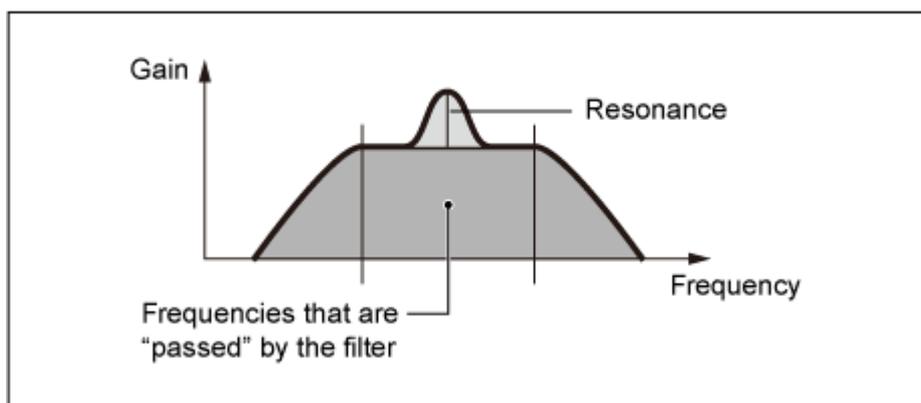
HPF12: −12 dB/oct dynamic High-Pass Filter.

● **BPF**
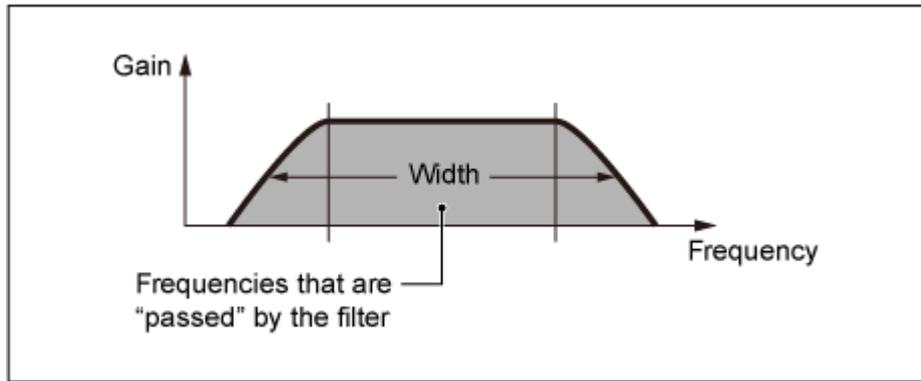
This Filter Type that only passes signals for a specific frequency band (Cutoff Frequency) and cuts all other signals.
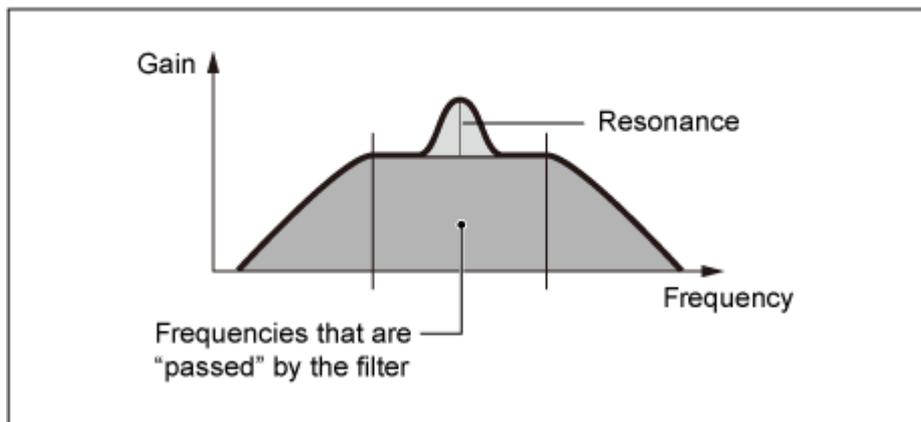
BPF12D: The combination of a −12 dB/oct HPF and LPF with a characteristic digital sound.

BPFw: A −12 dB/oct BPF that combines HPF and LPF filters to allow wider bandwidth settings.
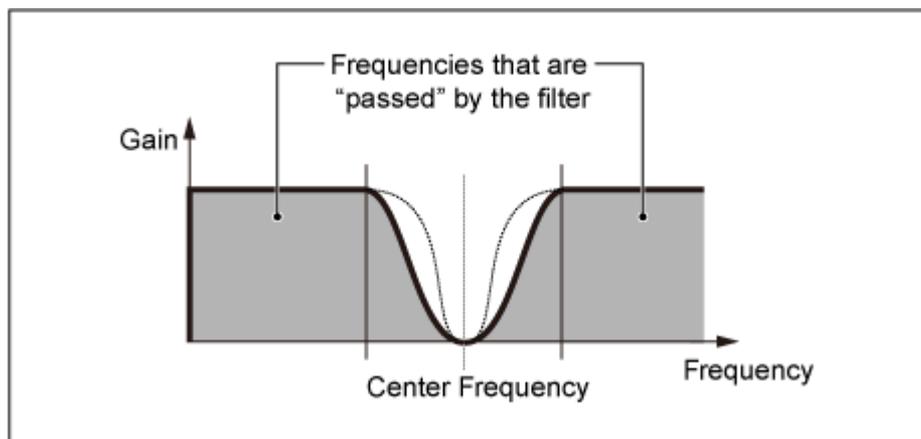
BPF6: The combination of a −6 dB/oct HPF and LPF.

- **BEF**

  The Band-Eliminate Filter has an opposite effect on the sound compared to the Band-Pass Filter.
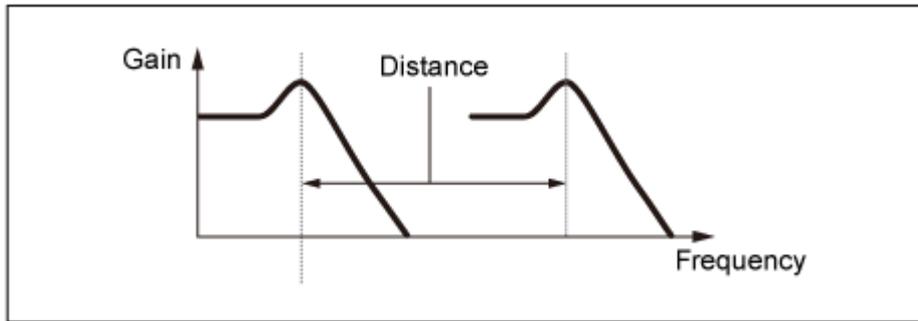
  When this Filter Type is selected, you can set the Cutoff Frequency around which the audio signal is muted or eliminated.

BEF12: −12 dB/oct Band-Eliminate Filter.
BEF6: −6 dB/oct Band-Eliminate Filter.
DualLPF: Two −12 dB/oct Low-Pass Filters connected in parallel. You can edit the distance between the two Cutoff Frequencies. The result of the filter is shown on the screen.

Lower Cutoff Frequency is set directly on the display
(and Higher Cutoff Frequency is automatically set)

DualHPF: Two −12 dB/oct High-Pass Filters connected in parallel.
DualBPF: Two −6 dB/oct Band-Pass Filters connected in parallel.
DualBEF: Two −6 dB/oct Band-Eliminate Filters connected in serial.
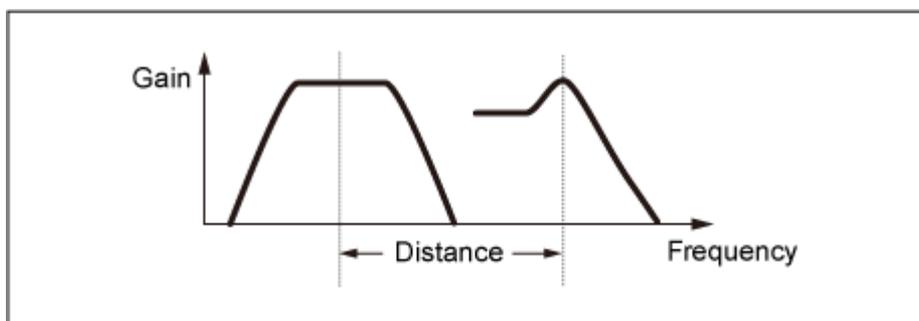
Lower Cutoff Frequency is set directly on the display
(and Higher Cutoff Frequency is automatically set)

LPF12+BPF6: A combination of a −12 dB/oct Low-Pass Filter and a −6 dB/oct Band-Pass Filter connected in parallel. You can edit the distance between the two Cutoff Frequencies.

Lower Cutoff Frequency is set directly on the display
(and Higher Cutoff Frequency is automatically set)

Cutoff (Filter Cutoff Frequency)

Sets the Cutoff Frequency.

The frequency set here is used by the filter set in *Type*.

Settings: 0–1023

Cutoff/Vel (Filter Cutoff Velocity Sensitivity)

Sets how the Cutoff Frequency responds to Velocity or the strength of the keystroke.

Settings: −64–+63

> **Positive values**: The faster the Velocity, the higher the Cutoff Frequency value becomes.
>
> **Negative values**: The slower the Velocity, the higher the Cutoff Frequency value becomes.
>
> **0**: No changes for the Cutoff Frequency by Velocity.

Resonance (Filter Resonance)
Width (Filter Width)

The parameter shown here varies depending on the *Filter Type* setting. *Resonance* is shown for LPF, HPF, BPF (excluding BPFw), or BEF, and *Width* is shown for BPFw.

For *Resonance*, this parameter indicates the strength of resonance. This can be used in combination with the Cutoff parameter to add further character to the sound.

For the BPFw, this parameter is used for adjusting the width of the frequencies passed by the filter.

This parameter may not be available depending on the Filter Type.
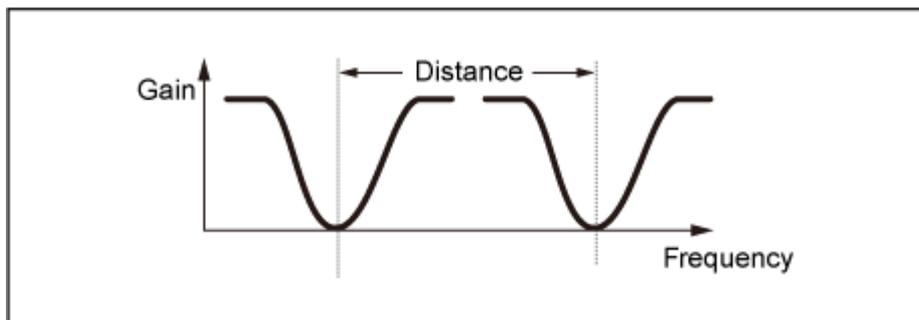
Settings: 0–127

Res/Vel (Filter Resonance Velocity Sensitivity)

Sets how the resonance level responds to Velocity or the strength of the keystroke.

This parameter may not be available depending on the Filter Type.

Settings: −64–+63

> **Positive value**: The higher the Velocity, the greater the *Resonance* becomes.
>
> **Negative value**: The lower the Velocity, the greater the *Resonance* becomes.
>
> **0**: *Resonance* value does not change.

Cutoff/Key (Filter Cutoff Key Follow Sensitivity)

Sets how the Cutoff Frequency level of the filter responds to key position.

The reference point is the Cutoff Frequency for the key set in *Center Key*.

Settings: −200%–+200%

> **Positive values**: The lower the key played, the lower the Cutoff Frequency becomes; the higher the key played, the higher the Cutoff Frequency becomes.

Negative values: The lower the key played, the higher the Cutoff Frequency becomes; the higher the key played, the lower the Cutoff Frequency becomes.

Distance

Sets the distance between the Cutoff Frequencies for the Dual Filter types and the LPF12+BPF6 filter.

This parameter may not be available depending on the Filter Type.

Settings: −128–+127

HPF Cutoff (HPF Cutoff Frequency)

Sets the center frequency for the functions that control the filter cutoff and how fast the FEG changes according to the key follow setting of HPF.

Increasing the value results in a higher Cutoff Frequency, and the low frequency signals are cut or blocked to make the sound brighter. Decreasing the value results in a higher Cutoff Frequency, and the low frequency signals are passed to make the sound deeper.

This parameter is not available when the Filter Type is set to LPF12+HPF12 or LPF6+HPF12.

Settings: 0–1023

HPF Cutoff/Key (HPF Cutoff Key Follow Sensitivity)

Sets the level of the Cutoff Frequency of the high-pass filter according to the position of the key.

This parameter is not available when the *Filter Type* is set to LPF12+HPF12 or LPF6+HPF12.

Settings: −200%–+200%

> **Positive values**: The lower the key played, the lower the Cutoff Frequency becomes; the higher the key played, the higher the Cutoff Frequency becomes.
> **Negative values**: The lower the key played, the higher the Cutoff Frequency becomes; the higher the key played, the lower the Cutoff Frequency becomes.

Gain (Filter Gain)

Sets the Gain (signals sent to the Filter unit).

Lowering the value decreases the volume of the Element.

Settings: 0–255

Filter EG ☆

On the *Filter EG* screen, you can set the Filter Envelope Generator (FEG) for the Element. The FEG lets you set the degree (or level) of changes to the Cutoff Frequency and how those changes evolve over time, starting from the moment you press a key on the keyboard to the moment the sound decays.

Operation

Hold Time (FEG Hold Time)

Sets the length of time it takes for maintaining the Cutoff Frequency at *Hold Level* starting from the moment you press a key on the keyboard.

Settings: 0–127

Attack Time (FEG Attack Time)

Sets the length of time it takes for the Cutoff Frequency to change from the end of *Hold Time* to the *Attack Level*.

Settings: 0–127

Decay1 Time (FEG Decay 1 Time)

Sets the length of time it takes for the Cutoff Frequency to change from the *Attack Level* to the *Decay 1 Level*.

Settings: 0–127

Decay2 Time (FEG Decay 2 Time)

Sets the length of time it takes for the Cutoff Frequency to change from the *Decay 1 Level* to the *Decay 2 Level*.

Settings: 0–127

Release Time (FEG Release Time)

Sets the length of time it takes for the Cutoff Frequency to change from the moment you release your finger from the key until it reaches the *Release Level*.

Settings: 0–127

Hold Level (FEG Hold Level)

Sets the Cutoff Frequency at the moment you press the key.

Settings: −128–+127

Attack Level (FEG Attack Level)

Sets the Cutoff Frequency value to change after you press the key.

Settings: −128–+127

Decay1 Level (FEG Decay 1 Level)

Sets the next Cutoff Frequency value to change from the *Attack Level*.

Settings: −128–+127

Decay2 Level (FEG Decay 2 Level)

Sets the Cutoff Frequency that is maintained while the key is held down.

Settings: −128–+127

Release Level (FEG Release Level)

Sets the next Cutoff Frequency value after you release your finger from the key.

Settings: −128–+127

Center Key (FEG Time Key Follow Sensitivity Center Key)

Sets the reference note (or a key to press) for *Time/Key*.

With the note (key) set here, the change speed of the cutoff frequency set in Filter EG is used as is.

Time/Key (FEG Time Key Follow Sensitivity)

Sets how the speed of the frequency change in FEG responds to the position of the key.

The change speed in FEG is used for the specified key in *Center Key*.
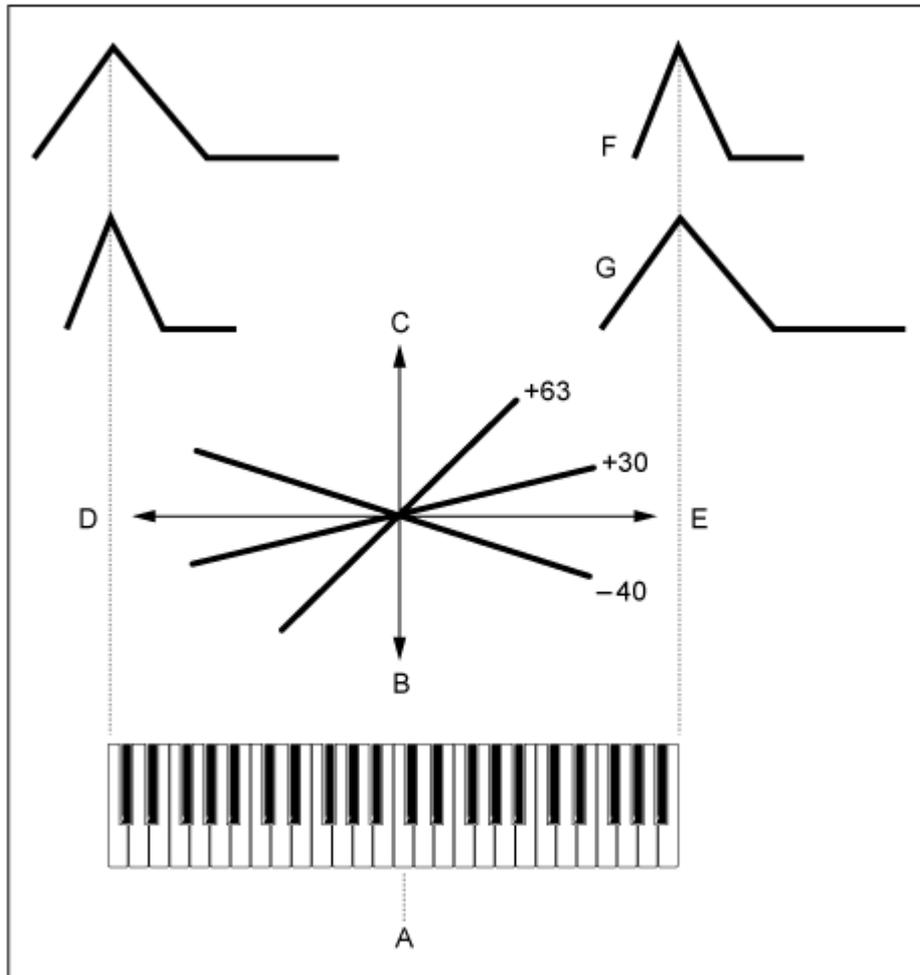
Settings: −64–+63

> **Positive values**: The lower the key played, the slower the FEG change becomes; the higher the key played, the faster the FEG change becomes.
> **Negative values**: The lower the key played, the faster the FEG change becomes; the higher the key played, the slower the FEG change becomes.
> **0**: No changes to the FEG regardless of the key position.

Time/Key and *Center Key*

A: *Center Key*
B: Slow
C: Fast
D: Low key
E: High key
F: Positive value
G: Negative value

Settings: C−2–G8

Time/Vel (FEG Time Velocity Sensitivity)
Segment (FEG Time Velocity Sensitivity Segment)
Sets how the Cutoff Frequency responds to Velocity or the strength of the keystroke.
First, set the time value in Segment, and then the velocity sensitivity value in *Time/Vel*.
Settings: *Time/Vel*: −64–+63
>   **Positive value**: The faster the velocity, the faster the FEG changes.
>   **Negative value**: The faster the velocity, the slower the FEG changes, while slow
>   velocity makes the FEG change faster.
>   **0**: No changes regardless of the velocity setting.
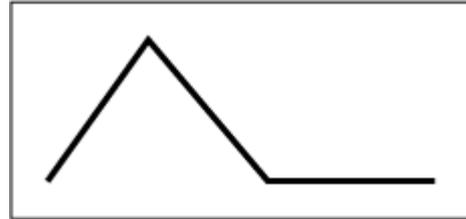
Fast velocity
(fast changes in Cutoff Frequency)

Slow velocity
(slow changes in Cutoff Frequency)

Settings: *Segment*: *Attack*, *Atk+Dcy*, *Decay*, *Atk+Rls*, *All*

> ***Attack***: *Time/Vel* value affects the *Attack Time*.
>
> ***Atk+Dcy***: The *Time/Vel* value affects the *Attack Time* and *Decay 1 Time*.
>
> ***Decay***: The *Time/Vel* value affects the *Decay Time*.
>
> ***Atk+Rls***: The *Time/Vel* value affects the *Attack Time* and *Release Time*.
>
> ***All***: The *Time/Vel* value affects the time-related settings in FEG.

FEG Depth

Sets the depth range for the Cutoff Frequency change controlled by the FEG.

Settings: −64–+63

> **0**: No changes for the Cutoff Frequency by the *Filter EG*.
>
> The depth range of the Cutoff Frequency change becomes wider when the setting is far from the value 0.
>
> For negative values, Cutoff Frequency changes are reversed.

Depth/Vel (FEG Depth Velocity Sensitivity)
Curve (FEG Depth Velocity Sensitivity Curve)

Sets how the depth range of the Cutoff Frequency change controlled by the FEG responds to Velocity (strength of the keystroke).

Also, with the *Curve* setting, you can set how the *FEG Depth* responds to the velocity.

The vertical axis represents the velocity while the horizontal axis represents the depth range of the Cutoff Frequency change.

Settings: *Depth/Vel*: −64–+63

> **Positive values**: Fast velocity widens the depth range of the *Filter EG* changes, while slow velocity narrows the depth range.
>
> **Negative values**: Fast velocity narrows the depth range of the *Filter EG* changes, while slow velocity widens the depth range.
>
> **0**: Cutoff Frequency does not respond to Velocity.
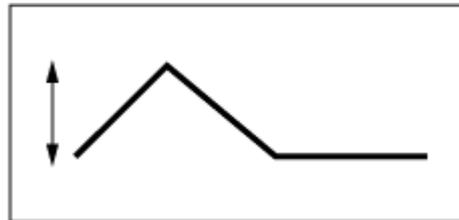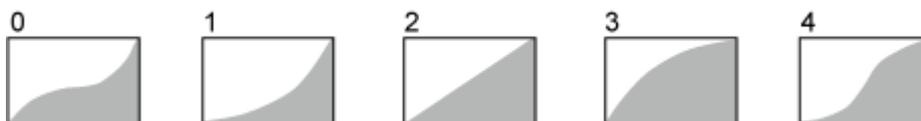
Fast velocity
(the depth range in Cutoff Frequency change
is wider)

Slow velocity
(the depth range in Cutoff Frequency change
is narrower)

Settings: *Curve*: 0–4

Scale ☆

On the *Scale* screen, you can set the filter scale for the Element.
The Filter Scale function allows you to change the Cutoff Frequency of the filter depending on the pitch.

Operation

[PERFORMANCE] → [EDIT/ ⟳] → *Part* selection → *Element* selection → *Filter* → *Scale*

Break Point (Filter Cutoff Scaling Break Point) 1–4
Sets the note numbers of four points to be set to *Cutoff Offset*.
Settings: C−2–G8

NOTE

The note numbers for *Break Points 1* to *4* will be automatically arranged in ascending order.

Cutoff Offset (Filter Cutoff Scaling Offset) 1–4

Sets the value that increases or decreases the Cutoff on all four Break Points.
Settings: −128–+127

NOTE

- When the offset value is set above or below the Cutoff value, the Cutoff Frequency never goes beyond the settings.
- For any notes below *Break Point 1*, the value will be set to the Cutoff Frequency of *Break Point 1*. For any notes above *Break Point 4*, the value will be set to the Cutoff Frequency of *Break Point 4*.

Amplitude ★
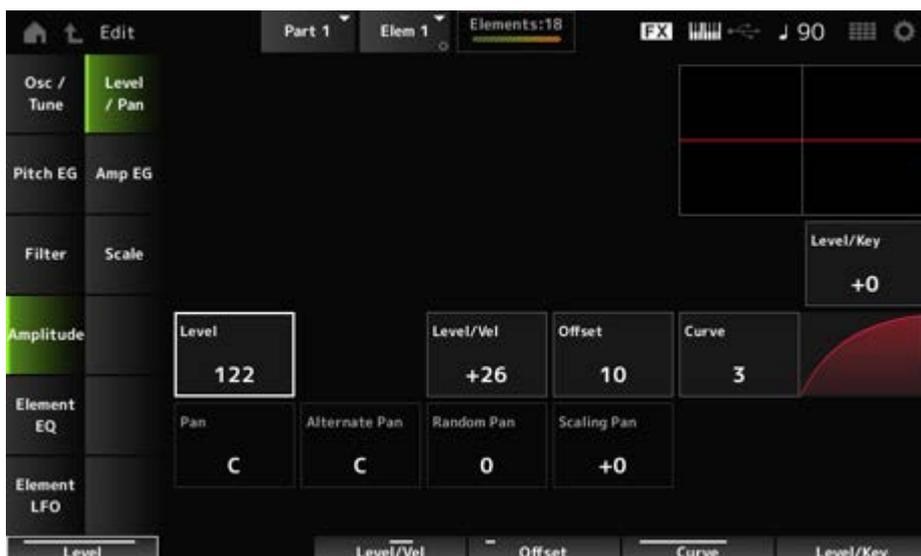
Level/Pan ☆

On the *Level/Pan* screen, you can set Level and Pan (position in the stereo field) for each Element.

Operation

[PERFORMANCE] → [EDIT/ ⊂⊃] → *Part* selection → *Element* selection → *Amplitude* → *Level/Pan*

Level/Key (Level Key Follow Sensitivity)

Sets how the volume of each Element responds to key position. The reference point is the volume specified in *Center Key*.

Settings: −64–+0–+63

> **Positive values**: The lower the key played, the softer the volume becomes; the higher the played, the louder the volume becomes.
> **Negative values**: The lower the key played, the louder the volume becomes; the higher the key played, the softer the volume becomes.

Level (Element Level)

Sets the output level (volume) for each Element.

Settings: 0–127

Level/Vel (Level Velocity Sensitivity)
Offset (Level Velocity Offset)
Curve (Level Sensitivity Key Curve)

Sets how the Level (Volume) responds to Velocity or the strength of the keystroke. Offset adjusts all settings specified in *Level/Vel*. When the value exceeds 127, the velocity is set to 127. Also, with the *Curve* setting, you can set how the volume responds to the velocity. The vertical axis represents the velocity while the horizontal axis represents the range for the volume changes.

Settings: *Level/Vel*: −64–+63
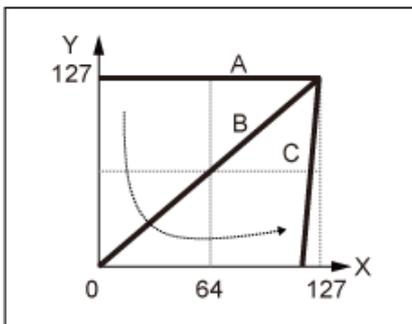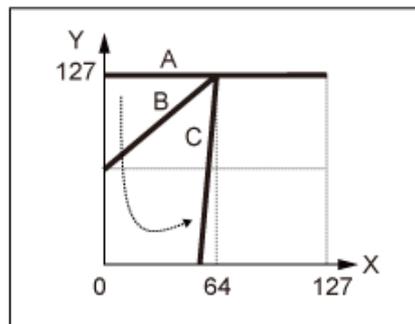
> **Positive value**: The faster the Velocity, the louder the volume becomes.
> **Negative value**: The slower the Velocity, the louder the volume becomes.
> **0**: No changes regardless of the Velocity setting.

Settings: *Offset*: 0–127
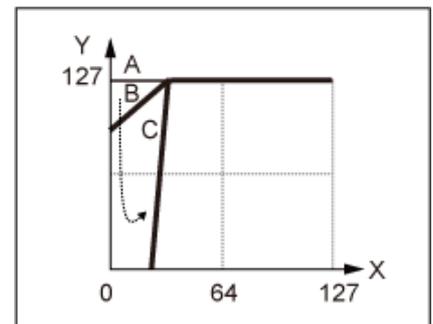
Offset (Level Velocity Offset) = 0   *Offset (Level Velocity Offset)* = 64   *Offset (Level Velocity Offset)* = 96

A: *Level/Vel (Level Velocity Sensitivity)* = 0
B: *Level/Vel (Level Velocity Sensitivity)* = 32
C: *Level/Vel (Level Velocity Sensitivity)* = 64
X: Velocity of the moment the key is pressed
Y: Velocity value sent to the internal tone generator
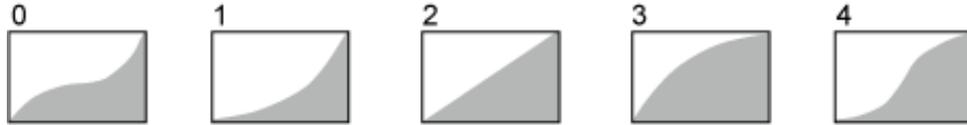
Settings: *Curve*: 0–4

Pan (Element Pan)

Sets the Pan position (in the stereo field) for the Element.

When there are right and left Pan settings for the Elements within a Part, it may be difficult to hear the result of the pan setting.

Settings: L63–C–R63

Alternate Pan (Alternate Pan Depth)

Sets the amount by which the sound is panned alternately left and right for each key you press.

The value set in *Pan* is the center position for the right and left movement of the Pan.

Settings: L64–C–R63

Random Pan (Random Pan Depth)

Sets the amount by which the sound is panned randomly left and right for each key you press.

The value set in *Pan* is the center position in the stereo field.

Settings: 0–127

Scaling Pan (Scaling Pan Depth)

Sets how the position of the key you press affects the position of the Pan setting.

The value set in *Pan* is the position for C3.

Settings: −64–+0–+63

> **Positive values**: Pan position is scaled to the left for lower keys and to the right for higher keys.
>
> **Negative values**: Pan position is scaled to the right for lower keys and to the left for higher keys.

Amp EG ☆

On the *Amp EG* screen, you can set the AEG (Amplitude Envelope Generator) Time for the Element. This lets you determine how the volume changes from the moment you press a key on the keyboard to when the sound decays.

Operation

[PERFORMANCE] → [EDIT/ ⟳] → *Part* selection → *Element* selection → *Amplitude* → *Amp*

Attack Time (AEG Attack Time)

Sets the length of time it takes for the volume to change from the moment you press a key on the keyboard until when it reaches the *Attack Level* value.

Settings: 0–127

Decay 1 Time (AEG Decay 1 Time)

Sets the length of time it takes for the volume to change from the *Attack Level* to the *Decay 1 Level*.

Settings: 0–127

Decay 2 Time (AEG Decay 2 Time)

Sets the length of time it takes for the volume to change from the *Decay 1 Level* to the *Decay 2 Level*.

Settings: 0–127

Release Time (AEG Release Time)

Sets the length of time it takes for the sound to decay after you have released the key.

Settings: 0–127

AEG Initial Level

Sets the volume for the moment you press the key.

Settings: 0–127

AEG Attack Level

Sets the volume for changing after you have pressed a key.

Settings: 0–127

AEG Decay 1 Level

Sets the next volume value to change from the *Attack Level*.

Settings: 0–127

AEG Decay 2 Level

Sets the volume that is maintained while the key is held down.

Settings: 0–127

Center Note (AEG Time Key Follow Center Note)

Sets the reference note (or a key to press) for *Time/Key*. According to the note (key) set here, the resulting sound of the pitch change set in PEG is played.

Settings: C−2–G8

Time/Key (AEG Time Key Follow Sensitivity)

Sets how the speed of the volume changes in AEG responds to key position. The speed change in AEG is used for the specified key in *Center Note*.
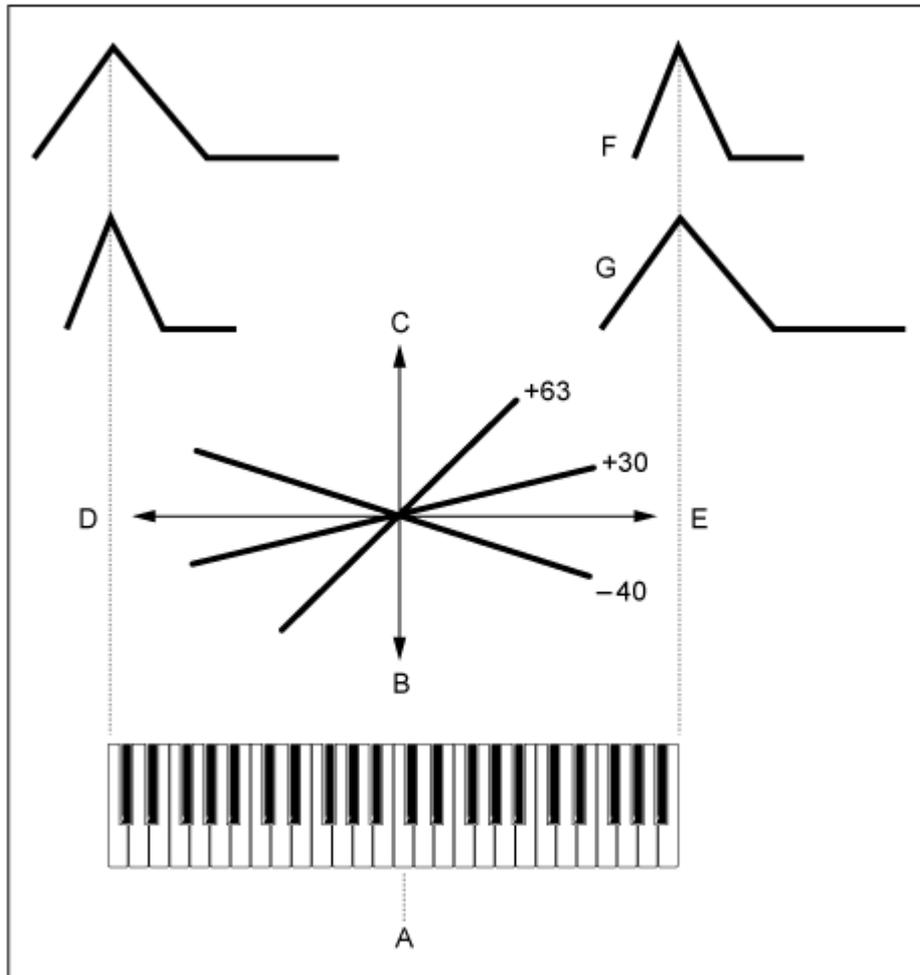
Settings: −64–+63

> **Positive values**: The lower the key played, the slower the AEG volume changes; the higher the key played, the faster the AEG volume changes.
> **Negative values**: The lower the key played, the faster the AEG volume changes; the higher the key played, the slower the AEG volume changes.
> **0**: No AEG volume changes regardless of the key position.

> *Time/Key (AEG Time Key Follow Sensitivity)* **and** *Center Note (AEG Time Key Follow Center Note)*

A: *Center Note*

B: Slow

C: Fast

D: Low keys

E: High keys

F: Positive values

G: Negative values

Release Adj (AEG Time Key Follow Sensitivity Release Adjustment)

Adjusts the sensitivity of the *AEG Time Key Follow Sensitivity* to *AEG Release*.

The lower the value, the lesser the sensitivity.

Settings: 0–127

> **127**: *AEG Time Key Follow Sensitivity* is the same as *Decay 1* and *Decay 2*.
> **0**: *AEG Time Key Follow Sensitivity* does not affect the *AEG Release*.

Time/Vel (AEG Time Velocity Sensitivity)
Segment (AEG Time Velocity Segment)

Sets how the time for volume changes in AEG responds to Velocity or the strength of the keystroke.

First, set the time value in Segment, and then the velocity sensitivity value in *Time/Vel*.

Settings: *Time/Vel*: −64–+63
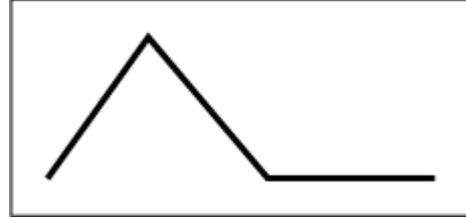
> **Positive value**: The faster the velocity, the faster the AEG volume changes.
>
> **Negative value**: The faster the velocity, the slower the AEG volume changes; the slower the velocity, the faster the AEG volume changes.
>
> **0**: No changes regardless of the velocity setting.

Fast velocity (fast volume change)　　　　　Slow velocity (slow volume change)

Settings: *Segment*: *Attack*, *Atk+Dcy*, *Decay*, *Atk+Rls*, *All*

> ***Attack***: *Time/Vel* value affects the Attack Time
>
> ***Atk+Dcy***: The *Time/Vel* value affects the *Attack Time* and *Decay 1 Time*.
>
> ***Decay***: The *Time/Vel* value affects the *Decay Time*.
>
> ***Atk+Rls***: The *Time/Vel* value affects the *Attack Time* and *Release Time*.
>
> ***All***: The *Time/Vel* value affects the time-related settings in AEG.

Half Damper (Half Damper Switch)

By setting this switch On, you can connect a separately sold foot controller FC3A to the [SUSTAIN] jack on the rear panel and use the half-damper function for your keyboard performance.

The Half-damper function gives you greater expressive control over sound decay, letting you use damper pedal operation just as you would on an acoustic piano—continuously and not just as an on/off switch.

Settings: Off, On

Time (Half Damper Time)

Sets the time from the moment you have released a key while you are pressing the foot controller FC3A fully down to when the sound decays when the *Half Damper (Half Damper Switch)* is set to On. This parameter is not shown when *Half Damper (Half Damper Switch)* is set to Off.

You can adjust the decay time from the *Half Damper Time* to the *Release Time* by changing the amount you press on the pedal.

When you release the pedal, the *Release Time* is used for decaying sound. By setting the *Release Time* to a small value, and *Half Damper Time* to a large value, you can play a natural decaying sound, like on an acoustic piano.

Settings: 0–127

Scale ☆

On the *Scale* screen, you can set the Amplitude Scale for the Element.

This changes the volume according to the key position on the keyboard.

Operation

[PERFORMANCE] → [EDIT/ ⊂⊃] → *Part* selection → *Element* selection → *Amplitude* → *Scale*

Break Point (Level Scaling Break Point) 1–4

Sets the note number for *Level Offset*.

Settings: C−2–G8

NOTE

The note numbers for *Break Points 1* to *4* will be automatically arranged in ascending order.

Level Offset (Level Scaling Offset) 1–4

Sets the values of four Break Points for controlling *Level*.

Settings: −128–+127

Element EQ ★

On the *Element EQ* screen, you can set the equalizer for the Element.

Operation

[PERFORMANCE] → [EDIT/ ⊂⊃] → *Part* selection → *Element* selection → *Element EQ*

EQ Type (Element EQ Type)

Selects the desired EQ type.

Settings: *2-band*, *P.EQ*, *Boost6*, *Boost12*, *Boost18*, *Thru*

> **2-band**: Shelving EQ that boosts or cuts the band of signals above or below a certain frequency (*Low Freq* or *High Freq*).
>
> **P.EQ**: Parametric EQ that boosts or cuts the signal level (*Gain*) around the Center Frequency (*Freq*).
>
> **Boost6**: Boosts the level by 6 dB.
>
> **Boost12**: Boosts the level by 12 dB.
>
> **Boost18**: Boosts the level by 18 dB.
>
> **Thru**: Bypasses the equalizer leaving the entire signal unaffected.
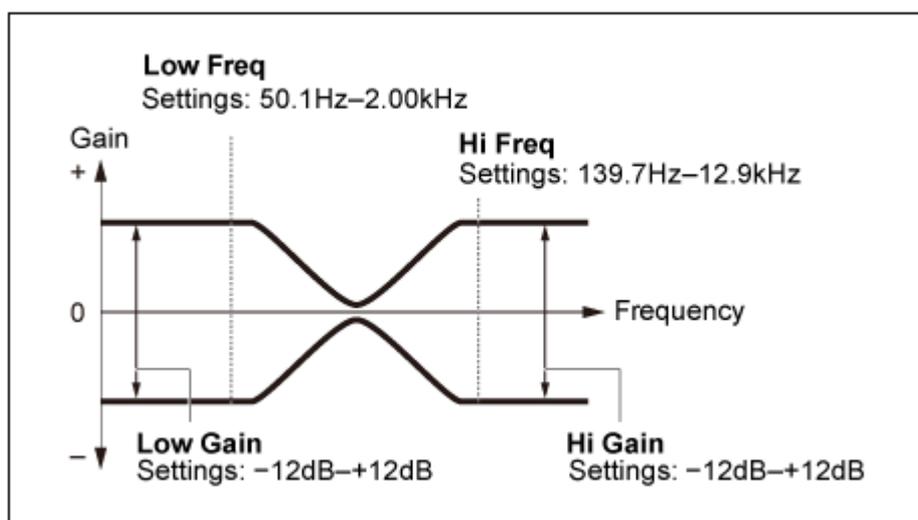
■ **When *EQ Type* is set to *2-band***

EQ Low Gain (Element EQ Low Gain)

Sets the signal level of the *Low* band.

Settings: −12.00dB–+12.00dB

EQ Low Freq (Element EQ Low Frequency)

Sets the frequency of the *Low* band.

Settings: 50.1Hz–2.00kHz

EQ Hi Gain (Element EQ High Gain)

Sets the signal level of the *High* band.
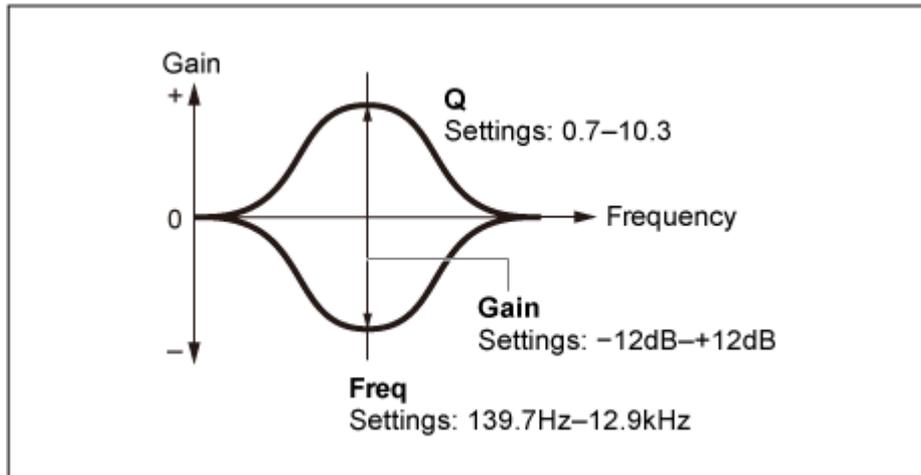
Settings: −12.00dB–+12.00dB

EQ Hi Freq (Element EQ High Frequency)

Sets the frequency of the *High* band.

Settings: 503.8Hz–10.1kHz

■ **When *EQ Type* is set to *P.EQ***

EQ Gain (Element EQ Gain)

Sets the signal level for the frequency range set in *EQ Freq*.

Settings: −12.00dB–+12.00dB

EQ Freq (Element EQ Frequency)

Sets the frequency to be cut or boosted.

Settings: 139.7Hz–12.9kHz

EQ Q (Element EQ Q)

By boosting or cutting the signal level of the frequency set in *EQ Freq*, you can create various frequency response curves.
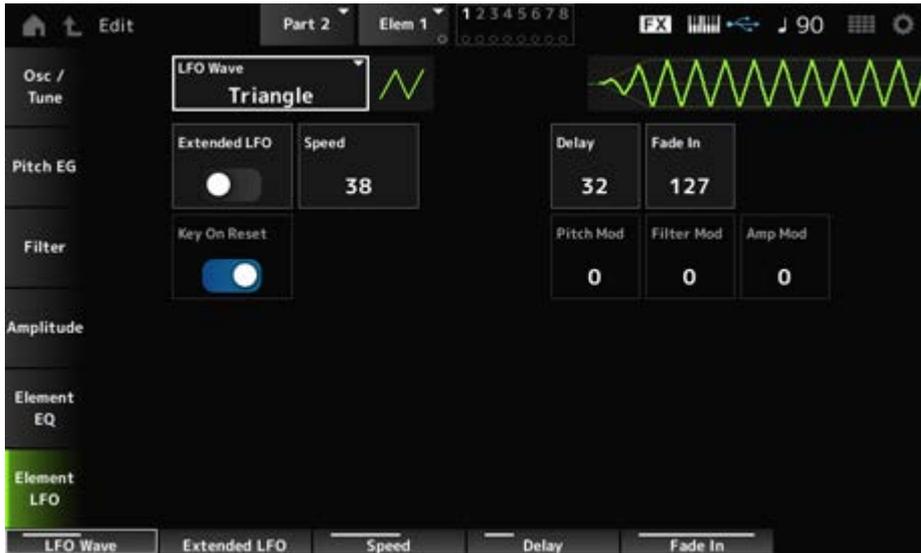
Settings: 0.7–10.3

On the *Element LFO* screen, you can set the LFO (Low Frequency Oscillator) for the Element. The LFO (Low Frequency Oscillator) for the Element generates signals in the low band, and you can use it for modulation (cyclical variation) of the pitch, filter, and amplitude.

Operation

[PERFORMANCE] → [EDIT/ ⟳] → *Part* selection → *Element* selection → *Element LFO*
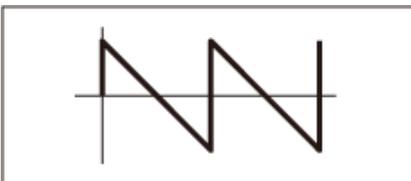
LFO Wave

Selects an LFO wave, for creating various distinct types of modulation.
Settings: *Saw*, *Triangle*, *Square*
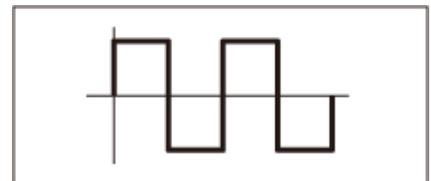
Saw (Sawtooth wave)	*Triangle* (Triangle wave)	*Square* (Square wave)

Extended LFO

Switches between the old set of settings (Off: 0–63) and a new set of settings with higher resolution (On: 0–415) for *Speed (LFO Speed)*.
To maintain compatibility of data created with the old settings, set this parameter to Off.
Settings: Off, On

Speed (LFO Speed)

Sets the speed of *LFO Wave* changes. The larger the value of this parameter, the faster the speed becomes.

Settings: 0–63 (*ExtendedLFO* set to Off), 0–415 (*ExtendedLFO* is set to On)

Delay (LFO Delay Time)

Sets the delay time between the moment you press a key on the keyboard and the moment the LFO comes into effect.
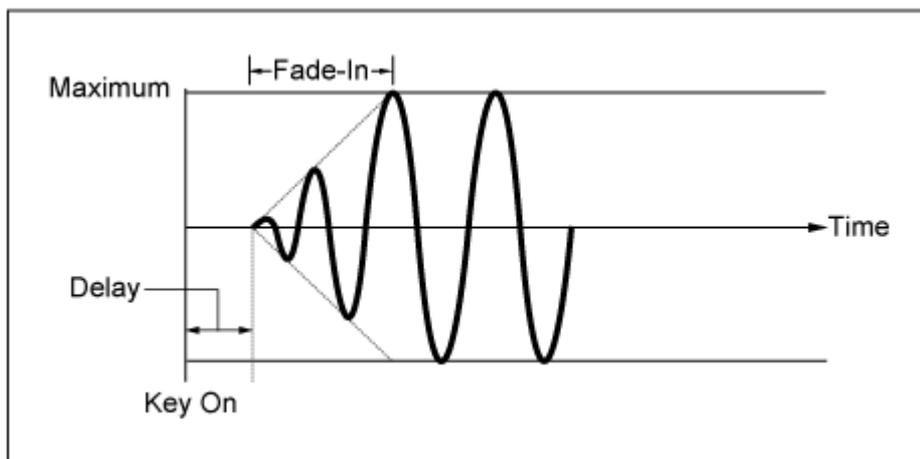
Settings: 0–127

Fade In (LFO Fade In Time)

Sets the time length for the LFO effect to fade in after you have released the key and the delay time set in *Delay* has elapsed.
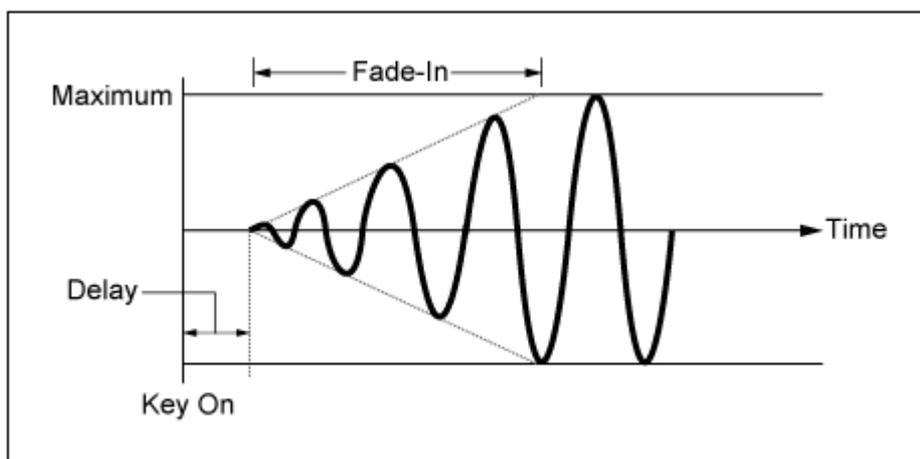
Settings: 0–127

> The larger the value, the longer it takes for the LFO effect to reach the maximum.
>
> **0**: LFO changes to the maximum value without any fade-ins.

Low value: Fast fade-in
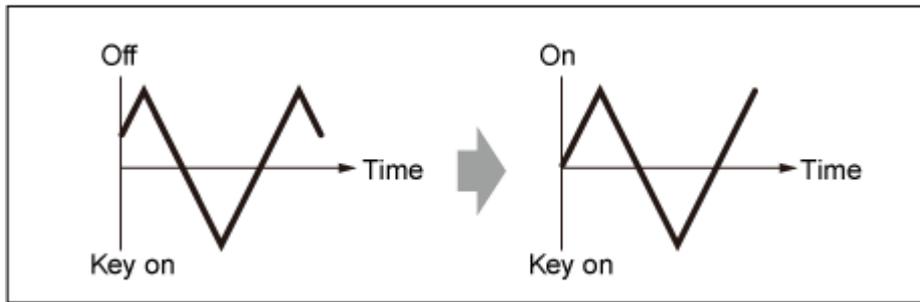
High value: Slow fade-in

Key On Reset (LFO Key On Reset)

Resets the oscillation of the LFO when a key is pressed.
Settings: Off, On

Pitch Mod (LFO Pitch Modulation Depth)

This parameter creates a vibrato effect (cyclical changes to the pitch) by using LFO waves.
Setting the parameter to larger values results in greater change to the volume.
Settings: 0–127

Filter Mod (LFO Filter Modulation Depth)

This parameter creates a wah effect (cyclical changes to the filter cutoff frequency) by using LFO waves.
Larger values result in greater range for cutoff frequency changes.
Settings: 0–127

Amp Mod (LFO Amplitude Modulation Depth)

This parameter creates a tremolo effect (cyclical changes in the volume) by using LFO waves.
Setting the parameter to larger values results in greater change to the volume.
Settings: 0–127

Drum Part Edit (AWM2) screen

The Drum Part (AWM2) consists of 73 drum keys.

Drum Part Edit (AWM2) includes *Part Common Edit* for setting parameters for the entire Part and *Key Edit* for setting parameters for individual drum keys.

Part Common Edit ☆

Contents

Part Settings ☆

Operation

[PERFORMANCE] → *Part Common* selection → [EDIT/ ⟲] → *General/Pitch* → *Part Settings*

Main Category (Part Main Category)
Sub Category (Part Sub Category)
Sets the Main category and Sub category of the selected Part.
Settings: Refer to the *Data List*.

Part Name
You can save the Part you are editing under a new name, using up to 20 alphanumeric characters.
Tapping on the name calls up the onscreen keyboard, allowing you to enter a name.

Volume
Sets the volume of the selected Part.
Settings: 0–127

Pan
Sets the Pan for the selected Part.
Settings: L63–C (center)–R63

Dry Level

Sets the Dry Level of the selected Part.

This parameter is available only when *Part Output* is set to *MainL&R* or *Drum*.

Settings: 0–127

Var Send (Variation Send)

Sets the Variation Send of the selected Part.

This parameter is available only when *Part Output* is set to *MainL&R* or *Drum*.

Settings: 0–127

Rev Send (Reverb Send)

Sets the Reverb Send of the selected Part.

This parameter is available only when *Part Output* is set to *MainL&R* or *Drum*.

Settings: 0–127

Part Output (Part Output Select)

Sets the output destination for the audio signals of the selected Part.

Settings: *MainL&R*, *AsgnL&R*, *USB1&2–USB29&30*, *AsgnL*, *AsgnR*, *USB1–30*, *Off*, *Drum*

> **MainL&R**: Outputs in stereo (two channels) to the OUTPUT [L/MONO] and OUTPUT [R] jacks.
>
> **AsgnL&R**: Outputs in stereo (two channels) to the ASSIGNABLE OUTPUT [L] and ASSIGNABLE OUTPUT [R] jacks.
>
> **USB1&2–USB29&30**: Outputs in stereo (channels 1 and 2, to channels 29 and 30) to the [USB TO HOST] terminal.
>
> **AsgnL**: Outputs in mono (one channel) to the ASSIGNABLE OUTPUT [L] jack.
>
> **AsgnR**: Outputs in mono (one channel) to the ASSIGNABLE OUTPUT [R] jack.
>
> **USB1–30**: Outputs in mono (channels 1 to 30) to the [USB TO HOST] terminal.
>
> **Off**: No output of the audio signal for the Part.
>
> **Drum**: You can set the output for each drum key.

Arp Play Only (Arpeggio Play Only)

Sets the Part to be played only with the Arpeggio.

The Part set to On will be played by Note On messages sent for the Arpeggio.

Settings: Off, On

Element Pan (Element Pan Switch)

Sets Pan to On or Off from the *Key Edit* ([EDIT/ ⟲]→*Part* selection→*Key* selection→*Level/Pan*→*Pan*).

When this parameter is set to Off, the Pan position in *Key Edit* will be set to C (center).

Settings: Off, On

Velocity Limit

Sets the velocity range (lowest and highest values) for the Part.

Settings: 1–127

Note Limit

Sets the note range (lowest and highest notes) for the Part.
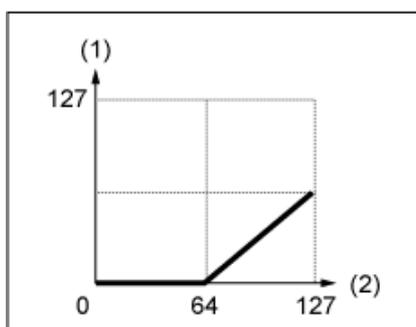
Settings: C−2–G8

Velocity Offset (Velocity Sensitivity Offset)

Increases or decreases the velocity value that is sent to the internal tone generator.

Settings: 0–127
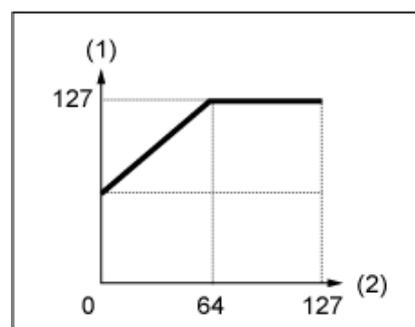
When Depth (above) = 64
and Offset = 32

When Depth (above) = 64
and Offset = 64

When Depth (above) = 64
and Offset = 96

(1)   Actual resulting velocity (affecting the tone generator)
(2)   Velocity with which you play a note
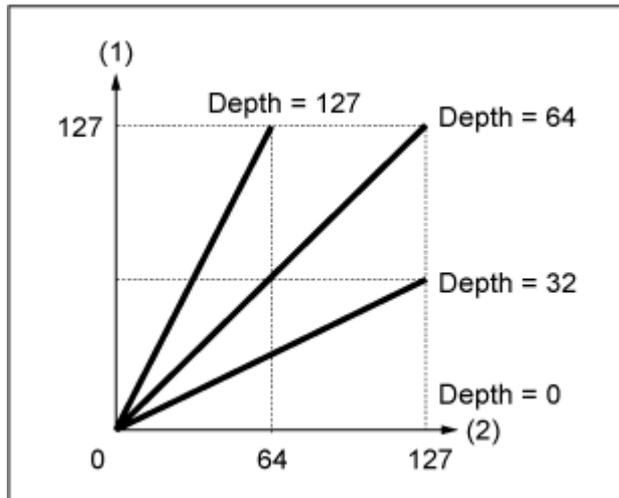
Velocity Depth (Velocity Sensitivity Depth)

Sets how the level of the velocity value (sent to the internal tone generator) responds to Velocity or the strength of the keystroke.

Settings: 0–127

When Offset (below) is set to 64:

(1)   Actual resulting velocity (affecting the tone generator)

(2)   Velocity with which you play a note

Zone Settings ☆

The screen shown here is the same as the one opened from *General/Pitch → Zone Settings* on the Part Edit (AWM2).

Pitch ☆

On the *Pitch* screen, you can set the pitch for the Part.

Operation

[PERFORMANCE] → *Part Common* selection → [EDIT/ ⟳] → *General/Pitch → Pitch*

Note Shift

Adjusts the pitch in semitones.

Settings: −24–+0–+24

Detune

Adjusts the pitch of the Part in 0.1 Hz increments.

By slightly shifting the pitch, you can detune the sound.

Settings: −12.8Hz–+0.0Hz–+12.7Hz

Pitch Control Group

Parts assigned to the same group are given the same pitch.

However, *Portamento*, *Mono/Poly*, and *Micro Tuning* are not available for the Drum Part.

Pitch Bend↓(Pitch Bend Range Lower)
Pitch Bend↑(Pitch Bend Range Upper)

Sets the range of the changes created with the Pitch Bend wheel in semitones.

Settings: −48–+0–+24

Filter/Amp ★

Filter EG ☆

The screen here is the same as the one opened from *Filter/Amp → Filter EG* on the *Part Edit (AWM2)*.

Amp EG ☆
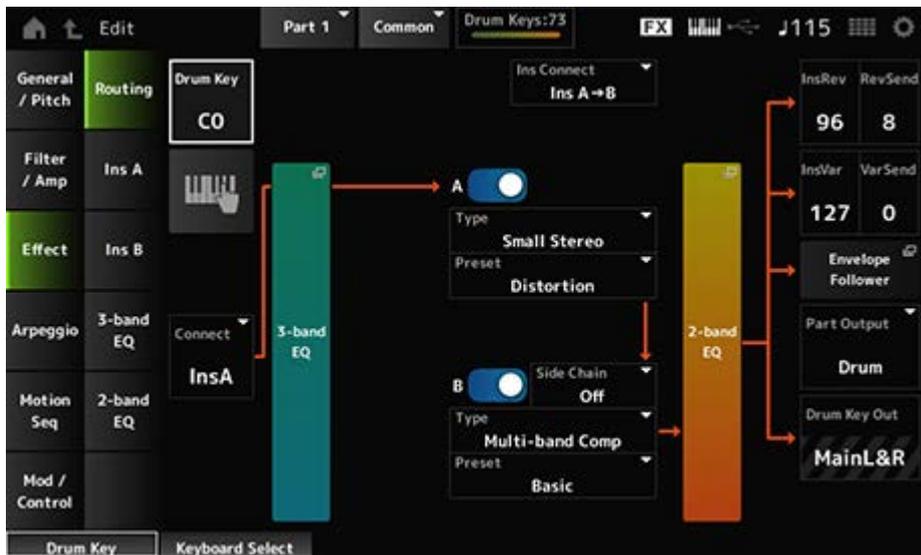
The screen here is the same as the one opened from *Filter/Amp → Amp EG* on the *Part Edit (AWM2)*.

Effect ★

Routing ☆

Operation

[PERFORMANCE] → *Part Common* selection → [EDIT/ ↻] → *Effect → Routing*

Basically, this is the same screen as *Effect → Routing* in *Part Edit (AWM2.)*

The parameters added to *Drum Part Edit (AWM2)* are shown below.

Drum Key (Drum Key Select)

Shows the name of the selected Drum Key.

Settings: C0–C6

Connect (Drum Key Connection Switch)

Sets the key to be output to Insertion Effect A or Insertion Effect B.

Setting this to *Thru* bypasses the Insertion Effects.

Settings: *Thru*, *InsA*, *InsB*

Keyboard Select

You can use the keyboard to directly select a Drum Key by setting this parameter On.

Settings: Off, On

InsRev (Insertion to Reverb Send Level)
InsVar (Insertion to Variation Send Level)

Sets the level of the Drum Key signals sent to Insertion Effect A or Insertion Effect B to the Reverb or Variation Effect.

This setting is applied to the entire Drum Part (all Drum Keys).

This parameter is available only when *Connect (Drum Key Connection Switch)* is set to *InsA* or *InsB*, and *Part Output* is set to *MainL&R* or *Drum*.

Settings: 0–127

KeyRev (Drum Key Reverb Send Level)
KeyVar (Drum Key Variation Send Level)

Sets the level of the drum key signals sent to Insertion Effect A or Insertion Effect B to the Reverb or Variation Effect.

This parameter can be set for each Drum Key.

This parameter is available when *Connect (Drum Key Connection Switch)* is set to *Thru*, and either when *Part Output* is set to *Main*, or when *Part Output* is set to *Drum* and *Drum Key Out* is set to *MainL&R*.

Settings: 0–127

Drum Key Out (Drum Key Output Select)

Sets the output destination for each Drum Key.

This parameter is shown only when *Part Output* is set to *Drum*.

Settings: *MainL&R*, *AsgnL&R*, *USB1&2–USB29&30*, *AsgnL*, *AsgnR*, *USB1–30*

> **MainL&R**: Outputs in stereo (two channels) to the OUTPUT [L/MONO] and OUTPUT [R] jacks.
>
> **AsgnL&R**: Outputs in stereo (two channels) to the ASSIGNABLE OUTPUT [L] and ASSIGNABLE OUTPUT [R] jacks.
>
> **USB1&2–USB29&30**: Outputs in stereo (channels 1 and 2, to channels 29 and 30) to the [USB TO HOST] terminal.
>
> **AsgnL**: Outputs in mono (one channel) to the ASSIGNABLE OUTPUT [L] jack.
>
> **AsgnR**: Outputs in mono (one channel) to the ASSIGNABLE OUTPUT [R] jack.
>
> **USB1–30**: Outputs in mono (channels 1 to 30) to the [USB TO HOST] terminal.

NOTE

When *Connect (Drum Key Connection Switch)* is set to *InsA* or *InsB*, and this parameter is fixed to the *MainL&R* setting.

Ins A
Ins B   ☆

The screen here is the same as the one opened from *Effect → InsA* or *InsB* on the *Part Edit (AWM2)*.

3-band EQ   ☆

The screen here is the same as the one opened from *Effect → 3-band EQ* on the *Part Edit (AWM2)*.

2-band EQ ☆

The screen here is the same as the one opened from *Effect → 2-band EQ* on the *Part Edit (AWM2)*.

Arpeggio ★

Common ☆

The screen here is the same as the one opened from *Arpeggio → Common* on the *Part Edit (AWM2)*.

Individual ☆

The screen here is the same as the one opened from *Arpeggio → Individual* on the *Part Edit (AWM2)*.

Advanced ☆

The screen here is basically the same as the one opened from *Arpeggio → Advanced* on the *Part Edit (AWM2)*; however, the parameter shown below has been added.

Fixed SD/BD (Arpeggio Fixed SD/BD)
When this parameter is set to On, Arpeggio playback uses C1 for the bass drum and D1 for the snare drum.
Most drum kits have the bass drum assigned to C1 and the snare drum assigned to D1.
However, some drum kits have the bass drum and snare drum assigned to some other keys. In that case, the Arpeggio would use those assigned keys for playback instead.
For this reason, the Arpeggio may not be played back properly depending on the particular combination of drum kit and Arpeggio type. When such problems occur, setting *Fixed SD/BD (Arpeggio Fixed SD/BD)* to On may be able to solve the problem.
Settings: Off, On

Motion Seq ★

Common ☆

The screen here is the same as the one opened from *Motion Seq → Common* on the *Part Edit (AWM2)*.

Lane ☆

The screen here is the same as the one opened from *Motion Seq → Lane* on the *Part Edit (AWM2)*.

Mod/Control ★

Control Assign ☆

The screen here is basically the same as the one opened from *Mod/Control → Control Assign* on the *Part Edit (AWM2)*, except that the available *Destination* settings are different.
For the list of *Destination* settings, refer to the *Control List* on *Data List*.

Tx/Rx Switch ☆

The screen here is the same as the one opened from *Mod/Control → Tx/Rx Switch* on the *Part Edit (AWM2)*.

Control Settings ☆

The screen here is the same as the one opened from *Mod/Control → Control Settings* on the *Part Edit (AWM2)*.

Key Edit ☆

Contents

> ### *Osc/Tune*
> ### *Filter*
> ### *Level/Pan*
> ### *Element EQ*
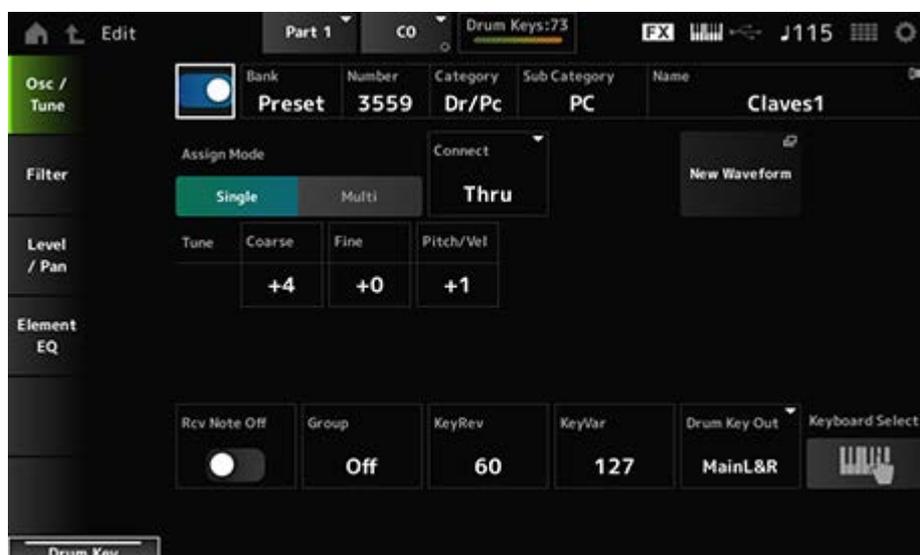
Osc/Tune ⭐

On the *Osc/Tune* screen, you can set the Oscillator for each key within the Drum Part.

Operation

[PERFORMANCE] → [EDIT/ ⟳] → *Part* selection → *Key* selection → *Osc/Tune*

Drum Key Switch
Sets the selected Drum Key to use.
Settings: Off, On

Bank (Waveform Bank)
Number (Waveform Number)
Category (Waveform Category)

Sub Category (Waveform Sub Category)
Name (Waveform Name)
Shows the name of the Waveform selected for the Drum Key.
Bank indicates the type of Waveform (Preset, User, and Library) assigned to the Element.
Settings: Refer to the *Data List*.

Assign Mode (Key Assign Mode)
Sets how sound is produced when the internal tone generator receives Note On messages of the same sound twice (or more) in a row.
Settings: *Single*, *Multi*

> **Single**: Stops the first note and then plays the same note again.
> **Multi**: Plays the second note over the first note. This setting makes rolls sound natural, especially crash cymbals or other percussion instruments having a long decay.

Connect (Drum Key Connection)
Sets the Key to be output to Insertion Effect A (*InsA*) or Insertion Effect B (*Ins B*), or bypasses the Insertion Effect (*Thru*).
This parameter is basically the same as *Connect (Drum Key Connection Switch)* on *Effect →Routing* on the *Drum Part Edit (AWM2.)*
Settings: Thru, InsA, InsB

New Waveform
Loads an audio file saved to USB flash drive as a Waveform.
Edit Waveform appears when a Waveform is loaded.

Edit Waveform
Opens the *Waveform Edit* screen.

Coarse (Coarse Tune)
Shifts the pitch of the waveform assigned to the Drum Key.
Settings: −48–+48

Fine (Fine Tune)
Finely adjusts the pitch of the wave assigned to the Drum Key.
Settings: −64–+63

Pitch/Vel (Pitch Velocity Sensitivity)
Sets how the pitch responds to Velocity or the strength of the keystroke.

Settings: −64–+63

> **Positive value**: The faster the Velocity, the higher the pitch becomes.
>
> **Negative value**: The faster the Velocity, the lower the pitch becomes.
>
> **0**: Remains unchanged

Rcv Note Off (Receive Note Off)

Sets the drum key to receive MIDI note-off messages.

Settings: Off, On

> **On**: The sound stops when release the key. Use this setting for percussion instrument sounds to make them last without decay.
>
> **Off**: The sound decays after you release the key.

Group (Alternate Group)

This setting helps you to prevent improper or unnatural combinations of drum keys to be played together.

For example, you can assign open and closed hi-hats to the same Group so that you can avoid them being played together.

For drum keys that can be played naturally with any combination, set this parameter to *Off*.

Settings: *Off*, 1–127

KeyRev (Drum Key Reverb Send Level)
KeyVar (Drum Key Variation Send Level)

Sets the level of the drum key signals sent through Insertion Effect A or Insertion Effect B to the Reverb or Variation Effect.

This parameter can be set to each drum key.

This parameter is not available depending on the *Connect (Drum Key Connection)*, *Part Output*, and *Drum Key Output* settings.

Settings: 0–127

Drum Key Out (Drum Key Output Select)

Sets the output destination for the Drum Key.

This parameter is not available depending on the *Connect (Drum Key Connection)* and *Part Output* settings.

Settings: *MainL&R*, *AsgnL&R*, *USB1&2–USB29&30*, *AsgnL*, *AsgnR*, *USB1–30*

> **MainL&R**: Outputs in stereo (two channels) to the OUTPUT [L/MONO] and OUTPUT [R] jacks.
>
> **AsgnL&R**: Outputs in stereo (two channels) to the ASSIGNABLE OUTPUT [L] and ASSIGNABLE OUTPUT [R] jacks.
>
> **USB1&2–USB29&30**: Outputs in stereo (channels 1 and 2, to channels 29 and 30) to the [USB TO HOST] terminal.
>
> **AsgnL**: Outputs in mono (one channel) to the ASSIGNABLE OUTPUT [L] jack.

> **AsgnR**: Outputs in mono (one channel) to the ASSIGNABLE OUTPUT [R] jack.
>
> **USB1–30**: Outputs in mono (channels 1 to 30) to the [USB TO HOST] terminal.

Keyboard Select

Sets the Keyboard select setting on or off.

When this parameter is set to On, you can select the desired drum key for editing by pressing a key on the keyboard.

Settings: Off, On

Filter ★

Sets the filter for the Drum Part.

You can change the tone quality by using a low pass filter and high pass filter on each drum key.

Operation

[PERFORMANCE] → [EDIT/ ⟳] → *Part* selection → *Key* selection → *Filter*

Cutoff (LPF Cutoff Frequency)

Sets the cutoff frequency for the low pass filter.

Settings: 0–1023

Cutoff/Vel (LPF Cutoff Velocity Sensitivity)

Sets the velocity sensitivity to the cutoff frequency of the low pass filter.

For positive values of this parameter, the stronger (higher velocity) you play the key, the higher the cutoff frequency becomes.

For negative values of this parameter, the stronger you play the key, the lower the cutoff frequency becomes.

Settings: −64–+63

Resonance (LPF Resonance)

Sets the level of the resonance effect on the low pass filter.

Settings: 0–127

HPF Cutoff (HPF Cutoff Frequency)

Sets the cutoff frequency of the high pass filter.

Settings: 0–1023

Level/Pan ★

Sets the Level and Pan (position in the stereo field) for each Drum Key.

Operation

[PERFORMANCE] → [EDIT/ ⟳] → *Part* selection → *Key* selection → *Level/Pan*

Attack Time (AEG Attack Time)

Sets the length of time it takes for the volume to change from the moment you press a key on the keyboard until the time the volume reaches the value set at the *Attack Level*.

Settings: 0–127

Decay 1 Time (AEG Decay 1 Time)

Sets the length of time it takes for the volume to change from the *Attack Level* to the *Decay 1 Level*.

Settings: 0–127

Decay 2 Time (AEG Decay 2 Time)
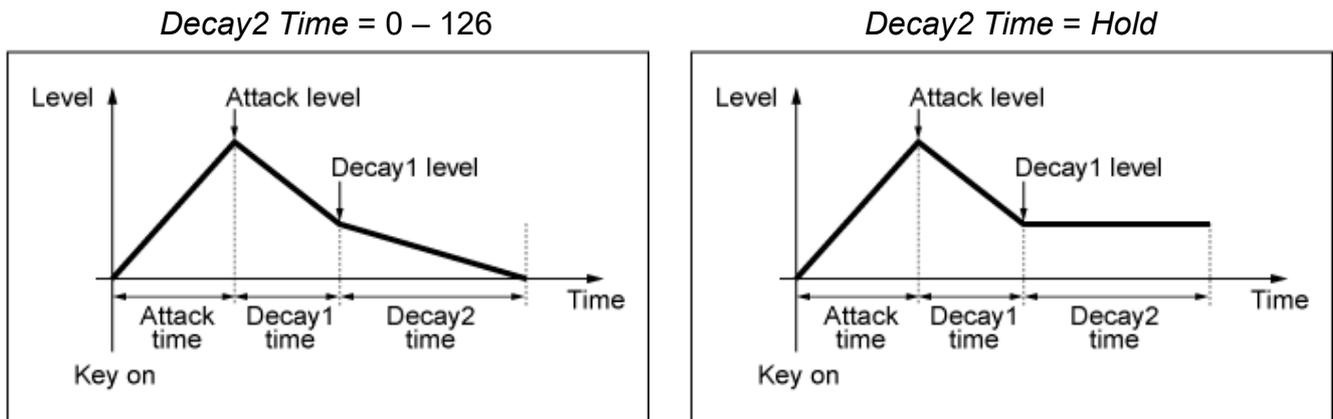
Sets the length of time it takes for the volume to change from the *Decay 1 Level* to the *Decay 2 Level*.

Settings: 0–126, Hold

Decay 1 Level (AEG Decay 1 Level)

Sets the next volume value to change from the *Attack Level*.

Settings: 0–127

Level (Drum Key Level)

Sets the output level for the Drum Key.

This parameter lets you adjust the level balance among the drum keys.

Settings: 0–127

Level/Vel (Level Velocity Sensitivity)

Sets how Level (Volume) responds to Velocity or the strength of the keystroke.

Settings: −64–+63

       Positive values: The faster the Velocity, the louder the volume becomes.

       Negative values: The slower the Velocity, the louder the volume becomes.

       0: No changes regardless of the velocity setting.

Pan

Sets the pan for the drum key.

You can adjust the position in the stereo field for the Drum Part (Drum Kit).

Settings: L63 (left)–C (center)–R63 (right)

Alternate Pan (Alternate Pan Depth)

Sets the amount by which the sound is panned alternately left and right for each key you press.

The value set in *Pan* is the center position for the right and left movement of the Pan.

Settings: L64–C–R63

Random Pan (Random Pan Depth)

Sets the amount by which the sound is panned randomly left and right for each key you press. The value set in *Pan* is the center position in the stereo field.

Settings: 0–127

Element EQ ⭐

The screen here is the same as the one opened from *Effect → Element EQ* on the *Part Edit (AWM2) Element Edit*.

Part Edit (FM-X) screen ☆

The Normal Part (FM-X) consists of eight Operators.

Part Edit (FM-X) includes *Part Common Edit* for setting parameters for the entire Part and *Operator Edit* for setting parameters for each Operator.

Part Common Edit ☆

Contents

Part LFO

2nd LFO

General / Pitch ★

Part Settings ☆

On the *Part Settings* screen, you can set the general parameters (such as Part names and tone generation) for the Part.

Operation

[PERFORMANCE] → *Part Common* selection → [EDIT/ ⟳] → *General/Pitch* → *Part Settings*

The screen here is basically the same as the one opened from *General/Pitch* → *Part Settings* on the *Part Edit (AWM2)* for the most part; however, the parameters shown below are added.

Random Pan (Random Pan Depth)

Sets how the sound is panned randomly left and right for each key played.

The value set in *Pan* is the center position in the stereo field.

Settings: 0–127

Alternate Pan (Alternate Pan Depth)

Sets how the sound is panned alternately left and right for each key played.

The value set in *Pan* is the center position for the right and left movement of the Pan.

Settings: L64–C–R63

Scaling Pan (Scaling Pan Depth)

Sets how the position of the key you press affects the position of the Pan setting.

The Pan for the Note Number C3 is the stereo field set in Pan.

By setting this parameter to a positive value, Pan is set to the left for lower keys, and to the right for higher keys.

When this parameter is set to a value of 0, there will be no changes to the Pan setting. When the parameter is set to a negative value, the pan is set to the left for lower keys, and to the right for higher keys.

Settings: −64–+0–+63

KeyOnDly Sync (Key On Delay Tempo Sync)

Sets the timing of the Key On Delay to synchronize with the tempo.

Settings: Off, On

Delay Length (Key On Delay Time Length)

Sets the delay time from when the moment the key is pressed to when sound is produced.

This parameter is not available when *KeyOnDly Sync* is set to On.

Settings: 0–127

Delay Length (Key On Delay Note Length)

This parameter is available when *KeyOnDly Sync* is set to On. You can set the timing for *Key On Delay* by using musical note values.

Settings: 1/16 (sixteenth notes), 1/8 Tri. (eighth-note triplets), 1/16 Dot. (dotted sixteenth notes), 1/8 (eighth notes), 1/4 Tri. (quarter-note triplets), 1/8 Dot. (dotted eighth notes), 1/4 (quarter notes), 1/2 Tri. (half-note triplets), 1/4 Dot. (dotted quarter notes), 1/2 (half notes), Whole Tri. (whole-note triplets), 1/2 Dot. (dotted half notes), 1/4 × 4 (quarter-note quadruplets; four quarter notes to the beat), 1/4 × 5 quarter-note quintuplets; five quarter notes to the beat), 1/4 × 6 (quarter-note sextuplets; six quarter notes to the beat), 1/4 × 7 (quarter-note septuplets; seven quarter notes to the beat), 1/4 × 8 (quarter-note octuplets; eight quarter notes to the beat)

Zone Settings ☆

The screen here is the same as the one opened from *General/Pitch → Zone Settings* on the *Part Edit (AWM2)*.

FM-X Settings ☆

On the *FM-X Settings* screen, you can set the *FM Color* parameters provided as a convenient editing tool for the FM-X sounds as well as the Algorithm (or how the Operators are arranged).

[PERFORMANCE] → *Part Common* selection → [EDIT/ ⏻] → *General/Pitch* → *FM-X Settings*

FM Attack

Controls the Attack Time of the EG that changes the depth of the frequency modulation over time.

Settings: −99–+99

FM Decay

Controls the Decay Time of the EG that changes the depth of the frequency modulation over time.

Settings: −99–+99

FM Sustain

Controls the Sustain Level of the EG that changes the depth of the frequency modulation over time.

Settings: −99–+99

FM Release

Controls the Release Time of the EG that changes the depth of the frequency modulation over time.

Settings: −99–+99

Algorithm (Algorithm Number)

Changes the Algorithm.
Settings: Refer to the *Data List*.

Feedback (Feedback Level)

Feedback causes the Operator to modulate itself by sending some of the output signals back. Here with this parameter, you can set the degree of such modulation.

Settings: 0–7

FM Depth

Changes the depth of the frequency modulation.

Settings: −99–+99

FM Harmonics

Changes the frequency of the harmonic overtones of FM synthesis.

Settings: −99–+99

FM Texture

Changes the texture of FM synthesis.

Settings: −99–+99

Algorithm Search

Opens the *Algorithm Search* screen.

Filter Offset FEG Depth

Sets the range of the cutoff frequency change by the FEG.

Settings: −64–+63

Filter Offset Cutoff (Filter Cutoff Frequency)

Changes the sound by setting the cutoff frequency of the filter. When the Low Pass Filter is selected, larger values here result in a brighter sound, and smaller values result in a darker sound.

This parameter is specified as an offset value to the filter cutoff frequency.

Settings: −64–+63

Filter Offset Resonance (Filter Offset Resonance/Width)

Adds special characteristics to the sound by adjusting the signal level near the cutoff frequency. This is specified as an offset value to the filter resonance.

Settings: −64–+63

Filter Type

Opens the setting screen for Filter Type.

Filter EG

Opens the *Filter EG* screen.

Pitch ☆

The screen here is basically the same as the one opened from *General/Pitch → Pitch* on the *Part Edit (AWM2)*, except that *Legato Slope (Portamento Legato Slope)* is invalid.

PEG/Scale ☆

On the *PEG/Scale* screen, you can set the pitch envelope generator and scale for the Part.

Operation

[PERFORMANCE] → *Part Common* selection → [EDIT/ ⟳] → *General/Pitch → PEG/Scale*

Attack Time (PEG Attack Time)

Sets the length of time it takes for the pitch to change from the moment you press a key on the keyboard until the time the pitch reaches the value set at *Attack Level*.

Settings: 0–99

Decay1 Time (PEG Decay 1 Time)

Sets the length of time it takes for the pitch to change from the *Attack Level* to the *Decay 1 Level*.

Settings: 0–99

Decay2 Time (PEG Decay 2 Time)

Sets the length of time it takes for the pitch to change from the *Decay 1 Level* to the *Decay 2 Level*.

Settings: 0–99

Release Time (PEG Release Time)

Sets the length of time it takes for the pitch to change from the moment you have released the key until it reaches the *Release Level*.

Settings: 0–99

Initial Level (PEG Initial Level)

Sets the pitch for the moment you press the key.

Settings: −50–+50

Attack Level (PEG Attack Level)

Sets the pitch to change from *Initial Level* after you have pressed a key.

Settings: −50–+50

Decay1 Level (PEG Decay 1 Level)

Sets the next pitch value to change from the *Attack Level*.

Settings: −50–+50

Decay2 Level (PEG Decay 2 Level)

Sets the next pitch value to change from the *Decay 1 Level*.

Settings: −50–+50

Release Level (PEG Release Level)

Sets the final pitch to reach after you have released the key.

Settings: −50–+50

PEG Depth

Sets the amount of pitch change controlled by the PEG.

Settings: *8 oct*, *2 oct*, *1 oct*, *0.5 oct*

> For example, when this parameter is set to *8 oct*, you can specify the smallest value to the Pitch EG level to create a pitch change of −4 octaves by sending the pitch value 0 to the internal tone generator, and by specifying the largest value to create a pitch change of +4 octaves.

Depth/Vel (PEG Depth Velocity Sensitivity)

Sets how the time of the pitch change in PEG responds to Velocity or the strength of the keystroke.

Settings: 0–7

Time/Key (PEG Time Key Follow Sensitivity)

Sets how the speed of the pitch change in PEG responds to key position.

The speed change in PEG is used for the specified key in *Center Key* (fixed to C3).

Settings: 0–7

> **Positive values**: The lower the key played, the slower the change in the PEG; the higher the key played, the faster the change in the PEG.
>
> **0**: No PEG changes regardless of the key position.

Random Pitch (Random Pitch Depth)

Changes the pitch of the Element randomly each time the key is pressed.

Settings: 0–127

Pitch/Vel (Pitch Velocity Sensitivity)

Sets how the pitch responds to Velocity or the strength of the keystroke.

Settings: −64–+63

> **Positive value**: The faster the Velocity, the higher the pitch becomes.
>
> **Negative value**: The faster the Velocity, the lower the pitch becomes.
>
> **0**: No pitch change

Filter / Amp ★

Filter Type ☆

The screen here is the same as the one opened from *Filter → Type* on the *Part Edit (AWM2) Element Edit*.

Filter EG ☆

The screen here is the same as the one opened from *Filter → Filter EG* on the *Part Edit (AWM2) Element Edit*.

Filter Scale ☆

The screen here is the same as the one opened from *Filter → Scale* on the *Part Edit (AWM2) Element Edit*.

Amp EG ☆

The screen here is the same as the one opened from *Filter/Amp → Amp EG* on the *Part Edit (AWM2)*.

Effect ★

Routing ☆

The screen here is basically the same as the one opened from *Effect → Routing* on the *Part Edit (AWM2)*; however, there are a few differences as shown below.

- No output setting for each Element
- Cannot select *Parallel* for *Ins Connect*

Ins A
Ins B ☆

The screen here is the same as the one opened from *Effect → InsA* or *InsB* on the *Part Edit (AWM2)*.

3-band EQ ☆

The screen here is the same as the one opened from *Effect → 3-band EQ* on the *Part Edit (AWM2)*.

2-band EQ ☆

The screen here is the same as the one opened from *Effect → 2-band EQ* on the *Part Edit (AWM2)*.

Arpeggio ★

Common ☆

The screen here is the same as the one opened from *Arpeggio → Common* on the *Part Edit (AWM2)*.

Individual ☆

The screen here is the same as the one opened from *Arpeggio → Individual* on the *Part Edit (AWM2)*.

Advanced ☆

The screen here is the same as the one opened from *Arpeggio → Advanced* on the *Part Edit (AWM2)*.

Motion Seq ★

Common ☆

The screen here is the same as the one opened from *Motion Seq → Common* on the *Part Edit (AWM2)*.

Lane ☆

The screen here is the same as the one opened from *Motion Seq → Lane* on the *Part Edit (AWM2)*.

Mod/Control ★

Control Assign ☆

Operation

[PERFORMANCE] → *Part Common* selection → [EDIT/ ⟳] → *Mod/Control → Control Assign*

The screen here is basically the same as the one opened from *Mod/Control → Control Assign* on the *Part Edit (AWM2)*, except that the available *Destination* settings are different.

For a list of settings, refer to the *Data List*.

Also, the parameters shown below are the ones available, instead of *ElementSw*.

Operator Sw (Operator Switch)

You can set the controller setting for each Operator on or off. This parameter is shown only when the selected *Destination* is related to Operators.

Settings: Off, On

Operator Rate

Sets the sensitivity of the controller selected for the *Destination*.

This parameter is shown only when the *Destination* is set to *OP Freq* or *OP AEG Offset*.

Settings: −7–+7

Sw/Rate

Switches between the *Operator Sw* and *Operator Rate*.

This parameter is shown only when the *Destination* is set to *OP Freq* or *OP AEG Offset*.

Settings: Off, On

After Touch ☆

The screen here is basically the same as the one opened from *Mod/Control → After Touch* on the *Part Edit (AWM2)*, except that the available *Destination* settings are different.

Tx/Rx Switch ★

The screen here is the same as the one opened from *Mod/Control → Tx/Rx Switch* on the *Part Edit (AWM2)*.

Control Settings ★

The screen here is the same as the one opened from *Mod/Control → Control Settings* on the *Part Edit (AWM2)*.

Part LFO ★

On the *Part LFO* screen, you can set the Part LFO.

Operation

[PERFORMANCE] → *Part Common* selection → [EDIT/ ⟳] → *Mod/Control → Part LFO*

LFO Wave
Selects the LFO Wave and sets the type of cyclical changes for the LFOs.
Settings: *Triangle*, *Triangle+*, *Saw Up*, *Saw Down*, *Squ1/4*, *Squ1/3*, *Square*, *Squ2/3*, *Squ3/4*, *Trapezoid*, *S/H1*, *S/H2*, *User*

Edit User LFO
Opens the setting screen for the User LFO.
You can create an LFO waveform of up to 16 steps.

Tempo Sync (LFO Tempo Sync)

Sets the speed of the LFO Wave changes to synchronize to Arpeggio or Song playback.

Settings: Off (not synchronized), On (synchronized)

■ When *Tempo Sync* is set to Off

Speed (LFO Speed)

Sets the speed of LFO Wave changes.

This parameter is not available when *Tempo Sync* is set to On.

Settings: 0–63

Random Speed (Part LFO Random Speed Depth)

Changes the LFO Speed randomly.

This parameter is not available when *Tempo Sync* is set to On.

Settings: 0–127

■ When *Tempo Sync* is set to On

Tempo Speed (LFO Tempo Speed)

This parameter is available when *Tempo Sync* is set to On. You can set the speed of changes in LFO Wave by using musical note values.

Settings: 1/16 (sixteenth notes), 1/8 Tri. (eighth-note triplets), 1/16 Dot. (dotted sixteenth notes), 1/8 (eighth notes), 1/4 Tri. (quarter-note triplets), 1/8 Dot. (dotted eighth notes), 1/4 (quarter notes), 1/2 Tri. (half-note triplets), 1/4 Dot. (dotted quarter notes), 1/2 (half notes), Whole Tri. (whole-note triplets), 1/2 Dot. (dotted half notes), 1/4 × 4 (quarter-note quadruplets; four quarter notes to the beat), 1/4 × 5 quarter-note quintuplets; five quarter notes to the beat), 1/4 × 6 (quarter-note sextuplets; six quarter notes to the beat), 1/4 × 7 (quarter-note septuplets; seven quarter notes to the beat), 1/4 × 8 (quarter-note octuplets; eight quarter notes to the beat), 1/4 × 16 (sixteen quarter-notes to the beat), 1/4 × 32 (thirty-two quarter-notes to the beat), 1/4 × 64 (sixty-four quarter-notes to the beat)

Delay (LFO Delay Time)

Sets the delay time between the moment you press a key on the keyboard and the moment the LFO comes into effect.

The larger the value, the longer the delay time before the LFO comes into effect.
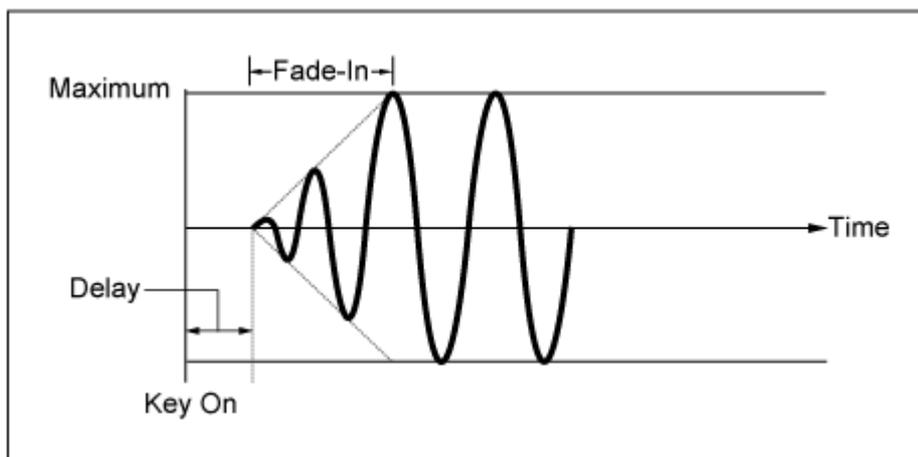
Settings: 0–127

Fade In (LFO Fade In Time)

Sets the amount of time for the LFO effect to fade in after the delay time set in *Delay (LFO Delay Time)* has elapsed.
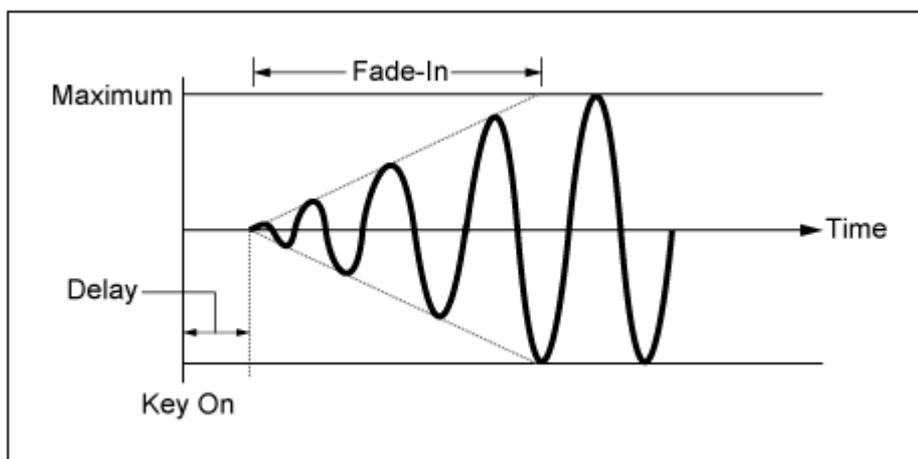
Settings: 0–127

> The larger the value, the longer it takes for the LFO effect to reach the maximum.
>
> **0**: LFO changes to the maximum value without any fade-in.

Low value: Fast fade-in
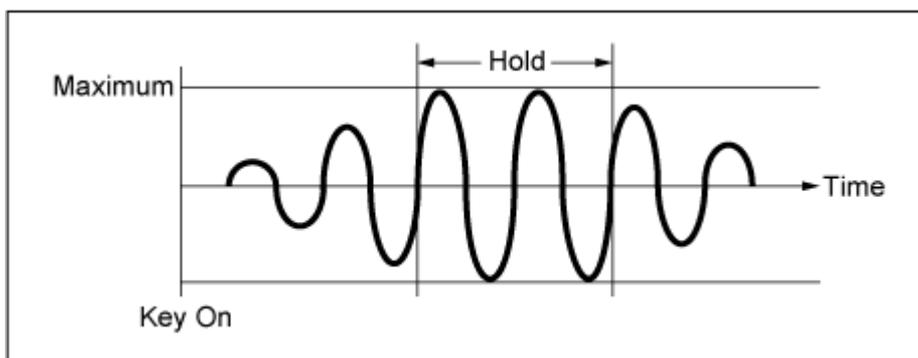
High value: Slow fade-in

Hold (LFO Hold Time)

Sets the time for maintaining the LFO effect after the maximum level has been reached.

Settings: 0–126, *Hold*

> *Hold*: Does not fade out

Fade Out (LFO Fade Out time)

Sets the amount of time for the LFO effect to fade out after the hold time set in *Hold (LFO Hold Time)* has elapsed.

The larger the value, the longer it takes for the LFO effect to fade out.

Settings: 0–127

Low value: Fast fade-out

High value: Slow fade-out

Key On Reset (LFO Key On Reset)

Resets the oscillation of the LFO when a key is pressed.

Settings: *Off*, *Each-on*, *1st-on*

Off   Does not reset the oscillation of the LFO. Pressing a key starts the LFO wave at whatever phase the LFO happens to be at that moment.

Each-on   Resets the oscillation of LFO every time a key is pressed and starts the waveform at the phase specified by the *Phase* parameter.

1st-on   Resets the oscillation of LFO every time a key is pressed and starts the waveform at the phase specified by the *Phase* parameter.

               When the second note is played while the first note is held, playback will not be reset.
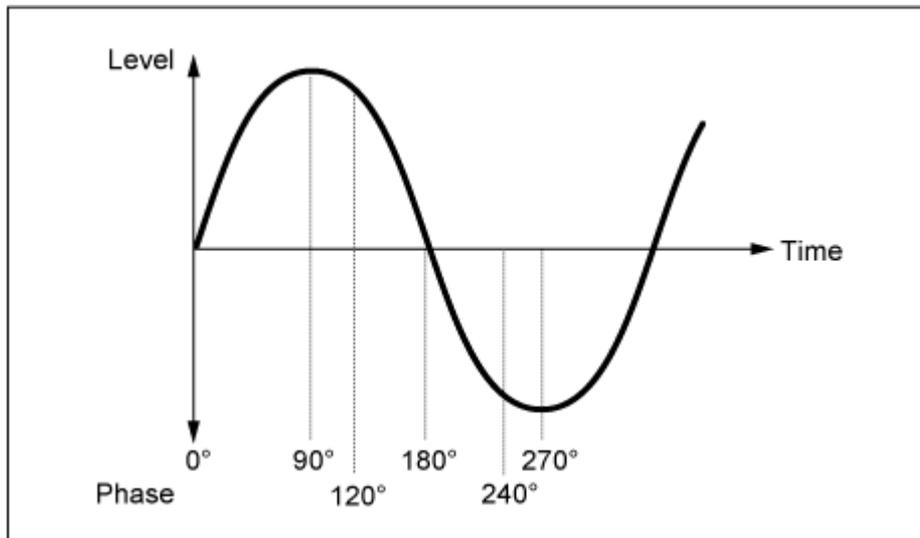
Loop (LFO Loop Switch)
Sets the *LFO Wave* to loop (repeat) playback or one-shot playback.
Settings: Off, On

Phase (LFO Phase)
Sets the initial phase for when *LFO Wave* is reset.
Settings: 0°, 90°, 120°, 180°, 240°, 270°

Destination (LFO Destination)

Sets the function to be controlled by the *LFO Wave*.

Settings: *Insertion Effect A Parameter1–24*, *Insertion Effect B Parameter1–24* (depending on the *Insertion Effect*)

Depth (LFO Depth)

Sets the depth of *LFO Wave* control for each *Destination*.
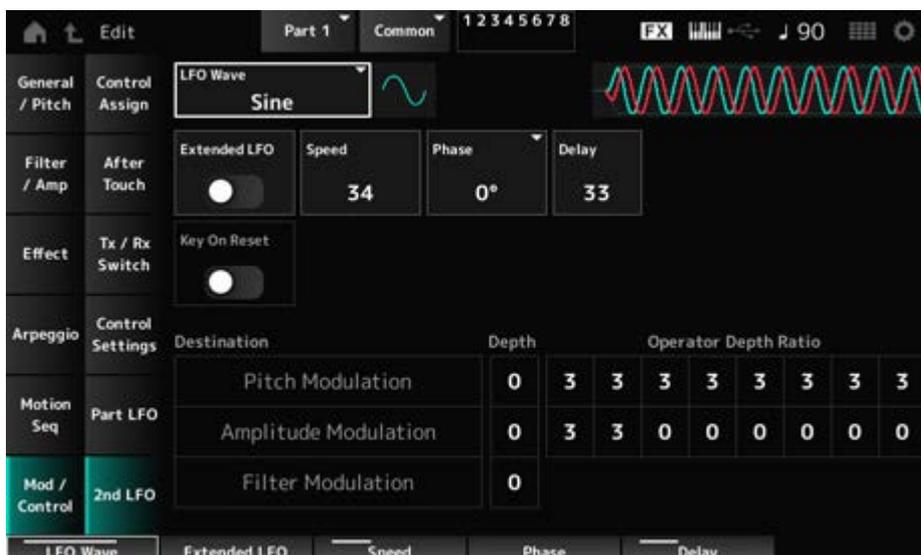
Settings: 0–127

2nd LFO

Operation

[PERFORMANCE] → *Part Common* selection → [EDIT/ ⟲] → *Mod/Control* → *2nd LFO*

LFO Wave (2nd LFO Wave)

Selects the 2nd LFO Wave.

Settings: *Triangle*, *Saw Down*, *Saw Up*, *Square*, *Sine*, *S/H*

The amplitude modulation phrase is shifted with *Sine*.

Extended LFO (2nd LFO Extended LFO)

Switches between the old set of settings (Off: 0–99) and a new set of settings with higher resolution (On: 0–415) for *Speed (2nd LFO Speed)*.
To maintain compatibility of data created with the old settings, set this parameter to Off.
Settings: Off, On

Speed (2nd LFO Speed)

Sets the speed of *LFO Wave (2nd LFO Wave)* changes.
Settings: 0–99 (When *Extended* is set to Off), 0–415 (When *Extended* is set to On)

Phase (2nd LFO Phase)

Sets the initial phase for when *LFO Wave (2nd LFO Wave)* is reset.
Settings: 0°, 90°, 180°, 270°

Delay (2nd LFO Delay Time)

Sets the time length for the 2nd LFO effect to fade in after you have released the key and the delay time set in Delay has elapsed.
Settings: 0–99

Key On Reset (2nd LFO Key On Reset)

Resets the oscillation of the 2nd LFO when a key is pressed.
Settings: Off, On

Pitch Modulation Depth (2nd LFO Pitch Modulation Depth)

This parameter creates a vibrato effect (cyclical changes to the pitch) by using the *LFO Wave (2nd LFO Wave)*, and lets you specify the depth of pitch modulation by the LFO.
Settings: 0–99

Pitch Modulation Operator Depth Ratio (2nd LFO Pitch Modulation Depth Offset)

Sets the depth of the modulation by LFO signals set in *Pitch Modulation Depth (2nd LFO Pitch Modulation Depth)*.
Settings: 0–7

Amplitude Modulation Depth (2nd LFO Amplitude Modulation Depth)

This parameter creates cyclical changes in the volume by using the *LFO Wave (2nd LFO Wave)*, and lets you specify the depth of volume modulation by the LFO.

Settings: 0–99

Amplitude Modulation Operator Depth Ratio (2nd LFO Amplitude Modulation Depth Offset)

Sets the depth of the modulation by LFO signals set in *Amplitude Modulation Depth (2nd LFO Amplitude Modulation Depth)*.

Settings: 0–7

Filter Modulation Depth (2nd LFO Filter Modulation Depth)

This parameter creates cyclical changes to the filter cutoff frequency by using the *LFO Wave (2nd LFO Wave)*, and lets you specify the depth of filter modulation by the LFO.

Settings: 0–99

Operator Edit ☆

<div style="border: 1px solid red;">

Contents

Form/Freq

Level

    Algorithm Search

</div>

Form/Freq ★

On the *Form/Freq* screen, you can set the waveform and frequency of the Operator.

Operation

[PERFORMANCE] → [EDIT/ 🔗] → *Part* selection → *Operator* selection → *Form/Freq*

Attack Time (PEG Attack Time)

Sets the length of time it takes for the pitch to reach the value set at the *Attack Level*.
Settings: 0–99

Decay Time (PEG Decay Time)

Sets the length of time it takes for the pitch to change from the value set at the *Attack Level* to the moment the PEG changes to the value 0.
Settings: 0–99

Initial Level (PEG Initial Level)
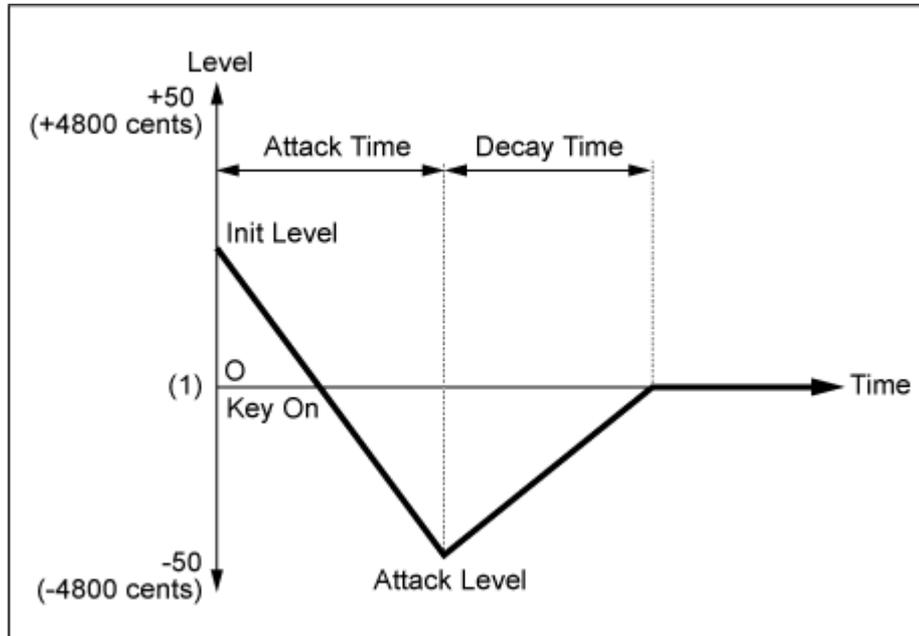
Sets the pitch for the moment you press the key.

Settings: −50–+50

Attack Level (PEG Attack Level)

Sets the change in pitch from the *Hold Level* or the moment you press a key.

Settings: −50–+50

(1)   Pitch (frequency) set to *Coarse Tune* and *Fine Tune*

Spectral (Spectral Form)

Sets the waveform for the selected Operator.

Settings: *Sine*, *All 1*, *All 2*, *Odd 1*, *Odd 2*, *Res 1*, *Res 2*

        Sine: Sine wave with no harmonic overtones

        All 1: Wave with harmonic overtones in a wide *Spectral* range

        All 2: Wave with harmonic overtones in a narrow *Spectral* range

        Odd 1: Wave containing odd harmonics in a wide *Spectral* range

        Odd 2: Wave containing odd harmonics in a narrow *Spectral* range

        Res 1: Wave having a peak on a particular harmonic in a wide *Spectral* range

        Res 2: Wave having a peak on a particular harmonic in a narrow *Spectral* range

Skirt (Spectral Skirt)

Sets the width of the transition band (skirt).

The smaller the value, the narrower the skirt becomes to boost a particular harmonic.

This parameter is not available when *Spectral* is set to *Sine*.

Settings: 0–7

Resonance (Spectral Resonance)
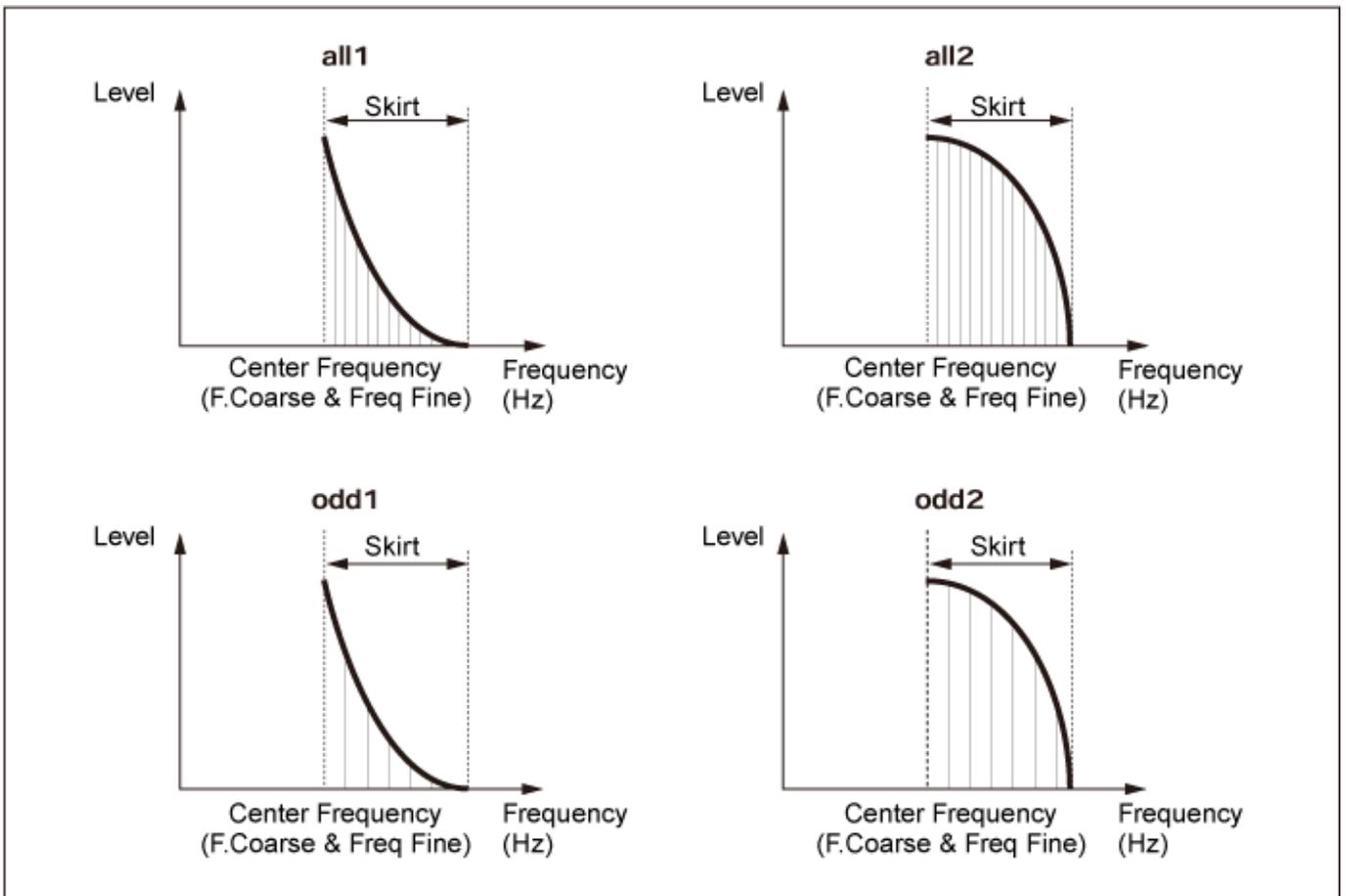
Sets the sensitivity of the resonance effect in *Spectral*.

The center frequency will be shifted to higher-order harmonics, so you can create the resonance effect or add special characteristics to the sound.
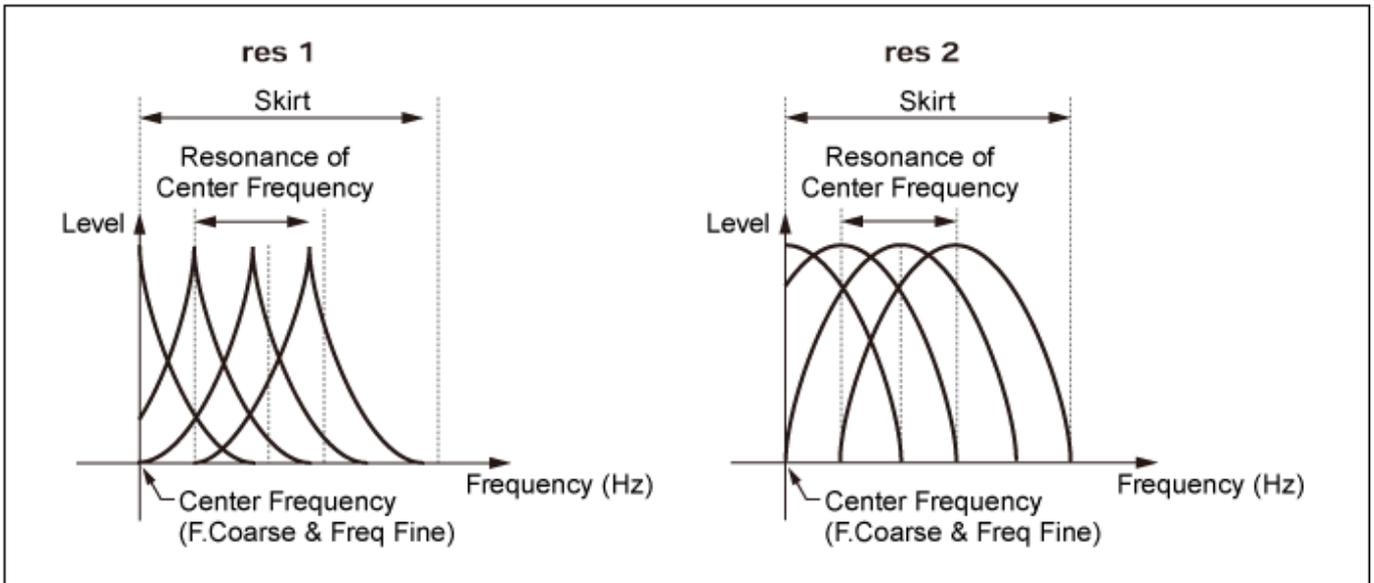
This parameter is available only when *Spectral* is set to *Res 1* or *Res 2*.

Settings: 0–99

Sine is a simple waveform containing only the fundamental wave with no harmonics, while other waveforms contain harmonic overtones. Therefore, when you have set Form to a wave other than *Sine*, the parameters related to the harmonics and its "peak" values (formants) will be available. Below are some specific parameters for controlling each wave explained in *Spectral*.

You can increase the number of harmonic overtones by setting a larger *Skirt* value to expand the spectrum range.

Setting a larger *Resonance* value will shift the center frequency to higher-order harmonics.

Resonance is set to 0: Shifts to the first harmonic.

Resonance is set to 99: Shifts to the 100th harmonic.

Key On Reset (Oscillator Key On Reset)

Resets the oscillation of the Oscillator when a key is pressed.

Settings: Off, On

> **Off**: Does not reset the oscillation of the Oscillator. Pressing a key starts the LFO wave at whatever phase the LFO happens to be at that moment.

Pitch/Vel (Pitch Velocity Sensitivity)

Sets how the pitch responds to Velocity or the strength of the keystroke.

This parameter is available only when *Freq Mode* is set to *Fixed*.

Settings: −7–+7

> **Positive value**: The faster the Velocity, the higher the pitch becomes.
> **Negative value**: The faster the Velocity, the lower the pitch becomes.
> **0**: kept unchanged

Freq Mode (Oscillator Frequency Mode)

Sets the output pitch of the Operator.

Settings: *Ratio*, *Fixed*

> **Ratio**: Sets the output pitch according to the key.
> **Fixed**: Sets the pitch to the *Coarse* or *Fine* setting, regardless of the pitch of the key being pressed.

Coarse (Coarse Tune)

Adjusts the output pitch of each Operator.

Settings: When *Freq Mode* is set to *Ratio*: 0–31

When *Freq Mode* is set to *Fixed*: 0–21

Fine (Fine Tune)

Finely adjusts the output pitch of each Operator.

Settings: When *Freq Mode* is set to *Ratio*: 0–99

When *Freq Mode* is set to *Fixed*: 0–127

Detune

Sets the output pitch of each Operator slightly higher or lower.

When the same value is set to *Coarse* and *Fine*, the Operator with the *Detune* setting will have slight pitch differences. As a result, you can create a warmer sound or chorusing effect.

Settings: −15–+15

Pitch/Key (Pitch Key Follow Sensitivity)

Sets the difference in pitch between two adjacent keys.

This parameter is available only when *Freq Mode* is set to *Fixed*.

Settings: 0–99

0: No pitch difference between the two adjacent keys and all keys are played at the pitch set in *Coarse* or *Fine*.

99: Pitch difference between two adjacent keys is set to a semitone.

Level ★

On the *Level* screen, you can set the general parameters for the Operator.

Operation

[PERFORMANCE] → [EDIT/ ⟳] → *Part* selection → *Operator* selection → *Level*

Hold Time (AEG Hold Time)

Sets the length of time it takes for the value to change from the moment you have pressed a key on the keyboard until the value reaches the *Hold Level*.

Settings: 0–99

Attack Time (AEG Attack Time)

Sets the length of time it takes for the value to change from the moment you press a key on the keyboard until the time the value reaches the *Attack Level*.

Settings: 0–99

Decay 1 Time (AEG Decay 1 Time)

Sets the length of time it takes for the value to change from *Attack Level* to *Decay 1 Level*.

Settings: 0–99

Decay 2 Time (AEG Decay 2 Time)

Sets the length of time it takes for the value to change from *Decay 1 Level* to *Decay 2 Level*.

Settings: 0–99

Release Time (AEG Release Time)

Sets the length of time it takes for the value to change from the moment you have pressed a key on the keyboard until when the value reaches the *Hold (Release) Level*.

Settings: 0–99

AEG Attack Level

Sets the value to be changed to after pressing a key.

Settings: 0–99

AEG Decay 1 Level

Sets the next value to change from the *Attack Level*.

Settings: 0–99

AEG Decay 2 Level
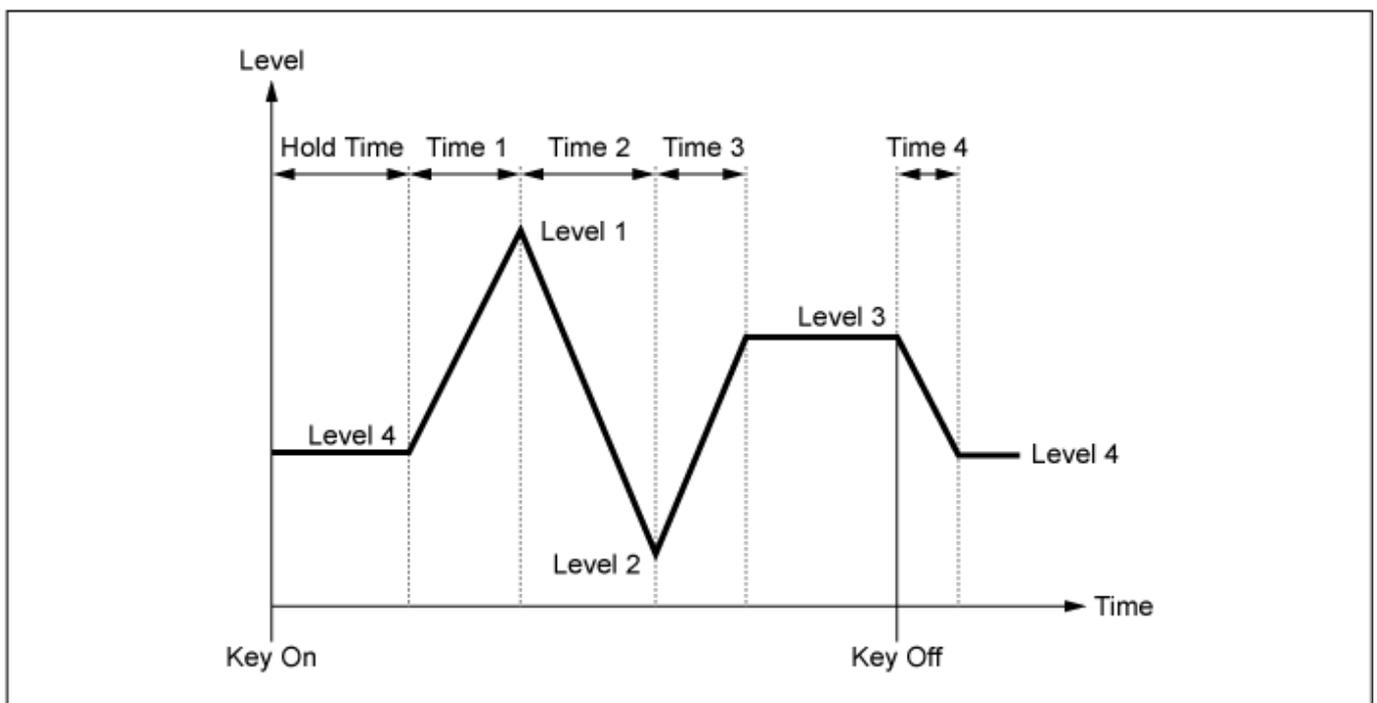
Sets the value that is maintained while the key is held down.

Settings: 0–99

Rel (Hold) Level (AEG Release (Hold) Level)

Sets the final value to reach after you have released the key.

Settings: 0–99

Level (Operator Level)

Sets the output level for the Operator.

Settings: 0–99

Level/Vel (Level Velocity Sensitivity)

Sets how the Level responds to Velocity or the strength of the keystroke.

Settings: −7–+7

> **Positive values**: The faster the Velocity, the louder the volume becomes.
> **Negative values**: The slower the Velocity, the louder the volume becomes.
> **0**: No change regardless of the velocity setting.

Time/Key (AEG Time Key Follow Sensitivity)

Sets how the speed of the level change in AEG responds to key position.

Settings: 0–7

> **Positive values**: The lower the key played, the slower the AEG volume changes; the higher the key played, the faster the AEG volume changes.
>
> **0**: No AEG volume change regardless of the key position.

Break Point (Level Scaling Break Point)

Sets the note number for the *Break Point* of amplitude scaling.

Settings: A−1–C8

Lvl/Key Lo (Level Scaling Low Depth)
Lvl/Key Hi (Level Scaling High Depth)

Sets the steepness of the change curve.

Settings: 0–99
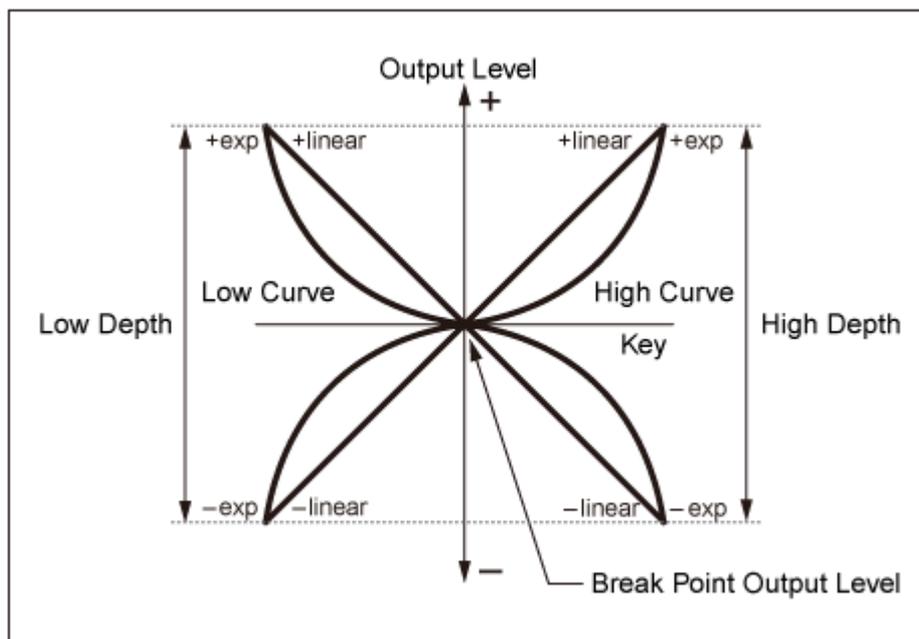
Curve Lo (Level Scaling Low Curve)
Curve Hi (Level Scaling High Curve)

Sets the change curve for amplitude scaling.

Settings: *−Linear*, *−Exp*, *+Exp*, *+Linear*

The keyboard is divided in two at the *Break Point*. Set *Curve Lo* for the steepness of the curve on the left side of the *Break Point*, and *Lvl/Key Lo* for the steepness of the curve on the right side of the *Break Point*.

Similarly, set *Curve Hi* to select the curve for the right side of the *Break Point*, and *Lvl/Key Hi* to the steepness of the curve (as shown below.)
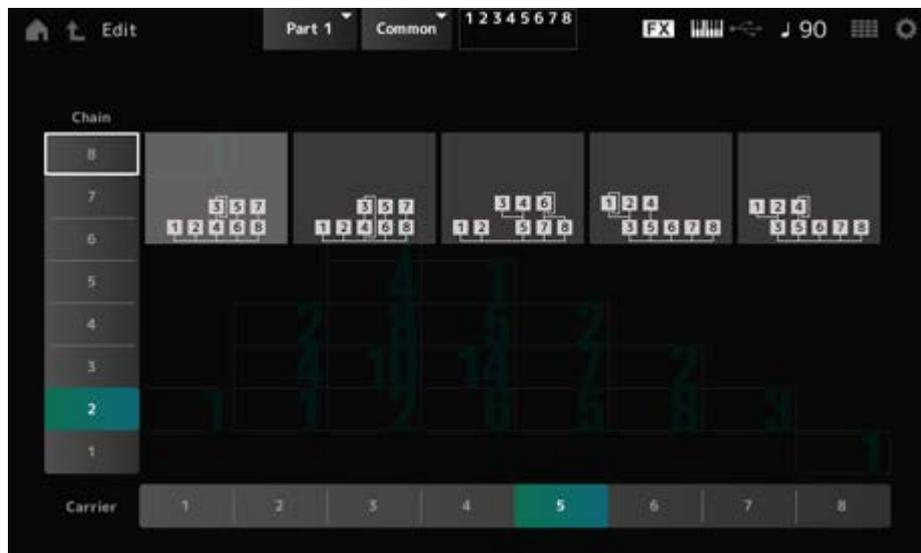
The key at the *Break Point* is the same as the output level set in the Operator Level. With the keys on the left side of the *Break Point*, the output level is corrected to the curve set in *Curve Lo (Level Scaling Low Curve)* and *Lvl/Key Lo (Level Scaling Low Depth)*. With the keys on the right side of the *Break Point*, the output level is corrected to the curve set in *Curve Hi (Level Scaling High Curve)* and *Lvl/Key Hi (Level Scaling High Depth)*. The output level of *Exp* curves changes exponentially, while the output level of *Liner* curves changes linearly. In either case, the farther away from the *Break Point*, the larger the changes to the output level.

Algorithm Search ★

Opens the *Algorithm Search* screen.
You can filter the search result based on the number of Operators connected in chains and the number of carriers.

Chain
You can filter the search result based on the number of Operators connected in chains.
Settings: 1–8

Carrier
You can filter the search result based on the number of carriers.
Settings: 1–8

Part Edit (AN-X) screen ☆

The Normal Part (AN-X) consists of three Oscillators and Noise.
The *Part Edit (AN-X)* includes *Part Common Edit* for setting parameters for the entire Part and *Oscillator Edit* for setting parameters for each Oscillator and *Noise Edit* for editing Noise.

Part Common Edit ☆

Contents

General/Pitch ★

Part Settings ☆

The screen here is the same as the one opened from *General/Pitch → Part Settings* on the *Part Edit (AWM2)*.

Zone Settings ☆

The screen here is the same as the one opened from *General/Pitch → Zone Settings* on the *Part Edit (AWM2)*.

AN-X Settings ☆

On the *AN-X Settings* screen, you can set the parameters that are specific to the AN-X sound engine.

Operation

[PERFORMANCE] → *Part Common* selection → [EDIT/ 🔗] → *General/Pitch → AN-X Settings*

Unison

Creates thickness by layering multiple sounds.

Settings: *Off*, 2, 4

Unison Detune

Sets how the pitch of the layered sound is to be shifted.

Settings: 0–15

Unison Spread

Sets how the layered sounds are spread in the stereo field.

Settings: 0–15

OSC Reset

Specifies how to reset the Oscillator.
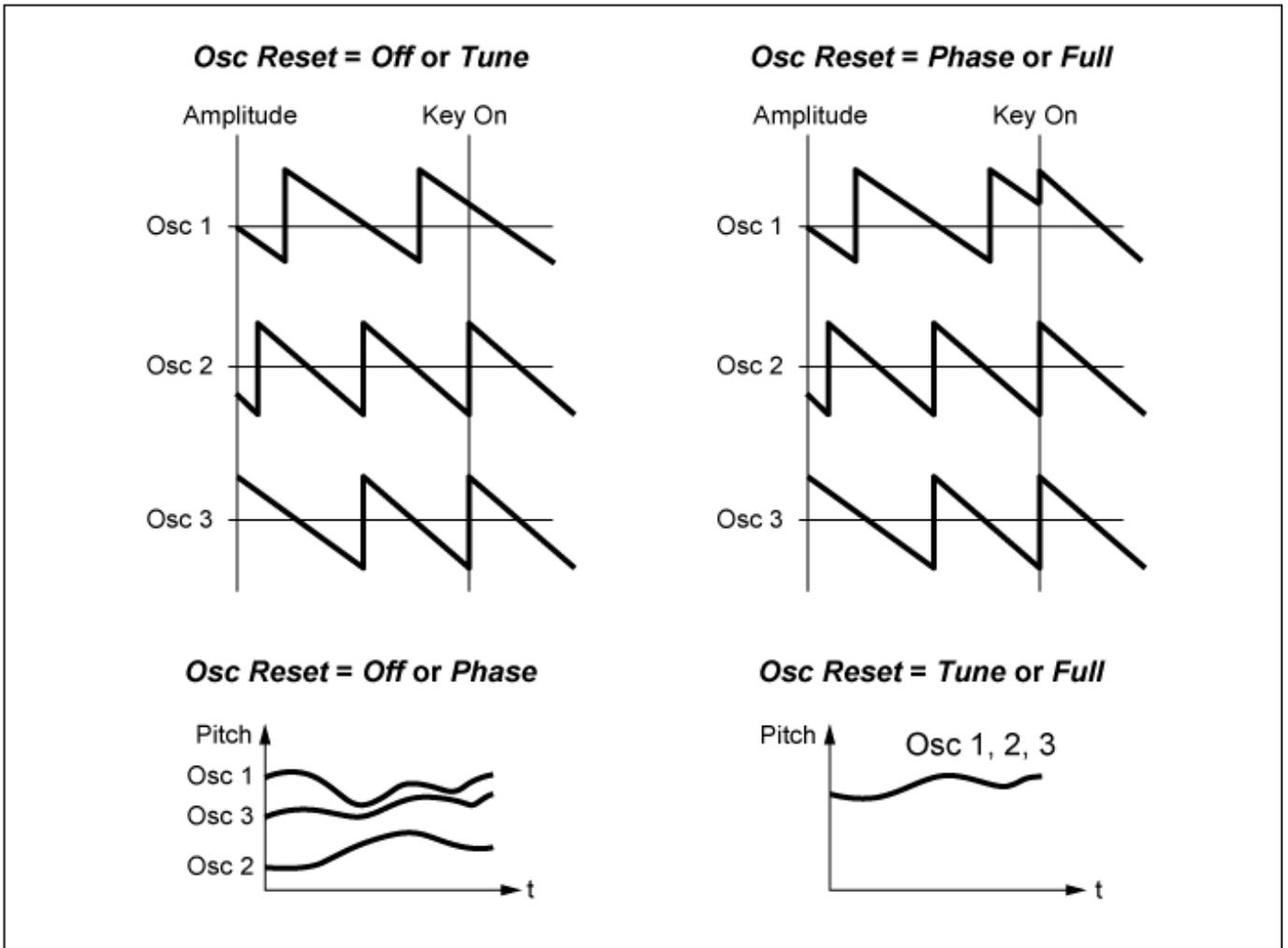
Settings: *Off*, *Phase*, *Tune*, *Full*

>   ***Off***: Does not reset.
>   ***Phase***: Resets the phase of OSC 1–3 at key-on.
>   ***Tune***: Makes the pitch of OSC 1–3 uniform.
>   ***Full***: Enables both Phase and Tune simultaneously.

Osc Reset = Off or Tune — Osc Reset = Phase or Full — Osc Reset = Off or Phase — Osc Reset = Tune or Full

Voltage Drift

Specifies the pitch of the Oscillator and variation of *Filter Cutoff*.

Oscillator pitch and variation of *Filter Cutoff* are affected by *Ageing*.

Settings: 0–127

> **0**: No variation
> **64**: Standard
> **127**: Maximum variation
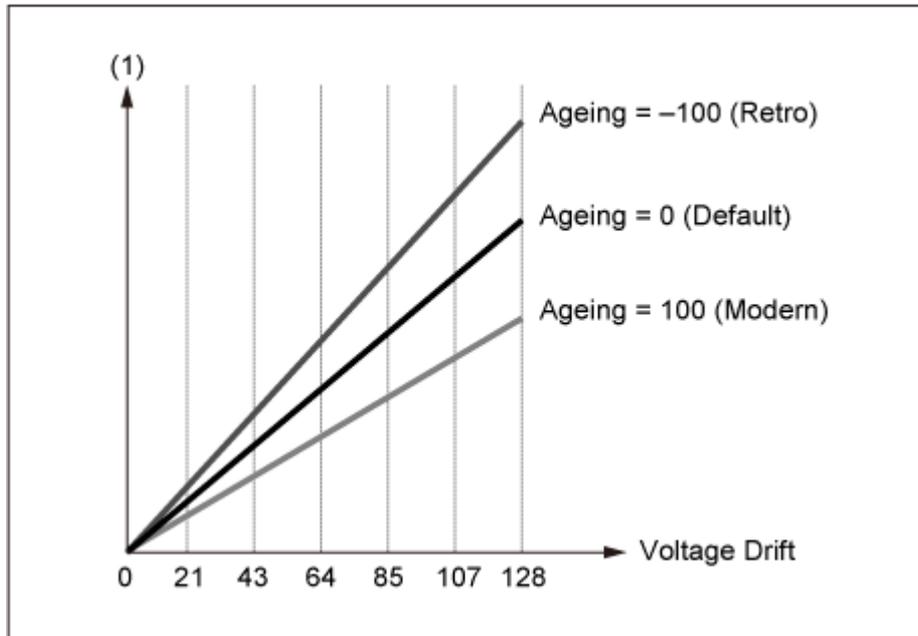
Ageing

Adjusts the frequency response as well as *OSC Pitch*, *Filter Cutoff*, and *EG Time* according to the virtual age of the instrument model.

Settings: −100 (old)–+100 (new)

■ **Correlation between *Voltage Drift* and *Ageing***

396

(1)   Variations in *Cutoff* or *Pitch*

Pitch ☆

The screen here is the same as the one opened from *General/Pitch → Pitch* on the *Part Edit (AWM2)*, except that *Legato Slope (Portamento Legato Slope)* is invalid.

Pitch EG ☆

On the *Pitch EG* screen, you can set the Pitch Envelope Generator.
You can use it to set how the sound changes over time, starting from the moment you press a key on the keyboard to when the sound decays.

Operation

[PERFORMANCE] → *Part Common* selection → [EDIT/ ⟲] → *General/Pitch → Pitch EG*

Attack (Pitch EG Attack Time)

Sets the length of time it takes for the EG to reach the maximum.

Settings: 0–255

Decay (Pitch EG Decay Time)

Sets the length of time it takes for the EG to reach the *Sustain* value.

Settings: 0–255

Sustain (Pitch EG Sustain Level)

Sets the sustain level.

Settings: 0–511

Release (Pitch EG Release Time)

Sets the length of time it takes after you have released the key until the EG reaches the value 0.

Settings: 0–255

Time/Vel (Pitch EG Time Velocity Sensitivity)

Sets how the velocity changes the EG over time.

The larger the value, the faster the EG changes over time when the keys are played with fast velocity.

Settings: −255–0–+255

PEG Depth - Osc 1–3 (Oscillator 1–3 Pitch EG Depth)

Sets the maximum amount of pitch change for the EG (in cents).

Settings: −4800–+4800 cents

    0: No pitch change

    The further the depth is from the value 0, the wider the pitch change range becomes.

    Negative value: Pitch change is inverted.

PEG Depth/Vel - Osc 1–3 (Oscillator 1–3 Pitch EG Depth Velocity Sensitivity)

Sets how the depth range of the pitch change controlled by the PEG responds to Velocity or the strength of the keystroke.

Also, with the *Curve* setting, you can set how the *PEG Depth* responds to velocity. The vertical axis represents velocity while the horizontal axis represents the depth range of the pitch change.

Settings: −255–+255
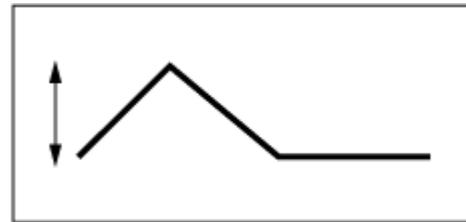
> **Positive value**: Faster velocity values widen the depth range of the PEG, while slower values narrow the depth range.
>
> **Negative value**: Faster velocity values narrow the depth range of the PEG, while slower values widen the depth range.
>
> **0**: No PEG changes regardless of the velocity setting.

Fast velocity
(the depth range in pitch change is wider)

Slow velocity
(the depth range in pitch change is narrower)

Pitch LFO ☆

On the *Pitch LFO* screen, you can set the Pitch LFO.

Operation

[PERFORMANCE] → *Part Common* selection → [EDIT/ ⏿] → *General/Pitch* → *Pitch LFO*

LFO Wave (Pitch LFO Wave)

Selects the LFO Wave and sets the type of cyclical changes to the LFOs.
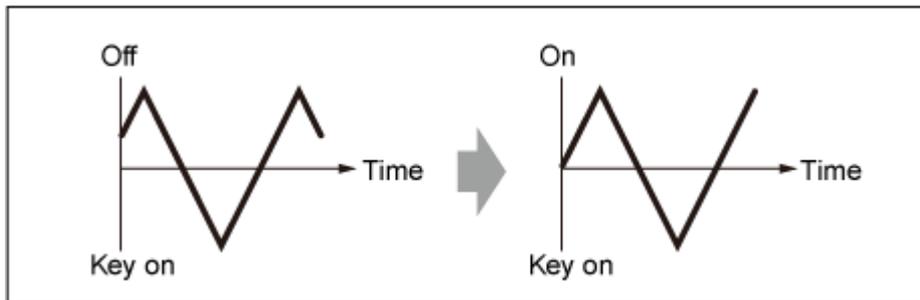
Settings: *Saw*, *Square*, *Triangle*, *Sine*, *Random*

Key On Reset (Pitch LFO Key On Reset)

Resets the phase of the LFO when a key is pressed.

Settings: Off, On

Speed (Pitch LFO Speed)

Sets the speed of LFO wave changes.

Settings: 0–415

Delay (Pitch LFO Decay Time)

Sets the delay time between the moment you press a key on the keyboard and the moment the LFO comes into effect.
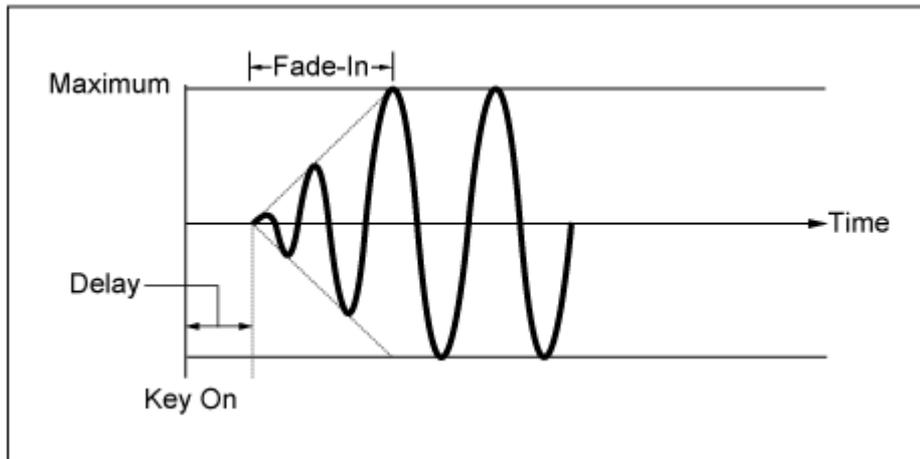
Settings: 0–127

Fade In (Pitch LFO Fade In Time)

Sets the time length for the LFO effect to fade in after you have released the key and the delay time set in Delay has elapsed.
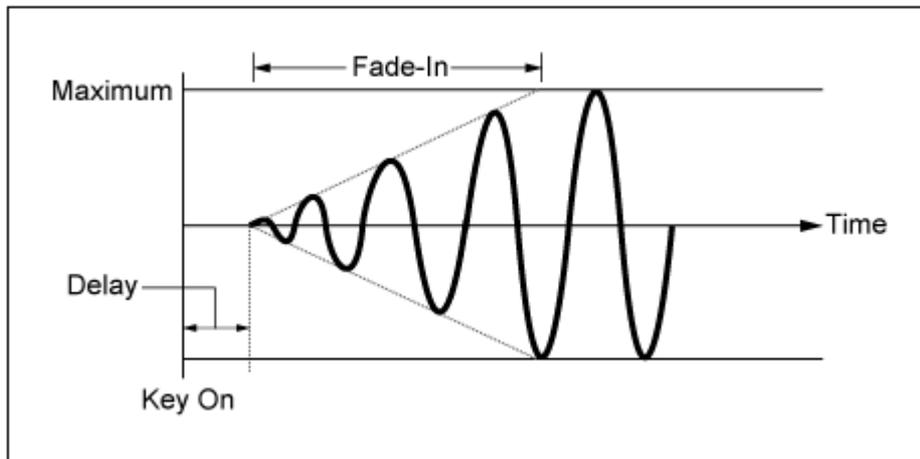
Settings: 0–214

The larger the value, the longer it takes for the LFO effect to reach the maximum.

0: The LFO changes to the maximum value without any fade-ins.

Small value: fast fade-in
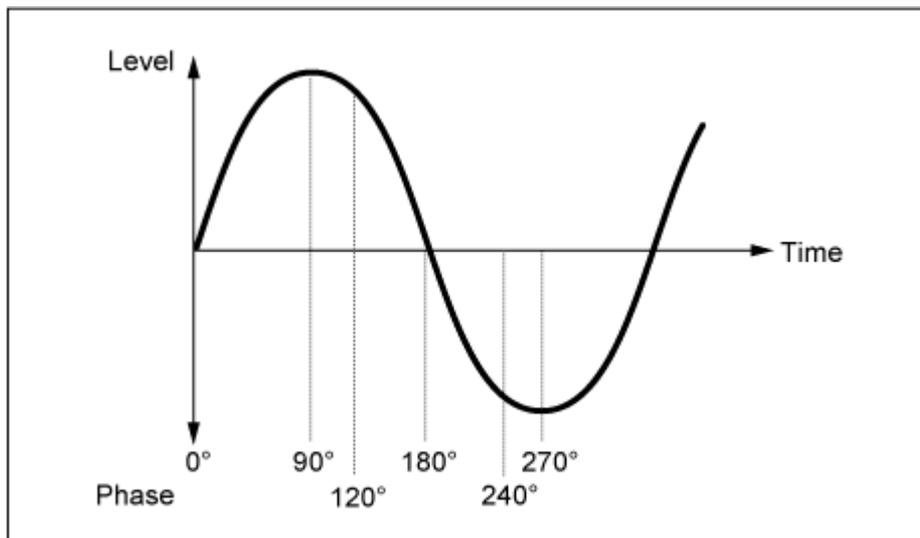
Large value: slow fade-in

Phase (Pitch LFO Phase)

Sets the phase for resetting the wave when a key is pressed.

Settings: 0, 30, 45, 60, 90, 120, 135, 150, 180, 210, 225, 240, 270, 300, 315, 330 (°)

Phase of the wave

Pitch LFO Depth - Osc 1–3 (Oscillator 1–3 Pitch LFO Depth)

Sets the depth range of pitch change controlled by the LFO.

Settings: −4800–+4800 cents

> **0**: No pitch change
>
> The further the depth is from the value 0, the wider the pitch change range becomes.
>
> **Negative value**: Pitch change is inverted.

Filter/Amp ★
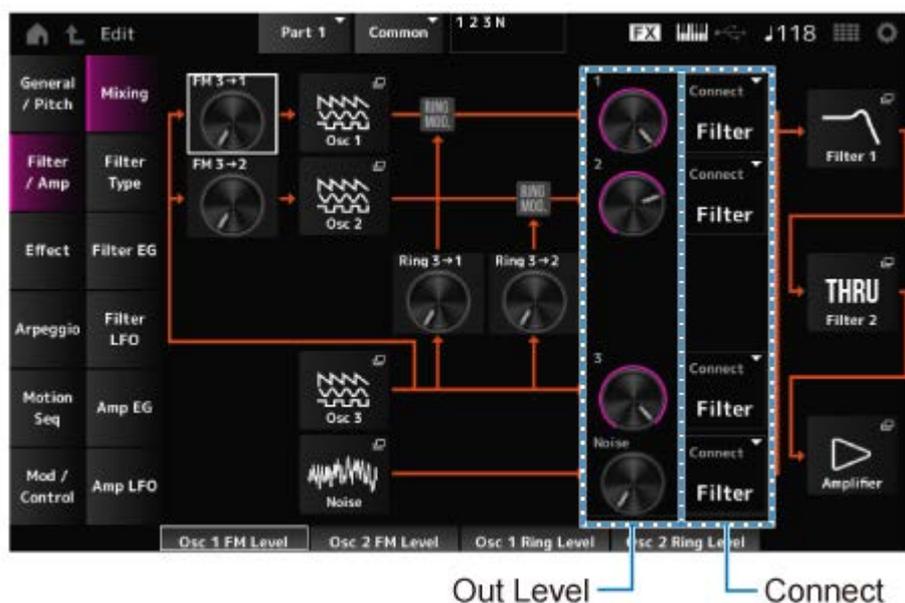
Mixing ☆

On the *Mixing* screen, you can set the output of each Oscillator while checking the signal flow diagram for the AN-X part.

Operation

[PERFORMANCE] → *Part Common* selection → [EDIT/ ⟳] → *Filter / Amp* → *Mixing*

FM 3 → 1 (Oscillator 1 FM Level)
FM 3 → 2 (Oscillator 2 FM Level)

Sets how OSC3 modulates OSC1 and OSC2 by using frequency modulation (FM).

Settings: 0–255

Osc 1 (Oscillator 1)
Osc 2 (Oscillator 2)
Osc 3 (Oscillator 3)

Opens the *OSC/Tune* screen for *Oscillator Edit*.

Noise

Opens the *Noise* screen.

Useful for creating various SFX sounds by using filters such as VCF and HPF on the noise signals.

Ring 3 → 1 (Oscillator 1 Ring Level)

Ring 3 → 2 (Oscillator 2 Ring Level)

Sets how the OSC3 modulates OSC1 and OSC2 by using Ring Modulation.

Settings: 0–255

1 (Oscillator 1 Out Level)

2 (Oscillator 2 Out Level)

3 (Oscillator 3 Out Level)

Noise (Noise Out Level)

1, 2, and 3 are for setting the Oscillator volume.

Noise is for adjusting the level of the signal output from the Noise Unit. You can control the level balance with other signals such as OSC 1, OSC 2, and Ring Modulator.

Settings: 0–511

Connect 1 (Oscillator 1 Out Select)

Connect 2 (Oscillator 2 Out Select)

Connect 3 (Oscillator 3 Out Select)

Noise Connect (Noise Out Select)

Sets the output destination for the Oscillators and Noise.

Settings: *Filter*, *Amp*

Filter 1

Filter 2

Opens the *Filter/Amp → Filter Type* screen for *Part Edit (AN-X)*.

Amplifier

Opens the *Filter/Amp → Amp EG* screen for *Part Edit (AN-X)*.

Filter Type ☆

On the *Filter Type* screen, you can select the filter type.

The available parameters differ depending on the filter type you have selected here.

Operation

Filter 1 Type

Filter 2 Type

Sets the filter.

The filters available for the AN-X are grouped into three types: LPF, HPF, and BPF.

Settings: *Thru*, LPF24, LPF18, LPF12, LPF6, HPF24, HPF18, HPF12, HPF6, BPF12, BPF6

- **LPF**
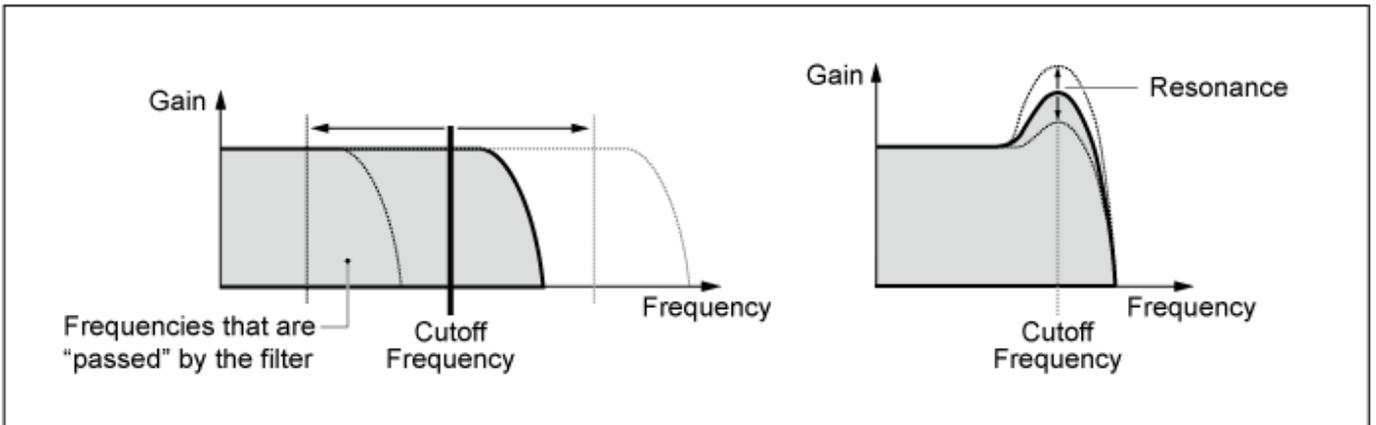
  Cuts the signals above the value set in Cutoff Frequency.

  The sound becomes brighter as you raise the Cutoff Frequency, since more signals are passed by the filter.

  The sound becomes darker as you lower the Cutoff Frequency, since signals are cut or blocked by the filter.

  You can produce a distinctive "peaky" sound by raising the Resonance or boosting the signal level near the Cutoff Frequency.

  This Filter Type is very popular and useful for producing classic synthesizer sounds.
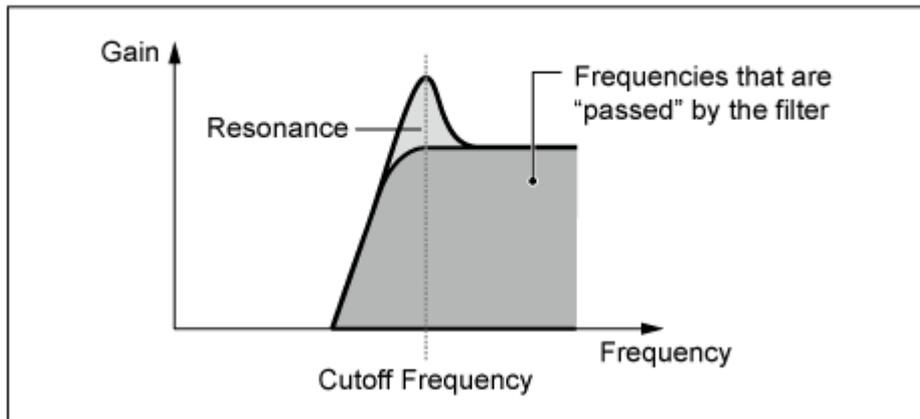
LPF24: −24 dB/oct
LPF18: −18 dB/oct
LPF12: −12 dB/oct
LPF6: −6 dB/oct

- **HPF**
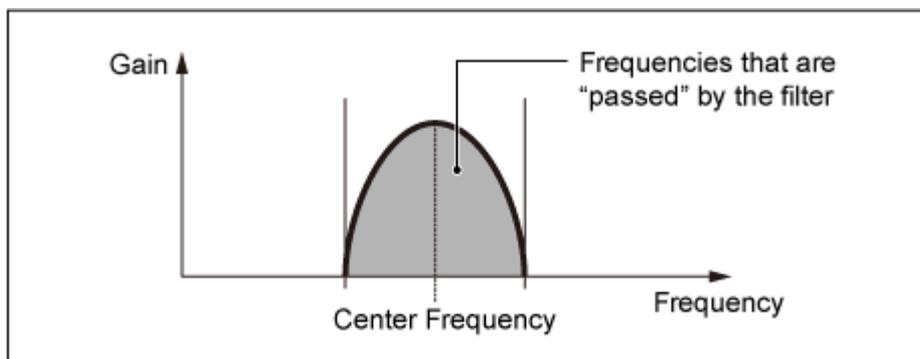
  A Filter Type that only passes signals above the Cutoff Frequency.
  You can produce a distinctive "peaky" sound by raising the Resonance or boosting the signal level near the Cutoff Frequency.

HPF24: −24 dB/oct
HPF18: −18 dB/oct
HPF12: −12 dB/oct
HPF6: −6 dB/oct

- **BPF**

  A Filter Type that only passes signals for a specific frequency band (Cutoff Frequency) and cuts all other signals.

BPF12: −12 dB/oct
BPF6: −6 dB/oct

Cutoff (Filter Cutoff)

Sets the cutoff frequency. The frequency set here is used by the filter set in *Type*.
Settings: 0–1023

Resonance (Filter Resonance)

Sets the size of the Resonance.
Settings: 0–255

Cutoff/Vel (Filter Cutoff Velocity Sensitivity)

Sets how Cutoff Frequency responds to Velocity or the strength of the keystroke.
Settings: −255–+255

> **Positive value**: The faster the Velocity, the higher the Cutoff Frequency value.
> **Negative value**: The slower the Velocity, the higher the Cutoff Frequency value.
> **0**: Cutoff Frequency does not respond to Velocity.

Res/Vel (Filter Resonance Velocity Sensitivity)

Sets how the resonance level responds to Velocity or the strength of the keystroke.
This parameter may not be available depending on the Filter Type.
Settings: −255–+255

> **Positive value**: The higher the Velocity, the greater the Resonance becomes.
> **Negative value**: The lower the Velocity, the greater the Resonance becomes.
> **0**: Resonance value does not change in response to Velocity.

Cutoff/Key (Filter Cutoff Key Follow)

Sets how the cutoff frequency level of the filter responds to the key position. When the value is set to 1oct, both the pitch and the cutoff frequency change at the same rate.
Settings: Off, 1/3oct, 1/2oct, 2/3oct, 1oct, 2oct

Filter 1 Drive (Filter 1 Saturator Drive)
Filter 2 Drive (Filter 2 Saturator Drive)

Sets the amount of distortion controlled by the Saturator section of the filter.
Settings: 0.0–60.0 (dB) (in units of 0.75 dB)

Filter 1 Drive/Vel (Filter 1 Saturator Drive Velocity Sensitivity)
Filter 2 Drive/Vel (Filter 2 Saturator Drive Velocity Sensitivity)

Sets how the *Drive* responds to Velocity.
Settings: −255–0–+255

F1 Out Level (Filter 1 Out Level)
F2 Out Level (Filter 2 Out Level)

Sets the output level for the Filter.
Settings: −12.0–+12.0 (dB) (in units of 0.375 dB)

Filter EG ☆

On the *Filter EG* screen, you can set the Filter Envelope Generator.
You can set how the *Filter Cutoff* changes over time, starting from the moment you press a key on the keyboard to when the sound decays.

Operation

[PERFORMANCE] → *Part Common* selection → [EDIT/ ⟳] → *Filter / Amp* → *Filter EG*

Attack (Filter Cutoff EG Attack Time)
Sets the length of time it takes for the EG to reach the maximum.
Settings: 0–255

Decay (Filter Cutoff EG Decay Time)
Sets the length of time it takes for the EG to change from the maximum to the *Sustain* level.
Settings: 0–255

Sustain (Filter Cutoff EG Sustain Level)
Sets the sustain level.
Settings: 0–511

Release (Filter Cutoff EG Release Time)
Sets the length of time it takes for the EG to reach a value of 0 after you have released the key.
Settings: 0–255

Time/Vel (Filter Cutoff EG Time Velocity Sensitivity)

Sets how the Cutoff Frequency responds to Velocity or the strength of the keystroke.

Settings: −255–0–+255

> **Positive values**: The faster the velocity the faster the FEG changes
>
> **Negative value**: Fast velocity values result in slower FEG changes, while slow velocity values result in faster FEG changes.
>
> **0**: No changes regardless of the Velocity setting.

FEG Depth - Filter 1–2 (Filter 1–2 Cutoff EG Depth)

Sets the depth range for the cutoff frequency change controlled by the FEG.

Settings: −9600–+9600 cents (in units of 50 cents)

> **0**: No changes to the cutoff frequency by the Filter EG.
>
> The depth range of the cutoff frequency change becomes wider the further the setting is from a value of 0.
>
> **Negative values**: Cutoff frequency changes are reversed.

FEG Depth/Vel - Filter 1–2 (Filter 1–2 Cutoff EG Depth Velocity Sensitivity)

Sets how the depth range of the cutoff frequency change controlled by the FEG responds to Velocity or the strength of the keystroke.

Settings: −255–0–+255

> **Positive values**: Faster velocity values widen the depth range of the Filter EG, while slower values narrow the depth range.
>
> **Negative values**: Faster velocity values narrow the depth range of the Filter EG, while slower values widen the depth range.
>
> **0**: Cutoff frequency does not respond to the Velocity.

Filter LFO ☆

On the *Filter LFO* screen, you can set the Filter LFO.

Operation

[PERFORMANCE] → *Part Common* selection → [EDIT/ ⌲] → *Filter / Amp* → *Filter LFO*

LFO Wave (Filter Common Cutoff LFO Wave)

Selects an LFO wave. By using the wave you have selected here, you can create various types of modulation.

Settings: *Saw*, *Square*, *Triangle*, *Sine*, *Random*

Key On Reset (Filter Common Cutoff LFO Key On Reset)

Resets the oscillation of the LFO when a key is pressed.

Settings: Off, On

Speed (Filter Common Cutoff LFO Speed)

Sets the speed of LFO wave changes.

Settings: 0–415

Delay (Filter Common Cutoff LFO Delay Time)

Sets the delay time between the moment you press a key on the keyboard and the moment the LFO comes into effect.

The larger the value, the longer the delay for the LFO to come into effect.

Settings: 0–127

Fade In (Filter Common Cutoff LFO Fade In Time)

Sets the time length for the LFO effect to fade in after you have released the key and the delay time set in *Delay* has elapsed.

Settings: 0–214

> The larger the value, the longer it takes for the LFO effect to reach the maximum.
>
> **0**: The LFO changes to the maximum value without any fade-ins.

Small value: fast fade-in

Large value: slow fade-in

Phase (Filter Common Cutoff LFO Phase)

You can set the initial phase for the time the LFO Wave is reset.

Settings: 0, 30, 45, 60, 90, 120, 135, 150, 180, 210, 225, 240, 270, 300, 315, 330 (°)

Phase of the wave

Depth (Filter Cutoff LFO Depth)

Sets the depth of the *LFO Wave* control for *Filter 1* and *Filter 2*.

Settings: −9600–+9600 (cents) (in units of 50 cents)

Amp EG ☆

On the *Amp EG* screen, you can set the AEG (Amplitude Envelope Generator).
By setting the Amp EG, you can set how the volume changes from the moment you press a key on the keyboard to when the sound decays.

Operation

[PERFORMANCE] → *Part Common* selection → [EDIT/ ⌇] → *Filter / Amp* → *Amp EG*

Attack (Amplitude EG Attack Time)

Sets the length of time it takes from the moment you press a key on the keyboard to when the *Amplitude Level* is reached.

Settings: 0–255

Decay (Amplitude EG Decay Time)

Sets the length of time it takes for the volume to change from the *Amplitude Level* to the *Sustain Level*.

Settings: 0–255

Sustain (Amplitude EG Sustain Level)

Sets the volume that is maintained while the key is held down.

Settings: 0–511

Release (Amplitude EG Release Time)

Sets the length of time it takes after you have release the key to when the sound decays.

Settings: 0–255

Time/Vel (Amplitude EG Time Velocity Sensitivity)
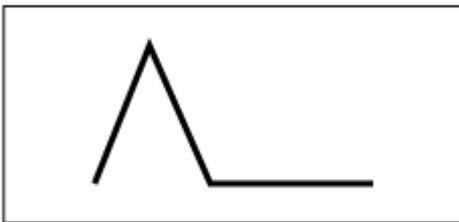
Sets the length of time it takes for volume changes in AEG to respond to Velocity or the strength of the keystroke.
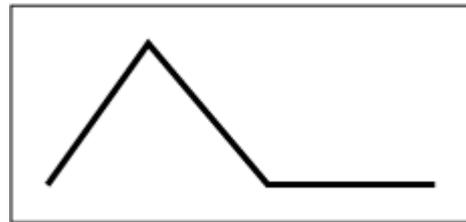
Settings: −255–+255

> **Positive value**: The faster the velocity, the faster the AEG volume changes.
> **Negative value**: Fast velocity values result in slower AEG volume changes, while slow velocity values result in faster AEG volume changes.
> **0**: No changes regardless of the velocity setting.

Fast velocity (fast volume change)   Slow velocity (slow volume change)

Level (Amplitude Level)

Sets the volume level of Amplitude.

Settings: 0–511

Level/Vel (Amplitude Level Velocity Sensitivity)

Sets how the Amplitude level responds to Velocity.

Settings: −255–0–+255

Level/Key (Amplitude Level Key Follow)

Sets how the *Amp Level* responds to pitch.

When *Amplitude Level Key* is set to 127, the *Amp Level* goes down 6 dB as the pitch goes up one octave.

Settings: 0–127

Drive (Amplitude Saturator Drive)

Sets the amount of distortion controlled by the Saturator of the Amplitude section.

Settings: 0.0–60.0 (dB) (in units of 0.75 dB)

Amp LFO ☆

On the *Amp LFO* screen, you can set the Amplitude LFO.

Operation
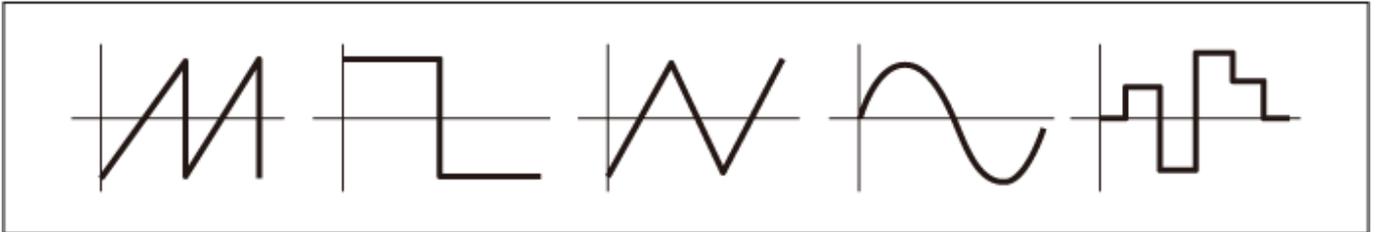
[PERFORMANCE] → *Part Common* selection → [EDIT/ ⟳] → *Filter / Amp* → *Amp LFO*

LFO Wave (Amplitude LFO Wave)

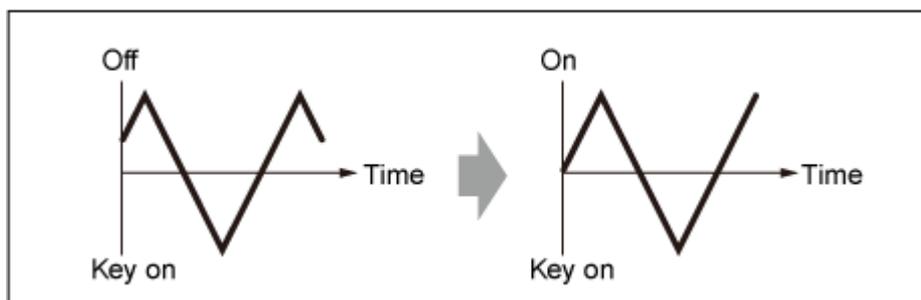Selects an LFO wave. By using the wave you have selected here, you can create various types of modulation.
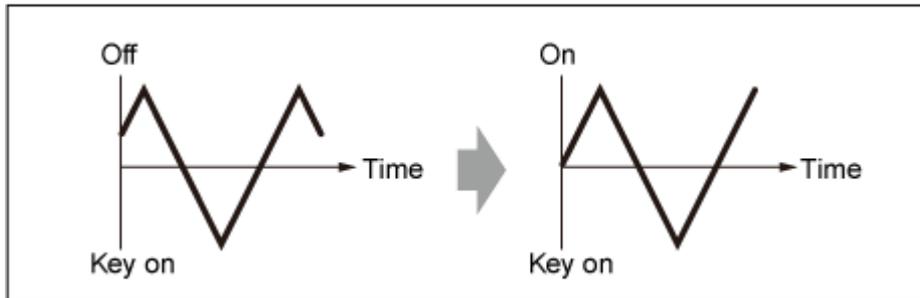
Settings: *Saw*, *Square*, *Triangle*, *Sine*, *Random*

Key On Reset (Amplitude LFO Key On Reset)

Resets the oscillation of the LFO when a key is pressed.

Settings: Off, On

Speed (Amplitude LFO Speed)

Sets the speed of LFO wave changes.

Settings: 0–415

Delay (Amplitude LFO Delay Time)

Sets the delay time between the moment you press a key on the keyboard and the moment the LFO comes into effect.

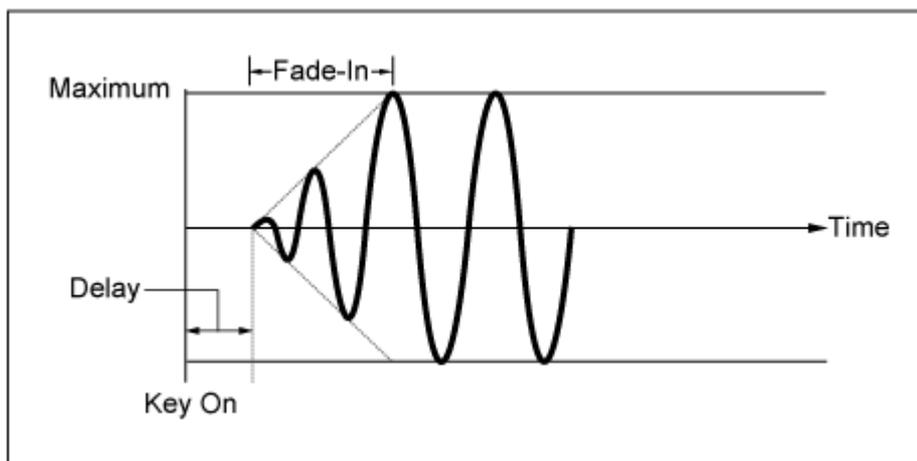The larger the value, the longer the delay time for the LFO to come into effect.
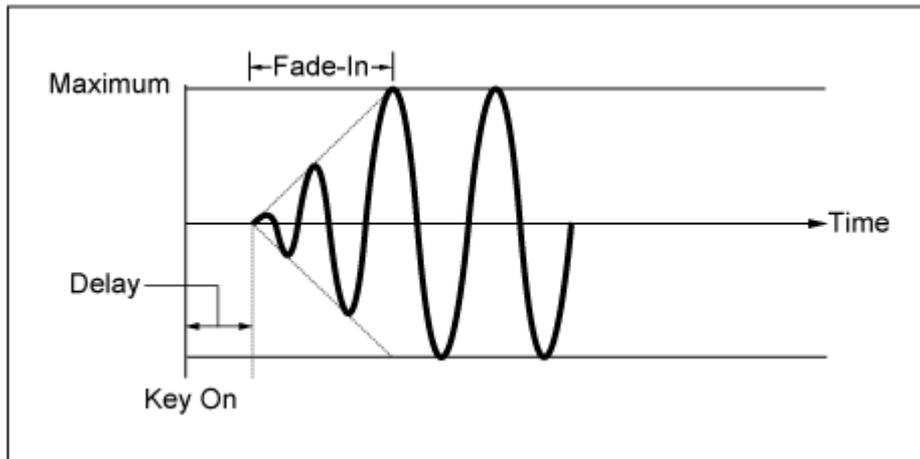
Settings: 0–127

Fade In (Amplitude LFO Fade In Time)

Sets the time length for the LFO effect to fade in after you have released the key and the delay time set in Delay has elapsed.
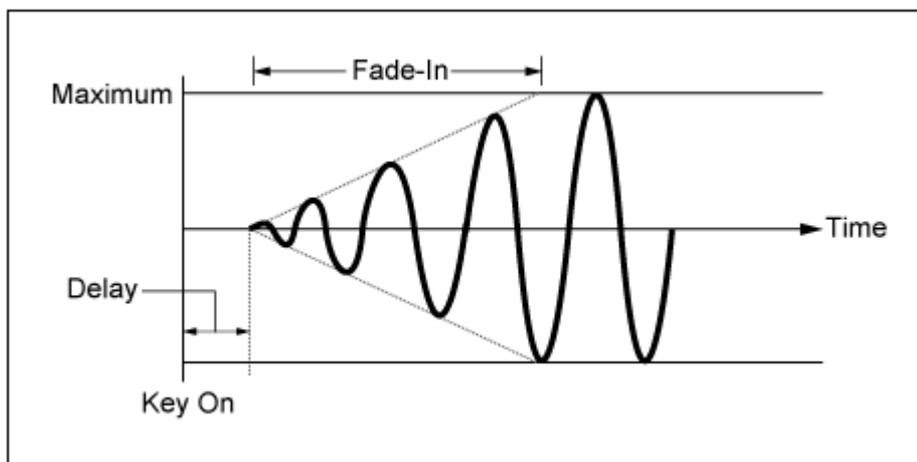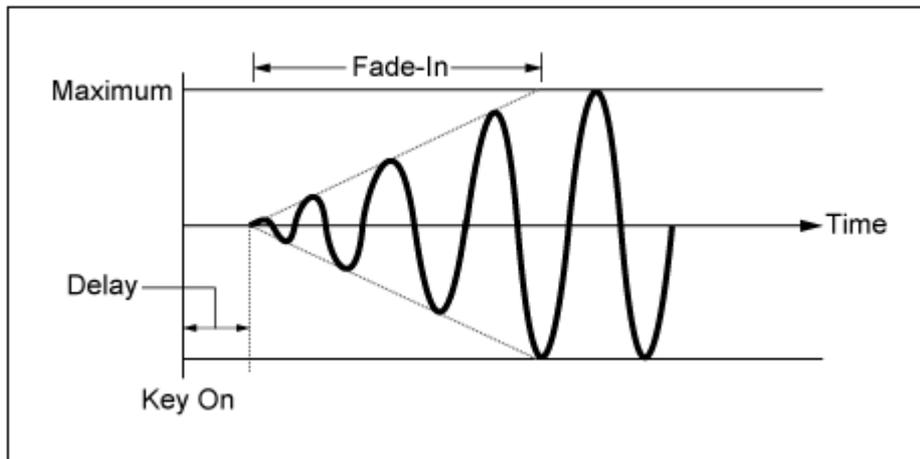
Settings: 0–214

> The larger the value, the longer it takes for the LFO effect to reach the maximum.
>
> **0**: The LFO changes to the maximum value without any fade-ins.

Small value: fast fade-in
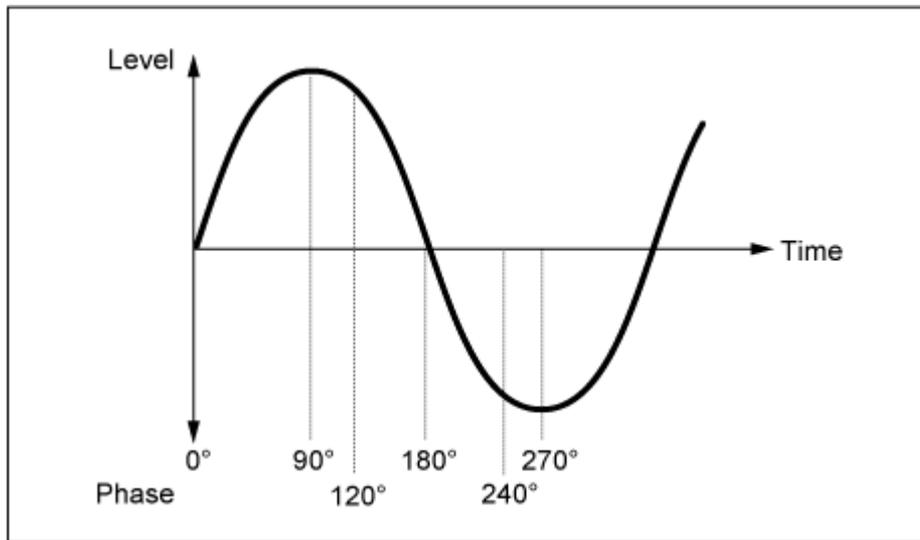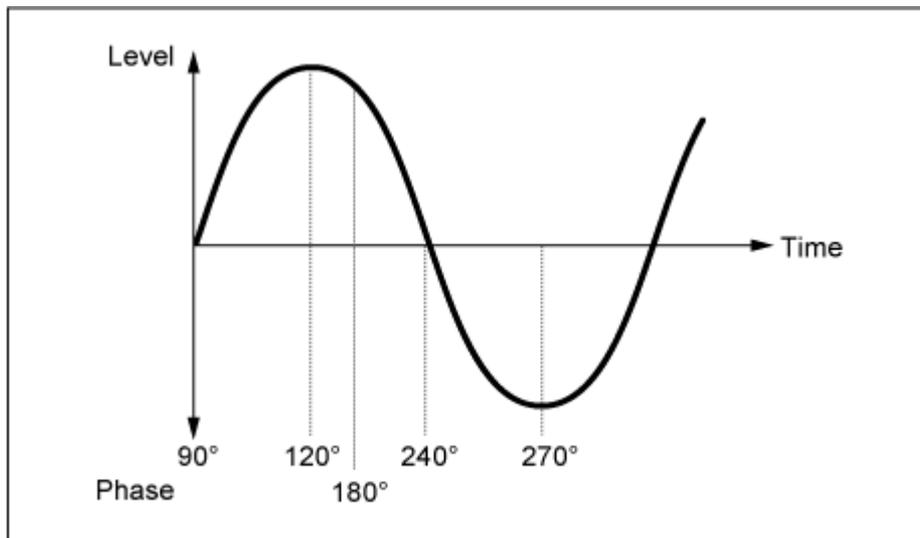

Large value: slow fade-in

Phase (Amplitude LFO Phase)

You can set the initial phase for the time the LFO wave is reset.

Settings: 0, 30, 45, 60, 90, 120, 135, 150, 180, 210, 225, 240, 270, 300, 315, 330 (°)

Phase of the wave

Depth (Amplitude Level LFO Depth)

Sets the depth range of volume changes controlled by the LFO.

Settings: −127–+127

Effect ★

Routing ☆

The screen here is almost the same as the one opened from *Effect → Routing* on *Part Edit (AWM2)*, with the exceptions listed below.

- No output setting for each *Element*
- Cannot select *Parallel* for *Ins Connect*

Ins A
Ins B ☆

The screen here is the same as the one opened from *Effect → InsA* or *InsB* on *Part Edit (AWM2)*.

3-band EQ ☆

The screen here is the same as the one opened from *Effect → 3-band EQ* on *Part Edit (AWM2)*.

2-band EQ ☆

The screen here is the same as the one opened from *Effect → 2-band EQ* on *Part Edit (AWM2)*.

Arpeggio ★

Common ☆

The screen here is the same as the one opened from *Arpeggio → Common* on *Part Edit (AWM2)*.

Individual ☆

The screen here is the same as the one opened from *Arpeggio → Individual* on *Part Edit (AWM2)*.

Advanced ☆

The screen here is the same as the one opened from *Arpeggio → Advanced* on *Part Edit (AWM2)*.

Motion Seq ★

Common ☆

The screen here is the same as the one opened from *Motion Seq → Common* on *Part Edit (AWM2)*.

Lane ☆

The screen here is the same as the one opened from *Motion Seq → Lane* on *Part Edit (AWM2)*.

Mod/Control ★

Control Assign ☆

The screen here is the same as the one opened from *Mod/Control → Control Assign* on *Part Edit (AWM2)*, except that the available *Destination* settings are different.

Use the parameters shown below, instead of *ElementSw* and others.

Oscillator Sw (Oscillator Switch)
You can set the controller setting for each Oscillator on or off. This parameter is shown only when the selected *Destination* is related to Oscillators.
Usually, there are three switches shown, but when the *Destination* is set to *OSC FM* or *OSC Ring*, only two of them will be shown.
Settings: Off, On

Filter Sw
You can set the controller setting for each Filter on or off.
This parameter is shown only when the selected *Destination* is related to filters.
Settings: Off, On

After Touch ☆

The screen here is the same as the one opened from *Mod/Control → After Touch* on *Part Edit (AWM2)*, except that the available *Destination* settings are different.

Tx/Rx Switch ☆

The screen here is the same as the one opened from *Mod/Control → Tx/Rx Switch* on *Part Edit (AWM2)*.

Control Settings ☆

The screen here is the same as the one opened from *Mod/Control → Control Settings* on *Part Edit (AWM2)*.

Part LFO ☆

The screen here is the same as the one opened from *Mod/Control → Part LFO* on *Part Edit (AWM2)*, except that the only available *Destination* setting is Ins.

Oscillator Edit ☆

Contents

> [*Osc/Tune*](#)
>
> [*Osc EG*](#)
>
> [*Osc LFO*](#)

Osc/Tune ★

On the *Osc/Tune* screen, you can set the general parameters for the Oscillator.
The modulation and wave shaping functions available on this screen are FM (Frequency Modulation), Ring Modulation, Oscillator Sync, *Pulse Width*, and *Wave Shaper*.

Operation
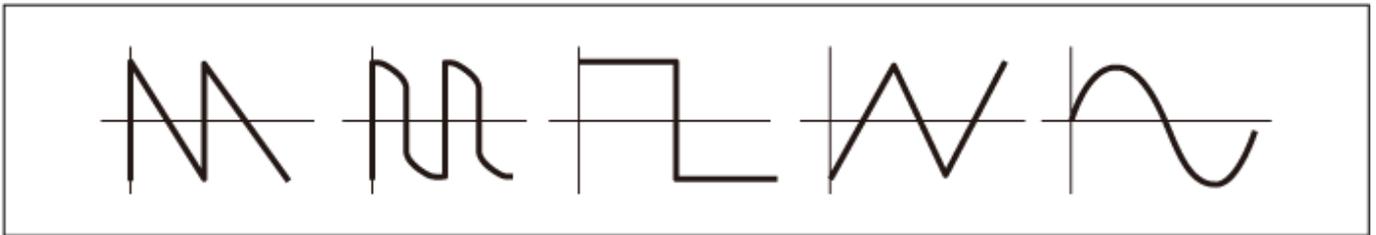
[PERFORMANCE] → [EDIT/ ⟳] → *Part* selection → *Oscillator* selection → *Osc/Tune*

Wave (Oscillator Wave)

Sets the waveform for the Oscillator.

Settings: *Saw1*, *Saw2* (variation of *Saw1* with thicker sound), *Square*, *Triangle*, *Sine*

Out Level (Oscillator Out Level)

Sets the volume of the Oscillators.

Settings: 0–511

Out Level/Vel (Oscillator Out Level Velocity Sensitivity)

Sets how the Oscillator volume responds to Velocity.

Settings: −255–+0–+255

Invert (Oscillator Out Invert Enable)

Performs negative/positive inversion of the Oscillator output.

Settings: Off, On

Connect (Oscillator Out Select)

Sets the output destination for the Oscillators.

Settings: *Filter*, *Amp*

Octave (Oscillator Octave)

Sets the pitch of the Oscillator in octaves.

Settings: 64', 32', 16', 8', 4', 2', 1'

Pitch (Oscillator Pitch)

Finely adjusts the pitch of the Oscillator.

Settings: −1200–+0–+1200 (cent)

■ FM (Frequency Modulation)

Modulates the frequency of the Oscillator by using another Oscillator.

FM Level (Oscillator FM Level)

Sets the level of the Frequency Modulation.

Settings: 0–255

FM Level/Vel (Oscillator FM Level Velocity Sensitivity)

Sets how Frequency Modulation responds to Velocity.

Settings: −255–+0–+255

■ Ring Modulation

By mixing two Oscillator signals, you can create a metallic inharmonic sound.

Ring Level (Oscillator Ring Level)

Sets the level of Ring Modulation.
Settings: 0–255

Ring Level/Vel (Oscillator Ring Level Velocity Sensitivity)

Sets how Ring Modulation responds to Velocity.
Settings: −255–+0–+255

■ Oscillator Sync

Oscillator Sync is a system that creates complex waves by forcing two Oscillators to synchronize.
The AN-X sound engine allows each Oscillator to set its synchronization timing, so you can use a single Oscillator for creating complex waveforms.

Sync Pitch (Oscillator Self Sync Pitch)

Sets the level of the Oscillator Sync.
Settings: 0–4800 (cents) (in units of 25 cents)

Sync Pitch/Vel (Oscillator Self Sync Pitch Velocity Sensitivity)
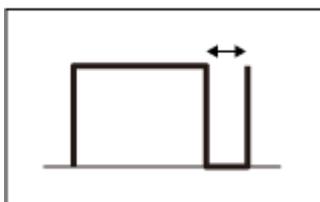
Sets how *Sync Pitch* responds to Velocity.
Settings: −255–+0–+255
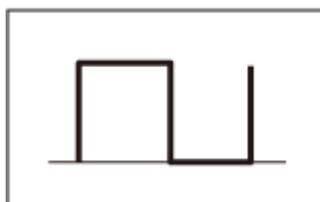
■ *Pulse Width*

Pulse Width is the ratio of the negative and positive parts of the *Square* wave.
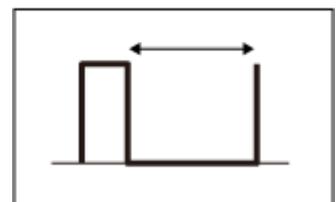
When *Pulse Width* is set to a small value	When *Pulse Width* is set to 50%	When *Pulse Width* is set to a large value

The AN-X sound engine lets you use *Pulse Width* not just on *Square* waves but also other waves.

Modulation of the LFO by using *Pulse Width* is called Pulse Width Modulation (PWM), which allows you to create a characteristic swirling sound.

With the AN-X sound engine, you can use PWM by using *Osc EG* and *Osc LFO*, and you can specify the level of PWM on the *Osc EG* screen and *Osc LFO* screen.

Pulse Width (Oscillator Pulse Width)

Sets the *Pulse Width* of the wave.
Settings: 1.0%–50.0%–99.0%

PulseWidth/Vel (Oscillator Pulse Width Velocity Sensitivity)

Sets how *Pulse Width* responds to Velocity.
Settings: −255–+0–+255

■ Wave Shaper

Creates a characteristic distortion and changes to the harmonic content by changing the shape of the waveform.

Shaper (Oscillator Wave Shaper)

Sets the level of the *Wave Shaper*.
By using *Wave Shaper*, the wave changes dynamically.
Settings: 0–255

Shaper/Vel (Oscillator Wave Shaper Velocity Sensitivity)

Sets how the *Wave Shaper* responds to Velocity.
Settings: −255–+0–+255

Pitch EG Settings

Opens the *General/Pitch → Pitch EG* screen for *Part Edit (AN-X)*.

Pitch LFO Settings

Opens the *General/Pitch → Pitch LFO* screen for *Part Edit (AN-X)*.

Osc 1–3 EG Settings

Opens the *Osc EG* screen for *Oscillator Edit*.

Osc 1–3 LFO Settings

Opens the *Osc LFO* screen for *Oscillator Edit*.

Osc EG ★

On the *Osc EG* screen, you can set the Envelope Generator for the Oscillator.

You can set how the Sync, *Pulse Width*, and *Wave Shape* change over time, starting from the moment you press a key on the keyboard to when the sound decays.

To set how the pitch changes over time, use *Pitch EG*.

Operation

[PERFORMANCE] → [EDIT/ ⟳] → *Part* selection → *Oscillator* selection → *Osc EG*

Attack (Oscillator EG Attack Time)
Sets the length of time it takes for the EG to change from the moment you press a key on the keyboard until it reaches the value set at the Attack Level.
Settings: 0–255

Decay (Oscillator EG Decay Time)
Sets the length of time it takes for the EG to change from the moment you press a key on the keyboard until it reaches the value set at the Decay Level.
Settings: 0–255

Sustain (Oscillator EG Sustain Level)
Sets the Sustain Level.
Settings: 0–511

Release (Oscillator EG Release Time)

Sets the length of time for the EG to reach a value of 0 after you have released the key.

Settings: 0–255

Osc EG Depth Sync (Oscillator Self Sync EG Depth)

Sets how the Sync responds to *Osc EG*.

Settings: −4800–+4800 (cent)

Osc EG Depth Pulse Width (Oscillator Pulse Width EG Depth)

Sets how the *Pulse Width* responds to *Osc EG*.

Settings: −127–+0–+127

Osc EG Depth Shaper (Oscillator Wave Shaper EG Depth)

Sets how the *Shaper* responds to *Osc EG*.

Settings: −127–+0–+127

Osc LFO ★

On the *Osc LFO* screen, you can set the Oscillator LFO.

Operation

[PERFORMANCE] → [EDIT/ 🔁] → *Part* selection → *Oscillator* selection → *Osc LFO*
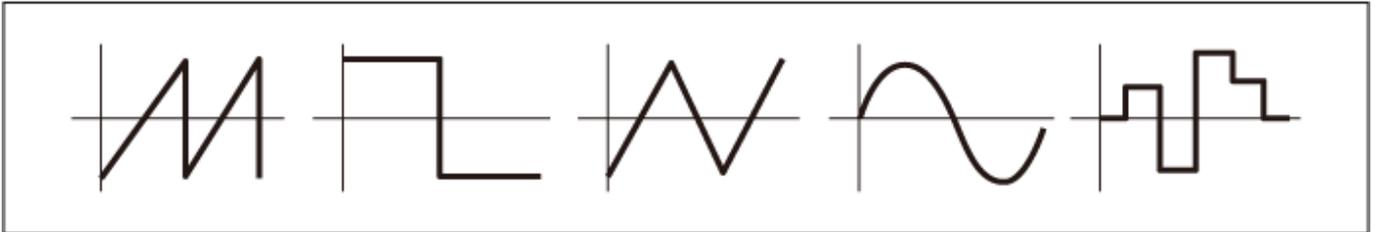
LFO Wave (Oscillator LFO Wave)

Selects an LFO wave.

By using the wave you have selected here, you can create various types of modulation.
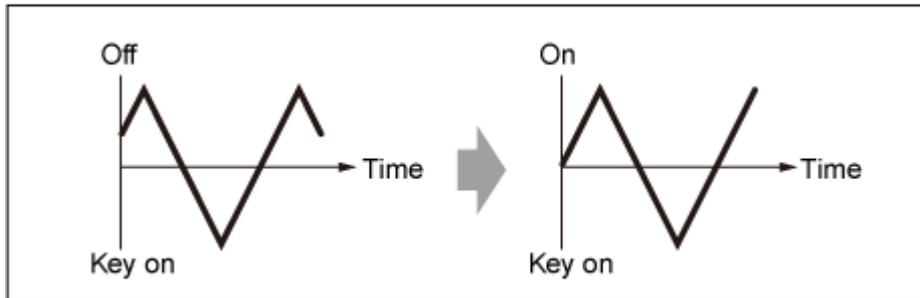
Settings: *Saw*, *Square*, *Triangle*, *Sine*, *Random*

Key On Reset (Oscillator LFO Key On Reset)

Resets the oscillation of the LFO when a key is pressed.

Settings: Off, On

Speed (Oscillator LFO Speed)

Sets the speed of LFO wave changes.

Settings: 0–415

Delay (Oscillator LFO Delay Time)

Sets the delay time between the moment you press a key on the keyboard and the moment the LFO comes into effect.

Settings: 0–127

Fade In (Oscillator LFO Fade In Time)

Sets the time length for the LFO effect to fade in after you have released the key and the delay time set in *Delay* has elapsed.

Settings: 0–214

Oscillator LFO Phase

Sets the LFO phase for resetting the wave when a key is pressed.

Settings: 0, 30, 45, 60, 90, 120, 135, 150, 180, 210, 225, 240, 270, 300, 315, 330 (°)

Osc LFO Depth Sync (Oscillator Self Sync LFO Depth)

Sets how the *Sync* responds to *Osc LFO*.

Settings: −4800–+4800 (cent)

Osc LFO Depth Pulse Width (Oscillator Pulse Width LFO Depth)

Sets how the *Pulse Width* responds to *Osc LFO*.

Settings: −127–+0–+127

Osc LFO Depth Shaper (Oscillator Wave Shaper LFO Depth)

Sets how the *Shaper* responds to *Osc LFO*.

Settings: −127–+0–+127

Noise Edit ☆

Noise ★

On the *Noise* screen, you can set the *Noise Generator*.

Operation

[PERFORMANCE] → [EDIT/ ⟳] → *Part* selection → *Oscillator* selection → *Noise*

Noise Tone (Noise Generator Tone)

Sets the frequency response for the *Noise*.

Settings: 0–64–127

> **0–63**: Cuts the treble
>
> **64**: White noise
>
> **65–127**: Cuts the bass

Out Level (Noise Generator Out Level)

Sets the volume of the *Noise*.

Settings: 0–511

Out Level/Vel (Noise Generator Out Level Velocity Sensitivity)

Sets how the *Noise* volume responds to Velocity.

Settings: −255–+0–+255

Connect (Noise Generator Out Select)

Sets the output destination for the *Noise*.
Settings: *Filter*, *Amp*

Category Search screen ☆

Category Search is a convenient function that allows you to quickly find a specific Performance, Part, Arpeggio, or Waveform you wish to use from a specified category.

Contents
Performance Category Search *Performance Merge* *Part Category Search* *Rhythm Pattern* *Arp Category Search (Arpeggio Category Search)* *Waveform Search (Waveform Category Search)*
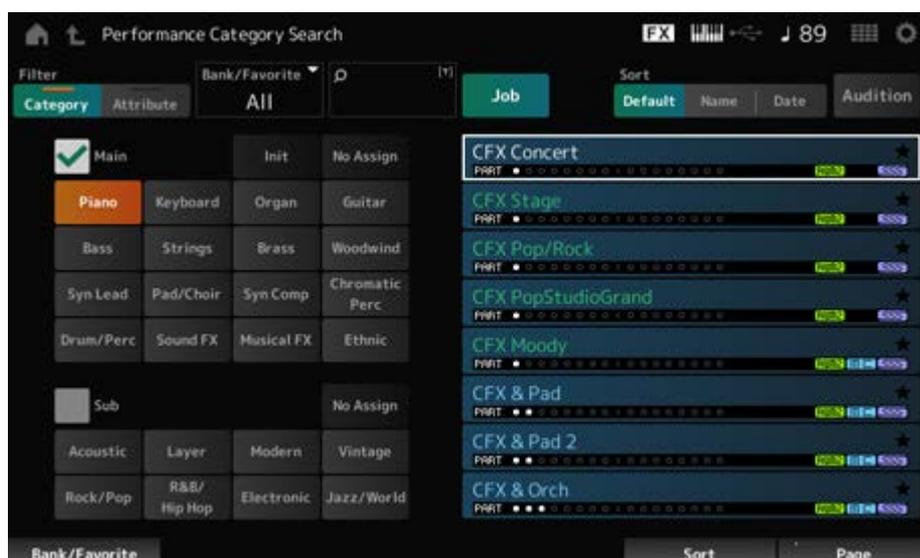
Performance Category Search ☆

On the *Performance Category Search* screen, you can search for and select Performances.

Operation

- Press the [CATEGORY] button
- Tap the Performance name → Select *Category Search* from the context menu

Filter

Select a filter to use in a search.
Settings: *Category*, *Attribute*

Main (Main Category)
Sub (Sub Category)

Filters by category.

By unchecking the *Main* or *Sub* checkbox, you can cancel filtering by category.
Settings: Refer to the *Data List*.

Attribute

Filters by attribute.

By unchecking the *Attribute* checkbox, you can cancel filtering by attribute.
Settings: *AWM2*, *FM-X*, *AN-X*, *MC*, *SSS*, *Smart Morph*, *Single*, *Multi*, *MOTIF XF*, *MONTAGE*, *MONTAGE M*

Bank/Favorite (Bank/Favorite Select)

Filters by bank or favorites.

When *Favorite* is selected, only the Performances with Favorite marks will appear in the list.

When the *Category Search* screen is shown, you can press the [CATEGORY] button to switch the Bank in the order of *All → Favorite → Preset → User → Library* name (when a Library file is loaded).

When you hold down the [CATEGORY] button, the selection will be reset to *All*.

Settings: *All*, *Favorite*, *Preset*, *User*, *Library* name (when a Library file is loaded)

Name Search

Allows you to enter certain characters included in the name for easy searching.

Tapping on the name calls up the onscreen keyboard, allowing you to enter up to 20 alphanumeric characters.

Job

Calls up the Job menu.

Sort

Sets the sort order of the Performance list.

Settings: *Default*, *Name*, *Date*

> **Name**: Sorts by name. The down arrow indicates that the list is arranged in ascending order (A to Z). The up arrow indicates that the list is arranged in descending order.
> **Date**: Sorts by the date the setting was stored. The down arrow indicates that the list is arranged in descending order (new to old). The up arrow indicates that the list is arranged in ascending order.

Audition

Sets the audition phrase playback on or off.

This parameter is not available when *Audition Lock* is On at: [UTILITY] → *Settings* → *Advanced*.

Settings: Off, On

Delete

Deletes the selected content.

This parameter is available only when a Performance in the User Bank is selected.

Rename

Changes the name of the selected content.

This parameter is available only when a Performance in the User Bank is selected.

Favorite All Clear

Clears all Favorite marks from the Performances.

This parameter is not available when there are no Performances with Favorite marks.

List

Shows the Performance name, along with its active Parts, attributes, and Favorite status.
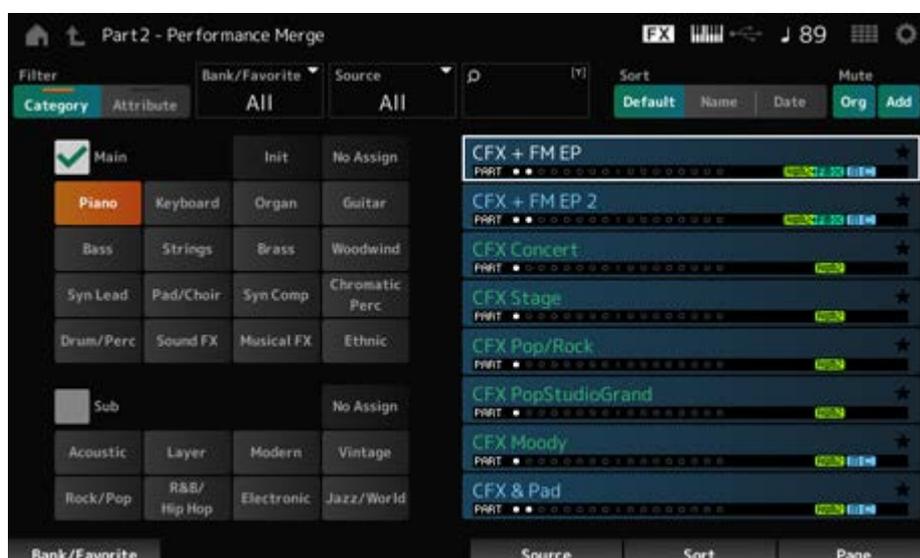
Performance Merge ☆

The *Performance Merge* screen allows you to assign multiple Parts of the selected Performance to empty Parts of another Performance. For example, you can layer a four-Part piano Performance and a two-part string Performance to create a rich six-part Performance.

Operation

[PERFORMANCE] → Select a Part (when the selected Part and all subsequent Parts are empty) → Tap [+]

Source

When selecting a Performance, the sound of the Part specified here is assigned to the currently selected Part.

Settings: *All*, *Part 1–16*

> *All*: All Parts in the selected Performance are assigned to empty Parts of the other selected Performance (as much as possible).
>
> *Part 1–16*: Only the sound of the specified Part will be assigned to the other selected Part.

Mute Org (Original Part Mute)

When this is off, the Parts shown on the display before you have opened the *Performance Merge* screen will be muted.

Settings: Off, On

Mute Add (Additional Part Mute)

When this is off, the Parts added on the *Performance Merge* screen will be muted.
Settings: Off, On
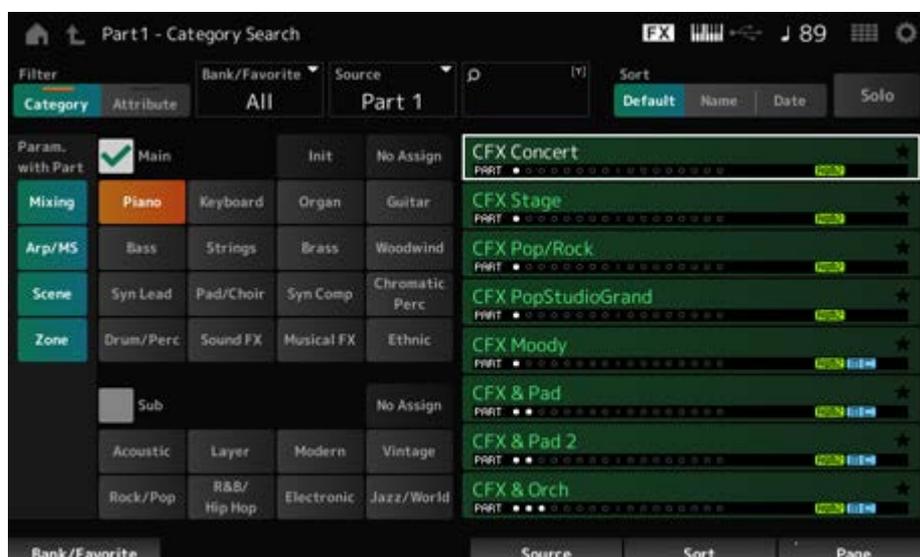
Part Category Search ☆

On the *Part Category Search* screen, you can search for and select Parts.

<div style="border:1px solid red;display:inline-block;padding:4px;">Operation</div>

- [SHIFT] + [CATEGORY]

- (When selecting a Part to which a sound has already been assigned) Tap the Performance name → Select *Category Search* from the context menu

- (When selecting an empty Part) Tap [+]

Source (Source Part)
When selecting a Performance, the sound of the Part specified here is assigned to the currently selected Part.
The initial setting is *Part 1*.
Settings: *Part 1–16*

Solo
Sets the Solo function on or off.
When this switch is turned on, the selected Part is set to solo.
Settings: Off, On

Param. with Part (Parameter with Part)
Loads a group of parameter values when a Performance is selected.
The parameters set to Off will retain their current settings even when a new Performance is

selected.

Parameter groups: *Mixing*, *Arp/MS*, *Scene*, *Zone*

Settings: Off, On

Rhythm Pattern ☆
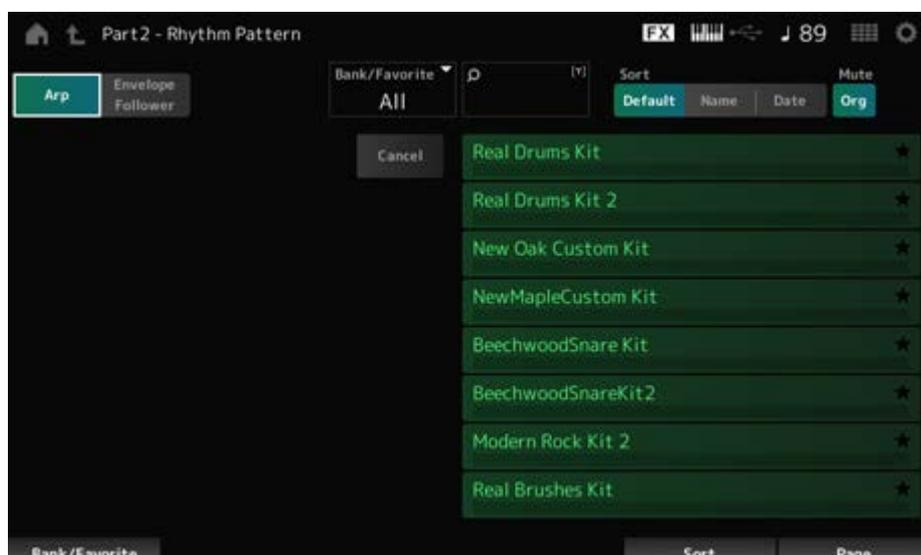
On the *Rhythm Pattern* screen, you can search for and select Rhythm Patterns.

The Rhythm Pattern function allows you to instantly add a rhythm Part to the current Performance. Also, by combining Rhythm Patterns with envelope follower effects, you can further change the sound.

Operation
[SHIFT] + [SONG/PATTERN]

Arp (Arpeggio)
Envelope Follower
Selects *Arpeggio* view or *Envelope Follower* view.

Bank/Favorite (Bank/Favorite Select)
Filters by bank or favorites.
When *Favorite* is selected, only the Rhythm Patterns with Favorite marks will appear in the list.
Settings: *All*, *Favorite*, *Preset*, *User*, *Library* name (when a Library file is loaded)

Name Search
Allows you to enter certain characters included in the name for easy searching.
Tapping on the name calls up the onscreen keyboard, allowing you to enter up to 20 alphanumeric characters.

Sort

Sets the sort order of the Rhythm Pattern list.

Settings: *Default*, *Name*, *Date*

> **Name**: Sorts by name. The down arrow indicates that the list is arranged in ascending order (A to Z). The up arrow indicates that the list is arranged in descending order.
>
> **Date**: Sorts by date the setting was stored. The down arrow indicates that the list is arranged in descending order (new to old). The up arrow indicates that the list is arranged in ascending order.

Mute Org (Original Part Mute)

When this is off, the Part shown on the display before you have opened the *Rhythm Pattern* screen will be muted.

Settings: Off, On

Mute Add (Additional Part Mute)

When this is off, the Parts added on the *Rhythm Pattern* screen will be muted.

Settings: Off, On

List
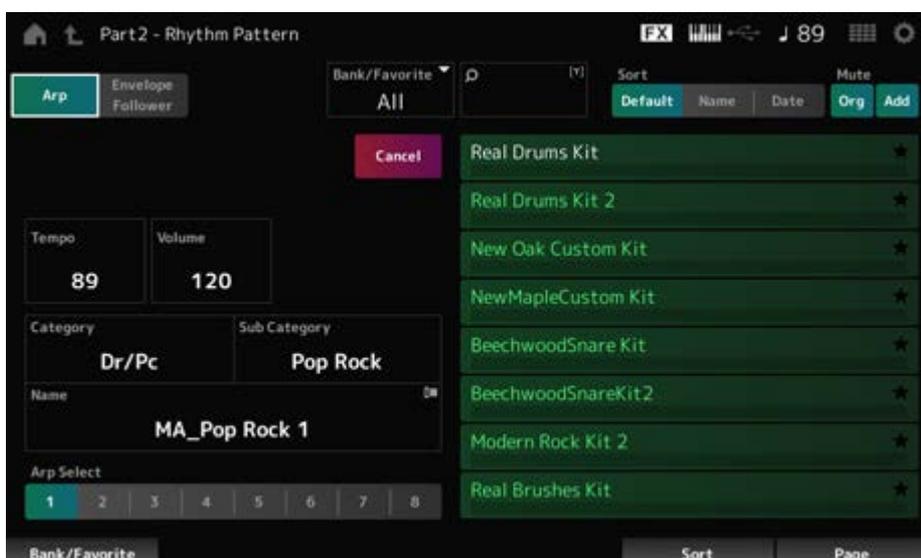
Shows the Rhythm Pattern list.

Cancel

Cancels the operation.

■ When *Arp* is on

Frequently used parameters for Arpeggio settings are displayed on the left side of the screen.

Tempo

Sets the tempo.

Settings: 5–300

Volume

Sets the volume of the Rhythm Pattern.

Settings: 0–127

Category (Arpeggio Main Category)

Sub Category (Arpeggio Sub Category)

Name

Shows the currently selected Arpeggio category, Sub category, and name.

By tapping on the name, you will see the context menu for *Arpeggio Category Search* and entering numbers.

Settings: Refer to the *Data List*.

Arp Select (Arpeggio Select)

Changes the Arpeggio selection.
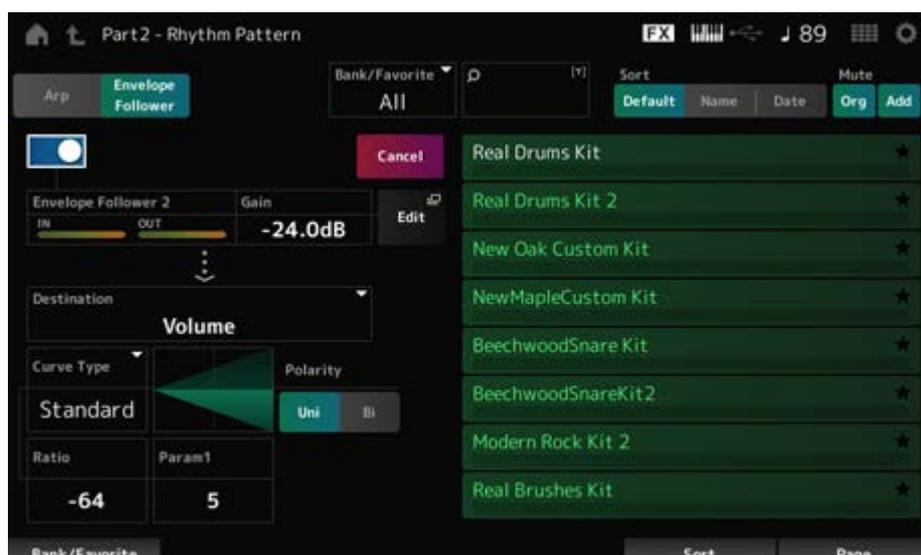
Settings: 1–8

■ **When *Envelope Follower* is on**

Frequently used parameters for the *Envelope Follower* settings are shown on the left side of the screen.

This allows for quick editing of parameters frequently used for Rhythm Patterns.

When you wish to change other parameters, use *Edit* to open the setting screen for the Envelope Follower.

Quick Assign

Enables Envelope Follower.

Settings: Off, On

Gain (Envelope Follower Gain)

Sets the input gain for the input source.

Settings: −24.0dB–0.0dB–24.0dB

Destination

Sets the destination for the Envelope Follower.

Settings: *Volume*, *Cutoff*, *Resonance*, *Pitch*, *Pan*, *Reverb Send*, *Variation Send*, *LFO Speed*, *LFO Depth 1*, *LFO Depth 2*, *LFO Depth 3*

Curve Type

Polarity (Curve Polarity)

Ratio (Curve Ratio)

Param1 (Curve Parameter 1)

Param2 (Curve Parameter 2)

Same as the *Control Assign* screen.

Edit

The *Envelope Follower Edit* screen appears.

How to use the Rhythm Pattern function ★

Here, we will show an example of how to add the Rhythm Pattern *8Z Trance Basics 1* to the Performance *Supertrance*, and then modify the sound with the Envelope Follower.

Adding a Rhythm Part (simple way) ☆

1 Select the desired Performance for adding the rhythm part.

Here, select *Supertrance*.
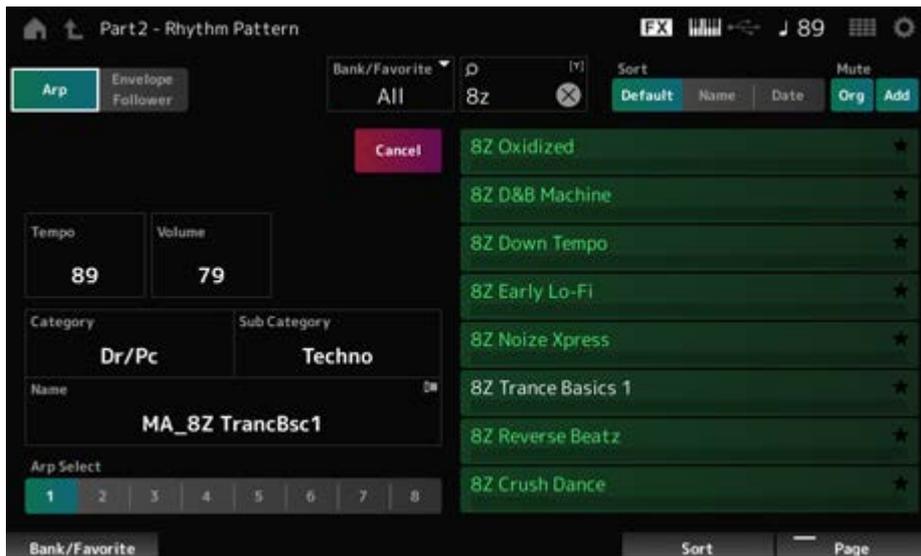
2 Press the [SHIFT] button + [SONG/PATTERN] button.

The *Rhythm Pattern* screen appears.

When all of Parts 1–8 are being used, *PartFull* will be shown and no Rhythm Patterns can be added.

3 Tap the Rhythm Pattern kit you wish to use from the Rhythm Pattern list.

Here, tap on *8Z Trance Basics 1*.

The rhythm Part has been added.

4 **Play the keyboard and the Rhythm Pattern starts playing.**

5 **Press the [PERFORMANCE] button or the [EXIT] button to confirm the Rhythm Pattern.**

The *Rhythm Pattern* screen closes.

NOTE
You can also confirm the selection by tapping the 🏠 (Home) icon.

6 **To stop the Rhythm Pattern, press the [ARP ON/OFF] button or the [■] (stop) button.**
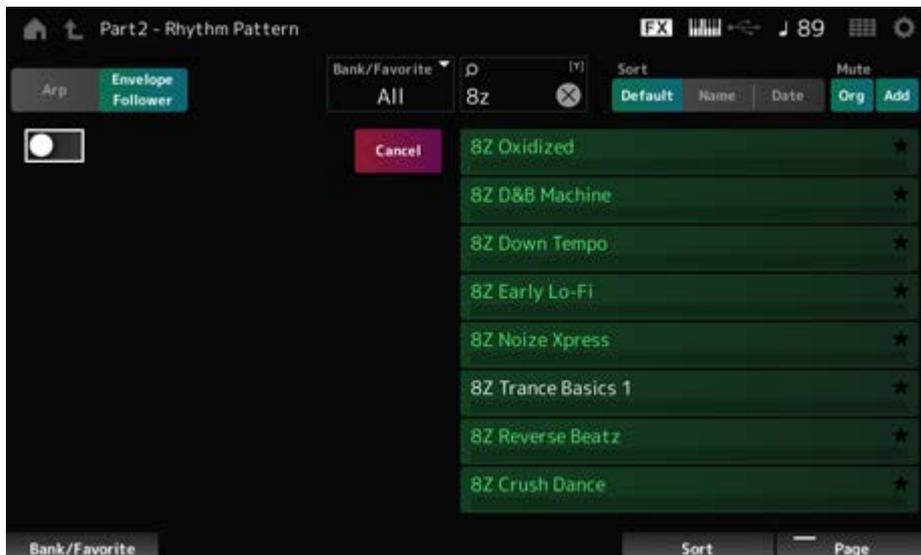
Setting the Envelope Follower ☆

Envelope Follower is a function that extracts the envelope (amplitude envelope) of the waveform from input signals, and then lets you use that envelope as a controller for modifying sounds. For example, by assigning a Rhythm Pattern to a Part and setting the Envelope Follower of the Part as a "*Source*," the sound of the other Parts is modified accordingly. This is especially useful for automatic "ducking," where you want to lower the volume of other instruments while a certain instrument sound you want to emphasize is being played.
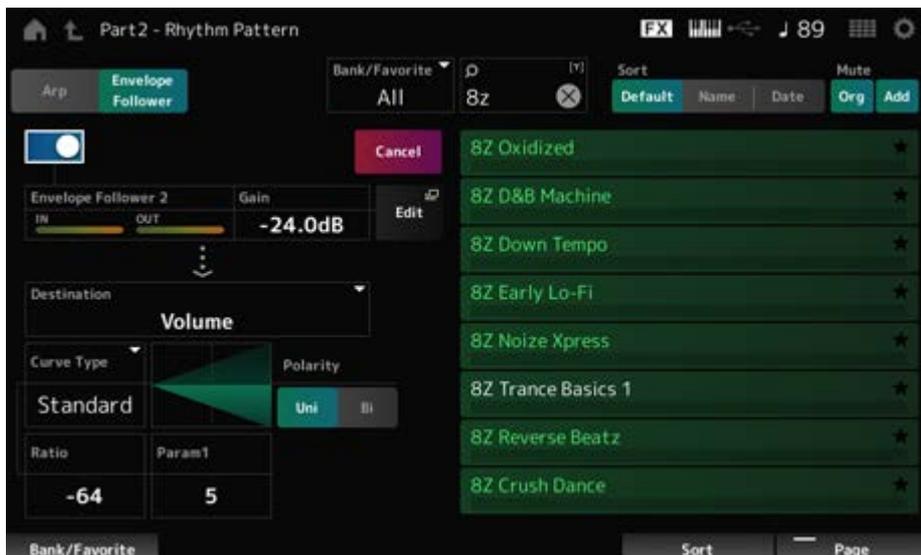
1 **Tap the *Envelope Follower* button on the *Rhythm Pattern* screen.**

The *Envelope Follower* screen appears.
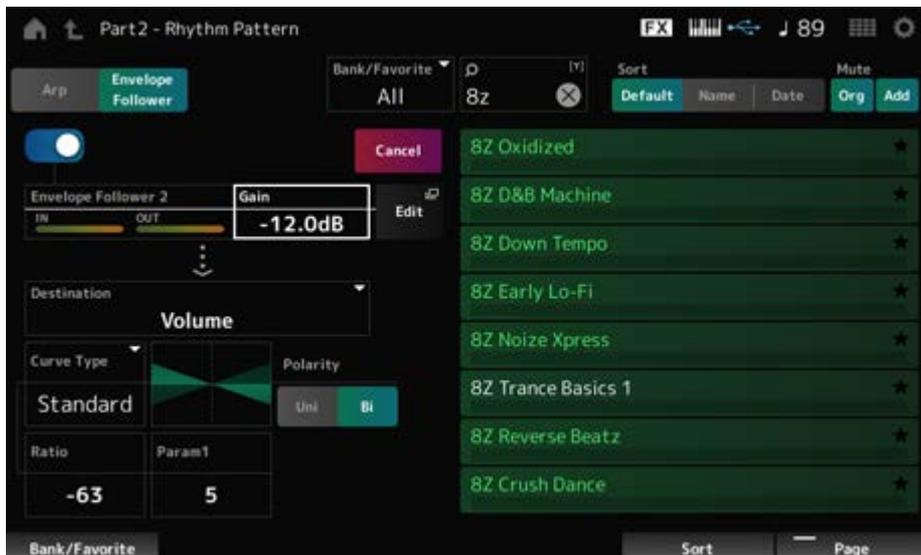
2   **Turn the _Envelope Follower_ switch on.**

Here, you can play the keyboard to hear the sound with the Envelope Follower enabled.

3   **Adjust settings as needed.**

Here, in this example, set the _Polarity_ to _Bi_, the _Ratio_ to −63, and the _Gain_ to −12dB.

For more detailed adjustments, tap the *Edit* button on the screen to open the Envelope Follower setting screen.

When you wish to change the Rhythm Pattern kit or Arpeggio type, press the [SHIFT] button + [SONG/PATTERN] button to go back to the *Rhythm Pattern* screen. The *Envelope Follower* settings are retained even after the kit or the Arpeggio type has been changed.
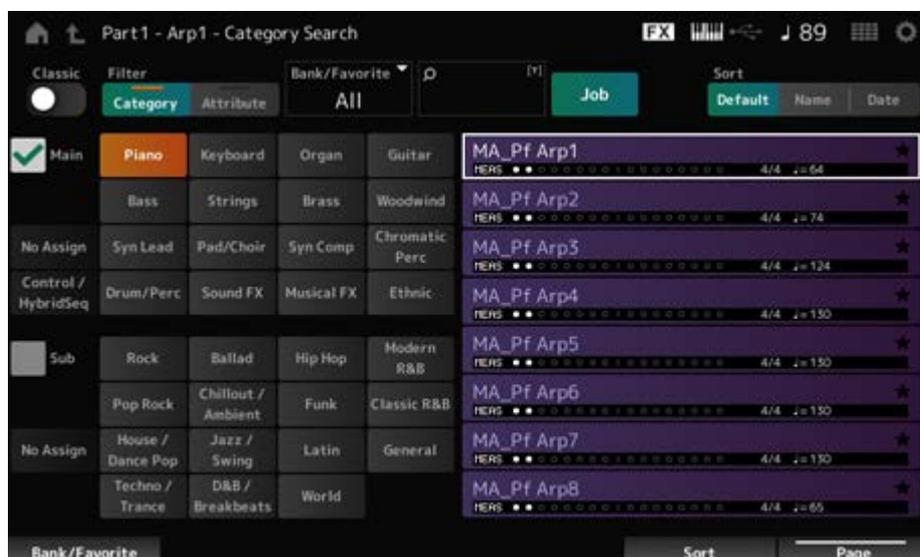
Arp Category Search (Arpeggio Category Search) ☆

On the *Arp Category Search* screen, you can search for and select Arpeggio types.

Operation

- [PERFORMANCE] → *Part Common* selection → [EDIT/ ⭗] → *Arpeggio* → *Individual* → [CATEGORY]

- [PERFORMANCE] → *Common* selection → [EDIT/ ⭗] → *Arp / MS* → *Arp Overview* → *Part* selection → [CATEGORY]

Classic (Classic Switch)

Turns the *Classic* view on.

In the *Classic* view, only common Arpeggios are listed, and no filters are available for searching.

Settings: Off, On

Main (Main Category)
Sub (Sub Category)

Filters by category.

By unchecking the *Main* or *Sub* checkbox, you can cancel filtering by category.

Settings: Refer to the *Data List*.

Attribute

Filters by attribute.

By unchecking the *Attribute* checkbox, you can cancel filtering by attribute.

Settings: *Note*, *Chord*, *Other*, *Intro*, *Main*, *Fill*, *Ending*, *AF*, *Accent*, *Random SFX*, *Mg*, number of measures, time signature, tempo

Bank/Favorite (Bank/Favorite Select)

Filters by bank or favorites.

When *Favorite* is selected, only the Arpeggio types with the Favorite marks will appear in the list.

Settings: *All*, *Favorite*, *Preset*, *User*, *Library* name (when a Library file is loaded)

Name Search

Allows you to enter certain characters included in the name for easy searching.

Tapping on the name calls up the onscreen keyboard, allowing you to enter up to 20 alphanumeric characters.

Job

Calls up the Job menu.

Delete

Deletes the selected content.

This parameter is available only when the Arpeggio in the User Bank is selected.

Rename

Changes the name of the selected content.

This parameter is available only when the Arpeggio in the User Bank is selected.

Favorite All Clear

Clears all Favorite marks from the Arpeggio list.

This parameter is not available when there are no Arpeggio types with Favorite marks.

Sort

Sets the sort order of the Arpeggio type list.

Settings: *Default*, *Name*, *Date*

> *Name*: Sorts by name. The down arrow indicates that the list is arranged in ascending order (A to Z). The up arrow indicates that the list is arranged in descending order.
> *Date*: Sorts by date the setting was loaded. The down arrow indicates that the list is arranged in descending order (new to old). The up arrow indicates that the list is arranged in ascending order.

List

Shows the Arpeggio name, time signature, beats, recommended tempo, Attributes, and Favorite status.
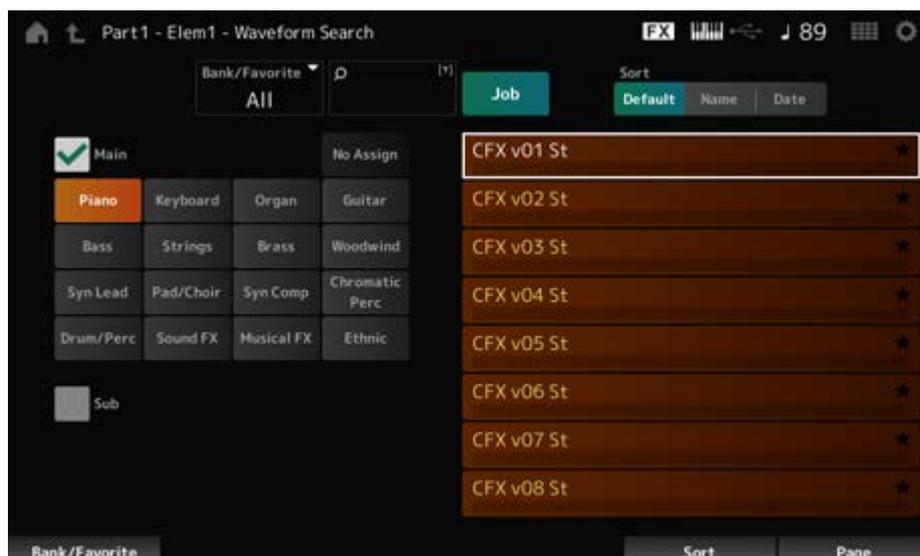
Waveform Search (Waveform Category Search)

On the *Waveform Search* screen, you can search for and select Waveforms.

Operation

Waveform related screen → *Part* selection → *Waveform* selection → [CATEGORY]

Bank/Favorite (Bank/Favorite Select)

Filters by bank or Favorites.

When *Favorite* is selected, only Waveforms with Favorite marks will appear in the list.

Settings: *All*, *Favorite*, *Preset*, *User*, *Library* name (when a Library file is loaded)

Name Search

Allows you to enter certain characters included in the name for easy searching.

Tapping on the name calls up the onscreen keyboard, allowing you to enter up to 20 alphanumeric characters.

Main (Main Category)
Sub (Sub Category)

Filters by category.

By unchecking the *Main* or *Sub* checkbox, you can cancel filtering by category.

Settings: Refer to the *Data List*.

Job

Calls up the Job menu.

447

Delete

Deletes the selected content.

This parameter is available only when a Waveform in the User Bank is selected.

Rename

Changes the name of the selected content.

This parameter is available only when a Waveform in the User Bank is selected.

Favorite All Clear

Clears all Favorite marks from the Waveform list.

This parameter is not available when there are no Waveforms with Favorite marks.

Sort

Sets the sort order of the Waveform list.

Settings: *Default*, *Name*, *Date*

> *Name*: Sorts by name. The down arrow indicates that the list is arranged in ascending order (A to Z). The up arrow indicates that the list is arranged in descending order.
>
> *Date*: Sorts by date the setting was stored. The down arrow indicates that the list is arranged in descending order (new to old). The up arrow indicates that the list is arranged in ascending order.

Live Set screen ☆

Live Sets are useful for live performance situations when you wish to change the Performance instantly along with the songs you are playing.

Contents

Live Set ☆

On the *Live Set* screen, you can call up a Performance.
When you press [SHIFT] + [EDIT/ ⟳] while the User Bank is selected, a dialog will be shown
and then you can copy or exchange pages or banks.

Operation

- Press the [LIVE SET] button

- Tap the ☰ (Live Set) icon

Bank (Bank Name)
Selects the Live Set bank.
Settings: *Preset*, *User 1–8* (default) or *Library* name (when a Library file is loaded)

Page
Selects the Live Set page.

Live Set Slot 1–16
Displays a list of Performances registered on the selected Live Set page.

Category Search
Opens the *Performance Category Search* screen.

Current Performance Name

Shows the name of the Performance registered in the selected slot.

Current Slot Name

Shows the name of the selected slot.

When a Pattern, Song, or audio is assigned to a slot, the name of the Pattern or Song, or the audio file will be shown.

Performance Attribute

Shows the attribute(s) of the Performance registered in the selected slot.

On the *Live Set* screen, the PTN icon changes to PTN CHAIN when a Pattern with chain on is assigned to a slot.

PTN : Displayed for a slot to which a Pattern is assigned.

PTN CHAIN : Displayed for a slot to which a Pattern with chain on is assigned.

SONG : Displayed for a slot to which a Song is assigned.

AUDIO : Displayed for a slot to which audio is assigned.

Edit

The *Live Set Edit* screen appears.

Edit appears only when *User Bank* is selected.

Live Set Register

On the *Live Set Register* screen, you can register Performances to Live Set slots.

Operation

- [SHIFT] + [LIVE SET]

- Hold down the [SHIFT] button and tap the *<Live Set>* button at the *Navigation Bar*

Store as New Perf. and Register (Store as New Performance and Register)
Stores the current Performance as a new Performance and registers it to the selected slot.

Jump to Data Utility
Opens the *Data Utility* screen.

Overwrite Current Perf. and Register (Overwrite Current Performance and Register)
Stores the new Performance over the existing Performance and registers it to the selected slot.

Register without Storing
Registers a Performance without storing it.

Live Set Edit ☆

On the *Live Set Edit* screen, you can edit Live Sets.
Only Live Sets in the User Bank can be edited.

Operation

[LIVE SET] → [EDIT/ ⟳]

Bank (Bank Name)

Saves the selected Live Set bank under a new name. You can use up to 20 alphanumeric characters.

Tapping on the name calls up the onscreen keyboard, allowing you to enter a name.

Page (Page Name)

Saves the selected Live Set page under a new name. You can use up to 20 alphanumeric characters.

Tapping on the name calls up the onscreen keyboard, allowing you to enter a name.

Done

Tap Done to close the *Live Set Edit* and show the *Live Set* screen.

Live Set Slot 1–16

Displays a list of Performances registered to the selected Live Set.

Slot Type

Selects the slot type.

Settings: *Perform*, *Song*, *Audio*, *Pattern*

Perform: Registers only the Performance to the slot

Song: Registers the Performance and Song to the slot

Audio: Registers the Performance and audio file to the slot

Pattern: Registers the Performance and Pattern to the slot

Slot Name
Pattern Name
Song Name
Audio Name

Shows the *Slot Name* when the *Slot Type* is *Perform*.

Tapping on the name calls up the onscreen keyboard, allowing you to enter a name for the current slot. You can use up to 20 alphanumeric characters.

When the *Slot Type* is *Pattern*, the *Pattern Name* is displayed; when the *Slot Type* is *Song*, the *Song Name* is displayed; and when the *Slot Type* is *Audio*, the *Audio Name* is displayed. The registered Pattern, Song or audio will be shown. When you tap on the name, the *Utility Load* screen appears. Then you can select the Pattern, Song, or audio to register.

Performance (Performance Name)

Shows the name of the Performance registered to the selected slot.

When you tap on the name, the *Performance Category Search* screen appears.

Color

Sets the color for the selected slot.

Settings: *Black*, *Red*, *Yellow*, *Green*, *Blue*, *Azure*, *Pink*, *Orange*, *Purple*, *Sakura*, *Cream*, *Lime*, *Aqua*, *Beige*, *Mint*, *Lilac*

Volume

Sets the volume of the Performance registered in the selected slot.

Job

Calls up the Job menu.

Copy

Turns the copy function on.

You can copy settings by selecting a slot to copy from, tapping *Copy*, and then selecting the slot to copy to.

Settings: Off, On

Exchange

Turns the exchange function on.

You can exchange settings by selecting the first slot, tapping *Exchange*, and then selecting the second slot.

Settings: Off, On

Delete

Select the slot, and then tap *Delete* to delete any registered Performances and other settings from the slot.

[+] (Add)

Tap [+] to register the selected Performance to that slot.

■ **Playing back the Pattern, Song, or Audio file from the *Live Set* screen**

Operation

Tap [LIVE SET] (or tap the Live Set icon) → *User bank* selection → *Slot* selection → [▶] (Play) button

---

NOTE

- Performance and slot cannot be changed while the Pattern or Song is being played back. If you attempt to change them, an error message will appear.
- When you press the [▶] (Play) button while the Pattern, Song, or audio file is played back, the Pattern, Song, or audio file playback screen will open.

Utility screen ☆

The *Utility* screen is used for setting common items for the entire instrument.

Settings ★

Sound ☆

The *Sound* screen is used for setting the sound output from the instrument.

Operation

Tone Generator Volume

Sets the overall volume of the sound output from the instrument.

Settings: 0–127

Tone Generator Note Shift

Adjusts the pitch of the overall sound produced by the Tone Generator block of the instrument in semitones.

Settings: −24semi–+24semi

Tone Generator Tune

Adjusts the tuning of the overall sound produced by the Tone Generator block of the instrument in semitones. You can fine-adjust the pitch in cents.

Settings: −102.4–+102.3

Keyboard Octave Shift

Shifts the pitch of the keys in octaves.

It is linked to the OCTAVE buttons on the top panel.

Settings: −3–+3

NOTE

The *Keyboard Octave Shift* setting is reset to 0 at the next startup.

Keyboard Transpose

Shifts the pitch of the keys in semitones.

Settings: −11semi–+11semi

NOTE
- For any notes outside the range C−2 to G8 (the range that can be played on the Tone Generator of this instrument), the note will be played at one octave higher (or lower).
- The *Keyboard Transpose* setting is reset to +0 semi at the next startup.

Keyboard Velocity Curve

Determines the actual velocity to be generated and transmitted according to the velocity with which you play notes on the keyboard.

The graph shown in the display indicates the velocity response curve. The horizontal axis represents the received velocity value (or the strength with which you have pressed the key), while the vertical axis represents the actual velocity value transmitted to the internal or external tone generators.

Settings: *Normal*, *Soft 1*, *Soft 2*, *Hard 1*, *Hard 2*, *Wide*, *Fixed*

Normal: Commonly used setting where the linear "curve" produces one-to-one correspondence between the strength of your keyboard playing (velocity) and the actual sound change.

Soft 1: Provides increased response

Soft 2: A curve between *Soft 1* and *Normal*

Hard 1: Provides decreased response

Hard 2: A curve between *Hard 1* and *Normal*

Wide: Accentuates your playing strength by producing lower velocities in response to softer playing and louder velocities in response to harder playing. As such, you can use this setting to expand your dynamic range.

Fixed: Produces the same velocity value, no matter what your playing strength. The value set in *Keyboard Fixed Velocity* is used here.

Keyboard Fixed Velocity

Sends a fixed velocity to the tone generator regardless of how hard or soft you play the keyboard.

This parameter is available only when the *Keyboard Velocity Curve* is set to *Fixed*.

Settings: 1–127

AT MIDI Out (After Touch MIDI Out)

Selects the type of aftertouch output to external devices.

Settings: *Off*, *Channel*, *Poly*

AT Curve (Poly After Touch Curve)

Sets the curve that determines the level of the aftertouch value relative to the strength when you press the key.

Settings: *Normal*, *Soft 1*, *Soft 2*, *Hard 1*, *Hard 2*

Sustain Pedal (Sustain Pedal Select)

Select the type of footswitch connected to the FOOT SWITCH [SUSTAIN] jack on the rear panel.

- **FC3, FC3A (half-damper feature enabled)**

  Select *FC3A (Half On)*.

  If you do not need to use the half-damper feature, select *FC3A (Half Off)*.

- **FC4, FC4A, FC5**

  Select FC4A or FC5.

  The half-damper feature is not available with the FC4, FC4A, and FC5.

- **Pedal with reverse polarity**

  Select *Reverse Polarity*.

  The half-damper feature is not available.

Settings: *FC3A (Half On)*, *FC3A (Half Off)*, *FC4A/FC5*, *Reverse Polarity*

NOTE

The *Sustain Pedal (Sustain Pedal Select)* setting is not necessary when you use the half-damper feature by sending the Control Change from the external MIDI device.

Global Tuning

When this parameter is on, the micro tuning settings in the global settings are prioritized over the micro tuning settings for each Part of the Performance.

This applies to all Parts except the Drum Part.

Settings: Off, On

NOTE

The *Global Tuning* setting is reset to Off the next time the instrument is turned on.

Micro Tuning Name (Global Micro Tuning Name)

Shows the name of the selected micro tuning.

Tapping on the name lets you call up the menu for selecting the micro tuning.

Settings: *Equal Temperament*, *Pure Major*, *Pure Minor*, *Weckmeister*, *Kirnberger*, *Vallotti & Young*, *1/4 Shift*, *1/4 tone*, *1/8 tone*, *Indian*, *Arabic1*, *Arabic2*, *Arabic3*

        User: *User1–8*

        Library: *Library* name (when a Library file is loaded)

Micro Tuning Root (Global Micro Tuning Root)

Sets the root note for the micro tuning.

This parameter is not shown if the selected type in *Micro Tuning Name* does not require a root note.
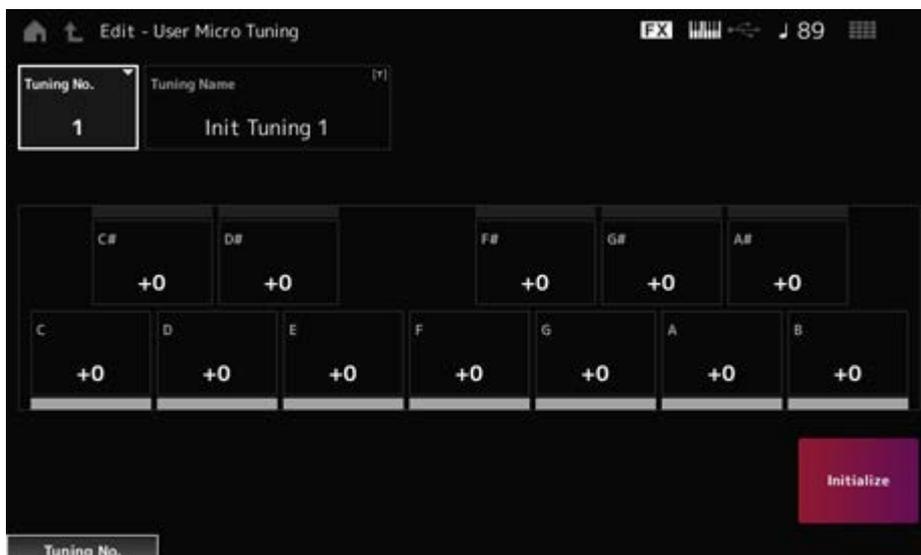
Settings: C–B

Edit User Tuning

Opens the *User Micro Tuning* settings screen.

Edit User Micro Tuning ★

This is the setting screen for *User Micro Tuning*.

Tuning No. (Micro Tuning Number)

Indicates the selected User Micro Tuning Number.

Settings: 1–8

Tuning Name (Micro Tuning Name)

You can save the User Micro Tuning you are editing under a new name.

Tapping on the name calls up the onscreen keyboard, allowing you to enter a name.

C, C♯, D, D♯, E, F, F♯, G, G♯, A, A♯, B

You can adjust the pitch of each note in cents to set the micro tuning.

Settings: −99–+99

Initialize

Initializes the selected User Micro Tuning.

Quick Setup ☆
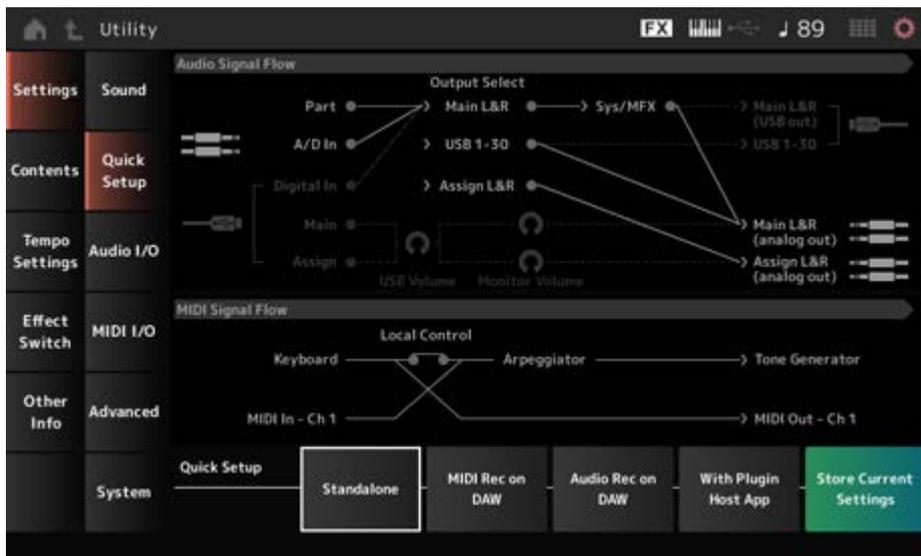
This function allows you to set all necessary settings for connecting the external device to the optimal values by simply selecting a group of settings.
Parameters across several setting screens can be set at once.

Operation

- [QUICK SETUP]
- [UTILITY] → *Settings* → *Quick Setup*

Audio Signal Flow
Displays the audio signal flow diagram.
The signal flow depicted changes depending on the connection on the [USB TO HOST] terminal and the other settings of the instrument.

MIDI Signal Flow
Displays the MIDI signal flow diagram.
The signal flow diagram changes depending on the settings of the instrument.

Quick Setup (Quick Setup Select)
Sets to one from *Quick Setup*.
Settings: *Standalone*, 1–3

The parameters for *Quick Setup* are as follows.

Audio settings	Direct Monitor Switch

MIDI settings	Local Control
Performance settings	Part 1–16 Output Select A/D In Output Select Digital In Output Select Part 1–8 Keyboard Control Switch Part 1–16 Part Mode Part 1–16 Tx Channel

For Audio settings, see *Audio I/O*. For MIDI settings, see *MIDI I/O*.

Initial settings for *Quick Setup* ★

■ *Standalone*

Settings for using the instrument by itself and for operating the external device from the instrument

Local Control	Direct Monitor	Output Select	Keyboard Sw	Part Mode	Tx Channel
On	On	Main L&R	Part 1–8: On	Part 1–16: Int	Part 1–16: Ch 1–16

■ *MIDI Rec on DAW*

Settings for recording your performance in MIDI on DAW software

Local Control	Direct Monitor	Output Select	Keyboard Sw	Part Mode	Tx Channel
Off	On	Main L&R	Part 1–8: On	Part 1–16: Int	Part 1–16: Ch 1–16

■ *Audio Rec on DAW*

Settings for recording each Part on the internal Tone Generator to DAW software as an individual audio track

Local Control	Direct Monitor	Output Select	Keyboard Sw	Part Mode	Tx Channel
On	Off	Different for each Part	Part 1–8: On	Part 1–16: Int	Part 1–16: Ch 1–16

■ *With Plugin Host App*

Settings for using the internal Tone Generator with a sound generator plug-in on a computer

Local Control	Direct Monitor	Output Select	Keyboard Sw	Part Mode	Tx Channel
On	On	Main L&R	Part 1–5: On Part 6–8: Off	Part 1–4: Int Part 5–16: Ext	Part 1–4: Ch 1–4 Part 5–8: Ch 1–4 Part 9–16: Ch 9–16

Store Current Settings

Stores the current settings to any one of *Quick Setup* 1 to 3.

Audio I/O ☆

On the *Audio I/O* screen, you can set the audio signal input and output.

[UTILITY] → *Settings* → *Audio I/O*

Audio Signal Flow

Displays the current audio signal flow diagram.

The flow diagram changes depending on the connection on the [USB TO HOST] terminal and the other settings of the instrument.

When you tap on the *Main Monitor Volume* in the *Audio Signal Flow*, the cursor moves to *Main*, and when you tap on *Assign*, the cursor moves to *Assign*.

A/D Input (A/D Input Gain)

Sets the input gain for the A/D INPUT jack to *Mic* or *Line*.

Settings: *Mic, Line*

　　　　Mic: Intended for a device with a low output level, such as a microphone.

> **Line**: Intended for a device with a high output level, such as a synthesizer, or audio device.

NOTE

A guitar or bass having an active pickup can be directly connected. On the other hand, when using a passive pickup, connect the instrument via an effect unit or direct box.

USB Volume

Adjusts the volume of the audio signal input from the [USB TO HOST] terminal. This is applied to the output signals from both the OUTPUT (BALANCED) jacks and the ASSIGNABLE OUTPUT (BALANCED) jacks.

Settings: 0–127

NOTE

USB Input Volume is stored as a global setting and not for each Performance.

Audio I/O Mode

Switches the mode for the audio signal output from the [USB TO HOST] terminal.

The instrument must be rebooted for this setting to be effective.

Settings: *16 Stereo/44.1kHz*, *4 Stereo/44.1–192kHz*

> **16 Stereo/44.1kHz**: Up to 32 channels (16 stereo channels) at a sampling frequency of 44.1 kHz
>
> **4 Stereo/44.1–192kHz**: Up to 8 channels (4 stereo channels) at a sampling frequency of 44.1 kHz to 192 kHz

NOTE

When set to *4 Stereo/44.1–192kHz*, the available frequencies are: 44.1 kHz, 48 kHz, 96 kHz, and 192 kHz.

Main L&R (Analog Output L&R Output Gain)

Sets the output gain of the OUTPUT (BALANCED) jacks.

Settings: −6dB, +0dB, +6dB, +12dB

Assign L&R (Assignable Output L&R Output Gain)

Sets the output gain of the ASSIGNABLE OUTPUT (BALANCED) jacks.

Settings: −6dB, +0dB, +6dB, +12dB

USB Main (USB Main L&R Output Gain)

Sets the output gain of the Main L&R channel of the [USB TO HOST] terminal.

Settings: −6dB, +0dB, +6dB, +12dB

USB 1–30 (USB Individual Output Gain)

Sets the output gain of the channels 1–30 of the [USB TO HOST] terminal.
Settings: −6dB, +0dB, +6dB, +12dB

Direct Monitor

Sets the audio signal output from *Main L&R (USB Out)* and *USB 1–30* channels to the external device (such as a computer) to be also played back from this instrument (direct monitoring).
When this is set to on, the audio signal output to the *Main L&R (USB Out)* channel and *USB 1–30* channels is also sent to the OUTPUT (BALANCED) jacks and [PHONES] jack of this instrument.
When there is no USB connection, the Direct Monitor switch is automatically turned on.
Settings: Off, On

Monitor Volume

Shows the *Monitor Volume* screen.
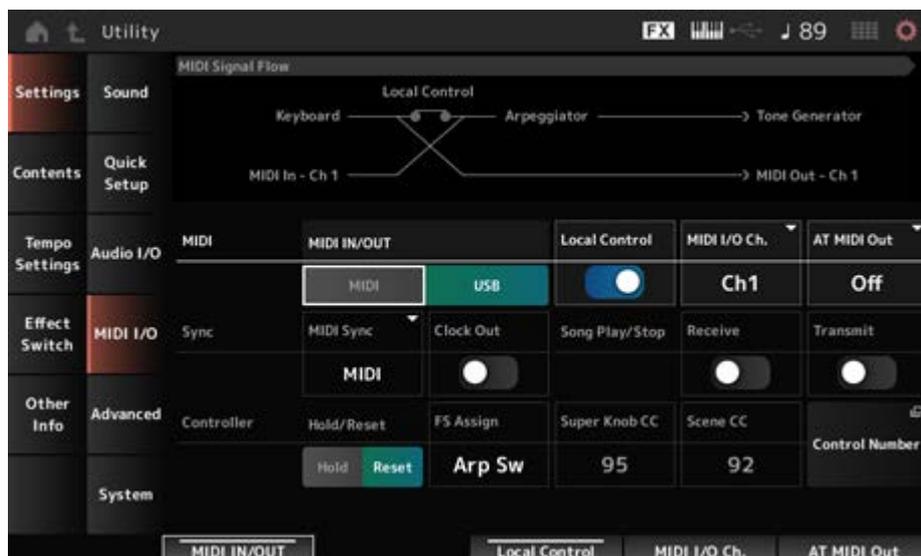
MIDI I/O   ☆
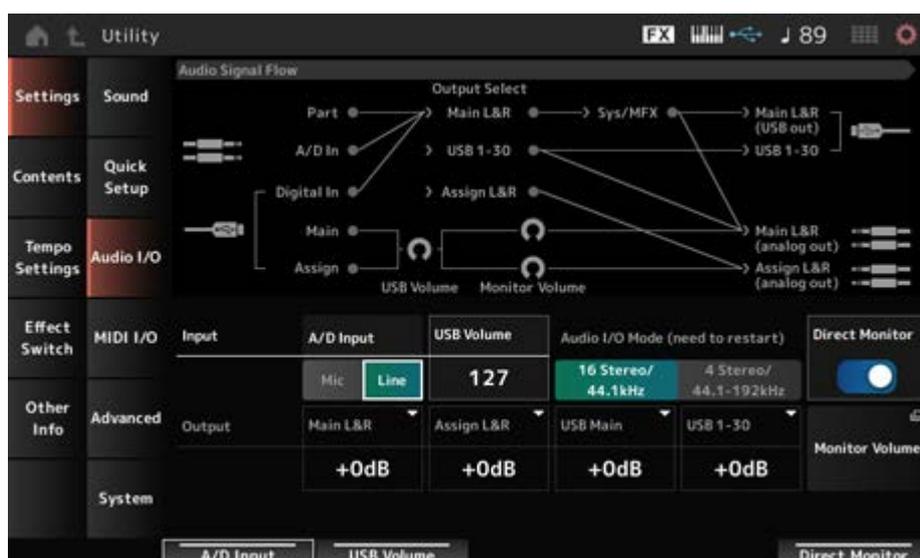
On the *MIDI I/O* screen, you can set the MIDI input and output.

Operation

[UTILITY] → *Settings* → *MIDI I/O*

MIDI Signal Flow

Displays the current MIDI signal flow diagram.
The flow diagram changes depending on the settings of the instrument.
By tapping near the *Local Control* switch on the *MIDI Signal Flow*, you can turn Local Control on or off.

MIDI IN/OUT

Selects the terminal(s) for transmitting and receiving MIDI messages.

Settings: MIDI, USB

Local Control

Switches Local Control on or off.

When the *Local Control* is set to off, the Controller block and the Tone Generator block will be disconnected, and no sound is produced when you play the keyboard. However, regardless of this setting, the keyboard performance data on this instrument are transmitted as MIDI messages, and MIDI messages sent from the external device are processed by the Tone Generator block.

Settings: Off, On

MIDI I/O Channel

Sets the MIDI channel for input and output of the Part with *Common* and the Part with the *Keyboard Control Switch* to be set to On.

Settings: *Ch1–Ch16*

AT MIDI Out (After Touch MIDI Out)

Selects the type of aftertouch output to external devices.

Settings: *Off*, *Channel*, *Poly*

MIDI Sync

Sets the parameters related to synchronization to the connected external device.

Select the internal clock of this instrument or the external MIDI clock of DAW software on the computer or the external MIDI device, or the audio signal input from the A/D INPUT jacks for playing back the Arpeggios, Motion Sequencer, Songs, and Patterns.

Settings: *Internal*, *MIDI*, *A/D In (ABS)*

> **Internal**: Synchronizes to the internal clock. For using this instrument by itself or as the primary clock source for other devices.
>
> **MIDI**: Synchronizes to the MIDI clock received from the external MIDI device. For using the external device as the primary clock source.
>
> **A/D In**: Synchronizes to the tempo, extracted by the Audio Beat Sync function, of the audio signal input from the A/D INPUT jacks.

Clock Out (MIDI Clock Out)

Sets the MIDI clock messages to be transmitted.

Settings: Off, On

Receive (Receive Sequencer Control)

Receives the MIDI messages for starting and stopping the Song.
Settings: Off, On

Transmit (Transmit Sequencer Control)
Transmits the MIDI messages for starting and stopping the Song.
Settings: Off, On

Controller Reset
Sets whether to use the current settings of the controllers such as modulation wheel, aftertouch, foot controller, and breath controller (*Hold*) or to reset to their initial settings (*Reset*) when you switch between Performances.
Settings: *Hold*, *Reset*

When set to Reset, the controllers will be reset when you switch between Performances as shown below:

Pitch bend	Center
Modulation wheel	Minimum
Aftertouch	Minimum
Foot controller	Maximum
Footswitch	Off
Ribbon controller	Center
Breath controller	Maximum
Expression	Maximum
Assignable switches 1 and 2	Off
Each lane of the motion sequencer	When the *Motion Seq Polarity* for the lane is set to *Unipolar*: the value is 0 (minimum) When the *Motion Seq Polarity* for the lane is set to *Bipolar*: the value is 64 (center)

FS Assign (FootSwitch Assign Control Number)
Sets the Control Change number generated by the operation of the footswitch connected to the FOOT SWITCH [ASSIGNABLE] jack. When this instrument receives a MIDI message with the same Control Change number specified here from the external MIDI device, the instrument will act as if the footswitch has been operated.
Settings: *Off, 1–95, Arp Sw, MS Sw, Play/Stop, Live Set+, Live Set−, Oct Reset, Tap Tempo*

Super Knob CC (Super Knob Control Change Number)

Sets the Control Change number generated by the operation of the Super Knob.

When this instrument receives the MIDI message with the same Control Change number specified here from the external device, the instrument will act as if the Super Knob has been operated.

Settings: *Off*, 1–95

NOTE

When this parameter is set to *Off*, the System Exclusive (SysEx) is used for handling MIDI messages.

Scene CC (Scene Control Change Number)

Sets the Control Change number generated when you switch between Scenes.

Also, Scene will change when a MIDI message with the same Control Change number set here is received from the external MIDI device.

Settings: *Off*, 1–95

NOTE

- Depending on the Control Change number, one of the Scenes 1–8 will be selected.
  0–15: Scene 1, 16–31: Scene 2, 32–47: Scene 3, 48–63: Scene 4, 64–79: Scene 5, 80–95: Scene 6, 96–111: Scene 7, 112–127: Scene 8
- If the Super Knob Control Change number and the Scene Control Change number are set to the same value, an exclamation mark appears in front of the number. In that case, the Scene Control Change takes priority, and the Super Knob Control Change is disabled.

Control Number

Opens the *Control → Control Number* screen for the *Common Edit*.
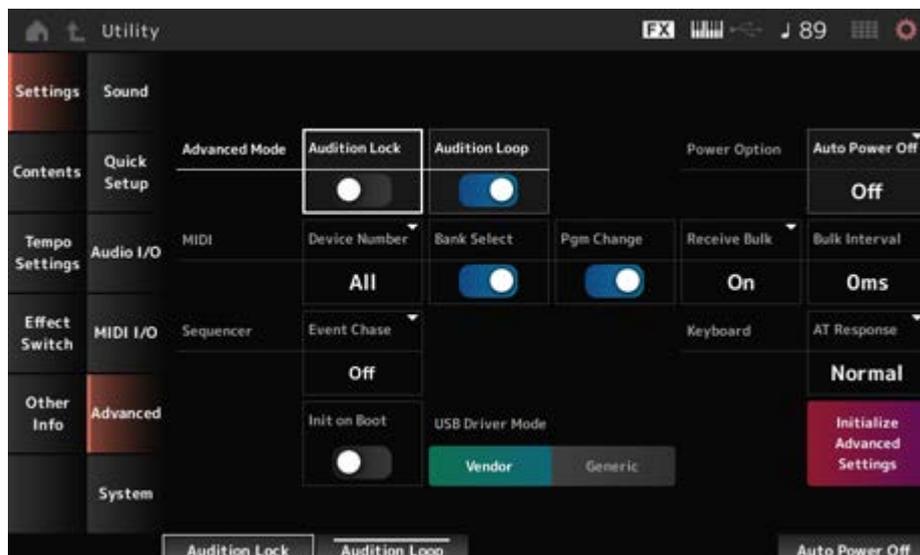
Advanced ☆

On the *Advanced* screen, you can set the detailed settings for the instrument.

Operation

[UTILITY] → *Settings → Advanced*

Audition Lock

Switches the audition lock on or off.

When set to on, the audition function is disabled.

Settings: Off, On

Audition Loop

When this parameter is set to on, the audition phrase will be played back in a loop.

When this is set to on, the playback of the audition phrase will stop automatically after it has been played to the end.

Settings: Off, On

Auto Power Off (Auto Power Off Time)

Auto Power Off is a function that automatically turns off the instrument when the instrument is inactive for a certain length of time to reduce energy consumption.

Here, you can set the length of time until the instrument is automatically turned off.

Settings: *Off* (*Auto Power Off* disabled), 5 min, 10 min, 15 min, 30 min, 60 min, 120 min

Device Number

Sets the MIDI device number.

For sending and receiving System Exclusive messages such as Bulk Dump and Parameter Change to and from an external MIDI device, you need to set this number to match the device number of the other device.

Settings: 1–16, *All*, *Off*

Bank Select (Receive/Transmit Bank Select)

Sets the reception and transmission of Bank Select messages between the instrument and the external MIDI device.

When this is set to on, the instrument will receive or recognize Bank Select messages sent from the external MIDI device.
Settings: Off, On

Pgm Change (Receive/Transmit Program Change)
Sets the reception and transmission of Program Change messages between the instrument and the external MIDI device.
When this is set to on, the instrument will receive or recognize Program Change messages sent from the external MIDI device.
Settings: Off, On

Receive Bulk
Sets the reception of Bulk Dump messages.
Settings: *Protect* (does not receive), *On* (receive)

Bulk Interval
Sets the interval time for transmission of Bulk data when this instrument receives the Bulk Request message from the external device.
Settings: 0–900ms

Event Chase (Song Event Chase)
This ensures that specified events to be recognized properly when, for example, a Song is played back from the middle, or with the Forward (fast-forward) and Back (rewind) operations. Events set with MIDI Event Chase will then function properly with the Forward and Back operations.
Settings: *Off*, *PC* (Program Change), *PC+PB+Ctrl* (Program Change + Pitch Bend + Control Change)

Init On Boot (Initialize User Data on Boot-up)
Initializes the User data when the instrument is turned on.
Settings: Off, On

USB Driver Mode
Set to *Vendor* for connecting to the computer with the *Yamaha Steinberg USB Driver* installed.
Settings: *Vendor*, *Generic*
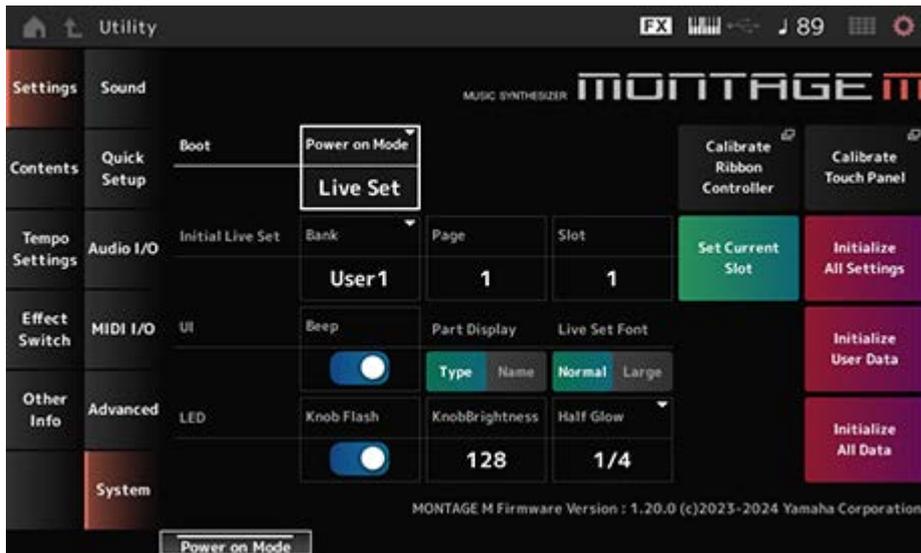
Initialize Advanced Settings
Initializes the settings on the *Advanced* screen.

System

On the *System* screen, you can set the parameters related to the entire instrument.

Operation

- [UTILITY] → *Settings* → *System*
- [UTILITY] + [DAW REMOTE] (→ *Calibrate Touch Panel* setting)

Power on Mode

Sets the screen to be shown on the display when the instrument is turned on.
Settings: *Perform*, *Live Set*

Calibrate Ribbon Controller

Opens the screen for ribbon controller calibration.
Use it when the ribbon controller does not respond correctly.

Calibrate Touch Panel

Opens the screen for touchscreen calibration.
Use it when the touchscreen does not respond correctly.

Initial Live Set Bank (Initial Live Set Bank)
Initial Live Set Page (Initial Live Set Page)
Initial Live Set Slot (Initial Live Set Slot)

When *Power On Mode* is set to *Live Set*, use this parameter to set the initial Live Set Slot to be selected after startup.

Set Current Slot (Set Current Slot to Initial Live Set)

Sets the current Performance to the Live Set slot selected after startup.

Initialize All Settings

Initializes all *Utility* screen settings.

Beep

Turns the touchscreen operation sound on or off.
Settings: Off, On

Part Display

Sets the Part Name to show the Category and Part Type or just Part Name.
Settings: *Type*, *Name*

Live Set Font

Determines the font size of the contents names and category names on the *Live Set* screen and the *Category Search* screen.
Settings: *Normal*, *Large*

Initialize User Data

Initializes all data in the User area of User memory (Performances, Motion Sequences, Live Sets, and such) and all settings on the *Utility* screen.

> **NOTICE**
>
> When *Initialize User Data* is carried out, all applicable data and system settings you created will be reset to the factory default.
> Be careful not to lose important data. It is also recommended saving the necessary settings to a USB flash drive in advance.

Knob Flash (Super Knob LED Blink)

Sets the flashing function of the Super Knob on or off.
Settings: Off, On

KnobBrightness

Sets the brightness of lighting on the Super Knob.

Settings: 0–128

Half Glow (LED Half Glow Brightness)

Controls the dimming of the button lamps.

Settings: *Off*, 1/4, 1/2

Initialize All Data

Initializes all data in User memory and all *Utility* screen settings.

NOTICE
When *Initialize User Data* is carried out, all applicable data and system settings you created will be reset to the factory default. Be careful not to lose important data. It is also recommended to save the necessary settings to a USB flash drive in advance.

Product Info

Shows the firmware version of the instrument.

Contents ★
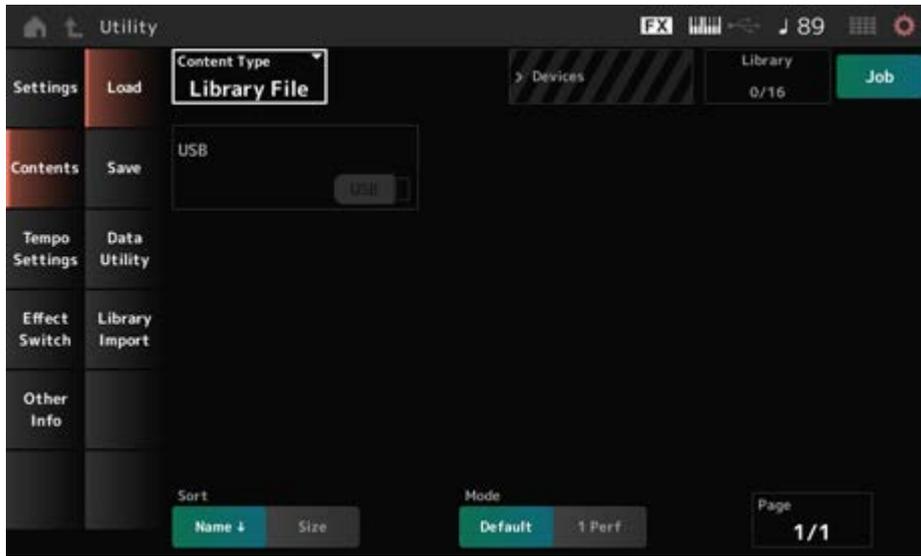
Load ☆

On the *Load* screen, you can load files and data.

Operation

- [UTILITY] → *Contents* → *Load*
- [SHIFT] + [STORE]

Content Type

All data or a specific set of data is loaded from a single file saved on a USB flash drive or setting stored on the instrument.

Here, you can select which set of data in a file to load.

Available settings vary depending on the route you take to open the screen.

Settings: The file types which can be loaded are as follows.

Content Type	Device Type	File extension	Description
User File	File	.Y2U (.Y2**W**) .X7U .X8U	User file saved on a USB flash drive is loaded into the User area of User memory. When the User file has been divided, both .Y2U and .Y2W must be saved on the USB flash drive. The following settings are included in a User file. ● Performance ● Arpeggio ● Motion Sequence ● Curve ● Live Set ● Micro Tuning ● Waveform ● Audition ● Smart Morph ● Utility settings (.Y2U only)

Content Type	Device Type	File extension	Description
Library File	File	.Y2L (.Y2**M**) .X7L .X8L	Library files saved on a USB flash drive are loaded into the Library area of User memory. When a Library file has been divided, both .Y2L and .Y2M must be saved on the USB flash drive. The following settings are included in a Library file. ● Performance ● Arpeggio ● Motion Sequence ● Curve ● Live Set (only one bank) ● Micro Tuning ● Waveform ● Audition ● Smart Morph
Backup File	File	.Y2A (.Y2**B**) .X7A .X8A	Backup files saved on a USB flash drive are loaded into the User memory. A backup file includes everything in the User and Library areas, as well as Songs, and Patterns. When a backup file has been divided, both .Y2A and .Y2B must be saved on the USB flash drive.
Song&Perf (Song & Performance)	Internal data		Only the specified Song is loaded from Songs stored in the User area of the User memory. Both MIDI sequences and Performances can be loaded.
Song	Internal data		Only the specified Song is loaded from Songs stored in the User area of the User memory. Only MIDI sequences can be loaded.
.mid File	File	.MID	Standard MIDI Files (SMF) saved on a USB flash drive are loaded (either in format 0 or format 1).
.wav File	File	.WAV	Audio files saved on a USB flash drive are loaded.
Pattern&Perf (Pattern & Performance)	Internal data		Only the specified Pattern is loaded from Patterns stored in the User area of the User memory. Both MIDI sequences and Performances can be loaded.
Pattern	Internal data		Only the specified Pattern is loaded from Patterns stored in the User area of the User memory. Only MIDI sequences can be loaded.

Content Type	Device Type	File extension	Description
Audio File *	File	.WAV .AIF	Audio files saved on a USB flash drive are loaded as Waveforms. Example: [PERFORMANCE] → [EDIT/ ⟳] → *Part* selection → *Element* selection → *Osc/Tune*
Motion Seq (*Motion Sequence*) *	Internal data		Only the specified sequence is loaded from the Motion Sequences saved (stored) in the User area of the User memory.
Smart Morph *	Internal data		Only Smart Morph data is loaded from the Performance saved (stored) in the User area of User memory.

NOTE

Content types marked with an asterisk (*) are not displayed when this screen is opened from the *Utility* screen.

Parent Folder Name
Current Folder Name

Indicates the name of the parent folder and the name of the current folder.

Once you tap on the parent folder name, it is then the current folder.

Job

Sets whether the Job function is enabled (On) or disabled (Off).

When this parameter is turned on, tapping on the current file, folder, or content will call up the *Rename* or *Delete* context menu.

When you tap on the connected USB flash drive, the context menu for *Format* will appear.

Settings: Off, On

Free Storage

Indicates the used capacity and total capacity of the selected storage.

The indication differs depending on the content type.

Folder and file select

Indicates the folders and files within the current folder.

Sort

Sets the sort order for the files in *File select*.

Settings: *Name*, *Size*, *Date*, *Default* (Varies by content type)

> **Name**: Sorts by name. The down arrow indicates that the list is arranged in ascending order (A to Z). The up arrow indicates that the list is arranged in descending order.
>
> **Size**: Sorts in order of data size. The down arrow indicates that the list is in ascending order (small to large). The up arrow indicates that the list is in descending order. This is not available when the content type is *Motion Seq*, *Song*, *Song&Perf*, *Pattern*, *Pattern&Perf*, *Performance*, or *Smart Morph*.
>
> **Date**: Sorts by the date the setting was stored. The down arrow indicates that the list is arranged in descending order (new to old). The up arrow indicates that the list is arranged in ascending order. This is available only when the content type is *Motion Seq*, *Song*, *Song&Perf*, *Pattern*, *Pattern&Perf*, *Performance*, or *Smart Morph*.
>
> **Default**: Sorts in ascending order of content number. This is available only when the content type is *Song*, *Song&Perf*, *Pattern*, *Pattern&Perf*, *Performance*, *Motion Seq*, or *Smart Morph*.

Mode

Selects the mode for loading.

This is shown only for a User File or a Library File.

Settings: *Default*, *1 Perf*

> **Default**: Loads all Performances.
>
> **1 Perf**: Loads only a specified Performance.

Key (Center Key)

Select the key to which the loaded WAV or AIFF is to be assigned.

This is shown only for audio files.

Settings: *Keyboard Select (C−2–G8)*, *All*

Keyboard Select

Sets whether *Center Key* is updated by keyboard operation.

This is shown only for audio files.

Page
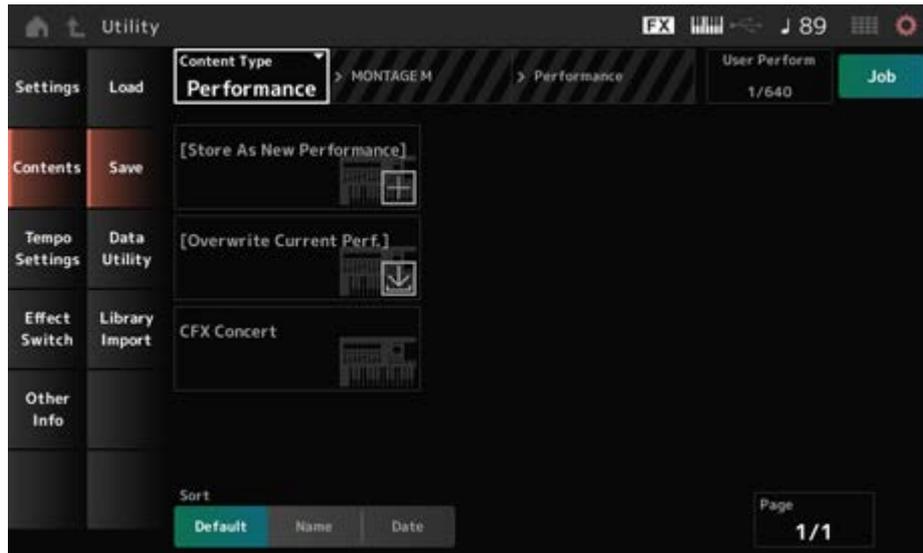
When the files appearing in the *File select* do not fit on a single page, a scroll button will appear to allow you to select a page.

Save ☆

On the *Save* screen, you can save files and data.

Operation

This is basically the same as the *Load* screen.

Content Type

All data or a specific set of data is saved on a USB flash drive or stored on the instrument.

Here, you can set which data to store or save.

Available settings vary depending on the route you take to open the screen.

Settings: The following table shows the content types that can be stored or saved.

Content Type	Device Type	File extension	Description
Performance	Internal data		Saves (Stores) the Performance to the User area of the User memory.

Content Type	Device Type	File extension	Description
User File	File	.Y2U (.Y2**W**)	Settings stored in the User area of User memory are saved to a USB flash drive as a User file. The following settings are included in a User file. ● Performance ● Arpeggio ● Motion Sequence ● Curve ● Live Set ● Micro Tuning ● Waveform ● Audition ● Smart Morph ● Utility settings When the file size exceeds 2 GB and the file has been divided, both .Y2U and .Y2W must be handled as a set.
Library File	File	.Y2L (.Y2**M**)	Settings stored in the Library area of User memory are saved to a USB flash drive as a Library file. The settings contained in the Library file are as follows (same as the User file, except for the *Utility* settings). ● Performance ● Arpeggio ● Motion Sequence ● Curve ● Live Set (only one bank) ● Micro Tuning ● Waveform ● Audition ● Smart Morph When the file size exceeds 2 GB and the file has been divided, both .Y2L and .Y2M must be handled as a set.

Content Type	Device Type	File extension	Description
Backup File	File	.Y2A (.Y2**B**)	Settings stored in the User memory are saved to a USB flash drive as a backup file. A backup file includes everything in the User and Library areas, Songs, and Patterns. When the file size exceeds 2 GB and the file has been divided, both .Y2A and .Y2B must be handled as a set.
.mid File	File	.MID	MIDI data stored in the Song and Pattern area of User memory is saved to a USB flash drive as a Standard MIDI File (SMF; only in format 1).
Motion Seq (*Motion Sequence*) *	Internal data		Stores (saves) the Motion Sequence being edited to the User area.

NOTE

Content types marked with an asterisk (*) are not displayed when this screen is opened from the *Utility* screen.
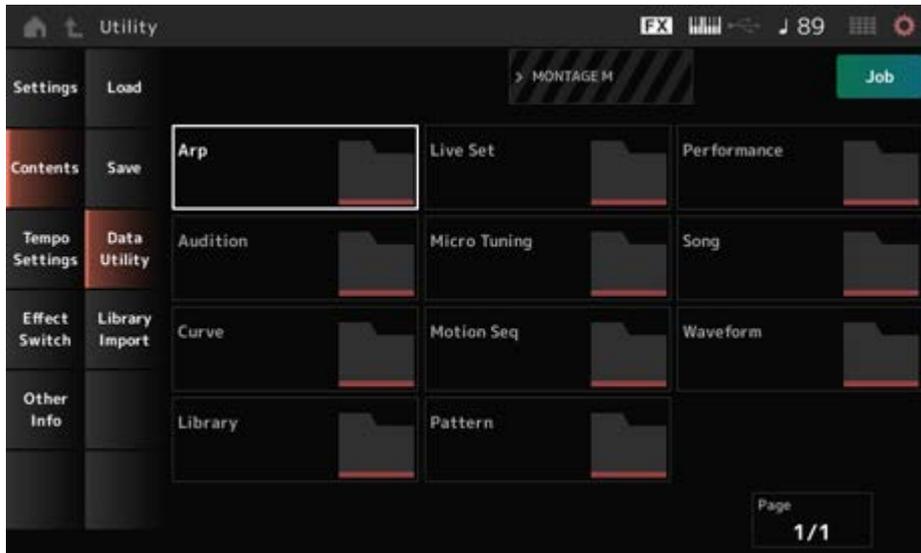
Data Utility ☆

On the *Data Utility* screen, you can manage files and data in User memory.

Operation

[UTILITY] → *Contents* → *Data Utility*

This is basically the same as the *Load* screen.

Folder select

Shows the Content types in User memory as folders. Tap the folder to open.

- Arp
- Audition
- Curve
- Library
- Live Set
- MicroTuning
- Motion Seq
- Pattern
- Performance
- Song
- Waveform

Content Select

Tapping on the name calls up the context menu for *Rename* and *Delete*.

When *Job* is turned on, the following three items are displayed.

Select All

Selects all of the contents in the folder.
Displayed when nothing has been selected.

Unselect All

Unselects all of the contents in the folder.

Displayed when any of the contents have been selected.

Delete

Deletes all selected content.

Displayed when any of the contents have been selected.
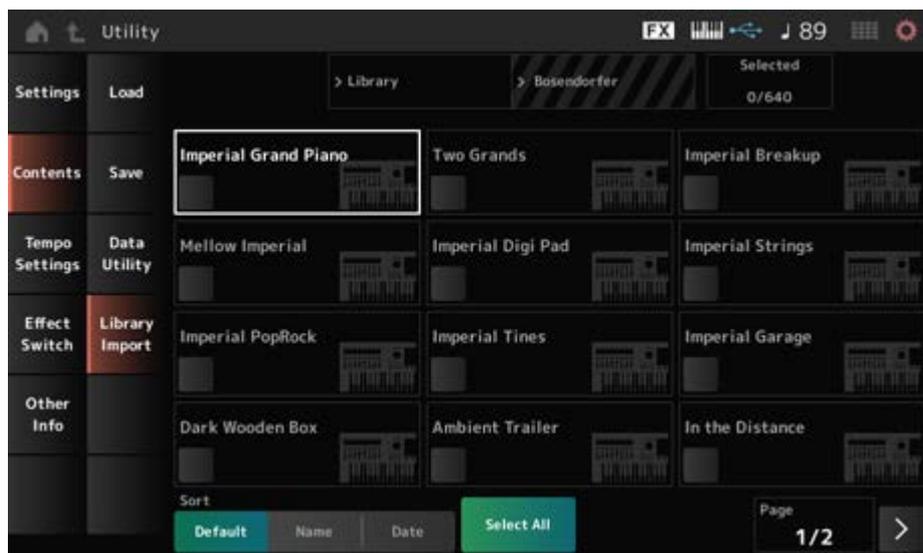
Library Import ☆

On the *Library Import* screen, you can copy specific Performance(s) in the library to the User Bank.

Operation

[UTILITY] → *Contents* → *Library Import*

This is basically the same as the *Load* screen.

Select All

Selects all Performances in the current library folder.

Shown only when no Performance has been selected.

Unselect All

Deselects all Performances in the current library folder.

Displayed only when any Performance has been selected.

Import to User Bank

Copies the selected Performance to the User Bank.

When this operation is carried out, the User Waveforms and User Arpeggios, User Curves, User Micro Tuning, and User Auditions used in the selected Performance are also copied to the User Bank.

Displayed only when any Performance has been selected.
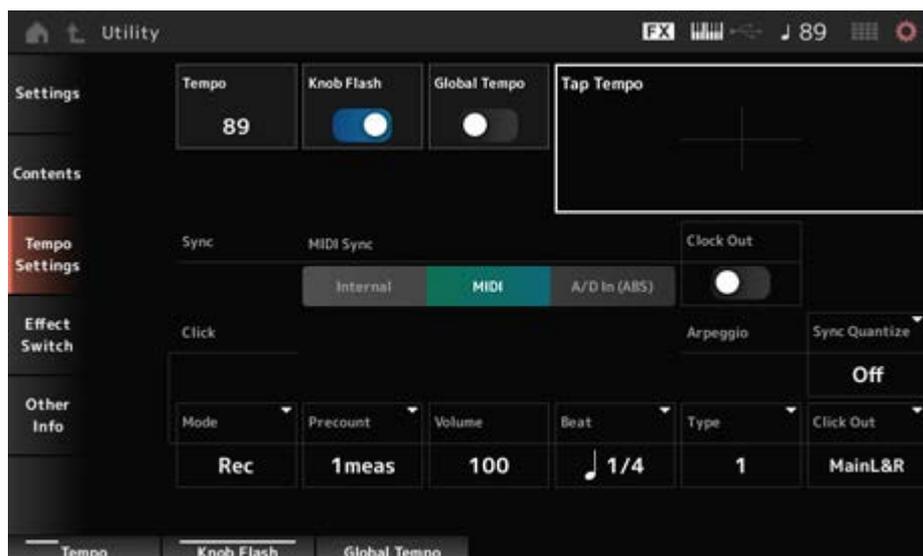
Tempo Settings ⭐

On the *Tempo Settings* screen, you can set the parameters related to tempo and synchronization.

Operation

- [TEMPO/TAP]
- [UTILITY] → *Tempo Settings*
- ♩ 90 (Tempo Settings) icon

Tempo

Sets the Performance tempo.

When *MIDI Sync* is set to *MIDI* or *A/D In* and the instrument is set to synchronize to an external device, *Ex.Tempo* will be shown instead of the setting value.

Settings: 5–300

Knob Flash (Super Knob LED Blink)

Sets the flashing of the Super Knob on or off.

Settings: Off, On

Global Tempo

When this parameter is set to off, a tempo setting for each Performance is used.

When set to on, the current tempo is retained when you change the Performance.

Settings: Off, On

Tap Tempo

You can set the desired tempo by tapping the area shown on the screen or by pressing (tapping) the [ENTER] button on the top panel while the cursor is on this parameter.

Or you can use the [TEMPO/TAP] button to set the tempo in the same way.

This parameter is not available when *MIDI Sync* is set to *MIDI* and the instrument is set to synchronize to an external device.

NOTE

When *MIDI Sync* is set to *A/D In*, the tempo search starts at the first tapping action.

MIDI Sync

Sets the parameters related to synchronization to the connected external device.

Select *Internal* for using the internal clock of this instrument, *MIDI* for using the external MIDI clock of the DAW software on the computer or the external MIDI device, or *A/D In (ABS)* for using the audio signal input from the A/D INPUT jacks, for playing back the Arpeggios, Motion Sequencer, and Songs.

Settings: *Internal*, *MIDI*, *A/D In (ABS)*

> **Internal**: Synchronizes to the internal clock. For using this instrument by itself or as the primary clock source for other devices.
>
> **MIDI**: Synchronizes to the MIDI clock received from the external MIDI device. For using the external device as the primary clock source.
>
> **A/D In**: Synchronizes to the tempo of the audio signal input from the A/D INPUT jacks.

Clock Out (MIDI Clock Out)

Sets the MIDI clock messages to be transmitted.

Settings: Off, On

Mode (Click Mode)

Sets when to play back the click sound (metronome).

Settings: *Off*, *Rec*, *Rec/Play*, *Always*

> **Off**: No click sound is played.
>
> **Rec**: The click sound is played during Song or Pattern recording.
>
> **Rec/Play**: The click sound is played during Song or Pattern recording and playback.
>
> **Always**: The click sound is always played.

Precount (Click Precount)

Sets the number of count-in measures from the time the [▶] (Play) button is pressed until recording actually starts when recording a Song or Pattern.

Settings: *Off* (recording starts when you press the [▶] (Play) button), *1meas–8meas*

NOTE

Since the click sound uses the internal Tone Generator, the use of the click sound affects the overall polyphony of the instrument.

Volume (Click Volume)

Sets the volume of the click sound.

Settings: 0–127

Beat (Click Beat)

Sets the beat at which the click sound is played.

Settings: 1/16 (sixteenth notes), 1/8 (eighth notes), 1/4 (quarter notes), 1/2 (half notes), Whole (whole notes)

Type (Click Type)

Selects the type of click sound.

Settings: 1–10

Sync Quantize (Arpeggio Synchro Quantize Value)

Adjusts the timing for starting the next Arpeggio when playing back an Arpeggio for multiple Parts. When set to *Off*, the Arpeggio is played back when you play the Part on the keyboard.

Settings: *Off*, 60 (thirty-second note), 80 (sixteenth note triplet), 120 (sixteenth note), 160 (eighth note triplet), 240 (eighth note), 320 (quarter note triplet), 480 (quarter note)

Click Out (Click Output Select)

Sets the output destination for the click sound.

Settings: *MainL&R*, *AsgnL&R*, *USB1&2–USB29&30*, *AsgnL*, *AsgnR*, *USB1–USB30*

> **MainL&R**: Outputs in stereo (two channels) to the OUTPUT [L/MONO] and [R] jacks.
>
> **AsgnL&R**: Outputs in stereo (two channels) to the ASSIGNABLE OUTPUT [L] and [R] jacks.
>
> **USB1&2–USB29&30**: Outputs in stereo (channels 1 and 2, to channels 29 and 30) to the [USB TO HOST] terminal.
>
> **AsgnL**: Outputs in mono (one channel) to the ASSIGNABLE OUTPUT [L] jack.
>
> **AsgnR**: Outputs in mono (one channel) to the ASSIGNABLE OUTPUT [R] jack.
>
> **USB1–30**: Outputs in mono (channels 1 to 30) to the [USB TO HOST] terminal.
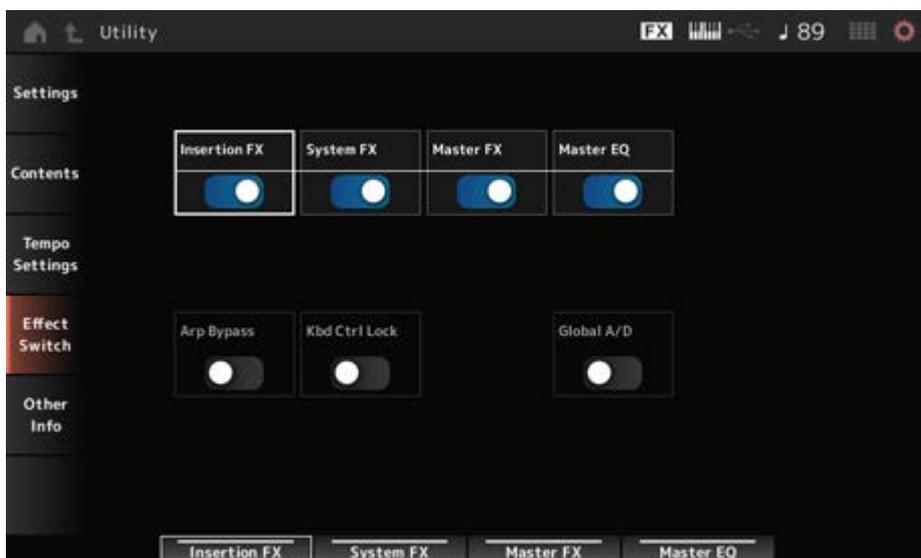
Effect Switch   ★

On the *Effect Switch* screen, you can set the parameters related to effect bypass.
The settings on this screen are not saved (stored), so the settings are reset to the default when the instrument is restarted.

Operation

- [UTILITY] → *Effect Switch*
- Tap the FX (Effect) icon
- [SHIFT] + [QUICK SETUP]

Insertion FX (Insertion Effect)
Sets the Insertion Effect on or off.
Settings: Off, On

System FX (System Effect)
Sets the System Effect on or off.
Settings: Off, On

Master FX (Master Effect)
Sets the Master Effect on or off.
Settings: Off, On

Master EQ
Sets the Master EQ on or off.
Settings: Off, On

Arp Bypass (Arpeggio Bypass)

Sets the Arpeggio Bypass on or off.

When this parameter is set to on, all Arpeggio operations are disabled.

Settings: Off, On

NOTE

- When Arpeggio Bypass is on, the [ARP ON/OFF] button flashes.
- When the Arpeggio Bypass is on, changing the Arpeggio switch for any Part will turn off Arpeggio Bypass.
- The Songs recorded by using the Arpeggio function will have the Arpeggio sequence included in the data. When you edit such Songs in the DAW software, you can set Arpeggio Bypass to On to prevent the Arpeggio playback from being affected twice.

Kbd Ctrl Lock (Keyboard Control Lock)

Sets lock for the Keyboard Control on or off.

When set to on, Keyboard Control is locked for all Parts.

Turning it off unlocks Keyboard Control.

This is useful for creating or editing each MIDI track separately, for example, when using the instrument as a 16-part multi-timbral sound module with the DAW software.

NOTE

When the Keyboard Control for each Part is changed while *Keyboard Control Lock* is on, Keyboard Control will be unlocked.

Settings: Off, On

Global A/D

When this parameter is set to on, the volume of the A/D Part stays the same when you change the Performance, and other parameters related to the A/D Part also stay the same.

When this parameter is set to off, the volume set for the Performance is used when you change Performances, and other parameters related to the A/D Part will change accordingly.

Master FX and *Master EQ* are switched on and off simultaneously.

Settings: Off, On

Other Info ★

On the *Other Info* screen, you can find other information.

Shift Function ☆

Shows the list of shortcut operations for simultaneous pressing of the [SHIFT] button and other buttons.

Legal Notices ☆

Shows content such as copyrights.

Screens shown by pressing specific buttons ☆

Contents

Panel Lock

Split Job

NOTE RANGE

NAVIGATION

FX OVERVIEW

Store

DAW REMOTE

Control Assign

Control View

Panel Lock ☆

Using the panel lock function prevents accidental operation during live performances.

Operation

When the *Home* screen or the *Live Set* screen is shown, press [SHIFT] + [TEMPO/TAP]

When the Panel Lock function is engaged, all operations will be unavailable, except the keyboard, pedals, Master Volume, Super Knob, Pitch bend wheel, Modulation wheel, Ribbon controller, and, of course, disengaging the unlock operation. This lock also applies to touchscreen operations.

When the Panel Lock function is engaged, press [SHIFT] + [TEMPO/TAP] again to disengage the Panel Lock.
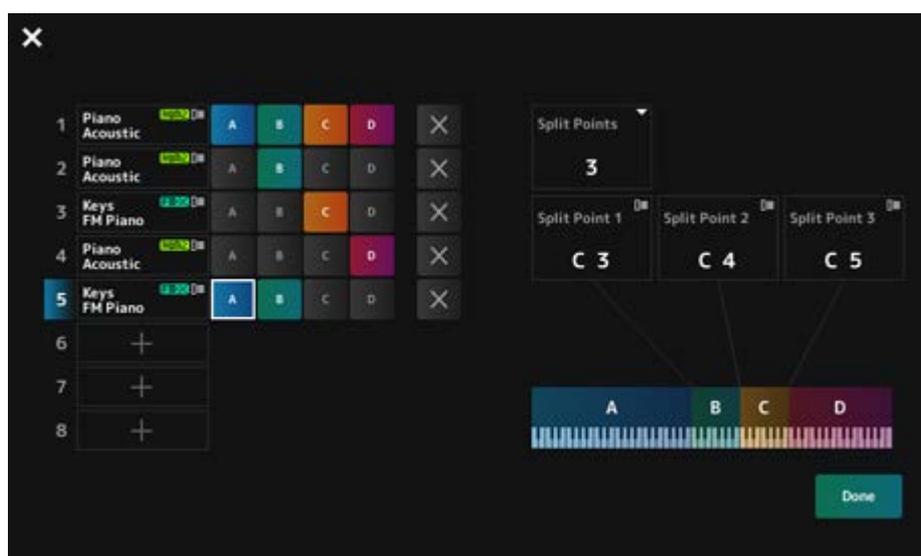
Split Job ☆

Sets the Split function (for dividing the entire keyboard into sections, allowing you to play each section with a different sound).

Operation

[SPLIT]

Split Points
Specifies the number of split points.
Settings: 1–3

Split Point 1–3
Specifies the key for the split point.
Settings: *C#−2–G8*

Part Name
Group A–D
Shows the Part name and the Split group. Tapping on the Part name calls up the menu for *Category Search* and *Delete*.
Press a Group button to assign the Part to the group.
Tap the group buttons while holding down the [SHIFT] button to assign a single Part to multiple groups.

[+] (Add)

When you tap [+], the *Part Category Search* screen or the *Performance Merge* screen opens, so that you can add a Part to the Performance.

X (Cancel)

Cancels group assignments.

Done

Confirms the settings and closes the screen.
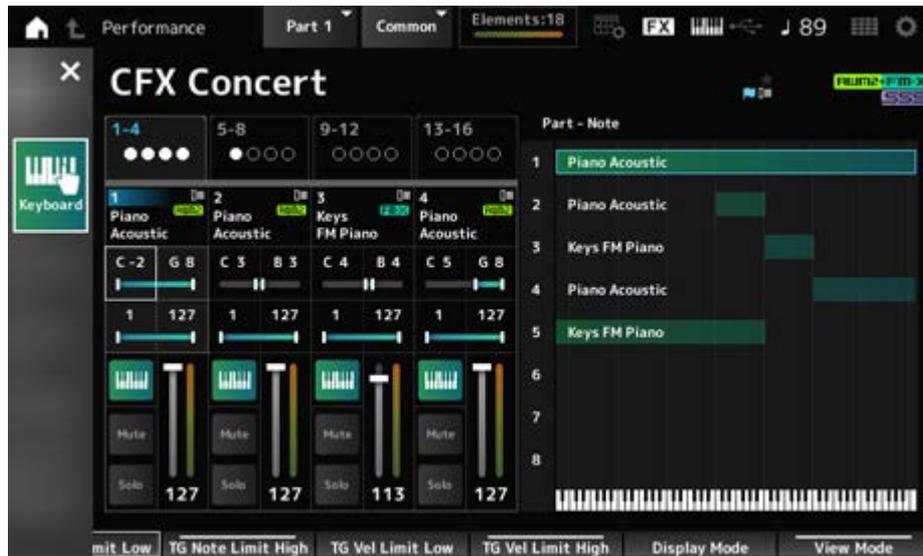
Tapping the ❌ (close) on the upper left cancels the setup and closes the screen.

NOTE RANGE ☆

Operation

[SHIFT]+[SPLIT]

The *Part—Note* view is shown on the *Home* screen.

The cursor moves to *TG Note Limit Low* of the selected Part and you can use the instrument's keyboard to enter the *Note Range* value.

NAVIGATION ☆

This is the *Navigation* screen, which provides convenient and instant navigation when editing the various parameters.

Operation

- [NAVIGATION]
- (With the *View Mode* on the *Home* screen is set to *Default*) Tap the *Navigation* button shown on the display

Tapping the icons calls up the corresponding setting screens.
Also, pressing the [NAVIGATION] button during editing calls up the current location icon 📍 .

FX OVERVIEW ☆

On the FX OVERVIEW screen, you can check the status of effect settings and easily access screens for advanced settings.

Operation

- [SHIFT]+[NAVIGATION]
- (With the *View Mode* on the *Home* screen is set to *Default*) Tap the *Fx Overview* button shown on the display

Switching Parts for display
Switches the Parts to display.
Settings: *1–4*, *5–8*, *9–12*, *13–16*, *A/D in*

All Ins
Turns all Insertion Effects (A and B) on or off.
Settings: Off, On

Var + Rev
Turns the Variation and Reverb effects on or off.
Settings: Off, On

Ins A
Ins B

495

Var

Rev

MFX

MEQ

Shows the corresponding screen for detailed settings.

Effect switch

Switches each effect on or off.

Settings: Off, On

Type

Preset

Sets the type and preset for each effect.

Settings: ***Effect Type***: See the Effect types.

         Preset: Refer to the *Data List*.
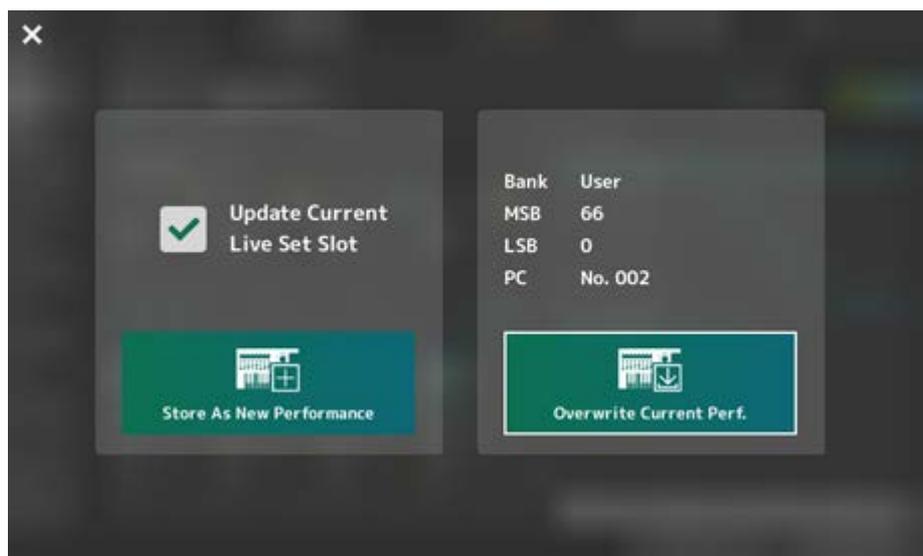
Store ☆

This is the confirmation screen when saving (storing) the current Performance in the User area.

Operation

[STORE]

Store As New Performance
Registers as a new Performance.

Update Current Live Set Slot
When a slot in the User Live Set bank is selected, a message confirming the update of the Live Set slot will appear. To proceed with the update, check the box and select *Store As New Performance*.

Overwrite Current Perf.
Saves the Performance you are editing over the existing settings (Bank, MSB, LSB, and Program Change number) shown on the display.

Jump to Data Utility
Shown when saving is not possible due to an error such as "*Performance full*."
[UTILITY] → *Contents* → *Data Utility* screen is displayed.
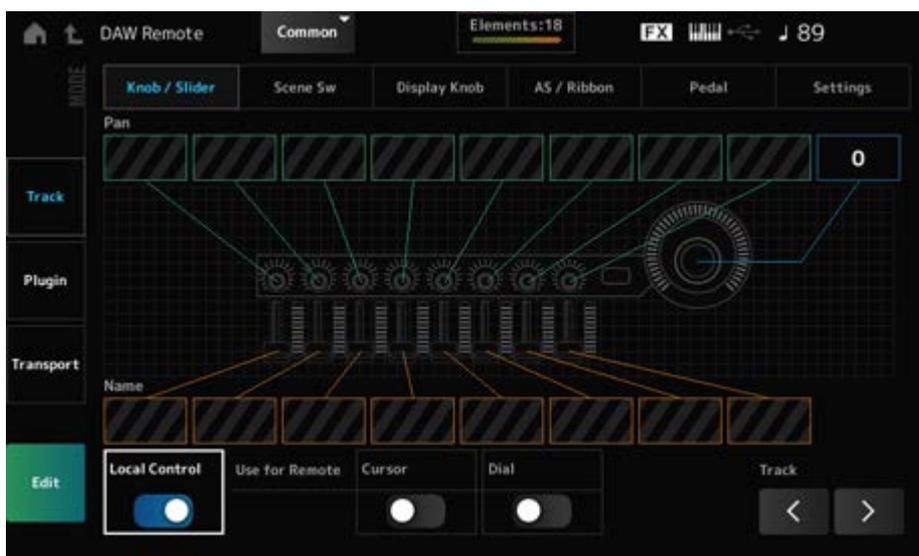
DAW REMOTE

Pressing the [DAW REMOTE] button enables the DAW remote function, allowing you to conveniently control your preferred DAW with the controllers on the instrument.

Operation

[DAW REMOTE]

Mode (Remote Control Mode)

Select the DAW remote function from three modes of operation.

You can also switch modes by pressing [DAW Remote] + one of the Slot number and Category name selection buttons (such as [Piano], [Keyboard], and [Organ]).

Settings: *Track*, *Plugin*, *Transport*

> **Track**: Mode for controlling multiple tracks on the DAW at once. Knob and control slider operations are sent as *Mackie Control* compatible protocols from Port 2.
>
> **Plugin**: Mode for controlling a specific plugin on the DAW. Knob and control slider operations are sent as messages in Control Change Numbers for remote functions from Port 1.
>
> **Transport**: Mode for playing the keyboard while playing back the recorded data on the DAW, or recording your keyboard performance on the DAW. You can use the Sequencer transport buttons to start or stop the playback on the DAW. All controllers except the Sequencer transport buttons operate as they normally do.

Switching screens

Opens the settings screen for each controller and the remote function.

Settings: *Knob/Slider, Scene Sw, Display Knob, AS/Ribbon, Pedal, Settings*

Local (Local Control)

Sets Local Control on or off.

This is the same setting that can be made from: [UTILITY] → *Settings* → *MIDI I/O* screen.

Use for Remote

Sets the Data dial and Cursor buttons on the Top panel for controlling the DAW.

- On: For controlling the DAW

- Off: For controlling the Main display on the top panel.
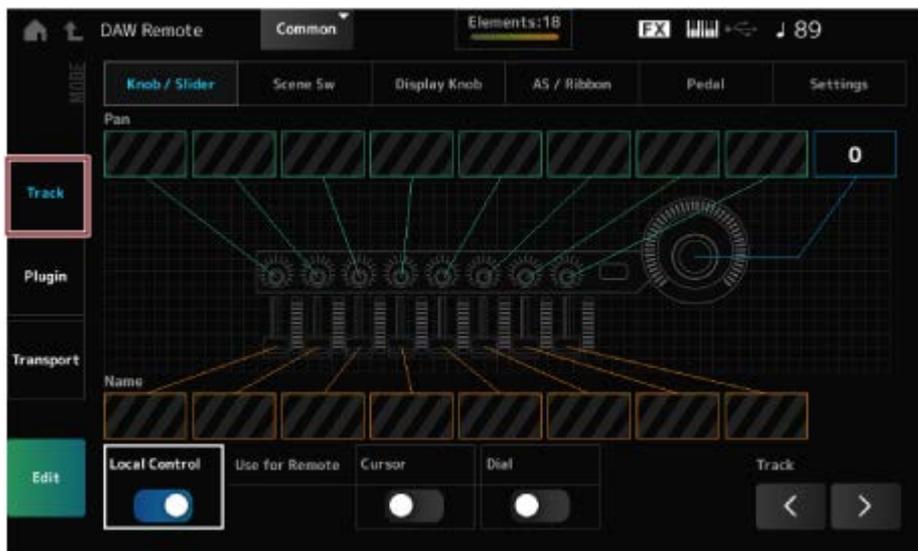
Track (Track Select)

Outputs the Track group selection (by eight tracks at a time).
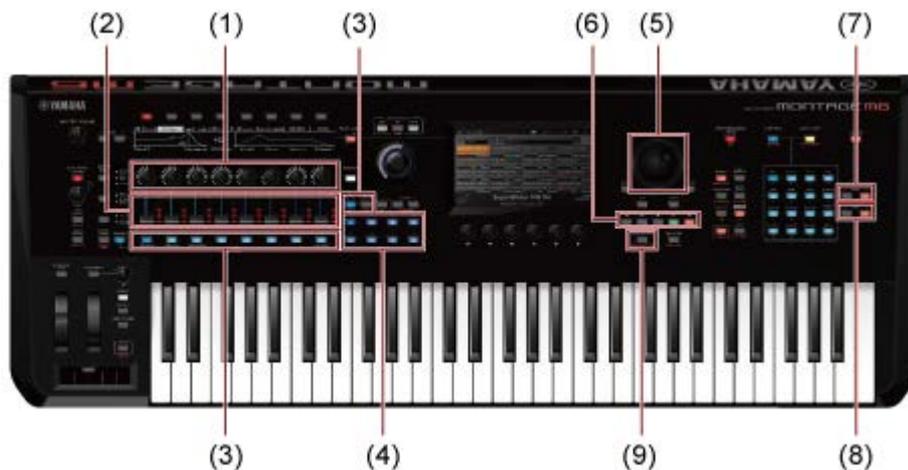
For using controllers ★

- *Track* mode
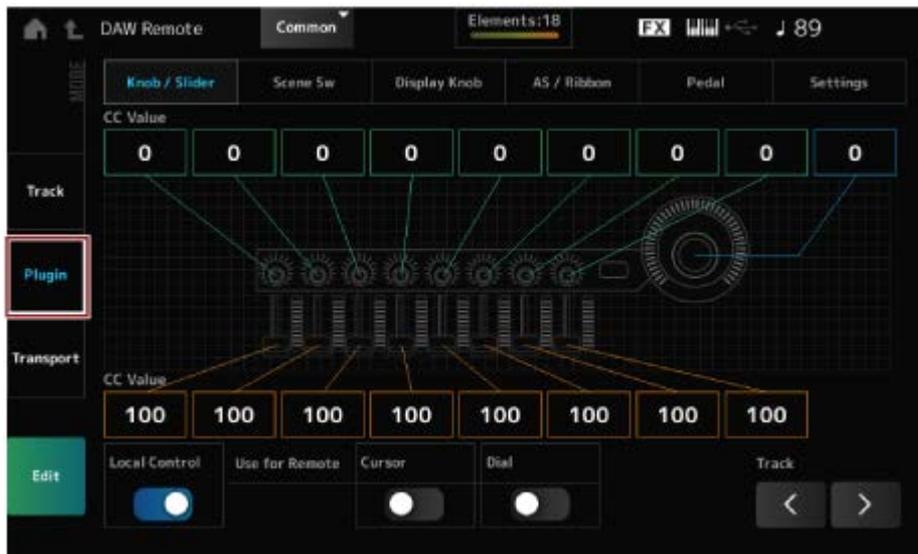
Controllers

	Controllers	On the DAW
1	Knobs 1–8	Controls the pan of the track.
2	Control sliders 1–8	Controls the volume of the track.
3	PART buttons, [PART SELECT] button, [KEYBOARD CONTROL] button	Selects track(s), and switches mute and solo of the selected track(s) on or off.
4	SCENE buttons	Function
5	Data dial, cursor buttons	Moves the cursor position or Song position.
6	Sequencer transport buttons	Controls the transport actions (recording and playback).
7	BANK buttons	Selects a track group (eight tracks at a time).
8	PAGE buttons	Selects a track group (one track at a time).
9	[SONG/PATTERN] button	Turns loop playback on or off.

Other controllers are set to send the Control Change messages set in remote mode.

- *Plugin* mode
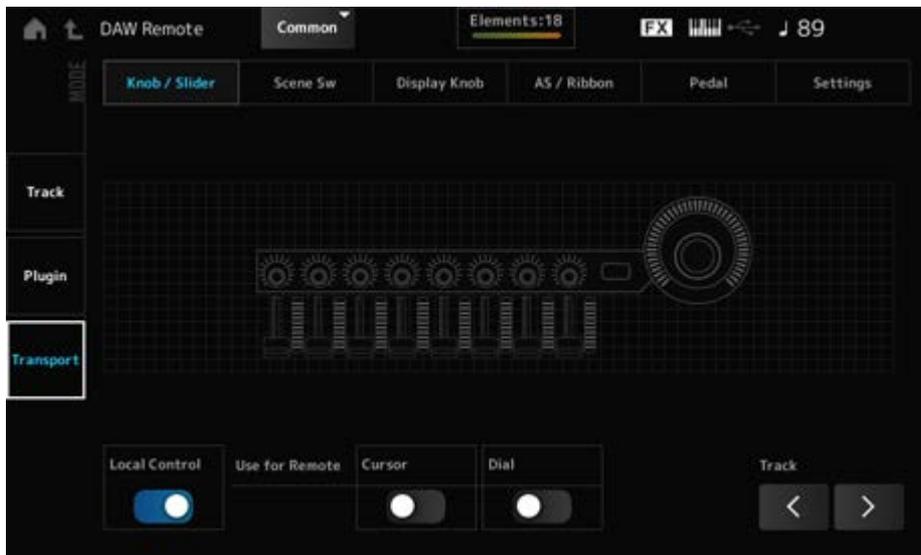
Controllers

Controllers	DAW operation
Knobs 1–8	Any Control Change you have selected.
Control sliders 1–8	(The Control Change number set with *Edit* in the *DAW Remote* screen is output.)

* PART buttons, [PART SELECT] button, [KEYBOARD CONTROL] button, data dial, cursor buttons, sequencer transport buttons, BANK buttons, and PAGE buttons behave the same way as in *Track* mode.

- *Transport* mode

Controllers

Controllers	On the DAW
Data dial, cursor buttons	Moves the cursor position or Song position.
Sequencer transport button	Controls the transport actions (recording and playback).
[SONG/PATTERN] button	Turns loop playback on or off.

* Other controllers operate as normal.

For Editing ★

Edit

Sets the Control Change message, such as the control number and channel mode, that is output from Port 1.
The settings on each tab are as follows:

■ Common

Local (Local Control)

Sets Local Control on or off.

This is the same setting that can be made from: [UTILITY] → *Settings* → *MIDI I/O* screen.

Use for Remote

Sets the Data dial and Cursor buttons on the Top panel for controlling the DAW.

- On: For controlling the DAW.
- Off: For controlling the Main display on the top panel.

■ Knob/Slider

CC Num. (Control Change Number)

Sets the control number for the knobs and control sliders.

Settings: 1–95

■ Scene SW

Scene1–8 (Scene 1–8 Control Number)

Sets the control number for the SCENE buttons.

Settings: 1–95

Latch (Scene 1 Switch Mode)
Momentary (Scene 1 Switch Mode)

Switches the operating mode of the SCENE buttons.

Settings: *Momentary*, *Latch*

■ Display Knob

Display Knob 1–8CC# (Display Knob 1–6 Control Number)

Sets the control number for the Display Knobs.

Settings: 1–95

■ AS / Ribbon

Portamento Switch

Sets the control number for the [PORTAMENTO] button.

Settings: 1–95

Portamento Switch Latch

Switches the operating mode of the [PORTAMENTO] button.

Settings: *Momentary*, *Latch*

Porta Knob (Portamento Knob)

Sets the control number for the PORTAMENTO [TIME] knob.
Settings: 1–95

Ribbon Ctrl (Ribbon Controller Control Number)

Sets the control number for the ribbon controller.
Settings: 1–95

RB Mode

Switches the operating mode of the ribbon controller.
Settings: *Hold*, *Reset*

Assign SW 1 (Assignable Switch 1 Control Number)
Assign SW 2 (Assignable Switch 2 Control Number)
MS Trigger (Motion Seq Trigger Switch Control Number)

Sets the control numbers for the [ASSIGN 1] button, [ASSIGN 2] button, and [MSEQ TRIGGER] button.
Settings: 1–95

Assign SW 1 Latch (Assignable Switch 1 Mode)
Assign SW 2 Latch (Assignable Switch 2 Mode)
MS Trigger Latch (Motion Seq Trigger Switch Control Number)

Switches the operating mode of the [ASSIGN 1] button, [ASSIGN 2] button, and [MSEQ TRIGGER] button.
Settings: *Momentary*, *Latch*

■ Pedal

Foot Ctrl 1 (Foot Controller 1 Control Number)
Foot Ctrl 2 (Foot Controller 2 Control Number)

Sets the control number for Foot Controller 1 and Foot Controller 2.
Settings: 1–95

FS (Foot Switch Control Number)

Shows the control number for the foot switch.
Settings: 1–95

FS Mode (Foot Switch Mode)

Switches the operating mode of the foot switch.
Settings: *Momentary*, *Latch*

■ *Settings*

DAW

Selects the particular DAW for use with this instrument.
Settings: *Cubase*, *Logic Pro*, *Pro Tools*, *Live*

MIDI I/O Ch.

Sets the MIDI channel for input and output of the *Common* and the Part with the *Keyboard Control Switch* to be set to On.

The MIDI channel set here is used also for sending the Control Change message from DAW Remote.

This is the same setting that can be made from: [UTILITY] → *Settings* → *MIDI I/O* screen.
Settings: Ch1–Ch16

Control Assign ☆

Registers the combination of *Source* and *Destination* in the *Controller Set*.

Operation

(When the cursor is on the parameter) Press the [CONTROL ASSIGN] button

Move the controller you wish to use for changing the parameter, or select one from the *Motion Sequencer Lane* or *Envelope Follower*.

NOTE

When you move the Super Knob but there aren't any unused assignable knobs to proceed with the setting, an error message will appear.

When a *Part* parameter is selected, you can set the *Assignable knobs* to change the *Common* parameters by operating an *Assignable Knob* while holding down the [COMMON] button.

Control View ☆

You can check the settings of the controller being operated.

Operation

- [SHIFT] + [CONTROL ASSIGN]

- (With the *View Mode* on the *Home* screen is set to *Default*) Tap the *Control View* button shown on the display

When you move the controller you wish to check, the *Control Assign* screen opens and the configuration information is displayed.

Other information

★

Contents

Effect types ☆

No Effect	Disables the Effects. Does not output the sound.
Thru	Sets the Effect to Thru. The input sound is output without any effects being applied.

■ *Reverb*

HD Hall	Simulates the natural acoustics of a concert hall.
REV-X Hall	Hall reverb using the REV-X reverb algorithm
R3 Hall	Hall reverb using the reverb algorithm of the ProR3 Digital Reverb Processor
SPX Hall	Hall reverb from the classic SPX1000
HD Room	Simulates the natural acoustics of a room.
REV-X Room	Room reverb using the REV-X reverb algorithm
R3 Room	Room reverb using the reverb algorithm of the ProR3 Digital Reverb Processor
SPX Room	Room reverb from the classic SPX1000
HD Plate	Simulates a plate reverb.
R3 Plate	Plate reverb using the reverb algorithm of the ProR3 Digital Reverb Processor
SPX Stage	Stage reverb from the classic SPX1000
Space Simulator	Allows you to specify the width, height, and depth of the room size.
Gated Reverb	Produces a gated reverb.
Reverse Reverb	Produces reverse playback of a gated reverb.

■ *Delay*

Cross Delay	The feedback of the delayed sound on each of the two channels is routed to the opposite channel. Produces alternate delayed sounds on the right and left.
Tempo Cross Delay	Tempo-synchronized Cross delay
Tempo Delay Mono	Tempo-synchronized Mono delay
Tempo Delay Stereo	Tempo-synchronized Stereo delay

Control Delay	Delay for creating scratch sounds by changing the delay length in real-time.
Delay LR	Produces two delayed sounds on the left and right, with two feedback delays.
Delay LCR	Produces three delayed sounds on the left, center, and right.
Analog Delay Retro	Simulates a bucket-brigade analog delay, set to short delay.
Analog Delay Modern	Simulates a bucket-brigade analog delay, set to long delay.

■ *Chorus*

G Chorus	Creates a deep sound with complex modulation.
2 Modulator	Allows you to set the pitch modulation and amplitude modulation. Spreads out the sound naturally.
SPX Chorus	Chorus effect that uses a 3-phase LFO to add modulation and spaciousness to the sound.
Symphonic	Multiplexes the modulations for creating more spaciousness.
Ensemble Detune	Chorus effect without modulation, created by adding a slightly pitch-shifted sound.

■ *Flanger*

VCM Flanger	Flanger using VCM technology
Classic Flanger	Flanger with typical swirling sounds
Tempo Flanger	Flanger with tempo synchronized LFO
Dynamic Flanger	Flanger that controls the delay modulation in real-time depending on the level of the input sound.
Control Flanger	Allows manual operation instead of the LFO.

■ *Phaser*

VCM Phaser Mono	Mono Phaser using VCM technology
VCM Phaser Stereo	Stereo Phaser using VCM technology
Tempo Phaser	Phaser with tempo synchronized LFO
Dynamic Phaser	Effect that controls the phase in real-time depending on the level of the input sound
Control Phaser	Allows manual operation instead of the LFO.

■ *Trem/Rtr (Tremolo & Rotary)*

Auto Pan	Moves the Pan left and right.
Tremolo	Creates cyclical changes to the volume.
Rotary Speaker 1	Simulates a rotary speaker.
Rotary Speaker 2	Simulates a rotary speaker including an amplifier.
VCM Rotary Speaker Classic	Standard rotary speaker effect using VCM technology. Suitable for organs.
VCM Rotary Speaker Overdrive	Rotary speaker effect using VCM technology. Simulates the distorted sound of a rotary speaker with a transistor preamp connected.
VCM Rotary Speaker Studio	Rotary speaker effect using VCM technology, with three-dimensional rotation.

■ *Dist (Distortion)*

Amp Simulator 1	Simulates a guitar amplifier.
Amp Simulator 2	Simulates a guitar amplifier.
Comp Distortion	Combines Compressor and Distortion.
Comp Distortion Delay	Combines Compressor, Distortion, and Delay.
U.S. Combo	American combo amp simulator
Jazz Combo	Jazz combo amp simulator
U.S. High Gain	American high gain amp simulator
British Lead	British stack amp simulator
Multi FX	Multi-effect processor for guitars
Small Stereo	Stereo distortion for guitar sounds
British Combo	British combo amp simulator
British Legend	British stack amp simulator

■ *Comp (Compressor)*

VCM Compressor 376	Compressor using VCM technology
Classic Compressor	Simple, easy-to-use compressor. Suitable for solo instruments.
Multi-band Comp	Splits the sound into three bands and applies compressor separately on those bands.
Uni Comp Down	Compressor with a downward algorithm that suppresses loud sounds.
Uni Comp Up	Compressor with an upward algorithm that amplifies soft sounds.
Parallel Comp	Compressor applying parallel processing of the compressed sounds

and dry sounds

■ *Wah*

VCM Auto Wah	Auto Wah using VCM technology. Creates cyclical changes to the center frequency of the filter.
VCM Touch Wah	Touch Wah using VCM technology. Changes the center frequency of the filter depending on the level of the input sound.
VCM Pedal Wah	Pedal Wah using VCM technology. Changes the center frequency of the filter by operating controllers, such as a pedal.

■ *Lo-Fi*

Lo-Fi	Downgrades the quality of the audio input for a lo-fi sound.
Noisy	Adds noise to the sound.
Digital Turntable	Adds turntable noise to the sound.
Bit Crusher	Produces distortion by reducing the resolution or bandwidth of the digital sound.

■ *Tech*

Ring Modulator	Changes the input to a metallic sound.
Dynamic Ring Modulator	The OSC Freq parameter for the Ring Modulator is controlled in real-time depending on the level of the input sound.
Dynamic Filter	The filter cutoff frequency is controlled in real-time depending on the level of the input sound.
Auto Synth	Resynthesizes the input signal using delay and modulation.
Spiralizer P	Special phaser-based filter with seemingly endless up or down pitch changes.
Tempo Spiralizer P	Spiralizer with tempo synchronized LFO
Spiralizer F	Special flanger-based filter with seemingly endless up or down pitch changes.
Tempo Spiralizer F	Spiralizer with tempo synchronized LFO
Isolator	Controls the volume of each band by using a powerful filter.
Slice	Slices the Amplitude EG of the input sound.
Tech Modulation	Applies special modulation.
Control Filter	A filter that allows manual operation of the cutoff frequency.

Vinyl Break	Causes the pitch to drop gradually to create a sound effect of a turntable stopped by hand or turning the device off.
Beat Repeat (even)	Creates mechanical beats by repeatedly playing sampled sounds. The length of the repeat is specified as a fraction of a beat with a denominator of an even number, such as 1/2, 1/4, 1/8, 1/16, and so on.
Beat Repeat (triplet)	Creates mechanical beats by repeatedly playing sampled sounds. The length of the repeat is specified as a fraction of a beat with a denominator having multiples of three, such as 1/3, 1/6, 1/12, and so on.
Beat Repeat (even+tri.)	Creates mechanical beats by repeatedly playing sampled sounds. Contains both even and triplet settings.
Beat Repeat (free)	Creates mechanical beats by repeatedly playing sampled sounds. The length of the repeat is specified as a decimal number.

■ *Misc*

VCM EQ 501	5-band EQ using VCM technology
Presence	Gives greater sonic presence to the input sound.
Harmonic Enhancer	Adds harmonic overtones to make the input sound stand out.
Stereophonic Optimizer	Adjusts the stereo location in the sound field.
Talking Modulator	Resynthesizes the input sound to create vowel formants.
Wave Folder	Controls the harmonic overtones to create a rich sound that changes over time.
VCM Mini Filter	Filter that adds thickness and depth to the sound. Simulates analog synthesizer circuitry.
VCM Mini Booster	Booster with distinctive characteristics. Simulates analog synthesizer circuitry.
Damper Resonance	Simulates the resonance of open string notes of an acoustic piano.
Pitch Change	Changes the pitch of the input sound.
Early Reflection	An effect created by isolating the early reflections of the reverb.
Vocoder	Extracts characteristics from the microphone sound and applies it to the Part played on the keyboard. Creates a distinctive, "robot voice" effect when you play the keyboard and sing or speak into the microphone at the same time.
NoiseGate+Comp+Eq	Contains Noise Gate, Compressor, and 3-band EQ. Suitable mainly for vocals.

Effect parameters ☆

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

Display name	Parameter name	Effect types using the parameter	Description
AEG Phase	*AEG Phase*	*Slice*	Shifts the phase of the Amplitude EG.
AM Depth	*AM Depth*	*2 Modulator*, *Tremolo*, *Noisy*, *Auto Synth*	Sets the depth of Amplitude Modulation.
AM Inverse R	*AM Inverse R*	*Auto Synth*	Sets the phase of the Amplitude Modulation for the right channel.
AM Speed	*AM Speed*	*Noisy*, *Auto Synth*	Sets the Amplitude Modulation speed.
AM Wave	*AM Wave*	*Auto Synth*	Selects the wave for modulating the Amplitude.
Amp Type	*Amp Type*	*Amp Simulator 2*	Selects the amplifier type to be simulated.
Analog Feel	*Analog Feel*	*Classic Flanger*	Adds the characteristics of an analog flanger to the sound.
Attack	*Attack*	*Comp Distortion*, *VCM Compressor 376*, *Classic Compressor*, *Downward Compressor*, *Upward Compressor*	Sets the length of time it takes for the compressor to reach the maximum.
Attack Offset	*Attack Offset*	*VCM Touch Wah*	Sets the length of time it takes for the Wah effect to be applied.

Display name	Parameter name	Effect types using the parameter	Description
Attack Time	*Attack Time*	*Dynamic Flanger*, *Dynamic Phaser*, *Dynamic Ring Modulator*, *Dynamic Filter*	Sets the attack time of the Envelope Follower.
		Beat Repeat	Sets the *Attack* time of the *Gate* applied to the entire sound.

Display name	Parameter name	Effect types using the parameter	Description
Balance	*Balance*	*U.S. Combo*	Adjusts the balance between the bass and the treble.
Bass	*Bass*	*British Combo*, *British Lead*, *British Legend*, *Jazz Combo*, *U.S. High Gain*	Adjusts the tone quality of the bass.
Bit	*Bit*	*Bit Crusher*	Reduces the bit precision.
Bit Assign	*Bit Assign*	*Lo-Fi*	Sets how *Word Length* is applied to the sound.
Bit Link	*Bit Link*	*Bit Crusher*	Sets the level of the *Side* setting that follows the *Mid* value when *M/S* is on.
BPF 1–10 Gain	*BPF1–10 Gain*	*Vocoder*	Sets the *Gain* of BPFs 1–10 of the Vocoder effect.
Break	*Break*	*Vinyl Break*	Sets *Break* to On.
Brilliant	*Brilliant*	*British Combo*	Adjusts the volume of the sound for which the bass is cut.

Display name	Parameter name	Effect types using the parameter	Description
Chorus	*Chorus*	*Jazz Combo*	Selects the Chorus type.
Click Density	*Click Density*	*Digital Turntable*	Sets the frequency of the click sound to be repeated.
Click Level	*Click Level*	*Digital Turntable*	Sets the click level.
Clipper	*Clipper*	*Upward Compressor*, *Downward Compressor*	Sets the distortion level of the Clipper that determines the maximum level for limiting the wave.
Clipper Source	*Clipper Source*	*Upward Compressor*, *Downward Compressor*	Selects the signal to which the Clipper effect is applied.
Color	*Color*	*Control Phaser*, *VCM Phaser Mono*, *VCM Phaser Stereo*	Sets the fixed phase modulation.
Com Release	*Common Release*	*Multi Band Comp*	Sets the Release Time (the time it takes for the Compressor effect to fade away) used commonly on three bands.
Comp Attack	*Comp Attack*	*NoiseGate+Comp+Eq*	Sets the length of time for the Compressor to be applied.
Comp Level	*Comp Level*	*Small Stereo*	Adjusts the output level of the compressor.
Comp Out Lvl	*Comp Output Level*	*NoiseGate+Comp+Eq*	Sets the output level of the compressor.
Comp Ratio	*Comp Ratio*	*NoiseGate+Comp+Eq*	Sets the ratio of the compressor.
Comp Release	*Comp Release*	*NoiseGate+Comp+Eq*	Sets the length of time it takes until the compressor effect fades away.

Display name	Parameter name	Effect types using the parameter	Description
Comp Sustain	*Comp Sustain*	*Multi FX*, *Small Stereo*	Adjusts the length of time for the compressor to sustain.
Comp Sw	*Comp SW*	*Small Stereo*	Turns the compressor on or off.
Comp Threshold	*Comp Threshold*	*NoiseGate+Comp+Eq*	Sets the input level for the effect to be applied.
Compress	*Compress*	*Comp Distortion Delay*	Sets the threshold (or the minimum input level) for the compressor to be applied.
Compression	*Compression*	*Parallel Compressor*	Sets the extent to which the compressor is applied.
Control Type	*Control Type*	*Control Delay*	When set to *Normal*, the delay effect is always applied to the sound. When set to *Scratch*, the delay effect is not applied if the controller value 0 is set to the *Delay Time*. The delay is applied to other cases.
Crush Type	*Crush Type*	*Bit Crusher*	Sets how the bit precision is reduced.
Cut	*Cut*	*British Combo*	Sets the velocity curve to the end of the sound.

Display name	Parameter name	Effect types using the parameter	Description
Cutoff	Cutoff Frequency	Beat Repeat	Cuts the high frequencies.
		VCM Mini Filter	Sets the Cutoff Frequency of the Filter for the effect sound.
	Cutoff Frequency Control	Control Filter	Sets the Filter Cutoff Frequency.

Display name	Parameter name	Effect types using the parameter	Description
Damper Control	Damper Control	Damper Resonance	Sets the amount of resonance for the piano damper.
Decay	Decay	REV-X Hall, REV-X Room	Controls how the reverb sound decays.
Delay Control	Delay Control	Multi FX	Adjusts the depth or amount of the effect set to Delay SW.
Delay Input Lvl	Delay Input Level	Analog Delay Retro, Analog Delay Modern	Sets the input level to the delay.
Delay Level	Delay Level	Auto Synth	Sets the level of the delayed sound.
Delay Level C	Delay Level C	Delay LCR	Sets the level of the delayed sound for the center channel.
Delay Mix	Delay Mix	Comp Distortion Delay	Sets the mixing level of the delayed sound.
Delay Offset	Delay Offset	G Chorus, 2 Modulator, SPX Chorus, Symphonic, Classic Flanger, Tempo Flanger, Dynamic Flanger	Sets the offset value for the delay modulation.
Delay Sw	Delay SW	Multi FX	Sets the delay type or modulation type.

Display name	Parameter name	Effect types using the parameter	Description
Delay Time	*Delay Time*	*Tempo Delay Mono*, *Tempo Delay Stereo*	Specifies the delay length in note duration.
		Control Delay, *Auto Synth*, *Tech Modulation*, *Multi FX*, *Analog Delay Retro*, *Analog Delay Modern*	Sets the delay length.
Delay Time C	*Delay Time C*	*Delay LCR*	Sets the delay length for the center channel.
Delay Time L	*Delay Time L*	*Delay LR*, *Delay LCR*, *Comp Distortion Delay*	Sets the delay length for the left channel.
Delay Time L>R	*Delay Time L>R*	*Cross Delay*, *Tempo Cross Delay*	Sets the delay time for the sound that is input from the left to be output from the right.
Delay Time R	*Delay Time R*	*Delay LR*, *Delay LCR*, *Comp Distortion Delay*	Sets the delay length for the right channel.
Delay Time R>L	*Delay Time R>L*	*Cross Delay*, *Tempo Cross Delay*	Sets the delay time for the sound that is input from the right to be output from the left.
Delay Tm Ofs R	*Delay Time Offset R*	*Auto Synth*, *Tech Modulation*	Sets the offset to the delay length for the right channel.
Density	*Density*	*R3 Hall*, *R3 Room*, *R3 Plate*, *SPX Hall*, *SPX Room*, *SPX Stage*, *Space Simulator*	Sets the density of the reverb.
		Early Reflection, *Gated Reverb*, *Reverse Reverb*	Sets the density of the reflections.

Display name	Parameter name	Effect types using the parameter	Description
Depth	Depth	Space Simulator	Sets the depth of the simulated room.
		VCM Flanger	Sets the Amplitude of the LFO wave that controls the cyclic change of the delay modulation.
		VCM Phaser Mono, VCM Phaser Stereo	Sets the Amplitude value of the LFO wave that controls the cyclic change of the phase modulation.
		Jazz Combo	Sets the depth of the Chorus/Vibrato.
Detune	Detune	Ensemble Detune	Sets the amount by which pitch is detuned.
Device	Device	Amp Simulator 1, Comp Distortion Delay	Sets the device for creating distortion sounds.
Diffusion	Diffusion	REV-X Hall, REV-X Room, R3 Hall, R3 Room, R3 Plate, SPX Hall, SPX Room, SPX Stage, Space Simulator, Gated Reverb, Reverse Reverb	Sets the spread of the reverb.
		Tempo Phaser, Early Reflection	Sets the spread of the selected effect.
Direction	Direction	Dynamic Flanger, Dynamic Phaser, VCM Touch Wah, VCN Pedal Wah, Dynamic Ring Modulator, Dynamic Filter	Sets the direction of the modulation controlled by the envelope follower.
		Tempo Spiralizer P, Tempo Spiralizer F	Sets the direction of the pitch shift.
Dist Drive	Dist Drive	Multi FX, Small Stereo	Controls the amount of distortion.
Dist EQ	Dist EQ	Multi FX, Small Stereo	Switches the EQ type for adjusting the tone quality of distortion.

Display name	Parameter name	Effect types using the parameter	Description
Dist Presence	*Dist Presence*	*Multi FX, Small Stereo*	Adjusts the tone quality for each distortion type.
Dist Sw	*Dist SW*	*Multi FX*	Sets the distortion type.
Dist Tone	*Dist Tone*	*Multi FX, Small Stereo*	Adjusts the tone quality of distortion.
Dist Type	*Dist Type*	*Small Stereo*	Sets the distortion type.
Distortion	*Distortion*	*Jazz Combo*	Sets the level of distortion.
Divide Freq Hi	*Divide Freq High*	*Multi Band Comp*	Sets the *Mid/High* frequency to divide into three bands.
Divide Freq Low	*Divide Freq Low*	*Multi Band Comp*	Sets the *Low/Mid* frequency to divide into three bands.
Divide Min Lvl	*Divide Min Level*	*Slice*	Sets the minimum level of the sliced section.
Divide Type	*Divide Type*	*Slice*	Specifies the timing for slicing by note duration.
Drive	*Drive*	*Noisy, Slice, Rotary Speaker 2, VCM Rotary Speaker Classic, VCM Rotary Speaker Overdrive, VCM Rotary Speaker Studio*	Sets the level of distortion.
		Harmonic Enhancer, Talking Modulator	Sets the level of the effect.
Drive Horn	*Drive Horn*	*Rotary Speaker 1*	Sets the depth of modulation generated by the rotation of the horn (treble).
Drive Rotor	*Drive Rotor*	*Rotary Speaker 1*	Sets the depth of modulation generated by the rotation of the rotor (woofer).

Display name	Parameter name	Effect types using the parameter	Description
Dry Level	*Dry Level*	*Digital Turntable*	Sets the level of the dry sound.
Dry LPF Cutoff	*Dry LPF Cutoff Frequency*	*Digital Turntable*	Sets the frequency to cut by using the Low-Pass Filter applied to the dry sound.
Dry Mix Level	*Dry Mix Level*	*Auto Synth*	Sets the level of the dry sound.
Dry/Wet	*Dry/Wet Balance*	*All*	Sets the balance of the dry sound and the effect sound.

<u>A</u> <u>B</u> <u>C</u> <u>D</u> **E** <u>F</u> <u>G</u> <u>H</u> <u>I</u> J <u>K</u> <u>L</u> <u>M</u> <u>N</u> <u>O</u> <u>P</u> Q <u>R</u> <u>S</u> <u>T</u> <u>U</u> <u>V</u> <u>W</u> X Y Z

Display name	Parameter name	Effect types using the parameter	Description
Edge	*Edge*	*Comp Distortion*	Sets the curve that determines how the sound is distorted.
Emphasis	*Emphasis*	*Lo-Fi*	Sets the change of the high frequency characteristics.
EQ 1 Freq	*EQ1(LSH) Frequency*	*VCM EQ 501*	Sets the cutoff frequency of EQ1 (*Low Shelving*).
EQ 1 Gain	*EQ1(LSH) Gain*	*VCM EQ 501*	Sets the gain of the EQ1 (*Low Shelving*).
EQ 2 Freq	*EQ2 Frequency*	*VCM EQ 501*	Sets the center frequency of EQ2.
EQ 2 Gain	*EQ2 Gain*	*VCM EQ 501*	Sets the gain of EQ2.
EQ 2 Q	*EQ2 Q*	*VCM EQ 501*	Sets the Q of EQ2.
EQ 3 Freq	*EQ3 Frequency*	*VCM EQ 501*	Sets the center frequency of EQ3.
EQ 3 Gain	*EQ3 Gain*	*VCM EQ 501*	Sets the gain of EQ3.

Display name	Parameter name	Effect types using the parameter	Description
EQ 3 Q	EQ3 Q	VCM EQ 501	Sets the Q of EQ3.
EQ 4 Freq	EQ4 Frequency	VCM EQ 501	Sets the center frequency of EQ4.
EQ 4 Gain	EQ4 Gain	VCM EQ 501	Sets the gain of EQ4.
EQ 4 Q	EQ4 Q	VCM EQ 501	Sets the Q of EQ4.
EQ 5 Freq	EQ5(HSH) Frequency	VCM EQ 501	Sets the cutoff frequency of EQ5 (*High Shelving*).
EQ 5 Gain	EQ5(HSH) Gain	VCM EQ 501	Sets the gain of the of EQ5 (*High Shelving*).
EQ Frequency	EQ Frequency	Noisy	Sets the frequency to boost or attenuate by using the EQ.
		VCM Mini Booster	Sets the frequency of the EQ set to *Type*.
EQ Gain	EQ Gain	Noisy	Sets the gain to boost or attenuate by using the EQ.
EQ High Freq	EQ High Frequency	Cross Delay, Tempo Cross Delay, Tempo Delay Mono, Tempo Delay Stereo, Control Delay, Delay LR, Delay LCR, G Chorus, 2 Modulator, SPX Chorus, Symphonic, Ensemble Detune, Classic Flanger, Tempo Flanger, Dynamic Flanger, Tempo Phaser, Dynamic Phaser, Auto Pan, Tremolo, Rotary Speaker 1, Ring Modulator, Dynamic Ring Modulator, Dynamic Filter, Slice, HD Hall, HD Room, HD Plate, NoiseGate+Comp+Eq	Sets the frequency of the high band to boost or attenuate by using the EQ.

Display name	Parameter name	Effect types using the parameter	Description
EQ High Gain	*EQ High Gain*	*Cross Delay, Tempo Cross Delay, Tempo Delay Mono, Tempo Delay Stereo, Control Delay, Delay LR, Delay LCR, G Chorus, 2 Modulator, SPX, Chorus, Symphonic, Ensemble Detune, Classic Flanger, Tempo Flanger, Dynamic Flanger, Tempo Phaser, Dynamic Phaser, Auto Pan, Tremolo, Rotary Speaker 1, Ring Modulator, Dynamic Ring Modulator, Dynamic Filter, Slice, HD Hall, HD Room, HD Plate, NoiseGate+Comp+Eq*	Sets the gain of the high band to boost or attenuate by using the EQ.
EQ Low Freq	*EQ Low Frequency*	*Cross Delay, Tempo Cross Delay, Tempo Delay Mono, Tempo Delay Stereo, Control Delay, Delay LR, Delay LCR, G Chorus, 2 Modulator, SPX Chorus, Symphonic, Ensemble Detune, Classic Flanger, Tempo Flanger, Dynamic Flanger, Tempo Phaser, Dynamic Phaser, Auto Pan, Tremolo, Rotary Speaker 1, Ring Modulator, Dynamic Ring Modulator, Dynamic Filter, Slice, Comp Distortion, HD Hall, HD Room, HD Plate*	Sets the frequency of the low band to boost or attenuate by using the EQ.
EQ Low Gain	*EQ Low Gain*	*Cross Delay, Tempo Cross Delay, Tempo Delay Mono, Tempo Delay Stereo, Control Delay, Delay LR, Delay LCR, G Chorus, 2 Modulator, SPX Chorus, Symphonic, Ensemble Detune, Classic Flanger, Tempo Flanger, Dynamic Flanger, Tempo Phaser, Dynamic Phaser, Auto Pan, Tremolo, Rotary Speaker 1, Ring Modulator, Dynamic Ring Modulator, Dynamic Filter, Slice, Comp Distortion, HD Hall, HD Room, HD Plate*	Sets the gain of the low band to boost or attenuate by using the EQ.
EQ Mid Freq	*EQ Mid Frequency*	*G Chorus, 2 Modulator, SPX Chorus, Symphonic, Classic Flanger, Tempo Flanger, Auto Pan, Tremolo, Comp Distortion, NoiseGate+Comp+EQ*	Sets the frequency of the mid band to boost or attenuate by using the EQ.
EQ Mid Gain	*EQ Mid Gain*	*G Chorus, 2 Modulator, SPX Chorus, Symphonic, Classic Flanger, Tempo Flanger, Auto Pan, Tremolo, Comp Distortion, NoiseGate+Comp+EQ*	Sets the gain of the mid band to boost or attenuate by using the EQ.

Display name	Parameter name	Effect types using the parameter	Description
EQ Mid Width	*EQ Mid Width*	*G Chorus, 2 Modulator, SPX Chorus, Symphonic, Classic Flanger, Tempo Flanger, Auto Pan, Tremolo, Comp Distortion, NoiseGate+Comp+EQ*	Sets the width of the middle band to boost or attenuate by using the EQ.
EQ Width	*EQ Width*	*Noisy*	Sets the width to boost or attenuate by using the EQ.
ER/Rev Balance	*ER/Rev Balance*	*R3 Hall, R3 Room, R3 Plate, SPX Hall, SPX Room, SPX Stage, Space Simulator*	Sets the level balance of the early reflection and reverb sounds.

Display name	Parameter name	Effect types using the parameter	Description
F/R Depth	*F/R Depth*	*Auto Pan*	Sets the depth of the pan on the front and rear (available when *PAN Direction* is set to *L Turn* or *R Turn*).
FB Hi Dmp Ofs R	*FB Hi Damp Offset R*	*Tech Modulation*	Sets the offset to the amount of decay in the high band for the R channel.
FB High Damp	*Feedback High Damp*	*R3 Hall, R3 Room, R3 Plate, SPX Hall, SPX Room, SPX Stage, Space Simulator, Cross Delay, Tempo Cross Delay, Tempo Delay Mono, Tempo Delay Stereo, Control Delay, Delay LR, Delay LCR, Classic Flanger, Early Reflection, Gated Reverb, Reverse Reverb, Comp Distortion Delay, Tech Modulation*	Adjusts the attenuation of high frequency sound by using the feedback sound. The smaller the value, the faster the attenuation of the high frequency sounds.
FB Level Ofs R	*FB Level Offset R*	*Auto Synth, Tech Modulation*	Sets the offset to the feedback level for the R channel.

Display name	Parameter name	Effect types using the parameter	Description
FB Time L	*Feedback Time L*	*Delay LR*	Sets the length of feedback for left delay.
FB Time R	*Feedback Time R*	*Delay LR*	Sets the length of feedback for right delay.
Feedback	*Feedback*	*VCM Flanger*, *VCM Phaser Mono*, *VCM Phaser Stereo*, *Control Flanger*, *Control Phaser*	Sets the level of the output signal returned to the effect block.
		Spiralizer P, *Spiralizer F*, *Tempo Spiralizer P*, *Tempo Spiralizer F*	Sets the level of the output signal returned to the effect block.
Feedback	*Feedback Level*	*R3 Hall*, *R3 Room*, *R3 Plate*, *SPX Hall*, *SPX Room*, *SPX Stage*, *Space Simulator*, *Early Reflection*, *Gated Reverb*, *Reverse Reverb*	Sets the feedback level of the initial delay.
		Cross Delay, *Tempo Cross Delay*, *Tempo Delay Mono*, *Tempo Delay Stereo*, *Control Delay*, *Delay LR*, *Delay LCR*, *G Chorus*, *2 Modulator*, *SPX Chorus*, *Classic Flanger*, *Tempo Flanger*, *Dynamic Flanger*, *Comp Distortion Delay*, *Auto Synth*, *Teck Modulation*	Sets the level of the delay sound to be sent back to the input. (Phase is inverted for negative values.)
		Analog Delay Retro, *Analog Delay Modern*	Sets the feedback level of the delayed sound.
		Tempo Phaser, *Dynamic Phaser*	Sets the level of the signal output from the phaser and returned to the input. (Inverted for negative values).
Feedback Lvl 1	*Feedback Level 1*	*Pitch Change*	Sets the feedback level of the delayed sound on the first route.

Display name	Parameter name	Effect types using the parameter	Description
Feedback Lvl 2	*Feedback Level 2*	*Pitch Change*	Sets the feedback level of the delayed sound on the second route.
Feedback Time	*Feedback Time*	*Delay LCR*, *Comp Distortion Delay*	Sets the delay length of the feedback.
Filter Type	*Filter Type*	*Lo-Fi*	Selects the effect type.
		Dynamic Filter, Control Filter	Sets the filter type.
		Beat Repeat	Sets the filter type for the effect sound.
Fine 1	*Fine 1*	*Pitch Change*	Fine-tunes the pitch on the first route.
Fine 2	*Fine 2*	*Pitch Change*	Fine-tunes the pitch on the second route.
Flanger Control	*Flanger Control*	*Control Flanger*	Sets the delay value (the value of the *Comb Filter*) of the delay modulation.
Fold	*Fold*	*Wave Folder*	Distorts the sound.
Fold Type	*Fold Type*	*Wave Folder*	Selects the level of distortion.
Formant Offset	*Formant Offset*	*Vocoder*	Adds the offset value to the Cutoff Frequency of the BPF for the input of the instrument sound.
Formant Shift	*Formant Shift*	*Vocoder*	Shifts the Cutoff Frequency of each BPF for the input of the instrument sound.

Display name	Parameter name	Effect types using the parameter	Description
Freeze	*Freeze*	*Beat Repeat*	When this parameter is set to On, the beat is repeated.

Display name	Parameter name	Effect types using the parameter	Description
Gain	*Gain*	*U.S. High Gain*	Sets the gain of the preamplifier.
		VCM Mini Booster	Adjusts the *Gain* of the *ShelfEQ*.
Gain Boost	*Gain Boost*	*U.S. Combo*	Switches the gain of the power amplifier.
Gain Limit	*Gain Limit*	*Upward Compressor*	Sets the maximum *Gain* level.
Gate Time	*Gate Time*	*Slice*	Sets the gate time of a slice.
		Beat Repeat	Sets the gate time of the entire sound.

Display name	Parameter name	Effect types using the parameter	Description
Height	*Height*	*Space Simulator*	Sets the height of the simulated room.
Hi Damp Freq	*High Damp Frequency*	*HD Hall, HD Room, HD Plate*	Adjusts the attenuation of the high band.
High Attack	*High Attack*	*Multi Band Comp*	Sets the length of time for the compressor to be applied to the high band.
High Cut	*High Cut*	*U.S. Combo*	Cuts the high band.

Display name	Parameter name	Effect types using the parameter	Description
High Gain	*High Gain*	*Multi Band Comp*	Sets the output level for the high band.
High Gain L	*High Subband Gain Lch*	*Stereophonic Optimizer*	Sets the resultant gain of the *High* band after the adjustment of the stereo sound (L channel).
High Gain R	*High Subband Gain Rch*	*Stereophonic Optimizer*	Sets the resultant gain of the *High* band after the adjustment of the stereo sound (R channel).
High Level	*High Level*	*Isolator*	Sets the level of the high band.
High Mute	*High Mute*	*Isolator*	Switches the mute for the high band.
High Ratio	*High Ratio*	*REV-X Hall*, *REV-X Room*, *HD Hall*, *HD Room*, *HD Plate*	Adjusts the ratio of the high frequencies.
		Multi Band Comp	Sets the compression ratio for the high frequencies.
High Threshold	*High Threshold*	*Multi Band Comp*	Sets the minimum input level for the effect to be applied to the high band.
High Treble	*High Treble*	*Jazz Combo*	Adjusts the tone quality in the frequency higher than the *Treble* setting.
Horn Accel	*Horn Acceleration*	*Rotary Speaker 2*, *VCM Rotary Speaker Classic*, *VCM Rotary Speaker Overdrive*, *VCM Rotary Speaker Studio*	Sets how the rotation of the horn (treble) changes from *Slow* to *Fast*.

Display name	Parameter name	Effect types using the parameter	Description
Horn Decel	*Horn Deceleration*	*Rotary Speaker 2, VCM Rotary Speaker Classic, VCM Rotary Speaker Overdrive, VCM Rotary Speaker Studio*	Sets how the rotation of the horn (treble) changes from *Fast* to *Slow*.
Horn Fast	*Horn Speed Fast*	*Rotary Speaker 1, Rotary Speaker 2, VCM Rotary Speaker Classic, VCM Rotary Speaker Overdrive, VCM Rotary Speaker Studio*	Sets the rotation speed of the horn (treble) for the *Fast* setting.
Horn Level	*Horn Level*	*VCM Rotary Speaker Classic, VCM Rotary Speaker Overdrive, VCM Rotary Speaker Studio*	Sets the volume of the horn (treble).
Horn Slow	*Horn Speed Slow*	*Rotary Speaker 1, Rotary Speaker 2, VCM Rotary Speaker Classic, VCM Rotary Speaker Overdrive, VCM Rotary Speaker Studio*	Sets the rotation speed of the horn (treble) for the *Slow* setting.
Horn Slow/Fast	*Horn Slow/Fast Time*	*Rotary Speaker 1*	Sets the transition time for the rotation speed of the horn (treble) to change from *Slow* to *Fast*.
HPF Cutoff	*HPF Cutoff Frequency*	*REV-X Hall, REV-X Room, R3 Hall, R3 Room, R3 Plate, SPX Hall, SPX Room, SPX Stage, Space Simulator, Ring Modulator, Dynamic Ring Modulator, Auto Synth, Harmonic Enhancer, Early Reflection, Gated Reverb, Reverse Reverb*	Sets the low frequency to cut by using the High-Pass Filter.
		Vocoder	Sets the Cutoff Frequency of the High-Pass Filter applied to the sound input from the microphone.
HPF Output Lvl	*HPF Output Level*	*Vocoder*	Sets how much the output from High-Pass Filter is mixed with the output from the Vocoder.

Display name	Parameter name	Effect types using the parameter	Description
Initial Delay	*Initial Delay*	*REV-X Hall, REV-X Room, R3 Hall, R3 Room, R3 Plate, SPX Hall, SPX Room, SPX Stage, Space Simulator, Early Reflection, HD Hall, HD Room, HD Plate, Gated Reverb, Reverse Reverb*	Sets the delay time for the early reflections.
Initial Delay 1	*Initial Delay 1*	*Pitch Change*	Sets the delay length of the first series of effects.
Initial Delay 2	*Initial Delay 2*	*Pitch Change*	Sets the delay length of the second series of effects.
Initial Delay L	*Initial Delay Lch*	*Ensemble Detune*	Sets the length of the left channel delay.
Initial Delay R	*Initial Delay Rch*	*Ensemble Detune*	Sets the length of the right channel delay.
Input Level	*Input Level*	*Bit Crusher, VCM Compressor 376, Rotary Speaker 2, Parallel Compressor, Wave Folder, VCM Mini Filter, VCM Mini Booster*	Sets the input level.
Input Mode	*Input Mode*	*G Chorus, 2 Modulator, SPX Chorus, Auto Pan, Tremolo, Lo-Fi*	Selects whether the input sound is in mono or stereo.
Input Select	*Input Select*	*Cross Delay, Tempo Cross Delay*	Selects an input.
Inst Level	*Inst Level*	*Vocoder*	Sets the input level of the Instrument sound.

Display name	Parameter name	Effect types using the parameter	Description
Knee	*Knee*	*Upward Compressor, Downward Compressor*	Sets the curve around the *Threshold*. The higher the value, the shallower the curve.

Display name	Parameter name	Effect types using the parameter	Description
L/R Depth	*L/R Depth*	*Auto Pan*	Sets the depth of the left and right pan.
L/R Diffusion	*L/R Diffusion*	*Tempo Delay Mono, Tempo Delay Stereo*	Sets the difference of the delay on the right and left for creating spaciousness.
Lag	*Lag*	*Tempo Cross Delay, Tempo Delay Mono, Tempo Delay Stereo*	Sets an additional delay length applied to the delayed sound specified by a note duration.
Length	*Length*	*Beat Repeat*	Sets the length for a repeat.
Level Offset	*Dyna Level Offset*	*Dynamic Flanger, Dynamic Phaser, Dynamic Ring Modulator, Dynamic Filter*	Sets the offset value added to the output of the envelope follower.
LFO Depth	*LFO Depth*	*SPX Chorus, Symphonic, Classic Flanger, Tempo Flanger, Ring Modulator*	Sets the depth of the modulation.
		Tempo Phaser	Sets the depth of the phase modulation.
		Wave Folder	Adjusts the depth of the LFO effect.
LFO Shape	*LFO Shape*	*Wave Folder*	Adjusts the shape of the LFO.

Display name	Parameter name	Effect types using the parameter	Description
LFO Speed	*LFO Speed*	*G Chorus*, *2 Modulator*, *SPX Chorus*, *Symphonic*, *Classic Flanger*, *Tremolo*, *Ring Modulator*, *Multi FX*	Sets the frequency of the modulation.
		Tempo Flanger, *Tempo Phaser*	Specifies the modulation speed by note duration.
		Auto Pan	Sets the frequency of the Auto Pan.
		Wave Folder	Adjusts the LFO speed.
LFO Wave	*LFO Wave*	*Classic Flanger*, *Ring Modulator*	Selects the wave for modulation.
		Auto Pan	Sets the panning curve.
		VCM Auto Wah	Selects the wave: sine or square.
Liveness	*Liveness*	*Gated Reverb*, *Reverse Reverb*, *Early Reflection*	Sets the attenuation of the early reflections.
Ln Chg Quantz	*Length Change Quantize*	*Beat Repeat*	Quantizes the timing for changing the Length parameter.
Low Attack	*Low Attack*	*Multi Band Comp*	Sets the length of time for the compressor to be applied to the low band.
Low Cut	*Low Cut*	*U.S. Combo*	Cuts the low band.
Low Gain	*Low Gain*	*Multi Band Comp*	Sets the output level for the low band.
Low Gain L	*Low Subband Gain Lch*	*Stereophonic Optimizer*	Sets the resultant gain of the *Low* band after adjustment of the stereo sound (L channel).

Display name	Parameter name	Effect types using the parameter	Description
Low Gain R	Low Subband Gain Rch	Stereophonic Optimizer	Sets the resultant gain of the *Low* band after the adjustment of the stereo sound (R channel).
Low Level	Low Level	Isolator	Sets the level for the low band.
Low Mute	Low Mute	Isolator	Switches the mute for the low band.
Low Ratio	Low Ratio	REV-X Hall, REV-X Room	Sets the adjustment of the low frequencies.
		Multi Band Comp	Sets the compression ratio for the low frequencies.
Low Threshold	Low Threshold	Multi Band Comp	Sets the minimum input level for the effect to be applied to the low band.
Lower Range	Lower Range	VCM Auto Wah, VCM Touch Wah, VCM Pedal Wah	Sets the maximum value for the variable range of the Wah filter.
		Control Flanger	Sets the maximum value for the variable range of the *Flanger Control*.
		Control Phaser	Sets the maximum value for the variable range of the *Phase Control*.
LPF Cutoff	LPF Cutoff Frequency	REV-X Hall, REV-X Room, R3 Hall, R3 Room, R3 Plate, SPX Hall, SPX Room, SPX Stage, Space Simulator, Amp Simulator 2, Comp Distortion, Noisy, Ring Modulator, Dynamic Ring Modulator, Auto Synth, Early Reflection, Gated Reverb, Reverse Reverb, Auto Synth, Noisy	Sets the high frequency range cut by the Low-Pass Filter.

Display name	Parameter name	Effect types using the parameter	Description
LPF Resonance	*LPF Resonance*	*Noisy*	Adds characteristics to the input to the low pass filter.

Display name	Parameter name	Effect types using the parameter	Description
M/S	*M/S*	*Bit Crusher*	When this parameter is on, each sound located at the center, left, and right changes individually.
Make Up Gain	*Make Up Gain*	*Upward Compressor*, *Downward Compressor*	Adjusts the level of the signal output from the compressor.
Manual	*Manual*	*VCM Flanger*	Sets the offset value of the delay modulation.
		VCM Phaser Mono, *VCM Phaser Stereo*	Sets the offset value of the phase modulation.
Master Volume	*Master Volume*	*U.S. High Gain*, *British Lead*, *British Legend*	Adjusts the gain of the power amplifier.
Mic Input Level	*Mic Input Level*	*Vocoder*	Sets the level of the input from the microphone.
Mic L-R Angle	*Mic L-R Angle*	*Rotary Speaker 1*, *Rotary Speaker 2*, *VCM Rotary Speaker Classic*, *VCM Rotary Speaker Overdrive*, *VCM Rotary Speaker Studio*	Sets the L/R angle of the microphone for extracting sound from the output.

Display name	Parameter name	Effect types using the parameter	Description
Mic Out Gate	*Mic Output Gate Switch*	*Vocoder*	Off: Always passes HPF output and *Noise Generator* output. On: Passes HPF output and *Noise Generator* output when there is audio input of the Instrument sound.
Mic Position	*Mic Position*	*U.S. Combo, Jazz Combo, U.S. High Gain, British Lead, British Combo, British Legend, Rotary Speaker 2*	Sets the relative position of the microphone to the speaker.
Mid	*Middle*	*British Lead, British Legend, Jazz Combo, U.S. High Gain*	Sets the tone quality of the mid band.
Mid 1 Gain L	*Mid1 Subband Gain Lch*	*Stereophonic Optimizer*	Sets the resultant gain of the *Mid1* band after the adjustment of the stereo sound (L channel).
Mid 1 Gain R	*Mid1 Subband Gain Rch*	*Stereophonic Optimizer*	Sets the resultant gain of the *Mid1* band after the adjustment of the stereo sound (R channel).
Mid 2 Gain L	*Mid2 Subband Gain Lch*	*Stereophonic Optimizer*	Sets the resultant gain of the *Mid2* band after the adjustment of the stereo sound (L channel).
Mid 2 Gain R	*Mid2 Subband Gain Rch*	*Stereophonic Optimizer*	Sets the resultant gain of the *Mid2* band after the adjustment of the stereo sound (R channel).

Display name	Parameter name	Effect types using the parameter	Description
Mid 3 Gain L	*Mid3 Subband Gain Lch*	*Stereophonic Optimizer*	Sets the resultant gain of the *Mid3* band after the adjustment of the stereo sound (L channel).
Mid 3 Gain R	*Mid3 Subband Gain Rch*	*Stereophonic Optimizer*	Sets the resultant gain of the *Mid3* band after the adjustment of the stereo sound (R channel).
Mid Attack	*Mid Attack*	*Multi Band Comp*	Sets the length of time for the compressor to be applied to the mid frequencies.
Mid Cut	*Mid Cut*	*U.S. Combo*	Cuts the mid frequencies.
Mid Gain	*Mid Gain*	*Multi Band Comp*	Sets the output level for the mid frequencies.
Mid Level	*Mid Level*	*Isolator*	Sets the level for the mid frequencies.
Mid Mute	*Mid Mute*	*Isolator*	Switches the mute for the mid frequencies.
Mid Ratio	*Mid Ratio*	*Multi Band Comp*	Sets the compression ratio for the mid frequencies.
Mid Sweep	*Mid Sweep*	*U.S. Combo*	Adjusts the frequency range over which the mid frequencies are cut.
Mid Threshold	*Mid Threshold*	*Multi Band Comp*	Sets the minimum input level for the effect to be applied to the mid band.

Display name	Parameter name	Effect types using the parameter	Description
Mid Width	*Mid Width*	*U.S. Combo*	Sets the bandwidth to cut the mid frequencies.
Mix	*Mix*	*VCM Flanger*, *Control Flanger*	Sets the volume of the effect sound.
Mix Level	*Mix Level*	*Harmonic Enhancer*	Sets the level of the effect sound mixed with the dry sound.
Mod Depth	*Mod Depth*	*Noisy, Auto Synth, Tech Modulation*	Sets the depth of the modulation.
Mod Depth	*Modulation Depth*	*Rotary Speaker 2*	Sets the depth of cyclical changes in the volume.
Mod Dpt Ofs R	*Mod Depth Offset R*	*Auto Synth*	Sets the offset to the depth of the modulation for the R channel.
Mod Feedback	*Mod Feedback*	*Noisy*	Sets the level of feedback to the modulation.
Mod Gain	*Mod Gain*	*Tech Modulation*	Sets the gain level of the modulation.
Mod LPF Cutoff	*Mod LPF Cutoff Frequency*	*Tech Modulation*	Sets the Cutoff Frequency of the Low-Pass Filter applied to the modulated sound.
Mod LPF Res	*Mod LPF Resonance*	*Tech Modulation*	Adds characteristics to the modulated sound by using the Low-Pass Filter.
Mod Mix	*Mod Mix Balance*	*Noisy, Tech Modulation*	Sets the mix balance of the modulated sound.
Mod Phase	*Modulation Phase*	*Classic Flanger*	Sets the L/R phase difference of the modulated wave.

Display name	Parameter name	Effect types using the parameter	Description
Mod Speed	Mod Speed	Noisy, Auto Synth, Tech Modulation	Sets the modulation speed.
Mod Wave Type	Mod Wave Type	Auto Synth	Selects the wave type for modulation.
Mode	Mode	VCM Phaser Mono, VCM Phaser Stereo, Control Phaser	Sets an element for changing the phaser type, or more specifically, the factor for forming the phaser effect.
		British Combo	Switches the preamplifier.
Modulator Lvl	Modulator Input Level	Ring Modulator	Sets the modulator level.
Move Speed	Move Speed	Talking Modulator	Sets how long it takes to change to the sound specified by the Vowel parameter.

Display name	Parameter name	Effect types using the parameter	Description
Noise Level	Background Noise Level	VCM Rotary Speaker Classic, VCM Rotary Speaker Overdrive, VCM Rotary Speaker Studio	Sets the amount of background noise.
Noise Level	Noise Level	Vocoder	Sets the level of the noise input.
		Digital Turntable	Sets the noise level.
Noise LPF Q	Noise LPF Q	Digital Turntable	Sets the Resonance of the Low-Pass Filter applied to the noise.
Noise Switch	Background Noise Off/On	VCM Rotary Speaker Classic, VCM Rotary Speaker Overdrive, VCM Rotary Speaker Studio	Turns the background noise on or off.

Display name	Parameter name	Effect types using the parameter	Description
Noise Tone	*Noise Tone*	*Digital Turntable*	Sets the tone quality of the noise.
Normal	*Normal*	*British Combo*	Adjusts the volume of the sound with flat EQ response.
Ns Gate Atk	*Noise Gate Attack*	*NoiseGate+Comp+Eq*	Sets the length of time for the Noise Gate to be applied.
Ns Gate Rls	*Noise Gate Release*	*NoiseGate+Comp+Eq*	Sets the length of time for the Noise Gate to be inactive.
Ns Gate Thrs	*Noise Gate Threshold*	*NoiseGate+Comp+Eq*	Sets the minimum input level for the Noise Gate to be applied.
Ns LPF Cutoff	*Noise LPF Cutoff Frequency*	*Digital Turntable*	Sets the frequency to cut by using the Low-Pass Filter applied to the noise.
Ns Mod Depth	*Noise Mod Depth*	*Digital Turntable*	Sets the depth of the noise modulation.
Ns Mod Speed	*Noise Mod Speed*	*Digital Turntable*	Sets the speed of the noise modulation.

Display name	Parameter name	Effect types using the parameter	Description
Offset	*Filter Offset*	*Spiralizer P, Spiralizer F, Tempo Spiralizer P, Tempo Spiralizer F*	Sets the initial pitch value in semitones.
Ofs Transition	*Offset Transition Rate*	*Spiralizer P, Spiralizer F, Tempo Spiralizer P, Tempo Spiralizer F*	Sets the transition time for the Offset value to change to the new value.

Display name	Parameter name	Effect types using the parameter	Description
On/Off Switch	On/Off Switch	Isolator	Turns the isolator on or off.
		Stereophonic Optimizer	Turns the effect on or off.
Osc Freq	OSC Frequency Coarse	Ring Modulator	Sets the frequency for modulating the input wave.
Osc Freq Fine	OSC Frequency Fine	Ring Modulator	Finely adjusts the frequency for modulating the input wave.
Output	Output	VCM Auto Wah, VCM Touch Wah, VCM Pedal Wah	Sets the output level.
Output Level	Filter Output Level	Control Filter	Sets the output level of the filter.
Output Level	Output Level	Amp Simulator 1, Amp Simulator 2, Comp Distortion, Comp Distortion Delay, U.S. Combo, Jazz Combo, U.S. High Gain, British Combo, British Lead, British Legend, Multi FX, Small Stereo, VCM Compressor 376, Classic Compressor, VCM EQ 501, Talking Modulator, Lo-Fi, Bit Crusher, Vinyl Break, Beat Repeat, Rotary Speaker 2, Downward Compressor, Upward Compressor, Parallel Compressor, Presence, Wave Folder, VCM Mini Filter, VCM Mini Booster	Sets the output level.
		Vocoder	Sets the output level of the Vocoder.
Output Level 1	Output Level1	Pitch Change	Sets the output level on the first route.
Output Level 2	Output Level2	Pitch Change	Sets the output level on the second route.

Display name	Parameter name	Effect types using the parameter	Description
Overdrive	*Overdrive*	*Amp Simulator 1*, *Amp Simulator 2*, *Comp Distortion*, *Comp Distortion Delay*, *VCM Auto Wah*, *VCM Touch Wah*, *VCN Pedal Wah*	Sets the level of distortion.

Display name	Parameter name	Effect types using the parameter	Description
Pan 1	*Pan 1*	*Pitch Change*	Sets the pan on the first route.
Pan 2	*Pan 2*	*Pitch Change*	Sets the pan on the second route.
Pan AEG Min Lvl	*Pan AEG Min Level*	*Slice*	Sets the minimum level of the Amplitude EG applied to the panned sound.
Pan AEG Type	*Pan AEG Type*	*Slice*	Sets the type of Amplitude EG applied to the panned sound.
Pan Depth	*Pan Depth*	*Slice*	Sets the depth of the pan.
Pan Direction	*Pan Direction*	*Auto Pan*	Sets the Auto Pan type.
Pan Type	*Pan Type*	*Slice*	Sets the pan type.
Panning	*Panning*	*Jazz Combo*	Sets the spread of the Chorus/Vibrato.
Pedal Control	*Pedal Control*	*VCM Pedal Wah*	Controls the Cutoff Frequency of the Wah filter.
Phase Control	*Phase Control*	*Control Phaser*	Sets the depth of the phase modulation.

Display name	Parameter name	Effect types using the parameter	Description
Phase Differ	*LFO Phase Difference*	*Tempo Flanger*, *Tremolo*	Sets the L/R phase difference of the modulated wave. (No phase difference for 0 deg or the value 64.)
Phase Reset	*LFO Phase Reset*	*Tempo Flanger*, *Tempo Phaser*, *Slice*	Sets how the initial phase of the LFO is reset.
Phase Shift Ofs	*Phase Shift Offset*	*Tempo Phaser*	Sets the offset value of the phase modulation.
Phaser Sw	*Phaser SW*	*Multi FX*	Sets the Phaser type.
Pitch 1	*Pitch 1*	*Pitch Change*	Sets the pitch for the first route in semitones.
Pitch 2	*Pitch 2*	*Pitch Change*	Sets the pitch for the second route in semitones.
Pitch Sweep	*Pitch Sweep*	*Beat Repeat*	Sets the pitch to change gradually in each repetition.
Plate Type	*Plate Type*	*HD Plate*	Sets how the sound resonates.
Play Speed	*Play Speed*	*Beat Repeat*	Sets the playback speed.
PM Depth	*PM Depth*	*G Chorus, 2 Modulator, Tremolo*	Sets the depth of the pitch modulation.
Post-comp HPF	*Post-comp HPF*	*Upward Compressor, Downward Compressor*	Sets the Cutoff Frequency of the High-Pass Filter which follows the compressor.
Pre Mod HPF F	*Pre Mod HPF Cutoff Frequency*	*Tech Modulation*	Sets the Cutoff Frequency of the High-Pass Filter before modulation is applied.

Display name	Parameter name	Effect types using the parameter	Description
Preamp	*Preamp*	*British Lead*	Sets the gain of the preamplifier.
Pre-LPF Cutoff	*Pre-LPF Cutoff Frequency*	*Lo-Fi*	Sets the Cutoff Frequency of the Low-Pass Filter for cutting the high frequency.
Pre-LPF Res	*Pre-LPF Resonance*	*Lo-Fi*	Adds characteristics to the input to the Low-Pass Filter.
Presence	*Presence*	*Presence*	Sets the level of the effect.
		Amp Simulator 1, *Comp Distortion Delay U.S. Combo*, *U.S. Hi Gain*, *British Lead*, *British Legend*	Boosts the high frequencies.

Display name	Parameter name	Effect types using the parameter	Description
R/H Balance	*Rotor/Horn Balance*	*Rotary Speaker 1*, *Rotary Speaker 2*	Sets the volume balance of the horn (treble) and rotor (woofer).
Random	*Random*	*Beat Repeat*	Creates random repetition.
Ratio	*Ratio*	*Comp Distortion*, *VCM Compressor 376*, *Classic Compressor*, *Downward Compressor*, *Upward Compressor*	Sets the ratio of the compressor.
Release	*Release*	*Comp Distortion*, *VCM Compressor 376*, *Classic Compressor*, *Downward Compressor*, *Upward Compressor*	Sets the length of time it takes until the compressor effect fades away.
Release Curve	*Release Curve*	*Dynamic Flanger*, *Dynamic Phaser*, *Dynamic Ring Modulator*, *Dynamic Filter*	Sets the release curve of the envelope follower.

Display name	Parameter name	Effect types using the parameter	Description
Release Time	*Release Time*	*Dynamic Flanger, Dynamic Phaser, Dynamic Ring Modulator, Dynamic Filter*	Sets the release time of the envelope follower.
		Beat Repeat	Sets the release time of the gate for the entire sound.
Repeat	*Repeat*	*Beat Repeat*	Sets the Repeat on or off.
Resonance	*Resonance*	*Dynamic Filter, Control Filter, VCM Mini Filter, VCM Mini Booster*	Adds characteristics to the filter.
		Beat Repeat	Sets the Resonance of the filter for the effect sound.
Resonance Ofs	*Resonance Offset*	*VCM Auto Wah, VCM Touch Wah, VCN Pedal Wah*	Sets the offset value to the Resonance.
Retrigger Cycle	*Retrigger Cycle*	*Beat Repeat*	Sets the cycle for retriggering the repeat.
Reverb Delay	*Reverb Delay*	*R3 Hall, R3 Room, R3 Plate, SPX Hall, SPX Room, SPX Stage, Space Simulator*	Sets the delay time from the early reflections to the reverb.
Reverb Time	*Reverb Time*	*REV-X Hall, REV-X Room, R3 Hall, R3 Room, R3 Plate, SPX Hall, SPX Room, SPX Stage, Space Simulator, HD Hall, HD Room, HD Plate*	Sets the reverb length.
Room Size	*Room Size*	*REV-X Hall, REV-X Room, Early Reflection, HD Hall, HD Room, Gated Reverb, Reverse Reverb*	Sets the size of the room.
Rotor Accel	*Rotor Acceleration*	*Rotary Speaker 2, VCM Rotary Speaker Classic, VCM Rotary Speaker Overdrive, VCM Rotary Speaker Studio*	Sets the rotation speed of the rotor (woofer) to change from *Slow* to *Fast*.
Rotor Decel	*Rotor Deceleration*	*Rotary Speaker 2, VCM Rotary Speaker Classic, VCM Rotary Speaker Overdrive, VCM Rotary Speaker Studio*	Sets the rotation speed of the rotor (woofer) to change from *Fast* to *Slow*.

Display name	Parameter name	Effect types using the parameter	Description
Rotor Fast	*Rotor Speed Fast*	*Rotary Speaker 1*, *Rotary Speaker 2*, *VCM Rotary Speaker Classic*, *VCM Rotary Speaker Overdrive*, *VCM Rotary Speaker Studio*	Sets the rotation speed of the rotor (woofer) for the *Fast* setting.
Rotor Level	*Rotor Level*	*VCM Rotary Speaker Classic*, *VCM Rotary Speaker Overdrive*, *VCM Rotary Speaker Studio*	Sets the volume of the rotor (woofer).
Rotor Slow	*Rotor Speed Slow*	*Rotary Speaker 1*, *Rotary Speaker 2*, *VCM Rotary Speaker Classic*, *VCM Rotary Speaker Overdrive*, *VCM Rotary Speaker Studio*	Sets the rotation speed of the rotor (woofer) for the *Slow* setting.
Rotor Slow/Fast	*Rotor Slow/Fast Time*	*Rotary Speaker 1*	Sets the transition time for the rotation speed of the rotor (woofer) to change from *Slow* to *Fast*.
Rtg Attack T	*Retrigger Attack Time*	*Beat Repeat*	Sets the Attack time of the *Gate* applied to the entire sound.
Rtg Gate Time	*Retrigger Gate Time*	*Beat Repeat*	Sets the gate time of the entire sound.
Rtg Quantize	*Retrigger Quantize*	*Beat Repeat*	When this parameter is set to On, the sound is repeated at the beginning of the measure set in the built-in sequencer.
Rtg Release T	*Retrigger Release Time*	*Beat Repeat*	Sets the Release time of the gate for the entire sound.

Display name	Parameter name	Effect types using the parameter	Description
Sample Rate	*Sample Rate*	*Bit Crusher*	Lowers the *Sample Rate*.
Sampling Freq	*Sampling Frequency Control*	*Lo-Fi*	Controls the sampling frequency.

Display name	Parameter name	Effect types using the parameter	Description
SC EQ Freq	*Side Chain EQ Frequency*	*Downward Compressor*, *Upward Compressor*	Sets the frequency of the EQ used for detecting the compressor level.
SC EQ Gain	*Side Chain EQ Gain*	*Downward Compressor*, *Upward Compressor*	Sets the gain of the EQ used for detecting the compressor level.
SC EQ Q	*Side Chain EQ Q*	*Downward Compressor*, *Upward Compressor*	Sets the Q of the EQ used for detecting the compressor level.
Scale Type	*Spiral Step Scale Type*	*Spiralizer P*, *Spiralizer F*, *Tempo Spiralizer P*, *Tempo Spiralizer F*	Sets how to create changes when the *Step Mode* is set to *Scale*.
Semitones	*Spiral Step Semitones*	*Spiralizer P*, *Spiralizer F*, *Tempo Spiralizer P*, *Tempo Spiralizer F*	Specifies the variation width in semitones when the *Step Mode* is set to *Semitone*.
Send to Noise	*Dry Send to Noise*	*Digital Turntable*	Sets the level of the dry signal sent to the noise effect.
Sensitivity	*Sensitivity*	*Dynamic Flanger*, *Dynamic Phaser*, *Dynamic Ring Modulator*, *Dynamic Filter*	Sets the sensitivity of the modulation applied to the input change.
		VCM Touch Wah	Sets the sensitivity of the Wah filter's change applied to the input change.
SEQ Clock	*SEQ Clock*	*Wave Folder*	Adjusts the speed of the built-in sequencer.
SEQ Depth	*SEQ Depth*	*Wave Folder*	Adjusts the depth of the effect on the built-in sequencer.

Display name	Parameter name	Effect types using the parameter	Description
SEQ Pattern	*SEQ Pattern*	*Wave Folder*	Select the pattern on the built-in sequencer.
SEQ Ph Reset	*SEQ Phase Reset*	*Wave Folder*	Sets the mode for resetting the built-in sequencer.
SEQ Variation	*SEQ Variation*	*Wave Folder*	Changes the behavior of the built-in sequencer.
Side Bit	*Side Bit*	*Bit Crusher*	Reduces the bit precision for the side chain.
Side Chain EQ	*Side Chain EQ Switch*	*Downward Compressor, Upward Compressor*	Turns the EQ used for detecting the compressor level on or off.
Side Chain Lvl	*Side Chain Input Level*	*VCM Compressor 376, Classic Compressor, Dyna Flanger, Dyna Phaser, Dyna Ring Mod, Dyna Filter, Multi Band Comp*	Sets the level of the input to the control circuit for Side Chain.
Side Smpl Rate	*Side Sample Rate*	*Bit Crusher*	Reduces the *Sample Rate* for the Side.
Smpl Rate Link	*Sample Rate Link*	*Bit Crusher*	Sets the level of the *Side* setting that follows the *Mid* value when *M/S* is on.
Space Type	*Space Type*	*Space Simulator*	Selects the space simulation type.
Speaker Air	*Speaker Air*	*U.S. Combo, Jazz Combo, U.S. High Gain, British Lead, British Combo, British Legend*	Emphasizes the characteristics of the speaker cabinet.
Speaker Type	*Speaker Type*	*Amp Simulator 1, Comp Distortion Delay*	Selects the speaker simulation type.
		U.S. Combo, Jazz Combo, U.S. High Gain, British Lead, Small Stereo, British Combo, British Legend, Multi FX	Sets the speaker type.

Display name	Parameter name	Effect types using the parameter	Description
Speed	*Speed*	*VCM Flanger*	Sets the frequency of the LFO wave which controls the cyclic change of the delay modulation.
		VCM Phaser Mono, *VCM Phaser Stereo*	Sets the frequency of the LFO wave which controls the cyclic change of the phase modulation.
		VCM Auto Wah	Sets the speed of the LFO.
		Vinyl Break	Sets the length of time for the sound to stop.
Speed Adjust	*Speed Adjust*	*Vinyl Break*	Finely adjusts the speed.
Speed Control	*Speed Control*	*Rotary Speaker 1*, *Rotary Speaker 2*	Switches the rotation speed (*Slow* or *Fast*).
		VCM Rotary Speaker Classic, *VCM Rotary Speaker Overdrive*, *VCM Rotary Speaker Studio*	Switches the rotation speed (*Slow*, *Stop*, or *Fast*).
Spiral	*Spiral Switch*	*Spiralizer P*, *Spiralizer F*, *Tempo Spiralizer P*, *Tempo Spiralizer F*	Turns the LFO On or Off.
Spiral Speed	*Spiral Speed*	*Spiralizer P*, *Spiralizer F*, *Tempo Spiralizer P*, *Tempo Spiralizer F*	Sets the speed of the pitch change.
Spiral Sync	*Spiral Sync*	*Spiralizer P*, *Spiralizer F*, *Tempo Spiralizer P*, *Tempo Spiralizer F*	Sets the standard cycle for changing the pitch in steps.
Spread	*Spread*	*Ensemble Detune*, *VCM Flanger*, *VCM Phaser Stereo*, *Control Phaser*	Sets how the sound spreads.
Stage	*Stage*	*VCM Phaser Mono*, *VCM Phaser Stereo*, *Tempo Phaser*, *Dynamic Phaser*, *Control Phaser*	Sets the number of steps for the phase shifter.

Display name	Parameter name	Effect types using the parameter	Description
Step Mode	*Spiral Step Mode*	*Spiralizer P, Spiralizer F, Tempo Spiralizer P, Tempo Spiralizer F*	Sets the pitch to change continuously (smoothly) or in steps.
Step Transition	*Spiral Step Transition Rate*	*Spiralizer P, Spiralizer F, Tempo Spiralizer P, Tempo Spiralizer F*	Sets the transition time for the pitch to change in steps.

Display name	Parameter name	Effect types using the parameter	Description
Texture	*Texture*	*Parallel Compressor, Presence, VCM Mini Filter, VCM Mini Booster*	Creates various changes to the texture of the effect.
Threshold	*Threshold*	*Comp Distortion, Classic Compressor, Downward Compressor, Upward Compressor*	Sets the input level for the effect to be applied.
Threshold Level	*Dyna Threshold Level*	*Dynamic Flanger, Dynamic Phaser, Dynamic Ring Modulator, Dynamic Filter*	Sets the minimum level at which the envelope follower starts.
Time Sweep	*Time Sweep*	*Beat Repeat*	Creates a gradual change in the time length with each repetition.
Tone	*Tone*	*Rotary Speaker 2, VCM Rotary Speaker Classic, VCM Rotary Speaker Overdrive, VCM Rotary Speaker Studio*	Sets the tone control.
Tone Shift	*Tone Shift*	*British Lead*	Switches the characteristic of the tone control.
Transition Rate	*Delay Transition Rate*	*Control Delay*	Sets the transition speed for changing the current *Delay Time* to the new value.
Treble	*Treble*	*British Combo, British Lead, British Legend, Jazz Combo, U.S. High Gain*	Adjusts the tone quality of the treble.

Display name	Parameter name	Effect types using the parameter	Description
Type	*Type*	*VCM Flanger*, *Control Flanger*	Selects the flanger type.
		VCM Auto Wah, *VCM Touch Wah*, *VCN Pedal Wah*	Selects the Wah type.
		Early Reflection, *Gated Reverb*, *Reverse Reverb*	Selects the reflection type.
		US High Gain, *British Lead*	Selects the amplifier type.
		Analog Delay Retro, *Analog Delay Modern*	Sets the character of the delay.
		Parallel Compressor	Sets the compressor type.
		Mini Filter, *Mini Boost*	Sets the filter Type.

Display name	Parameter name	Effect types using the parameter	Description
Upper Range	*Upper Range*	*VCM Auto Wah*, *VCM Touch Wah*, *VCN Pedal Wah*	Sets the maximum value for the variable range of the Wah filter.
		Control Flanger	Sets the maximum value for the variable range of the *Flanger Control*.
		Control Phaser	Sets the maximum value for the variable range of the *Phase Control*.

Display name	Parameter name	Effect types using the parameter	Description
Vib Speed	*Vib Speed*	*Jazz Combo*	Sets the speed of the vibrato. Available when Chorus is set to *Vib*.
Vocoder Attack	*Vocoder Attack*	*Vocoder*	Sets the Attack value of the Vocoder output.
Vocoder Rls	*Vocoder Release*	*Vocoder*	Sets the Release value of the Vocoder output.
Volume	*Volume*	*U.S. Combo, Jazz Combo*	Sets the level of the preamp.
Vowel	*Vowel*	*Talking Modulator*	Selects a vowel type.

Display name	Parameter name	Effect types using the parameter	Description
Wah Pedal	*Wah Pedal*	*Multi FX*	Sets the position of the Wah pedal.
Wah Sw	*Wah SW*	*Multi FX*	Sets the Wah type.
Wall Vary	*Wall Vary*	*Space Simulator*	Sets the wall type of the simulated room. Higher values produce more diffuse reflections.
Width	*Width*	*Space Simulator*	Sets the width of the simulated room.
Width High	*Width High*	*Stereophonic Optimizer*	Adjusts the stereo balance of the *High* band.
Width Low	*Width Low*	*Stereophonic Optimizer*	Adjusts the stereo balance of the *Low* band.

Display name	Parameter name	Effect types using the parameter	Description
Width Mid 1	*Width Mid1*	*Stereophonic Optimizer*	Adjusts the stereo balance of the *Mid1* band.
Width Mid 2	*Width Mid2*	*Stereophonic Optimizer*	Adjusts the stereo balance of the *Mid2* band.
Width Mid 3	*Width Mid3*	*Stereophonic Optimizer*	Adjusts the stereo balance of the *Mid3* band.
Word Length	*Word Length*	*Lo-Fi*	Sets the resolution of the sound, or how coarse the sound is.

Shortcut operations ☆

By simultaneously pressing the [SHIFT] button and another button, you can use the shortcut operations to instantly access the functions shown below.

■ Using the [SHIFT] button

Operation	Function
[SHIFT] + Knob 1–8	Switches Knobs to high-precision mode or in smaller increments (slows down value changes). Convenient when making fine adjustments to values.
[SHIFT] + [EDIT/ ⌒]	Calls up the *Copy/Exchange* screen.
[SHIFT] + KNOB POSITION [LEFT]	Registers the *Assign 1–8* value assigned to the knob to the KNOB POSITION [LEFT] button.
[SHIFT] + KNOB POSITION [MID]	Registers the *Assign 1–8* value assigned to the knob to the KNOB POSITION [MID] button.
[SHIFT] + KNOB POSITION [RIGHT]	Registers the *Assign 1–8* value assigned to the knob to the KNOB POSITION [RIGHT] button.
[SHIFT] + [PAGE JUMP]	Calls up the parameter being edited on the Main display to the Sub display.
[SHIFT] + [PART SELECT]	Enables the PART buttons for turning the solo setting on or off.
[SHIFT] + [KEYBOARD CONTROL]	Enables the PART buttons for turning the mute setting on or off.
[SHIFT] + [1–8/9–16]	Enables the PART buttons and sliders to switch between Parts 9–16.
[SHIFT] + [COMMON]	Selects Common for Elements, Operators, and Oscillators.
[SHIFT] + PART [1]–[8]	Selects one from Element 1–8, Operator 1–8, Oscillator 1–3, and Noise.
[SHIFT] + OCTAVE [−]	Sets the transpose value to −1 (decrease).
[SHIFT] + OCTAVE [+]	Sets the transpose value to +1 (increase).
[SHIFT] + OCTAVE [−] + OCTAVE [+]	Sets the transpose value to 0 (reset).
[SHIFT] + SCENE [1]–[8]	Registers the created Scene to one of the SCENE [1–8] buttons.

Operation	Function
[SHIFT] + [DEC/NO]	Sets the selected parameter value to −10 (decrease). Returns to the previous page on the *Live Set* screen.
[SHIFT] + [INC/YES]	Sets the selected parameter value to +10 (increase). Moves to the next page on the *Live Set* screen.
[SHIFT] + [ARP ON/OFF]	Calls up the *Arp Edit* screen.
[SHIFT] + [MSEQ ON/OFF]	Calls up the *Motion Seq Edit* screen.
[SHIFT] + [CONTROL ASSIGN]	Calls up the *Control View* screen.
[SHIFT] + [LATCH]	Calls up the *Ribbon Settings* screen.
[SHIFT] + [PERFORMANCE]	Calls up the *Property* screen (*Home* screen only).
[SHIFT] + [LIVE SET]	Moves to the *Live Set Register* screen.
[SHIFT] + [CATEGORY SEARCH]	Opens the *Part Category Search* screen for the selected Part.
[SHIFT] + [UTILITY]	Displays the parameter value.
[SHIFT] + [NAVIGATION]	Calls up the FX OVERVIEW screen.
[SHIFT] + [QUICK SETUP]	Calls up the *Effect Switch* screen.
[SHIFT] + [STORE]	Calls up the *Load* screen.
[SHIFT] + [SPLIT]	Calls up the *Home* screen with the *Part—Note* view selected.
[SHIFT] + [SONG/PATTERN]	Calls up the *Rhythm Pattern* screen.
[SHIFT] + [TEMPO/TAP]	Activates the panel lock function on or off. (Only on the *Home* screen or *Live Set* screen.)
[SHIFT] + Slot number [1]	Selects the first tab on the first column on the left side of the screen.
[SHIFT] + Slot number [2]	Selects the second tab on the first column on the left side of the screen.
[SHIFT] + Slot number [3]	Selects the third tab on the first column on the left side of the screen.
[SHIFT] + Slot number [4]	Selects the fourth tab on the first column on the left side of the screen.
[SHIFT] + Slot number [5]	Selects the fifth tab on the first column on the left side of the screen.
[SHIFT] + Slot number [6]	Selects the sixth tab on the first column on the left side of the screen.

Operation	Function
[SHIFT] + Slot number [9]	Selects the first tab on the second column on the left side of the screen.
[SHIFT] + Slot number [10]	Selects the second tab on the second column on the left side of the screen.
[SHIFT] + Slot number [11]	Selects the third tab on the second column on the left side of the screen.
[SHIFT] + Slot number [12]	Selects the fourth tab on the second column on the left side of the screen.
[SHIFT] + Slot number [13]	Selects the fifth tab on the second column on the left side of the screen.
[SHIFT] + Slot number [14]	Selects the sixth tab on the second column on the left side of the screen.
[SHIFT] + [A/D INPUT ON/OFF]	Calls up the *Audio In Edit* screen.
[SHIFT] + [PORTAMENTO]	Calls up the *Pitch Edit* screen.
[SHIFT] + [ASSIGN 1]/[ASSIGN 2]	Calls up the *Control Settings* screen.

■ Using the [DAW REMOTE] button

Operation	Function
[DAW REMOTE] + Slot number [1]	Calls up the *DAW Remote* screen in *Track* mode.
[DAW REMOTE] + Slot number [2]	Calls up the *DAW Remote* screen in *Plugin* mode.
[DAW REMOTE] + Slot number [3]	Calls up the *DAW Remote* screen in *Transport* mode.
[UTILITY] + [DAW REMOTE]	Moves to the *Touch Panel Calibration Setting* screen.

■ Using the [QUICK SETUP] button

Operation	Function
[QUICK SETUP] + Slot number [5]	Selects *Standalone* for *Quick Setup*.
[QUICK SETUP] + Slot number [6]	Selects *Quick Setup 1*.
[QUICK SETUP] + Slot number [7]	Selects *Quick Setup 2*.
[QUICK SETUP] + Slot number [8]	Selects *Quick Setup 3*.

■ OCTAVE buttons

Operation	Function
OCTAVE [−] + OCTAVE [+]	Resets octave shift.

Operation	Function
[SHIFT] + OCTAVE [−]	Sets the transpose value to −1 (decrease).
[SHIFT] + OCTAVE [+]	Sets the transpose value to +1 (increase).
[SHIFT] + OCTAVE [−] + OCTAVE [+]	Resets the transpose value.

■ Quickly pressing the button twice

You can toggle between *Internal* and *External* by quickly pressing the corresponding PART button twice.

When switched to *External*, the Part name is displayed in blue.

■ Holding down the button

Operation	Function
[CATEGORY]	Resets *Bank/Favorite* to *All*.
[QUICK EDIT]	Resets to Selected Part.
[A/D INPUT ON/OFF]	Turns the function on.

Message List ⭐

Message	Description	Required operation
** *library will be overwritten.*	The Library file with the same name has already been loaded when you tried to load a library. The existing data will be overwritten when the new data is loaded. The name of the Library file you are attempting to load is displayed in place of **.	
** *Control Assign full.*	Could not carry out the operation because there is no controller set available. The Part name you are attempting to add to the controller set is displayed in place of "**."	Delete the unnecessary controller set and redo the operation.
** *will be deleted.*	Data will be deleted as a result of this operation.	
** *will be loaded to Pattern.*	The .mid file will be loaded to the Pattern.	
** *will be loaded to Song.*	The .mid file will be loaded to the Song.	
** *will be loaded.*	The file will be loaded.	
** *will be overwritten.*	When saving, the Performance, file, folder, or Quick Setup with the same name already exists. The existing data will be overwritten when saved. The name of the Performance, file, folder, or Quick Setup that you are attempting to save is displayed in place of "**."	
Activate the source controller to assign.	You can assign parameters to the controller you are about to operate.	Operate the controller that you wish to assign.
Advanced settings will be initialized.	Initializes the settings of the [UTILITY] → *Settings* → *Advanced* tab.	

Message	Description	Required operation
All data and libraries will be initialized. Unsaved user data will be lost.	Restores the factory default settings.	It is recommended to save any necessary settings you wish to keep to a USB flash drive in advance.
All data is initialized upon power-on.	The instrument has been set to restore factory defaults when the instrument is turned on.	
All data will be overwritten by **	When loading is performed, all data will be overwritten. The name of the backup file you are attempting to load is displayed in place of "**."	
All Favorite Marks will be cleared.	All Favorite marks will be deleted.	
All settings will be initialized. User data is kept.	The settings for the instrument will be initialized. The User data will not be deleted.	
All sound will be stopped during optimization.	The internal memory will be restored.	
All user data will be initialized. Unsaved user data will be lost.	The User area in the User memory will be initialized. It is recommended to save any necessary settings you wish to keep to a USB flash drive in advance.	
Arpeggio bypass disabled.	The Arpeggio Bypass has been deleted.	
Arpeggio full.	Could not carry out the operation because the Arpeggio is full.	
Assignable knob full.	Could not carry out the operation because all assignable knobs are used in the controller set.	Delete any unnecessary controller set that has an assignable knob set as a Source and redo the operation.
Audio file is not found.	The specified audio file cannot be found.	
Audio Rec stopped due to lack of memory space.	Audio recording stopped automatically because the USB flash drive is full.	Use a new USB flash drive or delete unnecessary files and try this operation again.

Message	Description	Required operation
Audition full.	Could not carry out the operation because the *User Audition* data is full.	Delete unnecessary *User Audition* data from: [UTILITY] → *Contents* → *Data Utility* screen.
Auto power off disabled.	The *Auto Power Off* function has been disabled.	
Bulk data protected.	Bulk data cannot be received because of the setting.	
Can't process.	Cannot process the requested operation.	
Can't register unstored performance.	Cannot register the Performance to the Live Set because the bank or program number being edited has not yet been set.	
Completed.	The specified load, save, format, or other Job has been completed.	
Connecting to USB device...	Connecting the USB flash drive to the instrument.	
Converting Pattern to Song.	The Pattern is being converted.	
CPU Fan Error	The built-in cooling fan has stopped.	This condition may cause the internal temperature to rise and the instrument may stop working. Immediately back up all necessary data, turn off the instrument and contact your Yamaha dealer.
Current user data will be overwritten by **.	User data already exists at the destination for the file to be loaded. If you proceed, the existing user data will be overwritten. The name of the User file you are attempting to load is displayed in place of "**."	
Curve full	Could not carry out the operation because the *User Curve* data is full.	Delete unnecessary *User Curve* data from: [UTILITY] → *Contents* → *Data Utility* screen.
Data memory full.	(When loading a Library file) The content data in the library cannot be saved because the instrument memory is full.	

Message	Description	Required operation
Device number is off.	The bulk data cannot be sent or received because the device number is off.	
Device number mismatch.	The bulk data cannot be sent or received because the device number does not match.	
Dividing the drum track makes new performance data. Performance full.	Cannot carry out the operation because there is no Performance available for using *Divide Drum Track*.	
Dividing the drum track makes new performance data. You can't undo this operation.	A new Performance will be created by using *Divide Drum Track*. This operation cannot be undone.	
File is not found.	There are no files for the selected type.	
File or folder already exists.	A file or folder with the same already exists.	
File or folder path is too long.	Cannot open the specified file or folder because its path name is too long.	
Folder is not empty.	You are attempting to delete a folder that contains data.	
Folder is too deep.	Cannot open the folder because it is nested too deep in the folder structure.	
Illegal bulk data.	An error occurred while receiving bulk data or bulk requests.	
Illegal file name.	The file name is invalid.	
Illegal file.	The specified file cannot be handled or loaded into this instrument.	
Illegal parameters.	Incorrect parameters have been specified.	
Illegal sample data.	The specified sample data is not supported.	

Message	Description	Required operation
Illegal smart morph data.	The specified *Smart Morph* data is not supported.	
Keybank full.	While loading, the total number of keybanks exceeds the maximum number.	
Keyboard control lock disabled.	The *Keyboard Lock* has been disabled.	
Knob value stored.	The *Knob Value* has been stored (saved).	
Library full.	The total number of libraries exceeds the maximum number.	
Micro Tuning full	Could not be loaded because the *User Micro Tuning* data is full.	Delete unnecessary *User Micro Tuning* data from: [UTILITY] → *Contents* → *Data Utility* screen.
MIDI buffer full.	Could not be processed because an excessively large amount of MIDI data was received at once.	
MIDI checksum error.	The checksum of the received System Exclusive message is incorrect.	
No data.	There is no data in the selected track or specified range. Select the range again.	
No read/write authority to the file.	No read or write permissions for this file.	
Note ranges will be initialized.	The Note Range will be initialized.	
Now initializing all data…	The factory settings are being restored.	
Now initializing…	Some data is being initialized.	
Now loading...	The file is being loaded.	
Now receiving MIDI bulk data...	The instrument is receiving MIDI bulk data.	
Now saving...	The file is being saved.	
Now transmitting MIDI bulk data...	The instrument is sending MIDI bulk data.	
Panel unlocked.	The panel lock has been disabled.	

Message	Description	Required operation
Part *** will be overwritten.	There is already a Part at the copy destination. If you continue the operation, the existing Part at the copy destination will be overwritten.	
Part full.	Could not open the *Rhythm Pattern* screen because there were no Parts available.	Delete the unnecessary Part(s) and redo the operation.
Pattern full.	Could not carry out the operation because the Pattern is full.	
Pattern will be converted to Song.	The Pattern will be converted to a Song.	
Performance data in *** will be loaded.	The *Performance Data* in the file for a past model will be loaded.	
Performance full.	Could not carry out the operation because the Performance is full.	
Please connect USB device.	Connect a USB flash drive.	
Please keep power on.	Writing data in the flash ROM.	Do not turn off the instrument while this message is shown. If the instrument is turned off while this is displayed, User data may be lost or the system may be corrupted, preventing the system from starting properly the next time the instrument is turned on.
Please reboot to enable the new Audio I/O Mode.	Restart the instrument to enable the changes to the audio input and output settings.	
Please reboot to enable the new USB Driver Mode.	Restart the instrument to enable the changes to the USB driver mode settings.	
Please reboot to maintain internal memory.	Restart the instrument to repair the instrument memory.	
Please stop audio play/rec.	Stop audio recording or playback, and then try again.	
Please stop sequencer.	Stop the sequencer (Pattern or Song), and then try again.	

Message	Description	Required operation
Please store the pattern to change the chain play mode.	Store the Pattern before changing the chain playback mode.	
Please wait…	Processing.	Please wait.
Press [SHIFT] + [TEMPO/TAP] to unlock panel.	Panel Lock has been enabled. Press [SHIFT] + [TEMPO/TAP] to unlock the panel.	
Quick Setup ** is loaded.	*Quick Setup* has been loaded.	
Recall latest edits.	Recalls the last edited Performance data and puts it in the edit buffer.	
Redo **.	Carries out the operation again (*Redo*) that had been undone. The name of the operation is displayed in place of "**."	
Sample is protected.	The sample is protected and cannot be changed.	
Sample is too long.	The sample size is too large and cannot be loaded.	
Sample is too short.	The sample size is too small and cannot be loaded.	
Sample memory full.	The memory for samples is full and cannot be loaded.	
Scene stored.	The Scene has been stored (saved) to the SCENE button.	
Selected items will be copied to user bank.	The Performance will be copied to the User Bank.	
Smart Morph full.	The total number of Performances with Smart Morph exceeds the maximum number.	
Some keybanks were not loaded.	Some key banks are in the old format and cannot be loaded.	
Song/Pattern data overload.	The Song or Pattern cannot be played back because it is overloaded.	
Song full.	The total number of Songs exceeds the maximum number.	

Message	Description	Required operation
SSS disabled.	SSS has been disabled.	
SSS enabled.	SSS has been enabled.	
Touch the white square.	(During touch panel calibration) Tap the white square that appears on the display.	
Turn on Memory Switch to memorize ** into this scene.	To register a function to a Scene, *Memory (Memory Switch)* for the function must be turned on in advance.	Turn on the switch from: [PERFORMANCE] → *Scene*.
Undo **.	Cancels the last action (*Undo*). The name of the operation is displayed in place of "**."	
Unsupported USB device.	This USB device is not supported by this instrument.	
USB connection terminated.	The USB flash drive was shut off due to abnormal current flow.	Disconnect the USB flash drive and then press any button on the top panel.
USB device is full.	The USB flash drive is full and files cannot be saved.	Use a new USB flash drive or delete unnecessary files, and try this operation again.
USB device is write-protected.	The USB flash drive you are using is write-protected.	
USB device read/write error.	An error occurred during read/write to the USB flash drive.	
USB device will be formatted.	The USB flash drive will be formatted.	
User auditions will be overwritten with stored songs.	The existing *User Audition* will be overwritten by the currently stored Song.	
VCM Rotary is disabled except in Part 1.	The *VCM Rotary* can be used only with Part 1. It cannot be used on other Parts.	
Voice data in * will be loaded.**	The *Voice Data* in a file for a previous model is loaded.	
Waveform full.	The total number of waveforms exceeds the maximum number.	

Troubleshooting ☆

No sound? Wrong sound? When a problem like this occurs, make sure to check the troubleshooting section before assuming that the product is faulty.
Many problems can be solved by carrying out *Initialize All Data*, after backing up your data to a USB flash drive.
If the problem persists, consult your Yamaha dealer.

The touchscreen response is poor ＋

■ **Is the cursor pointing to the precise location you have touched on the touchscreen?**
If not, calibrate the touchscreen.

[UTILITY] + [DAW REMOTE] → *Calibrate Touch Panel*

[UTILITY] → *Settings* → *System* → *Calibrate Touch Panel*

The Ribbon Controller response is poor ＋

■ **Calibrate the ribbon controller.**

[UTILITY] → *Settings* → *System* → *Calibrate Ribbon Controller*

No sound ＋

■ **Are all Control sliders set to appropriate levels (other than zero or minimum)?**

■ **Are any amplifiers, speakers, or headphones connected to the instrument?**
Since this instrument has no built-in speakers, it is necessary to connect amplifiers, speakers, or headphones to hear any sounds.

■ **Is this instrument as well as any connected devices turned on?**

■ **Have you made all the appropriate level settings—including the Master Volume on this instrument and the volume settings on the connected device?**
When a foot controller is connected to the FOOT CONTROLLER jack, try moving the foot controller.

■ **Is Local Control set to Off?**
When *Local Control* is set to Off, no sound is produced when you play the keyboard.

[UTILITY] → *Settings* → *MIDI I/O* → *Local Control*

■ **Is a blank Part selected?**

If so, assign a sound to the Part or select another Part.

■ **Is the Mute switch for each Part turned on?**

When the Mute switch is turned on, no sound is produced when you play the keyboard.

[PERFORMANCE] → *Part* selection → *Mute*

■ **Is the Keyboard Control of each Part turned off?**

[PERFORMANCE] → *Part* selection → *Kbd Ctrl*

■ **Is *Arp Play Only* of each Part turned on?**

When this parameter is turned on, the corresponding Part produces sound only via Arpeggio playback.

[PERFORMANCE] → *Part* selection → [EDIT/ ⟳] → *General/Pitch* → *Part Settings* → *Arp Play Only*

[PERFORMANCE] → *Part* selection → [EDIT/ ⟳] → *Arpeggio* → *Common* → *Arp Play Only*

■ **Are the MIDI volume or MIDI expression settings too low when using the external controller?**

■ **Are the effect and filter settings appropriate?**

If you are using a filter, try changing the cutoff frequency. Some cutoff settings may filter out all of the sound.

[SHIFT] + [NAVIGATION]

[PERFORMANCE] → *Common* selection → [EDIT/ ⟳] → *Effect*

- For Normal Parts (AWM2) and Drum Parts

[PERFORMANCE] → *Part* selection → [EDIT/ ⟳] → *Element* or *Key* selection → *Filter*

[PERFORMANCE] → *Part* selection → [EDIT/ ⟳] → *Effect*

- For Normal Parts (FM-X) and Normal Parts (AN-X)

[PERFORMANCE] → *Part* selection → [EDIT/ ⟳] → *Filter/Amp*

[PERFORMANCE] → *Part* selection → [EDIT/ ⟳] → *Effect*

■ **Is Vocoder selected as the Insertion Effect Type of the Part?**

If so, set the parameters related to the A/D INPUT jacks to appropriate values, and then play the keyboard while speaking or singing into the microphone connected to this instrument. Check the A/D INPUT [GAIN] knob on the top panel is set to a value other than 0.

[PERFORMANCE] → *Part* selection → [EDIT/ ⟳] → *Effect* → *Routing*

[PERFORMANCE] → *Common* selection → [EDIT/ ⊂⊃] → *Audio In*

■ **Are the volume or level settings too low?**

[UTILITY] → *Settings* → *Sound* → *Tone Generator Volume*

[PERFORMANCE] → *Common* selection → [EDIT/ ⊂⊃] → *General/Pitch* → *Perf Settings* → *Volume*

[PERFORMANCE] → *Part* selection → [EDIT/ ⊂⊃] → *General/Pitch* → *Part Settings* → *Volume*

[PERFORMANCE] → *Part* selection → [EDIT/ ⊂⊃] → *Part Settings* → *General* → *Dry Level*

● For Normal Parts (AWM2) and Drum Parts

[PERFORMANCE] → *Part* selection → [EDIT/ ⊂⊃] → *Element* or *Key* selection → *Amplitude* → *Level/Pan* → *Level*

● For Normal Parts (FM-X)

[PERFORMANCE] → *Part* selection → [EDIT/ ⊂⊃] → *Operator* selection → *Level* → *Level*

● For Normal Parts (AN-X)

[PERFORMANCE] → *Part* selection → [EDIT/ ⊂⊃] → *Oscillator* selection → *OSC/Tune* → *Out Level*

■ **Are the settings such as *Element Switch*, *Note Limit*, *Velocity Limit*, and *Velocity Offset* appropriate?**

● For Normal Parts (AWM2) and Drum Parts

[PERFORMANCE] → *Part* selection → [EDIT/ ⊂⊃] → *General/Pitch* → *Part Settings*

[PERFORMANCE] → *Part* selection → [EDIT/ ⊂⊃] → *Element* or *Key* selection → *Osc/Tune*

● For Normal Parts (FM-X) and Normal Parts (AN-X)

[PERFORMANCE] → *Part* selection → [EDIT/ ⊂⊃] → *General/Pitch* → *Part Settings*

■ **Is the Mute switch for each Element or Operator of Part turned on?**

[PERFORMANCE] → *Part* selection → *Element* , *Operator* , or *Oscillator* status on the *Navigation bar*

■ **With a Normal Part (FM-X), is the Carrier Level set to "0"?**

568

> [PERFORMANCE] → *Part* selection → [EDIT/ 🔗] → *Operator* selection → *Level* → *Level*

■ **Is the output setting of each Part turned off?**

> [PERFORMANCE] → *Part* selection → [EDIT/ 🔗] → *General/Pitch* → *Part Settings* → *Part Output*

■ **Are the controller settings appropriate?**

When *Destination* is set to *Volume* or *Cutoff*, no sound is produced depending on the setting and controller status.

> [PERFORMANCE] → *Part* selection → [EDIT/ 🔗] → *Mod / Control* → *Control Assign*

No sound from the A/D INPUT jacks ✛

■ **Is the connected microphone turned on?**

■ **Is a dynamic microphone connected to the instrument?**

■ **Is the cable between the microphone or audio equipment and this instrument properly connected?**

■ **Is the A/D INPUT [GAIN] knob turned to the minimum?**

■ **Is the A/D INPUT [ON/OFF] button turned on (lit)?**

■ **Check if the cable connection to the A/D INPUT jacks matches the *Mono/Stereo* settings for the jack.**

> [PERFORMANCE] → *Common* selection → [EDIT/ 🔗] → *Audio In* → *Mixing* → *A/D In Input Mode*

■ **Check if the *Mic* or *Line* setting is appropriate.**

Set to *Mic* when a microphone or any device with a low output level is connected. Set to *Line* when an audio device, electronic instrument, or any device with a high input level is connected.

> [UTILITY] → *Settings* → *Audio I/O* → *A/D Input*

■ **Are the volume settings of the A/D Input Part too low?**

> [PERFORMANCE] → *Common* selection → [EDIT/ 🔗] → *Audio In* → *Mixing* → *A/D In Volume*

■ **Are the effect settings for the A/D Input Part appropriate?**

> [PERFORMANCE] → *Common* selection → [EDIT/ 🔗] → *Audio In* → *Routing*

■ **Is the output setting of the A/D Input Part appropriate?**

> [PERFORMANCE] → *Common* selection → [EDIT/ ⟳] → *Audio In* → *Mixing* →
> *A/D In Output Select*

■ **Check if the Vocoder effect is selected.**

When *Vocoder* is selected as the Insertion Effect, the audio input from the A/D INPUT jacks may not produce any sounds unless you play the keyboard.

> [PERFORMANCE] → *Part* selection → [EDIT/ ⟳] → *Effect* → *Routing*

Playback continues without stopping ✛

■ **When the [KEYBOARD HOLD] button is on, try turning it off.**

■ **When the [ARP ON/OFF] button is on, try turning it off.**

■ **For the *Pattern/Song/Audio* screen, press the [■] (Stop) button.**

■ **When an effect sound (such as Delay) continues and does not stop, change the effect setting or select a different Performance.**

■ **When the click sound continues, check the following setting.**

Set this parameter to something other than *always*, since this setting always plays back the click sound regardless of the sequencer status.

> [UTILITY] → *Tempo Settings* → Click Mode

Distorted sound ✛

■ **Are the effect settings appropriate?**

The sound may be distorted depending on the effect type and settings.

> [PERFORMANCE] → *Part* selection → [EDIT/ ⟳] → *Effect*

■ **Are the filter settings appropriate?**

Excessively high filter resonance settings can cause distortion.

• For Normal Parts (AWM2) and Drum Parts

> [PERFORMANCE] → *Part* selection → [EDIT/ ⟳] → *Element* or *Key* selection → *Filter*

• For Normal Parts (FM-X) and Normal Parts (AN-X)

> [PERFORMANCE] → *Part* selection → [EDIT/ ⟳] → *Filter/Amp* → *Filter Type*

■ **Is the volume set too high?**

> [UTILITY] → *Settings* → *Sound* → *Tone Generator Volume*

> [UTILITY] → *Settings* → *Audio I/O*

[PERFORMANCE] → *Common* selection → [EDIT/ ⌒] → *General/Pitch* → *Perf Settings* → *Volume*

[PERFORMANCE] → *Part* selection → [EDIT/ ⌒] → *General/Pitch* → *Part Settings* → *Volume*

- Normal Parts (AWM2)

[PERFORMANCE] → *Part* selection → [EDIT/ ⌒] → *Element* selection → *Amplitude* → *Level/Pan* → *Level*

- For Drum Parts

[PERFORMANCE] → *Part* selection → [EDIT/ ⌒] → *Key* selection → *Level/Pan* → *Level*

- For Normal Parts (FM-X)

[PERFORMANCE] → *Part* selection → [EDIT/ ⌒] → *Operator* selection → *Level* → *Level*

- For Normal Parts (AN-X)

[PERFORMANCE] → *Part* selection → [EDIT/ ⌒] → *Oscillator* selection → *OSC/Tune* → *Out Level*

The sound is cut off   +

■ **Is the entire sound exceeding the maximum polyphony?**

- AWM2 (preset waveforms): 128 (both stereo and mono)
- AWM2 (user or library waveforms): 128 (both stereo and mono)
- FM-X: 128
- AN-X: 16

Only one note sounds at a time   +

■ **Check if the tone generation mode is set to *Mono*.**

If you wish to play chords, set this parameter to *Poly*.

[PERFORMANCE] → *Part* selection → [EDIT/ ⌒] → *General/Pitch* → *Part Settings* → *Mono/Poly*

Wrong pitch   +

■ **Is *Tune* set to a value other than 0?**

[UTILITY] → *Settings* → *Sound* → *Tone Generator Tune*

■ **Is *Note Shift* or *Detune* set to a value other than 0?**

> [PERFORMANCE] → *Part* selection → [EDIT/ ⭗] → *General/Pitch* → *Pitch* → *Note Shift*

> [PERFORMANCE] → *Part* selection → [EDIT/ ⭗] → General/Pitch → *Pitch* → *Detune*

■ **When the Part produces a wrong pitch, have you selected a special temperament in *Micro Tuning*?**

> [PERFORMANCE] → *Part* selection → [EDIT/ ⭗] → *General/Pitch* → *Pitch* → *Micro Tuning Name*

■ **Have you set a special temperament in *Global Tuning*?**

> [UTILITY] → *Settings* → *Sound* → *Global Settings*

■ **When the Part produces a wrong pitch, is *LFO Pitch Modulation Depth* set too high?**

- For Normal Parts (AWM2)

> [PERFORMANCE] → *Part* selection → [EDIT/ ⭗] → *Element* selection → *Element LFO* → *Pitch Mod*

- For Normal Parts (FM-X)

> [PERFORMANCE] → *Part* selection → [EDIT/ ⭗] → *Mod/Control* → *2nd LFO* → *Pitch Modulation Depth*

- For Normal Parts (AN-X)

> [PERFORMANCE] → *Part* selection → [EDIT/ ⭗] → *General/Pitch* → *Pitch LFO* → *Pitch LFO Depth*

■ **When the Part produces a wrong pitch, are the *Coarse Tune* and *Fine Tune* settings appropriate?**

- For Normal Parts (AWM2) and Drum Parts

> [PERFORMANCE] → *Part* selection → [EDIT/ ⭗] → *Element* or *Key* selection → *Osc/Tune* → *Coarse*

> [PERFORMANCE] → *Part* selection → [EDIT/ ⭗] → *Element* or *Key* selection → *Osc/Tune* → *Fine*

- For Normal Parts (FM-X)

> [PERFORMANCE] → *Part* selection → [EDIT/ ⭗] → *Operator* selection → *Form/Freq* → *Coarse*

> [PERFORMANCE] → *Part* selection → [EDIT/ ⭗] → *Operator* selection → *Form/Freq* → *Fine*

■ **When the Part produces a wrong pitch, is the _Controller Destination_ set to Pitch?**

[PERFORMANCE] → _Part_ selection → [EDIT/ ⊂⊃] → _Mod/Control_ → _Control Assign_ → _Destination_

■ **For an AN-X Part, is _Voltage Drift_ set to an excessively large value?**

[PERFORMANCE] → _Part_ selection → [EDIT/ ⊂⊃] → _General/Pitch_ → _AN-X Settings_

No effect is applied   +

Check the effect settings by using [SHIFT] + [NAVIGATION].

■ **Is the Effect Switch off?**

[UTILITY] → _Effect Switch_

■ **Is _Variation Send_ or _Reverb Send_ set to a value other than 0?**

[PERFORMANCE] → _Part_ selection → [EDIT/ ⊂⊃] → _Effect_ → _Routing_ → _Var Send_

[PERFORMANCE] → _Part_ selection → [EDIT/ ⊂⊃] → _Effect_ → _Routing_ → _Rev Send_

■ **Is _Variation Return_ or _Reverb Return_ set to a value other than 0?**

[PERFORMANCE] → _Common_ selection → [EDIT/ ⊂⊃] → _Effect_ → _Routing_ → _Var Return_

[PERFORMANCE] → _Common_ selection → [EDIT/ ⊂⊃] → _Effect_ → _Routing_ → _Rev Return_

■ **Is the Insertion Effect on all Elements or all Keys in the Part set to _Thru_?**

[PERFORMANCE] → _Part_ selection → [EDIT/ ⊂⊃] → _Effect_ → _Routing_ → _Connect_

■ **(For System Effects) Is the effect type selected for each effect set to _No Effect_?**

■ **(For Insertion Effects) Is the effect type selected for each effect set to _Thru_?**

■ **Is the Insertion Switch setting appropriate?**

[PERFORMANCE] → _Part_ selection → [EDIT/ ⊂⊃] → _Effect_ → _Ins A_ or _Ins B_

Cannot start the Arpeggio   +

■ **Is the [ARP ON/OFF] button on?**

■ **Check the number of Parts for which the Arpeggio switch is turned on.**

You can simultaneously play back Arpeggios for up to eight Parts.

■ **Are the _Note Limit_ and _Velocity Limit_ settings for the Arpeggio appropriate?**

[PERFORMANCE] → *Part* selection → [EDIT/ ⌾] → *Arpeggio* → *Common*

■ Is the Arpeggio Type set to Off?

[PERFORMANCE] → *Part* selection → [EDIT/ ⌾] → *Arpeggio* → *Individual* → *Name*

■ Check the Arpeggio switch settings for each Part.

When the Arpeggio switch is set to off, the Arpeggio will not be played back even when you turn on the [ARP ON/OFF] button on the Top panel.

[PERFORMANCE] → *Part* selection → *Arp Part*

Cannot stop the Arpeggio   +

■ If you cannot stop Arpeggio playback by releasing your finger from the key, change the Arpeggio Hold switch to off.

[PERFORMANCE] → *Part* selection → [EDIT/ ⌾] → *Arpeggio* → *Common* → *Hold*

■ Turn off the [KEYBOARD HOLD] button on the Top panel.

Pattern or Song playback does not start by pressing the [▶] (Play) button   +

■ Is there any data in the selected Pattern or Song?

Cannot record Pattern or Song   +

■ Is there any memory space available for recording a Pattern or Song?

Memory space on the instrument can hold up to 128 Patterns and 128 Songs. If you attempt to record more than 128 Songs or Patterns, you will get a Song full message, and no more recording is possible.

Data communication between the instrument and the connected computer is not working properly   +

■ Is the Port setting on the computer appropriate?

■ Have you selected the proper terminal (MIDI or USB) on the *Utility* screen?

[UTILITY] → *Settings* → *MIDI I/O* → *MIDI IN/OUT*

MIDI Bulk dump data transmission or reception is not working properly   +

■ Is Receive Bulk protected?

Turn on *Receive Bulk*.

[UTILITY] → *Settings* → *Advanced* → *MIDI Receive Bulk*

■ **To enable the reception of data recorded by using the Bulk dump function of this instrument, you must set the same device number for both transmission and reception.**

[UTILITY] → *Settings* → *Advanced* → *MIDI Device Number*

■ **Is the same device number set to the connected MIDI device?**

[UTILITY] → *Settings* → *Advanced* → *MIDI Device Number*

Cannot save to the USB flash drive ✛

■ **Is the USB flash drive write-protected?**

■ **Is there enough free space on the USB flash drive?**
Open the *Save* screen and set the device to a USB flash drive. Check to see if the free storage space shown in the upper right corner of the screen is 0.0 KB.

[UTILITY] → *Contents* → *Save*

■ **Are you using a USB flash drive that has been confirmed to work with this instrument?**
Check the following URL for the list of USB devices that have been confirmed to work with this instrument.
https://download.yamaha.com/

In the display, there are some black points (unlit) or white points (always lit) ✛

■ **This is a characteristic of color LCDs, and is not a malfunction.**

Restoring the factory default settings (*Initialize All Data*) ☆

NOTICE
When the *Initialize All Data* function is carried out, all the Performances and songs in the User memory you have stored, as well as the *Utility* settings for the overall keyboard settings, will be overwritten with their defaults. Be careful not to lose important data. Therefore, you should regularly save backups of important settings to a USB flash drive.

1. **Open the settings screen from [UTILITY] → *Settings* → *System*.**

   This calls up the settings screen for the entire instrument.

2. **Tap [Initialize All Data].**

   The confirmation screen appears.
   To cancel the operation, tap the *Cancel No* button on the screen or press the [DEC/NO] button on the top panel.

3. **Tap the [Initialize Yes] button on the screen or press the [INC/YES] button on the top panel.**

   The *Initialize All Data* operation is carried out.