Roland

SH-2   **PLUG-OUT Software Synthesizer**

Owner's Manual

Introduction

You must specify the MIDI Input/Output in the Setting window (p. 12) for the first time.

For details on the settings for the DAW software that you're using, refer to the DAW's help or manuals.

In this document, SYSTEM-1/SYSTEM-1m are described as "SYSTEM-1."

About this product

- In the interest of product improvement, the specifications and/or contents of this package are subject to change without prior notice.
- The explanations in this manual include illustrations that depict what should typically be shown by the display. Note, however, that your unit may incorporate a newer, enhanced version of the system (e.g., includes newer sounds), so what you actually see in the display may not always match what appears in the manual.

About Trademarks

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Screen Structure

[PATCH] button

Selects a patch memory. The Patch Select window opens.

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[SEND] button

Sends the memory to the SYSTEM-1/SYSTEM-8.

p. 8

[GET] button

Loads the memory (temporary) being edited in PLUG-OUT mode of the SYSTEM-1/ SYSTEM-8 into the SH-2.

p. 8

* This works only if SH-2 is the MODEL of the SYSTEM-1/SYSTEM-8.

[PLUG-OUT] button

Installs the SH-2 into the SYSTEM-1/SYSTEM-8.

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Level meter

Displays output levels of the SH-2.

[TUNE] knob

Adjusts the overall pitch of the SH-2.

Patch Memory name

This area shows the name of the selected patch memory.

Main window

This area shows various knobs and sliders that you can use to edit the sound.

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[KEYBOARD] button

Toggles the keyboard area between visible and hidden.

Keyboard area

Click here to produce sound. When a MIDI message is received, the corresponding key responds.

[OPTION] button

Here you can choose skins and use MIDI Control Mapping.

These settings can be made separately for each instance of the SH-2.

p. 12

[SETTING] button

Here you can edit the MIDI settings and the direction of mouse wheel scrolling (Only Mac).

These settings are shared by all instances of the SH-2 that you are using.

p. 12

**[HELP] button**

Displays help.

[ABOUT] button

Here you can view information about the SH-2.

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Main Window

MODULATOR

Here you can create cyclic change (modulation) in the sound by applying vibrato (pitch modulation) or wah (filter modulation).

WAVE FORM	RANDOM (S/H) (Random wave)
	⊓ (Square wave)
	⋀ (Saw wave)
	⌢ (Triangle wave)
	⌢ (Sine wave)
RATE	Determines the speed of the modulation.
DELAY TIME	Specifies the time from the moment you play a note until the LFO reaches its maximum amplitude.

VOLUME

Adjusts the overall volume of the SH-2.

PORTAMENTO TIME

Adjusts the time over which the pitch change occurs.

BEND RANGE

Specifies the amount of pitch change that occurs when pitch bend messages are received.

TEMPO SYNC

Press this to make it light if you want to synchronize to the tempo of your host application (DAW).
Synchronization tempo range: 40–300

ARPEGGIO

Causes an arpeggio to be produced when you simply hold down a chord on the keyboard.

ARPEGGIO	If this is lit, an arpeggio plays.
ARP TYPE	Selects the arpeggio variation.
ARP STEP	Selects the speed of the arpeggio.

VCO

Here you can specify the character and the pitch of the sound.

| MOD | Modulates the pitch (vibrato). |
| AUTO BEND | Changes the pitch at the moment you play a note. |

VCO-1/VCO-2

WAVE FORM	⋀ (Saw wave)
	⊓ (Square wave)
	⌢ (Sine wave) *1 / NOISE *2
RANGE	Specifies the octave setting.

| PULSE WIDTH | When MOD is set to MAN, this adjusts the pulse width of the Square wave. When the setting is other than MAN, this adjusts the depth of the modulation produced by the LFO and envelope. |
| MOD | Selects the source that modulates the pulse width of the pulse wave. **S.OSC:** VCO-1 SUB **A.ENV:** VCA envelope **F.ENV:** VCF envelope **AUTO BEND:** AUTO BEND(VCO) **LFO:** Modulator **MAN:** No modulation |

| BENDER *1 | Adjusts the amount of bend that is applied to VCO-1. |
| FINE TUNE *2 | Adjusts the pitch of VCO-2. |
| COARSE TUNE *2 | Adjusts the pitch of VCO-2 in semitone steps. |

*1 VCO-1 only/ *2 VCO-2 only

AUDIO MIXER

Adjusts the volume of the VCO.

VCO-1 SUB	Volume of the sound one octave below.
VCO-1	Volume of VCO-1.
VCO-2	Volume of VCO-2.

EFFECTS

Here you can adjust the effects.

REVERB	Adjusts the depth of the reverb.
DELAY	Adjusts the volume of delay sound.
TIME	Adjusts the delay time.
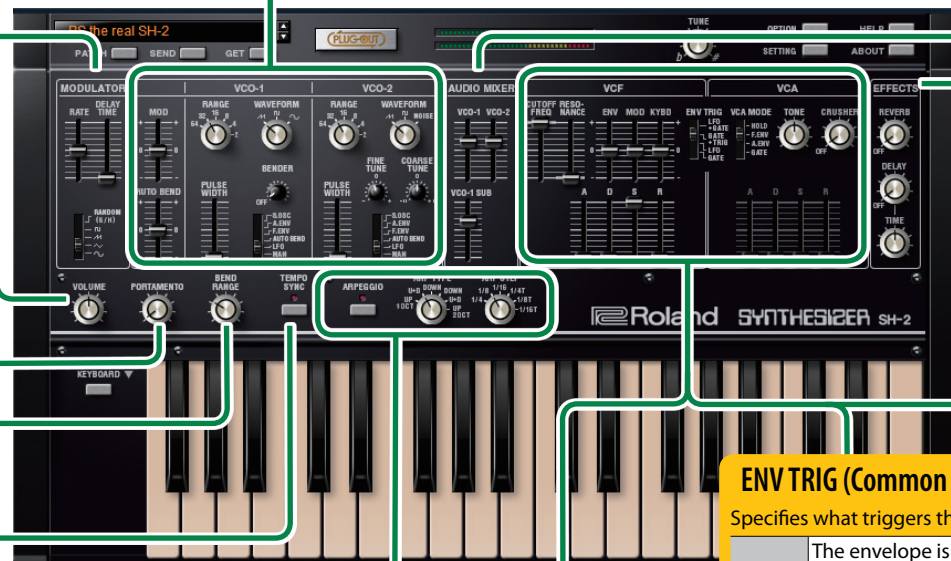
VCF

These settings determine the brightness and thickness of the sound. Here you can also specify the time-varying change (envelope) for the filter.

CUTOFF FREQ	Specifies the cutoff frequency of the low-pass filter.
RESONANCE	Resonance boosts the sound in the region of the filter's cutoff frequency.
ENV	Specifies the direction and amount by which the envelope changes.

MOD	Uses a modulator to vary the cutoff frequency of the low pass filter.
KYBD	Allows the filter cutoff frequency to vary according to the key that you play.
A D S R	Specifies the envelope.

ENV TRIG (Common for VCF and VCA)

Specifies what triggers the envelope.

LFO +GATE	The envelope is triggered when you newly press a key. And if you hold down a key, the envelope is triggered repeatedly at each cycle of the modulator. * The envelope is not triggered when you play legato.
GATE +TRIG	The envelope is triggered each time you press a key.
LFO	If you hold down a key, the envelope is triggered repeatedly at each cycle of the modulator.
GATE	The envelope is triggered when you newly press a key. * The envelope is not triggered when you play legato.

VCA

Here you can create time-varying change (envelope) for the volume.

VCA MODE	**HOLD:** The note sounds at a fixed volume level. **F.ENV:** The note sounds according to the envelope specified by the VCF's A D S R settings. **A.ENV:** The note sounds according to the envelope specified by the VCA's A D S R settings. **GATE:** The sound has a fixed volume as long as you hold down the key.
CRUSHER	Modifies the tonal character by distorting the waveform.
TONE	Adjusts the brightness of the sound.
A D S R	Specifies the envelope.

Memory and Bank

1. **Click the [PATCH] button.**

The Patch Select window opens.

[NEW] button

Creates a new empty bank.

[DELETE] button

Deletes the selected bank.

[LOAD] button

Imports a bank.

[SAVE] button

Exports a bank as a file.

The selected memory is shown in yellow.

[SEND ALL] button

Sends all (64) memories in the bank to the SYSTEM-1/SYSTEM-8.

[GET ALL] button

Receives all (64) memories stored on the SYSTEM-1/SYSTEM-8.

NOTE

All 64 memories are received into the currently selected bank, overwriting the previous contents of that bank. If you want to keep the state of the bank, create a new bank and receive the memories into the newly created bank (p. 6).

[WRITE] button

Saves an edited sound as a memory in the bank.

[RENAME] button

Renames the selected memory.

[READ] button

Loads a memory from a bank.

Bank

A set of 64 memories is called a "bank." By switching banks you can access a large number of memories.

A bank of memories can be saved as a file.

Changing to Other Bank

1. **Click the Bank field.**

The bank list window opens.

2. **Click the bank that you want to recall.**

By pressing the [▲][▼] buttons located at the right of the bank field, you can switch to the next or previous bank.

Exporting the Bank

Here's how to export a bank as a file.

1. **Click the [EXPORT] button.**

The file name input window opens.

2. **Enter a file name and save.**

The file is written.

Importing a Bank

1. **Click the [IMPORT] button.**

The file selection window opens.

2. **Select a file and load it.**

The bank is loaded.

Creating/Deleting a Bank

Creating a bank

Click the [NEW] button to create a new empty bank.

Deleting a bank

Here's how to delete the selected bank.

1. **Select a bank as described in "Changing to Other Bank" (p. 5).**

2. **Click the [DELETE] button.**
   A confirmation screen appears.

3. **Click [OK] to delete the bank.**

Renaming a Bank

1. **Select a bank as described in "Changing to Other Bank" (p. 5).**

2. **At the left of the bank field, click ▶.**

3. **Edit the name and press the [Return (Enter)] key.**

Memory

The SH-2 manages 64 memories as one bank.

Loading a Memory

Here's how to load a memory from a bank. When you load a memory, its settings appear in the edit area and can be edited.

1. **Click the number of the memory that you want to load.**

2. **Click the [LOAD] button. Or press the [Return (Enter)] key.**
   The memory is loaded.
   * You can also load a memory by double-clicking a memory number.

Saving the Memory

Here's how to save an edited sound as a memory in the bank.

1. **Click the number of the memory in which you want to save the sound.**

2. **Click the [SAVE] button.**
   The memory is saved in the bank.

Renaming the Memory

1. **Click the number of the memory that you want to rename.**

2. **Click the [RENAME] button.**

3. **Change the memory name. (Up to 16 letters)**

Changing the Order of the Memories

Drag the memory number to change the order of memories.

Keyboard shortcuts

Keyboard shortcuts for the Patch Select window.

Key	Function
Command (Ctrl) + B	Changes bank
Command (Ctrl) + I	Imports bank
Command (Ctrl) + E	Exports bank
Command (Ctrl) + N	New memory
Command (Ctrl) + O	Loads memory
Command (Ctrl) + S	Saves memory
Up/Down/Left/Right	Selects memory
Space	Renames memory
Command (Ctrl) + C	Copies memory
Command (Ctrl) + V	Pastes memory
Delete *1 delete ⌫ *2 fn + delete *2	Deletes memory
Return (Enter)	Loads memory
Command (Ctrl) + Z	Undo
Command (Ctrl) + Shift + Z	Redo
Command (Ctrl) + U	Sends all memories to the SYSTEM-1
Esc	Closes window

*1 Windows / *2 Mac

Playing with the SYSTEM-1

By connecting the SYSTEM-1 to your computer (Mac/Windows), you can use the SH-2 in conjunction with the SYSTEM-1.

Windows

The "SYSTEM-1 CTRL" shown as a MIDI port is the port used by the SH-2.
Do not use this port from your DAW.

Plug-Out

What is a "Plug-out"?

"Plug-out" is technology that allows a software synthesizer such as SH-2 to be installed and used in the SYSTEM-1.

- You can play the SH-2 on the SYSTEM-1 by itself, without using a computer.
- You can send the setting of selected bank to the SYSTEM-1.
- You can use the knobs and sliders of the SYSTEM-1 to edit the sound.
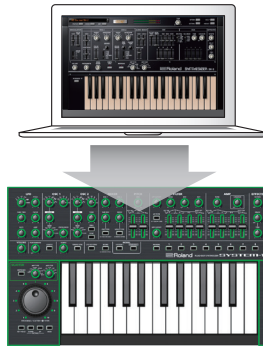
Plug-Out Procedure

1. **Click the [PLUG-OUT] button.**

A confirmation message appears.

2. **Click the [OK] button.**

A progress bar appears, and plug-out processing begins. This takes approximately one minute.

* If another software synthesizer is already plugged-out on the SYSTEM-1, a confirmation message appears. Click the [OK] button to continue.

> **If an error message appears, check the following items.**
> - Is the MIDI port specified correctly? (p. 12)
> - Is the SYSTEM-1 connected to your computer?

Send/Get Memories
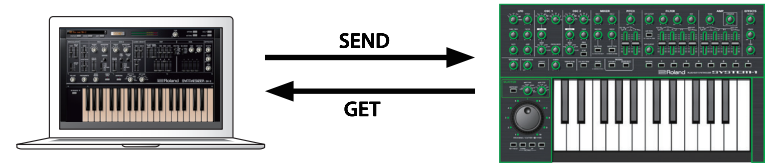
1. **Connect the SYSTEM-1 to your computer.**

2. **Turn on the MODEL [PLUG-OUT] button of the SYSTEM-1.**

* In order to send or get a memory, you must first plug-out (p. 8).

Sending the Memory

You can send the current SH-2 memory to the SYSTEM-1 and play it on the SYSTEM-1.
The sound is output from the SYSTEM-1's OUTPUT jacks.

3. **Click the [SEND] button of the SH-2.**

The memory is transmitted.

Getting the Memory

If you've used the SYSTEM-1 to edit a memory of the plugged-out SH-2, here's how to load that memory into the SH-2.

3. **Click the [GET] button of the SH-2.**

The memory is loaded.

> **If an error message appears, check the following items.**
> - Is the MIDI port specified correctly? (p. 12)
> - Is the SYSTEM-1 connected to your computer?
> - Is the SYSTEM-1's MODEL [PLUG-OUT] button turned on?
> - Is the SH-2 plugged-out on the SYSTEM-1? (p. 8)

SH-2 Controller Map

SH-2 (Original hardware)

SYSTEM-1 (Hardware)
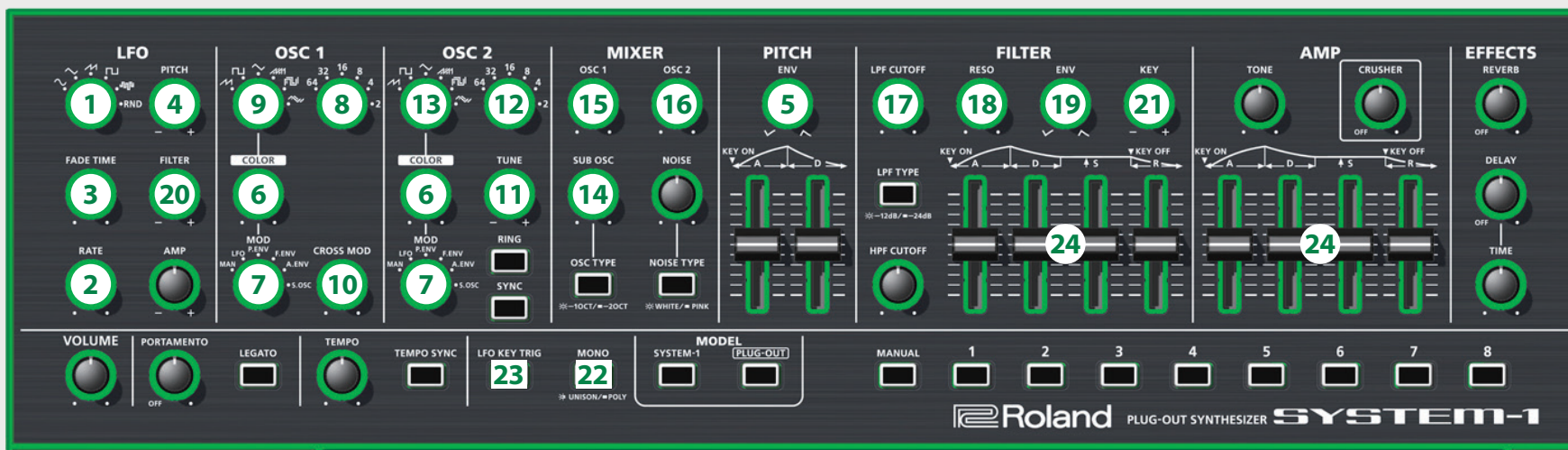
Controls	Lit	Unlit	Blink	Blink (Rapidly)
22	GATE	A.ENV	F.ENV	HOLD
23	GATE	LFO	GATE+TRIG	LFO + GATE

Playing with the SYSTEM-8

By connecting the SYSTEM-8 to your computer (Mac/Windows), you can use the SH-2 in conjunction with the SYSTEM-8.

Windows

The "SYSTEM-8 CTRL" shown as a MIDI port is the port used by the SH-2.
Do not use this port from your DAW.

Plug-Out

What is a "Plug-out"?

"PLUG-OUT" is technology that allows a software synthesizer such as SH-2 to be installed and used in the SYSTEM-8.

- You can play the SH-2 on the SYSTEM-8 by itself, without using a computer.
- You can send the setting of selected bank to the SYSTEM-8.
- You can use the knobs and sliders of the SYSTEM-8 to edit the sound.

Plug-Out Procedure

1. Click the [PLUG-OUT] button.

2. Select the plug-out destination (PLUG-OUT1–PLUG-OUT3) that corresponds to the MODEL button of the SYSTEM-8.

A confirmation message appears.

3. Click the [OK] button.

A progress bar appears, and plug-out processing begins. This takes approximately one minute.

   * If the SH-2 is already plugged-out to one of the plug-out destinations (PLUG-OUT1–PLUG-OUT3), it cannot be additionally plugged-out.

   * If another software synthesizer is already plugged-out on the SYSTEM-8, a confirmation message appears. Click the [OK] button to continue.

> **If an error message appears, check the following items.**
> - Is the MIDI port specified correctly? (p. 12)
> - Is the SYSTEM-1 connected to your computer?

Send/Get Memories

You can send the current SH-101 memory to the SYSTEM-8 and play it on the SYSTEM-8. The sound is output from the SYSTEM-8's OUTPUT jacks. If you've used the SYSTEM-8 to edit a memory of the plugged-out SH-101, here's how to load that memory into the SH-101.

SEND
GET

1. Connect the SYSTEM-8 to your computer.

2. Turn on the MODEL [PLUG-OUT1–3] button of the SYSTEM-8.

   * In order to send or get a memory, you must first plug-out.

Sending the Memory

3. Click the [SEND] button of the SH-2.

The memory is transmitted.

Getting the Memory

3. Click the [GET] button of the SH-2.

The memory is loaded.

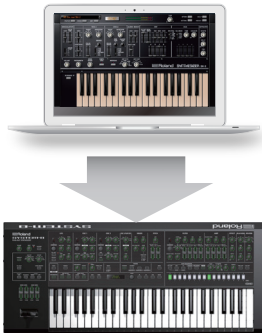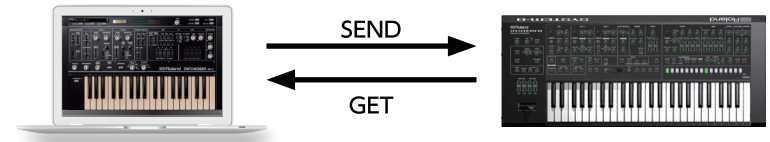> **If an error message appears, check the following items.**
> - Is the MIDI port specified correctly? (p. 12)
> - Is the SYSTEM-8 connected to your computer?
> - Is the SYSTEM-8's MODEL [PLUG-OUT] button turned on?
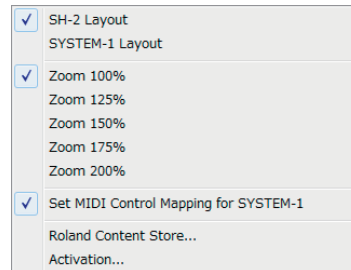> - Is the SH-2 plugged-out on the SYSTEM-8? (p. 8)

Correspondence table of SH-2 operations

SH-2	SYSTEM-8
MODULATION	
RATE	LFO RATE
DELAY TIME	LFO FADE TIME
WAVEFORM	LFO WAVE
VCO	
MOD	LFO PITCH
AUTO BEND	PITCH ENV
VCO-1	
RANGE	OSC 1 OCTAVE (FEET)
WAVEFORM	OSC 1 WAVE
PULSE WIDTH MOD	OSC 1 COLOR
MOD	OSC 1 MOD
BENDER	OSC 1 CROSS MOD
VCO-2	
RANGE	OSC 2 OCTAVE (FEET)
WAVEFORM	OSC 2 WAVE
FINE TUNE	OSC 2 FINE TUNE
COURSE TUNE	OSC 2 COURSE TUNE
PULSE WIDTH	OSC 2 COLOR
MOD	OSC 2 MOD
AUDIO MIXER	
VCO-1	MIXER OSC 1
VCO-2	MIXER OSC 2
VCO-1 SUB	MIXER SUB OSC 3/SUB OSC
ENV	
ENV TRIG	LFO KEY TRIG
VCF	
CUTOFF FREQ	FILTER CUTOFF
RESONANCE	FILTER RESO
ENV	FILTER ENV
MOD	LFO FILTER
KYBD	FILTER KEY
A	FILTER A
D	FILTER D
S	FILTER S
R	FILTER R
VCA	
MODE	MONO
TONE	AMP TONE
CRUSHER	EFFECT DEPTH
A	AMP A
D	AMP D
S	AMP S
R	AMP R
EFFECTS	
REVERB	REVERB LEVEL
DELAY	DELAY LEVEL
DELAY TIME	DELAY TIME

Settings

Option

1. Click the [OPTION] button.

✓	SH-2 Layout
	SYSTEM-1 Layout
✓	Zoom 100%
	Zoom 125%
	Zoom 150%
	Zoom 175%
	Zoom 200%
✓	Set MIDI Control Mapping for SYSTEM-1
	Roland Content Store...
	Activation...

2. Select items.

A ✓ is shown for the selected item.

Item	Explanation
SH-2 Layout SYSTEM-1 Layout	Changes the layout of the controllers in the main window. **SH-2 Layout:** The controllers are laid out as they are on the SH-2 (original). **SYSTEM-1 Layout:** The controllers are laid out as they are on the SYSTEM-1.
Zoom	Changes the size of the main window.
Set MIDI Control Mapping for SYSTEM-1	Check this item if you want to use the SYSTEM-1 as a control surface for the SH-2. Here you can make MIDI mapping settings for the buttons and sliders.
Authentication...	Performs user authentication for the SH-2.

Setting

1. Click the [SETTING] button.

The Setting window opens.

* Flip Scroll Direction is only on Mac.
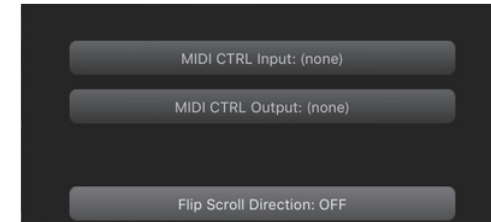
2. Edit the parameters.

Parameter	Explanation
MIDI CTRL Input	**If you're using SYSTEM-1** Choose "SYSTEM-1" (Mac OS) or "SYSTEM-1 CTRL" (Windows).
MIDI CTRL Output	**If you're using SYSTEM-8** Choose "SYSTEM-8 CTRL."
Flip Scroll Direction (Only on Mac)	Inverts the direction of rotation when using the mouse wheel to edit a value.

3. Click the [OK] button.

* Your changes are remembered.

* If multiple instances of the SH-2 are running, these settings apply to all instances.
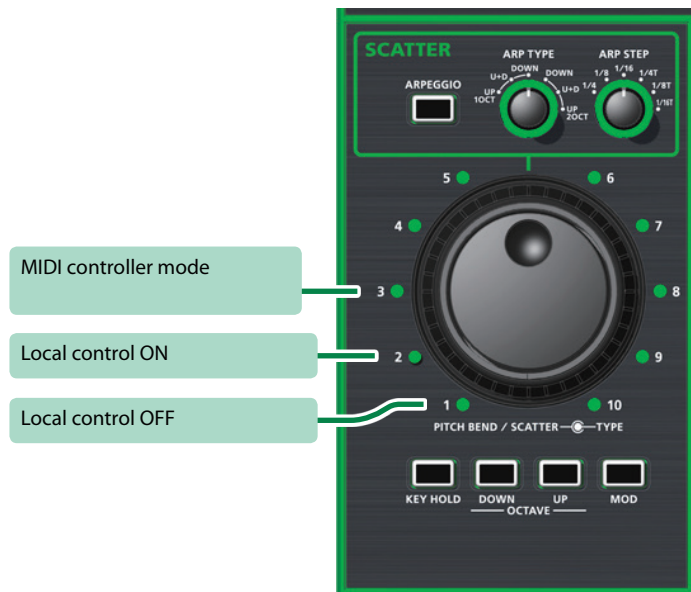
Setting for the SYSTEM-1

When you want to play the SH-2's sound (plug-in) with your SYSTEM-1, set the SYSTEM-1 to the MIDI controller mode.

Once you set to MIDI controller mode, SYSTEM-1's internal sound can not be played, and the SYSTEM-1 can play the SH-2's sound only.

* These settings are not available in SYSTEM-1m.

1. Turn the power on of the SYSTEM-1.

2. While holding down the MODEL [SYSTEM-1] and [PLUG-OUT] buttons, use the SCATTER [TYPE] dial to set to MIDI controller mode.

Setting	Explanation
MIDI Controller Mode	Choose this if you're using the SYSTEM-1 as a MIDI controller. * Playing the keyboard will not produce the SYSTEM-1's internal sound. * The SYSTEM-1's internal sound is not produced even if the SYSTEM-1 receives MIDI.
Local Control ON	Choose this when using the SYSTEM-1 on its own. (Default setting)
Local Control OFF	Choose this when using the SYSTEM-1 in conjunction with your DAW. * If the SYSTEM-1 is used by itself with this setting, playing the keyboard will not produce sound.

Setting for the SYSTEM-8

If you want to use the SYSTEM-8 to play the SH-2 (plug-in) in your DAW, set the SYSTEM-8's menu item "SYSTEM" → "SOUND" → "Local Sw" to "SURFACE."

The internal sound engine of the SYSTEM-8 no longer produces sound; only the SH-2 can produce sound.

For details, refer to SYSTEM-8 Reference Manual.