



## SH-101 PLUG-OUT Software Synthesizer

Owner's Manual

# Introduction

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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. **p. 5**

**[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-101. **p. 8**

**[PLUG-OUT] button**  
Installs the SH-101 into the SYSTEM-1/SYSTEM-8. **p. 8**

**Level meter**  
Displays output levels of the SH-101.

**[TUNE] knob**  
Adjusts the overall pitch of the SH-101.

**Patch Memory name**  
This area shows the name of the selected patch memory. **LD the Dial 101**

**Main window**  
This area shows various knobs and sliders that you can use to edit the sound. **p. 4**

**[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-101. **p. 12**

**[SETTING] button**  
Here you can edit the MIDI settings and the direction of mouse wheel scrolling. These settings are shared by all instances of the SH-101 that you are using. **p. 12**

**[HELP] button**  
Displays help.

**[ABOUT] button**  
Here you can view information about the SH-101.

# Main Window

## MODULATOR

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

<b>WAVE FORM</b>	<ul style="list-style-type: none"> <li>~ (Sine wave)</li> <li>^ (Triangle wave)</li> <li>∩ (Saw wave)</li> <li>□ (Square wave)</li> <li>⚡ (Random wave)</li> <li>NOISE (Noise)</li> </ul>
<b>VCO</b>	Allows to modulate the pitch, producing a vibrato effect.
<b>VCF</b>	Allows to modulate the VCF CUTOFF.
<b>RATE</b>	Determines the speed of the modulation.

## VCO

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

<b>FEET</b>	Specifies the octave of the oscillator.
<b>MOD</b>	<p>Selects the source that modulates the pulse width of the pulse wave.</p> <p><b>A. ENV:</b> VCA envelope  <b>F. ENV:</b> VCF envelope  <b>LFO:</b> Modulator  <b>MAN:</b> No modulation</p>
<b>PULSE WIDTH</b>	<p>Adjusts the modulation depth when MOD is set to A. ENV, F. ENV, or LFO.</p> <p>Adjusts the pulse width when MOD is set to MAN.</p>

## SOURCE MIXER

Here you can adjust the volume of the VCO, the sub oscillator, and noise.

	Pulse/Square wave
	Saw wave
<b>SUB OSC</b>	One or two octaves below
<b>OSC TYPE</b>	<p>Selects the type of the sub oscillator.</p> <p><b>1 OCT DOWN</b>  : One octave below  <b>2 OCT DOWN</b>  : Two octave below  <b>2 OCT DOWN</b>  : Two octave below (narrow width)</p>
<b>NOISE</b>	Noise

## VCF

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

<b>FREQ</b>	Specifies the cutoff frequency of the low-pass filter.
<b>RES</b>	Resonance boosts the sound in the region of the filter's cutoff frequency.
<b>ENV</b>	Specifies the direction and amount by which the envelope changes.
<b>KEYBD</b>	Allows the filter cutoff frequency to vary according to the key that you play.
<b>A D S R</b>	Specify the envelope.

## VCA

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

<b>STONE</b>	Adjusts the brightness of the sound.
<b>ENV TRIG</b>	<p>Specifies what triggers the envelope.</p> <p><b>GATE+TRIG:</b> The envelope is triggered each time you press a key.</p> <p><b>LFO:</b> If you hold down a key, the envelope is triggered repeatedly at each cycle of the modulator.</p> <p><b>GATE:</b> The envelope is triggered when you newly press a key. The envelope is not triggered when you play legato.</p>
<b>VCA MODE</b>	<p><b>ENV:</b> The sound follows the envelope specified by the ADSR settings.</p> <p><b>GATE:</b> The sound has a fixed volume as long as you hold down the key.</p>
<b>A D S R</b>	Specify the envelope.



## VOLUME

Adjusts the overall volume of the SH-101.

## PORTAMENTO

Smooths the pitch change between notes.

<b>MODE</b>	<p><b>OFF:</b> Portamento is not applied.</p> <p><b>AUTO:</b> Portamento is applied only when you play legato.</p> <p><b>ON:</b> Portamento is applied at all times.</p>
<b>TIME</b>	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

## EFFECTS

Here you can adjust the effects.

<b>CRUSHER</b>	Modifies the tonal character by distorting the waveform.
<b>REVERB</b>	Adjusts the depth of the reverb.
<b>DELAY</b>	Adjusts the volume of delay sound.
<b>TIME</b>	Adjusts the delay time.

## ARPEGGIO

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

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

# Memory and Bank

## 1. Click the [PATCH] button.

The Patch Select window opens.

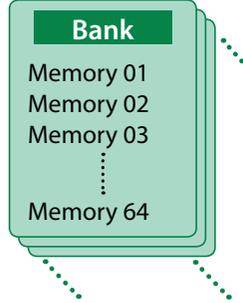
The screenshot shows a window titled 'PATCHES' with a grid of memory slots. The first slot (01) is highlighted in yellow. On the left side of the window, there are four buttons: [NEW], [DELETE], [LOAD], and [SAVE]. Callout boxes provide descriptions for each button.

<b>[NEW] button</b> Creates a new empty bank.	<b>[DELETE] button</b> Deletes the selected bank.
<b>[LOAD] button</b> Imports a bank.	<b>[SAVE] button</b> Exports a bank as a file.

The selected memory is shown in yellow.

## 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.

### [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.

## 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-101 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	Deletes memory
fn + delete *2	
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-101 in conjunction with the SYSTEM-1.

## Windows

The "SYSTEM-1 CTRL" shown as a MIDI port is the port used by the SH-101.  
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-101 to be installed and used in the SYSTEM-1.

- You can play the SH-101 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.

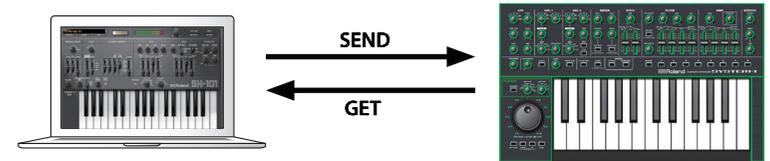
A progress bar appears, and plug-out processing begins. This takes approximately one minute.

\* 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-101 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-101.

The memory is transmitted.

## Getting the Memory

If you've used the SYSTEM-1 to edit a memory of the plugged-out SH-101, here's how to load that memory into the SH-101.

### 3. Click the [GET] button of the SH-101.

The memory is loaded.

#### If an error message appears, check the following items.

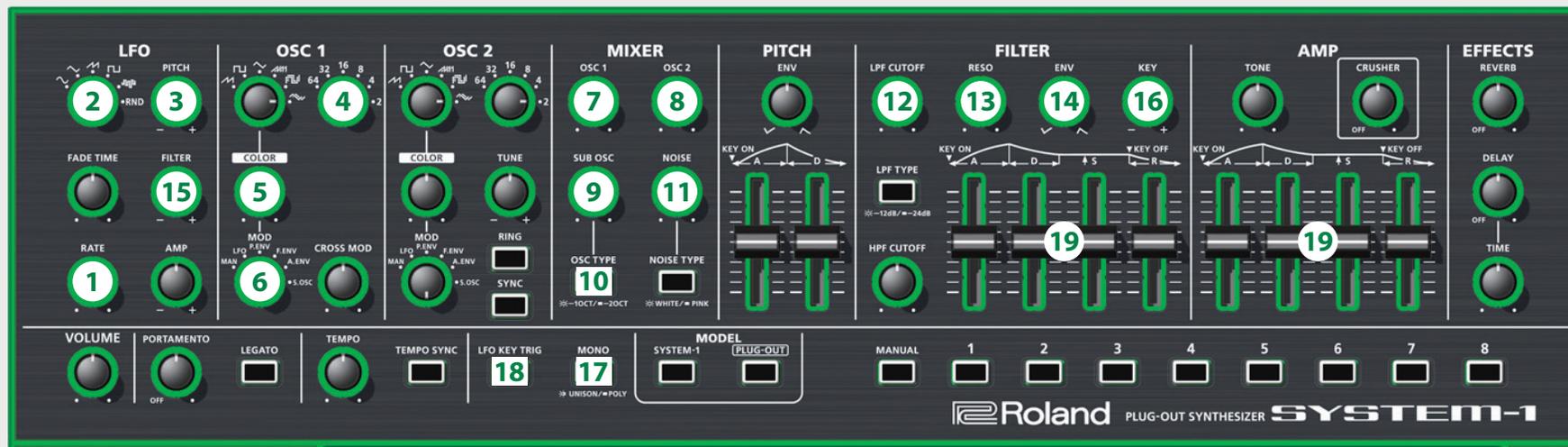
- Is the MIDI port specified correctly? (p. 12)
- Is the SYSTEM-1 connected to your computer?
- Is the SYSTEM-1's MODEL [PLUG-OUT] button turned on?
- Is the SH-101 plugged-out on the SYSTEM-1? (p. 8)

# SH-101 Controller Map

SH-101 (Original hardware)



SYSTEM-1 (Hardware)



Controls	Lit	Unlit	Blink
10	1 OCT DOWN $\square$	2 OCT DOWN $\square$	2 OCT DOWN $\square$
17	ENV	GATE	-
18	LFO	GATE	GATE+TRIG

# Playing with the SYSTEM-8

By connecting the SYSTEM-8 to your computer (Mac/Windows), you can use the SH-101 in conjunction with the SYSTEM-8.

## Windows

The “SYSTEM-8 CTRL” shown as a MIDI port is the port used by the SH-101.  
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-101 to be installed and used in the SYSTEM-8.

- You can play the SH-101 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–PLUGOUT3) 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.

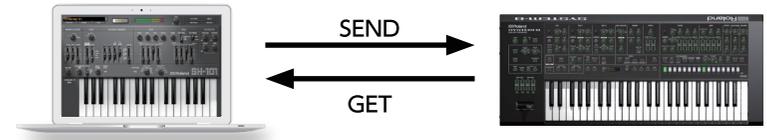
- \* If the SH-101 is already plugged-out to one of the plugout destinations (PLUG-OUT1–PLUG-OUT3), it cannot be additionally plugged-out.
- \* If another software synthesizer is already plugged-out on the SYSTEM-8, a confirmation message appears. Click the [OK] button to continue.

### If an error message appears, check the following items.

- Is the MIDI port specified correctly? (p. 12)
- Is the SYSTEM-8 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.



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-101.  
The memory is transmitted.

## Getting the Memory

3. Click the [GET] button of the SH-101.  
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-101 plugged-out on the SYSTEM-8? (p. 8)

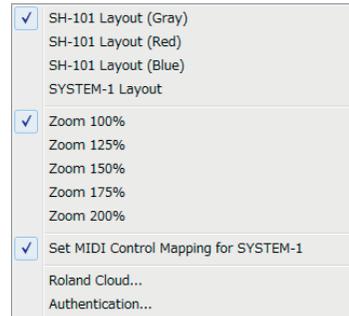
## Correspondence Table of SH-101 Operations

SH-101	SYSTEM-8
<b>MODULATOR</b>	
LFO/CLK RATE	LFO RATE
WAVE FORM	LFO WAVE
<b>VCO</b>	
MOD	LFO PITCH
RANGE	OSC 1 OCTAVE (FEET)
PULSE WIDTH	OSC 1 COLOR
PW MOD	OSC 1 MOD
<b>SOURCE MIXER</b>	
SQUARE	MIXER OSC 1
SAW	MIXER OSC 2
SUB OSC	MIXER OSC 3 SUB OSC
SUB OSC TYPE	OSC3 WAVE
NOISE	MIXER NOISE
<b>VCF</b>	
FREQ	FILTER CUTOFF
RES	FILTER RESO
ENV	FILTER ENV
MOD	LFO FILTER
KYBD	FILTER KEY
<b>VCA</b>	
TONE	AMP TONE
MODE	MONO
<b>ENV</b>	
TRIG	LFO KEY TRIG
A	FILTER A & AMP A
D	FILTER D & AMP D
S	FILTER S & AMP S
R	FILTER R & AMP R
<b>EFFECTS</b>	
CRUSHER	EFFECT DEPTH
REVERB	REVERB LEVEL
DELAY	DELAY LEVEL
DELAY TIME	DELAY TIME

# Settings

## Option

1. Click the [OPTION] button.



2. Select items.

A ✓ is shown for the selected item.

Item	Explanation
SH-101 Layout (Gray) SH-101 Layout (Red) SH-101 Layout (Blue) SYSTEM-1 Layout	Changes the layout of the controllers in the main window. <b>SH-101 Layout:</b> The controllers are laid out as they are on the SH-101 (original). You can also change the color. <b>SYSTEM-1 Layout:</b> 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-101. Here you can make MIDI mapping settings for the buttons and sliders.
Authentication...	Performs user authentication for the SH-101.

## Setting

1. Click the [SETTING] button.

The Setting window opens.



2. Edit the parameters.

Parameter	Explanation
MIDI CTRL Input	<b>If you're using SYSTEM-1</b> Choose "SYSTEM-1" (Mac OS) or "SYSTEM-1 CTRL" (Windows).
MIDI CTRL Output	<b>If you're using SYSTEM-8</b> Choose "SYSTEM-8 CTRL."
Flip Scroll Direction	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-101 are running, these settings apply to all instances.

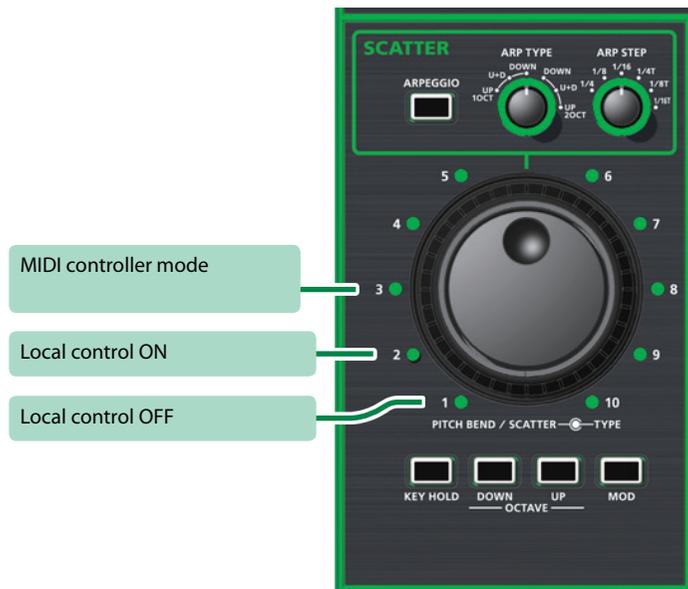
## Setting for the SYSTEM-1

When you want to play the SH-101'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-101'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
<b>Local Control ON</b>	Choose this when using the SYSTEM-1 on its own. (Default setting)
<b>Local Control OFF</b>	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.
<b>MIDI Controller Mode</b>	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.

## Setting for the SYSTEM-8

If you want to use the SYSTEM-8 to play the SH-101 (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-101 can produce sound.

For details, refer to SYSTEM-8 Reference Manual.