Panel Descriptions

① Common section

Here you can make the following settings for the SYSTEM-1.

Controller	Explanation
[VOLUME] knob	Adjusts the volume.
[PORTAMENTO] knob	Creates a smooth change in pitch between one key and the next key played. The knob adjusts the time required for the pitch change.
[LEGATO] button	Applies portamento only when you play legato (i.e., when you press the next key before releasing the previous key).
[TEMPO] knob	Sets the tempo of the arpeggiator (scatter). The LED blinks at the tempo you specified.
[TEMPO SYNC] button	Synchronizes the RATE of the ② LFO section and the delay time (TIME) of the ⑧ EFFECTS section to the tempo.
[LFO KEY TRIG] button	Specifies whether the LFO cycle will be synchronized to begin when the key is pressed (ON) or not (OFF).
[MONO] button	If this is on (lit), the synth will play monophonically (single notes). If this is blinking, the synth will play all sounds in unison (UNISON mode).
MODEL [SYSTEM-1]/[PLUG-OUT] button	If the [SYSTEM-1] button is on, this unit will operate as a SYSTEM-1 synthesizer. If the [PLUG-OUT] button is on, this unit will operate in "plug-out" mode.
[MANUAL] button	Causes sound to be produced according to the current settings of the knobs and sliders.

What is "Memory/Bank"?
You can store/recall up to 64 sets (8 memories x 8 banks) of panel settings (knobs/sliders).

Switching banks
1. If you're operating in SYSTEM-1 mode, long-press the [SYSTEM-1] button. If you're operating in PLUG-OUT mode, long-press the [PLUGOUT] button.
   The memory button corresponding to the currently selected bank number blinks.
2. Press a memory [1]–[8] button to switch the bank.
   * Even after you switch the bank, the sound prior to switching banks continues to be heard until you press a memory button to switch sounds.

To store panel settings in a memory button
Long-press a memory [1]–[8] button.
To recall settings (a sound) from a memory button
Press a memory [1]–[8] button.

Additional settings that can be registered in memory
The settings of the following SCATTER controllers can now be registered in memory.

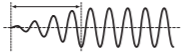| Controller |
| --- |
| [ARPEGGIO] button |
| [ARP TYPE] knob |
| [ARP STEP] knob |
| [SCATTER] jog shuttle |
| [TYPE] dial |
| [KEY HOLD] button |
| OCTAVE [DOWN] [UP] buttons |

With the settings of Ver. 1.20, the state of the above controllers is registered in memory. If you don't want the state of these controllers to be registered, refer to "MIDI and Other Settings"–"Memory registration method (SCATTER controllers)."

Memory volume function
By holding down the [TEMPO SYNC] button and turning the [TYPE] dial, you can specify the volume for each patch memory.
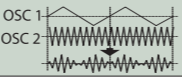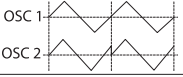
② LFO

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

Controller	Explanation
Wave knob	Selects the LFO waveform. ∿ (Sine wave), ⋀ (Triangle wave), ⋈ (Sawtooth wave), ⊓⊔ (Square wave), ⊓⊔ (Sample and Hold), RND (Random wave)
[FADE TIME] knob	Specifies the time from when the tone sounds until the LFO reaches its maximum amplitude.
[RATE] knob	Determines the speed of the LFO.
[PITCH] knob	Allows the LFO to modulate the pitch, producing a vibrato effect.
[FILTER] knob	Allows the LFO to modulate the FILTER CUTOFF (cutoff frequency).
[AMP] knob	Allows the LFO to modulate the AMP LEVEL (volume), producing a tremolo effect.

③ OSC 1/OSC 2

Here you can select the waveform that determines the character of the sound, and specify its pitch.
The SYSTEM-1 has two oscillators (OSC 1 and OSC 2).

Controller	Explanation
Wave knob	Selects the waveform that is the basis of the sound. ⋈ (Sawtooth wave), ⊓⊔ (Square wave), ⋀ (Triangle wave), ⋈ (Sawtooth wave 2), ⊓⊔ (Square wave 2), ∿ (Triangle wave 2) **The newly added basic waveforms** To select the basic waveforms that were added, hold down the [LEGATO] button and turn the OSC 1/OSC 2 waveform knob. ⋈ (Noise Saw), ⊓⊔ (Logic Operation), ⋀ (FM), ⋈ (FM + Sync), ⊓⊔ (Vowel), ∿ (CB)
[COLOR] knob	The result depends on the waveform.
[MOD] knob	Selects the source that modulates the [COLOR] knob.

MAN	The sound is determined by the position of the [COLOR] knob. It will not vary over time.
LFO	The sound varies over time at the rate specified in the ② LFO section.
P. ENV	The sound changes over time according to the envelope of the ⑤ PITCH section.
F. ENV	The sound changes over time according to the envelope of the ⑥ FILTER section.
A. ENV	The sound changes over time according to the envelope of the ⑦ AMP section.
S. OSC	The sound changes over time according to the frequency of the sub-oscillator.

Controller	Explanation
Octave (feet) knob	Specifies the octave of the oscillator.
[CROSS MOD] knob	Modifies the OSC 1 frequency according to the OSC 2 waveform. Turning the knob toward the right makes OSC 1 become a more complex sound, allowing you to create metallic sounds or sound effects.
[TUNE] knob	Adjusts the pitch of the oscillator. **Coarse Tune** Adjusts the pitch in semitone steps. By holding down the [RING][SYNC] buttons simultaneously and turning the SCATTER [TYPE] dial (or the OSC 2 [TUNE] knob), you can adjust the Coarse Tune. The SCATTER LEDs (1–10) indicate the amount of Coarse Tune (OFF (unlit), -11–+11). (LEDs 10 and 1 light simultaneously to indicate 11.)
[RING] button	This is a ring modulator. It generates a complex waveform by multiplying OSC 1 and OSC 2.
[SYNC] button	This is oscillator sync. It generates a complex waveform by forcibly resetting OSC 2 to the beginning of its cycle in synchronization with the OSC 1 frequency.

④ MIXER

Here you can adjust the volume of OSC 1, OSC 2, the sub-oscillator (an oscillator that produces a sound one or two octaves lower), and noise.

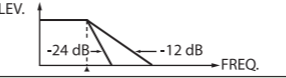| Controller	Explanation
[OSC 1] knob	Adjusts the volume of the OSC 1.
[OSC 2] knob	Adjusts the volume of the OSC 2.
[SUB OSC] knob	Adjusts the volume of the sub oscillator.
[OSC TYPE] button	Selects the type of the sub oscillator. **Lit**: Sound one octave below, **Unlit**: Sound two octaves below
[NOISE] knob	Adjusts the volume of the noise.
[NOISE TYPE] button	Selects the type of the noise. **Lit**: white noise, **Unlit**: pink noise

⑤ PITCH

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

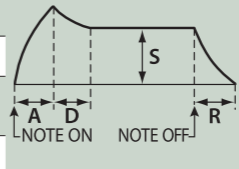| Controller	Explanation
[ENV] knob	If this knob is turned toward the right, the pitch initially becomes higher and then returns to the pitch of the key you pressed. If this knob is turned toward the left, the pitch initially becomes lower and then returns to the pitch of the key you pressed.
[A] slider [D] slider	These sliders operate similarly to the [A][D] sliders of the ⑦ AMP section (they affect the pitch rather than the volume).

⑥ FILTER

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

Controller	Explanation
[LPF CUTOFF] knob	Specifies the cutoff frequency of the low-pass filter. Frequency components above the cutoff frequency are cut, making the sound mellower.
[LPF TYPE] button	Selects the slope (steepness) of the low-pass filter. **Lit**: -12 dB, **Unlit**: -24 dB
[HPF CUTOFF] knob	Specifies the cutoff frequency of the high-pass filter. Frequency components below the cutoff frequency are cut.
[RESO] knob	Resonance boosts the sound in the region of the filter's cutoff frequency. Higher settings produce stronger emphasis, creating a distinctively "synthesizer-like" sound.
[ENV] knob	This knob specifies the depth and direction of the cutoff frequency change produced by the [A], [D], [S], and [R] sliders. If the knob is turned toward the right, the cutoff frequency moves in the upward direction. If the knob is turned toward the left, the cutoff frequency moves in the downward direction.
[KEY] knob	Allows the filter cutoff frequency to vary according to the key that you play. If the knob is turned toward the right, the cutoff frequency becomes higher as you play higher notes. If the knob is turned toward the left, the cutoff frequency becomes lower as you play lower notes.
[A] slider [D] slider [S] slider [R] slider	These sliders operate similarly to the [A][D][S][R] sliders of the ⑦ AMP section (they affect the cutoff frequency rather than the volume).

⑦ AMP

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

Controller	Explanation
[TONE] knob	Adjusts the brightness of the sound.
[CRUSHER] knob	Modifies the tonal character by distorting the waveform.
[A] slider (Attack time)	Specifies the time from the moment you press the key until the maximum volume is reached.
[D] slider (Decay time)	Specifies the time from when the maximum volume is reached, until it decays to the sustain level.
[S] slider (Sustain level)	Specifies the volume level that will be maintained from when the attack and decay times have elapsed until you release the key.
[R] slider (Release time)	Specifies the time from when you release the key until the volume reaches its minimum value.

⑧ EFFECTS

Here you can adjust the amount of reverb and delay.

Controller	Explanation
[REVERB] knob	Adds reverberation.
[DELAY] knob	Adjusts the volume of delay sound.
[TIME] knob	Adjusts the delay time (the time by which the sound is delayed).

⑨ PITCH BEND/SCATTER

"Pitch bend" modifies the pitch.

What is Scatter?
This is a function that applies various changes to the arpeggio performance, creating musical grooves.

Controller	Explanation
[ARPEGGIO] button	Causes an arpeggio to be produced when you simply hold down a chord on the keyboard. (This function is called the "arpeggiator.")
[ARP TYPE] knob	Selects the arpeggio variation.
[ARP STEP] knob	Specifies the note value for each step of the arpeggiator.
[PITCH BEND/ SCATTER] jog shuttle	The jog shuttle normally operates as pitch bend. If the [ARPEGGIO] button is turned on, the jog shuttle adjusts the scatter depth. * Scatter is on while you operate the jog shuttle. When you return the jog shuttle to the center, scatter turns off.
[TYPE] dial	Selects the scatter type (1–10).

You can make notes continue sounding even after you take your hand off the keyboard.

Hold function for Scatter Depth
Now you can hold the Scatter Depth by pressing the [KEY HOLD] button.

Holding the Scatter Depth
1. Turn on the [ARPEGGIO] button to enable Scatter.
2. While operating the [SCATTER] jog shuttle, press the [KEY HOLD] button.

Cancelling the Hold function for Scatter Depth
Hold is cancelled when you once again operate the [SCATTER] jog shuttle.

Controller	Explanation
[KEY HOLD] button	(see Hold function above)
OCTAVE [DOWN] [UP] button	**Octave shift** You can shift the keyboard's pitch range in steps of one octave. The button is lit for the one octave setting; the button is blinking for the 2–3 octave setting. If you press the [DOWN] [UP] buttons simultaneously, the keyboard will return to its normal pitch range. **Key transpose** By holding down the [DOWN][UP] buttons simultaneously and turning the SCATTER [TYPE] dial, you can transpose the keyboard in semitone steps (only upward). • The SCATTER LEDs (1–10) indicate the amount of transposition (1–11). (LEDs 10 and 1 light simultaneously to indicate 11.) • All unlit (OFF) when turned to the far left
[MOD] button	Vibrato (modulation) is applied to the sound while you hold down the [MOD] button. By holding down the [MOD] button and operating the ② LFO section, you can adjust the MOD depth.

⑩ Keyboard

This is a standard-size keyboard.
It is not touch-sensitive (the velocity is fixed).

Various Settings

Restoring the Factory Settings (Factory Reset)

Here's how to return the SYSTEM-1 to its factory-set state.
1. While holding down the [MANUAL] button, turn on the power.
   The [ARPEGGIO] button blinks.
   If you decide to cancel the factory reset, turn off the power.
2. Press the [ARPEGGIO] button to execute the factory reset.
3. When all buttons lit, turn the SYSTEM-1's power off, then on again.

MIDI and Other Settings

1. While holding down the [SYSTEM-1] button, turn on the power.
   The [ARPEGGIO] button blinks.
   If you decide not to make settings, turn off the power.
2. Use the following controllers to change the settings.

Parameter	Controller		Explanation
MIDI Channel	[TYPE] dial	Unlit (OFF)	Specifies the MIDI transmit/receive channel. The SCATTER LEDs (1–10) indicate the channel. (default: 1) • All unlit (OFF) when turned to the far left • All lit (OMNI) when turned to the far right • For 11–16, LEDs 10 and 1–6 are lit simultaneously.
		1–16	
		All lit (OMNI)	MIDI messages of all channels are received. The MIDI transmit channel will be 1.
MIDI Clock Source	[1] button	Lit (AUTO)	If MIDI clock is being input to the MIDI IN connector or the USB port, the SYSTEM-1's tempo will automatically synchronize to MIDI clock. (default) * If MIDI clock is being simultaneously input from the MIDI IN connector and from the USB port, the USB port takes priority.
		Unlit (INTERNAL)	The SYSTEM-1 operates at the tempo specified on the unit itself. Choose the "INTERNAL" setting if you don't want to synchronize to an external device.
MIDI Thru	[2] button	Lit (ON)	Specifies whether data received from the MIDI IN connector will be retransmitted from the MIDI OUT connector (ON: default) or will not be retransmitted (OFF).
		Unlit (OFF)	
BOOST Mode	[3] button	Lit (ON)	Boosts the output level of the OUT jacks.
		Unlit (OFF)	
Memory registration method (SCATTER controllers)	[4] button	Lit (Registered)	Specifies whether the state of the SCATTER controllers is registered in memory.
		Unlit (Not registered)	
LED DEMO	Hold down [MOD] and turn the [TYPE] dial		Specifies the time (minute) until the LED DEMO is shown. If this is unlit, the LED DEMO is not shown.
Master Tune	Hold down [KEY HOLD] and turn the jog shuttle	OCTAVE [DOWN] [UP] buttons lit	440 Hz (default)
		Only the [UP] button lit	440 + (SCATTER LED number) Hz
		Only the [DOWN] button lit	440 - (SCATTER LED number) Hz
			e.g.) If the [UP] button and the SCATTER LED (2) are lit, the setting is 442 Hz.

3. Press the [ARPEGGIO] button to save the settings.
   The settings are saved, and the SYSTEM-1 restarts.

Take a snapshot of all controllers
Hold down the [MANUAL] button to transmit the current state of the knobs, sliders, and switches to a computer or a MIDI device.

Change pitch bend range
Turn the [TYPE] dial while holding down the [LEGATO] button.
* The range is from 1 to 24.

e.g.)
The range is 12 when "10" and "2" are on.
The range is 24 when "10" blinks and "4" is on.

MIDI local on/off and MIDI controller mode
Turn the [TYPE] dial while holding down the [SYSTEM-1] button and the [PLUG-OUT] button.

LOCAL ON ("2" blinks)	It produces sound through any operation including external MIDI message.
LOCAL OFF ("1" blinks)	It produces sound only through external MIDI message.
MIDI CONTROLLER ("3" blinks)	It doesn't produce sound through any operation, only outputs MIDI message.

Data Backup/Restore

Backup

1. Hold down [ARPEGGIO] and switch on the power.
2. Connect your computer to the SYSTEM-1's USB port via USB cable.
3. Open the "SYSTEM-1" drive folder on your computer.
   The scene memory backup files are located in the "BACKUP" folder of the "SYSTEM-1" drive.
4. Copy the SYSTEM-1 Memory files in "BACKUP" folder into your computer.

SYSTEM-1	SYSTEM1_PATCH1.PRM - SYSTEM1_PATCH64.PRM
PLUGOUT	PLUGOUT_PATCH1.PRM - PLUGOUT_PATCH64.PRM

5. After copying is completed, disconnect the USB cable.

Windows 8/7
Right-click on the "SYSTEM-1" icon in "My Computer" and execute "Eject."
Mac OS
Drag the "SYSTEM-1" icon to the Trash icon in the Dock.
6. Turn the SYSTEM-1 power off.

Restore

1. Hold down [ARPEGGIO] and switch on the power.
2. Connect your computer to the SYSTEM-1's USB port via USB cable.
3. Open the "SYSTEM-1" drive folder on your computer.
4. Copy the SYSTEM-1 memory files into the "RESTORE" folder.
5. After copying is completed, disconnect the USB cable.

Windows 8/7
Right-click on the "SYSTEM-1" icon in "My Computer" and execute "Eject."
Mac OS
Drag the "SYSTEM-1" icon to the Trash icon in the Dock.
6. After the OCTAVE [DOWN][UP] buttons have completely stopped blinking, turn off the power.