



JUNO-X

Startup Guide



Startup Guide (this document)

Read this first. This document gives you an overview of this instrument.



PDF Manual (download from the Web)

- **Reference Manual**
This explains the steps required to operate this instrument.
- **Parameter Guide**
This explains about the parameters of the unit.
- **Sound List**
This is a list of the sounds built into the unit.
- **MIDI Implementation**
This is detailed information about MIDI messages.



To obtain the PDF manual

For details on how to use this instrument, download the PDF manual.

1. Visit the following website on your computer.

<https://www.roland.com/manuals/>



2. Choose "JUNO-X" as the product name.



* Make sure that the system program of the JUNO-X is updated to the latest version. For details on how to update the system program, visit the Roland website (<https://www.roland.com/global/support/>), search for "JUNO-X" and click "UPDATES & DRIVERS." You can check the instrument's current version from the [MENU] (WRITE) button → "INFORMATION." You can also download the latest documentation including this guide from our website.

USING THE UNIT SAFELY

INSTRUCTIONS FOR THE PREVENTION OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS

About ⚠ WARNING and ⚠ CAUTION Notices

⚠ WARNING	Used for instructions intended to alert the user to the risk of death or severe injury should the unit be used improperly.
⚠ CAUTION	Used for instructions intended to alert the user to the risk of injury or material damage should the unit be used improperly. * Material damage refers to damage or other adverse effects caused with respect to the home and all its furnishings, as well to domestic animals or pets.

About the Symbols

	The ⚠ symbol alerts the user to important instructions or warnings. The specific meaning of the symbol is determined by the design contained within the triangle. In the case of the symbol at left, it is used for general cautions, warnings, or alerts to danger.
	The symbol alerts the user to items that must never be carried out (are forbidden). The specific thing that must not be done is indicated by the design contained within the circle. In the case of the symbol at left, it means that the unit must never be disassembled.
	The symbol alerts the user to things that must be carried out. The specific thing that must be done is indicated by the design contained within the circle. In the case of the symbol at left, it means that the power-cord plug must be unplugged from the outlet.

ALWAYS OBSERVE THE FOLLOWING

WARNING

To completely turn off power to the unit, pull out the plug from the outlet

Even with the power switch turned off, this unit is not completely separated from its main source of power. When the power needs to be completely turned off, turn off the power switch on the unit, then pull out the plug from the outlet. For this reason, the outlet into which you choose to connect the power cord's plug should be one that is within easy reach and readily accessible.



Concerning the Auto Off function

The power to this unit will be turned off automatically after a predetermined amount of time has passed since it was last used for playing music, or its buttons or controls were operated (Auto Off function). If you do not want the power to be turned off automatically, disengage the Auto Off function (p. 12).



Do not disassemble or modify by yourself

Do not carry out anything unless you are instructed to do so in the owner's manual. Otherwise, you risk causing malfunction.



Do not repair or replace parts by yourself

Be sure to contact your dealer, a Roland service center, or an official Roland dealer.



For a list of Roland service centers and official Roland dealers, refer to the Roland website.

Do not use or store in the following types of locations

- Subject to temperature extremes (e.g., direct sunlight in an enclosed vehicle, near a heating duct, on top of heat-generating equipment); or are
- Damp (e.g., baths, washrooms, on wet floors); or are
- Exposed to steam or smoke; or are
- Subject to salt exposure; or are
- Exposed to rain; or are
- Dusty or sandy; or are
- Subject to high levels of vibration and shakiness; or are
- Placed in a poorly ventilated location.



Use only the stand that is recommended

This unit should be used only with a stand that is recommended by Roland.



WARNING

Do not place in a location that is unstable

When using the unit with a stand recommended by Roland, the stand must be carefully placed so it is level and sure to remain stable. If not using a stand, you still need to make sure that any location you choose for placing the unit provides a level surface that will properly support the unit, and keep it from wobbling.



Precautions regarding placement of this unit on a stand

Be sure to follow the instructions in the Owner's Manual carefully when placing this unit on a stand (p. 5). If it is not set up properly, you risk creating an unstable situation which could lead to the unit falling or the stand toppling, and may result in injury.



Connect the power cord to an outlet of the correct voltage

The unit should be connected to a power supply only of the type described as marked on the rear side of unit.



Use only the supplied power cord

Use only the attached power cord. Also, the supplied power cord must not be used with any other device.



Do not bend the power cord or place heavy objects on it

Otherwise, fire or electric shock may result.



Avoid extended use at high volume

Use of the unit at high volume for extended periods of time may cause hearing loss. If you ever experience any hearing loss or ringing in the ears, you should immediately stop using the unit and consult a specialized physician.



Do not allow foreign objects or liquids to enter unit; never place containers with liquid on unit

Do not place containers containing liquid (e.g., flower vases) on this product. Never allow foreign objects (e.g., flammable objects, coins, wires) or liquids (e.g., water or juice) to enter this product. Doing so may cause short circuits, faulty operation, or other malfunctions.



WARNING

Turn off the unit if an abnormality or malfunction occurs

In the following cases, immediately turn off the power, remove the power cord from the outlet, and contact your dealer, a Roland service center, or an official Roland dealer for service.



- The power cord has been damaged; or
- If smoke or unusual odor occurs; or
- Objects have fallen into, or liquid has been spilled onto the unit; or
- The unit has been exposed to rain (or otherwise has become wet); or
- The unit does not appear to operate normally or exhibits a marked change in performance.

For a list of Roland service centers and official Roland dealers, refer to the Roland website.

Be cautious to protect children from injury

Always make sure that an adult is on hand to provide supervision and guidance when using the unit in places where children are present, or when a child will be using the unit.



Do not drop or subject to strong impact

Otherwise, you risk causing damage or malfunction.



Do not share an outlet with an unreasonable number of other devices

Otherwise, you risk overheating or fire.



Do not use overseas

Before using the unit in overseas, consult with your retailer, the nearest Roland service center, or an authorized Roland distributor.



For a list of Roland service centers and official Roland dealers, refer to the Roland website.

Don't place burning objects on the unit

Don't place any burning object (such as a candle) on the unit.



Be aware of weather conditions

Use the apparatus in moderate climates.



⚠ CAUTION

Use only the specified stand(s)

This unit is designed to be used in combination with specific stands (KS-10Z, KS-12) manufactured by Roland. If used in combination with other stands, you risk sustaining injuries as the result of this product dropping down or toppling over due to a lack of stability.



Evaluate safety issues before using stands

Even if you observe the cautions given in the owner's manual, certain types of handling may allow this product to fall from the stand, or cause the stand to overturn. Please be mindful of any safety issues before using this product.



When disconnecting the power cord, grasp it by the plug

To prevent conductor damage, always grasp the power cord by its plug when disconnecting it.



Periodically clean the power plug

An accumulation of dust or foreign objects between the power plug and the power outlet can lead to fire or electric shock.



At regular intervals, be sure to pull out the power plug, and using a dry cloth, wipe away any dust or foreign objects that may have accumulated.

⚠ CAUTION

Disconnect the power plug whenever the unit will not be used for an extended period of time

Fire may result in the unlikely event that a breakdown occurs.



Route all power cords and cables in such a way as to prevent them from getting entangled

Injury could result if someone were to trip on a cable and cause the unit to fall or topple.



Avoid climbing on top of the unit, or placing heavy objects on it

Otherwise, you risk injury as the result of the unit toppling over or dropping down.



Never connect/disconnect a power plug if your hands are wet

Otherwise, you could receive an electric shock.



⚠ CAUTION

Disconnect all cords/cables before moving the unit

Before moving the unit, disconnect the power plug from the outlet, and pull out all cords from external devices.



Before cleaning the unit, disconnect the power plug from the outlet

If the power plug is not removed from the outlet, you risk receiving an electric shock.



Whenever there is a threat of lightning, disconnect the power plug from the outlet

If the power plug is not removed from the outlet, you risk causing malfunction or receiving an electric shock.



Handle the ground terminal carefully

If you remove the screw from the ground terminal, be sure to replace it; don't leave it lying around where it could accidentally be swallowed by small children. When refastening the screw, make that it is firmly fastened, so it won't come loose.



IMPORTANT NOTES

Power Supply

- Do not connect this unit to same electrical outlet that is being used by an electrical appliance that is controlled by an inverter or a motor (such as a refrigerator, washing machine, microwave oven, or air conditioner). Depending on the way in which the electrical appliance is used, power supply noise may cause this unit to malfunction or may produce audible noise. If it is not practical to use a separate electrical outlet, connect a power supply noise filter between this unit and the electrical outlet.

Placement

- Using the unit near power amplifiers (or other equipment containing large power transformers) may induce hum. To alleviate the problem, change the orientation of this unit; or move it farther away from the source of interference.
- This unit may interfere with radio and television reception. Do not use this unit in the vicinity of such receivers.
- Noise may be produced if wireless communications devices, such as cell phones, are operated in the vicinity of this unit. Such noise could occur when receiving or initiating a call, or while conversing. Should you experience such problems, you should relocate such wireless devices so they are at a greater distance from this unit, or switch them off.
- When moved from one location to another where the temperature and/or humidity is very different, water droplets (condensation) may form inside the unit. Damage or malfunction may result if you attempt to use the unit in this condition. Therefore, before using the unit, you must allow it to stand for several hours, until the condensation has completely evaporated.

- Do not allow objects to remain on top of the keyboard. This can be the cause of malfunction, such as keys ceasing to produce sound.
- Depending on the material and temperature of the surface on which you place the unit, its rubber feet may discolor or mar the surface.
- Do not place containers or anything else containing liquid on top of this unit. Also, whenever any liquid has been spilled on the surface of this unit, be sure to promptly wipe it away using a soft, dry cloth.

Maintenance

- Never use benzine, thinners, alcohol or solvents of any kind, to avoid the possibility of discoloration and/or deformation.

Repairs and Data

- Before sending the unit away for repairs, be sure to make a backup of the data stored within it; or you may prefer to write down the needed information. Although we will do our utmost to preserve the data stored in your unit when we carry out repairs, in some cases, such as when the memory section is physically damaged, restoration of the stored content may be impossible. Roland assumes no liability concerning the restoration of any stored content that has been lost.

Additional Precautions

- Any data stored within the unit can be lost as the result of equipment failure, incorrect operation, etc. To protect yourself against the irretrievable loss of data, try to make a habit of creating regular backups of the data you've stored in the unit.
- Roland assumes no liability concerning the restoration of any stored content that has been lost.

- Use a reasonable amount of care when using the unit's buttons, sliders, or other controls; and when using its jacks and connectors. Rough handling can lead to malfunctions.
- Never strike or apply strong pressure to the display.
- When disconnecting all cables, grasp the connector itself—never pull on the cable. This way you will avoid causing shorts, or damage to the cable's internal elements.
- A small amount of heat will radiate from the unit during normal operation.
- To avoid disturbing others nearby, try to keep the unit's volume at reasonable levels.
- When disposing of the packing carton or cushioning material in which this unit was packed, you must observe the waste disposal regulations that apply to your locality.
- Do not use connection cables that contain a built-in resistor.

Using External Memories

- Please observe the following precautions when handling external memory devices. Also, make sure to carefully observe all the precautions that were supplied with the external memory device.
 - Do not remove the device while reading/writing is in progress.
 - To prevent damage from static electricity, discharge all static electricity from your person before handling the device.

Caution Regarding Radio Frequency Emissions

- The following actions may subject you to penalty of law.
- Disassembling or modifying this device.
- Removing the certification label affixed to the back of this device.
- Using this device in a country other than where it was purchased

Intellectual Property Right

- It is forbidden by law to make an audio recording, video recording, copy or revision of a third party's copyrighted work (musical work, video work, broadcast, live performance, or other work), whether in whole or in part, and distribute, sell, lease, perform or broadcast it without the permission of the copyright owner.
- Do not use this product for purposes that could infringe on a copyright held by a third party. We assume no responsibility whatsoever with regard to any infringements of third-party copyrights arising through your use of this product.
- The copyright of content in this product (the sound waveform data, style data, accompaniment patterns, phrase data, audio loops and image data) is reserved by Roland Corporation.
- Purchasers of this product are permitted to utilize said content (except song data such as Demo Songs) for the creating, performing, recording and distributing original musical works.
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- This Product uses the Source Code of μ T-Kernel under T-License 2.0 granted by the T-Engine Forum (www.tron.org).

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- Company names and product names appearing in this document are registered trademarks or trademarks of their respective owners.
- In this manual, company names and product names of the respective owners are used because it is the most practical way of describing the sounds that are emulated using DSP technology.
- Roland and JUNO are either registered trademarks or trademarks of Roland Corporation in the United States and/or other countries.

Main Specifications

Keyboard	61 Keys (channel aftertouch)
Power consumption	20 W
Dimensions	1,072 (W) x 333 (D) x 118 (H) mm 42-1/4 (W) x 13-1/8 (D) x 4-11/16 (H) inches
Weight	11.6 kg / 25 lbs 10 oz

Accessories	Startup Guide, power cord
Options (sold separately)	Keyboard Stand: KS-10Z, KS-12
	Pedal Switch: DP series
	Expression Pedal: EV-5

* This document explains the specifications of the product at the time that the document was issued. For the latest information, refer to the Roland website.

Before using this unit, carefully read "IMPORTANT SAFETY INSTRUCTIONS" (inside front cover), "USING THE UNIT SAFELY" (p. 2), and "IMPORTANT NOTES" (p. 3). After reading, keep the document(s) where it will be available for immediate reference.

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Introduction

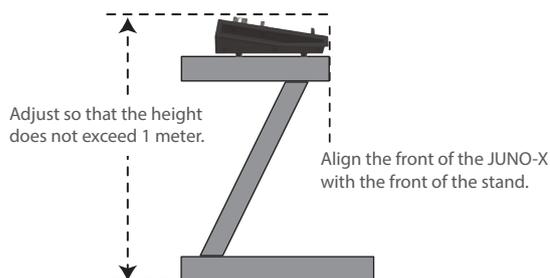
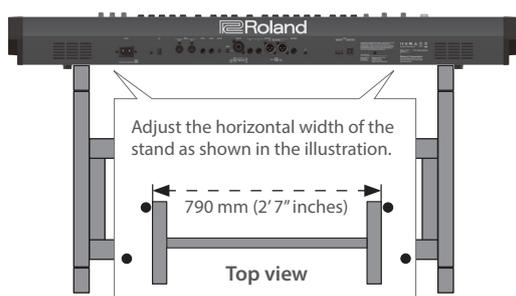
Placing the JUNO-X on a Stand

If you want to place the JUNO-X on a stand, use the Roland KS-10Z or KS-12. Place the JUNO-X on the stand as follows.

Be sure to follow the instructions in the Owner's Manual carefully when placing this unit on a stand. If it is not set up properly, you risk creating an unstable situation which could lead to the unit falling or the stand toppling, and may result in injury.

* Be careful not to get your fingers pinched in the stand when setting it up.

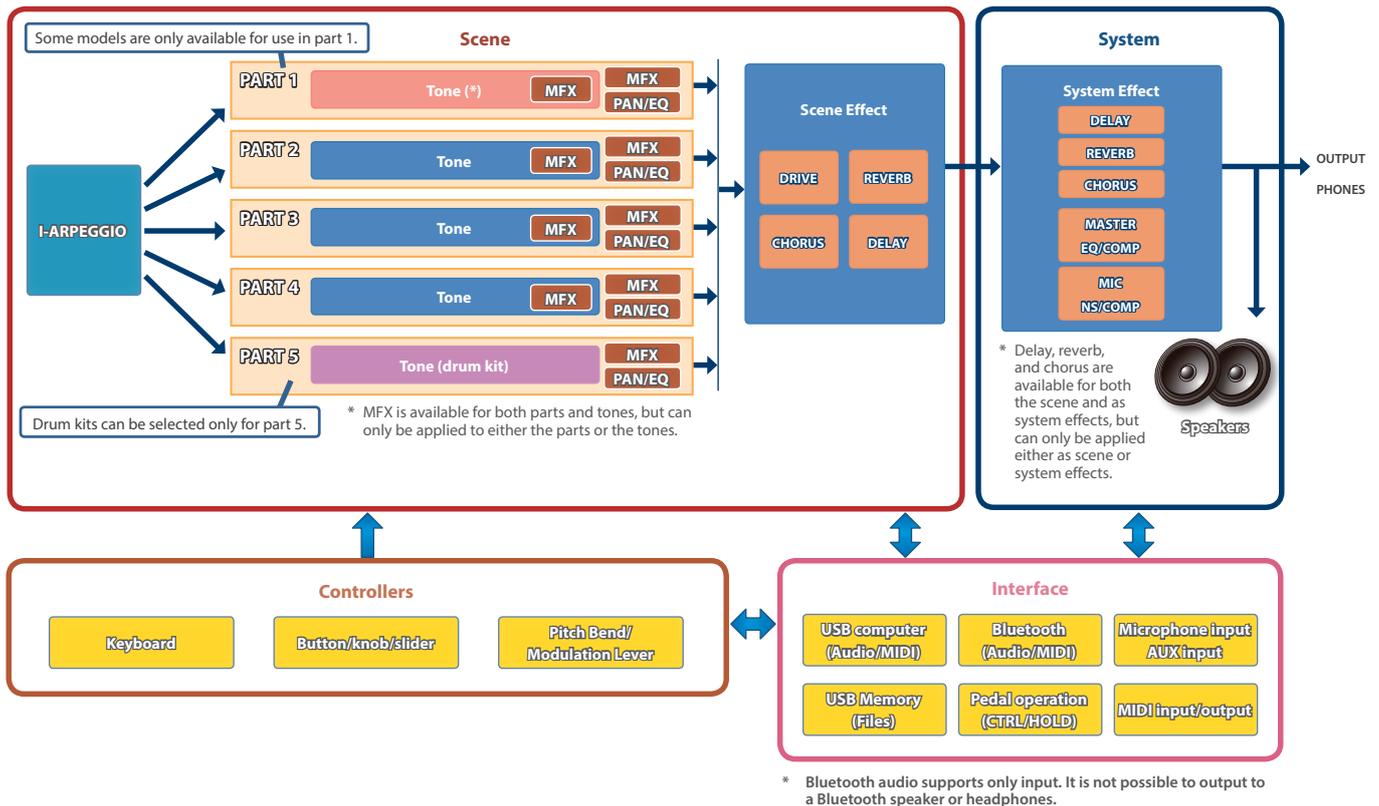
KS-10Z



KS-12

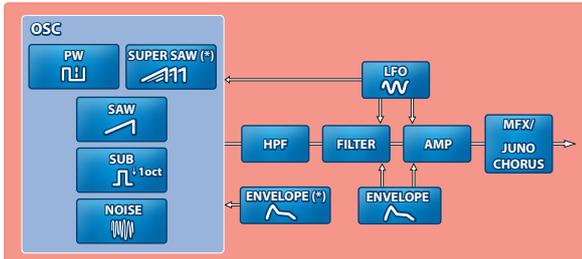


An Overview of the JUNO-X



* Elements of a tone (expanded view)

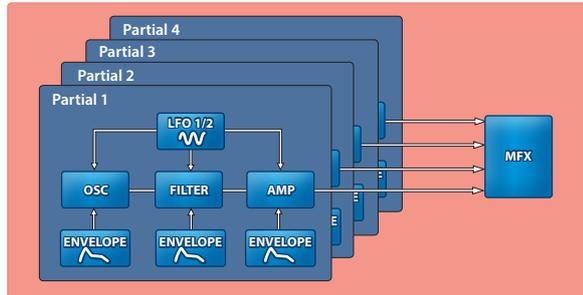
• Model: JUNO-X, JUNO-106, JUNO-60



Elements marked with an asterisk (*) are enabled only for the JUNO-X model.

* Some functions may vary, depending on the model.

• Model: XV-5080, RD-PIANO, etc.



Basic Structure

Tone

The sounds that you play from the keyboard are called “tones.”

A tone consists of an oscillator (OSC) which creates the basis of the sound, and a filter and effect (MFX) that modifies that sound. The types of oscillator, filter, and effect differ depending on the model.

Model

A “model” is a sound engine such as that of the JUNO-106, JUNO-60 or XV-5080, which reproduces the sound of a specific vintage synthesizer, or which offers distinctive functionality.

The JUNO-X features numerous models. You can use a single JUNO-X as if you owned a variety of different synthesizers.

Each model has distinctive parameters, effects and other elements, and you can use these to create tones that are unique to those models.

Category

The classifications of instruments or types of sounds such as “Synth Bass” or “Ensemble Strs” are called “categories.”

Part

A “part” is a location to which you can recall a tone and save it together with settings such as pan and EQ.

Each scene has five parts: for parts 1–4 you can select a synthesizer tone, and for part 5 you can select a drum kit tone.

I-ARPEGGIO

The I-Arpeggio function analyzes your keyboard playing and produces an optimal arpeggio pattern.

You can create a song using the following workflow: “perform with I-Arpeggio” → “adjust the phrases you like with Step Edit” → “import the result into your computer’s DAW as MIDI data.”

Scene

Settings of all parts, scene effect settings, and I-Arpeggio settings can be stored together as a “scene.”

A scene lets you store the sequence data for each part, settings for each part (tone number, pan, volume, etc.), settings that are common to all parts (reverb, delay, chorus, etc.), and favorite performance data.

You can prepare several scenes in which you’ve stored your favorite settings, and then switch between your scenes to simultaneously change a number of settings.

The JUNO-X can store 256 scenes.

System

You can apply effects to the audio signal from the scene, and output the resulting sound to an external device connected to the OUTPUT jacks or the PHONES jack, as well as to the speakers that are built into the JUNO-X.

The system settings let you edit the system effects. Unlike the scene effects, these parameters keep their settings even when you switch scenes.

Controllers

The controllers include the keyboard, the buttons/knobs/sliders on the panel, the pitch bend and modulation lever, the pedals connected to the rear panel and so on. Performance data generated when you press or release a key or press the damper pedal is converted into MIDI messages and sent to each part or to an external MIDI device.

Interface

This section lets you connect to an external MIDI device and transfer audio and MIDI data, as well as transfer audio and MIDI data to other devices connected via Bluetooth or USB.

If you connect a USB flash drive to the rear panel, you can use it to save or load scene and tone data (p. 13).

Quick operations guide

Basic operations

Here are the basic operations that are common for all functions.

Select an item	[▲SELECT▼] knob
Change a value	[- VALUE +] knob
Execute, display the tone list	[ENTER] (INIT) button
Return to the previous screen	[EXIT] button

Saving your settings

You need to perform a save operation if you want to save the settings such as for your scenes, the system and so on. Unsaved settings are lost when you turn the power off.

Display the save (WRITE) menu	[SHIFT] button + [MENU] (WRITE) button
-------------------------------	--

Moving between screens

Switch to the edit screen	[◀] [▶] buttons
Shortcut to switch to parameter settings screen	[SHIFT] button + button/knob/slider

Initializing the scene/tone settings

Display the initialization menu	[SHIFT] button + [ENTER] (INIT) button
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Selecting a scene

On the JUNO-X, you can select from a total of 256 scenes, organized as 16 banks of 16 scenes.

Select a scene bank	[SCENE] button → [▲SELECT▼] knob or [SCENE] button → [SCENE] button + [1]–[16] buttons
Select a scene	[SCENE] button → [- VALUE +] knob or [SCENE] button → [1]–[16] buttons

Selecting a tone

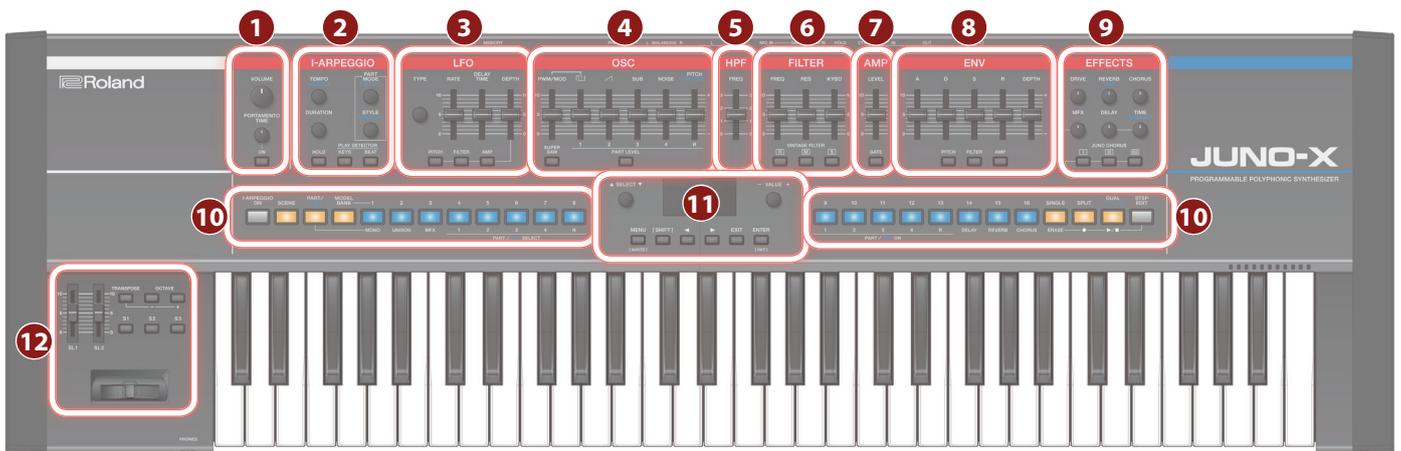
The JUNO-X is equipped with multiple sound engines called “models,” and each model has a diverse variety of sounds.

By using category function, you can narrow your focus to specific types of instruments or sounds across all of the sound engines.

Select a model/category	[MODEL BANK] button → use [▲SELECT▼] knob to move cursor to model/category name → [- VALUE +] knob
Select a tone from model/category	[MODEL BANK] button → use [▲SELECT▼] knob to move cursor to tone number → [- VALUE +] knob

Panel Descriptions

Top Panel



* Some buttons, knobs or sliders may be disabled depending on the model you select.

1

[VOLUME] knob

Adjusts the overall volume.

PORTAMENTO [TIME] knob

Changes the speed at which the pitch changes when portamento is on.

PORTAMENTO [ON] button

Selects whether the portamento effect is applied to the notes that you play.

2 I-ARPEGGIO section

[TEMPO] (SHUFFLE) knob

You can specify the tempo of the arpeggio.

Also, you can press the [PART/FUNC] button to make it light up blue and then turn the [TEMPO] (SHUFFLE) knob to adjust the shuffle feel of the sound.

[DURATION] knob

You can specify the length during which each of the arpeggiated notes is heard. Shortening the duration produces a staccato feel, and lengthening the duration produces a tenuto feel.

* The [DURATION] knob changes the value for all parts at the same time.

PART [MODE] (P-STYLE) knob

Selects the arpeggio mode for parts 1–5. The mode you select changes how the arpeggio plays.

Also, you can press the [PART/FUNC] button to make it light up blue and then turn the PART [MODE] (P-STYLE) knob to set how the probability (*) changes. Turn the knob all way counterclockwise to switch this off.

PART [STYLE] (P-AMOUNT) knob

Selects the arpeggio pattern for each part.

You can also press the [PART/FUNC] button to make it light up blue and then turn the PART [STYLE] (P-AMOUNT) knob to adjust how much probability (*) is applied.

(*) What is “probability”?

The probability setting changes the randomness of the notes that sound when you are using the I-ARPEGGIO function, giving the notes a more human feel. By changing the P-STYLE settings, you can alter the timing at which notes are played with a more random feel; and by adjusting the P-AMOUNT setting, you can change how often the notes play.

[HOLD] button

Turns the hold function on/off.

When the hold function is on, the sound of the last-played key is held.

PLAY DETECTOR [KEYS] button

When this button is on (lit), the constituent notes of the arpeggio change according to the chords you play on the keyboard.

PLAY DETECTOR [BEAT] button

When this button is on (lit), the arpeggio pattern changes according to the timing at which you play the keys.

3 LFO (low frequency oscillator) section

[TYPE] knob

Selects the LFO waveform.

[RATE] slider

Specifies the LFO’s modulation speed.

[DELAY TIME] slider

Specifies the time from when the tone sounds until the LFO reaches its maximum amplitude.

[DEPTH] slider

This specifies the depth of the LFO.

[PITCH] button

When this button is on (lit), you can use the [DEPTH] slider to adjust the intensity of the vibrato.

[FILTER] button

When this button is on (lit), you can use the [DEPTH] slider to adjust the intensity of the wah effect.

[AMP] button

When this button is on (lit), you can use the [DEPTH] slider to adjust the intensity of the tremolo effect.

4 OSC (oscillator) section

[PWM/MOD] slider

Changes the waveform modulation, such as the duty cycle of the square wave.

[L:] slider

Adjusts the level of the square wave or asymmetrical square wave.

[] slider

Adjusts the level of the sawtooth wave.

[SUB] slider

Adjusts the level of the sub oscillator.

[NOISE] slider

Adjusts the level of the noise.

[PITCH] (DETUNE) slider

Adjusts the pitch of the oscillator.

Also, you can press the [PART/FUNC] button to make it light up blue and then use the [PITCH] (DETUNE) slider to detune the pitches of the two oscillators.

[SUPER SAW] button

* This button is enabled only when "JUNO-X" is selected for the model.

When this button is on (lit), use the [PWM/MOD] slider to adjust how much the sawtooth wave is overlapped, and use the [] slider to adjust the level.

[PART LEVEL] button

When this button is on (lit), you can use the corresponding sliders to adjust the volume of parts 1–5.

5 HPF (high-pass filter) section**[FREQ] slider**

Specifies the cutoff frequency of the high-pass filter. The frequency components below the cutoff frequency are cut off.

6 FILTER section**[FREQ] slider**

Adjusts the cutoff frequency of the filter.

[RES] slider

Emphasizes the frequencies around the filter's cutoff frequency. Higher values produce greater emphasis, creating a unique synthesizer-like sound.

[KYBD] slider

Varies the filter's cutoff frequency according to the position of the key.

Raising the slider increases the value, and the cutoff increases with higher notes. Lowering the slider decreases the value, and the cutoff decreases with lower notes.

VINTAGE FILTER [R] [M] [S] buttons

If a vintage type model is selected, these buttons change the type of filter.

[R] models a Roland filter, and [M] and [S] model the filters of vintage synthesizers made by other manufacturers.

7 AMP section**[LEVEL] knob**

Adjusts the volume.

[GATE] button

When this button is on (lit), the notes play at a specific volume only while you press the keys.

8 ENV (envelope) section**[A] [D] [S] [R] sliders**

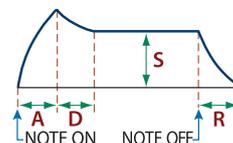
These sliders control the envelope, which creates time-based changes to the sound.

A: Attack time
(the time it takes for the sound to rise)

D: Decay time
(the time it takes for the sound to fall)

S: Sustain level
(the level at which the sound sustains)

R: Release time
(the length of time that the sound lingers)

**[DEPTH] slider**

Used in conjunction with the [PITCH] button and [FILTER] button, this slider specifies the depth of each envelope. No effect is applied when the value shown onscreen is zero.

[PITCH] button

If this button is on (lit), use the [DEPTH] slider and [A] [D] [S] [R] sliders to edit the pitch envelope.

[FILTER] button

If this button is on (lit), use the [DEPTH] slider and [A] [D] [S] [R] sliders to edit the FILTER envelope.

[AMP] button

If this button is on (lit), use the [A] [D] [S] [R] sliders to edit the AMP envelope.

9 EFFECTS section**[DRIVE] knob**

Adjusts how much distortion is applied to the sound (applies to all parts, but enabled only for parts whose Part:Output is set to "DRIVE").

[REVERB] (TIME) knob

Adjusts the depth of reverb (individually for each part).

Also, you can press the [PART/FUNC] button to make it light up blue and then operate the [REVERB] (TIME) knob to set the reverb length.

[CHORUS] knob

Adjusts the amount of chorus (individually for each part).

[MFX] knob

Adjusts the MFX depth (individually for each part).

[DELAY] knob

Adjusts the amount of delay (individually for each part).

[TIME] (FEEDBACK) knob

Adjusts the delay time (for all parts together).

Also, you can press the [PART/FUNC] button to make it light up blue and then operate the [TIME] (FEEDBACK) knob to adjust the amount of delay feedback.

JUNO CHORUS [I] [II] [III] buttons

Selects the chorus type.

* More than one button can be selected at the same time.

10 Performance section**[I-ARPEGGIO ON] button**

Turns the arpeggio function on/off.

[SCENE] button

Switches to scene select mode. In scene select mode, press buttons [1]–[16] to select a scene.

You can also hold down the [SCENE] button and press buttons [1]–[16] to select a scene bank.

[PART/FUNC] button

Switches to part select mode.

When you press this button again to make it light up blue, the instrument switches to FUNC mode, and the functions on the controls that are lit up blue are enabled.

[MODEL BANK] button

Switches to tone select mode. In tone select mode, press buttons [1]–[16] to select the tones from each model/category.

[1]–[16] buttons

These buttons have various functions depending on the mode.

Scene select mode ([SCENE] button)

The buttons switch scenes.

Part select mode ([PART/FUNC] button)

In this mode, you can switch the current part (buttons [4]–[8]) and turn parts on/off (buttons [9]–[13]). You can use the buttons to turn the following features on/off: MONO mode ([1]), the unison function ([2]) and effects ([3], [14]–[16]).

When the [PART/FUNC] button is lit blue, you can use the buttons to switch the current oscillator ([4]–[7]) and turn the oscillators on/off ([9]–[12]).

- * Use buttons [9]–[13] to turn the parts (SCENE ZONE EDIT > Keyboard Sw) on/off that can be played from the keyboard. If you want to turn on/off the sound of individual parts when playing an arpeggio, hold down the [SHIFT] button and press a [9]–[13] button (PART SW ON/OFF).

Tone select mode ([MODEL BANK] button)

Use this mode to select the tones of the models/categories that are assigned to the buttons.

Hold down the [MODEL BANK] button and press buttons [1]–[16] to specify the assigned model or category.

Step edit mode ([STEP EDIT] button)

Use this mode to edit the I-ARPEGGIO step edit data.

For details, refer to “Reference Manual” (PDF).

[SINGLE] button

Press this to play only one tone at a time (no layers).

In arpeggio step edit mode, use this button to erase steps that you’ve edited.

[SPLIT] button

When this button is on (lit), the keyboard is divided into two regions that you can play separately. To set the split point (the place on the keyboard where the regions are divided), hold down the [SPLIT] button and press the desired key.

In arpeggio step edit mode, use this button to record notes in a step.

[DUAL] (L/R DUAL) button

When this button is on (lit), you can play two tones layered together.

Also, when you press this button while the [PART/FUNC] button is lit blue, the tone for part 1 sounds from the left side and the tone for part 2 sounds from the right side, making the sound more spacious (L/R DUAL).

In arpeggio step edit mode, press this button to play or stop the step you edited.

[STEP EDIT] button

Switches to arpeggio step edit mode.

The buttons edit each step of the arpeggio performance.

11 Common section**[▲SELECT▼] knob**

Moves the cursor position up/down.

In scene select mode, use this knob to select a scene bank.

In tone select mode, use this knob to select a model/category.

Display

Shows various information for the operation.

[- VALUE +] knob

Use this knob to move the cursor or change a value.

In scene select mode, use this knob to select a scene.

In tone select mode, use this knob to select a tone.

[MENU] (WRITE) button

Pressing this button makes the MENU screen appear. Use this button to jump to a specific edit screen, or to switch to the system or utility screens.

Also, you can press the [MENU] (WRITE) button while holding down the [SHIFT] button to jump to the screens for saving scene settings, system settings and so on.

[SHIFT] button

Press the [MENU] (WRITE) button while holding down this button to jump to the screens for saving scene settings, system settings and so on.

You can also hold down this button and press the [ENTER] (INIT) button to jump to the screen for initializing the scene or tone you are setting.

- * By holding down the [SHIFT] button and operating a button, knob or slider, you can jump to the settings screen for that parameter.

[◀] [▶] buttons

Use these buttons to switch between screen pages.

This takes you to the edit pages that are arranged from left to right for the SCENE TOP screen or the MODEL BANK TOP screen.

[EXIT] button

Returns you to the previous screen.

In some screens, this cancels the function currently being executed.

- * By holding down the [EXIT] button and operating a knob or other controller, you can check its current value. This lets you check a value without modifying the sound.

[ENTER] (INIT) button

Press this to confirm a value or execute an operation.

You can also press the [ENTER] (INIT) button while holding down the [SHIFT] button to jump to the screen for initializing the scene or tone you are setting.

Press this button while in scene select mode or tone select mode to view the list of scenes or tones.

12**[SL1] [SL2] sliders**

These sliders control the parameters that are assigned to the sliders.

[TRANPOSE] button

By holding down this button and using the OCTAVE [-] [+] buttons you can transpose the pitch of the keyboard in semitone units.

OCTAVE [-] [+] buttons

Shift the pitch of the keyboard in units of one octave.

[S1] [S2] [S3] buttons

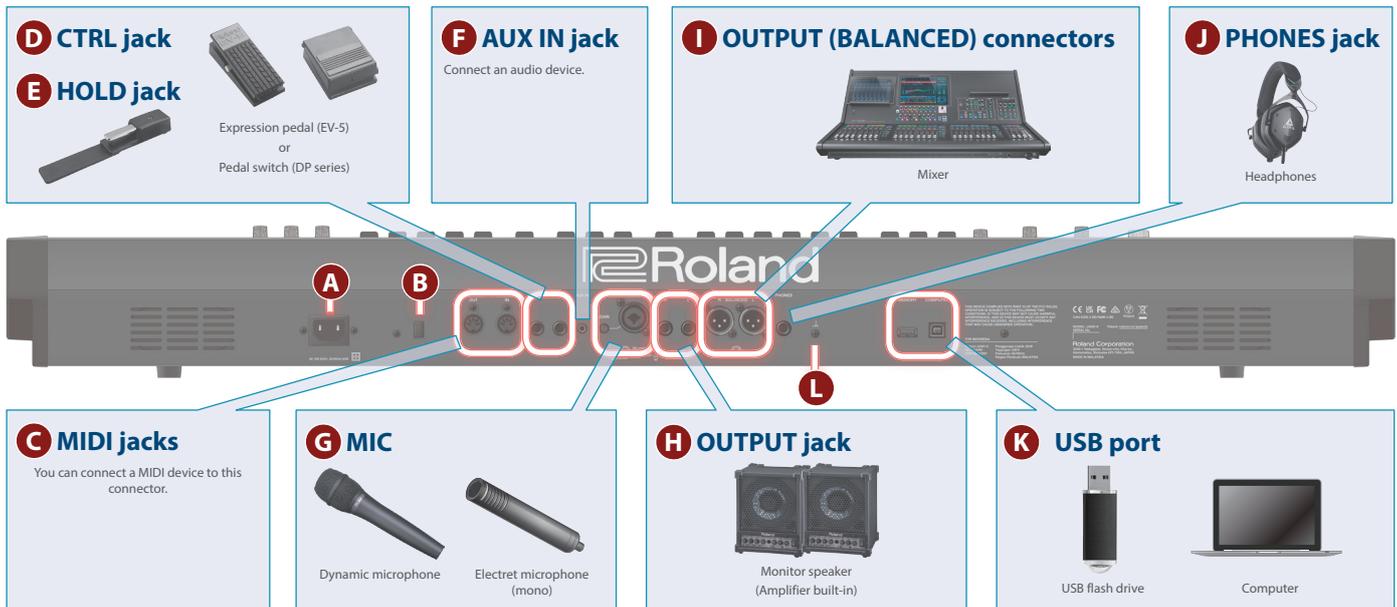
These buttons control the parameters that are assigned to the buttons.

Pitch Bend/Modulation Lever

This allows you to control pitch bend or apply vibrato.

Rear Panel (Connecting Your Equipment)

* To prevent malfunction and equipment failure, always turn down the volume, and turn off all the units before making any connections.



A AC IN jack

Connect the included power cord.

B [ON] switch

This switches the power on and off (p. 12).

C MIDI (OUT/IN) ports

These connectors transmit and receive MIDI messages to/from connected external MIDI devices.

D CTRL jack

Connect an expression pedal (EV-5; sold separately).

* Use only the specified expression pedal. By connecting any other expression pedals, you risk causing malfunction and/or damage to the unit.

E HOLD jack

Connect a pedal switch (DP series; sold separately).

F AUX IN jack

Connect an external audio device.

Use a stereo mini plug for this connection.

G MIC

MIC [GAIN] knob

Adjusts the volume of the mic input.

MIC IN jack

Connect a dynamic microphone or electret condenser microphone (plug-in power system) here.

* A condenser microphone (phantom powered) cannot be used.

Pin assignment of MIC IN jack



H OUTPUT L/R jacks

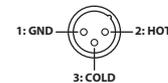
These are output jacks for audio signals.

Connect your amplified speakers etc.

I OUTPUT (BALANCED) L/R connectors

These are output connectors for audio signals. Connect these to your mixer etc.

Pin assignment of OUTPUT (BALANCED) L/R connectors



J PHONES jack

Connect stereo 1/4-inch phone type headphones here.

K USB port

USB MEMORY port

Connect a USB flash drive.

* Connect or disconnect the USB flash drive while the JUNO-X is powered-off.

* Never turn off the power or disconnect the USB flash drive during a process, such as while the "Executing..." display is shown.

USB COMPUTER port

Use a USB cable to connect this port to a USB port of your computer.

This allows the JUNO-X to operate as a USB MIDI device.

L Ground terminal

Connect this to an external earth or ground if necessary.

Front Panel (Connecting Your Equipment)



M PHONES jack

Connect stereo mini-type headphones here.

Turning the Power On and Adjusting the Volume

1. Turn the volume of the JUNO-X all the way down.

If you've connected external speakers or similar audio equipment to this instrument, turn the volume of those external devices all the way down as well.

2. Turn on the power of your equipment in this order: JUNO-X → connected devices.

* In order to protect its circuitry, the JUNO-X waits for a while after being powered on before it begins operating.

3. Raise the volume of the connected equipment to an appropriate level.

4. Adjust the volume of the JUNO-X with the [VOLUME] knob.

Turning the Power Off

1. Turn the volume of the JUNO-X all the way down.

If you've connected external speakers or similar audio equipment to this instrument, turn the volume of those external devices all the way down as well.

2. Turn off the equipment in this order: connected devices → JUNO-X.

* If you need to turn off the power completely, first turn off the unit, then unplug the power cord from the power outlet. Refer to "To completely turn off power to the unit, pull out the plug from the outlet" (p. 2).

Setting the AUTO OFF function

The power to this unit will be turned off automatically after a predetermined amount of time has passed since it was last used  for playing music, or its buttons or controls were operated (Auto Off function). If you do not want the power to be turned off automatically, disengage the Auto Off function.

* Unsaved data is lost when the power turns off. Before turning the power off, save (WRITE) the data that you want to keep (p. 7).

* To restore power, turn the power on again.

1. Press the [MENU] (WRITE) button.

2. Use the [▲SELECT▼] knob to select "SYSTEM," and then press the [ENTER] (INIT) button.

3. Use the [▲SELECT▼] knob to select "Auto Off" and use the [-VALUE+] knob to change the setting.

If you don't want the unit to turn off automatically, choose the "OFF" setting.

Parameter [▲SELECT▼] knob	Value [-VALUE+] knob
Auto Off	OFF, 30 [min], 240 [min]

4. To save the edited settings, hold down the [SHIFT] button and press the [MENU] (WRITE) button.

A confirmation message appears.

If you decide to cancel, press the [EXIT] button.

5. To execute, press the [ENTER] (INIT) button.

Using the Built-In Speakers

This unit contains built-in stereo speakers. If the built-in speakers are turned on, you can play sound from this unit.



1. Press the [MENU] (WRITE) button.

2. Use the [▲SELECT▼] knob to select "SYSTEM," and then press the [ENTER] (INIT) button.

3. Use the [▲SELECT▼] knob to select "Speaker Sw," and use the [-VALUE+] knob to specify "ON" or "AUTO."

Parameter [▲SELECT▼] knob	Value [-VALUE+] knob	Explanation
Speaker Sw	OFF	Sound is not output from the speakers.
	ON	Sound is output from the speakers.
	AUTO	When headphones are connected, the sound is output through the headphones; and when headphones are not connected, the sound is output through the speakers.

4. To save the edited settings, hold down the [SHIFT] button and press the [MENU] (WRITE) button.

A confirmation message appears.

If you decide to cancel, press the [EXIT] button.

5. To execute, press the [ENTER] (INIT) button.

Convenient Functions (UTILITY)

Backing-Up Data to a USB Flash Drive

Connect a USB flash drive.

* Use a commercially available USB flash drive. Note that we cannot guarantee that all commercially available USB flash drives will work.



Formatting a USB Flash Drive (FORMAT USB MEMORY)

Be sure to format your USB flash drive on this instrument, if you are using it for the first time.

NOTE

If the USB flash drive contains important data, be aware that this operation erases all data from the drive.

1. Press the [MENU] (WRITE) button.
2. Use the [▲SELECT▼] knob to select "UTILITY," and then press the [ENTER] (INIT) button.
3. Use the [▲SELECT▼] knob to select "FORMAT USB MEMORY," and then press the [ENTER] (INIT) button.
A confirmation message appears.
If you decide to cancel, press the [EXIT] button.
4. To execute, use the [- VALUE +] knob or the [◀] [▶] buttons to select "OK," and then press the [ENTER] (INIT) button.
When formatting is complete, the screen indicates "Completed!"
* Never turn off the power or disconnect the USB flash drive during a process, such as while the "Executing..." display is shown.

Backing-Up Data to USB Flash Drive (BACKUP)

Here's how to back up user data to a USB flash drive.

Data that is backed up

- All scene data (including vocoder and arpeggio settings)
- User tone data
- System settings (including system effects)

1. Press the [MENU] (WRITE) button.
2. Use the [▲SELECT▼] knob to select "UTILITY," and then press the [ENTER] (INIT) button.
3. Use the [▲SELECT▼] knob to select "BACKUP," and then press the [ENTER] (INIT) button.
The BACKUP screen appears.
4. Use the [▲SELECT▼] knob to move the cursor, and use the [- VALUE +] knob to edit the characters.
5. Once you've entered the filename, press the [ENTER] (INIT) button.
A confirmation message appears.
If you decide to cancel, press the [EXIT] button.

6. To execute, use the [- VALUE +] knob or the [◀] [▶] buttons to select "OK," and then press the [ENTER] (INIT) button.

When the backup is finished, the screen indicates "Completed!"

If a file of the same name exists, a confirmation screen (Overwrite?) asks whether you want to overwrite the existing file.

* Never turn off the power or disconnect the USB flash drive during a process, such as while the "Executing..." display is shown.

Restoring Backup Data (RESTORE)

Here's how user data that you backed up on a USB flash drive can be returned to the JUNO-X. This operation is called "restore."

NOTE

All user data are rewritten when you execute the restore operation. If your JUNO-X contains important data, assign it a different name and back it up to a USB flash drive before you restore.

1. Press the [MENU] (WRITE) button.
2. Use the [▲SELECT▼] knob to select "UTILITY," and then press the [ENTER] (INIT) button.
3. Use the [▲SELECT▼] knob to select "RESTORE," and then press the [ENTER] (INIT) button.
4. Use the [▲SELECT▼] knob to select the file you want to restore.
5. Press the [ENTER] (INIT) button.
A confirmation message appears.
If you decide to cancel, press the [EXIT] button.
6. To execute, use the [- VALUE +] knob or the [◀] [▶] buttons to select "OK," and then press the [ENTER] (INIT) button.
When the restore operation is finished, the screen indicates "Completed. Turn off power."
7. Turn the power of the JUNO-X off and then on again.
* Never turn off the power or disconnect the USB flash drive during a process, such as while the "Executing..." display is shown.

Returning to the Factory Settings (FACTORY RESET)

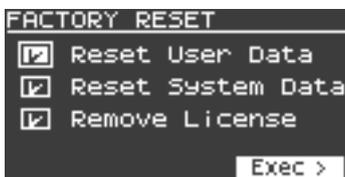
Here's how the settings that you edited and saved on the JUNO-X can be returned to their factory-set condition.

- * When you execute this operation, all saved settings including the sound parameters will be lost.
- * If you will later need the current settings, be sure to use the backup function (p. 13) to save the current settings before you restore the factory settings.

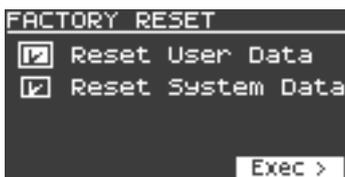
1. Press the [MENU] (WRITE) button.
2. Use the [▲SELECT▼] knob to select "UTILITY," and then press the [ENTER] (INIT) button.
3. Use the [▲SELECT▼] knob to select "FACTORY RESET," and then press the [ENTER] (INIT) button.

The FACTORY RESET screen appears.

If a sound pack or wave expansion is imported/installed



If a sound pack or wave expansion is not imported/installed



- * For more details on sound packs and wave expansions, see the "Reference Manual" (PDF).

4. Use the [▲SELECT▼] knob to select the item to execute, and press the [ENTER] (INIT) button to select its check box.

Press the [ENTER] (INIT) button again to clear the check box.

Item	Explanation
Reset User Data	Initializes the scenes and user tones (*1).
Reset System Data	Initializes the system settings (*1).
Remove License (*2)	Initializes the user license and wave expansion. Initializing the user license lets you import/install a sound pack or wave expansion that was downloaded with a different user license. This deletes the currently installed wave expansion.

- *1 Performing these operations erases any of the relevant data you have edited after purchase.
To save the current settings, be sure to use the backup function (p. 13) before you restore the unit to its factory default state.
- *2 This is displayed if a sound pack or wave expansion is imported/installed.
For more details on user licenses, see the "Sound Pack/Wave Expansion Installation Manual" (PDF).

5. Press the [▶] button.
A confirmation message appears.
If you decide to cancel, press the [EXIT] button.
6. To execute, use the [- VALUE +] knob or the [◀] [▶] buttons to select "OK," and then press the [ENTER] (INIT) button.
The display indicates "Completed. Turn off power."

7. Turn the power of the JUNO-X off and then on again.

- * Never turn off the power or disconnect the USB flash drive during a process, such as while the "Executing..." display is shown.