

Roland



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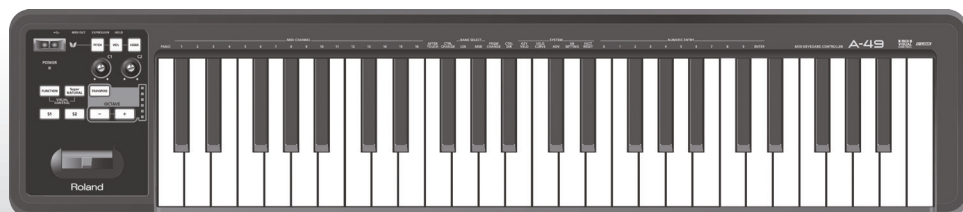


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2. Choose "A-49" as the product name.



A-49

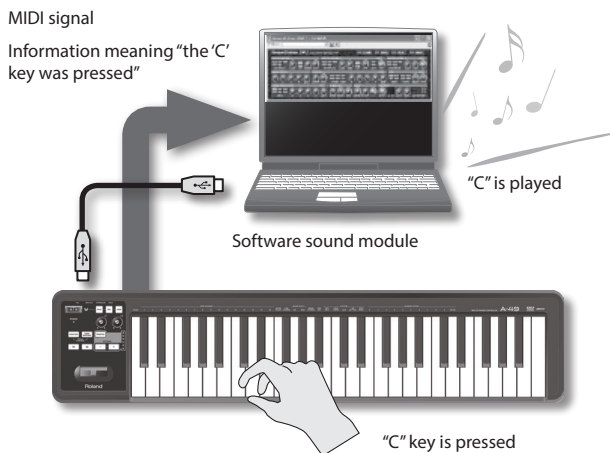
MIDI KEYBOARD CONTROLLER

Owner's Manual

What is MIDI?

MIDI is an internationally recognized standard for exchanging performance information between electronic musical instruments and computers.

For example, in the illustration below, a MIDI signal meaning “the ‘C’ key on the MIDI keyboard was pressed” passes through the A-49 and is received by the computer’s software sound module, and then the software sound module plays the note “C.”



In this way, MIDI is used to send performance information to other instruments; for example “the ‘C’ key was pressed with a certain amount of force,” “the instrument was changed to a violin sound,” “the volume was raised/lowered,” “the pitch was raised/lowered,” etc. In other words, MIDI is the “language of musical instruments.”

MIDI signals are merely performance instructions, therefore a MIDI sound module, such as a software sound module, is required to produce sound.

All software sound modules and DAW (Digital Audio Workstation) software support MIDI.

MEMO

DAW software is a term that refers to music production software.

Before using this unit, carefully read the sections entitled: “USING THE UNIT SAFELY” (p. 3) and “IMPORTANT NOTES” (p. 4). These sections provide important information concerning the proper operation of the unit. Additionally, in order to feel assured that you have gained a good grasp of every feature provided by your new unit, Owner’s Manual should be read in its entirety. The manual should be saved and kept on hand as a convenient reference.

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

Do not disassemble or modify by yourself

Do not open or perform any internal modifications on the unit.



Do not repair or replace parts by yourself

Do not attempt to repair the unit, or replace parts within it (except when this manual provides specific instructions directing you to do so). Refer all servicing to your retailer, the nearest Roland Service Center, or an authorized Roland distributor, as listed on the "Information" page.



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
- Humid; or are
- Exposed to rain; or are
- Dusty or sandy; or are
- Subject to high levels of vibration and shakiness.



WARNING

Do not place in an unstable location

Make sure you always have the unit placed so it is level and sure to remain stable. Never place it on stands that could wobble, or on inclined surfaces.



Don't allow foreign objects or liquids to enter unit; never place containers with liquid on unit

Do not place containers containing liquid 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.



Turn off the unit if an abnormality or malfunction occurs

Immediately disconnect the USB cable, and request servicing by your retailer, the nearest Roland Service Center, or an authorized Roland distributor, as listed on the "Information" page when:

- Objects have fallen into, or liquid has been spilled onto the unit; or
- If smoke or unusual odor occurs; 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.



WARNING

Adults must provide supervision in places where children are present

When using the unit in locations where children are present, be careful so no mishandling of the unit can take place. An adult should always be on hand to provide supervision and guidance.



Do not drop or subject to strong impact

Protect the unit from strong impact. (Do not drop it!)



CAUTION

Manage cables for safety

Try to prevent cords and cables from becoming entangled. Also, all cords and cables should be placed so they are out of the reach of children.



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

Never climb on top of, nor place heavy objects on the unit.



Disconnect everything before moving the unit

Disconnect all cords coming from external devices before moving the unit.



IMPORTANT NOTES

Power Supply

- To prevent malfunction and equipment failure, always make sure to turn off the power on all your equipment before you make any connections.

Placement

- This device may interfere with radio and television reception. Do not use this device in the vicinity of such receivers.
- Do not expose the unit to direct sunlight, place it near devices that radiate heat, leave it inside an enclosed vehicle, or otherwise subject it to temperature extremes. Excessive heat can deform or discolor the unit.
- 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. You can place a piece of felt or cloth under the rubber feet to prevent this from happening. If you do so, please make sure that the unit will not slip or move accidentally.

- Do not put anything that contains water on this unit. Also, avoid the use of insecticides, perfumes, alcohol, nail polish, spray cans, etc., near the unit. Swiftly wipe away any liquid that spills on the unit using a dry, soft cloth.

Maintenance

- For everyday cleaning wipe the unit with a soft, dry cloth or one that has been slightly dampened with water. To remove stubborn dirt, use a cloth impregnated with a mild, non-abrasive detergent. Afterwards, be sure to wipe the unit thoroughly with a soft, dry cloth.
- Never use benzene, thinners, alcohol or solvents of any kind, to avoid the possibility of discoloration and/or deformation.

Repairs and Data

- Please be aware that all data contained in this unit's memory will be initialized when it is sent for repairs. Roland assumes no liability concerning such loss of data, nor any obligation to recover it.

Additional Precautions

- Please be aware that the contents of memory can be irretrievably lost as a result of a malfunction, or the improper operation of the unit.
- Roland assumes no liability concerning such loss of data, nor any obligation to recover it.
- 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.
- 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.
- To avoid disturbing others nearby, try to keep the unit's volume at reasonable levels.
- When you need to transport the unit, package it in the box (including padding) that it came in, if possible. Otherwise, you will need to use equivalent packaging materials.
- Use only the specified expression pedal (EV-5; sold separately). By connecting any other expression pedals, you risk causing malfunction and/or damage to the unit.

- The usable range of D-BEAM controller will become extremely small when used under strong direct sunlight. Please be aware of this when using the D-BEAM controller outside.

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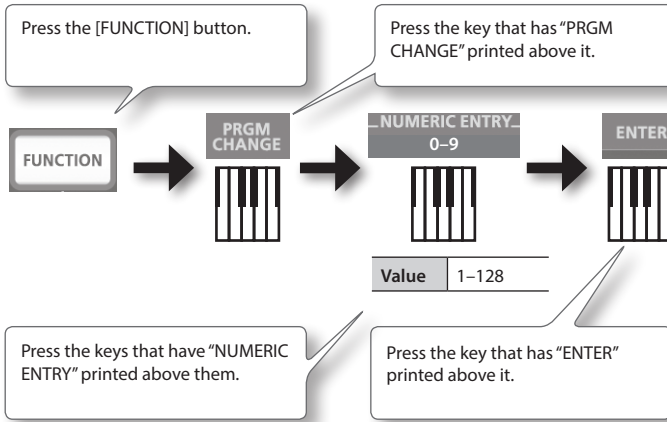
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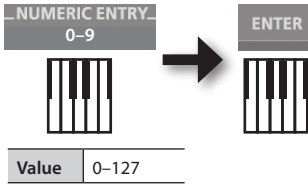
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How to read the procedural explanations



Using NUMERIC ENTRY to enter a value



NUMERIC ENTRY keys pressed in this order	This value is entered
6, 4, ENTER	64
1, 2, 7, ENTER	127
1, 2, 8, ENTER	28
9, 3, 5, 7, ENTER	57

* If you specified a value that's outside the acceptable range, the valid value that had been entered before you pressed ENTER will be used.

Explanation of the icons

Icon	Explanation
	Rotate a knob.
	Step on the pedal switch.
	Raise or lower the expression pedal.

Contents of the Package

After you open the package, please check that all items are present.
(If any accessories are missing, please contact the place of purchase.)

A-49



Ableton Live Lite Serial Number Card

The Ableton Live Lite serial number card contains a serial number that you will need when you install Ableton Live Lite. This serial number cannot be reissued. Please take care not to lose it.

For details on the installation procedure and other information, refer to <http://roland.cm/livelite>. Please be aware that Roland does not provide support for Ableton Live Lite.

USB cable

Use this cable to connect the A-49 to the USB connector of your computer.

* Please use only the included USB cable. If you require a replacement due to loss or damage, please contact the nearest Roland Service Center, or an authorized Roland distributor, as listed on the "Information" page.

Owner's Manual

This is the document you're reading. Keep it at hand for reference when needed.

Panel Descriptions

Panel

D-BEAM (p. 23)

D-BEAM controller

Move your hand above this to apply various effects to the sound.

[PITCH] button

If this is turned on, the D-BEAM controller will control the pitch.

[VOL] button

If this is turned on, the D-BEAM controller will control the volume.

[ASSIGN] button

If this is turned on, the D-BEAM controller will control the function you've assigned. (Factory setting: aftertouch)

POWER indicator

This will light if the A-49 is connected to your computer via USB.

[C1][C2] knobs

Turn this knob to use the function you've assigned (p. 24).

[FUNCTION] button

If you press this button so it's lit, you can change the MIDI channel or transmit a program change by pressing the appropriate keys (p. 15).

[SuperNATURAL] button

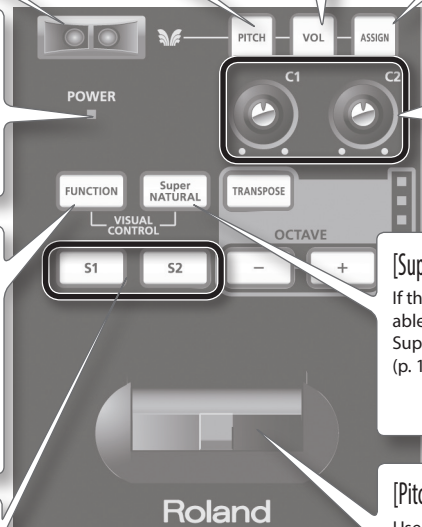
If this is turned on, you'll be able to control a connected SuperNATURAL sound module (p. 16).

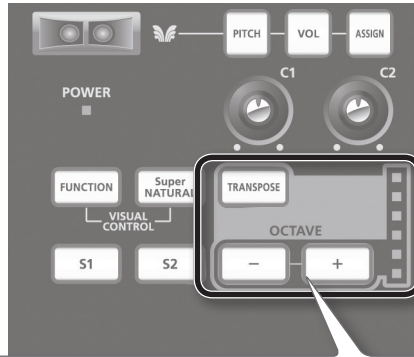
[S1][S2] buttons

You can switch sounds by pressing these buttons (p. 19).

[Pitch Bend/Modulation] lever

Use this lever to vary the pitch or to apply vibrato (p. 22).





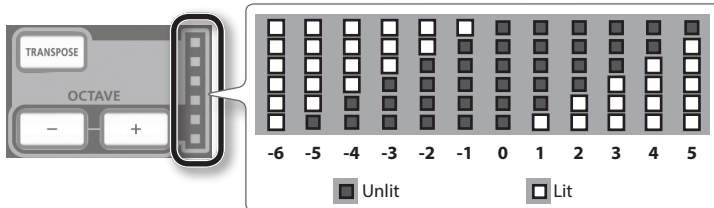
[TRANPOSE] button, OCTAVE/TRANPOSE indicator, [+][-] buttons

In PLAY mode (p. 14), you can press the [TRANPOSE] button to switch the function of the OCTAVE/TRANPOSE indicator and the [+][-] buttons.

When the [TRANPOSE] button is turned on, the transposition setting is enabled. When the [TRANPOSE] button is turned off, the transposition setting is disabled.

Button	Function	OCTAVE/TRANPOSE indicator
[+][-] buttons	Change the octave setting (p. 21)	Indicates the octave setting
[TRANPOSE] + [+][-] buttons	Change the transpose setting (p. 21)	Indicates the transpose setting

The OCTAVE/TRANPOSE indicator and the setting it shows



Rear Panel

HOLD jack

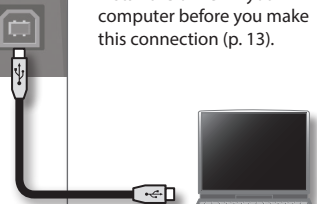
You can connect a pedal switch (DP-2, DP-10; available separately) here and use it as a hold pedal (p. 25).



USB COMPUTER port

Use a USB cable to connect the A-49 to your computer.

* Install the driver in your computer before you make this connection (p. 13).



EXPRESSION jack

You can connect an expression pedal (EV-5; available separately) here and use it to control various parameters and functions (p. 25).



* Use only the specified expression pedal (EV-5; sold separately). By connecting any other expression pedals, you risk causing malfunction and/or damage to the unit.

MIDI OUT connector

You can connect this to the MIDI IN connector of another MIDI device so that the A-49 can transmit MIDI messages to it.



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

Installing the Dedicated Driver

Note

Do not connect the A-49 to the computer until you are directed to do so.

You must install the USB driver when connecting the A-49 to your computer. Download the USB driver from the Roland website. For details, refer to Readme.htm which is included in the download.

<http://www.roland.com/support>

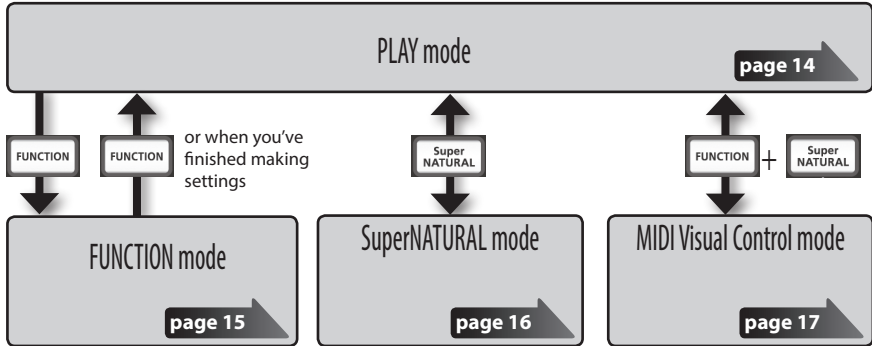
About the Operating Modes

Switching the Operating Mode

The A-49 has four modes.

When you turn on the power, the A-49 will automatically start up in PLAY mode.

You can switch the operating mode by pressing the following buttons.



PLAY Mode

What is PLAY mode?

This is the mode that's used when performing. When you play the keyboard, note messages will be transmitted, causing your MIDI device to produce sound.

In PLAY mode you can use the keyboard to play a connected sound module. You can also use functions such as the [Pitch Bend/Modulation] lever to change the pitch of the currently sounding notes (Pitch Bend) or apply a vibrato effect (Modulation), and change the octave (Octave Shift).

Functionality in PLAY mode

Performing	You can transmit MIDI messages by operating the keyboard, [Pitch Bend/Modulation] lever, [C1] [C2] knobs, [S1] [S2] buttons, D-BEAM controller, hold pedal, and expression pedal.	p. 18
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FUNCTION Mode

What is FUNCTION mode?

This is the mode that lets you transmit specific control messages or make settings for the A-49 itself.

In FUNCTION mode, the keyboard is used to select the function that you want to set (You won't be able to perform by playing the keyboard).

Functionality in FUNCTION mode

Specify the MIDI transmit channel	You can specify the transmit channel for the keyboard, [Pitch Bend/Modulation] lever, [C1] [C2] knobs, [S1] [S2] buttons, D-BEAM controller, hold pedal, and expression pedal.	p. 19
Transmit program change messages	You can transmit program change messages.	p. 20
Transmit Bank Select LSB	You can switch banks by transmitting Bank Select LSB (CC#32) messages.	p. 20
Transmit Bank Select MSB	You can switch banks by transmitting Bank Select MSB (CC#00) messages.	p. 20
Transmit aftertouch messages	You can transmit aftertouch messages.	p. 26
Transmit reset messages	If "stuck notes" occur on the connected MIDI sound module, or if there's something wrong with the sound, you can transmit reset messages (All Sound Off, All Notes Off, Reset All Controllers) to solve the problem.	p. 26
Change the keyboard settings	You can adjust the velocity sensitivity or specify the velocity value that is transmitted when you play the keyboard.	p. 28 p. 29
Change the functions that are assigned to the knobs, buttons and pedals	You can change the function (CC#) of the functions assigned to the [C1] [C2] knobs, [S1] [S2] buttons, [ASSIGN] button, HOLD jack, and EXPRESSION jack.	p. 30
Change the directionality of the knobs, D-BEAM controller, buttons, and pedals	You can change the directionality of the [C1] [C2] knobs, D-BEAM controller, [S1] [S2] buttons, HOLD jack, and EXPRESSION jack to specify the direction in which the value will increase.	p. 33
Change the function of the [C2] knob in SuperNATURAL mode	You can change the function that the [C2] knob will have in SuperNATURAL mode.	p. 29
Switch the driver that's used	You can choose whether to use the dedicated driver or the driver provided by the operating system.	p. 33
Restoring the factory settings	You can return all of the A-49's settings to the factory-set state.	p. 34

SuperNATURAL Mode

What is SuperNATURAL mode?

This is the mode that lets you control a SuperNATURAL sound module.

You can control the SuperNATURAL sound module that's connected to the A-49 via a MIDI cable.

What are SuperNATURAL Tones?

SuperNATURAL

Taking advantage of Behavior Modeling Technology, SuperNATURAL is Roland's exclusive sound set that achieves a new level of realism and expression that were difficult to realize with previous sound generators.

Behavior Modeling Technology

Not only physical modeling of the instruments, Roland takes it a step further by modeling the instrument's distinctive behavior that responds to how the performer plays, resulting in true-to-life, expressive sounds in realtime.

Functionality in SuperNATURAL mode

Buttons, knobs, etc.	Function
[PITCH] button	The same functionality as in PLAY mode.
[VOL] button	
[ASSIGN] button	General purpose controller 3 (CC#18)
[FUNCTION] button	Not in use.
[S1] button	General purpose controller 5 (CC#80)
[S2] button	General purpose controller 6 (CC#81)
[C1] knob	General purpose controller 1 (CC#16)
[C2] knob	General purpose controller 2 (CC#17) Operates as a general purpose controller 4 (CC#19) according to the SN SETTING (p. 29).
[Pitch Bend/Modulation] lever	The same functionality as in PLAY mode.
[TRANPOSE] button	
[+][-] buttons	
HOLD jack	You can use the same functionality as in PLAY mode.
EXPRESSION jack	

* The effect that's applied will depend on the sound module. For details, refer to the owner's manual of your sound module.

MIDI Visual Control Mode

What is MIDI Visual Control mode?

This is the mode that lets you control a video device that supports MIDI Visual Control (MVC). You can control images on the Visual Control device that's connected to the A-49 via a MIDI cable.

When you select MIDI Visual Control mode and play the keyboard of the A-49, images will be controlled in synchronization with your performance.

What is MIDI Visual Control?



MIDI Visual Control is an internationally-used recommended practice that was added to the MIDI specification so that visual expression could be linked with musical performance. Video equipment that is compatible with MIDI Visual Control can be connected to electronic musical instruments via MIDI in order to control video equipment in tandem with a performance.

Functionality in MIDI Visual Control mode

Buttons, knobs, etc.	Function
[PITCH] button	The same functionality as in PLAY mode.
[VOL] button	
[ASSIGN] button	Attack time (CC#73)
[FUNCTION] button	Not in use.
[S1] button	You can use the same functionality as in PLAY mode.
[S2] button	
[C1] knob	Cutoff (CC#74)
[C2] knob	Resonance (CC#71)
[Pitch Bend/Modulation] lever	The same functionality as in PLAY mode.
[TRANSCOPE] button	
[+][-] buttons	
HOLD jack	You can use the same functionality as in PLAY mode.
EXPRESSION jack	

* The effect that's applied will depend on the video device. For details, refer to the owner's manual of your video device.

Performing

When the A-49's power is turned on, it will automatically start up in PLAY mode (p. 14).

In PLAY mode, playing the keyboard will transmit note messages, causing your MIDI device to produce sound.

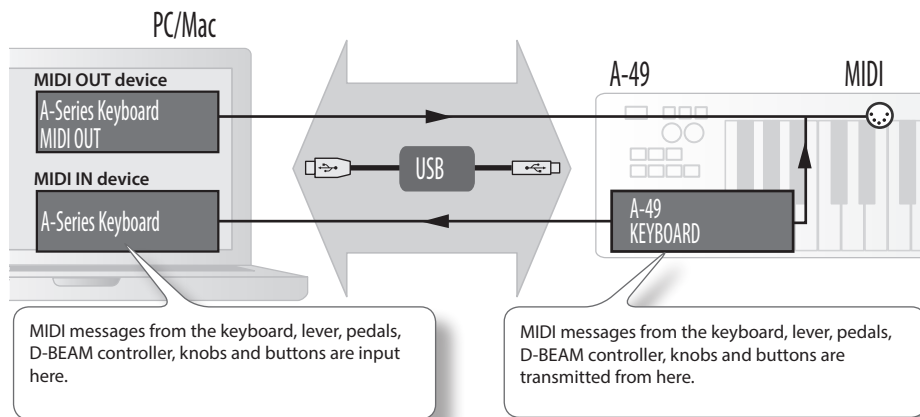
1. Set the A-49's MIDI transmit channel to match the MIDI receive channel of your MIDI device (or software) (p. 19).
2. Select a sound (p. 19).
3. Play the keyboard.

When you play the keyboard, MIDI messages will be transmitted.

* Since the A-49 itself does not contain a built-in sound generator, you can't play the A-49 on its own.

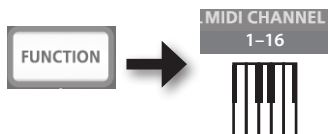
MIDI Signal Flow

The illustration below shows the MIDI signal flow.



Setting the MIDI Transmit Channel (MIDI CHANNEL)

In order to play sounds on your MIDI sound module, the A-49's MIDI transmit channel must match your MIDI sound module's MIDI receive channel.



MEMO

- For details on how to set the transmit channel of your external MIDI device, refer to its owner's manual.
- When you turn off the power, the setting will return to the default value (MIDI CHANNEL 1).

Switching Sounds

To switch sounds on your MIDI sound module, transmit a program change message.

Pressing the [S1] [S2] buttons will transmit program changes, causing your sound module to switch sounds.



Button	Function
[S1] button	Decrement the program change number
[S2] button	Increment the program change number

- * Program change numbers have a range of 1–128.

MEMO

You can change the functions that are assigned to the [S1] [S2] buttons. For details, refer to "Assigning Functions to the Knobs, Buttons, and Jacks" (p. 30).

To select sounds from a different bank, first transmit a Bank Select message, and then transmit a Program Change message.

- * Simply transmitting a Bank Select message will not make the sound change.
- * The Bank Select message must be sent before the Program Change message.

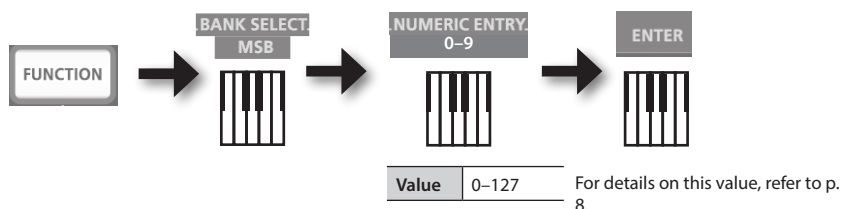
What is a bank?

MIDI sound modules organize their numerous sounds in various groups according to the category of sound. These groups are called “banks.”

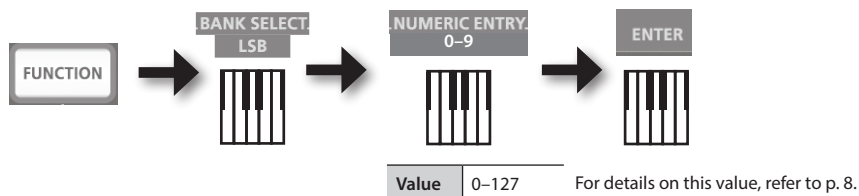
“Program change messages can only select sounds within the same bank, but by using these in conjunction with bank select messages, you can select different variations of sound.

* The way in which sounds are organized will differ for each sound module. For details, refer to the owner’s manual of the sound module you are using.

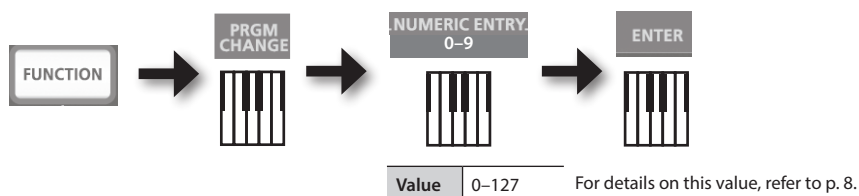
Transmitting the Bank Select MSB



Transmitting the Bank Select LSB



Transmitting a Program Change number (PRGM CHANGE)



Shifting the Pitch of the Keyboard

Changing the octave (Octave Shift)

You can raise or lower the pitch range of the keyboard (Octave Shift) by using the [+] [-] buttons.

You can change this setting in the range of -4 to 5 octaves.

The OCTAVE/TRANPOSE indicator will light to indicate the current octave shift setting (p. 11).

If you press the [+] button and [-] button simultaneously, this setting will be reset to 0.

Changing the pitch (Transpose)

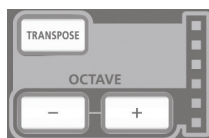
You can transpose the pitch in semitone step by using the [+] [-] buttons while holding down the [TRANPOSE] button.

You can change this setting in the range of -6 to 5.

The OCTAVE/TRANPOSE indicator will light to indicate the current transpose setting (p. 11).

When the [TRANPOSE] button is turned on, the transposition setting is enabled. When the [TRANPOSE] button is turned off, the transposition setting is disabled.

To reset the transpose setting to 0, hold down the [TRANPOSE] button and press the [+] button and [-] button simultaneously.



Using the Lever to Modify the Sound

Changing the pitch of a sounding note (Pitch Bend)

Moving the [Pitch Bend/Modulation] lever to the left or right will transmit pitch bend messages, causing the pitch to change slightly.

- * The range of the pitch change (“bend range”) will depend on the settings of your sound module.

Applying modulation to a sounding note (Modulation)

Moving the bender lever away from yourself will transmit modulation messages (CC#01), applying a vibrato effect to the sound.

- * The way in which the sound changes will depend on the settings of your sound module.

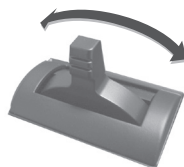
MEMO

Moving the lever toward the left while you play will lower the pitch, and moving it toward the right will raise the pitch. This effect is called “pitch bend.”

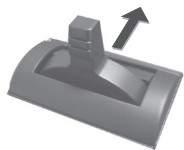
Moving the lever away from yourself will apply vibrato. This effect is called “modulation.”

If you move the lever to left or right and simultaneously move it away from yourself, both effects will apply at the same time.

- * The amount of pitch change (bend range) depends on the settings of your sound module.



Pitch bend effect



Modulation effect

Using the D-BEAM to Modify the Sound

You use the D-BEAM controller simply by moving your hand above it. By assigning different functions to it, you can control the sound in various ways.



1. Press the D-BEAM [PITCH], [VOL], or [ASSIGN] button to turn the D-BEAM controller on.

Button	Function
[PITCH] button	The pitch will change as you move your hand above the D-BEAM controller.
[VOL] button	The volume will change, allowing you to add expression to your performance.
[ASSIGN] button	The function assigned to the D-BEAM controller will be controlled. (Factory setting: aftertouch)

* The effect that's applied will depend on the sound module. For details, refer to the owner's manual of your sound module.

MEMO

You can change the function that's assigned to the [ASSIGN] button. For details, refer to "Assigning Functions to the Knobs, Buttons, and Jacks" (p. 30).

2. While playing the keyboard to produce sound, position your hand above the D-BEAM controller and slowly move it up and down.
3. To turn off the D-BEAM controller, once again press the button you pressed in step 1 (the button will go out).

Effective range of the D-BEAM controller

This illustration shows the effective range of the D-BEAM controller. No effect will be obtained if you position your hand outside the effective range.

NOTE

The effective range of the D-BEAM controller will change depending on the lighting conditions.



Using the Knobs to Modify the Sound

You can modify the sound by turning the [C1] [C2] knobs.



Knob	Function
[C1] knob	Transmits a Cutoff (CC#74) message.
[C2] knob	Transmits a Resonance (CC#71) message.

* The effect that's applied will depend on the sound module. For details, refer to the owner's manual of your sound module.

MEMO

You can change the functions that are assigned to the [C1] [C2] knobs. For details, refer to "Assigning Functions to the Knobs, Buttons, and Jacks" (p. 30).

Using the Pedals to Modify the Sound

The A-49 supports the use of a hold pedal (DP-2, DP-10; available separately) and an expression pedal (EV-5; available separately).

Jack	Function	Pedal
HOLD jack	Hold (CC#64)	Hold pedal
EXPRESSION jack	Expression (CC#11)	Expression pedal

* The effect that's applied will depend on the sound module. For details, refer to the owner's manual of your sound module.

MEMO

You can change the functions that are assigned to the HOLD jack and the EXPRESSION jack. For details, refer to "Assigning Functions to the Knobs, Buttons, and Jacks" (p. 30).

Sustaining the notes (Hold Pedal)

While playing the keyboard, step on the pedal switch.

You can hold (sustain) the notes by stepping on the pedal switch.



Adding expression to your performance (Expression Pedal)

While playing the keyboard, raise or lower the expression pedal.

You can make your performance more expressive by varying the volume.

* Use only the specified expression pedal (EV-5; sold separately). By connecting any other expression pedals, you risk causing malfunction and/or damage to the unit.

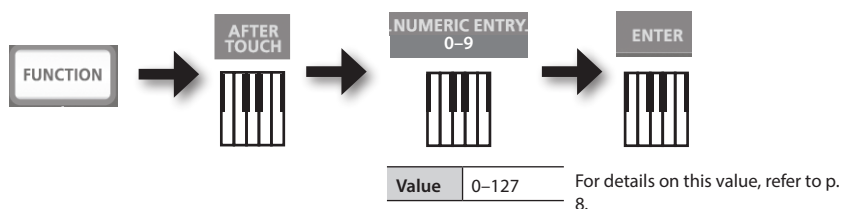


Using Aftertouch to Modify the Sound

Aftertouch is a function that lets you modify the sound by applying additional pressure to the key after playing a note.

On the A-49, applying further pressure to a key after playing a note will not affect the sound, turning on the [ASSIGN] button and moving your hand above the D-BEAM controller will cause Aftertouch messages to be transmitted.

As an alternative to using the D-BEAM controller, you can also directly enter a specific aftertouch value by using the keyboard.



* If you specify an aftertouch value other than 0, the change will continue to be applied to the sound. Return the value to 0 if you don't need this.

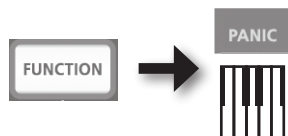
MEMO

- The A-49 is only able to transmit the variety of aftertouch called “channel pressure”; it cannot transmit “polyphonic key pressure” messages.
- You can assign aftertouch to the [C1] [C2] knobs or to the EXPRESSION jack. For details, refer to “Assigning Functions to the Knobs, Buttons, and Jacks” (p. 30).

Halting Stuck Notes (PANIC)

If you experience “stuck notes” on the connected MIDI sound module, or if there’s something else wrong with the sound, you can transmit reset messages (the PANIC function) to fix the problem.

This function will transmit the reset messages All Sounds Off, All Notes Off, and Reset All Controllers for all channels.

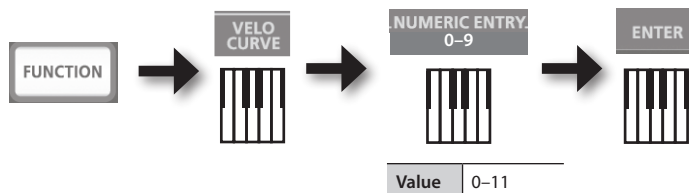


Changing the A-49 Settings

To change settings for the A-49, you need to be in FUNCTION mode.





Parameter	Factory setting	Explanation	Page
VELO CURVE	1-MEDIUM	When you play the A-49's keyboard, the transmitted note message will include a velocity value (volume data) corresponding to the force of your strike. The VELO CURVE setting lets you choose the curve by which the velocity value will change.	p. 28
KEY VELO	TOUCH	Specifies the velocity value of the keys you play.	p. 29
SN SETTING	MODE 0	Switches the function of the [C2] knob in SuperNATURAL mode.	p. 29
[C1] knob	Cutoff (CC#74)	Switches the functions assigned to the knobs, buttons, and jacks.	p. 30
[C2] knob	Resonance (CC#71)		
[ASSIGN] button	Aftertouch		
[S1] button	Switches the sound (decrements the program change number)		
[S2] button	Switches the sound (increments the program change number)		
HOLD jack	Hold (CC#64)		
EXPRESSION jack	Expression (CC#11)		
CTRL DIR	Positive direction	Specifies whether turning the knob toward the right will transmit successively higher, or successively lower values. The same setting can be made for the D-BEAM controller, buttons, and pedals.	p. 33
ADV	ADVANCED	Specifies whether the A-49 will use the dedicated driver described in "Installing the Dedicated Driver" (p. 13) (ADVANCED), or the standard driver provided by the operating system (GENERIC).	p. 33
FACT RESET	—	Returns all of the A-49's settings to their factory-set state.	p. 34

Changing the Velocity Curve (VELO CURVE)

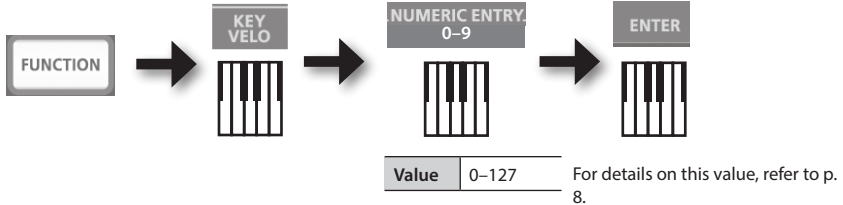


For details on this value, refer to p. 8.

* Values outside the acceptable range (12-) will not be entered.

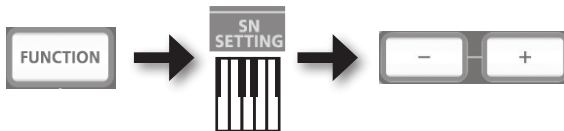
Value	Setting	Keyboard sensitivity	Type of curve
0	1-LIGHT	Higher velocity values (volume) can be produced even if you play softly.	These are the most typical settings. Your keyboard playing dynamics will produce the most natural volume change.  1
1	1-MEDIUM (default)	Keyboard sensitivity will be typical.	
2	1-HEAVY	Higher velocity values (volume) will not be produced unless you play strongly.	Compared to curve 1, these curves allow greater volume change without having to play very strongly.  2
3	2-LIGHT	Higher velocity values (volume) can be produced even if you play softly.	
4	2-MEDIUM	Keyboard sensitivity will be typical.	These curves make it easy to play consistently, with minimal change produced by your playing dynamics.  3
5	2-HEAVY	Higher velocity values (volume) will not be produced unless you play strongly.	
6	3-LIGHT	Higher velocity values (volume) can be produced even if you play softly.	Compared to curve 1, these curves produce greater volume change when you play strongly.  4
7	3-MEDIUM	Keyboard sensitivity will be typical.	
8	3-HEAVY	Higher velocity values (volume) will not be produced unless you play strongly.	
9	4-LIGHT	Higher velocity values (volume) can be produced even if you play softly.	
10	4-MEDIUM	Keyboard sensitivity will be typical.	
11	4-HEAVY	Higher velocity values (volume) will not be produced unless you play strongly.	

Specifying the Keyboard Velocity Value (KEY VELO)



Value	Setting	Explanation
0	TOUCH (default)	The velocity value that's transmitted will depend on the keyboard sensitivity and change curve you specify in "Changing the Velocity Curve (VELO CURVE)" (p. 28).
1-127	FIXED VALUE	The velocity value you specify here will be transmitted regardless of how strongly you play the keyboard.

Switching the Function of the [C2] Knob in SuperNATURAL Mode (SN SETTING)



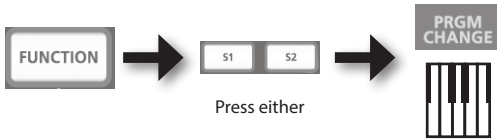
Button	Setting	Explanation
[+] button	MODE 1	General purpose controller 4 (CC#19) will be assigned to the [C2] knob.
[-] button	MODE 0 (default)	General purpose controller 2 (CC#17) will be assigned to the [C2] knob.

* The effect that's applied will depend on the sound module. For details, refer to the owner's manual of your sound module.

Assigning Functions to the Knobs, Buttons, and Jacks

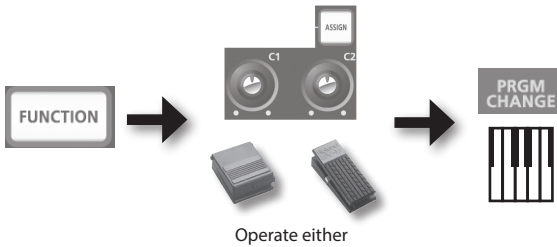
Assigning a Program Change Message (PRGM CHANGE)

[S1] [S2] buttons

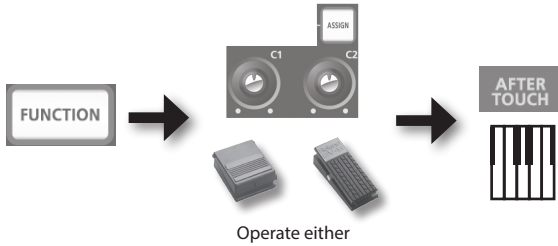


Button	Function
[S1] button	Decrement the program change number
[S2] button	Increment the program change number

Other controllers

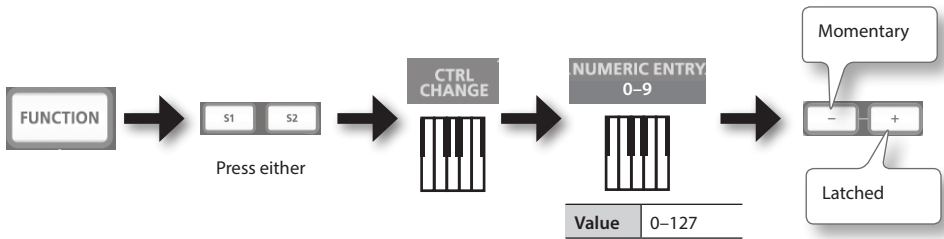


Assigning Aftertouch



Assigning a Control Change Number (CC#)

[S1] [S2] buttons

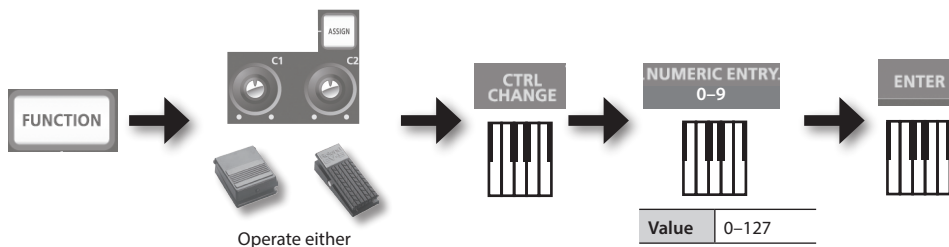


For details on this value, refer to p. 8.

Button	[S1][S2] buttons
[+] button	The button will alternately transmit ON (127) and OFF (0) each time you press it (Latched operation)
[-] button	The button will transmit ON (127) when you press it, and OFF (0) when you release it (Momentary operation)

Changing the A-49 Settings

Other controllers



For details on this value, refer to p. 8.

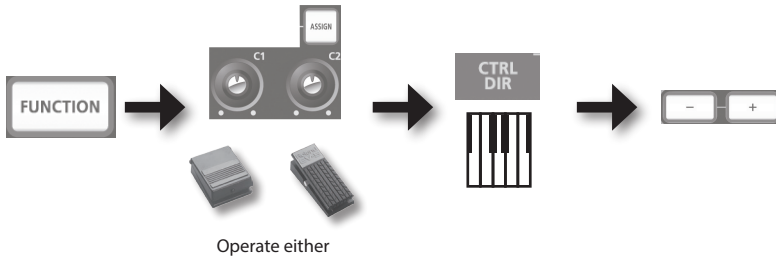
* You can't assign CC#0 (Bank Select MSB) or CC#32 (Bank select LSB).

Frequently used CC#

CC#	Function	Factory assignments
1	Modulation	Modulation of [Pitch Bend/Modulation] lever
5	Portamento time	—
7	Volume	[VOL] button
10	Panpot	—
11	Expression	EXPRESSION jack
64	Hold	HOLD jack
65	Portamento	—
66	Sostenuto	—
67	Soft	—
71	Resonance	[C2] knob
72	Release time	—
73	Attack time	—
74	Cutoff	[C1] knob
75	Decay time	—
76	Vibrato rate	—
77	Vibrato depth	—
78	Vibrato delay	—
84	Portamento control	—
91	General purpose effect 1 (Reverb send level)	—
93	General purpose effect 3 (Chorus send level)	—

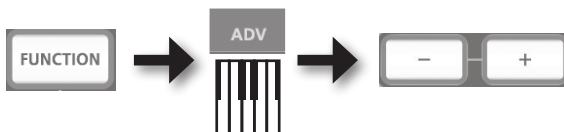
* The effect that's applied will depend on the sound module. For details, refer to the owner's manual of your sound module.

Changing the Direction of Value Increases for the Knobs, D-BEAM Controller, and Pedals (CTRL DIR)



Button	Setting	Explanation
[+] button	POSITIVE (default)	Moving the knob toward the right will increase the value. Moving your hand closer to the D-BEAM controller will increase the value, and moving it away from the D-BEAM controller will decrease the value. Pressing a pedal will increase the value.
[-] button	REVERSED	The opposite will occur.

Selecting the Dedicated Driver or the Generic Driver

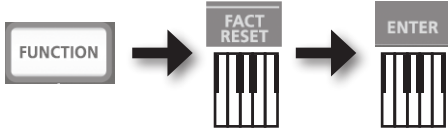


Normally, you can leave this set to "ADVANCED."

Button	Setting	Explanation
[+] button	ADVANCED (default)	The dedicated driver described in "Installing the Dedicated Driver" (p. 13) will be used.
[-] button	GENERIC	The generic driver provided by the operating system will be used. This is convenient if you don't have the dedicated driver, or if you're unable to install the dedicated driver.

* After changing the setting, disconnect the unit's USB cable, and then reconnect it to reflect setting.

Restoring the Factory Settings (FACT RESET)



Troubleshooting

If you experience problems, read this chapter first. It contains tips for solving most problems. If this chapter cannot help you solve a problem, please refer to the support section of our website. If the problem is not resolved, refer to the contact information listed at the end of this manual.

Roland support website: <http://www.roland.com/support/>



Problems When Installing the Driver

Problem	Confirmation	Resolution
Cannot install	Are you logged on with a user account that does not have administrator privileges?	Log on to the computer with a user account that has administrator privileges. For details, consult the administrator for your computer system.
Installer does not exit	Is your computer running on battery power?	Connect the power cord to the computer.
	Other than a mouse and keyboard, are any USB devices connected?	Make sure that there are no USB devices connected to the computer (other than a mouse and keyboard) during installation.
	Is the unit connected to a USB hub that is not connected to a power supply?	Use a USB hub that connects to a power supply.

Problems When Using the Unit

Problem	Confirmation	Resolution
Cannot select or use unit device	Is the driver installed?	Install the driver (p. 13).
	Is the POWER indicator off?	Make sure that the unit is connected to the computer correctly. If the problem is not resolved, reinstall the driver.
	Is the unit's device name displayed?	Exit all programs that are using the unit, disconnect the unit's USB cable, and then reconnect it.
	Is another program using the unit?	If the problem is not resolved, reinstall the driver.
	Did the computer enter standby (suspend) mode, hibernate mode, or sleep mode while the unit was connected?	Exit all programs that are using the unit, disconnect the unit's USB cable, and then reconnect it.
	Did you disconnect and reconnect the USB cable while using the unit?	If the problem is not resolved, restart the computer.

Troubleshooting

Problem	Confirmation	Resolution
Cannot select or use unit device	Was the unit connected to the computer while the computer was starting up?	Connect the unit after the computer has started up. With some computers, the unit cannot be used if it is connected to the computer while the computer is starting up.
	Mac OS X Have you configured "Audio MIDI Setup"?	Configure Audio MIDI Setup.
	Could you have specified OS default (GENERIC) as the driver setting?	Choose the dedicated setting (ADVANCED) (p. 33).
No sound	Is the POWER indicator off?	Make sure that the unit is connected to the computer correctly.
	Could you have operated the pedal or D-BEAM controller to lower the volume?	Try pressing the pedal or moving your hand above the D-BEAM controller.
Cannot play back or record	Is the driver installed?	Install the driver (p. 13).
	Are the software's input device and output device configured?	Select the A-49 as the input and output device.
	Is the unit's POWER indicator off?	Make sure that the unit is connected to the computer correctly. If the problem is not resolved, reinstall the driver (p. 13).
	Is the sound module connected to the MIDI OUT cable receiving MIDI signals?	Confirm the settings of the sound module.
	Is there another program using the unit?	Exit all programs that are using the unit, disconnect the unit's USB cable, and then reconnect it. If the problem is not resolved, reinstall the driver.
	Did the computer enter standby (suspend) mode, hibernate mode, or sleep mode while the unit was connected?	Exit all programs that are using the unit, disconnect the unit's USB cable, and then reconnect it.
	Did you disconnect and reconnect the USB cable while using the unit?	If the problem is not resolved, restart the computer.
	Was the unit connected to the computer while the computer was starting up?	Connect the unit after the computer has started up. With some computers, the unit cannot be used if it is connected to the computer while the computer is starting up.
Did the computer perform a processor-intensive task while you were using the unit?	Stop playback or recording, and then try playing back or recording again. If the problem is not resolved, exit all programs that are using the unit, disconnect the unit's USB cable, and then reconnect it.	

Problem	Confirmation	Resolution
Duplicate notes sound	Is the sound module set to Local On? Is the software's THRU function turned on?	Configure as follows. Sound module: Local Off Software's THRU function: Off For details, refer to the owner's manual for the equipment you are using.
Sound is interrupted during playback or recording, sound drops out	Are multiple programs running?	Exit programs that are not in use.
	Windows Is the system software up to date?	Run Windows Update or Microsoft Update and make sure the system software is up to date.
	Mac OS X Have you used Mac OS X Software Update?	Run Software Update and make sure the system software is up to date.
	Are the drivers for the computer's internal chipset and graphics card up to date?	Update to the latest drivers, as necessary.
	Is the unit connected to a USB hub?	Connect the unit directly to one of the computer's USB connectors.
	Did you try to play back or record immediately after the computer started up or after it woke up from sleep mode?	Wait a while before attempting playback or recording.
There's a time lag from when you play the keyboard until your software sound generator produces sound	Have you lowered (decreased) the audio buffer size of your software sound generator? Have you lowered (decreased) the buffer size for your sound card?	A software sound generator produces sound using your computer's sound card. Before the sound from the software sound generator is actually heard from the sound card as sound, there will be a time lag referred to as "latency." Regardless of the combination of sound generator and sound card you use, there will always be some latency. Usually, however, the latency can be kept to an acceptable amount by using the right combination of sound generator and card, and by making the appropriate settings. For details on how to make these settings, refer to the owner's manuals for your software and sound card.

Main Specifications

Roland A-49: MIDI Keyboard Controller

Keyboard	49 keys (with velocity)
Controllers	Buttons: [S1] [S2] (Assignable) Knobs: [C1] [C2] (Assignable) Foot Pedals: HOLD, EXPRESSION [Pitch Bend/Modulation] lever D-BEAM controller
Buttons	[FUNCTION] button [SuperNATURAL] button [+][-] buttons [TRANSCOPE] button
Display	POWER indicator LED OCTAVE/TRANSCOPE indicator LED
Connectors	HOLD jack: 1/4-inch phone type EXPRESSION jack: 1/4-inch TRS phone type MIDI OUT connector USB COMPUTER port (USB Type B)
Power Supply	Supplied from the computer via USB COMPUTER port
Current Draw	98 mA
Dimensions	836 (W) x 182 (D) x 84 (H) mm 32-15/16 (W) x 7-3/16 (D) x 3-5/16 (H) inches
Weight	2.5 kg / 5 lbs 9 oz
Accessories	Owner's Manual USB cable Ableton Live Lite Serial Number Card
Options (sold separately)	Pedal Switch (DP-2/DP-10) Expression Pedal (EV-5)

* In the interest of product improvement, the specifications and/or appearance of this unit are subject to change without prior notice.

MIDI Implementation Chart

Date: Sep. 1, 2012

Version: 1.00

Model: A-49

Function...	Transmitted	Recognized	Remarks
Basic Channel Default Changed	1 1-16	× ×	
Mode Default Messages Altered	Mode 3 OMNI ON/OFF, MONO, POLY *****	× × ×	
Note Number : True Voice	0-127 *****	× ×	
Velocity Note ON Note OFF	O (9n v=1-127) O (8n v=1-127), (9n v=0)	× ×	
Aftertouch Key's Ch's	× O	× ×	
Pitch Bend	O	×	
Control Change 0-119	O	×	
Program Change : True #	O (0-127) *****	× ×	
System Exclusive	O	O	
System Common : Song Pos : Song Sel : Tune	O O (0-127) O	× × ×	
System Real Time : Clock : Command	O O	× ×	
Aux Message : All Sound Off : Reset All Controller : Local control : All Notes Off : Active Sense : Reset	O *1 (120) O *1 (121) O O *1 (123) O O	× × × × × ×	
Notes	*1 Transmits When the Panic function is executed.		

Mode 1 : OMNI ON, POLY

Mode 2 : OMNI ON, MONO

O : Yes

Mode 3 : OMNI OFF, POLY

Mode 4 : OMNI OFF, MONO

X : No

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MEMO

For EU Countries



- UK** This symbol indicates that in EU countries, this product must be collected separately from household waste, as defined in each region. Products bearing this symbol must not be discarded together with household waste.
- DE** Dieses Symbol bedeutet, dass dieses Produkt in EU-Ländern getrennt vom Hausmüll gesammelt werden muss gemäß den regionalen Bestimmungen. Mit diesem Symbol gekennzeichnete Produkte dürfen nicht zusammen mit den Hausmüll entsorgt werden.
- FR** Ce symbole indique que dans les pays de l'Union européenne, ce produit doit être collecté séparément des ordures ménagères selon les directives en vigueur dans chacun de ces pays. Les produits portant ce symbole ne doivent pas être mis au rebut avec les ordures ménagères.
- IT** Questo simbolo indica che nei paesi della Comunità europea questo prodotto deve essere smaltito separatamente dai normali rifiuti domestici, secondo la legislazione in vigore in ciascun paese. I prodotti che riportano questo simbolo non devono essere smaltiti insieme ai rifiuti domestici. Ai sensi dell'art. 13 del D.Lgs. 25 luglio 2005 n. 151.
- ES** Este símbolo indica que en los países de la Unión Europea este producto debe recogerse aparte de los residuos domésticos, tal como está regulado en cada zona. Los productos con este símbolo no se deben depositar con los residuos domésticos.
- PT** Este símbolo indica que nos países da UE, a recolha deste produto deverá ser feita separadamente do lixo doméstico, de acordo com os regulamentos de cada região. Os produtos que apresentem este símbolo não deverão ser eliminados juntamente com o lixo doméstico.
- NL** Dit symbool geeft aan dat in landen van de EU dit product gescheiden van huishoudelijk afval moet worden aangeboden, zoals bepaald per gemeente of regio. Producten die van dit symbool zijn voorzien, mogen niet samen met huishoudelijk afval worden verwijderd.
- DK** Dette symbol angiver, at i EU-lande skal dette produkt opsamles adskilt fra husholdningsaffald, som defineret i hver enkelt region. Produkter med dette symbol må ikke smides ud sammen med husholdningsaffald.
- NO** Dette symbolet indikerer at produktet må behandles som spesialavfall i EU-land, iht. til retningslinjer for den enkelte regionen, og ikke kastes sammen med vanlig husholdningsavfall. Produkter som er merket med dette symbolet, må ikke kastes sammen med vanlig husholdningsavfall.

- SE** Symbolen anger att i EU-länder måste den här produkten kasseras separat från hushållsavfall, i enlighet med varje regions bestämmelser. Produkter med den här symbolen får inte kasseras tillsammans med hushållsavfall.
- FI** Tämä merkintä ilmaisee, että tuote on EU-maissa kerättävä erillään kotitalousjätteistä kunkin alueen voimassa olevien määräysten mukaisesti. Tämä merkintällä varustettuja tuotteita ei saa hävittää kotitalousjätteiden mukana.
- HU** Ez a szimbólum azt jelenti, hogy az Európán Unióban ezt a terméket a háztartási hulladéktól elkülönítve, az adott régióban érvényes szabályozás szerint kell gyűjteni. Az ezzel a szimbólummal ellátott termékeket nem szabad a háztartási hulladékok közé dobni.
- PL** Symbol oznacza, że zgodnie z regulacjami w odpowiednim regionie, w krajach UE produktu nie należy wyrzucać z odpadami domowymi. Produktów opatrzonych tym symbolem nie można utylizować razem z odpadami domowymi.
- CZ** Tento symbol udává, že v zemích EU musí být tento výrobek sbírán odděleně od domácího odpadu, jak je určeno pro každý region. Výrobky nesoucí tento symbol se nesmí vyhazovat spolu s domácími odpadem.
- SK** Tento symbol vyjadruje, že v krajinách EÚ sa musí byť tohto produktu vykonávaná oddelené od domového odpadu, podľa nariadení platných v konkrétnej krajine. Produkty s týmto symbolom sa nesmú vyhazovať spolu s domovým odpadom.
- EE** See sümbol näitab, et EL-i maades tuleb see toode olmeprügist eraldi koguda, nii nagu on igas piirkonnas määratud. Selle sümboliga märgitud tooteid ei tohi ära visata koos olmeprügiga.
- LT** Šis simbolis rodo, kad ES šalyse šis produktas turi būti surenkamas atskirai nuo buitinių atliekų, kaip nustatyta kiekviename regione. Šiuo simboliu paženkintai produktai neturi būti išmetami kartu su buitiniems atliekoms.
- LV** Šis simbols norāda, ka ES valstīs šo produktu jāievieš atsevišķi no mājsaimniecības atkritumiem, kā noteikts katrā reģionā. Produkts ar šo simbolu nedrīkst izmest kopā ar mājsaimniecības atkritumiem.
- SI** Ta simbol označuje, da je treba proizovd v državah EU zbirati ločeno od gospodinskih odpadkov, tako kot je določeno v vsaki regiji. Proizvoda s tem znakom ni dovoljeno odlagati skupaj z gospodinskimi odpadki.
- GR** Το σύμβολο αυτό υποδηλώνει ότι στις χώρες της Ε.Ε. το συγκεκριμένο προϊόν πρέπει να συλλέγεται χωριστά από τα υπόλοιπα οικιακά απορρίμματα, σύμφωνα με όσα προβλέπονται σε κάθε περιοχή. Τα προϊόντα που φέρουν το συγκεκριμένο σύμβολο δεν πρέπει να απορρίπτονται μαζί με τα οικιακά απορρίμματα.

For China

有关产品中所含有害物质的说明

本资料就本公司产品中所含的特定有害物质及其安全性予以说明。
本资料适用于2007年3月1日以后本公司所制造的产品。

环保使用期限



此标志适用于在中国国内销售的电子信息产品，表示环保使用期限的年数。所谓环保使用期限是指在自制造日起的规定期限内，产品中所含的有害物质不致引起环境污染，不会对人身、财产造成严重的不良影响。
环保使用期限仅在遵照产品使用说明书，正确使用产品的条件下才有效。
不当的使用，将会导致有害物质泄漏的危险。

产品中有毒物质的名称及含量

部件名称	有害物质					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr(VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
外壳 (壳体)	×	○	○	○	○	○
电子部件 (印刷电路板等)	×	○	×	○	○	○
附件 (电源线、交流适配器等)	×	○	○	○	○	○

本表格依据SJ/T 11364的规定编制。
○：表示该有害物质在该部件所有均质材料中的含量均在GB/T 26572 规定的限量要求以下。
×：表示该有害物质至少在该部件的某一均质材料中的含量超出GB/T 26572的限量要求。
(企业可在此处，根据实际情况对上表中打“×”的技术原因进行进一步说明。)

For the USA

DECLARATION OF CONFORMITY Compliance Information Statement

Model Name : A-49
Type of Equipment : MIDI Keyboard Controller
Responsible Party : Roland Corporation U.S.
Address : 5100 S. Eastern Avenue, Los Angeles, CA 90040-2938
Telephone : (323) 890-3700

For the USA

FEDERAL COMMUNICATIONS COMMISSION RADIO FREQUENCY INTERFERENCE STATEMENT

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment requires shielded interface cables in order to meet FCC class B limit.

Any unauthorized changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

For Canada

CAN ICES-3 (B)/NMB-3 (B)

For EU Countries

Manufacturer: Roland Corporation
2036-1 Nakagawa, Hosoe-cho, Kita-ku, Hamamatsu, Shizuoka 431-1304, JAPAN
Importer: Roland Corporation
ENA 23 Zone 1 nr. 1620 Klaus-Michael Kuehnelaan 13, 2440 Geel, BELGIUM



For the U.K.

Manufacturer: Roland Corporation
2036-1 Nakagawa, Hosoe-cho, Kita-ku, Hamamatsu, Shizuoka 431-1304, JAPAN
Importer: Roland Europe Group Limited
Hive 2, 1530 Arlington Business Park, Theale, Reading, Berkshire. RG7 4SA United Kingdom





Roland Service Centers and Distributors

When you need repair service, access this URL and find your nearest Roland Service Center or authorized Roland distributor in your country.

<http://roland.cm/service>



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