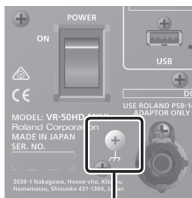


Connect the ground terminal to an external ground point before use

In order to stabilize the connections between this unit and external devices, and to prevent malfunctions or faulty operation caused by static electricity, you should connect the ground terminal of this unit to an external ground point before use. Use the included ground cord to make this connection.



Ground terminal

- * Before connecting the ground cord or any external devices, you must minimize the volume of all devices and turn off the power of all devices in order to prevent faulty operation or malfunctions.
- * Unsuitable places for connection
 - Water pipes (may result in shock or electrocution)
 - Gas pipes (may result in fire or explosion)
 - Telephone-line ground or lightning rod (may be dangerous in the event of lightning)
- * If you connect the ground terminal to an external ground point, a slight hum might occur.
- * If you do not understand how to connect the ground terminal, contact the nearest Roland Service Center.

Checking the Included Items

Check that all of the included items are present. If any of the included items are missing, contact your dealer.

- | | |
|---|--|
| <input type="checkbox"/> VR-50HD MK II unit | <input type="checkbox"/> Ground cord |
| <input type="checkbox"/> AC adaptor | <input type="checkbox"/> Startup Guide (this document) |
| <input type="checkbox"/> Power cord | <input type="checkbox"/> Leaflet "USING THE UNIT SAFELY" |

PDF Manual (download from the Web)

For details on operation and a list of menus, refer to "Reference Manual" (PDF).

Downloading

1. Access the Roland website.
<https://proav.roland.com/>
2. Move to the product page → click "Support" → download the applicable PDF file.



Before using the unit, ensure that its system program is at the most recent version. For information on available upgrades for the system program, see the Roland website (<https://proav.roland.com/>).

You can check the system program version by Pressing the [MENU] button → System < Setup > → < Version >.

Before using this unit, carefully read "USING THE UNIT SAFELY" and "IMPORTANT NOTES" (the leaflet "USING THE UNIT SAFELY" and the Owner's Manual (p. 8)). After reading, keep the document(s) where it will be available for immediate reference.

Panel Descriptions

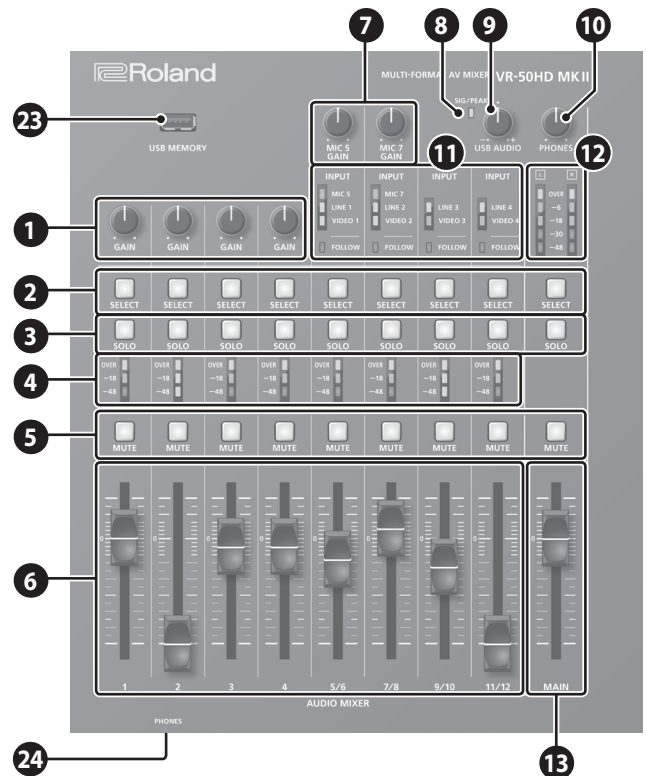
Top Panel

Audio Mixer Section (Input channels 1–11/12, MAIN bus)

- 1 [GAIN] knobs**
Adjust the gain (sensitivity) of the audio that is being input from the AUDIO IN 1–4 jacks.
- 2 [SELECT] buttons**
Accesses a menu screen related to audio input and output.
- 3 [SOLO] buttons**
Turn the solo function on/off. When this is on (lit), you can use the headphones to monitor the pre-fader audio.
* The audio for which the solo function is on can also be output from the AUX 2/MONITOR OUT jacks.
- 4 Level meters**
Indicate the input level.
- 5 [MUTE] buttons**
Turn the mute function on/off. When this is on (lit), the audio is temporarily silenced.
- 6 Audio faders**
Adjust the input level.
- 7 [MIC 5 GAIN] [MIC 7 GAIN] knobs**
Adjust the input gain (sensitivity) of the mic connected to the MIC 5 or MIC 7 jack.
- 8 SIG/PEAK indicator**
Indicates the output level of the USB audio. When the output level exceeds -48 dB, this is lit green. When output overload occurs, this is lit red.
- 9 [USB AUDIO] knob**
Adjusts the output level of the USB audio.
- 10 [PHONES] knob**
Adjusts the volume of the headphones.
- 11 INPUT indicators**

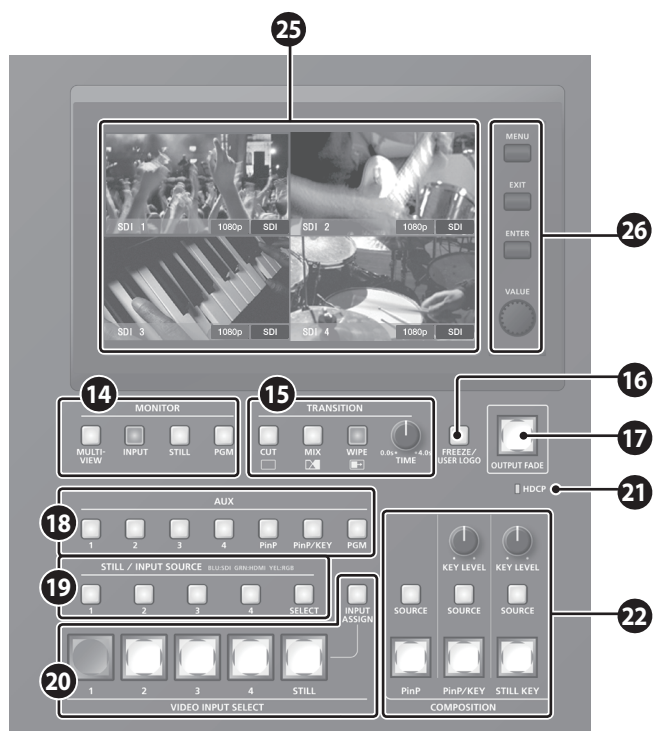
Indicator	Explanation	
MIC		
LINE	Indicates the audio source that is currently selected.	
VIDEO		
FOLLOW	When the audio follow function is on, this indicates the output status of the audio.	
	Lit green	Audio is not being output.
	Lit red	Audio is being output.
	Blinking red	Audio is being faded-in/out.
	* Audio follow is a function that automatically switches the audio output in tandem with video switching.	

- 12 MAIN level meter**
Indicates the output level.
- 13 [MAIN] fader**
Adjusts the output level.



Video Mixer Section

- 14 MONITOR**
Here you can switch the monitor display. The selected button is lit.
[MULTI-VIEW] button
Shows a list of the input/output video and the loaded still images.
[INPUT] button
Shows the input videos in four quarters of the screen.
[STILL] button
Shows the loaded still images in four quarters of the screen.
[PGM] button
Shows the program output video.
 - 15 TRANSITION**
[CUT] [MIX] [WIPE] buttons
Select video transition effects. The selected button is lit.
[TIME] knob
Adjusts the video transition time.
 - 16 [FREEZE/USER LOGO] button**
Turns the freeze function (freeze the output video) on/off. When on, the button is lit.
* You can also assign the user logo function (output a still image) to the [FREEZE/USER LOGO] button.
 - 17 [OUTPUT FADE] button**
The program output video and audio fade in/out.
- | Button | Status |
|-----------------|--------------------|
| Lit | Fade out completed |
| Blinking | Fading in/out |
| Unlit | Normal output |
- 18 AUX [1]–[4] [PinP] [PinP/KEY] [PGM] buttons**
Select the video that is sent to the AUX bus. The selected button is lit.



Common Controllers

- 23 USB MEMORY port**
Connect a USB flash drive here. It is used when loading a still image, or when saving or loading settings.
- 24 PHONES jacks (Front panel)**
Connect headphones here. Two sets of headphones can be used simultaneously.
- 25 Monitor (touch panel)**
Shows the input/output video, a loaded still image, or a menu screen. Touch the screen to select a menu item.
- 26 Menu operation area**
 - [MENU] button**
Switches the menu screen between visible and hidden.
 - [EXIT] button**
Returns you to the menu one level higher.
 - [ENTER] button**
Executes an operation.
 - [VALUE] knob**
Selects a menu item, or edits the value of a setting.

19 STILL/INPUT SOURCE

[SELECT] button

Selects the function of the [1]–[4] buttons. Each time you press the button, it cycles in the order of lit green → lit red → unlit (no function).

[1]–[4] buttons

- When the [SELECT] button is lit green
Select the video source that is assigned to each VIDEO INPUT SELECT [1]–[4] button. The lit color of the button indicates the video source.

Lit color	Video source	Lit color	Video source
Blue	SDI IN	Magenta	COMPOSITE IN
Green	HDMI IN	Yellow	RGB/COMPONENT IN

- When the [SELECT] button is lit red
Select the still image that is assigned to the VIDEO INPUT SELECT [STILL] button. The selected button is lit red.

20 VIDEO INPUT SELECT

[1]–[4] [STILL] buttons

Select the video that is output: an input video (1–4) or the still image (STILL). The selected button is lit.

[INPUT ASSIGN] button

Shows a menu screen where you can select the video source for the [1]–[4] buttons.

21 HDCP indicator

This indicator is lit, blinking, or unlit according to the HDCP (copy protection) setting and according to whether an HDCP-compliant device is connected.

22 COMPOSITION

[PinP] button

Turns PinP (picture-in-picture) composition on/off. When on, the button is lit.

[SOURCE] button

Shows a menu screen where you can select the inset screen video.

[PinP/KEY] button

Turns key composition on/off. When on, the button is lit.

[SOURCE] button

Shows a menu screen where you can select the video that will be composited.

[KEY LEVEL] knob

Adjusts the degree of extraction (transparency) for the key.

[STILL KEY] button

Turns on/off key composition using a still image (logo or image). When on, the button is lit.

[SOURCE] button

Shows a menu screen where you can select the still image that will be composited.

[KEY LEVEL] knob

Adjusts the degree of extraction (transparency) for the key.

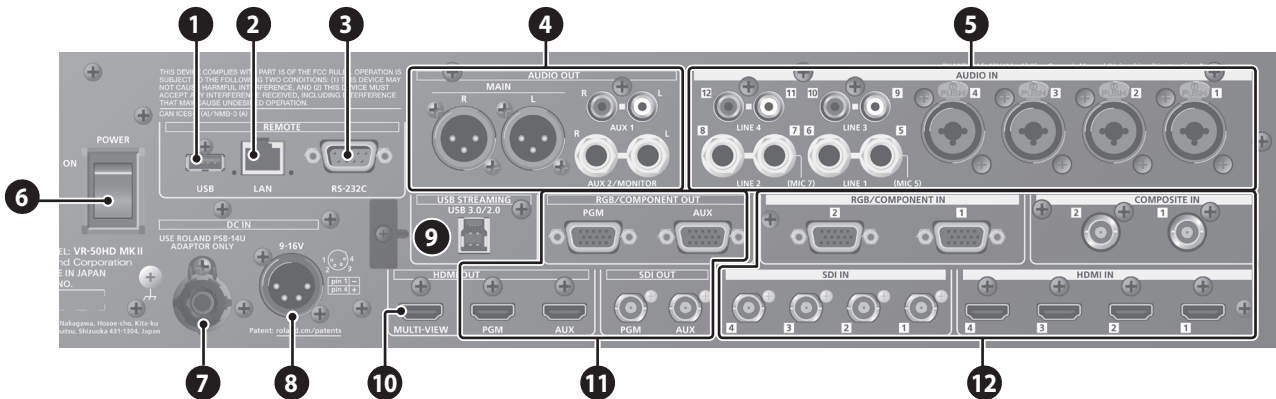
What is program (PGM) output?

This is the video output that reflects all processing, such as video compositing. With the factory settings, this is output from the PGM connector.

This is the video that is seen by the people who are watching the live stream or presentation.

Rear Panel

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



1 USB port

Connect a USB flash drive here. This is used to update the system program.

2 LAN port

Lets you remotely control this unit by using terminal software, etc.

3 RS-232C connector

You can connect this to a computer equipped with an RS-232C connector, and remotely control this unit.

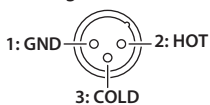
4 MAIN jacks, AUX 1 jacks, AUX 2/MONITOR jacks

These jacks output audio. Choose the jacks that are appropriate for the connected devices.

For each jack, you can change the audio bus (MAIN, AUX 1, AUX 2) that is assigned for output from that jack. With the factory settings, the bus assignments are as follows.

MAIN jacks	MAIN bus
AUX 1 jacks	AUX 1 bus
AUX 2/MONITOR jacks	AUX 2 bus

* Pin assignment of MAIN jacks (XLR)



5 AUDIO IN 1-4 jacks, LINE 1-4 jacks, MIC 5/7 jacks

These jacks input audio. Choose the jacks that are appropriate for the connected devices.

* Pin assignment of AUDIO IN 1-4 jacks (TRS/XLR)



*** About phantom power**

You can supply phantom power (+48 V) from the AUDIO IN 1-4 jacks (XLR). Turn on phantom power when you're using a condenser microphone that requires phantom power.

Select the [MENU] button → Audio < 1 >-< 4 > → set < +48V > to "ON."

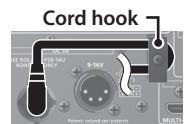
6 [POWER] switch (p. 5)

Turns the power on/off.

7 AC adaptor jack

Connect the included AC adaptor to this jack.

* Use the cord hook to secure the cord of the AC adaptor as shown in the illustration.



8 External power supply connector (p. 5)

Connect the external power supply here.

9 USB STREAMING port

Outputs the audio and video to your computer.

* If you are outputting HD video via USB, connect this to a USB 3.0 port of your computer.

* If you connect via an extension cable or a USB hub, the computer might not recognize this unit. We recommend that you connect this unit directly to your computer.

10 MULTI-VIEW connector

Outputs a list of the input/output video and the loaded still images.

* The output format fixed at 1080/60p.

11 PGM connectors, AUX connectors (RGB/COMPONENT OUT, HDMI OUT, SDI OUT)

These connectors output video. Choose the connectors that are appropriate for the connected devices.

For each connector, you can change the video bus (PGM, PVW, AUX) that is assigned for output from that connector. With the factory settings, the bus assignments are as follows.

PGM connectors	PGM bus (program video)
AUX connectors	AUX bus

12 RGB/COMPONENT IN 1-2 connectors

COMPOSITE IN 1-2 connectors
SDI IN 1-4 connectors, HDMI IN 1-4 connectors

These connectors input video. Choose the connectors that are appropriate for the connected devices.

The input format is automatically recognized.

NOTE

Do not block the cooling-fan intake and exhaust ports on the side panels. If the cooling-fan intake and exhaust ports are blocked, the internal temperatures may rise, causing malfunctions due to excessive heat.

Basic Operations

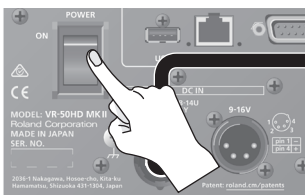
Turning the Power On/Off

Once everything is properly connected, be sure to follow the procedure below to turn on their power. If you turn on equipment in the wrong order, you risk causing malfunction or equipment failure.

* Before turning the unit on/off, always be sure to turn the volume down. Even with the volume turned down, you might hear some sound when switching the unit on/off. However, this is normal and does not indicate a malfunction.

Turning the power on

1. Make sure that all devices are powered-off.
2. Turn on this unit's [POWER] switch.



3. Turn on the power in the order of source devices → output devices.

Turning the power off

1. Turn off the power in the order of output devices → source devices.
2. Turn off this unit's [POWER] switch.

About the external power supply

You can use an external power supply to supply power.

If you use both the AC adaptor power supply and an external power supply simultaneously, the AC adaptor power supply operates as the "main power supply" and the external power supply operates as the "backup power supply."

Use an external power supply that satisfies the following conditions.

- Equipped with a current limiting function
- Able to supply 90 W or more of power

* Please also read the owner's manual of the external power supply that you're using.

NOTE

- Check whether this unit's external power supply connector matches the wiring of the external power supply that you're using. Connecting an external power supply whose wiring differs will cause malfunctions.

Pin wiring of the external power supply connector



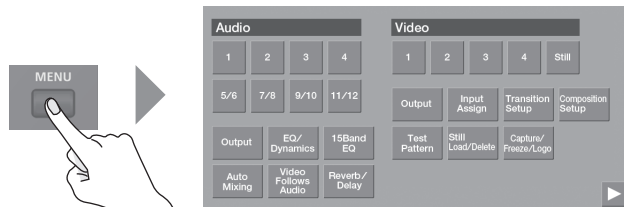
Pin number	Signal name
1	-
4	+

- You must supply power in the range of DC 9V–16V. Using a voltage outside this range will cause the external power supply or this unit to malfunction.

Operating the Menu

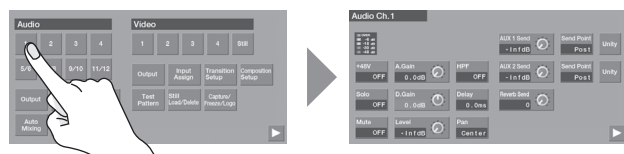
Here's how to access the menu, and make video/audio settings and settings for this unit.

1. Press the [MENU] button to display the MENU screen.



2. Touch a button in the screen to select a menu item.

The menu screen of the selected item appears.



- If the screen extends across multiple pages, touch ◀ or ▶ in the lower part of the screen to switch pages.
- Pressing the [EXIT] button moves you back one level higher.

3. Touch the screen to select the menu item that you want to edit, and edit the value.

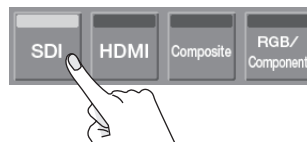
- For menu items shown with a red background, use the [VALUE] knob to edit the value.



MEMO

- By holding down the [ENTER] button and turning the [VALUE] knob, you can change the value more greatly.
- By holding down the [ENTER] button and pressing the [EXIT] button, you can reset the selected menu item (whose background is red) to its default value. If you continue holding the buttons, all menu items in the same screen will return to their default values.

- If the value of the setting is indicated by a button, touch a button to select the value of the setting.



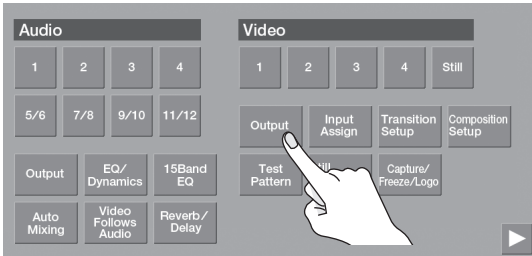
- For some menu items, the value of the setting changes each time you touch it.

4. Press the [MENU] button to close the menu.

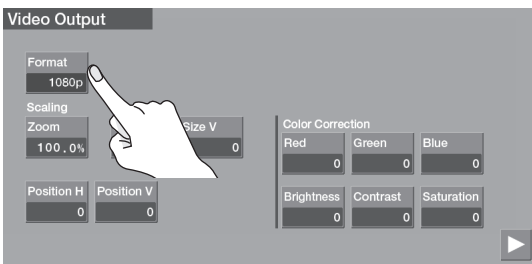
Setting the Output Format

Here's how to specify the output format as appropriate for the device that's connected.

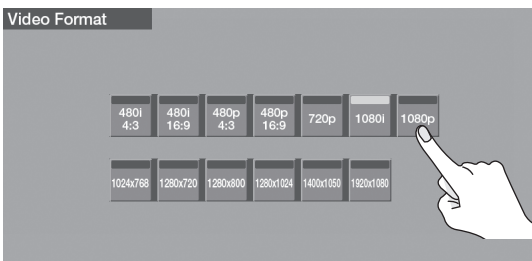
1. Press the [MENU] button to display the MENU screen.
2. Touch Video < Output >.



3. Touch < Format >.



4. Touch a button to select the output format.



The output format switches.

5. Press the [MENU] button to close the menu.

MEMO

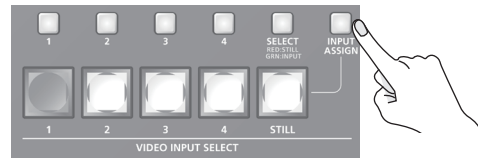
- If the output format is set to "1024x768"–"1920x1080," video is not output from the SDI OUT (PGM, AUX) connectors.
- The output format of the MULTI-VIEW connector is fixed at 1080/60p.
- The video output format of the USB STREAM port can be set by the [MENU] button → System <USB Stream> → <Resolution>.

Switching the Video

Assigning video sources

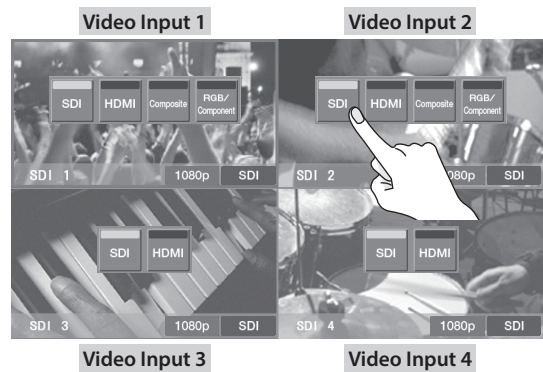
Here's how to assign the video sources being input from the video input connectors to the VIDEO INPUT SELECT [1]–[4] buttons.

1. Press the [INPUT ASSIGN] button.



The [INPUT ASSIGN] button is lit, and the video source select screen appears.

2. Touch a button to select the video source (connector name) that you want to input to Video Input 1–4.



3. Press the [INPUT ASSIGN] button to close the screen.

Switching the Video

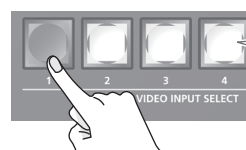
1. Press one of the [CUT], [MIX], or [WIPE] button to select the transition effect.



2. If you selected mix or wipe in step 1, turn the [TIME] knob to specify the video transition time.



3. Press a VIDEO INPUT SELECT [1]–[4] button to select the video.



Button	Video status
Lit red	Video is being output.
Blinking red	Video is transitioning.

The video is switched.

Adjusting the Audio

Adjusting the Input Gain (Sensitivity)

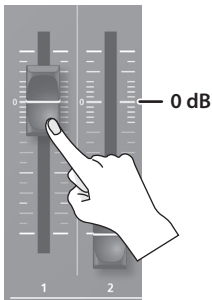
Here's how to adjust the input gain so that the audio is at the appropriate level.

Here we explain using the AUDIO IN 1 audio as an example.

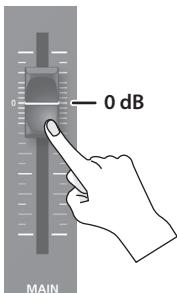
NOTE

Turning the [GAIN] knobs may produce a popping noise or cause momentary audio drop-out, but this is not a malfunction.

1. Position the input channel 1 audio fader near the "0 dB."



2. Move the [MAIN] fader to a position near the "0 dB."



3. Turn the input channel 1 [GAIN] knob fully counter-clockwise, minimizing (0 dB) the input gain.



4. While producing the sound that will actually be input, slowly turn the [GAIN] knob clockwise to adjust the input gain.

Raise the input gain as high as possible without allowing the level meter "OVER" indication to light red when the loudest sound level occurs.

MEMO

Adjusting the position (pan)

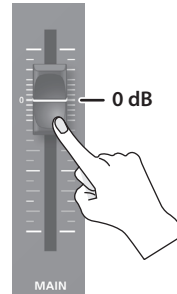
The left/right positioning of the sound is called "pan." If you're using two mics to stream a performance, panning the two mics to left and right will give the sound a more spacious feel.

To make adjustments, use the [MENU] button → Audio < 1 > - < 7/8 > → < Pan >.

Adjusting the Volume Balance

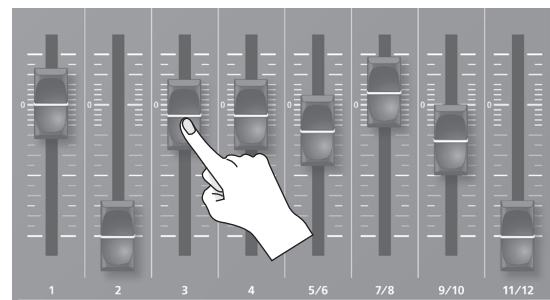
Here's how to adjust the volume balance of each input and the overall volume.

1. Move the [MAIN] fader to a position near the "0 dB."



2. While monitoring the audio via speakers or headphones, adjust the volume balance for the respective inputs.

Raise the volume level of audio you want to make more prominent, for example, an emcee microphone, and lower the volume level for other audio. When no audio is input, and for audio that is unused, lower the volume level to minimum (-INF dB).



3. Use the [MAIN] fader to adjust the volume of the output.

The MAIN level meter will light yellow at the appropriate volume.



Red: Excessive

Yellow: Appropriate

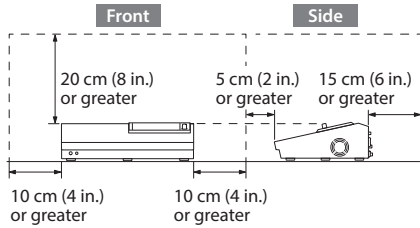
Green: Insufficient

USING THE UNIT SAFELY

WARNING

Secure a sufficient amount of space at the setup location

Since this unit normally emits a slight amount of heat, make sure to secure sufficient space around it, as shown below.



Use only the supplied AC adaptor and the correct voltage

Be sure to use only the AC adaptor supplied with the unit. Also, make sure the line voltage at the installation matches the input voltage specified on the AC adaptor's body. Other AC adaptors may use a different polarity, or be designed for a different voltage, so their use could result in damage, malfunction, or electric shock.

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.

CAUTION

Keep small items out of the reach of children

To prevent accidental ingestion of the small items, always keep them out of the reach of small children.

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.

Precautions concerning use of phantom power supply

Always turn the phantom power off when connecting any device other than condenser microphones that require phantom power. You risk causing damage if you mistakenly supply phantom power to dynamic microphones, audio playback devices, or other devices that don't require such power. Be sure to check the specifications of any microphone you intend to use by referring to the manual that came with it.

(This instrument's phantom power:

48 V DC, 14 mA Max)

IMPORTANT NOTES

Power Supply

- If the unit has been used with a power supply that has not been specified as suitable for the unit, the subsequent performance and operation of the unit can no longer be guaranteed. Also note that we may not be able to accept the unit for servicing and repairs.
- Place the AC adaptor so the side with the indicator faces upwards. The indicator will light when you plug the AC adaptor into an AC outlet.

Placement

- Depending on the material and temperature of the surface on which you place the unit, its rubber feet may discolor or mar the surface.

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.

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.

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.
- Never strike or apply strong pressure to the display.
- This unit allows you to switch images at high speed. For some people, viewing such images can cause headache, nausea, or other discomfort. Do not use this unit to create video that might cause these types of health problems. Roland Corporation will accept no responsibility for any such health problems that may occur in yourself or in viewers.
- Do not use connection cables that contain a built-in resistor.
- 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.

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.
- This product can be used to record or duplicate audio or visual material without being limited by certain technological copy-protection measures. This is due to the fact that this product is intended to be used for the purpose of producing original music or video material, and is therefore designed so that material that does not infringe copyrights belonging to others (for example, your own original works) can be recorded or duplicated freely.
- This product is using the open source license (GPL/LGPL) software. You have the right to acquire, modify and distribute the source code for this open source license software. You can obtain the open source license source code used in this product by downloading it from the following website: <https://proav.roland.com/global/support/>
- This product contains eParts integrated software platform of eSOL Co., Ltd. eParts is a trademark of eSOL Co., Ltd. in Japan.
- This Product uses the Source Code of μ T-Kernel under T-License 2.0 granted by the T-Engine Forum (www.tron.org).