

STREAMING VIDEO MIXER V-02HD MK II



English

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Checking the Included Items

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

- V-02HD MKII unit
- Cord hook
- AC adaptor
- Startup Guide
- Power cord
- Leaflet "USING THE UNIT SAFELY"

PDF Manual (download from the Web)

Details on operations and menu lists are provided in "Reference Manual" (PDF).

Downloading

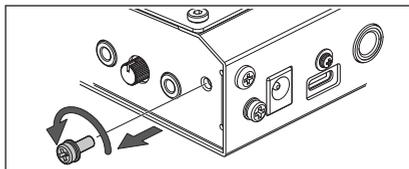
1. Enter the following URL in your computer.
<https://proav.roland.com/manuals/>
2. Choose "V-02HD MKII."



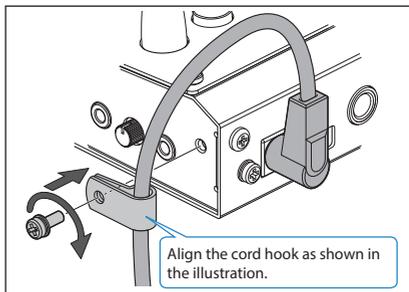
Attaching the Cord Hook

Attach the included cord hook. The cord hook is used to secure the cord of the AC adaptor.

1. Remove the screw (one) indicated in the illustration.



2. Using the screw that you removed in step 1, attach the cord hook as shown in the illustration.



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" → "VERSION."

Before using this unit, carefully read "USING THE UNIT SAFELY" and "IMPORTANT NOTES" (the leaflet "USING THE UNIT SAFELY" and the Startup Guide (p. 10)). After reading, keep the document(s) where it will be available for immediate reference.

Operating Guide (Panel Descriptions)

Top Panel

- **Fading video and audio in or out**
- **Outputting a captured still image**

[OUTPUT FADE] knob

Turn counterclockwise from the center
The program output video and audio fade in/out simultaneously. The video fades to a black screen.



The indicators located at the left and right of the [OUTPUT FADE] knob show the status.

Left indicator

Blinking red	Fading in/out
Lit red	Fade-out completed

Right indicator

Lit green	Unit contains still image
Lit red	Still image is being output
Dark	Unit contains no still image

Turn clockwise from the center

If you turn the knob all the way clockwise, the captured still image is output to preview/program as a cut (instant switching).

Center

Normal output.

* The settings described above are the factory defaults. You can also assign other functions to the [OUTPUT FADE] knob.

■ Selecting a Video Effect [TYPE] button

You can select the effect that's applied to the video. The video effect is switched each time you press the button. The indicator of the selected video effect is lit.

Transition effects → p. 6

MIX	The two videos are mixed as the transition occurs.
WIPE	The next video moves across to replace the original video.

Composition effects → p. 7, 8

Picture-in-picture (PiP)	The inset screen (a separate small screen) is shown on top of the background video.
KEY	A portion of the video is made transparent, and composited with the background video.



■ Switching video

[1] [2] buttons, Video fader → p. 6

[1] [2] buttons

Switch between the videos being input to INPUT 1 and 2, and send them to the program output.

[1] [2] buttons	Status
Lit red	Video that's being output as the program
Lit green	Preview video (standby video)

Video fader

Manually switch between the videos being input to INPUT 1 and 2, and send them to the program output.

Transition indicators (both sides of the fader)

The lit indicator shows the video that is being output as the program.

■ Compositing video

[1] [2] buttons, Video fader → p. 7, 8

[1] button (Lit yellow)/

Transition indicators (both sides of the fader)

Selects the background video when compositing video. A transition indicator (left or right) is lit to indicate the selected background video.

[2] button/Video fader

Outputs the resulting composited video as the program. The inset screen of picture-in-picture or the key video or image for key compositing is revealed or removed.

[2] button	Status
Lit red	Outputting the composited result as the program
Dark	Outputting only the background video as the program

■ Adjusting the video effect

[CONTROL 1] [CONTROL 2] knobs → p. 7-9

These adjust the video effect or visual effect (VFX).

- If the visual effect is on ([VFX] button lit), these knobs control the visual effect.
- Operate this while holding down the [VFX] button to target the audio effect.

■ Applying a Visual Effect to the Video

[VFX] button → p. 9

Turns the visual effect on/off.

When on, the [VFX] button is lit.

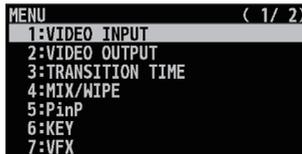
- You can adjust the audio effect by holding down the button and operating the [CONTROL 1] and [CONTROL 2] knobs.

■ Operating the Menu

[MENU] button, [VALUE] knob

Here's how to access the menu, and make video/audio settings and settings for the V-02HD MKII itself. The menu is shown on the display that's connected to the PREVIEW OUT connector.

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



The menu is organized into functions.

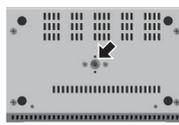
2. Turn the [VALUE] knob to move the cursor to the menu item that you want to change, and then press the [VALUE] knob.
3. Repeat step 2 as needed.
Pressing the [MENU] button moves you back one level higher.
4. Turn the [VALUE] knob to change the setting value, and then press the [VALUE] knob to confirm.

MEMO

- By turning the [VALUE] knob while pressing it, you can change the value more greatly.
- Long-pressing the [VALUE] knob returns the current menu item you're setting to its default value.

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

Tripod mounting socket (bottom panel)



This is used when attaching the V-02HD MKII to a commercially available camera tripod. The socket is threaded for a 1/4" screw.



What is the program output?

This is the video output that reflects all processing such as video compositing and visual effects. It is output from the PROGRAM OUT connector.

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

Rear Panel/Side 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.

DC IN 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.



PROGRAM OUT connector

This outputs the resulting mixed video (the program video). Here you can connect a display, projector, or video recorder that is equipped with an HDMI input connector.



Ground terminal

Connect this to an external earth or ground if necessary.

USB STREAM port (USB Type-C™)

Connect your computer here. This port outputs the resulting video/audio mix from the V-02HD MKII to your computer. Use this for live broadcasting of video/audio and for similar applications. This is also used to input audio played on your computer to the V-02HD MKII.

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

* If you connect via an extension cable or a USB hub, the computer might not recognize the V-02HD MKII. We recommend that you connect the V-02HD MKII directly to your computer.



CTL/EXP jack (TRS phone)



Connect an expression pedal (sold separately: EV-5, etc.) or footswitch (sold separately: BOSS FS-6, etc.). This is used when using your foot to control operations such as video switching.

* Use only the specified expression pedal (sold separately: EV-5, BOSS FV-500L, or FV-500H). By connecting any other expression pedals, you risk causing malfunction and/or damage to the unit.

PREVIEW OUT connector



This outputs the preview video (the standby video). Connect this to a display that is equipped with an HDMI input connector.

* The V-02HD MKII menu is shown on the display that's connected to the PREVIEW OUT connector.

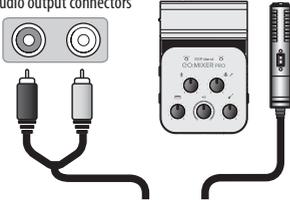
* Do not block the ventilation openings (the slits located on the front and side panels, etc.). If the ventilation openings are blocked, the internal temperatures may rise, causing malfunctions due to excessive heat.

AUDIO IN 1, 2 jack (stereo mini)

These input audio. Connect a mic, audio mixer, CD players, or other such audio equipment.

* Plug-in Power type mics are supported.

Audio output connectors



Plug-in Power settings

If you're using a Plug-in Power type mic, turn plug-in power on. Press the [SETUP] button to access the "AUDIO INPUT" → "AUDIO IN 1" or "AUDIO IN 2" settings, and set "PLUG-IN POWER" to "ON."

NOTE

When connecting a dynamic mic or a mic that does not support Plug-in Power, be sure to turn Plug-in Power off. If Plug-in Power is on when such a mic is connected, malfunctions will occur.

PHONES () jack (stereo mini)

Connect headphones here.



[PHONES] knob

Adjusts the volume of the headphones.

Turning the Power On/Off

[POWER] switch

* 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 the V-02HD MKII'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 the V-02HD MKII's [POWER] switch.

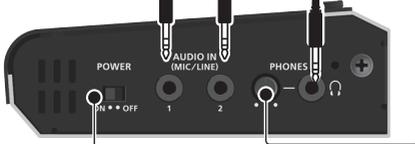
About the Auto Off function

The power to the V-02HD MKII turns off automatically when all of the following states persist for 240 minutes (Auto Off function).

- No operation performed on the V-02HD MKII
- No audio or video input
- No equipment is connected to the PROGRAM OUT/ PREVIEW OUT connectors

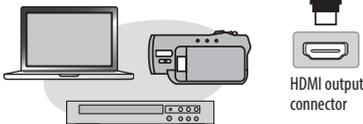
If you do not want the power to be turned off automatically, disengage the Auto Off function. Press the [MENU] button → "SYSTEM" → set "AUTO OFF" to "OFF."

- * Unsaved data is lost when the power turns off. Before turning the power off, save the data that you want to keep.
- * To restore power, turn the power on again.



HDMI cable

INPUT 1, 2 connectors



These input video. Connect these to a video camera, video device such as a BD player, or a computer that is equipped with an HDMI output connector.

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Video Operations

Using Mix/Wipe to Switch Video (MIX/WIPE)

Here's how to switch between input video while applying an effect, and output the program.

1. Press the [TYPE] button several times to select the transition effect (MIX, WIPE).



The MIX or WIPE indicator is lit.

Transition effects	Explanation
MIX	The two videos are mixed as the transition occurs.
WIPE	The next video moves across to replace the original video.

<Using the buttons to switch>

2. Press the button [1] or [2] that is lit green.

Lit red: Video that's being output as the program
 Lit green: Preview video (standby video)



The button you press lit red, and the video switches.

When the video has switched completely, the lit state (red, green) of buttons [1] [2] is exchanged.

MEMO

- **Operation of the [1] [2] buttons**
 The [1] [2] buttons can be assigned to perform other operations, such as auto take switching. To specify this, set the SYSTEM menu items "INPUT 1 SW ASSIGN" and "INPUT 2 SW ASSIGN." These settings are effective only if mix/wipe are selected as the video effect.
- **Video transition time**
 If you use the buttons to switch video, the transition occurs over a pre-specified time. To specify the video transition time, set the TRANSITION menu item "MIX/WIPE TIME."

<Using the fader to switch>

2. Slide the video fader to the far left or far right.

The transition indicator for the video that is the program output is lit. Slide the fader toward the side that is not lit.



The video is switched according to the movement of the video fader.

When the video has switched completely, the lit state (red, green) of buttons [1] [2] is exchanged.

MEMO

Depending on the timing at which you switch the video effect, the position of the video fader might differ from the actual output. If you operate the video fader in this state, the output does not change until the position of the video fader matches the actual output.

Changing the mix/wipe pattern

You can use the MIX/WIPE menu to specify the pattern by which the mix/wipe occurs and the direction of the wipe.

Menu item	Explanation
MIX TYPE	Pattern of the mix transition
WIPE TYPE	Pattern of the wipe transition
WIPE DIRECTION	Direction of wipe
WIPE BORDER COLOR	Color of the border added to the periphery of the wipe
WIPE BORDER WIDTH	Width of the border added to the periphery of the wipe

Using Picture-In-Picture to Composite Video (PinP)

Here's how to composite an inset screen (a small separate screen) onto the background video.



1. Press the [TYPE] button several times to select PinP.



The PinP indicator is lit green, and the inset screen is shown in the preview video (standby video).

You can check the position and size of the inset screen that will be composited before outputting the program.

2. Press the [1] button (lit yellow) to select the background video and the inset screen.

The transition indicator (left or right) of the selected background video is lit.



Each time you press the [1] button, the background video and the inset screen video that are output as the program will alternate.

3. Turn the [CONTROL 1] [CONTROL 2] knobs to adjust the inset screen.



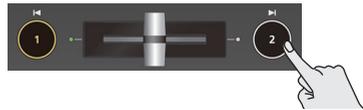
[CONTROL 1] knob

Turn: Horizontal display position of the inset screen
Turn while pressing: Size of the inset screen (reduce/magnify)

[CONTROL 2] knob

Turn: Vertical display position of the inset screen
Turn while pressing: Zoom ratio of the inset screen

4. Press the [2] button.



The inset screen is composited with the background video, and output as the program. The [2] button is lit red.

When you press the [2] button once again, the button goes dark and the inset screen disappears.

MEMO

- The fade time over which the inset screen appears or disappears when you press the [2] button is specified by the setting of the TRANSITION menu item "PinP TIME."
- You can also use the video fader to show or hide the inset screen.
- If a video composited by PinP is being output as the program, the PinP indicator is lit red.

Making detailed settings for the inset screen

You can use the PinP menu to specify the shape and size of the inset screen, and the color of the border that is added to the inset screen.

Menu item	Explanation
WINDOW	Use the following items to adjust the inset screen.
POSITION H	Horizontal display position
POSITION V	Vertical display position
SIZE	Size (reduce/magnify)
CROPPING H	Horizontal frame size
CROPPING V	Vertical frame size
SHAPE	Shape (rectangle, circle, diamond)
BORDER COLOR	Color of border
BORDER WIDTH	Width of border
VIEW	Use the following items to adjust the video that is shown in the inset screen.
POSITION H	Horizontal display position
POSITION V	Vertical display position
ZOOM	Magnification

Using a Key to Composite Video (KEY)

You can turn a portion of the video transparent and composite it with the background video. You can use luminance key with either a black or a white background, or a chroma key with either a blue or green background.

Luminance key

This cuts out text or an image by turning the black or white portion transparent, and composites it onto the background video.



Here we explain the procedure for using luminance key (the factory setting) to composite sample material that is saved in the unit.

1. Press the [TYPE] button several times to select KEY.

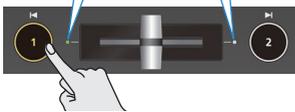


The KEY indicator is lit green, and the composition results is shown in the preview video (standby video).

You can check the logo to be key-composited before you output the program.

2. Press the [1] button to select the video of either INPUT 1 or 2 as the background.

The transition indicator (left or right) of the selected background video is lit.



Each time you press the [1] button, the background video being output as the preview will switch.

Chroma key

This cuts out a video by turning the blue or green portion transparent, and composites it onto the background video. Using this, you can composite only a subject that you are photographing against a blue screen or green screen.



3. Turn the [CONTROL 1] [CONTROL 2] knobs to adjust the depth of the effect that is applied.



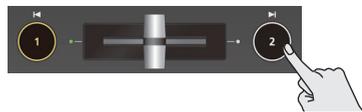
[CONTROL 1] knob

Adjusts the degree of extraction for the key.

[CONTROL 2] knob

Adjusts the degree of edge blur for the key.

4. Press the [2] button.



The logo is composited with the background video, and output as the program. The [2] button is lit red.

When you press the [2] button once again, the [2] button goes dark and the logo disappears.

MEMO

- The fade time over which the logo appears or disappears when you press the [2] button is specified by the setting of the TRANSITION menu item "KEY TIME."
- You can also use the video fader to show or hide the logo.
- If the key-composited video is being output as the program, the KEY indicator is lit red.

Applying a Visual Effect to the Video (VFX)

Here's how you can apply an effect to the entire video, such as varying the video's color or shape. You can apply a visual effect even while using picture-in-picture or key to composite the video.

Selecting a visual effect

1. Press the [MENU] button → "VFX" → select "VFX TYPE," and press the [VALUE] knob.

VFX	(1 / 2)
VFX	OFF
VFX TYPE	PART MOSAIC
CONTROL 1 POSITION H	0.0%
CONTROL 2 POSITION V	0.0%
MIX LEVEL	255

2. Turn the [VALUE] knob to select the visual effect, then press the [VALUE] knob.

Value	Explanation
PART MOSAIC	Applies a mosaic to the selected region.
BACKGROUND MOSAIC	Applies a mosaic to the portion outside the selected region.
FULL MOSAIC	Applies a mosaic to the entire screen.
WAVE	Makes the video wavy.
RGB REPLACE	Exchanges the colors.
COLORPASS	Turns the video black and white while preserving a specific color.
NEGATIVE	Inverts the brightness and colors.
COLORIZE	Adds color to the video.
POSTERIZE	Changes the gradations in brightness.
SILHOUETTE	Separates the video into light and dark areas, and makes the dark areas black and adds a different color to the light areas.
EMBOSS	Adds a bas-relief effect to the video.
FIND EDGES	Extracts contours.
MONOCOLOR	Turns the video monochrome.
HUE OFFSET	Changes the visual character by controlling the hue.
SATURATION OFFSET	Changes the visual character by controlling the saturation.
VALUE OFFSET	Changes the visual character by controlling the brightness.

3. Press the [MENU] button several times to close the menu.

Applying visual effects

1. Output the video to which you want to apply an effect.
2. Press the [VFX] button to turn on the visual effect (making the button light up).



The visual effect is applied to the program output video.

3. Turn the [CONTROL 1] or [CONTROL 2] knob to adjust the degree of effect applied.



MEMO

- For "PART MOSAIC" and "BACKGROUND MOSAIC," you can adjust the following settings by turning the [CONTROL 1] or [CONTROL 2] knob while pressing them.

[CONTROL 1] knob
Size of the selected region

[CONTROL 2] knob
Mosaic detail (block size)

- Settings for the effect that is controlled by the [CONTROL 1] [CONTROL 2] knobs can be checked in the VFX menu.

4. To turn off a visual effect, press the [VFX] button once again.

USING THE UNIT SAFELY

WARNING

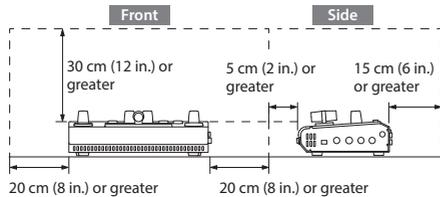
Concerning the Auto Off function

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. 5).



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 parts listed below, always keep them out of the reach of small children.

- Included Parts: Cord hook
- Removable Parts: Screw



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

- 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 and the side with textual information faces downwards. 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.

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.
- 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.
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