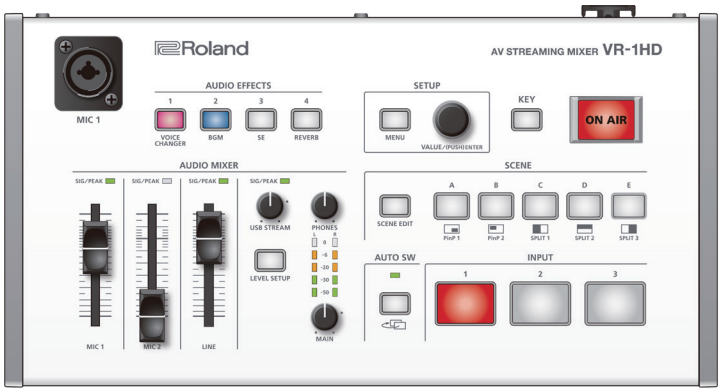
Roland

# Reference Manual

AV STREAMING MIXER

# VR-1HD

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# Panel Description

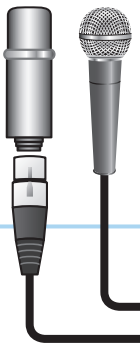
## Top Panel

### MIC 1 jack

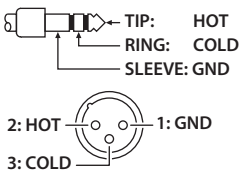
Connect your mic here. If you connect a condenser mic that requires a phantom power supply, turn the side panel [PHANTOM] switch on.

**NOTE**

- If you use a gooseneck mic, operating noise might be picked up.
- Do not connect a mic that supports plug-in power, or the mics that are included with Roland "VP-03" or "JD-Xi." Doing so will cause malfunctions



* Pin assignment of MIC 1 and MIC 2 jacks

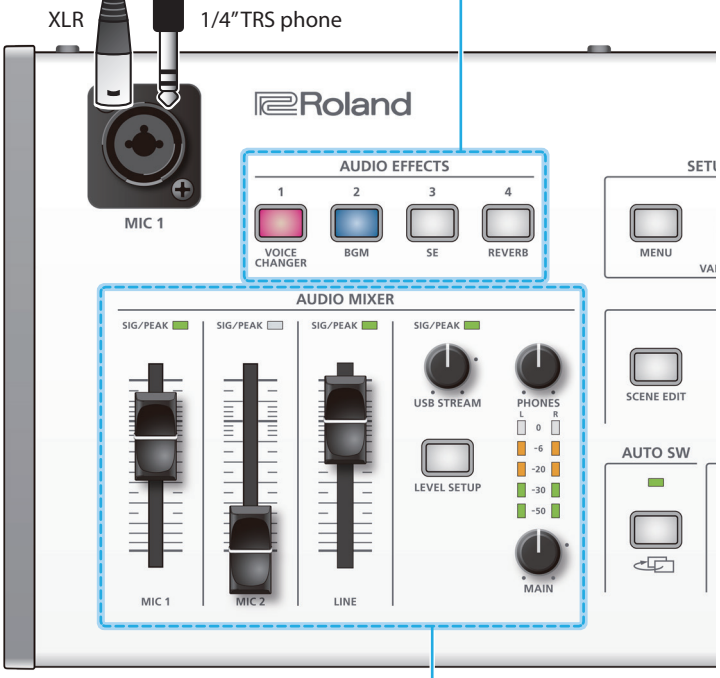



### AUDIO EFFECTS [1]–[4] buttons (p. 17, 19, 23)

Turn the audio effects on/off. When on, the button is lit.

| Button | Effect |
|---|---|
| [1] (VOICE CHANGER) | Transforms the pitch or character of the voice. |
| [2] (BGM) | Plays background music. |
| [3] (SE) | Plays a sound effect. |
| [4] (REVERB) | Adds reverberation to the sound. |

* The above are the factory settings. You can also assign other functions to each of buttons.




### AUDIO MIXER area (p. 16)

**SIG/PEAK indicators** (MIC 1/MIC 2/ LINE)
These are lit green when audio input is detected. If the input is excessive, the indicator is lit red.

**[MIC 1][MIC 2][LINE] faders**
Adjust the volume of the MIC 1, MIC 2, and LINE inputs.

**SIG/PEAK indicator** (USB STREAM)
Indicates the volume level of the USB output.

**[USB STREAM] knob**
Adjusts the volume of the USB output.

**[LEVEL SETUP] button**
Accesses the menu of settings related to volume, input gain, solo, and mute.

**[PHONES] knob**
Adjusts the volume of the headphones.

**Level meter**
Indicates the volume level of the main output.

**[MAIN] knob**
Adjusts the volume of the main output.

## SETUP area (p. 6)

**[MENU] button**

When this is on (lit), the menu appears on the display that's connected to the MONITOR (MENU) connector.

If you're in a lower level, this button returns to the next higher level. If the highest menu level is shown, this button closes the menu.

**[VALUE] knob**

Turn: Selects a menu item, or edits the value of a setting.

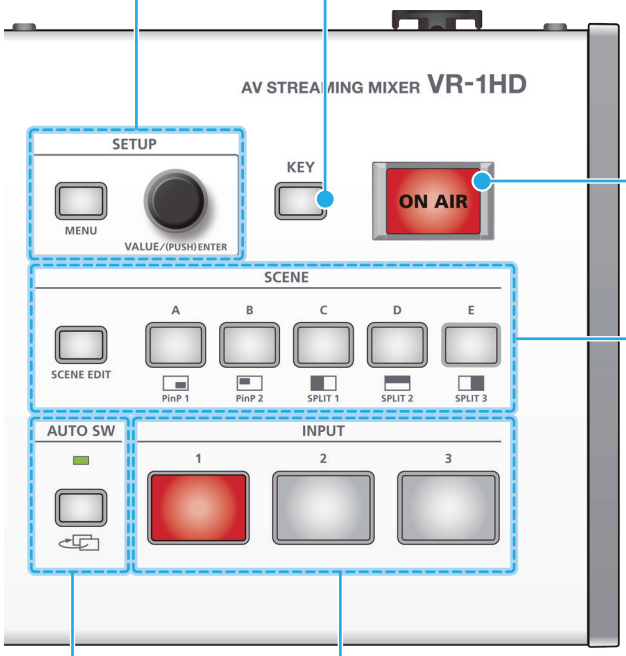
Press: Confirms the selected menu item or the edited value.

## [KEY] button (p. 14)

Turns on/off video compositing using a luminance key. When on (lit), two videos are composited and output.

### What is luminance key compositing?

This is a method of using brightness (luminance) information to cut out a logo or image and overlay it on a background image.


## [ON AIR] button (p. 14)

Fades-in/out the main output video.

The [ON AIR] button indicates the fade status.

| | |
|---|---|
| **Lit** | Normal output |
| **Blinking** | Now fading-in/out |
| **Unlit** | Faded out |

* The fade-in/out effect does not apply to the video that's output from the MONITOR (MENU) connector.

## SCENE area (p. 12)

**[SCENE EDIT] button**

Directly accesses the scene-related menu.

**SCENE [A]–[E] buttons**

Recall screen arrangements (scenes) that you've registered. The selected button is lit red.

* When you select the INPUT [1]–[3] buttons, the scene selection is cleared.

## INPUT [1]–[3] buttons (p. 10)

Switch the video that's being input to the VIDEO INPUT 1–3 connectors. The selected button is lit red.

* When you select the SCENE [A]–[E] buttons, the input video selection is canceled.
* Still images saved in this unit or single-color screens can also be assigned to the INPUT [1]–[3] buttons.

## AUTO SW area (p. 10)

**[AUTO SW] button**

Turn the auto switching function on/off. If this is on (lit), the INPUT 1–3 video and scenes A–E will switch automatically.

* Auto switching has three operating modes.

**AUTO SW indicator**

Lit green at the moment that auto switching switches the video.

* Operates at all times, regardless of whether auto switching is on or off.

### What is the main output?

This is the video/audio output that is affected by all processes such as video compositing and audio effects. It is output from the MAIN connector.

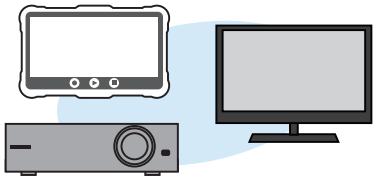
This is the video that is seen by the people who are watching the live stream or presentation.

# 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.

## MAIN connector

This outputs the result of mixing the video (main video) and audio. Connect it to your projector, display, or video recorder for recording.

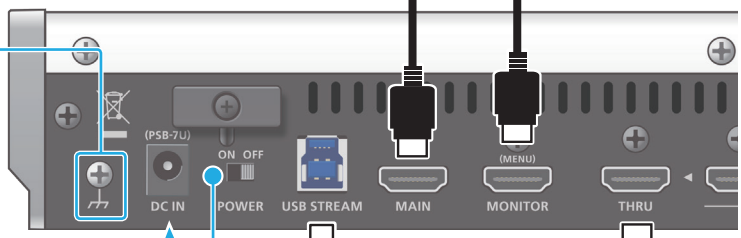



## MONITOR (MENU) connector

Connect this to your display to view the menu. This connector also outputs the main video before the fade-out effect is applied.

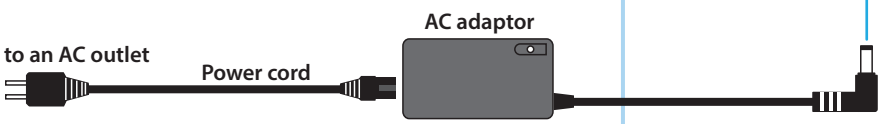

## Ground terminal

Connect this to an external earth or ground if necessary.

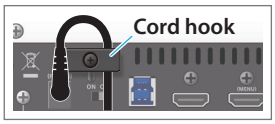



## DC IN jack

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.




## [POWER] switch (p. 6)

This switch turns the power on/off.

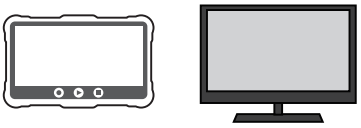
## USB STREAM port (p. 25)


Connect this to your computer. The result of the VR-1HD's video/audio mix is output from here to your computer. You can use this to live-stream your video/audio.

This also inputs the audio playback from your computer into the VR-1HD.

* 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 the VR-1HD. We recommend that you connect the VR-1HD directly to your computer.

## THRU connector




This "thru-outputs" the video that's being input from the VIDEO INPUT 3 connector. Connect this to your display or to a video recording for recording.

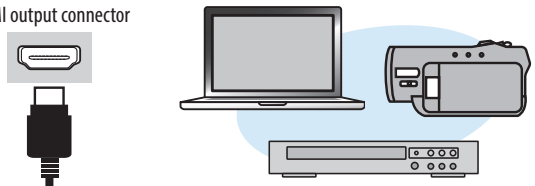
* Do not block the ventilation openings (the slits located on the front and side panels, etc.). If the ventilation openings are blocked, the internal temperatures may rise, causing malfunctions due to excessive heat.

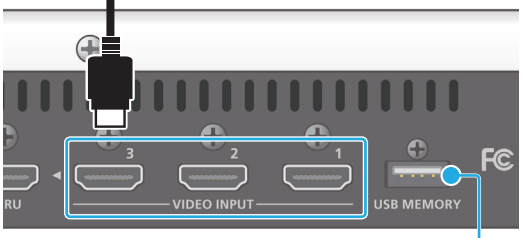
## VIDEO INPUT 1–3 connectors

These input video/audio. Connect them to video devices such as a video camera or BD player, or to your computer.

* The input format is detected automatically.

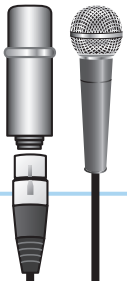
HDMI output connector






## MIC 2 jack

Connect your mic here. If you connect a condenser mic that requires a phantom power supply, turn the [PHANTOM] switch on.



**NOTE**

- If you use a gooseneck mic, operating noise might be picked up.
- Do not connect a mic that supports plug-in power, or the mics that are included with Roland "VP-03" or "JD-Xi." Doing so will cause malfunctions.

## PHONES jack

Connect headphones here.

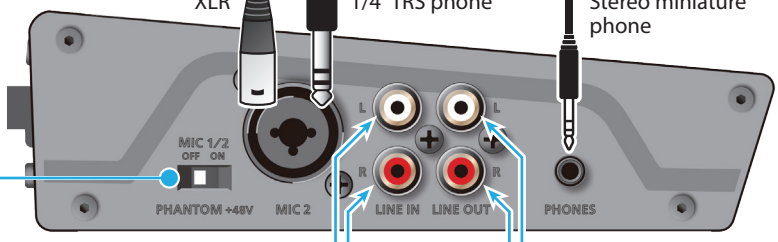
## USB MEMORY port (p. 15, 23)

Connect a USB flash drive here. You can use it when loading a music file (background music or sound effects) or a still image.

XLR

1/4" TRS phone

Stereo miniature phone




## [PHANTOM] switch

Turns on/off the phantom power of the MIC 1 and MIC 2 jacks (XLR). Turn on the phantom power supply if you connect a condenser mic that requires a phantom power supply.

* If you don't need phantom power, be sure to turn off the [PHANTOM] switch.
* Phantom power is common to the MIC 1 and MIC 2 jacks.

RCA phono

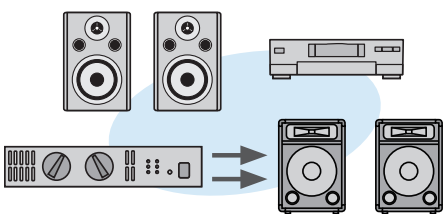
RCA phono

## LINE IN jacks

Audio output connectors

These input audio. Connect them to an audio device such as an audio mixer or CD player.

## LINE OUT jacks



Audio input connectors

These output the result of audio mixing. Connect them to your audio recorder, amp, or speakers.

## Turning the Power On/Off

* 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.

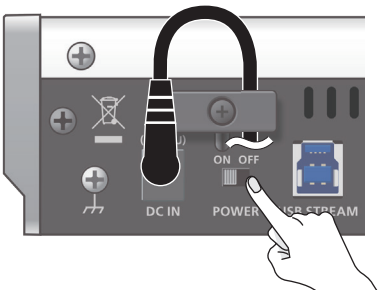
### Turning the power on

**MEMO**

If a USB flash drive containing the still images (p. 15) that were last loaded is connected when the VR-1HD starts, the still images are loaded automatically. In this case, startup might take some time depending on the size and number of the still images that are loaded.

**1.** **Make sure that all devices are powered-off.**

**2.** **Turn on the VR-1HD'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 VR-1HD's [POWER] switch.**

### About the Auto Off function

The power to the VR-1HD turns off automatically when all of the following states persist for 240 minutes (Auto Off function).

- No operation performed on the VR-1HD
- No audio or video input
- No equipment is connected to the MAIN/MONITOR (MENU)

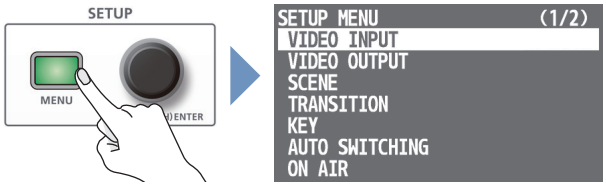
If you do not want the power to be turned off automatically, disengage the Auto Off function. Press the [MENU] button → "SYSTEM" → set "AUTO POWER OFF" to "OFF."

* If the auto-off function has turned off the power, slide the [POWER] switch when you want to turn the power on again.

## Operating the Menu

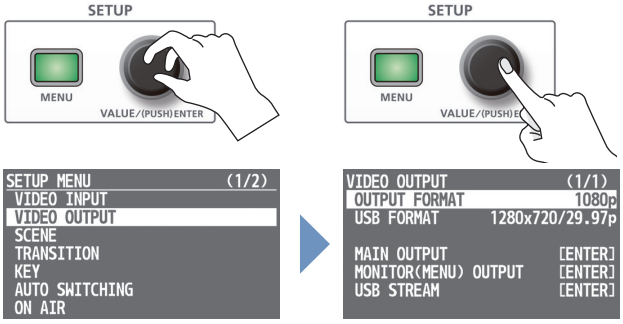
Here's how to access the menu, and make video/audio settings and settings for this unit. The menu is shown on the display that's connected to the MONITOR (MENU) connector.

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




The menu is organized into functions.

**2.** **Turn the [VALUE] knob to select the menu item that you want to edit, and press to confirm.**




**3.** **Repeat step 2 as needed.**

Pressing the [MENU] button moves you back one level higher.

**4.** **Turn the [VALUE] knob to edit the value of the setting, and press to confirm.**

- 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.**

**MEMO**

- The contents of the menu settings are saved to the unit every four seconds or when you close the menu.
- When you press the [LEVEL SETUP] button, the menu for volume, input gain, solo, and mute settings appears (p. 42).
- There are shortcuts that let you quickly access the menu for specific buttons and knobs.
  For details, refer to "Shortcut List" (p. 48).
- **If you want to temporarily change where the menu is shown**
  If you start up the VR-1HD with the following operation, the menu is shown on the display connected to the MAIN connector and on the USB STREAM output.
  While holding down the [MENU] button and the [VALUE] knob, turn on the power. When the unit becomes operable, release the button and knob.
  * The menu will no longer be shown on the display connected to the MONITOR (MENU) connector.
  * Operations of the [ON AIR] button (p. 14) will affect only the output of the MONITOR (MENU) connector.

# Video Input/Output Settings

## List of Compatible Video Formats

### Input video formats

| Frame rate | |
|---|---|
| When set to "59.94 Hz" | When set to "50 Hz" |
| 480/59.94i | 576/50i |
| 480/59.94p | 576/50p |
| 720/59.94p | 720/50p |
| 1080/59.94i | 1080/50i |
| 1080/59.94p | 1080/50p |
| VGA (640 x 480/60 Hz) | VGA (640 x 480/60 Hz) |
| SVGA (800 x 600/60 Hz) | SVGA (800 x 600/60 Hz) |
| XGA (1024 x 768/60 Hz) | XGA (1024 x 768/60 Hz) |
| WXGA (1280 x 800/60 Hz) | WXGA (1280 x 800/60 Hz) |
| HD (1280 x 720/60 Hz) | HD (1280 x 720/60 Hz) |
| SXGA (1280 x 1024/60 Hz) | SXGA (1280 x 1024/60 Hz) |
| FWXGA (1366 x 768/60 Hz) | FWXGA (1366 x 768/60 Hz) |
| SXGA+ (1400 x 1050/60 Hz) | SXGA+ (1400 x 1050/60 Hz) |
| UXGA (1600 x 1200/60 Hz) | UXGA (1600 x 1200/60 Hz) |
| FHD (1920 x 1080/60 Hz) | FHD (1920 x 1080/60 Hz) |
| WUXGA (1920 x 1200/60 Hz) | WUXGA (1920 x 1200/60 Hz) |

#### ● Audio input format

| | |
|---|---|
| **INPUT 1–3 connectors** | Linear PCM, 24 bits, 48 kHz, stereo |
| **USB STREAM port** | Linear PCM, 16 bits, 48 kHz, stereo |

### Output video formats

#### ● MAIN/MONITOR (MENU) connectors

| Frame rate | |
|---|---|
| When set to "59.94 Hz" | When set to "50 Hz" |
| 720/59.94p | 720/50p |
| 1080/59.94i | 1080/50i |
| 1080/59.94p | 1080/50p |
| XGA (1024 x 768/60 Hz) | XGA (1024 x 768/75 Hz) |
| WXGA (1280 x 800/60 Hz) | WXGA (1280 x 800/75Hz) |
| SXGA (1280 x 1024/60 Hz) | SXGA (1280 x 1024/75 Hz) |
| FWXGA (1366 x 768/60 Hz) | FWXGA (1366 x 768/75 Hz) |
| SXGA+ (1400 x 1050/60 Hz) | SXGA+ (1400 x 1050/75 Hz) |
| UXGA (1600 x 1200/60 Hz) | UXGA (1600 x 1200/60 Hz) |
| FHD (1920 x 1080/60 Hz) | FHD (1920 x 1080/60 Hz) |
| WUXGA (1920 x 1200/60 Hz) | WUXGA (1920 x 1200/60 Hz) |

#### ● USB STREAM port

| Frame rate | |
|---|---|
| When set to "59.94 Hz" | When set to "50 Hz" |
| 854 x 480/29.97p | 854 x 480/25p |
| 854 x 480/59.94p | 854 x 480/50p |
| 1280 x 720/29.97p | 1280 x 720/25p |
| 1280 x 720/59.94p | 1280 x 720/50p |
| 1920 x 1080/29.97p | 1920 x 1080/25p |

#### ● Audio input format

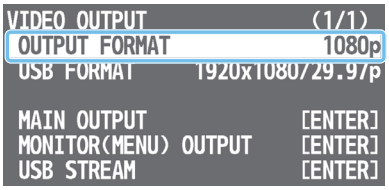
| | |
|---|---|
| **MAIN connector<br>MONITOR (MENU) connector** | Linear PCM, 24 bits, 48 kHz, stereo |
| **USB STREAM port** | Linear PCM, 16 bits, 48 kHz, stereo |

## Setting the Output Format

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

### MAIN/MONITOR (MENU) connectors

**1. [MENU] button → "VIDEO OUTPUT" → select "OUTPUT FORMAT."**




**2. Turn the [VALUE] knob to select the output format, and press to confirm.**

The output format switches, and a confirmation message appears.


If you want to cancel the operation, press the [MENU] button.

* If the changed format is not compatible with the output destination device, a confirmation message does not appear. In approximately 20 seconds the setting returns to its previous state.

**3. Turn the [VALUE] knob to select "YES," and press to confirm.**

The message "COMPLETED" appears.

* If you don't confirm within ten seconds, the change is not applied, and the setting returns to its previous state.

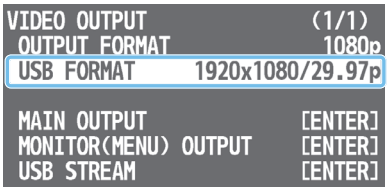
**4. Press the [VALUE] knob to close the message.**

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

### USB STREAM port

Here's how the video converted to the specified "OUTPUT FORMAT" can be further converted into a format that can be streamed.

**1. [MENU] button → "VIDEO OUTPUT" → select "USB FORMAT."**




**2. Turn the [VALUE] knob to select the output format, and press to confirm.**

The output format switches.

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

### About frame rate

The VR-1HD supports the frame rates "59.94 Hz" and "50 Hz." To specify the frame rate, use the [MENU] button → "SYSTEM" → "FRAME RATE."

The USB output also supports the frame rates "29.97 Hz" and "25 Hz." When you specify the output format of the USB STREAM port, you select a combination of resolution and frame rate.

# Specifying the Input Format (EDID)

With the factory settings, EDID is set to "DEFAULT" (the unit transmits EDID information for all formats that it is able to input).

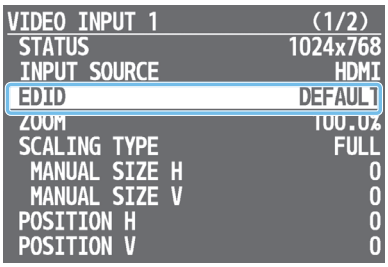
Change this setting if you want EDID information for a specific input format to be sent to a source device.

### What is EDID?

EDID is data that is transmitted from the VR-1HD to the source device when the VR-1HD is connected to a source device. EDID contains data such as the formats that can be input to the VR-1HD (resolution, color space, color depth) and audio information.

Based on the EDID information that the source device receives, it will output the most appropriate video format to the VR-1HD.

**1.** **[MENU] button → "VIDEO INPUT" → "INPUT 1"–"INPUT 3" → select "EDID."**




**2.** **Turn the [VALUE] knob to select the input format (EDID), and press to confirm.**

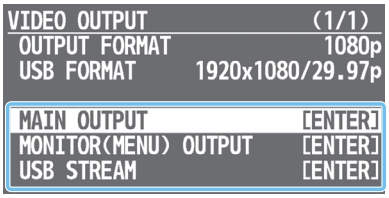
The input format (EDID) switches.

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

# Adjusting Output Video

Here's how to adjust the output image appropriately for the device that's receiving the VR-1HD's output.

**1.** **[MENU] button → "VIDEO OUTPUT" → select "MAIN OUTPUT," "MONITOR (MENU) OUTPUT," or "USB STREAM."**




A detailed menu appears.

**2.** **Use the [VALUE] knob to select a menu item.**

### ● MAIN OUTPUT, MONITOR (MENU) OUTPUT

| Menu item | Explanation |
|---|---|
| COLOR SPACE | Specifies the color space (system for representing colors in video). |
| DVI-D/HDMI | Specifies the type of output signal. |
| ZOOM (*1) | Adjusts the zoom ratio. |
| POSITION H (*1) | Adjusts the display position in the horizontal direction. |
| POSITION V (*1) | Adjusts the display position in the vertical direction. |
| BRIGHTNESS | Adjusts the brightness. |
| CONTRAST | Adjusts the contrast. |
| SATURATION | Adjusts the saturation. |
| RED | Adjusts the red level. |
| GREEN | Adjusts the green level. |
| BLUE | Adjusts the blue level. |

(*1) MAIN OUTPUT only

### ● USB STREAM

| Menu item | Explanation |
|---|---|
| ZOOM | Adjusts the zoom ratio. |
| SCALING TYPE | Specifies the scaling type. |
| MANUAL SIZE H | Adjusts the horizontal size. |
| MANUAL SIZE V | Adjusts the vertical size. |
| POSITION H | Adjusts the display position in the horizontal direction. |
| POSITION V | Adjusts the display position in the vertical direction. |
| CONNECTION RESET | Reconnects the computer and the VR-1HD when the video is garbled or when operation is otherwise unstable. |

**2.** **Turn the [VALUE] knob to edit the value of the setting, and press to confirm.**

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

**MEMO**

You can output a test pattern, useful for adjusting the image quality of a display. Use the [MENU] button → "SYSTEM" → "TEST PATTERN" to select the type of test pattern.

# Adjusting Input Video

Here's how to adjust the quality and scaling of the video signals that are assigned to the INPUT [1]–[3] buttons.

**1.** **[MENU] button → "VIDEO INPUT" → select "INPUT 1"–"INPUT 3."**


A detailed menu appears.

**2.** **Use the [VALUE] knob to select a menu item.**

| Menu item | Explanation |
|---|---|
| ZOOM | Adjusts the zoom ratio. |
| SCALING TYPE | Specifies the scaling type. |
| MANUAL SIZE H | Adjusts the horizontal size. |
| MANUAL SIZE V | Adjusts the vertical size. |
| POSITION H | Adjusts the display position in the horizontal direction. |
| POSITION V | Adjusts the display position in the vertical direction. |
| BRIGHTNESS | Adjusts the brightness. |
| CONTRAST | Adjusts the contrast. |
| SATURATION | Adjusts the saturation. |
| RED | Adjusts the red level. |
| GREEN | Adjusts the green level. |
| BLUE | Adjusts the blue level. |
| COLOR SPACE | Specifies the color space (system for representing colors in video). If this is set to "AUTO," an appropriate color space is automatically applied. |
| FLICKER FILTER | If this is "ON," flickering is reduced. |

**3.** **Turn the [VALUE] knob to edit the value of the setting, and press to confirm.**

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

**MEMO**

In addition to the video signals that are being input from the VIDEO INPUT connectors, you can also assign still images or single-color screens to the INPUT [1]–[3] buttons.

To make these settings, use the [MENU] button → "VIDEO INPUT" → "INPUT 1"– "INPUT 3" → "INPUT SOURCE."

| Value | Explanation |
|---|---|
| HDMI | The video being input from the VIDEO INPUT connector |
| STILL IMAGE 1, 2 | A still image loaded into the unit (p. 15) |
| BLACK, WHITE, GRAY, GREEN, BLUE | Single-color screen |

* A still image loaded into the unit cannot be made smaller. If resizing would make the still image smaller than its original size, it will not be resized (smaller), but instead a portion of the still image will be cut out for display.

# Inputting Copy-Protected (HDCP) Video

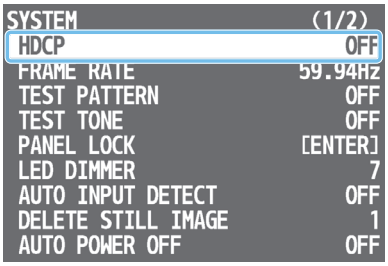
If you want to input HDCP-protected video from a BD player or other device, you can enable HDCP input.

* If you want to output HDCP-protected video, connect an HDCP-capable display.

### What's HDCP?

HDCP is copyright-protection technology that prevents unlawful copying of content by encoding the path when sending digital signals from a video playback device to a display monitor or other display equipment.

**1.** **[MENU] button → "SYSTEM" → select "HDCP."**




**2.** **Turn the [VALUE] knob to select "ON," and press to confirm.**

| Value | Explanation |
|---|---|
| ON | HDCP-protected video can be input. HDCP is also added to the video that is output. |
| OFF | HDCP-protected video cannot be input. |

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

**NOTE**

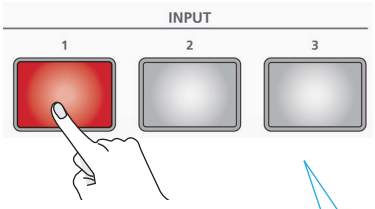
If "HDCP" is "ON," video and audio are not output from the USB STREAM port.

# Video Operations

## Using Buttons to Switch the Video

Here's how to manually switch between the INPUT 1–3 video signals.

**1. Press an INPUT [1]–[3] button to select the video.**




| Button | Video status |
|---|---|
| Lit red | Currently selected input video (the video being output). |
| Blinking red | Currently switching video. |
| Lit white | Valid video is input. |
| Unlit | No video is input. |

The selected button blinks red, and the video is gradually switched.

When the video has switched completely, the button changes from blinking red to lit red.

* When you select scene (p. 12), the input video selection is canceled.

**MEMO**

- **Video transition time**
  You can set the video transition time by using [MENU] button → "TRANSITION" → "TIME." This setting is common to the scene (p. 12) transition time.

- **Transition effects**
  A mix effect is applied when you switch between videos. The two videos are mixed during the transition.

  In the sampling cases, the transition occurs as a cut (instantaneous switch).
  - If the transition time is set to "0.0sec."
  - If you press an INPUT/SCENE button while a transition is occurring

- **Video source**
  In addition to the video signals that are being input from the VIDEO INPUT connectors, you can also assign still images or single-color screens to the INPUT [1]–[3] buttons.
  To make these settings, use the [MENU] button → "VIDEO INPUT" → "INPUT 1"–"INPUT 3" → "INPUT SOURCE."

| Value | Explanation |
|---|---|
| HDMI | The video being input from the VIDEO INPUT connector |
| STILL IMAGE 1, 2 | A still image loaded into the unit (p. 15) |
| BLACK, WHITE, GRAY, GREEN, BLUE | Single-color screen |

## Switching the Video Automatically (Auto Switching)

The video of INPUT 1–3 or of scenes (p. 12) can be switched automatically (the auto switching function). You can make operation easier by letting the video switch automatically.

### Operation modes for auto switching

Auto switching provides three operation modes that you can select as appropriate for your situation: "auto scan," "beat sync," and "video follows audio."

#### ● Switching at a specified interval (auto scan)

This automatically switches the video when a specified length of time elapses. You can change the duration that each video is shown, and also switch randomly between videos.

This is convenient when you want to switch between video signals of multiple cameras, for example when live-streaming a singer-instrumentalist.

* INPUT 1–3 are skipped if there is no video input.

#### ● Switching in sync with the beat of the music (beat sync)

This detects the beat of the song, and automatically switches the video at intervals of the beat.

This lets you create video transitions that are synchronized with the music, for example when live-streaming a DJ performance or a musical performance.

* For some songs, it might not be possible to correctly detect the beat.
* INPUT 1–3 are skipped if there is no video input.

#### ● Switching according to the mic volume (video follows audio)

This detects the audio that is input from a mic, and automatically switches to the specified video according to the volume.

For example, if you're streaming a talk show or a conversation, you can use this to switch between a closeup of the individual who is speaking and a wide shot of both people when neither person is speaking.

## Specifying the operation mode

### ● Auto scan

**1.** [MENU] button → "AUTO SWITCHING" → select "TYPE."


**2.** Turn the [VALUE] knob to select "AUTO SCAN," and press to confirm.

**3.** Use the [VALUE] knob to select a menu item.

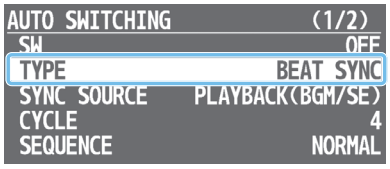
| Menu item | Explanation |
|---|---|
| SEQUENCE | Specifies the order in which video signals are shown.<br>**NORMAL:** INPUT 1–3 → switch in the order of scenes A–E.<br>**RANDOM:** Switch randomly. |
| INPUT 1–3 DURATION | Specifies the time that the video is shown. If this is "OFF," video switching does not affect the input. |
| SCENE A–E DURATION | |

**4.** Turn the [VALUE] knob to edit the value of the setting, and press to confirm.

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

### ● Beat sync

**1.** [MENU] button → "AUTO SWITCHING" → select "TYPE."




**2.** Turn the [VALUE] knob to select "BEAT SYNC," and press to confirm.

**3.** Use the [VALUE] knob to select a menu item.

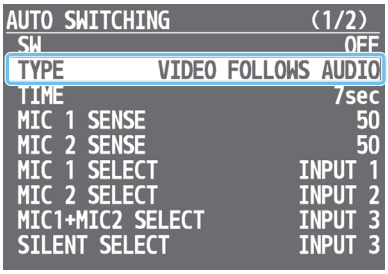
| Menu item | Explanation |
|---|---|
| SYNC SOURCE | Specifies the input audio that synchronizes the video. |
| CYCLE | Specifies the number of beats at which to switch to the next video. |
| SEQUENCE | Specifies the order in which video signals are shown.<br>**NORMAL:** INPUT 1–3 → switch in the order of scenes A–E.<br>**RANDOM:** Switch randomly. |
| INPUT 1–3 SW | Specifies whether video switching applies (ON) or does not apply (OFF) to the source. |
| SCENE A–E SW | |

**4.** Turn the [VALUE] knob to edit the value of the setting, and press to confirm.

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

### ● Video follows audio

**1.** [MENU] button → "AUTO SWITCHING" → select "TYPE."




**2.** Turn the [VALUE] knob to select "VIDEO FOLLOWS AUDIO," and press to confirm.

**3.** Use the [VALUE] knob to select a menu item.

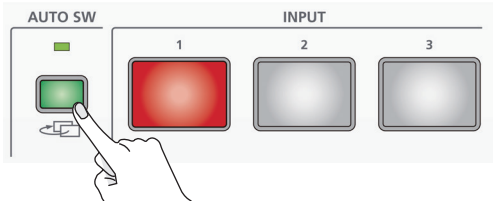
| Menu item | Explanation |
|---|---|
| TIME | Specifies the time until audio detection resumes after mic audio has been detected to switch the video or scene. |
| MIC 1 SENSE | Specify the detection level for the audio being input to the MIC 1 or 2 jack. The higher the level, the more easily audio is detected. |
| MIC 2 SENSE | |
| MIC 1 SELECT | Specifies the video/scene that is output when audio is detected in MIC 1. |
| MIC 2 SELECT | Specifies the video/scene that is output when audio is detected in MIC 2. |
| MIC 1 + MIC 2 SELECT | Specifies the video/scene that is output when audio is detected in both MIC 1 and MIC 2. |
| SILENT SELECT | Specifies the video/scene that is output when there is no audio input in either MIC 1 or MIC 2. |

**4.** Turn the [VALUE] knob to edit the value of the setting, and press to confirm.

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

## Turning the auto switching function on/off

**1.** Press the [AUTO SW] button to turn the auto switching function on (lit).




* If you're using beat sync, input or play back a song.

**2.** To turn the auto switching function off, press the [AUTO SW] button once again.

# Displaying a Combination of Two Videos (Scene)

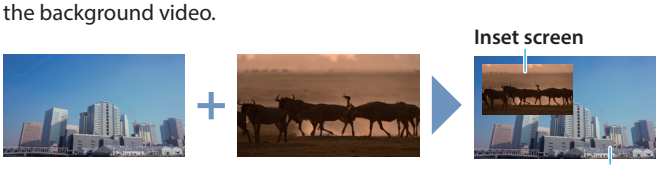
You can register a configuration of screens as a "scene" and show a combination of two videos. If you register your favorite configurations as scenes, you can instantly switch between those configurations just by pressing SCENE buttons. The VR-1HD provides five scenes.

## Types of screen configuration

There are two types of screen configuration that can be registered in a scene: "picture-in-picture" overlays an inset screen onto a background video, and "split" divides the screen horizontally or vertically.

### ● Picture-in-picture (PinP)

This overlays video of an inset screen (a small separate screen) onto the background video.



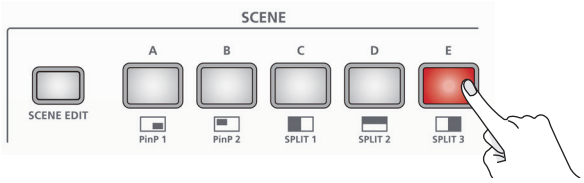

### ● Split

This divides the screen into left/right or upper/lower halves, and shows two videos.


## Recalling

With the factory settings, the screen configurations printed on the operating panel are registered in the SCENE [A]–[E] buttons.

**1. Press the SCENE button of the screen configuration that you want to recall.**




The scene is recalled, and the screen configuration changes. The selected button is lit red.

* When you select INPUT 1–3, the scene selection is cleared.

**MEMO**

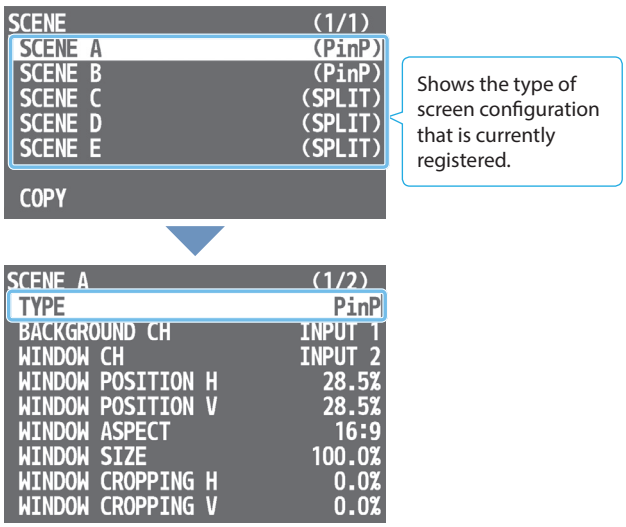
- The scene transition time is shared with the video transition time. The setting of [MENU] button → "TRANSITION" → "TIME" applies.
- You can change the scene transition effect.
  To make these settings, use the [MENU] button → "TRANSITION" → "SCENE TRANSITION."

| Value | Explanation |
|---|---|
| BLACK FADE | A fade effect enclosing a black screen is applied. All screens switch simultaneously. |
| MIX FADE | A fade effect is applied. Screens switch individually. |

## Registering

### ● Picture-in-picture (PinP)

**1. [SCENE EDIT] button → "SCENE A"–"SCENE E" → select "TYPE."**




**2. Turn the [VALUE] knob to select "PinP," and press to confirm.**

**3. Use the [VALUE] knob to select a menu item.**

| Menu item | Explanation |
|---|---|
| BACKGROUND CH | Specifies the background video. |
| WINDOW CH | Specifies the inset screen video. |
| WINDOW POSITION H | Adjusts the horizontal display position of the inset screen. |
| WINDOW POSITION V | Adjusts the vertical display position of the inset screen. |
| WINDOW ASPECT | Specifies the aspect ratio of the inset screen. |
| WINDOW SIZE | Adjusts the size of the inset screen. |
| WINDOW CROPPING H | Adjusts the horizontal size of the inset screen. |
| WINDOW CROPPING V | Adjusts the vertical size of the inset screen. |
| VIEW POSITION H | Adjusts the horizontal position of the video shown in the inset screen. |
| VIEW POSITION V | Adjusts the vertical position of the video shown in the inset screen. |
| VIEW ZOOM | Adjusts the zoom of the video shown in the inset screen. |

**4. Turn the [VALUE] knob to edit the value of the setting, and press to confirm.**

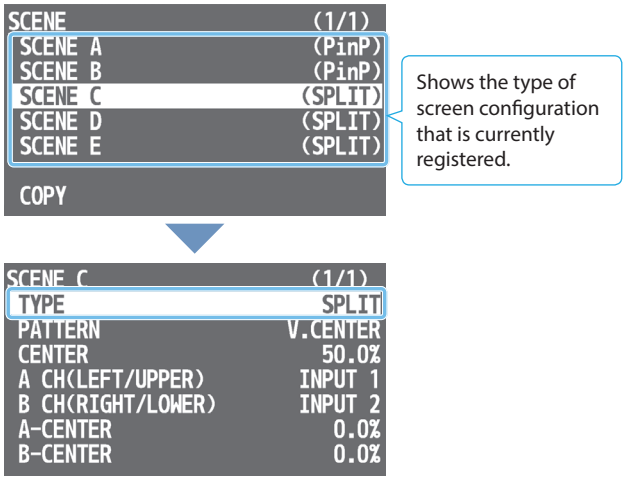
**5. Press the [SCENE EDIT] button several times to close the menu.**

**MEMO**

A still image loaded into the unit (p. 15) cannot be made smaller. If the still image is shown in the inset screen, a portion of the still image is cut out and shown, instead of making it smaller to match the size of the inset screen.

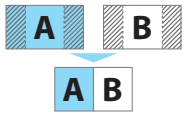
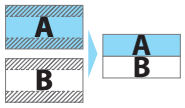
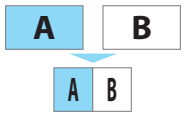
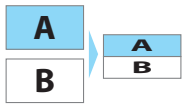
## ● Split

**1. [SCENE EDIT] button → "SCENE A"–"SCENE E" → select "TYPE."**




**2. Turn the [VALUE] knob to select "SPLIT," and press to confirm.**

**3. Use the [VALUE] knob to select a menu item.**

| Menu item | Explanation |
|---|---|
| PATTERN | Specifies the pattern for the split.<br>V.CENTER:  <br>H.CENTER:  <br>V.STRETCH:  <br>H.STRETCH:  |
| CENTER | Adjusts the position at which the screen is divided. |
| A CH (LEFT/UPPER) | Specifies the video that is shown in the left or upper side. |
| B CH (RIGHT/LOWER) | Specifies the video that is shown in the right or lower side. |
| A-CENTER (*1) | Adjusts the horizontal/vertical position of the video that's shown in the left or upper area. |
| B-CENTER (*1) | Adjusts the horizontal/vertical position of the video that's shown in the right or lower area. |

(*1) This is valid if "PATTERN" is set to "V.CENTER" or "H.CENTER."

**2. Turn the [VALUE] knob to edit the value of the setting, and press to confirm.**

**3. Press the [SCENE EDIT] button several times to close the menu.**

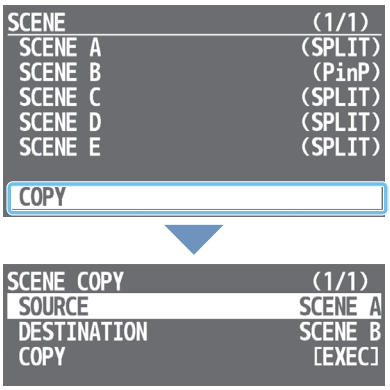
**MEMO**

A still image loaded into the unit (p. 15) cannot be made smaller. If you use "V.STRETCH" or "H.STRETCH" to show a still image, the stretch effect might not apply correctly depending on the resolution of the still image or the display region of the screen.

## Copying a scene

Here's how to copy the settings registered in a scene to another scene.

**1. [SCENE EDIT] button → select "COPY."**




The SCENE COPY menu appears.

**2. Use the [VALUE] knob to select a menu item.**

| Menu item | Explanation |
|---|---|
| SOURCE | Specifies the copy-source scene. |
| DESTINATION | Specifies the copy-destination scene. |

**3. Turn the [VALUE] knob to select one of "SCENE A" – "SCENE E," and press to confirm.**

**4. Use the [VALUE] knob to select "COPY."**

A confirmation message appears.
If you want to cancel the operation, press the [MENU] button.

**5. Turn the [VALUE] knob to select "YES," and press to confirm.**

The scene is copied. When the operation is finished, the message "COMPLETED" appears.

**6. Press the [VALUE] knob to close the message.**

**7. Press the [SCENE EDIT] button several times to close the menu.**

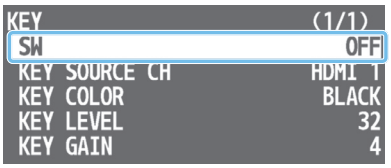
# Compositing a Logo or Image (Luminance Key)

Black or white portions of a logo or image can be cut out based on their brightness, and overlaid onto a background video. You can also use a scene (p. 12) as the background video.


## Adjusting the depth of compositing

**1. Output the video that you want to use as the background video.**

**2. [MENU] button → "KEY" → select "SW."**




**3. Turn the [VALUE] knob to select "ON," and press to confirm.**

The composited result is output.

**4. Use the [VALUE] knob to select a menu item.**

| Menu item | Explanation |
|---|---|
| KEY SOURCE CH | Specifies the source of the logo or video that is overlaid when using key compositing.<br>**HDMI 1–3:**<br>Video being input from the VIDEO INPUT 1–3 connectors<br>**STILL IMAGE 1, 2:**<br>A still image loaded into the unit (p. 15) |
| KEY COLOR | Specifies the key color (black or white). |
| KEY LEVEL | Adjusts the degree of extraction for the key. |
| KEY GAIN | Adjusts the degree of edge blur for the key. |

**5. Turn the [VALUE] knob to edit the value of the setting, and press to confirm.**

Set the various menu items while you watch the composited result.

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

## Key compositing

**1. Press the [KEY] button to turn key compositing on (lit).**


The logo or image is shown as a cut.

**2. To turn off key compositing, press the [KEY] button once again.**

The background video returns as a cut.

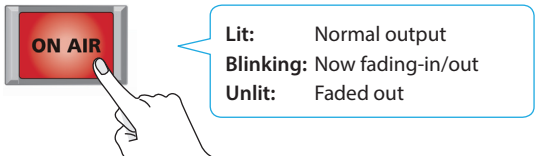
# Fading-In/Out the Main Output Video

Here's how to perform a fade-out from the main output video to a black screen, or a fade-in from a black screen to the main output video.

A scene that you don't want to output as video can be changed to a black screen.

* The fade-in/out effect does not apply to the video that's output from the MONITOR (MENU) connector.

**1. Press the [ON AIR] button.**




The main output video fades-out to a black screen.

When fade-out is complete, the [ON AIR] button goes dark.

**2. To fade-in, press the [ON AIR] button once again.**

The [ON AIR] button blinks, and video output begins. When fade-in is complete, the [ON AIR] button is lit.

**MEMO**

- You can also fade-in/out to a white screen.
  Use the [MENU] button → "ON AIR" → and set "OFF COLOR" to "WHITE."
- The fade-in/out time uses the [MENU] button → "TRANSITION" → "TIME" setting.
- With the factory settings, the video and audio fade-in/out together. If you want only the video to fade-in/out, use the [MENU] button → "ON AIR" → and set "AUDIO FADE" to "OFF."

# Outputting a Loaded Still Image

A still image that you loaded from a USB flash drive can be output in the same way as a video.
You can also use it as a source for key compositing (p. 14).

**NOTE**

- Up to two still images can be temporarily saved in this unit's internal memory. When you turn off the power, the still images are deleted.
- When using a USB flash drive for the first time, you must format it using the VR-1HD (p. 27).
- Depending on the USB flash drive, recognition of the flash drive might take some time.
- Never turn off the power or remove the USB flash drive while the message "PROCESSING..." is shown.

## Formats supported for loading

| | |
|---|---|
| **Format** | Windows Bitmap File (.bmp), 24-bit color, uncompressed |
| **Resolution** | Maximum 1920 x 1200 pixels |
| **File name** | Up to eight single-byte alphanumeric characters<br>* The extension ".bmp" must be added. |

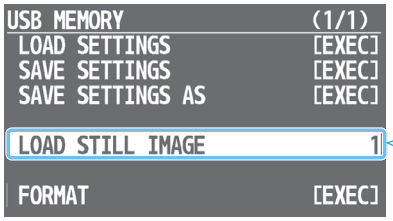
## Loading a still image

Here's how to load a still image from a USB flash drive into this unit.

**1. Save the still image in the root directory of the USB flash drive.**

**2. Connect the USB flash drive containing the still image to the USB MEMORY port.**

**3. [MENU] button → "USB MEMORY" → select "LOAD STILL IMAGE."**




An internal memory in which a still image is loaded is indicated by a "✱" symbol.

**4. Turn the [VALUE] knob to select the loading destination for the still image (internal memory 1 or 2), and press to confirm.**

A list of the still images in the USB flash drive is shown.

**5. Turn the [VALUE] knob to select the still image that you want to load, and press to confirm.**

A confirmation message appears.
If you want to cancel the operation, press the [MENU] button.

**6. Turn the [VALUE] knob to select "YES," and press to confirm.**

The still image is loaded into the unit. When the operation is finished, the message "COMPLETED" appears.

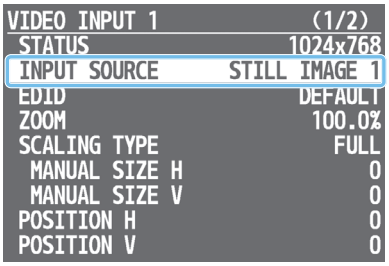
**7. Press the [VALUE] knob to close the message.**

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

## Assigning a Still Image to an INPUT Button

Here's how a still image loaded into the unit can be assigned to an INPUT button.

**1. [MENU] button → "VIDEO INPUT" → "INPUT 1"–"INPUT 3" → select "INPUT SOURCE."**



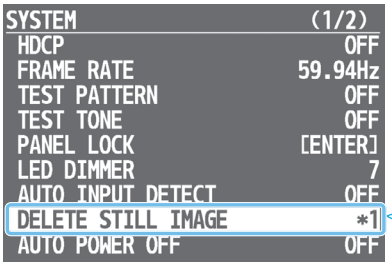

**2. Turn the [VALUE] knob to select "STILL IMAGE 1" or "STILL IMAGE 2," and press to confirm.**

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

## Deleting a Still Image

Here's how to delete a still image that's temporarily stored in the internal memory of the unit.

**1. [MENU] button → "SYSTEM" → select "DELETE STILL IMAGE."**




An internal memory in which a still image is loaded is indicated by a "✱" symbol.

**2. Turn the [VALUE] knob to select the internal memory that you want to delete, and press to confirm.**

A confirmation message appears.
If you want to cancel the operation, press the [MENU] button.

**3. Turn the [VALUE] knob to select "YES," and press to confirm.**

The still image is deleted. When the operation is finished, the message "COMPLETED" appears.

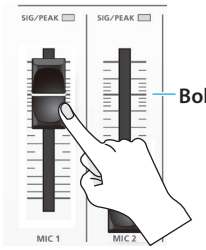
**4. Press the [VALUE] knob to close the message.**

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

## Adjusting the Mic's Input Gain (Sensitivity)

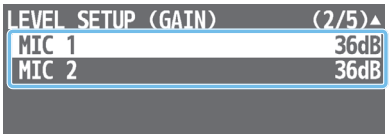
Here's how to adjust the input gain so that the mic audio is at the appropriate level.

**1.** **Move the [MIC 1] or [MIC 2] fader whose input gain you want to adjust to the "bold line" (0 dB).**




**2.** **Move the [MAIN] knob to a position near the indicator (0 dB).**


**3.** **Use the [LEVEL SETUP] button → LEVEL SETUP (GAIN) (2/5) to select "MIC 1" or "MIC 2."**




**4.** **Turn the [VALUE] knob fully counter-clockwise, minimizing (0 dB) the input gain.**

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

Raise the input gain as high as possible without allowing the MIC 1 or MIC 2 SIG/PEAK indicator to light red when the loudest voice occurs.

**6.** **Press the [VALUE] knob to confirm.**

**7.** **Press the [LEVEL SETUP] button to close the menu.**

**MEMO**

- **SIG/PEAK indicator**

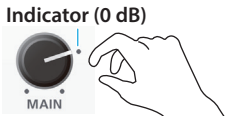
| Indication | Explanation |
|---|---|
| Lit red | Lit when excessive input occurs (0 dB or higher). |
| Lit green | Lit when voice is input (-50 dB or higher). |

- **Adjusting the mic 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 INPUT" → "MIC 1" or "MIC 2" → "PAN."

## Adjusting the Volume Balance

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

**1.** **Move the [MAIN] knob to a position near the indicator (0 dB).**

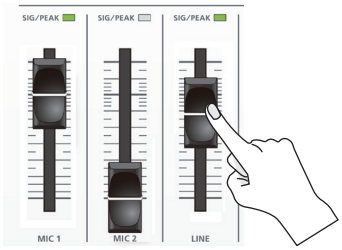



**2.** **While monitoring the audio via speakers or headphones, adjust the volume balance for the respective inputs.**

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).

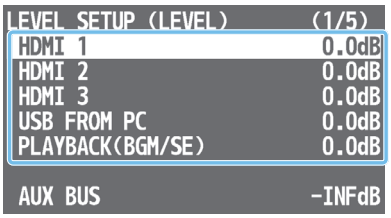
**●MIC 1, MIC 2, and LINE IN**

**Use the [MIC 1], [MIC 2], and [LINE] faders to adjust the volume.**




**●VIDEO INPUT 1–3, USB, and music files (p. 23)**

① **Use the [LEVEL SETUP] button → LEVEL SETUP (LEVEL) (1/5) to select the input audio.**

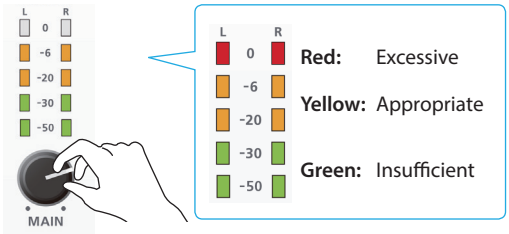



② **Use the [VALUE] knob to adjust the volume, and press to confirm.**

③ **Press the [LEVEL SETUP] button to close the menu.**

**3.** **Use the [MAIN] knob to adjust the volume of the main output.**

The level meter will light yellow at the appropriate volume.



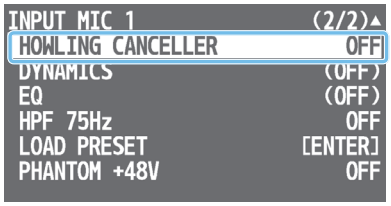

**MEMO**

- **Adjusting the volume of the USB output**
  The volume of the USB output (the volume being streamed) can be adjusted separately. Use the [USB STREAM] knob to make fine adjustments to the volume of the main output. If the AUX bus is assigned to the USB STREAM port (p. 24), this adjusts the volume of the AUX bus.
- You can output a test tone that's convenient for adjusting the volume.
  Use the [MENU] button → "SYSTEM" → "TEST TONE" to select the type of test tone that will be output.

# Reducing Acoustic Feedback (Howling Canceller)

Here's how to reduce the acoustic feedback that can occur when a mic is brought near a speaker (howling canceller function).

**1.** **[MENU] button → "AUDIO INPUT" → "MIC 1" or "MIC 2" → select "HOWLING CANCELLER."**




**2.** **Turn the [VALUE] knob to select "ON," and press to confirm.**

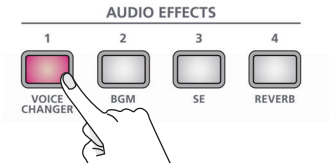
The howling canceller function turns on.

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

# Changing the Character of a Voice (Voice Changer)

Here's how to modify the pitch or character of the voice that's input from a mic. You can create transformations such as "from a female to a male voice," "from a male to a female voice," or "robot voice."

**1.** **Press the AUDIO EFFECTS [1] button to turn voice changer on (lit).**



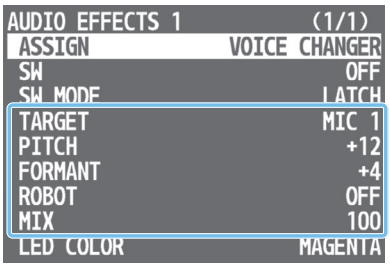

Vocalize into the mic, and the modified voice is output.

* With the factory settings, the effect is applied to the audio of MIC 1.

**2.** **To turn voice changer off, press the AUDIO EFFECTS [1] button once again.**

## Adjusting the voice changer settings

**1.** **[MENU] button → "AUDIO EFFECTS" → "EFFECTS 1" → select the menu item.**




| Menu item | Explanation |
|---|---|
| TARGET | Specifies the mic audio to which the effect applies. |
| PITCH | Adjusts the pitch of the voice in semitone steps. A setting of "0" is the original pitch. |
| FORMANT | Adjusts the character (formant) of the voice. Settings in the negative (–) direction produce a more masculine vocal character, and settings in the positive (+) direction produce a more feminine vocal character. A setting of "0" is the original voice. |
| ROBOT | If this is "ON," the voice is held at a fixed pitch, creating a mechanical robot-like impression. |
| MIX | Adjusts the balance between the unprocessed voice (0) and the voice processed by the effect (100). |

**2.** **Turn the [VALUE] knob to edit the value of the setting, and press to confirm.**

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

**MEMO**

With the factory settings, the AUDIO EFFECTS [1] button is assigned the voice changer on/off function.

You can use the [MENU] button → "AUDIO EFFECTS" → "EFFECTS 1" –"EFFECTS 4" → "ASSIGN" to change the function that's assigned.

# Applying Effects to Input Audio

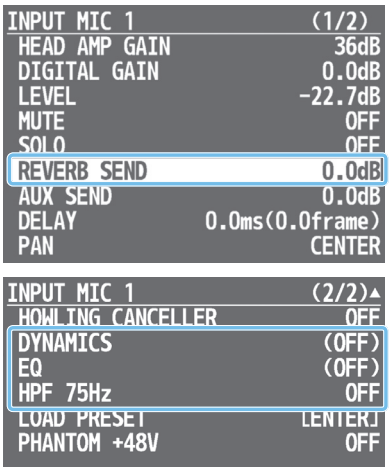
You can apply effects to the input audio to adjust the character of the sound. The following table shows the effects that are available.

| Input audio | Effect | | | | | | |
|---|---|---|---|---|---|---|---|
| | Reverb | Gate | Compressor | Limiter | Equalizer | High-pass filter | Voice changer |
| MIC 1, 2 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| LINE | ✓ | — | — | — | ✓ | — | — |
| VIDEO INPUT | ✓ | — | — | — | ✓ | — | — |
| USB | ✓ | — | — | — | ✓ | — | — |
| Music files (p. 23) | ✓ | — | — | — | ✓ | — | — |

**MEMO**

- You can use effect presets for MIC 1 and MIC 2. For details, refer to "Using an Effect Preset" (p. 19).
- For more about voice changer settings, refer to "Changing the Character of a Voice (Voice Changer)" (p. 17)

**1. [MENU] button → "AUDIO INPUT" → "MIC 1"–"PLAYBACK (BGM/SE)" → select an effect menu item.**




* For details on the effects, refer to the following section.

**2. Turn the [VALUE] knob to edit the value of the setting, and press to confirm.**

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

## Gate (GATE)

Eliminates audio that is lower than the specified threshold level. This is effective when the noise that you want to remove is separate from the audio that you want to keep, and can be used to remove hiss or other noise that is heard during periods of silence.

| Menu item | Explanation |
|---|---|
| DYNAMICS | Press the [VALUE] knob to access the DYNAMICS menu. |
| GATE | Turns the noise gate on/off. |
| GATE THRESHOLD | Specifies the level used as the threshold for removing audio. |
| GATE RELEASE | Specifies the length of time until the audio is fully attenuated after audio falls below the threshold. |

## Compressor/Limiter (COMP/LMT)

### ● Compressor

Audio that exceeds the specified threshold level is compressed. This reduces the difference between the maximum volume and minimum volume, making the audio more comfortable for listening.

### ● Limiter

Audio that exceeds the specified threshold level is compressed. This prevents distortion from occurring when unexpectedly loud audio is input.

* Distortion will occur if audio that exceeds the allowable range of the limiter is input.

| Menu item | Explanation |
|---|---|
| DYNAMICS | Press the [VALUE] knob to access the DYNAMICS menu. |
| COMP/LMT | Turns the compressor or limiter on/off. |
| COMP/LMT TYPE | Selects the compressor or limiter.<br>**COMP1:** This compressor is suitable for music.<br>**COMP2:** This compressor is suitable for voice. Its effect applies more quickly than "COMP1."<br>**LIMITER:** This is a limiter. |
| COMP/LMT THRESHOLD | Specifies the threshold at which the compressor/limiter applies. |

## Equalizer (EQ)

Adjusts the tone quality for each frequency band.

| Menu item | Explanation |
|---|---|
| EQ | Press the [VALUE] knob to access the EQ (equalizer) menu. |
| SW | Turns the equalizer on/off. |
| HI | Boosts or attenuates the high band. |
| HI FREQ | Adjusts the center frequency when changing the tone quality in the high band. |
| MID | Boosts or attenuates the middle band. |
| MID FREQ | Adjusts the center frequency when changing the tone quality in the middle band. |
| MID Q | Adjusts the width of the frequency band when boosting or attenuating the middle band. |
| LO | Boosts or attenuates the low band. |
| LO FREQ | Adjusts the center frequency when changing the tone quality in the low band. |

## High-pass filter (HPF 75Hz)

Cuts off unneeded low-band audio. The cutoff frequency is 75 Hz.

| Menu item | Explanation |
|---|---|
| HPF 75Hz | Turns the high-pass filter on/off. |

## Reverb (REVERB)

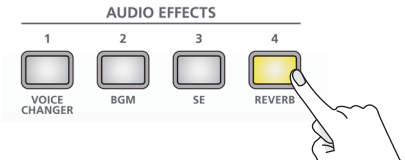
This adds reverberation to the sound.

**1. [MENU] button → "AUDIO INPUT" → "MIC 1"–"PLAYBACK (BGM/SE)" → select "REVERB SEND."**

**2. Turn the [VALUE] knob to adjust the amount of sound that is sent to reverb, and then press to confirm.**

Adjust the depth of reverb for each audio input.

**3. Press the AUDIO EFFECTS [4] button to turn reverb on (lit).**

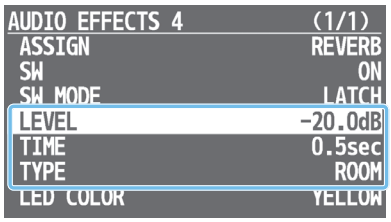



Reverb is applied.

**4. To turn reverb off, press the AUDIO EFFECTS [4] button once again.**

### Adjusting the reverb depth

**1. [MENU] button → "AUDIO EFFECTS" → "EFFECTS 4" (ASSIGN=REVERB) → select "LEVEL," "TIME," or "TYPE."**




| Menu item | Explanation |
|---|---|
| LEVEL | Sets the amount of sound that is returned from the reverb (return level). This adjusts the depth of the overall reverb. |
| TIME | Specifies the time until the reverberation is no longer heard. |
| TYPE | Specifies the reverb type.<br>ROOM: Produces the natural-sounding reverberation of a room.<br>HALL: Produces the reverberation that is typical of a performance in a concert hall. |

**2. Turn the [VALUE] knob to edit the value of the setting, and press to confirm.**

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

**MEMO**

With the factory settings, the AUDIO EFFECTS [4] button is assigned the reverb on/off function.

You can use the [MENU] button → "AUDIO EFFECTS" → "EFFECTS 1" –"EFFECTS 4" → "ASSIGN" to change the function that's assigned.

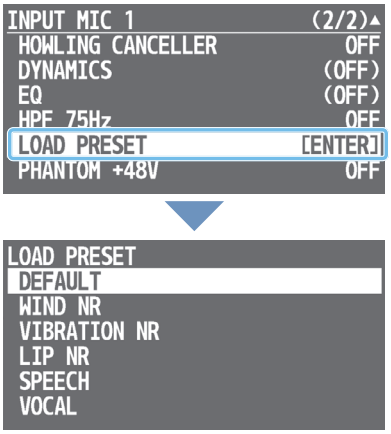
## Using an Effect Preset

The VR-1HD provides effect presets for the mics. Simply by selecting a preset, you can easily apply the effect that's appropriate for your situation.

Each preset consists of a combination of two effects (equalizer, high-pass filter).

* When you switch presets, the settings of each effect are overwritten.

**1. [MENU] button → "AUDIO INPUT" → "MIC 1" or "MIC 2" → select "LOAD PRESET."**




The preset list appears.

**2. Turn the [VALUE] knob to select an effect preset, and press to confirm.**

| Value | Explanation |
|---|---|
| DEFAULT | Flat settings that do not apply any effect. |
| WIND NR | Reduces wind noise. |
| VIBRATION NR | Reduces vibration and other low-frequency noise. |
| LIP NR | Reduces noises produced by the lips when speaking or singing. This is appropriate for vocal input. |
| SPEECH | Makes a spoken voice easier to understand. |
| VOCAL | Enhances a singing voice. |

A confirmation message appears.


If you want to cancel the operation, press the [MENU] button.

**3. Turn the [VALUE] knob to select "YES," and press to confirm.**

The preset is loaded. When the operation is finished, the message "COMPLETED" appears.

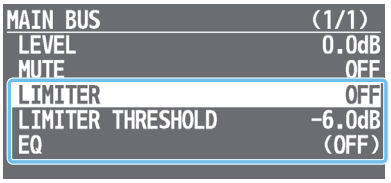
**4. Press the [VALUE] knob to close the message.**

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

# Applying Effects to Output Audio

Here's how to modify the tonal character by applying effects to the audio output.

**1. [MENU] button → "AUDIO OUTPUT" → "MAIN BUS" or "AUX BUS" → select an effect menu item.**




* For details on the effects, refer to the following section.

**2. Turn the [VALUE] knob to edit the value of the setting, and press to confirm.**

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

## Limiter (LIMITER)

Compresses the audio so that the mixed audio does not exceed the specified threshold level.

* Distortion will occur if audio that exceeds the allowable range of the limiter is input.

| Menu item | Explanation |
|---|---|
| LIMITER | Turns the limiter on/off. |
| LIMITER THRESHOLD | Specifies the threshold at which the limiter applies. |

## Equalizer (EQ)

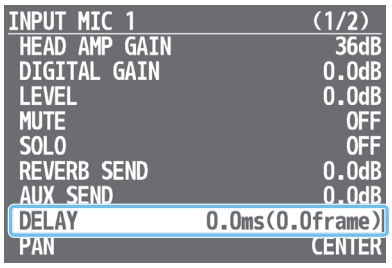
Adjusts the tone quality for each frequency band.

| Menu item | Explanation |
|---|---|
| EQ | Press the [VALUE] knob to access the EQ (equalizer) menu. |
| SW | Turns the equalizer on/off. |
| HI | Boosts or attenuates the high band. |
| HI FREQ | Adjusts the center frequency when changing the tone quality in the high band. |
| MID | Boosts or attenuates the middle band. |
| MID FREQ | Adjusts the center frequency when changing the tone quality in the middle band. |
| MID Q | Adjusts the width of the frequency band when boosting or attenuating the middle band. |
| LO | Boosts or attenuates the low band. |
| LO FREQ | Adjusts the center frequency when changing the tone quality in the low band. |

# Correcting a Time Difference Between Video and Audio (Delay)

If there is a timing discrepancy between the video and audio, you can correct the output timing by delaying the audio output.

**1. [MENU] button → "AUDIO INPUT" → "MIC 1"–"USB FROM PC" → select "DELAY."**




**2. Turn the [VALUE] knob to adjust the delay time of the input audio, and press to confirm.**

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

**MEMO**

For the USB STREAM port and AUX bus (p. 24), you can adjust the delay time of the audio output.

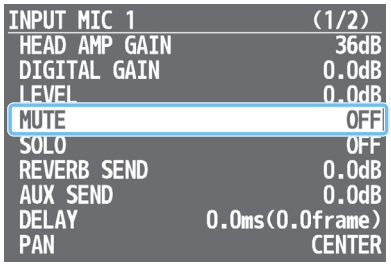
Press the [MENU] button → "AUDIO OUTPUT" → "USB STREAM" or "AUX BUS" → and adjust "DELAY."

# Silencing Only Specific Audio (Mute)

Here's how to temporarily silence specific input audio or output audio (the mute function).

## Muting input audio

**1.** **[MENU] button → "AUDIO INPUT" → "MIC 1"–"PLAYBACK (BGM/SE)" → select "MUTE."**



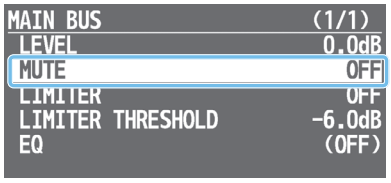

**2.** **Turn the [VALUE] knob to select "ON," and press to confirm.**

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

## Muting output audio

Here's how to mute the audio of the main output (main bus), AUX bus (p. 24), or USB output.

**1.** **[MENU] button → "AUDIO OUTPUT" → "MAIN BUS," "AUX BUS," or "USB STREAM" → select "MUTE."**




**2.** **Turn the [VALUE] knob to select "ON," and press to confirm.**

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

**MEMO**

You can assign the mute function to an AUDIO EFFECTS button and turn it on/off.

Press the [MENU] button → "AUDIO EFFECTS" → "EFFECTS 1" –"EFFECTS 4" → use the following menu items to change the function assignment.

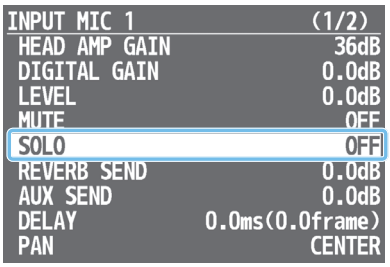
| Menu item | Explanation |
|---|---|
| ASSIGN | Choose "MUTE." |
| CH | Specify the audio that will be affected by the operation. |

# Checking a Specific Audio Input (Solo)

Here's how you can temporarily monitor a specific audio input via the headphones (solo function).

* The solo function applies to the headphone output. It does not affect output other than the headphones.

**1.** **[MENU] button → "AUDIO INPUT" → "MIC 1"–"PLAYBACK (BGM/SE)" → select "SOLO."**




**2.** **Turn the [VALUE] knob to select "ON," and press to confirm.**

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

**MEMO**

You can assign the solo function to an AUDIO EFFECTS button and turn it on/off.

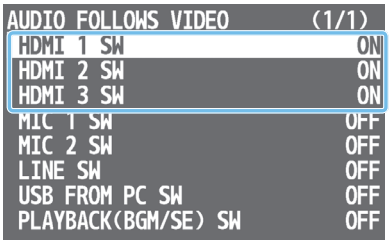
Press the [MENU] button → "AUDIO EFFECTS" → "EFFECTS 1" –"EFFECTS 4" → use the following menu items to change the function assignment.

| Menu item | Explanation |
|---|---|
| ASSIGN | Choose "SOLO." |
| CH | Specify the audio that will be affected by the operation. |

# Interlinking Audio Output to Video Switching (Audio Follow)

Here's how the audio output can be automatically switched in tandem with video switching (the audio follow function).

**1.** **[MENU] button → "AUDIO FOLLOWS VIDEO" → select "HDMI 1 SW"–"HDMI 3 SW."**




**2.** **Turn the [VALUE] knob to select "ON," and press to confirm.**

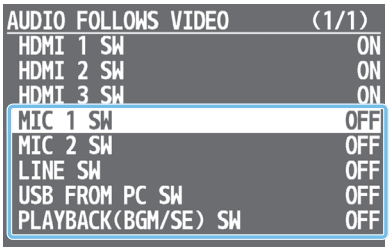
| Value | Explanation |
|---|---|
| ON | The video and audio from HDMI input are switched together. |
| OFF | The audio is always output regardless of the input video selection. |

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

## Adding an object for audio follow

Here's how an audio input source other than VIDEO INPUT 1–3 can be specified as an object for the audio follow function.

**1.** **[MENU] button → "AUDIO FOLLOWS VIDEO" → and select the audio input that will be the object of the audio follow function.**




| Menu item | Explanation |
|---|---|
| MIC 1 SW | MIC 1 input |
| MIC 2 SW | MIC 2 input |
| LINE SW | LINE input |
| USB FROM PC SW | USB input |
| PLAYBACK (BGM/SE) SW | Music files (p. 23) |

**2.** **Turn the [VALUE] knob to select one of "INPUT 1"–"INPUT 3," and press to confirm.**

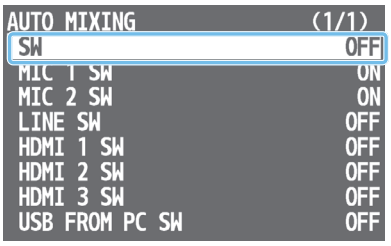
| Value | Explanation |
|---|---|
| INPUT 1–3 | For each audio source, these settings specify the input video (INPUT 1–3) that will use the audio follow function. Audio is output only when the specified input video is selected. |
| OFF | The audio is always output regardless of the input video selection. |

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

# Controlling the Volume Automatically (Auto Mixing)

The volume adjustments that would normally be done by the operator can be controlled automatically (auto mixing function). Since this lets you leave the volume adjustments up to the VR-1HD, it can be used in situations where there is no dedicated operator.

**1.** **[MENU] button → "AUTO MIXING" → select "SW."**




**2.** **Turn the [VALUE] knob to select "ON," and press to confirm.**

The auto mixing function turns on.

**3.** **Use the [VALUE] knob to select the audio whose setting you want to specify.**

| Menu item | Explanation |
|---|---|
| MIC 1 SW | MIC 1 input |
| MIC 2 SW | MIC 2 input |
| LINE SW | LINE input |
| HDMI 1 SW | VIDEO INPUT 1 input |
| HDMI 2 SW | VIDEO INPUT 2 input |
| HDMI 3 SW | VIDEO INPUT 3 input |
| USB FROM PC SW | USB input |

**4.** **Turn the [VALUE] knob to specify whether the selected audio is affected (ON) or is not affected (OFF) by auto mixing, and press to confirm.**

For audio that does not require auto mixing, such as background music, choose "OFF."

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

# Playing Back Music Files

Here's how to play back the internal music files or music files (.wav) that are saved on a USB flash drive. By playing back sound effects such as jingles or applause, or background music, you can make your stream or program more enjoyable.

**NOTE**

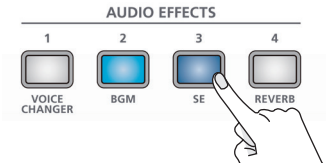
- When using a USB flash drive for the first time, you must format it using the VR-1HD (p. 27).
- Depending on the USB flash drive, recognition of the flash drive might take some time.

## Music files that can be played

| | |
|---|---|
| **Format (extension)** | WAV (.wav) |
| **Sample rate** | 44.1, 48 kHz |
| **Bit depth** | 16 bits |
| **Number of channels** | Stereo, mono |
| **File size** | 2 GB or less |
| **File name** | Up to eight single-byte alphanumeric characters<br>* The extension ".wav" must be added. |

## Playing back

**1. Press the AUDIO EFFECTS [2] or [3] button.**




The button lights, and the music file plays.

* With the factory settings, an internal music file will play.

| | |
|---|---|
| **[2] button** | BriskAfternoon: background music sample |
| **[3] button** | Applause: sound effect sample (applause) |

**2. To stop the music file, press the AUDIO EFFECTS [2] or [3] button once again.**

If loop playback is off, the music file stops automatically when it has played to the end.

**MEMO**

- Music files shorter than 10 ms might not play correctly.
- The VR-1HD plays back the music file directly from the connected USB flash drive. Even if a music file on the USB flash drive is selected, it will not play unless the USB flash drive is connected.
- With the factory settings, the AUDIO EFFECTS [2][3] buttons are assigned the music file play/stop function "PLAYBACK (BGM/SE)."
  You can use the [MENU] button → "AUDIO EFFECTS" → "EFFECTS 1"–"EFFECTS 4" → "ASSIGN" to change the function that's assigned.

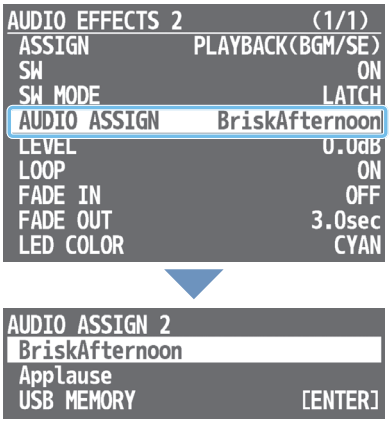
## Selecting a music file from a USB flash drive

Here's how to play back a music file that's saved on a USB flash drive.

**1. Save the music file in the root directory of the USB flash drive.**

**2. Connect the USB flash drive containing the music file to the USB MEMORY port.**

**3. [MENU] button → "AUDIO EFFECTS" → "EFFECTS 2" or "EFFECTS 3" → select "AUDIO ASSIGN."**




A list of clips appears. "BriskAfternoon" and "Applause" are internal music files.

**4. Use the [VALUE] knob to select "USB MEMORY."**

A list of the music files on the USB flash drive appears.

**5. Turn the [VALUE] knob to select the music file that you want to play, and press to confirm.**

A confirmation message appears.
If you want to cancel the operation, press the [MENU] button.

**6. Turn the [VALUE] knob to select "YES," then press the knob to confirm.**

The message "COMPLETED" appears.

**7. Press the [VALUE] knob to close the message.**

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

## Specifying the playback method

You can make the music file play as a loop, or make it fade-in/out.
Press the [MENU] button → "AUDIO EFFECTS" → choose "EFFECTS 1"–"EFFECTS 4," and set the following menu items.

### ● When ASSIGN = PLAYBACK (BGM/SE)

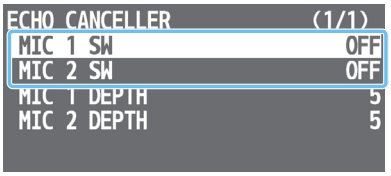
| Menu item | Explanation |
|---|---|
| **LEVEL** | Adjusts the playback volume of the music file. |
| **LOOP** | Turns loop playback on/off. |
| **FADE IN** | Specifies the fade-in time of the music file. |
| **FADE OUT** | Specifies the fade-out time of the music file. |

# Suppressing Echo in a Web Conference System (Echo Canceller)

In a conversation using the speaker and mic of a web conference system, an echo can occur when the other person's voice heard through the speaker is picked up by the mic and sent back to the other person.

When you use the echo canceller function, the echo component is removed from the voice that is picked up by a mic connected to the VR-1HD, so that only your own voice is sent to the other party.

**1. [MENU] button → "ECHO CANCELLER" → select "MIC 1 SW" or "MIC 2 SW."**




**2. Turn the [VALUE] knob to select "ON," and press to confirm.**

The echo canceller function turns on.

**3. Use the [VALUE] knob to select "MIC 1 DEPTH" or "MIC 2 DEPTH."**

**4. Turn the [VALUE] knob to adjust the depth (1–10) of the echo canceller, and press to confirm.**

Use the setting that produces the greatest reduction in the echo.

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

**MEMO**

- The echo canceller function supports rooms that are approximately 20m$^2$ (215 sq ft).
- If your own voice returns to you as an echo, you'll need the other party to make echo canceller settings.

# About the AUX Bus

A "bus" is a destination to which input audio is mixed and sent. The VR-1HD has two buses: the "main bus" and the "AUX bus." With the exception of the MAIN connector, you can assign a desired bus to each output connector.

### ● Main bus

This mixes and outputs all input audio. This is the same audio as the main output.

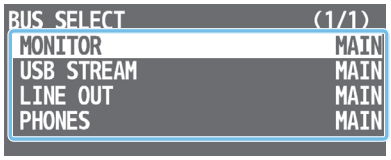
### ● AUX bus

This mixes and outputs only the input audio that is sent to the AUX bus. This allows you to output audio that is different than the main output.

For example, in a live event, you might output a mix of all audio inputs (the main bus), while separately outputting a mix of only specific audio inputs (the AUX bus) for recording or streaming.

## Assigning the AUX bus

**1. [MENU] button → "AUDIO OUTPUT" → "BUS SELECT" → select the output jack.**




**2. Turn the [VALUE] knob to select "AUX," and press to confirm.**

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

## Sending audio to the AUX bus

Press the [MENU] button → "AUDIO INPUT" → "MIC 1"–"PLAYBACK (BGM/SE)" → "AUX SEND" to adjust the amount that is sent to the AUX bus.

## Adjusting the audio of the AUX bus

Press the [MENU] button → "AUDIO OUTPUT" → "AUX BUS" → use the following menu items to adjust the audio of the AUX bus.

| Menu item | Explanation |
|---|---|
| LEVEL | Adjusts the volume |
| MUTE | Turns mute on/off (p. 21) |
| LIMITER | Limiter (p. 20) |
| LIMITER THRESHOLD | |
| DELAY | Delay (p. 20) |
| EQ | Equalizer (p. 20) |

# Live Streaming

## Outputting Video/Audio to a Computer for Streaming

Here's how the video and audio mixed by the VR-1HD can be output to a connected computer. You can also input audio that's played back by the computer.

By using an internet-connected computer with streaming software, you can distribute content as a live internet stream.

* In order for the audio and video from the VR-1HD to be correctly viewed on the computer, software that supports the USB video class and USB audio class must be installed on the computer.
* For the latest operating requirements, refer to the Roland website (**https://proav.roland.com/**).

### Outputting video and audio to the computer

1. **Using a USB 3.0 cable, connect a USB 3.0 port on the computer to the USB STREAM port on the VR-1HD.**
2. **Turn on the power to the VR-1HD.**
3. **Start the computer.**

   When communication with the computer has been established, the computer recognizes the VR-1HD as a USB video device and USB audio device.

   * The first time that the VR-1HD is connected to the computer, the standard drivers of the operating system are installed automatically.
4. **Operate the VR-1HD to prepare the video and audio that you want to output to the computer.**
5. **On your computer, verify the input from the VR-1HD.**

   Start software that supports the USB video class and audio class, and verify the video and audio that are being input from the VR-1HD.

**MEMO**

**If the video is garbled or operation is otherwise unstable**

Press the [MENU] button → "VIDEO OUTPUT" → "USB STREAM" → execute "CONNECTION RESET" to try reconnecting the computer with the VR-1HD.

### Using the loopback function

Audio from the computer can be input to the VR-1HD via USB, mixed with other audio, and returned to the computer (the loopback function).

You can add a narration to music that's played back from your computer and live-stream it, or record it using software on your computer.

### Capturing video on the computer

Using dedicated "Video Capture for VR" software, the video and audio that are output from the VR-1HD via USB can be recorded on your computer.

For details on operation, refer to the Owner's Manual included with "Video Capture for VR."

You can download "Video Capture for VR" from the Roland website.
**https://proav.roland.com/**

# Saving Internal Settings to a USB Flash Drive

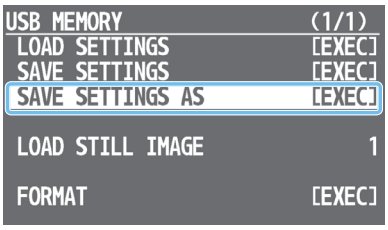
You can save the settings of this unit as a single file (.VR1) to a USB flash drive connected to the USB MEMORY port. You can use the saved settings file by loading it from the USB flash drive into this unit when necessary.

**NOTE**

- When using a USB flash drive for the first time, you must format it using the VR-1HD (p. 27).
- Never turn off the power or remove the USB flash drive while the message "PROCESSING..." is shown.
- Depending on the USB flash drive, recognition of the flash drive might take some time.

## Saving a new file

**1. [MENU] button → "USB MEMORY" → select "SAVE SETTINGS AS."**





"SYS + consecutive four-digit number. VR1" is specified as the file name.

A confirmation message appears.
If you want to cancel the operation, press the [MENU] button.

**2. Turn the [VALUE] knob to select "YES," then press the knob to confirm.**

The current settings are saved to the USB flash drive as a file. When the operation is finished, the message "COMPLETED" appears.


**3. Press the [VALUE] knob to close the message.**

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

**MEMO**

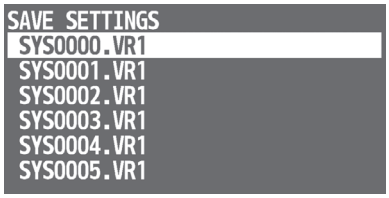
**Content that is not saved to the file**

- The SYSTEM menu settings "TEST PATTERN" and "TEST TONE." The unit always starts with these "OFF."
- The still images loaded into the unit. Only the file names of the still images are saved.
- The state of the [ON AIR] button. The unit always starts with this lit.
- The state of an AUDIO EFFECTS button to which "PLAYBACK (BGM/SE)" is assigned. The unit always starts with this off.
- The positions of the volume knobs and faders.

## Overwrite-saving

**1. [MENU] button → "USB MEMORY" → select "SAVE SETTINGS."**

The settings files in the USB flash drive are listed.




**2. Turn the [VALUE] knob to select the settings file that you want to overwrite, and press to confirm.**

A confirmation message appears.
If you want to cancel the operation, press the [MENU] button.

**3. Turn the [VALUE] knob to select "YES," and press to confirm.**

The settings file is overwrite-saved. When the operation is finished, the message "COMPLETED" appears.

**4. Press the [VALUE] knob to close the message.**

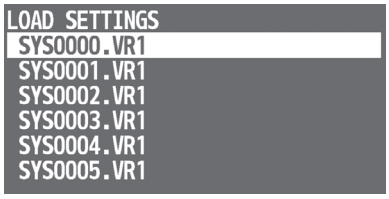
**5. Press the [MENU] button several times to close the menu.**

## Loading

Here's how to load this unit's settings that you saved on a USB flash drive. When you load settings, the current settings are overwritten.

**1. [MENU] button → "USB MEMORY" → select "LOAD SETTINGS."**

The settings files in the USB flash drive are listed.




**2. Turn the [VALUE] knob to select the settings file that you want to load, and press to confirm.**

A confirmation message appears.
If you want to cancel the operation, press the [MENU] button.

**3. Turn the [VALUE] knob to select "YES," and press to confirm.**

The settings are loaded. When the operation is finished, the message "COMPLETED" appears.

**4. Press the [VALUE] knob to close the message.**

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

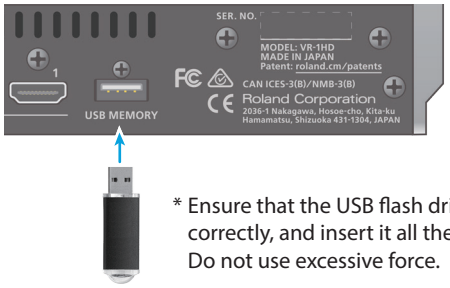
# Formatting a USB Flash Drive

The first time that you use a USB flash drive, you must use the VR-1HD to format it.

**NOTE**

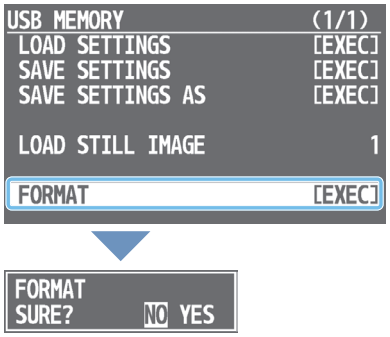
- A USB flash drive that was not formatted by the VR-1HD will not be recognized.
- Never turn off the power or remove the USB flash drive while the message "PROCESSING..." is shown.
- When you format a USB flash drive, all data on that USB flash drive is erased. If the drive contains important data, back it up to your computer before you format the drive.

**1. Connect the USB flash drive to the USB MEMORY port.**




* Ensure that the USB flash drive is oriented correctly, and insert it all the way into the port. Do not use excessive force.

**2. [MENU] button → "USB MEMORY" → select "FORMAT."**




A confirmation message appears.
If you want to cancel the operation, press the [MENU] button.

**3. Turn the [VALUE] knob to select "YES," and press to confirm.**

Formatting is executed. When the operation is finished, the message "COMPLETED" appears.


**4. Press the [VALUE] knob to close the message.**

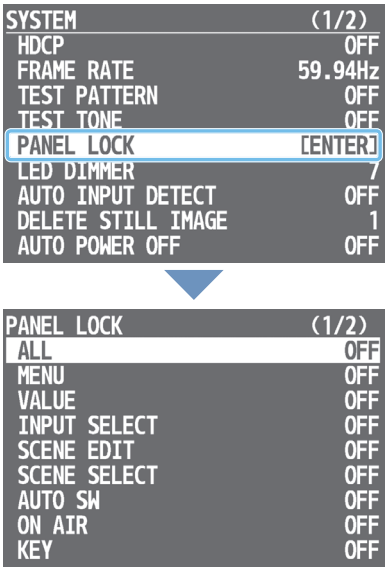
**5. Press the [MENU] button several times to close the menu.**

# Disabling Panel Operations (Panel Lock)

You can disable operation of the panel's buttons and knobs to prevent unintended operations (Panel Lock function).

## Selecting the objects of panel lock

**1. [MENU] button → "SYSTEM" → select "PANEL LOCK."**




The PANEL LOCK menu appears.

**2. Use the [VALUE] knob to select the object (button or knob) for which you want to make settings.**

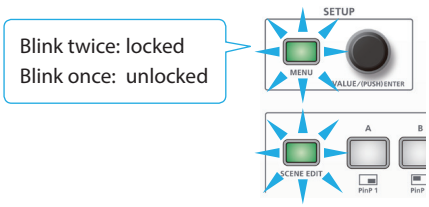
By choosing "ALL" you can select all buttons and knobs in a single operation.

**3. Turn the [VALUE] knob to specify whether panel lock will (ON) or will not (OFF) affect the object, and then press to confirm.**

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

## Locking or unlocking the operation panel

**1. Simultaneously hold down the [MENU] button and [SCENE EDIT] button for three seconds or longer.**




The [MENU] button and [SCENE EDIT] button blink twice, and the operation panel is locked.

**2. To unlock, simultaneously hold down the [MENU] button and [SCENE EDIT] button once again for three seconds or longer.**

The [MENU] button and [SCENE EDIT] button blink once, and the operation panel is unlocked.

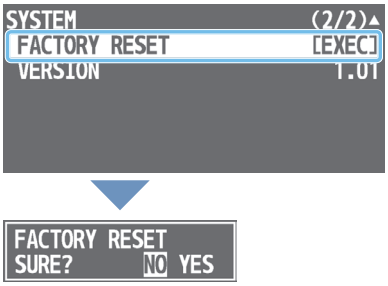
# Returning to the Factory Settings (Factory Reset)

Here's how you can return the settings of the VR-1HD to their factory-set state. If following the procedures described in this manual does not cause the result you expect, try executing a factory reset.

**NOTE**

When you execute factory reset, all previously specified content and the still image (p. 15) that was loaded into the unit will be lost.

**1. [MENU] button → "SYSTEM" → select "FACTORY RESET."**







A confirmation message appears.
If you want to cancel the operation, press the [MENU] button.

**2. Turn the [VALUE] knob to select "YES," and press to confirm.**

Factory reset is executed. When the operation is finished, the message "COMPLETED" appears.


**3. Press the [VALUE] knob to close the message.**

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

**MEMO**

By turning on the power while you hold down the AUDIO EFFECTS [1] button, you can execute factory reset at startup.

# Menu List

Pressing the [MENU] button makes the menu appear on the display connected to the MONITOR (MENU) connector.


**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.
- When you press the [LEVEL SETUP] button, the menu for volume, input gain, solo, and mute settings appears (p. 42).
- There are shortcuts that let you quickly access the menu for specific buttons and knobs.
  For details, refer to "Shortcut List" (p. 48).

## VIDEO INPUT Menu

| Menu item | **Value** (bold text: default value) | Explanation |
|---|---|---|
| **INPUT 1–3** | Adjust the videos that are assigned to the INPUT [1]–[3] buttons. | |
| **STATUS** | — | Indicates the format of the video source. If no video is being input, this indicates "NO SIGNAL." If no still image is loaded into the unit, this indicates "NO IMAGE." |
| **INPUT SOURCE** | Specifies the video sources that you want to assign to the INPUT [1]–[3] buttons. | |
| | **HDMI** | The video being input from the VIDEO INPUT connector |
| | STILL IMAGE 1, 2 | A still image loaded into the unit |
| | BLACK, WHITE, GRAY, GREEN, BLUE | Single-color screen |
| **EDID** | **DEFAULT**<br>720p<br>1080i<br>1080p<br>1024x768<br>1280x800<br>1366x768<br>1280x1024<br>1400x1050<br>1600x1200<br>1920x1080<br>1920x1200 | Specifies the input format (EDID).<br>If this is "DEFAULT," EDID information for all formats that can be input to the VR-1HD will be transmitted.<br>* When you change the setting, the change is not applied until you press the [VALUE] knob to confirm.<br>**What is EDID?**<br>EDID is data that is transmitted from the VR-1HD to the source device when the VR-1HD is connected to a source device. EDID contains data such as the formats that can be input to the VR-1HD (resolution, color space, color depth) and audio information.<br>Based on the EDID information that the source device receives, it will output the most appropriate video format to the VR-1HD. |
| **ZOOM** | 10.0–**100.0**–1000.0% (*1) (*2) | Adjusts the zoom ratio. |
| **SCALING TYPE** | Specifies the scaling type. (*2) | |
| | **FULL** | Always displays the picture expanded to full screen, irrespective of the aspect ratio of the input video. |
| | LETTERBOX | Enlarges or reduces the incoming video to a full-screen view while keeping the aspect ratio unchanged. |
| | CROP | Enlarges or reduces the incoming video so that the output picture has no blank margins while keeping the aspect ratio unchanged. Video extending beyond the borders is cut off. |
| | DOT BY DOT | Performs no scaling. |
| **MANUAL SIZE H** | -2000–**0**–2000 (*1) (*2) | Adjusts the horizontal size. |
| **MANUAL SIZE V** | -2000–**0**–2000 (*1) (*2) | Adjusts the vertical size. |
| **POSITION H** | -1920–**0**–1920 | Adjusts the display position in the horizontal direction. |
| **POSITION V** | -1200–**0**–1200 | Adjusts the display position in the vertical direction. |
| **BRIGHTNESS** | -64–**0**–64 | Adjusts the brightness. |
| **CONTRAST** | -64–**0**–64 | Adjusts the contrast. |
| **SATURATION** | -64–**0**–64 | Adjusts the saturation. |
| **RED** | -64–**0**–64 | Adjusts the red level. |
| **GREEN** | -64–**0**–64 | Adjusts the green level. |
| **BLUE** | -64–**0**–64 | Adjusts the blue level. |
| **COLOR SPACE** | RGB 0–255, RGB 16–235, YCC SD, YCC HD, **AUTO** | Specifies the color space (system for representing colors in video). If this is set to "AUTO," an appropriate color space is automatically applied. |
| **FLICKER FILTER** | **OFF**, ON | If this is "ON," flickering is reduced. |

(*1) The valid range of setting values depends on conditions such as the input/output format. In some cases, changing the value of a setting might not affect the video.

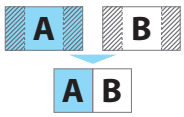
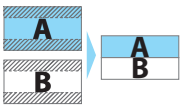
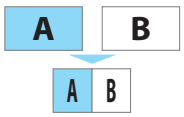
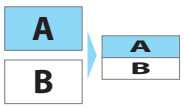
(*2) A still image loaded into the unit cannot be made smaller. If resizing would make the still image smaller than its original size, it will not be resized (smaller), but instead a portion of the still image will be cut out for display.

# VIDEO OUTPUT Menu

| Menu item | Value (bold text: default value) | Explanation |
|---|---|---|
| OUTPUT FORMAT | 720p<br>1080i<br>**1080p**<br>1024x768<br>1280x800<br>1366x768<br>1280x1024<br>1400x1050<br>1600x1200<br>1920x1080<br>1920x1200 | Specifies the output format of the MAIN/MONITOR (MENU) connector.<br>* When you change the setting, the change is not applied until you press the [VALUE] knob to confirm. |
| USB FORMAT | **1920x1080/29.97p (25p)**<br>1280x720/59.94p (50p)<br>1280x720/29.97p (25p)<br>854x480/59.94p (50p)<br>854x480/29.97p (25p) | Specifies the output format of the USB STREAM connector. This further converts the video that was format-converted by "OUTPUT FORMAT" into a format that can be streamed.<br>* The numerical value in parentheses is the frame rate when the SYSTEM menu setting "FRAME RATE" is set to "50 Hz."<br>* When you change the setting, the change is not applied until you press the [VALUE] knob to confirm. |
| MAIN OUTPUT | Adjusts the video that is output from the MAIN connector (the main output video). | |
| STATUS | — | Indicates the connection status of the MAIN connector. |
| COLOR SPACE | **RGB 0–255**, RGB 16–235, YCC | Specifies the color space (system for representing colors in video). |
| DVI-D/HDMI | **HDMI**, DVI-D | Specifies the type of output signal. |
| ZOOM | 10.0–**100.0**–1000.0% | Adjusts the zoom ratio. |
| POSITION H | -1920–**0**–1920 | Adjusts the display position in the horizontal direction. |
| POSITION V | -1200–**0**–1200 | Adjusts the display position in the vertical direction. |
| BRIGHTNESS | -64–**0**–64 | Adjusts the brightness. |
| CONTRAST | -64–**0**–64 | Adjusts the contrast. |
| SATURATION | -64–**0**–64 | Adjusts the saturation. |
| RED | -64–**0**–64 | Adjusts the red level. |
| GREEN | -64–**0**–64 | Adjusts the green level. |
| BLUE | -64–**0**–64 | Adjusts the blue level. |
| MONITOR (MENU) OUTPUT | Adjusts the video that is output from the MONITOR (MENU) connector. | |
| STATUS | — | Indicates the connection status of the MONITOR (MENU) connector. |
| COLOR SPACE | **RGB 0–255**, RGB 16–235, YCC | Specifies the color space (system for representing colors in video). |
| DVI-D/HDMI | **HDMI**, DVI-D | Specifies the type of output signal. |
| BRIGHTNESS | -64–**0**–64 | Adjusts the brightness. |
| CONTRAST | -64–**0**–64 | Adjusts the contrast. |
| SATURATION | -64–**0**–64 | Adjusts the saturation. |
| RED | -64–**0**–64 | Adjusts the red level. |
| GREEN | -64–**0**–64 | Adjusts the green level. |
| BLUE | -64–**0**–64 | Adjusts the blue level. |
| USB STREAM | Adjusts the video that is output from the USB STREAM connector. | |
| STATUS | (HIGH SPEED, SUPER SPEED) | Indicates whether the connection uses USB 2.0 (HIGH SPEED) or USB 3.0 (SUPER SPEED). If not connected to a computer, this indicates "NOT CONNECTED." |
| ZOOM | 10.0–**100.0**–1000.0% | Adjusts the zoom ratio. |
| SCALING TYPE | Specifies the scaling type. | |
| | **FULL** | Always displays the picture expanded to full screen, irrespective of the aspect ratio of the input video. |
| | LETTERBOX | Enlarges or reduces the incoming video to a full-screen view while keeping the aspect ratio unchanged. |
| | CROP | Enlarges or reduces the incoming video so that the output picture has no blank margins while keeping the aspect ratio unchanged. Video extending beyond the borders is cut off. |
| | DOT BY DOT | Performs no scaling. |
| MANUAL SIZE H | -2000–**0**–2000 (*3) | Adjusts the horizontal size. |
| MANUAL SIZE V | -2000–**0**–2000 (*3) | Adjusts the vertical size. |
| POSITION H | -1920–**0**–1920 | Adjusts the display position in the horizontal direction. |
| POSITION V | -1200–**0**–1200 | Adjusts the display position in the vertical direction. |
| CONNECTION RESET | [EXEC] | Reconnects the computer and the VR-1HD when the video is garbled or when operation is otherwise unstable. |

(*3) The valid range of setting values depends on conditions such as the input/output format. In some cases, changing the value of a setting might not affect the video.

# SCENE Menu

| Menu item | Value (bold text: default value) | Explanation |
|---|---|---|
| **SCENE A–E** (*4) | Adjusts the screen layouts that are registered in scenes A–E. | |
| **TYPE** | Specifies the type of screen layout. | |
| | PinP | An inset screen (a small different screen) is overlaid on the background video (picture-in-picture). |
| | SPLIT | The screen is divided into left/right or upper/lower halves, and two videos are shown. |
| **When TYPE = PinP** | | |
| **BACKGROUND CH** | INPUT 1–3 (*5) | Specifies the background video. |
| **WINDOW CH** | INPUT 1–3 (*5) | Specifies the inset screen video.<br>* A still image loaded into the unit cannot be made smaller. If the still image is shown in the inset screen, a portion of the still image is cut out and shown, instead of making it smaller to match the size of the inset screen. |
| **WINDOW POSITION H** | -100.0–100.0% | Adjusts the horizontal display position of the inset screen. |
| **WINDOW POSITION V** | -100.0–100.0% | Adjusts the vertical display position of the inset screen. |
| **WINDOW ASPECT** | 1 : 1, 4 : 3, 3 : 2, 16 : 9 | Specifies the aspect ratio of the inset screen. |
| **WINDOW SIZE** | 10.0–100.0% | Adjusts the size of the inset screen. |
| **WINDOW CROPPING H** | 0.0–100.0% | Adjusts the horizontal size of the inset screen. |
| **WINDOW CROPPING V** | 0.0–100.0% | Adjusts the vertical size of the inset screen. |
| **VIEW POSITION H** | -100.0–100.0% | Adjusts the horizontal position of the video shown in the inset screen. |
| **VIEW POSITION V** | -100.0–100.0% | Adjusts the vertical position of the video shown in the inset screen. |
| **VIEW ZOOM** | 100.0–1000.0% | Adjusts the zoom of the video shown in the inset screen. |
| **When TYPE = SPLIT** | | |
| **PATTERN** | Specifies the pattern for the split. | |
| | V.CENTER<br>Vertically cuts-out the center of the video.<br>  <br> | H.CENTER<br>Horizontally cuts-out the center of the video.<br>  <br> |
| | V.STRETCH<br>Vertically shrinks the video.<br>  <br> | H.STRETCH<br>Horizontally shrinks the video.<br>  <br> |
| | * A still image loaded into the unit cannot be made smaller. If you use "V.STRETCH" or "H.STRETCH" to show a still image, the stretch effect might not apply correctly depending on the resolution of the still image or the display region of the screen. | |
| **CENTER** | 0.0–100.0% | Adjusts the position at which the screen is divided. |
| **A CH (LEFT/UPPER)** | INPUT 1–3 (*5) | Specifies the video that is shown in the left or upper side. |
| **B CH (RIGHT/LOWER)** | INPUT 1–3 (*5) | Specifies the video that is shown in the right or lower side. |
| **A-CENTER** | -25.0–25.0% | This is valid if "PATTERN" is set to "V.CENTER" or "H.CENTER."<br>**When using V.CENTER**<br>Adjusts the horizontal position of the video that is shown on the left side.<br>**When using H.CENTER**<br>Adjusts the vertical position of the video that is shown on the upper side. |
| **B-CENTER** | -25.0–25.0% | This is valid if "PATTERN" is set to "V.CENTER" or "H.CENTER."<br>**When using V.CENTER**<br>Adjusts the horizontal position of the video that is shown on the right side.<br>**When using H.CENTER**<br>Adjusts the vertical position of the video that is shown on the lower side. |
| **COPY** | Specifies settings for copying a scene. | |
| **SOURCE** | **SCENE A**–E | Specifies the copy-source scene. |
| **DESTINATION** | SCENE A–**B**–E | Specifies the copy-destination scene. |
| **COPY** | [EXEC] | Executes the scene copy. |

(*4) The factory settings for SCENE A–E are as follows.

| Menu item | SCENE A | SCENE B |
|---|---|---|
| TYPE | PinP | PinP |
| BACKGROUND CH | INPUT 1 | INPUT 1 |
| WINDOW CH | INPUT 2 | INPUT 3 |
| WINDOW POSITION H | 28.5% | -28.5% |
| WINDOW POSITION V | 28.5% | -28.5% |
| WINDOW ASPECT | 16 : 9 | 16 : 9 |
| WINDOW SIZE | 30.0% | 30.0% |
| WINDOW CROPPING H | 0.0% | 0.0% |
| WINDOW CROPPING V | 0.0% | 0.0% |
| VIEW POSITION H | 0.0% | 0.0% |
| VIEW POSITION V | 0.0% | 0.0% |
| VIEW ZOOM | 100.0% | 100.0% |

| Menu item | SCENE C | SCENE D | SCENE E |
|---|---|---|---|
| TYPE | SPLIT | SPLIT | SPLIT |
| PATTERN | V.CENTER | H.CENTER | V.CENTER |
| CENTER | 50.0% | 50.0% | 31.6% |
| A CH (LEFT/UPPER) | INPUT 1 | INPUT 1 | INPUT 3 |
| B CH (RIGHT/LOWER) | INPUT 2 | INPUT 2 | INPUT 2 |
| A-CENTER | 0.0% | 0.0% | 0.0% |
| B-CENTER | 0.0% | 0.0% | 0.0% |

(*5) The video sources assigned to INPUT 1–3 are specified by VIDEO INPUT menu → "INPUT 1"–"INPUT 3" → "INPUT SOURCE."

# TRANSITION Menu

| Menu item | Value (bold text: default value) | Explanation |
|---|---|---|
| SCENE TRANSITION | Specifies what happens when scenes are switched.<br>* INPUT 1–3 always transition using mix. | |
| | BLACK FADE | A fade effect enclosing a black screen is applied. All screens switch simultaneously. |
| | **MIX FADE** | A fade effect is applied. Screens switch individually. |
| TIME | 0.0–**1.0**–5.0sec | Specifies the transition time when switching between scenes or video. |

# KEY Menu

| Menu item | Value (bold text: default value) | Explanation |
|---|---|---|
| SW | **OFF**, ON | Turns luminance key video compositing on/off.<br>You can also use the [KEY] button to turn this on/off. |
| KEY SOURCE CH | Specifies the source of the logo or video that is overlaid when using key compositing. | |
| | **HDMI 1**–3 | Video being input from the VIDEO INPUT 1–3 connectors |
| | STILL IMAGE 1, 2 | A still image loaded into the unit |
| KEY COLOR | **BLACK**, WHITE | Specifies the key color (black or white). |
| KEY LEVEL | 0–**32**–127 | Adjusts the degree of extraction (transparency) for the key. |
| KEY GAIN | 0–**4**–16 | Adjusts the degree of edge blur (semi-transmissive region) for the key. |

# AUTO SWITCHING Menu

| Menu item | Value (bold text: default value) | Explanation |
|---|---|---|
| SW | **OFF**, ON | Turns the auto switching function on/off. If this is "ON," the INPUT 1–3 video and scenes A–E are switched automatically.<br>You can also use the [AUTO SW] button to turn this on/off. |
| TYPE | Specifies the operation mode for auto switching. | |
| | AUTO SCAN | Video is switched at the specified interval. |
| | **BEAT SYNC** | The beat is detected from the song (input audio), and the video is switched at the timing of the beat. |
| | VIDEO FOLLOWS AUDIO | Audio being input from the mic is detected, and the specified video is switched according to the volume. |
| **When TYPE = AUTO SCAN** | | |
| SEQUENCE | Specifies the order in which video signals are shown. | |
| | **NORMAL** | INPUT 1–3 → switch in the order of scenes A–E.<br>* INPUT 1–3 are skipped if there is no video input. |
| | RANDOM | Switch randomly. |
| INPUT 1–3 DURATION | OFF, 1–**7**–120sec | Specifies the time that the video is shown. If this is "OFF," video switching does not affect the input. |
| SCENE A–E DURATION | **OFF**, 1–120sec | |
| **When TYPE = BEAT SYNC** | | |
| SYNC SOURCE | HDMI 1–3, MIC 1–2, LINE,<br>USB FROM PC, **PLAYBACK (BGM/SE)** | Specifies the input audio that synchronizes the video. |
| CYCLE | 1–**4**–10 | Specifies the number of beats at which to switch to the next video. |
| SEQUENCE | Specifies the order in which video signals are shown. | |
| | **NORMAL** | INPUT 1–3 → switch in the order of scenes A–E.<br>* INPUT 1–3 are skipped if there is no video input. |
| | RANDOM | Switch randomly. |
| INPUT 1–3 SW | OFF, **ON** | Specifies whether video switching applies (ON) or does not apply (OFF) to the source. |
| SCENE A–E SW | **OFF**, ON | |
| **When TYPE = VIDEO FOLLOWS AUDIO** | | |
| TIME | 1–**2**–120sec | Specifies the time until audio detection resumes after mic audio has been detected to switch the video or scene. |
| MIC 1 SENSE | 0–**50**–100 | Specify the detection level for the audio being input to the MIC 1 or 2 jack. The higher the level, the more easily audio is detected. |
| MIC 2 SENSE | 0–**50**–100 | |
| MIC 1 SELECT | OFF, INPUT 1–3, SCENE A–E | Specifies the video/scene that is output when audio is detected in MIC 1. |
| MIC 2 SELECT | The default values are as follows.<br>MIC 1 SELECT: **INPUT 1**<br>MIC 2 SELECT: **INPUT 2**<br>MIC 1 + MIC 2 SELECT: **INPUT 3**<br>SILENT SELECT: **OFF** | Specifies the video/scene that is output when audio is detected in MIC 2. |
| MIC 1 + MIC 2 SELECT | | Specifies the video/scene that is output when audio is detected in both MIC 1 and MIC 2. |
| SILENT SELECT | | Specifies the video/scene that is output when there is no audio input in either MIC 1 or MIC 2. |

# ON AIR Menu

| Menu item | Value (bold text: default value) | Explanation |
|---|---|---|
| OFF COLOR | **BLACK**, WHITE | Specifies the background color (black, white) used when fading-in/out the main output video. |
| AUDIO FADE | Specifies the operation when the [ON AIR] button is pressed. | |
| | OFF | Only the video fades-in/out. |
| | **ON** | The video and audio fade-in/out together. |

# AUDIO INPUT Menu

| Menu item | Value (bold text: default value) | Explanation |
|---|---|---|
| MIC 1, 2 | Adjusts the audio that is input from the MIC 1 and 2 jacks. | |
| HEAD AMP GAIN | 0–**36**–64dB | Adjusts the input gain (sensitivity) in the analog domain. |
| DIGITAL GAIN | -42.0–**0.0**–42.0dB | Adjusts the input gain (sensitivity) in the digital domain (after conversion from analog to digital). |
| LEVEL | -INF–**0.0**–10.0dB | Adjusts the input volume. |
| MUTE | **OFF**, ON | Turns the mute function on/off. If this is "ON," the audio is temporarily silenced. |
| SOLO | **OFF**, ON | Turns the solo function on/off. Only the audio for which this is "ON" is heard in the headphones.<br>* The solo function applies to the headphone output. It does not affect output other than the headphones. |
| REVERB SEND | -INF–**0.0**–10.0dB | Adjusts the amount of audio sent to reverb. |
| AUX SEND | -INF–**0.0**–10.0dB | Adjusts the amount of audio sent to the AUX bus. |
| DELAY | **0.0**–500.0ms (*6)<br>(**0.0**–29.9/25.0frame) | Adjusts the delay time of the audio.<br>Effect Delays the output of the audio by the specified time. |
| PAN | LEFT–**CENTER**–RIGHT | Adjusts the stereo position (pan). |
| HOWLING CANCELLER | **OFF**, ON | Turns the howling canceller function on/off. If this is "ON," howling (acoustic feedback) is suppressed. |
| DYNAMICS | (OFF, ON) | Press the [VALUE] knob to access the DYNAMICS menu. |
| GATE | **OFF**, ON | Turns the noise gate on/off.<br>Effect Eliminates audio that is lower than the specified threshold level. This is effective when the noise that you want to remove is separate from the audio that you want to keep, and can be used to remove hiss or other noise that is heard during periods of silence. |
| GATE THRESHOLD | -80.0– **-50.0**–0.0dB | Specifies the level used as the threshold for removing audio. |
| GATE RELEASE | 30–**860**–5000ms | Specifies the length of time until the audio is fully attenuated after audio falls below the threshold. |
| COMP/LMT | **OFF**, ON | Turns the compressor or limiter on/off. |
| COMP/LMT TYPE | Selects the compressor or limiter. | |
| | **COMP1** | This compressor is suitable for music.<br>Effect Audio that exceeds the specified threshold level is compressed. This reduces the difference between the maximum volume and minimum volume, making the audio more comfortable for listening. |
| | COMP2 | This compressor is suitable for voice. Its effect applies more quickly than "COMP1." |
| | LIMITER | This is a limiter.<br>Effect Audio that exceeds the specified threshold level is compressed. This prevents distortion from occurring when unexpectedly loud audio is input.<br>* Distortion will occur if audio that exceeds the allowable range of the limiter is input. |
| COMP/LMT THRESHOLD | -80.0– **-50.0**–0.0dB | Specifies the threshold at which the compressor/limiter applies. |
| EQ | (OFF, ON) | Press the [VALUE] knob to access the EQ (equalizer) menu. |
| SW | **OFF**, ON | Turns the equalizer on/off.<br>Effect Adjusts the tone quality for each frequency band. |
| HI | -15.0–**0.0**–15.0dB | Boosts or attenuates the high band. |
| HI FREQ | 1.00–**10.0**–20.0kHz | Adjusts the center frequency when changing the tone quality in the high band. |
| MID | -15.0–**0.0**–15.0dB | Boosts or attenuates the middle band. |
| MID FREQ | 20.0Hz–**500Hz**–20.0kHz | Adjusts the center frequency when changing the tone quality in the middle band. |
| MID Q | 0.5–**1.0**–16.0 | Adjusts the width of the frequency band when boosting or attenuating the middle band. |
| LO | -15.0–**0.0**–15.0dB | Boosts or attenuates the low band. |
| LO FREQ | 20.0–**100**–500Hz | Adjusts the center frequency when changing the tone quality in the low band. |

(*6) The number of frames shown in parentheses differs depending on the SYSTEM menu's "FRAME RATE" setting.

| Menu item | Value (bold text: default value) | Explanation |
|---|---|---|
| HPF 75Hz | **OFF**, ON | Turns the high-pass filter on/off.<br>Effect Cuts off unneeded low-band audio. The cutoff frequency is 75 Hz. |
| LOAD PRESET | Press the [VALUE] knob to see a preset list for the effects (high-pass filter, equalizer). When you select a preset, the settings of each effect are overwritten. | |
| | **DEFAULT** | Flat settings that do not apply any effect. |
| | WIND NR | Reduces wind noise. |
| | VIBRATION NR | Reduces vibration and other low-frequency noise. |
| | LIP NR | Reduces noises produced by the lips when speaking or singing. This is appropriate for vocal input. |
| | SPEECH | Makes a spoken voice easier to understand. |
| | VOCAL | Enhances a singing voice. |
| PHANTOM +48V | (OFF, ON) | Indicates the on/off status of the [PHANTOM] switch. |
| **LINE** | Adjusts the audio that is input from the LINE IN jacks. | |
| DIGITAL GAIN | -42.0–**0.0**–42.0dB | Adjusts the input gain (sensitivity). |
| LEVEL | -INF–**0.0**–10.0dB | Adjusts the input volume. |
| MUTE | **OFF**, ON | Turns the mute function on/off. If this is "ON," the audio is temporarily silenced. |
| SOLO | **OFF**, ON | Turns the solo function on/off. Only the audio for which this is "ON" is heard in the headphones.<br>* The solo function applies to the headphone output. It does not affect output other than the headphones. |
| REVERB SEND | -INF–**0.0**–10.0dB | Adjusts the amount of audio sent to reverb. |
| AUX SEND | -INF–**0.0**–10.0dB | Adjusts the amount of audio sent to the AUX bus. |
| DELAY | **0.0**–500.0ms (*7)<br>(**0.0**–29.9/25.0frame) | Adjusts the delay time of the audio.<br>Effect Delays the output of the audio by the specified time. |
| EQ | (OFF, ON) | Press the [VALUE] knob to access the EQ (equalizer) menu. |
| SW | **OFF**, ON | Turns the equalizer on/off.<br>Effect Adjusts the tone quality for each frequency band. |
| HI | -15.0–**0.0**–15.0dB | Boosts or attenuates the high band. |
| HI FREQ | 1.00–**10.0**–20.0kHz | Adjusts the center frequency when changing the tone quality in the high band. |
| MID | -15.0–**0.0**–15.0dB | Boosts or attenuates the middle band. |
| MID FREQ | 20.0Hz–**500Hz**–20.0kHz | Adjusts the center frequency when changing the tone quality in the middle band. |
| MID Q | 0.5–**1.0**–16.0 | Adjusts the width of the frequency band when boosting or attenuating the middle band. |
| LO | -15.0–**0.0**–15.0dB | Boosts or attenuates the low band. |
| LO FREQ | 20.0–**100**–500Hz | Adjusts the center frequency when changing the tone quality in the low band. |
| **HDMI 1–3** | Adjusts the audio that is input from the VIDEO INPUT 1–3 connectors. | |
| DIGITAL GAIN | -42.0–**0.0**–42.0dB | Adjusts the input gain (sensitivity). |
| LEVEL | -INF–**0.0**–10.0dB | Adjusts the input volume. |
| MUTE | **OFF**, ON | Turns the mute function on/off. If this is "ON," the audio is temporarily silenced. |
| SOLO | **OFF**, ON | Turns the solo function on/off. Only the audio for which this is "ON" is heard in the headphones.<br>* The solo function applies to the headphone output. It does not affect output other than the headphones. |
| REVERB SEND | -INF–**0.0**–10.0dB | Adjusts the amount of audio sent to reverb. |
| AUX SEND | -INF–**0.0**–10.0dB | Adjusts the amount of audio sent to the AUX bus. |
| DELAY | **0.0**–500.0ms<br>(**0.0**–29.9/25.0frame) | Adjusts the delay time of the audio.<br>Effect Delays the output of the audio by the specified time. |
| EQ | (OFF, ON | Press the [VALUE] knob to access the EQ (equalizer) menu. |
| SW | **OFF**, ON | Turns the equalizer on/off.<br>Effect Adjusts the tone quality for each frequency band. |
| HI | -15.0–**0.0**–15.0dB | Boosts or attenuates the high band. |
| HI FREQ | 1.00–**10.0**–20.0kHz | Adjusts the center frequency when changing the tone quality in the high band. |
| MID | -15.0–**0.0**–15.0dB | Boosts or attenuates the middle band. |
| MID FREQ | 20.0Hz–**500Hz**–20.0kHz | Adjusts the center frequency when changing the tone quality in the middle band. |
| MID Q | 0.5–**1.0**–16.0 | Adjusts the width of the frequency band when boosting or attenuating the middle band. |
| LO | -15.0–**0.0**–15.0dB | Boosts or attenuates the low band. |
| LO FREQ | 20.0–**100**–500Hz | Adjusts the center frequency when changing the tone quality in the low band. |

(*7) The number of frames shown in parentheses differs depending on the SYSTEM menu's "FRAME RATE" setting.

| USB FROM PC | Adjusts the audio that is input from the USB STREAM port. | |
|---|---|---|
| DIGITAL GAIN | -42.0–**0.0**–42.0dB | Adjusts the input gain (sensitivity). |
| LEVEL | -INF–**0.0**–10.0dB | Adjusts the input volume. |
| MUTE | **OFF**, ON | Turns the mute function on/off. If this is "ON," the audio is temporarily silenced. |
| SOLO | **OFF**, ON | Turns the solo function on/off. Only the audio for which this is "ON" is heard in the headphones.<br>* The solo function applies to the headphone output. It does not affect output other than the headphones. |
| REVERB SEND | -INF–**0.0**–10.0dB | Adjusts the amount of audio sent to reverb. |
| AUX SEND | -INF–**0.0**–10.0dB | Adjusts the amount of audio sent to the AUX bus. |
| DELAY | **0.0**–500.0ms (*8)<br>(**0.0**–29.9/25.0frame) | Adjusts the delay time of the audio.<br>Effect Delays the output of the audio by the specified time. |
| EQ | (OFF, ON) | Press the [VALUE] knob to access the EQ (equalizer) menu. |
| SW | **OFF**, ON | Turns the equalizer on/off.<br>Effect Adjusts the tone quality for each frequency band. |
| HI | -15.0–**0.0**–15.0dB | Boosts or attenuates the high band. |
| HI FREQ | 1.00–**10.0**–20.0kHz | Adjusts the center frequency when changing the tone quality in the high band. |
| MID | -15.0–**0.0**–15.0dB | Boosts or attenuates the middle band. |
| MID FREQ | 20.0Hz–**500Hz**–20.0kHz | Adjusts the center frequency when changing the tone quality in the middle band. |
| MID Q | 0.5–**1.0**–16.0 | Adjusts the width of the frequency band when boosting or attenuating the middle band. |
| LO | -15.0–**0.0**–15.0dB | Boosts or attenuates the low band. |
| LO FREQ | 20.0–**100**–500Hz | Adjusts the center frequency when changing the tone quality in the low band. |
| PLAYBACK (BGM/SE) | Adjust the audio of the music file (background music or sound effects) that is being played. | |
| DIGITAL GAIN | -42.0– **-12.0**–42.0dB | Adjusts the input gain (sensitivity). |
| LEVEL | -INF–**0.0**–10.0dB | Adjusts the input volume. |
| MUTE | **OFF**, ON | Turns the mute function on/off. If this is "ON," the audio is temporarily silenced. |
| SOLO | **OFF**, ON | Turns the solo function on/off. Only the audio for which this is "ON" is heard in the headphones.<br>* The solo function applies to the headphone output. It does not affect output other than the headphones. |
| REVERB SEND | -INF–**0.0**–10.0dB | Adjusts the amount of audio sent to reverb. |
| AUX SEND | -INF–**0.0**–10.0dB | Adjusts the amount of audio sent to the AUX bus. |
| EQ | (OFF, ON) | Press the [VALUE] knob to access the EQ (equalizer) menu. |
| SW | **OFF**, ON | Turns the equalizer on/off.<br>Effect Adjusts the tone quality for each frequency band. |
| HI | -15.0–**0.0**–15.0dB | Boosts or attenuates the high band. |
| HI FREQ | 1.00–**10.0**–20.0kHz | Adjusts the center frequency when changing the tone quality in the high band. |
| MID | -15.0–**0.0**–15.0dB | Boosts or attenuates the middle band. |
| MID FREQ | 20.0Hz–**500Hz**–20.0kHz | Adjusts the center frequency when changing the tone quality in the middle band. |
| MID Q | 0.5–**1.0**–16.0 | Adjusts the width of the frequency band when boosting or attenuating the middle band. |
| LO | -15.0–**0.0**–15.0dB | Boosts or attenuates the low band. |
| LO FREQ | 20.0–**100**–500Hz | Adjusts the center frequency when changing the tone quality in the low band. |

(*8) The number of frames shown in parentheses differs depending on the SYSTEM menu's "FRAME RATE" setting.

# AUDIO OUTPUT Menu

| Menu item | Value (bold text: default value) | Explanation |
|---|---|---|
| **BUS SELECT** | Specifies the bus that is assigned to each connector. | |
| MONITOR | **MAIN**, AUX | If you specify "MAIN" (main bus), all input audio is mixed and output. This is the same audio as the main output.<br>If you specify "AUX" (AUX bus), only the input audio sent to the AUX bus is mixed and output. This allows you to output audio that is different than the main output.<br><br>**What is a bus?**<br>A "bus" is a destination to which input audio is mixed and sent. The VR-1HD has two buses: the "main bus" and the "AUX bus." With the exception of the MAIN connector, you can assign a desired bus to each output connector. |
| USB STREAM | **MAIN**, AUX | |
| LINE OUT | **MAIN**, AUX | |
| PHONES | **MAIN**, AUX | |
| **MAIN BUS** | Adjusts the audio of the MAIN bus. | |
| LEVEL | -INF–**0.0**–10.0dB | Adjusts the output volume. |
| MUTE | **OFF**, ON | Turns the mute function on/off. If this is "ON," the audio is temporarily silenced. |
| LIMITER | **OFF**, ON | Turns the limiter on/off.<br>Effect Compresses the audio so that the mixed audio does not exceed the specified threshold level.<br>* Distortion will occur if audio that exceeds the allowable range of the limiter is input. |
| LIMITER THRESHOLD | -40.0– **-6.0**–0.0dB | Specifies the threshold at which the limiter applies. |
| EQ | (OFF, ON) | Press the [VALUE] knob to access the EQ (equalizer) menu. |
| SW | **OFF**, ON | Turns the equalizer on/off.<br>Effect Adjusts the tone quality for each frequency band. |
| HI | -15.0–**0.0**–15.0dB | Boosts or attenuates the high band. |
| HI FREQ | 1.00–**10.0**–20.0kHz | Adjusts the center frequency when changing the tone quality in the high band. |
| MID | -15.0–**0.0**–15.0dB | Boosts or attenuates the middle band. |
| MID FREQ | 20.0Hz–**500Hz**–20.0kHz | Adjusts the center frequency when changing the tone quality in the middle band. |
| MID Q | 0.5–**1.0**–16.0 | Adjusts the width of the frequency band when boosting or attenuating the middle band. |
| LO | -15.0–**0.0**–15.0dB | Boosts or attenuates the low band. |
| LO FREQ | 20.0–**100**–500Hz | Adjusts the center frequency when changing the tone quality in the low band. |
| **AUX BUS** | Adjusts the audio of the AUX bus. | |
| LEVEL | **-INF**–10.0dB | Adjusts the output volume. |
| MUTE | **OFF**, ON | Turns the mute function on/off. If this is "ON," the audio is temporarily silenced. |
| LIMITER | **OFF**, ON | Turns the limiter on/off.<br>Effect Compresses the audio so that the mixed audio does not exceed the specified threshold level.<br>* Distortion will occur if audio that exceeds the allowable range of the limiter is input. |
| LIMITER THRESHOLD | -40.0–**-6.0**–0.0dB | Specifies the threshold at which the limiter applies. |
| DELAY | **0.0**–500.0ms (*9)<br>(**0.0**–29.9/25.0frame) | Adjusts the delay time of the audio.<br>Effect Delays the output of the audio by the specified time. |
| EQ | (OFF, ON) | Press the [VALUE] knob to access the EQ (equalizer) menu. |
| SW | **OFF**, ON | Turns the equalizer on/off.<br>Effect Adjusts the tone quality for each frequency band. |
| HI | -15.0–**0.0**–15.0dB | Boosts or attenuates the high band. |
| HI FREQ | 1.00–**10.0**–20.0kHz | Adjusts the center frequency when changing the tone quality in the high band. |
| MID | -15.0–**0.0**–15.0dB | Boosts or attenuates the middle band. |
| MID FREQ | 20.0Hz–**500Hz**–20.0kHz | Adjusts the center frequency when changing the tone quality in the middle band. |
| MID Q | 0.5–**1.0**–16.0 | Adjusts the width of the frequency band when boosting or attenuating the middle band. |
| LO | -15.0–**0.0**–15.0dB | Boosts or attenuates the low band. |
| LO FREQ | 20.0–**100**–500Hz | Adjusts the center frequency when changing the tone quality in the low band. |
| **USB STREAM** | Adjusts the audio that is output from the USB STREAM port. | |
| LEVEL | **-INF**–10.0dB | Adjusts the output volume. |
| MUTE | **OFF**, ON | Turns the mute function on/off. If this is "ON," the audio is temporarily silenced. |
| DELAY | **0.0**–500.0ms (*10)<br>(**0.0**–14.9/29.9/12.0/25.0frame) | Adjusts the delay time of the audio.<br>Effect Delays the output of the audio by the specified time. |

(*9) The number of frames shown in parentheses differs depending on the SYSTEM menu's "FRAME RATE" setting.
(*10) The number of frames in parentheses differs depending on the VIDEO OUTPUT menu's "USB FORMAT" setting.

## AUDIO FOLLOWS VIDEO Menu

| Menu item | Value (bold text: default value) | Explanation |
|---|---|---|
| HDMI 1–3 SW | Turns the audio follow function on/off. Audio follow is a function that automatically switches the audio output in tandem with video switching. | |
| | OFF | The audio is always output regardless of the input video selection. |
| | **ON** | The video and audio from HDMI input are switched together. |
| MIC 1 SW | **OFF**, INPUT 1–3 | For each audio source, these settings specify the input video (INPUT 1–3) that will use the audio follow function. Audio is output only when the specified input video is selected.<br>If this is "OFF," the audio is always output regardless of the input video selection. |
| MIC 2 SW | **OFF**, INPUT 1–3 | |
| LINE SW | **OFF**, INPUT 1–3 | |
| USB FROM PC SW | **OFF**, INPUT 1–3 | |
| PLAYBACK (BGM/SE) SW | **OFF**, INPUT 1–3 | |

## AUTO MIXING Menu

| Menu item | Value (bold text: default value) | Explanation |
|---|---|---|
| SW | **OFF**, ON | Turns the auto mixing function on/off. Auto mixing is a function that automatically controls the volume adjustments. |
| MIC 1 SW | OFF, **ON** | Specifies whether Auto Mixing is applied (ON) or not applied (OFF). |
| MIC 2 SW | OFF, **ON** | |
| LINE SW | **OFF**, ON | |
| HDMI 1 SW | **OFF**, ON | |
| HDMI 2 SW | **OFF**, ON | |
| HDMI 3 SW | **OFF**, ON | |
| USB FROM PC SW | **OFF**, ON | |

## ECHO CANCELLER Menu

| Menu item | Value (bold text: default value) | Explanation |
|---|---|---|
| MIC 1 SW | **OFF**, ON | Turns the echo canceller function on/off. Echo canceller is a function that suppresses the voice echo that can occur when using a web conferencing system that includes a speaker and mic.<br>If this is "ON," the echo component of the voice picked up by a mic connected to the VR-1HD is suppressed, so that only your own voice is sent to the other party. |
| MIC 2 SW | **OFF**, ON | |
| MIC 1 DEPTH | 1–**5**–10 | Adjusts the depth of the echo canceller. |
| MIC 2 DEPTH | 1–**5**–10 | |

# AUDIO EFFECTS Menu

| Menu item | Value (bold text: default value) | Explanation |
|---|---|---|
| **EFFECTS 1–4** (*11) | These settings assign functions to the AUDIO EFFECTS [1]–[4] buttons and specify details of their operation. | |
| **ASSIGN** | Specifies the function that is assigned to the AUDIO EFFECTS [1]–[4] button. | |
| | NONE | No function is assigned. |
| | VOICE CHANGER | Turns the voice changer on/off.<br>Effect Transforms the pitch or character of the voice that is input from the mic. |
| | PLAYBACK (BGM/SE) | Plays/stops the music file (background music or sound effect). |
| | REVERB | Turns reverb on/off.<br>Effect Adds reverberation to the sound. |
| | MUTE | Turns the mute function on/off for the audio. |
| | SOLO | Turns the solo function on/off for the input audio. |
| **When ASSIGN = VOICE CHANGER** | | |
| **SW** | **OFF**, ON | Turns the voice changer on/off.<br>You can also turn this on/off using the AUDIO EFFECTS button to which the function is assigned. |
| **SW MODE** | Specifies the operation of the AUDIO EFFECTS button. | |
| | MOMENTARY | The effect is on only while you hold down the button, and turns off when you release the button. |
| | **LATCH** | The effect alternately turns on/off each time you press the button. |
| **TARGET** | **MIC 1**, MIC 2 | Specifies the mic audio to which the effect applies. |
| **PITCH** | -12– **+12** | Adjusts the pitch of the voice in semitone steps. A setting of "0" is the original pitch. |
| **FORMANT** | -10– **+4**– +10 | Adjusts the character (formant) of the voice. Settings in the negative (–) direction produce a more masculine vocal character, and settings in the positive (+) direction produce a more feminine vocal character. A setting of "0" is the original voice. |
| **ROBOT** | **OFF**, ON | If this is "ON," the voice is held at a fixed pitch, creating a mechanical robot-like impression. |
| **MIX** | 0–**100** | Adjusts the balance between the unprocessed voice (0) and the voice processed by the effect (100). |
| **LED COLOR** | RED, GREEN, YELLOW, BLUE, MAGENTA, CYAN | Specifies the illumination color of the AUDIO EFFECTS button. |
| **When ASSIGN = PLAYBACK (BGM/SE)** | | |
| **SW** | **OFF**, ON | Plays/stops the background music or sound effect. |
| **SW MODE** | Specifies the operation of the AUDIO EFFECTS button. | |
| | MOMENTARY | The effect is on only while you hold down the button, and turns off when you release the button. |
| | **LATCH** | The effect alternately turns on/off each time you press the button. |
| **AUDIO ASSIGN** | Selects the music file that will play. Press the [VALUE] knob to see a list of clips. | |
| | BriskAfternoon | Sample clip of background music. |
| | Applause | Sample clip of sound effect (applause). |
| | USB MEMORY | Use a music file saved on the USB flash drive.<br>Press the [VALUE] knob to view a list of the music files saved in the root directory of the USB flash drive.<br><br>**Music files that can be played**<br>**Format (extension)**: WAV (.wav)<br>**Sample rate**: 44.1, 48 kHz<br>**Bit depth**: 16 bits<br>**Number of channels**: Stereo, mono<br>**File size**: 2 GB or less<br>**File name**: Up to eight single-byte alphanumeric characters<br>* The extension ".wav" must be added.<br><br>* Music files shorter than 10 ms might not play correctly.<br>* The VR-1HD plays back the music file directly from the connected USB flash drive. Even if a music file on the USB flash drive is selected, it will not play unless the USB flash drive is connected. |
| **LEVEL** | -INF–10.0dB | Adjusts the playback volume of the music file. |
| **LOOP** | OFF, ON | Turns loop playback on/off. |
| **FADE IN** | OFF, 0.1–10.0sec | Specifies the fade-in time of the music file. |
| **FADE OUT** | OFF, 0.1–10.0sec | Specifies the fade-out time of the music file. |
| **LED COLOR** | RED, GREEN, YELLOW, BLUE, MAGENTA, CYAN | Specifies the illumination color of the AUDIO EFFECTS button. |

| Menu item | **Value** (bold text: default value) | Explanation |
|---|---|---|
| **When ASSIGN = REVERB** | | |
| **SW** | OFF, **ON** | Turns reverb on/off.<br>You can also turn this on/off using the AUDIO EFFECTS button to which the function is assigned. |
| **SW MODE** | Specifies the operation of the AUDIO EFFECTS button. | |
| | MOMENTARY | The effect is on only while you hold down the button, and turns off when you release the button. |
| | **LATCH** | The effect alternately turns on/off each time you press the button. |
| **LEVEL** | -INF– **-20.0**–10.0dB | Sets the amount of sound that is returned from the reverb (return level). This adjusts the depth of the overall reverb. |
| **TIME** | 0.0–**0.5**–5.0sec | Specifies the time until the reverberation is no longer heard. |
| **TYPE** | Specifies the reverb type. | |
| | **ROOM** | Produces the natural-sounding reverberation of a room. |
| | HALL | Produces the reverberation that is typical of a performance in a concert hall. |
| **LED COLOR** | RED, GREEN, YELLOW, BLUE, MAGENTA, CYAN | Specifies the illumination color of the AUDIO EFFECTS button. |
| **When ASSIGN = MUTE** | | |
| **SW** | **OFF**, ON | Turns the mute function on/off for the audio specified by "CH."<br>You can also turn this on/off using the AUDIO EFFECTS button to which the function is assigned. |
| **SW MODE** | Specifies the operation of the AUDIO EFFECTS button. | |
| | MOMENTARY | The effect is on only while you hold down the button, and turns off when you release the button. |
| | **LATCH** | The effect alternately turns on/off each time you press the button. |
| **CH** | HDMI 1–3, **MIC 1**–2, LINE, USB FROM PC, USB STREAM, AUX, MAIN | Specify the audio that will be affected by the operation. |
| **LED COLOR** | RED, GREEN, YELLOW, BLUE, MAGENTA, CYAN | Specifies the illumination color of the AUDIO EFFECTS button. |
| **When ASSIGN = SOLO** | | |
| **SW** | **OFF**, ON | Turns the solo function on/off for the audio specified by "CH."<br>You can also turn this on/off using the AUDIO EFFECTS button to which the function is assigned. |
| **SW MODE** | Specifies the operation of the AUDIO EFFECTS button. | |
| | MOMENTARY | The effect is on only while you hold down the button, and turns off when you release the button. |
| | **LATCH** | The effect alternately turns on/off each time you press the button. |
| **CH** | HDMI 1–3, **MIC 1**–2, LINE, USB FROM PC | Specify the audio that will be affected by the operation. |
| **LED COLOR** | RED, GREEN, YELLOW, BLUE, MAGENTA, CYAN | Specifies the illumination color of the AUDIO EFFECTS button. |

(*11) The factory settings for EFFECTS 1–4 are as follows.

| Menu item | EFFECTS 1 |
|---|---|
| **ASSIGN** | VOICE CHANGER |
| **SW** | OFF |
| **SW MODE** | LATCH |
| **TARGET** | MIC 1 |
| **PITCH** | +12 |
| **FORMANT** | +4 |
| **ROBOT** | OFF |
| **MIX** | 100 |
| **LED COLOR** | MAGENTA |

| Menu item | EFFECTS 2 |
|---|---|
| **ASSIGN** | PLAYBACK (BGM/SE) |
| **SW** | OFF |
| **SW MODE** | LATCH |
| **AUDIO ASSIGN** | BriskAfternoon |
| **LEVEL** | 0.0dB |
| **LOOP** | ON |
| **FADE IN** | OFF |
| **FADE OUT** | 3.0sec |
| **LED COLOR** | CYAN |

| Menu item | EFFECTS 3 |
|---|---|
| **ASSIGN** | PLAYBACK (BGM/SE) |
| **SW** | OFF |
| **SW MODE** | LATCH |
| **AUDIO ASSIGN** | Applause |
| **LEVEL** | 0.0dB |
| **LOOP** | OFF |
| **FADE IN** | OFF |
| **FADE OUT** | 1.0sec |
| **LED COLOR** | BLUE |

| Menu item | EFFECTS 4 |
|---|---|
| **ASSIGN** | REVERB |
| **SW** | OFF |
| **SW MODE** | LATCH |
| **LEVEL** | -20.0dB |
| **TIME** | 0.5sec |
| **TYPE** | ROOM |
| **LED COLOR** | YELLOW |

# USB MEMORY Menu

<table>
<tr><th>Menu item</th><th>Value (bold text: default value)</th><th>Explanation</th></tr>
<tr><td>LOAD SETTINGS</td><td>[EXEC]</td><td>Shows a list of the setting files (.VR1) that are on the USB flash drive.<br>You can select a setting file and load the settings into the unit. The current settings are overwritten.</td></tr>
<tr><td>SAVE SETTINGS</td><td>[EXEC]</td><td>Shows a list of the setting files (.VR1) that are on the USB flash drive.<br>You can select a setting file and then save the current settings by overwriting them onto the selected file.</td></tr>
<tr><td>SAVE SETTINGS AS</td><td>[EXEC]</td><td>Saves the current settings to the USB flash drive as a new file. A file name of “SYS + four-digit consecutive number.VR1” is assigned as the file name.<br><br>Content that is not saved to the file<br>• The SYSTEM menu settings “TEST PATTERN” and “TEST TONE.” The unit always starts with these “OFF.”<br>• The still images loaded into the unit. Only the file names of the still images are saved.<br>• The state of the [ON AIR] button. The unit always starts with this lit.<br>• The state of an AUDIO EFFECTS button to which “PLAYBACK (BGM/SE)” is assigned. The unit always starts with this off.<br>• The positions of the volume knobs and faders.</td></tr>
<tr><td>LOAD STILL IMAGE</td><td>1, 2</td><td>Specifies the loading destination for the still image (internal memory 1 or 2).<br>When you press the [VALUE] knob, a list of the still images saved in the root directory of the USB flash drive is shown. You can select a still image and load it into the unit.<br><br>Formats supported for loading<br><table><tr><td>Format</td><td>Windows Bitmap File (.bmp), 24-bit color, uncompressed</td></tr><tr><td>Resolution</td><td>Maximum 1920 x 1200 pixels</td></tr><tr><td>File name</td><td>Up to eight single-byte alphanumeric characters<br>* The extension “.bmp” must be added.</td></tr></table>* The still image is temporarily saved in internal memory. When you turn off the power, the still image is deleted.<br>* An internal memory in which a still image is loaded is indicated by a “✱” symbol.<br>* You can make the previously-loaded still image be automatically loaded when the VR-1HD starts. Save the same file in the root directory of the USB flash drive, and start the VR-1HD with the USB flash drive connected.</td></tr>
<tr><td>FORMAT</td><td>[EXEC]</td><td>Formats the USB flash drive.</td></tr>
</table>

# SYSTEM Menu

| Menu item | Value (bold text: default value) | Explanation |
|---|---|---|
| HDCP | **OFF**, ON | Specifies whether HDCP is enabled (ON) or disabled (OFF). When set to "ON," copyright-protected (HDCP) video can be input. HDCP is also added to the video that is output.<br>* If this is "ON," video/audio is not output from the USB STREAM port. |
| FRAME RATE | **59.94**, 50Hz | Specifies the frame rate.<br>* When you change the setting, the change is not applied until you press the [VALUE] knob to confirm. |
| TEST PATTERN | **OFF**, 75% COLOR BAR, 100% COLOR BAR, RAMP, STEP, HATCH | Specifies the test pattern. |
| TEST TONE | **OFF**, -20dB, -10dB, 0dB, 0dB-L, 0dB-R | Specifies the test tone. If this is set to "0dB-L" or "0dB-R," a test tone is output from the left channel (L) or right channel (R) respectively. |
| PANEL LOCK | [ENTER] | Displays the PANEL LOCK menu. |

Specify what panel lock will affect (ON) or will not affect (OFF).

| Menu item | Value (bold text: default value) | Explanation |
|---|---|---|
| ALL | **OFF**, ON | The settings of the following buttons and knobs are turned on/off together. |
| MENU | **OFF**, ON | [MENU] button |
| VALUE | **OFF**, ON | [VALUE] knob |
| INPUT SELECT | **OFF**, ON | INPUT [1]–[3] button |
| SCENE EDIT | **OFF**, ON | [SCENE EDIT] button |
| SCENE SELECT | **OFF**, ON | SCENE [A]–[E] button |
| AUTO SW | **OFF**, ON | [AUTO SW] button |
| ON AIR | **OFF**, ON | [ON AIR] button |
| KEY | **OFF**, ON | [KEY] button |
| AUDIO EFFECTS | **OFF**, ON | AUDIO EFFECTS [1]–[4] button |
| MIC 1 FADER | **OFF**, ON | [MIC 1] fader |
| MIC 2 FADER | **OFF**, ON | [MIC 2] fader |
| LINE IN FADER | **OFF**, ON | [LINE] fader |
| MAIN VOLUME | **OFF**, ON | [MAIN] knob |
| USB STREAM VOLUME | **OFF**, ON | [USB STREAM] knob |
| PHONES VOLUME | **OFF**, ON | [PHONES] knob |
| LEVEL SETUP | **OFF**, ON | [LEVEL SETUP] button |

**Locking/unlocking the operation panel**

When you simultaneously hold down the [MENU] button and [SCENE EDIT] button for three seconds or longer, the operation panel is locked or unlocked (p. 27).

| | | |
|---|---|---|
| LED DIMMER | 0–**7** | Adjusts the brightness when the buttons or indicators are lit.<br>* Even with a setting of "0," the buttons and indicators do not go completely dark. |
| AUTO INPUT DETECT | OFF, **ON** | Turns the auto input detect function on/off. If this is "ON," the input is automatically detected when the video input currently being output is interrupted, and the video is switched.<br>* If a scene is selected, the auto input detect function is disabled. |
| DELETE STILL IMAGE | **1**, 2 | Selects the internal memory whose still image will be deleted. Press the [VALUE] knob to delete the loaded still image.<br>* A "✱" symbol is shown for an internal memory in which a still image is loaded. |
| AUTO POWER OFF | **OFF**, ON | Turns the Auto Off function on/off.<br>If this is "ON," the power to the VR-1HD turns off automatically when all of the following states persist for 240 minutes.<br>• No operation performed on the VR-1HD<br>• No audio or video input<br>• No equipment is connected to the MAIN/MONITOR (MENU)/THRU connectors |
| FACTORY RESET | [EXEC] | Returns the unit to its factory defaults. |
| VERSION | — | Displays the version of the system program. |

# LEVEL SETUP Menu

Press the [LEVEL SETUP] button to access this menu.

| Menu item | Value (bold text: default value) | Explanation |
|---|---|---|
| **LEVEL SETUP (LEVEL) (1/5)** | | Adjusts the volume. |
| HDMI 1 | -INF–**0.0**–10.0dB | VIDEO INPUT 1–3 input |
| HDMI 2 | -INF–**0.0**–10.0dB | |
| HDMI 3 | -INF–**0.0**–10.0dB | |
| USB FROM PC | -INF–**0.0**–10.0dB | USB input |
| PLAYBACK (BGM/SE) | -INF–**0.0**–10.0dB | Music files (p. 23) |
| AUX BUS | **-INF**–0.0–10.0dB | AUX bus |
| **LEVEL SETUP (GAIN) (2/5)** | | Adjusts the head amp gain (the input gain in the analog domain). |
| MIC 1 | 0–**36**–64dB | MIC 1, 2 input |
| MIC 2 | 0–**36**–64dB | |
| **LEVEL SETUP (SOLO) (3/5)** | | Turns the solo function on/off. Only the audio for which this is "ON" is heard in the headphones. |
| MIC 1 | **OFF**, ON | MIC 1, 2 input |
| MIC 2 | **OFF**, ON | |
| LINE | **OFF**, ON | LINE input |
| HDMI 1 | **OFF**, ON | VIDEO INPUT 1–3 input |
| HDMI 2 | **OFF**, ON | |
| HDMI 3 | **OFF**, ON | |
| USB FROM PC | **OFF**, ON | USB input |
| PLAYBACK (BGM/SE) | **OFF**, ON | Music files (p. 23) |
| **LEVEL SETUP (MUTE) (4/5–5/5)** | | Turns the mute function on/off. If this is "ON," the audio is temporarily silenced. |
| MIC 1 | **OFF**, ON | MIC 1, 2 input |
| MIC 2 | **OFF**, ON | |
| LINE | **OFF**, ON | LINE input |
| HDMI 1 | **OFF**, ON | VIDEO INPUT 1–3 input |
| HDMI 2 | **OFF**, ON | |
| HDMI 3 | **OFF**, ON | |
| USB FROM PC | **OFF**, ON | USB input |
| PLAYBACK (BGM/SE) | **OFF**, ON | Music files (p. 23) |
| MAIN BUS | **OFF**, ON | Main bus |
| AUX BUS | **OFF**, ON | AUX bus |
| USB STREAM | **OFF**, ON | USB output |

* The LEVEL SETUP menu provides certain functions (volume, input gain, solo, mute) that have been excerpted from the AUDIO INPUT and OUTPUT menus.

# Appendices

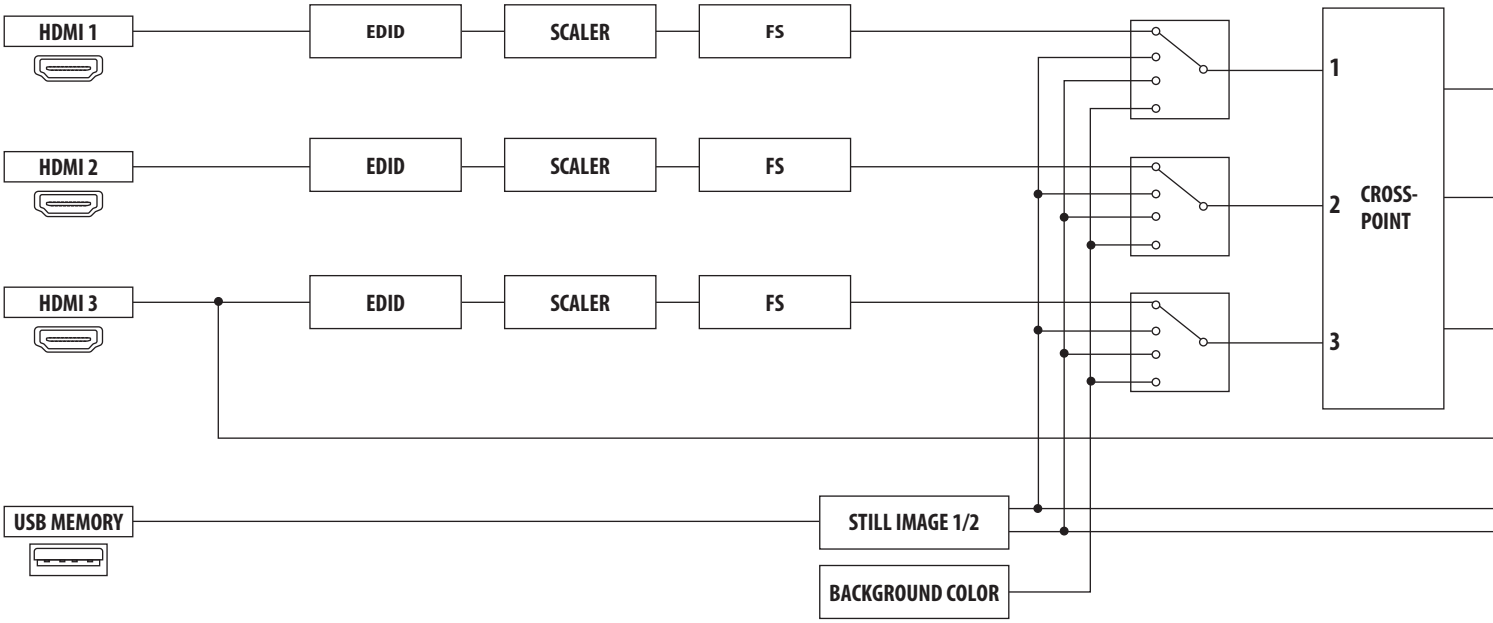
## Troubleshooting

If you suspect a malfunction, please check the following points. If this does not resolve the problem, contact a nearby Roland Service Center.

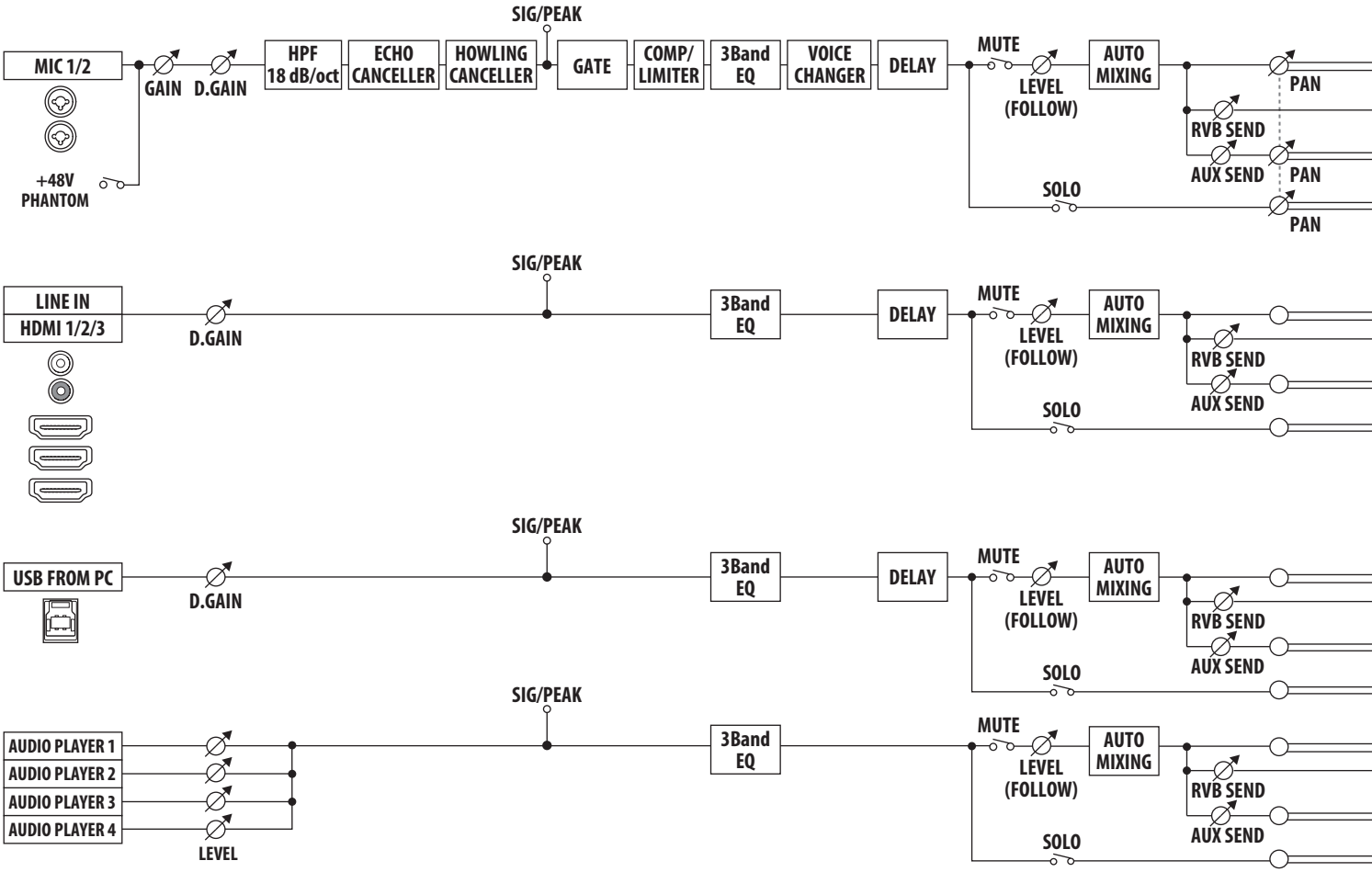
| Problem | Items to check | Action | Page |
|---|---|---|---|
| **Video-related problems** | | | |
| **No picture is input.** | Could you be inputting copy-protected (HDCP) video? | If you want to input copy-protected (HDCP) video, set the System menu "HDCP" setting to "ON." | p. 9 |
| **Video input from a computer is distorted.** | If video is being input from a computer, the image can sometimes be skewed, flickering, or otherwise distorted. | This is a phenomenon called "tearing," and is not a malfunction. | — |
| **No video appears.** | Could the [ON AIR] button be unlit? | If the [ON AIR] button is unlit, the main output video fades-out to a black screen. To output the main video, press the [ON AIR] button to make it light. | p. 14 |
| | Could "HDCP" be "ON"? | If the SYSTEM menu item "HDCP" is "ON," video and audio are not output from the USB STREAM port. | p. 9 |
| | Does the output destination display support copy protection (HDCP)? | If you are outputting copy-protected (HDCP) video, and a display that does not support HDCP is connected, the video might not be shown or might be incorrect. Connect a display that supports HDCP. | p. 9 |
| **"Snowy"-noise video is shown.** | It might be that the HDMI signal is not being correctly transmitted or received. | Reconnect the HDMI cable. | — |
| **Color is wrong.** | Do the color space settings of the output-destination device and the VR-1HD match? | Change the color space in VIDEO OUTPUT menu → "MAIN OUTPUT,""MONITOR (MENU) OUTPUT" → "COLOR SPACE." | p. 8 |
| | | Depending on the device, the color space might be linked with the DVI/HDMI selection or the selection of format. If so, changing the color space of the output-destination device might solve the problem. | — |
| **An edge of the video shown on a display is cut off.** | Are the display's settings correct? | Depending on the display, it might overscan automatically. Change the settings of the device. | — |
| **Can't connect via USB 3.0. Video is jerky.** | Could you be connecting via an extension cable or a USB hub? | If you connect via an extension cable or a USB hub, the computer might not recognize the VR-1HD. We recommend that you connect the VR-1HD directly to your computer. | — |
| | — | Go to the VIDEO OUTPUT menu → "USB STREAM" → execute "CONNECTION RESET" to try reconnecting the computer and the VR-1HD. | — |
| | Could you be using a USB 2.0 cable to connect the VR-1HD and the computer? | If you're outputting HD video via USB, use a USB 3.0 cable to connect the VR-1HD and the computer. | — |
| **Can't load a still image.** | Could the still image be a format or resolution that the VR-1HD does not support? | A still image of an unsupported format or resolution is not detected. Check the formats and resolutions that can be loaded. | p. 15 |
| | Is the file name of the still image assigned correctly? | If the file's name is not correct, it is not recognized.<br>The file name must be no more than eight single-byte characters. Also, the file name extension ".bmp" must be added. | |
| **Audio-related problems** | | | |
| **No audio is output. Audio volume is low.** | Is the volume turned down on the VR-1HD? | Adjust each input to the appropriate volume. Also raise the output volume. | p. 16 |
| | Could the volume of the USB output be lowered? | The USB output volume (the volume for streaming) can be adjusted individually. Use the [USB STREAM] knob to adjust the main output volume. | p. 21 |
| | Could the sound be muted (silenced)? | Cancel muting for the input/output audio. | p. 21 |
| | Is there audio for which the solo function is turned on? | Only the soloed audio is heard from the headphones. Cancel the solo function. | p. 21 |
| | Is a condenser mic connected? | If a condenser mic or other device requiring a phantom power supply is connected, turn the [PHANTOM] switch on. | p. 5 |
| **Can't play back or load a music file.** | Is a USB flash drive containing music files connected? | The VR-1HD plays back music files directly from the connected USB flash drive. If you want to play back a music file that is on a USB flash drive, you must connect that USB flash drive. | p. 23 |
| | Is the file name of the music file assigned correctly? | If the file's name is not correct, it is not recognized.<br>The file name must be no more than eight single-byte characters. Also, the file name extension ".wav" must be added. | |
| **Other Problems** | | | |
| **Can't use a USB flash drive.** | Has the USB flash drive been formatted by the VR-1HD? | A USB flash drive that was not formatted by the VR-1HD is not recognized. When using a USB flash drive for the first time, you must format it on the VR-1HD. | p. 27 |

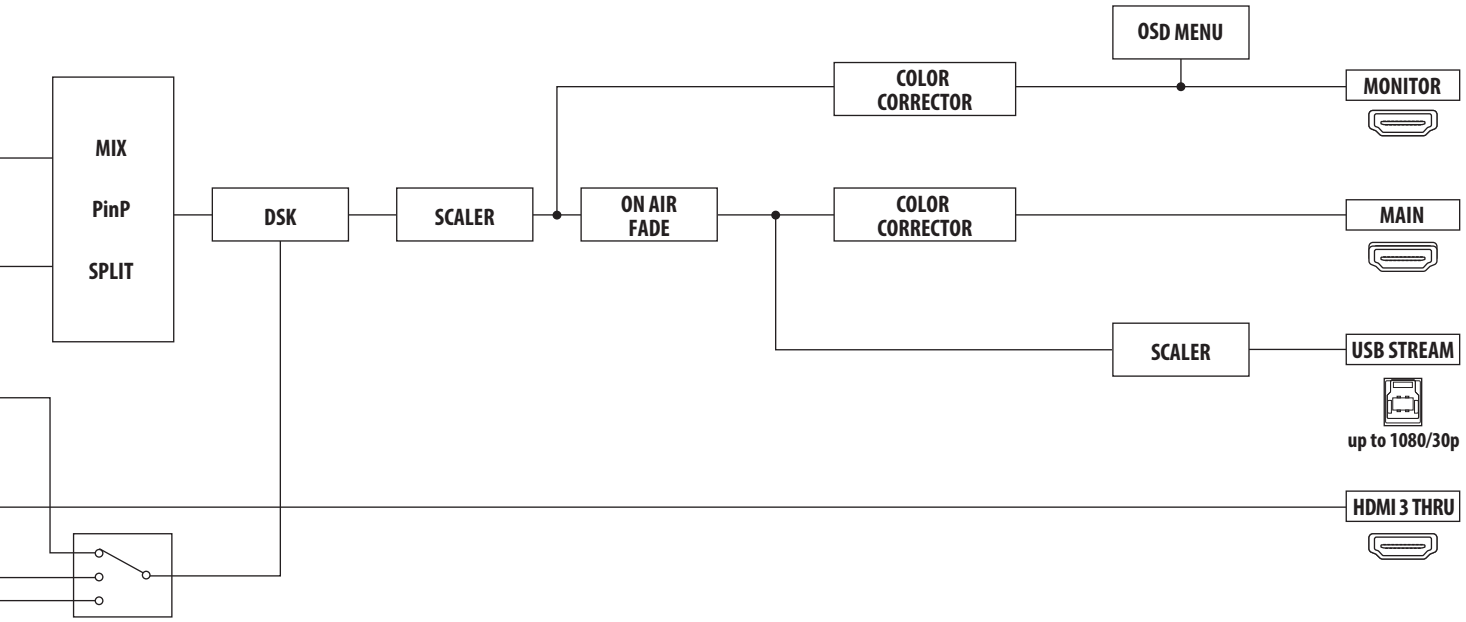
# Block Diagram

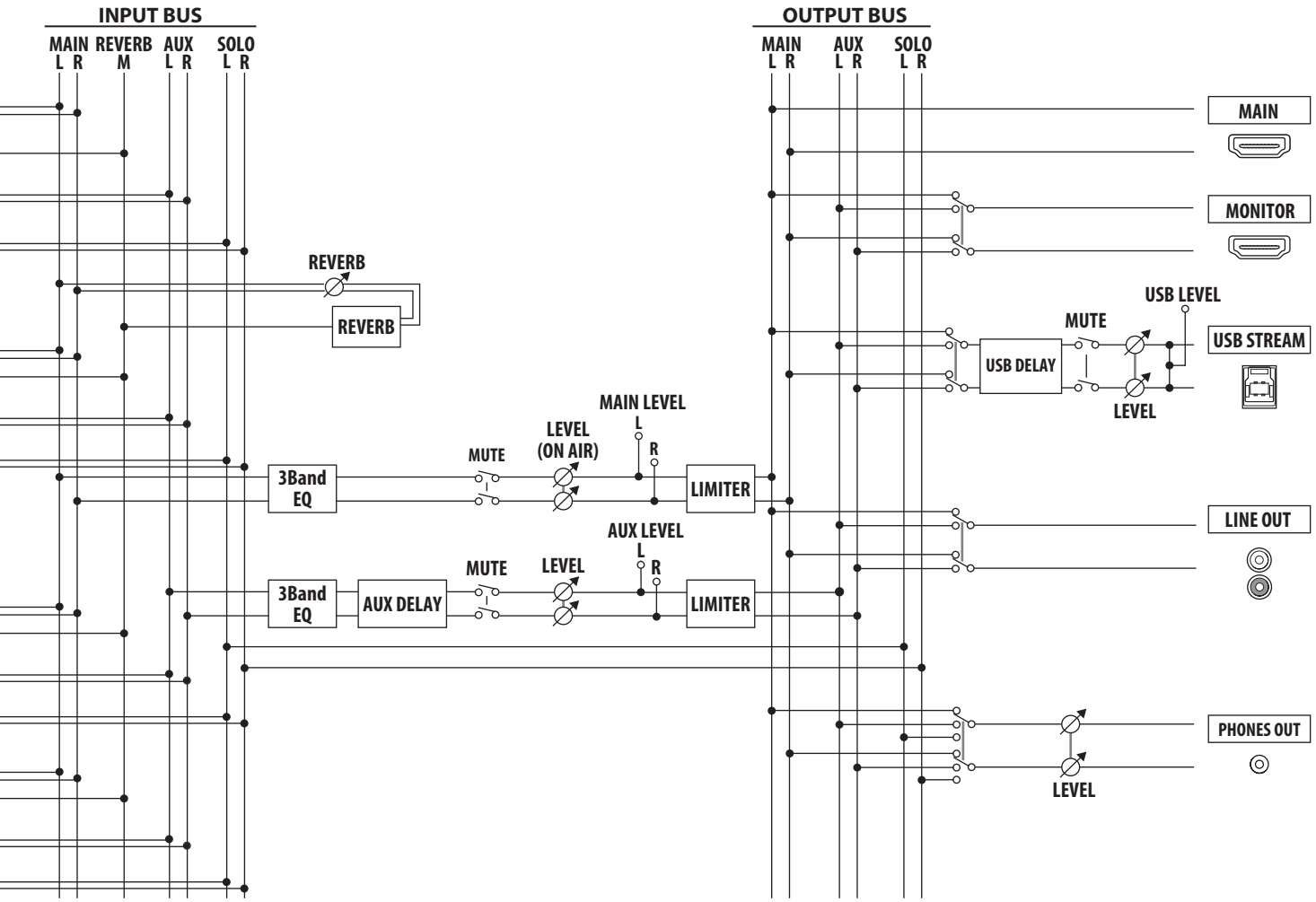
## Video section




## Audio section




OSD MENU
COLOR CORRECTOR
MONITOR
MIX
PinP
SPLIT
DSK
SCALER
ON AIR FADE
COLOR CORRECTOR
MAIN
SCALER
USB STREAM
up to 1080/30p
HDMI 3 THRU


INPUT BUS
MAIN L R
REVERB M
AUX L R
SOLO L R
OUTPUT BUS
MAIN L R
AUX L R
SOLO L R
MAIN
MONITOR
REVERB
REVERB
USB LEVEL
MUTE
USB STREAM
USB DELAY
LEVEL
MAIN LEVEL
L
R
LEVEL (ON AIR)
MUTE
3Band EQ
LIMITER
LINE OUT
AUX LEVEL
L
R
MUTE
LEVEL
3Band EQ
AUX DELAY
LIMITER
PHONES OUT
LEVEL

# Main Specifications

Roland VR-1HD: AV Streaming Mixer

## ■ Video

| | | |
|---|---|---|
| **Video Processing** | 4:4:4 (Y/Pb/Pr), 10-bit | |
| **Input Connectors** | VIDEO INPUT 1–3 connectors | HDMI type A x 3<br>* HDCP Supported.<br>* Multi-format Supported. |
| **Output Connectors** | MAIN connector | HDMI type A<br>* HDCP Supported |
| | MONITOR connector | |
| | THRU connector | |
| | USB STREAM port | USB B type |
| **Input Formats** | 480/59.94i, 576/50i, 480/59.94p, 576/50p, 720/59.94p, 720/50p, 1080/59.94i, 1080/50i, 1080/59.94p, 1080/50p<br>VGA (640 x 480/60 Hz), SVGA (800 x 600/60 Hz), XGA (1024 x 768/60 Hz), HD (1280 x 720/60 Hz), WXGA (1280 x 800/60 Hz)<br>SXGA (1280 x 1024/60 Hz), FWXGA (1366 x 768/ 60 Hz), SXGA+ (1400 x 1050/60 Hz), UXGA (1600 x 1200/60 Hz)<br>FHD (1920 x 1080/60 Hz), WUXGA (1920 x 1200/60 Hz)<br>* The refresh rate is the maximum value of each resolution.<br>* Conforms to VESA DMT Version 1.0 Revision 11.<br>* 1920 x 1200, 60 Hz: Reduced blanking<br>* The video signal frame rate can be selected at the SYSTEM menu (59.94 Hz or 50 Hz). | |
| **Output Formats** | **MAIN, MONITOR connectors**<br>720/59.94p, 720/50p, 1080/59.94i, 1080/50i, 1080/59.94p, 1080/50p, XGA (1024 x 768/60 Hz) (*1), WXGA (1280 x 800/60 Hz) (*1)<br>SXGA (1280 x 1024/60 Hz) (*1), FWXGA (1366 x 768/60 Hz) (*1), SXGA+ (1400 x 1050/60 Hz) (*1), UXGA (1600 x 1200/60 Hz)<br>FHD (1920 x 1080/60 Hz), WUXGA (1920 x 1200/60 Hz)<br>* The video signal frame rate can be selected at the SYSTEM menu (59.94 Hz or 50 Hz).<br><br>**USB STREAM port**<br>854 x 480/29.97p, 854 x 480/25p, 854 x 480/59.94p, 854 x 480/50p, 720/29.97p, 720/25p, 720/59.94p, 720/50p, 1080/29.97p, 1080/25p<br>* The video signal frame rate can be selected at the SYSTEM menu (59.94 Hz or 50 Hz). | |
| **Still Image** (*2) | Maximum Size | 1920 x 1200 pixels |
| | Format | Windows Bitmap File (.bmp), 24-bit color, uncompressed |
| **Video Effects** | Scene | PinP, Split |
| | Transition | Black fade, Mix fade |
| | Key Composition: | Luminance key |
| | Other | Still Image playback, Output fade (Audio, Video: WHITE or BLACK), Test pattern output |

(*1) Output refresh rate is 75 Hz when frame rate is set to 50 Hz.
(*2) It can be loaded up to 2 files from USB flash drive at startup.

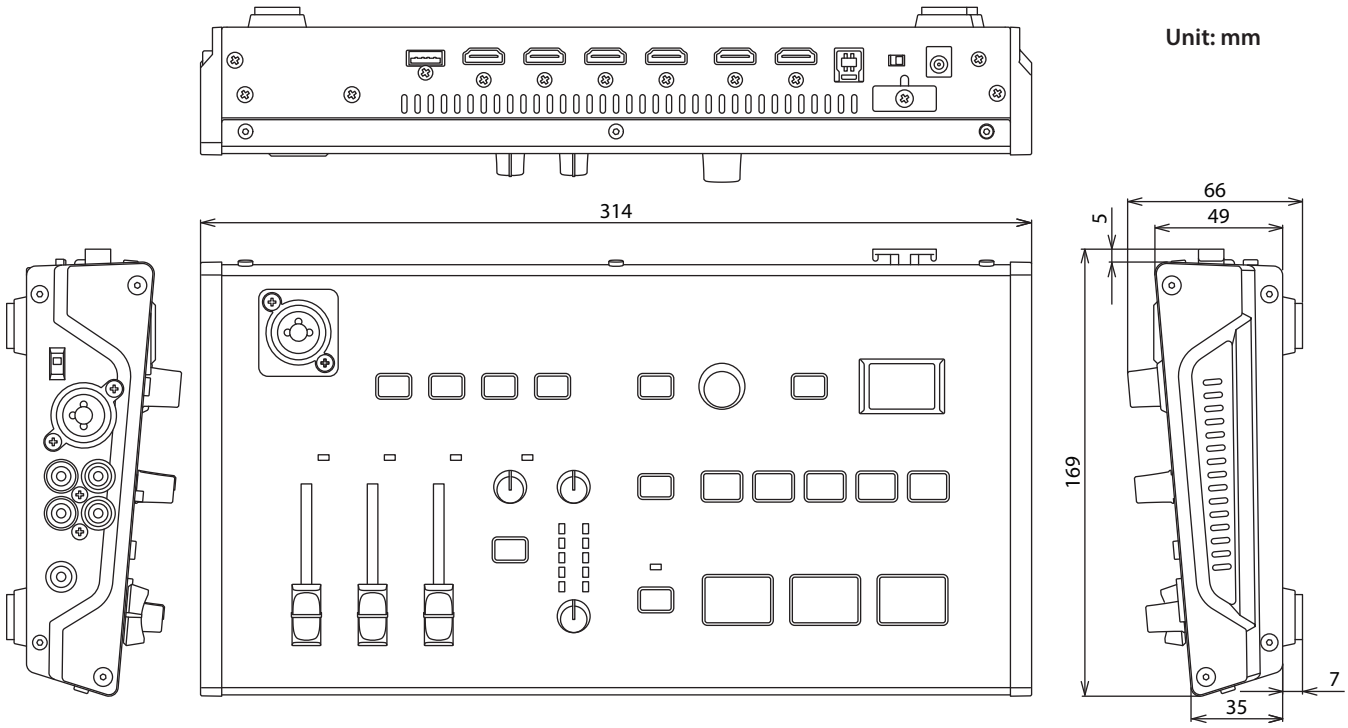
## ■ Audio

| | | |
|---|---|---|
| **Audio Processing** | Sample rate | 48 kHz, 24 bits |
| **Audio Formats** | VIDEO INPUT 1–3 connectors | Linear PCM, 48 kHz, 24 bits, stereo |
| | USB STREAM port | Linear PCM, 48 kHz, 16 bits, stereo |
| **Input Connectors** | VIDEO INPUT 1–3 connectors | HDMI type A |
| | MIC 1–2 jacks | Combo type (XLR, 1/4-inch TRS phone), phantom power (DC 48 V, 10 mA Max) |
| | LINE IN jacks | RCA phono type |
| | USB STREAM port | USB B type |
| **Output Connectors** | MAIN connector | HDMI type A |
| | MONITOR connector | HDMI type A |
| | LINE OUT jacks | RCA phono type |
| | USB STREAM port | USB B type |
| | PHONES jack | Stereo miniature phone type |
| **Nominal Input Level** | MIC 1–2 jacks | -60– +4 dBu (Maximum input level: +28 dBu) |
| | LINE IN jacks | -10 dBu (Maximum input level: +8 dBu) |
| **Input Impedance** | MIC 1–2 jacks | Minimum 10 k ohms (balanced, HEAD AMP GAIN: 0– +17 dBu)<br>Minimum 5 k ohms (balanced, HEAD AMP GAIN: +17– +64 dBu) |
| | LINE IN jacks | 15 k ohms |
| **Nominal Output Level** | LINE OUT jacks | -10 dBu (Maximum input level: +8 dBu) |
| | PHONES jack | 92 mW + 92 mW (32 ohms) |
| **Output Impedance** | LINE OUT jacks | 1 k ohms |
| | PHONES jack | 10 ohms |
| **Audio Effects** | Auto mixing, Echo canceller, Howling canceller, EQ, Delay, Compressor, HPF, Gate, Reverb, Limiter, Voice changer | |
| **Audio Player** | Number of Players | 4 |
| | Data Format | WAV (Linear PCM, 48 kHz, 16 bits stereo/44.1 kHz, 16 bits, stereo) |

| ■ Common Section | | |
|---|---|---|
| **Connectors** | USB MEMORY port (HOST) | USB A type (For USB flash drive, Still image, Audio player) |
| | USB STREAM port (DEVICE) | USB B type (For USB-VIDEO (USB 3.0), USB-AUDIO (USB 2.0): stereo 1 IN/1 OUT, Remote control, System update) |
| | DC IN jack | |
| **Functions** | Scene memory: 5, Panel lock function, EDID emulator, Auto switching (Auto scan, Beat sync switching, Video follows audio) | |
| **Power Supply** | AC adaptor | |
| **Current Draw** | 2 A | |
| **Power Consumption** | 24 W | |
| **Operation Temperature** | +0 to +40 degrees Celsius<br>+32 to +104 degrees Fahrenheit | |
| **Dimensions** | 314 (W) x 169 (D) x 66 (H) mm<br>12-3/8 (W) x 6-11/16 (D) x 2-5/8 (H) inches | |
| **Weight** (excluding AC adaptor) | 1.6 kg<br>3 lbs 9 oz | |
| **Accessories** | Startup Guide, Leaflet "USING THE UNIT SAFELY," AC adaptor, Power cord | |

* 0 dBu=0.775 Vrms
* 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.

# Dimensions



# Shortcut List

| Operation | Menu name |
|---|---|
| [MENU] + AUDIO EFFECTS [1] | AUDIO EFFECTS 1 |
| [MENU] + AUDIO EFFECTS [2] | AUDIO EFFECTS 2 |
| [MENU] + AUDIO EFFECTS [3] | AUDIO EFFECTS 3 |
| [MENU] + AUDIO EFFECTS [4] | AUDIO EFFECTS 4 |
| [MENU] + [MIC 1] fader | INPUT MIC 1 |
| [MENU] + [MIC 2] fader | INPUT MIC 2 |
| [MENU] + [LINE] fader | INPUT LINE |
| [MENU] + [USB STREAM] knob | AUDIO USB STREAM |
| [MENU] + [MAIN] knob | MAIN BUS |
| [MENU] + [KEY] | KEY |
| [MENU] + [ON AIR] | ON AIR |
| [SCENE EDIT] | SCENE |
| [MENU] + SCENE [A] | SCENE A |
| [MENU] + SCENE [B] | SCENE B |
| [MENU] + SCENE [C] | SCENE C |
| [MENU] + SCENE [D] | SCENE D |
| [MENU] + SCENE [E] | SCENE E |
| [MENU] + [AUTO SW] | AUTO SWITCHING |
| [MENU] + INPUT [1] | VIDEO INPUT 1 |
| [MENU] + INPUT [2] | VIDEO INPUT 2 |
| [MENU] + INPUT [3] | VIDEO INPUT 3 |