DIRECT STREAMING AV MIXER

# SR-20HD

Version 2.1 and later

## Reference Manual




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- This product is using the open source software. For the source code and license documentation of the open source software, please confirm the following website:
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Before using the unit, ensure that its system program is at the most recent version. For information on available upgrades for the system program, see the Roland website (**https://proav.roland.com/**).

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

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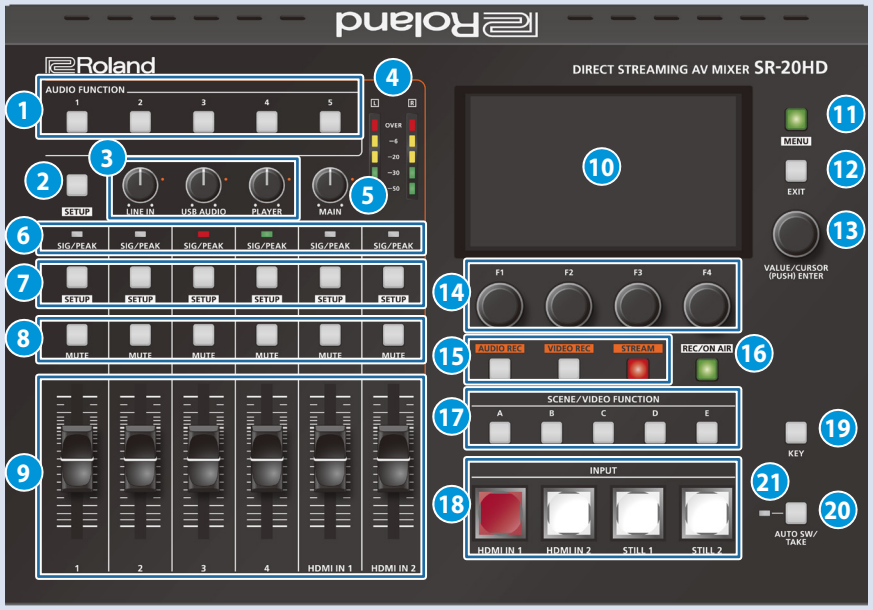
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# Panel Descriptions

## Top Panel




### 1 AUDIO FUNCTION

**[1]–[5] buttons**

Use these buttons to turn on/off or execute the audio-related functions. You can also assign different functions to each button.

### 2 [SETUP] button

The audio input/output parameters aside from those selected using the 7 [SETUP] button are shown at the bottom of the display.

The target display channel changes each time you press the button.

LINE IN → USB AUDIO → PLAYER/SRT In → HEADSET Mic → MAIN → Monitor → LINE IN → ...

### 3 [LINE IN] knob

Adjusts the input level for the LINE IN jacks.

**[USB AUDIO] knob**

Adjusts the volume of USB audio that's input from the device connected to the USB VIDEO IN port.

**[PLAYER] knob**

Adjusts the volume used to play back audio files (WAV) or video files (MP4) on the SD card.

### 4 Level meter

Indicates the volume level of the main output.

### 5 [MAIN] knob

Adjusts the main output level.

### 6 SIG/PEAK indicators

These indicators light up when audio input is detected.

| | |
|---|---|
| Unlit | Less than -51 dB |
| Lit green | -50– -21 dB |
| Lit yellow | -20– -1 dB |
| Lit red | Over 0 dB (Excessive) |

### 7 [SETUP] buttons

The input channel parameters you selected when pressing these buttons are shown at the bottom of the display.

### 8 [MUTE] buttons

Press these buttons to mute (silence) the audio of the selected input channels.

### 9 [1]–[4] faders

Adjusts the input level for the AUDIO IN 1–4 jacks.

**[HDMI IN 1], [HDMI IN 2] faders**

Adjusts the input level for the HDMI IN 1–2 connectors.

### 10 Display

Shows the status of the input/output video and of streaming/recording, as well as the parameters and menus.

### 11 [MENU] button

Switches the menu between visible and hidden.

### 12 [EXIT] button

Exits a menu level or cancels an operation.

### 13 [VALUE/CURSOR] knob

| | |
|---|---|
| Turning | Selects the menu parameters, switches between parameters shown at the bottom of the display, and edits their values. |
| Pressing | Confirms a selected menu item or an edited setting. |

### 14 [F1]–[F4] knobs

Use these knobs to set the parameter values shown at the bottom of the display.

### 15 [AUDIO REC] button

Shows the audio recording status.

| | |
|---|---|
| **Unlit** | Stopped, no parameter shown at the bottom of the display |
| **Lit red** | Recording |
| **Blinking yellow** | Error occurred during recording |

Press the button (lit green) to show the parameters related to audio recording at the bottom of the display.

### [VIDEO REC] button

Shows the video recording status.

| | |
|---|---|
| **Unlit** | Stopped, no parameter shown at the bottom of the display |
| **Lit red** | Now recording video |
| **Blinking yellow** | Error occurred during recording video |

Press the button (lit green) to show the parameters related to video recording at the bottom of the display.

### [STREAM] button

Shows the livestreaming status.

| | |
|---|---|
| **Unlit** | Stopped, no parameter shown at the bottom of the display |
| **Lit red** | Now livestreaming |
| **Blinking yellow** | Error occurred during livestreaming |

Press the button (lit green) to show the parameters related to livestreaming at the bottom of the display.

### 16 [REC/ON AIR] button

Parameters related to playing back/stopping either livestreaming or audio/video recording are shown at the bottom of the display.

### 17 SCENE/VIDEO FUNCTION

**[A]–[E] buttons**

These buttons recall the registered screen configurations and execute video-related functions.

You can also assign different functions to each button.

### 18 INPUT

**[HDMI IN 1], [HDMI IN 2], [STILL 1], [STILL 2] buttons**

You can also assign different functions to each button.

| | |
|---|---|
| **Lit red** | Currently selected video (video now outputting) |
| **Blinking red** | Video is transitioning |
| **Lit white** | Video input is valid |
| **Unlit** | No video input |

### 19 [KEY] button

Turns key composition on/off.

### 20 [AUTO SW/TAKE] button

Turns the auto switching function on/off.

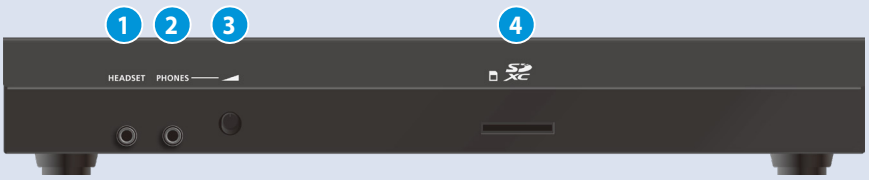
When PGM Direct (the function that immediately sends the selected video to final output; p. 26) is on, the unit automatically switches between the HDMI IN 1–2 video, STILL 1–2 still images or scenes A–E that are registered in the SCENE/VIDEO FUNCTION [A]–[E] buttons.

When PGM Direct is off, this button acts as the [TAKE] button to switch between final output.

### 21 AUTO SW indicator

Lights up green at the video transition timing that's controlled by the auto-switching function.

## Front Panel



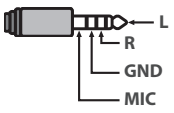

### 1 HEADSET jack

Connect your headset or headphones here.

**NOTE**

Use a headset with a 3.5 mm CTIA-type mini plug (4-pole).

* Pin arrangement for mini cable (4-pole)




### 2 PHONES jack

Connect headphones.

### 3 [PHONES] knob

Adjusts the volume of audio coming through the headset or headphones connected to the HEADSET or PHONES jack.

* The same audio signal is output from both the HEADSET and the PHONES jack.

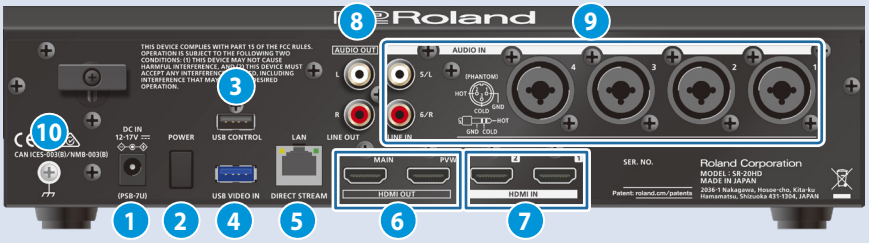
* You can't adjust the volume for either jack independently.

### 4 SDXC card slot

Insert an SD card here.

# Rear Panel

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

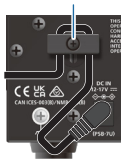



### 1 DC IN jack

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.

Cord hook



### 2 [POWER] switch

Turns the power on/off.

### 3 USB CONTROL port

- You can connect your smartphone to this port and use it for tethering.
- Connect a USB flash drive to import still images, or connect a USB keyboard for inputting text.

### 4 USB VIDEO IN port

Connect a USB STREAM output of the compatible Roland products.

### 5 LAN (DIRECT STREAM) port

Connect this port to a network device for livestreaming. This port is used for inputting and outputting video/audio to and from an SRT-compatible device that's connected to a network.

**NOTE**

As this port supports GbE, use a LAN cable with a CAT5e specification or better.

### 6 HDMI OUT (MAIN, PVW) connectors

These connectors output video.

Connect external displays and projectors.

* You can also configure the menu (p. 9) settings to make the menus that appear on this unit's display also appear on the display that's connected to the HDMI OUT PVW connectors.

### 7 HDMI IN 1, 2 connectors

These connectors input video.

Connect a video camera or computer with an HDMI output connector here.

### 8 AUDIO OUT (LINE OUT) jacks

These jacks output audio.

Connect them to an audio recorder, amplifier, speakers, or other such equipment.

### 9 AUDIO IN 1–4 (XLR/TRS) jacks

These jacks input audio.

Connect a mic or line-level analog audio equipment here.

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




* **About phantom power**

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

Use the [MENU] button → "Audio Input" → "AUDIO IN 1"–"AUDIO IN 4" → set "PHANTOM +48 V" to "On".

### AUDIO IN 5/L, 6/R (LINE IN) jacks

These jacks input audio.

Connect analog audio equipment such as an audio mixer here.

### 10 Ground terminal

Connect this to an external earth or ground if necessary.

# Basic Operations

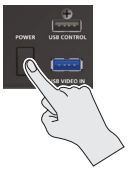
## Turning the Power On/Off

* Before turning the power on/off, minimize the volume. Even if the volume is minimized, you might hear a sound when turning the power on/off, but this is not a malfunction.
* Before disconnecting an SD card or a USB flash drive while the power is on, be sure to perform the Eject operation.
* When turning the power off, you must perform the shutdown operation.
* This unit is not designed for continuous operation over long periods of time (one month or longer). If you want to use this unit over long periods of time, cycle the power periodically.

### Turning the power on

**1. Make sure all devices are turned off.**

**2. Turn on the [POWER] switch on the SR-20HD to turn on the power.**




**3. Power-on the source devices.**

Turn on the power of source devices such as video cameras that are connected to the SR-20HD's input connectors.

**4. Power-on the output devices.**

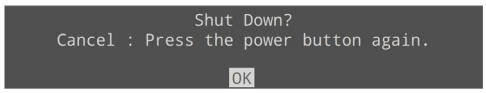
Turn on the power of devices such as projectors that are connected to the SR-20HD's output connectors.

### Turning the power off

**1. Turn off the power in the sequence of first the output equipment, and then the sources.**

**2. Turn the SR-20HD's [POWER] switch off.**

The following message is shown on the display.




**3. Press the [VALUE/CURSOR] knob to complete the shutdown.**

If you decide to cancel, press the [POWER] switch once again.

You can also turn off this unit as follows: [MENU] button → "System" → "Shut Down".

#### About the Auto Off function

The power to the unit turns off automatically to save energy when all of the following states persist for 20 minutes by default (Auto Off function).

- No operation performed on the SR-20HD
- No video input
- No equipment is connected to the HDMI OUT connectors
- No livestreaming or video recording

If you do not want the power to be turned off automatically, turn this setting off. "System" menu Ó set "Auto Off" to "Off". Note that when the setting is turned off, the unit may consume more power.

Power consumption when in off mode (when the power automatically turns off): 0.1 W

* If the power automatically turns off, any unsaved data is lost. Before the power turns off, save the data that you want to keep.
* You can simply turn the power back on after it has turned off automatically.

## About SD Cards

**NOTE**

**When using the SR-20HD, you must always install an SD card.**

#### Cards that can be used with the SR-20HD

The SR-20HD supports SDXC cards.

Depending on the manufacturer or type of SD card, some cards might not work correctly for video or audio recording on the SR-20HD.
For the latest information on cards that are known to work, refer to the Roland support page.

**https://roland.cm/sr-20hd**

**NOTE**

Before using a commercially available SD card with the SR-20HD, you must first format it as described in "Formatting an SD Card".

### Inserting an SD Card

**1. Insert the SD card into the SDXC card slot until you hear it click into place.**



**NOTE**

When inserting an SD card, take care that it is oriented correctly, and push it all the way in. Do not use excessive force.

### Formatting an SD Card

**1. Select [MENU] button → "SD Card/USB Memory" → "SD Card Format", and then press the [VALUE/CURSOR] knob.**

A confirmation message appears.

**2. Turn the [VALUE/CURSOR] knob to select "OK", and then press the [VALUE/CURSOR] knob to confirm.**

The SD card is formatted.

**NOTE**

Formatting erases all data (recorded video and audio data) on the SD card.

### Removing an SD Card

**1. Select [MENU] button → "SD Card/USB Memory" → "SD Card Eject", and then press the [VALUE/CURSOR] knob.**

A confirmation message appears.

* You can also view the confirmation message by holding down the [EXIT] button and pressing the [MENU] button.

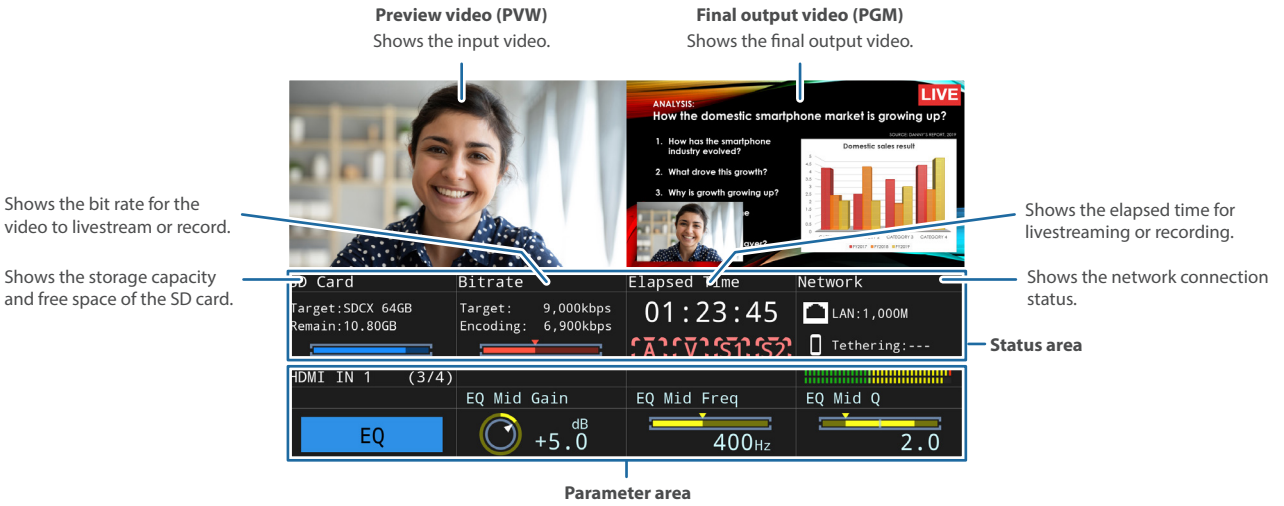
**2. Turn the [VALUE/CURSOR] knob to select "OK", and then press the [VALUE/CURSOR] knob**

The screen indicates "The SD Card is safe to remove", and it is now safe to remove the card.

**3. Press the SD card inward.**

**4. Grasp the SD card and pull it toward yourself.**

# Basic Screen




Shows four parameters, the values of which you can edit and confirm using the [F1]–[F4] knobs.

# Operating the Parameter Area

Four parameters are shown in the parameter area at the bottom of the display. Use the [F1]–[F4] knobs to edit and confirm the values.

- Use the AUDIO IN 1–4 and HDMI IN 1–2 [SETUP] buttons, and the [AUDIO REC], [VIDEO REC], [STREAM] and [REC/ON AIR] buttons to switch between parameters to display.
- You can assign the functions you want to show in the parameter area (analog gain, mute, delay, etc.) to the AUDIO FUNCTION [1]–[5] buttons.
- If there are more than four parameters, use the [VALUE/CURSOR] knob to switch between pages and show the additional parameters.

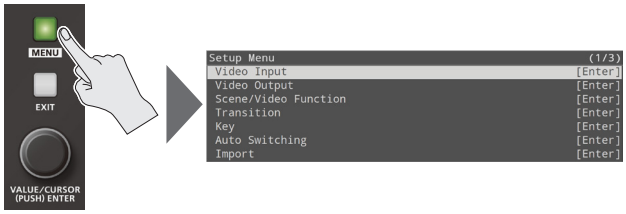


## Operating the Menu

Here's how to access the menu to configure the video/audio/livestreaming settings and the settings for the SR-20HD.

* The menu can also be shown on the display that is connected to the HDMI OUT PVW connector.

### 1. Press the [MENU] button to display the menu.




The [MENU] button lights up, the menu categories are displayed.

### 2. Turn the [VALUE/CURSOR] knob to select a category, and then press the [VALUE/CURSOR] knob to confirm.




The menu for the selected category is displayed.

### 3. Turn the [VALUE/CURSOR] knob to select a menu item, and then press the [VALUE/CURSOR] knob to confirm.

The cursor moves to the setting value.

- If the menu item is located at a deeper level, repeat step 3.
- Pressing the [EXIT] button moves you back one level higher.

### 4. Turn the [VALUE/CURSOR] knob to change the value of the setting.

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

### 5. Press the [VALUE/CURSOR] knob to apply the setting.

The cursor returns to the menu item.

### 6. Press the [MENU] button to quit the menu.

## Setting the Date and Time

Follow the steps below to set the internal clock the first time you turn on this unit. The date and time you set here is shown onscreen, and is stored as data in the files you record.

**NOTE**

- The battery-powered internal clock keeps operating even after the power is turned off.
- If the battery runs out, the message "Battery Error" is displayed. If you see this message, contact the nearest Roland Service Center.

### 1. [MENU] button → "System" → select "Date & Time Settings", and then press the [VALUE/CURSOR] knob.




### 2. Turn the [VALUE/CURSOR] knob to select "Manual", and then press the [VALUE/CURSOR] knob.




### 3. Turn the [VALUE/CURSOR] knob to select "Date" or "Time", and then press the [VALUE/CURSOR] knob.

A dialog box appears.

### 4. Turn the [VALUE/CURSOR] knob to select either YY (year)/MM (month)/DD (day) or MIN (minutes)/SEC (seconds), and then press the [VALUE/CURSOR] knob.

The item to be edited blinks.

### 5. Turn the [VALUE/CURSOR] knob to edit either the YY/MM/DD or the MIN/SEC values, and then press the [VALUE/CURSOR] knob.

### 6. Repeat steps 4–5 to set the YY/MM/DD or the MIN/SEC values.

### 7. Turn the [VALUE/CURSOR] knob to select "OK", and close the dialog box.

### 8. Turn the [VALUE/CURSOR] knob to select "Set", and then press the [VALUE/CURSOR] knob.

This confirms the values you set.

If you select "Cancel", the values you set are discarded and returned to their original values.

### 9. Turn the [VALUE/CURSOR] knob to select a menu item, then press the [VALUE/CURSOR] knob.

| Menu item | Explanation |
|---|---|
| Configure | Sets the time either manually (Manual) or retrieves the time from an NTP server (Using NTP). |
| Time Zone | Sets the time zone. |
| Date Format | Sets the format used for displaying the date. |
| NTP Server | Specifies the default NTP server. |

### 10. Turn the [VALUE/CURSOR] knob to change the value of the setting, and then press the [VALUE/CURSOR] knob.

### 11. Press the [MENU] button to quit the menu.

# Video Input/Output Settings

## List of Compatible Video Formats

### Input formats

| 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 |
| 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) |
| 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 format

| | |
|---|---|
| **HDMI IN 1, 2 connector** | Linear PCM, 24 bits, 48 kHz, stereo |

### Output formats

#### HDMI OUT (MAIN, PVW) connector

| Frame rate | |
|---|---|
| **When set to "59.94 Hz"** | **When set to "50 Hz"** |
| 1080/59.94p | 1080/50p |

#### Audio format

| | |
|---|---|
| **HDMI OUT (MAIN, PVW) connector** | Linear PCM, 24 bits, 48 kHz, stereo |

## Specifying the Input Format (EDID)

With the factory settings, EDID is set to "Internal" (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 SR-20HD to the source device when the SR-20HD is connected to a source device. EDID contains data such as the formats that can be input to the SR-20HD (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 SR-20HD.

**1. [MENU] button → "Video Input" → select "HDMI IN 1" or "HDMI IN 2", and then press the [VALUE/CURSOR] knob.**




**2. Turn the [VALUE/CURSOR] knob to select "EDID", and then press the [VALUE/CURSOR] knob.**




**3. Turn the [VALUE/CURSOR] knob to select the input format (EDID), and then press the [VALUE/CURSOR] knob.**

| Value |
|---|
| Internal, 720p, 1080i, 1080p,<br>SVGA (800 x 600), XGA (1024 x 768), WXGA (1280 x 800),<br>FWXGA (1366 x 768), SXGA (1280 x 1024), SXGA+ (1400 x 1050),<br>UXGA (1600 x 1200), Full HD (1920 x 1080), WUXGA (1920 x 1200) |

**5. Press the [MENU] button to quit the menu.**

## Adjusting Output Video

Here's how to adjust the output image appropriately for the device that's receiving the SR-20HD's output.

### 1. [MENU] button → "Video Output" → select "HDMI OUT MAIN" or "HDMI OUT PVW", and then press the [VALUE/CURSOR] knob.

A detailed menu appears.




### 2. Turn the [VALUE/CURSOR] knob to select a menu item, and then press the [VALUE/CURSOR] knob.

| Menu item | Explanation |
|---|---|
| Status | Shows the status of the HDMI OUT (MAIN, PVW) connector. |
| Color Space | Specifies the color space (system for representing colors in video). |
| DVI-D/HDMI | Specifies the type of output signal. |
| 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. |
| **HDMI OUT PVW only** | |
| Output Assign | Specifies the output bus that is assigned to the HDMI OUT PVW connector. |

### 3. Turn the [VALUE/CURSOR] knob to change the value of the setting, and then press the [VALUE/CURSOR] knob.

### 4. Press the [MENU] button to quit the menu.

You can output a test pattern, useful for adjusting the image quality of a display.

[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 [HDMI IN 1]–[STILL 2] buttons.

### 1. [MENU] button → "Video Input" → select "HDMI IN 1"–"STILL 2", and then press the [VALUE/CURSOR] knob.

A detailed menu appears.




### 2. Turn the [VALUE/CURSOR] knob to select a menu item, and then press the [VALUE/CURSOR] knob.

| Menu item | Explanation |
|---|---|
| **HDMI IN 1, 2 only** | |
| Status | Displays information about the input video (video format, size, etc.). |
| Color Space | Specifies the color space (system for representing colors in video).<br>If this is set to "Auto", an appropriate color space is automatically applied. |
| Flicker Filter | If this is "On", flickering is reduced. |
| **STILL 1 only** | |
| Still Memory | Selects the memory number in which the still image is saved. |
| **HDMI IN 1, STILL 2** | |
| Zoom | Adjusts the zoom ratio. |
| Scaling Type | Specifies the scaling type.<br>* The scaling type for STILL 1/SRT In and STILL 2 is fixed at "Full". |
| Manual Size H | Adjusts the horizontal size. |
| Manual Size V | Adjusts the vertical size. |
| Position H | Adjusts the horizontal position. |
| Position V | Adjusts the vertical position. |
| Brightness | Adjusts the brightness. |
| Contrast | Adjusts the contrast. |
| Saturation | Adjusts the saturation. |

### 3. Turn the [VALUE/CURSOR] knob to change the value of the setting, and then press the [VALUE/CURSOR] knob.

### 4. Press the [MENU] button to quit the menu.

#### When using video from USB VIDEO IN

Make the following settings.

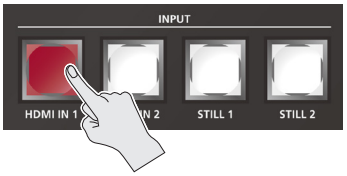
- Press the [MENU] button → "System" → "USB VIDEO IN Mode" and set to "Video Only".
- Press the [MENU] button → "Video Input" → "STILL 1/SRT In" → "Type" and set to "USB VIDEO IN".
- Set USB STREAM to "720p29.97" or "720p25" for the product to connect.
  * If a UVC-01 is connected, "720p29.97" or "720p25" is automatically set.
- When a VR-4HD is connected, set SYSTEM FORMAT of the VR-4HD to "720p".

# Video Operations

## Using Buttons to Switch the Video

Here's how to manually switch between the INPUT (HDMI IN 1–2, STILL 1 /SRT In, STILL 2) video signals/still images.

### 1. Press an INPUT [HDMI IN 1]–[STILL 2] button to select the video.




| Button | Video status |
|---|---|
| Lit red | Currently selected video (video now outputting) |
| Blinking red | Video is transitioning |
| Lit white | Video input is valid |
| Unlit | No video 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. 14), the input video selection is canceled.

**■ Video transition time**

You can set the video transition time by using [MENU] button → "Transition" → "Time". This setting is common to the scene (p. 14) 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 "0.0 sec".
- If you press an INPUT button while a transition is occurring.

**■ Video source for the [STILL 1] button (p. 19)**

You can assign the still images and videos imported to an SD card to the [STILL 1] button.

Set this from the [MENU] button → "Video Input" → "STILL 1/SRT In" → "Type".

| Value | Explanation |
|---|---|
| Still | Still images imported to an SD card |
| Video Player | Videos imported to an SD card |

**■ Video source for the [STILL 2] button (p. 22)**

The still images captured from the HDMI IN 1–2, STILL 1/SRT In video source is assigned to the [STILL 2] button.

Capture the still image from the [MENU] button → "Import" → "Input Capture".

- Only one still image can be captured.
- Captured still images cannot be reduced in size.
- When you turn off the power, the captured still image is lost.
- When using the [STILL 2] button, you must capture the image after the unit starts up.

## Switching the Video Automatically (Auto Switching)

The video/still image of INPUT (HDMI IN 1–2, STILL 1 /SRT In, STILL 2) or of scenes (p. 14) can be switched automatically (the auto switching function).

You can make operation easier by letting the video switch automatically.

* You can't use the auto-switching function when PGM Direct (p. 26) is "Off".

### Operation modes for auto switching

Auto switching provides two operation modes that you can select as appropriate for your situation: "auto scan" 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 (HDMI IN 1–2, STILL 1 /SRT In, STILL 2) are skipped if there is no video input.

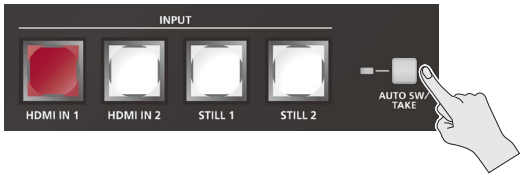
#### Switching according to the mic volume (video follows audio)

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.

## Turning the Auto Switching Function On/Off

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




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

# Specifying the Operation Mode

## Auto scan

1. **[MENU] button → "Auto Switching" → select "Type", and then press the [VALUE/CURSOR] knob.**




2. **Turn the [VALUE/CURSOR] knob to select "Auto Scan", and then press the [VALUE/CURSOR] knob.**

3. **Turn the [VALUE/CURSOR] knob to select a menu item, and then press the [VALUE/CURSOR] knob.**

| Menu item | Explanation | |
|---|---|---|
| Sequence | Specifies the order in which video signals are shown. | |
| | Normal | HDMI IN 1–STILL 2 → switch in the order of scenes A–E. |
| | Random | Switch randomly. |
| Video Input Duration | Specifies the time that the video is shown. If this is "OFF", video switching does not affect the input. | |
| HDMI IN 1, 2 | | |
| STILL 1/SRT In, STILL 2 | | |
| Scene Duration | | |
| Scene A–E | | |

4. **Turn the [VALUE/CURSOR] knob to change the value of the setting, and then press the [VALUE/CURSOR] knob.**

5. **Press the [MENU] button to quit the menu.**

## Video follows audio

1. **[MENU] button → "Auto Switching" → select "Type", and then press the [VALUE/CURSOR] knob.**




2. **Turn the [VALUE/CURSOR] knob to select "Video Follows Audio", and then press the [VALUE/CURSOR] knob.**




3. **Turn the [VALUE/CURSOR] knob to select a menu item, and then press the [VALUE/CURSOR] knob.**

| Menu item | Explanation |
|---|---|
| Time | Specifies the time until audio detection resumes after mic audio has been detected to switch the video or scene. |
| Mic A, B Source | Specifies the audio input to which auto-switching is applied for Mic A and Mic B. |
| Mic A, B Sense | Specifies the detection level for the audio being input to the Mic A, B.<br>The higher the level, the more easily audio is detected. |
| Mic A, B Select | Specifies the video/scene that is output when audio is detected in Mic A, B. |
| Mic A + Mic B Select | Specifies the video/scene that is output when audio is detected in both Mic A and Mic B. |
| Silent Select | Specifies the video/scene that is output when there is no audio input in either Mic A or Mic B. |

4. **Turn the [VALUE/CURSOR] knob to change the value of the setting, and then press the [VALUE/CURSOR] knob.**

5. **Press the [MENU] button to quit the menu.**

# 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/VIDEO FUNCTION buttons.

The SR-20HD provides five scenes.

## Types of screen configuration

There are the following three types of screen configuration that can be registered in a scene.

### Picture-in-picture (PinP)

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

You can freely change the size and position of the inset screen.




### Split

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




### Picture-by-picture (PbyP)

This places two screens beside each other.

You can freely change the size and position of each screen.



## Registering a Scene

### Picture-in-picture (PinP)

**1. [MENU] button → "Scene/Video Function" → "Scene/Video Function A–E" → select "Mode", and then press the [VALUE/CURSOR] knob.**




**2. Turn the [VALUE/CURSOR] knob to select "Scene", and then press the [VALUE/CURSOR] knob.**

**3. Turn the [VALUE/CURSOR] knob to select "Type", and then press the [VALUE/CURSOR] knob.**

**4. Turn the [VALUE/CURSOR] knob to select "PinP", and then press the [VALUE/CURSOR] knob.**




**5. Turn the [VALUE/CURSOR] knob to select a menu item, and then press the [VALUE/CURSOR] knob.**

| Menu item | Explanation |
|---|---|
| LED Color | Specifies the illumination color of the SCENE [A]–[E] button. |
| Background Ch | Specifies the background video. |
| Window Ch | Specifies the inset screen video. |
| Window Pos H | Adjusts the horizontal position of the inset screen. |
| Window Pos V | Adjusts the vertical 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 Crop H | Adjusts the horizontal size of the inset screen. |
| Window Crop V | Adjusts the vertical size of the inset screen. |
| View Pos H | Adjusts the horizontal position of the video shown in the inset screen. |
| View Pos 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. |

**6. Turn the [VALUE/CURSOR] knob to change the value of the setting, and then press the [VALUE/CURSOR] knob.**

**7. Press the [MENU] button to quit the menu.**

Still images assigned to the [STILL 2] button (p. 22) cannot be reduced in size.

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. [MENU] button → "Scene/Video Function" → "Scene/Video Function A–E" → select "Mode", and then press the [VALUE/CURSOR] knob.**



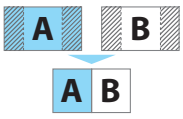
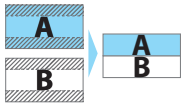
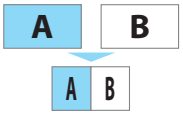
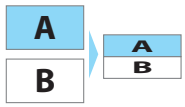

**2. Turn the [VALUE/CURSOR] knob to select "Scene", and then press the [VALUE/CURSOR] knob.**

**3. Turn the [VALUE/CURSOR] knob to select "Type", and then press the [VALUE/CURSOR] knob.**

**4. Turn the [VALUE/CURSOR] knob to select "Split", and then press the [VALUE/CURSOR] knob.**




**5. Turn the [VALUE/CURSOR] knob to select a menu item, and then press the [VALUE/CURSOR] knob.**

| Menu item | Explanation |
|---|---|
| LED Color | Specifies the illumination color of the SCENE [A]–[E] button. |
| 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/CURSOR] knob to change the value of the setting, and then press the [VALUE/CURSOR] knob.**

**3. Press the [MENU] button to quit the menu.**

Still images assigned to the [STILL 2] button (p. 22) cannot be reduced in size.

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.

## Picture-by-picture (PbyP)

**1. [MENU] button → "Scene/Video Function" → "Scene/Video Function A–E" → select "Mode", and then press the [VALUE/CURSOR] knob.**




**2. Turn the [VALUE/CURSOR] knob to select "Scene", and then press the [VALUE/CURSOR] knob.**

**3. Turn the [VALUE/CURSOR] knob to select "Type", and then press the [VALUE/CURSOR] knob.**

**4. Turn the [VALUE/CURSOR] knob to select "PbyP", and then press the [VALUE/CURSOR] knob.**




**5. Turn the [VALUE/CURSOR] knob to select a menu item, and then press the [VALUE/CURSOR] knob.**

| Menu item | Explanation |
|---|---|
| LED Color | Specifies the illumination color of the SCENE [A]–[E] button. |
| A Ch | Specifies the video for each window (screen A, screen B). |
| B Ch | |
| Layer Order | Specifies the overlay order (foreground/ background) for screen A and screen B. |
| A Ch | |
| Position H | Adjusts the horizontal position of the screen A. |
| Position V | Adjusts the vertical position of the screen A. |
| Aspect | Specifies the aspect ratio of the screen A. |
| Size | Adjusts the size of the screen A. |
| Cropping H | Adjusts the horizontal size of the screen A. |
| Cropping V | Adjusts the vertical size of the screen A. |
| View Pos H | Adjusts the horizontal position of the video shown in the screen A. |
| View Pos V | Adjusts the vertical position of the video shown in the screen A. |
| View Zoom | Adjusts the zoom of the video shown in the screen A. |
| B Ch | |
| Position H | Adjusts screen B in the same way as screen A. |
| Position V | |
| Aspect | |
| Size | |
| Cropping H | |
| Cropping V | |
| View Pos H | |
| View Pos V | |
| View Zoom | |

**6. Turn the [VALUE/CURSOR] knob to change the value of the setting, and then press the [VALUE/CURSOR] knob.**

**7. Press the [MENU] button to quit the menu.**

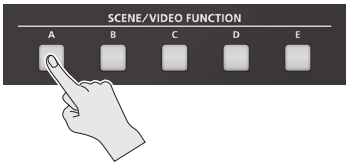
Still images assigned to the [STILL 2] button (p. 22) cannot be reduced in size.

If the still image is shown, a portion of the still image is cut out and shown, instead of making it smaller to match the size of the screen A or screen B.

## Recalling a Scene

Here's how to recall a scene that was registered.

### 1. Press the SCENE [A]–[E] buttons to which the scene is registered.




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

* When you select INPUT (HDMI IN 1–2, STILL 1 /SRT In, STILL 2), the scene selection is cleared.

- 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. |
| Motion | Switching occurs while each screen moves. |

## Copying a Scene

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

### 1. [MENU] button → "Scene/Video Function" → select "Scene/Video Function Copy", and then press the [VALUE/CURSOR] knob.

The Scene/Video Function Copy menu appears.



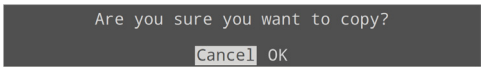

### 2. Turn the [VALUE/CURSOR] knob to select a menu item, and then press the [VALUE/CURSOR] knob.

| Menu item | Explanation |
|---|---|
| Source | Specifies the copy-source scene. |
| Destination | Specifies the copy-destination scene. |

### 3. Turn the [VALUE/CURSOR] knob to select the copy source/destination scene, and then press the [VALUE/CURSOR] knob.

### 4. Turn the [VALUE/CURSOR] knob to select "Copy", and then press the [VALUE/CURSOR] knob.

A confirmation message appears.




If you want to cancel the operation, select "Cancel".

### 5. Turn the [VALUE/CURSOR] knob to select "OK", and then press the [VALUE/CURSOR] knob.

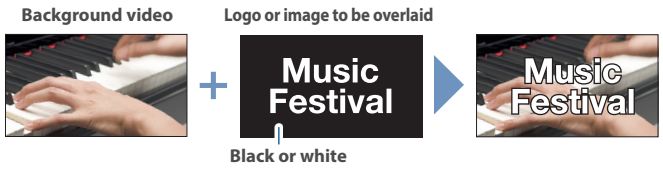
### 6. Press the [MENU] button to quit the menu.

# Using a Key to Composite Video

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

## 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. 14) 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", and then press the [VALUE/CURSOR] knob.**




**3. Turn the [VALUE/CURSOR] knob to select "On", and then press the [VALUE/CURSOR] knob.**

The composited result is output.

**4. Turn the [VALUE/CURSOR] knob to select "Key Source Ch", "Key Color", "Key Level", or "Key Gain", and then press the [VALUE/CURSOR] knob.**




#### ■ Key Source Ch

Select the source of the logo or image that you want to superimpose.

| Value | Explanation |
|---|---|
| HDMI IN 1, 2 | Video being input from the HDMI IN 1, 2 connectors |
| STILL 1/SRT In, STILL 2 | A still image loaded into the unit (p. 19, p. 22) |

#### ■ Key Color

Choose "BLACK" or "WHITE".

| Value | Explanation |
|---|---|
| Black | Composite using luminance key.<br>Makes black portions transparent according to brightness. |
| White | Composite using luminance key.<br>Makes white portions transparent according to brightness. |
| Green 1–3 | Composite using chroma key.<br>Makes green portions transparent according to hue. |
| Blue 1–3 | Composite using chroma key.<br>Makes blue portions transparent according to hue. |

#### ■ Key Level

Adjusts the degree of extraction for the key.

#### ■ Key Gain

Adjusts the degree of edge blur for the key.

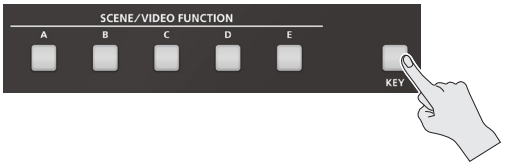
**5. Turn the [VALUE/CURSOR] knob to change the value of the setting, and then press the [VALUE/CURSOR] knob.**

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

**6. Press the [MENU] button to quit the menu.**

### Key compositing

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




The composited result is shown as a cut.

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

The background video returns as a cut.

### Changing the size of the logo or image

When using key compositing, you can change the size and position of the overlaid logo or image. Make these settings in the following Key menu.

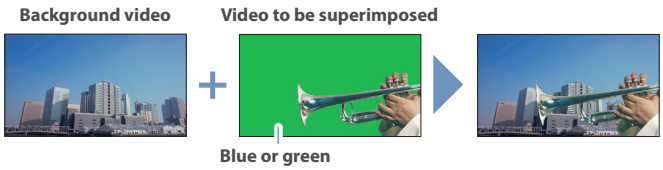
| Menu item | Explanation |
|---|---|
| Source Zoom | Adjusts the zoom ratio. |
| Source Scaling Type | Specifies the scaling type. |
| Manual Size H | Adjusts the horizontal size. |
| Manual Size V | Adjusts the vertical size. |
| Source Pos H | Adjusts the horizontal position. |
| Source Pos V | Adjusts the vertical position. |

# Compositing a Subject and Background (Chroma Key)

You can cut out a video by turning its blue or green portion transparent, and then superimpose it on the background video.

This lets you composite a subject that's photographed against a blue background or green background.

You can also use a scene (p. 14) 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", and then press the [VALUE/CURSOR] knob.**




**3. Turn the [VALUE/CURSOR] knob to select "On", and then press the [VALUE/CURSOR] knob.**

The composited result is output.

**4. Turn the [VALUE/CURSOR] knob to select "Key Source Ch", "Key Color", "Key Level", or "Key Gain", and then press the [VALUE/CURSOR] knob.**




### Key Source Ch

Select the source of the logo or image that you want to superimpose.

| Value | Explanation |
|---|---|
| HDMI IN 1, 2 | Video being input from the HDMI IN 1, 2 connectors |
| STILL 1/SRT In, STILL 2 | A still image loaded into the unit (p. 19, p. 22) |

### Key Color

Specifies "Green 1–3" or "Blue 1–3". Choose the preset 1–3 that allows the most appropriate compositing.

| Value | Explanation |
|---|---|
| Black | Composite using luminance key.<br>Makes black portions transparent according to brightness. |
| White | Composite using luminance key.<br>Makes white portions transparent according to brightness. |
| Green 1–3 | Composite using chroma key.<br>Makes green portions transparent according to hue. |
| Blue 1–3 | Composite using chroma key.<br>Makes blue portions transparent according to hue. |

### Key Level

Adjusts the degree of extraction for the key.

### Key Gain

Adjusts the degree of edge blur for the key.

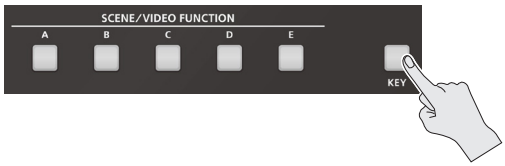
**5. Turn the [VALUE/CURSOR] knob to change the value of the setting, and then press the [VALUE/CURSOR] knob.**

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

**6. Press the [MENU] button to quit the menu.**

## Key compositing

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




The composited result is shown as a cut.

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

The background video returns as a cut.

## Changing the size of the logo or image

When using key compositing, you can change the size and position of the overlaid logo or image. Make these settings in the following Key menu.

| Menu item | Explanation |
|---|---|
| Source Zoom | Adjusts the zoom ratio. |
| Source Scaling Type | Specifies the scaling type. |
| Manual Size H | Adjusts the horizontal size. |
| Manual Size V | Adjusts the vertical size. |
| Source Pos H | Adjusts the horizontal position. |
| Source Pos V | Adjusts the vertical position. |

# Using Still Images and Videos

You can load (import) still images and videos from a USB flash drive to an SD card and use them as the video source for "STILL 1".

You can also import and use still images (the sample files) contained in the internal memory of this unit to an SD card.

**NOTE**

- When using an SD card for the first time, you must format it using the SR-20HD (p. 7).
- Depending on the SD card/USB flash drive, recognition of the SD card/flash drive might take some time.
- Never turn off the power or remove the SD card/USB flash drive while the message "Processing..." is shown.

## Importing Still Images

### Formats supported for importing

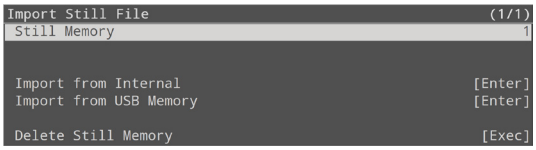
| | |
|---|---|
| **Format** | PNG File (.png), 24-bit color<br>* The PNG alpha channel is not supported. |
| | JPEG File (.jpg .jpeg), 24-bit color |
| **Resolution** | Maximum 1920 x 1080 pixels |
| **File name** | Maximum of 32 single-byte alphanumeric characters, including the file extension |

### Importing

**Importing from a USB flash drive**

1. **Save the still image to the root directory of the USB flash drive.**
2. **Connect the USB flash drive containing the still image to the USB MEMORY port.**

1. **Insert the SD card (p. 7).**
2. **[MENU] button → "Import" → select "Import Still File", and then press the [VALUE/CURSOR] knob.**




3. **Select "Still Memory", and then press the [VALUE/CURSOR] knob.**
4. **Turn the [VALUE/CURSOR] knob to select the memory (1–8) to which the still image is to be saved, and then press the [VALUE/CURSOR] knob.**

- When "Safety Image" is selected, the still image is imported as a still image that switches when you use the safety delay function (p. 47).
- The "*" mark is displayed for memories that contain a still image.

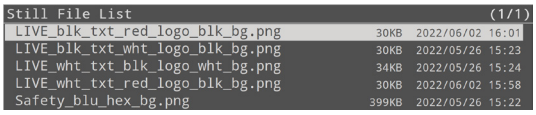
**Importing a sample file**

5. **Turn the [VALUE/CURSOR] knob to select "Import from Internal", and then press the [VALUE/CURSOR] knob.**

**Importing from a USB flash drive**

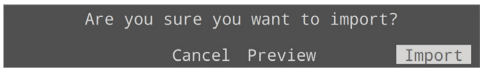
5. **Turn the [VALUE/CURSOR] knob to select "Import from USB Memory", and then press the [VALUE/CURSOR] knob.**

A list of the still images is shown.




6. **Turn the [VALUE/CURSOR] knob to select the still image to import, and then press the [VALUE/CURSOR] knob.**

A confirmation message appears.




If you want to cancel the operation, select "Cancel".

- Select "Preview" to check the still image.

  The still image is output to HDMI OUT PVW.

7. **Turn the [VALUE/CURSOR] knob to select "OK", and then press the [VALUE/CURSOR] knob.**

When the operation is finished, the message "Completed" appears.

8. **Press the [MENU] button to quit the menu.**

### Using a still image for the [STILL 1] button's video source

1. **[MENU] button → "Video Input" → select "STILL 1/SRT In", and then press the [VALUE/CURSOR] knob.**




2. **Select "Type", and then press the [VALUE/CURSOR] knob.**
3. **Turn the [VALUE/CURSOR] knob to select "Still", and then press the [VALUE/CURSOR] knob.**
4. **Turn the [VALUE/CURSOR] knob to select "Still Memory", and then press the [VALUE/CURSOR] knob.**
5. **Turn the [VALUE/CURSOR] knob to select the still image (1–8) to be used for STILL 1, and then press the [VALUE/CURSOR] knob.**
6. **Press the [MENU] button to quit the menu.**

You can assign the function that switches the still image used for STILL 1 to the VIDEO FUNCTION buttons.

For details, see "Assigning a Function to the VIDEO FUNCTION Buttons" (p. 25).

# Importing and Using Videos

Here's how to import video from a USB flash drive.

You can also use a video that's recorded on an SD card while you're livestreaming (p. 38).

## Formats supported for importing

| | |
|---|---|
| **Format** | MP4 File (.mp4), H.264, AAC (48 kHz),<br>Average bit rate of 10,000 kbps or less |
| **Resolution** | Maximum 1080p29.97 |
| **File name** | Maximum of 32 single-byte alphanumeric characters, including the file extension |

## Importing

**1. Save the video file to the root directory of the USB flash drive.**

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

**3. Insert the SD card (p. 7).**

**4. [MENU] button → "Import" → select "Import Video File", and then press the [VALUE/CURSOR] knob.**




**5. Select "Video Memory", and then press the [VALUE/CURSOR] knob.**

**6. Turn the [VALUE/CURSOR] knob to select the memory (1–8) to which the video is to be saved, and then press the [VALUE/CURSOR] knob.**

- The "*" mark is displayed for memories that contain a video.

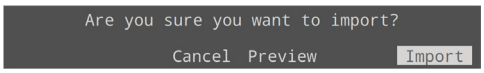
**7. Turn the [VALUE/CURSOR] knob to select "Import from USB Memory", and then press the [VALUE/CURSOR] knob.**

A list of the videos is shown.




**8. Turn the [VALUE/CURSOR] knob to select the video to import, and then press the [VALUE/CURSOR] knob.**

A confirmation message appears.




If you want to cancel the operation, select "Cancel".

- Select "Preview" to check the video. The still image is output to HDMI OUT PVW.

  You can also use the [F1]–[F4] knobs to skip within a video during playback.

| | |
|---|---|
| **[F1]: -60s** | Skips 60 seconds backward |
| **[F2]: -10s** | Skips 10 seconds backward |
| **[F3]: +10s** | Skips 10 seconds forward |
| **[F4]: +60s** | Skips 60 seconds forward |

- The audio channel from the video is sent to the Audio Input PLAYER/SRT In channel. No audio is output when "MAIN Mute" or "Monitor Mute" (p. 32) for the PLAYER/SRT In channel is set to "On".

**9. Turn the [VALUE/CURSOR] knob to select "OK", and then press the [VALUE/CURSOR] knob.**

When the operation is finished, the message "Completed" appears.

### ■ Start Time, End Time

You can set the playback start and end points for the video after it is imported.

**10. Turn the [VALUE/CURSOR] knob to select "Start Time" or "End Time", and then press the [VALUE/CURSOR] knob.**

**11. Turn the [VALUE/CURSOR] knob to change the value of the setting, and then press the [VALUE/CURSOR] knob.**

**12. Press the [MENU] button to quit the menu.**

## Using a video for the [STILL 1] button's video source

1. **[MENU] button → "Video Input" → select "STILL 1/SRT In", and then press the [VALUE/CURSOR] knob.**




2. **Select "Type", and then press the [VALUE/CURSOR] knob.**
3. **Turn the [VALUE/CURSOR] knob to select "Video Player", and then press the [VALUE/CURSOR] knob.**
4. **Press the [MENU] button to quit the menu.**

## Assigning a function to the VIDEO FUNCTION buttons

To playback or stop a video that's assigned to the [STILL 1] button, use the VIDEO FUNCTION buttons to which you've assigned the video playback/stop functions.

1. **[MENU] button → "Scene/Video Function" → "Scene/Video Function A–E" → select "Mode", and then press the [VALUE/CURSOR] knob.**




2. **Turn the [VALUE/CURSOR] knob to select "Video Function", and then press the [VALUE/CURSOR] knob.**
3. **Turn the [VALUE/CURSOR] knob to select "Type", and then press the [VALUE/CURSOR] knob.**
4. **Turn the [VALUE/CURSOR] knob to select "Video Player", and then press the [VALUE/CURSOR] knob.**




5. **Turn the [VALUE/CURSOR] knob to select a menu item, and then press the [VALUE/CURSOR] knob.**

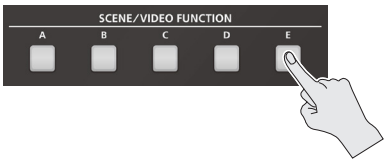
| Menu item | Explanation |
|---|---|
| Video Memory | Selects the memory number of the video to play back. |
| Repeat | Turns repeat playback on/off. |

6. **Turn the [VALUE/CURSOR] knob to change the value of the setting, and then press the [VALUE/CURSOR] knob.**
7. **Press the [MENU] button to quit the menu.**

## Playing/stopping a video

1. **Press the [STILL 1] button.**
2. **Press the VIDEO FUNCTION [A]–[E] button to which you've assigned the "Video Player" function.**

   The button blinks, and the video plays.




3. **To stop video playback, press the same button again.**

## Capturing a Still Image

This captures a still image from the HDMI IN 1–2, STILL 1/SRT In video source and assigns it to the [STILL 2] button.

**NOTE**

- All audio stops during the capture.
- Depending on the format of the input video, it may take some time for the capture to finish.

**1. [MENU] button → "Import" → select "Input Capture", and then press the [VALUE/CURSOR] knob.**




**2. Turn the [VALUE/CURSOR] knob to select "Capture Source", and then press the [VALUE/CURSOR] knob.**

**3. Turn the [VALUE/CURSOR] knob to select the video source from which to capture, and then press the [VALUE/CURSOR] knob.**

| Value |
|---|
| HDMI IN 1, HDMI IN 2, STILL 1/SRT In |

**4. Turn the [VALUE/CURSOR] knob to select "Exec", and then press the [VALUE/CURSOR] knob.**

When the operation is finished, the message "Capture completed." appears.

**5. Press the [VALUE/CURSOR] knob to close the message.**

**6. Press the [MENU] button to quit the menu.**

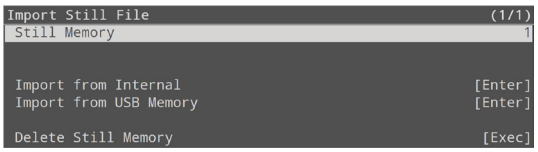
You can assign the still image capture function to the VIDEO FUNCTION buttons.

For details, see "Assigning a Function to the VIDEO FUNCTION Buttons" (p. 25).

## Deleting a Still Image/Video

### Deleting a still image

**1. [MENU] button → "Import" → select "Import Still File", and then press the [VALUE/CURSOR] knob.**



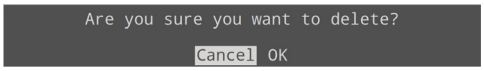

**2. Select "Still Memory", and then press the [VALUE/CURSOR] knob.**

**3. Turn the [VALUE/CURSOR] knob to select the memory (1–8) to delete, and then press the [VALUE/CURSOR] knob.**

The "*" mark is displayed for memories that contain a still image.

**4. Turn the [VALUE/CURSOR] knob to select "Delete Still Memory", and then press the [VALUE/CURSOR] knob.**

A confirmation message appears.




If you want to cancel the operation, select "Cancel".

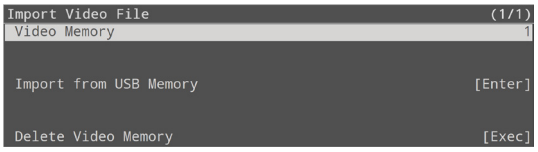
**5. Turn the [VALUE/CURSOR] knob to select "OK", and then press the [VALUE/CURSOR] knob.**

When the operation is finished, the message "Completed" appears.

**6. Press the [MENU] button to quit the menu.**

### Deleting a video

**1. [MENU] button → "Import" → select "Import Video File", and then press the [VALUE/CURSOR] knob.**



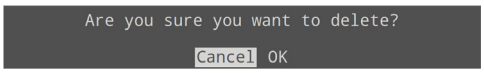

**2. Select "Video Memory", and then press the [VALUE/CURSOR] knob.**

**3. Turn the [VALUE/CURSOR] knob to select the memory (1–8) to delete, and then press the [VALUE/CURSOR] knob.**

The "*" mark is displayed for memories that contain a video.

**4. Turn the [VALUE/CURSOR] knob to select "Delete Video Memory", and then press the [VALUE/CURSOR] knob.**

A confirmation message appears.




If you want to cancel the operation, select "Cancel".

**5. Turn the [VALUE/CURSOR] knob to select "OK", and then press the [VALUE/CURSOR] knob.**

When the operation is finished, the message "Completed" appears.

**6. Press the [MENU] button to quit the menu.**

# Using SRT Video

SRT video input is supported on the SR-20HD, SRT video signals that are sent over a network can be input into the SR-20HD and treated as video content.

This section describes how to make the necessary connections and input the SRT content, using an SRT video output device connected to your LAN as an example.

* When "Stream/Rec Mode" ([MENU] button → "System" → "Stream/Rec Mode) is set to "Standard" or "SRT In Only", the SRT receiving functionality is enabled.
* SRT video is assigned to the INPUT [STILL 1] button.
* You can't use still images, video or USB VIDEO IN when inputting SRT video.

## Network Requirements




**PTZ camera that supports SRT**

**SR-20HD**

* To input video over a network, the IP address, subnet mask and default gateway must be configured.

  These settings are usually retrieved from the DHCP server and assigned.

## Connecting an SRT-compatible Device to Input SRT Video

The SRT video signal can be connected from either the transmitting or receiving device, regardless of the orientation of the video signal.

The device that's waiting for the connection is in "listener" mode, and the device that's initiating the connection is in "caller" mode. Depending on the device, one or both modes are supported.

The SR-20HD supports both listener and caller modes.

### Connecting in caller mode

In caller mode, configure the receiving device (SR-20HD) to match the configuration of the transmitting device.

Here's how to make an SRT connection from the SR-20HD to the transmitting device and input the video to the SR-20HD.

**1. Set the SRT mode of the transmitting device to listener mode, and input the other settings.**

* For details on how to connect and operate in this mode, refer to the owner's manual of the transmitting device.

**2. [MENU] button → "Video Input" → select "STILL 1/SRT In", and then press the [VALUE/CURSOR] knob.**




**3. Use the [VALUE/CURSOR] knob to change the setting as shown below.**

| Parameter | Explanation |
|---|---|
| SRT In | Enable |
| Mode | Caller |
| Remote IP Address | Sets the IP address of the SRT transmitting device. |
| Remote Port | Sets the port number of the SRT transmitting device. |
| Latency | Sets the length (delay time) of the SRT retransmission buffer. Out of the latencies set for the receiving and transmitting devices, the one with the larger value takes precedence.<br>Set this as necessary. |
| Stream ID | If a stream ID is set for the transmitting device, set the stream ID to this same ID.<br>* If the stream IDs on the sending and receiving devices do not match, the video cannot be transmitted or received. |
| Passphrase | If encryption is set on the transmitting device, set the to the same passphrase as the one used on the transmitting device.<br>* If the passphrases of the transmitting and receiving devices don't match, the video cannot be transmitted or received. |

You can also configure this using the Web app.

The SR-20HD must be connected to the Internet before you use the Web app.

**1. Use the [VALUE/CURSOR] knob to select "Use Web Application", and press the [VALUE/CURSOL] knob.**

The shortened URL and QR code for the Web app are shown.

**2. Open the displayed URL on your computer or smartphone.**

**3. Configure the parameters on your computer or smartphone, and press the [SUBMIT] button.**

The settings are applied to the SR-20HD.

**4. Set the transmitting device to SRT listener mode.**

**5. Turn the [VALUE/CURSOR] knob to select "Start/Stop", and then press the [VALUE/CURSOR] knob.**

**6. Turn the [VALUE/CURSOR] knob to select "Start", and then press the [VALUE/CURSOR] knob.**

**7. Press the INPUT [STILL 1] button.**

The video from the transmitting device is shown.

## Connecting in listener mode

This shows how to configure the SR-20HD in listener mode to listen for SRT connections.

This connects the transmitting device to the SR-20HD via SRT and input the video to the SR-20HD.

### 1. [MENU] button → "Video Input" → select "STILL 1/SRT In", and then press the [VALUE/CURSOR] knob.




### 2. Use the [VALUE/CURSOR] knob to change the setting as shown below.

| Parameter | Explanation |
|---|---|
| SRT In | Enable |
| Mode | Listener |
| Local Port | Sets the port number of the SRT transmitting device. |
| Latency | Sets the length (delay time) of the SRT retransmission buffer. Out of the latencies set for the receiving and transmitting devices, the one with the larger value takes precedence.<br>Set this as necessary. |
| Passphrase | If encryption is set on the transmitting device, set the to the same passphrase as the one used on the transmitting device.<br>* If the passphrases of the transmitting and receiving devices don't match, the video cannot be transmitted or received. |

* In listener mode, you do not need to set the Stream ID.

You can also configure this using the Web app.

The SR-20HD must be connected to the Internet before you use the Web app.

**1. Use the [VALUE/CURSOR] knob to select "Use Web Application", and press the [VALUE/CURSOL] knob.**

The shortened URL and QR code for the Web app are shown.

**2. Open the displayed URL on your computer or smartphone.**

**3. Configure the parameters on your computer or smartphone, and press the [SUBMIT] button.**

The settings are applied to the SR-20HD.

### 3. Set the SRT mode of the transmitting device to caller mode.

* For details on how to connect and operate in this mode, refer to the owner's manual of the transmitting device.

### 4. Set the caller mode of the transmitting device based on the settings in step 2.

* Press the [MENU] button → "Network" → "Network Information" to check the IP address that's set for the transmitting device.

### 5. Turn the [VALUE/CURSOR] knob to select "Start/Stop", and then press the [VALUE/CURSOR] knob.

### 6. Turn the [VALUE/CURSOR] knob to select "Start", and then press the [VALUE/CURSOR] knob.

The unit enters SRT listening mode.

### 7. Perform the operations for connecting on the transmitting device.

Press the INPUT [STILL 1] button to show the video that's sent from the transmitting device.

## Stopping the SRT connection

The SRT connection can be stopped from either the transmitting or receiving device.

Follow the steps on the SR-20HD as shown below to stop the connection.

### 1. [MENU] button → "Video Input" → select "STILL 1/SRT In", and then press the [VALUE/CURSOR] knob.

### 2. Turn the [VALUE/CURSOR] knob to select "Start/Stop", and then press the [VALUE/CURSOR] knob.

### 3. Turn the [VALUE/CURSOR] knob to select "Stop", and then press the [VALUE/CURSOR] knob.

* To stop the connection from the transmitting device, refer to the owner's manual of that device.

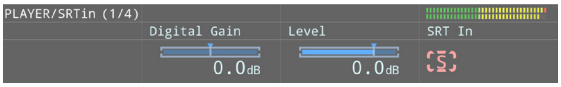
You can also start/stop the SRT connection by using the following method.

**1. Press the [SETUP] button a number of times until "Player/SRT In" appears.**

The display channel to be shown changes each time you press the button.

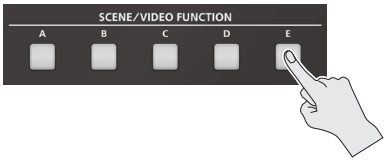
**2. Press the [F4] knob to start/stop the SRT connection.**

The connection status is shown in the parameter area.



# Using the VIDEO FUNCTION Buttons

You can assign video-related functions to the VIDEO FUNCTION [A]–[E] buttons.




## Assigning a Function to the VIDEO FUNCTION Buttons

**1. [MENU] button → "Scene/Video Function" → "Scene/Video Function A–E" → select "Mode", and then press the [VALUE/CURSOR] knob.**




**2. Turn the [VALUE/CURSOR] knob to select "Video Function", and then press the [VALUE/CURSOR] knob.**

**3. Turn the [VALUE/CURSOR] knob to select "Type", and then press the [VALUE/CURSOR] knob.**




**4. Turn the [VALUE/CURSOR] knob to select the function to assign to a button, and then press the [VALUE/CURSOR] knob.**

| Value | Explanation |
|---|---|
| Video Player | Plays back/stops the video for STILL 1. |
| USB VIDEO IN | Uses the video or audio input to USB VIDEO IN for STILL 1. |
| Still | Shows the specified still image for STILL 1. |
| Prev Still | Shows the previous still image for STILL 1. |
| Next Still | Shows the next still image for STILL 1. |
| Safety Image | The safety delay function (p. 47) switches the streaming video to a still image and mutes the streaming audio. |
| Input Capture | Captures the still image and assigns it to STILL 2. |
| Save Still | Captures the streaming/video source as a still image and saves it as a JPEG file to the SD card.<br>* Save Still can only be used during streaming and video recording. |
| Output Fade | Fades the main output video in/out. |

**5. Turn the [VALUE/CURSOR] knob to select a menu item, and then press the [VALUE/CURSOR] knob.**

* See "Scene/Video Function" in the menu list (p. 55) for a list of menu items that can be set for each function (type).

**6. Turn the [VALUE/CURSOR] knob to change the value of the setting, and then press the [VALUE/CURSOR] knob.**

**7. Press the [MENU] button to quit the menu.**

## Copying a Video Function

Here's how to copy the settings from one video function to another.

**1. [MENU] button → "Scene/Video Function" → select "Scene/Video Function Copy", and then press the [VALUE/CURSOR] knob.**

The Scene/Video Function Copy menu appears.



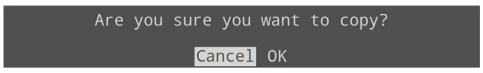

**2. Turn the [VALUE/CURSOR] knob to select a menu item, and then press the [VALUE/CURSOR] knob.**

| Menu item | Explanation |
|---|---|
| Source | Specifies the copy-source video function. |
| Destination | Specifies the copy-destination video function. |

**3. Turn the [VALUE/CURSOR] knob to select the copy source/destination video function, and then press the [VALUE/CURSOR] knob.**

**4. Turn the [VALUE/CURSOR] knob to select "Copy", and then press the [VALUE/CURSOR] knob.**

A confirmation message appears.




If you want to cancel the operation, select "Cancel".

**5. Turn the [VALUE/CURSOR] knob to select "OK", and then press the [VALUE/CURSOR] knob.**

**6. Press the [MENU] button to quit the menu.**

## 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 HDMI OUT PVW connector.

### 1. [MENU] button → select "Transition", and then press the [VALUE/CURSOR] knob.

The Transition menu appears.




### 2. Turn the [VALUE/CURSOR] knob to select a menu item, and then press the [VALUE/CURSOR] knob.

| Menu item | Explanation | |
|---|---|---|
| Time | Sets the length of the fade-in/out effect.<br>* This setting is also applied to the scene and video transition times. | |
| Off Color | Specifies the background color (black, white) used when fading-in/out the main output video. | |
| Audio Fade | Off | Only the video fades-in/out. |
| | On | The video and audio fade-in/out together. |

### 3. Turn the [VALUE/CURSOR] knob to change the value of the setting, and then press the [VALUE/CURSOR] knob.

### 4. Press the [MENU] button to quit the menu.

You can assign the fade-in/out function to the VIDEO FUNCTION buttons.

For details, see "Assigning a Function to the VIDEO FUNCTION Buttons" (p. 25).

## Sending the Selected Video to Final Output Immediately (PGM Direct)

You can use the PGM Direct function to send the selected video right away to final output.

### 1. [MENU] button → select "Transition", and then press the [VALUE/CURSOR] knob.

The Transition menu appears.




### 2. Turn the [VALUE/CURSOR] knob to select "PGM Direct", and then press the [VALUE/CURSOR] knob.




### 3. Turn the [VALUE/CURSOR] knob to select "On", and then press the [VALUE/CURSOR] knob.

### 4. Press the [MENU] button to quit the menu.

### When PGM Direct is "On"

- The selected video is immediately sent to final output.
- When you select the video corresponding to the INPUT [HDMI IN 1]–[STILL 2] buttons or the scenes registered to the SCENE [A]–[E] buttons, the output video (streaming, video recording source) changes after the set transition time has elapsed.

### When PGM Direct is "Off"

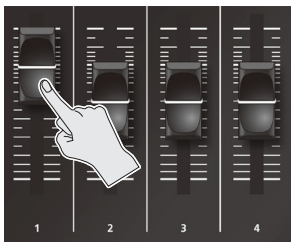
- In this case, the auto-switching function (p. 12) is unavailable, and the [AUTO SW/TAKE] button operates as the [TAKE] button to switch the final output.
- For the INPUT [HDMI IN 1]–[STILL 2] buttons, when you check the PVW (preview) of the video to be outputted next and then press the [TAKE] button, the output video (streaming, video recording source) changes after the set transition time has elapsed.
- For the scenes that are registered to the SCENE [A]–[E] buttons, the output video (streaming, video recording source) changes after the set transition time has elapsed.

# Audio Operations

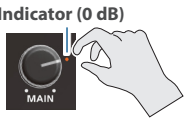
## Adjusting the Mic's Input Gain (Sensitivity)

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

### 1. Move the [1]–[4] 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. [MENU] button → "Audio Input" → "AUDIO IN 1–4" → select "Analog Gain", and then press the [VALVE/CURSOR] knob.




### 4. Turn the [VALUE/CURSOR] knob fully counter-clockwise, minimizing the input gain.

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

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

### 6. Press the [VALUE/CURSOR] knob to confirm.

### 7. Press the [MENU] button to quit the menu.

#### ■ SIG/PEAK indicator

| | |
|---|---|
| **Unlit** | Less than -51 dB |
| **Lit green** | -50– -21 dB |
| **Lit yellow** | -20– -1 dB |
| **Lit red** | Over 0 dB (Excessive) |

#### ■ Adjusting the mic position (pan)

The left/right positioning of the sound is called "pan".

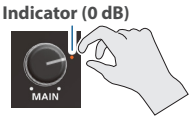
If you're using two mics to stream a performance, panning the two mics to left and right will give the sound a more spacious feel.

To make adjustments, use the [MENU] button → "Audio Input" → "AUDIO IN 1–4" → "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).




#### ■ HDMI IN 1, HDMI IN 2

Use the [HDMI IN 1] and [HDMI IN 2] faders to adjust the input levels for the HDMI IN 1 and 2 connectors.

#### ■ LINE IN

Use the [LINE IN] knob to adjust the input level for the LINE IN jacks.

#### ■ USB AUDIO

Use the [USB AUDIO] knob to adjust the volume of USB audio that's input from the device connected to the USB VIDEO IN port.

**Make the following settings when using USB audio.**

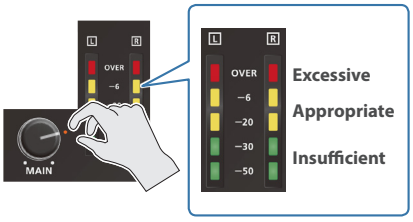
- Press the [MENU] button → "System" → "USB VIDEO IN Mode" and set to "Audio Only".
- Press the [MENU] button → "Video Input" → "STILL 1/SRT In" → "Type" and set to "USB VIDEO IN".

#### ■ PLAYER/SRT In

Use the [PLAYER] knob to adjust the volume used to play back audio files (WAV) or video files (MP4) on the SD card, or audio from SRT In.

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

The level meter will light yellow at the appropriate volume.




You can output a test tone that's convenient for adjusting the volume.

Press the [MENU] button → "Audio Output" → "Test Tone" to select the type of test tone that will be output.

# Setting the Input/Output Channel Parameters

This shows you how to view and set the input/output channel parameters in parameter area of the display.

## AUDIO IN 1–HDMI IN 2 parameters

### 1. Press the [SETUP] button for AUDIO IN 1–4 or HDMI IN 1–2.




The parameter for the channel you pressed is shown in the parameter area.




### 2. Turn the [VALUE/CURSOR] knob to switch between pages.




### 3. Turn the [F1]–[F4] knobs to edit the values, and then press the [F1]–[F4] knobs.




## Other channel parameters

### 1. Press the [SETUP] button.




The target display channel changes each time you press the button.

LINE IN → USB AUDIO → PLAYER/SRT In → HEADSET Mic → MAIN → Monitor → LINE IN → ...

### 2. Turn the [VALUE/CURSOR] knob to switch between pages.

### 3. Turn the [F1]–[F4] knobs to edit the values, and then press the [F1]–[F4] knobs.

- You can assign a function to an AUDIO FUNCTION button for switching between the channel/parameters shown in the parameter area.
  After setting the parameter that you want to show ([MENU] button → "Audio Function" → "Audio Function 1–5"), use "Display Target" to set the channel you want to show.
- You can also set the parameters for the input/output channels from the menu.
  ([MENU] button → "Audio Input" "Audio Output")

## Parameters shown in the parameter area

| Page / Chanel | 1/5 | | | | 2/5 | | | | 3/5 | | | | 4/5 | | | | 5/5 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Analog Gain | Digital Gain | Level | Phase | Main Mute | Monitor Mute | Rec Send | Pan | HPF 75 Hz | | GATE | COMPRESSOR | EQ | EQ Mid Gain | EQ Mid Freq | EQ Mid Q | EQ Low Gain | EQ Low Freq | EQ High Gain | EQ Hi Freq |
| AUDIO IN 1–4 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| LINE IN | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| USB AUDIO | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| HEADSET Mic | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

| Page / Chanel | 1/4 | | | | 2/4 | | | | 3/4 | | | | 4/4 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Analog Gain | Digital Gain | Level | Phase | Main Mute | Monitor Mute | Rec Send | Delay | EQ | EQ Mid Gain | EQ Mid Freq | EQ Mid Q | EQ Low Gain | EQ Low Freq | EQ High Gain | EQ Hi Freq |
| HDMI IN 1, 2 | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| PLAYER/SRT In | | ✓ | ✓ | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

| Page / Chanel | 1/3 | | | | 2/3 | | | | 3/3 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Level | Mute | LIMITER | Delay | EQ | EQ Mid Gain | EQ Mid Freq | EQ Mid Q | EQ Low Gain | EQ Low Freq | EQ High Gain | EQ Hi Freq |
| Main | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Monitor | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

# 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 | | | |
|---|---|---|---|---|
| | High-pass filter | Gate | Compressor | Equalizer |
| AUDIO IN 1–4 | ✓ | ✓ | ✓ | ✓ |
| LINE IN | ✓ | – | – | ✓ |
| HEADSET Mic | ✓ | ✓ | ✓ | ✓ |
| HDMI IN 1, 2 | – | – | – | ✓ |
| PLAYER/SRT In | – | – | – | ✓ |
| USB AUDIO | – | ✓ | ✓ | ✓ |

You can use effect presets for AUDIO IN 1–4.

For details, refer to "Using a Load Preset" (p. 31).

**1. [MENU] button → "Audio Input" → "AUDIO IN 1"–"PLAYER/SRT In"→ select an effect menu item, and then press the [VALUE/CURSOR] knob.**




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

**2. Turn the [VALUE/CURSOR] knob to change the value of the setting, and then press the [VALUE/CURSOR] knob.**

**3. Press the [MENU] button to quit the menu.**

## High-pass filter (HPF 75 Hz)

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

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

## 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 |
|---|---|
| Gate | Turns the noise gate on/off. |
| Threshold | Specifies the level used as the threshold for removing audio. |
| Release | Specifies the length of time until the audio is fully attenuated after audio falls below the threshold. |

## 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.

| Menu item | Explanation |
|---|---|
| Compressor | Turns the compressor on/off. |
| Threshold | Specifies the threshold at which the compressor applies. |
| Ratio | Specifies the degree of compression applied to the audio. |
| Attack | Specifies the time until compression starts when audio exceeding the threshold is input. |
| Release | Adjusts the length of time until compression ends after audio falls below the threshold. |
| Makeup Gain | Adjusts the final output volume level after applying the compressor. |

## Equalizer (EQ)

Adjusts the volume for each frequency band.

| Menu item | Explanation |
|---|---|
| EQ | Turns the equalizer on/off. |
| Mid Gain | Boosts or attenuates the midrange band. |
| Mid Freq | Adjusts the center frequency when changing the volume in the midrange band. |
| Mid Q | Adjusts the frequency bandwidth when boosting or attenuating the midrange band. |
| Lo Gain | Boosts or attenuates the low band. |
| Lo Freq | Adjusts the center frequency when changing the volume in the low band. |
| Hi Gain | Boosts or attenuates the high band. |
| Hi Freq | Adjusts the center frequency when changing the volume in the high band. |

## Using a Load Preset

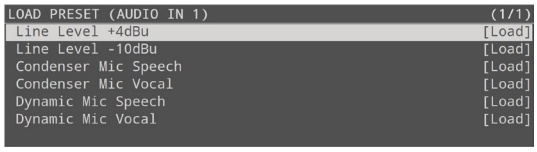
The SR-20HD provides effect presets for the mics. Simply by selecting a preset, you can easily apply the effect that's appropriate for your situation.

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

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

**1. [MENU] button → "Audio Input" → "AUDIO IN 1–4" → select "Load Preset", and then press the [VALUE/CURSOR] knob.**

The preset list appears.



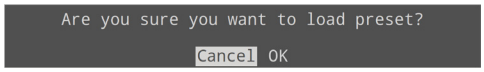

**2. Turn the [VALUE/CURSOR] knob to select a preset, and then press the [VALUE/CURSOR] knob.**

| Value | Explanation |
|---|---|
| Line Level +4 dBu | Flat settings with no effects with a nominal input level of +4 dBu. |
| Line Level -10 dBu | Flat settings with no effects with a nominal input level of -10 dBu. |
| Condenser Mic Speech | Effects for condenser mic to makes a spoken voice easier to understand. |
| Condenser Mic Vocal | Effects for condenser mic to enhances a singing voice. |
| Dynamic Mic Speech | Effects for dynamic mic to makes a spoken voice easier to understand. |
| Dynamic Mic Vocal | Effects for dynamic mic to enhances a singing voice. |

**NOTE**

The phantom power does not turn on even if the condenser mic preset is loaded. When using a condenser mic that requires phantom power, switch the "Phantom +48 V" setting to "On" to activate phantom power.

A confirmation message appears.




If you want to cancel the operation, select "Cancel".

**3. Turn the [VALUE/CURSOR] knob to select "OK", and then press the [VALUE/CURSOR] knob.**

The preset is loaded.

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

**5. Press the [MENU] button to quit 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 "Monitor Bus" → select an effect menu item, and then press the [VALUE/CURSOR] knob.**




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

**2. Turn the [VALUE/CURSOR] knob to change the value of the setting, and then press the [VALUE/CURSOR] knob.**

**3. Press the [MENU] button to quit the menu.**

### 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. |
| Threshold | Specifies the threshold at which the limiter applies. |

### Equalizer (EQ)

Adjusts the volume for each frequency band.

| Menu item | | Explanation |
|---|---|---|
| EQ | | Turns the equalizer on/off. |
| | Mid Gain | Boosts or attenuates the midrange band. |
| | Mid Freq | Adjusts the center frequency when changing the volume in the midrange band. |
| | Mid Q | Adjusts the frequency bandwidth when boosting or attenuating the midrange band. |
| | Lo Gain | Boosts or attenuates the low band. |
| | Lo Freq | Adjusts the center frequency when changing the volume in the low band. |
| | Hi Gain | Boosts or attenuates the high band. |
| | Hi Freq | Adjusts the center frequency when changing the volume in the high 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" → "Analog Mix"–"HDMI IN 2" → select "Delay", and then press the [VALUE/CURSOR] knob.**




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

3. **Press the [MENU] button to quit the menu.**

For the MAIN bus (p. 33), you can adjust the delay time of the audio output.

Press the [MENU] button → "Audio Output" → "MAIN 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" → "AUDIO IN 1"–"USB AUDIO" → select a mute menu item, and then press the [VALUE/CURSOR] knob.**




| Menu item | Explanation |
|---|---|
| MAIN Mute | If this is set to "On", the input audio to MAIN bus is temporarily muted. |
| Monitor Mute | If this is set to "On", the input audio to Monitor bus is temporarily muted. |

2. **Turn the [VALUE/CURSOR] knob to change the value of the setting, and then press the [VALUE/CURSOR] knob.**

3. **Press the [MENU] button to quit the menu.**

The MAIN Mute and fader come before the Monitor Mute in the signal chain. For this reason, if the MAIN Mute is "On" or if the fader volume is all the way down, the audio signal is not sent to the Monitor bus.

## Muting output audio

Here's how to mute the audio of the main output (MAIN bus) or Monitor bus.

1. **[MENU] button → "Audio Output" → "MAIN Bus" or "Monitor Bus" → select "Mute", and then press the [VALUE/CURSOR] knob.**




2. **Turn the [VALUE/CURSOR] knob to select "On", and then press the [VALUE/CURSOR] knob.**

3. **Press the [MENU] button to quit the menu.**

You can assign the mute function to the AUDIO FUNCTION buttons to turn it on/off.

Press the [MENU] button → "Audio Function" → "Audio Function 1–5" → "Assign" and set to "Display Mute".

# Assigning Audio Buses to Output Connectors

The SR-20HD features four types of audio buses. You can assign a desired bus to each output connector.

### MAIN bus

This bus mixes and outputs all input audio. The audio signal is the same as that of the main output.

### Monitor bus

Use this bus mainly when monitoring the audio through headphones.

You can also listen to the audio of other buses through headphones.

The audio that's sent to the Monitor bus is the same as the audio that's sent to the MAIN bus (the audio signal that goes through the MAIN Mute, Audio Follows Video, fader, Auto Mixing and Pan).

You can configure whether the audio is sent to the Monitor bus or not in Monitor Mute for each audio input (p. 32).

* If the MAIN Mute (p. 32) is "On" or if the fader volume is all the way down, the audio signal is not sent to the Monitor bus.

### REC bus

This bus is mainly used as an Audio REC source (WAV recording).

The audio signal before passing through the MAIN Mute and fader is sent to the Monitor bus.

Even if MAIN Mute is "On" or the fader is all the way down, the audio is recorded as a WAV file.

This lets you correct the issue during post-editing, if for example you make a mistake during livestreaming.

### Test tone

You can output a test tone that is useful for making volume adjustments.

**1. [MENU] button → "Audio Output" → select "Bus Select", and then press the [VALUE/CURSOR] knob.**




**2. Turn the [VALUE/CURSOR] knob to select the output jack/connector to which the audio bus is assigned, and then press the [VALUE/CURSOR] knob.**

| Menu item | Explanation |
|---|---|
| HDMI OUT MAIN | Specifies the audio bus that's assigned to the HDMI OUT MAIN connector. |
| HDMI OUT PVW | Specifies the audio bus that's assigned to the HDMI OUT PVW connector. |
| LINE OUT | Specifies the audio bus that's assigned to the AUDIO OUT (LINE OUT) jacks. |
| PHONES | Specifies the audio bus that's assigned to the PHONES jack. |
| VIDEO REC/STREAM | Specifies the audio bus that's used for video streaming/recording. |
| AUDIO REC | Specifies the audio bus that's used for audio recording. |

**3. Turn the [VALUE/CURSOR] knob to select the audio bus, and then press the [VALUE/CURSOR] knob.**

**4. Press the [MENU] button to quit the menu.**

- You can adjust the audio for the MAIN bus and for the Monitor bus.
  Edit the various settings from the [MENU] button → "Audio Output" → "MAIN Bus" or "Monitor Bus".
- You can select what type of test tone is outputted.
  Edit the various settings from the [MENU] button → "Audio Output" → "Test Tone".

# 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).

* When "Video Follows Audio" is selected for the auto-switching type (p. 12), the audio follow function is disabled.

**1. [MENU] button → "Audio Follows Video" → select Audio Follow SW "HDMI IN 1"–"STILL 2", and then press the [VALUE/CURSOR] knob.**




**2. Turn the [VALUE/CURSOR] knob to select "On", and then press the [VALUE/CURSOR] knob.**

| 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 to quit the menu.**

## Adding an object for audio follow

Here's how an audio input source other than HDMI IN 1–STILL 2 can be specified as an object for the audio follow function.

**1. Select the input audio to be used for audio follow from the [MENU] button → "Audio Follows Video" → "Video Source Select", and press the [VALUE/CURSOR] knob.**




| Menu item | Explanation |
|---|---|
| AUDIO IN 1–4 | AUDIO IN 1–4 input |
| LINE IN | LINE input |
| HEADSET Mic | Headset mic input |
| HDMI IN 1, 2 | HDMI IN 1, 2 input |
| USB AUDIO | USB audio input from the USB VIDEO IN port |
| PLAYER/SRT In | Audio files (WAV) or video files (MP4) on the SD card, or audio from SRT In. |

**2. Turn the [VALUE/CURSOR] knob to select a value from "HDMI IN 1" to "STILL 2", and then press the [VALUE/CURSOR] knob.**

| Value | Explanation |
|---|---|
| HDMI IN 1–2, STILL 1 /SRT In, STILL 2 | For each audio source, these settings specify the input video (HDMI IN 1–STILL 2) that will use the audio follow function.<br>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 to quit 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 SR-20HD, it can be used in situations where there is no dedicated operator.

**1. [MENU] button → "Audio Mixing" → select "SW", and then press the [VALUE/CURSOR] knob.**




**2. Turn the [VALUE/CURSOR] knob to select "On", and then press the [VALUE/CURSOR] knob.**

The auto mixing function turns on.

**3. Turn the [VALUE/CURSOR] knob to select the audio to which the setting is applied, and then press the [VALUE/CURSOR] knob.**

| Menu item | Explanation |
|---|---|
| AUDIO IN 1–4 | AUDIO IN 1–4 input |
| HEADSET Mic | Headset mic input |

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

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

**5. Press the [MENU] button to quit the menu.**

# Setting the Priority for Volume Distribution

If there is audio that you want to make more prominent, such as when you want to raise the volume of an emcee microphone, raise the weight level of that audio to emphasize it, and lower the weight level for other audio.

When air-conditioner noise or the like is a concern, specify the weight level to a low value.

**1. [MENU] button → "Auto Mixing" → select "Weight", and then press the [VALUE/CURSOR] knob.**




**2. Turn the [VALUE/CURSOR] knob to select the audio to which the setting the priority for volume distribution (Weight), and then press the [VALUE/CURSOR] knob.**

**3. Turn the [VALUE/CURSOR] knob to set the priority for volume distribution, and then press the [VALUE/CURSOR] knob.**

| Value |
|---|
| 0–100% |

**4. Press the [MENU] button to quit the menu.**

# Using Audio Files

You can load (import) a sample file in this unit's internal memory or an audio file (.WAV) saved on a USB flash drive onto an SD card, and play it back.

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 an SD card for the first time, you must format it using the SR-20HD (p. 7).
- Depending on the SD card/USB flash drive, recognition of the SD card/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 unsupported) |
| **File name** | Maximum of 32 single-byte alphanumeric characters, including the file extension |

## Importing an Audio File

You can import audio files to the SD card.

### Importing from a USB flash drive

1. **Save the audio file to the root directory of the USB flash drive.**
2. **Connect the USB flash drive containing the audio to the USB MEMORY port.**

1. **Insert the SD card (p. 7).**
2. **[MENU] button → "Import" → select "Import Audio File", and then press the [VALUE/CURSOR] knob.**




3. **Select "Audio Memory", and then press the [VALUE/CURSOR] knob.**
4. **Turn the [VALUE/CURSOR] knob to select the memory (1–8) to which the audio file is to be saved, and then press the [VALUE/CURSOR] knob.**

   The "*" mark is displayed for memories that contain an audio file.

### Importing a sample file

5. **Turn the [VALUE/CURSOR] knob to select "Import from Internal", and then press the [VALUE/CURSOR] knob.**

### Importing from a USB flash drive

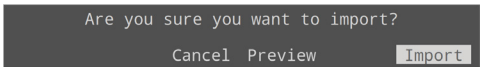
5. **Turn the [VALUE/CURSOR] knob to select "Import from USB Memory", and then press the [VALUE/CURSOR] knob.**

   A list of the audio files is shown.




6. **Turn the [VALUE/CURSOR] knob to select the audio file to import, and then press the [VALUE/CURSOR] knob.**

   A confirmation message appears.




   If you want to cancel the operation, select "Cancel".

- Select "Preview" to preview the audio file. The audio is sent to the audio input's PLAYER/SRT In channel. No audio is output when "MAIN Mute" or "Monitor Mute" (p. 32) for the PLAYER/SRT In channel is set to "On".

7. **Turn the [VALUE/CURSOR] knob to select "OK", and then press the [VALUE/CURSOR] knob.**

   When the operation is finished, the message "Completed" appears.

8. **Press the [MENU] button to quit the menu.**

## Playing Back Audio Files

Use the AUDIO FUNCTION button to play back audio files.

The audio file playback/stop function must be assigned to an AUDIO FUNCTION button.

### Assigning a function to the AUDIO FUNCTION buttons

1. **[MENU] button → "Audio Function" → "Audio Function 1–5" → select "Assign", and then press the [VALUE/CURSOR] knob.**




2. **Turn the [VALUE/CURSOR] knob to select "Audio Player", and then press the [VALUE/CURSOR] knob.**
3. **Turn the [VALUE/CURSOR] knob to select a menu item, and then press the [VALUE/CURSOR] knob.**

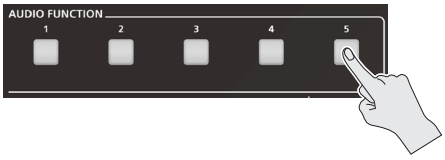
| Menu item | Explanation | |
|---|---|---|
| **SW Mode** | Specifies the operation of the AUDIO FUNCTION button. | |
| | Momentary | The effect is on only while you hold down the button, and turns off when you release the button. |
| | Latch | The effect alternately turns on/off each time you press the button. |
| **Audio Memory** | The effect alternately turns on/off each time you press the button. | |

4. **Turn the [VALUE/CURSOR] knob to change the value of the setting, and then press the [VALUE/CURSOR] knob.**
5. **Press the [MENU] button to quit the menu.**

## Playing back/stopping an audio file

**1. Press the AUDIO FUNCTION [1]–[5] button to which the audio file playback/stop function is assigned.**

The button blink, and the audio file plays.




* Audio files shorter than 10 ms might not play correctly.

**2. To stop audio file playback, press the same button again.**

- When SW MODE is "Momentary", playback stops once you take your finger off the button.
- If loop playback is off, the Audio file stops automatically when it has played to the end.

## Specifying the playback method

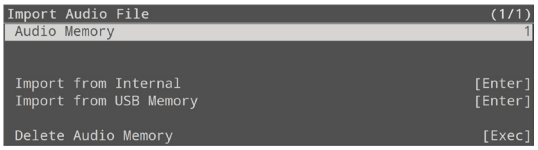
You can make the music file play as a loop, or make it fade-in/out.

Press the [MENU] button → "Audio Function" → Audio Function 1–5" → select "Audio Player", and set the following menu items.

| Menu item | Explanation |
|---|---|
| Loop | Turns loop playback on/off. |
| Level | Adjusts the playback volume of the audio file. |
| Fade In | Specifies the fade-in time of the audio file. |
| Fade Out | Specifies the fade-out time of the audio file. |

## Deleting an Audio File

**1. [MENU] button → "Import" → select "Import Audio File", and then press the [VALUE/CURSOR] knob.**



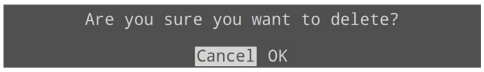

**2. Select "Audio Memory", and then press the [VALUE/CURSOR] knob.**

**3. Turn the [VALUE/CURSOR] knob to select the memory number (1–8) of the audio file to delete, and then press the [VALUE/CURSOR] knob.**

The "*" mark is displayed for memories that contain an audio file.

**4. Turn the [VALUE/CURSOR] knob to select "Delete Audio Memory", and then press the [VALUE/CURSOR] knob.**

A confirmation message appears.




If you want to cancel the operation, select "Cancel".

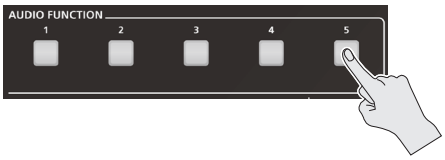
**5. Turn the [VALUE/CURSOR] knob to select "OK", and then press the [VALUE/CURSOR] knob.**

When the operation is finished, the message "Completed" appears.

**6. Press the [MENU] button to quit the menu.**

# Using the AUDIO FUNCTION Buttons

You can assign audio-related functions to the AUDIO FUNCTION [1]–[5] buttons.




## Assigning a Function to the AUDIO FUNCTION Buttons

**1. [MENU] button → "Audio Function" → "Audio Function 1–5" → select "Assign", and then press the [VALUE/CURSOR] knob.**




**2. Turn the [VALUE/CURSOR] knob to select the function to assign to a button, and then press the [VALUE/CURSOR] knob.**

| Value | Explanation |
|---|---|
| None | No function is assigned. |
| Auto Mixing | Switches the Auto Mixing feature on or off. |
| Audio Player | Plays/stops the audio file. |
| Display Analog Gain | Displays the Analog Gain screen on parameter area. |
| Display Mute | Displays the Mute screen on parameter area. |
| Display Delay | Displays the Delay screen on parameter area. |
| Display Audio Setup | Displays the Audio Setup screen on parameter area. |

**3. Turn the [VALUE/CURSOR] knob to select a menu item, and then press the [VALUE/CURSOR] knob.**

* See "Audio Function" in the menu list (p. 67) for a list of menu items that can be set for each function (type).

**4. Turn the [VALUE/CURSOR] knob to change the value of the setting, and then press the [VALUE/CURSOR] knob.**

**5. Press the [MENU] button to quit the menu.**

## Copying a Audio Function

Here's how to copy the settings from one audio function to another.

**1. [MENU] button → "Audio Function" → select "Audio Function Copy", and then press the [VALUE/CURSOR] knob.**

The Audio Function Copy menu appears.



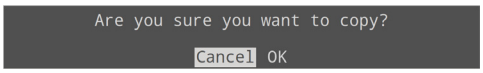

**2. Turn the [VALUE/CURSOR] knob to select a menu item, and then press the [VALUE/CURSOR] knob.**

| Menu item | Explanation |
|---|---|
| Source | Specifies the copy-source audio function. |
| Destination | Specifies the copy-destination audio function. |

**3. Turn the [VALUE/CURSOR] knob to select the copy source/destination audio function, and then press the [VALUE/CURSOR] knob.**

**4. Turn the [VALUE/CURSOR] knob to select "Copy", and then press the [VALUE/CURSOR] knob.**

A confirmation message appears.




If you want to cancel the operation, select "Cancel".

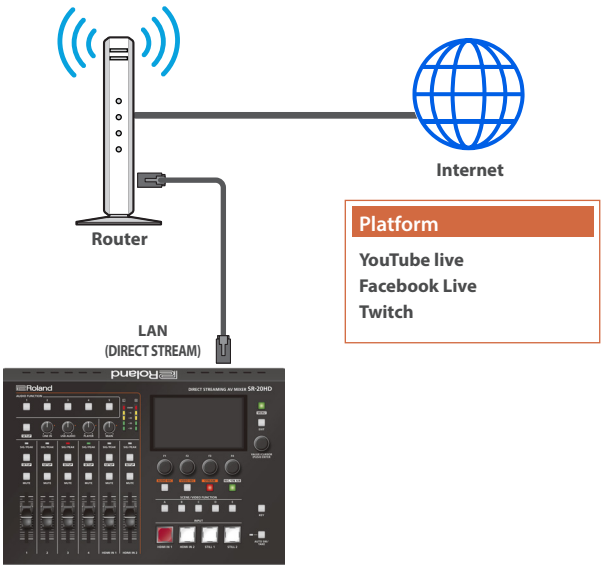
**5. Turn the [VALUE/CURSOR] knob to select "OK", and then press the [VALUE/CURSOR] knob.**

**6. Press the [MENU] button to quit the menu.**

# Livestreaming and Recording Audio/Video

## What to Do Before Livestreaming

### Network Requirements




#### Internet connection, including DNS server settings

- To access the Internet, the IP address, subnet mask and default gateway must be configured.
- To access the server hosting the streaming service, you must connect to the DNS (Domain Name System) server, which converts the server's domain name and IP address.

* The above settings are usually retrieved from the DHCP server and assigned.

#### Continuous TCP communications

To broadcast the livestream via the RTMP or RTMPS protocol over TCP, continuous communication without interruptions or restrictions between devices is required.

#### HTTPS connection to an Internet server

To configure the livestream for a Web app, you must have an HTTPS connection to an Internet server.

### Streaming and Recording Mode Settings

Set the "Stream/Rec Mode" (p. 71) to match your network environment and the video to be streamed/recorded.

Three modes are available: "Standard", "High Quality" and "SRT In Only" with the following specifications.

| | | | High Quality Mode Encode Only | | SRT In Only Mode Decode SRT Only | Standard Mode Encode & Decode | | | |
|---|---|---|---|---|---|---|---|---|---|
| Parameter Setting | Streaming / Recording Format | | 1080p59.94/50<br>1080p29.27/25<br>720p59.94/50<br>720p29.97/25 | | – | 1080p29.27/25<br>720p59.94/50<br>720p29.97/25 | | | |
| | Target Video Bitrate | | Up to 20,000 kbps | | – | Up to 10,000 kbps | | | |
| | SRT In Enable | | – | | Enable | Disable | | Enable | |
| | SRT Out Enable | | Disable | Enable | – | Disable | Enable | Disable | Enable |
| 2 x RTMP Streaming+Recording | | | ✓ | – | – | ✓ | – | ✓ | – |
| SRT Streaming+Recording | | | – | ✓ | – | – | ✓ | – | ✓ |
| InputSource | HDMI IN 1, HDMI IN 2, STILL 2 | | ✓ | | ✓ | ✓ | | ✓ | |
| | STILL 1/ SRT In | Still | ✓ | | – | ✓ | | – | |
| | | USB VIDEO IN (UVC or UAC) | – | | – | Max 720p29.97 | | – | |
| | | Video Player | – | | – | Max 1080p29.97<br>Up to 10,000 kbps | | – | |
| | | SRT In | – | | Max 1080p60<br>Up to 20,000 kbps | – | | Max 1080p30<br>Up to 10,000 kbps | |

## Points to Be Aware of When Livestreaming

Set the appropriate Video Bitrate (p. 69) to match the speed of your Internet connection.

Press the [MENU] button → "Stream" → select "Video Bitrate".

The video bit rate is a target bit rate that's used when compressing (encoding) video.

For complex video sequences and the like, the video may be livestreamed at a bit rate of up to around 1.5 times the value that's set.

We recommend that you test the speed of your Internet connection to ensure that a bandwidth of around twice the Video Bitrate value is available before beginning the livestream.

The Video Bitrate can be set in the parameter area.

Press the [STREAM] button to view the parameter.

## Starting/Stopping the Livestream, Audio or Video Recording

The livestream, audio recording and video recording on the SR-20HD start and stop all at the same time, and cannot be started or stopped separately.

* You can separately set whether to livestream, record audio or video.

The date and time when recording started are used in the filenames for MP4 or WAV files that you record.

We recommend that you set the date and time ([MENU] button -> "System" → "Date & Time Settings" → "Time Zone").

## Turning Livestreaming, Audio and Video Recording ON/OFF

### Turning the livestream on/off

**1. [MENU] button → "Stream" → select "Service RTMP 1, 2", and then press the [VALUE/CURSOR] knob.**




**2. Press the [VALUE/CURSOR] knob.**

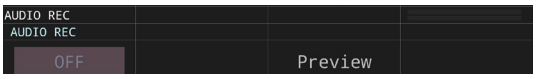
**3. Turn the [VALUE/CURSOR] knob to select the streaming platform if you want to stream content or to select "Off" if you don't want to stream content, and then press the [VALUE/CURSOR] knob.**

**4. Press the [MENU] button to quit the menu.**

### Turning audio recording on/off

**1. Press the [AUDIO REC] button.**

The audio recording-related parameters are shown in the parameter area.

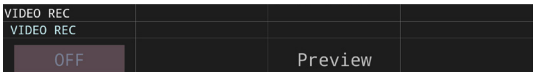



**2. Turn the [F1] (AUDIO REC) knob to select "ON" or "OFF", and then press the [F1] knob.**

### Turning video recording on/off

**1. Press the [VIDEO REC] button.**

The video recording-related parameters are shown in the parameter area.




**2. Turn the [F1] (VIDEO REC) knob to select "ON" or "OFF", and then press the [F1] knob.**

You can also turn audio/video recording on/off from the menu.

Press the [MENU] button → "Record" → and select to "AUDIO REC (WAV)" or "VIDEO REC (MP4)".

# Livestreaming via YouTube Live

## Getting ready

- Create a Google account beforehand.
- Make sure that the SR-20HD is connected to the Internet for livestreaming.
- To record audio/video, set AUDIO REC and VIDEO REC to "On" (p. 39).

### 1. [MENU] button → "Stream" → select "Service RTMP 1" or "Service RTMP 2", and then press the [VALUE/CURSOR] knob.




### 2. Press the [VALUE/CURSOR] knob.

### 3. Turn the [VALUE/CURSOR] knob to select "YouTube Live", and then press the [VALUE/CURSOR] knob.

### 4. Turn the [VALUE/CURSOR] knob to select "Use Web App", and then press the [VALUE/CURSOR] knob.

The shortened URL and QR code for the Web app are shown.




### 5. On the Web browser of your computer or smartphone, open the link that's shown.

### 6. Select your Google account.

### 7. Set the following parameters.

| Item | Explanation | |
|---|---|---|
| Title | Input the title of the livestream. | |
| Description | Input the description to be shown on YouTube Live for your content. | |
| Select privacy scope | Selects the privacy settings (the scope of release) for the livestream. | |
| | Public | Anyone can search for and view the content. |
| | Unlisted | The content can be accessed only via the link. |
| | Private | Only the content creator (publisher) can view the content. |
| Select latency Preference | Selects the latency setting. | |
| | normal | Normal latency |
| | low | Low latency |
| | ultralow | Ultra-low latency |

### 8. Click "CREATE BROADCAST AND GET STREAM KEY".

### 9. Click "SEND TO DEVICE".

When the data transmission is finished, the message "Success" appears.

The URL and stream key are applied to the SR-20HD.

### 10. Click "OK".

### 11. Close the page.

### 12. Press the [REC/ON AIR] button.

The parameters related to livestreaming, audio and video recording are shown in the parameter area.




### 13. Press the [F3] (STAND BY) or [F4] (ON AIR) knob.

Livestreaming starts.

If audio/video recording is turned on, the audio/video starts at the same time as the livestream.

### 14. To stop the livestream, press the [F2] (STOP) knob.

The message "Are you sure you want to stop streaming?" is shown.

### 15. Turn the [VALUE/CURSOR] knob to select "OK", and then press the [VALUE/CURSOR] knob.

The livestream ends.

**NOTE**

- Stream keys that are acquired have an expiration date, so they need to be acquired prior to livestreaming.
- When acquiring the stream key, you can select a livestream for which the schedule has already been set by using "SELECT YOUR BROADCAST".

### "STAND BY" and "ON AIR"

Livestreaming, audio and video recording start regardless of whether you select STAND BY or ON AIR.

For both STAND BY and ON AIR, you can configure the audio player, video input selection and key composition state, which lets you change the streaming setup for STAND BY (waiting to begin the livestream) and ON AIR (livestream in progress).

You can set this from the [MENU] button → "Stream" → "STAND BY setting" or "ON AIR setting".

For example, you can set a still image to be shown and background music to play in a loop during STAND BY; and you can make a sound effect play along with a key-composited live logo while displaying the video signal from HDMI IN 1 during ON AIR to start the program.

# Livestreaming via Facebook Live

## Getting ready

- Create a Facebook account beforehand.
- Make sure that the SR-20HD is connected to the Internet for livestreaming.
- To record audio/video, set AUDIO REC and VIDEO REC to "On" (p. 39).

### 1. [MENU] button → "Stream" → select "Service RTMP 1" or "Service RTMP 2", and then press the [VALUE/CURSOR] knob.




### 2. Press the [VALUE/CURSOR] knob.

### 3. Turn the [VALUE/CURSOR] knob to select "Facebook Live", and then press the [VALUE/CURSOR] knob.

### 4. Turn the [VALUE/CURSOR] knob to select "Use Web App", and then press the [VALUE/CURSOR] knob.

The shortened URL and QR code for the Web app are shown.




### 5. On the Web browser of your computer or smartphone, open the link that's shown.

### 6. Log in to your Facebook account.

### 7. Set the following parameters.

| Item | Explanation | |
|---|---|---|
| Title | Input the title of the livestream. | |
| Description | Input the description to be shown on Facebook Live for your content. | |
| Select destination for live-streaming | Sets where to "post" the livestream (meaning who can view the content). | |
| | Timeline | The content is streamed to your personal timeline. |
| | Page | The content is streamed to a Facebook page. |
| Select privacy scope | Selects the privacy settings (the scope of release) for the livestream. | |
| | SELF | The livestream is only visible to you. |
| | ALL FRIENDS | Only friends can view the livestream. |
| | EVERYONE | Anyone can view the livestream. |

### 8. Click "SUBMIT TO DEVICE!".

When the data transmission is finished, the message "Success" appears.

The URL and stream key are applied to the SR-20HD.

### 9. Click "OK".

### 10. Close the page.

### 11. Press the [REC/ON AIR] button.

The parameters related to livestreaming, audio and video recording are shown in the parameter area.




### 12. Press the [F3] (STAND BY) or [F4] (ON AIR) knob.

Livestreaming starts.

If audio/video recording is turned on, the audio/video starts at the same time as the livestream.

### 13. To stop the livestream, press the [F2] (STOP) knob.

The message "Are you sure you want to stop streaming?" is shown.

### 14. Turn the [VALUE/CURSOR] knob to select "OK", and then press the [VALUE/CURSOR] knob.

The livestream ends.

**NOTE**

- Facebook stream keys that are acquired have an expiration date, so they need to be acquired prior to livestreaming.

#### "STAND BY" and "ON AIR"

Livestreaming, audio and video recording start regardless of whether you select STAND BY or ON AIR.

For both STAND BY and ON AIR, you can configure the audio player, video input selection and key composition state, which lets you change the streaming setup for STAND BY (waiting to begin the livestream) and ON AIR (livestream in progress).

You can set this from the [MENU] button → "Stream" → "STAND BY setting" or "ON AIR setting".

For example, you can set a still image to be shown and background music to play in a loop during STAND BY; and you can make a sound effect play along with a key-composited live logo while displaying the video signal from HDMI IN 1 during ON AIR to start the program.

# Livestreaming via Twitch

## Getting ready

- Create a Twitch account beforehand.
- Make sure that the SR-20HD is connected to the Internet for livestreaming.
- To record audio/video, set AUDIO REC and VIDEO REC to "On" (p. 39).

### 1. [MENU] button → "Stream" → select "Service RTMP 1" or "Service RTMP 2", and then press the [VALUE/CURSOR] knob.




### 2. Press the [VALUE/CURSOR] knob.

### 3. Turn the [VALUE/CURSOR] knob to select "Twitch", and then press the [VALUE/CURSOR] knob.

### 4. Turn the [VALUE/CURSOR] knob to select "Use Web App", and then press the [VALUE/CURSOR] knob.

The shortened URL and QR code for the Web app are shown.




### 5. On the Web browser of your computer or smartphone, open the link that's shown.

### 6. Log in to your Twitch account.

### 7. Select the server to connect to in "Select ingest server location".

To stream your content in a more stable network environment, select a server in a region that's close to you.

* You can still livestream, regardless of which server you choose.

### 8. Click "SUBMIT TO DEVICE!".

When the data transmission is finished, the message "Success" appears.

The URL and stream key are applied to the SR-20HD.

### 9. Click "OK".

### 10. Close the page.

### 11. Press the [REC/ON AIR] button.

The parameters related to livestreaming, audio and video recording are shown in the parameter area.




### 12. Press the [F3] (STAND BY) or [F4] (ON AIR) knob.

Livestreaming starts.

If audio/video recording is turned on, the audio/video starts at the same time as the livestream.

### 13. To stop the livestream, press the [F2] (STOP) knob.

The message "Are you sure you want to stop streaming?" is shown.

### 14. Turn the [VALUE/CURSOR] knob to select "OK", and then press the [VALUE/CURSOR] knob.

The livestream ends.

#### "STAND BY" and "ON AIR"

Livestreaming, audio and video recording start regardless of whether you select STAND BY or ON AIR.

For both STAND BY and ON AIR, you can configure the audio player, video input selection and key composition state, which lets you change the streaming setup for STAND BY (waiting to begin the livestream) and ON AIR (livestream in progress).

You can set this from the [MENU] button → "Stream" → "STAND BY setting" or "ON AIR setting".

For example, you can set a still image to be shown and background music to play in a loop during STAND BY; and you can make a sound effect play along with a key-composited live logo while displaying the video signal from HDMI IN 1 during ON AIR to start the program.

# Streaming with Custom Settings

You can configure a custom livestream destination server without using a selectable platform on the SR-20HD.

### Getting ready

- Make sure that the SR-20HD is connected to the Internet for livestreaming.
- To record audio/video, set AUDIO REC and VIDEO REC to "On" (p. 39).

**1. [MENU] button → "Stream" → select "Service RTMP 1" or "Service RTMP 2", and then press the [VALUE/CURSOR] knob.**




**2. Press the [VALUE/CURSOR] knob.**

**3. Turn the [VALUE/CURSOR] knob to select "Custom", and then press the [VALUE/CURSOR] knob.**

**4. Turn the [VALUE/CURSOR] knob to select "Use Web App", and then press the [VALUE/CURSOR] knob.**

The shortened URL and QR code for the Web app are shown.




**5. On the Web browser of your computer or smartphone, open the link that's shown.**

**6. Input the "RTMP URL" and "Stream Key".**

**MEMO**

- You can find the "RTMP URL" and "Stream Key" on the website or other resource of the streaming platform you are going to use.
- Use a USB keyboard connected to the USB CONTROL port to input this information.

**7. Click "SUBMIT!".**

When the data transmission is finished, the message "Success!" appears.

The URL and stream key are applied to the SR-20HD.

**8. Click "OK".**

**9. Close the page.**

**10. Press the [REC/ON AIR] button.**

The parameters related to livestreaming, audio and video recording are shown in the parameter area.




**11. Press the [F3] (STAND BY) or [F4] (ON AIR) knob.**

Livestreaming starts.

If audio/video recording is turned on, the audio/video starts at the same time as the livestream.

**12. To stop the livestream, press the [F2] (STOP) knob.**

The message "Are you sure you want to stop streaming?" is shown.

**13. Turn the [VALUE/CURSOR] knob to select "OK", and then press the [VALUE/CURSOR] knob.**

The livestream ends.

### "STAND BY" and "ON AIR"

Livestreaming, audio and video recording start regardless of whether you select STAND BY or ON AIR.

For both STAND BY and ON AIR, you can configure the audio player, video input selection and key composition state, which lets you change the streaming setup for STAND BY (waiting to begin the livestream) and ON AIR (livestream in progress).

You can set this from the [MENU] button → "Stream" → "STAND BY setting" or "ON AIR setting".

For example, you can set a still image to be shown and background music to play in a loop during STAND BY; and you can make a sound effect play along with a key-composited live logo while displaying the video signal from HDMI IN 1 during ON AIR to start the program.

# Streaming via SRT

SRT video output is supported on the SR-20HD. SRT video can be output to a remote SRT-compatible device that's connected to a network.

This section describes how to make the necessary connections and output the SRT content, using an SRT video input device connected to your LAN as an example.

* When "Stream/Rec Mode" ([MENU] button → "System" → "Stream/Rec Mode") is set to "Standard" or "High Quality", the SRT transmitting functionality is available.
* RTMP streaming is not available when outputting SRT video.

## Network Requirements




* To output video over a network, the IP address, subnet mask and default gateway must be configured.

  These settings are usually retrieved from the DHCP server and assigned.

## Connecting an SRT-compatible Device to Output SRT Video

The SRT video signal can be connected from either the transmitting or receiving device, regardless of the orientation of the video signal.

The device that's waiting for the connection is in "listener" mode, and the device that's initiating the connection is in "caller" mode. Depending on the device, one or both modes are supported.

The SR-20HD supports both listener and caller modes.

### Connecting in caller mode

In caller mode, configure the transmitting device (SR-20HD) to match the configuration of the receiving device.

Here's how to make an SRT connection from the SR-20HD to the receiving device and output the video from the SR-20HD.

**1. Set the SRT mode of the receiving device to listener mode, and input the other settings.**

* For details on how to connect and operate in this mode, refer to the owner's manual of the receiving device.

**2. [MENU] button → "Stream" → select "SRT Out", and then press the [VALUE/CURSOR] knob.**

**3. Turn the [VALUE/CURSOR] knob to select "Enable", and then press the [VALUE/CURSOR] knob.**

**4. Turn the [VALUE/CURSOR] knob to select "Service SRT", and then press the [VALUE/CURSOR] knob.**




**5. Use the [VALUE/CURSOR] knob to change the setting as shown below.**

| Parameter | Explanation |
|---|---|
| Mode | Caller |
| Remote IP Address | Sets the IP address of the SRT receiving device. |
| Remote Port | Sets the port number of the SRT receiving device. |
| Latency | Sets the length (delay time) of the SRT retransmission buffer. Out of the latencies set for the receiving and transmitting devices, the one with the larger value takes precedence.<br>Set this as necessary. |
| Stream ID | If a stream ID is set for the receiving device, set the stream ID to this same ID.<br>* If the stream IDs on the sending and receiving devices do not match, the video cannot be transmitted or received. |
| Encryption | If you want to encrypt the video, set the encryption method.<br>Configure the same encryption method on the receiving device.<br>* If the encryption methods of the transmitting and receiving devices don't match, the video cannot be transmitted or received. |
| Passphrase | When setting an encryption method, this sets the passphrase.<br>Set the same passphrase for the receiving device.<br>* If the passphrases of the transmitting and receiving devices don't match, the video cannot be transmitted or received. |

You can also configure this using the Web app.

The SR-20HD must be connected to the Internet before you use the Web app.

**1. Use the [VALUE/CURSOR] knob to select "Use Web Application", and press the [VALUE/CURSOL] knob.**

The shortened URL and QR code for the Web app are shown.

**2. Open the displayed URL on your computer or smartphone.**

**3. Configure the parameters on your computer or smartphone, and press the [SUBMIT] button.**

The settings are applied to the SR-20HD.

**6. Set SRT listener mode on the receiving device.**

**7. Press the [MENU] button to quit the menu.**

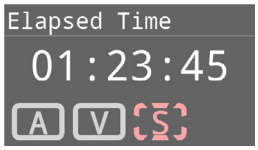
**8. Press the [REC/ON AIR] button.**

The parameters related to starting and stopping livestreaming, audio and video recording are shown in the parameter area.

**9. Press the [F3] (STAND BY) or [F4] (ON AIR) knob.**

The video is displayed on the receiving device.

You can check the connection status on the GUI screen.




## Connecting in listener mode

This shows how to configure the SR-20HD in listener mode to listen for SRT connections.

These are the steps for connecting to the SR-20HD from the receiving device via SRT and outputting the video from the SR-20HD.

In listener mode on the SR-20HD, you can send SRT video to up to three receiving devices.

**1. [MENU] button → "Stream" → select "SRT Out", and then press the [VALUE/CURSOR] knob.**

**2. Turn the [VALUE/CURSOR] knob to select "Enable", and then press the [VALUE/CURSOR] knob.**

**3. Turn the [VALUE/CURSOR] knob to select "Service SRT", and then press the [VALUE/CURSOR] knob.**




**4. Use the [VALUE/CURSOR] knob to change the setting as shown below.**

| Parameter | Explanation |
|---|---|
| Mode | Listener |
| Local Port | Sets the port number used for listening for SRT connections. |
| Latency | Sets the length (delay time) of the SRT retransmission buffer. Out of the latencies set for the receiving and transmitting devices, the one with the larger value takes precedence.<br>Set this as necessary. |
| Encryption | If you want to encrypt the video, set the encryption method.<br>Configure the same encryption method on the receiving device.<br>* If the encryption methods of the transmitting and receiving devices don't match, the video cannot be transmitted or received. |
| Passphrase | When setting an encryption method, this sets the passphrase.<br>Set the same passphrase for the receiving device.<br>* If the passphrases of the transmitting and receiving devices don't match, the video cannot be transmitted or received. |

* In listener mode, you do not need to set the Stream ID.

You can also configure this using the Web app.

The SR-20HD must be connected to the Internet before you use the Web app.

**1. Use the [VALUE/CURSOR] knob to select "Use Web Application", and press the [VALUE/CURSOL] knob.**

The shortened URL and QR code for the Web app are shown.

**2. Open the displayed URL on your computer or smartphone.**

**3. Configure the parameters on your computer or smartphone, and press the [SUBMIT] button.**

The settings are applied to the SR-20HD.

**5. Set the SRT mode of the receiving device to caller mode.**

* For details on how to connect and operate in this mode, refer to the owner's manual of the receiving device.

**6. Set the caller mode of the receiving device based on the settings in step 4.**

* Press the [MENU] button → "Network" → "Network Information" to check the IP address that's set for the receiving device.

**7. Press the [MENU] button to quit the menu.**

**8. Press the [REC/ON AIR] button.**

The parameters related to starting and stopping livestreaming, audio and video recording are shown in the parameter area.

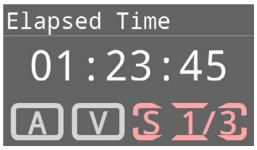
**9. Press the [F3] (STAND BY) or [F4] (ON AIR) knob.**

The unit enters SRT listening mode.

**10. Perform the operations for connecting on the receiving device.**

The video is displayed on the receiving device.

You can check the connection status on the GUI screen.




## Stopping the SRT connection

The SRT connection can be stopped from either the transmitting or receiving device.

Follow the steps on the SR-20HD as shown below to stop the connection.

**1. If a menu is already shown, press the [MENU] button to close it.**

**2. Press the [F2] (STOP) knob.**

The message "Are you sure you want to stop streaming?" is shown.

**3. Turn the [VALUE/CURSOR] knob to select "OK", and then press the [VALUE/CURSOR] knob.**

* To stop the connection from the receiving device, refer to the owner's manual of that device.

# Tethering

You can connect your smartphone to this unit and use it for tethering.




## iPhone:

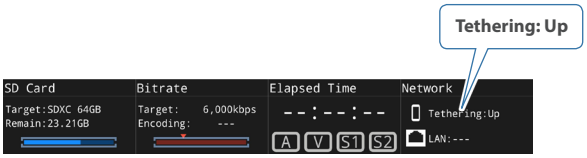
1. **Use the Lightning to USB-A cable included with your iPhone to connect to the USB CONTROL port of the SR-20HD.**
2. **On your iPhone, select "Settings" → "Personal Hotspot", and turn "Allow Other to Join" on.**
3. **When you see the message, "Trust this Computer?", tap "Trust".**
4. **If you see the message "Enter Device Passcode to Trust This Computer", enter your passcode.**
5. **Press the [STREAM] button on the SR-20HD.**

   The livestreaming-related parameters are shown in the parameter area.




6. **Press the [F4] knob to execute "Start Tethering".**

   Once the Network display in the status area changes from "Tethering: ---" to "Tethering: Up", you can use the mobile network connection of your iPhone.




7. **To stop tethering, press the [F4] knob once more to execute "Stop Tethering".**

You can also make the tethering start/stop from the menu.

[MENU] button → "Network" → select "Start Tethering" or "Stop Tethering", and then press the [VALUE/CURSOR] knob.

## Android devices:

**NOTE**

The method of operation differs depending on the smartphone model. Check the owner's manual for your device for details.

1. **Connect the USB CONTROL port of the SR-20HD to your smartphone with a USB cable.**

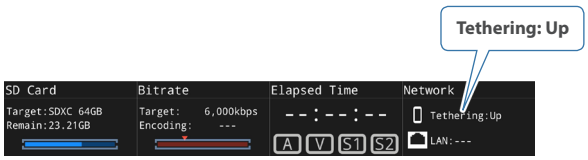
   A notification is shown at the top of your smartphone screen.
2. **On your smartphone, select "Settings" → "Network and Internet" → "Hotspot and tethering".**
3. **Activate "USB tethering".**
4. **Press the [STREAM] button on the SR-20HD.**

   The livestreaming-related parameters are shown in the parameter area.




5. **Press the [F4] knob to execute "Start Tethering".**

   Once the Network display in the status area changes from "Tethering: ---" to "Tethering: Up", you can use the mobile network connection of your iPhone.




6. **To stop tethering, press the [F4] knob once more to execute "Stop Tethering".**

You can also make the tethering start/stop from the menu.

[MENU] button → "Network" → select "Start Tethering" or "Stop Tethering", and then press the [VALUE/CURSOR] knob.

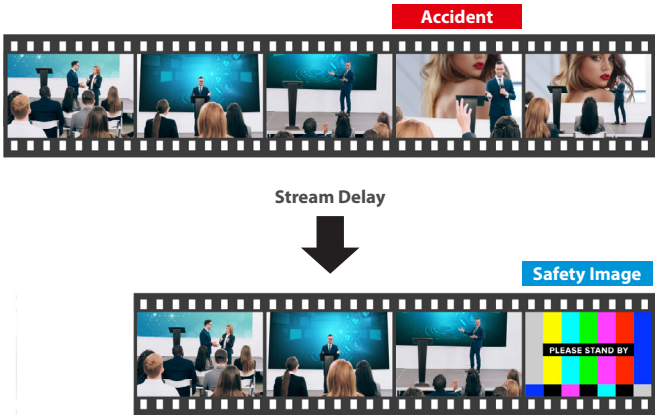
# Avoiding Sporadic Issues When Livestreaming (Safety Delay)

The SR-20HD comes with a built-in "safety delay" function that helps you to avoid unexpected troubles during livestreaming.

You can set the video and audio buffer (streaming delay time: "Stream Delay") for the safety delay function.

If an accidental issue occurs within the streaming delay time, you can control the "switch to still image" and "mute audio" functions with the press of a button, which prevents undesirable content from being streamed.

The safety delay function thus helps you to feel more at ease when livestreaming content, especially in situations like live events where there is no script or guide.




- The streaming delay time can be set in five-second intervals, to a maximum of 60 seconds.
- This unit switches to the still image you imported as the "safety image".
- The unit switches to the safety image only during livestreaming. You can only check the switch to the safety image by looking at the livestreamed video. The image shown on this unit's display or the video outputted via the HDMI OUT connector doesn't switch to the safety image.
- Use this function by assigning the VIDEO FUNCTION [A]–[E] buttons to switch to the still image and to mute the audio.
  * The safety image is already assigned to the VIDEO FUNCTION [E] button, as per the factory settings.

## Setting the Streaming Delay Time

**1. [MENU] button → "Stream" → select "Stream Delay", and then press the [VALUE/CURSOR] knob.**




**2. Turn the [VALUE/CURSOR] knob to set the streaming delay time, and then press the [VALUE/CURSOR] knob.**

| Value |
|---|
| Off, 5 sec–60 sec (five-second intervals) |

**3. Press the [MENU] button to quit the menu.**

The Stream delay can be set in the parameter area.
Press the [STREAM] button to view the parameter.

## Assigning a Function to the VIDEO FUNCTION Buttons

**1. [MENU] button → "Scene/Video Function" → "Scene/Video Function A–E" → select "Mode", and then press the [VALUE/CURSOR] knob.**




**2. Turn the [VALUE/CURSOR] knob to select "Video Function", and then press the [VALUE/CURSOR] knob.**

**3. Turn the [VALUE/CURSOR] knob to select "Type", and then press the [VALUE/CURSOR] knob.**




**4. Turn the [VALUE/CURSOR] knob to select "Safety Image", and then press the [VALUE/CURSOR] knob.**

| Value | Explanation |
|---|---|
| Safety Image | The safety delay function switches the streaming video to a still image and mutes the streaming audio. |

**5. Turn the [VALUE/CURSOR] knob to select "LED Color", and then press the [VALUE/CURSOR] knob.**

| Value | Explanation |
|---|---|
| Red, Green, Blue, Cyan, Magenta, Yellow | Specifies the illumination color of the VIDEO FUNCTION [A]–[E] button. |

**6. Turn the [VALUE/CURSOR] knob to change the value of the setting, and then press the [VALUE/CURSOR] knob.**

**7. Press the [MENU] button to quit the menu.**

# Saving Internal Settings to an SD Card

You can save the settings of this unit as a single file (.sr20) to a SD card. You can use the saved settings file by loading it from the USB flash drive into this unit when necessary.

* The MENU (p. 9) settings are automatically saved to the SD card.

**NOTE**

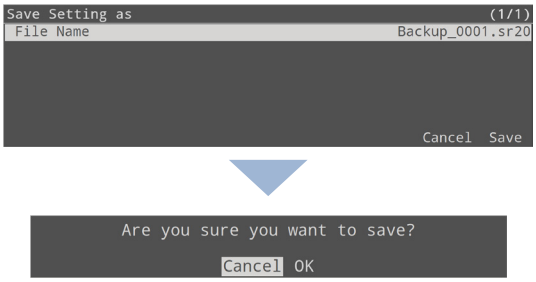
- When using a SD card for the first time, you must format it using the SR-20HD (p. 7).
- Never turn off the power or remove the SD card while the message "Processing..." is shown.
- Depending on the SD card, recognition of the SD card might take some time.

## Saving

### Saving a new file

**1. [MENU] button → "SD card/USB Memory" → select "Save Setting as", and then press the [VALUE/CURSOR] knob.**

A confirmation message appears.




If you want to cancel the operation, select "Cancel".

**2. Turn the [VALUE/CURSOR] knob to select "OK", and then press the [VALUE/CURSOR] knob.**

When the operation is finished, the message "Completed" appears.

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

**4. Press the [MENU] button to quit the menu.**

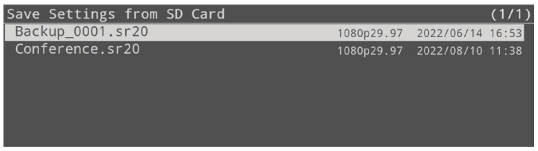
**Content that is not saved to the file**

- The System menu settings "Test Pattern". The unit always starts with this "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 state of the AUDIO FUNCTION button to which the audio player is assigned. This is always off when the unit starts up.
- The positions of the volume knobs and faders.

### Overwrite-saving

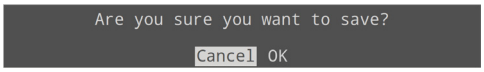
**1. [MENU] button → "SD card/USB Memory" → select "Save Settings", and then press the [VALUE/CURSOR] knob.**

The settings files in the SD card are listed.




**2. Turn the [VALUE/CURSOR] knob to select the setting file to overwrite, and then press the [VALUE/CURSOR] knob.**

A confirmation message appears.




If you want to cancel the operation, select "Cancel".

**3. Turn the [VALUE/CURSOR] knob to select "OK", and then press the [VALUE/CURSOR] knob.**

When the operation is finished, the message "Completed" appears.

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

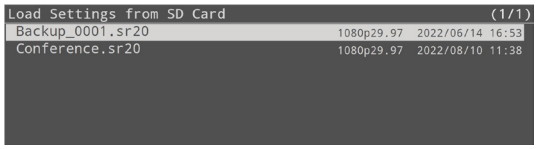
**5. Press the [MENU] button to quit the menu.**

## Loading

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

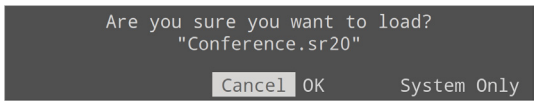
**1. [MENU] button → "SD card/USB Memory" → select "Load Settings", and then press the [VALUE/CURSOR] knob.**

The settings files in the SD card are listed.




**2. Turn the [VALUE/CURSOR] knob to select the setting file to recall, and then press the [VALUE/CURSOR] knob.**

A confirmation message appears.




If you want to cancel the operation, select "Cancel".

- When you select "System Only", only the Network, Stream, Record and System settings can be recalled.

**3. Turn the [VALUE/CURSOR] knob to select "OK", and then press the [VALUE/CURSOR] knob.**

When the operation is finished, the message "Completed" appears.

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

**5. Press the [MENU] button to quit the menu.**

## Deleting

Here's how to delete this unit's settings that are stored on an SD card.

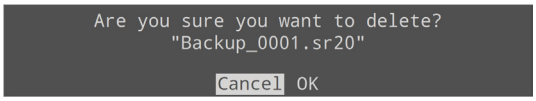
**1. [MENU] button → "SD card/USB Memory" → select "Delete Settings", and then press the [VALUE/CURSOR] knob.**

The settings files in the SD card are listed.




**2. Turn the [VALUE/CURSOR] knob to select the setting file to delete, and then press the [VALUE/CURSOR] knob.**

A confirmation message appears.




If you want to cancel the operation, select "Cancel".

**3. Turn the [VALUE/CURSOR] knob to select "OK", and then press the [VALUE/CURSOR] knob.**

When the operation is finished, the message "Completed" appears.

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

**5. Press the [MENU] button to quit the menu.**

# Disabling Panel Operations (Panel Lock)

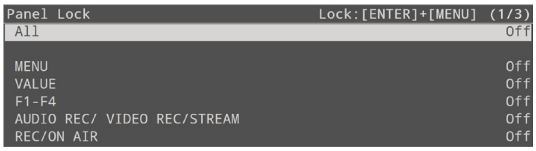
You can disable operation of the panel's buttons and knobs to prevent unintended operations (Panel Lock function).

## Selecting the objects of panel lock

* The [PHONES] knob is not affected by the panel lock.

**1. [MENU] button → "System" → select "Panel Lock", and then press the [VALUE/CURSOR] knob.**

The Panel Lock menu appears.




**2. Turn the [VALUE/CURSOR] knob to select the object (button or knob) for which you want to make settings, and then press the [VALUE/CURSOR] knob.**

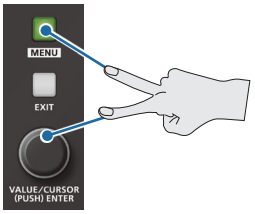
By choosing "All" you can select all buttons and knobs in a single operation.

**3. Turn the [VALUE/CURSOR] knob to specify whether panel lock will (On) or will not (Off) affect the object, and then press the [VALUE/CURSOR] knob.**

**4. Press the [MENU] button to quit the menu.**

## Locking or unlocking the operation panel

**1. Simultaneously hold down the [VALUE/CURSOR] knob and [MENU] button for three seconds or longer.**




**2. To unlock, simultaneously hold down the [VALUE/CURSOR] knob and [MENU] button once again for three seconds or longer.**

The message "Lock Released." appears, and the panel lock is deactivated.

# Returning to the Factory Settings (Factory Reset)

Here's how you can return the settings of the SR-20HD 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.

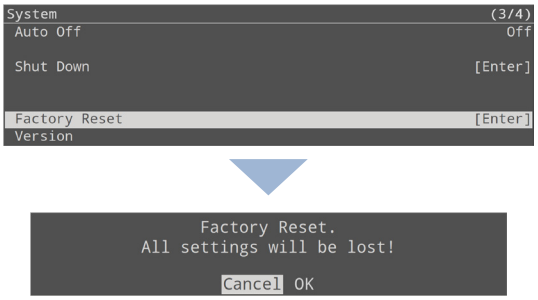
**NOTE**

When you execute a factory reset, all of the settings you made are lost.

* The still images, videos and audio files you imported still remain even after a factory reset.

**1. [MENU] button → "System" → select "Factory Reset", and then press the [VALUE/CURSOR] knob.**

A confirmation message appears.




If you want to cancel the operation, select "Cancel".

**2. Turn the [VALUE/CURSOR] knob to select "OK", and then press the [VALUE/CURSOR] knob.**

When the operation is finished, the message "Completed" appears.

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

**4. Press the [MENU] button to quit the menu.**

# Menu List

Pressing the [MENU] button makes the menu appear on the display.




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

## Video Input

| Menu item | Value (Bold: default) | Explanation |
|---|---|---|
| **HDMI IN 1, 2** | **Adjusts the video that is input from the HDMI IN 1, 2 connectors.** | |
| Status | — | Displays information about the input video (video format, size, etc.).<br>If no video is being input, this indicates "No Signal". |
| EDID | **Internal**, 720p, 1080i, 1080p,<br>SVGA (800x600),<br>XGA (1024x768),<br>WXGA (1280x800),<br>FWXGA (1366x768),<br>SXGA (1280x1024),<br>SXGA+ (1400x1050),<br>UXGA (1600x1200),<br>Full HD (1920x1080),<br>WUXGA (1920x1200) | Specifies the input format (EDID).<br>If this is "Internal", EDID information for all formats that can be input to the SR-20HD will be transmitted.<br>* When you change the setting, the change is not applied until you press the [VALUE/CURSOR] knob to confirm.<br>**What is EDID?**<br>EDID is data that is transmitted from the SR-20HD to the source device when the SR-20HD is connected to a source device. EDID contains data such as the formats that can be input to the SR-20HD (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 SR-20HD. |
| 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 (*1) | Adjusts the horizontal size. |
| Manual Size V | -2000–**0**–+2000 (*1) | Adjusts the vertical size. |
| Position H | -1920–**0**–+1920 | Adjusts the position in the horizontal direction. |
| Position V | -1200–**0**–+1200 | Adjusts the position in the vertical direction. |
| Brightness | -64–**0**–+63 | Adjusts the brightness. |
| Contrast | -64–**0**–+63 | Adjusts the contrast. |
| Saturation | -64–**0**–+63 | Adjusts the saturation. |
| 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. |

| Menu item | Value (Bold: default) | Explanation |
|---|---|---|
| **STILL 1/SRT In** | **Adjusts the video that is assigned to the STILL 1/SRT In.** | |
| **When SRT In = Disable** | | |
| **SRT In** | **Disable**, Enable | When using STILL 1 for still images, video or the USB VIDEO IN signal, set this to "Disable". |
| **Type** | Specifies the video sources that you want to assign to the STILL 1. | |
| | **Still** | Still images imported to an SD card |
| | USB VIDEO IN | Video or audio inputted to the USB VIDEO IN port |
| | Video Player | Videos imported to an SD card |
| **Still Memory** | 1–8 | Selects the memory number in which the still image is saved. |
| **Zoom** | 10.0–**100.0**–1000.0% | Adjusts the zoom ratio. |
| **Scaling Type** | **Full** | Specifies the scaling type.<br>The scaling type for STILL 1/SRT In is fixed at "Full". |
| **Manual Size H** | -2000–**0**–+2000 | Adjusts the horizontal size. |
| **Manual Size V** | -2000–**0**–+2000 | Adjusts the vertical size. |
| **Position H** | -1920–**0**–+1920 | Adjusts the position in the horizontal direction. |
| **Position V** | -1200–**0**–+1200 | Adjusts the position in the vertical direction. |
| **Brightness** | -64–**0**–+63 | Adjusts the brightness. |
| **Contrast** | -64–**0**–+63 | Adjusts the contrast. |
| **Saturation** | -64–**0**–+63 | Adjusts the saturation. |
| **When SRT In = Enable, Mode = Caller** | | |
| **SRT In** | **Disable**, Enable | When using STILL 1 for the SRT In signal, set this to "Enable". |
| **Start/Stop** | **Stop**, Start | Starts/stops SRT receiving. |
| **Zoom** | 10.0–**100.0**–1000.0% | Adjusts the zoom ratio. |
| **Scaling Type** | **Full** | Specifies the scaling type.<br>The scaling type for STILL 1/SRT In is fixed at "Full". |
| **Manual Size H** | -2000–**0**–+2000 | Adjusts the horizontal size. |
| **Manual Size V** | -2000–**0**–+2000 | Adjusts the vertical size. |
| **Position H** | -1920–**0**–+1920 | Adjusts the position in the horizontal direction. |
| **Position V** | -1200–**0**–+1200 | Adjusts the position in the vertical direction. |
| **Brightness** | -64–**0**–+63 | Adjusts the brightness. |
| **Contrast** | -64–**0**–+63 | Adjusts the contrast. |
| **Saturation** | -64–**0**–+63 | Adjusts the saturation. |
| **Mode** | **Caller**, Listener | Sets the SRT mode to "Caller". |
| **Remote IP Address** | 0.0.0.0 | Sets the IP address of the SRT transmitting device (listener). |
| **Remote Port** | 0–**5000**–65535 | Sets the port number of the SRT transmitting device (listener). |
| **Latency** | **80**–8000ms | Sets the length (delay time) of the SRT retransmission buffer.<br>Out of the latencies set for the receiving and transmitting devices, the one with the larger value takes precedence. |
| **Stream ID** | | Sets the stream ID to the same ID as that of the SRT transmitting device (listener). |
| **Passphrase** | | Sets the passphrase to the same passphrase as that of the SRT transmitting device (listener). |
| **Use Web App** | [Enter] | You can use the web app to configure the above settings for SRT. |

* Use a USB keyboard connected to the USB CONTROL port to input Passphrase and Stream ID.

| Menu item | Value (Bold: default) | Explanation |
|---|---|---|
| **When SRT In = Enable, Mode = Listener** | | |
| SRT In | **Disable**, Enable | When using STILL 1 for the SRT In signal, set this to "Enable". |
| Start/Stop | **Stop**, Start | Starts/stops SRT receiving. |
| Zoom | 10.0–**100.0**–1000.0% | Adjusts the zoom ratio. |
| Scaling Type | **Full** | Specifies the scaling type.<br>The scaling type for STILL 1/SRT In is fixed at "Full". |
| Manual Size H | -2000–**0**–+2000 | Adjusts the horizontal size. |
| Manual Size V | -2000–**0**–+2000 | Adjusts the vertical size. |
| Position H | -1920–**0**–+1920 | Adjusts the position in the horizontal direction. |
| Position V | -1200–**0**–+1200 | Adjusts the position in the vertical direction. |
| Brightness | -64–**0**–+63 | Adjusts the brightness. |
| Contrast | -64–**0**–+63 | Adjusts the contrast. |
| Saturation | -64–**0**–+63 | Adjusts the saturation. |
| Mode | **Caller**, Listener | Sets the SRT mode to "Listener". |
| Local Port | 0–**2000**–65535 | Sets the port number used for listening for SRT connections |
| Latency | **80**–8000ms | Sets the length (delay time) of the SRT retransmission buffer.<br>Out of the latencies set for the receiving and transmitting devices, the one with the larger value takes precedence. |
| Passphrase | | Sets the passphrase to the same passphrase as that of the SRT transmitting device (caller). |
| Use Web App | [Enter] | You can use the web app to configure the above settings for SRT. |

* Use a USB keyboard connected to the USB CONTROL port to input Passphrase.

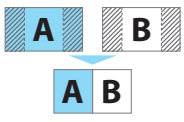
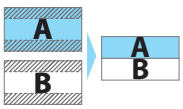
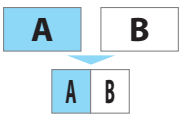
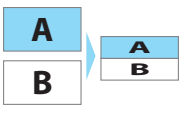
| STILL 2 | Adjusts the still image that is assigned to the STILL 2. | |
|---|---|---|
| Zoom | **100.0**–1000.0% | Adjusts the zoom ratio.<br>* The size of STILL 2 can't be reduced. |
| Scaling Type | Specifies the scaling type. The scaling type for STILL 2 is fixed at "Full". | |
| | **Full** | Always displays the picture expanded to full screen, irrespective of the aspect ratio of the input video. |
| Manual Size H | -2000–**0**–+2000 (*1) | Adjusts the horizontal size. |
| Manual Size V | -2000–**0**–+2000 (*1) | Adjusts the vertical size. |
| Position H | -1920–**0**–+1920 | Adjusts the position in the horizontal direction. |
| Position V | -1200–**0**–+1200 | Adjusts the position in the vertical direction. |
| Brightness | -64–**0**–+63 | Adjusts the brightness. |
| Contrast | -64–**0**–+63 | Adjusts the contrast. |
| Saturation | -64–**0**–+63 | Adjusts the saturation. |

(*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.

# Video Output

| Menu item | Value (Bold: default) | Explanation |
|---|---|---|
| **HDMI OUT MAIN** | **Adjusts the video that is output from the HDMI OUT MAIN connector.** | |
| Status | — | Displays the connection status of the HDMI OUT MAIN connector.<br>If there is no connection, "Not Connected" is shown. |
| Color Space | **YPbPr (4:4:4)**, YPbPr (4:2:2),<br>RGB (0–255), RGB (16–235) | Specifies the color space. |
| DVI-D/HDMI | **HDMI**, DVI-D | Specifies the output mode. |
| Brightness | -64–**0**–+63 | Adjusts the brightness. |
| Contrast | -64–**0**–+63 | Adjusts the contrast. |
| Saturation | -64–**0**–+63 | Adjusts the saturation. |
| Red | -64–**0**–+63 | Adjusts the red level. |
| Green | -64–**0**–+63 | Adjusts the green level. |
| Blue | -64–**0**–+63 | Adjusts the blue level. |
| **HDMI OUT PVW** | **Adjusts the video that is output from the HDMI OUT PVW connector.** | |
| Status | — | Displays the connection status of the HDMI OUT PVW connector.<br>If there is no connection, "Not Connected" is shown. |
| Color Space | **YPbPr (4:4:4)**, YPbPr (4:2:2),<br>RGB (0–255), RGB (16–235) | Specifies the color space. |
| DVI-D/HDMI | **HDMI**, DVI-D | Specifies the output mode. |
| Output Assign | Specifies the output of the HDMI OUTPUT PVW connector. | |
| | PVW | Outputs the preview video. |
| | **Multi-View** | Outputs the multi-view monitor video. |
| Brightness | -64–**0**–+63 | Adjusts the brightness. |
| Contrast | -64–**0**–+63 | Adjusts the contrast. |
| Saturation | -64–**0**–+63 | Adjusts the saturation. |
| Red | -64–**0**–+63 | Adjusts the red level. |
| Green | -64–**0**–+63 | Adjusts the green level. |
| Blue | -64–**0**–+63 | Adjusts the blue level. |
| **PVW Source** | | |
| PVW Source | **HDMI IN 1**, HDMI IN 2,<br>STILL 1/SRT In, STILL 2 | Specifies the video sources that you want to assign to the HDMI OUT PVW. |

# Scene/Video Function

| Menu item | Value (Bold: default) | Explanation |
|---|---|---|
| **Scene/Video Function A–E** | | **Specifies the function that is assigned to the SCENE/VIDEO FUNCTION [A]–[E] button. The current settings are shown in at the right side of the screen.** |
| Mode | Sets how the SCENE/VIDEO FUNCTION [A]–[E] buttons are used. | |
| | None | No function is assigned. |
| | Scene | The buttons are used as SCENE buttons to recall the registered scenes. |
| | Video Function | The buttons operate as the VIDEO FUNCTION buttons, letting you execute the assigned video-related functions. |
| Type | **When Mode = Scene** | Sets the functions used when the buttons are used as SCENE buttons. |
| | PinP | Picture-in-picture<br>An inset screen (a small different screen) is overlaid on the background video. |
| | Split | Split<br>The screen is divided into left/right or upper/lower halves, and two videos are shown. |
| | PbyP | Picture-by-picture<br>This places two screens beside each other. You can freely change the size and position of each screen. |
| | **When Mode = Video Function** | Sets the functions used when the buttons are used as VIDEO FUNCTION buttons. |
| | Video Player | Plays back/stops the video for STILL 1. |
| | USB VIDEO IN | Uses the video or audio input to USB VIDEO IN for STILL 1. |
| | Still | Shows the specified still image for STILL 1. |
| | Prev Still | Shows the previous still image for STILL 1. |
| | Next Still | Shows the next still image for STILL 1. |
| | Safety Image | The safety delay function (p. 47) switches the streaming video to a still image and mutes the streaming audio. |
| | Input Capture | Captures the still image and assigns it to STILL 2. |
| | Save Still | Captures the streaming/video source as a still image and saves it as a JPEG file to the SD card. |
| | Output Fade | Fades the main output video in/out. |
| **When Type = PinP** | | |
| LED Color | Red, Green, Blue, Cyan, Magenta, Yellow | Specifies the illumination color of the SCENE [A]–[E] button. |
| Background Ch | **HDMI IN 1**, HDMI IN 2, STILL 1/SRT In, STILL 2 | Specifies the background video. |
| Window Ch | HDMI IN 1, **HDMI IN 2**, STILL 1/SRT In, STILL 2 | Specifies the inset screen video. (*2) |
| Window Pos H | -100.0–**28.5**–100.0% | Adjusts the horizontal position of the inset screen. |
| Window Pos V | -100.0–**28.5**–100.0% | Adjusts the vertical 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–**30.0**–100.0% | Adjusts the size of the inset screen. |
| Window Crop H | **0.0**–100.0% | Adjusts the horizontal size of the inset screen. |
| Window Crop V | **0.0**–100.0% | Adjusts the vertical size of the inset screen. |
| View Pos H | -100.0–**0.0**–100.0% | Adjusts the horizontal position of the video shown in the inset screen. |
| View Pos V | -100.0–**0.0**–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** | | |
| LED Color | Red, Green, Blue, Cyan, Magenta, Yellow | Specifies the illumination color of the SCENE [A]–[E] button. |
| Pattern | Specifies the pattern for the split. | |
| | **V.center**<br>Vertically cuts-out the center of the video.<br> | H.center<br>Horizontally cuts-out the center of the video.<br> |
| | V.stretch<br>Vertically shrinks the video. (*2)<br> | H.stretch<br>Horizontally shrinks the video. (*2)<br> |
| Center | 0.0–**50.0**–100.0% | Adjusts the position at which the screen is divided. |
| A Ch (Left/Upper) | **HDMI IN 1**, HDMI IN 2, STILL 1/SRT In, STILL 2 | Specifies the video that is shown in the left or upper side. |
| B Ch (Right/Lower) | HDMI IN 1, **HDMI IN 2**, STILL 1/SRT In, STILL 2 | Specifies the video that is shown in the right or lower side. |

| Menu item | Value (Bold: default) | Explanation |
|---|---|---|
| A-Center | -25.0–**0.0**–25.0% | **When Pattern = V.center**<br>Adjusts the horizontal position of the video that is shown on the left side.<br>**When Pattern = H.center**<br>Adjusts the vertical position of the video that is shown on the upper side. |
| B-Center | -25.0–**0.0**–25.0% | **When Pattern = V.center**<br>Adjusts the horizontal position of the video that is shown on the right side.<br>**When Pattern = H.center**<br>Adjusts the vertical position of the video that is shown on the lower side. |
| **When Type = PbyP** | | |
| LED Color | Red, Green, Blue, Cyan, Magenta, Yellow | Specifies the illumination color of the SCENE [A]–[E] button. |
| A Ch | **HDMI IN 1**, HDMI IN 2, STILL 1/SRT In, STILL 2 | Specifies the video for screen A. (*2) |
| B Ch | HDMI IN 1, **HDMI IN 2**, STILL 1/SRT In, STILL 2 | Specifies the video for screen B. (*2) |
| Layer Order | **A/B**, B/A | Specifies the overlay order (foreground/background) for screen A and screen B. |
| A Ch | Adjusts the screen A. | |
| Position H | -100.0–**-25.0**–100.0% | Adjusts the horizontal position of the screen A. |
| Position V | -100.0–**0.0**–100.0% | Adjusts the vertical position of the screen A. |
| Aspect | 1:1, 4:3, 3:2, **16:9** | Specifies the aspect ratio of the screen A. |
| Size | 10.0–**50.0**–100.0% | Adjusts the size of the screen A. |
| Cropping H | **0.0**–100.0% | Adjusts the horizontal size of the screen A. |
| Cropping V | **0.0**–100.0% | Adjusts the vertical size of the screen A. |
| View Pos H | -100.0–**0.0**–100.0% | Adjusts the horizontal position of the video shown in the screen A. |
| View Pos V | -100.0–**0.0**–100.0% | Adjusts the vertical position of the video shown in the screen A. |
| View Zoom | **100.0**–1000.0% | Adjusts the zoom of the video shown in the screen A. |
| B Ch | Adjusts the screen B. | |
| Position H | -100.0–**-25.0**–100.0% | Adjusts the horizontal position of the screen B. |
| Position V | -100.0–**0.0**–100.0% | Adjusts the vertical position of the screen B. |
| Aspect | 1:1, 4:3, 3:2, **16:9** | Specifies the aspect ratio of the screen B. |
| Size | 10.0–**50.0**–100.0% | Adjusts the size of the screen B. |
| Cropping H | **0.0**–100.0% | Adjusts the horizontal size of the screen B. |
| Cropping V | **0.0**–100.0% | Adjusts the vertical size of the screen B. |
| View Pos H | -100.0–**0.0**–100.0% | Adjusts the horizontal position of the video shown in the screen B. |
| View Pos V | -100.0–**0.0**–100.0% | Adjusts the vertical position of the video shown in the screen B. |
| View Zoom | **100.0**–1000.0% | Adjusts the zoom of the video shown in the screen B. |
| **When Type = Video Player** | | |
| LED Color | Red, Green, Blue, Cyan, Magenta, Yellow | Specifies the illumination color of the VIDEO FUNCTION [A]–[E] button. |
| Video Memory | 1–8 | Selects the memory number in which the movie file is saved. |
| Repeat | Off, **On** | Turns repeat playback on/off. |
| **When Type = USB VIDEO IN** | | |
| LED Color | Red, Green, Blue, Cyan, Magenta, Yellow | Specifies the illumination color of the VIDEO FUNCTION [A]–[E] button. |
| **When Type = Still** | | |
| LED Color | Red, Green, Blue, Cyan, Magenta, Yellow | Specifies the illumination color of the VIDEO FUNCTION [A]–[E] button. |
| Still Memory | 1–8 | Selects the memory number in which the still image is saved. |
| **When Type = Prev Still, Next Still, Safety Image, Input capture, Output Fade** | | |
| LED Color | Red, Green, Blue, Cyan, Magenta, Yellow | Specifies the illumination color of the VIDEO FUNCTION [A]–[E] button. |
| **When Type = Save Still** | | |
| LED Color | Red, Green, Blue, Cyan, Magenta, Yellow | Specifies the illumination color of the VIDEO FUNCTION [A]–[E] button. |
| Mode | Sets how still image capture works. | |
| | One Shot | Still images are captured at the timing with which you press the VIDEO FUNCTION [A]–[E] buttons. |
| | Interval | Still images are captured at the intervals you specify. |
| Interval | 1 min–10 min | Specifies the time, when "Mode" is set to "Interval". |

| Menu item | Value (Bold: default) | Explanation |
|---|---|---|
| **Scene/Video Function Copy** | | **Copy the settings from one Scene/Video Function to another.** |
| **Source** | Scene/Video Function A–E | Specifies the copy-source Scene/Video Function. (default: A) |
| **Destination** | | Specifies the copy-destination Scene/Video Function. (default: B) |
| **Copy** | [Exec] | Executes the Scene/Video Function copy. |

(*2) The size of STILL 2 can't be reduced. 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.

## The factory settings for Scene/Video Function A–E

### A

| Menu item | Value |
|---|---|
| **Mode** | Scene |
| **Type** | PinP |
| **LED Color** | Red |
| **Background Ch** | HDMI IN 1 |
| **Window Ch** | HDMI IN 2 |
| **Window Pos H** | 28.5% |
| **Window Pos V** | 28.5% |
| **Window Aspect** | 16:9 |
| **Window Size** | 30.0% |
| **Window Crop H** | 0.0% |
| **Window Crop V** | 0.0% |
| **View Pos H** | 0.0% |
| **View Pos V** | 0.0% |
| **View Zoom** | 100.0% |

### B

| Menu item | Value |
|---|---|
| **Mode** | Scene |
| **Type** | Split |
| **LED Color** | Red |
| **Pattern** | V.Center |
| **Center** | 50.0% |
| **A Ch (Left/Upper)** | HDMI IN 1 |
| **B Ch (Right/Lower)** | HDMI IN 2 |
| **A-Center** | 0.0% |
| **B-Center** | 0.0% |

### C

| Menu item | | Value |
|---|---|---|
| **Mode** | | Scene |
| **Type** | | PbyP |
| **LED Color** | | Red |
| **A Ch** | | HDMI IN 1 |
| **B Ch** | | HDMI IN 2 |
| **Layer Order** | | A/B |
| **A Ch** | **Position H** | -25.0% |
| | **Position V** | 0.0% |
| | **Aspect** | 16:9 |
| | **Size** | 50.0% |
| | **Cropping H** | 0.0% |
| | **Cropping V** | 0.0% |
| | **View Pos H** | 0.0% |
| | **View Pos V** | 0.0% |
| | **View Zoom** | 100.0% |
| **B Ch** | **Position H** | 25.0% |
| | **Position V** | 0.0% |
| | **Aspect** | 16:9 |
| | **Size** | 50.0% |
| | **Cropping H** | 0.0% |
| | **Cropping V** | 0.0% |
| | **View Pos H** | 0.0% |
| | **View Pos V** | 0.0% |
| | **View Zoom** | 100.0% |

### D

| Menu item | Value |
|---|---|
| **Mode** | Video Function |
| **Type** | Input Capture |
| **LED Color** | Blue |

### E

| Menu item | Value |
|---|---|
| **Mode** | Video Function |
| **Type** | Safety Image |
| **LED Color** | Yellow |

# Transition

| Menu item | Value (Bold: default) | Explanation |
|---|---|---|
| Scene Transition | Specifies what happens when scenes are switched. | |
| | 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. |
| | Motion | Switching occurs while each screen moves. |
| Time | 0.0–**1.0**–5.0 sec | Specifies the transition time when switching between scenes or video. |
| Output Fade | Sets the display time for the video that's registered to the scene. | |
| Off Color | **Black**, White | Specifies the background color (black, white) used when fading-in/out the main output video. |
| Audio Fade | Off | Only the video fades-in/out. |
| | **On** | The video and audio fade-in/out together. |
| PGM Direct | Turns PGM Direct (the function that immediately sends the selected video to final output) on/off. | |
| | Off | For the INPUT [HDMI IN 1]–[STILL 2] buttons, when you check the PVW (preview) of the video to be outputted next and then press the [TAKE] button, the output video (streaming, video recording source) changes after the set transition time has elapsed.<br>For the scenes that are registered to the SCENE [A]–[E] buttons, the output video (streaming, video recording source) changes after the set transition time has elapsed.<br>* If set to "Off", the Auto Switching setting will be ignored. |
| | **On** | The selected video is immediately sent to final output.<br>When you select the video corresponding to the INPUT [HDMI IN 1]–[STILL 2] buttons or the scenes registered to the SCENE [A]–[E] buttons, the output video (streaming, video recording source) changes after the set transition time has elapsed. |

# Key

| Menu item | Value (Bold: default) | Explanation |
|---|---|---|
| SW | **Off**, On | Turns key compositing on/off. |
| Key Source Ch | HDMI IN 1, HDMI IN 2, STILL 1/SRT In, STILL 2 | Specifies the source of the logo or video that is overlaid when using key compositing. |
| Key Color | Specifies the key type (extraction color) used during key composition. | |
| | **Black** | Composite using luminance key. Makes black portions transparent according to brightness. |
| | White | Composite using luminance key. Makes white portions transparent according to brightness. |
| | Green 1–3 | Composite using chroma key.<br>Makes green portions transparent according to hue.<br>Choose the preset 1–3 that allows the most appropriate compositing. |
| | Blue 1–3 | Composite using chroma key.<br>Makes blue portions transparent according to hue.<br>Choose the preset 1–3 that allows the most appropriate compositing. |
| 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. |
| Source Zoom | 10.0–**100.0**–1000.0% | Adjusts the zoom of the superimposed logo or video. (*3) |
| Source Scaling Type | Specifies the scaling type of the superimposed logo or video. (*3) | |
| | Full | Always displays the picture expanded to full screen, irrespective of the aspect ratio of the superimposed logo or video. |
| | Letterbox | Enlarges or reduces the logo or video to a full-screen view while keeping the aspect ratio unchanged. |
| | Crop | Enlarges or reduces the logo or 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 (*4) | Adjusts the horizontal size of the superimposed logo or video. |
| Manual Size V | -2000–**0**–2000 (*4) | Adjusts the vertical size of the superimposed logo or video. |
| Source Pos H | -1920–**0**–1920 | Adjusts the position in the horizontal direction of the superimposed logo or video. |
| Source Pos V | -1200–**0**–1200 | Adjusts the position in the vertical direction of the superimposed logo or video. |

(*3) The size of STILL 2 can't be reduced. 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.

(*4) 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.

# Auto Switching

| Menu item | Value (Bold: default) | Explanation |
|---|---|---|
| SW | **Off**, On | Turns the auto switching function on/off. |
| Type | Specifies the operation mode for auto switching. | |
| | **Auto Scan** | Video is switched at the specified interval. |
| | Video Follows Audio | Audio being input 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** | Switch in order of HDMI IN 1 → HDMI IN2 → STILL 1/SRT In → STILL 2 → scene A–E. |
| | Random | Switch randomly. |
| Video Input Duration | Specifies the time that the input video is shown. | |
| HDMI IN 1 | Off, 1–**7**–120 sec | If this is "Off", video switching does not affect the input. |
| HDMI IN 2 | | |
| STILL 1/SRT In | | |
| STILL 2 | | |
| Scene Duration | Sets the display time for the video that's registered to the scene. | |
| Scene A | **Off**, 1–120 sec | If this is "Off", video switching does not affect the input. |
| Scene B | | |
| Scene C | | |
| Scene D | | |
| Scene E | | |
| When Type = Video Follows Audio | | |
| Time | 1–**2**–120 sec | Specifies the time until audio detection resumes after audio has been detected to switch the video or scene. |
| Mic A Source | **AUDIO IN 1**–4, LINE IN, HEADSET Mic, HDMI IN 1–2, USB AUDIO, PLAYER/SRT In | Sets the audio source that's detected by Mic A. |
| Mic B Source | AUDIO IN 1, **AUDIO IN 2**–4, LINE IN, HEADSET Mic, HDMI IN 1–2, USB AUDIO, PLAYER/SRT In | Sets the audio source that's detected by Mic B. |
| Mic A Sense | 0–**50**–100 | Specify the detection level for the audio being input to the Mic A.<br>The higher the level, the more easily audio is detected. |
| Mic B Sense | 0–**50**–100 | Specify the detection level for the audio being input to the Mic B.<br>The higher the level, the more easily audio is detected. |
| Mic A Select | Off, **HDMI IN 1**, HDMI IN 2, STILL 1 /SRT In, STILL 2, Scene A–E | Specifies the video/scene that is output when audio is detected in Mic A. |
| Mic B Select | Off, HDMI IN 1, **HDMI IN 2**, STILL 1 /SRT In, STILL 2, Scene A–E | Specifies the video/scene that is output when audio is detected in Mic B. |
| Mic A+Mic B Select | Off, HDMI IN 1–2, STILL 1 /SRT In, STILL 2, Scene A–**B**–E | Specifies the video/scene that is output when audio is detected in both Mic A and Mic B. |
| Silent Select | **Off**, HDMI IN 1–2, STILL 1 /SRT In, STILL 2, Scene A–E | Specifies the video/scene that is output when there is no audio input in either Mic A or Mic B. |

# Import

| Menu item | Value (Bold: default) | Explanation |
|---|---|---|
| **Import Still File** | **Imports still images to an SD card.** | |
| **Still Memory** | 1–8, Safety Image | Selects the memory where the still image is to be imported. If a still image already exists in a memory, an asterisk (*) is shown, along with the filename of the still image that's saved.<br>When "Safety Image" is selected, the still image is imported as a still image that switches when you use the safety delay function (p. 47). |
| **Import from Internal** | [Enter] | Shows a screen where you can select the sample file to be imported. |
| **Import from USB Memory** | [Enter] | Shows a screen where you can select the still image file to be imported. |
| **Delete Still Memory** | [Exec] | Delete the imported still image file. |
| **Import Video File** | **Imports videos to an SD card.** | |
| **Video Memory** | 1–8 | Selects the memory where the video is to be imported.<br>If a video already exists in a memory, an asterisk (*) is shown, along with the filename and bitrate of the video that's saved. |
| **Start Time** | 00:00:00–(file length) | Set the playback start point of the imported movie. |
| **End Time** | 00:00:01–END | Set the playback end point of the imported movie. |
| **Import from USB Memory** | [Enter] | Shows a screen where you can select the movie file to be imported. |
| **Import from SD card (rec)** | [Enter] | Shows a screen where you can select the movie file (the movies recorded on the SD card) to be imported. |
| **Delete Video Memory** | [Exec] | Delete the imported movie file. |
| **Import Audio File** | **Imports audio files to an SD card.** | |
| **Audio Memory** | 1–8 | Selects the memory where the audio file is to be imported. If an audio file already exists in a memory, an asterisk (*) is shown, along with the filename of the audio file that's saved. |
| **Import from Internal** | [Enter] | Shows a screen where you can select the sample file to be imported. |
| **Import from USB Memory** | [Enter] | Shows a screen where you can select the audio file to be imported. |
| **Delete Audio Memory** | [Exec] | Delete the imported audio file. |
| **Import Capture** | **Captures a still image to the HDMI IN 1–2, STILL 1/SRT In video source and assigns it to the [STILL 2] button.** | |
| **Capture Source** | **HDMI IN 1**, HDMI IN 2, STILL 1/SRT In | Selects the video source for capturing still images. |
| | [Exec] | Capture a still image from the selected video source. |

# Audio Input

| Menu item | Value (Bold: default) | Explanation |
|---|---|---|
| **AUDIO IN 1–4** | **Adjusts the audio that is input from the AUDIO IN 1–4 jacks.** | |
| **Analog Gain** | **+4**– -38 dBu (PAD: On),<br>**-10**– -52 dBu (PAD: Off) | Adjusts the input gain (sensitivity) in the analog domain. |
| **Digital Gain** | -42.0–**0.0**– 42.0 dB | Adjusts the input gain (sensitivity) in the digital domain (after conversion from analog to digital). |
| **Level** | **-INF**, -80.0–10.0 dB | Adjusts the input volume. |
| **Phase** | **Off**, On | Reverses the phase of the audio signal. |
| **PAD** | Off, **On** | Switches the pad on/off.<br>Turning this "On" will lower the input sensitivity of the preamp. |
| **Phantom +48 V** | **Off**, On | Turns the phantom power on/off.<br>If this is "On", phantom power is supplied via the AUDIO IN connectors. |
| **MAIN Mute** | **Off**, On | Turns the mute function on/off.<br>If this is set to "On", the input audio to MAIN bus is temporarily muted. |
| **Monitor Mute** | **Off**, On | Turns the mute function on/off.<br>If this is set to "On" the input audio to Monitor bus is temporarily muted. |
| **REC Send** | **-INF**, -80.0–10.0 dB | Adjusts the amount of audio sent to the REC bus. |
| **Pan** | L50–L1, **Center**, R1–R50 | Adjusts the stereo position (pan). |
| **HPF 75 Hz** | **Off**, On | Turns the high-pass filter on/off. Cuts off low-band audio not required for the effect.<br>The cutoff frequency is 75 Hz. |
| **Gate** | **Off**, On | Turns the noise gate on/off.<br>Eliminates audio that is lower than the specified threshold level. |
| **Threshold** | -80– **-50**–0 dB | Specifies the base level used as the threshold for removing audio.<br>Audio below the level set here is removed. |
| **Release** | 30–**860**–5000 ms | Adjusts the length of time until the audio is fully attenuated after the audio level falls below the threshold. |
| **Compressor** | **Off**, On | Turns the compressor on/off.<br>Audio that exceeds the specified effect threshold level is compressed. |
| **Threshold** | -50– **-8**–0 dB | Specifies the base level at which the compressor is applied.<br>Compression is applied to audio that exceeds the threshold. |
| **Ratio** | 1.00:1, 1.12:1, 1.25:1, 1.40:1, 1.60:1, 1.80:1, 2.00:1, **2.50:1**, 3.20:1, 4.00:1, 5.60:1, 8.00:1, 16.0:1, INF:1 | Specifies the degree of compression applied to the audio.<br>The state in which no compression is applied is defined as "1". |
| **Attack** | 0–**3.0**–100 ms | Specifies the time until compression starts when audio exceeding the threshold is input. |
| **Release** | 30–**250**–5000 ms | Adjusts the length of time until compression ends after audio falls below the threshold. |
| **Makeup Gain** | -40–**0**–40 dB | Adjusts the final output volume level after applying the compressor. |
| **EQ** | **Off**, On | Turns the equalizer on/off.<br>Adjusts the volume for each frequency band. |
| **Mid Gain** | -15.0–**0.0**–+15.0 dB | Boosts or attenuates the midrange band. |
| **Mid Freq** | 20.0 Hz–**500 Hz**–20.0 kHz | Adjusts the center frequency when changing the volume in the midrange band. |
| **Mid Q** | 0.5, **1.0**, 2.0, 4.0, 8.0, 16.0 | Adjusts the frequency bandwidth when boosting or attenuating the midrange band. |
| **Lo Gain** | -15.0–**0.0**–+15.0 dB | Boosts or attenuates the low band. |
| **Lo Freq** | 20.0 Hz–**100 Hz**–2.0 kHz | Adjusts the center frequency when changing the volume in the low band. |
| **Hi Gain** | -15.0–**0.0**–+15.0 dB | Boosts or attenuates the high band. |
| **Hi Freq** | 1.0–**10.0**–20.0 kHz | Adjusts the center frequency when changing the volume in the high band. |
| **Load Preset** | Display a preset list for the PAD, Analog Gain, HPF 75 Hz and EQ.<br>When you select a preset, the settings of each effect are overwritten. | |
| | Line Level +4 dBu | Flat settings with no effects with a nominal input level of +4 dBu. |
| | Line Level -10 dBu | Flat settings with no effects with a nominal input level of -10 dBu. |
| | Condenser Mic Speech | Effects for condenser mic to makes a spoken voice easier to understand. |
| | Condenser Mic Vocal | Effects for condenser mic to enhances a singing voice. |
| | Dynamic Mic Speech | Effects for dynamic mic to makes a spoken voice easier to understand. |
| | Dynamic Mic Vocal | Effects for dynamic mic to enhances a singing voice. |

| Menu item | Value (Bold: default) | Explanation |
|---|---|---|
| **LINE IN** | **Adjusts the audio that is input from the AUDIO IN 5/L, 6/R (LINE IN) jacks.** | |
| Mono | Converts the input audio from stereo to mono. | |
| | **Off** | Sends the stereo input audio without change. |
| | L Only | The audio of the L channel is sent to both L and R. |
| | R Only | The audio of the R channel is sent to both L and R. |
| | LR Mix | The audio of the L channel and R channel is mixed, and sent to both L and R. |
| Digital Gain | -42.0–**0.0**– 42.0 dB | Adjusts the input gain (sensitivity) in the digital domain (after conversion from analog to digital). |
| Level | **-INF**, -80.0–10.0 dB | Adjusts the input volume. |
| Phase | **Off**, On | Reverses the phase of the audio signal. |
| MAIN Mute | **Off**, On | Turns the mute function on/off.<br>If this is set to "On", the input audio to MAIN bus is temporarily muted. |
| Monitor Mute | **Off**, On | Turns the mute function on/off.<br>If this is set to "On" the input audio to Monitor bus is temporarily muted. |
| REC Send | **-INF**, -80.0–10.0 dB | Adjusts the amount of audio sent to the REC bus. |
| HPF 75 Hz | **Off**, On | Turns the high-pass filter on/off. Cuts off low-band audio not required for the effect.<br>The cutoff frequency is 75 Hz. |
| EQ | **Off**, On | Turns the equalizer on/off.<br>Adjusts the volume for each frequency band. |
| Mid Gain | -15.0–**0.0**–+15.0 dB | Boosts or attenuates the midrange band. |
| Mid Freq | 20.0 Hz–**500 Hz**–20.0 kHz | Adjusts the center frequency when changing the volume in the midrange band. |
| Mid Q | 0.5, **1.0**, 2.0, 4.0, 8.0, 16.0 | Adjusts the frequency bandwidth when boosting or attenuating the midrange band. |
| Lo Gain | -15.0–**0.0**–+15.0 dB | Boosts or attenuates the low band. |
| Lo Freq | 20.0 Hz–**100 Hz**–2.0 kHz | Adjusts the center frequency when changing the volume in the low band. |
| Hi Gain | -15.0–**0.0**–+15.0 dB | Boosts or attenuates the high band. |
| Hi Freq | 1.0–**10.0**–20.0 kHz | Adjusts the center frequency when changing the volume in the high band. |
| **HEADSET Mic** | **Adjusts the audio that is input from the HEADSET (headset mic) jacks.** | |
| Analog Gain | -10– -28– -52 dBu | Adjusts the input gain (sensitivity) in the analog domain. |
| Digital Gain | -42.0–**0.0**–42.0 dB | Adjusts the input gain (sensitivity) in the digital domain (after conversion from analog to digital). |
| Level | -INF, -80.0–**0.0**–10.0 dB | Adjusts the input volume. |
| Phase | **Off**, On | Reverses the phase of the audio signal. |
| MAIN Mute | Off, **On** | Turns the mute function on/off.<br>If this is set to "On", the input audio to MAIN bus is temporarily muted. |
| Monitor Mute | Off, **On** | Turns the mute function on/off.<br>If this is set to "On" the input audio to Monitor bus is temporarily muted. |
| REC Send | **-INF**, -80.0–10.0 dB | Adjusts the amount of audio sent to the REC bus. |
| Pan | L50–L1, **Center**, R1–R50 | Adjusts the stereo position (pan). |
| HPF 75 Hz | **Off**, On | Turns the high-pass filter on/off. Cuts off low-band audio not required for the effect.<br>The cutoff frequency is 75 Hz. |
| Gate | **Off**, On | Turns the noise gate on/off.<br>Eliminates audio that is lower than the specified threshold level. |
| Threshold | -80– **-50**–0 dB | Specifies the base level used as the threshold for removing audio.<br>Audio below the level set here is removed. |
| Release | 30–**860**–5000 ms | Adjusts the length of time until the audio is fully attenuated after the audio level falls below the threshold. |
| Compressor | **Off**, On | Turns the compressor on/off.<br>Audio that exceeds the specified effect threshold level is compressed. |
| Threshold | -50–**-8**–0 dB | Specifies the base level at which the compressor is applied.<br>Compression is applied to audio that exceeds the threshold. |
| Ratio | 1.00:1, 1.12:1, 1.25:1, 1.40:1, 1.60:1, 1.80:1, 2.00:1, **2.50:1**, 3.20:1, 4.00:1, 5.60:1, 8.00:1, 16.0:1, INF:1 | Specifies the degree of compression applied to the audio.<br>The state in which no compression is applied is defined as "1". |
| Attack | 0–**3.0**–100 ms | Specifies the time until compression starts when audio exceeding the threshold is input. |
| Release | 30–**250**–5000 ms | Adjusts the length of time until compression ends after audio falls below the threshold. |
| Makeup Gain | -40–**0**–40 dB | Adjusts the final output volume level after applying the compressor. |

| Menu item | Value (Bold: default) | Explanation |
|---|---|---|
| EQ | **Off**, On | Turns the equalizer on/off.<br>Adjusts the volume for each frequency band. |
| Mid Gain | -15.0–**0.0**–+15.0 dB | Boosts or attenuates the midrange band. |
| Mid Freq | 20.0 Hz–**500 Hz**–20.0 kHz | Adjusts the center frequency when changing the volume in the midrange band. |
| Mid Q | 0.5, **1.0**, 2.0, 4.0, 8.0, 16.0 | Adjusts the frequency bandwidth when boosting or attenuating the midrange band. |
| Lo Gain | -15.0–**0.0**–+15.0 dB | Boosts or attenuates the low band. |
| Lo Freq | 20.0 Hz–**100 Hz**–2.0 kHz | Adjusts the center frequency when changing the volume in the low band. |
| Hi Gain | -15.0–**0.0**–+15.0 dB | Boosts or attenuates the high band. |
| Hi Freq | 1.0–**10.0**–20.0 kHz | Adjusts the center frequency when changing the volume in the high band. |
| **Analog Mix** | **Adjusts the audio input from AUDIO IN 1–4, LINE IN and the HEADSET mic jacks all at once.** | |
| Delay | **0.0**–166.6 ms<br>(**0.0**–9.9/8.3 frame) (*5) | Adjusts the delay time of the audio. |
| **HDMI IN 1, 2** | **Adjusts the audio that is input from the HDMI IN 1, 2 connectors.** | |
| Mono | Converts the input audio from stereo to mono. | |
| | **Off** | Sends the stereo input audio without change. |
| | L Only | The audio of the L channel is sent to both L and R. |
| | R Only | The audio of the R channel is sent to both L and R. |
| | LR Mix | The audio of the L channel and R channel is mixed, and sent to both L and R. |
| Digital Gain | -42.0–**0.0**– 42.0 dB | Adjusts the input gain (sensitivity) in the digital domain (after conversion from analog to digital). |
| Level | **-INF**, -80.0–10.0 dB | Adjusts the input volume. |
| Phase | **Off**, On | Reverses the phase of the audio signal. |
| MAIN Mute | **Off**, On | Turns the mute function on/off.<br>If this is set to "On", the input audio to MAIN bus is temporarily muted. |
| Monitor Mute | **Off**, On | Turns the mute function on/off.<br>If this is set to "On" the input audio to Monitor bus is temporarily muted. |
| REC Send | **-INF**, -80.0–10.0 dB | Adjusts the amount of audio sent to the REC bus. |
| Delay | **0.0**–83.3 ms<br>(**0.0**–4.9/4.1 frame) (*5) | Adjusts the delay time of the audio. |
| EQ | **Off**, On | Turns the equalizer on/off.<br>Adjusts the volume for each frequency band. |
| Mid Gain | -15.0–**0.0**–+15.0 dB | Boosts or attenuates the midrange band. |
| Mid Freq | 20.0 Hz–**500 Hz**–20.0 kHz | Adjusts the center frequency when changing the volume in the midrange band. |
| Mid Q | 0.5, **1.0**, 2.0, 4.0, 8.0, 16.0 | Adjusts the frequency bandwidth when boosting or attenuating the midrange band. |
| Lo Gain | -15.0–**0.0**–+15.0 dB | Boosts or attenuates the low band. |
| Lo Freq | 20.0 Hz–**100 Hz**–2.0 kHz | Adjusts the center frequency when changing the volume in the low band. |
| Hi Gain | -15.0–**0.0**–+15.0 dB | Boosts or attenuates the high band. |
| Hi Freq | 1.0–**10.0**–20.0 kHz | Adjusts the center frequency when changing the volume in the high band. |

(*5) The number of frames shown in parentheses differs depending on the System menu's "Frame Rate" setting.

| PLAYER/SRT In | **Adjusts the playback volume of the audio, video files on the SD card, or audio from SRT In.** | |
|---|---|---|
| Digital Gain | -42.0–**0.0**– 42.0 dB | Adjusts the input gain (sensitivity) in the digital domain (after conversion from analog to digital). |
| Level | **-INF**, -80.0–10.0 dB | Adjusts the input volume. |
| MAIN Mute | **Off**, On | Turns the mute function on/off.<br>If this is set to "On", the input audio to MAIN bus is temporarily muted. |
| Monitor Mute | **Off**, On | Turns the mute function on/off.<br>If this is set to "On" the input audio to Monitor bus is temporarily muted. |
| REC Send | **-INF**, -80.0–10.0 dB | Adjusts the amount of audio sent to the REC bus. |
| EQ | **Off**, On | Turns the equalizer on/off.<br>Adjusts the volume for each frequency band. |
| Mid Gain | -15.0–**0.0**–+15.0 dB | Boosts or attenuates the midrange band. |
| Mid Freq | 20.0 Hz–**500 Hz**–20.0 kHz | Adjusts the center frequency when changing the volume in the midrange band. |
| Mid Q | 0.5, **1.0**, 2.0, 4.0, 8.0, 16.0 | Adjusts the frequency bandwidth when boosting or attenuating the midrange band. |
| Lo Gain | -15.0–**0.0**–+15.0 dB | Boosts or attenuates the low band. |
| Lo Freq | 20.0 Hz–**100 Hz**–2.0 kHz | Adjusts the center frequency when changing the volume in the low band. |
| Hi Gain | -15.0–**0.0**–+15.0 dB | Boosts or attenuates the high band. |
| Hi Freq | 1.0–**10.0**–20.0 kHz | Adjusts the center frequency when changing the volume in the high band. |

| Menu item | Value (Bold: default) | Explanation |
|---|---|---|
| **USB AUDIO** | **Adjusts the audio that is input from the USB VIDEO IN connector.** | |
| **Digital Gain** | -42.0–**0.0**– 42.0 dB | Adjusts the input gain (sensitivity) in the digital domain (after conversion from analog to digital). |
| **Level** | **-INF**, -80.0–10.0 dB | Adjusts the input volume. |
| **Phase** | **Off**, On | Reverses the phase of the audio signal. |
| **MAIN Mute** | **Off**, On | Turns the mute function on/off.<br>If this is set to "On", the input audio to MAIN bus is temporarily muted. |
| **Monitor Mute** | **Off**, On | Turns the mute function on/off.<br>If this is set to "On" the input audio to Monitor bus is temporarily muted. |
| **REC Send** | **-INF**, -80.0–10.0 dB | Adjusts the amount of audio sent to the REC bus. |
| **HPF 75 Hz** | **Off**, On | Turns the high-pass filter on/off. Cuts off low-band audio not required for the effect.<br>The cutoff frequency is 75 Hz. |
| **Gate** | **Off**, On | Turns the noise gate on/off.<br>Eliminates audio that is lower than the specified threshold level. |
| **Threshold** | -80–**-50**–0 dB | Specifies the base level used as the threshold for removing audio.<br>Audio below the level set here is removed. |
| **Release** | 30–**860**–5000 ms | Adjusts the length of time until the audio is fully attenuated after the audio level falls below the threshold. |
| **Compressor** | **Off**, On | Turns the compressor on/off.<br>Audio that exceeds the specified effect threshold level is compressed. |
| **Threshold** | -50– **-8**–0 dB | Specifies the base level at which the compressor is applied.<br>Compression is applied to audio that exceeds the threshold. |
| **Ratio** | 1.00:1, 1.12:1, 1.25:1, 1.40:1, 1.60:1, 1.80:1, 2.00:1, **2.50:1**, 3.20:1, 4.00:1, 5.60:1, 8.00:1, 16.0:1, INF:1 | Specifies the degree of compression applied to the audio.<br>The state in which no compression is applied is defined as "1". |
| **Attack** | 0–**3.0**–100 ms | Specifies the time until compression starts when audio exceeding the threshold is input. |
| **Release** | 30–**250**–5000 ms | Adjusts the length of time until compression ends after audio falls below the threshold. |
| **Makeup Gain** | -40–**0**–40 dB | Adjusts the final output volume level after applying the compressor. |
| **EQ** | **Off**, On | Turns the equalizer on/off.<br>Adjusts the volume for each frequency band. |
| **Mid Gain** | -15.0–**0.0**–+15.0 dB | Boosts or attenuates the midrange band. |
| **Mid Freq** | 20.0 Hz–**500 Hz**–20.0 kHz | Adjusts the center frequency when changing the volume in the midrange band. |
| **Mid Q** | 0.5, **1.0**, 2.0, 4.0, 8.0, 16.0 | Adjusts the frequency bandwidth when boosting or attenuating the midrange band. |
| **Lo Gain** | -15.0–**0.0**–+15.0 dB | Boosts or attenuates the low band. |
| **Lo Freq** | 20.0 Hz–**100 Hz**–2.0 kHz | Adjusts the center frequency when changing the volume in the low band. |
| **Hi Gain** | -15.0–**0.0**–+15.0 dB | Boosts or attenuates the high band. |
| **Hi Freq** | 1.0–**10.0**–20.0 kHz | Adjusts the center frequency when changing the volume in the high band. |

# Audio Output

| Menu item | Value (Bold: default) | Explanation |
|---|---|---|
| **Bus Select** | **Specifies the audio bus that's assigned to each output connector.** | |
| HDMI OUT MAIN | **MAIN Bus**, Monitor Bus, REC Bus, Test Tone<br>* PHONES: **Monitor Bus**, AUDIO REC, **Main Bus** | Specifies the audio bus that's assigned to the HDMI OUT MAIN connector. |
| HDMI OUT PVW | | Specifies the audio bus that's assigned to the HDMI OUT PVW connector. |
| LINE OUT | | Specifies the audio bus that's assigned to the AUDIO OUT (LINE OUT) jacks. |
| PHONES | | Specifies the audio bus that's assigned to the PHONES jack. |
| VIDEO REC/STREAM | | Specifies the audio bus that's used for video streaming/recording. |
| AUDIO REC | | Specifies the audio bus that's used for audio recording. |

| Bus | Explanation |
|---|---|
| MAIN Bus | This bus mixes and outputs all input audio. The audio signal is the same as that of the main output. |
| Monitor Bus | Use this bus mainly when monitoring the audio through headphones.<br>You can also listen to the audio of other buses through headphones.<br>The audio that's sent to the Monitor bus is the same as the audio that's sent to the MAIN bus (the audio signal that goes through the MAIN Mute, Audio Follows Video, fader, Auto Mixing and Pan).<br>You can configure whether the audio is sent to the Monitor bus or not in Monitor Mute (p. 63) for each audio input.<br>* If the MAIN Mute (p. 63) is "On" or if the fader volume is all the way down, the audio signal is not sent to the Monitor bus. |
| REC Bus | This bus is mainly used as an Audio REC source (WAV recording).<br>The audio signal before passing through the MAIN Mute and fader is sent to the Monitor bus.<br>Even if MAIN Mute is "On" or the fader is all the way down, the audio is recorded as a WAV file.<br>This lets you correct the issue during post-editing, if for example you make a mistake during livestreaming. |
| Test Tone | You can output a test tone that is useful for making volume adjustments. |

| MAIN Bus | Adjusts the audio of the MAIN bus. | |
|---|---|---|
| Level | -**INF**, -80.0–10.0 dB | Adjusts the output volume. |
| Mute | **Off**, On | Turns the mute function on/off.<br>If this is set to "On", the output audio is temporarily muted. |
| Limiter | **Off**, On | Turns the limiter on/off.<br>Limits the output volume so that it does not exceed the specified effect threshold level. |
| Threshold | -40– **-6**–0 dB | Specifies the base level at which the limiter is applied.<br>Compression is applied to audio that exceeds the threshold.<br>The volume level of audio that is output is limited so as to stay to below the threshold. |
| Delay | **0.0**–166.6 ms<br>(**0.0**–9.9/8.3 frame) (*6) | Adjusts the delay time of the audio. |
| EQ | **Off**, On | Turns the equalizer on/off.<br>Adjusts the volume for each frequency band. |
| Mid Gain | -15.0–**0.0**–+15.0 dB | Boosts or attenuates the midrange band. |
| Mid Freq | 20.0 Hz–**500 Hz**–20.0 kHz | Adjusts the center frequency when changing the volume in the midrange band. |
| Mid Q | 0.5, **1.0**, 2.0, 4.0, 8.0, 16.0 | Adjusts the frequency bandwidth when boosting or attenuating the midrange band. |
| Lo Gain | -15.0–**0.0**–+15.0 dB | Boosts or attenuates the low band. |
| Lo Freq | 20.0 Hz–**100 Hz**–2.0 kHz | Adjusts the center frequency when changing the volume in the low band. |
| Hi Gain | -15.0–**0.0**–+15.0 dB | Boosts or attenuates the high band. |
| Hi Freq | 1.0–**10.0**–20.0 kHz | Adjusts the center frequency when changing the volume in the high band. |
| **Monitor Bus** | **Adjusts the audio of the Monitor bus.** | |
| Level | -INF, -80.0–**0.0**, 10.0 dB | Adjusts the output volume. |
| Mute | **Off**, On | Turns the mute function on/off.<br>If this is set to "On", the output audio is temporarily muted. |
| Limiter | **Off**, On | Turns the limiter on/off.<br>Limits the output volume so that it does not exceed the specified effect threshold level. |
| Threshold | -40– **-6**–0 dB | Specifies the base level at which the limiter is applied.<br>Compression is applied to audio that exceeds the threshold.<br>The volume level of audio that is output is limited so as to stay to below the threshold. |

(*6) The number of frames shown in parentheses differs depending on the System menu's "Frame Rate" setting.

| Menu item | Value (Bold: default) | Explanation |
|---|---|---|
| EQ | **Off**, On | Turns the equalizer on/off.<br>Adjusts the volume for each frequency band. |
| Mid Gain | -15.0–**0.0**–+15.0 dB | Boosts or attenuates the midrange band. |
| Mid Freq | 20.0 Hz–**500 Hz**–20.0 kHz | Adjusts the center frequency when changing the volume in the midrange band. |
| Mid Q | 0.5, **1.0**, 2.0, 4.0, 8.0, 16.0 | Adjusts the frequency bandwidth when boosting or attenuating the midrange band. |
| Lo Gain | -15.0–**0.0**–+15.0 dB | Boosts or attenuates the low band. |
| Lo Freq | 20.0 Hz–**100 Hz**–2.0 kHz | Adjusts the center frequency when changing the volume in the low band. |
| Hi Gain | -15.0–**0.0**–+15.0 dB | Boosts or attenuates the high band. |
| Hi Freq | 1.0–**10.0**–20.0 kHz | Adjusts the center frequency when changing the volume in the high band. |
| **Test Tone** | **These are the settings for the test tone.** | |
| Test Tone | Specifies the test tone. | |
| | Off | No test tone is output. |
| | L:1k+R:1k | L channel 1 kHz, R channel: 1 kHz |
| | L:1k+R:2k | L channel 1 kHz, R channel: 2 kHz |
| Level | -INF–**-20.0**–0.0 dB | Specifies the level of test tone. |

# Audio Follows Video

| Menu item | Value (Bold: default) | Explanation |
|---|---|---|
| Audio Follow SW | Turns the audio follow function on/off. Audio follow is a function that automatically switches the audio output in tandem with video switching.<br>* When "Video Follows Audio" is selected for the Auto Switching Type (p. 59) , the audio follow function is disabled. | |
| HDMI IN 1, 2 | Off | The audio is always output regardless of the input video selection. |
| STILL 1/SRT In, STILL 2 | **On** | The input video selection and audio are switched together. |
| Video Source Select | For each audio source, these settings specify the input video that will use the audio follow function. | |
| AUDIO IN 1–4<br>LINE IN<br>HEADSET Mic<br>HDMI IN 1, 2<br>USB AUDIO<br>PLAYER/SRT In | **Off**, HDMI IN 1, HDMI IN 2, STILL 1/SRT In, STILL 2 | 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. |

# Auto Mixing

| Menu item | Value (Bold: default) | Explanation |
|---|---|---|
| SW | **Off**, On | Turns the auto mixing function on/off.<br>Auto mixing is a function that automatically controls the volume adjustments. |
| AUDIO IN 1<br>AUDIO IN 2<br>AUDIO IN 3<br>AUDIO IN 4<br>HEADSET Mic | Off, **On** | Specifies whether Auto Mixing is applied (On) or not applied (Off). |
| Weight | | |
| AUDIO IN 1<br>AUDIO IN 2<br>AUDIO IN 3<br>AUDIO IN 4<br>HEADSET Mic | 0–**100%** | Specifies the weight level (the priority for volume distribution).<br>* Setting the weight level to "0%" results in no audio output. |

# Audio Function

| Menu item | Value (Bold: default) | Explanation |
|---|---|---|
| **Audio Function 1–5** | | **Specifies the function that is assigned to the AUDIO FUNCTION [1]–[5] button. The current settings are shown in at the right side of the screen.** |
| **Assign** | Sets how the AUDIO FUNCTION [1]–[5] buttons are used. | |
| | None | No function is assigned. |
| | Auto Mixing | Switches the Auto Mixing feature on or off. |
| | Audio Player | Plays/stops the audio file. |
| | Display Analog Gain | Displays the Analog Gain screen on parameter area. |
| | Display Mute | Displays the Mute screen on parameter area. |
| | Display Delay | Displays the Delay screen on parameter area. |
| | Display Audio Setup | Displays the Audio Setup (either LINE IN, USB AUDIO, PLAYER/SRT In, HEADSET Mic, MAIN Bus, or Monitor Bus) screen on parameter area. |
| **When Assign = Auto Mixing, Display Analog Gain, Display Delay** | | |
| **LED Color** | Red, Green, Blue, Cyan, Magenta, Yellow | Specifies the illumination color of the AUDIO FUNCTION [1]–[5] button. |
| **When Assign = Audio Player** | | |
| **LED Color** | Red, Green, Blue, Cyan, Magenta, Yellow | Specifies the illumination color of the AUDIO FUNCTION [1]–[5] button. |
| **SW Mode** | Specifies the operation of the AUDIO FUNCTION [1]–[5] 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 Memory** | 1–8 | Selects the memory number in which the audio file is saved. |
| **Loop** | Off, **On** | Turns loop playback on/off. |
| **Level** | -INF–**0.0**–0.0 dB | Adjusts the playback volume of the audio file. |
| **Fade In** | **Off**, 0.1–10.0 sec | Specifies the fade-in time of the audio file. |
| **Fade Out** | Off, 0.1–**3.0**–10.0 sec | Specifies the fade-out time of the audio file. |
| **When Assign = Display Mute** | | |
| **LED Color** | Red, Green, Blue, Cyan, Magenta, Yellow | Specifies the illumination color of the AUDIO FUNCTION [1]–[5] button. |
| **Display Target** | Configures the Mute screens that are shown in the parameter area. | |
| | **Monitor Mute - AUDIO IN** | Displays the Monitor Mute screen of AUDIO IN 1-4 on parameter area. |
| | Monitor Mute - HDMI IN | Displays the Monitor Mute screen of HDMI IN 1 and HDMI IN 2 on parameter area. |
| | Monitor Mute - LINE IN | Displays the Monitor Mute screen of LINE IN, USB AUDIO, PLAYER/SRT In, and HEADSET Mic on parameter area. |
| | MAIN Mute - LINE IN | Displays the MAIN Mute screen of LINE IN, USB AUDIO, PLAYER/SRT In, and HEADSET Mic on parameter area. |
| **When Assign = Display Audio Setup** | | |
| **LED Color** | Red, Green, Blue, Cyan, Magenta, Yellow | Specifies the illumination color of the AUDIO FUNCTION [1]–[5] button. |
| **Display Target** | LINE IN, USB AUDIO, PLAYER/SRT In, HEADSET Mic, **MAIN Bus**, Monitor Bus | Sets the display contents of the Audio Setup screen. |
| **Audio Function Copy** | | **Copy the settings from one Audio Function to another.** |
| **Source** | Audio Function 1–5 | Specifies the copy-source Audio Function. (default: 1) |
| **Destination** | | Specifies the copy-destination Audio Function. (default: 2) |
| **Copy** | [Exec] | Executes the Audio Function copy. |

## The factory settings for Audio Function 1–5

1

| Menu item | Value |
|---|---|
| Assign | Auto Mixing |
| LED Color | Magenta |

2

| Menu item | Value |
|---|---|
| Assign | Display Analog Gain |
| LED Color | Red |

3

| Menu item | Value |
|---|---|
| Assign | Display Mute |
| LED Color | Red |
| Display Target | Monitor Mute - AUDIO IN |

4

| Menu item | Value |
|---|---|
| Assign | Display Delay |
| LED Color | Green |

5

| Menu item | Value |
|---|---|
| Assign | Display Audio Setup |
| LED Color | Cyan |
| Display Target | MAIN Bus |

# Network

| Menu item | Value (Bold: default) | Explanation |
|---|---|---|
| Priority | **LAN**, Tethering | Sets whether to prioritize the LAN connection or your smartphone tethering when streaming. |
| LAN Setup | [Enter] | Displays the LAN Setup screen. |

| Menu item | Value (Bold: default) | Explanation |
|---|---|---|
| Configure | Selects how settings are made for the IP address, subnet mask, default gateway, and DNS server. | |
| | **Using DHCP** | The information needed for connecting to the network is obtained automatically from the DHCP server. |
| | Manually | This is to be configured manually. |
| When Configure = Manually | | |
| IP Address | ---.---.---.--- | Specifies the IP address. |
| Subnet Mask | | Specifies the subnet mask. |
| Default Gateway | | Specifies the default gateway. |
| DNS Server | | Specifies the default DNS server. |

| | | |
|---|---|---|
| Start Tethering/ Stop Tethering | [Exec] | Starts/stops tethering with your smartphone. |
| Network Information | [Enter] | Displays the Network Information screen. |

| Menu item | Value (Bold: default) | Explanation |
|---|---|---|
| Link Status | ---.---.---.--- | Displays the network connection status. |
| IP Address | | Displays the IP address. |
| Subnet Mask | | Displays the subnet mask. |
| Default Gateway | | Displays the default gateway. |
| DNS Server | | Displays the default DNS server. |

| | | |
|---|---|---|
| MAC Address | --:--:--:--:--:-- | Displays the MAC address of SR-20HD. |

# Stream

| Menu item | Value (Bold: default) | Explanation |
|---|---|---|
| **When SRT Out = Disable** | | |
| **SRT Out** | **Disable**, Enable | When using Service RTMP 1, 2, set this to "Disable". |
| **Service RTMP 1, 2** | Sets which platform is used for livestreaming. | |
| **Service RTMP** | **Off** | Livestreaming is not used. |
| | Custom | Custom settings are used for streaming. |
| | YouTube Live | Uses YouTube Live for streaming. |
| | Facebook Live | Uses Facebook Live for streaming. |
| | Twitch | Uses Twitch for streaming. |
| **URL** | | Specifies and displays URL of the streaming server. |
| **Stream Key** | | Specifies and displays the stream key. |
| **Use Web App** | [Enter] | Uses a Web app to set the streaming server URL and stream key. |
| * Use a USB keyboard connected to the USB CONTROL port to input this information. | | |
| **When SRT Out = Enable, Mode = Caller** | | |
| **SRT Out** | **Disable**, Enable | When using Service SRT, set this to "Enable". |
| **Service SRT** | | |
| **Mode** | Caller, **Listener** | Sets the SRT mode to "Caller". |
| **Remote IP Address** | 0.0.0.0 | Sets the IP address of the SRT receiving device (listener). |
| **Remote Port** | 0 – **2000** – 65535 | Sets the port number of the SRT receiving device (listener). |
| **Latency** | **80** – 8000ms | Sets the length (delay time) of the SRT retransmission buffer.<br>Out of the latencies set for the receiving and transmitting devices, the one with the larger value takes precedence. |
| **Stream ID** | | Sets the stream ID to the same ID as that of the SRT receiving device (listener). |
| **Encryption** | **None**, AES-128, AES-192, AES-256 | Sets the encryption method for encrypting video.<br>* The transmitting and receiving device must both use the same the encryption method. |
| **Passphrase** | | Sets the passphrase when Encryption is set to anything other than "None".<br>* The transmitting and receiving device must both use the same the passphrase. |
| **Use Web App** | [Enter] | You can use the web app to configure the above settings for SRT. |
| * Use a USB keyboard connected to the USB CONTROL port to input Passphrase and Stream ID. | | |
| **When SRT Out = Enable, Mode = Listener** | | |
| **SRT Out** | **Disable**, Enable | When using Service SRT, set this to "Enable". |
| **Service SRT** | | |
| **Mode** | Caller, **Listener** | Sets the SRT mode to "Listener". |
| **Local Port** | 0 – **5000** – 65535 | Sets the port number used for listening for SRT connections |
| **Latency** | **80** – 8000ms | Sets the length (delay time) of the SRT retransmission buffer.<br>Out of the latencies set for the receiving and transmitting devices, the one with the larger value takes precedence. |
| **Encryption** | **None**, AES-128, AES-192, AES-256 | Sets the encryption method for encrypting video.<br>* The transmitting and receiving device must both use the same the encryption method. |
| **Passphrase** | | Sets the passphrase when Encryption is set to anything other than "None".<br>* The transmitting and receiving device must both use the same the passphrase. |
| **Use Web App** | [Enter] | You can use the web app to configure the above settings for SRT. |
| * Use a USB keyboard connected to the USB CONTROL port to input Passphrase. | | |
| **Encode Profile** | **High**, Main, Baseline | Specifies the profile of video encoding. |
| **Encode Mode** | This sets the optimal encoding method for the video. | |
| | Resolution | Suitable for presentations and other video contents that don't have a lot of motion. |
| | Motion | Suitable for sports programs, gaming videos and the like that have a lot of motion. |
| **Video Bitrate** | 1,000–**6,000**–20,000 kbps | Specifies the target bitrate of video encoding. |
| **Audio Bitrate** | 32, 48, 64, 96, **128**, 160, 192, 224, 256, 320, 384 | Specifies the target bitrate of audio encoding. |
| **Stream Delay** | **Off**, 5 sec–60 sec (five-second intervals) | Sets the streaming delay time that's used by the safety delay function (p. 47). |

| Menu item | Value (Bold: default) | Explanation |
|---|---|---|
| STAND BY Setting | Sets the state of the audio player, video input selection and key composition when STAND BY is selected. | |
| Audio Player | **None** | This does not change the play/stop state of the audio player. |
| | Start Audio Player AF1–5 | Plays the audio player that's set for Audio Function 1–5. |
| | Stop Audio Player | Stops Audio Player. |
| Video Player | **None** | This does not change the play/stop state of the video player. |
| | Start Video Player VF A–E | Plays the video player that's set for Video Function A–E. |
| | Stop Audio Player | Stops Video Player. |
| Video Input Select | **None** | This does not change the selection state for video input. |
| | HDMI IN 1, 2 | Switches to HDMI IN 1, 2. |
| | STILL 1/SRT In, STILL 2 | Switches to STILL 1/SRT In, STILL 2. |
| | Scene A–E | Selects the Scene A–E. |
| Key | **None** | The key compositing on/off setting is not changed. |
| | Off | Turns off key composition. |
| | On | Turns on key composition. |
| ON AIR Setting | Sets the state of the audio player, video input selection and key composition when ON AIR is selected. | |
| Audio Player | **None** | This does not change the play/stop state of the audio player. |
| | Start Audio Player AF1–5 | Plays the audio player that's set for Audio Function 1–5. |
| | Stop Audio Player | Stops Audio Player. |
| Video Player | **None** | This does not change the play/stop state of the video player. |
| | Start Video Player VF A–E | Plays the video player that's set for Video Function A–E. |
| | Stop Audio Player | Stops Video Player. |
| Video Input Select | **None** | This does not change the selection state for video input. |
| | HDMI IN 1, 2 | Switches to HDMI IN 1, 2. |
| | STILL 1/SRT In, STILL 2 | Switches to STILL 1/SRT In, STILL 2. |
| | Scene A–E | Selects the Scene A–E. |
| Key | **None** | The key compositing on/off setting is not changed. |
| | Off | Turns off key composition. |
| | On | Turns on key composition. |

# Record

| Menu item | Value (Bold: default) | Explanation |
|---|---|---|
| AUDIO REC (WAV) | **Off**, On | Sets whether to record a WAV file (ON) or not (OFF). |
| VIDEO REC (MP4) | **Off**, On | Sets whether to record an MP4 file (ON) or not (OFF). |

# SD Card/USB Memory

| Menu item | Value (Bold: default) | Explanation |
|---|---|---|
| SD Card | | |
| Access Type | **A**, B | Sets the method of accessing the SD card.<br>If the SR-20HD does not recognize the SD card, change the "Access Type" setting.<br>* The setting is applied at startup. |
| Eject | [Exec] | Safely ejects and allows you to remove the SD card. |
| Format | [Exec] | Formats an inserted SD card. |
| Speed Test | [Exec] | Measures the data write speed to the SD card. |
| USB Memory | | |
| Eject | [Exec] | Safely ejects and allows you to remove the USB flash drive. |
| Load Settings | [Enter] | Loads a settings file saved on a SD card back into this unit. |
| Save Settings | [Enter] | Saves the settings of this unit by overwriting an existing file on a SD card. |
| Save Settings as | [Enter] | Saves the settings of this unit with a name you specify to a SD card. |
| Delete Settings | [Enter] | Deletes a settings file saved on a SD card. |

# System

| Menu item | Value (Bold: default) | Explanation |
|---|---|---|
| Frame Rate | **59.94 Hz**, 50 Hz | Specifies the frame rate. |
| Stream/Rec Mode | Sets the streaming/video recording mode. | |
| | **Standard** | You can stream and video record up to 1080p29.97 or 1080p25 with up to 10,000 kbps.<br>USB VIDEO input and video playback functions can be used. |
| | High Quality | You can stream and video record up to 1080p59.94 or 1080p50 with up to 20,000 kbps.<br>USB VIDEO input and video playback functions cannot be used. |
| | SRT In Only | You can input SRT up to 1080p60 with up to 20,000 kbps.<br>Stream, video record, USB VIDEO input and video playback functions cannot be used. |
| Stream/Rec Format | Sets the streaming/video recording format. | |
| | 1080p59.94 | Frame Rate: 59.94 Hz Stream/Rec Mode: High Quality only |
| | 1080p50 | Frame Rate: 50 Hz Stream/Rec Mode: High Quality only |
| | 1080p29.97 | Frame Rate: 59.94 Hz |
| | 720p59.94 | Frame Rate: 59.94 Hz |
| | 720p29.97 | Frame Rate: 59.94 Hz |
| | 1080p25 | Frame Rate: 50 Hz |
| | 720p50 | Frame Rate: 50 Hz |
| | 720p25 | Frame Rate: 50 Hz |
| USB VIDEO IN Mode | Specifies the operation mode for USB VIDEO IN port. | |
| | **Video Only** | Only video is input. |
| | Audio Only | Only USB audio is input. |
| Date & Time Settings | [Enter] | Sets the date and time. |

| Menu item | Value (Bold: default) | Explanation |
|---|---|---|
| (Date/Time) | – | Displays the date and time. |
| Configure | Selects how the time is set. | |
| | Manual | The time is set manually. |
| | **Using NTP** | The time is set by retrieving the time from an NTP server. |
| Time Zone | – | Sets the time zone. |
| Date Format | Month/Day/Year<br>Day/Month/Year<br>Year/Month/Day | Sets the format used for displaying the date. |
| NTP Server | – | Specifies the default NTP server. |
| Manual | [ENTER] | The time is set manually. |

| | | |
|---|---|---|
| Test Pattern | **Off**, 75% Color Bar, 100% Color Bar, Ramp, Step, Hatch | Specifies the test pattern. |
| Auto Input Detect | **Off**, On | Turns the auto input detect function on/off.<br>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. |

<table>
<tr><th>Menu item</th><th>Value (Bold: default)</th><th>Explanation</th></tr>
<tr><td>Panel Lock</td><td>[Enter]</td><td>Sets whether panel lock is enabled (On) or disabled (Off) for the controls in question.</td></tr>
<tr><td colspan="3">
<table>
<tr><th>Menu item</th><th>Value (Bold: default)</th><th>Explanation</th></tr>
<tr><td>All</td><td>Off, On</td><td>All controls in the Panel Lock menu</td></tr>
<tr><td>MENU</td><td>Off, On</td><td>[MENU] button</td></tr>
<tr><td>VALUE</td><td>Off, On</td><td>[VALUE/CURSOR] knob</td></tr>
<tr><td>F1-F4</td><td>Off, On</td><td>[F1]–[F4] knobs</td></tr>
<tr><td>AUDIO REC/VIDEO REC/ STREAM</td><td>Off, On</td><td>[AUDIO REC], [VIDEO REC], [STREAM] buttons</td></tr>
<tr><td>REC/ON AIR</td><td>Off, On</td><td>[REC/ON AIR] button</td></tr>
<tr><td>Video INPUT</td><td>Off, On</td><td>[HDMI IN 1], [HDMI IN 2], [STILL 1], [STILL 2] buttons</td></tr>
<tr><td>SCENE/VIDEO FUNCTION</td><td>Off, On</td><td>SCENE/VIDEO FUNCTION [A]–[E] buttons</td></tr>
<tr><td>AUTO SW</td><td>Off, On</td><td>[AUTO SW/TAKE] button</td></tr>
<tr><td>KEY</td><td>Off, On</td><td>[KEY] button</td></tr>
<tr><td>AUDIO FUNCTION</td><td>Off, On</td><td>AUDIO FUNCTION [1]–[5] buttons</td></tr>
<tr><td>Audio SETUP</td><td>Off, On</td><td>[SETUP] buttons</td></tr>
<tr><td>Audio MUTE</td><td>Off, On</td><td>[MUTE] buttons</td></tr>
<tr><td>Audio Knob</td><td>Off, On</td><td>[LINE IN], [USB AUDIO], [PLAYER], [MAIN] knobs</td></tr>
<tr><td>Audio Fader</td><td>Off, On</td><td>AUDIO IN [1]–[4], [HDMI IN 1], [HDMI IN 2] faders</td></tr>
</table>
Locking/unlocking the operation panel<br>
Long-press the [MENU] button for at least three seconds while holding down the [VALUE/CURSOR] knob to toggle panel lock on/off (p. 50).<br>
* The [PHONES] knob is not affected by the panel lock.
</td></tr>
<tr><td>LED Dimmer</td><td>1–8</td><td>Adjusts the brightness of the LEDs.</td></tr>
<tr><td>LCD Dimmer</td><td>1–8</td><td>Adjusts the brightness of this unit's display.</td></tr>
<tr><td>Auto Off</td><td>Off, On</td><td>Turns the Auto Off function on/off.<br>If this is set to "On", the power to the SR-20HD turns off automatically when all of the following applies for at least 20 minutes.<br>• No operation performed on the SR-20HD<br>• No video input<br>• No equipment is connected to the HDMI OUT connectors<br>• No livestreaming or video recording</td></tr>
<tr><td>Shut Down</td><td>[ENTER]</td><td>Use this when you want to turn the power on/off with an AC power strip or the like.</td></tr>
<tr><td>Factory Reset</td><td>[ENTER]</td><td>Returns the unit to its factory defaults.</td></tr>
<tr><td>Version</td><td>–</td><td>Displays the version of the system program.</td></tr>
</table>

# Appendix

## 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** | | | |
| **Cannot stream, record video or audio** | Have you inserted an SD card? | Make sure that the SD card is inserted correctly. | p. 7 |
| | Is the SD card locked? | Unlock the SD card before use. | – |
| | Is the SD card formatted correctly? | Be sure to format the SD card using the SR-20HD. | p. 7 |
| | Is there enough storage capacity left on the SD card? | Delete any files you don't need, or use a different SD card. | p. 49 |
| **No video input** | Could you be inputting copy-protected (HDCP) video? | HDCP-protected video cannot be used as an input source. | – |
| **Video from the computer is corrupted** | When a rapidly moving video is input from a computer, out-of-sync motion, flicker, or other picture corruption may occur. | This is called "tearing", and does not indicate an equipment malfunction. | – |
| **No video output** | Is the display connected correctly? | Is video showing on this unit's display (LCD)? If you can see video on this unit's display, the video is also being output to the output connectors.<br>Check the display connections. | – |
| **Cannot play a still image file** | Have you correctly imported the still image file? | Try importing the still image file in question again, and see whether it imports correctly. | p. 19 |
| **Audio-related problems** | | | |
| **No audio is output**<br>**Audio volume is low** | Is the volume turned down on the SR-20HD? | Adjust each input to the appropriate volume. Also raise the output volume. | p. 4<br>p. 27 |
| | Could the audio be muted? | Cancel muting for the input/output audio. | p. 4 |
| | Is a condenser mic connected? | If a condenser mic or other device requiring a phantom power supply is connected, press the [MENU] button → "Audio Input" → "AUDIO IN 1–4" → select "Phantom +48 V", and set to "On". | p. 61 |
| **Can't play back audio files** | Have you correctly imported the audio file? | Try importing the audio file in question again, and see whether it imports correctly. | p. 35 |
| **Other Problems** | | | |
| **Can't use a USB flash drive** | Is the USB flash drive formatted correctly? | Reformat the media on your computer in FAT32 format. | – |

# Main Specifications

| ■ Video | | |
|---|---|---|
| **Video Processing** | 4:2:2 (Y/Pb/Pr), 8-bit | |
| **Number of video channels** | 2 channels | |
| **Input formats** | HDMI IN 1–2 connectors | 720/59.94p, 720/50p, 1080/59.94i, 1080/50i, 1080/59.94p, 1080/50p<br>SVGA (800 x 600/60 Hz), XGA (1024 x 768/60 Hz), WXGA (1280 x 800/60 Hz),<br>FWXGA (1366 x 768/60 Hz), SXGA (1280 x 1024/60 Hz), SXGA+ (1400 x 1050/60 Hz),<br>UXGA (1600 x 1200/60 Hz), Full HD (1920 x 1080/60 Hz), WUXGA (1920 x 1200/60 Hz) |
| | * The refresh rate is the maximum value of each resolution.<br>* Conforms to CEA-861-E, VESA DMT Version 1.0 Revision 11.<br>* 1920 x 1200/60 Hz: Reduced blanking<br>* The input interlaced video signal is converted to progressive video signal by internal processing.<br>* HDCP is not supported. | |
| **Output formats** | HDMI OUT MAIN connector | 1080/59.94p, 1080/50p<br>* The video signal frame rate can be selected at the SYSTEM menu (59.94 Hz or 50 Hz). |
| | HDMI OUT PVW connector | * HDCP is not supported. |
| **Stream and Video Recorder** | Protocols | RTMP, RTMPS, SRT (Caller, Listener) |
| | Container | FLV (RTMP, RTMPS), MPEG2-TS (SRT) |
| | Recording File Format | MP4 |
| | Codec | H.264, Profile High/Main/Baseline<br>720/59.94p, 720/50p, 1080/59.94p, 1080/50p<br>Target bitrate up to 20,000 kbps<br>AAC-LC, 16 bits, 48 kHz, stereo, target bitrate up to 384 kbps |
| | * Stream and Video Recorder functions are not available in "SRT In only" mode. | |
| **Audio Recorder** | File Format | WAV |
| | Codec | Linear PCM, 16 bits, 48 kHz, stereo |
| | * Audio Recorder function is not available in "SRT In only" mode. | |
| **Video Player** | File Format | MP4 |
| | Codec | H.264<br>Maximum 1080/29.97p, Progressive<br>Average bit rate of 10,000 kbps or less<br>AAC LC, 16 bits, 48 kHz, Stereo |
| | * Video Player function is not available in "High Quality" mode or "SRT In only" mode. | |
| **SRT In** | Protocols | SRT (Caller, Listener) |
| | Container | MPEG2-TS |
| | Codec | H.264<br>Maximum 1080/60p, Progressive<br>Average bit rate of 20,000 kbps or less<br>AAC LC, 16 bits, 48 kHz, Stereo |
| | * SRT In function is not available in "High Quality" mode.<br>* In "Standard" mode, the SRT In is limited to maximum 1080/30p average bit rate of 10,000 kbps or less. | |
| **USB Video or Audio** | USB Video | Maximum 720p29.97, Uncompressed (YUY2) |
| | USB Audio | Linear PCM, 16 bit, 48 kHz, stereo |
| | * You can use either USB video or USB audio.<br>* The USB VIDEO IN Mode can be selected at the SYSTEM menu (Video Only or Audio Only).<br>* The USB STREAM output of the following Roland products can be used with the SR-20HD:<br>VR-4HD, UVC-01<br>* USB Video and Audio functions are not available in "High Quality" mode or "SRT In only" mode. | |
| **Import Still Image** | PNG File (.png) | Maximum 1920 x 1080 pixels, 24-bit color (alpha channel not supported) |
| | JPEG File (.jpg .jpeg) | Maximum 1920 x 1080 pixels, 24-bit color |
| **Save Still Image** | JPEG File (.jpg) | 1920 x 1080 pixels, 24-bit color |
| **Video Effects** | Scene | Picture in Picture, Split, Picture by Picture |
| | Transition | Black fade, Mix fade |
| | Key Composition | Luminance key, Chroma key |
| | Other | Output fade, Test pattern output, Stream Delay |

| ■ Audio | | |
|---|---|---|
| **Audio Processing** | 24 bits, 48 kHz | |
| **Number of audio channels** | 15 channels | |
| **Audio Formats** | HDMI IN/OUT connectors | Linear PCM, 24 bit, 48 kHz, stereo |
| **Audio Effects** | Delay, High Pass Filter, Gate, Compressor, Equalizer, Limiter, Test tone output | |
| **Audio Player** | File format | WAV (Linear PCM, 16 bits, 48 kHz/44.1 kHz, stereo) |

| ■ Common Section | |
|---|---|
| **Recording Media** | SDHC/SDXC card (sold separately)<br>* SDXC card is required for video recording.<br>* When using the SR-20HD, you must always install an SD card. |
| **Other Functions** | Panel lock function<br>EDID emulator |

| ■ Connectors | | | |
|---|---|---|---|
| **Input Connectors** | HDMI IN 1–2 connectors | HDMI type A (Multi-format supported) | |
| | AUDIO IN 1–4 jacks | Combo type | |
| | | XLR type | balanced, phantom power (DC 48 V, 10 mA), (1 GND, 2 HOT, 3 COLD) |
| | | 1/4-inch TRS phone | balanced |
| **Output Connectors** | HDMI OUT MAIN connector | HDMI type A | |
| | HDMI OUT PVW connector | | |
| | LINE OUT jack | RCA phono type | |
| | PHONES jack | Stereo miniature phone type | |
| **Input/Output connector** | HEADSET jack | Stereo miniature phone type (3.5 mm, 1/8-inch, TRRS 4-pole, CTIA) | |
| **Other Connectors** | USB VIDEO IN port | USB VIDEO IN port: USB A (USB 3.0) | |
| | USB CONTROL port | USB A (USB 2.0) | |
| | LAN (DIRECT STREAM) port | RJ-45, 1000BASE-T (for Live Streaming and SRT In/Out) | |
| | DC IN jack | | |

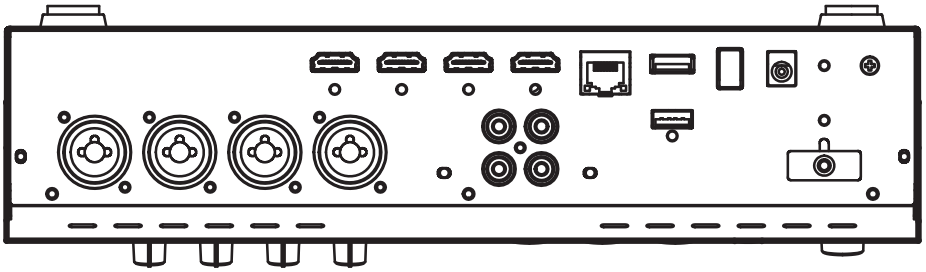
| ■ Audio Input/Output Characteristics | | |
|---|---|---|
| **Nominal Input Level** | AUDIO IN 1–4 jacks | -52 – +4 dBu (Maximum Input level: +24 dBu) |
| | LINE IN jacks | -10 dBu (Maximum Input level: +10 dBu) |
| **Input Impedance** | AUDIO IN 1–4 jacks | XLR type, with phantom power: 5 kΩ |
| | | XLR type, without phantom power: 7 kΩ |
| | | TRS 1/4-inch phono type: 7 kΩ |
| | LINE IN jacks | 18 kΩ |
| **Nominal Output Level** | AUDIO OUT jacks | -10 dBu (Maximum Output level: +10 dBu) |
| | PHONES jack | 72 mW + 72 mW (32 Ω) |
| **Output Impedance** | AUDIO OUT jacks | 1 kΩ |

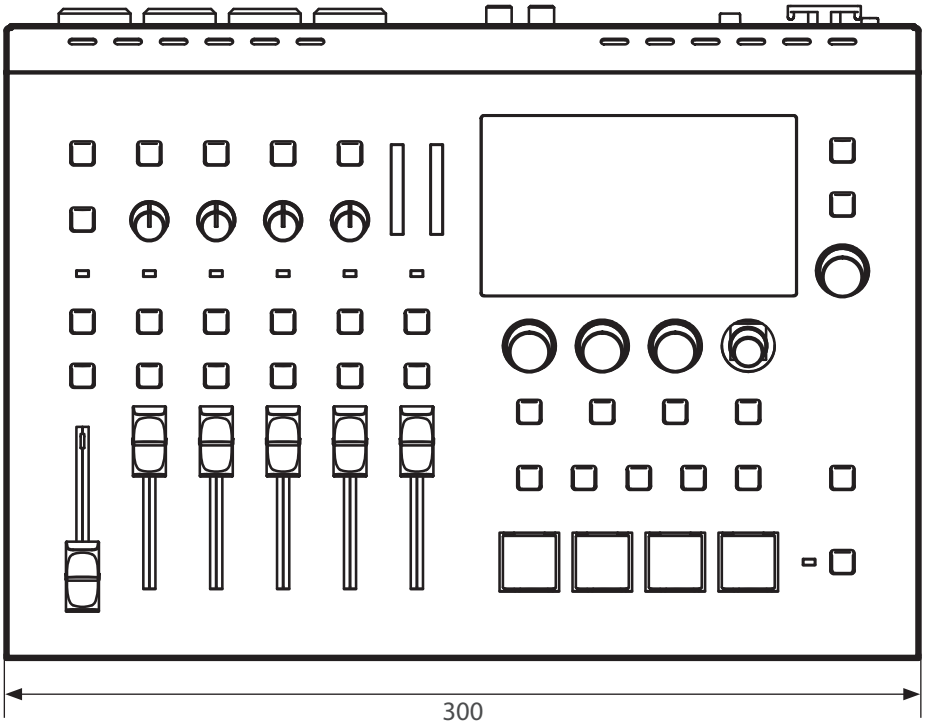
| ■ Others | |
|---|---|
| **Display** | 4.3 inches TFT color LCD: 480 x 272 dots |
| **Power Supply** | AC adaptor |
| **Current Draw** | 3.5 A |
| **Power Consumption** | 42 W |
| **Dimensions** | 300 (W) x 215 (D) x 86 (H) mm<br>11-13/16 (W) x 8-1/2 (D) x 3-7/16 (H) inches |
| **Weight (excluding AC adaptor)** | 2.4 kg<br>5 lbs 5 oz |
| **Operation Temperature** | 0– +40°C<br>+32– +104°F |
| **Accessories** | Startup Guide, Leaflet "USING THE UNIT SAFELY", AC adaptor, Power cord |

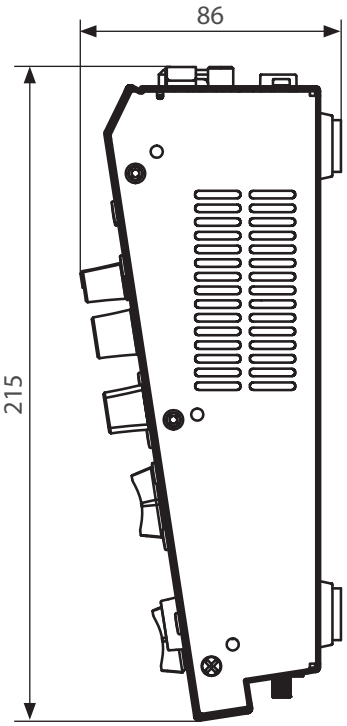
* 0 dBu = 0.775 Vrms
* The terms HDMI, HDMI High-Definition Multimedia Interface, HDMI Trade dress and the HDMI Logos are trademarks or registered trademarks of HDMI Licensing Administrator, Inc.
* SRT (Secure Reliable Transport) is an open source video transport protocol and technology stack, developed and pioneered by Haivision.
* 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

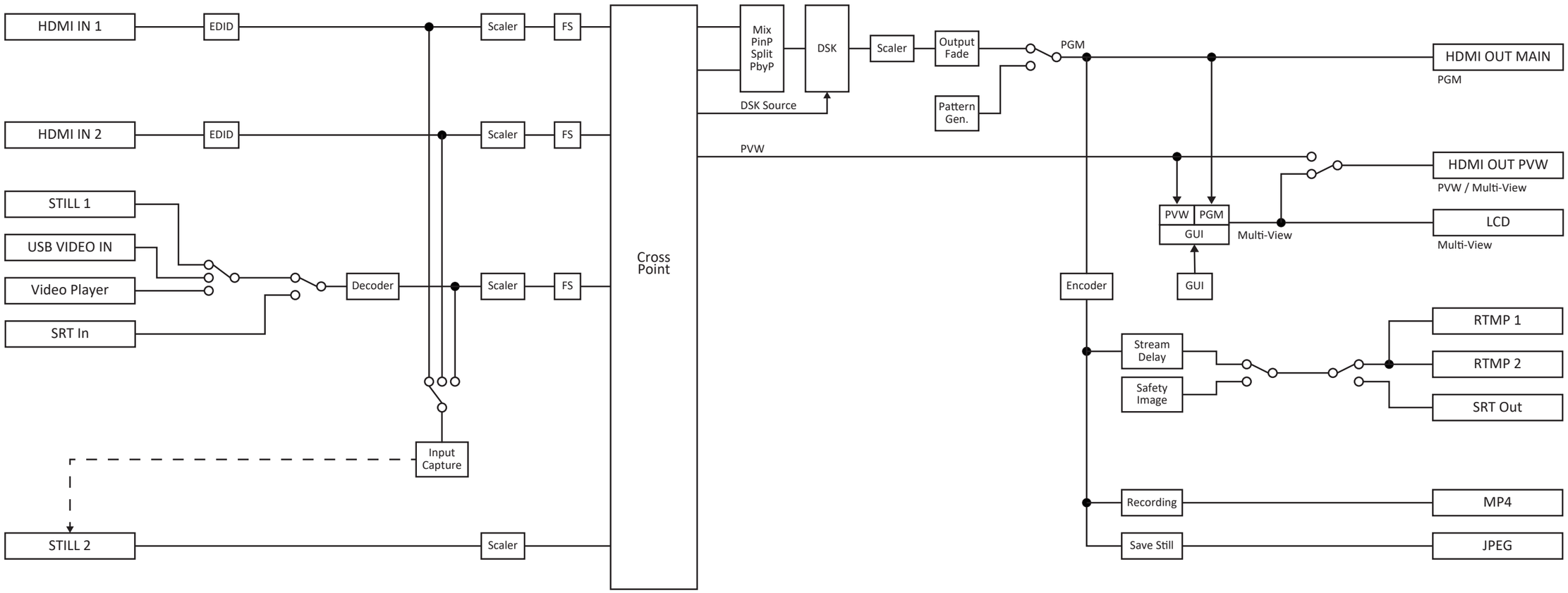
Unit: mm





## Video Block Diagram



# Audio Block Diagram

