Reference Manual

Version 1.3 and later

MATRIX SWITCHER

XS-42H



VIDEO PROCESSOR

VP-42H



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* This manual is common to the XS-42H and the XS-42H. Procedural explanations are illustrated using screens of the XS-42H.

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Panel descriptions

Front panel

LINE IN

[LINE IN] knob

Adjusts the volume of the line input. Adjust this so that the LINE indicator is sometimes lit yellow.

LINE IN indicator

Indicates the volume level of the line input.

Lit red	Volume is excessive.
Lit yellow	Volume is appropriate.
Lit green	Volume is insufficient.

MASTER p. 11

[MASTER] knob

Adjusts the overall volume.

MASTER indicator

Indicates the overall volume level.

Lit red	Volume is excessive.
Lit yellow	Volume is appropriate.
Lit green	Volume is insufficient.

PHONES (🎧) jack

Connect stereo mini-jack headphones here.

- **XS-42H**
  The output audio is the same as the audio of the OUTPUT HDMI 2 connector. (*1)

[LOCK] button

Long-press this to turn on/off the panel lock function.



[PHONES] knob

Adjusts the volume of the headphones.

[TIME] knob p. 8, 9

XS-42H

Specifies the transition time when switching between scenes (p. 9) or video.

VP-42H

Specifies the transition time when switching between scenes (p. 9).

While a menu is displayed p. 6

While a menu is displayed, these function as the following buttons.

CURSOR [▼] [▲] buttons

These buttons select a menu category or item.

VALUE [–] [+] buttons

These buttons change the value of a menu item.

[ENTER] button

This button moves to a lower-level menu, or executes an operation.

(*1) If the Audio menu item "Cascade" is set to "Enable", you can use headphones to monitor the audio of the OUTPUT HDMI 1 connector.

Cross-point [1]–[4] buttons p. 8

These buttons switch the cross-point of the video channel.

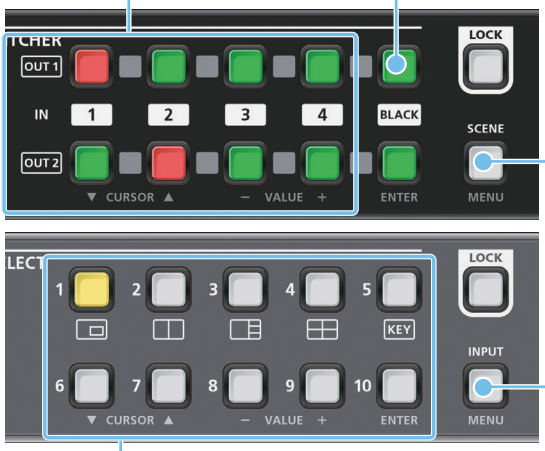
Button	Status
Lit green	Valid video is being input.
Lit red	This is the selected video channel.
Dark	No video is input.

[BLACK] button p. 8

Fades-out the output video to a black screen.
If you press the cross-point button of a faded-out output, it fades-in.

Button	Status
Lit red	Faded out
Lit green	Normal output

- You can also fade-out the output video to a still image.



[SCENE]/[MENU] button p. 6, 9

Scene function: Press the button (lit green)

Turns on the scene function. Recalls a scene (registered video/audio settings) (p. 9).

- The cross-point buttons and the [BLACK] button function as scene select buttons 1–10.
- The video/audio settings are automatically registered to the currently selected scene.

Menu display: Long-press the button (lit red)

The menu is displayed on the monitor connected to the OUTPUT HDMI 2 connector (p. 6).
While the menu is displayed, each press of the button takes you back to the next higher level of the menu. If the highest menu level is already shown, the button closes the menu.

SCENE SELECT [1]–[10] buttons p. 9

Recall a scene (registered video/audio settings).

- The video/audio settings are automatically registered to the currently selected scene.

[INPUT]/[MENU] button p. 6, 8

Video assignment function: Press the button (lit green)

You can use video assignment shortcuts (p. 8). You can use the SCENE SELECT buttons to select the video assigned to each layer.

SCENE SELECT buttons	Explanation
[1]–[4] buttons	Select layers 1–4 (when selected: lit yellow)
[6]–[10] buttons	Select video (when selected: lit red) [6]–[9]: INPUT HDMI 1–4 [10]: Still image

Menu display: Long-press the button (lit red)

The menu is displayed on the monitor connected to the OUTPUT HDMI 2 connector (p. 6).
While the menu is displayed, each press of the button takes you back to the next higher level of the menu. If the highest menu level is already shown, the button closes the menu.

Cooling vents (top panel, side panels)



These exhaust internal heat to prevent the interior of the unit from overheating.

NOTE

Do not block the cooling vents. If the cooling vents are blocked, the temperature inside the unit will rise, possibly causing malfunctions due to overheating.

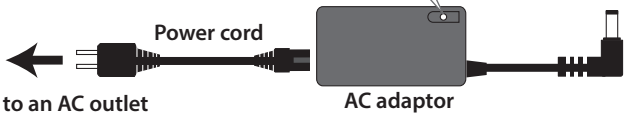
Rear panel

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

DC IN jack

Connect the included AC adaptor to this jack.

Place the AC adaptor so the side with the indicator faces upwards and the side with textual information faces downwards. The indicator will light when you plug the AC adaptor into an AC outlet.



LAN port p. 15, 19, 28

This is used to remotely control this unit from a web browser or terminal software.

LINE OUT jacks

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

- **XS-42H**
  The output audio is the same as the audio of the OUTPUT HDMI 2 connector. (*2)

LINE IN jacks

These input audio. Connect these to your audio or video device such as an audio mixer or CD player.

USB port

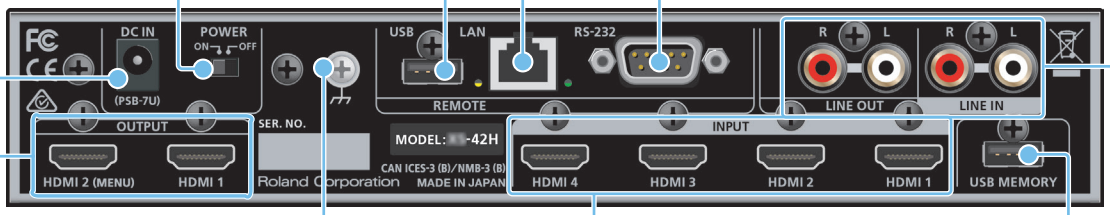
You can connect a USB flash drive here. This is used to update the system program.

RS-232 connector p. 28

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

[POWER] switch p. 6

This switch turns the power on/off.



Ground terminal

Connect this to an external earth or ground if necessary.

USB MEMORY port p. 10

You can connect a USB flash drive here. It is used to load a still image, to save or load settings, or to update the system program.

OUTPUT HDMI 1, 2 connectors

These output video and audio. Connect them to a projector, video recorder, or external display.

- The menu is shown on the monitor connected to the OUTPUT HDMI 2 connector.
- **VP-42H**
  The same video is output from the OUTPUT HDMI 1 and 2 connectors.

INPUT HDMI 1–4 connectors

These input video and audio. Connect them to a video device such as a video camera or BD player, or to a computer.

- The input format is automatically recognized.
- In the Input menu, the "Input Status" shows the video format that is being input to each channel, and the presence or absence of an HDCP signal.

(*2) If the Audio menu item "Cascade" is set to "Enable", the audio of the OUTPUT HDMI 1 connector is output from the LINE OUT jacks.

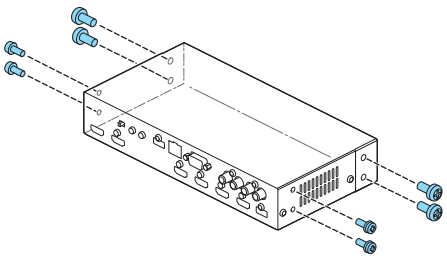
Setup and preparations

Rack-mounting

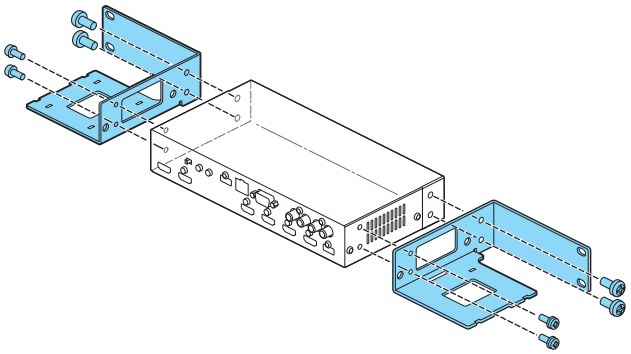
Attaching the rack-mount angles

By attaching the included rack-mount angles to this unit, you can mount it in a rack.

1. Remove the screws from the side panels.



2. Using the screws that you removed, attach the rack-mount angles as shown in the illustration.



Important notes on rack mounting

- Install in a well-ventilated location.
- Do not block the cooling vents located on the unit's top panel and side panels.
- Avoid mounting the unit in a sealed-type rack. Warm air within the rack cannot escape and is sucked into the unit, making efficient cooling impossible.
- If the back of the rack cannot be opened, install an exhaust port or ventilation fan at the top back surface of the rack, where warm air collects.
- When using the unit while mounted in a movable case (portable rack), remove the front and rear rack covers so that the front and back of the unit are not obstructed.
- Take care not to pinch your fingers etc. while mounting the unit in a rack.

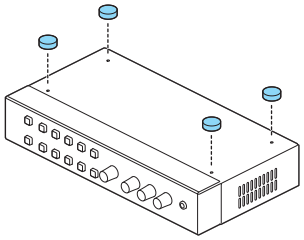
Free-standing use

Attaching the rubber feet

If you will be placing this unit on a desk or shelf for use, attach the included rubber feet (4 pcs.). This prevents the unit from slipping or from scratching the surface on which it is placed.

1. Remove the rubber feet from the sheet.

2. Peel the double-sided tape off the rubber feet, and affix the feet so that they cover the four guide holes on the bottom of the unit.



Basic operations

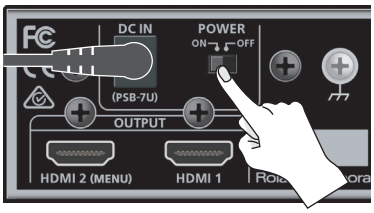
Turning the power on/off

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

Turning the power on

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

2. To turn on the power, slide this unit's [POWER] switch to the ON position.



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

Turning the power off

1. Turn off the power in the order of output devices → source devices.

2. To turn off the power, slide this unit's [POWER] switch to the OFF position.

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 unit
- No audio or video input
- No equipment is connected to the OUTPUT HDMI connectors

If you do not want the power to be turned off automatically, turn this setting off. Note that when the setting is turned off, the unit may consume more power.
Long-press the [MENU] button → "System" → set "Auto Power Off" to "Disabled".

NOTE

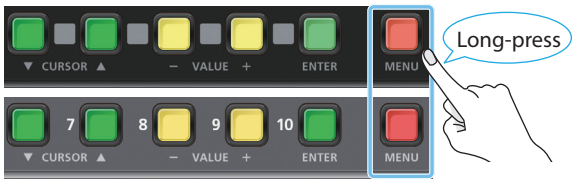
- Unsaved data is lost when the power turns off. Before turning the power off, save the data that you want to keep.
- To restore power, turn the power on again.

Operating the menu

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

- The menu is shown only on the monitor that's connected to the OUTPUT HDMI 2 connector.

1. Long-press the [MENU] button to display the menu.



The [MENU] button is lit red, and the menu categories are displayed.



2. Press the CURSOR [▼] [▲] buttons to select a category, then press the [ENTER] button to confirm the selection.

The menu items of the selected category are displayed.

3. Press the CURSOR [▼] [▲] buttons to select a menu item.

- If the value area indicates "Enter", you can press the [ENTER] button to proceed to a lower level.
  Alternatively, pressing the [ENTER] button executes an operation.
- Pressing the [MENU] button moves you back one level higher.

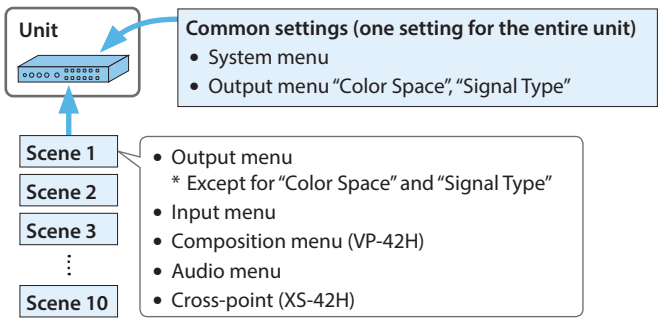
4. Press the VALUE [–] [+] buttons to change the value of the setting.

- By holding down the [ENTER] button and long-pressing the VALUE [–] or [+] button you can change the value of the setting more greatly.
- If you press the VALUE [–] and [+] buttons simultaneously, the selected menu item returns to its default setting.

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

Saving your settings

With the factory settings, changes you make to menu settings are automatically saved to the unit when you close the menu.



- You can disable automatic saving of the settings. Long-press the [MENU] button → "System" → set "Auto Setting Store" to "Disabled". If automatic storage is disabled, you should manually store the current settings as necessary (p. 13).
- For more about scenes, refer to "Recalling video/audio settings (scenes)" (p. 9).

Video operations

List of compatible video formats

Input video formats

Frame rate	
When set to "59.94 Hz"	**When set to "50 Hz"**
480/59.94i	576/50i
480/59.94p	576/50p
720/59.94p	720/50p
1080/59.94i	1080/50i
1080/59.94p	1080/50p
800 x 600/60 Hz	800 x 600/60 Hz
1024 x 768/60 Hz	1024 x 768/60 Hz
1280 x 720/60 Hz	1280 x 720/60 Hz
1280 x 800/60 Hz	1280 x 800/60 Hz
1280 x 1024/60 Hz	1280 x 1024/60 Hz
1366 x 768/60 Hz	1366 x 768/60 Hz
1400 x 1050/60 Hz	1400 x 1050/60 Hz
1600 x 1200/60 Hz	1600 x 1200/60 Hz
1920 x 1080/60 Hz	1920 x 1080/60 Hz
1920 x 1200/60 Hz RB	1920 x 1200/60 Hz RB

* The input format is automatically recognized.

Audio input format	HDMI: Linear PCM, 24 bits, 48 kHz, 2 ch

Output video formats

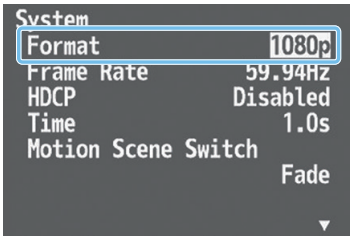
Frame rate	
When set to "59.94 Hz"	**When set to "50 Hz"**
720/59.94p	720/50p
1080/59.94i	1080/50i
1080/59.94p	1080/50p
1024 x 768/60 Hz	1024 x 768/75 Hz
1280 x 720/60 Hz	1280 x 720/75 Hz
1280 x 800/60 Hz	1280 x 800/75 Hz
1280 x 1024/60 Hz	1280 x 1024/75 Hz
1366 x 768/60 Hz	1366 x 768/75 Hz
1400 x 1050/60 Hz	1400 x 1050/75 Hz
1600 x 1200/60 Hz	1600 x 1200/60 Hz
1920 x 1080/60 Hz	1920 x 1080/60 Hz
1920 x 1200/60 Hz RB	1920 x 1200/60 Hz RB

Audio output format	HDMI: Linear PCM, 24 bits, 48 kHz, 2 ch

Setting the output format

Specify the output format as appropriate for the device that's connected.

1. Long-press the [MENU] button → "System" → select "Format".



2. Use the CURSOR [▼] [▲] buttons to select the output format.



3. Use the CURSOR [▼] [▲] buttons to select "Execute", and press the [ENTER] button.

The output format switches, and the message "Keep output format?" appears.

* If your monitor does not support the format, the unit returns to the previous setting without showing a message.

4. Use the CURSOR [▼] [▲] buttons to select "Yes", and press the [ENTER] button.

* If you don't press the [ENTER] button to confirm the setting, you'll revert to the original setting without applying the change.

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

About frame rate

Frame rates that can be input and output are "59.94 Hz" or "50 Hz". You can change the frame rate by long-pressing the [MENU] button → "System" → "Frame Rate".

When inputting Computer-resolution video

The refresh rate is "60 Hz" regardless of the frame rate.

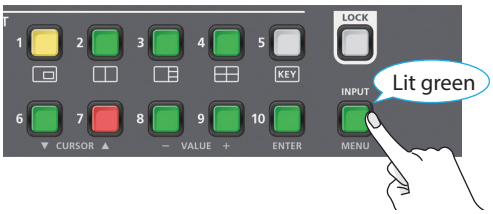
When outputting Computer-resolution video

If the frame rate setting is "50 Hz", the refresh rate might be "75 Hz" depending on the output resolution.

Compositing video VP-42H only

Up to four screens of the video inputs can be composited as layers and output.

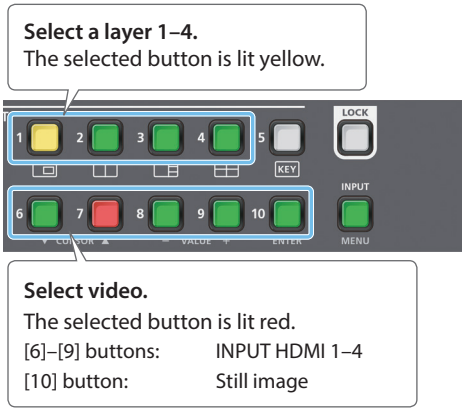
1. Press the [INPUT] button to make it light green.



Now you can use the SCENE SELECT buttons to select the video that's assigned to each layer.

- This is a shortcut for Composition menu → "Layer 1"–"Layer 4" → "Source".

2. Use the SCENE SELECT buttons to select the video that's assigned to each layer.



- For details on how to load a still image, refer to "Outputting a loaded still image" (p. 10).

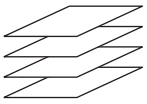
3. Long-press the [MENU] button → "Composition" → "Layer 1"–"Layer 4" → adjust each of the Window items.

For each layer, adjust the position and size of the video.

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

MEMO

- The order in which layers are overlaid is fixed.



- You can use luminance key or chroma key to composite the video that's assigned to layer 1. Long-press the [MENU] button → "Composition" → "Layer 1" → set "Key" to "Enabled". Use "Type" to specify the key type (extraction color).
- The screen pattern setting is automatically registered in the currently-selected scene (p. 9).
- The same video is output from the OUTPUT HDMI 1 and 2 connectors.

Hiding the layers

1. Long-press the [MENU] button → "Composition" → "Layer 1"–"Layer 4" → set "Layer" to "Disabled".

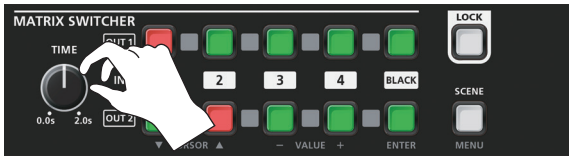
Switching the video XS-42H only

Use the cross-point buttons to switch the combination of four inputs and two outputs, and output the video. The internal frame synchronizer allows seamless video switching.

* Video and audio are switched in tandem.

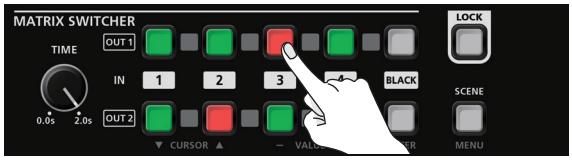
1. Make sure that the [SCENE]/[MENU] button is unlit.

2. Use the [TIME] knob to specify the video transition time.



3. Press a cross-point button.

The horizontal direction of the cross-point buttons is the input channel, and the vertical direction is the output channel.



The output video is switched.

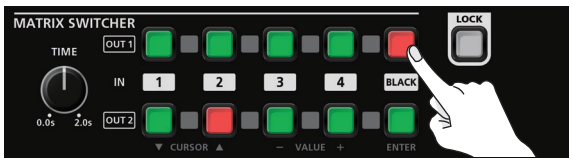
MEMO

You can individually specify the scaling for each video output. Long-press the [MENU] button → "Output" → "Output 1"–"Output 2" → adjust each of the Scaling items.

Fading the Output Video

Here's how you can fade the output video to a still image or to a black screen.

1. Press the [BLACK] button of the output channel that you want to fade-out.



The [BLACK] button is lit red, and the video fades-out to a still image or a black screen.

2. To fade-in, press the cross-point button of the output channel that is faded-out.

Video output begins.

MEMO

- The fade time is specified by the setting of the [TIME] knob.
- To specify the video source of the [BLACK] button, long-press the [MENU] button → "Input" → "Input Black" → set "Source".

  For details on how to load a still image, refer to "Outputting a loaded still image" (p. 10).

Recalling video/audio settings (scenes)

Video/audio settings can be registered as "scenes" and recalled for use when necessary. This unit provides ten scenes.

Registering to a scene

Video/audio settings are automatically registered in the currently selected scene. You don't need to perform any operation to register them.

The following settings are registered in a scene.

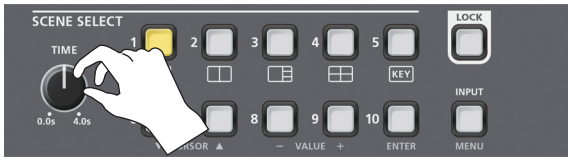
- Output menu　* Except for "Color Space" and "Signal Type"
- Input menu
- Composition menu (VP-42H)
- Audio menu
- Cross-point (XS-42H)

Recalling a scene

VP-42H

1. Make sure that the [INPUT]/[MENU] button is unlit.

2. Use the [TIME] knob to specify the scene switching time.



3. Press the SCENE SELECT button of the scene number that you want to recall.

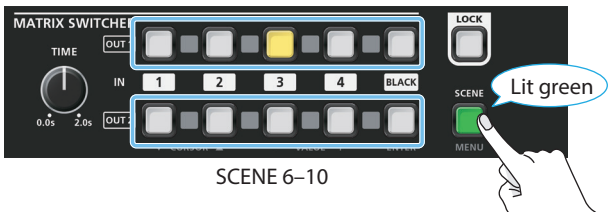


The settings are recalled. The currently selected button is lit yellow.

XS-42H

1. Press the [SCENE] button to make it light green.

SCENE 1–5



SCENE 6–10

Now you can use the cross-point buttons and the [BLACK] button to select a scene. The currently selected button is lit yellow.

2. Press the cross-point button or [BLACK] button of the scene number that you want to recall.

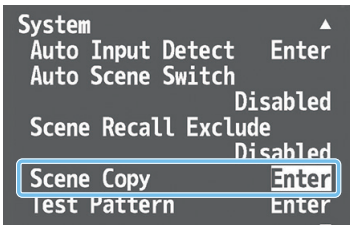
The settings are recalled.

- The scene switching time is common with the video switching time. The setting of the [TIME] knob is used.

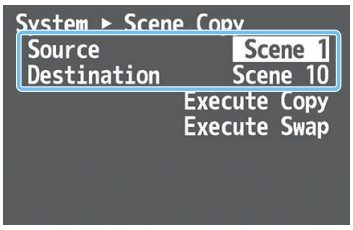
Copying or exchanging scenes

The settings registered in a scene can be copied to another scene or exchanged between scenes.

1. Long-press the [MENU] button → "System" → select "Scene Copy" and press the [ENTER] button.



2. Select "Source" (copy/exchange source scene) and "Destination" (copy/exchange destination scene), and use the VALUE [–] [+] buttons to specify the scene numbers.



3. Choose "Execute Copy" or "Execute Swap", and press the [ENTER] button.

The scene is copied or exchanged.

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

MEMO

- You can change the scene transition effect. Long-press the [MENU] button → "System" → "Scene Transition", and specify "Black", "Fade", or "Motion" (VP-42H).
- You can automatically switch scenes 1–10 (auto scene mixing function). Long-press the [MENU] button → "System" → "Auto Scene Switch" and set the scene display interval.

Outputting a loaded still image

A still image that you load from a USB flash drive can be assigned to an input channel, and output in the same way as video.

Formats supported for loading

Format	Windows Bitmap File (.bmp), 24-bit color, uncompressed
Resolution	Maximum 1920 x 1200 pixels
File name	**default.bmp**, **default2.bmp**, **default3.bmp**

NOTE

Make sure to use the filenames listed above. Still images with any other file name cannot be loaded.

Loading a still image

Here's how to load a still image from a USB flash drive into this unit. Below are the save destinations (in internal memory) for the still images.

Save destination	Still image file
Still Image	default.bmp
Still Image2	default2.bmp
Still Image3	default3.bmp

* **When you turn on this unit while a USB flash drive that contains still images in the root directory (using the filenames shown in the above table) is connected, the still images are automatically loaded.**

NOTE

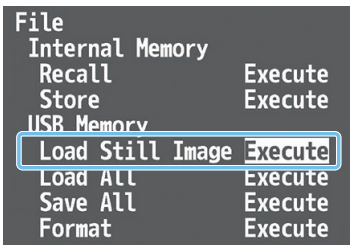
- This unit temporarily saves the still images that are loaded.
  If a still image is already loaded, loading a new still image overwrites the previously loaded image. The still image is deleted when the power is turned off.
- When using a USB flash drive for the first time, you must format it using this unit (p. 13).
- Never turn o the power or remove the USB ash drive while the message "Processing." is shown.

1. Save the still image (default.bmp, default2.bmp, or, default3.bmp) in the root directory of the USB flash drive.

2. To the USB MEMORY port, connect the USB flash drive on which the still image is saved.

* Be sure to connect your USB flash drive to the USB MEMORY port. The USB flash drive is not recognized if it is connected to the USB port located in the upper row of connectors.

3. Long-press the [MENU] button → "File" → USB Memory, select "Load Still Image" and press the [ENTER] button.



When the still image has been loaded into the unit, the message "Completed." appears.

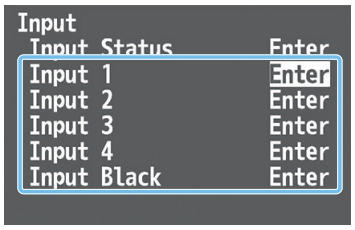
4. Press the [ENTER] button to close the message.

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

Assigning the still image

Here's how to assign the loaded still image to an input channel.

1. Long-press the [MENU] button → "Input" → select "Input 1"–"Input Black" and press the [ENTER] button.



2. Select "Source", and use the VALUE [–] [+] buttons to specify "Still Image"– "Still Image3".



If you select the input channel to which "Still Image"–"Still Image3" is assigned, the still image is output.

XS-42H

If "Still Image"–"Still Image3" is assigned to the Input Black channel, pressing the [BLACK] button fades-out to the still image (p. 8).

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

Audio operations

Audio input and output settings

You can adjust the volume (Level) of audio that is input or output, and change the state (State) of each channel.

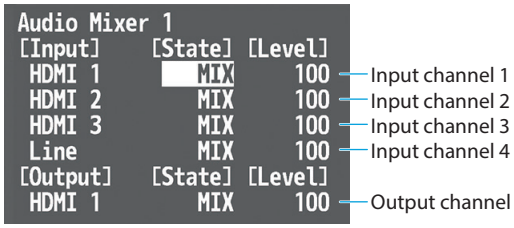
1. XS-42H

Long-press the [MENU] button → "Audio" → choose "Mixer 1" (OUTPUT HDMI 1/PHONES) or "Mixer 2" (OUTPUT HDMI 2/LINE OUT), and press the [ENTER] button.

The XS-42H is equipped with an independent audio mixer for each output channel.

VP-42H

Long-press the [MENU] button → "Audio" → select "Mixer" and press the [ENTER] button.



2. **Use the CURSOR [▼] [▲] buttons to set each menu item.**

3. **Use the VALUE [–] [+] buttons to change the value of the setting.**

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

Specifying the state of each channel (State)

1. **Select the "State" of the input/output channel, and specify its state.**

Input

Value	Explanation
MUTE	The input audio is temporarily muted (mute function).
MIX	The audio is input.
FOLLOW XS-42H	The video and audio switch in tandem (auto follow function). Audio is output only when an input channel's cross-point is selected. If all input channels are set to "FOLLOW", only the audio of the currently selected cross-point is output, and other audio is muted.

Output

Value	Explanation
MUTE	The output audio is temporarily muted (mute function).
MIX	The result of the audio mix is output.

Adjusting the volume (Level)

1. **Select the input channel's "Level", and adjust the volume.**

If there is no input audio, or if you're not using the audio, set the volume to "0".

100 = 0.0 dB, 127 = +6.0 dB.

2. **Select the output channel's "Level", and adjust the volume.**

The color of the MASTER indicator indicates whether the volume is adjusted appropriately.



Lit color	Status
Red	Volume is excessive.
Yellow	Volume is appropriate.
Green	Volume is insufficient.

XS-42H

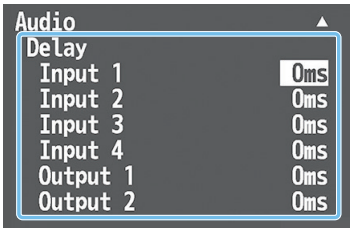
- With the factory settings, the [MASTER] knob adjusts the volume of OUTPUT HDMI 2.
  You can change what is controlled by the [MASTER] knob by long-pressing [MENU] button → "Audio" → "Panel Master".
- The MASTER indicator shows the volume level of the HDMI output that is controlled by the [MASTER] knob.

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.

You can individually specify the audio delay time for each input and output.

1. Long-press the [MENU] button → "Audio" → Delay, select "Input 1"–"Output 2".



2. Use the VALUE [–] [+] buttons to adjust the delay time of the input audio or output audio.

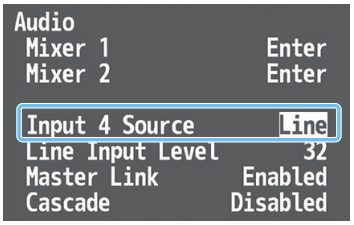
3. Press the [MENU] button several times to close the menu.

Selecting the audio source of input channel 4

Here's how to select the audio source that is input to input channel 4. You can also output a test tone.

- With the factory settings, this is set to "Line" (line input).

1. Long-press the [MENU] button → "Audio" → select "Input 4 Source".



2. Use the VALUE [–] [+] buttons to specify the audio source that will be input.

Value	Explanation
HDMI 4	Input audio from the INPUT HDMI 4 connector
Line	Input audio from the LINE IN jacks
Test Tone	Test tone

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

Other functions

Manually saving the current settings

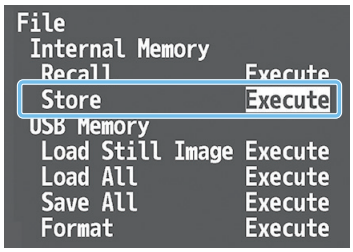
If automatic saving of settings is disabled, all the settings you make are lost when you turn off the power. You can manually save the current settings as necessary. Saved settings can be recalled and used.

MEMO

- To enable/disable automatic saving of settings, long-press the [MENU] button → "System" → specify "Auto Setting Store".
- The unit can store only one set of settings. When you save settings, the previously saved settings are overwritten.
- If automatic saving is disabled, the unit starts up with the last-saved settings the next time you turn on the power.

Saving

1. Long-press the [MENU] button → "File" → in Internal Memory, select "Store" and press the [ENTER] button.



The current settings are saved. When the operation is finished, the message "Completed." appears.

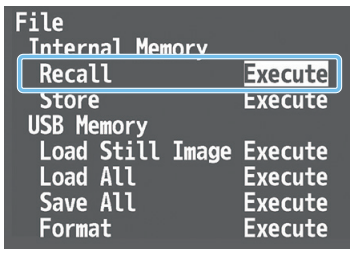
2. Press the [ENTER] button to close the message.

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

Recalling

Here's how to recall the settings that are saved in the unit. When you recall the settings, the current settings are overwritten.

1. Long-press the [MENU] button → "File" → in Internal Memory, select "Recall" and press the [ENTER] button.



The settings are recalled. When the operation is finished, the message "Completed." appears.

2. Press the [ENTER] button to close the message.

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

Formatting a USB flash drive

The first time that you use a USB ash drive, you must use the unit to format it.

NOTE

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

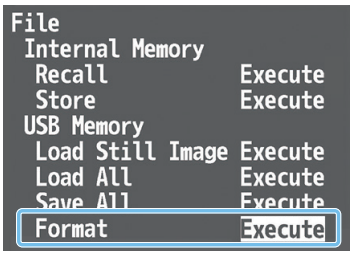
1. Connect the USB flash drive to the USB MEMORY port.

Even if the USB flash drive is connected to the USB port, it is not recognized.



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

2. Long-press the [MENU] button → "File" → in USB Memory, select "Format" and press the [ENTER] button.





A recognition message appears.

3. Use the CURSOR [▼] [▲] buttons to select "Execute", and press the [ENTER] button.

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

4. Press the [ENTER] button to close the message.

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

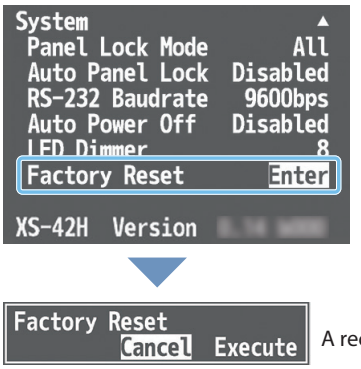
Returning to the factory settings (factory reset)

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

NOTE

When you execute factory reset, all previously-specified content and settings registered in scenes (p. 9) are lost.

1. Long-press the [MENU] button → "System" → select "Factory Reset" and press the [ENTER] button.



A recognition message appears.

2. Use the CURSOR [▼] [▲] buttons to select "Execute", and press the [ENTER] button.

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

3. Press the [ENTER] button to close the message.

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

Network connections

You can remotely control this unit from a computer or tablet on the network.

Remote control methods

The following two methods of remote control are provided.

Control from a web browser

You can use a web browser such as on your computer to remotely control the unit's operating panel and menu settings.

Enter the specified URL in your web browser, and start the WebRCS web application to control the unit from your web browser.

For details, refer to "WebRCS web application" (p. 19).

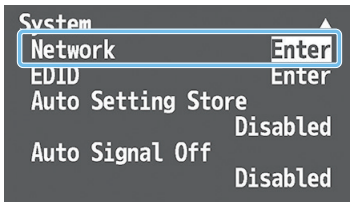
Control by sending commands

You can send commands from your computer to remotely control the unit's operating panel and menu settings.

For details on the commands to transmit, refer to "LAN/RS-232 command reference" (p. 28).

Specifying the unit's network settings

1. Long-press the [MENU] button → "System" → select "Network" and press the [ENTER] button.



2. Set the following menu items appropriately for your network.

Menu item	Explanation
IP Configure	Selects how settings are made for the IP address, subnet mask, and default gateway. * Changed settings are applied at next start-up. **DHCP Server:** DHCP server functionality is enabled. The information needed for connecting to the network is assigned automatically by this unit to the computers that are on the LAN. **DHCP Client:** The IP address and other information needed for connecting to the network is obtained automatically from the DHCP server of the LAN. **Manually:** The IP address, subnet mask, and default gateway are specified manually.
IP Address	Shows the IP address. (*1) (*2)
Subnet Mask	Shows the subnet mask. (*1) (*2)
Default Gateway	Shows the default gateway. (*1) (*2)
MAC	Shows the MAC address.

(*1) Manual settings can be made only if "IP Configure" is set to "Manually".
(*2) The identification number "0.0.0.0" is shown until a network connection is established.

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

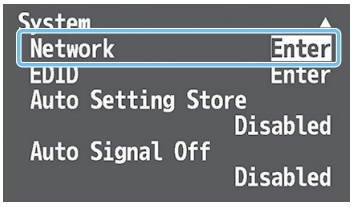
Setting a password

Here's how to set the password used for connecting to the network (WebRCS, Telnet).

NOTE

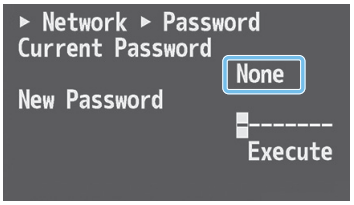
Input the password that's set here when connecting a computer or other device on the same network to access the unit.

1. Long-press the [MENU] button → "System" → select "Network" and press the [ENTER] button.



2. Select "Password" and press the [ENTER] button.

3. Check whether a password is set in the "Current Password" parameter.



Display	Explanation	
None	Password not set	➡ **Go to step 5**
--------	Password set	➡ **Go to step 4**

4. To change the password, input the existing password in the "Current Password" field.

If you've forgotten the password, perform a factory reset (p. 14) and register the password again.

5. Input a new eight-character password in the "New Password" field.

You can use single-byte alphanumeric characters (a–f, 0–9) for the password.

Move the cursor	Press the CURSOR [▼] [▲] buttons
Input a character	Press the VALUE [–] [+] buttons.

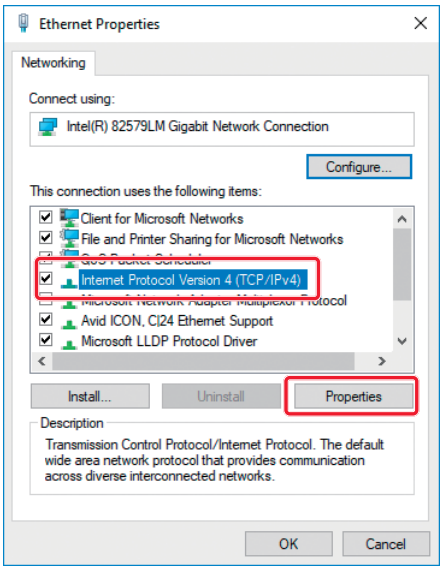
6. Use the CURSOR [▼] [▲] buttons to select "Execute", and press the [ENTER] button.

This registers or changes the password.

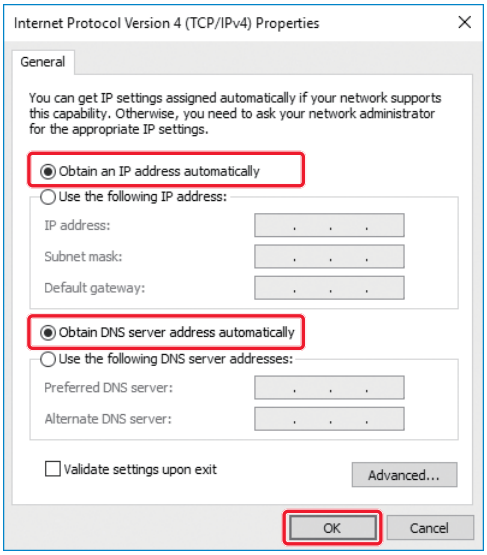
Specifying your computer's network settings

Windows

1. Working in sequence, click the [(Start)] button → "Settings" (gear icon).
2. Click "Network and Internet".
3. Click "Change Adapter Options".
4. Right-click the network connection you're using, then click "Properties".
5. Select "Internet Protocol Version 4 (TCP/IPv4)" and click the [Properties] button.

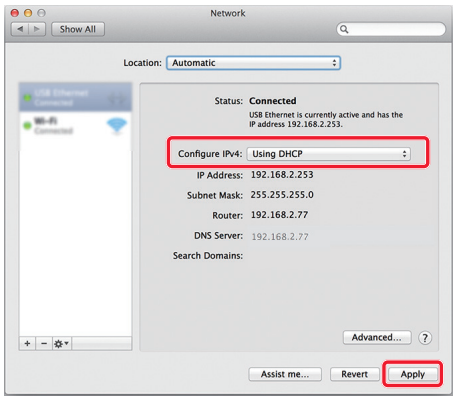


6. Select the "Obtain an IP address automatically" and "Obtain DNS server address automatically" options, and click the [OK] button.



Mac

1. Display the Apple menu → "System Preferences" → "Network".
2. From the list on the left, select the network connection service you're using.
3. Set "Configure IPv4" to "Using DHCP", and click the [Apply] button.

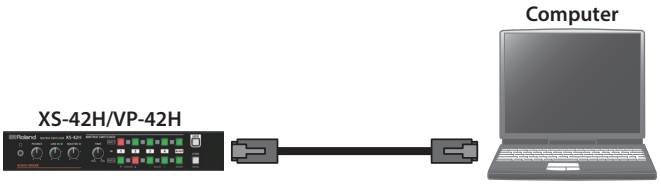


Connection Example 1

This unit is connected one-to-one to the computer.

MEMO

- The LAN cable can be either a cross-cable or a straight cable.
- If your computer does not support a wired LAN, you'll need to separately obtain a wired LAN adapter.
- If you experience problems such as inability to connect when making a network connection, check whether this unit will connect one-to-one to your computer.



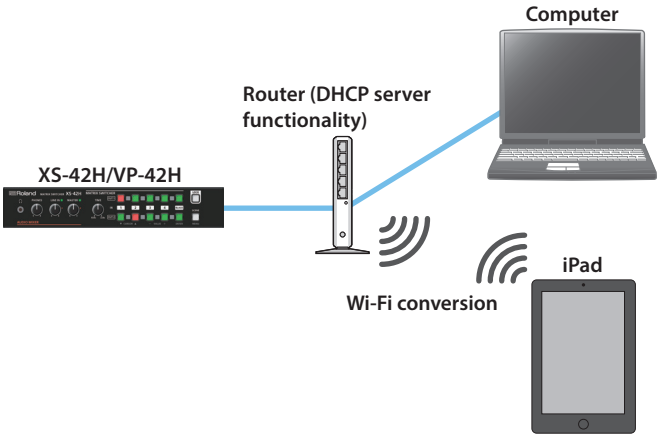
Network settings on the XS-42H/VP-42H

Menu item	Setting
IP Configure	DHCP Server

Connection Example 2

This unit is connected via a router that is equipped with DHCP server functionality.

DHCP servers are typically sold as routers. Use a router that is equipped with DHCP server functionality and wireless LAN conversion functionality.

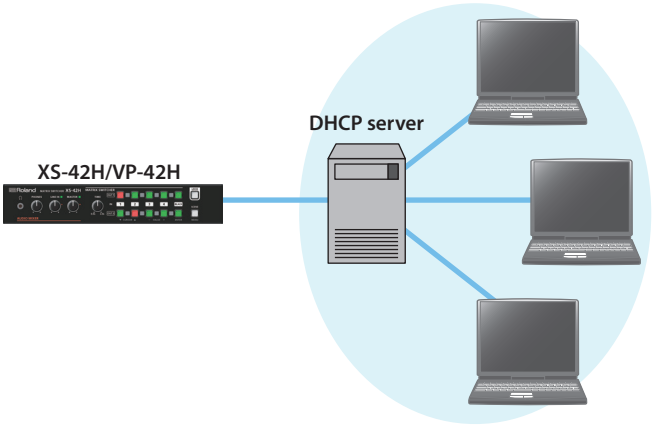


Network settings on the XS-42H/VP-42H

Menu item	Setting
IP Configure	DHCP Client

Connection Example 3

This unit is connected to an existing network.



Network settings on the XS-42H/VP-42H

Menu item	Setting
IP Configure	Manually
IP Address	Input manually. If you don't know the required information for the connection, ask your network administrator.
Subnet Mask	
Default Gateway	

Usage Example 1

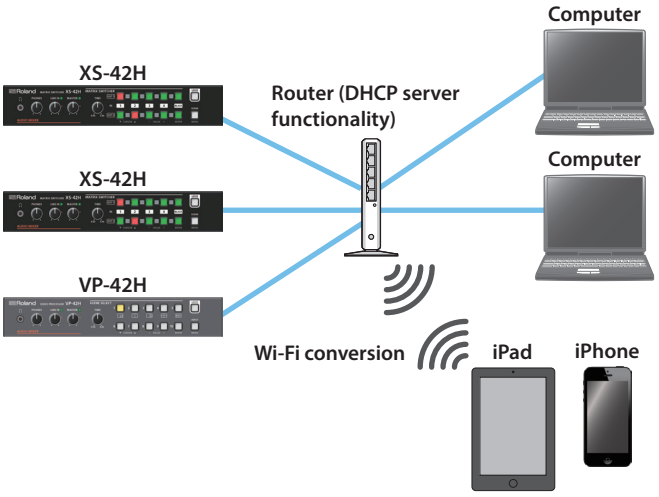
Multiple XS-42H/VP-42H units and devices are connected.

You can remotely control the XS-42H/VP-42H unit that is specified as the control destination of each device.

MEMO

If you assign a fixed IP address to an XS-42H/VP-42H unit, you can continue using that address as the URL for WebRCS or as the IP address to which you send commands.

For details on how to specify a fixed IP address, refer to the owner's manual of the router that you're using.



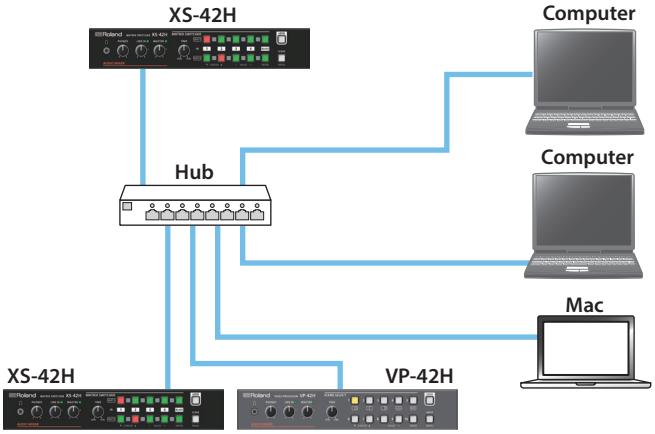
Network settings on the XS-42H/VP-42H

Menu item	Setting
IP Configure	DHCP Client

Usage Example 2

One XS-42H or VP-42H unit is used as the DHCP server, and is connected to multiple XS-42H/VP-42H units and devices.

You can remotely control the XS-42H/VP-42H units that are specified as the control destination for each device.



One unit only: XS-42H/VP-42H network settings

Menu item	Setting
IP Configure	DHCP Server

Other units: XS-42H/VP-42H network settings

Menu item	Setting
IP Configure	DHCP Client

WebRCS web application

The WebRCS web application is remote control software that is built into this unit. It lets you remotely control this unit's operating panel and menu settings from the web browser of a computer or tablet on the network.
There is no need to install special software on your computer or tablet.

Operating requirements

The following web browsers are supported.

Windows	Google Chrome 56 or later
Mac	Safari 10 or later
	Google Chrome 56 or later
iPhone/iPad	Safari 10 or later
Android	Google Chrome 56 or later

* Enable JavaScript on the web browser that you're using.

* The requirements listed above describe systems that have been found to work; they do not guarantee operation. Operation will differ due to differences in your network and the processing capability of your web browser.

Starting up

1. Follow the steps in "Network connections" (p. 15) to connect the unit to a computer that's on the same network.

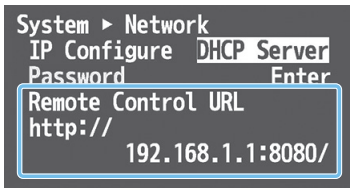
2. Follow the steps in "Setting a password" (p. 15) to set the password used for connecting to the network.

When using the unit

3. Long-press the [MENU] button → "System" → select "Network" and press the [ENTER] button.

The URL is shown in "Remote Control URL" of the Network menu.

* The URL is not shown if a network connection is not established.



When using your computer or tablet

4. Start a web browser on your network-connected computer or tablet.

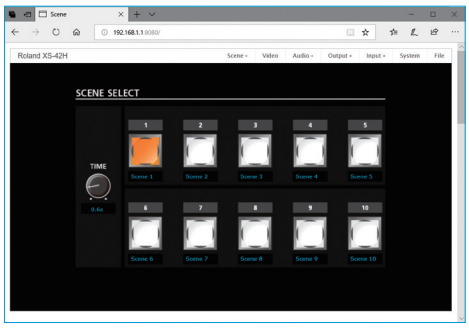
5. In the address bar of your Web browser, input the URL that's shown in "Remote Control URL".

The "Login" dialog box appears.

6. Enter your user name and password to login to the network.

User name	user
Password	Password that you set (p. 15)

Start the WebRCS web application. Now you can remotely control this unit from the web browser.



MEMO

By specifying the following addresses, you can show specific fixed operating screens. Since the menu bar is not shown, this prevents unintended operations or changes in the settings.

XS-42H

Select scenes
http://xxx.xxx.xxx.xxx:8080/**scene_xs.html**

Switch video
http://xxx.xxx.xxx.xxx:8080/**input_xs.html**

VP-42H

Select scenes
http://xxx.xxx.xxx.xxx:8080/**scene_vp.html**

Select video assigned to layers
http://xxx.xxx.xxx.xxx:8080/**input_vp.html**

* Replace the underlined portion with the address that you input in step 5.

Operations that can be performed only via WebRCS

Downloading/uploading the unit's settings

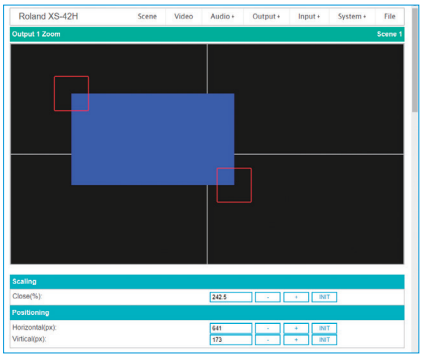
Choose "File" → "Download" or "Upload".

This unit's settings can be downloaded to your computer or other device as a file.

A downloaded file can be uploaded to this unit to recall the settings.

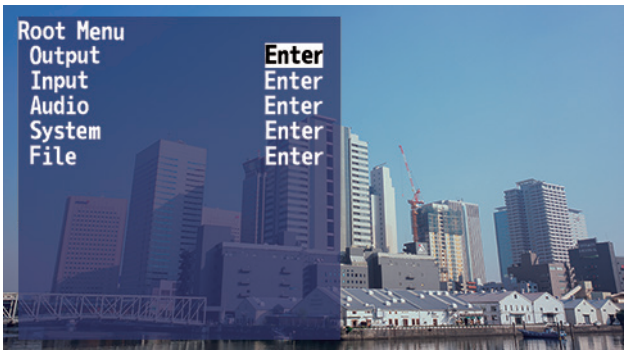
Dragging to adjust the layout of a layer VP-42H

Choose "Composition" → "Layer 1"–"Layer 4".



Menu list

Long-pressing the [MENU] button makes the menu appear on the monitor connected to the OUTPUT HDMI 2 connector.



MEMO

- By holding down the [ENTER] button and long-pressing the VALUE [–] or [+] button you can change the value of the setting more greatly.
- If you press the VALUE [–] and [+] buttons simultaneously, the selected menu item returns to its default setting.

Output menu

Menu item	Value (bold text: default value)	Explanation
Output 1–2	(Enter)	Displays a menu for making detailed settings for Output channel 1–2 (see below).

Output 1–2 detailed settings menu (*1)

Menu item		Value (bold text: default value)	Explanation
Scaling		Use the following settings to specify the scaling.	
	Close	10.0–**100.0**–1000.0% (*2)	Adjusts the zoom ratio.
	Fine **Horizontal**	-1920–**0**– +1920 (*2)	Adjusts the size in the horizontal direction.
	Fine **Vertical**	-1200–**0**– +1200 (*2)	Adjusts the size in the vertical direction.
Positioning		Use the following settings to adjust the displayed position.	
	Horizontal	-19200–**0**– +19200 (*2)	Adjusts the displayed position in the horizontal direction.
	Vertical	-12000–**0**– +12000 (*2)	Adjusts the displayed position in the vertical direction.
Color Correction		Use the following settings to specify color correction.	
	Brightness	-64–**0**– +64	Adjusts the brightness.
	Saturation	-64–**0**– +64	Adjusts the saturation.
	Contrast	-64–**0**– +64	Adjusts the contrast.
	Red	-64–**0**– +64	Adjusts the red level.
	Green	-64–**0**– +64	Adjusts the green level.
	Blue	-64–**0**– +64	Adjusts the blue level.
Color Space		**RGB 0-255**, RGB 16-235, YCC	Specifies the color space.
Signal Type		**HDMI**, DVI-D	Specifies the HDMI output mode.

(*1) VP-42H The Output 2 menu contains only "Color Space" and "Signal Type".
(*2) The range of this value varies according to conditions such as the input/output format. The values listed above are the minimum and maximum values.

Input menu

Menu item	Value	Explanation
Input Status	(Enter)	Indicates the video format that is being input to each INPUT HDMI connector, and the presence or absence of an HDCP signal.
Input 1–4	(Enter)	Displays a menu for making detailed settings for Input channel 1–4 (see below).
Input Black	(Enter)	Displays a menu for making detailed settings for Input Black channel (see below).

Input 1–4 detailed settings menu

Menu item		Value (bold text: default value)	Explanation
Scaling		Use the following settings to specify the scaling.	
	Type	**Full**, Letterbox, Crop, Dot by Dot	Specifies the scaling type. Full: Regardless of the aspect ratio of the input video, always show it expanded to the full screen. Letterbox: This enlarges or reduces the incoming video to a full-screen view while keeping the aspect ratio unchanged. Crop: This 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: No scaling is performed.
	Close	10.0–**100.0**–1000.0% (*3)	Adjusts the zoom ratio.
	Fine **Horizontal**	-1920–**0**– +1920 (*3)	Adjusts the size in the horizontal direction.
	Fine **Vertical**	-1920–**0**– +1920 (*3)	Adjusts the size in the vertical direction.
Positioning		Use the following settings to adjust the displayed position.	
	Horizontal	-19200–**0**– +19200 (*3)	Adjusts the displayed position in the horizontal direction.
	Vertical	-12000–**0**– +12000 (*3)	Adjusts the displayed position in the vertical direction.
Color Correction		Use the following settings to specify color correction.	
	Brightness	-64–**0**– +64	Adjusts the brightness.
	Saturation	-64–**0**– +64	Adjusts the saturation.
	Contrast	-64–**0**– +64	Adjusts the contrast.
	Red	-64–**0**– +64	Adjusts the red level.
	Green	-64–**0**– +64	Adjusts the green level.
	Blue	-64–**0**– +64	Adjusts the blue level.
Color Space		RGB 0-255, RGB 16-235, YCC SD, YCC HD, **Auto**	Specifies the color space.
Flicker Filter		**Disabled**, Enabled	Enables/disables the flicker filter.
Source		**HDMI**, Still Image, Black, Input, Still Image2, Still Image3	Specifies the video source (HDMI input, still image, black screen, share video of another channel) that is assigned to each input channel. **Share video source** "Input" can be specified for Input 2–4. The channel you specify will share the video source of the immediately preceding channel. When you share a video source, one video source is assigned to multiple channels. For example, if you want the channel 1 video to be shared by input channels 2–4, set the input channel 2–4 video source to "Input".

(*3) The range of this value varies according to conditions such as the input/output format. The values listed above are the minimum and maximum values.

Input Black detailed settings menu

Menu item	Value (bold text: default value)	Explanation
Source	**Still Image**, Black, Still Image2, Still Image3	Specify the video source (still image, black screen) that is assigned to the Input Black channel.

Composition menu

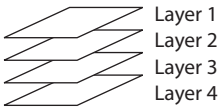
VP-42H only

Menu item	Value (bold text: default value)	Explanation
Layer 1–4	(Enter)	Displays the detailed settings menu for each layer (see below).
Layer Copy	The following items specify how layer settings are copied or exchanged.	
Source	**Layer 1**–4	Specifies the copy/exchange-source layer number.
Destination	**Layer 1**–4	Specifies the copy/exchange-destination layer number. Choose "Execute Copy" or "Execute Swap" and press the [ENTER] button to copy or exchange the layer settings.

Layer 1–4 detailed settings menu

Menu item		Value (bold text: default value)	Explanation
Layer		Disabled, Enabled (*4)	Shows/hides the layer.
Source		Input 1–4, Input Black (*4)	Specifies the input channel that is assigned to the layer. * To specify the video source that is assigned to the input channel, use Input menu →"Input 1"–"Input 4" or "Input Black"→"Source".
Window		Use the following items to adjust the layer.	
Sizing	**Horizontal**	10.0–100.0% (*4)	Adjusts the size in the horizontal direction.
	Vertical	10.0–100.0% (*4)	Adjusts the size in the vertical direction.
Positioning	**Horizontal**	-100.0–0.0– +100.0% (*4)	Adjusts the displayed position in the horizontal direction.
	Vertical	-100.0–0.0– +100.0% (*4)	Adjusts the displayed position in the vertical direction.
View		The following items adjust the video that is shown in the layer.	
Auto Fitting		**Letterbox**, Crop	Automatically adjusts the video's zoom so that it fits in the window size. Letter Box : Adjusts the size so that the entire area of the input video is shown in the window. A margin might appear. Crop : Adjusts the size of the input video so that no margin appears in the window. The portion of the video that falls outside is cut. When you select "Execute" and press the [ENTER] button, the video size is adjusted automatically. "Scaling" reflects the automatically adjusted value. The "Positioning Horizontal" and "Positioning Vertical" settings return to the default value (0.0%).
Scaling		10.0–1000.0% (*4)	Adjusts the zoom ratio.
Positioning	**Horizontal**	-100.0–**0.0**– +100.0%	Adjusts the displayed position in the horizontal direction.
	Vertical	-100.0–**0.0**– +100.0%	Adjusts the displayed position in the vertical direction.
Key (*5)		**Disabled**, Enabled	Enables/disables key compositing.
Type (*5)		**Luminance Black** Luminance White Chroma Green 1–3 Chroma Blue 1–3	Specifies the key type (extraction color) used during key composition. Luminance Black: Uses a brightness threshold to make black transparent. Luminance White: This uses a brightness threshold to make white transparent. Chroma Green 1–3: Uses a color threshold to make green transparent. Choose the preset 1–3 that allows the most appropriate compositing. Chroma Blue 1–3: Uses a color threshold to make blue transparent. Choose the preset 1–3 that allows the most appropriate compositing.
Level (*5)		0–**32**–127	Adjusts the degree to which the key is removed (transparency).
Gain (*5)		0–**4**–16	Adjusts the degree to which the edge of the key is blurred (semi-transparent area).

* The order in which layers are overlaid is fixed.



(*4) The default value depends on the scene.
(*5) Shown only for Layer 1.

Audio menu

Menu item	Value (bold text: default value)	Explanation
Mixer 1, 2 XS-42H **Mixer** VP-42H	(Enter)	Displays a menu for making detailed settings for the audio mixer (see below).
Input 4 Source	HDMI 4, **Line**, Test Tone	Specifies the audio source that is assigned to input channel 4. HDMI 4: The input audio from the INPUT HDMI 4 connector Line: The input audio from the LINE IN connector Test Tone: Test tone
Line Input Level	0–**32**–127	Adjusts the volume of the line input. This can also be adjusted by the [LINE IN] knob. * 100 = 0.0 dB, and 127 = +6.0 dB.
Panel Master XS-42H	Mixer 1, **Mixer 2**, Mixer 1&2	Specifies what is controlled by the [MASTER] knob. Mixer 1: Adjusts the volume of OUTPUT HDMI 1. Mixer 2: Adjusts the volume of OUTPUT HDMI 2. Mixer 1&2: Links OUTPUT HDMI 1 and 2, and adjusts them to the same volume.
Cascade XS-42H	**Disabled**, Enabled	If this is set to "Enable", the output of Mixer 1 is input to Mixer 2. The audio of Mixer 1 can be output from Mixer 2's LINE OUT jacks, the PHONES jack, and the OUTPUT HDMI 2 connector.
Delay	The following items adjust the audio delay time of each input and output. Delays the output of the audio by the specified time.	
Input 1–4	**0**–80ms	Adjusts the delay time of the input audio.
Output 1, 2	**0**–80ms	Adjusts the delay time of the output audio.

Audio Mixer detailed settings menu

Menu item	Value (bold text: default value)	Explanation
Input		
State	MUTE, MIX, **FOLLOW** XS-42H	Specifies the state of the input channel. MUTE: The input audio is temporarily muted (mute function) MIX: The audio is input. FOLLOW: The video and audio switch in tandem (auto follow function). Audio is output only when an input channel's cross-point is selected. If all input channels are set to "FOLLOW", only the audio of the currently selected cross-point is output, and other audio is muted.
	MUTE, **MIX** VP-42H	Specifies the state of the input channel. MUTE: The input audio is temporarily muted (mute function) MIX: The audio is input.
Level	0–**100**–127	Adjusts the volume of the input audio. * 100 = 0.0 dB, and 127 = +6.0 dB.
Output		
State	MUTE, **MIX**	Specifies the state of the output channel. Mute: The output audio is temporarily muted (mute function). Mix: The result of the audio mix is output.
Level	0–**32**–127	Adjusts the volume of the output audio. * 100 = 0.0 dB, and 127 = +6.0 dB.

System menu

Menu item	**Value** (bold text: default value)	Explanation
Format	720p, 1080i, **1080p**, 1024 x 768, 1280 x 720, 1280 x 800, 1366 x 768, 1280 x 1024, 1400 x 1050, 1600 x 1200, 1920 x 1080, 1920 x 1200	Specifies the output format.
Frame Rate	**59.94**, 50Hz	Specifies the frame rate.
HDCP	**Disabled**, Enabled	If this is set to "Enabled", copy-protected (HDCP) video can be input. Also, HDCP is applied to the video that is output.
Time	0.0–**1.0**–2.0s XS-42H	Specifies the transition time when switching between scenes or video. This can also be adjusted by the [TIME] knob.
	0.0–**1.0**–4.0s VP-42H	Specifies the transition time when switching between scenes. This can also be adjusted by the [TIME] knob.
Motion Scene Switch	Black, **Fade** XS-42H	Specifies what happens when scenes are switched. Black: A fade effect enclosing a black screen is applied. Fade: A fade effect is applied.
	Black, Fade, **Motion** VP-42H	Specifies what happens when scenes are switched. Black: A fade effect enclosing a black screen is applied. All layers switch simultaneously. Fade: A fade effect is applied. Layers switch individually. Motion: The window of each layer moves as the switch occurs.
Auto Input Detect XS-42H	(Enter)	Displays the auto input detect detailed settings menu (p. 25).
Auto Scene Switch	**Disabled**, 5–300 s	If you specify a number of seconds, the auto scene switching function is enabled. Scenes 1–10 switch automatically at the specified time interval.
Scene Recall Exclude	**Disabled**, Audio	Specifies whether the audio settings are recalled when a scene is recalled. Disabled: All settings are recalled. Audio: Audio-related settings are not recalled.
Scene Copy	(Enter)	Displays the scene copy detailed settings menu (p. 25).
Test Pattern	(Enter)	Displays the test pattern detailed settings menu (p. 25).
Network	(Enter)	Displays the network detailed settings menu (p. 26).
EDID	(Enter)	Displays the EDID copy detailed settings menu (p. 26).
Auto Setting Store	Disabled, **Enabled**	If this is "Enabled", the current settings are automatically saved to the unit when you close the menu.
Auto Signal Off	**Disabled**, 1min, 5min, 10min	Specifies whether a video signal stops being output when there is no video input (auto signal off function). Disabled: A video signal (black screen) is output. 1, 5, 10min: When the specified time elapses, the video signal (black screen) stops being output. Output resumes when a video signal is once again input or when a button is operated.
Panel Lock Mode	**All**, Scene, Input XS-42H	Specifies the operating mode during panel lock. All: All operating panel buttons and knobs will be inoperable. Scene: Only scene recall operations can be performed. Input: Only video switching operations can be performed.
	All, Scene VP-42H	Specifies the operating mode during panel lock. All: All operating panel buttons and knobs will be inoperable. Scene: Only scene recall operations can be performed.
Auto Panel Lock	**Disabled**, Enabled	Enables/disables the panel lock function. If this is "Enabled", the unit starts up with the panel locked (the [LOCK] button is lit red). To disable panel lock, long-press the [LOCK] button. * A change to this setting is applied at the next start-up.
RS-232 Baudrate	**9600**, 38400bps	Specifies the communication speed (bps) of the RS-232 connector. * A change to this setting is applied at the next start-up.
Auto Power Off	Disabled, **Enabled**	Enables/disables the auto-off function. If this is set to "Enabled", the power automatically turns off when 240 minutes elapse with the unit in the following state. • No operation performed on the unit • No audio or video input • No equipment is connected to the OUTPUT HDMI connectors
LED Dimmer	1–**8**	Adjusts the brightness of the front panel LEDs.
Factory Reset	(Enter)	Resets the unit to its factory-set state.
Version	—	Displays the system program version.

Scene Copy detailed settings menu

Menu item	Value (bold text: default value)	Explanation
Source	**Scene 1**–10	Specifies the copy/swap-source scene number.
Destination	**Scene 1**–10	Specifies the copy/swap-destination scene number. When you choose "Execute Copy" or "Execute Swap" and press the [ENTER] button, the scenes are copied or swapped.

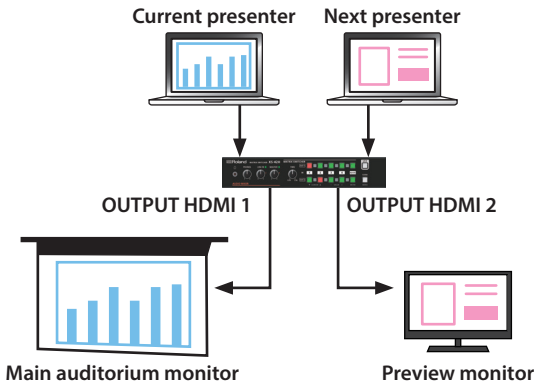
Auto Input Detect detailed settings menu

XS-42H only

Menu item	Value (bold text: default value)	Explanation
Output 1, 2	**Disabled**, Enabled	Enables/disables the auto input detect function. Auto input detect is a function that automatically switches the video when input is interrupted for the video that is being output.
On Action	**Disabled**, Enabled	Specifies operation when a new signal input is detected. If this is "Enabled", the unit automatically switches to the channel of the detected input signal.
Off Action	**Scanning**, Input 1–4, Input Black	Specifies operation when input is interrupted for the video that is being output. Scanning: Scan consecutively from input channel 1, and automatically switch to an input that has a valid signal. Input 1–Input Black: Automatically switch to the specified input channel.

Setting example 1) In a presentation, switch between the computers of multiple presenters

This allows you to check the readiness or preview the screen of the next presenter, and smoothly switch from the computer of the current presenter.



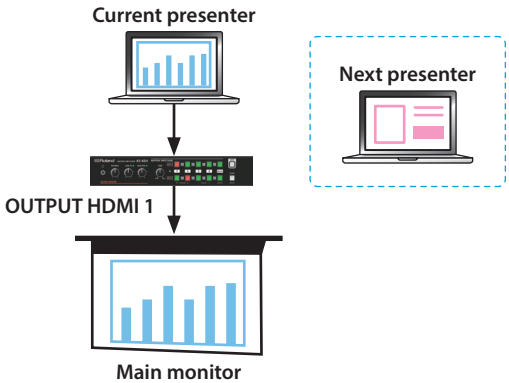
"Auto Input Detect" settings

Menu item		Value	Target
Output 1	On Action	Disabled	Main auditorium monitor, current presenter's computer
	Off Action	Scanning	
Output 2	On Action	Enabled	Preview monitor, next presenter's computer
	Off Action	Scanning	

1. When you connect the next presenter's computer, the computer screen is shown in the preview monitor, allowing you to check the computer's readiness and screen.
2. When you disconnect the current presenter's computer, the next presenter's computer screen is shown on the main auditorium monitor.
3. When you further connect the next presenter's computer, the computer screen is shown on the preview monitor.

Setting example 2) In a conference room that has a single main monitor, change connections between the computers of different presenters

The XS-42H holds the output signal when you connect a different computer, thus preventing a state in which the monitor shows no signal or a blue screen, or goes to sleep.



"Auto Input Detect" settings

Menu item		Value	Target
Output 1 (*6)	On Action	Disabled	Main monitor, current presenter's computer
	Off Action	Input Black	
Output 1 (*7)	On Action	Enabled	Main monitor, current presenter's computer
	Off Action	Input Black	

1. When you disconnect the current presenter's computer, the unit switches to the Input Black channel (black screen or still image).
2. When you connect the next presenter's computer, the computer's screen is shown on the main monitor.

(*6) (*7) If you connect the next presenter's computer while the current presenter's computer is connected

(*6) The input does not switch. In this state if you disconnect the current presenter's computer, the unit switches to the Input Black channel (black screen or still image).
(*7) The unit switches to the screen of the next presenter's computer.

Network detailed settings menu

Menu item	Value (bold text: default value)	Explanation
IP Configure	**DHCP Server**, DHCP Client, Manually	Selects how settings are made for the IP address, subnet mask, and default gateway. * Changed settings are applied at next start-up. DHCP Server: DHCP server functionality is enabled. The information needed for connecting to the network is assigned automatically by this unit to the computers that are on the LAN. DHCP Client: The IP address and other information needed for connecting to the network is obtained automatically from the DHCP server of the LAN. Manually: The IP address, subnet mask, and default gateway are specified manually.
Password	(Enter)	Displays a menu for making detailed settings for the password (see below).
Remote Control URL	http://192.168.10.10:8080/ (example display)	Shows the URL for starting the WebRCS web application in your web browser. * The URL is not shown if a network connection is not established.
IP Address	192.168.10.10 (example display)	Shows the IP address. (*8) (*9)
Subnet Mask	255.255.255.0 (example display)	Shows the subnet mask. (*8) (*9)
Default Gateway	192.168.10.1 (example display)	Shows the default gateway. (*8) (*9)
MAC	00:00:00:00:00:00 (example display)	Shows the MAC address.

(*8) Manual settings can be made only if "IP Configure" is set to "Manually".
(*9) The identification number "0.0.0.0" is shown until a network connection is established.

Password detailed settings menu

Sets the password necessary to connect to the network (WebRCS, Telnet).
When connecting a computer or other device on the same network to access the unit, input the password that's set here.

Menu item	Value (bold text: default value)	Explanation
Current Password	–	When you want to change the password, enter the current password here. When you're registering a password for the first time, you don't need to input this setting. **Show password** **Password not set**: None **Password set**: ––––––––
New Password	–	Input the new eight-character password. * You can use single-byte alphanumeric characters (a–f, 0–9) for the password.

Test Pattern detailed settings menu

Menu item	Value (bold text: default value)	Explanation
Pattern	**Disabled**, Color Bars SMPTE, Color Bars 75%, Color Bars 100%, Ramp, Step, Hatch, Frame, Diagonal, Circle, Red, Green, Blue, white, Black, ColorBars 75%-SP, Color Bars100%-SP, Ramp-SP, Step-SP, Hatch-SP, Ver.Stripe, Hor.Stripe, Ver.Stripe-RB, Hor.Stripe-RB	Specifies the test pattern.
Motion	**Disabled**, Slow, Fast	Specifies the scroll speed of the test pattern.

EDID detailed settings menu

Menu item	Value (bold text: default value)	Explanation
Source	**Default**, 720p, 1080i, 1080p, 1024 x 768, 1280 x 720, 1280 x 800, 1366 x 768, 1280 x 1024, 1400 x 1050, 1600 x 1200, 1920 x 1080, 1920 x 1200	Specifies the EDID copy source.
Destination	**Input 1**–4	Specifies the copy-destination INPUT HDMI connector. When you select "Execute" and press the [ENTER] button, the EDID information is copied.

File menu

<table>
<tr><th>Menu item</th><th>Value</th><th>Explanation</th></tr>
<tr><td colspan="2">Internal Memory</td><td>Settings for the following items are manually saved and recalled.</td></tr>
<tr><td>Recall</td><td>(Execute)</td><td>Press the [ENTER] button to recall the settings saved in the unit.</td></tr>
<tr><td>Store</td><td>(Execute)</td><td>Press the [ENTER] button to store the current settings in the unit's internal memory.</td></tr>
<tr><td colspan="2">USB Memory</td><td>The following items execute operations using a USB flash drive. Be sure to connect your USB flash drive to the USB MEMORY port.</td></tr>
<tr><td>Still Image Load</td><td>(Execute)</td><td>Loads a still image saved in the USB flash drive's root directory into the unit.
Formats supported for loading<table><tr><td>Format</td><td>Windows Bitmap File (.bmp), 24-bit color, uncompressed</td></tr><tr><td>Resolution</td><td>Maximum 1920 x 1200 pixels</td></tr><tr><td>File name</td><td>default.bmp, default2.bmp, default3.bmp</td></tr></table>* If a USB flash drive containing a still image in its root directory is connected when the unit starts up, the still image is loaded automatically.</td></tr>
<tr><td>Load All</td><td>(Execute)</td><td>Loads a settings file from the USB flash drive and recalls the settings to the unit. The current settings are overwritten.</td></tr>
<tr><td>Save All</td><td>(Execute)</td><td>Saves the current settings to the USB flash drive as a file. If there is already a settings file on the USB flash drive, it is overwritten. The file name is "model name.PRM".
* The System menu setting "Test Pattern" is not saved in the file. The unit always starts up with this "Disabled".</td></tr>
<tr><td>Format</td><td>(Execute)</td><td>Formats the USB flash drive.</td></tr>
</table>

LAN/RS-232 command reference

The unit support two types of remote-interface communication: LAN and RS-232.
Using the LAN port or RS-232 connector to send specific commands to the unit from a controlling device lets you operate the unit remotely.

LAN interface

This uses the LAN port on the unit.
You use Telnet to operate the unit remotely over a LAN (TCP/IP protocol).

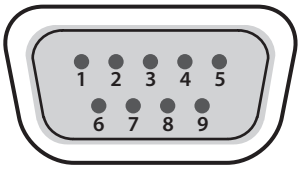
Communication standards

Port	LAN port (supports 100BASE-TX)
TCP port number	8023

For methods of connecting to a network, refer to "Network connections" (p. 15).

RS-232 interface

RS-232 connector pin layout



DB-9 type (male)

Pin assignments

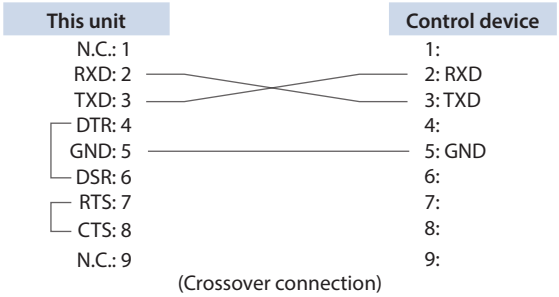
Pin No.	Signal
1	N.C.
2	RXD
3	TXD
4	DTR
5	GND
6	DSR
7	RTS
8	CTS
9	N.C.

Communication standards

Communication method	Synchronous (asynchronous), full-duplex
Communication speed	9,600/38,400 bps
Parity	none
Data length	8 bits
Stop bit	1 bit
Code set	ASCII

Cable wiring diagram

Use an RS-232 crossover cable to connect the unit and the controller (an RS-232-compatible computer or other device).



(Crossover connection)

* The connections between 4 and 6 and between 7 and 8 are inside the unit.

Command format

Commands are common to the LAN and the RS-232 interface.

Transmitted commands (control device → this unit)

Transmit specific commands from the control device to this unit.

Command	Format
ver	Obtains the model name and version information. **ver** | **lf**
set	Sets a parameter. **set** | **,** | **Category** | **,** | **ID** | **,** | **Sub-ID** | **,** | **Value** | **lf**
get	Obtains the current parameter value. **get** | **,** | **Category** | **,** | **ID** | **,** | **Sub-ID** | **lf** When this unit correctly receives a command, it returns set,[category],[ID],[sub-ID],[value][lf].

* "lf" is the ASCII code "0aH", and is a control code that indicates the end of the command. H indicates a hexadecimal value.

ack response (this unit → control device)

When this unit correctly receives a command, it returns ack.
The ack response commands are described in "List of commands" (p. 29).

Error response (this unit → control device)

When this unit could not correctly receive a command, it returns an error.

err	**,**	**Transmitted command**	**lf**

List of commands

* When sending a sequence of commands to the unit from a controller, after each one, be sure to verify that an "ack" response is returned before sending the next command.

XS-42H

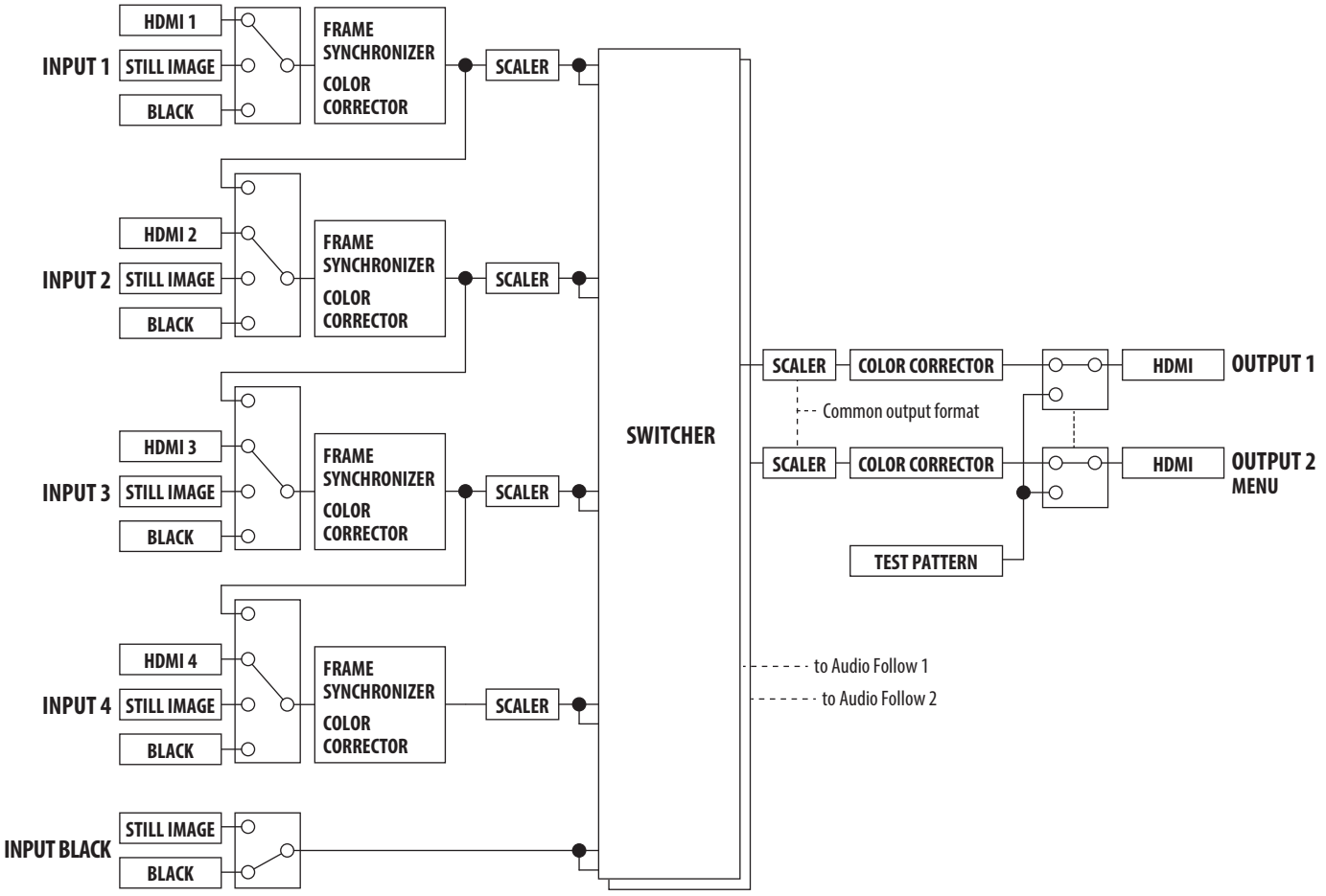
Item	Transmitted command	Response command	Parameter
Specify the video/scene transition time	set,10,19,0,[a][lf]	ack,10,19,0,[a][lf]	a: 0–4,000 * The units are milliseconds (ms).
Switch scenes	set,11,11,0,[a][lf]	ack,11,11,0,[a][lf]	a: 0 (Scene 1)–9 (Scene 10)
Select the input channel for OUTPUT 1	set,11,10,0,[a][lf]	ack,11,10,0,[a][lf]	a: 0 (Input 1)–3 (Input 4), 4 (Input Black)
Select the input channel for OUTPUT 2	set,11,10,1,[a][lf]	ack,11,10,1,[a][lf]	a: 0 (Input 1)–3 (Input 4), 4 (Input Black)
Obtain the current scene number	get,10,20,0[lf]	ack,10,20,0[lf] set,10,20,0,[a][lf]	a: 0 (Scene 1)–9 (Scene 10)
Obtain the input channel currently selected for OUTPUT 1	get,[a],0,0[lf]	ack,[a],0,0[lf] set,[a],0,0,[b][lf]	a: 0 (Scene 1)–9 (Scene 10) b: 0 (Input 1)–3 (Input 4), 4 (Input Black)
Obtain the input channel currently selected for OUTPUT 2	get,[a],0,1[lf]	ack,[a],0,1[lf] set,[a],0,1,[b][lf]	a: 0 (Scene 1)–9 (Scene 10) b: 0 (Input 1)–3 (Input 4), 4 (Input Black)
Adjust the input channel volume of Audio Mixer 1	set,[a],1,[b],[c][lf]	ack,[a],1,[b],[c][lf]	a: 0 (Scene 1)–9 (Scene 10), 15 (currently selected scene) b: 0 (Input 1)–3 (Input 4) c: 0–127
Adjust the overall volume of Audio Mixer 1	set,[a],2,0,[b][lf]	ack,[a],2,0,[b][lf]	a: 0 (Scene 1)–9 (Scene 10), 15 (currently selected scene) b: 0–127
Adjust the input channel volume of Audio Mixer 2	set,[a],6,[b],[c][lf]	ack,[a],6,[b],[c][lf]	a: 0 (Scene 1)–9 (Scene 10), 15 (currently selected scene) b: 0 (Input 1)–3 (Input 4) c: 0–127
Adjust the overall volume of Audio Mixer 2	set,[a],7,0,[b][lf]	ack,[a],7,0,[b][lf]	a: 0 (Scene 1)–9 (Scene 10), 15 (currently selected scene) b: 0–127
Acquire version information	ver[lf]	ack,ver[lf] ver,XS-42H,[a][lf]	a: Version * The version info is ASCII text strings. * If this unit is in the process of starting up, the version is shown as "----".

VP-42H

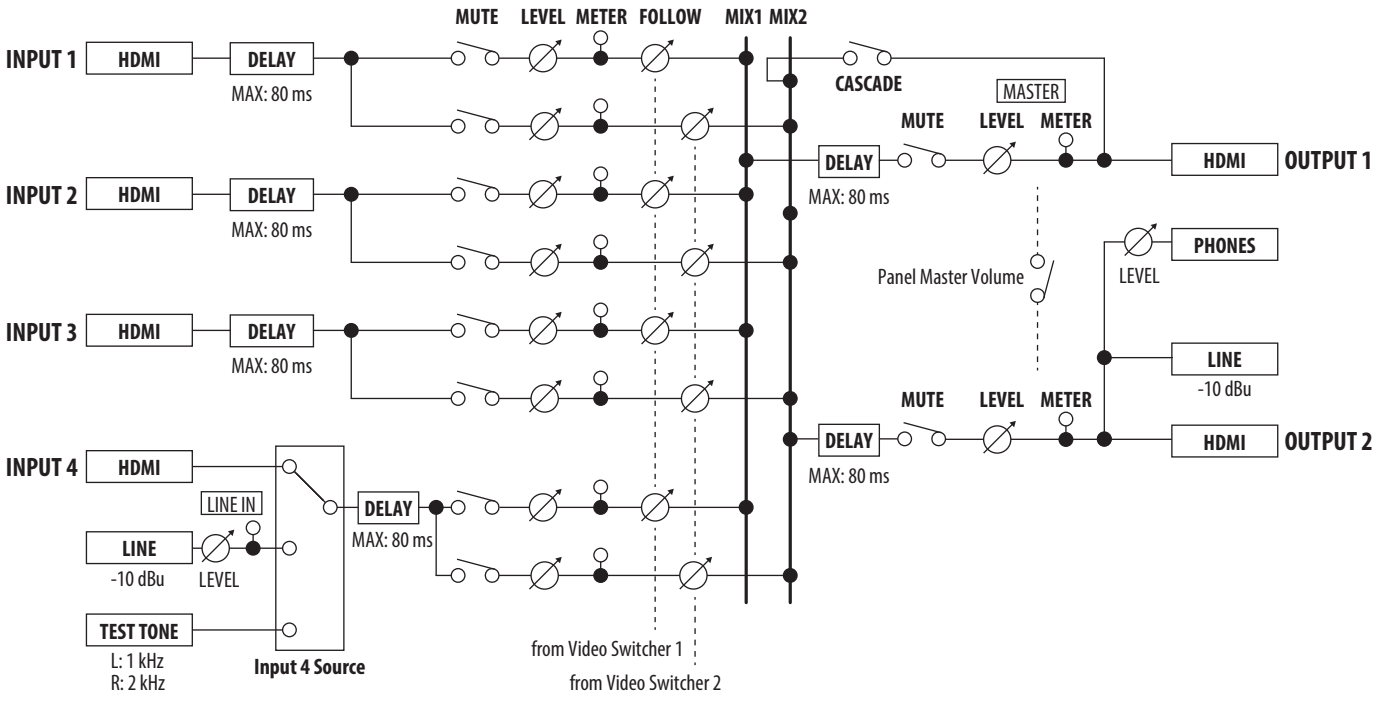
Item	Transmitted command	Response command	Parameter
Specify the scene transition time	set,10,19,0,[a][lf]	ack,10,19,0,[a][lf]	a: 0–4,000 * The units are milliseconds (ms).
Switch scenes	set,11,11,0,[a][lf]	ack,11,11,0,[a][lf]	a: 0 (Scene 1)–9 (Scene 10)
Show/hide a layer	set,[a],41,[b],[c][lf]	ack,[a],41,[b],[c][lf]	a: 0 (Scene 1)–9 (Scene 10), 15 (currently selected scene) b: 0 (Layer 1)–3 (Layer 4) c: 0 (Disabled), 1 (Enabled) Show/hide a layer
Specify the input channel assigned to a layer	set,[a],42,[b],[c][lf]	ack,[a],42,[b],[c][lf]	a: 0 (Scene 1)–9 (Scene 10), 15 (currently selected scene) b: 0 (Layer 1)–3 (Layer 4) c: 0 (Input 1)–3 (Input 4), 4 (Input Black)
Obtain the current scene number	get,10,20,0[lf]	ack,10,20,0[lf] set,10,20,0,[a][lf]	a: 0 (Scene 1)–9 (Scene 10)
Adjust the input channel volume	set,[a],1,[b],[c][lf]	ack,[a],1,[b],[c][lf]	a: 0 (Scene 1)–9 (Scene 10), 15 (currently selected scene) b: 0 (Input 1)–3 (Input 4) c: 0–127
Adjust the overall volume	set,[a],2,0,[b][lf]	ack,[a],2,0,[b][lf]	a: 0 (Scene 1)–9 (Scene 10), 15 (currently selected scene) b: 0–127
Acquire version information	ver[lf]	ack,ver[lf] ver,VP-42H,[a][lf]	a: Version * The version info is ASCII text strings. * If this unit is in the process of starting up, the version is shown as "----".

XS-42H block diagram

Video section

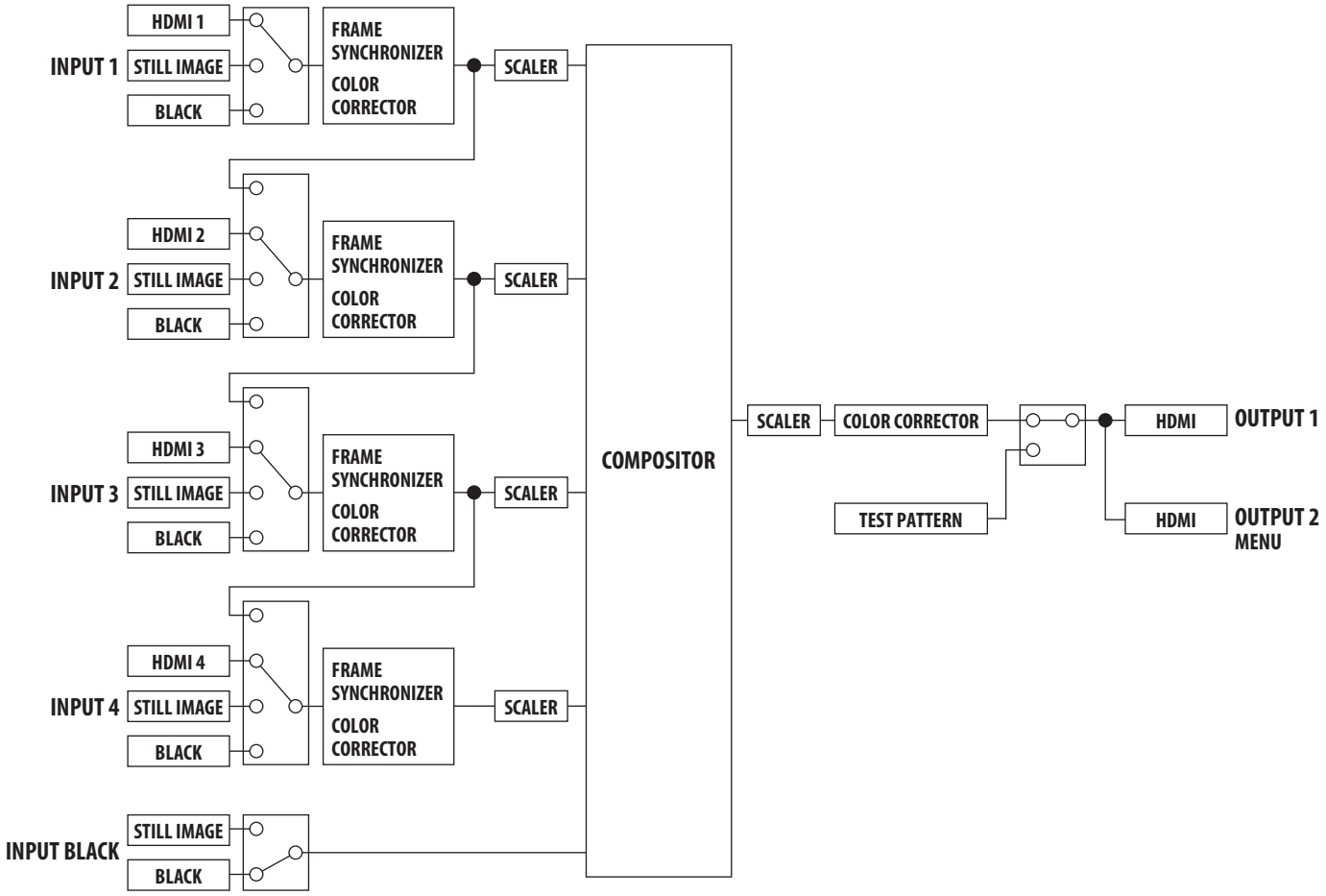


Audio section

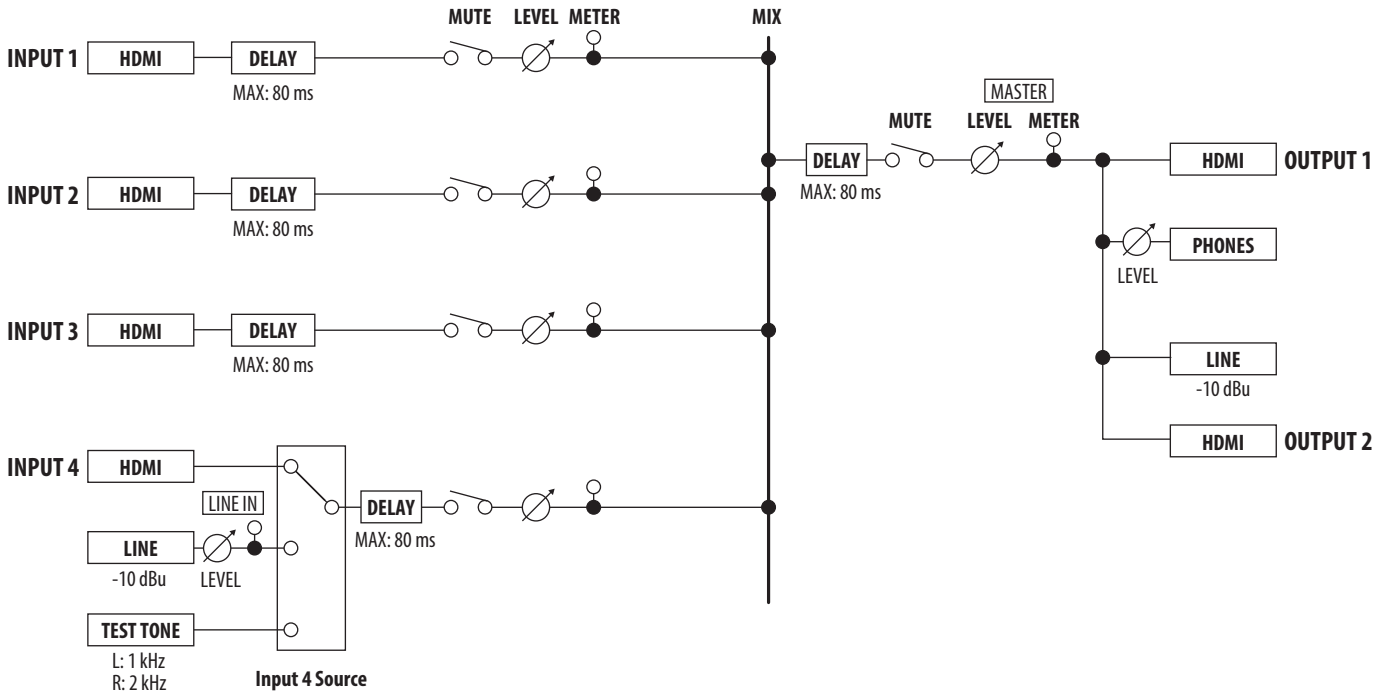


VP-42H block diagram

Video section



Audio section



Troubleshooting

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

Problem	Items to check	Action	Page
Video-related problems			
No picture is input.	XS-42H Could the cross-point buttons be unlit?	Video of a format not supported by the unit being input. If valid video is being input, the crosspoint button is lit green.	p. 7
	Could you be inputting copy-protected (HDCP) video?	If you want to input copy-protected (HDCP) video, set the System menu "HDCP" setting to "Enabled".	—
Video is not output.	Is the display connected correctly?	If you want to output copy-protected (HDCP) video, connect a HDCP-compliant display.	—
	Do the color space settings of the output-destination device and the unit match?	Go to Output menu → "Output 1"–"Output 2" → and change the "Color Space" setting.	—
"Snowy"-noise video is output.	It might be that the HDMI signal is not being correctly transmitted or received.	Reconnect the HDMI cable.	—
Video input from a computer is distorted.	If video is being input from a computer, the image can sometimes be skewed, flickering, or otherwise distorted.	This is a phenomenon called "tearing", and is not a malfunction.	—
Color is wrong.	Do the color space settings of the output-destination device and the unit match?	Go to Output menu → "Output 1"–"Output 2" → and change the "Color Space" setting.	—
		Depending on the device, the color space might be linked with the DVI/HDMI selection or the selection of format. If so, changing the color space of the output-destination device might solve the problem.	—
An edge of the video shown on a display is cut off.	Are the display's settings correct?	Depending on the display, it might overscan automatically. Change the settings of the device.	—
Can't load a still image.	Are you loading a still image of a format and resolution supported by the unit?	Still images of an unsupported format or resolution are not recognized. Make sure that the still image is of a format and resolution that are supported by the unit.	p. 10
	Is the file name of the still image assigned correctly?	Use one of the following filenames: "default.bmp", "default2.bmp" or "default3.bmp". If the file's name is not correct, it is not recognized.	
		If you assign a file name on your computer, and the computer is set to hide the file name extension, the extension might be duplicated so that the name is "default.bmp.bmp". Check the settings of your computer.	
Audio-related Problems			
No audio is output. **Audio volume is low.**	Could the volume setting of the connected amp or speaker be low?	Adjust the volume appropriately.	—
	Could the volume setting be lowered?	Adjust each input audio setting to the appropriate volume. Also adjust the overall volume.	p. 11
	Could the audio be muted (silenced)?	In the Audio menu, set "State" to "MIX" or "FOLLOW" (XS-42H) so that muting is disabled.	p. 11
Other Problems			
Can't use a USB flash drive.	Has the USB flash drive been formatted by the unit?	A USB flash drive that was not formatted by the unit is not recognized. When using a USB flash drive for the first time, you must format it on this unit.	p. 13

Main specifications

Roland XS-42H: Matrix Switcher
Roland VP-42H: Video Processor

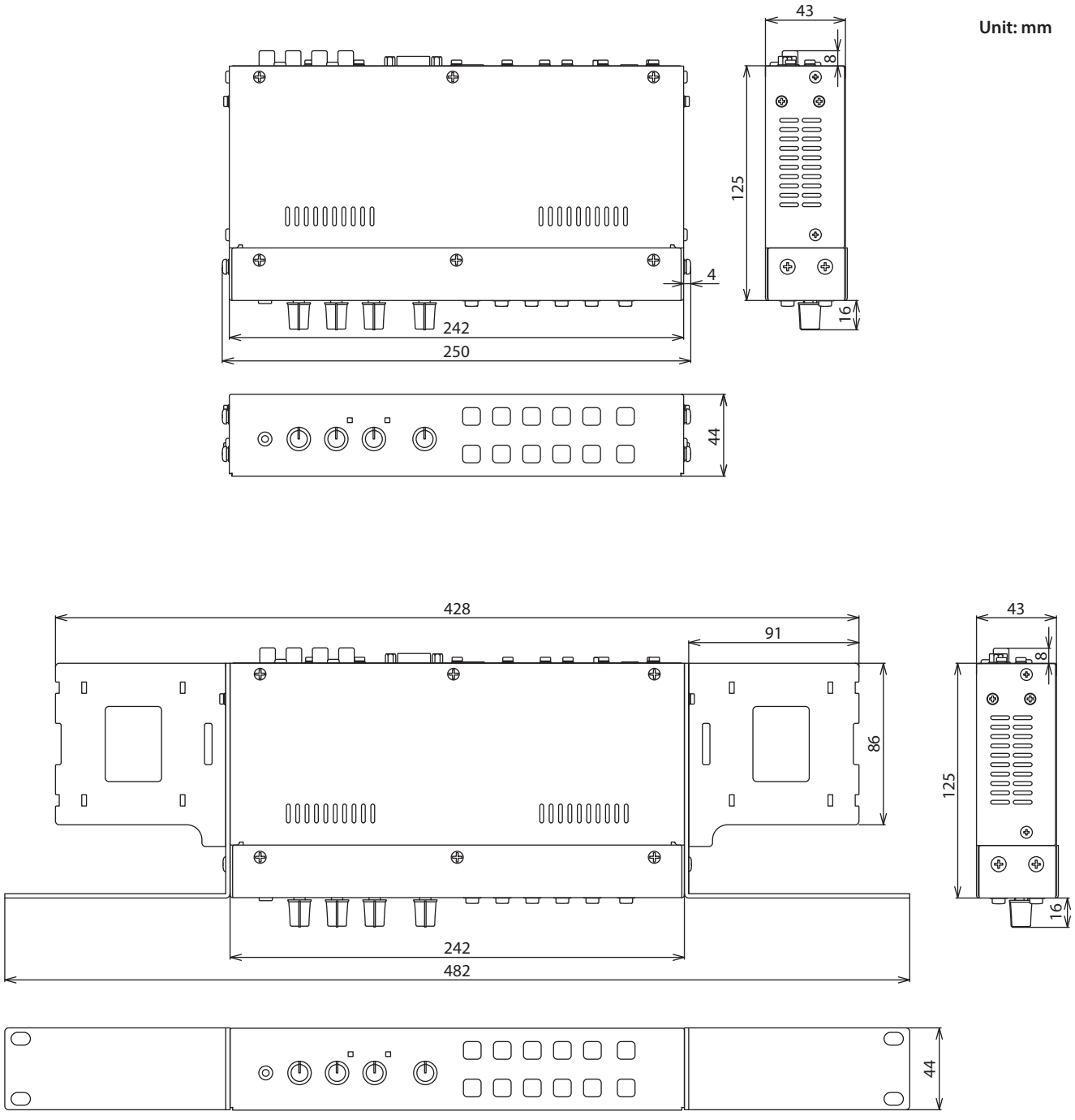
	XS-42H	VP-42H
■ Video		
Processing	4:4:4 (Y/Pb/Pr, RGB)/10 bits, 4:2:2 (Y/Pb/Pr)/10 bits	
Input Connectors	INPUT HDMI 1–4: HDMI type A x 4 * HDCP Supported	
Output Connectors	OUTPUT HDMI 1–2: HDMI type A x 2 * HDCP Supported	OUTPUT HDMI 1–2: HDMI type A x 2 * HDCP Supported * 2 Output is the same image.
Formats	480/59.94i (*1), 576/50i (*1), 480/59.94p (*1), 576/50p (*1), 720/59.94p, 720/50p, 1080/59.94i, 1080/50i, 1080/59.94p, 1080/50p, 800 x 600/60 (*1), 1024 x 768/60 (*2), 1280 x 720/60 (*2), 1280 x 800/60 (*2), 1366 x 768/60 (*2), 1280 x 1024/60 (*2), 1400 x 1050/60 (*2), 1600 x 1200/60, 1920 x 1080/60, 1920 x 1200/60 RB * Conforms to CEA-861-E,VESA DMT Version 1.0 Revision 11 * Frame rate is 59.94 Hz (NTSC) or 50 Hz (PAL). (*1) Input only. (*2) Output refresh rate is 75 Hz when frame rate is set to 50 Hz.	
Effects	Transition: Mix, Cut	Layer: 4 * Picture in Picture with Keyer x 1, Picture in Picture x 3 * Motion Scene Switch
Still Image	Internal Memory: 3 Maximum Size: 1920 x 1200 pixels Format: Windows Bitmap File (.bmp), 24-bit color, uncompressed	
■ Audio		
Sample Rate	48 kHz, 24 bits	
Input Connectors	INPUT HDMI 1–4: HDMI type A x 4 LINE IN: RCA pin type	
Output Connectors	OUTPUT HDMI 1–2: HDMI type A x 2 LINE OUT: RCA pin type PHONES: Stereo mini type	OUTPUT HDMI 1–2: HDMI type A x 2 * 2 Output is the same audio. LINE OUT: RCA pin type PHONES: Stereo mini type
Input Level	LINE IN: -10 dBu (Maximum: +8 dBu)	
Input Impedance	LINE IN: 15 kΩ	
Output Level	LINE OUT: -10 dBu (Maximum : +8 dBu) PHONES: 72 mW + 72 mW (32 Ω)	
Output Impedance	LINE OUT: 1 kΩ PHONES : 10 Ω	
Formats	HDMI: Linear PCM, 24 bits, 48 kHz, 2 ch	
Processing	Mixer: 4 ch x 2 (Delay: Maximum 80 ms, Audio Follow)	Mixer: 4 ch (Delay: Maximum 80 ms)
■ Others		
External Connectors	REMOTE: RS-232: DB-9 type (Male) LAN: RJ45 USB: USB A type (Use for future expansion)	
	USB MEMORY: USB A type (Use for USB Memory)	
Functions	Scene Memory: 10, Test Pattern Generator, Test Tone Generator, EDID Emulator	
Power Supply	AC Adaptor	
Current Draw	2.1 A	
Power Consumption	25 W * Power consumption when in off mode (when the power automatically turns off): 0.2 W	
Operation Temperature	+0 to +40 degrees Celsius +32 to +104 degrees Fahrenheit	
Dimensions	242 (W) x 125 (D) x 44 (H) mm 9-9/16 (W) x 4-15/16 (D) x 1-3/4 (H) inches	
Weight	1.2 kg 2 lbs 11 oz	
Accessories	Owner's Manual, Leaflet "USING THE UNIT SAFELY", AC adaptor, Power cord, Rubber feet (4 pcs.), Rack mount angle set	

* 0 dBu = 0.775 Vrms

* This document explains the specifications of the product at the time that the document was issued. For the latest information, refer to the Roland website.

Dimensions

Unit: mm



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