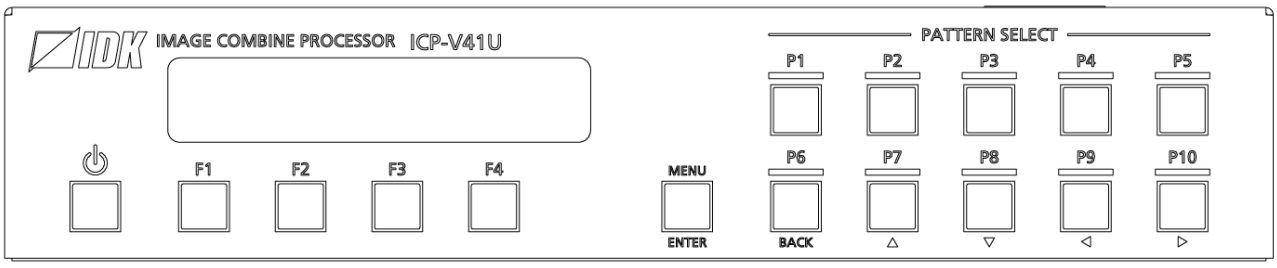
Multi-Window Video Processor

ICP-V41U

Operation Guide
Ver.1.0.0



Thank you for choosing our product.
Please thoroughly familiarize yourself with this guide before installing this equipment. We recommend keeping this manual together with the equipment for future reference as needed.

IDK Corporation

- Some information contained in this guide such as exact product appearance, communication commands, and so on may differ depending on the product version.
- This guide is subject to change without notice. You can download the latest version from IDK's website at: www.idkav.com

About technical documentation

■ **Please read the following guides before connecting this equipment to a power source.**

1. Safety Instructions Contains important safety instructions for the product to help ensure your own personal safety and protect the product and working environment from potential damage.	Provided with the product.
2. Setup Guide Contains setup information and precautions for installing the product and connecting cables.	Download from www.idkav.com

■ **Please refer to the following guides as needed.**

3. Operation Guide Describes how to configure and use the equipment.	Download from www.idkav.com
4. User Guide Contains detailed explanation of functions, setting values, and restrictions.	
5. Command Guide Contains information on controlling the equipment using communication commands through RS-232C or LAN communication.	

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FCC STATEMENT

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

(Class A)

Supplier's Declaration of Conformity
47 CFR § 2.1077 Compliance Information

Unique Identifier

Type of Equipment: 4K@60 Multi-Window Video Processor
Model Name: ICP-V41U

Responsible Party – U.S. Contact Information

Company Name: IDK America Inc.
Address: 72 Grays Bridge Road Suite 1-C, Brookfield, CT 06804
Telephone number: +1-203-204-2445
URL: www.idkav.com

FCC Compliance Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

(FCC SDoC)

CE MARKING

This equipment complies with the essential requirements of the relevant European health, safety and environmental protection legislation.

WEEE MARKING

Waste Electrical and Electronic Equipment (WEEE), Directive 2002/96/EC
(This directive is only valid in the EU.)
This equipment complies with the WEEE Directive (2002/96/EC) marking requirement.
The left marking indicates that you must not discard this electrical/electronic equipment in domestic household waste.

Safety Instructions

Read all safety and operating instructions before using this product. Follow instructions and heed warnings/cautions.
Instructions and warnings/cautions for all products are provided. Some of them may not be applicable to your product.

Warning	Indicates the presence of a hazard that may result in death or serious personal injury if the warning is ignored or the product is handled incorrectly.
Caution	Indicates the presence of a hazard that may cause minor personal injury or property damage if the caution is ignored or the product is handled incorrectly.

Symbol	Description	Example
Caution	This symbol is intended to alert the user. (Warning and caution)	**Hot surfaces Caution**
Prohibited	This symbol is intended to prohibit the user from specified actions.	**Do not disassemble**
Instruction	This symbol is intended to instruct the user.	**Unplug**

Warning

For lifting heavy products:

Instruction	**● Lifting must be done by two or more personnel.** To avoid injury: When lifting the product, bend your knees, keep your back straight and get close to it with two or more persons.

For installing and connecting products:

Prohibited	**● Do not place the product in unstable place.** Install the product in a horizontal and stable place, as this may fall or tip over and cause injury. **● Secure the product if installing in the locations with vibration.** Vibration may move or tip over the product unexpectedly, resulting in injury.

⚠ Warning

 Instruction	**● Installation work must be performed by professionals.** The product is intended to be installed by skilled technicians. For installation, please contact a system integrator or IDK. Improper installation may lead to the risk of fire, electric shock, injury, or property damage. **● Insert the power plug into an outlet that is unobstructed.** Unobstructed access to the plug enables unplugging the product in case of any extraordinary failure, abnormal situation or for easy disconnection during extended periods of non-use. **● Insert the power plug into an appropriate outlet completely.** If the plug is partially inserted, arching may cause the connection to overheat, increasing the risk of electric shock or fire. Do not use a damaged plug or connect to a loose outlet. **● Unplug the product from an AC power source during installation or service.** When connecting peripheral devices to this product, unplug all involved devices from outlets. Ground potential differences may cause fire or other difficulties. **● The product must be electrically earthed/grounded.** To reduce the risk of electric shock, ensure the product is connected to a mains socket outlet with a protective earthing connection. **● For PoE/PoH, use category cables meeting IEEE802.3af/at.** Otherwise, it may cause problems or a fire.

For operating products:

 Prohibited	**● Keep out any foreign objects.** To avoid fire or electric shock, do not permit foreign objects, such as metal and paper, to enter the product from vent holes or other apertures. **● For power cable/plug and Category cable,** **・ Do not scratch, heat, or modify, including splicing or lengthening them.** **・ Do not pull, place heavy objects on them, or pinch them.** **・ Do not bend, twist, tie or clamp them together forcefully.** Misuse of the power cable and plug may cause fire or electric shock. If power cables/plugs become damaged, contact your IDK representative.
 Do not disassemble	**● Do not repair, modify or disassemble.** Since the product includes circuitry that uses potentially lethal, high voltage levels, disassembly by unauthorized personnel may lead to the risk of fire or electric shock. For internal inspection or repair, contact your IDK representative.
 Do not touch	**● Do not touch the product and connected cables during electric storms.** Contact may cause electric shock.
 Instruction	**● Clean the power plug regularly.** If the plug is covered in dust, it may increase the risk of fire.

If the following problem occurs:

 Unplug	**● Unplug immediately if the product smokes, makes unusual noise, or produces a burning odor.** **● Unplug immediately if the product is damaged by falling or having been dropped.** **● Unplug immediately if water or other objects are directed inside.** If you continue to use the product under these conditions, it may increase the risk of electric shock or fire. For maintenance and repair, contact your IDK representative.

Caution

For installing and connecting products:

 **Prohibited**	**● Do not place the product in a location where it will be subjected to high temperatures.** If the product is subjected to direct sunlight or high temperatures while under operation, it may affect the product's performance and reliability and may increase the risk of fire. **● Do not store or operate the product in dusty, oil smoke filled, or humid place.** Placing the product in such environment may increase the risk of fire or electric shock. **● Do not block the vent holes.** If ventilation slots are blocked, it may cause the product to overheat, affecting performance and reliability and may increase the risk of fire. **● Do not place or stack heavy items on the product.** Failure to observe this precaution may result in damage to the product itself as well as other property and may lead to the risk of personal injury. **● Do not exceed ratings of outlet and wiring devices.** Exceeding the rating of an outlet may increase the risk of fire and electric shock.
 **No wet hands**	**● Do not handle power plug with wet hands.** Failure to observe this precaution may increase the risk of electric shock.
 **Instruction**	**● Use and store the product within the specified temperature/humidity range.** If the product is used outside the specified range of temperature and humidity continuously, it may increase the risk of fire or electric shock. **● Do not place the product at elevations of 1.24 mi. (2,000 m) or higher above sea level.** Failure to do so may shorten the life of the internal parts and result in malfunctions. **● When mounting the product into the rack, provide sufficient cooling space.** Mount the product in a rack meeting EIA standards, and maintain spaces above and below for air circulation. For your safety as required, attach an L-shaped bracket in addition to the panel mount bracket kit to improve mechanical stability. **● Never insert screws without the rubber feet into the threaded holes on the bottom of the product.** Never insert screws alone into the threaded holes on the bottom of the product. Doing so may lead to damage when the screws contact electric circuitry or components inside the product. Reinstall the originally supplied rubber feet using the originally supplied screws only.

For operating products:

 **Hot surfaces Caution**	**For products with the hot surfaces caution label only:** **● Do not touch the product's hot surface.** If the product is installed without enough space, it may cause malfunction of other products. If you touch product's hot surface, it may cause burns.
 **Prohibited**	**● Use only the supplied power cable and AC adapter.** **● Do not use the supplied power cable and AC adapter with other products.** If non-compliant adapter or power cables are used, it may increase the risk of fire or electric shock.
 **Unplug**	**● If the product won't be used for an extended period of time, unplug it.** Failure to observe this precaution may increase the risk of fire. **● Unplug the product before cleaning.** To prevent electric shock.
 **Instruction**	**● Do not prevent heat release.** If cooling fan stops, power off the product and contact IDK. Failure to do so may raise internal temperature and increase the risk of malfunction, fire, or electric shock. **● Keep vents clear of dust.** If the vent holes near the cooling fan or near the fan are covered with dust, internal temperatures increase and may increase the risk of malfunction. Clean the vent holes and near the fan as needed. If dust accumulates inside of the product, it may increase the risk of fire or electric shock. Periodic internal cleaning, especially before humid rainy season, is recommended. For internal cleaning, contact your IDK representative.

Contents

About this Guide

This guide describes how to configure and use the ICP-V Multi-Window Video Processor.

Operations are described based on the front panel operation, and information for the WEB GUI is also included for each operation.

Conventions

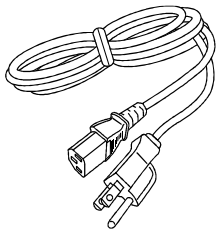
- The following terms are used in this guide.
  - PC : Personal computer
  - WEB GUI : Graphic User Interface (GUI) displayed through a WEB browser.
  - OUT A : OUT 1A connector
  - OUT 1 : OUT 1A output channel
  - INOFF : Input channel OFF
  - W1 : Window1
  - W2 : Window2
  - W3 : Window3
  - W4 : Window4
- The following symbols are used in this guide.
  - [ ] : Menus and messages displayed on the front panel display and a WEB GUI.
  - “ ” : Reference
- The following notifications are used in this guide.
  - ***Note*** : Addresses practices not related to personal injury, such as restrictions and attention.
  - ***Tip*** : Provides supplemental remarks and suggestions.

About this Product

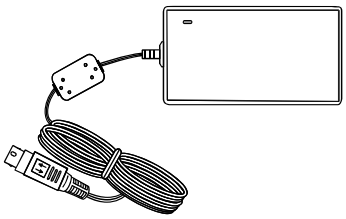
The ICP-V41U is a multi-window processor that simultaneously displays up to four windows on a single screen with customizable window layouts.
With four (4) HDMI video inputs, and a single HDMI scaled output, the ICP-V can support video resolutions, in and out, up to 4K@60 (4:4:4).
Audio signals can be distributed simultaneously as well as embedded/de-embedded for breakaway audio routing. The ICP-V support both HDMI digital audio and analog audio in and out.
The ICP-V can be configured and controlled remotely using RS-232C or LAN.
External devices can be controlled via RS-232C, LAN, CEC, or contact closure by registering control commands.

Provided items

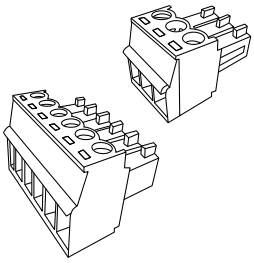
Ensure that all items illustrated below are included in the package.
If any items are missing or damaged, please contact IDK.



One (1) power cord, 6 ft. (1.8 m)



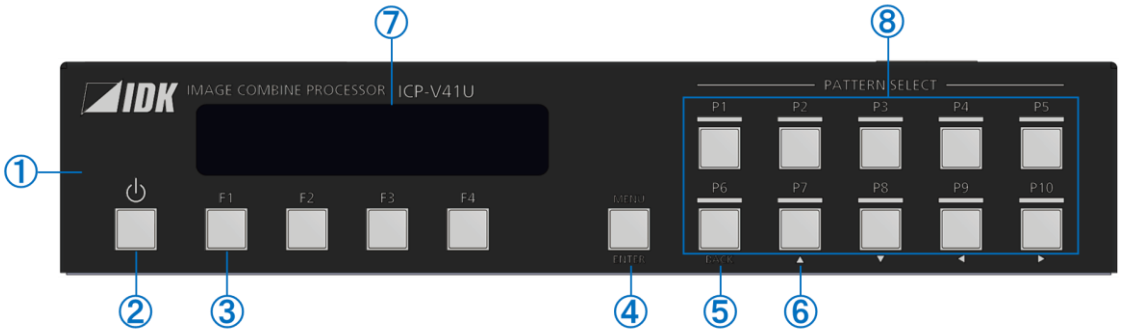
One (1) AC adapter (4 ft. (1.2 m))



Three (3) 3-pin captive-screw terminal blocks
One (1) 6-pin captive-screw terminal block

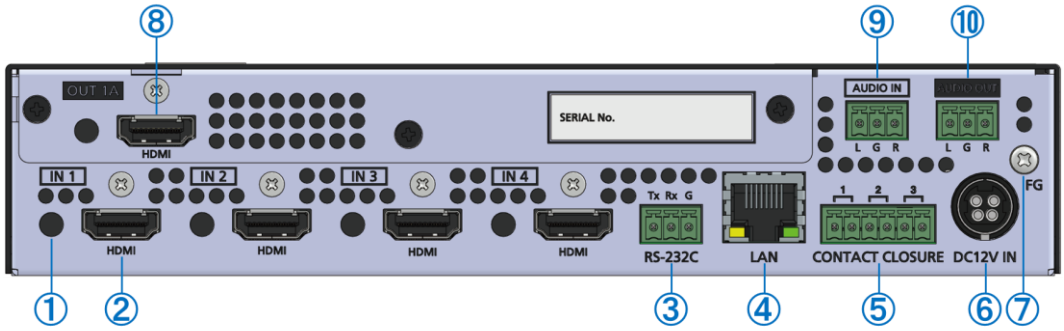
Panel overview

Front panel



①	Front panel User accessible control buttons and front panel display
②	Power button Power mode control: ON/OFF/STANDBY
③	Function button (F button) Executes user assigned functions.
④	MENU/ENTER button Displays a menu or submenu. Selects a menu or accepts a new setting.
⑤	BACK button Returns to the previous page. (When a menu is displayed.)
⑥	Navigation buttons (△▽◁▷) Menu and attribute selection. (When a menu is displayed.) Moves the cursor. Value and action selection.
⑦	Front panel display Displays menus, parameters, or setting values.
⑧	Pattern (layout) selection buttons Recalls layout

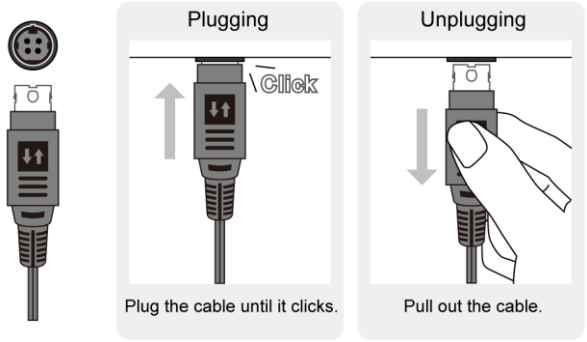
Rear panel



①	Hole for HDMI cable clamp (Not used)
②	HDMI input
③	RS-232C
④	LAN
⑤	CONTACT CLOSURE
⑥	DC Power
⑦	Frame ground (M4 screw)
⑧	HDMI output
⑨	Analog audio input
⑩	Analog audio output

Precautions for Installation

- Grounding (Earthing) is required. Connect the FG (Frame Ground) connector to a local electrical ground bonding point.
- When installing the ICP-V, observe the following precautions; otherwise, the internal temperature increases, possibly affecting product reliability and operation.
  - Do not stack or place one ICP-V directly on top of another ICP-V.
  - Do not block vent holes.
  - Maintain sufficient clearances around the ICP-V (1.2 in. (30 mm) or more) to provide adequate ventilation.
  - It is advisable to install the ICP-V in an environment compatible with the maximum temperature indicated in the specification sheet 32°F to 104°F (0°C to +40°C).
  - If mounting the ICP-V on an optional IDK rack system, refer to its User Guide for details.
- Insert the DC plug into the power inlet connector of the ICP-V until it clicks.
  Hold the connector as illustrated below when unplugging the DC plug.



Connection Details

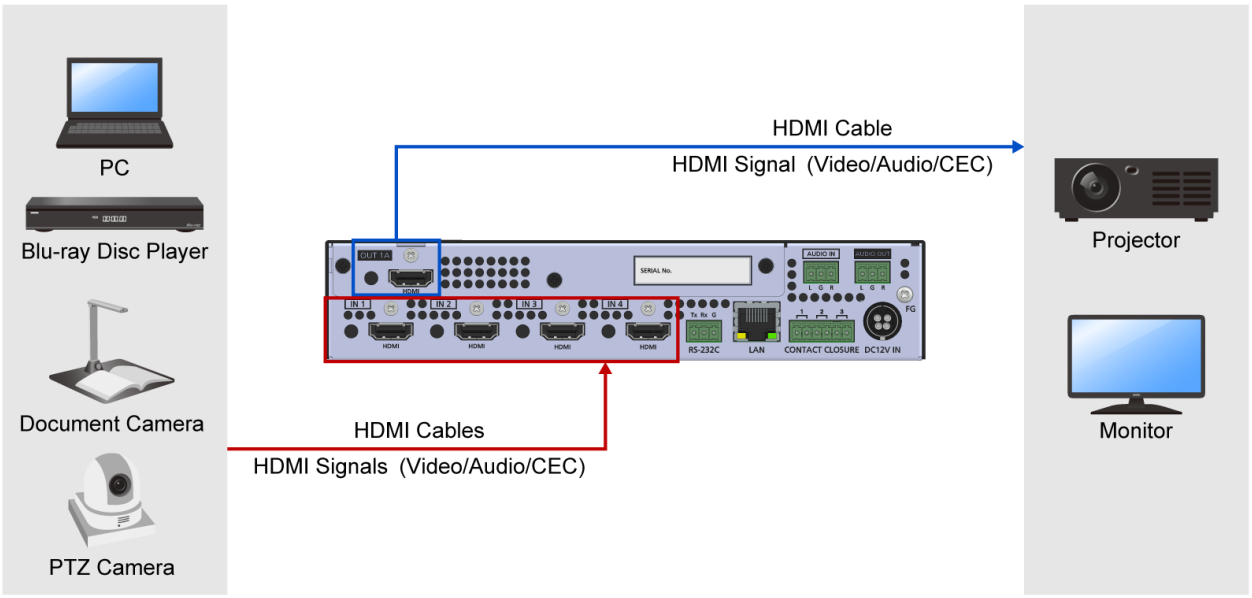
When connecting the ICP-V to external devices, observe the following precautions.

Notes

- Before connecting cables to the ICP-V or an external device, dissipate static electricity by touching grounded metal such as equipment racks before handling signal cables. Failure to observe this precaution may result in ESD (electrostatic discharge) damage.
- Power off or disconnect all related devices before connecting cables.
- Be sure to fully seat all plugs and connections and dress cables to reduce stress on connectors.

Connecting HDMI devices

Connect the ICP-V to HDMI devices using HDMI cables.

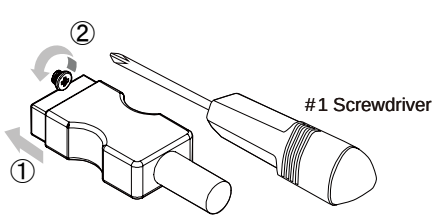


Notes

- Video may be interrupted or may not be output depending on cable type, cable quality, cabling condition, connected device type, and installation environment.
- A problem may occur if a cable joint is used for HDMI cable extension.

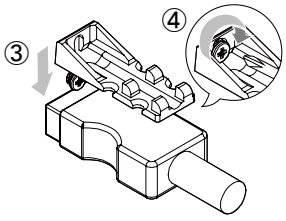
Cable Lacing Bracket (FB-01 For IDK products only)

Use the cable lacing bracket to secure a standard HDMI cable as shown.



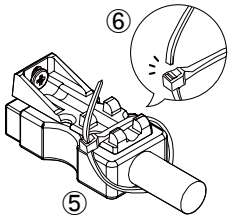
① Plug the HDMI cable into the HDMI connector.

② Loosen the HDMI connector screw (about six turns).
The screw does not need to be removed.



③ Place the bracket on the screw.

④ Tighten the screw to secure the bracket. (Do not overtighten the screw.)

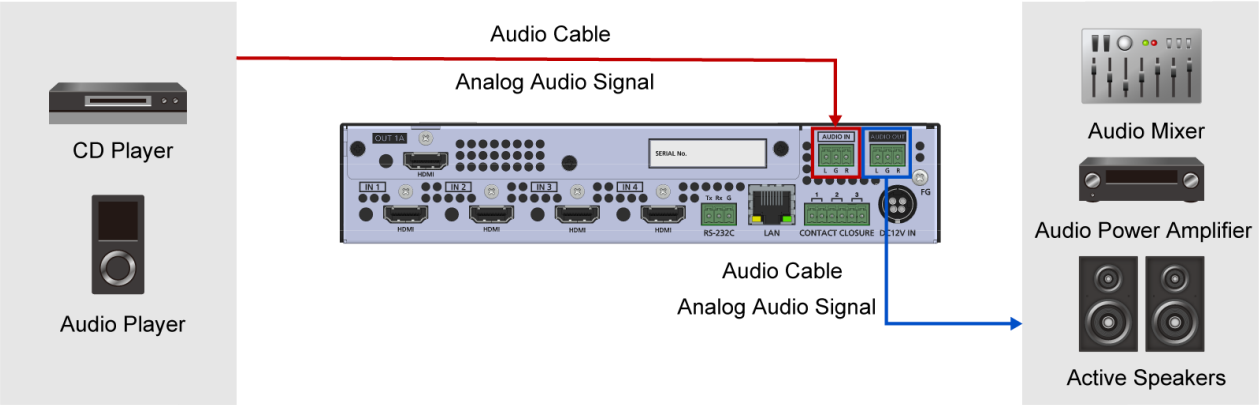


⑤ Place the tie wrap around the cable and tighten the tie wrap as above.

⑥ Cut excess length.

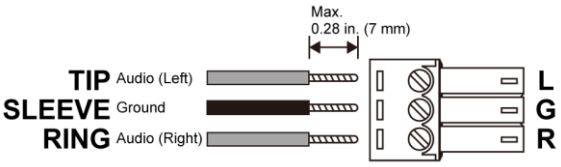
Connecting to analog devices

Connect the ICP-V to analog audio devices over audio cables.



Tip

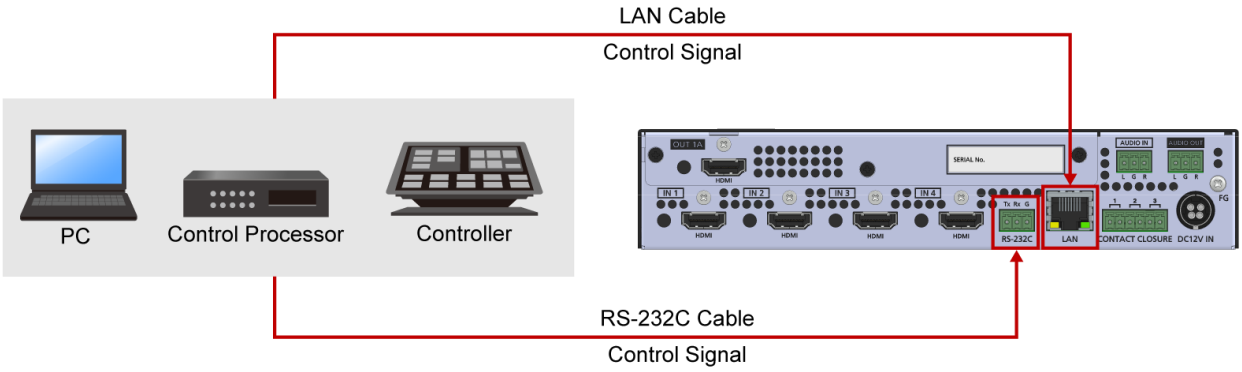
Connect the captive-screw terminal blocks to audio cable as follows:



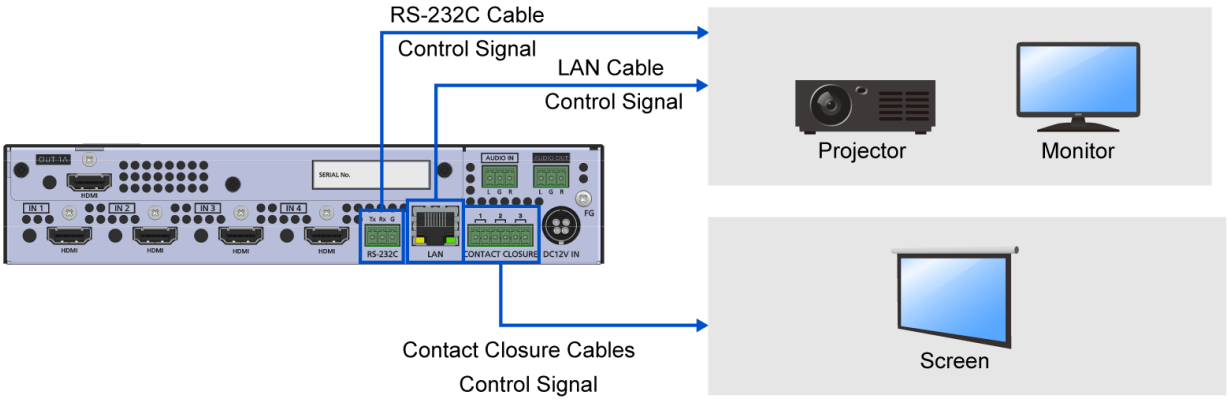
28 AWG to 16 AWG conductor cabling is recommended.
The length of the exposed wire after stripping is 0.28 in. (7 mm) at maximum.

Control connections

Connect the ICP-V to external devices over LAN/RS-232C to control the ICP-V from external devices.



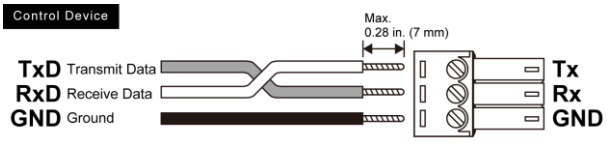
Connect the ICP-V to external devices over LAN/RS-232C to control external devices from the ICP-V.



Tip

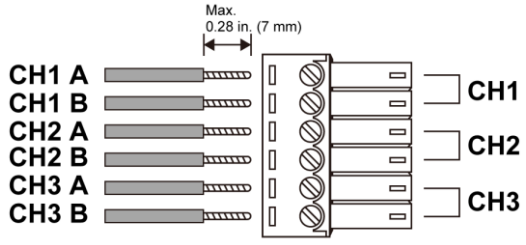
Connect the captive-screw terminal blocks to LAN/RS-232C cables as follows:

RS-232C cable



28 AWG to 16 AWG conductor cabling is recommended.
The length of the exposed wire after stripping 0.28 in. (7 mm) at maximum.

Contact closure connector cable



28 AWG to 16 AWG conductor cabling is recommended.
The length of the exposed wire after stripping is 0.28 in. (7 mm) at maximum.

Advanced menu

The menu structure consists of frequently used basic menus and advanced menus, Only the basic menus are displayed by default.
This section describes how to display both basic and advanced menus.

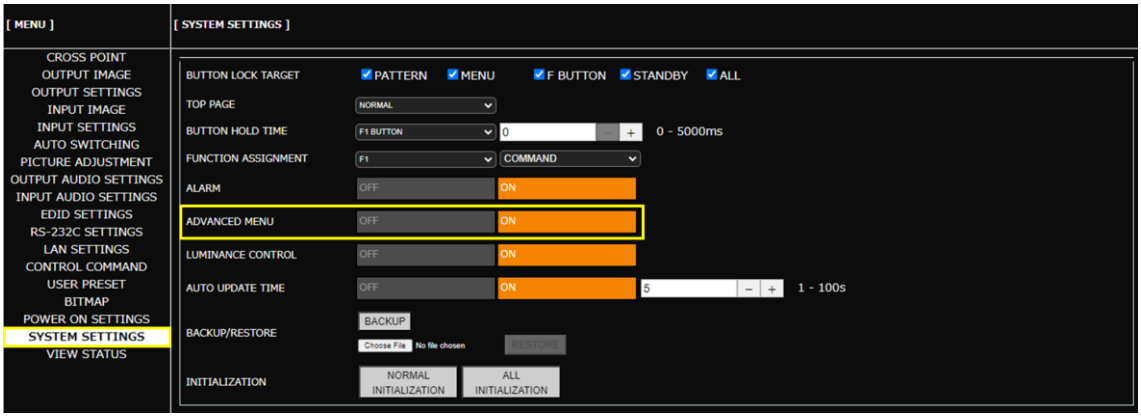
For sections that describe an advanced menu, the **Advanced** indication below is included at the lower right area of the section title.

Advanced

Front Panel

1. Select [SYSTEM SETTINGS]→[ADVANCED MENU].
2. Select [ON].

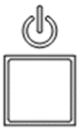
WEB GUI



Front Panel Operations

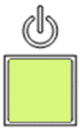
This chapter contains information on the front panel operation and security lock.

The color of the power button LED indicates the power state of the ICP-V.



Not lighted: No power

Amber: Standby

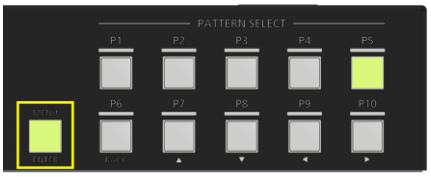


Green: Powered on

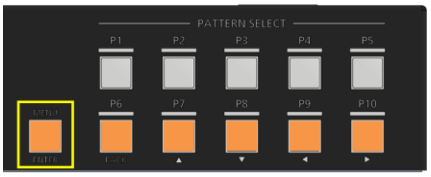
Note

Power on the ICP-V after connecting all cables.

Press the MENU/ENTER button or BACK button to switch available operations. The color of the MENU/ENTER button LED indicates available operation.



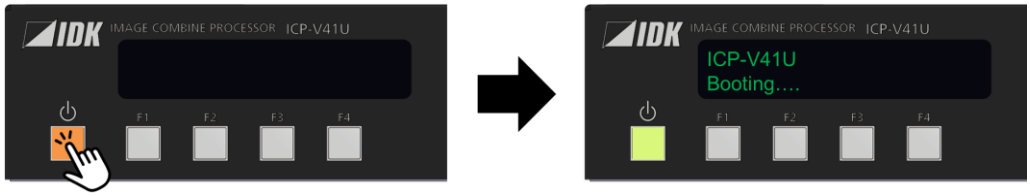
Lights solid green: Layout selection



Lights solid amber: Menu operation

Powering up

1. Press the power button.
   When boot-up is complete, the power button LED lights solid green.

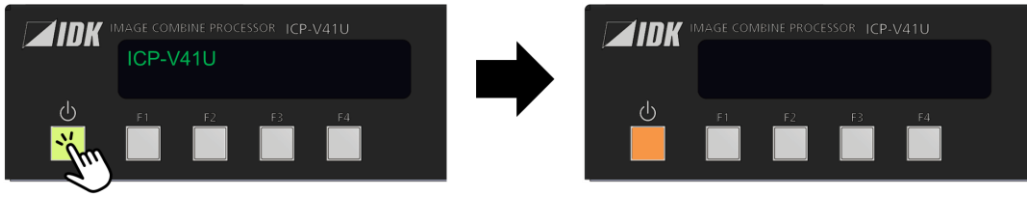


Notes

- It takes 12 seconds at maximum to be ready for normal operation after powering up.
- If the power button does not light, power is not supplied. Ensure that the supplied AC power cable is connected.

Switching power state to standby

1. Press and hold the power button for one second.
   When the ICP-V enters standby mode, the power button LED lights solid amber.



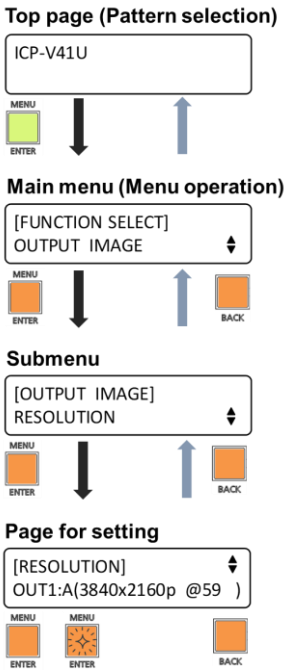
Selecting menu

Use the following buttons (Only the lighted buttons are available in each menu session):

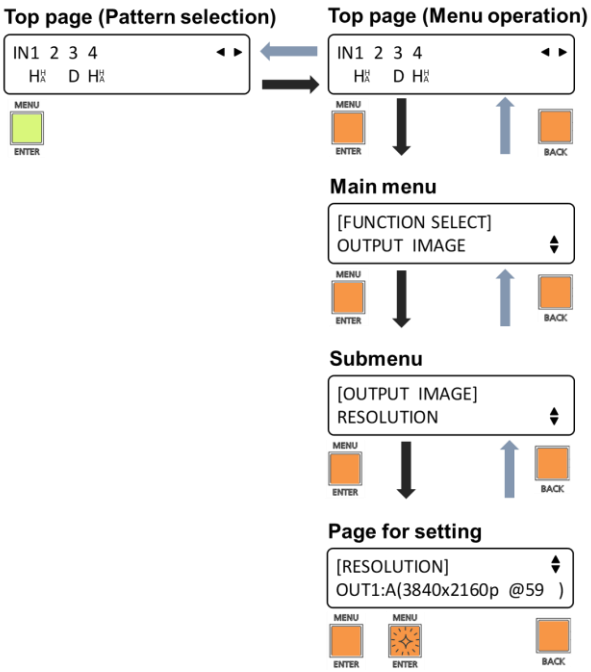
MENU/ENTER button : Accesses currently selected submenus or submenu items.
BACK button : Exits currently selected submenus or submenu items.
Navigation buttons : Changes values of adjustable features or navigates the menus/submenus.

When the MENU/ENTER button is flashing, press the MENU/ENTER button to accept the selected value(s).

When device name is displayed on the top page:



When values other than device name is displayed on the top page:



Tip

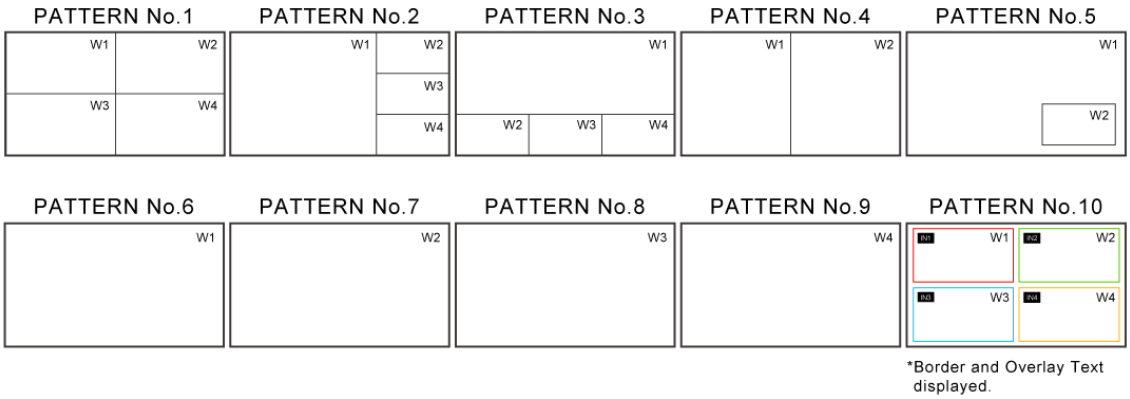
Only basic menus are displayed by default. To display advanced menus as well, perform the procedure in "**Advanced menu (P.18)**".

Recalling layout (P1 to P10)

1. Press the BACK button until the MENU/ENTER button lights solid green.
2. Press a pattern (layout) selection button to be recalled.

Tips

- Only PATTERN1 to PATTERN10 layouts can be recalled from the front panel buttons.
  To recall PATTERN11 to PATTERN32, see “**Recalling stored layouts from pattern memory (1 to 32) (P.88)**”.
- The following layouts are saved to the pattern memory by default.



Setting function button mode

1. Select [SYSTEM SETTING]→[FUNCTION ASSIGNMENT].
2. Select the function button.
3. Select the function mode.
   [COMMAND] : Executes assigned control commands.
   [DISPLAY POWER] : Executes control commands assigned to buttons for controlling power of sink devices.
   [CROSSPOINT] : Recalls the stored crosspoint memory.
   [PRESET MEMORY] : Recalls the stored preset memory.

Notes

- If [COMMAND] is selected, the front panel buttons are disabled during the command execution.
- If [DISPLAY POWER] is selected, function buttons to which [DISPLAY POWER] is assigned are activated even during the command execution.

Tips

- To control projector power state using a function button, perform the procedure in “**Projector Power Control (P.69)**”.
- To control screens using a function button, perform the procedure in “**Screen Control (P.77)**”.
- For details regarding pattern memory, crosspoint memory, and preset memory, see “**Storing and Recalling Presets (P.83)**”.
- For details regarding control command assignment, refer to the User Guide.

Setting front panel security lockout

Enabling front panel security lockout

1. Press and hold the MENU/ENTER button for two seconds.
   When the lockout is enabled, a message, [Button Lock !] appears on the front panel display.

Tip

Only the standby and input buttons will light after enabling front panel security lockout. During lockout, the other buttons will not light. LEDs of locked buttons other than the power button and pattern selection buttons turn off.

Disabling front panel security lockout

1. Press and hold the MENU/ENTER button for two seconds.
   When the lockout is disabled, a message, [Button Lock Release !] appears on the front panel display.

Selecting button lock target

1. Select [SYSTEM SETTINGS]→[BUTTON LOCK TARGET].
2. Select the button groups to be locked.
   [PATTERN] : Pattern selection buttons
   [MENU] : MENU/ENTER button, BACK button, Navigation buttons (△▽◁▷)
   [F BUTTON] : Function button
   [STANDBY] : Power button

Tip

For function buttons, the press-and-hold time can also be set manually to prevent accidental operation. For details, refer to the User Guide.

WEB Browser Operation

This chapter describes how to control the ICP-V via a WEB browser of a connected PC.

Displaying WEB GUI

1. Configure network settings for the PC before connecting to the ICP-V.
   If the ICP-V's IP address is set to its default, set the internet protocol version 4 (TCP/IPv4) of the PC.
   Example
   IP address : 192.168.1.100
   Subnet mask : 255.255.255.0
   Default gateway : No character
2. Connect the ICP-V's LAN connector to the PC.
3. Open a WEB browser on the connected PC.
4. Enter **http://192.168.1.199** into the address bar of the WEB browser.

Note

JavaScript of WEB browser needs to be activated to display the WEB GUI.

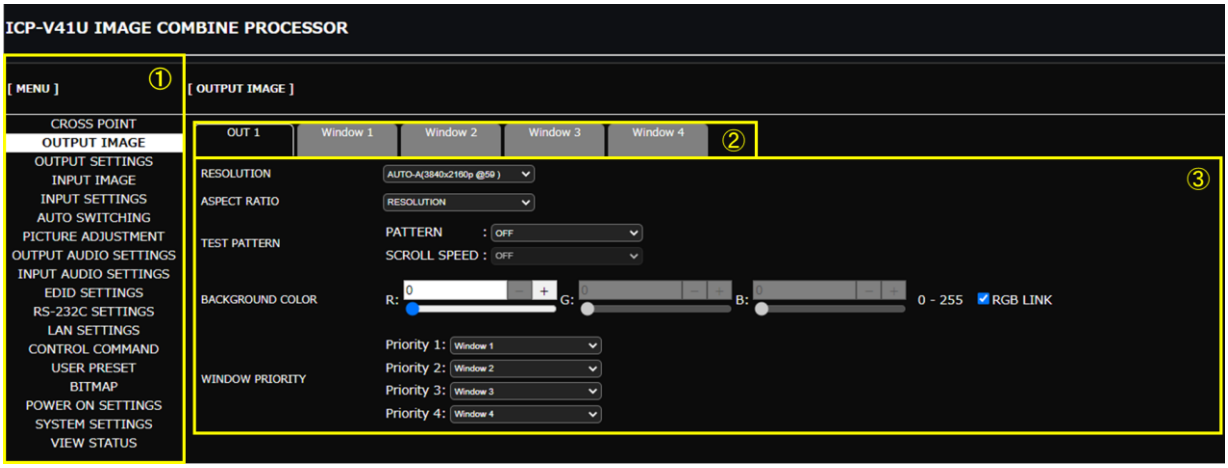
Tip

See "**Configuring LAN communication (P.68)**" for setting or viewing the ICP-V's IP address.

Changing settings via WEB browser

Advanced

1. Select the main menu (①).
2. Select the output window (②).
3. Select or specify the desired values (③).
   To initialize the image settings, click the [INITIALIZATION] button.

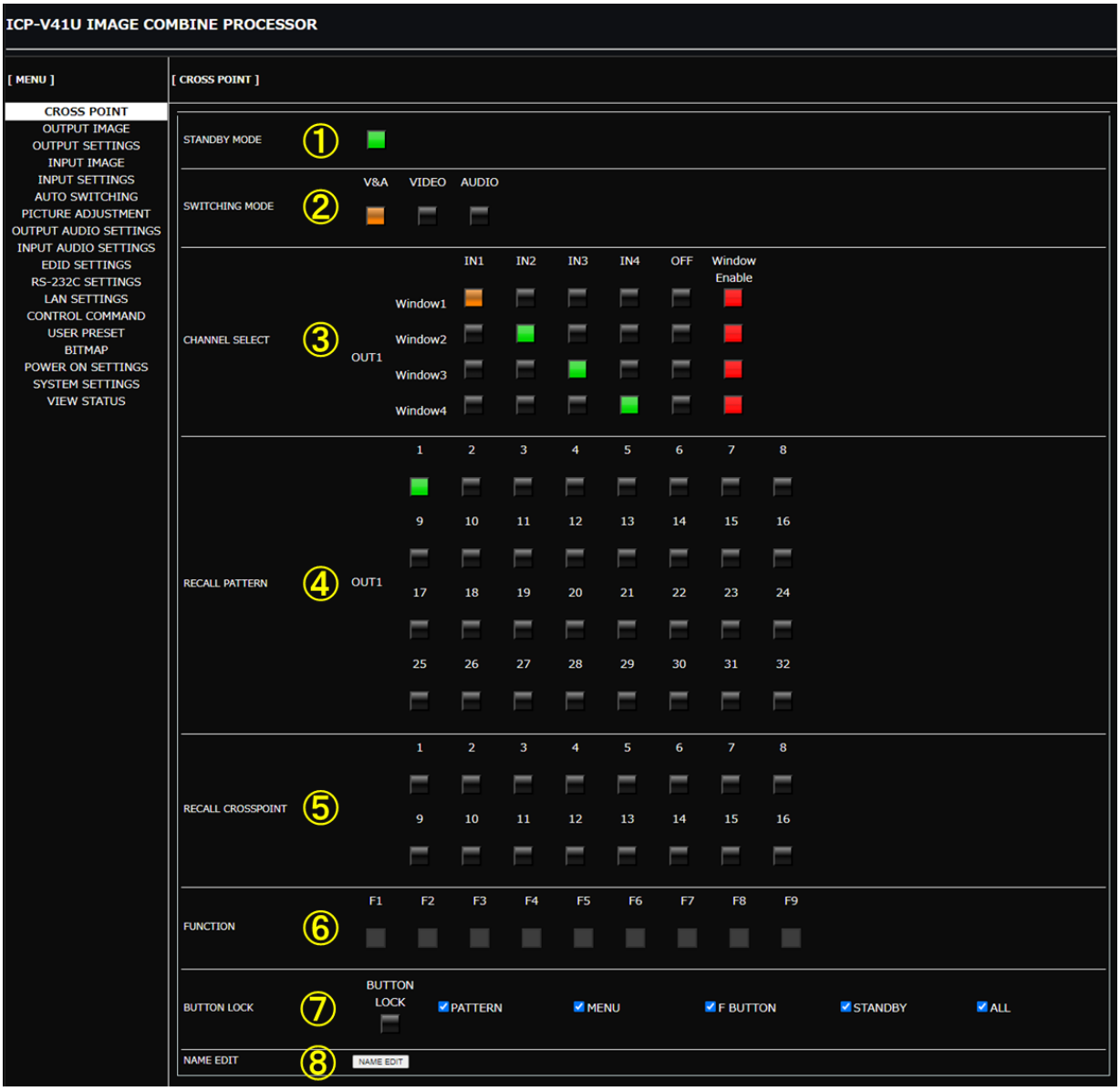


Tip

Only basic menus are displayed by default. To display advanced menus as well, perform the procedure in "**Advanced menu (P.18)**".

Controlling ICP-V via WEB browser

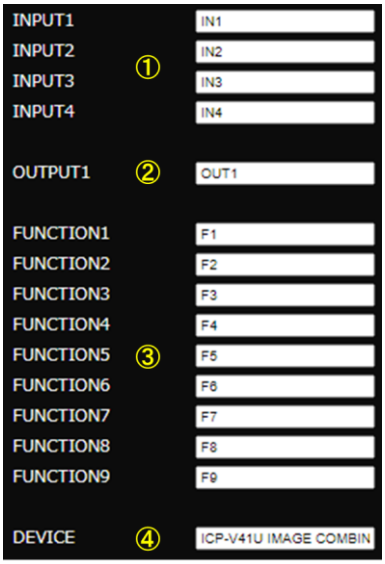
1. Select [MENU]→[CROSS POINT].
2. Select or specify the desired values.



①	[STANDBY MODE]	Switches the power state.
②	[SWITCHING MODE]	Selects the signal to be switched when an input is selected.
③	[CHANNEL SELECT]	Selects input video and audio signals. Enables/disables PinP window display.
④	[RECALL PATTERN]	Recalls layouts stored in the ICP-V.
⑤	[RECALL CROSSPOINT]	Recalls crosspoint settings stored in the ICP-V.
⑥	[FUNCTION]	Executes the functions assigned to the function button.
⑦	[BUTTON LOCK]	Selects button group(s) to be locked/unlocked. Enables/disables button lock.
⑧	[NAME EDIT]	Edits input names and other items displayed on WEB GUI.

Editing crosspoint name

1. Select [MENU]→[CROSS POINT].
2. Click the [NAME EDIT] button from [CROSSPOINT] to open the [NAME EDIT] window.
3. Enter the desired name(s).



①Input channel names:
Up to 10 one-byte characters.

②Output channel names:
Up to 10 one-byte characters.

③Function button name:
Up to 10 one-byte characters.

④Device name:
Up to 40 one-byte characters.

Tip

The edited input channel name is displayed as an overlay text.

4. Click the [×] button to close the [NAME EDIT] window.

Switching video/audio

Video and audio are switched according to the selected switching mode.

[V&A] : Switches video and audio simultaneously.
[VIDEO] : Switches video only.
[AUDIO] : Switches audio only.

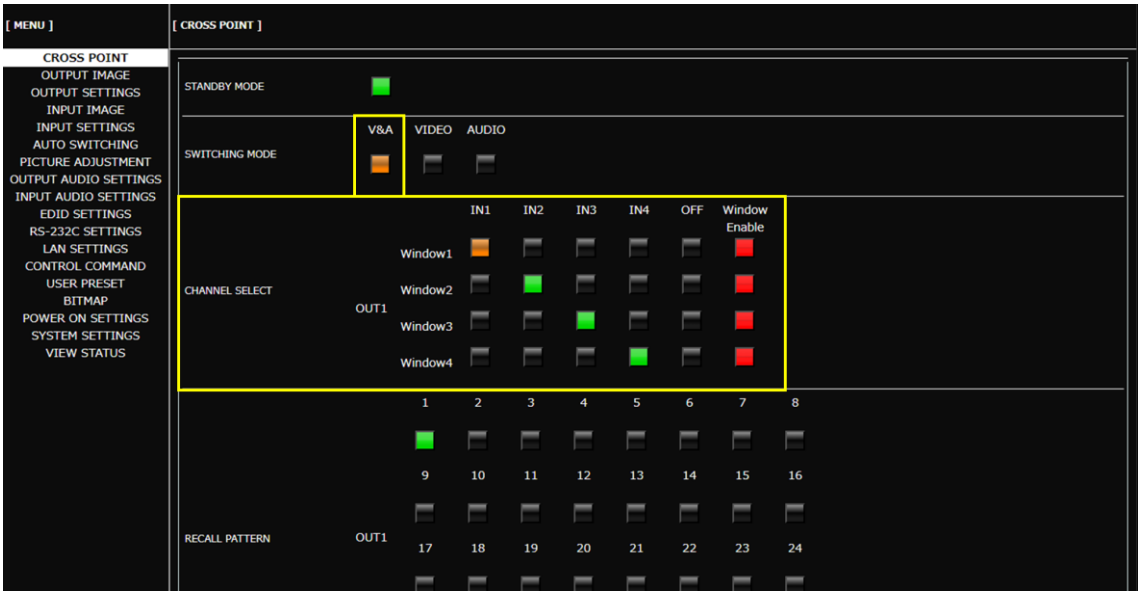
For digital and analog audio outputs, audio that is selected to Window1.

The illumination color of the [CHANNEL SELECT] indicate which signal is currently selected.

Lights solid amber: Video and audio are selected.
Lights solid green : Only video is selected.
Lights solid red : Only audio is selected.

Switching video and audio simultaneously

1. Select [MENU]→[CROSS POINT].
2. Select [SWITCHING MODE]→[V&A].
3. Select an input channel for each window in [CHANNEL SELECT].



Switching video and audio separately

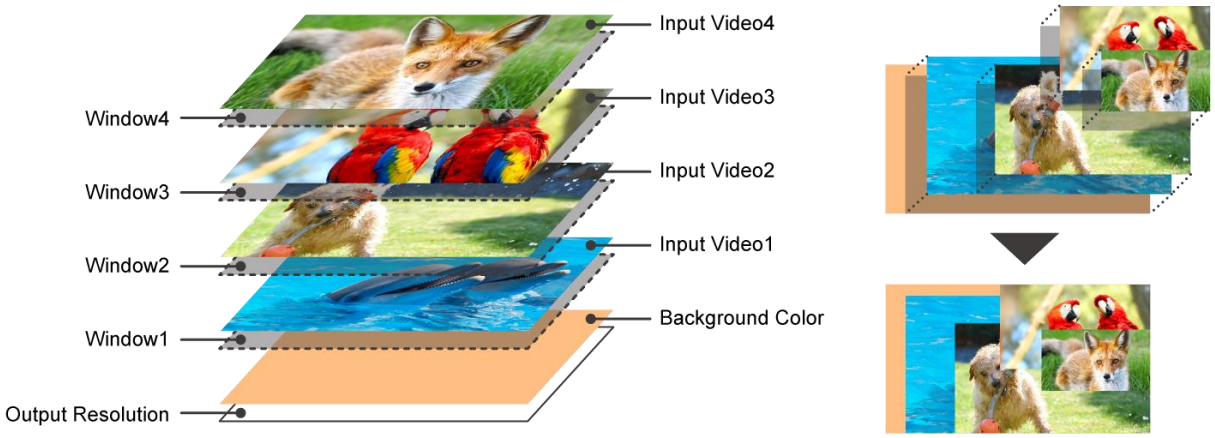
Audio of Window1 can be switched.

1. Select [MENU]→[CROSS POINT].
2. Select [SWITCHING MODE]→[VIDEO] or [AUDIO].
   [VIDEO]：Switches video only.
   [AUDIO]：Switches audio only.
3. Select an input channel in [CHANNEL SELECT] to switch video/audio selected in [SWITCHING MODE].

Setting Video Attributes

This section describes how to set input video and output video attributes, such as resolution, image size, image position, and so on.

Images are displayed in the order below. The window display order can be changed in "**Setting window priority (P.40)**".



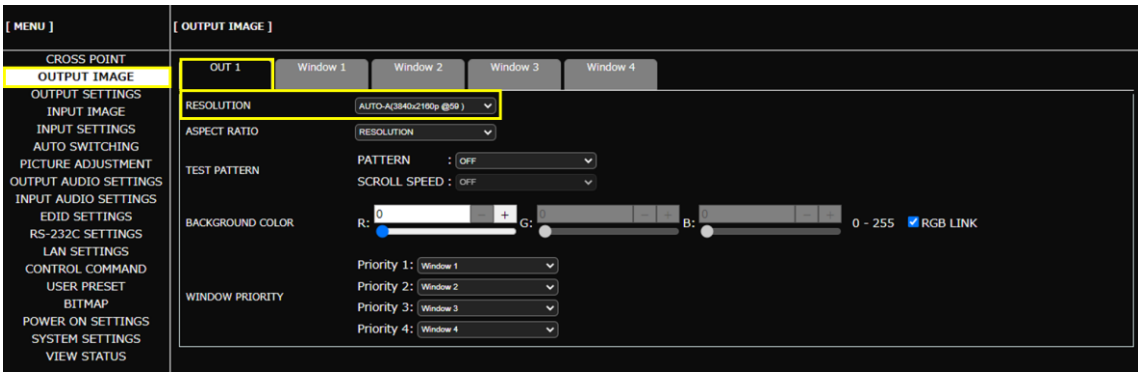
Changing output resolution

Automatically, the optimal output resolution format is delivered to the sink device upon connection and based on its EDID profile.
This section describes how to manually select output resolution formats.

Front Panel

1. Select [OUTPUT IMAGE]→[RESOLUTION].
2. Select the resolution. (Default: A (AUTO-A))
3. Press the MENU/ENTER button to accept the new value.

WEB GUI

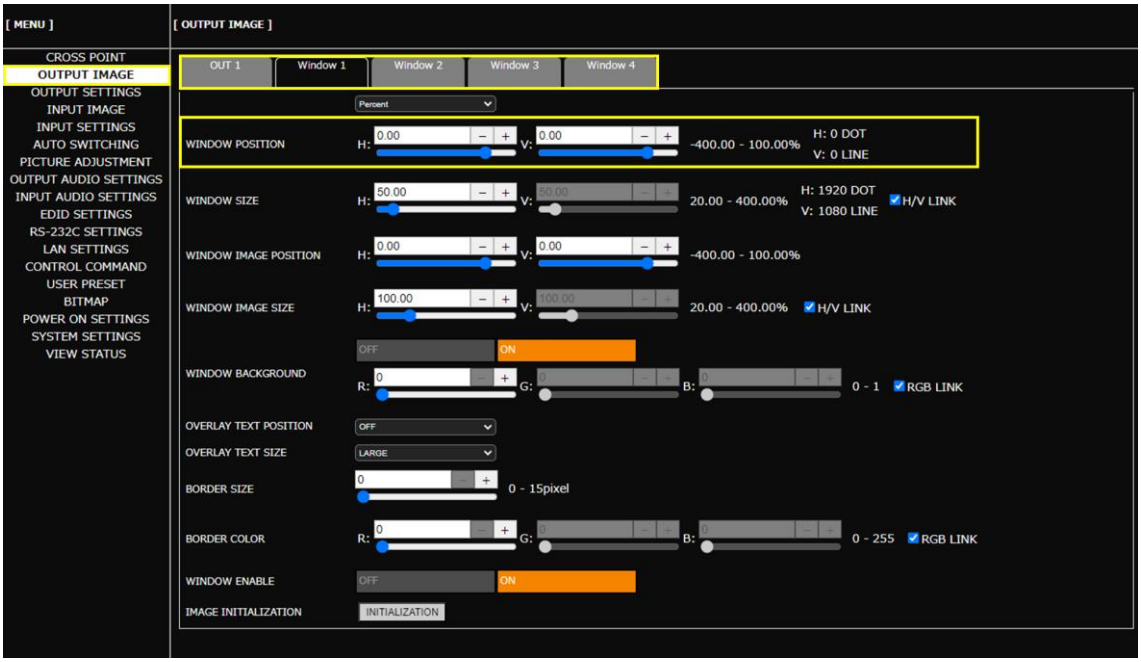


Adjusting window image position

Front Panel

1. Select [OUTPUT IMAGE]→[WINDOW POSITION].
2. Select the window.
3. Set the desired values of [H] (Horizontal) or [V] (Vertical).
4. Set the image position. (Default: 0.0%)

WEB GUI

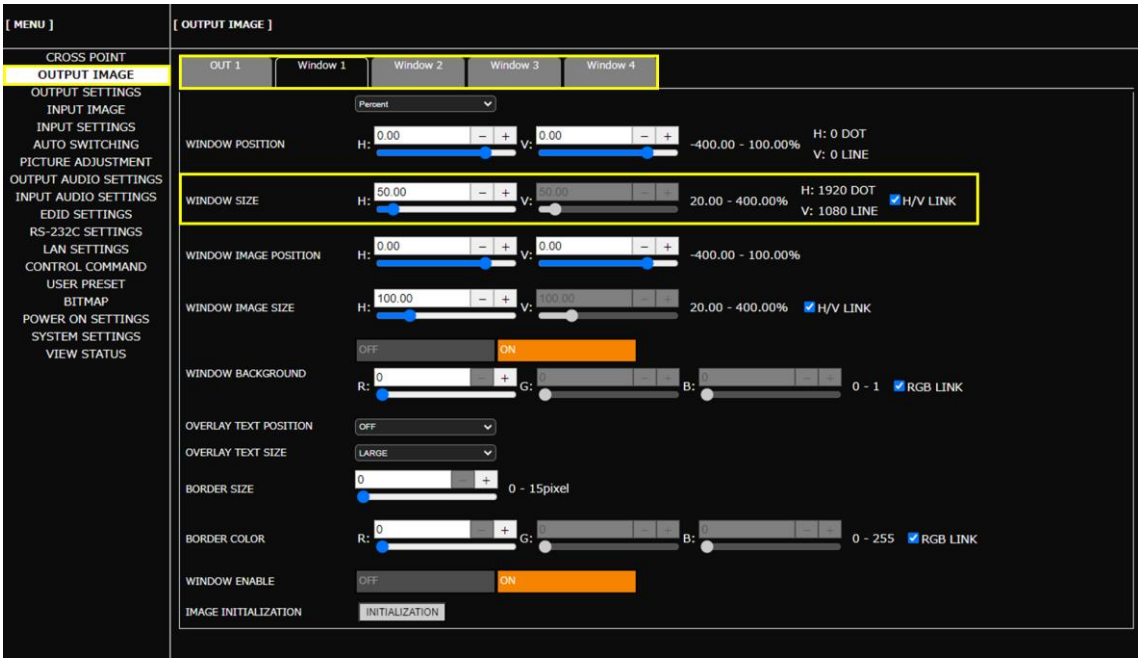


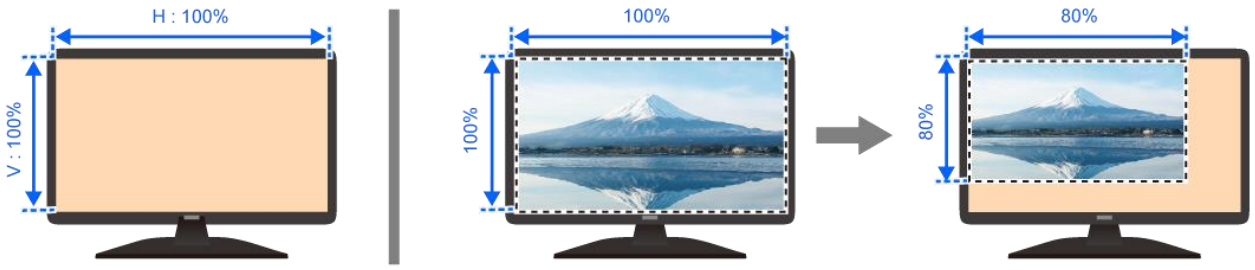
Adjusting window image size

Front Panel

1. Select [OUTPUT IMAGE]→[WINDOW SIZE].
2. Select the output window.
3. Set the desired values of [HV] (Horizontal and vertical properly), [H] (Horizontal), or [V] (Vertical).
4. Set the image size. (Default: 100.0%)

WEB GUI





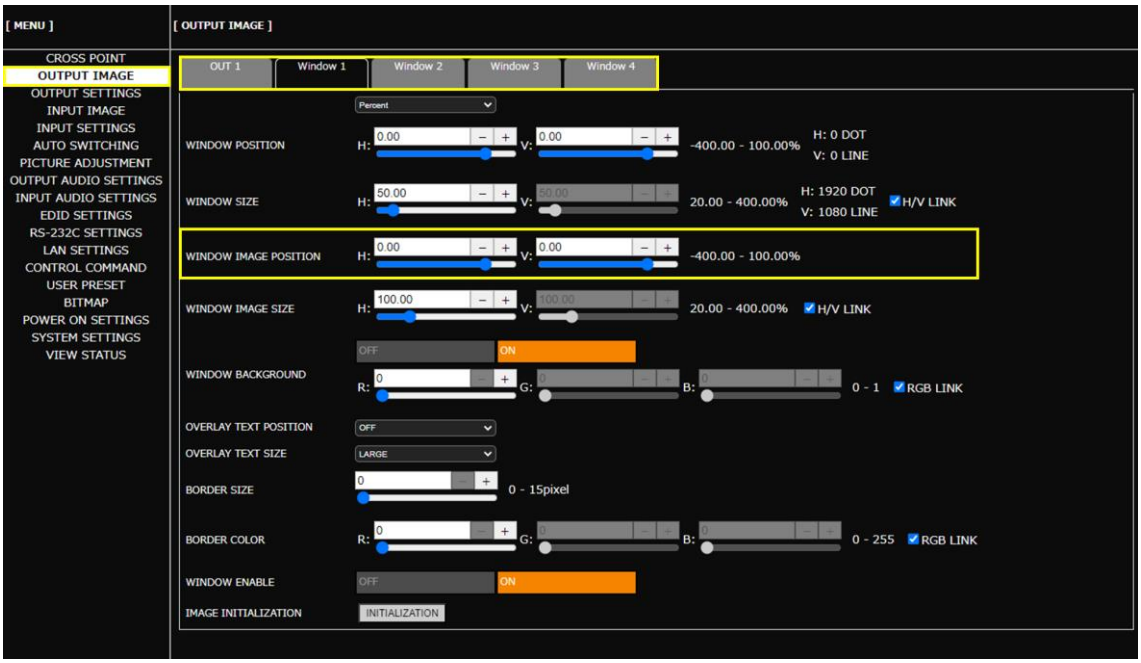
Adjusting image position in the window

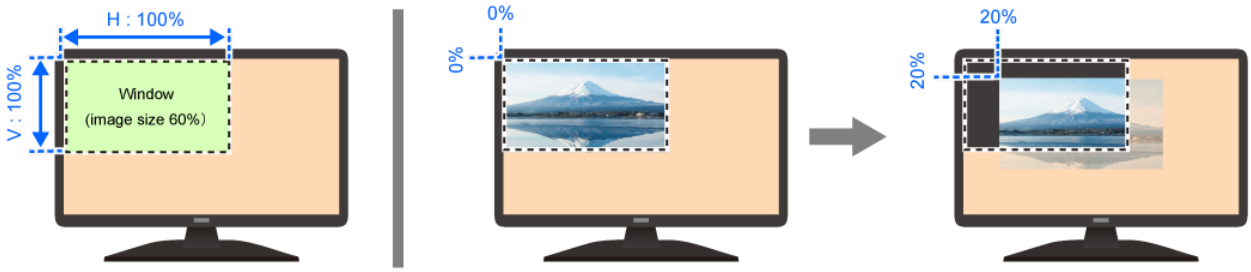
The image position in the window can be set as ratio to the output resolution with reference to the upper left of the window (0%) and the lower right 100%.

Front Panel

1. Select [OUTPUT IMAGE]→[WINDOW IMAGE POSITION].
2. Select the window.
3. Set the desired values of [H] (Horizontal) or [V] (Vertical).
4. Set the image position. (Default: 0.0%)

WEB GUI





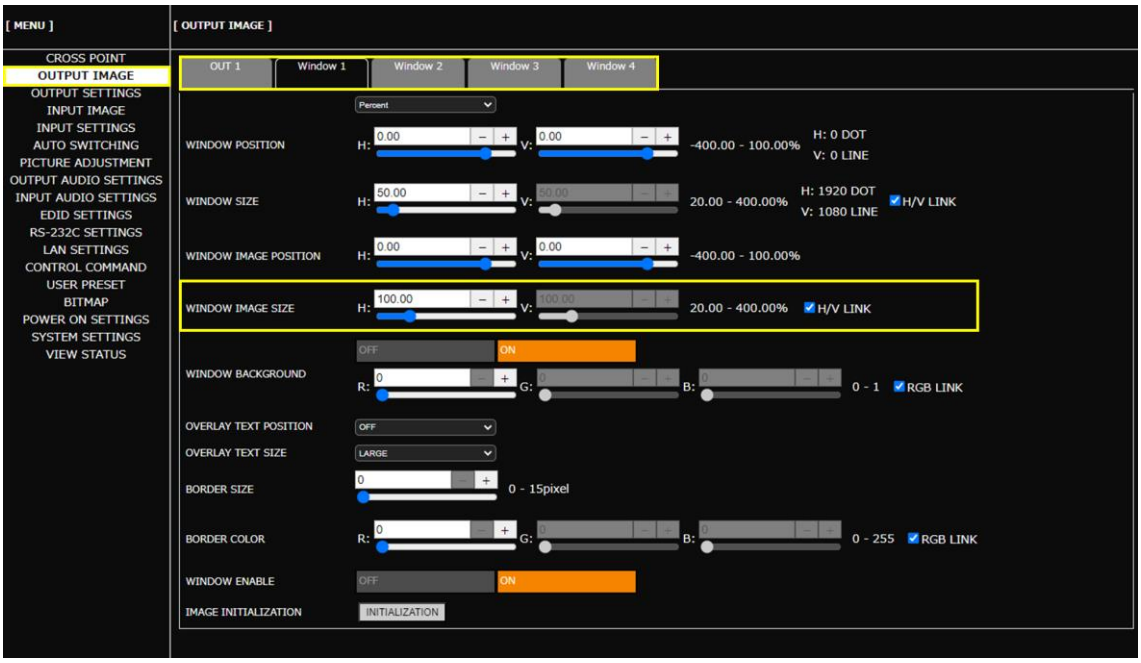
Adjusting window image size in the window

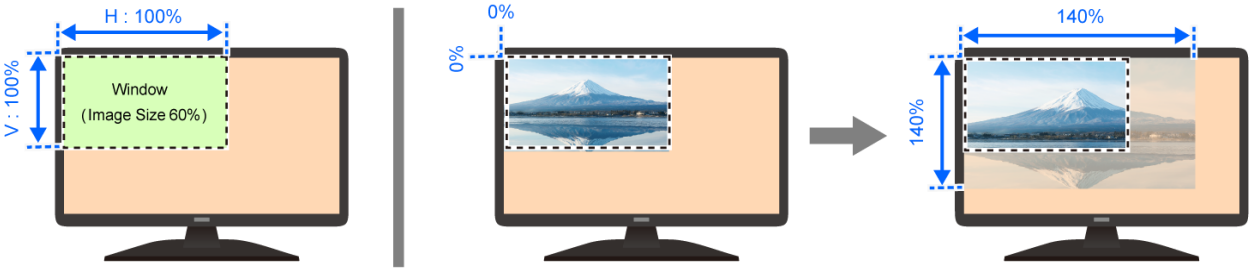
The ratio to the window can be set with reference to the upper left.

Front Panel

1. Select [WINDOW IMAGE SIZE].
2. Select the output window.
3. Set the desired values of [HV] (Horizontal and vertical properly), [H] (Horizontal), or [V] (Vertical).
4. Set the image size. (Default: 100.0%)

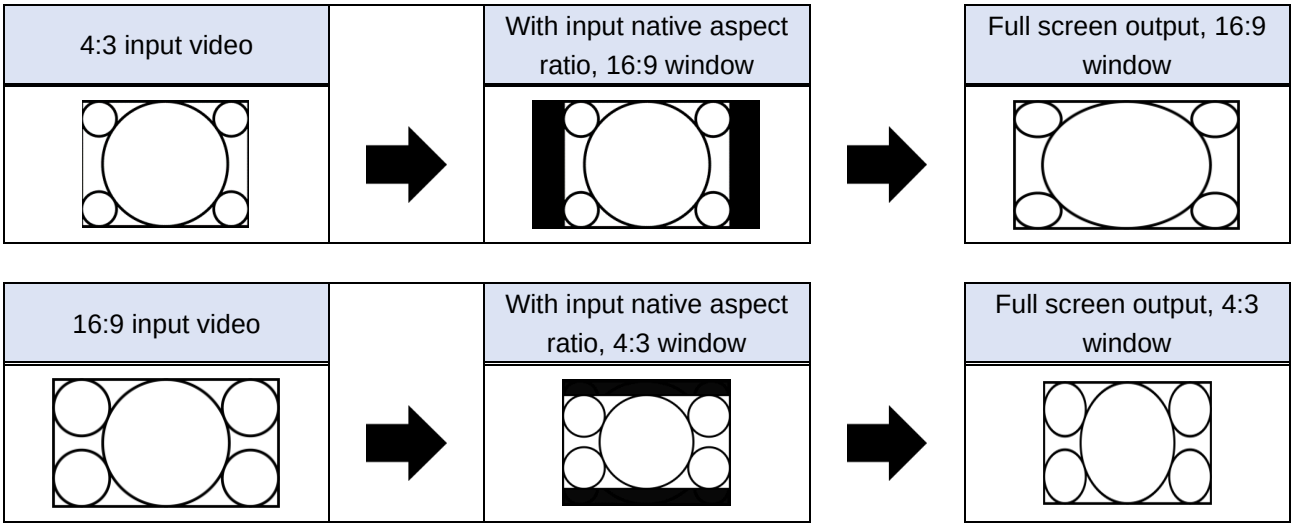
WEB GUI





Displaying input video on full screen

The figures below show how a full input video is displayed on a full screen.



Displaying input video on full window

Advanced

Front Panel

1. Select [INPUT IMAGE]→[ASPECT RATIO].
2. Select the input.
3. Select [FULL]. (Default: AUTO-1)

WEB GUI

Tip

Only basic menus are displayed by default. To display advanced menus as well, perform the procedure in "**Advanced menu (P.18)**".

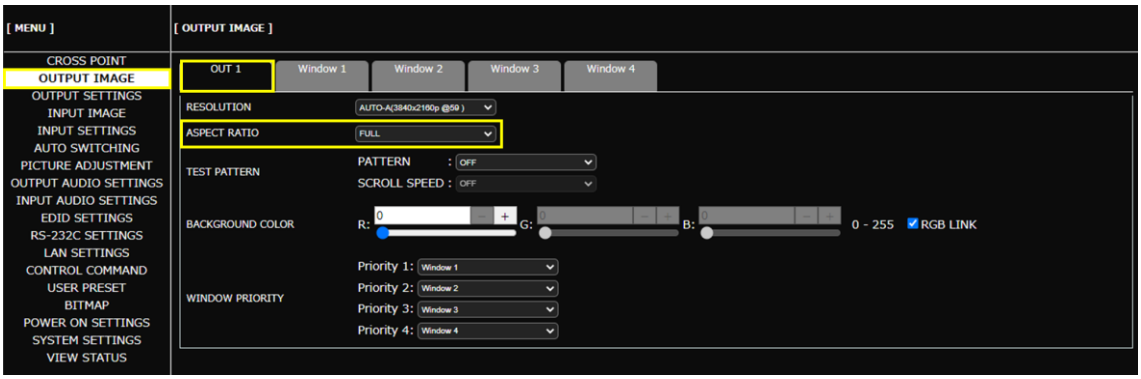
Displaying all input video on full screen

Advanced

Front Panel

1. Select [OUTPUT IMAGE]→[ASPECT RATIO].
2. Select the output.
3. Select [FULL]. (Default: RESOLUTION)

WEB GUI



Tip

Only basic menus are displayed by default. To display advanced menus as well, perform the procedure in "**Advanced menu (P.18)**".

Displaying input video dot-by-dot

Advanced

The figures below show how input video is displayed dot-by-dot.

1920x1080 input video		Dot-by-dot, 3840x2160 window
	➡	

3840x2160 input video		Dot-by-dot, 1920x1080 window
	➡	

Front Panel

1. Select [INPUT IMAGE]→[ASPECT RATIO].
2. Select the input.
3. Select [THROUGH]. (Default: AUTO-1)

WEB GUI

Tip

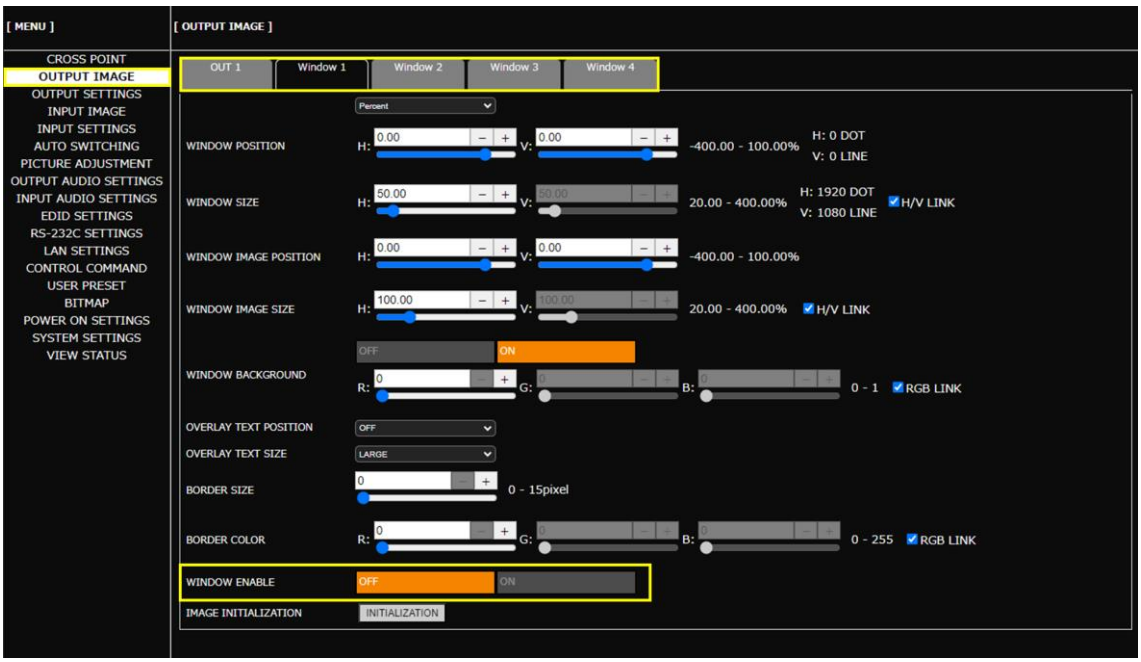
Only basic menus are displayed by default. To display advanced menus as well, perform the procedure in "**Advanced menu (P.18)**".

Hiding window

Front Panel

1. Select [OUTPUT IMAGE]→[WINDOW ENABLE].
2. Select the window.
3. Select [OFF]. (Default: ON)

WEB GUI



Setting window priority

Advanced

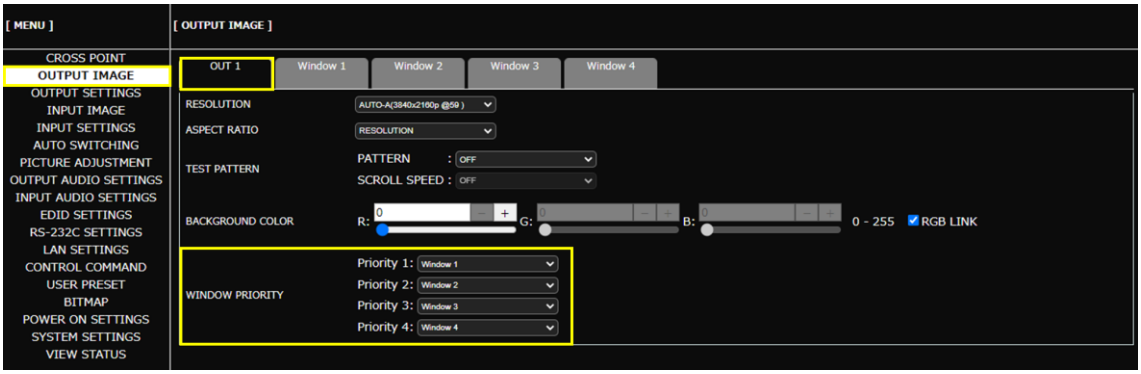
Front Panel

1. Select [OUTPUT IMAGE]→[WINDOW PRIORITY].
2. Set the priority. The leftmost has the highest priority. (Default: W1 > W2 > W3 > W4)

   [WINDOW PRIORITY]
   OUT1 : W1 > W2 > W3 > W4

3. Press the MENU/ENTER button to accept the new values.

WEB GUI



Tip

Only basic menus are displayed by default. To display advanced menus as well, perform the procedure in "**Advanced menu (P.18)**".

Setting window overlay text

Displaying overlay text

Advanced

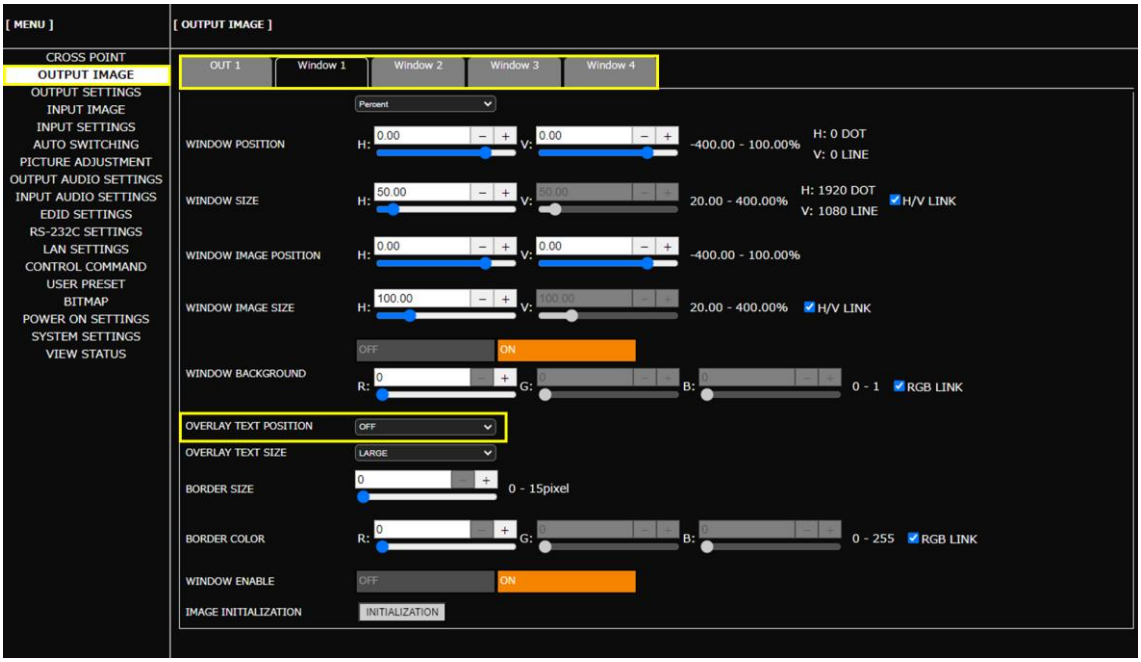
Front Panel

1. Select [OUTPUT IMAGE]→[OVERLAY TEXT POSITION].
2. Select the window.
3. Select the position. (Default: OFF)

Tip

For input channel name to be displayed, see “**Editing crosspoint name (P.27)**”.

WEB GUI



Tip

Only basic menus are displayed by default. To display advanced menus as well, perform the procedure in “**Advanced menu (P.18)**”.

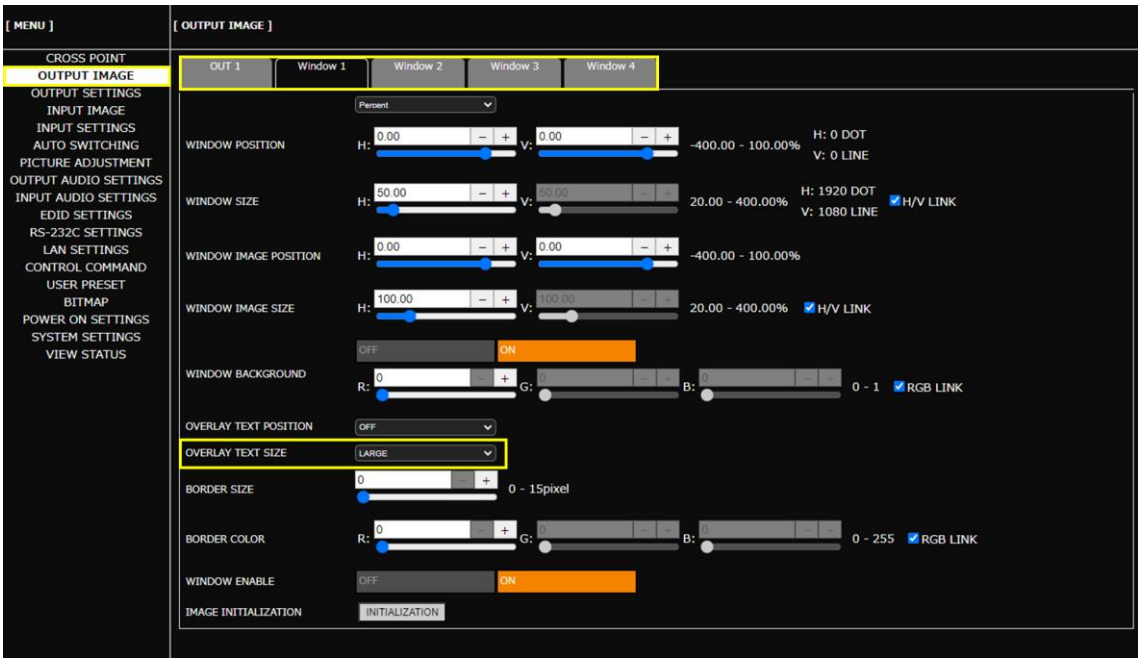
Setting overlay text size

Advanced

Front Panel

1. Select [OUTPUT IMAGE]→[OVERLAY TEXT SIZE].
2. Select the window.
3. Select the size. (Default: LARGE)

WEB GUI



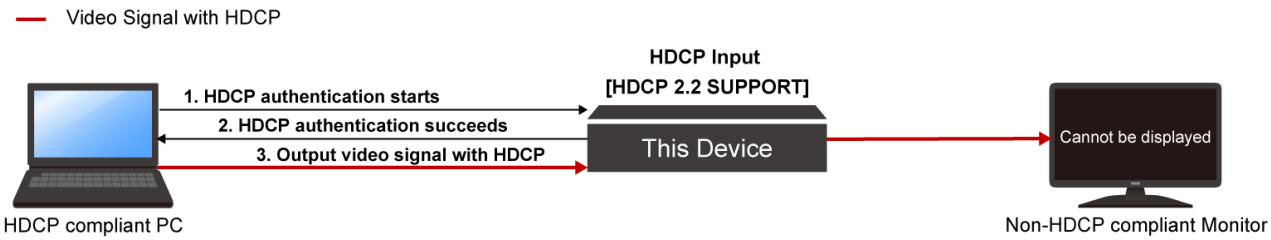
Tip

Only basic menus are displayed by default. To display advanced menus as well, perform the procedure in "**Advanced menu (P.18)**".

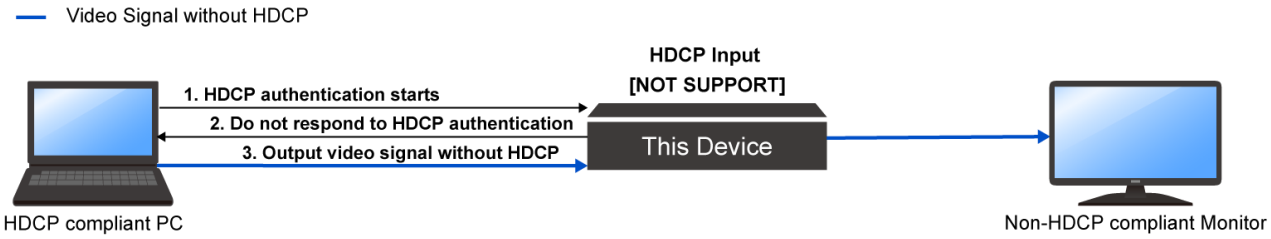
Displaying video on non-HDCP compliant sink device

Advanced

By default, the ICP-V operates as an HDCP 2.2-compliant device.
If a source device that automatically determines and encrypts HDCP is connected, HDCP-encrypted video signals cannot be displayed on a non-HDCP compliant sink device.



To display video signals on a non-HDCP compliant sink device, set the ICP-V's input connector to Non-HDCP mode.



Front Panel

1. Select [INPUT SETTINGS]→[HDCP INPUT].
2. Select the input connector.
3. Select [NOT SUPPORT]. (Default: HDCP 2.2 SUPPORT)

WEB GUI

Note

For source devices that require HDCP encryption (for example, a Blu-ray player), video or audio cannot be presented on non-HDCP compliant sink devices.

Tip

Only basic menus are displayed by default. To display advanced menus as well, perform the procedure in "**Advanced menu (P.18)**".

Enabling Deep Color input

Advanced

Front Panel

1. Select [EDID SETTINGS].
2. Set the input connector as follows:

Submenu	Setting value	Default
[EDID SELECTION]	BUILT-IN EDID	BUILT-IN EDID
[SIGNAL FORMAT]	HDMI	HDMI
[DEEP COLOR]	30-BIT COLOR	24-BIT COLOR

3. Press the MENU/ENTER button to accept the new values.

WEB GUI

Tip

Only basic menus are displayed by default. To display advanced menus as well, perform the procedure in "**Advanced menu (P.18)**".

Enabling Deep Color output

Advanced

Front Panel

1. Select [OUTPUT SETTINGS]→[DEEP COLOR].
2. Select the output connector.
3. Select [30-BIT COLOR]. (Default: 24-BIT COLOR)

WEB GUI

Notes

- Even with [30-BIT COLOR] selected, video signals are output at 24-BIT COLOR if the sink device does not support Deep Color.
- If [30-BIT COLOR] is selected and the output resolution is 4K@50/59.94/60, video signals are output at 30-BIT COLOR of HDMI YCbCr 4:2:2 or HDMI YCbCr 4:2:0.

Tip

Only basic menus are displayed by default. To display advanced menus as well, perform the procedure in "**Advanced menu (P.18)**".

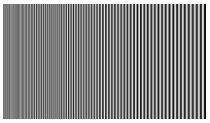
Outputting test patterns

Front Panel

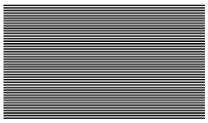
1. Select [OUTPUT IMAGE]→[TEST PATTERN].
2. Select the test patten.
3. If the selected test pattern supports scrolling, select the scroll speed.

WEB GUI

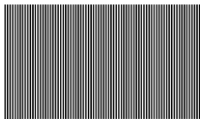
HORIZONTAL ZEBRA*



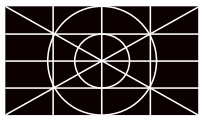
VERTICAL ZEBRA*



HORIZONTAL STRIPE



VERTICAL STRIPE



CROSS HATCH

BLUE RASTER

GREEN RASTER

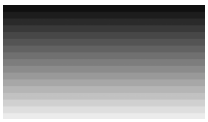
RED RASTER

50% WHITE RASTER

100% WHITE RASTER

HORIZONTAL RAMP*

VERTICAL RAMP*



H-GRAY SCALE*

V-GRAY SCALE*

H-COLOR BAR*

V-COLOR BAR*

*Scrolling supported.

Initializing output image settings

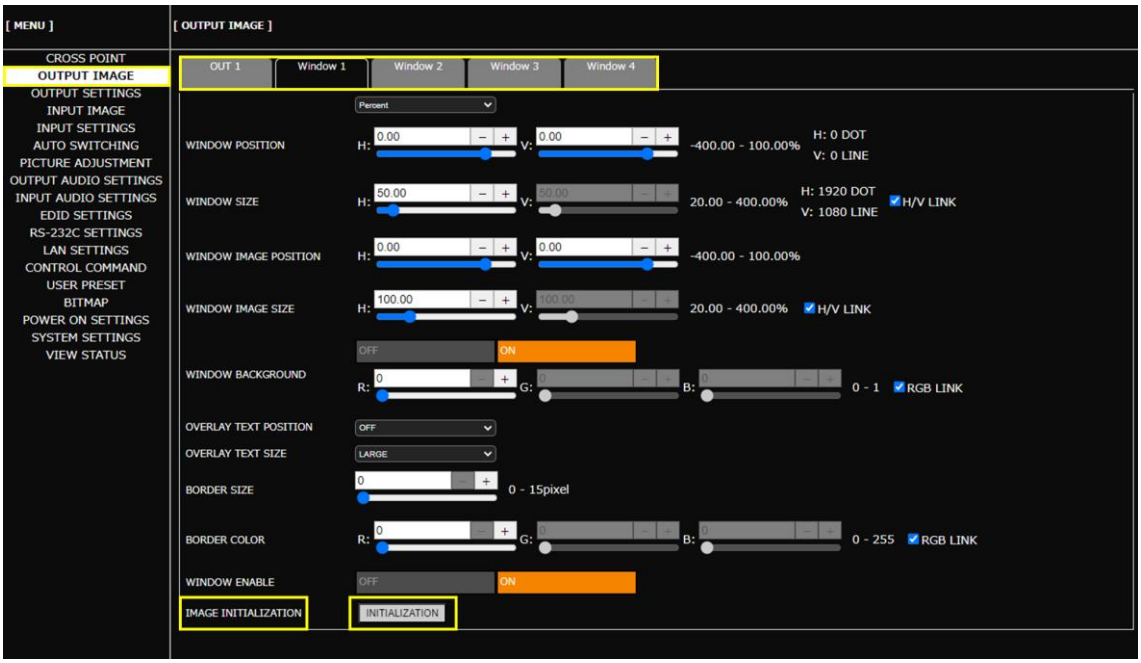
The following settings will be initialized.

【Adjusting window image position (P.32)】
【Adjusting window image size (P.33)】
【Adjusting image position in the window (P.34)】
【Adjusting window image size in the window (P.35)】

Front Panel

1. Select [OUTPUT IMAGE]→[IMAGE INITIALIZATION].
2. Select the window to be initialized.
3. Select [YES].
4. Press the MENU/ENTER button to accept the new values.

WEB GUI



Note

To restore settings, make a backup copy.

Initializing input image settings

The settings of aspect ratio, display position, and display size will be initialized.

Tip

For settings of display position and display size, refer to the User Guide.

Front Panel

1. Select [INPUT IMAGE]→[IMAGE INITIALIZATION].
2. Select the input channel to be initialized.
3. Select [YES].
4. Press the MENU/ENTER button to accept the new values.

WEB GUI

Note

To restore settings, make a backup copy.

Setting Audio

This chapter describes how to configure and adjust input and output audio of the ICP-V.
Digital input audio of the Window1 input channel is output from an HDMI output connector while de-embedded audio of HDMI output connector output signal is output from an analog audio output connector.

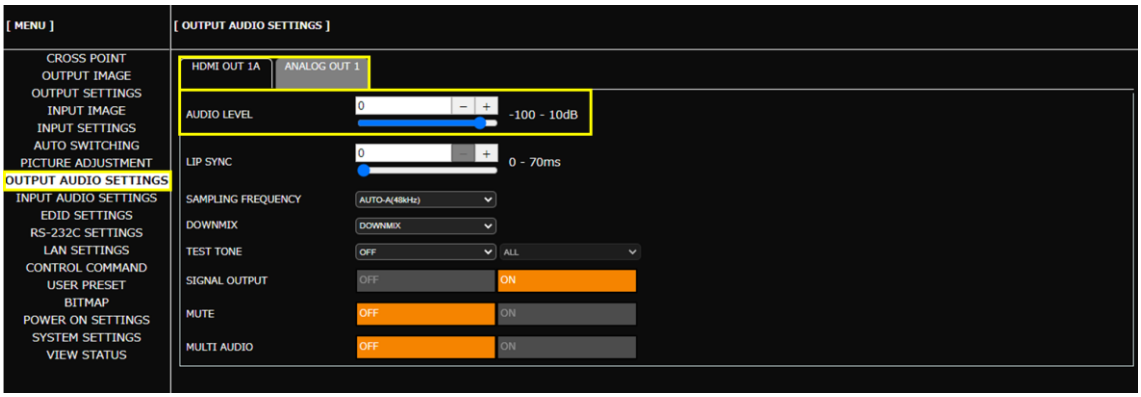
Adjusting Audio Level

1. Adjust the signal level differences between inputs audio:
   Front Panel
   a) Select [INPUT AUDIO SETTINGS]→[AUDIO LEVEL].
   b) Select the input connector.
   c) Set the input audio level. (Default: 0dB)

   WEB GUI

2. Adjust the audio level for each output audio:
   Front Panel
   a) Select [OUTPUT AUDIO SETTINGS]→[AUDIO LEVEL].
   b) Select the output connector.
   c) Set the output audio level. (Default: 0dB)

   WEB GUI



Embedding analog input audio

Analog audio can be embedded to a desired input video.

Front Panel

1. Select [INPUT AUDIO SETTINGS]→[SOURCE SELECTION].
2. Select the input.
3. Select [ANALOG1]. (Default: DIGITAL)

WEB GUI

Enabling multichannel audio input

Advanced

By default, it is set to 2-channnel audio so that multichannel audio is not output from a source device. If you want to input multichannel audio, change the EDID settings.

Front Panel

1. Select [EDID SETTINGS].
2. Set the input connector as follows:

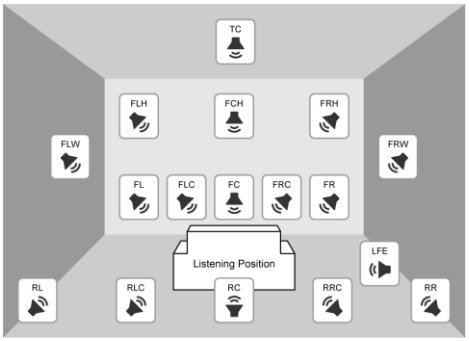
Submenu	Setting value	Default
[EDID SELECTION]	BUILT-IN EDID	BUILT-IN EDID
[SIGNAL FORMAT]	HDMI	HDMI
[SPEAKER CONFIGURATION]	AUTO	AUTO
	3 to 8 (Number of speakers)	2

3. Press the MENU/ENTER button to accept the new values.

WEB GUI

Tips

- To select speakers for multichannel audio manually, set [SPEAKER CONFIGURATION] to [MANUAL].



FL : Front Left
FC : Front Center
FR : Front Right
FLC : Front Left Center
FRC : Front Right Center
RL : Rear Left
RC : Rear Center
RR : Rear Right
RLC : Rear Left Center
RRC : Rear Right Center
LFE : Low Frequency Effect
FLW : Front Left Wide
FRW : Front Right Wide
FLH : Front Left High
FCH : Front Center High
FRH : Front Right High
TC : Top Center

- Only basic menus are displayed by default. To display advanced menus as well, perform the procedure in “**Advanced menu (P.18)**”.

Enabling multichannel audio output

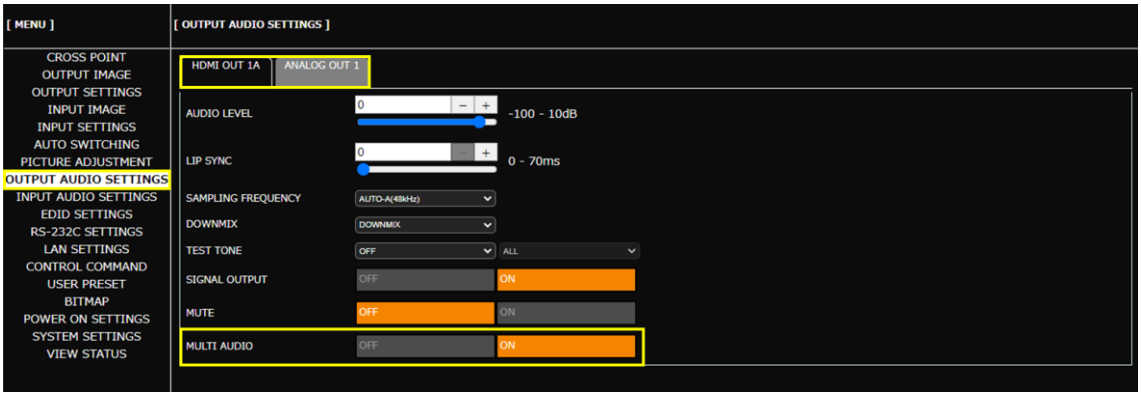
Advanced

By default, downmixed audio is output if multichannel audio is applied to an input. If you want to output multichannel audio, change the setting as follows:

Front Panel

1. Select [OUTPUT AUDIO SETTINGS]→[MULTI AUDIO].
2. Select the output connector.
3. Select [ON]. (Default: OFF)

WEB GUI



Note

Without downmixing, if the sink device does not support multichannel audio, only part of the audio program is presented.

Tip

Only basic menus are displayed by default. To display advanced menus as well, perform the procedure in "**Advanced menu (P.18)**".

Downmixing multichannel LPCM input audio

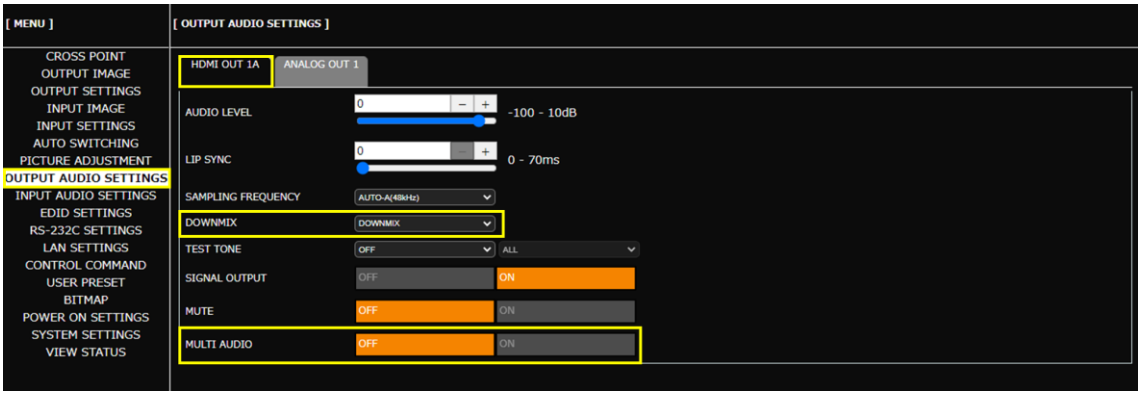
Advanced

To downmix multichannel LPCM input audio, set the digital audio and analog audio downmix.

Front Panel

1. Select [OUTPUT AUDIO SETTINGS]→[MULTI AUDIO].
2. Select the output connector.
3. Select [OFF]. (Default: OFF)
4. Select [OUTPUT AUDIO SETTINGS]→[DOWNMIX].
5. Select the output connector.
6. Select [DOWNMIX]. (Default: DOWNMIX)

WEB GUI



Tip

Only basic menus are displayed by default. To display advanced menus as well, perform the procedure in "**Advanced menu (P.18)**".

Enabling Bitstream audio

Advanced

By default, multichannel audio is not output from a source device. Change the EDID settings to enable Bitstream audio.

Front Panel

1. Select [EDID SETTINGS].
2. Set the input connector as follows:

Submenu	Setting value	Default
[EDID SELECTION]	BUILT-IN EDID	BUILT-IN EDID
[SIGNAL FORMAT]	HDMI	HDMI
[SPEAKER CONFIGURATION]	AUTO	AUTO
	3 to 8 (Number of speakers)	2

3. Press the MENU/ENTER button.
4. Select the audio format.
5. Select the input connector.
6. Select the sampling frequency. (Default: OFF)
7. Press the MENU/ENTER button to accept the new value.

WEB GUI

Notes

- The following Bitstream audio are supported: AAC, Dolby Digital, Dolby Digital Plus, Dolby TrueHD, DTS, and DTS-HD
- Bitstream audio that is not supported by the sink device cannot be output.
- If Bitstream audio is input or output, audio settings are disabled and analog audio cannot be output.

Tip

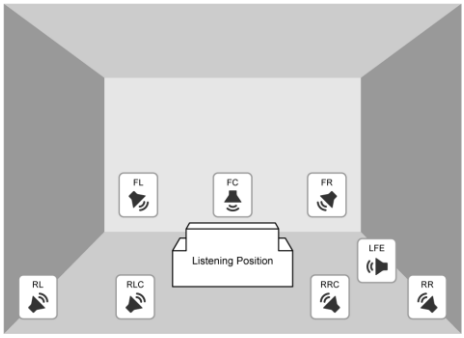
Only basic menus are displayed by default. To display advanced menus as well, perform the procedure in "**Advanced menu (P.18)**".

Outputting test tone

The test tone feature is useful for checking audio output operation, to confirm multichannel speaker assignment and to perform audio level adjustment.

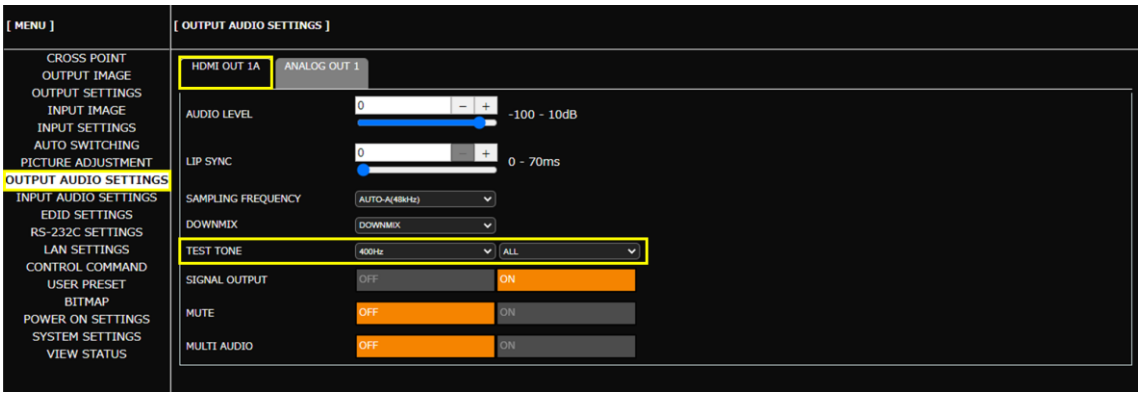
Front Panel

1. Select [OUTPUT AUDIO SETTINGS]→[TEST TONE].
2. Select the output connector.
3. Select the test tone frequency.
4. Select the speaker.



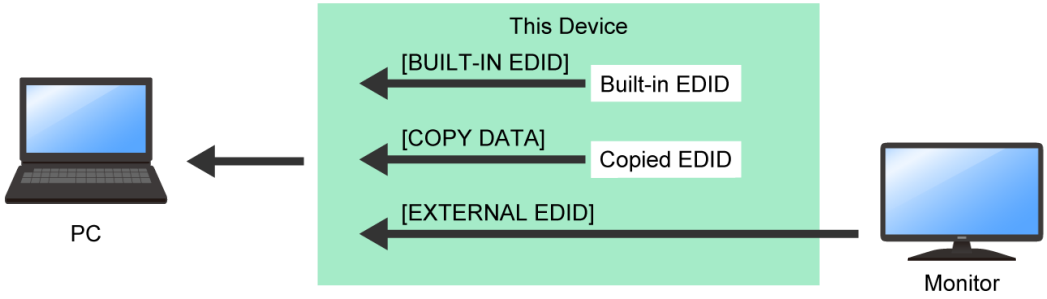
FL : Front Left
FC : Front Center
FR : Front Right
LFE : Low Frequency Effect
RL : Rear Left
RLC : Rear Left Center
RRC : Rear Right Center
RR : Rear Right

WEB GUI



EDID

This chapter describes how to select EDID options and change EDID settings.



[BUILT-IN EDID] : ICP-V's EDID. Native resolution and the like can be changed.
[COPY DATA] : EDID copied from sink devices.
[EXTERNAL EDID] : EDID of sink devices connected to output connectors.

Selecting EDID

Front Panel

1. Select [EDID SETTINGS]→[EDID SELECTION].
2. Select the input connector.
3. Select the EDID profile. (Default: BUILT-IN EDID)
4. Press the MENU/ENTER button to accept the new value.

WEB GUI

Note

[COPY DATA] can be selected only if valid stored data is available. Names that are set at the time of storing are displayed. For how to store the copied data to the ICP-V, see "**Copying EDID of sink device (P.58)**".

Changing supported resolution of built-in EDID

Front Panel

1. Select [EDID SETTINGS]→[RESOLUTION].
2. Select the input connector.
3. Select the resolution format. (Default: 3840x2160@60Hz 4:4:4)
4. Press the MENU/ENTER button to accept the new value.

WEB GUI

Note

If a source device that does not support 4K is connected when the ICP-V's EDID is set to 4K, video may not be output correctly. Change the EDID settings according to the format supported by the source device.

Copying EDID of sink device

Front Panel

1. Select [EDID SETTINGS]→[SINK DEVICE EDID COPY].
2. Select the output connecter to which the sink device is connected.
3. Select the memory location number.
4. Enter the desired name.
5. Press the MENU/ENTER button to accept the new values.

WEB GUI

Bitmap

This chapter describes how to store and display bitmap files.

To store bitmap files, the ICP-V supports DIB (Device Independent Bitmap) with a header generally used for Windows. These files need to meet the following requirements:

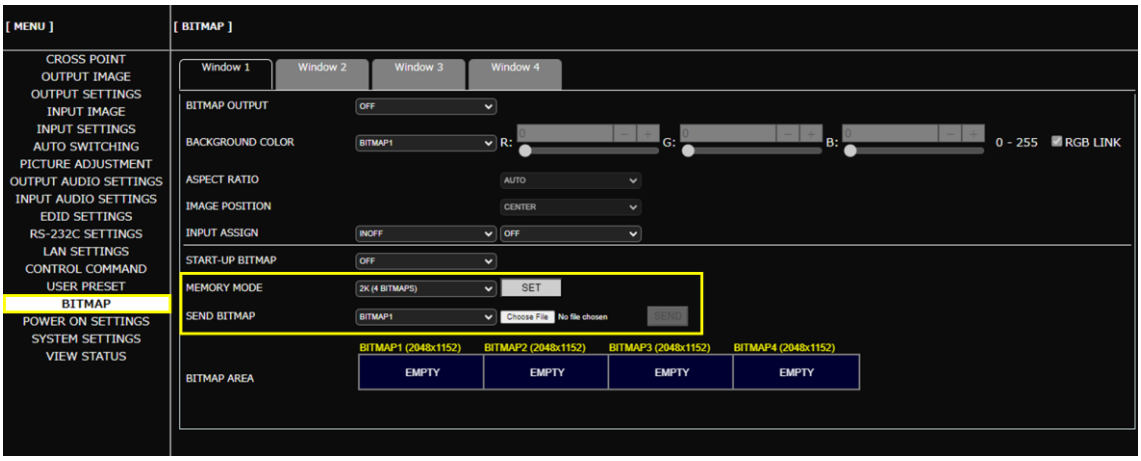
File header	: BITMAPFILEHEADER
Information header	: BITMAPCOREHEADER (for OS/2), BITMAPINFOHEADER (for Windows)
The number of colors	: 2 colors (monochrome, 1 bit), 16 colors (4 bits), 256 colors (8 bits), 16.77 million colors (TRUE COLOR, 24 bits)
Size of an image:	: [MEMORY MODE] [2K (4 BITMAPS)] : 2048x1152 or smaller [MEMORY MODE] [4K (1 BITMAPS)] : 4096x2160 or smaller
Compression format	: No compression (BI_RGB), 8 bit-run-length compression (BI_RLE8), 4 bit-run-length compression (BI_RLE4)

Storing bitmap file

Advanced

WEB GUI

1. Select [MENU]→[BITMAP].
2. Select a maximum resolution for [MEMORY MODE].
   2K (4 BITMAPS) : Up to four bitmap files of 2048x1152 or smaller.
   4K (1 BITMAP) : One bitmap file of 4096x2160 or smaller
3. Click [SET].
   Notes
   - Once the setting is changed, stored bitmap files are deleted automatically.
   - Approximate upload times for bitmap images is six minutes for 1920x1080 and 20 minutes for 3840x2160.
4. Select the bitmap file number from the [SEND BITMAP] drop-down menu.
5. Click [Choose File] and select the bitmap file.
6. Click [SEND].



Notes

- Do not power off the ICP-V while the message, [Writing Bitmap Please Wait...] appears on the front panel display. The settings may be deleted.
- The stored bitmap file is not deleted even after initialization or it cannot be backed up.
- Use a WEB browser to store bitmap files. Bitmap files cannot be stored via the front panel.

Tip

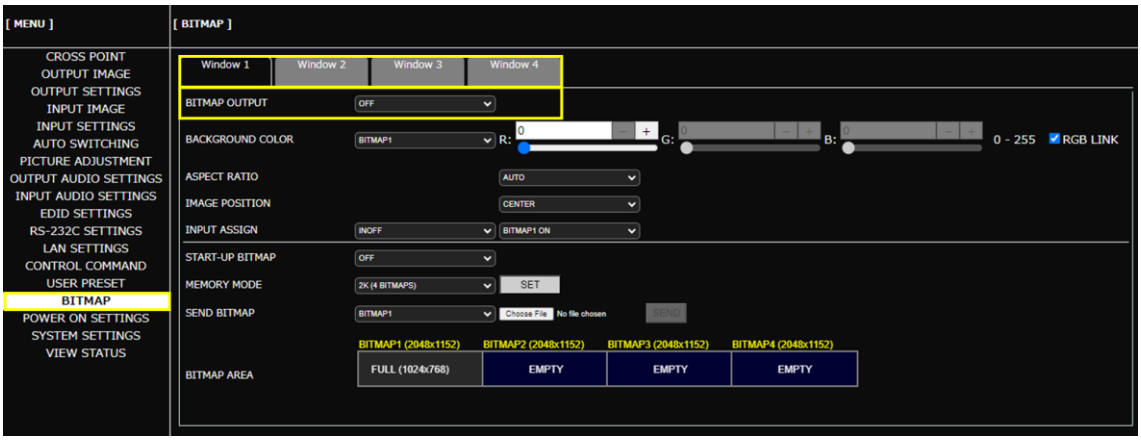
Only basic menus are displayed by default. To display advanced menus as well, perform the procedure in "**Advanced menu (P.18)**".

Displaying a bitmap

Front Panel

1. Select [BITMAP]→[BITMAP OUTPUT].
2. Select the window.
3. Select the stored bitmap file number.

WEB GUI



Note

Only numbers corresponding to stored bitmap files can be selected.

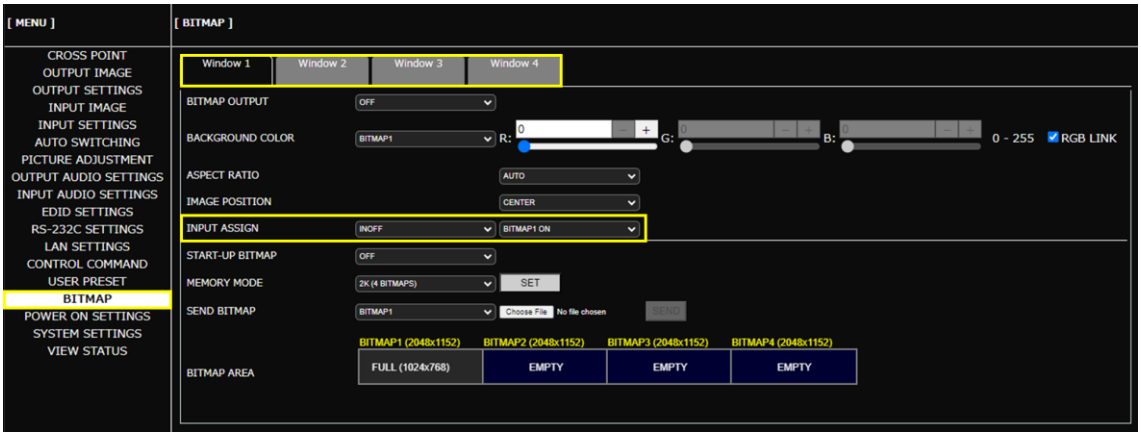
Displaying bitmap when an input is set to OFF

Advanced

Front Panel

1. Select [BITMAP]→[INPUT ASSIGN].
2. Select the window.
3. Select [INOFF] for [INPUT ASSIGN].
4. Select the bitmap file number.
5. Press the MENU/ENTER button to accept the new value.

WEB GUI



Note

Only numbers corresponding to stored bitmap files can be selected.

Tip

Only basic menus are displayed by default. To display advanced menus as well, perform the procedure in "**Advanced menu (P.18)**".

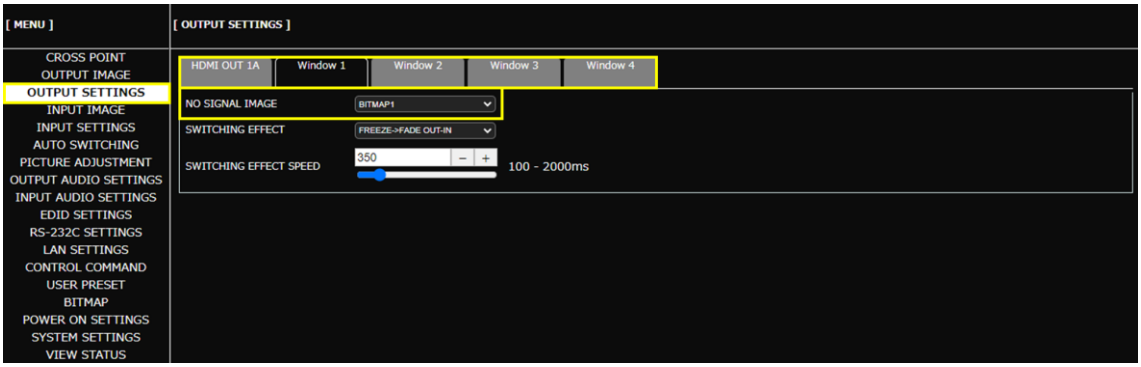
Displaying bitmap when no video signal is present at input

Advanced

Front Panel

1. Select [OUTPUT SETTINGS]→[NO SIGNAL IMAGE].
2. Select the window.
3. Select the bitmap file number.

WEB GUI



Note

Only numbers corresponding to stored bitmap files can be selected.

Tip

Only basic menus are displayed by default. To display advanced menus as well, perform the procedure in "**Advanced menu (P.18)**".

Automatic Input Switching

This chapter describes how to automatically select connected inputs based on detection of video signal activity.

Configuring automatic input switching

Advanced

The example below shows how to set automatic channel switching for when video signal input is detected and when input video signal disappears.

1. Setting automatic switching to the channel in which input video signal is detected:
   Front Panel
   - **a)** Select [AUTO SWITCHING]→[SIGNAL ON PRIORITY].
   - **b)** Select the window.
   - **c)** Select the same priority for all inputs.
   - **d)** Press the MENU/ENTER button.

   WEB GUI

2. Setting automatic switching to IN1 for when input video signal disappears:

Front Panel

a) Select [AUTO SWITCHING]→[SIGNAL OFF PRIORITY].

b) Select the window.

c) Select the priorities as follows:

Input	Setting value	Description
[IN1]	1	The top priority
Inputs other than IN1	OFF	No priority is set.

d) Press the MENU/ENTER button to accept the new values.

WEB GUI

3. Selecting signal to be switched:

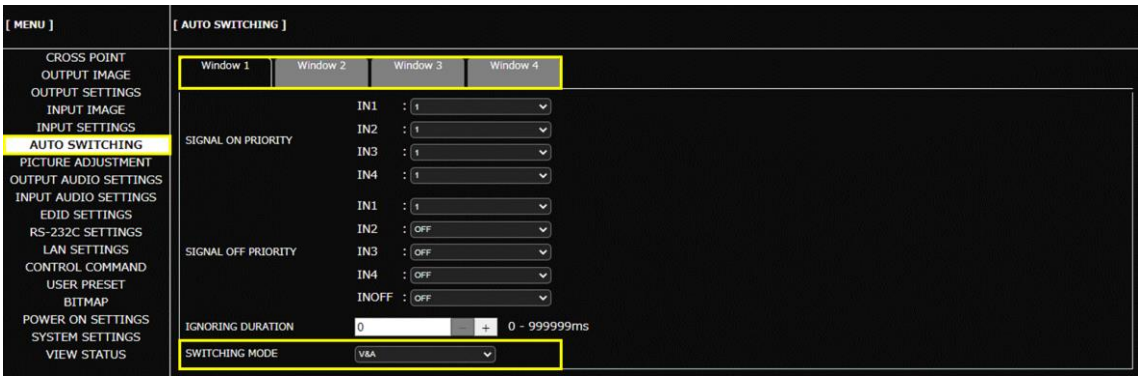
Front Panel

a) Select [AUTO SWITCHING]→[SWITCHING MODE].

b) Select the window.

c) Select [V&A].

WEB GUI



Tip

Only basic menus are displayed by default. To display advanced menus as well, perform the procedure in "**Advanced menu (P.18)**".

Automatic input switching – Setting response delay interval

Advanced

If changes in input video signals are detected at short intervals, inputs are switched automatically and continuously. This successive automatic switching can be avoided by setting the change detection interval manually after the auto-input switching is executed.

Front Panel

1. Select [AUTO SWITCHING]→[IGNORING DURATION].
2. Select the window.
3. Set the ignoring duration to temporarily disable input detection after an auto-input switching event has occurred.

WEB GUI

Tip

Only basic menus are displayed by default. To display advanced menus as well, perform the procedure in "**Advanced menu (P.18)**".

RS-232C/LAN Communication

This chapter describes how to configure communication for the ICP-V.

Configuring RS-232C communication

Front Panel

1. Select [RS-232C SETTINGS]→[PARAMETERS].
2. Select the connectors supporting RS-232C communication.
3. Configure the following items: [BAUD RATE], [DATA BIT LENGTH], [PARITY], [STOP BIT]
4. Press the MENU/ENTER button to accept the new value.

WEB GUI

Tip

By default, RS-232C communication is configured as follows:

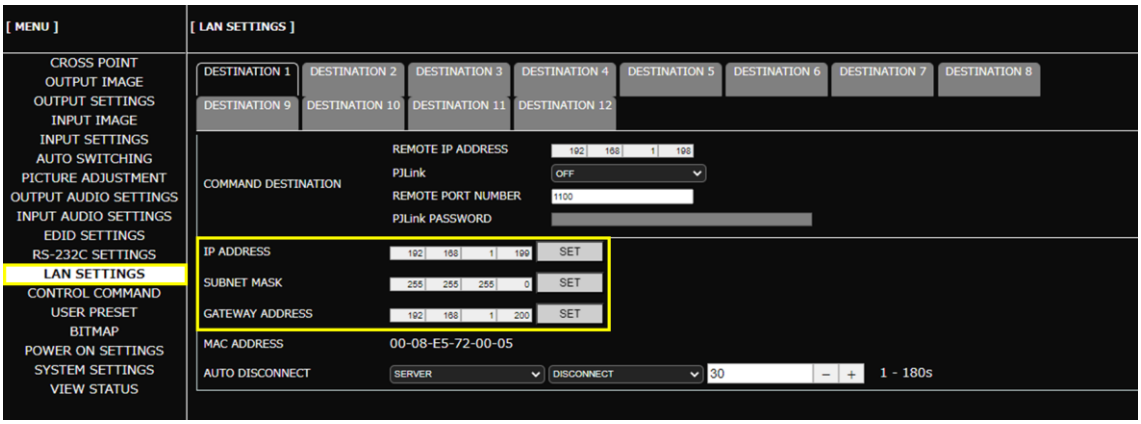
Baud rate	: 9600 bps
Data bit length	: 8 bits
Parity check	: NONE
Stop bit	: 1 bit

Configuring LAN communication

Front Panel

1. Select [LAN SETTINGS].
2. Configure the following items: [IP ADDRESS], [SUBNET MASK], [GATE WAY]
3. Press the MENU/ENTER button to accept the new values.

WEB GUI



Notes

- From an external device to the ICP-V : Up to eight connections.
- From the ICP-V to an external device : Up to 12 connections.

Tips

- By default, RS-232C communication is configured as follows:
  IP address : 192.168.1.199
  Subnet mask : 255.255.255.0
  Default gateway : 192.168.1.200
  TCP port : 1100 (Fixed)
- By default, LAN communication of extension connectors is configured as follows:
  10GbE connector: Disabled

Projector Power Control

This chapter describes how to command projector power ON/OFF from the ICP-V.

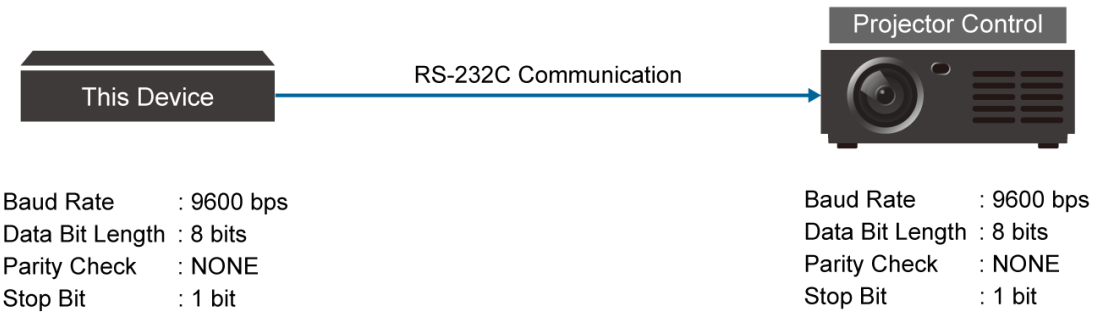
Tip

For other controls from the ICP-V, refer to the User Guide.

Controlling projector power via RS-232C communication

Advanced

The examples below show how to control projector power using a function button.

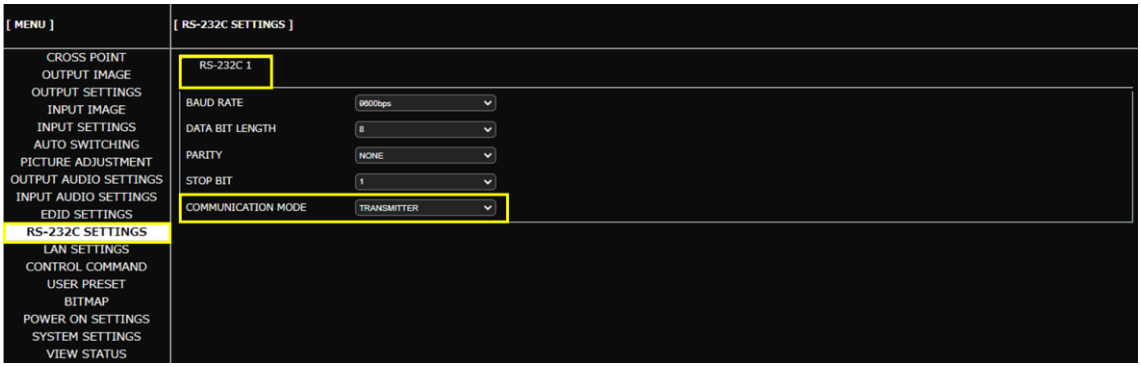


1. By performing "**Configuring RS-232C communication (P.67)**", configure the RS-232C communication of the ICP-V to the same settings as the projector as follows:
2. Set the communication mode to [TRANSMITTER].

   Front Panel

   a) Select [RS-232C SETTINGS]→[COMMUNICATION MODE].
   b) Select the RS-232C communication connector.
   c) Select [TRANSMITTER].
   d) Press the MENU/ENTER button to accept the new value.

   WEB GUI



3. Register the two commands for powering on and off the projector to the ICP-V.

Front Panel

a) Select [CONTROL COMMAND]→[COMMAND REGISTER/EDIT].

b) Select the command (CMD) number.

c) Register the commands as follows:

	CMD1	CMD2
I/F	RS-232C/LAN	RS-232C/LAN
RS1	ON	ON
DATA	Power ON command*	Power OFF command*
DATA SIZE	Transmitting data size	Receiving data size
MEMO	POWER ON	POWER OFF

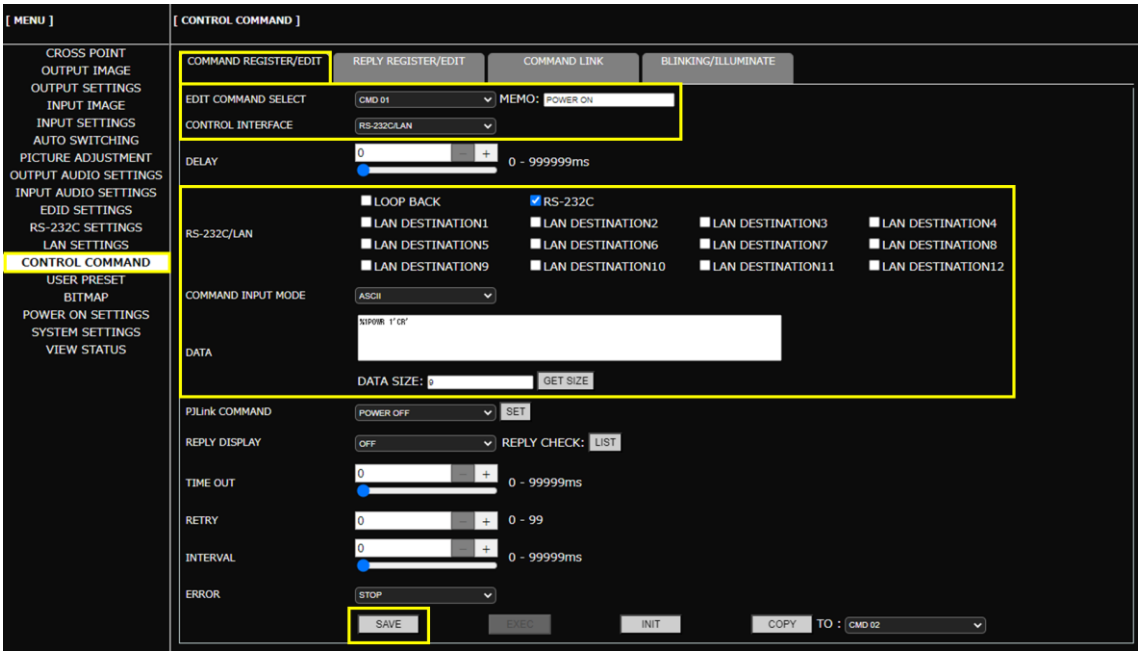
*For the power control command, refer to the User Guide of the projector.

Note

Only values that need to be changed are shown above.

d) Press the MENU/ENTER button to accept the new values.

WEB GUI



Tips

- To register the control commands, you also can use Multi-Window Video Processor Configurator or Control Command Configuration Tool, which can be downloaded from www.idkav.com.
- To control registered commands from external devices, send the @EXC command to the ICP-V. For details, refer to the Command Guide.

4. Assign [DISPLAY POWER] to the F1 button.

Front Panel

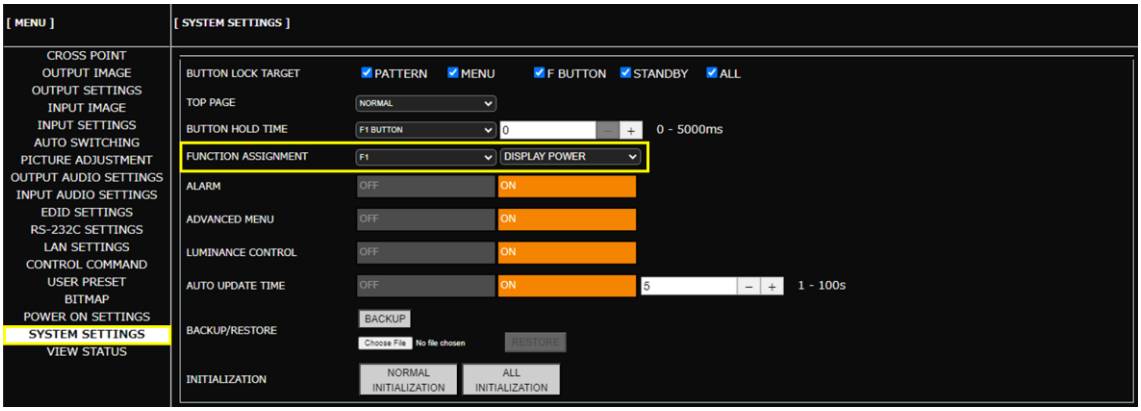
a) Select [SYSTEM SETTING]→[FUNCTION ASSIGNMENT].

b) Select [F1].

c) Assign [DISPLAY POWER] to [F1].

d) Press the MENU/ENTER button.

WEB GUI



5. Assign the control commands to a function button.

Front Panel

a) Select [CONTROL COMMAND]→[COMMAND LINK].

b) Select [F1].

c) Assign control commands registered in [A-1st] (powering on) and [B-1st] (powering off) to F1 function button.

TOGGLE: ON

A-1st : COMMAND 2

B-1st : COMMAND 1

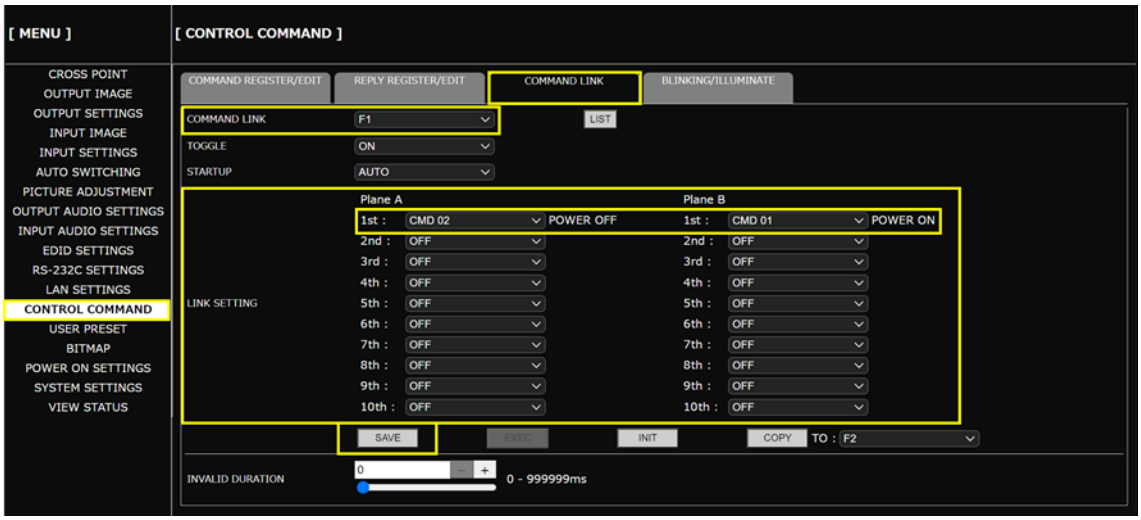
Note

[A-1st] : Executed by pressing the button LED while lit.

[B-1st] : Executed by pressing the button LED while unlit.

d) Press the MENU/ENTER button to accept the new values.

WEB GUI



6. Press the assigned function button.

Press the F1 button while unlit : Powering on projector.

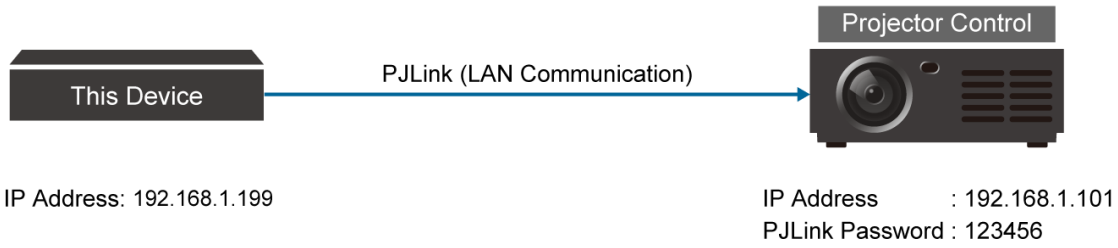
Press the F1 button while lit : Powering off projector.

Tip

Only basic menus are displayed by default. To display advanced menus as well, perform the procedure in "**Advanced menu (P.18)**".

Controlling projector power via PJLink (LAN communication)

Advanced



1. Perform the same procedure described in this section "**Configuring LAN communication (P.68)**".
2. Configure the destination of control command.

   Front Panel

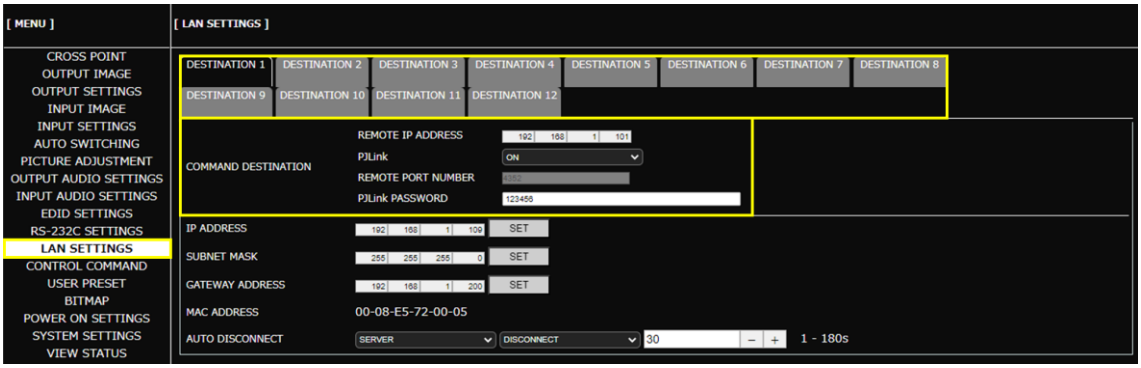
   a) Select [LAN SETTINGS]→[COMMAND DESTINATION].
   b) Select [DESTINATION1].
   c) Set the IP address of the projector to [192.168.1.101].
   d) Set [PJLink] to [ON].
   e) Configure the PJLink password to [123456].

   Tip

   For password of PJLink, refer to the User Guide of the projector.

   f) Press the MENU/ENTER button to accept the new value.

   WEB GUI



Note

If you do not use PJLink protocol connection, set [PJLink] to [OFF] and set the destination port number.

3. Register the two commands for powering a projector on and off on the ICP-V.

Front Panel

a) Select [CONTROL COMMAND]→[COMMAND REGISTER/EDIT].

b) Select the command (CMD) number.

c) Register the commands as follows:

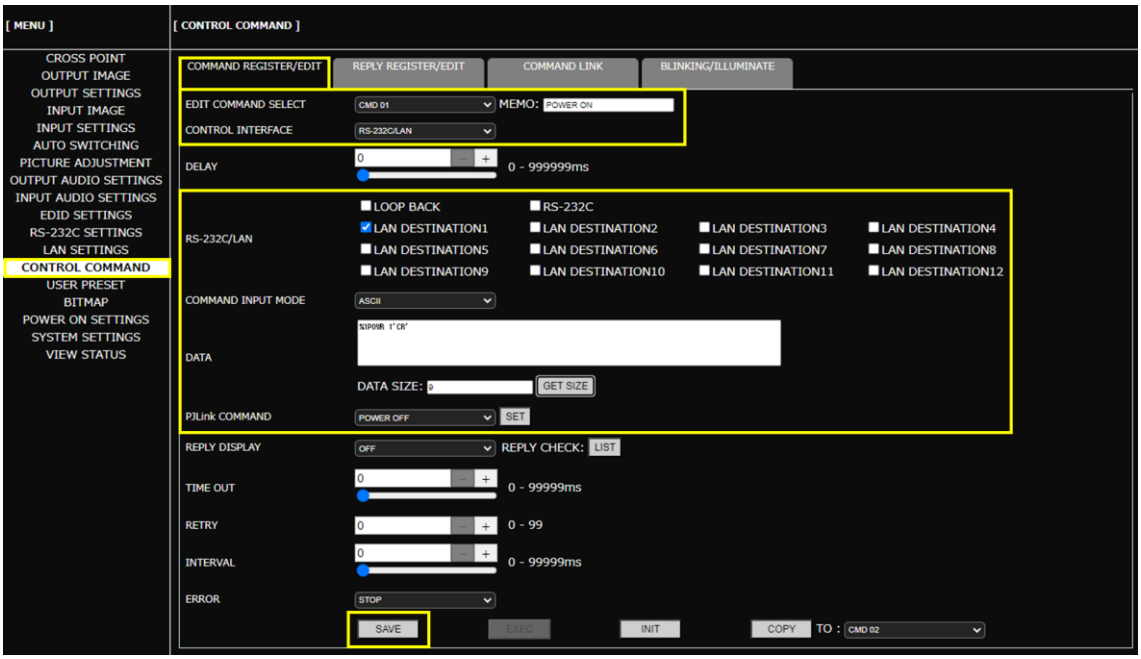
	CMD1	CMD2
I/F	RS-232C/LAN	RS-232C/LAN
[LAN DESTINATION1]	ON	ON
DATA	%1POWR 1↲	%1POWR 0↲
DATA SIZE	9	9
MEMO	POWER ON	POWER OFF

Note

Only values that need to be changed are shown above.

d) Press the MENU/ENTER button to register the control command.

WEB GUI



Tips

- To register the control commands, you also can use Multi-Window Video Processor Configurator or Control Command Configuration Tool, which can be downloaded from www.idkav.com.
- To control registered commands from external devices, send the @EXC command to the ICP-V. For details, refer to the Command Guide.

4. Assign [DISPLAY POWER] to a function button.

Front Panel

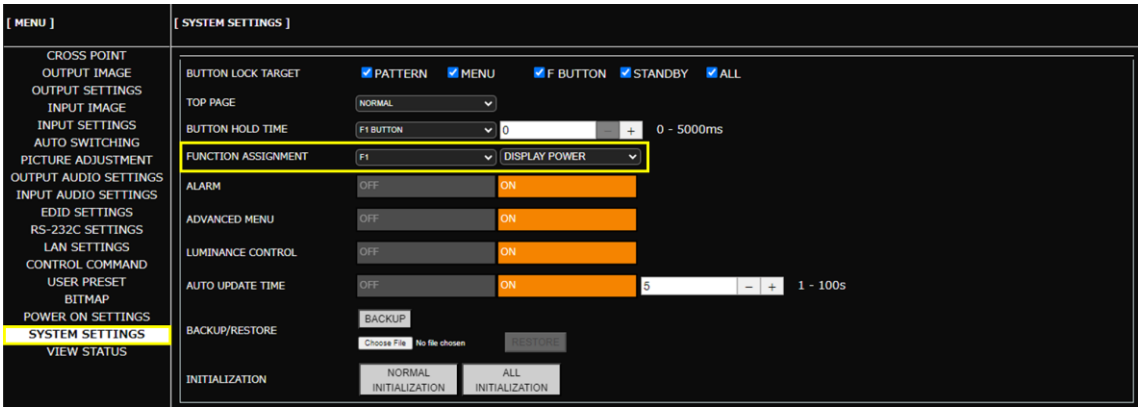
a) Select [SYSTEM SETTING]→[FUNCTION ASSIGNMENT].

b) Select [F1].

c) Assign [DISPLAY POWER] to [F1].

d) Press the MENU/ENTER button to accept the new value.

WEB GUI



5. Assign the control commands to a function button.

Front Panel

a) Select [CONTROL COMMAND]→[COMMAND LINK].

b) Select [F1].

c) Assign control commands registered in [A-1st] (powering on) and [B-1st] (powering off) to F1 function button.

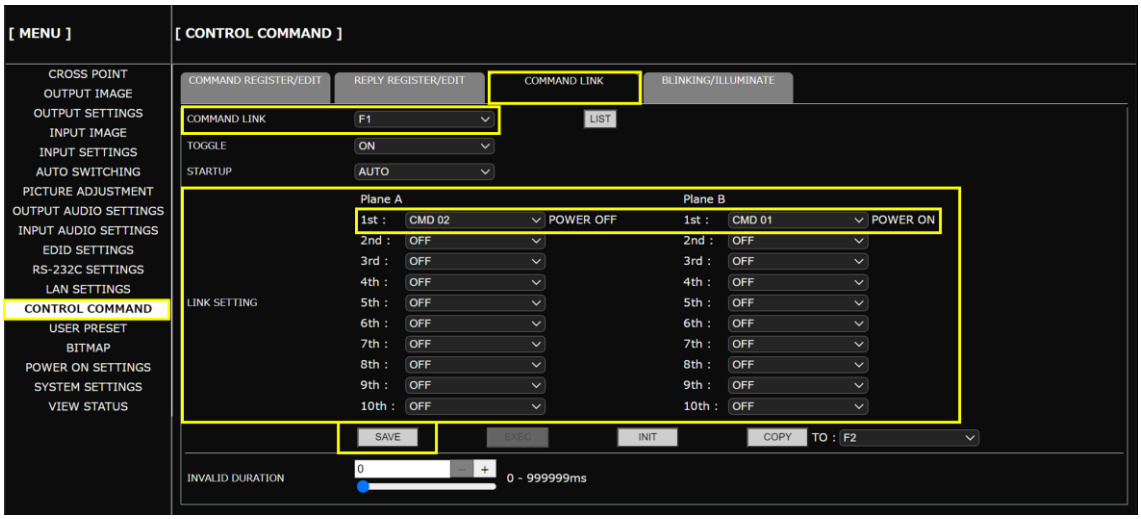
TOGGLE: ON
A-1st : COMMAND 2
B-1st : COMMAND 1

Note

[A-1st] : Executed by pressing the button LED while lit.
[B-1st] : Executed by pressing the button LED while unlit.

d) Press the MENU/ENTER button to accept the new values.

WEB GUI



6. Press the assigned function button.

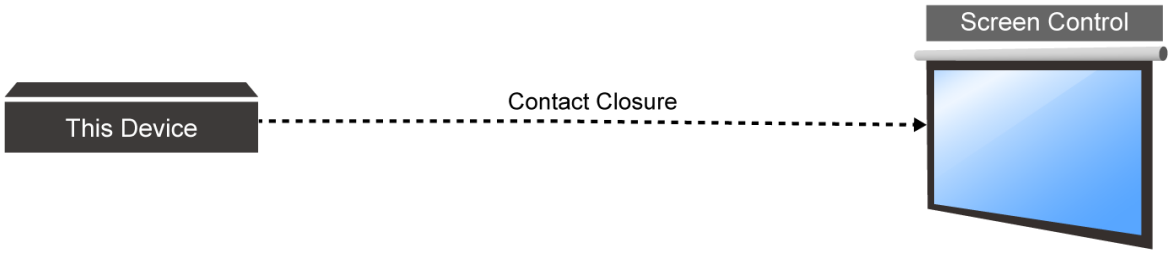
Press the F1 button while unlit : Powering on projector.
Press the F1 button while lit : Powering off projector.

Tip

Only basic menus are displayed by default. To display advanced menus as well, perform the procedure in "**Advanced menu (P.18)**".

Screen Control

This chapter describes how to control a screen via contact closure from the ICP-V.



1. Register the three commands for screen up/down/stop in the ICP-V.

   Front Panel

   a) Select [CONTROL COMMAND]→[COMMAND REGISTER/EDIT].

   b) Select the command (CMD) number.

   c) Register the commands as follows:

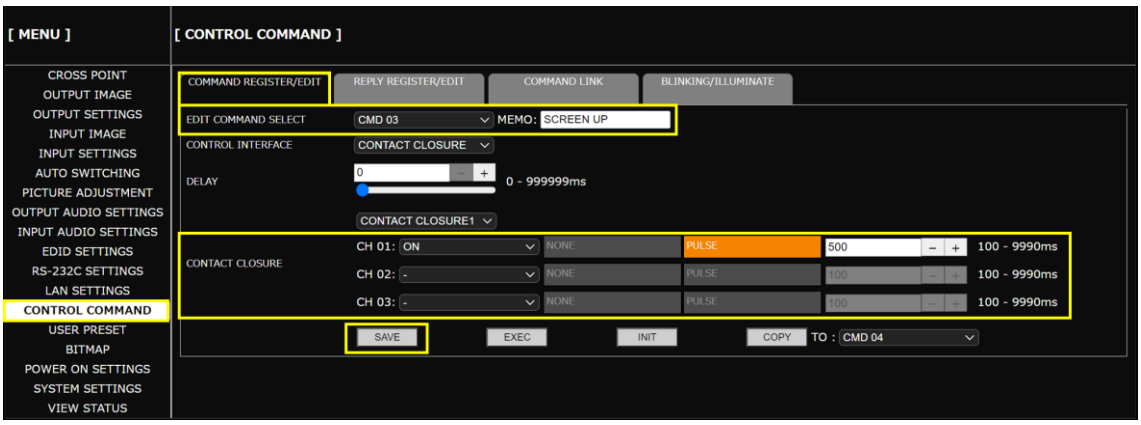
	CMD3		CMD4		CMD5	
I/F	CONTACT CLOSURE		CONTACT CLOSURE		CONTACT CLOSURE	
CH1	ON	PULSE: 500 ms	OFF	PULSE: NONE	OFF	PULSE: NONE
CH2	OFF	PULSE: NONE	ON	PULSE: 500 ms	OFF	PULSE: NONE
CH3	OFF	PULSE: NONE	OFF	PULSE: NONE	ON	PULSE: 500 ms
MEMO	SCREEN UP		SCREEN STOP		SCREEN DOWN	

   Notes

   - Only values that need to be changed are shown above.
   - For setting values for [PULSE] of [CH1] to [CH3], refer to the User Guide of the screen.

   d) Press the MENU/ENTER button to accept the new value.

   WEB GUI



Tips

- To register the control commands, you also can use Multi-Window Video Processor Configurator or Control Command Configuration Tool, which can be downloaded from www.idkav.com.
- To control registered commands from external devices, send the @EXC command to the ICP-V. For details, refer to the Command Guide.

2. Assign [COMMAND] to function buttons for screen up/down/stop.

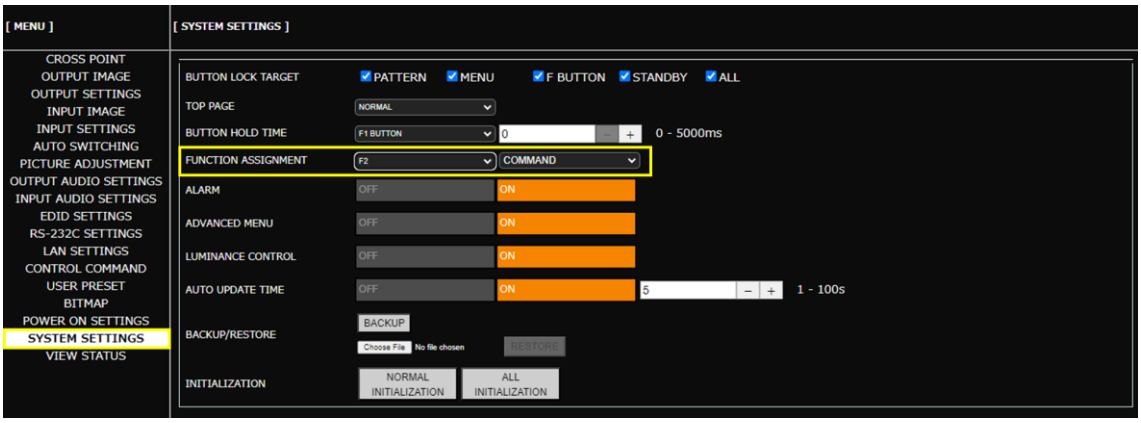
Front Panel

a) Select [SYSTEM SETTING]→[FUNCTION ASSIGNMENT].

b) Assign [COMMAND] to [F2] to [F4].

c) Press the MENU/ENTER button to accept the new value.

WEB GUI



3. Assign commands for screen up/down/stop to function buttons.

Front Panel

a) Select [CONTROL COMMAND]→[COMMAND LINK].

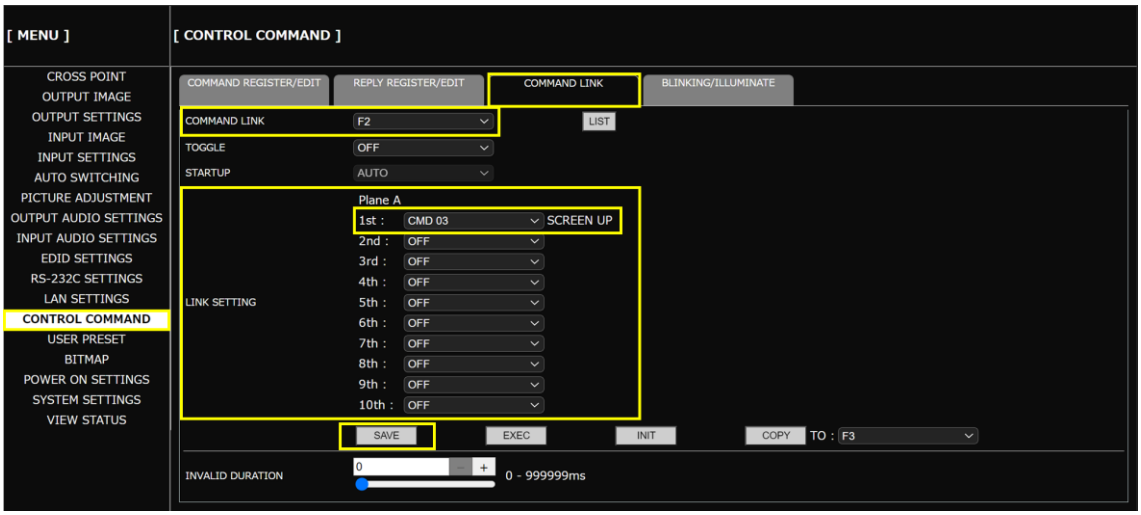
b) Select [F2] to [F4].

c) Assign control commands as follows:

	F2	F3	F4
TOGGLE	OFF	OFF	OFF
1st	COMMAND 3	COMMAND 4	COMMAND 5

d) Press the MENU/ENTER button.

WEB GUI



4. Press the assigned function button.
Press the lit F2 button : Screen UP
Press the lit F3 button : Screen STOP
Press the lit F4 button : Screen DOWN

Viewing Status

This chapter describes how to view I/O signal and EDID states of sink devices.
If video or audio cannot be displayed, check signal status using these features.

Viewing input signal status

Front Panel

1. Select [VIEW STATUS]→[INPUT STATUS].
2. Select the input connector.
3. Select the item.

Input video resolution

[IN1 RESOLUTION]
3840x2160p 59.94Hz

Input video signal format

[IN1 VIDEO FORMAT]
HDMI 444 8bpc

[IN1 VIDEO FORMAT]
HDMI 444 8bpc LIMITED

Input audio signal format

[IN1 AUDIO FORMAT]
L-PCM 48kHz 24bit M

HDCP

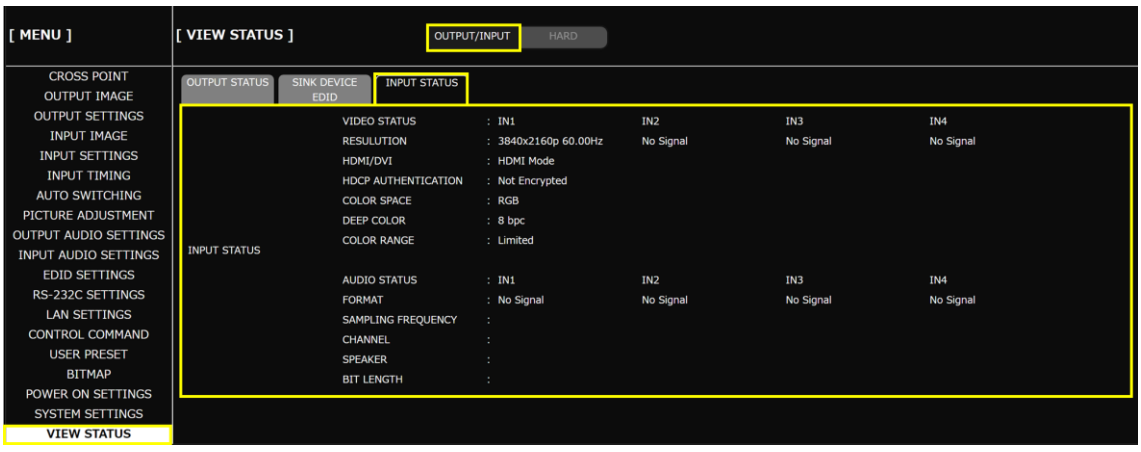
[IN1 HDCP STATUS]
HDCP2.2 Type0

Status of all input connectors

IN1 2 3 4
H(H/A) D H

[H]	: HDMI signal is input.
[D]	: DVI signal is input.
No character	: No signal is input.
Small [H]	: Signal is protected by HDCP.
Small [A]	: Audio is embedded.

WEB GUI

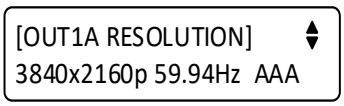


Viewing output signal status

Front Panel

1. Select [VIEW STATUS]→[OUTPUT STATUS].
2. Select the output connector.
3. Select the item.

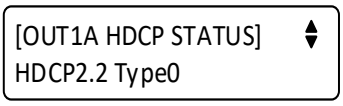
Output video resolution



Output video signal format

Output audio signal format

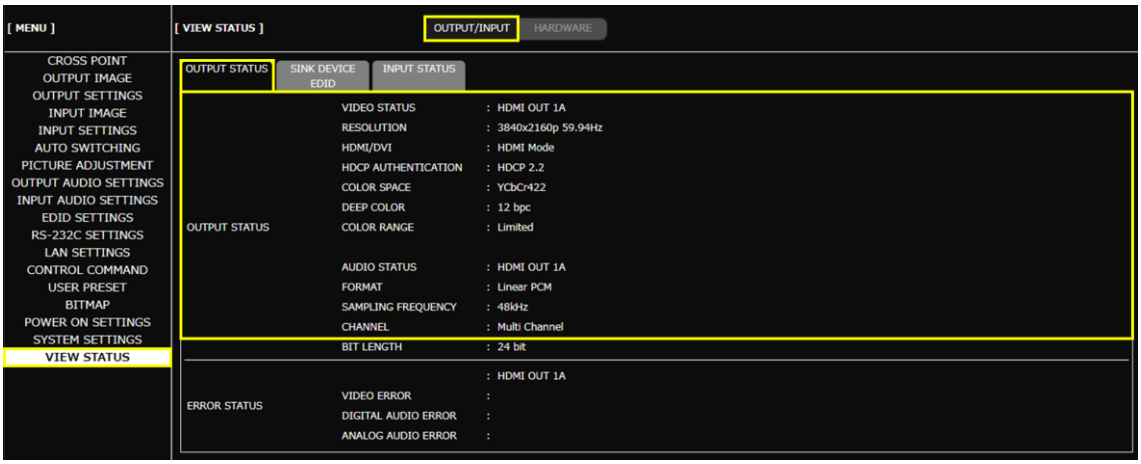
HDCP



Note

AAA: An error code is displayed. For descriptions of error codes, refer to the User Guide.

WEB GUI



Note

For some sink devices, different signals from the ICP-V's output setting may be output.

Viewing sink device EDID

This feature is useful for checking the optimal resolution and audio format.

Front Panel

1. Select [VIEW STATUS]→[SINK DEVICE EDID].
2. Select the output connector to which the sink device is connected.
3. Select the item.

Sink device name and recommended resolution

[OUT1A] MONITOR NAME
3840x2160p 594.00MHz

Supported video signal format

[OUT1A] HDMI
RGB/YCbCr422/444

[OUT1A]
DVI

Supported color depth

[OUT1A]
8/10/12 bpc

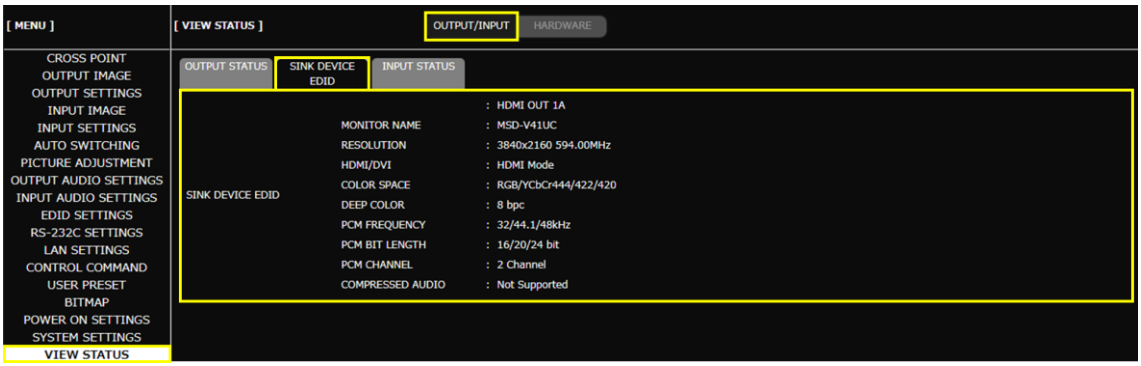
Supported sampling frequency

[OUT1A]
32/44.1/48/96kHz

Supported audio signal format

[OUT1A] 16/20/24BIT
8CHANNEL COMPRESSED

WEB GUI



Storing and Recalling Presets

This chapter describes how to store and recall settings to/from the following three types of presets:

- Preset memory : Current input selection of video and audio and output video settings.
- Crosspoint memory : Current input selection of video and audio.
- Pattern memory : Current settings such as image position, image size, and so on.

Tip

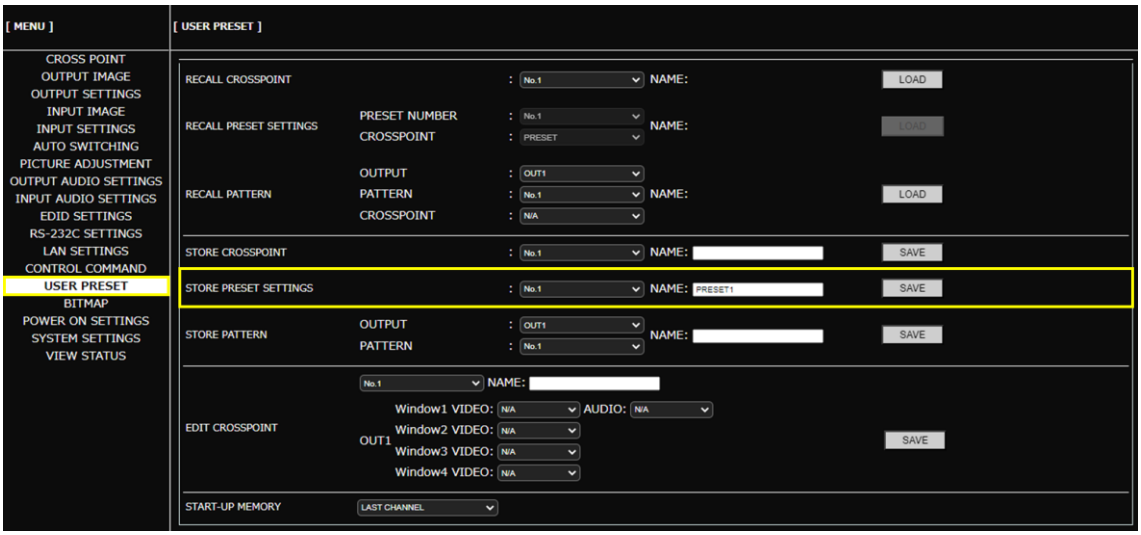
For details of settings to be stored as presets, refer to the User Guide.

Storing settings in preset memory

Front Panel

1. Select [USER PRESET]→[STORE PRESET SETTINGS].
2. Select the preset memory number.
3. Enter the desired name.
4. Press the MENU/ENTER button.
   The confirmation message appears.
5. Select [YES].
6. Press the MENU/ENTER button.

WEB GUI

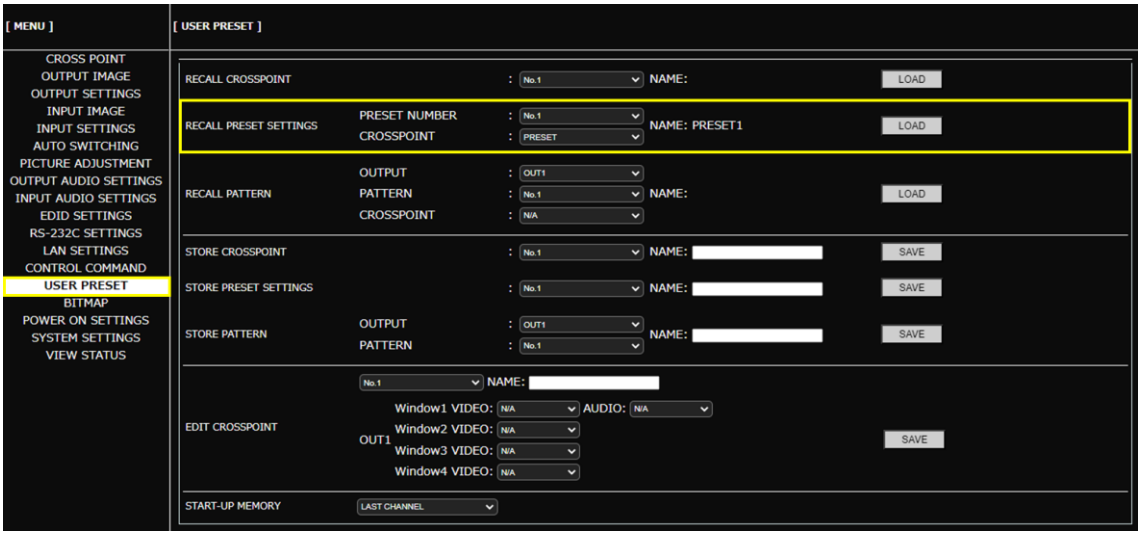


Recalling stored settings from preset memory

Front Panel

1. Select [USER PRESET]→[RECALL PRESET SETTINGS].
2. Select the preset memory number.
3. For [CROSSPOINT], select the input you want to recall with the preset memory.
   [N/A] : No information
   [PRESET] : The input settings stored in the preset memory.
   [CP_MEMORY] : The input settings stored in the crosspoint memory.
4. Press the MENU/ENTER button.
   The confirmation message appears.
5. Select [YES].
6. Press the MENU/ENTER button to accept the new value.

WEB GUI



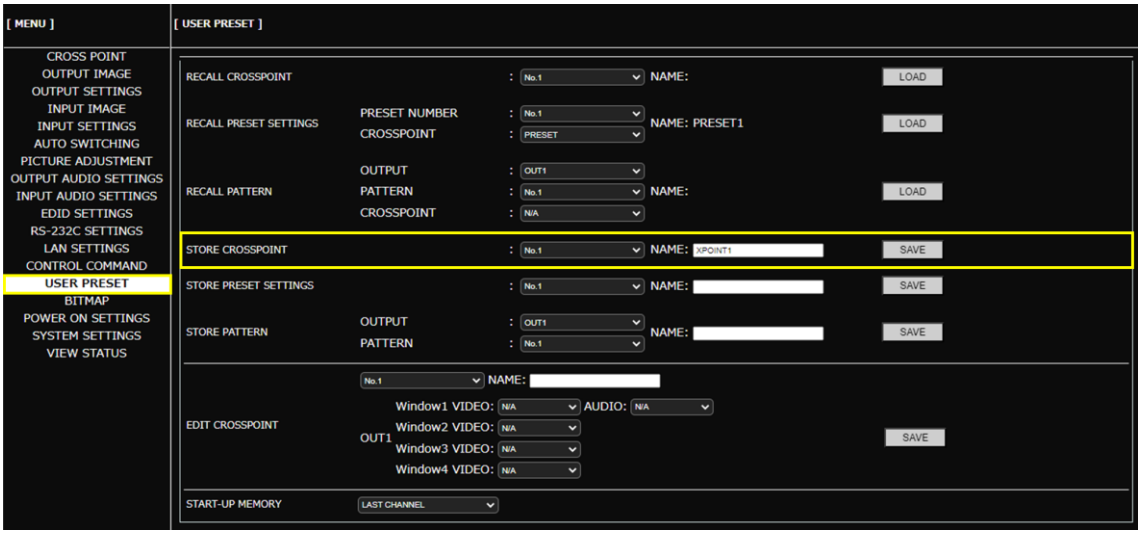
Storing input selection settings to crosspoint memory

The input channel selections of the currently routed video and audio can be stored to crosspoint memory.

Front Panel

1. Select [USER PRESET]→[STORE CROSSPOINT].
2. Select the crosspoint memory number.
3. Enter the desired name.
4. Press the MENU/ENTER button.
   The confirmation message appears.
5. Select [YES].
6. Press the MENU/ENTER button to accept the new values.

WEB GUI

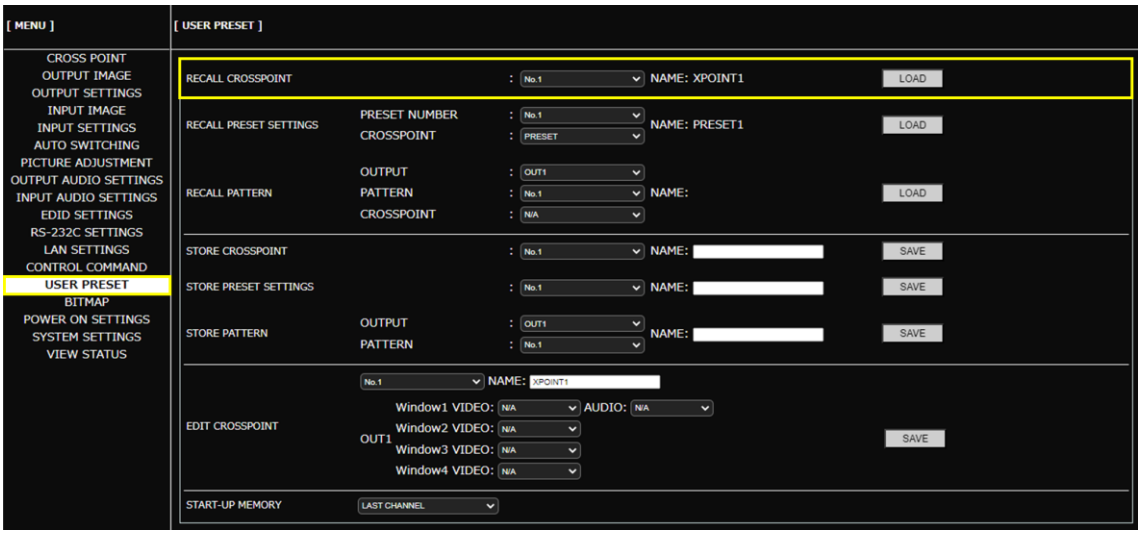


Recalling stored input selection settings from crosspoint memory

Front Panel

1. Select [USER PRESET]→[RECALL CROSSPOINT].
2. Select the crosspoint memory number.
3. Press the MENU/ENTER button.

WEB GUI

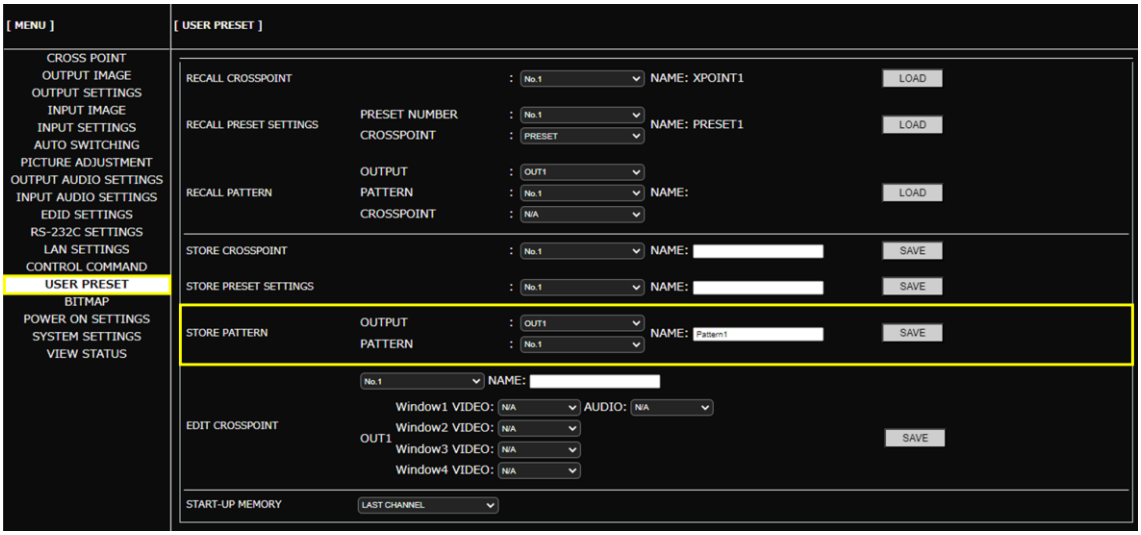


Storing layouts in pattern memory

Front Panel

1. Select [USER PRESET]→[STORE PATTERN].
2. Select the pattern memory location number.
3. Enter the desired name.
4. Press the MENU/ENTER button.
   The confirmation message appears.
5. Select [YES].
6. Press the MENU/ENTER button to accept the new values.

WEB GUI

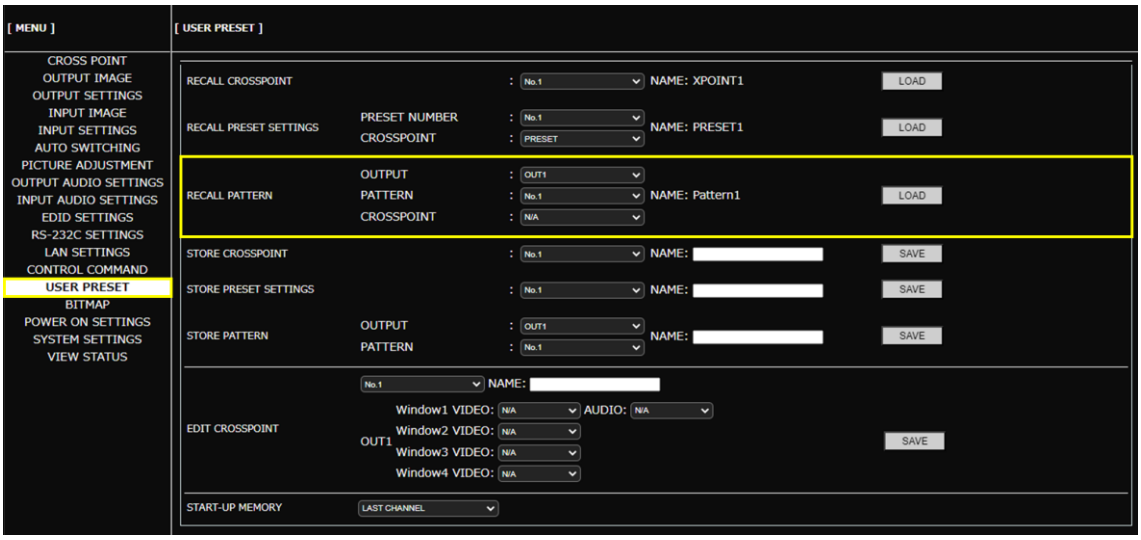


Recalling stored layouts from pattern memory (1 to 32)

Front Panel

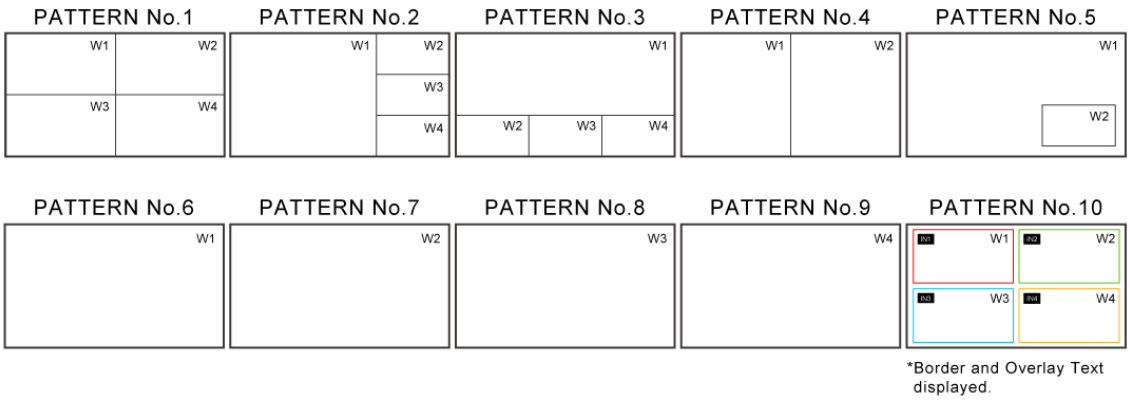
1. Select [USER PRESET]→[RECALL PATTERN].
2. Select the pattern memory location number.
3. For [CROSSPOINT], select the input you want to recall with the preset memory.
   [N/A] : No information
   [CP_MEMORY] : The input settings stored in the crosspoint memory.
4. Press the MENU/ENTER button.
   The confirmation message appears.
5. Select [YES].
6. Press the MENU/ENTER button to accept the new values.

WEB GUI



Tips

- PATTERN1 to PATTERN10 can be recalled from front panel buttons.
- By default, the following layouts are stored in the pattern memory:



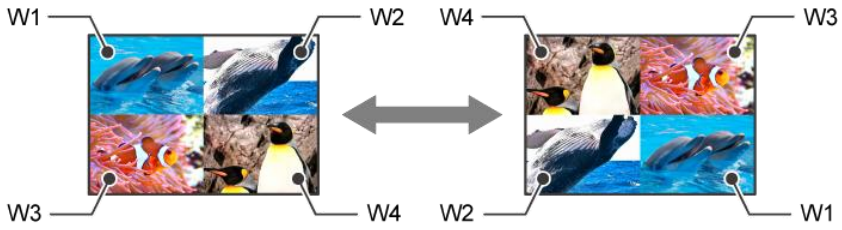
*Border and Overlay Text displayed.

Recalling layout seamlessly

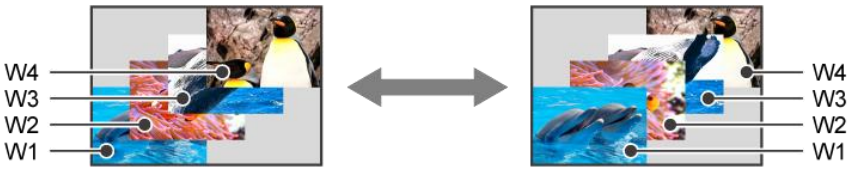
If all window sizes are the same before and after a layout is recalled, layouts can be recalled seamlessly. For other cases, some black frames are output.

Example: Seamless recalling

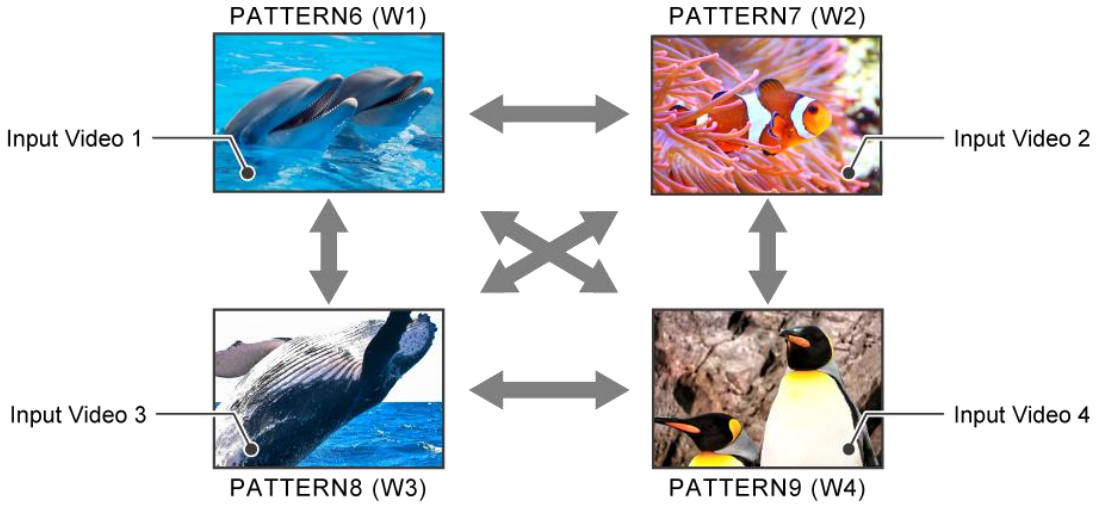
- Window position changes:



- Window priority changes:



By default, a single window layout that can be recalled seamlessly is saved to PATTERN6 to PATTERN9. If IN1 to IN4 are selected to Window1 to Window4 respectively, input video can be switched seamlessly.



Setting audio channel when layout is switched

By default, the audio of Window1 IN1 is output.
To output the audio when a layout is switched, set the crosspoint memory to be recalled with the pattern memory.

Editing audio crosspoint

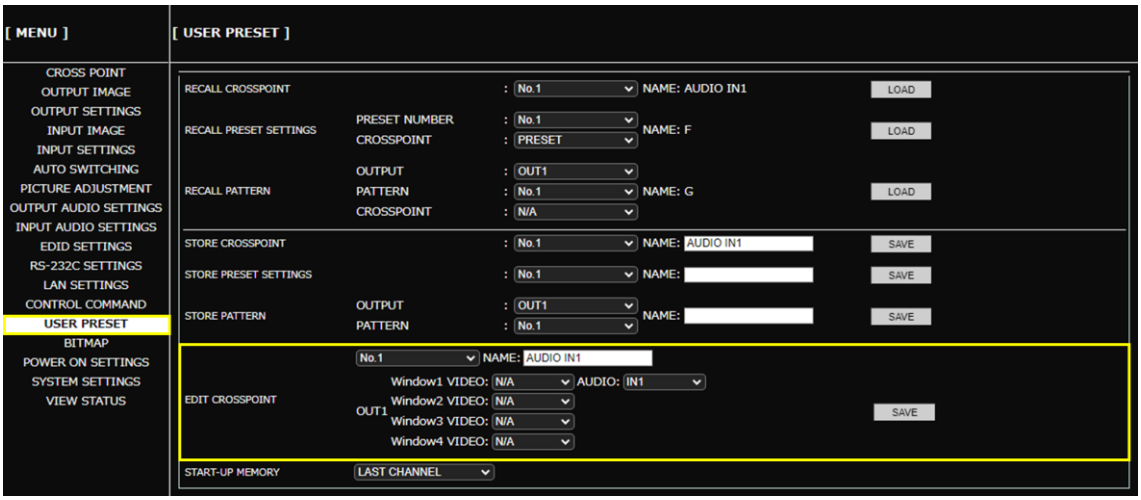
Front Panel

1. Select [USER PRESET]→[EDIT CROSSPOINT].
2. Select the crosspoint memory number.
3. Select the window.
4. Set the crosspoint to be recalled.
   [V] : Video channel number ([N/A]: Does not recall video channel information)
   [A] : Audio channel number ([N/A]: Does not recall audio channel information)
   [NAME] : Crosspoint memory name
   Example

Memory number	Window	V	A	NAME
1	OUT1W1	N/A	1	AUDIO IN1
2	OUT1W1	N/A	2	AUDIO IN2
3	OUT1W1	N/A	3	AUDIO IN3
4	OUT1W1	N/A	4	AUDIO IN4

5. Press the MENU/ENTER button to accept the new values.

WEB GUI



Assigning audio cross point when pattern is recalled

Front Panel

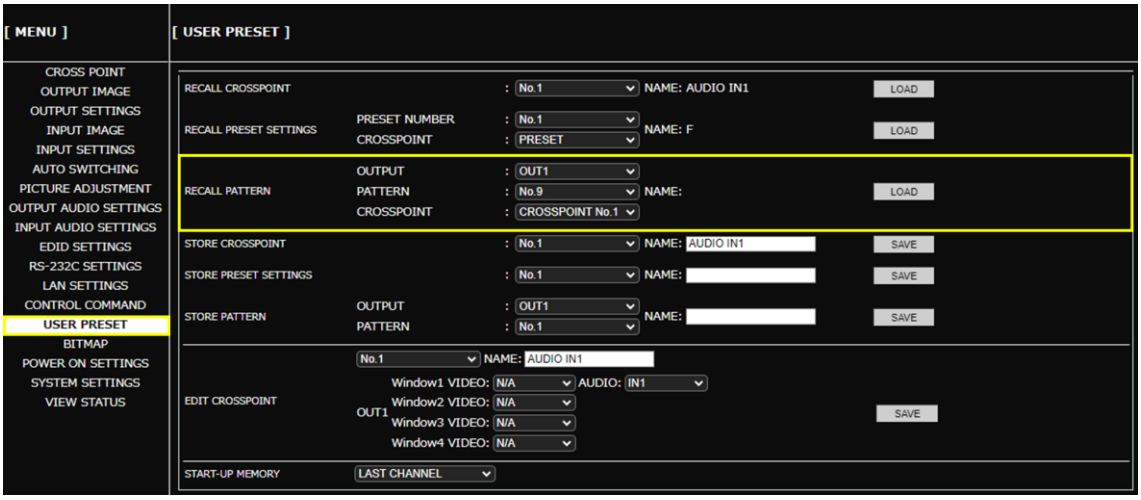
1. Select [USER PRESET]→[RECALL PATTERN].
2. Select the pattern memory location number.
3. Select the crosspoint memory number.

   Example

Pattern memory location number	Crosspoint memory number
9	CP_MEMORY1
10	CP_MEMORY2
11	CP_MEMORY3
12	CP_MEMORY4

4. Press the MENU/ENTER button to accept the new values.

WEB GUI



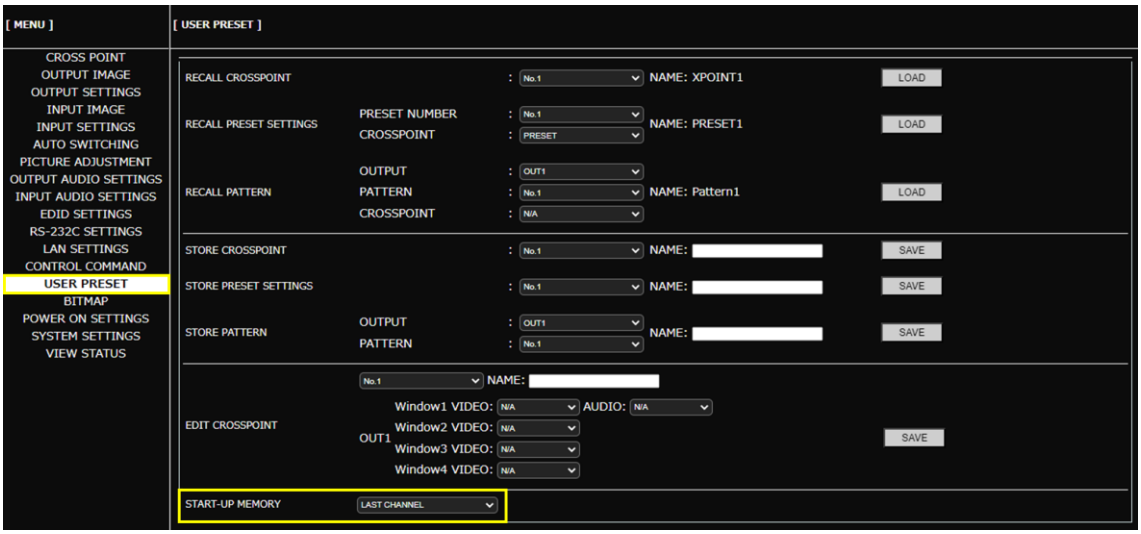
Recalling presets at start-up

Front Panel

1. Select [USER PRESET]→[START-UP MEMORY].
2. Select presets you want to recall at the time of start-up.

   [LAST CHANNEL] : Last settings before powering off or turning to the standby state.
   [CROSS POINT] : Desired crosspoint.
   [PRESET MEMORY] : Selected preset.
   [PATTERN MEMORY] : Selected pattern memory.

WEB GUI



Note

If no settings are stored in the preset memory, preset memory is not displayed on the menu.

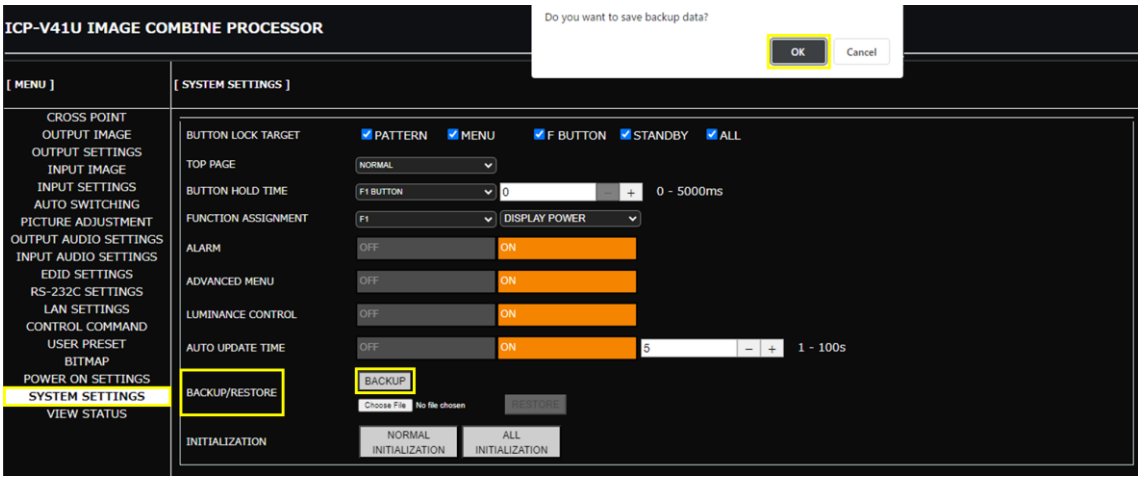
Backup and Restore

This chapter describes how to back up and restore settings.
All settings can be stored to a PC as a backup file via a WEB browser. The backup file can also be used to copy settings to other ICP-V device.

Backing up settings

WEB GUI

1. Select [SYSTEM SETTINGS].
2. Click [BACK UP] of [BACKUP/RESTORE].
3. Click [OK].



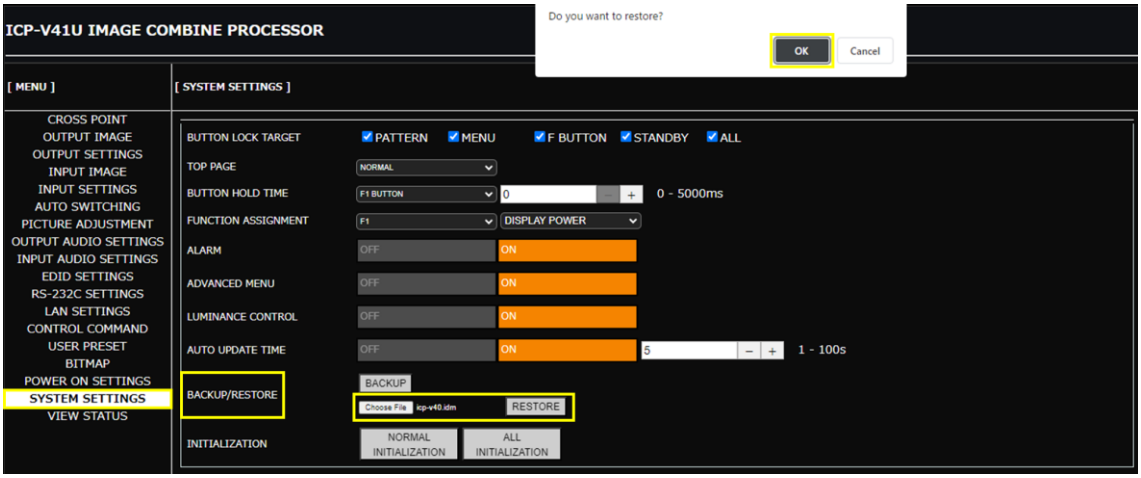
Notes

- A backup file is stored in IDM format.
- Bitmap files cannot be backed up.

Restoring settings from backup file

WEB GUI

1. Select [SYSTEM SETTINGS].
2. Click [Choose File] from [BACKUP/RESTORE].
3. Select the file.
4. Click [SEND].
5. Click [OK].
   When the restoring is complete, the ICP-V reboots.



Note

Do not power off the ICP-V during the restoring process. The settings may be deleted.

Initialization

This chapter describes how to restore settings to factory-installed defaults.

Notes

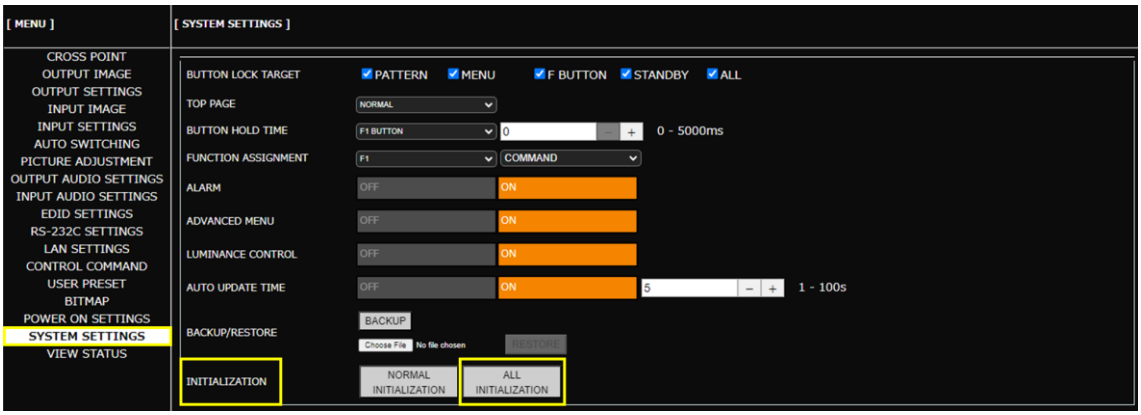
- Bitmap files are not initialized.
- Back up setting files for restore before executing the initialization process as needed.

Initializing all settings

Front Panel

1. Press and hold the BACK button to boot the ICP-V.
2. Ensure that a message, [Initializing…] appears on the front panel display.
3. Release the MENU/ENTER button.

WEB GUI

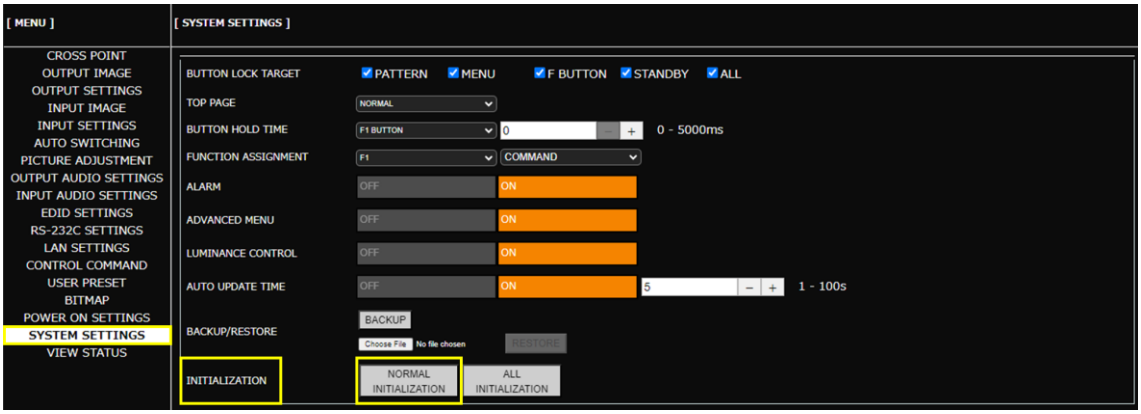


Note

Do not power off the ICP-V while the message, [Initializing…] appears on the front panel display. The initialization process may not be completed correctly.

Initializing settings other than LAN/RS-232C configurations

WEB GUI



Note

Do not power off the ICP-V while the message, [Initializing…] appears on the front panel display. The initialization process may not be completed correctly.

Other useful features

This chapter describes useful features.

Enabling sink device to enter standby mode

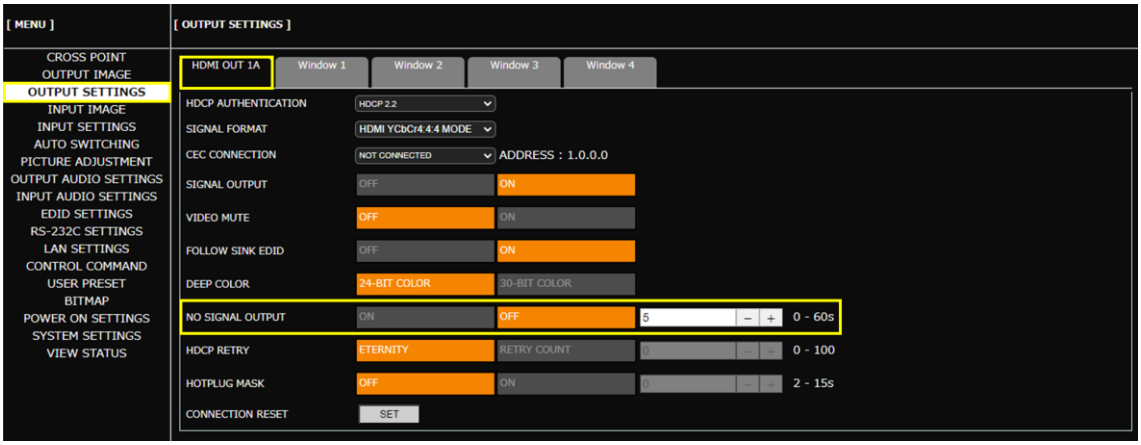
Advanced

To command a sink device into standby more when setting an input to [OFF] or disable the output signal of ICP-V when no video signal is available at the input.

Front Panel

1. Select [OUTPUT SETTINGS]→[NO SIGNAL OUTPUT].
2. Select the output connector.
3. Set the response delay time between setting an input to [OFF] or detection of no video input signal and then disabling output signal. (Default: ON)

WEB GUI



Tips

- For detailed condition requirements, refer to the User Guide.
- Only basic menus are displayed by default. To display advanced menus as well, perform the procedure in “**Advanced menu (P.18)**”.

Troubleshooting

This chapter provides recommendations in case difficulties are encountered during ICP-V setup and operation.

In case the ICP-V does not work correctly, please check the following items first.

- Are the ICP-V and all devices connected to an active power source and are they powered on?
- Are signal cables connected correctly?
- Are there any loose or partially mated connections?
- Are the interconnecting cables specified correctly to support adequate bandwidth?
- Are specifications of connected devices matched to each other?
- Are configuration settings for the connected devices correct?
- Is there any nearby equipment that may cause electrical noise/RF interference?

Use the ICP-V built-in status display features to check for input signal presence and format. Also use the status display features to check for the presence of connected sink devices as well as for EDID and HDCP compatibility.

If difficulties persist, please refer to the peripheral device manuals as well, since connected equipment may be the cause of the trouble.

If the trouble persists, please contact us after checking the following items.

- Does the problem occur with all the signal connectors?
- Does the problem occur when you connect the source and display devices directly, bypassing the ICP-V?

Multi-Window Video Processor

ICP-V41U

Operation Guide

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