

For Customer in China

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<http://pro.sony.com.cn>

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SONY®

SONY®

BRS-200

Remote Camera Operating Switcher

制造商：索尼公司
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Sony Corporation

Printed in Japan

Operating Instructions

Before operating the unit, please read this manual thoroughly and retain it for future reference.

BRS-200

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Owner's Record

The model and serial numbers are located on the bottom. Record these numbers in the spaces provided below. Refer to these numbers whenever you call upon your Sony dealer regarding this product.

Model No. _____ Serial No. _____

WARNING

To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.

To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.

WARNING

THIS APPARATUS MUST BE EARTHED.

WARNING

The supplied AC power adaptor has no power switch. When installing the unit, incorporate a readily accessible disconnect device in the fixed wiring, or connect the power plug to an easily accessible socket-outlet near the unit. If a fault should occur during operation of the unit, operate the disconnect device to switch the power supply off, or disconnect the power plug.

Attention-when the product is installed in Rack:

1.Prevention against overloading of branch circuit

When this product is installed in a rack and is supplied power from an outlet on the rack, please make sure that the rack does not overload the supply circuit.

2.Providing protective earth

When this product is installed in a rack and is supplied power from an outlet on the rack, please confirm that the outlet is provided with a suitable protective earth connection.

3.Internal air ambient temperature of the rack

When this product is installed in a rack, please make sure that the internal air ambient temperature of the rack is within the specified limit of this product.

4.Prevention against achieving hazardous condition due to uneven mechanical loading

When this product is installed in a rack, please make sure that the rack does not achieve hazardous condition due to uneven mechanical loading.

5.Install the equipment while taking the operating temperature of the equipment into consideration

For the operating temperature of the equipment, refer to the specifications of the Operation Manual.

6.When performing the installation, keep the following space away from walls in order to obtain proper exhaust and radiation of heat.

Right, Left : 10 cm (4 inches) or more

When installing the installation space must be secured in consideration of the ventilation and service operation.

- Do not block the ventilation slots at the left side and right side panels, and vents of the fans.
- Leave a space around the unit for ventilation.
- Leave more than 10 cm (4 inches) of space in the rear of the unit to secure the operation area.

When the unit is installed on the desk or the like, leave at least 10 cm (4 inches) of space in the left and right sides. Leaving 10 cm (4 inches) or more of space above the unit is recommended for service operation.

IMPORTANT

The nameplate is located on the bottom.

For the customers in the U.S.A.

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.

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

All interface cables used to connect peripherals must be shielded in order to comply with the limits for a digital device pursuant to Subpart B of Part 15 of FCC Rules.

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.

For customers in Canada

This Class A digital apparatus complies with Canadian ICES-003.

For kundene i Norge

Dette utstyret kan kobles til et IT-strømfordelingssystem.

For the customers in Europe, Australia and New Zealand**WARNING**

This is a Class A product. In a domestic environment, this product may cause radio interference in which case the user may be required to take adequate measures.

For the customers in Europe

The manufacturer of this product is Sony Corporation, 1-7-1 Konan, Minato-ku, Tokyo, Japan.

The Authorized Representative for EMC and product safety is Sony Deutschland GmbH, Hedelfinger Strasse 61, 70327 Stuttgart, Germany. For any service or guarantee matters please refer to the addresses given in separate service or guarantee documents.

This apparatus shall not be used in the residential area.

Precautions

Operating and Storage Locations

- Avoid operating and storing the switcher in the following locations:
 - Extremely hot or cold places (operating temperature: 5°C to 40°C (41°F to 104°F))
 - Places exposed to direct sunlight for a long period or close to heating appliances
 - Close to sources of strong magnetism
 - Close to sources of powerful electromagnetic radiation, such as radios or TV transmitters
 - Places exposed to strong vibration or shock
- Using a mobile phone, etc. near the switcher may cause a malfunction or affect the images. Try to turn off mobile phones, etc. as much as possible when you are near the switcher.
- When the switcher is installed in a rack, leave more than 10 cm (4 inches) of space at the left and right sides and more than 10 cm (4 inches) of space in the rear between the rack and the switcher.
- Leave space around the switcher for ventilation and maintenance when it is installed.
 - Do not obstruct ventilation openings at the left and right sides of the Processor Unit.
 - Leave spaces around the switcher for ventilation.
 - Leave more than 10 cm (4 inches) of maintenance clearance at the rear of the switcher.
 - When the switcher is installed on a horizontal position such as on a desk, leave more than 10 cm (4 inches) of space at the left and right sides. Leaving more than 10 cm (4 inches) of space above the switcher is recommended for service operation.

Cleaning

Make sure to disconnect the power plug of the switcher from the AC outlet before cleaning.

On cleaning of the cabinet

- Use a soft, dry cloth to gently wipe the cabinet. Stubborn stains may be removed with a cloth lightly dampened with a mild detergent solution. Then wipe it with a soft dry cloth.
- Never use strong solvent, such as thinner, benzene, or insecticides, since they may damage the surface finish or fade indications on the switcher.
- If you wipe the cabinet forcibly using a cloth with any dust attached, the cabinet may be scratched.
- If the cabinet of the switcher is exposed to a rubber or vinyl object for a long period, the cabinet may be changed in quality, or some of the coating may come off.

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Features

The Sony Remote Camera Operating Switcher is a compact switcher, incorporating functions for controlling up to seven BRC-series cameras, and video switching functions that support HD signals.

Flexible input/output configuration

Optional interface boards can be installed in the switcher, and a combination of these interface boards allows you to accept various inputs according to your requirements. An input of DVI signal and eight inputs of SDI signal, up to nine inputs in total, can be enabled.

The switcher is equipped with four SDI outputs of three channels and one DVI output as standard. Installing the optional interface board provides one additional DVI output, allowing you to project different video sources on two monitors or projectors. This provides wider usage of the switcher for various events and presentations.

Basic video switching features incorporated

This switcher is of compact type but is equipped with basic HD signal switching features, such as mix, wipe, PIP (Picture-in-Picture) and DSK (Down Stream Key). It is also equipped with a dedicated SD signal switching mode that can be switched by menu operation.

Minimized video latency

Thanks to 1-line minimized video latency of the switcher when a genlock signal is applied, the switcher is suitable for use for conferences, live events, etc.

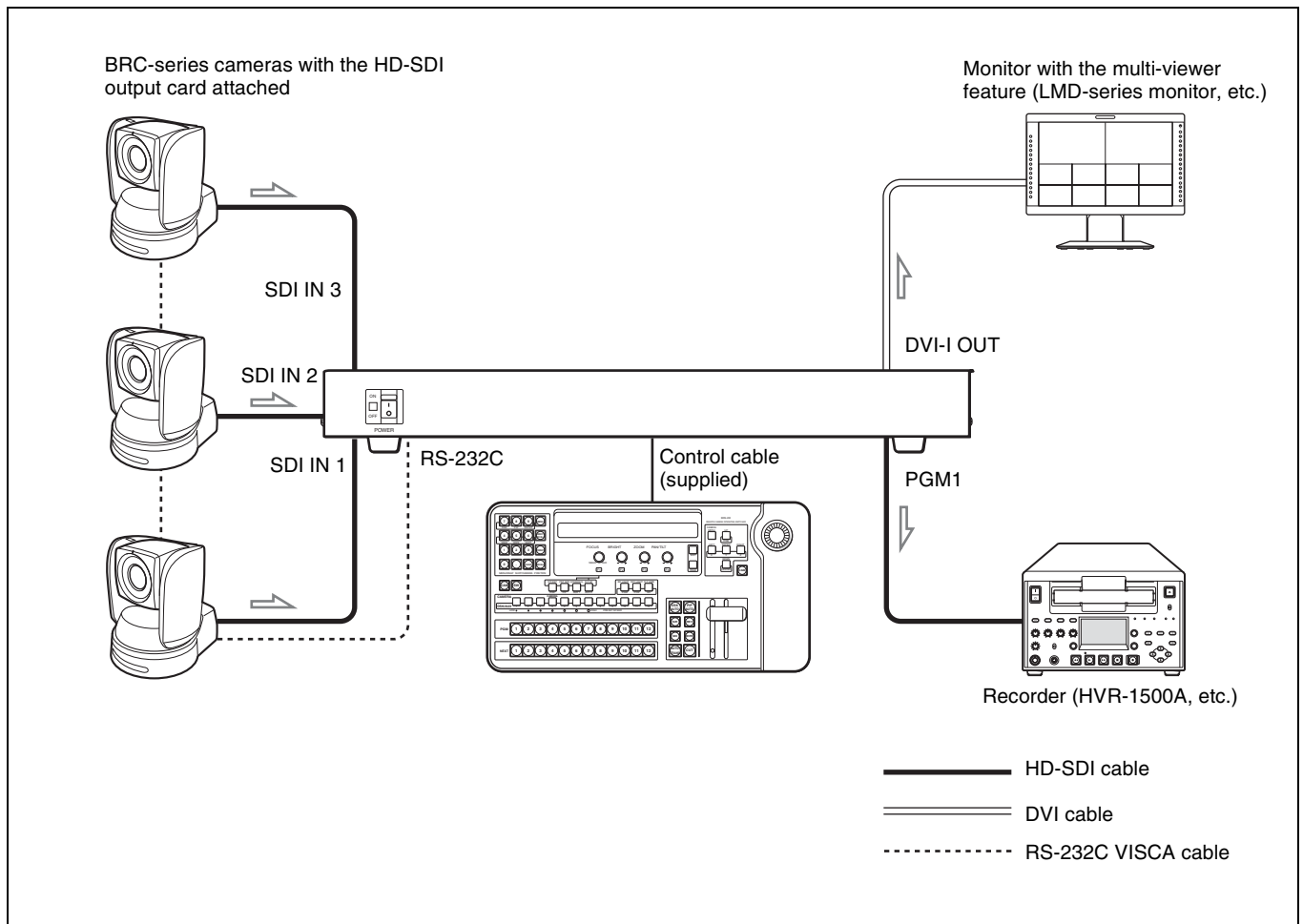
Multi-viewer

The switcher incorporates a multi-viewer function that enables display of 4, 10 or 16 different programs on one monitor at the same time with 4-, 10- or 16-picture split screens.

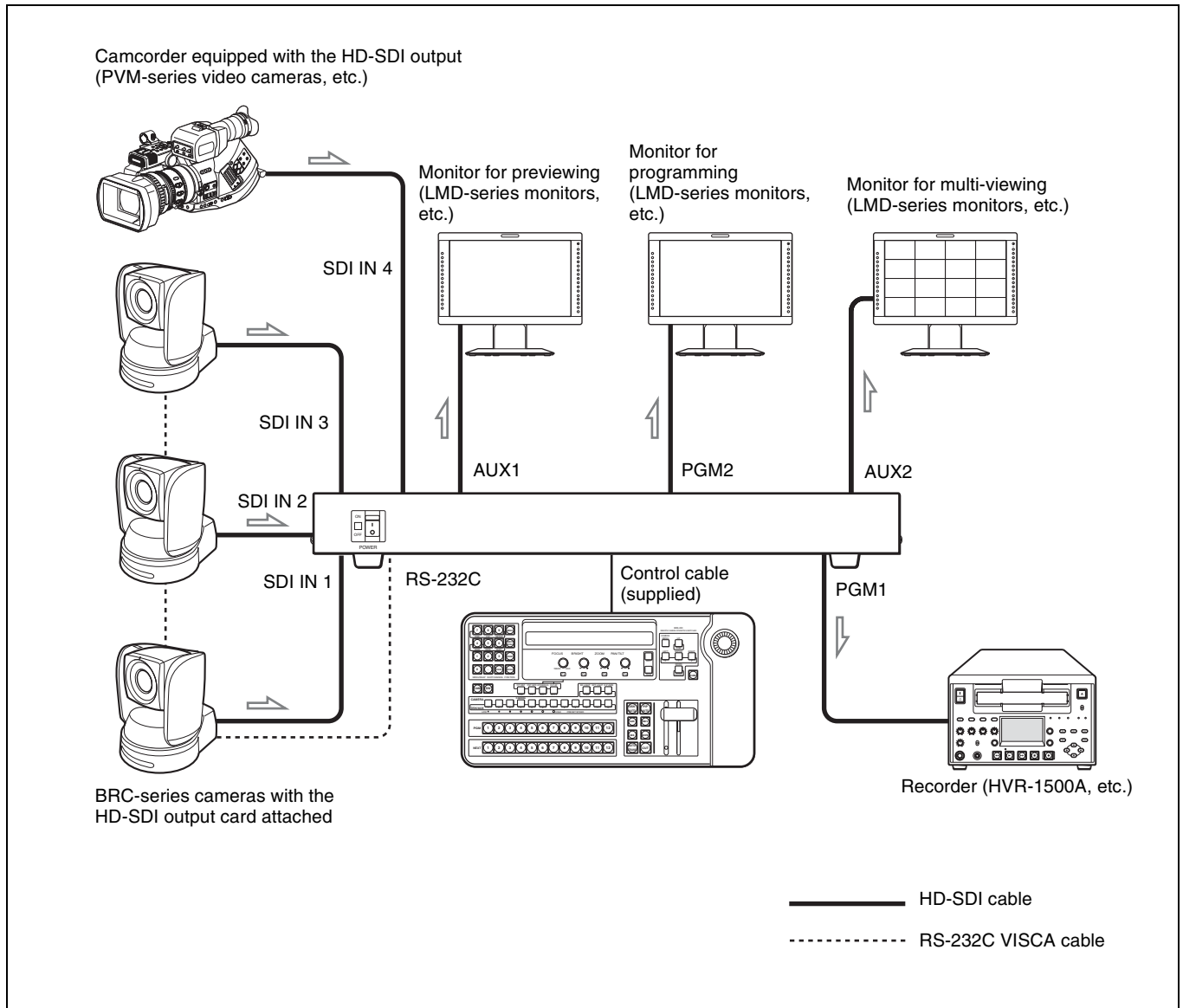
System Configuration

The BRS-200 Remote Camera Operating Switcher has various system capabilities with the use of optional equipment. This section describes typical four system configurations.

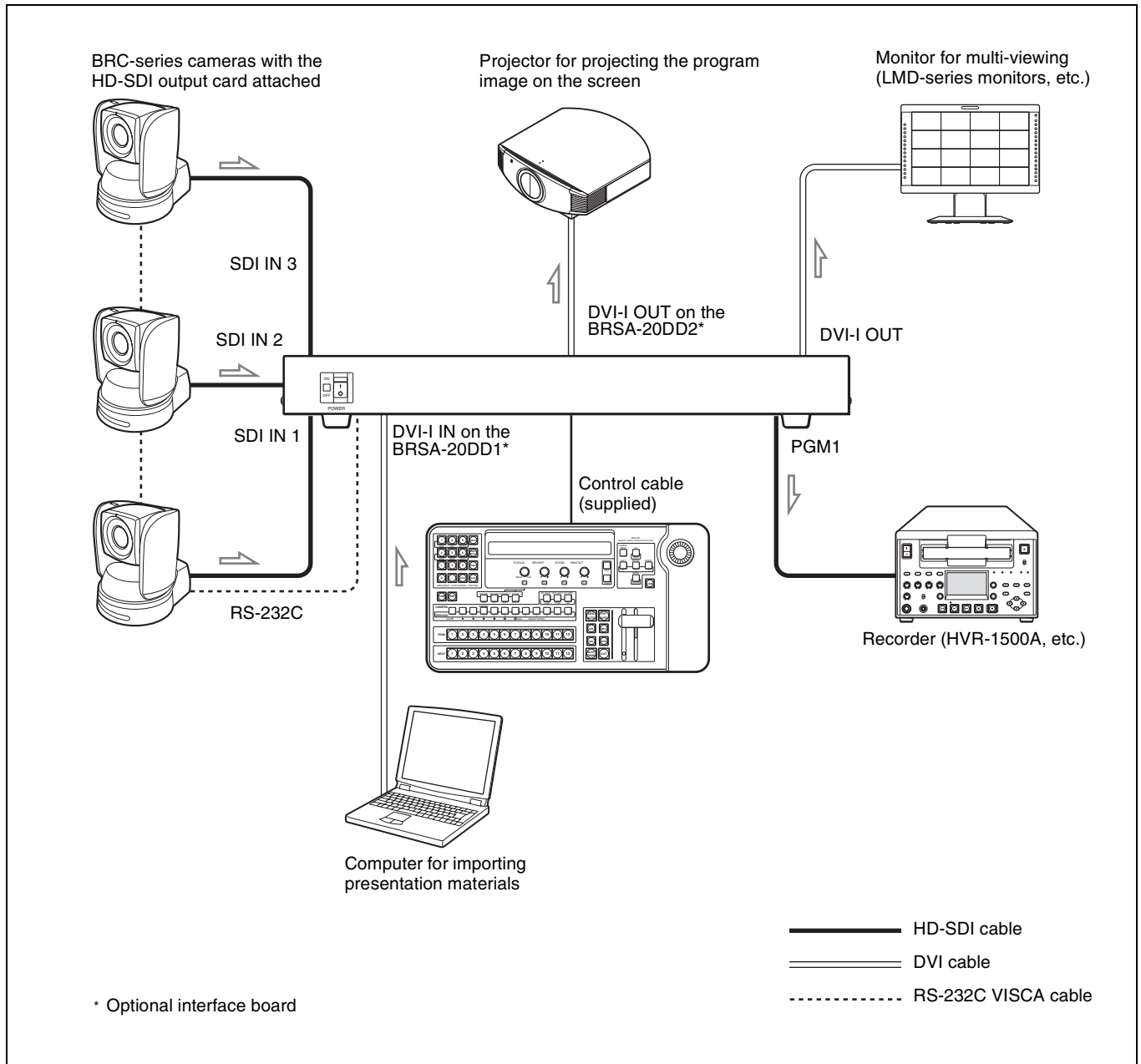
Basic Configuration



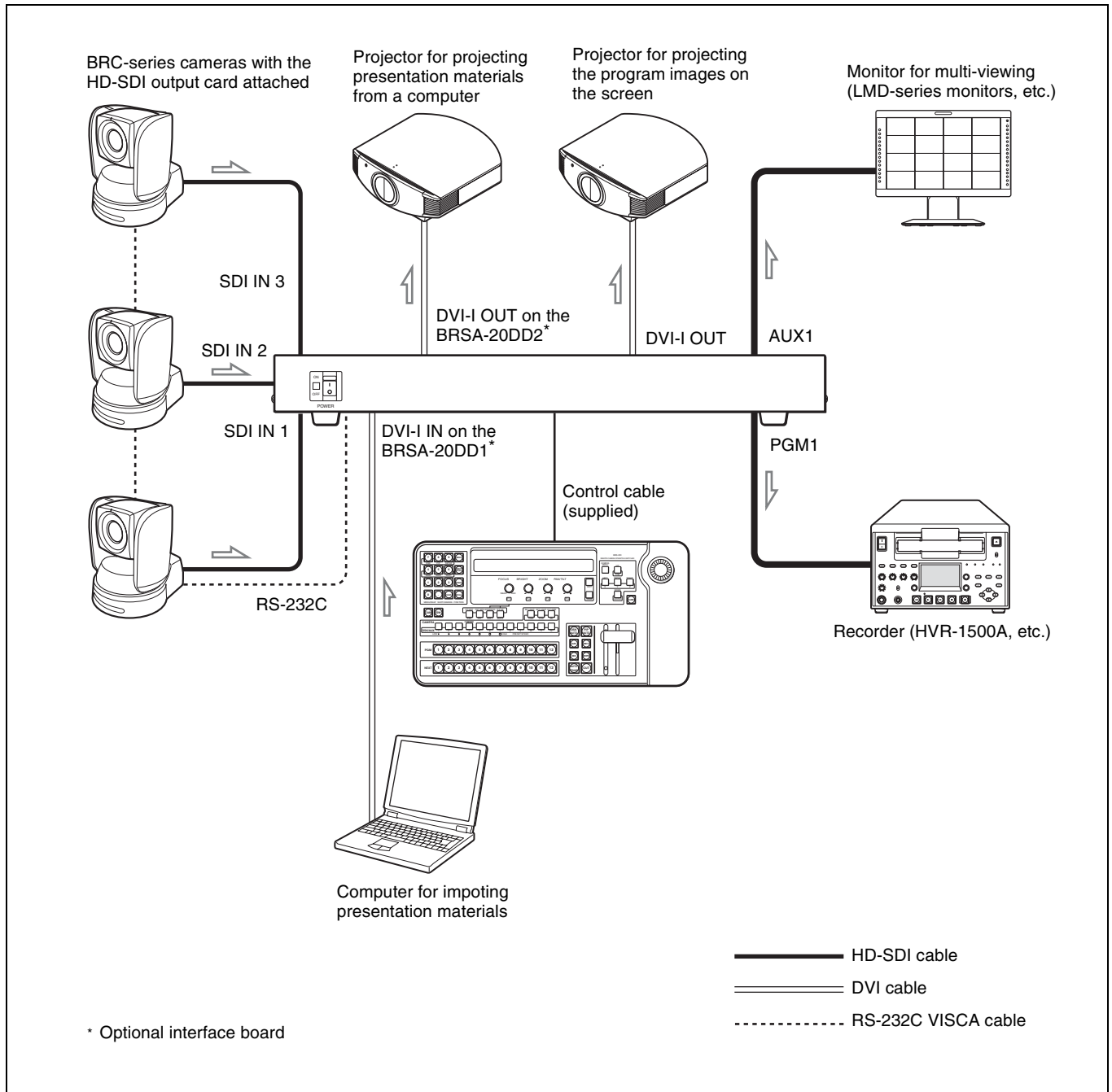
Configuration for a Live Event



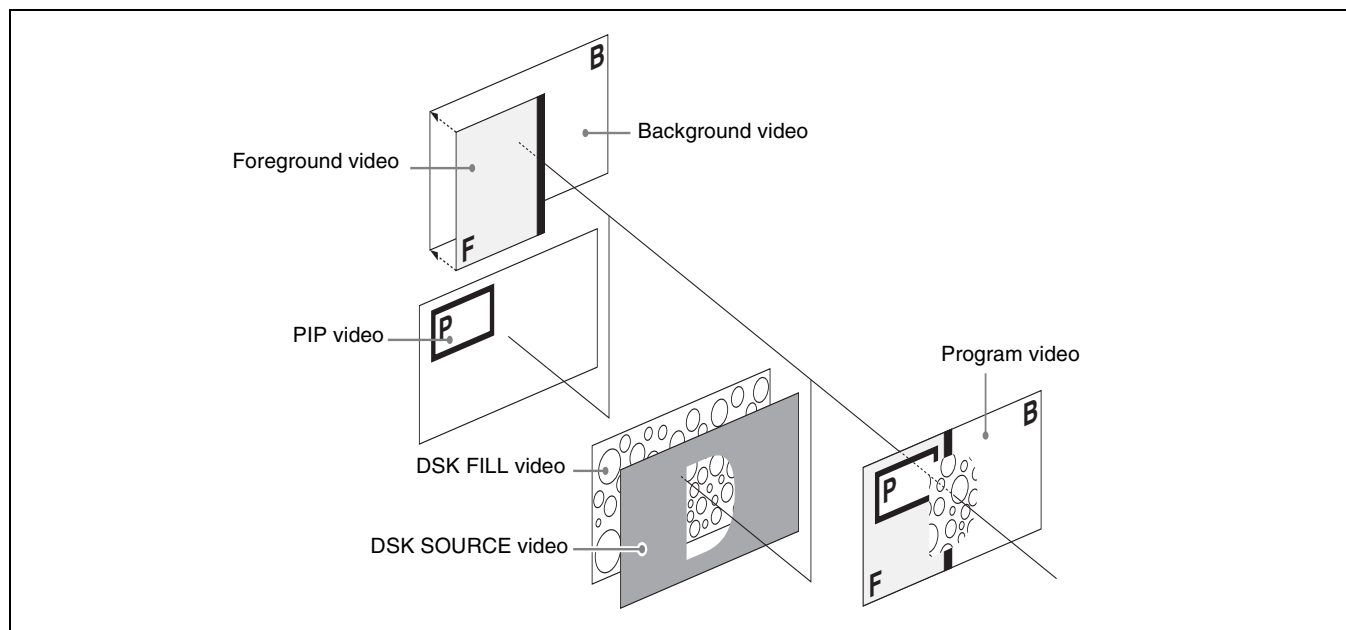
Configuration for a Presentation



Configuration for Presentation Using Two Projectors



Structure of Switched or Composed Video Output by Video Switching



The structure of the images to be switched or composed by video switching is shown above.

For the detailed operations, see Chapter 4 “Switching Operation.”

Background video

The background video is an image before you apply an effect such as wipe and mix. This can also be expressed as an image that disappears as the effect progresses.

Select the background video with PGM select buttons 1 to 12.

Foreground video

The foreground video is an image to be inserted by applying an effect such as wipe or mix. This can also be expressed as an image that appears as the effect progresses and is switched with the background video.

Select the foreground video with NEXT select buttons 1 to 12 and perform the effect, using the transition lever or the AUTO TRANS button.

PIP (Picture-in-Picture) video

The PIP video is an image to be inserted over a background video (and a foreground video while the effect is being applied).

Select the PIP video by pressing the PIP button and DSK/AUX 1 to 12 buttons. To compose the PIP video, press the PIP AUTO button.

DSK FILL (Downstream key fill) video

The DSK FILL video is an image to be composed actually by DSK composition.

Select the DSK FILL video by pressing the DSK button and DSK/AUX 1 to 12 buttons. To compose the DSK FILL video, press the DSK AUTO button.

DSK SOURCE (Downstream key source) video

The DSK SOURCE video is an image to determine the area of a DSK FILL video to be composed. This is also referred to as a “key.”

There are three types of keys:

- Luminance key that cuts a key portion of a DSK FILL video using a key signal (DSK SOURCE) created by a specific brightness of the DSK FILL video.
- Chroma key that cuts a key portion of a DSK FILL video using a key signal (DSK SOURCE) created by a specific color of the DSK FILL video.
- Split function that cuts a key portion of a DSK FILL video using a key signal created by a specific brightness of the DSK SOURCE video selected separated from the DSK FILL video.

Note

The DSK FILL video and the DSK SOURCE video are identical for the luminance key and chroma key.

Program video

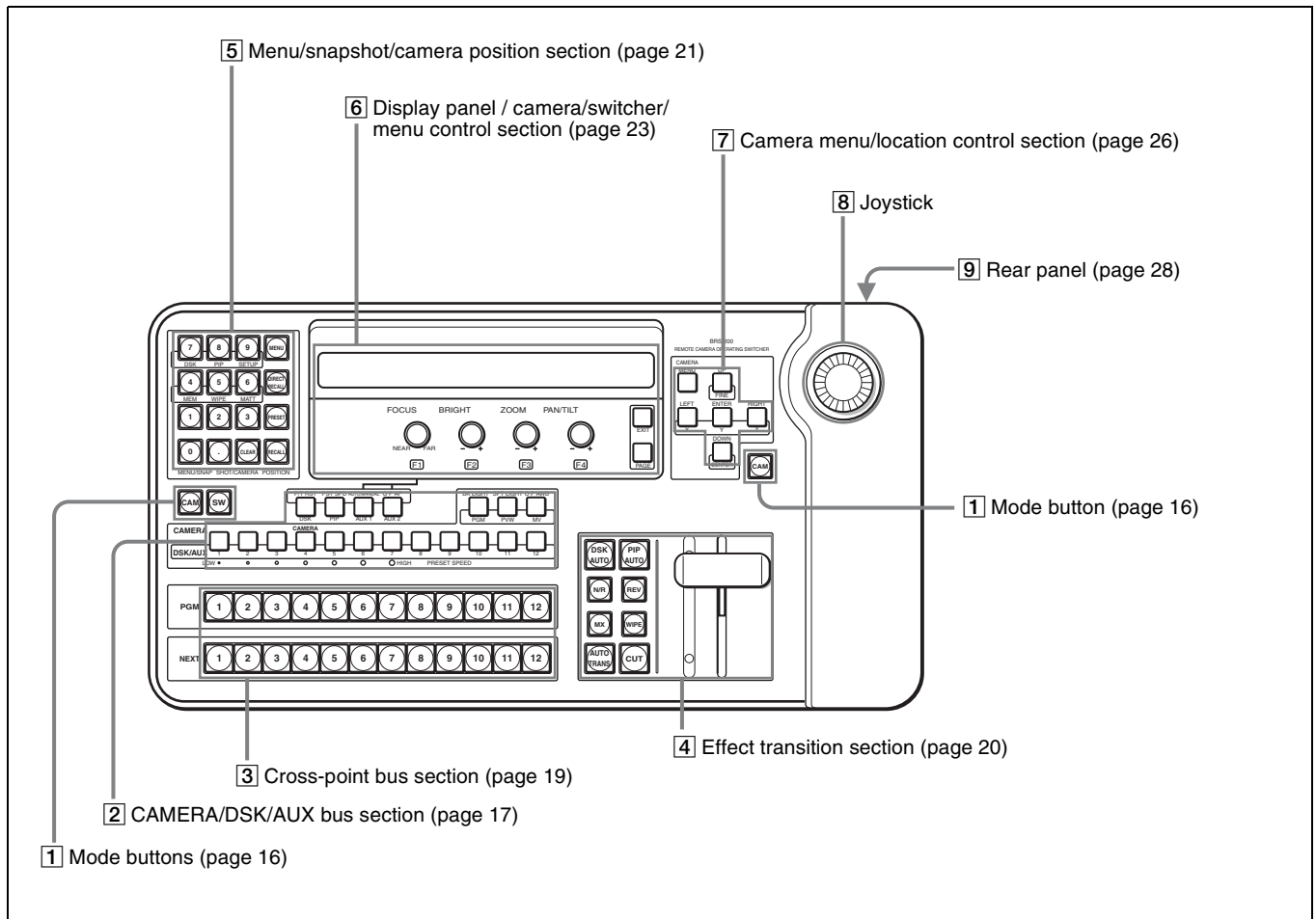
The program video is an image output from the switcher after switching or composition was applied.

Control Panel

The parts on the control panel are grouped into **1** to **9** according to their functions, as shown below. See the pages in parentheses for more details.

Note

You can set for a warning beep to sound if the switcher is incorrectly operated. Set “BEEP” to “On” on menu page 944 to enable the beep sound (page 139).

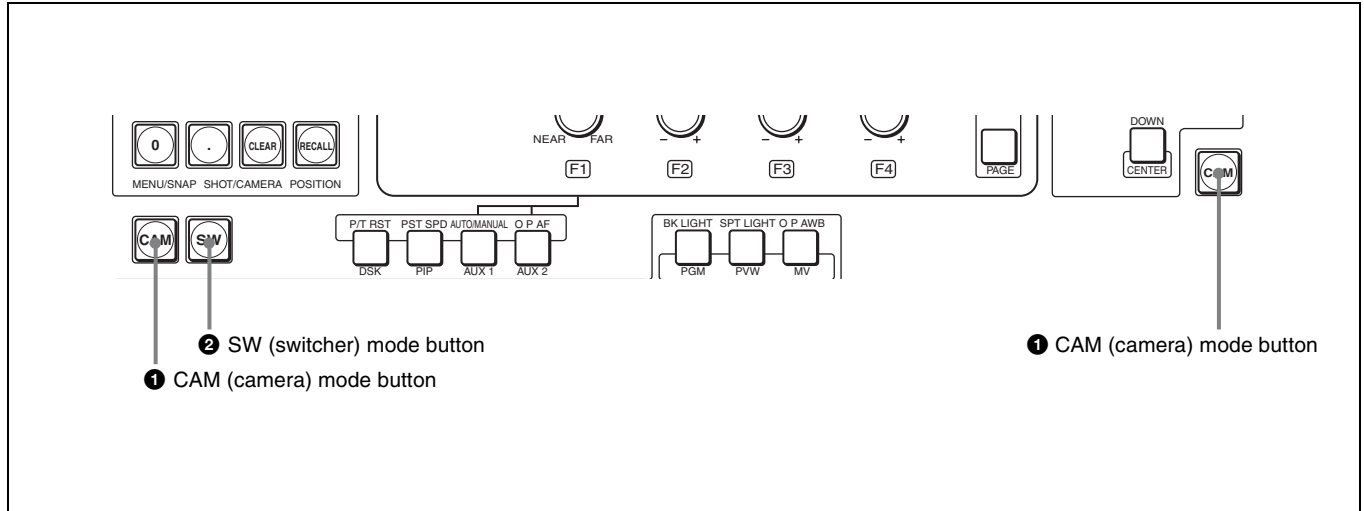


1 Mode Buttons

The buttons and controls on the switcher function according to the mode switched between CAM (camera) mode and SW (switcher) mode with the mode buttons.

Note

The function modes of the switcher consist of CAM (camera) mode, SW (switcher) mode and menu mode. To switch the switcher to menu mode, press the MENU button in **5** Menu/snapshot/camera position section (page 21).



1 CAM (camera) mode buttons

Press one of these buttons to use the **2** CAMERA/DSK/AUX bus section, **5** Menu/snapshot/camera position section, **6** Display panel / camera/switcher/menu control section, **7** Camera menu/location control section or **8** Joystick to control connected cameras.

The CAM mode buttons on the left and right sides function the same.

You can control the cameras when the CAM mode buttons are lit.

2 SW (switcher) mode button

Press this button to use the **2** CAMERA/DSK/AUX bus section, **5** Menu/snapshot/camera position section, **6** Display panel / camera/switcher/menu control section, **7** Camera menu/location control section or **8** Joystick to control the video switcher.

You can control the video switcher when the SW mode button is lit.

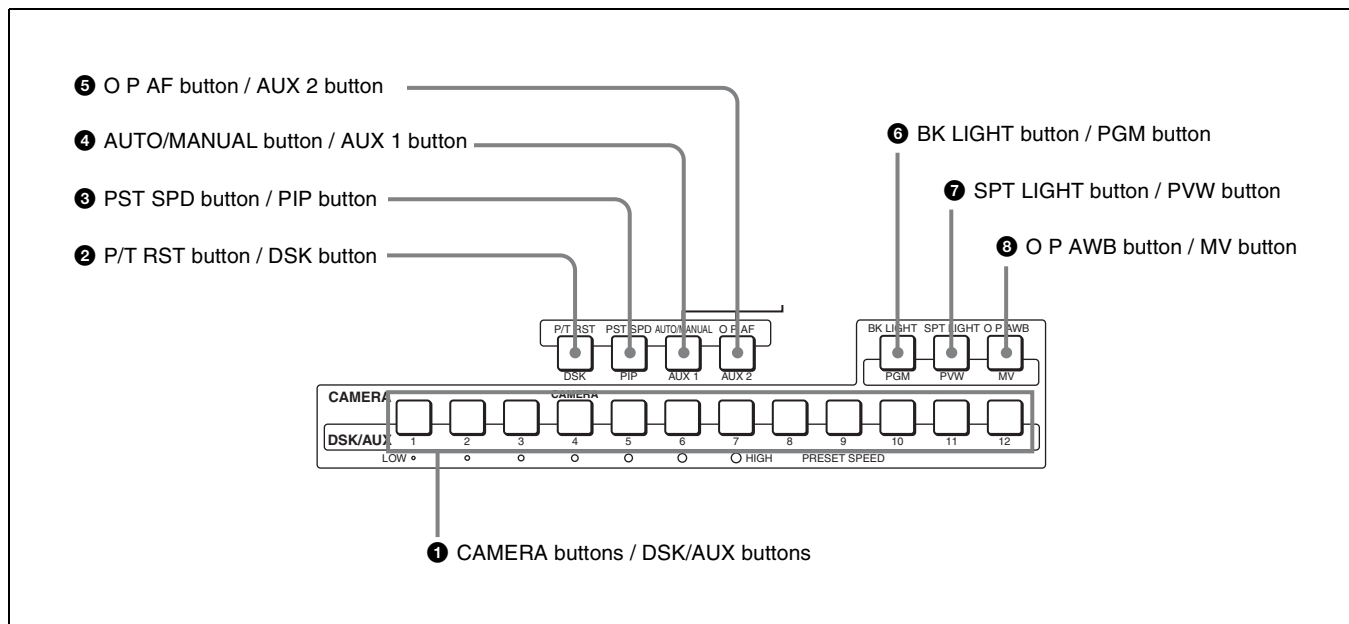
Note

The buttons in the **3** Cross-point bus section and **4** Effect transition section function for video switching even when the switcher is in a mode other than SW mode.

2 CAMERA/DSK/AUX Bus Section

The buttons in this section differ in function depending on whether the switcher is in CAM mode or SW mode.

The functions of the buttons are explained for both modes individually.



■ Functions in CAM mode

1 CAMERA buttons

Selects the connected camera to be controlled. The selected camera button lights up. To set up the selected camera, use the SETUP menu.

For details on setup of the camera, see "Setting Up the VISCA Camera" on page 57.

Note

Assign the VISCA cameras (BRC-300/300P, BRC-H700, BRC-Z700 and BRC-Z330) to the CAMERA 1 to 7 buttons.

2 P/T RST (pan/tilt reset) button

Hold this button pressed to reset the pan/tilt position of the camera to the factory preset position.

3 PST SPD (preset speed) button

Sets the pan/tilt speed at which the camera moves to the preset pan/tilt position. When you hold this button pressed, the CAMERA 1 to 7 buttons switch to function as pan/tilt speed setting buttons. Pressing one of the CAMERA buttons allows you to set the pan/tilt speed aligned to the pressed button.

For details, see "To set the camera moving speed to the preset position" on page 113.

4 AUTO/MANUAL button

Each time you press this button, the focus mode of the camera switches between AUTO and MANUAL. When the button is lit, the focus mode is set to AUTO. The focus mode is set to MANUAL when the button is not lit.

AUTO: The camera focuses on the subject in the center of the screen automatically. The FOCUS control (page 24) and the O P AF button are disabled.

MANUAL: You can adjust the focus manually with the FOCUS control (page 24) and the O P AF button.

For details, see "Adjusting the Focus of the Camera" on page 104.

5 O P AF (one-push auto focus) button

Press this button to perform one-push auto focus of the camera when the focus mode is set to MANUAL with the AUTO/MANUAL button.

6 BK LIGHT (backlight) button

When the exposure mode of the camera is set to FULL AUTO, SHUTTER Pri, IRIS Pri or GAIN Pri, pressing to light up this button enables the backlight compensation function of the camera.

Pressing this button again to make it go dark disables the backlight compensation function.

For details, see "To enable backlight compensation" on page 106.

7 SPT LIGHT (spotlight) button

This button functions only for the BRC-H700, BRC-Z700 or BRC-Z330.

When the exposure mode of the camera is set to FULL AUTO, SHUTTER Pri, IRIS Pri or GAIN Pri, press to light up this button, enabling the spotlight compensation function of the camera. Pressing this button again to make it go dark disables the spotlight compensation function.

For details, see “To enable spotlight compensation (only for the BRC-H700, BRC-Z700 or BRC-Z330 camera)” on page 107.

8 O P AWB (one-push auto white balance) button

When the white balance adjustment mode of the camera is set to ONE PUSH, press to light up this button, performing one-push auto white balance adjustment of the camera.

■ Functions in SW mode**1 DSK/AUX (downstream key/auxiliary) buttons**

The same images assigned to the select buttons 1 to 12 in the cross-point bus section are assigned to the DSK/AUX 1 to 12 buttons.

Press one of the buttons to select an image after pressing the DSK, PIP, AUX 1 or AUX 2 button.

2 DSK (downstream key) button

When you select a key source of the downstream key, press to light up this button then press one of the DSK/AUX 1 to 12 buttons.

What is “downstream key”?

Using this function allows you to superimpose graphics, characters, etc. on a background image. This is called DSK (downstream key), because a key is added to the final program output video (executed at the lowest downstream).

3 PIP (picture-in-picture) button

When you select an image to be inserted for the picture-in-picture function, press to light up this button then press one of the DKS/AUX 1 to 12 buttons.

4 AUX 1 (auxiliary 1) button

When you select the video output from the AUX1 connector, press to light up this button then press one of the DSK/AUX 1 to 12 buttons, the PGM, PVW or MV button.

5 AUX 2 (auxiliary 2) button

When you select the video output from the AUX2 connector, press to light up this button then press one of the DSK/AUX 1 to 12 buttons, the PGM, PVW or MV button.

Notes

- Ancillary data that include embedded audio input from the SDI IN connector are output from the AUX1 or

AUX2 connector. When you select the video output from the AUX1 or AUX2 connector with any of the PGM, PVW or MV buttons, embedded audio is not output. Ancillary data included in the SDI input signal are not output if “FS” is set to “On” for the SDI signal on menu page 925.

- Embedded audio is noisy when the output from the AUX1 or AUX2 connector is switched. When “BUS ENBL” is set to “Off” on menu page 931, the output video is not switched by pressing any button. This protects against an accidental switching.

6 PGM (program) button

When you press to light up this button after pressing the AUX 1 or AUX 2 button, the PGM (program) video is output from the AUX1 or AUX2 connector.

7 PVW (preview) button

When you press to light up this button after pressing the AUX 1 or AUX 2 button, the PVW (preview) video is output from the AUX1 or AUX2 connector.

Note**What is “preview”?**

The video, which will be output after executing a cut, wipe or mix effect in the effect transition section, is called PVW (preview) video.

8 MV (Multi-Viewer) button

When you press to light up this button after pressing the AUX 1 or AUX 2 button, the MV (multi-viewer) video is output from the AUX1 or AUX2 connector.

Note**What is “multi-viewer”?**

The switcher is able to display up to 16 different programs on one monitor with 16-picture split screen. This function is called “multi-viewer.”

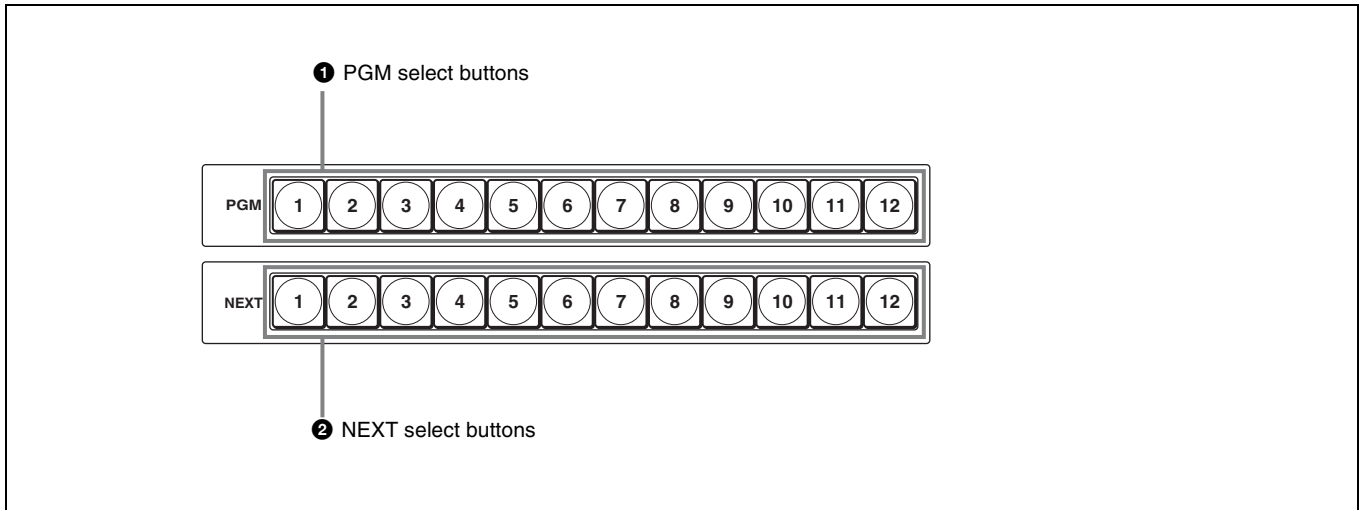
The switcher can divide the screen into 4-, 10- or 16-picture as well as full screen display. You can select any picture for each split screen.

For details, see “To set up multi-viewer output (menu page 934)” on page 55.

3 Cross-Point Bus Section

The cross-point bus section includes two types of cross-point buttons, PGM select buttons and NEXT select

buttons. This section functions for modes other than SW mode.



1 PGM (program) select buttons

The signal output from the PGM connector is called PGM (program) output video. Use these buttons to select a background image of the program output video.

Pressing one of PGM select buttons 1 to 12 allows you to select the video (input video, color matte, color bars, or frame memory video) assigned to the selected button.

2 NEXT select buttons

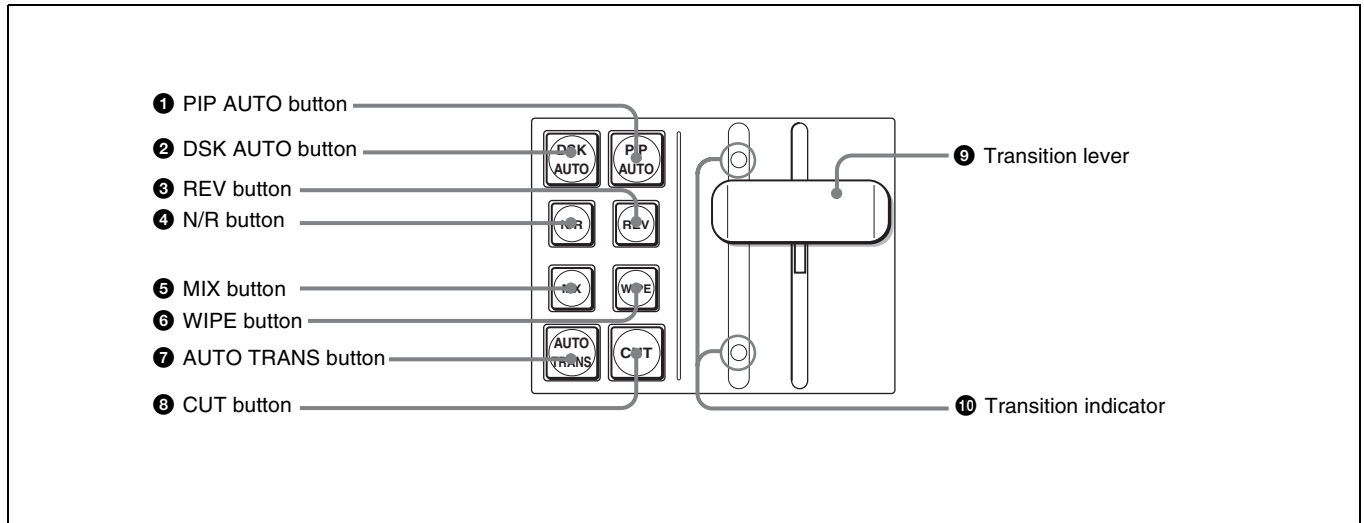
Use these buttons to select a foreground image to be output next to the present PGM output.

Pressing one of NEXT select buttons 1 to 12 allows you to select the video (input video, color matte, color bars, or frame memory video) assigned to the selected button.

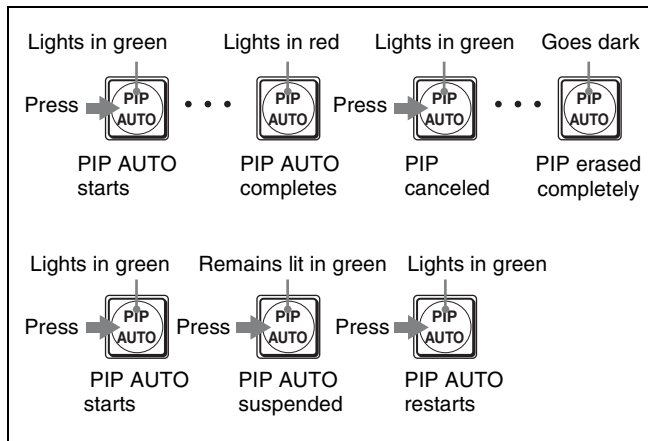
For details on the cross-point buttons, see “Setting the Bus Mode for the Cross-Point Buttons (Menu Page 943)” on page 56.

4 Effect Transition Section

The effect transition section is used for effect transition in video switching. This section is used for modes other than SW mode.



1 PIP AUTO (automatic picture-in-picture) button
When you press this button, it lights in green, and the video set in the PIP menu is inserted in the program output video after automatic transition (PIP AUTO function). When the PIP AUTO function is complete, the button turns red. Pressing the button again cancels PIP and the button turns green. After automatic transition, the PIP AUTO button goes dark.
If you press this button while the PIP AUTO function is being executed (the button lights in green), the function is suspended and the button remains lit in green. Pressing the button again restores the PIP AUTO function.



Note

You can set the transition time of the PIP AUTO function in the menu (page 80).

2 DSK AUTO (automatic downstream key) button
When you press this button, it lights in green, and the DSK (downstream key) set in the DSK menu is inserted in the program output video after automatic transition (DSK AUTO function).
When the DSK AUTO function is complete, the button turns red. Pressing the button again cancels DSK and the button turns green. After automatic transition, the DSK AUTO button goes dark.
If you press this button while the DSK AUTO function is being executed (the button lights in green), the function is suspended and the button remains lit in green. Pressing the button again restores the DSK AUTO function.

Note

You can set the transition time of the DSK AUTO function in the menu (page 80).

3 REV (reverse) button
When you press to light up this button, a transition is executed in the reverse direction. Pressing this button again to make it go dark cancels reverse transition mode.

4 N/R (Normal/Reverse) button
When you press to light up this button, each transition of wipe is executed in normal or reverse direction alternatively. When you press this button again to make it go dark, transitions of wipe are executed in normal direction only.

5 MIX button
When you press to light up this button, the current video is gradually switched to the next video while the two videos

are overlapped during transition of the background video (mix).

Note

When wipe is selected, mix mode is canceled.

6 WIPE button

When you press to light up this button, the current video (background video) is gradually switched as if the next video was wiping out the present video during transition of the background video (wipe).

Note

When mix is selected, wipe mode is canceled.

7 AUTO TRANS (automatic transition) button

When you press to light up this button, an effect is automatically executed within the preset transition time during transition of the background video (AUTO TRANS function) (page 69).

When you press to light up this button while the AUTO TRANS function is being executed (the button lights in orange), the function is suspended (the button stays lit in orange). Pressing the button again restores the AUTO TRANS function, and the button goes dark when the transition is complete.

8 CUT button

When you press to light up this button, the present video is instantaneously switched to the next program video during transition of the background video (cut).

9 Transition lever

Use this lever to execute a transition of the background video manually.

Note

If the switcher is turned on when the transition lever is not positioned at either end, move the lever back and forth between both ends once. This action enables the function of the lever.

10 Transition indicator

The indicator shows the available direction of the transition lever.

Moving the transition lever in the direction of the indicator lit starts a transition.

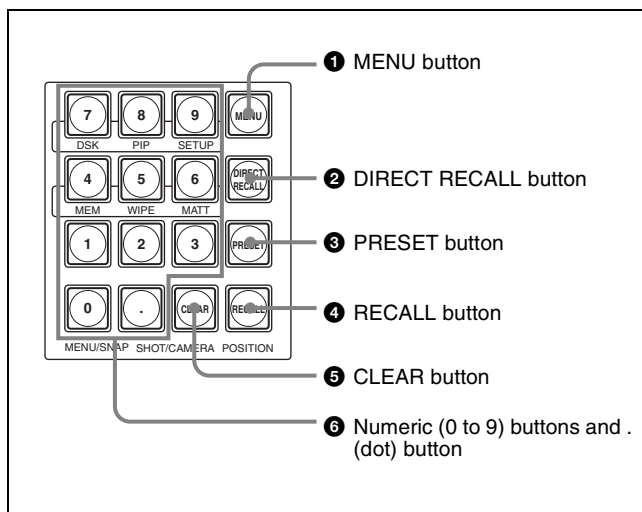
Note

If you press the AUTO TRANS button after moving the transition lever to the middle, for example, an inconsistency between the application of the effect and the position of the transition may occur. In such a case, both indicators may light up.

Do not use excessive force while operating the transition lever.

5 Menu/Snapshot/Camera Position Section

The buttons in the menu/snapshot/camera position section differ in function depending on whether the switcher is in menu mode, SW mode, or CAM mode.



1 MENU button

When you press to light up this button, the display panel is set to menu mode.

In menu mode, pressing one of numeric buttons 4 to 9 allows you to display one of the top menus (see “Top menu list”). The selected numeric button lights up. To return to CAM or SW mode, press the MENU button or press the CAM or SW mode button.

Notes

- When you switch to menu mode, the menu page displayed last will be shown on the display panel. At the time of the system startup the display panel shows the top page of the SETUP menu.
- For the procedures for menu operation, see “To display the menu” on page 22.
- For details on the setting menus, see “Menu List” on page 131.

Top menu list

Pressing one of numeric buttons 4 to 9 displays the top menu listed below. The corresponding button lights up.

Numeric button	Top menu	Menu description
4	MEM (memory) menu	Importing an image into the frame memory, Time stamp setting for a file
5	WIPE menu	Setting the wipe pattern or border
6	MATT menu	Setting the color matte
7	DSK menu	Setting the DSK (downstream key)
8	PIP menu	Setting the PIP (picture-in-picture)
9	SETUP menu	Setting up the system

To display the menu

A three-digit menu page is assigned to each of all the setting menus displayed in menu mode.

To specify the menu page directly, press the numeric buttons for “third-digit number,” “. (dot),” “second-digit number,” and “first-digit number” in sequence.

Example: To specify menu page 912



2 DIRECT RECALL button

When you press to light up this button, the switcher is set to direct recall mode, and you can recall the preset settings stored for numeric buttons 0 to 9. Pressing the DIRECT RECALL button again releases direct recall mode.

In direct recall mode you can operate the following:

■ When CAM mode is selected

The preset setting stored for the camera position numbers 1 to 9 can be recalled by pressing numeric buttons 1 to 9.

■ When SW mode is selected

The preset setting stored in the snapshot numbers, direct wipe numbers, or direct PIP numbers 0 to 9 on the switcher can be recalled by pressing numeric buttons 0 to 9.

For details on snapshot numbers, direct wipe numbers and direct PIP numbers, see “Storing the Settings of a Wipe, PIP, and Setting Menu Items” on page 97.

Notes

- When the DIRECT RECALL button is pressed while the MENU button is lit, menu mode is canceled, and the switcher enters CAM or SW mode.

- To recall camera position number or snapshot number 10 or larger, cancel direct recall mode and use the RECALL button to recall it.
- If you set the tenths digit (Bank) of the snapshot number in the menu, you can recall the two-digit snapshot number only by pressing one of numeric buttons 0 to 9 that corresponds to the ones digit of the snapshot number (page 139).

3 PRESET button

Use this button to store a setting in a camera position number, snapshot number, direct wipe number, or direct PIP number.

■ When CAM mode is selected

You can store the pan, tilt or zoom position or other camera settings in the camera position numbers. Up to 99 settings can be stored in the 1 to 99 positions for each VISCA camera.

- ① Use one of numeric buttons 0 to 9 to display the flashing position number in which you wish to store the setting on the display panel.
- ② Hold the PRESET button pressed.

For details, see “Storing the Camera Settings” on page 111.

■ When SW mode is selected

You can store the various switcher settings. Up to 100 settings can be stored in the 0 to 99 snapshot numbers, and up to 10 settings can be stored in the 0 to 9 direct wipe or direct PIP numbers.

- ① Use one of numeric buttons 0 to 9 to display a flashing snapshot, direct wipe or direct PIP number in which you wish to store the setting on the display panel.
- ② Hold the PRESET button pressed.

For details, see “Storing the Settings of a Wipe, PIP, and Setting Menu Items” on page 97.

4 RECALL button

Press this button to recall the setting stored in the camera position number on the camera or in the snapshot, direct wipe, or direct PIP number on the switcher.

■ When CAM mode is selected

You can recall the pan, tilt or zoom position or other camera settings stored in camera position numbers 1 to 99.

- ① Use one of numeric buttons 0 to 9 to display the flashing position number to be recalled on the display panel.
- ② Press the RECALL button.

■ When SW mode is selected

You can recall the various preset switcher settings.

- ① Use one of the numeric buttons 0 to 9 to display the flashing snapshot, direct wipe or direct PIP number to be recalled on the display panel.
- ② Press the RECALL button.

5 CLEAR button

■ When menu mode is selected

When this button is pressed, the last two digits of the menu page reset to "00."

■ When CAM mode is selected

When this button is pressed, the camera position number displayed on the display panel disappears.

■ When SW mode is selected

When this button is pressed, the snapshot, direct wipe, or direct PIP number displayed on the display panel disappears.

6 Numeric buttons 0 to 9 and . (dot) button

■ When menu mode is selected

Use the numeric buttons and . (dot) button to enter menu page.

For procedures for menu page input, see "To display the menu" on page 22.

■ When CAM mode is selected

Use numeric buttons 0 to 9 to enter the camera position number.

■ When SW mode is selected

Use numeric buttons 0 to 9 to enter the snapshot, direct wipe, or direct PIP number.

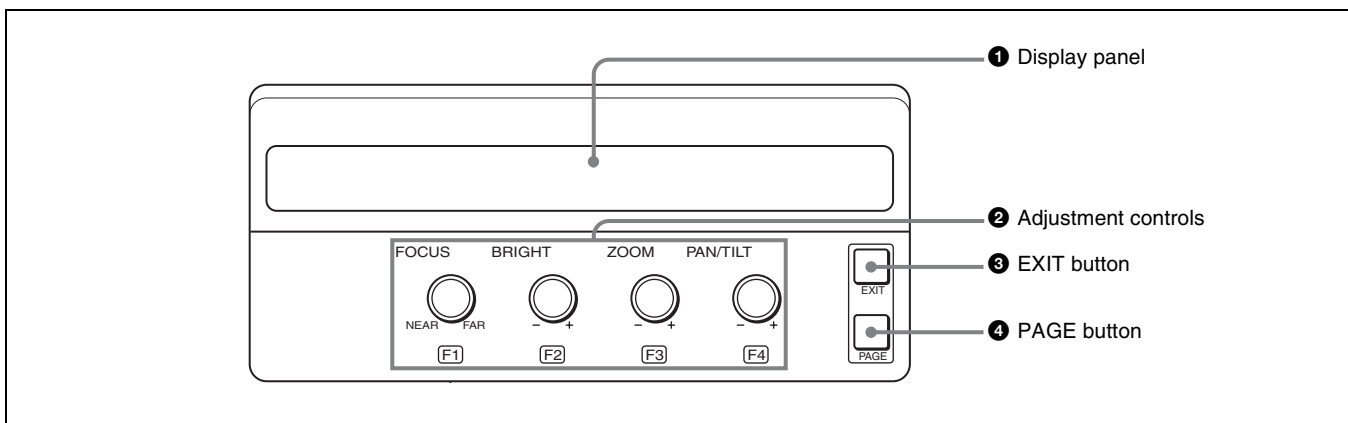
Note

To enter the two-digit number, press the second-digit number then the first-digit number.

To correct a number entered, press the CLEAR button then enter the correct number.

6 Display Panel / Camera/Switcher/Menu Control Section

The buttons and controls in this section differ in function depending on whether the switcher is in CAM mode, in SW mode or in menu mode.



1 Display panel

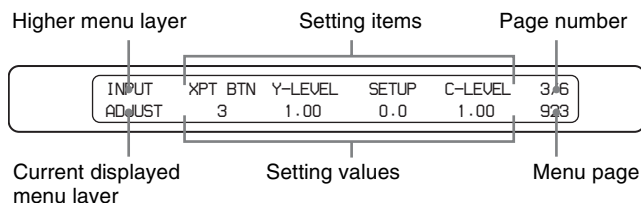
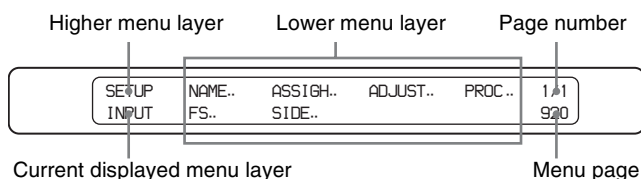
Displays the menu, the current effect, and the camera settings.

While viewing the display panel, you can check and change the settings.

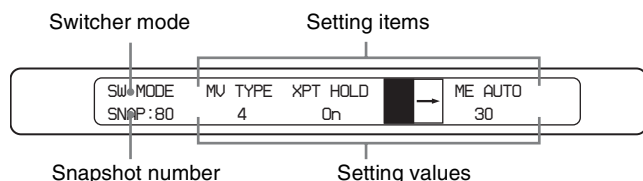
When the menu of a lower layer has further lower layers, the menu name is followed by ".."

The following display panel shows a representative example:

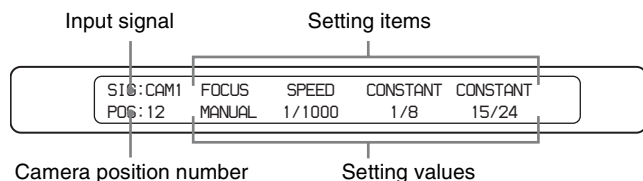
Menu layers in menu mode



Setting status in SW mode



Setting status in CAM mode



② Adjustment controls (F1/FOCUS, F2/BRIGHT, F3/ZOOM, F4/PAN/TILT)

The function of the controls differ among menu mode, CAM mode and SW mode.

■ When menu mode is selected

You can change the setting of four groups of each menu display, using the F1 to F4 controls located below each menu display.

To move to a lower layer

There are lower layers when the menu name is followed by “..”

Turn the adjustment control (F1 to F4) located below the menu name you wish to operate to highlight it then press the corresponding adjustment control. The display switches to the next lower layer of the menu.

To change a setting item

When the setting item can be changed, press the corresponding adjustment control (F1 to F4) to display another setting item.

To change a setting value

Turn the corresponding adjustment control (F1 to F4) to change the setting value. To enable the settings that have been changed, executing “Exec” may be required.

Notes

- The default setting can be obtained by holding the corresponding adjustment control (F1 to F4) pressed if the default setting is preset at the factory. Depending on the setting items, turning the control while holding it pressed enables the setting value to change roughly.
- You can display a lower layer of the menu by specifying the three-digit menu page with numeric buttons 0 to 9 and the . (dot) button in the menu/snapshot/camera position section.

■ When SW mode is selected

You can use the adjustment controls for the following operations and adjustments:

F1 control

You can select the type of multi-viewer.

F2 control

You can select whether to reflect the setting registered for the snapshot number for the assigned select button in the cross-point bus section, DSK source, or PIP source when that setting is recalled.

Press the F2 control to select “XPT HOLD,” “DSK HOLD” or “PIP HOLD” then turn the F2 control to set the selected item to “On” or “Off.” When set to “On,” the setting registered for the snapshot number is not reflected.

F3 control

You can select a wipe pattern or direct select mode.

Pressing the F3 control displays a wipe pattern or “DIRECT” on the display panel.

If you turn the F3 control while a wipe pattern is displayed, you can change the wipe pattern.

If you turn the F3 control while “DIRECT” is displayed, you can select a snapshot number (“SS”), direct wipe (“Wipe”), or direct PIP (“PIP”), in sequence. After selecting direct select mode, enter the register number with numeric buttons 0 to 9 then press the RECALL button. The setting of a snapshot, direct wipe, or direct PIP stored in the selected register number is recalled.

F4 control

You can change the transition time in units of frames for executing a transition by pressing the AUTO TRANS button.

Press the F4 control to select “ME AUTO,” “DSK AUTO,” or “PIP AUTO” then turn the F4 control to change the value.

To change the transition time for a mix or wipe effect, select “ME AUTO.” For DSK AUTO select “DSK AUTO,” and for PIP AUTO select “PIP AUTO.”

■ When CAM mode is selected

You can set or adjust the following using the F1 to F4 adjustment controls:

FOCUS control

You can adjust the focus manually when the AUTO/MANUAL button in the CAMERA/DSK/AUX bus section is not lit (manual focus mode) and “MANUAL” or “ASSIST” is displayed under “FOCUS.”

BRIGHT (brightness) control

You can adjust the brightness when the exposure mode is set to SHUTTER Pri, IRIS Pri, GAIN Pri, or MANUAL on the camera. You can also adjust the exposure compensation level when EX-COMP (exposure compensation) is set to ON on the camera.

ZOOM control

You can change the zoom speed when you operate the zoom by using the dial on the upper part of the joystick. Press the control to switch between “CONSTANT” and “VARIABLE.” Turn the control to select the speed from among 1/8 to 8/8.

PAN/TILT (panning/tilting) control

You can change the panning and tilting speed when you operate panning/tilting by using the joystick. Press the control to switch between “CONSTANT” and “VARIABLE.” Turn the control to select the speed from among 1/24 to 24/24.

Note

You can select the speed from among 0.5/24 to 24/24 for the BRC-Z700 camera.

③ EXIT button

When menu mode is selected, press this button to return to the next higher layer of the menu. The last digit of menu page changes to “0” and flashes. You can enter the last digit of that number using numeric buttons 0 to 9.

When you press this button while the last digit of the menu page is flashing or the last digit is “0,” the last two digits reset to “00.”

Note

When “TOP” is shown at the lower left of the display panel, the top menu is displayed. In this case, pressing the EXIT button does not change the display.

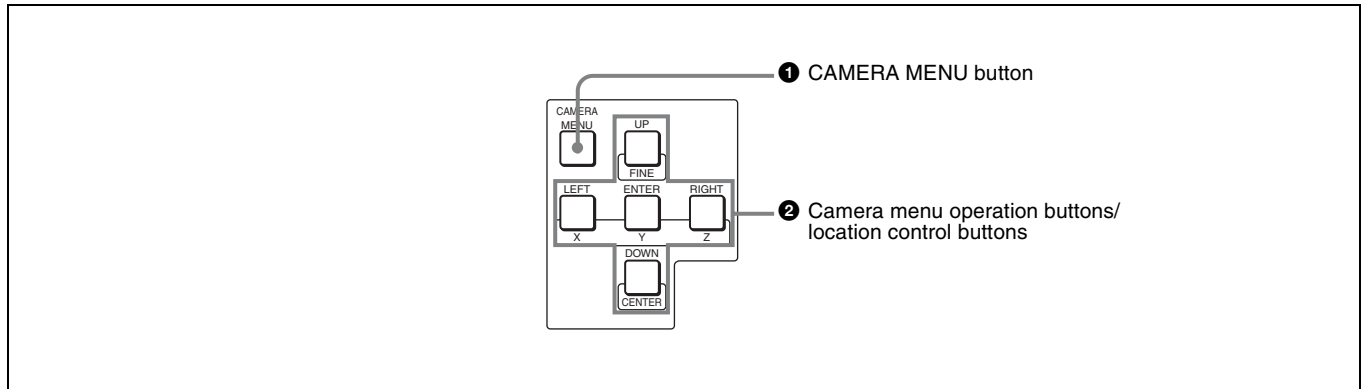
④ PAGE button

The number of pages for the displayed menu and the individual menu page number are displayed at the right end of the display panel. The number of pages indicates how many pages in the same layer the displayed menu has. When you press the PAGE button, the display changes to the next menu page. When the button is pressed while the last page is displayed, the first page is restored.

7 Camera Menu/Location Control Section

The buttons in this section differ in function depending on whether the switcher is in CAM or SW mode.

The functions of the buttons are explained for both modes individually.



■ Functions in CAM mode

① CAMERA MENU button

When you hold this button pressed to light up the button, the main menu of the camera is displayed on the image shot by the camera selected with one of the CAMERA buttons in the CAMERA/DSK/AUX bus section. Hold the button pressed again to turn off the main menu.

If the selected camera has two or more main pages, each press of the button switches the main menu to the next page. After the last page is displayed, the main menu of the camera disappears.

Holding the CAMERA MENU button pressed while any setting menu of the camera is displayed restores the main menu.

Note

If the DATA MIX switch on the BRC-H700, BRC-Z700 or BRC-Z330 camera is set to OFF, or the DATA MIX switch on the BRU-H700 HD Optical Multiplex Unit is set to OFF, the menu of the camera is not displayed on the output image from the interface board installed in the camera or the BRU-H700. For details, refer to the Operating Instructions supplied with the camera or the BRU-H700.

② Camera menu operation buttons (UP/DOWN/LEFT/RIGHT/ENTER)

Use these buttons to operate the menu on the camera when the menu is displayed on the image shot by the camera selected with one of the CAMERA button in the CAMERA/DSK/AUX bus section.

- Select the menu item from the main menu with the UP or DOWN button then press the ENTER button to display the selected setting menu.
- Select the setting item to be changed with the UP or DOWN button then press the LEFT or RIGHT button to change the setting value.

- To restore the main menu, hold the CAMERA MENU button pressed.

Note

The camera menu operation buttons in this section function the same as the $\uparrow/\downarrow/\leftarrow/\rightarrow$ /HOME buttons on the Remote Commander supplied with the camera. For details, refer to the Operating Instructions supplied with the camera.

■ Functions in SW mode

① CAMERA MENU button

This button cannot be used in SW mode.

② Location control buttons (FINE/CENTER/X/Y/Z)

Use these buttons to set the function of the joystick when it is to be used in menu mode.

FINE button

Pressing to light up this button reduces the speed of setting using the joystick. This enables you to make fine adjustment. To restore the normal setting speed, press the button again to make it go dark.

CENTER button

Pressing this button resets the setting data obtained using the joystick to the factory preset settings.

X, Y and Z buttons

Pressing to light up one of these buttons enables the following operation of the joystick:

X: to move the joystick horizontally

Y: to move the joystick vertically

Z: to turn the dial on the upper part of the joystick

Press one of these buttons again to make it go dark to disable the corresponding operation.

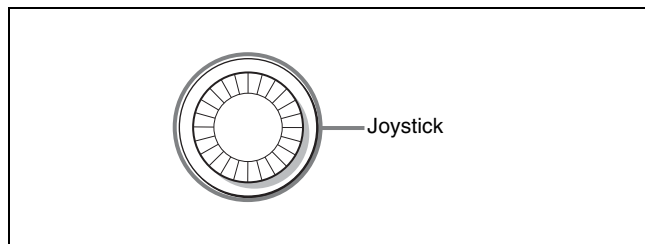
Note

Note that the joystick does not function if the X, Y and Z buttons are all unlit.

8 Joystick

The functions of the joystick differ depending on whether the switcher is in CAM or SW mode.

The functions of the joystick are explained for both modes individually.

**■ Functions in CAM mode**

Use the joystick for panning, tilting and zooming operations of the camera selected with the CAMERA button in the CAMERA/DSK/AUX bus section.

When you incline the joystick left or right, the camera pans. When you incline it forward or backward, the camera tilts. The pan/tilt speed changes according to the angle of the inclination.

When you turn the dial on the upper part of the joystick clockwise, the subject becomes larger (zoom in). When you turn it counterclockwise, the subject becomes smaller (zoom out).

Notes

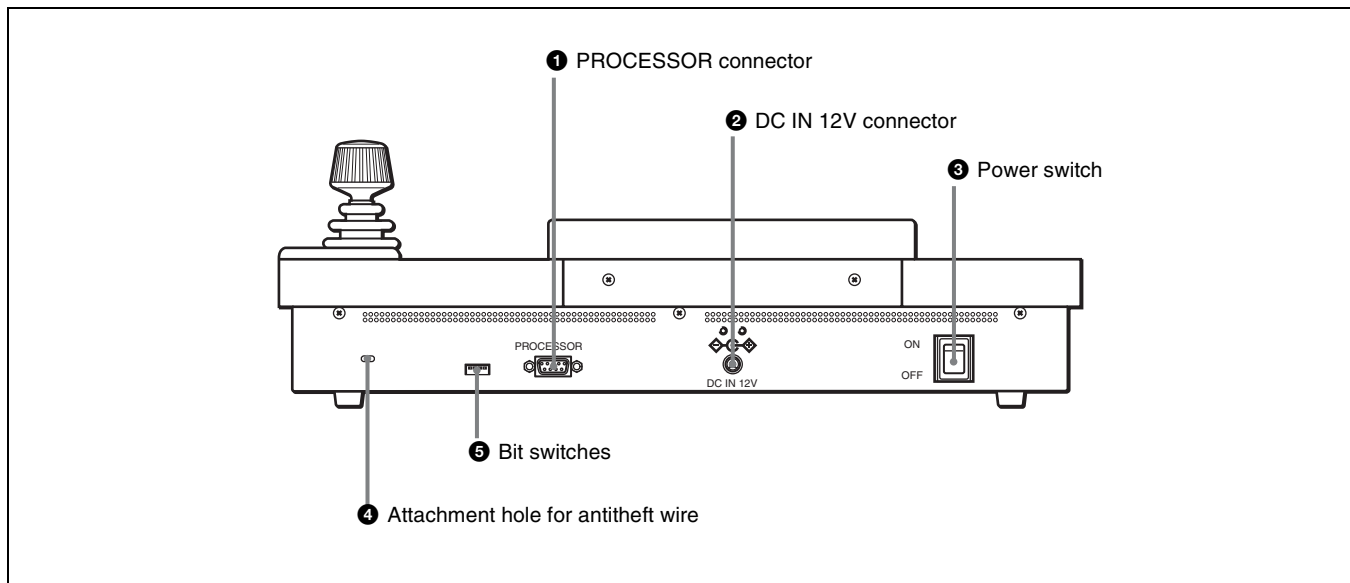
- Using the menu, you can change the pan/tilt direction and speed when you operate the joystick to pan or tilt the camera (page 109).
- Using the menu, you can change the zoom magnification or zoom speed when you operate the dial on the upper part of the joystick to zoom in/out (page 108).

■ Functions in SW mode

In menu mode, the joystick can be used to set the display location and size of a PIP image, and luminance, saturation and hue of color matte signals or chroma keys.

For detailed operations, see “To adjust the size and display position of an embedded video using the joystick” on page 77 and “To specify the chroma key automatically using the joystick” on page 92.

9 Rear Panel Section



1 PROCESSOR connector

Connect to the PANEL connector on the Processor Unit with the supplied control cable.

2 DC IN 12V connector

Connect the supplied AC power adaptor.

3 Power switch

Turns the Control Panel ON/OFF.

4 Attachment hole for antitheft wire

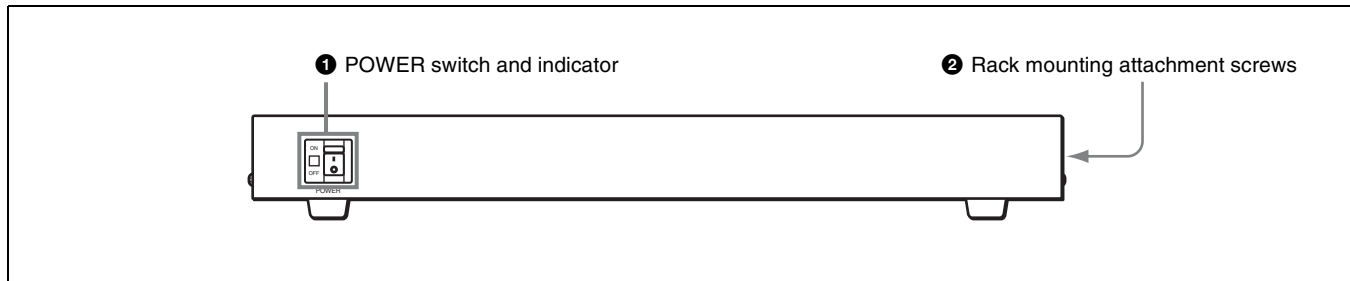
This is a hole (3 mm × 7 mm) for attaching a commercially available antitheft wire.

5 Bit switches

Used for future system expansion. All the switches are set to the OFF (upper) positions at the factory. Do not change these settings.

Processor Unit

Front Panel



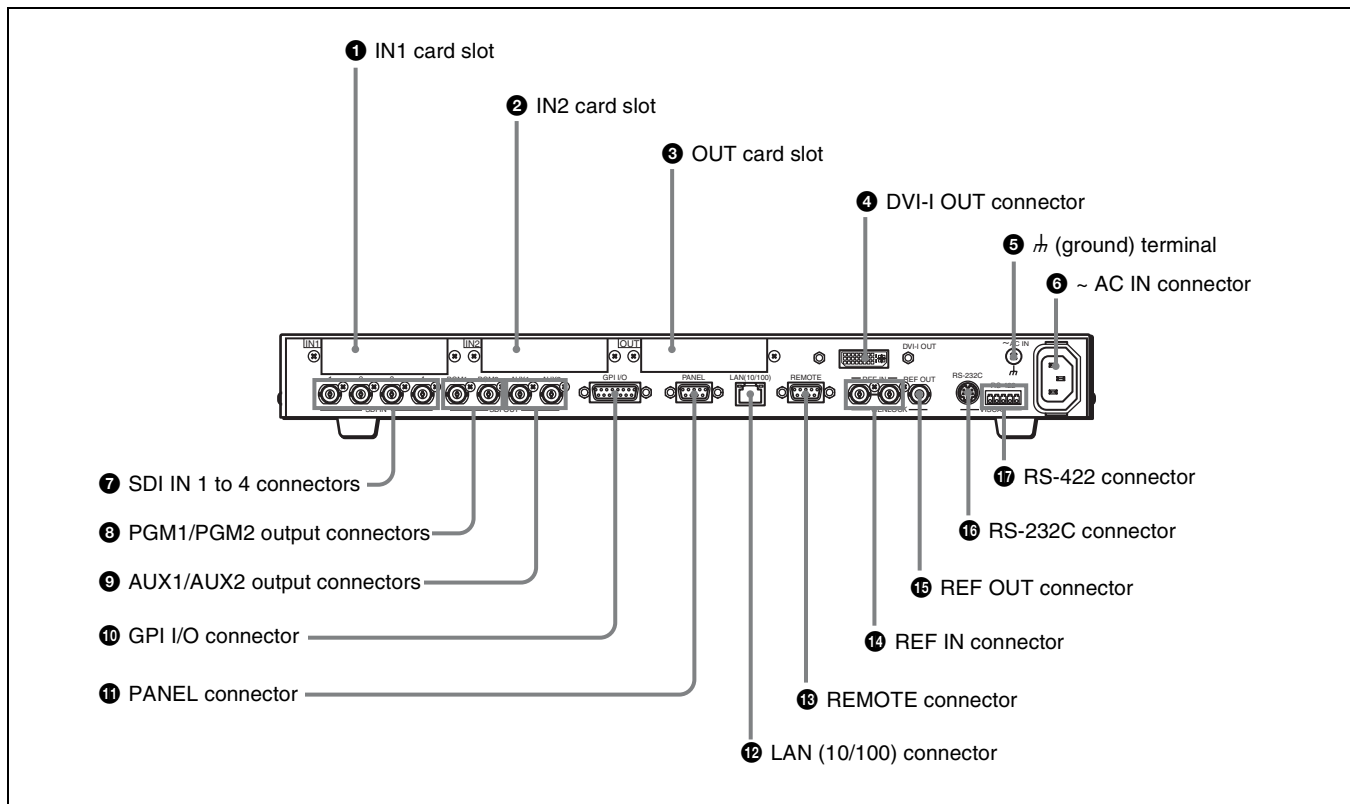
1 POWER switch and indicator

Turns the Processor Unit ON/OFF. Press the **I** side of the switch to turn it on. The indicator lights up in green.

2 Rack mounting attachment screws

Use these screws to attach the supplied rack mount brackets for installing the switcher in a rack. Four screws each on the right and left sides are attached at the factory.

Rear Panel



1 IN1 (input 1) card slot

Insert the BRSA-20HSD1 or BRSA-20DD1 interface board (not supplied).

2 IN2 (input 2) card slot

Insert the BRSA-20DD1 interface board (not supplied).

Note

The optional BRSA-20HSD1 interface board cannot be installed in the IN2 card slot.

③ OUT (output) card slot

Insert the BRSA-20DD2 interface board (not supplied).

④ DVI-I OUT (DVI-I output) connector

Connect to the DVI input connector on a monitor.

⑤ ♂ (ground) terminal

Used to connect to a ground lead.

Connect a ground lead when you use this switcher.

⑥ ~ AC IN connector

Connect to an AC outlet with the supplied power cord.

⑦ SDI IN (SDI input) 1 to 4 connectors (BNC type)

Input an SDI signal from a video camera or VCR (player). You can input the SDI signal from 1 to 4 connectors. The built-in frame synchronizer enables input of asynchronous signals.

Note

The switcher cannot accept SD-SDI and HD-SDI signals simultaneously. Select SD-SDI or HD-SDI signal using the menu.

⑧ PGM1 (program 1)/PGM2 (program 2) output connectors (BNC type)

Connect to the SDI input connector on a monitor. The program video with an effect applied is output via these connectors. The same signal is output through the PGM1 and PGM2 connectors.

⑨ AUX1 (auxiliary 1)/AUX2 (auxiliary 2) output connectors (BNC type)

Connect to the SDI input connector on a monitor. The PGM (program), PVW (preview) or MV (multi-viewer) video signal, or any of the input signals selected with 1 to 12 buttons in the cross-point bus section can be output via these connectors. The AUX1 and AUX2 output connectors are able to output different signals.

⑩ GPI I/O (GPI* input/output) connector (D-sub 15-pin)

Connect to the tally connector on the video camera to enable the tally lamp on the camera to light up. With the switcher connected via this connector to an external device, you can control the PGM or NEXT select buttons on the switcher from the connected device.

* General-Purpose Interface

⑪ PANEL (control panel) connector (D-sub 9-pin)

Connect to the PROCESSOR connector on the Control Panel with the supplied control cable.

Note

Be careful not to use the wrong connector as the

⑪ PANEL connector and ⑬ REMOTE connector are the same connector type.

⑫ LAN (10/100) connector

Connect to a computer with a cross-type LAN cable (not supplied). You can store the setting data for the switcher in the connected computer and import the data from the computer.

CAUTION

For safety, do not connect the connector for peripheral device wiring that might have excessive voltage to this port. Follow the instructions for this port.

CAUTION

When you connect the LAN cable of the unit to peripheral device, use a shielded-type cable to prevent malfunction due to radiation noise.

⑬ REMOTE connector (D-sub 9-pin)

This connector is used for system expansion.

⑭ REF IN (reference sync input) connectors (BNC type)

A reference synchronization signal is input via this connector from an external device. The other REF IN connector is used as a loop-through output connector. If it is not to be used as a loop-through output, attach a 75-ohm terminator to this connector.

⑮ REF OUT (reference sync output) connector (BNC type)

If a reference synchronization signal is not input via the REF IN connector, the built-in reference synchronization signal is output through this connector.

⑯ RS-232C connector (mini-DIN 8-pin)

Connect to the VISCA RS-232C connector on a camera.

⑰ RS-422 connector (Connector plug)

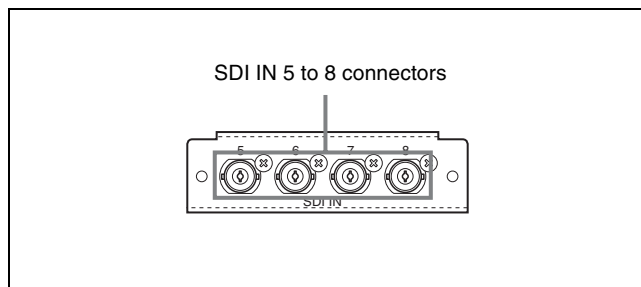
Connect to the VISCA RS-422 connector on a camera using the supplied RS-422 connector plug (5-pin).

For connection using the RS-422 connector plug, see "To Use the VISCA RS-422 Connector Plug" on page 151.

Note

For VISCA connection, be sure to use either connection using the RS-422 or the RS-232C connector.

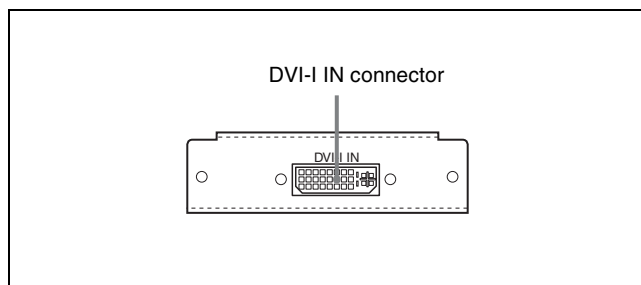
BRSA-20HSD1 HD/SD-SDI Input Board (Not Supplied)



SDI IN (SDI input) 5 to 8 connectors

Input SDI signals from a video camera or a VCR (player). The switcher can accept up to eight SDI inputs using the four inputs (SDI IN 5 to 8) on this board and the SDI IN 1 to 4 connectors on the Processor Unit. The built-in frame synchronizer enables input of asynchronous signals.

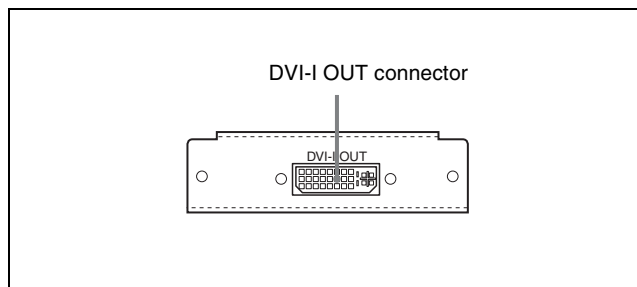
BRSA-20DD1 DVI Input Board (Not Supplied)



DVI-I IN (DVI-I input) connector

Inputs a DVI signal from a computer. Using this connector enables the switcher to handle an RGB signal input from a computer. The connector complies with the DVI-I standards and is able to handle both digital RGB and analog RGB signals.

BRSA-20DD2 DVI Output Board (Not Supplied)



DVI-I OUT (DVI-I output) connector

Connect to the DVI input on a monitor. Up to two monitors can be used, using this connector and the DVI-I OUT connector on the Processor Unit. The connector complies with the DVI-I standards and is able to handle both digital RGB and analog RGB signals.

Note

When "RESO" is set to "HD 50" or "HD 59.94" on menu page 932, only analog component signals are output through this connector.

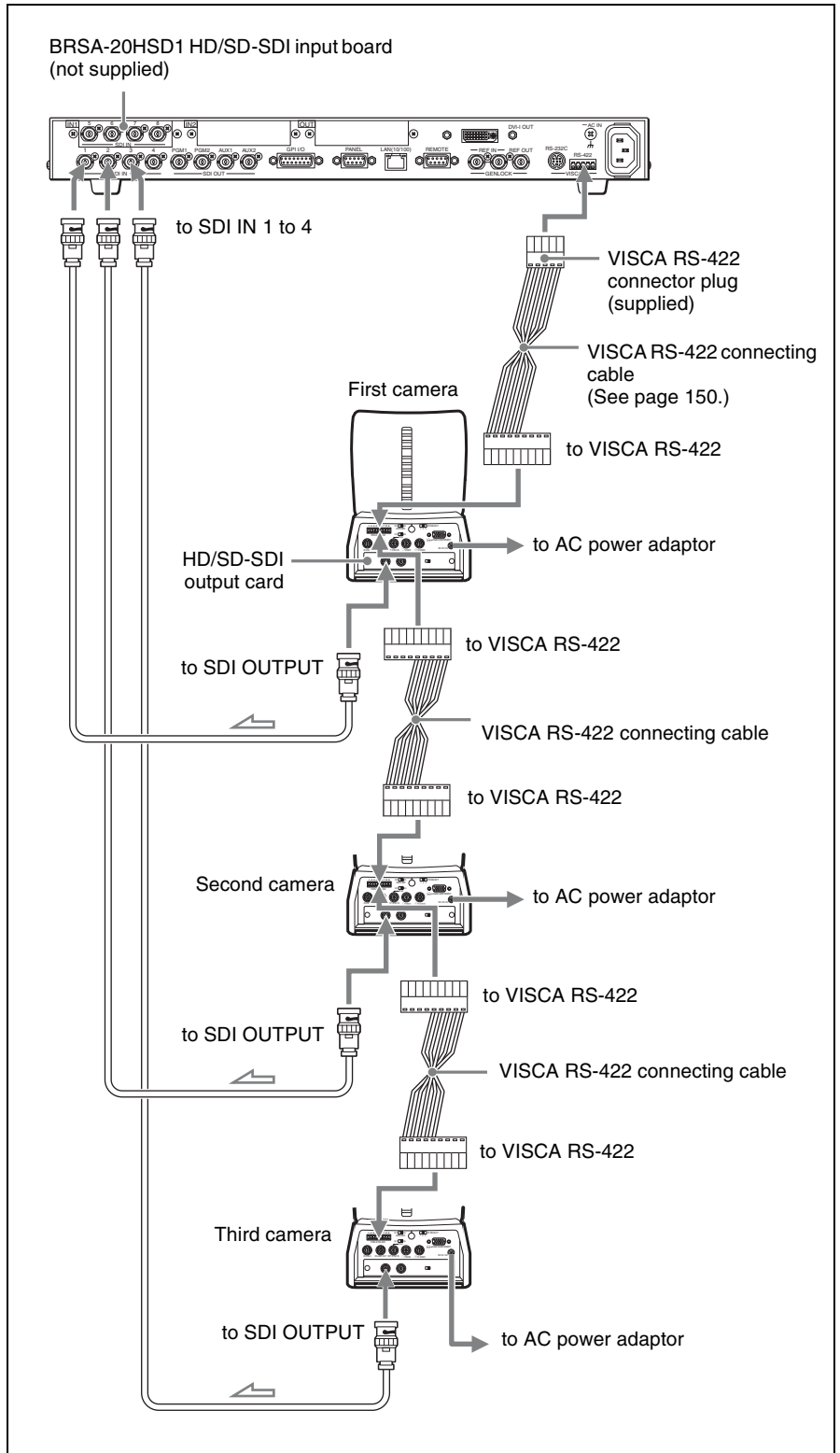


Connecting External Equipment

This chapter describes connections with peripheral devices. Connect the peripheral devices, connect and install the switcher, then perform the basic setup of the switcher using the menus.

Connecting VISCA Cameras

Up to seven Sony BRC-series VISCA-compatible cameras can be connected to the switcher.



To connect the video cable

Connect the SDI outputs on cameras to the SDI IN 1 to 4 connectors on the switcher.

Notes

- To output an SDI video signal from a BRC-series camera, installing the interface board that enables output of a SDI signal in the camera is required. For details, refer to the Operating Instructions supplied with the camera.
- Installing the optional BRSA-20HSD1 HD/SD-SDI input board enables connection of up to seven BRC-series cameras.
- When the switcher handles SDI signals, either an SD-SDI or HD-SDI signal must be used. Both signals cannot be handled at the same time.

To connect the VISCA control cable

Connect the RS-422 or RS-232C connectors on BRC-series cameras controlled by the switcher via the RS-422 or RS-232C connectors on the switcher. Up to seven BRC-series cameras can be connected in daisy-chain connection. For details on daisy-chain connection, refer to the Operating Instructions supplied with the cameras.

To connect the camera to the switcher via the RS-422 connector on the switcher, prepare the connecting cable using the RS-422 connector plugs supplied with the switcher and camera.

For preparing the connecting cable, see the pin assignments of the VISCA RS-422 connector (page 148) and “Wiring Example of VISCA RS-422 Connection” (page 150).

For use of the VISCA RS-422 connector plug, see “To Use the VISCA RS-422 Connector Plug” on page 151.

To configure the cameras

Set the following setup items for all the connected BRC-series cameras to the same values.

HD/SD select switch	SD-SDI or HD-SDI
Camera address selector	0 (Normally, automatically assigned)
Video format	59.94i or 50i
VISCA communication mode	RS-422 or RS-232C
Communication baud rate	9600 bps or 38400 bps

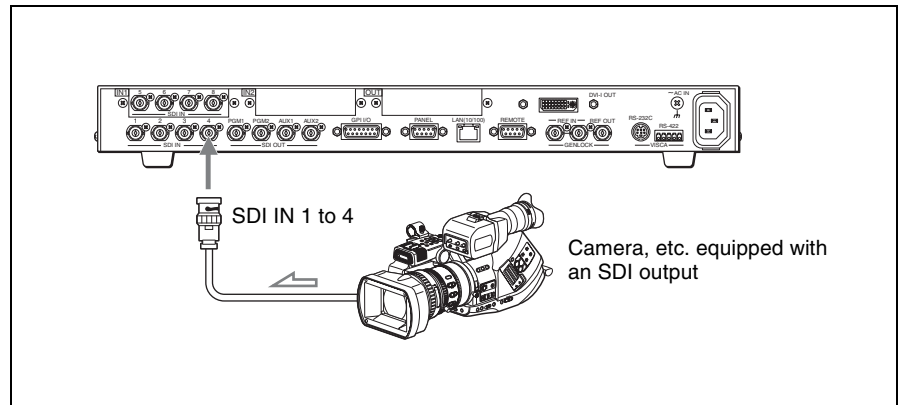
To connect the cameras to the AC power supply

After the cameras are connected to the switcher, connect the AC power adaptors supplied with the cameras to AC outlets.

The cameras turn on, pan and tilt automatically, and move to the position stored as camera position 1.

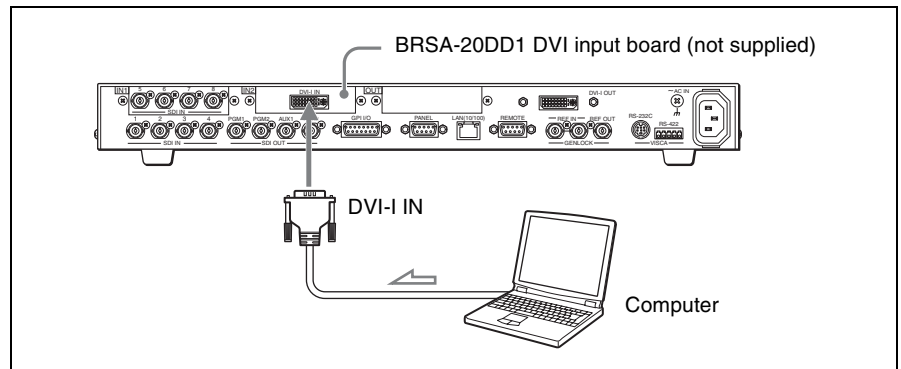
Connecting a Video Output Device Such as a Camera Other Than a BRC-Series Camera

Connect a camera or video output device equipped with an SDI output to the SDI IN connector on the switcher.



Connecting a DVI Signal Output Device

To use an image output from the DVI output on a computer, install the optional BRSA-20DD1 DVI input board in the IN1 or IN2 card slot on the switcher to connect to the computer.

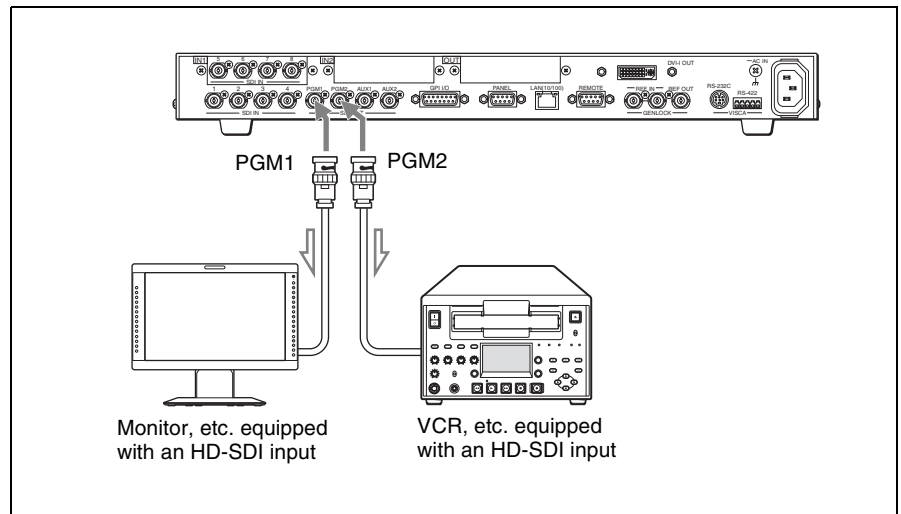


Notes

- To connect a computer that supports an analog RGB output signal only, use a commercially available conversion cable (D-sub 15-pin ↔ analog DVI).
- The video signal format to be used can be set to “HD” or “SD” under “FORMAT” on menu page 951 (page 50). When it is set to “SD,” small characters and fine graphics output from a computer may be blurred.

Connecting Monitors to the PGM1 And PGM2 Connectors

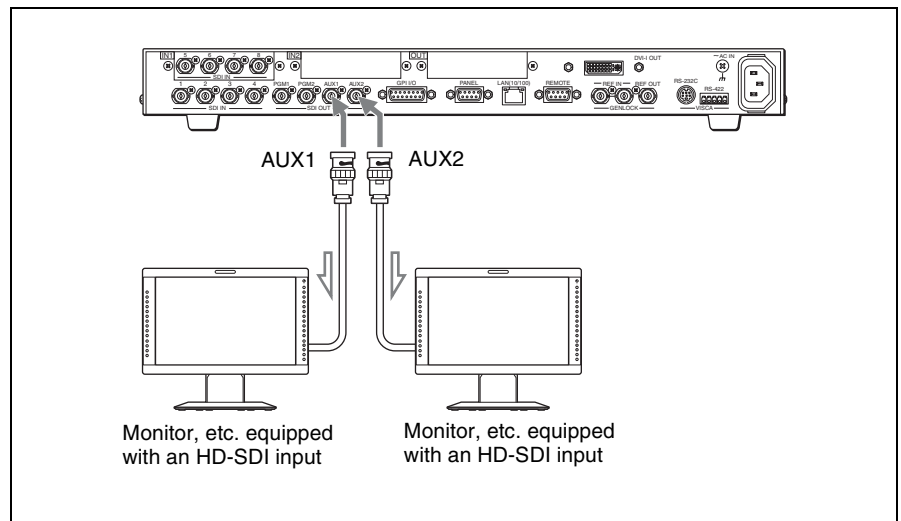
Program videos are output from the PGM1 and PGM2 connectors. These two connectors output the same signal. Connect the PGM1 and PGM2 connectors on the switcher to the SDI inputs on a monitor or VCR.



Connecting Monitors to the AUX1 And AUX2 Connectors

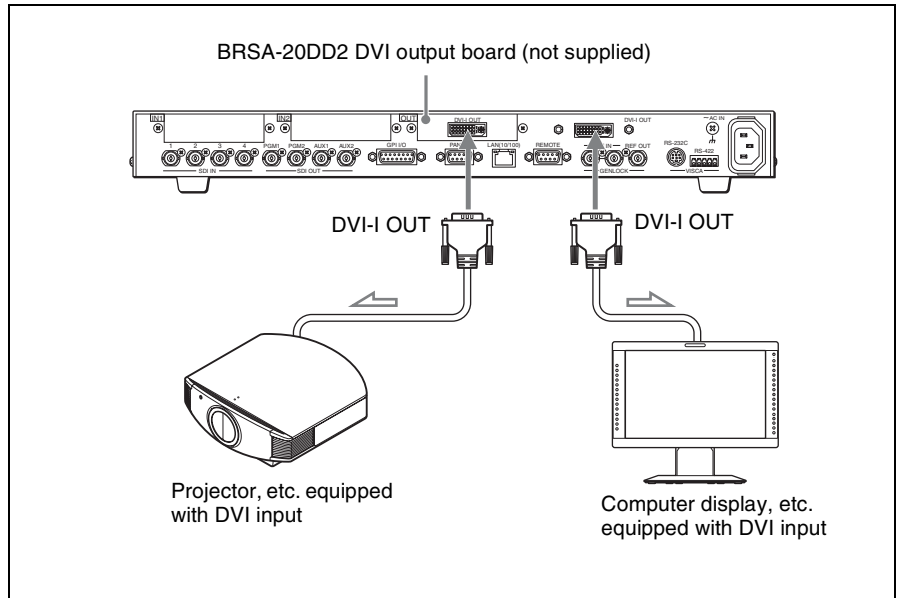
One signal selected from among the PGM (program), PVW (preview), MV (multi-viewer) videos and input signals 1 to 12 is output from the AUX1 or AUX2 connector. A different signal can be output from each of these two connectors.

When a monitor equipped with an SDI input is connected to the AUX1 or AUX2 connector, you can check the video before an effect is applied.



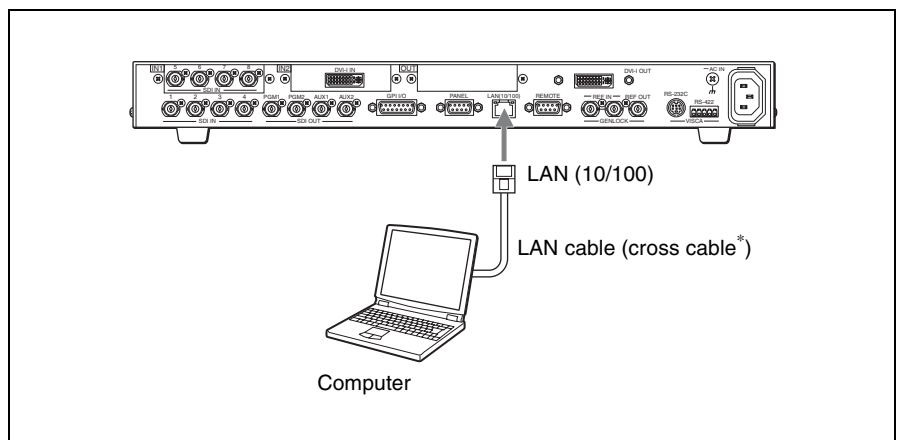
Connecting a Monitor or Projector Equipped with a DVI Input

You can monitor an image by connecting a computer display or projector equipped with a DVI input to the DVI-I OUT connector on the switcher. Installing the optional BRSA-20DD2 DVI output board to the OUT card slot on the switcher enables connection of two monitors equipped with DVI inputs at the same time.



Connecting a Computer for Storing the Setting Data

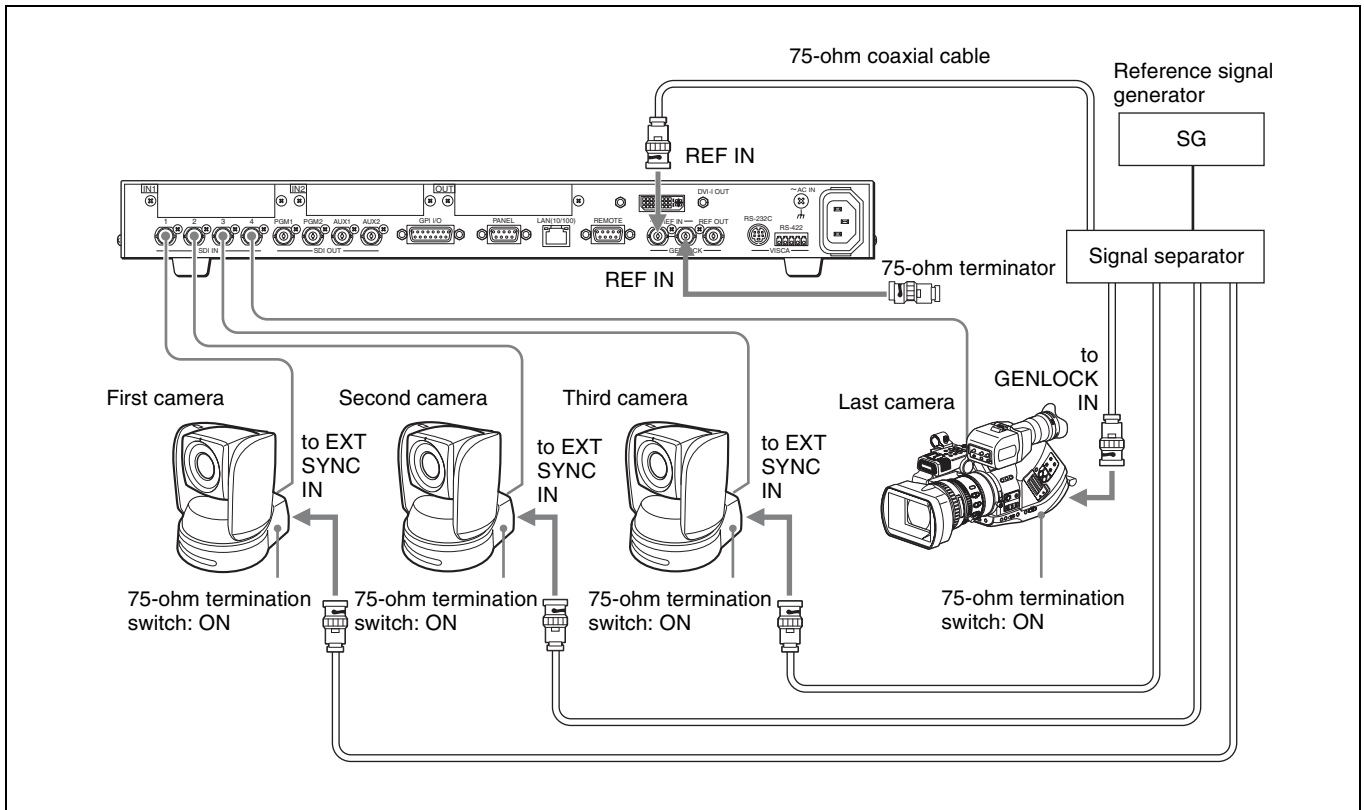
Connect the LAN (10/100) connector on the switcher to a computer's LAN connector with a cross-type LAN cable. You can store the data such as snapshot, camera position and frame memory image, set by the switcher in the connected computer, or import the data stored in the computer to restore the previous status of the switcher.



* Some computers can be connected with a straight type LAN cable.

Connecting an External Sync Signal

To synchronize with the connected video devices, input the reference signal from an external reference signal generator to the REF IN connector on the switcher and to the external video sync signal input (EXT SYNC IN connector for the BRC-series cameras).



Note

If the connected device is not equipped with an external video sync signal connector, set “FS” to “On” in the SETUP menu (page 53). The connected device can be synchronized with the switcher using the built-in frame synchronizer of the switcher.

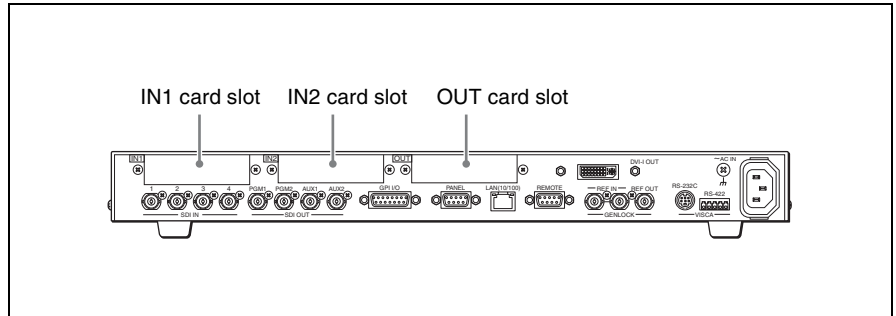
Installation and Connection of the Switcher

This section describes installation and connection of the switcher.

Installing an Interface Board

Install an optional interface board in the card slot at the rear of the Processor Unit. The Processor Unit has three card slots at the rear. Some of the interface boards are restricted with regard to installation in some of these three card slots.

Interface boards and available card slots



Interface board	Card slot		
	IN1	IN2	OUT
BRSA-20HSD1 HD/SD-SDI input board	Yes	No	No
BRSA-20DD1 DVI input board	Yes	Yes	No
BRSA-20DD2 DVI output board	No	No	Yes

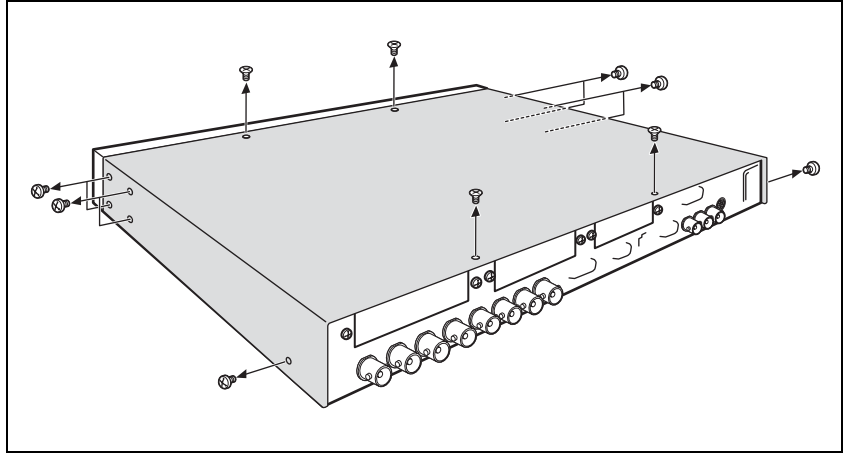
Yes: can be installed, No: cannot be installed

To install an interface board

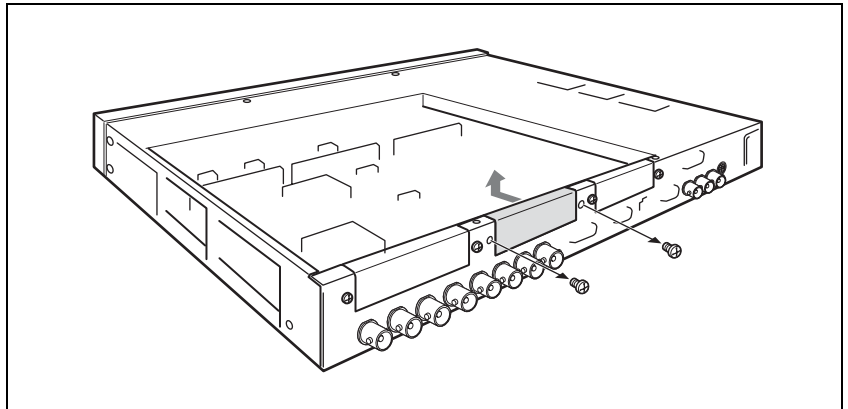
Notes

- Be sure to turn off all the equipment before attaching or removing an interface board.
- **Immediately after the switcher has been turned off, the Processor Unit is hot. Be sure to wait more than 30 minutes after the switcher is turned off before you open the top cover of the Processor Unit.**
- Do not remove any panels inside other than the top panel of the Processor Unit.
- Be sure to use the attachment screws supplied with an interface board to install it in the card slot. Using other screws may cause damage to the interface board and the Processor Unit.
- When installing the interface board, be careful not to injure yourself.

- 1 Remove the 14 screws to remove the top panel of the Processor Unit.



- 2 Remove the two screws to remove the card slot cover.

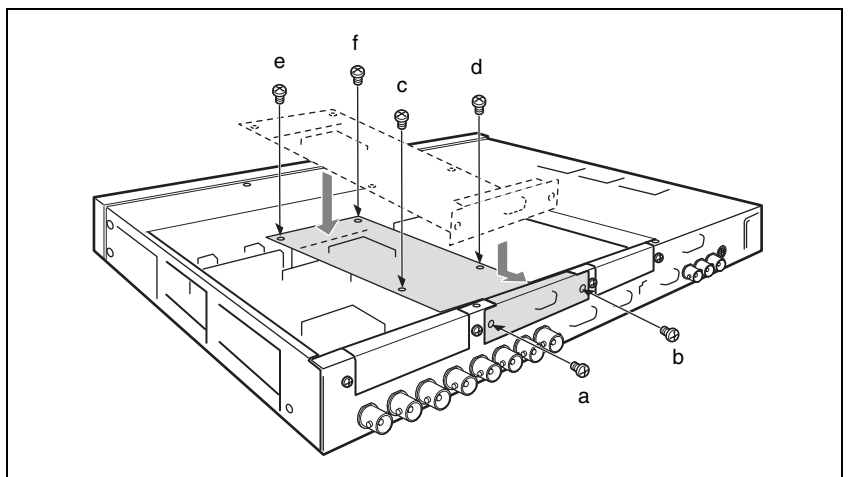


- 3 Insert the interface board into the attachment position.
Align the connectors and insert the board securely as far as it will go.

- 4 Attach the interface board to the card slot using the four attachment screws supplied with the interface board and two screws removed in step 2.

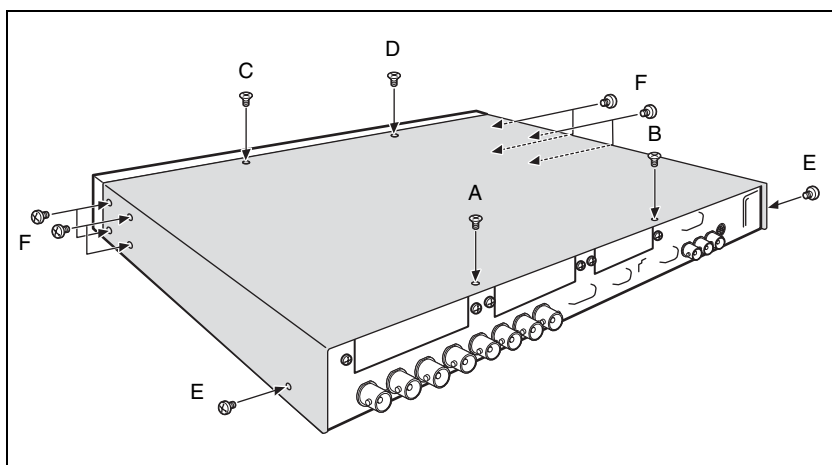
Note

Tighten the screws in the order a to f, as shown in the illustration.



- 5** Reinstall the top panel of the Processor Unit using the 14 screws removed in step 1.

Tighten the screws in the order A, B, C, D, E, and F.



- 6** Reset the setting data of the switcher to the factory preset settings.

Display menu page 955, turn the F2 control to display “⊥ Reboot” under “FACT SET,” then press the F2 control. The setting data stored in the switcher will be reset to the factory preset settings.

Note

When an optional interface board has been installed or removed, be sure to reset the setting data to the factory preset settings before operating the switcher.

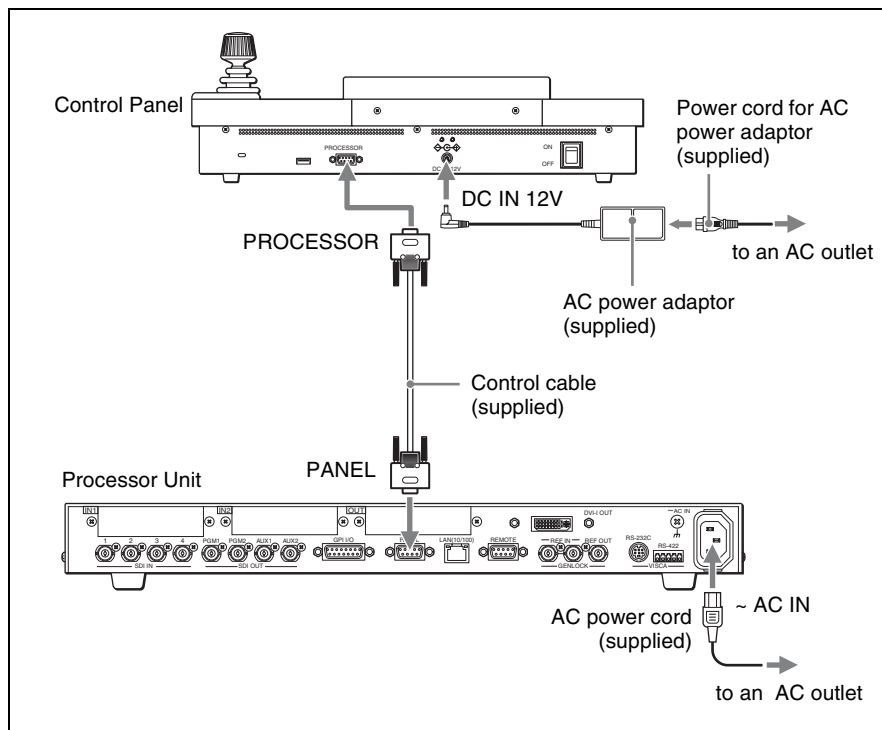
To remove the interface board

Remove the interface board in reverse order.

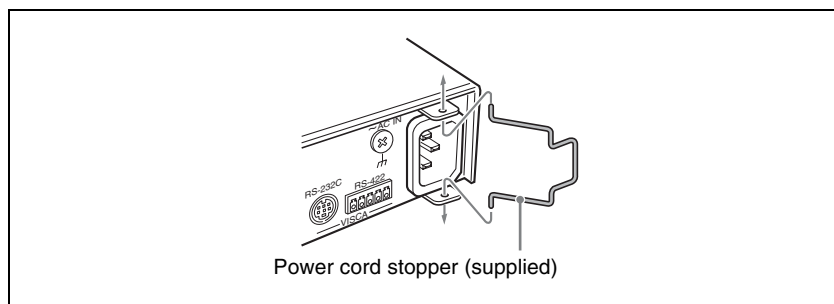
Connecting the Processor Unit and Control Panel

Note

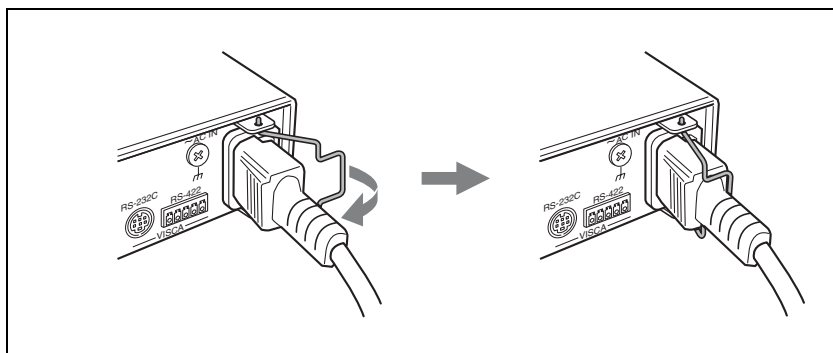
Be sure to turn off all the equipment before connection.



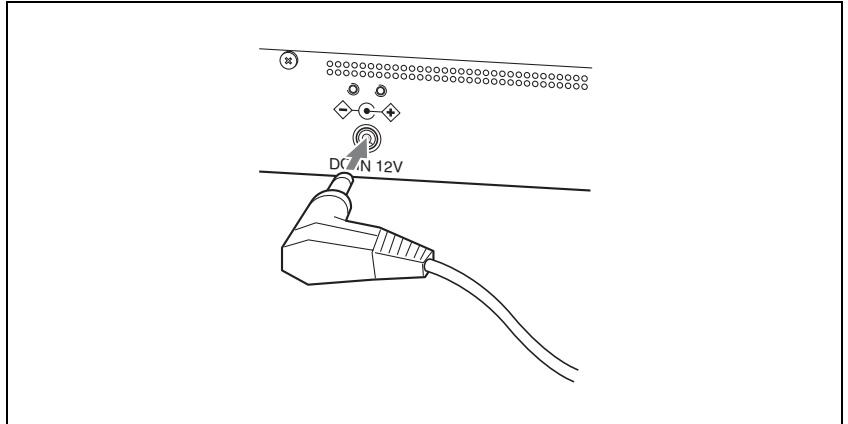
- 1** Connect the PANEL connector on the Processor Unit to the PROCESSOR connector on the Control Panel with the supplied control cable.
- 2** Connect the Processor Unit to an AC outlet with the supplied AC power cord.
 - 1** Attach the supplied power cord stopper to the AC IN connector on the Processor Unit.



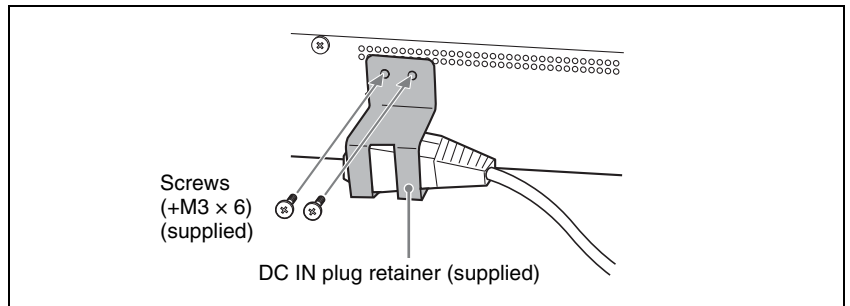
- 2** Insert the plug of the power cord into the AC IN connector and secure the plug with the stopper.



- 3** Connect the Control Panel to an AC outlet with the AC power adaptor (supplied) and the power cord for the AC power adaptor (supplied).
- 1** Insert the DC plug of the AC power adaptor to the DC IN 12V jack in the direction indicated in the illustration below.



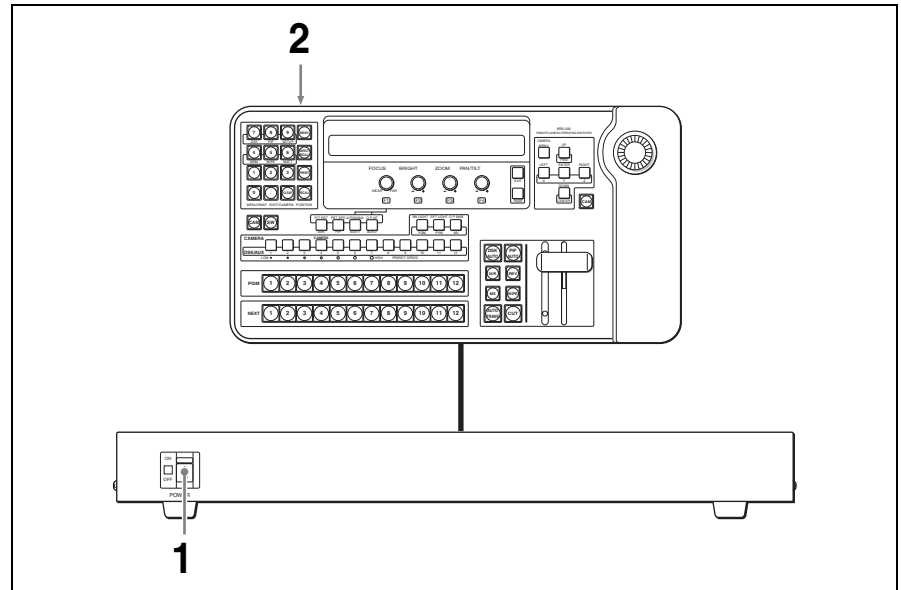
- 2** Fix the supplied DC IN plug retainer by tightening the two supplied screws (+M3 × 6).



For connection with peripheral devices, see “Connecting External Equipment” on page 33.

Turning on the Power

After the connection between the Processor Unit and the Control Panel is complete, turn on the power of the switcher following the steps below.



- 1** Set the POWER switch on the Processor Unit to ON (I side).
The Processor Unit is turned on, and the POWER indicator lights in green.
- 2** Set the power switch at the rear of the Control Panel to ON.
The Control Panel is turned on and the display panel and buttons light up.
- 3** Turn on the powers on the peripheral devices.

Note

When the power of the switcher is turned on, “No Communication.” may be displayed momentarily.

To turn off the power

Set the power switch on the Control panel to OFF then set the POWER switch on the Processor Unit to OFF (O side).

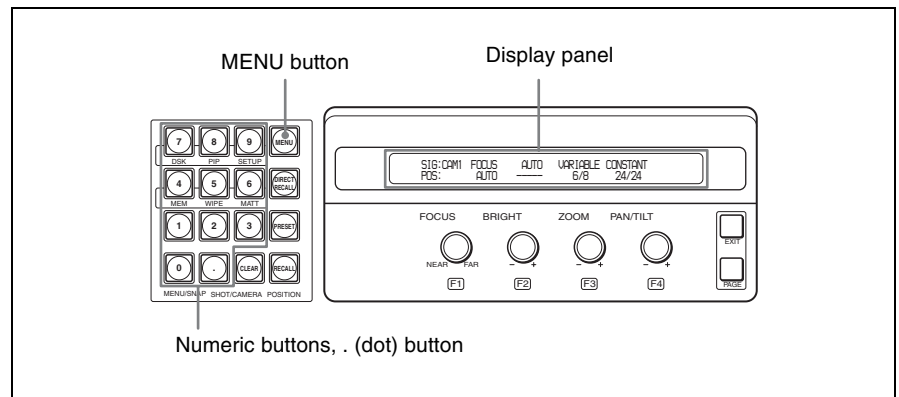
Menu Operation

You can set up your system, select various effects for switching operation, etc. while viewing the menus displayed on the display panel.

Three-digit menu page numbers are assigned to all the setting menus individually. You can display the desired setting menu directly by specifying the menu page with the numeric buttons. You can also use the adjustment controls located below the display panel to display the setting menus or to change the setting values.

Displaying the Menus

You can display a menu by specifying its assigned three-digit menu page. This section describes the procedure for setting "FORMAT" in "SYS MODE" (system mode), as an example. Menu page assigned to "SYS MODE" is 951. For other menu page numbers, see "Menu List" on page 131.

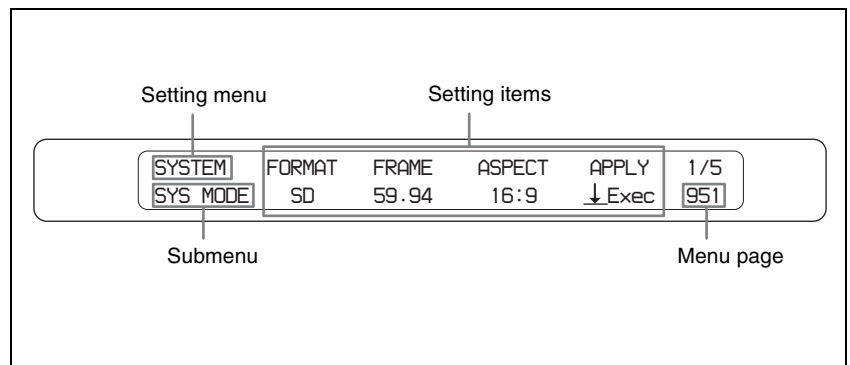


- 1 Press the MENU button.

The MENU button lights in orange, and the indication on the display panel switches to menu mode.

- 2 Press numeric button 9 then . (dot), 5 and 1 in sequence.

The SYS MODE menu is displayed.



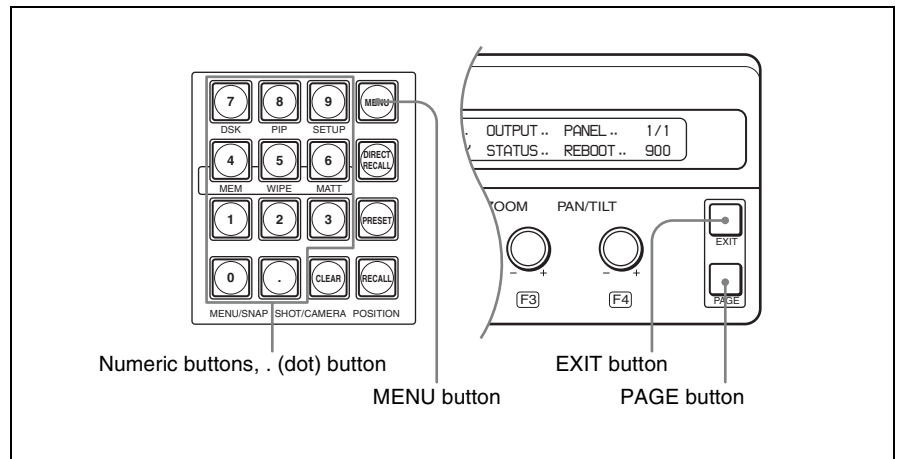
Note

To specify a three-digit menu page, press the numeric button for the third digit of the number, the . (dot) button then the second and first digits in sequence.

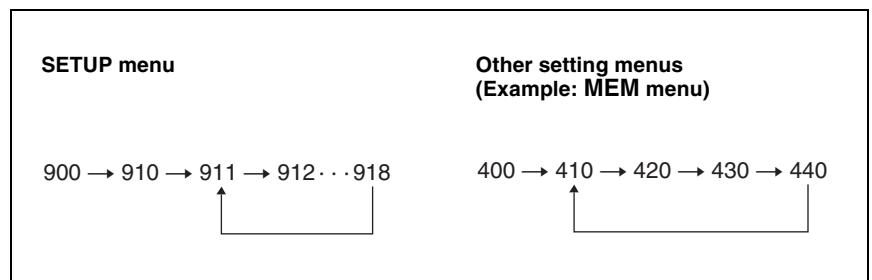
To display other menu pages

Use the PAGE and EXIT buttons below the display panel or the numeric buttons and . (dot) button.

Each digit of the menu page indicates the layer of the menu. The third digit indicates the first layer, the second digit the second layer, and the first digit the third layer. If the menu has no third layer, the first digit of the menu page is shown as "0." The menu display can be switched to another menu by specifying a three-digit number, or to another setting menu of the same submenu by changing only the first digit.



- **PAGE button:** Each time you press this button, the submenu displayed on the display panel changes within the same setting menu. For the SETUP menu, the setting items within the same submenu change.



- **EXIT button:** The display returns to the one upper layer of the menu.
- **MENU button:** The display returns to the one upper layer of the menu. When the TOP menu is displayed on the display panel, pressing this button exits menu mode.
- **Numeric and . (dot) buttons:** When you specify a three-digit menu page using these buttons, the specified menu will be displayed, exiting the currently displayed menu.

To change all three digits

Specify all numbers for the menu page to be displayed.

Press the numeric button for the third digit, . (dot), second digit, then the first digit in sequence.

To change the last two digits

Press the MENU or EXIT button to display the upper-layer menu then specify the menu page.

Press the MENU or EXIT button then press the . (dot) button, numeric button for the second digit and first digit in sequence. When the third layer of the menu is displayed, press the MENU or EXIT button twice then press the . (dot) button, numeric button for the second digit and first digit in sequence.

To change the last one digit

Press the MENU or EXIT button then press the numeric button for the first digit for the menu page to be displayed.

To exit menu mode

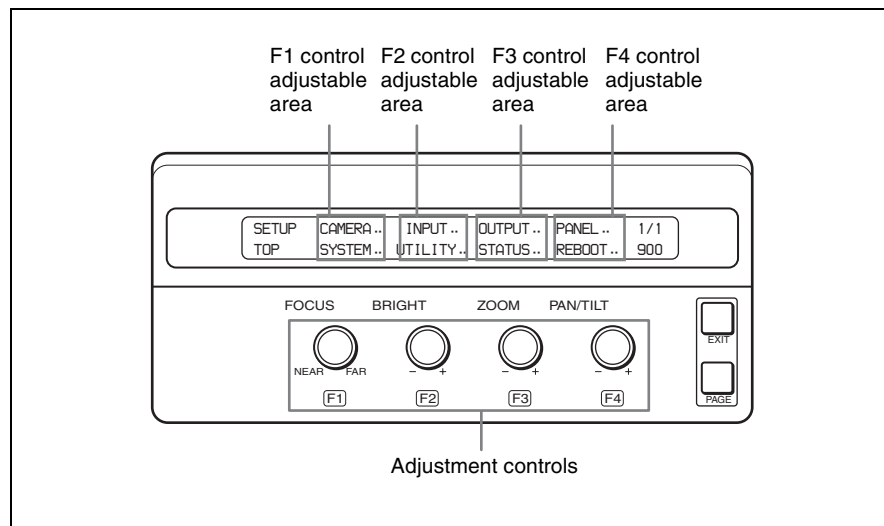
Press the MENU button again when the TOP menu is displayed.

You can also press the SW mode button or CAM mode button to switch to SW mode or CAM mode.

Operating the Menu

Use the adjustment controls to change the setting values and to store the setting.

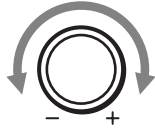
The F1 to F4 adjustment controls can be used for setting the items displayed above each control. To set the item displayed at the left end of the display panel, use the F1 control. To adjust the item displayed at the right end, use the F4 control.



To use the adjustment controls (F1 to F4)

Press or turn the controls to operate the menu.

For example, when you turn the F3 control while an item in the F1 control adjustable area is highlighted, an item in the F3 control area will be highlighted. You can select the desired setting item in the adjustable area by turning the corresponding control.



Displays either the upper or lower setting item or changes the setting value.

Turn clockwise or counterclockwise



Press

Displays the lower-layer menu of the highlighted menu. If “Exec” or “↓” is displayed in the menu, pressing the control executes the selected setting. Depending on the settings, a message that prompts you to store or clear the setting or a notification to reboot the system may appear.

Notes

- Some settings may be reset to the factory preset settings by holding the control pressed.
- Some setting values may be roughly changed by turning the control while pressing.

Basic Setups for the Switcher

This section describes the basic setup items for the switcher. Set up the switcher before starting video switching or camera-control operations.

Setting the Video Signal Format and Aspect Ratio (Menu Page 951)

This menu is used to set the signal format and the aspect ratio supported by the switcher.

- 1 Display menu page 951.

For the procedure for displaying the menu, see “Menu Operation” on page 46.

SYSTEM	FORMAT	FRAME	ASPECT	APPLY	1/5
SYS MODE	HD	59.94	16:9	↓ Exec	951

- 2 Turn the F1 control to select the video signal format you are using under “FORMAT.”

SD: to use SD-SDI signals

HD: to use HD-SDI signals

- 3 Turn the F2 control to select the frame frequency compatible with the video signal you are using under “FRAME.”

59.94: to use an NTSC signal (vertical frequency: 59.94 Hz) or 1080/59.94i video signal

50: to use a PAL signal (vertical frequency: 50 Hz) or 1080/50i video signal

- 4 Turn the F3 control to select the aspect ratio of the display under “ASPECT.”

4:3: to use a display with 4:3 aspect ratio

16:9: to use a display with 16:9 aspect ratio

- 5 Press the F4 control to confirm the settings selected in steps 2 to 4.

Pressing the F4 control enables confirmation of the settings.

Rebooting the switcher is required after the settings for “FORMAT” or “FRAME” are changed, and the message “Reboot system? [PAGE] (yes) or [EXIT] (no)” appears on the display panel.

When only the setting for “ASPECT” is changed, “Save setup data? [PAGE] (yes) or [EXIT] (no)” appears.

- 6 Press the PAGE button.

After the switcher has saved the setting data and is rebooted, the changed settings are enabled.

Setting Up the Video Input Signals

To identify the video input signals (menu page 921)

You can name a video signal input to the switcher.

1 Display menu page 921.

For the procedure for displaying the menu, see “Menu Operation” on page 46.

INPUT	SIGNAL	RENAME	<=>		1/6
NAME	IN 1	(4 chars.)			921

2 Turn the F1 control to select the video input signal to be named under “SIGNAL.”

IN 1 to IN 4: to name the video signal input from any of the SDI IN 1 to 4 connectors at the rear of the Processor Unit

IN 5 to IN 8: to name the video signal input from the input connector on the interface board installed in the IN1 card slot at the rear of the Processor Unit (When the BRSA-20HSD1 is installed, select any of “IN 5” to “IN 8.” When the BRSA-20DD1 is installed, select “IN 5.”)

IN 9: to name the video signal input from the input connector on the interface board installed in the IN2 card slot at the rear of the Processor Unit

FM 1, FM 2: to name frame memory image 1 or 2 stored in the Processor Unit

MAT1, MAT2: to name color matte 1 or 2 used for a background image

CLBR: to name color bars used for adjustment and test transmission

3 Set the name of the video input signal within four characters under “RENAME” using the F2 and F3 controls.

① Press the F2 control to highlight the first character of the registered video input signal name.

② Turn the F2 control to change the highlighted character.
You can select alphanumeric characters and symbols.

For selectable characters, see “Selectable characters” on page 52.

③ Turn the F3 control to change the highlighted character and the F2 control to change the character.

④ Repeat steps ② and ③ to set the name within four characters.

Notes

- If the highlighted characters exceed four by turning the F3 control, the present displayed name is defined as the name of the selected video input signal. To highlight the characters again, press the F2 control.
- The displayed name under “RENAME” and the selected signal under “SIGNAL” are changed relative to each other. If you press the F2 control when no highlighted character is displayed under “RENAME”, the video input signal under “SIGNAL” will be changed.

Selectable characters

(Space) ! " # \$ % & ' () * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ? @ A B C D E F G H I J K L M N O P Q R S T U V W X Y Z [\] ^ _ ` a b c d e f g h i j k l m n o p q r s t u v w x y z { } ~
--

When the setting is complete

Press the CAM mode button or SW mode button to exit menu mode.

If you change the setting, "Save setup data? [PAGE] (yes) or [EXIT] (no)" appears on the display panel. Press the PAGE button to store the data.

To assign the video input signals to the PGM and NEXT select buttons (menu page 922)

Assign the video input signals to PGM and NEXT select buttons 1 to 12. If you assign a video input signal to any one of the PGM or NEXT buttons, the same signal will be assigned to the same number of the PGM or NEXT button.

You can also disable any select button that is not to be used.

1 Display menu page 922.

For the procedure for displaying the menu, see "Menu Operation" on page 46.

Note

When menu page 921 is displayed, one press of the PAGE button displays menu page 922.

INPUT	XPT BTN	SIGNAL	NAME	INHIBIT	2/6
ASSIGN	1	IN 1	(4 chars.)	On	922

2 Turn the F1 control to select the number of the select button (1 to 12) to which you wish to assign a video input signal under "XPT BTN" (cross-point button).

3 Turn the F2 control to set the video input signal that you wish to assign to the button selected in step 2, under "SIGNAL."

IN 1 to IN 4: to set the video signal input from the SDI IN 1 to 4 connectors at the rear of the Processor Unit

IN 5 to IN 8: to set the video signal input from the interface board installed in the IN1 card slot at the rear of the Processor Unit (When the BRSA-20HSD1 is installed, select any of "IN 5" to "IN 8." When the BRSA-20DD1 is installed, select "IN 5.")

IN 9: to set the video signal input from the input connector on the interface board installed in the IN2 card slot at the rear of the Processor Unit

FM 1, FM 2: to set frame memory image 1 or 2 stored in the Processor Unit

MAT1, MAT2: to set color matte 1 or 2 used for a background image

CLBR: to set color bars used for adjustment and test transmission

Note

The display under "NAME" shows the same video input name that was set in "RENAME" of menu page 921. Since the items under "SIGNAL" and "NAME" are changed relative to each other, you can select the signal from the signal name by turning the F3 control instead of the F2 control.

To disable the select button

Use this function if you are not using any of select buttons 1 to 12.
On menu page 922, turn the F1 control to select the number of the select button to be disabled under “XPT BTN.” Turn the F4 control to set “INHIBIT” (inhibition) to “On”. The selected button will no longer operate even if you press the button.

When the setting is complete

Press the CAM mode button or SW mode button to exit menu mode.
If you change the setting, “Save setup data? [PAGE] (yes) or [EXIT] (no)” appears on the display panel. Press the PAGE button to store the data.

To add a frame synchronizer to the input video signal (menu page 925)

If the input video is an asynchronous signal, it can be synchronized using the frame synchronizer built in the switcher.

- 1 Display menu page 925.

For the procedure for displaying the menu, see “Menu Operation” on page 46.

Note

When menu page 922 is displayed, pressing the PAGE button three times displays menu page 925.

INPUT	SIGNAL	NAME	FS		5/6
FS	SDI1	(4 chars.)	On		925

- 2 Turn the F1 control to select the video input signal for which you wish to change the FS (frame synchronizer) setting under “SIGNAL.”

SDI1 to SDI4: to select an SDI signal input from the device connected to the SDI IN 1 to 4 connectors at the rear of the Processor Unit (When the BRSA-20HSD1 HD/SD-SDI input board is installed in the IN1 card slot, the input channels increase to eight and the selectable items also increase to “SDI8.”)

Note

The signal name set under “RENAME” on menu page 921 is displayed under “NAME” of this menu. Since the items under “SIGNAL” and “NAME” are changed relative to each other, you can select the signal from the signal name by turning the F2 control instead of the F1 control.

- 3 Turn the F3 control to set “FS.”

On: to add a frame synchronizer to the selected video input signal
Off: not to add a frame synchronizer to the selected video input signal

When the setting is complete

Press the CAM mode button or SW mode button to exit menu mode.
If you change the setting, “Save setup data? [PAGE] (yes) or [EXIT] (no)” appears on the display panel. Press the PAGE button to store the data.

Setting Up the Video Output Signals

To set the DVI output (menu page 932)

The menu is used to set the type of video output from the DVI-I OUT connector on the switcher and the resolution of that output video.

- 1 Display menu page 932.

For the procedure for displaying the menu, see “Menu Operation” on page 46.

OUTPUT	BOARD	BUSSEL	RESO		2/6
DVI	STD	PGM	↓ XGA		932

- 2 Turn the F1 control to display the DVI-I output connector that you wish to set up under “BOARD.”

STD: to set up the DVI-I OUT connector equipped with the switcher as standard at the rear of the Processor Unit

OPTION: to set up the DVI-I OUT connector on the BRSA-20DD2 DVI output board installed in the OUT card slot at the rear of the Processor Unit

Note

If you select “OPTION” when the BRSA-20DD2 DVI output board is not installed in the switcher, “_” is displayed under “BUSSEL,” and you cannot select the video in step 3.

- 3 Turn the F2 control to select the type of video to be output from the DVI-I output connector under “BUSSEL.”

AUX1, AUX2: to output the same video as that output from the AUX1 or AUX2 connector at the rear of the Processor Unit

MV: to output MV (multi-viewer) video set on menu page 934

PVW: to output preview video

PGM: to output program video

- 4 Turn the F3 control to display the resolution of the output video signal under “RESO” then press the F3 control.

You can select from among XGA, WXGA, SXGA, HD 59.94 (or HD 50) and WUXGA.

Notes

- Either “HD 59.94” or “HD 50” is displayed according to the setting under “FRAME” on menu page 951.
- “HD 59.94,” “HD 50” and “WUXGA” are displayed only when “HD” is selected under “FORMAT” on menu page 951.

When the setting is complete

Press the CAM mode button or SW mode button to exit menu mode.

If you change the setting, “Save setup data? [PAGE] (yes) or [EXIT] (no)” appears on the display panel. Press the PAGE button to store the data.

To set up multi-viewer output (menu page 934)

The menu is used to set up multi-viewer output.

- 1 Display menu page 934.

For the procedure for displaying the menu, see “Menu Operation” on page 46.

OUTPUT	TYPE	WINDOW	SIGNAL		4/6
MV	4	1	PGM		934

- 2 Turn the F1 control to select the type of multi-viewer output under “TYPE.”

You can select from among 1 (full screen), 4-, 10- and 16-picture multi-viewer.

- 3 Turn the F2 control to select the picture number for which you wish to set up the output signal under “WINDOW.”

You can select a number from 1 to 16 according to the type of multi-viewer selected under “TYPE.”

For details on the type of multi-viewer and the picture number, see “Type of multi-viewer and picture number” on page 56.

- 4 Turn the F3 control to select the output video displayed on each divided window under “SIGNAL.”

PGM: to output program video

PVW: to output preview video

IN 1 to IN 4: to output video input from the SDI IN 1 to 4 connectors at the rear of the Processor Unit

IN 5 to IN 8: to output video input from the interface board installed in the IN1 card slot at the rear of the Processor Unit
(When the BRSA-20HSD1 is installed, select any of “IN 5” to “IN 8.”
When the BRSA-20DD1 is installed, select “IN 5.”)

IN 9: to output the video input from the input connector on the interface board installed in the IN2 card slot at the rear of the Processor Unit

FM 1, FM 2: to output frame memory image 1 or 2 stored in the Processor Unit

MAT1, MAT2: to output color matte 1 or 2 used for a background image

CLBR: to output color bars used for adjustment and test transmission

AUX1, AUX2: to output the same video as that output from the AUX1 or AUX2 connector at the rear of the processor unit.

NONE: to display the window in black

Notes

- If you select multi-viewer video for the output from the AUX1 or AUX2 output connector (page 64), selecting “AUX1” or “AUX2” in step 4 above displays the window in black.
- If you select video that cannot be displayed for any reason, such as a different video format, the corresponding window is displayed in black or in blue (for FM 1 and FM 2).

Type of multi-viewer and picture number

Type of multi-viewer	Picture number	Factory preset output video																																
TYPE1	1	PGM																																
TYPE4	<table border="1" style="width: 100%; text-align: center;"> <tr> <td>1</td> <td>2</td> </tr> <tr> <td>3</td> <td>4</td> </tr> </table>	1	2	3	4	<table border="1" style="width: 100%; text-align: center;"> <tr> <td>PVW</td> <td>PGM</td> </tr> <tr> <td>IN 1</td> <td>IN 2</td> </tr> </table>	PVW	PGM	IN 1	IN 2																								
1	2																																	
3	4																																	
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IN 5	IN 6	IN 7	IN 8																															
IN 9	MAT1	MAT2	CLBR																															

When the setting is complete

Press the CAM mode button or SW mode button to exit the menu mode.
 If you change the setting, "Save setup data? [PAGE] (yes) or [EXIT] (no)" appears on the display panel. Press the PAGE button to store the data.

Setting the Bus Mode for the Cross-Point Buttons (Menu Page 943)

The PGM and NEXT select buttons are collectively referred to as cross-point buttons.

The select button of the program video currently output from the PGM output connector lights in red, and the button of the program video to be output next lights in orange.

In bus toggle mode ("BUS TGL" is set to "On."), the program video currently output is shown as the PGM select button lit in red, and the program video to be output next is shown as the NEXT select button lit in orange.

In bus fixed mode ("BUS TGL" is set to "Off."), the functions of a string of the PGM select buttons and that of the NEXT select buttons are replaced with each other depending on the position of the transition lever. When the transition lever is in the upper end position, the button of the upper string (PGM select button) indicates the current program output video (lights in red), and the button of the

lower string (NEXT select button) indicates the next program output video (lights in orange).

When the lever is in the lower end position, the button of the lower string (NEXT select button) indicates the current program output video (lights in red), and the button of the upper string (PGM select button) indicates the next program output video (lights in orange).

The menu is used to select bus toggle or bus fixed mode.

- 1 Display menu page 943.

For the procedure for displaying the menu, see “Menu Operation” on page 46.

PANEL	ME AUTO	DSK AUTO	PIP AUTO	BUS TGL	3/5
TRANS	30	30	30	Off	943

- 2 Turn the F4 control to display “On” or “Off” under “BUS TGL.”

On: to use the cross-point buttons in bus toggle mode

Off: to use the cross-point buttons in bus fixed mode

When the setting is complete

Press the CAM mode button or SW mode button to exit menu mode.

If you change the setting, “Save setup data? [PAGE] (yes) or [EXIT] (no)” appears on the display panel. Press the PAGE button to store the data.

Setting Up the VISCA Camera

To set the VISCA communication mode (menu page 911)

The menu is used to select VISCA mode for communication with the VISCA cameras, RS-422 or RS-232C.

- 1 Display menu page 911.

For the procedure for displaying the menu, see “Menu Operation” on page 46.

CAMERA	CONTROL	BAUD	MODEL	APPLY	1/8
VISCA	RS-232C	9600	Auto	↓ Exec	911

- 2 Turn the F1 control to display the VISCA communication mode to be used under “CONTROL.”

You can select RS-422 or RS-232C.

- 3 Turn the F2 control to set the baud rate for communication with the VISCA cameras under “BAUD.”

You can select “9600” or “38400” for the baud rate.

- 4 Turn the F3 control to set the model of the connected cameras under “MODEL.”

Normally, set it to “Auto.”

If all the connected cameras are of the same model, you can also select the model name.

Notes

- If you select a model name that is different from the connected cameras, a warning message appears when the switcher is turned on. In this case, select the correct model or select “Auto” in this menu.
- Set the VISCA communication mode on the cameras to the same as that on the switcher. For how to set the VISCA communication mode on the camera, refer to the Operating Instructions supplied with the cameras.

5 Press the F4 control to confirm the settings described in steps 2 to 4.

Pressing the F4 control enables confirmation of the settings. Rebooting the switcher is required after the settings are changed, and “Reboot system? [PAGE] (yes) or [EXIT] (no)” appears on the display panel.

6 Press the PAGE button.

The switcher reboots, and the changed settings are enabled.

Assigning the VISCA IDs (menu page 912)

The menu is used to assign the VISCA ID to each of the CAMERA 1 to 7 buttons in the CAMERA/DSK/AUX bus section. Pressing the CAMERA button enables you to control a VISCA-compatible camera with the same VISCA ID as that assigned to the button.

Note

Do not set the same VISCA ID to different cameras. We recommend that the address switches on the cameras be set to “Auto” (“0” for the BRC-Z700). With this setting, VISCA IDs 1 to 7 are automatically assigned to the cameras in order of closer distance from the switcher.

For how to assign the address to the camera, refer to the Operating Instructions supplied with the camera.

1 Display menu page 912.

For the procedure for displaying the menu, see “Menu Operation” on page 46.

Note

When menu page 911 is displayed, pressing the PAGE button once displays menu page 912.

CAMERA	CAM BTN	NAME	VISCA ID	NET CHG	2/8
ASSIGN	1	(4 chars.)	Off	↓ Exec	912

2 Turn the F1 control to set the CAMERA button number to which you wish to assign the VISCA ID under “CAM BTN.”

You can select CAMERA button 1 to 7.

Note

Since the settings under “CAM BTN” and “NAME” are changed relative to each other, you can select the CAMERA button number from the camera name by turning the F2 control instead of the F1 control.

- 3 Turn the F3 control to set the same VISCA ID as that set on the camera under “VISCA ID.”

You can select VISCA ID 1 to 7 or “Off.”

Pressing the CAMERA button set in step 2 enables you to control a BRC-series camera with the same VISCA ID as selected in this step. When “Off” is selected, no camera can be controlled with the CAMERA button selected in step 2.

Note

You can assign the same VISCA ID to two or more CAMERA buttons.

- 4 Repeat steps 2 and 3 to assign a VISCA ID to each of the CAMERA buttons.
- 5 Press the F4 control to confirm the settings in steps 2 to 4.

Pressing the F4 control enables confirmation of the settings.

To reassign the VISCA IDs

If a camera in the VISCA system configuration is changed, you should reassign the VISCA IDs.

Press the F4 control on menu page 912 to execute “NET CHG” (Network Change). The VISCA IDs of all the cameras are then reassigned to the CAMERA buttons.

When the setting is complete

Press the CAM mode button or SW mode button to exit menu mode.

If you change the setting, “Save setup data? [PAGE] (yes) or [EXIT] (no)” appears on the display panel. Press the PAGE button to store the data.

To control the power on/off of the VISCA cameras (menu page 917)

You can turn on/off the power of the connected VISCA cameras from the switcher. You can also turn on the connected VISCA cameras automatically when the power of the switcher is turned on.

- 1 Display menu page 917.

For the procedure for displaying the menu, see “Menu Operation” on page 46.

CAMERA	CAM BTN	TURN	APPLY	AUTO ON	7/8
PWR MNG	All	Off	NOP	On	917

- 2 Turn the F1 control to set the CAMERA button number of the camera whose power on/off you wish to control under “CAM BTN.”

You can select “All” and CAMERA button 1 to 7.

When “All” is selected, you can control power on/off of all the connected VISCA cameras.

- 3 Turn the F2 control to set “On” or “Off” under “TURN.”

On: to turn on the camera

Off: to turn off the camera

- 4 Turn the F3 control to display “↓ Exec” then press the F3 control.

The selected camera is turned on/off according to the setting in step 3.
Repeating steps 2 to 4 allows the switcher to control each of the cameras.

To turn on all the VISCA cameras in conjunction with the power of the switcher

Turn the F4 control to set “AUTO ON” to “On.” You can turn on all the connected VISCA cameras automatically when the switcher is turned on.

When the setting is complete

Press the CAM mode button or SW mode button to exit menu mode.

If you change the setting, “Save setup data? [PAGE] (yes) or [EXIT] (no)” appears on the display panel. Press the PAGE button to store the data.

Setting Up the Switcher for Connecting the Computer (Menu Page 963)

When a computer is connected to the LAN (10/100) connector at the rear of the switcher with a cross cable, you can store the setting data of the switcher in the computer, or import the data in the computer to the switcher.

The menu is used to set up the IP address and network mask of the switcher in order to communicate with the connected computer via FTP.

Note

The IP address of the switcher is 192.168.abc.def and the network mask is 255.255.abc.def. Only the third octet (abc) and the fourth octet (def) are displayed in the menu and can be changed.

- 1 Display menu page 963.

For the procedure for displaying the menu, see “Menu Operation” on page 46.

UTILITY	IPADD	NET MASK	FTP	APPLY	3/3
LAN	1. 1	255. 0	Enable	↓ Exec	963

- 2 Use the F1 control to set up the IP address of the switcher under “IPADD.”

- ① Press the F1 control to highlight the value of the third octet.
- ② Turn the F1 control to change the highlighted value. You can enter a value of 0 to 255.
- ③ Press the F1 control to highlight the value of the fourth octet and change the highlighted value by turning the F1 control. You can enter a value of 0 to 255.
- ④ Press the F1 control to confirm the values temporarily.

- 3 Use the F2 control to set up the network mask of the switcher under “NET MASK.”

Follow the procedure described in step 2.

- 4 Turn the F3 control to select “Enable” under “FTP.”

- 5 Press the F4 control to confirm the values set in steps 2 to 4.

Pressing the F4 control enables confirmation of the settings.

Rebooting the switcher is required after the settings are changed, and “Reboot system? [PAGE] (yes) or [EXIT] (no)” appears on the display panel.

6 Press the PAGE button.

The switcher reboots, and the changed settings are enabled.

Note

If “FTP” is set to “Disable,” the connection between the switcher and the computer via LAN is disconnected. The switcher will not respond to any response such as ping from the connected computer.

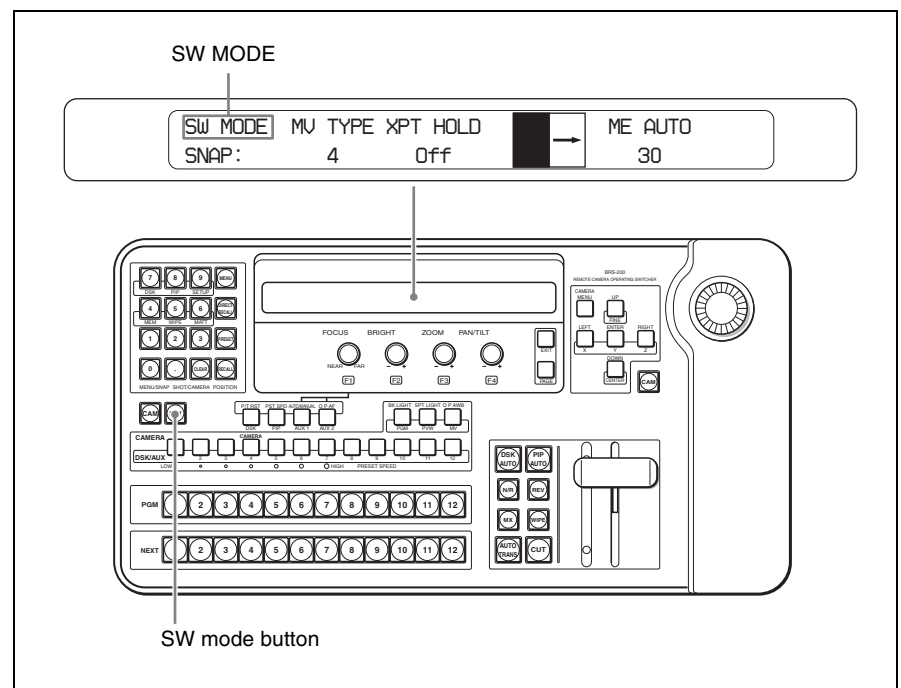


Before Starting the Switching Operation

You have set up the input/output video signals for switching operation with “Basic Setups of the Switcher” in “Chapter 3 Preparations.” This chapter describes how to switch the program output video from the PGM output connectors on the Processor Unit and how to apply video effects. Before starting the switching operation, confirm the following contents.

Enabling SW Mode

Press to light up the SW mode button on the Control Panel. The switcher enters SW (switcher) mode. The display panel switches to SW MODE display.



Notes

- While you are inclining the joystick or turning the dial on the upper part of the joystick in CAM mode, pressing the SW mode button does not light up the

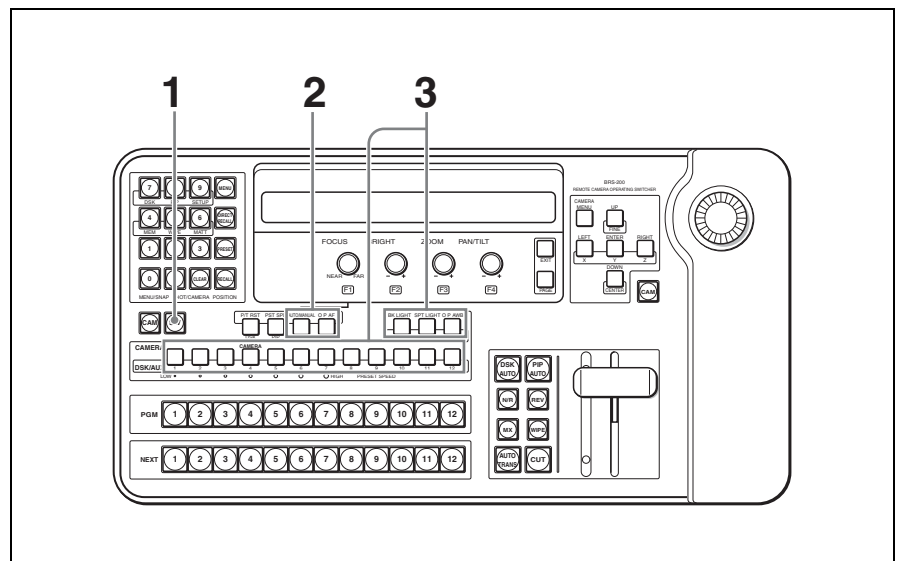
button or enables SW mode. Release your hands from the joystick before you press the SW mode button.

- When you press the SW mode button, the message “Save setup data? [PAGE] (yes) or [EXIT] (no)” or “Reboot system? [PAGE] (yes) or [EXIT] (no)” may appear. Press the PAGE button. The switcher enters SW mode after saving the data or rebooting the system. If you press the EXIT button, the switcher enters menu mode without storing the data. Press the SW mode button again.
- The buttons in the cross-point bus section and effect transition section, as well as the transition lever can be used for SW mode even when the switcher is in another mode and the SW mode button is not lit.

Selecting the Auxiliary Output Video

Select the video signal output from the AUX1 or AUX2 connector at the rear of the Processor Unit.

The AUX1 and AUX2 output connectors are able to output the program output video, preview video, multi-viewer video, etc.



1 Press to light up the SW mode button to enter the SW mode.

2 Press to light up the AUX 1 or AUX 2 button.

AUX 1 button: to select the video output from the AUX1 output connector

AUX 2 button: to select the video output from the AUX2 output connector

3 Press to light up any one among the DSK/AUX 1 to 12, PGM, PVW and MV buttons.

Pressing each button allows you to select the following video:

PGM button: program output video

PVW button: preview output video

MV button: multi-viewer output video

DSK/AUX 1 to 12 buttons: input video, frame memory, color matte, or color-bar signal assigned to the selected button

The selected video signal will be output from the AUX1 and AUX2 output connectors.

Basics of Video Switching

In video switching, one input video is switched to another, then the final program video is output from the PGM output connector. Composition of the images is also available.

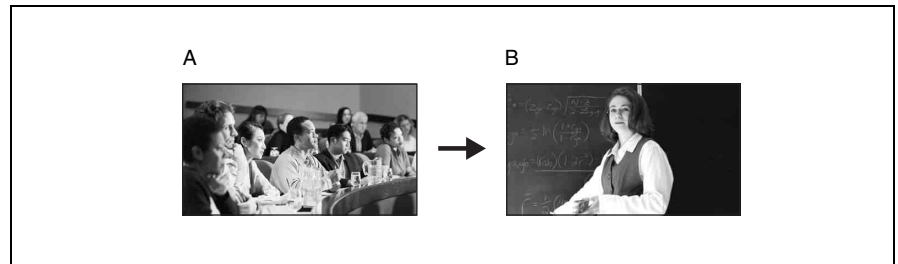
This section describes the most basic switching functions. See the relevant sections for details on switching and composing operations.

Note

Before starting, set up the switcher referring to “Basic Setups for the Switcher” in Chapter 3 (page 50).

Switching with a cut

This is the most basic and commonly used type of switching. The image is switched instantaneously from A to B.



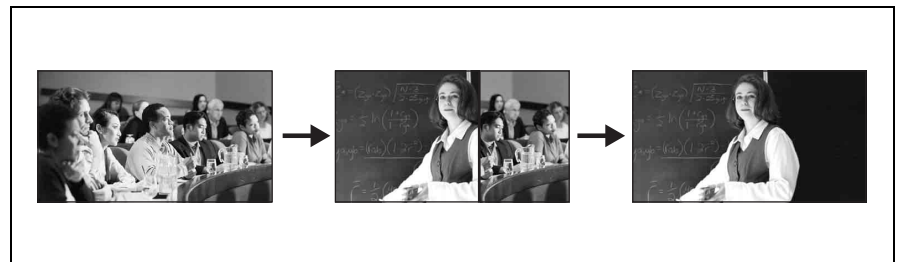
For details, see “Switching the Video with a Cut” on page 66.

Switching with a transition effect

In a transition effect, the image is gradually switched from one video to another by applying an effect.

With a wipe, for example, the program output video is gradually switched as if the next video were wiping out the current video across the screen.

Example of a wipe



For details, see “Switching the Video with an Effect (Transition Effect)” on page 69.

Switching the Video with a Cut

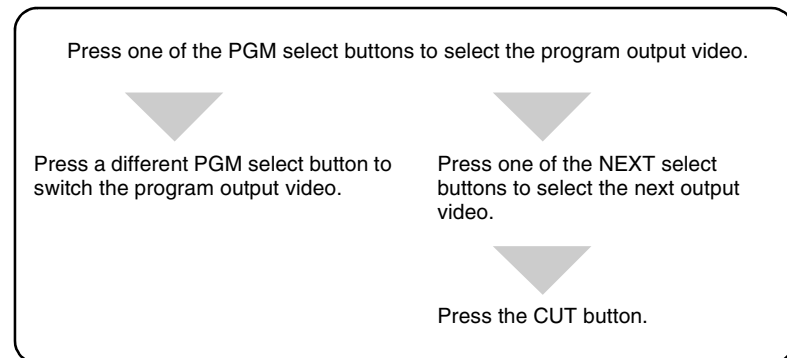
This method switches the video instantaneously without applying any effect. This is the most basic form of switching.

Basic operation of a cut

There are the following two methods for switching with a cut:

- Switching directly to the next video by pressing the PGM select button
- Checking the next video in the preview window then pressing the CUT button

The basic procedure for switching with a cut is as follows:

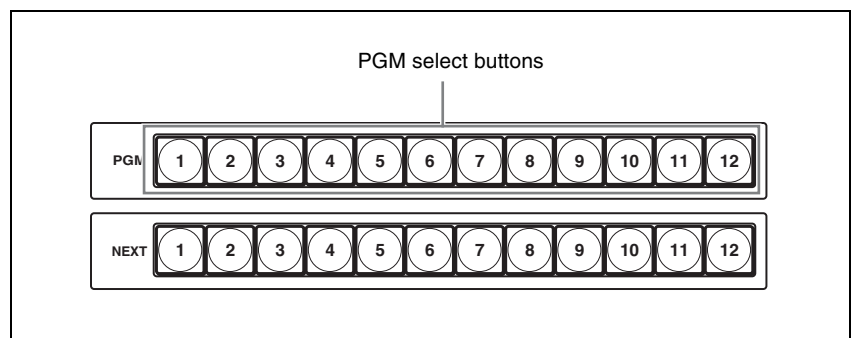


Switching Directly with the PGM Select Button

To switch from one video to another, simply press the PGM select button to which a different video is assigned.

- 1** Press the PGM select button to which the video to be output is assigned.

The button you pressed lights up in red, and the selected video is output from the PGM output connector.



- 2** Press the PGM select button to which the video to be output next is assigned.

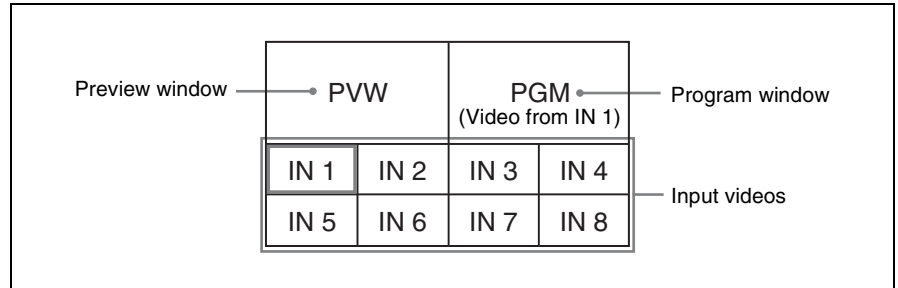
The button you pressed lights up in red, and the program output video is instantaneously switched to the selected video.

- 3** Repeat step **2** to switch the program output video one after another.

Note

It is convenient for selecting the video if you use the multi-viewer feature (page 55) to display multiple input videos on a monitor at the same time. In the multi-viewer display, the current program output video is boxed in a red frame.

Example of 10-picture multi-viewer:

**Note**

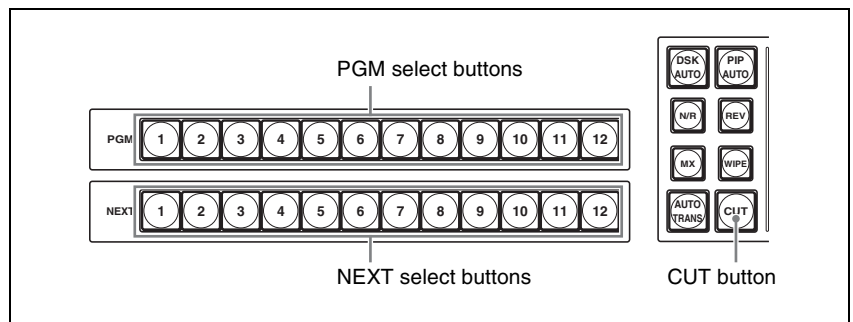
You can change the type of the multi-viewer output from among 1, 4, 10 and 16 pictures by turning the F1 control and changing the number under "MV TYPE," when the switcher is in SW mode.

Switching with the CUT Button After Checking the Next Video in the Preview Window

To switch the video after checking a new video in the preview window, use the CUT button.

- 1 Press the PGM select button to which the video to be output is assigned.

The button you pressed lights up in red, and the selected program video is output.



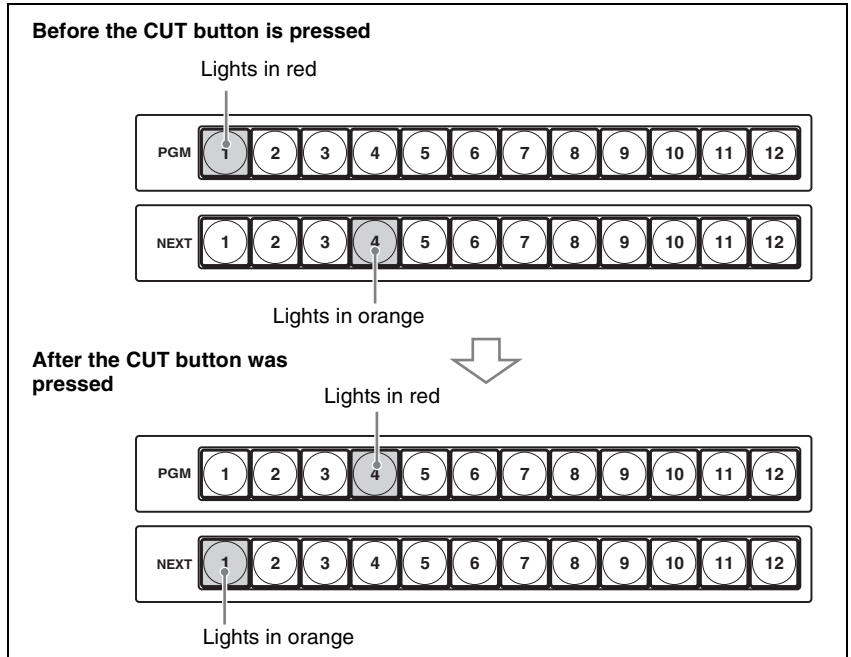
- 2 Press the NEXT select button to which the video to be output next is assigned.

The button you pressed lights up in orange, and the selected video is output in the preview window.

- 3 Press the CUT button.

The program output video is switched to the video selected in step 2. The previous program output video is shown in the preview window. At the same time, the illumination of the PGM select button and that of the NEXT select button are switched.

Example: When you press the PGM select button 1 and NEXT select button 4

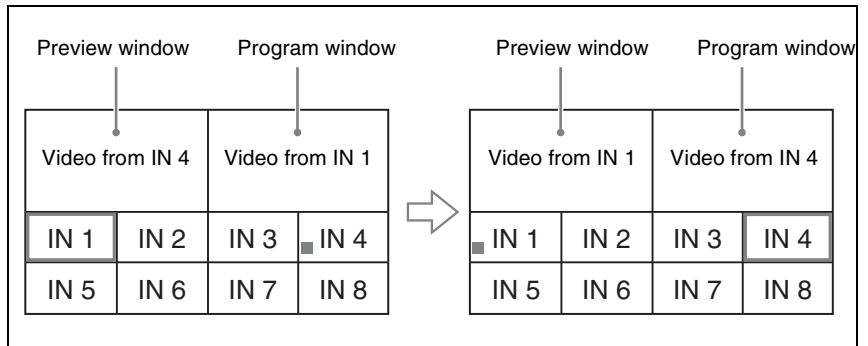


Each press of the CUT button switches the program output video.

Note

It is convenient for selecting the video if you use the multi-viewer feature (page 55) to display multiple input videos on a monitor at the same time. In the multi-viewer, the program output video is boxed in a red frame, and an orange ■ mark appears on the video selected with the NEXT select button. Each press of the CUT button switches the red frame and the orange ■ mark.

Example of 10-picture multi-viewer:



Notes

- The red frame and orange ■ mark are also displayed on the videos for the picture-in-picture or downstream key function.
For details, see “Executing Picture-in-Picture” (page 76) or “Basic operation of downstream key composition” (page 85).
- You can change the usage mode of the cross-point buttons (PGM and NEXT select buttons) to bus fixed mode.
For details, see “Setting the Bus Mode for the Cross-Point Buttons (Menu Page 943)” on page 56.

Switching the Video with an Effect (Transition Effect)

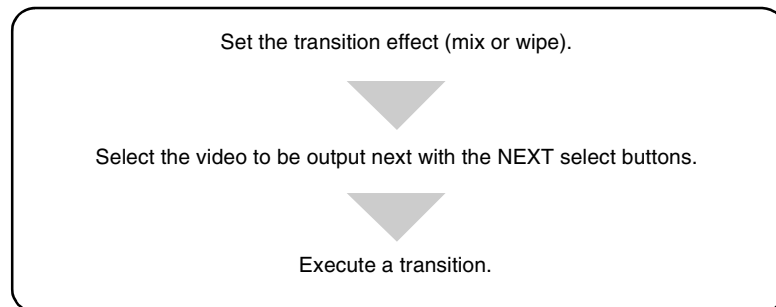
Instead of an instantaneous switching of the videos, you can gradually switch from one video to another while applying various effects. This video switching is called “transition effect.”

There are two types of transition effects available for the switcher:

- to switch while overlapping the current and next videos (mix)
- to switch while wiping from the current video to the next video (wipe)

Basic operation of a transition effect

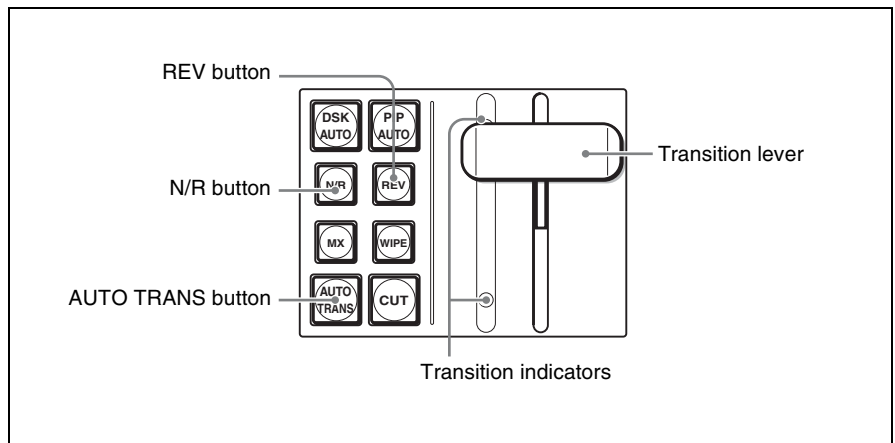
The basic procedure for applying a transition effect is as follows:



To execute a transition

There are two methods for executing a transition as follows:

- to execute a transition automatically by pressing the AUTO TRANS button
- to execute a transition manually using the transition lever



To use the AUTO TRANS button

Pressing the AUTO TRANS button gradually switches the video during the preset transition time.

Note

You can change the transition time. Follow the procedure described in “Setting the Transition Time” on page 80.

To use the transition lever

Moving the transition lever in the direction of the lit indicator enables execution of a transition according to the movement of the lever.

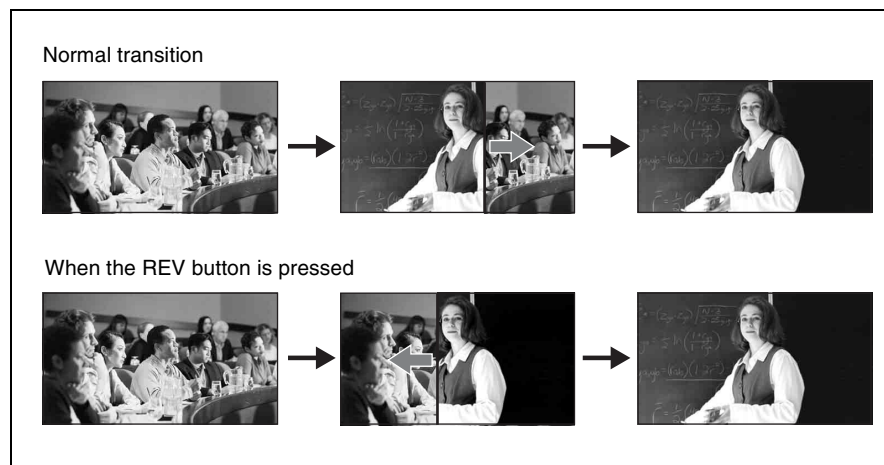
When you move the lever as far as it will go in the direction of the lit indicator, the transition is complete. Then the indicator on the opposite end lights up instead.

To change the direction of transition

• Using the REV button

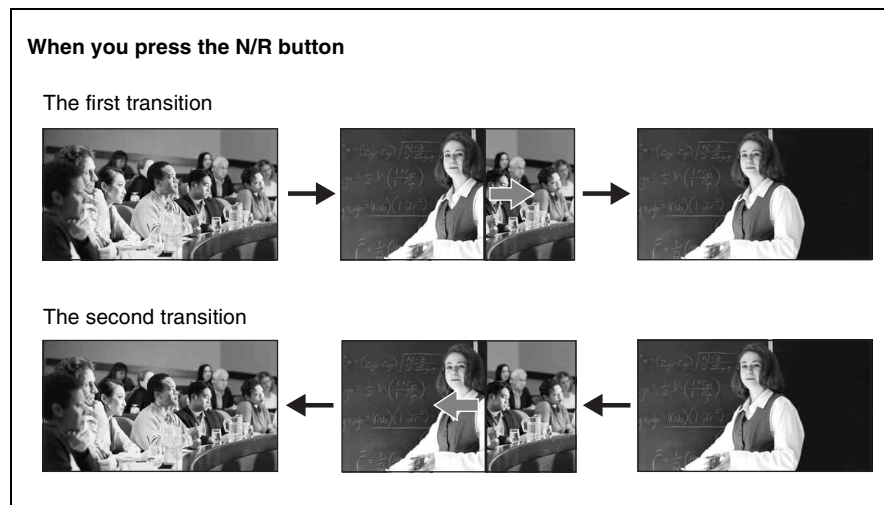
Press to light up the REV button to enable transition in the reverse direction.

If you press the REV button while the button is lit, the button goes dark, and the transition progresses in the normal direction.



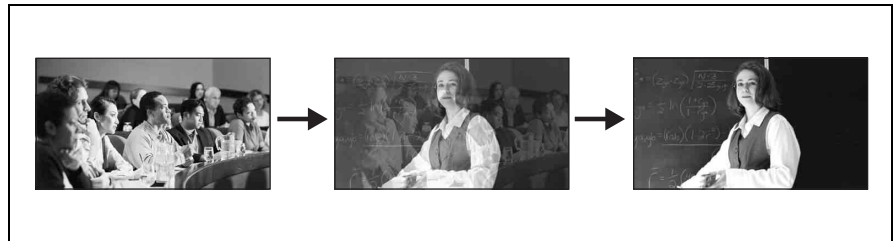
• Using the N/R (Normal/Reverse) button

When you press to light up the N/R button, the transition reciprocates each time the AUTO TRANS button is pressed. If you press the N/R button while the button is lit, the button goes dark, and this feature is canceled. Each time a transition is complete, the REV button lights up then goes dark.



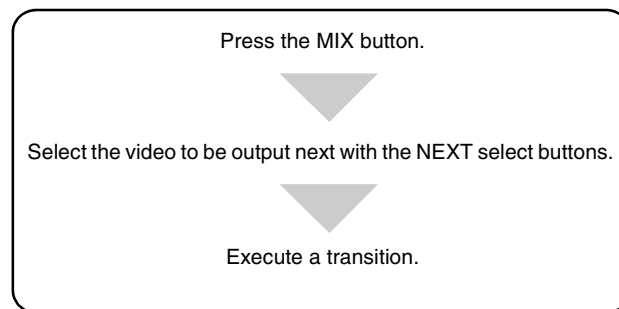
Switching the Video with a Dissolve Effect (Mix)

A gradual transition is done from the current video to the next video while both videos are overlapped.



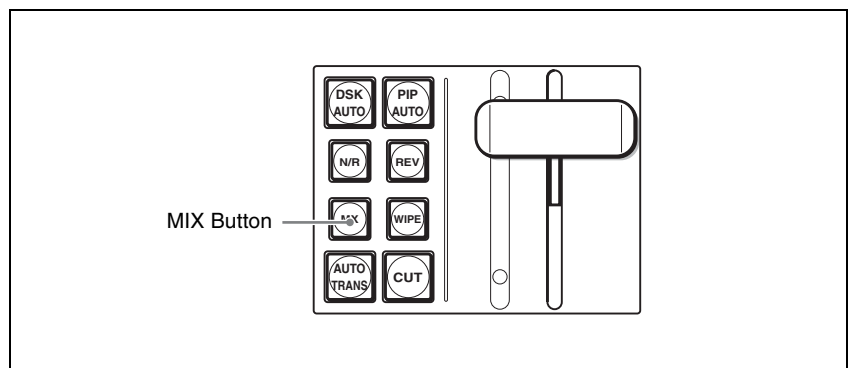
Basic operation of a dissolve effect

The basic procedure for a dissolve is as follows:



1 Press the MIX button.

The MIX button lights up in orange.



Note

Even if you press the MIX button while the AUTO TRANS button is lit or the transition lever is not positioned at either end, you cannot change the wipe transition to mix transition effect. In such a case, wait until the AUTO TRANS button goes dark or move the transition lever as far as it will go to either the upper or lower end.

2 Determine the video to be output next then press the NEXT select button to which the selected video is assigned.

The selected video appears in the preview window.

3 Use the AUTO TRANS button or transition lever to execute a transition.

The program output video gradually switches to the video selected with the NEXT select button while one video dissolves to the other.



Each time you press the AUTO TRANS button or move the transition lever, the program output video switches to the video selected with the NEXT select button while one video dissolves the other.

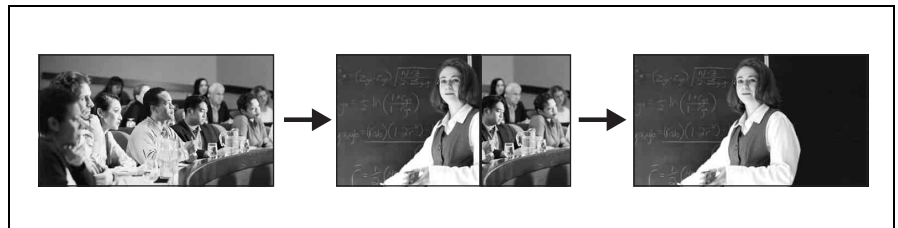
Note

You can change the transition time for executing a transition using the AUTO TRANS button.

For details, see “Setting the Transition Time” on page 80.

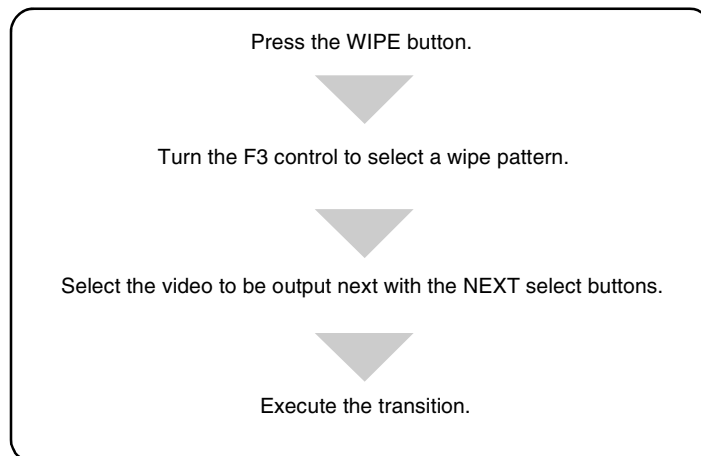
Switching the Video with a Wipe

The program output video is gradually wiped across the screen to reveal the next video. You can select from among 20 wipe patterns.



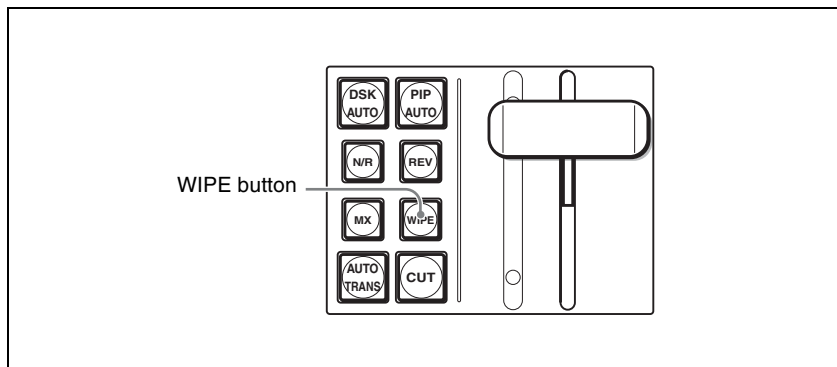
Basic operation of a wipe

The basic procedure for a wipe is as follows:



1 Press the WIPE button.

The WIPE button lights up in orange.



Note

Even if you press the WIPE button while the AUTO TRANS button is lit or the transition lever is not positioned at either end, you cannot change the mix transition to wipe transition effect. In such a case, wait until the AUTO TRANS button goes dark or move the transition lever as far as it will go to either the upper or lower end.

2 Turn the F3 control to select one of the wipe patterns.

You can select from among 20 patterns.

SW MODE	MV TYPE	XPT HOLD		ME AUTO	
SNAP:	4	Off		30	

For available wipe patterns, see “Wipe patterns” on page 74.

Note

If “DIRECT” appears on the display panel above the F3 control, press the F3 control once to display the wipe pattern.

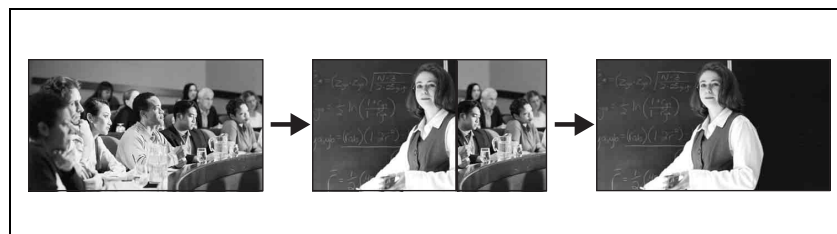
3 Determine the video to be output next then press the NEXT select button to which the selected video is assigned.

The selected video appears in the preview window.

4 Use the AUTO TRANS button or transition lever to execute the transition.

The program output video is gradually wiped across the screen to reveal the video selected with the NEXT select button.

Example of a wipe pattern



Each time you press the AUTO TRANS button or move the transition lever, the program output video is switched to the video selected with the NEXT select button in a wipe transition.

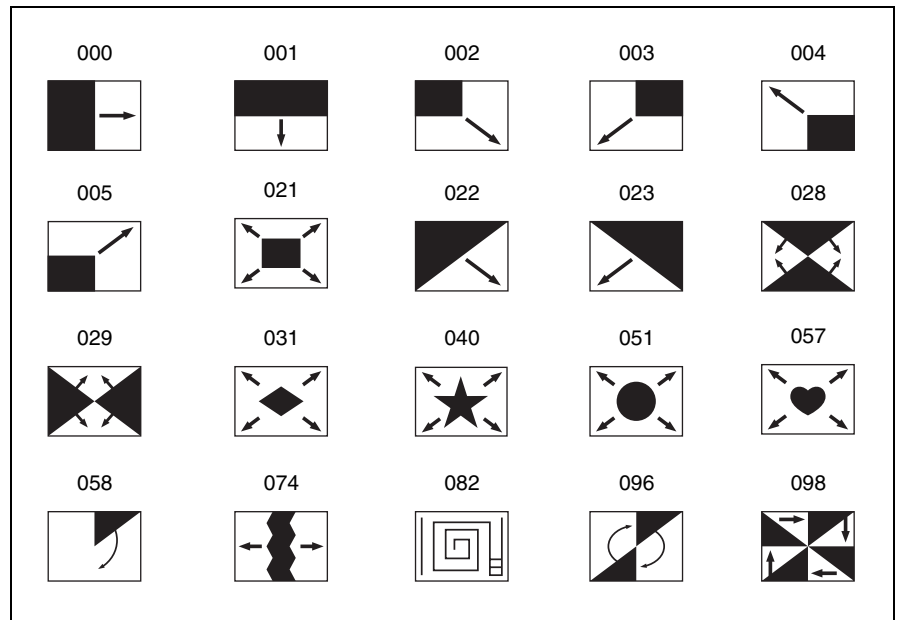
Notes

- You can change the transition time for executing a transition using the AUTO TRANS button.
For details, see “Setting the Transition Time” on page 80.
- You can set a border for the boundary between the videos switched by a wipe.
For details, see “Setting a Border for a Wipe or PIP” on page 81.
- You can store up to 10 wipe settings in the switcher and can easily recall them.
For details, see “Storing the Settings of a Wipe, PIP, and Setting Menu Items” on page 97.

Wipe patterns

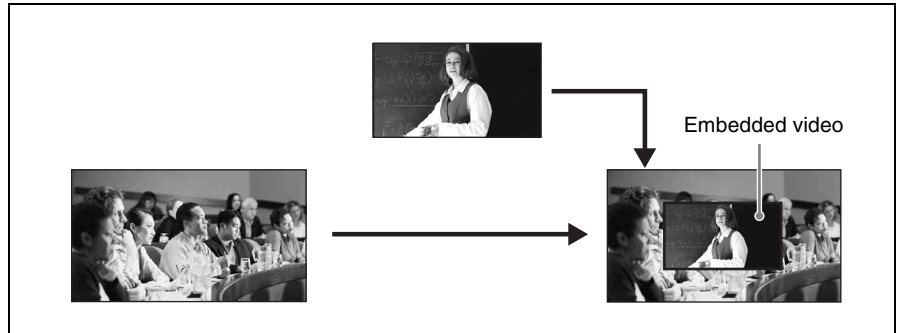
For a wipe, 20 patterns are selectable.

The patterns available for this switcher and the pattern numbers are as follows:
The arrows in the wipe patterns indicate the direction of a transition.



Composing Videos Using Picture-in-Picture (PIP)

You can compose videos, using the picture-in-picture feature, by embedding a video within another video as a small window.



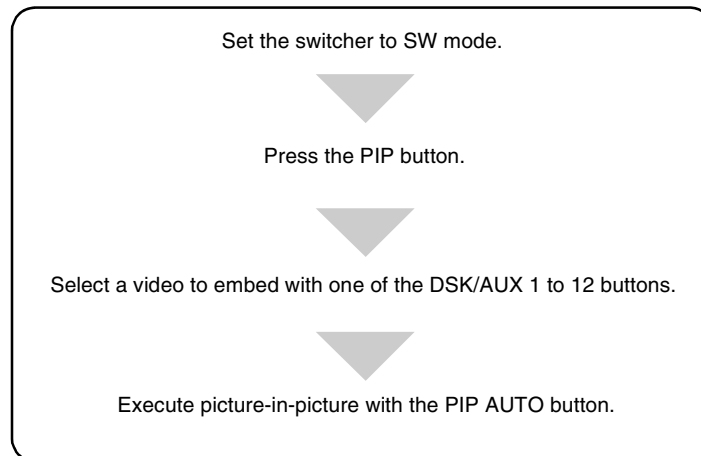
Note

When you use the picture-in-picture feature to compose videos, you can check the results of composite video in the preview window before outputting the program video.

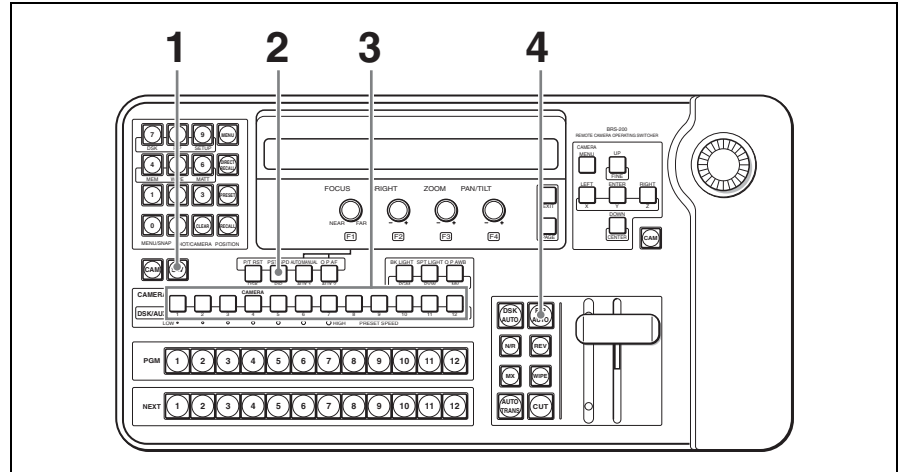
For details, see “Checking the Results of Composite Video (Effect Preview)” on page 96.

Basic operation of picture-in-picture

The basic procedure for picture-in-picture is as follows:



Executing Picture-in-Picture



- 1** Press to light up the SW mode button to set the switcher to SW mode.
- 2** Press to light up the PIP button.
- 3** Press one of the DSK/AUX 1 to 12 buttons to select a video to embed.
In multi-viewer display an orange ■ mark appears on the video to embed.
- 4** Press to light up the PIP AUTO button in green.

The video selected in step **3** is embedded in the program output video. In multi-viewer display the orange ■ mark on the video to embed disappears and the video is boxed in a red frame. When the transition is complete, the PIP AUTO button turns red.

To cancel picture-in-picture

After the transition is complete, while the PIP AUTO button is lit in red, press the PIP AUTO button. The PIP AUTO button lights up in green. After automatic transition, the PIP AUTO button goes dark, and the embedded picture disappears.

To suspend the transition of picture-in-picture (PIP AUTO)

While the PIP AUTO button is lit in green (the transition is in progress), press the PIP AUTO button to suspend the transition. Press the button again to restore the transition. When the transition is complete, the PIP AUTO button turns red.

Notes

- You can change the transition time for executing a transition using the PIP AUTO button.
For details, see “Setting the Transition Time” on page 80.
- You can change the size and display position of an embedded video.
For details, see “Adjusting the Size and Display Position of an Embedded Video in Picture-in-Picture” on page 77.
- You can set the border of an embedded video.
For details, see “Setting a Border for a Wipe or PIP” on page 81.

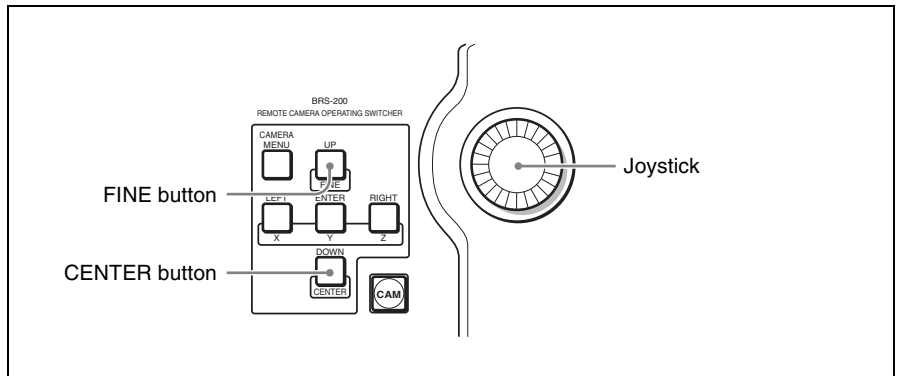
- You can crop an unwanted portion of an embedded video.
For details, see “To crop an embedded video for picture-in-picture” on page 79.

Adjusting the Size and Display Position of an Embedded Video in Picture-in-Picture

You can set the size and display position of a video to be embedded in picture-in-picture.

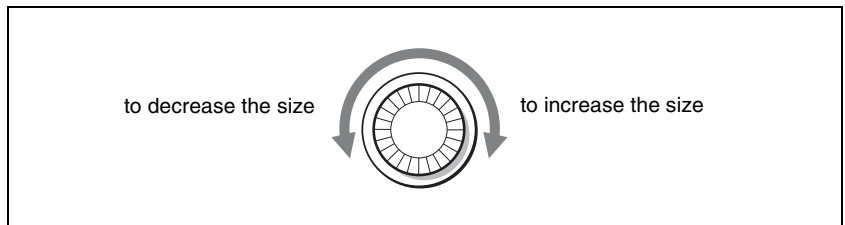


To adjust the size and display position of an embedded video using the joystick

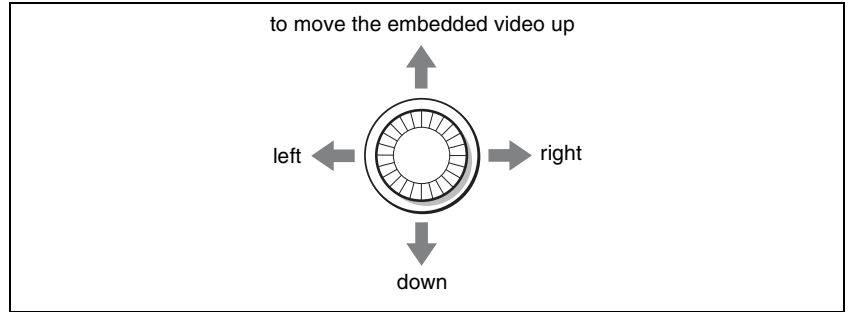


- 1 Press to light up the MENU button.
- 2 Display menu page 810.
For the procedure for displaying the menu, see “Menu Operation” on page 46.
- 3 Turn the dial on the upper part of the joystick clockwise or counterclockwise to specify the size of the embedded video.

You can set the size from 1/6 to 1/2 a full-screen size.



- Incline the joystick forward, backward, left, or right to specify the display position of the embedded video.



To display the embedded video in the center of the screen

Press the CENTER button. The embedded picture is reduced in size by half and displayed centered.

To reduce the setting speed of the joystick

When you press to light up the FINE button, the speed for changing the setting with the joystick is reduced, and fine adjustment of the size and display position is enabled. Press the FINE button again to make it go dark to restore the normal setting speed.

Notes

- The joystick is operable only when the X, Y, or Z button is lit. The X button corresponds to horizontal movement of the display position of the embedded video and the Y button to vertical movement. The Z button corresponds to the size adjustment of the embedded video. If you press the X, Y, or Z button to make the button go dark, the corresponding function is disabled. Press to light up the corresponding button again to enable the joystick.
- You can store up to 10 settings for the size and display position in the register of the switcher and recall them easily.

For details, see “Storing the Settings of a Wipe, PIP, and Setting Menu Items” on page 97.

To adjust the size and display position of an embedded video using the menus

You can set the size and display position of an embedded video in picture-in-picture by changing the setting values in the menu instead of using the joystick.

- Press to light up the MENU button.

- Display menu page 810.

For the procedure for displaying the menu, see “Menu Operation” on page 46.

PIP	SIZE		DRCT NO.	PRESET	1/5
SIZE	1/2		None	↓ Exec	810

- Turn the F1 control to set the size of the embedded video under “SIZE.”

You can set the size from 1/6 to 1/2 a full-screen size.

- Press the PAGE button to display menu page 820.

PIP	V POS	H POS	DRCT NO.	PRESET	2/5
POS	0.00	0.00	None	↓ Exec	820

- Turn the F1 and F2 controls to set the display position of the embedded video.

V POS: to set the vertical position within the range of -9.00 to 9.00

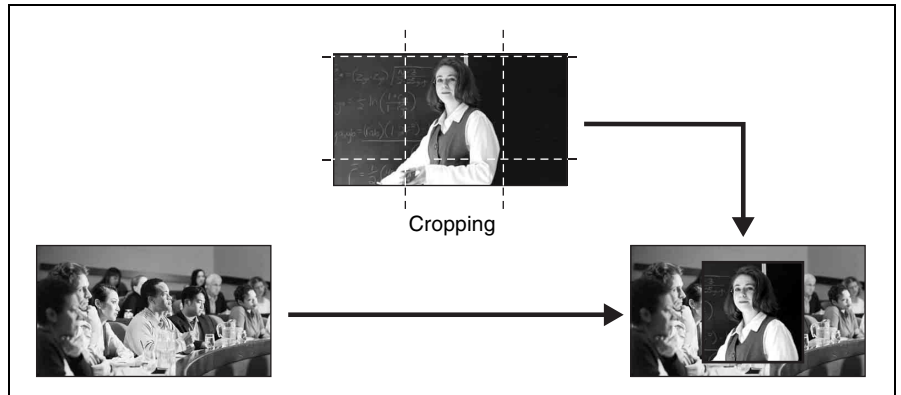
H POS: to set the horizontal position within the range of -16.00 to 16.00

Note

The selectable range for “H POS” is -12.00 to 12.00 when “FORMAT” is set to “SD” on menu page 951.

To crop an embedded video for picture-in-picture

You can crop an unwanted portion of a video and embed it in picture-in-picture.



- Press to light up the MENU button.
- Display menu page 840.

For the procedure for displaying the menu, see “Menu Operation” on page 46.

PIP	CROP	CROPPOS..			4/5
CROP	On				840

- Turn the F1 control to set “On” under “CROP.”
- Press the F2 control.

Menu page 841 is displayed.

PIP	TOP	LEFT	RIGHT	BOTTOM	1/1
CROPPOS	9.0	-12.0	12.0	-9.0	841

- Turn the F1 to F4 controls to set the cropping area for an embedded video.

TOP: to set the upper side within the range of -9.0 to 9.0 in units of 0.1

LEFT: to set the left side within the range of -16.0 to 16.0 in units of 0.1

RIGHT: to set the right side within the range of -16.0 to 16.0 in units of 0.1

BOTTOM: to set the lower side within the range of -9.0 to 9.0 in units of 0.1

Note

The selectable ranges are -5.0 to 5.0 for “TOP” and “BOTTOM,” and -8.0 to 8.0 for “LEFT” and “RIGHT” when “FORMAT” is set to “SD” on menu page 951.


Setting the Transition Time

The transition time indicates the duration of an effect from the beginning to the end in units of frames.

You can set the transition time for executing a transition using the AUTO TRANS, PIP AUTO or DSK AUTO button within the range of 0 to 999 frames.

- 1 Press to light up the SW mode button to set the switcher to SW mode.

The setting value of the transition time is displayed on the display panel above the F4 control.

SW MODE	MV TYPE	XPT HOLD		ME AUTO	
SNAP:	4	Off		30	

- 2 Press the F4 control to select the desired setting item.

ME* AUTO: to set the transition time for a mix or wipe effect

DSK AUTO: to set the transition time for a downstream key (DSK)

PIP AUTO: to set the transition time for picture-in-picture (PIP)

* ME is an abbreviation for Mix & Effect and indicates the mix and wipe transition effects.

- 3 Turn the F4 control to change the setting value.

You can set the transition time within the range of 0 to 999 frames in units of frames.

Note

You can also set the transition time on the following menu pages.

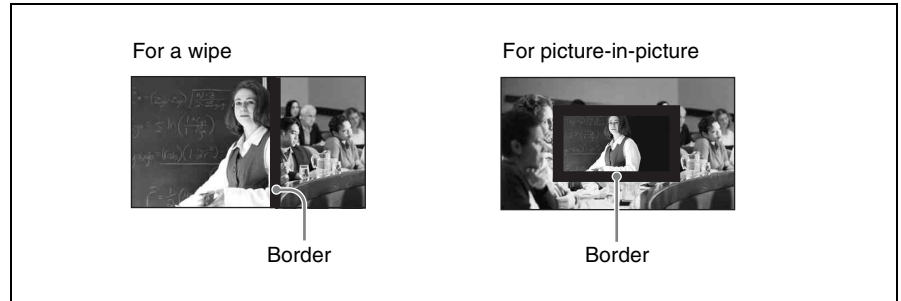
Menu page 943: ME AUTO, DSK AUTO, PIP AUTO

Menu page 760: DSK AUTO

Menu page 850: PIP AUTO

Setting a Border for a Wipe or PIP

The boundary of videos to be switched with a wipe or the frame of an embedded video in picture-in-picture are referred to as a “border.” You can set the color and width of a border.



1 Set a wipe pattern or a video to be embedded for picture-in-picture, referring to “Switching the Video with a Wipe” (page 72) or “Adjusting the Size and Display Position of an Embedded Video in Picture-in-Picture” (page 77).

2 Press the MENU button.

3 Display menu page 520 for a wipe and 830 for picture-in-picture.

For the procedure for displaying the menu, see “Menu Operation” on page 46.

4 Turn the F1 to F4 controls to change the color or width of a border.

Example of a wipe

WIPE	LUM	SAT	HUE	WIDTH	
BORDER	0.0	0.0	0.0	Off	520

LUM: to set the luminance within the range of 0.0 to 100.0 in units of 0.1

SAT: to set the saturation within the range of 0.0 to 100.0 in units of 0.1

HUE: to set the hue in units of 0.5

WIDTH: to set the border width within the range of 1 to 50 or set it to “Off” (no border)

Note

You can use the joystick to change the color of a border instead of the F1 to F3 controls. Inclining the joystick forward, backward, left or right adjusts “LUM” (luminance) and “SAT” (saturation). Turning the dial on the upper part of the joystick adjusts “HUE.”

Using the Color Bars or Color Mattes

The switcher incorporates the color bars for adjustment and testing and the color mattes used as a background. You can assign these video signals to the PGM or NEXT select buttons to use them for video switching or composition.

Assigning the Color Bar or Color Matte to the PGM or NEXT Select Button

Open menu page 922 and set “CLBR” (color bar), “MAT1” (color matte 1), or “MAT2” (color matte 2) under “SIGNAL.”

INPUT	XPT BTN	SIGNAL	NAME	INHIBIT	2/6
ASSIGN	1	CLBR	(4 chars.)	Off	922

For details, see “To assign the video input signals to the PGM and NEXT select buttons (menu page 922)” on page 52.

Changing the Color of Color Matte

- 1 Display menu page 610 for changing color matt 1 or menu page 620 for changing color matte 2.

For the procedure for displaying the menu, see “Menu Operation” on page 46.

To change color matt 1:

MATT	LUM	SAT	HUE		1/2
MATT1	0.0	0.0	0.0		610

- 2 Turn the F1, F2, and F3 controls to change the color of the color matte.

LUM: to set the luminance within the range of 0.0 to 100.0 in units of 0.1

SAT: to set the saturation within the range of 0.0 to 100.0 in units of 0.1

HUE: to set the hue in units of 0.5

Note

You can use the joystick to change the color of the color matte instead of the F1 to F3 controls.

Inclining the joystick forward, backward, left, or right adjusts “LUM” (luminance) and “SAT” (saturation). Turning the dial on the upper part of the joystick adjusts “HUE.”

Using Still Images Stored in Frame Memory

You can store the input video in frame memory as a still image and use it as a video source. The switcher has two frame memories: FM 1 and FM 2. You can store one still image in each frame memory.

- 1 Display menu page 410.

For the procedure for displaying the menu, see “Menu Operation” on page 46.

MEM	SIGNAL	DIST	FREEZE		1/4
FREEZE	IN 1	FM 1	↓ Exec		410

- 2 Turn the F1 control to select the input signal from which you wish to import a still image to frame memory, under “SIGNAL.”

IN 1 to IN 4: to select the video signal input from among any of the SDI IN 1 to 4 connectors at the rear of the Processor Unit

IN 5 to IN 8: to select the video signal input from the input connector on the interface board installed in the IN1 card slot at the rear of the Processor Unit (When the BRSA-20HSD1 is installed, select any of “IN 5” to “IN 8.” When the BRSA-20DD1 is installed, select “IN 5.”)

IN 9: to select the video signal input from the input connector on the interface board installed in the IN2 card slot at the rear of the Processor Unit

FM 1, FM 2: to select the image stored in frame memory 1 or 2 on the Processor Unit

MAT1, MAT2: to select color matte 1 or 2 for a background image

CLBR: to select the color bars for adjustment and test transmission

PGM: to select the program output video

PVW: to select the preview output video

- 3 Turn the F2 control to select the frame memory in which you wish to store a still image under “DIST.”

You can select “FM 1” (frame memory 1) or “FM 2” (frame memory 2).

- 4 Press the F3 (FREEZE) control.

The image displayed at the moment you press the F3 control is stored in frame memory as a still image.

- 5 Press the PAGE button twice to display menu page 430.

MEM	LOAD	STORE			3/4
NV MEM	NOP	↓ FM 1			430

- 6 Turn the F2 control to assign the frame memory whose data you wish to store in nonvolatile memory under “STORE.”

You can select “↓ FM 1,” “↓ FM 2,” or “↓ Both” (frame memories 1 and 2).

- 7 Press the F2 control.

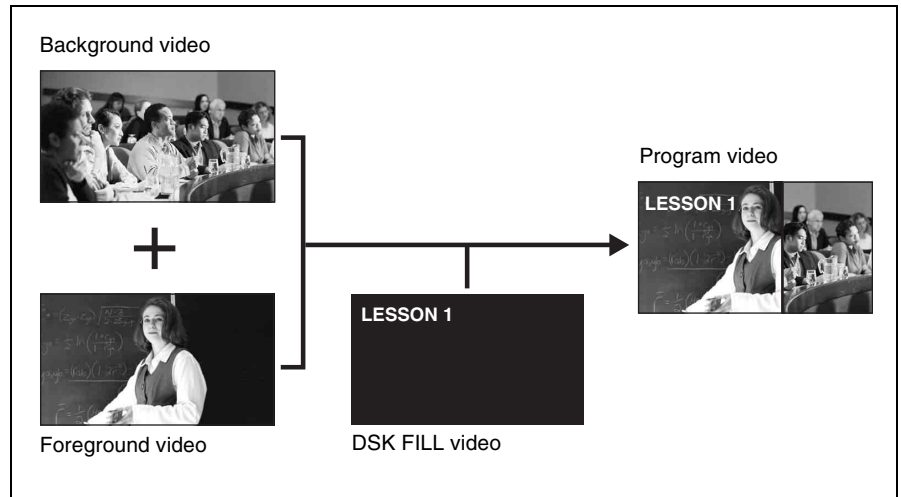
The still image in the selected frame memory is stored in nonvolatile memory. It takes about three minutes to store a frame memory.

Notes

- The still image stored in nonvolatile memory is retained even if the power for the switcher is turned off. However, the still image in frame memory that is not stored in nonvolatile memory, is lost when the switcher is turned off.
- To recall the still image from nonvolatile memory and store it in frame memory, set “LOAD” to “⊥ FM 1,” “⊥ FM 2,” or “⊥ Both” on menu page 430.
- When the switcher is turned on, the data in nonvolatile memory will automatically be loaded into frame memory.

Using the Downstream Key (DSK) to Add Characters or Graphics

You can add characters or graphics to a video that includes any effect or composition. In the flow of the procedure for outputting the final program video, this action is executed in the lowest downstream and called “downstream key (DSK).” This function is useful for superimposing characters.



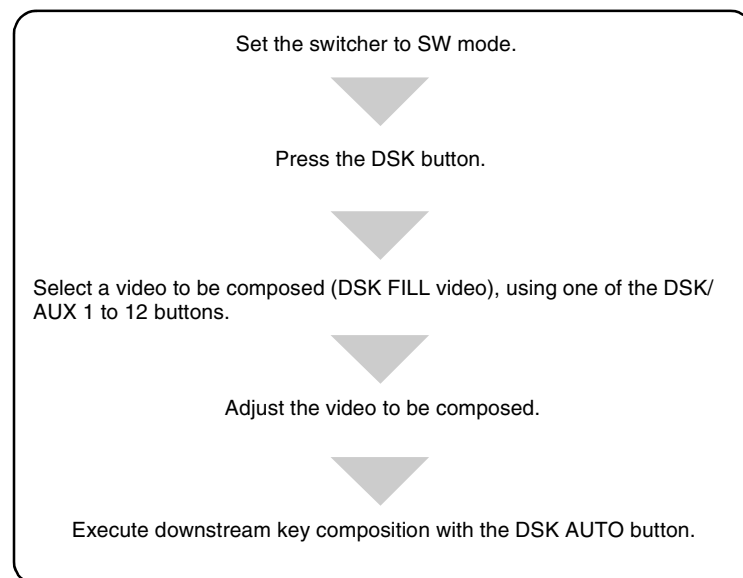
Note

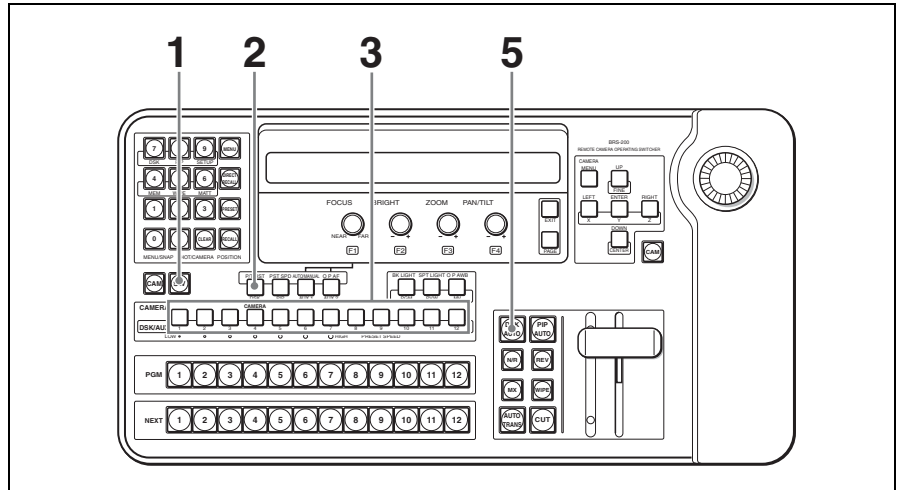
You can check the results of downstream key composition in the preview window before outputting the program video.

For details, see “Checking the Results of Composite Video (Effect Preview)” on page 96.

Basic operation of downstream key composition

The basic procedure for downstream key composition is as follows:





1 Press to light up the SW mode button to set the switcher to SW mode.

2 Press to light up the DSK button.

3 Press one of the DSK/AUX 1 to 12 buttons to specify a video to be composed with the DSK composition (DSK FILL video).

In multi-viewer display an orange ■ mark appears on the DSK FILL video (DSK FILL and DSK SOURCE videos for the DSK split composition).

4 Adjust the video to be composed.

For the procedure for adjusting the video, see “Composing Video Using the Luminance Key” (page 87), “Composing Video Using DSK Split” (page 88) or “Composing Video Using the Chroma Key” (page 91).

5 Press to light up the DSK AUTO button in green.

The DSK FILL video selected in step **3** is superimposed on the program output video.

In multi-viewer display the orange ■ mark on the DSK FILL video (DSK FILL and DSK SOURCE videos for DSK split composition) disappears, and the video is boxed in a red frame.

When the transition is complete, the DSK AUTO button turns red.

To cancel the downstream key composition

While the DSK AUTO button is lit in red after the transition is complete, press the DSK AUTO button. The DSK AUTO button lights up in green. After automatic transition, the DSK AUTO button goes dark then the downstream key composition is canceled.

To suspend the transition (DSK AUTO) of the downstream key composition

When the DSK AUTO button is lit in green (the transition is in progress), press the DSK AUTO button. The transition is suspended, and the button remains lit in green. Press the button again to restore the transition. When the transition is complete, the DSK AUTO button turns red.

Note

You can change the transition time for executing the transition by pressing the DSK AUTO button.

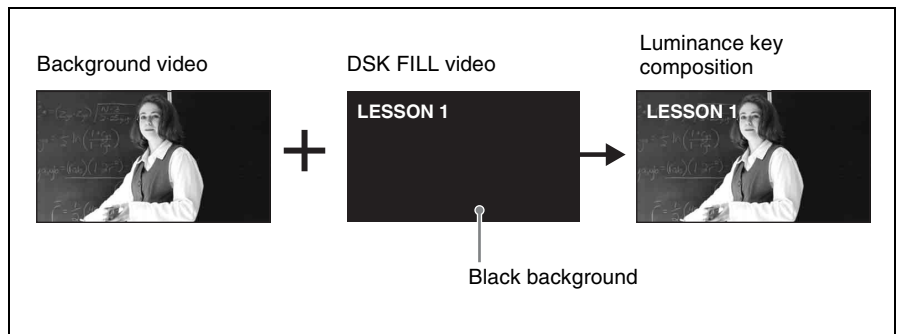
For details, see “Setting the Transition Time” on page 80.

Composing Video Using the Luminance Key

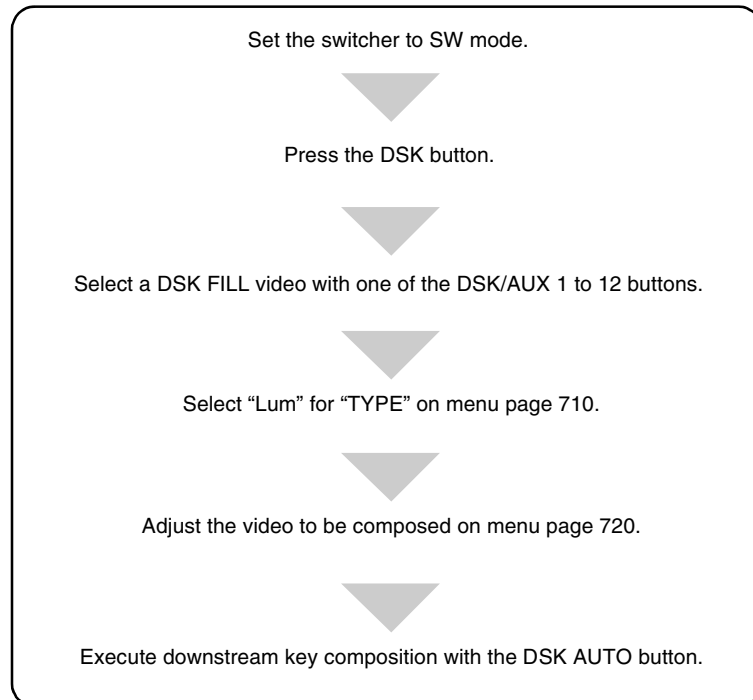
A video is created by detecting the differences of the components of brightness (luminance) to cut unwanted portions from the DSK FILL video. This method is referred to as “luminance key.”

Generally, the bright characters on a black background are cut out of the DSK FILL video and superimposed on a background video.

In the example below, the character string “LESSON 1” cut from the DSK FILL video is composed with the background video.



Basic operation of luminance keying



- 1** Press to light up the SW mode button to set the switcher to SW mode.
- 2** Press to light up the DSK button.

3 Press one of the DSK/AUX 1 to 12 buttons to specify a video to be composed with the DSK composition (DSK FILL video).

4 Display menu page 710.

For the procedure for displaying the menu, see “Menu Operation” on page 46.

DSK	TYPE	FILL	SOURCE	INVERT	1/6
KEYMODE	Lum	(4 chars.)	----	Off	710

5 Turn the F1 control to select “Lum” (luminance) under “TYPE.”

Note

If you wish to compose a dark portion on a bright background in the image, turn the F4 control to select “On” under “INVERT.”

6 Press the PAGE button to display menu page 720.

DSK	CLIP	GAIN	TRANSP	2/6
ADJUST	50	50.0	0.0	720

7 Turn the F1, F2, and F3 controls to adjust the composite image displayed in the preview window.

CLIP: to adjust the clipped status of a background image within the range of 0 to 100

GAIN: to adjust the sharpness of the outline within the range of 0.0 to 100.0

TRANSP: to adjust the transparency of characters or graphics to be composed within the range of 0.0 to 100.0 in units of 0.1

8 Press the DSK AUTO button to execute the DSK transition.

The composite DSK video is applied to the program output.

Note

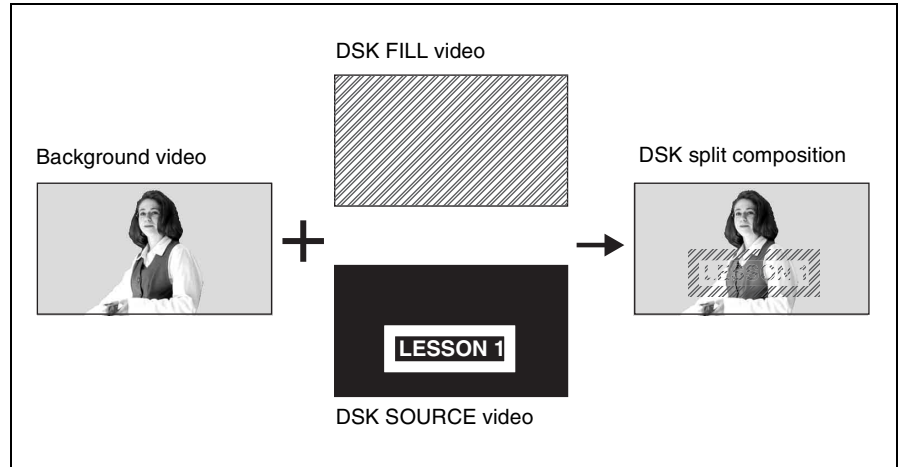
If “DSK CLN” is set to “On” on menu page 933, the composite DSK video is not displayed in the preview window. Set “DSK CLN” to “Off” (page 96). When a transition is complete, the composite video disappears from the preview window even if “DSK CLN” is set to “Off.”

Composing Video Using DSK Split

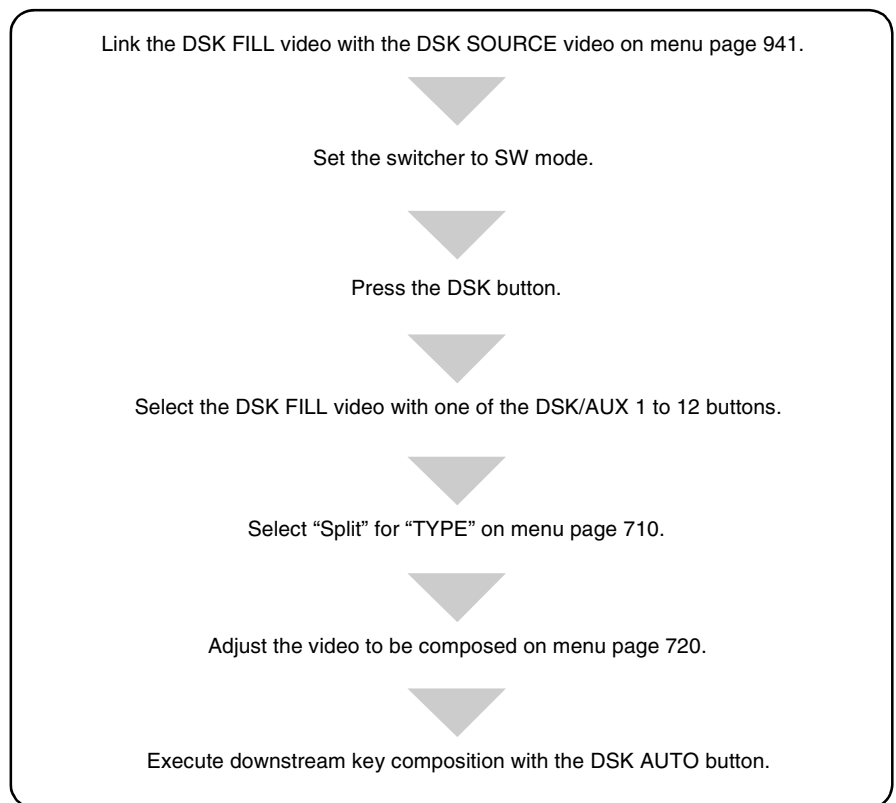
The DSK split function enables assignment of a specific DSK SOURCE video that determines the composing area of a video, separately from a DSK FILL video.

Generally, the DSK SOURCE video is a monochrome image that defines the area of characters so that only the area of characters in the DSK FILL video can be composed with a background video.

In the example below, only the area “LESSON 1” cut from the DSK FILL video is composed with the background video.



Basic operation of DSK split



1 Display menu page 941.

For the procedure for displaying the menu, see "Menu Operation" on page 46.

PANEL	XPT BTN	FILL	SIGNAL	SOURCE	1/5
DSK BUS	1	(4 chars.)	IN 1	(4 chars.)	941

2 Turn the F1 (or F2) control to specify the input signal assigned to PGM select buttons 1 to 12 as a DSK FILL video, under "XPT BTN" (cross-point button) and "FILL."

- 3 Turn the F3 (or F4) control to select a DSK SOURCE video under “SIGNAL” and “SOURCE.”

Note

The settings of “XPT BTN” and “FILL,” and those of “SIGNAL” and “SOURCE” change simultaneously.

- 4 Press to light up the SW mode button to set the switcher to SW mode.

Note

If you change the DSK source video in step 3, “Save setup data? [PAGE] (yes) or [EXIT] (no)” appears on the display panel. Press the PAGE button to store the data.

- 5 Press to light up the DSK button.
- 6 Press one of the DSK/AUX 1 to 12 buttons to specify a video to be composed with the DSK composition (DSK FILL video).
- 7 Display menu page 710.

DSK	TYPE	FILL	SOURCE	INVERT	1/6
KEYMODE	Split	(4 chars.)	(4 chars.)	Off	710

- 8 Turn the F1 control to select “Split” under “TYPE.”

The signals selected in steps 6 and 3 are displayed under “FILL” and “SOURCE,” respectively.

Notes

- You can change the DSK FILL signal shown under “FILL” by turning the F2 control.
- If you wish to compose a portion of the DSK FILL video using a dark portion on a bright background in the DSK SOURCE video, turn the F4 button to select “On” under “INVERT.”

- 9 Press the PAGE button to display menu page 720.

DSK	CLIP	GAIN	TRANSP		2/6
ADJUST	50	50.0	0.0		720

- 10 Turn the F1, F2, and F3 controls to adjust the composite image displayed in the preview window.

CLIP: to adjust the clipped status of a background image within the range of 0 to 100

GAIN: to adjust the sharpness of the outline within the range of 0.0 to 100.0

TRANSP: to adjust the transparency of characters or graphics to be composed within the range of 0.0 to 100.0 in units of 0.1

- 11 Press the DSK AUTO button to execute the DSK transition.

The composite DSK video is applied to the program output.

Note

If “DSK CLN” is set to “On” on menu page 933, the composite DSK video is not displayed in the preview window. Set “DSK CLN” to “Off” (page 96). When a transition is complete, the composite video disappears from the preview window even if “DSK CLN” is set to “Off.”

To use a monochromatic image (color matte) as a DSK FILL video

- 1 Display menu page 750.

DSK	LUM	SAT	HUE	FILL	5/6
MAT	0.0	0.0	0.0	Off	750

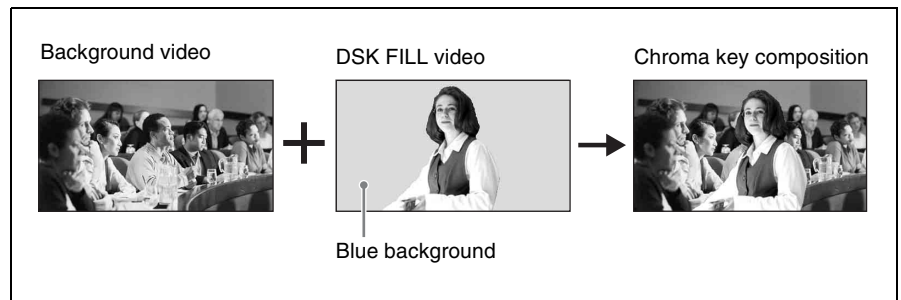
- 2 Turn the F1, F2 and F3 controls to adjust “LUM” (luminance), “SAT” (saturation) and “HUE” of the monochromatic image.
- 3 Turn the F4 control to set “FILL” to “On.”

When the DSK transition is executed, the adjusted monochromatic image is composed as a DSK FILL video.

Composing Video Using the Chroma Key

A video is created by detecting a specific color component (chroma) to cut a portion from the DSK FILL video. This method is referred to as “chroma key.” Generally, a subject is shot with a blue background, the background that contains blue component is cut out, then only the subject is superimposed on a background video.

In the example below, only a figure cut from the DSK FILL video is composed with the background video.

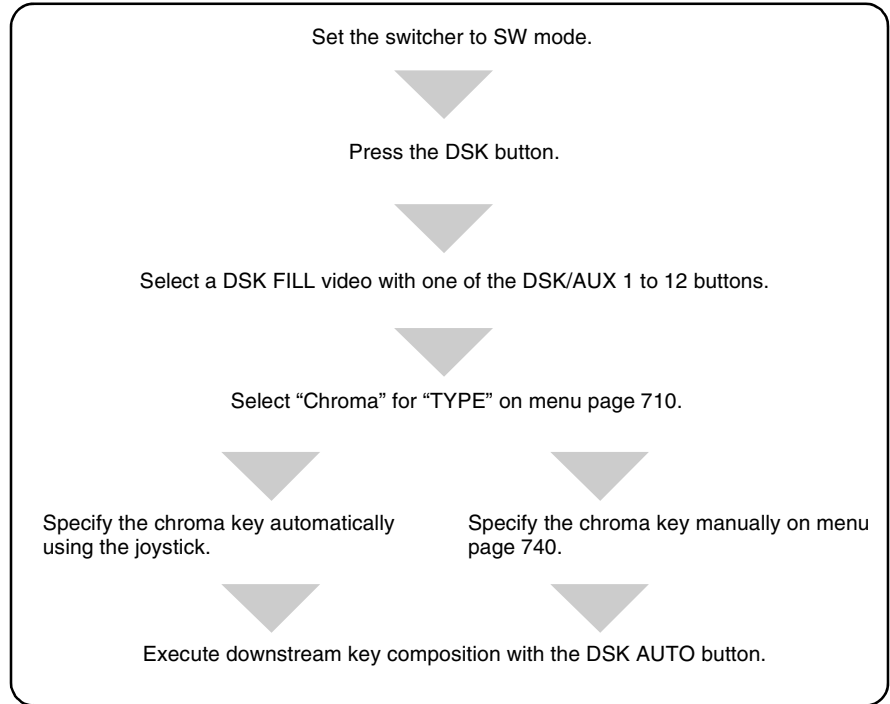


Basic operation of chroma keying

The switcher is provided with two methods for setting the chroma key.

- to set the chroma key automatically, specifying the color by moving the cursor displayed in the preview window with the joystick
- to set the chroma key manually by menu operation

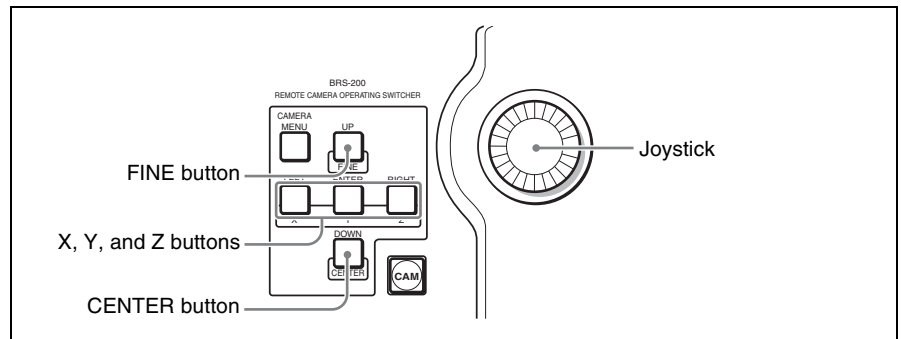
You can also adjust the chroma key manually after specifying it with joystick operation.



To specify the chroma key automatically using the joystick

Notes

- If “PGM OUT” is set to “Off” on menu page 935, the cursor and the chroma key video are not displayed in the program output window.
- If “DSK CLN” is set to “On” on menu page 933, the composite DSK video is not displayed in the preview window. Set “DSK CLN” to “Off” (page 96). When the transition is complete, the composite video disappears from the preview window even if “DSK CLN” is set to “Off.”



- 1 Press to light up the SW mode button to set the switcher to SW mode.
- 2 Press to light up the DSK button.
- 3 Press one of the DSK/AUX 1 to 12 buttons to specify a video to be composed with the DSK composition (DSK FILL video).
- 4 Display menu page 710.

For the procedure for displaying the menu, see “Menu Operation” on page 46.

DSK	TYPE	FILL	SOURCE	INVERT	1/6
KEYMODE	Chroma	(4 chars.)	----	Off	710

5 Turn the F1 control to select “Chroma” under “TYPE.”

Note

You can change the DSK FILL video selected with the DSK/AUX buttons by turning the F2 control.

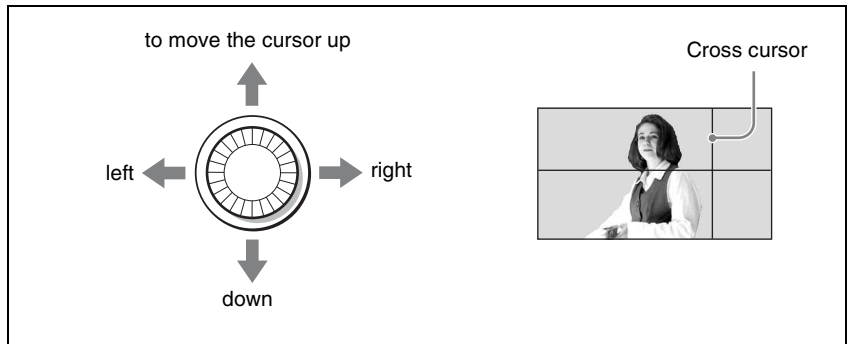
6 Press the PAGE button twice to display menu page 730.

DSK	CURSORON	AUTO			3/6
AUTO CK	↓ Exec	↓ Exec			730

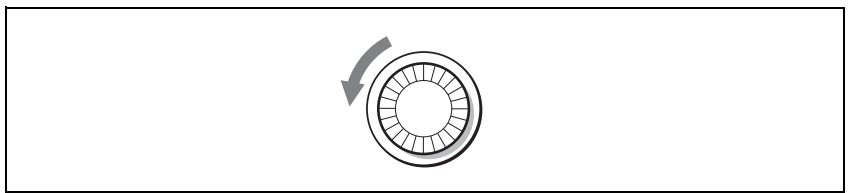
7 Press the F1 (CURSORON) control or turn the dial on the upper part of the joystick clockwise.

The cross cursor appears in the preview window.

8 Incline the joystick forward, backward, left, or right to align the center of the cursor to the color to be removed.



9 Press the F2 control (AUTO) or turn the dial on the upper part of the joystick counterclockwise.



The cross cursor disappears, and the composite image is displayed in the preview window.

Notes

- Pressing the CENTER button allows you to specify the chroma key automatically instead of using the F2 control or the dial on the upper part of the joystick. When you press the CENTER button, the cross cursor returns to the center of the window.
- Turning the dial on the upper part of the joystick clockwise in step **9** restores the preview window of step **8**.

10 Press the DSK AUTO button to execute the DSK transition.

The composite DSK video is applied to the program output.

To reduce the moving speed of the joystick

When you press to light up the FINE button, the speed for changing the setting with the joystick is reduced, and you can make fine adjustment of the position of the cross cursor. Pressing the FINE button again to make it go dark restores the normal moving speed.

Note

The joystick is operable only when the X, Y, or Z button is lit. The X button corresponds to horizontal movement of the cursor and the Y button to vertical movement. The Z button corresponds to the operation of the dial on the joystick. If you press the X, Y, or Z button to make it go dark, the corresponding function is disabled. Press to light up the corresponding button again to enable the joystick.

To set the chroma key manually by menu operation

You can specify the color of the chroma key by changing the setting values in the menu instead of using the joystick.

Notes

- If the cross cursor is displayed in the preview window, the chroma key cannot be set manually. Before operating, turn the dial on the upper part of the joystick counterclockwise to turn off the cursor.
- If “DSK CLN” is set to “On” on menu page 933, the composite DSK video is not displayed in the preview window. Set “DSK CLN” to “Off” (page 96). When a transition is complete, the composite video disappears from the preview window even if “DSK CLN” is set to “Off.”

- 1 Press to light up the SW mode button to set the switcher to SW mode.
- 2 Press to light up the DSK button.
- 3 Press one of the DSK/AUX 1 to 12 buttons to specify a video to be composed with the DSK composition (DSK FILL video).
- 4 Display menu page 710.

For the procedure for displaying the menu, see “Menu Operation” on page 46.

DSK	TYPE	FILL	SOURCE	INVERT	1/6
KEYMODE	Chroma	(4 chars.)	----	Off	710

- 5 Turn the F1 control to select “Chroma” under “TYPE.”

Note

To replace the portion to be cut off with that to be left, turn the F4 control to select “On” under “INVERT.”

- 6 Press the PAGE button three times to display menu page 740.

DSK	CLIP	GAIN	HUE	ANGLE	4/6
CK ADJ	50	50.0	0.0	5.0	740

- 7 Turn the F1, F2, F3, and F4 controls to adjust the composite video displayed in preview window.

CLIP: to adjust the clipped status of a background image within the range of 0 to 100

GAIN: to adjust the sharpness of the outline within the range of 0.0 to 100.0

HUE: to adjust the hue within the range of 0.0 to 359.5 in units of 0.5

ANGLE: to adjust the area of the color space within the range of 5.0 to 90.0 in units of 0.5

Note

“ANGLE” is a value that indicates a scope of similar colors to the color specified with “HUE.” Setting “ANGLE” to “90.0” specifies colors in a scope within ± 45 degrees in the color space in relation to the color set with “HUE.”

- 8 Press the DSK AUTO button to execute the DSK transition.

The composite DSK video is applied to the program output.

Checking the Results of Composite Video (Effect Preview)

You can check and adjust the results of PIP (picture-in-picture) or DSK (downstream key) composition in the preview window before displaying it as program output video.

- 1 Display menu page 933.

For the procedure for displaying the menu, see “Menu Operation” on page 46.

OUTPUT	DSK CLN	PIP CLN			3/6
PVWMODE	On	On			933

- 2 Turn the F1 or F2 control to set the output mode in the preview window.

DSK CLN: to set to “Off” when you wish to preview the video as the results of DSK composition.

PIP CLN: to set to “Off” when you wish to preview the video as the results of PIP.

If you have changed the setting, “Save setup data? [PAGE] (yes) or [EXIT] (no)” appears on the display panel.

- 3 Press the PAGE button.

The setting is saved.

If you do not wish to save the setting, press the EXIT button.

About the preview window and the program output video

After performing the above steps, the results of PIP or DSK composition are displayed in the preview window. When the PIP or DSK composition has been executed by using the AUTO TRANS button, CUT button, or transition lever and the resulting video is displayed in the program window (green illumination of the PIP AUTO button or DSK AUTO button turns red), the results of PIP or DSK composition disappear from the preview window.

If the PIP or DSK composite video is erased from the program window (green illumination of the PIP AUTO button or DSK AUTO button goes dark), the results of PIP or DSK composition are displayed in the preview window.

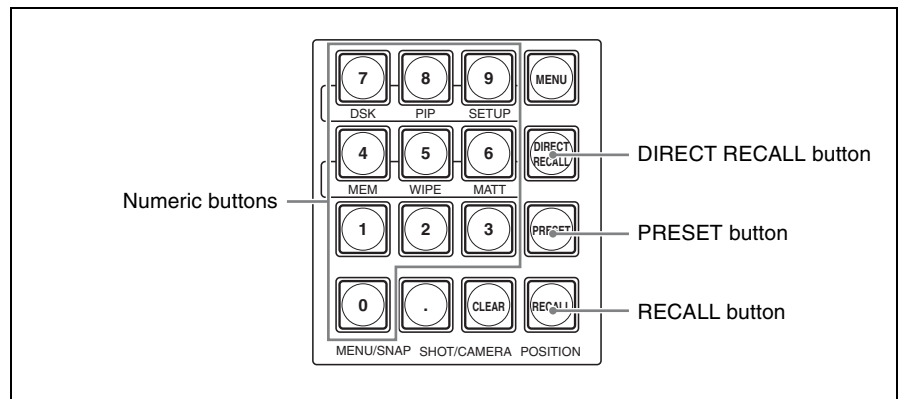
Storing the Settings of a Wipe, PIP, and Setting Menu Items

You can store the settings of a wipe, PIP (picture-in-picture), and setting menu items in the registers of the switcher and recall them as required. There are three registering functions:

Function	Setting items to be registered	Register numbers	Maximum number of registers
Snapshot	Setting data on setting menu pages 400 to 850	Snapshot numbers 0 to 99	100
Direct wipe	Wipe pattern	Direct wipe numbers 0 to 9	10
Direct PIP	Size and display position of the embedded video for PIP	Direct PIP numbers 0 to 9	10

Notes

- A snapshot register can store all the data on setting menu pages 400 to 850 with the exception of the date setting on menu page 440.
- Use the snapshot function to store the setting items for PIP that cannot be stored with the Direct PIP function, such as the cropping data (page 79).



1 Set the items you wish to store, as required.

- To store snapshot data, perform settings on menu pages 400 to 850 referring to “Preparations” in Chapter 3 or “Menu List” in Appendix.
- To store wipe patterns, see “Switching the Video with a Wipe” on page 72.
- To store the size and display position of PIP video, see “Adjusting the Size and Display Position of an Embedded Video in Picture-in-Picture” on page 77.

2 Check that the SW mode button is lit.

When the SW mode button is not lit, press to light up the button to set the switcher to SW mode.

3 Check that “DIRECT” is displayed on the display panel above the F3 control.

If “DIRECT” is not displayed, press the F3 control to display it.

- Turn the F3 control to display “SS” (snapshot), “Wipe,” or “PIP” under “DIRECT” according to the setting you wish to store.

“SNAP:,” “WIPE:,” or “PIP:” is displayed at the bottom left of the display panel.

Example of a wipe:

SW MODE	MV TYPE	XPT HOLD	DIRECT	ME AUTO	
WIPE:	4	Off	Wipe	30	

- Check that the DIRECT RECALL button is not lit.

If the DIRECT RECALL button is lit, press the button to make it go dark.

- Press numeric buttons 0 to 9 to enter a register number.

To store in a snapshot register, enter a snapshot number between 0 and 99. To store a wipe pattern or the settings of PIP video, enter a direct wipe number 0 to 9 or a direct PIP number 0 to 9.

The selected number appears and flashes next to “SNAP:,” “WIPE:,” or “PIP:” at the bottom left of the display panel.

SW MODE	MV TYPE	XPT HOLD	DIRECT	ME AUTO	
WIPE: 1	4	Off	Wipe	30	

Flashing

- Hold the PRESET button pressed.

The indication “Storing Preset Data.” appears at the bottom left of the display panel, and the setting is stored.

To recall the registered settings

- Check that the SW mode button is lit.

If the SW mode button is not lit, press to light up the button to set the switcher to SW mode.

- Check that “DIRECT” is displayed on the display panel above the F3 control.

If “DIRECT” is not displayed, press the F3 control to display it.

- Turn the F3 control to display “SS,” “Wipe,” or “PIP” under “DIRECT” according to the setting you wish to recall.

“SNAP:,” “WIPE:,” or “PIP:” is displayed at the bottom left of the display panel.

- Check that the DIRECT RECALL button is not lit.

If the DIRECT RECALL button is lit, press the button to make it go dark.

- Press numeric buttons 0 to 9 to enter the register number in which the setting you wish to recall is stored.

6 Press the RECALL button.

The setting of a snapshot, wipe, or PIP stored in the selected register number is recalled.

Direct recall function

If you light up the DIRECT RECALL button in step **4**, you can recall the setting stored in one of register numbers 0 to 9 easily by pressing the corresponding numeric button 0 to 9.

This direct recall function is convenient for you to switch the setting instantaneously, as you can recall the stored setting with one press of the button.

Note

Normally, the direct recall function allows you to recall snapshot data registered in snapshot numbers 0 to 9. To recall snapshot data registered in a snapshot number 11 or higher using the direct recall function, set the “Bank” on menu page 945.

For details, see “To recall the snapshot number using the DIRECT RECALL button (menu page 945)” on page 139.



Before Operating the Camera

The switcher is equipped with a VISCA connector. VISCA (Video System Control Architecture) is a technology that provides capability of control of a video device from external equipment.

This chapter describes the procedure for remote control of Sony VISCA-compatible BRC-series cameras connected with the switcher. Before starting operation, check the following:

The following operations of the cameras are remotely controlled:

- Pan/tilt
- Zoom
- Focus
- Exposure
- White balance
- Camera menu operation

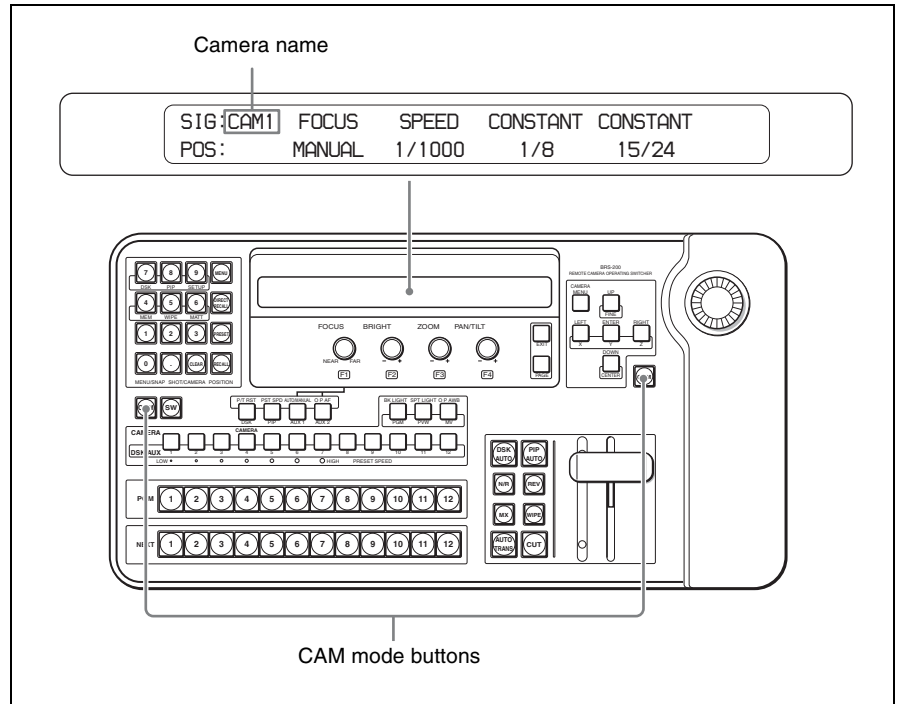
Note

Controllable operations with the switcher are limited depending on the functions of a camera. For details, refer to the Operating Instructions supplied with the camera.

Setting the Switcher to CAM mode

Press to light up the CAM mode button on the control panel. The two CAM mode buttons function the same.

The switcher switches to CAM mode. The display panel enters CAM mode and displays the selected camera name on the left.

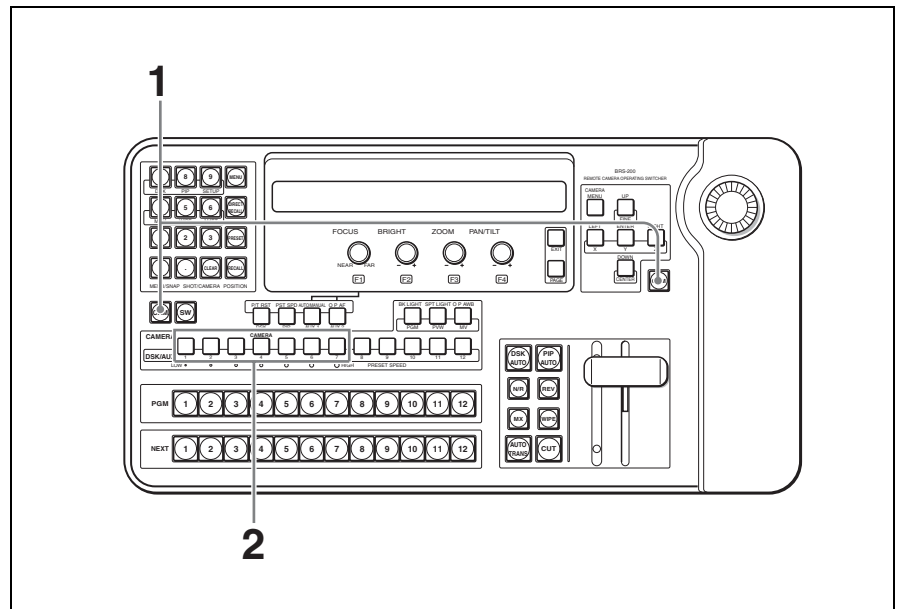


Notes

- When you press the CAM mode button, “Save setup data? [PAGE] (yes) or [EXIT] (no)” or “Reboot system? [PAGE] (yes) or [EXIT] (no)” may appear on the display panel. If you press the PAGE button, the switcher will enter CAM mode after saving the data and rebooting the system. If you press the EXIT button, the switcher will enter menu mode without storing the data. Press the CAM mode button again.
- When you display the MV (multi-viewer) display, a blue ■ mark is displayed on the camera image you are controlling from the switcher.

Selecting the Camera to Be Controlled

This section explains how to select the camera you wish to control from the switcher.



- 1** Press to light up the CAM mode button so that the switcher is set to CAM mode.
- 2** Press one of the CAMERA 1 to 7 buttons to which the camera you wish to control is assigned.

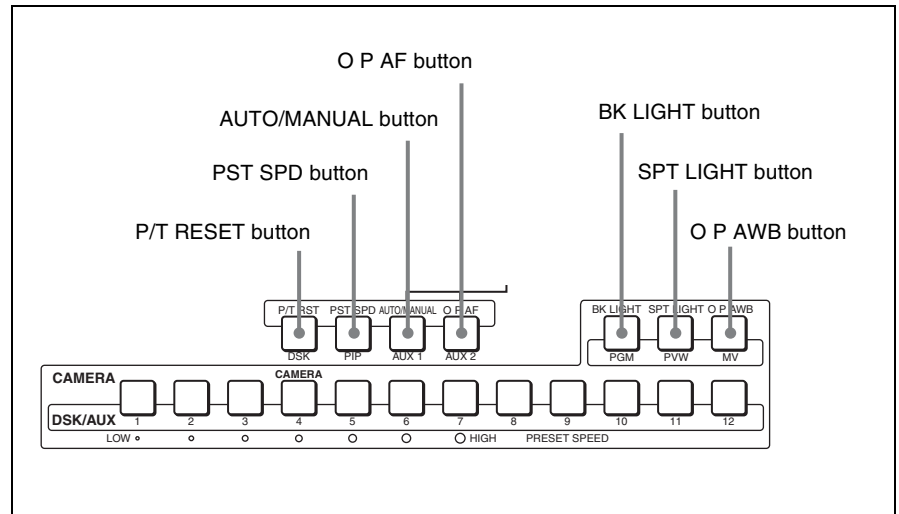
The selected button lights in orange, and the information on the selected camera is displayed on the display panel.

Notes

- If you press the button to which an uncontrollable camera is assigned, the display panel shows “-----.”
- If the camera does not support the setting that was set or changed on the display panel, the setting on the display panel may change to that supported by the camera after a while.

Controlling the Camera

The switcher is able to control focus, exposure, white balance, pan/tilt, and zoom of a camera.



Adjusting the Focus of the Camera

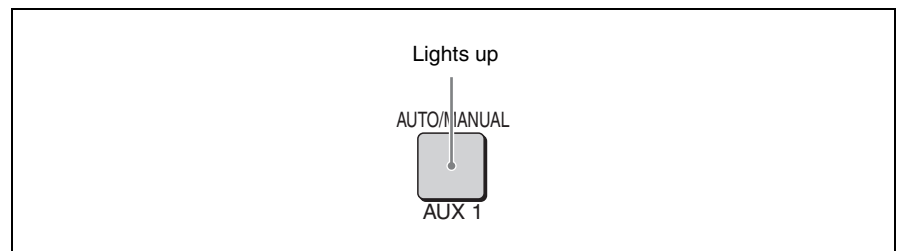
When the switcher is in CAM mode, the focus setting of the selected camera is displayed on the display panel above the F1 (FOCUS) control.

SIG: CAM1	FOCUS	SPEED	CONSTANT	CONSTANT	
POS:	AUTO	1/1000	1/8	15/24	

To focus the camera on a subject automatically

Press to light up the AUTO/MANUAL button. The display panel indicates "AUTO" under "FOCUS."

In AUTO mode, the camera is focused on the subject displayed in the center of the screen automatically.

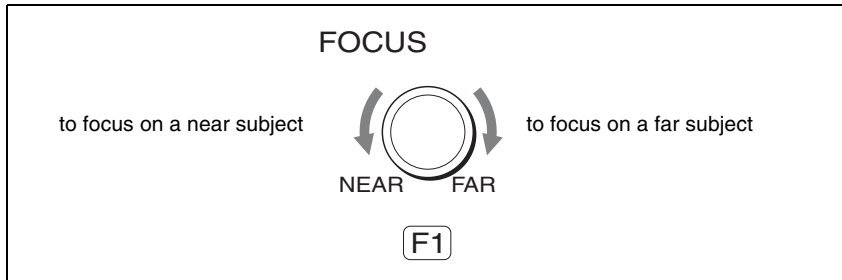


Note

For the BRC-Z700 or BRC-Z330, lighting up the AUTO/MANUAL button displays "ASSIST" under "FOCUS" on the display panel when AF ASSIST is set to ON in the menu of the camera. In this case, you can adjust the focus manually by turning the F1 (FOCUS) control. For details, refer to the Operating Instructions supplied with the camera.

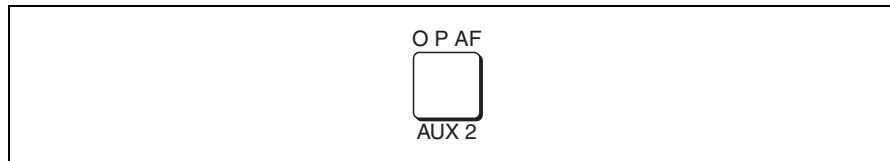
To focus the camera on a subject manually

- 1 Press the AUTO/MANUAL button to make it go dark.
The indication under “FOCUS” changes to “MANUAL” on the display panel.
- 2 Turn the F1 control clockwise or counterclockwise to have the camera focus on the subject.



To focus on a subject automatically with one-push operation during manual focus adjustment

When the display panel indicates “MANUAL” under “FOCUS,” press the O P AF button.
The one-push auto focus function is enabled, and the camera is focused on the subject in the center of the screen automatically.



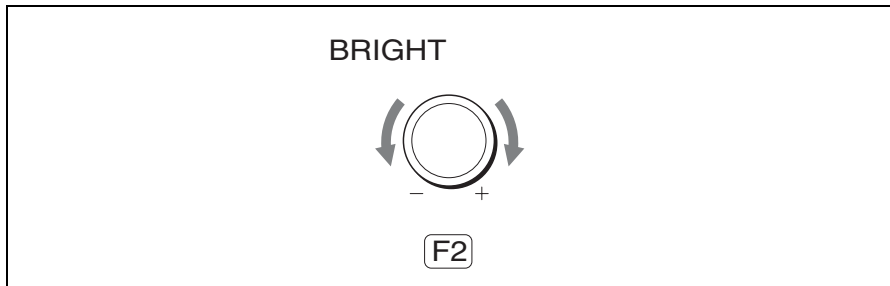
Adjusting the Exposure

The exposure setting values can be changed according to exposure mode set for the camera.
When the switcher is in CAM mode, the exposure setting of the selected camera is displayed on the display panel above the F2 (BRIGHT) control.

SIG: CAM1	FOCUS	SPEED	CONSTANT	CONSTANT	
POS:	AUTO	1/1000	1/8	15/24	

To adjust the exposure

Use the F2 (BRIGHT) control to adjust the exposure.
The adjustable items vary with the exposure mode set by the camera.



Exposure mode setting on the camera	Indication on the display panel above the F2 control	Adjustment procedure
FULL AUTO	AUTO	Exposure adjusted automatically using the sensitivity, shutter speed and iris.
SHUTTER Pri	SPEED	Adjust the shutter speed manually by turning the F2 control.
IRIS Pri	IRIS	Adjust the iris manually by turning the F2 control.
GAIN Pri	GAIN	Adjust the gain manually by turning the F2 control.
MANUAL	SPEED, IRIS or GAIN (selected by pressing the F2 control)	Adjust the shutter speed, iris or gain displayed on the display panel manually by turning the F2 control.

Note

When “BRIGHT” is set to “IRIS+G” on menu page 914 for the BRC-H700, BRC-Z700 or BRC-Z330 camera, “IRIS/dB” is displayed under “IRIS” and you can manually adjust the iris or gain of the camera by turning the F2 control.

To enable exposure compensation

When EX-COMP (exposure compensation) is set to ON in the menu of the camera, press the F2 control several times until “EX-COMP” is displayed on the display panel above the F2 control. The exposure compensation is enabled.

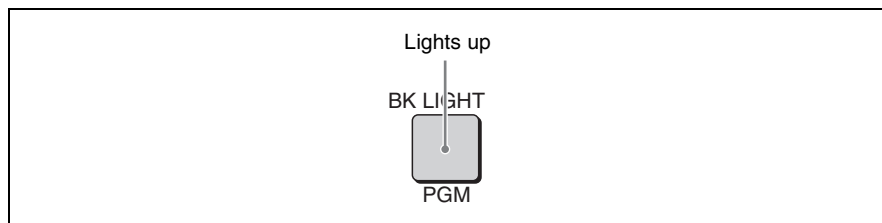
SIG: CAM1	FOCUS	EX-COMP	CONSTANT	CONSTANT	
POS:	AUTO	0	1/8	15/24	

Turn the F2 control to set the exposure compensation level under “EX-COMP.”

To enable backlight compensation

When you shoot a subject with a light source behind it and the subject becomes dark, use the backlight compensation function.

When you press to light up the BK LIGHT button, the backlight compensation function of the camera is enabled.



Pressing the BK LIGHT button again to make it go dark disables the backlight compensation function.

For details on the backlight compensation function, refer to the Operating Instructions supplied with the camera.

Notes

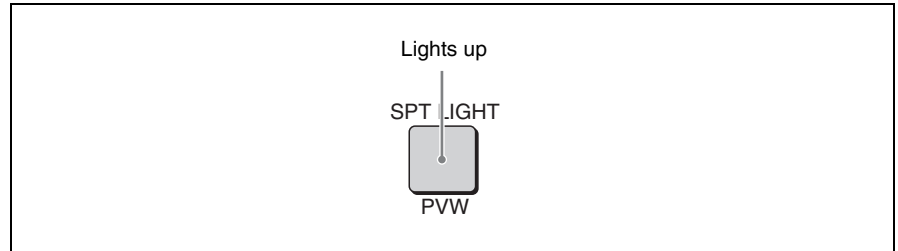
- The BK LIGHT button does not function when the exposure mode of the camera is set to MANUAL.

- If you press the BK LIGHT button when the spotlight compensation function is enabled for the BRC-H700, BRC-Z700 or BRC-Z330 camera, spotlight compensation is disabled, and backlight compensation becomes enabled.
- For the BRC-300/300P camera, the BK LIGHT button functions only when the exposure mode is set to FULL AUTO in the camera.

To enable spotlight compensation (only for the BRC-H700, BRC-Z700 or BRC-Z330 camera)

If a portion of a shooting subject is illuminated, the spotlight compensation function adjusts the exposure to a darker level.

When you press to light up the SPT LIGHT button, the spotlight compensation function of the camera is enabled.



Pressing the SPT LIGHT button again to make it go dark disables the spotlight compensation function.

For details on the spotlight compensation function, refer to the Operating Instructions supplied with the camera.

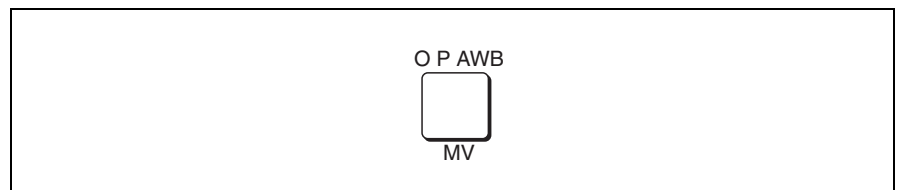
Notes

- The SPT LIGHT button does not function when the exposure mode of the camera is set to MANUAL.
- If you press the SPT LIGHT button when the backlight compensation function is enabled, backlight compensation is disabled, and spotlight compensation becomes enabled.
- The BRC-300/300P camera does not incorporate the spotlight compensation function.

Adjusting the White Balance

Display a white object under the same lighting conditions as the subject you are shooting, and zoom it in on the screen. (You can use a white wall, etc., instead of a white object.) Use the white object, etc. to adjust the white balance.

Press the O P AWB button. One-push white balance of the camera is automatically adjusted.

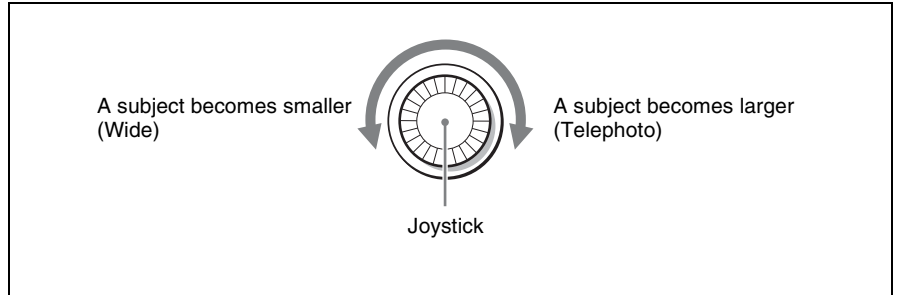


For details on one-push white balance, refer to the Operating Instructions supplied with the camera.

Zooming

To operate zoom with the joystick

Turn the dial on the upper part of the joystick clockwise or counterclockwise. When you turn the dial clockwise, a subject becomes larger. When you turn it counterclockwise, a subject becomes smaller.



To reverse the zoom operation

You can reverse the turning direction of the dial on the upper part of the joystick for zoom operation.

- 1 Display menu page 914.

For the procedure for displaying the menu, see “Menu Operation” on page 46.

CAMERA	PAN DIR	TILT DIR	ZOOM DIR	BRIGHT	4/8
MODE	Normal	Normal	Reverse	IRIS	914

- 2 Turn the F3 (ZOOM) control to select “Reverse” under “ZOOM DIR.”

Then, the subject becomes smaller as you turn the dial on the upper part of the joystick clockwise, and the subject becomes larger if you turn it counterclockwise.

To adjust the zoom speed

The zoom speed can be changed according to the turning angle of the dial on the upper part of the joystick or can be held constant regardless of the turning angle.

SIG: CAM1	FOCUS	SPEED	CONSTANT	CONSTANT	
POS:	AUTO	1/1000	1/8	15/24	

- 1 Press the F3 (ZOOM) control to select “CONSTANT” or “VARIABLE.”

CONSTANT: to zoom in/out at a constant speed regardless of the turning angle of the dial

VARIABLE: to increase the zoom speed as the turning angle of the dial becomes larger

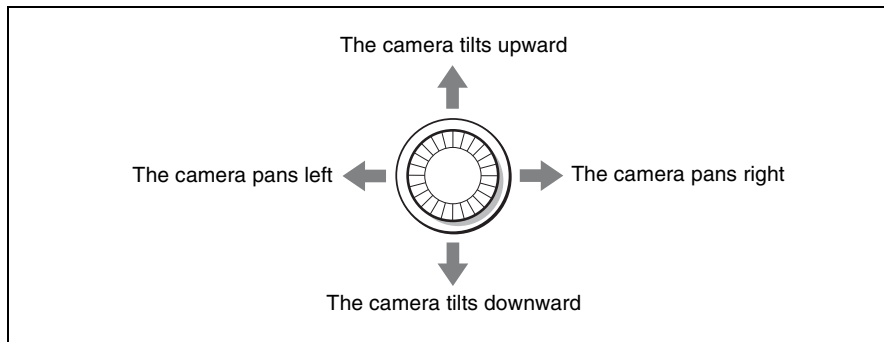
- 2 Turn the F3 (ZOOM) control to set the zoom speed.

Assuming the highest zoom speed that the camera supports is 8/8, you can set the value between 1/8 and 8/8. The larger a numerator is, the higher the zoom speed becomes.

Operating Pan/Tilt of the Camera

To operate pan/tilt of a camera with the joystick

Incline the joystick forward, backward, right or left to operate pan/tilt of the camera. While viewing the monitor, incline the joystick in the direction of an object to be shot.



To align the panning/tilting direction with the direction in which the joystick is inclined

Depending on the installation of the camera, panning/tilting direction may be different from that in which the joystick is inclined. The panning/tilting can be changed to the reverse direction to align with the direction in which you incline the joystick. You can change the directions of panning and tilting individually.

- 1 Display menu page 914.

For the procedure for displaying the menu, see "Menu Operation" on page 46.

CAMERA	PAN DIR	TILT DIR	ZOOM DIR	BRIGHT	4/8
MODE	Reverse	Reverse	Normal	IRIS	914

- 2 To reverse the panning direction, turn the F1 control to select "Reverse" under "PAN DIR."
- 3 To reverse the tilting direction, turn the F2 control to select "Reverse" under "TILT DIR."

To adjust the panning/tilting speed

The panning/tilting speed can be changed according to the angle at which you incline the joystick or can be held constant regardless of the angle.

SIG: CAM1	FOCUS	SPEED	CONSTANT	CONSTANT	
POS:	AUTO	1/1000	1/8	15/24	

- 1 Press the F4 (PAN/TILT) control to select "CONSTANT" or "VARIABLE."

CONSTANT: to pan/tilt at a constant speed regardless of the angle at which you incline the joystick

VARIABLE: to increase the panning/tilting speed as the angle at which the joystick is inclined becomes larger

2 Turn the F4 (PAN/TILT) control to set the panning/tilting speed.

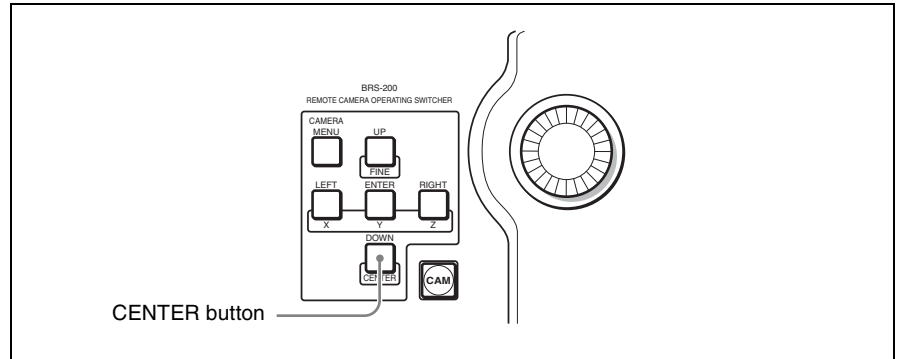
Assuming the highest panning/tilting speed that the camera supports is 24/24, you can set the value between 1/24 and 24/24. The larger a numerator is, the higher the panning/tilting speed becomes.

Note

For the BRC-Z700 camera, you can set the value between 0.5/24 and 24/24.

To face the camera back to the front

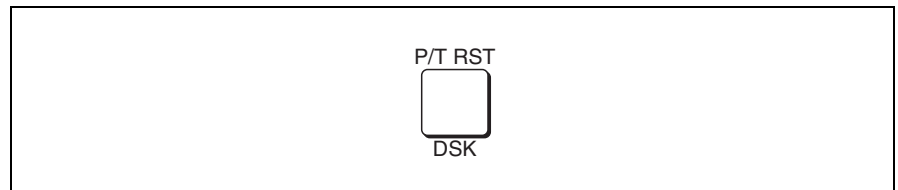
Hold the CENTER button in the camera menu/location control section pressed. The camera returns to face the front.



If you accidentally move the camera with your hand

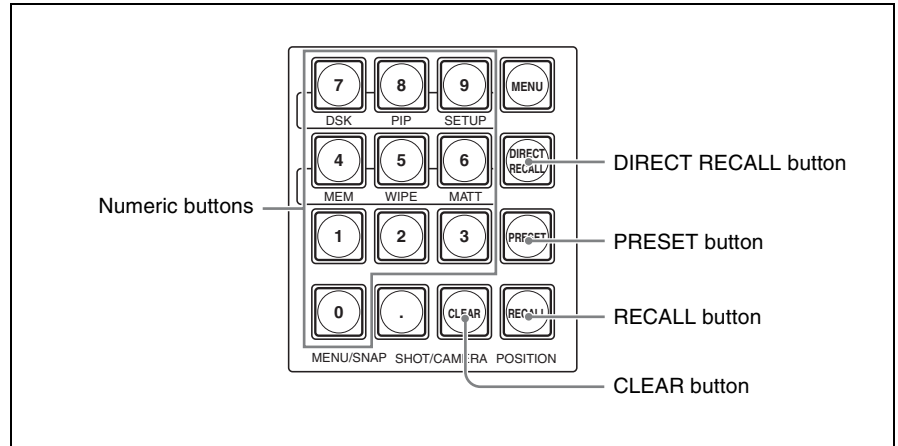
If the camera is accidentally moved by external force, an object or your finger is caught with the camera or the camera does not recognize its correct position, hold the P/T RST button pressed.

The panning/tilting position of the camera is reset to the factory preset setting.



Storing the Camera Settings

Up to 99 combinations of the camera settings including panning/tilting, focusing, exposure, backlighting, etc. are stored for each camera in the camera position numbers of the switcher.



- 1** Check that the CAM mode button is lit.

If the CAM mode button is not lit, press to light up the CAM mode button so that the switcher is set to CAM mode.
- 2** Press one of the the CAMERA 1 to 7 buttons to select the camera whose settings you wish to preset.

The selected button lights in orange, and the display panel displays the setting information of the selected camera.
- 3** Adjust pan/tilt, zoom, focus, exposure, etc. of the selected camera.

For details on the adjustment procedures, see “Controlling the Camera” on page 104.
- 4** Check that the DIRECT RECALL button is not lit.

If the button is lit, press the DIRECT RECALL button to make it go dark.
- 5** Press numeric buttons 0 to 9 to enter the camera position number of the camera for which you wish to store the settings.

You can enter camera position numbers 1 to 99.
The camera position number you entered flashes next to “POS:” at the lower left of the display panel.

SIG: CAM1	FOCUS	SPEED	CONSTANT	CONSTANT	
POS: 1	AUTO	1/1000	1/8	15/24	

Flashes.

To change the number you entered, press the CLEAR button then enter a new number.

Notes

- The camera settings of position numbers 1 to 16 (1 to 6 for the BRC-300/300P camera) are stored in memory of the camera. The settings that can be stored differ depending on the functions of the cameras. For details, refer to the Operating Instructions of the camera.
- The camera settings of position numbers 17 to 99 (7 to 99 for the BRC-300/300P camera) are stored in memory of the switcher. The settings that can be stored are panning/tilting, zooming, focus mode, focus position, exposure and white balance.

6 Hold the PRESET button pressed.

The indication “2002 Completed.” appears on the display panel when storing is complete.

To recall the preset camera setting

1 Check that the CAM mode button is lit.

If the CAM mode button is not lit, press to light up the CAM mode button so that the switcher is set to CAM mode.

2 Press one of the the CAMERA 1 to 7 buttons to select the camera whose settings you wish to recall.

The selected button lights in orange, and the display panel displays the setting information of the selected camera.

3 Check that the DIRECT RECALL button is not lit.

If the button is lit, press the DIRECT RECALL button to make it go dark.

4 Press numeric buttons 0 to 9 to enter the camera position number (0 to 99) of the camera in which the settings you wish to recall have been stored.

The camera position number you entered flashes next to “POS:” at the lower left of the display panel.

Note

To change the number you entered, press the CLEAR button then enter a new number.

5 Press the RECALL button.

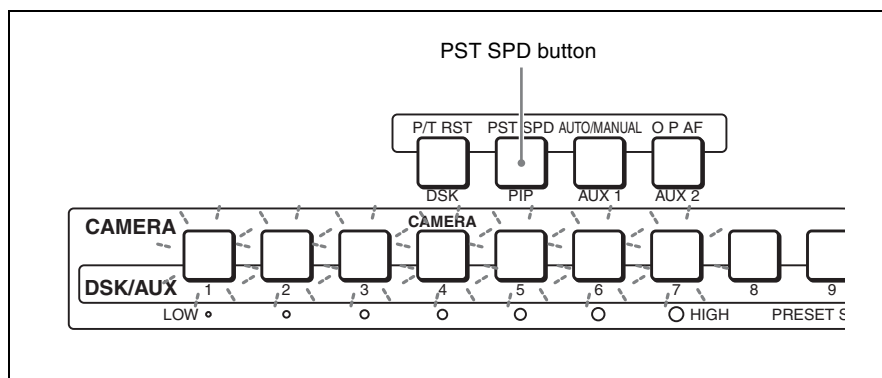
The settings such as pan/tilt, zoom, focus and exposure, stored in the entered camera position number, are recalled.

Notes

- For the settings stored in position numbers 1 to 9, you can recall them directly by pressing to light up the DIRECT RECALL button and pressing numeric button 1 to 9 (Direct Recall function). Using this function allows you to recall the stored settings with only one press when you wish to change the camera settings immediately.
- If you recall the settings in position numbers 17 to 99 (7 to 99 for the BRC-300/300P camera), panning/tilting, zooming, focus mode, focus position, exposure and white balance settings are reflected to the camera.

To set the camera moving speed to the preset position

You can select the panning/tilting speed at which the camera moves to the preset position.



Note

You can preset the moving speed of the camera in position numbers 1 to 6 for the BRC-300/300P and in position numbers 1 to 16 for other models.

- 1 Follow the steps in “To recall the preset camera setting” (page 112) to recall the camera setting stored in the camera position.

The selected position number is displayed at the lower left of the display panel.

- 2 Hold the PST SPD button pressed to light up the button.

The CAMERA 1 to 7 buttons can be used for setting the speed. The button that corresponds to the currently selected speed lights up. Other CAMERA buttons flash.

- 3 Press one of the CAMERA 1 to 7 buttons to set the panning/tilting speed while the button is flashing.

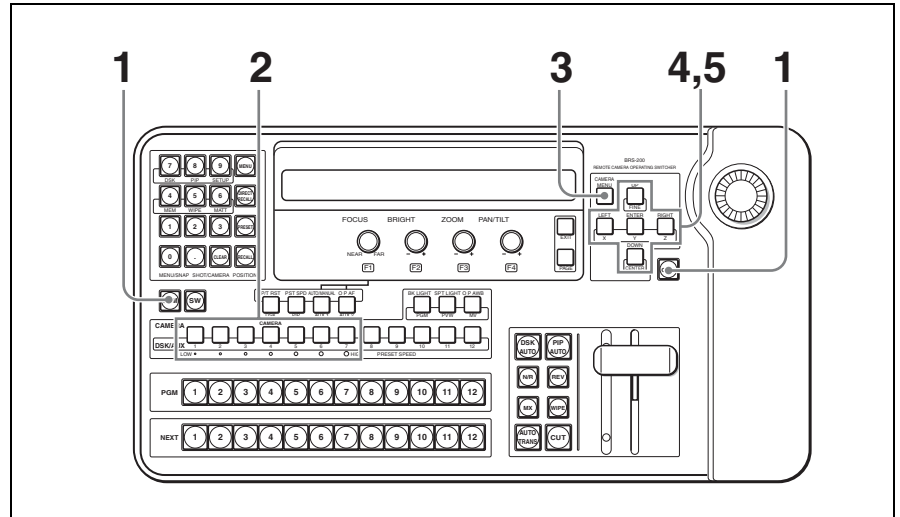
The panning/tilting speed to be set increases in the order of CAMERA 1 to 7. You can set seven panning/tilting speeds stored for CAMERA button 1 (the lowest speed: 1 degree/sec.) to CAMERA button 7 (highest speed: 60 degrees/sec.)

Note

Press the CAMERA button within five seconds after the PST SPD button is pressed. After five seconds the CAMERA buttons stop flashing, and speed setting mode is canceled. In this case, repeat steps 2 and 3 again.

Operating the Camera Menu

The menus of the Sony BRC-series cameras can be operated by the switcher while displaying the menus on a monitor. For details on the camera menus, refer to the Operating Instructions supplied with the camera.



- 1 Check that the CAM mode button is lit.

If the CAM mode button is not lit, press to light up the CAM mode button so that the switcher is set to CAM mode.

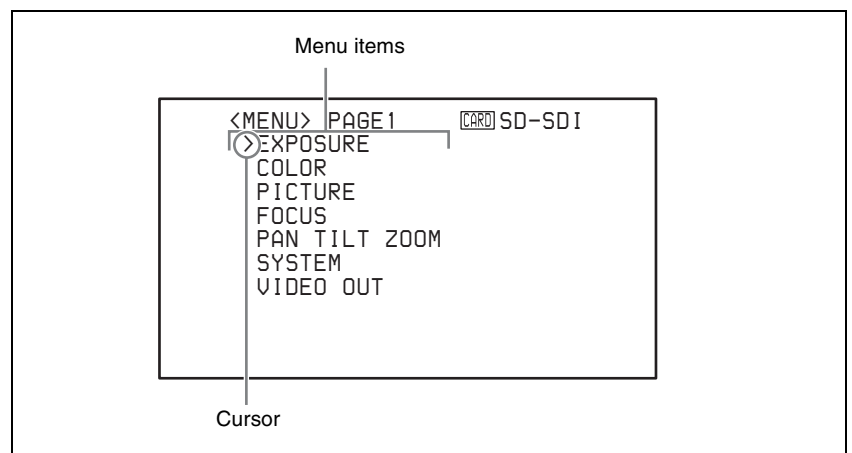
- 2 Press one of the the CAMERA 1 to 7 buttons to select the camera whose menu you wish to display.

The selected button lights in orange, and the display panel on the switcher displays the setting information of the selected camera.

- 3 Hold the CAMERA MENU button pressed to light the button.

The first page of the main menu appears on the camera image on the monitor screen.

Example of the main menu for the BRC-Z700 camera with the BRBK-HSD1 output card attached:



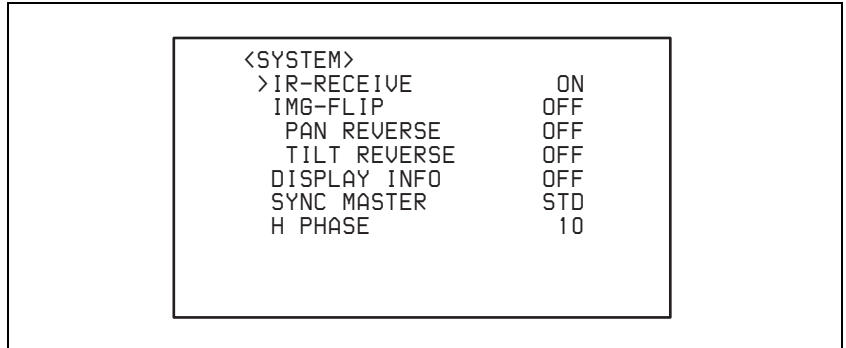
Notes

- To exit main menu, hold the CAMERA MENU button pressed.
- If the main menu of the camera contains two or more pages, holding the CAMERA MENU button pressed opens the next main menu page. If you hold the CAMERA MENU button pressed when the last main menu page is displayed, the main menu disappears.

- 4** Press the UP or DOWN button to move the cursor to the menu to be changed then press the ENTER button.

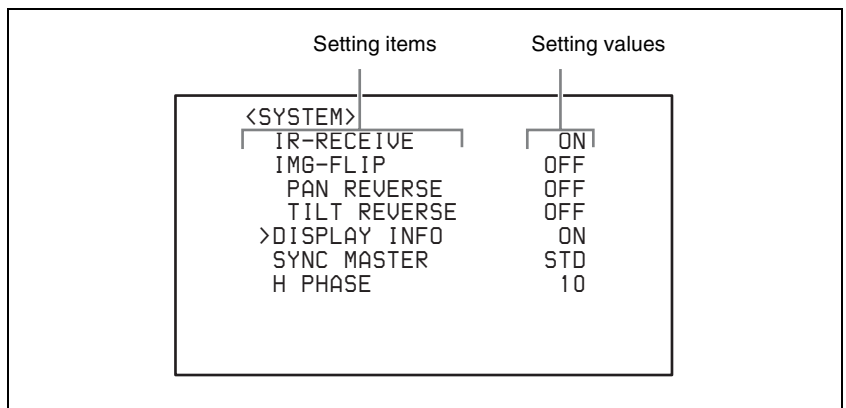
The selected menu opens.

Example of the SYSTEM menu for the BRC-Z700 camera:



- 5** Press the UP or DOWN button to move the cursor to the setting item to be changed then change the setting value by pressing the LEFT or RIGHT button.

Example of the SYSTEM menu for the BRC-Z700 camera:



Note

While the CAMERA MENU button is lit, the joystick does not function. Use the UP, DOWN, LEFT, RIGHT, and ENTER buttons to operate the camera menus.

To exit the menu

Hold the CAMERA MENU button pressed. The button goes dark and the menu displayed on a monitor disappears.

Depending on the layer of the menu displayed, it is required to press the CAMERA MENU button several times to exit the menu.

Disabling the Infrared Remote Commander Supplied with the Camera

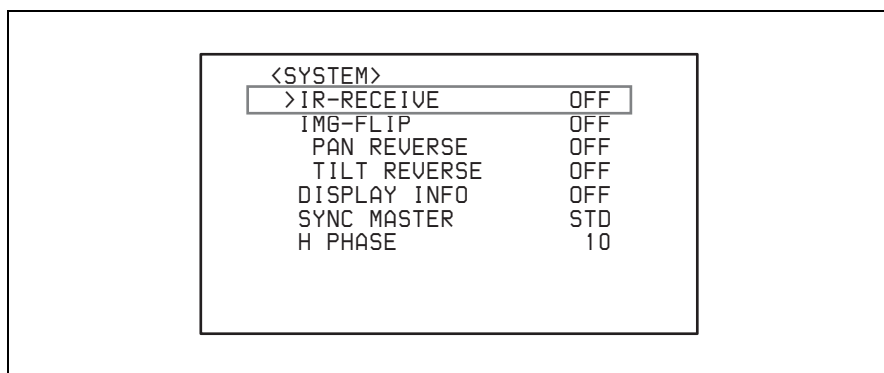
As the Sony BRC-series cameras connected with the switcher are controlled by the switcher, the Remote Commander supplied with the camera is not used. Set in the camera menu for the camera to ignore infrared signals.

Note

To prevent camera from malfunctioning, be sure to disable infrared signal reception on the camera.

Example of the BRC-Z700 camera

Set IR-RECEIVE to OFF in the SYSTEM menu.



For details on the operation of the camera menu, see “Operating the Camera Menu” on page 114.

For details on the setting for disabling the infrared signal reception from the Remote Commander, refer to the Operating Instructions supplied with the camera.

Setting the Illumination of the Tally Lamp on the Camera

This section describes how to turn on a tally lamp on Sony BRC-series cameras.

- 1 Display menu page 916.

For the procedure for displaying the menu, see “Menu Operation” on page 46.

CAMERA	MODE				6/8
TALLY	Off				916

- 2 Turn the F1 control to set how to light up the tally lamp on the camera under “MODE.”

CAM BTN: to set so that the tally lamp on the camera selected with one of the CAMERA 1 to 7 buttons lights up when the switcher is in CAM mode

PGM: to set so that the tally lamp on the camera whose output image appears as program output video lights up.

Off: to set so that the tally lamp does not light



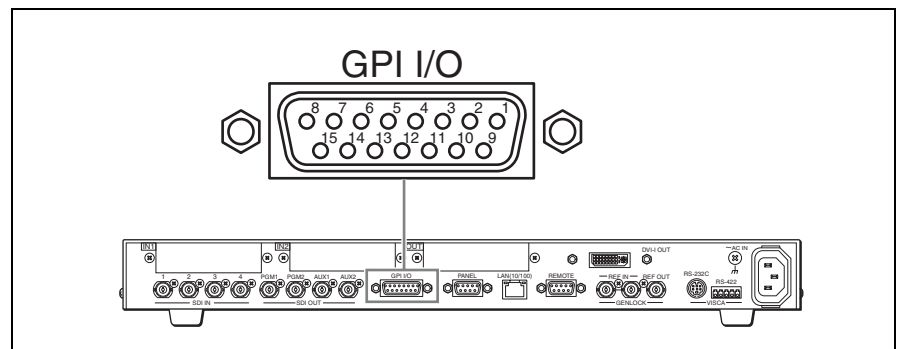
Using the GPI I/O Connector

When the GPI I/O connector on the switcher is connected to the tally connector on the camera control unit (CCU), etc., the tally lamp illumination on a camera can be controlled by the switcher, or switching of the PGM and NEXT select buttons on the switcher can be controlled by an external device.

Assigning Various Functions to the Pins on the GPI I/O Connector

All the pins are set to NOP (not used) at the factory. Use the menu to assign various functions to pins 1 to 12 on the GPI I/O connector.

Pin assignments on the GPI I/O connector (D-sub 15-pin, female)



- 1 Display menu page 961.

For the procedure for displaying the menu, see “Menu Operation” on page 46.

UTILITY	PIN NO	FUNCTION	COLOR	I/O DIR	1/3
GPI	1	NOP	----	Input	961

- 2 Turn the F1 control to select pin number whose function you wish to change under “PIN NO.”

You can select pin number 1 to 12.

- 3 Turn the F2 control to set the function of the selected pin under “FUNCTION.”

For selectable functions, see “Functions enabled to be assigned to the pins on the GPI I/O connector” on page 120.

When you select “Button1” to “Button12” with the F2 control, the setting item is displayed under “COLOR.” Turn the F3 control to select “Red” or “Amber.”

The “Output” or “Input” indication is displayed under “I/O DIR” above the F4 control depending on the selected function.

Output: to operate an external device using the control signal output from the switcher

Input: to operate the switcher using the control signal input to the switcher from an external device

Functions enabled to be assigned to the pins on the GPI I/O connector

NOP: Not used

Input

PGMBTN1 to PGMBTN12: PGM select buttons 1 to 12

NEXTBTN1 to NEXTBT12: NEXT select buttons 1 to 12

AUX1BTN1 to AUX1BT12, AUX1BTPG, AUX1BTPV, AUX1BTMV:
output signal selection with the AUX1 button

AUX2BTN1 to AUX2BT12, AUX2BTPG, AUX2BTPV, AUX2BTMV:
output signal selection with the AUX2 button

CUT: CUT button

ME AUTO: AUTO TRANS button

PIP AUTO: PIP AUTO button

DSK AUTO: DSK AUTO button

TRANSMIX: MIX button

TRANS WP: WIPE button

FRZ MEM1, FRZ MEM2: import of frame memory video 1, 2

CAM MODE: CAM mode button

SW MODE: SW mode button

DRCT-SS, DRCT-WP, DRCT-PIP: direct snapshot mode, direct wipe mode, or direct PIP mode selection

DRCTRCL0 to DRCTRCL9: recall of DIRECT RECALL 0 to 9

Output

Button1 to Button12: Cross-point buttons (PGM select buttons and NEXT select buttons) 1 to 12

DSK On: DSK AUTO button (On)

PIP On: PIP AUTO button (On)

CAM1 to CAM7: CAMERA 1 to 7 buttons

AUX1BTN1 to AUX1BT12, AUX1BTPG, AUX1BTPV, AUX1BTMV:
AUX 1 button

AUX2BTN1 to AUX2BT12, AUX2BTPG, AUX2BTPV, AUX2BTMV:
AUX 2 button

Setting example 1

UTILITY	PIN NO	FUNCTION	COLOR	I/O DIR	1/3
GPI	1	PGMBTN1	----	Input	961

If pin number 1 on the GPI I/O connector is connected to GND, the same performance as that obtained by pressing the PGMBTN1 (PGM select button 1) is executed.

Setting example 2

UTILITY	PIN NO	FUNCTION	COLOR	I/O DIR	1/3
GPI	10	Button1	Red	Output	961

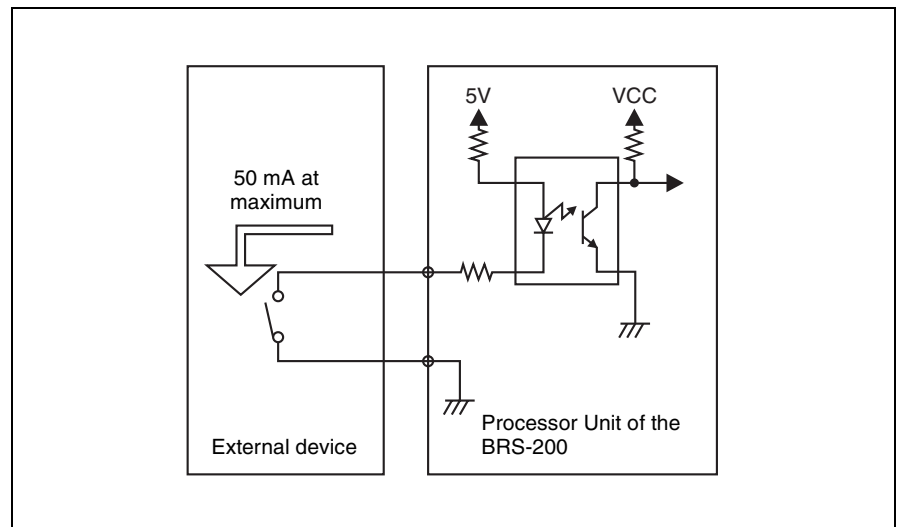
When the Button1 (cross-point button 1) is lit in red, pin number 10 on the GPI I/O connector short-circuits with GND.

It will be convenient to write down the functions assigned to each pin on the chart below.

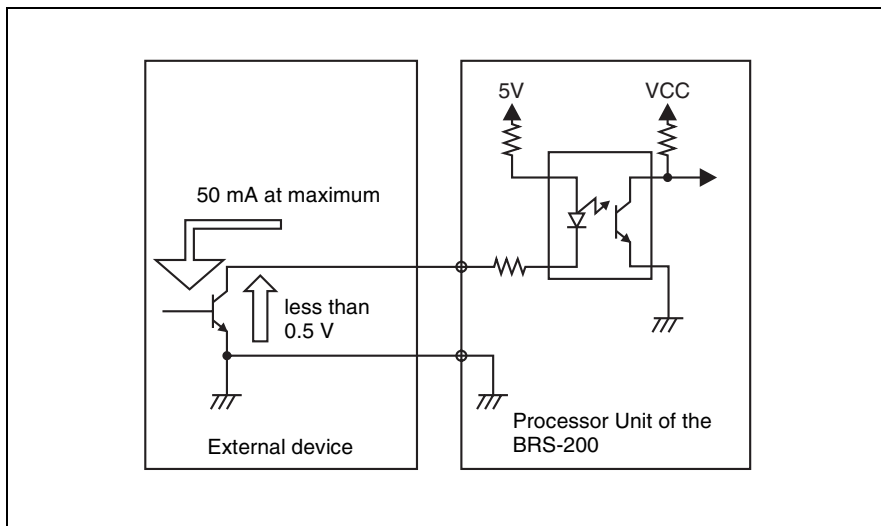
Pin number	Function	Pin number	Function
1		9	
2		10	
3		11	
4		12	
5		13	GND
6		14	GND
7		15	GND
8			

Control Examples Using the GPI I/O Connector

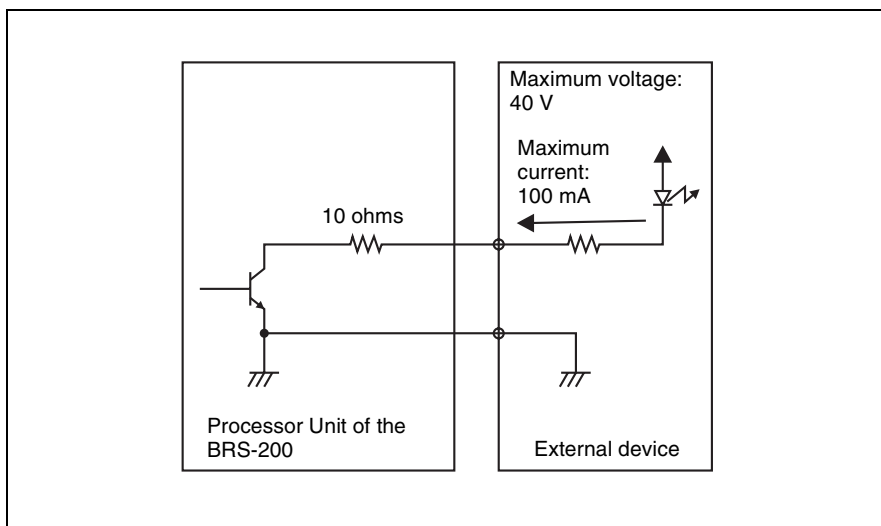
Input example 1: control example when an external switch is connected



Input example 2: control example when an open collector is used



Output example: control example when an external lamp is connected



Using the REMOTE Connector

The switcher can be controlled by a computer via the REMOTE connector on the switcher.

Follow the specifications below to communicate with the computer.

Configuring SERIAL DATA

Communication method

D-sub 9-pin

RS-422A compatible

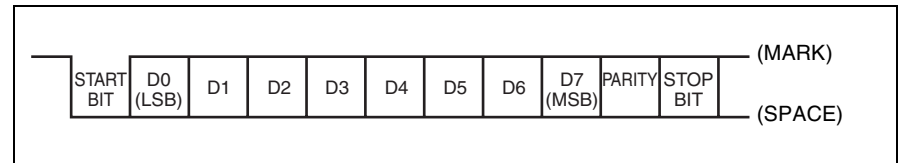
Synchronous system: Asynchronous

Baud rate: 38400, 19200, 9600 (selectable in the menu)

Character length: 8 bits

Parity: Odd, even, none (selectable in the menu)

Stop bit: 1 bit

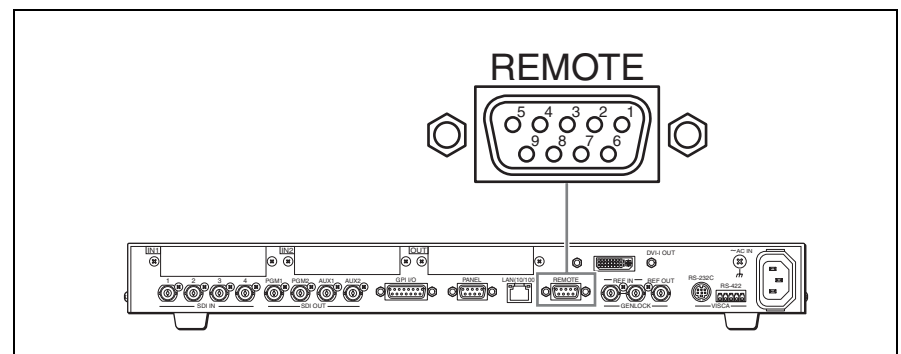


1 START BIT + 8 DATA BITs + 1 PARITY BIT + 1 STOP BIT

Odd parity: D0 to D7, and when the total number of ones for PARITY is odd

REMOTE connector

Pin assignments of the REMOTE connector (D-sub 9-pin, female)



Pin No.	Signal	Function
1	GND	Frame Ground
2	XMIT -	Transmit "A"
3	RCV +	Receive "B"
4	GND	Receive Common
5	NOT USED	Space
6	GND	Transmit Common
7	XMIT +	Transmit "B"
8	RCV -	Receive "A"

Transferring Data between the Switcher and a Computer

Connecting a computer to the LAN connector on the Processor Unit allows you to save the data set on the switcher on the computer (download) or import the data from a computer (upload) to the switcher.

The following data can be downloaded or uploaded:

- Frame memory image data (FM1 and FM2)
- Setting data (camera position data, snapshot data, and SETUP menu data)

Connection and Configuration

Connecting a computer

Connect the LAN connector on the switcher to the LAN connector on a computer with a cross cable (not supplied).

For the connection, see “Connecting a Computer for Storing the Setting Data” on page 38.

Setting up the switcher

Display menu page 963 to set up the IP address and network mask of the switcher and to set “FTP” to “Enable.”

Example of the IP address: 192.168.1.1

Example of the network mask: 255.255.255.0

UTILITY	IPADD	NET MASK	FTP	APPLY	3/3
LAN	1. 1	255. 0	Enable	↓ Exec	963

For details on the setup, see “Setting Up the Switcher for Connecting the Computer (Menu Page 963)” on page 60.

Note

The switcher may not function temporarily when a LAN cable is plugged or unplugged, or while uploading or downloading is being executed between the switcher and a computer. Set “FTP” to “Disable” when you are not communicating with a computer.

Downloading/Uploading

- 1** If the computer is using a proxy server to access an Internet, set it to “Access the Internet without using a proxy server.”
- 2** Set up the TCP/IPv4 IP address of the computer.
Example of IP address: 192.168.1.101
- 3** Set up the same network mask as that of the switcher for the TCP/IPv4 network mask of the computer.
Example of the network mask: 255.255.255.0

- 4 Start Windows Explorer and enter the path for the data you wish to download or upload in the Address text box to log on.

To open Explorer, right-click “Start” then select “Explorer” from the displayed menu.

For Frame Memory 1: ftp://192.168.1.1 (IP address of the switcher)/FM1/

For Frame Memory 2: ftp://192.168.1.1 (IP address of the switcher)/FM2/

For setting data: ftp://192.168.1.1 (IP address of the switcher)/

The logon window opens.

- 5 Enter the following user name and password in the logon window then click “Logon.”

User name: brs200

Password: sony

The computer is connected to FTP in the switcher, and the window for storing data set in step 4 will open.

- 6 Execute downloading or uploading.

For the procedure for downloading or uploading the data, see “To download or upload the frame memory image data” on page 126, or “To download or upload the setting data” on page 127.

Notes

- Do not download and upload at the same time. The data may not be transferred correctly.
Prevent both the data for frame memory 1 and frame memory 2 from being downloaded (or uploaded) at the same time.
- When you are using Windows Vista Ultimate Service Pack 1, Windows XP Professional Service Pack 3, Windows XP Home Edition or Windows XP Home Edition Service Pack 3, the switcher and computer may not communicate correctly, or you may not log on to the desired path if upload and download or log-on and log-out of the FTP have been done repeatedly. In such cases, turn the switcher off then back on or shut down the computer and reboot it then try to do again.
- If the date and time entered on menu page 440 and those set on a computer differ by more than a year, the date and time stamp of the file downloaded to the computer may change.

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To download or upload the frame memory image data

To download the image data stored in frame memory 1 or 2 to a computer

Copy the image data stored in the window displayed in step 5 of the procedure above to the destination folder on the computer.

To upload the image data stored on a computer to frame memory 1 or 2

Copy the image data stored on the computer to the window displayed in step 5.

Image file formats available for uploading to the frame memory

The switcher is able to upload the image data with the following file formats:

- TGA (extension: .tga)
- JPEG (extension: .jpg)

Notes

- The origin of the data is on the upper left for the TGA-format data supported by the switcher.
- For a TGA file that contains alpha data, image data will be uploaded to the frame memory selected in step 4, and the data to be used for DSK SOURCE will be uploaded to another frame memory.
- If you upload the image data to frame memory 2 when “FOLDER” is set to “AutoSwap” on menu page 420, the data in frame memory 1 and frame memory 2 are automatically exchanged after the upload is complete, and the uploaded data will be stored in frame memory 1.
- The switcher does not support Microsoft Office PowerPoint data saved in JPEG format.
- If you upload a TGA file when “FOLDER” is set to “AutoSwap” on menu page 420, only the image data will be uploaded to the switcher. The data to be used for DSK SOURCE data will not be uploaded.
- Still-image data uploaded and stored in frame memory 1 or 2 are erased when the switcher is turned off. To retain the image data even after the switcher is turned off, execute “STORE” on menu page 440 to store the still image in nonvolatile memory.

Restrictions on image size for uploading to the frame memory

There are the following restrictions on image size that can be uploaded to the frame memory:

- An image with more than 1920 × 1080 pixels will not be displayed.
- For an image with fewer than 1920 × 1080 pixels if “FORMAT” is set to “HD” on menu page 951 or fewer than 720 × 487 pixels if set to “SD,” black frames will appear around the image, since the center of the screen is the basic point of the display.
- When “FORMAT” is set to “SD” on menu page 951, the right and lower portions of the image with more than 720 × 487 pixels will be cut off, since the upper left of the screen is the basic point of the display.

To download or upload the setting data

To download the setting data to a computer

Copy the setting data in the window displayed in step 5 of the procedure above to the destination folder on the computer. The setting data are stored in files with the following filenames:

- **Camera position data:** campre.dat
- **Snapshot data:** snapshot.dat
- **SETUP menu data:** system.dat
- **All the setting data above:** all.dat

To upload the setting data stored on a computer to the switcher

Copy the setting data that were downloaded to the computer to the window displayed in step 5 above. The uploaded setting data from the computer are enabled after the upload is completed then the Processor Unit and Control Unit are turned off then rebooted.

Notes

- Camera position data (campre.dat) do not contain the preset camera settings in position numbers 1 to 16 (1 to 6 for the BRC-300/300P camera). As these

preset camera settings are stored in memory of a BRC-series camera, those in position numbers 1 to 16 (1 to 6 for the BRC-300/300P camera) are not reflected to the camera by downloading or uploading camera position data.

- When you are downloading or uploading the setting data, do not change any of the filenames of the files for storing those data.
- If an interface board installed in the switcher has been changed, the uploaded data that were set before changing the board are not correctly reflected.

Notes on downloading/uploading frame memory images in SD mode

When transferring image data between the switcher and a computer if the video signal format is set to “SD” on the switcher, the size of the transferred image will be somewhat changed.

To make the image identical before and after transferring, adjust the size of the image using an image editing tool.

For details on video signal formats, see “Setting the Video Signal Format and Aspect Ratio (Menu Page 951)” on page 50.

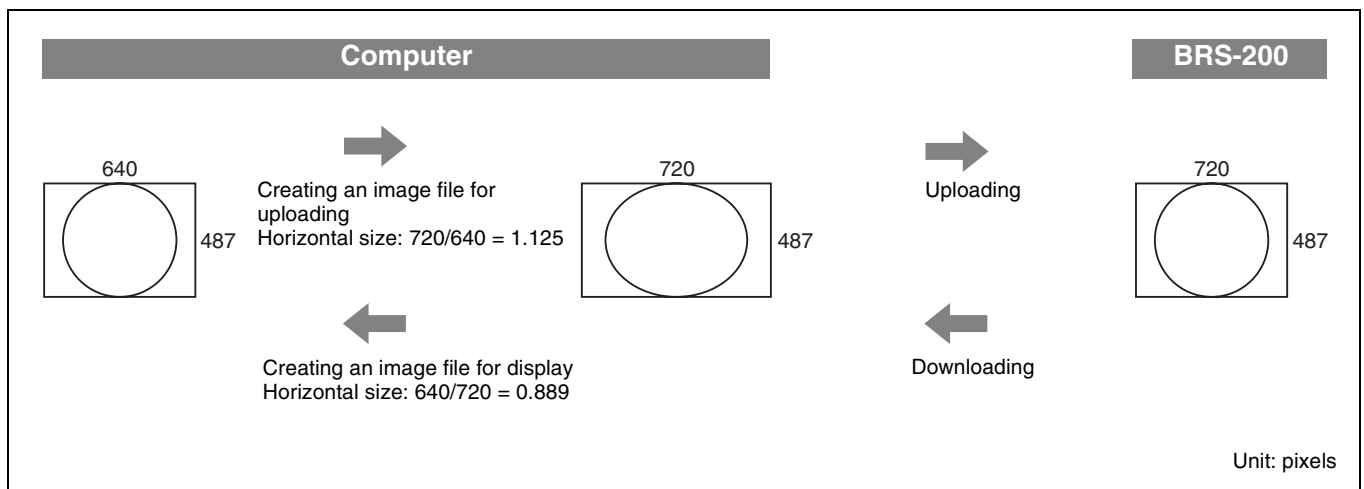
When “FORMAT” is set to “SD” and “FRAME” to “59.94”

To upload image data stored on a computer to frame memory of the switcher

Use an image editing tool to create an image enlarged in horizontal size to 1.125 times then upload it.

To display image data downloaded from frame memory of the switcher on a computer

An image downloaded to a computer will be larger than the original. Use an image editing tool to create an image for display that is reduced to 0.889 times. If black bands of several lines appear in the upper and lower parts of the image, trim them if necessary.



When “FORMAT” is set to “SD” and “FRAME” to “50”

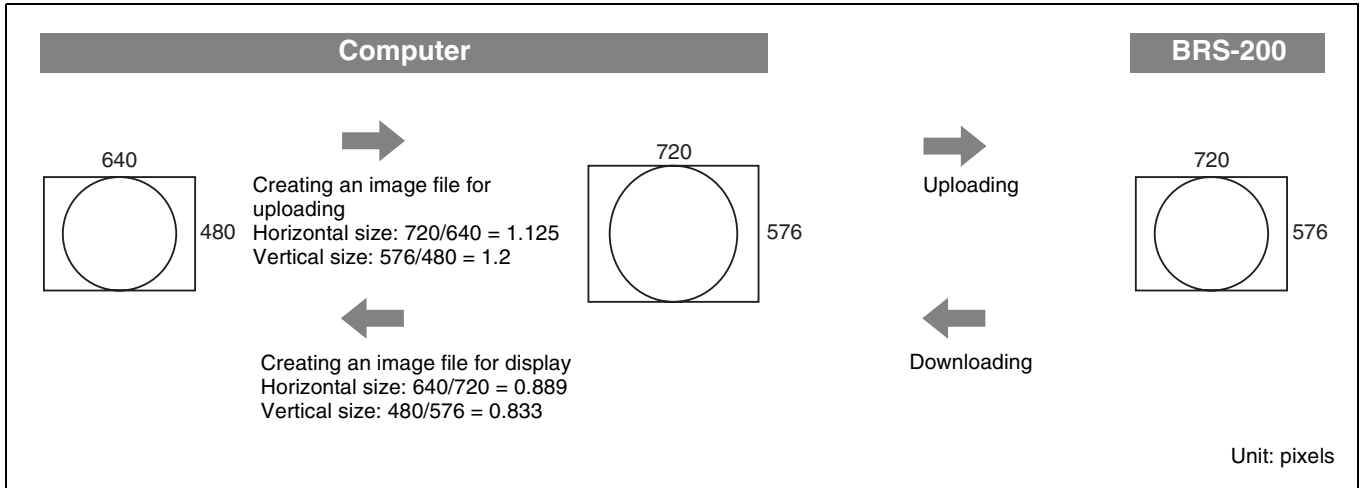
To upload image data stored on a computer to frame memory of the switcher

Use an image editing tool to create an image enlarged in horizontal size to 1.125 times and in vertical size to 1.2 times then upload it.

To display image data downloaded from frame memory of the switcher on a computer

An image downloaded to a computer will be larger than the original. Use an image editing tool to create an image for display that is reduced to 0.889 times

in horizontal size and to 0.833 times in vertical size. If black bands of several lines appear in the upper and lower parts of the image, trim them if necessary.





Menu List

The menus of the switcher consist of the camera mode menus displayed in CAM mode, switcher mode menus in SW mode and various setup menus in menu mode.

The three-digit number shown in the setting menu and submenu (setting item) of the menu list below is the menu page number assigned to each menu. You can directly open the menu for performing setup by specifying its menu page number. For details, see “Menu Operation” on page 46.

The factory preset settings are displayed in bold font in each menu.

Camera Mode Menu

Adjustment control	Indication/ Setting item		Description
--	SIG:	(Camera name)	
-	POS:	1 to 99 (Camera position number)	
F1	FOCUS	AUTO, MANUAL, ASSIST	<p>Selects AUTO or MANUAL with the AUTO/MANUAL button. When MANUAL is selected, turn the F1 control to adjust the focus.</p> <p>Note When AF ASSIST is set to ON on the BRC-Z700 or BRC-Z330 camera, ASSIST is displayed and manual focus is enabled using the F1 control.</p>
F2	AUTO	(Indication only)	<p>Adjusts the exposure manually. Items that can be set differ depending on the exposure mode set on the camera. Press the F2 control to select the item and turn the F2 control to change the value.</p> <p>Note Adjustable range of the SPEED, IRIS or GAIN setting value varies with the model of the camera. Refer to the Operating Instructions supplied with the camera.</p>
	SPEED	1/10000 to 1/60	
	IRIS	CLOSE, F16 to F1.6	
	GAIN	0 dB to 24 dB, HYPER	
	EX-COMP	-7 to +7	
F3	VARIABLE	1/8 to 8/8	<p>Adjusts the zoom speed. Press the F3 control to select VARIABLE or CONSTANT then turn the F3 control to change the value.</p>
	CONSTANT	1/8 to 8/8 (4/8)	
F4	VARIABLE	1/24 to 24/24	<p>Adjusts the panning/tilting speed. Press the F4 control to select VARIABLE or CONSTANT and turn the F4 control to change the value.</p>
	CONSTANT	BRC-300/300P/H700/ Z330: 1/24 to 24/24 (8/24) BRC-Z700: 0.5/24 to 24/24 (8/24)	

Switcher Mode Menu

Adjustment control	Indication/ Setting item		Description
--	SW MODE	(Switcher mode indication)	
-	SNAP:	0 to 99 (snapshot number indication)	<p>The number of mode selected under DIRECT above the F3 control is displayed.</p>
	WIPE:	0 to 9 (direct wipe number indication)	
	PIP:	0 to 9 (direct PIP number indication)	
F1	MV TYPE	1, 4, 10, 16	Selects the type of multi-viewer.
F2	XPT HOLD	Off , On	<p>Selecting On when the preset value stored in a snapshot number was recalled disables switching among XPT (cross-point button), DSK and PIP select buttons. Press the F2 control to select XPT HOLD, DSK HOLD or PIP HOLD then turn the F2 control to select On or Off.</p>
	DSK HOLD	Off , On	
	PIP HOLD	Off , On	
F3	WIPE PATTERN	(Wipe pattern figure)	<p>Press the F3 control to select WIPE PATTERN or DIRECT. When WIPE PATTERN is selected, turn the F3 control to select the desired wipe pattern. When DIRECT is selected, select direct select mode from among SS (snapshot), Wipe and PIP.</p>
	DIRECT	SS , Wipe, PIP	
F4	ME AUTO	0 to 999 (30)	<p>Press the F4 control to select ME AUTO, DSK AUTO or PIP AUTO then turn the F4 control to set the transition time.</p>
	DSK AUTO	0 to 999 (30)	
	PIP AUTO	0 to 999 (30)	

MEM Menu

Setting menu	Setting item	Description			
400	FREEZE..	410	SIGNAL	IN 1, IN 2, IN 3, IN 4, IN 5, IN 6, IN 7, IN 8, IN 9, FM 1, FM 2, MAT1, MAT2, CLBR, PGM, PVW	Allows you to register a still image in frame memory 1 or 2. Turn the F1 control to select a signal then turn the F2 control to specify FM1 or FM2. Press the F3 control to register the image.
			DIST	FM 1, FM 2	
			FREEZE	↓ Exec	
	MODE..	420	FM 1	Frame, Field1, Field2	Sets up the signal imported to FM 1 or FM 2 as a still image. Setting FOLDER to AutoSwap automatically swaps between the data in FM 1 and FM 2 after importing the data.
			FM 2	Frame, Field1, Field2	
			FOLDER	Separate, AutoSwap	
	NV MEM..	430	LOAD	NOP, ↓ FM 1, ↓ FM 2, ↓ Both	Stores still image data in nonvolatile memory and recalls them. LOAD: Writes the data in nonvolatile memory to FM 1 or FM 2. (When the switcher is on, data are written automatically.) STORE: Stores still image data of FM 1 or FM 2 in internal nonvolatile memory. It takes about 3 minutes to store one frame memory.
			STORE	NOP, ↓ FM 1, ↓ FM 2, ↓ Both	
	TIME..	440	MM/DD/YY	01/01'09	Enter the date and time when the data are stored in a computer. Press the F1 control to highlight the date then turn the F1 control to change the date. To move the highlighted position, turn the F2 control. In the same manner as above, change the time using the F3 and F4 controls. To register the settings, press the F4 control.
<=>					
HH:MM:SS			00:00:00		
<=>			↓ Set		
				<p>Note</p> <p>The switcher does not have a built-in clock. The entered date and time will not be updated.</p>	

WIPE Menu

Setting menu	Setting item	Description			
500	PATTERN..	510	NUMBER	000, 001, 002, 003, 004, 005, 021, 022, 023, 028, 029, 031, 040, 051, 057, 058, 074, 082, 096, 098	Turn the F1 or F2 control to select a wipe pattern. Storing it in the direct wipe number is supported. <i>For details, see "To store a wipe pattern in the direct wipe number (menu page 510)" on page 133.</i>
			(Figure)	(Wipe pattern figure)	
			DRCT NO.	None, 0 to 9	
			PRESET	↓ Exec	
	BORDER..	520	LUM	0.0 to 100.0 (in 0.1)	Set the border between the videos for a wipe. Turn the F1 to F4 controls to adjust LUM (luminance), SAT (saturation), HUE, and WIDTH of the border. All items except WIDTH can be set using the joystick.
			SAT	0.0 to 100.0 (in 0.1)	
			HUE	0.0 to 359.5 (in 0.5)	
			WIDTH	Off, 1 to 50 (in 1)	

To store a wipe pattern in the direct wipe number (menu page 510)

Select a wipe pattern on menu page 510, turn the F3 control to display the direct wipe number (0 to 9) under DRCT NO., then press the F4 control (PRESET).

To recall the preset wipe pattern

When you turn the F3 control to display Wipe under DIRECT in SW mode, WIPE: is displayed at the lower left corner on the display panel. (If DIRECT is not displayed on the display panel above the F3 control, press the F3 control once to display it.)

When you press numeric buttons 0 to 9 to enter the direct wipe number (0 to 9) beside WIPE: then press the RECALL button, you can recall the preset wipe pattern.
 You can also recall the preset wipe pattern simply by pressing numeric buttons 0 to 9 if you press to light up the DIRECT RECALL button.

MATT Menu

Setting menu	Setting item	Description		
600 MATT 1..	610 LUM	0.0 to 100.0 (in 0.1)		
		SAT	0.0 to 100.0 (in 0.1)	
		HUE	0.0 to 359.5 (in 0.5)	
	MATT 2..	620 LUM	0.0 to 100.0 (in 0.1)	
			SAT	0.0 to 100.0 (in 0.1)
			HUE	0.0 to 359.5 (in 0.5)

DSK Menu

Setting menu	Setting item	Description	
700 KEYMODE..	710 TYPE	Lum, Split, Chroma	
		FILL	(4-character indication)
		SOURCE	(4-character indication)
		INVERT	Off, On
ADJUST..	720 CLIP	0 to 100 (50)	
		GAIN	0.0 to 100.0 (50.0)
		TRANSP	0.0 to 100.0 (in 0.1)
AUTO CK..	730 CURSORON	↓ Exec	
		AUTO	↓ Exec
CK ADJ..	740 CLIP	0 to 100 (50)	
		GAIN	0.0 to 100.0 (50.0)
		HUE	0.0 to 359.5 (in 0.5)
		ANGLE	5.0 to 90.0 (in 0.5)

Note

Refer to DSK CLN on menu page 933, and PGM OUT on menu page 935.

Note

If you displayed the cursor on menu page 730, turn the dial on the upper part of the joystick counterclockwise to make the cursor disappear then set the chroma key.

Setting menu		Setting item		Description	
700	MATT..	750	LUM	0.0 to 100.0 (in 0.1)	Allows you to use color matte as DSK FILL video when FILL is set to On. Use the F1 to F3 controls or the joystick to adjust LUM (luminance), SAT (saturation) and HUE.
			SAT	0.0 to 100.0 (in 0.1)	
			HUE	0.0 to 359.5 (in 0.5)	
			FILL	Off, On	
	TRANS..	760	DSK AUTO	0 to 999 (30) (in frames)	Sets the transition time for DSK AUTO.

PIP Menu

Setting menu		Setting item		Description		
800	SIZE..	810	SIZE	1/6, 1/5, 1/4, 1/3, 1/2	Use the F1 control or the dial on the upper part of the joystick to set the size of an embedded video for PIP: Storing it in the direct PIP number is supported. <i>For details, see "To store the PIP settings in the direct PIP number (menu pages 810 and 820)" on page 135.</i>	
			DRCT NO.	None, 0 to 9		
			PRESET	↓ Exec		
POS..	820	V POS	-9.00 to 9.00 (0.00) (in 0.04 or 0.05)	Use the F1 and F2 controls or the joystick to set the position of an embedded video for PIP. Storing it in the direct PIP number is supported. <i>For details, see "To store the PIP settings in the direct PIP number (menu pages 810 and 820)" on page 135.</i>		
		H POS	-16.00 to 16.00 (0.00) (in 0.04 or 0.05)			
		DRCT NO.	None, 0 to 9			
		PRESET	↓ Exec			
				Note The selectable range for H POS is -12.00 to 12.00 when FORMAT is set to SD on menu page 951.		
BORDER..	830	LUM	0.0 to 100.0 (in 0.1)	Sets the border of an embedded video for PIP. Turn the F1 to F4 controls to adjust LUM (luminance), SAT (saturation), HUE and WIDTH of the border. All items except WIDTH can be set using the joystick.		
		SAT	0.0 to 100.0 (in 0.1)			
		HUE	0.0 to 359.5 (in 0.5)			
		WIDTH	Off, 1 to 50 (in 1)			
CROP..	840	CROP	Off, On	To use as an embedded video for PIP, you can crop some parts of the video. To crop, set CROP to On then set the range to be cropped on menu page 841. Note The selectable ranges are -5.0 to 5.0 for TOP and BOTTOM, and -8.0 to 8.0 for LEFT and RIGHT when FORMAT is set to SD on menu page 951.		
		CROPPOS..	841		TOP	-9.0 to 9.0 (in 0.1)
					LEFT	-16.0 to 16.0 (in 0.1)
					RIGHT	-16.0 to 16.0 (in 0.1)
					BOTTOM	-9.0 to 9.0 (in 0.1)
TRANS..	850	PIP AUTO	0 to 999 (30) (in frames)	Sets the transition time for PIP AUTO.		

To store the PIP settings in the direct PIP number (menu pages 810 and 820)

You can store the SIZE value set on menu page 810 and V POS and H POS values set on menu page 820. To store them, turn the F3 control to display the direct PIP number (0 to 9) under DRCT NO. on menu page 810 or 820 then press the F4 control (PRESET).

To recall the preset PIP settings

When you turn the F3 control to display PIP under DIRECT in SW mode, PIP: is displayed at the lower left corner on the display panel. (If DIRECT is not displayed on the display panel above the F3 control, press the F3 control once to display it.)

When you press numeric buttons 0 to 9 to enter the direct PIP number (0 to 9) beside PIP: then press the RECALL button, you can recall the preset PIP setting.

You can also recall the preset PIP setting simply by pressing numeric buttons 0 to 9 if you press to light up the DIRECT RECALL button.

SETUP Menu

Note

If you changed the values of the setting items in the SETUP menu (menu pages 900s) and exit the menu, a message "Reboot system? [PAGE] (yes) or [EXIT] (no)" or "Save setup data? [PAGE] (yes) or [EXIT] (no)" may appear on the display panel depending on the changed setting items. Press the PAGE button (yes) to reboot the switcher or to store the changed settings. The stored settings are retained in memory when the switcher is turned off and on again. When the EXIT button (no) is pressed, the settings are restored to those before your changes.

Setting menu	Setting item		Description		
900	CAMERA..	910 VISCA..	911 CONTROL RS-232C , RS-422	Sets up the connection with the VISCA cameras. Normally, keep MODEL set to Auto so that the switcher detects the model automatically. When all the connected cameras are of the same model, you can also specify the model. To apply the changed setting, press the F4 control to execute APPLY.	
			BAUD 38400, 9600		
			MODEL Auto , BRC-300, BRC-H700, BRC-Z700, BRC-Z330		
			APPLY ↓ Exec		
		ASSIGN..	912 CAM BTN	1, 2, 3, 4, 5, 6, 7	Allows you to assign the VISCA ID of the desired camera to one of the CAMERA 1 to 7 buttons. To change the assigned VISCA ID of the camera, execute NET CHG.
				NAME (4-character indication)	
				VISCA ID Off, 1 to 7	
				NET CHG ↓ Exec	
		SENSE..	913 ZOOM	Constant, Variable	Sets the sensitivity of reaction in camera zoom and joystick movement. Note When ZOOM is set to Constant, the default setting of SPEED (F2) is 4. When JOYSTICK is set to Constant, the default setting of SPEED (F4) is 8.
				SPEED 1, 2, 3, 4, 5, 6, 7, 8	
				JOYSTICK Constant, Variable	
				SPEED BRC-300/300P/H700/Z330: 1 to 24 BRC-Z700: 0.5, 1 to 24	
		MODE..	914 PAN DIR	Normal , Reverse	Sets the reaction of the joystick for panning/tilting and zoom direction. When BRIGHT is set to IRIS+G, IRIS and GAIN can be changed by turning the F2 control if the exposure is set to MANUAL on the BRC-H700, BRC-Z700 and BRC-Z330 camera.
				TILT DIR Normal , Reverse	
				ZOOM DIR Normal , Reverse	
				BRIGHT IRIS , IRIS+G	
		POS RST..	915 CAM BTN	1 to 7	Resets the preset value stored in the camera position number that corresponds to the CAMERA button.
				FROM 1 to 99, All	
				TO 1 to 99	
				RESET NOP , ↓ Exec	
		TALLY..	916 MODE	Off, CAM BTN, PGM	Sets the illumination specification of the tally lamp on the connected VISCA camera.

Setting menu	Setting item		Description				
900 CAMERA..	910 PWR MNG..	917 CAM BTN	All, 1 to 7	Sets power ON/OFF of the camera that corresponds to the CAMERA button using the F1 to F3 controls. When AUTO ON is set to On, the power for all the connected cameras is turned on in conjunction with the switcher's power.			
			TURN		Off, On		
			APPLY		NOF, ↓ Exec		
			AUTO ON		Off, On		
		PWRSTAT..	918 CAM BTN		1 to 7	The power status of the camera that corresponds to the CAMERA button is displayed under STATUS when the F4 control is pressed.	
					NAME		(4-character indication)
					STATUS		Sensing, On, Stand-By, Off, Non Asgn (indication only)
					CHECK		↓ Exec
	INPUT..	920 NAME..	921 SIGNAL	IN 1, IN 2, IN 3, IN4, IN 5, IN 6, IN 7, IN 8, IN 9, FM 1, FM 2, MAT1, MAT2, CLBR	Allows you to register the name (in 4 characters) identifying each of the signals input from the connectors on the Processor Unit and frame memories, color mattes, and color bars built in the switcher. <i>For details, see "To register the name of the signal (menu page 921)" on page 137.</i>		
				RENAME		(4-character definition to be input)	
				<=>			
		ASSIGN..	922 XPT BTN	1 to 12	Assigns signals to the cross-point buttons. Disables operation of the selected cross-point button when INHIBIT is set to On.		
				SIGNAL		IN 1, IN 2, IN 3, IN 4, IN 5, IN 6, IN 7, IN 8, IN 9, FM 1, FM 2, MAT1, MAT2, CLBR	
				NAME		(4-character indication)	
				INHIBIT		Off, On	
		ADJUST..	923 XPT BTN	1 to 12	Adjusts the levels of the signals that correspond to the cross-point buttons. Note These adjustments are not available for DVI, color matte, or frame memory signals.		
				Y-LEVEL		0.50 to 1.50 (1.00) (in 0.01)	
SETUP	-10.0 to 10.0 (0.0) (in 0.5)						
C-LEVEL	0.50 to 1.50 (1.00) (in 0.01)						
PROC..	924 SIGNAL	IN 5, IN 9	Sets the process of the aspect ratio of the signal input from IN 5 or IN 9 when the optional BRSA-20DD1 is installed. <i>For details, see "Conversion between Input Signal and Output Signal" on page 142.</i> Note These items can be set only when FORMAT is set to HD on menu page 951.				
		NAME		(4-character indication)			
		4:3 PROC		↓ WidZoom, ↓ Center, ↓ Zoom			
FS..	925 SIGNAL	SDI1, SDI2, SDI3, SDI4, SDI5, SDI6, SDI7, SDI8	Allows you to add FS (frame synchronizer) to the input signal selected under SIGNAL. Set FS to On for the connected device to which external sync signal cannot be added.				
		NAME		(4-character indication)			
		FS		Off, On			
SIDE..	926 LUM	0.0 to 100.0 (in 0.1)	Sets color matte for the side cut area for an available signal. The F1 to F3 controls and the joystick can be used for the setting.				
		SAT		0.0 to 100.0 (in 0.1)			
		HUE		0.0 to 359.5 (in 0.5)			

To register the name of the signal (menu page 921)

Each of the signals input from the connectors on the Processor Unit and frame memories, color mattes and color bars built in the switcher can be named in four characters to register.

Open the menu page 921 and follow the procedure below:

- ① Turn the F1 or F2 control to select the signal to be registered.
- ② Press the F2 control to highlight a character.
- ③ Turn the F2 control to change the highlighted character.
- ④ Turn the F3 control to move the highlighting to the character to be changed.

When you move the highlighting to the space next to the fourth character on the right, the input characters are registered.

Setting menu		Setting item			Description		
900	OUTPUT..	930	AUX..	931	BUS	AUX1, AUX2	<p>Selects the function and specification of the AUX1 and AUX2 output connectors.</p> <p>Allows output of ancillary data superimposed on an SDI signal without masking when ANCIL is set to On.</p> <p>When BUS ENBL is set to Off, the settings last selected are retained.</p> <p>When CAM MODE is set to On, the AUX output image will switch to the same image as that selected with CAMERA select button 1 to 7.</p> <p>Note Ancillary data will not be output from the SDI signal with FS set to On on menu page 925.</p>
					ANCIL	Off, On	
					BUS ENBL	Off, On	
					CAM MODE	Off, On	
		DVI..	932	BOARD	STD, OPTION	<p>Selects the signal output from the DVI-I output connector on the Processor Unit or the optional BRSA-20DD2 output board.</p> <p>When AUX1 or AUX2 is selected, the same video as that output from the AUX1 or AUX2 connector is output.</p> <p>Allows you to select the resolution of the output signal under RESO.</p> <p>Note When FORMAT is set to HD on menu page 951, HD 59.94, HD 50 or WUXGA can be selected under RESO. HD 59.94 or HD 50 can be selected depending on the FRAME setting on menu page 951.</p>	
				BUSSEL	AUX1, AUX2, MV, PVW, PGM		
				RESO	↓ XGA, ↓ WXGA, ↓ SXGA, ↓ HD 59.94, ↓ HD 50, ↓ WUXGA		
		PVWMODE..	933	DSK CLN	Off, On	<p>Specifies whether to display DSK or PIP video in the PVW window when the DSK AUTO or PIP AUTO button is not lit.</p> <p>When set to Off, the video is displayed in the PVW window, and when set to On, it is not displayed.</p>	
				PIP CLN	Off, On		
		MV..	934	TYPE	1, 4, 10, 16	<p>Sets the multi-viewer.</p> <p>Specify the number of the small windows under TYPE.</p> <p>To assign the video to each small window, select a window under WINDOW and specify a video to be displayed in the small window under SIGNAL.</p> <p>Notes</p> <ul style="list-style-type: none"> When TYPE4, TYPE10 or TYPE16 is selected, the PGM or PVW video assigned under SIGNAL is delayed by about 1 line from the videos in other windows. When TYPE 1 is selected, the factory-preset setting is PGM. 	
				WINDOW	TYPE1: 1 TYPE4: 1 to 4 TYPE10: 1 to 10 TYPE16: 1 to 16		
	SIGNAL			NONE, IN 1, IN 2, IN 3, IN 4, IN 5, IN 6, IN 7, IN 8, IN 9, FM 1, FM 2, MAT1, MAT2, CLBR, PGM, PVW, AUX1, AUX2			
	CK..	935	PGM OUT	Off, On	<p>Sets whether the cursor and chroma key are to be superimposed on the PGM output video when specifying the color of the chroma key with the cursor.</p>		

Setting menu		Setting item		Description		
900	OUTPUT..	930 SAFETTL..	936 DISPLAY	Off, On	Allows display of a frame in a safe area (80% or 90% of the display) of the signal selected under BUS SEL when DISPLAY is set to On. Setting CROSS to On allows display of a cross indication with a frame. Setting SIDE CUT to On allows display of the side cuts (vertical lines indicating the position) with a frame.	
			BUS SEL	PGM, PVW, AUX1, AUX2, MV		
			CROSS	Off, On		
			SIDE CUT	Off, On		
	PANEL..	940 DSKBUS..	941	XPT BTN	1 to 12	Sets DSK SOURCE signal to be assigned automatically to the DSK FILL signal selected with the DSK/AUX select button 1 to 12.
				FILL	(4-character indication)	
				SIGNAL	IN 1, IN 2, IN 3, IN 4, IN 5, IN 6, IN 7, IN 8, IN 9, FM 1, FM 2, MAT1, MAT2, CLBR	
				SOURCE	(4-character indication)	
		SW / CAM..	942	MOD ENBL	Both, SW Only, CAM Only	Allows you to set whether the switcher is to function in either CAM or SW mode only. When either is selected, the switcher does not function in the other mode. To enable the setting, press the F4 (MOD CHG) control.
				MOD CHG	↓ Exec	
		TRANS..	943	ME AUTO	0 to 999 (30)	Sets the transition time of each effect. Setting BUS TGL to On enables use of the PGM and NEXT cross-point buttons in BUS TGL mode. <i>For details, see "Setting the Bus Mode for the Cross-Point Buttons (Menu Page 943)" on page 56.</i>
				DSK AUTO	0 to 999 (30)	
				PIP AUTO	0 to 999 (30)	
				BUS TGL	Off, On	
		MODE..	944	BEEP	Off, On	Sets for the beep to sound or not, under BEEP. Selects the snapshot data recalled at the time of startup under STARTUP. <i>For details, see "To specify snapshot data at the time of startup (menu page 944)" on page 139.</i>
				STARTUP	Setup, 0 to 99	
BANK..	945	DRCT RCL	Bank 0, Bank 1, Bank 2, Bank 3, Bank 4, Bank 5, Bank 6, Bank 7, Bank 8, Bank 9	Sets the tens digit of the snapshot number when recalling it using the DIRECT RECALL button. <i>For details, see "To recall the snapshot number using the DIRECT RECALL button (menu page 945)" on page 139.</i>		

To specify snapshot data at the time of startup (menu page 944)

You can store the data set in the menus from menu pages in the 400s* (MEM menu) to 800s (PIP menu) with 0 to 99 snapshot numbers.

When you enter the number 0 to 99 under STARTUP in menu page 944, the switcher starts with the selected snapshot data when the power is turned on.

When you select Setup under STARTUP, the switcher starts with the currently selected values in the SETUP menu.

* The date and time setting on menu page 440 are not registered in the snapshot number.

To recall the snapshot number using the DIRECT RECALL button (menu page 945)

Select any of Bank 0 to Bank 9 under DRCT RCT on menu page 945.

The numbers 0 to 9 for Bank correspond to the tens digit of the snapshot number. Specifying Bank 0 allows you to recall snapshot numbers 0 to 9, Bank 1 to recall snapshot numbers 10 to 19 etc. and Bank 9 to recall snapshot numbers 90 to 99.

For example, specifying Bank 3 allows you to recall snapshot numbers 30 to 39 by pressing and lighting up the DIRECT RECALL button then pressing numeric buttons 0 to 9.

Setting menu		Setting item				Description			
900	SYSTEM..	950	SYSMODE..	951	FORMAT	SD, HD	Selects the system that the switcher supports. Note When FORMAT is set to HD and ASPECT is set to 4:3 on menu page 951, a PGM or PVM output image will remain in the portions outside the 4:3 display.		
					FRAME	59.94 , 50			
					ASPECT	4:3, 16:9			
					APPLY	↓ Exec			
			REFIN..	952	TYPE	Tri Sync, BB	Sets input sync signal. When the F2 control (APPLY) is pressed after setting TYPE, rebooting is required to enable the setting. Note If FORMAT is set to SD on menu page 951, TYPE is fixed to BB.		
					APPLY	↓ Exec			
			REFOUT..	953	TYPE	Tri Sync, BB	Sets output sync signal. When V PHASE is set to + 1H, 1H delay occurs.		
					H PHASE	-0.500 to 0.500 (0.000) (in 0.001, unit: H Line)			
					V PHASE	-1H, 0H , +1H (unit: Line)			
			SNAP..	954	MEM NO.	0 to 99	Resets the data stored in snapshot to the factory preset value. <ul style="list-style-type: none"> To reset an individual snapshot number, select the snapshot number under MEM NO. then press the F2 control (MEM CLR). To reset data in units of Bank, select the Bank number under CLR BANK then press the F3 control (CLR BANK). 		
					MEM CLR	↓ Exec			
					CLR BANK	NOP , ↓ All, ↓ Bank 0 to ↓ Bank 9			
			INIT..	955	SETUP	NOP , ↓ Reboot	Resets the data stored in the switcher to the factory preset value. <ul style="list-style-type: none"> To reset the SETUP data (menu pages 900s), turn the F1 control to display Reboot then press the F1 control. To reset all the data including snapshot data, turn the F2 control to display Reboot under FACT SET then press the F2 control. 		
					FACT SET	NOP , ↓ Reboot			
			UTILITY..	960	GPI..	961	PIN NO	1 to 12	Sets input/output of the GPI I/O connector. Turn the F1 control to specify the pin number of the GPI I/O connector then turn the F2 control to select the function. When any of Button1 to 12 is selected, turn the F3 control to specify the illumination color. I/O DIR indicates whether the selected function is for input or output.
							FUNCTION	NOP , PGMBTN1 to PGMBTN12, NEXTBTN1 to NEXTBT12, AUX1BTN1 to AUX1BT12, AUX1BTPG, AUX1BTPV, AUX1BTMV, AUX2BTN1 to AUX2BT12, AUX2BTPG, AUX2BTPV, AUX2BTMV, CUT, ME AUTO, PIP AUTO, DSK AUTO, TRANSMIX, TRANS WP, FRZ MEM1, FRZ MEM2, CAM MODE, SW MODE, DRCT-SS, DRCT-WP, DRCT-PIP, DRCTRCL0 to DRCTRCL9, Button1 to Button12, DSK On, PIP On, CAM1 to CAM7, AUX1BTN1 to AUX1BT12, AUX1BTPG, AUX1BTPV, AUX1BTMV, AUX2BTN1 to AUX2BT12, AUX2BTPG, AUX2BTPV, AUX2BTMV	
							COLOR	-----, Red , Amber	
		I/O DIR				Input, Output (indication)			

Setting menu	Setting item			Description		
900 UTILITY..	960 REMOTE..	962	CONTROL	Off, On	Sets up the REMOTE connector.	
			BAUD	9600, 19200, 38400		
			PARITY	None , Even, Odd		
			APPLY	↓ Exec		
	LAN..	963	IPADD	1.1 to 255.255	Sets up the IP address and network mask of the switcher for communication with a computer. After entering the addresses in IPADD and NET MASK, set FTP to Enable. When the F4 control (APPLY) is pressed, rebooting is required to enable the setting.	
			NET MASK	0.0 to 255.255 (255.0)		
			FTP	Disable, Enable		
			APPLY	↓ Exec		
	STATUS..	970 FIRMVER..	971	PR	XX.XX (Version indication)	Allows you to check the version of the firmware.
				CP	XX.XX (Version indication)	
FPGAVER1..		972	GENLOCK	XX.XX (Version indication)	Allows you to check the version of the FPGA.	
			SDI I/O	XX.XX (Version indication)		
			INPUT	XX.XX (Version indication)		
			OUTPUT	XX.XX (Version indication)		
FPGAVER2..		973	DVI	XX.XX (Version indication)	Allows you to check the version of the FPGA.	
			OPT IN1	XX.XX (Version indication)		
			OPT IN2	XX.XX (Version indication)		
			OPT OUT	XX.XX (Version indication)		
CODE..		974	MACADD H	0000 (MAC Address MSB indication)	Allows you to check the MAC address and serial number.	
			MACADD L	00000000 (MAC Address LSB indication)		
			SERIAL	123456 (product serial number)		
DIAG..		975	FAN 1	OK, NG (indication)	Allows you to check the condition of the fan.	
			FAN 2	OK, NG (indication)		
	FAN 3		OK, NG (indication)			
	FAN 4		OK, NG (indication)			
OPTION..	976	IN SLOT1	SDI, DVI, None (indication)	Allows you to check the type of the interface board installed in the switcher.		
		IN SLOT2	DVI, None (indication)			
		OUT SLOT	DVI, None (indication)			
REBOOT..	980	REBOOT	↓ Exec	Indicates the executing process. <ul style="list-style-type: none"> REBOOT: The switcher reboots when the F1 control is pressed. SAVE: The SETUP setting data is saved when the F2 control is pressed. CONTINUE: Nothing is executed, and the menu display is restored when the F3 control is pressed. 		
		SAVE	↓ Exec			
		CONTINUE	↓ Exec			

Conversion between Input Signal and Output Signal

The list below describes how SDI, 4:3 or 5:4 DVI, and 16:9 DVI input signals are converted to output from the SDI OUT and DVI-I OUT connectors on the switcher.

Notes

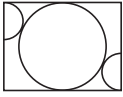
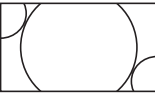
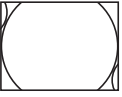


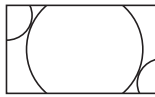

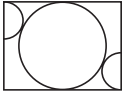
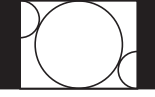






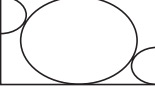
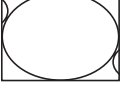




- The column “SYSTEM mode” in the following charts corresponds to the settings under “FORMAT” and “ASPECT” on menu page 951.
- The “Zoom,” “Center” and “Wide Zoom” under the column “Input” correspond to the settings under “4:3 PROC” on menu page 924.

SDI input signal

SYSTEM mode	Input	Output					
FORMAT ASPECT	SDI IN	SDI OUT	DVI OUT				
			1024 × 768	1280 × 768	1280 × 1024	1920 × 1080i	1920 × 1200
SD 4:3							
SD 16:9							
HD							

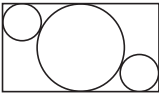
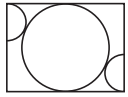
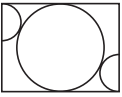
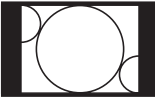
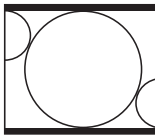
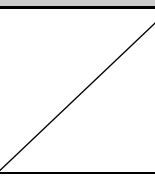
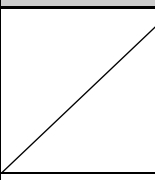
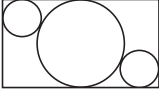

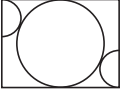

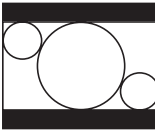
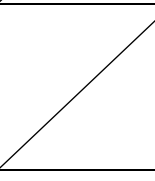
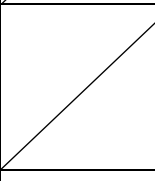




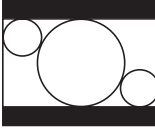


DVI (4:3) or DVI (5:4)* input signal

SYSTEM mode	Input	Output					
FORMAT ASPECT	DVI IN 4:3	SDI OUT	DVI OUT				
			1024 × 768	1280 × 768	1280 × 1024	1920 × 1080i	1920 × 1200
SD 4:3							
SD 16:9							

SYSTEM mode	Input	Output					
FORMAT ASPECT	DVI IN 4:3	SDI OUT	DVI OUT				
			1024 × 768	1280 × 768	1280 × 1024	1920 × 1080i	1920 × 1200
HD	Zoom 						
	Center 						
	Wide Zoom 						

* Black bands on both sides of the image are increased on DVI OUT images for DVI (5:4) signals.

DVI (16:9) input signal

SYSTEM mode	Input	Output					
FORMAT ASPECT	DVI IN (16:9)	SDI OUT	DVI OUT				
			1024 × 768	1280 × 768	1280 × 1024	1920 × 1080i	1920 × 1200
SD 4:3							
SD 16:9							
HD							

Messages and Troubleshooting

While you are operating the switcher, a message may appear on the display panel.

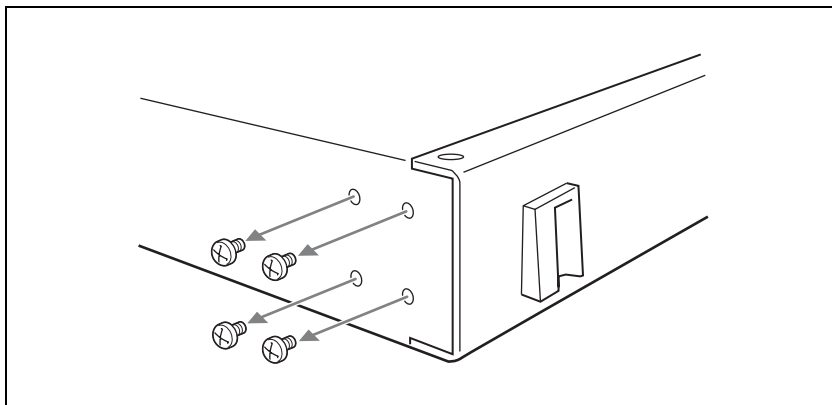
Check this section before consulting your Sony dealer. If the switcher still does not function properly, write down the message number and consult your Sony dealer.

Number	Message	Description	Solution
1001	Booting Now.	The switcher is being booted.	Wait until the message changes.
1002	Fan STOP !!	Fan has stopped.	Turn off the switcher. Check if any object is blocking the power fan openings. If the fan still does not function, consult your Sony dealer.
1003	No Communication.	The POWER switch of the Processor Unit is set to OFF, or the control cable is not connected properly.	Set the POWER switch of the Processor Unit to ON. If the message is displayed when it is set to ON, check that the supplied control cable is properly connected between the PANEL connector on the Processor Unit and the PROCESSOR connector on the Control Panel.
1015	Transferring Data. Please wait.	Waiting for a reply from the Processor Unit.	Wait until the message changes, and do not turn off the power.
1016	Storing Preset Data.	Snapshot data, etc. are being saved.	Wait until the message changes, and do not turn off the power.
1017	Accessing NV MEM.	Transmitting the data between frame memory and nonvolatile memory.	Wait until the message changes, and do not turn off the power.
1018	Snapshot Data are being reset.	The snapshot data are now being reset.	Wait until the message changes, and do not turn off the power.
2001	Storing Preset Data.	Preset data are being saved.	Wait until the message changes, and do not turn off the power.
2002	Completed.	Saving of the preset data is complete.	—
2005	Different from the expected camera.	Information on camera models does not match.	The model of the connected camera when storing the data differs from the model when recalling the data.
2011	Position Data are being reset.	The camera positions are now being reset.	Wait until the message changes, and do not turn off the power.
XXXX	—	—	If error messages not mentioned on this list appear, turn the switcher off then back on after a while. If error messages still remain, consult your Sony dealer.

Installing the Rack Mounting Bracket into the Switcher

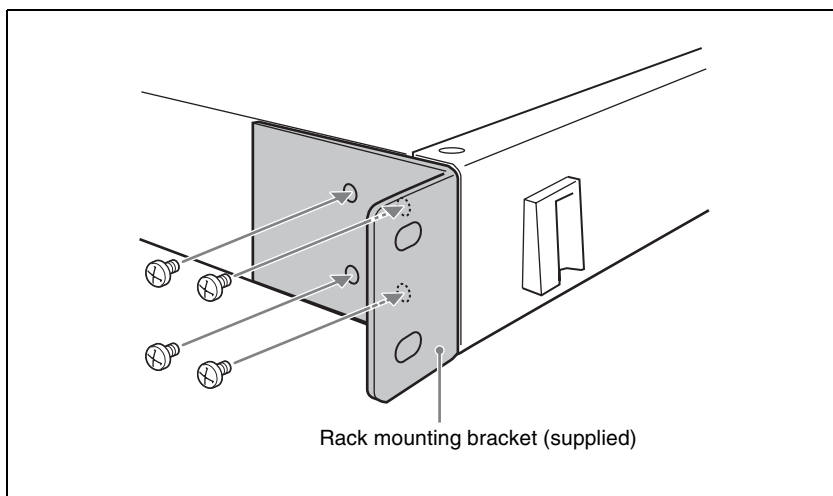
To install the Processor Unit in a rack, attach the supplied rack mounting brackets on the left and right sides of the Unit.

- 1 Remove the four screws each from the left and right sides.



- 2 Attach the supplied rack mounting brackets to the left and right sides with the removed screws.

Tighten the screws with torque of between 1.2 Nm and 1.6 Nm.



Specifications

Signal processing

HD mode/SD mode	HD mode or SD mode is selectable with the menu.
Television system	1080/59.94i, 1080/50i, 480/59.94i, 576/50i
Signal processing system	4 : 2 : 2 : 4 digital component
Quantization bits	Y: 10 bits, C: 10 bits, KEY: 10 bits
Input/output delay	1 H (when the frame synchronizer is OFF)

Inputs/Outputs

Video input	BNC type × 4, 800 mVp-p, 75 ohms HD-SDI: 1.485 Gbps or 1.485/1.001 Gbps SD-SDI: 270 Mbps The frame synchronizer function is built in for all the inputs.
Reference input	BNC type × 2, 75 ohms loop through (An external 75-ohm terminator is required.) BB: NTSC 0.429 Vp-p, PAL 0.45 Vp-p (Tri-level sync: ±0.3 Vp-p is available for HD mode.)
Video output	BNC type × 4, 800 mVp-p, 75 ohms HD-SDI: 1.485 Gbps or 1.485/1.001 Gbps SD-SDI: 270 Mbps
DVI-I output	DVI-I (Single Link) × 1 DVI-D: Resolution HD mode: XGA, WXGA, SXGA, WUXGA SD mode: XGA, WXGA, SXGA (HDCP not supported) RGB: R/G/B: 0.7 Vp-p, H/V: TTL Resolution HD mode: XGA, WXGA, SXGA, WUXGA HD59.94i (component), HD50i (component) SD mode: XGA, WXGA, SXGA

For details on acceptable DVI-I input/output signals, see “Acceptable DVI-I Input/Output Signal Formats” on page 152.

Reference output	BNC type × 1, 75 ohms BB: NTSC 0.429 Vp-p, PAL 0.45 Vp-p (Tri-level sync: ±0.3 Vp-p is available for HD mode.)
------------------	--

Interfaces

REMOTE	D-sub 9-pin type (female) × 1
GPI I/O	D-sub 15-pin type (female) × 1, 12 inputs/outputs in common
LAN	RJ-45 type × 1, 10Base-T/100Base-TX
VISCA	RS-232C: Mini DIN 8-pin type × 1 RS-422: 5-pin type × 1
PANEL	Processor Unit: D-sub 9-pin type (female) × 1
PROCESSOR	Control Panel: D-sub 9-pin type (female) × 1

General

Power requirements	Processor Unit: 100 to 240 V AC, 50/60 Hz Control Panel: 12 V DC
DC input	Control Panel: 12 V DC, JEITA type 4 × 1
Power consumption	Processor Unit: 125 W (when the maximum number of interface boards is installed) Control Panel: 12 W
Current consumption	Processor Unit: 1.2 to 0.6 A (100 to 240 V AC) Control Panel: 1 A
Operating temperature	5°C to 40°C (41°F to 104°F)
Dimensions	Processor Unit: 430 × 44 × 430 mm (17 × 1 3/4 × 17 inches) (w/h/d) Control Panel: 424 × 138 × 222 mm (16 3/4 × 5 1/2 × 8 3/4 inches) (w/h/d)
Mass	Processor Unit: Approx. 7.5 kg (16 lb 9 oz) (not including an optional interface board) Control Panel: Approx. 3.6 kg (7 lb 15 oz)
Supplied accessories	AC power cord (1) AC power adaptor (1) Power cord for AC power adaptor (1) Control cable (for connection between the Processor Unit and Control Panel) (1) Rack mounting bracket (1 set) RS-422 connector plug (1) Power cord stopper (1) DC IN plug retainer (1) and screws (+M3 × 6) (2) Quick Reference Guide (1) Operating Instructions (1) Warranty (1)

Optional accessories

BRSA-20HSD1 HD/SD-SDI input board

Video input	BNC type × 4, 800 mVp-p, 75 ohms HD-SDI: 1.485 Gbps or 1.485/1.001 Gbps SD-SDI: 270 Mbps The frame synchronizer function is built in for all the inputs.
-------------	---

BRSA-20DD1 DVI input board

DVI-I input	DVI-I (Single Link) × 1 DVI-D: Resolution XGA, WXGA, SXGA (HDCP not supported) RGB: R/G/B: 0.7 Vp-p, H/V: TTL Resolution XGA, WXGA, SXGA
-------------	---

BRSA-20DD2 DVI output board

DVI-I output	DVI-I (Single Link) × 1 DVI-D: Resolution HD mode: XGA, WXGA, SXGA, WUXGA SD mode: XGA, WXGA, SXGA (HDCP not supported)
--------------	---

RGB: R/G/B: 0.7 Vp-p, H/V: TTL
 Resolution HD mode: XGA, WXGA, SXGA, WUXGA
 HD59.94i (component), HD50i
 (component)
 SD mode: XGA, WXGA, SXGA

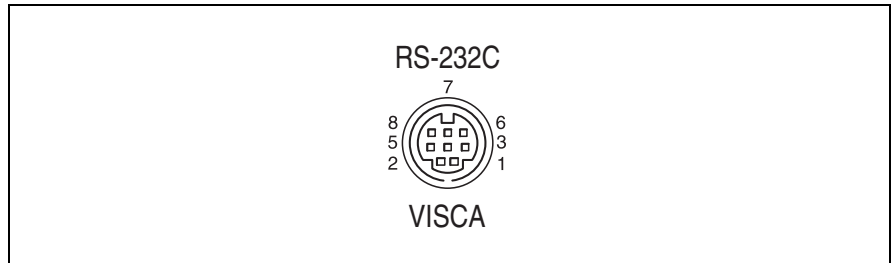
Design and specifications are subject to change without notice.

Notes

- Always make a test recording, and verify that it was recorded successfully. SONY WILL NOT BE LIABLE FOR DAMAGES OF ANY KIND INCLUDING, BUT NOT LIMITED TO, COMPENSATION OR REIMBURSEMENT ON ACCOUNT OF FAILURE OF THIS UNIT OR ITS RECORDING MEDIA, EXTERNAL STORAGE SYSTEMS OR ANY OTHER MEDIA OR STORAGE SYSTEMS TO RECORD CONTENT OF ANY TYPE.
- Always verify that the unit is operating properly before use. SONY WILL NOT BE LIABLE FOR DAMAGES OF ANY KIND INCLUDING, BUT NOT LIMITED TO, COMPENSATION OR REIMBURSEMENT ON ACCOUNT OF THE LOSS OF PRESENT OR PROSPECTIVE PROFITS DUE TO FAILURE OF THIS UNIT, EITHER DURING THE WARRANTY PERIOD OR AFTER EXPIRATION OF THE WARRANTY, OR FOR ANY OTHER REASON WHATSOEVER.

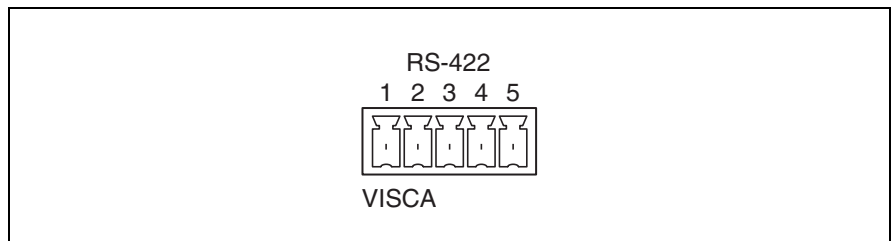
Pin Assignments

VISCA RS-232C output connector (mini DIN 8-pin, female)



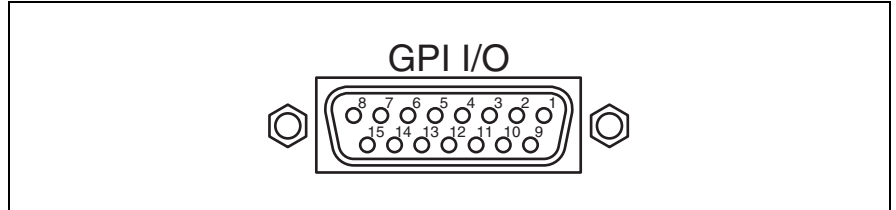
Pin No.	Function	Pin No.	Function
1	No Connection	5	RXD IN
2	No Connection	6	GND
3	TXD IN	7	No Connection
4	GND	8	No Connection

VISCA RS-422 connector (connector plug, 5-pin)



Pin No.	Function	Pin No.	Function
1	GND	4	TXD IN-
2	RXD IN-	5	TXD IN+
3	RXD IN+		

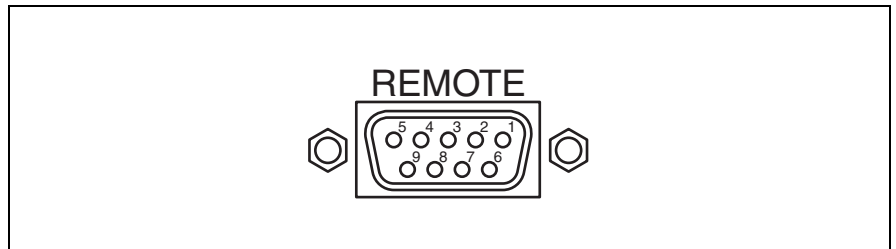
GPI I/O connector (D-sub 15-pin, female)



Pin No.	Function	Pin No.	Function
1	Input or output	9	Input or output
2	Input or output	10	Input or output
3	Input or output	11	Input or output
4	Input or output	12	Input or output
5	Input or output	13	GND
6	Input or output	14	GND
7	Input or output	15	GND
8	Input or output		

For the functions that can be assigned to pins 1 to 12, see “Using the GPI I/O Connector” on page 119.

REMOTE connector (D-sub 9-pin, female)



Pin No.	Signal	Function
1	GND	Frame Ground
2	XMIT-	Transmit “A”
3	RCV+	Receive “B”
4	GND	Receive Common
5	NOT USED	Space
6	GND	Transmit Common
7	XMIT+	Transmit “B”
8	RCV-	Receive “A”
9	GND	Frame Ground

For the definitions of “A” and “B,” see “Using the REMOTE Connector” on page 123.

Wiring Example of VISCA RS-422 Connection

Third to seventh VISCA cameras

VISCA RS-422 Connector

1	RXD OUT -
2	RXD OUT +
3	TXD OUT -
4	TXD OUT +
5	GND
6	RXD IN -
7	RXD IN +
8	TXD IN -
9	TXD IN +

Second VISCA cameras

VISCA RS-422 Connector

1	RXD OUT -
2	RXD OUT +
3	TXD OUT -
4	TXD OUT +
5	GND
6	RXD IN -
7	RXD IN +
8	TXD IN -
9	TXD IN +

First VISCA cameras

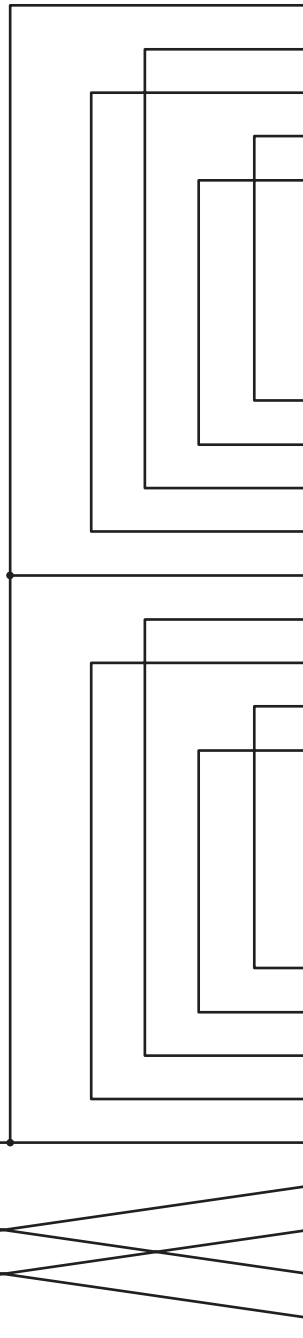
VISCA RS-422 Connector

1	RXD OUT -
2	RXD OUT +
3	TXD OUT -
4	TXD OUT +
5	GND
6	RXD IN -
7	RXD IN +
8	TXD IN -
9	TXD IN +

Processor Unit of the BRS-200

VISCA RS-422 Connector

1	GND
2	RXD IN -
3	RXD IN +
4	TXD IN -
5	TXD IN +

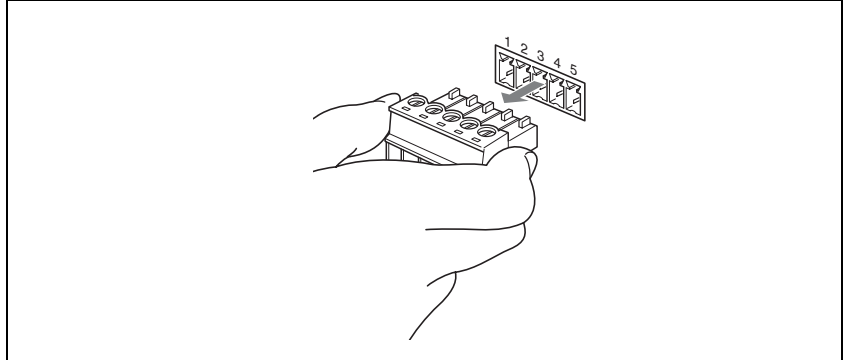


Appendix

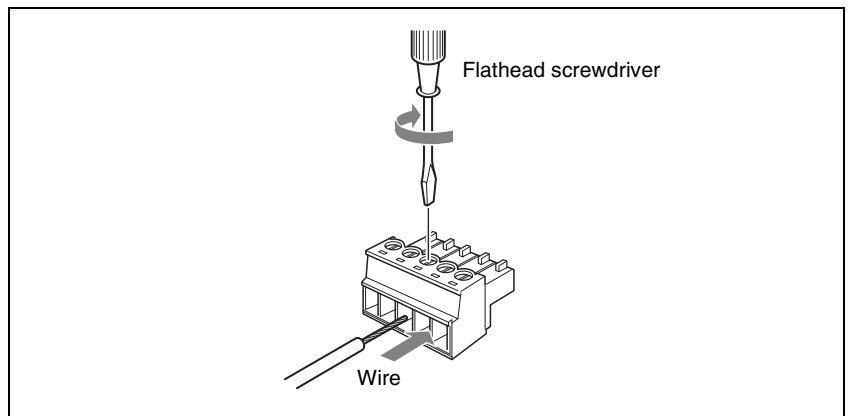
To Use the VISCA RS-422 Connector Plug

The VISCA RS-422 connector plug is inserted into the RS-422 connector on the switcher at the factory.

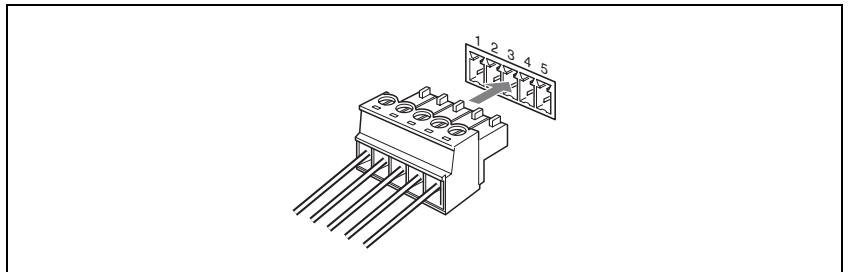
- 1 Grasp both ends of the VISCA RS-422 connector plug and pull it out, as shown in the illustration.



- 2 Insert a wire (AWG Nos. 28 to 18) into the desired wire opening on the VISCA RS-422 connector plug and tighten the screw for that wire using a flathead screwdriver.



- 3 Insert the VISCA RS-422 connector plug into the VISCA RS-422 connector.



Notes

- In order to stabilize the voltage level of the signal, connect both ends to GND.
- When the connections using the VISCA RS-422 connectors are made, the VISCA RS-232C connection is not available.
- The maximum connection distance with the VISCA RS-422 connection is about 1,200 m (3,937 feet).

Acceptable DVI-I Input/Output Signal Formats

DVI-I input signal formats

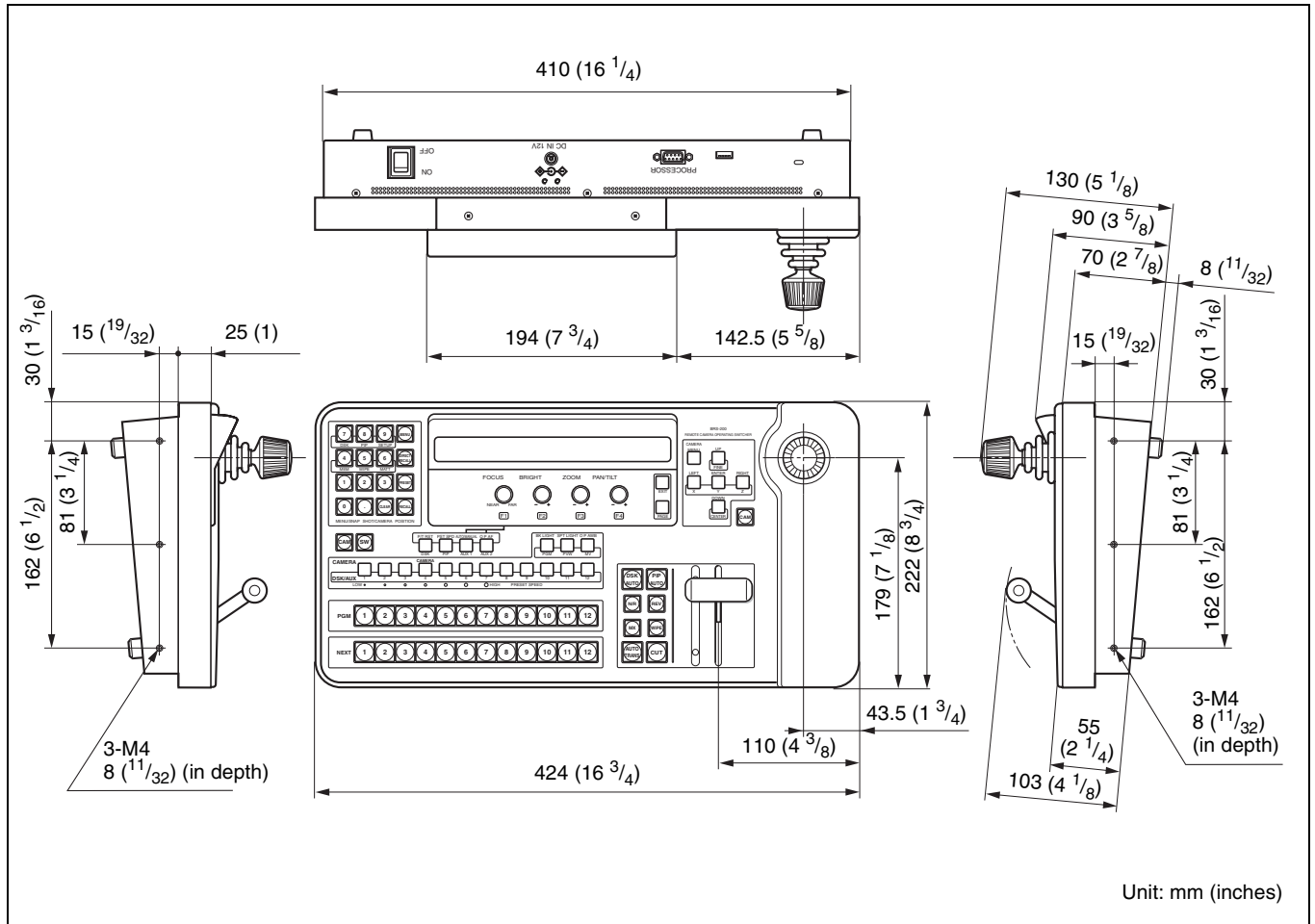
Resolution	Signal format	fH (kHz)	fV (Hz)	Dot clock (MHz)	H sync polarity	V sync polarity	Digital input	Analog input
1024 × 768	VESA (DMT) XGA 60 Hz	48.363	60.004	65	H-neg	V-neg	Supported	Supported
1280 × 768	VESA (DMT) WXGA 60 Hz	47.776	59.870	79.5	H-neg	V-pos	Supported	Supported
1280 × 800	VESA (DMT) WXGA 60 Hz	49.702	59.810	83.5	H-neg	V-pos	Supported	Supported
1280 × 1024	VESA (DMT) SXGA 60 Hz	63.981	60.02	108	H-pos	V-pos	Supported	Supported

DVI-I output signal formats

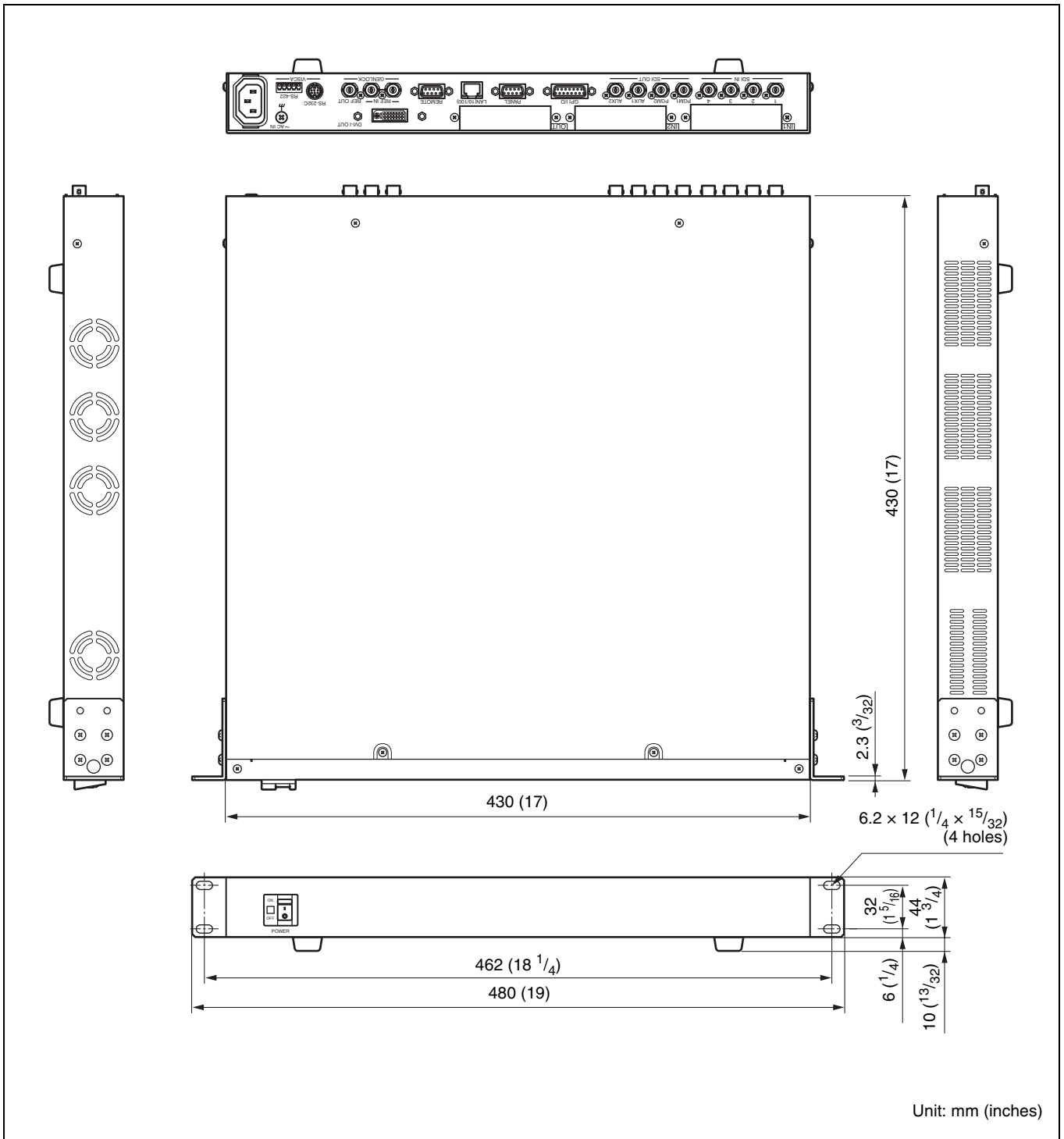
Resolution	Signal format	fH (kHz)	fV (Hz)	Dot clock (MHz)	H sync polarity	V sync polarity	Digital output	Analog output
1024 × 768	VESA (DMT) XGA 60 Hz	48.363	60.004	65	H-neg	V-neg	Supported	Supported
1280 × 768	VESA (DMT) WXGA 60 Hz	47.776	59.870	79.5	H-neg	V-pos	Supported	Supported
1280 × 1024	VESA (DMT) SXGA 60 Hz	63.981	60.02	108	H-pos	V-pos	Supported	Supported
1920 × 1080	EIA/CEA-861 1920 × 1080 Int 59.94 Hz	33.716	59.939	74.175	H-pos	V-pos	Not supported	Supported (component output)
1920 × 1080	EIA/CEA-861 1920 × 1080 Int 50 Hz	28.125	50.000	74.250	H-pos	V-pos	Not supported	Supported (component output)
1920 × 1200	VESA (DMT) WUXGA 60 Hz Reduced Blanking	74.038	59.950	154	H-pos	V-neg	Supported	Supported

Dimensions

Control Panel



Processor Unit



Appendix

Glossary

Background picture

An image that disappears as the effect progresses. The image is displayed as the program output video before any effect is applied.

Bus

An internal signal path to use an input signal, color matte, etc. for a specific purpose. Signals selected for input to the bus are passed on to the next process.

Chroma key

A method of creating a composite picture by deleting components that contain a specified color (chroma). Typically, a subject is captured in front of a blue background, referred to as a "blue screen," and the blue background is removed, leaving only a subject for composing.

Color bars

A test signal which displays vertical colored stripes on a monitor. Used to adjust the hue and saturation of colors on video cameras and monitors.

Color matte

A color signal generated by this unit. The hue, saturation, and luminance of color mattes can be adjusted.

Cross-point

An electronic switch where video signal lines cross. When the switch is closed, usually by pressing a button, multiple input signals and one or more output signals are allowed to pass.

Cut

An instantaneous switch from one picture to another.

Downstream key (DSK)

A function which allows pictures to be composed by taking video to be applied and adding further images and text. It is called downstream key because this processing is done at the lowest stream.

Field

In the NTSC color television system, 262.5 horizontal scanning lines. Odd lines are scanned for the first field before returning to the top of the screen to scan even lines. A frame is composed of two fields: the odd and even fields.

Foreground picture

An image that appears as the program output video after applying any effect.

Frame

Two fields, containing all the information in a complete picture.

Frame synchronizer

A device or function used to bring the timing of asynchronous video into conformance with a local reference signal.

Gen-lock

To synchronize output signals with an external sync signal.

GPI (General Purpose Interface)

A general purpose interface that is used to communicate with devices that do not have standard interfaces.

Luminance key

A method of creating a composite picture by deleting components of a specified luminance (brightness). Typically used to extract bright characters from a dark background, so that only the characters can be added to the composed picture.

Mix

A type of transition effect. A foreground video is finally replaced with a background video while both videos are gradually overlapped.

Pan

To move the camera to the left and right.

Picture-in-Picture (PIP)

An effect obtained by embedding a video within another video.

Preset

A function which allows a set of electrical settings to be stored and

recalled as a single set of data. This system has a camera preset function.

Program (PGM) signal output

The final video signal output from this system after applying the effects.

RGB

An output signal format which displays pictures by using the three primary colors: Red, Green, and Blue.

Serial digital interface (SDI)

A standard for transmitting uncompressed digital video signals and embedded audio.

Snapshot

Data containing the settings of specific controls on the control panel. Snapshots can be stored and recalled to restore the control panel to a desired state.

Subnet mask

An IP address, which indicates the address of a device in a network, has two components: a network address (the address of the network) and a host address (the address of an individual computer). A subnet mask is a value used to specify how many bits in the IP address are reserved for the network address. A subnet is a smaller network created by dividing a large network into two or more parts.

S-video signal

A video signal with separate luminance (Y) and chrominance (C) components. As opposed to composite video, S-video provides higher quality by eliminating interference between the Y and C signals.

Tilt

To move a camera up and down.

Transition

To switch from one video to a different video over a certain time interval. Transitions can be used for composing or erasing graphics or characters using the downstream key or Picture-in-Picture function.

Transition effect

Gradually switching from one video to another through the application of one of various effects. This system supports two types of transition effect: mix and wipe.

VISCA

A protocol developed by Sony which allows video equipment to be connected to computers.

White balance

To adjust the balance of red, green and blue signal levels so that white objects are reproduced in true white.

Wipe

A type of transition effect. A background video is gradually wiped across the screen to reveal a foreground video.



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