

LVS-400

VIDEO MIX / LIVE SWITCHER

Version 2.0

Supplement: Additional Functions

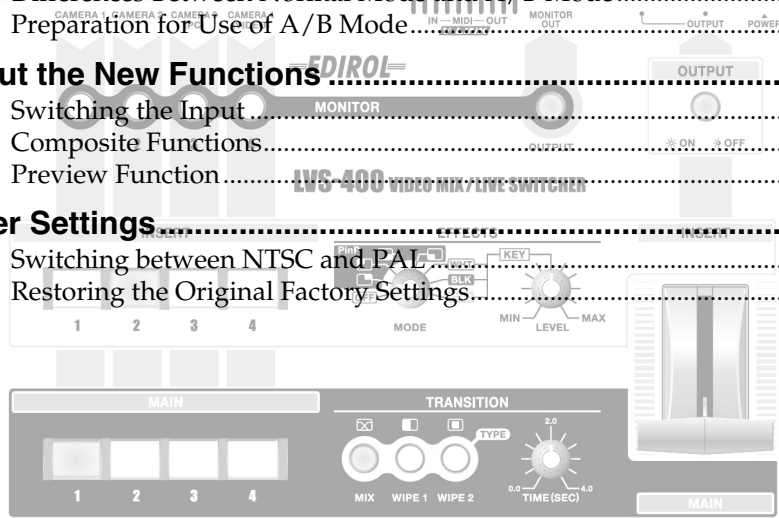
Thank you, and congratulations on your choice of the LVS-400.

In addition to the LVS-400 functions you have come to know, LVS-400 Version 2.0 now also adds an "A/B mode." A/B mode allows you to utilize the LVS-400 as an even more enhanced video switcher. This supplement describes the use of "A/B Mode." Please read this material in conjunction with the main LVS-400 Owner's Manual.

Before using this unit, carefully read the sections entitled: "USING THE UNIT SAFELY" (LVS-400 Owner's Manual p. 2, p. 3) and "IMPORTANT NOTES" (LVS-400 Owner's Manual p. 4). These sections provide important information concerning the proper operation of the unit. Additionally, in order to feel assured that you have gained a good grasp of every feature provided by your new unit, LVS-400 Owner's Manual and Supplement: Additional Functions (the document you are reading) should be read in its entirety. The manual should be saved and kept on hand as a convenient reference.

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Preparations for Use of the New Function (A/B Mode)

Additional Functions

The following functions have been added with the LVS-400 Version 2.0 A/B mode.

- “Composite Functions” (p. 7)
Allows you to switch between two composite screens while preserving the respective images as they are.
- “Preview Function” (p. 13)
With a monitor screen connected to MONITOR OUT, this allows confirmation of the synthesized effect in the display before the resulting composite image is output.

Differences Between Normal Mode and A/B Mode

The relationship between the main and insert images differs according to the mode selected.

- Normal Mode
The relationship between the MAIN screen and the INSERT screen remains fixed. Although the relationship between the MAIN and INSERT screens cannot be switched, it simplifies settings and working with original source images and key images in PinP (Picture-in-Picture) and composite video.
- A/B Mode
With certain settings, the correspondence between the MAIN screen and the INSERT screen can be switched. Although this makes for more complex settings and operations using the composite functions, it does give you free rein in selecting the images to use for PinP and composite video. A/B mode is the appropriate mode to use in attaining high-level image mixes.

MEMO

For more information on the use of Normal mode, refer to the “LVS-400 Owner's Manual.”

Preparation for Use of A/B Mode

Affixing the Special A/B Mode Panel Sheet

Included with the LVS-400 Version 2.0 package is a special panel sheet to be used when the unit is in A/B mode. Affix the sheet to the LVS-400 before using A/B mode.

1

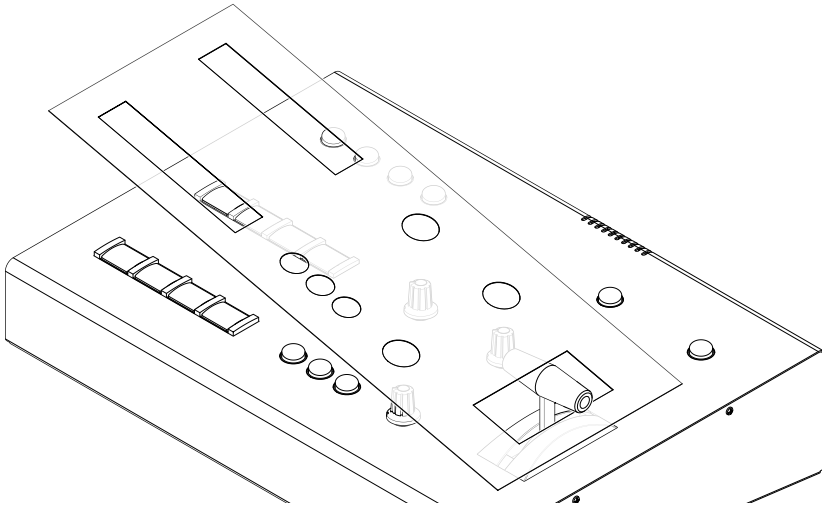
Set the video fader at approximately center (between MAIN and INSERT).

MEMO

To attach the sheet to the panel, first peel off the protective backing paper from the sheet and then affix the sheet to the panel.

2

First pass the panel sheet opening (the portion that shows "A/B MODE") over the video fader, starting from the right side of the fader.



3

Lay down the rest of the panel sheet over the other knobs and buttons so that the respective knobs and buttons pass through the openings in the sheet.

Preparation for Use of the LVS-400

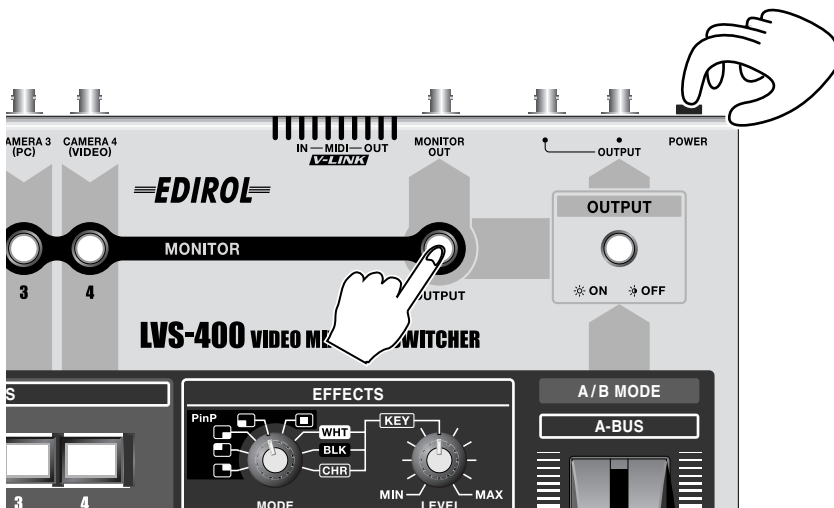
Before using the LVS-400, read the section "Connecting Peripheral Devices" in the LVS-400 Owner's Manual.

Using the LVS-400 in A/B Mode

Use the following procedures in using the LVS-400 Version 2.0 in A/B mode.

1

Power up your LVS-400 while holding down [OUTPUT] and press [POWER].



The opening screen appears in the monitor display connected to MONITOR OUT.

Preparations for Use of the New Function (A/B Mode)

At this time, "A/B MODE" is displayed.



2

Once the opening screen is displayed, release [OUTPUT].

When turning off the power to the LVS-400...

When the LVS-400 is turned off while in A/B mode, it remains set to the A/B mode setting. The next time you turn the LVS-400 back on to use it, the mode switches automatically to A/B mode.

Returning the LVS-400 to Normal Mode

To switch back from A/B mode and use the LVS-400 in Normal mode, follow the instructions in "Using the LVS-400 in A/B Mode" (p. 3) once again.

"A/B MODE" does not appear in the opening screen after the LVS-400 is returned to Normal mode.



About the New Functions

Switching the Input

You can switch inputs using a combination of the A-BUS and B-BUS buttons 1–4 and the video fader.

Switching the A-BUS Image with Images from Other Inputs

This switches the image selected with A-BUS with an image from a different input.

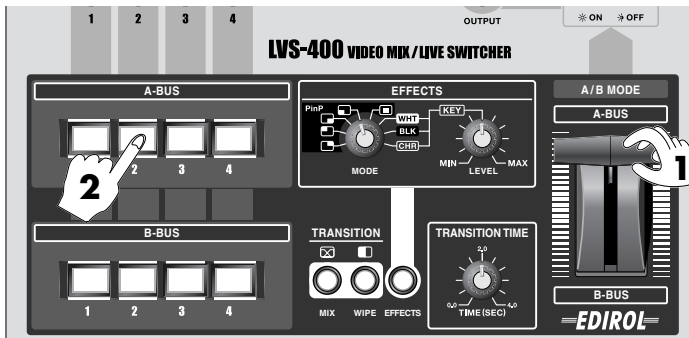
1

Tilt the video fader towards the A-BUS side.

The image corresponding to the lit (selected) A-BUS button is output from the OUTPUT connector.

2

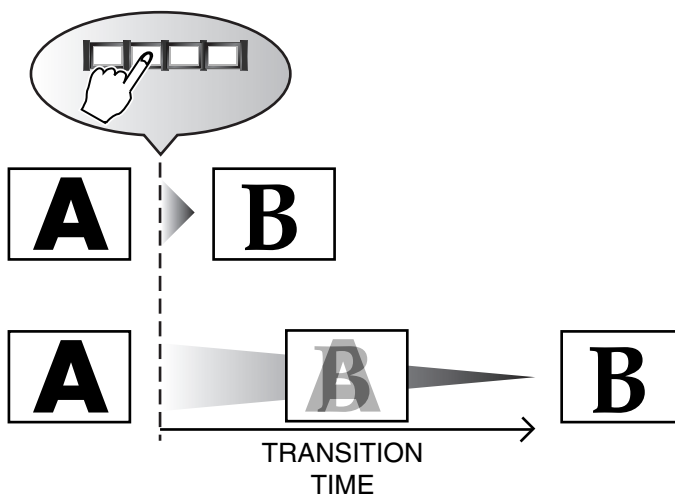
Select the image source you want to output with one of the A-BUS buttons 1–4.



The video switches to the selected image.

Switching Images As They Play

You can switch images while they are being played by setting the transition time with the TRANSITION TIME knob. 4.0 is the longest setting (4.0 seconds); when set to 0.0, the images are switched instantly.



MEMO

Pressing the A-BUS or B-BUS buttons while the video fader is positioned midway between A-BUS and B-BUS may disrupt the image.

MEMO

The BUS buttons flash during transitions and switching.

Switching the Image from A-BUS to B-BUS with the Video Fader

You can use the video fader to switch the bus used for the image output. The selected input image on the bus to which side the video fader is tilted becomes the output image.

1

Press **TRANSITION [MIX] or [WIPE]**.

Select the image transition pattern (effect).

Button	Pattern
[MIX]	The transition uses a mix effect.
[WIPE]	The transition uses a wipe effect.

2

Tilt the video fader towards the **A-BUS side**.

The video switches to the selected image.

3

Select the image source you want to output as the **A-BUS image with one of the A-BUS buttons 1–4**.

The image corresponding to the lit (selected) A-BUS button is output from the OUTPUT connector.

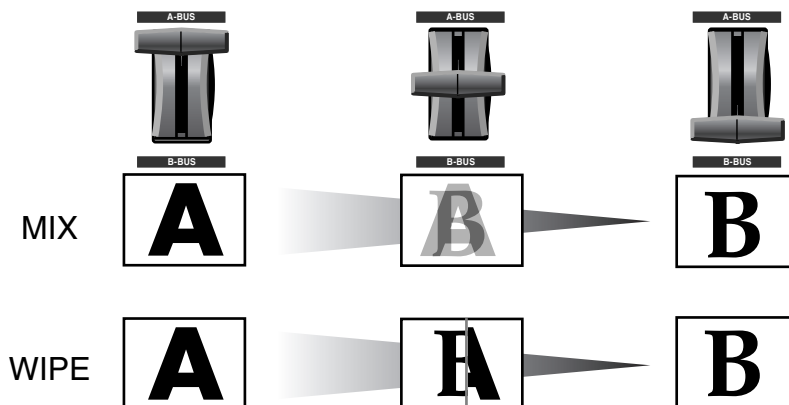
4

Select the image source you want to output as the **B-BUS image with one of the B-BUS buttons 1–4**.

5

Tilt the video fader towards the **B-BUS side**.

The output image switches from A-BUS to B-BUS using the effect selected with TRANSITION.



MEMO

Pressing the A-BUS or B-BUS buttons while the video fader is positioned midway between A-BUS and B-BUS may disrupt the image.

Composite Functions

With Version 2.0, you can assign PinP (Picture-in-Picture) as well as White Luminance Key, Black Luminance Key, and Chroma Key (specific color) to either the A-BUS or B-BUS image.

Creating Composite Video with PinP Using the A-BUS Image Within the B-BUS Image

This effect layers a small image (the “foreground image”) on top of an image displayed in the full screen (the “background image”).

As an example, here’s how to layer “foreground image B” on top of “background A.”

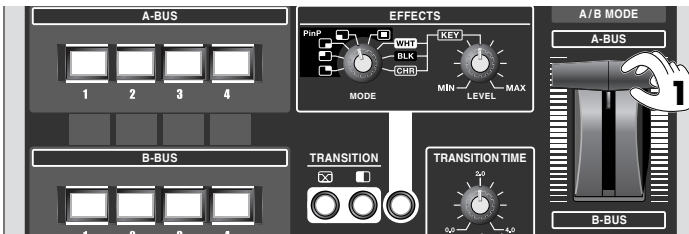
MEMO

Pressing the A-BUS or B-BUS buttons to switch images while creating a composite using two images with PinP may cause the image to be disrupted.

1

Tilt the video fader towards the A-BUS side.

The image corresponding to the lit (selected) A-BUS button is output from the OUTPUT connector.



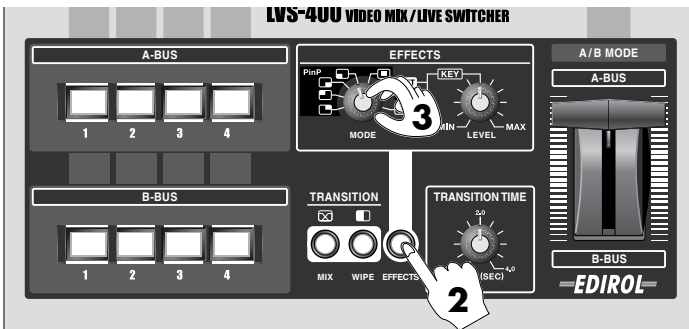
2

Press [EFFECTS].

The B-BUS button will flash. The image corresponding to the flashing (selected) button becomes the insert image.

3

Select the PinP pattern you want to use with the MODE knob.



4

Tilt the video fader towards the B-BUS side.

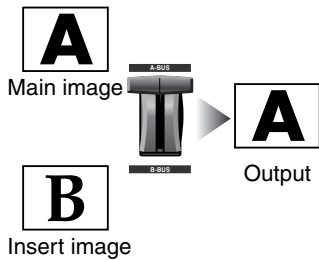
The composite output video contains the image corresponding to the flashing BUS button and the image corresponding to the lit BUS button.

Relationship Between the Main and Insert Images in PinP

The relationship between the image occupying the entire screen (the main image) and the smaller image within that (the insert image) is determined by the position of the video fader.

1. Tilt the video fader to the bus carrying the image you want to use as the main image.

The image corresponding to the lit (selected) BUS button is output from the OUTPUT connector.



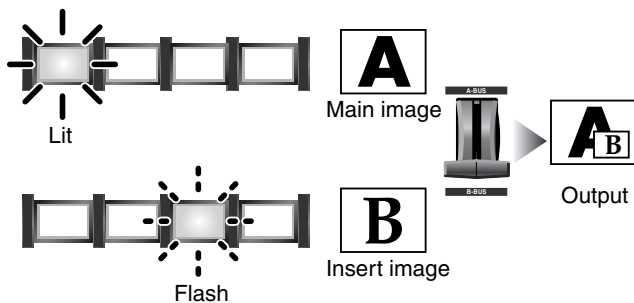
2. Press [EFFECTS].

The EFFECTS button will lit. The image on the side to which the video fader is tilted is the main image (with the BUS button lit), and the image on the opposite bus is used as the insert image (with the BUS button flashing)

3. Select the PinP pattern you want to use with the MODE knob.

4. Tilt the video fader towards the small (foreground) image side.

The composite output video contains the image corresponding to the flashing BUS button and the image corresponding to the lit BUS button.



MEMO

When [EFFECTS] is already lit prior to Step 2, press [MIX] or [WIPE] so that [EFFECTS] light goes off. This is because the main and insert images are determined the instant [EFFECTS] is pressed and its light goes on.

Changing the Position of the Insert Image

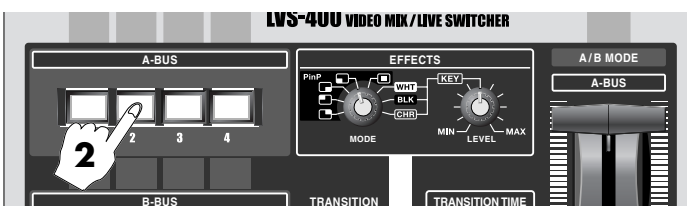
You can change the position of the insert image displayed in PinP.

1

Select the PinP pattern you want to use with the MODE knob.

2

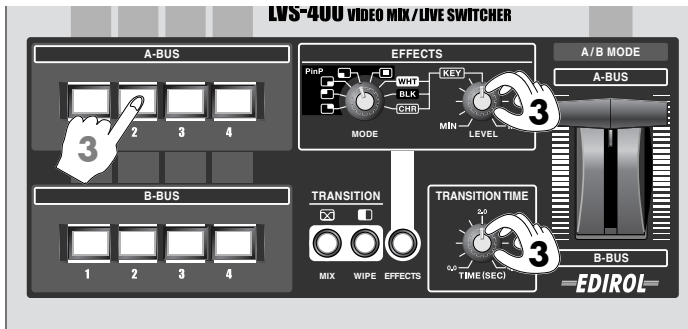
Hold down the flashing BUS button ([1]–[4]) for at least three seconds.



3

While continuing to hold down the **BUS** button, turn the **EFFECTS LEVEL** knob or **TRANSITION TIME** knob.

You can move the insert image vertically with the **EFFECTS LEVEL** knob and horizontally with the **TRANSITION TIME** knob.



4

When you are finished adjusting the position, release the **BUS** button.

Changing the Size of the Insert Image

You can change the size of the insert image displayed in PinP.

1

Select the PinP pattern you want to use with the **MODE** knob.

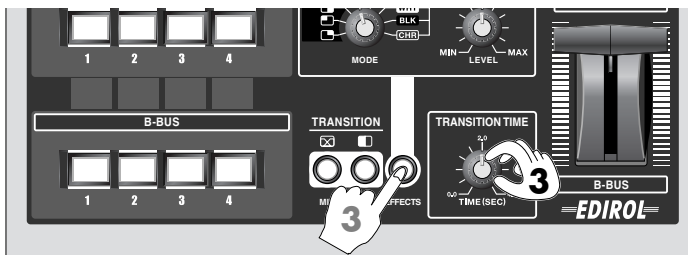
2

Hold down **[EFFECTS]** for at least three seconds.

3

While continuing to hold down **[EFFECTS]**, turn the **TRANSITION TIME** knob.

You can change the insert image size with the **TRANSITION TIME** knob.



4

When you are finished adjusting the position, release **[EFFECTS]**.

MEMO

You can set the size separately for each of the four corners and the center position.

MEMO

Size changes remain in effect until the power is turned off. Turning off the power restores the size to the original factory default settings.

MEMO

The functions for adjusting the insert image position and changing the size of the image are enabled in Normal mode (not A/B mode).

Creating Composite Video with the A-BUS Image in the White or Black Portions of the B-BUS Image

1

Tilt the video fader towards the A-BUS side.

The image corresponding to the lit (selected) A-BUS button is output from the OUTPUT connector.

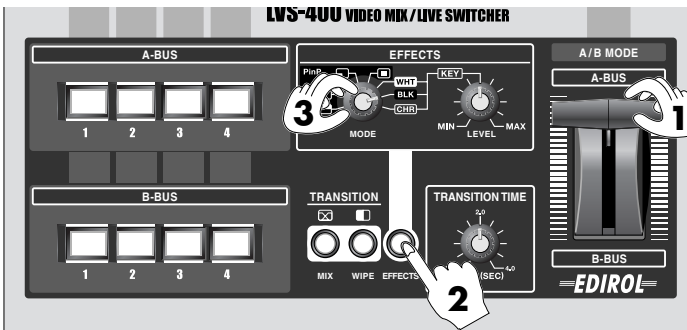
2

Press [EFFECTS].

The B-BUS button will flash. The image corresponding to the flashing (selected) button becomes the key image (the image portions of which are to be removed).

3

Turn the MODE knob to "WHT" or "BLK" – depending on portion to eliminate. The LVS-400 switches to White or Black Luminance Key mode.



4

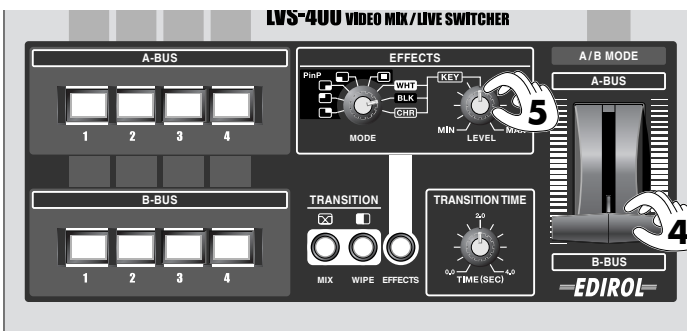
Tilt the video fader towards the B-BUS side.

Light portions of the image corresponding to the flashing B-BUS button are replaced with the A-BUS image.

5

Turn the EFFECTS LEVEL knob.

Adjust the sensitivity so that the results correspond to the light or dark portions of the B-BUS image.



HINT

To create composite video with the specific color replaced, turn the MODE knob to "CHR."

MEMO

Pressing the A-BUS or B-BUS buttons to switch images while creating a composite using two images with the EFFECT MODE knob set to "WHT," "BLK," or "CHR" may cause the image to become disrupted.

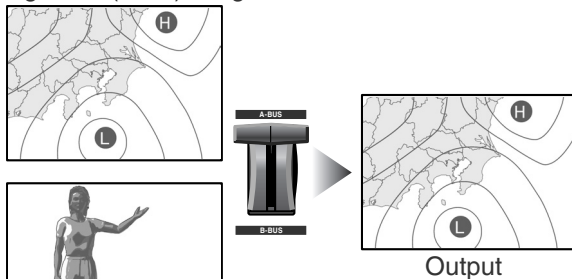
Relationship Between the Key and Incorporated Images Using the Key Composite Functions

The relationship between the background image and the image used in replacing the specified color in the background image is determined by the position of the video fader.

- 1. Tilt the video fader toward the bus with the image you want to use as the background.**

The image corresponding to the lit (selected) BUS button is output from the OUTPUT connector.

Background (Main) image



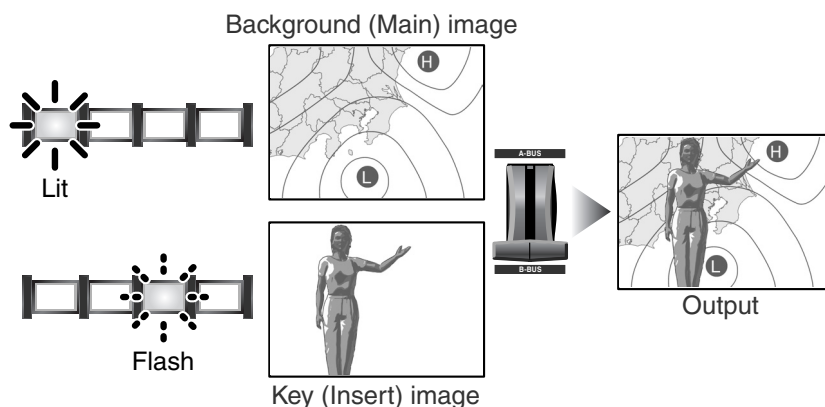
Key (Insert) image

- 2. Press [EFFECTS].**

Tilt the video fader to the side containing the image you want to have incorporated (with the BUS button lit); the image from the opposite side becomes the key image (with the BUS button flashing).

- 3. Turn the MODE dial to select the key (the color to be replaced).**
- 4. Tilt the video fader towards the key image side.**

The composite output video contains the image corresponding to the flashing BUS button and the image corresponding to the lit BUS button.



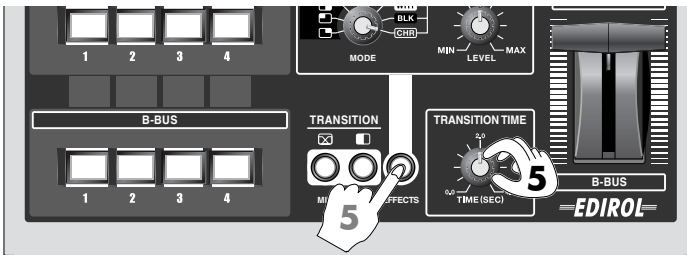
MEMO

When [EFFECTS] is already lit prior to Step 2, press [MIX] or [WIPE] so that [EFFECTS] light goes off. This is because the background and key images are determined the instant [EFFECTS] is pressed and its light goes on.

Changing the Chroma-Key (Key Composite) Color

Using the Chroma-Key function, you can change the color that is replaced in the image.

- 1 **Connect a monitor display to the MONITOR OUT connector.**
- 2 **Perform steps 1–2 of “Changing the Chroma-Key (Key Composite) Color” (p. 12).**
Prepare to use Chroma Key, selecting the background and key images.
- 3 **Turn the MODE knob to “CHR.”**
The LVS-400 switches to Chroma-Key mode.
- 4 **In Normal mode, hold down either [MIX], [WIPE 1], or [WIPE 2] for at least three seconds. In A/B mode, hold down [EFFECTS] for at least three seconds.**
“KeyColor = ***” (“***” indicates the color type) appears in the monitor display connected to the MONITOR OUT connector.
- 5 **While continuing to hold down the button when you choose in step 4, turn the TRANSITION TIME knob.**
Select the color to be used as the key color. The monitor display then changes to “KeyColor = ***.”



The following shows the colors you can select as key colors.

	KeyColor		KeyColor
01	Blue-Magenta	07	Cyan-Green
02	Blue-Cyan (original factory condition)	08	Green-Cyan
03	Red-Magenta	09	Green-Red
04	Red-Yellow	10	Cyan-blue
05	Magenta-Red	11	Yellow-Green
06	Magenta-Blue	12	Yellow-Red

MEMO

Changes in the Key Color setting are saved even when the power is turned off.

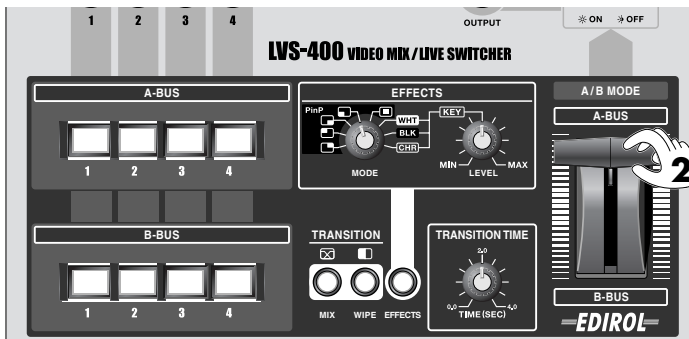
Preview Function

You can preview images in the monitor display connected to the MONITOR OUT connector to confirm composite images and images to be switched before proceeding.

Confirming the B-BUS Image While the A-BUS Image Is Being Output (Automatic Transition)

1 Connect a monitor display to the MONITOR OUT connector.

2 Tilt the video fader towards the A-BUS side.
The image corresponding to the lit (selected) A-BUS button is output from the OUTPUT connector.
At this point, the B-BUS image is output from the MONITOR OUT connector.



With the Transition to the B-BUS Image...

The B-BUS image is output from OUTPUT when the video fader is tilted toward the B-BUS side. At this point, MONITOR OUT switches to the A-BUS image. The image from the side not selected with the video fader is always set to be output automatically from MONITOR OUT. Accordingly, this allows you to constantly check composite and switched images before they are sent to OUTPUT.

Manually Switching Images to MONITOR OUT

You can also have fixed, selected images output, regardless of the video fader position.

1 Hold down either MONITOR buttons ([1]–[4], or [OUTPUT]) for at least three seconds.

The MONITOR button stops flashing and remains lit. The image selected with the MONITOR button is then locked as the image output from the MONITOR OUT connector.

To return to the original state (whereby MONITOR OUT is switched automatically with the video fader), carry out Step 1 again.

MEMO

Changes in the MONITOR OUT setting are saved even when the power is turned off.

Blacking out the output image

Here's how you can temporarily black out the output image.

1

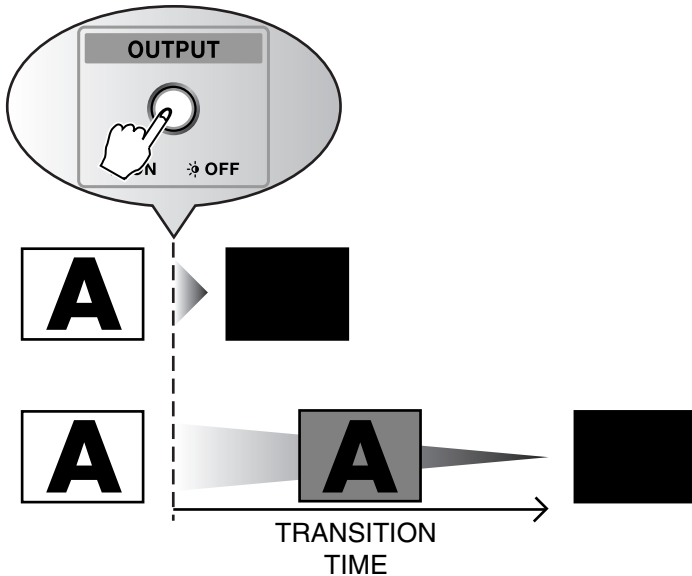
Press [OUTPUT ON/OFF].

When you press the LVS-400's [OUTPUT ON/OFF], the button flashes, and the output from the OUTPUT connector turns black. The image is output when the button is pressed again.

Adjusting the Time for the Image to Fade to Black

You can have the image output from the OUTPUT connector gradually fade out to black over a preset length of time.

1. **Connect a monitor display to the MONITOR OUT connector.**
2. **Hold down [OUTPUT ON/OFF] for at least three seconds.**
"Time = *" ("*" indicates a number of 0-9) appears in the monitor display connected to the MONITOR OUT connector.
3. **While continuing to hold down [OUTPUT ON/OFF], turn the TRANSITION TIME knob.**
The transition time lengthens as the value is increased.
4. **When you are finished adjusting the position, release [EFFECTS].**



MEMO

Time changes remain in effect until the power is turned off. Turning off the power restores the time to the original factory default settings (TIME=3).

MEMO

The OUTPUT ON/OFF button flash during transitions and switching.

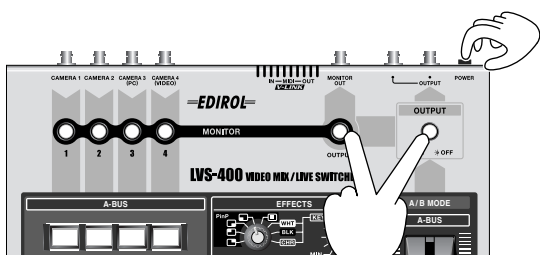
Other Settings

Switching between NTSC and PAL

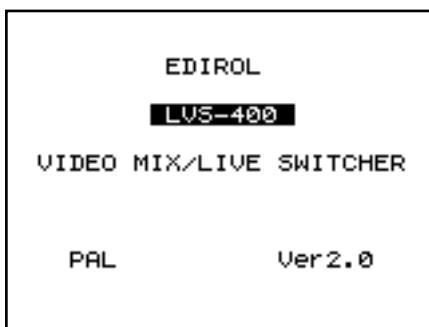
The LVS-400 can be switched to support either NTSC or PAL format signals. If you are using the LVS-400 in areas that use other format video (such as foreign country), switch the setting as described below.

1

Power up your LVS-400 while holding down [OUTPUT ON/OFF], [OUTPUT] and press [POWER].



The opening screen appears in the monitor display connected to MONITOR OUT. At this time, "PAL" or "NTSC" is displayed.



2

Once the opening screen is displayed, release [OUTPUT ON/OFF] and [OUTPUT].

When turning off the power to the LVS-400...

When the LVS-400 is turned off, it remains set to the NTSC/PAL mode setting. The next time you turn the LVS-400 back on to use it, the mode switches automatically to same mode.

Returning the LVS-400 to Original Mode

To switch back from current mode and use the LVS-400 in original mode, follow the instructions in **Switching between NTSC and PAL** (p. 15) once again.



?

NTSC and PAL are the color television broadcast standard. NTSC used in areas such as North America and Japan. PAL used in Europe and Southeast Asia.

MEMO

The function described here, switching between NTSC and PAL formats, determines the broadcast standards used for handling the video images. Accordingly, both the input and output are switched simultaneously. The LVS-400 cannot convert NTSC to PAL or PAL to NTSC.

MEMO

When the LVS-400 is turned off, it remains set to the broadcast standard settings (NTSC or PAL).

MEMO

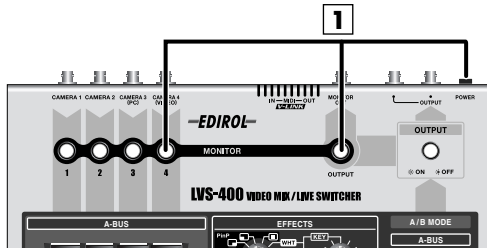
If you connect a device that uses a different broadcast standard than the one the unit is set to use, the resulting images may be erratic.

Restoring the Original Factory Settings

You can initialize the settings stored in the LVS-400 to their original factory condition.

1

Power up your LVS-400 while holding down MONITOR [4], [OUTPUT] and press [POWER].



The opening screen appears in the monitor display connected to MONITOR OUT. At this time, "FACTORY PRESET."



This restores all of the settings to their original factory condition.

Information

When you need repair service, call your nearest EDIROL/Roland Service Center or authorized EDIROL/Roland distributor in your country as shown below.

EDIROL

EUROPE
EDIROL (Europe) Ltd.
Studio 3.4 114 Power Road
London W4 5PY
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TEL: +44 (0)20 8747 5949
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Deutschland
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France
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Italia
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Avenue, Dublin 12
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TEL: (01) 4294444

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20020 Arse, Milano, ITALY
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