

**SONY®**

# **MVS-8000/8000SF System**

**(With CCP-8000 Series Center Control Panel)**

## **User's Guide**

## **Multi Format Switcher System**

**Volume 2** English

**1st Edition (Revised 7)**

**Software Version 5.00 and Later**

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# Chapter 11 DME Operations

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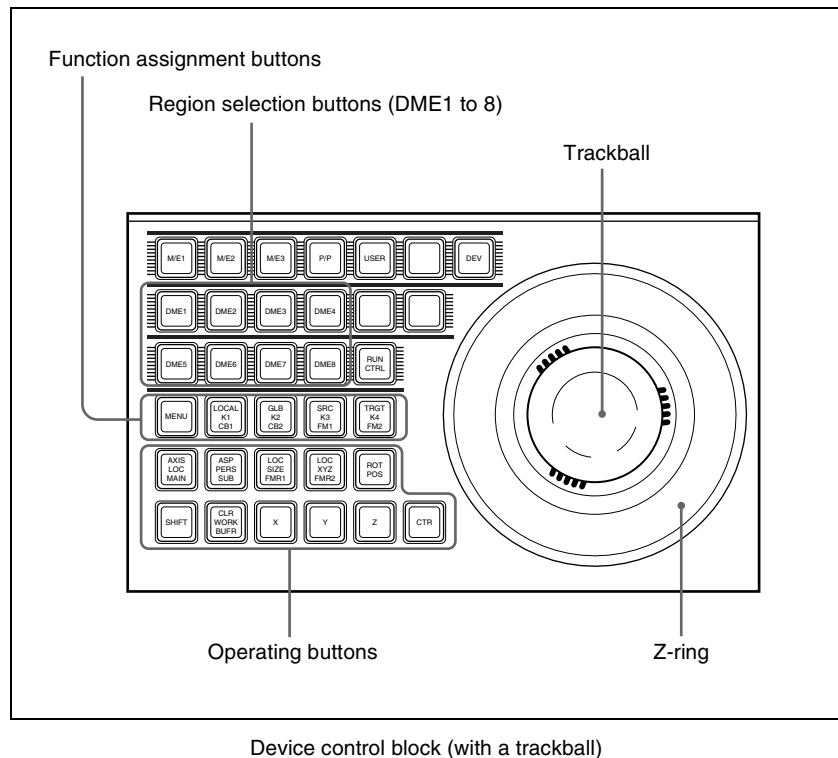
# Three-Dimensional Transformation Operations

Use the device control block to carry out three-dimensional DME transformations.

*For details of three-dimensional DME coordinate space, see “Three-Dimensional Transformations” in Chapter 1 (Volume 1).*

## Basic Operations

This section explains how to use a trackball-type device control block to carry out three-dimensional transformations.



# Transforming an image in three-dimensional coordinate space

Use the following procedure.

- 1 With the region selection buttons, select the target channel of the operation.

You can press several of the buttons simultaneously to select several channels. In this case, the button that you pressed first lights in green, while buttons pressed subsequently light in amber.

- 2 With the function assignment buttons, select the three-dimensional coordinate space in which to perform the transformation.

**LOCAL button:** Selects local coordinate space.

**GLB button:** Selects global coordinate space. You can select this button and the [LOCAL] button simultaneously.

**SRC button:** Selects the source coordinate space.

**TRGT button:** Selects the target coordinate space.

([SRC] and [TRGT] cannot be selected at the same time.)

- 3 Press the button for the operation you want to do, turning it on, to select the transformation mode.

The trackball and Z-ring are assigned to the selected three-dimensional coordinate space transformation mode.

*For details of the three-dimensional transformation operation modes, see “Transformation Operation Modes” in Chapter 1 (Volume 1).*

**To move the image:** Press the [LOC XYZ] button, turning it on.

You can move the image on the x- and y-axes with the trackball and move it on the z-axis with the Z-ring. Pressing the [LOC SIZE] button instead of the [LOC XYZ] button, turning it on, makes it possible to move the image on the x- and y-axes.

**To rotate the image:** Press the [ROT] button, turning it on.

You can rotate the image on the x- and y-axes with the trackball and rotate it on the z-axis with the Z-ring.

To rotate the image in Spin mode, press the [ROT] button, turning it on, while holding down the [SHIFT] button. You can operate in the same way with the trackball and Z-ring.

**To move an axis of rotation:** With the [SRC] button selected in step 2, press the [AXIS LOC] button, turning it on.

You can move the axis of rotation of the image on the x- and y-axes of the image with the trackball, and on the z-axis with the Z-ring.

**To magnify or shrink the image:** Press the [LOC SIZE] button, turning it on.

You can magnify and shrink the image with the Z-ring. Rotate counterclockwise to shrink, and clockwise to magnify.

**To change the aspect ratio of the image:** With the [SRC] button selected in step 2, press the [ASP PERS] button, turning it on.

You can change the aspect ratio independently on the x- and y-axes with the trackball, and change it simultaneously on both the x- and y-axes with the Z-ring.

**To change the perspective on the image:** With the [TRGT] button selected in step 2, press the [ASP PERS] button, turning it on.

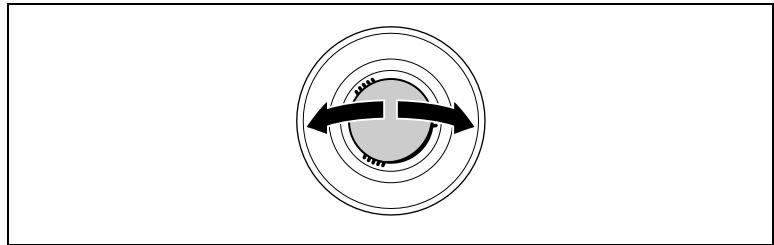
You can change the perspective of the image on the x- and y-axes with the trackball, and change the distance to the view point with the Z-ring.

**To change the skew of the image:** With the [SRC] button selected in step 2, press the [ASP PERS] button, turning it on, while holding down the [SHIFT] button.

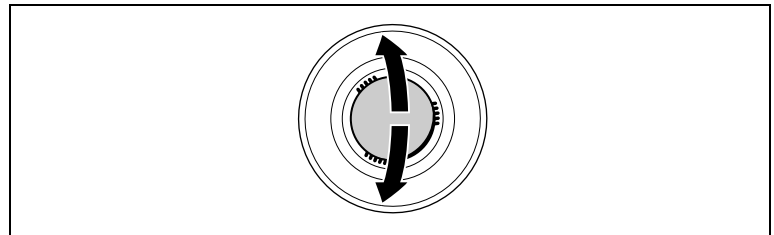
You can change the skew of the image along the x- and y-axes with the trackball.

**4** Depending on the axis of the change, operate the trackball and Z-ring as follows.

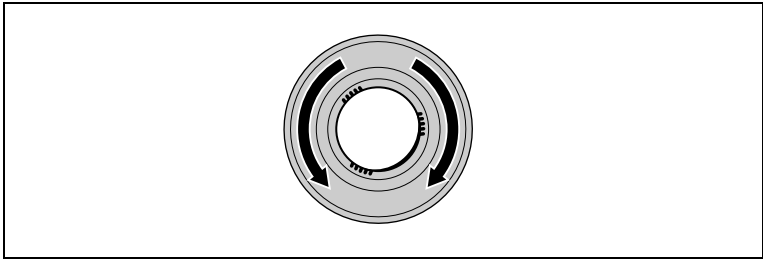
- To change on the x-axis, rotate the trackball horizontally. Parameter values increase as you rotate to the right, and decrease as you rotate to the left.



- To change on the y-axis, rotate the trackball vertically. Parameter values increase as you rotate upward, and decrease as you rotate downward.



- To change on the z-axis, rotate the Z-ring.  
Parameter values increase as you rotate clockwise, and decrease as you rotate counterclockwise.  
However, when you have pressed the [LOC XYZ] button to move the image, z-axis parameters increase as you rotate counterclockwise, and decrease as you rotate clockwise.



**To reduce the rate of change of the parameters (fine mode)**  
Carry out the trackball or Z-ring operations while holding down the [SRC] or [TRGT] button.

**5** To restrict the change in the transformation to a specific axis, press the [X], [Y], or [Z] button, tuning it on.

This enables the trackball and Z-ring operations on the selected axis only.

Functions assignable to trackball and Z-ring operations

Button	Usable coordinate space	Trackball x-direction	Trackball y-direction	Z-ring
LOC XYZ	Source, target	Move image on x-axis	Move image on y-axis	Move image on z-axis
ROT	Source, target	Rotate image on y-axis	Rotate image on x-axis	Rotate image on z-axis
SHIFT+ROT	Source, target	Rotate image on y-axis (Spin mode)	Rotate image on x-axis (Spin mode)	Rotate image on z-axis (Spin mode)
AXIS LOC	Source	Move x-axis of rotation	Move y-axis of rotation	Move z-axis of rotation
LOC SIZE	Source, target	Move image on x-axis	Move image on y-axis	Magnify and shrink image
ASP PERS	Source	Change aspect ratio on x-axis	Change aspect ratio on y-axis	Change aspect ratio on x- and y-axes simultaneously
	Target	Shift view point on x-axis	Shift view point on y-axis	Change distance from view point to image
SHIFT+ASP PERS	Source	Change skew on x-axis	Change skew on y-axis	Change aspect ratio on x- and y-axes simultaneously

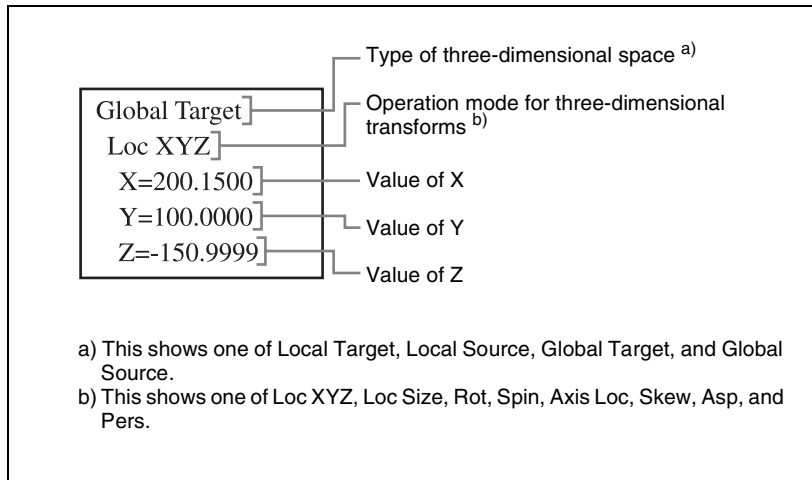
## Three-Dimensional Parameter Display

You can check the values of the three-dimensional parameters in the DME menu.

### Displaying the three-dimensional parameters in the DME menu

In the menu control block, select the top menu selection button [DME]. The DME menu appears. The status area shows the three-dimensional parameters currently controlled by the device control block.

- When multiple DME channels are selected, this shows the parameters for the reference channel.
- When both Global and Local are selected, the three-dimensional parameters are shown for the channel (the reference channel) for which the button is lit green.



Example three-dimensional parameter display (DME menu)

## Viewing the three-dimensional parameter details

In the DME menu, press the menu title button (the [DME] in the upper left part of the screen).

The Status menu appears. This menu shows the three-dimensional parameters for the DME reference channel currently selected in the device control block.

Page

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DME

> Status

1 2 3 4 5 6 7 8

Effect#: 0 (-----)

Free KF: 0

Master

KF# 0 / 0

00: 00: 00: 00

Edge

Video Modify

Freeze

Non-Linear

Light/Trail

Input/Output

Local

Size:

Aspect:

Skew:

Location:

Axis Location:

Rotation:

Source Spin:

Target Spin:

Perspective:

Target Loc/Size:

X

1.0000

0.0000

-4.4420

0.0000

0.6330

0.0000

0.0000

-0.0660

-0.2360

Y

1.0000

0.0000

-0.1820

0.0000

-0.1068

0.0000

0.0000

-0.0440

-0.1360

Z

1.0000

1.0000

0.0400

0.0000

0.0152

0.0000

0.0000

1.0000

1.0000

Global

Size:

Location:

Axis Location:

Rotation:

Source Spin:

Target Spin:

Perspective:

Target Loc/Size:

X

-2.8300

0.0000

0.6330

0.0000

0.0000

-0.0660

-0.2360

Y

-0.0540

0.0000

-0.1068

0.0000

0.0000

-0.0440

-0.1360

Z

1.0000

0.0000

0.0152

0.0000

0.0000

1.0000

1.0000

Prev

1111

Example three-dimensional parameter details

## Entering Three-Dimensional Parameter Values

In addition to setting three-dimensional parameter values with the trackball and Z-ring, you can enter them directly from the numeric keypad control block.

### Entering three-dimensional parameter values

Use the following procedure.

- 1 In the device control block, press the [X], [Y], or [Z] button, turning it on.  
The numeric keypad control block enters a mode in which you can enter parameters for the selected axis.
- 2 Enter a parameter value with the numeric keypad.

The number of significant digits after a decimal point is 4.

### 3 Press the [ENTER] button.

The parameter value is changed, and the image changes.

#### To enter difference values

You can enter difference values by pressing the [+/-] button, entering the difference from the current value, and pressing the [TRIM] button to confirm. The [+/-] button toggles between “+” (plus) and “-” (minus) each time it is pressed.

## Resetting three-dimensional parameter values

Pressing the [CTR] button in the device control block sets the current three-dimensional parameter values to the closest detent points.

To reset three-dimensional parameter values to the defaults for the current transformation operation mode, press the [CTR] button twice in rapid succession. (*For details of detents and default values, see “Three-Dimensional Transformations” in Chapter 1 (Volume 1).*)

## Clearing the working buffer

The working buffer is memory that holds the instantaneous state of an effect. To clear (initialize) only the three-dimensional transform parameters in the working buffer, press the [CLR WORK BUFR] button in the device control block.

To clear all of the parameters in the working buffer and initialize the DME system, press the [CLR WORK BUFR] button twice in rapid succession. It is necessary to do this for both the local coordinate space and global coordinate space.

As the initial DME state, you can specify whether to use the factory default settings or user settings in the Setup menu. (*See “Selecting the State After Powering On (Start Up Menu)” (page 280).*)

---

## Graphics Display

You can display graphics such as a wire frame, coordinate axis, and a grid over the current DME image. This makes it easier to set up transformations, because you can operate while viewing the coordinate axes and the position of the image in three-dimensional coordinate space. (*For the types of graphics displayed, see “Graphics Display” in Chapter 1 (Volume 1).*)

Use the DME menu to make graphics display settings. You can make separate settings for separate channels. To select a target DME channel, use the device control block.

## Displaying graphics

Use the following procedure.

- 1 In the menu control block, select the top menu selection button [DME].  
The DME menu appears.

- 2** Select VF6 'Input/Output' and HF4 'Graphic.'  
The Graphic menu appears.

- 3** Turn [Graphic] on.
- The system enters graphics display mode, enabling graphics to be displayed in the monitor screen.

- 4** Turn on the buttons of the graphics you want to show.

**To show axes:** Turn [Axis] on.

**To show axis names:** Turn [Axis Name] on.

**To show the channel ID:** Turn [Ch ID] on.

**To show a wire frame:** Turn [Wire Frame] on.

**To show the grid:** Turn [Grid] on.

**To show the flex shadow axis:** Turn [Flex Shadow Axis] on.

The selected graphics appear in the monitor screen.

**Note**

The flex shadow axis function is not supported on the MVE-8000/8000A.

- 5** If you want to shrink the graphics display to show the range not displayed on a normal monitor, turn [Scale] on and set the following parameters.

Knob	Parameter	Adjustment	Setting values
1	Scale	Degree to which the graphics display is shrunk	0.00 to 100.00

As the value of the setting grows, the monitor shrinks further toward the center point.

- 6** To automatically erase the graphic display while the keyframes are executing, press [Auto Erase], turning it on, and then set the following parameter.

Knob	Parameter	Adjustment	Setting values
1	Recover Time	Time until graphic display appears again after keyframe execution	0 to 300 (frames)

## Outputting graphics to the monitor output connector

In the Graphic menu, press [Monitor Out] to turn it on.

Graphics are displayed on the device connected to the monitor output connector.

### Note

Output to the Monitor Out connector is not supported on the MVE-8000. When the MKE-8021A is installed in the MVE-8000A to provide an SDI interface or when the MVE-9000 is used, it is possible to output graphics to the Monitor Out connector.

## Canceling Virtual Images

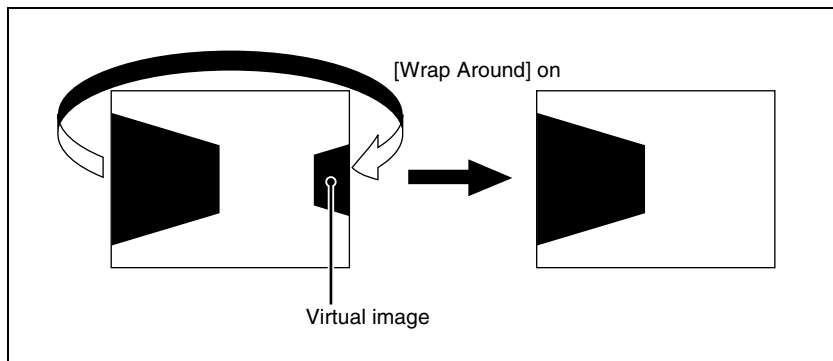
When a transformation is executed with an extreme degree of perspective, the part of the image which is beyond the imaginary view point can wrap around and show on the other side. The wrapped-around portion is referred to as a virtual image.

Using the DME menu, you can make a setting not to show the virtual images.

## Canceling virtual images

Use the following procedure.

- 1** In the DME menu, select VF6 'Input/Output' and HF2 'Video/Key.'  
The Video/Key menu appears.
- 2** Press [Wrap Around], turning it on.  
The virtual image disappears.



# DME Special Effect Operations

You can use DME to add a variety of special effects. The following types of DME special effects are available.

*For details of DME special effects, see “DME Special Effects” in Chapter 1 (Volume 1).*

- **Edge effects:** Border, Crop, Beveled Edge, Key Border, Art Edge, Flex Shadow
- **Effects for entire image:** Defocus, Blur, Multi Move
- **Effects for video image:** Sepia, Mono, Posterization, Solarization, Nega, Contrast, Mosaic, Mask, Sketch, Metal, Dim and Fade, Glow
- **Freeze effects**
- **Nonlinear effects:** Wave, Mosaic Glass, Flag, Twist, Ripple, Rings, Broken Glass, Flying Bar, Blind, Split, Split Slide, Mirror, Multi Mirror, Kaleidoscope, Lens, Circle, Panorama, Page Turn, Roll, Cylinder, Sphere, Explosion, Swirl, Melt, Character Trail
- **Lighting effects:** Lighting, Spotlighting
- **Recursive effects:** Trail, Motion Decay, Keyframe Strobe
- **Background color**
- **Separate Sides** (effects for front and back sides)
- **Signal inversion (Invert effect)**
- **Key density adjustment**
- **Key source selection**

## Operations common to all DME special effects

In this section, explanations of the operating procedures for individual special effects begin with selections from the DME menu. The following are common operations that you must do prior to selecting from the DME menu.

- 1** In the device control block, select the target DME channel.
- 2** In the menu control block, select the top menu selection button [DME].  
The DME menu appears.

---

## Border Settings

This effect adds a border to the image.

## Adding a border

Use the following procedure.

- 1** In the DME menu, select VF1 ‘Edge’ and HF1 ‘Border/Crop.’

The Border/Crop menu appears.

- 2** Press [Border], turning it on.

The Border effect is enabled. You can adjust the border width parameters with the knobs.

### Note

Once the Border effect is enabled, you cannot use the Edge Soft effect (*see page 27*).

- 3** Set the parameters.

The valid ranges of the parameter values depend on the combination of signal format (SD/HD) and aspect ratio (4:3/16:9) selected in the system, as follows.

#### • SD format, 4:3 mode

Parameter group [1/2]

Knob	Parameter	Adjustment	Setting values
1	H	Border width on left and right sides	Left value shown
2	V	Border width on top and bottom sides	Top value shown
3	All	Border width on all sides	Left value shown
5	Density	Border density	0.00 to 100.00

Parameter group [2/2]

Knob	Parameter	Adjustment	Setting values
1	Top	Border width on top side	–6.00 to +6.00
2	Left	Border width on left side	–8.00 to +8.00
3	Right	Border width on right side	–8.00 to +8.00
4	Bottom	Border width on bottom side	–6.00 to +6.00
5	Density	Border density	0.00 to 100.00

## • SD format, 16:9 mode

Parameter group [1/2]

Knob	Parameter	Adjustment	Setting values
1	H	Border width on left and right sides	Left value shown
2	V	Border width on top and bottom sides	Top value shown
3	All	Border width on all sides	Left value shown
5	Density	Border density	0.00 to 100.00

Parameter group [2/2]

Knob	Parameter	Adjustment	Setting values
1	Top	Border width on top side	-4.50 to +4.50
2	Left	Border width on left side	-8.00 to +8.00
3	Right	Border width on right side	-8.00 to +8.00
4	Bottom	Border width on bottom side	-4.50 to +4.50
5	Density	Border density	0.00 to 100.00

## • HD format, 4:3 mode

Parameter group [1/2]

Knob	Parameter	Adjustment	Setting values
1	H	Border width on left and right sides	Left value shown
2	V	Border width on top and bottom sides	Top value shown
3	All	Border width on all sides	Left value shown
5	Density	Border density	0.00 to 100.00

Parameter group [2/2]

Knob	Parameter	Adjustment	Setting values
1	Top	Border width on top side	-18.00 to +18.00
2	Left	Border width on left side	-24.00 to +24.00
3	Right	Border width on right side	-24.00 to +24.00
4	Bottom	Border width on bottom side	-18.00 to +18.00
5	Density	Border density	0.00 to 100.00

- **HD format, 16:9 mode**

Parameter group [1/2]

Knob	Parameter	Adjustment	Setting values
1	H	Border width on left and right sides	Left value shown
2	V	Border width on top and bottom sides	Top value shown
3	All	Border width on all sides	Left value shown
5	Density	Border density	0.00 to 100.00

Parameter group [2/2]

Knob	Parameter	Adjustment	Setting values
1	Top	Border width on top side	−18.00 to +18.00
2	Left	Border width on left side	−32.00 to +32.00
3	Right	Border width on right side	−32.00 to +32.00
4	Bottom	Border width on bottom side	−18.00 to +18.00
5	Density	Border density	0.00 to 100.00

## Setting the border color

The operation differs depending on the DME used (MVE-8000/8000A or MVE-9000).

### When the MVE-8000/8000A is used

Press [Border Color], turning it on, and set the following parameters.

Knob	Parameter	Adjustment	Setting values
1	Luminance	Luminance	0.00 to 100.00
2	Saturation	Saturation	0.00 to 100.00
3	Hue	Hue	359.99 to 0.00

### When the MVE-9000 is used

Use the buttons in the <Border Fill> group to select the signal to insert in the border.

**Flat Color:** single color

**Mix Color:** mix color signal set in the Color Mix menu (*see page 56*)

**Ext Video:** an external video signal input to the Ext IN connector

If Flat Color is selected, adjust the following parameters.

Knob	Parameter	Adjustment	Setting values
1	Luminance	Luminance	0.00 to 100.00

Knob	Parameter	Adjustment	Setting values
2	Saturation	Saturation	0.00 to 100.00
3	Hue	Hue	359.99 to 0.00

If Mix Color or Ext Video selected, the border color changes according to the mix color signal or external video signal.

## Softening the border edges

Press [Border Soft], turning it on, and set the following parameters.

Knob	Parameter	Adjustment	Setting values
1	Soft	Softness of inner side of border	0.00 to 100.00

## Crop Settings

This effect crops the image.

*For an illustrative figure and other information, see “DME Special Effects” in Chapter 1 (Volume 1).*

## Cropping the image

Use the following procedure.

- 1 In the DME menu, select VF1 ‘Edge’ and HF1 ‘Border/Crop.’

The Border/Crop menu appears.

- 2 Press [Crop], turning it on.

The Crop effect is enabled. You can adjust degree of cropping with the knobs.

- 3 Set the parameters.

The valid ranges of the parameter values depend on the combination of signal format (SD/HD) and aspect ratio (4:3/16:9) selected in the system, as follows.

- SD format, 4:3 mode

Parameter group [1/2]

Knob	Parameter	Adjustment	Setting values
1	H	Crop positions on left and right sides	Left value shown

Parameter group [1/2]

Knob	Parameter	Adjustment	Setting values
2	V	Crop positions on top and bottom sides	Top value shown
3	All	Crop positions on all sides	Left value shown

Parameter group [2/2]

Knob	Parameter	Adjustment	Setting values
1	Top	Crop position on top side	-3.00 to +3.00
2	Left	Crop position on left side	-4.00 to +4.00
3	Right	Crop position on right side	-4.00 to +4.00
4	Bottom	Crop position on bottom side	-3.00 to +3.00

• SD format, 16:9 mode

Parameter group [1/2]

Knob	Parameter	Adjustment	Setting values
1	H	Crop positions on left and right sides	Left value shown
2	V	Crop positions on top and bottom sides	Top value shown
3	All	Crop positions on all sides	Left value shown

Parameter group [2/2]

Knob	Parameter	Adjustment	Setting values
1	Top	Crop position on top side	-2.25 to +2.25
2	Left	Crop position on left side	-4.00 to +4.00
3	Right	Crop position on right side	-4.00 to +4.00
4	Bottom	Crop position on bottom side	-2.25 to +2.25

• HD format, 4:3 mode

Parameter group [1/2]

Knob	Parameter	Adjustment	Setting values
1	H	Crop positions on left and right sides	Left value shown
2	V	Crop positions on top and bottom sides	Top value shown
3	All	Crop positions on all sides	Left value shown

Parameter group [2/2]

Knob	Parameter	Adjustment	Setting values
1	Top	Crop position on top side	-9.00 to +9.00

Parameter group [2/2]

Knob	Parameter	Adjustment	Setting values
2	Left	Crop position on left side	-12.00 to +12.00
3	Right	Crop position on right side	-12.00 to +12.00
4	Bottom	Crop position on bottom side	-9.00 to +9.00

### • HD format, 16:9 mode

Parameter group [1/2]

Knob	Parameter	Adjustment	Setting values
1	H	Crop positions on left and right sides	Left value shown
2	V	Crop positions on top and bottom sides	Top value shown
3	All	Crop positions on all sides	Left value shown

Parameter group [2/2]

Knob	Parameter	Adjustment	Setting values
1	Top	Crop position on top side	-9.00 to +9.00
2	Left	Crop position on left side	-16.00 to +16.00
3	Right	Crop position on right side	-16.00 to +16.00
4	Bottom	Crop position on bottom side	-9.00 to +9.00

### Signs of numeric settings

For H, V, and All settings, the sign (+/-) of the setting need not be considered. For example, in the case of an H setting, the value for Left is automatically regarded as a negative value, and the value for Right as a positive value, to display the image.

The following is an example of these settings.

Parameter	Entered value	Setting
H	1.5	Left=-1.50
		Right=1.50
	-1.5	Left=-1.50
		Right=1.50

- 4** To soften the edges of the image, press [Edge Soft], turning it on, and set the following parameter.

Knob	Parameter	Adjustment	Setting values
1	Soft	Softness of edges	0.00 to 100.00

**Note**

Edges cannot be softened when the Crop effect is disabled.

### To specify whether to invert the crop area when inverting the video image

In the <Invert/Crop Process> group, select either of the following.

**Crop → Invert:** Set an axis of symmetry at the center of the input video, and invert both the desired area of video and the crop area horizontally and vertically around that axis of symmetry. The order of effect application is Crop > Invert.

**Invert → Crop:** Set an axis of symmetry at the center of the input video, and invert only the desired area of video horizontally and vertically around that axis of symmetry. The order of effect application is Invert > Crop.

---

## Beveled Edge Settings

This effect applies a beveled frame appearance to an image.

*For sample images, see “DME Special Effects” in Chapter 1 (Volume 1).*

### Applying a beveled edge

Use the following procedure.

- 1** In the DME menu, select VF1 ‘Edge’ and HF2 ‘Beveled Edge.’

The Beveled Edge menu appears.

- 2** Press [Beveled Edge], turning it on.

This enables the beveled edge, and you can now use the knobs to adjust the parameters.

**Note**

When the border is enabled, the edge soft function (*see page 27*) is not available.

- 3** Set the parameters.

The valid ranges of the parameter values depend on the combination of signal format (SD/HD) and aspect ratio (4:3/16:9) selected in the system, as follows.

- SD format, 4:3 mode

Knob	Parameter	Adjustment	Setting values
1	H	Simultaneously adjust width of left and right edges	0.00 to 4.00
2	V	Simultaneously adjust width of top and bottom edges	0.00 to 3.00
3	All	Simultaneously adjust width of all four edges	Value of H shown

• **SD format, 16:9 mode**

Knob	Parameter	Adjustment	Setting values
1	H	Simultaneously adjust width of left and right edges	0.00 to 4.00
2	V	Simultaneously adjust width of top and bottom edges	0.00 to 2.25
3	All	Simultaneously adjust width of all four edges	Value of H shown

• **HD format, 4:3 mode**

Knob	Parameter	Adjustment	Setting values
1	H	Simultaneously adjust width of left and right edges	0.00 to 12.00
2	V	Simultaneously adjust width of top and bottom edges	0.00 to 9.00
3	All	Simultaneously adjust width of all four edges	Value of H shown

• **HD format, 16:9 mode**

Knob	Parameter	Adjustment	Setting values
1	H	Simultaneously adjust width of left and right edges	0.00 to 16.00
2	V	Simultaneously adjust width of top and bottom edges	0.00 to 9.00
3	All	Simultaneously adjust width of all four edges	Value of H shown

**4** In the <Edge Mode> group, select the type of edge.

**Light:** effect of light striking the edge

Knob	Parameter	Adjustment	Setting values
1	Top	Adjust luminance of top edge	-100.00 to +100.00
2	Left	Adjust luminance of left edge	-100.00 to +100.00
3	Right	Adjust luminance of right edge	-100.00 to +100.00
4	Bottom	Adjust luminance of bottom edge	-100.00 to +100.00

Knob	Parameter	Adjustment	Setting values
5	All	Simultaneously adjust luminance of all four edges	Value of Left shown

**Color:** colored edges. When this is selected, set the following parameters in the <Color Adjust> group.

• To set the density

Knob	Parameter	Adjustment	Setting values
1	Density	Adjust the color density	0.00 to 100.00

• To set the colors for each edge (Top, Left, Right, Bottom, All)

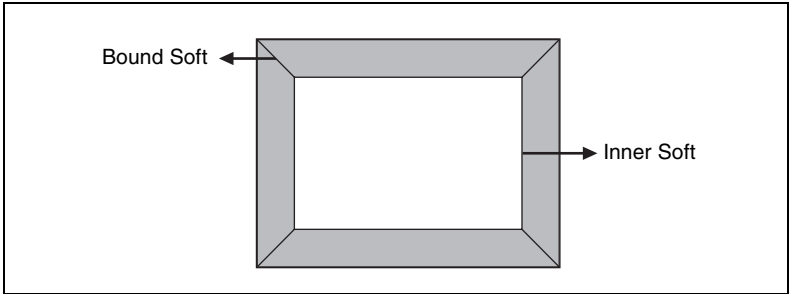
Knob	Parameter	Adjustment	Setting values
1	Luminance	Luminance	0.00 to 100.00 <sup>a)</sup>
2	Saturation	Saturation	0.00 to 100.00 <sup>a)</sup>
3	Hue	Hue	359.99 to 0.00 <sup>a)</sup>

a) For the All adjustment, the value for Left is shown.

5

To soften the inside of the edges and the boundaries between adjacent edges, turn on [Edge Soft], and adjust the following parameters.

Knob	Parameter	Adjustment	Setting values
1	Inner Soft	Softness of the inside of edges	0.00 to 100.00
2	Bound Soft	Softness of the edge boundaries	0.00 to 100.00



# Key Border Settings

This effect adds borders to a key, or makes the key an outline only.

**Note**

The Key Border function is not supported on the MVE-8000/8000A.

## Applying key borders

Use the following procedure.

- 1** In the DME menu, select VF1 'Edge' and HF3 'Key Border.'

The Key Border menu appears.

- 2** Press [Key Border], turning it on.

This enables key borders, and you can now use the knobs to adjust the parameters.

**Note**

The key border function and Glow function (*see page 75*) cannot be turned on at the same time. Only the one most recently turned on is effective.

- 3** Set the following parameters.

Knob	Parameter	Adjustment	Setting values
1	H	Simultaneously adjust width of left and right key borders	0.00 to 100.00
2	V	Simultaneously adjust width of top and bottom key borders	0.00 to 100.00
3	All	Simultaneously adjust width of all four key borders	Value of H shown
4	Soft	Softness of the key borders	0.00 to 100.00
5	Density	Density of the key borders	0.00 to 100.00

- 4** To set the key border color, press [Flat Color] and adjust the following parameters.

Knob	Parameter	Adjustment	Setting values
1	Luminance	Luminance	0.00 to 100.00
2	Saturation	Saturation	0.00 to 100.00
3	Hue	Hue	359.99 to 0.00

### To select an outline only key

Press [Outline], turning it on.

The outline only effect is enabled.

# Art Edge Settings

This effect adds edges to the inside and outside of the input picture.

## Note

The Art Edge function is not supported on the MVE-8000/8000A.

## Applying art edges

Use the following procedure.

- 1 In the DME menu, select VF1 'Edge' and HF4 'Art Edge.'

The Art Edge menu appears.

- 2 Press [Art Edge], turning it on.

This enables art edges, and you can now use the knobs to adjust the parameters.

## Note

The Defocus, Blur, Key Border, and Glow effects cannot be applied to the Art Edge sections.

- 3 Set the parameters.

The valid ranges of the parameter values depend on the combination of signal format (SD/HD) and aspect ratio (4:3/16:9) selected in the system, as follows.

### • SD format, 4:3 mode

Parameter group [1/2]

Knob	Parameter	Adjustment	Setting values
1	H	Simultaneously adjust width of left and right edges	Value of Left shown
2	V	Simultaneously adjust width of top and bottom edges	Value of Top shown
3	All	Simultaneously adjust width of all four edges	Value of Left shown
5	Density	Density of edges	0.00 to 100.00

Parameter group [2/2]

Knob	Parameter	Adjustment	Setting values
1	Top	Width of top edge	0.00 to 6.00

Parameter group [2/2]

Knob	Parameter	Adjustment	Setting values
2	Left	Width of left edge	0.00 to 8.00
3	Right	Width of right edge	0.00 to 8.00
4	Bottom	Width of bottom edge	0.00 to 6.00
5	Density	Density of edges	0.00 to 100.00

- **SD format, 16:9 mode**

Parameter group [1/2]

Knob	Parameter	Adjustment	Setting values
1	H	Simultaneously adjust width of left and right edges	Value of Left shown
2	V	Simultaneously adjust width of top and bottom edges	Value of Top shown
3	All	Simultaneously adjust width of all four edges	Value of Left shown
5	Density	Density of edges	0.00 to 100.00

Parameter group [2/2]

Knob	Parameter	Adjustment	Setting values
1	Top	Width of top edge	0.00 to 4.50
2	Left	Width of left edge	0.00 to 8.00
3	Right	Width of right edge	0.00 to 8.00
4	Bottom	Width of bottom edge	0.00 to 4.50
5	Density	Density of edges	0.00 to 100.00

- **HD format, 4:3 mode**

Parameter group [1/2]

Knob	Parameter	Adjustment	Setting values
1	H	Simultaneously adjust width of left and right edges	Value of Left shown
2	V	Simultaneously adjust width of top and bottom edges	Value of Top shown
3	All	Simultaneously adjust width of all four edges	Value of Left shown
5	Density	Density of edges	0.00 to 100.00

Parameter group [2/2]

Knob	Parameter	Adjustment	Setting values
1	Top	Width of top edge	0.00 to 18.00

Parameter group [2/2]

Knob	Parameter	Adjustment	Setting values
2	Left	Width of left edge	0.00 to 24.00
3	Right	Width of right edge	0.00 to 24.00
4	Bottom	Width of bottom edge	0.00 to 18.00
5	Density	Density of edges	0.00 to 100.00

• **HD format, 16:9 mode**

Parameter group [1/2]

Knob	Parameter	Adjustment	Setting values
1	H	Simultaneously adjust width of left and right edges	Value of Left shown
2	V	Simultaneously adjust width of top and bottom edges	Value of Top shown
3	All	Simultaneously adjust width of all four edges	Value of Left shown
5	Density	Density of edges	0.00 to 100.00

Parameter group [2/2]

Knob	Parameter	Adjustment	Setting values
1	Top	Width of top edge	0.00 to 18.00
2	Left	Width of left edge	0.00 to 32.00
3	Right	Width of right edge	0.00 to 32.00
4	Bottom	Width of bottom edge	0.00 to 18.00
5	Density	Density of edges	0.00 to 100.00

## Adjusting the position of art edges

Use the following procedure.

- 1** In the Art Edge menu, press [Edge Position], turning it on.
- 2** Adjust the following parameters.

The valid ranges of the parameter values depend on the combination of signal format (SD/HD) and aspect ratio (4:3/16:9) selected in the system, as follows.

• **SD format, 4:3 mode**

Knob	Parameter	Adjustment	Setting values
1	Top	Position of top edge	-3.00 to +3.00
2	Left	Position of left edge	-4.00 to +4.00

Knob	Parameter	Adjustment	Setting values
3	Right	Position of right edge	−4.00 to +4.00
4	Bottom	Position of bottom edge	−3.00 to +3.00
5	All	Adjust the position of all four edges	Value of H shown

• SD format, 16:9 mode

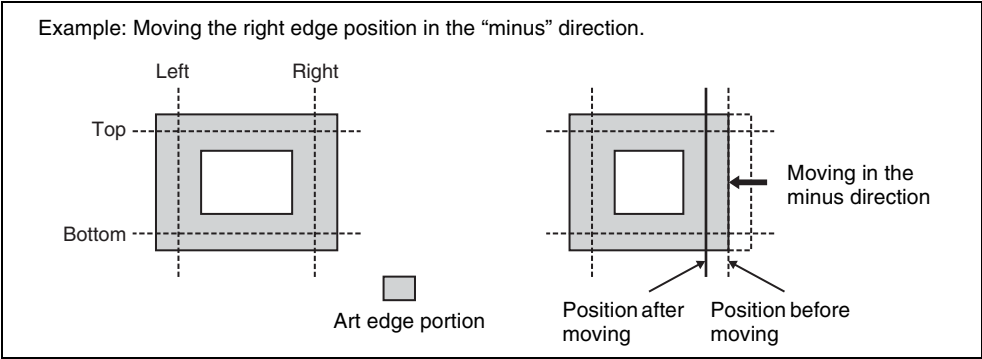
Knob	Parameter	Adjustment	Setting values
1	Top	Position of top edge	−2.25 to +2.25
2	Left	Position of left edge	−4.00 to +4.00
3	Right	Position of right edge	−4.00 to +4.00
4	Bottom	Position of bottom edge	−2.25 to +2.25
5	All	Adjust the position of all four edges	Value of H shown

• HD format, 4:3 mode

Knob	Parameter	Adjustment	Setting values
1	Top	Position of top edge	−9.00 to +9.00
2	Left	Position of left edge	−12.00 to +12.00
3	Right	Position of right edge	−12.00 to +12.00
4	Bottom	Position of bottom edge	−9.00 to +9.00
5	All	Adjust the position of all four edges	Value of H shown

• HD format, 16:9 mode

Knob	Parameter	Adjustment	Setting values
1	Top	Position of top edge	−9.00 to +9.00
2	Left	Position of left edge	−16.00 to +16.00
3	Right	Position of right edge	−16.00 to +16.00
4	Bottom	Position of bottom edge	−9.00 to +9.00
5	All	Adjust the position of all four edges	Value of H shown



## Softening the inner and outer sides of art edges

Use the following procedure.

- 1 In the Art Edge menu, press [Soft], turning it on.
- 2 Adjust the following parameters.

Knob	Parameter	Adjustment	Setting values
1	Inner H	Simultaneously adjust softness of left and right inner edges	0.00 to 100.00
2	Inner V	Simultaneously adjust softness of top and bottom inner edges	0.00 to 100.00
3	Outer H	Simultaneously adjust softness of left and right outer edges	0.00 to 100.00
4	Outer V	Simultaneously adjust softness of top and bottom outer edges	0.00 to 100.00
5	All	Simultaneously adjust softness of all inner and outer edges.	Value of Outer H shown

## Setting the way in which art edge colors change

Use the following procedure.

- 1 In the <Art Edge Source> group of the Art Edge menu, select the color pattern to apply to the art edges.

**Flat Color:** Uses Color 1 (*see page 42*) as a flat color.

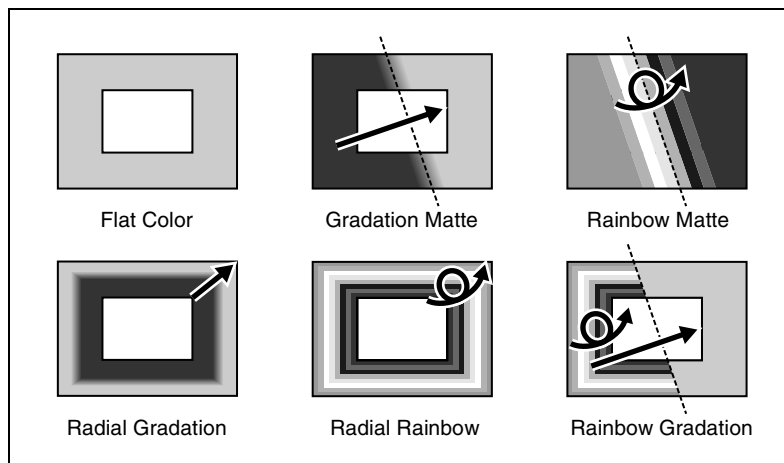
**Gradation Matte:** Color 1 changes to Color 2 (*see page 42*) at the border lines (*see step 2*).

**Rainbow Matte:** The color set as Color 1 changes hue into color on the border lines.

**Radial Gradation:** Color 1 on the inner side is mixed into Color 2 on the outer side, according to the shape of the art edge.

**Radial Rainbow:** The hue of Color 1 on the inner side changes into Color 2 on the outer side, according to the shape of the art edge.

**Rainbow Gradation:** Color 3 (*see page 43*) overwrites Radial Rainbow, giving a gradation effect.



- 2** When you select other than [Flat Color], set the gradation border lines for the selected pattern.

### Border line parameters for Gradation Matte and Rainbow Matte

The valid ranges of the parameter values depend on the combination of signal format (SD/HD) and aspect ratio (4:3/16:9) selected in the system, as follows.

#### • SD format, 4:3 mode

Knob	Parameter	Adjustment	Setting values
1	H	Position of gradation border in horizontal direction	-8.00 to +8.00
2	V	Position of gradation border in vertical direction	-6.00 to +6.00
3	Soft	Softness of gradation border region	0.00 to 100.00

#### • SD format, 16:9 mode

Knob	Parameter	Adjustment	Setting values
1	H	Position of gradation border in horizontal direction	-8.00 to +8.00
2	V	Position of gradation border in vertical direction	-4.50 to +4.50

Knob	Parameter	Adjustment	Setting values
3	Soft	Softness of gradation border region	0.00 to 100.00

• **HD format, 4:3 mode**

Knob	Parameter	Adjustment	Setting values
1	H	Position of gradation border in horizontal direction	−24.00 to +24.00
2	V	Position of gradation border in vertical direction	−18.00 to +18.00
3	Soft	Softness of gradation border region	0.00 to 100.00

• **HD format, 16:9 mode**

Knob	Parameter	Adjustment	Setting values
1	H	Position of gradation border in horizontal direction	−32.00 to +32.00
2	V	Position of gradation border in vertical direction	−18.00 to +18.00
3	Soft	Softness of gradation border region	0.00 to 100.00

**Radial Gradation and Radial Rainbow parameters**

Knob	Parameter	Adjustment	Setting values
3	Soft	Softness of gradation border region	0.00 to 100.00

**Rainbow Gradation parameters**

The valid ranges of the parameter values depend on the combination of signal format (SD/HD) and aspect ratio (4:3/16:9) selected in the system, as follows.

• **SD format, 4:3 mode**

Knob	Parameter	Adjustment	Setting values
1	H	Position of gradation border in horizontal direction	−8.00 to +8.00
2	V	Position of gradation border in vertical direction	−6.00 to +6.00
3	RBW Soft	Softness of rainbow border region	0.00 to 100.00
4	GRD Soft	Softness of gradation border region	0.00 to 100.00

- **SD format, 16:9 mode**

Knob	Parameter	Adjustment	Setting values
1	H	Position of gradation border in horizontal direction	−8.00 to +8.00
2	V	Position of gradation border in vertical direction	−4.50 to +4.50
3	RBW Soft	Softness of rainbow border region	0.00 to 100.00
4	GRD Soft	Softness of gradation border region	0.00 to 100.00

- **HD format, 4:3 mode**

Knob	Parameter	Adjustment	Setting values
1	H	Position of gradation border in horizontal direction	−24.00 to +24.00
2	V	Position of gradation border in vertical direction	−18.00 to +18.00
3	RBW Soft	Softness of rainbow border region	0.00 to 100.00
4	GRD Soft	Softness of gradation border region	0.00 to 100.00

- **HD format, 16:9 mode**

Knob	Parameter	Adjustment	Setting values
1	H	Position of gradation border in horizontal direction	−32.00 to +32.00
2	V	Position of gradation border in vertical direction	−18.00 to +18.00
3	RBW Soft	Softness of rainbow border region	0.00 to 100.00
4	GRD Soft	Softness of gradation border region	0.00 to 100.00

**3** When Gradation Matte or Rainbow Matte is selected, set modifiers as required.

- **When turning [Angle] on in the <Rotation> group and slanting the pattern**

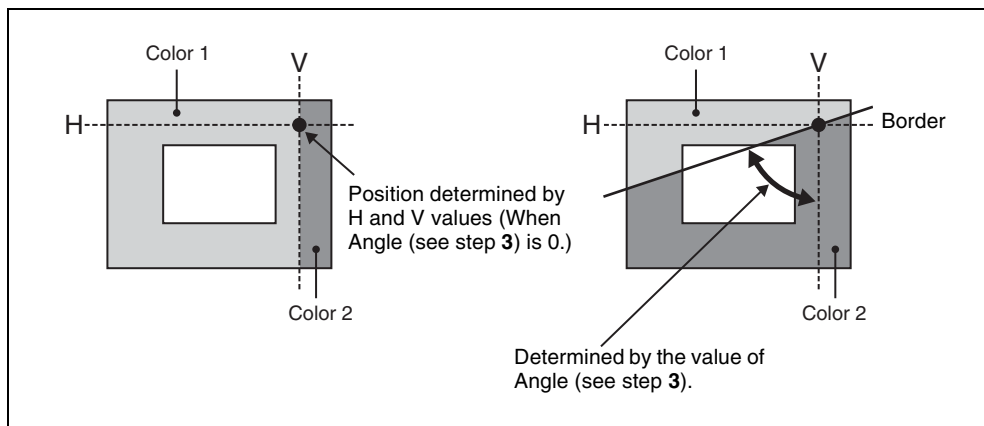
Knob	Parameter	Adjustment	Setting values
1	Angle	Rotation angle of pattern	−8.00 to +8.00 <sup>a)</sup>

a) −1.00 is one rotation in counterclockwise direction. +1.00 is one rotation in clockwise direction. 0.00 is no rotation.

- **When turning [Speed] on in the <Rotation> group and rotating the pattern at a specified speed**

Knob	Parameter	Adjustment	Setting values
1	Speed	Rotation speed of pattern	-100.00 to +100.00 <sup>a)</sup>

a) -100.00 is four rotations per second in counterclockwise direction. +100.00 is four rotations per second in clockwise direction. 0.00 is no rotation.



## Setting art edge colors

Use the following procedure.

- 1 In the Art Edge menu, turn on the button (Color 1 to Color 3) for the color for which you want to make settings in the <Color Adjust> group.
- 2 Adjust the following parameters.

### • Color 1 settings

Knob	Parameter	Adjustment	Setting values
1	Luminance	Luminance	0.00 to 100.00
2	Saturation	Saturation	0.00 to 100.00
3	Hue	Hue	359.99 to 0.00

### • Color 2 settings

#### Note

Color 2 cannot be set when [Flat Color] is selected in the <Art Edge Source> group.

Knob	Parameter	Adjustment	Setting values
1	Luminance	Luminance	0.00 to 100.00
2	Saturation	Saturation	0.00 to 100.00

Knob	Parameter	Adjustment	Setting values
3	Hue Offset	Hue range	-540.0 to +540.0

### • Color 3 settings

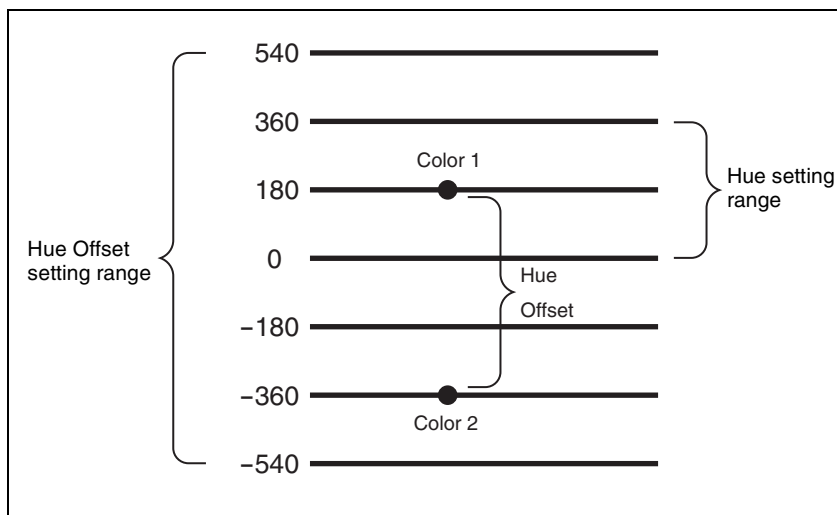
#### Note

Color 3 can be set only when [Rainbow Gradation] is selected in the <Art Edge Source> group.

Knob	Parameter	Adjustment	Setting values
1	Luminance	Luminance	0.00 to 100.00
2	Saturation	Saturation	0.00 to 100.00
3	Hue Offset	Hue range	-540.0 to +540.0

### Relationship between Hue and Hue Offset

For example, when the Hue value of Color 1 is 180.00, and the Hue Offset value of Color 2 is -540.00, the relationship is as shown below, with the hue changing within the Hue Offset range of Color 1 and Color 2.



## Rounding art edge corners

Press [Round Corner], turning it on.

The art edge corners on the inner and outer sides are rounded.

#### Note

This function is available only when [Soft] is on.

# Flex Shadow Settings

This effect applies a shadow to the picture using only one channel.

*For a sample illustration and other information, see “Digital Multi Effects (DME)” in Chapter 1 (Volume 1).*

## Notes

- The Flex Shadow function is not supported on the MVE-8000/8000A.
- “Mix Color” or “Ext Video” can only be applied to one of the background (see page 137), flex shadow, trail (see page 115), and wind (see page 123) effects.

If you select “Mix Color” or “Ext Video” in one of these settings, a selection of “Mix Color” or “Ext Video” in any of the other effects is disabled, and “Flat Color” is selected in its place.

- When executing combining four channels of DME images, “Mix Color” and “Ext Video” in the flex shadow and background effects cannot be selected.

## Applying a flex shadow

Use the following procedure.

- 1** In the DME menu, select VF1 ‘Edge’ and HF5 ‘Flex Shadow.’

The Flex Shadow menu appears.

- 2** Press [Flex Shadow], turning it on.

This enables flex shadows, and you can now use the knobs to adjust the parameters.

## Note

The Flex shadow function cannot be enabled when the following functions are enabled.

- Any nonlinear effect
- Brick
- Shadow

- 3** Adjust the following parameters.

The valid ranges of the parameter values depend on the combination of signal format (SD/HD) and aspect ratio (4:3/16:9) selected in the system, as follows.

- **SD format, 4:3 mode**

Knob	Parameter	Adjustment	Setting values
1	H	Move shadow horizontally	−8.00 to +8.00
2	V	Move shadow vertically	−6.00 to +6.00
3	Size All	Enlarge or shrink horizontally and vertically	Value of Size H (see page 46) shown
4	Soft <sup>a)</sup>	Softness of shadow	0.00 to 100.00
5	Density	Density of shadow	0.00 to 100.00

a) The Soft parameter is valid only when [Internal] is selected in the <Flex Shadow Source> group.

#### • SD format, 16:9 mode

Knob	Parameter	Adjustment	Setting values
1	H	Move shadow horizontally	−8.00 to +8.00
2	V	Move shadow vertically	−4.50 to +4.50
3	Size All	Enlarge or shrink horizontally and vertically	Value of Size H (see page 46) shown
4	Soft <sup>a)</sup>	Softness of shadow	0.00 to 100.00
5	Density	Density of shadow	0.00 to 100.00

a) The Soft parameter is valid only when [Internal] is selected in the <Flex Shadow Source> group.

#### • HD format, 4:3 mode

Knob	Parameter	Adjustment	Setting values
1	H	Move shadow horizontally	−24.00 to +24.00
2	V	Move shadow vertically	−18.00 to +18.00
3	Size All	Enlarge or shrink horizontally and vertically	Value of Size H (see page 46) shown
4	Soft <sup>a)</sup>	Softness of shadow	0.00 to 100.00
5	Density	Density of shadow	0.00 to 100.00

a) The Soft parameter is valid only when [Internal] is selected in the <Flex Shadow Source> group.

#### • HD format, 16:9 mode

Knob	Parameter	Adjustment	Setting values
1	H	Move shadow horizontally	−32.00 to +32.00
2	V	Move shadow vertically	−18.00 to +18.00
3	Size All	Enlarge or shrink horizontally and vertically	Value of Size H (see page 46) shown
4	Soft <sup>a)</sup>	Softness of shadow	0.00 to 100.00



Knob	Parameter	Adjustment	Setting values
5	Density	Density of shadow	0.00 to 100.00

a) The Soft parameter is valid only when [Internal] is selected in the <Flex Shadow Source> group.

- 4** In the <Flex Shadow Source> group, select the signal to use for the flex shadow.

**External:** Generate the shadow using an input signal.

**Internal:** Generate the shadow using a full-size key signal.

- 5** In the <Flex Shadow Fill> group, select the signal to insert in the flex shadow.

**Flat Color:** single color

**Mix Color:** mix color signal set in the Color Mix menu (*see page 56*)

**Ext Video:** an external video signal input to the Ext IN connector

- 6** Only if Flat Color is selected in step **5**, adjust the following parameters.

Knob	Parameter	Adjustment	Setting values
1	Luminance	Luminance	0.00 to 100.00
2	Saturation	Saturation	0.00 to 100.00
3	Hue	Hue	359.99 to 0.00

## Adjusting the size of the flex shadow

Use the following procedure.

- 1** In the Flex Shadow menu, press [Size], turning it on.
- 2** Set the following parameters.

Knob	Parameter	Adjustment	Setting values
1	Size H	Enlarge or shrink horizontally	0.00 to 2.00
2	Size V	Enlarge or shrink vertically	0.00 to 2.00
3	Size All	Enlarge or shrink horizontally and vertically	Value of Size H shown
4	Soft <sup>a)</sup>	Softness of shadow	0.00 to 100.00
5	Density	Density of shadow	0.00 to 100.00

a) The Soft parameter is valid only when [Internal] is selected in the <Flex Shadow Source> group.

## Setting the center point of the flex shadow

Use the following procedure.

- 1** In the Flex Shadow menu, press [Axis Loc], turning it on.
- 2** Adjust the following parameters.

The valid ranges of the parameter values depend on the combination of signal format (SD/HD) and aspect ratio (4:3/16:9) selected in the system, as follows.

### • SD format, 4:3 mode

Knob	Parameter	Adjustment	Setting values
1	Axis Loc H	Move the shadow center axis horizontally	−8.00 to +8.00
2	Axis Loc V	Move the shadow center axis vertically	−6.00 to +6.00

### • SD format, 16:9 mode

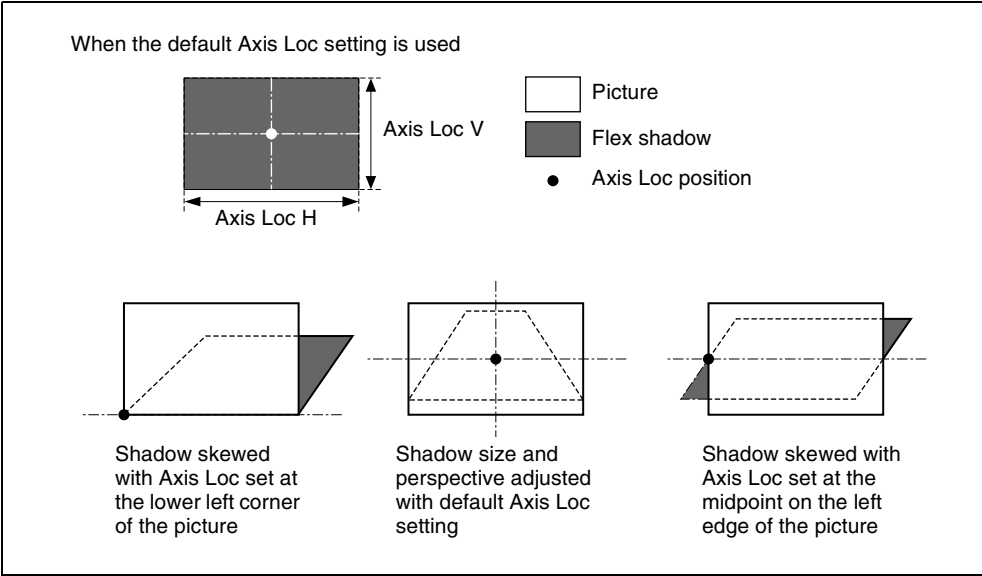
Knob	Parameter	Adjustment	Setting values
1	Axis Loc H	Move the shadow center axis horizontally	−8.00 to +8.00
2	Axis Loc V	Move the shadow center axis vertically	−4.50 to +4.50

### • HD format, 4:3 mode

Knob	Parameter	Adjustment	Setting values
1	Axis Loc H	Move the shadow center axis horizontally	−24.00 to +24.00
2	Axis Loc V	Move the shadow center axis vertically	−18.00 to +18.00

### • HD format, 16:9 mode

Knob	Parameter	Adjustment	Setting values
1	Axis Loc H	Move the shadow center axis horizontally	−32.00 to +32.00
2	Axis Loc V	Move the shadow center axis vertically	−18.00 to +18.00



The flex shadow central axis appears when the [Flex Shadow Axis] function is enabled in the Graphic menu.

For details, see “Graphics Display” (page 19).

### Skewing the flex shadow

Use the following procedure.

- 1 In the Flex Shadow menu, press [Skew], turning it on.
- 2 Adjust the following parameters.

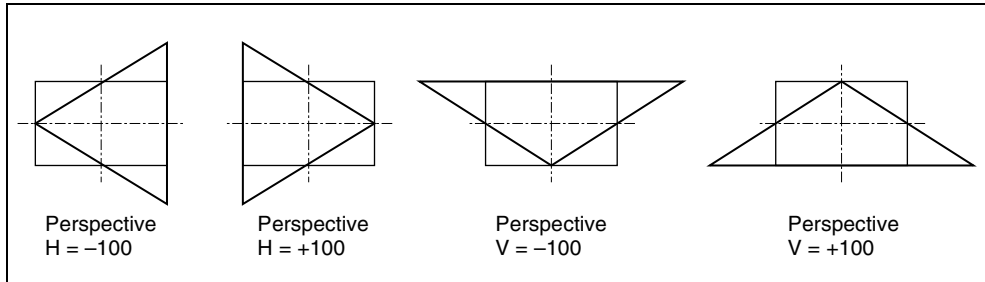
Knob	Parameter	Adjustment	Setting values
1	Skew H	Skew horizontally	−100.00 to +100.00
2	Skew V	Skew vertically	−100.00 to +100.00

### Adding perspective to the flex shadow

Use the following procedure.

- 1 In the Flex Shadow menu, press [Perspective], turning it on.
- 2 Adjust the following parameters.

Knob	Parameter	Adjustment	Setting values
1	Perspective H	Add horizontal perspective	-100.00 to +100.00
2	Perspective V	Add vertical perspective	-100.00 to +100.00

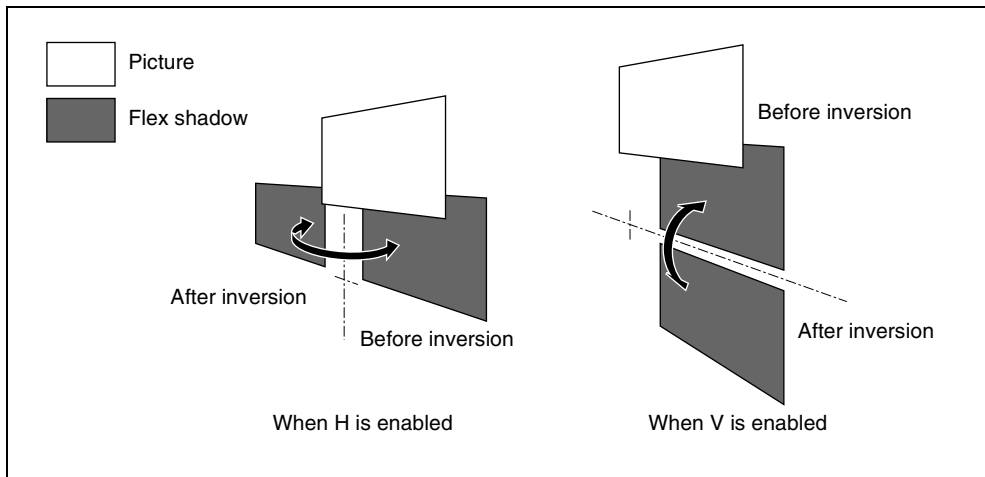


## Inverting the flex shadow

In the <Invert> group of the Flex Shadow menu, select the direction to invert the shadow.

**H:** Invert the shadow in the horizontal direction. The inversion is applied around the axis of the knob 2 parameter Axis Loc V set with [Axis Loc].

**V:** Invert the shadow in the vertical direction. The inversion is applied around the axis of the knob 1 parameter Axis Loc H set with [Axis Loc].



## Setting a combine shadow

Use the following procedure.

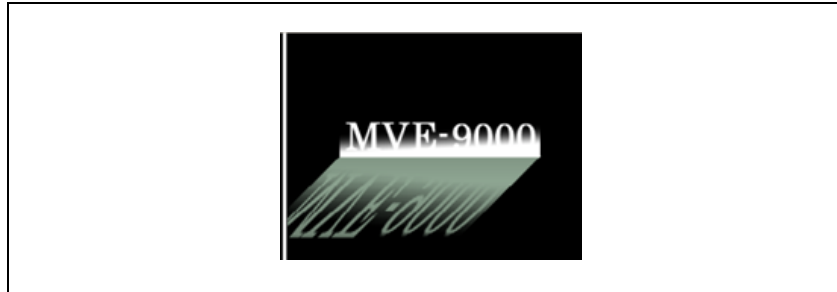
Knob	Parameter	Adjustment	Setting values
1	Density	Density of combine shadow	0.00 to 100.00

## Notes

- The Combine Shadow effect is applied to all shadows, not only the sections where shadows overlap.
- Combine Shadow is enabled when the Flex Shadow effect and the global effect Combiner are enabled. In this state, Combine Shadow remains enabled even if the global effect is disabled.
- In Combine Shadow, the settings for the channel with the lowest number among the channels being combined are enabled.

## Flex shadow creation example

The flow of flex pattern creation will be explained using the following pattern as an example.



- 1** Press [Flex Shadow], turning it on.
- 2** In the <Flex Shadow> group, select [External].
- 3** Turn [Axis Loc] on and use knob 2 to set the Axis Loc V parameter so that the center of the flex shadow deformation is at the bottom of the picture.

(For HD format and 16: 9 mode: Axis Loc V = -9.00)

The following steps will be easier if you display the flex shadow axis graphic by pressing [Flex Shadow Axis] in the Graphic menu.

- 4** Press [V] in the <Invert> group, turning it on, to invert the flex shadow horizontally.

- 5 Turn [Size] on and use knob 2 to set the Size V parameter so that the shadow extends vertically.  
(For HD format and 16: 9 mode: Size V = 1.50)
- 6 Press [Skew], turning it on, and use knob 1 to set the Skew H parameter so that the parallel lines appear to emerge from the depth at the right.  
(For HD format and 16:9 mode: Skew H = -50.00)

## Wipe Crop Settings

This effect crops the video image to be visible only inside a wipe pattern.

*For example images, see “DME Special Effects” in Chapter 1 (Volume 1).*

### Notes

- The wipe crop function is not supported on the MVE-8000/8000A.
- When wipe crop is on, any mask that was on is turned off.
- When brick is on, wipe crop cannot be turned on. To turn wipe crop on, it is first necessary to turn brick off.
- In the <Shaped Video> group of the Video/Key menu, when [Output] is off, unless you set [Bkgd] in the HF1 ‘Bkgd’ menu to on, the wipe crop effect will not be visible.

## Applying the wipe crop effect

### To select the pattern

Use the following procedure.

- 1 In the DME menu, select VF1 ‘Edge’ and HF6 ‘Wipe Crop.’  
The Wipe Crop menu appears.
- 2 Press [Wipe Crop], turning it on.
- 3 Press [Pattern Select].  
The Pattern Select menu appears.
- 4 From the displayed patterns (standard wipe patterns 1 to 24), press any pattern to select it.  
  
In this state, you can use the knobs to adjust the size of the pattern. (*For details of parameters, see the next item.*)



## To set the pattern size and position

Use the following procedure.

**1** In the Wipe Crop menu, press [Position/Size].

**2** Set the following parameters.

The setting range for the parameters depends on the signal format (SD/HD) and aspect ratio (4:3/16:9) selected in the system, as follows.

### • For SD format

Knob	Parameter	Adjustment	Setting values
1	H	Horizontal position	−8.00 to +8.00
2	V	Vertical position	−6.00 to +6.00 <sup>a)</sup> −4.50 to +4.50 <sup>b)</sup>
3	Size	Pattern size	0.00 to 100.00
5	Pattern	Pattern number	1 to 24, 304

a) For 4:3 mode

b) For 16:9 mode

### Note

When pattern number 304 is selected, the effect of settings in the <Edge> group varies with the Size setting.

### • For HD format

Knob	Parameter	Adjustment	Setting values
1	H	Horizontal position	−24.00 to +24.00 <sup>a)</sup> −32.00 to +32.00 <sup>b)</sup>
2	V	Vertical position	−18.00 to +18.00
3	Size	Pattern size	0.00 to 100.00
5	Pattern	Pattern number	1 to 24, 304

a) For 4:3 mode

b) For 16:9 mode

### Note

When pattern number 304 is selected, the effect of settings in the <Edge> group varies with the Size setting.

## To invert the regions of the cropping

In the Wipe Crop menu, press [Invert], turning it on.

## Setting the aspect ratio of the wipe crop pattern (Aspect)

Use the following procedure.

- 1** In the Wipe Crop menu, press [Aspect], turning it on.
- 2** Set the following parameter.

Knob	Parameter	Adjustment	Setting values
1	Aspect	Aspect ratio	–100.00 to +100.00 <sup>a)</sup>

a) When set to a negative value, the image is stretched vertically, to become taller.  
When set to a positive value, the image is stretched horizontally, to become wider.

## Rotating the wipe crop pattern (Rotation)

Use the following procedure.

- 1** In the <Rotation> group of the Wipe Crop menu, select one of the following.  
**Angle:** Incline the pattern through a fixed angle.  
**Speed:** Rotate the pattern at a fixed speed.
- 2** Depending on the selection in step **1**, set the following parameter.

### • When Angle is selected

Knob	Parameter	Adjustment	Setting values
1	Angle	Angle of pattern rotation	–8.00 to +8.00 <sup>a)</sup>

a) –1.00 represents a whole turn counterclockwise, and +1.00 represents a whole turn clockwise. 0.00 is the original state.

### • When Speed is selected

Knob	Parameter	Adjustment	Setting values
1	Speed	Rotation rate of pattern	–100.00 to +100.00 <sup>a)</sup>

a) –100.00 represents a speed of four whole turns counterclockwise per second, and +100.00 represents a speed of four whole turns clockwise per second. 0.00 is the stationary state.

## Applying modulation to the wipe crop pattern (Modulation)

Use the following procedure.

- 1** In the <Modulation> group of the Wipe Crop menu, select one of the following.

- H (horizontal modulation):** Modulate the pattern to apply waving in the horizontal direction.
- V (vertical modulation):** Modulate the pattern to apply waving in the vertical direction.

2 Set the following parameters.

Knob	Parameter	Adjustment	Setting values
1	Amplitude	Amplitude of modulation	0.00 to 100.00
2	Frequency	Frequency of modulation	0.00 to 100.00
3	Speed	Speed of waves	−100.00 to +100.00

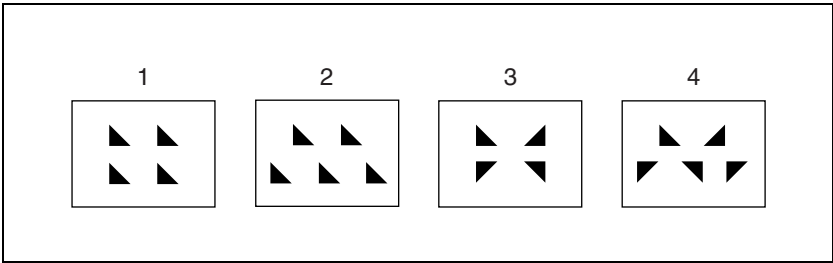
### Replicating the wipe crop pattern (Multi)

Use the following procedure.

- 1 In the Wipe Crop menu, press [Multi], turning it on.
- 2 Set the following parameters.

Knob	Parameter	Adjustment	Setting values
1	H Multi	Number of repetitions of pattern horizontally	1 to 63
2	V Multi	Number of repetitions of pattern vertically	1 to 63
3	Invert Type	Replication layout	1 to 4 <sup>a)</sup>

a) See the following figure



### Modifying the wipe crop pattern edge

You can apply a border to the wipe crop pattern, or soften the boundary.

- 1 In the <Edge> group of the Wipe Crop menu, select one of the following.
- Border:** border

**Soft:** soft edge  
**Soft Border:** soft border

**2** Depending on the selection in step **1**, set the following parameters.

• **When Border is selected**

Knob	Parameter	Adjustment	Setting values
1	Width	Border width	0.00 to 100.00

• **When Soft is selected**

Knob	Parameter	Adjustment	Setting values
1	Soft	Edge softness	0.00 to 100.00

• **When Soft Border is selected**

Knob	Parameter	Adjustment	Setting values
1	Width	Border width	0.00 to 100.00
2	Inner Soft	Border inner softness	0.00 to 100.00
3	Outer Soft	Border outer softness	0.00 to 100.00

## Selecting the signal or color to be inserted in the wipe crop border

When you are applying a border or soft border to the wipe crop, you can select the signal or color to be inserted in the border.

**1** In the <Border Fill> group of the Wipe Crop menu, select one of the following.

**Flat Color:** flat color

**Mix Color:** a mix color signal combining color 1 and color 2 (*see the next section, “Color Mix Settings”*)

**Ext Video:** an external video signal input to the Ext IN connector

**2** When Flat Color is selected in step **1** only, adjust the following parameters.

Knob	Parameter	Adjustment	Setting values
1	Luminance	Luminance	0.00 to 100.00
2	Saturation	Saturation	0.00 to 100.00
3	Hue	Hue	359.99 to 0.00

## Color Mix Settings

This function allows you to create a “mix color” signal, combining two different colors with a pattern from a pattern generator, to be used to fill a background, border, and so on.

The mix color signal can be used in the border, flex shadow, wipe crop, trail, wind, and background effects.

*For example images, “DME Special Effects” in Chapter 1 (Volume 1).*

### Note

The color mix function is not supported on the MVE-8000/8000A.

## Creating a color combination pattern

### To select the pattern

Use the following procedure.

- 1 In the DME menu, select VF1 ‘Edge’ and HF7 ‘Color Mix.’

The Color Mix menu appears.

- 2 Press [Mix Pattern Select].

The Mix Pattern Select menu appears.

- 3 Press any of the displayed patterns (standard wipe patterns 1 to 24) to select it.

In this state, you can adjust the pattern size and border softness with the knobs.

*(For details of the parameters, see the next item.)*

### To set the pattern size and position

Use the following procedure.

- 1 In the Color Mix menu, press [Position/Size].

- 2 Set the following parameters.

The setting range for the parameters depends on the system selected signal format (SD/HD) and aspect ratio (4:3/16:9), as follows.

- For SD format

Knob	Parameter	Adjustment	Setting values
1	H	Horizontal position	−8.00 to +8.00
2	V	Vertical position	−6.00 to +6.00 <sup>a)</sup> −4.50 to +4.50 <sup>b)</sup>
3	Size	Pattern size	0.00 to 100.00
4	Soft	Softness of the pattern	0.00 to 100.00
5	Pattern	Pattern number	1 to 24

a) For 4:3 mode

b) For 16:9 mode

#### • For HD format

Knob	Parameter	Adjustment	Setting values
1	H	Horizontal position	−24.00 to +24.00 <sup>a)</sup> −32.00 to +32.00 <sup>b)</sup>
2	V	Vertical position	−18.00 to +18.00
3	Size	Pattern size	0.00 to 100.00
4	Soft	Softness of the pattern	0.00 to 100.00
5	Pattern	Pattern number	1 to 24

a) For 4:3 mode

b) For 16:9 mode

### To invert the regions of the two colors

In the Color Mix menu, press [Color Invert], turning it on.

## Adjusting the color 1 and color 2

Use the following procedure.

- 1** In the Color Mix menu, to adjust color 1 press [Color1], and to adjust color 2 press [Color2].
- 2** Set the following parameters.

Knob	Parameter	Adjustment	Setting values
1	Luminance	Luminance	0.00 to 100.00
2	Saturation	Saturation	0.00 to 100.00
3	Hue	Hue	359.99 to 0.00

## Modifying the color combination pattern

*See the following pages.*

- “Setting the aspect ratio of the wipe crop pattern (Aspect)” (page 53)
- “Replicating the wipe crop pattern (Multi)” (page 54)
- “Rotating the wipe crop pattern (Rotation)” (page 53)
- “Applying modulation to the wipe crop pattern (Modulation)” (page 53)

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## Defocus Settings

This effect defocuses the entire image.

*For an illustrative figure and other information, see “DME Special Effects” in Chapter 1 (Volume 1).*

### Applying the Defocus effect

Use the following procedure.

- 1** In the DME menu, select VF2 ‘Video Modify’ and HF1 ‘Defocus/Blur.’  
The Defocus/Blur menu appears.

- 2** Press [Defocus], turning it on.

The Defocus effect is enabled. You can adjust the defocusing of video and key signals with the knobs.

#### **Note**

On the MVE-8000A, the Defocus and Glow effects cannot be enabled at the same time. The effect which was turned on most recently is enabled.

- 3** In the <Defocus Mode> group, select the signal to which to apply the defocus effect.

**Video/Key:** Video signal and key signal

**Video:** Video signal only

**Key:** Key signal only

#### **Note**

“Key” can be selected only when the MVE-8000A/MVE-9000 is connected through an SDI interface.

- 4** Set the parameters.

- When Video/Key is selected (with DME dedicated interface)

Knob	Parameter	Adjustment	Setting values
1	H	Horizontal defocusing of video and key signals	0.00 to 100.00
2	V	Vertical defocusing of video and key signals	0.00 to 100.00
3	All	Horizontal and vertical defocusing of video and key signals	H value shown

- When Video/Key is selected (with SDI-interfaced MVE-8000A/MVE-9000)

Parameter group [1/2]

Knob	Parameter	Adjustment	Setting values
1	V/K H	Horizontal defocusing of video and key signals	Video H value shown
2	V/K V	Vertical defocusing of video and key signals	Video V value shown
3	V/K All	Horizontal and vertical defocusing of video and key signals	Video H value shown
4	Video All	Horizontal and vertical defocusing of video signal	Video H value shown
5	Key All	Horizontal and vertical defocusing of key signal	Key H value shown

Parameter group [2/2]

Knob	Parameter	Adjustment	Settings values
1	Video H	Horizontal defocusing of video signal	0.00 to 100.00
2	Video V	Vertical defocusing of video signal	0.00 to 100.00
3	Key H	Horizontal defocusing of key signal	0.00 to 100.00
4	Key V	Vertical defocusing of key signal	0.00 to 100.00

- When Video is selected

Knob	Parameter	Adjustment	Setting values
1	H	Horizontal defocusing of video signal	0.00 to 100.00
2	V	Vertical defocusing of video signal	0.00 to 100.00
3	All	Horizontal and vertical defocusing of video signal	H value shown

• When Key is selected (with SDI-interfaced MVE-8000A/MVE-9000)

Knob	Parameter	Adjustment	Settings values
1	H	Horizontal defocusing of key signal	0.00 to 100.00
2	V	Vertical defocusing of key signal	0.00 to 100.00
3	All	Horizontal and vertical defocusing of key signal	H value shown

- 5 To cancel black level leaking that can occur at the edge of the screen when the Defocus effect is enabled, press [Clean Defocus], turning it on.

## Masking the Defocus effect with a selected pattern

Press [Mask] to display the Mask menu, and set the pattern type and modifiers.

*For details, see “Mask Settings” (page 76).*

**Note**

The Mask function is not supported on the MVE-8000.

## Blur Settings

This effect blurs the entire image.

### Applying the Blur effect

Use the following procedure.

- 1 In the DME menu, select VF2 ‘Video Modify’ and HF1 ‘Defocus/Blur.’  
The Defocus/Blur menu appears.

- 2 Press [Blur], turning it on.

The Blur effect is enabled. You can adjust the blurring of video and key signals with the knobs.

**Note**

On the MVE-8000A, the Glow and Blur effects cannot be enabled at the same time. The effect which was turned on most recently is enabled.

- 3 When the MVE-8000A/MVE-9000 is connected through an SDI interface, in the <Blur Mode> group, select the signal to which you want apply the Blur effect.

**Video/Key:** Video signal and key signal

**Video:** Video signal only

**Key:** Key signal only

## 4 Set the parameters.

### • When the DME dedicated interface is used

Knob	Parameter	Adjustment	Setting values
1	H	Horizontal defocusing of video and key signals	0.00 to 100.00
2	V	Vertical defocusing of video and key signals	0.00 to 100.00
3	All	Horizontal and vertical defocusing of video and key signals	H value shown

### • When Video/Key is selected (with SDI-interfaced MVE-8000A/MVE-9000)

Parameter group [1/2]

Knob	Parameter	Adjustment	Settings values
1	V/K H	Horizontal defocusing of video and key signals	Video H value shown
2	V/K V	Vertical defocusing of video and key signals	Video V value shown
3	V/K All	Horizontal and vertical defocusing of video and key signals	Video H value shown
4	Video All	Horizontal and vertical defocusing of video signal	Video H value shown
5	Key All	Horizontal and vertical defocusing of key signal	Key H value shown

Parameter group [2/2]

Knob	Parameter	Adjustment	Settings values
1	Video H	Horizontal defocusing of video signal	0.00 to 100.00
2	Video V	Vertical defocusing of video signal	0.00 to 100.00
3	Key H	Horizontal defocusing of key signal	0.00 to 100.00
4	Key V	Vertical defocusing of key signal	0.00 to 100.00

### • When video is selected (with SDI-interfaced MVE-8000A/MVE-9000)



Knob	Parameter	Adjustment	Settings values
1	H	Horizontal defocusing of video signal	0.00 to 100.00
2	V	Vertical defocusing of video signal	0.00 to 100.00
3	All	Horizontal and vertical defocusing of video signal	H value shown

• **When Key is selected (with SDI-interfaced MVE-8000A/MVE-9000)**

Knob	Parameter	Adjustment	Setting values
1	H	Horizontal defocusing of key signal	0.00 to 100.00
2	V	Vertical defocusing of key signal	0.00 to 100.00
3	All	Horizontal and vertical defocusing of key signal	H value shown

## Masking the Blur effect with a selected pattern

Press [Mask] to display the Mask menu, and set the pattern type and modifiers.

*For details, see “Mask Settings” (page 76).*

### Note

The Mask function is not supported on the MVE-8000.

---

## Multi Move Settings

This effect shrinks the image and lines up a number of copies vertically and horizontally.

*For an illustrative figure and other information, see “DME Special Effects” in Chapter 1 (Volume 1).*

## Applying the Multi Move effect

Use the following procedure.

- 1 In the DME menu, select VF2 ‘Video Modify’ and HF2 ‘Multi Move.’

The Multi Move menu appears.

- 2 Press [Multi Move], turning it on.

The Multi Move effect is enabled. You can adjust the center point of shrinking, the ratio of shrinking, and the aspect ratio of the shrunken images with the knobs.

### 3 Set the parameters.

The valid ranges of the parameter values depend on the combination of signal format (SD/HD) and aspect ratio (4:3/16:9) selected in the system, as follows.

#### • SD format, 4:3 mode

Knob	Parameter	Adjustment	Setting values
1	Center X	x-value of shrinking center point	−4.00 to +4.00
2	Center Y	y-value of shrinking center point	−3.00 to +3.00
3	Size	Shrinking ratio	0.00 to 100.00
4	Aspect	Aspect ratio of shrunken images	−100.00 to +100.00 <sup>a)</sup>

a) Specify minus values to stretch the image in the vertical direction, and plus values to stretch the image in the horizontal direction.

#### • SD format, 16:9 mode

Knob	Parameter	Adjustment	Setting values
1	Center X	x-value of shrinking center point	−4.00 to +4.00
2	Center Y	y-value of shrinking center point	−2.25 to +2.25
3	Size	Shrinking ratio	0.00 to 100.00
4	Aspect	Aspect ratio of shrunken images	−100.00 to +100.00 <sup>a)</sup>

a) Specify minus values to stretch the image in the vertical direction, and plus values to stretch the image in the horizontal direction.

#### • HD format, 4:3 mode

Knob	Parameter	Adjustment	Setting values
1	Center X	x-value of shrinking center point	−12.00 to +12.00
2	Center Y	y-value of shrinking center point	−9.00 to +9.00
3	Size	Shrinking ratio	0.00 to 100.00
4	Aspect	Aspect ratio of shrunken images	−100.00 to +100.00 <sup>a)</sup>

a) Specify minus values to stretch the image in the vertical direction, and plus values to stretch the image in the horizontal direction.

#### • HD format, 16:9 mode

Knob	Parameter	Adjustment	Setting values
1	Center X	x-value of shrinking center point	−16.00 to +16.00



Knob	Parameter	Adjustment	Setting values
2	Center Y	y-value of shrinking center point	−9.00 to +9.00
3	Size	Shrinking ratio	0.00 to 100.00
4	Aspect	Aspect ratio of shrunken images	−100.00 to +100.00 <sup>a)</sup>

a) Specify minus values to stretch the image in the vertical direction, and plus values to stretch the image in the horizontal direction.

---

## Sepia Settings

This effect overlays a specified color onto the image.

### Applying the Sepia effect

Use the following procedure.

- 1 In the DME menu, select VF2 ‘Video Modify’ and HF3 ‘Color Modify.’

The Color Modify menu appears.

- 2 Press [Sepia], turning it on.

The Sepia effect is enabled. You can adjust the degree of mixing between the sepia image and the original image with the knobs.

- 3 Set the following parameters.

Knob	Parameter	Adjustment	Setting values
1	Mix Y	Y signal mix amount	0.00 to 100.00
2	Mix C	Chroma signal mix amount	0.00 to 100.00
3	Mix All	Y signal and chroma signal mix amount	Mix Y value shown

- 4 To set the color of the sepia image, press [Sepia Color], turning it on, and adjust the parameters.

Knob	Parameter	Adjustment	Setting values
1	Luminance	Luminance	0.00 to 100.00
2	Saturation	Saturation	0.00 to 100.00
3	Hue	Hue	359.99 to 0.00

## Masking the Sepia effect with a selected pattern

Press [Mask] to display the Mask menu, and set the pattern type and modifiers.

*For details, see “Mask Settings” (page 76).*

### Note

The Mask function is not supported on the MVE-8000.

---

## Mono Settings

This effect converts the image into a monochrome image.

### Applying the Mono effect

Use the following procedure.

- 1** In the DME menu, select VF2 ‘Video Modify’ and HF3 ‘Color Modify.’  
The Color Modify menu appears.
- 2** Press [Mono], turning it on.  
The Mono effect is enabled. The color image changes to monochrome.

## Masking the Mono effect with a selected pattern

Press [Mask] to display the Mask menu, and set the pattern type and modifiers.

*For details, see “Mask Settings” (page 76).*

### Note

The Mask function is not supported on the MVE-8000.

---

## Posterization and Solarization Settings

The Posterization and Solarization effects both give a painting-like effect by coarsening the gradations of the image. The Posterization effect coarsens luminance gradations, and the Solarization effect coarsens chroma gradations.

### Applying the Posterization or Solarization effect

Use the following procedure.

- 1 In the DME menu, select VF2 'Video Modify' and HF3 'Color Modify.'  
The Color Modify menu appears.
- 2 Press [Poster/Solar], turning it on.

The Posterization and Solarization effects are enabled. You can adjust the coarseness of the gradations with the knobs.

- ### 3 Set the parameters.

Knob	Parameter	Adjustment	Setting values
1	Poster	Coarseness of luminance gradations (Posterization parameter)	0.00 to 100.00
2	Solar	Coarseness of chroma gradations (Solarization parameter)	0.00 to 100.00

### Masking the Posterization or Solarization effect with a selected pattern

Press [Mask] to display the Mask menu, and set the pattern type and modifiers.

*For details, see “Mask Settings” (page 76).*

### Note

**The Mask function is not supported on the MVE-8000.**

## Nega Settings

This effect reverses the luminance or chroma of the image.

*For an illustrative figure and other information, see “DME Special Effects” in Chapter 1 (Volume 1).*

## Applying the Nega effect

Use the following procedure.

- 1 In the DME menu, select VF2 'Video Modify' and HF3 'Color Modify.'  
The Color Modify menu appears.

- 2** Press [Nega Y] or [Nega C], turning it on, or press both buttons, turning them on.

**Nega Y:** Reverse the luminance.  
**Nega C:** Reverse the chroma.

## Masking the Nega effect with a selected pattern

Press [Mask] to display the Mask menu, and set the pattern type and modifiers.

*For details, see “Mask Settings” (page 76).*

### Note

The Mask function is not supported on the MVE-8000.

---

## Contrast Settings

This effect changes the contrast of the luminance and chroma of the image.

## Applying the Contrast effect

Use the following procedure.

- 1 In the DME menu, select VF2 ‘Video Modify’ and HF3 ‘Color Modify.’

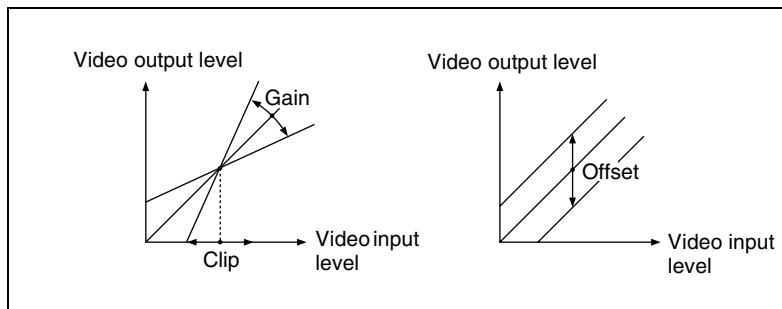
The Color Modify menu appears.

- 2 Press [Contrast], turning it on.

The Contrast effect is enabled. You can adjust the luminance and chroma contrast with the knobs.

- 3 Set the parameters.

Knob	Parameter	Adjustment	Setting values
1	Y Clip	Luminance clip level	+109.59 to -7.31
2	Y Gain	Luminance contrast gradient	-100.00 to +100.00
3	Y Offset	Luminance offset level increment	-100.00 to +100.00
4	C Gain	Chroma contrast gradient	-100.00 to +100.00



Clip, Gain, Offset

## Masking the Contrast effect with a selected pattern

Press [Mask] to display the Mask menu, and set the pattern type and modifiers.

*For details, see “Mask Settings” (page 76).*

### Note

The Mask function is not supported on the MVE-8000.

## Mosaic Settings

This effect divides the image into small tiles so that it looks like a mosaic.

*For an illustrative figure and other information, see “DME Special Effects” in Chapter 1 (Volume 1).*

## Applying the Mosaic effect

Use the following procedure.

- 1** In the DME menu, select VF2 ‘Video Modify’ and HF4 ‘Mosaic.’

The Mosaic menu appears.

- 2** Press [Mosaic], turning it on.

The Mosaic effect is enabled. You can adjust the size and aspect ratio of the mosaic tiles with the knobs.

- 3** Set the following parameters.

Knob	Parameter	Adjustment	Setting values
1	Size	Size of tiles	0.00 to 100.00
2	Aspect	Aspect ratio of tiles	-100.00 to +100.00 <sup>a)</sup>

a) Specify minus values to stretch the tiles in the vertical direction, and plus values to stretch the tiles in the horizontal direction.

## Masking the Mosaic effect with a selected pattern

Press [Mask] to display the Mask menu, and set the pattern type and modifiers.

*For details, see “Mask Settings” (page 76).*

### Note

The Mask function is not supported on the MVE-8000.

## Sketch Settings

This effect provides a range of effects based on the outline of the image, giving impressions of sketching, enhanced outlines, drawing, relief, or increased sharpness.

*For a sample illustration and other information, see “Digital Multi Effects (DME)” in Chapter 1 (Volume 1).*

### Note

The Sketch function is not supported on the MVE-8000.

## Applying the Sketch effect

Use the following procedure.

- 1** In the DME menu, select VF7 ‘Enhanced Video Modify’ and HF1 ‘Sketch.’  
The Sketch menu appears.
- 2** Press [Sketch], turning it on.  
The Sketch effect is enabled.
- 3** Select the method for applying outlines in the <Sketch Mode> group.

**Sketch:** Apply an effect like a sketch.

**Edge Color:** Enhance the outlines.

**Draw:** Apply an effect like a line drawing.

**Relief:** Apply a bas-relief effect.

**Sharp:** Increase the apparent sharpness.

## 4 Set the following parameters, according to the method selected in step 3.

### • When Sketch is selected

Knob	Parameter	Adjustment	Setting values
1	Mix	Mix amount for Sketch video and input video	0.00 to 100.00 <sup>a)</sup>
2	Clip	Reference level for outline extraction	-100.00 to +100.00 <sup>b)</sup>
3	Gain	Image gain for outline extraction	-100.00 to +100.00
4	C Gain	Chroma gain of input video	-100.00 to +100.00

a) 100.00 gives an image completely transformed by the Sketch effect. 0.00 is the original input image.

b) The larger the Clip value, the narrower the outline width.

### • When Edge Color is selected

Knob	Parameter	Adjustment	Setting values
1	Mix	Mix amount for Edge Color video and input video	0.00 to 100.00 <sup>a)</sup>
2	Clip	Reference level for outline extraction	-100.00 to +100.00 <sup>b)</sup>

a) 100.00 gives an image completely transformed by the Sketch effect. 0.00 is the original input image.

b) The larger the Clip value, the narrower the outline width.

### • When Draw is selected

Knob	Parameter	Adjustment	Setting values
1	Mix	Mix amount for Draw video and input video	0.00 to 100.00 <sup>a)</sup>
2	Clip	Reference level for outline extraction	-100.00 to +100.00 <sup>b)</sup>
3	Gain	Image gain for outline extraction	-100.00 to +100.00

a) 100.00 gives an image completely transformed by the Sketch effect. 0.00 is the original input image.

b) The larger the Clip value, the narrower the outline width.

### • When Relief is selected

Knob	Parameter	Adjustment	Setting values
1	Mix	Mix amount for Relief video and input video	0.00 to 100.00 <sup>a)</sup>

Knob	Parameter	Adjustment	Setting values
2	Offset	Relief luminance level	-100.00 to +100.00
3	Gain	Image gain for outline extraction	-100.00 to +100.00
4	Angle	Direction of relief image light source	-8.00 to +8.00

a) 100.00 gives an image completely transformed by the Sketch effect. 0.00 is the original input image.

#### • When Sharp is selected

Knob	Parameter	Adjustment	Setting values
1	H	Simultaneously adjust the left and right resolution	0.00 to 100.00
2	V	Simultaneously adjust the top and bottom resolution	0.00 to 100.00
3	All	Simultaneously adjust the resolution of all four sides	0.00 to 100.00
5	Coring	Minimum value of edge to emphasize	0.00 to 100.00

**5** If you selected other than Sharp in step **3**, depending on the necessity, proceed as follows.

#### • To adjust the outline color for Edge Color or Draw

Turn [Edge Matte] on and set the following parameters to set the outline color.

Knob	Parameter	Adjustment	Setting values
1	Luminance	Luminance	0.00 to 100.00
2	Saturation	Saturation	0.00 to 100.00
3	Hue	Hue	359.99 to 0.00

#### • To set the color of the sections other than the outlines for Draw

Press [Matte], turning it on, and adjust the following parameters to set the color of the sections other than the outlines.

Knob	Parameter	Adjustment	Setting values
1	Luminance	Luminance	0.00 to 100.00
2	Saturation	Saturation	0.00 to 100.00
3	Hue	Hue	359.99 to 0.00

#### • To select the signal to mix with the relief pattern for Relief

In the <Chroma Type> group, select the signal to mix with the relief pattern.

**Matte:** Select a single color. The following parameters can be adjusted.

Knob	Parameter	Adjustment	Setting values
2	Saturation	Saturation	0.00 to 100.00
3	Hue	Hue	359.99 to 0.00

**Video:** Select the input video signal.

- 6
- To invert white and black in the extracted video, or to invert the outlines and the sections other than the outlines, press [Nega], turning it on.

### Masking the Sketch effect with a selected pattern

Press [Mask] to display the Mask menu and set the type of pattern and modifiers.

*For details, see “Mask Settings” (page 76).*

Note

The Mask function is not supported on the MVE-8000.

## Metal Settings

This effect provides a metallic gloss like that from gold, silver, or a rainbow colored surface.

*For a sample illustration and other information, see “Digital Multi Effects (DME)” in Chapter 1 (Volume 1).*

Note

The Metal function is not supported on the MVE-8000.

### Applying the Metal effect

- Use the following procedure.
- 1
- In the DME menu, select VF7 ‘Enhanced Video Modify’ and HF2 ‘Metal.’
- The Metal menu appears.
- 2
- Press [Metal], turning it on.
- This enables the Metal effect.
- 3
- Set the parameters.

Knob	Parameter	Adjustment	Setting values
1	Mix Ratio	Mix amount for Metal video and input video	0.00 to 100.00
2	Y Clip	Clip level of input signal Y level	0.00 to 100.00
3	Y Gain	Amount of gain for clip adjusted input signal Y level	-100.00 to +100.00
4	Y Offset	Offset added to clip and gain adjusted input Y signal	0.00 to 100.00

**4** In the <Metal Mode> group, select the type of metallic gloss.

**Gold:** Give a gold gloss to the input video.

**Silver:** Give a silver gloss to the input video.

**Rainbow:** Give a rainbow color gloss to the input video.

**Variable:** Give a metallic gloss to the input video in any color by adjusting the following parameters.

Knob	Parameter	Adjustment	Setting values
2	Saturation	Saturation	0.00 to 100.00
3	Hue	Hue	359.99 to 0.00

## Masking the Metal effect with a selected pattern

Press [Mask] to display the Mask menu and set the type of pattern and modifiers.

*For details, see “Mask Settings” (page 76).*

### Note

The Mask function is not supported on the MVE-8000.

## Dim and Fade Settings

The Dim effect makes the image darker as it recedes into the distance. The Fade effect makes the image fade into the background as it recedes into the distance.

*For sample illustrations and other information, see “Digital Multi Effects (DME)” in Chapter 1 (Volume 1).*

### Note

The Dim and Fade functions are not supported on the MVE-8000/8000A.

## Applying the Dim effect

Use the following procedure.

- 1 In the DME menu, select VF7 'Enhanced Video Modify' and HF3 'Dim & Fade.'

The Dim & Fade menu appears.

- 2** Press [Dim], turning it on.

This enables the Dim effect.

- ### 3 Set the following parameters.

Knob	Parameter	Adjustment	Setting values
1	Start	Point where dimming starts (dim start point)	-100.00 to +100.00
2	Gain	Degree of dimming	0.00 to 100.00

- 4** Press [Flat Color] and set the parameters for the color of the depths of the picture.

Knob	Parameter	Adjustment	Setting values
1	Luminance	Luminance	0.00 to 100.00
2	Saturation	Saturation	0.00 to 100.00
3	Hue	Hue	359.99 to 0.00

## Applying the Fade effect

Use the following procedure.

- 1 In the DME menu, select VF7 'Enhanced Video Modify' and HF3 'Dim & Fade.'

The Dim & Fade menu appears.

- 2** Press [Fade], turning it on.

This enables the Fade effect.

- ### 3 Set the parameters.

Knob	Parameter	Adjustment	Setting values
1	Start	Point where fading starts (fade start point)	-100.00 to +100.00
2	Gain	Degree of fading	0.00 to 100.00

## Glow Settings

This effect softens the edges of highlights, giving an effect like being struck by a soft light.

*For a sample illustration and other information, see “Digital Multi Effects (DME)” in Chapter 1 (Volume 1).*

### Note

The Glow function is not supported on the MVE-8000.

## Applying the Glow effect

Use the following procedure.

- 1** In the DME menu, select VF7 ‘Enhanced Video Modify’ and HF4 ‘Glow.’

The Glow menu appears.

- 2** Press [Glow], turning it on.

This enables the Glow effect.

### Notes

- On the MVE-9000, the key border function and Glow function cannot be turned on at the same time. The function most recently turned on is effective.
- On the MVE-8000A, the Defocus and Glow effects or the Blur and Glow effects cannot be turned on at the same time. The effect most recently turned on is effective.

- 3** Set the parameters.

Knob	Parameter	Adjustment	Setting values
1	Clip	Reference level for highlight detection	0.00 to 100.00
2	Gain	Amount of gain for highlights	−100.00 to +100.00
3	Soft	Softness	0.00 to 100.00

- 4** Press [Matte] and set the glow color.

Knob	Parameter	Adjustment	Setting values
1	Luminance	Luminance	0.00 to 100.00
2	Saturation	Saturation	0.00 to 100.00



Knob	Parameter	Adjustment	Setting values
3	Hue	Hue	359.99 to 0.00

## Inverting the highlight areas

Press [Glow Invert], turning it on.  
The highlight and non-highlight areas are inverted.

## Masking the Glow effect with a selected pattern

Press [Mask] to display the Mask menu and set the type of pattern and modifiers.

*For details, see “Mask Settings” (page 76).*

### Note

The Mask function is not supported on the MVE-8000.

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## Mask Settings

This effect masks part of the picture, so that special effects are applied only inside a selected pattern.

*For a sample illustration and other information, see “Digital Multi Effects (DME)” in Chapter 1 (Volume 1).*

### Note

The Mask function is not supported on the MVE-8000.

## Applying masks

Use the following procedure.

- 1 In the DME menu, select VF2 ‘Video Modify’ and HF7 ‘Mask.’  
The Mask menu appears.
- 2 In the <Mask> group, press the button for the group of the effect to which you want to apply the mask, turning it on.

**Effect Gp 1:** Posterization, Solarization, Nega, Sepia, Mono, Contrast, Mosaic, Sketch, Metal

**Effect Gp 2:** Defocus, Blur, Glow

**Note**

On the MVE-8000A, Effect Gp 1 and Effect Gp 2 cannot be turned on at the same time.

**3** Press [Position/Size].

**4** Set the mask source parameters.

The valid ranges of the parameter values depend on the combination of signal format (SD/HD) and aspect ratio (4:3/16:9) selected in the system, as follows.

• **SD format, 4:3 mode**

Knob	Parameter	Adjustment	Setting values
1	H	Horizontal position	−8.00 to +8.00
2	V	Vertical position	−6.00 to +6.00
3	Size	Size of mask	0.00 to 100.00
4	Soft	Softness of mask	0.00 to 100.00
5	Pattern	Pattern number	21, 24, 304 <sup>a)</sup>

a) This setting value is not supported on the MVE-8000A.

• **SD format, 16:9 mode**

Knob	Parameter	Adjustment	Setting values
1	H	Horizontal position	−8.00 to +8.00
2	V	Vertical position	−4.50 to +4.50
3	Size	Size of mask	0.00 to 100.00
4	Soft	Softness of mask	0.00 to 100.00
5	Pattern	Pattern number	21, 24, 304 <sup>a)</sup>

a) This setting value is not supported on the MVE-8000A.

• **HD format, 4:3 mode**

Knob	Parameter	Adjustment	Setting values
1	H	Horizontal position	−24.00 to +24.00
2	V	Vertical position	−18.00 to +18.00
3	Size	Size of mask	0.00 to 100.00
4	Soft	Softness of mask	0.00 to 100.00
5	Pattern	Pattern number	21, 24, 304 <sup>a)</sup>

a) This setting value is not supported on the MVE-8000A.

• **HD format, 16:9 mode**

Knob	Parameter	Adjustment	Setting values
1	H	Horizontal position	-32.00 to +32.00
2	V	Vertical position	-18.00 to +18.00
3	Size	Size of mask	0.00 to 100.00
4	Soft	Softness of mask	0.00 to 100.00
5	Pattern	Pattern number	21, 24, 304 <sup>a)</sup>

a) This setting value is not supported on the MVE-8000A.

**5** To invert the mask source, press [Invert], turning it on.

**6** As required, set the modifiers for the mask pattern.

• **When turning [Aspect] on and adjusting the pattern aspect ratio**

Knob	Parameter	Adjustment	Setting values
1	Aspect	Aspect ratio	-100.00 to +100.00 <sup>a)</sup>

a) When a minus value is specified, the picture is extended in the vertical direction. When a plus value is specified, the picture is extended in the horizontal direction.

• **When turning [Angle] on in the <Rotation> group and slanting the pattern**

Knob	Parameter	Adjustment	Setting values
1	Angle	Rotation angle of pattern	-8.00 to +8.00 <sup>a)</sup>

a) -1.00 is one rotation in counterclockwise direction. +1.00 is one rotation in clockwise direction. 0.00 is no rotation.

• **When turning [Speed] on in the <Rotation> group and rotating the pattern at a specified speed**

Knob	Parameter	Adjustment	Setting values
1	Speed	Rotation speed of pattern	-100.00 to +100.00 <sup>a)</sup>

a) -100.00 is four rotations per second in counterclockwise direction. +100.00 is four rotations per second in clockwise direction. 0.00 is no rotation.

## Freeze Settings

This effect freezes the input video. The following types are available:

- Hard Freeze
- Time Strobe
- Film

**Note**

When 720p signal format is used, the Film mode cannot be selected.

*For details of the operation modes, see “DME Special Effects” in Chapter 1 (Volume 1).*

To apply a Freeze effect, start by displaying the Freeze menu. In the DME menu, select VF3 ‘Freeze’ and HF1 ‘Freeze.’

## Applying the Hard Freeze effect

Use the following procedure.

- 1** In the <Freeze Timing> group, select the signal freeze timing.

**Frame:** Freeze one frame of signal.

**Field 1:** Freeze the first field of signal.

**Note**

During the execution of a freeze with the MVE-8000, you cannot change the freeze timing.

- 2** In the <Freeze> group, press [Hard Freeze], turning it on.

The Hard Freeze is executed, displaying a still image.

## Applying the Time Strobe effect

Use the following procedure.

- 1** In the <Freeze Timing> group, select the signal freeze timing.

**Frame:** Freeze one frame of signal.

**Field 1:** Freeze the first field of signal.

**Notes**

- During the execution of a freeze with the MVE-8000, you cannot change the freeze timing.
- The freeze timing setting is not required when the following signal formats are being used.

Signal formats: 1080PsF/30, 1080PsF/29.97, 1080PsF/25, 1080PsF/24, 1080PsF/23.976, 720p/59.94, 720p/50

- 2** In the <Freeze> group, press [Time Strobe], turning it on.

The Time Strobe freeze is enabled. You can adjust the freeze interval and the ratio of live video inserted between freeze images.

### 3 Set the parameters.

Knob	Parameter	Adjustment	Setting values
1	Duration	Freeze interval	1 to 255 (frames)
2	Live	Ratio of live video inserted between freeze images	0.00 to 100.00

## Applying the Film effect

### Note

When 720p signal format is used, the Film mode cannot be selected.

Use the following procedure.

- 1 In the <Freeze> group, press [Film], turning it on.  
The Film freeze is enabled. You can adjust the ratio of frame advance.
- 2 Set the parameter.

Knob	Parameter	Adjustment	Setting values
1	Film	Ratio of frame advance	0.00 to 100.00

## Nonlinear Effect Settings

You can add a variety of effects, including effects that change the shape of the image as a whole. Use the following procedure.

- 1 In the DME menu, select VF4 'Non Linear' and HF1 'Type.'  
A menu for selecting the various effects appears.
- 2 Display the menu for the effect that you want to apply by pressing its button.  
The effect displayed is enabled.
- 3 Make the settings for the selected effect.

The following nonlinear effects are available.

Name	Effect	See
Wave	Produces a wave-like effect in the image.	page 82
Mosaic Glass	Makes the image rougher and finer at a specified interval.	page 86

Name	Effect	See
Flag	Applies an effect like a flag waving in the wind.	page 87
Twist	Twists the image.	page 87
Ripple	Applies an effect like ripples moving across the image.	page 88
Rings	Partitions the image into rings that rotate while moving in the same direction.	page 93
Broken Glass	Partitions the image like broken glass, with shards flying outward.	page 94
Flying Bar	Divides the image into bars which peel off in two blocks as they move.	page 94
Blind	Divides the image into bars or wedges, with blocks rotating like the slats of venetian blinds.	page 95
Split	Splits the image upper and lower, left and right.	page 96
Split Slide	Divides the image into bars which slide alternately in reverse directions.	page 97
Mirror	Partitions the image vertically and horizontally, creating an image like a reflection in a mirror.	page 98
Multi Mirror	Divides the image into originals and reflections, lining them up vertically and horizontally.	page 98
Kaleidoscope	Creates an image like a view into a kaleidoscope.	page 99
Lens	Creates an image like a view through a lens.	page 100
Circle	Makes a circle with the image.	page 102
Panorama	Curves the upper and lower edges of the image to emphasize the sense of perspective.	page 102
Page Turn	Turns the image like a turning page.	page 103
Roll	Rolls the image up.	page 104
Cylinder	Winds the whole image onto a cylinder.	page 104
Sphere	Winds the whole image onto a sphere.	page 104
Explosion	Divides the image into fragments which expand as they fly out.	page 105
Swirl	Swirls the image.	page 106
Melt	Melts the image away from a specified part.	page 107
Character Trail	Extends the edge of the image like a trail.	page 109

### Notes

- It is not possible to apply two or more nonlinear effects at the same time. Turning any nonlinear effect on automatically turns all other nonlinear effects off.
- The Flex Shadow function cannot be enabled when any of the nonlinear effects Page Turn, Roll, Cylinder, and Sphere is enabled. However, the Flex Shadow function is not supported on the MVE-8000/8000A.

### To turn an effect off

In the setting menu, press the button for the effect name, turning it off, or in the Type menu press [OFF] in the lower right part of the window.

## Wave settings

The Wave effect produces a wave-like effect in the image.

### Note

When the signal format is 720p/59.94, the Wave function cannot be used on the MVE-8000.

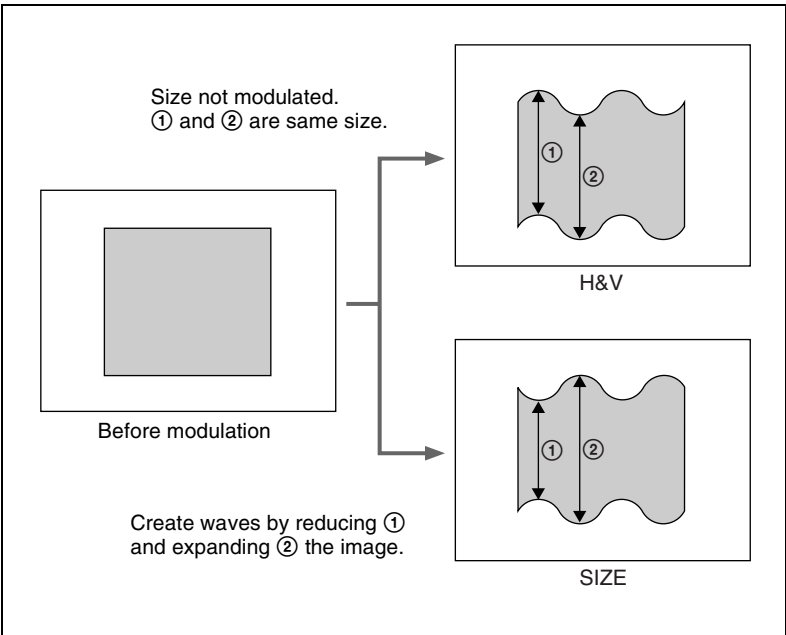
### To apply the Wave effect

With the Wave menu displayed, use the following procedure.

- 1 In the <Mode> group, select the wave modulation mode.

**H&V:** Modulate vertically and horizontally without changing the size of the image. This mode allows waves to be created in both the vertical and horizontal directions at the same time.

**SIZE:** Create waves by reducing and expanding the image. This mode allows waves to be created in one direction only.



- 2 Set the following parameters, according to the selected mode.

### • When H&V is selected

Parameter group [1/2]

Knob	Parameter	Adjustment	Setting values
1	Amp H	Amplitude of waves in horizontal direction	0.00 to 100.00
2	Freq H	Frequency of waves in horizontal direction	0.00 to 100.00
3	Offset H <sup>a)</sup>	Horizontal direction in which to offset wave phase and amount of movement	–16.00 to +16.00 <sup>c)</sup> –64.00 to +64.00 <sup>d)</sup>
4	Speed H <sup>b)</sup>	Horizontal direction and speed of waves	–100.00 to +100.00
5	Slant	Slant of waves	–8.000 to +8.000

Parameter group [2/2]

Knob	Parameter	Adjustment	Setting values
1	Amp V	Amplitude of waves in vertical direction	0.00 to 100.00
2	Freq V	Frequency of waves in vertical direction	0.00 to 100.00
3	Offset V <sup>a)</sup>	Vertical direction in which to offset wave phase and amount of movement	–16.00 to +16.00 <sup>c)</sup> –64.00 to +64.00 <sup>d)</sup>
4	Speed V <sup>b)</sup>	Vertical direction and speed of waves	–100.00 to +100.00
5	Slant	Slant of waves	–8.000 to +8.000

a) Set when Lock is on.

b) Set when Lock is off.

c) Setting for SD 4:3, SD 16:9

d) Setting for HD 4:3, HD 16:9

### • When Size is selected

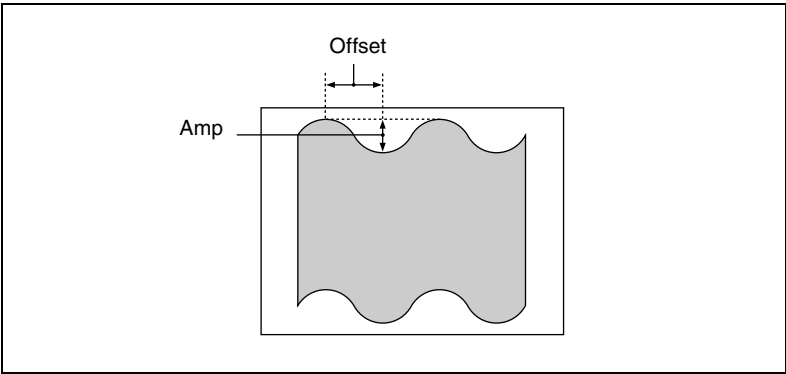
Knob	Parameter	Adjustment	Setting values
1	Amp H	Amplitude of waves	0.00 to 100.00
2	Freq H	Frequency of waves	0.00 to 100.00
3	Offset H <sup>a)</sup>	Direction in which to offset wave phase and amount of movement	–16.00 to +16.00 <sup>c)</sup> –64.00 to +64.00 <sup>d)</sup>
4	Speed H <sup>b)</sup>	Direction and speed of waves	–100.00 to +100.00
5	Slant	Slant of waves	–8.00 to +8.00

a) Set when Lock is on.

b) Set when Lock is off.

c) Setting for SD 4:3, SD 16:9

d) Setting for HD 4:3, HD 16:9



**To stop the waves**  
 Press [Lock], turning it on.  
 With each press, the waves alternately stop and start moving again.

**To select the waveform**  
 Press [Form] and set the following parameters.

• When H&V mode is selected

Knob	Parameter	Adjustment	Setting values
1	Form H	Waveform in horizontal direction	1 to 6 <sup>a)</sup>
2	Form V	Waveform in vertical direction	1 to 6 <sup>a)</sup>

• When Size mode is selected

Knob	Parameter	Adjustment	Setting values
1	Form H	Waveform	1 to 6 <sup>a)</sup>

- a) 1 (SINE): Sine wave  
 2 (PARABOLA): Parabola wave  
 3 (TRIANGLE): Triangular wave  
 4 (RECTANGLE): Rectangular wave  
 5 (CIRCLE): Circular wave  
 6 (CUBIC): Cubic wave

**To randomize the modulated waveform**  
 Use the following procedure.

- 1 Press [Random], turning it on.
- 2 Set the following parameters.

• When H&V mode is selected

Knob	Parameter	Adjustment	Setting values
1	Random H	Degree of randomness in horizontal waveform modulation	0.00 to 100.00
2	Random V	Degree of randomness in vertical waveform modulation	0.00 to 100.00
3	Random All	Degree of randomness in both vertical and horizontal directions	Random H value shown

• When Size mode is selected

Knob	Parameter	Adjustment	Setting values
1	Random H	Degree of randomness in waveform modulation	0.00 to 100.00

### To limit the wave range

Use the following procedure.

- 1 Press [Range], turning it on.
- 2 Set the following parameters.

• When H&V mode is selected

Knob	Parameter	Adjustment	Setting values
1	Size H	Amount of horizontal wave modulation	0.00 to 100.00
2	Offset H	Center point of horizontal modulation range	–8.000 to +8.000 <sup>a)</sup> –32.000 to +32.000 <sup>b)</sup>
3	Size V	Amount of vertical wave modulation	0.00 to 100.00
4	Offset V	Center point of vertical modulation range	–8.000 to +8.000 <sup>a)</sup> –32.000 to +32.000 <sup>b)</sup>

a) Setting for SD 4:3, SD 16:9

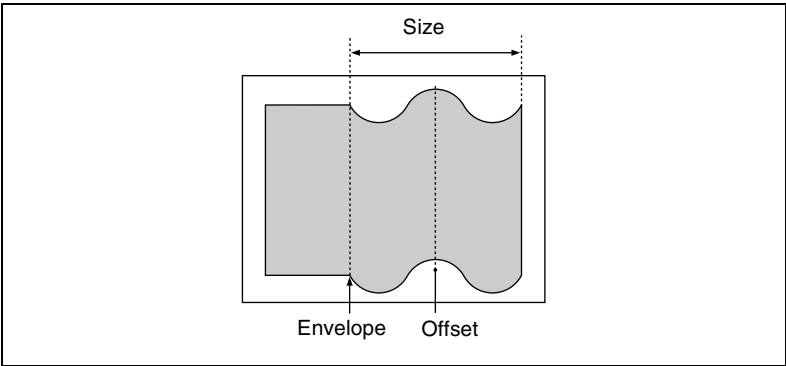
b) Setting for HD 4:3, HD 16:9

• When Size mode is selected

Knob	Parameter	Adjustment	Setting values
1	Size H	Amount of wave modulation	0.00 to 100.00
2	Offset H	Center point of modulation range	–8.000 to +8.000 <sup>a)</sup> –32.000 to +32.000 <sup>b)</sup>

a) Setting for SD 4:3, SD 16:9

b) Setting for HD 4:3, HD 16:9



**To smooth the range envelope when the wave range is limited**  
 Use the following procedure.

- 1 Press [Range Envelope], turning it on.
- 2 Set the following parameters.

• **When H&V mode is selected**

Knob	Parameter	Adjustment	Setting values
1	Envelope H	Smoothness of envelope in horizontal direction	0.00 to 100.00
2	Envelope V	Smoothness of envelope in vertical direction	0.00 to 100.00

• **When Size mode is selected**

Knob	Parameter	Adjustment	Setting values
1	Envelope H	Smoothness of envelope	0.00 to 100.00

**To reverse the wave range**  
 Use the following procedure.  
**To reverse the horizontal wave range set with [Range]:** Press [Range Rev H], turning it on.  
**To reverse the vertical wave range set with [Range]:** Press [Range Rev V], turning it on.

### Mosaic Glass settings

The Mosaic Glass effect makes the image rougher and finer at a specified interval.

### To apply the Mosaic Glass effect

Display the Mosaic Glass menu.

The items displayed in the Mosaic Glass menu and the functions of the knobs are the same as for the Wave menu.

*For more information about how to make settings, see “Wave settings” (page 82).*

## Flag settings

Applies an effect like a flag waving in the wind.

### To apply the Flag effect

Display the Flag menu.

The items displayed in the Flag menu and the functions of the knobs are the same as for the Wave menu.

*For more information about how to make settings, see “Wave settings” (page 82).*

## Twist settings

The Twist effect twists the image.

### To apply the Twist effect

With the Twist menu displayed, set the following parameters.

Parameter group [1/2]

Knob	Parameter	Adjustment	Setting values
1	Amp V	Amplitude of twist in vertical direction	0.00 to 100.00
2	Freq V	Frequency of twist in vertical direction	0.00 to 100.00
3	Offset V <sup>a)</sup>	Amount of movement in twist phase in the vertical direction	–16.00 to +16.00 <sup>c)</sup> –64.00 to +64.00 <sup>d)</sup>
4	Speed V <sup>b)</sup>	Speed and direction of twist movement in vertical direction	–100.00 to +100.00
5	Slant	Slant of twist	–8.000 to +8.000

Parameter group [2/2]

Knob	Parameter	Adjustment	Setting values
1	Amp H	Amplitude of twist in horizontal direction	0.00 to 100.00
3	Offset H <sup>a)</sup>	Amount of movement in twist phase in the horizontal direction	–100.00 to +100.00
5	Slant	Slant of twist	–8.000 to +8.000

a) Set when Lock is on.



- b) Set when Lock is off.
- c) Setting for SD 4:3, SD 16:9
- d) Setting for HD 4:3, HD 16:9

**To stop the waves**

Press [Lock], turning it on.  
With each press, the waves alternately stop and start moving again.

**To select the waveform**

Press [Form] and set the following parameters.

Knob	Parameter	Adjustment	Setting values
1	Form H	Waveform in horizontal direction	1 to 6 <sup>a)</sup>
2	Form V	Waveform in vertical direction	1 to 6 <sup>a)</sup>

- a) 1 (SINE): Sine wave  
2 (PARABOLA): Parabola wave  
3 (TRIANGLE): Triangular wave  
4 (RECTANGLE): Rectangular wave  
5 (CIRCLE): Circular wave  
6 (CUBIC): Cubic wave

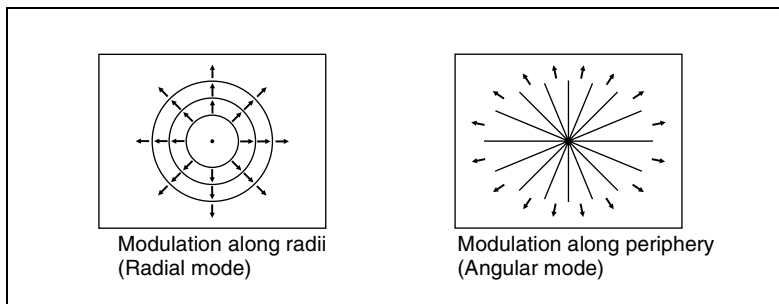
**Ripple settings**

Applies an effect like ripples moving across the image.

**To apply the Ripple effect**

With the Ripple menu displayed, use the following procedure.

- 1** In the <Mode> group, select the ripple modulation mode.
- Radial:** Points on radii of the same length from the center of the ripples behave in the same way.
- Angular:** Points at the same angle from the center of the ripples behave in the same way.
- Both:** Both Radial and Angular ripples are applied.
- Shape:** The ripples can have shapes such as stars or hearts in addition to circles.



Modulation modes and directions

## 2 Set the following parameters, depending on the selected modulation mode.

### • When Radial mode is selected

Knob	Parameter	Adjustment	Setting values
1	Amp R	Ripple amplitude along radius	0.00 to 100.00
2	Freq R	Ripple frequency along radius	0.00 to 100.00
3	Offset R <sup>a)</sup>	Direction along radius in which to offset ripple phase and amount of movement	–8.000 to +8.000 <sup>c)</sup> –32.000 to +32.000 <sup>d)</sup>
4	Speed R <sup>b)</sup>	Ripple direction along radius and speed	–100.00 to +100.00
5	Amp A	Ripple amplitude along periphery	0.00 to 100.00

a) Set when Lock is on.

b) Set when Lock is off.

c) Setting for SD 4:3, SD 16:9

d) Setting for HD 4:3, HD 16:9

### • When Angular mode is selected

Knob	Parameter	Adjustment	Setting values
1	Amp A	Ripple amplitude along periphery	0.00 to 100.00
2	Freq A	Ripple frequency along periphery	0.00 to 100.00
3	Offset A <sup>a)</sup>	Direction along periphery in which to offset ripple phase and amount of movement	–8.000 to +8.000
4	Speed A <sup>b)</sup>	Ripple direction along periphery and speed	–100.00 to +100.00
5	Amp R	Ripple amplitude along radius	0.00 to 100.00

a) Set when Lock is on.

b) Set when Lock is off.

- **When Both mode is selected**

### Parameter group [1/2]

Knob	Parameter	Adjustment	Setting values
1	Amp R	Ripple amplitude along radius	0.00 to 100.00
2	Freq R	Ripple frequency along radius	0.00 to 100.00
3	Offset R <sup>a)</sup>	Direction along radius in which to offset ripple phase and amount of movement	−8.000 to +8.000 <sup>c)</sup> −32.000 to +32.000 <sup>d)</sup>
4	Speed R <sup>b)</sup>	Ripple direction along radius and speed	−100.00 to +100.00

Parameter group [2/2]

Knob	Parameter	Adjustment	Setting values
1	Amp A	Ripple amplitude along periphery	0.00 to 100.00
2	Freq A	Ripple frequency along periphery	0.00 to 100.00
3	Offset A <sup>a)</sup>	Direction along periphery in which to offset ripple phase and amount of movement	−8.000 to +8.000
4	Speed A <sup>b)</sup>	Ripple direction along periphery and speed	−100.00 to +100.00

a) Set when Lock is on.

b) Set when Lock is off.

c) Setting for SD 4:3, SD 16:9

d) Setting for HD 4:3, HD 16:9

- **When Shape mode is selected**

### Parameter group [1/2]

Knob	Parameter	Adjustment	Setting values
1	Amp R	Ripple amplitude	0.00 to 100.00
2	Freq R	Ripple frequency	0.00 to 100.00
3	Offset R <sup>a)</sup>	Direction in which to offset ripple phase and amount of movement	−8.000 to +8.000 <sup>c)</sup> −32.000 to +32.000 <sup>d)</sup>
4	Speed R <sup>b)</sup>	Ripple direction and speed	−100.00 to +100.00
5	Shape	Ripple shape	1 to 4 <sup>e)</sup>

Parameter group [2/2]

Knob	Parameter	Adjustment	Setting values
1	Aspect	Ripple aspect ratio	-100.00 to +100.00
2	Angle	Ripple angle	-8.000 to +8.000

a) Set when Lock is on.

b) Set when Lock is off.

c) Setting for SD 4:3, SD 16:9

- d) Setting for HD 4:3, HD 16:9
- e) 1 (Circle): Circle
  - 2 (Rectangle): Rectangle
  - 3 (Star): Star
  - 4 (Heart): Heart

### To limit the direction in which modulation is applied

By pressing [Plus Only], turning it on, you can limit the direction in which modulation is applied (the direction in which the image expands) to the plus direction only.

### To set the ripple center point

Use the following procedure.

- 1** Press [Position], turning it on.
- 2** Set the following parameters, depending on the selected modulation mode.

#### • When Shape is selected

Knob	Parameter	Adjustment	Setting values
1	H	Ripple center point in horizontal direction	–5.000 to +5.000 <sup>a)</sup> –20.000 to +20.000 <sup>b)</sup>
2	V	Ripple center point in vertical direction	–3.000 to +3.000 <sup>a)</sup> –12.000 to +12.000 <sup>b)</sup>

a) Setting for SD 4:3, SD 16:9

b) Setting for HD 4:3, HD 16:9

#### • When other than Shape is selected

Knob	Parameter	Adjustment	Setting values
1	H	Ripple center point in horizontal direction	–8.000 to +8.000 <sup>a)</sup> –32.000 to +32.000 <sup>b)</sup>
2	V	Ripple center point in vertical direction	–6.000 to +6.000 <sup>a)</sup> –18.000 to +18.000 <sup>b)</sup>

a) Setting for SD 4:3, SD 16:9

b) Setting for HD 4:3, HD 16:9

### To limit the ripple range

- 1** Press [Range], turning it on.
- 2** Set the following parameters.

**• When Radial or Shape mode is selected**

Knob	Parameter	Adjustment	Setting values
1	Size R	Amount of ripple modulation along radius	0.00 to 100.00
2	Offset R	Center of modulation range along radius	–8.000 to +8.000 <sup>a)</sup> –32.000 to +32.000 <sup>b)</sup>

a) Setting for SD 4:3, SD 16:9

b) Setting for HD 4:3, HD 16:9

**• When Angular mode is selected**

Knob	Parameter	Adjustment	Setting values
1	Size A	Amount of ripple modulation along periphery	0.00 to 100.00
2	Offset A	Center of modulation range along periphery	–8.000 to +8.000

**• When Both mode is selected**

Knob	Parameter	Adjustment	Setting values
1	Size R	Amount of ripple modulation along radius	0.00 to 100.00
2	Offset R	Center of modulation range along radius	–8.000 to +8.000 <sup>a)</sup> –32.000 to +32.000 <sup>b)</sup>
3	Size A	Amount of ripple modulation along periphery	0.00 to 100.00
4	Offset A	Center of modulation range along periphery	–8.000 to +8.000

a) Setting for SD 4:3, SD 16:9

b) Setting for HD 4:3, HD 16:9

**To reverse the ripple range**

Use the following procedure.

**When modulation mode is Radial, Both, or Shape:** Press [Range Rev R], turning it on.**When modulation mode is Both or Angular:** Press [Range Rev A], turning it on.**Other settings**

You can turn [Lock], [Form], [Random], and [Range Envelope] on to do the following.

- Stop the waves
- Select the wave shape
- Randomize the waveform
- Smooth the range envelope when the wave range is limited

For Lock, Form, Random, and Range Envelope functions, see “Wave settings” (page 82).

## Rings settings

The Rings effect partitions the image into rings that rotate while moving in the same direction.

### To apply the Rings effect

With the Rings menu displayed, use the following procedure.

- 1 To make transition settings, press [Transition] and set the following parameters.

Knob	Parameter	Adjustment	Setting values
1	Transition	Degree of transition	0.000 to 100.000
2	Random	Degree of randomness in distance moved by each block	0.000 to 100.000
3	Spiral	Amount of movement toward periphery accompanying transition	–1.000 to +1.000

- 2 To set the partition method, press [Partition] and set the following parameters.

Knob	Parameter	Adjustment	Setting values
1	Width	Width of partition	0.000 to 100.000
2	Random	Degree of randomness in partition width	0.000 to 100.000
3	Angle	Starting angle of effect	–8.000 to +8.000

- 3 To set the ring center position, press [Position] and set the following parameters.

Knob	Parameter	Adjustment	Setting values
1	H	Horizontal center position	–5.000 to +5.000 <sup>a)</sup> –20.000 to +20.000 <sup>b)</sup>
2	V	Vertical center position	–4.000 to +4.000 <sup>a)</sup> –16.000 to +16.000 <sup>b)</sup>

a) Setting for SD 4:3, SD 16:9

b) Setting for HD 4:3, HD 16:9

- 4 To partition into pixels, press [Pixel], turning it on, and set the following parameters.

Knob	Parameter	Adjustment	Setting values
1	Density	Degree to which image disappears around periphery	0.00 to 100.00
2	Random	Degree of jaggies at block edges	0.00 to 100.00

## Broken Glass settings

The Broken Glass effect partitions the image like broken glass, with shards flying outward.

### To apply the Broken Glass effect

Display the Broken Glass menu.

The functions of the knobs in the Broken Glass menu are the same as those of the Rings menu, with the exception of [Direction].

*For details about operation, see “Rings settings” (page 93).*

### To fix the direction in which shards scatter

Press [Direction], turning it on.

## Flying Bar settings

The Flying Bar effect divides the image into bars which peel off in two blocks as they move.

### To apply the Flying Bar effect

With the Flying Bars menu displayed, use the following procedure.

- 1 To make transition settings, press [Transition] and set the following parameters.

Knob	Parameter	Adjustment	Setting values
1	Transition	Degree of transition	0.000 to 100.000
2	Random	Degree of randomness in distance moved by each block	–100.000 to +100.000
3	Angle	Direction of movement	–8.000 to +8.000

- 2 To set the partition method, press [Partition] and set the following parameters.

Knob	Parameter	Adjustment	Setting values
1	Width	Width of partition	0.000 to 100.000
2	Random	Degree of randomness in partition width	0.000 to 100.000
3	Angle	Partition angle	–8.000 to +8.000

## Blind settings

The Blind effect divides the image into bars or wedges, with blocks rotating like the slats of venetian blinds.

### To apply the Blind effect

With the Blind menu displayed, use the following procedure.

- 1** In the <Mode> group, select [Bar] or [Wedge].
- 2** To make transition settings, press [Transition] and set the following parameters.

Knob	Parameter	Adjustment	Setting values
1	Rotation	Number of rotations of the blocks	–8.000 to +8.000
2	Perspective	Degree of randomness in distance moved by each block	0.000 to 100.000

- 3** To set the partition method, press [Partition] and set the following parameters.

#### • When Bar was selected in step 2

Knob	Parameter	Adjustment	Setting values
1	Width	Width of partition	0.000 to 100.000
2	Offset	Degree of randomness in partition width	–5.000 to +5.000 <sup>a)</sup> –20.000 to 20.000 <sup>b)</sup>
3	Angle	Starting angle of effect	–8.000 to +8.000

a) Setting for SD 4:3, SD 16:9

b) Setting for HD 4:3, HD 16:9

#### • When Wedge was selected in step 2

Knob	Parameter	Adjustment	Setting values
4	No	Width of blocks	0.000 to 100.000
5	Phase	Partition position	–8.000 to +8.000

### To set the wedge center position

When Wedge is selected in the <Mode> group, you can set the wedge center position.

- 1** Press [Position].
- 2** Set the following parameters.

Knob	Parameter	Adjustment	Setting values
1	H	Horizontal center position	–8.000 to +8.000 <sup>a)</sup> –32.000 to +32.000 <sup>b)</sup>
2	V	Vertical center position	–6.000 to +6.000 <sup>a)</sup> –18.000 to +18.000 <sup>b)</sup>

a) Setting for SD 4:3, SD 16:9

b) Setting for HD 4:3, HD 16:9

## Split settings

The Split effect splits the image upper and lower, left and right.

### To apply the Split effect

With the Split menu displayed, use the following procedure.

- 1 In the <Mode> group, select the split method.

**Single:** Leave gaps between splits.

**Double:** Fill gaps between splits with the same image.

- 2 Set the following parameters.

Knob	Parameter	Adjustment	Setting values
1	Transition H	Degree of left and right separation	0.000 to 100.000
2	Transition V	Degree of top and bottom separation	0.000 to 100.000

### To set the split position

Use the following procedure.

- 1 Press [Position].
- 2 Set the following parameters.

Knob	Parameter	Adjustment	Setting values
1	H	Degree of left and right separation	–4.000 to +4.000 <sup>a)</sup> –16.000 to +16.000 <sup>b)</sup>
2	V	Degree of top and bottom separation	–3.000 to +3.000 <sup>a)</sup> –12.000 to +12.000 <sup>b)</sup>

a) Setting for SD 4:3, SD 16:9

b) Setting for HD 4:3, HD 16:9

## Split Slide settings

The Split Slide effect divides the image into bars which slide alternately in reverse directions.

### To apply the Split Slide effect

With the Split Slide menu displayed, set the following parameters.

Parameter group [1/2]

Knob	Parameter	Adjustment	Setting values
1	Transition H	Degree of transition in horizontal direction	0.000 to 100.000
2	Random H	Degree of randomness in distance moved by blocks in horizontal direction	0.00 to 100.00
3	Skew H	Degree of skew in horizontal direction	0.00 to 100.00
4	Width H	Horizontal width of partition	0.00 to 100.00
5	Angle	Angle of partition line	-8.000 to +8.000

Parameter group [2/2]

Knob	Parameter	Adjustment	Setting values
1	Transition V	Degree of transition in vertical direction	0.000 to 100.000
2	Random V	Degree of randomness in distance moved by blocks in vertical direction	0.00 to 100.00
3	Skew V	Degree of skew in vertical direction	0.00 to 100.00
4	Width V	Vertical width of partition	0.00 to 100.00
5	Angle	Angle of partition line	-8.000 to +8.000

### To set the partition position

Use the following procedure.

- 1** Press [Position], turning it on.
- 2** Set the following parameters.

Knob	Parameter	Adjustment	Setting values
1	H	Horizontal partition position	-5.000 to +5.000 <sup>a)</sup> -20.000 to +20.000 <sup>b)</sup>
2	V	Vertical partition position	-5.000 to +5.000 <sup>a)</sup> -20.000 to +20.000 <sup>b)</sup>

a) Setting for SD 4:3, SD 16:9

b) Setting for HD 4:3, HD 16:9

## Mirror settings

The Mirror effect partitions the image vertically and horizontally, creating an image like a reflection in a mirror.

## To apply the Mirror effect

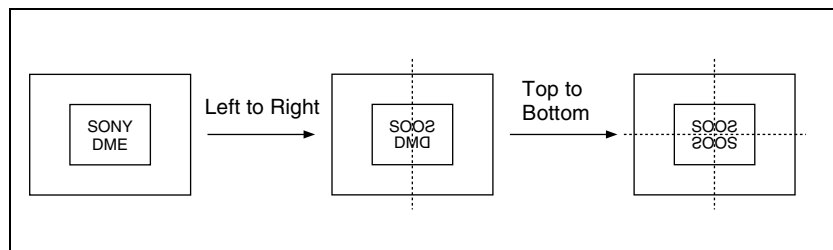
With the **Mirror** menu displayed, press [Left to Right], [Right to Left], [Top to Bottom], or [Bottom to Top] to set the reflection method (multiple selections possible).

**Left to Right:** Reflect left side on right.

**Right to Left:** Reflect right side on left.

**Top to Bottom:** Reflect top side on bottom.

**Bottom to Top:** Reflect bottom side on top.



### To set the position of the border between original and reflection

Use the following procedure.

- 1 Press [Position].
- 2 Set the following parameters.

Knob	Parameter	Adjustment	Setting values
1	H	Horizontal border position	-8.000 to +8.000 <sup>a)</sup> -32.000 to +32.000 <sup>b)</sup>
2	V	Vertical border position	-6.000 to +6.000 <sup>a)</sup> -24.000 to +24.000 <sup>b)</sup>

a) Setting for SD 4:3, SD 16:9

b) Setting for HD 4:3, HD 16:9

## Multi Mirror settings

The Multi Mirror effect divides the image into originals and reflections, lining them up vertically and horizontally.

## To apply the Multi Mirror effect

With the Multi Mirror menu displayed, set the following parameters.

Knob	Parameter	Adjustment	Setting values
1	Interval H	Horizontal distance between mirrors (original width)	0.000 to 10.000 <sup>a)</sup> 0.000 to 40.000 <sup>b)</sup>
2	Offset H	Amount of horizontal offset of image with mirrors fixed	-4.000 to +4.000 <sup>a)</sup> -16.000 to +16.000 <sup>b)</sup>
3	Interval V	Vertical distance between mirrors (original width)	0.000 to 10.000 <sup>a)</sup> 0.000 to 40.000 <sup>b)</sup>
4	Offset V	Amount of vertical offset of image with mirrors fixed	-4.000 to +4.000 <sup>a)</sup> -16.000 to +16.000 <sup>b)</sup>
5	Angle	Mirror angle	-8.000 to +8.000

a) Setting for SD 4:3, SD 16:9

b) Setting for HD 4:3, HD 16:9

## To set the center position of original image

Use the following procedure.

**1** Press [Position], turning it on.

**2** Set the following parameters.

Knob	Parameter	Adjustment	Setting values
1	H	Horizontal original image center position	-4.000 to +4.000 <sup>a)</sup> -16.000 to +16.000 <sup>b)</sup>
2	V	Vertical original image center position	-4.000 to +4.000 <sup>a)</sup> -16.000 to +16.000 <sup>b)</sup>

a) Setting for SD 4:3, SD 16:9

b) Setting for HD 4:3, HD 16:9

## Kaleidoscope settings

The Kaleidoscope effect creates an image like a view into a kaleidoscope.

## To apply the Kaleidoscope effect

With the Kaleidoscope menu displayed, set the following parameters.

Knob	Parameter	Adjustment	Setting values
1	Number	Number of blocks	0.00 to 100.00
2	Phase	Angle of partition reference point	-8.000 to +8.000 <sup>a)</sup>
3	Offset H	Amount of horizontal offset	-4.000 to +4.000 <sup>a)</sup> -16.000 to +16.000 <sup>b)</sup>

Knob	Parameter	Adjustment	Setting values
4	Offset V	Amount of vertical offset	–3.000 to +3.000 <sup>a)</sup> –12.000 to +12.000 <sup>b)</sup>

a) Setting for SD 4:3, SD 16:9

b) Setting for HD 4:3, HD 16:9

### To reflect the kaleidoscope image as if in a mirror

Use the following procedure.

- 1 To reflect in the horizontal direction, press [Mirror H], turning it on.
- 2 To reflect in the vertical direction, press [Mirror V], turning it on.

### To set the reflection position

Use the following procedure.

- 1** Press [Position], turning it on.
- 2** Set the following parameters.

Knob	Parameter	Adjustment	Setting values
1	H	Horizontal reflection position	0.000 to 4.000 <sup>a)</sup> 0.000 to 16.000 <sup>b)</sup>
2	V	Vertical reflection position	0.000 to 3.000 <sup>a)</sup> 0.000 to 12.000 <sup>b)</sup>

a) Setting for SD 4:3, SD 16:9

b) Setting for HD 4:3, HD 16:9

**To cyclically repeat part of the original and its reflection**

Press [Cyclic], turning it on.

## Lens settings

The Lens effect creates an image like a view through a lens.

## To apply the Lens effect

With the Lens menu displayed, use the following procedure.

- 1 In the <Mode> group, select the lens shape.
  - Circle
  - Rectangle
  - Star
  - Heart

- Bar
- Cross

**2** Depending on the selected lens shape, set the following parameters.

• **When Circle, Rectangle, Star, or Heart is selected**

Knob	Parameter	Adjustment	Setting values
1	Magnify H	Magnification ratio	−100.00 to +100.00
2	Curve H	Curve ratio	−100.00 to +100.00
3	Size H	Size	0.00 to 100.00
4	Angle	Slant angle	−8.000 to +8.000
5	Aspect	Aspect ratio	−100.00 to +100.00

• **When Bar is selected**

Knob	Parameter	Adjustment	Setting values
1	Magnify H	Magnification ratio	−100.00 to +100.00
2	Curve H	Curve ratio	−100.00 to +100.00
3	Size H	Size	0.00 to 100.00
4	Angle	Slant angle	−8.000 to +8.000

• **When Cross is selected**

Parameter group [1/2]

Knob	Parameter	Adjustment	Setting values
1	Magnify H	Horizontal magnification ratio	−100.00 to +100.00
2	Curve H	Horizontal curve ratio	−100.00 to +100.00
3	Size H	Horizontal size	0.00 to 100.00

Parameter group [2/2]

Knob	Parameter	Adjustment	Setting values
1	Magnify V	Vertical magnification ratio	−100.00 to +100.00
2	Curve V	Vertical curve ratio	−100.00 to +100.00
3	Size V	Vertical size	0.00 to 100.00

**To make only the lens part visible**

Press [Lens Only], turning it on.

The parts of the image outside the lens are removed.

**To set the lens center position**

Use the following procedure.

**1** Press [Position], turning it on.

## 2 Set the following parameters.

Knob	Parameter	Adjustment	Setting values
1	H	Horizontal lens center position	–5.000 to +5.000 <sup>a)</sup> –20.000 to +20.000 <sup>b)</sup>
2	V	Vertical lens center position	–4.000 to +4.000 <sup>a)</sup> –16.000 to +16.000 <sup>b)</sup>

a) Setting for SD 4:3, SD 16:9

b) Setting for HD 4:3, HD 16:9

## Circle settings

The Circle effect makes a circle with the image.

### To apply the Circle effect

With the Circle menu displayed, set the following parameters.

Knob	Parameter	Adjustment	Setting values
1	Radius	Size of circle	0.00 to 100.00

### To make the axis of modulation vertical

Press [Mod V], turning it on.

The axis of modulation when converting to the circle becomes vertical.

## Panorama settings

The Panorama effect curves the upper and lower edges of the image to emphasize the sense of perspective.

### To apply the Panorama effect

With the Panorama menu displayed, set the following parameters.

Knob	Parameter	Adjustment	Setting values
1	Curve H	Horizontal curve ratio	–100.00 to +100.00
2	Curve V	Vertical curve ratio	–100.00 to +100.00
3	Position H	Horizontal curve center position	–4.000 to +4.000 <sup>a)</sup> –16.000 to +16.000 <sup>b)</sup>
4	Position V	Vertical curve center position	–3.000 to +3.000 <sup>a)</sup> –12.000 to +12.000 <sup>b)</sup>

a) Setting for SD 4:3, SD 16:9

b) Setting for HD 4:3, HD 16:9

## Page Turn settings

The Page Turn effect turns the image like turning a page.

### To apply the Page Turn effect

With the Page Turn menu displayed, use the following procedure.

- 1 In the <Split Mode> group, select the split mode.

**H&V:** The image turns as it is split from the center into 4 parts: left, right, upper, lower.

**H:** The image turns as it is split from the center into 2 parts: left, right.

**V:** The image turns as it is split from the center into 2 parts: upper, lower.

**When nothing is selected (Off):** There are no splits and the image turns from the edge.

- 2 Press [Page Turn], then set the following parameters.

Knob	Parameter	Adjustment	Setting values
1	Radius	Radius of turn part	0.00 to 100.00
2	Offset	Amount of turn	-100.00 to +100.00
3	Angle	Angle of turn	-0.250 to +0.000 <sup>a)</sup> -0.250 to +0.250 <sup>b)</sup> -0.500 to +0.000 <sup>c)</sup> -8.000 to +8.000 <sup>d)</sup>

a) When split mode is H&V

b) When split mode is H

c) When split mode is V

d) When split mode is off

### To set the input signal of the back page

Use the following procedure.

- 1 In the <Back Video> group, select the signal input into the back page.

**Self:** Use the same signal as the front page.

**Flat:** Use a flat color.

**Hue Rotation:** Gradually vary the hue.

**2nd Ch:** Use the 2nd channel video signal.

To select "2nd Ch," it is first necessary to select the second DME on the keyer using DME.

- 2 Adjust the following parameters, according to the selected input signal.

- **When Flat is selected**

Knob	Parameter	Adjustment	Setting values
1	Luminance	Luminance	0.00 to 100.00
2	Saturation	Saturation	0.00 to 100.00
3	Hue	Hue	359.99 to 0.00

- **When Hue Rotation is selected**

Knob	Parameter	Adjustment	Setting values
1	Luminance	Luminance	0.00 to 100.00
2	Saturation	Saturation	0.00 to 100.00
3	Speed	Speed at which hue changes	-12.00 to +12.00

## Roll settings

The Roll effect rolls the image up.

### To apply the Roll effect

Display the Roll menu.

The knobs in the Roll menu have the same functions as those in the Page Turn menu.

*For details about operation, see “Page Turn settings” (page 103).*

## Cylinder settings

The Cylinder effect winds the whole image onto a cylinder.

### To apply the Cylinder effect

With the Cylinder menu displayed, set the following parameters.

Knob	Parameter	Adjustment	Setting values
1	Radius	Degree to which image is wound onto the cylinder	0.00 to 100.00
2	Min R	Radius of the cylinder	0.00 to 100.00
3	Offset	Horizontal position of the image wound onto cylinder	-100.00 to +100.00

The procedure for selecting the input signal in the <Back Video> group is the same as for the Page Turn menu.

*For details about operation, see “Page Turn settings” (page 103).*

## Sphere settings

The Sphere effect winds the whole image onto a sphere.

### To apply the Sphere effect

Display the Sphere menu.

The knobs in the Sphere menu have the same functions as those in the Cylinder menu.

*For details about operation, see “Cylinder settings” (page 104).*

## Explosion settings

The Explosion effect divides the image into fragments which expand as they fly out.

### To apply the Explosion effect

With the Explosion menu displayed, use the following procedure.

**1** In the <Mode> group, select the explosion pattern.

- Circle
- Rectangle
- Star
- Heart
- Ellipse

**2** Set the following parameters.

#### • When Circle was selected in step 1

Knob	Parameter	Adjustment	Setting values
1	Transition	Degree of transition	0.00 to 100.00
2	Curve	Degree to which image periphery expands	0.00 to 100.00
3	Spiral	Degree of curvature of transition path	−100.00 to +100.00

#### • When Rectangle, Star, Heart, or Ellipse was selected in step 1

Knob	Parameter	Adjustment	Setting values
1	Transition	Degree of transition	0.00 to 100.00
2	Curve	Degree to which image periphery expands	0.00 to 100.00
3	Aspect	Aspect ratio of waveform	−100.00 to +100.00
4	Angle	Slant of waveform	−8.000 to +8.000

### To make the fragments stardust

Use the following procedure.

**1** Press [Pixel], turning it on.



- 2** Set the following parameters.

Knob	Parameter	Adjustment	Setting values
1	Density	Degree to which image disappears	0.00 to 100.00
2	Random	Degree of randomness in flying out fragment positions	0.00 to 100.00

### To set the explosion center point

Use the following procedure.

- 1** Press [Position], turning it on.
- 2** Set the following parameters.

Knob	Parameter	Adjustment	Setting values
1	H	Center point in horizontal direction	–5.000 to +5.000 <sup>a)</sup> –20.000 to +20.000 <sup>b)</sup>
2	V	Center point in vertical direction	–4.000 to +4.000 <sup>a)</sup> –16.000 to +16.000 <sup>b)</sup>

a) Setting for SD 4:3, SD 16:9

b) Setting for HD 4:3, HD 16:9

## Swirl settings

The Swirl effect swirls the image.

### To apply the Swirl effect

With the Swirl menu displayed, set the following parameters.

Knob	Parameter	Adjustment	Setting values
1	Transition	Swirl amount	0.00 to 100.00
2	Center	Amount of rotation in center of swirl	–8.000 to +8.000
3	Outer	Amount of rotation outside of Area	–8.000 to +8.000
4	Area	Region of swirl	0.00 to 100.00

### To make the tip of the swirl stardust

Use the following procedure.

- 1** Press [Pixel], turning it on.
- 2** Set the following parameters.

Knob	Parameter	Adjustment	Setting values
1	Density	Degree to which image disappears	0.00 to 100.00
2	Random	Trail type and amount of stardust	0.00 to 100.00

### To set the center position of the swirl

Use the following procedure.

- 1 Press [Position], turning it on.
- 2 Set the following parameters.

Knob	Parameter	Adjustment	Setting values
1	H	Horizontal center position of swirl	-8.000 to +8.000 <sup>a)</sup> -32.000 to +32.000 <sup>b)</sup>
2	V	Vertical center position of swirl	-6.000 to +6.000 <sup>a)</sup> -18.000 to +18.000 <sup>b)</sup>

a) Setting for SD 4:3, SD 16:9

b) Setting for HD 4:3, HD 16:9

## Melt settings

The Melt effect melts the image away from a specified part.

### To apply the Melt effect

With the Melt menu displayed, use the following procedure.

- 1 In the <Direction> group, select the direction in which the image melts away.  
  
**Up:** Melting occurs upward.  
**Down:** Melting occurs downward.
- 2 To make transition settings, press [Transition] and set the following parameters.

Knob	Parameter	Adjustment	Setting values
1	Transition	Degree of transition	0.00 to 100.00
2	Curve	Degree to which image stretches	0.00 to 100.00
3	Random	Degree of jaggies at melted part	0.00 to 100.00

- 3 To make wave settings for melting part, press [Border] and set the following parameters.

Knob	Parameter	Adjustment	Setting values
1	Amp	Amplitude of waves	0.00 to 100.00
2	Freq	Frequency of waves	0.00 to 100.00
3	Offset <sup>a)</sup>	Amount of wave phase offset	-16.000 to +16.000 <sup>c)</sup> -64.000 to +64.000 <sup>d)</sup>
4	Speed <sup>b)</sup>	Direction and speed of waves	-100.00 to +100.00
5	Slant	Slant of border	-100.00 to +100.00

a) Set when Lock is on.

b) Set when Lock is off.

c) Setting for SD 4:3, SD 16:9

d) Setting for HD 4:3, HD 16:9

### To stop the waves in the melting part

Press [Lock], turning it on.

With each press, the waves alternately stop and start moving again.

### To select the shape of the part beginning to melt

Press [Form] and set the following parameter.

Knob	Parameter	Adjustment	Setting values
1	Form	Waveform	1 to 8 <sup>a)</sup>

a) 1 (SINE): Sine wave

2 (PARABOLA): Parabola wave

3 (TRIANGLE): Triangular wave

4 (RECTANGLE): Rectangular wave

5 (CIRCLE): Circular wave

6 (CUBIC): Cubic wave

7 (MELT1): Melting wave 1

8 (MELT2): Melting wave 2

### To make the melting part stardust

Use the following procedure.

**1** Press [Pixel], turning it on.

**2** Set the following parameters.

Knob	Parameter	Adjustment	Setting values
1	Density	Degree to which image disappears	0.00 to 100.00
2	Random	Degree to which pixel positions become more randomized further from the center	0.00 to 100.00

## Character Trail settings

The Character Trail effect extends the edge of the image like a trail.

### To apply the Character Trail effect

With the Character Trail menu displayed, set the following parameters.

Knob	Parameter	Adjustment	Setting values
1	Transition	Position where effect starts	–8.000 to +8.000 <sup>a)</sup> –32.000 to +32.000 <sup>b)</sup>
2	Expand	Degree of expansion	0.00 to 100.00
3	Trans Angle	Angle of slanting in effect region	–8.000 to +8.000
4	Trail Angle	Direction of trail	–100.00 to +100.00

a) Setting for SD 4:3, SD 16:9

b) Setting for HD 4:3, HD 16:9

### To make the tip of the swirl stardust

Use the following procedure.

- 1** Press [Pixel], turning it on.
- 2** Set the following parameters.

Knob	Parameter	Adjustment	Setting values
1	Density	Degree to which image disappears	0.00 to 100.00
2	Random	Trail type and amount of stardust	0.00 to 100.00

## Lighting Settings

This effect provides the effect of light striking the image. The following lighting patterns are available:

- Plane
- Bar
- Preset (lighting pattern suitable for nonlinear effects)

### Note

You cannot select Bar for an image subjected to a nonlinear effect.

### Applying the Lighting effect

Use the following procedure.

- 1** In the DME menu, select VF5 ‘Light/Trail’ and HF1 ‘Lighting.’



The Lighting menu appears.

## 2 Press [Lighting], turning it on.

The Lighting effect is enabled.

## 3 In the <Light Pattern> group, select the lighting pattern Plane, Bar or Preset.

You can adjust the intensity of the light and other parameters with the knobs.

## 4 Set the parameters.

The parameters differ as follows, depending on the selected lighting pattern.

### • When Plane is selected

Knob	Parameter	Adjustment	Setting values
1	Light	Intensity of light in highlight area	0.00 to 100.00
5	Total Ambient	Brightness of whole image	0.00 to 100.00 <sup>a)</sup>

a) You can make the Lighting effect more effective by adjusting [Total Ambient] to lower the brightness of the entire image. This setting is used both by this effect and by the Spotlighting effect.

### Note

The Total Ambient parameter is not supported on the MVE-8000/8000A.

### • When Bar is selected

Knob	Parameter	Adjustment	Setting values
1	Light	Intensity of light in highlight area	0.00 to 100.00
2	Ambient	Intensity of light in ambient area	0.00 to 100.00
5	Total Ambient	Brightness of whole image	0.00 to 100.00 <sup>a)</sup>

a) You can make the Lighting effect more effective by adjusting [Total Ambient] to lower the brightness of the entire image. This setting is used both by this effect and by the Spotlighting effect.

### Note

The Total Ambient parameter is not supported on the MVE-8000/8000A.

### • When Preset is selected

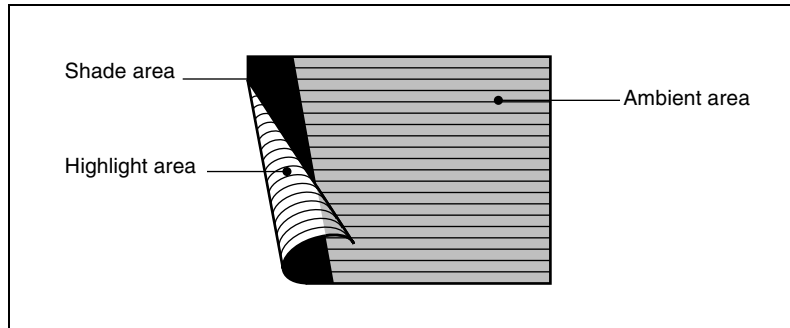
Knob	Parameter	Adjustment	Setting values
1	Light	Intensity of light in highlight area	0.00 to 100.00

Knob	Parameter	Adjustment	Setting values
2	Ambient	Intensity of light in ambient area	0.00 to 100.00
3	Shade	Intensity of light in shade area	0.00 to 100.00 <sup>a)</sup>
5	Total Ambient	Brightness of whole image	0.00 to 100.00 <sup>b)</sup>

- a) Setting is available when nonlinear effect page turn, roll, cylinder, or sphere is selected.  
b) You can make the Lighting effect more effective by adjusting [Total Ambient] to lower the brightness of the entire image. This setting is used both by this effect and by the Spotlighting effect.

#### Note

The Total Ambient parameter is not supported on the MVE-8000/8000A.



The three regions for which the light intensity can be set

## Setting the bar shape of the highlight area

When you select [Bar] or [Preset] in step **3**, use the following procedure to set the shape of the bar.

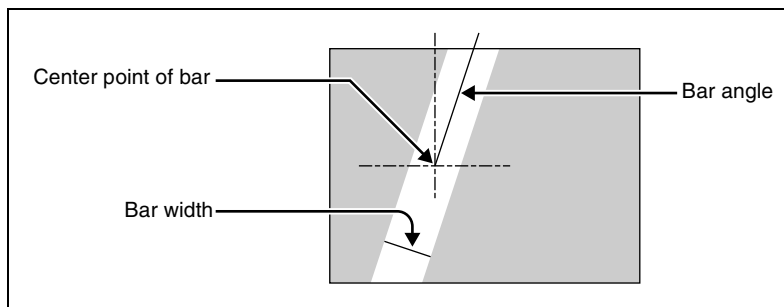
- 1 Turn [Light Modify] on.
- 2 Adjust the following parameters.

Knob	Parameter	Adjustment	Setting values
1	X	X-value of bar center point	-8.00 to +8.00 <sup>a) b)</sup> -24.00 to +24.00 <sup>c)</sup> -32.00 to +32.00 <sup>d)</sup>
2	Y	Y-value of bar center point	-6.00 to +6.00 <sup>a)</sup> -4.50 to +4.50 <sup>b)</sup> -18.00 to +18.00 <sup>c) d)</sup>
3	Angle <sup>e)</sup>	Angle of bar	-8.00 to +8.00
4	Width	Width of bar	0.00 to 100.00



Knob	Parameter	Adjustment	Setting values
5	Soft	Softness of edges	0.00 to 100.00

- a) For SD 4:3
- b) For SD 16:9
- c) For HD 4:3
- d) For HD 16:9
- e) There are some nonlinear effects for which Angle cannot be used.



Bar shape parameters

## Setting the color of the light in the highlight area

To set the color of the light in the highlight area, use the following procedure.

- 1** Turn [Light Color] on.
- 2** Adjust the following parameters.

Knob	Parameter	Adjustment	Setting values
1	Luminance	Luminance	0.00 to 100.00
2	Saturation	Saturation	0.00 to 100.00
3	Hue	Hue	359.99 to 0.00

## Setting the bar shape of the shade area

When you select [Preset] in step **3** of “Applying the Lighting effect” (*see page 109*), use the following procedure to set the bar shape of the shade area.

- 1** Turn [Shade Modify] on.
- 2** Adjust the following parameters.

Knob	Parameter	Adjustment	Setting values
1	X	X-value of bar center point	-8.00 to +8.00 <sup>a)</sup> -24.00 to +24.00 <sup>b)</sup> -32.00 to +32.00 <sup>c)</sup>
4	Width	Width of bar	0.00 to 100.00
5	Soft	Softness of edges	0.00 to 100.00

a) For SD 4:3 and SD 16:9

b) For HD 4:3

c) For HD 16:9

## Setting the color of the shade in the shade area

To set the color of the shade in the shade area, use the following procedure.

- 1 Turn [Shade Color] on.
- 2 Adjust the following parameters.

Knob	Parameter	Adjustment	Setting values
1	Luminance	Luminance	0.00 to 100.00
2	Saturation	Saturation	0.00 to 100.00
3	Hue	Hue	359.99 to 0.00

## Setting the bar mode of the highlight area

When you select [Bar] in step **3** of “Applying the Lighting effect” (see page 109), use the following procedure to set the bar mode of the highlight area.

*For a sample illustration and other information, see “Digital Multi Effects (DME)” in Chapter 1 (Volume 1).*

### Note

The bar mode of the highlight area is not supported on the MVE-8000/8000A.

- 1 Select the mode in the <Bar Light Mode> group.  
**Normal:** Emphasizes the bar highlight area.  
**Specular:** An effect like light striking a surface with metallic reflections.  
**Mat:** An effect like light striking paper, cloth, or another diffusively reflective surface.
- 2 Set the following parameters.



Knob	Parameter	Adjustment	Setting values
1	Intensity	Intensity of diffuse light area	0.00 to 100.00
2	Offset	Offset of center of diffuse light area	-4.00 to +4.00 <sup>a)</sup> -12.00 to +12.00 <sup>b)</sup> -16.00 to +16.00 <sup>c)</sup>
3	Width	Width of diffuse light area	0.00 to 100.00
4	Soft	Softness of diffuse light area	0.00 to 100.00

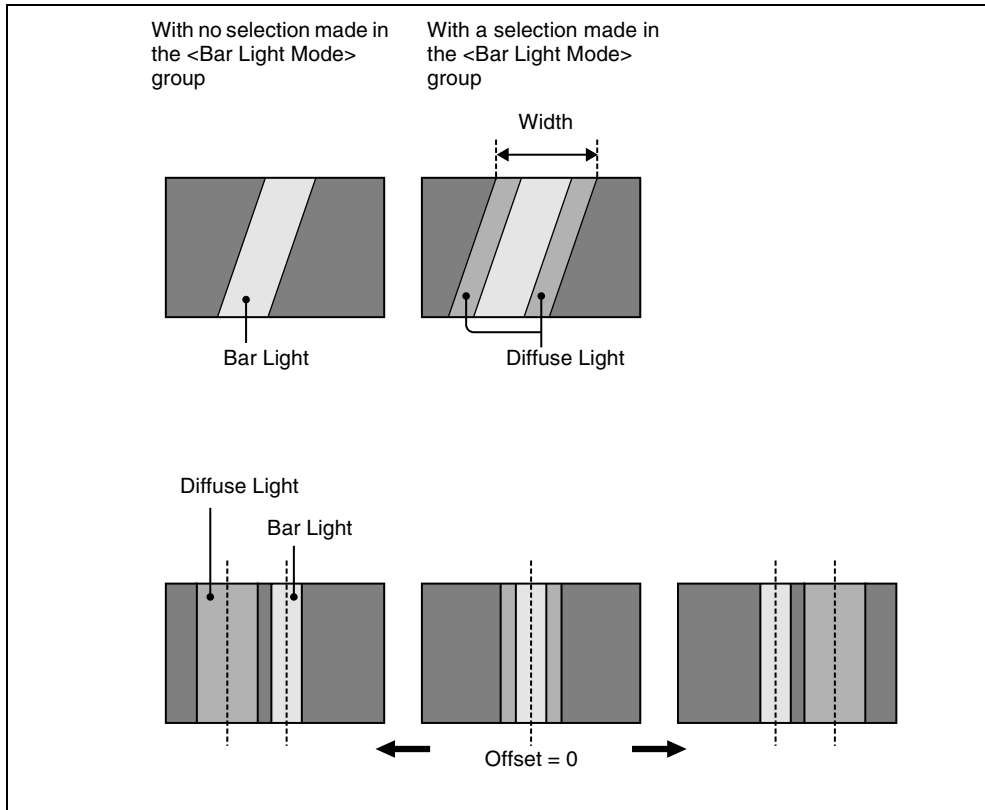
a) For SD 4:3 and SD 16:9

b) For HD 4:3

c) For HD 16:9

- 3** When you select Normal or Mat in step **1**, press [Bar Diffuse Color], turning it on, and adjust the following parameters to set the color of the diffuse light area.

Knob	Parameter	Adjustment	Setting values
1	Luminance	Luminance	0.00 to 100.00
2	Saturation	Saturation	0.00 to 100.00
3	Hue	Hue	359.99 to 0.00



## Trail Settings

This effect recursively freezes the input video at regular intervals so that a trail of afterimages is created.

*For an illustrative figure and other information, see "DME Special Effects" in Chapter 1 (Volume 1).*

### Notes

- When using the MVE-8000, the Trail effect cannot be applied to more than two channels at the same time.
- Turning Trail on when Motion Decay (*see page 119*), Keyframe Strobe (*see page 121*) or Wind (*see page 123*) is on turns it off automatically.

## Applying the Trail effect

Use the following procedure.

- 1** In the DME menu, select VF5 ‘Light/Trail’ and HF2 ‘Trail.’  
The Trail menu appears.
- 2** Press [Trail], turning it on.  
The Trail effect is enabled. You can adjust the parameters with the knobs.
- 3** Set the parameters.

Knob	Parameter	Adjustment	Setting values
1	Decay	Degree to which the trail is left	0.00 to 100.00 <sup>a)</sup>
2	Interval	Freeze interval	1 to 255 (frames)
3	Live	Proportion of the interval between two successive freeze images for which the video is run	0.00 to 100.00

a) 0.00 is no trail. At 100.00, the trail does not disappear.

- 4** To erase the trail, press [Trail Eraser], turning it on.

## Switching the priority between the current image and trail superimposed

In the <Priority> group, select the method of superimposition.

**Over:** Current image is on top.

**Under:** Trail is on top.

## Selecting the source to create a trail

In the <Trail Source> group, select the source to create a trail.

### Notes

- “Rainbow,” “Mix Color,” and “Ext Video” are not supported on the MVE-8000/8000A.
- “Mix Color” or “Ext Video” can only be applied to one of the background (*see page 137*), flex shadow (*see page 44*), trail, and wind (*see page 123*) effects.

If you select “Mix Color” or “Ext Video” in one of these settings, a selection of “Mix Color” or “Ext Video” in any of the other effects is disabled, and “Flat Color” is selected in its place.

- When executing combining four channels of DME images, “Mix Color” and “Ext Video” in the flex shadow and background effects cannot be selected.

**Freeze Video:** Use freeze images of the input video as source of the trail.

**Flat Color:** Use a flat color matte as source of the trail. You can set the following parameters with the knobs.

Knob	Parameter	Adjustment	Setting values
1	Luminance	Luminance	0.00 to 100.00
2	Saturation	Saturation	0.00 to 100.00
3	Hue	Hue	359.99 to 0.00

**Hue Rotate:** Use a color matte whose hue varies slightly with each frame for the trail of the afterimages. You can set the following parameters with the knobs.

Knob	Parameter	Adjustment	Setting values
1	Luminance	Luminance	0.00 to 100.00
2	Saturation	Saturation	0.00 to 100.00
3	Hue Speed	Speed at which the hue changes	-12.00 to +12.00

**Mix Color:** Insert a mix color signal set in the Color Mix menu (*see page 56*) in the afterimage portion.

**Ext Video:** Insert the external video signal input to the Ext IN connector in the afterimage portion.

**Rainbow:** Use a freeze image with the hue changing every frame in the afterimage portion. The difference from “Hue Rotate” is that many colors appear simultaneously.

*For details of the Rainbow parameters, see the “Hue Rotate” item above.*

## Erasing the afterimages that remain in memory whenever a keyframe is passed

Press [Trail Eraser], turning it on.

When the effect passes a keyframe, the afterimage is erased before writing a new afterimage.

## Selecting the freeze timing

In the <Trail Freeze Timing> group, select the timing for freezing a trail.

**Frame:** freeze in frame units.

**Field:** freeze in field units.

**Note**

The freeze timing setting is not required when the following signal formats are being used.

Signal formats: 1080PsF/30, 1080PsF/29.97, 1080PsF/25, 1080PsF/24, 1080PsF/23.976, 720p/59.94, 720p/50

## Defocusing the afterimage portion (Defocus)

**Note**

The function to defocus the trail afterimage portion is not supported on the MVE-8000/8000A.

Use the following procedure.

- 1** Press [Defocus], turning it on.
- 2** Set the following parameters.

Knob	Parameter	Adjustment	Setting values
1	Defocus V	Defocusing of the video signal	0.00 to 100.00
2	Defocus K	Defocusing of the key signal	0.00 to 100.00

## Applying stardust to the afterimage portion

The afterimage portion becomes stardust, and gradually disappears.

- 1** Press the [DUST] button, turning it on.
- 2** Set the following parameters.

Knob	Parameter	Adjustment	Setting values
1	Trail Dust	Amount of the afterimage disappearing as stardust <sup>a)</sup>	0.00 to 100.00
2	Dust Soft	Timing with which stardust disappears	0.00 to 100.00
3	Dust Size	Size of stardust	0.00 to 100.00
4	Dust Aspect	Aspect ratio of stardust	-100.00 to +100.00

a) The way in which the afterimage disappears is affected by both Decay and Trail Dust parameter adjustments.

## Setting a combine process

Select whether to add the Trail effect before or after the combine.

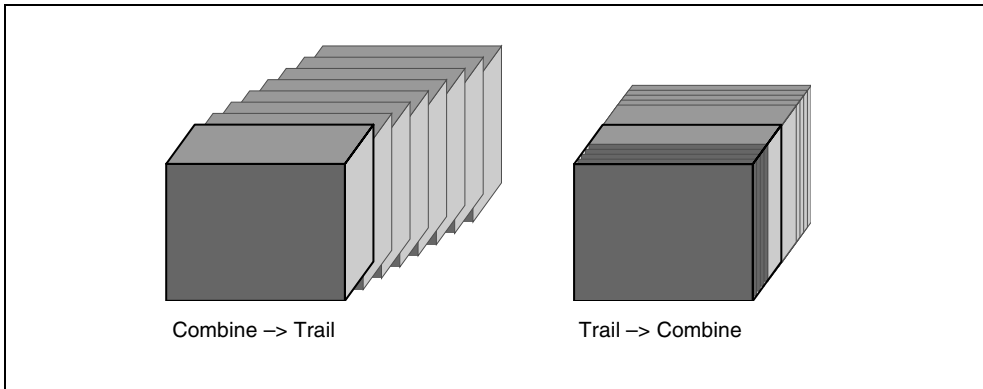
### Notes

- The combine process function is not supported on the MVE-8000/8000A.
- When you change the selection in the <Combine Process> group, the afterimages which had been added up to then disappear.
- When you do not combine images, the Trail effect only is applied, regardless of the selection in the <Combine Process> group.

Select one of the following in the <Combine Process> group.

**Combine → Trail:** Add the Trail effect after the combine. As the trail parameters, the data for the channel with the lowest number among the channels being combined is enabled.

**Trail → Combine:** Add the Trail effect before the combine. Trails parameters can be set independently for each channel.



## Motion Decay Settings

When the video image is a moving image, you can blur the motion by creating motion trails (or afterimages).

*For sample images, see “DME Special Effects” in Chapter 1 (Volume 1).*

### Note

When you turn on motion decay, if the Trail, Keyframe Strobe or Wind effect is on, it automatically goes off.

## Blurring image motion

Use the following procedure.

- 1 In the DME menu, select VF5 'Light/Trail' and HF3 'Motion Decay.'

The Motion Decay menu appears.

- 2 Press [Motion Decay], turning it on.

This enables motion decay, and you can now use the knobs to adjust the parameters.

- 3 Set the following parameter.

Knob	Parameter	Adjustment	Setting values
1	Video Decay	Degree of blurring of the video signal	0.00 to 100.00 <sup>a)</sup>

a) At the setting 0.00, there is no afterimage. At a setting of 100.00, the afterimage does not decay.

- 4 In the <Decay Mix Mode> group, select the way in which the video signal is blurred.

**Soft:** mix the live image and the afterimage.

**Hard:** show the lighter of the live image and afterimage.

- 5 To erase the afterimage, press [Decay Eraser], turning it on.

## Erasing the afterimages that remain in memory whenever a keyframe is passed

Press [Decay Eraser], turning it on.

When the effect passes a keyframe, the afterimage is erased before writing a new afterimage.

## Selecting the freeze timing

In the <Decay Freeze Timing> group, select the timing for motion decay freezing.

**Frame:** freeze in frame units.

**Field:** freeze in field units.

### Note

The freeze timing setting is not required when the following signal formats are being used.

Signal formats: 1080PsF/30, 1080PsF/29.97, 1080PsF/25, 1080PsF/24,  
1080PsF/23.976, 720p/59.94, 720p/50

## Applying stardust to the afterimage portion

The afterimage portion becomes stardust, and gradually disappears.

- 1** Press the [DUST] button, turning it on.
- 2** Set the following parameters.

Knob	Parameter	Adjustment	Setting values
1	Decay Dust	Amount of the afterimage disappearing as stardust <sup>a)</sup>	0.00 to 100.00
2	Dust Soft	Timing with which stardust disappears	0.00 to 100.00
3	Dust Size	Size of stardust	0.00 to 100.00
4	Dust Aspect	Aspect ratio of stardust	-100.00 to +100.00

a) The way in which the afterimage disappears is affected by both the Video Decay and Decay Dust parameter adjustments for the motion decay.

## Keyframe Strobe Settings

Each time a keyframe is passed, the video image is frozen, and left remaining.

### Note

When you turn on keyframe strobe, if the Trail, Motion Decay or Wind effect is on, it automatically goes off.

## Leaving a trail of afterimages of the image

Use the following procedure.

- 1** In the DME menu, select VF5 'Light/Trail' and HF4 'KF Strobe.'

The KF Strobe menu appears.

- 2** Press [KF Strobe], turning it on.

This enables the Keyframe Strobe effect, and you can now use the knobs to adjust the parameters.

- 3** Set the following parameter.



Knob	Parameter	Adjustment	Setting values
1	Decay	Degree of blurring of the video signal	0.00 to 100.00 <sup>a)</sup>

a) At the setting 0.00, there is no afterimage. At a setting of 100.00, the afterimage does not decay.

**4** To erase the afterimage, press [KF Strobe Eraser], turning it on.

## Selecting the overlay priority for movie and still images (video freeze image)

In the <Priority> group, select the way in which the images are overlaid.

**Over:** the movie is on top, and the still image is underneath.

**Under:** the movie is underneath, and the still image is on top.

**Mix:** the movie and still images are mixed; adjust the following parameter with the knob.

Knob	Parameter	Adjustment	Setting values
1	Mix	Mix amount of the still image with respect to the movie	0.00 to 100.00 <sup>a)</sup>

a) The 0.00 setting is the same as Over, and the 100.00 is the same as Under.

## Selecting the freeze timing

In the <KF Freeze Timing> group, select the timing for freezing the keyframe strobe.

**Frame:** freeze in frame units.

**Field:** freeze in field units.

### Note

The freeze timing setting is not required when the following signal formats are being used.

Signal formats: 1080PsF/30, 1080PsF/29.97, 1080PsF/25, 1080PsF/24, 1080PsF/23.976, 720p/59.94, 720p/50

## Erasing the afterimages that remain in memory whenever a keyframe is passed

Press [KF Strobe Eraser], turning it on.

When the effect passes a keyframe, the afterimage is erased before writing a new afterimage.

## Applying stardust to the afterimage portion

The afterimage portion becomes stardust, and gradually disappears.

- 1 Press the [DUST] button, turning it on.
- 2 Set the following parameters.

Knob	Parameter	Adjustment	Setting values
1	KF Strobe Dust	Amount of the afterimage disappearing as stardust <sup>a)</sup>	0.00 to 100.00
2	Dust Soft	Timing with which stardust disappears	0.00 to 100.00
3	Dust Size	Size of stardust	0.00 to 100.00
4	Dust Aspect	Aspect ratio of stardust	−100.00 to +100.00

a) The way in which the afterimage disappears is affected by both the Decay and KF Strobe Dust parameter adjustments for the keyframe strobe.

## Disabling the keyframe strobe afterimage

Press [KF Strobe Disable], turning it on.

If you turn this function on when creating a keyframe, even as the effect passes a keyframe, no afterimage remains.

## Setting a combine process

Select whether to add the Keyframe Strobe effect before or after the combine.

### Notes

- The combine process function is not supported on the MVE-8000/8000A.
- When you change the selection in the <Combine Process> group, the afterimages which had been added up to then disappear.
- When you do not combine images, the Keyframe Strobe effect only is applied, regardless of the selection in the <Combine Process> group.

Select one of the following in the <Combine Process> group.

**Combine → KF STRB:** Add the Keyframe Strobe effect after the combine.

As parameters, the data for the channel with the lowest number among the channels being combined is enabled.

**KF STRB → Combine:** Add the Keyframe Strobe effect before the combine.

Parameters can be set independently for each channel.

## Wind Settings

This effect strobes the image at regular intervals, and moves the frozen image in a fixed direction, leaving an afterimage.

For example images, “DME Special Effects” in Chapter 1 (Volume 1).

#### Notes

- The wind function is not supported on the MVE-8000/8000A.
- When wind is turned on, any of the following effect that are on are turned off.
  - Trail
  - Motion decay
  - Keyframe strobe

## Applying the wind effect

Use the following procedure.

- 1** In the DME menu, select VF5 ‘Light/Trail’ and HF5 ‘Wind.’

The Wind menu appears.

- 2** Press [Wind], turning it on.

This enables the wind, and you can now adjust the parameters with the knobs.

- 3** Set the following parameters.

Knob	Parameter	Adjustment	Setting values
1	Decay	Amount of afterimage displayed	0.00 to 100.00 <sup>a)</sup>
2	Shift H	Extension in the horizontal direction	–100.00 to +100.00
3	Shift V	Extension in the vertical direction	–100.00 to +100.00

a) 0.00 represents no afterimage, and 100.00 represents no decay in the afterimage.

- 4** To erase the afterimages, press [Wind Eraser], turning it on.

## Selecting the signal for the afterimage portion

In the <Wind Source> group, select the image to fill the afterimage portion.

#### Notes

- “Mix Color” or “Ext Video” can only be applied to one of the background (see page 137), flex shadow (see page 44), trail (see page 115), and wind effects. If you select “Mix Color” or “Ext Video” in the wind settings, a selection of “Mix Color” or “Ext Video” in any of the other effects is disabled, and “Flat Color” is selected in its place.

- When executing combining four channels of DME images, “Mix Color” and “Ext Video” cannot be selected.

**Freeze Video:** Freeze the input image to use as the afterimage.

**Flat Color:** Use a single color matte for the afterimage; you can set the following parameters with the knobs.

Knob	Parameter	Adjustment	Setting values
1	Luminance	Luminance	0.00 to 100.00
2	Saturation	Saturation	0.00 to 100.00
3	Hue	Hue	359.99 to 0.00

**Hue Rotate:** Use a single color matte with the hue changing for each frame as the afterimage; you can set the following parameters with the knobs.

Knob	Parameter	Adjustment	Setting values
1	Luminance	Luminance	0.00 to 100.00
2	Saturation	Saturation	0.00 to 100.00
3	Hue Speed	Rate at which hue changes	-12.00 to +12.00

**Mix Color:** Insert a mix color signal (*see page 56*) in the afterimage portion.

**Ext Video:** Insert the external video signal input to the Ext IN connector in the afterimage portion.

**Rainbow:** Use a freeze image with the hue changing every frame in the afterimage portion. The difference from “Hue Rotate” is that many colors appear simultaneously.

*For details of the Rainbow parameters, see the “Hue Rotate” item above.*

## Applying Hue modulation to the afterimage portion (Modulation)

Use the following procedure.

**1** In the Wind menu, press [Modulation], turning it on.

**2** Set the following parameters.

Knob	Parameter	Adjustment	Setting values
1	Amp H	Horizontal amplitude of the wave	0.00 to 100.00
2	Freq H	Horizontal frequency of the wave	-100.00 to +100.00
3	Amp V	Vertical amplitude of the wave	0.00 to 100.00
4	Freq V	Vertical frequency of the wave	-100.00 to +100.00

## Spotlighting Settings

Creates the effect of a spotlight striking the surface of the image.

For a sample illustration and other information, see “Digital Multi Effects (DME)” in Chapter 1 (Volume 1).

### Notes

- The Spotlighting effect is not supported on the MVE-8000/8000A.
- When the global effect Combiner is enabled, the settings of the smallest-numbered channel selected for the Combiner are used.

## Setting the surface where light strikes the image

Use the following procedure.

- 1 In the DME menu, select VF5 ‘Light/Trail’ and HF6 ‘Spot Lighting.’

The Spot Lighting menu appears.

- 2 Press [Spot Lighting], turning it on.

This enables Spotlighting, and you can now use the knobs to adjust the parameters.

- 3 Set the following parameter.

Knob	Parameter	Adjustment	Setting values
1	Total Ambient	Brightness of whole image	0.00 to 100.00

- Lowering the brightness of the image makes Spotlighting more effective.
- The Total Ambient setting is shared with the Lighting function.

- 4 In the <Surface Select> group, select the state of the surface struck by the light.

**Flat:** The image surface is unchanged, causing the selected light source to appear as the effect.

**Texture:** A texture appears on the surface of the image.

**Non Linear:** The Spotlighting effect is applied to an area to which a DME nonlinear effect is applied.

**Notes**

- The BZDM-9050 Texture Lighting Software (for MVE-9000) is required to enable Texture or Non Linear.  
An install key must be entered to use the software (*see page 285*).
- The Spotighting Non Linear setting is effective for the following nonlinear effects. For any other nonlinear effect, the result of selecting the Non Linear setting is the same as selecting Flat.  
Wave, Mosaic Glass, Flag, Ripple, Lens, Panarama, Page Turn, Roll.

**5** If you selected Texture or Non Linear in step **4**, set the following parameters.

### Parameters when you selected Texture

#### • SD format

Knob	Parameter	Adjustment	Setting values
1	X	Movement in X-axis direction	–8.00 to +8.00 <sup>a)</sup>
2	Y	Movement in Y-axis direction	–6.00 to +6.00 <sup>b)</sup>
3	Size X	Image size in X-axis direction	0.50 to 16.00
4	Size Y	Image size in Y-axis direction	0.50 to 16.00
5	Amp	Emphasize bumps and depressions	–100.00 to +100.00 <sup>c)</sup>

a) Minus moves left, plus moves right.

b) Minus moves down, plus moves up.

c) Plus emphasizes bumps in texture, minus emphasizes depressions. 0.00 is a flat surface.

#### • HD format

Knob	Parameter	Adjustment	Setting values
1	X	Movement in X-axis direction	–32.00 to +32.00 <sup>a)</sup>
2	Y	Movement in Y-axis direction	–24.00 to +24.00 <sup>b)</sup>
3	Size X	Image size in X-axis direction	0.50 to 16.00
4	Size Y	Image size in Y-axis direction	0.50 to 16.00
5	Amp	Emphasize bumps and depressions	–100.00 to +100.00 <sup>c)</sup>

a) Minus moves left, plus moves right.

b) Minus moves down, plus moves up.

c) Plus emphasizes bumps in texture, minus emphasizes depressions. 0.00 is a flat surface.

### Parameters when you selected Non Linear

Knob	Parameter	Adjustment	Setting values
5	Amp	Distance of light	–100.00 to +100.00 <sup>a)</sup>



a) Light appears from Z direction. At -100.00 the light goes deepest, at +100.00 the whole image is lit like a flat effect.

**6** If you selected Texture in step **4**, select the pattern as explained in the next section “To select a texture pattern.”

**7** If you selected Texture in step **4**, select the way it is applied in the <Surface Axis> group.

**Move:** The texture moves together with the DME image.

**Fix:** The texture does not move, even if the DME image moves.

*For the difference between these application methods, see “Digital Multi Effects (DME)” in Chapter 1 (Volume 1).*

**Note**

If Non Linear is selected in the <Surface Select> group, Fix is disabled. Behavior is the same as Move.

### To select a texture pattern

Use the following procedure.

**1** In the Spot Lighting menu, press [Texture Ptn Select].

The Texture Ptn Select menu appears.

Two lists appear in the status area. The list on the left displays the number and name of the currently selected texture. The list on the right is for selecting a texture.

**2** In the <Texture Pattern> group, press [User] or [Factory] to select the texture pattern list.

**[User]:** List of texture patterns created by the user. (See “Adding user texture patterns” (page 288).

**[Factory]:** List of texture patterns stored in the system when shipped from the factory.

**3** Do one of the following to select a texture.

- Press directly on the list on the right of the status area.
- Press the arrow keys to scroll the reverse video cursor.
- Turn the knob.

Knob	Parameter	Adjustment	Setting values
1	Texture No	Texture	1 to 30 <sup>a)</sup> 101 and upwards <sup>b)</sup>

a) When Factory is selected

- b) When User is selected. The setting value range depends on the number of texture patterns installed.

## 4 Press [Set].

The texture selected in step 2 appears in the list on the left of the status area.

### To display a test sphere

Use the following procedure.

## 1 In the Spot Lighting menu, press [Test Sphere], turning it on.

A test sphere effect appears on the image surface.

## 2 Adjust the following parameter.

Knob	Parameter	Adjustment	Setting values
5	Amp	Distance of light	-100.00 to +100.00 <sup>a)</sup>

a) Light appears from Z direction. At -100.00 the light goes deepest, at +100.00 the whole image is lit like a flat effect.

*For details of the relationship of test spheres and light sources, see “DME Special Effects” in Chapter 1 (Volume 1).*

## Setting light sources

Up to three light sources (Light 1 to Light 3) for Spotlighting can be set by menus.

### Light source menu

The following three light source menus are available.

Light source	Menu
Light 1	DME>Light/Tail>Spot Lighting>Light 1
Light 2	DME>Light/Tail>Spot Lighting>Light 2
Light 3	DME>Light/Tail>Spot Lighting>Light 3

#### Note

The BZDM-9050 Texture Lighting Software (for MVE-9000) is required to enable Light 2 and Light 3.

An install key must be entered to use the software (*see page 285*).

### To set light source data

The following example shows how to set light source data with the Light 1 menu.



If you use multiple light sources, use the same procedure for all light sources.

- 1 In the <Spot Lighting Adjust> group of the Spot Lighting menu, press [Light 1].

The Light 1 menu appears.

- 2 Press [Light 1], turning it on.

This enables the Light 1 light source, and you can now use the knobs to adjust the parameters.

- 3 Set the following parameters.

Knob	Parameter	Adjustment	Setting values
1	Total Ambient	Brightness of whole image	0.00 to 100.00
2	Intensity	Intensity (brightness) of the light source	0.00 to 100.00
3	Soft	Softness of the lighted area	0.00 to 100.00

- Lowering the brightness of the image makes Spotlighting more effective.
- The Total Ambient setting is shared with the Lighting function.

- 4 In the <Spot Mode> group, select the type of light source.

**Parallel:** Parallel light source. The direction can be set.

**Point:** Point light source. The position can be set.

**Line:** Line light source. The position and angle can be set.

**Whole:** Non-directional light source which illuminates the whole image (no settings).

*For more information about light source types, see “Digital Multi Effects (DME)” in Chapter 1 (Volume 1).*

- 5 According to the selected light source type, set the following parameters.

#### When you selected Parallel

Knob	Parameter	Adjustment	Setting values
1	Longitude	Longitude	-8.00 to +8.00 <sup>a)</sup>
2	Latitude	Latitude	-8.00 to +8.00

a) Minus moves counterclockwise, plus moves clockwise.

#### When you selected Point

- SD format

Knob	Parameter	Adjustment	Setting values
1	X	Movement in X-axis direction	–6.00 to +6.00 <sup>a)</sup>
2	Y	Movement in Y-axis direction	–6.00 to +6.00 <sup>b)</sup>
3	Z	Movement in Z-axis direction	–6.00 to +6.00 <sup>c)</sup>

- a) Minus moves left, plus moves right.  
b) Minus moves down, plus moves up.  
c) Minus moves forward, plus moves deeper.

#### • HD format

Knob	Parameter	Adjustment	Setting values
1	X	Movement in X-axis direction	–24.00 to +24.00 <sup>a)</sup>
2	Y	Movement in Y-axis direction	–24.00 to +24.00 <sup>b)</sup>
3	Z	Movement in Z-axis direction	–24.00 to +24.00 <sup>c)</sup>

- a) Minus moves left, plus moves right.  
b) Minus moves down, plus moves up.  
c) Minus moves forward, plus moves deeper.

### When you selected Line

#### • SD format

Knob	Parameter	Adjustment	Setting values
1	X	Movement in X-axis direction	–6.00 to +6.00 <sup>a)</sup>
2	Y	Movement in Y-axis direction	–6.00 to +6.00 <sup>b)</sup>
3	Z	Movement in Z-axis direction	–6.00 to +6.00 <sup>c)</sup>
4	Longitude	Longitude	–8.00 to +8.00 <sup>d)</sup>

- a) Minus moves left, plus moves right.  
b) Minus moves down, plus moves up.  
c) Minus moves forward, plus moves deeper.  
d) Minus moves counterclockwise, plus moves clockwise.

#### • HD format

Knob	Parameter	Adjustment	Setting values
1	X	Movement in X-axis direction	–24.00 to +24.00 <sup>a)</sup>
2	Y	Movement in Y-axis direction	–24.00 to +24.00 <sup>b)</sup>
3	Z	Movement in Z-axis direction	–24.00 to +24.00 <sup>c)</sup>
4	Longitude	Longitude	–8.00 to +8.00 <sup>d)</sup>

- a) Minus moves left, plus moves right.  
b) Minus moves down, plus moves up.  
c) Minus moves forward, plus moves deeper.  
d) Minus moves counterclockwise, plus moves clockwise.

- 6 In the <Axis Select> group, select the coordinate space in which to place the light source.

**Source:** Place the light source in the source coordinate space. The spotlight moves when the image moves.

**Target:** Place the light source in the target coordinate space. The spotlight does not move, even when the image moves.

*For details of the coordinate space in which to place the light source, see “DME Special Effects” in Chapter 1 (Volume 1).*

### To set a test sphere

Use the following procedure.

- 1 In the Light 1 menu, press [Test Sphere], turning it on.  
A test sphere effect appears on the surface of the image.

- 2 Adjust the following parameter.

Knob	Parameter	Adjustment	Setting values
5	Amp	Distance of light	−100.00 to +100.00 <sup>a)</sup>

a) Light appears from Z direction. At −100.00 the light goes deepest, at +100.00 the whole image is lit like a flat effect.

### To select the lighted area

In the <Area Select> group, select one of the following.

**FRGD:** The light strikes the image foreground.

**BKGD:** The light strikes the image background.

**Both:** The light strikes both foreground and background.

*For more information about the lighted area, see “Digital Multi Effects (DME)” in Chapter 1 (Volume 1).*

### Notes

- If you select [Multiply] in the <Fill Blending Mode> group of the Light Color Adjust menu (*see page 135*), the light effect is not applied to the background, even if you select BKGD or Both.
- If the setting of [Brilliancy] in the <Fill Source> group of the Light Color Adjust menu (*see page 135*) is 100.00, the light effect is not applied to the background, even if you select BKGD or Both.
- When the global effect Combiner is set to Mix or Depth, the light effect is not applied to the background, even if you select BKGD or Both.

### To select Surface Flat

Press [Surface Flat], turning it on.

If you have selected anything other than Flat in the <Surface Select> group of the Spot Lighting menu, the part corresponding only to the surface being struck by the currently set light from the light source is shown in the same way as if Flat had been selected.

## To set the shape of the light

Use the following procedure.

- 1** Press [Shape], turning it on.
- 2** Set the following parameters.

### • SD format

Knob	Parameter	Adjustment	Setting values
1	Shape Ptn	Shape pattern	1 to 2 <sup>a)</sup>
2	Size	Shape size	0.00 to 6.00
3	Deform	Amount of shape deformation	0.00 to 100.00 <sup>b)</sup>
4	Soft	Softness of shape pattern	0.00 to 100.00
5	Angle	Angle of shape pattern rotation	−8.00 to +8.00 <sup>c)</sup>

a) For more information about the shape patterns, see “Shape Patterns” (page 526) in the Appendix.

b) 0 is a round shape, and 100 is the shape itself. Smaller values make the pattern more rounded.

c) −1.00 is one rotation in the counterclockwise direction. +1.00 is one rotation in the clockwise direction.

### • HD format

Knob	Parameter	Adjustment	Setting values
1	Shape Ptn	Shape pattern	1 to 2 <sup>a)</sup>
2	Size	Shape size	0.00 to 24.00
3	Deform	Amount of shape deformation	0.00 to 100.00 <sup>b)</sup>
4	Soft	Softness of shape pattern	0.00 to 100.00
5	Angle	Angle of shape pattern rotation	−8.00 to +8.00 <sup>c)</sup>

a) For more information about the shape patterns, see “Shape Patterns” (page 526) in the Appendix.

b) 0 is a round shape, and 100 is the shape itself. Smaller values make the pattern more rounded.

c) −1.00 is one rotation in the counterclockwise direction. +1.00 is one rotation in the clockwise direction.

## To rotate the shape pattern

Use the following procedure.

- 1 Press [Shape Speed], turning it on.

The display on knob 5 that was visible when [Shape] was selected changes.

- 2 Set the following parameter.

Knob	Parameter	Adjustment	Setting values
5	Speed	Rotation direction and speed	-100.00 to +100.00 <sup>a)</sup>

a) -100.00 is four rotations per second in the counterclockwise direction, and +100.00 is four rotations per second in the clockwise direction. 0.00 stops the rotation.

## To change the light to a ring shape

Use the following procedure.

### Note

If you select Parallel or Whole (*see page 130*) in the <Spot Mode> group and shaping is disabled, the Ring parameter cannot be set.

- 1 Press [Ring] and set the following parameters.

#### • SD format

Knob	Parameter	Adjustment	Setting values
1	Offset	Offset from center position (radius)	-6.00 to +6.00
2	Radius	Radius of ring	0.00 to 6.00
3	Angle	Rotation angle of ring	-8.00 to +8.00 <sup>a)</sup>

a) -1.00 is one rotation in the counterclockwise direction and +1.00 is one rotation in the clockwise direction.

### Note

There is no Radius setting when Line is selected in the <Spot Mode> group.

#### • HD format

Knob	Parameter	Adjustment	Setting values
1	Offset	Offset from center position (radius)	-24.00 to +24.00
2	Radius	Radius of ring	0.00 to 6.00
3	Angle	Rotation angle of ring	-8.00 to +8.00 <sup>a)</sup>

a) -1.00 is one rotation in the counterclockwise direction and +1.00 is one rotation in the clockwise direction.

**Note**

There is no Radius setting when Line is selected in the <Spot Mode> group.

**To rotate the ring**

Use the following procedure.

- 1** Press [Ring Speed], turning it on.

The display on knob 3 that was visible when [Ring] was selected changes.

- 2** Set the following parameter.

Knob	Parameter	Adjustment	Setting values
3	Speed	Rotation speed and direction.	-100.00 to +100.00 <sup>a)</sup>

a) -100.00 is four rotations per second in the counterclockwise direction, and +100.00 is four rotations per second in the clockwise direction. 0.00 stops the rotation.

**To invert the lighted area**

Press [Light Invert], turning it on.

The lighted area is inverted.

**To add color to the light source**

Use the following procedure.

- 1** In the Light 1 menu, press [Light Color Adjust].

The Light Color Adjust menu appears.

- 2** In the <Fill Blending Mode> group, select how the light and image should be blended.

**Mix:** Light as if reflected from a mirror.

**Multiply:** Light as if reflected from a dull surface (diffuse reflection).

- 3** If you selected Mix, select the fill color in the <Fill Source> group.

**Flat Color:** A monochrome matte.

**Hue Rotation:** Color matte with a color that gradually varies.

- 4** According to the selection, set the following parameters.

• **When you selected Flat Color**

Knob	Parameter	Adjustment	Setting values
1	Luminance	Luminance	0.00 to 100.00
2	Saturation	Saturation	0.00 to 100.00

Knob	Parameter	Adjustment	Setting values
3	Hue	Hue	359.99 to 0.00
4	Brilliance	Brilliance of surface struck by light	0.00 to 100.00 <sup>a)</sup>

a) 100.00: The image beneath the light shines through.

### • When you selected Hue Rotation

Knob	Parameter	Adjustment	Setting values
1	Luminance	Luminance	0.00 to 100.00
2	Saturation	Saturation	0.00 to 100.00
3	Speed	Speed at which hue changes	-12.00 to +12.00 <sup>a)</sup>
4	Brilliance	Brilliance of surface struck by light	0.00 to 100.00 <sup>b)</sup>

a) -12.00 is a 360-degree rotation every second in the counterclockwise direction. +12.00 is a 360-degree rotation every second in the clockwise direction.

b) 100.00: The image beneath the light shines through.

## Copying or swapping light source settings

You can copy or swap the setting from one light source (Light 1 to Light 3) to another light source. Use the following procedure.

**1** In the Spot Lighting menu, press [Copy/Swap].

The Copy/Swap menu appears.

Two lists appear in the status area. The list on the left shows the copy or swap sources, and the list on the right shows the copy or swap destinations.

**2** Do one of the following to select the target data.

- Press directly on the list in the status area.
- Press the arrow keys to scroll the reverse video cursor.
- Turn the knobs.

Knob	Parameter	Adjustment	Setting values
1	Left No	Copy or swap source data	1 to 3
2	Right No	Copy or swap destination data	1 to 3

**3** Press [Copy] to copy, or [Swap] to swap.

The data is copied or swapped.

### To undo a copy or swap

Press [Undo]. Settings are returned to their values before the copy or swap.

## Background Settings

This effect adds a color to the background of the image.

### Applying the Background effect

Use the following procedure.

- 1** In the DME menu, select VF6 ‘Input/Output’ and HF1 ‘Bkgd.’  
The Bkgd menu appears.
- 2** Press [Bkgd], turning it on.  
The Background effect is enabled. Only if Flat Color is selected in the <Bkgd Fill> group, you can adjust the parameters with the knobs.
- 3** Set the following parameters.

Knob	Parameter	Adjustment	Setting values
1	Luminance	Luminance	0.00 to 100.00
2	Saturation	Saturation	0.00 to 100.00
3	Hue	Hue	359.99 to 0.00

### Selecting the signal to insert in the background

When using the MVE-9000, you can select the signal to insert in the background.

With [Bkgd] set on, use the following procedure.

- 1** In the <Bkgd Fill> group, select one of the following.

**Flat Color:** single color

**Mix Color:** mix color signal set in the Color Mix menu (*see page 56*)

**Ext Video:** an external video signal input to the Ext IN connector

#### Notes

- “Mix Color” or “Ext Video” can only be applied to one of the background, flex shadow (*see page 44*), trail (*see page 115*), and wind (*see page 123*) effects.  
If you select “Mix Color” or “Ext Video” in one of these settings, a selection of “Mix Color” or “Ext Video” in any of the other effects is disabled, and “Flat Color” is selected in its place.
- When executing combining four channels of DME images, “Mix Color” and “Ext Video” cannot be selected.



- 2** Only if Flat Color is selected in step **1**, adjust the following parameters.

Knob	Parameter	Adjustment	Setting values
1	Luminance	Luminance	0.00 to 100.00
2	Saturation	Saturation	0.00 to 100.00
3	Hue	Hue	359.99 to 0.00

---

## Separate Sides Settings

This effect applies separate video signals and key signals to the front and back of the image.

*For an illustration of the concept of front and back, see “DME Special Effects” in Chapter 1 (Volume 1).*

### Applying the Separate Sides effect

Use the following procedure.

- 1** In the DME menu, select VF6 ‘Input/Output’ and HF2 ‘Video/Key.’

The Video/Key menu appears.

- 2** Press [Separate Side], turning it on.

The Separate Sides effect is enabled. If the video and key signals currently being output to the monitor are the front side, you can select the front signals. If they are the back side, you can select the back signals. Video and key signals are selected with the cross-point control blocks of each M/E bank or the PGM/PST bank.

---

## Shaped Video Settings

### Switching shaped video on or off

You can select whether or not the following signals are treated as shaped video (a signal subjected to key processing).

- The input video signal from the switcher, for each of the front and back sides of an image
- The output video signal

Use the following procedure.

### Notes

- On the MVE-8000, the shaped video function is not supported. On the MVE-8000A, the shaped video function is supported only when the MKE-8021A is installed to provide an SDI interface.
- When the MKE-8021A is installed in the MVE-8000A to provide an SDI interface, turning the shaped video function off enables both “Ext Key” and “Lum Key” in each of the <Front Key> and <Back Key> groups.
- When using the MVS-8000 dedicated interface, since the input video signal to the first channel is always set to the key processed signal on the switcher, the shaped video setting is always on. For the second and third channel signals, this may also be turned off.

**1** In the DME menu, select VF6 ‘Input/Output’ and HF2 ‘Video/Key.’  
The Video/Key menu appears.

**2** In the <Shaped Video> group, press each of the following buttons to switch it on or off.

**Front Input:** When this is on, the front image of the input video signal is treated as shaped video.

**Back Input:** When this is on, the back image of the input video signal is treated as shaped video.

**Output:** When this is on, the output video signal is treated as shaped video.

## About on and off for shaped video input (Front Input/Back Input)

Switch shaped video on and off according to the input video signals.

For example, switch the shaped video input on when the input signal is a key processed image such as computer graphics.

Switch the shaped video input off when the input signal is not key processed, for example when a video signal taken with a camera is cut out with a title or other key signal.

## About on and off for shaped video output

Switch the shaped video output on and off to match the on and off state of the switcher clean video mode.

Also, when the shaped video output is on, it is recommended that the switcher key type be set to linear key.

## About the relationship between shaped video output and effects

When the shaped video output is off, the video signal before key processing is output. According to the selected effect, the following states may result.

- (a) The output video signal is affected by the key signal.
- (b) When key processing is done, a different image may appear in the parts which are removed.
- (c) There is no change in the output video signal for effects which are applied to key signals only.

When multiple effects are applied, the order of priority is (a) > (b) > (c). The following explains the relationship between effects and states (a), (b), and (c).

#### **(a) The output video signal is affected by the key signal**

The output video signal is affected by the key signal when the following effects are selected. To prevent the signal from being affected, set the DME key source to Int Key, or choose an appropriate input key signal.

Page Turn, Roll, Cylinder, Sphere, Spotlighting, global effects (Combiner, Brick, Shadow)

#### **(b) When key processing is done, a different image may appear in the parts which are removed**

The following states result, depending on the selected effect.

Removal with the key can be checked by turning the background on.

**Border, Beveled Edge:** Added also to the outer side of the cropped video signal (restriction of this version only).

**Trail, Keyframe Strobe:** The key signal level of the afterimage portion varies with adjustments of the knob (Decay), but the afterimage portion of the video signal does not disappear until Trail Eraser (KF Strobe Eraser) is turned on or the effect is turned off.

**Lighting:** The Lighting effect is applied to the whole picture.

**Spotlighting:** If BKGD or Both is selected in the <Area Select> group, light strikes the entire background.

#### **(c) No change in the output video signal for effects which are applied to key signals only**

The following states result, depending on the selected effect.

Removal with the key can be checked by turning the background on.

**Crop:** The Copy effect is applied to the key signal only. The video signal does not change.

**Edge Soft:** The Edge Soft effect is applied to the key signal only. The video signal does not change.

**Shadow, Flex Shadow, Combine Shadow:** The key signal density changes. The video signal does not change.

**Fade:** The key signal changes according to depth data. The video signal does not change.

**Key Density:** The key signal density changes. The video signal does not change.

---

## Invert Settings

Inverts the input video signal and key signal horizontally or vertically. You can make separate settings for the front and back.

*For an illustration of signal inversion, see “DME Special Effects” in Chapter 1 (Volume 1).*

### Applying the Invert effect

Use the following procedure.

- 1** In the DME menu, select VF6 ‘Input/Output’ and HF2 ‘Video/Key.’  
The Video/Key menu appears.
- 2** In the <Front> group (to invert front signals) or the <Back> (to invert back signals), press the following buttons, turning them on.
  - H Invert:** Invert video and key signals horizontally.
  - V Invert:** Invert video and key signals vertically.

---

## Key Density Settings

For the selected key, you can separately set the key density.

### Setting the key density

Use the following procedure.

- 1** In the DME menu, select VF6 ‘Input/Output’ and HF2 ‘Video/Key.’  
The Video/Key menu appears.
- 2** Press [Key Density], turning it on.  
This enables the key density function, and you can now use the knobs to adjust the parameters.
- 3** Set the following parameter.

Knob	Parameter	Adjustment	Setting values
1	Key Density	Key density	0.00 to 100.00

## Key Source Selection

Select the key signals for use as the front and back of the image.

### Selecting the key source signals

Use the following procedure.

#### Note

When the shaped video setting (*see page 138*) is on, it is not possible to select the key source. It is fixed as “Ext Key” as listed in the following.

- 1 In the DME menu, select VF6 ‘Input/Output’ and HF2 ‘Video/Key.’

The Video/Key menu appears.

- 2 In the <Front Key> group or <Back Key> group respectively, press one of the following, turning it on.

**Ext Key:** Use the key signal sent from the switcher as the key source.

**Int Key:** Use the full-size DME internal key signal as the key source.

**Lum Key:** Use the input video luminance signal as the key source.

#### Note

“Lum Key” can be selected only when the MVE-8000A or MVE-9000 is used.

- 3 When the DME being used is the MVE-8000A/9000 and Ext Key or Lum Key is selected in step 2, set the following parameters.

Knob	Parameter	Adjustment	Setting values
1	Clip	Reference level for key signal generation	-7.31 to +109.59
2	Gain	Key sensitivity	-100.00 to +100.00

#### Notes

- The Ext Key and Lum Key in the <Front Key> group share clip and gain settings. Similarly, Ext Key and Lum Key in the <Back Key> group also share clip and gain settings.

- When using the MVE-8000A/9000, the Ext Key parameter setting is only enabled when the shaped video setting is off.

## Interpolation Settings

Specifies the interpolation method for input video signals and input key signals.

When using the MVE-8000/8000A, except for the settings in the <Filter Mode> group the following settings are only valid in an SD system. When using the MVE-9000, the following settings are valid both in an SD system and an HD/1080i system.

*For an overview of interpolation, see “Interpolation” in Chapter 1 (Volume 1).*

### Selecting an interpolation method for input video signals

Use the following procedure.

- 1 In the DME menu, select VF6 ‘Input/Output’ and HF3 ‘Process.’
- 2 In the <Video Field/Frame Mode> group, select the interpolation method for the video signal.
 

**Adaptive Y/C:** Detect changes in the luminance and chrominance components of the video signal separately, and switch automatically between fields and frames.

**Adaptive Y:** Detect changes in the luminance component of the video signal separately, and switch automatically between fields and frames.

**Field:** Do interpolation in field units. This gives natural movement, suitable for moving video.

**Frame:** Do interpolation in frame units. This gives higher image precision, suitable for still pictures.
- 3 When you select Adaptive Y/C or Adaptive Y in step 2, set the following parameter.

Knob	Parameter	Adjustment	Setting values
1	Mode	Degree of motion detection	1 to 4

- 4 In the <Key Field/Frame Mode> group, select the interpolation method for the key signal.
 

**Adaptive:** Detect changes in the luminance component of the key signal separately, and switch automatically between fields and frames.

**Field:** Do interpolation in field units. This gives natural movement, suitable for moving video.

**Frame:** Do interpolation in frame units. This gives higher image precision, suitable for still pictures.

- 5** When you select Adaptive in step **4**, set the following parameter.

Knob	Parameter	Adjustment	Setting values
1	Mode	Degree of motion detection	1 to 4

- 6** In the <Interpolation Mode> group, set the number of pixels to use in interpolation.

**Multi:** Do interpolation using 8-by-8 pixels. This gives higher picture quality.

**Linear:** Do interpolation using 2-by-2 pixels.

- 7** In the <Filter Mode> group, select the method used to show the picture reduced or expanded.

**Model1 (standard):** Even when the picture is reduced, add compensation so that it can be seen clearly.

**Mode2 (soft):** Suppress aliasing when expanding or reducing the picture.

**Mode3 (sharp):** Do not suppress aliasing when expanding or reducing the picture.

## Applying the anti-moire filter

You can reduce the moire patterns created by interpolation when an image is enlarged, compressed, or rotated.

Use the following procedure.

### Note

This function is effective only when the HD signal format is used on the MVE-8000/8000A.

- 1** In the DME menu, select VF6 'Input/Output' and HF3 'Process.'

The Process menu appears.

- 2** Press [Anti Moire Filter], turning it on.

- 3** Set the following parameter.

Knob	Parameter	Adjustment	Setting values
1	Anti Moire Filter	Amount of moire reduction	1 to 8

# Global Effect Operations

Global effects are special effects created by combining the images of successive channels. The following types of global effects are available.

- Combiner
- Brick
- Shadow

*For details of these global effects, see “Global Effects” in Chapter 1 (Volume 1).*

## Operations common to all global effects

In this section, explanations of the operating procedures for individual global effects begin with selections from VF1 ‘Ch1 - Ch4’ in the Global Effect menu. The following are common operations that you must do prior to selecting from this menu.

- 1** In the device control block, select the target DME channel.
- 2** In the menu control block, press the top menu selection button [GLB EFF], then select VF1 ‘Ch1 - Ch4.’

The Global Effect>Ch1 - Ch4 menu appears.

## Combiner Settings

You can combine images using up to four consecutive channels. You can also combine channels 1 and 2, and channels 3 and 4, pairwise.

The setting menu differs according to the combiner usage status.

This section shows the cases of “Ch1+Ch2+Ch3” and “Ch1+Ch2, Ch3+Ch4” as examples.

*For details of operating procedures when using an SDI interface, see “Procedure for combine operation when using an SDI interface” (page 146).*

## Setting the combiners

Use the following procedure.

- 1** In the Global Effect>Ch1- Ch4 menu, select HF1 ‘Combiner Priority.’

The Combiner Priority menu appears.

- 2 If [Mix], [Auto] or [Depth] is on, turn it off.
- 3 Set the overlap priority for “Ch1+Ch2+Ch3” or “Ch1+Ch2, Ch3+Ch4” as follows.

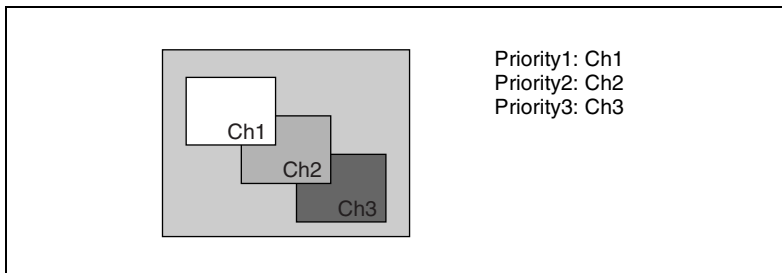
**For case “Ch1+Ch2+Ch3”**

Under <Priority1> to <Priority3>, press [Ch1], [Ch2], and [Ch3], respectively, to set the overlap priority.

**Priority1:** Select the channel with the highest priority.

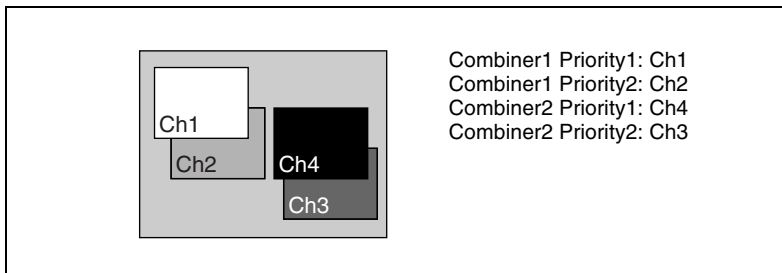
**Priority2:** Select the channel with the second highest priority.

**Priority3:** Select the channel with the lowest priority.



**For case “Ch1+Ch2, Ch3+Ch4”**

Under <Combiner 1 Priority 1> and <Combiner 1 Priority 2>, press [Ch1] and [Ch2] respectively, and under <Combiner 2 Priority 1> and <Combiner 2 Priority 2>, press [Ch4] and [Ch3] respectively, to set the respective priorities for overlaying the images.



## Procedure for combine operation when using an SDI interface

Use the following procedure only when the DME being used is the MVE-8000A or MVE-9000 with an SDI interface.

**Note**

It is not possible to select MVE-8000A or MVE-9000 channels with buttons in the key control block.

In the following, the example given is that channels 2 and 3 are combined, then channels 1+2 and channels 3+4 are combined, but other combinations are also possible.

- 1** In the Global Effect menu, select VF1 ‘Ch1-Ch4’ and HF7 ‘Combine Gp Select.’

The Combine Gp Select menu appears.

- 2** In the <Combine Gp Select> group, select the channel combination.
  - To combine channels 2 and 3, press [Ch2+Ch3], turning it on.
  - To combine the previously combined combinations of channels 1 and 2, and channels 3 and 4, press [Ch1+Ch2] and [Ch3+Ch4], turning them on.

**Note**

The only two buttons that can be selected simultaneously are the combination of [Ch1+Ch2] and [Ch3+Ch4].

The selected channels are combined.

### Canceling a combine

When for example [Ch2+Ch3] is on, pressing [Ch2+Ch3] once more turns it off. Alternatively, pressing a different combination button to select it cancels the combine selection for the current combination.

## Mixing the images of up to four consecutive channels

Use the following procedure.

- 1** In the Combiner Priority menu, press [Mix], turning it on.
- 2** Adjust the following parameters.

### For case “Ch1+Ch2”

Knob	Parameter	Adjustment	Setting values
1	Mix	Mix degree	0.00 to 100.00 <sup>a)</sup>

a) See “Global Effects” in Chapter 1 (Volume 1).

For case “Ch1+Ch2+Ch3”

Knob	Parameter	Adjustment	Setting values
1	Mix1	Mix degree for mix of channel 1 with result of Mix2	0.00 to 100.00 <sup>a)</sup>
2	Mix2	Mix degree for channels 2 and 3	0.00 to 100.00 <sup>a)</sup>

a) See “Global Effects” in Chapter 1 (Volume 1).

For case “Ch1+Ch2+Ch3+Ch4”

Knobs 1 and 2 set the same parameters as “For case ‘Ch1+Ch2+Ch3’,” respectively. Knob 3 is additionally effective, which sets the parameter Mix3 (in the same setting value range as with knobs 1 and 2).

Mixing pairwise the images of channels 1 and 2, and channels 3 and 4

Use the following procedure.

- 1 In the Combiner Priority menu, press [Combiner1 Mix], turning it on.
- 2 Adjust the following parameter.

Knob	Parameter	Adjustment	Setting values
1	Mix1	Mix degree for channels 1 and 2	0.00 to 100.00 <sup>a)</sup>

a) See “Global Effects” in Chapter 1 (Volume 1).

- 3 Press [Combiner2 Mix], turning it on.
- 4 Adjust the following parameter.

Knob	Parameter	Adjustment	Setting values
1	Mix2	Mix degree for channels 2 and 3	0.00 to 100.00 <sup>a)</sup>

a) See “Global Effects” in Chapter 1 (Volume 1).

Automatically setting the priority of overlapping images

To set the system so that the priority of overlapping images is automatically determined by their position on the z-axis, in the Combiner Priority menu, press [Auto], turning it on.

**Note**

It is not possible to cross images. If an image is rotated, the priority is determined by the position on the z-axis of the center of the image.

## Crossing images from up to four consecutive channels in three dimensions

**Note**

The three-dimensional crossing function is not supported on the MVE-8000/8000A.

Use the following procedure.

- 1** In the Combiner Priority menu, press [Depth], turning it on.
- 2** Set the following parameters.

### For case “Ch1+Ch2”

Knob	Parameter	Adjustment	Setting values
1	Soft	Softness of edges of crossed section	0.00 to 100.00

### For case “Ch1+Ch2+Ch3”

Knob	Parameter	Adjustment	Setting values
1	Soft1	Softness of edges of channel 1 and channel 2 crossed section	0.00 to 100.00
2	Soft2	Softness of edges of channel 2 and channel 3 crossed section	0.00 to 100.00

### For case “Ch1+Ch2+Ch3+Ch4”

Knobs 1 and 2 set the same parameters as “For case ‘Ch1+Ch2+Ch3’,” respectively. Knob 3 is additionally effective, which sets the parameter Soft3 (in the same setting value range as with knobs 1 and 2).

## Crossing images from channels 1 and 2, and channels 3 and 4 in three dimensions

**Note**

The three-dimensional crossing function is not supported on the MVE-8000/8000A.

Use the following procedure.

- 1 In the Combiner Priority menu, press [Combiner1 Depth], turning it on.
- 2 Set the following parameter.

Knob	Parameter	Adjustment	Setting values
1	Soft1	Softness of edges of channel 1 and channel 2 crossed section	0.00 to 100.00

- 3 Press [Combiner2 Depth], turning it on.
- 4 Set the following parameter.

Knob	Parameter	Adjustment	Setting values
1	Soft2	Softness of edges of channel 3 and channel 4 crossed section	0.00 to 100.00

## Brick Settings

This effect creates a rectangular parallelepiped from 3 successive channels.

*For an illustration, see “Global Effects” in Chapter 1 (Volume 1).*

### Applying the Brick effect

Use the following procedure.

- 1 In the Global Effect>Ch1 - Ch4 menu, select HF2 ‘Brick.’

The Brick menu appears.

- 2 Press [Brick], turning it on.

The Brick effect is enabled, and a rectangular parallelepiped (brick) showing the images of three channels appears. You can use the knobs to adjust parameters for the height of the brick and the overlap between the three images.

#### Notes

- When the Brick effect is enabled, the z-axis position of the front image in the source coordinate frame is shifted by the amount of half the height. Therefore, the image is somewhat magnified.
- The flex shadow function cannot be enabled when Brick is enabled. However, the flex shadow function is not supported on the MVE-8000/8000A.

### 3 Set the parameters.

Knob	Parameter	Adjustment	Setting values
1	Height	Height of brick	0.00 to 8.00 <sup>a)</sup> 0.00 to 32.00 <sup>b)</sup>
2	Front Overlap	Front overlap	-100.00 to +100.00
3	Side H Overlap	Side H overlap	-100.00 to +100.00
4	Side V Overlap	Side V overlap	-100.00 to +100.00

a) Setting for SD 4:3, SD 16:9

b) Setting for HD 4:3, HD 16:9

### 4 Specify the way to insert the side images when the height is changed by pressing one of the following buttons in the <Side V> group or the <Side H> group.

**Crop:** Crop the parts that do not fit into the side without shrinking the picture. You can set the following parameters.

The valid ranges of the parameter values depend on the combination of signal format (SD/HD) and aspect ratio (4:3/16:9) selected in the system, as follows.

#### • SD format, 4:3 mode

Knob	Parameter	Adjustment	Setting values
1	H	Position of left crop	-4.00 to +4.00
2	V	Position of top crop	-3.00 to +3.00
3	Rotation	Angle of rotation, when rotated around the Z-axis of the source space	0/90/180/270°

#### • SD format, 16:9 mode

Knob	Parameter	Adjustment	Setting values
1	H	Position of left crop	-4.00 to +4.00
2	V	Position of top crop	-2.25 to +2.25
3	Rotation	Angle of rotation, when rotated around the Z-axis of the source space	0/90/180/270°

#### • HD format, 4:3 mode

Knob	Parameter	Adjustment	Setting values
1	H	Position of left crop	-12.00 to +12.00
2	V	Position of top crop	-9.00 to +9.00

Knob	Parameter	Adjustment	Setting values
3	Rotation	Angle of rotation, when rotated around the Z-axis of the source space	0/90/180/270°

• **HD format, 16:9 mode**

Knob	Parameter	Adjustment	Setting values
1	H	Position of left crop	-16.00 to +16.00
2	V	Position of top crop	-9.00 to +9.00
3	Rotation	Angle of rotation, when rotated around the Z-axis of the source space	0/90/180/270°

The set position becomes the upper left corner of Side V or Side H. The right and bottom sides of the inserted image are set automatically.

**Compress:** Images are inserted after being compressed. You can set the following parameters.

The valid ranges of the parameter values depend on the combination of signal format (SD/HD) and aspect ratio (4:3/16:9) selected in the system, as follows.

• **SD format, 4:3 mode**

Knob	Parameter	Adjustment	Setting values
1	Top	Position of top crop	-2.83 to +3.00
2	Left	Position of left crop	-4.00 to +3.83
3	Right	Position of right crop	-3.83 to +4.00
4	Bottom	Position of bottom crop	-3.00 to +2.83
5	Rotation	Angle of rotation, when rotated around the Z-axis of the source space	0/90/180/270°

• **SD format, 16:9 mode**

Knob	Parameter	Adjustment	Setting values
1	Top	Position of top crop	-2.12 to +2.25
2	Left	Position of left crop	-4.00 to +3.87
3	Right	Position of right crop	-3.87 to +4.00
4	Bottom	Position of bottom crop	-2.25 to +2.12
5	Rotation	Angle of rotation, when rotated around the Z-axis of the source space	0/90/180/270°

### • HD format, 4:3 mode

Knob	Parameter	Adjustment	Setting values
1	Top	Position of top crop	-8.50 to +9.00
2	Left	Position of left crop	-12.00 to +11.50
3	Right	Position of right crop	-11.50 to +12.00
4	Bottom	Position of bottom crop	-9.00 to +8.50
5	Rotation	Angle of rotation, when rotated around the Z-axis of the source space	0/90/180/270°

### • HD format, 16:9 mode

Knob	Parameter	Adjustment	Setting values
1	Top	Position of top crop	-8.50 to +9.00
2	Left	Position of left crop	-16.00 to +15.50
3	Right	Position of right crop	-15.00 to +16.00
4	Bottom	Position of bottom crop	-9.00 to +8.50
5	Rotation	Angle of rotation, when rotated around the Z-axis of the source space	0/90/180/270°

The part of the image defined by Top, Left, Right, and Bottom is magnified or shrunk to fit into Side V or Side H.

### To invert the image in a side face

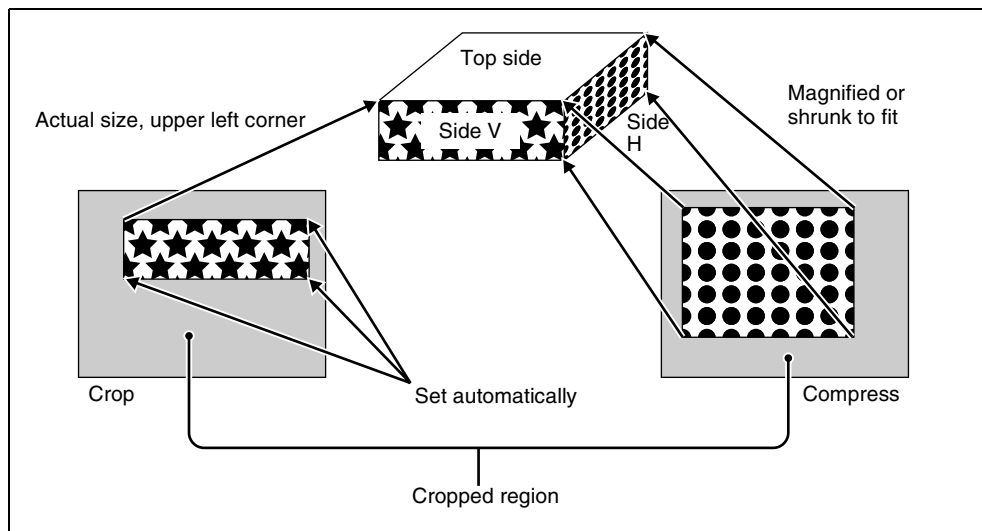
For example, to invert the image on the front of Side H in the <Side H Front> group, press the following buttons, turning them on.

**Invert H:** To invert horizontally.

**Invert V:** To invert vertically.

For the images on the other faces, use a similar operation in the following groups:

- Back image of Side H: <Side H Back> group
- Front image of Side V: <Side V Front> group
- Back image of Side V: <Side V Back> group



## Shadow Settings

This effect uses two to four successive channels to give an image a shadow.

*For an illustration, see “Global Effects” in Chapter 1 (Volume 1).*

### Note

When the Combiner function is off, the shadow effect cannot be used.

## Applying the Drop Shadow effect

The Shadow menu allows you to apply the Drop Shadow effect. To access the Shadow menu, in the Global Effect>Ch1 - Ch4 menu select HF3 ‘Shadow.’ Depending on the selected combiner channels, the valid buttons differ as follows.

Combiner channel selection	Button				
	Ch1 Shadow	Ch2 Shadow	Ch3 Shadow	Ch1+Ch2 Shadow	Ch2+Ch3 Shadow
Ch1+Ch2	Valid				
Ch2+Ch3		Valid			
Ch3+Ch4			Valid		
Ch1+Ch2+Ch3	Valid	Valid		Valid	
Ch2+Ch3+Ch4		Valid	Valid		Valid

Combiner channel selection	Button				
	Ch1 Shadow	Ch2 Shadow	Ch3 Shadow	Ch1+Ch2 Shadow	Ch2+Ch3 Shadow
Ch1+Ch2+Ch3+Ch4	Valid	Valid	Valid	Valid	

Taking Ch1 Shadow as an example, the following explains the procedure for applying the Drop Shadow effect.

- 1 Press [Ch1 Shadow], turning it on.

The Drop Shadow effect is enabled, and channel 2 becomes the channel for the shadow to the image. You can adjust the position and density of the shadow with the knobs.

#### Note

The flex shadow function cannot be enabled when Drop Shadow is enabled.

However, the flex shadow function is not supported on the MVE-8000/8000A.

- 2 Set the parameters.

Knob	Parameter	Adjustment	Setting values
1	Position H	Horizontal shadow position	-8.00 to +8.00 <sup>a)</sup> -32.00 to +32.00 <sup>b)</sup>
2	Position V	Vertical shadow position	-8.00 to +8.00 <sup>a)</sup> -32.00 to +32.00 <sup>b)</sup>
3	Density	Density of shadow	0.00 to 100.00

a) Setting for SD 4:3, SD 16:9

b) Setting for HD 4:3, HD 16:9

- 3 In the <Ch1 Shadow Source> group, select the shadow source signal.

**Video:** Select Ch2 video input as the shadow.

**Flat Color:** Select a matte color as the shadow.

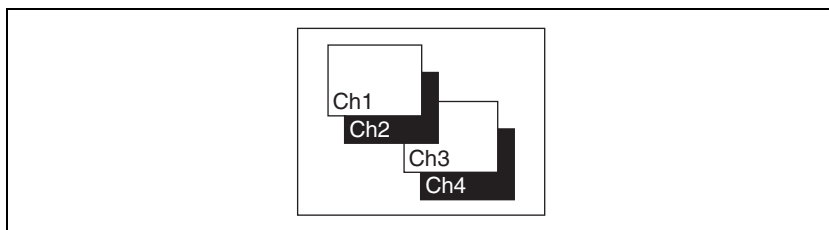
- 4 When you select Flat Color in step 3, adjust the parameters.

Knob	Parameter	Adjustment	Setting values
1	Luminance	Luminance	0.00 to 100.00
2	Saturation	Saturation	0.00 to 100.00
3	Hue	Hue	359.99 to 0.00



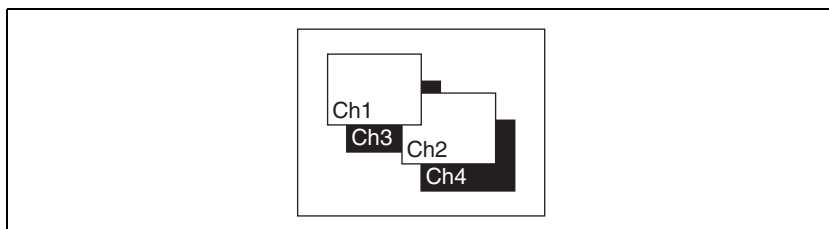
### To combine the video images after applying a shadow

Use the Combiner function to select channel 1 + channel 2 and channel 3 + channel 4, then turn [Ch 1 Shadow] and [Ch 3 Shadow] on.



### To apply a shadow after combining the video images

Use the Combiner function to select channel 1 + channel 2 + channel 3 + channel 4, then turn [Ch 1 + Ch 2 Shadow] on.



## Chapter 12 External Devices

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# Control of External Devices

Use the Device menu to carry out operations for controlling external devices such as the following.

- Devices supporting P-Bus (Peripheral II protocol) (referred to as “P-Bus devices” in the manual)
- Devices supporting GPI (General Purpose Interface) (referred to as “GPI devices” in the manual)
- VTRs
- Disk recorders (supporting Sony disk 9-pin protocol and video disk communications protocol)
- Extended VTRs (Abekas A53 protocol)

For VTRs, Extended VTRs, and disk recorders, you can also carry out operations using the device control block.

## Notes

- To operate P-Bus devices, VTRs, Extended VTRs, and disk recorders in the this system, the following settings are required on the DCU 9-pin serial port.
  - Device type setting
  - Device name
  - Setting of control panel (SCU) to be used

*For details of the settings, see “Making serial port settings” (page 399).*

- When using a disk recorder or Extended VTR, be sure to go to the Device>DDR/VTR>File List menu, and recall the file.

*For details of the operation, see “Recalling a file” (page 182).*

## To access the Device menu

In the menu control block, press the top menu selection button [DEV].

# Control of P-Bus Devices

## Creating and Editing the P-Bus Timeline

This section describes how to set an action for a keyframe point, and edit the P-Bus timeline.

*For details of keyframe creation and editing operations, see “Creating and Editing Keyframes” (page 200).*

### Note

Using the P-Bus timeline function requires the P-Bus control mode to be set to [Timeline]. Carry out this setting in the Engineering Setup>Panel>Device Interface menu.

## Setting an action

To set an action, use the following procedure.

- 1** In the Device menu, press VF2 ‘P-Bus Timeline.’

The Device>P-Bus Timeline menu appears.

The status area shows two lists. The left list is for setting combinations of devices and actions. The settings in this list will be saved as keyframe point data. The right list is for selecting the action.

- 2** Select the P-Bus device for which you want to set an action, by using any of the following methods to specify the device ID.

- Press directly on the left list appearing in the status area.
- Press the arrow keys to scroll the reverse video cursor.
- Turn the knob.

Knob	Parameter	Adjustment	Setting values
1	ID	Device number	0 to 23

- 3** Using either of the following methods, select the action.

- Press directly on the right list in the status area.
- Turn the knob.

Knob	Parameter	Adjustment	Setting values
2	Action No	Action	1 to 4 <sup>a)</sup>

- a) 1: Off (no specification)
- 2: Store
- 3: Recall
- 4: Trigger

- 4** If in step **3** you selected 2 (Store), 3 (Recall), or 4 (Trigger), turn knob 3 to select the register number or trigger number.

The indication for knob 3 changes to reflect the selection of Store, Recall, or Trigger.

Knob	Parameter	Adjustment	Setting values
3	Store No	Register number for Store	1 to 99
3	Recall No	Register number for Recall	1 to 99
3	Trigger No	Trigger number	0 to 15

The setting is reflected in the list on the right of the status area.

- 5** Press [Set].

For the device selected in the list on the left of the status area, this sets the action specified in step **4**.

Repeat steps **2** to **5** as required for other devices.

## Testing an action command

To produce a test output of the action command, press [Test Fire].

The action command is output from the 9-pin serial port of the DCU according to the setting in the list on the left of the status area.

## Clearing an action setting

### To clear the setting for separate devices

Use the following procedure.

- 1** In the list on the left of the status area, select the device for which you want to clear the action setting.
- 2** In the list on the right, select “Off.”
- 3** Press [Set].

### To clear the action settings for all devices in a single operation

Press [All Off].

## Setting the action for a rewind operation

On the P-Bus timeline, when the [REWIND] button in the keyframe control block is pressed the action set for the first keyframe is not executed; when the [RUN] button is pressed, then the first keyframe action is executed.

To execute an action when the [REWIND] button is pressed, it is necessary to set this action (Rewind Action). To carry out this setting, in the Device>P-Bus Timeline menu, press [Rewind Action] to recall the Rewind Action menu. In this setting screen, use the same setting method as in the screen for setting an action on the P-Bus timeline.

Alternatively, you can select the reverse arrangement, whereby when the [REWIND] button is pressed, this executes the action set for the first keyframe, and when the [RUN] button is pressed the first keyframe action is not executed. In this case, the Rewind Action setting is still valid.

*For details of the setting, see “Setting the first keyframe when a rewind is executed” (page 345).*

## Carrying out a Direct Store

You can carry out a Learn with the register number specified for the device selected in the menu. Use the following procedure.

- 1** Using any of the following methods, select the device.
  - Press directly on the list on the left of the status area.
  - Press the arrow keys to scroll the reverse video cursor.
  - Turn the knob.

Knob	Parameter	Setting	Setting values
1	ID	Device ID	0 to 23

- 2** In the Device>P-Bus Timeline menu, press [Direct Store].  
The numeric keypad window appears.
- 3** Enter the register number for which you want to carry out the Learn.  
The setting range is from 1 to 99.
- 4** Press [Enter].  
This carries out a Learn with the specified register number.

# P-Bus Trigger

“P-Bus trigger” is a function whereby a button operation in the numeric keypad control block or keyframe control block outputs an action command to a P-Bus device.

## Note

To use the P-Bus trigger function, the P-Bus control mode must be set to [Trigger]. Make this setting in the Engineering Setup>Panel>Device Interface menu (*see page 342*).

The relation between the operation in each of the control blocks and the action command output is as follows.

### Action command for an operation in the numeric keypad control block

- RECALL: Recall
- STORE: Store

This recalls the register specified in the numeric keypad control block, and a Recall or Store is carried out, according to the setting.

### Action command for an operation in the keyframe control block

- RUN: Trigger 1
- REWIND: Trigger 4
- NEXT KF: Trigger 7
- PREV KF: Trigger 8

## Outputting an action command

As an example, to output a Recall, use the following procedure.

- 1** In the numeric keypad control block, press the [EFF] button, turning it on.  
The [RCALL] button in the numeric keypad control block lights.
- 2** Press the [P-BUS] button in the numeric keypad control block, turning it on, to select the P-Bus region.
- 3** Enter the number of the register to be recalled with the numeric keypad buttons.
- 4** Press the [ENTER] button in the numeric keypad control block.  
This carries out the Recall.

# Control of GPI Devices

## GPI Timeline Creation and Editing

This section describes how to set GPI output ports to be registered at a keyframe point, and how to carry out creation and editing of the GPI timeline.

*For details of keyframe creation and editing operations, see “Creating and Editing Keyframes” (page 200).*

### GPI output port settings

Set the GPI output port number of the control panel or DCU which outputs GPI pulses at a keyframe point on the GPI timeline.

Use the following procedure. (Use the same procedure to subsequently change the settings.)

- 1** In the Device menu, press VF1 ‘GPI Timeline.’

The Device>GPI Timeline menu appears.

The status area shows the “GPI Output” list on the left and the “GPI Port” list on the right.

The “GPI Output” list (on the left) shows the relation between ports 1 to 8 for the GPI timeline and the trigger pulse output destination ports. The content of this list is saved as keyframe data.

The “GPI Port” list (on the right) is for selecting the GPI trigger pulse output destination.

- 2** Using either of the following methods, select the GPI timeline port you want to set on the GPI Timeline.

- Press directly on the list on the left of the status area.
- Turn the knob.

Knob	Parameter	Setting	Setting values
1	GPI Output No	GPI timeline port number	1 to 8

- 3** Using either of the following methods, trigger output destination.

- Press directly on the list on the right of the status area.
- Turn the knob.

Knob	Parameter	Setting	Setting values
2	GPI Port No	SCU/DCU GPI port to be the trigger output destination	1 to 3 <sup>a)</sup>

- a) 1: Off (no specification)  
 2: Control panel (SCU) GPI port  
 3: DCU GPI port

- 4** If in step **3** you selected 2 (SCU) or 3 (DCU), then use the knob to select the port number.

The indication for knob 3 depends on whether SCU or DCU is selected.

Knob	Parameter	Setting	Setting values
3	SCU Port No	SCU GPI port number	1 to 8
3	DCU Port No	DCU GPI port number	1 to 50 <sup>a)</sup>

- a) The number of DCU GPI ports depends on the settings in Engineering Setup.

The setting is reflected in the list on the right of the status area.

- 5** Press [Set].

This specifies the SCU/DCU GPI port whose number you specified in step **4** as the pulse output destination for the GPI output port selected in the list on the left of the status area.

Repeat steps **1** to **5** for other GPI output ports as required.

## Testing trigger output

To test the trigger output, press [Test Fire].

According to the list settings on the left of the status area, a pulse is output from the selected output port.

## Clearing output port settings

### To clear the settings for each device (GPI output port)

Use the following procedure.

- 1** In the list on the left of the status area, select the GPI output port whose settings you want to clear.
- 2** In the list on the right, select “Off.”
- 3** Press [Set].

## To clear the settings for all devices (GPI output ports) in a single operation

Press [All Off].

## Setting the action for a rewind operation

On the GPI timeline, when the [REWIND] button in the keyframe control block is pressed the action set for the first keyframe is not executed; when the [RUN] button is pressed, then the first keyframe action is executed.

To execute an action when the [REWIND] button is pressed, it is necessary to set this action (Rewind Action). To carry out this setting, in the Device>GPI Timeline menu, press [Rewind Action] to recall the Rewind Action menu. In this setting screen, use the same setting method as in the screen for setting an action on the GPI timeline.

Alternatively, you can select the reverse arrangement, whereby when the [REWIND] button is pressed, this executes the action set for the first keyframe, and when the [RUN] button is pressed the first keyframe action is not executed. In this case, the Rewind Action setting is still valid.

*For details of the setting, see “Setting the first keyframe when a rewind is executed” (page 345).*

---

# Control of VTRs, Extended VTRs, and Disk Recorders

To control a VTR, Extended VTR, or disk recorder in this system, the following settings are required.

- Button assignment: For a VTR, Extended VTR, or disk recorder connected to the DCU 9-pin serial port, assign a device selection button in the device control block.
- Timecode source: When using a VTR, specify a reference signal used for determining the tape position.

*For details, see “Making DCU serial port settings” (page 342) and “Making detailed settings on the external device connected to the serial port” (page 401).*

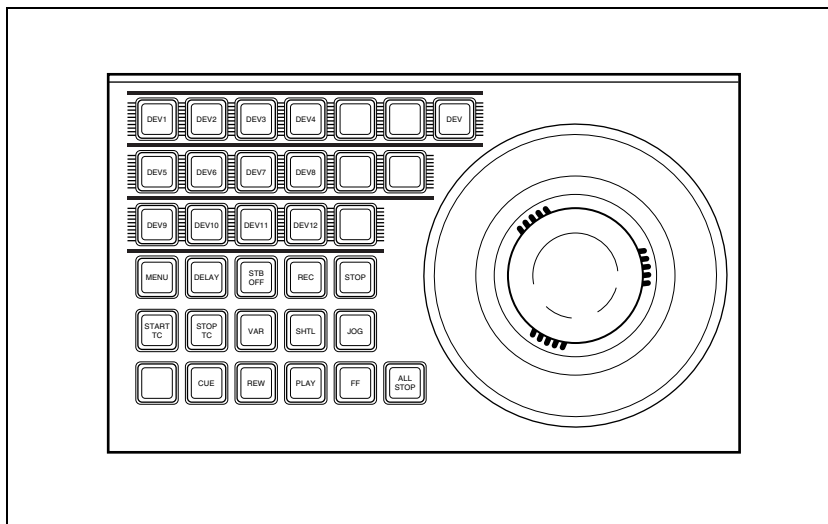
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## Controlling the Tape/Disk Transport

### Switching to VTR/disk recorder operation mode

To control a VTR, Extended VTR, or disk recorder, press the [DEV] button in the device control block, turning it on.

This puts the device control block in VTR/disk recorder operation mode, and the button arrangement changes as shown in the following figure. (Note that [USER], [RUN CTRL], and [SHIFT] do not operate in VTR/disk recorder operation mode.)



Device control block in VTR/disk recorder operation mode (trackball type)

## Selecting a VTR/Extended VTR/disk recorder

To select the VTR/Extended VTR/disk recorder to be controlled, in the device selection buttons of the device control block, press a selection of the [DEV1] to [DEV12] buttons, turning them on.

## Controlling the tape/disk transport

Using the buttons in the device control block, you can control the tape transport or the disk transport.

*For more details of the effect of buttons in VTR/disk recorder operation mode, see “Device Control Block (Trackball)” and “Device Control Block (Joystick)” in Chapter 2 (Volume 1).*

Depending on the settings in setup, you can also operate the VTR, Extended VTR, or disk recorder from the standard type transition control block.

*For more details of the effect of buttons in VTR/disk recorder operation mode, see the section “Transition Control Block (Standard Type)” in Chapter 2 (Volume 1).*

*For details of settings in setup, see “Setting VTR operation button assignment” (page 311).*

## Recording to VTRs and disk recorders

You can record to the VTR or disk recorder selected in the device control block. Proceed as follows.

### Notes

- Recording is not possible if the VTR or disk recorder is not set to Recorder.
- The disk recorder type must be specified to use the video disk communications protocol.

*See “To make detailed settings for a disk recorder (video disk communications protocol)” (page 405) for more information about how to make this setting.*

- Recording start points and end points cannot be set.
- When using a disk recorder, recording is not possible unless a new file name is specified.

*See “Creating new files” (page 183) for more information about how to specify file names.*

- 1** Using the buttons of the device control block, select the VTR or disk recorder to which you want to record.  
You can select more than one button.

The first button pressed lights green to indicate the reference device, and the subsequent buttons light amber.

- 2** While holding down the [REC] button in the device control block, press the [PLAY] button.

Recording starts. During recording, the [REC] button lights red and the [PLAY] button lights amber.

### Note

Note the following points about recording to a disk recorder.

- The maximum length of time that can be recorded in one operation is 30 minutes.
- If you want to record to a different file than the file used in the previous recording, use the Device>DDR/VTR>File List menu to create a new file.
- If you resume recording without executing [Unload] from the Device>DDR/VTR>File List menu, recording starts at the position in the same file where recording was interrupted.

### To stop recording

Press the [STOP] button or the [ALL STOP] button in the device control block.

## Checking VTR/Disk Recorder/Extended VTR Information

You can check the VTR/disk recorder/Extended VTR information (timecode information and operating status) set in the device control block, in the Device menu display.

To check the VTR/disk recorder/Extended VTR information, press VF3 'VTR' and HF1 'Cueup & Play' or HF2 'Timeline' in the Device menu. The Device>DDR/VTR>Cueup & Play menu or Device>DDR/VTR>Timeline menu appears, and a list shows the timecode information and operating status for each device. The columns of the list show the following information.

**DEV (device name):** DEV1 to DEV12 represent respectively device 1 to device 12.

**Reg (register):** Number of the register to which settings apply.

**Status:** Status of each device. The meaning of the indications is as follows.

Operating status display	When VTR, Extended VTR, or Sony disk 9-pin protocol is used	When video disk communications protocol is used
XXXX	Communications with the device are being carried out normally, but status information is not received.	Not communicating, or communicating but the device type cannot be read.
Local	The REMOTE/LOCAL switch of the device is set to LOCAL.	Port is not open.
Tape Out	No tape is loaded (VTR). No file loaded. (Sony disk 9-pin protocol or Extended VTR)	No file loaded.
Rec	Recording.	Recording.
Cue>	Cueing up in the forward direction.	—
Cue<	Cueing up in the reverse direction.	—
Eject	Ejecting cassette.	—
Stb Off	Stopped in standby off mode.	—
Stop	Stopped in standby on mode.	Stopped.
Play	Playing.	Playing.
FF	Fast forwarding.	—
Rewind	Rewinding.	—
Shtl>	Playing in the forward direction in shuttle mode.	—

Operating status display	When VTR, Extended VTR, or Sony disk 9-pin protocol is used	When video disk communications protocol is used
Shtl<	Playing in the reverse direction in shuttle mode.	—
Var>	Playing in the forward direction in “variable” mode.	Playing in the forward direction in “variable” mode.
Var<	Playing in the reverse direction in “variable” mode.	Playing in the reverse direction in “variable” mode.
Jog>	Playing in the forward direction in jog mode.	Playing in the forward direction in jog mode.
Jog<	Playing in the reverse direction in jog mode.	Playing in the reverse direction in jog mode.
Still	Playing still image.	—

**Current:** Shows timecode for current device position.

**Start TC:** Shows timecode for start point set on device.

**Stop TC:** Shows timecode for stop point set on device.

**Speed:** Shows the variable speed set for each device.

**Delay:** Shows start delay time set on device.

## Cueup & Play

Using the device control block or Device menu, you can carry out Cueup & Play settings (VTR or disk recorder start point, stop point, and start delay time), and save the settings in an effect register. By recalling this register, you can carry out automatic control of the VTR, Extended VTR, or disk recorder.

### Notes

- In an effect register set on the VTR/disk recorder timeline, Cueup & Play settings are not possible. To add Cueup & Play settings to such a register, first clear the VTR/disk recorder timeline setting before carrying out the operation.
- When using a disk recorder with Cueup & Play, if you carry out the following sequence of operations, the system may freeze on the frame of the start point.
  1. Press the [RUN] button to play to a point close to the end of a file.
  2. Stop playback.
  3. Press the [RUN] button once more.

In such cases, first recall a different register, then carry out the following sequence:

  1. Recall the original register again.
  2. Press the [REWIND] button.

3. Press the [RUN] button.

## Making and saving settings relating to Cueup & Play

Use the following procedure.

- 1** Press the [EFF] button in the numeric keypad control block, turning it on.  
This assigns the numeric keypad control block to keyframe operations, and the [RCALL] button lights.
- 2** Press the region selection button for the region for which you want to make the setting, turning it on.  
You can select more than one button.
- 3** Enter the number of the register to be recalled with the numeric keypad buttons.  
To search for an empty register, instead of entering a number, press the [.] (period) button.  
  
The display shows the register number. A letter “e” or “E” after the number indicates the register status, as follows:  
**e:** This register is empty in the selected region.  
**E:** This register is empty in all selectable regions.
- 4** Press the [ENTER] button.  
This recalls the register you selected in step **3**.
- 5** Press the [DEV] button in the device control block, turning it on.

### Note

Check that the [MENU] button is not lit. If it is lit, press to turn it off.

- 6** With the device selection buttons in the device control block, select the VTR, Extended VTR, or disk recorder for which you want to make the setting.  
You can select more than one button.  
  
The first button pressed lights green to indicate the reference region, and the subsequent buttons light amber.
- 7** To set the start point, play back on the VTR, disk recorder, or Extended VTR by control from the device control block. Find the desired start point, and at that point press the [START TC] button. Alternatively, in the Device>DDR/VTR>Cueup & Play menu, enter the timecode for the start point.

If using the [START TC] button, each time you press the button overwrites the start point timecode.

*For details of settings in the Cueup & Play menu, see “Setting the start point, stop point, and start delay time in a menu” (page 173).*

- 8** To set the stop point, once again play back on the VTR/Extended VTR/disk recorder. Find the desired stop point, and at that point press the [STOP TC] button. Alternatively, in the Device>DDR/VTR>Cueup & Play menu, enter the timecode for the stop point.

If using the [STOP TC] button, each time you press the button overwrites the stop point.

*For details of settings in the Cueup & Play menu, see “Setting the start point, stop point, and start delay time in a menu” (page 173).*

- 9** To set a start delay time, press the [DELAY] button in the device control block, and enter a value in the numeric keypad control block. Alternatively, make the setting in the Device>DDR/VTR>Cueup & Play menu.

If no setting is required, continue to step **10**.

*For details of settings in the Cueup & Play menu, see “Setting the start point, stop point, and start delay time in a menu” (page 173).*

- 10** Press the [STORE] button, turning it on, in the numeric keypad control block.
- 11** Enter the number of the register in which to save the settings.  
When overwriting the settings in the register recalled in step **3**, continue to step **12** without changing the displayed register number.
- 12** Press the [ENTER] button.

This saves the settings in the register.

## Automatically cueing up and playing VTR/Extended VTR/disk recorder

By recalling a register in which you have saved setting data for Cueup & Play, you can control the VTR/Extended VTR/disk recorder automatically in the same way as when automatically executing a keyframe effect.  
Use the following procedure.

- 1** In the numeric keypad control block, press the [EFF] button, turning it on.  
The [RCALL] button in the numeric keypad control block lights.

- 2 With the region selection buttons in the numeric keypad control block, select the region.  
You can select more than one button.

- 3 Enter the number of the register to be recalled with the numeric keypad buttons.

- 4 Press the [REWIND] button in the keyframe control block.

The VTR/Extended VTR/disk recorder automatically advances to the timecode value set as the start point.

While the VTR/Extended VTR/disk recorder is operating, the [ALL STOP] button in the device control block flashes amber, and when the start point is reached lights green.

If the operating VTR/Extended VTR/disk recorder is selected as the reference region in the device control block, the [CUE] button also flashes and lights in the same way as the [ALL STOP] button. Also, when the start point is reached, the [STOP] button lights amber.

- 5 Press the [RUN] button in the keyframe control block.

The VTR/Extended VTR/disk recorder is now controlled according to the keyframe data.

## Setting the start point, stop point, and start delay time in a menu

In the Device menu, you can set the start point, stop point, and start delay time. To make the setting, use the following procedure.

- 1 In the Device menu, press VF3 'DDR/VTR' and HF1 'Cueup & Play.'

The Device>DDR/VTR>Cueup & Play menu appears.

The status area shows the device name, register number, status information, current time, start point, stop point, and start delay time.

- 2 Using any of the following methods, select the device.

- Press directly on the list in the status area.
- Press the arrow keys to scroll the reverse video cursor.
- Turn the knob.

Knob	Parameter	Adjustment	Setting values
1	Dev	Device number	1 to 12

- 3 Carry out any of the following operations as required.

- To set the start point, press [SET] in the <Start TC> group.
- To set the stop point, press [SET] in the <Stop TC> group.

- To set the start delay time point, press [SET] in the <Delay> group.

A timecode window appears.

#### 4 Set the timecode value for the start point, stop point, or start delay time.

##### Note

You can enter a start delay time in the range that depends on the signal format as follows:

00:00 to 59:nn,

where nn = (number of frames per second) – 1.

#### 5 Press [Enter].

The set start point, stop point, or start delay time is reflected in the status area.

## Clearing the start point, stop point, and start delay time settings in a menu

In the Device menu, use the following procedure.

- 1 In the Device menu, press VF3 'DDR/VTR' and HF1 'Cueup & Play.'
- 2 Using any of the following methods, select the device for which you want to clear the settings.
  - Press directly on the list in the status area.
  - Press the arrow keys to scroll the reverse video cursor.
  - Turn the knob.

Knob	Parameter	Setting	Setting values
1	Dev	Device number	1 to 12

#### 3 Carry out any of the following operations as required.

- To clear the start point, press [Clear] in the <Start TC> group.
- To clear the stop point, press [Clear] in the <Stop TC> group.
- To clear the start delay time, press [Clear] in the <Delay> group.

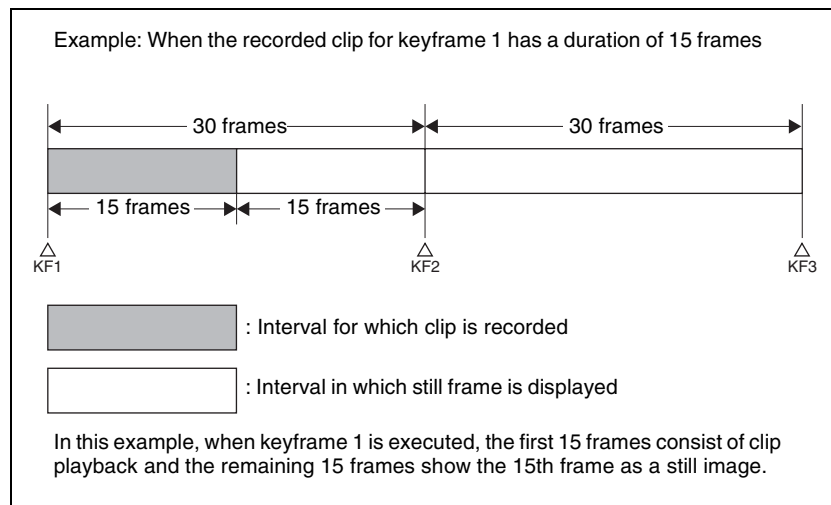
This clears the setting of the start point, stop point, or start delay time.

## VTR/Disk Recorder/Extended VTR Timeline

### Note

When executing a timeline using a disk recorder or Extended VTR, note the following points.

- When carrying out keyframe settings, be sure to recall the file for operation first.
- If the duration of the recorded video clip is less than the keyframe duration, after playback to the end of the clip, the remainder of the keyframe duration is filled with a still of the last frame of the clip (*see figure below*).



When executing the timeline using a disk recorder, also take note of the following points.

- Set the keyframe duration to at least 30 frames.
- From pressing the [RUN] button to the time when the effect actually starts execution may take around one second.

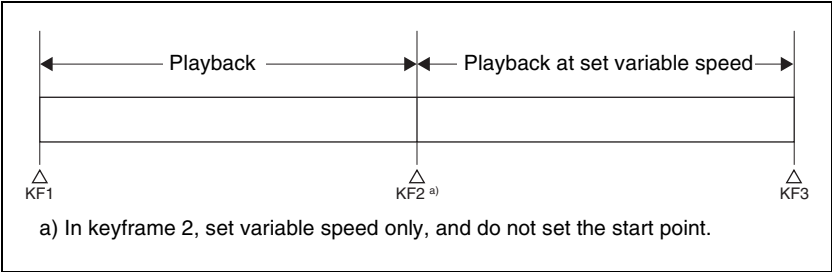
In order that pressing the [RUN] button after [REWIND] make the effect start execution as soon as possible, set cueing up of the file for operation as rewind operation <sup>1)</sup>. In the first keyframe <sup>2)</sup> to be executed with [RUN], for the cued-up file, do not set the start point, but set only the start command.

- 1) If the setting when the [REWIND] button is pressed is for the first keyframe to be executed, then the first keyframe is executed, and otherwise the setting for the Rewind Action is carried out.
- 2) If the setting when the [REWIND] button is pressed is for the first keyframe to be executed, then the second keyframe is executed, and otherwise the first keyframe is executed.

- To execute an effect, be sure to carry out a Rewind.  
For example, when the start command only is set for a keyframe, playback

starts from the current position, in the same way as with a VTR (no automatic cue-up).

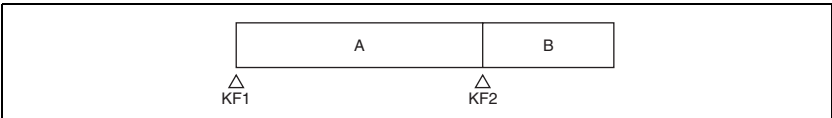
- During file playback, to play the next keyframe at variable speed, for the next keyframe set variable speed only, and do not set the start point (*see figure below*).



- When using a disk recorder with the VTR/disk recorder timeline, if you carry out the following sequence of operations, the system may freeze on the frame of the start point.
  1. Press the [RUN] button to play to a point close to the end of a file.
  2. Stop playback.
  3. Press the [RUN] button once more.

In such cases, first recall a different register, then carry out the following sequence:

  1. Recall the original register again.
  2. Press the [REWIND] button.
  3. Press the [RUN] button.
- Some operating limitations apply when the video disk communications protocol is used. These are explained with reference to the following figure, which illustrates creation of a timeline that plays from the video of file A to the video of file B.



– Operation with no problems:

KF1 action setting	Operating status of file A	KF2 action setting
Start	Playing	Start

– Black video or still image appears momentarily when play switches from file A to file B:

KF1 action setting	Operating status of file A	KF2 action setting
Start	Playing	Cueup
Variable Speed set	Playing at variable speed	Cueup
Cueup	Cueup	Cueup

- Partial operating limitation:

KF1 action setting	Operating status of file A	KF2 action setting
Start	Playing	Variable Speed set <sup>a)</sup>
Variable Speed set	Playing at variable speed	Variable Speed set <sup>a)</sup>
Cueup	Cueup	Variable Speed set <sup>a)</sup>

a) Failure to operate when variable speed is set to minus value. However, operates when the file B action is set to Start, and then variable speed is set to minus after file B starts playing.

- Play does not switch from file A to file B:

KF1 action setting	Operating status of file A	KF2 action setting
Variable Speed set	Playing at variable speed	Start
Cueup	Cueup	Start

If play continues to show video of file A without switching to file B, a Stop action is required in file A in order to switch to file B.

## VTR/disk recorder/Extended VTR timeline editing

This section describes how to set an action at a keyframe point, and how to edit the timeline.

*For details of the operations for keyframe creation and editing, see “Creating and Editing Keyframes” (page 200).*

### To set an action in the menu

Use the following procedure.

- 1 In the Device menu, press VF3 ‘DDR/VTR’ and HF2 ‘Timeline.’

The Device>DDR/VTR>Timeline menu appears.

The status area shows two lists. The upper list shows the device name, register number, keyframe number, and action type (start point, stop point, and variable speed) set for the keyframe.

The lower list is used for setting the action for the device selected in the upper list, and shows the port name, current time, status information, start

point, stop point, variable speed, and file name (for a disk recorder or Extended VTR).

- 2 Using any of the following methods, select the device for which you want to set the action.

- Press directly on the list in the status area.
- Press the arrow keys to scroll the reverse video cursor.
- Turn the knob.

Knob	Parameter	Setting	Setting values
1	Dev	Device number	1 to 12

- 3 If using an Extended VTR or disk recorder, in the Device>DDR/VTR>File List menu, recall the file.

*For details of settings required to recall a file, see “Sharing disk recorder/Extended VTR file lists” (page 343).*

**Note**

There is a limit of eight disk recorder files that can set on a single timeline.

When not using an Extended VTR or disk recorder, skip to step 4.

- 4 In the <Action> group, select the action.

**Cueup:** Output a command to cue up to the currently displayed start point.

**Start:** Output a Play command.

**Note**

When the stop point and variable speed are both set, the variable speed setting takes priority.

**Stop:** Output a Stop command.

**Note**

Before executing the Stop command, if the timecode for the set stop point has been reached, or on an Extended VTR or disk recorder if the end of the file has been reached, then at that point the device stops.

- 5 To set a start point, in the <Start TC> group, press the [Set] button.

A timecode window appears.

If you do not want to set the start point, skip to step 8.

**Note**

For an Extended VTR or disk recorder on which the start point is not set, the file recalled in the Extended VTR/disk recorder when the keyframe point is passed is the subject of the action.

**6** Set the start point as a timecode value.

**7** Press [Enter].

The new start point setting is reflected in the status area.

**8** To set the stop point, in the <Stop TC> group press the [Set] button.

A timecode window appears.

**9** Set the stop point as a timecode value.

If you do not want to set the stop point, skip to step **11**.

**10** Press [Enter].

The new stop point setting is reflected in the status area.

**11** To set the variable speed, in the <Variable Speed> group, carry out either of the following.

- Press [Fit].  
Without setting a speed value, this automatically carries out playback according to automatically calculated values for the duration and keyframe duration to fit the set start point and stop point.
- Press the [Set] button, and adjust the parameter with the knob.

Knob	Parameter	Setting	Setting values
2	Variable	Variable speed	-100 to +200 <sup>a)</sup>

a) The setting range of the variable speed depends on the type of connected device.

The new variable speed setting is reflected in the status area.

Repeat steps **2** to **11** as required for other devices.

### To carry out start point and stop point settings and cueing up operations in the device control block

With the following buttons in the device control block, you can set the start point or stop point of a keyframe point on the timeline, or carry out a cueing up operation.

**Note**

Check that the [MENU] button in the device control block is lit green. If it is not lit, press it, turning it on.

**[START TC] button:** Set the start point of the keyframe point to the current time.

**[STOP TC] button:** Set the stop point of the keyframe point to the current time.

**[CUE] button:** Cue up to the start point set for the keyframe point.

To display or check the settings, use the Device>DDR/VTR>Timeline menu.

### To test an action command output

To test an action command output, select the desired device from the upper list in the status area, and press [Test Fire].

An action command is output from the DCU 9-pin serial port, according to the settings in the list.

### To clear the start point, stop point, and variable speed settings

Use the following procedure.

- 1** In the upper list in the status area, select the device for which you want to clear the settings.
- 2** Carry out any of the following operations as required.
  - To clear the start point setting, press [Clear] in the <Start TC> group.
  - To clear the stop point setting, press [Clear] in the <Stop TC> group.
  - To clear the variable speed setting, press [Clear] in the <Variable Speed> group.

### To set the action for a rewind operation

On the VTR/disk recorder/Extended VTR timeline, when the [REWIND] button in the keyframe control block is pressed the action set for the first keyframe is not executed; when the [RUN] button is pressed, then the first keyframe action is executed.

To execute an action when the [REWIND] button is pressed, it is necessary to set this action (Rewind Action). To carry out this setting, in the Device>DDR/VTR>Timeline menu, press [Rewind Action] to recall the Rewind Action menu. In this setting screen, use the same setting method as in the screen for setting an action on the VTR/disk recorder timeline.

Alternatively, you can select the reverse arrangement, whereby when the [REWIND] button is pressed, this executes the action set for the first keyframe, and when the [RUN] button is pressed the first keyframe action is not executed. In this case, the Rewind Action setting is still valid.

*For details of the setting, see “Setting the first keyframe when a rewind is executed” (page 345).*

## Disk Recorder/Extended VTR File Operations

To carry out disk recorder/Extended VTR file operations, use the Device menu.

### Refreshing (recalling) the disk recorder/Extended VTR file list

Use the following procedure.

- 1 In the Device menu, press VF3 ‘DDR/VTR’ and HF3 ‘File List.’

The Device>VTR/DDR> File List menu appears.

In the status area, two lists appear.

The upper list shows the selected device name, and the currently selected file name (register number), and set file name.

The lower list shows a list of files for the selected device (the device appearing in the upper list). In this list is shown the file name (register number) set when the material was recorded, the length of the file data (timecode value), and the file update information.

#### Notes

- File update information is not shown when using the video disk communications protocol.
- When using an Extended VTR, the length of file data and file update information are not shown, and the register number is shown in place of the file name.

- 2 Select the device for which you want to recall the file list, using the knob.

Knob	Parameter	Setting	Setting values
1	Dev	Device number	1 to 12

- 3 Press the [File List Update] button.

This starts the process of recalling the file list, and a message box appears. When the file list recall is completed, the message box disappears.

#### To cancel recalling the file list

During the recall, press the [Cancel] button in the message box.

## File list sharing

You can share the recalled file list across serial ports connected to the same disk recorder.

*For details of file list sharing settings, see “Sharing disk recorder/Extended VTR file lists” (page 343).*

## Sorting files in the list

You can sort the files in the list by name, number, or update date. Use the following procedure.

- 1** In the Device menu, press VF3 ‘DDR/VTR’ and HF3 ‘File List.’  
The Device>DDR/VTR>File List menu appears.
- 2** Select the device for which you want to recall the file list, using the knob.

Knob	Parameter	Setting	Setting values
1	Dev	Device number	1 to 12

- 3** In the <Sort> group, press one of [File Name], [File No], and [Update].

**File Name:** Sort in alphabetical order of file name.

**File No:** Sort in ascending file number order.

**Update:** Sort in file update date order, newest first.

### Notes

- Files cannot be sorted by the file update date and time when using the video disk communications protocol.
- When using an Extended VTR, it is not possible to sort files.

This sorts the files in the selected order.

## Recalling a file

To recall a file from the file list, use the following procedure.

### Note

Files cannot be recalled when the disk recorder is set to Recorder.

- 1** In the Device menu, press VF3 ‘DDR/VTR’ and HF3 ‘File List.’  
The Device>DDR/VTR>File List menu appears.
- 2** Select the device from which you want to recall a file, using the knob.

Knob	Parameter	Setting	Setting values
1	Dev	Device number	1 to 12

**3** Using any of the following methods, select the file you want to recall.

- Press directly on the lower list in the status area.
- Press the arrow keys to scroll the reverse video cursor.
- Turn the knob.

Knob	Parameter	Setting	Setting values
2	No	File selection	1 to 5000 <sup>a)</sup> 0 to 99 <sup>b)</sup>

a) For disk recorders. The range of setting values depends on the total number of files.

b) For Extended VTRs. The range of setting values depends on the total number of files.

**4** Press [Load].

This recalls the selected file, and the file name appears at the top of the status area.

## Creating new files

A file name must be specified to record to a new file on a disk recorder. Use the following procedure.

### Notes

- New files cannot be created when the disk recorder is set to Player or Recorder/Player.
- In the case of Extended VTRs, new files cannot be created.

**1** In the Device menu, press VF3 'DDR/VTR' and HF3 'File List.'

The Device>DDR/VTR>File List menu appears.

**2** Press [New File].

The keyboard window appears.

**3** Enter a file name and press [Enter].

**When using the Sony disk recorder 9-pin protocol:** Up to 23 characters.

**When using the video disk communications protocol:** Up to 8 characters

The name appears as the current file name at the top of the status area.

### **When the loaded file is not a target for recording**

When a file that is not a target for recording is loaded in the disk recorder, proceed as follows.

- 1** In the Device menu, press VF3 'DDR/VTR' and HF3 'File List.'

The Device>DDR/VTR>File List menu appears.

- 2** Press [Unload].

The current file name at the top of the status area is cleared.



## Chapter 13 Keyframe Effects

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# Sequence of Keyframe Operations

The following table shows the principal operations involved in the sequence from creating keyframes to executing an effect. For details of each operation, see the page number in parenthesis.

*For an overview, see “Keyframes” in Chapter 1 (Volume 1).*

**Recalling a register (see page 193)**

To create a new effect, recall an empty register; to edit an effect, open the register containing it.



**Specifying the region and edit points (see page 198)**

Select the region in which editing applies, and set the edit points.



**Creating and editing keyframes (see page 200)**

Create the keyframes that make up the effect, using operations to create, insert, modify, or delete keyframes.



**Time settings (see page 213)**

Set the overall duration of the effect or the duration of each keyframe.



**Path setting (see page 216)**

Set the type of interpolation used between successive keyframes.



**Executing effects (see page 220)**

This provides a smooth effect, based on the time and path settings.



**Saving effects (see page 223)**

Save a completed effect in a register.

# Displaying the Timeline Menu

By displaying the Timeline menu, you can view keyframe effects on the timeline for each region, and the associated information.

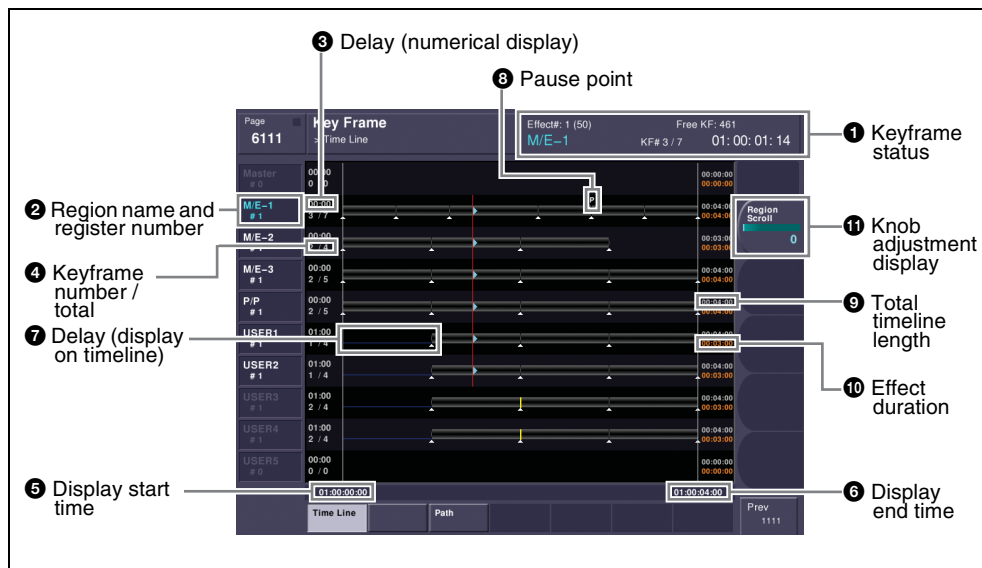
## Recalling the Timeline menu

To recall the Timeline menu, use the following procedure.

- 1** In the menu control block, press the top menu selection button [KEYFRAME].
  - 2** Select HF1 'Time Line.'
- The Time Line menu appears.

## Interpreting the Timeline Menu

The following are the main parts of the menu display.



Key Frame>Timeline menu

**1 Keyframe status**

This shows the region name, register number, register name, number of remaining keyframes, current position and timecode with regard to the reference region.

**2 Region name and register number**

This shows the region name and the number of the register recalled in this region.

The display color indicates the region selection as follows.

**Blue:** reference region

**White:** selected region

**Gray:** not selected region

**3 Delay (numerical display)**

This shows the delay between carrying out an effect operation, and the start of the actual effect.

**4 Keyframe number / total**

This shows the number of the keyframe at the cursor position, and the total number of keyframes in the register.

**5 Display start time**

This shows the timecode value for the timeline display start point.

**6 Display end time**

This shows the timecode value for the timeline display end point.

**7 Delay (display on timeline)**

When a delay is set, the interval is shown by a blue line.

**8 Pause point**

A “P” appears where a pause is set.

**9 Total timeline length**

The total time of delays and effect duration appears in white.

**10 Effect duration**

The total duration of the effect appears in orange.

**11 Knob adjustment display**

Turning the corresponding knob scrolls the timeline display, allowing you to see the timeline for regions that were previously hidden.

---

## Settings in the Timeline Menu

### Selecting the region to be displayed

The Timeline menu shows a timeline for each region, but you can also restrict the regions to be shown.

### Recalling the Timeline Assign menu

Use the following procedure.

- 1** In the menu control block, press the top menu selection button [KEYFRAME].
- 2** Select HF5 ‘Timeline Assign.’

The Key Frame>Timeline Assign menu appears.

The right of the status area shows a list of the regions (including the global region) assigned to the region selection buttons in the numeric keypad control block. The left shows the regions in order of precedence, and whether each region is shown on the Timeline menu.

### Deciding which regions appear on the timeline

In the Timeline Assign menu, press [Active Region], toggling it on or off.

**On:** The regions for which the region selection buttons in the numeric keypad control block are lit are shown in the precedence order (*see next item*) set in this menu, followed by the regions for which the buttons are off, in the same order.

**Off:** The regions appear according to the precedence order (*see next item*) and display on/off setting (*see page 191*) set in this menu.

### Deciding the precedence order for timeline display

To change the precedence order, insert and delete regions in the list, in the desired order.

- 1** In the Timeline Assign menu, use any of the following methods to select the desired precedence order position and the region you want to insert.
  - Press directly on the precedence order position in the list on the left and the region you want to insert in the list on the right.
  - Press the arrow keys to scroll the reverse video cursor.
  - Turn the knobs to make the setting.



Knob	Parameter	Adjustment	Setting values
1	Priority	Precedence order of insertion position	1 to 30
2	Region	Region to be inserted	1 to 30

- 2** In the <Priority> group, press [Insert].

This inserts the selected region before the specified precedence order. If the inserted region is already present in a different precedence order, it is deleted from that precedence order.

- 3** To delete a region from a precedence order, use any of the following methods to select the region.

- Press directly on the list on the left of the status area.
- Press the arrow keys to scroll the reverse video cursor.
- Turn the knob.

Knob	Parameter	Adjustment	Setting values
1	Priority	Precedence order assigned to the region to be deleted	1 to 30

- 4** To carry out the deletion, press [Delete] in the <Priority> group.

This deletes the selected region from the precedence order list.

## Setting the display of regions in the Timeline menu on or off

When [Active Region] is off, to select which regions are displayed in the Timeline menu, use the following procedure.

- 1** In the Timeline Assign menu, use any of the following methods to select the region.

- Press directly on the list on the left of the status area.
- Press the arrow keys to scroll the reverse video cursor.
- Turn the knob.

Knob	Parameter	Adjustment	Setting values
1	Priority	Region selection	1 to 30

- 2** For no display, press [Display], turning it off. To display, press once more, turning it on.

When [Active Region] is off, regions with the “Display Off” setting are not displayed in the Timeline menu.

## **To return to the default precedence order and timeline menu display settings**

Press [Default] in the <Priority> group.



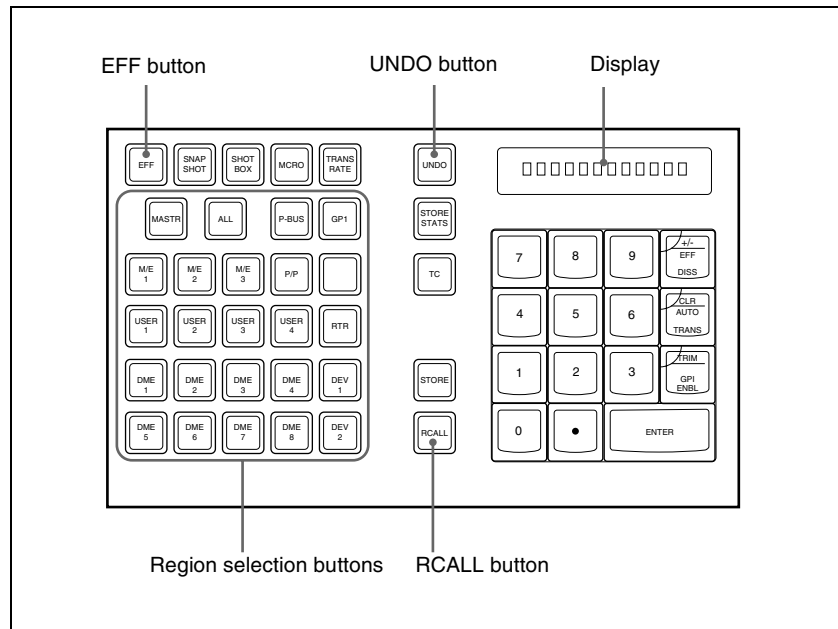
# Recalling a Register

Use the numeric keypad control block to recall a register. For each region there are 99 registers dedicated to keyframes, numbered from 1 to 99.

When creating an effect as a user programmable DME, use a 3-digit register number which is commonly used for all DME regions (channels).

*For a description of the concept of regions and registers, see “Regions and Registers” in Chapter 1 (Volume 1).*

The master timeline can also be recalled from the standard-type Flexi Pad control block.



Numeric keypad control block

## Recalling a register

Use the following procedure.

- 1 Press the [EFF] button, turning it on.

This allocates the numeric keypad control block to keyframe operations, and the [RCALL] button lights.

- 2 Press the button corresponding to the region you want to select, turning it on.

You can also press more than one button.

**[M/E 1], [M/E 2], [M/E 3], [P/P]:** These select the corresponding M/E-1, M/E-2, M/E-3, and PGM/PST regions.

**[USER 1] to [USER 8]:** These select the USER regions.

**[DME 1] to [DME 8]:** These select the DME channels.

**[DEV 1] to [DEV 12]:** These select the regions DEV 1 to DEV 12, respectively.

**[P-BUS]:** This selects P-Bus.

**[GPI]:** This selects GPI.

**[ALL]:** This selects all valid regions.

**[MASTR]:** This selects the master timeline (*see “Creating and Saving a Master Timeline” (page 225)*).

#### Note

The regions that can be selected simultaneously are those assigned to the region selection buttons in the numeric keypad control block. (*See “Assigning the region selection buttons in the numeric keypad control block” (page 310).*)

It is not possible to select [MASTR] and other regions simultaneously. If selected simultaneously, the master timeline takes precedence.

The first button pressed lights green as the reference region, and any subsequently pressed buttons light amber.

*For details of the precedence order for becoming the reference region, see “Regions and Registers” in Chapter 1 (Volume 1).*

The display shows the name of the reference region, and the number of the last register recalled for this region.

- 3 Enter the number of the register you want to recall, using the numeric keypad.

To find an empty register, instead of entering a number, press the [.] (period) button. To search for an empty register common to all currently selectable regions, press the [.] button again.

To search for an empty register in the 100 range, press [1], [0], [0], [.] (period) in this order. Similarly, to search for an empty register in the 200 range, press [2], [0], [0], [.] (period), and to search for an empty register in the 300 range, press [3], [0], [0], [.] (period).

The register number appears in the display. If the number is followed by a letter ‘e’ or ‘E,’ this indicates the following.

**e:** The selected register is empty for the regions selected in step 2.

E: The selected register is empty for all currently selectable regions.

- 4 To apply a temporary attribute (effect dissolve), press the [+/-/EFF DISS] button.

**Note**

It is not possible to apply temporary attributes to the master timeline.

- 5 Press the [ENTER] button.

This recalls the specified register.

When the master timeline is recalled, the region selection buttons light according to the saved region information.

**To undo the recall of a register**

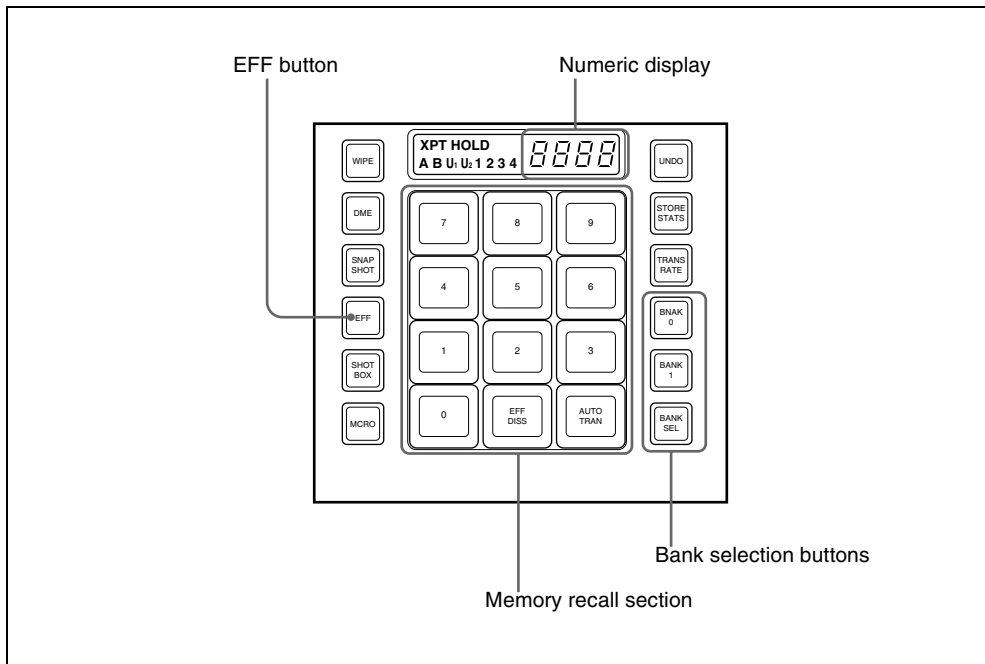
Immediately after recalling the register, press the [UNDO] button to undo the operation.

**Note**

After recalling the master timeline, you cannot undo the recall.

## Recalling the master timeline in the Flexi Pad control block

Whichever block you recall the master timeline from, the region set when it was saved is recalled.



Flexi Pad control block (standard type)

To recall the master timeline, use the following procedure.

- 1** In the Flexi Pad control block, press the [EFF] button.

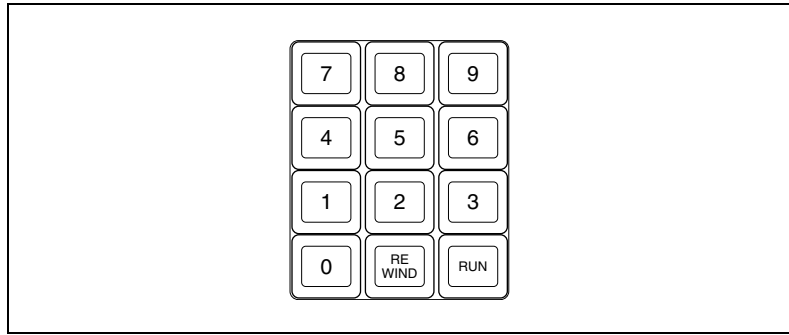
This assigns the Flexi Pad control block to master timeline operation. The previously selected bank number and last recalled register number appear in the numeric display.

- 2** Using any of the following methods, select the bank to be recalled.

**To select bank 0:** press the [BANK 0] button.

**To select bank 1:** press the [BANK 1] button.

**To select any of banks 0 to 9:** press the [BANK SEL] button; the memory recall section display changes as shown in the following figure; press one of 0 to 9.



The selected bank number appears in the numeric display.

The memory recall section buttons show the register names corresponding to the selected bank, and the register status.

Note that by a setting in the Setup menu, you can select either register names or register numbers to be displayed.

**Lit orange:** register holding the master timeline

**Lit yellow:** last recalled register

**Off:** empty register

- 3** Press the button in the memory recall section which shows the desired register name.

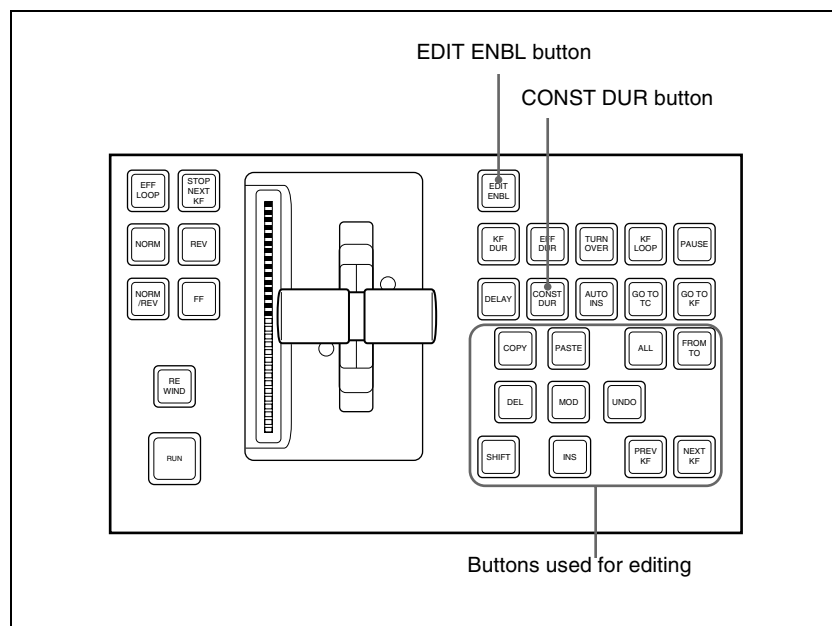
The button you pressed lights yellow, and the master timeline is recalled. The numeric display shows the bank number, followed by the selected register number.

# Specifying the Region and Edit Points

## Selecting the region in which editing applies

Select the region in which the editing is applied by the effect consisting of keyframes, using the region selection buttons in the numeric keypad control block. (See step 2 (page 194) in “Recalling a register.”)

## Setting the edit points



Keyframe control block

To set the edit points, use any of the following operations in the keyframe control block.

- To move the edit point to the keyframe immediately after the current time (the position at which the effect is currently stopped), press the [NEXT KF] button.
- To move the edit point to the keyframe immediately before the current time, press the [PREV KF] button.
- To move the edit point to a keyframe specified by number, press the [GO TO KF] button, then enter the keyframe number with the numeric keypad in the numeric keypad control block, and press the [ENTER] button to confirm.

- To move the edit point to a specified timecode, press the [GO TO TC] button, then enter the timecode value with the numeric keypad in the numeric keypad control block, and press the [ENTER] button to confirm.

### **To enter a difference value**

When moving to a point specified with the [GO TO KF] button or [GO TO TC] button, you can also enter the difference from the current keyframe number or timecode value.

Press the numeric keypad [+/-] button, and enter the difference, then press the [TRIM] button. Each time you press the [+/-] button, it toggles between plus (+) and minus (-).

---

# Creating and Editing Keyframes

*For details of keyframe editing, see “Effect Editing” in Chapter 1 (Volume 1).*

---

## Creation

### Creating new keyframes

To create new keyframes, after recalling an empty register, use the following procedure to create and insert each new keyframe. Use the keyframe control block for carrying out the operation.

- 1** Press the [EDIT ENBL] button, turning it on.

This enables effect editing in the keyframe control block.

- 2** Create the image you want to be the first keyframe.

- 3** Press the [INS] button.

This takes the current image as the first keyframe.

You can make a setting in the Setup menu so that when you recall an empty register, the system state at that point is automatically captured as the first keyframe.

- 4** Create the image you want to be the next keyframe.

- 5** Press the [INS] button.

This inserts the current image as the second keyframe after the first keyframe.

Repeat steps **4** and **5** to create the required number of keyframes.

#### **To insert a new keyframe before an existing keyframe**

Hold down the [SHIFT] button and press the [INS] button, to insert a new keyframe before the current keyframe.

## Insertion

### Inserting keyframes

To insert a keyframe in an existing effect, use the following procedure in the keyframe control block.

- 1** Press the [EDIT ENBL] button, turning it on.
- 2** Stop the effect at the desired edit point.
- 3** Create the image for the keyframe you want to insert.
- 4** Press the [INS] button.  
When the edit point is on a keyframe, to insert the new keyframe before the existing keyframe, hold down the [SHIFT] button and press the [INS] button.

This inserts the current image as the new keyframe.

Inserting a keyframe may change the total duration of the effect. (See “Time Settings” in Chapter 1 (Volume 1).)

## Modification

### Modifying keyframes

Use the following procedure in the keyframe control block.

- 1** Press the [EDIT ENBL] button, turning it on.
- 2** Stop the effect at the desired edit point.

When the edit point is on a keyframe, this is what you modify. If the edit point is between two keyframes, the previous keyframe is what you modify.

#### Note

In constant duration mode (see “Effect Editing” in Chapter 1 (Volume 1)) modification is only possible when the edit point is on a keyframe.

- 3** Using image transformations or adding special effects, modify the keyframe.

## 4 Press the [MOD] button.

This modifies the keyframe.

## Modifying more than one keyframe simultaneously

You can modify a number of keyframes simultaneously. There are three different cases for this operation.

- Modifying from the edit point to a particular keyframe
- Modifying all keyframes in the effect
- Modifying the keyframes in a specified range

The different procedures for these cases are now described.

### To modify from the edit point to a particular keyframe

Use the following procedure.

#### 1 Press the [EDIT ENBL] button, turning it on.

#### 2 Stop the effect at the first keyframe of the range to be modified.

#### 3 Carry out the necessary modifications.

#### 4 Press the [FROM TO] button, turning it on.

The display in the numeric keypad control block shows the current keyframe number, followed by “TO.”

#### 5 Enter the number of the last keyframe to be modified from the numeric keypad control block and press the [ENTER] button to confirm.

#### 6 Press the [MOD] button. Alternatively, hold down the [SHIFT] button and press the [MOD] button.

*For the difference in the result, see “Differences in the changes when a number of keyframes are modified” (page 203).*

This makes the modification simultaneously to all keyframes from the edit point to the specified keyframe.

### To modify all keyframes in the effect

Use the following procedure.

#### 1 Press the [EDIT ENBL] button, turning it on.

#### 2 Carry out the necessary modifications on any keyframe.

#### 3 Press the [ALL] button, turning it on.



- 4 Press the [MOD] button. Alternatively, hold down the [SHIFT] button and press the [MOD] button.

*For the difference in the result, see “Differences in the changes when a number of keyframes are modified” (page 203).*

This makes the modification simultaneously to all keyframes in the effect.

### To modify the keyframes in a specified range

Use the following procedure.

- 1 Press the [EDIT ENBL] button, turning it on.
- 2 Stop the effect at any keyframe within the range to be modified.
- 3 Carry out the necessary modifications.
- 4 Press the [FROM TO] button, turning it on.

The display in the numeric keypad control block shows the current keyframe number, followed by “TO.”

- 5 Using the numeric keypad in the numeric keypad control block, carry out the following operations.
  - To set the first keyframe in the range to be modified, press the [CLR] button, then enter the keyframe number, and press the [ENTER] button to confirm.
  - To set the last keyframe in the range to be modified, enter the keyframe number from the numeric keypad, and press the [ENTER] button to confirm.
- 6 Press the [MOD] button. Alternatively, hold down the [SHIFT] button and press the [MOD] button.

*For the difference in the result, see “Differences in the changes when a number of keyframes are modified” (page 203).*

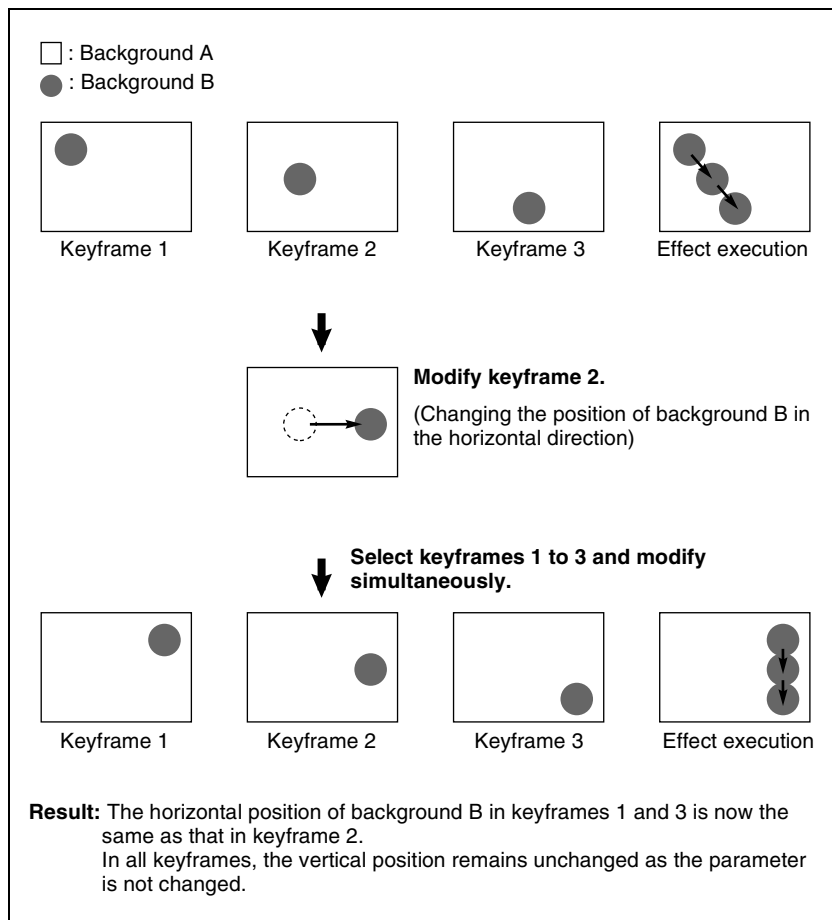
This makes the modification simultaneously to all keyframes in the specified keyframe range.

## Differences in the changes when a number of keyframes are modified

When you select a number of keyframes to modify, and press the [MOD] button alone or in combination with the [SHIFT] button, the result of the operation differs as follows.

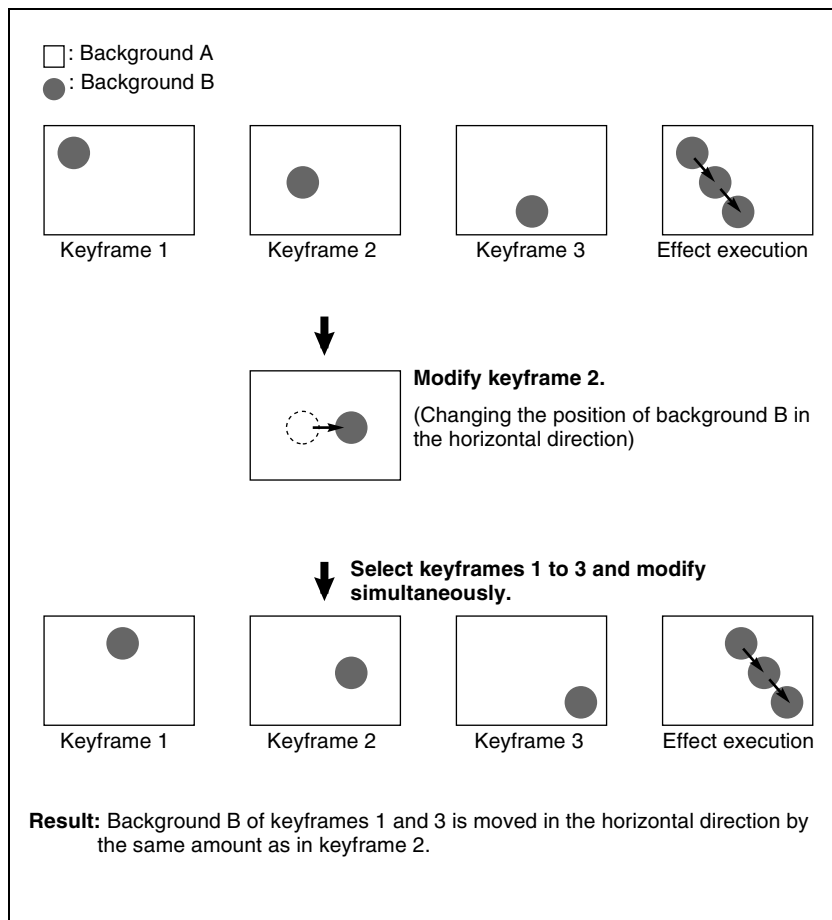
## Modifying the keyframes by pressing the [MOD] button alone

The modified parameter values are taken as absolute values, and applied to all of the selected keyframes.



## Modifying the keyframes by holding down the [SHIFT] button and pressing the [MOD] button

The modified parameter values are taken as relative values, which modify all of the selected keyframes.



## Deletion

### Deleting keyframes

Use the following procedure in the keyframe control block.

- 1 Press the [EDIT ENBL] button, turning it on.

- 2 Stop the effect at the desired edit point.

When the edit point is on a keyframe, this is what you delete. If the edit point is between two keyframes, the previous keyframe is what you delete.

- 3 To delete a number of keyframes in a single operation, press the [FROM TO] button or the [ALL] button, turning it on.

*For how to specify a range of keyframes, see “Modifying more than one keyframe simultaneously” (page 202).*

- 4 Press the [DEL] button.

This deletes the keyframe.

Deleting a keyframe reduces the total duration of the effect.

In constant duration mode (*see page 212*), however, the duration does not change.

*For details of changes in the effect duration caused by deleting keyframes, see “Keyframes” in Chapter 1 (Volume 1).*

---

## Movement

### Moving keyframes

Use the following procedure.

- 1 Press the [EDIT ENBL] button, turning it on.
- 2 Stop the effect at the edit point you want to move.
- 3 To move a number of keyframes in a single operation, press the [FROM TO] button, turning it on, to specify the keyframes.

*For how to specify a range of keyframes, see “Modifying more than one keyframe simultaneously” (page 202).*

- 4 Press the [DEL] button.

This deletes the keyframe, and saves it in the paste buffer.

- 5 Move the edit point to the position to which you want to move the keyframe.

- 6 Press the [PASTE] button.

This inserts the keyframe you have moved after the current keyframe. In constant duration mode, the moved keyframe overwrites the edit point.

### **To insert the moved keyframe before a keyframe**

Hold down the [SHIFT] button, and press the [PASTE] button to insert the moved keyframe before the current keyframe.

---

## **Copying**

### **Copying keyframes**

Use the following procedure.

- 1** Press the [EDIT ENBL] button, turning it on.
- 2** Stop the effect at the edit point you want to copy.
- 3** To copy a number of keyframes in a single operation, press the [FROM TO] button or the [ALL] button, turning it on.

*For how to specify a range of keyframes, see “Modifying more than one keyframe simultaneously” (page 202).*

- 4** Press the [COPY] button.

This copies the specified keyframe, and saves it to the paste buffer.

- 5** Move the edit point to the position where you want to insert the copied keyframe.

- 6** Press the [PASTE] button.

This inserts the keyframe you have copied after the current keyframe. In constant duration mode, the copied keyframe overwrites the edit point.

### **To insert the copied keyframe before a keyframe**

Hold down the [SHIFT] button, and press the [PASTE] button to insert the copied keyframe before the current keyframe.

---

## **Pause**

To apply a pause to a keyframe, use the following procedure.

- 1** Press the [EDIT ENBL] button, turning it on.
- 2** Stop the effect on the keyframe to which you want to apply a pause.
- 3** Press the [PAUSE] button.  
This applies a pause to the specified keyframe.

---

## Keyframe Loop (Repeated Execution of a Specified Range)

By setting the range of the loop within the effect, and the number of loop executions, you can execute the loop range repeatedly.

### Note

It is only possible to set one keyframe loop for each region.

### Creating a new keyframe loop

To specify the loop range and loop count, carry out the following procedure.

- 1** Press the [EDIT ENBL] button, turning it on.
- 2** Stop the effect on the keyframe you want to make the first of the loop range (start point). (Here, by way of example, keyframe 2 is taken as the start point.)
- 3** Press the [KF LOOP] button in the keyframe control block, turning it on.

The numeric keypad control block display shows the start point keyframe number as follows.

<b>FM</b>	<b>2</b>	<b>TO</b>
-----------	----------	-----------

The example shown means “from (keyframe) 2 to...,” where the end keyframe is to follow.

- 4** With the numeric keypad buttons of the numeric keypad control block, enter the number of the last keyframe in the loop range (end point). (Here, by way of example, keyframe 5 is the end point.)

<b>FM</b>	<b>2</b>	<b>TO</b>	<b>5</b>
-----------	----------	-----------	----------

- 5** Press the [ENTER] button to confirm the entry.

The display changes as follows, prompting you to enter the loop count.

COUNT
-------

- 6** Enter the loop count. (Here, by way of example, “15” is entered.)

- To specify a loop count, enter a number in the range 1 to 99.
- To specify an endless loop, enter “0” (zero).

COUNT	15
-------	----

- 7** Press the [ENTER] button to confirm the entry.

The start point, end point, and loop count that you have set are reflected in the Timeline menu.

If you enter the loop count as “0” (endless loop), the count is shown as “inf” (infinity).

The numeric keypad control block display changes back to the state shown in step 4.

## Changing the keyframe loop settings

To change the loop range or count for the currently recalled effect, carry out the following procedure.

- 1** When the [KF LOOP] button in the keyframe control block is lit amber, press it, turning it green.

The numeric keypad control block display shows the current loop range. If, for example, the start point is keyframe 2 and the end point is keyframe 5, this appears as follows.

FM	2	TO	5
----	---	----	---

- 2** To change the loop range, press the [CLEAR] button in the numeric keypad control block.  
To change the loop count only, press the [ENTER] button, then skip to step 6.

When you press the [CLEAR] button, this appears as follows.

FM	TO
----	----

- 3** Enter the keyframe number for the new start point, and press the [ENTER] button.
- 4** Enter the keyframe number for the new end point, and press the [ENTER] button.  
The display shows the currently set loop count.
- 5** To change the setting, press the [CLEAR] button.  
This clears the set loop count.

**COUNT**

- 6** Enter the new loop count, and press the [ENTER] button.

## Executing a keyframe loop

In the keyframe control block, press the [RUN] button.

The set loop range is executed repeatedly for the set loop count number of times.

The screen shows the total loop count and the number of loops remaining. (If the loop count is infinite (inf), the remaining number is not shown.)

If the [REV] button is lit, the loop is played in the reverse order.

## Canceling keyframe loop execution

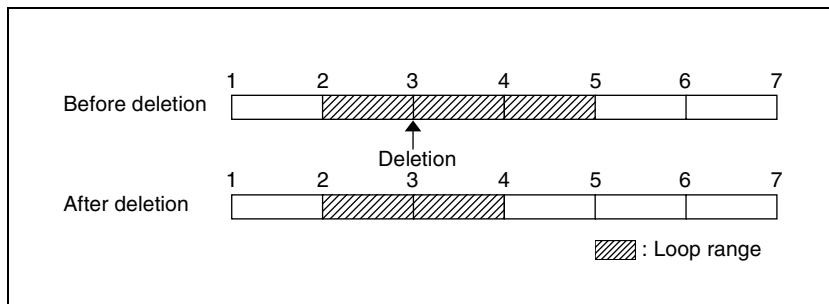
Press the [REWIND] button in the keyframe control block.

## Changes to the loop range caused by keyframe insertion/deletion

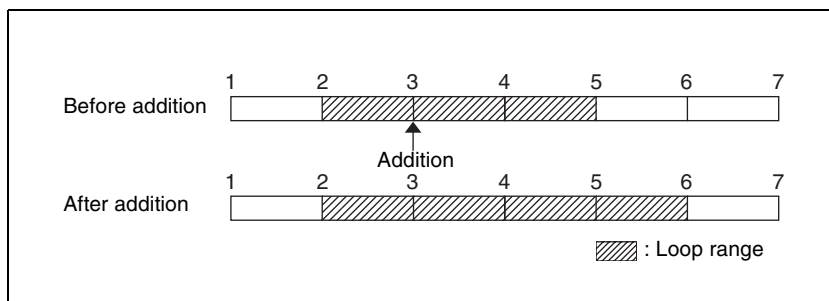
When a keyframe is inserted or deleted within the loop range, the loop range also changes. The following are examples.

Example 1: If keyframe 3 is deleted, the loop end point moves forward as follows.

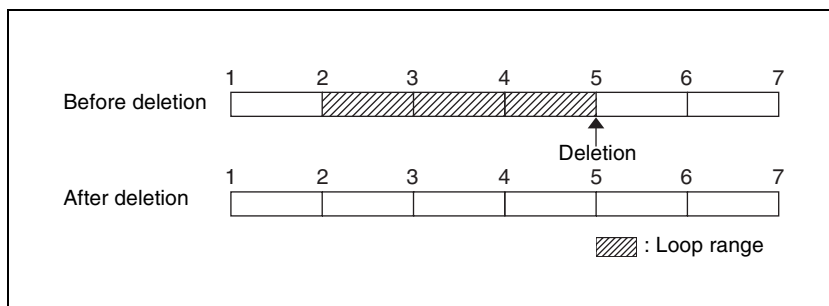




Example 2: If keyframe 3 is added, the end point keyframe number moves back.



Example 3: If the keyframe at the end of the loop range (the end point) is deleted, the keyframe loop settings are all cleared, as follows, and the [KF LOOP] button goes off. The same occurs if the first keyframe in the loop range (the start point) is deleted.



## Undoing an Edit Operation

To undo a keyframe insert, modify, delete, or paste operation immediately after execution, press the [UNDO] button.

---

## Duration Mode Setting

There are two keyframe duration modes: variable duration mode, and constant duration mode in which the effect duration is fixed. (See “Duration modes” in Chapter 1 (Volume 1).)

- To select variable duration mode, turn the [CONST DUR] button off.
- To select constant duration mode, press the [CONST DUR] button, turning it on.

---

## Transition Mode Settings for User Programmable DME

To create an effect for user programmable DME, it is necessary to set the transition mode.

### Setting the transition mode

Use the following procedure.

- 1** In the Key Frame menu, select HF4 ‘DME User PGM.’

The DME User PGM menu appears.

- 2** In the <Transition Mode> group, select the transition mode according to the DME wipe action.

**Single:** select single transition mode.

**Flip/Tumble:** select the flip/tumble transition mode.

**Dual:** select dual transition mode.

**P in P:** select picture-in-picture mode.

**Compress:** select compress mode.

**Frame I/O:** select frame in-out transition mode.

**Frame I/O H:** select frame in-out transition mode in the horizontal direction.

**Frame I/O V:** select frame in-out transition mode in the vertical direction.

*For details of creating an effect for user programmable DME, see “Creating User Programmable DME Patterns” in Chapter 6 (Volume 1).*

#### Note

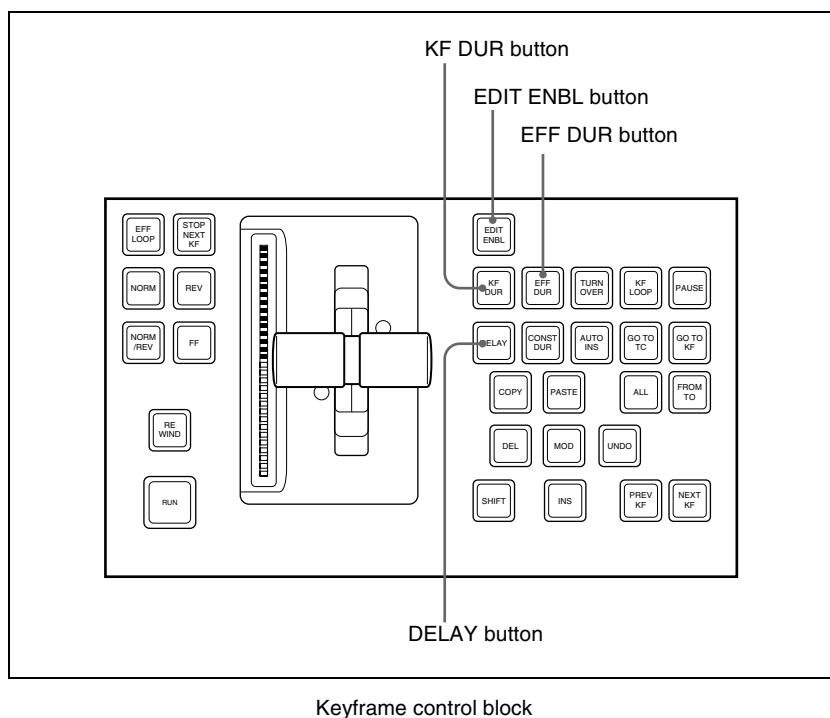
Which DME channel is selected as the reference region (lit green) in the numeric keypad control block is reflected in the <Transition Mode> group display.

# Time Settings

You can determine the execution time of an effect by setting either the keyframe durations or the effect duration.

*For details of keyframe duration and effect duration, see “Time Settings” in Chapter 1 (Volume 1).*

## Setting the Keyframe Duration



### Setting the keyframe duration

You can set the value of the keyframe duration independently for each keyframe, by the following method.

- 1 Press the [EDIT ENBL] button, turning it on.

- 2** Stop the effect on the keyframe for which you want to set the duration.  
The time from this keyframe to the following keyframe is what you set.
- 3** Press the [KF DUR] button, turning it on.  
The display in the numeric keypad control block shows “KF DUR” followed by the duration of the current keyframe (seconds:frames).
- 4** Using the numeric keypad in the numeric keypad control block, enter the timecode value for the keyframe duration, as a maximum of four digits.  
For example, to set 9 seconds and 20 frames, enter 920. You can also use the [TRIM] button to enter a difference value. (*See “To enter a difference value” (page 199).*)
- 5** Press the [ENTER] button to confirm the entry.  
This changes the keyframe duration to the new setting.

**Note**

In addition to this procedure, the keyframe duration may also be automatically changed as a result of changing the effect duration. (*See the next section.*)

---

## Setting the Effect Duration

To set the effect duration, use the following procedure.

- 1** Press the [EDIT ENBL] button, turning it on.
- 2** Press the [EFF DUR] button, turning it on.  
The display in the numeric keypad control block shows “DUR” followed by the effect duration (minutes:seconds:frames).
- 3** Using the numeric keypad in the numeric keypad control block, enter the timecode value for the effect duration, as a maximum of six digits.  
For example, to set 3 minutes 7 seconds and 15 frames, enter 30715. You can also use the [TRIM] button to enter a difference value. (*See “To enter a difference value” (page 199).*)
- 4** Press the [ENTER] button.  
This changes the effect duration to the new setting.

**Note**

In addition to this procedure, the effect duration may also be changed as a result of inserting or deleting keyframes. See “Time Settings” in Chapter 1 (Volume 1).

---

## Setting the Delay

To set the delay (see “Time Settings” in chapter 1 (Volume 1)), use the following procedure.

**1** Press the [EDIT ENBL] button, turning it on.

**2** Press the [DELAY] button, turning it on.

The display in the numeric keypad control block shows “DELAY” followed by the delay time (seconds:frames).

**3** Using the numeric keypad in the numeric keypad control block, enter the timecode value for the delay, as a maximum of four digits.

You can also use the [TRIM] button to enter a difference value. (See “To enter a difference value” (page 199).)

**4** Press the [ENTER] button to confirm the entry.

This changes the delay setting.

---

# Path Setting

The term “path” refers to the specification of how interpolation is carried out from one keyframe to the next.

*For details of the notion of path, see “Paths” in Chapter 1 (Volume 1).*

Set keyframe paths in the Key Frame>Path menu.

## To access the Key Frame>Path menu

In the menu control block, press the top menu selection button [KEYFRAME], then select HF3 ‘Path.’

---

## Basic Procedure for Path Settings

### Selecting the category

From the 16 buttons in the function button area, select the category for which you want to make the setting.

**First row:** path settings for the switcher M/E1 to M/E3, and PGM/PST banks

**Second and third rows:** path settings for User1 to User8

**Fourth row:** path settings for DME local channel and global channel 3D transforms and effects

### Making switcher path settings

This section describes settings for M/E-1 Key1 as an example.

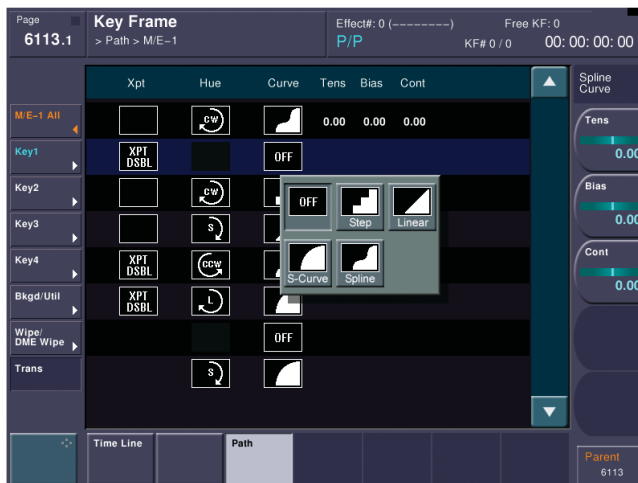
The area for the VF buttons shows the names of items.

A ► sign by a button indicates that pressing it opens a more detailed setting menu.

The status area shows the settings for Xpt, Hue, and Curve. However, depending on the item, these parameters may or may not be present.

#### Note

Whenever you set a path or modify its setting, be sure to press the [MOD] button in the keyframe control block. The setting does not become effective unless the [MOD] button is pressed.



## Changing the path type for Curve

Use the following procedure.

- 1 In the Path menu, press [M/E-1].  
The M/E-1 menu appears.
- 2 Press the Curve path type indication for the Key1 item that you want to change.  
A path selection window appears.
- 3 Press the indication for the desired path type, to select it.



**OFF:** Executing the effect causes no change.



**Step:** There is no interpolation between keyframes, so that the effect parameters are updated each time a keyframe is passed.



**Linear:** Linear interpolation between keyframes, resulting in constant speed movement.



**S-Curve:** The rate of change accelerates and decelerates before and after a keyframe, so that the rate of change is maximum midway between two keyframes.



**Spline:** The effect follows a smooth curved path from each keyframe to the next.

The status area reflects the selected path type.

At this point, depending on the setting for Curve, the effect for Hue and Xpt is also affected as shown in the following table. In the menu, the Hue and Xpt settings do not change, but the path type indication is dimmed out.

Curve setting	Hue change	Xpt change
OFF	Does not change	Hold
Step	Changes as with the Step setting	Is not affected

- 4** If you selected Spline as the path type, set the following parameters, using the knobs.

Knob	Parameter	Adjustment	Setting values
1	Tens	Spline interpolation tension	−4.00 to +4.00
2	Bias	Spline interpolation bias	−4.00 to +4.00
3	Cont	Spline interpolation continuity	−4.00 to +4.00

## Changing the path type for Hue

Use the following procedure.

- 1** Press the Hue path type indication for the item that you want to change.
- 2** Turn knob 1 to change the Hue path type.

The path type indications shown in the menu represent the change in hue as seen on a Vectorscope.



**CW:** Rotate clockwise.



**CCW:** Rotate counterclockwise.



**Short:** The hue changes in whichever of the clockwise and counterclockwise directions is shorter.



**Long:** The hue changes in whichever of the clockwise and counterclockwise directions is longer.

## Changing the path type for Xpt

Use the following procedure.

- 1** Press the Xpt path type indication for the item that you want to change.  
A path selection window appears.
- 2** Press the indication for the desired path type, to select it.



**Xpt Hold off:** When replaying a keyframe, change the inputs to the settings saved in memory.



**Xpt Hold on:** When replaying a keyframe, do not change the inputs.

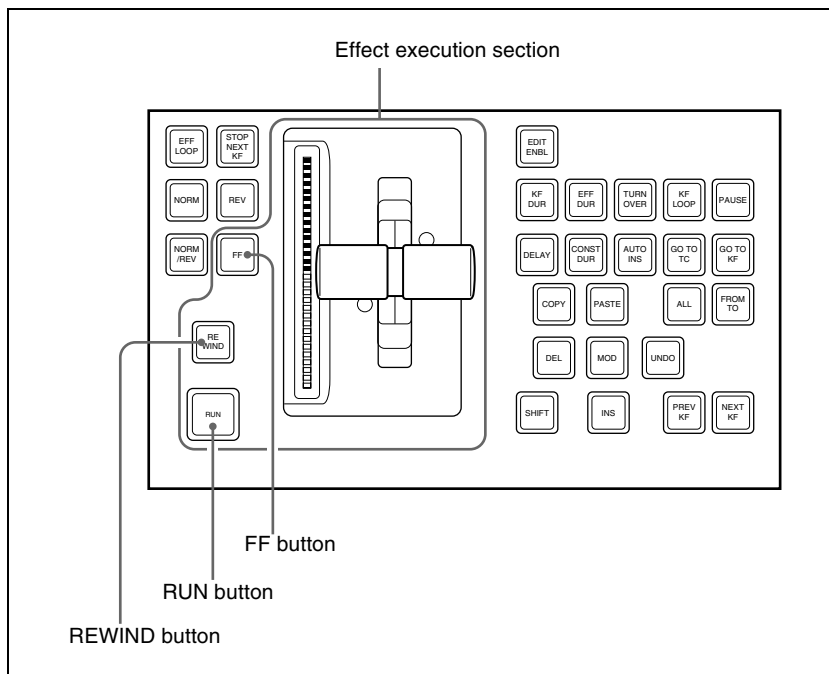
# Executing Effects

By means of the [RUN] button in the keyframe control block, you can play an effect as a continuously varying image. This is referred to as effect execution.

*See also “Effect Execution” in Chapter 1 (Volume 1).*

It is also possible to execute an effect from the device control block or the standard type Flexi Pad control block (*see Chapter 2 (Volume 1)*).

## Executing Effects in the Keyframe Control Block



Keyframe control block

## Executing an effect automatically

Use the following procedure.

- 1** Select the region in which you want to execute the effect, using the region selection buttons in the numeric keypad control block. (See step **2** (page 194) of “Recalling a register.”)
- 2** With the numeric keypad, enter the number of the register in which the effect you want to execute is saved, and press the [ENTER] button to confirm.  
  
This recalls the effect saved in the register.
- 3** In the keyframe control block, press the [RUN] button.  
  
The [RUN] button lights amber and the effect is executed automatically.

## Moving to the first keyframe of the effect

To move to the first keyframe of the effect, press the [REWIND] button.

## Moving to the last keyframe of the effect

To move to the last keyframe of the effect, press the [FF] button.

---

## Setting the Run Mode

You can set the run mode in which an effect is executed when you press the [RUN] button.

## Specifying the effect execution direction

To specify the effect execution direction, press the [NORM] button or the [REV] button, turning it on. When you press one, turning it on, the other automatically goes off.

To execute the effect so as to obtain the effects of the [NORM] and [REV] buttons alternately, press the [NORM/REV] button, turning it on.

**When the [NORM] button is lit:** The effect is executed in the direction from the first keyframe to the last keyframe.

**When the [REV] button is lit:** The effect is executed in the direction from the last keyframe to the first keyframe.

**When the [NORM/REV] button is lit:** Each time the effect is executed, the direction reverses.



## Executing an effect up to the next keyframe

Use the following procedure.

**1** Press the [STOP NEXT KF] button, turning it on.

**2** Press the [RUN] button.

This executes the effect as far as the next keyframe. When the [REV] button is lit, it is executed as far as the previous keyframe.

## Repeating an effect

Use the following procedure.

**1** Press the [EFF LOOP] button, turning it on.

**2** Press the [RUN] button.

This executes the effect repeatedly, from the first keyframe to the last keyframe.

When the [REV] button is lit, the effect is executed in the reverse direction.

**3** To stop the repeating effect, press the [EFF LOOP] button, turning it off, or press the [REWIND] button.

---

## Executing an Effect in the Flexi Pad Control Block

### Executing an effect

To execute an effect recalled from the numeric keypad control block in the Flexi Pad control block, use the following procedure.

**1** In the Flexi Pad control block, press the [EFF] button.

This assigns the Flexi Pad control block to effect operation, and the [REWIND] button and [RUN] button appear in the memory recall section. The previously selected bank number and last recalled register number appear in the numeric display.

**2** Press the following buttons to execute the effect.

**REWIND:** Press this button to move to the first keyframe of the currently recalled effect.

**RUN:** Press this button to run the currently recalled effect.

## Saving Effects

When you recall an effect, the currently recalled effect is automatically saved in a register. This is referred to as the auto save function.

You can disable the auto save function in a Setup menu.

By means of the following operation, you can also specify a register and save an effect in it.

### Saving an effect in a specified register

Specify the register using the numeric keypad control block. Use the following procedure.

- 1 Press the [EFF] button, turning it on.

This allocates the numeric keypad control block to keyframe operations.

- 2 Press the region selection button corresponding to the region for which you want to save the register, turning it on.

See step **2** (page 194) of “Recalling a register.”

- 3** Press the [STORE] button, turning it on.

- 4** With the numeric keypad, enter the number of the register in which you want to save the effect.
- To find an empty register, instead of entering a number, press the [.] (period) button. To search for an empty register common to all currently selectable regions, press the [.] button again.
- To search for an empty register in the 100 range, press [1], [0], [0], [.] (period) in this order. Similarly, to search for an empty register in the 200 range, press [2], [0], [0], [.] (period), and to search for an empty register in the 300 range, press [3], [0], [0], [.] (period).

The register number appears in the display. If the number is followed by a letter 'e' or 'E,' this indicates the following.

**e:** The selected register is empty for the regions selected in step 2.

**E:** The selected register is empty for all selectable regions.

- 5** To add an attribute (effect dissolve), press the [+/-/EFF DISS] button, turning it on.

*For details of attributes, see “Effect Attributes” in Chapter 1 (Volume 1).*

## 6 Press the [ENTER] button.

This saves the current effect in the specified register, and turns off the [STORE] button. The [RCALL] button and [STORE STATS] button both light.

### **To undo the saving of an effect**

Immediately after saving an effect, hold down the [STORE STATS] button and press the [UNDO] button to undo the save.



# Creating and Saving a Master Timeline

## Creating and Saving a Master Timeline Using the Buttons in the Numeric Keypad Control Block

### Creating and saving a master timeline

You can save region information (information on any regions, including the register numbers associated with the regions) referred to as a master timeline in a dedicated register. By recalling that register, you can manipulate the regions and registers together.

To create and save a new master timeline, use the following procedure.

- 1** Press the [EFF] button, turning it on.  
This assigns the numeric keypad control block to keyframe effect operations.
- 2** Recall the register number of the effect you want to save on the master timeline for each region. (*See “Recalling a Register” (page 193).*)
- 3** Of the region selection buttons, press those buttons for the regions you want to save on the master timeline, turning them on.
- 4** Press the region selection button [MASTR], turning it on.  
The display shows the number of the register last used for master timeline register operation.
- 5** Press the [STORE] button, turning it on.
- 6** With the numeric keypad buttons, enter the number of the register in which you want to save the master timeline.  
To find an empty register, instead of entering a number, press the [.] (period) button.  
The display shows the register number. If the number is followed by a letter “E,” the register is empty.
- 7** Press the [ENTER] button.

The regions selected in step **3** and the register numbers recalled in those regions are saved in the master timeline register, and the [STORE] button goes off. At the same time, the [RCALL] button lights.

#### Notes

- It is not possible to undo a master timeline save.
- Saving the master timeline does not carry out a save of effects. Save the effects for each region first, then carry out the master timeline save.

## Changing a master timeline

You can change information already saved in a master timeline.

As an example, to change the M/E-1 register from Effect 5 to Effect 10, use the following procedure.

Information in master timeline register 1 before change

Region	Register
M/E-1	Effect 5
P/P	Effect 5



Information in master timeline register 1 after change

Region	Register
M/E-1	Effect 10
P/P	Effect 5

- 1** Recall the master timeline register you want to change. (*See “Recalling a Register” (page 193).*)

This simultaneously recalls M/E-1 register 5 and P/P register 5, and the [M/E-1] and [P/P] region selection buttons light.

- 2** Press the region selection button [MASTR], turning it off.

- 3** Turn on only the button for the region you want to change (here, [M/E-1]), and recall the desired register (here, Effect 10).

This recalls M/E-1 register 10, while on P/P register 5 remains selected.

- 4** Press the buttons for the regions you want to save on the master timeline (here, [M/E-1] and [P/P]), turning them on.

- 5** Press the region selection button [MASTR], turning it on.

The display shows the register number last used for master timeline operation.

- 6** Press the [STORE] button, turning it on.
- 7** With the numeric keypad buttons, enter the number of the register (here “1”) in which you want to save the master timeline, and press the [ENTER] button.

This saves M/E-1 register 10 and P/P register 5 in master timeline register 1, and the [STORE] button goes off. At the same time, the [RCALL] button lights.

## Checking the regions saved on a master timeline

For example in the course of changing a master timeline, you can check which regions are saved in the register. With the [MASTR] button in the numeric keypad control block lit, hold down the [STORE] button. While it is held down, the buttons for the saved regions light. When the button is released, the state before it was held down is restored.

---

## Creating and Saving a Master Timeline With the Menu

You can save a master timeline using the Effect>Master Timeline>Store menu.

### Recalling the Store menu

Carry out the following procedure.

- 1** Do either of the following.
  - In the menu control block, press the top menu selection button [EFF].
  - In the numeric keypad control block, press the [EFF] button twice in rapid succession.

The Effect menu appears.

- 2** Press VF1 ‘Master Timeline’ and HF1 ‘Store.’

The Master Timeline>Store menu appears.

The status area shows the master timeline register names, register lock status, register number for each region, and so on.

- 3** If required, press the following buttons in the status area to change the region display.

[illegible]

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## Creating and Saving a Master Timeline

- Press directly on the list in the status area.
- Press the arrow keys to scroll the reverse video cursor.
- Turn the knob.

**2** Press [Edit].

The status area shows the status of each region in this master timeline.

- Press directly on the display in the status area.
- To cancel the selection, press once more to return to the normal display.
- To select all regions, press [ALL].
- To select all switcher-related regions (M/E, P/P, USER), press [SWR ALL].

- 4** Press [Assign], turning it on.

- If the selected register is locked, a confirmation message appears asking whether or not to cancel the operation. Press [OK] to return to the previous menu display without carrying out the registration.
- If the operation is carried out, the region selected in step **3** is registered on the master timeline, and the parameters are now valid.

**5** Turn the knob to select the number of the effect register.

Knob	Parameter	Adjustment	Setting values
3	Effect Reg	Effect register number	1 to 399

**6** Repeat steps **3** to **5** as required to set all regions and register numbers to be saved on the master timeline.

**7** In the <Store> group, press [Store].

This saves the settings.

**To return to the state before saving the master timeline content**

In the <Store> group, press [Undo].

---

# Register Operations in the Menus

Using the Effect menu, you can carry out the following effect register operations.

- Attribute setting
- Status display
- Register editing

## To display the Effect menu

Press the top menu selection button [EFF] in the menu control block.

The menus for editing registers are divided up by registers. Here the menu for registers 1 to 99 is described as an example, but you can carry out operations in the same way on registers 101 to 199, 201 to 299, and 301 to 399, using VF3 to VF5.

---

## Effect Attribute Settings

### Applying effect dissolve

To apply the “effect dissolve” attribute to a keyframe effect, use the following procedure.

- 1** In the Effect menu, press VF2 ‘Effect 1-99’ and HF1 ‘Attribute.’

The Attribute menu appears.

The status area shows the region names, register numbers and status, and attribute settings.

- 2** Press the region display in the upper part of the list, and in the selection window select the region. Selecting multiple regions is also possible. To select all regions, press [ALL].

- 3** Press [OK].

The selected region name appears in the upper part of the list.

- 4** Using any of the following methods, select the register.
  - Press directly on the list in the status area.
  - Press the arrow keys to scroll the reverse video cursor.
  - Turn the knobs.

Knob	Parameter	Adjustment	Setting values
1	Register	Register number	1 to 99
3	Num	Select number of registers	1 to 99

- To select all registers, press [ALL].

**5** Press [Effect Dissolve], turning it on.

**6** Turn the knob to set the duration.

Knob	Parameter	Adjustment	Setting values
4	Eff Diss Duration	Dissolve duration	1 to 999 (frames)

## Setting the duration for a temporary attribute

To set the duration for a temporary attribute set in the numeric keypad control block, turn knob 5.

Knob	Parameter	Adjustment	Setting values
5	Temp Dur	Temporary attribute dissolve duration	0 to 999 (frames)

## Effect Status Display

The Effect>Effect 1-99 menu displays the following information.

**Region name:** The selected region name appears in the upper part of the list.

**Register number**

**Register name**

**Write-protected status:** When the register is write-protected, a letter “L” appears.

**Empty status:** When the register is empty, a letter “E” appears.

## Effect Register Editing

You can carry out the following editing on effect registers and master timeline registers.

- **Lock:** Write-protect the contents of the register.
- **Copy:** Copy the contents of one register to another register.
- **Merge:** Merge the data of two registers. It is not possible to merge master timeline registers.

- **Move:** Move the contents of one register to another register.
- **Swap:** Swap the contents of two registers.
- **Delete:** Delete the contents of a register.
- **Name:** Attach a name to a register.

## Write-protecting the contents of the effect register

Use the following procedure.

### Note

It is not possible to write-protect an empty register.

- 1 In the Effect menu, press VF2 'Effect 1-99' and HF2 'Lock.'

The Lock menu appears.

- 2 Press the region display in the upper part of the list to display a selection window, then select the region in the selection window. Selecting multiple regions is also possible.  
To select all regions, press [ALL].

- 3 Press [OK].

The selected region name appears in the upper part of the list.

- 4 Using any of the following methods, select the register.

- Press directly on the list in the status area.
- Press the arrow keys to scroll the reverse video cursor.
- Turn the knobs.

Knob	Parameter	Adjustment	Setting values
1	Register	Register number	1 to 99
3	Num	Select number of registers	1 to 99

- To select all registers, press [ALL].

- 5 Press [Lock], turning it on.

### To unlock the register

Select the register you want to unlock, and press [Lock], turning it off.

## Copying, moving, and swapping effect register data

This section describes the procedure for copying. You can move or swap registers using a similar procedure.

- 1 In the Effect menu, press VF2 'Effect 1-99' and HF3 'Copy/Merge.'

- The Copy/Merge menu appears.
- The left side of the status area shows the register number of the copy source, and the right side shows the register number of the copy destination.

- 2** Press the region display in the upper part of the list to display a selection window, then select the region in the selection window. Selecting multiple regions is also possible.  
To select all regions, press [ALL].

### Operation between regions

Operation between regions is possible in the following cases.

- Two of the M/E-1, M/E-2, M/E-3 and P/P regions
- Two of the USER1 to 8 regions of the same configuration
- Two of the DME1 to 8 (including Global) regions

- 3** Press [OK].

The selected region name appears in the upper part of the list.

- 4** Using any of the following methods, select the desired registers.

- Press directly on the list in the status area.
- Press the arrow keys to scroll the reverse video cursor.
- Turn the knobs.

Knob	Parameter	Adjustment	Setting values
1	From Reg	Copy source register number	1 to 99
2	To Reg	Copy destination register number	1 to 99
3	Num	Select number of registers	1 to 99

- To select all registers, press [ALL].

- 5** To copy without transferring the name, in the <Copy> group, press [W/o Name], turning it on.

- 6** In the <Copy> group, press [Copy].

This carries out the copy.

If, for example, the copy destination register is write-protected or the same register is specified both as the copy source and destination registers, a confirmation message appears. Press [OK] to cancel the copy.

## Merging effect registers

Use the following procedure.

- 1** In the Effect menu, select VF2 'Effect 1-99' and HF3 'Copy/Merge.'

- The Copy/Merge menu appears.
- The left side of the status area shows a list for the register coming afterward when merged. The right side shows a list for the register coming before when merged.

**2** Press the region display in the upper part of the list, and in the selection window select the region. Selecting multiple regions is also possible. To select all regions, press [ALL].

**3** Press [OK].

The selected region name appears in the upper part of the list.

**4** Using any of the following methods, select the register.

- Press directly on the list in the status area.
- Press the arrow keys to scroll the reverse video cursor.
- Turn the knobs.

Knob	Parameter	Adjustment	Setting values
1	From Reg	The register coming afterwards when merged	1 to 99
2	To Reg	The register coming before when merged	1 to 99

**5** Press [Merge].

This carries out the merge.

## Deleting data from effect registers

Use the following procedure.

**1** In the Effect menu, press VF2 'Effect 1-99' and HF6 'Delete.'

The Delete menu appears.

**2** Press the region display in the upper part of the list to display a selection window, then select the region in the selection window. Selecting multiple regions is also possible. To select all regions, press [ALL].

**3** Press [OK].

The selected region name appears in the upper part of the list.

**4** Using any of the following methods, select the desired registers.

- Press directly on the list in the status area.
- Press the arrow keys to scroll the reverse video cursor.

- Turn the knobs.

Knob	Parameter	Adjustment	Setting values
1	Register	Register number	1 to 99
3	Num	Select number of registers	1 to 99

- To select all registers, press [ALL].

## 5 Press [Delete].

## Attaching a name to an effect register

Use the following procedure.

### 1 In the Effect menu, press VF2 ‘Effect 1-99’ and HF7 ‘Rename.’

The Rename menu appears.

### 2 Press the region display in the upper part of the list to display a selection window, then select the region in the selection window. Selecting multiple regions is also possible.

To select all regions, press [ALL].

### 3 Press [OK].

The selected region name appears in the upper part of the list.

### 4 Using any of the following methods, select the register you want to name.

- Press directly on the list in status area.
- Press the arrow keys to scroll the reverse video cursor.
- Turn the knob.

Knob	Parameter	Adjustment	Setting values
1	Register	Register number	1 to 99

The selected register appears in reverse video.

### 5 Press [Rename].

A keyboard window appears.

*For details of keyboard window operation, see “Menu Operations” in Chapter 2 (Volume 1).*

### 6 Enter the name, of not more than eight characters, and press [Enter].

The set name is reflected in the status area.



## Chapter 14 Snapshots

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# Snapshot Operations From the Numeric Keypad Control Block

The term “snapshot” refers to a function whereby the various settings required to apply a particular effect to an image are saved in memory as a set of data, for recall as required to recover the same effect-applied state.

*For an overview of snapshots, see “Snapshots” in Chapter 1 (Volume 1).*

You can carry out snapshot operations principally using the numeric keypad control block. *(See following illustration.)*

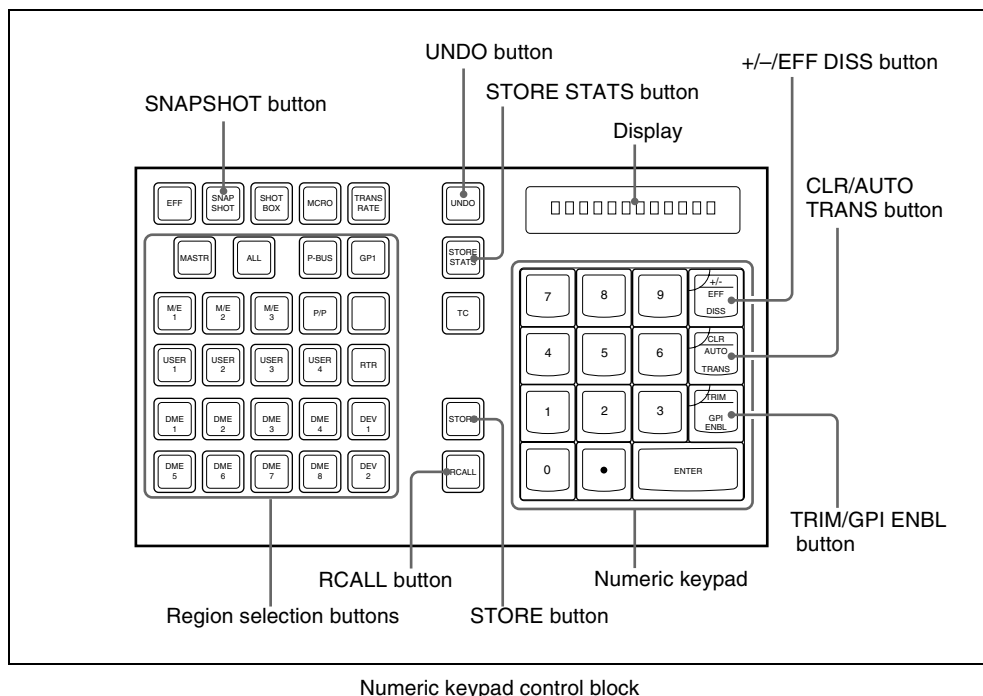
Additionally, in each of the M/E-1 to M/E-3 and PGM/PST banks, you can use the Flexi Pad control block to save and recall. *(See page 244.)*

To apply attributes or display the status, use the Snapshot menu. *(See page 250.)*



# Saving and Recalling Snapshots

Snapshot operations with the numeric keypad control block use the following buttons.



## Saving a snapshot from the numeric keypad control block

Use the following procedure.

- 1** Make the settings for the state you want to save as a snapshot.
- 2** In the numeric keypad control block, press the [SNAPSHOT] button, turning it on.  
  
This allocates the numeric keypad control block to snapshot operations, and the [RCALL] button lights.
- 3** Press the region selection button corresponding to the region for which you want to save, turning it on. You can select more than one region.  
  
[M/E 1], [M/E 2], [M/E 3], [P/P]: These select the corresponding M/E-1, M/E-2, M/E-3, and PGM/PST regions.

**[USER 1] to [USER 8]:** These select the USER regions.

**[DME 1] to [DME 8]:** These select the DME channels.

**[RTR]:** This selects the Router region.

**[ALL]:** This selects all regions.

**Note**

The regions that can be selected simultaneously are those assigned to the region selection buttons in the numeric keypad control block. (See “Assigning the region selection buttons in the numeric keypad control block” (page 310).)

The first button pressed lights green as the reference region, and any subsequently pressed buttons light amber.

*For details of the precedence order for becoming the reference region, see “Regions and Registers” in Chapter 1 (Volume 1).*

The display shows the name of the reference region and the number of the register previously recalled for that region.

**4** Press the [STORE] button, turning it on.

**5** Enter the desired register number from the numeric keypad.

To find an empty register, instead of entering a number, press the [.] (period) button. To search for an empty register common to all currently selectable regions, press the period button again.

**Note**

If you choose a register which already contains a snapshot, and save a snapshot, then the existing register contents are overwritten.

The register number appears in the display. If the number is followed by a letter ‘e’ or ‘E,’ this indicates the following.

**e:** The selected register is empty for the regions selected in step **3**.

**E:** The selected register is empty for all currently selectable regions.

The entered register number appears in the display.

**6** To apply attributes, press the following buttons, turning them on.

Attribute to apply	Button
Effect dissolve	[+/-/EFF DISS] button
Auto transition	[CLR/AUTO TRANS] button
GPI output <sup>a)</sup>	TRIM/GPI ENBL] button

a) The GPI port that can be set is 1 (fixed).

*For details of attributes, see “Snapshots” in Chapter 1 (Volume 1).*

#### Note

In the numeric keypad control block, it is not possible to apply the cross-point hold. *For details, see “Applying snapshot attributes” (page 250).*

## 7 Press the [ENTER] button.

This saves the snapshot, and the [STORE] button goes off. The [RCALL] and [STORE STATS] buttons light.

### To cancel a snapshot save operation

After saving a snapshot, to cancel the save, hold down the [STORE STATS] button and press the [UNDO] button.

## Recalling a snapshot from the numeric keypad control block

Use the following procedure.

### 1 In the numeric keypad control block, press the [SNAPSHOT] button, turning it on.

This allocates the numeric keypad control block to snapshot operations, and the [RCALL] button lights.

### 2 Press the region selection button corresponding to the region you want to recall, turning it on. Multiple selections are also possible.

**[M/E 1], [M/E 2], [M/E 3], [P/P]:** These select the corresponding M/E-1, M/E-2, M/E-3, and PGM/PST regions.

**[USER 1] to [USER 8]:** These select the user regions.

**[DME 1] to [DME 8]:** These select the DME channels.

**[ALL]:** This selects all regions.

**[RTR]:** This selects the Router region.

**[MASTR]:** This selects a master snapshot.

#### Note

The regions that can be selected simultaneously are those assigned to the region selection buttons in the numeric keypad control block. (*See “Assigning the region selection buttons in the numeric keypad control block” (page 310).*)

It is not possible to select [MASTR] and other regions simultaneously. If selected simultaneously, the master snapshot takes precedence.

The first pressed button lights green as the reference region, and subsequently pressed buttons light amber.

*For details of the precedence order for becoming the reference region, see “Regions and registers” in Chapter 1 (Volume 1).*

The display shows the name of the reference region and the number of the register previously recalled for that region.

### 3 Enter the desired register number from the numeric keypad.

*See step 5 (page 240) in “Saving a snapshot from the numeric keypad control block.”*

The entered register number appears in the display.

### 4 To apply temporary attributes, press the following buttons, turning them on.

Control block	Temporary attribute to apply	Button
Cross-point control block	A/B bus cross-point hold	[XPT HOLD] button in the background A/B bus
	Key cross-point hold	[XPT HOLD] button in the key bus <sup>a)</sup>
	Key disable	[XPT HOLD] button in the key bus <sup>b)</sup>
Numeric keypad control block	Effect dissolve	[+/-/EFF DISS] button
	Auto transition	[CLR/AUTO TRANS] button

a) When Xpt Hold mode is selected in setup.

b) When Key Disable mode is selected in setup.

*For the setup setting, see “Settings Relating to Keys, Wipes and Frame Memory (Key/Wipe/FM Menu)” (page 366).*

*For details of temporary attributes and available attributes, see “Snapshot Attributes” in Chapter 1 (Volume 1).*

#### Notes

- The cross-point hold and key disable settings are maintained until you next press the [XPT HOLD] button.
- Applying temporary attributes does not affect the contents of the register.
- It is not possible to apply temporary attributes to a master snapshot.

### 5 Press the [ENTER] button.

This recalls the specified snapshot, and the reference region name and recalled register number appear in the display.

If you applied the effect dissolve or auto transition temporary attributes in step 4, the corresponding buttons go off.

When a master snapshot is recalled, the region selection buttons light according to the saved region information.

### **To cancel a snapshot recall operation**

After saving a snapshot, to cancel the recall, press the [UNDO] button.

#### **Note**

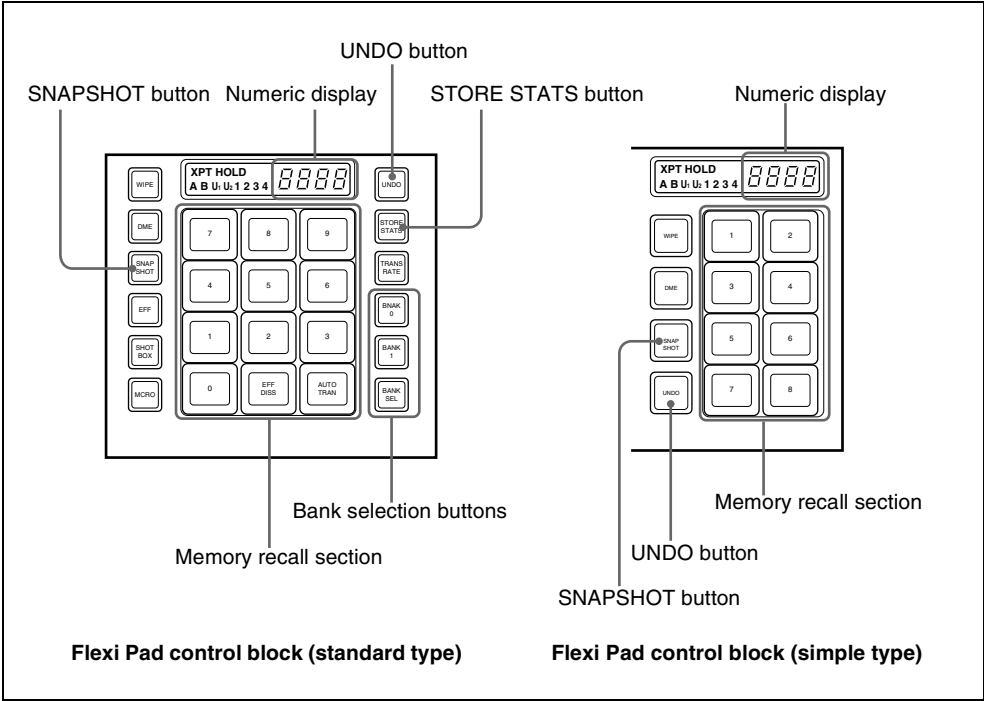
It is not possible to cancel recalling a master snapshot.

## **Creating and saving a master snapshot with the numeric keypad control block**

To create and save a master snapshot with the numeric keypad control block, refer to the operations in “*Creating and Saving a Master Timeline Using the Buttons in the Numeric Keypad Control Block*” (page 225). Note, however, that in place of the [EFF] button in the numeric keypad control block, the [SNAPSHOT] button is used.

# Snapshot Operations in the Flexi Pad Control Block

In the Flexi Pad control block on each of the M/E-1 to M/E-3 and PGM/PST banks, you can only carry out operations on snapshots for that bank. It is therefore not necessary to select a region.

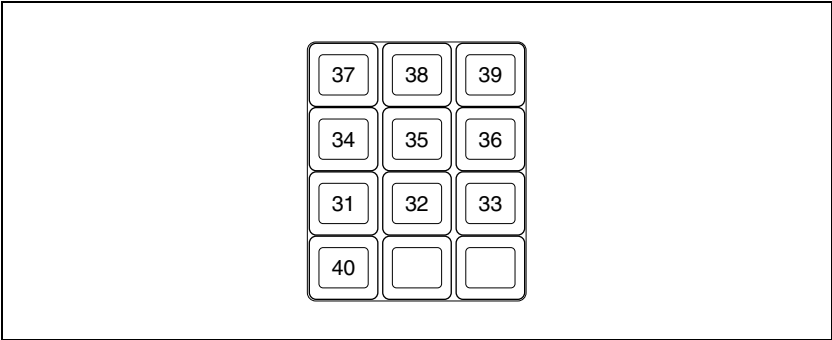


# Banks and Registers

In a standard type Flexi Pad control block, in order to handle the 99 registers, they are considered in groups. These groups are called “banks,” and there are ten banks, numbered from 0 to 9. The correspondence between banks and registers is shown in the following table.

Bank number	Register numbers
Bank 0	1 to 10
Bank 1	11 to 20
Bank 2	21 to 30
Bank 3	31 to 40
Bank 4	41 to 50
Bank 5	51 to 60
Bank 6	61 to 70
Bank 7	71 to 80
Bank 8	81 to 90
Bank 9	91 to 99

**Example:** When you select bank 3, the register numbers allocated to the memory recall section are as follows.



## Operations with a simple type Flexi Pad control block

With a simple type Flexi Pad control block, the registers that can be handled are numbers 1 to 8. Bank operations are therefore not possible. It is also not possible to apply attributes, or to cancel a snapshot save or recall operation once carried out. To use registers 9 to 99, or to cancel a snapshot save operation, use the numeric keypad control block.

# Saving and Recalling Snapshots

## Saving a snapshot

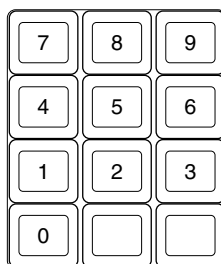
As an example, to save a snapshot on the M/E-1 bank, use the following procedure.

- 1** In the M/E-1 bank, make the settings for the state you want to save as a snapshot.
- 2** In the M/E-1 bank Flexi Pad control block, press the [SNAPSHOT] button.  
This allocates the Flexi Pad control block to snapshot operations. The numeric display shows the last selected bank number and the register number last recalled on the bank.
- 3** Use any of the following methods to select the bank for saving the snapshot.  
(On a simple type Flexi Pad control block, there are no banks, and this operation is not necessary.)

**To select bank 0:** Press the [BANK 0] button.

**To select bank 1:** Press the [BANK 1] button.

**To select any bank from 0 to 9:** Press the [BANK SEL] button, changing the memory recall section display as shown below; select a number from 0 to 9.



The selected bank number appears in the numeric display.

The buttons in the memory recall section change to show the names of the registers in the selected bank, together with the register status.

Using the Setup menu, it is possible to specify which to display, the register name or register number.

**Lit orange:** Register containing a snapshot

**Lit yellow:** Last recalled register

**Not lit:** Register not containing anything

- 4** To apply an attribute, hold down the [SNAPSHOT] button, and in the memory recall section, press a button as follows, turning it on.

Attribute to apply	Button
Effect dissolve	[EFF DISS] button
Auto transition	[AUTO TRANS] button

*For details of attributes, see “Snapshot Attributes” in Chapter 1 (Volume 1).*

**Note**

In the Flexi Pad control block, it is not possible to apply the cross-point hold or GPI output attributes. In a simple type Flexi Pad control block, it is not possible to apply any attributes. To add these attributes, use a menu operation. (See page 250.)

- 5** Still holding down the [SNAPSHOT] button from step **4**, press the memory recall button corresponding to the register in which you want to save.

**Note**

If you press a button which is lit orange or yellow, the existing register contents are overwritten.

The button you pressed lights yellow, and this completes the save operation. The [STORE STATS] button lights amber, and the numeric display shows the selected register number after the bank number.

**To cancel a snapshot save operation**

After saving a snapshot, to cancel the save, hold down the [STORE STATS] button and press the [UNDO] button.

The [STORE STATS] button changes color from amber to green.

**Note**

On a simple type Flexi Pad control block, it is not possible to cancel a snapshot save operation.

## Recalling a snapshot

**Note**

When an M/E bank is not assigned to any region selection button in the numeric keypad control block in a setup setting, it is not possible to recall a

snapshot with the Flexi Pad control block of that M/E bank. (See “Assigning the region selection buttons in the numeric keypad control block” (page 310)).

As an example, to recall a snapshot on the M/E-1 bank, use the following procedure.

**1** In the M/E-1 bank Flexi Pad control block, press the [SNAPSHOT] button.

This allocates the Flexi Pad control block to snapshot operations. The numeric display shows the last selected bank number and the register number last recalled on the bank.

**2** Select the bank for recall.

See step **3** (page 246) in “Saving a snapshot.”

**3** To apply temporary attributes, press the following buttons, turning them on.

Control block	Temporary attribute to apply	Button
Cross-point control block	A/B bus cross-point hold	[XPT HOLD] button in the background A/B bus
	Key cross-point hold	[XPT HOLD] button in the key bus <sup>a)</sup>
	Key disable	[XPT HOLD] button in the key bus <sup>b)</sup>
Flexi Pad control block	Effect dissolve	[EFF DISS] button
	Auto transition	[AUTO TRANS] button

a) When Xpt Hold mode is selected in setup.

b) When Key Disable mode is selected in setup.

For the setup setting, see “Settings Relating to Keys, Wipes and Frame Memory (Key/Wipe/FM Menu)” (page 366).

For details of temporary attributes and available attributes, see “Snapshot Attributes” in Chapter 1 (Volume 1).

**Notes**

- The cross-point hold and key disable settings are maintained until you next press the [XPT HOLD] button.
- Applying temporary attributes does not affect the contents of the register.

**4** Press the button in the memory recall section which shows the desired register name.

The button you pressed lights yellow, and this recalls the snapshot.

The numeric display shows the selected register number after the bank number.

### To cancel a snapshot recall operation

After recalling a snapshot, to cancel the recall, press the [UNDO] button.

## Deleting a snapshot

As an example, to delete a snapshot on the M/E-1 bank, use the following procedure.

- 1** In the M/E-1 bank Flexi Pad control block, press the [SNAPSHOT] button.  
This allocates the Flexi Pad control block to snapshot operations. The numeric display shows the last selected bank number and the last recalled register number on the corresponding bank.
- 2** Select the bank for the register containing the snapshot you want to delete.  
*See step 3 (page 246) in “Saving a snapshot.”*
- 3** Hold down the [STORE STATS] button, then hold down the button in the memory recall section displaying the number of the corresponding register.

The button you pressed goes off, and this deletes the snapshot. The [STORE STATS] button lights amber.

#### Note

On a simple type Flexi Pad control block, it is not possible to delete a snapshot.

# Snapshot Operations in the Menus

You can also set snapshot or key snapshot attributes in the Snapshot menu, which also displays the status of the registers. To access the Snapshot menu, press the top menu selection button [SNAPSHOT] in the menu control block. In the Snapshot menu, as well as setting snapshot attributes, you can carry out editing operations on snapshots, including copy and delete.

See “Snapshot Register Editing” (page 255).

## Setting Snapshot Attributes

### Applying snapshot attributes

To apply an attribute to a snapshot, use the following procedure.

- 1 In the Snapshot menu, press VF2 ‘Snapshot’ and HF1 ‘Attribute.’

The Snapshot>Attribute menu appears.

The status area shows the region names, register numbers, and the status and attributes set.

- 2 Press the region display in the upper part of the list to display a selection window, then select the region in the selection window. Selecting multiple regions is also possible. To select all regions, press [ALL].

- 3 Press [OK].

The selected region name appears in the upper part of the list.

- 4 Using any of the following methods, select the register.

- Press directly on the list in the status area.
- Press the arrow keys to scroll the reverse video cursor.
- Turn the knobs.

Knob	Parameter	Adjustment	Setting values
1	Register	Register number	1 to 99
2	Num	Select number of registers	1 to 99

- To select all registers, press [ALL].

- 5 In the <Attribute> group, press the buttons for the attributes you want to apply, turning them on.

Carry out the following procedures for each of the attributes.

### To apply the cross-point hold attributes

- 1 Press [XPT Hold].

The Snapshot>Attribute>Xpt Hold menu appears. The status area shows a list of the currently selected regions and bus names.

- 2 Using any of the following methods, select the register.

- Press directly on the list in the status area. To select one or more buses, press [Plural] and then select buses.
- Press the arrow keys to scroll the reverse video cursor.
- Turn the knobs.

Knob	Parameter	Adjustment	Setting values
2	Destination <sup>a)</sup>	Destination selection	1 to 128
3	Bus <sup>b)</sup>	Bus name selection	–

a) Appears when the region is RTR.

b) Appears when the region is other than RTR.

- To select all registers, press [ALL].

- 3 When the region is set to RTR (Router) only, press [RTR Level].

A window appears for selecting the router level.

- 4 Press the level for which you want to set the cross-point hold, turning it on, and press [OK]. To select all levels, press [ALL].

- 5 Press [On].

This enables cross-point hold on the selected bus or buses.

To switch cross-point hold off, press [Off].

### To apply the effect dissolve attribute

- 1 Press [Effect Dissolve], turning it on.

- 2 Turn the knob to set the effect dissolve duration.

Knob	Parameter	Adjustment	Setting values
3	Eff Diss Duration	Dissolve duration	0 to 999 (frames)

### To set the duration for a dissolve set as a temporary attribute effect

To set the duration for a dissolve set as a temporary attribute effect in the numeric keypad or Flexi Pad control block, turn the knob.

Knob	Parameter	Adjustment	Setting values
5	Temp Dur	Temporary attribute dissolve duration	0 to 999 (frames)

### To apply the auto transition attribute

Press [Auto Transition], turning it on.

### To apply the GPI output attribute

- 1 Press [GPI Output], turning it on.
- 2 Turn the knob to set the port number.

Knob	Parameter	Adjustment	Setting values
4	GPI Out Port	GPI output port number	1 to 8

*For details of attributes and available attributes, see “Snapshots” in Chapter 1 (Volume 1).*

## Snapshot Status Display

The Snapshot>Attribute menu displays the following information.

*For details of how to access the Snapshot>Attribute menu, see page 250.*

**Region name:** The selected region name appears in the upper part of the list.

**Register number**

**Register name**

**Write-protected status:** When the register is write-protected, an “L” (for “lock”) appears.

**Empty status:** When the register is empty, an “E” (for “empty”) appears.

**Attribute settings:** The attributes set for a register are shown by the following character codes.

**When the cross-point hold is set:**

Displayed character codes	Attributes set
A, B	Cross-point hold is set for the A or B background bus.
1, 2, 3, 4	Cross-point hold is set for key bus 1, 2, 3, or 4.
U1, U2	Cross-point hold is set for the utility 1 or utility 2 bus.
D2	Cross-point hold is set for video bus selected for 2nd DME channel.
FvFkBvBk	Cross-point hold is set for all of the DME front video bus, DME front key bus, DME back video bus, and DME back key bus.
Aux	Cross-point hold is set for one of the AUX buses.
Mon	Cross-point hold is set for one of the monitor buses.
Fm1, Fm2	Cross-point hold is set for one of the frame memory 1 and 2 buses.
RTR	Cross-point hold is set for the Router region.

#### When an effect dissolve is set:

Displayed character codes	Attributes set
Duration value	The effect dissolve attribute is set, with the displayed duration.

#### When an auto transition is set:

Displayed character codes	Attributes set
T	Auto transition is set.

#### When a GPI output is set:

Displayed character codes	Attributes set
Port number	GPI output is set for the port of the displayed number.

## Setting Key Snapshot Attributes

### Applying key snapshot attributes

To apply an attribute to a key snapshot, use the following procedure.

- 1 In the Snapshot menu, press VF5 'Key Snapshot' and HF1 'Attribute.'  
The Snapshot>Key Snapshot>Attribute menu appears.

The status area shows the region names, register numbers, and whether the registers are locked or not.

**2** Press the region display in the upper part of the list to display a selection window, then select the region in the selection window. Selecting multiple regions is also possible.

**3** Press [OK].

The selected region name appears in the upper part of the list.

**4** Using any of the following methods, select the register.

- Press directly on the list in the status area.
- Press the arrow keys to scroll the reverse video cursor.
- Turn the knobs.

Knob	Parameter	Adjustment	Setting values
1	Register	Register number	1 to 4
3	Num	Select number of registers	1 to 4

- To select all registers, press [All].

**5** In the <Recall Mode> group, select one of the following modes for save and recall operations.

**XPT:** Only the key material selection data is saved or recalled.

**Modifier:** Only the key modifier settings are saved or recalled.

**Transition:** Only the independent key transition settings are saved or recalled.

---

## Creating and Saving a Master Snapshot

To save a master snapshot in the Snapshot menu, after recalling the Snapshot>Master Snapshot>Store menu, refer to the operations in “*Creating and Saving a Master Timeline With the Menu*” (page 227).

### Recalling the Store menu

Carry out the following procedure.

**1** Do either of the following.

- In the menu control block, press the top menu selection button [SNAPSHOT].

- In the numeric keypad control block, press the [SNAPSHOT] button twice in rapid succession.

The Snapshot menu appears.

## 2 Press VF1 ‘Master Snapshot’ and HF1 ‘Store.’

The Master Snapshot>Store menu appears.

The status area shows the master snapshot register names, register lock status, register number for each region, and so on.

## 3 If required, press the following buttons in the status area to change the region display.

**M/E, P/P:** indicate assignment of M/E-1 (“M/E1”), M/E-2 (“M/E2”), M/E-3 (“M/E3”), and P/P (“P/P”).

**User:** User1 (“USR1”) to User8 (“USR8”)

**DME:** indicate assignment of DME ch1 (“DME1”), ch2 (“DME2”), ch3 (“DME3”), ch4 (“DME4”), ch5 (“DME5”), ch6 (“DME6”), ch7 (“DME7”), and ch8 (“DME8”).

**Misc:** RTR (“Router”)

---

## Snapshot Register Editing

You can carry out the following editing on snapshot registers.

(You can use similar procedures also on master snapshot, wipe snapshot, DME wipe snapshot and key snapshot registers.)

- **Lock:** Write-protect the contents of the register.
- **Copy:** Copy the contents of one register to another register.
- **Move:** Move the contents of one register to another register.
- **Swap:** Swap the contents of two registers.
- **Delete:** Delete the contents of a register.
- **Name:** Attach a name to a register.

*For details of snapshot register operations, see “Effect Register Editing” (page 231).*



## Chapter 15 Utility/Shotbox

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# Utility Execution

You can assign actions such as menu shortcuts, function enabling and disabling, and recalling shotbox or macro registers to buttons in the menu control block and utility/shotbox control block. Use the setup menu to make the assignment.

*For details of the menu control block and utility/shotbox control block, see “Menu Control Block” and “Utility/Shotbox Control Block” in Chapter 2 (Volume 1).*

*For details of the settings for assigning functions to buttons, see “Setting Button Assignments (Prefs/Utility Menu)” (page 326).*

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## Executing a Utility With the User Preference Buttons (Menu Control Block)

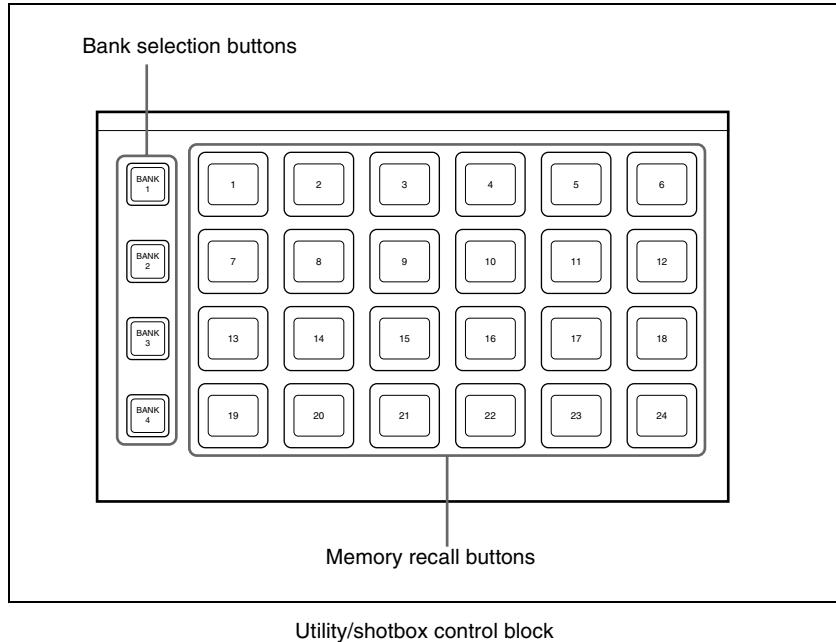
In the setup menu, you can assign any eight actions to the user preference buttons in the menu control block.

### To execute an assigned action

Press the corresponding user preference button ([PREFS 1] to [PREFS 8]).

- In the case of a function on/off action, the button you pressed lights amber, and this enables the function.  
To disable the function, press the button once more.
- For other actions, the button you pressed momentarily lights amber, and then the function is executed.

## Executing a Utility in the Utility/Shotbox Control Block



By default, the memory recall buttons in the utility/shotbox control block are assigned to shotbox registers 1 to 96, in banks 1 to 4 (*see page 270*), but in the setup menu, you can assign these to any 96 actions.

### To execute an assigned action

Use the following procedure.

*When the action is to execute a shotbox register, follow the procedure in “Shotbox Execution in the Utility/Shotbox Control Block” (page 270).*

- 1** Press one of the bank selection buttons [BANK1] to [BANK4] to select a bank.

- The bank selection button you pressed lights amber.
- For the selected bank, the memory recall buttons show the button numbers and corresponding button states. If a button has been given a name in the setup menu, this name appears.

**Not lighted:** buttons with nothing saved

**Lit orange:** buttons saving a utility command or menu shortcut



- 2** Press the memory recall button for which the action you want to execute has been registered.
- In the case of a function on/off action, the button you pressed lights green, and this enables the function.  
To disable the function, press the button once more.
  - For other actions, the button you pressed momentarily lights green, and then the function is executed.

# Shotbox Register Creation

The term “shotbox” refers to a function whereby for each specified region any snapshot or keyframe effect can be recalled simultaneously. For each region, any snapshot or keyframe effect number can be specified to be recalled. There is also a setting to enable or disable the auto run function.

*For a shotbox overview, see “Shotbox” in Chapter 1 (Volume 1).*

You can create (save) shotbox registers in the following control blocks.

- Numeric keypad control block (See “Numeric Keypad Control Block” in Chapter 2 (Volume 1).)
- Menu control block (See “Menu Control Block” in Chapter 2 (Volume 1).)

## Creating a Shotbox Register in the Numeric Keypad Control Block

When you create a shotbox register in the numeric keypad control block, you carry out separate operations in respect of the snapshot setting data and the effect setting data, and save in the register. The procedure described here makes the snapshot settings first, followed by the effect settings.

### Creating a shotbox register

Use the following procedure.

- 1** In the numeric keypad control block, press the [SNAPSHOT] button, turning it on.  
This assigns the numeric keypad control block to snapshot operations.
- 2** Specify the register number of the snapshot you want to save in a shotbox register, and then recall it for each region.

*For details of the procedure for recalling a register, see “Recalling a snapshot from the numeric keypad control block” (page 241).*

- 3** Press the [SHOTBOX] button, turning it on.  
This assigns the numeric keypad control block to shotbox operations.
- 4** Press the [STORE] button, turning it on.

The [SNAPSHOT] button lights green.  
If not lighted, press the [SNAPSHOT] button to turn it on.

**Note**

Only in [SHOTBOX] operation mode with the [STORE] button lit, the [SNAPSHOT] button or [EFF] button lights green to indicate that a setting operation is in progress for the purpose of saving snapshot data or effect data in a shotbox register.

**5** Press the region button for the snapshot you want to save, turning it on.

**6** Enter the desired shotbox register number with the numeric keypad buttons.

To find an empty register, instead of entering a number, press the [.] (period) button.

The display shows the relevant register numbers. When a register number is postfixed with an “E,” the register is empty.

**7** Press [ENTER].

This saves the region you turned on in step **5**, and the register number you recalled for that region as a snapshot setting in a shotbox register, and the [STORE] button goes off. At the same time, the [RCALL] button lights.

**8** In the numeric keypad control block, press the [EFF] button, turning it on.

**9** Specify the register number of the keyframe effect you want to save in a shotbox register, and then recall it for each region.

*For details of the procedure for recalling a register, see “Recalling a register” (page 193).*

**10** Referring to steps **3** to **5**, carry out the setting operation for effect register saving. In step **4**, however, press the [EFF] button, lighting it green.

**11** Enter the shotbox register number specified in step **6** using the numeric keypad buttons.

**12** Press the [ENTER] button.

This saves the effect setting in a shotbox register, and the [STORE] button goes off. At the same time, the [RCALL] button lights.

### To change the contents of a shotbox register

After recalling the shotbox register you want to change, referring to the previous item “*Creating a shotbox register*,” change the contents of the shotbox register, and save.

### To check the region saved in a shotbox register

During operations to change the contents of a shotbox register, to check which region is saved in the register, use the following procedure.

- 1** With the [SHOTBOX] button lit, press the [STORE] button, turning it on.
- 2** Press the required button, as follows, turning it on.

**To check the snapshot region:** [SNAPSHOT] button

**To check the effect region:** [EFF] button

- 3** Hold down the [STORE] button.

While this button is held down, the button for the saved region lights. Releasing the button returns you to the state before holding down the [STORE] button.

#### Note

While the [STORE] button is lit, the mode selection buttons ([TRANS RATE] button and so on) in the numeric keypad control block do not operate. To change the mode, press the [RCALL] button or [SHOTBOX] button so that the [STORE] button goes off.

---

## Creating a Shotbox Register Using the Menus

### Accessing the Shotbox menu

Carry out creation and editing of shotbox registers in the Shotbox menu.

To access the Shotbox menu, use either of the following methods.

- In the menu control block, press the top menu selection button [SHOTBOX].
- In the numeric keypad control block, press the [SHOTBOX] button twice in rapid succession.

### Creating a shotbox register

Use the following procedure.

- 1** In the Shotbox menu, press VF1 ‘Register’ and HF1 ‘Store/Recall.’  
The Store/Recall menu appears.

In the status area, the settings for each register appear as follows.

**Region settings:** Appear as “Sxxx” when a snapshot is allocated, and as “Exxx” when an effect is allocated. (xxx is the register number.) The register name also appears. If nothing is allocated, nothing appears in the display.

**Register lock setting:** When the register is write-protected, an “L” (for “lock”) appears.

**Empty status:** When the register is empty, an “E” (for “empty”) appears.

**Auto run setting:** When this is enabled, so that an effect is executed simultaneously with recall, “AR” appears.

**Shotbox register name:** This shows the shotbox register name.

- 2
- If necessary, switch the region display by pressing one of the following buttons in the status area.

**M/E, P/P:** Shows the allocations for M/E-1 (“M/E1”), M/E-2 (“M/E2”), M/E-3 (“M/E3”), and P/P (“P/P”).

**User:** Shows the allocations for User1 (“USR1”), User2 (“USR2”), User3 (“USR3”), User4 (“USR4”), User5 (“USR5”), User6 (“USR6”), User7 (“USR7”), and User8 (“USR8”).

**DME:** Shows the allocations for DME ch1 (“DME1”), ch2 (“DME2”), ch3 (“DME3”), ch4 (“DME4”), ch5 (“DME5”), ch6 (“DME6”), ch7 (“DME7”), and ch8 (“DME8”).

**Dev1-8:** Shows the allocations for Device1 (“DEV1”), Device2 (“DEV2”), Device3 (“DEV3”), Device4 (“DEV4”), Device5 (“DEV5”), Device6 (“DEV6”), Device7 (“DEV7”), and Device8 (“DEV8”).

**Dev9-12:** Shows the allocations for Device9 (“DEV9”), Device10 (“DEV10”), Device11 (“DEV11”), and Device12 (“DEV12”).

**Misc:** Shows the allocations for P-Bus (“PBUS”), GPI (“GPI”), and Router (“RTR”).

- 3
- Using any of the following methods, select the register you want to create (or edit).

  - Press directly on the list appearing in the status area.
  - Press the arrow keys to scroll the reverse video cursor.
  - Turn the knob.

Knob	Parameter	Adjustment	Setting values
1	Shotbox Reg	Shotbox register number	1 to 99

- 4
- Press [Edit].

The Edit menu appears, and it is now possible to make the settings for the specified register.

You can also use knob 1 to select the register in this menu.

In the status area, the shotbox register status for each region appears.

- 5** Using any of the following methods, select the desired region. You may select more than one region.
- Press directly on the region display in the status area, turning it to reverse video.
  - Press [ALL] to select all regions.
  - To select all switcher-related regions (M/E, P/P, USER), press [SWR ALL].
  - To cancel a selection, press once more to return to the normal display.

- 6** In the <Assign> group, select the snapshot or effect to be allocated to the region.

**Snapshot:** Allocate a snapshot register.

**Effect:** Allocate a keyframe effect.

- If the selected register is locked, a confirmation message appears asking whether or not to cancel the operation. Press [OK] to return to the previous menu display without carrying out the registration.
- If the operation is carried out, the region selected in step **5** is registered on the master timeline, and the parameters are now valid.

- 7** Depending on the selection in step **6**, set the parameters as follows.

• **When a snapshot is selected**

Knob	Parameter	Adjustment	Setting values
3	Snapshot	Snapshot register number	1 to 99

• **When an effect is selected**

Knob	Parameter	Adjustment	Setting values
3	Effect	Keyframe effect number	1 to 99 <sup>a)</sup>

a) For the DME region, you can also set register numbers 101 to 199, 201 to 299, and 301 to 399.

- 8** To run the allocated effect as soon as it is recalled, press [Auto Run], turning it on.

- 9** Repeat steps **5** to **8** as required.

- 10** In the <Store> group, press [Store] to save the setting.

**To return to the state before saving the setting**

In the <Store> group, press [Undo].

**To execute the settings to check them**  
Press [Recall] to execute the shotbox.

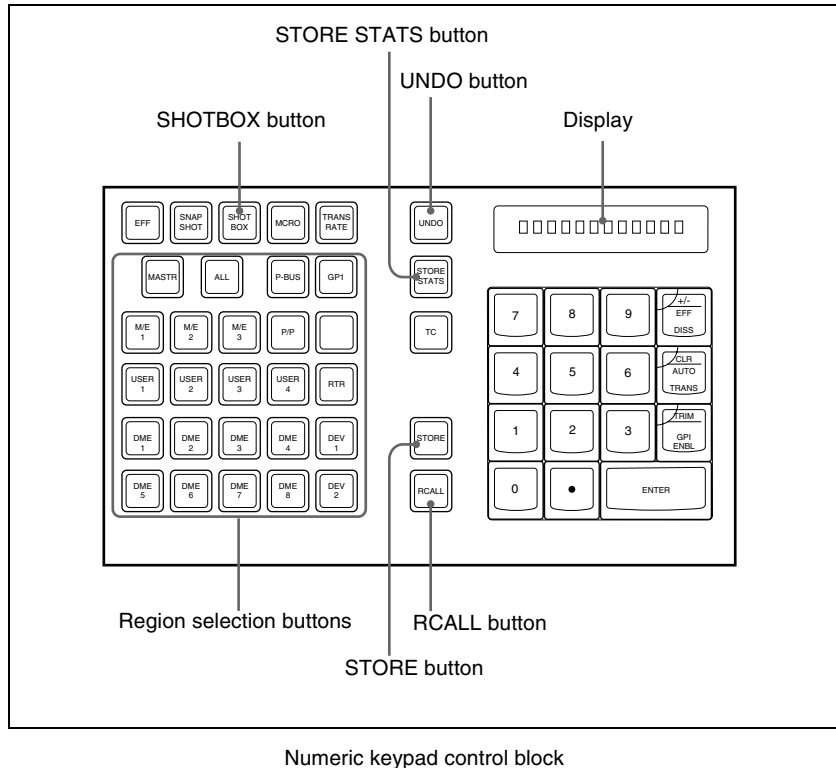


# Shotbox Execution

You can recall (and run) shotbox registers from the following control blocks. This section describes the various methods of operation.

- Numeric keypad control block (*see page 267*)
- Flexi Pad control block (*see page 268*)
- Utility/shotbox control block (*see page 270*)

## Shotbox Execution From the Numeric Keypad Control Block



To carry out shotbox execution in the numeric keypad control block, use the following procedure.

- 1 In the numeric keypad control block, press the [SHOTBOX] button, turning it on.
  - This allocates the numeric keypad control block to shotbox operations.
  - The [RCALL] button lights amber.
  - The display shows the last recalled register number.
- 2 With the numeric keypad buttons, enter the desired register number.
  - The display now shows the entered register number.
  - If the specified register is empty, an “E” automatically appears after the register number.
- 3 Press the [ENTER] button.
  - This runs the specified shotbox register.
  - The number of the recalled register appears in the display.
  - The region selection buttons corresponding to the regions for which the effect is set light.
  - If auto run is set for the specified shotbox register, on recall the effect is immediately executed.
  - If you recall an empty register, then shotbox execution has no effect.

**When auto run is not set for the recalled register**

Simply recalling the register does not run the effect. To do this, in the keycode control block, press the [RUN] button.

---

## Shotbox Execution in the Flexi Pad Control Block

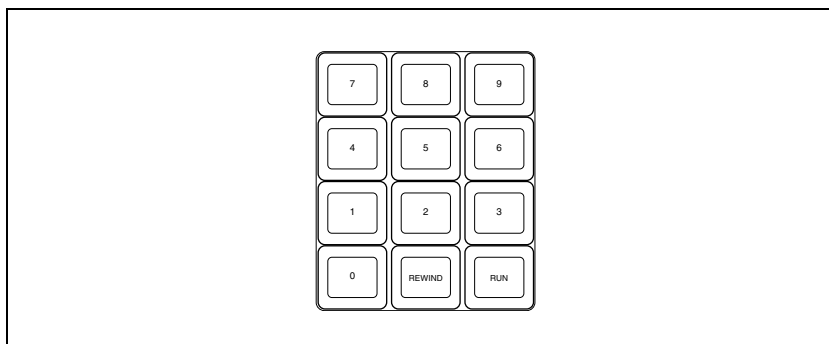
Use the following procedure.

**Note**

In the simple type of Flexi Pad control block, shotbox operations are not possible.

- 1 In the Flexi Pad control block, press the [SHOTBOX] button, lighting the [SHOTBOX] button amber.
  - This allocates the Flexi Pad control block to shotbox operations.
  - The previously selected bank number and the last recalled register number appear in the numeric display.
- 2 Using any of the following methods, select the bank.
  - To select a register in bank 0, press the [BANK 0] button.
  - To select a register in bank 1, press the [BANK 1] button.

- Press the [BANK SEL] button, and when the memory recall section display changes as follows, press the button from 0 to 9 corresponding to the bank you want to select.



- The numeric display shows the selected bank number.
- The buttons in the memory recall section show the names and states of the registers corresponding to the selected bank.  
**Off:** Register in which nothing is saved  
**Lit orange:** Register holding shotbox settings  
**Lit yellow:** Last executed register

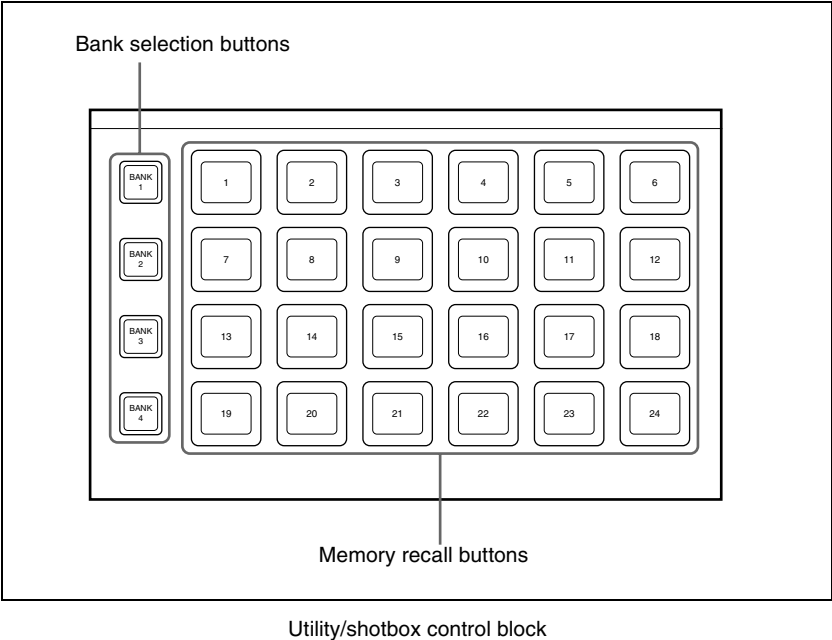
**3** Press the button in the memory recall section corresponding to the register you want to run.

- The selected shotbox register is executed.
- The pressed button lights yellow.
- The numeric display shows the bank number followed by the selected register number.
- If the selected shotbox register has auto run set, on recall the effect is immediately executed.

#### When auto run is not set for the recalled register

Simply recalling the register does not run the effect. To do this, press the [RUN] button.

# Shotbox Execution in the Utility/Shotbox Control Block



In the utility/shotbox control block, as the default setting the memory recall buttons have registers 1 to 96 allocated to banks 1 to 4.

Bank	Register allocation to memory recall buttons
1	1 to 24
2	25 to 48
3	49 to 72
4	73 to 96

For shotbox execution in the utility/shotbox control block, use the following procedure.

- 1 Press one of the bank selection buttons [BANK1] to [BANK4] to select the bank.
  - The pressed bank selection button lights amber.
  - The memory recall buttons show the names and states of the registers corresponding to the selected bank.

**Off:** Register in which nothing is saved

**Lit orange:** Register holding shotbox settings

**Lit yellow:** Last recalled register

**2** Press the memory recall button to which the shotbox register you want to run is allocated.

- The shotbox execution is carried out.
- The pressed button lights yellow.
- The numeric keypad control block [SHOTBOX] button lights, and the region selection button corresponding to the region for which the effect is set also lights.
- If the selected shotbox register has auto run set, on recall the effect is immediately executed.

**When auto run is not set for the recalled register**

Simply recalling the register does not run the effect. To do this, press the [RUN] button in the keyframe control block.

---

# Shotbox Register Editing

You can carry out the following editing on shotbox registers.

- **Lock:** Write-protect the contents of the register.
- **Copy:** Copy data from one register to another.
- **Move:** Move data from one register to another.
- **Swap:** Swap the contents of two registers.
- **Delete:** Delete the contents of a register.
- **Name:** Attach a name to a register.

The procedures for shotbox register editing are similar to the procedures described in “*Effect Register Editing*” (page 231). Unlike in effect register editing, however, it is not necessary to specify a region in shotbox register editing.

## Chapter 16 Engineering Setup

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# Setup for the Whole System

Carry out operations relating to setup in the Engineering Setup menu.  
To access the Engineering Setup menu, press the top menu selection button [ENG SETUP].

*For an overview of setup, see “Setup” in Chapter 1 (Volume 1).*

## Setting the unit ID

When there are two switchers and connected DME units on the same network, it is necessary to set the unit ID on each device, as follows.

Switcher	ID
1st switcher	1
2nd switcher	2

DME	ID
DME1 for 1st switcher (channels 1 to 4)	1
DME2 for 1st switcher (channels 5 to 8)	2
DME1 for 2nd switcher (channels 1 to 4)	3
DME2 for 2nd switcher (channels 5 to 8)	4

*For more details of how to make the unit ID settings, refer to the installation manual for the particular device.*

## Network Settings (Network Config Menu)

To make the network settings, use System>Network Config menu.

### To display the Network Config menu

In the Engineering Setup menu, select VF1 ‘System’ and HF1 ‘Network Config.’

The status area shows the device ID, and Control LAN and Data LAN IP addresses for each device excluding the DCU.

## Making the network settings

Use the following procedure.

- 1 In the System>Network Config menu, press [Auto Config].

This automatically checks all devices (excluding the DCU) connected to the Data LAN.

- 2 Once switch to another menu, then display the Network Config menu again.

Now the status area of the System>Network Config menu shows the results of the automatic check.

**Note**

Be sure to carry out this operation after reconfiguring the system, or after a software upgrade.

---

## System Settings (System Config Menu)

To make the system settings, use the System>System Config menu.

### To display the System Config menu

In the Engineering Setup menu, select VF1 'System' and HF2 'System Config.'

**Note**

After changing any of the following settings, be sure to press [Execute] to save the new values. If you want to cancel the setting changes without saving them, press [Clear].

## Selecting the system operation mode

In the <Operation Mode> group of the System>System Config menu, select one of the following.

**Single Proc:** Control mode in which the panel controls a switcher and up to two DMEs connected to the switcher.

**Single Simul:** Control mode in which the panel controls a switcher and a DME connected to the switcher. The operating bank and DME are interlocked. (See "System Setup" in Chapter 1 (Volume 1).)

**Dual Simul:** Control mode in which the panel controls two switchers and the DME connected to each switcher simultaneously.

**Notes**

- When operating an MVS-8000 system and a DVS-9000 system in Dual Simul mode, simultaneous operation may not be possible because of differences between the systems in some functions.

- For an MVS-8000 system, SD systems and HD systems store different numbers of frames in frame memory. When operating an SD system and an HD system in Dual Simul mode, use the HD system (which stores fewer frames) as the first system (the system whose switcher ID is 1).

## Specifying the switcher controlled by the control panel

Use the following procedure.

- 1 In the System>System Config menu, press the [Panel Assign] button.  
The Panel Assign menu appears.
- 2 Select the switcher to be controlled by the selected control panel, as follows.
  - **If there is only one switcher on the network**, in the <1st Switcher> group, set [SWR1] to On, and in the <2nd Switcher> group, set [SWR2] to Off.
  - **If there are two switchers on the same network**, in the <1st Switcher> group, select the switcher to be operated.  
When the system operation mode (*see previous item*) is set to [Dual Simul], the switcher status set in <1st Switcher> appears on the control panel.
- 3 To set the selected control panel as tally control master panel, press [Tally Master], turning it on.  
  
If there are multiple panels and processors, the control panel for which [Tally Master] is set to On carries out tally control for the whole system.

### Note

When there are multiple control panels, make sure that one of them has [Tally Master] set to On. When you change the master panel, be sure to copy and save the setup tally (TLY) and router (RTR) data in the File menu, and make the same settings for other panels.

## Specifying the DME connected to the switcher

Use the following procedure.

- 1 In the System>System Config menu, press [Switcher Assign].  
The Switcher Assign menu appears.
- 2 Using either of the following methods, select the switcher to which the settings apply.



- In the list appearing in the menu, press the desired device name.
- Press the arrow keys to scroll the reverse video cursor.

The selected switcher appears in reverse video.

If there is only one switcher on the network, carry out the SWR1 setting (for the first switcher) only.

### 3 Make the DME settings as follows.

- **When making DME settings for SWR1 (the first switcher)**, for the first DME, select [DME1] in the <1st DME> group. For the second DME, select [DME2] in the <2nd DME> group. When a second DME is not connected, turn all buttons in the <2nd DME> group off.
- **When making DME settings for SWR2 (the second switcher)**, for the first DME, select [DME3] in the <1st DME> group. For the second DME, select [DME4] in the <2nd DME> group. When a second DME is not connected, turn all buttons in the <2nd DME> group off.

#### Setup in “Dual Simul” mode

When the system operation mode (*see page 276*) is set to “Dual Simul,” the following setting is required for setup of the two switchers and connected DME units.

In the <Setup Target> group, set the [System 1] or [System 2] button to On, then carry out the setup. You can also set both to On, and make the settings simultaneously on the two systems.

---

## Setting the Signal Format and Screen Aspect Ratio (Format Menu)

To set the format, that is, the frame frequency and number of scan lines handled by each device, and the screen aspect ratio, use the System>Format menu.

#### To display the Format menu

In the Engineering Setup menu, select VF1 ‘System’ and HF3 ‘Format.’

#### Note

After changing any of the following settings, be sure to press [Execute] to save the new values. If you want to cancel the setting changes without saving them, press [Clear].

Note that since the [Execute] button is in the System>Format menu, when you make settings in a submenu, it is essential to remember to return to the System>Format menu and press the [Execute] button to save.

### When using 720p format (on a 4M/E or 3M/E system)

On a 4M/E system or a 3M/E system with a board with multi-format support, it is not possible to use an M/E reentry signal in an overlaid manner on the key bus or utility 1 bus even when not using the color corrector.

**Example 1:** When M/E-1 is selected on the M/E-2 background A bus (or background B bus, key bus, utility 1 bus, or utility 2 bus), it is not possible to select M/E-2 on the M/E-3 key bus or utility 1 bus.

**Example 2:** When M/E-2 is selected on the M/E-3 background A bus (or background B bus, key bus, utility 1 bus, or utility 2 bus), it is not possible to select M/E-3 on the PGM/PST key bus or utility 1 bus.

In the case of a 3M/E system, by setting bit 1 of switch S101 on the CA-44 board to the “Off” position, you can remove this restriction. Note, however, that this slightly reduces the input window.

## Setting the signal format

Use the following procedure.

- 1** In the <Frame/Field Rate> group of the System>Format menu, select the system operating frequency.

*For more details, see “System Setup” in Chapter 1 (Volume 1).*

- 2** Press [Active Line/Aspect].

The Active Line/Aspect menu appears.

The status area shows the number of active scan lines and screen aspect ratio for the switcher and connected DME(s).

- 3** In the <Active Line> group, select the number of active scan lines.

The number of scan lines that can be selected depends on the operating frequency selected in step **1** and the switcher model.

## Setting the screen aspect ratio

Use the following procedure.

- 1** In the System>Format>Active Line/Aspect menu, select one of the following from the <Screen Aspect> group.
  - 16:9
  - 4:3
  - Independent: Set the screen aspect ratio separately for M/E, P/P, and USER on the switcher, and for each channel independently on the DME.
- 2** If you selected [Independent] in step **1**, select from the following.

**Switcher Aspect:** Make the setting for the switcher.

**DME Aspect:** Make the setting for the DME.

A menu appears according to the selection.

- 3** Carry out either of the following, depending on the selection you made in step **2**.

**When you selected [Switcher Aspect]:** In each of the <M/E-1>, <M/E-2>, <M/E-3>, <P/P>, and <USER> groups, select either [16:9] or [4:3].

**When you selected [DME Aspect]:** For each of the <CH1> to <CH4> groups, select either [16:9] or [4:3].

## Switching the input reference signal for HD system

In the <Ref Input Format> group of the System>Format menu, switch the input reference signal selection.

- Tri Sync
- BB

*For details, see “System Setup” in Chapter 1 (Volume 1).*

---

## Selecting the State After Powering On (Start Up Menu)

To set the initial state at start-up, use the System>Start Up menu.

### Note

It is not possible to set the DCU state at start-up, but its settings can be saved in the control panel.

### To display the Start Up menu

In the Engineering Setup menu, select VF1 ‘System’ and HF4 ‘Start Up.’

The status area shows the current start-up mode settings of each device.

## Selecting the state at start-up

Use the following procedure.

- 1** In the status area of the System>Start Up menu, select the device to which the settings are to apply.
- 2** In the <Start Up Mode> group, select one of the following modes.

**Resume:** When this is on, Resume mode is enabled.

**Custom:** When this is on, Custom mode is enabled.

*For information about Resume mode and Custom mode, see “System Setup” in Chapter 1 (Volume 1).*

**Note**

The Resume mode is only valid when a switcher or control panel is selected for the setting. In this case, the initial status of the control panel applies only to the key bus delegation button settings.

- 3** When Custom mode is selected, in each of the <Setup> group and <Initial Status> group, select one of the following.

**User:** When this is on, user-defined settings are used for the Setup or Initial Status settings. For the method of saving the user-defined settings, *see the next item*.

**Factory:** When this is on, factory default settings are used for the Setup or Initial Status settings.

- 4** To confirm the settings, press [Execute]. If you want to cancel the setting changes without saving them, press [Clear].

When [Execute] is pressed, a confirmation message appears.

- 5** Select [Yes].

The start-up state settings are saved.

## Saving user-defined settings

### To save the Setup settings

Use the following procedure.

- 1** After selecting the devices to which the settings apply to, in the System>Start Up menu, press [Setup Define].

A confirmation message appears.

- 2** Press [Yes].

This saves the setup settings for the selected devices in non-volatile memory within the respective devices.

*For details about the settings which will be saved, see “Data Saved by [Setup Define] and [Initial Status Define]” (page 582).*

### To save the Initial Status settings

Use the following procedure.

- 1 After selecting the devices to which the settings apply to, in the System>Start Up menu, press [Init Status Define].

A confirmation message appears.

- 2 Press [Yes].

This saves the initial status settings other than the “setup” settings for the selected devices in non-volatile memory within the respective devices. For the control panel, only the settings of the key bus delegation buttons are saved.

*For details about the settings which will be saved, see “Data Saved by [Setup Define] and [Initial Status Define]” (page 582).*

## Setting automatic loading of register data at power on (autoload function)

To have specified data read in at power on, in the System >Start Up menu, press [Power On File Load], turning it on.

This enables the autoload function.

When the autoload function is enabled, a directory “PWON\_LD” appears in the corresponding File menu.

*About saving data which can be loaded by the autoload function, see “Saving Files Recalled by Autoload” (page 443).*

---

## Reset and Initialization (Initialize Menu)

To carry out a reset or memory initialization for a device, use the System>Initialize menu.

### To display the Initialize menu

In the Engineering Setup menu, select VF1 ‘System’ and HF5 ‘Initialize.’

The status area shows the current start-up mode settings.

## Resetting the device and initializing memory

Use the following procedure.

- 1 In the status area of the System>Initialize menu, select the device to which the settings are to apply.
- 2 In the <Initialize> group, select one of the following modes.

**Reset:** Reset the device.

**All Clear:** Initialize memory.

**3** Press [Execute].

A confirmation message appears.

**4** Select [Yes].

Depending on the selection in step **2**, the following is the result.

- When you selected [Reset], a reset is applied to the device causing it to be restarted in the start-up state.
- When you selected [All Clear], all memory in the device is cleared, including snapshots, keyframe effects, setup, and so on, and the device returns to its factory default settings. However, the Network Config, Format, Start Up, and Date/Time settings are not initialized.

---

## Installation and Device Setup (Install/Unit Config Menu)

To install software or firmware in a device, use the System>Install/Unit Config menu.

### To display the Install/Unit Config menu

In the Engineering Setup menu, select VF1 'System' and HF6 'Install/Unit Config.'

The status area shows the version of the software and the firm ware installed in each device.

## Installing software

Use the following procedure.

**1** Insert the memory card holding the software into the memory card slot.

**2** In the Install/Unit Config menu, press [Install].

The System>Install/Unit Config>Install menu appears; the status area shows the following information.

**Upper list:** For each connected device, this shows the device name, current software version (Current), and the latest version that can be installed (Install, Title).

**OK:** Installation already completed.

**On:** For installation, but not completed.

**Error:** An error occurred during installation.

**Cancel:** Installation canceled.

**Lower list:** For the device selected in the upper list, this shows an automatically detected list of software that can be installed on the particular device. Also, software selected as a candidate for installation in the upper list is marked in the lower list with an asterisk.

- 3** If you are satisfied with the currently installed version of all items in the upper list, skip to step **6**.

To change the items to be installed, use any of the following methods to select the relevant device.

- Press directly on the list in the status area.
- Use the arrow keys to scroll the reverse video cursor.
- Turn the knob.

Knob	Parameter	Adjustment	Setting values
1	Device	Device selection	1 and upwards

The display of the lower list changes according to the selected device.

#### To display all related software

Press [Display All Software], turning it on.

Not just the automatically detected software, but the names of all related software for the selected device appear.

- 4** In the lower list, select the software you want to install.

- Press directly on the list in the status area.
- Use the arrow keys to scroll the reverse video cursor.
- Turn the knob.

Knob	Parameter	Adjustment	Setting values
3	No	Software selection	1 and upwards

- 5** Press [Set].

The selection is reflected under “Install” and “Title” in the upper list.

- 6** Press [Install].

The “Install” box shows “On,” confirming that this is to be installed. To cancel this installation setting, press “Install” once more, making the box blank.

- 7** Repeat steps **3** to **6**, to confirm all software to be installed.

- 8** Press [Execute].

A confirmation message appears.

## 9 Press [Yes].

This carries out the installation, and when it completes normally, the “Install” box shows “OK.”

## Displaying installation details

In the System>Install/Unit Config menu, press [Detail Information]. This accesses the Detail Information menu, and displays the detailed information on the software and firmware installed in the currently selected device.

## Making settings required to use the software

BZS-8250	Simple P/P Software
BZDM-9050	Texture Lighting Software (for MVE-9000)
BZS-8050	Editing Control Software <sup>a)</sup>

a) This can be used only with a CCP-8000 series control panel equipped with the MKS-8010A.

To use the software listed above, you are required to enter an install key which validates the software. (If the software has been factory installed, the install key is not required.)

For the method of obtaining an install key, contact your Sony representative. To obtain a key, you may be required to submit the unique device ID of the switcher you are using. You can check the unique device ID in the Install/Unit Config menu of the switcher, using the following procedure.

### To display the unique device ID

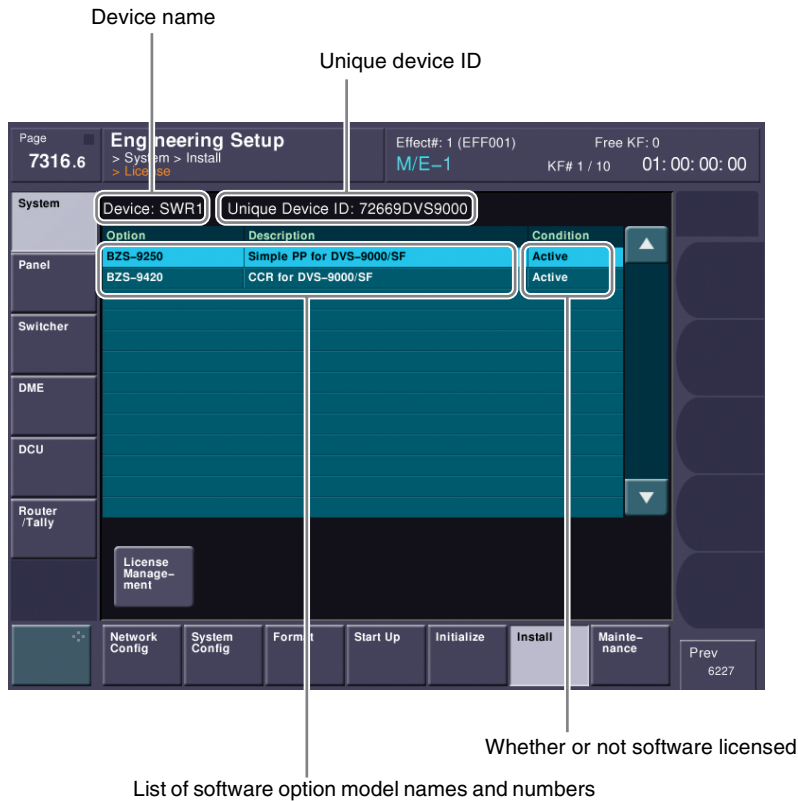
To check the unique device ID, carry out the following procedure.

**1** In the System>Install/Unit Config menu, use either of the following methods to select the device for which you want to register the license.

- Press directly on the list in the status area.
- Press the arrow keys to scroll the reverse video cursor.

**2** Press [License].

The License menu appears as follows.



### To enter the install key

When you have the install key, carry out the following procedure.

- 1** In the System>Install/Unit Config menu, use either of the following methods to select the device for which you want to register the license.
  - Press directly on the list in the status area.
  - Press the arrow keys to scroll the reverse video cursor.
- 2** Press [License].  
The License menu appears.
- 3** Press directly on the name of the software you want to license (the Condition box is blank).
- 4** Press [License Management].

The License Management menu appears.

**5** Press [Activate License].

A keyboard window appears.

**6** Enter the 16-character install key you have been given, and press [Enter].

A license registration completed message appears.

**7** Press [OK].

The status area Condition box shows “Active.”

**8** Using either of the following methods, restart the device.

- In the System>Initialize menu, select only the device for which you registered the license, and press [Reset] in the <Initialize> group.
- Power off and on again.

After restarting, the licensed software is now available for use.

(In case it becomes necessary to cancel the license registration, you can use the following procedure.)

### **To cancel the license registration**

Carry out the following procedure.

**1** In the System>Install/Unit Config menu, use either of the following methods to select the device for which you want to cancel the license registration.

- Press directly on the list in the status area.
- Press the arrow keys to scroll the reverse video cursor.

**2** Press [License].

The License menu appears.

**3** Press directly on the name of the software for which you want to cancel the license registration (the Condition box shows “Active”).

**4** Press [License Management].

The License Management menu appears.

**5** Press [Deactivate License].

A confirmation message appears.

**6** Press [Yes].

A license registration canceled message appears.

**7** Press [OK].

The status area Condition box showing “Active” changes to blank.

**8** Using either of the following methods, restart the device.

- In the System>Initialize menu, select only the device for which you registered the license, and press [Reset] in the <Initialize> group.
- Power off and on again.

After restarting, the software for which the license registration has been canceled is no longer available.

## Adding user texture patterns

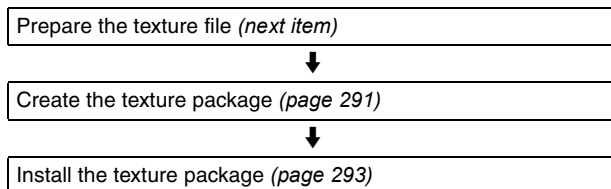
You can add user created texture patterns to the repertory of texture patterns with which the spotlighting function enables the light falls on the image surface.

**Note**

This function is not supported on the MVE-8000/8000A.

*For details of spotlighting, see page 126, and for details of texture patterns, see page 128.*

The procedure for adding a texture pattern is as follows.


**To prepare a texture file**

Create a texture file meeting the following conditions, and save it on a memory card.

**File format:** Windows bmp (“bitmap”) (extension: bmp, 24-bit RGB)

**File name:** alphanumeric (maximum 8 characters) + extension (bmp)

Example: wood\_01.bmp

**Image size (horizontal × vertical):** 128 × 128 to 1024 × 1024 pixels

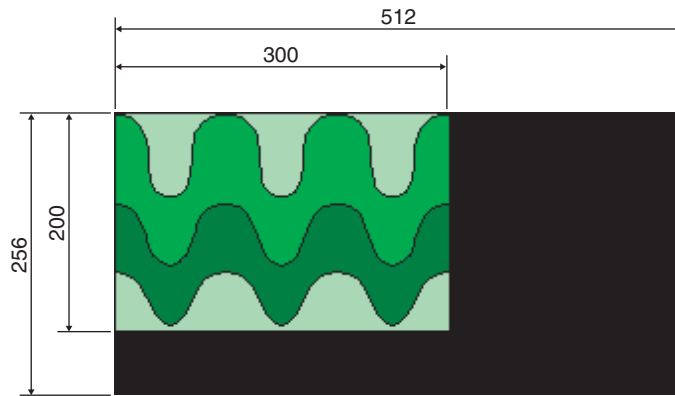
The maximum number of texture files that can be handled by the system is related to the image size of the texture files, as shown in the following table (when all images are the same size).

Dimension (horizontal) \ Dimension (vertical)	Maximum number of texture files handled			
	128 pixels	256 pixels	512 pixels	1024 pixels
128 pixels	64	32	16	8
256 pixels	32	16	8	4
512 pixels	16	8	4	2
1024 pixels	8	4	2	1

### Notes

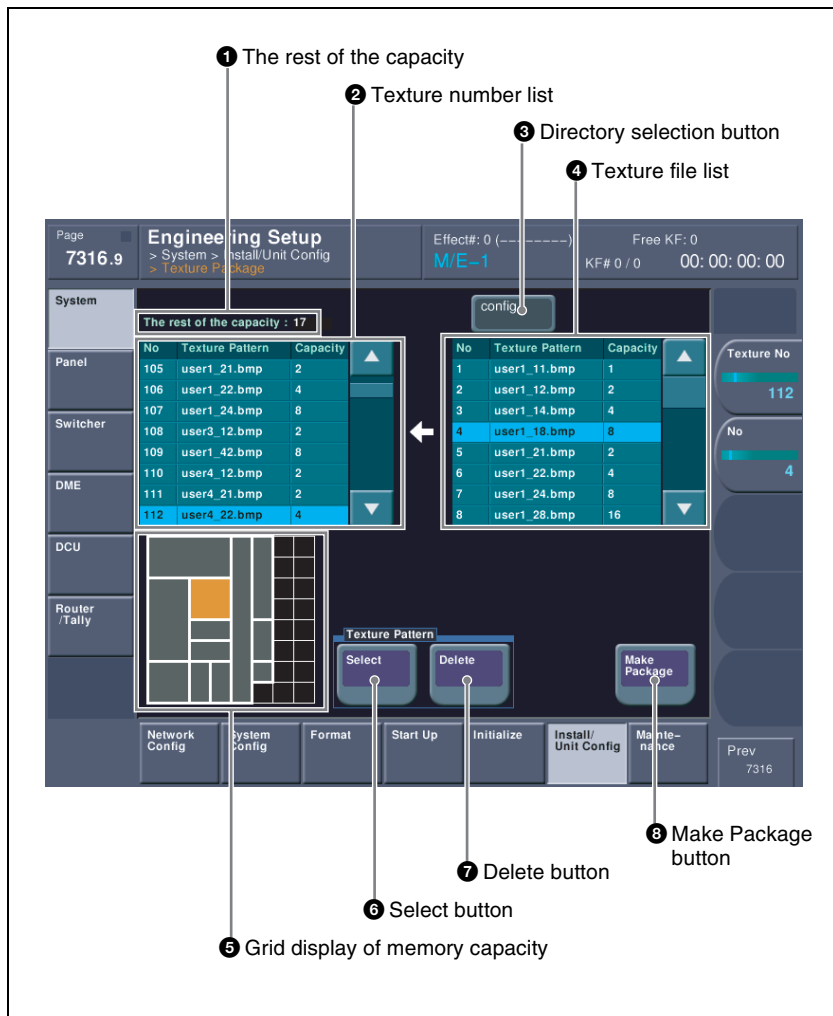
- Different image sizes can be combined, but this affects the total number of texture files that can be handled.
- The number of texture files that can be handled may be reduced, depending on the way in which they are stored in memory (see “Texture Package menu” (page 289)).
- For a texture file with an image size outside the specification, the minimum enclosing image size is applied (see table above), and the region below and to the right is filled with black.

**Example:** a  $300 \times 200$  pixel texture file is treated as  $512 \times 256$  pixels.



### Texture Package menu

To create user texture patterns, use the Texture Package menu.



### ❶ The rest of the capacity (available memory space)

This shows an available memory space in units of  $128 \times 128$  pixels (a maximum of 64 units of memory space is available).

### ❷ Texture number list

This shows the texture numbers (101 to 164) registered in the texture package. The list Capacity shows the file size in units of  $128 \times 128$  pixels (a total maximum of 64 units of texture files can be registered).

**③ Directory selection button**

By pressing this button to display the popup window, you can select a directory on the memory card.

**④ Texture file list**

This shows the texture files stored on the memory card.

If a texture file is stored in a directory, press the directory selection button and select the directory in the popup window, to show a list of files.

The list Capacity shows the file size in units of 128×128 pixels.

**⑤ Grid display of memory capacity**

This shows how the texture files are stored in memory (an 8×8 grid, of 64 squares, each equivalent to 128×128 pixels).

And this shows the location where the texture files are stored in memory by bold frames. The grid for the texture file selected in the texture number list is shown in amber.

**⑥ Select button**

Pressing this button assigns the texture file selected in the texture file list to the number selected in the texture number list.

**⑦ Delete button**

Pressing this button deletes the texture file assigned to the number in the texture number list.

**⑧ Make Package button**

Pressing this button creates the texture package.

**To create a texture package**

To use a user-provided texture pattern with the spotlighting function, it is necessary to convert the texture files to vector files for bump mapping. This operation is referred to as “creating a texture package.”

Use the following procedure.

- 1** Insert the memory card holding the texture file into the memory card slot.
- 2** In the Engineering Setup menu, select VF1 ‘System’ and HF6 ‘Install/Unit Config.’

The Install/Unit Config menu appears; the status area shows the version information for the software installed on the various devices.

- 3** Using any of the following methods, select a DME for which the spotlighting license is valid.
  - Press directly on the list in the status area.

- Press the arrow keys to scroll the reverse video cursor.
- Turn the knob.

#### 4 Press [Texture Package].

##### Note

If you select a device for which the spotlighting license is not enabled, then [Texture Package] is not enabled.

The System>Install/Unit Config>Texture Package menu appears.

*For details of the Texture Package menu, see page 289.*

#### 5 In the texture number list, select the number for which you want to register the texture package, by any of the following methods.

- Press directly on the list in the status area.
- Press the arrow keys to scroll the reverse video cursor.
- Turn the knob.

Knob	Parameter	Adjustment	Setting values
1	Texture No	Texture number selection	101 to 164

#### 6 In the texture file list, select the texture file by any of the following methods.

- Press directly on the list in the status area.
- Press the arrow keys to scroll the reverse video cursor.
- Turn the knob.

Knob	Parameter	Adjustment	Setting values
2	No	Texture file selection	1 and upwards <sup>a)</sup>

a) The range of the setting values depends on the number of saved files on a memory card.

#### 7 In the <Texture Pattern> group, press [Select].

This assigns the texture file selected in step **6** to the number selected in step **5**, and updates the texture number list.

The grid display of memory capacity shows the location where the texture files are stored in memory by bold frames. The grid portion for the texture file selected in the texture number list is shown in amber.

#### 8 Repeat steps **5** to **7**, to assign all of the texture files to texture packages.

**Notes**

- If you assign a texture file that is already in the texture number list to a different texture number, then the previous assignment is deleted. (It is not possible to assign the same texture file to two or more different texture numbers.)
- In the following cases, texture file assignment is not possible.
  - If there is no available memory space (“The rest of the capacity:0” appears)
  - If the selected texture file is too large to fit in the available memory space

**To delete a texture file assignment**

Select the texture file (multiple selections are not possible) you want to delete in the texture number list, and in the <Texture Pattern> group press [Delete].

- 9** To create the texture package, press [Make Package].

A confirmation message appears.

- 10** Select [OK].

The texture package is created in the same location that the texture file is stored on the memory card (extension: zsp, file name generated automatically).

**Notes**

- If you remove the memory card on which the texture file is stored, it is not possible to create the texture package.
- If a texture package is already present on the memory card, it is overwritten by a new texture package.
- If you carry out steps **9** and **10** without having assigned even one texture file, it is not possible to create a texture package.
- If there is insufficient space on the memory card to store the texture package, an error message appears, and the process is aborted. If this happens, delete unwanted files from the memory card using your computer, so that there is enough free space on the memory card, and repeat the process. (As a guide, the space required is approximately equal to total number of bytes of the texture files assigned in steps **5** to **8**.)

**To Install the texture package**

Use the following procedure.

- 1** Insert the memory card holding the texture package into the memory card slot.

- 2 In the Engineering Setup menu, select VF1 'System' and HF6 'Install/Unit Config.'

The Install/Unit Config menu appears; the status area shows the version information for the software installed on the various devices.

- 3 Press [Install].

The System>Install/Unit Config>Install menu appears; the status area shows the following information.

**Upper list:** For each connected device, this shows the device name, current software version (Current), and the latest version that can be installed (Install, Title).

**OK:** Installation already completed.

**On:** For installation, but not completed.

**Error:** An error occurred during installation.

**Cancel:** Installation canceled.

**Lower list:** For the device selected in the upper list, this shows an automatically detected list of software that can be installed on the particular device. Also, software selected as a candidate for installation in the upper list is marked in the lower list with an asterisk.

- 4 Using any of the following methods, select in the upper list a DME for which the spotlighting license is valid.

- Press directly on the list in the status area.
- Use the arrow keys to scroll the reverse video cursor.
- Turn the knob.

Knob	Parameter	Adjustment	Setting values
1	Device	Device selection	1 and upwards

- 5 Press [Display All Software], turning it on.

The lower list shows the texture packages.

- 6 Using any of the following methods, select the texture package you want to install from the lower list.

- Press directly on the list in the status area.
- Use the arrow keys to scroll the reverse video cursor.
- Turn the knob.

Knob	Parameter	Adjustment	Setting values
3	No	Package selection	1 and upwards

- 7 Press [Set].

The selection is reflected under “Install” and “Title” in the upper list.

**8** Press [Install].

The “Install” box shows “On,” confirming that this is to be installed. To cancel this installation setting, press “Install” once more, making the box blank.

**9** To carry out the installation, press [Execute].

A confirmation message appears.

**10** Select [Yes].

This carries out the installation, and when it completes normally, the “Install” box shows “OK.”

## Switching the color correction function

### Note

After making the setting, be sure to finally press [Execute] to confirm the setting. To cancel the setting during the process, press [Clear].

Use the following procedure.

**1** In the System>Install/Unit Config menu status area, select SWR1 or SWR2, where the color correction function is installed.

**2** Press [Unit Config].

- The Unit Config menu appears.
- The status area shows the device name and the currently selected color correction function name.

**3** In the <CCR Config> group, select either of the following.

**Spot CCR:** Enable the spot color adjustment function.

**Secondary CCR:** Enable the secondary color correction function.

**4** Press [Execute].

A confirmation message appears.

**5** Select [Yes].

- This resets the device and switches the function.
- The color correction settings are all reinitialized.

## System Maintenance (Maintenance Menu)

The system date and time, memory card and USB related settings, setup menu lock settings, and so on, appear in the System>Maintenance menu.

### To display the Maintenance menu

In the Engineering Setup menu, select VF1 'System' and HF7 'Maintenance.' In the status area, the current date and time, and details of the memory card appear.

## Setting the date and time

For system date and time settings, use the following procedure.

- 1 With the knobs, adjust the following parameters.

Parameter group [1/2]

Knob	Parameter	Adjustment	Setting values
1	Hour	Hour	0 to 23
2	Min	Minute	0 to 59
3	Sec	Second	0 to 59

Parameter group [2/2]

Knob	Parameter	Adjustment	Setting values
1	Month	Month	1 to 12
2	Day	Day	1 to 31
3	Year	Year	2000 to 2037

The set date and time appears in the "Set" box in the status area.

- 2 Press the [Set Date/Time] button.

This sets the current time to the date and time set in step 1, and the setting in the "Current" box of the status area changes accordingly.

## Displaying memory card information

To display the memory card capacity and device name, use the following procedure.

- 1 Insert the memory card into the memory card slot.
- 2 In the <USB Storage Device> group of the System>Maintenance menu, press [Refresh].

## Formatting a memory card

To format a memory card, use the following procedure.

### Note

Format a memory card before using it for the first time.

- 1** Insert the memory card in the memory card slot.
- 2** In the System>Maintenance menu, using either of the following methods, select the USB device.
  - Press directly on the list appearing in the status area.
  - Press the arrow keys to scroll the reverse video cursor.
- 3** In the <USB Storage Device> group, press [Format].  
A confirmation message appears.
- 4** To carry out the formatting, press [YES].  
This formats the memory card.

## Carrying out the primary setting

To specify a USB device with a storage device connected as a primary device, use the following procedure.

### Note

Without this setting, you cannot use the “Memory Card” item in the File menu to access a memory card on a storage device connected to the USB device.

- 1** In the System>Maintenance menu, using any of the following methods, select the USB device you want to set as primary.
  - Press directly on the list appearing in the status area.
  - Press the arrow keys to scroll the reverse video cursor.
  - Turn the knob.

Knob	Parameter	Adjustment	Setting values
5	Mount Point	USB device selection	1 to 18

- 2** In the <USB Storage Device> group, press [Set Primary].

## Reloading a USB driver

To reload a USB driver, in the System>Maintenance menu, press [Reload USB Driver].

**Note**

If even after this operation the memory card is not recognized, remove the memory card and reinsert it, then try again.

## Initializing the hard disk

If a file system corruption error has occurred on the hard disk, you should initialize the hard disk.

Use the following procedure.

- 1** In the <HDD> group of the System>Maintenance menu, press [HDD Format].

**Note**

When the hard disk is operating normally, pressing [HDD Format] has no effect.

An initialization confirmation message appears.

- 2** To execute the initialization operation, press [Yes]. To cancel, press [No].

If you have pressed [Yes], the hard disk initialization operation is executed, and a finished message appears. If you have pressed [No], the initialization operation is canceled, and the System>Maintenance menu appears again.

- 3** Press [OK].

The processor is reset.

## Locking the setup menu settings

To protect the data, you can inhibit operations in selected setup menus. Use the following procedure. (It is not possible to lock the Setup Operation Lock menu.)

- 1** In the System>Maintenance menu, press [Setup Operation Lock].

The Setup Operation Lock menu appears.

- 2** In the <VF Group> group, select the group including the desired menu.

The status area shows a list of menu numbers and menu names in the selected group.

Subsequent lock operations apply within the group selected here.

- 3** Using any of the following methods, select the menu or the set of menus as candidates for the locking operation.


- Press directly on the list in the status area.
- Use the arrow keys to scroll the reverse video cursor.
- Turn the knobs.

Knob	Parameter	Adjustment	Setting values
1	No	Selection of a menu by its number in the list	1 and upwards
3	Num	Selection of number of menus in the list	1 and upwards

- To select all setup menus within the selected group, press [ALL].

You can also select a menu while it is open. *For details, see the section “To select an opened setup menu for locking” (page 300).*

- 4** Press [Lock Item Select].

This makes the selected menus candidates for locking, and a padlock icon appears in the “Lock” box (in the unlocked state) .

#### Note

If there are already one or more locked menus, selection of lock candidates is not possible.

#### To deselect a lock candidate

After selecting a menu, press [Lock Item Select] once more, to clear the Lock box.

#### To deselect all lock candidates in the selected VF group


Press [Lock Item All Clear].

- 5** Repeat steps **2** to **4**, to select all of the lock candidates.

- 6** Press [Lock].

A keyboard window appears.

- 7** Enter the password with a maximum of 16 characters, and press [Enter].

If the password is correct, the menus selected in the list of candidates are all locked. The padlock icon changes to the locked state .

#### Releasing the lock

When a lock is already applied, use the following procedure.



- 1** In the System>Maintenance>Setup Operation Lock menu, press [Lock].  
A keyboard window appears.
- 2** Enter the password.  
If the password is correct, the lock is released, and the padlock icon disappears.

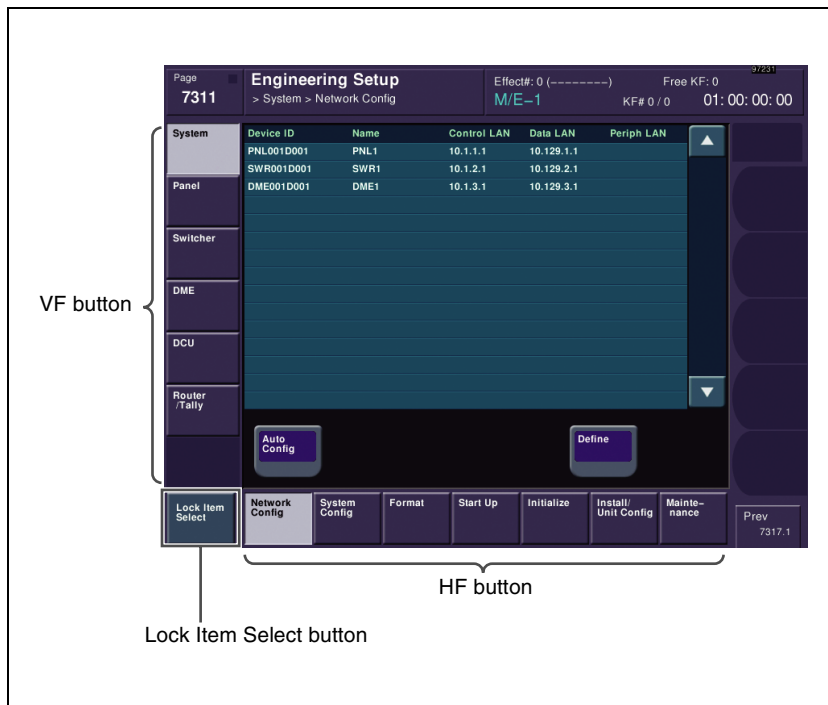
### **To change the lock password**

Use the following procedure.

- 1** In the System>Maintenance>Setup Operation Lock menu, press [Change Password].  
A confirmation message appears.
- 2** Press [Yes].  
A keyboard window labeled “Old Password” appears.
- 3** Enter the old password, and press [Enter].  
If the password is correct, a keyboard window labeled “New Password” appears.
- 4** Enter the new password, and press [Enter].
- 5** Enter the new password once more, for confirmation.  
This sets the new password.

### **To select an opened setup menu for locking**

With the menu you want to lock open, press Lock Item Select button at the lower left.



The Lock Item Select button turns red, and a padlock icon appears.

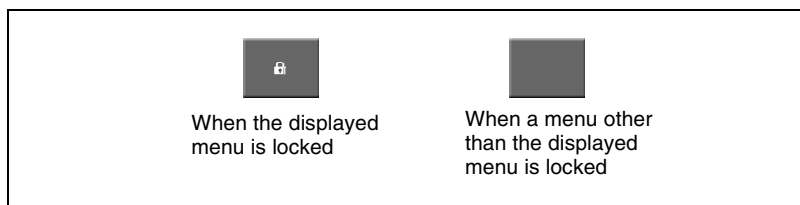


This selection is reflected in the lock candidate list in the Setup Operation Lock menu.

### Note

If there are already one or more locked menus, selection of lock candidates is not possible.

In this case, the indication of the Lock Item Select button changes as follows.



If you want to select lock candidates, first remove the lock in the Setup Operation Lock menu.



# Setup Relating to Operations From the Control Panel

## Overall Control Panel Settings (Config Menu)

To carry out the overall control panel settings, use the Panel>Config menu.

### To display the Config menu

In the Engineering Setup menu, select VF2 'Panel' and HF1 'Config.'

The status area shows the "Bank numbers 1 to 4" (physical locations) of the M/E and PGM/PST banks, the allocated bank names, and whether or not operation is enabled.

## Interchanging the bank order or disabling operation

Use the following procedure.

- 1** In the Panel>Config menu, select the Bank you want to set, using any of the following methods.
  - Press directly on the status area display.
  - Press the arrow keys to scroll the reverse video cursor.
  - Turn the knob.

Knob	Parameter	Adjustment	Setting values
1	Bank	Select the position of the bank you want to set	1 to 4

The Bank selection here indicates the physical position on the control panel, numbering from the top as the 1st Row, 2nd Row, 3rd Row, and 4th Row.

- 2** Select the bank that you want to assign to the selected Bank number in the <M/E Assign> group.

The status area shows the interchanged state of the banks.

### Notes

- It is not possible to assign the same M/E logical bank to more than one physical bank. Be sure to make different M/E assignments.

- When the bank order is changed, the state of region selection button assignment in the numeric keypad control block also changes correspondingly.

**3** For the selected Bank number, in the <M/E Operation> group, select one of the following.

**Enable:** Enable panel display and operation of the bank.

**Disable:** Enable only panel display, and disable operation of the bank.

**Inhibit:** Disable both the panel display and operation of the bank.

**Note**

When this is set to Inhibit, snapshots of the bank are not recalled.

## Assigning two M/E banks to one M/E bank

Use the following procedure.

**1** In the Panel>Config menu, select the M/E bank for which you want to make the setting.

- Press directly on the list in the status area.
- Press the arrow keys to scroll the reverse video cursor.
- Turn the knob.

Knob	Parameter	Adjustment	Setting values
1	Bank	Selection of position of bank for which you want to make the setting	1 to 4 <sup>a)</sup>

a) Depends on the center control panel configuration. When the bank closest to the operator (the 4th row of a 4-M/E system) is selected, [Dual M/E Assign] is disabled.

For example, if the furthest bank from you is assigned to M/E-1, and you want no shift button operation for the bank, select 1 (1st Row) for Bank.

**2** Press [Dual M/E Assign].

This assigns the furthest M/E bank from you to the unshifted (shifted) cross-points and the M/E bank in front of it to the shifted (unshifted) cross-points. For fader lever operations, only the M/E bank closer to you is enabled.

*The shift/non-shift assignment is set by [Dual M/E Xpt Swap]. For more details, see the next section, “Interchanging shifted and non-shifted operations for a dual M/E.”*

### To return to the original assignment

Interchange the bank order (see page 303).

## Interchanging shifted and non-shifted operations for a dual M/E

Use the following procedure.

- 1** In the Panel>Config menu, select the M/E bank for which the dual M/E setting is made.
  - Press directly on the list in the status area.
  - Press the arrow keys to scroll the reverse video cursor.
  - Turn the knob.

Knob	Parameter	Adjustment	Setting values
1	Bank	Bank to be selected for dual M/E setting	1 to 4 <sup>a)</sup>

a) Depends on the center control panel configuration.

- 2** Press [Dual M/E Xpt Swap], toggling it on or off.

**On:** The lower M/E bank is non-shifted, and the higher M/E bank is shifted.

**Off:** The lower M/E bank is shifted, and the higher M/E bank is non-shifted.

## Assigning the key delegation in the downstream key control block

As an example, to assign key 4 of the M/E-1 bank to key delegation button 1 of the downstream key control block 1, use the following procedure.

- 1** In the Panel>Config menu, press the [DSK Fader Assign].  
The DSK Fader Assign menu appears.
- 2** Directly press on the indications in the status area, to select the downstream key control block for which you want to make the setting, and select the key delegation.  
Here, press on the intersection of the “1st Module” column and “Key1 Assign” row.
- 3** In the <M/E Select> group, select the bank of the key you want to assign.  
Here, select [M/E-1] as an example.
- 4** In the <Key Link Select> group, select the key you want to assign.  
Here, select [Key4] as an example.
- 5** To disable the fader lever of the selected downstream key control block, select [Disable] in the <Fader Assign> group.

To enable the fader lever, select one of the following in the <Fader Assign> group, determine the key to which the fader lever operation applies.

**All:** Key selected with one of the key delegation buttons

**Key1:** Key assigned to key delegation button 1 ([DSK1] button)

**Key2:** Key assigned to key delegation button 2 ([DSK2] button)

**Key3:** Key assigned to key delegation button 3 ([DSK3] button)

**Key4:** Key assigned to key delegation button 4 ([DSK4] button)

## Linking switcher bus and router destination

To provide links between the switcher bus and router destination, make the following settings as required.

**Matrix selection:** Select the target of link setting from the eight matrices (1 to 8).

**Matrix position definition:** Set the start address and level for the source and destination on the S-Bus.

**Link table setting:** Link a switcher cross-point button and matrix source.

**Link bus setting:** Link a switcher bus address and router destination.

### To select a matrix number

Use the following procedure.

- 1** In the Panel>Config menu, press [External Bus Link].

The External Bus Link menu appears.

The status area shows the current link status.

- 2** Turn the knobs to select the matrix.

Knob	Parameter	Adjustment	Setting values
1	Link No	Link number	1 to 64
2	Link Matrix	Matrix number	1 to 8

In the status area, the color of the selected part changes.

- 3** Press [Link Matrix Set].

This confirms the matrix selection and the selected part in the status area returns to the previous color.

### To delete a link

With the link selected, press [Clear].

### To define the position of a matrix

Specify where in the 1024 × 1024 S-Bus space the link matrix is to be provided, by setting the source and destination start address.

For the matrix selected in the External Bus Link menu, use the following procedure.

- 1 In the Panel>Config>External Bus Link menu, press [Link Matrix Adjust].

The Link Matrix Adjust menu appears.

The status area shows the status of the currently selected matrix, and a list of the source and destination start addresses that can be selected.

In this menu too, you can use the knobs to select the link for the setting.

- 2 Using any of the following methods, define the position of the matrix to be linked.

- Press directly on the list appearing in the status area.
- Press the arrow keys to scroll the reverse video cursor.
- Turn the knobs.

Knob	Parameter	Adjustment	Setting values
2	Source	Source start address	1 to 897
3	Destination	Destination start address	1 to 897
4	Level	Level	1 to 8

- 3 To confirm a source address selected in step **2**, press [Source Set], to confirm a destination address press [Destination Set], and to confirm a level press [Level Set].

This confirms the selection, which is reflected in the status area.

### To set a link table

For the link selected in the External Bus Link menu, make the settings as follows.

- 1 In the Panel>Config>External Bus Link>Link Matrix Adjust menu, press [Link Table Adjust].

The Link Table Adjust menu appears.

The status area lists the status of the currently selected link, combinations of video signals and sources, and the sources that can be selected.

- 2 Using any of the following methods, select the switcher cross-point button and the matrix source to be linked to the button.

- Press directly on the list appearing in the status area.
- Press the arrow keys to scroll the reverse video cursor.

- Turn the knobs.

Knob	Parameter	Adjustment	Setting values
1	Main No	Switcher cross-point button	1 to 128
2	Source No	Matrix source selection	1 to 128

- 3** To confirm the matrix source selection made in step **2**, press [Link Source Set].

This confirms the selection, which is reflected in the status area.

- 4** As required, repeat steps **2** and **3** to select the matrix sources to be linked to other cross-point buttons.

### To initialize the set links

Press [Init Link Table].

A confirmation message appears.

Press [Yes].

The links set using the above procedure are initialized to the default settings, and this is reflected in the status area.

## To make link bus settings

For the link number selected in the External Bus Link menu, use the following procedure.

- 1 In the Panel>Config>External Bus Link menu, press [Link Bus Adjust].

The Link Bus Adjust menu appears. The status area lists the current link status, and the switcher buses and router destinations that can be selected. In this menu too, you can use knob 1 to select the link to be set.

- 2** Using any of the following methods, select the switcher bus and the router destination to be linked to the switcher bus.

- Press directly on the list appearing in the status area.
- Press the arrow keys to scroll the reverse video cursor.
- Turn the knobs.

Knob	Parameter	Adjustment	Setting values
2	Internal Bus	Switcher bus selection	1 to 128
3	Destination	Router destination selection	1 to 128

- 3** To confirm the bus selected in step **2**, press [Master Bus Set], and to confirm the destination press [Linked Dest Set].

This confirms the selection, which is reflected in the status area.

## Linking transitions between keyers

Use the following procedure.

- 1 In the Panel>Config menu, press [Key Trans Link].  
The Key Trans Link menu appears.  
The status area shows the keyers for each M/E bank and the linked keyers.
- 2 Using any of the following methods, select the keyer to be the master.
  - Press directly on the list appearing in the status area.
  - Press the arrow keys to scroll the reverse video cursor.
  - Turn the knob.

Knob	Parameter	Adjustment	Setting values
1	Master Key	Select keyer to be master	1 to 16

The selected keyer appears in reverse video.

- 3 In the <Key Select> group, select the keyer to be linked to the transition of the master.

### Note

Linking does not apply to a transition carried out with the downstream key control block.

## Linking the next transition selection buttons

To the transition links between keyers, you can add a link for the next transition selection buttons in the transition control block. The effect of this additional link is such that if for example, two keyers (Key 2 and Key 3) are linked with the master keyer (Key 1), pressing the [KEY1] next transition selection button also selects the [KEY2] and [KEY3] buttons.

Use the following procedure.

- 1 Set the transition links between keyers.  
*For details of the operation, see the previous section, “Linking transitions between keyers.”*
- 2 Press [Next Trans Link], turning it on.  
The [KEY1], [KEY2], [KEY3], and [KEY4] next transition selection buttons in the transition control block are now selected coupled to the settings in the Key Trans Link menu for transition links between keyers.

**Note**

These settings apply to the whole Key Trans Link menu. It is not possible to make separate settings for each master keyer.

## Selecting the module to be the reference for device control block

In the <Reference Module> group of the Panel>Config menu, select the module to be the reference.

- Trackball
- Joystick

## Assigning the region selection buttons in the numeric keypad control block

Use the following procedure.

- 1 In the Panel>Config menu, press [10 Key Region Assign].

The 10 Key Region Assign menu appears. On the left of the status area the region selection buttons (of the CCP-8000 by default) are shown, and on the right a list of the assignable regions.

- 2 In the <Type> group, press [CCP 8000].

The region selection button display changes to display the buttons of the CCP-8000.

- 3 Press the indication for the button you want to assign.

The button you pressed turns to reverse video.

- 4 Using any of the following methods, select the region to be assigned.

- Press directly on the list.
- Press the arrow keys to scroll the reverse video cursor.
- Turn the knob.

Knob	Parameter	Adjustment	Setting values
1	Region	Region selection	1 to 35

- 5 Press [Set] to confirm the selection.

This assigns the region to the region selection button in the numeric keypad control block.

**Note**

Only the regions assigned here can be used for snapshot recall.

When an M/E bank is not assigned to a region selection button in the numeric keypad control block, it is not possible to recall a snapshot with the Flexi Pad control block of that M/E.

### **To set the region selection buttons selected when the [ALL] button is pressed**

Use the following procedure.

- 1** In the 10 Key Region Assign menu, press [All Select] in the button area, or the [All Select] button indication in the status area, turning it on.

The [All Select] button indication in the status area turns orange, and the region selection button indication in the status area changes to the mode for assigning region selection buttons to the [ALL] button. In the factory default setting, all buttons appear in reverse video, and are assigned to the [ALL] button.

- 2** To remove a button from the assignment to the [ALL] button, press the button indication, turning it off.

The button you pressed changes to a normal indication.

### **To return the region assignments to the factory default**

In the 10 Key Region Assign menu, press [Default].

This returns the assignments of the region selection buttons in the numeric keypad control block to the factory default.

### **To clear a region assignment**

Use the following procedure.

- 1** In the 10 Key Region Assign menu, press the indication for the button to which the region is assigned.

The button you pressed turns to reverse video.

- 2** Press [Clear].

This clears the assignment of the selected button, which is now no longer assigned.

## **Setting VTR operation button assignment**

You can change the assignment of some of the buttons in the transition control block for use in VTR operations. Use the following procedure.

- 1** In the Panel>Config menu, press [Program Button].

The Program Button menu appears.

## 2 Press [Transition Module].

The Transition Module menu appears.

## 3 Using any of the following methods, select the bank.

- Press directly on the list in the status area.
- Press the arrow keys to scroll the reverse video cursor.
- Turn the knob.

Knob	Parameter	Adjustment	Setting values
1	Bank	Bank selection	1 to 4

## 4 Select the assignment for the [PTN LIMIT], [LIMIT SET], and [KF] buttons in the standard type transition control block from the <PTN LIMIT/LIMIT SET/KF Button Assign> group.

**Ptn Limit /KF:** These are used as the [PTN LIMIT] button, [LIMIT SET] button, and [KF] button.

**Play/Stop/Cue:** These are used as the [PLAY] button, [STOP] button, and [CUE] button for VTR operation.

**Inhibit:** Inhibit operations with these buttons.

## 5 Select the assignment for the [NORM], [NORM/REV], and [REV] buttons in the transition control block from the <NORM/NORM REV/REV Button Assign> group.

### Note

This operation cannot be done in the simple type transition control block.

**Normal/Reverse:** These are used as the [NORM] button, [NORM/REV] button and [REV] button.

**Play/Stop/Cue:** These are used as the [PLAY] button, [STOP] button, and [CUE] button for VTR operation.

**Inhibit:** Inhibit operations with these buttons.

## Setting the assignment of macro operation buttons

### Note

This setting applies to all simple type Flexi Pad control blocks on the control panel.

To switch the [UNDO] button on a simple type Flexi Pad control block to a [MCRO] button for macro operation, use the following procedure.

## 1 In the Engineering Setup menu, select VF2 'Panel' and HF1 'Config.'

The Config menu appears.

**2** Press the [Program Button].

The Program Button menu appears.

**3** Press [Flexi Pad Module].

The Flexi Pad Module menu appears.

**4** Select the assignment of the [UNDO] button in the simple type Flexi Pad control block from the <UNDO Button Assign> group.

**UNDO:** use as an [UNDO] button.

**MACRO:** use as a [MCRO] button.

---

## Cross-Point Settings (Xpt Assign Menu)

To carry out the cross-point settings, use the Panel>Xpt Assign menu.

### To display the Xpt Assign menu

In the Engineering Setup menu, select VF2 'Panel' and HF2 'Xpt Assign.'

The status area shows a list of "cross-point assign tables" to use for the M/E banks, PGM/PST bank, and various buses.

## Creating cross-point assign tables

As cross-point assign tables, you can create a "main" table and up to four other tables (table 1 to table 4). However, you can only carry out assignment of the video and key combinations in the main table.

### To create the main table

In the main table, a pair consisting of a video signal and a key signal is assigned to each button number. You can also assign the same signal to another button number at the same time. Further, you can delete currently assigned signals from the main table.

To create the main table, use the following procedure.

**1** In the Panel>Xpt Assign menu or Panel>Xpt Assign>Table1 (Table2, Table3, or Table4) menu, press [Main, V/K Pair Assign].

The Main, V/K Pair Assign menu appears.

The left part of the status area shows the names of video and key signals currently assigned in the main table and the source numbers. The right part

shows the source numbers and the names of the signals which can be assigned.

## 2 Using any of the following methods, select the button number.

- Press an auxiliary bus control block cross-point button.  
(The auxiliary bus control block is in selection mode, only when the menu for cross-point button selection is showing.)
- Press the arrow keys to scroll the reverse video cursor.
- Turn the knob.

Knob	Parameter	Adjustment	Setting values
1	V/K Pair No	Selection of video and key pair number	1 to 128

## 3 When assigning a video signal, press [Video] in the <Assign> group. When assigning a key signal, press [Key]. (You can select a video signal and a key signal at the same time.)

### Note

[Video] and [Key] in the <Assign> group cannot be turned off at the same time. At least the one or the other is always on.

## 4 Use any of the following methods to select the signal to assign.

- Press directly on the list in the status area.
- Press the arrow keys to move the reverse video cursor.
- Turn the knob.

Knob	Parameter	Adjustment	Setting values
3	Source No	Selection of source to be assigned	1 to 128

## 5 Using the buttons in the <Xpt Assign> group, assign the selected signal to the button number currently selected in the main table.

**Set:** Delete the signal currently assigned to the selected button number and make a new assignment.

**Insert:** Move down one line the signal currently assigned to the selected button number and following signals, and make a new assignment.

### Note

When a button number in the range 121 to 128 is selected, execution of “Insert” is impossible. The signal assignments to button numbers 121 to 128 cannot be changed. When “Insert” is executed for any other number, moving down of signals ends at number 120, and the signals assigned to numbers 121 to 128 are maintained in their original lines.

### To disable a button

In the Panel>Xpt Assign>Main, V/K Pair Assign menu, select the button you want to disable, and press [Inhibit].

### To delete any currently assigned signal

In the Panel>Xpt Assign>Main, V/K Pair Assign menu, select the button corresponding to the signal you want to delete, and press [Delete] in the <Xpt Assign> group.

Signal deletion is executed in accordance with the selection in the <Assign> group, and the signal assigned to the button number next to the selected button number and following signals move up one line.

#### Note

When a button number in the range 121 to 128 is selected, execution of “Delete” is impossible. The signal assignments to button numbers 121 to 128 cannot be changed. When a signal assigned to any other button number is deleted, moving up of signals ends when the signal assigned to number 120 has moved to number 119, and the signals assigned to numbers 121 to 128 are maintained in their original lines.

### To create tables 1 to 4

When creating tables 1 to 4, in the same way as when creating the main table, you can assign the same signal to more than one button number, or delete currently assigned signals. However, assignment of video and key combinations is impossible.

The following explains the operating procedure, taking table 1 by way of example.

- 1** In the Panel>Xpt Assign menu, press [Table1 Button Assign].

The Table1 Button Assign menu appears.

The left part of the status area shows the cross-point button numbers, video and key pair numbers, video signal source names and source numbers, and key signal source names and source numbers. The right part shows the video and key pair numbers, and the names of video signals and key signals set in the main table.

The Table1 Button Assign menu also allows you to access the Main, V/K Pair Assign menu and the Src Name/LCD Color menu.

- 2** Using any of the following methods, select the button number.

- Press an auxiliary bus control block cross-point button.  
(The auxiliary bus control block is in selection mode, only when the menu for cross-point button selection is showing.)
- Press the arrow keys to scroll the reverse video cursor.
- Turn the knob.



Knob	Parameter	Adjustment	Setting values
1	Button No	Cross-point button selection	1 to 128

**3** Using any of the following methods, select the pair number.

- Press directly on the list in the status area.
- Press the arrow keys to scroll the reverse video cursor.
- Turn the knob.

Knob	Parameter	Adjustment	Setting values
3	V/K Pair No	Selection of video and key pair number to be assigned	1 to 128

**4** Using the buttons in the <Button Assign> group, assign the selected pair number to the button number currently selected in table 1.

**Set:** Delete the signal currently assigned to the selected button number and make a new assignment.

**Insert:** Move down one line the signal currently assigned to the selected button number and following signals, and make a new assignment.

**Note**

When a button number in the range 121 to 128 is selected, execution of “Insert” is impossible. The signal assignments to button numbers 121 to 128 cannot be changed. When “Insert” is executed for any other number, moving down of signals ends at number 120, and the signals assigned to numbers 121 to 128 are maintained in their original lines.

**To disable a button**

In the Panel>Xpt Assign>Table 1 Button Assign menu, select the button you want to disable, and press [Inhibit].

**To delete any currently assigned signal**

In the Panel>Xpt Assign>Table 1 Button Assign menu, select the button corresponding to the signal you want to delete, and press [Delete] in the <Button Assign> group.

The signal assigned to the button number next to the selected button number and following signals move up one line.

**Note**

When a button number in the range 121 to 128 is selected, execution of “Delete” is impossible. The signal assignments to button numbers 121 to 128 cannot be changed. When a signal assigned to any other button number is deleted, moving up of signals ends when the signal assigned to number 120 has

moved to number 119, and the signals assigned to numbers 121 to 128 are maintained in their original lines.

### To return the table to its default state

- 1** In the Panel>Xpt Assign>Main, V/K Pair Assign menu or Panel>Xpt Assign>Table1 (Table2, Table3, or Table4) Button Assign menu, press [Default Recall].

A confirmation message appears, asking whether or not to return to the default state.

- 2** To return to the default state, press [Yes], and to cancel the operation, press [No].

### To set the cross-point button shift operation

You can set the operation of the rightmost button in each row of cross-point buttons excluding the reentry buttons.

In the <Xpt Shift Mode> group of the Panel>Xpt Assign>Main, V/K Pair Assign menu or Panel>Xpt Assign>Table1 (Table2, Table3, or Table4) Button Assign menu, select one of the following for each cross-point table.

**Hold:** Acts as a shift button, and the shifted version of the cross-point buttons is enabled while the button is held down.

**Lock:** Acts as a shift button, and pressing the button toggles between the shifted version and the unshifted version.

**Off:** Acts as a cross-point button, in a 16-button system as button number 16, in a 24-button system as button number 24, and in a 32-button system as button number 32.

### To set the action of the [SHIFT] button in the cross-point control block

In the <Display Shift Mode> group of the Panel>Xpt Assign>Main, V/K Pair Assign menu or Panel>Xpt Assign>Table1 (Table2, Table3, or Table4) Button Assign menu, select either of the following.

**Display:** Functions as a shift button dedicated to the source name displays.

**Shift All Bus:** Functions as a shift button for all buses.

#### Notes

- It is not possible to make this setting separately for each of the M/E and PGM/PST banks.
- “Shift All Bus” is only valid when the cross-point button shift operation (*see previous item*) is set to “Lock” or “Off.”

## Setting the source signal name

Use the following procedure.

- 1 In the Panel>Xpt Assign menu or Panel>Xpt Assign>Table1 (Table2, Table3, or Table4) Button Assign menu, press [Src Name/LCD Color].  
The Src Name/LCD Color menu appears.
- 2 Turn the knob to select the signal to be set.

Knob	Parameter	Adjustment	Setting values
1	Source No	Source signal selection	1 to 128
2	Num	Number of source signals to be selected	1 to 128

- 3 Press [Source Name].  
A keyboard window appears.
- 4 Enter any name of not more than 16 characters, then press [Enter].  
*For details of keyboard window operation, see “Menu Operations” in Chapter 2 (Volume 1).*

### Sequential names for multiple signals

When you specify a number at the end of a signal name, all of the signals in the range selected by knobs 1 and 2 are automatically assigned names ending with sequential numbers.

**Example:** To assign sequential names to source signal 2 through source signal 4

- 1) In step 2 above, set knob 1 to “2,” and set knob 2 to “3.”
- 2) Set the name of source signal 2 to “CAM2.”  
The name “CAM3” is assigned automatically to source signal 3, and the name “CAM4” is assigned automatically to source signal 4.

## Setting the source name display color

- 1 In the Src Name/LCD Color menu, turn the knobs to select the setting target.

Knob	Parameter	Adjustment	Setting values
1	Source No	Source signal selection	1 to 128
2	Num	Number of source signals to be selected	1 to 128

- 2 In the <LCD Color> group, select the color (Orange/Green/Yellow).

## Copying cross-point assign tables

The contents of a cross-point assign table can be copied to another cross-point assign table, and vice versa.

### Note

The contents of a sub table cannot be copied to the main table.

- 1** In the Panel>Xpt Assign menu, press [Table Copy].  
The Table Copy menu appears.  
The status area shows a list of copy sources and a list of copy destinations.
- 2** Using any of the following methods, select the number of the table to use as the copy source and the number of the table you want to be the copy destination.
  - Press directly on the list of copy sources (left-side list) or the list of copy destinations (right-side list) in the status area.
  - Press the arrow keys to scroll the reverse video cursor.
  - Turn the knob.

Knob	Parameter	Adjustment	Setting values
1	Left No	Selection of copy source	1 to 5
2	Right No	Selection of copy destination	1 to 4

- 3** Press [Copy].  
A confirmation message appears, asking whether or not to execute the copy.
- 4** To execute the copy, press [Yes], and to cancel the operation, press [No].

## Selecting cross-point assign tables

You can select the cross-point assign table to be used for each of the following banks or buses.

- M/E-1 to M/E-3 banks and PGM/PST bank
- Buses assignable to AUX delegation buttons

Use the following procedure.

- 1** In the Panel>Xpt Assign menu, press [Table Assign].  
The Table Assign menu appears.  
The status area shows the bank and bus names, and the cross-point assign table.

**2** Using any of the following methods, select the bank or bus.

- Press directly on the list in the status area.
- Press the arrow keys to scroll the reverse video cursor.
- Turn the knob.

Knob	Parameter	Adjustment	Setting values
1	No	Bank or bus selection	1 and upwards
2	Num	Number of banks/buses to be selected	1 and upwards

**3** In the <Xpt Table Select> group, select the cross-point table you want to assign.

## Exporting source names and destination names

To send the source names and destination names to the S-Bus, use the following procedure.

**1** In the Panel>XPT Assign menu, press [Name Export].

The Name Export menu appears.

**2** Turn the knob to set the station ID.

Knob	Parameter	Adjustment	Setting values
1	Station ID	Station ID setting	1 to 255 <sup>a)</sup>

a) If set to 255, the information is sent to all stations (with display of “All”).

**3** Press [Src Name Export].

This exports the source names to the station selected in step **2**.

**4** Press [Dest Name Export].

This exports the destination names to the station selected in step **2**.

### Note

Since destination names cannot be selected freely, fixed names are used.

## Assigning a cross-point button to enable/disable side flags

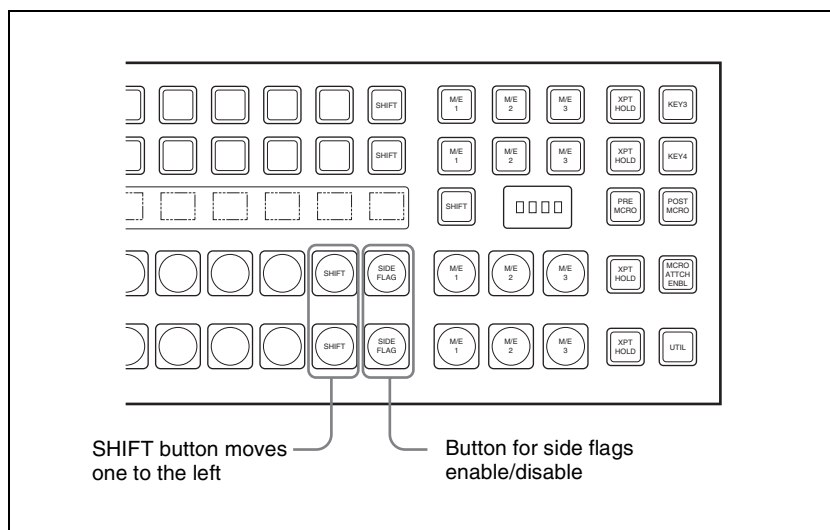
By assigning the side flag function to the rightmost button in a cross-point button row, you can use this button to enable/disable side flags for each of the M/E and PGM/PST banks.

This setting applies to all of the M/E and PGM/PST banks.

When you make this assignment, the SHIFT button (the button assigned to the shift function) is moved one to the left.

### Note

If a macro attachment is set, when you assign the button to the side flag function, the button numbers are offset, and therefore when you press the button this does not execute the macro. The settings, however, are maintained, so that when you cancel the side flag assignment, the macro can be accessed once more.



*For details of side flag operations, see Chapter 10 “Side Flag Settings” (Volume 1).*

Use the following procedure.

- 1** In the Panel>XPT Assign menu, press [Side Flags Button Assign].

The Side Flags Button Assign menu appears.

- 2** Press [Side Flags Btn Assign], turning it on.

This assigns the rightmost cross-point button to enabling/disabling the side flag function.

# Auxiliary Bus Control Block Settings (Aux Assign Menu)

To carry out the settings of the AUX delegation buttons in the auxiliary bus control block, use the Panel>Aux Assign menu.

## To display the Aux Assign menu

In the Engineering Setup menu, select VF2 'Panel' and HF3 'Aux Assign.' The left side of the status area shows the delegation numbers, and the list of buses set; the right side shows a list of buses that can be assigned.

## Assigning a bus to an AUX delegation button

Use the following procedure.

- 1 Using any of the following methods, select the delegation button and the bus to be assigned.
  - Press directly on the list in the status area.
  - Press the arrow keys to scroll the reverse video cursor.
  - Turn the knobs.

Knob	Parameter	Adjustment	Setting values
1	Deleg No	Selection of AUX delegation button	1 to 128 <sup>a)</sup>
2	Bus No	Selection of bus to be assigned	1 to 107 <sup>b)</sup>

a) The setting can be from 1 to 62. The valid settings, however, depend on the number of buttons and the delegation button shift mode.

Number of buttons	Shift mode	Valid settings
16	OFF	1 to 16
	ON	1 to 30
24	OFF	1 to 24
	ON	1 to 46
32	OFF	1 to 32
	ON	1 to 62

- b) The buses that can be assigned are as follows.
- AUX1 to AUX48, Monitor1 to Monitor8, DME1V to DME8V, and DME1K to DME8K  
M/E1 Utility1 and 2, M/E2 Utility1 and 2, M/E3 Utility1 and 2  
P/P Utility1 and 2, Frame Memory Source1 and 2, Edit Preview, DSK1 to 4 Fill/Source,  
M/E3 Key 1 and 4 Fill/Source  
M/E-1 EXT DME, M/E-2 EXT DME, M/E-3 EXT DME, P/P EXT DME, DME Utility  
1 and 2, CCR 1 and 2
- For a button for which you want to disable operation, press [Inhibit].

- 2 Press [Set] to confirm the selection.

### To set the AUX delegation button shift operation

To set the operation mode of the rightmost button in the row of AUX delegation buttons, select one of the following in the <Shift Mode> group of the Panel>Aux Assign menu.

**Hold:** Acts as a shift button, and the shifted version of the AUX delegation buttons is enabled while the button is held down.

**Lock:** Acts as a shift button, and pressing the button toggles between the shifted version and the unshifted version of the AUX delegation buttons.

**Off:** Acts as an AUX delegation button. In a 16-button system it acts as button number 16, in a 24-button system as button number 24, and in a 32-button system as button number 32.

## Using the auxiliary bus control block for router control

To make router control settings, display the Setup>Panel>Aux Assign>RTR Mode Setting menu.

### To display the RTR Mode Setting menu

Use the following procedure.

- 1 In the Engineering Setup menu, select VF2 'Panel' and HF3 'Aux Assign.'  
The Aux Assign menu appears.

- 2 Press [RTR Mode Setting].

The RTR Mode Setting menu appears. The left of the status area shows the destination number assignment status and source table, and the right side lists the destinations that can be assigned.

### To assign a destination to a destination selection button

In the RTR Mode Setting menu, use the following procedure.

- 1 Using any of the following methods, select a destination selection button and the destination to be assigned to the button.
  - Press directly on the list appearing in the status area.
  - Press the arrow keys to scroll the reverse video cursor.
  - Turn the knobs.

Knob	Parameter	Adjustment	Setting values
1	Dest No	Destination selection button selection	1 to 128
2	No	Destination selection in S-Bus space	1 to 1024

- For a button whose operation you want to disable, press [Inhibit].

#### Note

When a destination selection button having a number in the range 65 to 128 is selected, source table selection automatically becomes invalid, and therefore the Inhibit function also becomes invalid.

- 2 Press [Dest Set] to confirm the selection.
- 3 If in step 1 you selected a value in the range 1 to 64, turn the knob to select the source table.

Knob	Parameter	Adjustment	Setting values
3	Source Table	Source table selection	1 to 5

- 4 Press [Source Table Set] to confirm the selection.
- 5 Repeat steps 1 to 4 as required.

#### To set the shift operation of the destination selection buttons

To set the operation mode of the rightmost button in the destination selection button row, select one of the following in the <Dest Shift Mode> group of the RTR Mode Setting menu.

**Hold:** Acts as a shift button, and the shifted destination selection buttons are enabled while the button is held down.

**Lock:** Acts as a shift button, and pressing the button toggles between the shifted and unshifted states of the destination selection buttons.

**Off:** Acts as a destination selection button, that is, button number 16 on a 16-button system, button number 24 on a 24-button system, and button number 32 on a 32-button system.

#### To set the source table

Use the following procedure.

- 1 In the RTR Mode Setting menu, press [Source Table Assign].  
The Source Table Assign menu appears.
- 2 In the <Source Table Select> group, select the source table you want to manipulate.
- 3 Press [Table Assign].  
The Table Assign menu appears.

The left of the status area lists the button numbers and set sources, and the right side lists the source that can be assigned.

- 4** Using any of the following methods, select a source selection button and the source you want to assign.

- Press directly on the list appearing in the status area.
- Press the arrow keys to scroll the reverse video cursor.
- Turn the knobs.

Knob	Parameter	Adjustment	Setting values
1	Source No	Source selection button selection	1 to 128
2	No	Source selection in S-Bus space	1 to 1024

- For a button whose operation you want to disable, press [Inhibit].

- 5** Press [Source Set] to confirm the selection.

### To set the shift operation of the source selection buttons

To set the operation mode of the rightmost button in the source selection button row with different destinations assigned to the 1st and 2nd rows, select the source table in the Source Table Assign menu, then in the <Xpt Shift Mode> group select one of the following.

**Hold:** Acts as a shift button, and the shifted source selection buttons are enabled while the button is held down.

**Lock:** Acts as a shift button, and pressing the button toggles between the shifted and unshifted states of the source selection buttons.

**Off:** Acts as a cross-point button, that is, button number 16 on a 16-button system, button number 24 on a 24-button system, and button number 32 on a 32-button system.

### To expand the shift function

To set the [KEY] button as a shift operation expansion button, in the Source Table Assign menu select the source table, then in the <Expand Xpt Shift Assign> group, press [Key Button].

In order not to expand the shift operation, press [No Assign] in the <Expand Xpt Shift Assign> group.

### To assign levels to a level selection button

To assign levels to the [LEVEL1] to [LEVEL4] buttons in the auxiliary bus control block, use the following procedure.

- 1** In the RTR Mode Setting menu, press [Level Button Assign].

The Level Button Assign menu appears. The status area shows a list of the assignment status of levels to each button.

- 2 In the <Level Button Select> group, select the button you want to set.
- 3 In the <Level Assign> group, press the levels you want to assign to the button, turning them on.

You can select plural of levels. You can also make a selection that overlaps that of another button.

### To select a destination selection button for a snapshot

To set whether snapshots are recalled for each destination selection button individually, use the RTR Mode Setting menu as follows.

- 1 Use any of the following methods to select the destination selection button to which the setting applies.
  - Press directly on the list on the left of the status area.
  - Press the arrow keys to scroll the reverse video cursor.
  - Turn the knob.

Knob	Parameter	Adjustment	Setting values
1	Dest No	Selection of destination selection button	1 to 128

- 2 Press [SS Enable], turning it on or off.

**On:** When a snapshot applying to the router is recalled, the recall also applies to the selected destination selection button.

**Off:** When a snapshot applying to the router is recalled, the recall does not apply to the selected destination selection button.

#### Note

When a destination selection button is set to Inhibit, then even if SS Enable is on, the snapshot for that destination is not recalled.

## Setting Button Assignments (Prefs/Utility Menu)

To assign functions to the user preference buttons ([PREFS 1] to [PREFS 8]) in the menu control block and the memory recall buttons in the utility/shotbox control block, display the Panel>Prefs/Utility menu.

### To display the Prefs/Utility menu

In the Engineering Setup menu, select VF2 'Panel' and HF4 'Prefs/Utility.' The status area shows the settings of the user preference buttons.

## Assigning functions to user preference buttons

Use the following procedure.

- 1 Using any of the following methods, select the button to be assigned.

- Press directly on the list in the status area.
- Press the arrow keys to scroll the reverse video cursor.
- Turn the knob.

Knob	Parameter	Adjustment	Setting values
1	No	User preference button selection	1 to 8

- 2 In the <Action> group, select the function to be assigned.

**Menu Shortcut:** Assign a frequently used menu to be recalled (menu shortcut).

**Utility Command:** Assign a function enable/disable or similar operation (utility command).

**Macro Recall:** Assign a macro register recall.

**Shotbox Recall:** Assign a shotbox register recall.

- 3 Depending on the selection in step 2, make the following settings.

**When Menu Shortcut is selected:** For the subsequent operations, *see the next item “Assigning a menu shortcut to a user preference button” (page 331).*

**When Utility Command is selected:** A list of commands appears on the right of the status area; using any of the following methods, select the command you want to assign.

- Press directly on the list.
- Press the arrow keys to scroll the reverse video cursor.
- Turn the knob.

Knob	Parameter	Adjustment	Setting values
3	Command	Utility command selection	1 and upwards
4 a)	GPI No	GPI port number	1 and upwards

a) When the Command parameter is set to Sw’er GPI Test Fire, Panel GPI Test Fire, DCU GPI, or Test Fire

**When Macro Recall is selected:** Turn the knob to select the macro register you want to assign.

Knob	Parameter	Adjustment	Setting values
3	Macro	Macro register selection	1 to 99



**When Shotbox Recall is selected:** Turn the knob to select the shotbox register you want to assign.

Knob	Parameter	Adjustment	Setting values
3	Shotbox	Shotbox register selection	1 to 99

## 4 Press [Action Set].

This assigns the selected action, which is reflected in the status area.

### To cancel an assignment

After selecting the relevant button, press [Clear].

### List of utility commands and user preference button status

The following table shows the utility commands that can be assigned to user preference buttons.

Command name <sup>a)</sup>	Function	Button status	
		Lit amber	Off
SWR Remote1 Enbl   SWR Remote4 Enbl	Switcher Remote 1 enabled/disabled   Switcher Remote 4 enabled/disabled	Enabled	Disabled
DME1 Editor Port Enbl	DME1 editor port enabled/disabled	Enabled	Disabled
DME2 Editor Port Enbl	DME2 editor port enabled/disabled	Enabled	Disabled
2nd System Enbl	(Dual Simul Mode) Second system enabled/disabled	Enabled	Disabled
ME1 PGM1 ST   ME1 PGM4 ST	M/E-1 PGM1 output safe title on/off   M/E-1 PGM4 output safe title on/off	On	Off
ME1 PVW ST	M/E-1 preview output safe title on/off	On	Off
ME1 Clean ST	M/E-1 clean output safe title on/off	On	Off
ME1 K-PVW ST	M/E-1 key preview output safe title on/off	On	Off
ME2 PGM1 ST   ME2 PGM4 ST	M/E-2 PGM1 output safe title on/off   M/E-2 PGM4 output safe title on/off	On	Off
ME2 PVW ST	M/E-2 preview output safe title on/off	On	Off
ME2 Clean ST	M/E-2 clean output safe title on/off	On	Off
ME2 K-PVW ST	M/E-2 key preview output safe title on/off	On	Off
ME3 PGM1 ST   ME3 PGM4 ST	M/E-3 PGM1 output safe title on/off   M/E-3 PGM4 output safe title on/off	On	Off
ME3 PVW ST	M/E-3 preview output safe title on/off	On	Off
ME3 Clean ST	M/E-3 clean output safe title on/off	On	Off
ME3 K-PVW ST	ME-3 key preview output safe title on/off	On	Off
PP PGM1 ST   PP PGM4 ST	PP PGM1 output safe title on/off   PP PGM4 output safe title on/off	On	Off
PP PVW ST	P/P preview output safe title on/off	On	Off
PP Clean ST	P/P clean output safe title on/off	On	Off
PP K-PVW ST	P/P key preview output safe title on/off	On	Off
DME MON1 ST	DME Monitor 1 output safe title on/off	On	Off
DME MON2 ST	DME Monitor 2 output safe title on/off	On	Off
Edit PVW ST	Edit preview output safe title on/off	On	Off
Preset ST	Preset output safe title on/off	On	Off

Command name <sup>a)</sup>	Function	Button status	
		Lit amber	Off
AUX1 ST   AUX48 ST	AUX1 output safe title on/off   AUX48 output safe title on/off	On	Off
FM Src1 Frame Freeze	Frame freeze of frame memory source 1	During frame freeze	Either of the other two states
FM Src1 Filed Freeze	Field freeze of frame memory source 1	During field freeze	Either of the other two states
FM Src1 Freeze Off	Release freeze of frame memory source 1	While freeze being released	Either of the other two states
FM Src2 Frame Freeze	Frame freeze of frame memory source 2	During frame freeze	Either of the other two states
FM Src2 Field Freeze	Field freeze of frame memory source 2	During field freeze	Either of the other two states
FM Src2 Freeze Off	Release freeze of frame memory source 2	While freeze being released	Either of the other two states
SWR GPI Enbl	Enable/disable switcher GPI	Enabled	Disabled
DME1 GPI Enbl	Enable/disable DME1 GPI	Enabled	Disabled
DME2 GPI Enbl	Enable/disable DME2 GPI	Enabled	Disabled
Panel GPI Enbl	Enable/disable panel GPI	Enabled	Disabled
SWR GPI1 Test Fire   SWR GPI8 Test Fire	Output test trigger from switcher GPI1   Output test trigger from switcher GPI8	Output (lights only at the instant the button is pressed)	When the output is assigned
Panel GPI1 Test Fire   Panel GPI8 Test Fire	Output test trigger from panel GPI1   Output test trigger from panel GPI8	Output (lights only at the instant the button is pressed)	When the output is assigned
DCU GPI1 Test Fire   DCU GPI50 Test Fire	Output test trigger from port assigned to DCU GPI1   Output test trigger from port assigned to DCU GPI50	Output (lights only at the instant the button is pressed)	When the output is assigned
Macro Attachment Enbl	Enable/disable macro attachment	Enabled	Disabled
Macro Only Set	Macro only mode on/off	On	Off
Pre Macro	Set macro attachment in pre macro mode	Can be set only while pressed (lit)	When the function is assigned
Post Macro	Set macro attachment in post macro mode	Can be set only while pressed (lit)	When the function is assigned
Macro Take	Macro execution	During execution	When the function is assigned
Macro Auto Ins	Macro auto insert mode on/off	On	Off

Command name <sup>a)</sup>	Function	Button status	
		Lit amber	Off
Macro AT with Rate	When registering an auto transition macro event, on/off setting of mode to save transition rate	On	Off
Macro AT with A/B Bus	When registering an auto transition macro event for the transition control block, on/off setting of mode to save A/ B Bus cross-point settings	On	Off
Macro TL with Region	When registering a timeline macro event, on/off setting of mode to save applicable region	On	Off
DME Override	DME override on/off	On	Off
DME Graphic	DME graphics on/off (Applies to graphics for channel selected in device control block)	On	Off
System Manager Enbl	Enable/disable operation from System Manager	Enabled	Disabled
Plug-In Editor Enbl	Enable/disable operation from an editing keyboard	Enabled	Disabled

a) For the safe title on/off commands (from ME1 PGM1 ST-ME1 PGM4 ST to AUX1 ST-AUX48 ST), the name of the assigned output signal is shown.

## Assigning a menu shortcut to a user preference button

Use the following procedure.

- 1 Referring to the procedure up to step 2 in the previous item, select [Menu Shortcut].

The user preference buttons [PREFS 1] to [PREFS 8] flash amber.

- 2 Using any of the following methods, display the menu to which you want to make a shortcut.

- In the menu control block, press the relevant top menu selection button, then select VF and HF.
- Press the menu page number button in the upper left corner of the menu screen, then enter a menu number from the numeric keypad window.
- Press a particular control panel button twice in rapid succession.

- 3 Press the user preference button to which you want to assign the shortcut.

The menu screen goes back to the Prefs/Utility menu, and the selection is reflected in the status area. The user preference buttons [PREFS 1] to [PREFS 8] stop flashing amber.

## To abandon the process of menu shortcut assignment

In the Prefs/Utility menu, press [Menu Shortcut] once more.

This exits the menu shortcut assignment mode.

## Assigning a function to a memory recall button in the utility/shotbox control block

Use the following procedure.

- 1 In the Prefs/Utility menu, press [Utility Module Assign].

The Prefs/Utility>Utility Module Assign menu appears. The status area shows the settings in the utility/shotbox control block.

- 2 Using any of the following methods, select the button to be assigned.

- Press directly on the list.
- Press the arrow keys to scroll the reverse video cursor.
- Turn the knobs.

Knob	Parameter	Adjustment	Setting values
1	Bank	Bank selection	1 to 4
2	Button No	Control block button selection	1 to 24

- 3 In the <Action> group, select the function you want to assign.

**Menu Shortcut:** Assign a frequently used menu to be recalled (menu shortcut).

**Utility Command:** Assign a function enable/disable or similar operation (utility command).

**Macro Recall:** Assign a macro register recall.

**Shotbox Recall:** Assign a shotbox register recall.

- 4 Depending on the selection in step 3, make the following settings.

**When Menu Shortcut is selected:** For the subsequent operations, *see the next item “Assigning a menu shortcut to a memory recall button in the utility/shotbox control block” (page 336).*

**When Utility Command is selected:** A list of commands appears on the right of the status area; using any of the following methods, select the command you want to assign.

- Press directly on the list.
- Press the arrow keys to scroll the reverse video cursor.
- Turn the knob.

Knob	Parameter	Adjustment	Setting values
3	Command	Utility command selection	1 and upwards

Knob	Parameter	Adjustment	Setting values
4 a)	GPI No	GPI port number	1 and upwards

a) When the Command parameter is set to Sw'er GPI Test Fire, Panel GPI Test Fire, DCU GPI, or Test Fire

**When Macro Recall is selected:** Turn the knob to select the macro register you want to assign.

Knob	Parameter	Adjustment	Setting values
3	Macro	Macro register selection	1 to 99

**When Shotbox Recall is selected:** Turn the knob to select the shotbox register you want to assign.

Knob	Parameter	Adjustment	Setting values
3	Shotbox	Shotbox register selection	1 to 99

## 5 Press [Action Set].

This assigns the selected action, which is reflected in the status area. In the utility/shotbox control block, the assigned button lights orange. If a shotbox register was assigned, the register name appears.

### To cancel an assignment

After selecting the relevant button, press [Clear].

### List of utility commands and memory recall button status

The following table shows the utility commands that can be assigned to memory recall buttons.

Command name <sup>a)</sup>	Function	Button status	
		Lit green	Lit orange
SWR Remote1 Enbl   SWR Remote4 Enbl	Switcher Remote 1 enabled/disabled   Switcher Remote 4 enabled/disabled	Enabled	Disabled
DME1 Editor Port Enbl	DME1 editor port enabled/disabled	Enabled	Disabled
DME2 Editor Port Enbl	DME2 editor port enabled/disabled	Enabled	Disabled
2nd System Enbl	(Dual Simul Mode) Second system enabled/disabled	Enabled	Disabled
ME1 PGM1 ST   ME1 PGM4 ST	M/E-1 PGM1 output safe title on/off   M/E-1 PGM4 output safe title on/off	On	Off
ME1 PVW ST	M/E-1 preview output safe title on/off	On	Off
ME1 Clean ST	M/E-1 clean output safe title on/off	On	Off

Command name <sup>a)</sup>	Function	Button status	
		Lit green	Lit orange
ME1 K-PVW ST	M/E-1 key preview output safe title on/off	On	Off
ME2 PGM1 ST   ME2 PGM4 ST	M/E-2 PGM1 output safe title on/off   M/E-2 PGM4 output safe title on/off	On	Off
ME2 PVW ST	M/E-2 preview output safe title on/off	On	Off
ME2 Clean ST	M/E-2 clean output safe title on/off	On	Off
ME2 K-PVW ST	M/E-2 key preview output safe title on/off	On	Off
ME3 PGM1 ST   ME3 PGM4 ST	M/E-3 PGM1 output safe title on/off   M/E-3 PGM4 output safe title on/off	On	Off
ME3 PVW ST	M/E-3 preview output safe title on/off	On	Off
ME3 Clean ST	M/E-3 clean output safe title on/off	On	Off
ME3 K-PVW ST	ME-3 key preview output safe title on/off	On	Off
PP PGM1 ST   PP PGM4 ST	PP PGM1 output safe title on/off   PP PGM4 output safe title on/off	On	Off
PP PVW ST	P/P preview output safe title on/off	On	Off
PP Clean ST	P/P clean output safe title on/off	On	Off
PP K-PVW ST	P/P key preview output safe title on/off	On	Off
DME MON1 ST	DME Monitor 1 output safe title on/off	On	Off
DME MON2 ST	DME Monitor 2 output safe title on/off	On	Off
Edit PVW ST	Edit preview output safe title on/off	On	Off
Preset ST	Preset output safe title on/off	On	Off
AUX1 ST   AUX48 ST	AUX1 output safe title on/off   AUX48 output safe title on/off	On	Off
FM Src1 Frame Freeze	Frame freeze of frame memory source 1	During frame freeze	Either of the other two states
FM Src1 Filed Freeze	Field freeze of frame memory source 1	During field freeze	Either of the other two states
FM Src1 Freeze Off	Release freeze of frame memory source 1	While freeze being released	Either of the other two states
FM Src2 Frame Freeze	Frame freeze of frame memory source 2	During frame freeze	Either of the other two states
FM Src2 Field Freeze	Field freeze of frame memory source 2	During field freeze	Either of the other two states
FM Src2 Freeze Off	Release freeze of frame memory source 2	While freeze being released	Either of the other two states

Command name <sup>a)</sup>	Function	Button status	
		Lit green	Lit orange
SWR GPI Enbl	Enable/disable switcher GPI	Enabled	Disabled
DME1 GPI Enbl	Enable/disable DME1 GPI	Enabled	Disabled
DME2 GPI Enbl	Enable/disable DME2 GPI	Enabled	Disabled
Panel GPI Enbl	Enable/disable panel GPI	Enabled	Disabled
SWR GPI1 Test Fire   SWR GPI8 Test Fire	Output test trigger from switcher GPI1   Output test trigger from switcher GPI8	Output (lights only at the instant the button is pressed)	When the output is assigned
Panel GPI1 Test Fire   Panel GPI8 Test Fire	Output test trigger from panel GPI1   Output test trigger from panel GPI8	Output (lights only at the instant the button is pressed)	When the output is assigned
DCU GPI1 Test Fire   DCU GPI50 Test Fire	Output test trigger from port assigned to DCU GPI1   Output test trigger from port assigned to DCU GPI50	Output (lights only at the instant the button is pressed)	When the output is assigned
Macro Attachment Enbl	Enable/disable macro attachment	Enabled	Disabled
Macro Only Set	Macro only mode on/off	On	Off
Pre Macro	Set macro attachment in pre macro mode	Can be set only while pressed (lit)	When the function is assigned
Post Macro	Set macro attachment in post macro mode	Can be set only while pressed (lit)	When the function is assigned
Macro Take	Macro execution	During execution	When the function is assigned
Macro Auto Ins	Macro auto insert mode on/off	On	Off
Macro AT with Rate	When registering an auto transition macro event, on/off setting of mode to save transition rate	On	Off
Macro AT with A/B Bus	When registering an auto transition macro event for the transition control block, on/off setting of mode to save A/B Bus cross-point settings	On	Off
Macro TL with Region	When registering a timeline macro event, on/off setting of mode to save applicable region	On	Off
DME Override	DME override on/off	On	Off
DME Graphic	DME graphics on/off (Applies to graphics for channel selected in device control block)	On	Off
System Manager Enbl	Enable/disable operation from System Manager	Enabled	Disabled

Command name <sup>a)</sup>	Function	Button status	
		Lit green	Lit orange
Plug-In Editor Enbl	Enable/disable operation from an editing keyboard	Enabled	Disabled

a) For the safe title on/off commands (from ME1 PGM1 ST-ME1 PGM4 ST to AUX1 ST-AUX48 ST), the name of the assigned output signal is shown.

## Assigning a menu shortcut to a memory recall button in the utility/shotbox control block

Use the following procedure.

- 1 Referring to the procedure up to step **3** in the previous item, select [Menu Shortcut].

The memory recall buttons in the utility/shotbox control block flash orange.

- 2 Using any of the following methods, display the menu to which you want to make a shortcut.

- In the menu control block, press the relevant top menu selection button, then select VF and HF.
- Press the menu page number button in the upper left corner of the menu screen, then enter a menu number from the numeric keypad window.
- Press a particular control panel button twice in rapid succession.

- 3 In the utility/shotbox control block, select the bank, and press the button to which you want to assign the shortcut.

The menu screen goes back to the Prefs/Utility>Utility Module Assign menu, and the selection is reflected in the status area.

The buttons in the utility/shotbox control block stop flashing, and the button to which the menu shortcut is assigned lights orange.

### To abandon the process of menu shortcut assignment

In the Prefs/Utility>Utility Module Assign menu, press [Menu Shortcut]. This exits the menu shortcut assignment mode.

## Setting names to be displayed in memory recall buttons

### Note

The name you set using the following procedure is displayed only when “Menu Shortcut” or “Utility Command” has been assigned to the selected memory recall button. To set a name for display in a memory recall button to which

“Shotbox Recall” or “Macro Recall” has been assigned, use the Shotbox menu or Macro menu.

Use the following procedure.

- 1** In the Prefs/Utility>Utility Module Assign menu, select the button using any of the following methods.

- Press directly on the list.
- Press the arrow keys to scroll the reverse video cursor.
- Turn the knobs.

Knob	Parameter	Adjustment	Setting values
1	Bank	Bank selection	1 to 4
2	Button No	Control block button selection	1 to 24

- 2** Press [Name].

A keyboard window appears.

- 3** Enter a name of not more than eight characters, and press [Enter].

The name you have set is reflected in the status area and on the memory recall button in the utility/shotbox control block.

---

## Interfacing With External Devices (Device Interface Menu)

To carry out setup relating to connections with external devices, display the Panel>Device Interface menu.

### To display the Device Interface menu

In the Engineering Setup menu, select VF2 ‘Panel’ and HF5 ‘Device Interface.’

## Making control panel GPI input settings

Use the following procedure.

- 1** In the Panel>Device Interface menu, press [GPI Input].


The GPI Input menu appears.


- 2** Using any of the following methods, select the settings.


- Press directly on the list appearing in the status area.
- Press the arrow keys to scroll the reverse video cursor.
- Turn the knob.


Knob	Parameter	Adjustment	Setting values
1	Port	Port selection	1 to 8

### 3 In the <Trigger Type> group, select the trigger type.

 **(Rising Edge):** Apply the trigger on a rising edge of an input pulse.

 **(Falling Edge):** Apply the trigger on a falling edge of an input pulse.

 **(Any Edge):** Apply the trigger on a change in the polarity of the input signal.

 **(Level):** Carry out the specified operation when the input is low or high.

**No Operation:** Apply no trigger on an input pulse.

### 4 In the <Target> group, select the action block.

**M/E-1, M/E-2, M/E-3, P/P:** Set the action for one of the banks.

**Common/Setup:** Set an action for something other than the above, or a setup action.

### 5 Using any of the following methods, select the action to be set.

- Press directly on the list appearing in the status area.
- Press the arrow keys to scroll the reverse video cursor.
- Turn the knobs.

Knob	Parameter	Adjustment	Setting values
2	Action	Action selection	1 and upwards <sup>a)</sup>
4	Aux Bus No	Aux bus selection	1 to 48 <sup>e)</sup>
5	Reg No	Register number	1 to 4 <sup>b)</sup> 1 to 99 <sup>c)</sup> 1 to 399 <sup>d)</sup>
5	Src No	Source signal selection	1 and upwards <sup>e)</sup>

a) • **Action list when the trigger type is other than “Level”**

When Target is M/E-1, M/E-2, or M/E-3: Cut, Auto Trans

Key1 Cut, Key2 Cut, Key3 Cut, Key4 Cut

Key1 Auto Trans, Key2 Auto Trans, Key3 Auto Trans, Key4 Auto Trans

Key1 SS ? Recall, Key2 SS ? Recall, Key3 SS ? Recall, Key4 SS ? Recall

When Target is P/P: Cut, Auto Trans

DSK1 Cut, DSK2 Cut, DSK3 Cut, DSK4 Cut

DSK1 Auto Trans, DSK2 Auto Trans, DSK3 Auto Trans, DSK4 Auto Trans

DSK1 SS ? Recall, DSK2 SS ? Recall, DSK3 SS ? Recall, DSK4 SS ? Recall

FTB Cut, FTB Auto Trans

When Target is Common/Setup: Master SS ? Recall, Master Effect ? Recall, SS ?

Recall, Effect ? Recall, Effect ? Recall & Run, KF Run, KF Stop, KF Rewind, FM

Src1 Frame Freeze, FM Src1 Field Freeze, FM Src1 Freeze Off, FM Src2 Frame

Freeze, FM Src2 Field Freeze, FM Src2 Freeze Off, Shotbox ? Recall, Macro

Take, No Action

- **Action list when the trigger type is only “Rising Edge” or “Falling Edge”**

Aux ? O’ride Src ??

- **Action list when the trigger type is “Level”**

When Target is M/E-1, M/E-2, M/E-3, or P/P: No Action

When Target is Common/Setup: Format (Overall system settings, frame/field rate, number of lines)

Aspect (overall system settings), Simul, Level Enable, No Action

### Notes

- “Level Enable” is a function that determines whether GPI inputs are enabled (“Enable”) or disabled (“Disable”) for the “Aspect” and “Format” actions that can be used when the trigger type is Level. When Level Enable is used, if the input is “Disable” then it is not possible to switch “Aspect” or “Format” by GPI input. If a GPI to switch “Aspect” or “Format” occurs when powering the system off, the action triggered by the GPI may start immediately before the power goes off and the power may go off before the action is completed. This may corrupt the setup settings. It is therefore recommended to use Level Enable to avoid such a situation.
- As for “Aux ? O’ride Src ??,” when “Rising Edge” is selected, on a rising edge the set AUX bus primary input is used. On a falling edge, the original state of the cross-point is restored. If the GPI trigger is applied repeatedly at short intervals (0.5 second or less), the cross-point switching may not be carried out correctly. In this case, apply the GPI trigger again.

b) When knob 2 selection is “Key Snapshot”

c) When knob 2 selection is “Snapshot” or “Shotbox”

d) When knob 2 selection is “Effect”

e) When knob 2 selection is “Aux ? O’ride Src ??”

## 6 Press [Action Set] to confirm the action selection.

The selected setting appears in the status area.

## Carrying out level settings

To set the low level and high level, first set the trigger type to “Level,” then use the following procedure.

- 1 In the Panel>Device Interface menu, select the action to be set, and press [H/L Set].

The H/L Set menu appears.

- 2 Using any of the following methods, select the settings.

- Press directly on the list appearing in the status area.

- Press the arrow keys to scroll the reverse video cursor.
- Turn the knob.

Knob	Parameter	Adjustment	Setting values
1	No	Signal format/screen aspect ratio selection	1 and upwards

- 3** To apply the selection made in step **2** when the input is the GPI high level, press [H Set]. To apply the selection made in step **2** when the input is low, press [L Set].

This confirms the setting, which appears in the status area.

## Making control panel GPI output settings

Use the following procedure.

- 1** In the Panel>Device Interface menu, press [GPI Output].


The GPI Output menu appears.


- 2** Using any of the following methods, select the settings.


- Press directly on the list appearing in the status area.
- Press the arrow keys to scroll the reverse video cursor.
- Turn the knob.

Knob	Parameter	Adjustment	Setting values
1	Port	Port selection	1 to 8

- 3** In the <Trigger Type> group, select the trigger polarity.

 **(Rising Edge):** The trigger causes the relay contacts to be open-circuit or drives the output high, and holds this state for the specified pulse width.

 **(Falling Edge):** The trigger causes the relay contacts to be shorted or drives the output low, and holds this state for the specified pulse width.

 **(Any Edge):** Each time the trigger occurs, the relay contacts are alternately closed or opened, or the output is switched between high and low.

**Status:** Depending on the status, the relay contacts are closed or opened, or the output is switched between high and low.

**No Operation:** The trigger has no effect on the relay state or output level.

- 4** Turning the knobs, select the pulse width and timing to be set.

Knob	Parameter	Adjustment	Setting values
3	Pulse Width	Pulse width	1 to 60 (fields)
4	Timing	Output timing	1 to 3 <sup>a)</sup>

a) 1: Field 1, 2: Field 2, 3: Any

When “ $\infty$ ” is selected as the trigger polarity, there is no Pulse Width setting. When “Status” is selected, there is no Pulse Width or Timing setting.

**5** In the <Source> group, select the action block.

**M/E-1 to M/E-3 and P/P:** Set an action for the M/E or PGM/PST bank.

**Common:** Set an action for error status.

**6** Using any of the following methods, select the action to be set.

- Press directly on the list appearing in the status area.
- Press the arrow keys to scroll the reverse video cursor.
- Turn the knobs.

Knob	Parameter	Adjustment	Setting values
2	Action	Action selection	1 and upwards <sup>a)</sup>
5	Reg No	Register number	1 to 4 <sup>b)</sup>

a) • **Action list when the trigger type is other than “Status”**

When Source is M/E-1, M/E-2, or M/E-3: Key1 SS ? Recall, Key2 SS ? Recall, Key3 SS ? Recall, Key4 SS ? Recall, No Action

When Source is P/P: DSK1 SS ? Recall, DSK2 SS ? Recall, DSK3 SS ? Recall, DSK4 SS ? Recall, No Action

When Source is Common: KF Run, No Action

• **Action list when the trigger type is “Status”**

When Source is M/E-1, M/E-2, or M/E-3: Key1 SS ? Recall, Key2 SS ? Recall, Key3 SS ? Recall, Key4 SS ? Recall

Key1 On, Key2 On, Key3 On, Key4 On, No Action

When Source is P/P: DSK1 SS ? Recall, DSK2 SS ? Recall, DSK3 SS ? Recall, DSK4 SS ? Recall

DSK1 On, DSK2 On, DSK3 On, DSK4 On, No Action

When Source is Common: Error Make, Error Break, No Action

b) When knob 2 selection is “Key Snapshot”

**7** Press [Action Set] to confirm the action selection.

The selected setting appears in the status area.

## Test firing the trigger

To test fire the trigger, press [Test Fire].

This outputs a trigger from the selected output port. This is not output when the trigger type is “Status.”

## Setting the control mode for P-Bus devices

In the <P-Bus Control> group of the Panel>Device Interface menu, select the mode.

**Trigger:** When a predetermined button is pressed, the action command assigned to that button is output, to control an external device.

**Timeline:** The external device is controlled as a keyframe effect controlled by the center control panel.

## Setting the SCU editor panel port

When an editing keyboard is used, this port setting is for the editing keyboard if the license for the BZS-8050 is valid (*see page 285*), and for the serial tally if the license for the BZS-8050 is invalid.

If you want to use the port setting for the serial tally when the license for the BZS-8050 is valid, select [Serial Tally] from the <Editor Port Assign> group in the Panel>Device Interface menu.

**Serial Tally:** Use the SCU editor panel port for the serial tally.

**Editor Keyboard:** Use the SCU editor panel port for the editing keyboard.

## Making DCU serial port settings

You can assign buttons in the device control block (DEV1 to DEV12) to DCU serial ports, to operate the devices (disk recorder/VTR/Extended VTR) connected to these ports. For a disk recorder/Extended VTR, you can also set the sharing of file lists.

*For details of DCU serial port settings, see “Serial Port Settings (Serial Port Assign Menu)” (page 399).*

### To associate a serial port with a device selection button

**1** In the Panel>Device Interface menu, press [DCU Serial Port Assign].

The Serial Port Assign menu appears.

**2** Using any of the following methods, select the DCU serial port.

- Press directly on the list in the status area.
- Press the arrow keys to scroll the reverse video cursor.
- Turn the knob.

Knob	Parameter	Adjustment	Setting values
1	No	Serial port selection	1 and upwards <sup>a)</sup>

a) The range of the setting value depends on the DCU port settings.

The DCU number, slot number, and serial port number appear.

### 3 Select the device selection button to be assigned from the <Assign> group.

#### Notes

- It is not possible to assign more than one device selection button to the same port. The later assigned device selection button takes priority, and the previous selection is invalidated.
- If P-Bus/Mixer ESAM-II is assigned to a serial port, it is not possible to assign a device selection button to that port.

### 4 Repeat steps 2 and 3 as required to make assignments to other ports.

#### To select whether to use an editing keyboard

If you want to use an editing keyboard for the selected device, select a port using the same operation as in step 2, then press [Plug-In Editor Enbl] to display “Enbl” in the Editor column. If you do not want to use an editing keyboard, press [Plug-In Editor Enbl] to make the “Enbl” display disappear.

#### Notes

- This selection is possible when the BZS-8050 license is valid (*see page 285*).
- A port to which Mixer ESAM-II is assigned is automatically set to Enbl, and you cannot change this setting.

## Sharing disk recorder/Extended VTR file lists

To share files between devices connected to the same disk recorder/Extended VTR, use the following procedure.

#### Note

The following operation can only be carried out for the ports to which a disk recorder or Extended VTR is assigned.

### 1 In the Panel>Device Interface>Serial Port Assign menu, select the target disk recorder/Extended VTR.

- Press directly on the list in the status area.
- Press the arrow keys to scroll the reverse video cursor.
- Turn the knob.

Knob	Parameter	Adjustment	Setting values
1	No	Serial port selection	1 and upwards <sup>a)</sup>

a) The range of the setting value depends on the DCU port settings.



- 2** Turn the knob to select the device selection button (DEV1 to DEV12) for sharing the file list.

Knob	Parameter	Adjustment	Setting values
2	File List	Device selection button for sharing the file list	1 to 12

- 3** Press [Same File List Set].

This is reflected in the file list in the status area.

- 4** Repeat steps **1** to **3** as required to select other devices for sharing the file list.

---

## Operation Settings (Operation Menu)

To make settings relating to panel operation, use the Panel>Operation menu.

### To display the Operation menu

In the Engineering Setup menu, select VF2 'Panel' and HF6 'Operation.'

The status area shows the items that can be set and a list of the settings.

## Setting the on-air tally

To set the high tally state reflected on the control panel, select either of the following in the <Button Tally> group.

**System:** The overall system tally state is reflected on the control panel.

**Independ:** The tally state of the switcher only is reflected on the control panel.

## Setting the transition rate display mode

To determine whether to display transition rate values in menus and on the control panel in frames or as timecode values, select either of the following in the <Trans Rate Display> group.

**Frame:** display in frames.

**Timecode:** display as timecode (SS:FF).

## Making settings relating to effects

To make settings relating to the functions used when carrying out keyframe effect operations, use the following procedure.

- 1 In the Panel>Operation menu, press [Effect Mode].  
The Effect Mode menu appears.  
The status area shows a list of the items with their settings.

- 2 Make the following settings as required.

**Effect recall mode:** To select the state of the first keyframe when an effect is recalled, select [Recall] (the first keyframe is not recalled) or [Recall&Rewind] (the first keyframe is recalled) in the <Recall Mode> group.

**Automatically turning [EDIT ENBL] off:** When an effect is recalled with the [EDIT ENBL] button on, to automatically turn this button off, disabling keyframe editing, turn [Edit Enable Auto Off] on.

**Automatic first keyframe insertion:** When an empty register is recalled, to automatically insert a first keyframe of the state at that point, turn [1st KF Auto Insert] on.

**Automatic effect saving:** To automatically save an effect when it is recalled after being edited, turn [Effect Auto Save] on.

**Keyframe duration default value:** Press [Default KF Duration], then enter the default value from the numeric keypad window.

## Setting the first keyframe when a rewind is executed

For P-Bus, GPI, and DDR/VTR timeline operations, to execute the first keyframe when a rewind is carried out, set each external device on in the <REWIND&1st KF> group in the Effect Mode menu.

### Note

When an effect is executed by pressing the [RUN] button with this setting on, the first keyframe action is not executed.

**GPI:** setting for the GPI timeline

**P-Bus:** setting for the P-Bus timeline

**DDR/VTR:** setting for the VTR/disk recorder/Extended VTR timeline

## Setting the Source and Destination names

To set the Source and Destination names used in the control panel, use the following procedure.

### Note

Before carrying out these settings, it is necessary to set the number of the S-Bus description name.

*For details of the operation, see “To set the group number of an S-Bus description name” (page 411) under “Setup Relating to Router Interface and Tally.”*

- 1** In the <Source/Dest Name> group of the Panel>Operation menu, select the names to be used from the following.

**Sw’er Local:** Source names set in the Xpt Assign menu, and fixed bus names

**S-Bus Descript:** Description names set in the router

**S-Bus Type + Num:** Type + Num set in the router (In this case always eight characters.)

- 2** In the <Name Display Mode> group, select the method of display in the source name displays.

**Auto:** Optimize display according to number of characters. A name of up to two characters appears as two characters in one line. A name of up to four characters appears as four characters in one line.

Otherwise, up to the first eight characters are shown in two lines.

**2 Character:** The first two characters appear.

**4 Character:** The first four characters appear.

### **To replace a name set in the Xpt Assign menu with an S-Bus description name**

Turn [S-Bus Name Link] on. This has such effect that each time a description name is changed on the router, the corresponding source name is automatically changed. Thus, the same description name can always be used both on the router and the switcher.

Even when [Sw’er Local] is selected, the same name as when [S-Bus Descript] is selected can be displayed. The S-Bus description name can also be displayed in the Xpt Assign menu.

## **Settings for the Flexi Pad**

Use the following procedure.

- 1** In the Panel>Operation menu, press [Flexi Pad Mode].

The Flexi Pad Mode menu appears.

The status area shows a list of the items with their settings.

- 2** Make the following settings as required.

**Coupling the transition type selection with the Flexi Pad control block mode selection:** To make the Flexi Pad mode selection change

automatically when [WIPE] or [DME] is selected in the transition control block, press [Wipe/DME Auto Deleg], turning it on.

**Button indications in the memory recall section:** When the Flexi Pad control block mode is [WIPE] or [DME], for the button indications in the memory recall section, select [Pattern] or [Register Name] in the <Wipe/DME Display> group. When the mode is [Snapshot], [Effect], or [MCRO], select [Register No] or [Register Name] in the <Snapshot/Effect Display> group.

*For details, see the following.*

- “Wipe Snapshots” in Chapter 5 (Volume 1)
- “DME Wipe Snapshots” in Chapter 6 (Volume 1)
- the figure of the memory recall section in “Recalling the master timeline in the Flexi Pad control block” (page 196)
- the figure of the memory recall section in “Saving and Recalling Snapshots” (page 246)
- the figure of the memory recall section in “Recalling a Macro Register and Executing a Macro” (page 447).

## Setting the button operation mode

Use the following procedure.

- 1 In the Panel>Operation menu, press [Custom Button].

The Custom Button menu appears.

The status area shows a list of the items with their settings.

- 2 Make the following settings as required.

### **Operation mode of the [ALL] button in the transition control block:**

To specify the next transition to be selected by pressing the [ALL] button in the transition control block, press the next transition you want to select, turning it on, in the <Next Trans All> group. If everything here is set to Off, then pressing the [ALL] button does not change the specification of the next transition.

**Operation mode during an auto transition:** For the operation mode when the [AUTO TRANS] or [TAKE] button is pressed once more during an auto transition, select [Continue] or [Cancel] in the <Auto Trans/Take> group.

**Continue:** Continue the auto transition.

**Cancel:** Cancel the auto transition and return to the state before starting the auto transition.

**Operation mode during keyframe execution:** For the operation mode when the [RUN] button is pressed once more during effect execution, select [Continue] or [Cancel] in the <Run> group.

**Continue:** Continue the execution.

**Cancel:** Cancel the execution and return to the state before starting the execution.

**Interchanging the [AUTO TRANS] and [CUT] buttons:** To interchange the [AUTO TRANS] and [CUT] buttons in the transition control block, press the [Auto Trans/Cut Swap] button, turning it on.

**Transition preview operation mode:** For the operation mode of the [TRANS PVW] button, select [Lock] or [Hold] in the <Trans Pvw> group. The setting as to whether to use the “One-time mode” in which the transition preview terminates when the transition completes, or to use button control, is made on the switcher side (*see page 364*).

**CCP-8000-specific button settings:** Press [CCP-8000 Button], and skip to step **3**.

### 3 If required, make the following settings.

**Operating mode during a fade-to-black:** To set the operating mode if the [FTB] button is pressed once more during a fade-to-black, select either of the following in the <FTB> group.

**Continue:** Continue the fade-to-black.

**Cancel:** Cancel the fade-to-black, and return to the state before executing the fade-to-black.

**Operation mode of the [XPT HOLD] buttons in the key rows:** Set the operation mode of the [XPT HOLD] buttons in the key rows in the <Key Bus Xpt Hold> group, as follows.

**Normal:** The <Xpt Hold Mode> in the Switcher>Key/Wipe/FM menu is enabled.

**Protect:** In this mode, pressing a panel button cannot change the cross-point settings.

#### Note

The button On/Off state is preserved in each of the “Normal” and “Protect” modes. For example, if the [XPT HOLD] buttons are “On” in the Normal mode, and you switch to Protect mode, then if the [XPT HOLD] buttons were “Off” in this mode the previous time, the [XPT HOLD] buttons go off, and if they were “On” they light.

**[UTIL] button operation mode:** To set the operation mode of the [UTIL] button in the cross-point control block, press either of the following in the <Util Button> group.

**Hold:** Acts as a utility button while held down, changing the assignment of the cross-point button rows.

**Lock:** For the key rows, each time the button is pressed the cross-point button assignment toggles between the utility assignment and the normal assignment. The background A and B rows are fixedly assigned to the A and B rows, even if the [UTIL] button is pressed.

(For details, see “Names and Functions of Parts of the Control Panel” in Chapter 2 (Volume 1).)

## Setting trackball, joystick, and double-click sensitivity

Use the following procedure.

- 1 In the Panel>Operation menu, press the [Sensitivity].

The Sensitivity menu appears.

The status area shows a list of the items with their settings.

- 2 Make the following settings as required.

**Trackball and Z-ring sensitivity in normal mode:** In the <Trackball Normal Mode> group, select [ $\times 1$ ], [ $\times 2$ ], or [ $\times 4$ ].

**Trackball and Z-ring sensitivity in fine mode:** In the <Trackball Fine Mode> group, select [ $1/2$ ], [ $1/4$ ], or [ $1/8$ ].

**Joystick sensitivity in normal mode:** In the <Joystick Normal Mode> group, select [ $\times 1$ ], [ $\times 2$ ], or [ $\times 4$ ].

**Joystick sensitivity in fine mode:** In the <Joystick Fine Mode> group, select [ $1/2$ ], [ $1/4$ ], or [ $1/8$ ].

**Touch sensitivity for recalling menus by double-clicking buttons:** In the <Double Click> group, select [Fast], [Normal], or [Slow].

## Specifying main split fader

In the <Main Split Fader> group of the Panel>Operation menu, select [Left] or [Right].

## Setting the macro execution mode

Use the following procedure.

- 1 Press [Macro] in the Panel>Operation menu.

The Macro menu appears.

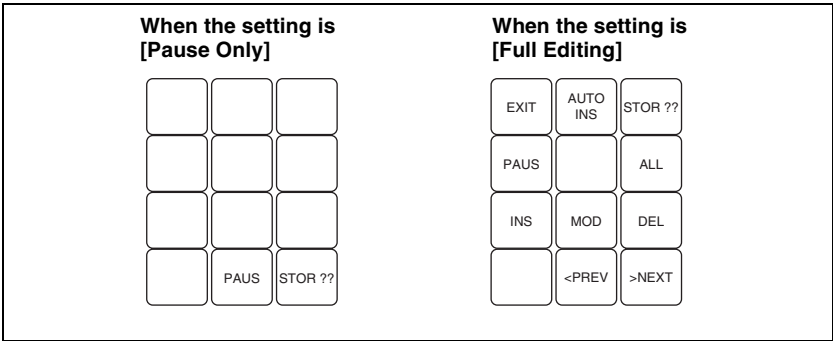
- 2 In the <Macro Execution Mode> group, select the macro execution mode.

**Normal:** normal execution mode

**Step:** step execution mode

- 3 In the <Flexi Pad Edit Mode> group, set the macro editing mode of the standard type Flexi Pad to [Pause Only] or [Full Editing].

This enables the standard type Flexi Pad control block to be used for macro editing. Depending on the macro editing mode setting, functions are assigned to the memory recall buttons as shown in the following figure.



## Screen Saver and Other Settings (Maintenance Menu)

To make settings relating to the screen saver, etc., use the Panel>Maintenance menu.

### To display the Maintenance menu

In the Engineering Setup menu, select VF2 ‘Panel’ and HF7 ‘Maintenance.’ The status area shows a list of the items with their settings.

### Screen saver settings

To enable the menu screen saver, use the following procedure.

- 1 In the Panel>Maintenance menu, press [Screen Saver], turning it on.
- 2 Adjust the following parameter.

Knob	Parameter	Adjustment	Setting values
1	Sleep Time	Time until screen saver starts operation	1 to 300 (minutes)

### Adjusting the brightness

You can adjust each of the following brightnesses independently.  
**LCD:** Adjust the brightness of the source name displays and the LCD buttons in the Flexi Pad control block.

**LED:** Adjust the brightness of the LED displays in the numeric keypad control block and so forth.

**Switch:** Adjust the brightness of the panel switches.

The following description takes the LCD brightness as an example. Use a similar process for the other adjustments.

- 1** In the Panel>Maintenance menu, press [LCD Brightness].
- 2** Adjust the following parameter.

Knob	Parameter	Adjustment	Setting values
1	Brightness	Menu screen brightness	1 to 5 <sup>a)</sup>

a) The larger the value, the brighter the screen.

## Adjusting the alarms

In the Panel>Maintenance menu, make the following settings.

**To give audible feedback from menu touch screen operations:** Press [Touch Beep], turning it on.

## Calibrating the touch panel

Use the following procedure.

- 1** In the Panel>Maintenance menu, press [Touch Panel Calibration].
- The following message appears.  
 “To Perform Calibration, please touch the center of each plus sign.”

- 2** Press [Yes].

- 3** Press the center of the plus sign displayed on the screen.

When you press on the plus sign, it disappears and a diagonally opposite plus sign appears.

- 4** Press the center of the plus sign.

A confirmation message appears.

- Select “Yes” to restart the panel reflecting the new setting.
- Select “No” to cancel the setting and return to the Maintenance menu.

# Setup Relating to Switcher Processor

## Settings for Switcher Configuration (Config Menu)

To make settings for the switcher processor configuration, use the Switcher>Config menu.

### To display the Config menu

In the Engineering Setup menu, select VF3 'Switcher' and HF1 'Config.'  
The status area shows the output signal assignment for each of the M/E and PGM/PST banks.

## Adjusting the reference phase

To adjust the switcher internal reference phase, in the Switcher>Config menu, set the following parameter.

Knob	Parameter	Adjustment	Setting values
3	Phase	Switcher internal reference phase	-32.00 to +96.00

## Specifying the video switching timing

In the <Switching Timing> group of the Switcher>Config menu, select one of the following.

**Any:** Not specified

**Field 1:** Field 1 (odd fields)

**Field 2:** Field 2 (even fields)

### Note

When the "Active Line" setting is 720p or 1080PsF, this selection is not possible.

## Setting the operation mode

In the <M/E Config> group of the Switcher>Config menu, select the operation mode for each M/E or P/P bank from the following.

- Standard mode
- Multi Program mode
- DSK mode (P/P only)

*For details of the modes, see "Switcher Setup" in Chapter 1 (Volume 1).*

**Note**

When Multi Program mode is selected, two or more transition type indication may light. It is also possible that more than one “Transition Type” has been selected in the Misc>Transition menu for each M/E.

**To assign the output of each bank in Multi Program mode**

When you selected [Multi Program] in the procedure described in “Setting the operation mode” (page 352), use the following procedure.

- 1** In the Switcher>Config menu, press [M/E Output Assign].  
The M/E Output Assign menu appears.
- 2** On the list in the status area, select the bank output to be assigned.  
The selected output appears in reverse video.
- 3** In the <M/E Output Assign> group, select the output signal to be assigned.

**To set the output configuration for each bank**

When you selected [Multi Program] or [DSK] in the procedure described in “Setting the operation mode” (page 352), use the following procedure.

- 1** In the Switcher>Config menu, press [PGM Config].  
The PGM Config menu appears.  
The status area shows the background and key configuration assigned to the output of each bank.
- 2** Using either of the following methods, select the output for which you want to make the setting.
  - Press directly on the list appearing in the status area.
  - Press the arrow keys to scroll the reverse video cursor.
  - Turn the knob.

Knob	Parameter	Adjustment	Setting values
1	No (PGM)	Output to which setting applies	1 to 16

The selected output appears in reverse video.

- 3** In the <Bkgd> group, select the background.  
In Multi Program mode, select [Clean] or [Utility2], then skip to step **5**.  
In DSK mode, select one of [Bkgd1] to [Bkgd4].
- 4** In DSK mode, turn the knobs to select the background signal.



Knob	Parameter	Adjustment	Setting values
2 to 5	Bkgd1 to 4	Background signal selection	1 to 18 <sup>a)</sup>

a) 1 to 6: M/E1 OUT1 to 6  
7 to 12: M/E2 OUT1 to 6  
13 to 18: M/E3 OUT1 to 6

- 5** In each of the <Key1> to <Key4> groups, select [Enable] or [Disable].

### To set the key preview configuration

You can make this setting at any time, regardless of the operation mode.

- 1** In the Switcher>Config menu, press [K-PVW Config].

The K-PVW Config menu appears.

The status area shows the key preview configuration for each bank.

- 2** Using either of the following methods, select the key preview to which the settings apply.

- Press directly on the list appearing in the status area to make the selection.
- Press the arrow keys to scroll the reverse video cursor.
- Turn the knob.

Knob	Parameter	Adjustment	Setting values
1	No (K-PVW)	Key preview to which setting applies	1 to 8

The selected key preview appears in reverse video.

- 3** In the <Mode> group, select [Video] mode or [Key] mode.

If you select Key mode, skip to step **6**.

- 4** In the <Bkgd> group, select the background.

In standard mode or Multi Program mode, select [Clean] or [Utility2], then skip to step **6**.

In DSK mode, select any of [Bkgd1] to [Bkgd4].

- 5** In DSK mode, turn the knobs to select the background signal.

Knob	Parameter	Adjustment	Setting values
2 to 5	Bkgd1 to 4	Background signal selection	1 to 18 <sup>a)</sup>

- a) 1 to 6: M/E1 OUT1 to 6  
7 to 12: M/E2 OUT1 to 6  
13 to 18: M/E3 OUT1 to 6

**6** In the <Key 1> to <Key 4> groups, select the corresponding key status from the following.

**Link:** Follow the key on/off setting.

**On:** Key is always on.

**Off:** Key is always off.

## Setting user regions

### Note

If you change the user region settings, the previously stored snapshot data and keyframe effect data can no longer be used.

Use the following procedure.

**1** In the Switcher>Config menu, press [User1-8 Config].

The User1-8 Config menu appears. The status area shows the region names and assigned user region numbers.

**2** Using any of the following methods, select the region you want to set.

- Press directly on the list in the status area.
- Press the arrow keys to scroll the reverse video cursor.
- Turn the knob.

Knob	Parameter	Adjustment	Setting values
1	Region	Region selection	1 and upwards

**3** In the <User Region Assign> group, select the user region you want to assign. If you do not want to assign a user region, select [No Assign].

**4** Repeat steps **2** and **3** as required to make the settings for other regions.

**5** To confirm the setting, press [Execute]. To cancel the setting and return to the original state, press [Clear] without pressing [Execute].

When you press [Execute], a confirmation message appears.

**6** Press [Yes].

This assigns a region to a user region.

## Assigning PGM/PST logically to an M/E

Use the following procedure.

- 1** In the Switcher>Config menu, press [Logical M/E Assign].  
The Logical M/E Assign menu appears. The status area shows the physical M/E and logical M/E organization.
- 2** Select the M/E you want to logically set to the PGM/PST from the <Logical M/E to Physical P/P> group.  
**P/P:** Assign the physical PGM/PST as logical PGM/PST.  
**M/E-1:** Assign the physical PGM/PST as logical M/E-1.  
**M/E-2:** Assign the physical PGM/PST as logical M/E-2.  
**M/E-3:** Assign the physical PGM/PST as logical M/E-3.

## Setting the assignments of DME channels to use on the individual M/E banks

The Switcher>Config>DME Config menu allows you to select the DME channels to use on the M/E and PGM/PST banks for processed keys or DME wipes.

Use the following procedure.

- 1** In the Switcher>Config menu, press [DME Config].  
The DME Config menu appears.
- 2** Using either of the following methods, select the M/E or PGM/PST bank for which you want to set a DME channel assignment.
  - Press directly on the list in the status area.
  - Press the arrow keys to scroll the reverse video cursor.
- 3** In the <DME Channel> group, press one of the [Ch1] to [Ch8] buttons turning it on.  
The corresponding DME channel is assigned to the M/E or PGM/PST bank selected in step **2**.
- 4** Repeat steps **2** and **3** to assign DME channels to other banks.

## Setting the side flag video material and operation

Make settings relating to the video material (4:3 aspect ratio) for applying side flags.

**Note**

These settings are valid only on the MVS-8000A; not valid on the MVS-8000.

*For details of side flag operations, see “Side Flag Settings” in Chapter 10 (Volume 1).*

### To set the aspect ratio (4:3/16:9)

Use the following procedure.

- 1** In the Switcher>Config menu, press [Side Flags].

The Side Flags menu appears.

The status area lists the video/key pair numbers, video signal source names, and aspect ratio settings (16:9/4:3).

- 2** Using any of the following methods, select the pair number for which you want to make the setting.

- Press directly on the list in the status area.
- Use the arrow keys to scroll the reverse video cursor.
- Turn the knobs.

Knob	Parameter	Adjustment	Setting values
1	V/K Pair No	Selection of a V/K pair by its number in the list	1 to 128
3	Num	Selection of number of V/K pairs in the list	1 to 128

- To select all of the pair numbers, press [ALL].

- 3** In the <Aspect> group, press [4:3].

If you select [16:9], no side flags are applied.

### To set 4:3 video material to have side flags applied automatically

You can make a setting so that when a signal with aspect ratio set to 4:3 is selected in the cross-point control block, side flags are automatically applied. To do so, in the Switcher >Config >Side Flags menu press [Auto Side Flags]. Pressing this button toggles the setting on and off.

This setting applies to all of the M/E and PGM/PST banks.

### To set to crop to 4:3 when a DME wipe is executed

When side flags are enabled, you can automatically crop an image as set to be a 4:3 image when executing a DME wipe.

To do so, in the Switcher>Config>Side Flags menu press [Auto Crop].

Pressing this button toggles the setting on and off.

This setting applies to all of the M/E and PGM/PST banks.

### To adjust the width of the side flags

You can adjust the width of the side flags. Use the following procedure.

- 1** In the Switcher>Config>Side Flags menu, press [Width].
- 2** Adjust the following parameters.

Knob	Parameter	Adjustment	Setting values
3	Left	Width of left side flag	-100.00 to +100.00
4	Right	Width of right side flag	-100.00 to +100.00
5	All	Width of both side flags	Left value shown

### To display the menu for enabling/disabling the side flags

In the Switcher>Config>Side Flags menu, press [Misc>Enbl>Setup Flags].

### To display the menu for assigning the side flags on/off function to a cross-point button

In the Switcher>Config>Side Flags menu, press [Side Flags Button Assign].

## Signal Input Settings (Input Menu)

For setup relating to signal inputs, use the Switcher>Input menu.

### To display the Input menu

In the Engineering Setup menu, select VF3 'Switcher' and HF2 'Input.'  
The status area shows source numbers and source names, input signal phase, and through mode on/off setting.

## Making phase adjustment and through mode settings

Use the following procedure.

- 1** In the Switcher>Input menu, select the input signal to which the settings apply.
  - Press directly on the list appearing in the status area.
  - Press the arrow keys to scroll the reverse video cursor.
  - Turn the knob.

Knob	Parameter	Adjustment	Setting values
1	Src No	Input signal selection	1 to 80

The selected input signal appears in reverse video.

- 2** Press [Input Phase Adj].
- 3** To adjust the phase, adjust the following parameter.

Knob	Parameter	Adjustment	Setting values
2	Phase	Input signal phase	-16 to +16

- 4** To enable through mode, press [Through Mode], turning it on.

## Making video process settings

Use the following procedure.

- 1** In the Switcher>Input menu, press [Video Process].  
The Video Process menu appears.  
The status area shows the source number, source name, and video process adjustment settings.
- 2** Using any of the following methods, select the input signal to which the settings apply.
  - Press directly on the list appearing in the status area.
  - Press the arrow keys to scroll the reverse video cursor.
  - Turn the knob.

Parameter group [2/2]

Knob	Parameter	Adjustment	Setting values
1	Src No	Input signal selection	1 to 80

- 3** Press [Video Process], turning it on.
- 4** Adjust the following parameters.

Parameter group [1/2]

Knob	Parameter	Adjustment	Setting values
1	Video Gain	Video signal gain	-200.00 to +200.00
2	Y Gain	Y signal gain	-200.00 to +200.00
3	C Gain	Chrominance signal gain	-200.00 to +200.00
4	Hue Delay	Hue delay	-180.00 to +180.00
5	Black Level	Black level	-7.31 to +109.59

To set the parameter settings to their defaults, press [Unity].

## Enabling the illegal color limiter

To enable the illegal color limiter for the signals generated by the switcher internal matte generator, press [Matte Illeg Col Limit] in the Switcher>Input menu, turning it on.

---

## Signal Output Settings (Output Menu)

For setup relating to signal outputs, use the Switcher>Output menu.

### To display the Output menu

In the Engineering Setup menu, select VF3 'Switcher' and HF3 'Output.'

The status area shows the output signal numbers and names, and output signal phase for the signals output from Output 1 to 48.

## Assigning output signals

To assign a signal to output from an output port, use the following procedure.

- 1** In the Switcher>Output menu, press [Output Assign].

The Output Assign menu appears.

The status area shows the output ports and assigned signals on the left, and a list of signals that can be assigned on the right.

- 2** In the <Output Assign> group, select either of the following.

**[Re-Entry Source]:** It is possible to make duplicate assignments.

M/E-1 Output 1 to 6 <sup>a)</sup>

M/E-2 Output 1 to 6 <sup>a)</sup>

M/E-3 Output 1 to 6 <sup>a)</sup>

PGM/PST 1 to 6 <sup>a)</sup>

DME Monitor Video

DME Monitor Key

a) M/E output signals selected in the M/E Output Assign menu.

**[Aux Bus]:** It is not possible to make duplicate assignments.

Preset

Edit Preview

AUX 1 to 48

- 3** Using any of the following methods, select the output port number and signal to be assigned.

- Press directly on the list appearing in the status area to make the selection.

- Press the arrow keys to scroll the reverse video cursor.
- Turn the knobs.

Knob	Parameter	Adjustment	Setting values
1	Output No	Output port number	1 to 48
2	Source No	Selection of signal to be assigned	1 and upwards

- For output ports not to be assigned, press [Inhibit].

The selected signal appears in reverse video.

## 4 Press [Set] to confirm the assignment.

## Selecting the output signal to which settings apply

In the following adjustment/setting operations except for “*Setting the reference output*” (see page 363), use any of the following methods to select the output signal before making the setting.

- Press directly on the list in the status area.
- Press the arrow keys to move the reverse video cursor.
- Turn the knob.

Knob	Parameter	Adjustment	Setting values
1	Output No	Output port number selection	1 to 48

The selected output signal appears in reverse video.

## Adjusting the video clip

To adjust the clip value for each of the output signals from the Output 1 to 48 ports, use the following procedure.

### 1 In the Switcher>Output menu, press [Video Clip].

The Video Clip menu appears.

The status area shows the output ports and assigned signals, and the white clip, dark clip, and chrominance clip values.

### 2 Adjust the following parameters.

Knob	Parameter	Adjustment	Setting values
2	White Clip	Luminance signal white clip value	90.00 to 109.02
3	Dark Clip	Luminance signal dark clip value	–6.85 to +10.00
4	Chroma Clip	Chrominance signal clip value	90.00 to 113.17

To set the values to the default values, press [Default].

## Making vertical blanking interval adjustment and through mode settings

Use the following procedure.

- 1 In the Switcher>Output menu, press [V Blank/Through].

The V Blank/Through menu appears.

The status area shows the output ports and the assigned signals, the vertical blanking interval, and the through mode Enable/Disable status.

- 2 Press [V Blank Mask].

- 3 Adjust the parameter.

Knob	Parameter	Adjustment	Setting values
2	Mask End	Final value for vertical blanking interval	See note a) below

a) Depending on the signal format, the adjustment range varies as follows.

- **480i**: 10 to 19
- **576i**: 6 to 22
- **1080i**: 7 to 20
- **720p**: 7 to 25

To return the values to their defaults, press [Default].

- 4 To enable the through mode, press [Through Mode], setting it to Enable. The through mode can be applied to the following outputs.

- Aux 1 to 48 outputs
- Program outputs of the M/E and PGM/PST rows
- Clean outputs of the M/E and PGM/PST rows

## Making safe title settings

Use the following procedure.

- 1 In the Switcher>Output menu, press [Safe Title].

The Safe Title menu appears.

The status area shows the output ports and the assigned signals, with the box 1, box 2, and cross states.

- 2 To enable the safe title on/off setting made in the Misc menu, press [Safe Title], turning it on.

- 3 Carry out either of the following operations.

**To display a box:** Press [Box1] or [Box2], turning it on.

In this case, carry out the following steps **4** and **5**.

**To display a cross:** Press [Cross], turning it on.

- 4** When you selected [Box1] or [Box2] in step **3**, adjust the following parameters.

Knob	Parameter	Adjustment	Setting values
2	Box Size	Box size	50.00 to 100.00
3	Luminance	Display brightness	0.00 to 100.00 <sup>a)</sup>

a) Adjustable for Box2

- 5** When in step **3** you selected [Box1] or [Box2], in the <Box1 Adjust> or <Box2 Adjust> group, select the aspect ratio (16:9/14:9/4:3).

## Setting the reference output

To adjust the reference output phase with respect to the reference input, adjust the following parameters in the Switcher>Output menu.

Knob	Parameter	Adjustment	Setting values
2	Line	Line phase	-90 to +90
3	Time	Time	-32.00 to +96.00

## Cropping the image to a 4:3 aspect ratio in an HD system

In an HD system, to crop an image having a screen aspect ratio of 4:3 to an aspect ratio of 4:3, use the following procedure.

- 1** In the Output menu, press [4:3 Crop].

The Output 4:3 Crop menu appears.

The status area shows the output ports and respective 4:3 Crop mode settings.

- 2** Press [4:3 Crop], turning it on.

This enables the crop setting, and this is reflected in the status area.

### Note

When the screen aspect ratio of 16:9 is selected for all M/E banks in the System>Format>Active Line/Aspect menu, the setting of 4:3 Crop is disabled.

## Settings Relating to Video Switching (Transition Menu)

For settings relating to video switching, use the Switcher>Transition menu.

### To display the Transition menu

In the Engineering Setup menu, select VF3 ‘Switcher’ and HF4 ‘Transition.’ The status area shows the transition preview, key transition, bus toggle, and split fader settings for each M/E and P/P bank.

### Selecting the bank to which the settings apply

In the Transition menu, using any of the following methods, select the bank to which the settings apply, then make the settings.

- Press directly on the list appearing in the status area.
- Press the arrow keys to scroll the reverse video cursor.
- Turn the knob.

Knob	Parameter	Adjustment	Setting values
1	Bank	M/E or P/P selection to which settings apply	1 to 4

The selected bank appears in reverse video.

### Setting the transition preview mode

To select the transition preview mode, in the <Transition Preview> group of the Transition menu, select either of the following.

**One Time:** The transition preview ends after a single transition.

**Normal:** Switching the [TRANS PVW] button on or off switches between the transition preview mode and the normal mode.

### Selecting the transition mode of the independent key transition control block

To select the key transition mode, select either of the following in the <Key Transition> group of the Transition menu.

**Same:** The transition settings for the On and Off directions are the same.

**Independent:** The transition settings for the On and Off directions can be set separately.

### Selecting the background transition flip-flop mode

In the Transition menu, press [Bus Toggle], to switch between on and off.

**On:** Flip-flop mode

**Off:** Bus fixed mode

*For more details, see “Flip-flop mode and bus fixed mode” in Chapter 1 (Volume 1).*

## Setting the split fader to be enabled or disabled

In the Transition menu, press [Split Fader] to switch between Enable and Disable. This setting is only valid when using a simple transition module with Bus Toggle set to Off.

**Enable:** When the fader lever is split, the split fader effect is enabled.

**Disable:** Even when the fader lever is split, the normal fader lever effect is obtained.

## Enabling or disabling the fade-to-black function

In the <FTB> group of the Transition menu, press the program output name to toggle between On and Off.

**On:** When the [FTB] button is pressed, a fade-to-black is carried out.

**Off:** Even when the [FTB] button is pressed, no fade-to-black is carried out.

### Note

The PGM2 to PGM4 settings are only valid in Multi Program mode or DSK mode.

## Setting a preset color mix

Use the following procedure.

- 1** In the Switcher>Transition menu, press [Preset Color Mix].

The Preset Color Mix menu appears.

The status area shows the stroke mode setting for each M/E bank, the setting for whether or not the key status is maintained, and the one-time mode setting.

- 2** In the <Stroke Mode> group, select whether to carry out a transition in one stroke or two strokes.

**Normal:** Carry out a preset color mix with two transition operations.

**Single:** Carry out a preset color mix with a single transition operation.

### Note

In bus fixed mode (*see page 364*), the setting is fixed to “Single.”

- 3 In the <Non Drop Key> group, select the key setting for a transition including a key.

To carry out the transition with the key state maintained, press [Key1] to [Key4], turning them on. (See “Transition Types” in Chapter 1 (Volume 1).)

- 4 If each time a transition ends the transition type is to return to the previous setting, press [One Time Enable].

## Settings relating to fader lever operations

To select the way in which the fader lever position and the transition progress are related, use the following procedure.

- 1 In the Switcher>Transition menu, press [Transition Curve].

The Transition Curve menu appears.

- 2 In the <Fader Curve> group, select the fader lever operation mode.

**Normal:** The transition progress is linear, according to the fader lever position. (Factory default setting)

**Adv Tally Mode:** When the fader lever is moved from the end of its travel, the tally is output slightly before the transition starts.

---

## Settings Relating to Keys, Wipes and Frame Memory (Key/Wipe/FM Menu)

For settings relating to keys, wipes and frame memory, use the Switcher>Key/Wipe/FM menu.

### To display the Key/Wipe/FM menu

In the Engineering Setup menu, select VF3 ‘Switcher’ and HF5 ‘Key/Wipe/FM.’

The status area shows the key memory settings, mask and border processing order, key priority, cross-point hold, pattern limit transition, and wipe edge settings for each of the M/E and PGM/PST banks.

## Switching video process memory on or off

In the Switcher>Key/Wipe/FM menu, press [Video Proc Memory], turning it on. (See also “Switcher Setup” in Chapter 1 (Volume 1).)

## Settings for the show key function

Use the following procedure.

- 1** In the Switcher>Key/Wipe/FM menu, press [Show Key].  
The Show Key menu appears.
- 2** In the <Show Key Enable> group, press the signal for which “show key” is enabled, turning it on.
- 3** To set the time for which “show key” is held, press [Hold Time].
- 4** Adjust the following parameter.

Knob	Parameter	Adjustment	Setting values
1	Hold Time	Show key hold time	0 to 999 (frames)

## Settings for DSK auto drop function

Use the following procedure.

- 1** In the Switcher>Key/Wipe/FM menu, press [DSK Auto Drop].  
The DSK Auto Drop menu appears.
- 2** In the <DSK Auto Drop> group, press one of [DSK1] to [DSK4] for which you want the DSK to be deleted automatically, turning it on.

## Automatically naming and saving to frame memory

In the Switcher>Key/Wipe/FM menu, press [FM Auto Store], turning it on.

## Selecting the bank to which the settings apply

For the section “Selecting the key memory mode” and subsequent sections, select the bank to which the settings apply using any of the following methods, then make the settings.

- Press directly on the list appearing in the status area.
- Press the arrow keys to scroll the reverse video cursor.
- Turn the knob.

Knob	Parameter	Adjustment	Setting values
1	Bank	M/E or P/P selection to which settings apply	1 to 4

The selected bank appears in reverse video.

## Selecting the key memory mode

In the <Key Memory> group of the Switcher>Key/Wipe/FM menu, select one from Full (full mode)/Simple (simple mode)/Off.

*For more details, see “Key Memory” in Chapter 1 (Volume 1).*

## Selecting the processing order of masks and borders

In the <Mask/Border Process> group of the Switcher>Key/Wipe/FM menu, select one of the following.

**Mask>Border:** Apply the Mask effect, then apply the Border effect.

**Border>Mask:** Apply the Border effect, then apply the Mask effect.

## Selecting the key priority operation mode

In the <Key Priority> group of the Switcher>Key/Wipe/FM menu, select one of the following.

**Normal:** The key priority sequence can be varied freely.

**Fix:** Fixed at currently set priority sequence.

## Setting the operation mode of the key bus [XPT HOLD] button

In the <Xpt Hold Mode> group of the Switcher>Key/Wipe/FM menu, select any of the following.

**Key Disable:** The [XPT HOLD] button of the key bus functions not only as a cross-point hold button but also as a key disable button. When the [XPT HOLD] button is on, recalling a snapshot or keyframe effect does not reflect the key settings, including the cross-point selection information.

**Key Disable with Status:** Same as [Key Disable], and further disables the reflection of the key on/off status.

**Xpt Hold:** The [XPT HOLD] button of the key bus functions as a cross-point hold button. When the [XPT HOLD] is on, recalling a snapshot or keyframe effect does not reflect the cross-point selection information.

## Setting the operation mode when the pattern limit is released

In the <Pattern Limit Transition> group of the Switcher>Key/Wipe/FM menu, select either of the following operation modes.

**Auto:** When the pattern limit is released, the remainder of the transition is carried out automatically at a special-purpose transition rate.

**Manual:** After the pattern limit is released, the transition waits for the next operation, then executes. Until you move the fader lever or press [AUTO TRANS], the transition is not executed.

## Setting the default wipe edge softness

- 1 In the Switcher>Key/Wipe/FM menu, press [Wipe Edge Default], turning it on.
- 2 Set the following parameter.

Knob	Parameter	Adjustment	Setting values
3	Soft	Default value of wipe edge softness	−50.00 to +50.00

## Settings Relating to Function Links (Link Menu)

Carry out setup relating to links by displaying the Switcher>Link menu.

### To display the Link menu

In the Engineering Setup menu, select VF3 ‘Switcher’ and HF6 ‘Link.’  
The status area shows the current link information.

## Setting a cross-point button link

To link together two buses internal to the switcher, use the following procedure.

- 1 In the Switcher>Link menu, press [Internal Bus Link].  
The Internal Bus Link menu appears.  
The status area shows the link source and link destination buses, and link table information.
- 2 Using any of the following methods, select what setting applies to.
  - Press directly on the list appearing in the status area.
  - Press the arrow keys to scroll the reverse video cursor.
  - Turn the knob.

Knob	Parameter	Adjustment	Setting values
1	Link No	Link number	1 to 64

- 3 Press [Link Bus Select].

The Link Bus Select menu appears.  
The status area lists the current setting status of the selected link and the buses that can be selected.



- 4 In the <Bus Select> group, select [Master Bus] (link source bus).
- 5 Using any of the following methods, select the bus to be the link source, and press [Bus Set].
  - Press directly on the list appearing in the status area.
  - Press the arrow keys to scroll the reverse video cursor.
  - Turn the knob.

Knob	Parameter	Adjustment	Setting values
2	No	Bus selection	1 to 174 <sup>a)</sup>

a) Only when [Master Bus] is selected, 171 (M/E-1 Trans PGM), 172 (M/E-2 Trans PGM), 173 (M/E-3 Trans PGM), and 174 (P/P Trans PGM) are available. When [Linked Bus] is selected, 172 to 174 are not available.

Only when [Linked Bus] is selected, 103 (AUX1 as key) to 150 (AUX48 as key), and 159 (MON1 as key) to 166 (MON8 as key) are available. When [Master Bus] is selected, 103 to 150 and 159 to 166 are not available.

**Note**

With one of 171 to 174 selected for [Master Bus], linking is carried out as soon as you start moving the fader lever.

- 6 In the <Bus Select> group, select [Linked Bus] (link destination bus).
- 7 Referring to step 5, select the bus to be the link destination, and press [Bus Set].
- 8 Turn the knob to select the link table, and press [Link Table Set].

Knob	Parameter	Adjustment	Setting values
3	Link Table No	Link table selection	1 to 8

*For more information about link tables, see the following item.*

The status area reflects the current setting status.

**To delete a link**

Select the link you want to delete, then press [Clear] in the Internal Bus Link menu.

## Making link table settings

Use the following procedure.

- 1 In the Internal Bus Link menu, press [Link Table Select].

The Link Table Select menu appears.

- 2** Using any of the following methods, select the link source and link destination signals.

- Press directly on the list appearing in the status area.
- Press the arrow keys to scroll the reverse video cursor.
- Turn the knobs.

Knob	Parameter	Adjustment	Setting values
4	Main No	Video/key signal for link source <sup>a)</sup>	1 to 128
5	No	Video/key signal for link destination <sup>a)</sup>	1 to 128

a) When the selected bus has a key source bus set, a key signal is displayed; when other buses are selected, a video signal is displayed.

- 3** To confirm the selection, press [Link Src Set].

This links the link destination signal to the signal selected as Main No.

### To initialize the set source address

Press [Init Link Table].

A confirmation message appears; press [Yes].

The source addresses are reassigned, and this is reflected in the status area.

### To change the link number and link table number

In this menu too, you can change the link number and link table number. To do this, turn the knobs as follows to make the setting, then press [Link Table Set].

Knob	Parameter	Adjustment	Setting values
1	Link No	Link to which setting applies	1 to 64
3	Link Table No	Link table selection	1 to 8

## Linking cross-point buttons and GPI output ports

To link cross-point buttons or the [CUT] and [AUTO TRANS] buttons in the cross-point control block, and GPI output ports, use the following procedure.

- 1** In the Switcher>Link menu, press [GPI Link], to display the Switcher>Link>GPI Link menu.

The status area shows the output ports and the link status, and delay value information.

- 2** Using any of the following methods, select the GPI output port.

- Press directly on the list appearing in the status area.
- Press the arrow keys to scroll the reverse video cursor.

- Turn the knob.

Knob	Parameter	Adjustment	Setting values
1	GPI Port	GPI output port selection	1 to 8

### 3 Press [GPI Link Adjust].

The GPI Link Adjust menu appears.

The status area shows the current setting state of the selected link, and a list of the selectable video names or button names, together with the GPI link Enable/Disable setting for each bus.

### 4 Using any of the following methods, select what the setting applies to. For each GPI port there can be up to eight links.

- Press directly on the list appearing in the status area.
- Press the arrow keys to scroll the reverse video cursor.
- Turn the knobs.

Knob	Parameter	Adjustment	Setting values
1	GPI Port	GPI output port selection	1 to 8
2	Link No	Link number selection	1 to 8
3	Video/Button No	Selection of video or button name to be linked	1 to 136 <sup>a)</sup>

a) These include main pair numbers 1 to 128, and “Cut” and “Auto Trans” on each bank.

### 5 In the <Video/Button> group, press [Select].

The selected video or button name is reflected in the status area.

#### To clear a video/button name link

Make the selection to which the setting applies, then in the <Video/Button> group press [Clear].

### 6 To select for each bus whether the GPI link setting is enabled or disabled, use any of the following methods to select the bus to which the setting applies.

- Press directly on the list appearing in the status area.
- Press the arrow keys to scroll the reverse video cursor.
- Turn the knob.

Knob	Parameter	Adjustment	Setting values
4	Bus	Bus selection	1 to 114

### 7 In the <Bus> group, select any of the following.

**Enable:** Enable the GPI link setting for the selected bus.

**Disable:** Disable the GPI link setting for the selected bus.

**All Enable:** Enable the GPI link setting for all buses.

### To set the delay value

Use the following procedure.

- 1** In the GPI Link Adjust menu, turn the knobs to select the output port for which you want to set the delay value, and the corresponding delay value.

Knob	Parameter	Adjustment	Setting values
1	GPI Port	GPI output port for the setting	1 to 8
5	Delay	Delay value for the output port	0 to 300 (fields)

- 2** Press [Delay Set].

This confirms the delay value, which is reflected in the status area.

## Making a setting for linking two M/E banks

You can link any two M/E banks for some operations by using the Switcher>Link>M/E Link menu.

The operations for which you can link two M/E banks are as follows.

- Transition execution (auto transition, cut, and fader lever operation)
- Next transition selection
- Transition type selection

The default setting is such that the specified banks are linked for transition execution only.

Use the following procedure.

- 1** In the Switcher>Link menu, press [M/E Link].

The M/E Link menu appears.

The status area displays a link list showing link source banks (M/E and PGM/PST) and link destination banks, and a selection list.

- 2** Using any of the following methods, select the link number you want to set.
  - Press directly on the list in the status area.
  - Press the arrow keys to scroll the reverse video cursor.
  - Turn the knob.

Knob	Parameter	Adjustment	Setting values
1	Link No	Link number selection	1 to 8

**3** In the <M/E Select> group, select [Master M/E] (link source).

**4** Using any of the following methods, select the M/E or PGM/PST bank you want to be the link source, then press [M/E Set].

- Press directly on the list in the status area.
- Press the arrow keys to scroll the reverse video cursor.
- Turn the knob.

Knob	Parameter	Adjustment	Setting values
2	No	Bank selection	1 to 4 <sup>a)</sup>

- a) 1: M/E-1  
 2: M/E-2  
 3: M/E-3  
 4: PGM/PST

**5** In the <M/E Select> group, select [Linked M/E] (link destination).

**6** In the same way as in step **4**, select the M/E or PGM/PST bank you want to be the link destination, then press [M/E Set].

### To link the banks not only for transition execution but also for the other operations

Press [Transition Only], turning it off.

### To release the link setting

Use the same operation as in step **2** to select the link number for which you want to release the link setting, then press [Clear].

## Making a link setting for key transition

You can make a link setting for key transition by using the Switcher>Link>Key Transition Link menu.

The operations for which you can link two banks are the following independent key transition operations.

- Auto transition
- Turning the key on or off
- Fader lever operation (on the downstream key control block)

Use the following procedure.

**1** In the Switcher>Link menu, press [Key Trans Link].

The Key Transition Link menu appears.

The status area displays a link list showing link sources and link destinations, and a key selection list.

- 2** Using any of the following methods, select the link number you want to set.

- Press directly on the list in the status area.
- Press the arrow keys to scroll the reverse video cursor.
- Turn the knob.

Knob	Parameter	Adjustment	Setting values
1	Link No	Link number selection	1 to 32

- 3** In the <Key Select> group, select [Master Key] (link source).

- 4** Using any of the following, select the key you want to be the link source, then press [Key Set].

- Press directly on the list in the status area.
- Press the arrow keys to scroll the reverse video cursor.
- Turn the knob.

Knob	Parameter	Adjustment	Setting values
2	No	Key number selection	1 to 16 <sup>a)</sup>

a) The keys and their numbers selectable as link source/link destination are as follows.

M/E-1 Key1 (1), M/E-1 Key2 (2), M/E-1 Key3 (3), M/E-1 Key4 (4), M/E-2 Key1 (5), M/E-2 Key2 (6), M/E-2 Key3 (7), M/E-2 Key4 (8), M/E-3 Key1 (9), M/E-3 Key2 (10), M/E-3 Key3 (11), M/E-3 Key4 (12), DSK1 (13), DSK2 (14), DSK3 (15), and DSK4 (16)

- 5** In the <Key Select> group, select [Linked Key] (link destination).

- 6** In the same way as in step **4**, select the key you want to be the link destination, then press [Key Set].

#### To release the link setting

Use the same operation as in step **2** to select the link number for which you want to release the link setting, then press [Clear].

## Interfacing With External Devices (Device Interface Menu)

To carry out setup relating to connections with external devices, display the Switcher>Device Interface menu.

## To display the Device Interface menu

In the Engineering Setup menu, select VF3 ‘Switcher’ and HF7 ‘Device Interface.’

## Making 9-pin port device interface settings

The description in this section takes the REMOTE3 port as an example. For other REMOTE ports, carry out the same process as required.

- 1** In the Switcher>Device Interface menu, press [Remote Assign].  
The Remote Assign menu appears.
- 2** Select the device interface you want to set for the REMOTE3 port from the <Remote3> group.  
**Editor A:** assign Editor A to the REMOTE3 port.  
**Editor B:** assign Editor B to the REMOTE3 port.  
**AUX:** assign AUX to the REMOTE3 port.  
**DME1:** assign DME1 to the REMOTE3 port.

### Note

When REMOTE3 and REMOTE4 are respectively assigned to DME1 and DME2, you can switch the AUX bus from the DME (DME-3000/7000) connected to these ports.

At this time, connect the DME input video signals and key signals as follows.

- DME1 video input: AUX1 output
- DME1 key input: AUX2 output
- DME2 video input: AUX4 output
- DME2 key input: AUX5 output

Note that for a DME external video signal, you can select any of AUX1 to AUX14 on the DME. Connect to the selected AUX bus.


## Making switcher processor GPI input settings


Use the following procedure.


- 1** In the Switcher>Device Interface menu, press [GPI Input].  
The GPI Input menu appears.
- 2** Using any of the following methods, select the settings.
  - Press directly on the list appearing in the status area.
  - Press the arrow keys to scroll the reverse video cursor.
  - Turn the knobs.


Knob	Parameter	Adjustment	Setting values
1	Port	Port selection	1 to 8
2	No	Selection of number for action to be assigned	1 to 8

**3** In the <Trigger Type> group, select the trigger type.

 **(Rising Edge):** Apply the trigger on a rising edge of an input pulse.

 **(Falling Edge):** Apply the trigger on a falling edge of an input pulse.

 **(Any Edge):** Apply the trigger on a change in the polarity of the input signal.

 **(Level):** Carry out the specified operation when the input is low or high.

**No Operation:** Apply no trigger on an input pulse.

**4** In the <Target> group, select the action block.

**M/E-1, M/E-2, M/E-3, P/P:** Set the action for one of the banks.

**Common/Setup:** Set an action for something other than the above, or a setup action.

**5** Using any of the following methods, select the action to be set.

- Press directly on the list appearing in the status area.
- Press the arrow keys to scroll the reverse video cursor.
- Turn the knobs.

Knob	Parameter	Adjustment	Setting values
3	Action	Action selection	1 and upwards <sup>a)</sup>
4	Reg No	Register number	1 to 4 <sup>b)</sup> 1 to 99 <sup>c)</sup>

a) • **Action list when the trigger type is other than “Level”**

When Target is M/E-1, M/E-2, or M/E-3: Cut, Auto Trans

Key1 Cut, Key1 Auto Trans, Key2 Cut, Key2 Auto Trans, Key3 Cut, Key3 Auto Trans, Key4 Cut, Key4 Auto Trans

SS ? Recall, Key1 SS ? Recall, Key2 SS ? Recall, Key3 SS ? Recall, Key4 SS ? Recall

Effect ? Recall, Effect ? Recall & Run, KF Run, KF Stop, KF Rewind, KF Reverse Run, No Action

When Target is P/P: Cut, Auto Trans

DSK1 Cut, DSK1 Auto Trans, DSK2 Cut, DSK2 Auto Trans, DSK3 Cut, DSK3 Auto Trans, DSK4 Cut, DSK4 Auto Trans

FTB Cut, FTB Auto Trans

SS ? Recall, DSK1 SS ? Recall, DSK2 SS ? Recall, DSK3 SS ? Recall, DSK4 SS ? Recall

Effect ? Recall, Effect ? Recall & Run, KF Run, KF Stop, KF Rewind, KF Reverse Run, No Action

When Target is Common/Setup: FM Src1 Field Freeze, FM Src1 Frame Freeze, FM Src2 Field Freeze, FM Src2 Frame Freeze  
FM Src1 Freeze Off, FM Src2 Freeze Off

User1 to 8 SS ? Recall, User1 to 8 EFF ? Recall, User1 to 8 EFF ? Recall & Run, User1 to 8 KF Run, User1 to 8 KF Stop, User1 to 8 KF Rewind, User1 to 8 KF Reverse Run, No Action

• **Action list when the trigger type is “Level”**

When Target is M/E-1, M/E-2, M/E-3, or P/P: Aspect

Bkgd A Side Flags\*, Bkgd B Side Flags\*,

\* Appears on the MVS-8000A only.

No Action

When Target is Common/Setup: Format, Aspect, Level Enable, No Action

**Note**

“Level Enable” is a function that determines whether GPI inputs are enabled (“Enable”) or disabled (“Disable”) for the “Aspect” and “Format” actions that can be used when the trigger type is Level. When Level Enable is used, if the input is “Disable” then it is not possible to switch “Aspect” or “Format” by GPI input.

If a GPI to switch “Aspect” or “Format” occurs when powering the system off, the action triggered by the GPI may start immediately before the power goes off and the power may go off before the action is completed. This may corrupt the setup settings.

It is therefore recommended to use Level Enable to avoid such a situation.

b) When knob 3 selection is “Key Snapshot”

c) When knob 3 selection is “Snapshot” or “Effect”

## 6 Press [Action Set] to confirm the action selection.

The selected setting appears in the status area.

## Carrying out level settings

To set the low level and high level, first set the trigger type to “Level,” then use the following procedure.

### 1 In the Switcher>Device Interface menu, select the action to be set, and press [H/L Set].

The H/L Set menu appears.

### 2 Using any of the following methods, select the settings.

- Press directly on the list appearing in the status area.
- Press the arrow keys to scroll the reverse video cursor.
- Turn the knob.

Knob	Parameter	Adjustment	Setting values
1	No	Selection of setting for action	1 and upwards

- 3** To apply the selection made in step **2** when the input is high, press [H Set].  
To apply the selection made in step **2** when the input is low, press [L Set].
- This confirms the setting, which appears in the status area.

#### Notes

- When the action is “Format,” these settings conflict with the current settings, but after making the settings, agreement is restored after a pulse change or power off/on.
- When the Action is “Bkgd A Side Flags” or “Bkgd B Side Flags,” the levels are fixed, as follows.  
**High level:** Off  
**Low level:** On

## Making switcher processor GPI output settings

Use the following procedure.


- 1** In the Switcher>Device Interface menu, press [GPI Output].
- The GPI Output menu appears.


- 2** Using any of the following methods, select the settings.


- Press directly on the list appearing in the status area.
- Press the arrow keys to scroll the reverse video cursor.
- Turn the knob.

Knob	Parameter	Adjustment	Setting values
1	Port	Port selection	1 to 8

- 3** In the <Trigger Type> group, select the trigger polarity.

 **(Rising Edge):** The trigger causes the relay contacts to be open-circuit or drives the output high, and holds this state for the specified pulse width.

 **(Falling Edge):** The trigger causes the relay contacts to be shorted or drives the output low, and holds this state for the specified pulse width.

 **(Any Edge):** Each time the trigger occurs, the relay contacts are alternately closed or opened, or the output is switched between high and low.

**Status:** Depending on the status, the relay contacts are closed or opened, or the output is switched between high and low.

**No Operation:** The trigger has no effect on the output.

- 4** Turn the knobs to select the pulse width and timing to be set.

Knob	Parameter	Adjustment	Setting values
3	Pulse Width	Pulse width	1 to 60 (fields)
4	Timing	Output timing	1 to 3 <sup>a)</sup>

a) 1: Field 1, 2: Field 2, 3: Any

When “ $\infty$ ” is selected as the trigger polarity, there is no Pulse Width setting. When “Status” is selected, there is no Pulse Width or Timing setting.

## 5 In the <Source> group, select the action block.

**M/E-1 to M/E-3 and P/P:** Set an action for the M/E or PGM/PST bank.

**Common:** Set an action for error status.

## 6 Using any of the following methods, select the action to be set.

- Press directly on the list appearing in the status area.
- Press the arrow keys to scroll the reverse video cursor.
- Turn the knobs.

Knob	Parameter	Adjustment	Setting values
2	Action	Action selection	1 and upwards <sup>a)</sup>
5	Reg No	Register number	1 to 4 <sup>b)</sup> 1 to 99 <sup>c)</sup>

### a) • Action list when the trigger type is other than “Status”

When Source is M/E-1, M/E-2, or M/E-3: Cut, Auto Trans

Key1 Cut, Key1 Auto Trans, Key2 Cut, Key2 Auto Trans, Key3 Cut, Key3 Auto Trans, Key4 Cut, Key4 Auto Trans

Key1 SS ? Recall, Key2 SS ? Recall, Key3 SS ? Recall, Key4 SS ? Recall

Effect ? Recall, Effect ? Recall & Run, KF Run, KF Stop, KF Rewind, No Action

When Source is P/P: Cut, Auto Trans

DSK1 Cut, DSK1 Auto Trans, DSK2 Cut, DSK2 Auto Trans, DSK3 Cut, DSK3 Auto Trans, DSK4 Cut, DSK4 Auto Trans

FTB Cut, FTB Auto Trans

DSK1 SS ? Recall, DSK2 SS ? Recall, DSK3 SS ? Recall, DSK4 SS ? Recall

Effect ? Recall, Effect ? Recall & Run, KF Run, KF Stop, KF Rewind, No Action

When Source is Common: No Action

### • Action list when the trigger type is “Status”

When Source is M/E-1, M/E-2 or M/E-3: Key1 On, Key2 On, Key3 On, Key4 On  
No Action

When Source is P/P: DSK1 On, DSK2 On, DSK3 On, DSK4 On  
No Action

When Source is Common: Error Make, Error Break, No Action

b) When knob 2 selection is “Key Snapshot”

c) When knob 2 selection is “Snapshot” or “Effect”

## 7 Press [Action Set] to confirm the action selection.

The selected setting appears in the status area.

## Test firing the trigger

To test fire the trigger, press [Test Fire].

This outputs a trigger from the selected output port. This is not output when the trigger type is “Status.”

## Enabling or disabling AUX bus control

Use the following procedure.

- 1** In the Switcher>Device Interface menu, press [Aux Control].  
The Aux Control menu appears.
- 2** Select the 9-pin port for the setting, from the <Control> group.  
**Remote1:** Make the settings for the REMOTE1 port.  
**Remote2:** Make the settings for the REMOTE2 port.  
**Remote3:** Make the settings for the REMOTE3 port.  
**Remote4:** Make the settings for the REMOTE4 port.
- 3** Using any of the following methods, select the AUX bus.
  - Press directly on the list in the status area.
  - Press the arrow keys to scroll the reverse video cursor.
  - Turn the knob.

Knob	Parameter	Adjustment	Setting values
1	No	AUX bus selection	0 to 48 <sup>a)</sup>

a) 0: EDIT PVW  
1 to 48: AUX1 to AUX48

- 4** Select whether to enable or disable AUX bus control from the <Control Mode> group.  
**Enable:** enable control of the port selected in step **2**.  
**Disable:** disable control of the port selected in step **2**.  
**Manual:** make whether control of the port selected in step **2** is possible or not depend on the setting in the Misc menu.
- 5** Repeat steps **2** to **4** as required to make the settings for other ports.

## Setting the interface between the DME and the switcher

To set the interface between the DME and the switcher when the DME is an MVE-8000A or MVE-9000, proceed as follows.

- 1 In the Engineering Setup menu, select VF3 'Switcher' and HF7 'Device Interface.'

The Device Interface menu appears.

- 2 Press [DME Type Setting].

The DME Type Setting menu appears.

- 3 In the <DME1 Type> group to set DME1 or in the <DME2 Type> group to set DME2, press either of the following, turning it on.

**Dedicated:** The MVE-8000A/MVE-9000 has an MVS-8000-series dedicated interface.

**SDI:** The MVE-8000A/MVE-9000 has an SDI interface.

## Setting the AUX bus output and reentry input

Select the signal input to the DME (AUX bus output) and the signal returned as the switcher primary input (reentry input) as follows.

### Notes

- When using the MVE-8000, it is not necessary to make this setting.
- Before the following operations, carry out the procedure described in the previous item "*Setting the interface between the DME and the switcher.*"

- 1 In the Switcher>Device Interface menu, press [DME Type Setting].

The DME Type Setting menu appears.

- 2 Press [DME SDI Interface].

The DME SDI Interface menu appears.

- 3 Using any of the following methods, select the DME channel to which operations apply.

- Press directly on the list on the left of the status area.
- Press the arrow keys to scroll the reverse video cursor.
- Turn the knob.

Knob	Parameter	Adjustment	Setting values
1	DME Ch No	DME channel selection	1 to 24

**Notes**

- When using the MVE-8000A, it is not possible to select any of DME 1 Ext In to DME 8 Ext In.
- When using the MVE-9000 through the DME dedicated interface, it is not possible to select DME 1 to DME 8 (video/key).

**4** In the <Select> group, select the AUX bus or reentry to be assigned to the DME channel.

**Aux Bus:** Set AUX bus.

**Re-Entry:** Set reentry.

**5** Depending on the selection in step **4**, use any of the following methods to make the setting.

- Press directly on the list on the right of the status area.
- Press the arrow keys to scroll the reverse video cursor.
- Turn the knob.

• **When Aux Bus is selected**

Knob	Parameter	Adjustment	Setting values
2	Src No	AUX bus number	0 to 48

• **When Re-Entry is selected**

Knob	Parameter	Adjustment	Setting values
2	Src No	Reentry number	0 to 80

**6** Press [Set].

In the list on the right of the status area, the selected content is reflected in the specified DME channel.

Repeat steps **3** to **6** as required.

# Setup Relating to DME

## Settings Relating to Signal Inputs (Input Menu)

To make settings relating to DME input signals, display the DME>Input menu.

### To display the Input menu

In the Engineering Setup menu, select VF4 'DME' and HF1 'Input.'  
The status area shows the initial crop information and the DME system phase.  
In the following description, the settings for DME1 are given by way of example, but the settings for DME2 are carried out in a similar way.

## Setting the initial crop

Use the following procedure.

- 1 In the DME1 <Aspect> group, select the screen aspect ratio (16:9 or 4:3).
- 2 In the DME1 <Crop> group, press [Initial Crop] and adjust the following parameters.

### If you selected 4:3 in step 1

Knob	Parameter	Adjustment	Setting values
1	Top	Position of top side	-3.00 to +3.00
2	Left	Position of left side	-4.00 to +4.00
3	Right	Position of right side	-4.00 to +4.00
4	Bottom	Position of bottom side	-3.00 to +3.00

### If you selected 16:9 in step 1

Knob	Parameter	Adjustment	Setting values
1	Top	Position of top side	-9.00 to +9.00
2	Left	Position of left side	-16.00 to +16.00
3	Right	Position of right side	-16.00 to +16.00
4	Bottom	Position of bottom side	-9.00 to +9.00

### To return the parameter values to their default values

Press [Unity] in the <Crop> group.

## Setting an illegal color limit for matte signals

To enable the illegal color limiter for the signals generated by the DME internal matte generator, press [Matte Illeg Col Limit] for DME1 in the DME>Input menu, turning it on.

## Making DME system phase adjustment

To adjust the DME reference phase, use the following procedure.

- 1** Press [System Phase].
- 2** Set the following parameters.

Knob	Parameter	Adjustment	Setting values
1	DME1 Phase	DME1 system phase adjustment	-32.00 to +96.00
2	DME2 Phase	DME2 system phase adjustment	-32.00 to +96.00

## Setting the TBC window center position

When the MVE-8000A/MVE-9000 is connected through SDI interface, the DME>Input>TBC Center menu allows you to set the TBC window center position.

Use the following procedure.

- 1** In the DME>Input menu, press [TBC Center].

The TBC Center menu appears.

The status area shows the TBC center position values for DME1, DME 2, and external input signals.

### Note

The TBC center position values for external input signals are shown only when an SDI-interfaced MVE-9000 is used.

- 2** Using any of the following methods, select the input number for which you want to set the TBC center position.
  - Press directly on the list in the status area.
  - Press the arrow keys to scroll the reverse video cursor.
  - Turn the knob.

Knob	Parameter	Adjustment	Setting values
1	No	Input number selection	1 to 8

- 3 In the <Video/Key> group (when an SDI-interfaced MVE-8000A/9000 is used) or the <External Video> group (when an SDI-interfaced MVE-9000 is used), press the desired button, and set the TBC center position to 0H, 0.5H, or 1H.

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## Settings Relating to Signal Outputs (Output Menu)

To make settings relating to DME output signals, display the DME>Output menu.

### To display the Output menu

In the Engineering Setup menu, select VF4 'DME' and HF3 'Output.'

## Adjusting the monitor output

When the MVE-8000A/MVE-9000 is connected through SDI interface, you can adjust both DME1 and DME2 output video clip levels.

Use the following procedure. (DME 1 is taken by way of example.)

- 1 In the <DME1(Ch1-Ch4)> group, press [Clip Adjust], turning it on.
- 2 Set the following parameters.

Knob	Parameter	Adjustment	Setting values
1	White Clip	White clip adjustment	90.00 to 109.02
2	Dark Clip	Dark clip adjustment	-6.85 to +10.00
3	Chroma Clip	Chroma clip adjustment	90.00 to 113.17

### To return the setting to the default value

Press [Default].

## Setting the monitor output

To set the signals output from the four monitor output connectors, use the following procedure.

### Note

This setting is valid when an SDI-interfaced MVE-8000A or an MVE-9000 is used.

- 1 Press [Monitor Output].

The Monitor Output menu appears.

- 2 In the <Select> group, select the DME to which the setting applies.  
**DME1:** Select DME1.  
**DME2:** Select DME2.
- 3 In the list on the left of the status area, press directly on the monitor output for which you want to make setting.
- 4 In the list on the right of the status area, press directly on the signal you want to output.
- 5 Press [Set].  
 The selection is reflected in the monitor output.

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## Interfacing With External Devices (Device Interface Menu)

To carry out setup relating to DME connections with external devices, display the DME>Device Interface menu.

### To display the Device Interface menu

In the Engineering Setup menu, select VF4 'DME' and HF4 'Device Interface.'

In the following description, the settings for DME1 are given by way of example, but the settings for DME2 are carried out in a similar way.

## Setting the editor protocol

In the <DME1 Editor Protocol> group of the DME>Device Interface menu, press the following buttons to make the setting.

**DME:** Control by DME protocol through the editor port.

**VTR:** Control by VTR protocol through the editor port.

## Making editor port settings

In the <DME1 Editor Port Setting> group of the DME>Device Interface menu, press either of the following to select the way in which the editor ports are used.

**Common:** Control all of channels 1 to 4 through Editor port 1.

**Independ:** Control channels 1 to 4 individually through Editor ports 1 to 4.

### Note

On the MVE-8000, the setting is fixed to Common.

# Making DME GPI input settings

Use the following procedure.

**1** In the DME>Device Interface menu, press [DME1 GPI Input].


The DME1 GPI Input menu appears.


**2** Using any of the following methods, select the settings.


- Press directly on the list appearing in the status area.
- Press the arrow keys to scroll the reverse video cursor.
- Turn the knobs.


Knob	Parameter	Adjustment	Setting values
1	Port	Input port selection	1 to 8
2	No	Selection of number for action to be assigned	1 to 8

**3** In the <Trigger Type> group, select the trigger polarity.

 **(Rising Edge):** Apply the trigger on a rising edge of an input pulse.

 **(Falling Edge):** Apply the trigger on a falling edge of an input pulse.

 **(Any Edge):** Apply the trigger on a change in the polarity of the input signal.

 **(Level):** Carry out the specified operation when the input is low or high.

**No Operation:** Apply no trigger on an input pulse.

**4** In the <Target> group, select what this applies to (channels 1 to 4, or Proc).

**5** Using any of the following methods, select the action to be set.

- Press directly on the list appearing in the status area.
- Press the arrow keys to scroll the reverse video cursor.
- Turn the knobs.

Knob	Parameter	Adjustment	Setting values
3	Action	Action selection	1 and upwards <sup>a)</sup>
4	Reg No	Register number	1 to 99 <sup>b)</sup> 1 to 399 <sup>c)</sup>

a) • Action list when the trigger type is other than “Level”

When Target is Ch1, Ch2, Ch3, or Ch4: Freeze, SS ? Recall

Effect ? Recall, Effect ? Recall & Run, KF Run, KF Stop, KF Rewind, KF Reverse Run, No Action

When Target is Proc: No Action

• **Action list when the trigger type is “Level”**

When Target is Ch1, Ch2, Ch3, or Ch4: Aspect, No Action

When Target is Proc: Format (frame/field rate, number of lines)

Aspect, Level Enable, No Action

**Note**

“Level Enable” is a function that determines whether GPI inputs are enabled (“Enable”) or disabled (“Disable”) for the “Aspect” and “Format” actions that can be used when the trigger type is Level. When Level Enable is used, if the input is “Disable” then it is not possible to switch “Aspect” or “Format” by GPI input.

If a GPI to switch “Aspect” or “Format” occurs when powering the system off, the action triggered by the GPI may start immediately before the power goes off and the power may go off before the action is completed. This may corrupt the setup settings.

It is therefore recommended to use Level Enable to avoid such a situation.

b) When knob 3 selection is “Snapshot”

c) When knob 3 selection is “Effect”

## 6 Press [Action Set] to confirm the action selection.

The selected setting appears in the status area.

## Carrying out level settings

To set the low level and high level, first set the trigger type to “Level,” then use the following procedure.

### 1 In the DME>Device Interface menu, select the action to be set, and press [H/L Set].

The H/L Set menu appears.

### 2 Using any of the following methods, select the settings.

- Press directly on the list appearing in the status area.
- Press the arrow keys to scroll the reverse video cursor.
- Turn the knob.

Knob	Parameter	Adjustment	Setting values
1	No	Signal format/screen aspect ratio selection	1 and upwards

### 3 To apply the selection made in step 2 when the input is high, press [H Set]. To apply the selection made in step 2 when the input is low, press [L Set].

This confirms the setting, which appears in the status area.

## Making DME GPI output settings

Use the following procedure.

- 1 In the DME>Device Interface menu, press [DME1 GPI Output].

The DME1 GPI Output menu appears.

The output port selection is fixed at 1.

- 2 In the <Trigger Type> group, select the trigger polarity.

**Status:** Depending on the status, the relay contacts are closed or opened, or the output is switched between high and low.

**No Operation:** The trigger has no effect on the relay state or output level.

- 3 Using any of the following methods, select the action you want to set.

- Press directly on the list appearing in the status area.
- Press the arrow keys to scroll the reverse video cursor.
- Turn the knob.

Knob	Parameter	Adjustment	Setting values
2	Action	Action selection	1 to 3 <sup>a)</sup>

a) Error Make, Error Break, No Action

- 4 Press [Action Set] to confirm the action selection.

The selected setting appears in the status area.

# Setup Relating to DCU

## Note

For setup relating to DCU, it is necessary to make the same settings on multiple control panels (maximum three units) that are sharing the DCU. After carrying out the DCU setup on one control panel, make the same settings on the other control panels.

## Settings Relating to Parallel Inputs (Input Config Menu)

The DCU parallel input ports are assigned with the following priority sequence.

1. When external boxes are set in the Router/Tally>Router>External Box Assign menu, the parallel inputs are assigned to the external box inputs in order.
2. When tally settings are carried out in the Router/Tally>Tally Enable menu, tally inputs are assigned automatically.

In this menu, you set only the input ports which are unused after making the above assignments.

To assign GPI inputs to DCU parallel input ports, display the DCU>Input Config menu.

### To display the Input Config menu

In the Engineering Setup menu, select VF5 'DCU' and HF1 'Input Config.' The status area shows input port information.

## Assigning a GPI input port

Use the following procedure.

- 1** In the DCU>Input Config menu, select what the setting applies to (DCU1 or DCU2) from the <DCU Select> group.
- 2** In the <Parallel Input Assign> group, press [GPI Input].
- 3** Using any of the following methods, assign the number of the GPI input to the input port.
  - Press directly on the list appearing in the status area.

- Press the arrow keys to scroll the reverse video cursor.
- Turn the knobs.

Knob	Parameter	Adjustment	Setting values
1	Parallel Input	Input port	1 to 102 <sup>a)</sup>
3	GPI Input	GPI input	1 to 50

a) When the MKS-2700 is connected, select a value in the range 1 to 34.

## 4 To confirm the assignment in step 3, press [GPI Input Set].

This assigns the GPI input, and this is reflected in the status area.

## Releasing the assignment of a GPI input port

Use the following procedure.

- 1 In the DCU>Input Config menu, select what the setting applies to (DCU1 or DCU2) from the <DCU Select> group.
- 2 In the <Parallel Input Assign> group, if [GPI Input] is on, press it to turn it off.
- 3 Turn the knobs to adjust the following parameters.

Knob	Parameter	Adjustment	Setting values
1	From No	First port number	1 to To No
2	To No	Last port number	From No to 102

## 4 In the <Parallel Input Assign> group, press [No Assign].

## GPI Input Setting (GPI Input Assign Menu)

To set the trigger type and so on for each GPI input, display the DCU>GPI Input Assign menu.

### To display the GPI Input Assign menu

In Engineering Setup, select VF5 'DCU' and HF2 'GPI Input Assign.'  
The GPI input port setting status appears in the status area.

## Making DCU GPI input settings


Use the following procedure.


- 1** In the DCU>GPI Input Assign menu, using any of the following methods select what the setting applies to.


- Press directly on the list appearing in the status area.
- Press the arrow keys to scroll the reverse video cursor.
- Turn the knob.


Knob	Parameter	Adjustment	Setting values
1	No	GPI input	1 to 50

- 2** In the <Trigger Type> group, select the trigger polarity.

 **(Rising Edge):** Apply the trigger on a rising edge of an input pulse.

 **(Falling Edge):** Apply the trigger on a falling edge of an input pulse.

 **(Any Edge):** Apply the trigger on a change in the polarity of the input signal.

 **(Level):** Carry out the specified operation when the input is low or high.

**No Operation:** Apply no trigger on an input pulse.

- 3** In the <Target Device> group, select the control panel to handle the GPI input.

**SCU1:** ID1 control panel (PNL1)

**SCU2:** ID2 control panel (PNL2)

**SCU3:** ID3 control panel (PNL3)

The action set in the following step **4** is executed for the switcher and DME controlled by the selected control panel.

- 4** Using any of the following methods, select the action you want to set.

- Press directly on the list appearing in the status area.
- Press the arrow keys to scroll the reverse video cursor.
- Turn the knobs.

Knob	Parameter	Adjustment	Setting values
2	Action	Action selection	1 and upwards <sup>a)</sup>
4	Aux Bus No	Aux bus selection	1 to 48 <sup>e)</sup>
5	Reg No	Register number	1 to 4 <sup>b)</sup> 1 to 99 <sup>c)</sup> 1 to 399 <sup>d)</sup>



Knob	Parameter	Adjustment	Setting values
5	Src No	Source signal selection	1 and upwards <sup>e)</sup>

a) • **Action list when the trigger type is other than “Level”**

M/E-1 Cut, M/E-2 Cut, M/E-3 Cut, P/P Cut,  
M/E-1 Auto Trans, M/E-2 Auto Trans, M/E-3 Auto Trans,  
P/P Auto Trans  
M/E-1 Key1 Auto Trans, M/E-1 Key1 Cut  
M/E-1 Key2 Auto Trans, M/E-1 Key2 Cut  
M/E-1 Key3 Auto Trans, M/E-1 Key3 Cut  
M/E-1 Key4 Auto Trans, M/E-1 Key4 Cut  
M/E-2 Key1 Auto Trans, M/E-2 Key1 Cut  
M/E-2 Key2 Auto Trans, M/E-2 Key2 Cut  
M/E-2 Key3 Auto Trans, M/E-2 Key3 Cut  
M/E-2 Key4 Auto Trans, M/E-2 Key4 Cut  
M/E-3 Key1 Auto Trans, M/E-3 Key1 Cut  
M/E-3 Key2 Auto Trans, M/E-3 Key2 Cut  
M/E-3 Key3 Auto Trans, M/E-3 Key3 Cut  
M/E-3 Key4 Auto Trans, M/E-3 Key4 Cut  
P/P DSK1 Auto Trans, P/P DSK1 Cut  
P/P DSK2 Auto Trans, P/P DSK2 Cut  
P/P DSK3 Auto Trans, P/P DSK3 Cut  
P/P DSK4 Auto Trans, P/P DSK4 Cut  
FTB Auto Trans, FTB Cut  
Master SS ? Recall,  
SS ? Recall,  
M/E-1 Key1 SS ? Recall, M/E-1 Key2 SS ? Recall  
M/E-1 Key3 SS ? Recall, M/E-1 Key4 SS ? Recall  
M/E-2 Key1 SS ? Recall, M/E-2 Key2 SS ? Recall  
M/E-2 Key3 SS ? Recall, M/E-2 Key4 SS ? Recall  
M/E-3 Key1 SS ? Recall, M/E-3 Key2 SS ? Recall  
M/E-3 Key3 SS ? Recall, M/E-3 Key4 SS ? Recall  
P/P DSK1 SS ? Recall, P/P DSK2 SS ? Recall  
P/P-1 DSK3 SS ? Recall, P/P-1 DSK4 SS ? Recall  
FM Src1 Field Freeze, FM Src1 Frame Freeze, FM Src1 Freeze Off  
FM Src2 Field Freeze, FM Src2 Frame Freeze, FM Src2 Freeze Off  
Effect ? Recall, Effect ? Recall & Run, KF Run, KF Stop,  
Master Effect ? Recall  
KF Rewind, Shotbox ? Recall, Macro Take, No Action

• **Action list when the trigger type is only “Rising Edge” or “Falling Edge”**

Aux? O’ride Src??

• **Action list when the trigger type is “Level”**

Simul, Custom, Format (frame/field rate, number of lines)  
(System Format, SWR Format, DME Ch1-Ch4 Format, DME Ch5-Ch8 Format)  
Aspect (System Aspect, SWR Aspect, M/E-1 Aspect, M/E-2 Aspect,  
M/E-3 Aspect, P/P Aspect, DME Ch1-Ch4 Aspect  
DME Ch1 Aspect, DME Ch2 Aspect, DME Ch3 Aspect,  
DME Ch4 Aspect, DME Ch5 Aspect  
DME Ch6 Aspect, DME Ch7 Aspect, DME Ch8 Aspect)  
Level Enable, No Action

**Notes**

- “Level Enable” is a function that determines whether GPI inputs are enabled (“Enable”) or disabled (“Disable”) for the Aspect and Format actions that can be used when the trigger type is Level. When Level Enable is used, if the input is “Disable” then it is not possible to switch Aspect or Format by GPI input. If a GPI to switch Aspect or Format occurs when powering the system off, the

action triggered by the GPI may start immediately before the power goes off and the power may go off before the action is completed. This may corrupt the setup settings. It is therefore recommended to use Level Enable to avoid such a situation.

- As for “Aux ? O’ride Src ??,” when “Rising Edge” is selected, on a rising edge the set AUX bus primary input is used. On a falling edge, the original state of the cross-point is restored. If the GPI trigger is applied repeatedly at short intervals (0.5 second or less), the cross-point switching may not be carried out correctly. In this case, apply the GPI trigger again.
- b) When knob 2 selection is “Key Snapshot”
- c) When knob 2 selection is “Snapshot”
- d) When knob 2 selection is “Effect”
- e) When knob 2 selection is “Aux ? O’ride Src ??”

## 5 To confirm the setting in step 4, press [Action Set].

This confirms the setting, which appears in the status area.

## Carrying out level settings

To set the low level and high level, first set the trigger type to “Level,” then use the following procedure.

### 1 In the DCU>GPI Input Assign menu, select the action to be set, and press [H/L Set].

The H/L Set menu appears.

### 2 Using any of the following methods, select the settings.

- Press directly on the list appearing in the status area.
- Press the arrow keys to scroll the reverse video cursor.
- Turn the knob.

Knob	Parameter	Adjustment	Setting values
1	No	Signal format/screen aspect ratio selection	1 and upwards

### 3 To apply the selection made in step 2 when the input is the GPI high level, press [H Set]. To apply the selection made in step 2 when the input is low, press [L Set].

This confirms the setting, which appears in the status area.

## Parallel Output Settings (Output Config Menu)

For the DCU parallel output ports, after carrying out tally settings in the Router/Tally>Tally Enable menu, you can assign GPI outputs to output ports that are still unused.

To assign DCU outputs to DCU parallel output ports, display the DCU>Output Config menu.

### To display the Output Config menu

In Engineering Setup, select VF5 'DCU' and HF3 'Output Config.'  
The status area shows output port information.

## Assigning a GPI output port

Use the following procedure.

- 1** In the DCU>Output Config menu, select what the setting applies to (DCU1 or DCU2) from the <DCU Select> group.
- 2** In the <Parallel Output Assign> group, press [GPI Output].
- 3** Using any of the following methods, select the output port and GPI output number.
  - Press directly on the list appearing in the status area.
  - Press the arrow keys to scroll the reverse video cursor.
  - Turn the knobs.

Knob	Parameter	Adjustment	Setting values
1	Parallel Output Slot	Output port slot	2 to 6 <sup>a)</sup>
2	Parallel Output Port	Output port	1 to 54 <sup>b)</sup>
5	GPI Output	GPI output	1 to 50

a) When the MKS-2700 is connected, select 2.

b) When the MKS-2700 is connected, select a value in the range 1 to 36.

- 4** To confirm the selected setting, press [GPI Output Set].

This confirms the selection, which is reflected in the status area.

## Releasing the assignment of a GPI output port

Use the following procedure.

- 1** In the DCU>Output Config menu, select what the setting applies to (DCU1 or DCU2) from the <DCU Select> group.
- 2** In the <Parallel Output Assign> group, if [GPI Output] is on, press it to turn it off.
- 3** Turn the knobs to select the slot and port to which the setting applies.

Knob	Parameter	Adjustment	Setting values
1	From Slot	First port slot	2 to 6
2	From Port	First port number	1 to 54
3	To Slot	Last port slot	2 to 6
4	To Port	Last port number	1 to 54

- 4** In the <Parallel Output Assign> group, press [No Assign].

## GPI Output Setting (GPI Output Assign Menu)

To set the trigger type and so on for each GPI output, display the DCU>GPI Output Assign menu.

### To display the GPI Output Assign menu




In Engineering Setup, select VF5 'DCU' and HF4 'GPI Output Assign.'  
The GPI output port setting status appears in the status area.

## Making DCU GPI output settings

Use the following procedure.

- 1** In the DCU>GPI Output Assign menu, using any of the following methods select what the setting applies to.
- Press directly on the list appearing in the status area.
  - Press the arrow keys to scroll the reverse video cursor.
  - Turn the knob.

Knob	Parameter	Adjustment	Setting values
1	No	GPI output	1 to 50

- 2** In the <Trigger Type> group, select the trigger polarity.
-  **(Rising Edge):** The trigger causes the relay contacts to be open-circuit or drives the output high, and holds this state for the specified pulse width.
  -  **(Falling Edge):** The trigger causes the relay contacts to be shorted or drives the output low, and holds this state for the specified pulse width.
  -  **(Any Edge):** Each time the trigger occurs, the relay contacts are alternately closed or opened, or the output is switched between high and low.

**Status:** Depending on the status, the relay contacts are closed or opened, or the output is switched between high and low.

**No Operation:** The trigger has no effect on the relay state or output level.

### 3 Turning the knobs, select the pulse width and timing to be set.

Knob	Parameter	Adjustment	Setting values
3	Pulse Width	Pulse width	1 to 60 (fields)
4	Timing	Output timing	1 to 3 <sup>a)</sup>

a) 1: Field 1, 2: Field 2, 3: Any

When “ $\infty$ ” is selected as the trigger polarity, there is no Pulse Width setting. When “Status” is selected, there is no Pulse Width or Timing setting.

### 4 In the <Source Device> group, select the control panel or DCU to handle the GPI output.

**SCU1:** ID1 control panel (PNL1)

**SCU2:** ID2 control panel (PNL2)

**SCU3:** ID3 control panel (PNL3)

**DCU1:** ID1 DCU

**DCU2:** ID2 DCU

When the action set in the following step **5** is carried out on the control panel selected here, this causes a GPI output. It is also possible to output error information. When the DCU is selected, you can output error information by means of the action set in step **5**.

### 5 Using any of the following methods, select the action you want to set.

- Press directly on the list appearing in the status area.
- Press the arrow keys to scroll the reverse video cursor.
- Turn the knobs.

Knob	Parameter	Adjustment	Setting values
2	Action	Action selection	1 and upwards <sup>a)</sup>
5	Reg No	Snapshot register number	1 to 4 <sup>b)</sup>
5	GPI No	GPI number selection	1 to 32 <sup>c)</sup>

a) • **Action list when the trigger type is other than “Status”**

When Source Device is SCU: M/E1 Key1 SS ? Recall, M/E1 Key2 SS ? Recall, M/E1 Key3 SS ? Recall

M/E1 Key4 SS ? Recall, M/E2 Key1 SS ? Recall, M/E2 Key2 SS ? Recall, M/E2 Key3 SS ? Recall, M/E2 Key4 SS ? Recall

M/E3 Key1 SS ? Recall, M/E3 Key2 SS ? Recall, M/E3 Key3 SS ? Recall, M/E3

Key4 SS ? Recall

P/P DSK1 SS ? Recall, P/P DSK2 SS ? Recall, P/P DSK3 SS ? Recall, P/P DSK4 SS ? Recall

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No Action

When Source Device is DCU: No Action

• **Action list when the trigger type is “Status”**

When Source Device is SCU: M/E1 Key1 SS ? Recall, M/E1 Key2 SS ? Recall, M/E1 Key3 SS ? Recall, M/E1 Key4 SS ? Recall

M/E2 Key1 SS ? Recall, M/E2 Key2 SS ? Recall, M/E2 Key3 SS ? Recall, M/E2 Key4 SS ? Recall

M/E3 Key1 SS ? Recall, M/E3 Key2 SS ? Recall, M/E3 Key3 SS ? Recall, M/E3 Key4 SS ? Recall

P/P DSK1 SS ? Recall, P/P DSK2 SS ? Recall, P/P DSK3 SS ? Recall, P/P DSK4 SS ? Recall

M/E1 Key1 On, M/E1 Key2 On, M/E1 Key3 On, M/E1 Key4 On

M/E2 Key1 On, M/E2 Key2 On, M/E2 Key3 On, M/E2 Key4 On

M/E3 Key1 On, M/E3 Key2 On, M/E3 Key3 On, M/E3 Key4 On

P/P DSK1 On, P/P DSK2 On, P/P DSK3 On, P/P DSK4 On

Error Make, Error Break, No Action

When Source Device is DCU: Error Make, Error Break, No Action

b) When knob 2 selection is “Key Snapshot”

c) When knob 2 selection is “GPI”

## 6 To confirm the selection, press [Action Set].

This confirms the selection, which appears in the status area.

## Test firing the trigger

To test fire the trigger, in the DCU>GPI Output menu press [Test Fire].

This outputs a trigger from the selected output port. This is not output when the trigger type is “Status.”

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## Serial Port Settings (Serial Port Assign Menu)

To set the protocol to match a device connected to a 9-pin serial port, display the DCU>Serial Port Assign menu.

### To display the Serial Port Assign menu

In Engineering Setup, select VF5 ‘DCU’ and HF5 ‘Serial Port Assign.’

The serial port setting status appears in the status area.

## Making serial port settings

Use the following procedure.

- 1 In the DCU>Serial Port Assign menu, select the target for the setting (DCU1 or DCU2) from the <DCU Select> group.



## 2 Using any of the following methods, select the serial port.

- Press directly on the list on the left of the status area.
- Press the arrow keys to scroll the reverse video cursor.
- Turn the knob.

Knob	Parameter	Adjustment	Setting values
1	Port No	Serial port	1 and upwards <sup>a)</sup>

a) The setting value range depends on the DCU port setting. (When the MKS-2700 is connected, select 2 for the slot and a value in the range 1 to 6 for the port.)

## 3 Using any of the following methods, select the protocol for the connected device.

- Press directly on the list on the right of the status area.
- Press the arrow keys to scroll the reverse video cursor.
- Turn the knob.

Knob	Parameter	Adjustment	Setting values
2	Device Type	Protocol selection	1 to 7 <sup>a)</sup>

- a) 1. No Assign: nothing is connected to the serial port.  
2. P-Bus: P-Bus device.  
3. VTR: VTR  
4. DDR SD9P: disk recorder (Sony disk 9-pin protocol)  
5. DDR VDCP: disk recorder (video disk communication protocol)  
6. Extended VTR (Abekas A53 protocol)  
7. Mixer ESAM-II

### Note

Mixer ESAM-II cannot be operated from this system. It can only be operated from an editing keyboard.

## 4 Press [Device Type Set].

The selected protocol is reflected on the left of the status area.

## 5 To enter the name of the serial port, press [Set] in the <Name> group.

A keyboard window appears. You can enter a name of not more than 16 characters.

If no name is set for the serial port, it is displayed as "DCUd\_PORTS-p."

**d:** 1 or 2 (DCU No.)

**s:** 2 to 6 (Slot No.)

**p:** 1 to 6 (Port No.)

**6** Press [Enter].

**To return the set name to the default name**

Press [Clear] in the <Name> group.

**7** From the <SCU Select> group, select the control panel (SCU1, SCU2 or SCU3) assigned to operations on the external device connected to the serial port.

**To delete the serial port assignment**

Use the following procedure.

**1** In the DCU>Serial Port Assign menu, select the target for the setting (DCU1 or DCU2) from the <DCU Select> group.

**2** Using any of the following methods, specify the serial port.

- Press directly on the list in the status area.
- Press the arrow keys to scroll the reverse video cursor.
- Turn the knob.

Knob	Parameter	Adjustment	Setting values
1	Port No	Serial port	1 and upwards <sup>a)</sup>

a) The range of setting values depends on the DCU port setting. (When the MKS-2700 is connected, select 2 for the slot and a value in the range 1 to 6 for the port.)

**3** Press [Clear].

## Making detailed settings on the external device connected to the serial port

After setting the external device for each serial port, it is necessary to make further detailed settings for operation of the external device.

**To make detailed settings for a P-Bus device**

Use the following procedure.

**1** In the DCU>Serial Port Assign menu, select the setting target (DCU1 or DCU2) from the <DCU Select> group.

**2** Using any of the following methods, select the serial port connected to the P-Bus device for which you want to make the settings.

- Press directly on the list in the status area.
- Press the arrow keys to scroll the reverse video cursor.
- Turn the knob.

Knob	Parameter	Adjustment	Setting values
1	Port No	Serial port number	1 and upwards <sup>a)</sup>

a) The range of setting values depends on the DCU port setting. (When the MKS-2700 is connected, select 2 for the slot and a value in the range 1 to 6 for the port.)

### 3 Press [Port Setting].

The DCU>Serial Port Assign>P-Bus Setting menu appears.

At the top of the status area, the relevant serial port, slot number, protocol, serial port name, and SCU number appear. In the lower part of the status area, the device name and response speed settings appear.

### 4 Using any of the following methods, select the ID for which you want to make a device name setting.

- Press directly on the device name list in the status area.
- Press the arrow keys to scroll the reverse video cursor.
- Turn the knob.

Knob	Parameter	Adjustment	Setting values
1	ID	ID selection	0 to 23

### 5 In the <Name> group, press [Set] to display a numeric keypad window.

### 6 Input the desired name, and press [Enter].

The input device name appears in the device name list.

#### To return the device name for the selected ID to the default name

In the <Name> group, press [Clear].

### 7 Using any of the following methods, specify the command to which the response speed setting applies.

- Press directly on the delay list in the status area.
- Press the arrow keys to scroll the reverse video cursor.
- Turn the knob.

Knob	Parameter	Adjustment	Setting values
2	No	Command number selection	1 to 18

### 8 Turn the knob to set the response speed (in field units) of the device.

Knob	Parameter	Adjustment	Setting values
3	Delay	Response speed setting	0 to 60

## 9 Press [Delay Set].

This confirms the setting.

## 10 Repeat steps 4 to 9 as required to make the settings for other commands.

### To make detailed settings for a VTR

Use the following procedure.

## 1 In the <DCU Select> group of the DCU>Serial Port Assign menu, select the target for the setting (DCU1 or DCU2).

## 2 Using any of the following methods, select the serial port connected to the VTR for which you want to make the settings.

- Press directly on the list in the status area.
- Press the arrow keys to scroll the reverse video cursor.
- Turn the knob.

Knob	Parameter	Adjustment	Setting values
1	Port No	Serial port	1 and upwards <sup>a)</sup>

a) The range of setting values depends on the DCU port setting. (When the MKS-2700 is connected, select 2 for the slot and a value in the range 1 to 6 for the port.)

## 3 Press [Port Setting].

The DCU>Serial Port Assign>VTR Setting menu appears.

At the top of the status area, the relevant serial port, slot number, protocol, serial port name, SCU number, and timecode source appear. In the lower part of the status area, the VTR constants appear.

## 4 In the <TC Source> group, select the timecode source (reference signal for determining the tape position) from the following.

**LTC (Longitudinal Time Code):** Use LTC. When interpolation data is returned from a VTR, use that interpolation data.

**LTC: VITC (Vertical Interval Time Code):** Normally use LTC, but when the tape is moving at speeds at which LTC cannot be read, use VITC.

When interpolation data is returned from a VTR, use that interpolation data.

**CTL (Control):** CTL pulses or timer counter pulses are used. Use this only for a tape on which no timecode is recorded.

The displayed tape position is based on the reference signal specified here.

## 5 Using any of the following methods, specify the VTR constants.

- Press directly on the list in the status area.
- Press the arrow keys to scroll the reverse video cursor.
- Turn the knob.

Knob	Parameter	Adjustment	Setting values
1	Item	Item selection	1 to 16

## 6 Press [Set].

A numeric keypad window for hexadecimal input appears.

## 7 Set the VTR constants using values in the range 00 to FF.

Block	Byte	Setting item
BLOCK 1	1	HI-BYTE (DEVICE TYPE)
	2	LO-BYTE (DEVICE TYPE)
	3	HI-BYTE (FRAME) (PREROLL TIME)
	4	LO-BYTE (FRAME) (PREROLL TIME)
	5	EDIT DELAY (FRAME)
	6	EE DELAY (FRAME)
	7	OVER RUN (FRAME)
	8	TRAJECTORY
BLOCK 2	1	TC READ DELAY (FRAME)
	2	START DELAY (FRAME)
	3	AFTER SYNC DELAY–
	4	AFTER SYNC DELAY+
	5	MODE1
	6	MODE2
	7	MAX PRRL SPEED
	8	QUICK PVW PRRL TIME (FRAME)

## 8 Press [Enter].

This confirms the settings.

## 9 Repeat steps 5 to 8 as required to set the constants for other VTRs.

### To make detailed settings for a disk recorder (Sony disk 9-pin protocol)

Use the following procedure.

## 1 In the <DCU Select> group of the DCU>Serial Port Assign menu, select the target for the setting (DCU1 or DCU2).

- 2** Using any of the following methods, select the serial port connected to the disk recorder for which you want to make the settings.

- Press directly on the list in the status area.
- Press the arrow keys to scroll the reverse video cursor.
- Turn the knob.

Knob	Parameter	Adjustment	Setting values
1	Port No	Serial port	1 and upwards <sup>a)</sup>

a) The range of setting values depends on the DCU port setting. (When the MKS-2700 is connected, select 2 for the slot and a value in the range 1 to 6 for the port.)

- 3** Press [Port Setting].

The DCU>Serial Port Assign>DDR SD9P Setting menu appears.

At the top of the status area, the relevant serial port, slot number, protocol, serial port name, SCU number, and disk recorder type appear. In the lower part of the status area, the response speed settings appear.

- 4** Using any of the following methods, specify the item to which the response speed setting applies.

- Press directly on the list in the status area.
- Press the arrow keys to scroll the reverse video cursor.
- Turn the knob.

Knob	Parameter	Adjustment	Setting values
1	Item No	Item selection	1 to 4 <sup>a)</sup>

- a) 1. Maximum Open Delay: maximum time required to open a file  
 2. Maximum Cueup Delay: maximum time required to cue up a file  
 3. Play After Cueup Delay: delay time from the cued-up state to begin playback  
 4. Play After Open Next Delay: delay time from the Open Next state to begin playback

- 5** Turn the knob to set the disk recorder response speed.

Knob	Parameter	Adjustment	Setting values
2	Setting	Response speed setting	0 to 255

- 6** Press [Set].

This confirms the setting.

- 7** Repeat steps **4** to **6** as required to make the settings for other items.

### To make detailed settings for a disk recorder (video disk communications protocol)

Use the following procedure.



- 1 In the <DCU Select> group of the DCU>Serial Port Assign menu, select the target for the setting (DCU1 or DCU2).
- 2 Using any of the following methods, select the serial port connected to the disk recorder for which you want to make settings.

- Press directly on the list in the status area.
- Press the arrow keys to scroll the reverse video cursor.
- Turn the knob.

Knob	Parameter	Adjustment	Setting values
1	Port No	Serial port	1 and upwards <sup>a)</sup>

a) The range of setting values depends on the DCU port setting. (When the MKS-2700 is connected, select 2 for the slot and a value in the range 1 to 6 for the port.)

- 3 Press [Port Setting].

The DCU>Serial Port Assign>DDR VDCP Setting menu appears.  
At the top of the status area, the relevant serial port, slot number, protocol, serial port name, SCU number, and disk recorder type appear.  
In the lower part of the status area appear the video port number and response speed settings.

- 4 In the <DDR Type> group, select the type of disk recorder.

**Player:** Functioning as a player.

**Recorder:** Functioning as a recorder.

- 5 Using any of the following methods, specify the item to which the video port number or response speed setting applies.

- Press directly on the list in the status area.
- Press the arrow keys to scroll the reverse video cursor.
- Turn the knob.

Knob	Parameter	Adjustment	Setting values
1	Item No	Item selection	1 to 5 <sup>a)</sup>

- a) 1. Video Port: Number of the video port associated with the serial port to which the setting applies  
For a player, the output port setting  
For a recorder, the input port setting  
2. Maximum Open Delay: maximum time required to open a file  
3. Maximum Cueup Delay: maximum time required to cue up a file  
4. Play After Cueup Delay: delay time from the cued-up state to begin playback  
5. Stop Delay: delay time from issuing the stop command until actually stopping

- 6 Turn the knob to set the disk recorder video port number or response speed.

### When setting the video port number

Knob	Parameter	Adjustment	Setting values
2	Setting	Video port number	0 to 127 <sup>a)</sup>

a) 0: No assignment

### When setting the response speed

Knob	Parameter	Adjustment	Setting values
2	Setting	Response speed	0 to 255

**7** Press [Set].

This confirms the setting.

**8** If required, repeat steps **4** to **7**, to set other items.

### To make detailed settings for an Extended VTR

Use the following procedure.

- 1** In the DCU>Serial Port Assign menu, select the setting target (DCU1 or DCU2) from the <DCU Select> group.
- 2** Using any of the following methods, select the serial port connected to the Extended VTR for which you want to make the settings.
  - Press directly on the list in the status area.
  - Press the arrow keys to scroll the reverse video cursor.
  - Turn the knob.

Knob	Parameter	Adjustment	Setting values
1	Port No	Serial port number	1 and upwards <sup>a)</sup>

a) The range of setting values depends on the DCU port setting. (When the MKS-2700 is connected, select 2 for the slot and a value in the range 1 to 6 for the port.)

**3** Press [Port Setting].

The DCU>Serial Port Assign>Extended VTR Setting menu appears.

At the top of the status area, the relevant serial port, slot number, protocol, serial port name, and SCU number appear. In the lower part of the status area, the response speed settings appear.

- 4** Using any of the following methods, specify the command to which the response speed setting applies.
  - Press directly on the list in the status area.
  - Press the arrow keys to scroll the reverse video cursor.

- Turn the knob.

Knob	Parameter	Adjustment	Setting values
1	Item No	Item selection	1 to 4 <sup>a)</sup>

- a) 1.Maximum Open Delay: maximum time required to open a file  
2. Maximum Cueup Delay: maximum time required to cue up a file  
3. Play After Cueup Delay: maximum delay time from the cued-up state to begin playback  
4. Stop Delay: delay time from issuing the stop command until actually stopping

**5** Turn the knob to set the response speed of the Extended VTR.

Knob	Parameter	Adjustment	Setting values
2	Setting	Response speed setting	0 to 255

**6** Press [Set].

This confirms the setting.

**7** Repeat steps **4** to **6** as required to make the settings for other items.

# Setup Relating to Router Interface and Tally

## Router Interface Settings (Router Menu)

In this system, the interface with a router (routing switcher) uses the S-Bus protocol. It is therefore necessary to assign inputs and outputs of the switcher and so on to an S-Bus space.

To carry out this assignment, use the Router/Tally>Router menu. The assignment is common to the parallel and serial tallies.

### To display the Router menu

In the Engineering Setup menu, select VF6 'Router/Tally' and HF1 'Router.' The status area shows the device names to be assigned to the S-Bus space, the matrix size, source address, destination address, and level.

## Assigning switcher inputs and outputs to S-Bus space

Use the following procedure.

- 1** In the <Device> group of the Router/Tally>Router menu, select the device to which the settings apply.

**SWR1:** Settings apply to switcher 1.

**SWR2:** Settings apply to switcher 2.

### Note

When there are two switchers on the same network, the SWR2 (second switcher) settings are required. If there is only one switcher, the settings are not required.

- 2** In the <Matrix Size> group, select the matrix size.

**Standard (136 × 138):** Assign the switcher S-Bus space at full size. You can assign all switcher inputs and outputs to the S-Bus space, but this causes some waste of S-Bus space.

**Compact (128 × 128):** Assign the switcher S-Bus space at compact size. It is not possible to assign all switcher inputs and outputs to the S-Bus space, but the S-Bus space can be used efficiently.

- 3** Turn the knobs to set the parameters for the following items.

**Source:** Specify the start address of the matrix source.

**Destination:** Specify the start address of the matrix destination.

**Level:** Specify the level in the S-Bus space.

Knob	Parameter	Adjustment	Setting values
1	Source	Source start address	1 and upwards <sup>a)</sup>
2	Destination	Destination start address	1 and upwards <sup>b)</sup>
3	Level	Level	1 to 8

a) When the matrix size is Standard, the maximum value is 889. For the Compact size, the maximum value is 897.

b) When the matrix size is Standard, the maximum value is 887. For the Compact size, the maximum value is 897.

## Making an external box setting

Use the following procedure.

- 1 In the Router/Tally>Router menu, press [External Box Assign].

The External Box Assign menu appears.

The status area shows the external box size, address, and other settings.

- 2 In the <Device> group, select what the setting applies to (External Box 1 to 4).

- 3 In the <Matrix Size> group, select the number of inputs.

**No Assign:** Do not use.

**8×1:** Select an external box with 8 inputs and 1 output.

**16×1:** Select an external box with 16 inputs and 1 output.

**32×1:** Select an external box with 32 inputs and 1 output.

- 4 Turn the knobs to make adjustments.

Knob	Parameter	Adjustment	Setting values
1	Source	Source start address	1 to 1017 <sup>a)</sup> 1 to 1009 <sup>b)</sup> 1 to 993 <sup>c)</sup>
2	Destination	Destination start address	1 to 1024
3	Level	Level	1 to 8

a) When Matrix Size is 8×1

b) When Matrix Size is 16×1

c) When Matrix Size is 32×1

## To couple external boxes

By coupling a number of external boxes, the number of inputs can be increased.

Here the example of coupling External Box1 and External Box2 is described.

- 1 In the External Box Assign menu, select [External box1] from the <Device> group.
- 2 In the <Matrix Size> group, select [8×1].
- 3 Turn the knobs to make adjustments.

Knob	Parameter	Adjustment	Setting values
1	Source	Source start address	1 to 1017
2	Destination	Destination start address	1 to 1024
3	Level	Level	1 to 8

- 4 In the <Device> group, select [External box2].
- 5 In the <Matrix Size> group, select [32×1].
- 6 Turn the knobs to make adjustments.  
At this point make the settings of Destination and Level the same as in step 3.

This automatically couples External Box1 and External Box2, forming an external box with 40 (8+32) inputs.

### To set the group number of an S-Bus description name

Use the following procedure.

- 1 In the <Alias Name Gp> group of the Router/Tally>Router menu, press [Gp No].
- 2 Turn the knob to set the following parameter.

Knob	Parameter	Adjustment	Setting values
1	Gp No	Group number of S-Bus description name	0 to 7 <sup>a)</sup>

a) When setting values 1 to 7 are selected: If the name is not set, the description name for 0 appears. If the description name for 0 is not registered either, the Type and No values appear.

- 3 In the <Alias Name Gp> group, press [Set].

This confirms the setting, which is reflected in the status area.

#### Note

Transmit the description name selected here from the router.

## Tally Group Settings (Group Tally Menu)

With the S-Bus protocol, tally control is possible for groups 1 to 8, but in this system you can use either groups 1 to 4 or groups 5 to 8.

You can also select whether or not to transfer the tally information over the S-Bus.

To select the tally groups, use the Router/Tally>Group Tally menu.

### To display the Group Tally menu

In the Engineering Setup menu, select VF6 'Router/Tally' and HF2 'Group Tally.'

## Setting the tally groups

Use the following procedure.

- 1** In the <Tally Group> group of the Group Tally menu, select the tally groups.

**Group1 to 4:** Use groups 1 to 4.

**Group5 to 8:** Use groups 5 to 8.

### Note

For parallel tallies, regardless of this setting, you can use groups 1 to 8.

However, this setting is reflected in tally type parameter display (*see step 6 of the procedure for "Making or modifying parallel tally settings" (page 418)*).

- 2** Press [SBus Tally Enable], turning it on or off.

**On:** Enable the transfer of S-Bus tally information over the S-Bus.

**Off:** Disable the transfer of S-Bus tally information over the S-Bus.

## Wiring Settings (Wiring Menu)

When configuring a system in which the switcher inputs and outputs are connected to a router, it is necessary to set this connection configuration (referred to as "wiring") in the S-Bus space.

To make the wiring settings, use the Router/Tally>Wiring menu. The settings are common to the parallel and serial tallies.

### To display the Wiring menu

In the Engineering Setup menu, select VF6 'Router/Tally' and HF3 'Wiring.'

The status area shows the wiring settings.

## Making new wiring settings

Use the following procedure.

- 1 In the Router/Tally>Wiring menu, press [New].

The New menu appears.

- 2 With a knob or menu operation, set the destination.

When switcher inputs and outputs are connected to the router in a group, you can specify the start and end destination addresses.

**Destination From:** Specify the start destination address for the wiring configuration.

**Destination To:** When the wiring configuration is multiple, specify the end destination address. For a single wiring connection, this setting is not required.

**Destination Level:** Specify the destination level of the wiring configuration.

Knob	Parameter	Adjustment	Setting values
1	Destination (From)	Destination start address	1 to 1024
2	Destination (To)	Destination end address	From start address to 1024
3	Destination (Level)	Destination level	1 to 8

- 3 Set the source.

**Source From:** Specify the source start address for the wiring configuration.

**Source Level:** Specify the source level for the wiring configuration.

Knob	Parameter	Adjustment	Setting values
4	Source (From)	Source start address	1 to 1024
5	Source (Level)	Source level	1 to 8

- 4 Press [Execute].

This makes the wiring setting according to the specifications in steps 2 and 3.

## Changing the wiring settings

Use the following procedure.

- 1** In the Router/Tally>Wiring menu, press [Modify].  
The Modify menu appears.
- 2** Referring to steps **2** and **3** in the preceding section “Making new wiring settings,” change the parameters as required. In this case, however, it is not possible to specify multiple destinations in a single operation, and a single “Destination Address” must be specified.
- 3** Press [Execute].  
This updates the wiring settings.

## Deleting wiring settings

Use the following procedure.

- 1** In the Router/Tally>Wiring menu, using either of the following methods, select the wiring whose settings you want to delete.
  - Press directly on the list appearing in the status area.
  - Press the arrow keys to scroll the reverse video cursor.
- 2** Press [Delete].  
This deletes the selected wiring entry.

## Sorting wiring settings

In the Router/Tally>Wiring menu, press [Sort].

The sorting of wiring settings are executed in the following order.

Destination level order (ascending)→Destination address order (ascending)→Source level order (ascending)

---

## Tally Generation Settings (Tally Enable Menu)

For settings relating to tally generation, use the Router/Tally>Tally Enable menu. The settings are common to the parallel and serial tallies.

### To display the Tally Enable menu

In the Engineering Setup menu, select VF6 ‘Router/Tally’ and HF4 ‘Tally Enable.’

The status area shows the tally generation settings.

## Making new tally generation settings

Use the following procedure.

- 1** In the Router/Tally>Tally Enable menu, press [New].

The New menu appears.

- 2** Turn the knobs to set the following parameters.

Knob	Parameter	Adjustment	Setting values
1	Destination Address	Destination address	1 to 1024
2	Destination Level	Destination level	1 to 8
3	Tally Type	Tally type	1 to 8 <sup>a)</sup>

a) When you selected Group 1 to 4 in the section “Setting the tally groups” (page 412), this is 1:R1, 2:G1, 3:R2, 4:G2, 5:R3, 6:G3, 7:R4, and 8:G4.

When you selected Group 5 to 8, this is 1:R5, 2:G5, 3:R6, 4:G6, 5:R7, 6:G7, 7:R8, and 8:G8. (R is an abbreviation of “Red Tally,” and G of “Green Tally.”)

- 3** In the <Tally Enable> group, specify the tally generation mode.

**Enable:** Always generate a tally.

**Disable:** Never generate a tally.

**Tally Input:** Generate a tally from the tally input state.

- 4** When you selected Tally Input as the tally generation mode in step **3**, select either of the following in the <Tally Input> group.

**DCU1:** Generate tally with reference to signal input to DCU1 port. Set the port number with the knob.

**DCU2:** Generate tally with reference to signal input to DCU2 port. Set the port number with the knob.

- 5** Turn the knob to select the tally input port number.

Knob	Parameter	Adjustment	Setting values
5	Input No	Tally input port number	1 to 102

- 6** Press [Execute].

This sets the settings made in steps **2** to **5** as the settings for tally generation.

## Modifying tally generation

Use the following procedure.

- 1** In the Router/Tally>Tally Enable menu, press [Modify].  
The Modify menu appears.
- 2** With reference to steps **2** to **5** in the preceding section “Making new tally generation settings,” change the parameters as required.
- 3** Press [Execute].  
This modifies the tally generation settings.

## Deleting tally generation settings

Use the following procedure.

- 1** Using either of the following methods in the Router/Tally Enable menu, select the tally generation entry you want to delete.
  - Press directly on the list appearing in the status area.
  - Press the arrow keys to scroll the reverse video cursor.
- 2** Press [Delete].  
This deletes the selected tally generation entry.

---

## Tally Copy Settings (Tally Copy Menu)

For settings relating to the tally copy function, use the Router/Tally>Tally Copy menu. The settings are common to the parallel and serial tallies.

### To display the Tally Copy menu

In the Engineering Setup menu, select VF6 ‘Router/Tally’ and HF5 ‘Tally Copy.’

The status area shows the tally copy status.

## Making new tally copy settings

Use the following procedure.

- 1** In the Router/Tally>Tally Copy menu, select [New].  
The New menu appears.
- 2** Turn the knob to select the copy-from source.  
When setting more than one tally copy, you can specify the copy-from source start and end addresses.

Knob	Parameter	Adjustment	Setting values
1	Copy From (From)	Copy-from source start address	1 to 1024
2	Copy From (To)	Copy-from source end address	1 to 1024

- 3** Specify the copy-to source address.

Knob	Parameter	Adjustment	Setting values
3	Copy To (From)	Copy-to source (start) address	1 to 1024
4	Copy To (To)	Copy-to source (end) address	1 to 1024

- 4** Press [Execute].

This makes the tally copy setting according to the specifications in steps **2** and **3**.

## Modifying tally copy settings

Use the following procedure.

- 1** In the Router/Tally>Tally Copy menu, press [Modify].  
The Modify menu appears.
- 2** Use the knobs to select the copy source and copy destination.

Knob	Parameter	Adjustment	Setting values
1	Copy From	Copy-from source	1 to 1024
2	Copy To	Copy-to source	1 to 1024

- 3** Press [Execute].

This updates the tally copy settings.

## Deleting tally copy settings

Use the following procedure.

- 1** In the Router/Tally>Tally Copy menu, using any of the following methods, select the tally copy whose settings you want to delete.
  - Press directly on the list appearing in the status area.
  - Press the arrow keys to scroll the reverse video cursor.
  - Turn the knob.

Knob	Parameter	Adjustment	Setting values
1	Copy No	Tally copy setting selection for deletion	1 and upwards

## 2 Press [Delete].

This deletes the selected tally copy entry.

## Parallel Tally Settings (Parallel Tally Menu)

For settings relating to parallel tally, use the Router/Tally>Parallel Tally menu.

### To display the Parallel Tally menu

In the Engineering Setup menu, select VF6 'Router/Tally' and HF6 'Parallel Tally.'

The status area shows the parallel tally settings.

## Making or modifying parallel tally settings

Use the following procedure.

- 1 In the <Device> group of the Router/Tally>Parallel Tally menu, select DCU1 or DCU2.
- 2 Using any of the following methods, select the slot number and port number.
  - Press directly on the list appearing in the status area.
  - Press the arrow keys to scroll the reverse video cursor.
  - Turn the knobs.

Knob	Parameter	Adjustment	Setting values
1	Slot No	Parallel tally slot number	2 to 6 <sup>a)</sup>
2	Port No	Parallel tally port number	1 to 54 <sup>b)</sup>

a) When the MKS-2700 is connected, select 2 for the slot and a value in the range 1 to 36 for the port.

b) When the MKS-2700 is connected, select a value in the range 1 to 36.

## 3 Press [Set].

The Set menu appears.

## 4 In the <Source/Destination> group, select the tally type.

**Src:** Return a tally to all sources output to the destination.

**Dest:** Return a tally to the destination outputting the source to which a source tally is returned.

## 5 Set the destination address and level.

The level setting is only required when in step **4** you selected Destination.

Knob	Parameter	Adjustment	Setting values
1	Address	Destination address	1 to 1024
2	Level	Destination level	1 to 8

## 6 When setting the tally type, set the following parameter.

Knob	Parameter	Adjustment	Setting values
3	Type	Tally type	1 to 8 <sup>a)</sup>

a) When you selected Group 1 to 4 in the section “Setting the tally groups” (page 412), this is 1:R1, 2:G1, 3:R2, 4:G2, 5:R3, 6:G3, 7:R4, and 8:G4.

When you selected Group 5 to 8, this is 1:R5, 2:G5, 3:R6, 4:G6, 5:R7, 6:G7, 7:R8, and 8:G8. (R is an abbreviation of “Red Tally,” and G of “Green Tally.”)

## 7 Press [Execute].

This makes the parallel tally settings, in accordance with the settings in steps **1** to **6**.

## Deleting parallel tally settings

Use the following procedure.

### 1 In the Router/Tally>Parallel Tally menu, using any of the following methods, select the parallel tally whose settings you want to delete.

- Press directly on the list appearing in the status area.
- Press the arrow keys to scroll the reverse video cursor.
- Turn the knobs.

Knob	Parameter	Adjustment	Setting values
1	Slot No	Parallel tally slot number	2 to 6
2	Port No	Parallel tally port number	1 to 54

### 2 Press [Clear].

This deletes the selected parallel tally entry.

## Serial Tally Settings (Serial Tally Menu)

To make serial tally settings, display the Router/Tally>Serial Tally menu.

### To display the Serial Tally menu

In the Engineering Setup menu, select VF6 'Router/Tally' and HF7 'Serial Tally.'

The serial tally settings appear in the status area.

## Setting or changing the serial tally settings

Use the following procedure.

- 1 In the <Serial Tally Port> group of the Serial Tally menu, select the port to which the setting applies.
- 2 In the <Tally Type> group, press the tally types to select. (You can select up to four.)

### Note

The selectable tally types depend on the settings in the Group Tally menu.

## Making the serial tally source address settings

To set the serial tally source address for each port, use the following procedure.

- 1 In the Serial Tally menu, press [Source Assign].  
The Source Assign menu appears.  
In the status area, the tally types and source address set for the serial tally port appear.
- 2 In the <Serial Tally Port> group, select the port to which the setting applies.
- 3 Using any of the following methods, select the port bit number.
  - Press directly on the list on the left of the status area.
  - Press the arrow keys to scroll the reverse video cursor.
  - Turn the knob.

Knob	Parameter	Adjustment	Setting values
1	Bit No	Bit selection	1 to 128

- 4 Turn the knob to select the source address.

Knob	Parameter	Adjustment	Setting values
2	Source Addr	Source address selection	1 to 1024

**5** Press [Source Address Set].

This confirms the setting.

## Clearing a source address setting

### To clear a source address setting for a particular bit

In the Source Assign menu, select the serial tally port and bit number (*see steps 2 and 3 in the previous item*), then press [Clear].

This clears the source address setting for the selected bit.

### To clear all source address settings

In the Source Assign menu, select the serial tally port, then press [All Clear]. A confirmation message appears.

- If you select “Yes,” this clears all source address settings for the selected serial tally port.
- If you select “No,” the clear operation is canceled.

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# Simple Connection of the MKS-8080/8082 AUX Bus Remote Panel

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## Procedure for Simple Connection

To carry out simple connection of the MKS-8080/8082 AUX Bus Remote Panel, use the following procedure.

For settings on the MKS-8080/8082, refer to the section “Making the Setting With Buttons (Setup Function)” in the Operation Manual for the MKS-8080/8082.

- 1** Carry out initialization of the MKS-8080/8082 settings.  
This can be done on the MKS-8080/8082 separately.
- 2** Set the MKS-8080/8082 station number in the range 2 to 17.  
This can be done on the MKS-8080/8082 separately.
- 3** Set the S-Bus data link primary station to the CCP-8000 Center Control Panel.  
  
Set the STATION ID switches S903 on the front of the CA-45 board in the SCU SLOT 1 to 001 (switch 1 only to the OPEN position).
- 4** In the Engineering Setup> System> Initialize menu, select PNL, and carry out a reset.  
  
This carries out a restart, and when the restart is completed connection to the MKS-8080/8082 is possible.
- 5** In the Engineering Setup>Router/Tally> Router menu, set the position of the MVS-8000 system in S-Bus space.  
  
Select the setting from SWR1 and SWR2, and set each of Source, Destination, and Level to 1.

---

## Setting Status of the MKS-8080/8082 in Simple Connection

As a result of making the simple connection, the MKS-8080/8082 operates in AUX bus mode, and the settings are the following factory defaults.

With regard to the meaning of the following settings, refer to the section “Menu Operations” in the Operation Manual for the MKS-8080/8082.

**C: SET SWITCHER ID (for AUX mode)**

This is set to 001, which is the station number of the CCP-8000.

**D: SET AUX DESTINATION/SOURCE (for AUX mode)**

The source is set to IN001 and following, and destination is set to OUT001 and following.

**H: SET PHANTOM TABLE (for Router mode)**

This is unset, since the unit does not operate in router mode.

**N: SET PANEL TABLE (for Router mode)**

The source is set to IN001 and following, and destination is set to OUT001 and following. However, since the unit does not operate in router mode, these settings are not used.

**R: SET ROUTE**

Since when using the simple connection the switcher and router cannot be connected in cascade, no route setting is required, and this is unset.

**O: SET AVAILABLE SOURCE/DESTINATION**

Set the source and destination ranges so that the MVS-8000 inputs and outputs can be selected.

**Y: SET DISPLAY MODES**

The DISPLAY MODES/PANEL FUNCTION setting is set to NORMAL. The TALLY GROUP setting is set to be the same as the setting in Engineering Setup>Router/Tally> Tally Group on the MVS-8000.

**Z: SET PANEL STATUS**

The various settings are the same as the factory default settings.



## Chapter 17 Files

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---

# Operations on Individual Files

You can save or load the contents of an individual file or register. Carry out these operations in the File menu.

---

## Displaying the Individual File Operation Menus

Use the following procedure.

- 1** In the menu control block, press the top menu selection button [FILE].
- 2** Depending on the type of file to be manipulated, select the following ‘VF’ and ‘HF’ combination.

Button	HF1	HF2	HF3	HF4
<b>VF1</b>	Setup	Initial Status	Key Memory	Video Proc Memory
<b>VF2</b>	Effect 1-99	Effect 101-199	Effect 201-299	Effect 301-399
<b>VF3</b>	Snapshot	Wipe Snapshot	DME Snapshot	Key Snapshot
<b>VF4</b>	Shotbox	Macro	Macro Attachment	—
<b>VF5</b>	Frame Memory	—	—	—

The following description refers to the example of carrying out operations on snapshot files, but the procedure is similar in the other menus.

---

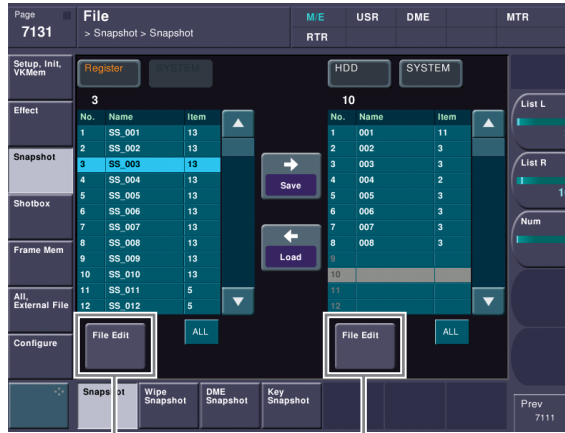
## Viewing Detailed File Information

As an example, to view detailed snapshot file information, carry out the following procedure.

- 1** In the File menu, select VF3 ‘Snapshot’ and HF1 ‘Snapshot.’

The Snapshot menu appears.

The status area shows the device status, and a list of files present on the device.



File Edit buttons

## 2 Press [File Edit].

The file details appear (reference region file name, creation date, regions including data) in table form.



Detail display area

Selecting a particular file displays more detailed information about that file in the detail display area at the top right of the file list.

---

## Selecting Regions

You can carry out a file operation on a number of regions simultaneously. However, a region selection is not required for the following files.

- Key memory
- Video process memory
- Shotbox
- Macro
- Macro attachment
- Frame memory
- Setup
- Initial status

In the above list, for frame memory in Dual Simul mode you can select the switcher to be used for the operation in a way similar to the region selection. For setup and initial status, you can similarly separate the files to be operated on by device.

### To make a region selection

Use the following procedure.

- 1** Press the region selection area at the top right of the screen (*see page 427*).  
The region selection window appears.
- 2** Press the region names you do not want to select, turning them off.
- 3** Press [OK].

---

## Selecting a Device for Operations

To carry out file operations, you need to specify the device holding the data (or file), as one of the following: register, hard disk, memory card, and so on. You can then further select a directory.

### Notes

- Files saved on the hard disk may be lost if the hard disk fails. Always keep separate backup copies of important files on a memory card.
- Format a memory card (*see page 297*) before using it for the first time.

As an example, to select a memory card, use the following procedure.

- 1** In the File menu, press the device selection indication above the file list (default is [HDD] (hard disk)).  
(If [Memory Card] appears, then since the memory card is already selected, steps **1** and **2** are not necessary.)

A pull-down menu appears.

- 2** Press [Memory Card].

This selects the memory card as the location holding the files.

- 3** To select a directory, in the device selection area, press [SYSTEM] (default setting).

If there are any directories on the memory card, a pull-down menu appears.

*To create a new directory, see “Creating a New Directory” (page 439).*

- 4** Press the name of the directory you want to use.

This selects the specified directory on the memory card to be manipulated.

---

## Saving Files

As an example, to save snapshot register data to hard disk or memory card, use the following procedure.

- 1** In the File menu, select VF3 ‘Snapshot’ and HF1 ‘Snapshot.’
- 2** In the device selection area on the left, select [Register].
- 3** In the device selection area on the right, select [HDD] or [Memory Card], then select a directory.

*See “Selecting a Device for Operations” (page 428).*

- 4** Using either of the following methods, select the data to be saved, and the file in which to save it.
  - To select all files within the list, press [ALL] below the list.
  - To select multiple files, turn the knobs to select in the following ranges.



Knob	Parameter	Adjustment	Setting values
1	List L	Select the first register whose data is to be saved	1 to 99
2	List R	Select the first file to which data is to be saved	1 to 99
3	Num	Number of registers to be selected	1 to 99

- To select a single file, press the arrow keys to scroll the reverse video cursor, or press directly on the list in the status area.

## 5 Press [→ Save].

This saves the selected register data in the specified location.

If there is already data in the specified location, a confirmation message appears.

- Select “Yes” to overwrite the data.
- Select “No” to cancel saving all of the data.

---

## Loading Files

As an example, to load a snapshot file from hard disk or memory card to a register, use the following procedure.

- 1 In the File menu, select VF3 ‘Snapshot’ and HF1 ‘Snapshot.’
- 2 In the device selection area on the left, select [Register].
- 3 In the device selection area on the right, select where the file is held ([HDD] or [Memory Card]), and then specify a directory.

See “*Selecting a Device for Operations*” (page 428).

- 4 Using any of the following methods, select the register to which you want to load, and the file to be loaded.

- To select all files within the list, press [ALL] below the list.
- To select multiple files, turn the knobs to select in the following ranges.

Knob	Parameter	Adjustment	Setting values
1	List L	Select the first register into which the data is to be loaded	1 to 99
2	List R	Select the first file in which data is held	1 to 99
3	Num	Number to be selected	1 to 99

- To select a single file, press the arrow keys to scroll the reverse video cursor, or press directly on the list in the status area.

## 5 Press [← Load].

This loads the contents of the selected file from the specified location. (Setup data is first loaded.)

# Copying Files

You can copy files either within a directory or between directories, on the hard disk, or memory card.

As an example, to copy a snapshot file from memory card to hard disk, use the following procedure.

- 1 In the File menu, select VF3 ‘Snapshot’ and HF1 ‘Snapshot.’
- 2 In the device selection area on the left, specify the location of the file to be copied (in this case [Memory Card] and a directory). (*See page 428.*)
- 3 In the device selection area on the right, select the destination of the copied file (in this case [HDD] and a directory).
- 4 Using any of the following methods, select the source and destination files.
  - To select all files within the list, press [ALL] below the list.
  - To select multiple files, turn the knobs to select in the following ranges.

Knob	Parameter	Adjustment	Setting values
1	List L	Select the first copy source file	1 to 99
2	List R	Select the first destination file	1 to 99
3	Num	Number to be selected	1 to 99

- To select a single file, press the arrow keys to scroll the reverse video cursor, or press directly on the list in the status area.

## 5 Press [→ Copy].

This copies the selected file or files to the specified destination.

If there is already data in the specified location, a confirmation message appears.

- Select “Yes” to overwrite the data.
- Select “No” to cancel copying all of the files.

---

## Renaming Files

You can rename a file on the hard disk or memory card and a register for the snapshot or effect. As an example, to rename a snapshot file, use the following procedure.

- 1 In the File menu, select VF3 ‘Snapshot’ and HF1 ‘Snapshot.’

The Snapshot menu appears. The status area shows the device status, and a list of files present on the device.

- 2 Press [File Edit].

A detailed list appears. Here too, you can select a device or specify a directory. (*See page 428.*)

- 3 Using any of the following methods, select the file you want to rename.

- Press directly on the list in the status area.
- Press the arrow keys to scroll the reverse video cursor.
- Turn the knob.

Knob	Parameter	Adjustment	Setting values
1	List	File selection	1 to 99

- 4 Press [Rename].

The keyboard window appears. (*See “Menu Operations” in Chapter 2 (Volume 1).*)

- 5 Enter a name of not more than eight characters, and press [Enter].

The name you have entered is reflected in the status area.

### Note

Within the switcher, the names for Initial Status and Setup data are fixed. You can change the file names on the hard disk or memory card, but the next time they are reloaded they will revert to the default names.

---

## Deleting Files

You can delete data from the hard disk or memory card and snapshot or effect data from a register. As an example, to delete a snapshot file, use the following procedure.

- 1 In the File menu, select VF3 ‘Snapshot’ and HF1 ‘Snapshot.’

The Snapshot menu appears. The status area shows the device status, and a list of files present on the device.

- 2 Press [File Edit].

A detailed list appears. Here too, you can select a device or specify a directory. (*See page 428.*)

- 3 Using any of the following methods, select the file you want to delete.

- To select all files within the list, press [All] below the list.
- To select multiple files, turn the knobs to select in the following ranges.

Knob	Parameter	Adjustment	Setting values
1	List	Select the first file	1 to 99
3	Num	Number to be selected	1 to 99

- To select a single file, press the arrow keys to scroll the reverse video cursor, or press directly on the list in the status area.

- 4 Press [Delete].

A confirmation message appears.

- Select “Yes” to delete.
- Select “No” to cancel the deletion.

---

# File Batch Operations

You can batch process all files or registers. Carry out these operations using the File>All, External File>All menu.

---

## Displaying the Batch Operation Menu

Use the following procedure.

- 1** Press the top menu selection button [FILE].
  - 2** Select VF6 'All, External File' and HF1 'All.'
- The All menu appears.

---

## Batch Saving Files

To save the data of all registers to hard disk or memory card, use the following procedure.

### Notes

- Files saved on the hard disk may be lost if the hard disk fails. Always keep separate backup copies of important files on a memory card.
- Format a memory card (*see page 297*) before using it for the first time.

- 1** In the device selection area of the All menu, select the destination for saving the files ([HDD] or [Memory Card] and directory). (*See page 428.*)
- 2** If there are registers you do not want to save, in the <Category> group, exclude them from the operation. To select all registers, press [All Select].

*For details of the data to which operations apply, see "Files" in Chapter 1 (Volume 1).*

- 3** Press [→ Save].

A confirmation message appears.

- Select "Yes" to carry out the batch save.
- Select "No" to cancel the batch save.

## Batch Loading Files

To load files from hard disk or memory card, use the following procedure.

- 1** In the device selection area of the All menu, select where the files are held ([HDD] or [Memory Card] and directory). (*See page 428.*)
- 2** If there are files you do not want to load, in the <Category> group, exclude them from the operation. To select all files, press [All Select].

*For details of the data to which operations apply, see “Files” in Chapter 1 (Volume 1).*

- 3** Press [← Load].

A confirmation message appears.

- Select “Yes” to carry out the batch load. (Setup data is first loaded.)
- Select “No” to cancel the batch load.

### To execute the load after clearing the data in the destination regions

Before pressing [← Load], press [CLR Before Load], turning it on.

The following categories of data can be cleared before execution of the load.

Effect, Snapshot, Wipe Snapshot, DME Wipe Snapshot, Key Snapshot, Shotbox, Macro

## Batch Copying Files

To copy files between the hard disk and a memory card, use the following procedure.

- 1** In the operating device selection section to the left of the All menu, select the storage location ([HDD] or [Memory Card] and directory) of the source files (*see page 428*).
- 2** In the operating device selection section to the right of the All menu, select the destination storage location ([HDD] or [Memory Card] and directory) (*see page 428*).
- 3** If there are files you do not want to copy, remove them from the selection in the <Category> group. To select all files, press [All Select].

*For details of the data to which the operation applies, see “Files” in Chapter 1 (Volume 1).*

## 4 Press [→ Copy].

This copies the selected files to the specified destination.

If there is already data present in the destination location, a confirmation message appears.

- Select “Yes” to overwrite.
- Select “No” to cancel copying all of the files.

---

## Batch Deleting Files

To delete files from hard disk or memory card, use the following procedure.

**1** In the device selection area of the All menu, select where the files are held ([HDD] or [Memory Card] and directory). (*See page 428.*)

**2** Press [Delete All].

A confirmation message appears.

- Select “Yes” to delete all files from the selected directory.
- Select “No” to cancel the batch delete.



# Importing and Exporting Files

You can import or export frame memory image data from or to external media.

**Import:** to transfer a file in a different format from hard disk or memory card to frame memory as image data.

**Export:** to change the file format of register data and save the data on hard disk or memory card.

To carry out these operations, use the File>All,External File>Import/Export menu.

*For details of the formats supported for import and export, see “Files” in Chapter 1 (Volume 1).*

## Displaying the Import/Export Menu

In the File menu, select VF6 ‘All, External File’ and HF2 ‘Import/Export.’ The list on the left shows the frame memory registers, and the list on the right shows the content of the external recording media.

## Importing Frame Memory Data

As an example, to import data in a bitmap format from a memory card to a frame memory register, use the following procedure.

*About the points you should take note of when importing data, see “Files” in Chapter 1 (Volume 1).*

- 1** In the Import/Export menu, press the device selection area on the left to select [Frame Memory (.BMP)].
- 2** Press the device selection area on the right to select [Memory Card]. It is not possible to select a directory.
- 3** Using any of the following methods, select the register into which the data is to be imported and the file.
  - Press directly on the list in the status area.
  - Press the arrow keys to scroll the reverse video cursor.
  - Turn the knobs.



Knob	Parameter	Adjustment	Setting values
1	List L	Register selection	1 and upwards
2	List R	File selection	1 and upwards

#### 4 Press [← Import].

This transfers the external file to the frame memory register.

---

## Exporting Frame Memory Data

As an example, to save image data from frame memory in a bitmap format on a memory card, use the following procedure.

- 1 In the Import/Export menu, press the device selection area on the left to select [Frame Memory (.BMP)].
- 2 Press the device selection area on the right to select [Memory Card]. It is not possible to select a directory.
- 3 Using any of the following methods, select the data you want to export from the list on the left.
  - Press directly on the list in the status area.
  - Press the arrow keys to scroll the reverse video cursor.
  - Turn the knob.

Knob	Parameter	Adjustment	Setting values
1	List L	Register selection	1 and upwards

#### 4 Press [→ Export].

This adds the image data from the frame memory in a bitmap format on the memory card.

If the specified destination file name already exists, an overwriting confirmation message appears.

- Select “Yes” to overwrite the data.
- Select “No” to cancel the whole file export operation.

---

# Directory Operations

You can create a new directory on hard disk or memory card, rename, or delete a directory.

To carry out these operations, use the File>Configure>Directory menu.

---

## Displaying the Directory Menu

In the File menu, select VF7 'Configure' and HF1 'Directory.'  
The Directory menu appears.

---

## Creating a New Directory

To create a new directory, use the following procedure.

- 1** In the device selection pull-down menu, select [HDD] or [Memory Card].  
(See page 428.)
- 2** Press [New].  
The keyboard window appears. (See "Menu Operations" in Chapter 2 (Volume 1).)
- 3** Enter a name of not more than eight characters, and press [Enter].  
A new directory with the name you have entered appears in the status area.

---

## Renaming a Directory

To rename a directory, use the following procedure.

- 1** In the device selection pull-down menu, select [HDD] or [Memory Card].  
(See page 428.)
- 2** Using any of the following methods, select the directory.
  - Press directly on the list in the status area.
  - Press the arrow keys to scroll the reverse video cursor.

- Turn the knob.

Knob	Parameter	Adjustment	Setting values
1	List	Directory selection	1 and upwards

**3** Press [Rename].

The keyboard window appears. (See “Menu Operations” in Chapter 2 (Volume 1).)

**4** Enter a new name of not more than eight characters, and press [Enter].

The new name appears in the status area.

---

## Deleting a Directory

To delete a directory, use the following procedure.

**1** In the device selection pull-down menu, select [HDD] or [Memory Card]. (See page 428.)

**2** Using any of the following methods, select the directory.

- Press directly on the list in the status area.
- Press the arrow keys to scroll the reverse video cursor.
- Turn the knob.

Knob	Parameter	Adjustment	Setting values
1	List	Directory selection	1 and upwards

**3** Press [Delete].

A confirmation message appears.

- Select “Yes” to delete the directory.
- Select “No” to cancel the deletion.

# Copying Files Between Different Unit IDs

Switcher and DME files on the hard disk or a memory card are handled separately for each unit ID.

With the normal file copy operation, it is not possible to copy files between different unit IDs. To copy files between different unit IDs, use the following procedure.

*For details of unit IDs, see “Setup for the Whole System” (page 275) in Chapter 16.*

## Displaying the Unit ID Copy menu

In the File menu, select VF7 ‘Configure’ and HF2 ‘Unit ID Copy.’  
The Unit ID Copy menu appears.

## Copying files between different unit IDs

To copy files between different unit IDs, grouped by category, use the following procedure.

- 1** In the Unit ID Copy menu, press the category selection section at the top right of the screen.
- 2** Press the categories you do not want to select, turning them off.
- 3** Press [OK].
- 4** In the operating device selection section on the left list, select the storage location of the source files, and in the operating device selection section on the right list, specify the destination storage location (see “*Selecting a Device for Operations*” (page 428)).
- 5** Using either of the following methods, select the copy source and copy destination unit IDs.
  - Press directly on the list for the copy source on the left of the status area, and on the right for the copy destination.
  - Press the arrow keys to scroll the reverse video cursor.
  - Turn the knobs.

Knob	Parameter	Adjustment	Setting values
1	List L	Selection of copy source unit ID	1 to 4
2	List R	Selection of copy desitination unit ID	1 to 4

## 6 Press [→Copy].

A confirmation message appears.

- Select “Yes” to carry out the copy to the specified destination of the selected file categories.
- Select ‘No’ to cancel the copy.

### **Note**

If there is already data present in the copy destination, note that this will overwrite all of the data.



# Saving Files Recalled by Autoload

If you save effect setting data, frame memory image files and so on in the PWON\_LD directory on the hard disk, then when the system is powered on this data is recalled automatically. This is known as the autoload function. To save the data to be recalled by the autoload function, use the menu for operations on individual files.

*For the data recalled by the autoload function, see “Files” in Chapter 1 (Volume 1).*

*For the setting enabling or disabling the autoload function, see “Setting automatic loading of register data at power on (autoload function)” (page 282).*

For example, to save snapshot data, use the following procedure.

- 1** In the File menu, select VF3 ‘Snapshot’ and HF1 ‘Snapshot.’  
The Snapshot menu appears.
- 2** In the device selection area on the left, select [Register].
- 3** In the device selection area on the right, select [HDD].  
Be sure to select [HDD] as the saving destination.
- 4** Select the PWON\_LD directory.  
The PWON\_LD directory is automatically created when [Power On File Load] is set to On in the System>Start Up menu. If set to Off, the directory does not appear.
- 5** Using any of the following methods, select the data to be saved, and the file in which to save it.
  - To select all files within the list, press [ALL] below the list.
  - To select multiple files, turn the knobs to select in the following ranges.

Knob	Parameter	Adjustment	Setting values
1	List L	Select the first register whose data is to be saved	1 to 99
2	List R	Select the first file to which data is to be saved	1 to 99
3	Num	Number of registers to be selected	1 to 99

- To select a single file, press the arrow keys to scroll the reverse video cursor, or directly press on the list in the status area.

## 6 Press [→Save].

The data from the selected registers is saved in the specified destination. If the specified destination already contains data, a confirmation message appears.

- Select “Yes” to overwrite the existing data.
- Select “No” to cancel the entire saving operation.



## Chapter 18 Macros

---

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---

# Macro Operations in the Numeric Keypad Control Block and the Keyframe Control Block

This section describes macro operations carried out in the numeric keypad control block and the keyframe control block.

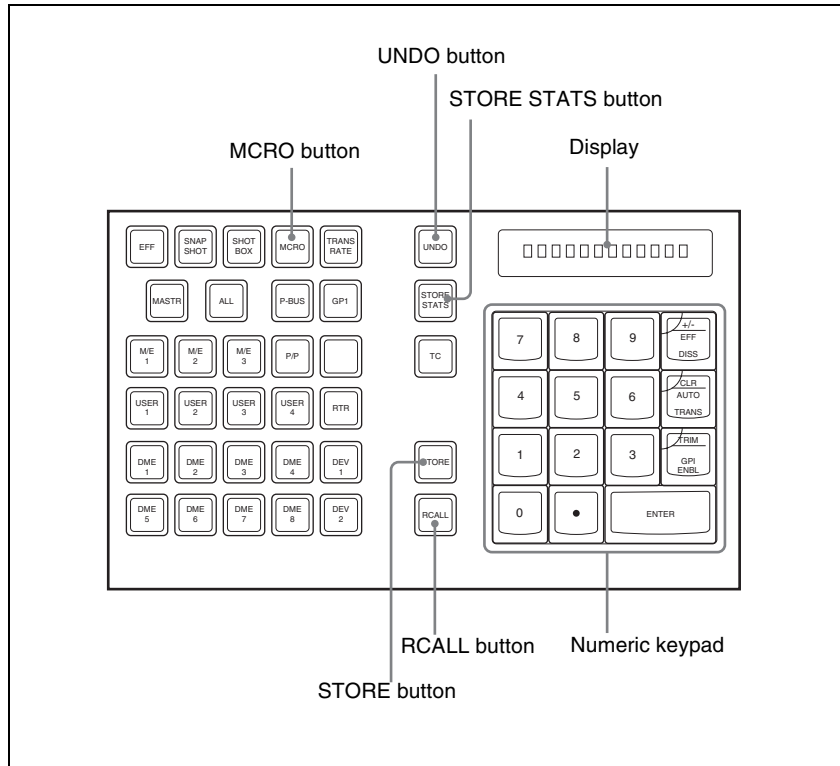
## Note

For a macro take operation (see “Macro Execution” under “Macros” in Chapter 1 (Volume 1)), the numeric keypad control block and keyframe control block are not used. Use the [Take] button in the Flexi Pad control block.

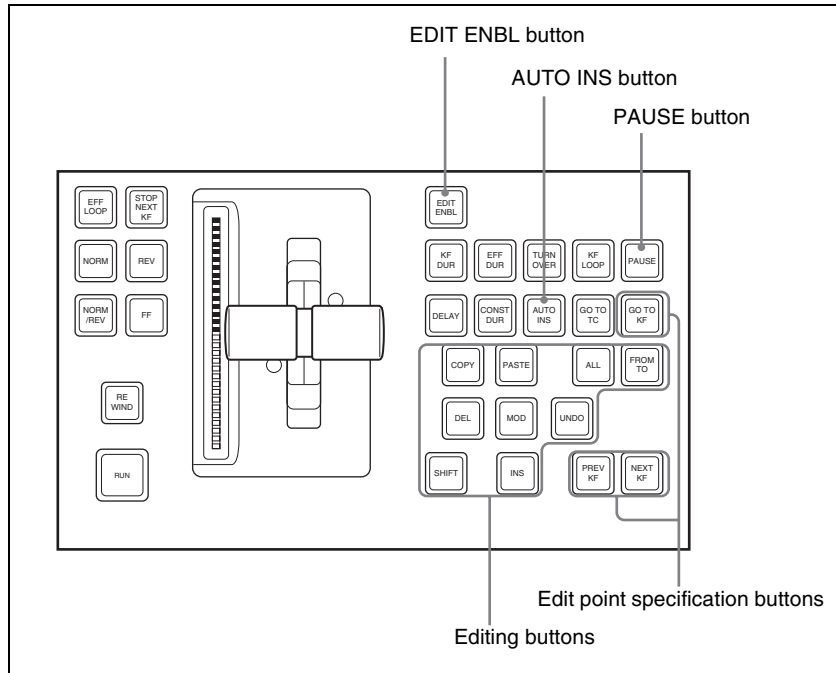
*For an overview of macros, see “Macros” in Chapter 1 (Volume 1).*

For macro operations in the numeric keypad control block, use the following buttons. (See the figure on next page.)





For macro operations in the keyframe control block, use the following buttons. (See the following figure.)



## Recalling a Macro Register and Executing a Macro

To carry out a macro operation, recall a macro register. Recalling an empty register allows you to carry out macro editing operations. Recalling a register holding a macro executes the macro immediately.

To recall a macro register, use the following procedure.

- 1** In the numeric keypad control block, press the [MCRO] button, turning it on.

This assigns the numeric keypad control block to macro operations, and the [RCALL] button lights.

- 2** Enter the number of the register to be recalled with the numeric keypad buttons.

To search for an empty register, instead of entering a number, press the [.] (period) button.

The display shows the corresponding register number. A letter “E” after the number indicates that the corresponding register is empty.

### 3 Press the [ENTER] button.

This recalls the specified register.

#### **When you recall an empty register**

This assigns the numeric keypad control block and keyframe control block to macro editing.

*For details of macro editing, see “Creating and Editing a Macro” (see below).*

#### **When you recall a register holding a macro**

This immediately executes the macro. While the macro is executed, the [RCALL] button flashes.

#### **Notes**

- It is not possible to execute more than one macro at a time.
- During macro execution, recalling the same register again stops the macro being executed.
- Individual events stored in a macro are executed according to the settings in setup. If you change the settings in setup, a saved macro may not have the expected effect.
- During macro execution, if you switch the control panel to macro editing mode, the macro being executed stops.
- During macro editing it is not possible to execute a macro.
- If you start execution of a macro by operating a Flexi Pad control block or a button for which a macro attachment is set, then before the end of execution of that macro you cannot recall and execute a separate macro from the numeric keypad control block.

---

## **Creating and Editing a Macro**

Use the numeric keypad control block and keyframe control block to create and edit a macro.

After carrying out creation and editing, be sure to carry out a save operation (*see page 456*), using the numeric keypad control block.

### **Switching auto insert mode on or off for macro creation/editing**

In the auto insert mode, when creating or editing a macro, an operation carried out on the control panel is automatically registered as an event.

When this mode is off, it is necessary to press the [INS] button in the keyframe control block for each operation to register the event.

To switch auto insert mode on or off, press the [AUTO INS] button in the keyframe control block.

### Note

When you start macro editing using the numeric keypad control block with the macro execution mode set to “Normal” (see page 349), the auto insert mode is automatically on. When “Step” is selected as the macro execution mode, the auto insert mode is automatically off.

## Creating a new macro

Use the following procedure.

- 1 Recall an empty register.

*For details of the method of operation, see “Recalling a Macro Register and Executing a Macro” (page 448).*

This assigns the numeric keypad control block and keyframe control block to macro editing, and the [MCRO] button in the numeric keypad control block and the [EDIT ENBL] button in the keyframe control block light red. The [STORE] button in the numeric keypad control block flashes red.

- 2 If required, press the [AUTO INS] button in the keyframe control block to toggle the auto insert mode on or off.
- 3 Create the events (carry out the control panel operations to be registered as events in the macro).

You can include pause events (see page 455).

*For details of events that can be registered, see “Macros” in Chapter 1 (Volume 1).*

- When auto insert mode (see page 449) is on, execution of a control panel operation automatically registers an event in the macro.
- When auto insert mode is off, proceed to step 4.

### Notes

- During macro editing, if you press any of the mode selection buttons in the numeric keypad control block other than the [MCRO] button ([TRANSRATE] button, and so on), the executed operation is also registered as an event. In this case, the [MCRO] button stays lit red.
- Even during macro editing, you can carry out keyframe operations using the fader lever in the keyframe control block and the following buttons: [EFF LOOP], [STOP NEXT KF], [NORM], [REV], [NORM / REV], [FF], [REWIND], [RUN]
- During macro editing, if you press a button for which a macro attachment is set, the outcome is as described in the next item.



**4** When auto insert mode is off, press the [INS] button in the keyframe control block to register the event.

**5** Repeat steps **3** and **4** to register the required events in the macro.

This registers the events in the macro, in the order the operations were carried out on the control panel.

**6** Press the [STORE] button.

Macro editing finishes, and the [MCRO] button and [STORE] button in the numeric keypad control block light amber. The keyframe control block returns to the state before starting macro editing.

#### Note

While carrying out macro editing in the numeric keypad control block and keyframe control block, no macro operation other than macro recalling is possible in the Flexi Pad control block.

#### Merging a macro for which a macro attachment is set

While creating/editing a macro, if you press a button for which a macro attachment is set, the macro in the register assigned to the button is recalled, and the following occurs.

- When auto insert mode is on, it is merged with the macro being edited. However, the macro assigned to the button is not executed.
- When auto insert mode is off, it is copied to the paste buffer. Pressing the [PASTE] button in the keyframe control block merges it with the macro being edited.

## Specifying an edit point

To specify an edit point with the numeric keypad control block and keyframe control block, use the following procedure.

**1** Recall the register of the macro you want to edit.

*For details of the method of operation, see “Recalling a Macro Register and Executing a Macro” (page 448).*

**2** In the numeric keypad control block, hold down the [MCRO] button, and press the [STORE] button.

This assigns the numeric keypad control block and keyframe control block to macro editing, and the [MCRO] button in the numeric keypad control block and the [EDIT ENBL] button in the keyframe control block light red. The [STORE] button in the numeric keypad control block flashes red.

### 3 Using any of the following methods, specify the edit point.

- To move the edit point to the event immediately following the current macro event, press the [NEXT KF] button in the keyframe control block.
- To move the edit point to the event immediately preceding the current macro event, press the [PREV KF] button in the keyframe control block.
- To move to an edit point by specifying an event number (the number showing the position of the event in the macro execution sequence), press the [GO TO KF] button in the keyframe control block, then in the numeric keypad control block, enter the target number and confirm with the [ENTER] button.

## Inserting an event

Use the following procedure.

- 1 Specify the edit point. (*See page 451.*)
- 2 If required, press the [AUTO INS] button in the keyframe control block to toggle the auto insert mode on or off.
- 3 Create the event.
  - When auto insert mode (*see page 449*) is on, the event is automatically added to the macro.
  - When auto insert mode is off, proceed to step 4.
- 4 When auto insert mode is off, press the [INS] button in the keyframe control block.
- 5 Repeat steps 3 and 4 to insert the required events in the macro.

## Modifying a single event

Use the following procedure.

- 1 Specify the edit point. (*See page 451.*)
- 2 If the [AUTO INS] button is lit, press it to turn off the insert mode.
- 3 Create the event.
- 4 Press the [MOD] button in the keyframe control block.

## Modifying a particular range of events

Use the following procedure.



- 1** Carry out steps **1** to **3** of the procedure in “*Modifying a single event*” (the previous item).
- 2** Press the [FROM TO] button in the keyframe control block, turning it on.  
The numeric display in the numeric keypad control block shows the current event number and the indication “TO.”
- 3** To set the start of the range to other than the current event number, press the [CLR/AUTO TRANS] button in the numeric keypad control block, then enter the desired event number with the numeric keypad and press the [ENTER] button. (This operation is not required when using the current event number.)
- 4** Enter the event number for the end of the range and press the [ENTER] button.
- 5** Press the [MOD] button in the keyframe control block.  
This modifies the specified range of events simultaneously.

## Modifying all events at the same time

Use the following procedure.

- 1** Carry out steps **1** to **3** of the procedure in “*Modifying a single event*” (page 452).
- 2** Press the [ALL] button in the keyframe control block, turning it on.
- 3** Press the [MOD] button.  
This modifies all events in the specified range simultaneously.

## Deleting an event

Use the following procedure.

- 1** Specify the edit point. (See page 451.)
- 2** To delete multiple events simultaneously, carry out either of the following operations. (This operation is not required to delete the event at the edit point only.)
  - To specify a range to be deleted, press the [FROM TO] button in the keyframe control block, then enter the event numbers from the numeric keypad control block.

- To delete all events within this macro, press the [ALL] button, turning it on.

### 3 Press the [DEL] button.

This deletes the specified events.

## Moving events

Use the following procedure.

### 1 Specify the edit point for the start of the range to be moved. (*See page 451.*)

### 2 To move multiple events simultaneously, press the [FROM TO] button in the keyframe control block, then specify the range in the numeric keypad control block.

### 3 Press the [DEL] button.

This temporarily deletes the specified events from the macro, and copies them to the paste buffer.

### 4 Move to the edit point which is the destination within the macro to which you want to move the events.

### 5 To paste the contents of the paste buffer after the edit point, press the [PASTE] button in the keyframe control block. To paste before the edit point, hold down the [SHIFT] button in the keyframe control block and press the [PASTE] button.

This pastes the events from the paste buffer.

## Copying events

Use the following procedure.

### 1 Specify the edit point for the start of the range to be copied.

### 2 To copy multiple events simultaneously, press the [FROM TO] button or [ALL] button in the keyframe control block, then specify the range in the numeric keypad control block.

### 3 Press the [COPY] button.

This copies the specified events into the paste buffer.

- 4** Move to the edit point which is the destination within the macro to which you want to copy the events.
- 5** To paste the contents of the paste buffer after the edit point, press the [PASTE] button in the keyframe control block.  
To paste before the edit point, hold down the [SHIFT] button in the keyframe control block and press the [PASTE] button.

This copies the events from the paste buffer.

## Inserting a pause event

Use the following procedure.

- 1** Press the [PAUSE] button in the keyframe control block, lighting it green.  
The indication “PAUSE” appears in the numeric keypad control block display.
- 2** If required, press the [AUTO INS] button in the keyframe control block to toggle the auto insert mode on or off.
- 3** Enter the pause duration with the numeric keypad control block (0 or 1 to 999 (frames)).
- 4** Press the [ENTER] button.
  - If auto insert mode is on, this sets the pause duration, and inserts the pause event.
  - When auto insert mode is off, continue to step **5**.
- 5** When auto insert mode is off, press the [INS] button in the keyframe control block to insert the pause event.

## Merging macro register data

Use the following procedure.

- 1** Specify the edit point. (*See page 451.*)
- 2** Press the [RCALL] button in the numeric keypad control block, lighting it amber.
- 3** Enter the number of the macro register you want to copy using the numeric keypad buttons.

The display shows the register number.

## 4 Press the [ENTER] button.

The [RCALL] button goes off, and the specified register data is copied to the paste buffer.

- When auto insert mode is on, the data from the specified register is included after the edit point.
- When auto insert mode is off, continue to step 5.

## 5 When auto insert mode is off, to include after the edit point, press the [PASTE] button in the keyframe control block. To include before the edit point, hold down the [SHIFT] button in the keyframe control block, and press the [PASTE] button.

In place of steps 2 to 4, you can specify the register with the Flexi Pad control block. (See “Recalling a Macro Register and Executing a Macro” (page 459)). The same effect is obtained if you use a button which has a macro attachment set. In this case, the data from the assigned macro register is copied into the paste buffer.

## Undoing a macro editing operation with the numeric keypad control block

Immediately after inserting, modifying, deleting, or pasting an event, you can undo the operation by pressing the [UNDO] button in the numeric keypad control block.

---

## Saving a Macro

Use the following procedure to save the register after creating or editing/modifying a macro.

### 1 In the numeric keypad control block, press the [MCRO] button, turning it on.

This assigns the numeric keypad control block to macro operations.

### 2 Press the [STORE] button, turning it on.

### 3 Enter the number of the register in which you want to save the macro with the numeric keypad buttons.

To search for an empty register, instead of entering a number, press the [.] (period) button.

The display shows the corresponding register number. A letter “E” after the number indicates that the corresponding register is empty.

**4** Press the [ENTER] button.

This saves the macro data in the specified register, and the [STORE] button goes off.

The [RCALL] and [STORE STATS] buttons light.

**To cancel the saving of a macro**

To cancel the saving of a macro immediately after performing it, hold down the [STORE STATS] button and press the [UNDO] button.

# Macro Operations in the Standard Type Flexi Pad Control Block

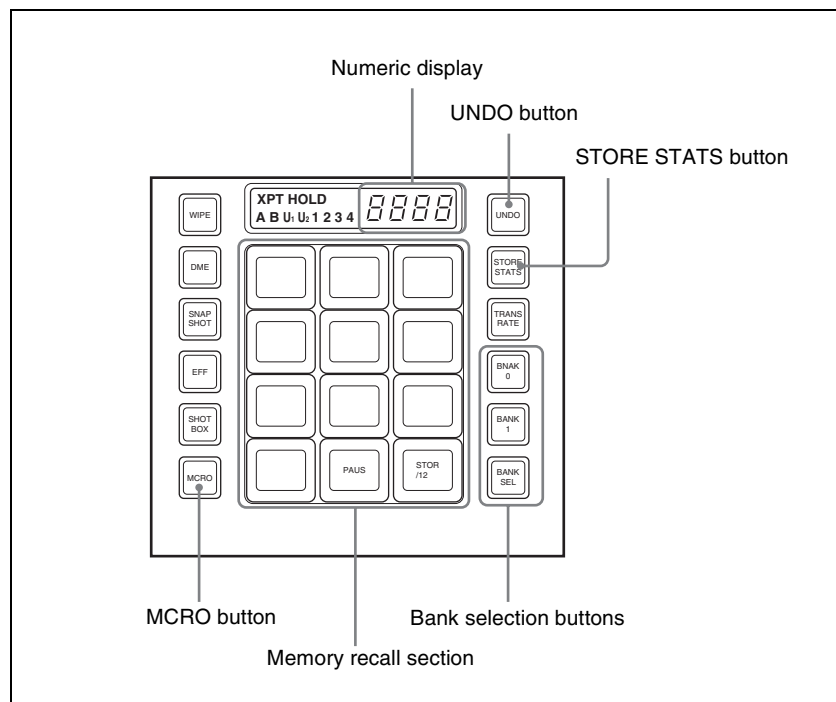
This section describes how to carry out macro operations in a standard type Flexi Pad control block.

*For an overview of macros, see “Macros” in Chapter 1 (Volume 1).*

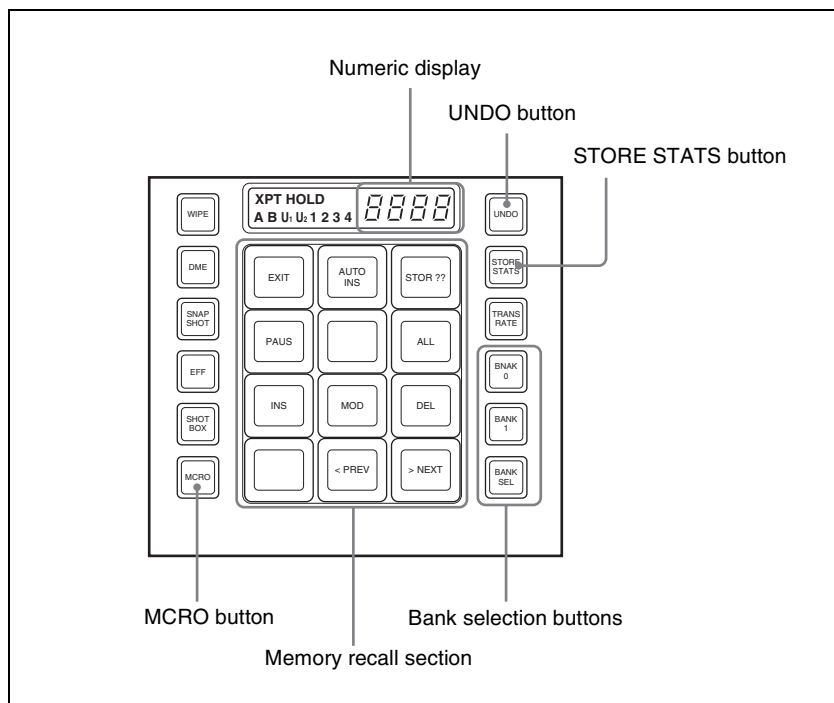
Using the <Flexi Pad Edit Mode> group buttons in the Engineering Setup>Panel>Operation>Macro menu, you can set the macro execution mode to Pause Only or Full Editing (*see page 349*).

The display of the standard type Flexi Pad control block changes as follows, depending on the selected mode of macro execution.

## When entering macro editing mode with “Pause Only” selected



## When entering macro editing mode with “Full Editing” selected



About operations in Full Editing mode, see “Macro Operations in the Simple Type Flexi Pad Control Block” (page 466).

## Banks and registers

To allow operations on the 99 registers, the standard type Flexi Pad control block treats the registers in groups. These groups are called banks, and there are 10 banks, numbered from 0 to 9.

For details of the correspondence between banks and registers, see “Banks and Registers” (page 245).

## Recalling a Macro Register and Executing a Macro

### Carrying out a macro operation in the normal mode

Use the following procedure to recall a macro register.

- 1 In the Flexi Pad control block, press the [MCRO] button, turning it on.

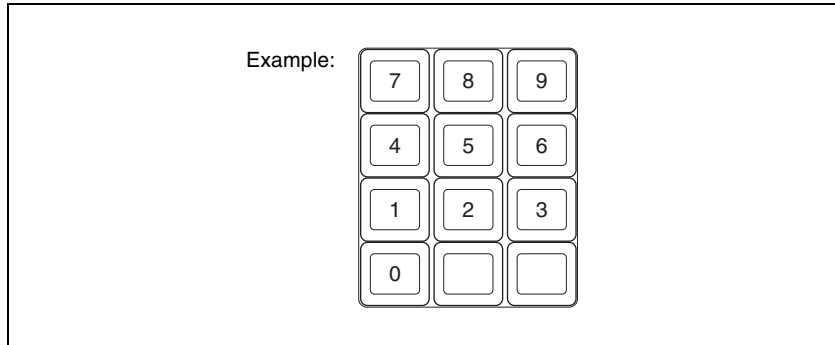
This assigns the Flexi Pad control block to macro operations.  
The numeric display shows the previously selected bank number and the last recalled register number.

## 2 Use any of the following operations to select the bank for recall.

**To select bank 0:** Press the [BANK0] button.

**To select bank 1:** Press the [BANK1] button.

**To select any of banks 0 to 9:** Press the [BANK SEL] button, changing the memory recall section display as shown below; select a number from 0 to 9.



The selected bank number appears in the numeric display.

Each button in the memory recall section shows the corresponding register name and register status for the selected bank.

Note that in the Setup menu, you can select whether to display register names or register numbers.

**Lit orange:** Register holding macro data

**Lit yellow:** Last recalled register

**Off:** Empty register

## 3 Press the button in the memory recall section showing the name of the register to be recalled.

The button you pressed lights yellow, the macro register is recalled, and the macro is executed.

During macro execution, the button you pressed remains yellow, but flashes. When macro execution completes, it returns to permanently on. The numeric display shows the bank name followed by the selected register number.

### Notes

- It is not possible to execute more than one macro at a time.

- During macro execution, recalling the same register again stops the macro being executed.
- Individual events stored in a macro are executed according to the settings in setup. If you change the settings in setup, a saved macro may not have the expected effect.
- During macro execution, if you switch the control panel to macro editing mode, the macro being executed stops.
- During macro editing it is not possible to execute a macro.
- If you start execution of a macro by operating the Flexi Pad control block for an M/E or PGM/PST bank, the numeric keypad control block or a button for which a macro attachment is set, then before the end of execution of that macro you cannot recall and execute a separate macro from the Flexi Pad control block for a different bank.

## Executing a macro in normal execution mode (with pause events set)

When execution of a macro is paused, the [Take] button is assigned to the memory recall section.

To restart the macro execution, press the [Take] button.

*You can switch the normal execution mode and step execution mode in the Setup menu. See “Setting the macro execution mode” (page 349).*

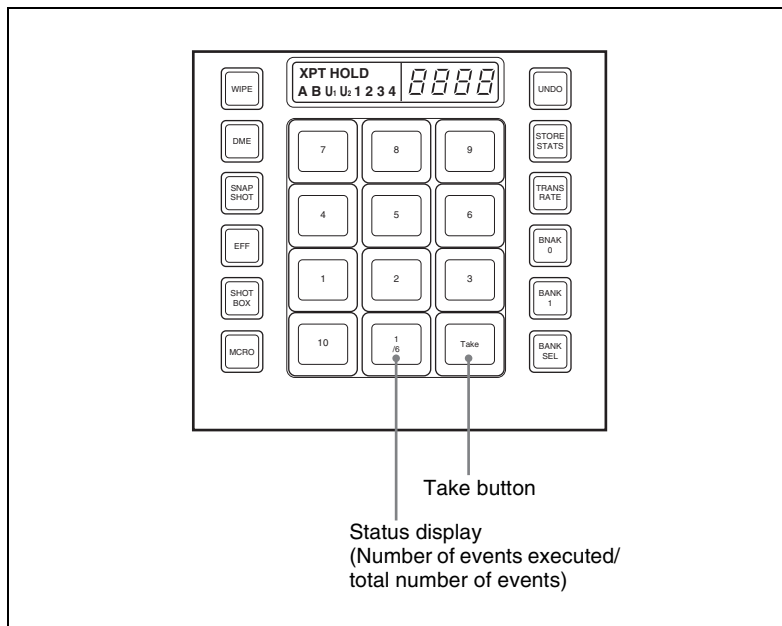
## Executing a macro in step execution mode

To recall a macro register and execute the macro in step execution mode, use the following procedure.

- 1 In the Flexi Pad control block, recall the macro register.

*For details of recalling macro registers, see “Recalling a Macro Register and Executing a Macro” (page 459).*

The Flexi Pad control block memory recall section is assigned to the display of the [Take] button and macro execution status, as in the following figure.



## 2 Press the [Take] button.

This executes one event within the macro, then stops.

The number of events executed, as shown in the memory recall section status display, is incremented by one.

## 3 Repeat step 2, executing the macro event by event.

When all events in the macro have been executed, the [Take] button goes off.

# Creating and Saving a Macro

Use the following procedure.

## 1 In the Flexi Pad control block, press the [MCRO] button, turning it on.

This assigns the Flexi Pad control block to macro operations.

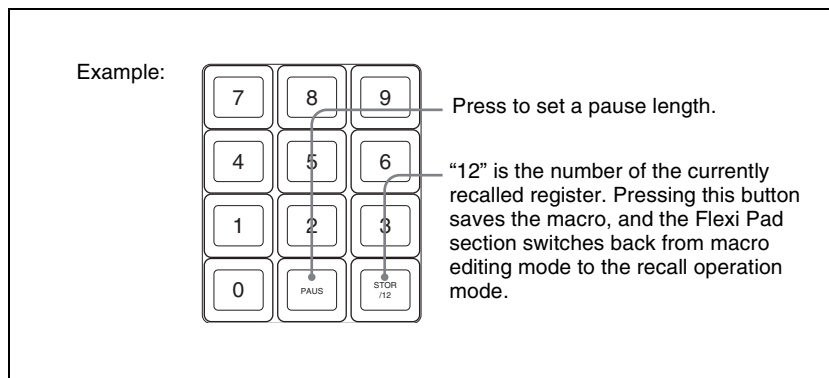
## 2 Select the bank of the register in which you want to save the macro.

*For details of the method of operation, see step 2 in the previous item “Recalling a Macro Register and Executing a Macro” (page 459).*

- 3 Hold down the [MCRO] button in the Flexi Pad control block, and press the button in the memory recall section showing the desired register name.

This assigns the Flexi Pad control block to macro editing, and the auto insert function is enabled. The [MCRO] button lights red.

As an example, when register 12 is specified, the buttons in the memory recall section appear as in the following figure.



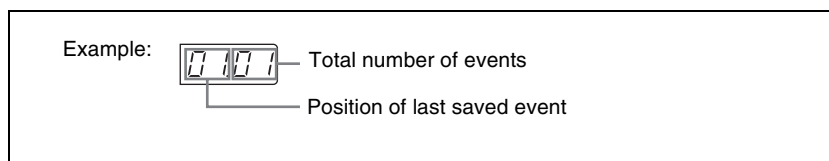
- 4 In the same way as in the numeric keypad control block, create the events you want to save in the macro.

*For details, see step 2 (page 450) of "Creating a new macro."*

- 5 Repeat step 4 to save the desired events in the macro.

The operations you carry out on the control panel are saved as a sequence of events in the macro.

The numeric display appears as follows.



- 6 Press the [STORE XX] button in the memory recall section (where XX is the register number).

The [STORE STATS] button lights amber.

This saves the created macro in the register, and macro editing ends.

The Flexi Pad control block returns to the state before macro editing began.

The [MCRO] button lights amber.

### Notes

- During macro editing, you can press a mode selection button in the Flexi Pad control block other than the [MCRO] button (for example, the [WIPE] button or [DME] button) to record the executed operation as an event. In this case, the [MCRO] button remains lit red.
- During macro editing, if you press a button for which a macro attachment is set, the macro within the register assigned to the button is merged into the macro being edited. However, the macro assigned to the button is not executed.
- While carrying out macro editing in the Flexi Pad control block, absolutely no macro operations are possible in the Flexi Pad control blocks for other M/E and PGM/PST banks. Macro operations from the numeric keypad control block are also not possible.

### To cancel the saving of a macro

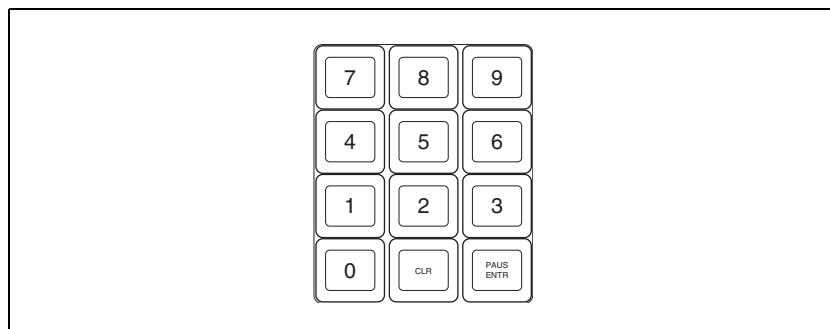
To cancel the saving of a macro immediately after performing it, hold down the [STORE STATS] button and press the [UNDO] button.

## Inserting a pause event

Use the following procedure.

- 1** Press the [PAUS] button in the memory recall section.

The buttons in the memory recall section change as follows.



- 2** Enter the length of pause you want to set (0 to 999 frames).
- 3** Press the [PAUS ENTR] button.

This sets the pause length, and inserts the pause event.

The memory recall section display returns to its former state.

## Deleting a macro

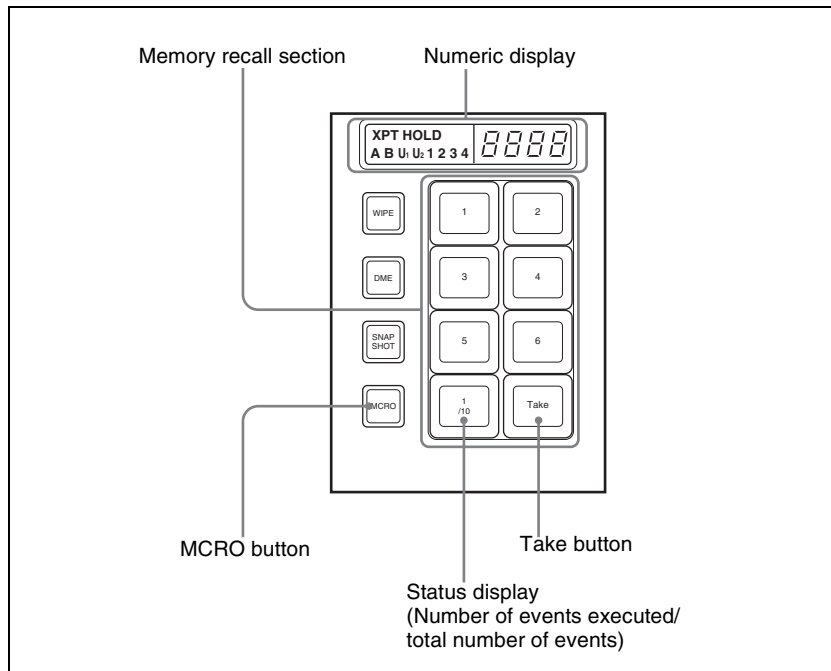
Use the following procedure.

- 1** In the Flexi Pad control block, press the [MCRO] button.  
This assigns the Flexi Pad control block to macro operations.  
The numeric display shows the previously selected bank number and the number of the last recalled register.
- 2** Select the bank of the register holding the macro you want to delete.  
*For details of the method of operation, see step 2 (page 460) of “Recalling a Macro Register and Executing a Macro.”*
- 3** Hold down the [STORE STATS] button, and then press the button in the memory recall section showing the corresponding register number.  
The button you pressed in the memory recall section goes off, and this deletes the macro. The [STORE STATS] button lights amber.

# Macro Operations in the Simple Type Flexi Pad Control Block

This section describes the macro operations carried out in the simple type Flexi Pad control block.

Use the following buttons.



## To use the MCRO button

To enable the [MCRO] button for use as in the above figure, it is necessary in the Setup menu to switch the [UNDO] button to the [MCRO] button.

*For more details, see “Setting the assignment of macro operation buttons” in Chapter 16 (page 312).*

### Note

In a simple type Flexi Pad control block, only registers 1 to 6 can be used for operations. There are no “bank” operations.  
For registers 7 to 99, use the numeric keypad control block.

---

# Recalling a Macro Register and Executing a Macro

## Executing a macro in normal execution mode

Use the following procedure.

- 1** In the simple type Flexi Pad control block, press the [MCRO] button, turning it on.

This assigns the Flexi Pad control block to macro operation.

The numeric display shows the number of the last recalled register.

The buttons of the memory recall section show the selected register status.

**Lit orange:** register holding macro data

**Lit yellow:** last recalled register

**Off:** empty register

- 2** Press the button in the memory recall section showing the register to be recalled.

The button you pressed lights yellow, the macro register is recalled, and the macro is executed.

During the macro execution, the button pressed remains yellow, but flashes, and when the macro execution completes it changes to permanently lit.

The numeric display shows the selected register number.

### Notes

- Only one macro can be executed at a time.
- During macro execution, if you recall the same register again, execution of the macro stops.
- Individual events registered in a macro are executed according to the setup settings. If you change the setup settings, the content of the macro may not be played back.
- During macro execution, if you switch the control panel to macro editing mode, the macro currently being executed stops.
- It is not possible to execute a macro during macro editing.

## Executing a macro in normal execution mode (with pause events set)

When the macro execution is paused, the [Take] button is assigned to the simple type Flexi Pad memory recall section.

Press the button to restart macro execution.

## Executing a macro in step execution mode

After recalling the macro register, to execute a macro in step execution mode, use the following procedure.

### Note

To execute a macro in step execution mode requires setting the step execution mode in the Setup menu.

*For details of the method of setting, see “Setting the macro execution mode” (page 349).*

- 1** In the simple type Flexi Pad control block, press the [MCRO] button, turning it on.

This assigns the Flexi Pad control block to macro operation.

- 2** Press the button in the memory recall section showing the register to be recalled.

- 3** Press the [Take] button.

This executes one event within the macro, then stops.

The number of events executed, as shown in the memory recall section status display, is incremented by one.

- 4** Repeat step **3**, executing the macro event by event.

When all events in the macro have been executed, the [Take] button goes off.

---

## Creating and Editing a Macro

### Creating a macro

Use the following procedure.

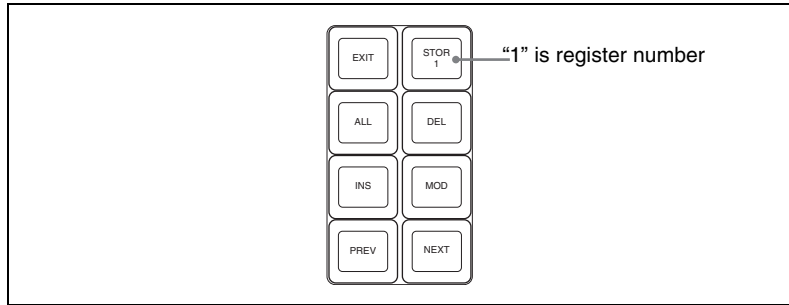
- 1** In the simple type Flexi Pad control block, press the [MCRO] button, turning it on.

This assigns the Flexi Pad control block to macro operation.

- 2** While holding down the [MCRO] button in the Flexi Pad control block, press the button in the memory recall section showing the desired register name.

This assigns the Flexi Pad control block to macro editing.

As an example, when register 1 is specified, the memory recall section buttons appear as in the following figure.



- 3** Carry out the control panel operation to be registered as an event in the macro.

*For details of the events that can be registered, see “Overview” under “Macros” in Chapter 1 (Volume 1).*

#### Note

In the Flexi Pad control block, it is not possible to set a pause event. To set a pause event, use the numeric keypad control block.

- 4** Press the [INS] button.

This registers the operation carried out in step **3** as an event within the macro.

- 5** Repeat steps **3** and **4** to register the required events in the macro.

The numeric display shows the last registered event position, and the total number of events.

- 6** Press the [STOR 1] button in the memory recall section.

This saves the created macro in the register and ends the macro editing mode; the [MCRO] button lights amber.

#### Notes

- During macro editing, if you press any of the mode selection buttons in the Flexi Pad control block other than [MCRO] button (the [WIPE] button, [DME] button, and so on), the executed operation is also registered as an event. In this case, the [MCRO] button stays lit red.
- While carrying out macro editing in the Flexi Pad control block, pressing a button to which a macro attachment is set does not execute the macro.

- In the simple type Flexi Pad control block, it is not possible to undo a macro save.

## Specifying an edit point

Use the following procedure.

- 1** In the Flexi Pad control block, press the [MCRO] button, turning it on.  
This assigns the Flexi Pad control block to macro operation.
- 2** While holding down the [MCRO] button in the Flexi Pad control block, press the button in the memory recall section showing the desired register name.
- 3** Specify the edit point by the following operation.
  - To move the edit point to the event immediately following the current macro event (the macro event specified as the current edit point), press the [NEXT] button.
  - To move the edit point to the event immediately preceding the current macro event, press the [PREV] button.

## Inserting an event

To add an event to an already created macro, use the following procedure.

- 1** Specify the edit point. (*See above.*)
- 2** Carry out the event to be added on the control panel.  
*For details of events that can be registered, see “Overview” under “Macros” in Chapter 1 (Volume 1).*
- 3** In the memory recall section, press the [INS] button.  
This adds the new event after the event specified in step **1**.

## Modifying an event

Use the following procedure.

- 1** Specify the edit point. (*See above.*)
- 2** Carry out the event you want to modify on the control panel.
- 3** Press the [MOD] button.  
This modifies the event at the specified edit point as carried out in step **2**.



## Deleting an event

Use the following procedure.

- 1** Specify the edit point. (*See page 470.*)
- 2** Press the [DEL] button.  
This deletes the event specified in step **1**.

## Deleting all events within a macro register

Use the following procedure.

- 1** Specify the edit point. (*See page 470.*)
- 2** Press the [ALL] button, lighting it green.
- 3** Press the [DEL] button.  
This deletes all events within the register.

---

## Saving a Macro

In the memory recall section, press the [STOR X] (X=register number) button to save the edited macro in a register.

### **To return to the state before editing, without saving the macro editing results**

Press the [EXIT] button to recall the same register again. This returns to the state before editing, without saving the macro editing results.

---

# Macro Editing Using Menus

Using any of the menus in the following table, you can edit macro registers and macro events.

Menu	Function	Operations
Register menu (macro register editing)	Carry out macro register editing.	<ul style="list-style-type: none"><li>• Locking a register</li><li>• Copying a register</li><li>• Deleting a register</li><li>• Naming a register</li></ul>
On Line Edit menu (online editing of macro events)	Edit events in a macro register, using the control panel and menus.	<ul style="list-style-type: none"><li>• Inserting an event</li><li>• Deleting an event</li><li>• Modifying an event</li></ul>
Off Line Edit menu (offline editing of macro events)	Edit events in a macro register, on the hard disk, or on a memory card, using the menus.	<ul style="list-style-type: none"><li>• Inserting an event</li><li>• Adding an event</li><li>• Deleting an event</li><li>• Creating a new macro</li></ul>

---

## Macro Register Editing

You can display the current state of a macro register using the Macro>Register menu.

The items displayed are the same as under “*Effect Status Display*” (see page 231), with the exception that the region name is not displayed and that the total number of macro events saved in the register is displayed.

In the Macro>Register menu, you can do the following editing operations on macro registers.

- **Lock:** Write-protect the contents of the register.
- **Copy:** Copy the contents of one register to another register.
- **Delete:** Delete the contents of a register.
- **Name:** Attach a name to a register.

The operations for macro register editing are the same as those for effect register editing (see page 231) except the region selection operation, which is not necessary for macro register editing.

---

## Online Editing of Macro Events

Using the On Line Edit menu, you carry out online editing of macro events.

In the On Line Edit menu, you can check the control panel operating sequence in the menu. You can also carry out editing using the control panel and menu.

## To display the On Line Edit menu

Use the following procedure.

- 1** Recall the macro register you want to edit with the control panel, and select the macro editing mode <sup>1)</sup>.

1) With the numeric keypad control block, keyframe control block, or Flexi Pad control block assigned to macro editing (*see step 2 in “Specifying an edit point” (page 451), step 3 in “Creating and Saving a Macro” (page 462), and step 2 in “Creating a macro” (page 468)*)

- 2** In any of the following menus, select the same register as the register recalled in step **1**, and press [On Line Edit] in the button area.

- Macro >Register >Lock menu
- Macro >Register >Delete menu
- Macro >Register >Rename menu
- File >Shotbox, Macro >Macro >File Edit menu

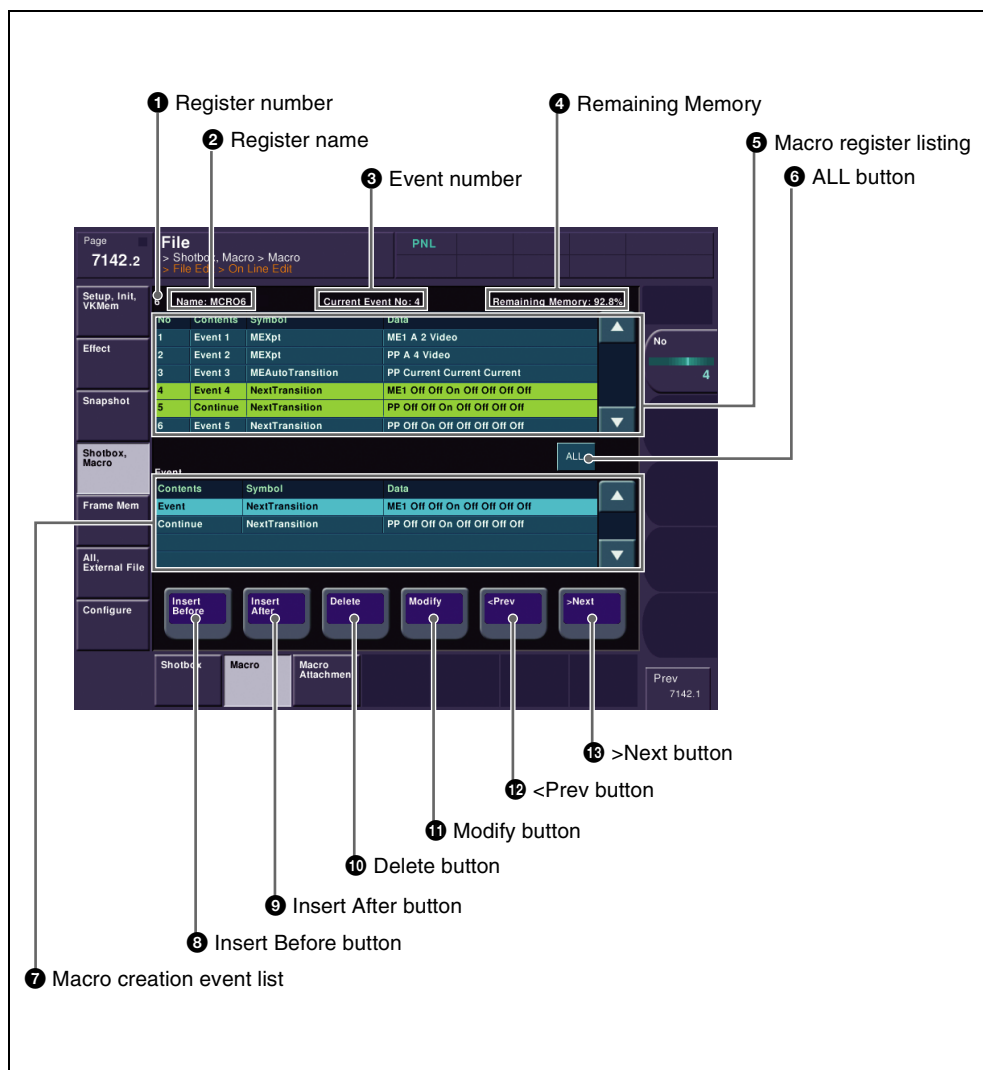
The On Line Edit menu appears, and you can now carry out online editing of the events held in the recalled register. Meanwhile, the control block of the control panel operated in step **1** is assigned to control editing operations.

### Note

In the following cases, [On Line Edit] is disabled, and it is not possible to display the On Line Edit menu.

- When the recalled register and the register selected in the menu are different.
- When a device other than [Register] is selected ([HDD] or [Memory Card]) in the File >Shotbox, Macro >Macro >File Edit menu.
- If the recalled register is locked.

## On Line Edit menu



### 1 Register number

Shows the number of the register being edited.

### 2 Register name

Shows the name of the register being edited.

**③ Event number**

Shows the current event number. When the [FROM TO] button in the keyframe control block is pressed to select a range of events, this appears as a range, “From X To Y.”

The event number reflects the position of the cursor in the macro register listing.

**④ Remaining Memory**

Shows the percentage of memory still available for recording events.

**⑤ Macro register listing**

When a macro is stored in the register, this shows a list of the macro events. Each macro event consists of the following components, which you can check in the list.

- **Contents:** Identifies this as an Event statement, Continue statement, or event number
- **Symbol:** Type of event (ASCII character string)
- **Data:** Event details in the form of parameters and data

*For details of the event components, see “Macro File Editing Rules” (page 548).*

The cursor shows the current event in the list, in reverse video. You can turn knob 1 to scroll the list, but this does not change the cursor position. Depending on the switcher status, the cursor color changes as follows.

- **Yellow:** in macro editing mode
- **Gray:** when the editing mode is exited by a control panel operation
- **Blue:** during macro execution

**⑥ ALL button**

Selects all events in the macro register listing.

**⑦ Macro creation event list**

Shows the event being created or executed in the control panel.

**⑧ Insert Before button**

Inserts a created event immediately before the selected event in the macro register listing.

**⑨ Insert After button**

Inserts a created event immediately after the selected event in the macro register listing.

**⑩ Delete button**

Deletes the selected event in the macro register listing.

### 11 **Modify button**

Replaces the selected event in the macro register listing with a created event.

### 12 **<Prev button**

Moves the cursor to the event immediately before the selected event in the macro register listing.

### 13 **>Next button**

Moves the cursor to the event immediately after the selected event in the macro register listing.

## Carrying out online editing of macro events

In the On Line Edit menu, you can carry out the following editing operations on the events in the macro register.

- **Insert:** Insert a macro event.
- **Delete:** Delete a macro event.
- **Modify:** Modify a macro event.

### **Note**

It is not possible to save editing results using this menu alone. Carry out the necessary control panel operations to save the edited register.

### **To insert an event**

Use the following procedure.

**1** On the control panel, if auto insert mode is on, switch it off.

**2** On the control panel, create a macro event.

The created event appears in the macro creation event list.

*For more details of the display, see “Macro File Editing Rules” (page 548).*

**3** In the macro register listing, press [<Prev] or [>Next] to select the position where you want to insert the created event.

**4** Carry out either of the following.

**To insert before the event selected in the list:** Press [Insert Before].

**To insert after the event selected in the list:** Press [Insert After].

This inserts the created event either before or after the specified event.

**Note**

In the following cases, [Insert Before] and [Insert After] are disabled, and it is not possible to insert the event.

- If the memory or register is full.
- The size of the created macro event is larger than the memory or register space available.
- When multiple events are selected.
- When the number of events has reached 99.
- When not in macro editing mode.<sup>1)</sup>

1) While a macro is being executed on the control panel, when macro saving has been executed, or when the [EXIT] button in the Flexi Pad control block has been pressed

## 5 Operate the control panel to save the editing result.

### To delete an event

Use the following procedure.

- 1 In the macro register listing, press [<Prev] or [>Next] to select the event you want to delete.

#### To select all events in the register

Press [All].

- 2 Press [Delete].

This deletes the selected event.

**Note**

If not in macro editing mode<sup>1)</sup>, [Delete] is disabled, and it is not possible to delete the selected event.

1) While a macro is being executed on the control panel, when macro saving has been executed, or when the [EXIT] button in the Flexi Pad control block has been pressed

## 3 Operate the control panel to save the editing result.

### To modify an event

Use the following procedure.

- 1 On the control panel, if auto insert mode is on, switch it off.
- 2 In the macro register listing, press [<Prev] or [>Next] to select the event you want to modify.
- 3 On the control panel, modify the macro event.

The modified event appears in the macro creation event list.  
*For more details of the display, see “Macro File Editing Rules” (page 548).*

#### 4 Press [Modify].

This modifies the event selected in the list.

##### **Note**

If not in macro editing mode <sup>1)</sup>, [Modify] is disabled, and it is not possible to modify the event.

1) While a macro is being executed on the control panel, when macro saving has been executed, or when the [EXIT] button in the Flexi Pad control block has been pressed

#### 5 Operate the control panel to save the editing result.

---

## Offline Editing of Macro Events

Using the Off Line Edit menu, you carry out offline editing of macro events. In the Off Line Edit menu, you can carry out editing in the menu only, unrelated to operation of the control panel.

### **To display the Off Line Edit menu**

In any of the following menus, select the register or device holding the macro you want to edit, and press [Off Line Edit] in the button area.

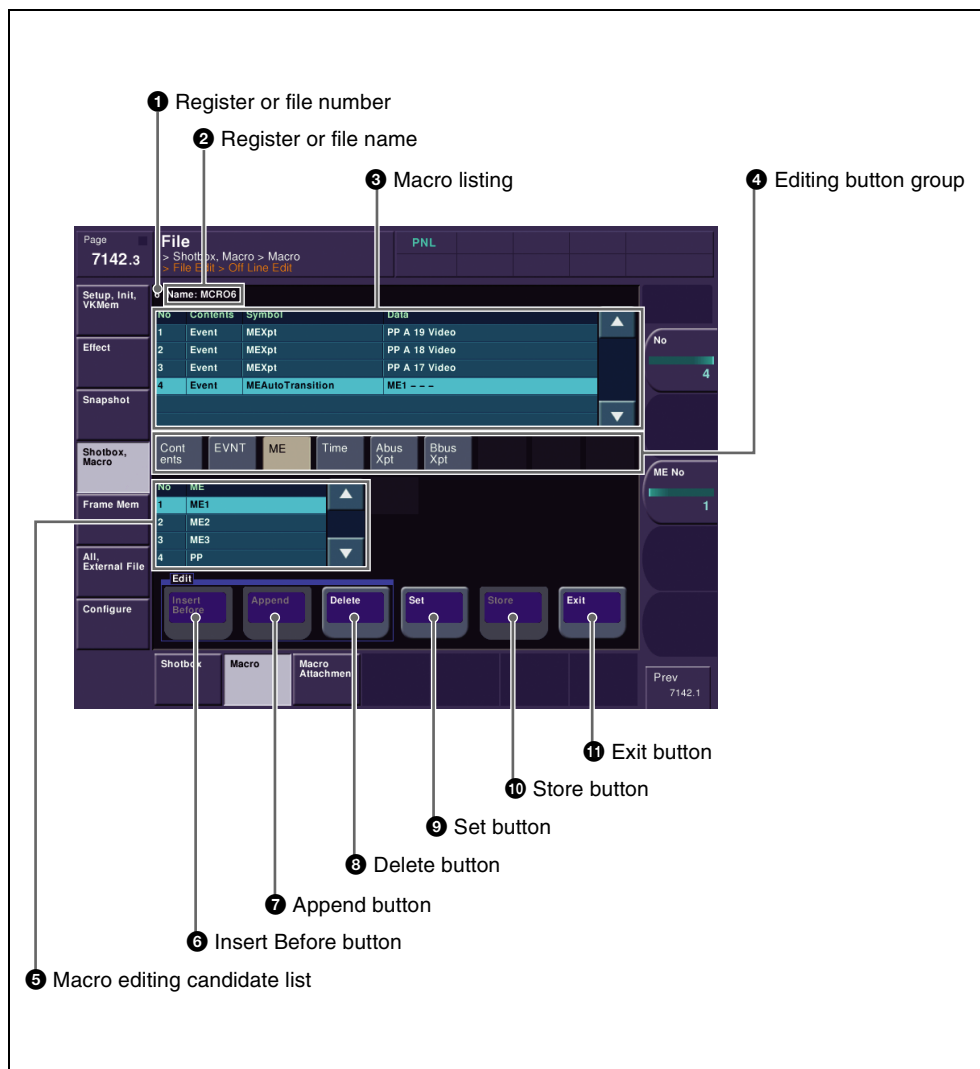
- Macro >Register >Lock menu
- Macro >Register >Delete menu
- Macro >Register >Rename menu
- File >Shotbox, Macro >Macro >File Edit menu

This recalls the selected macro register or macro file, and offline editing is now possible.

##### **Note**

If the selected register is locked, [Off Line Edit] is disabled, and it is not possible to display the Off Line Edit menu.

## Off Line Edit menu



### 1 Register or file number

Shows the number of the register or file being edited.

### 2 Register or file name

Shows the name of the register or file being edited.

### ③ Macro listing

Lists the macro events that are saved in the register or file. The cursor moves to the selected event. Each macro event consists of the following components, which you can check in the list.

- **Contents:** Event statement, Continue statement, comment (#), or event number, as selected in the editing button group [Contents]
- **Symbol:** Event type (ASCII character string), as selected in the editing button group [EVNT]
- **Data:** Parameters and data as set in the editing button group

*For more details of the event components, see “Macro File Editing Rules” (page 548).*

### ④ Editing button group

This row of buttons shows the components of an event. To carry out event editing: (1) press an editing button, then (2) select an item from the list of macro editing candidates, and repeat this process as required.

### ⑤ Macro editing candidate list

Shows the list of editing candidates for the selection from the editing button group.

### ⑥ Insert Before button

Inserts immediately before the event selected in the macro listing.

### ⑦ Append button

Adds an empty row at the end of the macro listing.

### ⑧ Delete button

Deletes the event selected in the macro listing.

### ⑨ Set button

Reflects the item selected in the macro editing candidate list, in the macro listing and editing buttons.

### ⑩ Store button

Saves the results of the macro register or macro file editing, and returns to the File Edit menu.

### ⑪ Exit button

Closes the Off Line Edit menu without saving the results of the macro register or macro file editing, and returns to the File Edit menu.

## Carrying out offline editing of macro events

In the Off Line Edit menu, you can carry out the following editing operations on the events in the macro register or macro file.

- **Insert:** Insert a macro event.
- **Add:** Add a macro event.
- **Delete:** Delete a macro event.

You can also create a new macro.

## To insert an event

Use the following procedure.

**1** In the macro listing, select the event immediately after the position where you want to insert an event.

**2** Press [Insert Before].

This inserts a blank row before the event selected in step **1**.

**3** Press [Contents] in the editing button group.

The following event types appear in the macro editing candidate list.

- **Event:** Event
- **Continue:** Event continuation
- **#:** Comment

*For details of the items, see “Macro File Editing Rules” (page 548).*

**4** Select the desired item from the macro editing candidate list, and press [Set].

The selected item appears at the event insertion position in the macro listing, as an event component. Additionally, in the leftmost blank position of the editing button group (to the right of [Contents]), a button appears, corresponding to the item in the macro editing candidate list. For example, if “Event” is selected, an [EVNT] button appears.



**5** In the editing button group, press the button that has just appeared.

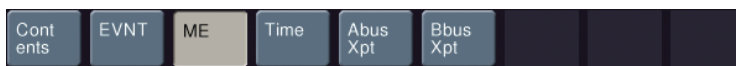
The item corresponding to the button appears in the macro editing candidate list.

If you press the [EVNT] button, the symbol indicating the event contents appears.

*For details of symbols, see “Correspondence Between Events and Symbols” (page 551).*

- 6 Select the desired item from the macro editing candidate list, and press [Set].

At the event insertion position of the macro listing, the selected item is added as an event component. Additionally, in the next blank position of the editing button group, a button appears, corresponding to the item in the macro editing candidate list. For example, if “MEAutoTransition” is selected, a button for the parameters and data for the MEAutoTransition appears.



**Note**

If you select an item from the macro editing candidate list, be sure to press [Set]. If [Set] is not pressed, the selection is not confirmed.

- 7 Repeat steps 5 and 6, to edit the event components.

At the event insertion position of the macro listing, the confirmed item is added as an event component.

**To further add an event**

Repeat steps 1 to 7.

**To close the Off Line Edit menu without saving the editing results**

Press [Exit] to return to the File Edit menu.

- 8 Press [Store].

This saves the results of the macro register or macro file editing, and returns to the File Edit menu.

**To append an event**

This adds an event at the end of the macro.

Use the following procedure.

- 1 Press [Append].

A blank row is added at the end of the macro listing.

- 2 Carry out steps 3 to 8 of the previous item, “To insert an event,” to edit an event.

**To delete an event**

Use the following procedure.

**1** In the macro listing, select the event you want to delete.

**2** Press [Delete].

This deletes the selected event.

If a deleted Event statement is followed by a Continue statement, the Continue statement is converted to an Event statement.

**To close the Off Line Edit menu without saving the editing results**

Press [Exit] to return to the File Edit menu.

**3** Press [Store].

This saves the results of the macro register or macro file editing, and returns to the File Edit menu.

**To create a new macro**

Use the following procedure.

**1** From the list in any of the following menus, select an empty register or file, and press [Off Line Edit] in the button area.

- Macro>Register>Lock menu
- Macro>Register>Delete menu
- Macro>Register>Rename menu
- File>Shotbox, Macro>Macro>File Edit menu

The Off Line Edit menu appears.

**2** Carry out steps **3** to **8** of the procedure “To insert an event” (*page 481*), to create an the event.

---

# Macro Attachment Assigning

The term “macro attachment” refers to the assignment of a macro register to a control panel button or a particular position of a fader lever, so that the macro execution is linked to the normal function of the button or the operation of the fader lever.

*For an overview of macro attachment, see “Macros” in Chapter 1 (Volume 1).*

---

## Setting and Canceling a Macro Attachment

### Setting a macro attachment to a button

This section describes the example of setting a macro attachment for the background A row cross-points.

Use the following procedure.

*See “Macros” in Chapter 1 (Volume 1) for the buttons for which a macro attachment can be set.*

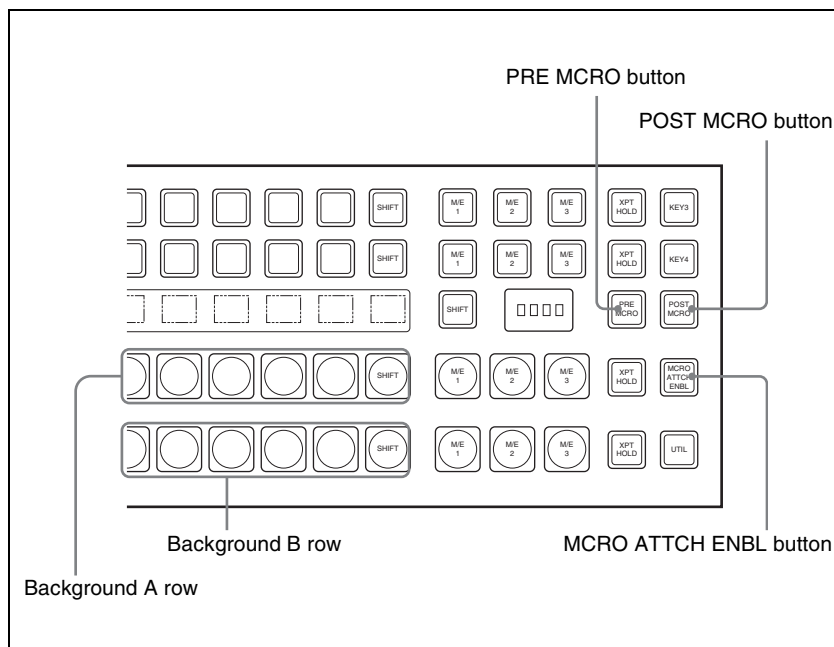
- 1** Recall the macro register you want to assign to the button.

*For details of recall from the numeric keypad control block, see page 448.*

*For details of recall from the Flexi Pad control block, see page 459.*

- 2** To set in pre macro mode, hold down the [PRE MCRO] button in the cross-point control block, and to set in post macro mode, hold down the [POST MCRO] button, and then press the desired button in the background A row.





The cross-point button you pressed flashes amber, and the register you recalled in step **1** is assigned to the button.

### If you make both pre macro and post macro settings for the same button

The later setting is valid.

### To make a macro attachment setting in macro only mode

#### Note

To carry out this operation, it is first necessary to assign the “Macro Only Set” function to the user preference buttons in the menu control block or the utility/shotbox control operation. Carry out this assignment in the Eng Setup>Panel>Prefs/Utility menu. (For details, see “Setting Button Assignments (Prefs/Utility Menu)” (page 326).)

To make a macro attachment in macro only mode, use the following procedure.

- 1** Recall the macro register you want to assign to the button.  
*For details of recall from the numeric keypad control block, see page 448, and for details of recall from the Flexi Pad control block, see page 459.*
- 2** Press the button to which [MCRO ONLY SET] is assigned, turning it on.

- 3** Hold down the cross-point control block [PRE MCRO] button or [POST MCRO] button, and press the desired button in the background A row.

The cross-point button you pressed flashes green, and the register you recalled in step **1** is assigned to the button. The [MCRO ONLY SET] button goes off.

### To check macro attachment settings

Hold down the [PRE MCRO] button or [POST MCRO] button. While it is held down, buttons for which macro attachments are set flash as follows.

#### While the [PRE MCRO] button is held down:

- Buttons set in pre macro mode: flash amber
- Buttons set in macro only mode: flash green

#### While the [POST MCRO] button is held down:

- Buttons set in post macro mode: flash amber
- Buttons set in macro only mode: flash green

## Setting a macro attachment to a fader lever

You can set a macro attachment to any particular position of a fader lever in the transition control block.

Use the following procedure.

### Notes

- In macro only mode it is not possible to set a macro attachment.
- It is not possible to set a macro attachment to a fader lever in the keyframe control block or downstream key control block.
- For a split fader, you can set a macro attachment to the main split fader.

*For details of split faders, see Chapter 3, “Split Fader” (Volume 1).*

- 1** Recall the macro register that you want to assign to the fader lever.

*For details of recall from the numeric keypad control block see page 448, and for recall from the Flexi Pad control block see pages 459 and 467.*

- 2** Move the fader lever to the position where you want to set the macro attachment.

- 3** Hold down the [PRE MCRO] or [POST MCRO] button <sup>1)</sup> in the cross-point control block, and press the [LIMIT SET] or [PRIOR SET] button in the control block containing the fader lever operated in step **2**.

1) Only when setting a macro attachment to the start point or end point of fader lever operation, use [PRE MCRO] and [POST MCRO] in distinction, as follows.

**To set the operation start point (0%):** hold down [PRE MCRO] for the operation.

**To set the operation end point (100%):** hold down [POST MCRO] for the operation.

This assigns the register recalled in step **1** to the fader lever position selected in step **2**.

### **To check a macro attachment setting**

Hold down the [PRE MCRO] or [POST MCRO] button in the cross-point control block. While it is held down, the fader lever position where the macro attachment is set appears in the following places.

- **Transition indicator in the transition execution section:** The indicator lights at the position where the macro attachment is set.
- **Transition rate indication in the transition execution section:** This shows the fader lever position where the macro attachment is set, as a percentage value. (Fader lever start position as 0%, end position 100%)

## **Removing macro attachment settings**

### **To cancel a macro attachment to a button**

Hold down the [PRE MCRO] button or [POST MCRO] button, and press a button that is flashing in the background A row. The button for which the macro attachment is set stops flashing and goes off, and this removes the setting.

### **To cancel a macro attachment to a fader lever**

Hold down the [PRE MCRO] or [POST MCRO] button in the cross-point control block, and press the [LIMIT SET] or [PRIOR SET] button in the control block containing the fader lever having the macro attachment set.

### **To remove all macro attachment settings in a single operation**

You can remove all macro attachment settings in a single operation. Use the following procedure.

- 1** In the Macro menu, select VF2 'Attachment.'
- 2** Press [All Clear].  
A confirmation message appears.
- 3** Select [Yes].  
This deletes all macro attachment setting data.

---

## **Displaying the Macro Attachment List**

In the Macro>Attachment menu, you can display the macro attachment list to check the macro attachment settings.

The macro attachment list includes the following columns.

- **Block:** Shows the names of control panel blocks.
- **Button:** Shows the names of macro attachment assigned buttons (of up to 30 characters).
- **Reg:** Shows the names of assigned registers.
- **Name:** Shows the names of macro registers.
- **Mode:** Shows the names of macro modes (Pre/Post/Only/---<sup>1)</sup>).

Above the list is shown the names of the block and macro attachment assigned button currently selected in the list.

1) When no macro mode is set

*For details of the macro modes, see “Macro Attachment” in Chapter 1 (Volume 1).*

*For details of the macro attachment list display, see “About the Macro Attachment List Display” in the Appendix (page 558).*

## Moving quickly within the macro attachment list from one block to another

When you are viewing the macro attachment settings for a block in the macro attachment list, you can move quickly from the current block to another block to check the settings for that block by pressing the following buttons in the <Block Select> group.

- **P/P:** Move to a block in the PGM/PST bank.
- **M/E-1:** Move to a block in the M/E-1 bank.
- **M/E-2:** Move to a block in the M/E-2 bank.
- **M/E-3:** Move to a block in the M/E-3 bank.
- **Aux:** Move to a section in the auxiliary bus control block.
- **Others:** Move to a block/section in a location other than the PGM/PST bank, M/E-1 to M/E-3 banks, and the auxiliary bus control block.

## Scrolling the list

To scroll the macro attachment list, do one of the following.

- Press the arrow keys to scroll the reverse video cursor.
- Turn the knob.

Knob	Parameter	Adjustment	Setting values
1	No	Macro attachment settings scrolling	1 and upwards

---

# Executing a Macro by Macro Attachment

## Note

For execution on any of the M/E and PGM/PST banks, use the [MCRO ATTCH ENBL] button in the cross-point control block. To execute a macro according to a macro attachment set elsewhere, assign “MCRO ATTCH ENBL” to a utility/shotbox control block or user preference button, then use that button.

## Executing a macro assigned to a button

Use the following procedure.

**1** Depending on the location of the button you want to use, press the [MCRO ATTCH ENBL] button, turning it on.

**2** Press the desired button for which a macro attachment has been set.

This recalls the macro register assigned to the button, and the macro is executed as follows, according to the operation mode.

**Pre macro mode:** The macro is executed first, and then the button function is executed.

**Post macro mode:** The button function is executed first, and then the macro is executed.

**Macro only mode:** The button function is not executed, and the macro only is executed.

During macro execution, the button you pressed flashes.

## Notes

- It is not possible to execute more than one macro at a time. Therefore, even if you simultaneously press multiple buttons for which macro attachments are set, only one macro is executed.
- During macro execution, recalling the same register again stops the macro being executed. Therefore, pressing twice a button for which a macro attachment is set stops the macro being executed.
- Individual events stored in a macro are executed according to the settings in setup. If you change the settings in setup, a saved macro may not have the expected effect.
- During macro execution, if you switch the control panel to macro editing mode, the macro being executed stops.
- During macro editing, pressing a button for which a macro attachment is set does not execute the macro.

### To disable macro attachment settings

Depending on the location of the button you want to disable, press the [MCRO ATTCH ENBL] button, turning it off.

In this state, pressing a button for which a macro attachment is set does not execute the macro.

## Executing a macro assigned to a fader lever

Use the following procedure.

**1** In the cross-point control block for the fader lever on which you want to execute the macro, press the [MCRO ATTCH ENBL] button, turning it on.

**2** Move the fader lever from the start position to the end position.

When the fader lever passes the position at which the macro attachment is set, the macro register is recalled, and the macro is executed.

### Notes

- Unless you move the fader lever to the end position (completing the travel), it is not possible to execute the macro again.
- When the preset color mix stroke mode is Normal (*see page 365*), the first lever operation executes the macro, but the second lever operation does not.
- During macro execution, it is not possible to execute another macro.
- Individual events stored in a macro are executed according to the settings in setup. If you change the settings in setup, a saved macro may not have the expected effect.
- During macro execution, if you switch the control panel to macro editing mode, the macro being executed stops.
- During macro editing, even if you operate a fader lever with a macro attachment set, the macro is not executed.

### To disable a macro attachment setting

In the cross-point control block for the fader lever on which you want to disable the macro, press the [MCRO ATTCH ENBL] button, turning it off.

In this state, operating the fader lever with a macro attachment set does not execute the macro.

## Chapter 19 Color Corrector

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# Preparations

## Notes

To use the color corrector, the MKS-8420M Color Corrector Board is required.

### Note on using a format other than 720p

**When using the color corrector on a 4M/E system or a 3M/E system with a board with multi-format support:** It is not possible to use an M/E reentry signal in an overlaid manner on the key bus or utility 1 bus.

**Example 1:** When M/E-1 is selected on the M/E-2 background A bus (or background B bus, key bus, utility 1 bus, or utility 2 bus), it is not possible to select M/E-2 on the M/E-3 key bus or utility 1 bus.

**Example 2:** When M/E-2 is selected on the M/E-3 background A bus (or background B bus, key bus, utility 1 bus, or utility 2 bus), it is not possible to select M/E-3 on the PGM/PST key bus or utility 1 bus.

In the case of a 3M/E system with a board with multi-format support, by setting bit 1 of switch S101 on the CA-44 board to the “Off” position, you can remove this restriction. Note, however, that, in the case of 480i or 576i, this slightly reduces the input window.

### Note on using 720p format

The following restrictions apply depending on the system configuration.

**Restriction 1:** M/E reentry signals cannot be selected on the key bus and utility 1 bus. For example, you cannot select M/E-1 on the M/E-2 key bus or utility 1 bus.

**Restriction 2:** It is not possible to use an M/E reentry signal in an overlaid manner on the key bus or utility 1 bus.

**Example 1:** When M/E-1 is selected on the M/E-2 background A bus (or background B bus, key bus, utility 1 bus, or utility 2 bus), it is not possible to select M/E-2 on the M/E-3 key bus or utility 1 bus.

**Example 2:** When M/E-2 is selected on the M/E-3 background A bus (or background B bus, key bus, utility 1 bus, or utility 2 bus), it is not possible to select M/E-3 on the PGM/PST key bus or utility 1 bus.

- **When using the color corrector on a 3M/E system with a board with multi-format support**

The above restriction 1 applies.

By setting bit 1 of switch S101 on the CA-44 board to the “Off” position, you can remove this restriction for M/E reentry signals unless they are overlaid triply or more. Note, however, that this slightly reduces the input window.

- **When using the color corrector on a 3M/E system with an HD dedicated board**

The restriction 2 applies.

- **When not using the color corrector on a 3M/E system with a board with multi-format support**

The restriction 2 applies.

By setting bit 1 of switch S101 on the CA-44 board to the “Off” position, you can remove this restriction. Note, however, that this slightly reduces the input window.

- **When using the color corrector on a 4M/E system**

The restriction 1 applies.

- **When not using the color corrector on a 4M/E system**

The restriction 2 applies.

## Assigning the color corrector input buses to AUX delegation buttons

There are two inputs for capturing material to the color corrector: the CCR1 bus and the CCR2 bus.

*For details of the input assignment operation, see “Auxiliary Bus Control Block Settings (Aux Assign Menu)” (page 322).*

## Selecting the color correction input signal

After assigning CCR1 and CCR2 to AUX buses, use the following procedure.

- 1** In the auxiliary bus control block, press the AUX delegation buttons assigned to CCR1 (or CCR2).
- 2** In the cross-point button row, select the signal to which you want to apply color correction.

### Note

The signals you can select on the CCR1 and CCR2 buses are limited to the primary inputs and frame memory outputs (FM1 to FM8).

## Selecting the color corrector output signal

By assigning the signal output from the color corrector to a cross-point button, you can make that signal available on that button.

*For details of the assignment process, see “Cross-Point Settings (Xpt Assign Menu)” (page 313).*



## Accessing the CCR menu

For color correction operations, use the CCR menu.

To access the CCR menu, in the menu control block, press the top menu selection button [CCR].

The following description uses CCR1 as an example. To apply color correction to CCR2, replace VF1 'CCR1' by VF2 'CCR2,' and follow the same procedure.

# Overall Color Corrector Operations

## Enabling Color Corrector

To enable the functions of color corrector 1, for example, use the following procedure.

- 1** In the CCR menu, press VF1 'CCR1' and any HF.
- 2** In the <CCR> group, press [CCR], turning it on.  
This enables the functions of color corrector 1.

## Returning all color corrector settings to their defaults

Use the following procedure.

- 1** In the <CCR> group, press [Unity].  
A confirmation message appears.
- 2** Press [Yes].  
This returns all color corrector settings to their defaults, whether [CCR] is on or off.

## Copy and Swap Operations

### Copying color corrector data

Use the following procedure.

- 1** In the CCR menu, press VF3 'Copy/Swap.'  
The Copy/Swap menu appears.  
The status area shows a copy source list on the left and a copy destination list on the right.
- 2** Using any of the following methods, select the copy source data and copy destination data.
  - Press directly on the list appearing in the status area.

- Press the arrow keys to scroll the reverse video cursor.
- Turn the knobs.

Knob	Parameter	Adjustment	Setting values
1	Left No	Select copy source data	1 or 2
2	Right No	Select copy destination data	1 or 2

**3** Press [Copy].

This carries out the copy.

## Swapping color corrector data

Refer to the procedure described in the previous item “Copying color corrector data.” In step **3**, press [Swap] instead of [Copy].

### To undo copy or swap

In the Copy/Swap menu, press [Undo].

The state before carrying out the copy or swap is restored.

# Color Corrector Functions

This section describes the color corrector functions.

## Input Video Processing Operations

To apply input video processing effects, use the following procedure.

- 1** In the CCR menu, press VF1 'CCR1' and HF1 'Input Process.'  
The Input Process menu appears.
- 2** In the <Input Process> group, press [Input Process], turning it on.
- 3** Adjust the following parameters.

Knob	Parameter	Adjustment	Setting values
1	Video Gain	Video signal gain	-200.00 to +200.00
2	Y Gain	Y signal gain	-200.00 to +200.00
3	C Gain	Chrominance signal gain	-200.00 to +200.00
4	Hue Delay	Hue delay	-180.00 to +180.00
5	Black Level	Black level	-116.90 to +116.90

### To return the parameters to their default settings

Press [Unity] in the <Input Process> group.

## Primary Color Correction Operations

### Applying primary color correction

Use the following procedure.

- 1** In the CCR menu, press VF1 'CCR1' and HF2 'Primary CCR.'  
The Primary CCR menu appears.
- 2** In the <Primary CCR> group, press [Primary CCR], turning it on.

**3** In the <Primary CCR Adjust> group, select the setting item.

**Black:** black balance adjustment

**White:** white balance adjustment

**Gamma:** gamma correction

**Knee:** knee correction

**4** Depending on the selection in step **3**, adjust the following parameters.

• **When Black or Gamma is selected**

Knob	Parameter	Adjustment	Setting values
1	Red	Red signal adjustment	−100.00 to +100.00
2	Green	Green signal adjustment	−100.00 to +100.00
3	Blue	Blue signal adjustment	−100.00 to +100.00
4	All	Simultaneous RGB adjustment	Red value is shown

• **When White is selected**

Knob	Parameter	Adjustment	Setting values
1	Red	Red signal adjustment	0.00 to 200.00
2	Green	Green signal adjustment	0.00 to 200.00
3	Blue	Blue signal adjustment	0.00 to 200.00
4	All	Simultaneous RGB adjustment	Red value is shown

• **When Knee is selected**

Knob	Parameter	Adjustment	Setting values
1	Red	Red signal adjustment	20.00 to 75.00
2	Green	Green signal gain	20.00 to 75.00
3	Blue	Blue signal gain	20.00 to 75.00
4	All	Simultaneous RGB adjustment	Red value is shown

**To return the parameters to their default settings**

In the <Primary CCR> group, press [Unity].

## Masking a part of the primary color correction

Here the procedure for mask 1 operation is described by way of example. You can carry out mask 2 operation in a similar way.

Use the following procedure.

**1** In the <Primary Mask> group of the Primary CCR menu, press [Mask1], turning it on.

## 2 Press [Mask1 Adjust].

The Mask1 Adjust menu appears.

## 3 In the <Mask Source> group, select the mask source.

**Box:** signal from dedicated box generator

**Pattern:** signal from dedicated pattern generator

## 4 Depending on the selection in step 2, adjust the following parameters.

### • When Box is selected

Knob	Parameter	Adjustment	Setting values
1	Top	Top position	-100.00 to +100.00
2	Left	Left position	-100.00 to +100.00
3	Right	Right position	-100.00 to +100.00
4	Bottom	Bottom position	-100.00 to +100.00
5	Soft	Degree of softness of box	0.00 to 100.00

### • When Pattern is selected

Knob	Parameter	Adjustment	Setting values
1	Size	Pattern size	0.00 to 100.00
2	Soft	Degree of softness of pattern edge	0.00 to 100.00
5	Pattern	Pattern number	1 to 24

For the pattern selection, you can also press [Mask Ptn Select] in the Mask1 Adjust menu, then use the Mask Ptn Select menu.

Press any of the displayed patterns (standard wipe patterns 1 to 24) to select it, then you can adjust the following parameters.

Knob	Parameter	Adjustment	Setting values
1	Size	Pattern size	0.00 to 100.00
2	Soft	Degree of softness of pattern edge	0.00 to 100.00

## 5 When selecting the pattern as a mask source, set the pattern modifiers as required.

### • When turning [Position] on and setting the pattern position

Knob	Parameter	Adjustment	Setting values
1	Position H	Horizontal position	-200.00 to +200.00 <sup>a)</sup>

Knob	Parameter	Adjustment	Setting values
2	Position V	Vertical position	−200.00 to +200.00 <sup>a)</sup>

a) See “Positioner” under “Wipes” in Chapter 1 (Volume 1).

### • When turning [Multi] on and replicating the same pattern

Knob	Parameter	Adjustment	Setting values
1	H Multi	Number of repetitions of pattern horizontally	1 to 63
2	V Multi	Number of repetitions of pattern vertically	1 to 63
3	Invert Type	Replication layout	1 to 4 <sup>a)</sup>

a) See “Pattern replication (“Multi”)” under “Wipes” in Chapter 1 (Volume 1).

### • When turning [Aspect] on and setting the aspect ratio of the pattern

Knob	Parameter	Adjustment	Setting values
1	Aspect	aspect ratio	−100.00 to +100.00 <sup>a)</sup>

a) See “Aspect ratio” under “Wipes” in Chapter 1 (Volume 1).

### • When turning the [Angle] on in the <Rotation> group and slanting the pattern

Knob	Parameter	Adjustment	Setting values
1	Angle	Angle of pattern rotation	−100.00 to +100.00 <sup>a)</sup>

a) See “Rotation” under “Wipes” in Chapter 1 (Volume 1).

### • When turning [Speed] on in the <Rotation> group and rotating the pattern at a fixed rate

Knob	Parameter	Adjustment	Setting values
1	Speed	Rotation rate of pattern	−100.00 to +100.00 <sup>a)</sup>

a) See “Rotation” under “Wipes” in Chapter 1 (Volume 1).

- 6 To invert the mask source, return to the Primary CCR menu and press [Mask Invert], turning it on.

#### Note

The mask function is common to the primary color correction, secondary color correction luminance processing, and spot color adjustment functions. For example, if in primary color correction you set mask 1 to a box, then in

secondary color correction set mask 1 to a pattern, this also changes the setting in primary color correction to the pattern.

## Secondary Color Correction Operations

### Note

When spot color adjustment is enabled in the setup settings, this function is disabled. (See “Switching the color correction function” (page 295).)

### Applying secondary color correction

Use the following procedure.

- 1** In the CCR menu, select VF1 ‘CCR1’ and HF3 ‘Secondary CCR.’  
The Secondary CCR menu appears.
- 2** In the <Secondary CCR> group, press [Secondary CCR], turning it on.
- 3** In the <Secondary CCR Adjust> group, select the color for which you want to make the setting.
- 4** Adjust the following parameters.

Knob	Parameter	Adjustment	Setting values
1	Luminance	Luminance	−100.00 to +100.00
2	Saturation	Saturation	0.00 to 200.00
3	Hue Delay	Hue delay	−180.00 to +180.00

### To return the parameter settings to their default values

In the <Secondary CCR> group press [Unity].

### Masking a part of the secondary color correction

In the <Secondary Mask> group, press [Mask1] or [Mask2], turning it on, then carry out the same operation as described under “Masking a part of the primary color correction” (page 498).

# RGB Clip Operations

## Making RGB clip adjustments

Use the following procedure.

- 1
- In the CCR menu, press VF1 ‘CCR1’ and HF4 ‘RGB Clip.’  
The RGB Clip menu appears.
- 2
- In the <RGB Clip> group, press [RGB Clip], turning it on.
- 3
- In the <RGB Clip Adjust> group, select the item you want to adjust.  
**Dark:** dark clip adjustment  
**White:** white clip adjustment
- 4
- Adjust the following parameters.

Knob	Parameter	Adjustment	Setting values
1	Red	Red signal adjustment	–50.00 to +149.99 <sup>a)</sup> –49.99 to +150.00 <sup>b)</sup>
2	Green	Green signal adjustment	–50.00 to +149.99 <sup>a)</sup> –49.99 to +150.00 <sup>b)</sup>
3	Blue	Blue signal adjustment	–50.00 to +149.99 <sup>a)</sup> –49.99 to +150.00 <sup>b)</sup>
4	All	Simultaneous RGB adjustment	Red value is shown

a) When Dark is selected  
b) When White is selected

**To return the parameters to their default settings**  
In the <RGB Clip> group, press [Unity].

# Luminance Processing Operations

## Applying luminance processing

Use the following procedure.

- 1** In the CCR menu, press VF1 'CCR1' and HF5 'Luminance Process.'  
The Luminance Process menu appears.
- 2** In the <Luminance Process> group, press [Luminance Process], turning it on.
- 3** In the <Mode> group, specify the adjustment mode.

**Tint:** add a specified color to the original video signal.

**Color Modify:** adjust the original video signal.

**Y Modify:** adjust the output levels of the input luminance signal.

When tint mode or color modify mode is selected, skip to step **4**.

When Y modify mode is selected, adjust the following parameters.

Knob	Parameter	Adjustment	Setting values
1	White	White balance adjustment	0.00 to 200.00
2	Black	Black balance adjustment	-100.00 to +100.00
3	Y Lift	Curvature of curve	-100.00 to +100.00
4	Y Dark	Position of maximum point of curve	-7.31 to +109.59

*For details of the adjustments, see "Color Corrector" in Chapter 1 (Volume 1).*

- 4** In the <Bound> group, make the settings for the three regions (Dark, Middle, and Bright).

- **[Level] parameters:** set the boundaries of the three regions.

Knob	Parameter	Adjustment	Setting values
1	Over B Level	Luminance level of the Over Bright point	50.00 to 150.00
2	Mid B Level	Luminance level of the Bright/Middle point	10.00 to 120.00
3	Dark Mid Level	Luminance level of the Middle/Dark point	-20.00 to +90.00
4	Under D Level	Luminance level of the Under Dark point	-50.00 to +50.00

- **[Soft] parameters:** set the degree of boundary softness of the three regions.

Knob	Parameter	Adjustment	Setting values
1	Over B Soft	Degree of softness at Over Bright point	15.00 to 70.00
2	Mid B Soft	Degree of softness at Bright/Middle point	15.00 to 42.50
3	Dark Mid Soft	Degree of softness at Middle/Dark point	15.00 to 42.50
4	Under D Soft	Degree of softness at Under Dark point	15.00 to 70.00

For details of the adjustments, see “Color Corrector” in Chapter 1 (Volume 1).

- 5** In the <Luminance Process Adjust> group, press [Dark], [Mid], or [Bright], and adjust the following parameters for the three regions.

• **In tint mode**

Knob	Parameter	Adjustment	Setting values
1	Luminance	Luminance	–100.00 to +100.00
2	Saturation	Saturation	0.00 to 100.00
3	Hue	Hue	359.99 to 0.00

• **In color modify mode**

Knob	Parameter	Adjustment	Setting values
1	Luminance	Luminance	–100.00 to +100.00
2	C Gain	Chrominance signal gain	0.00 to 200.00
3	Hue Delay	Hue delay	–180.00 to +180.00

**To return the parameters to their default settings**

In the <Luminance Process> group, press [Unity].

## Masking a part of luminance processing

In the <Luminance Mask> group, press [Mask1] or [Mask2], turning it on, then carry out the same procedure as in “Masking a part of the primary color correction” (page 498).

# Spot Color Adjustment

## Note

When secondary color correction is enabled in the setup settings, this function is disabled. (See “Switching the color correction function” (page 295).)

## Adjusting the color of the specified region (key)

Use the following procedure.

- 1** In the CCR menu, press VF1 ‘CCR1’ and HF6 ‘Spot CCR/Output.’  
The Spot CCR/Output menu appears.
- 2** In the <Spot CCR> group, press [Spot CCR], turning it on.
- 3** In the <Auto> group, press [Sample Mark], turning it on.

## Note

When [Sample Mark] is on, the effects of color adjustment outside the region of spot color adjustment (*see page 506*) and output video processing (*see page 507*) are temporarily disabled.

Turning [Sample Mark] off restores the former state.

- 4** Adjust the parameters so that the color you want to change is included within the sample mark.

Knob	Parameter	Adjustment	Setting values
1	Position H	Horizontal position	–100.00 to +100.00
2	Position V	Vertical position	–100.00 to +100.00
3	Size	Size	1.00 to 100.00

- 5** In the <Auto> group, press [Auto Start], to adjust the key automatically.

## Note

This automatic adjustment does not carry out key gain adjustment. If required, adjust the key gain as shown in step **6**.

- 6** Press [Key Adjust], and adjust the following parameters.

Knob	Parameter	Adjustment	Setting values
1	Luminance	Luminance	-7.31 to +109.59
2	Saturation	Saturation	0.00 to 100.00
3	Hue	Hue	359.99 to 0.00
4	Gain	Key gain	-100.00 to +100.00

- 7** Press [Window], turning it on, to adjust the key detection range for spot color adjustment.

Knob	Parameter	Adjustment	Setting values
1	Luminance	Luminance	0.00 to 100.00
2	Saturation	Saturation	0.00 to 100.00
3	Hue	Hue	0.00 to 100.00

- 8** In the <Spot CCR> group, press [Spot CCR] to display the parameters, and adjust the replacement color.

Knob	Parameter	Adjustment	Setting values
1	Luminance	Luminance	0.00 to 100.00
2	Saturation	Saturation	0.00 to 100.00
3	Hue	Hue	359.99 to 0.00

### To return the parameters to their default settings

In the <Spot CCR> group, press [Unity].

## Masking a part of the spot color adjustment

In the <Spot CCR Mask> group, press [Mask1] or [Mask2], turning it on, then carry out the same procedure as in “*Masking a part of the primary color correction*” (page 498).

## Adjusting the color outside the spot color adjustment region

Use the following procedure.

- 1** In the Spot CCR/Output menu, press [Outer Out Proc] in the <Outer Out Proc> group, turning it on.
- 2** Adjust the following parameters.

Knob	Parameter	Adjustment	Setting values
1	Video Gain	Video signal gain	–200.00 to +200.00
2	Y Gain	Y signal gain	–200.00 to +200.00
3	C Gain	Chrominance signal gain	–200.00 to +200.00
4	Hue Delay	Hue delay	–180.00 to +180.00
5	Black Level	Black level	–116.90 to +116.90

### To return the parameters to their default settings

In the <Outer Out Proc> group, press [Unity].

## Output Video Processing Operations

### Applying output video processing effects

Use the following procedure.

- 1 In the CCR menu, press VF1 ‘CCR1’ and HF6 ‘Spot CCR/Output.’  
The Spot CCR/Output menu appears.
- 2 In the <Output Process> group, press [Output Process], turning it on.
- 3 Adjust the following parameters.

Knob	Parameter	Adjustment	Setting values
1	Video Gain	Video signal gain	–200.00 to +200.00
2	Y Gain	Y signal gain	–200.00 to +200.00
3	C Gain	Chrominance signal gain	–200.00 to +200.00
4	Hue Delay	Hue delay	–180.00 to +180.00
5	Black Level	Black level	–116.90 to +116.90

### To return the parameters to their default settings

In the <Output Process> group, press [Unity].

## YUV Clip Operations

### Applying YUV clip processing

Use the following procedure.

- 1 In the CCR menu, press VF1 ‘CCR1’ and HF7 ‘YUV Clip.’  
The YUV Clip menu appears.
- 2 In the <YUV Clip> group, press [YUV Clip], turning it on.
- 3 In the <YUV Clip Adjust> group, select the target for adjustment.  
**Luminance:** settings for the luminance signal.  
**Chroma:** settings for the color difference signal.
- 4 Depending on the selection in step 3, adjust the following parameters.

- **When Luminance is selected**

Knob	Parameter	Adjustment	Setting values
1	White Clip	White clip adjustment	–6.85 to +109.13
2	Dark Clip	Dark clip adjustment	–6.85 to +109.13

- **When Chroma is selected**

Knob	Parameter	Adjustment	Setting values
1	U Posi Clip	Positive clip adjustment for U signal	–113.39 to +113.39
2	U Nega Clip	Negative clip adjustment for U signal	–113.39 to +113.39
3	V Posi Clip	Positive clip adjustment for V signal	–113.39 to +113.39
4	V Nega Clip	Negative clip adjustment for V signal	–113.39 to +113.39

**To return the parameters to their default settings**

In the <YUV Clip> group, press [Unity].

## Chapter 20 DIAGNOSIS

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Not supported in Version 5.00.



# Appendix

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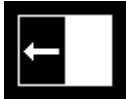















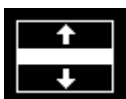






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# Wipe Pattern List

## Standard Wipes

1		2		3		4	
5		6		7		8	
9		10		11		12	
13		14		15		16	
17		18		19		20	
21		22		23		24	


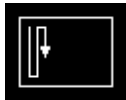



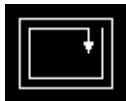
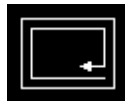
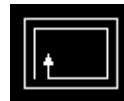








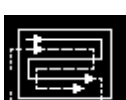

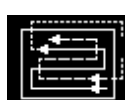
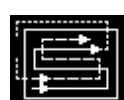








# Enhanced Wipes

26		27		29		49	
300		301		302		303	
304							

# Rotary Wipes


100		101		102		103	
104		105		106		107	
150		151		156		158	
160		162		516		518	
604		606		624		661	

# Mosaic Wipes

200		201		202		203	
206		207		208		209	
210		211		212		213	
220		221		222		223	
224		225		226		227	
228		229		230		231	
232		233		234		235	

236		237		238		239	
240		241		242		243	
244		245		246		247	
250		251		252		253	
254		255		256		257	
260		261		262		263	
264		265		266		267	
268		269					









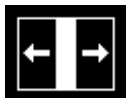


## Random/Diamond Dust Wipes

270		271		272		273	
274							









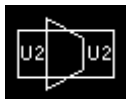
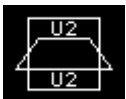
# Squeeze

1021		1022		1023		1024	
1025		1026		1027		1028	
1029		1030		1031			





# Door

1041		1042		1043		1044	
------	---	------	---	------	---	------	---


# Flip tumble

1101		1102	
------	---	------	---














## Frame in-out

1201		1202		1203		1204	
------	---	------	---	------	---	------	--














## Picture-in-picture

1251	
------	---

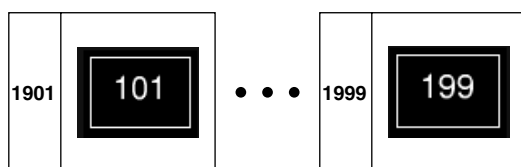
## Page turn

1301		1302		1303		1304	
1305		1306		1307		1308	
1309		1310		1311		1312	
1313							

## Page roll

1321		1322		1323		1324	
1325		1326		1327		1328	
1329		1330		1331		1332	
1333							

## User programmable DME



# DME Wipe Patterns Available in Two-Channel Mode

## Slide

2601		2602		2603		2604	
2605		2606		2607		2608	

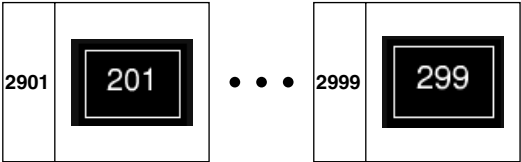
## Squeeze

2621		2622		2623		2624	
2625		2626		2627		2628	

## Picture-in-picture










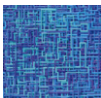


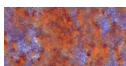





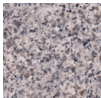




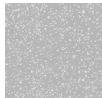
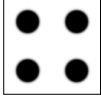
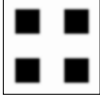
2651		2652	
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User programmable DME



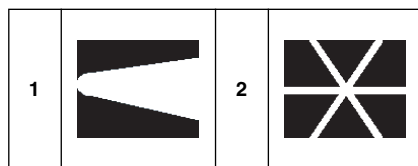
# SpotLighting

## Texture Patterns

1		2		3		4	
5		6		7		8	
9		10		11		12	
13		14		15		16	
17		18		19		20	
21		22		23		24	
25		26		27		28	
29		30					

Material provided by Digital Archive Japan, INC

## Shape Patterns



# Functional Differences With Models of DME

Function	Menu number	MVE-8000	MVE-8000A	MVE-9000	See page
Selection of signal to insert in the border	4111	Flat Color only	Flat Color only	Flat Color Ext Video Mix Color	26
Key Border	4113	No	No	Yes	32
Art Edge	4114	No	No	Yes	34
Flex Shadow	4115	No	No	Yes	44
Wipe Crop	4116	No	No	Yes	51
Color Mix	4117	No	No	Yes	56
Mask	4127	No	Yes <sup>a)</sup>	Yes	76
Switching the freeze timing during execution of a freeze	4131	No	Yes	Yes	78
Wave	4141.1	No with the 720p/59.94 format	Yes	Yes	82
Adjustment of entire image brightness in Lighting/Spotlighting (parameter Total Ambient)	4151 4156	No	No	Yes	110 126
Setting the bar mode of the highlight area	4151	No	No	Yes	113
Adjustment of color of the diffuse light area (parameter Bar Diffuse Color)	4151	No	No	Yes	114
Number of channels for applying a trail effect	4152	Maximum 2 channels	Without limitation	Without limitation	115
Selection of signal to insert in the trail afterimage portion	4152	Freeze Video Flat Color Hue Rotate	Freeze Video Flat Color Hue Rotate	Without limitation	116
Combine process for Trail	4152	No	No	Yes	119
Defocus function for Trail	4152	No	No	Yes	118
Combine process for Keyframe Strobe	4154	No	No	Yes	123
Wind	4155	No	No	Yes	123
Spotlighting	4156	No	No	Yes	126

Function	Menu number	MVE-8000	MVE-8000A	MVE-9000	See page
Selection of signal to insert in the background	4161	Flat Color only	Flat Color only	Flat Color Ext Video Mix Color	137
Key source selection	4162	Ext Key Int Key	Ext Key <sup>b)</sup> Int Key Lum Key <sup>b)</sup>	Ext Key <sup>b)</sup> Int Key Lum Key <sup>b)</sup>	142
Shaped Video	4162	No	Yes only when SDI interface is used	Yes only when SDI interface is used	138
Interpolation settings	4163	Yes only for SD	Yes only for SD	Yes both for SD and HD	143
Anti-moire filter	4163	Yes only for HD	Yes only for HD	No	144
Flex shadow axis settings	4164	No	No	Yes	20
Outputting graphics to the monitor	4164	No	Yes only when SDI interface is used	Yes	21
Sketch	4171	No	Yes	Yes	69
Metal	4172	No	Yes	Yes	72
Dim and Fade	4173	No	No	Yes	73
Glow	4174	No	Cannot be turned on when Defocus/Blur is on.	Cannot be turned on when Key Border is on.	75
Combiner depth settings (three-dimensional crossing function) (parameter Depth)	4211	No	No	Yes	149
Signal format: 720p/50	7313.1	No	Yes	Yes	279
Adding user texture patterns (for Spotlighting)	7316.9	No	No	Yes	288
Setting the interface between DME and switcher	7337.6	No	Yes	Yes	382
Setting AUX bus output/re-entry input	7337.7	—	It is not possible to make settings for DME 1 to 8 Ext In.	When using the DME dedicated interface, it is not possible to make settings for DME 1 to 8 Video/Key.	382
TBC window center position	7341.1	No	Yes only when SDI interface is used. <sup>c)</sup>	Yes only when SDI interface is used.	385
Adjustment of monitor output video clip level	7343	No	Yes only when SDI interface is used.	Yes only when SDI interface is used.	386

Function	Menu number	MVE-8000	MVE-8000A	MVE-9000	See page
Monitor output signal settings	7343.1	No	Yes only when SDI interface is used.	Yes	386
Settings relating to usage of editor port	7344	Fixed to Common	Yes	Yes	387

- a) Effect groups 1 and 2 cannot be selected at the same time. Pattern 304 (round corner) is not supported.
- b) When Shaped Video is off.
- c) It is not possible to make settings for external input signals.

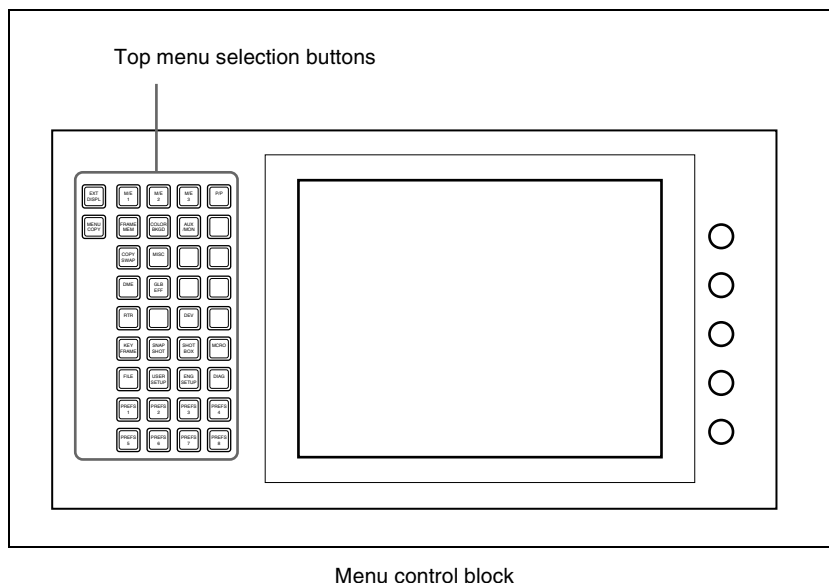
---

# Menu Tree

---

## Recalling Menus

This section details the menu structure, and shows the top menu selection buttons in the menu control block which are used to access the menus.



Some menus can also be accessed by pressing other buttons twice in rapid succession.

*For more details, see “Menu Organization” in Chapter 2 (Volume 1).*

### Note

Some menus may not appear, depending on the model.

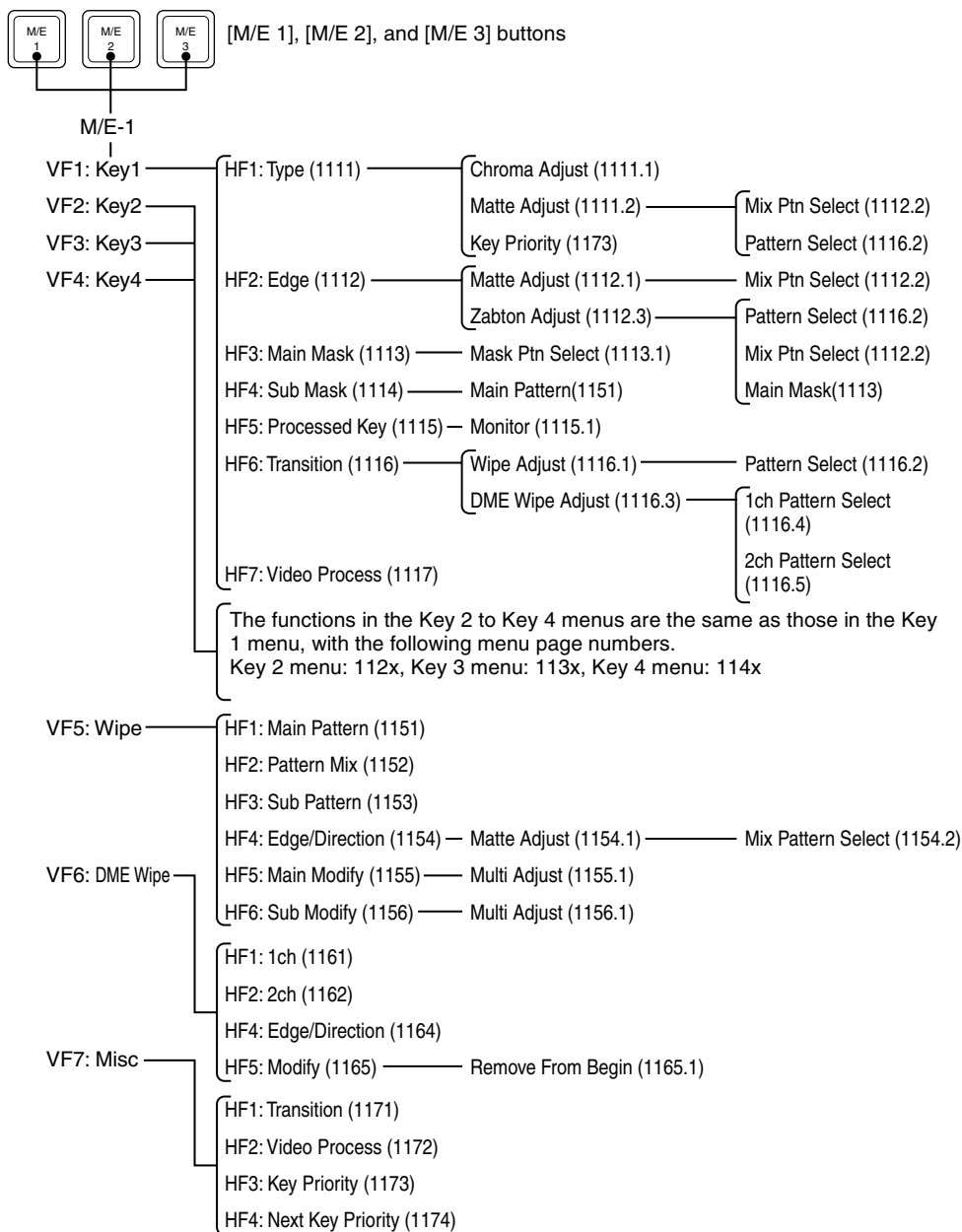
---

## M/E-1 to M/E-3 Menus

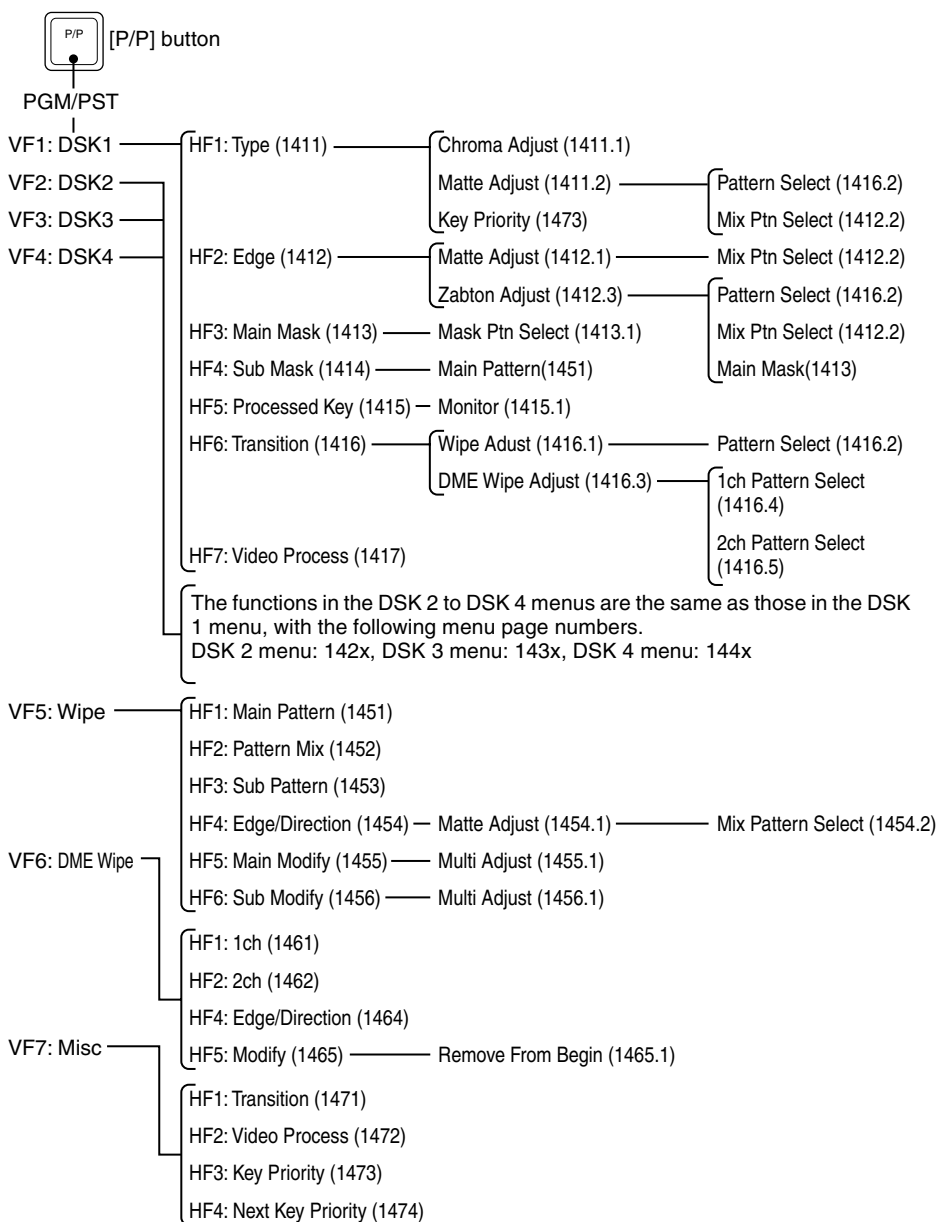
The functions in the M/E-1, M/E-2, and M/E-3 menus are the same, but the menu page numbers are distinguished as follows.

M/E-1 menus: 11xx, M/E-2 menus: 12xx, M/E-3 menus: 13xx

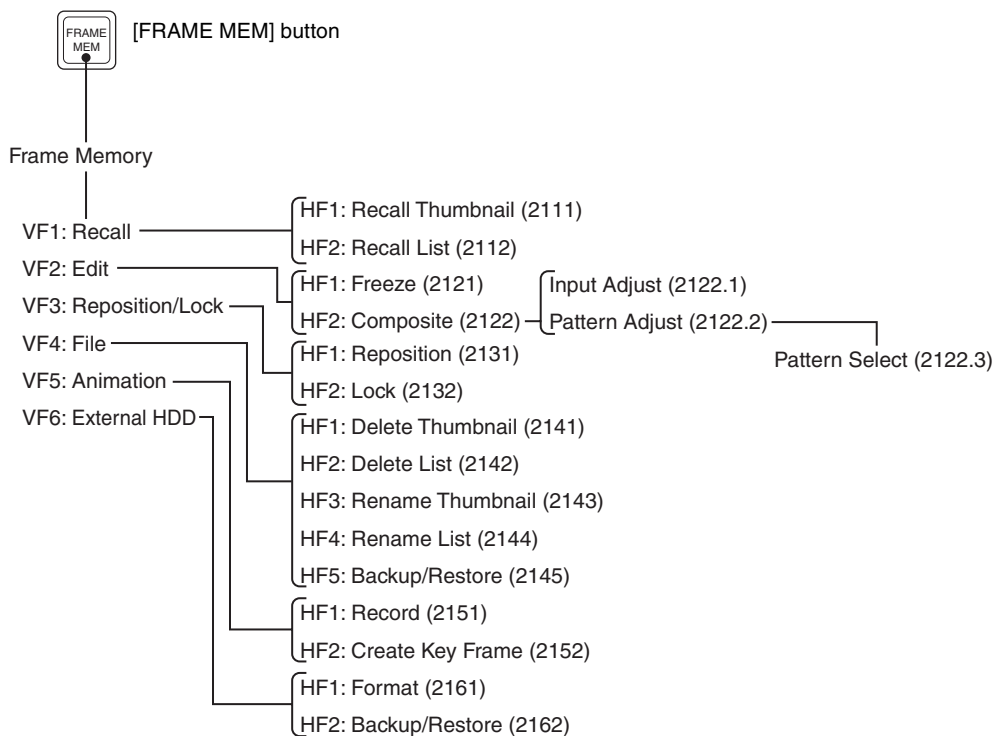
In this section, the numbers for the M/E-1 menus are given as examples.



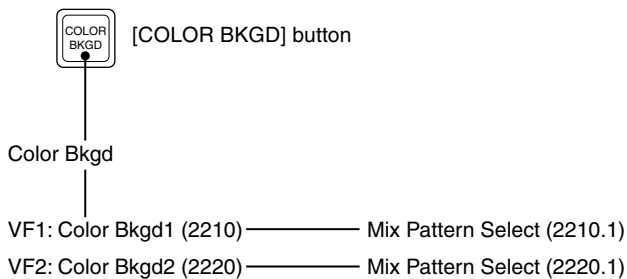
# PGM/PST Menu



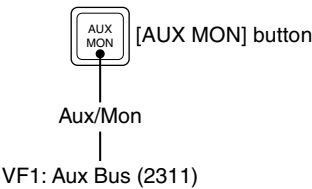
## Frame Memory Menu



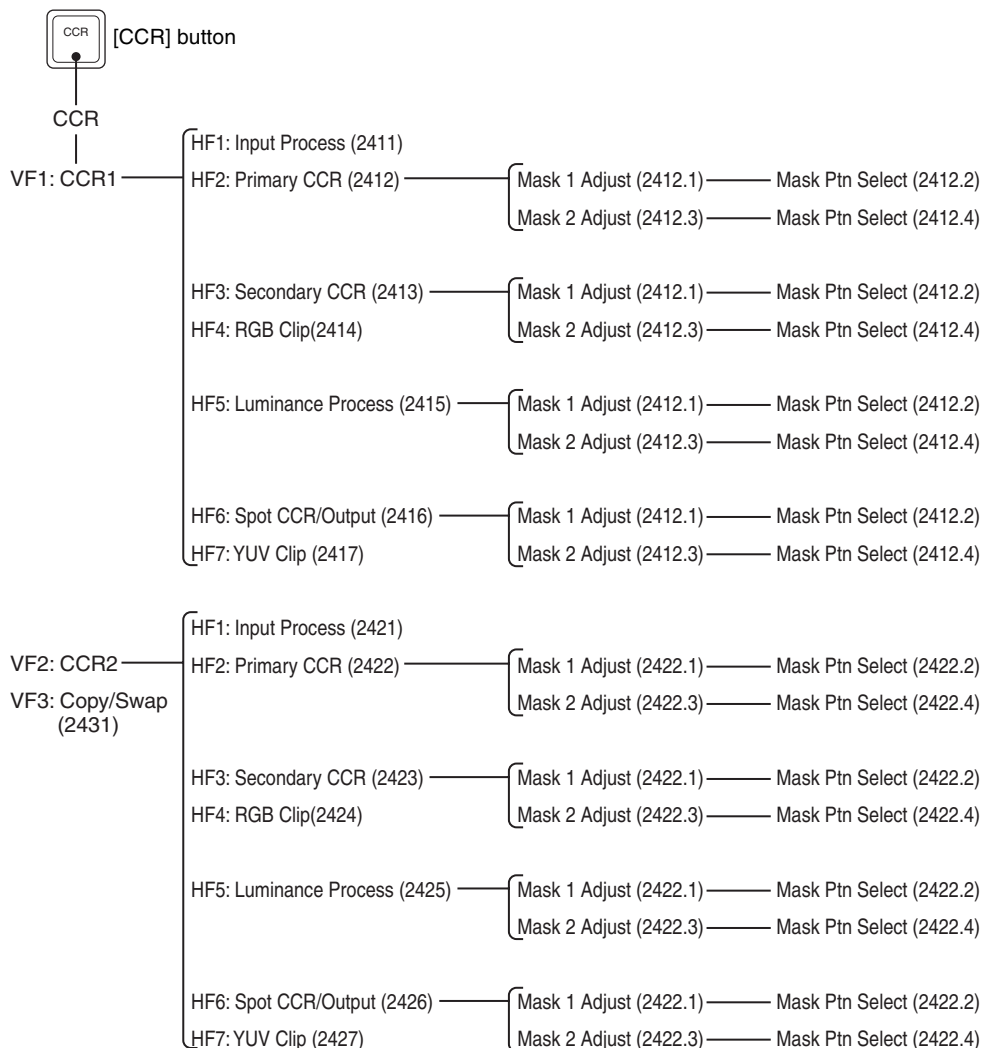
## Color Bkgd Menu



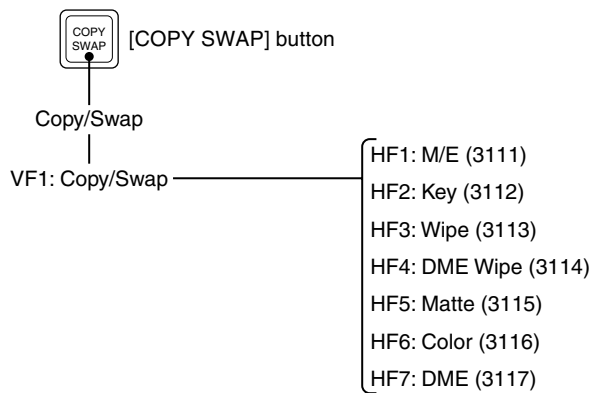
# AUX/MON Menu



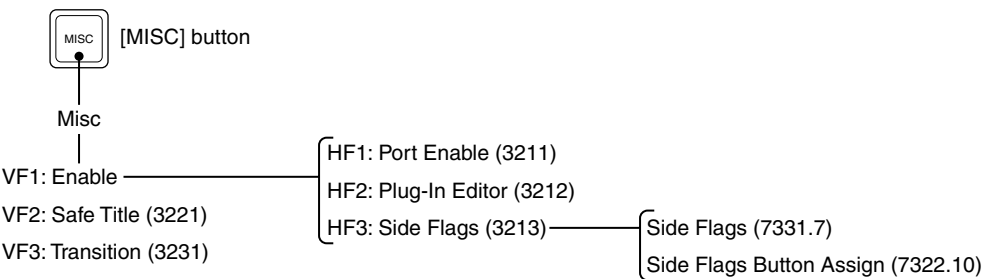
# CCR Menu



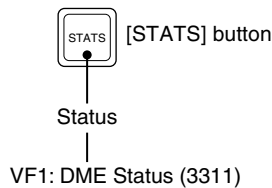
# Copy/Swap Menu



# Misc Menu

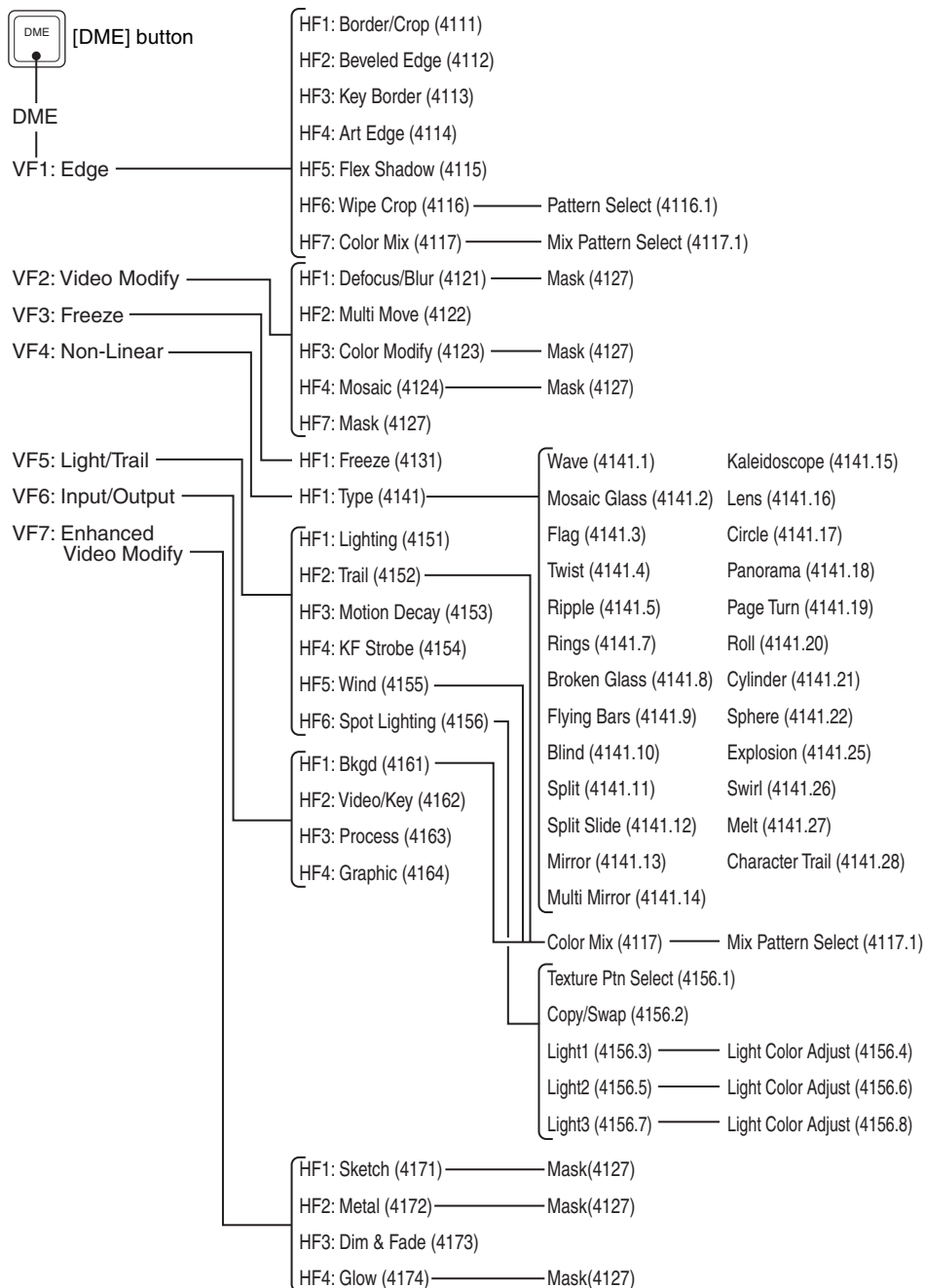


# Status Menu

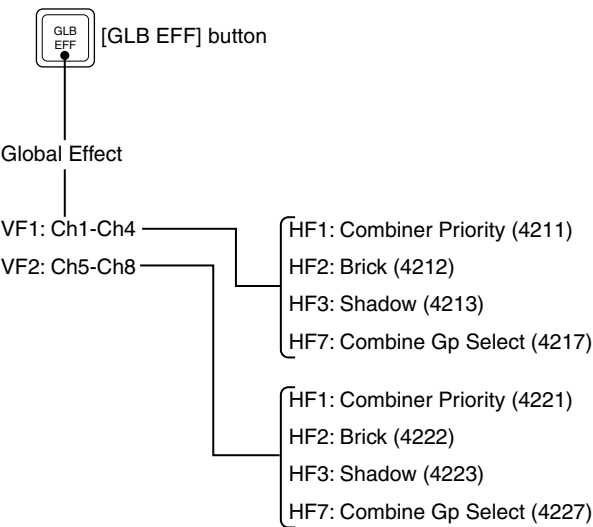


Appendix

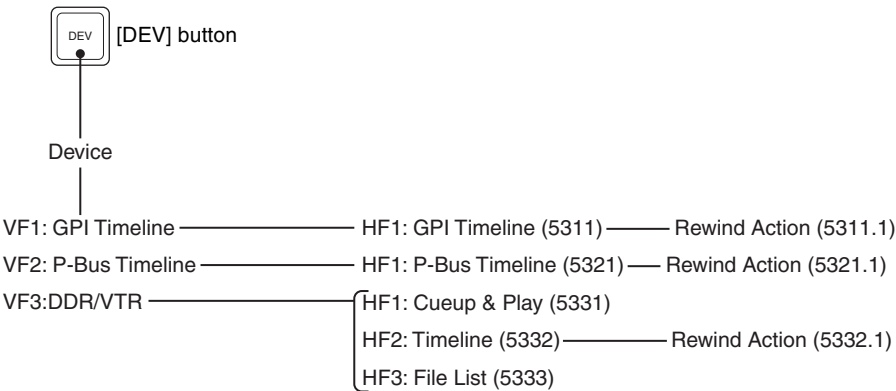
# DME Menu



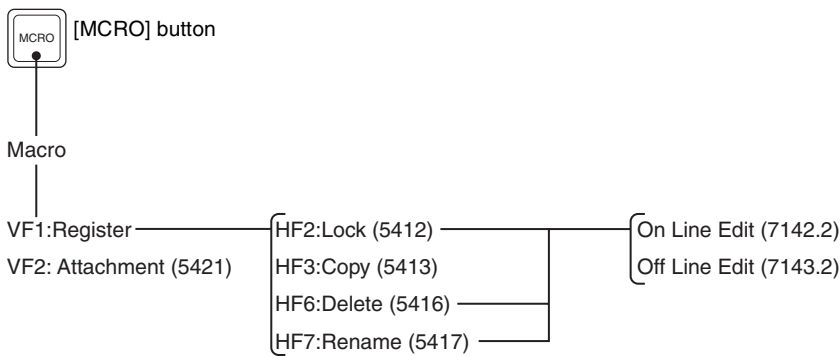
# Global Effect Menu



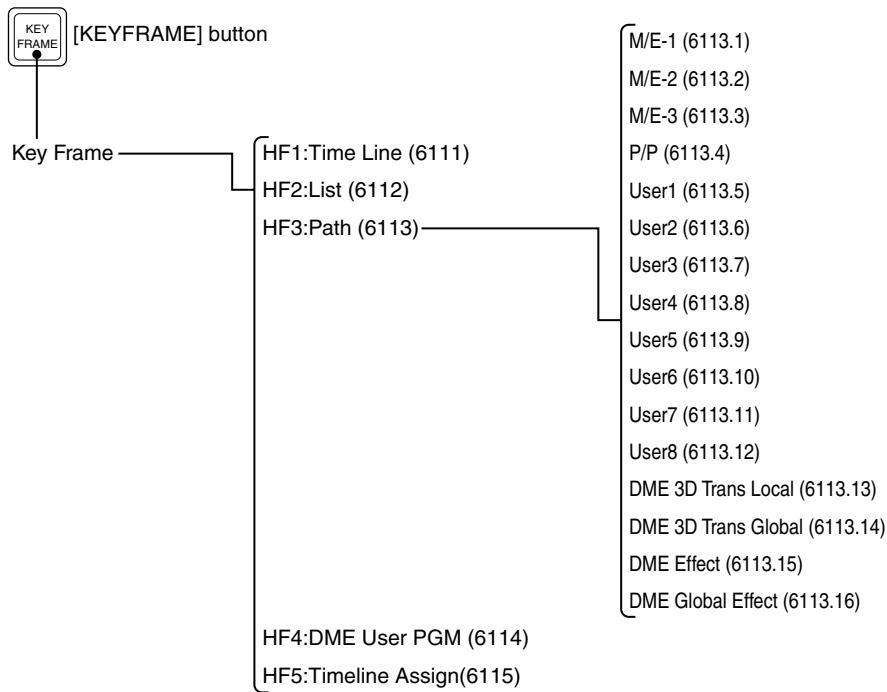
# Device Menu



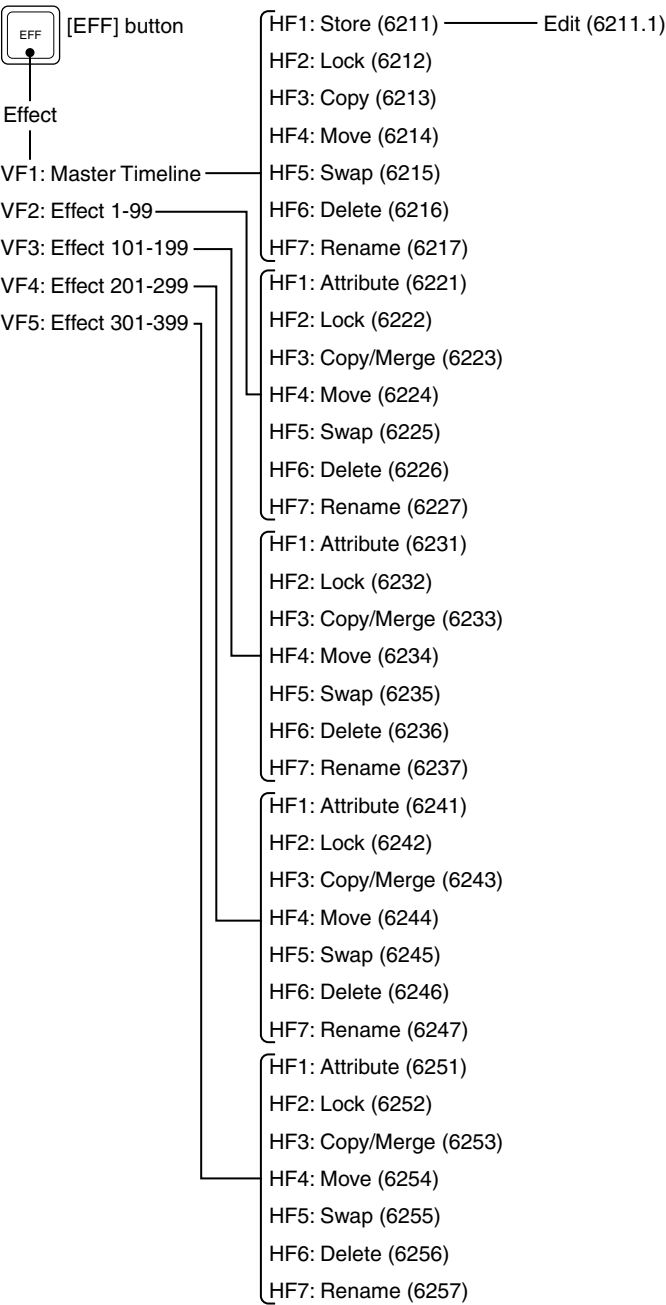
# Macro Menu



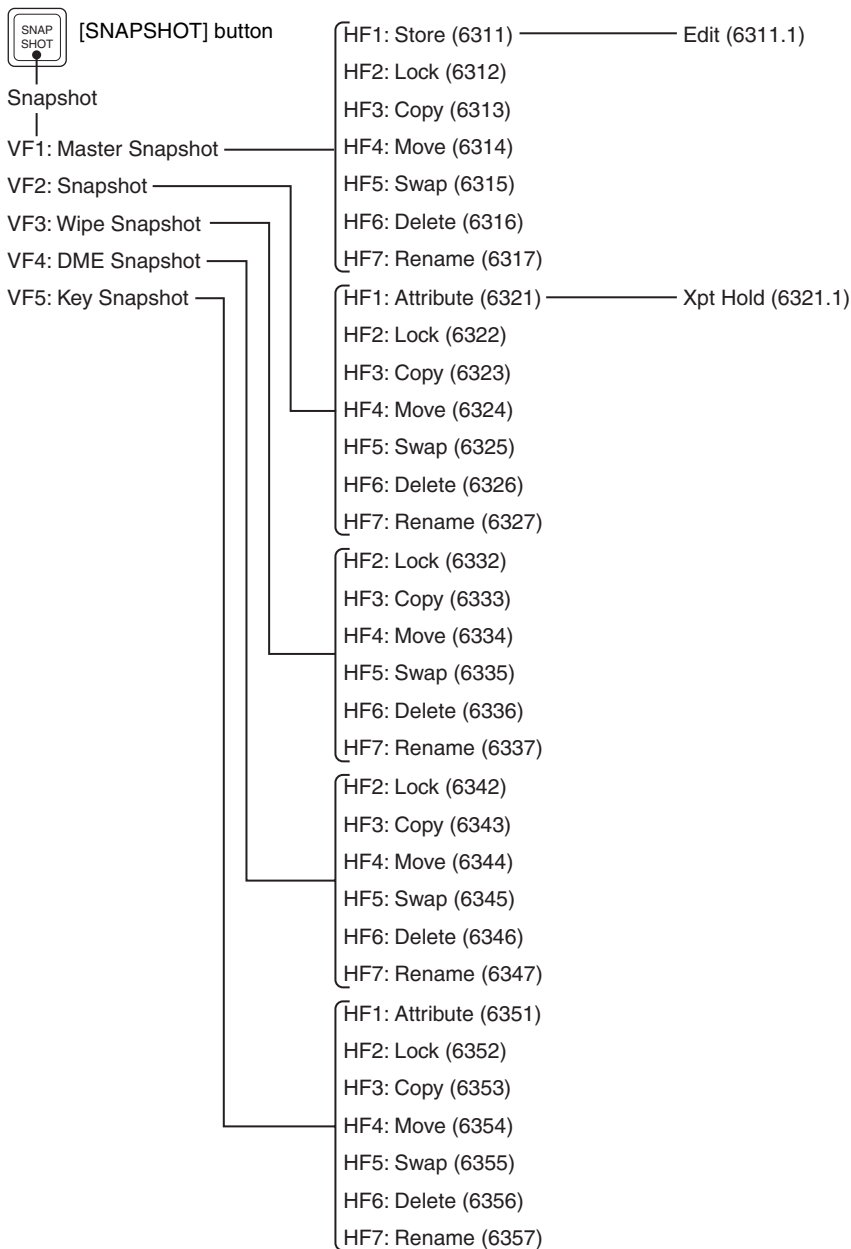
# Key Frame Menu



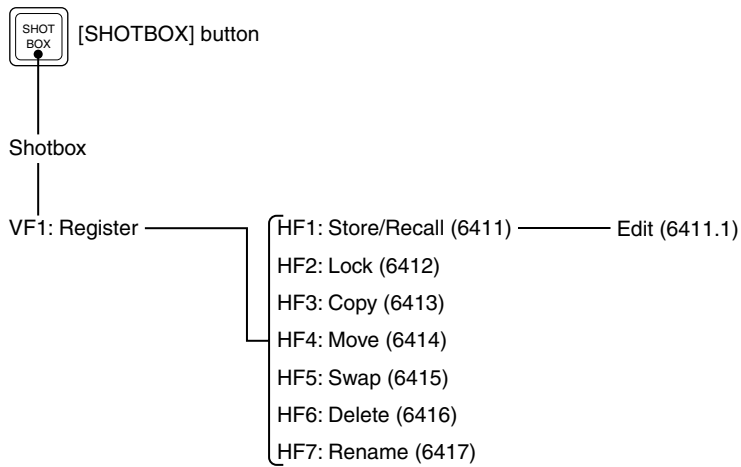
# Effect Menu



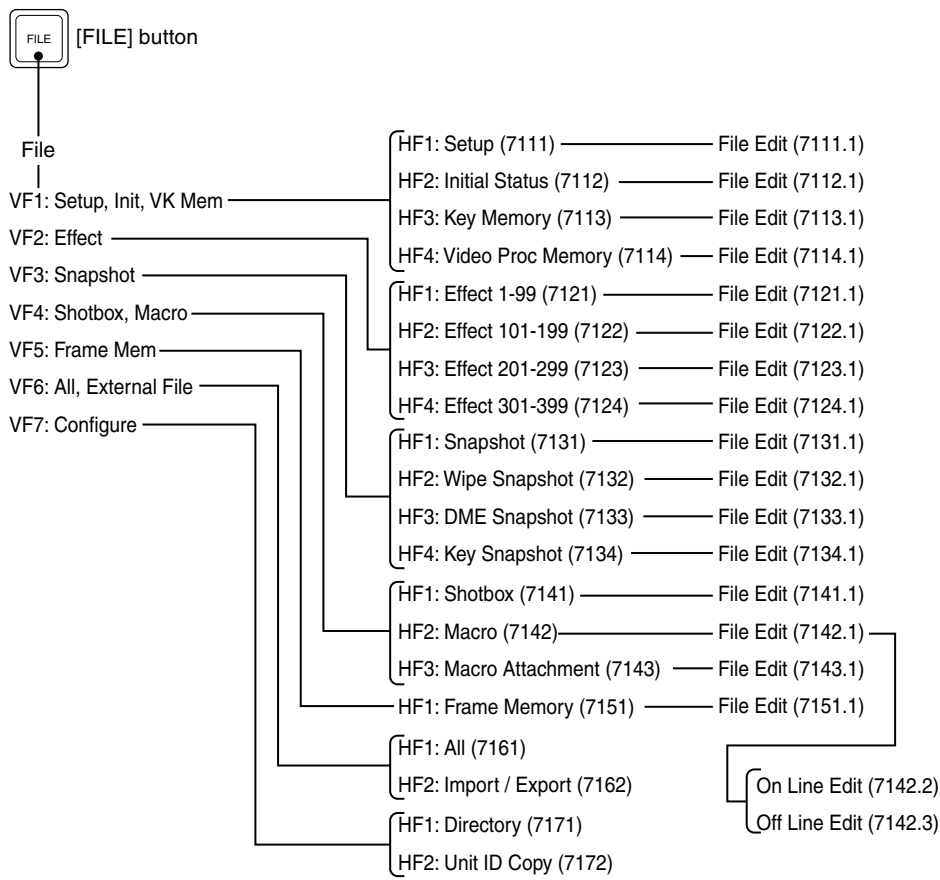
# Snapshot Menu



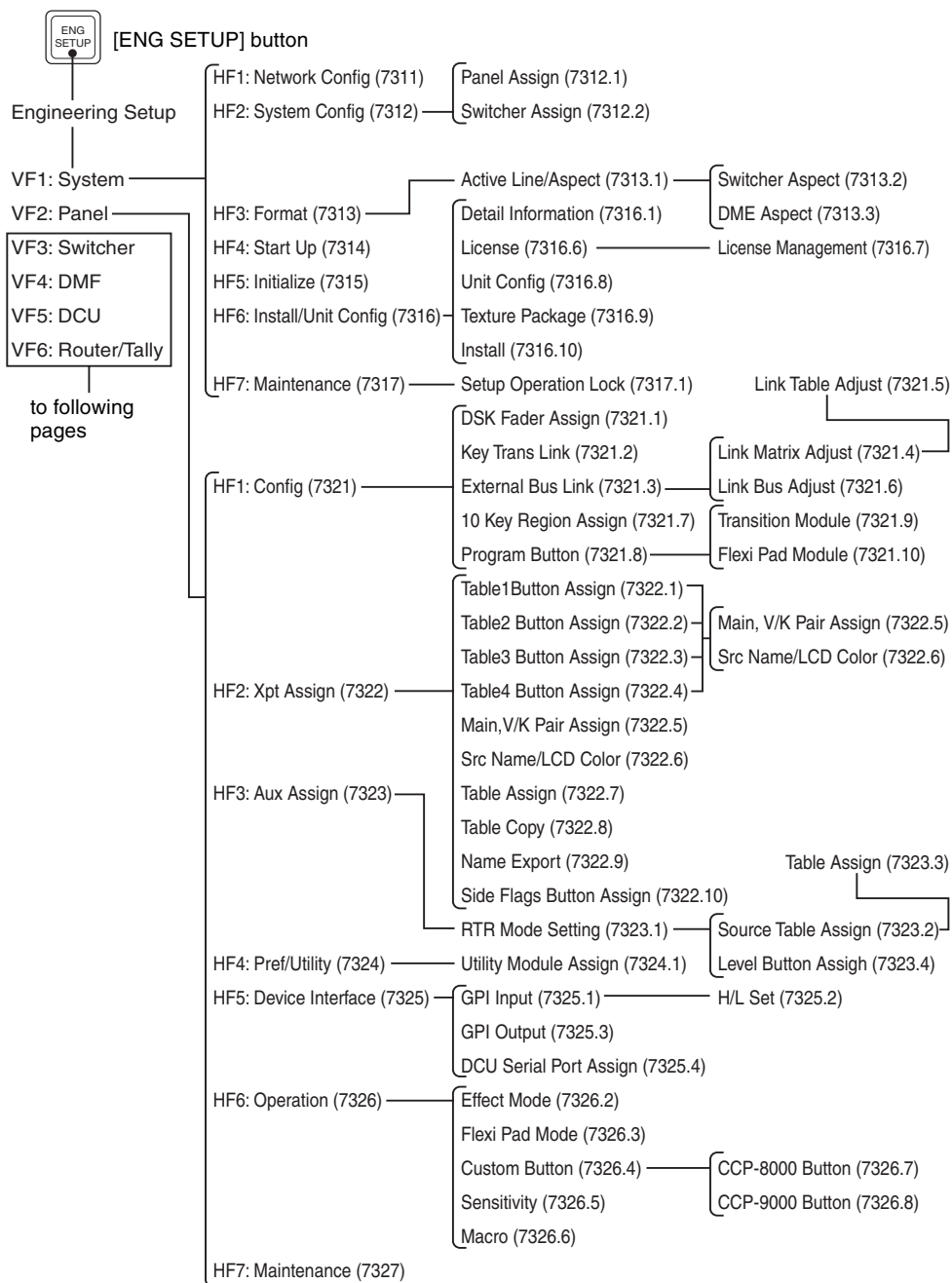
# Shotbox Menu

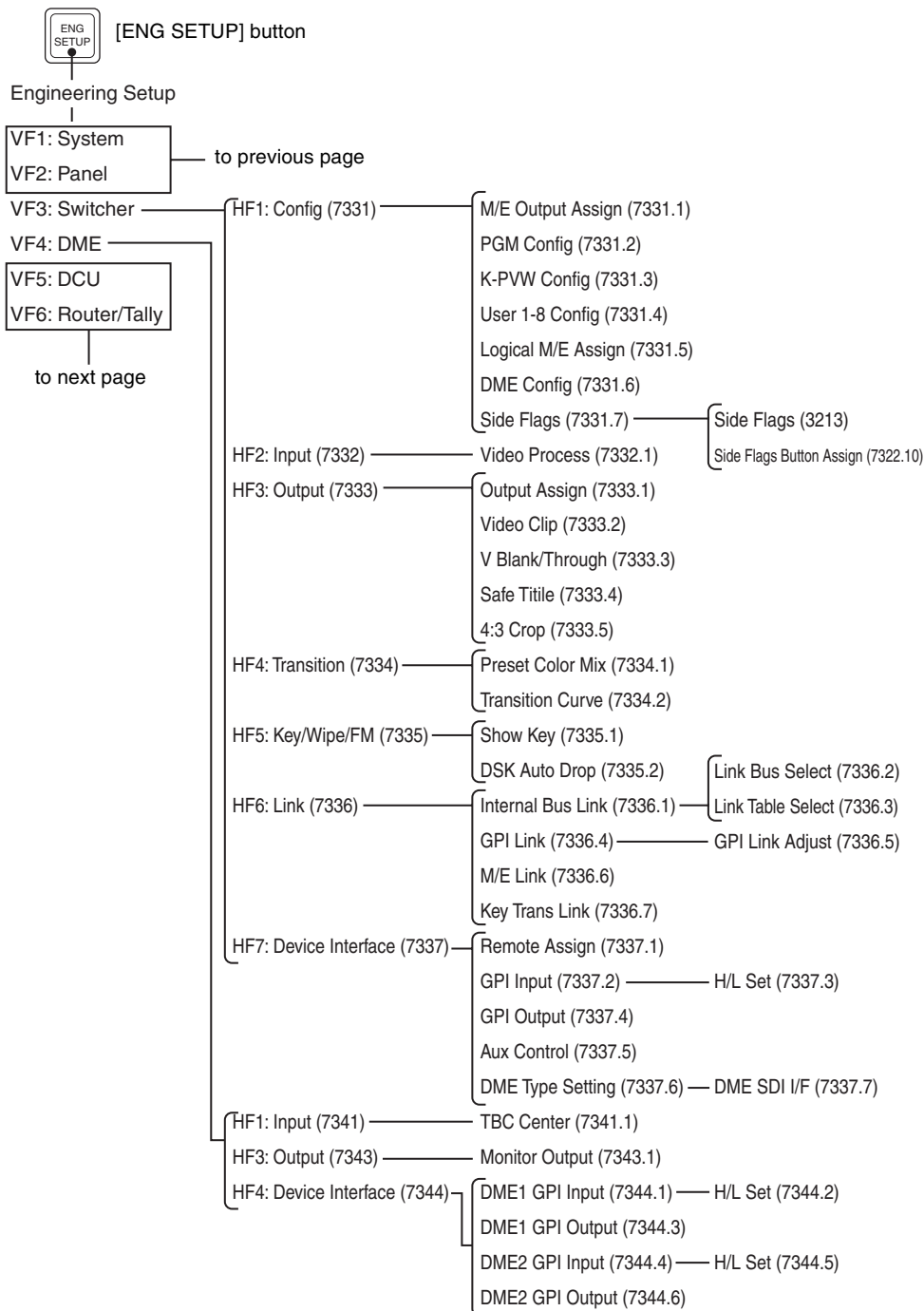


# File Menu



# Engineering Setup Menu







[ENG SETUP] button

Engineering Setup

VF1: System  
VF2: Panel  
VF3: Switcher  
VF4: DME

to previous pages

VF5: DCU

VF6: Router/Tally

HF1: Input Config (7351)

HF2: GPI Input Assign (7352) — H/L Set (7352.1)

HF3: Output Config (7353)

HF4: GPI Output Assign (7354)

HF5: Serial Port Assign (7355)

P-Bus Setting (7355.1)

VTR Setting (7355.2)

DDR SD9P Setting (7355.3)

DDR VDCP Setting (7355.4)

Extended VTR Setting (7355.5)

HF1: Router (7361)

External Box Assign (7361.1)

HF2: Group Tally (7362)

HF3: Wiring (7363)

New (7363.1)

Modify (7363.2)

HF4: Tally Enable (7364)

New (7364.1)

Modify (7364.2)

HF5: Tally Copy (7365)

New (7365.1)

Modify (7365.2)

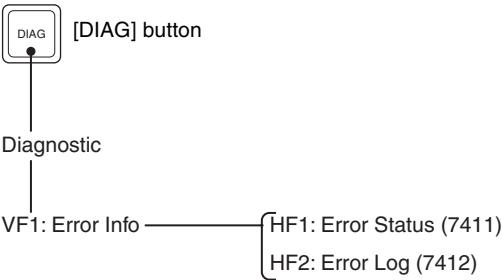
HF6: Parallel Tally (7366)

Set (7366.1)

HF7: Serial Tally (7367)

Source Assign (7367.1)

# Diagnostic Menu



---

# Macro File Editing Rules

When editing a macro file, follow the rules described below.

---

## Macro File Syntax

The macro file syntax is as follows.

### File format

The file is in CSV (comma-separated value) format.

### Newline code

CR (ASCII code 0D), LF (ASCII code 0A), or CRLF may be used.

### Statement syntax

There are four types of statement, each terminated by a newline code.

**File header:** This must always appear as the first line of the file. It comprises 28 characters, as follows.

Example: PNL (space) 0001PNL\_rrrr.PMRnnnnnnnn

rrrr: macro register number (0001 to 0099)

nnnnnnnn: In a file created on the switcher, this is a register name automatically set by the switcher.

When creating a new file, it is recommended to set this to be the same as the file name (*see page 550*).

The name is limited to eight characters.

The following characters may not be used.

space, \, /, :, ;, , (comma), . (dot), <, >, \*, ?, " "

**Comment:** Begins with "#". The content of the line following the "#" up to the next newline has no effect on macro execution, and can be used as a comment.

### Note

You can only use comments in files saved to the hard disk or a memory card. When you load a macro file into a register, the comments are discarded.

**Event statement:** Begins with "Event?", and defines the macro event. (*See next item, "Syntax of Event and Continue Statements."*)

**Continue statement:** Begins with "Continue?", and defines the macro event. (*See next item, "Syntax of Event and Continue Statements."*)

Some events cannot be used. (See “Correspondence Between Events and Symbols” (page 551).)

---

## Syntax of Event and Continue Statements

An event can be written with an Event statement only, or with an Event statement followed by any number of Continue statements. The Event statements and Continue statements have the following syntax.

### Word separator character

Use “,” (comma).

### Ignored

Spaces and tabs are ignored. There is no distinction between lowercase and uppercase. If two or more separator characters appear consecutively, later ones are ignored. Separator characters at the beginning of a line are also ignored.

### Content of line

Must begin with “Event?” or “Continue?”, followed by symbols and parameters.

Event?,[symbol], [parameter], [parameter], ...

Continue?,[symbol], [parameter], [parameter], ...

**symbol:** ASCII character string showing the type of event (See “Correspondence Between Events and Symbols” (page 551))

**parameter:** Shows details of an event. Consists of parameter names and arguments, and these must appear in pairs. The number and type of parameters depends on the event. (See “Symbols and Parameters” (page 552))

If the same parameter appears twice or more, the last occurrence is valid.

## How to use Continue statements

When a single parameter has more than one argument, use a Continue statement. The following example is of a snapshot event.

An event to recall a snapshot in region M/E-1 is written as:

```
Event?,Snapshot,Region?,ME1,Register?,1,Attribute?,Off,Time?,Current
```

In the Event statement, only one region can be specified.

To specify both regions M/E-1 and DME1, use a Continue statement, thus:

```
Event?,Snapshot,Region?,ME1,Register?,1,Attribute?,Off,Time?,Current  
Continue?,Snapshot,Region?,DME1,Register?,1,Attribute?,Off,Time?,Current
```

To specify more than one argument for a region parameter, follow the Event statement by a Continue statement on the next line.

## File Name

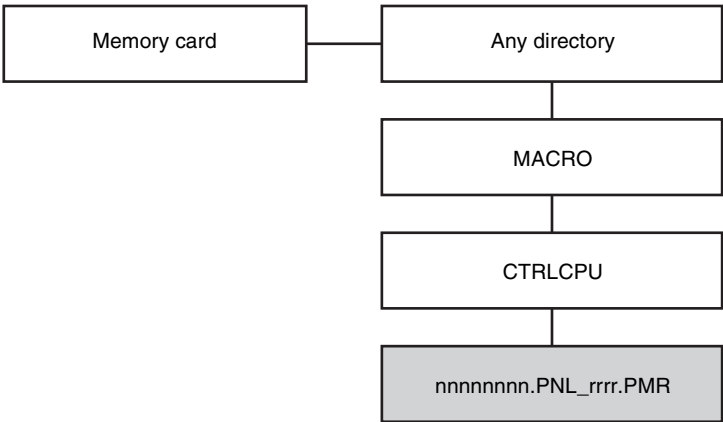
Set the file name as follows.

**Example:** nnnnnnnn.PNL\_rrrr.PMR  
nnnnnnnn: In a file created on the switcher, this is a register name automatically set by the switcher.  
The name is limited to eight characters.  
The following characters may not be used.  
space, \, /, :, ;, , (comma), . (dot), <, >, \*, ?, “ ”  
rrrr: macro register number (0001 - 0099)

## Saving and Recalling a File

For a newly created file, if you create a directory on the memory card (*see figure below*), and move the file to the prescribed location, you can then recall it in the File>All, External File menu.

**Note**  
When amending a file saved on the switcher, be sure to save it in the original directory.



Path example: Memory Card\Sample\MACRO\CTRLCPU\  
nnnnnnnn.PNL\_rrrr.PMR

---

## Errors

If any of the following problems occur, it is not possible to recall the file. Attempting to recall the file will produce an error message.

- If there is a syntax error.
- If a required parameter is not present.

*For details of error messages, see page 563.*

---

## Correspondence Between Events and Symbols

For details of events, see “Overview” under “Macros” in Chapter 1 (Volume 1).

Event	Symbol	Using Continue
Cross-point selection in the auxiliary bus control block	AuxXpt	No
Cross-point selection in the auxiliary bus control block in router control mode	RouterXpt	Yes
Cross-point selection in the cross-point control block	MEXpt	No
Auto transition and take in the transition execution section	MEAutoTransition	No
Cut in the transition execution section	MECut	No
Transition type selection	TransitionType	No
Next transition setting	NextTransition	No
Pattern limit on/off	PatternLimit	No
Fade-to-black execution	FadeToBlack	No
Auto transition and take in the independent key transition execution section	KeyAutoTransition	Yes
Key insertion and deletion in the independent key transition execution section	KeyCut	Yes
Independent key transition type selection	KeyTransitionType	No
VTR/DDR start point setting	StartTc	Yes
VTR/DDR playback	Play	Yes
VTR/DDR stop	Stop	Yes
VTR/DDR cue-up	Cue	Yes
Disk recorder/Extended VTR file recall	DiskFileLoad	No
Recall snapshot	Snapshot	Yes

a) For details of pause events, see “Macro Execution” under “Macros” in Chapter 1 (Volume 1).

n: indicates a numeral 0 to 9.  
x: indicates an alphanumeric character.

Symbol	Parameter name	Arguments	Description
MEXpt	ME?	ME1 to ME3, PP	Applicable bank
	MEBus?	A, B, Key1 to Key4, Key1Source to Key4Source, Utility1, Utility2, DMEExternalVideo	Applicable bus
	Xpt?	1 to 128	Main table cross-point button number set in the Xpt Assign menu
	VideoKey?	Video, Key	Signal type selected on the applicable bus (video signal or key signal)
AuxXpt	AuxBus?	EditPreview, AUX1 to AUX48, Monitor1 to Monitor8, FrameMemory1, FrameMemory2, DME1Video to DME8Video, DME1Key to DME8Key, DME1Video2nd to DME8Video2nd (a), DME1Key2nd to DME8Key2nd (b), DMEUtility1, DMEUtility2, CCR1, CCR2	Applicable AUX bus (a): DMEVideo2nd= Bus for selecting back video signal of DME channel (n=1 to 8), (b): DMEKey2nd= Bus for selecting back key signal of DME channel (n=1 to 8)
	Xpt?	1 to 128	Cross-point button number in the main table set in the Xpt Assign menu
	VideoKey?	Video, Key	Type of signal (video signal or key signal) to be selected on the applicable bus
MEAutoTransition	ME?	ME1 to ME3, PP	Applicable bank
	Time?	Current (a), 1 to 999	Transition rate (number of frames) (a): Mode in which the current value set on the transition control block is used
	ABusXpt?	Current (a), 1 to 128	A bus or B bus cross-point button number. Use the button number of the main table set in the Xpt Assign menu. (a): Mode in which the cross-point number set for the current A bus or B bus is used
	BBusXpt?	Current (a), 1 to 128	

Symbol	Parameter name	Arguments	Description
MECut	ME?	ME1 to ME3, PP	Applicable bank
KeyAutoTransition	ME?	ME1 to ME3, PP	Applicable bank
	Key?	Key1 to Key4	Key of the applicable independent key transition control block
	Time?	Current (a), 1 to 999	Transition rate (number of frames) (a): Mode in which the current value set on the independent key transition control block is used
	Direction?	ToOn (a), ToOff (b), Any (c)	Transition execution mode (a): Key is inserted (b): Key is deleted (c): Transition is always executed
KeyCut	ME?	ME1 to ME3, PP	Applicable bank
	Key?	Key1 to Key4	Key of the applicable independent key transition control block
	Direction?	ToOn (a), ToOff (b), Any (c)	Transition execution mode (a): Key is inserted (b): Key is deleted (c): Transition is always executed
Play	Device?	1 to 12	Applicable device
Cue	Device?	1 to 12	Applicable device
	Timecode?	Current (a), hh:mm:ss:ff	Start point timecode hh=hours (00 to 23) mm=minutes (00 to 59) ss=seconds (00 to 59) ff=frames (00 to 29) (a): Mode in which the currently set timecode is used
Stop	Device?	1 to 12	Applicable device
DiskFileLoad	Device?	1 to 12	Applicable device
	FileName?	FileName	Name of file being set (max. eight characters)

Symbol	Parameter name	Arguments	Description
Snapshot	Region?	ME1 to ME3, PP, User1 to User8, DME1 to DME8, Router	Applicable region
	Register?	1 to 99	Applicable register number
	Attribute?	Off, Dissolve, AutoTransition, Dissolve&AutoTransition	Applicable snapshot attributes
	Time?	Current (a), 1 to 999	Duration of effect dissolve (number of frames) (a): Mode in which the currently set value is used
KeySnapshot	ME?	ME1 to ME3, PP	Applicable bank
	Key?	Key1 to Key4	Applicable key
	Register?	1 to 4	Applicable register number
WipeSnapshot	ME?	ME1 to ME3, PP	Applicable bank
	Register?	1 to 10	Applicable register number
DMEWipeSnapshot	ME?	ME1 to ME3, PP	Applicable bank
	Register?	1 to 10	Applicable register number
TimelineRecall	Region?	ME1 to ME3, PP, User1 to User8, DME1 to DME8, PBus, Device1 to Device12, GPI	Applicable region
	Register?	1 to 399	Applicable register number
TimelineRun	Region?	ME1 to ME3, PP, User1 to User8, DME1 to DME8, PBus, Device1 to Device12, GPI, Current (a)	Applicable region (a): Mode in which operation takes place in the region currently specified in the numeric keypad control block
TimelineRewind	Region?	ME1 to ME3, PP, User1 to User8, DME1 to DME8, PBus, Device1 to Device12, GPI, Current (a)	Applicable region (a): Mode in which operation takes place in the region currently specified in the numeric keypad control block
TimelineFF	Region?	ME1 to ME3, PP, User1 to User8, DME1 to DME8, PBus, Device1 to Device12, GPI, Current (a)	Applicable region (a): Mode in which operation takes place in the region currently specified in the numeric keypad control block
Shotbox	Register?	1 to 99	Applicable register number
Pause	Time?	0 to 999	Time for which macro is paused (number of frames)

Symbol	Parameter name	Arguments	Description
StartTc	Device?	1 to 12	Applicable device
MasterSnapshot	Register?	1 to 99	Applicable register number
MasterTimelineRecall	Register?	1 to 99	Applicable register number
RouterXpt	DestinationButton?	1 to 128	Router cross-point button
	Source?	1 to 1024	Router source number
	Level?	1 to 8	Router level selection
PatternLimit	ME?	ME1 to ME3, PP	Applicable bank
	Status?	ToOn (a), ToOff (b), Any (c)	Pattern limit status (a): Pattern limit applies (b): Pattern limit does not apply (c): The pattern limit status always changes
TransitionType	ME?	ME1 to ME3, PP	Applicable bank
	TransitionType?	Mix, NAM, SuperMix, PresetColorMix, Wipe, DMEWipe	Transition type
KeyTransitionType	ME?	ME1 to ME3, PP	Applicable bank
	Key?	Key1 to Key4	Key of the applicable independent key transition control block
	Direction?	On (a), Off (b), Any (c)	Independent key transition execution mode (a): Key is inserted (b): Key is deleted (c): Transition is always executed
	KeyTransitionType?	Mix, Wipe, DMEWipe, Cut	Transition type of the independent key transition control block
NextTransition	ME?	ME1 to ME3, PP	Applicable bank
	All?	On, Off	Applicable next transition
	KeyPriority?	On, Off	Applicable next transition
	BKGD?	On, Off	Applicable next transition
	Key1? to Key4?	On, Off	Applicable next transition
FadeToBlack	Time?	Current (a), 1 to 999	Transition rate (number of frames) (a): Mode in which the current value set on the fade to black control block is used

Symbol	Parameter name	Arguments	Description
TimelineDirectionNormal	Region?	ME1 to ME3, PP, User1 to User8, DME1 to DME8, PBus, Device1 to Device12, GPI, Current (a)	Applicable region (a): Mode in which operation takes place in the region currently specified in the numeric keypad control block
TimelineDirectionReverse	Region?	ME1 to ME3, PP, User1 to User8, DME1 to DME8, PBus, Device1 to Device12, GPI, Current (a)	Applicable region (a): Mode in which operation takes place in the region currently specified in the numeric keypad control block
TimelineNormalReverseOn	Region?	ME1 to ME3, PP, User1 to User8, DME1 to DME8, PBus, Device1 to Device12, GPI, Current (a)	Applicable region (a): Mode in which operation takes place in the region currently specified in the numeric keypad control block
TimelineNormalReverseOff	Region?	ME1 to ME3, PP, User1 to User8, DME1 to DME8, PBus, Device1 to Device12, GPI, Current (a)	Applicable region (a): Mode in which operation takes place in the region currently specified in the numeric keypad control block
UtilityButton	UtilityModule?	UserPrefs, UtilityBox	Applicable bank
	Button?	1 to 96	Applicable button
	UtilityStatus?	On, Off, Current (a)	Status of function assigned to button (a): Operates according to currently assigned function

## Example of File Contents

Line	Content	Description
1	PNL 0001PNL_0000.PMRMACROREG	File header
2	#,Sample,	Comment
3	Event?,Snapshot,Region?,ME1,Register?,1,Attribute?,Off,Time?,Current	Simultaneously recall snapshots from register number 1 in the M/E-1 and DME1 regions.
4	Continue?,Snapshot,Region?,DME1,Register?,1,Attribute?,Off,Time?,Current	
5	Event?,MEXpt,ME?,ME2,MEBus?,A,Xpt?,121,VideoKey?,Video	Select button number 121 on the M/E-2 A bus.

---

# About the Macro Attachment List Display

The Button column in the macro attachment list displayed in the status area of the Macro>Attachment menu screen shows character strings which identify macro attachment assigned buttons. Each of these character strings is in fact a combination of characters shown in the Button(1), Button(2), and Button(3) columns in the following tables.

For example, if Block and Button(1) to Button(3) are combined as:

Block: P/P XPT

Button(1): UTIL1 Bus

Button(2): V

Button(3): XPT2

the Button column in the macro attachment list in the Macro>Attachment menu screen shows “UTIL1 BusVXPT2,” which means “utility 1 bus, video signal, cross-point number 2.”

---

## M/E and PGM/PST Banks

The following table shows only the macro attachment assignable buttons in the PGM/PST bank.

For the M/E-1 (M/E-2 or M/E-3) bank, “P/P” in the Block Select and Block columns changes to “M/E-1” (“M/E-2” or “M/E-3”) and “DSK” in the Button(1) and Button(2) columns changes to “KEY.” The contents of the Button(3) column do not change.



Block Select	Block	Button(1)	Button(2)	Button(3)
P/P	P/P XPT	A Bus B Bus DSK1 Bus : DSK4 Bus DSK1 Src Bus : DSK4 Src Bus	(nothing) Shift	XPT 1 : XPT 128 M/E 1 M/E 2 M/E 3 P/P
		UTIL1 Bus UTIL2 Bus EXT DME Bus DMEUtility1 DMEUtility2	V K V Shift K Shift	
	P/P Trans	(blank) DSK1 : DSK4	MIX NAM SUPER Mix <sup>a)</sup> PST COLOR MIX <sup>a)</sup> WIPE DME TAKE <sup>b)</sup> AUTO TRANS <sup>a)</sup> CUT <sup>a)</sup> DSK_ON <sup>a)</sup> ALL <sup>a)</sup> KEY PRIOR <sup>a)</sup> BKGD <sup>a)</sup> DSK1 <sup>a)</sup> : DSK4 <sup>a)</sup> NORM (PLAY) <sup>a)</sup> NORM/REV (STOP) <sup>a)</sup> REV (CUEUP) <sup>a)</sup> PTN LIMIT (PLAY) <sup>c)</sup> LIMIT SET (STOP) <sup>c)</sup> KF (CUEUP) <sup>c)</sup> PTN LIMIT Fader	(nothing)
	P/P Key Trans	DSK3 DSK4	MIX WIPE DME CUT TAKE DSK_ON	

a) For the standard type or compact type transition control block.

b) For the simple type transition control block.

c) For the standard type transition control block.

## Auxiliary Bus Control Block

Block Select	Block	Button(1)	Button(2)	Button(3)
Aux	AUX-1 AUX-2	EDIT PVW AUX 1 : AUX 48 Mon1 : Mon8 FM1 FM2	V K V Shift K Shift V 2nd Row K 2nd Row V 2nd Row Shift K 2nd Row Shift	XPT 1 : XPT 128 M/E 1 M/E 2 M/E 3 P/P
		DME1V : DME8V DME1K : DME8K	(nothing) Shift 2nd Row 2nd Row Shift	
		DMEUtility1 DMEUtility2	V K V Shift K Shift V 2nd Row K 2nd Row V 2nd Row Shift K 2nd Row Shift	
		DME1V2nd : DME8V2nd DME1K2nd : DME8K2nd	(nothing) Shift 2nd Row 2nd Row Shift	
		CCR1 CCR2	V K V Shift K Shift V 2nd Row K 2nd Row V 2nd Row Shift K 2nd Row Shift	
		P/P UTIL1 P/P UTIL2 M/E-1 UTIL1 M/E-1 UTIL2 M/E-2 UTIL1 M/E-2 UTIL2 M/E-3 UTIL1 M/E-3 UTIL2		

Block Select	Block	Button(1)	Button(2)	Button(3)
Aux	AUX-1 AUX-2	DSK1 : DSK4 M/E-3 KEY1 M/E-3 KEY2 M/E-3 KEY3 M/E-3 KEY4	(nothing) Shift 2nd Row 2nd Row Shift	XPT 1 : XPT 128 M/E 1 M/E 2 M/E 3 P/P
		DSK1 Src : DSK4 Src M/E-3 KEY1 Src M/E-3 KEY2 Src M/E-3 KEY3 Src M/E-3 KEY4 Src		
		P/P EXT DME M/E-1 EXT DME M/E-2 EXT DME M/E-3 EXT DME	V K V Shift K Shift V 2nd Row K 2nd Row V 2nd Row Shift K 2nd Row Shift	



## Other Blocks

Block Select	Block	Button(1)	Button(2)	Button(3)
Others	Keyframe	RUN REWIND FF NORM REV NORM/REV	(nothing)	(nothing)
	Joystick Trackball	DEV	CLR WORK BUFR (CUEUP) Y (PLAY) TRGT (STOP) AXIS LOC (START TC)	
	Utility Box 1 Utility Box 2 Menu	Utility 1 : Utility 96	(nothing)	
	DSK/FTB	Key1 Key2	AUTO TRANS KEY_ON FTB	
	FTB	(nothing)	FTB	
	DSK Fader 1 : DSK Fader 4	P/P M/E1 M/E2 M/E3	KEY1 : KEY4	MIX WIPE DME CUT TAKE KEY-ON

# Error Messages

Error messages appear in the following three formats.

- A list display in the Error Status menu (7411)/Error Log menu (7412)
- Message boxes
- List based on the Error Information menu (9900)

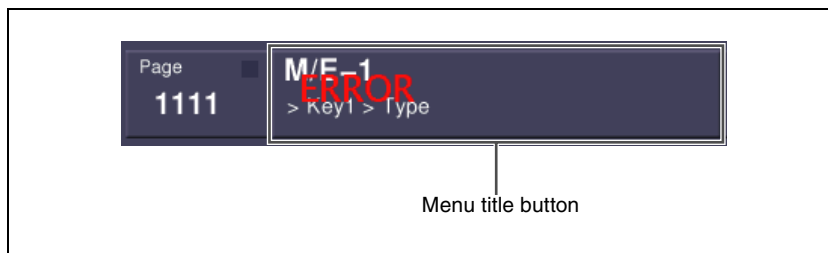
## Error Messages Displayed in the Error Status/Error Log Menu

When an error occurs, the word “ERROR” appears in red on the menu title button.

When “ERROR” is displayed, pressing the menu title button displays the Error Status menu or Error Log menu.

**When an error is current effective:** the Error Status menu appears (*see page 564*).

**When an error has already been cleared:** the Error Log menu appears (*see page 566*).



*You can select whether or not to indicate the occurrence of an error by the word “ERROR” shown on the menu title button, by setting [Error Popup] in the Error Status menu or Error Log menu. For details, see “Error Status menu” (page 564) or “Error Log menu” (page 566).*

**To display the error status or error log regardless of whether there is currently an error**

**1**

Carry out either of the following.

- Press the [DIAG] button of the top menu selection buttons.

- Press the menu page number button at the upper left of the menu screen, to display the top menu window, then enter 7411 or 7412, and press [Enter].

The Diagnostic menu appears.

## 2 Press VF1 'Error Info.'

The error information menu appears.

## 3 Press either of the following buttons.

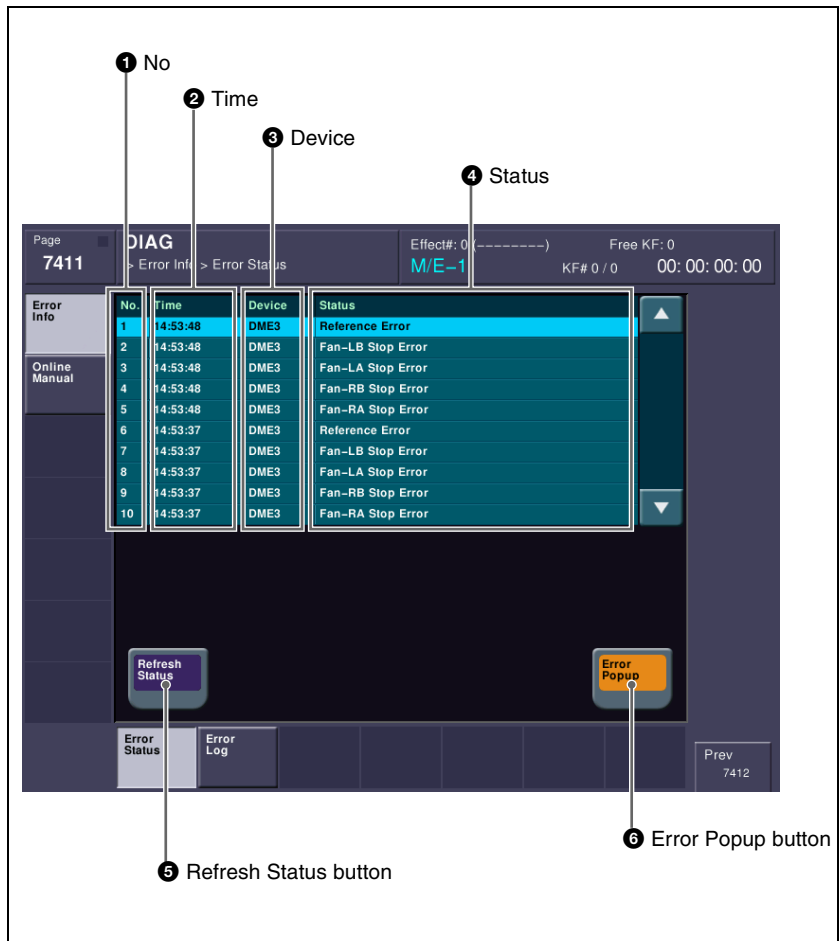
**HF1 'Error Status':** display the Error Status menu

**HF2 'Error Log':** display the Error Log menu

## Error Status menu

The Error Status menu lists currently occurring error information, listed with the most recent information at the top.

When an error has been cleared, the error disappears from the list.



#### ❶ No

This is a sequential number assigned to the error status.

#### ❷ Time

This shows the time the error occurred.

#### ❸ Device

This shows the device on which the error occurred.

#### ❹ Status

This shows the details of the error.

#### ❺ Refresh Status button

This refreshes the list display.

## ⑥ Error Popup button

This selects whether or not to display “ERROR” on the menu title button when an error occurs. This button is linked to the Error Popup button in the error log menu.

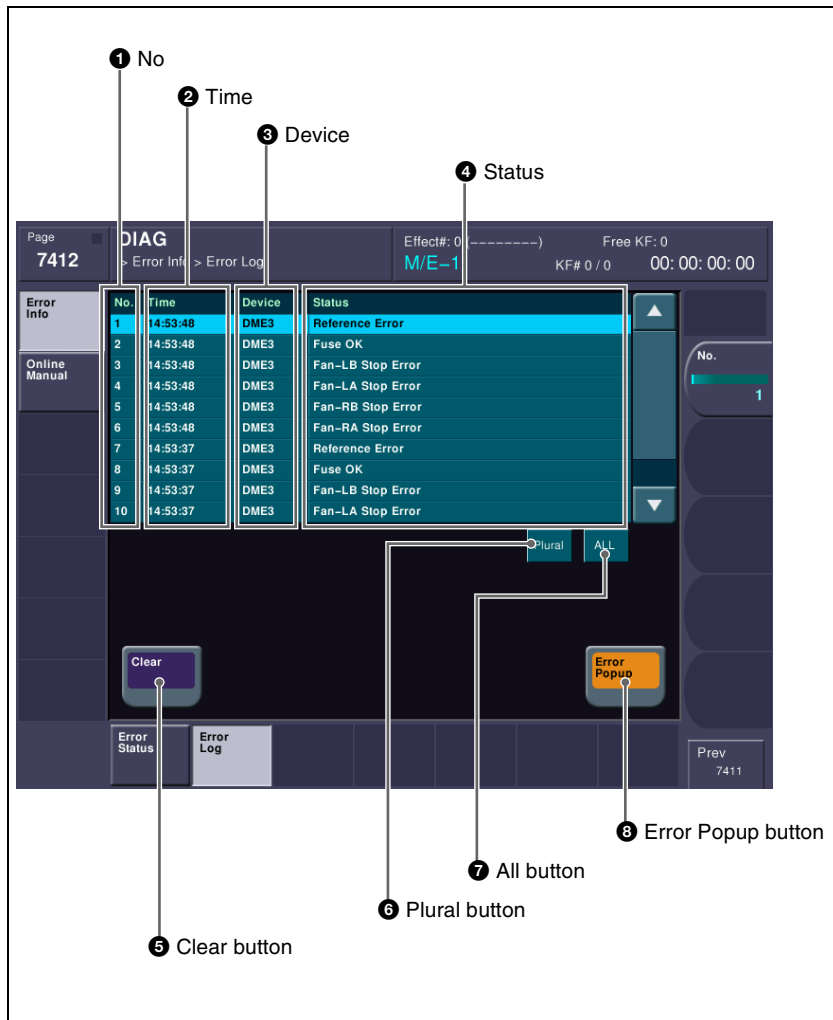
**On:** if a device error occurs, display “ERROR” on the menu title button.

**Off:** if a device error occurs, do not display “ERROR” on the menu title button.

## Error Log menu

The Error Log menu lists changes in the error status from the time that the menu display in the menu operating section is started up, listed with the most recent information at the top.

A maximum of 1024 error status changes appear, and when the number exceeds 1024, the oldest items disappear from the list.



### ❶ No

This is a sequential number assigned to the items in the error log.

### ❷ Time

This shows the time the status change occurred.

### ❸ Device

This shows the device on which the status change occurred.

### ❹ Status

This shows the details of the status change.

If you press on the list, this switches the display to reverse video, and selects the item. You can also select items in the error log by turning the knob.

**5 Clear button**

This deletes the selected error log item from the list.

**6 Plural button**

When this is on, you can select more than one error log. To cancel the selection, press once again to return to the normal display.

**7 All button**

When this is on, all error log items are selected. To cancel the selection, press once again to return to the normal display.

**8 Error Popup button**

This selects whether or not to display “ERROR” on the menu title button when an error occurs. This button is linked to the Error Popup button in the error status menu.

**On:** if a device error occurs, display “ERROR” on the menu title button.

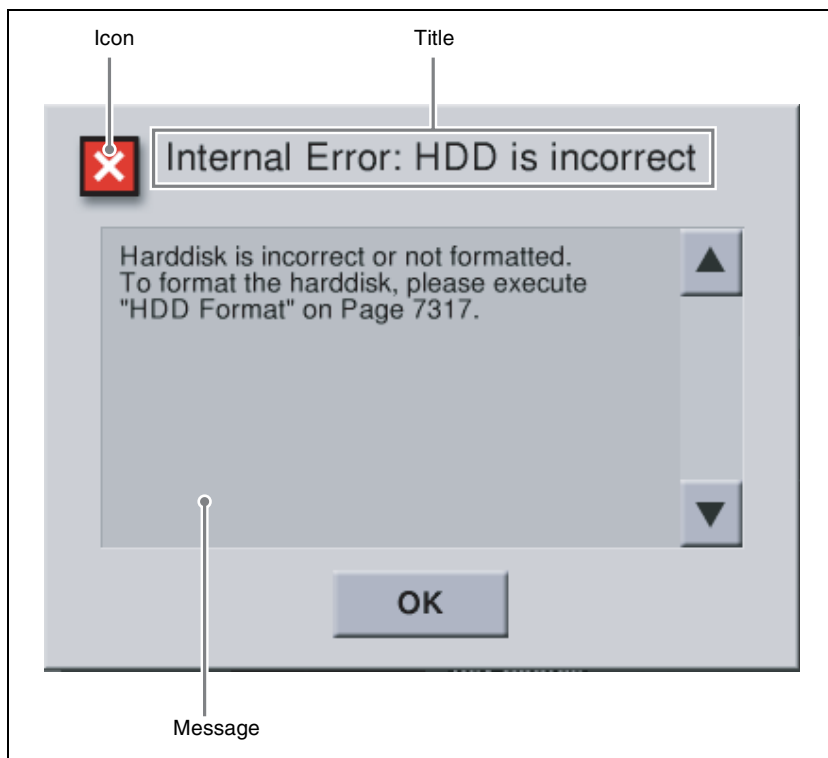
**Off:** if a device error occurs, do not display “ERROR” on the menu title button.

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## Error Messages Appearing in a Message Box




Corresponding to the content of the message, an icon appears.














Icon	Title	Message	Description
	Activate License	The license key you entered is invalid. Please check and enter again.	7316.7: Engineering Setup>System>Install/Unit Config>License>License Management In the above menu, since the entered information was incorrect, the Activate License procedure failed. Check the license key, and enter again.
	Activate License	License key was successfully entered. The license will be activated after rebooting your system.	7316.7: Engineering Setup>System>Install/Unit Config>License>License Management In the above menu, the Activate License procedure completed successfully.
	Append Key Frame	[Append Key Frame] cannot be executed. FMx is not assigned to a user region.	2152: Frame Memory >Animation >Create Key Frame In the above menu, an attempt was made to execute [Append Key Frame], but it failed because the frame memory output (FMx) is not assigned to a user region. 7331.4: Make the assignment in the Engineering Setup >Switcher >Config >User1-8 Config menu, and try again.



Icon	Title	Message	Description
	Append Key Frame	[Append Key Frame] cannot be executed. Key Frame Register is locked. (UserX)	2152: Frame Memory >Animation >Create Key Frame In the above menu, an attempt was made to execute [Append Key Frame] using a locked register (UserX region). Unlock the register.
		[Append Key Frame] cannot be executed. Key Frame Register is busy. (UserX)	2152: Frame Memory >Animation >Create Key Frame In the above menu, an attempt was made to execute [Append Key Frame] using a register (UserX region) into which files are being loaded. Try again after file loading has finished.
		[Append Key Frame] cannot be executed. Key Frame Register is being edited. (UserX)	2152: Frame Memory >Animation >Create Key Frame In the above menu, an attempt was made to execute [Append Key Frame] using a register (UserX region) with which a keyframe creating or editing operation is proceeding. Try again after the keyframe operation has finished.
		[Append Key Frame] cannot be executed. Key Frame Register is full. (UserX)	2152: Frame Memory >Animation >Create Key Frame In the above menu, an attempt was made to execute [Append Key Frame] using a register (UserX region) in which no keyframe remains.
		[Append Key Frame] cannot be executed. Key Frame Register is not active.(UserX)	2152: Frame Memory >Animation >Create Key Frame In the above menu, an attempt was made to execute [Append Key Frame] using a register for which the appropriate region selection button in the numeric keypad control block is not selected. Try again after you select the region selection button [UserX] in the numeric keypad control block.
	Change Password	The password has been successfully changed.	7317.1: Engineering Setup >System >Maintenance >Setup Operation Lock In the above menu, the password was successfully changed.
	Change Password	Failed. The password was not changed.	7317.1: Engineering Setup >System >Maintenance >Setup Operation Lock In the above menu, the password was not changed.
	Create Key Frame	[Create Key Frame] cannot be executed. FMx is not assigned to a user region.	2152: Frame >Memory >Animation >Create Key Frame In the above menu, an attempt was made to execute [Create Key Frame], but it failed because the frame memory output (FMx) is not assigned to a user region. 7331.4: Make the assignment in the Engineering Setup >Switcher >Config >User1-8 Config menu, and try again.


Icon	Title	Message	Description
	Create Key Frame	[Create Key Frame] cannot be executed. Key Frame Register is locked. (UserX)	2152: Frame Memory >Animation >Create Key Frame In the above menu, an attempt was made to execute [Create Key Frame] using a locked register (UserX region). Unlock the register.
		[Create Key Frame] cannot be executed. Key Frame Register is busy. (UserX)	2152: Frame Memory >Animation >Create Key Frame In the above menu, an attempt was made to [Create Key Frame] using a register (UserX region) into which files are being loaded. Try again after file loading has finished.
		[Create Key Frame] cannot be executed. Key Frame Register is being edited. (UserX)	2152: Frame Memory >Animation >Create Key Frame In the above menu, an attempt was made to execute [Create Key Frame] using a register (UserX region) with which a keyframe creating or editing operation is proceeding. Try again after the keyframe operation has finished.
		[Create Key Frame] cannot be executed. There is no free Key Frame. (UserX)	2152: Frame Memory >Animation >Create Key Frame In the above menu, an attempt was made to execute [Create Key Frame] for a UserX region with insufficient usable keyframes.
		[Create Key Frame] cannot be executed. Key Frame Register is not active. (UserX)	2152: Frame Memory >Animation >Create Key Frame In the above menu, an attempt was made to execute [Create Key Frame] using a register for which the appropriate region selection button in the numeric keypad control block is not selected. Try again after you select the region selection button [UserX] in the numeric keypad control block.
	Deactivate License	The license will be deactivated after rebooting your system.	7316.7: Engineering Setup>System>Install/Unit Config>License>License Management In the above menu, the Deactivate License procedure completed successfully.
	Disk Format	Success!!	7317: Engineering Setup>System>Maintenance In the above menu, removable disk formatting procedure completed successfully.
		Failure. Make sure of the memory card.	7317: Engineering Setup>System>Maintenance In the above menu, removable disk formatting procedure failed. Check that the memory card is correctly inserted.





Icon	Title	Message	Description
	Error	This operation is cancelled, because the register is locked. Please change the register status to be unlocked first.	6211.1: Effect>Master Timeline>Store>Edit 6311.1: Snapshot>Master Snapshot>Store>Edit 6411.1: Shotbox>Register>Store/Recall>Edit In the above menu, an attempt was made to assign to a register that is locked. Unlock the register before carrying out the assignment.
		The file was not able to be read.	7142.1: File >Shotbox, Macro >File Edit In the above menu, [Off Line Edit] was pressed but the selected file could not be read. Select the file again, and press [Off Line Edit] once more.
		It was not possible to make a file.	7142.3: File >Shotbox, Macro >File Edit >Off Line Edit In the above menu, when storing, the file could not be written. Try the store once more.
		Failed...	7162: File>All, External File>Import/Export In the above menu, importing a file failed. Check the format of the original file, and try again.
		The Source and the target are the same directory. Please change the source or the target directory.	7172: File >Configure >Unit ID Copy In the above menu, the same directory and ID were selected for source and target. Select a different directory and ID.
	File Frame Memory	Some requests are skipped. Following operation is not permitted. — Loading that will cause duplicate register name.	7151: File >Frame Memory 7162: File >All, External File >Import/Export In the above menu, an attempt was made to load a file of a name already existing in the register.
	File Open Status	ERROR (01)	533X: Device>DDR/VTR menu When an error is returned from the DDR/VTR, one of these messages appears, depending on the error number. Use Menu7355:Engineering Setup>DCU>Serial Port Assign or Menu7325.4:Engineering Setup>Panel>Device Interface>Serial Port Assign to check the device settings.
		ERROR (02)	
		ERROR (FF): No target device has been assigned	
	GPI Input	Please set Target.	7325.1/2: Engineering Setup>Panel>Device Interface>GPI Input 7344.1/2: Engineering Setup>DME>Device Interface>DME1 GPI Input 7344.5/6: Engineering Setup>DME>Device Interface>DME2 GPI Input 7352/7352.1: Engineering Setup>DCU>GPI Input Assign In the above menus, when making a setting, a parameter setting value was incorrect. Check the settings, and try again.
		Please set Trigger Type.	
		Please set Reg No.	
		Please set Aux Bus No.	
		Please set Src No.	
		Please set Pulse Width.	
		Please set Pulse Timing.	







Icon	Title	Message	Description
	GPI Output	Please set Target.	7325.3/4: Engineering Setup>Panel>Device Interface>GPI Output
		Please set Trigger Type.	7337.2/3: Engineering Setup>Switcher>Device Interface>GPI Output
		Please set Reg No.	7337.4/5: Engineering Setup>Switcher>Device Interface>GPI Output
		Please set Aux Bus No.	7344.3/4: Engineering Setup>DME>Device Interface>DME1 GPI Output
		Please set Src No.	7344.7/8: Engineering Setup>DME>Device Interface>DME2 GPI Output
		Please set Pulse Width.	7354/7354.1: Engineering Setup>DCU>GPI Output Assign
		Please set Pulse Timing.	In the above menus, when making a setting, a parameter setting value was incorrect. Check the settings, and try again.
	HDD Format	Failure. HDD device is busy. In order to complete HDD format, System needs to be restarted and formatted again. System will be restarted, then please execute HDD format again.	7317: Engineering Setup>System>Maintenance In the above menu, the hard disk formatting procedure failed. If the hard disk is functioning correctly, or in some cases when there is damage to the disk, it may not be possible to format the disk correctly in a single attempt. In such cases, it is necessary to restart the system, and then carry out formatting again. Press [OK] to restart the system.
	HDD Format	Success!! System will be restarted.	7317: Engineering Setup>System>Maintenance In the above menu, the hard disk formatting procedure completed successfully. Press [OK] to restart the system.
	Initial Read	Initializing now...	This popup message appears during menu startup, while system information is being read in.
	Install	No Task. Select a package on the list.	7316.10: Engineering Setup>System>Install/Unit Config>Install In the above menu, the package for installation was not selected. Select a package to be installed.









Icon	Title	Message	Description
	Install	(1) Please select the MKS-8010A package on the list (2) Please select the MKS-8010 package (not MKS-8010A) on the list.	7316.10: Engineering Setup>System>Install/Unit Config>Install In the above menu, the menu software installation package does not match the model on which it is to be installed. (1) When the MKS-8010 installation package is selected on the MKS-8010A (2) When the MKS-8010A installation package is selected on the MKS-8010
		Some files are skipped.	7316.10: Engineering Setup>System>Install/Unit Config>Install In the above menu, some program files were not installed, for example because the hardware is not present. Check the skipped files against the hardware configuration, to confirm that the installation was completed correctly.
		Not Found. The software package does not exist on the removable disk.	7316.10: Engineering Setup>System>Install/Unit Config>Install In the above menu, the software package to be installed was not found. Check that the memory card is correctly inserted, and try the installation once more.
	Install	All processes have succeeded.	7316.10: Engineering Setup>System>Install/Unit Config>Install In the above menu, the installation procedure completed successfully.

Icon	Title	Message	Description
	Install Error	Target: MENU  Error code: (1) INSTALL_RPM_ERROR (2) INSTALL_DPKG_ERROR  Program file: XXXXX	An error occurred during software installation on (1) the MKS-8010A or (2) the MKS-8010.
		Target: MENU  Error code: INSTALL_RCVDA_ERROR  Program file: XXXXX	An error occurred during recovery data installation. <sup>a)</sup>
		Target: MENU  Error code: INSTALL_UNCOMPRESS_ERROR  Program file: XXXXX	During software installation, an attempt to uncompress a file failed.
		Target: MENU  Error code: Error message received from the Switcher/DME/Panel Processor  Program file: XXXXX	During software installation, an error occurred on the Switcher/DME/Panel Processor. The displayed message is the same as shown in "Error Messages Shown in the Error Information Menu" ( <i>page 579</i> ).

Icon	Title	Message	Description
	Install error	Target: XXXXX Error code: XXXXX Program file: XXXXX	7316.10: Engineering Setup>System>Install/Unit Config>Install In the above menu, if an error occurs during installation, this shows: 1. Target: Target device for installation 2. Error code: Message returned by device 3. Program file: Program file name where error occurred Check the following, and try the installation once more. •Are you using the correct software package? •Has it been downloaded correctly? (Retry download)
		Target: XXXXX Error code: INSTALL_ERR_NOCONFIG No config file is found.	7316.10: Engineering Setup>System>Install/Unit Config>Install In the above menu, when installing, an installation settings file could not be read in correctly. Download another set of installation files, and try the installation once more.
		Target: XXXXX Error code: INSTALL_ERR_NOPROGRAM No program file is found.	7316.10: Engineering Setup>System>Install/Unit Config>Install In the above menu, when installing, a program file included in the installation settings file could not be read in correctly. Download another set of installation files, and try the installation once more.
	Internal Error: Data HDD	The user data partition of hard disk drive is damaged, and all data is lost. The hard disk drive needs to be reformatted. Please execute HDD format on Page 7317.	When starting up the menu system, an error was found on the hard disk. In the 7317: Engineering Setup>System>Maintenance menu, execute [HDD Format].
	Internal Error: HDD is incorrect	Hard disk is incorrect or not formatted. To format the hard disk, please execute "HDD Format" on Page 7317.	
	Internal Error: Recovery HDD	The recovery data partition of hard disk is damaged, and all data is lost. The data needs to be recovered. Please execute Restore Data on Page 9999.	During menu startup, an error was found in the recovery data partition of the hard disk. Restore the recovery data using menu 9999. <sup>a)</sup>

Icon	Title	Message	Description
	Internal Error: Temporary HDD	The system data partition of hard disk drive is damaged. The hard disk drive needs to be reformatted. Please execute HDD format on Page 7317. Please make sure to save all data in the user data partition of hard disk drive to any other device or media, before reformatted.	When starting up the menu system, an error was found on the hard disk. In the 7317: Engineering Setup>System>Maintenance menu, execute [HDD Format].
	Invalid Name	Empty...	2121: Frame Memory>Edit>Freeze>Store In the above menu, a Store was carried out without specifying a name. Alternatively: 71XX: File Menu 7171: File>Configure>Directory In the above menu, when renaming a file or creating a directory, the name was not entered. Enter the name correctly.
		The file exists already...	2121: Frame Memory>Edit>Freeze>Store In the above menu, the file name specified for a store operation already exists in the switcher. Specify a different name.
	Loading Texture Pattern	Target File: XXXXX Failed to load target bmp file./ Illegal Name. This operation is canceled.	7316.9: Engineering Setup >System >Install/ Unit Config >Texture Package In the above menu, an error occurred when loading a texture file. Delete texture files with an illegal size or illegal file name, then try again.
		Target File: XXXXX Failed to load target bmp file./ Illegal Size. This operation is canceled.	
	Make Package	Texture file: XXXXX Not Found. This texture file does not exist on the removable disk.	7316.9: Engineering Setup >System >Install/ Unit Config >Texture Package In the above menu, when loading an already created texture package, a texture file within the texture package was not found.
		This operation is cancelled, because capacity is full. Please clear texture pattern.	7316.9: Engineering Setup >System >Install/ Unit Config >Texture Package In the above menu, when making a texture package, there was insufficient space on a memory card.
	Password	Password Incorrect	7317.1: Engineering Setup >System >Maintenance >Setup Operation Lock In the above menu, the wrong password was entered. Enter the correct password.
	Recovery Complete	System disk has been damaged, and then recovered. Shutdown and restart the system is recommended to exit from recovery mode.	Corruption has been detected in the flash memory for starting the menu CPU, but this has been recovered. Since the system is operating in recovery mode, shut down and restart as soon as practicable. <sup>a)</sup>

Icon	Title	Message	Description
	Restore Data	Restoring...	Appears while restoring recovery data using Menu 9999. <sup>a)</sup>
		Success!!	Appears when recovery data has been successfully restored using Menu 9999. <sup>a)</sup>
		Recovery binary on the USB storage device is not found.	Recovery data for restoring using Menu 9999 cannot be found on the memory card. Check that the recovery data has been correctly copied to the memory card, and restart the system to retry. <sup>a)</sup>
	Restore Data	Failure. Copying recovery data hasn't finished.	Restoring recovery data using Menu 9999 failed. Check that the recovery data has been correctly copied to the memory card, and restart the system to retry. <sup>a)</sup>
	Set Time/Date	Error: Wrong Format.	7317: Engineering Setup>System>Maintenance In the above menu, an incorrect date and time was specified. Specify the date and time correctly.
	Warning	No Switcher information available. Please confirm "Network Configuration" on Page 7311.	When starting up the menu system, the switcher is not present in the system information. Check the Data LAN connections, and in the 7311:Engineering Setup>System>Network Config menu, retry [Auto Config].
	Warning	This operation will be cancelled, because the register is locked. Please change the register status to be unlocked first.	6211.1: Effect>Master Timeline>Store>Edit 6311.1: Snapshot>Master Snapshot>Store>Edit 6411.1: Shotbox>Register>Store>Edit In the above menus, an attempt was made to store in a locked register. Unlock the register before carrying out the store.
	Warning (System Config)	Illegal Network Config Information (Page 7311)	When starting up the menu system, if the system information read from the control panel is not correct, one of these messages, that corresponds to the situation appears. Following the message, use 7311:Engineering Setup>System>Network Config or 7312:Engineering Setup>System>System Config to retry the operation.
		Illegal Panel Assign Information for Dual Simul Operation (Page 7312)	
		No Panel Assign Information (Page 7312)	
		No Switcher Assign Information (Page 7312)	
		No System Operation Mode Information (Page 7312)	
		No DME Channel Information	

a) MKS-8010A only

## Error Messages Shown in the Error Information Menu

If a file transfer related error occurs, the Error Information menu appears to the following error messages.

### Error messages displayed when an error is detected by the switcher processor

The following messages (except message a)) indicate data error; load or save the data again. If the message still appears, contact your Sony service representative.

Messages relating to loading	Messages relating to saving
PUT CLOSE (0x1)	GET OPEN (0x1)
PUT CLOSE (0x2)	GET OPEN (0x2)
PUT CLOSE (0x3)	GET OPEN (0x3)
PUT CLOSE (0x4)	GET OPEN (0x4)
PUT CLOSE (0x5)	GET OPEN (0x5)
PUT CLOSE (0x6)	GET OPEN (0x6)
PUT CLOSE (0x7)	GET OPEN (0x7)
PUT CLOSE (0x8)	GET OPEN (0x8)
PUT CLOSE (0x9)	GET OPEN (0x9)
PUT CLOSE (0xA)	GET OPEN (0xA)
PUT CLOSE (0xB) <sup>a)</sup>	GET OPEN (0xB) <sup>a)</sup>
PUT CLOSE (0xC)	GET OPEN (0xC)

a) This occurs if the User Region Config state is different for save and load. Make the User Region Config the same as when the data was saved before carrying out a load operation.

### Error messages when an error is detected displayed by the control panel

When one of the following messages (except messages a) and b)) appears, load or save the data again. If the message still appears, contact your Sony service representative.

Message
ERROR: NOT SUPPORTED
ERROR: DESTINATION NG
ERROR: OUT OF MEMORY
ERROR: ILLEGAL BLOCK ID

Message
ERROR: CANNOT PROCESS
ERROR: CLF CHECK SUM ERROR <sup>a)</sup>
ERROR: SEQUENCE ERROR
ERROR: OUT OF BUFFER
ERROR: PACKET FORMATING
ERROR: UPLOAD DATA SIZE OVER
ERROR: CANNOT CREATE HEADER
ERROR: INVALID REG NO
ERROR: DOWNLOAD FILE SIZE OVER
ERROR: INVALID VERSION
ERROR: INVALID FORMAT
ERROR: INVALID MODEL
ERROR: INVALID CATEGORY
ERROR: WRONG FILE SIZE
ERROR: UNCOMPRESS ERROR
ERROR: CHECK SUM ERROR <sup>a)</sup>
ERROR: BROKEN DATA <sup>a)</sup>
ERROR: LOCK REGISTER <sup>b)</sup>

- a) This occurs if a problem in the data makes normal load or save operation impossible. Either create the register data again, or resave.
- b) This appears if an attempt is made to load from a locked register. Release the lock, and repeat the load.

## Error messages displayed by the DME processor

When one of the following messages (except message a)) appears, load or save the data again. If the message still appears, contact your Sony service representative.

Message
<filename>:ERROR:File size is zero
<filename>:ERROR:Not complete
<filename>:ERROR:Timeout
<filename>:ERROR:UnKnown
<filename>:ERROR:Can't Rename
<filename>:ERROR:Can't Copy
<filename>:ERROR:Busy, try later <sup>a)</sup>

- a) Even if operation such as batch deletion of snapshot or effect registers appears from the menu to have completed, if internal processing is still being carried out when an attempt is made to carry out another operation, then this message appears. Wait a short time, then retry.

## Error messages displayed when an error is detected by the menu CPU

When one of the following messages (except messages a) to d)) appears, load or save the data again. If the message still appears, contact your Sony service representative.

Message
ERROR: CONNECT ERROR
ERROR: GET CONF FILE
ERROR: SERVER BUSY
ERROR: NO RESULT FILE
ERROR: SERVER NOT RESPOND <sup>a)</sup>
ERROR: SRC FILE OPEN
ERROR: DST FILE OPEN
ERROR: SRC FILE READ
ERROR: DST FILE READ
ERROR: SRC FILE WRITE
ERROR: DST FILE WRITE
ERROR: MAKE DIRECTORY
ERROR: FILE DELETE
ERROR: LOCAL STORAGE ACCESS
ERROR: COMMAND RESULT
ERROR: VERIFY ERROR <sup>b)</sup>
ERROR: NO FREE SPACE <sup>c)</sup>
ERROR: SAME FILE ALREADY EXIST <sup>d)</sup>

- a) If there is no response at all from the processor on the Data LAN, this message appears. Check the Network Config, Data-LAN connections, and processor power supply.
- b) This appears if the memory card cannot be accessed normally.  
Check whether the memory card is damaged, whether it is correctly connected to the memory card slot, and whether the USB Primary settings are correct.
- c) This appears if there is insufficient free space on the memory card or hard disk.
- d) This appears if an attempt is made to transfer a frame memory file whereas another file with the same name already exists on the switcher. Change the name, or delete the file on the switcher, then repeat the transfer.

# Data Saved by [Setup Define] and [Initial Status Define]

This section lists the data saved in the Engineering Setup> System> Start Up menu, by each of [Setup Define] and [Initial Status Define].

## Data saved by [Setup Define]

Type	Menu number	Menu path	Saved data
Included in Panel Setup	7321	Engineering Setup >Panel >Config	All data relating to Config menu
	7321.1	Engineering Setup >Panel >Config >DSK Fader Assign	All data relating to DSK Fader Assign menu
	7321.2	Engineering Setup >Panel >Config >Key Trans Link	All data relating to Key Trans Link menu
	7321.3	Engineering Setup >Panel >Config >External Bus Link	All data relating to External Bus Link menu
	7321.7	Engineering Setup >Panel >Config >10 Key Region Assign	All data relating to 10 Key Region Assign menu
	7321.8	Engineering Setup >Panel >Config >Program Button	All data relating to Program Button menu
	7322.1 to 7322.4	Engineering Setup >Panel >Xpt Assign >Table1(/2/3/4) Button Assign	All data relating to Table1(/2/3/4) Button Assign menu
	7322.5	Engineering Setup >Panel >Xpt Assign >Main,V/K Pair Assign	<Xpt Shift Mode> and <Display Shift Mode> group data
	7322.7	Engineering Setup >Panel >Xpt Assign >Table Assign	Multiple cross-point assignment data
	7322.10	Engineering Setup >Panel >Side Flags Button Assign	All data relating to Side Flags Button Assign menu
	7323	Engineering Setup >Panel >Aux Assign	Data relating to bus assignment to AUX delegation buttons
	7323.1	Engineering Setup >Panel >Aux Assign >RTR Mode Setting	All data relating to RTR Mode Setting menu
	7324	Engineering Setup >Panel >Prefs/Utility	All data relating to function assignment to user preference buttons
	7324.1	Engineering Setup >Panel >Prefs/Utility >Utility Module Assign	All data relating to function assignment to utility/shotbox control block
	7325	Engineering Setup >Panel >Device Interface	All data relating to Device Interface menu

Type	Menu number	Menu path	Saved data
	7325.1	Engineering Setup >Panel >Device Interface >GPI Input	All data relating to GPI Input menu
	7325.3	Engineering Setup >Panel >Device Interface >GPI Output	All data relating to GPI Output menu
	7325.4	Engineering Setup >Panel >Device Interface >DCU Serial Port Assign	All data relating to DCU Serial Port Assign menu
	7326	Engineering Setup >Panel >Operation	All data relating to Operation menu
	7326.2	Engineering Setup >Panel >Operation >Effect Mode	All data relating to Effect Mode menu (excluding [Default KF Duration] setting values)
	7326.3	Engineering Setup >Panel >Operation >Flexi Pad Mode	All data relating to Flexi Pad Mode menu
	7326.4	Engineering Setup >Panel >Operation >Custom Button	All data relating to Custom Button menu
	7326.5	Engineering Setup >Panel >Operation >Sensitivity	All data relating to Sensitivity menu
	7326.6	Engineering Setup >Panel >Operation >Macro	All data relating to Macro menu
	7326.7	Engineering Setup >Panel >Operation>Custom Button >CCP-8000 Button	All data relating to CCP-8000 Button menu
	7326.8	Engineering Setup >Panel >Operation >Custom Button >CCP-9000 Button	All data relating to CCP-9000 Button menu
	7327	Engineering Setup >Panel >Maintenance	Setting data for the following buttons: <ul style="list-style-type: none"> <li>• [Screen Saver]</li> <li>• [LCD Brightness]</li> <li>• [LED Brightness]</li> <li>• [Switch Brightness]</li> <li>• [Touch Beep]</li> </ul>
	7351 to 7355	Engineering Setup >DCU	All data relating to DCU
	7361 to 7367	Engineering Setup >Router/Tally	All data relating to router interface and tally interface
Included in Switcher Setup	7331 7331.1 7331.2 7331.3	<ul style="list-style-type: none"> <li>• Engineering Setup &gt;Switcher &gt;Config</li> <li>• Engineering Setup &gt;Switcher &gt;Config &gt;M/E Output Assign</li> <li>• Engineering Setup &gt;Switcher &gt;Config &gt;PGM Config</li> <li>• Engineering Setup &gt;Switcher &gt;Config &gt;K-PVW Config</li> </ul>	<ul style="list-style-type: none"> <li>• &lt;M/E Config&gt; group setting data</li> <li>• All data relating to M/E Output Assign menu</li> <li>• All data relating to PGM Config menu</li> <li>• All data relating to K-PVW Config menu</li> </ul>
	7331.4	Engineering Setup >Switcher >Config >User1-8 Config	All data relating to User1-8 Config menu

Type	Menu number	Menu path	Saved data
	7331.5	Engineering Setup >Switcher >Config >Logical M/E Assign	All data relating to Logical M/E Assign menu
	7331.6	Engineering Setup >Switcher >Config >DME Config	All data relating to DME Config menu
	7331	Engineering Setup >Switcher >Config	Setting data for knob 3 (Phase)
	7331	Engineering Setup >Switcher >Config	Setting data for <Switching Timing> group
	7331.7	Engineering Setup >Switcher >Config >Side Flags	All data relating to Side Flags menu
	7332	Engineering Setup >Switcher >Input	Settings of [Input Phase Adj], [Through Mode] and [Matte Illeg Col Limit]
	7332.1	Engineering Setup >Switcher >Input >Video Process	All data relating to Video Process menu
	7333	Engineering Setup >Switcher >Output	Settings of the following reference outputs: <ul style="list-style-type: none"> <li>• Knob 1 (Output No)</li> <li>• Knob 2 (Line)</li> <li>• Knob 3 (Time)</li> </ul>
	7333.1	Engineering Setup >Switcher >Output >Output Assign	All data relating to Output Assign menu
	7333.2	Engineering Setup >Switcher >Output >Video Clip	All data relating to Video Clip menu
	7333.3	Engineering Setup >Switcher >Output >V Blank/Throuh	Setting of [V Blank Mask], and [Through Mode] setting data for each output
	7333.4	Engineering Setup >Switcher >Output >Safe Title	All data relating to Safe Title menu
	7333.5	Engineering Setup >Switcher >Output >4:3 Crop	All data relating to 4:3 Crop menu
	7334	Engineering Setup >Switcher >Transition	Following setting data in the Transition menu: <ul style="list-style-type: none"> <li>• &lt;Transition Preview&gt; group</li> <li>• &lt;Key Transition&gt; group</li> <li>• [Bus Toggle], [Split Fader]</li> <li>• &lt;FTB&gt; group</li> </ul>
	7334.1	Engineering Setup >Switcher >Transition >Preset Color Mix	All data relating to Preset Color Mix menu
	7334.2	Engineering Setup >Switcher >Transition >Transition Curve	Setting data for <Fader Curve> group
	7335	Engineering Setup >Switcher >Key/Wipe/FM	All data relating to Key/Wipe/FM menu
	7335.1	Engineering Setup >Switcher >Key/Wipe/FM >Show Key	All data relating to Show Key menu

Type	Menu number	Menu path	Saved data
	7335.2	Engineering Setup >Switcher >Key/Wipe/FM >DSK Auto Drop	All data relating to DSK Auto Drop menu
	7336.1	Engineering Setup >Switcher >Link >Internal Bus Link	All data relating to Internal Bus Link menu
	7336.4	Engineering Setup >Switcher >Link >GPI Link	All data relating to GPI Link menu
	7336.6	Engineering Setup >Switcher >Link >M/E Link	All data relating to M/E Link menu
	7336.7	Engineering Setup >Switcher >Link >Key Transition Link	All data relating to Key Transition Link menu
	7337.1	Engineering Setup >Switcher >Device Interface >Remote Assign	All data relating to Remote Assign menu
	7337.2	Engineering Setup >Switcher >Device Interface >GPI Input	All data relating to GPI Input menu
	7337.4	Engineering Setup >Switcher >Device Interface >GPI Output	All data relating to GPI Output menu
	7337.5	Engineering Setup >Switcher >Device Interface >AUX Control	All data relating to AUX Control menu
	7337.6	Engineering Setup >Switcher >Device Interface >DME Type Setting	All data relating to DME Type Setting menu <sup>a)</sup>
	7322.5	Engineering Setup >Panel >Xpt Assign >Main,V/K Pair Assign	Cross-point assignment settings (excluding <Xpt Shift Mode> and <Display Shift Mode> groups)
	7322.6	Engineering Setup >Panel >Xpt Assign >Src Name/LCD Color	<ul style="list-style-type: none"> <li>Names of source signals</li> <li>Color of source name display for each source signal</li> </ul>
	7326.2	Engineering Setup >Panel >Operation >Effect Mode	Setting of [Default KF Duration] for switcher keyframes
Included in DME Setup	3221	Misc >Safe Title	All data relating to Safe Title menu
	7341	Engineering Setup >DME >Input	All data relating to Input menu
	7341.1	Engineering Setup >DME >Input >TBC Center	All data relating to TBC Center menu <sup>b)</sup>
	7343	Engineering Setup >DME >Output	Video clip level adjustment values for DME1 and DME2 outputs <sup>b)</sup>
	7343.1	Engineering Setup >DME >Output >Monitor Output	All data relating to Monitor Output menu <sup>a)</sup>
	7344	Engineering Setup >DME >Device Interface	All data relating to Device Interface menu
	7344.1	Engineering Setup >DME >Device Interface >DME1 GPI Input	All data relating to DME1 GPI Input menu

Type	Menu number	Menu path	Saved data
	7344.3	Engineering Setup >DME >Device Interface >DME1 GPI Output	All settings relating to DME1 GPI Output menu
	7344.4	Engineering Setup >DME >Device Interface >DME2 GPI Input	All settings relating to DME2 GPI Input menu
	7344.6	Engineering Setup >DME >Device Interface >DME2 GPI Output	All settings relating to DME2 GPI Output menu
	7326.2	Engineering Setup >Panel >Operation >Effect Mode	Settings relating to [Default KF Duration] for DME keyframes

a) For MVE-9000 only

b) Only when using the MVE-8000A/9000 SDI interface

## Data saved by [Initial Status Define]

Type	Menu number	Menu path	Saved data
Included in Panel	—	—	On/off settings of [KEY3] and [KEY4] key bus switching buttons
	3212	Misc >Enable >Plug-In Editor	All data relating to Plug-In Editor menu
Included in Switcher (Same as data saved in Snapshots)	—	—	<ul style="list-style-type: none"> <li>• For each M/E, setting data relating to the following: cross-points, transitions, Key1 to Key4 (including settings in the independent key transition control block), wipes, DME wipes, video processing</li> <li>• Color backgrounds 1/2</li> <li>• Frame memory</li> <li>• AUX bus (including video processing settings)</li> <li>• Monitor bus</li> </ul>
	3213	Misc >Enable >Side Flags	All data relating to Side Flags menu
	3211	Misc >Enable >Port Enable	Setting data for <Switcher> group
Included in DME	—	—	Three-dimensional transformation data
	4111	DME >Edge >Border/Crop	All data relating to Border/Crop menu
	4112	DME >Edge >Beveled Edge	All data relating to Beveled Edge menu
	4121 to 4124	DME >Video Modify	All data relating to Video Modify menu
	4131	DME >Freeze >Freeze	All data relating to Freeze menu

Type	Menu number	Menu path	Saved data
	4141 (4141.1 to 4141.28)	DME >Non Linear	All data relating to Non Linear menu
	4151	DME >Light/Trail >Lighting	All data relating to Lighting menu
	4152	DME >Light/Trail >Trail	All data relating to Trail menu
	4153	DME >Light/Trail >Motion Decay	All data relating to Motion Decay menu
	4154	DME >Light/Trail >KF Strobe	All data relating to KF Strobe menu
	4161	DME >Input/Output >Bkgd	All data relating to Bkgd menu
	4162	DME >Input/Output >Video/Key	All data relating to Video/Key menu
	4163	DME >Input/Output >Process	All data relating to Process menu
	4164	DME >Input/Output >Graphic	All data relating to Graphic menu
	4211, 4221	Global Effect >Ch1-Ch4 >Combine Priority Global Effect >Ch5-Ch8 >Combine Priority	All data relating to Combine Priority menu
	4212, 4222	Global Effect >Ch1-Ch4 >Brick Global Effect >Ch5-Ch8 >Brick	All data relating to Brick menu
	4213, 4223	Global Effect >Ch1-Ch4 >Shadow Global Effect >Ch5-Ch8 >Shadow	All data relating to Shadow menu
	4113	DME >Edge >Key Border	All data relating to Key Border menu <sup>a)</sup>
	4114	DME > Edge> Art Edge	All data relating to Art Edge menu <sup>a)</sup>
	4115	DME >Edge >Flex Shadow	All data relating to Flex Shadow menu <sup>a)</sup>
	4116	DME >Edge >Wipe Crop	All data relating to Wipe Crop menu <sup>a)</sup>
	4117	DME >Edge >Color Mix	All data relating to Color Mix menu <sup>a)</sup>
	4127	DME >Video Modify >Mask	All data relating to Mask menu <sup>a)</sup>
	4156	DME >Light/Trail >Spot Lighting	All data relating to Spot Lighting menu <sup>a)</sup>
	4155	DME >Light/Trail >Wind	All data relating to Wind menu <sup>a)</sup>
	4171	DME >Enhanced Video Modify >Sketch	All data relating to Sketch menu <sup>a)</sup>
	4172	DME >Enhanced Video Modify >Metal	All data relating to Metal menu <sup>a)</sup>
	4173	DME >Enhanced Video Modify >Dim & Fade	All data relating to Dim & Fade menu <sup>a)</sup>

Type	Menu number	Menu path	Saved data
	4174	DME >Enhanced Video Modify >Glow	All data relating to Glow menu <sup>a)</sup>
	3211	Misc >Enable >Port Enable	<DME1> and <DME2> group data

a) For MVE-9000 only

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