

Operating Instructions **Vol.2**

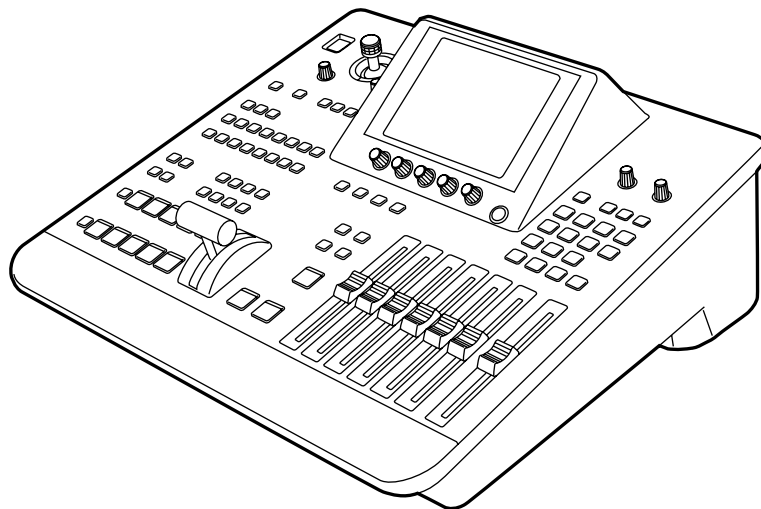
Digital AV Mixer

Model No. **AG-HMX100P**

Model No. **AG-HMX100E**

Volume **2**

Note that Operating Instructions Vol. 2 describes advanced operations of the digital AV mixer.
For instructions on basic operations of the digital AV mixer, refer to Operating Instructions Vol. 1 (printed document) supplied with this unit.



Before operating this product, please read the instructions carefully and save this manual for future use.

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List of Transition Patterns

List of Key Patterns

[PATTERN EDGE]

An edge can be added to a pattern.

Rotary 1	Rotary 2	Rotary 3	Rotary 4	Rotary 5
PATTERN EDGE	HARD	WIDTH 32	COLOR WHITE	
	HARD SOFT BORDER SOFT BORDER	1-255	WHITE YELLOW CYAN GREEN MAGENTA RED BLUE BLACK CUSTOM1 CUSTOM2	

Select the edge of transition patterns from [HARD], [SOFT], [BORDER], and [SOFT BORDER] using the rotary 2 control. The factory default setting is [HARD].

Set [WIDTH] in the range of 1 to 255 using the rotary 3 control.

The factory default setting is 32.

For No. 701 to No. 707 (24 to 27) and No. 801 to No. 814 (183 to 196) patterns, [WIDTH] can be set only to 1 or 2.

Use the rotary 4 control to set [COLOR] (color of the edge) to one of the colors in the table shown below.

Setting	Color
[WHITE] (factory default setting)	White
[YELLOW]	Yellow
[CYAN]	Cyan
[GREEN]	Green
[MAGENTA]	Magenta
[RED]	Red
[BLUE]	Blue
[BLACK]	Black
[CUSTOM1] or [CUSTOM2]	Grey as the factory default setting

When [CUSTOM1] or [CUSTOM2] is selected, the same color as set in the [BACK MATTE] submenu of the [INT VIDEO] menu is applied (→ page Vol.1-29).

◆ NOTE

- If the PinP pattern is selected and Still is applied to source video B, Still is cancelled at the same time as the transition lever is operated. (The PinP pattern and Still cannot be used as the same time.)
- [SOFT BORDER] cannot be selected for No. 701 to No. 707 (24 to 27) and No. 801 to No. 814 (183 to 196) patterns.

[EFFECTS]

Select the effect of [SHADOW] or [TRAIL] using the rotary 2 control.

SHADOW: Adds black shadow to the pattern.

TRAIL: Leaves trails of the moving pattern.

Select [OFF] to apply no effect.


Rotary 1	Rotary 2	Rotary 3	Rotary 4	Rotary 5
EFFECTS	OFF			
	OFF SHADOW TRAIL			

If [SHADOW] is selected

Rotary 1	Rotary 2	Rotary 3	Rotary 4	Rotary 5
EFFECTS	SHADOW			

Set the position of the shadow by operating the joystick while holding down the SHIFT key.

The CENTER, SCENE GRABBER, and HOLD buttons flash temporarily.

To cancel the shadow position setting, press the  key while holding down the SHIFT key in the state where [EFFECTS] is selected (inverted to black). At the same time as the setting becomes [OFF], the specified shadow position is reset.

If [TRAIL] is selected

Rotary 1	Rotary 2	Rotary 3	Rotary 4	Rotary 5
EFFECTS	TRAIL	SELF	TIME	16
	SELF SELF-SPARK BODM BODM-SPARK	1-32		

Select the spark for the trail (the twinkling effect of trails) from [SELF] (original video), [SELF-SPARK] (spark of original video), [BODM] (border color), and [BODM-SPARK] (border spark) using the rotary 3 control.

When [BODM] or [BODM SPARK] is selected, the color set in the [PATTERN EDGE] submenu of the [TRANSITION] menu is used as the border color.

Set the continuation time of the trail in the range of 1 to 32 using the rotary 4 control.

To set the offset position of the trail, operate the joystick while holding down the SHIFT key.

The CENTER, SCENE GRABBER, and HOLD buttons flash temporarily.

The offset position setting can be cancelled in the same way as for canceling the shadow position setting.

◆ NOTE

The trail or shadow settings are canceled when TRAIL or SHADOW is selected in the [DSK EFFECTS] submenu of the [DSK FADE] menu or when the multi-strobe effect or DECAY is selected in the [VIDEO EFFECTS] menu.

Setting the Basic Pattern Key

[BASIC PATTERN KEY]/Pattern Key

[PATTERN KEY]

The [BASIC PATTERN KEY] menu or [PATTERN KEY] menu is used to create a key with key patterns.

The [BASIC PATTERN KEY] menu appears when the selected pattern has a number in the range of 3001 to 3046, and the [PATTERN KEY] menu appears when the selected pattern has a number of 3301 or larger.

→ For pattern numbers, refer to “List of Key Patterns” at the back of Volume 2.

[BASIC PATTERN KEY] menu

This menu is displayed when the selected pattern has a number in the range of No. 3001 to No. 3046.

POS.	X 128	Y 128	■□□□□□□□□□□□□□□□□	
	Z 196		■□□□□□□□□□□□□□□□□	
EVENT	ME TIME	PATTERN	INT	
00 E	1:00 F	3001	WHT	
BASIC PATTERN KEY				
<div>▼</div> <div>▼</div> <div>▼</div> <div>▼</div> <div>▼</div>				
PATTERN EDGE	HARD	WIDTH 16	COLOR WHITE	K LEVEL 255
EFFECTS	OFF			
KEY LEARN	EMPTY 9000	SETUP		

[PATTERN KEY] menu

This menu is displayed when the selected pattern has No. 3301 or larger.

The [PATTERN KEY] menu allows you to make settings for video cropping.

POS.	X 128	Y 128	■□□□□□□□□□□□□□□□□	
	Z 196		■□□□□□□□□□□□□□□□□	
EVENT	ME TIME	PATTERN	INT	
00 E	1:00 F	3301	WHT	
PATTERN KEY				
<div>▼</div> <div>▼</div> <div>▼</div> <div>▼</div> <div>▼</div>				
PATTERN EDGE	HARD	WIDTH 16	COLOR WHITE	K LEVEL 255
CROP	▲ 0	▼ 0	◀ 0	▶ 0
EFFECTS	OFF			
KEY LEARN	EMPTY 9000	SETUP		

Scroll the screen to display.

[PATTERN EDGE]

The items other than [K LEVEL] can be set in the same way as the transition (wipe) pattern (→ page 4).

For [K LEVEL], set the key level (transparency level of the key) in the range of 0 to 255 using the rotary 5 control. The smaller the setting value, the higher the transparency. When 0 is set, the key disappears entirely (becomes transparent).

The key registered in the direct patterns can be individually set for each pattern.

[CROP] (for [PATTERN KEY] menu only)

Video used as the key can be cropped.

Rotary 1	Rotary 2	Rotary 3	Rotary 4	Rotary 5
CROP	▲ 0	▼ 0	◀ 0	▶ 0
0-243(480i) 0-288(576i) 0-720(720p) 0-540(1080i)	0-243(480i) 0-288(576i) 0-720(720p) 0-540(1080i)	0-720(480i) 0-720(576i) 0-1280(720p) 0-1920(1080i)	0-720(480i) 0-720(576i) 0-1280(720p) 0-1920(1080i)	

Set the top edge of the video in the range of 0 to 243 (480i)/288 (576i)/720 (720P)/540 (1080i) using the rotary 2 control.

The factory default setting is 0.

Set the bottom edge of the video in the range of 0 to 243 (480i)/288 (576i)/720 (720P)/540 (1080i) using the rotary 3 control.

The factory default setting is 0.

Set the left edge of the video in the range of 0 to 720 (480i)/576i)/1280 (720P)/1920 (1080i) using the rotary 4 control.

The factory default setting is 0.

Set the right edge of the video in the range of 0 to 720 (480i)/576i)/1280 (720P)/1920 (1080i) using the rotary 5 control.

The factory default setting is 0.

For top and bottom edge settings, when one is increased, the other may be decreased to prevent the total value of both settings from exceeding the maximum value.

For right and left edge settings, when one is increased, the other may be decreased to prevent the total value of both settings from exceeding the maximum value.

[EFFECTS]

Settings can be made in the same way as in the [EFFECTS] submenu of the [TRANSITION] menu (→ page 4).

[KEY LEARN]

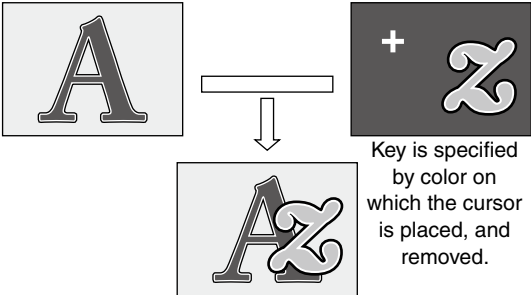
See “Setting Key Learn [KEY LEARN]” (→ page 9).

Setting the Chroma Key

[CHROMA KEY]

Chroma keying is a function for removing a specified color range from one image and keying another image to the range.

The following diagram shows an example of the chroma key.



The [CHROMA KEY] menu is used to create a chroma key.

[CHROMA KEY] menu

The menu appears when the CHROMA KEY (chroma key) button is pressed in the PATTERN area (→ page Vol.1-14) or the pattern of No. 62 is selected.

ME preview is automatically chosen, and the video to be keyed with the chroma key cursor is output from the preview output connector.

Shows the selected number: 1, 2, or 3. Shows the selected color.

POS. X 128 Y 128 Z 196

EVENT ME TIME PATTERN INT
00_E 1:00_F 0062 WHT

CHROMA KEY 1 R= - - G= - - B= - -

KEY	COLOR 1	SLICE 1 128	SLOPE 1 8	K LEVEL 255
COLOR CANCEL	OFFSET 128	C SLICE 128	C-AREA 3	MONO L 6
CROP	0	0	0	0
EFFECTS	OFF			
BORDER	COLOR WHITE			

Scroll the screen to display.

[KEY]

Up to three colors to be removed from an image can be stored.

Rotary 1	Rotary 2	Rotary 3	Rotary 4	Rotary 5
KEY	COLOR 1	SLICE 1 128	SLOPE 1 8	K LEVEL 255
	1-3	0-255	0-15	0-255

After selecting the number using the rotary 2 control, move the chroma key cursor on the preview image to the color (blue for example) to be removed using the joystick, and press the key.

The numeric values of the stored color are displayed for R, G, and B, respectively, in the menu. ("---" appears when the color is not stored.)

The color can be stored any number of times by pressing the key. However, the color data is overwritten each time it is stored.

To cancel the stored color, enter the selected number using the numeric keys while holding down the SHIFT key.

To set the chroma key in detail

The color density and range can be specified to designate more precise keying.

Set [SLICE] of the selected color in the range of 0 to 255 using the rotary 3 control.

The slice is set to specify the color density (saturation) in the area to be removed. For example, if you specify blue using the joystick, the setting value can be increased to remove only blue darker than the specified blue.

Set [SLOPE] of the selected color in the range of 0 to 15 using the rotary 4 control.

The slope is set to specify the range (hue) of the color to be removed. For example, if you specify blue using the joystick, the setting value can be increased to remove only blue closest to the specified blue.

Set [K LEVEL] (transparency level of the key) in the range of 0 to 255 using the rotary 5 control.

◆ **NOTE**

The value set with the rotary 3 control is saved for each of the three key colors, while the value set with the rotary 5 control is applied to all stored colors.

[COLOR CANCEL]

The appearance of color blur can be diminished in the boundary area of the key.

Rotary 1	Rotary 2	Rotary 3	Rotary 4	Rotary 5
COLOR CANCEL	OFFSET 128	C SLICE 128	C-AREA 3	MONO L 6
	0-255	0-255	0-3	0-15

Set [OFFSET] (offset from the key) in the range of [0] to [255] using the rotary 2 control.

Set [C SLICE] (cancel slice) in the range of [0] to [255] using the rotary 3 control.

Set [C-AREA] (cancel area) in the range of [0] to [3] using the rotary 4 control.

Set [MONO L] (mono level) in the range of [0] to [15] using the rotary 5 control.

[CROP]

Settings can be made in the same way as in the [CROP] submenu of the [PATTERN KEY] menu (→ page 5).

[EFFECTS]

Settings can be made in the same way as in the [EFFECTS] submenu of the [TRANSITION] menu (→ page 4).

[BORDER]

Use the rotary 2 control to set [COLOR] (color of the edge) to one of the colors in the table shown below.

Setting	Color
[WHITE] (factory default setting)	White
[YELLOW]	Yellow
[CYAN]	Cyan
[GREEN]	Green
[MAGENTA]	Magenta
[RED]	Red
[BLUE]	Blue
[BLACK]	Black
[CUSTOM1] or [CUSTOM2]	Grey as the factory default setting

When [CUSTOM1] or [CUSTOM2] is selected, the same color as set in the [BACK MATTE] submenu of the [INT VIDEO] menu is applied (→ page Vol.1-28).

If [TRAIL] is selected in the [EFFECTS] submenu, the color set in the [BORDER] submenu is used as the border color when [BODM] or [BODM SPARK] is selected.

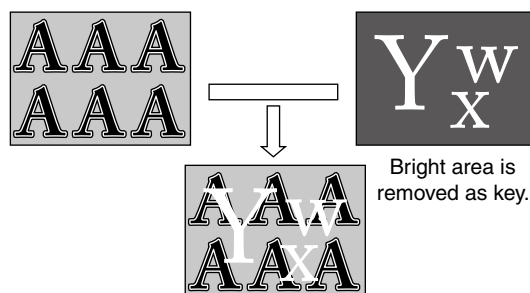
Setting the Luminance Key

[LUMINANCE KEY] /External Key
[EXT KEY]

Luminance keying is a function for creating a key with the specific brightness (luminance) of one image as the reference and keying to another image.

External keying is a function for keying a specified extraneous image. The external keying function enables keying of an image which is not assigned as the input source.

The following diagram shows an example of the luminance key.



The [LUMINANCE KEY] menu is used to create a luminance key.

The [EXT KEY] menu is used to create an external key.

[LUMINANCE KEY] menu

The menu appears when the LUM KEY button is pressed in the PATTERN area (→ page Vol.1-14) or the pattern of No. 61 is selected.

POS.	X 128	Y 128		
	Z 196			
EVENT	ME TIME	PATTERN	INT	
00 _E	1:00 _F	0061	WHT	
LUMINANCE KEY				
KEY		SLICE 0	SLOPE 15	K LEVEL 255
CROP	0	0	0	0
EFFECTS	OFF			
BORDER	COLOR WHITE			

Scroll the screen to display.

[EXT KEY] menu

The menu appears when the EXT KEY button is pressed in the PATTERN area (→ page Vol.1-14) or the pattern of No. 59 is selected.

POS.	X 128	Y 128		
	Z 196			
EVENT	ME TIME	PATTERN	INT	
00 _E	1:00 _F	0059	WHT	
EXT KEY				
<div> <div>▼</div> <div>▼</div> <div>▼</div> <div>▼</div> <div>▼</div> </div>				
KEY	KEY SD1	SLICE 0	SLOPE 15	K LEVEL 255
CROP	▲ 0	▼ 0	◀ 0	▶ 0
EFFECTS	OFF			
BORDER	COLOR WHITE			

Scroll the screen to display.

[KEY]

Set [KEY] (key signal) to one of the following using the rotary 2 control (for [EXT KEY] menu only).

When the system format is set to HD (→ page Vol.1-19):

SDI1, SDI2, SDI3, SDI4, HDMI1, HDMI2, DVI-I

When the system format is set to SD (→ page Vol.1-19):

SDI1, SDI2, SDI3, SDI4, VIDEO1, VIDEO2, DVI-I

The factory default setting is [SDI1] in each case.

To set the luminance key in detail

The color density and luminance level range can be specified to designate more precise keying.

Set [SLICE] (slice level) in the range of [0] to [255] using the rotary 3 control.

The factory default setting is [0].

The slice is set to specify the brightness level of the area to be removed. The setting value can be increased to remove only the area brighter than the specified area.

Set [SLOPE] in the range of [0] to [15] using the rotary 4 control.

The factory default setting is [15].

The slope is set to specify the luminance level range of the area to be removed. The setting value can be increased to remove only the area of the luminance level closest to the specified level.

Set [K LEVEL] (transparency level of the key) in the range of [0] to [255] using the rotary 5 control.

The factory default setting is [255].

[CROP]

Settings can be made in the same way as in the [CROP] submenu of the [PATTERN KEY] menu (→ page 5).

[EFFECTS]

Settings can be made in the same way as in the [EFFECTS] submenu of the [TRANSITION] menu (→ page 4).

[BORDER]

Settings can be made in the same way as in the [BORDER] submenu of the [CHROMA KEY] menu (→ page 7).

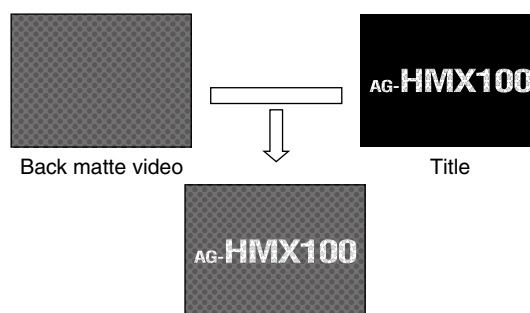
Setting the Title Key [TITLE KEY]

A still picture saved in memory from the [DSK] menu can be keyed as a title.

Title keys are saved as patterns of the numbers with “1” as the last digit every 10th (9511, 9521,...) in the range of 9501 to 9791. (The number of patterns that can be saved varies with the setting in the [MEMORY] submenu of [SETUP] menu.)

See “[DSK SOURCE]” for saving title keys (→ page 11).

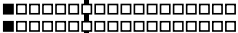
The following diagram shows an example of the title key.



The [TITLE KEY] menu is used to create a title key.

[TITLE KEY] menu

The menu appears when a still picture saved in title memory is called with the pattern number 9501 or larger from the [DSK SOURCE] > [MODE] submenu of the [DSK FADE] menu (→ page 11).

POS.	X 128	Y 128				
	Z 512					
EVENT	ME TIME	PATTERN	INT			
00 _E	02:00 _F	9501	WHT			
TITLE KEY						
						
KEY		SLICE	SLOPE	K LEVEL		
		0	15	255		
CROP	▲	▼	◀	▶		
	0	0	0		0	
EFFECTS	OFF					
BORDER	COLOR WHITE					

Scroll the screen to display.

◆ NOTE

- The title keys saved in memory are erased when the power is turned off. Since memory is empty when the unit is restarted, the [TITLE KEY] menu is not displayed even if a pattern number of the title key after No. 9501 is specified.
- When a title key is called during execution of the downstream key, [DSK EFFECTS] (DSK effect) is set to [OFF].
- Title keys cannot be set if the title memory count is set to 0 in the [MEMORY] submenu of the [SETUP] menu (→ page 27).

[KEY]

Settings can be made in the same way as in the [KEY] submenu of the [LUMINANCE KEY] menu (→ page 8).

[CROP]

Settings can be made in the same way as in the [CROP] submenu of the [PATTERN KEY] menu (→ page 5).

[EFFECTS]

Settings can be made in the same way as in the [EFFECTS] submenu of the [TRANSITION] menu (→ page 4).

[BORDER]

Settings can be made in the same way as in the [BORDER] submenu of the [CHROMA KEY] menu (→ page 7).

Setting Key Learn [KEY LEARN]

The key learn function allows storing the key frame settings (XYZ and key level) in memory and calling them to reproduce the animation effect.

A key frame refers to a frame which defines changes of the video used for animation. Several points where a shape or position of an object is changed can be set in the key frame to create smooth animation through interpolation between the points.

With the [(BASIC) PATTERN KEY] menu, the rotary 1 control can be operated to select [KEY LEARN] to set key learn in the currently selected key pattern and register the key pattern as a pattern in the range of No. 9000 to No. 9019.


Rotary 1	Rotary 2	Rotary 3	Rotary 4	Rotary 5
KEY LEARN	EMPTY 9000	SETUP		
	9000-9019	SETUP CLR ALL CLR		

To select the number applied to the pattern in which key learn is set


Operate the rotary 2 control to select the pattern number in the range of 9000 to 9019.

When the number of the pattern with key learn set is selected, [SAVED] is displayed. When the number of the pattern with no key learn set is selected, [EMPTY] is displayed.

To edit key learn

Select [SETUP] using the rotary 4 control, and press the  key.

The Key Learn Editing screen appears.

When the  key is pressed with [SAVED] displayed for the selected pattern, the message [OK?] appears.

In this case, press the  key again to display the Key Learn Editing screen.

◆ NOTE

When key learn that is already registered in a pattern is edited, the settings of the original pattern before key learn was set are given priority. Thus, even if the pattern with key learn set is called and [SETUP] is selected, no change is given to the base pattern.

For key learn in a different pattern, it is recommended to use a pattern number for which EMPTY is displayed or to delete the existing key learn pattern once and set a new key learn pattern.


Key Learn Editing screen

POS.	X 128	Y 128	Z 196	
EVENT	00 E	ME TIME 1:00 F	PATTERN 3001	INT WHT
KEY LEARN	9000			
INSERT REPLACE	BASIC			
CLR KF	K FRAME 0			K LEVEL 255
COPY				
PASTE				
EXIT				

To select the key frame number

The key frame number is shown under [K FRAME]. When selecting the key frame number to copy the key frame or specify a position for inserting the key frame, select it from the registered key frame numbers using the rotary 2 control while holding down the SHIFT key.

To set the key frame

Select the editing item including the key position (X, Y, and Z), aspect, and time using the rotary 1 control, and proceed with the setting of the key frame. To execute each editing item, press the  key.

INSERT: Inserts a key frame in the place of the next key frame.

REPLACE: Replaces the current key frame.

CLR KF: Deletes the current key frame.


COPY: Copies the current key frame.

PASTE: Pastes a copied key frame by overwriting.

EXIT: Cancels the key learn editing mode and saves the key learn settings.

To set the time up to the current key frame, a value is input for [ME TIME] with the numeric keys or the TIME rotary control.

The set time is shown under [ME TIME] on the setting screen (→ page Vol.1-20).

Upon completion of registration, select [EXIT] using the rotary 1 control and press the  key to fix the key frame settings.

The menu returns to the original [(BASIC) PATTERN KEY] menu.


◆ NOTE

The key position, time, and other items set for the key frames cannot be changed. To change those items, delete the applicable key frame and set a new key frame. When inserting a key frame, be sure to complete the time setting in advance.


To set the transparency level of the key

Set [K LEVEL] in the range of [0] to [255] using the rotary 5 control while holding down the SHIFT key.

To make settings for other key pattern

By using the rotary 1 control to select [EXIT] and pressing the  key, cancel the key learn editing mode, select the key pattern, and display the key learn editing screen again.




To preview the operation of the key

Select the pattern with [SAVED] indicated, use the rotary 4 control to select [PREVIEW], and press the  key

◆ NOTE

[PREVIEW] is displayed only when settings have been made in the menu for the same pattern as that with key learn set.

To delete a key learn pattern

Select the pattern with [SAVED] indicated, use the rotary 4 control to select [CLR] or [ALL CLR], and press the  key. When the message [OK?] appears, press the  key again. To cancel the pattern deletion, press the  key while holding down the SHIFT key.

When [CLR] is selected, the currently selected key learn pattern is deleted. When [ALL CLR] is selected, all key learn patterns are deleted.

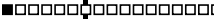
To use a pattern with key learn set

Key learn is set in the patterns in the range of No. 9000 to No. 9019.

When one of those patterns is selected, [(BASIC) PATTERN KEY] menu for No. 9000 to No. 9019 patterns appears.
([KEY LEARN] is not displayed as the setting item.)

If key learn is set in the selected pattern in the range of No. 3001 to No. 3046, the [BASIC PATTERN KEY] menu appears. If key learn is set in the selected pattern of No. 3301 or larger, the [PATTERN KEY] menu appears.

[BASIC PATTERN KEY] menu (original pattern No. 3001 to No. 3046)

POS. X 128 Y 128		Z 196			
EVENT 00 E		ME TIME 1:00 F		PATTERN 9000	
				INT WHT	
BASIC PATTERN KEY				ORIGINAL 3001	
PATTERN EDGE		HARD		WIDTH 16	
				COLOR WHITE	
EFFECTS		OFF		K LEVEL 255	

Original pattern number

[PATTERN KEY] menu (original pattern No. 3301 or larger)

POS.	X 128	Y 128				
	Z 196					
EVENT	ME TIME	PATTERN	INT			
00 _E	1:00 _F	9001	WHT			
PATTERN KEY			ORIGINAL 3301			
▼		▼	▼	▼	▼	
PATTERN EDGE	HARD	WIDTH 16	COLOR WHITE	K LEVEL 255		
CROP	▲ 0	▼ 0	◀ 0	▶ 0		
EFFECTS	OFF					

Original pattern number

To execute key learn

Set the items in the [(BASIC) PATTERN KEY] menu, and press the AUTO TAKE button.

The slope is set to specify the luminance level range of the area to be removed. The setting value can be increased to remove only the area of the luminance level closest to the specified level.

Set [REVERSE] (reversing the key signal) to [ON] or [OFF] using the rotary 4 control.

The factory default setting is [OFF].

Set [K LEVEL] (transparency level of the key) in the range of [0] to [255] using the rotary 5 control.

The factory default setting is [255].

[CROP]

Settings can be made in the same way as in the [CROP] submenu of the [PATTERN KEY] menu (→ page 5).

DSK slide on/off [DSK ON/OFF]

The direction and time of the slide in/out operation can be set for executing the downstream key.

[SLIDE I.] and [SLIDE O.] are effective if [KEY] is set to [TITLE] in the [DSK SOURCE] submenu.

Rotary 1	Rotary 2	Rotary 3	Rotary 4	Rotary 5
DSK ON/OFF	ME TRIG OFF	SLIDE I. OFF	SLIDE O. OFF	SPEED 8
	OFF ON	OFF ◀ ▶ ▲ ▼	OFF ◀ ▶ ▲ ▼	2-64

Operate the rotary 2 control to set whether or not to execute downstream key additionally during auto transition executed with the AUTO TAKE button.

The factory default setting is [OFF].

Operate the rotary 3 control to set the direction of the slide in operation when DSK is ON.

The factory default setting is [OFF].

Operate the rotary 4 control to set the direction of the slide out operation when DSK is ON.

◀: Sliding toward the left

▶: Sliding toward the right

▲: Sliding toward the top

▼: Sliding toward the bottom

The factory default setting is [OFF].

Operate the rotary 5 control to set the sliding speed.

Select an even number in the range of [2] to [64].

The factory default setting is [8].

[DSK EFFECTS]

Settings can be made in the same way as in the [EFFECTS] submenu of the [TRANSITION] menu (→ page 4).

Setting the Fade [FADE]

The [DSK FADE] menu is used to set the fade effect (→ page 11).

Rotary 1	Rotary 2	Rotary 3	Rotary 4	Rotary 5
FADE	TO BLACK	AUDIO ON	PHONE AFTER	
	BLACK WHITE BLUE	ON OFF	AFTER PRE	

Select the video color after fading from [BLACK], [WHITE], and [BLUE] using the rotary 2 control.

The factory default setting is [BLACK].

Set [AUDIO] (sound fading) to [ON] or [OFF] using the rotary 3 control.

The factory default setting is [ON].

Set [PHONE] (fading of headphones output) to [AFTER] or [PRE] using the rotary 4 control. [AFTER] generates sound with fade applied, while [PRE] generates sound without fade.

The factory default setting is [AFTER].

Adjusting Input Video

Adjusting Colors of Video [COLOR EFFECTS]

The [COLOR EFFECTS] menu is used to make settings for applying effects to the colors of video for each bus. The color effects to video can be set including color balance and brightness adjustment.

◆ **NOTE**

The color effect and MONO (monochrome) effect cannot be used at the same time. The color effect cannot be applied to the video to which MONO has been applied as the video effect.

[COLOR EFFECTS] menu

The menu appears when the A/PROG COLOR EFFECTS or B/PRESET COLOR EFFECTS button is pressed to turn on. The color effects set currently are applied at the same time. To display the menu without applying the effects, press either COLOR EFFECTS button while holding down the SHIFT key.

When the preview output is executed, switching is automatically performed between video A and video B according to the pressed button.

COLOR Pb 128 Pr 128		C GAIN 0			
EVENT	ME TIME	PATTERN	INT		
00 E	1:00 F	3001	BLUE		
COLOR EFFECTS					
▼	▼	▼	▼	CH A ▼	
Y SETUP 0	Y GAIN 0	Pb 128	Pr 128	C GAIN 0	

Set [Y SETUP] (Y signal setup) in the range of [-128] to [+127] using the rotary 1 control.
The factory default setting is [0].

Set [Y GAIN] (Y signal gain) in the range of [-128] to [+127] using the rotary 2 control (0 dB=0).
The factory default setting is [0].

To adjust the color balance, adjust [PB] and [PR]. Use the rotary 3 (for X direction) and rotary 4 (for Y direction) controls or operate the joystick in the X and Y directions.

Set [C GAIN] (chroma gain) using the rotary 5 control or rotary Z control.

At that time, the joystick, rotary Z control settings, and 3D display area of the setting screen (→ page Vol.1-20) shows the P_B , P_R , and C GAIN values.

To set the color saturation to 0 temporarily

Press the **CENTER** button during operation of the **[COLOR EFFECTS]** menu, the color saturation can be set to zero temporarily.

◆ NOTE

- If the No. 221 or 222 (1068 or 1069) pattern is selected, the MIX pattern with the color effects applied is set, the COLOR EFFECT button is lighted, and the [COLOR EFFECTS] menu appears.
- No color effects can be applied to internal video.

Applying Effects to Video

[VIDEO EFFECTS]

The [VIDEO EFFECTS] menu is used to apply changes to video or video switching effect for each bus. Special video effects such as mosaic and paint can be set in this menu.

◆ NOTE

- No video effects can be applied to internal video.
- Only one choice can be made from multi-strobe, decay, trail, and shadow. The effect selected last has priority, and the previously selected effect is canceled.
- Decay cannot be set to ON for both A/PROG and B/PRESET at the same time. The setting made last has priority and the other made earlier is turned OFF.
- Only one choice can be made from multi-strobe and mosaic. The effect selected last has priority, and the previously selected effect is canceled.

[VIDEO EFFECTS] menu

The menu appears when the A/PROG VIDEO EFFECTS or B/PRESET VIDEO EFFECTS button is pressed to turn on. The video effects set currently are applied at the same time.

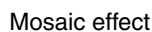
To display the menu without applying the effects, press either VIDEO EFFECTS button while holding down the SHIFT key.

When the preview output is executed, switching is automatically performed between video A and video B according to the pressed button.

Scroll the screen to display. _____

The mosaic effect can be applied to input video.

The following diagram shows an example of the mosaic effect.



Select [ON] or [OFF] to specify whether or not to apply the effect using the rotary 2 control.

The factory default setting is [OFF].

Set the direction of applying the mosaic effect to [XY] (horizontal and vertical), [X] (horizontal only), or [Y] (vertical only) using the rotary 3 control.

Set [SIZE] in the range of 0 to 31 using the rotary 4 control.

The factory default setting is 8.

This size setting is applied to Nos. 1001, 1002, and 1003 (200, 201, and 202) patterns.

The video effect of purposely displacing the focus can be set to perform fantastical rendering or get the attention of viewers.

Defocus effect

Select [ON] or [OFF] to specify whether or not to apply the effect using the rotary 2 control.
The factory default setting is [OFF].

Set [LEVEL] in the range of 0 to 7 using the rotary 3 control.
The factory default setting is 2.

This level setting is applied to No. 1004 (203) transition pattern. This effect cannot be activated with any two-dimensionally compressed pattern at the same time.

Either mosaic or defocus can be selected. Whichever is selected later has priority and the other selected earlier is canceled.

Chroma (color) can be deleted to generate monochrome video.

Select [ON] or [OFF] to specify whether or not to apply the effect using the rotary 2 control.
The factory default setting is [OFF].
This setting has a priority over the settings made in the [COLOR EFFECTS] menu (→ page 13).

[TIME EFFECTS]

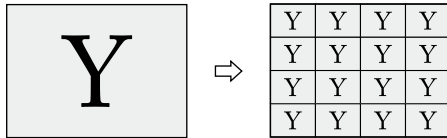
The still, strobe, or multi-strobe effect can be set.

Still: Keeps the video still.

Strobe: Plays video frame by frame.

Multi-strobe: Divides the screen into 4, 9, or 16 screens and displays the strobe image on each divided screen.

The following diagram shows an example of the multi-strobe effect.



Multi-strobe effect (16 screens)

The still effect can be executed by pressing the A/PROG bus (or B/PRESET bus) STILL button.

The strobe effect can be executed by pressing the A/PROG bus (or B/PRESET bus) STROBE button.

When the STILL or STROBE button is pressed to turn on, the [VIDEO EFFECTS] menu appears (→ page 13).

◆ NOTE

When the STILL or STROBE button is pressed to execute the effect, the video effects set in the VIDEO EFFECTS menu are also executed at the same time.

Rotary 1	Rotary 2	Rotary 3	Rotary 4	Rotary 5
TIME EFFECTS	OFF	FIELD	SCREEN 1	TIME 2
	OFF STILL STROBE	FIELD FRAME	1 @ 4 @ 9 @ 16 R 4 R 9 R 16	MANUAL 2-124

Select [STILL] or [STROBE] using the rotary 2 control. Select [OFF] to apply no effect.

When [OFF] is selected, both the STILL and STROBE execution buttons are also set to off (turned off).

If [STILL] is selected

Rotary 1	Rotary 2	Rotary 3	Rotary 4	Rotary 5
TIME EFFECTS	STILL	FIELD		
		FIELD FRAME		

Select [FIELD] or [FRAME] using the rotary 3 control. The factory default setting is [FIELD].

If [STROBE] is selected

Rotary 1	Rotary 2	Rotary 3	Rotary 4	Rotary 5
TIME EFFECTS	STROBE	FIELD	SCREEN 1	TIME 2
		FIELD FRAME	1 @ 4 @ 9 @ 16 R 4 R 9 R 16	MANUAL 2-124

Select [FIELD] or [FRAME] using the rotary 3 control. The factory default setting is [FIELD].

Set [SCREEN] (number of strobe screens) and the repeat count using the rotary 4 control.

The factory default setting is 1.

A numeric value such as [4] is set to specify the number of screens into which the screen is divided for strobe image display.

When @ is given to a numeric value: The strobe image is sequentially displayed only once on each of the screens divided according to the value.

When R is given: It is repeated to sequentially display the strobe image on each of the screens divided according to the value.

Set [TIME] (strobe duration) in the range of [2] to [124] using the rotary 5 control.

Time can be changed in 2 steps.

The factory default setting is [20].

When [TIME] is set to [MANUAL], the screen can be stopped by pressing the A/PROG bus STROBE button or B/PRESET bus STROBE button while holding down the SHIFT key.

This time setting is applied to Nos. 1062, 1063, 1064, and 1065 (215, 216, 217, and 218) transition patterns.

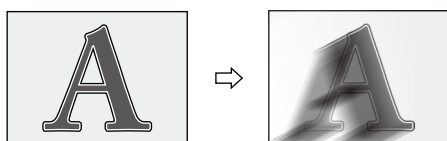
◆ NOTE

- When any of the following patterns is selected, only one choice can be made from SOFT, BORDER, and SOFT BORDER for multi-strobe and pattern edge. The effect selected last has priority, and the previously selected effect is canceled.
Nos. 1541 to 1550 (32 to 35, 130 to 133, and 141 to 142)
Nos. 3304, 3314, and 3324
- Either strobe or still can be selected. Whichever is selected later has priority and the other selected earlier is canceled.
- Either multi-strobe or scene grabber can be selected. Whichever is selected later has priority and the other selected earlier is canceled.
- The multi-strobe effect cannot be enabled for both A/PROG and B/PRESET at the same time. The setting made last has priority and the other made earlier is disabled.
- When the still or strobe (including multi-strobe) effect is activated, selecting a two-dimensionally compressed pattern cancels the still or strobe effect. When a two-dimensionally compressed pattern is selected, applying the still or strobe effect changes the pattern being used to the MIX(56) pattern.

[DECAY]

The afterimage effect can be added to video.

The following diagram shows an example of the decay effect.



Decay effect

Rotary 1	Rotary 2	Rotary 3	Rotary 4	Rotary 5
DECAY	OFF	TIME 16		
	OFF ON	0-32		

Select [ON] or [OFF] to specify whether or not to apply the effect using the rotary 2 control.

The factory default setting is [OFF].

Set [TIME] in the range of [0] to [32] using the rotary 3 control.

The factory default setting is [16].

This time setting is applied to No. 1066 (219) pattern.

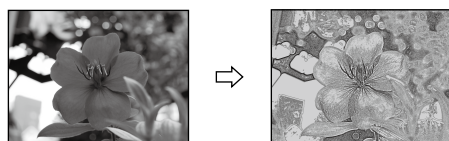
◆ NOTE

The decay effect cannot be applied to both input source video A and B at the same time. When the decay effect is enabled for one video, it is automatically disabled for the other video.

[PAINT]

The image tone can be decreased to generate painting-like video.

The following diagram shows an example of the paint effect.



Paint effect

Rotary 1	Rotary 2	Rotary 3	Rotary 4	Rotary 5
PAINT	OFF	LEVEL 4		
	OFF ON	0-7		

Select [ON] or [OFF] to specify whether or not to apply the effect using the rotary 2 control.

The factory default setting is [OFF].

Set [LEVEL] in the range of 0 to 7 using the rotary 3 control.

The factory default setting is 4.

This level setting is applied to No. 1034 (211) transition pattern.

[NEGA]

The brightness of video can be inverted.

The following diagram shows an example of the negative effect.



Negative effect

Rotary 1	Rotary 2	Rotary 3	Rotary 4	Rotary 5
NEGA	Y OFF	C OFF		
	OFF ON	OFF ON		

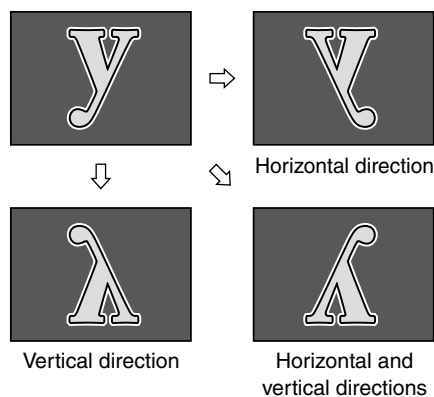
Select [ON] or [OFF] to specify whether or not to apply the Y signal negative setting [Y] using the rotary 2 control and the chroma signal negative setting [C] using the rotary 3 control, respectively.

The factory default setting is [OFF] for both items.

[MIRROR]

The mirror effect can be produced in the horizontal or vertical directions.

The following diagram shows an example of the mirror effect.



Mirror effect

Rotary 1	Rotary 2	Rotary 3	Rotary 4	Rotary 5
MIRROR	H OFF	V OFF		
	OFF ON	OFF ON		

Select [ON] or [OFF] to specify whether or not to apply the mirror setting in the horizontal direction [H] using the rotary 2 control and in the vertical direction [V] using the rotary 3 control, respectively.

The factory default setting is [OFF] for both items.

Setting Audio Effects

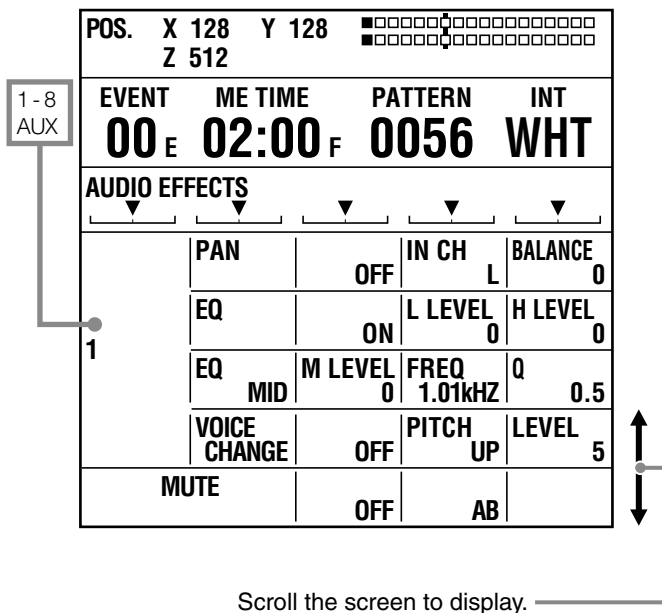
The [AUDIO EFFECTS] menu is used to process sound. Audio effects can be set for each input source.

To execute the audio effects

Press the AUDIO EFFECTS execution button.
The AUDIO FOLLOW VIDEO button can be pressed to turn on to link the video effects and the audio effects during execution of transition or fade.

[AUDIO EFFECTS] Menu

The menu appears when the AUDIO EFFECTS button is pressed.



Select the input source using the rotary 1 control.

[1] to [8]: Input sources 1 to 8

[AUX]: AUX input

Select the effect to set using the rotary 2 control.

[PAN]

[PAN] is set to change the audio balance between left and right.

Rotary 2	Rotary 3	Rotary 4	Rotary 5
PAN	OFF	IN CH L	BALANCE 0
OFF ON	L R L+R	L7 L6 ⋮ L1 0 R1 R2 ⋮ R7	

Select [ON] or [OFF] to specify whether or not to apply the effect using the rotary 3 control.
The factory default setting is [OFF].

Set [IN.CH] to [L], [R], or [L+R] using the rotary 4 control. [IN.CH] is used to select the channel to be emphasized.

L: Left channel

R: Right channel

L+R: Both left and right channels

The factory default setting is [L].

Set [BALANCE] in the range of L7 to 0 and 0 to R7 using the rotary 5 control.

[BALANCE] is used to select whether to expose the channel selected with [IN.CH] toward the right direction (R) or left direction (L) and to set the gap from the center position using a numeric value.

The factory default setting is 0 (center).

[EQ]

[EQ MID] is used to adjust the high-range or mid-range audio level and set equalizer effects.

Rotary 2	Rotary 3	Rotary 4	Rotary 5
EQ	ON	L LEVEL 0	H LEVEL 0
OFF ON	-14dB - 14dB	-14dB - 14dB	

Select [ON] or [OFF] to specify whether or not to apply all equalizer effects using the rotary 3 control.

The factory default setting is [ON].

Set the [L LEVEL] (low-range level in dB) in the range of [-14dB] to [14dB] in 2 dB steps using the rotary 4 control.
The factory default setting is [0].

Set the [H LEVEL] (high-range level in dB) in the range of [-14dB] to [14dB] in 2 dB steps using the rotary 5 control.
The factory default setting is [0].

[EQ MID]

Rotary 2	Rotary 3	Rotary 4	Rotary 5
EQ MID	M LEVEL 0	FREQ 1.01kHz	Q 0.5
-14dB - 14dB	100Hz-10.2kHz	0.5 1 2 5	

Set the [M LEVEL] (mid-range level in dB) in the range of [-14dB] to [14dB] in 2 dB steps using the rotary 3 control.
The factory default setting is [0].

Set the [FREQ] (Frequency to be emphasized) in the range of [100Hz] to [10.2kHz] using the rotary 4 control.
The factory default setting is [1.01kHz].

Set [Q] (Quality factor value: resonance level) to [0.5], [1], [2] or [5] using the rotary 5 control. As the value is larger, resonance lasts longer.
The factory default setting is [0.5].

[VOICE]

Settings can be made for the voice changer.

Rotary 2	Rotary 3	Rotary 4	Rotary 5
VOICE CHANGE	OFF	PITCH UP	LEVEL 5
OFF ON	DOWN UP	0-10	

Select [ON] or [OFF] to specify whether or not to apply the effect using the rotary 3 control.
The factory default setting is [OFF].

Select [UP] or [DOWN] for [PITCH] to specify whether to increase or decrease the sound pitch using the rotary 4 control.
The factory default setting is [UP].

Set [LEVEL] in the range of 0 to 10 using the rotary 5 control.
The factory default setting is 5.

[MUTE]

Rotary 1	Rotary 2	Rotary 3	Rotary 4	Rotary 5
MUTE	OFF	AB		
OFF -12dB -20dB -60dB	AB ABAUX ALL			

Select the mute level from [-12dB], [-20dB], and [-60dB] using the rotary 3 control.
Select [OFF] to apply no effect.
The factory default setting is [OFF].
Select the channel to mute from [AB] (buses A and B), [ABAUX] (buses A and B and AUX output), and [ALL] (all channels) using the rotary 4 control.
The factory default setting is [ALL].

Chapter 2 Registering Settings and Effects

If the menu settings and created effects are stored in internal memory, the same settings and effects can be quickly reproduced.

The settings made on the setting screen (→ page Vol.1-20) are referred to as “events” on this unit, where up to 100 events with numbers allocated can be registered in memory (event memory).

The settings of the [SETUP] menu (→ page Vol.1-22) can be registered in up to eight files.

File operation [FILE]

In the [FILE] submenu of the [SETUP] menu, it is possible to save the settings of the [SETUP] menu in a file and call the file using the rotary 2 and 3 controls.


The following types of data are saved and called.


- [SETUP] menu setting values
- [AUDIO/VIDEO] input settings
- X, Y, and Z position settings (individual settings for direct patterns and common settings for other patterns)
- Registration contents of direct patterns

Rotary 1	Rotary 2	Rotary 3	Rotary 4	Rotary 5
FILE	EMPTY 1	SAVE		
	1-8	SAVE RECALL ALL CLR		

To clear a saved file

Select [ALL CLR] using the rotary 3 control.

When the message [OK?] appears, press the  key.

To cancel the file clear, press the  key while holding down the SHIFT key.


To select a file to operate


Select the file number from [1] to [8] using the rotary 2 control.

When the file of the selected number is null, [EMPTY] is shown. When the file is already saved, [SAVED] is shown.

To save the current settings in a file


Select [SAVE] using the rotary 3 control.

When the message [OK?] appears, press the  key.

To cancel the file save, press the  key while holding down the SHIFT key.

To call a saved file

Select [RECALL] using the rotary 3 control.

When the message [OK?] appears, press the  key.

The file of the selected number is called and the settings of the [SETUP] menu are changed to those saved in the file.

◆ NOTE

- If an empty file is selected ([EMPTY] is displayed), [RECALL] is not displayed.
- When the unit must be restarted due to the system format change caused by data call, the message “TURN POWER OFF” appears. In this case, turn off the power and restart the unit.

Event Memory Operation

The EVENT SET and EVENT RECALL buttons are used to register and call events, respectively.

The currently selected event number is shown in the event number display area of the setting screen. [E] is shown for a null event.

EVENT
00E

Registering the Current Settings and Created Effects as Events

1 Press the EVENT SET button.

The button is lighted.

2 Select the event number in the range of 0 to 99. Enter the number using the numeric keys or increment or decrement the value using the + or – key, respectively.

3 Press the key.

The EVENT SET button flashes for approximately 2 seconds, and then goes off.

To register a series of effects as events

Up to 10 effects can be consecutively registered as events with numbers 50 to 59, 60 to 69, 70 to 79, 80 to 89, or 90 to 99.

Since those 10 events can be called and executed consecutively, the key frame settings can also be registered as events.

Calling Events

1 Press the EVENT RECALL button.

The button is lighted.

2 Select the event number. Enter the number using the numeric keys or increment or decrement the value using the + or – key, respectively.

3 To call the settings, press the key.

The EVENT RECALL button goes off.
The selected event is called and the settings of the setting screen are changed to those registered as the event.

4 Press the AUTO TAKE button.

The effects registered as the event are executed.

If one of the events in which a series of effects were registered is called

If 10 events are consecutively registered with event numbers in the range of 50 to 59, 60 to 69, 70 to 79, 80 to 89, or 90 to 99, the settings of the first event are reproduced when one of the 10 events is called.

◆ NOTE

When the event is called, the settings of the input source used during creation of the effects are not reproduced. The effects are executed with the currently available input source settings. Thus, first reproduce the same input source settings as those during effect creation, and then call the event to execute.

Clearing Event Memory

1 Press the EVENT RECALL button.


The button is lighted.

2 Select the event number. Enter the number using the numeric keys or increment or decrement the value using the + or – key, respectively.

3 Press the key while holding down the SHIFT key.

The EVENT RECALL button goes off.
The memory of the selected event is cleared.

Clearing All the Event Memory

- 1** Press the EVENT RECALL button.
The button is lighted.
- 2** Press the . (period) key twice.
“**” is displayed instead of an event number.
- 3** Press the  key while holding down the SHIFT key.

Chapter 3 Switching 3D Video

When two different types of video for the left eye (L channel) and right eye (R channel) are monitored in the overlay state, adjustment is made for allowing the left eye and right eye to view the L-channel video and R-channel video, respectively, for example, wearing 3D glasses. This adjustment enables the brain to recognize the images on video as stereoscopic images.

When the parallax (distance between left and right eyes) is virtually increased, a 3D appearance and a sense of depth are enhanced.

When 3D video is used as the input source to this unit, two input connectors are paired to input one video for the left eye and the other for the right eye.

Example Connections with 3D Camera

This section shows examples of systems in which this unit and 3D camera are connected to create 3D video using each input video for the L and R channels.

The following are three system examples:

- System for displaying the program output and multi-view output of this unit on a single monitor (simultaneous display of L and R channels)
- System for individually displaying the program output and multi-view output on different monitors (use of SIDE BY SIDE signal)
- System for using video from four cameras as the input sources to two units of AG-HMX100P/HMX100E

◆ NOTE

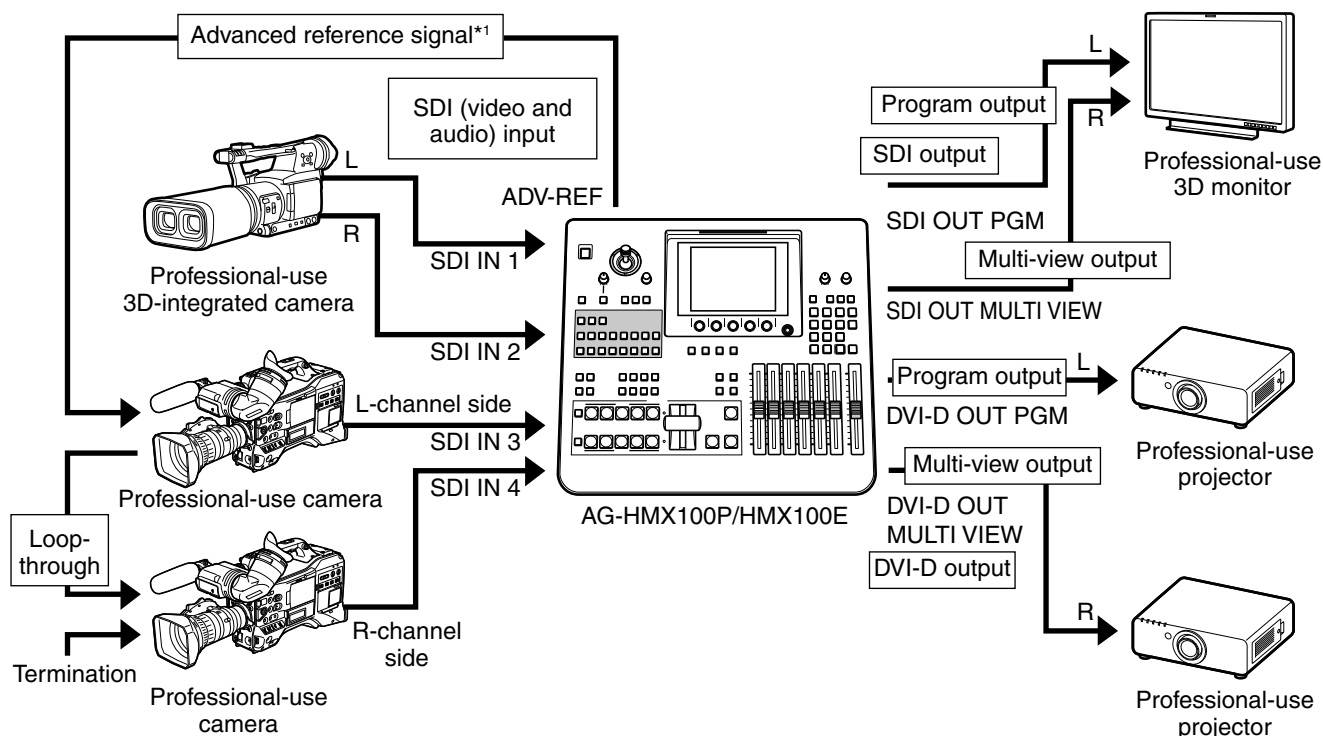
- The 3D video production systems shown below cannot perform preview output. AUX output can be used only for input source check. Of the video switching effects, only cut can be executed.
- When [3DFORMAT] is set to [1080/23PsF] in 3D mode, this unit cannot be synchronized with an external signal generator.

System for Monitoring Program Output as L channel and Multi-view Output as R Channel (Simultaneous Display of L and R Channels)

SDI input 1 and SDI input 2 are paired to be used as L-channel and R-channel input sources, respectively. SDI input 3 and SDI input 4 are paired to be used as L-channel and R-channel input sources, respectively.

Program output and multi-view output are paired to be used as L-channel and R-channel outputs.

3D mode is set to [MODE1] (→ page 25).



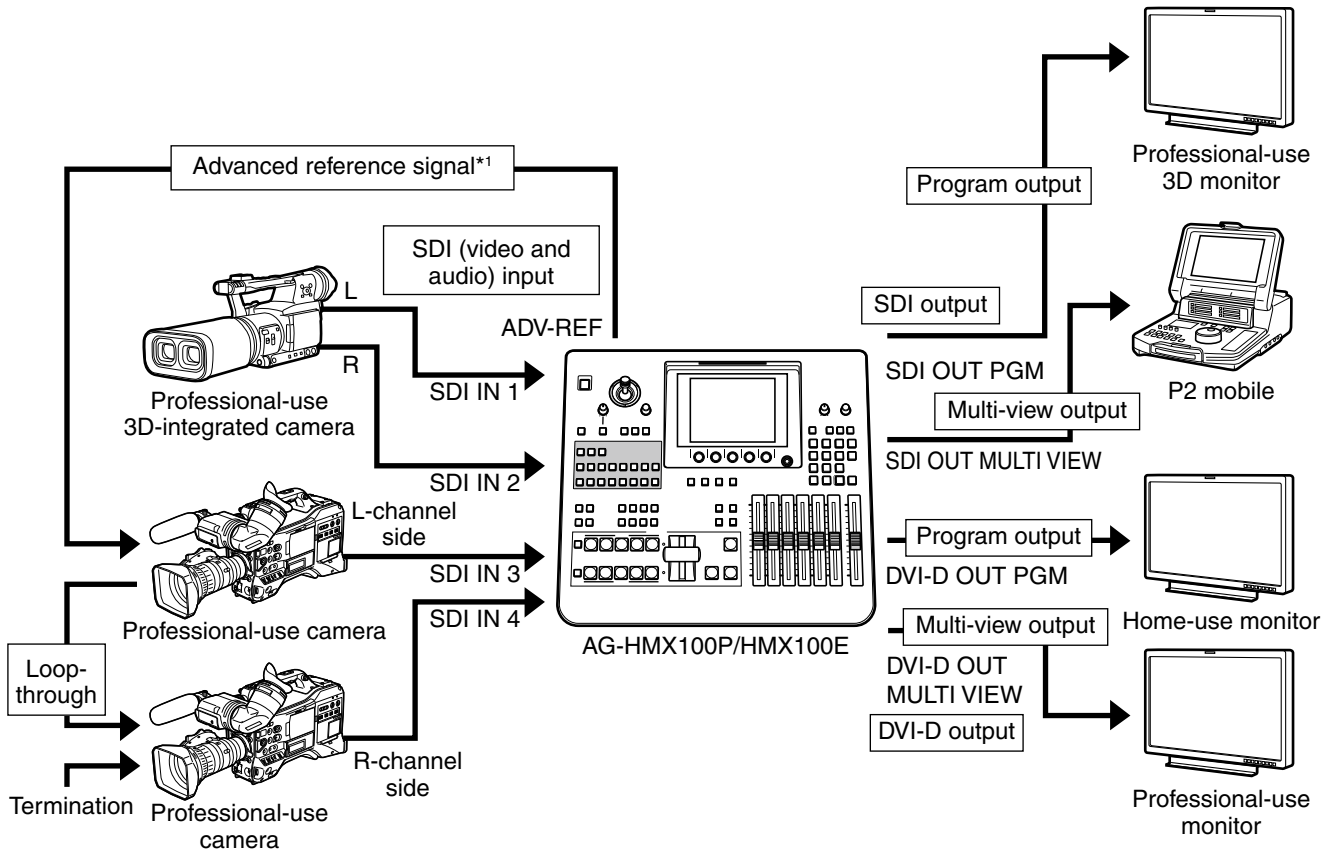
*1 Advanced reference signal need not necessarily be connected.

System for Displaying Program Output and Multi-view Output on Different Monitors (Use of SIDE BY SIDE Signal)

SDI input 1 and SDI input 2 are paired to be used as L-channel and R-channel input sources, respectively. SDI input 3 and SDI input 4 are paired to be used as L-channel and R-channel input sources, respectively. The output is the SIDE BY SIDE signal to be transferred

as a single-channel signal generated by compression of L-channel and R-channel signals in the horizontal direction. Program output and multi-view output are the same signal.

3D mode is set to [MODE2] (→ page 25).



*1 Advanced reference signal need not necessarily be connected.

System Configured with 2 Units of AG-HMX100P/HMX100E and 4 Cameras

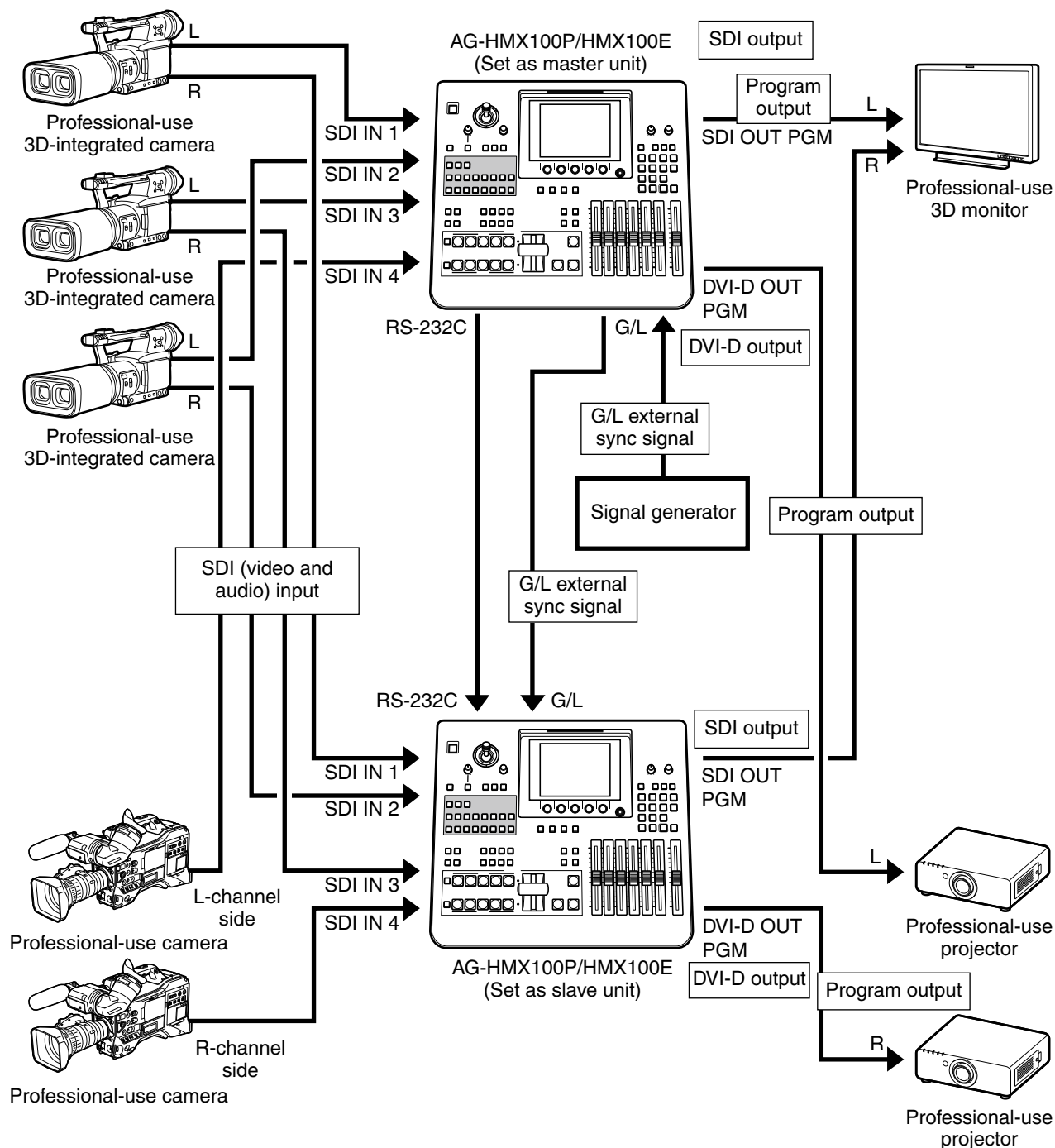
Two units of AG-HMX100P/HMX100E are used and the video from up to four cameras is switched to be used as the input source.

SDI inputs 1 to 4 of the first mixer are used as the L-channel input sources, while those of the second mixer are used as the R-channel input sources. Program outputs from the first and second mixers are paired to be used as the L-channel and R-channel outputs, respectively.

3D mode is set to [MODE3-M] on the master unit and [MODE3-S] on the slave unit (→ page 25).

◆ NOTE

- When 3D mode is set to [MODE3-S] on the slave unit, all audio outputs are muted. Make audio output from the master unit.
- In order to synchronize two units of AG-HMX100P/HMX100E, be sure to connect a signal generator and input the same synch signal.



Chapter 4 Operating Environment Setting

This chapter describes the settings for the operating environment of this unit, external synchronization, and external equipment.

Setting the System

The following describes the settings for the whole system.

The [SYSTEM1] and [SYSTEM2] submenus of the [SETUP] menu are used.

Setting [SYSTEM1]

Rotary 1 Rotary 2 Rotary 3 Rotary 4 Rotary 5

SYSTEM1	TIME	GPI		
	SEC	ME		
	SEC FRAME	ME DSK FADE		

To set the time display

Set [TIME] to [SEC] (seconds + frames) or [FRAME] (frames only) using the rotary 2 control.
The factory default setting is [SEC].

To select the video effect for GPI control

The GPI trigger signal can be input to the GPI input connector to externally control one of the video effects: key/transition, downstream key, and fade. The system goes standby on the trailing edge of the GPI trigger signal, and executes the effect three frames later.

Set [GPI] to [ME] (key/transition), [DSK] or [FADE] using the rotary 3 control.
The factory default setting is [ME].

Setting [SYSTEM2]

Rotary 1 Rotary 2 Rotary 3 Rotary 4 Rotary 5

SYSTEM2	P.SAVE	SCR SAVE		HOURS M.
	OFF	OFF		OFF
	OFF ON	OFF 10-60		OFF ON

To set the power management mode

Set [P.SAVE] to [ON] using the rotary 2 control.

If this unit is not operated for more than four hours, the power is automatically turned off.

To restart the unit, turn on the POWER button.

In one of the following cases, the time counter is reset and immediately restarted.

- A button has been operated on the operation panel.
- This unit has been externally operated through RS-232C or GPI control.
- Video signal is being input to a connector of this unit.

To set the time until the screen saver is executed

Operate the rotary 3 control to select the time until the screen saver is executed to protect the LCD.

The time can be set in the range of 10 to 60 in units of 10 minutes. If [SCRN SAVE] is set to [OFF], the screen saver is not displayed.


The factory default setting is [10].

The screen saver is disabled when any part on the operation panel or the external controller is operated.

◆ NOTE

In 3D mode, unnecessary buttons including those for operating patterns and events are disabled. Even if any of those buttons is pressed, the screen saver is not disabled. To disable the screen saver, operate a button available in 3D mode including source selector buttons.

To display the hours meter on a new screen

Set [HOURS M.] to [ON] using the rotary 5 control, and press the  key.

The accumulated value of the energization time is displayed.

The screen is closed when the  key is pressed again.

Setting [MEMORY]

This section describes the method of allocating memory for internal video and titles separately. The memory is used to save the internal video created from input video (→ page Vol.1-30) and title keys (→ page 8).

The [MEMORY] submenu of the [SETUP] menu is used.

◆ NOTE

If the memory settings are changed in this submenu, all data saved in the memory is cleared.

Rotary 1	Rotary 2	Rotary 3	Rotary 4	Rotary 5
MEMORY	INT V	TITLE		
	30	0		
	0-30 (480/59i) 0-30 (576/50i) 0-14 (720p) 0-6 (1080i)	0-30 (480/59i) 0-30 (576/50i) 0-14 (720p) 0-6 (1080i)		


- 1 Set [INT V] (internal video memory size) using the rotary 2 control and [TITLE] using the rotary 3 control, respectively.


The total memory size (number of frames) varies with the video format (→ page Vol.1-26). When the size of either internal video memory or title memory is increased, the other may be automatically decreased to prevent the sum of the two values from exceeding the total memory size.

If the [INT V] or [TITLE] value is changed, * appears under [INT V] or [TITLE], respectively.

- 2 Press the  key with * displayed.

The message [OK?] appears.

- 3 Press the  key again to fix the change.

To cancel the change, press the  key while holding down the SHIFT key.

If other menu screen is displayed when * is being displayed, the settings return to the previous values without being updated.

The factory default settings are as shown below.

Video Format	[INT V]	[TITLE]
1080/59i	3	3
1080/50i	3	3
720/59p	7	7
720/50p	7	7
480/59i	15	15
576/50i	15	15

Setting the Audio Level [AUDIO LEVEL]

The audio level is indicated by the audio level meter on the setting screen (→ page Vol.1-20).

The [AUDIO LEVEL] submenu of the [SETUP] menu is used to make the settings for the audio level.

Rotary 1	Rotary 2	Rotary 3	Rotary 4	Rotary 5
AUDIO LEVEL	ALIGN.			HEAD
	0dB			20dB
	-3dB 0dB 4dB			18dB 20dB

AG-HMX100P

Rotary 1	Rotary 2	Rotary 3	Rotary 4	Rotary 5
AUDIO LEVEL	ALIGN.			HEAD
	0dB			18dB
	-3dB 0dB 4dB			20dB

AG-HMX100E

Set [ALIGN.] to [-3dB], [0dB] or [4dB] using the rotary 2 control.

The factory default setting is [0dB]

Set [HEAD] (head room) to [18dB] or [20dB] using the rotary 5 control.

The factory default setting is [20dB] (AG-HMX100P) or [18dB] (AG-HMX100E).

When the head room value is changed, the reference mark of the audio level meter (→ page Vol.1-20) is also changed on the Setting screen.

Setting for External Synchronization [GEN LOCK]

When the SD reference signal is input to this unit to perform external synchronization, it is necessary to connect a signal generator to the G/L (external synch reference input) connectors. These two G/L connectors are in the loop-through state, and automatically terminated when loop-through is disabled.

This unit is also equipped with the ADV-REF (advanced reference output) connector to output the reference signal with the vertical phase advanced for the input source. This reference signal can be used to minimize the delay of the output signal caused by the system.

◆ NOTE

When the reference signal is connected or disconnected, output images are distorted or sound is muted for several seconds.

The [GEN LOCK] submenu of the [SETUP] menu is used to make the settings for external synchronization.

Rotary 1	Rotary 2	Rotary 3	Rotary 4	Rotary 5
GEN. LOCK	H PHASE 1000			
	0-2000			

To adjust the output phase of video, set [H PHASE] (horizontal phase) using the rotary 2 control. Set [H PHASE] (horizontal phase) using the rotary 2 control. The factory default setting is 1000.

Setting Details for Connecting PC [PC2]

When videos created on PC are input to the DVI-I IN connector of this unit, if the analog signal is input, it is necessary to make detailed settings in the [PC2] submenu of the [SETUP] menu.

Rotary 1	Rotary 2	Rotary 3	Rotary 4	Rotary 5
PC2	H POSI 30	V POSI 10	PHASE 16	CLOCK 1000
	0-60 0-300* ¹	0-20	0-31	1200-1500* ² 1500-1800* ³ 1500-1800* ⁴

*¹ When [PC1] is [1080/50] or [1080/60]

*² When [PC1] is [XGA]

*³ When [PC1] is [WXGA]

*⁴ When [PC1] is [SXGA]

Set [H POSI] (horizontal position) using the rotary 2 control.

Set [V POSI] (vertical position) using the rotary 3 control.

Set [PHASE] using the rotary 4 control.

Set [CLOCK] using the rotary 5 control.
(Only an even number can be selected.)

◆ NOTE

The [PC2] parameters cannot be set in the following cases.

- [DIGITAL] is selected in [PC1]: No parameter can be set.
- [ANALOG] is selected in [PC1] and [FORMAT] is set to 1080/50P or 1080/60P: [CLOCK] cannot be set.

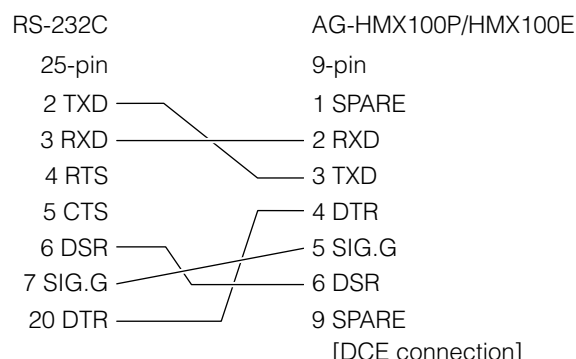
Setting for External Interface

This unit is equipped with the external interfaces as described below to allow operating this unit from an external controller or PC as well as operating a projector from this unit.

To perform the remote operation, select [RS-232C] or [PJ] (Projector) from the [RS-232C] submenu of the [SETUP] menu (→ page 29) and press the PROJECTOR/REMOTE button to turn on to activate RS-232C control.

RS-232C connector

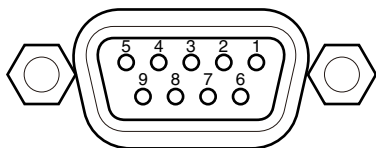
Enables to control all functions except for AUX input and output. When using a conversion cable with 9-pin and 25-pin plugs, connect the cable as shown below.



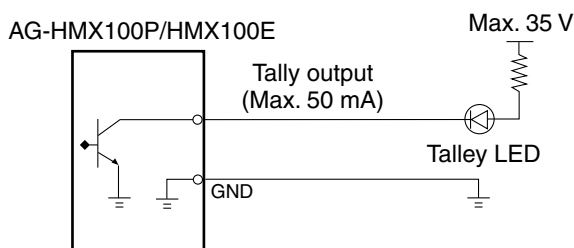
- Under RS-232C control, the operation is executed three frames after reception of the applicable command.
- When a transition pattern is selected, set the transition time to 2 frames or more. If it is set to less than 2 frames, frame accuracy is not certified.

TALLY connector

Open collector output connector for the tally lamp. When video of input source 1, 2, 3, 4, 5, 6, 7 or 8 is being used, the tally signal is output.



Pin No.	Signal
1	Input source 1
2	Input source 2
3	Input source 3
4	Input source 4
5	Input source 5
6	Input source 6
7	Input source 7
8	Input source 8
9	GND



Tally connection example

The Tally signal is output with max. 35 V and max. 50 mA.

Setting [RS-232C]

This section describes the settings required for operating this unit from an external controller via the RS-232C interface.

The RS-232C interface is also used to operate a projector from this unit.

Rotary 1	Rotary 2	Rotary 3	Rotary 4	Rotary 5
RS-232C	B. RATE 38.4k	DATA L. 8BITS	PARITY NONE	PJ
	9.6k 19.2k 38.4k 115.2k	8BITS 7BITS	NONE ODD EVEN	PJ RS-232C

To set the communication rate

Set [B. RATE] using the rotary 2 control.

The following speeds can be selected.

Setting	Baud Rate
[9.6 k]	9600 bps
[19.2 k]	19200 bps
[38.4 k]	38400 bps
[115.2 k]	115200 bps

The factory default setting is [9.6 k].

To set the data length

Set [DATA L.] to [8BITS] or [7BITS] using the rotary 3 control.

The factory default setting is [8BITS].

To set the communication parity

Set [PARITY] to [NONE] (not set), [ODD] (odd bit), or [EVEN] (even bit) using the rotary 4 control.

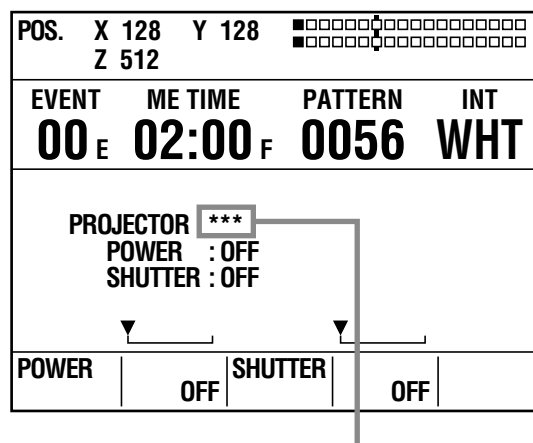
To select the communication mode

[PJ] (projector) and [RS-232C] can be selected with the rotary 5 control.

If [PJ] is selected, the Projector Setting screen appears when the PROJECTOR/REMOTE button is set to ON, enabling operation of a Panasonic projector from this unit.

Projector setting screen



The status of the projector connected to this unit is displayed.





Appears during projector monitoring.

When the projector is not compatible with the communication system of this unit or the unit cannot obtain any information due to differences in the communication protocol, “---” appears for [POWER] and [SHUTTER]. In addition, “---” appears for [SHUTTER] when the projector power is off.

To turn on or off the projector power

- 1 Select [ON] or [OFF] using the rotary 2 control, and press the  key.
- 2 Press again the  key when the message [OK?] appears.

To control the shutter function of the projector

- 1 Select [ON] or [OFF] using the rotary 3 control, and press the  key.
- 2 Press again the  key when the message [OK?] appears.

Black signals are output from the PGM connector of the SDI and DVI-D connectors to projectors without shutter function.

◆ NOTE

- If the communication is interrupted during control of the projector, operational consistency may not be maintained between this unit and the projector. (For example, if the communication cable is disconnected after the shutter is turned off from the unit, the black signal is output from the PGM connector.)
- This unit monitors the condition of the projector at regular intervals.
During projector monitoring, *** appears on the screen, disabling this unit to control the projector.

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– key	13, 35, 20
. (period) key	14, 32, 21

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List of Transition Patterns

Legends

- There is a case in which two or more numbers are set for one pattern (duplicate numbers).
Example: The same Mtrix pattern is called regardless of whether 24 or 701 is specified.
- When transition is executed by specifying the number in the columns for which “+Diss” is shown, transition mix (Dissolve) is performed.
Example: The same Slide1 pattern is called regardless of whether 43 or 1311 is specified. However, when transition is executed with 43 or 1311 specified, transition wipe or transition mix is performed, respectively.
- The COMP SINGLE, COMP BOTH, SLIDE, MULTI, and Blinds patterns are the basic patterns with the corresponding MODIFY effects applied as shown by the arrow marks (→ page Vol.2-3). (**Example:** When SLIDE as the MODIFY effect is applied to the No. 1 basic pattern, the No. 43, 1301, or 1304 pattern is generated.)

- +Diss:** This denotes a pattern to which the dissolve effect can be applied.
A: Temporary change of aspect ratio is available (→ page Vol.1-35).
O: One-way function is available (→ page Vol.1-34). (Only when [BUS] in the [SETUP] menu is set to [AB].)
R: Reverse function is available (→ page Vol.1-35).
XY: XY position adjustment with the joystick is available (→ page Vol.1-34).
Z: Z position adjustment with the joystick is available (→ page Vol.1-34).

*1 Any SLIDE pattern cannot be used for the downstream key.

	Basic																							
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
		O,R	O,R	O,R	O,R	O,R	O,R	O,R	O,R	O,R	O,R	O,R	A, O, R, XY	A, O, R, XY	A, O, R, XY	A, O, R, XY	O,R	O,R	O,R	O,R	O,R	O,R	O,R	O,R
+COMP SINGLE	↓																							
	COMP SINGLE																							
	Duplicated +Diss	28 1501 1521	29 1502 1522	30 1503 1523	31 1504 1524	36 1505 1525	37 1506 1526	38 1507 1527	39 1508 1528	40 1509 1529	41 1510 1530		42 1511 1531	128 1512 1532		129 1513 1533								
		O,R	O,R	O,R	O,R	O,R	O,R	O,R	O,R	O,R	O,R		O,R	A, O, R, XY		A, O, R, XY								
+COMP BOTH	→																							
	COMP BOTH																							
	Duplicated	32 1541	33 1542	34 1543	35 1544	130 1545	131 1546	132 1547	133 1548															
		O,R	O,R	O,R	O,R	O,R	O,R	O,R	O,R															
+SLIDE	→																							
	SLIDE*1																							
	Duplicated +Diss	43 1301 1311	44 1302 1312	45 1303 1313	46 1304 1314	51 1505 1315	52 1306 1316	53 1307 1317	54 1308 1318															
		O,R	O,R	O,R	O,R	O,R	O,R	O,R	O,R															
+MULTI	→																							
	MULTI																							
		63	64	65	66	67	68	69	70								71	72	73	74	75	76	77	78
		O,R	O,R	O,R	O,R	O,R	O,R	O,R	O,R								O,R	O,R	O,R	O,R	O,R	O,R	O,R	O,R
+Blinds	→																							
	Blinds																							
		79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	100	101	102
		O,R	O,R	O,R	O,R	O,R	O,R	O,R	O,R	O,R	O,R	O,R	A, O, R, XY	A, O, R, XY	A, O, R, XY	A, O, R, XY	O,R	O,R	O,R	O,R	O,R	O,R	O,R	O,R

Basic2																LUM	CUT MIX	SAT MIX
Duplicated	183 801	184 802	185 803	186 804	187 805	188 806	189 807	190 808	191 809	192 810	193 811	194 812	195 813	196 814		197 1082	198 1083	199 1084
	O,R	O,R	O,R	O,R	O,R	O,R	O,R	O,R	O,R	O,R	O,R	O,R	O,R	O,R				

Mtrix							
Duplicated	24 701	25 702	26 703	27 704	705	706	707
	O,R	O,R	O,R	O,R	O,R	O,R	O,R

MIX		M I X			NAM
Duplicated	55 1010	56 1080	57	58	60*3 1081
			O, R	O, R	

Tumble*2		
Duplicated	141 1549	142 1550
	O,R	O,R

DVE*1 BPreset*2	Mosaic XY	Mosaic X	Mosaic Y	Defocus	H Mirror	V Mirror	HV Mirror	Nega YC	Nega Y	Nega C	Mono	Paint	CUT	Still Field	Still Fram	Strobe	4Multi Strob	9Multi Strob	16Multi Strob	Decay	Video Fa B	Color Fa B	V+C Fa B
Duplicated	200 1001	201 1002	202 1003	203 1004	204 1021	205 1022	206 1023	207 1030	208 1031	209 1032	210 1033	211 1034	212 1059	213 1060	214 1061	215 1062	216 1063	217 1064	218 1065	219 1066	220 1067	221 1068	222 1069

Shutter*1*4				
Duplicated	223 1091	224 1092	225 1093	226 1094
	O,R	O,R	O,R	O,R

Direct Pattern	DT 1	DT 2	DT 3	DT 4	DT 5	DT 6	DT 7
	241	242	243	244	245	246	247

Panel	Panel	Panel
	0	99
	O,R	O,R

*1 Any DVE or Shutter pattern cannot be used for the downstream key.

*2 When a DVE Bpreset pattern is selected, the pattern with the effects corresponding to the number specified for the MIX (65) pattern is called.







*3 When the No. 60 (1081) pattern is being used, the switched video cannot be previewed even if the transition lever is set to the A or B side and the ME PVW button is pressed.

*4 When these patterns are used, it is not possible to execute transition with the transition lever. Use the AUTO TAKE button to execute transition.





List of Key Patterns



Legends

- There is a case in which two or more numbers are set for one pattern (duplicate numbers).
Example: The same Basic Key pattern is called regardless of whether 62 or 3101 is specified.
- When the number in the columns for which “+Diss” is shown is specified, a pattern with the dissolve effect added is called.
When the number in the columns for which “Exp” is shown is specified, a pattern with the expand effect (pattern appearance with expansion) added is called.
When the number in the columns for which “Diss+Exp” is shown is specified, a pattern with the dissolve effect and expand effect added is called.

Basic Pattern Key						
+Diss Exp Exp+Diss	3001 3021 3041	3002 3022 3042	3003 3023 3043	3004 3024 3044	3005 3025 3045	3006 3026 3046
	A, K, R, S, XY, Z	A, K, R, S, XY, Z	A, K, R, S, XY, Z	A, K, R, S, XY, Z	A, K, R, S, XY, Z	A, K, R, S, XY, Z

Basic Key	CHR	LUM	EXT
Duplicated	62 3101	61 3102	59 3103
	R	R	R

PinP				
+Diss Exp Exp+Diss	3301 3311 3321	3302 3312 3322	3303 3313 3323	3304 3314 3324
	A, K, XY, Z	A, K, XY, Z	A, K, XY, Z	A, K, XY, Z

Spot Light		
+Diss Exp Exp+Diss	3305	3315 3325
	A, K, R, S, XY, Z	A, K, R, S, XY, Z

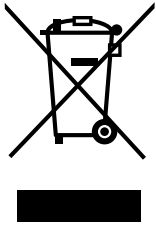
Key Learn	Key Learn1	Key Learn2	Key Learn3	Key Learn4	Key Learn5	Key Learn6	Key Learn7	Key Learn8	Key Learn9	Key Learn10	Key Learn11	Key Learn12	Key Learn13	Key Learn14	Key Learn15	Key Learn16	Key Learn17	Key Learn18	Key Learn19	Key Learn20
	9000	9001	9002	9003	9004	9005	9006	9007	9008	9009	9010	9011	9012	9013	9014	9015	9016	9017	9018	9019

Title	T-1	T-2	T-3	T-4	T-5	T-6	T-7	T-8	T-9	T-10	T-11	T-12	T-13	T-14	T-15	T-16	T-17	T-18	T-19	T-20	T-21	T-22	T-23
+Diss	9501	9511	9521	9531	9541	9551	9561	9571	9581	9591	9601	9611	9621	9631	9641	9651	9661	9671	9681	9691	9701	9711	9721
Title	T-24	T-25	T-26	T-27	T-28	T-29	T-30																
+Diss	9731	9741	9751	9761	9771	9781	9791																

Direct Pattern	DK 1	DK 2	DK 3	DK 4	DK 5	DK 6
	248	249	250	251	252	253

- +Diss:** This denotes a pattern to which the dissolve effect can be applied.
- EXP:** This denotes a pattern that appears as expanding.
- EXP+Diss:** This denotes a pattern that appears as expanding and with the dissolve effect.
- A:** Temporarily change of aspect ratio is available (→ page Vol.1-36).
- K:** Key learn setting is available (→ page Vol.2-9).
- R:** Reverse function is available (→ page Vol.1-36).
- S:** Scene Grabber function is available (→ page Vol.1-36).
- XY:** XY position adjustment with the joystick is available (→ page Vol.1-36).
- Z:** Z position adjustment with the joystick is available (→ page Vol.1-36).

Information on Disposal for Users of Waste Electrical & Electronic Equipment (private households)



This symbol on the products and/or accompanying documents means that used electrical and electronic products should not be mixed with general household waste.

For proper treatment, recovery and recycling, please take these products to designated collection points, where they will be accepted on a free of charge basis. Alternatively, in some countries you may be able to return your products to your local retailer upon the purchase of an equivalent new product.

Disposing of this product correctly will help to save valuable resources and prevent any potential negative effects on human health and the environment which could otherwise arise from inappropriate waste handling. Please contact your local authority for further details of your nearest designated collection point.

Penalties may be applicable for incorrect disposal of this waste, in accordance with national legislation.

For business users in the European Union

If you wish to discard electrical and electronic equipment, please contact your dealer or supplier for further information.

Information on Disposal in other Countries outside the European Union

This symbol is only valid in the European Union. If you wish to discard this product, please contact your local authorities or dealer and ask for the correct method of disposal.