

SONY[®]

Multi Format Switcher System

MFS-2000 System

(With MKS-2010/MKS-2015/MKS-2017 Control Panel)

SUPPLEMENT 2

Software Version 3.30

English

Manual to be supplemented

MFS-2000 System User's Guide

1st Edition

Software Version 3.00 and Later

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This supplement provides supplementary description of the functions newly supported in the MFS-2000 system version 3.30.

Insert this supplement in your copy of the MFS-2000 System User's Guide.

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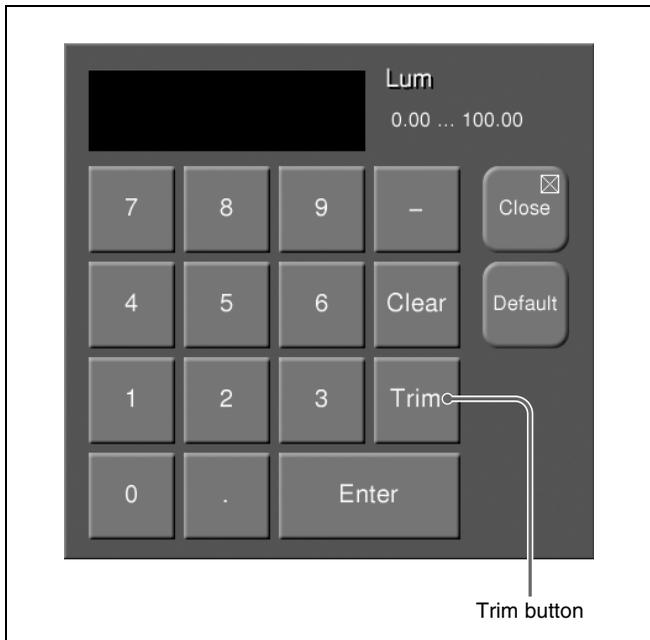
Functions Newly Supported in Version 3.30

The functions newly supported in Version 3.30 of the MFS-2000 system are as follows.

Classification	Functions supported	Menu No.	See page
Numeric keypad window	Entering an adjustment with the Trim button	-	4
Transitions	Pattern limit setting	2007, 2102	4
	Pattern limit release and transition rate setting when released		5
Independent key transitions using effects (1-channel DME) (M/E only)	Assignment of buttons used (setup)	9302, 9307	6
	Effect selection	1400, 1500	7
	Detailed effect settings	1402 to 1405, 1502 to 1505	8
	Default recall	-	8
	Button double click access to menus	-	8
Additional effect functions	Effect selection by entering a pattern number	1400, 1500, 2000	9
	Additional parameters for squeeze patterns	1400, 1500, 2000	9
	Selection of "no dead zone" mode for transitions with cropping enabled	1402, 1502, 2002	10
Using an external hard disk	Formatting an external hard disk	4800	11
	Saving and recalling still images	4801	11
	Error messages for external hard disk operations	-	12
External media support	Formatting "Memory Sticks" and media connected to the USB connections block	7900	13
	Manually installing software from a USB storage device	9003	User's Guide, 191
Timeline operations	Switching between Timeline menu and Path menu	8000, 8100	14
Setup	Video Disk Communications Protocol: detailed settings (response time setting, file naming mode setting, timecode sense setting)	5601, 9502	14
	Renaming source signals	9301	15
	Error Make and Error Break settings for switcher GPI output actions	9401	User's Guide, 209
	Error Make and Error Break settings for DCU GPI output actions	9405	User's Guide, 214

Trim Button Added

In the numeric keypad window, you can use the Trim button.



Using the Trim button

Enter an adjustment from the current value, then press the Trim button to confirm the entered value.

For example, if you press 8 when the current setting value is 50, then without pressing Enter press Trim, this confirms a setting of 58.

Pattern Limit

You can set the range of the transition during execution of an effect (wipe).

When you execute a transition with the pattern limit function on, the results will be as follows depending on the execution range setting.

- When the limit value is set to 50%, the effect at the end of the transition is the same as when the fader lever is at the center position in the normal case (with the pattern limit function disabled); the wipe pattern does not complete.
- When the limit value is set to 0%, the wipe effect is completely disabled, and carrying out the transition produces no change in the image.
- When the limit value is set to the maximum 100%, the image changes in exactly the same way as when the pattern limit function is off, but when the transition is completed, the cross-point selections do not interchange between the background A and B buses.

Notes

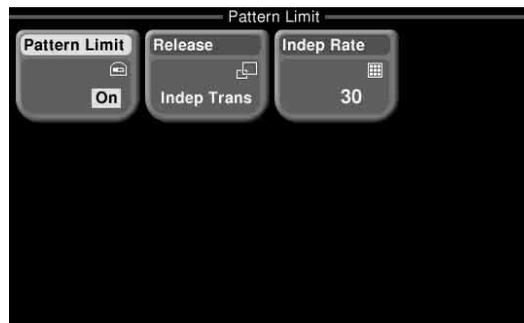
- A pattern limit only applies when an effect (wipe) is selected as the transition type. It cannot be applied to a mix or preset color mix.
A pattern limit cannot be applied when the pattern number 0901 or 0902 is selected.
- A pattern limit cannot be applied to an independent key transition.

Making the Pattern Limit Setting

The following procedure shows the case of an M/E bank setting, but the same basic procedure also applies to a PGM/PST bank setting.

- 1 From the top menu, select Effect/Wipe >M/E Effect >Pattern Limit.

The Pattern Limit menu appears.



- 2 Press [Pattern Limit], turning it on.

- 3 Set the following parameter with the knob.

Knob	Description	Setting values
1 (Ptn Limit)	Transition execution range	0.00 to 100.00

- 4 Carry out the transition.

The transition progresses as far as the set pattern limit.

- 5 Carry out the transition once again.

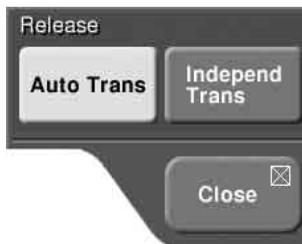
The status before the previous transition is restored.

Releasing the pattern limit

- To release the pattern limit after completion of step 5 in the previous procedure, in the Pattern Limit menu press [Pattern Limit], turning it off.
- If after carrying out step 4 in the previous procedure, the pattern limit has been reached, proceed as follows.

- 1 In the Effect/Wipe >M/E Effect >Pattern Limit menu press [Release].

A popup window appears.



- 2 Select the transition rate when the pattern limit is released.

Auto Trans: Use the transition rate set in the M/E transition control block or PGM/PST transition control block.

Independ Trans: Use the transition rate set for pattern limit release. (*See next item.*)

- 3 Press [Pattern Limit], turning it off.

- 4 Carry out the transition.

This releases the pattern limit.

Depending on the way in which the transition was executed, the action will be as follows.

- When you press the [CUT] button, the pattern limit is immediately released, and the image switches instantaneously.
- When you press the [AUTO TRANS] button, until the state of the next transition, the transition is carried out over the duration given by the transition rate.

- When you move the fader lever, the transition is carried out from the pattern limit state to the state before the pattern limit transition was carried out. Moving the fader lever even a little synchronizes the fader lever position with the transition state, and you can move the fader lever either in the forward direction or in the reverse direction.

Setting the transition rate when the pattern limit is released

- 1 In the Effect/Wipe >M/E Effect >Pattern Limit menu, press [Indep Rate].

The numeric keypad window appears.

- 2 Enter the desired number of frames in the range 0 to 999, and press [Enter].

This confirms the input, and the transition rate appears on the button.

Using an Effect for an Independent Key Transition

Overview

Using a 1-channel DME effect pattern (in the 1000 range), you can carry out an independent key transition. Thus, for example, different effects can be applied to the background and key 1.

Notes

- This requires the DME Board Set (MKS-2470) to be installed.
- An effect can be used for an independent key transition on an M/E key. For a downstream key independent key transition, effects cannot be used.
- Effects using DME cannot be selected on the same keys for an M/E transition and an independent key transition. For example, when one of the effects numbered 1001 to 1999 or 2001 to 2999 has already been selected on key 1 for an M/E transition, you cannot select any effect using DME on key 1 for an independent key transition.
- In the MFS-2000 system you can use two of the DME channels. So, when one of the DME effects numbered 2001 to 2999 is selected for an M/E transition, you cannot select any DME effect for an independent key transition on key 1 or key 2. And, when some effects are selected on key 1 and key 2 for independent key transitions, you can not use any effect using DME for M/E transitions.

Effect patterns available for independent key transitions

Effect numbers	Group name
1001 to 1008	Slide
1011 to 1013	Split
1015 to 1020	Expansion
1021 to 1031	Squeeze
1041 to 1048	Door
1051 to 1069	2D Trans
1071 to 1094	3D Trans
1201 to 1208, 1221 to 1224, 1231	Frame In/Out
1301 to 1313, 1315 to 1318, 1341 to 1345	Page Turn
1321 to 1333, 1335 to 1338, 1346 to 1350	Page Roll
1351 to 1358	Mirror
1361 to 1364	Accordion
1365 to 1369, 1501	Sphere
1371 to 1374	Character Trail
1375 to 1379	Wave
1381 to 1382	Ripple
1384 to 1389	Split Slide
1391 to 1399	Sparkle
1901 to 1999	User Programmable DME

Assigning the Buttons Used (Setup)

Assigning a key delegation to a utility control block button

In order to control an independent key transition effect in the Effect/Wipe control block, assign an independent key transition key delegation (M/E K1 Trans, M/E K2 Trans) to one of the utility control block buttons. Operations in the Effect/Wipe control block apply to keys selected with these buttons.

For details of the assignment operation, see “Assigning utility commands” (User’s Guide, page 200).

Assigning the auto transition function to an M/E transition control block button (for a 1 M/E panel)

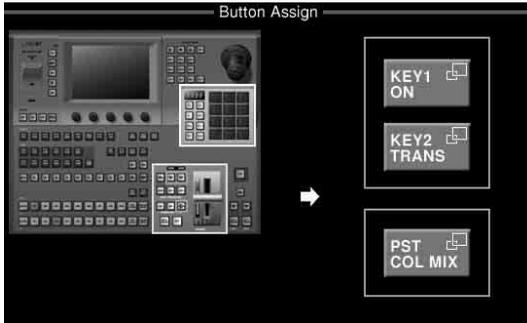
You can assign the auto transition function for an independent key transition to the [KEY1 ON] and [KEY2 ON] buttons of the M/E transition control block of an MKS-2010 control panel (1 M/E panel). The following procedure describes the case of assignment to the [KEY1 ON] button. Use a similar procedure for the [KEY2 ON] button.

- 1 From the top menu, select Setup/Diag >Operation >Button Assign.

The Button Assign menu appears.

- 2 In the menu screen, press the indication of transition control block .

The current assignment appears on the right.



- 3 Press the indication (KEY1 ON) for the button whose assignment you want to change.

A popup window appears.



- 4 Press [KEY1 TRANS].

This assigns the auto transition function to the [KEY1 ON] button for an independent key transition of key 1.

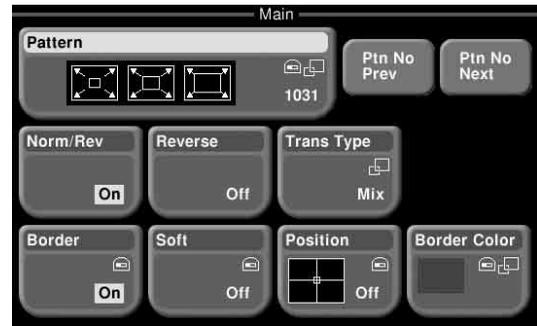
Selecting the Effect for an Independent Key Transition

The following procedure describes the case of setting for key 1. Use a similar procedure for key 2.

Setting the transition type of an independent key transition to be an effect

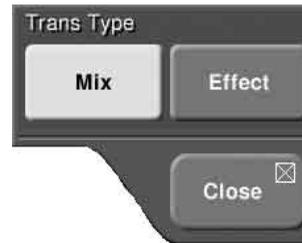
- 1 From the top menu, select Key >M/E K1 Trans >Main.

The Main menu appears.



- 2 Press [Trans Type].

A popup window appears.



- 3 Press [Effect].

The popup window closes, and the transition type of the independent key transition is set to “effect.”

Selecting the effect pattern for an independent key transition

- 1 Confirm that the transition type of an independent key transition is set to effect. (*See previous item.*)

- 2 In the Key >M/E K1 Trans >Main menu, press [Pattern].

A popup window for selection of effect patterns appears.

- 3 Use either of the following operations to select the effect pattern.

- Select the desired pattern by scrolling the popup window or from the group name.

See “Selecting Effects From Menus” (User’s Guide, page 62).

- Enter the number of the desired pattern to make the selection.

See steps 3 and following in “Selecting an effect with a pattern number” (page 9).

Making Detailed Settings for an Independent Key Transition Effect

Effect modifiers

In the Main menu, you can make the following modifier settings. Carry out the operation in the same way as for a normal transition.

Setting	Button(s) to press	Reference page in User's Guide
Changing the position and size of the effect pattern	Position	68
Selecting effect directions	Norm/Rev, Reverse	76
Adding borders to video	Border	71
Setting border colors	Border Color	71
Softening borders or edges of video	Soft	72

Advanced effect operations

Use the following menus for advanced effect operations. Carry out the operation in the same way as for a normal transition.

Setting	Menus (menu page numbers)	Reference page in User's Guide
Cropping effects	Key >M/E K1 (K2) Trans > Crop (1402/ 1502)	101
Adding beveled edges to video	Key >M/E K1 (K2) Trans >Beveled Edge (1403/1503)	102
Adding lighting	Key >M/E K1 (K2) Trans >Lighting (1404/1504)	104
Adding afterimages (Trail)	Key >M/E K1 (K2) Trans >Trail/Shadow (1405/1505)	104
Adding shadows around effects	Key >M/E K1 (K2) Trans >Trail/Shadow (1405/1505)	106

Transformations specific to effect patterns

As for a normal transition, you can set the transformation parameters.

For details, see "Effect Control Parameter List" (User's Guide Appendix (separate volume), page 7).

Other Operations

Returning independent key transition data to the default values (default recall)

In the popup window that appears when you press the Default Recall button in a menu screen (*see User's Guide, page 31*), you can select the following items.

- M/E K1 Trans: Functional unit in the Key >M/E K1 Trans menu
- M/E K2 Trans: Functional unit in the Key >M/E K2 Trans menu

This returns the data values set in these menus to the default values.

Note

The default recall function does not apply to transition type.

Accessing menus by double clicking

In the utility control block, double click the button to which M/E K1 Trans or M/E K2 Trans is assigned. The respective Main menu (number 1400 or 1500) appears.

Additional Effect Functions

Additional Effect Selection Method

Selecting an effect with a pattern number

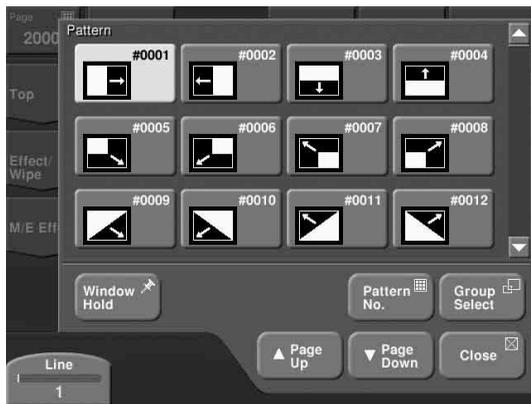
1 From the top menu, select one of the following.

- Effect/Wipe >M/E Effect >Main
- Effect/Wipe >P/P Wipe >Main
- Key >M/E K1 Trans >Main
- Key >M/E K2 Trans >Main

The Main menu appears.

2 Press [Pattern].

A popup window appears.



3 Press [Pattern No.].

The popup window closes, and the numeric keypad window appears.

4 Enter the desired pattern number.

This confirms the effect pattern; the popup window closes, returning to the Main menu.

Additional Squeeze Pattern Parameters

In a squeeze effect (Nos. 1025 to 1028), when cropping is enabled, you can adjust the position at which the new image appears, or apply borders to any of the four edges.

Enabling the image position adjustment and border

1 In any of the following menus, select a squeeze pattern (Nos. 1025 to 1028). (These effects can also be applied to an independent key transition.)

- Effect/Wipe >M/E Effect >Main
- Effect/Wipe >P/P Wipe >Main
- Key >M/E K1 Trans >Main
- Key >M/E K2 Trans >Main

2 Press [Crop Link] displayed in place of a parameter button, setting it to On.

Parameter	Description	Setting values	Remarks
Knob 4 (Crop Link)	Selection of whether to enable image position adjustment and border settings	On/Off	In the menu display, a [Crop Link] button appears in place of a parameter button for knob 4. Press the button to toggle the Crop Link function between On and Off.

Adjusting the position at which a image appears

After selecting the desired squeeze patterns, set the following parameters with the knobs.

Parameter	Description	Setting values	Remarks
Knob 1 (Offset H)	Horizontal position at which image appears	-50.00 to +50.00	-50%: Move left by 25% of screen width +50%: Move right by 25% of screen width
Knob 2 (Offset V)	Vertical position at which image appears	-50.00 to +50.00	-50%: Move downward by 25% of screen height +50%: Move upward by 25% of screen height

Adding a border

Press [Border], turning it on.

This adds a border to the four edges of the image.

Additional Mode for No Dead Zone When Cropping Is Enabled

When [Last 5%] is selected for carrying out a transition, you can set the transition completion timing to 70% ([Last 30%]), 95% ([Last 5%]), or 100% ([Off]) of the transition duration.

Setting the transition completion timing

1 Refer to “To set a relationship between transition progress and cropping” (*User's Guide, page 102*), to select “Last 5%.”

2 Press [Release Trans].

A popup window appears.



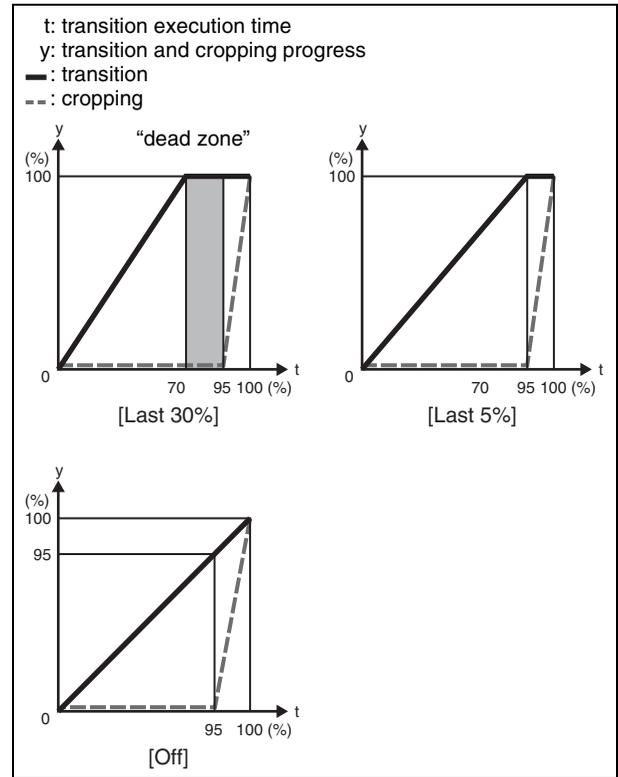
3 Select one of the following.

Last30%: The transition completes at the end of 70% of the transition execution time. The transition has a dead zone from 70% to 95% of the transition time. The cropping is removed during the last 5% (enlarges).

Last5%: The transition completes at the end of 95% of the transition execution time. When the transition completes, the cropping is removed during the last 5% (enlarges).

Off: The transition completes at the end of the transition execution time. During the last 5% of the transition, the transition and cropping removal proceed together.

(See following diagram.)



External Hard Disk Drive Access

You can connect a hard disk drive to the MFS-2000 system, and save and recall image data from frame memory. Since image data saved in memory is lost when the system is powered off, using an external hard disk drive allows required data to be preserved.

Notes

- Only one hard disk drive can be connected to each system.
- While the hard disk is being accessed, frame memory operations are not possible from the control panel. All the frame memory operations, including recalling frame memory image data by a snapshot, are out of control.

Consult a Sony service representative or sales representative about the hard disk drives that can be connected.

Hard Disk Formatting

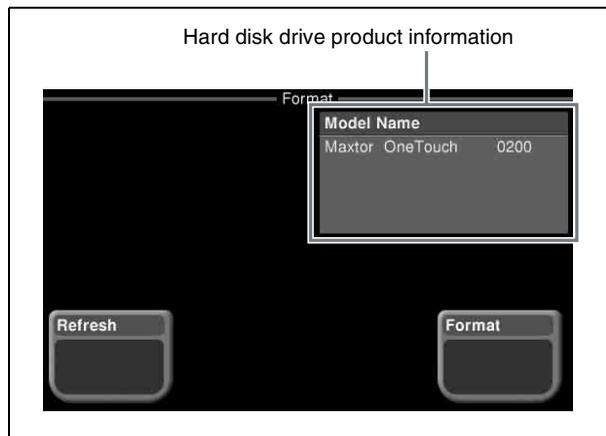
When you connect a hard disk drive for the first time, it is necessary to format the hard disk. This partitions the disk, creating five logical drives (FMHDD1 to FMHDD5).

- 1 From the top menu, select Frame Memory >External HDD >Format.

The Format menu appears.

- 2 Press [Refresh].

The product information for the connected hard disk drive appears at the upper right of the screen.



- 3 Press [Format].

A popup window for confirming formatting appears.

Note

Carrying out formatting erases any existing data on the hard disk.

- 4 Press [Yes].

This starts the hard disk formatting, and a window appears, showing the progress of the operation. When the operation is completed successfully, a completion message appears.

Press [OK] to close the window.

Saving Still Images to the External Hard Disk

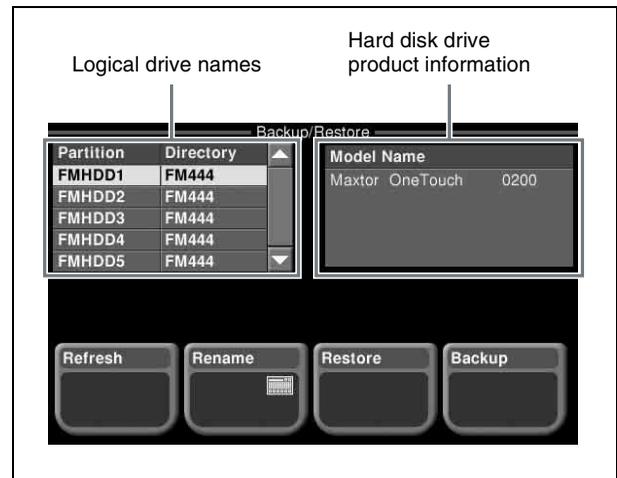
You can save all of the files from frame memory to the external hard disk drive.

Note

Before carrying out this operation for the first time, it is necessary to format the hard disk. (See previous item.)

- 1 From the top menu, select Frame Memory >External HDD >Backup/Restore.

The Backup/Restore menu appears.



To get the hard disk drive information

Press [Refresh].

The product information for the connected hard disk drive appears at the upper right of the screen.

- 2 Using any of the following methods, select a logical drive (FMHDD1 to FMHDD5).

- Press directly on the list in the status area.
- Use the arrow buttons to scroll the reverse video cursor.
- Turn the knob.

Knob	Description	Setting values
1 (Partition)	Logical drive selection	1 to 5

3 Press [Backup].

A popup window for confirming file saving appears.

Note

When you save the files, all of the saved files in the logical drive are erased immediately before the saving operations.

4 Press [Yes].

This starts the file saving operation. If there is no directory in the logical drive, a directory is automatically created, and the files are saved within it. A window appears, showing the progress of the operation.

When the operation is completed successfully, a completion message appears.

Press [OK] to close the window.

Renaming a directory

1 In the Frame Memory >External HDD >Backup/Restore menu, select the directory you want to rename from the list.

2 Press [Rename].

A keyboard window appears.

3 Enter the new directory name (maximum eight characters), and press [Enter].

This renames the directory.

Recalling Files From the External Hard Disk

You can recall all of the saved files on the hard disk drive into frame memory.

1 Carry out steps 1 and 2 of the procedure “Saving Still Images to the External Hard Disk” (page 11).

Note

It is not possible to select a directory (logical drive) on which files are not saved.

2 Press [Restore].

A popup window for confirming file recall appears.

Note

When you recall the files, any existing data in frame memory is lost immediately before the recalling operation.

3 Press [Yes].

This starts the file recalling operation. A window appears, showing the progress of the operation. When the operation is completed successfully, a completion message appears.

Press [OK] to close the window.

Error Messages for External Hard Disk Operations

If an error occurs during an external hard disk operation, the following messages appear.

Error message	Error description
No external HDD was found (-2).	Frame Memory >External HDD >Format Frame Memory >External HDD >Backup/Restore In one of the above menu operations, the external hard disk could not be recognized. Check that the external hard disk is correctly connected.
Format operation failed (-10).	Frame Memory >External HDD >Format In the above menu operation, formatting the external hard disk was not completed correctly.
Format operation failed (-11).	Frame Memory >External HDD >Format Frame Memory > External HDD >Backup/Restore In one of the above menu operations, the logical drives of the external hard disk could not be accessed. Check that the external hard disk is correctly formatted.
Cannot access the partition (-12).	Frame Memory >External HDD >Format Frame Memory >External HDD >Backup/Restore In one of the above menu operations, the directory of the external hard disk could not be accessed.
Cannot access the directory (-20).	Frame Memory >External HDD >Format Frame Memory >External HDD >Backup/Restore In one of the above menu operations, the directory of the external hard disk could not be accessed.
Cannot access the directory (-21).	Frame Memory >External HDD >Format Frame Memory >External HDD >Backup/Restore In one of the above menu operations, the external hard disk was busy and could not be accessed.
The external HDD is busy (-22).	Frame Memory >External HDD >Format Frame Memory >External HDD >Backup/Restore In one of the above menu operations, the external hard disk was busy and could not be accessed.
The external HDD is full (-32).	Frame Memory >External HDD >Backup/Restore In the above menu operation, an attempt was made to execute [Backup] to the external hard disk which does not have enough capacity.

Error message	Error description
Backup operation failed (-33).	Frame Memory >External HDD > Backup/Restore In the above menu operation, an attempt was made to execute [Backup] but the file storing process was not completed correctly.
Backup operation failed (-34).	
No file was found (-40).	Frame Memory >External HDD >Backup/Restore In the above menu operation, an attempt was made to execute [Restore] but no files written on the external hard disk was found.
Restore operation failed (-42).	Frame Memory >External HDD >Backup/Restore In the above menu operation, an attempt was made to execute [Restore] but recalling file from the external hard disk was not completed correctly.
Restore operation failed (-43).	

External Media Support

Formatting Media

You can format “Memory Sticks” and media connected to the USB connector.

- 1 From the top menu, select File >Directory Manage.

The Directory Manage menu appears.



- 2 Press [Media Sel].

A popup window appears for media selection.



- 3 Press [Memory Stick] or [USB].

- 4 Press [Format].

A confirmation message appears.

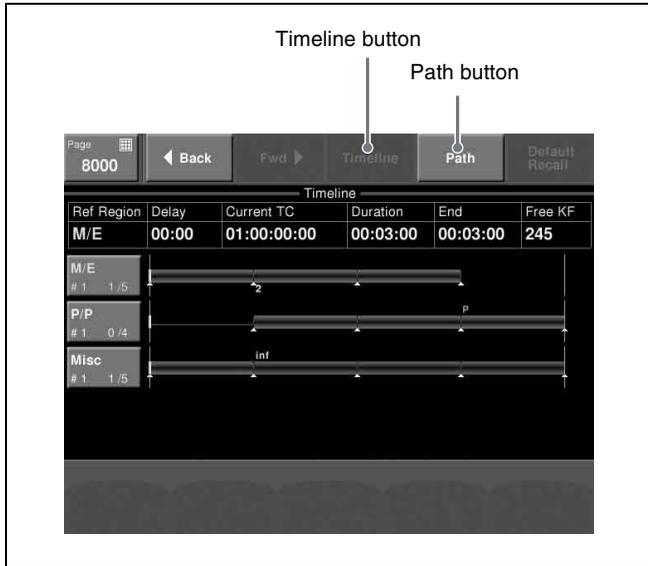
- 5 Press [Yes].

This starts the formatting operation, and a window appears, showing the progress. When the operation is completed successfully, a completion message appears.

Press [OK] to close the window.

Switching Menus in Timeline Operations

In menus in the 8000 range, the [Timeline] and [Path] buttons appear. Press either of these to switch between the Timeline menu and Path menu.



Disk Recorder Control

Making Advanced Settings for Disk Recorders (Video Disk Communications Protocol)

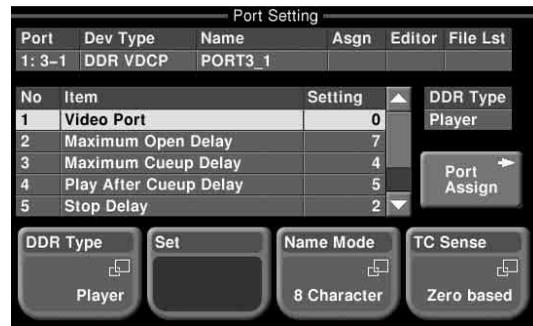
Selecting the file name format

Select the format for the file names handled by the disk recorder.

For more information about files handled by the disk recorder (loading file lists, loading files, creating files), see page 179 in the User's Guide.

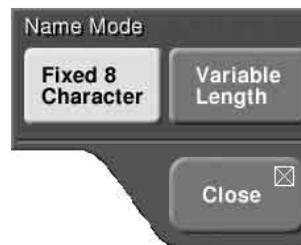
- 1 From the top menu, select Setup/Diag >Device >Port Assign >Port Setting.

The Port Setting menu appears.



- 2 Press [Name Mode].

A popup window appears.



- 3 Select either of the following.

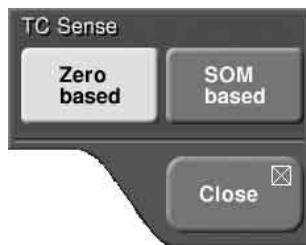
Fixed 8 Character: Handle eight-character fixed-length file names

Variable Length: Handle variable-length file names (In the MFS-2000 system, file names are limited to a maximum of 23 characters.)

Setting the timecode sense

- 1 In the Setup/Diag >Device >Port Assign >Port Setting menu, press [TC Sense].

A popup window appears.



- 2 Select from the following, according to the protocol that the connected device supports.

Zero based: Mode in which the timecode is sensed with the first frame of the recalled file as 00:00:00:00

SOM based: Mode in which the timecode is sensed with the values recorded in the recalled file

Note

The details of the above operating modes depend on the connected device. *For details, refer to the documentation for the connected device.*

Setting the response time

In the Setup/Diag >Device >Port Assign >Port Setting menu (see previous item), the following are added to the knob 3 setting items.

Still Delay: Time required to stop after issuing the Still command

Continue Delay: Time required to stop after issuing the Continue command

For details of the method of setting, see “Making detailed settings for disk recorders (Video Disk Communications Protocol)” (User’s Guide, page 222).

Renaming Source Signals

For the source signal names displayed on MKS-8082 and similar AUX bus remote panels, the default is “IN 16” and so on, but you can change the names as follows.

- 1 From the top menu, select Setup/Diag >Operation >V/K Pair Assign.

The Video/Key Pair Assign menu appears.



- 2 Using any of the following methods, select the number of the source whose name is to be changed.

- Press directly on the list in the status area.
- Use the arrow buttons to scroll the reverse video cursor.
- Turn the knob.

Knob	Description	Setting values
4 (Source No)	Source number setting	1 to 33

The selected source number appears in reverse video.

- 3 Press [Source Name].

A keyboard window appears.

- 4 Enter the new source name (maximum 16 characters), and press [Enter].

Note

The following characters cannot be used in a source name:

space \ / : , (comma) ; * ? “ < > . (period) |

