

Solid-State Memory Camcorder

PMW-F3K

PMW-F3L

Supplement



XDCMEX SXS

Exmor
Super35 CMOS

HDMI i

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Foreword

This supplement contains the following supplementary information about the PMW-F3K/F3L.

- Using an External Hard Disk
- Using a Media Adaptor
- Operating via the REMOTE Connector
- Output Formats and Limitations

Using an External Hard Disk

You can use an optional PHU-60K, PHU-120K, or PHU-120R Professional Hard Disk Unit with this camcorder.

Notes

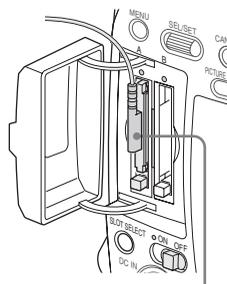
- High-speed playback may not be properly achieved with the PHU-60K/120K/120R.
- Slow Motion recording by the Slow & Quick Motion recording function cannot be made with the PHU-60K/120K/120R.

Attaching the PHU-60K/120K/120R

Recording/playback can be made using the PHU-60K/120K/120R in the same manner as with SxS memory cards if you connect the PHU connection cable of the PHU-60K/120K/120R to an SxS memory card slot of the camcorder.

Connecting the PHU connection cable

- 1 Set the power switch of the camcorder to the ON position.**
- 2 Open the cover of the card slot block and plug the PHU connection cable into a slot.**



Insert so that the cable extends upward.

- 3 Turn on the PHU-60K/120K/120R.**
The POWER indicator of the PHU-60K/120K/120R lights in green.

Subsequently, the access lamp of the camcorder lights in red then changes to green once the unit is ready for use.

Notes

- The cover of the card slot block cannot be closed with the PHU-60K/120K/120R connected.
- Bundle the cable so that it will not accidentally get on nearby objects.

To disconnect the PHU connection cable

Operate in the same manner as when you remove an SxS memory card from the slot.

Formatting the PHU-60K/120K/120R

For a PHU-60K/120K/120R that is not formatted or that was formatted with another system, the message “Unsupported File System” is displayed on the LCD monitor/viewfinder screen.

Format the PHU-60K/120K/120R as instructed below.

To execute formatting

Using “Format Media” of the OTHERS menu, specify “Media(A)” (slot A) or “Media(B)” (slot B) then select “Execute.”

Formatting begins.

An in-progress message and status bar (%) are displayed, and the access lamp lights in red.

When formatting is completed, a completion message is displayed for three seconds.

Notes

- Formatting for the PHU-60K/120K/120R on this camcorder is “Quick Format” with which only the managerial data are erased. To erase the recording data completely, connect the unit to a PC and perform “Full Format.”
- The PHU-60K/120K/120R to be used with this camcorder must be formatted using the format function of this camcorder. Any PHU-60K/120K/120R formatted with another device must be formatted again with this camcorder.

Checking the Remaining Time Available for Recording

In E-E Display/Recording mode, the remaining capacity (in minutes) of the PHU-60K/120K/120R connected via a card slot is displayed on the LCD monitor/viewfinder screen.



The available time for recording with the current video format (recording bit rate) is calculated according to the remaining space of the hard disk and displayed in time units of minutes.

The remaining capacity can also be checked in a meter format on the BATTERY/MEDIA status screen.

Restoring the PHU-60K/120K/120R

If an error occurs with data on the PHU-60K/120K/120R for some reason, the hard disk must be restored.

If a PHU-60K/120K/120R that needs to be restored is connected, a message that prompts you to execute restoration is displayed on the LCD monitor/viewfinder screen.

To restore the hard disk

Select “Execute” by turning the jog dial then push the dial.

Restoration begins.

During restoration, an in-progress message and status bar (%) are displayed, and the access lamp is lit in red.

When restoration is completed, a completion message is displayed for three seconds.

If restoration fails

- A PHU-60K/120K/120R on which an error occurred may become usable again through reformatting.
- In some cases, only parts of clips cannot be restored. Playback of the restored clips becomes possible again.

Using a Media Adaptor

Use of the optional MEAD-MS01 or MEAD-SD01 Media Adaptor permits you to insert a “Memory Stick” (with MEAD-MS01) or an SDHC card (with MEAD-SD01) to the SxS memory card slot of the camcorder and use it for recording and playback in the same way as with an SxS memory card.

Usable “Memory Stick”

“Memory Stick PRO-HG Duo HXA” series

Usable SDHC card

Class 10 SDHC card

For details on use of the MEAD-MS01/SD01 Media Adaptor, refer to the operating instructions of the adaptor.

Notes

- High-speed playback may not be properly achieved with a “Memory Stick” or an SDHC card.
- Slow Motion recording by the Slow & Quick Motion recording function cannot be made with a “Memory Stick” or an SDHC card.

Formatting

When you use a “Memory Stick” or an SDHC card with this camcorder, formatting is required. A “Memory Stick” or an SDHC card to be used with this camcorder must be formatted using the format function of this camcorder.

It is also necessary to format a “Memory Stick” or an SDHC card for use if a caution message is displayed when you mount the “Memory Stick” or SDHC card.

For a “Memory Stick” or an SDHC card that was formatted with another system unsupported by this camcorder, the message “Unsupported File System” is displayed on the LCD monitor/viewfinder screen.

Format the “Memory Stick” or SDHC card as instructed below.

To execute formatting

Using “Format Media” of the OTHERS menu, specify “Media(A)” (slot A) or “Media(B)” (slot B) then select “Execute.”

Formatting begins.

An in-progress message and status bar (%) are displayed, and the access lamp lights in red.

When formatting is completed, a completion message is displayed for three seconds.

Note

In formatting, all data in a “Memory Stick” or an SDHC card including protected images, are erased and cannot be restored.

Connection between the camcorder and a PC

To use a “Memory Stick” or an SDHC card in which data have been recorded with an XDCAM EX-series product, insert it into the slot of the camcorder and connect between the PC and this camcorder using a USB cable.

To use a “Memory Stick” formatted with this camcorder with other devices having a “Memory Stick” slot

1. First make a backup copy of the data recorded in the “Memory Stick.”
2. When the backup is done, format the “Memory Stick” with the device to be used.

For details on the formatting method, refer to the operating instructions of the device to be used.

To use an SDHC card formatted with this camcorder with other devices having an SDHC card slot

1. First make a backup copy of the data recorded in the SDHC card.
2. When the backup is done, format the SDHC card with the device to be used.

For details on the formatting method, refer to the operating instructions of the device to be used.

- “Memory Stick” and  MEMORY STICK are trademarks of Sony Corporation.
- “Memory Stick PRO-HG Duo” and MEMORY STICK PRO-HG DUO are trademarks of Sony Corporation.

Operating via the REMOTE Connector

When the optional RM-B750 / RM-B150 Remote Control Unit is connected, various settings of the camcorder can be performed from the remote control device.

You can operate the menus of the camcorder and monitor the picture on the display of the RM-B750 or a video monitor connected via the MONITOR connector of the remote control device.

Connection

Using the remote cable (10 m) supplied with the remote control device, connect between the REMOTE connector of the camcorder and the camera connector of the remote control device.

When you turn on the camcorder after the connection, the camcorder enters Remote Control mode.

Note

Use the RM-B750 of serial number 120000 or higher.

Adjusting the camcorder from the remote control device

Turn on the camcorder.

The Picture Profile function is activated, automatically selecting Picture Profile 10.

From this status, you can control menu and recording operations from the remote control device.

For the functions that can be controlled from the remote control devices, see “Functions Operable via the REMOTE Connector” on page 8.

Notes

- Remote control operations cannot be made if USB connection to the camcorder is enabled.
- Do not connect or disconnect the remote control device when the camcorder is on.
- The following controls of the camcorder become inoperative when the remote control device is connected.
 - GAIN switch
 - WHITE BALANCE switch
 - SHUTTER switch

- BARS/CAM button
- AUTO WHT BAL button

The ECS frequency value displayed on the Remote Control Unit may slightly differ from that on the camcorder.

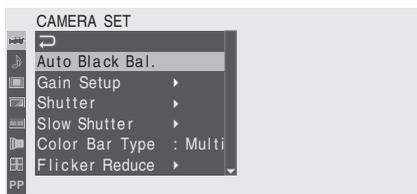
Releasing Remote Control mode

Turn off the camcorder and disconnect the remote control device.

The settings on the controls on the camcorder become valid.

Operating the Menus of the Camcorder

In Remote Control mode, **PP** (the icon for the Picture Profile menu) is displayed at the bottom with the Setup menu icons, enabling you select the Picture Profile menu from this screen.



Note

The menu items that cannot be set in Remote Control mode are shaded and cannot be selected.

Operating the menu from the RM-B150

Set the camcorder to E-E Display mode then proceed as follows.

- 1 Set the DISPLAY switch to MENU.**

The menu of the camcorder appears on the monitor screen connected via the MONITOR connector of the RM-B150.
- 2 Select and set the menu items using the MENU SELECT knob and the CANCEL/ENTER switch.**
- 3 When the settings are completed, set the DISPLAY switch to ON or OFF to exit the menu.**

For details on operations of the RM-B150, refer to the Operation Manual of the RM-B150.

Operating the menu from the RM-B750

Set the camcorder to E-E Display mode then proceed as follows.

1 Press and light the MONITOR button then press the VF MENU button.

The menu of the camcorder appears on the RM-B750 display and the monitor screen connected via the MONITOR connector of the RM-B750.

2 Select and set the menu items, using the MENU SELECT knob, ENTER button, and CANCEL button.

3 When the settings are completed, press the VF MENU button to exit the menu.

For details on operations of the RM-B750, refer to the Operation Manual of the RM-B750.

Functions Operable via the REMOTE Connector

When the camcorder is set to E-E Display mode, the following functions can be made using the controls, the switches, or the touch panel (RM-

B750) on the remote control device, in addition to menu operations.

Function	Operation on the camcorder	Operation on the RM-B150	Operation on the RM-B750
Menu ON/OFF	MENU button	yes	yes
Master gain selection	GAIN switch	yes	
Step gain selection			yes
Color bar signal output ON/OFF	BARS/CAM button	yes	yes
Shutter ON/OFF	SHUTTER switch + CAMERA SET menu → Shutter	yes	yes
Shutter speed selection	CAMERA SET menu → Shutter	yes	yes
ECS ON/OFF	SHUTTER switch + CAMERA SET menu → Shutter	yes	yes
ECS frequency selection	CAMERA SET menu → Shutter	yes	yes
Auto white balance	AUTO WHT BAL button	yes	yes
Auto black balance	CAMERA SET menu → Auto Black Bal.	yes	yes
White R/B level adjustments		yes	yes
Black R/B level adjustments		yes	yes
White balance memory selection	WHITE BALANCE switch	yes	yes
Auto Tracing White ON/OFF	Assignable button (with "ATW" assigned)	yes	yes
Recording start/stop	REC START/STOP button	yes	yes
Rec Review	REC REVIEW button	yes	yes
Rec Review stop	STOP button	yes	yes
Playback start	PLAY/PAUSE button	yes	yes
Playback stop	STOP button	yes	yes
Fast-forward playback	F FWD button	yes	yes
Fast-reverse playback	F REV button	yes	yes
Call signal ON/OFF ¹⁾			yes

1) When you press the CALL button on the RM-B750, the message "CALL" is displayed in the viewfinder of the camcorder.

Adjustments of the Picture Profiles

The Picture Profile menu of the camcorder can be operated from the remote control device in the same manner as on the camcorder. In addition, some items of the Picture Profile menu can also be adjusted by using the menus or controls of the remote control device.

For details on operations of the remote control device, refer to the Operation Manual of the device.

Notes

- The following menu and knob/switch operations on the remote control device are enabled when the menu of the camcorder is not displayed.
The changes become valid and reflected on the Picture Profile menu.
- If the control knobs on the remote control device is set to Absolute mode, the corresponding items cannot be changed on the Picture Profile menu.

Picture Profile item		Operation on the RM-B150	Operation on the RM-B750
Matrix	Setting		yes
	Level		yes
	R-G, R-B, G-R, G-B, B-R, B-G		yes
Multi Matrix	Setting		yes
	Axis		yes
	Hue		yes
	Saturation		yes
HD Detail	Setting		yes
SD Detail	Level	yes	yes
	Frequency		yes
	Crispening		yes
	H/V Ratio		yes
	White Limiter		yes
	Black Limiter		yes
	Knee APT Level		yes
Skin Tone Detail	Setting	yes	yes
	Level	yes	yes
	Area Indication		yes
	Saturation		yes
	Phase		yes
	Width		yes
Knee	Setting		yes
	Auto Knee	yes	yes
	Point	yes	yes
	Slope	yes	yes
	Knee SAT Level	yes	yes
Gamma	Level	yes	yes
	Select		yes
Black		yes	yes
Black Gamma			yes
Low Key SAT			yes

Formats and Limitations of Outputs

Video Formats and Output Formats

Output formats of the SDI OUT connector

The format of serial digital signals fed from the SDI OUT connector depends on the related Setup menu settings or the format of the clip to be played, as shown below.

No signal is fed out from the SDI OUT connector when “SDI/HDMI/i.LINK I/O Select” of the VIDEO SET menu is at any setting other than “HD SDI” and “SD SDI.”

In E-E Display/Recording mode

“Country” setting of the OTHERS menu’s “System”: NTSC Area/NTSC(J) Area

OTHERS menu “System”: “Format” setting	SDI OUT output format	
	VIDEO SET menu “SDI/HDMI/i.LINK I/O Select” setting	
	HD SDI	SD SDI
HQ 1920/59.94i	1920×1080/59.94i	720×480/59.94i
HQ 1920/29.97P	1920×1080/29.97PsF	720×480/29.97PsF
HQ 1920/23.98P (23.98P Output: 59.94i(2-3PullDown))	1920×1080/59.94i ¹⁾	720×480/59.94i ¹⁾
HQ 1920/23.98P (23.98P Output: 23.98PsF)	1920×1080/23.98PsF	
HQ 1440/59.94i	1920×1080/59.94i	720×480/59.94i
HQ 1440/29.97P	1920×1080/29.97PsF	720×480/29.97PsF
HQ 1440/23.98P (23.98P Output: 59.94i(2-3PullDown))	1920×1080/59.94i ¹⁾	720×480/59.94i ¹⁾
HQ 1440/23.98P (23.98P Output: 23.98PsF)	1920×1080/23.98PsF	
SP 1440/59.94i	1920×1080/59.94i	720×480/59.94i
SP 1440/23.98P	1920×1080/59.94i ¹⁾	720×480/59.94i ¹⁾
HQ 1280/59.94P	1280×720/59.94P	720×480/59.94i ²⁾
HQ 1280/29.97P	1280×720/59.94P ³⁾	720×480/29.97PsF
HQ 1280/23.98P	1280×720/59.94P ⁴⁾	720×480/59.94i ¹⁾
DVCAM59.94i SQ/EC	“SDI/HDMI/i.LINK I/O Select” invalid	720×480/59.94i
DVCAM29.97P SQ/EC		720×480/29.97PsF

¹⁾59.94i provided through 2-3 pulldown of 23.98P

²⁾59.94i provided through conversion from 59.94P

³⁾59.94P provided by outputting each frame of 29.97P two times

⁴⁾59.94P provided by repeating each frame of 23.98P two or three times

“Country” setting of the OTHERS menu’s “System”: PAL Area

OTHERS menu “System”: “Format” setting	SDI OUT output format	
	VIDEO SET menu “SDI/HDMI/i.LINK I/O Select” setting	
	HD SDI	SD SDI
HQ 1920/50i	1920×1080/50i	720×576/50i
HQ 1920/25P	1920×1080/25PsF	720×576/25PsF
HQ 1440/50i	1920×1080/50i	720×576/50i
HQ 1440/25P	1920×1080/25PsF	720×576/25PsF
SP 1440/50i	1920×1080/50i	720×576/50i
HQ 1280/50P	1280×720/50P	720×576/50i ¹⁾
HQ 1280/25P	1280×720/50P ²⁾	720×576/25PsF
DVCAM50i SQ/EC	“SDI/HDMI/i.LINK I/O Select” invalid	720×576/50i
DVCAM25P SQ/EC		720×576/25PsF

1)50i provided through conversion from 50P

2)50P provided by outputting each frame of 25P two times

In Thumbnail Screen mode

“Country” setting of the OTHERS menu’s “System”: NTSC Area/NTSC(J) Area

OTHERS menu “System”: “Format” setting	SDI OUT output format	
	VIDEO SET menu “SDI/HDMI/i.LINK I/O Select” setting	
	HD SDI	SD SDI
HQ 1920/59.94i	1920×1080/59.94i	720×480/59.94i
HQ 1920/29.97P		
HQ 1920/23.98P (23.98P Output: 59.94i(2-3PullDown))	1920×1080/59.94i ¹⁾	
HQ 1920/23.98P (23.98P Output: 23.98PsF)	1920×1080/23.98PsF	
HQ 1440/59.94i	1920×1080/59.94i	
HQ 1440/29.97P		
HQ 1440/23.98P (23.98P Output: 59.94i(2-3PullDown))	1920×1080/59.94i ¹⁾	
HQ 1440/23.98P (23.98P Output: 23.98PsF)	1920×1080/23.98PsF	
SP 1440/59.94i	1920×1080/59.94i	
SP 1440/23.98P		
HQ 1280/59.94P	1280×720/59.94P	
HQ 1280/29.97P		
HQ 1280/23.98P		
DVCAM59.94i SQ/EC	“SDI/HDMI/i.LINK I/O Select” invalid	
DVCAM29.97P SQ/EC		

1)59.94i provided through 2-3 pulldown of 23.98P

“Country” setting of the OTHERS menu’s “System”: PAL Area

OTHERS menu “System”: “Format” setting	SDI OUT output format	
	VIDEO SET menu “SDI/HDMI/i.LINK I/O Select” setting	
	HD SDI	SD SDI
HQ 1920/50i	1920×1080/50i	720×576/50i
HQ 1920/25P		720×576/25PsF
HQ 1440/50i		720×576/50i
HQ 1440/25P		720×576/25PsF
SP 1440/50i		720×576/50i
HQ 1280/50P	1280×720/50P	720×576/50i ¹⁾
HQ 1280/25P		720×576/25PsF
DVCAM50i SQ/EC	“SDI/HDMI/i.LINK I/O Select” invalid	720×576/50i
DVCAM25P SQ/EC		720×576/25PsF

In Clip Playback mode

“Country” setting of the OTHERS menu’s “System”: NTSC Area/NTSC(J) Area

Video format of playback clip	SDI OUT output format	
	VIDEO SET menu “SDI/HDMI/i.LINK I/O Select” setting	
	HD SDI	SD SDI
HQ 1920/59.94i	1920×1080/59.94i	720×480/59.94i
HQ 1920/29.97P	1920×1080/29.97PsF	720×480/29.97PsF
HQ 1920/23.98P (23.98P Output: 59.94i(2-3PullDown))	1920×1080/59.94i ¹⁾	720×480/59.94i ¹⁾
HQ 1920/23.98P (23.98P Output: 23.98PsF)	1920×1080/23.98PsF	
HQ 1440/59.94i	1920×1080/59.94i	720×480/59.94i
HQ 1440/29.97P	1920×1080/29.97PsF	720×480/29.97PsF
HQ 1440/23.98P (23.98P Output: 59.94i(2-3PullDown))	1920×1080/59.94i ¹⁾	720×480/59.94i ¹⁾
HQ 1440/23.98P (23.98P Output: 23.98PsF)	1920×1080/23.98PsF	
SP 1440/59.94i	1920×1080/59.94i	720×480/59.94i
SP 1440/23.98P	1920×1080/59.94i ¹⁾	720×480/59.94i ¹⁾
HQ 1280/59.94P	1280×720/59.94P	720×480/59.94i ²⁾
HQ 1280/29.97P	1280×720/59.94P ³⁾	720×480/29.97PsF
HQ 1280/23.98P	1280×720/59.94P ⁴⁾	720×480/59.94i ¹⁾
DVCAM59.94i SQ/EC	“SDI/HDMI/i.LINK I/O Select” invalid	720×480/59.94i
DVCAM29.97P SQ/EC		720×480/29.97PsF

¹⁾59.94i provided through 2-3 pulldown of 23.98P

²⁾59.94i provided through conversion from 59.94P

³⁾59.94P provided by outputting each frame of 29.97P two times

⁴⁾59.94P provided by repeating each frame of 23.98P two or three times

“Country” setting of the OTHERS menu’s “System”: PAL Area

Video format of playback clip	SDI OUT output format	
	VIDEO SET menu “SDI/HDMI/i.LINK I/O Select” setting	
	HD SDI	SD SDI
HQ 1920/50i	1920×1080/50i	720×576/50i
HQ 1920/25P	1920×1080/25PsF	720×576/25PsF
HQ 1440/50i	1920×1080/50i	720×576/50i
HQ 1440/25P	1920×1080/25PsF	720×576/25PsF
SP 1440/50i	1920×1080/50i	720×576/50i
HQ 1280/50P	1280×720/50P	720×576/50i ¹⁾
HQ 1280/25P	1280×720/50P ²⁾	720×576/25PsF
DVCAM50i SQ/EC	“SDI/HDMI/i.LINK I/O Select” invalid	720×576/50i
DVCAM25P SQ/EC		720×576/25PsF

1)50i provided through conversion from 50P

2)50P provided by outputting each frame of 25P two times

Output formats of the HDMI OUT connector

The format of serial digital signals fed from the HDMI OUT connector depends on the related Setup menu settings or the format of the clip to be played, as shown below.

No signal is fed out from the HDMI OUT connector when “SDI/HDMI/i.LINK I/O Select” of the VIDEO SET menu is set to “HD SDI” or “SD SDI.”

In E-E Display/Recording mode

“Country” setting of the OTHERS menu’s “System”: NTSC Area/NTSC(J) Area

OTHERS menu “System”: “Format” setting	HDMI OUT output format		
	VIDEO SET menu “SDI/HDMI/i.LINK I/O Select” setting		
	HD HDMI HD HDMI & HDV	SD HDMI i SD HDMI i & HDV SD HDMI i & DVCAM	SD HDMI P SD HDMI P & HDV
HQ 1920/59.94i	1920×1080/59.94i	720×480/59.94i	720×480/59.94P
HQ 1920/29.97P	1920×1080/29.97PsF	720×480/29.97PsF	
HQ 1920/23.98P (23.98P Output: 59.94i(2-3PullDown))	1920×1080/59.94i ¹⁾	720×480/59.94i ¹⁾	
HQ 1920/23.98P (23.98P Output: 23.98PsF)	1920×1080/23.98PsF		
HQ 1440/59.94i	1920×1080/59.94i	720×480/59.94i	
HQ 1440/29.97P	1920×1080/29.97PsF	720×480/29.97PsF	
HQ 1440/23.98P (23.98P Output: 59.94i(2-3PullDown))	1920×1080/59.94i ¹⁾	720×480/59.94i ¹⁾	
HQ 1440/23.98P (23.98P Output: 23.98PsF)	1920×1080/23.98PsF		
SP 1440/59.94i	1920×1080/59.94i	720×480/59.94i	
SP 1440/23.98P	1920×1080/59.94i ¹⁾	720×480/59.94i ¹⁾	
HQ 1280/59.94P	1280×720/59.94P	720×480/59.94i ²⁾	
HQ 1280/29.97P	1280×720/59.94P ³⁾	720×480/29.97PsF	
HQ 1280/23.98P	1280×720/59.94P ⁴⁾	720×480/59.94i ¹⁾	
DVCAM59.94i SQ/EC	“SDI/HDMI/i.LINK I/O Select” invalid	720×480/59.94i	
DVCAM29.97P SQ/EC		720×480/29.97PsF	

1)59.94i provided through 2-3 pulldown of 23.98P

2)59.94i provided through conversion from 59.94P

3)59.94P provided by outputting each frame of 29.97P two times

4)59.94P provided by repeating each frame of 23.98P two or three times

“Country” setting of the OTHERS menu’s “System”: PAL Area

OTHERS menu “System”: “Format” setting	HDMI OUT output format		
	VIDEO SET menu “SDI/HDMI/i.LINK I/O Select” setting		
	HD HDMI HD HDMI & HDV	SD HDMI i SD HDMI i & HDV SD HDMI i & DVCAM	SD HDMI P SD HDMI P & HDV
HQ 1920/50i	1920×1080/50i	720×576/50i	720×576/50P
HQ 1920/25P	1920×1080/25PsF	720×576/25PsF	
HQ 1440/50i	1920×1080/50i	720×576/50i	
HQ 1440/25P	1920×1080/25PsF	720×576/25PsF	
SP 1440/50i	1920×1080/50i	720×576/50i	
HQ 1280/50P	1280×720/50P	720×576/50i ¹⁾	
HQ 1280/25P	1280×720/50P ²⁾	720×576/25PsF	
DVCAM50i SQ/EC	“SDI/HDMI/i.LINK I/O Select” invalid	720×576/50i	
DVCAM25P SQ/EC		720×576/25PsF	

¹⁾50i provided through conversion from 50P

²⁾50P provided by outputting each frame of 25P two times

In Thumbnail Screen mode

“Country” setting of the OTHERS menu’s “System”: NTSC Area/NTSC(J) Area

OTHERS menu “System”: “Format” setting	HDMI OUT output format		
	VIDEO SET menu “SDI/HDMI/i.LINK I/O Select” setting		
	HD HDMI HD HDMI & HDV	SD HDMI i SD HDMI i & HDV SD HDMI i & DVCAM	SD HDMI P SD HDMI P & HDV
HQ 1920/59.94i	1920×1080/59.94i	720×480/59.94i	720×480/59.94P
HQ 1920/29.97P			
HQ 1920/23.98P (23.98P Output: 59.94i (2-3PullDown))	1920×1080/59.94i ¹⁾		
HQ 1920/23.98P (23.98P Output: 23.98PsF)			
HQ 1440/59.94i	1920×1080/59.94i		
HQ 1440/29.97P			
HQ 1440/23.98P (23.98P Output: 59.94i (2-3PullDown))	1920×1080/59.94i ¹⁾		
HQ 1440/23.98P (23.98P Output: 23.98PsF)			
SP 1440/59.94i	1920×1080/59.94i		
SP 1440/23.98P			
HQ 1280/59.94P	1280×720/59.94P		
HQ 1280/29.97P			
HQ 1280/23.98P			
DVCAM59.94i SQ/EC	“SDI/HDMI/i.LINK I/O Select” invalid	720×480/59.94i	“SDI/HDMI/i.LINK I/O Select” invalid
DVCAM29.97P SQ/EC			

¹⁾59.94i provided through 2-3 pulldown of 23.98P

“Country” setting of the OTHERS menu’s “System”: PAL Area

OTHERS menu “System”: “Format” setting	HDMI OUT output format		
	VIDEO SET menu “SDI/HDMI/i.LINK I/O Select” setting		
	HD HDMI HD HDMI & HDV	SD HDMI i SD HDMI i & HDV SD HDMI i & DVCAM	SD HDMI P SD HDMI P & HDV
HQ 1920/50i	1920×1080/50i	720×576/50i	720×576/50P
HQ 1920/25P			
HQ 1440/50i			
HQ 1440/25P			
SP 1440/50i			
HQ 1280/50P	1280×720/50P		
HQ 1280/25P			
DVCAM50i SQ/EC	“SDI/HDMI/i.LINK I/O Select” invalid		“SDI/HDMI/i.LINK I/O Select” invalid
DVCAM25P SQ/EC			

In Clip Playback mode

“Country” setting of the OTHERS menu’s “System”: NTSC Area/NTSC(J) Area

Video format of playback clip	HDMI OUT output format			
	VIDEO SET menu “SDI/HDMI/i.LINK I/O Select” setting			
	HD HDMI HD HDMI & HDV	SD HDMI i SD HDMI i & HDV SD HDMI i & DVCAM	SD HDMI P SD HDMI P & HDV	
HQ 1920/59.94i	1920×1080/59.94i	720×480/59.94i	720×480/59.94P	
HQ 1920/29.97P	1920×1080/29.97PsF	720×480/29.97PsF		
HQ 1920/23.98P (23.98P Output: 59.94i(2-3PullDown))	1920×1080/23.98PsF	720×480/59.94i ¹⁾		
HQ 1920/23.98P (23.98P Output: 23.98PsF)				
HQ 1440/59.94i	1920×1080/59.94i	720×480/59.94i		
HQ 1440/29.97P	1920×1080/29.97PsF	720×480/29.97PsF		
HQ 1440/23.98P (23.98P Output: 59.94i(2-3PullDown))	1920×1080/23.98PsF	720×480/59.94i ¹⁾		
HQ 1440/23.98P (23.98P Output: 23.98PsF)				
SP 1440/59.94i	1920×1080/59.94i	720×480/59.94i		
SP 1440/23.98P	1920×1080/59.94i ¹⁾	720×480/59.94i ¹⁾		
HQ 1280/59.94P	1280×720/59.94P	720×480/59.94i ²⁾		
HQ 1280/29.97P	1280×720/59.94P ³⁾	720×480/29.97PsF		
HQ 1280/23.98P	1280×720/59.94P ⁴⁾	720×480/59.94i ¹⁾		
DVCAM59.94i SQ/EC	“SDI/HDMI/i.LINK I/O Select” invalid	720×480/59.94i		“SDI/HDMI/i.LINK I/O Select” invalid
DVCAM29.97P SQ/EC		720×480/29.97PsF		

1)59.94i provided through 2-3 pulldown of 23.98P

2)59.94i provided through conversion from 59.94P

3)59.94P provided by outputting each frame of 29.97P
two times

4)59.94P provided by repeating each frame of 23.98P
two or three times

“Country” setting of the OTHERS menu’s “System”: PAL Area

Video format of playback clip	HDMI OUT output format		
	VIDEO SET menu “SDI/HDMI/i.LINK I/O Select” setting		
	HD HDMI HD HDMI & HDV	SD HDMI i SD HDMI i & HDV SD HDMI i & DVCAM	SD HDMI P SD HDMI P & HDV
HQ 1920/50i	1920×1080/50i	720×576/50i	720×576/50P
HQ 1920/25P	1920×1080/25PsF	720×576/25PsF	
HQ 1440/50i	1920×1080/50i	720×576/50i	
HQ 1440/25P	1920×1080/25PsF	720×576/25PsF	
SP 1440/50i	1920×1080/50i	720×576/50i	
HQ 1280/50P	1280×720/50P	720×576/50i ¹⁾	
HQ 1280/25P	1280×720/50P ²⁾	720×576/25PsF	
DVCAM50i SQ/EC	“SDI/HDMI/i.LINK I/O Select” invalid	720×576/50i	“SDI/HDMI/i.LINK I/O Select” invalid
DVCAM25P SQ/EC		720×576/25PsF	

¹⁾50i provided through conversion from 50P

²⁾50P provided by outputting each frame of 25P two times

Output formats of the VIDEO OUT connector

The VIDEO OUT connector outputs HD-Y signals (when the SDI OUT or HDMI OUT connector output is HD) or analog composite signals (when the SDI OUT or HDMI OUT connector output is SD) of the same format as that for the SDI OUT or HDMI OUT connector.

However, a simplified playback signal is output when playing a clip recorded with the system different from that set with “Country” under “System” of the OTHERS menu.

When playing a clip recorded with PAL system when “Country” of the OTHERS menu’s “System” is “NTSC Area” or “NTSC(J) Area”

Some frame may be repeated when the frame rate is converted.

Video format of playback clip	VIDEO OUT output format	
	HD-Y	Analog composite
HQ 1920/50i	1920×1080/60i	720×576/59.94i
HQ 1920/25P	1920×1080/30PsF	720×576/29.97PsF
HQ 1440/50i	1920×1080/60i	720×576/59.94i
HQ 1440/25P	1920×1080/30PsF	720×576/29.97PsF
SP 1440/50i	1920×1080/60i	720×576/59.94i
HQ 1280/50P	1280×720/60P	720×576/29.97PsF
HQ 1280/25P		
DVCAM50i SQ/EC	Playback impossible	Playback impossible
DVCAM25P SQ/EC		

¹⁾50i provided through conversion from 50P

²⁾50P provided by outputting each frame of 25P two times

When playing a clip recorded with NTSC system when “Country” of the OTHERS menu’s “System” is “PAL Area”

Some frame may be deleted when the frame rate is converted.

Video format of playback clip	VIDEO OUT output format	
	HD-Y	Analog composite
HQ 1920/59.94i	1920×1080/49.95i	720×576/50i
HQ 1920/29.97P	1920×1080/24.97PsF	720×576/25PsF
HQ 1920/23.98P		
HQ 1440/59.94i	1920×1080/49.95i	720×576/50i
HQ 1440/29.97P	1920×1080/24.97PsF	720×576/25PsF
HQ 1440/23.98P		
SP 1440/59.94i	1920×1080/49.95i	720×576/50i
SP 1440/23.98P	1920×1080/24.97PsF	720×576/25PsF
HQ 1280/59.94P	1280×720/49.95P	720×576/50i
HQ 1280/29.97P		720×576/25PsF
HQ 1280/23.98P		
DVCAM59.94i SQ/EC	Playback impossible	Playback impossible
DVCAM29.97P SQ/EC		

Output formats of the i.LINK (HDV/DV) connector

The format of serial digital signals fed from the i.LINK (HDV/DV) connector depends on the related Setup menu settings or the format of the clip to be played, as shown below.

No signal is fed out from the i.LINK (HDV/DV) connector when “SDI/HDMI/i.LINK I/O Select” of the VIDEO SET menu is set to “HD SDI,” “SD SDI,” “HD HDMI,” “SD HDMIi,” or “SD HDMI P.”

In E-E Display/Recording mode

“Country” setting of the OTHERS menu’s “System”: NTSC Area/NTSC(J) Area

OTHERS menu “System”: “Format” setting	i.LINK output format	
	VIDEO SET menu “SDI/HDMI/i.LINK I/O Select” setting	
	HD HDMI & HDV, SD HDMI i & HDV HD HDMI P & HDV	SD HDMI i & DVCAM
HQ 1920/59.94i	No signal	720×480/59.94i
HQ 1920/29.97P		720×480/29.97PsF
HQ 1920/23.98P		No signal
HQ 1440/59.94i		720×480/59.94i
HQ 1440/29.97P		720×480/29.97PsF
HQ 1440/23.98P		No signal
SP 1440/59.94i	1440×1080/59.94i	720×480/59.94i
SP 1440/23.98P	1440×1080/59.94i ¹⁾	720×480/59.94i ¹⁾
HQ 1280/59.94P	No signal	720×480/59.94i ²⁾
HQ 1280/29.97P		720×480/29.97PsF
HQ 1280/23.98P		No signal
DVCAM59.94i SQ/EC		720×480/59.94i
DVCAM29.97P SQ/EC		720×480/29.97PsF

¹⁾59.94i provided through 2-3 pulldown of 23.98P

²⁾59.94i provided through conversion from 59.94P

“Country” setting the OTHERS menu’s “System”: PAL Area

OTHERS menu “System”: “Format” setting	i.LINK output format	
	VIDEO SET menu “SDI/HDMI/i.LINK I/O Select” setting	
	HD HDMI & HDV, SD HDMI i & HDV HD HDMI P & HDV	SD HDMI i & DVCAM
HQ 1920/50i	No signal	720 × 576/50i
HQ 1920/25P		720 × 576/25PsF
HQ 1440/50i		720 × 576/50i
HQ 1440/25P		720 × 576/25PsF
SP 1440/50i	1440 × 1080/50i	720 × 576/50i
HQ 1280/50P	No signal	720 × 576/50i ¹⁾
HQ 1280/25P		720 × 576/25PsF
DVCAM50i SQ/EC		720 × 576/50i
DVCAM25P SQ/EC		720 × 576/25PsF

¹⁾50i provided through conversion from 50P

In Thumbnail Screen mode

“Country” setting the OTHERS menu’s “System”: NTSC Area/NTSC(J) Area

OTHERS menu “System”: “Format” setting	i.LINK output format	
	VIDEO SET menu “SDI/HDMI/i.LINK I/O Select” setting	
	HD HDMI & HDV, SD HDMI i & HDV HD HDMI P & HDV	SD HDMI i & DVCAM
HQ 1920/59.94i	No signal	720×480/59.94i
HQ 1920/29.97P		No signal
HQ 1920/23.98P		
HQ 1440/59.94i		720×480/59.94i
HQ 1440/29.97P	No signal	
HQ 1440/23.98P		
SP 1440/59.94i		
SP 1440/23.98P	1440×1080/59.94i	No signal
HQ 1280/59.94P	No signal	
HQ 1280/29.97P		
HQ 1280/23.98P		
DVCAM59.94i SQ/EC	720×480/59.94i	
DVCAM29.97P SQ/EC	720×480/29.97PsF	

“Country” setting the OTHERS menu’s “System”: PAL Area

OTHERS menu “System”: “Format” setting	i.LINK output format	
	VIDEO SET menu “SDI/HDMI/i.LINK I/O Select” setting	
	HD HDMI & HDV, SD HDMI i & HDV HD HDMI P & HDV	SD HDMI i & DVCAM
HQ 1920/50i	No signal	720×576/50i
HQ 1920/25P		
HQ 1440/50i		
HQ 1440/25P		
SP 1440/50i	1440×1080/50i	No signal
HQ 1280/50P	No signal	
HQ 1280/25P		
DVCAM50i SQ/EC		
DVCAM25P SQ/EC		

In Clip Playback mode

“Country” setting the OTHERS menu’s “System”: NTSC Area/NTSC(J) Area

Video format of playback clip	i.LINK output format	
	VIDEO SET menu “SDI/HDMI/i.LINK I/O Select” setting	
	HD HDMI & HDV, SD HDMI i & HDV HD HDMI P & HDV	SD HDMI i & DVCAM
HQ 1920/59.94i	No signal	720 × 480/59.94i
HQ 1920/29.97P		720 × 480/29.97PsF
HQ 1920/23.98P		No signal
HQ 1440/59.94i		720 × 480/59.94i
HQ 1440/29.97P		720 × 480/29.97PsF
HQ 1440/23.98P		No signal
SP 1440/59.94i	1440 × 1080/59.94i	720 × 480/59.94i
SP 1440/23.98P	1440 × 1080/59.94i ¹⁾	720 × 480/59.94i ¹⁾
HQ 1280/59.94P	No signal	720 × 480/59.94i ²⁾
HQ 1280/29.97P		720 × 480/29.97PsF
HQ 1280/23.98P		No signal
DVCAM59.94i SQ/EC		720 × 480/59.94i
DVCAM29.97P SQ/EC		720 × 480/29.97PsF

¹⁾59.94i provided through 2-3 pulldown of 23.98P

²⁾59.94i provided through conversion from 59.94P

“Country” setting the OTHERS menu’s “System”: PAL Area

Video format of playback clip	i.LINK output format	
	VIDEO SET menu “SDI/HDMI/i.LINK I/O Select” setting	
	HD HDMI & HDV, SD HDMI i & HDV HD HDMI P & HDV	SD HDMI i & DVCAM
HQ 1920/50i	No signal	720 × 576/50i
HQ 1920/25P		720 × 576/25PsF
HQ 1440/50i		720 × 576/50i
HQ 1440/25P		720 × 576/25PsF
SP 1440/50i	1440 × 1080/50i	720 × 576/50i
HQ 1280/50P	No signal	720 × 576/50i ¹⁾
HQ 1280/25P		720 × 576/25PsF
DVCAM50i SQ/EC		720 × 576/50i
DVCAM25P SQ/EC		720 × 576/25PsF

¹⁾50i provided through conversion from 50P

Output formats of the HD SDI A/B connectors

When “Dual-Link & Gamma Select” of the VIDEO SET menu is set to “1.5G YPbPr422 & Video,” signals are fed from the HD SDI

connectors depending on the related Setup menu settings in E-E Display/Recording mode.

In other conditions, no signal is fed.

OTHERS menu “System” setting		HD SDI output format	
Country	Format	A connector	B connector
NTSC Area/ NTSC(J) Area	HQ 1920/59.94i	1920 × 1080/59.94P@1.5G	1920 × 1080/59.94P@1.5G
PAL Area	HQ 1920/50i	1920 × 1080/50P@1.5G	1920 × 1080/50P@1.5G

Limitations of Outputs

The outputs from the camcorder are limited by the menu settings as follows:

blank: no signal

Menu setting			Output				Input
System		SDI/HDMI/ i.LINK I/O Select	SDI OUT	HDMI OUT	VIDEO OUT	i.LINK	i.LINK
HD/SD	Format						
HD	HQ	HD SDI	HD		HD-Y		
		SD SDI	SD		Composite		
		HD HDMI		HD	HD-Y		
		SD HDMI P		SD P			
		SD HDMI i		SD i	Composite		
		SD HDMI i & DVCAM		SD i	Composite	DVCAM	DVCAM (display only)
	SP	HD SDI	HD		HD-Y		
		SD SDI	SD		Composite		
		HD HDMI & HDV		HD	HD-Y		
		SD HDMI P & HDV		SD P			
		SD HDMI i & HDV		SD i	Composite		
		SD HDMI i & DVCAM		SD i	Composite	SD	
SD	DVCAM	SD SDI	SD		Composite		
		SD HDMI i & DVCAM		SD i	Composite	DVCAM	DVCAM (display only)

