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Technical News

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Revised :

Issued : January 18, 2021

Subject: Software Release [V2.50]

Issue No.HDCM20-062-TN

Target Models / Destination

Model Name	Dest
HDRC-4000	SYL

Model Name	Dest

Model Name	Dest

Model Name	Dest

[Description]

Updated software for HDRC-4000 is released. (V2.50)
Upgrade it as necessary.

[Applicable Model]

Model / Destination	Serial Number			Number of Unit
HDRC-4000 SYL	10001	-	11027	

[Change Point]

< New Function >

1. SR Live Metadata File is supported

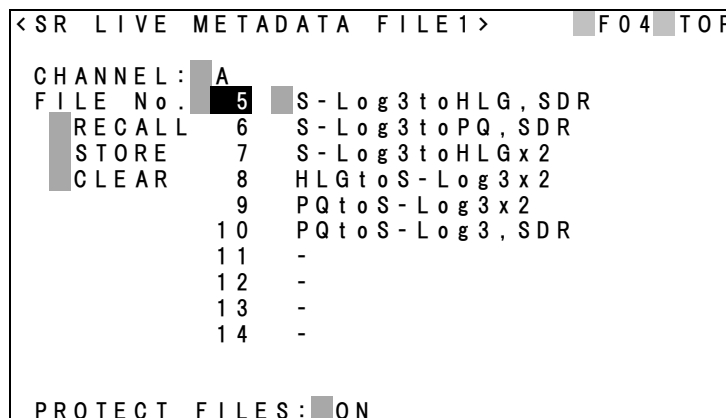
In addition to the SR Live Metadata, a group of items for converting from HDR to SDR, device-specific settings such as resolution conversion, additional paint, and input / output settings can be handled as a file. It has file import / export and recall / save functions, and import / export can be performed in a USB drive and remote control panel (* 1). Refer to SR_Live_Metadata_file_sample.srm for the details of the file contents.

*1 : The remote control panel (MSU-3x00, MSU-1x00, RCP-350x, RCP-15xx) will support SR Live Metadata File in FY21 1Q.

OSD Menu

FILE Menu, page <SR LIVE METADATA FILE1>

Perform SR Live Metadata File RECALL / SOTRE / CLEAR operation



```

<SR LIVE METADATA FILE1>      F04 TOP
CHANNEL : A
FILE No. : 5  S - Log 3 to HLG, SDR
RECALL   6  S - Log 3 to PQ, SDR
STORE    7  S - Log 3 to HLG x 2
CLEAR    8  HLG to S - Log 3 x 2
          9  PQ to S - Log 3 x 2
          10 PQ to S - Log 3, SDR
          11 -
          12 -
          13 -
          14 -
PROTECT FILES : ON
  
```

CHANNEL : Select the channel A or B.

FILE No. : Select the number of the SR Live Metadata File.

RECALL : Call the SR Live Metadata File of the selected number and reflect it on the selected channel.

STORE : Save the settings of the selected channel to the selected number.

CLEAR : Erase the contents of the selected SR Live Metadata File.

PROTECT FILES : Set whether to protect internal files ON or OFF.
This protect setting is common to all the file MENU.

FILE Menu, page <SR LIVE METADATA FILE2>

Export SR Live Metadata File to a USB drive and import from a USB drive.

<SR LIVE METADATA FILE2>		F04	TOP
FILE No.	2	S-Log3 to HLG, SDR2	
USB	HLG_Live_to_SDR.srm		
	2020/10/05 15:00		
EXPORT	HLG_Natural_to_S-Log3.srm		
(IMPORT)	HLG_Natural_to_S-Log3(1).s		
DELETE	HLG_Natural_to_S-Log3(2).s		
	HLG_Natural_to_S-Log3(3).s		
	HLG_Natural_to_S-Log3(4).s		
	S-Log3 to HLG, SDR.srm		
	PQ to S-Log3.srm		
	PQ to S-Log3, SDR.srm		
PROTECT FILES:		ON	

FILE No. : Select the number of the internal SR Live Metadata File.

USB : Select the SR Live Metadata File in a USB drive.
(Only files with the extension srm are displayed.)

EXPORT : Output (export) the selected internal SR Live Metadata File to a USB drive.
The name of the output file will be (the name of the SR Live Metadata File to be output).srm.
If nothing is entered, the file name will be SRLiveXXXX.srm (XXXX is a number).
The file is saved in the following folder in the USB drive.
MSSONY¥PRO¥CAMERA¥HD_CAM

IMPORT: Read (import) the selected SR Live Metadata File in a USB drive into the internal file with the selected number. The file name of the read file becomes the name of the internal SR Live Metadata File as it is.

DELETE: Delete the selected SR Live Metadata File in a USB drive.

PROTECT FILES : Set whether to protect internal files ON or OFF.
This protect setting is common to all the file MENU.

* See below for examples of the exported file.

HLG_Mild_to_SDR.srm: Example file when converting from 4K HLG (Mild Look) to HD SDR

SDR_to_HLG_Live.srm: Example file when converting from HD SDR to 4K HLG (Live Look)

2. Added the function to export All-Settings File to a USB drive and the function to import from a USB drive.
Until now, MSU or RCP was required when exporting / importing All-Settings File. With the addition of this function, it is now possible to export to or import from a USB drive with the HDRC-4000 alone.

FILE Menu, page <ALL-SETTINGS FILE2>

Export All-Settings File to a USB drive and import from a USB drive.

< ALL - SETTINGS FILE 2 >		F 0 3	TOP
FILE No.	5	S L o g 2 H L G , S L o g 2 S D R	
USB	1	S L o g 2 P Q , S L o g 2 S D R	
		2020/10/05 15:00	
EXPORT	10	S L o g 2 H L G x 2	
IMPORT	100	H L G 2 S L o g x 2	
DELETE	101	H L G 2 S L o g x 2	
	102	H L G 3 S L o g x 2	
	103	H L G 4 S L o g x 2	
	1000	P Q 2 S L o g x 2	
	1001	P Q 2 S L o g x 2	
	9999	T h r o u g h	
PROTECT FILES: ON			

FILE No. : Select the number of the internal All-Settings File.

USB : Select the All-Settings File number in a USB drive.

(Displays only files with a file name of 8 digits, 00000000 to 00009999, and an extension of CAL. The last 4 digits of the file name and the name saved in the file are displayed.)

EXPORT: Output (export) the selected internal All-Settings File to a USB drive.

The name of the output file will be (the smallest unused 8-digit number).CAL.

The file is saved in the following folder in the USB drive.

MSSONY¥PRO¥CAMERA¥HD_CAM

IMPORT: Read (import) the selected All-Settings File in a USB drive into the internal file of the selected number.

DELETE: Deletes the selected All-Settings File in a USB drive.

PROTECT FILES : Set whether to protect internal files ON or OFF.

This protect setting is common to all the file MENU.

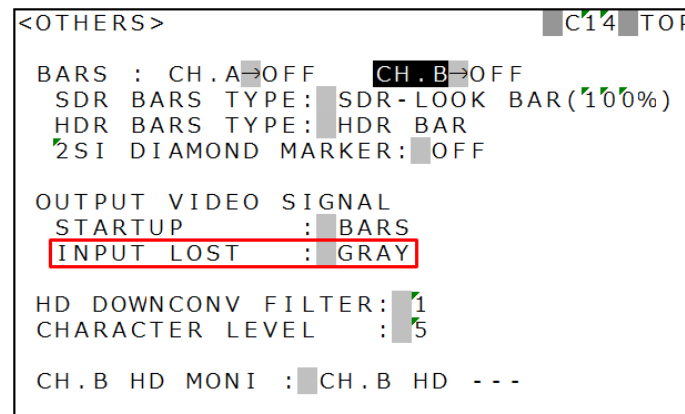
3. Add a freeze image to the output image options when the input signal is interrupted.

A function has been added to freeze the output image so that a distorted image does not appear when the input image becomes no signal.

Settings can be performed in INPUT LOST on page C14 <OTHERS> of CONFIGURATION Menu.
INPUT LOST:

- GRAY : If the input image becomes no signal, a gray image is output.
- FREEZE: When the input image becomes no signal, output the image just before there is no signal.

In particular, when using 4K input and handling multiple signals as one 4K video (example: 4K 59.94P 3G-SDI Level-B x4), if any one of them becomes no signal after all the input signals are input, the entire 4K input image, including the remaining signals, is frozen and output.



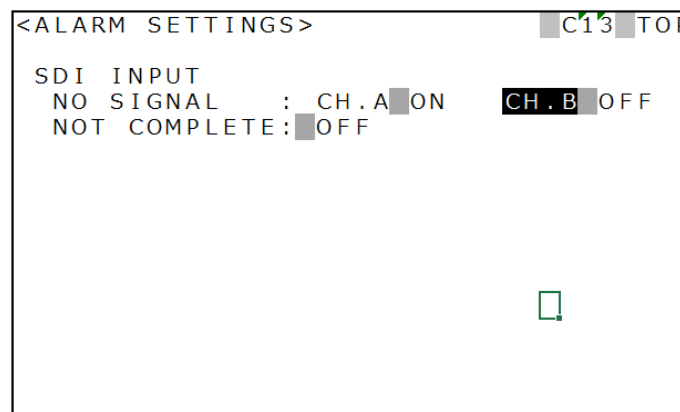
The initial setting for INPUT LOST is GRAY.

4. Added a function to display a warning message on the remote control panel when there is no input or is incomplete.

A function has been added to display a warning message on the remote control panel (* 2) when there is no input signal or incomplete (for example, only 3 out of 4 are input).

You can select whether to output a warning message by setting the SDI INPUT item on page C13 <ALARM SETTINGS> of the Configuration Menu.

- NO SIGNAL: Display a warning message when there is no input signal (ON / OFF).
The initial setting is OFF.
- NOT COMPLETE: Display a warning message when the input signal is incomplete (ON / OFF). The initial setting is ON.



*2 : The remote control panel (MSU-3x00, MSU-1x00, RCP-350x, RCP-15xx) will support this warning messages in FY21 1Q.

5. Added the function to display HDR Target White on the remote control panel (* 3)

A function has been added to display HDR Target White on the remote control panel.
HDR Target White shows what nit the HDR brightness corresponds to 100nit of SDR.

HDR Target White is calculated from SDR Gain and Look. And the Look used to calculate the HDR Target White on the remote control panel is as follows.

When both 4K / HD output are SDR : Calculate HDR Target White using Look of input

When 4K / HD output is HDR / SDR : Calculate HDR Target White using Look of HDR output

When both 4K / HD output are HDR : When both looks are the same

⇒ Calculate HDR Target White using the output Look

When the looks are different

⇒ "---" is displayed

*3 : The remote control panel (MSU-3x00, MSU-1x00, RCP-350x, RCP-15xx) will support HDR Target White in FY21 1Q.

< Specification Change >

1. Processing change when Payload ID in chroma of 12G-SDI is not embedded
 If 12G-SDI without Payload ID in Chroma was input, the audio data was corrupted by Payload ID insertion function.
 We changed the specification to add a Payload ID in chroma without corrupting audio data even if 12G-SDI without Payload ID in Chroma is input.
2. Processing change when a signal without Payload ID is input in Through Mode
 Time code in HD Main output was corrupted by Payload ID insertion function if SDI signal without a payload ID was input in Through Mode.
 We changed the specification to add a Payload ID without corrupting Time code.
3. Change the Payload ID of S-Log3
 Changed byte 4, bit depth setting from 10bit to 10bit Full Range in case of S-Log3 output.
 Note: In case of 1080i output, the Payload of SDR is embedded even if the signal is HDR.
4. Change of the lighting specifications of the CAM PW button LED on remote control panel such as RCP or MSU
 Specification of CAM PW button LED is changed as follows.
 CAM PW button LED on remote control panel is always on when HDRC-4000 is connected.
 This specification is the same as HDC-P50 which does not have a power supply control function.
5. After recalling Standard from the remote control panel, it could not be canceled. It was changed to be done.
6. We changed to output Rec Trigger (metadata in horizontal ancillary region, DID: 52h, SDID: 4Dh) which is embedded in the input signal.
7. Partially changed the specifications of SR Live Metadata output
 With respect to HDR Black Compression, HDR Look and HDR Target White, which setting value is reflected to SR Live Metadata output changes depending on the output setting.
 - When Look Conversion is OFF, the values of 3 items in SR live metadata output are common setting values. (*4)
 - When Look Conversion is ON, the values of 3 items in SR live metadata output are as follows.
 - When both 4K / HD output are SDR: Values of the input signal
 - When 4K / HD output is HDR / SDR: Values of the HDR output signal
 - When both 4K / HD output are HDR: Values of each HDR output signal

*4: If the HDR Look setting is Natural and the output OETF is HDR other than HLG (Var 1.2), HDR Look is replaced to Live.

< Error Correction >

1. Fixed a problem that the version and serial number was not displayed on HZC-CSM10 (Camera System Management Software).
2. When the frame rate is 30 or less, and Through Mode is ON, Payload ID of 3G-SDI output was incorrect. Two Payload ID in two Lines were embedded.
 This error has been fixed.

[Preparation]

< Software Files >

File Names : hsrc4000_v2.50_all.zip

*Contact Sony representative to obtain the software files.

The following files are obtained by extracting the above zip File.

hsrc4000_v2.50_all.zip		
hsrc4000_app.pkg	- Software File	(Change Item)
hsrc4000_sdi.pkg	- PLD File	(Change Item)
hsrc4000_dec.pkg	- PLD File	(Change Item)
hsrc4000_dcp.pkg	- PLD File	(Change Item)
hsrc4000_4kpost.pkg	- PLD File	(Change Item)
hsrc4000_2kpost.pkg	- PLD File	(Change Item)
hsrc4000_sdp.pkg	- PLD File	(Change Item)

Examples of SR Live Metadata File

- SR_Live_Metadata_file_sample.srm : File example
- HLG_Mild_to_SDR.srm : File example when converting from 4K HLG (Mild Look) to HD SDR
- SDR_to_HLG_Live.srm : File example when converting from HD SDR to 4K HLG (Live Look) HD

< Others >

USB drive 1 piece

[Installation Procedure]

As for the procedure, refer to the section of “Software Upgrade” of SERVICE MANUAL.

[Confirmation after Upgrading]

Confirm the version of HDRC-4000 in HDRC-4000 MENU, DIAGNOSIS - <ROM VERSION> (D02) page.

APP	V2.50	(Change Item)
OS	V1.00	
UPDATER	V1.00	
PLD		
SY	V1.00	
SDI	V2.51	(Change Item)
DEC	V2.52	(Change Item)
DCP1	V2.52	(Change Item)
DCP2	V2.52	(Change Item)
4K-POST	V2.50	(Change Item)
2K-POST	V2.52	(Change Item)
SDP	V2.50	(Change Item)