SONY

HD DIGITAL VIDEOCASSETTE RECORDER

HDW-500
HDW-F500
HDW-250

HDCAM

ISR Interactive Status Reporting

PROTOCOL MANUAL
ISR (INTERACTIVE STATUS REPORTING) PROTOCOL
AND COMMAND SPECIFICATIONS
1st Edition (Revised 1)

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About This Manual

This manual describes the ISR function (Interactive Status Reporting/integrated equipment control function) of HD digital video cassette recorders HDW-500, HDW-F500, and HDW-250. For other ISR functions, refer to the manual below. If you want to obtain this manual, please contact your local Sony Sales Office/Service Center.

ISR protocol manual
Part number: 9-967-614-01

1. Summary

HDW-500/F500/250 supports the ISR function.
The ISR function enables centralized monitoring and control of the status of the machine, contents of errors in the machine and other items on the monitor screen of a personal computer.
Displayed data on a PC screen can also be saved as files and can be printed.

HDW-500/F500/250 supports the following main functions.

Monitoring functions
- Error messages
- Operation status

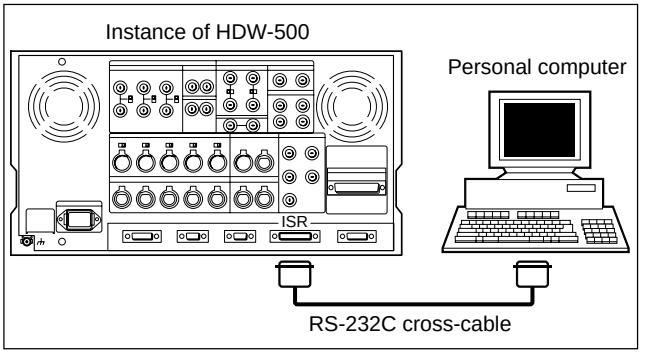
Control functions
- Equipment name, serial number
- ROM version

2. Operating Environment of ISR Function

The ISR function is controlled from the Sony ISR application program software.
For information on the personal computer specifications for running the ISR application program software, installation procedure and actual operating procedure, please contact your local Sony Sales Office/Service Center.

To control this unit with ISR, first do the following.

1. Connect a personal computer to this unit with an RS-232C cross-cable.
   For HDW-500/F500, connect a personal computer to the ISR connector (D-sub, 25-pin).
   For HDW-250, connect a personal computer to the REMOTE connector (D-sub, 9-pin).



Note

For details on the setting the RS-232C communication baud rate and flow control, refer to the Maintenance Manual Part 1 of this unit.
For HDW-500/F500, refer to "4-3-7. OTHERS Check".
For HDW-250, refer to SYSTEM, REMOTE in "3-1. Setup Menu".

2. Install the ISR application program software in the computer.

3. Supported Commands

HDW-500/F500/250 supports the following commands.
Refer to the separate ISR PROTOCOL MANUAL for more details of the respective commands.

Common

Common	Contents	Page described on this manual
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Response

Command	Contents
∗ATN: OPC;	Operation Complete
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∗ATN: QRESP;	Query Response

Sony Private

Command	Contents	Page described on this manual
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4. Description of Command Function

This section supplements the expression of the parameter described in a command format or return command.

######: Parameter indicating the number consisting of a six-digit (maximum) numeral and alphabetical character (in capital letter). (Test number,message register number, setup item number, etc.)

XX (Italic XX): Parameter of Flow Control (“0” or “1”) and Mode Control (usually, set to “0” in this unit).

Other italics: Indicates the parameter names other than described above.

∗RST (Reset)

Command definition: Resets the software of this unit that processes an ISR protocol.
Command format: ∗RST;
Return command: ∗ATN:OPC;
(A return command is sent when the reset operation is completed.)

This unit performs the processing below when this command is received.

- Initialization of ISR communication
- Clearing of command error cue
- Clearing of channel condition pointer

∗IDN? (Identify Query)

Command definition: Queries the ID data (identify: identification information) of this unit.
Command format: ∗IDN?;
Return command: ∗ATN:QRESP;*XXid-data*
XX indicates 00 or 10.
id-data returns the contents of data below.

id-data	Description
Manufacturer:	Returned as Sony.
Model:	Returns the model name of this unit. (HDW-250, HDW-500, or HDW-F500)
Device ID:	Returns the device ID set in this unit. (The device ID is set using a DEVID command.)
Serial number:	Returns the (five-digit) serial number of this unit.
Software version:	Returned as NONE in this unit.
Virtual machine type:	Returned as 02 in this unit.
VM sub-address:	Returned as NONE in this unit.
Destination:	Returns the destination of this unit. (J: Japan, UC: North America, EK: Europe, and SY: Foreign)
ROM:	Returns the ROM information below that exists in this unit (including options). • Board name and program name • ROM version • Slot name (Returned as NONE in this unit.) • Quantity (Returned as 1 in this unit.) • Location (Returned as Ref. No. in this unit.) • Checksum value (Returned as NONE in this unit.) • Raw ROM name (Returned as NONE in this unit.) • Part No. (Returned as NONE in this unit.)

Note

A return example in the HDW-F500 is partially given below.

```
∗ATN:QRESP;10Manufacturer:SONY
            Model:HDW-F500
            Device ID:VTR1
            Serial number:010311
            Software version:NONE
            Virtual machine type:02
            VM sub-address:NONE
            Destination:SY
            ROM:SS-88/SYS1:V2.00:NONE:1:IC112:NONE:NONE:NONE
            ROM:SS-88/SYS2:V2.00:NONE:1:IC412:NONE:NONE:NONE
            ROM:SS-88/SV1:V1.00:NONE:1:IC1010:NONE:NONE:NONE
            ROM:SS-88/SV2:V1.00:NONE:1:IC1024:NONE:NONE:NONE
            ROM:SS-88/DT:V0.12:NONE:1:IC2110:NONE:NONE:NONE
            ROM:DR-307/DR:V1.00:NONE:1:IC106:NONE:NONE:NONE
∗ATN:QRESP;00ROM:EQ-85/RF:V1.04:NONE:1:IC900:NONE:NONE:NONE
            ROM:FP-103/FP:V1.01:NONE:1:IC7:NONE:NONE:NONE
            ROM:CP-266/CP:V2.01:NONE:1:IC114:NONE:NONE:NONE
            ROM:SS-88/TCRG:V1.10:NONE:1:IC315:NONE:NONE:NONE
            ROM:SWC-37/SWC:V1.00:NONE:1:IC3:NONE:NONE:NONE
```

∗TST ##### (Test)

Command definition: Executes the self-diagnosis of this unit.
Command format: ∗TST #####;
indicates the test number.
Return command: ∗ATN:OPC;
(A return command is sent when the self-diagnosis is completed.)

Note

A command is returned as described below when the test number not used in this unit is specified.

∗ATN:CMDERR;

This unit executes the self-diagnosis corresponding to a test number when this command is received.

Test No.	Contents of self-diagnosis	Remarks
1	Initial Self-Diagnostics	The same as the self-diagnosis executed during the power-on sequence. Software is reset before executing the self-diagnosis.

Note

- The result of self-diagnosis is queried using a ∗TST? command.
- The self-diagnosis that can be executed in this unit can be queried using a HELP:TST? command.

∗TST? (Test Query)

Command definition: Queries the self-diagnosis result stored in the self-diagnosis result buffer of this unit.
Command format: ∗TST?;
Return command: ∗ATN:QRESP;*XX*Test:######;*result*
XX indicates 00.
indicates the test number.
result indicates the diagnosis result message.
A command is returned as described below when there is no self-diagnosis result.

∗ATN:QRESP;00Test:0

The diagnosis result message is as shown below.

Test No.	Message	Description
1	Initial Self-Diagnostics Passed.	The result of a self-diagnosis indicates that no error occurred.
	Error occurred in Initial Self-Diagnostics.	The result of a self-diagnosis indicates that an error occurred.

Note

The returned result is deleted from a buffer when the result of a self-diagnosis is queried using a ∗TST? command.

∗STATUS? (Status Query)

Command definition: Queries the operating state of this unit.
Command format: ∗STATUS?;
Return command: ∗ATN:QRESP;*XXstatus-data*
XX indicates 00.
status-data indicates the operating state.

The operating state defined in this unit is shown below. However, there is the operating state in which status-data is not compatible depending on the model used.

status-data	HDW-500	HDW-F500	HDW-250
AUTO EDIT	Compatible	Compatible	
DMC	Compatible	Compatible	
DMC EDIT	Compatible	Compatible	
DMC PREVIEW	Compatible	Compatible	
EDIT	Compatible	Compatible	
F.FWD	Compatible	Compatible	Compatible
JOG	Compatible	Compatible	
PLAY	Compatible	Compatible	Compatible
PREROLL	Compatible	Compatible	Compatible
PREVIEW	Compatible	Compatible	
PROGRAM PLAY	Compatible	Compatible	
REC	Compatible	Compatible	Compatible
REVIEW	Compatible	Compatible	
REW	Compatible	Compatible	Compatible
TAPE UNTHREAD	Compatible	Compatible	Compatible
SHUTTLE	Compatible	Compatible	
STANDBY OFF	Compatible	Compatible	
STOP	Compatible	Compatible	Compatible
VAR	Compatible	Compatible	

∗CMDERR? (Command Error Query)

Command definition: Queries the contents of an error stored in the ISR command error buffer of this unit.

Command format: ∗CMDERR?;

Return command: ∗ATN:QRESP;*XXcommand-in-error*−>*error-code*:*description*

XX indicates 00.

command-in-error indicates the command string (including a parameter) in which an error occurred.

error-code indicates the error code in ISR.

description indicates the contents of an error.

A command is returned as described below when no error occurs.

∗ATN:QRESP;00CMDERR−>No errors in queue

This command is used to query the contents of an error for this unit when an ISR system receives a command-error (∗ATN:CMDERR;) from this unit.

Notes

- The contents of the oldest error are returned when multiple command errors occur. The returned command error is deleted from a buffer.
- The oldest error is erased when a buffer overflows.

error-code	description
0	No errors in queue
1	Syntax error. Command not recognized
2	Syntax error. Parameter out of limits or unexpected type
3	Syntax error. Too few or too many parameters
4 to 10	Reserved
11	Flow control value out of range
12	Mode control value out of range
13 to 20	Reserved
21	Packet error. Received packet had too many bytes
22	Command not implemented yet
23	Command not executed. Insufficient memory
24 to 100	Reserved
101	Data error. Received data field had too many bytes
102	Data error. Received data field had value out of range
103 to 999	Reserved
1000	Control not performed. No Cassette
1001	Control not performed. Rec Inhibit
1002	Control not performed. Not Stop Mode
1003 to 999999	Reserved

∗MSG? ###### (Message Register Query)

Command definition: Queries the system error, warning, and channel condition alarm that occurs in this unit.

Command format: ∗MSG? ######;

A message register number is described in ######. (Refer to “6. Message”.)

Return command: ∗ATN:QRESP;*XXmessage-line*

XX indicates 00 or 10.

message-line indicates the messages corresponding to message register numbers (other than 0). For the message register number not used in this unit, a command is returned as described below.

∗ATN:QRESP;00Not Active

When 0 is specified in the message register number, all message register numbers of the system error, warning, and channel condition alarm occurring in this unit are indicated in *message-line*. However, a command is returned as described below when nothing occurs in this unit.

∗ATN:QRESP;000

Note

A command is returned as described below when message register numbers 1001, 14D1, and 11E00 are generated in HDW-500.

∗ATN:QRESP;001001,14D1,11E00

∗UPLOAD? (Upload)

Command definition: Uploads the data of the specified type from this unit to a personal computer.

VSETTBL: When the whole table of the setup parameter that can be treated using the ISR function of this unit is uploaded

SETFILE: When the contents of the setup value stored in the nonvolatile RAM of this unit are directly uploaded (in binary code)

Command format: ∗UPLOAD? *type*;

VSETTBL or SETFILE above is described in *type*.

Note

When VSETTBL is specified for HDW-500 and HDW-F500:
The UPLOAD COMMAND option in the RS-232C status of HDW-500 and HDW-F500 must be incompressible. If not, a command error (∗ATN:CMDERR) occurs. The RS-232C status is checked and changed by F3 RS-232C STATUS of F9 OTHERS CHECK in a MAINTENANCE menu.

Return command: ∗ATN:QRESP;*XXdata*

XX indicates 00 or 10 when the specified type is VSETTBL. *XX* indicates 01 or 11 when it is SETFILE.

data is the data of the specified type.

Note

For HDW-250, *XX* indicates 01 because *data* is sent in units of one packet when *type* is SETFILE.

Data returned by VSETTBLE

The whole table of the setup parameter that can be treated using the ISR function of this unit is returned according to the format below.

number : *attribute(D)* : *available_value1* : *description1*, *available_value2* : *description2*, ...
or
number : *attribute(C)* : *available_value* : *condition*

The item number of a setup parameter is described in *number*. (A crlf code [0D0A] is described for each item.)
The type (D: description or C: condition) of a parameter set value is described in *attribute*.

- When *attribute* is D: A parameter is prepared by several choices.
  The data value of a parameter is put in *available_value*, and the state name is put in *description*.
  The choice is delimited using a comma (,).
- When *attribute* is C: A parameter is prepared in the effective range.
  The effective range is put in *available_value*, and the conditions of the effective range are put in *condition* (+1 or +H).
  When *condition* is +1, the effective range is displayed in decimal.
  When *condition* is +H, the effective range is displayed in hexadecimal.

Data returned by SETFILE

The contents of the setup value stored in the nonvolatile RAM of this unit are directly returned using a binary code. In HDW-500 and HDW-F500, data is divided into two packets (336 bytes × 2 = 672 bytes) and then returned.

- The first 512 bytes are a setup parameter.
- The next two bytes (513th and 514th bytes) are a device type (DEVICE TYPE).
- The 515th byte and later are Reserve area.

In HDW-250, data is returned in units of one packet (256 bytes).

- The first 128 bytes are a setup parameter.
- The next two bytes (129th and 130th bytes) are a device type (DEVICE TYPE).
- The 131st byte and later are Reserve area.

Note

This unit can be easily returned to the original setting state later even if the contents of this unit's setup value are changed when the contents of this unit's set value extracted in a SETFILE format are stored in a personal computer. Using a DOWNLOAD SETFILE command, this unit is returned to the original setting state.

SETUP? (Setup Query)

Command definition: Queries the whole setting of the setup parameter set in this unit.
Command format: SETUP?
Return command: ∗ATN:QRESP;*XXdata*
XX indicates 00 or 10.
data is the whole setting of a setup parameter. (A line is fed for each item.)
One item is indicated by ###### : *item* : *parameter*.
In ######, the setup item number is indicate.
In *item*, the item name is indicated.
In *parameter*, the set state name is indicated.

SETUP? ###### (Setup Query with Item Number)

Command definition: Queries the set parameter of the specified setup item number.
Command format: SETUP? ######
A setup item number is described in ######.
Return command: ∗ATN:QRESP;*XX*###### : *item* : *parameter*
XX indicates 00.
In ######, the setup item number is indicated.
In *item*, the item name is indicated.
In *parameter*, the set data value is indicated.
For the setup item number not used in this unit, a command is returned as described below.

∗ATN:CMDERR;

SETUP ###### (Setup)

Command definition: Sets the parameter of the specified setup item number.
Command format: SETUP ######;*XXparameter*
XX indicates 00.
A setup item number is described in ######.
The data value to be set is described in *parameter*.
Return command: ∗ATN:OPC;
(A return command is sent when this unit has completed the setting.)
For the setup item number not used in this unit, a command is returned as described below.

∗ATN:CMDERR;

HRS? (Hours Meter Query)

Command definition: Queries the contents of an hours meter in this unit.
Command format: HRS?
Return command: ∗ATN:QRESP;*XXitem*:*value*:*unit*
XX indicates 00.
item indicates the meter name.
The (six-digit) value of time or count is described in *value*.
unit indicates the unit (hours or times).

item	unit
OPERATION HOURS	HOURS
DRUM RUNNING HOURS	HOURS
TAPE RUNNING HOURS	HOURS
THREADING COUNTER	TIMES
DRUM RUNNING HOURS (resetable)	HOURS
TAPE RUNNING HOURS (resetable)	HOURS
THREADING COUNTER (resetable)	TIMES

Note
For more details of the hours meter, refer to the Operation Manual or Maintenance Manual Part 1 of this unit.

HELP:TST? (Help: Test Menu Query)

Command definition: Queries the self-diagnosis menu of this unit.
Command format: HELP:TST?
Return command: ∗ATN:QRESP;*XX*1:Initial Self-Diagnositics
XX indicates 00.
Note
The self-diagnosis menu of this unit is only 1: Initial Self-Diagnostics.
For more details, refer to the ∗TST command.

HELP:LOG? (Help: Log Menu Query)

Command definition: Queries the log data type of this unit.
Command format: HELP:LOG?
Return command: ∗ATN:QRESP;*XXtype*:*description*
XX indicates 00.

type	description
ALL	ALL LOG
CON	CHANNEL CONDITION
ERR	ERROR LOG
WAR	WARNING LOG

RDLOG? (Read Log Query)

Command definition: Reads the log data of this unit.

Command format: RDLOG? *type*, *direction*

The type of the log to be read is described in *type*. Refer to the HELP : LOG? command.

The sequence (F or L) in which a log is read is described in *direction*.

F: Sequence from old log (first)

L: Sequence from new log (last)

Return command: ∗ATN : QRESP ; *XXlog-event(s)*

XX indicates 10 or 00.

log-event(s) indicates one or more log data. (A line is fed for each log data.)

The history of one log data is indicated by (*dd* : *hh* : *mm* : *ss*) : (*hh* : *mm* : *ss* : *ff*) : *message*.

(*dd* : *hh* : *mm* : *ss*) indicates the day, hour, minute, and second of a timer (RTC) incorporated in this unit.

(*hh* : *mm* : *ss* : *ff*) indicates the time code (hour: minute: second: frame) in which an event occurred.

message indicates the message register number and message sentence in pairs.

A command is returned as described below when there is no log data to be returned.

∗ATN : QRESP ; 00Empty

CLRLOG (Clear Log)

Command definition: Clears the log data of this unit.

Command format: CLRLOG *type* ;

The type of the log to be cleared is described in *type*. Refer to the HELP:LOG? command.

Return command: ∗ATN : OPC

(A return command is sent when this unit has cleared a log.)

DEVID (Device ID Set)

Command definition: Sets the device ID of this unit.

Command format: DEVID : *XXdevice-id*

00 is described in *XX*.

The device ID (up to 50 characters) to be set is described in *device-id*.

Note

The device ID is data that the customer can arbitrarily set to identify this unit. The set device ID can be checked using a ∗IDN? command.

Return command: ∗ATN : OPC

(A return command is sent when this unit has completed the setting.)

DOWNLOAD SETFILE (Download)

Command definition 1: Downloads the data uploaded in the SETFILE format of an UPLOAD? command from a personal computer to this unit.

Command format 1: DOWNLOAD SETFILE:*XXdata*;

11 or 01 is described in *XX*. (To DNW-250, data is sent in units of one packet. Therefore, 01 is described in *XX*.)

data is the set data of the setup parameter uploaded in the SETFILE format of a ∗UPLOAD? command. (Refer to the ∗UPLOAD? command.)

Note

In this unit, an actual setup parameter is not updated even if the set data of a setup parameter is received using this command. The setup parameter is updated after the command indicated in command format 2 below is received.

Return command 1: ∗ATN:OPC;

(A return command is sent when this unit has received a packet.)

Command definition 2: Stores the downloaded data based on a SETFILE format in nonvolatile RAM.

Command format 2: DOWNLOAD SETFILE,MEM:*XX*;

00 is described in *XX*.

Note

In this unit, DEVICE TYPE (two-byte code) in the downloaded data is compared with the device type of a source unit when this command is received. A setup parameter is updated (data is stored in the nonvolatile RAM of this unit) when the former coincides with the latter.

Return command 2: ∗ATN:OPC;

(A return command is sent when this unit has updated the set data of a setup parameter.)

CHCOND? (Channel Condition Query)

Command definition: Queries the latest condition of this unit's video and audio channels.

Command format: CHCOND?;

Return command: ∗ATN:QRESP;*XX*Video:*level-name*:*v-level*
Audio:*level-name*:*a-level*

XX indicates 00.

level-name indicates the state of this unit when the channel condition is checked.

v-level indicates the condition level of the video channel.

a-level indicates the condition level of the audio channel.

level-name	State
REC VERIFY	REC mode
PLAY	PB mode
INVALID	The channel condition is invalid. (When recording and playback are not performed after the power is turned on)

level	State
0	No degradation is detected.
1	(Not displayed in this unit.)
2	Degradation is detected, but playback is possible.
3	(Not displayed in this unit.)
4	Degradation is detected. **Note** If this condition is continued, clean the head or inspect the internal block.

CHCOND:ALRDY? (Channel Condition Already Query)

Command definition: Queries the history information on the channel condition of this unit.

Note

The channel condition in level 0 is not contained in history. The history of this unit is erased when it is returned for query.

Command format: CHCOND:ALRDY?;

Return command: *ATN:QRESP;*XXcondition(s)*

XX indicates 10 or 00.

condition(s) indicates one or more history. (A line is fed for each history.)

One history is indicated by *hh*:*mm*:*ss*:*ff*:*channel*:*level-name*:*level*.

hh:*mm*:*ss*:*ff* indicates the time code (hour: minute: second: frame) in which the channel condition in except level 0 occurred.

channel indicates the channel in which the channel condition in except level 0 occurred.

VIDEO: Video channel

AUDIO: Audio channel

For *level-name*, refer to the CHCOND? command.

level indicates the level of a channel condition. Refer to the CHCOHD? command.

A command is returned as described below when there is no history to be returned.

*ATN:QRESP;00Empty

RMCTL (Remote Control)

Command definition: Controls this unit remotely.

Command format: RMCTL *type*;

The remote control operation (refer to the table below) is described in *type*.

Return command: *ATN:OPC;

(A return command is sent when this unit starts the specified operation.)

Note

A command is returned as described below when this unit cannot perform the specified operation.

*ATN:CMDERR;

type	Description
STANDBYON	Standby on
STANDBYOFF	Standby off
EJECT	Cassette eject
STOP	Stop
REW	Rewind
F.FWD	Fast forward
PLAY	Playback
REC	Recording
CUEUP,hhmmssff	Cue-up (hhmmssff: time code, hour, minute, second, and frame)

5. Setup Parameter Index Table for ISR

For more details of each parameter, refer to the Operation Manual of this unit.
The bold-faced setting in the column of a parameter value (Parameters) is the factory setting of equipment.

5-1. HDW-500/F500

In the item or parameter value (Parameters) for HDW-500 only, a 500 mark is assigned.
In the item or parameter value (Parameters) for HDW-F500 only, a F500 mark is assigned.

5-1-1. Operation

No.	Item (Operation)	Parameters (Data : State)	Remarks
130001	PRE-READ	**0 : off** 1 : audio/video 2 : audio only 3 : video only	
160002	REC INHIBIT on/off	**0 : off** 1 : on	 (all/crash/video/audio)
160003	REC INHIBIT AREA select	**0 : all** 1 : crash REC 2 : video/CTL 3 : audio/CTL	
170004	CAPSTAN LOCK select	**0 : 2FD** 1 : 4FD LOCK 2 : 4FD HOLD	
170005	SERVO/AV REFERENCE select	**0 : input** 1 : auto 2 : external	
170006	EXTERNAL REFERENCE select	**0 : extrn HD** 500 1 : extrn NTSC F500 1 : extrn SD	
160007	SYNC PLAY	**0 : off** 1 : on	
160008	LOCAL FUNCTION ENABLE	0 : all disable **1 : stop & eject** 2 : all enable 3 : local key map	
160018	F500 AUTO EJECT LEVEL	**0 : off** 1 : LEVEL1 2 : LEVEL2 3 : LEVEL3	
160091	LOCAL KEY MAP, STOP	**0 : disable** 1 : enable	
160092	LOCAL KEY MAP, PLAY	**0 : disable** 1 : enable	
160093	LOCAL KEY MAP, REC/EDIT	**0 : disable** 1 : enable	
160094	LOCAL KEY MAP, STANDBY	**0 : disable** 1 : enable	
160095	LOCAL KEY MAP, EJECT	**0 : disable** 1 : enable	

No.	Item (Operation)	Parameters (Data : State)	Remarks
160096	LOCAL KEY MAP, JOG	**0 : disable** 1 : enable	
160097	LOCAL KEY MAP, SHUTTLE	**0 : disable** 1 : enable	
160098	LOCAL KEY MAP, VAR	**0 : disable** 1 : enable	
160099	LOCAL KEY MAP, PREROLL	**0 : disable** 1 : enable	
16009A	LOCAL KEY MAP, PREVIEW/REVIEW	**0 : disable** 1 : enable	
16009B	LOCAL KEY MAP, AUTO	**0 : disable** 1 : enable	
16009C	LOCAL KEY MAP, INPUT CHECK	**0 : disable** 1 : enable	
16009D	LOCAL KEY MAP, MENU CURSOR	**0 : disable** 1 : enable	
16009E	LOCAL KEY MAP, AUTO INPUT	**0 : disable** 1 : enable	
16009F	LOCAL KEY MAP, MONITOR	**0 : disable** 1 : enable	
130171	STANDBY OFF	**0 : EE/EE** 1 : PB/MU	
130172	STANDBY ON	**0 : PB/MU** 1 : EE/EE 2 : EE/MU	
130173	REC	**0 : EE/EE** 1 : PB/PB	
130174	EDIT	**0 : EE/EE** 1 : PB/PB	
130175	SHUTTLE	**0 : PB/MU** 1 : EE/EE 2 : PB/PB	
130176	JOG	**0 : PB/PB** 1 : PB/MU	
130177	VAR	**0 : PB/PB** 1 : PB/MU	

5-1-2. Control Panel

No.	Item (Control Panel)	Parameters (Data : State)	Remarks
160101	SELECTION FOR SEARCH DIAL ENABLE	0 : dial direct **1 : via search key**	
160102	REFERENCE SYSTEM ALARM	0 : off **1 : on**	
160104	REC INHIBIT LAMP FLASHING	**0 : off** 1 : on	
160107	JOG DIAL RESPONSE	**0 : type-1 : –1 to +1** 1 : type-2 : –2 to +2 2 : type-3 : –2 to +2	
160108	CONTROL PANEL select	**0 : sw selection (EXT)** 1 : parallel control	

No.	Item (Control Panel)	Parameters (Data : State)	Remarks
160109	KEY INHIBIT	**0 : off** 1 : on	
161101	KEY INHIBIT SWITCH EFFECTIVE AREA, MON./INPUT SEL	**0 : disable** 1 : enable	
161102	KEY INHIBIT SWITCH EFFECTIVE AREA, CONTROL PANEL	**0 : disable** 1 : edit 2 : enable	
160111	VARIABLE SPEED LIMIT IN KEY PANEL CONTROL	**0 : off** 1 : on	
160112	CTL LOCK IN VAR/SHTL	**0 : off** 1 : –1/–0.5/0.5/1.0/2.0	
160113	DT MODE	**0 : field (–1 to +1)** 1 : frame	
160118	INPUT GUARD select	**0 : off** 1 : on	
160120	WARNING DISPLAY	**0 : off** 1 : on	
161211	500 HD FREQUENCY F500 SYSTEM FREQUENCY	**0 : off** 1 : diff 2 : ever	
161212	ACTIVE LINE (HD)	**0 : off** 1 : diff 2 : ever	
161213	EOS DISPLAY	0 : off 1 : on	
161214	VIDEO INT SG	**0 : off** 1 : on	
161215	AUDIO INT SG	**0 : off** 1 : on	
160122	MULTI CUE CLEAR by inject	0 : off 1 : on	
160123	Tele-File CONTROL MODE	**0 : control panel** 1 : RS-232C	
160124	Tele-File MENU auto popup	**0 : on** 1 : off	
160125	Tele-File THREAD COUNTER clear mode	**0 : not clear** 1 : when format	
160126	F500 Tele-File ENTRY POINT	**0 : CUE Point** 1 : IN/OUT Point	
160127	F500 Tele-File IN OUT Input Continue	**0 : off** 1 : on	

5-1-3. Remote Interface

No.	Item (Remote Interface)	Parameters (Data : State)	Remarks
010201	REMOTE 9-PIN	**0 : off** 1 : on	
010202	REMOTE 50-PIN	**0 : off** 1 : on	
010203	PARALLEL RUNNING	**0 : disable** 1 : enable	

5-1-4. Editing

No.	Item (Editing)	Parameters (Data : State)	Remarks
100301	EDIT OPERATION MODE	0 : film 1 : CG **2 : normal**	
100302	PREROLL TIME	0 : 0 sec **5 : 5 sec** 30 : 30 sec	Range: 0 to 30 sec. Step: 1 sec.
100303	POSTROLL TIME	0 : 0 sec **2 : 2 sec** 30 : 30 sec	Range: 0 to 30 sec. Step: 1 sec.
100304	VAR SPEED RANGE FOR SYNCHRONIZATION	**0 : –1 to +2** 1 : –1.15 to +2.45	
100305	EDIT FIELD select	**0 : 1F** 1 : 2F 2 : AUTO (1F/2F)	
100306	SYNCHRONIZE	**0 : accurate** 1 : rough 2 : off	
100311	ANALOG AUDIO EDIT PRESET REPLACE FOR CH1	0 : no definition **1 : analog ch1** 2 : analog ch2 3 : analog ch1+ch2	
100312	ANALOG AUDIO EDIT PRESET REPLACE FOR CH2	0 : no definition 1 : analog ch1 **2 : analog ch2** 3 : analog ch1+ch2	
100313	ANALOG AUDIO EDIT PRESET REPLACE FOR CH3	**0 : no definition** 1 : analog ch1 2 : analog ch2 3 : analog ch1+ch2	
100314	ANALOG AUDIO EDIT PRESET REPLACE FOR CH4	**0 : no definition** 1 : analog ch1 2 : analog ch2 3 : analog ch1+ch2	
100315	ANALOG AUDIO EDIT PRESET REPLACE FOR CUE	**0 : no definition** 1 : analog ch1 2 : analog ch2 3 : analog ch1+ch2	
100317	AUDIO EDIT MODE	0 : cue edit **1 : cross fade** 2 : fade in/out	
100318	EDIT RETRY	0 : off **1 : on**	
100320	PLAY COMMAND DELAY START TIME	–30 : –30 frame **0 : 0 frame** 30 : +30 frame	Range: –30 to +3 frames Step: 1 frame
100321	VIDEO PREVIEW MODE	**0 : VVV** 1 : VBV	(video-video-video) (video-black-video)
100322	AUDIO PREVIEW MODE	**0 : SSS** 1 : SMS	(sound-sound-sound) (sound-mute-sound)

5-1-5. Preroll

No.	Item (Preroll)	Parameters (Data : State)	Remarks
170401	FUNCTION MODE AFTER CUE-UP	**0 : stop** 1 : still	
170403	CUEUP BY TC	0 : capstan only **1 : reel/capstan**	
170404	CUEUP BY CTL	**0 : capstan only** 1 : reel/capstan	
170407	AUTO REWIND	**0 : off** 1 : on	

5-1-6. Tape Protector

No.	Item (Tape Protector)	Parameters (Data : State)	Remarks
170501	STILL TIMER	0 : 0.5 sec 1 : 5 sec 2 : 10 sec 3 : 20 sec 4 : 30 sec 5 : 40 sec 6 : 50 sec 7 : 1 min 8 : 2 min 9 : 3 min 10 : 4 min 11 : 5 min 12 : 6 min 13 : 7 min **14 : 8 min** 15 : 30 min	
170502	TAPE PROTECTION MODE FROM SEARCH	**0 : step fwd** 1 : standby off 2 : tension release	
170503	TAPE PROTECTION MODE FROM STOP	**0 : standby off** 1 : tension release	
170504	DRUM ROTATION IN STANDBY OFF	**0 : off** 1 : on	
170505	STILL TENSION	**0 : normal** 1 : loose	

5-1-7. Time Code Generator

No.	Item (Time Code Generator)	Parameters (Data : State)	Remarks
110601	DF/NDF MODE select	**0 : drop frame** 1 : non-drop frame 2 : auto	
110602	TIMER MODE select	0 : CTL **1 : TC** 2 : UBIT	
110603	TCR MODE select	**0 : LTC** 1 : auto 2 : VITC	
110604	TAPE TIMER DISPLAY	0 : +/–12H **1 : 24H**	
110605	TAPE SOURCE select	**0 : TCG** 1 : V IN	
110606	TCG MODE select	**0 : preset** 1 : regen 2 : auto	

No.	Item (Time Code Generator)	Parameters (Data : State)	Remarks
110607	TCG REGENE SOURCE select	**0 : int-LTC** 1 : int-VITC 2 : ext-LTC 3 : ext-VITC	
110608	TCG/UBG REGENE MODE	**0 : TC&UB** 1 : TC 2 : UB	
110609	REC RUN/FREE RUN select	**0 : free run** 1 : rec run	
110610	DOWNCONVERTER VITC output	0 : off **1 : on**	
110611	500 DOWNCONVERTER VITC POSITION-1 select F500 DOWNCONVERTER VITC POSITION-1 select (NTSC)	0 : 12 line **4 : 16 line** 8 : 20 line	Range: line 12 to 20 Step: 1 line Valid only when HKDV-501/501A is used.
110612	500 DOWNCONVERTER VITC POSITION-2 select F500 DOWNCONVERTER VITC POSITION-2 select (NTSC)	0 : 12 line **6 : 18 line** 8 : 20 line	Range: line 12 to 20 Step: 1 line Valid only when HKDV-501/501A is used.
110613	TC OUTPUT SIGNAL IN REGENE MODE	**0 : off tape** 1 : regene 2 : through	
110614	PHASE CORRECTION	**0 : off** 1 : on	
110615	TCG CF FLAG	**0 : off** 1 : on 2 : auto	
110616	F500 DOWNCONVERTER VITC POSITION-1 select (PAL)	0 : 9,322 line 1 : 10,323 line 2 : 11,324 line 3 : 12,325 line 4 : 13,326 line 5 : 14,327 line 6 : 15,328 line 7 : 16,329 line 8 : 17,330 line 9 : 18,331 line **10 : 19,332 line** 11 : 20,333 line 12 : 21,334 line 13 : 22,335 line	Value only when HKDV-501A is used. **Note** Valid only when the system frequency is 25PsF or 50i.
110617	F500 DOWNCONVERTER VITC POSITION-2 select (PAL)	0 : 9,322 line 1 : 10,323 line 2 : 11,324 line 3 : 12,325 line 4 : 13,326 line 5 : 14,327 line 6 : 15,328 line 7 : 16,329 line 8 : 17,330 line 9 : 18,331 line 10 : 19,332 line 11 : 20,333 line **12 : 21,334 line** 13 : 22,335 line	Value only when HKDV-501A is used. **Note** Valid only when the system frequency is 25PsF or 50i.
110620	SUPERIMPOSED CHARACTER	**0 : off** 1 : on	
110622	CHARACTER H-POSITION	0 : 0 **8 : 8** 15 : 15	Range: 0 (left) to 15 (right) Step: 1
110623	CHARACTER V-POSITION	0 : 0 **22 : 22** 23 : 23	Range: 0 (lower) to 23 (upper) Step: 1
110624	CHARACTER TYPE	0 : without BG 1 : outlined 2 : translucent **3 : with BG**	
110625	CHARACTER SIZE	0 : ×1 **1 : ×2** 2 : ×3	

No.	Item (Time Code Generator)	Parameters (Data : State)	Remarks
110626	DISPLAY INFORMATION select	0 : time data & status 1 : time data & UB 2 : time data & CTL 500 3 : time data & time data F500 3 : time data & VITC **4 : time data only**	
110627	CHAR WARNING DISPLAY at dual line mode	**0 : off** 1 : on	
110628	REMAIN TIME DISPLAY	0 : on 1 : 10min **2 : off**	
110630	F500 TC CORRECT at 25F off-speed PB	**0 : off** 1 : on	
110631	F500 ORIGINAL TC display	**0 : off** 1 : on	
110632	F500 JUMPING TC select	**0 : –3H** 5 : +3H	Range: –3H to +3H (HEX) Step: 1H

5-1-8. Video Control

No.	Item (Video Control)	Parameters (Data : State)	Remarks
130701	VIDEO INPUT select (When HKDV-504 is used) (When HKDV-506/506A is used)	**0 : SDI** 1 : DUB 1 : SDTI	
130706	FORCED VERTICAL INTERPOLATION OFF	**0 : auto** 1 : forced Y ADD off	
130707	ROUNDING	**0 : simple** 1 : adaptive	
130708	MASTER LEVEL (HD) preset: 4000H	0 : 0(HEX) (0.0%) **4000 : 4000(HEX)** (100.0%) 5A70 : 5A70(HEX) (143.3%)	Range: 0 to 5A70 (HEX) Step: 1 (HEX)
130709	Y LEVEL (HD) preset: 4000H	0 : 0(HEX) (0.0%) **4000 : 4000(HEX)** (100.0%) 5A70 : 5A70(HEX) (143.3%)	Range: 0 to 5A70 (HEX) Step: 1 (HEX)
130710	PB LEVEL (HD) preset: 4000H	0 : 0(HEX) (0.0%) **4000 : 4000(HEX)** (100.0%) 5A70 : 5A70(HEX) (143.3%)	Range: 0 to 5A70 (HEX) Step: 1 (HEX)
130711	PR LEVEL (HD) preset: 4000H	0 : 0(HEX) (0.0%) **4000 : 4000(HEX)** (100.0%) 5A70 : 5A70(HEX) (143.3%)	Range: 0 to 5A70 (HEX) Step: 1 (HEX
130712	SETUP LEVEL (HD) preset: 0	–20 : –10.0 **0 : 0** 20 : 10.0	Range: –10.0 to +10.0 Step: 0.5
130713	SYNC PHASE (HD) preset: 0	–128 : –128 **0 : 0** 127 : 127	Range: –128 to 127 Step: 1
130714	FINE (HD) preset: 0H	**0 : 0(HEX)** 400 : 400(HEX)	Range: 0 to 400 (HEX) Step: 1 (HEX)
130720	EFFECT EDIT MODE	**0 : off** 1 : on	
130730	ACTIVE LINE 1035 CONVERT MODE	**0 : 1080⇨1035(CONV)** 1 : 1080⇨1035(CROP)	Valid only when HKDV-502 is used.

No.	Item (Video Control)	Parameters (Data : State)	Remarks
130731	ACTIVE LINE 1080 CONVERT MODE	**0 : 1035⇨1080(CONV)** 1 : 1035⇨1080(PANEL)	Valid only when HKDV-502 is used.
130732	SLOW PROCESS MODE	**0 : off** 1 : on	Valid only when HKDV-502 is used.
130754	DOWNCONVERTER MODE	**0 : EDGE-CROP** 1 : LETTER BOX 2 : SQUEEZE	Valid only when HKDV-501/501A is used.
130755	MASTER LEVEL (D1) preset: 4000H	0 : 0(HEX) (0.0%) **4000 : 4000(HEX)** (100.0%) 5A70 : 5A70(HEX) (143.3%)	Range: 0 to 5A70 (HEX) Step: 1 (HEX)
130756	Y LEVEL (D1) preset: 4000H	0 : 0(HEX) (0.0%) **4000 : 4000(HEX)** (100.0%) 5A70 : 5A70(HEX) (143.3%)	Range: 0 to 5A70 (HEX) Step: 1 (HEX)
130757	B-Y LEVEL (D1) preset: 4000H	0 : 0(HEX) (0.0%) **4000 : 4000(HEX)** (100.0%) 5A70 : 5A70(HEX) (143.3%)	Range: 0 to 5A70 (HEX) Step: 1 (HEX)
130758	R-Y LEVEL (D1) preset: 4000H	0 : 0(HEX) (0.0%) **4000 : 4000(HEX)** (100.0%) 5A70 : 5A70(HEX) (143.3%)	Range: 0 to 5A70 (HEX) Step: 1 (HEX)
130759	VIDEO OUTPUT LEVEL (D2) preset: 4000H	0 : 0(HEX) (0.0%) **4000 : 4000(HEX)** (100.0%) 5A70 : 5A70(HEX) (143.3%)	Range: 0 to 5A70 (HEX) Step: 1 (HEX)
130760	CHROMA LEVEL (D2) preset: 4000H	0 : 0(HEX) (0.0%) **4000 : 4000(HEX)** (100.0%) 5A70 : 5A70(HEX) (143.3%)	Range: 0 to 5A70 (HEX) Step: 1 (HEX)
130761	HUE (D2) preset: 0	–30 : –30 0 : 0 30 : 30	Range: –30 to 30 Step: 1
130762	SETUP LEVEL (D2) preset: 0	**0 : 0** 10 : 5.0 20 : 10.0	Range: 0 to 10.0 IRE Step: 0.5
130763	SYNC PHASE (NTSC) preset: 0	–128 : –128 **0 : 0** 127 : 127	Range: –128 to 127 Step: 1
130764	FINE (NTSC) preset: 0H	**0 : 0(HEX)** 400 : 400(HEX)	Range: 0 to 400 (HEX) Step: 1 (HEX)
130765	CROSS COLOR preset: 7H	0 : 0(HEX) **7 : 7(HEX)** F : F(HEX)	Range: 0 to F (HEX) Step: 1 (HEX) Valid only when HKDV-501/501A is used.
130766	H CROP POSITION preset: 0	–120 : –120 **0 : 0** 120 : 120	Range: –120 to 120 Step: 1 Valid only when HKDV-501/501A is used.
130767	DETAIL GAIN preset: 20H	00 : 00(HEX) **20 : 20(HEX)** 7F : 7F(HEX)	Range: 00 to 2F (HEX) Step: 1 (HEX) Valid only when HKDV-501/501A is used.
130768	LIMITER preset: 20H	00 : 00(HEX) **20 : 20(HEX)** 3F : 3F(HEX)	Range: 00 to 3F (HEX) Step: 1 (HEX) Valid only when HKDV-501/501A is used.
130769	CRISP THRESHOLD preset: 0H	**00 : 00(HEX)** 0F : 0F(HEX)	Range: 0 to 0F (HEX) Step: 1 (HEX) Valid only when HKDV-501/501A is used.
130770	LEVEL DEPEND THRESHOLD preset: 8H	00 : 00(HEX) **08 : 08(HEX)** 0F : 0F(HEX)	Range: 0 to 0F (HEX) Step: 1 (HEX) Valid only when HKDV-501/501A is used.

No.	Item (Video Control)	Parameters (Data : State)	Remarks
130771	H DETAIL FREQUENCY select	0 : 2.6 MHz 1 : 3.4 MHz **2 : 3.9 MHz** 3 : 4.6 MHz	Valid only when HKDV-501/501A is used.
130772	H/V RATIO preset: 3H	00 : 00(HEX) **03 : 03(HEX)** 0F : 0F(HEX)	Range: 0 to 0F (HEX) Step: 1 (HEX) Valid only when HKDV-501/501A is used.
130773	GAMMA LEVEL preset: 0	−128 : −128 **0 : 0** 127 : 127	Range: −128 to 127 Step: 1 Valid only when HKDV-501/501A is used.
130775	VIDEO OUTPUT DATA	0 : 8-bit **1 : 10-bit**	
130776	DOWNCONVERTER INPUT CHECK ENABLE	**0 : disable** 1 : enable	
130777	DCP V-FILTER SELECT	**0 : mode 1** 1 : mode 2 2 : mode 3	
130778	F500 LETTER BOX MODE SELECT	**0 : 16 : 9** 1 : 14 : 9 2 : 13 : 9	

5-1-9. Audio Control

No.	Item (Audio Control)	Parameters (Data : State)	Remarks
140801	AUDIO INPUT select ALL-CHANNELS	0 : analog **1 : SDI** 2 : AES/EBU	
140802	AUDIO INPUT select CH-1	0 : analog **1 : SDI** 2 : AES/EBU	
140803	AUDIO INPUT select CH-2	0 : analog **1 : SDI** 2 : AES/EBU	
140804	AUDIO INPUT select CH-3	0 : analog **1 : SDI** 2 : AES/EBU	
140805	AUDIO INPUT select CH-4	0 : analog **1 : SDI** 2 : AES/EBU	
140806	AUDIO EMPHASIS	**0 : off** 1 : on	
140807	AUDIO MONITOR-L select	**1 : ch1** 2 : ch2 3 : ch1, ch2 4 : ch3 5 : ch1, ch3 6 : ch2, ch3 7 : ch1, ch2, ch3 8 : ch4 9 : ch1, ch4 10 : ch2, ch4 11 : ch1, ch2, ch4 12 : ch3, ch4 13 : ch1, ch3, ch4 14 : ch1, ch3, ch4 15 : ch1, ch2, ch3, ch4 16 : cue 17 : ch1, cue 18 : ch2, cue 19 : ch1, ch2, cue 20 : ch3, cue 21 : ch1, ch3, cue 22 : ch2, ch3, cue 23 : ch1, ch2, ch3, cue 24 : ch4, cue 25 : ch1, ch4, cue 26 : ch2, ch4, cue 27 : ch1, ch2, ch4, cue 28 : ch3, ch4, cue 29 : ch1, ch3, ch4, cue 30 : ch1, ch3, ch4, cue 31 : ch1, ch2, ch3, ch4, cue	

No.	Item (Audio Control)	Parameters (Data : State)	Remarks
140808	AUDIO MONITOR-R select	1 : ch1 **2 : ch2** 3 : ch1, ch2 4 : ch3 5 : ch1, ch3 6 : ch2, ch3 7 : ch1, ch2, ch3 8 : ch4 9 : ch1, ch4 10 : ch2, ch4 11 : ch1, ch2, ch4 12 : ch3, ch4 13 : ch1, ch3, ch4 14 : ch1, ch3, ch4 15 : ch1, ch2, ch3, ch4 16 : cue 17 : ch1, cue 18 : ch2, cue 19 : ch1, ch2, cue 20 : ch3, cue 21 : ch1, ch3, cue 22 : ch2, ch3, cue 23 : ch1, ch2, ch3, cue 24 : ch4, cue 25 : ch1, ch4, cue 26 : ch2, ch4, cue 27 : ch1, ch2, ch4, cue 28 : ch3, ch4, cue 29 : ch1, ch3, ch4, cue 30 : ch1, ch3, ch4, cue 31 : ch1, ch2, ch3, ch4, cue	
140809	DIGITAL JOG SOUND	0 : off **1 : on**	
140811	DIGITAL AUDIO FADE TIME	0 : 5 ms **1 : 10 ms** 2 : 15 ms 3 : 20 ms 4 : 25 ms 5 : 50 ms 6 : 85 ms 7 : 115 ms	
140812	AUDIO CH3/4 INPUT SOURCE ARRANGE	**0 : CH3/CH4: sw/sw** 1 : CH3/CH4: ch1/sw 2 : CH3/CH4: sw/ch2 3 : CH3/CH4: ch1/ch2	
140813	AUDIO MONITOR OUTPUT MIXING	0 : add **1 : rms** 2 : average	
140814	LEVEL METER SCALE	**0 : peak 0 dB** 1 : reference 0 dB	
140815	AUDIO OUTPUT PHASE	00 : 00(HEX) **80 : 80(HEX)** FF : FF(HEX)	Range: 0 to FF (HEX) Step: 1 (HEX)
140817	AUDIO LEVEL METER DIMMER CONTROL	**00 : 0(HEX)** 07 : 7(HEX)	Range: 0 to 7 (HEX) Step: 1 (HEX)
140819	F500 NON AUDIO MODE Select	**0 : BURST DATA MODE** 1 : CONTINUOUS DATA MODE	
140820	F500 NON AUDIO Channel Select	**0 : off** 1 : SDI CH1/2 (MODE 1) 2 : SDI CH3/4 (MODE 2) 3 : SDI all (MODE 3) 4 : AES CH1/2 (MODE 4) 5 : AES CH3/4 (MODE 5) 6 : AES all (MODE 6) 7 : SDI CH1/2 & AES CH3/4 (MODE 7) 8 : AES CH1/2 & SDI CH3/4 (MODE 8)	
140821	F500 AUDIO ADVANCE MODE	**0 : off** 1 : on	

5-1-10. Digital Process

No.	Item (Digital Process)	Parameters (Data : State)	Remarks
130902	FREEZE MODE	**0 : field** 1 : field 1 2 : field 2 3 : frame 1+2 4 : frame 2+1	
130903	FREEZE CONTROL FROM KEY PANEL	**0 : momentary** 1 : latch	
130905	STOP FREEZE CONTROL	0 : disable **1 : enable**	

5-1-11. Others

No.	Item (Others)	Parameters (Data : State)	Remarks
110A01	F500 PD TIME CODE DISPLAY	**0 : off** 1 : on	Valid only when HKDV-507 is used.
110A02	F500 PD PRESET FRAME MODE	**0 : 24FRAME MODE (24F)** 1 : 30FRAME MODE (30F)	Valid only when HKDV-507 is used.
110A03	F500 PD SUPERIMPOSED CHARACTER	**0 : off** 1 : on	Valid only when HKDV-507 is used.
110A04	F500 PD DF/NDF select	**0 : drop frme (DF)** 1 : non-drop frame (NDF)	Valid only when HKDV-507 is used.
160T01	AUTO REPEAT MODE	**0 : off** 1 : on	
130T02	INTERNAL VIDEO SIGNAL GENERATOR (HD)	**0 : off** 1 : COLOR BARS 2 : MULTI BURST 3 : 10 STEPS 4 : PULSE & BAR 5 : RAMP 6 : BLACK	
130T03	INTERNAL VIDEO SIGNAL GENERATOR LINE SELECT	**0 : 1035** 1 : 1080	
140T04	INTERNAL AUDIO SIGNAL GENERATOR	**0 : off** 1 : silence 2 : 1 kHz sine	

5-2. HDW-250

5-2-1. Operation

No.	Item (Operation)	Parameters (Data : State)	Remarks
170001	SERVO A/V REFERENCE SELECT	**0 : INP** 1 : EXT	
170002	EXTERNAL REFERENCE SELECT	**0 : HD** 1 : NTSC	
170004	STILL TIMER SELECT	0 : 0.5S 1 : 5S 2 : 10S 3 : 20S 4 : 30S 5 : 40S 6 : 50S 7 : 1M 8 : 2M 9 : 3M 10 : 4M 11 : 5M 12 : 6M 13 : 7M **14 : 8M** 15 : 9M 16 : 10M 17 : 15M 18 : 30M	S:sec., M: min.
170005	SEARCH SELECT	0 : ×2 **1 : ×5** 2 : ×8	
170006	FREEZE MODE	**0 : FLD** 1 : FRM	

5-2-2. Editing

No.	Item (Editing)	Parameters (Data : State)	Remarks
100101	REC MODE	0 : CRUSH **1 : ASM** 2 : AUTO	
110102	PREROLL TIME	0 : 0S **5 : 5S** 30 : 30S	Range: 0 to 30 sec. Step: 1 sec.
100901	AUTO TRACKING	0 : OFF **1 : ONE** 2 : ON	

5-2-3. Time Code Generator

No.	Item (Time Code Generator)	Parameters (Data : State)	Remarks
110201	REC RUN	**0 : INT** 1 : TAPE	
110202	TCG EXTERNAL LOCK SOURCE SELECT	**0 : TCIN** 1 : SDI	
110203	PHASE CORRECTION	**0 : OFF** 1 : ON	
110204	TCG CG FLAG	**0 : OFF** 1 : ON	
110205	TC OUT	**0 : GEN** 1 : AUTO	
110301	CHARACTER V POSITION	0 : 0 **22 : 22** 23 : 23	Range: 0 to 23 Step: 1
110302	CHARACTER TYPE	0 : W/O 1 : OUTL 2 : TRNS **3 : BG**	(without Back ground) (outlined) (translucent) (with Black back ground)
110303	DISPLAY INFORMATION select	0 : STAT 1 : UB 2 : CTL 3 : VITC **4 : TIME**	(start)
110304	CHAR WARNING DISPLAY at dual line mode	**0 : OFF** 1 : ON	
110305	REMAIN TIME DISPLAY	**0 : OFF** 1 : ON 2 : 10mi	 (10 min.)
110401	VITC/NTSC	**0 : ON** 1 : OFF	
110402	VITC POSITION-1 select	0 : 12LN **4 : 16LN** 8 : 20LN	Range: ine 12 to 20 Step: 1 line
110403	VITC POSITION-2 select	0 : 12LN **6 : 18LN** 8 : 20LN	Range: line 12 to 20 Step: 1 line

5-2-4. Video Control

No.	Item (Video Control)	Parameters (Data : State)	Remarks
130501	SDI OUT	**0 : AUTO** 1 : OFF 2 : ON	
130502	MASTER LEVEL preset: 4000H	0 : 0(HEX) (0.0%) **4000 : 4000(HEX)** (100.0%) 5A70 : 5A70(HEX) (143.3%)	Range: 0 to 5A70 (HEX) Step: 1 (HEX)
130503	Y LEVEL preset: 4000H	0 : 0(HEX) (0.0%) **4000 : 4000(HEX)** (100.0%) 5A70 : 5A70(HEX) (143.3%)	Range: 0 to 5A70 (HEX) Step: 1 (HEX)
130504	PB LEVEL preset: 4000H	0 : 0(HEX) (0.0%) **4000 : 4000(HEX)** (100.0%) 5A70 : 5A70(HEX) (143.3%)	Range: 0 to 5A70 (HEX) Step: 1 (HEX)
130505	PR LEVEL preset: 4000H	0 : 0(HEX) (0.0%) **4000 : 4000(HEX)** (100.0%) 5A70 : 5A70(HEX) (143.3%)	Range: 0 to 5A70 (HEX) Step: 1 (HEX)
130506	SETUP LEVEL preset: 20	0 : –10.0 **20 : 0** 40 : 10.0	Range: –10.0 to 10.0 Step: 0.5
130507	SYNC PHASE preset: 128	0 : –36 **128 : 0** 255 : 36	Range: –36 to 36 Step: 0.5
130508	FINE preset: 0	**0 : 0** 1024 : 1024	Range: 0 to 1024 Step: 1
130509	ROUNDING	**0 : SIMP** 1 : ADAP	(simple) (adaptive)
130601	DOWNCONVERTER OUT	**0 : AUTO** 1 : OFF 2 : ON	
130602	DOWNCONVERTER MODE	**0 : CROP** 1 : LBOX 2 : SQUZ	(edge-crop) (letter box) (squeeze)
130603	H CROP POSITION preset: 120	0 : –120 **120 : 0** 240 : 120	Range: –120 to 120 Step: 1
130604	SETUP LEVEL (NTSC) preset: 0 (J, PAL) preset: 15 (UC)	**0 : 0.0** **15 : 7.5** 20 : 10.0	Range: 0.0 to 10.0 IRE Step: 0.5 IRE
130605	SYNC PHASE (NTSC) preset: 128	0 : –128 **128 : 0** 255 : 127	Range: –128 to 127 Step: 1
130606	FINE preset: 0	**0 : 0** 1024 : 1024	Range: 0 to 1024 Step: 1
130608	DETAIL GA preset: 20H	0 : 0 **20 : 32** 7F : 127	Range: 0 to 127 Step: 1
130801	VIDEO TEST SG	**0 : OFF** 1 : CB 2 : RMP 3 : TEN 4 : GRY	 (color bars) (ramp) (10 steps) (gray scale)

5-2-5. Audio Control

No.	Item (Audio Control)	Parameters (Data : State)	Remarks
140701	INPUT 1/2	0 : ANA **1 : DIGI**	
140702	INPUT 3/4	0 : ANA **1 : DIGI**	
140703	EMPHASIS	**0 : OFF** 1 : ON	
140704	DOUBLE REC	**0 : OFF** 1 : ON	
140705	PB VOLUME	**0 : UNTY** 1 : VAR	(unity) (variable)
140808	AUDIO TEST SG	**0 : OFF** 1 : 1k/1 2 : 1k/2	

5-2-6. Control Panel

No.	Item (Control Panel)	Parameters (Data : State)	Remarks
160A01	TELE FILE POP UP SELECT	**0 : OFF** 1 : ON	

5-2-7. System

No.	Item (System)	Parameters (Data : State)	Remarks
180807	CAMERA POWER SUPPLY	**0 : OFF** 1 : ON	

6. Message

For more details of each message, refer to Part 1 in the Maintenance Manual of this unit.
HDW-500/F500: “Section 3 Self-Diagnosis” (Refer to the error code as reference.)
HDW-250: “Section 2 Error Message and Error Log”

6-1. Error Message

For HDW-500/F500 use (1/2)

Message No.	Message	Error code	Remarks
104	SY ROM ERROR	A1	
108	READ WRITE ERROR MAIN SRAM2	A0	
10D	READ WRITE ERROR MAIN-IF DPRAM	A0	
10E	READ WRITE ERROR MAIN-SV1 DPRAM	A0	
124	SYS NV-RAM CHECK SUM ERROR	A3	
130	CPU INITIALIZE ERROR IF	93	
1000	DRUM TROUBLE Speed Error Detected	08	
1001	DEW DETECTED	10	
1002	DRUM TROUBLE No PG Detected	08	
1003	DRUM TROUBLE No FG Detected	08	
108B	REEL POSITION SENSOR TROUBLE	22	
1090	REEL TROUBLE - 1 Slack Detected (T-REEL/THREADING)	01	
1091	REEL TROUBLE - 1 No FG Detected (S/T-REEL)	01	
1092	REEL TROUBLE - 2 Direction Disagreement	02	
1093	REEL TROUBLE - 2 Slack Detected (Pinch - ON FWD) (S-REEL/T-REEL)	02	
1094	REEL TROUBLE - 2 Slack Detected (Pinch - ON REV) (S-REEL/T-REEL)	02	
1095	REEL TROUBLE - 2 Slack Detected (Pinch - ON FWD) (CAPSTAN/T-REEL)	02	
1096	REEL TROUBLE - 2 Slack Detected (Pinch - ON REV) (CAPSTAN/S-REEL)	02	
1097	REEL TROUBLE - 2 Slack Detected (Pinch - OFF FWD) (S-REEL/T-REEL)	02	
1098	REEL TROUBLE - 2 Slack Detected (Pinch - OFF REV) (S-REEL/T-REEL)	02	
1099	REEL TROUBLE - 2 No FG Detected (S-REEL)	02	
109A	REEL TROUBLE - 3 Direction Disagreement	03	
109B	REEL TROUBLE - 3 Slack Detected (S-REEL/T-REEL)	03	
109C	REEL TROUBLE - 3 Slack Detected (CAPSTAN/T-REEL)	03	
109D	REEL TROUBLE - 3 Low tension Detected	03	
109E	REEL TROUBLE - 2 No FG Detected (S/T-REEL)	02	
109F	REEL TROUBLE - 2 No FG Detected (T-REEL)	02	
10A0	REEL TROUBLE - 4 S-REEL Side Trouble (FF)	04	
10A1	REEL TROUBLE - 4 T-REEL Side Trouble (FF)	04	
10A2	REEL TROUBLE - 4 S-REEL Side Trouble (REW)	04	
10A3	REEL TROUBLE - 4 T-REEL Side Trouble (REW)	04	
10A4	REEL TROUBLE - 5 S-REEL FG Trouble Detected	05	
10A5	REEL TROUBLE - 5 T-REEL FG Trouble Detected	05	
10A6	REEL TROUBLE - 5 SLACK Detected (When cassette) (up/down operation)	05	

For HDW-500/F500 use (2/2)

Message No.	Message	Error code	Remarks
10A7	REEL TROUBLE - 5 Over Current Detected (S-REEL)	05	
10A8	REEL TROUBLE - 5 Over Current Detected (T-REEL)	05	
10A9	REEL SHIFT MOTOR LOCK	21	
10AA	REEL TROUBLE - 3 Slack Detected (CAPSTAN/S-REEL)	03	
10AB	REEL TROUBLE - 5 No FG Detected (S-REEL)	05	
10AC	REEL TROUBLE - 5 No FG Detected (T-REEL)	05	
1100	CAPSTAN TROUBLE Speed Error Detected	07	
1104	CAPSTAN TROUBLE No FG Detected	07	
1105	CAPSTAN TROUBLE Trouble Detected When cassette up/down operation	07	
1194	CASSETTE COMPARTMENT MOTOR LOCK	20	
1200	THREADING TROUBLE	0A	
1220	TH/UNTH MOTOR TIME OUT No FG Detected	09	
1221	TH/UNTH MOTOR TIME OUT Time Over	09	
1222	TH/UNTH MOTOR TIME OUT Unthread end not sensed	09	
1282	TAPE TENSION ERROR	06	
1300	DT HARD ERROR	B0	
1301	CPU INITIALIZE ERROR DT	93	
14A4	SV NV-RAM TROUBLE	97	
14A5	DR NV-RAM CHECK SUM ERROR	A2	
14B0	CPU INITIALIZE ERROR SV1	93	
14BF	TAPE END SENSOR TROUBLE	13	
14C0	TAPE TOP SENSOR TROUBLE	12	
14D0	INTERNAL INTERFACE ERROR SV1-drum servo (SV2)	92	
14D1	INTERNAL INTERFACE ERROR SV1-DT	92	
14D2	INTERNAL INTERFACE ERROR SV1-DR	92	
14D4	FAN TROUBLE	14	
14D5	FAN MOTOR TROUBLE FAN2 Trouble Detected	14	
14D6	FAN MOTOR TROUBLE FAN3 Trouble Detected	14	
14D7	TAPE TOP/END SENSOR TROUBLE	11	
1900	INTERNAL INTERFACE ERROR MAIN-FP	92	
1901	RS-422 REMOTE COMMAND BUFFER FULL	A5	
1902	PLAYER CONTROL COMMAND BUFFER FULL	A4	
1903	INTERNAL INTERFACE ERROR MAIN-APR	92	HDW-500 only
1904	INTERNAL INTERFACE ERROR MAIN-EQ	92	
1905	INTERNAL INTERFACE ERROR MAIN-SV1	92	
1906	INTERNAL INTERFACE ERROR MAIN-IF	92	
1907	INTERNAL INTERFACE ERROR MAIN-AP1	92	HDW-F500 only
1908	INTERNAL INTERFACE ERROR MAIN-PD	92	HDW-F500 only
1FBD	TCG HARD ERROR	B1	
1F80	DCP-26 BOARD INSTALLATION ERROR	B2	
1F81	DCP-26 & PD-94 BOARD INSTALLATION ERROR	B3	

For HDW-250 use

Message No.	Message	Error code	Remarks
108	Read Write Error MAIN SRAM2	A0	
10D	Read Write Error MAIN IF	A0	
10E	Read Write Error MAIN SV1	A0	
1001	HUMID DEW DETECTED	10	
1003	DRUM TROUBLE FG ERROR	08	
1060	FUSE BLOWN	C3	
1070	BATTERY END	C4	
10AD	REEL NOT STOPPED	05	
10B0	TAPE SLACK AT THREAD / UNTHREAD	01	
10B1	TAPE SLACK AT SEARCH / SHUTTLE	02	
10B2	TAPE SLACK AT PLAY / REC	03	
1104	CAPSTAN FG ERROR	07	
1194	CASSETTE COMPARTMENT MOTOR LOCKED	20	
1220	THREAD/UNTHREAD ERROR	09	
1224	TH/UNTHREAD SENSOR	0A	
1225	TH/UNTHREAD AND UP/DOWN SENSOR	0C	
1282	TAPE TENSION ERROR	06	
1283	TAPE TROUBLE	04	
14A4	SV NV-RAM TROUBLE	97	
14BF	TAPE END SENSOR	13	
14C0	TAPE TOP SENSOR	12	
14C4	CASSECOM UP/DOWN SENSOR	0B	
14D4	FAN MOTOR TROUBLE FAN1 Trouble Detected	14	
14D7	TAPE TOP/END SENSOR	11	
1E00	SV NO RESPONSE	C2	
1FBE	TG NO RESPONSE	C1	

6-2. Warning Message

For HDW-500/F500 use

Message No.	Message	Warning code	Remarks
10410	UNFORMAT TELEFILE	5F	
10411	INCONSISTENT FORMAT OF META DATA	16	HDW-F500 only
10412	PB FREQUENCY IS UNSUITABLE	17	HDW-F500 only
11104	LOST LOCK	02	
11182	NO CASSETTE COMPARTMENT MODE	34	
11301	DT UNLOCKED	45	
11C00	NO PB RF SIGNAL	14	
11C88	NO LTC REPRODUCED	3B	
11D81	NO SDI INPUT	08	
11D82	NO SDI AUDIO INPUT	09	
11D84	NO A1/A2 INPUT	1C	
11D85	NO A3/A4 INPUT	20	
11D97	INVALID SDI DATA	2D	
11DA0	PROCESSOR IS IN TEST MODE	50	
11E00	AUDIO PLL UNLOCKED	11	
11E01	VIDEO PLL UNLOCKED	55	
11E04	NO EXTERNAL REFERENCE	01	
11E84	INPUT AUDIO DATA MISMATCH 32.000K	59	
11E85	INPUT AUDIO DATA MISMATCH 47.056K	5A	
11F0A	INCONSISTENT EMPHASIS	15	
11F0C	VITC NOT READ	10	

For HDW-250 use

In HDW-250, no warning code is given to the warning message.

Message No.	Message	Remarks
10069	BATTERY NEAR END	
10071	TAPE NEAR END	
10072	TAPE END	
11000	PREROLL FAILED	
11102	SERVO NOT LOCKED AT ASSEMBLE EDIT	
11104	LOST LOCK	
11400	CAMERA DC SUPPLY MENU ON WITH BP90A	
11401	CAMERA DC SUPPLY WAS CUT OFFED	
11B00	NO CAM INPUT	
11C00	NO PB RF SIGNAL	
11C01	RF TROUBLE	
11C88	NO LTC REPRODUCED	
11D81	NO SDI INPUT	
11D97	INVALID SDI INPUT	
11E01	VIDEO PLL UNLOCKED	
11E04	NO EXTERNAL REFERENCE VIDEO	
11F00	TELE FILE HARD ERROR	

6-3. Channel Condition Message

Message No.	Message	Alarm code	Remarks
11C05	CHANNEL CONDITION ALARM	1 or 2	In the main unit of equipment, two messages (VIDEO DATA ERROR and AUDIO DATA ERROR) are displayed. However, in ISR, only this message is used.

HDW-500
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HDW-250
PROTOCOL ISR (E)
9-968-521-62

Sony Corporation
Communication System Solutions Network Company

Printed in Japan
2000. 9 22