TASCAM

TEAC PROFESSIONAL

TASCAM HS-4000

CONTROL I/O connector

RS-232C Protocol Specification

Ver. 1.00

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TEAC Corporation

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1.　Overview

　　The CONTROL I/O connector (RS–232C) on the HS–4000 enables you to control the HS–4000 from a computer or other external device.　In this document, the HS–4000 is referred to as the "controlled device". and the external device that controls it is referred to as the "external controller."

2.　Specifications

　　Electrical specifications

Standard	Conforms to JIS X–5101 (equivalent to former JIS C–6361 and EIA RS–232C) (Not compatible with the RS–422A used in professional VTR units)
Impedance at receiver	When measured with an applied voltage of between ±3 and 15V, the DC resistance is between 3KΩ and 7KΩ. Total load capacitance is 2500pF or below.
Open circuit voltage at transmitter	25V or below
Open circuit voltage at receiver	2V or below
Signal voltage	When the open circuit voltage at the receiver is 0V, the signal voltage is between ±5V and ±15V for a load impedance of between 3K and 7KΩ.
Signal discrimination	Logical "1"　–3V or below
	Logical "0"　+3V or more

　　Communication format

Circuit type	3–wire, half–duplex
Transmission type	Digital binary serial
Data speed (baud rate)	4800/9600/19200/38400 bit/sec
Character length	7/8 bit
Parity bit	Odd/Even/None
Stop bit	1/2 bit

(Data speed, character length, parity bit, and stop bit settings are made on the HS–4000.)

　　Connector pin–out

Connector	D–sub 9–pin female (inch thread)
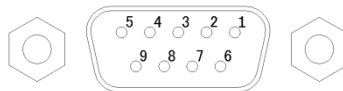
Terminal pin–out and input/output signals

Pin no	In/Out	Signal name	Description
1	–	NC	Not connected
2	In	Rx Data	Data received at this pin *1
3	Out	Tx Data	Data transmitted from this pin
4	Out	(Reserved)	Reserved
5	–	GND	Ground
6	In	(Reserved)	Reserved
7	In	RTS	Request To Send (input "request to transmit") *2
8	Out	CTS	Clear To Send (output "ready to receive") *2
9	–	NC	Not connected

*1：A voltage that satisfies the RS–232C specification must be applied to Rx Data.

*2：RTS/CTS is loopback–connected within the controlled device. If RTS/CTS control is used, consider the design of the external controller.

Controlled device(HS–8)　　　　　　External controller

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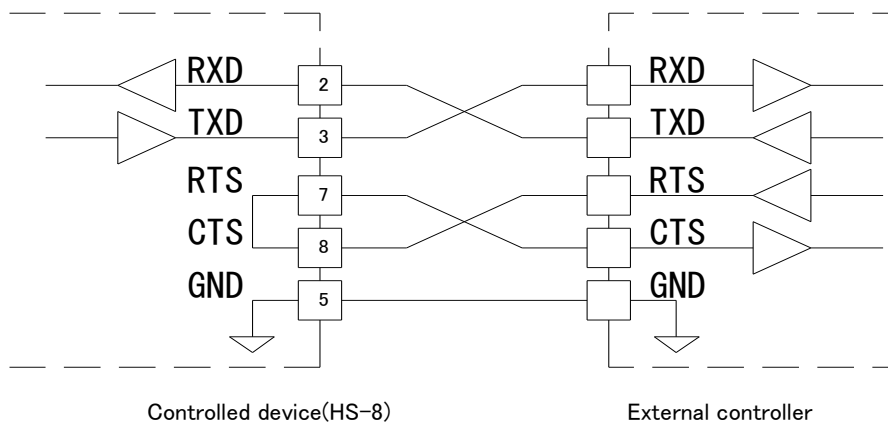
3. Command format

Command format overview
The command format is as follows.

Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7	Byte 8	···	Byte n
LF	ID	Command		Data 1	Data 2	Data 3	Data 4	···	CR

Commands begin with a "line feed (LF)," end with a "carriage return (CR)," and are based on the ASCII format. UTF-8 is used, however, for character strings in product names, for example.

The type following the LF is the machine ID. The machine ID is described later.

Commands are expressed using two ASCII bytes.

The byte string following the command expresses the data, and is between 0 bytes (for a command that has no data) and a maximum of 123 bytes. For details on the data, refer to the detailed explanation for each command. For commands that use 0--9 and A--F as data values, uppercase characters are used for A--F.

Example commands
Example 1:   Transmitting a PLAY command to a controlled device of ID=0
When the controlled device is in Stop or Play-Ready mode, this command will initiate playback on the controlled device.
The PLAY command is [12], and is transmitted as follows.

		ID	Command	
ASCII	LF	0	1	2	CR
HEX	0Ah	30h	31h	32h	0Dh

Example 2:   Telling a controlled device of ID=0 to perform a direct search for take 123
The command "DIRECT TRACK SEARCH PRESET [23]" is transmitted to perform this action.
The data bytes consist of ASCII in two-byte units.
For the command "DIRECT TRACK SEARCH PRESET," the take number is specified as follows.
- Data 1   Tens digit of the specified take number
- Data 2   Ones digit of the specified take number
- Data 3   Thousands digit of the specified take number
- Data 4   Hundreds digit of the specified take number

Thus, the transmitted command is as follows.

		ID	Command		Data: take 123			
ASCII	LF	0	2	3	2	3	0	1	CR
HEX	0Ah	30h	32h	33h	32h	33h	30h	31h	0Dh

Machine ID
The unit uses Machine ID = 0/1 to receive commands and transmit returns.
If a command with an ID other than Machine ID = 0/1 is received, that command is ignored.
If an unsupported command is received, the HS-8 will transmit ILLEGAL [F2].

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List of commands
A list of commands is given below.

Control/Preset/Sense Command		Return Command		Adapted F/W Ver
0F	INFORMATION REQUEST	8F	INFORMATION RETURN	2.01
10	STOP			2.01
12	PLAY			2.01
13	RECORD			2.01
14	PAUSE			2.01
16	SEARCH			2.01
19	FLASH START			2.10
1A	SKIP			2.01
1B	JOG	9B	JOG RETURN	2.10
1C	SHUTTLE	9C	SHUTTLE RETURN	2.10
1D	CALL			2.01
20	AUTO CUE LEVEL PRESET	A0	AUTO CUE LEVEL RETURN	2.10
23	DIRECT TRACK SEARCH PRESET			2.01
27	CLOCK DATA PRESET	A7	CLOCK DATA RETURN	2.01
2C	TIME SEARCH PRESET			2.01
30	AUTO CUE SELECT	B0	AUTO CUE SELECT RETURN	2.10
36	AUTO READY SELECT	B6	AUTO READY SELECT RETURN	2.10
37	REPEAT SELECT	B7	REPEAT SELECT RETURN	2.01
3A	INCR PLAY SELECT	BA	INCR PLAY SELECT RETURN	2.10
4D	PLAYMODE SELECT			2.01
4E	PLAY MODE SENSE	CE	PLAY MODE RETURN	2.01
50	MECHA STATUS SENSE	D0	MECHA STATUS RETURN	2.01
55	TRACK No. STATUS SENSE	D5	TRACK No. STATUS RETURN	2.01
58	CURRENT TRACK TIME SENSE	D8	CURRENT TRACK TIME RETURN	2.01
		F0	ERROR SENSE REQUEST	2.01
		F1	CAUTION SENSE REQUEST	2.01
		F2	ILLEGAL STATUS	2.01
		F4	POWER ON STATUS	2.01
		F6	CHANGE STATUS	2.01
78	ERROR SENSE	F8	ERROR SENSE RETURN	2.01
79	CAUTION SENSE	F9	CAUTION SENSE RETURN	2.01
7F	VENDOR COMMAND	FF	VENDOR COMMAND RETURN	2.01

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List of vendor commands

A list of vendor commands (Command 7F / FF) is given below.

Command codes are a combination of command (2 bytes), category code (2 bytes) and sub command (2 bytes). For detailed information, see page 32 and following.

Control/Sense Command		Return Command		Adapted F/W Ver
7F01	DEVICE SELECT	FF01	DEVICE SELECT RETURN	2.10
7F0310	MARK SET			2.01
7F0400	FLASH PAGE SELECT	FF0480	FLASH PAGE RETURN	2.10
7F041A	FLASH PAGE SKIP			2.10
7F0439	FLASH KEY METHOD SELECT	FF04B9	FLASH KEY METHOD RETURN	2.10
7F0511	ONLINE SELECT	FF0511	ONLINE SELECT RETURN	2.01
7F0600	CHASE SELECT	FF0680	CHASE SELECT RETURN	2.01
7F0700	PLAYER SELECT	FF0780	PLAYER SELECT RETURN	2.10
7F0900	OPERATION MODE SELECT	FF0980	OPERATION MODE SELECT RETURN	2.10
7F1510	RETAKE	FF1590	RETAKE ACK	2.01
7F151A	REGION SKIP			2.01
7F3100	PLAY LIST STANDBY	FF3180	PLAYLIST STANDBY STATUS RETURN	2.10
7F3300	AES31 STANDBY	FF3380	AES31 STANDBY RETURN	2.10

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Command sequence

In most cases the controlled device will not send an ACK in response to transport control or data preset commands sent from the external controller.

The controlled device will send back a return command in response to data sense commands that request a data value specified on the controlled device.

When the status of the controlled device changes, such as from Stop to Play mode, or when an error etc. occurs, the controlled device will send a command indicating this to the external controller.

Examples of the command sequence are given below.

You must leave an interval of at least 20 ms between commands.

Example 1:   Controlling the transport of the controlled device

    This example describes the Play operation.

    When the controlled device receives the PLAY command and enters Play mode, it will transmit a CHANGED STATUS command.

    ACK is not transmitted for the PLAY command.

Command		State of controlled device
External controller	Controlled device	
PLAY ->		Stopped
	<- CHANGED STATUS	Transmit when starting Play

Example 2:   Presetting data

    This example describes setting the AUTO CUE LEVEL.

    When the controlled device receives the AUTO CUE LEVEL PRESET (Preset) command, it will set its AUTO CUE LEVEL.

    ACK is not transmitted for this command.

Command		State of controlled device
External controller	Controlled device	
AUTO CUE LEVEL PRESET (Preset -54dB) ->		AUTO CUE LEVEL set to -54dB

Example 3:   Obtaining specified data

    This example describes obtaining the currently-set AUTO CUE LEVEL.

    When the controlled device receives the AUTO CUE LEVEL PRESET (Sense) command, it will return the currently-set AUTO CUE LEVEL.

Command		State of controlled device
External controller	Controlled device	
AUTO CUE LEVEL PRESET (Sense) ->		
	<- AUTO CUE LEVEL RETURN	

Example 4:   Checking the status of the controlled device, and performing the next operation
When the operating status of the controlled device changes, it will transmit CHANGED STATUS. By using CHANGED STATUS as a trigger for sending MECHA STATUS SENSE, the new operating status can be determined.

This example shows how to check the RECORD-READY status of the controlled device and then initiate recording.

Command		State of controlled device
External controller	Controlled device	
		Stopped
RECORD (Record Ready) ->		
	<- CHANGED STATUS	Transmitted when entering record-ready state
MECHA STATUS SENSE ->		
	<- MECHA STATUS RETURN	Returns record-ready state
RECORD (Record) ->		
	<- CHANGES STATUS	Transmitted when entering record state

Command details

The commands, data, and machine IDs described here are characters (ASCII).

A command is two character bytes, a machine ID is one character byte, and each item of data is an individual character byte.

The HS-8 can use the following take numbers, folder numbers, and project numbers. However, if a number that does not exist is specified, it will be considered an invalid command.

Take number	999 maximum
Entry number	100 maximum
Session number	999 maximum
Project number	99 maximum

INFORMATION REQUEST
Requests the controlled device to return information such as the software version.

Command	0F
Machine ID	0
Data	none
Return	INFORMATION RETURN [8F]

STOP
Places the controlled device into stop state.
This command will be ignored if Machine ID=1 is designated and the operation mode is any other than dual playlist or mix playlist modes.

Command	10
Machine ID	0/1
Data	none
Return	none

PLAY
Places the controlled device into play state.
This command will be ignored if Machine ID=1 is designated and the operation mode is any other than dual playlist or mix playlist modes.
To start recording while in record-ready state, use RECORD (Record).

Command	12
Machine ID	0/1
Data	none
Return	none

RECORD

Places the controlled device into record or record-ready state.

This command will be ignored if the operation mode does not allow recording.

Command   13
Machine ID   0
Data   2 bytes

Data 1	Data 2	Description	Remarks
0	0	Record	Starts recording while in record-ready state.
0	1	Record Pause	Places the controlled device into record-ready state.

・ If data other than the above is received, the HS-8 will transmit ILLEGAL [F2].

Return   none

PAUSE

Places the controlled device into play-ready state.

This command will be ignored if Machine ID=1 is designated and the operation mode is any other than dual playlist or mix playlist modes.

To pause recording, use RECORD (Record Pause).

Command   14
Machine ID   0/1
Data   2 bytes

Data 1	Data 2	Description	Remarks
0	1	Pause On	Places the device into play-ready state.

・ If data other than the above is received, the HS-8 will transmit ILLEGAL [F2].

Return   none

SEARCH

Places the controlled device into search playback state.

This command will be ignored if Machine ID=1 is designated and the operation mode is any other than dual playlist or mix playlist modes.

If the operation mode is dual playlist or mix playlist, but a Machine ID other than that of the current player is designated, the unit will transmit ILLEGAL [F2].

The search playback state will continue until a command such as STOP, PLAY or PAUSE is received.

Command   16
Machine ID   0/1
Data   2 bytes

Data 1	Data 2	Description	Remarks
0	0	Search Forward(Normal)	Search (playback) in the forward direction. (Normal speed)
0	1	Search Reverse (Normal)	Search (playback) in the backward direction. (Normal speed)
1	0	Search Forward (High)	Search (playback) in the forward direction. (High speed)
1	1	Search Reverse (High)	Search (playback) in the backward direction. (High speed)

・ If data other than the above is received, the HS-8 will transmit ILLEGAL [F2].

Return   none

FLASH START

Causes the controlled device to flash-start the specified take/entry.

This command will be ignored if Machine ID=1 is designated and the operation mode is any other than dual playlist or mix playlist modes.

If the operation mode is timeline, the unit will transmit ILLEGAL [F2].

Command   19

Machine ID   0/1

Data   4 bytes

	Description	Remarks
Data 1	Tens digit of the take/entry number	
Data 2	Ones digit of the take/entry number	Take/entry number
Data 3	Thousands digit of the take/entry number	Example: "1400" indicates take 14
Data 4	Hundreds digit of the take/entry number	

・ If data other than the above is received, the unit will transmit ILLEGAL [F2].

Return   none

SKIP

Causes the controlled device to skip between playback points.

If the operation mode is timeline, the controlled device will skip regions.

If the operation mode is playlist (single/dual/mix), the controlled device will skip entries. In other operation modes, the controlled device will skip takes.

In all operation modes, the controlled device will skip marks.

After skipping, the device will maintain the state in which it was right before the operation was performed.

This command will be ignored if Machine ID=1 is designated and the operation mode is any other than dual playlist or mix playlist modes.

Command   1A

Machine ID   0/1

Data   2 bytes

Data 1	Data 2	Description	Remarks
0	0	Track Skip Next	Skips to the next take/entry/region.
0	1	Track Skip Previous	If the current position is within one second of the beginning of a take/entry/region, it skips to the beginning of the previous one. Otherwise, it skips to the beginning of the current take.
2	0	Mark Skip Next	Moves to the next mark.
2	1	Mark Skip Previous	Moves to the previous mark.

・ If data other than the above is received, the HS-8 will transmit ILLEGAL [F2].

Return   none

JOG

Enables JOG playback of the controlled device.

The data value adjusts the speed of JOG playback.

This command will be ignored if Machine ID=1 is designated and the operation mode is any other than dual playlist or mix playlist modes.

If the operation mode is dual playlist or mix playlist, but a Machine ID other than that of the current player is designated, the unit will transmit ILLEGAL [F2].

Command   1B

Machine ID   0/1

Data   2 bytes

Data 1	Data 2	Description	Remarks
0	0	OFF	Disables JOG mode.
0	1	ON	Enables JOG mode.
1	0	FWD x0.0	PAUSE
1	1	FWD x0.1	Plays forward at 0.1x speed.
1	2	FWD x0.2	Plays forward at 0.2x speed.
1	3	FWD x0.3	Plays forward at 0.3x speed.
1	4	FWD x0.4	Plays forward at 0.4x speed.
1	5	FWD x0.5	Plays forward at 0.5x speed.
1	6	FWD x0.6	Plays forward at 0.6x speed.
1	7	FWD x0.7	Plays forward at 0.7x speed.
1	8	FWD x0.8	Plays forward at 0.8x speed.
1	9	FWD x0.9	Plays forward at 0.9x speed.
1	A	FWD x1.0	Plays forward at 1.0x speed.
2	0	RWD x0.0	PAUSE
2	1	RWD x0.1	Plays backward at 0.1x speed.
2	2	RWD x0.2	Plays backward at 0.2x speed.
2	3	RWD x0.3	Plays backward at 0.3x speed.
2	4	RWD x0.4	Plays backward at 0.4x speed.
2	5	RWD x0.5	Plays backward at 0.5x speed.
2	6	RWD x0.6	Plays backward at 0.6x speed.
2	7	RWD x0.7	Plays backward at 0.7x speed.
2	8	RWD x0.8	Plays backward at 0.8x speed.
2	9	RWD x0.9	Plays backward at 0.9x speed.
2	A	RWD x1.0	Plays backward at 1.0x speed.
F	F	Sense	Requests that the JOG on/off state be returned.

・ If data other than the above is received, the unit will transmit ILLEGAL [F2].

Return   JOG RETURN [9B]

SHUTTLE

Enables SHUTTLE playback of the controlled device.

The data value adjusts the speed of SHUTTLE playback.

This command will be ignored if Machine ID=1 is designated and the operation mode is any other than dual playlist or mix playlist modes.

If the operation mode is dual playlist or mix playlist, but a Machine ID other than that of the current player is designated, the unit will transmit ILLEGAL [F2].

Command   1C
Machine ID   0/1
Data   2 bytes

Data 1	Data 2	Description	Remarks
0	0	OFF	Disables SHUTTLE mode.
0	1	ON	Enables SHUTTLE mode.
1	0	FWD x0.0	PAUSE
1	1	FWD x2.0	Plays forward at 2x speed.
1	2	FWD x4.0	Plays forward at 4x speed.
1	3	FWD x8.0	Plays forward at 8x speed.
1	4	FWD x16.0	Plays forward at 16x speed.
1	5	FWD x32.0	Plays forward at 32x speed.
2	0	RWD x0.0	PAUSE
2	1	RWD x2.0	Plays backward at 2x speed.
2	2	RWD x4.0	Plays backward at 4x speed.
2	3	RWD x8.0	Plays backward at 8x speed.
2	4	RWD x16.0	Plays backward at 16x speed.
2	5	RWD x32.0	Plays backward at 32x speed.
F	F	Sense	Requests that the SHUTTLE on/off state be returned.

・ If data other than the above is received, the unit will transmit ILLEGAL [F2].

Return   SHUTTLE RETURN [9C]

CALL

Locates to the call point and puts the controlled device into playback standby.

This command will be ignored if Machine ID=1 is designated and the operation mode is any other than dual playlist or mix playlist modes.

Command   1D
Machine ID   0/1
Data   none
Return   none

AUTO CUE PRESET

Sets the Auto Cue Level of the controlled device.

A return command is returned only if Sense [FF] is specified.

The Auto Cue function is turned on or off using the command "AUTO CUE SELECT [30]."

Command   20

Machine ID   0

Data   2 bytes

Data 1	Data 2	Description	Remarks
0	0	Preset -24dB	
0	1	Preset -30dB	
0	2	Preset -36dB	
0	3	Preset -42dB	
0	4	Preset -48dB	
0	5	Preset -54dB	
0	6	Preset -60dB	
0	7	Preset -66dB	
0	8	Preset -72dB	
F	F	Sense	Requests that the current preset level be returned.

・ If data other than the above is received, the HS-8 will transmit ILLEGAL [F2].

Return   AUTO CUE LEVEL RETURN [A0]

DIRECT TRACK SEARCH PRESET

Conducts a direct search for the specified take/entry number.

This command will be ignored if the operation mode is timeline.

This command will be ignored if Machine ID=1 is designated and the operation mode is any other than dual playlist or mix playlist modes.

The operation of the controlled device after a direct search depends on the data format (data length) of this command.

<u>When data length is 4-byte</u>

If the controlled device is Stop or Play mode when this command is received, it will enter Play mode after a direct search. If the controlled device is in any other state, it will remain in that state even after a direct search.

<u>When data length is 6-byte</u>

The operation of the controlled device after a direct search is determined by Data 5 and 6.

Command   23

Machine ID   0/1

Data   4 bytes or 6 bytes

	Description	Remarks
Data 1	Tens digit of the take/entry number	
Data 2	Ones digit of the take/entry number	Take/entry number
Data 3	Thousands digit of the take/entry number	Example: "2301" indicates take 123
Data 4	Hundreds digit of the take/entry number	

If the data length is 6 bytes, the following data will be added as the the operation specification code.

Data 5	Data 6	Operation	Remarks
1	2	PLAY	
1	4	PAUSE	

・ If a take number that does not exist or an entry that has no assignment is specified, the unit will transmit ILLEGAL [F2].

・ If an operation specification code that is not in the table above is specified, the unit will transmit ILLEGAL [F2].

Return   none

CLOCK DATA PRESET

Sets the date and time of the controlled device.

A return command is returned only if Sense [FF] is specified for Data 1 and Data 2.

Command   27

Machine ID   0

Data   10 bytes or 2 bytes

	Description	Remarks
Data 1	Tens digit of the year	
Data 2	Ones digit of year	
Data 3	Tens digit of month	
Data 4	Ones digit of month	
Data 5	Tens digit of day	Example: "0802231234" indicates 12:34 PM on February 23, 2008
Data 6	Ones digit of day	
Data 7	Tens digit of hours	
Data 8	Ones digit of hours	
Data 9	Tens digit of minutes	
Data 10	Ones digit of minutes	

・ If a date or time outside the possible range is set, the unit will transmit ILLEGAL [F2].

Return   CLOCK DATA PRESET RETURN [A7]

TIME SEARCH PRESET

Searches the specified take/entry number and time.

This command will be ignored if Machine ID=1 is designated and the operation mode is any other than dual playlist or mix playlist modes.

The operation of the controlled device after a search depends on the data format (data length) of this command.

<u>When data length is 12-byte</u>

If the controlled device is stopped or playing back when this command is received, it will start playing back after a direct search. If the controlled device is in any other state, it will remain in that state after a search.

<u>When data length is 14-byte</u>

The operation of the controlled device after a search is determined by Data 13 and 14.

Command   2C
Machine ID   0/1
Data   12 bytes or 14bytes

	Description	Remarks
Data 1	Tens digit of the take/entry number	In timeline mode, this is fixed to 1 (0100) because there are no takes/entries.
Data 2	Ones digit of the take/entry number	
Data 3	Thousands digit of the take/entry number	
Data 4	Hundreds digit of the take/entry number	
Data 5	Tens digit of hours	
Data 6	Ones digit of hours	
Data 7	Tens digit of minutes	
Data 8	Ones digit of minutes	
Data 9	Tens digit of seconds	
Data 10	Ones digit of seconds	
Data 11	Tens digit of frames	
Data 12	Ones digit of frames	

If the data length is 14 bytes, the following data will be added as the the operation specification code.

Data 13	Data 14	Operation	Remarks
1	2	PLAY	
1	4	PAUSE	

- If a take number that does not exist or an entry that has no assignment is specified, the unit will transmit ILLEGAL [F2].
- If data outside the operating range is received, the unit will transmit ILLEGAL [F2].
- If an operation-specified code that is not in the table above is specified, the unit will transmit ILLEGAL [F2].

Return   none

AUTO CUE SELECT

Turns on or off the Auto Cue function of the controlled device.

A return command is returned only if Sense [FF] is specified.

The Auto Cue Level setting is made using the "AUTO CUE LEVEL PRESET [20]" command.

This command will be ignored if the operation mode is timeline.

Command   30

Machine ID   0

Data   2 bytes

Data 1	Data 2	Description	Remarks
0	0	Auto Cue Off	
0	1	Auto Cue On	
F	F	Sense	Requests that the current setting be returned.

・ If data other than the above is received, the unit will transmit ILLEGAL [F2].

Return   AUTO CUE SELECT RETURN [B0]

AUTO READY SELECT

Turns on or off the Auto Ready function of the controlled device.

A return command is returned only if Sense [FF] is specified.

This command will be ignored if the operation mode is timeline.

Command   36

Machine ID   0

Data   2 bytes

Data 1	Data 2	Description	Remarks
0	0	Auto Ready Off	
0	1	Auto Ready On	
F	F	Sense	Requests that the current setting be returned.

・ If data other than the above is received, the unit will transmit ILLEGAL [F2].

Return   AUTO READY SELECT RETURN [B6]

REPEAT SELECT

Turns on or off Repeat Playback of the controlled device.

A return command is returned only if Sense [FF] is specified.

Command   37

Machine ID   0

Data   2 bytes

Data 1	Data 2	Description	Remarks
0	0	Repeat Off	
0	1	Repeat On	
F	F	Sense	Requests that the current setting be returned.

・ If data other than the above is received, the unit will transmit ILLEGAL [F2].

Return   REPEAT SELECT RETURN [B7]

INCR PLAY SELECT

Turns on or off the Incremental Play function of the controlled device.

A return command is returned only if Sense [FF] is specified.

This command will be ignored if the operation mode is timeline.

Command   3A

Machine ID   0

Data   2 bytes

Data 1	Data 2	Description	Remarks
0	0	INCR Play Off	
0	1	INCR Play On	
F	F	Sense	Requests that the current setting be returned.

・If data other than the above is received, the unit will transmit ILLEGAL [F2].

Return   INCR PLAY SELECT RETURN [BA]

PLAY MODE SELECT

Sets the play mode for the controlled device.

To check the Play mode setting, use the "PLAY MODE SENSE [4E]" command.

This command will be ignored if the operation mode is timeline.

Command   4D

Machine ID   0

Data   2 bytes

Data 1	Data 2	Description	Remarks
0	0	All Take	Plays all takes in the current session
0	1	One Take	Plays the current take only

・If data other than the above is received, the unit will transmit ILLEGAL [F2].

Return   none

PLAY MODE SENSE

Requests that the play mode of the controlled device be returned.

Command   4E

Machine ID   0

Data   none

Return   PLAY MODE RETURN [CE]

MECHA STATUS SENSE

Requests that the operation status of the controlled device be returned.

If Machine ID=1 is designated and the operation mode is any other than dual playlist or mix playlist modes, this command will return the same information as though Machine ID=0 was designated.

Command   50

Machine ID   0/1

Data   none

Return   MECHA STATUS RETURN [D0]

TRACK No. STATUS SENSE

Requests that the current take/entry number be returned.

If the operation mode is timeline, the unit will always transmit "1".

If Machine ID=1 is designated and the operation mode is any other than dual playlist or mix playlist modes, the unit will return "0".

Command   55

Machine ID   0/1

Data   none

Return   TRACK No. STATUS RETURN [D5]

CURRENT TRACK TIME SENSE

Requests the information about the play time for the current take/entry (or take being recorded in record mode) in the following format. (MSF format = Minutes, Seconds, Frame; HMSF format = Hours, Minutes, Seconds, Frames)

If the time exceeds 9999 minutes when requesting MSF format or exceeds 100 hours when requesting HMSF format, "--" will be returned for the entire time response.

If Total Elapsed Time is requested when the operation mode is timeline, the unit will return the Elapsed Time. If Remain Time or Total Remain Time is requested when not recording or in recording standby, the unit will return ILLEGAL [F2].

If Machine ID=1 is designated and the operation mode is any other than dual playlist or mix playlist modes, the unit will return "0".

Command   58
Machine ID   0/1
Data   2 bytes

Data 1	Data 2	Description	Remarks
0	0	Elapsed Time	Take/entry elapsed time in MSF format or timeline ABS time
0	1	Remain Time	Take/entry remaining time (when recording, remaining recording time until max file size) in MSF format or timeline remaining time when recording (remaining capacity until 24:00 ABS or max file size)
0	2	Total Elapsed Time	Session elapsed time in MSF format or timeline ABS time
0	3	Total Remain Time	Session remaining time (when recording, remaining recording time on media) in MSF format or, when recording in timeline mode, timeline remaining time (remaining capacity until 24:00 ABS or on media)
0	4	Timecode Time	Timecode time in MSF format
1	0	Elapsed Time	Take/entry elapsed time in HMSF format or timeline ABS time
1	1	Remain Time	Take/entry remaining time (when recording, remaining recording time until max file size) in MSF format or timeline remaining time when recording (remaining capacity until 24:00 ABS or max file size)
1	2	Total Elapsed Time	Session elapsed time in HMSF format or timeline ABS time
1	3	Total Remain Time	Session remaining time (when recording, remaining recording time on media) in HMSF format or, when recording in timeline mode, timeline remaining time (remaining capacity until 24:00 ABS or on media)
1	4	Timecode Time	Timecode time in HMSF format

・ If data other than the above is received, the unit will transmit ILLEGAL [F2].

Return   CURRENT TRACK TIME RETURN [D8]

ERROR SENSE

Requests that the current error status be returned.
Command   78
Machine ID   0/1
Data   none
Return   ERROR SENSE RETURN [F8]

CAUTION SENSE

Requests that the current caution status be returned.
Command   79
Machine ID   0/1
Data   none
Return   CAUTION SENSE RETURN [F9]

VENDOR COMMAND

This command controls the unit's unique functions. See "Detailed Information about Vendor Commands" on page 27.

INFORMATION RETURN

This is the return command in response to the "INFORMATION REQUEST [0F]" command.

It returns the software version of the controlled device.

Command   8F

Machine ID   0

Data   4 bytes

Data 1	Tens digit of the software version	Data 1 – 4 example
Data 2	Ones digit of the software version	0100 Version 1.00
Data 3	First decimal place of the software version	
Data 4	Second decimal place of the software version	

Request   INFORMATION REQUEST [0F]

JOG RETURN

This is the return command in response to the "JOG [1B]" command.

This returns the JOG mode On/Off status of the player designated by the Machine ID.

Command   9B

Machine ID   0/1

Data   2 bytes

Data 1	Data 2	Description	Remarks
0	0	Jog Off	
0	1	Jog On	

Request/Preset   JOG [1B]

SHUTTLE RETURN

This is the return command in response to the "SHUTTLE [1C]" command.

This returns the SHUTTLE mode On/Off status of the player designated by the Machine ID.

Command   9C

Machine ID   0/1

Data   2 bytes

Data 1	Data 2	Description	Remarks
0	0	Shuttle Off	
0	1	Shuttle On	

Request/Preset   SHUTTLE [1C]

AUTO CUE LEVEL RETURN

This is the return command in response to the "AUTO CUE LEVEL PRESET [20]" command.

It returns the set auto cue level.

Command   A0

Machine ID   0

Data   2 bytes

Data 1	Data 2	Description	Remarks
0	0	−24dB	
0	1	−30dB	
0	2	−36dB	
0	3	−42dB	
0	4	−48dB	
0	5	−54dB	
0	6	−60dB	
0	7	−66dB	
0	8	−72dB	

Request/Preset   AUTO CUE LEVEL PRESET [20]

CLOCK DATA RETURN

This is the return command in response to the "CLOCK DATA PRESET [27]" command.

It returns the set date and time values.

Command   A7

Machine ID   0

Data   12 bytes

	Description	Remarks
Data 1	Tens digit of the year	
Data 2	Ones digit of year	
Data 3	Tens digit of month	
Data 4	Ones digit of month	
Data 5	Tens digit of day	
Data 6	Ones digit of day	
Data 7	Tens digit of hours	
Data 8	Ones digit of hours	
Data 9	Tens digit of minutes	
Data 10	Ones digit of minutes	
Data 11	Tens digit of the seconds	
Data 12	Ones digit of the seconds	

Request/Preset   CLOCK DATA PRESET [27]

AUTO CUE SELECT RETURN

This is the return command in response to the "AUTO CUE SELECT [30]" command.

It returns the On/Off status of the auto cue function.

Command   B0

Machine ID   0

Data   2 bytes

Data 1	Data 2	Description	Remarks
0	0	Auto Cue Off	
0	1	Auto Cue On	

Request/Preset   AUTO CUE SELECT [30]

AUTO READY SELECT RETURN

This is the return command in response to the "AUTO READY SELECT [36]" command.

It returns the On/Off status of the auto-ready function.

Command   B6

Machine ID   0

Data   2 bytes

Data 1	Data 2	Description	Remarks
0	0	Auto Ready Off	
0	1	Auto Ready On	

Request/Preset   AUTO READY SELECT [36]

REPEAT SELECT RETURN

This is the return command in response to the "REPEAT SELECT [37]" command.

It returns the On/Off status of repeat playback.

Command   B7

Machine ID   0

Data   2 bytes

Data 1	Data 2	Description	Remarks
0	0	Repeat Off	
0	1	Repeat On	

Request/Preset   REPEAT SELECT [37]

INCR PLAY SELECT RETURN

This is the return command in response to the "INCR PLAY SELECT [3A]" command.

It returns the On/Off status of the incremental play function.

Command   BA

Machine ID   0

Data   2 bytes

Data 1	Data 2	Description	Remarks
0	0	INCR Play Off	
0	1	INCR Play On	

Request/Preset   INCR PLAY SELECT [3A]

PLAY MODE RETURN

This is the return command in response to the "PLAY MODE SENSE [4E]" command.

It returns the current Play mode.

Command   CE

Machine ID   0

Data   2 bytes

Data 1	Data 2	Description	Remarks
0	0	All Take	Plays all takes/entries in the current session
0	1	One Take	Plays the current take/entry only

Request/Preset   PLAY MODE SENSE [4E]

MECHA STATUS RETURN

This is the return command in response to the "MECHA STATUS SENSE [50]" command.

It returns the current operation status of the controlled d device.

Command   D0

Machine ID   0/1

Data   2 bytes

Data 1	Data 2	Description	Remarks
0	0	No Media	No media is inserted
1	0	Stop	Stopped
1	1	Play	Playing
1	2	Ready On	In playback standby
8	1	Record	Recording
8	2	Record Ready	In recording standby
8	3	Information Writing	Currently writing various information
F	F	Other	In another state

Request/Preset   MECHA STATUS SENSE [50]

TRACK No. STATUS RETURN

This is the return command in response to the "TRACK No. STATUS SENSE [55]" command.

It returns the take/entry number where currently located.

If the operation mode is timeline, the unit will always transmit "1".

If Machine ID=1 is designated and the operation mode is any other than dual playlist or mix playlist modes, the unit will return "0".

Command   D5

Machine ID   0/1

Data   6 bytes

	Description	Remarks
Data 1	00	Always returns the fixed value "00."
Data 2		
Data 3	Tens digit of the take/entry number	
Data 4	Ones digit of the take/entry number	
Data 5	Thousands digit of the take/entry number	
Data 6	Hundreds digit of the take/entry number	

Request/Preset   TRACK No. SENSE [55]

CURRENT TRACK TIME RETURN

This is the return command in response to the "CURRENT TRACK TIME SENSE [58]" command.

It returns information about the play time for the current take/entry (or take being recorded in record mode) in the specified format.

(MSF format = Minutes, Seconds, Frame; HMSF format = Hours, Minutes, Seconds, Frames)

If the time exceeds 9999 minutes when requesting MSF format or exceeds 100 hours when requesting HMSF format, "--" will be returned for Data 3-10.

If Total Elapsed Time is requested when the operation mode is timeline, the unit will return the Elapsed Time. If Remain Time or Total Remain Time is requested when not recording or in recording standby, the unit will return ILLEGAL [F2].

If Machine ID=1 is designated and the operation mode is any other than dual playlist or mix playlist modes, the unit will return "0".

Command   D8
Machine ID   0/1
Data   10 bytes

	Description	Remarks
Data 1	Time Mode	00: Take/entry elapsed time in MSF format or timeline ABS time 01: Take/entry remaining time (when recording, remaining recording time until max file size) in MSF format or timeline remaining time when recording (remaining capacity until 24:00 ABS or max file size) 02: Session elapsed time in MSF format or timeline ABS time 03: Session remaining time (when recording, remaining recording time on media) in MSF format or timeline remaining time when recording (remaining capacity until 24:00 ABS or on media) 04: Timecode time in MSF format
Data 2		10: Take/entry elapsed time in HMSF format or timeline ABS time 11: Take/entry remaining time (when recording, remaining recording time until max file size) in HMSF format or timeline remaining time when recording (remaining capacity until 24:00 ABS or max file size) 12: Session elapsed time in HMSF format or timeline ABS time 13: Session remaining time (when recording, remaining recording time on media) in HMSF format or timeline remaining time when recording (remaining capacity until 24:00 ABS or on media) 14: Timecode time in HMSF format
Data 3	Tens digit of the minutes	For 00-04, the tens and ones digits of the minute value (MSF format)
Data 4	Ones digit of the minutes/hours	For 10-14, the tens and ones digits of the hour value (HMSF format)
Data 5	Thousands/tens digit of the minutes	For mode 00-04, the thousands and hundreds digits of the minute value (MSF format)
Data 6	Hundreds/ones digit of the minutes	For mode 10-14, the tens and ones digit of the minute value (HMSF format)
Data 7	Tens digit of the seconds	
Data 8	Ones digit of the seconds	
Data 9	Tens digit of the frames	
Data 10	Ones digit of the frames	

Request/Preset   CURRENT TRACK TIME SENSE [58]

ERROR SENSE REQUEST

This command is returned if the error status changes.
Send an ERROR SENSE [78] command from the controlling device to check the error contents.

Command   F0
Machine ID   0/1
Data   none
Request/Preset   none

CAUTION SENSE REQUEST

This command is returned if the caution status changes.
Send a CAUTION SENSE [79] command from the controlling device to check the caution contents.

Command   F1
Machine ID   0/1
Data   none
Request/Preset   none

ILLEGAL STATUS

This command is returned when an invalid command or data is sent to the controlled device.
If this command is transmitted from the controlled device, use the external controller device to re-transmit a command or data that meets the specifications.

Command   F2
Machine ID   0
Data   none
Request/Preset   none

POWER ON STATUS

This command notifies that the controlled device has been turned on.

Command   F4
Machine ID   0
Data   none
Request/Preset   none

CHANGE STATUS

This command notifies that the operation or mode of the controlled device has changed.

Command   F6
Machine ID   0/1
Data   2 bytes

Data 1	Data 2	Description	Remarks
0	0	Changed Mechanical Status	The operation status has changed.
0	3	Changed Track	The take/entry number has changed.
1	0	Changed Online Status	The online status has changed.

Request/Preset   none

ERROR SENSE RETURN

This is the return command in response to the "ERROR SENSE [78]" command.

It returns the last error status.

Command   F8

Machine ID   0/1

Data   2 bytes

Data 1	N2	Error code（N1-N2N3）	
Data 2	N3	0-00	No Error
Data 3	0	1-01	Rec Error (error related to recording)
Data 4	N1	1-02	Device Error (error related to device)
		1-08	Stand-By Error (error during recording preparation)
		1-09	Information Write Error (error during final recording processing)
		1-FF	Other Error (An error other than those above occurred. Check the unit.)

Request/Preset   ERROR SENSE [78]

CAUTION SENSE RETURN

This is the return command in response to the "CAUTION SENSE [79]" command.

It returns the last caution status.

Command   F9

Machine ID   0/1

Data   2 bytes

Data 1	N2	Caution code（N1-N2N3）	
Data 2	N3	0-00	No Caution
Data 3	0	1-02	Media Error (error related to media)
Data 4	N1	1-03	Can't Undo
		1-06	Media Full (media has no remaining capacity)
		1-07	Track Full (maximum take/entry size has been reached)
		1-09	D-In Unlock (digital input is unlocked)
		1-0A	No Call Point
		1-0B	Can't REC (recording is not possible)
		1-0C	Write Protected (media is write-protected)
		1-0D	Not Execute (function cannot be executed in this state)
		1-0F	Can't Edit (editing is not possible in this state)
		1-13	Can't Select (selecting is not possible in this state)
		1-14	Track Protected
		1-16	Name Full (name setting character upper limit has been reached)
		1-18	Play List Error (error related to playlist)
		1-1D	Not Audio (digital input is not audio)
		1-1E	Decode Error (error related to playback)
		1-1F	Media Not Match (media is not suitable)
		1-FF	Other Caution (A caution other than those above occurred. Check the unit.)

Request/Preset   CAUTION SENSE [79]

VENDOR COMMAND RETURN

This is the returned command in response to COMMAND [7F]. See "Detailed Information about Vendor Commands" below.

Detailed information about Vendor Commands

Vendor commands for the HS-4000 have the following format.

Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7	Byte 8	Byte 9	···	Byte n
LF	ID	Command		Data 1	Data 2	Data 3	Data 4	Data 5	···	CR
LF	'0'	'7F' or 'FF'		Category Code		Sub Command		Parameter	···	CR

Category Code: The category code (2-byte ASCII) is used for classifying vendor commands according to function.

Sub Command: This is a unique sub-command code (2-byte ASCII) within the category.
                 DEVICE SELECT (01) is the only category that has no sub command, so its Data 3 and higher are parameters.

Parameter: This is a parameter added to the command code (ASCII, length differs for each sub command.)

Below is the list of category codes.

Category Code	Category classification	Description
01	Device selection	Selects the device to be used (Slot 1 / 2)
03	Mark	Performs an operation related to a mark
04	Flash start	Performs an operation related to flash starting
05	Online	Online selection
06	Timecode settings	Settings related to timecode
07	Playback settings	Operations related to playback
09	Operation mode	Operation mode selection

DEVICE SELECT

Selects the current slot.

A return command is returned as the selection result.

Command   7F
Category Code   01
Machine ID   0
Data   2 bytes

Data 3	Data 4	Description	Remarks
0	0	SLOT 1	Selects SLOT 1 as the current slot.
0	1	SLOT 2	Selects SLOT 2 as the current slot.
F	F	Sense	Requests that the current slot be returned.

・ If data other than the above is received, the unit will transmit ILLEGAL [F2].

Return   DEVICE SELECT RETURN [FF01]

TEAC Corporation

MARK SET

Sets a mark on the controlled device.

The mark will be set at the current time counter position.

If Machine ID=1 is designated and the operation mode is any other than dual playlist or mix playlist modes, the unit will transmit ILLEGAL [F2].

If the operation mode is dual playlist or mix playlist, but a Machine ID other than that of the current player is designated, the unit will transmit ILLEGAL [F2].

Command	7F
Category Code	03
Sub Command	10
Machine ID	0/1
Data	none

FLASH PAGE SELECT

Selects a flash page on the controlled device.

A return command is returned only if Sense [FF] is specified for Data 5 and Data 6.

If the operation mode is timeline, the unit will transmit ILLEGAL [F2].

This command will be ignored if Machine ID=1 and a page is designated and the operation mode is any other than dual playlist or mix playlist modes. If Sense is specified, the unit will return "1".

Command	7F
Category Code	04
Sub Command	00
Machine ID	0/1
Data	2 bytes

	Description	Remarks
Data 5	Tens digit of the page number	Flash page number
Data 6	Ones digit of the page number	Example: "02" is page 2

・ If a page number that does not exist on the controlled device is specified, the connected device will transmit ILLEGAL [F2].

Return	FLASH PAGE RETURN [FF0480]

FLASH PAGE SKIP

Skips a flash page on the controlled device.

This command will be ignored if Machine ID=1 is designated and the operation mode is any other than dual playlist or mix playlist modes.

Command	7F
Category Code	04
Sub Command	1A
Machine ID	0/1
Data	2 bytes

Data 5	Data 6	Description	Remarks
0	0	Flash Page Skip Next	Moves to the next page.
0	1	Flash Page Skip Previous	Moves to the previous page

・ If data other than the above is received, the unit will transmit ILLEGAL [F2].

Return	none

FLASH KEY METHOD SELECT

Sets the flash key method used on the controlled device.

A return command is returned only if Sense [FF] is specified.

If the operation mode is mix playlist and a command other than Sense is designated, the unit will transmit ILLEGAL [F2].

Command   7F

Category Code   04

Sub Command   39

Machine ID   0

Data   2 bytes

Data 5	Data 6	Description	Remarks
0	0	Flash Key Method Flash	
0	1	Flash Key Method Standby	
F	F	Sense	Requests that the current setting be returned.

・ If data other than the above is received, the unit will transmit ILLEGAL [F2].

Return   FLASH KEY METHOD RETURN [FF04B9]

ONLINE SELECT

Turns on or off the Online mode of the controlled device.

A return command is returned only if Sense [FF] is specified.

This command will be ignored if Machine ID=1 is designated and the operation mode is any other than dual playlist or mix playlist modes.

Command   7F

Category Code   05

Sub Command   11

Machine ID   0/1

Data   2 bytes

Data 5	Data 6	Description	Remarks
0	0	ONLINE OFF	Online mode off
0	1	ONLINE ON	Online mode on
F	F	Sense	Requests that the current setting be returned.

・ If data other than the above is received, the unit will transmit ILLEGAL [F2].

Return   ONLINE SELECT RETURN [FF0511]

CHASE SELECT

Turns on or off the Chase mode of the controlled device.

A return command is returned only if Sense [FF] is specified.

Command   7F

Category Code   06

Sub Command   00

Machine ID   0

Data   2 bytes

Data 5	Data 6	Description	Remarks
0	0	Chase OFF	Chase mode off
0	1	Chase ON	Chase mode on
F	F	Sense	Requests that the current setting be returned.

・ If data other than the above is received, the unit will transmit ILLEGAL [F2].

Return   CHASE SELECT RETURN [FF0680]

PLAYER SELECT

Sets the current player (deck A or B) for the controlled device.

A return command is returned only if Sense [FF] is specified.

If deck B is designated and the operation mode is any other than dual playlist or mix playlist modes, the unit will return ILLEGAL [F2].

Command   7F

Category Code 07

Sub Command   00

Machine ID   0

Data   2 bytes

Data 5	Data 6	Description	Remarks
0	0	Deck A	Sets deck A as the current player.
0	1	Deck B	Sets deck B as the current player.
F	F	Sense	Requests that the current player be returned.

・ If data other than the above is received, the unit will transmit ILLEGAL [F2].

Return   PLAYER SELECT RETURN [FF0780]

OPERATION MODE SELECT

Changes the operation mode of the controlled device.

A return command is returned only if Sense [FF] is specified.

Command   7F

Category Code 09

Sub Command   00

Machine ID   0

Data   2 bytes

Data 5	Data 6	Description	Remarks
0	0	TC Mode	Timeline mode
0	1	Take Mode	
0	2	Playlist Mode Single	Single playlist mode
0	3	Playlist Mode Dual	Dual playlist mode
0	4	Playlist Mode A/B Mixed	Playlist A/B mix mode
1	0	On Air Mode	On air mode
F	F	Sense	Requests that the current operation mode be returned.

・ If data other than the above is received, the unit will transmit ILLEGAL [F2].

Return   OPERATION MODE SELECT RETURN [FF0980]

RETAKE

Performs the retake operation on the controlled device.

When execution completes, the controlled device returns "RETAKE ACKNOWLEDGE [FF1590]".

Command   7F

Category Code 15

Sub Command   10

Machine ID   0

Data   none

Return   RETAKE ACKNOWLEDGE [FF1590]

REGION SKIP

Causes the controlled device to skip to the beginning or end of all regions.

If the operation mode is not timeline, the unit will transmit ILLEGAL [F2].

Command   7F
Category Code   15
Sub Command   1A
Machine ID   0
Data   2 bytes

Data 5	Data 6	Description	Remarks
0	0	Region End	Skip to the end of the last region
0	1	Region Top	Skip to the beginning of the first region

・ If data other than the above is received, the unit will transmit ILLEGAL [F2].

Return   none

PLAY LIST STANDBY REQUEST

This command requests that the designated playlist be put in standby (imported).

Command   7F
Category Code   31
Sub Command   00
Machine ID   0
Data   3-770 bytes

	Description	Remarks
Data 5 - Data 6	00 - REQUEST command	
Data 7 - Data 774	Playlist file name (full file path)	UTF-8 (768 bytes maximum) Slot 1 = A:\ Slot 2 = B:\

Return   PLAY LIST STANDBY STATUS RETURN [FF3180]

PLAY LIST STANDBY STATUS SENSE

This command requests that the playlist standby status be returned.

Command   7F
Category Code   31
Sub Command   00
Machine ID   0
Data   2 bytes

	Description	Remarks
Data 5 - Data 6	FF-SENSE Command	

Return   PLAY LIST STANDBY STATUS RETURN [FF3180]

AES31 STANDBY REQUEST

This command requests that the designated AES31 file be put in standby (imported).

This command will only execute the standby procedure when the unit is in a stopped state.

Command   7F
Category Code   33
Sub Command   00
Machine ID   0
Data   5 bytes to 774 bytes

	Description	Remarks
Data 5 - Data 6	00 - REQUEST command	
Data 7 - Data 774	AES31 file name (full file path)	UTF-8 (768 bytes maximum) Slot 1 = A:\ Slot 2 = B:\

Return   AES31 STANDBY STATUS RETURN [FF3380]

AES31 STANDBY STATUS SENSE

This command requests that the AES31 standby command status be returned.

Command   7F
Category Code   33
Sub Command   00
Machine ID   0
Data   2 bytes

	Description	Remarks
Data 5 – Data 6	FF-SENSE Command	

Return   AES31 STANDBY STATUS RETURN [FF3380]

DEVICE SELECT RETURN

This is the return command in response to the "DEVICE SELECT [7F01]" command.

It returns the current slot.

This is also automatically returned when the slot is changed.

Command   FF
Category Code   01
Machine ID   0
Data   2 bytes

Data 3	Data 4	Description	Remarks
0	0	SLOT 1	SLOT 1
0	1	SLOT 2	SLOT 2

Request/Preset   DEVICE SELECT [7F01]

FLASH PAGE RETURN

This is the return command in response to the "FLASH PAGE SELECT [7F0400]" command.

It returns the current flash page number.

If the operation mode is timeline, the unit will transmit ILLEGAL [F2].

This command will be ignored if Machine ID=1 and a page is designated and the operation mode is any other than dual playlist or mix playlist modes. If Sense is specified, the unit will return "1".

Command   FF
Category Code   04
Sub Command   80
Machine ID   0/1
Data   2 bytes

	Description	Remarks
Data 5	Tens digit of the page number	Flash page number
Data 6	Ones digit of the page number	Example: "02" is page 2

Request/Preset   FLASH PAGE SELECT [7F0400]

FLASH KEY METHOD RETURN

This is the return command in response to the "FLASH KEY METHOD SELECT [7F0439]" command.

It returns the current flash key method setting.

Individual mode will only be returned if the operation mode is mix playlist mode. It cannot be set.

Command   FF

Category Code   04

Sub Command   B9

Machine ID   0

Data   2 bytes

Data 5	Data 6	Description	Remarks
0	0	Flash Key Method Flash	
0	1	Flash Key Method Standby	
0	2	Flash Key Method Individual	

Request/Preset   FLASH KEY METHOD SELECT [7F0439]

ONLINE SELECT RETURN

This is the return command in response to the "ONLINE SELECT [7F0511]" command.

It returns the Online On/Off state.

Command   FF

Category Code   05

Sub Command   11

Machine ID   0/1

Data   2 bytes

Data 5	Data 6	Description	Remarks
0	0	ONLINE OFF	Online mode off
0	1	ONLINE ON	Online mode on

Request/Preset   ONLINE SELECT[7F0511]

CHASE SELECT RETURN

This is the return command in response to the "CHASE SELECT [7F0600]" command.

It returns the On/Off state of the Chase mode.

Command   FF

Category Code   06

Sub Command   80

Machine ID   0

Data   2 bytes

Data 5	Data 6	Description	Remarks
0	0	Chase OFF	Chase mode: off
0	1	Chase ON	Chase mode: on

Request/Preset   CHASE SELECT[7F0600]

PLAYER SELECT RETURN

This is the return command in response to the "PLAYER SELECT [7F0700]" command.

It returns the current player (deck A or B) selection status.

Command   FF

Category Code   07

Sub Command   80

Machine ID   0

Data   2 bytes

Data 5	Data 6	Description	Remarks
0	0	Deck A	Deck A is the current player.
0	1	Deck B	Deck B is the current player.

Request/Preset   PLAYER SELECT[7F0700]

OPERATION MODE SELECT RETURN

This is the return command in response to the "OPERATION MODE SELECT [7F0900]" command.

It returns the current operation mode.

This is also automatically returned when the operation mode is changed.

Command   FF

Category Code   09

Sub Command   80

Machine ID   0

Data   2 bytes

Data 5	Data 6	Description	Remarks
0	0	Time Line	Timeline mode
0	1	Take	Take mode
0	2	Playlist Mode Single	Single playlist mode
0	3	Playlist Mode Dual	Dual playlist mode
0	4	Playlist Mode A/B Mixed	Playlist A/B mixed mode
1	0	On Air Mode	On air mode

Request/Preset   OPERATION MODE SELECT [7F0900]

RETAKE ACKNOWLEDGE

This is the return command in response to the "RETAKE [7F1510]" command.

It is sent when execution starts, and it returns the execution results.

Command   FF

Category Code   15

Sub Command   90

Machine ID   0

Data   2 bytes

Data 7	Data 8	Description	Remarks
0	0	Start	Execution started
1	1	End (OK)	Execution completed successfully
1	2	End (NG)	Execution did not complete/failed

Request/Preset   RETAKE [7F1510]

PLAY LIST STANDBY STATUS RETURN

This is the return command in response to the "PLAY LIST STANDBY STATUS SENSE [7F3100FF]" command.
This returns the playlist standby status.
This status is also returned when a "PLAY LIST STANDBY STATUS REQUEST [7F3100FF]" command completes execution.

Command   FF
Category Code   31
Sub Command   80
Machine ID   0
Data   2 bytes

	Description	Remarks
Data 5	Playlist standby status 0 - Standby OK 1 - Not Standby 2 - Preparing standby F - Illegal Operation	 The operation mode is not set to playlist
Data 6	Error code 0 - No Error 1 - No File 2 - Not Current 3 - Illegal Folder	 No Error Designated file does not exist Designated file exists, but is not in current project/session Designated file exists, but is not in a valid folder

Request/Preset   PLAY LIST STANDBY STATUS SENSE [7F3100]

AES31 STANDBY STATUS RETURN

This is the return command in response to the "AES31 STANDBY STATUS SENSE [7F3300FF]" command.
This returns the standby status of the AES31 format file.
This status is also returned when an "AES31 STANDBY STATUS REQUEST [7F3300FF]" command completes execution.

Command   FF
Category Code   33
Sub Command   80
Machine ID   0
Data   2 bytes

	Description	Remarks
Data 5	AES31 standby status 0 - Standby OK 1 - Not Standby 2 - Preparing standby F - Illegal Operation	 The operation mode is not set to timeline.
Data 6	Error code 0 - No Error 1 - No File 2 - Not Current 3 - Illegal Folder 4 - Not Stop	 No Error Designated file does not exist Designated file exists, but is not in current project/session Designated file exists, but is not in a valid folder Unit is not stopped

Request/Preset   AES31 STANDBY STATUS SENSE [7F3300]