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(This was machine translated from Japanese to English.)

VDCP remote control function in T2 4K

VDCP Remote Control Overview

The T2 4K (3.5.0 or later) allows the following VDCP control via Ethernet and RS-422:

- Control T2 4K with VDCP from an external controller (recorder - remote mode)
- Control T2 4K with VDCP from an external controller (Player - Remote Mode)

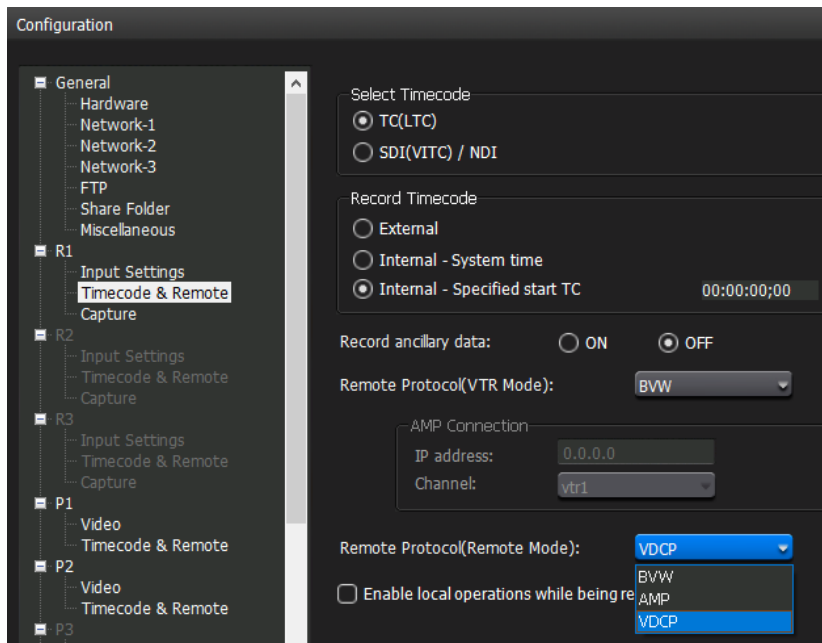
VDCP Remote Control Settings

Control T2 4K with VDCP from an external controller (recorder - remote mode)

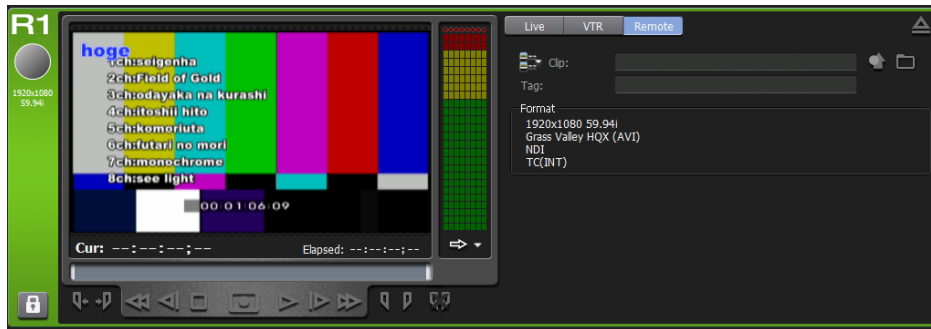
Settings for controlling the T2 recorder channel from an external controller with VDCP commands (via Ethernet or RS-422).

As a device, the T2 accepts commands from the external controller.

Configuration->R1(or R2, R3)->Timecode & Remote->Remote Protocol(Remote Mode):->VDCP



Close the configuration screen with OK and select Remote mode on the R1 (or R2, R3) tab.

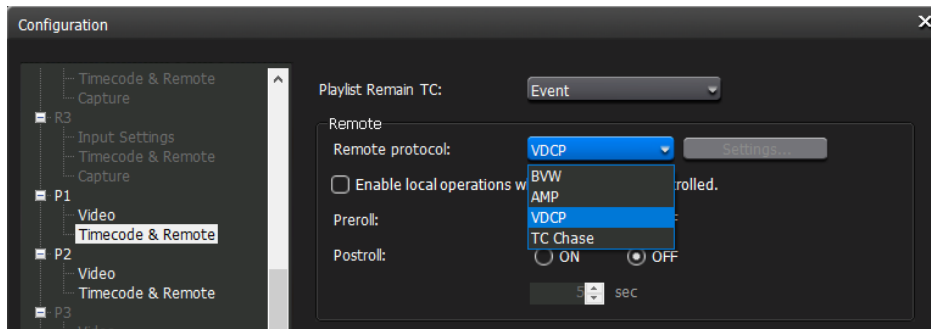


Control T2 4K with VDCP from an external controller (Player - Remote Mode)

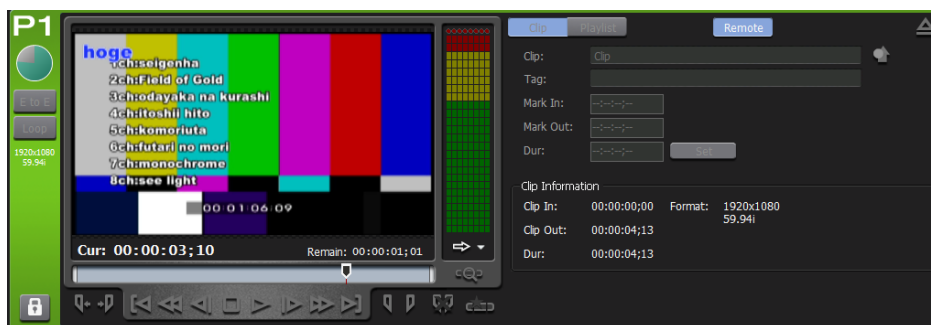
Settings for controlling the T2 recorder channel from an external controller with VDCP commands (via Ethernet or RS-422).

As a device, the T2 accepts commands from the external controller.

Configuration->P1(or P2, P3)->Timecode & Remote->Remote Protocol:->VDCP



Close the configuration screen with OK and enable Remote mode in the P1 (or P2, P3) tab.



Other settings

Configuration->Miscellaneous->AMP / VDCP->VDCP->Remote Transport

You can choose between RS-422, TCP/IP (Ethernet), or both simultaneous VDCP connections.

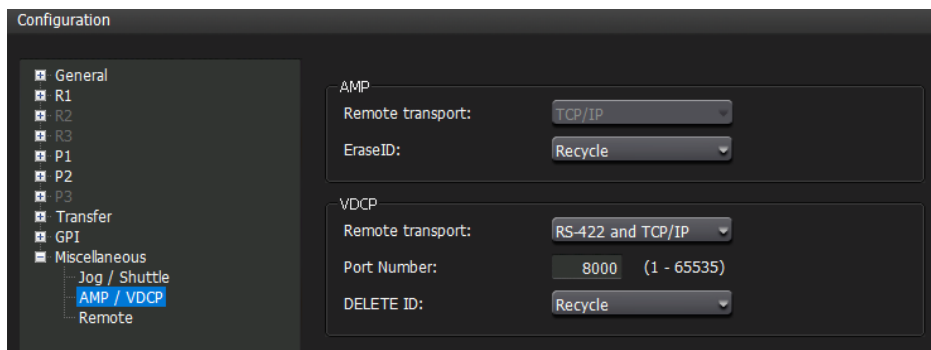
Configuration->Miscellaneous->AMP / VDCP->VDCP->Port Number

When connecting to TCP/IP (Ethernet), you can set the listening port number (in the range 1 - 65535). The default is 8000.

* In order to apply the port number change, it is necessary to restart the T2 application.

Configuration->Miscellaneous->AMP / VDCP->VDCP->DELETE ID

You can configure whether to permanently delete clips for the Delete ID command of the VDCP command.



About connection control of VDCP remote control

RS-422 connection

When VDCP is configured, the RS-422 pin assigned to each player/recorder when connected to BVW is available.

The assignment of the REMOTE IN pin in each IO mode follows the table below:

IO mode	REMOTE IN1	REMOTE IN2	REMOTE IN3
4K 1 in 0 out	R1	-	-
4K 0 in 1 out	-	P1	-
4K 0 in 2 out (Key/Fill)	-	P1	P2
4K 0 in 2 out	-	P1	P2
HD/SD 3 in 0 out	R1	R2	R3
HD/SD 2 in 1 out	R1	R2	P1
HD/SD 1 in 2 out	R1	P1	P2
HD/SD 0 in 3 out	P1	P2	P3

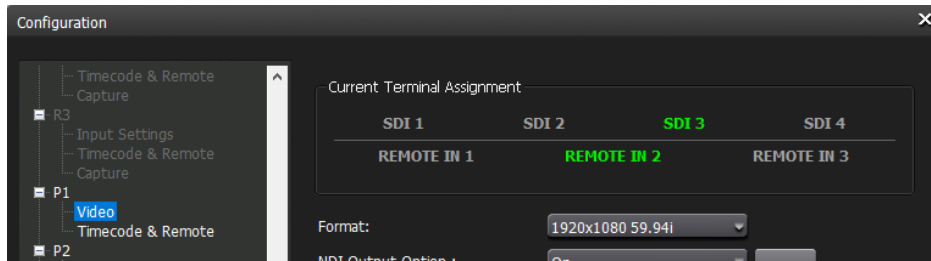
In addition, the REMOTE IN pin assigned to each player/recorder is displayed on the configuration screen.

Configuration→R1 (or R2, R3) →Input **Settings**→ **Current Terminal Assignment** (Recorder)

or

Configuration→ P1 (or P2, P3) → **Video**→ **Current Terminal Assignment** (Player)

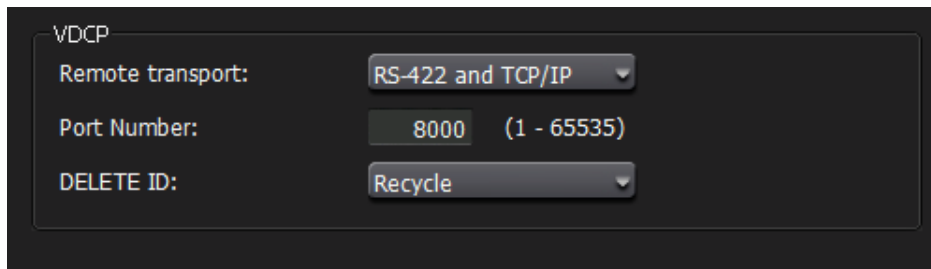
displays the assignment of the REMOTE IN terminal.



About Ethernet connections

You can optionally set the port number when connecting to VDCP for T2 4K. The default is 8000.

* In order to apply the port number change, it is necessary to restart the T2 application.



About Connection Control

In VDCP, input terminals and output terminals are controlled as "ports", and one port is assigned to each unit to control as input devices or output devices.

Each port is numbered 1~127, and a maximum of 127 ports can be specified for each input and output on the protocol. (0 cannot be used as an input/output port)

In T2 4K, the port number assignments used by the OPEN PORT, SELECT PORT, and CLOSE PORT commands follow the table below:

Player/Recorder	VDCP port number	Expression on the OPEN PORT/SELECT PORT/CLOSE PORT command (signed 8 bit)
P1	SOP 1	1
P2	SOP 2	2
P3	SOP 3	3
(Reservation)	SOP 4 - SIP 127	4 - 127

Player/Recorder	VDCP port number	Expression on the OPEN PORT/SELECT PORT/CLOSE PORT command (signed 8 bit)
R1	SIP 1	-1
R2	SIP 2	-2
R3	SIP 3	-3
(Reservation)	SIP 4 - SIP 127	-4 - -127

List of commands supported by VDCP commands

The VDCP command support for T2 4K is shown in the table below.

Restriction:

The delay between sending and executing transport commands such as Play and Stop does not result in a fixed frame.

The following categories of VDCP commands are not supported:

- Deferred (timeline) commands
- Macro Commands
- Archive Commands

command		Channelless mode	recorder	player	Synchronous mode	Fill/Key signal output mode	Additional Notes on T2 Operation
0x.0C	Local Disable	x	○	○	x	x	Whether or not local control or remote control is available is a setting for each channel.
0x.0D	Local Enable	x	○	○	x	x	Whether or not local control or remote control is available is a setting for each channel.
0x.14	Delete From Archive	x	x	x	x	x	Not supported in T2.
0x.15	Delete Protect ID	○	○	○	○	○	
0x.16	UnDelete Protect ID	○	○	○	○	○	

1x.00	Stop	x	○	○	○	○	
1x.01	Play	x	x	○	○	○	
1x.02	Record	x	○	x	x	x	Since Record Init during recording is not supported, to perform the next recording, please run Record Init after stopping recording and issue Record again.
1x.03	Freeze	x	x	x	x	x	Not supported in T2.
1x.04	Still	x	x	○	○	○	
1x.05	Step	x	x	○	○	○	
1x.06	Continue	x	x	○	○	○	
1x.07	That	x	x	○	○	○	
1x.08	Variable Play	x	x	○	○	○	
1x.09	Unfreeze	x	x	x	x	x	Not supported in T2.
1x.0A	EE mode	x	x	○	x	x	Both Mode 1 (EE ON) and Mode 2 (EE Auto) are treated as EE Auto.
2x.1D	Rename ID	○	○	○	○	○	
2x.1E	Preset Std Time	x	x	x	x	x	Not supported in T2.
2x.1F	New Copy	○	○	○	○	○	

2x.20	Sort Mode	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
2x.21	Close Port	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
2x.22	Select Port	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
2x.23	Record Init	x	<input type="radio"/>	x	x	x	It cannot be run while recording.
2x.24	Play Cue	x	x	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	CUE to IDLE state will mount and preview the clip.
2x.25	Cue with Data	x	x	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	When CUE to IDLE state, it is mounted and the clip is previewed.
2x.26	Delete ID	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
2x.27	Get From Archive	x	x	x	x	x	Not supported in T2.
2x.29	Clear	x	x	x	x	x	Not supported in T2.
2x.2A	Send to archive	x	x	x	x	x	Not supported in T2.
2x.2B	% to signal full	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
2x.2C	Record init with data	x	<input type="radio"/>	x	x	x	It cannot be run while recording. You cannot specify an existing recorded clip ID to record over it.

2x.2D	Select logical drive	x	x	x	x	x	Not supported in T2.
2x.2E	System delete ID	x	x	x	x	x	Not supported in T2.
2x.30	Preset	x	x	x	x	x	Not supported in T2.
2x.31	Vid Compr Rate	x	x	x	x	x	Not supported in T2.
2x.32	Aud. Sample Rate	x	x	x	x	x	Not supported in T2.
2x.33	Aud. Comp. Rate	x	x	x	x	x	Not supported in T2.
2x.34	Audio IN Level	x	x	x	x	x	Not supported in T2.
2x.35	Audio OUT Level	x	x	x	x	x	Not supported in T2.
3x.37	Vid Compr Param	x	x	x	x	x	Not supported in T2.
2x.38	Select Output	x	x	x	x	x	Not supported in T2.
2x.39	Select Input	x	x	x	x	x	Not supported in T2.
2x.3A	Record Mode	x	x	x	x	x	Not supported in T2.
2x.41	SubCarrier Adjust	x	x	x	x	x	Not supported in T2.
2x.42	Horiz Sync Timing	x	x	x	x	x	Not supported in T2.
2x.43	Disk Preroll	○	○	○	○	○	Accept the setting, but the delay frame will not be constant

2x.50	Copy File To	x	x	x	x	x	Not supported in T2.
2x.51	Delete File From	x	x	x	x	x	Not supported in T2.
2x.52	Abort Copy File To	x	x	x	x	x	Not supported in T2.
2x.53	Set Working Folder	○	○	○	○	○	
3x.01	Open Port	○	○	○	○	○	
3x.02	Next	○	○	○	○	○	
3x.03	Last	○	○	○	○	○	Regardless of the 3x/Bx command type of CMD1, it always returns the response itself to the previous request (does not convert the format of the response according to the Fixed Character ID/Variable Length ID specified).
3x.05	Port Status Request	○	○	○	○	○	
3x.06	Position Request	cannot	○	○	○	○	
3x.07	Active ID Request	cannot	○	○	○	○	

3x.08	Device Type Request	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Returns the following string: Grass Valley:T2
3x.10	System Status Request	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
3x.11	ID List	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
3x.12	Get Working Folder	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
3x.14	ID Size Request	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
3x.15	IDs Added to Arch	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Not supported in T2.
3x.16	ID Request	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
3x.17	Compr. Settings Request	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			Not supported in T2.

3x.18	IDs Added List	○	○	○	○	○	<ul style="list-style-type: none">• Returns only appends to the Current Folder.• If the name is changed by a method other than VDCP's Rename ID, it will not be reflected in the Added List.
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3x.19	IDs Deleted List	○	○	○	○	○	<ul style="list-style-type: none"> • Returns only deletes for the Current Folder. • If the name is changed by a method other than VDCP's Rename ID, it will not be reflected in the Deleted List.
3x.25	Multi Port Status Request	x	x	x	x	x	Not supported in T2.
5x.60	Abort Macro#	x	x	x	x	x	Not supported in T2.
5x.61	Active Macro List	x	x	x	x	x	Not supported in T2.
5x.62	Macro Status	x	x	x	x	x	Not supported in T2.
5x.63	Copy File To	x	x	x	x	x	Not supported in T2.
5x.64	Get From Archive	x	x	x	x	x	Not supported in T2.
5x.65	Send to Archive	x	x	x	x	x	Not supported in T2.
5x.66	Prepare ID To Play	x	x	x	x	x	Not supported in T2.

5x.67	Close ID from play	x	x	x	x	x	Not supported in T2.
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Port Status Availability

Status 1 - State and Flag Status

	meaning	Can	remarks
Byte 1, bit 0:	IDLE	<input type="radio"/>	
Byte 1, bit 1:	CUE/INIT	<input type="radio"/>	
Byte 1, bit 2:	PLAY OR RECORD	<input type="radio"/>	
Byte 1, bit 3:	STILL	<input type="radio"/>	Player only
Byte 1, bit 4:	THAT	<input type="radio"/>	Player only
Byte 1, bit 5:	VALIABLE PLAY	<input type="radio"/>	Player only
Byte 1, bit 6:	PORT BUSY	<input type="radio"/>	
Byte 1, bit 7:	CUE/INIT DONE	<input type="radio"/>	
Byte 2, bit 0-7:	PORT ID	<input type="radio"/>	In the connectionless state, returns 0

Status 2 Short Option - Port Hardware\Media Status

	meaning	Can	remarks
Byte 1, bit 0:	PORT DOWN	<input type="radio"/>	
Byte 1, bit 1:	ID'S ADDED	<input type="radio"/>	
Byte 1, bit 2:	ID'S DELETED	<input type="radio"/>	
Byte 1, bit 3:	ID'S ADDED TO ARCH.	x	
Byte 1, bit 4:	NO REF INPUT	<input type="radio"/>	Player only
Byte 1, bit 5:	NO VIDEO INPUT	x	
Byte 1, bit 6:	NO AUDIO INPUT	x	
Byte 1, bit 7:	AUDIO OVERLOAD	x	

Status 2 Extended Option - Port Hardware\Media Status

	meaning	Can	remarks
Byte 1, bit 0:	PORT DOWN	○	
Byte 1, bit 1:	ID'S ADDED	○	
Byte 1, bit 2:	ID'S DELETED	○	
Byte 1, bit 3:	ID'S ADDED TO ARCH.	×	
Byte 1, bit 4:	NO REF INPUT	○	Player only
Byte 1, bit 5:	NO VIDEO INPUT	×	
Byte 1, bit 6:	NO AUDIO INPUT	×	
Byte 1, bit 7:	AUDIO OVERLOAD	×	
Byte 2, bit 0:	NO TIMECODE INPUT	×	

Status 3 Short Option - Port Error Status

	meaning	Can	remarks
Byte 1, bit 0:	SYSTEM ERROR	×	
Byte 1, bit 1:	ILLEGAL VALUE	○	
Byte 1, bit 2:	INVALID PORT	○	
Byte 1, bit 3:	WRONG PORT TYPE	○	
Byte 1, bit 4:	COMMAND QUEUE FULL	×	
Byte 1, bit 5:	DISK FULL	○	
Byte 1, bit 6:	CMD WHILE BUSY	×	
Byte 1, bit 7:	NOT SUPPORTED	○	
Byte 2, bit 0:	INVALID ID	○	
Byte 2, bit 1:	ID NOT FOUND	○	
Byte 2, bit 2:	ID ALREADY EXIST	○	
Byte 2, bit 3:	ID STILL RECORDING	×	
Byte 2, bit 4:	ID STILL PLAYING	○	
Byte 2, bit 5:	ID NOT TRANSFERRED FROM ARCHIVE	×	

Byte 2, bit 6:	ID NOT TRANSFERRED TO ARCHIVE	×	
Byte 2, bit 7:	ID DELETE PROTECTED	○	
Byte 3, bit 0:	NOT IN CUE/INITE STATE	×	
Byte 3, bit 1:	CUE NOT DONE	○	
Byte 3, bit 2:	PORT NOT IDLE	○	
Byte 3, bit 3:	PORT PLAYNG/ACTIVE	○	
Byte 3, bit 4:	PORT NOT ACTIVE	○	
Byte 3, bit 5:	CUE OR OPERATION FAILED	×	
Byte 3, bit 6:	NETWORK ERROR	×	
Byte 3, bit 7:	SYSTEM REBOOTED	○	

Status 3 Extended Option - Port Error Status

	meaning	Can	remarks
Byte 1, bit 0:	SYSTEM ERROR	×	
Byte 1, bit 1:	ILLEGAL VALUE	○	
Byte 1, bit 2:	INVALID PORT	○	
Byte 1, bit 3:	WRONG PORT TYPE	○	
Byte 1, bit 4:	COMMAND QUEUE FULL	×	
Byte 1, bit 5:	DISK FULL	○	
Byte 1, bit 6:	CMD WHILE BUSY	×	
Byte 1, bit 7:	NOT SUPPORTED	○	
Byte 2, bit 0:	INVALID ID	○	
Byte 2, bit 1:	ID NOT FOUND	○	
Byte 2, bit 2:	ID ALREADY EXIST	○	
Byte 2, bit 3:	ID STILL RECORDING	○	
Byte 2, bit 4:	ID STILL PLAYING	○	
Byte 2, bit 5:	ID NOT TRANSFERRED FROM ARCHIVE	×	

Byte 2, bit 6:	ID NOT TRANSFERRED TO ARCHIVE	×	
Byte 2, bit 7:	ID DELETE PROTECTED	○	
Byte 3, bit 0:	NOT IN CUE/INITE STATE	×	
Byte 3, bit 1:	CUE NOT DONE	○	
Byte 3, bit 2:	PORT NOT IDLE	○	
Byte 3, bit 3:	PORT PLAYNG/ACTIVE	○	
Byte 3, bit 4:	PORT NOT ACTIVE	○	
Byte 3, bit 5:	CUE OR OPERATION FAILED	×	
Byte 3, bit 6:	NETWORK ERROR	×	
Byte 3, bit 7:	SYSTEM REBOOTED	○	
Byte 6, bit 0:	NOT IN CUE/INITE STATE	×	
Byte 6, bit 1:	CUE NOT DONE	○	*Copy of Byte 3
Byte 6, bit 2:	PORT NOT IDLE	○	*Copy of Byte 3
Byte 6, bit 3:	PORT PLAYNG/ACTIVE	○	*Copy of Byte 3
Byte 6, bit 4:	PORT NOT ACTIVE	○	*Copy of Byte 3
Byte 6, bit 5:	CUE OR OPERATION FAILED	×	
Byte 6, bit 6:	NETWORK ERROR	×	
Byte 6, bit 7:	SYSTEM REBOOTED	○	*Copy of Byte 3

Status 4 - Port Settings

	meaning	Can	remarks
Byte 1, bit 0:	OFF	○	Indicates connectionless status
Byte 1, bit 1:	COMPOSITE	×	
Byte 1, bit 2:	S-VIDEO	×	
Byte 1, bit 3:	.YUV	×	

Byte 1, bit 4:	D1	○	Recorder/Player Indicates when SDI input and output are in use
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Status 5 – Video Compression Type

	meaning	Can	remarks
Byte 1, bit 0-7:	NUMBER OF VIDEO TYPES	○	Always 0: Format information not supported
Byte 2, bit 0-7:	TYPE X	×	
Byte 3, bit 0-7:	TYPE Y	×	
Byte 4, bit 0-7:	TYPE Z	×	