Projection Display Serial Interface Specification

D851, D853W, D855ST, D857WT, D859

V Code

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1. RS-233 Setting

Baud Rate	9600
Parity Check	None
Data Bit	8
Stop Bit	1
Flow Control	None

Required Null cable Minimum delay for next command: 1ms



RS232 pin assignment

Pin	Description	Pin	Description
1	NC	2	RXD
3	TXD	4	NC
5	GND	6	NC
7	RTS	8	CTS
9	NC		



2. Control Command Structure

The Command is structured by the Header code, ID code, Command code, Data code, and End code. Most of the commands are structured except some for the compatibility issue with other projectors

	Header Code	ID Code	Command Code	Data Code	End Code
ASCII	'V'	XX	Command	Data	<cr></cr>

Note:

XX = 00-98, Projector's ID, XX = 99 is for all projectors Return Result: P = Pass / F = Fail n: 0: Disable / 1: Enable / Value (0~9999)

3. Command Group 00

Command Group 00			
ASCII	Function	Description	Result Return
VXXS0001	Power On		P/F
VXXS0002	Power Off		P/F
VXXS0003	Resync		P/F
VXXG0004	Get Lamp Hours		Pn/F
VXXS0006	System Reset		P/F
VXXG0007	Get System Status	0: Reset 1: Standby 2: Operation 3: Cooling	Pn/F
VXXG0008	Get F/W Version		Pn/F

4. Command Group 01

Command Group 01			
ASCII	Function	Description	Result Return
VXXG0101	Get Brightness	n=0~100	Pn/F
VXXS0101n	Set Brightness	n=0~100	P/F
VXXG0102	Get Contrast	n=0~100	Pn/F
VXXS0102n	Set Contrast	n=0~100	P/F
VXXG0103	Get Color	n=0~100	Pn/F
VXXS0103n	Set Color	n=0~100	P/F
VXXG0104	Get Tint	n=0~100	Pn/F
VXXS0104n	Set Tinh	n=0~100	P/F
VXXG0105	Get Sharpness	n=0~31	Pn/F
VXXS0105n	Set Sharpness	n=0~31	P/F
		0: Cold	
VXXG0106	Get Color Temperature	1: Normal	Pn/F
		2: Warm	
		0: Cold	
VXXS0106n	Set Color Temperature	1: Normal	P/F
		2: Warm	
		0: PC	
		1: MAC	
VXXS0107	Get Gamma	2: Video	Pn/F
		3: Chart	
		4: B&W	
		0: PC	
		1: MAC	
VXXG0107n	Get Gamma	2: Video	P/F
		3: Chart	
		4: B&W	

Command Group 02			
ASCII	Function	Description	Result Return
VXXS0201	Select RGB		P/F
VXXS0202	Select RGB 2		P/F
VXXS0203	Select DVI		P/F
VXXS0204	Select Video		P/F
VXXS0205	Select S-Video		P/F
VXXS0206	Select HDMI		P/F
VXXG0220	Get Current Source	1: RGB 2: RGB 2 3: DVI 4: Video 5: S-Video 6: HDMI	Pn/F

5. Command Group 02

6. Command Group 03

Command Group 03			
ASCII	Function	Description	Result Return
		0: Fill	
		1: 4:3	
VXXG0301	Get Aspect	2: 16:9	Pn/F
		3: Letterbox	
		4: Native	
		0: Fill	
		1: 4:3	
VXXS0301n	Set Aspect	2: 16:9	P/F
		3: Letterbox	
		4: Native	
VXXG0302	Blank Status	0: Off	Dn/F
VAA00302	Blank Status	1: On	1 11/1
VVVC0202m	Set Blank	0: Off	D/E
VAA5050211		1: On	
VXXG0303	Auto Keystone Status	0: Off	Dn/F
VAA00505	Auto Reystone Status	1: On	1 11/1
VXXS0303n	Set Auto Keystone	0: Off	D/F
VAAS0505II	Set Auto Reystone	1: On	1/1
VXXG0304	Freeze Status	0: Off	D n/F
VAA00304		1: On	1 11/1
VXXS030/m	Set Freeze	0: Off	D/F
• 2228030411		1: On	1/1
VXXG0305	Get Volume	n=0~8	Pn/F
VXXS0305n	Set Volume	n=0~8	P/F

Command Group 03 Continue			
ASCII	Function	Description	Result Return
		0: Front	
VVVC0209	Projection Mode Status	1: Rear	Dn/E
VAAUUSUo	Flojection Widde Status	2: Ceiling	ΓΠ/Γ
		3: Rear + Ceiling	
		0: Front	
VXXS0308n	Set Projection Mode	1: Rear	P/F
		2: Ceiling	
		3: Rear + Ceiling	
VXXG0309	Get Vertical Keystone	$n = -30 \sim 30$	Pn/F
VVVC0200n	Sat Vartical Vaystona	$n = -30 \sim 30$	D/E
VAA0050911	Set vertical Reystolle	n: Must be even #	Γ/Γ
VXXG0311	Get Electronic Zoom	$n = -10 \sim 10$	Pn/F
VXXS0311n	Set Electronic Zoom	$n = -10 \sim 10$	P/F

7. Command Group 04

Command Group 04 (Remote Control)			
ASCII	Function	Description	Result Return
VXXS0401	Up Arrow ▲		P/F
VXXS0402	Down Arrow ▼		P/F
VXXS0403	Left Arrow \blacktriangleleft		P/F
VXXS0404	Right Arrow ►		P/F
VXXS0405	Power		P/F
VXXS0406	Exit		P/F
VXXS0407	Input		P/F
VXXS0408	Auto		P/F
VXXS0409	Keystone +		P/F
VXXS0410	Keystone -		P/F
VXXS0411	Menu		P/F
VXXS0412	Status		P/F
VXXS0413	Mute		P/F
VXXS0414	Zoom +		P/F
VXXS0415	Zoom -		P/F
VXXS0416	Blank		P/F
VXXS0417	Freeze		P/F
VXXS0418	Volume +		P/F
VXXS0419	Volume -		P/F
VXXS0420	Enter		P/F

8-9. Hyper Terminal setting guide

8-9-1 Connect the RS232 Cable between your computer and Projector.

8-9-2 Open HyperTerminal

Window2000/XP HyperTerminal path : Start \ Programs \ Accessories \ Communications \ HyperTerminal •



8-9-3 Setting the HyperTerminal parameter :

Step 1. Type the connection name .



Step2. Choose the COM port for your RS232 Cable connected to.

Connect To		<u>?</u> ×
🦓 test		
Enter details for	the phone number that you want to	o dial:
Country/region:	Taiwan (886)	Ŧ
Area code:	02	
Phone number:		
Connect using:	COM1	•
	OK Cano	el

Step3. In Bits per second choose " 9600 " and in Flow control choose " None " ${\scriptstyle \circ}$

COM1 Propert	ies			?	×
Port Settings	1				
Bits p	er second: 96	00		•	
	Data bits: 8			•	
	Parity: No	ne		•	
	Stop bits: 1			•	
FI	ow control: No	ne			
			Restore	Defaults	
	OK		Cancel	Apply	

Step4. Click the File and choose Properties to setting Keyboard parameter •

🍓 TEST - HyperTerminal	
File Edit View Call Transfe	er Help
New Connection	r 🕈
Open	
Save	
Save As	
Page Setup	
Print	
Properties	
Exit Alt+F4	
<u>12</u>	<u>`</u>
Displays the properties of the cur	rent session //

Step5. In Setting page , choose Emulation type for your keyboard.

TEST Properties	<u>?</u> ×
Connect T C Settings	
Function, arrow, and ctrl keys act as	
Terminal keys O Windows keys	
Backspace key sends	
Octrl+H O Del O Ctrl+H, Space, Ctrl+H	
Emulation:	
VT100 Terminal Setup	
Telnet terminal ID: VT100	
Backscroll buffer lines: 500	
Play sound when connecting or disconnecting	
Input Translation ASCII Setup	
OK Car	ncel

Step6. Click ASCII Setting icon to setup ASCII code parameter.

TEST Properties	? ×
Connect To Settings	
Function, arrow, and ctrl keys act as	
Backspace key sends	
O <u>C</u> trl+H O <u>D</u> el O Ctrl+ <u>H</u> , Space, Ctrl+H	
Emulation:	
VT100 ▼ Terminal <u>S</u> etup	
Tel <u>n</u> et terminal ID: VT100	
Backscroll buffer lines: 500	
Play sound when connecting or disconnecting	
Input Translation	
OK Car	icel

Step7. Mark Send Line ends with line feeds and Echo typed characters locally and click OK bottom to complete setting.

AS	5CII	Setup ?X
Γ	- AS	CII Sending
		Send line ends with line feeds
		Echo typed characters locally
	Lin	e delay: 0 milliseconds.
	Ch	aracter delay: 0 milliseconds.
[- AS	CII Receiving
		Append line feeds to incoming line ends
		Force incoming data to 7-bit ASCII
	☑	Wrap lines that exceed terminal width
l		
		OK Cancel