RS232 Command List

For All Products

Contents:

RS232 Commands

RS232 Command List

For BenQ:

RP552
RP552H
RP840G
RP653
RP703
RP750
RP750K

Applicable for All Regions

Version: 02
Date:2016/03/30

1. Application

This document defines the RS232 communications method for control the BenQ Interactive Flat Panels when using a remote controller.

2. Preparation Connectors and wiring

Connector: 9-pin D-sub
Cable: Direct cable

Connection
Monitor + PC

3. Communication specification

Communication Parameter	
RS-232C Remote control	
(1) Interface	RS-232C
(2) Baud rate	9600bps
(3) Data length	8bits
(4) Parity	None
(5) Stop bit	1 bit

4. Format of data for communication via serial port

Protocol (With ID)

1 Length (1 byte): Total byte of message excluding "CR"
Ex: 0x38 for Length=8; 0x39 for Length=9; 0x3A for Length=10.

2 ID (2 byte): Identification for each of the monitor
Set command with ID="99" (0x39 0x39) will doe the settings to all monitors, and it will not have reply command.
If the communication is between LAN chip and Sacler chip, the ID should be always "01" (0x30 0x31)

3 Command Type (1 byte)
0x73 ('s'): Set command
0x67 ('g'): Get command
0x72 ('r'): Reply command
0x2B ('+'): Valid command reply
0x2D ('-'): Invalid command reply
Possible invalid condition (1) Command Code not support (2) Packet length is wrong (3) Value is out of expected range.

4 Command Code (1 byte)

5 Value (at least 3 byte)

6 CR (1 byte): 0x0D

Set command

Send Command: Length (1 byte) + ID (2 byte) + Cmd Type (1 byte) + Cmd Code(1 byte) + Value(>=3 byte) + CR (1 byte)

Ex: Set Brightness as 76 for ID-02 and this command is valid

Send packet

Byte	0	1	2	3	4	5	6	7	8
Name	Length	ID		Cmd Type	Cmd Code	Value			CR
						Byte1	Byte2	Byte3	
Hex	0x38	0x30	0x32	0x73	0x24	0x30	0x37	0x36	0x0D

Return packet

Byte	0	1	2	3	4
Name	Length	ID		Cmd Type	CR
Hex	0x34	0x30	0x32	0x2B	0x0D

Ex: Set Brightness as 176 for ID-02 and this command is invalid

Send packet

Byte	0	1	2	3	4	5	6	7	8
Name	Length	ID		Cmd Type	Cmd Code	Value			CR
						Byte1	Byte2	Byte3	
Hex	0x38	0x30	0x32	0x73	0x24	0x31	0x37	0x36	0x0D

Return packet

Byte	0	1	2	3	4
Name	Length	ID		Cmd Type	CR
Hex	0x34	0x30	0x32	0x2D	0x0D

Ex: Set Brightness as 76 for all monitors

Send packet

Byte	0	1	2	3	4	5	6	7	8
Name	Length	ID		Cmd Type	Cmd Code	Value			CR
						Byte1	Byte2	Byte3	
Hex	0x38	0x39	0x39	0x73	0x24	0x30	0x37	0x36	0x0D

Return packet: No return packet

Get command

Send Command: Length (1 byte) + ID (2 byte) + Cmd Type (1 byte) + Cmd Code(1 byte) + Value(>=3 byte) + CR (1 byte)

Ex: Get Brightness from ID-05 and this command is valid, and the Brightness value is 67.

Send packet

Byte	0	1	2	3	4	5	6	7	8
Name	Length	ID		Cmd Type	Cmd Code	Value			CR
						Byte1	Byte2	Byte3	
Hex	0x38	0x30	0x35	0x67	0x62	0x30	0x30	0x30	0x0D

Return packet

Byte	0	1	2	3	4	5	6	7	8
Name	Length	ID		Cmd Type	Cmd Code	Value			CR
						Byte1	Byte2	Byte3	
Hex	0x38	0x30	0x35	0x72	0x62	0x30	0x36	0x37	0x0D

Protocol (Without ID)

1 The without ID protocol only supports the set command.

2 There is no ID at the command packet, and there is no return packet even the command is invalid.

3 Length (1 byte): Total bytes of message = 5 ASCII (35H) excluding “CR”

Ex: Set Brightness as 76

Send packet

Byte	0	1	2	3	4	5
Name	Length	Cmd Code	Value			CR
			Byte1	Byte2	Byte3	
Hex	0x35	0x24	0x30	0x37	0x36	0x0D

5. Command List – Set command

Set Function	Len	ID	Cmd Type	Cmd Code (Hex)	RS232 (ASCII Bytes)	Send Set Command (HEX)
Power	8		s	21	000 : Blank	38 30 31 73 21 30 30 30 0D
					001 : On	38 30 31 73 21 30 30 31 0D
					002 : Standby (or android off)	38 30 31 73 21 30 30 32 0D
Video Source	8		s	22	000 : VGA	38 30 31 73 22 30 30 30 0D
					001 : HDMI1	38 30 31 73 22 30 30 31 0D
					002: HDMI2	38 30 31 73 22 30 30 32 0D
					003 : AV	38 30 31 73 22 30 30 33 0D
					021 : HDMI3	38 30 31 73 22 30 32 31 0D
					022 : HDMI4 (for 4K model)	38 30 31 73 22 30 32 32 0D
					031 : VGA2	38 30 31 73 22 30 33 31 0D
					032 : VGA3	38 30 31 73 22 30 33 32 0D
					101 : android	38 30 31 73 22 31 30 31 0D
					103 : Slot in PC	38 30 31 73 22 31 30 33 0D
Contrast	8		s	23	000 ~ 100	38 30 31 73 23 30 30 30 0D ~ 38 30 31 73 23 31 30 30 0D
Brightness	8		s	24	000 ~ 100	38 30 31 73 24 30 30 30 0D ~ 38 30 31 73 24 31 30 30 0D
Sharpness	8		s	25	000 ~	38 30 31 73 25 30 30 30 0D ~ 38 30 31 73 25 31 30 30 0D
Aspect Ratio	8		s	31	000 : 16:9	38 30 31 73 31 30 30 30 0D
					001 : 4:3	38 30 31 73 31 30 30 31 0D
					002 : PTP	38 30 31 73 31 30 30 32 0D
Language	8		s	32	000: English	38 30 31 73 32 30 30 30 0D
					001: Français	38 30 31 73 32 30 30 31 0D
					002: Español	38 30 31 73 32 30 30 32 0D
					003: 繁中	38 30 31 73 32 30 30 33 0D
					004: 简中	38 30 31 73 32 30 30 34 0D
					005: Português	38 30 31 73 32 30 30 35 0D
					006: German	38 30 31 73 32 30 30 36 0D
					007: Dutch	38 30 31 73 32 30 30 37 0D
					008: Polish	38 30 31 73 32 30 30 38 0D
					009: Russia	38 30 31 73 32 30 30 39 0D
					010:Czech	38 30 31 73 32 30 31 30 0D
					011:Danish	38 30 31 73 32 30 31 31 0D
					012:Swedish	38 30 31 73 32 30 31 32 0D
					013:Italian	38 30 31 73 32 30 31 33 0D
					014:Romanian	38 30 31 73 32 30 31 34 0D
					015:Norwegian	38 30 31 73 32 30 31 35 0D
					016:Finnish	38 30 31 73 32 30 31 36 0D
					017:Greek	38 30 31 73 32 30 31 37 0D
					018:Turkish	38 30 31 73 32 30 31 38 0D
					019:Arabic	38 30 31 73 32 30 31 39 0D
					020:Japanse	38 30 31 73 32 30 32 30 0D
Sound Mode	8		s	33	000 : Movie	38 30 31 73 33 30 30 30 0D
					001 : Standard	38 30 31 73 33 30 30 31 0D
					002 : Custom	38 30 31 73 33 30 30 32 0D
					003 : Classroom	38 30 31 73 33 30 30 33 0D
					004 : Meeting	38 30 31 73 33 30 30 34 0D
Volume	8		s	35	000 ~ 100	38 30 31 73 35 30 30 30 0D ~ 38 30 31 73 35 31 30 30 0D
Mute	8		s	36	000: Off	38 30 31 73 36 30 30 30 0D
					001: On	38 30 31 73 36 30 30 31 0D
Treble	8		s	37	000~100	38 30 31 73 37 30 30 30 0D ~ 38 30 31 73 37 31 30 30 0D
Bass	8		s	38	000~100	38 30 31 73 38 30 30 30 0D ~ 38 30 31 73 38 31 30 30 0D
Balance	8		s	39	000~100	38 30 31 73 39 30 30 30 0D ~ 38 30 31 73 39 31 30 30 0D

Set Function	Len	Cmd Type	Cmd Code (Hex)	RS232 (ASCII Bytes)	Send Set Command (HEX)
Reomte comtrol command	8	s	40	000 : Vol +	38 30 31 73 40 30 30 30 0D
				001 : Vol -	38 30 31 73 40 30 30 31 0D
				010 : Remote 上	38 30 31 73 40 30 31 30 0D
				011 : Remote 下	38 30 31 73 40 30 31 31 0D
				012 : Remote 左	38 30 31 73 40 30 31 32 0D
				013 : Remote 右	38 30 31 73 40 30 31 33 0D
				014 : Remote OK	38 30 31 73 40 30 31 34 0D
				020 : Remote Menu Key	38 30 31 73 40 30 32 30 0D
				021 : Remote Input source	38 30 31 73 40 30 32 31 0D
				022 : Remote Exit	38 30 31 73 40 30 32 32 0D
				031 : Blank	38 30 31 73 40 30 33 31 0D
				032 : Freeze	38 30 31 73 40 30 33 32 0D
IR Control	8	s	42	000: Disable	38 30 31 73 42 30 30 30 0D
				001: Enable	38 30 31 73 42 30 30 31 0D
Button&IR Control	8	s	43	000: Disable	38 30 31 73 43 30 30 30 0D
				001: Enable	38 30 31 73 43 30 30 31 0D
Button Control	8	s	45	000: Disable	38 30 31 73 45 30 30 30 0D
				001: Enable	38 30 31 73 45 30 30 31 0D
Image Retention	8	s	47	000: Off	38 30 31 73 47 30 30 30 0D
				001: On	38 30 31 73 47 30 30 31 0D
Chroma (Color)	8	s	82	000 ~ 050	38 30 31 73 82 30 30 30 0D
Backlight	8	s	84	000 ~ 100	38 30 31 73 82 30 30 31 0D
Color Temp	8	s	86	000 : Cool	38 30 31 73 86 30 30 30 0D
				001 : Standard	38 30 31 73 86 30 30 31 0D
				002 : Classroom	38 30 31 73 86 30 30 32 0D
Auto Adjustment Execute	8	s	8F	<---	38 30 31 73 8F 30 30 30 0D
RTC Year	8	s	98	000 ~ 099	38 30 31 73 98 30 30 30 0D ~ 38 30 31 73 98 30 39 39 0D
RTC Month	8	s	99	001 ~ 012	38 30 31 73 99 30 30 31 0D ~ 38 30 31 73 99 30 31 32 0D
RTC Day	8	s	9A	001 ~ 031	38 30 31 73 9A 30 30 31 0D ~ 38 30 31 73 9A 30 31 32 0D
RTC Hour	8	s	9B	000 ~ 023	38 30 31 73 9B 30 30 30 0D ~ 38 30 31 73 9B 30 32 33
RTC Minute	8	s	9C	000 ~ 059	38 30 31 73 9C 30 30 30 0D ~ 38 30 31 73 9C 30 35 39

Set Function	Len	Cmd Type	Cmd Code (Hex)	RS232 (ASCII Bytes)	Send Set Command (HEX)
On/Off Timer	14	s	E0	Byte1~Byte9 (1) Byte1: Decide which Timer is selected, and its enable/disable setting. Byte1[3:0]=0x1~0x07. There are totally 7 Timers, this value is used to decide which Timer is selected. Byte1[7]: Reserved, should be 0. Byte1[6]: The Timer is enable or not. Byte1[6]=1 means enable. Byte1[5]: The On Timer is enable or not. Byte1[5]=1 means enable. Byte1[4]: The Off Timer is enable or not. Byte1[4]=1 means enable. (2) Byte2: The Day of the On/Off Timer. bit0 for Sunday, bit1 for Monday, bit2 for Tuesday, bit3 for Wednesday, bit4 for Thursday, bit5 for Friday, bit6 for Saturday, bit7 for Everday. (3) Byte3: The Hour of the On Timer. Byte3=0x00~0x17. (4) Byte4: The Minute of the On Timer. Byte4=0x00~0x3B. (5) Byte5: The Hour of the Off Timer. Byte5=0x00~0x17.	

6. Command List – Get command

Get Function	Len	Cmd	Cmd Code	RS232	Send Get Command MDA to Device	System Reply Command message
Model Info	20	g	20	(1) Input value: Byte1 - Byte2 - Byte3… Byte15 Byte2~Byte11=0x00 Byte1=0x01: Get Customer Name Byte1=0x02: Get Customer Model Name Byte1=0x04: Get Scaler Firmware Version Byte1=0x05: Get LAN Firmware Version Byte1=0x06: Get Serial Number (2) Return value: Byte1 - Byte2 - Byte3 …Byte15 The Byte1 value at the return value should be the same as the value of Byte1 at input value. Byte2~Byte15 should be ASCII format. Ex: If Customer=Generic, Byte1=0x01, Byte2='G', Byte3='e',...Byte8='c', Byte9~Byte11=0x00. Ex: If the Scaler Firmware Version=1.02, Byte1=0x03, Byte2='1', Byte3='.', Byte4='0', Byte5='2', Byte6~Byte11=0x00	Get Customer Name : 44 30 31 67 20 01 00 00 00 00 00 00 00 00 00 00 00 00 00 00 0D	44 30 31 72 20 ***01*** 42 45 4E 51 00 00 00 00 00 00 00 00 00 00 0D
					Get Model Name : 44 30 31 67 20 02 00 00 00 00 00 00 00 00 00 00 00 00 00 00 0D	ST550K : 44 30 31 72 20 **02** 52 50 35 35 32 00 00 00 00 00 00 00 00 00 0D
					Get SW version : 44 30 31 67 20 04 00 00 00 00 00 00 00 00 00 00 00 00 00 00 0D	40 30 31 72 20 ***04*** 31 2E 30 2E 35 00 00 00 00 00 00 00 00 00 0D
					Get Serial Number : 44 30 31 67 20 06 00 00 00 00 00 00 00 00 00 00 00 00 00 00 0D	44 30 31 72 20 ***06*** 45 49 50 33 46 30 30 30 35 32 30 32 45 00 0D
Signal Status	8	g	22	000: Signal unstable	38 30 31 67 22 30 30 30 0D	38 30 31 72 22 30 30 30 0D
				001: Signal stable (Active Sync exists)		38 30 31 72 22 30 30 31 0D
Treble	8	g	37	000~100	38 30 31 67 37 30 30 30 0D	38 30 31 72 37 30 30 30 0D ~ 38 30 31 72 37 31 30
Bass	8	g	38	000~100	38 30 31 67 38 30 30 30 0D	38 30 31 72 38 30 30 30 0D ~ 38 30 31 72 38 31 30
Balance	8	g	39	000~100	38 30 31 67 39 30 30 30 0D	38 30 31 72 39 30 30 30 0D ~ 38 30 31 72 39 31 30
Contrast	8	g	61	000 ~ 100	38 30 31 67 61 30 30 30 0D	38 30 31 72 61 30 30 30 0D ~ 38 30 31 72 61 31 30
Brightness	8	g	62	000 ~ 100	38 30 31 67 62 30 30 30 0D	38 30 31 72 62 30 30 30 0D ~ 38 30 31 72 62 31 30
Sharpness	8	g	63	000 ~ 020	38 30 31 67 63 30 30 30 0D	38 30 31 72 63 30 30 30 0D ~ 38 30 31 72 63 31 30
Sound Mode	8	g	65	000 : Movie	38 30 31 67 65 30 30 30 0D	38 30 31 72 65 30 30 30 0D
				001 : Standard		38 30 31 72 65 30 30 31 0D
				002 : Custom		38 30 31 72 65 30 30 32 0D
				003 : Classroom		38 30 31 72 65 30 30 33 0D
				004 : Meeting		38 30 31 72 65 30 30 34 0D
Volume	8	g	66	000 ~ 100	38 30 31 67 66 30 30 30 0D	38 30 31 72 66 30 30 30 0D ~ 38 30 31 72 66 31 30
Mute	8	g	67	000: Off	38 30 31 67 67 30 30 30 0D	38 30 31 72 67 30 30 30 0D
				001: On		38 30 31 72 67 30 30 31 0D
IR Control	8	g	68	000: Disable	38 30 31 67 68 30 30 30 0D	38 30 31 72 68 30 30 30 0D
				001: Enable		38 30 31 72 68 30 30 31 0D
Button&IR Control	8	g	69	000: Disable	38 30 31 67 69 30 30 30 0D	38 30 31 72 69 30 30 30 0D
				001: Enable		38 30 31 72 69 30 30 30 0D
Video Source	8	g	6A	000 : VGA	38 30 31 67 6A 30 30 30 0D	38 30 31 72 6A 30 30 30 0D
				001 : HDMI1		38 30 31 72 6A 30 30 31 0D
				002: HDMI2		38 30 31 72 6A 30 30 32 0D
				003 : CVBS / AV		38 30 31 72 6A 30 30 33 0D
				021 : HDMI3		38 30 31 72 6A 30 32 31 0D
				~~022 : HDMI4 (for 4K Model)~~		~~38 30 31 72 6A 30 32 32 0D~~
				031 : VGA2		38 30 31 72 6A 30 33 31 0D
				032 : VGA3		38 30 31 72 6A 30 33 32 0D
				~~051 : TV~~		~~38 30 31 72 6A 30 35 31 0D~~
				101 : android		38 30 31 72 6A 31 30 31 0D
				103 : Slot in PC		38 30 31 72 6A 31 30 33 0D
Power	8	g	6C		38 30 31 67 6C 30 30 30 0D	38 30 31 72 6C 30 30 30 0D
				001 : On		38 30 31 72 6C 30 30 31 0D
				002 : Standby (or android off)		38 30 31 72 6C 30 30 32 0D

Get Function	Len	Cmd	Cmd Code	RS232	Send Get Command MDA to Device	System Reply Command message
Image Retention	8	g	72	000: Off	38 30 31 67 72 30 30 30 0D	38 30 31 72 72 30 30 30 0D
				001: On		38 30 31 72 72 30 30 31 0D
Button Control	8	g	73	000: Disable	38 30 31 67 73 30 30 30 0D	38 30 31 72 73 30 30 30 0D
				001: Enable		38 30 31 72 73 30 30 31 0D
Aspect Ratio	8	g	77	000 : 16:9	38 30 31 67 77 30 30 30 0D	38 30 31 72 77 30 30 30 0D
				001 : 4:3		38 30 31 72 77 30 30 31 0D
				002 : PTP		38 30 31 72 77 30 30 32 0D
Language	8	g	78	000: English	38 30 31 67 78 30 30 30 0D	38 30 31 72 78 30 30 30 0D
				001: Français		38 30 31 72 78 30 30 31 0D
				002: Español		38 30 31 72 78 30 30 32 0D
				003: 繁中		38 30 31 72 78 30 30 33 0D
				004: 简中		38 30 31 72 78 30 30 34 0D
				005: Português		38 30 31 72 78 30 30 35 0D
				006: German		38 30 31 72 78 30 30 36 0D
				007: Dutch		38 30 31 72 78 30 30 37 0D
				008: Polish		38 30 31 72 78 30 30 38 0D
				009: Russia		38 30 31 72 78 30 30 39 0D
				010:Czech		38 30 31 72 78 30 31 30 0D
				011:Danish		38 30 31 72 78 30 31 31 0D
				012:Swedish		38 30 31 72 78 30 31 32 0D
				013:Italian		38 30 31 72 78 30 31 33 0D
				014:Romanian		38 30 31 72 78 30 31 34 0D
				015:Norwegian		38 30 31 72 78 30 31 35 0D
				016:Finnish		38 30 31 72 78 30 31 36 0D
				017:Greek		38 30 31 72 78 30 31 37 0D
				018:Turkish		38 30 31 72 78 30 31 38 0D
				019:Arabic		38 30 31 72 78 30 31 39 0D
				020:Japanse		38 30 31 72 78 30 32 30 0D
Chroma (Color)	8	g	B2	000 ~ 050	38 30 31 67 B2 30 30 30 0D	38 30 31 72 B2 30 30 30 0D ~ 38 30 31 72 B2 30 35 30 0D
Backlight	8	g	B4	000 ~ 100	38 30 31 67 B4 30 30 30 0D	38 30 31 72 B4 30 30 30 0D ~ 38 30 31 72 B4 31 30 30 0D
Color Temp	8	g	B6	000 : Cool	38 30 31 67 B6 30 30 30 0D	38 30 31 72 B6 30 30 30 0D
				001 : Standard		38 30 31 72 B6 30 30 31 0D
				002 : Classroom		38 30 31 72 B6 30 30 32 0D
RTC Year	8	g	C8	000 ~ 099	38 30 31 67 C8 30 30 30 0D	38 30 31 72 C8 30 30 30 0D ~ 38 30 31 72 C8 30 39 39 0D
RTC Month	8	g	C9	001 ~ 012	38 30 31 67 C9 30 30 30 0D	38 30 31 72 C9 30 30 31 0D ~ 38 30 31 72 C9 30 31 32 0D
RTC Day	8	g	CA	001 ~ 031	38 30 31 67 CA 30 30 30 0D	38 30 31 72 CA 30 30 31 0D ~ 38 30 31 72 CA 30 33 31 0D
RTC Hour	8	g	CB	000 ~ 023	38 30 31 67 CB 30 30 30 0D	38 30 31 72 CB 30 30 30 0D ~ 38 30 31 72 CB 30 32 33 0D
RTC Minute	8	g	CC	000 ~ 059	38 30 31 67 CC 30 30 30 0D	38 30 31 72 CC 30 30 30 0D ~ 38 30 31 72 CC 30 35 39 0D

Get Function	Len	Cmd Type	Cmd Code (Hex)	RS232	Send Get Command MDA to Device	System Reply Command message
On/Off Timer	14	g	E0	Input value: Byte1 - Byte2 - Byte3…Byte9 (1) Byte1[3:0]: The Number of the On/Off Timer. There are totally 7 On/Off Timers, and this byte is used to selected which timer is going to be accessed. (2) Byte1[7:4] is reserved, should be 0. (3) Byte2~9 are reserverd, should be 0x00. Return value: Byte1 - Byte2 - Byte3…Byte9 (1) Byte1[3:0]: Should retuen the same value as Byte1 at Input value. Byte1[7]: Reserved, should be 0. Byte1[6]: The Timer is enable or not. Byte1[6]=1 means enable. Byte1[5]: The On Timer is enable or not. Byte1[5]=1 means enable. Byte1[4]: The Off Timer is enable or not. Byte1[4]=1 means enable. (2) Byte2: The Day of the On/Off Timer. bit0 for Sunday, bit1 for Monday, bit2 for Tuesday, bit3 for Wednesday, bit4 for Thursday, bit5 for Friday, bit6 for Saturday, bit7 for Everday. (3) Byte3: The Hour of the On Timer. Byte3=0x00~0x17. (4) Byte4: The Minute of the On Timer. Byte4=0x00~0x3B. (5) Byte5: The Hour of the Off Timer. Byte5=0x00~0x17. (6) Byte6: The Minute of the Off Timer. Byte6=0x00~0x3B. (7) Byte7: Select the Video Source. 0x00=VGA, 0x01=HDMI1, 0x02=HDMI2, 0x03=AV, 0x04=YPbPr, 0x05=S-Video, 0x06=DVI, 0x07=DisplayPort, 0x08=SDI, 0x09=Multi-Media. 0x0A=Network, 0x0B=USB Display 0xFF=Default. Other values are reserved. (8) Byte8~9 are reserved, and should be 0x00.		
Network Setting	14	g	E1	Input Value: Byte1 - Byte2 - Byte3…Byte9 (1) Byte1=0x00: IP Setup Mode Byte1=0x01: IP Address Byte1=0x02: Get Subnet Mask Byte1=0x03: Default Gateway Byte1=0x04: Primary DNS Byte1=0x05: Secondary DNS Byte1=0x06: MAC Address (2) Byte2~9 are reserved, should be 0x00. Return value: Byte1 - Byte2 - Byte3…Byte9 The Byte1 at the return value should be the same as the value of Byte1 at Input value. Byte2~Byte15 should be hex value format (1) If Byte1=0x00(IP Setup Mode) at Input value, the return value should be Byte1=0x00 Byte2=0x00: Manual 0x01: DHCP Byte3~9 are reserved, should be 0x00. (2) If Byte1=0x01(IP Address) at Input value, the return value should be Ex: IP address=169.254.81.38 Byte1=0x01 (same as Byte1 at Input value) Byte2=0xA9 (=169), Byte3=0xFE (=254), Byte4=0x51(=81), Byte5=0x26 (=38) Byte6~9 are reserved, should be 0x00. (3) If Byte1=0x02~0x05 at Input value, refer to (2) (4) If Byte1=0x06(MAC Address) at Input value, the return value should be Ex: MAC address=00:22:64:7E:2C:82 Byte1=0x06 (same as Byte1 at Input value) Byte2=0x00, Byte3=0x22, Byte4=0x64, Byte5=0x7E, Byte6=0x2C, Byte7=0x82 Byte8~9 are reserved, should be 0x00.		

RS232 Command List

For BenQ:
RP652
RP702
RP790S
RP705H

Applicable for All Regions

Version: 02
Date:2015/11/17

1. Application

This document defines the RS232 communications method for control the BenQ Interactive Flat Panels when using a remote controller.

2. Preparation Connectors and wiring

Connector: 9-pin D-sub
Cable: Direct cable

Connection
Monitor + PC

3. Communication specification

Communication Parameter RS-232C Remote control	
(1) Interface	RS-232C
(2) Baud rate	38400bps
(3) Data length	8bits
(4) Parity	None
(5) Stop bit	1 bit

4. Command List – Set command

Set Function	Len	ID	Cmd Type	Cmd Code (Hex)	Value Range (ASCII Bytes) RP Series RS232	Send Set Command	System Return message	Remark
Power	8		s	21	000 : ------- / Monitor Off	38 30 31 73 21 30 30 30 0D	Set command is Valid, system return 34 30 31 2B 0D	
					001 : Android On / Monitor On	38 30 31 73 21 30 30 31 0D		
					002 : Android Off / -------	38 30 31 73 21 30 30 32 0D		
						38 30 31 73 21 30 30 33 0D		
Video Source	8		s	22	000 : VGA	38 30 31 73 22 30 30 30 0D	Set command is Invalid or system don't support command, system return 34 30 31 2D 0D	
					001 : HDMI1	38 30 31 73 22 30 30 31 0D		
					002: HDMI2	38 30 31 73 22 30 30 32 0D		
					003 : AV	38 30 31 73 22 30 30 33 0D		
					004 : YPbPr	38 30 31 73 22 30 30 34 0D		
					021 : HDMI3	38 30 31 73 22 30 32 31 0D		
					022 : HDMI4	38 30 31 73 22 30 32 32 0D		
					023 : HDMI5	38 30 31 73 22 30 32 33 0D		
					101 : android	38 30 31 73 22 31 30 31 0D		
					102 : OPS	38 30 31 73 22 31 30 32 0D		
					200 : Android Home (Remote Control - Android Home Key)	38 30 31 73 22 32 30 30 0D		
					201 : Inpput (Reomte Control - Input Source	38 30 31 73 22 32 30 31 0D		
Aspect Ratio	8		s	31	000 : Full	38 30 31 73 31 30 30 30 0D		
					001 : 4:3	38 30 31 73 31 30 30 31 0D		
					002 : Film	38 30 31 73 31 30 30 32 0D		
					003 : Subtitle	38 30 31 73 31 30 30 33 0D		
					004 : PC Mode	38 30 31 73 31 30 30 34 0D		
Language	8		s	32	000: English	38 30 31 73 32 30 30 30 0D		
					001: Français	38 30 31 73 32 30 30 31 0D		
					002: Español	38 30 31 73 32 30 30 32 0D		
					003: 繁中	38 30 31 73 32 30 30 33 0D		
					004: 简中	38 30 31 73 32 30 30 34 0D		
					005: Português	38 30 31 73 32 30 30 35 0D		
					006: German	38 30 31 73 32 30 30 36 0D		
					007: Dutch	38 30 31 73 32 30 30 37 0D		
					008: Polish	38 30 31 73 32 30 30 38 0D		
					009: Russia	38 30 31 73 32 30 30 39 0D		
					010:Czech	38 30 31 73 32 30 31 30 0D		
					011:Danish	38 30 31 73 32 30 31 31 0D		
					012:Swedish	38 30 31 73 32 30 31 32 0D		
					013:Italian	38 30 31 73 32 30 31 33 0D		
					014:Romanian	38 30 31 73 32 30 31 34 0D		
					015:Norwegian	38 30 31 73 32 30 31 35 0D		
					016:Finnish	38 30 31 73 32 30 31 36 0D		
					017:Greek	38 30 31 73 32 30 31 37 0D		
					018:Turkish	38 30 31 73 32 30 31 38 0D		
					019:Arabic	38 30 31 73 32 30 31 39 0D		
					020:Japanse	38 30 31 73 32 30 32 30 0D		

Set Function	Len	ID	Cmd Type	Cmd Code (Hex)	Value Range (ASCII Bytes) RP Series RS232	Send Set Command	System Return message	Remark
Volume	8		s	35	200 Volume -	38 30 31 73 35 32 30 30 0D		
					300 Volume +	38 30 31 73 35 33 30 30 0D		
Mute	8		s	36	001: On	38 30 31 73 36 30 30 31 0D		
Remote Controller Function	8		s	40	000 : Remote Control VOL+	38 30 31 73 40 30 30 30 0D		
					001 : Reomte Control VOL-	38 30 31 73 40 30 30 31 0D		
					010 : Remote Control 上	38 30 31 73 40 30 31 30 0D		
					011 : Remote Control 下	38 30 31 73 40 30 31 31 0D		
					012 : Reomte Control 左	38 30 31 73 40 30 31 32 0D		
					013 : Remote Control 右	38 30 31 73 40 30 31 33 0D		
					014 : Reomte Control OK	38 30 31 73 40 30 31 34 0D		
					020 : Reomte Control Menu Key	38 30 31 73 40 30 32 30 0D		
					021 : Remote Control Input Source Key	38 30 31 73 40 30 32 31 0D		
					022 : Reomte Control Exit Key	38 30 31 73 40 30 32 32 0D		
					031 : Blank	38 30 31 73 40 30 33 31 0D		
					032 : Freeze	38 30 31 73 40 30 33 32 0D		
All Reset (OSD recall)	8		s	7E		38 30 31 73 7E 30 30 30 0D		OSD recall

4. Command List – Get command

Get Function	Len	ID	Cmd Type	Cmd Code	Value Range (ASCII RP Series / RS232)	Send Get Command	System Reply Command
Model Info	20		g	20	(1) Input value: Byte1 - Byte2 - Byte3...Byte15 Byte2~Byte11=0x00 Byte1=0x01: Get Customer Name Byte1=0x02: Get Customer Model Name Byte1=0x04: Get Scaler Firmware Version Byte1=0x05: Get LAN Firmware Version Byte1=0x06: Get Serial Number (2) Return value: Byte1 - Byte2 - Byte3...Byte15 The Byte1 value at the return value should be the same as the value of Byte1 at input value. Byte2~Byte15 should be ASCII format. Ex: If Customer=Generic, Byte1=0x01, Byte2='G', Byte3='e',...Byte8='c', Byte9~Byte11=0x00. Ex: If the Scaler Firmware Version=1.02, Byte1=0x03, Byte2='1', Byte3='.', Byte4='0', Byte5='2', Byte6~Byte11=0x00.	44 30 31 67 20 01 00 00 00 00 00 00 00 00 00 00 00 00 00 0D	44 30 31 72 20 ***01*** 42 45 4E 51 00 00 00 00 00 00 00 00 00 00 0D
						44 30 31 67 20 02 00 00 00 00 00 00 00 00 00 00 00 00 00 0D	RP652 : 44 30 31 72 20 **02** 52 50 36 35 32 00 00 00 00 00 00 00 00 00 0D PR702 : 44 30 31 72 20 **02** 52 50 37 30 32 00 00 00 00 00 00 00 00 00 0D RP790 : 44 30 31 72 20 **02** 52 50 37 39 30 00 00 00 00 00 00 00 00 00 0D
						44 30 31 67 20 04 00 00 00 00 00 00 00 00 00 00 00 00 00 0D	40 30 31 72 20 ***04*** 31 2E 30 2E 35 00 00 00 00 00 00 00 00 00 0D
						44 30 31 67 20 06 00 00 00 00 00 00 00 00 00 00 00 00 00 0D	44 30 31 72 20 ***06*** 45 49 50 33 46 30 30 30 35 32 30 32 45 00 0D
Signal Status	8		g	22	000: Signal unstable	38 30 31 67 22 30 30 30 0D	38 30 31 72 22 30 30 30 0D
					001: Signal stable (Active Sync exists)		38 30 31 72 22 30 30 31 0D
Volume	8		g	66	000 ~ 100	38 30 31 67 66 30 30 30 0D	38 30 31 72 66 30 30 30 0D ~ 38 30 31 72 66 31 30 30 0D
Mute	8		g	67	000: Off	38 30 31 67 67 30 30 30 0D	38 30 31 72 67 30 30 30 0D
					001: On		38 30 31 72 67 30 30 31 0D
Video Source	8		g	6A	000 : VGA	38 30 31 67 6A 30 30 30 0D	38 30 31 72 6A 30 30 30 0D
					001 : HDMI1		38 30 31 72 6A 30 30 31 0D
					002: HDMI2		38 30 31 72 6A 30 30 32 0D
					003 : AV		38 30 31 72 6A 30 30 33 0D
					004 : YPbPr		38 30 31 72 6A 30 30 34 0D
					021 : HDMI3		38 30 31 72 6A 30 32 31 0D
					022 : HDMI4		38 30 31 72 6A 30 32 32 0D
					023 : HDMI5		38 30 31 72 6A 30 32 33 0D
					101 : android		38 30 31 72 6A 31 30 31 0D
					102 : OPS		38 30 31 72 6A 31 30 32 0D

Get Function	Len	ID	Cmd Type	Cmd Code	Value Range (ASCII RP Series RS232	Send Get Command	System Reply Command
Power	8		g	6C		38 30 31 67 6C 30 30 30 0D	38 30 31 72 6C 30 30 30 0D
							38 30 31 72 6C 30 30 31 0D
							38 30 31 72 6C 30 30 32 0D
							38 30 31 72 6C 30 30 33 0D
Language	8		g	78	000: English	38 30 31 67 78 30 30 30 0D	38 30 31 72 78 30 30 30 0D
					001: Français		38 30 31 72 78 30 30 31 0D
					002: Español		38 30 31 72 78 30 30 32 0D
					003: 繁中		38 30 31 72 78 30 30 33 0D
					004: 简中 (X)		38 30 31 72 78 30 30 34 0D
					005: Portuguẹs		38 30 31 72 78 30 30 35 0D
					006: German		38 30 31 72 78 30 30 36 0D
					007: Dutch		38 30 31 72 78 30 30 37 0D
					008: Polish		38 30 31 72 78 30 30 38 0D
					009: Russia		38 30 31 72 78 30 30 39 0D
					010:Czech		38 30 31 72 78 30 31 30 0D
					011:Danish		38 30 31 72 78 30 31 31 0D
					012:Swedish		38 30 31 72 78 30 31 32 0D
					013:Italian		38 30 31 72 78 30 31 33 0D
					014:Romanian		38 30 31 72 78 30 31 34 0D
					015:Norwegian		38 30 31 72 78 30 31 35 0D
					016:Finnish		38 30 31 72 78 30 31 36 0D
					017:Greek		38 30 31 72 78 30 31 37 0D
					018:Turkish		38 30 31 72 78 30 31 38 0D
					019:Arabic		38 30 31 72 78 30 31 39 0D
					020:Japanse		38 30 31 72 78 30 32 30 0D

Generic RS232 protocol – V1

1 Introduction

This document describes the hardware interface spec and software protocols of RS232 interface communication between Commercial Display and PC or other control unit with RS232 protocol.

Both sets protocol contain two sections command:

- Set-Function
- Get-Function

※In below document, "PC" will represents all the control units that can sent or receive the RS232 protocol command.

2 Description

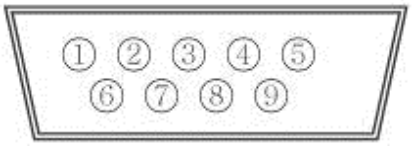
2.1 Hardware specification

LCD communication port in the rear side

(1) Connector type: DSUB 9 Pin Male

(2) Pin Assignment

Male DSUB 9Pin



(outside view)

Pin #	Signal	Remark
1	NC	
2	RXD	Input to LCD Monitor
3	TXD	Output from LCD Monitor
4	NC	
5	GND	
6	NC	
7	NC	
8	NC	
9	NC	
frame	GND	

*Use of crossover (null modem) cable required for use with PC

2.2 Communication Setting

- Baud Rate Select: 9600bps (fixed)
- Data bits: 8bits (fixed)
- Parity: None (fixed)
- Stop Bits: 1(fixed)

2.3 Command Message Reference

PC sends to Monitor command packet followed by "CR". Every time PC sends control command to the Monitor, the Monitor shall response as follows:

1. If the message is receives correctly it will send "+" (02Bh) followed by "CR" (00Dh)
2. If the message is receives incorrectly it will send "-" (02Dh) followed by "CR" (00Dh)

3 Set and Get Protocol :

3.1 Command Description

Name	Byte	
Length	1	Total Byte of Message excluding “CR”. Ex: 0x38 for Length=8; 0x39 for Length=9; 0x3A for Length=10.
ID	2	Identification for each of the monitor(2 byte) Set command with ID="99" (0x39 0x39) will do the settings to all monitors, and it will not have reply command.
Command Type	1	0x73 ('s'): Set command 0x67 ('g'): Get command 0x72 ('r'): Reply command 0x2B ('+'): Valid command reply 0x2D ('-'): Invalid command reply
Command:	1	Function command code: One byte ASCII code
Value	3	Three bytes ASCII that defines the value
CR	1	0x0D

3.2 Set-Function Listing

The PC can control the LCD Monitor for specific actions. The Set-Function command allows you to control the LCD monitor behavior in a remote sit through the RS232 port. There are 2 kind of set command. It support “With ID “ and “Without ID” protocol .

With ID Protocol

The Set-Function packet format consists of 9 bytes .

Set-Function description:

Send Command: Length (1 byte) + ID (2 byte) + Cmd Type (1 byte) + Cmd Code(1 byte) + Value(3 byte) + CR (1 byte)

Example1: Set Brightness as 76 for Monitor 02 and this command is valid

Send (Hex Format)

Send: (Command Type=”s”)

Byte	0	1	2	3	4	5	6	7	8
Name	Length	ID		Cmd Type	Cmd Code	Value			CR
						Byte1	Byte2	Byte3	
Hex	0x38	0x30	0x32	0x73	0x24	0x30	0x37	0x36	0x0D

Reply (Hex Format)

Byte	0	1	2	3	4
Name	Length	ID		Cmd Type	CR
Hex	0x34	0x30	0x32	0x2B	0x0D

Example2: Set Brightness as 176 for Monitor -02 and this command is NOT valid

Send (Hex Format)

Byte	0	1	2	3	4	5	6	7	8
Name	Length	ID		Cmd Type	Cmd Code	Value			CR
						Byte1	Byte2	Byte3	
Hex	0x38	0x30	0x32	0x73	0x24	0x31	0x37	0x36	0x0D

Reply (Hex Format)

Byte	0	1	2	3	4
Name	Length	ID		Cmd Type	CR
Hex	0x34	0x30	0x32	0x2D	0x0D

Example3: Set brightness 76 for all monitors
Send (Hex Format)

Byte	0	1	2	3	4	5	6	7	8
Name	Length	ID		Cmd Type	Cmd Code	Value			CR
						Byte1	Byte2	Byte3	
Hex	0x38	0x39	0x39	0x73	0x24	0x30	0x37	0x36	0x0D

Reply (Hex Format)
No Reply.

Without ID Protocol
The without ID protocol only supports the set command.
There is no ID at the command packet, and there is no return packet even the command is invalid.
Length (1 byte): Total bytes of message = 5 ASCII (35H) excluding "CR"
Ex: Set Brightness as 76

Byte	0	1	2	3	4	5
Name	Length	Cmd Code	Value			CR
			Byte1	Byte2	Byte3	
Hex	0x35	0x24	0x30	0x37	0x36	0x0D

Set-function table

Set Function	Len	ID	Cmd Type	Cmd Code (Hex)	Value Range (ASCII Bytes)	Remark
Power	8		s	21	000: Standby	
					001: On	
Video Source	8		s	22	000 : VGA	

					001 : HDMI1	
					002: HDMI2	Option, not support if the platform doesn't have this feature.
					003 : AV	Option, not support if the platform doesn't have this feature.
					004 : YPbPr	
					005 : S-Video	Option, not support if the platform doesn't have this feature.
					006 : DVI	
					007 : DisplayPort	
					008 : SDI	Option, not support if the platform doesn't have this feature.
					009 : Multi-Media	Option, not support if the platform doesn't have this feature.
					010:Network	Option, not support if the platform doesn't have this feature.
					011: USB Display	Option, not support if the platform doesn't have this feature.
Contrast	8		s	23	000 ~ 100	
Brightness	8		s	24	000 ~ 100	
Sharpness	8		s	25	000 ~ 020	
Picture Reset	8		s	26		Value don't care
Aspect Ratio	8		s	31	000: Full (Video) / Full 2 (PC)	
					001: 4:3 (Video) /Real (PC)	
					002: Wide Zoom (Video) / Full1 (PC)	
					003: Zoom (Video)	
Language	8		s	32	000: English	
					001: Français	
					002: Español	
					003: 繁中	Option, not support if the platform doesn't have this feature.
					004: 简中	Option, not support if the platform doesn't have this feature.
					005: Portuguê s	Option, not support if the platform doesn't have this feature.
					006: German	Option, not support if the platform doesn't have this feature.
					007: Dutch	Option, not support if the platform doesn't have this feature.
					008: Polish	Option, not support if the platform doesn't have this feature.
					009: Russia	Option, not support if the platform doesn't have this feature.
					010:Czech	Option, not support if the platform doesn't have this feature.

					011:Danish	Option, not support if the platform doesn't have this feature.
					012:Swedish	Option, not support if the platform doesn't have this feature.
					013:Italian	Option, not support if the platform doesn't have this feature.
					014:Romanian	Option, not support if the platform doesn't have this feature.
					015:Norwegian	Option, not support if the platform doesn't have this feature.
					016:Finnish	Option, not support if the platform doesn't have this feature.
					017:Greek	Option, not support if the platform doesn't have this feature.
					018:Turkish	Option, not support if the platform doesn't have this feature.
					019:Arabic	Option, not support if the platform doesn't have this feature.
					020:Japanse	Option, not support if the platform doesn't have this feature.
Sound Mode	8		s	33	000: Dynamic	
					001: Standard	
					002: Custom	
Volume	8		s	35	000 ~ 100	
Mute	8		s	36	000: Off	
					001: On	
Treble	8		s	37	000~100	OSD value=RS232 value-50
Bass	8		s	38	000~100	OSD value=RS232 value-50
Balance	8		s	39	000~100	OSD value=RS232 value-50
Surround	8		s	3A	000: Off	
					001: On	
Sound Reset	8		s	3B		Value don't care
Monitor ID	8		s	3D	001 ~ 098	
IR Control	8		s	42	000: Disable	All the buttons at the remote controller have no function
					001: Enable	
					002: Passthrough Master Note: To set Pass through, the command must use the "With ID protocal", and the ID should between "01"~"98".	

					003: Passthrough Slave Note1: To set Pass through, the command must use the "With ID protocal", and the ID should between "01"~"98". Note2: The monitor will not response to any RS232 command if it is at Passthrough Slave mode	
Button&IR Control	8		s	43	000: Disable	All the buttons at both keypad board and remote controller have no function.
					001: Enable	
Button Control	8		s	45	000: Disable	All the buttons at the keypad board have no function
					001: Enable	
Image Retention	8		s	47	000: Off	
					001: On	
OSD Info Box	8		s	5B	000: Off	
					001: On	
All Reset	8		s	7E		Value don't care
Picture Mode	8		s	81	000: Standard	
					001: Vivid	
					002: Cinema	
					003: Custom	
Chroma (Color)	8		s	82	000 ~ 050	
Phase (Tint)	8		s	83	000 ~ 050	
Backlight	8		s	84	000 ~ 100	
Adaptive Contrast	8		s	85	000: Off	
					001: On	
Color Temp	8		s	86	000: Cool	
					001: Neutral	
					002: Warm	
					003: Custom	
Audio Source	8		s	88	000: Audio1	
					001: Audio2	Option, not support if the platform doesn't have this feature.
					002: HDMI or HDMI1	
					003: HDMI2	Option, not support if the platform doesn't have this feature.
					004: DisplayPort	
					005: SDI	Option, not support if the platform doesn't have this feature.
					006: Multi-Media	Option, not support if the platform doesn't have this feature.
Speaker	8		s	89	000: Internal	

					001: External	Option, not support if the platform doesn't have this feature.
					002: Lineout	
PAP Enable	8		s	8A	000: Off	
					001: PIP	
					002: PBP	
PAP Size	8		s	8D	When PAP=PIP 000: Small 001: Large	
					When PAP=PBP 000 ~ 014	
PIP Position	8		s	8E	000: Upper Left	
					001: Upper Right	
					002: Lower Left	
					003: Lower Right	
Auto Adjustment Execute	8		s	8F		For VGA only, execute auto adjustment.
VGA Clock frequency	8		s	90	000 ~ 100	
VGA Phase	8		s	91	000 ~ 031	
VGA H.Position	8		s	92	000 ~ 060	
VGA V.Position	8		s	93	000 ~ 060	
Ambient Light Sensor	8		s	94	000: Off	
					001: On	
Auto Search	8		s	96	000: Off	
					001: On	
Over Scan	8		s	97	000: Off	
					001: On	
					002: Auto	
RTC Year	8		s	98	000 ~ 099	Ex: value=012 means Year 2012 If the setting is illegal (Ex: Year 2013 doesn't have the date Feb/29), return "Invalid Command Reply".
RTC Month	8		s	99	001 ~ 012	Ex: value=001 means January If the setting is illegal (Ex: Februrary doesn't have the date Feb/31), return "Invalid Command Reply".
RTC Day	8		s	9A	001 ~ 031	If the setting is illegal (Ex: Day31 doesn't exist in April), return "Invalid Command Reply".
RTC Hour	8		s	9B	000 ~ 023	
RTC Minute	8		s	9C	000 ~ 059	
Touch Feature	8		s	9E	000: Off	For touch model only.
					001: On	For touch model only.
OSD Rotation	8		s	9F	000: Landscape	
					001: Portrait	
H Monitor	8		s	A4	001 ~ 010	

V Monitor	8		s	A5	001 ~ 010	
H Position	8		s	A6	001 ~ 010	
V Position	8		s	A7	001 ~ 010	
Frame Comp.	8		s	A8	000: Off	
					001: On	
Power Save	8		s	A9	000: Off	
					001: Low	
					002: High	
Auto Adjustment	8		s	AA	000: Off	
					001: On	
Display Wall LED	8		s	AE	000: Off	
					001: On	
Display Wall Power On Delay	8		s	AF	000: Off	
					001: On	
PAP Active Picture	8		s	BE	000: Main(For PIP), Left(For PBP)	
					001: Sub(For PIP), Right(For PBP)	

On/Off Timer	14		s	E0	Byte1~Byte9 (1) Byte1: Decide which Timer is selected, and its enable/disable setting. Byte1[3:0]=0x1~0x07. There are totally 7 Timers, this value is used to decide which Timer is selected. Byte1[7]: Reserved, should be 0. Byte1[6]: The Timer is enable or not. Byte1[6]=1 means enable. Byte1[5]: The On Timer is enable or not. Byte1[5]=1 means enable. Byte1[4]: The Off Timer is enable or not. Byte1[4]=1 means enable. (2) Byte2: The Day of the On/Off Timer. bit0 for Sunday, bit1 for Monday, bit2 for Tuesday, bit3 for Wednesday, bit4 for Thursday, bit5 for Friday, bit6 for Saturday, bit7 for Everday. (3) Byte3: The Hour of the On Timer. Byte3=0x00~0x17. (4) Byte4: The Minute of the On Timer. Byte4=0x00~0x3B. (5) Byte5: The Hour of the Off Timer. Byte5=0x00~0x17. (6) Byte6: The Minute of the Off Timer. Byte6=0x00~0x3B. (7) Byte7: Select the Video Source. 0x00=VGA, 0x01=HDMI1, 0x02=HDMI2, 0x03=AV, 0x04=YPbPr, 0x05=S-Video, 0x06=DVI, 0x07=DisplayPort, 0x08=SDI, 0x09=Multi-Media. 0x0A=Network, 0x0B=USB Display (8) Byte8~9 are reserved, and should be 0x00.	Note: Some of the Video Sources are not supported if the model doesn't have this feature.. Ex: Byte1=0x01 means the Timer no.1 is selected and disable. Ex: Byte1=0x41 means the Timer no.1 is select and enable, and its both On and Off Timers are disable. Ex: Byte1=0x61 means the Timer no.1 is select and enable, and its On Timer is enable, Off Timer is disable. Ex: Byte1=0x71 means the Timer no.1 is select and enable, and its both On and Off Timers are enable. Ex: Byte1=0x53 means the Timer no.3 is select and enable, and its On Timer is disable, Off Timer is enable. Ex: Byte2=0x02 means the Timer is on Monday. Ex: Byte3=0x08, Byte4=0x1E means the On Timer is at 8:30. Ex: Byte5=0x17, Byte6=0x00 means the Off Timer is at 23:00. Ex: Byte7=0x00 means the selected Video Source is VGA.

3.3 Get-Function Listing

Get function format is listed as following :

Length (1 byte) + ID (2 byte) + Cmd Type (1 byte) + Cmd Code(1 byte) + Value(>=3 byte) + CR (1 byte).

Example 1:

Get Brightness from ID-05 and this command is valid, and the Brightness value is 67.

Send command:

Byte	0	1	2	3	4	5	6	7	8
Name	Length	ID		Cmd Type	Cmd Code	Value			CR
						Byte1	Byte2	Byte3	
Hex	0x38	0x30	0x35	0x67	0x62	0x30	0x30	0x30	0x0D

Return:

Byte	0	1	2	3	4	5	6	7	8
Name	Length	ID		Cmd Type	Cmd Code	Value			CR
						Byte1	Byte2	Byte3	
Hex	0x38	0x30	0x35	0x72	0x62	0x30	0x36	0x37	0x0D

Example 2:

Get Customer Name from ID-05, and the Customer Name is Qisda.

Byte	0	1	2	3	4
Name	Length	ID		Cmd Type	Cmd Code
Hex	0x44	0x30	0x35	0x67	0xDC

5	6	7	8	9	10	11	12	13
Value								
Byte1	Byte2	Byte3	Byte4	Byte5	Byte6	Byte7	Byte8	Byte9
0x01	0x00	0x00	0x00	0x00	0x00	0x00	0x00	0x00

14	15	16	17	18	19	20
Value						CR
Byte10	Byte11	Byte12	Byte13	Byte14	Byte15	
0x00	0x00	0x00	0x00	0x00	0x00	0x0D

Return:

Byte	0	1	2	3	4
Name	Length	ID		Cmd Type	Cmd Code
Hex	0x44	0x30	0x35	0x72	0xDC

5	6	7	8	9	10	11	12	13
Value								
Byte1	Byte2	Byte3	Byte4	Byte5	Byte6	Byte7	Byte8	Byte9
0x51 ('Q')	0x69 ('i')	0x73 ('s')	0x64 ('d')	0x61 ('a')	0x00	0x00	0x00	0x00

14	15	16	17	18	19	20
Value						CR
Byte10	Byte11	Byte12	Byte13	Byte14	Byte15	
0x00	0x00	0x00	0x00	0x00	0x00	0x0D

PC Get-function command to LCD Monitor

Get Function	Len	ID	Cmd Type	Cmd Code (Hex)	Value Range (ASCII Bytes)	Remark
Model Info	20		g	20	(1) Input value: Byte1 - Byte2 - Byte3…Byte15 Byte2~Byte11=0x00 Byte1=0x01: Get Customer Name Byte1=0x02: Get Customer Model Name Byte1=0x03: Get Qisda Model Name Byte1=0x04: Get Scaler Firmware Version Byte1=0x05: Get LAN Firmware Version Byte1=0x06: Get Serial Number (2) Return value: Byte1 - Byte2 - Byte3…Byte15 The Byte1 value at the return value should be the same as the value of Byte1 at input value. Byte2~Byte15 should be ASCII format. Ex: If Customer=Generic, Byte1=0x01, Byte2='G', Byte3='e',...Byte8='c', Byte9~Byte11=0x00. Ex: If the Scaler Firmware Version=1.02, Byte1=0x03, Byte2='1', Byte3='.', Byte4='0', Byte5='2', Byte6~Byte11=0x00.	

Capability	8		g	21	Return value: Byte1 - Byte2 - Byte3 (1) Byte1 bit0 of Byte1=1: Support SDI bit1 of Byte1=1: Support Touch feature bit2 of Byte1=1: Support Internal speaker bit3 of Byte1=1: Support Multi-Media module (only STB supports Multi-Media module) bit4 of Byte1=1: Support HDMI2 (only STA supports HDMI2) bit5 of Byte1=1: Support Network bit6 of Byte1=1: Support USB Display bit7 of Byte1=1: Support DVI (2) Byte2: bit0 of Byte2=1: Support AV bit1 of Byte2=1: Support S-Video bit2 of Byte2=1: Support Audio2 bit3 of Byte2=1: Support Display Wall Other bit are reserved, and should be 0.	
Signal Status	8		g	22	000: Signal unstable	
					001: Signal stable (Active Sync exists)	
Signal Format	8		g	23	000: PC	
					001: Video	
AV Timing	8		g	24	000: NTSC	
					001: PAL	
Treble	8		g	37	000~100	OSD value=RS232 value-50
Bass	8		g	38	000~100	OSD value=RS232 value-50
Balance	8		g	39	000~100	OSD value=RS232 value-50
Surround	8		g	3A	000: Off	
					001: On	
OSD Info Box	8		g	5D	000: Off	
					001: On	
Contrast	8		g	61	000 ~ 100	
Brightness	8		g	62	000 ~ 100	
Sharpness	8		g	63	000 ~ 020	
Sound Mode	8		g	65	000: Dynamic	
					001: Standard	
					002: Custom	
Volume	8		g	66	000 ~ 100	
Mute	8		g	67	000: Off	
					001: On	
IR Control	8		g	68	000: Disable	All the buttons at the remote controller have no function
					001: Enable	

					002: Passthrough Master Note: To set Pass through, the command must use the "With ID protocal", and the ID should between "01"~"98".	
					003: Passthrough Slave Note1: To set Pass through, the command must use the "With ID protocal", and the ID should between "01"~"98". Note2: The monitor will not response to any RS232 command if it is at Passthrough Slave mode	
Button&IR Control	8		g	69	000: Disable	All the buttons at both keypad board and remote controller have no function.
					001: Enable	
Video Source	8		g	6A	000 : VGA	If PIP or PBP=On, the return value is the source at active window.
					001 : HDMI1	
					002: HDMI2	Option, not support if the platform doesn't have this feature.
					003 : AV	Option, not support if the platform doesn't have this feature.
					004 : YPbPr	
					005 : S-Video	Option, not support if the platform doesn't have this feature.
					006 : DVI	
					007 : DisplayPort	
					008 : SDI	Option, not support if the platform doesn't have this feature.
					009 : Multi-Media	Option, not support if the platform doesn't have this feature.
					010:Network	Option, not support if the platform doesn't have this feature.
					011: USB Display	Option, not support if the platform doesn't have this feature.
Power	8		g	6C	000: Standby	
					001: On	
5V	8		g	6D	~050	value=049 means 4.9V
12V	8		g	6E	~120	value=122 means 12.2V
Ambient Sensor Value	10		g	70	00000 ~ 2000	Ex: If the value is 500, the return value should be: Byte1=0x30, Byte2=0x35, Byte3=0x30, Byte4=0x30, Byte5=0x30.

Thermal Sensor Value	10		g	71	(1) Input value: Byte1-Byte2-...Byte5 (a) Byte1=0x01: Get the thermal sensor value from main board 0x02: Get the thermal sensor value from keypad board (b) Byte2~Byte5 are reserved, should b 0x00 (2) Return value: Byte1-Byte2-...Byte5 (a) Byte1=0x01: The thermal sensor value is from main board 0x02: The thermal sensor value is rom kaypad board (b) Byte2: If the thermal value is >=0, Byte2='+' (0x2B) If the thermal value is <0, Byte2='-' (0x2D) (c) Byte3~Byte5: The absolute value of the temperature, in ASCII format.	Ex: If the temperature 5℃is from main board, the return value should be: Byte1=0x01, Byte2=0x2B, Byte3=0x30, Byte4=0x30, Byte5=0x35. Ex: If the temperature -15℃is from keypad board, the return value should be: Byte1=0x02, Byte2=0x2D, Byte3=0x30, Byte4=0x31, Byte5=0x35.
Image Retention	8		g	72	000: Off	
					001: On	
Button Control	8		g	73	000: Disable	All the buttons at the keypad board have no function
					001: Enable	
Monitor ID	8		g	75	001 ~ 098	
Operation Time	10		g	76	00000 ~ 99999	unit is hour
Aspect Ratio	8		g	77	000: Full (Video) / Full 2 (PC)	
					001: 4:3 (Video) /Real (PC)	
					002: Wide Zoom (Video) / Full1 (PC)	
					003: Zoom (Video)	
Language	8		g	78	000: English	
					001: Français	
					002: Español	
					003: 繁中	Option, not support if the platform doesn't have this feature.
					004: 简中	Option, not support if the platform doesn't have this feature.
					005: Português	Option, not support if the platform doesn't have this feature.
					006: German	Option, not support if the platform doesn't have this feature.
					007: Dutch	Option, not support if the platform doesn't have this feature.
					008: Polish	Option, not support if the platform doesn't have this feature.
					009: Russia	Option, not support if the platform doesn't have this feature.

					010:Czech	Option, not support if the platform doesn't have this feature.
					011:Danish	Option, not support if the platform doesn't have this feature.
					012:Swedish	Option, not support if the platform doesn't have this feature.
					013:Italian	Option, not support if the platform doesn't have this feature.
					014:Romanian	Option, not support if the platform doesn't have this feature.
					015:Norwegian	Option, not support if the platform doesn't have this feature.
					016:Finnish	Option, not support if the platform doesn't have this feature.
					017:Greek	Option, not support if the platform doesn't have this feature.
					018:Turkish	Option, not support if the platform doesn't have this feature.
					019:Arabic	Option, not support if the platform doesn't have this feature.
					020:Japanse	Option, not support if the platform doesn't have this feature.
Touch Feature	8		g	9E	000: Off	For touch model only.
					001: On	For touch model only.
Display Wall LED	8		g	AE	000: OFF	
					001: ON	
Display Wall Power On Delay	8		g	AF	000: OFF	
					001: ON	
Picture Mode	8		g	B1	000: Standard	
					001: Vivid	
					002: Cinema	
					003: Custom	
Chroma (Color)	8		g	B2	000 ~ 050	
Phase (Tint)	8		g	B3	000 ~ 050	
Backlight	8		g	B4	000 ~ 100	
Adaptive Contrast	8		g	B5	000: Off	
					001: On	
Color Temp	8		g	B6	000: Cool	
					001: Neutral	
					002: Warm	
					003: Custom	

Audio Source	8		s	88	000: Audio1	
					001: Audio2	Option, not support if the platform doesn't have this feature.
					002: HDMI or HDMI1	
					003: HDMI2	Option, not support if the platform doesn't have this feature.
					004: DisplayPort	
					005: SDI	Option, not support if the platform doesn't have this feature.
					006: Multi-Media	Option, not support if the platform doesn't have this feature.
Speaker	8		g	B9	000: Internal	
					001: External	Option, not support if the platform doesn't have this feature.
					002: Lineout	
PAP Enable	8		g	BA	000: Off	
					001: PIP	
					002: PBP	
PAP Size	8		g	BD	When PAP=PIP 000: Small 001: Large	
					When PAP=PBP 000 ~ 014	
PAP Active Picture	8		g	BE	000: Main(For PIP), Left(For PBP)	
					001: Sub(For PIP), Right(For PBP)	
PIP Position	8		g	BF	000: Upper Left	
					001: Upper Right	
					002: Lower Left	
					003: Lower Right	
VGA Clock frequency	8		g	C0	000 ~ 100	For VGA only.
VGA Phase	8		g	C1	000 ~ 031	For VGA only.
VGA H.Position	8		g	C2	000 ~ 060	
VGA V.Position	8		g	C3	000 ~ 060	
Ambient Light Sensor	8		g	C4	000: Off	
					001: On	
Auto Search	8		g	C6	000: Off	
					001: On	
Over Scan	8		g	C7	000: Off	
					001: On	
					002: Auto	

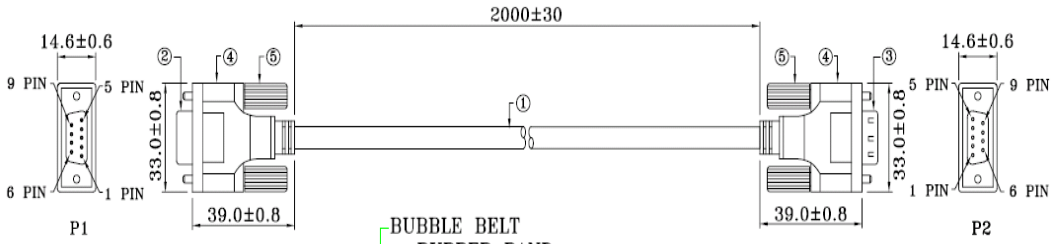
RTC Year	8		g	C8	000 ~ 099	Ex: value=012 means Year 2012 If the RTC is not enable, return "Invalid Command Reply"
RTC Month	8		g	C9	001 ~ 012	Ex: value=001 means January If the RTC is not enable, return "Invalid Command Reply"
RTC Day	8		g	CA	001 ~ 031	If the RTC is not enable, return "Invalid Command Reply"
RTC Hour	8		g	CB	000 ~ 023	If the RTC is not enable, return "Invalid Command Reply"
RTC Minute	8		g	CC	000 ~ 059	If the RTC is not enable, return "Invalid Command Reply"
OSD Rotation	8		s	CF	000: Landscape	
					001: Portrait	
H Monitor	8		g	D4	001 ~ 010	
V Monitor	8		g	D5	001 ~ 010	
H Position	8		g	D6	001 ~ 010	
V Position	8		g	D7	001 ~ 010	
Frame Comp.	8		g	D8	000: Off	
					001: On	
Power Save	8		g	D9	000: Off	
					001: Low	
					002: High	
Auto Adjustment	8		g	DA	000: Off	
					001: On	
Temperature Alert	8		g	DB	000~005: degree The Alert Email will be sent out. When the temperature is reached the "limitied temperature - parameter"	

On/Off Timer	14		g	E0	Input value: Byte1 - Byte2 - Byte3…Byte9 (1) Byte1[3:0]: The Number of the On/Off Timer. There are totally 7 On/Off Timers, and this byte is used to selected which timer is going to be accessed. (2) Byte1[7:4] is reserved, should be 0. (3) Byte2~9 are reserverd, should be 0x00. Return value: Byte1 - Byte2 - Byte3…Byte9 (1) Byte1[3:0]: Should retuen the same value as Byte1 at Input value. Byte1[7]: Reserved, should be 0. Byte1[6]: The Timer is enable or not. Byte1[6]=1 means enable. Byte1[5]: The On Timer is enable or not. Byte1[5]=1 means enable. Byte1[4]: The Off Timer is enable or not. Byte1[4]=1 means enable. (2) Byte2: The Day of the On/Off Timer. bit0 for Sunday, bit1 for Monday, bit2 for Tuesday, bit3 for Wednesday, bit4 for Thursday, bit5 for Friday, bit6 for Saturday, bit7 for Everday. (3) Byte3: The Hour of the On Timer. Byte3=0x00~0x17. (4) Byte4: The Minute of the On Timer. Byte4=0x00~0x3B. (5) Byte5: The Hour of the Off Timer. Byte5=0x00~0x17. (6) Byte6: The Minute of the Off Timer. Byte6=0x00~0x3B. (7) Byte7: Select the Video Source. 0x00=VGA, 0x01=HDMI1, 0x02=HDMI2, 0x03=AV, 0x04=YPbPr, 0x05=S-Video, 0x06=DVI, 0x07=DisplayPort, 0x08=SDI, 0x09=Multi-Media. 0x0A=Network, 0x0B=USB Display 0xFF=Default. Other values are reserved. (8) Byte8~9 are reserved, and should be 0x00.	See the return value examples below: Ex: Byte1=0x01 means the Timer no.1 is selected and disable. Ex: Byte1=0x41 means the Timer no.1 is select and enable, and its both On and Off Timers are disable. Ex: Byte1=0x61 means the Timer no.1 is select and enable, and its On Timer is enable, Off Timer is disable. Ex: Byte1=0x71 means the Timer no.1 is select and enable, and its both On and Off Timers are enable. Ex: Byte1=0x53 means the Timer no.3 is select and enable, and its On Timer is disable, Off Timer is enable. Ex: Byte2=0x02 means the Timer is on Monday. Ex: Byte3=0x08, Byte4=0x1E means the On Timer is at 8:30. Ex: Byte5=0x17, Byte6=0x00 means the Off Timer is at 23:00. Ex: Byte7=0x00 means the selected Video Source is VGA.

Network Setting	14		g	E1	Input Value: Byte1 - Byte2 - Byte3…Byte9 (1) Byte1=0x00: IP Setup Mode Byte1=0x01: IP Address Byte1=0x02: Get Subnet Mask Byte1=0x03: Default Gateway Byte1=0x04: Primary DNS Byte1=0x05: Secondary DNS Byte1=0x06: MAC Address (2) Byte2~9 are reserved, should be 0x00. Return value: Byte1 - Byte2 - Byte3…Byte9 The Byte1 at the return value should be the same as the value of Byte1 at Input value. Byte2~Byte15 should be hex value format (1) If Byte1=0x00(IP Setup Mode) at Input value, the return value should be Byte1=0x00 Byte2=0x00: Manual 0x01: DHCP Byte3~9 are reserved, should be 0x00. (2) If Byte1=0x01(IP Address) at Input value, the return value should be Ex: IP address=169.254.81.38 Byte1=0x01 (same as Byte1 at Input value) Byte2=0xA9 (=169), Byte3=0xFE (=254), Byte4=0x51(=81), Byte5=0x26 (=38) Byte6~9 are reserved, should be 0x00. (3) If Byte1=0x02~0x05 at Input value, refer to (2) (4) If Byte1=0x06(MAC Address) at Input value, the return value should be Ex: MAC address=00:22:64:7E:2C:82 Byte1=0x06 (same as Byte1 at Input value) Byte2=0x00, Byte3=0x22, Byte4=0x64, Byte5=0x7E, Byte6=0x2C, Byte7=0x82 Byte8~9 are reserved, should be 0x00.	Ex: Subnet Mask=255.255.255.0, the return value: Byte1=0x02, Byte2=0xFF, Byte3=0xFF, Byte4=0xFF, Byte5=0x00, Byte6~9=0x00.

1. RS232 Cable Requirement and Pin Assignment

Cable Requirement:

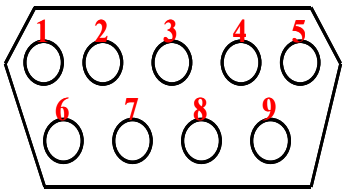


WIRE ARRANGEMENT		
P1	COLOR	P2
1	BLACK	1
2	BROWN	3
3	RED	2
4	ORANGE	4
5	YELLOW	5
6	GREEN	6
7	BLUE	7
8	PURPLE	8
9	GRAY	9
CASE	DRAIN WIRE	CASE

(to be checked)

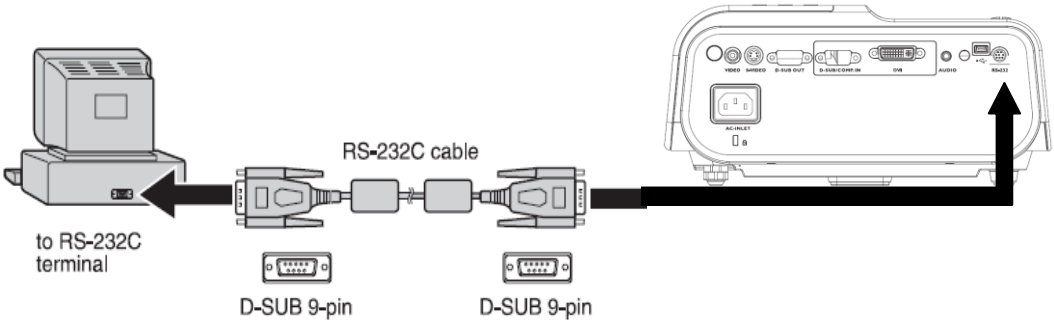
RS232 pin assignment

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



2. RS232 Connection

Below shows the illustration of connection between PC and Projector.



Note:

- Make sure that your computer and projector are turned off before connection.
- Power on the computer first, and then plug the power cord of the projector.
- (It may cause Com port incorrect function, if you do not follow this instruction)
- Adapters may be necessary depending on the PC connected to this projector.

3. Interface Settings

RS-232 protocol	
Baud Rate	115200 bps (default) Changeable(2400/4800/9600/14400/19200/38400/57600/115200) Setting in OSD menu
Data Length	8 bit
Parity Check	None
Stop Bit	1 bit
Flow Control	None

Software specification

1. Each input character will be echoed and All the echo text will be same with the command you execute except query command
2. When give “Enter”(ASCII 13), it will echo 3E,00. It means projector is ready to accept RS-232 command.
3. If no any command, it should echo 0D,0A,00 after 5 seconds.(5 sec time out)
4. If the command format is illegal, it will echo “Illegal format”.
5. If the command format is correct, but it is not valid for this model, it will echo “Unsupported item”.
6. If the command format is correct, but can’t be execute in some condition, it will echo “Block item”.

Note: 1.Item 5 and item 6 is not support at power saving mode (standby power < 1W).
2.Each input upper case and lower case character should be action.

7. all of status command and power on command should be action when low power mode(<0.5W)

8.support volume bar display

9.if system have Lan over Rs232 function, The RS232 command can be support.

4. Command Table

Function	Type	Operation	ASCII
Power	Write	Power On	<CR>*pow=on#<CR>
	Write	Power off	<CR>*pow=off#<CR>
	Read	Power Status	<CR>*pow=?#<CR>
Source Selection	Write	COMPUTER/YPbPr	<CR>*sour=RGB#<CR>
	Write	COMPUTER 2/YPbPr2	<CR>*sour=RGB2#<CR>
	Write	Component	<CR>*sour=ypbr#<CR>
	Write	Component2	<CR>*sour=ypbr2#<CR>
	Write	DVI-A	<CR>*sour=dviA#<CR>
	Write	DVI-D	<CR>*sour=dvid#<CR>
	Write	HDMI	<CR>*sour=hdmi#<CR>
	Write	HDMI 2	<CR>*sour=hdmi2#<CR>
	Write	Composite	<CR>*sour=vid#<CR>
	Write	S-Video	<CR>*sour=svid#<CR>
	Write	Network	<CR>*sour=network#<CR>
	Write	USB Display	<CR>*sour=usbdisplay#<CR>
	Write	USB Reader	<CR>*sour=usbreader#<CR>
	Read	Current source	<CR>*sour=?#<CR>
Audio Control	Write	Mute On	<CR>*mute=on#<CR>
	Write	Mute Off	<CR>*mute=off#<CR>
	Read	Mute Status	<CR>*mute=?#<CR>
	Write	Volume +	<CR>*vol=+#<CR>
	Write	Volume -	<CR>*vol=-#<CR>
	Read	Volume Status	<CR>*vol=?#<CR>
	Write	Mic. Volume +	<CR>*micvol=+#<CR>
	Write	Mic. Volume -	<CR>*micvol=-#<CR>
	Read	Mic. Volume Status	<CR>*micvol=?#<CR>
Audio source select	Write	Audio pass Through off	<CR>*audiosour=off#<CR>
	Write	Audio-Computer1	<CR>*audiosour=RGB#<CR>
	Write	Audio-Computer2	<CR>*audiosour=RGB2#<CR>
	Write	Audio-Video/S-Video	<CR>*audiosour=vid#<CR>
	Write	Audio-Component	<CR>*audiosour=ypbr#<CR>
	Write	Audio-HDMI	<CR>*audiosour=hdmi#<CR>
	Write	Audio-HDMI2	<CR>*audiosour=hdmi2#<CR>

	Read	Audio pass Status	<CR>*audiosour=?#<CR>
Picture Mode	Write	Dynamic	<CR>*appmod=dynamic#<CR>
	Write	Presentation	<CR>*appmod=preset#<CR>
	Write	sRGB	<CR>*appmod=srgb#<CR>
	Write	Bright	<CR>*appmod=bright#<CR>
	Write	Living Room	<CR>*appmod=livingroom#<CR>
	Write	Game	<CR>*appmod=game#<CR>
	Write	Cinema	<CR>*appmod=cine#<CR>
	Write	Standard	<CR>*appmod=std#<CR>
	Write	User1	<CR>*appmod=user1#<CR>
	Write	User2	<CR>*appmod=user2#<CR>
	Write	User3	<CR>*appmod=user3#<CR>
	Write	ISF Day	<CR>*appmod=isfday#<CR>
	Write	ISF Night	<CR>*appmod=isfnight#<CR>
	Write	3D	<CR>*appmod=threed#<CR>
	Read	Picture Mode	<CR>*appmod=?#<CR>
Picture Setting	Write	Contrast +	<CR>*con=+#<CR>
	Write	Contrast -	<CR>*con=-#<CR>
	Read	Contrast value	<CR>*con=?#<CR>
	Write	Brightness +	<CR>*bri=+#<CR>
	Write	Brightness -	<CR>*bri=-#<CR>
	Read	Brightness value	<CR>*bri=?#<CR>
	Write	Color +	<CR>*color=+#<CR>
	Write	Color -	<CR>*color=-#<CR>
	Read	Color value	<CR>*color=?#<CR>
	Write	Sharpness +	<CR>*sharp=+#<CR>
	Write	Sharpness -	<CR>*sharp=-#<CR>
	Read	Sharpness value	<CR>*sharp=?#<CR>
	Write	Color Temperature-Warmer	<CR>*ct=warmer#<CR>
	Write	Color Temperature-Warm	<CR>*ct=warm#<CR>
	Write	Color Temperature-Normal	<CR>*ct=normal#<CR>
	Write	Color Temperature-Cool	<CR>*ct=cool#<CR>
	Write	Color	<CR>*ct=cooler#<CR>

		Temperature-Cooler	
	Write	Color Temperature-lamp native	<CR>*ct=native#<CR>
	Read	Color Temperature Status	<CR>*ct=?#<CR>
	Write	Aspect 4:3	<CR>*asp=4:3#<CR>
	Write	Aspect 16:9	<CR>*asp=16:9#<CR>
	Write	Aspect 16:10	<CR>*asp=16:10#<CR>
	Write	Aspect Auto	<CR>*asp=AUTO#<CR>
	Write	Aspect Real	<CR>*asp=REAL#<CR>
	Write	Aspect Letterbox	<CR>*asp=LBOX#<CR>
	Write	Aspect Wide	<CR>*asp=WIDE#<CR>
	Write	Aspect Anamorphic	<CR>*asp=ANAM#<CR>
	Read	Aspect Status	<CR>*asp=?#<CR>
	Write	Digital Zoom In	<CR>*zoomI#<CR>
	Write	Digital Zoom out	<CR>*zoomO#<CR>
	Write	Auto	<CR>*auto#<CR>
	Write	Brilliant color on	<CR>*BC=on#<CR>
	Write	Brilliant color off	<CR>*BC=off#<CR>
	Read	Brilliant color status	<CR>*BC=?#<CR>
Operation Settings	Write	Projector Position-Front Table	<CR>*pp=FT#<CR>
	Write	Projector Position-Rear Table	<CR>*pp=RE#<CR>
	Write	Projector Position-Rear Ceiling	<CR>*pp=RC#<CR>
	Write	Projector Position-Front Ceiling	<CR>*pp=FC#<CR>
	Write	Quick auto search	<CR>*QAS=on#<CR>
	Write	Quick auto search	<CR>*QAS=off#<CR>
	Read	Quick auto search status	<CR>*QAS=?#<CR>
	Read	Projector Position Status	<CR>*pp=?#<CR>
	Write	Direct Power On-on	<CR>*directpower=on#<CR>
	Write	Direct Power On-off	<CR>*directpower=off#<CR>
	Read	Direct Power On-Status	<CR>*directpower=?#<CR>
	Write	Signal Power On-on	<CR>*autopower=on#<CR>

	Write	Signal Power On-off	<CR>*autopower=off#<CR>
	Read	Signal Power On-Status	<CR>*autopower=?#<CR>
	Write	Standby Settings-Network on	<CR>*standbynet=on#<CR>
	Write	Standby Settings-Network off	<CR>*standbynet=off#<CR>
	Read	Standby Settings-Network Status	<CR>*standbynet=?#<CR>
	Write	Standby Settings-Microphone on	<CR>*standbymic=on#<CR>
	Write	Standby Settings-Microphone off	<CR>*standbymic=off#<CR>
	Read	Standby Settings-Microphone Status	<CR>*standbymic=?#<CR>
	Write	Standby Settings-Monitor Out on	<CR>*standbymnt=on#<CR>
	Write	Standby Settings-Monitor Out off	<CR>*standbymnt=off#<CR>
	Read	Standby Settings-Monitor Out Status	<CR>*standbymnt=?#<CR>
Baud Rate	Write	2400	<CR>*baud=2400#<CR>
	Write	4800	<CR>*baud=4800#<CR>
	Write	9600	<CR>*baud=9600#<CR>
	Write	14400	<CR>*baud=14400#<CR>
	Write	19200	<CR>*baud=19200#<CR>
	Write	38400	<CR>*baud=38400#<CR>
	Write	57600	<CR>*baud=57600#<CR>
	Write	115200	<CR>*baud=115200#<CR>
	Read	Current Baud Rate	<CR>*baud=?#<CR>
Lamp Control	Read	Lamp Hour	<CR>*ltim=?#<CR>
	Read	Lamp2 Hour	<CR>*ltim2=?#<CR>
	Write	Normal mode	<CR>*lampm=lnor#<CR>
	Write	Eco mode	<CR>*lampm=eco#<CR>
	Write	Smart Eco mode	<CR>*lampm=seco#<CR>
	Write(雙燈)	Dual Brightest	<CR>* lampm =dualbr#<CR>
	Write(雙燈)	Dual Reliable	<CR>* lampm =dualre#<CR>

	Write(雙燈)	Single Alternative	<CR>* lampm =single#<CR>
	Write(雙燈)	Single Alternative Eco	<CR>* lampm =singleeco#<CR>
	Read	Lamp Mode Status	<CR>*lampm=?#<CR>
Miscellaneous	Read	Model Name	<CR>*modelname=?#<CR>
	Write	Blank On	<CR>*blank=on#<CR>
	Write	Blank Off	<CR>*blank=off#<CR>
	Read	Blank Status	<CR>*blank=?#<CR>
	Write	Freeze On	<CR>*freeze=on#<CR>
	Write	Freeze Off	<CR>*freeze=off#<CR>
	Read	Freeze Status	<CR>*freeze=?#<CR>
	Write	Menu On	<CR>*menu=on#<CR>
	Write	Menu Off	<CR>*menu=off#<CR>
	Write	Up	<CR>*up#<CR>
	Write	Down	<CR>*down#<CR>
	Write	Right	<CR>*right#<CR>
	Write	Left	<CR>*left#<CR>
	Write	Enter	<CR>*enter#<CR>
	Write	3D Sync Off	<CR>*3d=off#<CR>
	Write	3D Auto	<CR>*3d=auto#<CR>
	Write	3D Sync Top Bottom	<CR>*3d=tb#<CR>
	Write	3D Sync Frame Sequential	<CR>*3d=fs#<CR>
	Write	3D Frame packing	<CR>*3d=fp#<CR>
	Write	3D Side by side	<CR>*3d=sbs#<CR>
	Write	3D inverter disable	<CR>*3d=da#<CR>
	Write	3D inverter	<CR>*3d=iv#<CR>
	Write	2D to 3D	<CR>*3d=2d3d#<CR>
	Write	3D nVIDIA	<CR>*3d=nvidia#<CR>
	Read	3D Sync Status	<CR>*3d=?#<CR>
	Write	Remote Receiver-front+rear	<CR>*rr=fr#<CR>
	Write	Remote Receiver-front	<CR>*rr=f#<CR>
	Write	Remote Receiver-rear	<CR>*rr=r#<CR>
	Read	Remote Receiver Status	<CR>*rr=?#<CR>
	Write	Instant On-on	<CR>*ins=on#<CR>
	Write	Instant On-off	<CR>*ins=off#<CR>

	Read	Instant On Status	<CR>*ins=?#<CR>
	Write	Lamp Saver Mode-on	<CR>*lpsaver=on#<CR>
	Write	Lamp Saver Mode-off	<CR>*lpsaver=off#<CR>
	Read	Lamp Saver Mode Status	<CR>*lpsaver=?#<CR>
	Write	Projection Log In Code on	<CR>*prjlogincode=on#<CR>
	Write	Projection Log In Code off	<CR>*prjlogincode=off#<CR>
	Read	Projection Log In Code Status	<CR>*prjlogincode=?#<CR>
	Write	Broadcasting on	<CR>*broadcasting=on#<CR>
	Write	Broadcasting off	<CR>*broadcasting=off#<CR>
	Read	Broadcasting Status	<CR>*broadcasting=?<CR>
	Write	AMX Device Discovery-on	<CR>*amxdd=on#<CR>
	Write	AMX Device Discovery-off	<CR>*amxdd=off#<CR>
	Read	AMX Device Discovery Status	<CR>*amxdd=?#<CR>
	Read	Mac Address	<CR>*macaddr=?#<CR>
	Write	High Altitude mode on	<CR>*Highaltitude=on#<CR>
	Write	High Altitude mode off	<CR>*Highaltitude=off#<CR>
	Read	High Altitude mode status	<CR>*Highaltitude=?#<CR>

Note: The above function will be vary from model to model. (ex: source, audio settings, aspect ratio..etc)

5. Command Category

Type	Operation	ASCII	Note
Write	Power On	<CR>*pow=on#<CR>	Standby
Write	Power Off	<CR>*pow=off#<CR>	power on
Read	Power Status	<CR>*pow=?#<CR>	Standby, power on, cooling

Type	Operation	ASCII	HEX
Write	Power On	<CR>*pow=on#<CR>	0D 2A 70 6F 77 3D 6F 6E 23 0D

Echo (ASCII)	Echo (Hex)
>*pow=on#*POW=ON#	3E 2A 70 6F 77 3D 6F 6E 23 0D 0D 0A 2A 50 4F 57 3D 4F 4E 23 0D 0A
If system already turn on and send command again	
>*pow=on#*POW=ON#	3E 2A 70 6F 77 3D 6F 6E 23 0D 0D 0A 2A 50 4F 57 3D 4F 4E 23 0D 0A

Type	Operation	ASCII	HEX
Write	Power Off	<CR>*pow=off#<CR>	0D 2A 70 6F 77 3D 6F 66 66 23 0D
Echo (ASCII)		Echo (Hex)	
>*pow=off#*POW=OFF#		3E 2A 70 6F 77 3D 6F 66 66 23 0D 0D 0A 2A 50 4F 57 3D 4F 46 46 23 0D 0A	
If system already turn off and send command again			
>*pow=off#*POW=OFF#		3E 2A 70 6F 77 3D 6F 66 66 23 0D 0D 0A 2A 50 4F 57 3D 4F 46 46 23 0D 0A	

Type	Operation	ASCII	HEX
Read	Power Status	<CR>*pow=?#<CR>	0D 2A 70 6F 77 3D 3F 23 0D
Echo (ASCII)		Echo (Hex)	
> *pow=?#ON#		3E 2A 70 6F 77 3D 3F 23 0D 0D 0A 2A 50 4F 57 3D 4F 4E 23 0D 0A	
Note : This is in power on status.			
>*pow=?#*POW=OFF#		3E 2A 70 6F 77 3D 3F 23 0D 0D 0A 2A 50 4F 57 3D 4F 46 46 23 0D 0A	
Note : This is in power off status.			

5.1 Source Selection

Note: the command definition is for all input source, it may not be available for some model due to the difference of product specification

Type	Operation	ASCII	Note
Write	Computer/YPbPr	<CR>*sour=RGB#<CR>	power on
Write	Computer2/YPbPr2	<CR>*sour=RGB2#<CR>	power on

Write	Component	<CR>*sour=YPbr#<CR>	power on
Write	Component2	<CR>*sour=YPbr2#<CR>	power on
Write	DVI-A	<CR>*sour=dviA#<CR>	power on
Write	DVI-D	<CR>*sour=dvid#<CR>	power on
Write	HDMI	<CR>*sour=hdmi#<CR>	power on
Write	HDMI 2	<CR>*sour=hdmi2#<CR>	power on
Write	Composite	<CR>*sour=vid#<CR>	power on
Write	S-VIDEO	<CR>*sour=svid#<CR>	power on
Write	Network	<CR>*sour=network#<CR>	power on
Write	USB Display	<CR>*sour=usbdisplay#<CR>	power on
Write	USB Reader	<CR>*sour=usbreader#<CR>	power on
Read	Current source	<CR>*sour=?#<CR>	power on

Type	Operation	ASCII	HEX
Write	Computer	<CR>*sour=RGB#<CR>	0D 2A 73 6F 75 72 3D 52 47 42 23 0D
Echo (ASCII)		Echo (Hex)	
>*sour=RGB#*SOUR=RGB#		3E 2A 73 6F 75 72 3D 52 47 42 23 0D 0D 0A 2A 53 4F 55 52 3D 52 47 42 23 0D 0A	

Type	Operation	ASCII	HEX
Write	Computer 2	<CR>*sour=RGB2#<CR>	0D 2A 73 6F 75 72 3D 52 47 42 32 23 0D
Echo (ASCII)		Echo (Hex)	
>*sour=RGB2#*SOUR=RGB2#		3E 2A 73 6F 75 72 3D 52 47 42 32 23 0D 0D 0A 2A 53 4F 55 52 3D 52 47 42 32 23 0D 0A	

Type	Operation	ASCII	HEX
Write	Component	<CR>*sour=YPbr#<CR>	0D 2A 73 6F 75 72 3D 59 50 62 72 23 0D
Echo (ASCII)		Echo (Hex)	
>*sour=YPbr#*SOUR=YPBR#		3E 2A 73 6F 75 72 3D 59 50 62 72 23 0D 0D 0A 2A 53 4F 55 52 3D 59 50 42 52 23 0D 0A	

Type	Operation	ASCII	HEX
Write	Component2	<CR>*sour=YPbr2#<CR>	0D 2A 73 6F 75 72 3D 59 50 62 72 32 23 0D

Echo (ASCII)	Echo (Hex)
>*sour=YPb2r#*SOUR=YPBR2#	3E 2A 73 6F 75 72 3D 59 50 62 32 72 23 0D 0D 0A 2A 53 4F 55 52 3D 59 50 42 52 32 23 0D 0A

Type	Operation	ASCII	HEX
Write	DVI-A	<CR>*sour=dviA#<CR>	0D 2A 73 6F 75 72 3D 64 76 69 41 23 0D

Echo (ASCII)	Echo (Hex)
>*sour=dviA#*SOUR=DVIA#	3E 2A 73 6F 75 72 3D 64 76 69 41 23 0D 0D 0A 2A 53 4F 55 52 3D 44 56 49 41 23 0D 0A

Type	Operation	ASCII	HEX
Write	DVI-D	<CR>*sour=dvid#<CR>	0D 2A 73 6F 75 72 3D 64 76 69 64 23 0D

Echo (ASCII)	Echo (Hex)
>*sour=dvid#*SOUR=DVID#	3E 2A 73 6F 75 72 3D 64 76 69 64 23 0D 0D 0A 2A 53 4F 55 52 3D 44 56 49 44 23 0D 0A

Type	Operation	ASCII	HEX
Write	HDMI	<CR>*sour=hdmi#<CR>	0D 2A 73 6F 75 72 3D 68 64 6D 69 23 0D

Echo (ASCII)	Echo (Hex)
>*sour=hdmi#*SOUR=HDMI#	3E 2A 73 6F 75 72 3D 68 64 6D 69 23 0D 0D 0A 2A 53 4F 55 52 3D 48 44 4D 49 23 0D 0A

Type	Operation	ASCII	HEX
Write	HDMI2	<CR>*sour=hdmi2#<CR>	0D 2A 73 6F 75 72 3D 68 64 6D 69 32 23 0D

Echo (ASCII)	Echo (Hex)
>*sour=hdmi2#*SOUR=HDMI2#	3E 2A 73 6F 75 72 3D 68 64 6D 69 32 23 0D 0D 0A 2A 53 4F 55 52 3D 48 44 4D 49 32 23 0D 0A

Type	Operation	ASCII	HEX
Write	Composite	<CR>*sour=vid#<CR>	0D 2A 73 6F 75 72 3D 76 69 64 23 0D

Echo (ASCII)	Echo (Hex)
>*sour=vid#*SOUR=VID#	3E 2A 73 6F 75 72 3D 76 69 64 23 0D 0D 0A 2A 53 4F

	55 52 3D 56 49 44 23 0D 0A

Type	Operation	ASCII	HEX
Write	SVIDEO	<CR>*sour=svid#<CR>	0D 2A 73 6F 75 72 3D 73 76 69 64 23 0D
Echo (ASCII)		Echo (Hex)	
>*sour=svid#*SOUR=SVID#		3E 2A 73 6F 75 72 3D 73 76 69 64 23 0D 0D 0A 2A 53 4F 55 52 3D 53 56 49 44 23 0D 0A	

Type	Operation	ASCII	HEX
Write	Network	<CR>*sour=network#<CR>	0D 2A 73 6F 75 72 3D 6E 65 74 77 6F 72 6B 23 0D
Echo (ASCII)		Echo (Hex)	
>*sour=network#*SOUR=NETWORK#		3E 2A 73 6F 75 72 3D 6E 65 74 77 6F 72 6B 23 0D 0D 0A 2A 53 4F 55 52 3D 4E 45 54 57 4F 52 4B 23 0D 0A	

Type	Operation	ASCII	HEX
Write	USB Display	<CR>*sour=usbdisplay#<CR>	0D 2A 73 6F 75 72 3D 75 73 62 64 69 73 70 6C 61 79 23 0D
Echo (ASCII)		Echo (Hex)	
>*sour=usbdisplay#*SOUR=USBDISPLAY#		3E 2A 73 6F 75 72 3D 75 73 62 64 69 73 70 6C 61 79 23 0D 0D 0A 2A 53 4F 55 52 3D 55 53 42 44 49 53 50 4C 41 59 23 0D 0A	

Type	Operation	ASCII	HEX
Write	USB Reader	<CR>*sour=usbreader#<CR>	0D 2A 73 6F 75 72 3D 75 73 62 72 65 61 64 65 72 23 0D
Echo (ASCII)		Echo (Hex)	
>*sour=usbreader#*SOUR=USBREADER#		3E 2A 73 6F 75 72 3D 75 73 62 72 65 61 64 65 72 23 0D 0D 0A 2A 53 4F 55 52 3D 55 53 42 52 45 41 44 45 52 23 0D 0A	

Type	Operation	ASCII	HEX
Read	Current source	<CR>*sour=?#<CR>	0D 2A 73 6F 75 72 3D 3F 23 0D
Echo (ASCII)		Echo (Hex)	
>*sour=?#*SOUR=DVID#		3E 2A 73 6F 75 72 3D 3F 23 0D 0D 0A 2A 53 4F 55 52 3D 44 56 49 44 23 0D 0A	

Note : This is an example for inquiry command with current source is DVI-D

5.2 Audio

Type	Operation	ASCII	Note
Write	Mute On	<CR>*mute=on#<CR>	power on
Write	Mute Off	<CR>*mute=off#<CR>	power on
Read	Mute Status	<CR>*mute=?#<CR>	power on
Write	Volume +	<CR>*vol=+#<CR>	power on
Write	Volume -	<CR>*vol=-#<CR>	power on
Read	Volume Status	<CR>*vol=?#<CR>	power on
Write	Mic Volume +	<CR>*micvol=+#<CR>	power on
Write	Mic Volume -	<CR>*micvol=-#<CR>	power on
Read	Mic Volume Status	<CR>*micvol=?#<CR>	power on

Type	Operation	ASCII	HEX
Write	Mute On	<CR>*mute=on#<CR>	0D 2A 6D 75 74 65 3D 6F 6E 23 0D
Echo (ASCII)		Echo (Hex)	
>*mute=on#*MUTE=ON#		3E 2A 6D 75 74 65 3D 6F 6E 23 0D 0D 0A 2A 4D 55 54 45 3D 4F 4E 23 0D 0A	

Type	Operation	ASCII	HEX
Write	Mute Off	<CR>*mute=off#<CR>	0D 2A 6D 75 74 65 3D 6F 66 66 23 0D
Echo (ASCII)		Echo (Hex)	
>*mute=off#*MUTE=OFF#		3E 2A 6D 75 74 65 3D 6F 66 66 23 0D 0D 0A 2A 4D 55 54 45 3D 4F 46 46 23 0D 0A	

Type	Operation	ASCII	HEX
Read	Mute Status	<CR>*mute=?#<CR>	0D 2A 6D 75 74 65 3D 3F 23 0D
Echo (ASCII)		Echo (Hex)	

>*mute=?#*MUTE=OFF#	3E 2A 6D 75 74 65 3D 3F 23 0D 0D 0A 2A 4D 55 54 45 3D 4F 46 46 23 0D 0A

Note : This is an example for inquiry command with current mute is off.

Type	Operation	ASCII	HEX
Write	Volume +	<CR>*vol=+#<CR>	0D 2A 76 6F 6C 3D 2B 23 0D
Echo (ASCII)		Echo (Hex)	
>*vol=+#*VOL=+#		3E 2A 76 6F 6C 3D 2B 23 0D 0D 0A 2A 56 4F 4C 3D 2B 23 0D 0A	

Type	Operation	ASCII	HEX
Write	Volume -	<CR>*vol=-#<CR>	0D 2A 76 6F 6C 3D 2D 23 0D
Echo (ASCII)		Echo (Hex)	
>*vol=-#*VOL=-#		3E 2A 76 6F 6C 3D 2D 23 0D 0D 0A 2A 56 4F 4C 3D 2D 23 0D 0A	

Type	Operation	ASCII	HEX
Read	Volume	<CR>*vol=?#<CR>	0D 2A 76 6F 6C 3D 3F 23 0D
Echo (ASCII)		Echo (Hex)	
>*vol=?#*VOL=5#		3E 2A 76 6F 6C 3D 3F 23 0D 0D 0A 2A 56 4F 4C 3D 35 23 0D 0A	

Note : This is an example for inquiry command with current volume is 5.

Type	Operation	ASCII	HEX
Read	Mic. Volume+	<CR>*micvol=+#<CR>	0D 2A 6D 69 63 76 6F 6C 3D 2B 23 0D
Echo (ASCII)		Echo (Hex)	
>*micvol=+#*MICVOL=+#		3E 2A 6D 69 63 76 6F 6C 3D 2B 23 0D 0D 0A 2A 4D 49 43 56 4F 4C 3D 2B 23 0D 0A	

Type	Operation	ASCII	HEX
Read	Mic. Volume-	<CR>*micvol=-#<CR>	0D 2A 6D 69 63 76 6F 6C 3D 2D 23 0D
Echo (ASCII)		Echo (Hex)	
>*micvol=-#*MICVOL=-#		3E 2A 6D 69 63 76 6F 6C 3D 2D 23 0D 0D 0A 2A 4D 49 43 56 4F 4C 3D 2D 23 0D 0A	

Type	Operation	ASCII	HEX
Read	Mic. Volume Status	<CR>*micvol=?#<CR>	0D 2A 6D 69 63 76 6F 6C 3D 3F 23 0D
Echo (ASCII)		Echo (Hex)	
>*micvol=?#*MICVOL=5#		3E 2A 6D 69 63 76 6F 6C 3D 3F 0D 0D 0A 2A 4D 49 43 56 4F 4C 3D 35 23 0D 0A	

Note : This is an example for inquiry command with current volume is 5.

5.3 Audio source select

Type	Operation	ASCII	Note
Write	Audio pass Through off	<CR>*audiosour=off#<CR>	power on
Write	Audio-Computer1	<CR>*audiosour=RGB#<CR>	power on
Write	Audio-Computer2	<CR>*audiosour=RGB2#<CR>	power on
Write	Audio-Video/S-Video	<CR>*audiosour=vid#<CR>	power on
Write	Audio-Component	<CR>*audiosour=ypbr#<CR>	power on
Write	Audio-HDMI	<CR>*audiosour=hdmi#<CR>	power on
Write	Audio-HDMI2	<CR>*audiosour=hdmi2#<CR>	power on
Read	Audio pass Status	<CR>*audiosour=?#<CR>	power on

Type	Operation	ASCII	HEX
Write	Audio pass Through off	<CR>*audiosour=off#<CR>	0D 2A 61 75 64 69 6F 73 6F 75 72 3D 6F 66 66 23 0D
Echo (ASCII)		Echo (Hex)	
>*audiosour=off#*AUDIOSOUR=OFF#		3E 2A 61 75 64 69 6F 73 6F 75 72 3D 6F 66 66 23 0D 0D 0A 2A 41 55 44 49 4F 53 4F 55 52 3D 4F 46 46 23 0D 0A	

Type	Operation	ASCII	HEX
Write	Audio-Computer1	<CR>*audiosour=RGB#<CR>	0D 2A 61 75 64 69 6F 73 6F 75 72 3D 52 47 42 23 0D
Echo (ASCII)		Echo (Hex)	
>*audiosour=RGB#*AUDIOSOUR=RGB#		3E 2A 61 75 64 69 6F 73 6F 75 72 3D 52 47 42 23 0D 0D 0A 2A 41 55 44 49 4F 53 4F 55 52 3D 52 47 42 23 0D 0A	

Type	Operation	ASCII	HEX

Write	Audio-Computer2	<CR>*audiosour=RGB2#<CR>	0D 2A 61 75 64 69 6F 73 6F 75 72 3D 52 47 42 32 23 0D
Echo (ASCII)		Echo (Hex)	
>*audiosour=RGB2#*AUDIOSOUR=RGB2#		3E 2A 61 75 64 69 6F 73 6F 75 72 3D 52 47 42 32 23 0D 0D 0A 2A 41 55 44 49 4F 53 4F 55 52 3D 52 47 42 32 23 0D 0A	

Type	Operation	ASCII	HEX
Write	Audio-Video/S-Video	<CR>*audiosour=vid#<CR>	0D 2A 61 75 64 69 6F 73 6F 75 72 3D 76 69 64 23 0D
Echo (ASCII)		Echo (Hex)	
>*audiosour=vid#*AUDIOSOUR=VID#		3E 2A 61 75 64 69 6F 73 6F 75 72 3D 76 69 64 23 0D 0D 0A 2A 41 55 44 49 4F 53 4F 55 52 3D 56 49 44 23 0D 0A	

Type	Operation	ASCII	HEX
Write	Audio-Component	<CR>*audiosour=ypbr#<CR>	0D 2A 61 75 64 69 6F 73 6F 75 72 3D 79 70 62 72 23 0D
Echo (ASCII)		Echo (Hex)	
>*audiosour=ypbr#*AUDIOSOUR=YPBR#		3E 2A 61 75 64 69 6F 73 6F 75 72 3D 79 70 62 72 23 0D 0D 0A 2A 41 55 44 49 4F 53 4F 55 52 3D 59 50 42 52 23 0D 0A	

Type	Operation	ASCII	HEX
Write	Audio-HDMI	<CR>*audiosour=hdmi#<CR>	0D 2A 61 75 64 69 6F 73 6F 75 72 3D 79 70 62 72 23 0D
Echo (ASCII)		Echo (Hex)	
>*audiosour=hdmi#*AUDIOSOUR=HDMI#		3E 2A 61 75 64 69 6F 73 6F 75 72 3D 68 64 6D 69 23 0D 0D 0A 2A 41 55 44 49 4F 53 4F 55 52 3D 48 44 4D 49 23 0D 0A	

Type	Operation	ASCII	HEX
Write	Audio-HDMI2	<CR>*audiosour=hdmi2#<CR>	0D 2A 61 75 64 69 6F 73 6F 75 72 3D 79 70 62 72 32 23 0D

Echo (ASCII)	Echo (Hex)
>*audiosour=hdmi2#*AUDIOSOUR=HDMI2#	3E 2A 61 75 64 69 6F 73 6F 75 72 3D 68 64 6D 69 32 23 0D 0D 0A 2A 41 55 44 49 4F 53 4F 55 52 3D 48 44 4D 49 32 23 0D 0A

Type	Operation	ASCII	HEX
Write	Audio pass Status	<CR>*audiosour=?#<CR>	0D 2A 61 75 64 69 6F 73 6F 75 72 3D 79 70 62 72 32 23 0D

Echo (ASCII)	Echo (Hex)
>*audiosour=?#*AUDIOSOUR=?#	3E 2A 61 75 64 69 6F 73 6F 75 72 3D 3F 23 0D 0D 0A 2A 41 55 44 49 4F 53 4F 55 52 3D 3F 23 0D 0A

5.4 Picture Mode

Type	Operation	ASCII	Note
Write	Dynamic	<CR>*appmod=dynamic#<CR>	Source Display
Write	Bright	<CR>*appmod=bright#<CR>	Source Display
Write	Living Room	<CR>*appmod=livingroom#<CR>	Source Display
Write	Game	<CR>*appmod=game#<CR>	Source Display
Write	Presentation	<CR>*appmod=preset#<CR>	Source Display
Write	sRGB	<CR>*appmod=srgb#<CR>	Source Display
Write	High Brightness	<CR>*appmod=hibr#<CR>	Source Display
Write	Cinema	<CR>*appmod=cine#<CR>	Source Display
Write	Standard	<CR>*appmod=std#<CR>	Source Display
Write	User1	<CR>*appmod=user1#<CR>	Source Display
Write	User2	<CR>*appmod=user2#<CR>	Source Display
Write	User3	<CR>*appmod=user3#<CR>	Source Display
Write	ISF Day	<CR>*appmod=isfday#<CR>	Source Display
Write	ISF Night	<CR>*appmod=isfnight#<CR>	Source Display
Write	3D	<CR>*appmod=threed#<CR>	Source Display
Read	Picture Mode	<CR>*appmod=?#<CR>	Source Display

Type	Operation	ASCII	HEX
Write	Dynamic	<CR>*appmod=dynamic#<CR>	0D 2A 61 70 70 6D 6F 64 3D 64 79 6E 61 6D 69 63 23 0D

Echo (ASCII)	Echo (Hex)
>*appmod=dynamic#...*APPMOD=DYNAMIC#	3E 2A 61 70 70 6D 6F 64 3D 64 79 6E 61 6D 69 63 23 0D 0D 0A 2A 41 50 50 4D 4F 44 3D 44 59 4E 41 4D 49 43 23 0D 0A

Type	Operation	ASCII	HEX
Write	Bright	<CR>*appmod=bright#<CR>	0D 2A 61 70 70 6D 6F 64 3D 62 72 69 67 68 74 23 0D

Echo (ASCII)	Echo (Hex)
>*appmod=bright#*APPMOD=BRIGHT#	3E 2A 61 70 70 6D 6F 64 3D 62 72 69 67 68 74 23 0D 0D 0A 2A 41 50 50 4D 4F 44 3D 42 52 49 47 48 54 23 0D 0A

Type	Operation	ASCII	HEX
Write	Living Room	<CR>*appmod=livingroom#<CR>	0D 2A 61 70 70 6D 6F 64 3D 6C 69 76 69 6E 67 72 6F 6F 6D 23 0D

Echo (ASCII)	Echo (Hex)
>*appmod=livingroom#*APPMOD=LIVINGROOM#	3E 2A 61 70 70 6D 6F 64 3D 6C 69 76 69 6E 67 72 6F 6F 6D 23 0D 0D 0A 2A 41 50 50 4D 4F 44 3D 4C 49 56 49 4E 47 52 4F 4F 4D 23 0D 0A

Type	Operation	ASCII	HEX
Write	Game	<CR>*appmod=game#<CR>	0D 2A 61 70 70 6D 6F 64 3D 67 61 6D 65 23 0D

Echo (ASCII)	Echo (Hex)
>*appmod=game#...*APPMOD=GAME#	3E 2A 61 70 70 6D 6F 64 3D 67 61 6D 65 23 0D 0D 0A 2A 41 50 50 4D 4F 44 3D 47 41 4D 45 23 0D 0A

Type	Operation	ASCII	HEX
Write	Presentation	<CR>*appmod=preset#<CR>	0D 2A 61 70 70 6D 6F 64 3D 70 72 65 73 65 74 23 0D

Echo (ASCII)	Echo (Hex)
>*appmod=preset#..*APPMOD=PRESET#	3E 2A 61 70 70 6D 6F 64 3D 70 72 65 73 65 74 23 0D 0D 0A 2A 41 50 50 4D 4F 44 3D 50 52 45 53 45 54 23 0D 0A

Type	Operation	ASCII	HEX
Write	sRGB	<CR>*appmod=srgb#<CR>	0D 2A 61 70 70 6D 6F 64 3D 73 72 67 62 23 0D

Echo (ASCII)	Echo (Hex)
>*appmod=srgb#...*APPMOD=SRGB#	3E 2A 61 70 70 6D 6F 64 3D 73 72 67 62 23 0D 0D 0A 2A 41 50 50 4D 4F 44 3D 53 52 47 42 23 0D 0A

Type	Operation	ASCII	HEX
Write	Cinema	<CR>*appmod=cine#<CR>	0D 2A 61 70 70 6D 6F 64 3D 63 69 6E 65 23 0D

Echo (ASCII)	Echo (Hex)
>*appmod=cine#...*APPMOD=CINE#	3E 2A 61 70 70 6D 6F 64 3D 63 69 6E 65 23 0D 0D 0A 2A 41 50 50 4D 4F 44 3D 43 49 4E 45 23 0D 0A

Type	Operation	ASCII	HEX
Write	Standard	<CR>*appmod=std#<CR>	0D 2A 61 70 70 6D 6F 64 3D 73 74 64 23 0D

Echo (ASCII)	Echo (Hex)
>*appmod=std#...*APPMOD=STD#	3E 2A 61 70 70 6D 6F 64 3D 73 74 64 23 0D 0D 0A 2A 41 50 50 4D 4F 44 3D 53 54 44 23 0D 0A

Type	Operation	ASCII	HEX
Write	User1	<CR>*appmod=user1#<CR>	0D 2A 61 70 70 6D 6F 64 3D 75 73 65 72 31 23 0D

Echo (ASCII)	Echo (Hex)
>*appmod= user1#... *APPMOD=USER1#	3E 2A 61 70 70 6D 6F 64 3D 75 73 65 72 31 23 0D 0D 0A 2A 41 50 50 4D 4F 44 3D 55 53 45 52 31 23 0D 0A

Type	Operation	ASCII	HEX
Write	User2	<CR>*appmod=user2#<CR>	0D 2A 61 70 70 6D 6F 64 3D 75 73 65 72 32 23 0D

Echo (ASCII)	Echo (Hex)
>*appmod=user2#.... *APPMOD=USER2#	3E 2A 61 70 70 6D 6F 64 3D 75 73 65 72 32 23 0D 0D 0A 2A 41 50 50 4D 4F 44 3D 55 53 45 52 32 23 0D 0A

Type	Operation	ASCII	HEX
Write	User3	<CR>*appmod=user3#<CR>	0D 2A 61 70 70 6D 6F 64 3D 75 73 65 72 33 23 0D

Echo (ASCII)	Echo (Hex)
>*appmod= user3#... *APPMOD=USER3#	3E 2A 61 70 70 6D 6F 64 3D 75 73 65 72 33 23 0D 0D 0A 2A 41 50 50 4D 4F 44 3D 55 53 45 52 33 23 0D 0A

Type	Operation	ASCII	HEX
Write	ISF Day	<CR>*appmod=isfday#<CR>	0D 2A 61 70 70 6D 6F 64 3D 69 73 66 64 61 79 23 0D

Echo (ASCII)	Echo (Hex)
>*appmod=isfday#...*APPMOD=ISFDAY#	3E 2A 61 70 70 6D 6F 64 3D 69 73 66 64 61 79 23 0D 0D 0A 2A 41 50 50 4D 4F 44 3D 49 53 46 44 41 59 23 0D 0A

Type	Operation	ASCII	HEX
Write	ISF night	<CR>*appmod=isfnight#<CR>	0D 2A 61 70 70 6D 6F 64 3D 69 73 66 6E 69 67 68 74 23 0D

Echo (ASCII)	Echo (Hex)
>*appmod=isfnight#...*APPMOD=ISFNIGHT#	3E 2A 61 70 70 6D 6F 64 3D 69 73 66 6E 69 67 68 74 23 0D 0D 0A 2A 41 50 50 4D 4F 44 3D 49 53 46 4E 49 47 48 54 23 0D 0A

Type	Operation	ASCII	HEX
Write	3D	<CR>*appmod=threed#<CR>	0D 2A 61 70 70 6D 6F 64 3D 74 68 72 65 65 64 23 0D

Echo (ASCII)	Echo (Hex)
>*appmod=threed#...*APPMOD=THREED#	3E 2A 61 70 70 6D 6F 64 3D 74 68 72 65 65

	64 23 0D 0D 0A 2A 41 50 50 4D 4F 44 3D 54 48 52 45 45 44 23 0D 0A

Type	Operation	ASCII	HEX
Read	Picture Mode	<CR>*appmod=?#<CR>	0D 2A 61 70 70 6D 6F 64 3D 3F 23 0D
Echo (ASCII)		Echo (Hex)	
>*appmod=?#...*APPMOD=SRGB#		3E 2A 61 70 70 6D 6F 64 3D 3F 23 0D 0D 0A 2A 41 50 50 4D 4F 44 3D 53 52 47 42 23 0D 0A	

Note : This is an example for inquiry command with current mode is SRGB.

5.5 Baud Rate

Type	Operation	ASCII	Note
Write	2400	<CR>*baud=2400#<CR>	power on
Write	4800	<CR>*baud=4800#<CR>	power on
Write	9600	<CR>*baud=9600#<CR>	power on
Write	14400	<CR>*baud=14400#<CR>	power on
Write	19200	<CR>*baud=19200#<CR>	power on
Write	38400	<CR>*baud=38400#<CR>	power on
Write	57600	<CR>*baud=57600#<CR>	power on
Write	115200	<CR>*baud=115200#<CR>	power on
Read	Baud Rate	<CR>*baud=?#<CR>	power on

Type	Operation	ASCII	HEX
Write	9600	<CR>*baud=9600#<CR>	0D 2A 62 61 75 64 3D 39 36 30 30 23 0D
Echo (ASCII)		Echo (Hex)	
>*baud=9600#...*BAUD=9600#		3E 2A 62 61 75 64 3D 39 36 30 30 23 0D 0D 0A 2A 42 41 55 44 3D 39 36 30 30 23 0D 0A	

Type	Operation	ASCII	HEX
Write	19200	<CR>*baud=19200#<CR>	0D 2A 62 61 75 64 3D 31 39 32 30 30 23 0D
Echo (ASCII)		Echo (Hex)	

>*baud=19200#...*BAUD=19200#	3E 2A 62 61 75 64 3D 31 39 32 30 30 23 0D 0D 0A 2A 42 41 55 44 3D 31 39 32 30 30 23 0D 0A

Type	Operation	ASCII	HEX
Write	38400	<CR>*baud=38400#<CR>	0D 2A 62 61 75 64 3D 33 38 34 30 30 23 0D
Echo (ASCII)		Echo (Hex)	
>*baud=38400#...*BAUD=38400#		3E 2A 62 61 75 64 3D 33 38 34 30 30 23 0D 0D 0A 2A 42 41 55 44 3D 33 38 34 30 30 23 0D 0A	

Type	Operation	ASCII	HEX
Write	57600	<CR>*baud=57600#<CR>	0D 2A 62 61 75 64 3D 35 37 36 30 30 23 0D
Echo (ASCII)		Echo (Hex)	
>*baud=57600#...*BAUD=57600#		3E 2A 62 61 75 64 3D 35 37 36 30 30 23 0D 0D 0A 2A 42 41 55 44 3D 35 37 36 30 30 23 0D 0A	

Type	Operation	ASCII	HEX
Write	115200	<CR>*baud=115200#<CR>	0D 2A 62 61 75 64 3D 31 31 35 32 30 30 23 0D
Echo (ASCII)		Echo (Hex)	
>*baud=115200#...*BAUD=115200#		3E 2A 62 61 75 64 3D 31 31 35 32 30 30 23 0D 0D 0A 2A 42 41 55 44 3D 31 31 35 32 30 30 23 0D 0A	

Type	Operation	ASCII	HEX
Read	Baud Rate	<CR>*baud=?#<CR>	0D 2A 62 61 75 64 3D 3F 23 0D
Echo (ASCII)		Echo (Hex)	
>*baud=?#...*BAUD=115200#		3E 2A 0D 2A 62 61 75 64 3D 3F 23 0D 0D 0A 2A 42 41 55 44 3D 31 31 35 32 30 30 23 0D 0A	

Note : This is an example for inquiry command with current baud rate is 115200.

5.6 Picture Setting

Type	Operation	ASCII	Note
Write	Contrast +	<CR>*con=+#<CR>	power on
Write	Contrast -	<CR>*con=-#<CR>	power on

Read	Contrast value	<CR>*con=?#<CR>	power on
Write	Brightness +	<CR>*bri=+#<CR>	power on
Write	Brightness -	<CR>*bri=-#<CR>	power on
Read	Brightness value	<CR>*bri=?#<CR>	power on
Write	Color +	<CR>*color=+#<CR>	power on
Write	Color -	<CR>*color=-#<CR>	power on
Read	Color value	<CR>*color=?#<CR>	power on
Write	Sharpness +	<CR>*sharp=+#<CR>	power on
Write	Sharpness -	<CR>*sharp=-#<CR>	power on
Read	Sharpness value	<CR>*sharp=?#<CR>	power on
Write	Color Temperature-Warmer	<CR>*ct=warmer#<CR>	power on
Write	Color Temperature-Warm	<CR>*ct=warm#<CR>	power on
Write	Color Temperature-Normal	<CR>*ct=normal#<CR>	power on
Write	Color Temperature-Cool	<CR>*ct=cool#<CR>	power on
Write	Color Temperature-Cooler	<CR>*ct=cooler#<CR>	power on
Write	Color Temperature-Lamp Native	<CR>*ct=native#<CR>	power on
Read	Color Temperature Status	<CR>*ct=?#<CR>	power on
Write	Aspect 4:3	<CR>*asp=4:3#<CR>	power on
Write	Aspect 16:9	<CR>*asp=16:9#<CR>	power on
Write	Aspect Auto	<CR>*asp=AUTO#<CR>	power on
Write	Aspect Real	<CR>*asp=REAL#<CR>	power on
Write	Aspect Letterbox	<CR>*asp=LBOX#<CR>	power on
Write	Aspect Wide	<CR>*asp=WIDE#<CR>	power on
Write	Aspect Anamorphic	<CR>*asp=ANAM#<CR>	power on
Read	Aspect Status	<CR>*asp=?#<CR>	power on
Write	Zoom In	<CR>*zoomI#<CR>	power on
Write	Zoom out	<CR>*zoomO#<CR>	power on
Write	Auto	<CR>*auto#<CR>	power on, RGB source with

			signal

Type	Operation	ASCII	HEX
Write	Contrast +	<CR>*con=+#<CR>	0D 2A 63 6F 6E 3D 2B 23 0D
Echo (ASCII)		Echo (Hex)	
>*con=+#*CON=+#		3E 2A 63 6F 6E 3D 2B 23 0D 0D 0A 2A 43 4F 4E 3D 2B 23 0D 0A	

Type	Operation	ASCII	HEX
Write	Contrast -	<CR>*con=-#<CR>	0D 2A 63 6F 6E 3D 2D 23 0D
Echo (ASCII)		Echo (Hex)	
>*con=-#*CON=-#		3E 2A 63 6F 6E 3D 2D 23 0D 0D 0A 2A 43 4F 4E 3D 2D 23 0D 0A	

Type	Operation	ASCII	HEX
Read	Contrast value	<CR>*con=?#<CR>	0D 2A 63 6F 6E 3D 3F 23 0D
Echo (ASCII)		Echo (Hex)	
>*con=?#....*CON=0#...		3E 2A 63 6F 6E 3D 3F 23 23 0D 0D 0A 2A 43 4F 4E 3D 30 23 0D 0A	

Type	Operation	ASCII	HEX
Write	Brightness +	<CR>*bri=+#<CR>	0D 2A 62 72 69 3D 2B 23 0D
Echo (ASCII)		Echo (Hex)	
>*bri=+#*BRI=+#		3E 2A 62 72 69 3D 2B 23 0D 0D 0A 2A 42 52 49 3D 2B 23 0D 0A	

Type	Operation	ASCII	HEX
Write	Brightness -	<CR>*bri=-#<CR>	0D 2A 62 72 69 3D 2D 23 0D
Echo (ASCII)		Echo (Hex)	
>*bri=-#*BRI=-#		3E 2A 62 72 69 3D 2D 23 0D 0D 0A 2A 42 52 49 3D 2D 23 0D 0A	

Type	Operation	ASCII	HEX
Read	Brightness value	<CR>*bri=?#<CR>	0D 2A 62 72 69 3D 3F 23 0D

Echo (ASCII)	Echo (Hex)
>*bri=?#....*BRI=50#...	3E 2A 62 72 69 3D 3F 23 23 0D 0D 0A 2A 42 52 49 3D 35 30 23 0D 0A

Type	Operation	ASCII	HEX
Write	Color +	<CR>*color=+#<CR>	0D 2A 63 6F 6C 6F 72 3D 2B 23 0D
Echo (ASCII)		Echo (Hex)	
>*color=+#*COLOR=+#		3E 2A 63 6F 6C 6F 72 3D 2B 23 0D 0D 0A 2A 43 4F 4C 4F 52 3D 2B 23 0D 0A	

Type	Operation	ASCII	HEX
Write	Color -	<CR>*color=-#<CR>	0D 2A 63 6F 6C 6F 72 3D 2D 23 0D
Echo (ASCII)		Echo (Hex)	
>*color=-#*COLOR=-#		3E 2A 63 6F 6C 6F 72 3D 2D 23 0D 0D 0A 2A 43 4F 4C 4F 52 3D 2D 23 0D 0A	

Type	Operation	ASCII	HEX
Read	Color Value	<CR>*color=?#<CR>	0D 2A 63 6F 6C 6F 72 3D 3F 23 0D
Echo (ASCII)		Echo (Hex)	
>*color=?#*COLOR=50 #		3E 2A 63 6F 6C 6F 72 3D 3F 23 0D 0D 0A 2A 43 4F 4C 4F 52 3D 35 30 23 0D 0A	

Type	Operation	ASCII	HEX
Write	Sharpness +	<CR>*sharp=+#<CR>	0D 2A 73 68 61 72 70 3D 2B 23 0D
Echo (ASCII)		Echo (Hex)	
>*sharp=+#*SHARP=+#		3E 2A 73 68 61 72 70 3D 2B 23 0D 0D 0A 2A 53 48 41 52 50 3D 2B 23 0D 0A	

Type	Operation	ASCII	HEX
Write	Sharpness	<CR>*sharp=-#<CR>	0D 2A 73 68 61 72 70 3D 2D 23 0D
Echo (ASCII)		Echo (Hex)	
>*s=-#sharp*SHARP=-#		3E 2A 73 68 61 72 70 3D 2D 23 0D 0D 0A 2A 53 48 41 52 50 3D 2D 23 0D 0A	

Type	Operation	ASCII	HEX

Read	Sharpness Value	<CR>*sharp=?#<CR>	0D 2A 73 68 61 72 70 3D 3F 23 0D
Echo (ASCII)		Echo (Hex)	
>*sharp=?#*SHARP=0 # (vary by picture mode)		3E 2A 73 68 61 72 70 3D 3F 23 0D 0D 0A 2A 53 48 41 52 50 3D 30 23 0D 0A	

Type	Operation	ASCII	HEX
Write	Color Temperature-Warmer	<CR>*ct=warmer#<CR>	0D 2A 63 74 3D 77 61 72 6D 65 72 23 0D
Echo (ASCII)		Echo (Hex)	
>*ct=warmer#*CT=WARMER#		3E 2A 63 74 3D 77 61 72 6D 65 72 23 0D 0D 0A 2A 43 54 3D 57 41 52 4D 45 52 23 0D 0A	

Type	Operation	ASCII	HEX
Write	Color Temperature-Warm	<CR>*ct=warm#<CR>	0D 2A 63 74 3D 77 61 72 6D 23 0D
Echo (ASCII)		Echo (Hex)	
>*ct=warm#*CT=WARM#		3E 2A 63 74 3D 77 61 72 6D 23 0D 0D 0A 2A 43 54 3D 57 41 52 4D 23 0D 0A	

Type	Operation	ASCII	HEX
Write	Color Temperature-Normal	<CR>*ct=normal#<CR>	0D 2A 63 74 3D 6E 6F 72 6D 61 6C 23 0D
Echo (ASCII)		Echo (Hex)	
>*ct=normal#*CT=NORMAL #		3E 2A 63 74 3D 6E 6F 72 6D 61 6C 23 0D 0D 0A 2A 43 54 3D 4E 4F 52 4D 41 4C 23 0D 0A	

Type	Operation	ASCII	HEX
Write	Color Temperature-Cool	<CR>*ct=cool#<CR>	0D 2A 63 74 3D 63 6F 6F 6C 23 0D
Echo (ASCII)		Echo (Hex)	
>*ct=cool#*CT=COOL#		3E 2A 63 74 3D 63 6F 6F 6C 23 0D 0D 0A2A 43 54 3D 43 4F 4F 4C 23 0D 0A	

Type	Operation	ASCII	HEX
Write	Color Temperature-Cool	<CR>*ct=cooler#<CR>	0D 2A 63 74 3D 63 6F 6F 6C 65 72 23 0D

Echo (ASCII)	Echo (Hex)
>*ct=cooler#*CT=COOLER#	3E 2A 63 74 3D 63 6F 6F 6C 65 72 23 0D 0D 0A 2A 43 54 3D 43 4F 4F 4C 45 52 23 0D 0A

Type	Operation	ASCII	HEX
Read	Color Temperature-Lamp Native	<CR>*ct=native#<CR>	0D 2A 63 74 3D 6E 61 74 69 76 65 23 0D

Echo (ASCII)	Echo (Hex)
>*ct=native#*CT=NATIVE#	3E 2A 63 74 3D 6E 61 74 69 76 65 23 0D 0D 0A 2A 43 54 3D 4E 41 54 49 56 45 23 0D 0A

Type	Operation	ASCII	HEX
Read	Color Temperature status	<CR>*ct=?#<CR>	0D 2A 63 74 3D 3F 23 0D

Echo (ASCII)	Echo (Hex)
>*ct=?#*CT=NORMAL # (For example: current status = normal)	3E 2A 63 74 3D 3F 23 0D 0D 0A 2A 43 54 3D 4E 4F 52 4D 41 4C 23 0D 0A

Type	Operation	ASCII	HEX
Write	Aspect 4:3	<CR>*asp=4:3#<CR>	0D 2A 61 73 70 3D 34 3A 33 23 0D

Echo (ASCII)	Echo (Hex)
>*asp=4:3#*ASP=4:3#	3E 2A 61 73 70 3D 34 3A 33 23 0D 0D 0A 2A 41 53 50 3D 34 3A 33 23 0D 0A

Type	Operation	ASCII	HEX
Write	Aspect 16:9	<CR>*asp=16:9#<CR>	0D 2A 61 73 70 3D 31 36 3A 39 23 0D

Echo (ASCII)	Echo (Hex)
>*asp=16:9#*ASP=16:9#	3E 2A 61 73 70 3D 31 36 3A 39 23 0D 0D 0A 2A 41 53 50 3D 31 36 3A 39 23 0D 0A

Type	Operation	ASCII	HEX
Write	Aspect Auto	<CR>*asp=AUTO#<CR>	0D 2A 61 73 70 3D 41 55 54 4F 23 0D

Echo (ASCII)	Echo (Hex)
>*asp=AUTO#*ASP=AUTO#	3E 2A 61 73 70 3D 41 55 54 4F 23 0D 0D 0A 2A 41 53 50 3D 41 55 54 4F 23 0D 0A

Type	Operation	ASCII	HEX
Write	Aspect Real	<CR>*asp=REAL#<CR>	0D 2A 61 73 70 3D 52 45 41 4C 23 0D
Echo (ASCII)		Echo (Hex)	
>*asp=REAL#*ASP=REAL#		3E 2A 61 73 70 3D 52 45 41 4C 23 0D 0D 0A 2A 41 53 50 3D 52 45 41 4C 23 0D 0A	

Type	Operation	ASCII	HEX
Write	Aspect Letterbox	<CR>*asp=LBOX#<CR>	0D 2A 61 73 70 3D 4C 42 4F 58 23 0D
Echo (ASCII)		Echo (Hex)	
>*asp=LBOX#*ASP=LBOX#		3E 2A 61 73 70 3D 4C 42 4F 58 23 0D 0D 0A 2A 41 53 50 3D 4C 42 4F 58 23 0D 0A	

Type	Operation	ASCII	HEX
Write	Aspect Anamorphic	<CR>*asp=ANAM#<CR>	0D 2A 61 73 70 3D 41 4E 41 4D 23 0D
Echo (ASCII)		Echo (Hex)	
>*asp=ANAM#*ASP=ANAM#		3E 2A 61 73 70 3D 41 4E 41 4D 23 0D 0D 0A 2A 41 53 50 3D 41 4E 41 4D 23 0D 0A	

Type	Operation	ASCII	HEX
Write	Aspect Status	<CR>*asp=?#<CR>	0D 2A 61 73 70 3D 3F 23 0D
Echo (ASCII)		Echo (Hex)	
>*asp=?#*ASP=?#		3E 2A 61 73 70 3D 3F 23 0D 0D 0A 2A 41 53 50 3D 3F 23 0D 0A	

Type	Operation	ASCII	HEX
Write	Aspect Wide	<CR>*asp=WIDE#<CR>	0D 2A 61 73 70 3D 57 49 44 45 23 0D
Echo (ASCII)		Echo (Hex)	
>*asp=WIDE#*ASP=WIDE#		3E 2A 61 73 70 3D 57 49 44 45 23 0D 0D 0A 2A 41 53 50 3D 57 49 44 45 23 0D 0A	

Type	Operation	ASCII	HEX
Write	Zoom In	<CR>*zoomI#<CR>	0D 2A 7A 6F 6F 6D 49 23 0D
Echo (ASCII)		Echo (Hex)	
>*zoomI #*ZOOMI#		3E 2A 7A 6F 6F 6D 49 23 0D 0D 0A 2A 5A 4F 4F 4D 49 23 0D 0A	

Type	Operation	ASCII	HEX
Write	Zoom Out	<CR>*zoomO#<CR>	0D 2A 7A 6F 6F 6D 4F 23 0D
Echo (ASCII)		Echo (Hex)	
>*zoomO #*ZOOMO #		3E 2A 7A 6F 6F 6D 4F 23 0D 0D 0A 2A 5A 4F 4F 4D 4F 23 0D 0A	

Type	Operation	ASCII	HEX
Write	Auto	<CR>*auto#<CR>	0D 2A 61 75 74 6F 23 0D
Echo (ASCII)		Echo (Hex)	
>*auto#*AUTO#		3E 2A 61 75 74 6F 23 0D 0D 0A 2A 41 55 54 4F 23 0D 0A	

5.7 Lamp Control

Type	Operation	ASCII	Note
Read	Lamp Hour	<CR>*ltim=?#<CR>	Lamp usage hour, standby, power on
Read	Lamp2 Hour	<CR>*ltim2=?#<CR>	Lamp usage hour, standby, power on
Write	Normal mode	<CR>*lampm=lnor#<CR>	Power on
Write	Economic mode	<CR>* lampm =eco#<CR>	Power on
Write	Smart Eco mode	<CR>*lampm=seco#<CR>	Power on
Write	Dual Brightest	<CR>* lampm =dualbr#<CR>	Power on
Write	Dual Reliable	<CR>* lampm =dualre#<CR>	Power on
Write	Single Alternative	<CR>* lampm =single#<CR>	Power on
Write	Single Alternative Eco	<CR>* lampm =singleeco#<CR>	Power on
Read	Lamp Mode	<CR>*lampm=?#<CR>	Power on

	Status		

Type	Operation	ASCII	HEX
Read	Lamp Hour	<CR>*ltim=?#<CR>	0D 2A 6C 74 69 6D 3D 3F 23 0D
Echo (ASCII)		Echo (Hex)	
>ltim=?#IM=3#		3E 2A 6C 74 69 6D 3D 3F 23 0D 0D 0A 2A 4C 54 49 4D 3D 33 23 0D 0A	

Type	Operation	ASCII	HEX
Read	Lamp 2 Hour	<CR>*ltim2=?#<CR>	0D 2A 6C 74 69 6D 32 3D 3F 23 0D
Echo (ASCII)		Echo (Hex)	
>ltim=?#IM=3#		3E 2A 6C 74 69 6D 32 3D 3F 23 0D 0D 0A 2A 4C 54 49 4D 3D 33 23 0D 0A	

Type	Operation	ASCII	HEX
Write	Normal mode	<CR>*lampm=lnor#<CR>	0D 2A 6C 61 6D 70 6D 3D 6C 6E 6F 72 23 0D
Echo (ASCII)		Echo (Hex)	
>*lampm = lnor #LAMPM=LNOR*		3E 2A 6C 61 6D 70 6D 3D 6C 6E 6F 72 23 23 0D 0D 0A 23 4C 41 4D 50 4D 3D 4C 4E 4F 52 2A 0D 0A	

Type	Operation	ASCII	HEX
Write	Economic mode	<CR>*lampm =eco#<CR>	0D 2A 6C 61 6D 70 6D 3D 65 63 6F 23 0D
Echo (ASCII)		Echo (Hex)	
> .*lampm =eco#*LAMPM=ECO#		3E 2A 6C 61 6D 70 6D 3D 65 63 6F 23 0D 0D 0A 2A 4C 41 4D 50 4D 3D 45 43 4F 23 0D 0A	

Type	Operation	ASCII	HEX
Write	Smart Eco mode	<CR>*lampm =seco#<CR>	0D 2A 6C 61 6D 70 6D 20 3D 73 65 63 6F 23 0D
Echo (ASCII)		Echo (Hex)	
>*lampm =seco#*LAMPM=SECO#		3E 2A 6C 61 6D 70 6D 20 3D 73 65 63 6F 23 0D 0D 0A 2A 4C 41 4D 50 4D 3D 53 45 43 4F 23 0D 0A	

Type	Operation	ASCII	HEX
Write	Dual Brightness	<CR>*lampm =dualbr#<CR>	0D 2A 6C 61 6D 70 6D 3D 64 75 61 6C 62 72 23 0D
Echo (ASCII)		Echo (Hex)	
>*lampm =dualbr#*LAMPM=DUALBR#		3E 2A 6C 61 6D 70 6D 3D 64 75 61 6C 62 72 23 0D 0D 0A 2A 4C 41 4D 50 4D 3D 44 55 41 4C 42 52 23 0D 0A	

Type	Operation	ASCII	HEX
Write	Dual Reliable	<CR>*lampm =dualre#<CR>	0D 2A 6C 61 6D 70 6D 3D 64 75 61 6C 72 65 23 0D
Echo (ASCII)		Echo (Hex)	
>*lampm =dualre#*LAMPM=DUALRE#		3E 2A 6C 61 6D 70 6D 3D 64 75 61 6C 72 65 23 0D 0D 0A 2A 4C 41 4D 50 4D 3D 44 55 41 4C 52 45 23 0D 0A	

Type	Operation	ASCII	HEX
Write	Single Alternative	<CR>* lampm =signal#<CR>	0D 2A 6C 61 6D 70 6D 3D 73 69 6E 67 6C 65 23 0D
Echo (ASCII)		Echo (Hex)	
> *lampm =signal#*LAMPM=SIGNAL#		3E 0D 2A 6C 61 6D 70 6D 3D 73 69 6E 67 6C 65 23 0D 0D 0D 0A 2A 4C 41 4D 50 4D 3D 53 49 47 4E 41 4C 23 0D 0A	

Type	Operation	ASCII	HEX
Write	Single Alternative Eco	<CR>* lampm =singleeco#<CR>	0D2A 6C 61 6D 70 6D 3D 73 69 6E 67 6C 65 65 63 6F 23 0D
Echo (ASCII)		Echo (Hex)	
> *lampm =single#*LAMPM=SINGLEECO#		3E 0D 2A 6C 61 6D 70 6D 3D 73 69 6E 67 6C 65 65 63 6F 23 0D 0D 0D 0A 2A 4C 41 4D 50 4D 3D 53 49 4E 47 4C 45 45 43 4F 23 0D 0A	

Type	Operation	ASCII	HEX
Read	Lamp Mode Status	<CR>*lampm=?#<CR>	0D 2A 6C 61 6D 70 6D 3D 3F 23 0D
Echo (ASCII)		Echo (Hex)	
>*lampm		3E 2A 6C 61 6D 70 6D 3D 3F 23 23 0D 0D 0A 2A 4C 41	

= ?#....*LAMPM=SINGLE#...	4D 50 4D 3D 53 49 4E 47 4C 45 23 0D 0A

Note 1: This is an example for inquiry command with current lamp usage hour is 3.

Note 2: A reading time(N seconds) is necessary for this function at power saving mode(standby power < 1W).

Note 3: Power saving mode(standby power < 1W) is in the condition of ……..

5.8 Miscellaneous

Type	Operation	ASCII	Note
Read	Model Name	<CR>*modelname=?#<CR>	standby, power on
Write	Blank On	<CR>*blank=on#<CR>	power on
Write	Blank Off	<CR>*blank=off#<CR>	power on
Read	Blank Status	<CR>*blank=?#<CR>	power on
Write	Freeze On	<CR>*freeze=on#<CR>	power on
Write	Freeze Off	<CR>*freeze=off#<CR>	power on
Read	Freeze Status	<CR>*freeze=?#<CR>	power on
Write	Menu On	<CR>*menu=on#<CR>	power on
Write	Menu Off	<CR>*menu=off#<CR>	power on
Write	Up	<CR>*up#<CR>	power on
Write	Down	<CR>*down#<CR>	power on
Write	Right	<CR>*right#<CR>	power on
Write	Left	<CR>*left#<CR>	power on
Write	Enter	<CR>*enter#<CR>	power on
Write	3D Sync Off	<CR>*3d=off#<CR>	power on
Write	3D Auto	<CR>*3d=auto#<CR>	power on
Write	3D Frame packing	<CR>*3d=fp#<CR>	power on
Write	3D Side by side	<CR>*3d=sbs#<CR>	power on
Write	3D inverter disable	<CR>*3d=da#<CR>	power on
Write	3D inverter	<CR>*3d=iv#<CR>	power on
Write	2D to 3D	<CR>*3d=2d3d#<CR>	power on
Write	3D nVIDIA	<CR>*3d=nvidia#<CR>	power on
Write	3D Sync Top Bottom	<CR>*3d=tb#<CR>	power on

Write	3D Sync Frame Sequential	<CR>*3d=fs#<CR>	power on
Read	3D Sync Status	<CR>*3d=?#<CR>	power on
Write	Remote Receiver-front+rear	<CR>*rr=fr#<CR>	power on
Write	Remote Receiver-front	<CR>*rr=f#<CR>	power on
Write	Remote Receiver-rear	<CR>*rr=r#<<CR>	power on
Read	Remote Receiver Status	<CR>*rr=?#<CR>	power on
Write	Instant On-on	<CR>*ins=on#<CR>	power on
Write	Instant On-off	<CR>*ins=off#<CR>	power on
Read	Instant On Status	<CR>*ins=?#<CR>	power on
Write	Lamp Saver Mode-on	<CR>*lpsaver=on#<CR>	power on
Write	Lamp Saver Mode-off	<CR>*lpsaver=off#<CR>	power on
Read	Lamp Saver Mode Status	<CR>*lpsaver=?#<CR>	power on
Write	Projection Log In Code on	<CR>*prjlogincode=on#<CR>	power on
Write	Projection Log In Code off	<CR>*prjlogincode=off#<CR>	power on
Read	Projection Log In Code Status	<CR>*prjlogincode=?#<CR>	power on
Write	Broadcasting on	<CR>*broadcasting=on#<CR>	power on
Write	Broadcasting off	<CR>*broadcasting=off <CR>	power on
Read	Broadcasting Status	<CR>*broadcasting=?<CR>	power on
Write	AMX Device Discovery-on	<CR>*amxdd=on#<CR>	power on
Write	AMX Device	<CR>*amxdd=off#<CR>	power on

	Discovery-off		
Read	AMX Device Discovery Status	<CR>*amxdd=?#<CR>	power on
Read	Mac Address	<CR>*macaddr=?#<CR>	power on

Type	Operation	ASCII	HEX
Read	Model Name	<CR>*modelname=?#<CR>	0D 2A 6D 6F 64 65 6C 6E 61 6D 65 3D 3F 23 0D
Echo (ASCII)		Echo (Hex)	
>*modelname=?#*MODELNAME=MS612ST# (For example)		3E 2A 6D 6F 64 65 6C 6E 61 6D 65 3D 3F 23 0D 0D 0A 2A 4D 4F 44 45 4C 4E 41 4D 45 3D 4D 53 36 31 32 53 54 23 0D 0A	

Type	Operation	ASCII	HEX
Write	Blank On	<CR>*blank=on#<CR>	0D 2A 62 6C 61 6E 6B 3D 6F 6E 23 0D
Echo (ASCII)		Echo (Hex)	
>*blank=on#*BLANK=ON#		3E 2A 62 6C 61 6E 6B 3D 6F 6E 23 0D 0D 0A 2A 42 4C 41 4E 4B 3D 4F 4E 23 0D 0A	

Type	Operation	ASCII	HEX
Write	Blank Off	<CR>*blank=off#<CR>	0D 2A 62 6C 61 6E 6B 3D 6F 66 66 23 0D
Echo (ASCII)		Echo (Hex)	
>*blank=off#*BLANK=OFF#		3E 2A 62 6C 61 6E 6B 3D 6F 66 66 23 0D 0D 0A 2A 42 4C 41 4E 4B 3D 4F 46 46 23 0D 0A	

Type	Operation	ASCII	HEX
Read	Blank Status	<CR>*blank=?#<CR>	0D 2A 62 6C 61 6E 6B 3D 3F 23 0D
Echo (ASCII)		Echo (Hex)	
>*blank=?#*BLANK=OFF#		3E 2A 62 6C 61 6E 6B 3D 3F 23 0D 0D 0A 2A 42 4C 41 4E 4B 3D 4F 46 46 23 0D 0A	

Type	Operation	ASCII	HEX

Write	Freeze On	<CR>*freeze=on#<CR>	0D 2A 66 72 65 65 7A 65 3D 6F 6E 23 0D
Echo (ASCII)		Echo (Hex)	
>*freeze=on#*FREEZE=ON#		3E 2A 66 72 65 65 7A 65 3D 6F 6E 23 0D 0D 0A 2A 46 52 45 45 5A 45 3D 4F 4E 23 0D 0A	

Type	Operation	ASCII	HEX
Write	Freeze Off	<CR>*freeze=off#<CR>	0D 2A 66 72 65 65 7A 65 3D 6F 66 66 23 0D
Echo (ASCII)		Echo (Hex)	
>*freeze=off#*FREEZE=OFF#		3E 2A 66 72 65 65 7A 65 3D 6F 66 66 23 0D 0D 0A 2A 46 52 45 45 5A 45 3D 4F 46 46 23 0D 0A	

Type	Operation	ASCII	HEX
Read	Freeze Status	<CR>*freeze=?#<CR>	0D 2A 66 72 65 65 7A 65 3D 3F 23 0D
Echo (ASCII)		Echo (Hex)	
>*freeze=?#*FREEZE=OFF#		3E 2A 66 72 65 65 7A 65 3D 3F 23 0D 0D 0A 2A 46 52 45 45 5A 45 3D 4F 46 46 23 0D 0A	

Type	Operation	ASCII	HEX
Write	Menu On	<CR>*menu=on#<CR>	0D 2A 6D 65 6E 75 3D 6F 6E 23 0D
Echo (ASCII)		Echo (Hex)	
>*menu=on#*MENU=ON#		3E 2A 6D 65 6E 75 3D 6F 6E 23 0D 0D 0A 2A 4D 45 4E 55 3D 4F 4E 23 0D 0A	

Type	Operation	ASCII	HEX
Write	Menu Off	<CR>*menu=off#<CR>	0D 2A 6D 65 6E 75 3D 6F 66 66 23 0D
Echo (ASCII)		Echo (Hex)	
>*menu=on#*MENU=OFF#		3E 2A 6D 65 6E 75 3D 6F 66 66 23 0D 0D 0A 2A 4D 45 4E 55 3D 4F 46 46 23 0D 0A	

Type	Operation	ASCII	HEX

Write	Up	<CR>*up#<CR>	0D 2A 75 70 23 0D
Echo (ASCII)		Echo (Hex)	
>*up#*UP#		3E 2A 75 70 23 0D 0D 0A 2A 55 50 23 0D 0A	

Type	Operation	ASCII	HEX
Write	Down	<CR>*down#<CR>	0D 2A 64 6F 77 6E 23 0D
Echo (ASCII)		Echo (Hex)	
>*down#*DOWN#		3E 2A 64 6F 77 6E 23 0D 0D 0A 2A 44 4F 57 4E 23 0D 0A	

Type	Operation	ASCII	HEX
Write	Right	<CR>*right#<CR>	0D 2A 72 69 67 68 74 23 0D
Echo (ASCII)		Echo (Hex)	
>*right#*RIGHT#		3E 2A 72 69 67 68 74 23 0D 0D 0A 2A 52 49 47 48 54 23 0D 0A	

Type	Operation	ASCII	HEX
Write	Left	<CR>*left#<CR>	0D 2A 6C 65 66 74 23 0D
Echo (ASCII)		Echo (Hex)	
>*left#*LEFT#		3E 2A 6C 65 66 74 23 0D 0D 0A 2A 4C 45 46 54 23 0D 0A	

Type	Operation	ASCII	HEX
Write	Enter	<CR>*enter#<CR>	0D 2A 65 6E 74 65 72 23 0D
Echo (ASCII)		Echo (Hex)	
>*enter#*ENTER#		3E 2A 65 6E 74 65 72 23 0D 0D 0A 2A 45 4E 54 45 52 23 0D 0A	

Type	Operation	ASCII	HEX
Write	3D Sync Off	<CR>*3d=off#<CR>	0D 2A 33 64 3D 6F 66 66 23 0D
Echo (ASCII)		Echo (Hex)	
>*3d=off#*3D=OFF#		3E 2A 33 64 3D 6F 66 66 23 0D 0D 0A 2A 33 44 3D 4F 46 46 23 0D 0A	

Type	Operation	ASCII	HEX
Write	3D Sync auto	<CR>*3d=auto#<CR>	0D 2A 33 64 3D 61 75 74 6F 23 0D
Echo (ASCII)		Echo (Hex)	
>*3d=auto#*3D=auto#		3E 2A 33 64 3D 61 75 74 6F 23 0D 0D 0A 2A 33 44 3D 61 75 74 6F 23 0D 0A	

Type	Operation	ASCII	HEX
Write	3D Frame packing	<CR>*3d=fp#<CR>	0D 2A 33 64 3D 66 70 23 0D
Echo (ASCII)		Echo (Hex)	
>*3d=fp#*3D=fp#		3E 2A 33 64 3D 66 70 23 0D 0D 0A 2A 33 44 3D 66 70 23 0D 0A	

Type	Operation	ASCII	HEX
Write	3D Side by side	<CR>*3d=sbs#<CR>	0D 2A 33 64 3D 73 62 73 23 0D
Echo (ASCII)		Echo (Hex)	
>*3d=sbs#*3D=sbs#		3E 2A 33 64 3D 73 62 73 23 0D 0D 0A 2A 33 44 3D 73 62 73 23 0D 0A	

Type	Operation	ASCII	HEX
Write	3D inverter disable	<CR>*3d=da# <CR>	0D 2A 33 64 3D 64 61 23 0D
Echo (ASCII)		Echo (Hex)	
>*3d=da#*3D=da#		3E 2A 33 64 3D 64 61 23 0D 0D 0A 2A 33 44 3D 64 61 23 0D 0A	

Type	Operation	ASCII	HEX
Write	3D inverter	<CR>*3d=iv#<CR>	0D 2A 33 64 3D 69 76 23 0D
Echo (ASCII)		Echo (Hex)	
>*3d=iv#*3D=iv#		3E 2A 33 64 3D 69 76 23 0D 0D 0A 2A 33 44 3D 69 76 23 0D 0A	

Type	Operation	ASCII	HEX
Write	2D to 3D	<CR>*3d=2d3d#<CR>	0D 2A 33 64 3D 32 64 33 64

			23 0D
Echo (ASCII)		Echo (Hex)	
>*3d=2d3d#*3D=2d3d#		3E 2A 33 64 3D 32 64 33 64 23 0D 0D 0A 2A 33 44 3D 32 64 33 64 23 0D 0A	

Type	Operation	ASCII	HEX
Write	nVidia 3D	<CR>*3d=nvidia#<CR>	0D 2A 33 64 3D 6E 76 69 64 69 61 23 0D
Echo (ASCII)		Echo (Hex)	
>*3d=nvidia#*3D=NVIDIA#		3E 2A 33 64 3D 6E 76 69 64 69 61 23 2A 33 44 3D 4E 56 49 44 49 41 23 0D 0A	

Type	Operation	ASCII	HEX
Write	3D Sync Top Bottom	<CR>*3d=tb#<CR>	0D 2A 33 64 3D 74 62 23 0D
Echo (ASCII)		Echo (Hex)	
>*3d=tb#*3D=TB#		3E 2A 33 64 3D 74 62 23 0D 0D 0A 2A 33 44 3D 54 42 23 0D 0A	

Type	Operation	ASCII	HEX
Write	3D Sync Frame Sequential	<CR>*3d=fs#<CR>	0D 2A 33 64 3D 66 73 23 0D
Echo (ASCII)		Echo (Hex)	
>*3d=fs#*3D=FS#		3E 2A 33 64 3D 66 73 23 0D 0D 0A 2A 33 44 3D 46 53 23 0D 0A	

Type	Operation	ASCII	HEX
Read	3D Sttus	<CR>*3d=?#<CR>	0D 2A 33 64 3D 3F 23 0D
Echo (ASCII)		Echo (Hex)	
>*3d=?#*3D=?#		3E 2A 33 64 3D 3F 23 0D 0D 0A 2A 33 44 3D 3F 23 0D 0A	

Type	Operation	ASCII	HEX
Write	Remote	<CR>*rr=fr#<CR>	0D 2A 72 72 3D 66 72 23 0D

	Receiver-front+rear		
Echo (ASCII)		Echo (Hex)	
>*rr=frr#*RR=FR#		3E 2A 72 72 3D 66 72 23 0D 0D 0A 2A 52 52 3D 46 52 23 0D 0A	

Type	Operation	ASCII	HEX
Write	Remote Receiver-front	<CR>*rr=f#<CR>	0D 2A 72 72 3D 66 23 0D
Echo (ASCII)		Echo (Hex)	
>*rr=f#*RR=F#		3E 2A 72 72 3D 66 23 0D 0D 0A 2A 52 52 3D 46 23 0D 0A	

Type	Operation	ASCII	HEX
Write	Remote Receiver-rear	<CR>*rr=r#<CR>	0D 2A 72 72 3D 72 23 0D
Echo (ASCII)		Echo (Hex)	
>*rr=r#*RR=R#		3E 2A 72 72 3D 72 23 0D 0D 0A 2A 52 52 3D 52 23 0D 0A	

Type	Operation	ASCII	HEX
Write	Remote Receiver Status	<CR>*rr=?#<CR>	0D 2A 72 72 3D 3F 23 0D
Echo (ASCII)		Echo (Hex)	
>*rr=?#*RR=?#		3E 2A 72 72 3D 3F 23 0D 0D 0A 2A 52 52 3D 3F 23 0D 0A	

Type	Operation	ASCII	HEX
Write	Instant On-on	<CR>*rins=on#<CR>	0D 2A 72 69 6E 73 3D 6F 6E 23 0D
Echo (ASCII)		Echo (Hex)	
>*rins=on#*RINS=ON#		3E 2A 72 69 6E 73 3D 6F 6E 23 0D 0D 0A 2A 52 49 4E 53 3D 4F 4E 23 0D 0A	

Type	Operation	ASCII	HEX
Write	Instant	<CR>*rins=off#<CR>	0D 2A 72 69 6E 73 3D 6F 66

	On-off		66 23 0D
Echo (ASCII)		Echo (Hex)	
>*rins=off#*RINS=OFF#		3E 2A 72 69 6E 73 3D 6F 66 66 23 0D 0D 0A 2A 52 49 4E 53 3D 4F 46 46 23 0D 0A	

Type	Operation	ASCII	HEX
Read	Instant On Status	<CR>*rins=?#<CR>	0D 2A 72 69 6E 73 3D 3F 23 0D
Echo (ASCII)		Echo (Hex)	
>*rins=?#*RINS=?#		3E 2A 72 69 6E 73 3D 3F 23 0D 0D 0A 2A 52 49 4E 53 3D 3F 23 0D 0A	

Type	Operation	ASCII	HEX
Write	Lamp Saver Mode-on	<CR>*lpsaver=on#<CR>	0D 2A 6C 70 73 61 76 65 72 3D 6F 6E 23 0D
Echo (ASCII)		Echo (Hex)	
>*lpsaver=on#*LPSAVER=ON#		3E 2A 6C 70 73 61 76 65 72 3D 6F 6E 23 0D 0D 0A 2A 4C 50 53 41 56 45 52 3D 4F 4E 23 0D 0A	

Type	Operation	ASCII	HEX
Write	Lamp Saver Mode-off	<CR>*lpsaver=off#<CR>	0D 2A 6C 70 73 61 76 65 72 3D 6F 66 66 23 0D
Echo (ASCII)		Echo (Hex)	
>*lpsaver=off#*LPSAVER=OFF#		3E 2A 6C 70 73 61 76 65 72 3D 6F 66 66 23 0D 0D 0A 2A 4C 50 53 41 56 45 52 3D 4F 46 46 23 0D 0A	

Type	Operation	ASCII	HEX
Read	Lamp Saver Mode Status	<CR>*lpsaver=?#<CR>	0D 2A 6C 70 73 61 76 65 72 3D 3F 23 0D
Echo (ASCII)		Echo (Hex)	
>*lpsaver=?#* LPSAVER=?#		3E 2A 6C 70 73 61 76 65 72 3D 3F 23 0D 0D 0A 2A 20 4C 50 53 41 56 45 52 3D 3F 23 0D 0A	

Type	Operation	ASCII	HEX

Write	Projection Log In Code on	<CR>*prjlogincode=on#<CR>	0D 2A 70 72 6A 6C 6F 67 69 6E 63 6F 64 65 3D 6F 6E 23 0D
Echo (ASCII)		Echo (Hex)	
>*prjlogincode=on#*PRJLOGINCODE=ON#		3E 2A 70 72 6A 6C 6F 67 69 6E 63 6F 64 65 3D 6F 6E 23 0D 0D 0A 2A 50 52 4A 4C 4F 47 49 4E 43 4F 44 45 3D 4F 4E 23 0D 0A	

Type	Operation	ASCII	HEX
Write	Projection Log In Code off	<CR>*prjlogincode=off#<CR>	0D 2A 6C 70 73 61 76 65 72 3D 3F 23 0D
Echo (ASCII)		Echo (Hex)	
>*prjlogincode=off#*PRJLOGINCODE=OFF#		3E 2A 70 72 6A 6C 6F 67 69 6E 63 6F 64 65 3D 6F 66 66 23 0D 0D 0A 2A 50 52 4A 4C 4F 47 49 4E 43 4F 44 45 3D 4F 46 46 23 0D 0A	

Type	Operation	ASCII	HEX
Read	Projection Log In Code Status	<CR>*prjlogincode=?#<CR>	0D 2A 70 72 6A 6C 6F 67 69 6E 63 6F 64 65 3D 3F 23 0D
Echo (ASCII)		Echo (Hex)	
>*prjlogincode=?#*PRJLOGINCODE=?#		3E 2A 70 72 6A 6C 6F 67 69 6E 63 6F 64 65 3D 3F 23 0D 0D 0A 2A 50 52 4A 4C 4F 47 49 4E 43 4F 44 45 3D 3F 23 0D 0A	

Type	Operation	ASCII	HEX
Write	Broadcasting on	<CR>*broadcasting=on#<CR>	0D 2A 62 72 6F 61 64 63 61 73 74 69 6E 67 3D 6F 6E 23 0D
Echo (ASCII)		Echo (Hex)	
>*broadcasting=on#*BROADCASTING=ON#		3E 2A 62 72 6F 61 64 63 61 73 74 69 6E 67 3D 6F 6E 23 0D 0D 0A 2A 42 52 4F 41 44 43 41 53 54 49 4E 47 3D 4F 4E 23 0D 0A	

Type	Operation	ASCII	HEX

Write	Broadcasting on	<CR>*broadcasting=off#<CR>	0D 2A 6C 70 73 61 76 65 72 3D 3F 23 0D
Echo (ASCII)		Echo (Hex)	
>*broadcasting=off#*BROADCASTING=OFF#		3E 2A 62 72 6F 61 64 63 61 73 74 69 6E 67 3D 6F 66 66 23 0D 0D 0A 2A 42 52 4F 41 44 43 41 53 54 49 4E 47 3D 4F 46 46 23 0D 0A	

Type	Operation	ASCII	HEX
Write	Broadcasting Status	<CR>*broadcasting=?#<CR>	0D 2A 62 72 6F 61 64 63 61 73 74 69 6E 67 3D 3F 23 0D
Echo (ASCII)		Echo (Hex)	
>*broadcasting=?#*BROADCASTING=?#		3E 2A 62 72 6F 61 64 63 61 73 74 69 6E 67 3D 3F 23 0D 0D 0A 2A 42 52 4F 41 44 43 41 53 54 49 4E 47 3D 3F 23 0D 0A	

Type	Operation	ASCII	HEX
Write	AMX Device Discovery-on	<CR>*amxdd=on#<CR>	0D 2A 61 6D 78 64 64 3D 6F 6E 23 0D
Echo (ASCII)		Echo (Hex)	
>*amxdd=on#*AMXDD=ON#		3E 2A 61 6D 78 64 64 3D 6F 6E 23 0D 0D 0A 2A 41 4D 58 44 44 3D 4F 4E 23 0D 0A	

Type	Operation	ASCII	HEX
Write	AMX Device Discovery-off	<CR>*amxdd=off#<CR>	0D2A 61 6D 78 64 64 3D 6F 66 66 23 0D
Echo (ASCII)		Echo (Hex)	
>*amxdd=off#*AMXDD=OFF#		3E 2A 61 6D 78 64 64 3D 6F 66 66 23 0D 0D 0A 2A 41 4D 58 44 44 3D 4F 46 46 23 0D 0A	

Type	Operation	ASCII	HEX
Read	AMX Device Discovery Status	<CR>*amxdd=?#<CR>	0D 2A 61 6D 78 64 64 3D 3F 23 0D
Echo (ASCII)		Echo (Hex)	

>*amxdd=?#*AMXDD=?#	3E 2A 61 6D 78 64 64 3D 3F 23 0D 0D 0A 2A 41 4D 58 44 44 3D 3F 23 0D 0A

Type	Operation	ASCII	HEX
Read	Mac Address	<CR>*macaddr=?#<CR>	0D 2A 6D 61 63 61 64 64 72 3D 3F 23 0D
Echo (ASCII)		Echo (Hex)	
>*macaddr=?#*MACADDR=?#		3E 2A 61 6D 78 64 64 3D 6F 6E 23 0D 0D 0A 2A 4D 41 43 41 44 44 52 3D 3F 23 0D 0A	

5.9 Operation Setting

Type	Operation	ASCII	Note
Write	Projector Position-Front Table	<CR>*pp=FT#<CR>	power on
Write	Projector Position-Rear Table	<CR>*pp=RE#<CR>	power on
Write	Projector Position-Rear Ceiling	<CR>*pp=RC#<CR>	power on
Write	Projector Position-Front Ceiling	<CR>*pp=FC#<CR>	power on
Read	Projector Position Status	<CR>*pp=?#<CR>	power on
Write	Direct Power On-on	<CR>*directpower=on#<CR>	power on
Write	Direct Power On-off	<CR>*directpower=off#<CR>	power on
Read	Direct Power On-Status	<CR>*directpower=?#<CR>	power on
Write	Signal Power On-on	<CR>*autopower=on#<CR>	power on
Write	Signal Power On-off	<CR>*autopower=off#<CR>	power on
Write	Signal Power On-Status	<CR>*autopower=?#<CR>	power on
Write	Standby Settings-Network	<CR>*standbynet=on#<CR>	power on

	on		
Write	Standby Settings-Network off	<CR>*standbynet=off#<CR>	power on
Read	Standby Settings-Network Status	<CR>*standbynet=?#<CR>	power on
Write	Standby Settings-Microphone on	<CR>*standbymic=on#<CR>	power on
Write	Standby Settings-Microphone off	<CR>*standbymic=off#<CR>	power on
Write	Standby Settings-Microphone Status	<CR>*standbymic=?#<CR>	power on
Write	Standby Settings-Monitor Out on	<CR>*standbymnt=on#<CR>	power on
Write	Standby Settings-Monitor Out off	<CR>*standbymnt=off#<CR>	power on
Write	Standby Settings-Monitor Out Status	<CR>*standbymnt=?#<CR>	power on

Type	Operation	ASCII	HEX
Read	Projector Position-Front Table	<CR>*pp=FT#<CR>	0D 2A 70 70 3D 46 54 23 0D
Echo (ASCII)		Echo (Hex)	
>*pp=FT#*PP=FT#		3E 2A 70 70 3D 46 54 23 0D 0D 0A 2A 50 50 3D 46 54 23 0D 0A	

Type	Operation	ASCII	HEX
Read	Projector Position-Rear	<CR>*pp=RE##<CR>	0D 2A 70 70 3D 52 45 23 0D

	Table		
Echo (ASCII)		Echo (Hex)	
>*pp=RE#*PP=RE#		3E 2A 70 70 3D 52 45 23 0D 0D 0A 2A 50 50 3D 52 45 23 0D 0A	

Type	Operation	ASCII	HEX
Write	Projector Position-Rear Ceiling	<CR>*pp=RC##<CR>	0D 2A 70 70 3D 52 43 23 0D
Echo (ASCII)		Echo (Hex)	
>*pp=RC#*PP=RC#		3E 2A 70 70 3D 52 43 23 0D 0D 0A 2A 50 50 3D 52 43 23 0D 0A	

Type	Operation	ASCII	HEX
Write	Projector Position-Front Ceiling	<CR>*pp=FC#<CR>	0D 2A 70 70 3D 46 43 23 0D
Echo (ASCII)		Echo (Hex)	
>*pp=FC#*PP=FC#		3E 2A 70 70 3D 46 43 23 0D 0D 0A 2A 50 50 3D 46 43 23 0D 0A	

Type	Operation	ASCII	HEX
Write	Projector Position Status	<CR>*pp=?#<CR>	0D 2A 70 70 3D 3F 23 0D
Echo (ASCII)		Echo (Hex)	
>*pp=?#*PP=?#		3E 2A 70 70 3D 3F 23 0D 0D 0A 2A 50 50 3D 3F 23 0D 0A	

Type	Operation	ASCII	HEX
Write	Direct Power On-on	<CR>*directpower=on#<CR>	0D 2A 64 69 72 65 63 74 70 6F 77 65 72 3D 6F 6E 23 0D
Echo (ASCII)		Echo (Hex)	
>*directpower=on#*DIRECTPOWER=ON#		3E 2A 64 69 72 65 63 74 70 6F 77 65 72 3D 6F 6E 23 0D 0D 0A 2A 44 49 52 45 43 54 50	

	4F 57 45 52 3D 4F 4E 23 0D 0A

Type	Operation	ASCII	HEX
Write	Direct Power On-off	<CR>*directpower=off#<CR>	0D 2A 64 69 72 65 63 74 70 6F 77 65 72 3D 6F 66 66 23 0D
Echo (ASCII)		Echo (Hex)	
>*directpower=off#*DIRECTPOWER=OFF#		3E 2A 64 69 72 65 63 74 70 6F 77 65 72 3D 6F 66 66 23 0D 0D 0A 2A 44 49 52 45 43 54 50 4F 57 45 52 3D 4F 46 46 23 0D 0A	

Type	Operation	ASCII	HEX
Write	Direct Power On-Status	<CR>*directpower=?#<CR>	0D 2A 64 69 72 65 63 74 70 6F 77 65 72 3D 3F 23 0D
Echo (ASCII)		Echo (Hex)	
>*directpower=?#*DIRECTPOWER=?#		3E 2A 64 69 72 65 63 74 70 6F 77 65 72 3D 3F 23 0D 0D 0A 2A 44 49 52 45 43 54 50 4F 57 45 52 3D 3F 23 0D 0A	

Type	Operation	ASCII	HEX
Write	Signal Power On-on	<CR>*autopower=on#<CR>	0D 2A 61 75 74 6F 70 6F 77 65 72 3D 6F 6E 23 0D
Echo (ASCII)		Echo (Hex)	
>*autopower=on#*AUTOPOWER=ON#		3E 2A 61 75 74 6F 70 6F 77 65 72 3D 6F 6E 23 0D 0D 0A 2A 41 55 54 4F 50 4F 57 45 52 3D 4F 4E 23 0D 0A	

Type	Operation	ASCII	HEX
Write	Signal Power On-off	<CR>*autopower=off#<CR>	0D 2A 61 75 74 6F 70 6F 77 65 72 3D 6F 66 66 23 0D
Echo (ASCII)		Echo (Hex)	
>*autopower=off#*AUTOPOWER=OFF#		3E 2A 61 75 74 6F 70 6F 77 65 72 3D 6F 66 66 23 0D 0D 0A 2A 41 55 54 4F 50 4F 57 45 52 3D 4F 46 46 23 0D 0A	

Type	Operation	ASCII	HEX
Write	Signal Power	<CR>*autopower=?#<CR>	0D 2A 61 75 74 6F 70 6F 77

	On-Status		65 72 3D 3F 23 0D
Echo (ASCII)		Echo (Hex)	
>*autopower=?#*AUTOPOWER=?#		3E 2A 61 75 74 6F 70 6F 77 65 72 3D 3F 23 0D 0D 0A 2A 41 55 54 4F 50 4F 57 45 52 3D 3F 23 0D 0A	

Type	Operation	ASCII	HEX
Write	Standby Settings-Network on	<CR>*standbynet=on#<CR>	0D 2A 73 74 61 6E 64 62 79 6E 65 74 3D 6F 6E 23 0D
Echo (ASCII)		Echo (Hex)	
>*standbynet=on#*STANDBYNET=ON#		3E 2A 73 74 61 6E 64 62 79 6E 65 74 3D 6F 6E 23 0D 0D 0A 2A 53 54 41 4E 44 42 59 4E 45 54 3D 4F 4E 23 0D 0A	

Type	Operation	ASCII	HEX
Write	Standby Settings-Network off	<CR>*standbynet=off#<CR>	0D 2A 73 74 61 6E 64 62 79 6E 65 74 3D 6F 66 66 23 0D
Echo (ASCII)		Echo (Hex)	
>*standbynet=off#*STANDBYNET=OFF#		3E 2A 73 74 61 6E 64 62 79 6E 65 74 3D 6F 66 66 23 0D 0D 0A 2A 53 54 41 4E 44 42 59 4E 45 54 3D 4F 46 46 23 0D 0A	

Type	Operation	ASCII	HEX
Write	Standby Settings-Network Status	<CR>*standbynet=?#<CR>	0D 2A 73 74 61 6E 64 62 79 6E 65 74 3D 3F 23 0D
Echo (ASCII)		Echo (Hex)	
>*standbynet=?#*STANDBYNET=?#		3E 2A 73 74 61 6E 64 62 79 6E 65 74 3D 3F 23 0D 0D 0A 2A 53 54 41 4E 44 42 59 4E 45 54 3D 3F 23 0D 0A	

Type	Operation	ASCII	HEX
Write	Standby Settings-Microphone	<CR>*standbymic=on#<CR>	0D 2A 73 74 61 6E 64 62 79 6D 69 63 3D 6F 6E 23 0D

	on		
Echo (ASCII)		Echo (Hex)	
>*standbymic=on#*STANDBYMIC=ON#		3E 2A 73 74 61 6E 64 62 79 6D 69 63 3D 6F 6E 23 0D 0D 0A 2A 53 54 41 4E 44 42 59 4D 49 43 3D 4F 4E 23 0D 0A	

Type	Operation	ASCII	HEX
Write	Standby Settings-Microphone off	<CR>*standbymic=off#<CR>	0D 2A 73 74 61 6E 64 62 79 6D 69 63 3D 6F 66 66 23 0D
Echo (ASCII)		Echo (Hex)	
>*standbymic=off#*STANDBYMIC=OFF#		3E 2A 73 74 61 6E 64 62 79 6D 69 63 3D 6F 66 66 23 0D 0D 0A 2A 53 54 41 4E 44 42 59 4D 49 43 3D 4F 46 46 23 0D 0A	

Type	Operation	ASCII	HEX
Write	Standby Settings-Microphone Status	<CR>*standbymic=?#<CR>	0D 2A 73 74 61 6E 64 62 79 6D 69 63 3D 3F 23 0D
Echo (ASCII)		Echo (Hex)	
>*standbymic=?#*STANDBYMIC=?#		3E 2A 73 74 61 6E 64 62 79 6D 69 63 3D 3F 23 0D 0D 0A 2A 53 54 41 4E 44 42 59 4D 49 43 3D 3F 23 0D 0A	

Type	Operation	ASCII	HEX
Write	Standby Settings-Monitor Out on	<CR>*standbymnt=on#<CR>	0D 2A 73 74 61 6E 64 62 79 6D 6E 74 3D 6F 6E 23 0D
Echo (ASCII)		Echo (Hex)	
>*standbymnt=on#*STANDBYMNT=ON#		3E 2A 73 74 61 6E 64 62 79 6D 6E 74 3D 6F 6E 23 0D 0D 0A 2A 53 54 41 4E 44 42 59 4D 4E 54 3D 4F 4E 23 0D 0A	

Type	Operation	ASCII	HEX
Write	Standby Settings-Monitor	<CR>*standbymnt=off#<CR>	0D 2A 73 74 61 6E 64 62 79 6D 6E 74 3D 6F 66 66 23 0D

	Out on		
Echo (ASCII)		Echo (Hex)	
>*standbymnt=off#*STANDBYMNT=OFF#		3E 2A 73 74 61 6E 64 62 79 6D 6E 74 3D 6F 66 66 23 0D 0D 0A 2A 53 54 41 4E 44 42 59 4D 4E 54 20 3D 4F 46 46 23 0D 0A	

Type	Operation	ASCII	HEX
Write	Standby Settings-Monitor Out Status	<CR>*standbymnt=?#<CR>	0D 2A 73 74 61 6E 64 62 79 6D 6E 74 3D 3F 23 0D
Echo (ASCII)		Echo (Hex)	
>*standbymnt=?#*STANDBYMNT=?#		3E 2A 73 74 61 6E 64 62 79 6D 6E 74 3D 3F 23 0D 0D 0A 2A 53 54 41 4E 44 42 59 4D 4E 54 3D 3F 23 0D 0A	

5.10 Error Code

Type	Operation	ASCII	Note
Read	Error Code	<CR>*error=report#<CR>	

The error code can be shown via RS-232 port. Record the latest 3 times error information. It should report the following item.

Note 1: A reading time(N seconds) is necessary for this function at power saving mode(standby power < 1W).

Note 2: Power saving mode(standby power < 1W) is in the condition of ……..

	Item	Description
1	Error Item	
2	Lamp Usage Hour	
3	Inlet Temp	
4	Outlet Temp	
5	Fan 1 speed	

6	Fan 2 speed	
7	Last Source	

Note: The error item could be discussed after project kicked off.

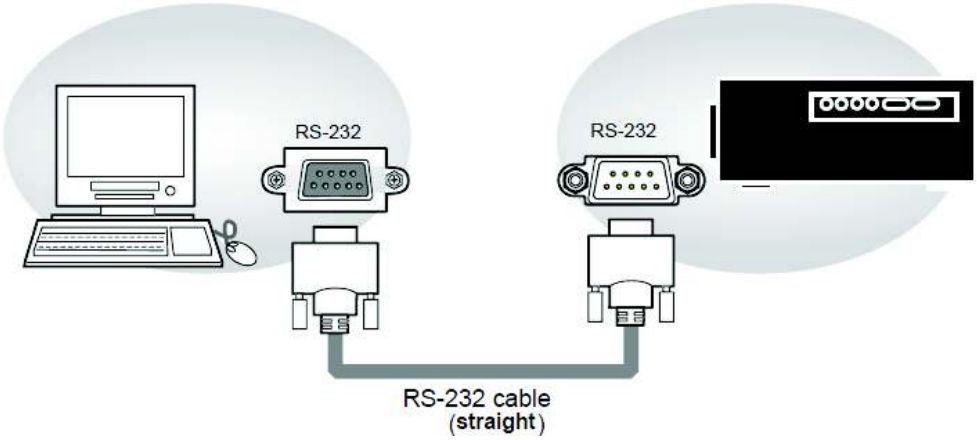
APPENDIX2. RS-232 Communication

RS-232 Communication

When the projector connects to the computer by RS-232 communication, the projector can be controlled with RS-232 commands from the computer. For details of RS-232 commands, refer to RS-232 Communication command table.

Connection

1. Turn off the projector and the computer.
2. Connect the projector's RS232 port and the computer's RS-232 port with a RS-232 cable (straight) . Use the cable that fulfills the specification shown in the figure
3. Turn the computer on, and after the computer has started up turn the projector on.



CONTROL PORT CONNECTOR (D-sub 9 pin)

	Serial
1	N.C
2	RXD
3	TXD
4	N.C
5	Ground
6	N.C
7	Short with pin8
8	Short with pin7
9	N.C

APPENDIX3. Ben-Q_ RS-232 Commend List

Function	Type	Description(紅字表示 Delta 的定義)	ASCII	Setting Condition	Note	Support
Power	Write	Power On	<CR>*pow=on#<CR>	StandBy		V
	Write	Power off	<CR>*pow=off#<CR>	Lamp On		V
	Read	Power Status	<CR>*pow=?#<CR>	Any State		V
Source Selection	Write	COMPUTER/YPbPr(VGA)	<CR>*sour=RGB#<CR>	Lamp On & Not in blank screen		V
	Write	COMPUTER 2/YPbPr2(BNC)	<CR>*sour=RGB2#<CR>			V
	Write	Component	<CR>*sour=YPbr#<CR>			V
	Write	Component2	<CR>*sour=ypbr2#<CR>			X
	Write	DVI-A	<CR>*sour=dviA#<CR>			X
	Write	DVI-D (DVI)	<CR>*sour=dvid#<CR>			V
	Write	HDMI	<CR>*sour=hdmi#<CR>			V
	Write	HDMI 2	<CR>*sour=hdmi2#<CR>			X
	Write	Composite(Video)	<CR>*sour=vid#<CR>			V
	Write	S-Video	<CR>*sour=svid#<CR>			V
	Write	Network	<CR>*sour=network#<CR>			X
	Write	USB Display	<CR>*sour=usbdisplay#<CR>			X
	Write	USB Reader	<CR>*sour=usbreader#<CR>			X
	Write	Wireless	<CR>*sour=wireless#<CR>			X
	Write	DisplayPort	<CR>*sour=dp#<CR>			X
	Write	HD Connect	<CR>*sour=hdconnect#<CR>			X
	Write	HDBaseT	<CR>*sour=hdbaset#<CR>			V
	Read	Current source	<CR>*sour=?#<CR>			V
Audio Control	Write	Mute On	<CR>*mute=on#<CR>			X
	Write	Mute Off	<CR>*mute=off#<CR>			X
	Read	Mute Status	<CR>*mute=?#<CR>			X
	Write	Volume +	<CR>*vol=+#<CR>			X
	Write	Volume -	<CR>*vol=-#<CR>			X
	Read	Volume Status	<CR>*vol=?#<CR>			X
	Write	Mic. Volume +	<CR>*micvol=+#<CR>			X
	Write	Mic. Volume -	<CR>*micvol=-#<CR>			X
	Read	Mic. Volume Status	<CR>*micvol=?#<CR>			X
Audio source	Write	Audio pass Through off	<CR>*audiosour=off#<CR>			X

select	Write	Audio-Computer1	<CR>*audiosour=RGB#<CR>			X
	Write	Audio-Computer2	<CR>*audiosour=RGB2#<CR>			X
	Write	Audio-Video/S-Video	<CR>*audiosour=vid#<CR>			X
	Write	Audio-Component	<CR>*audiosour=ypbr#<CR>			X
	Write	Audio-HDMI	<CR>*audiosour=hdmi#<CR>			X
	Write	Audio-HDMI2	<CR>*audiosour=hdmi2#<CR>			X
	Read	Audio pass Status	<CR>*audiosour=?#<CR>			X
Picture Mode	Write	Dynamic	<CR>*appmod=dynamic#<CR>	Source Locked		X
	Write	Presentation	<CR>*appmod=preset#<CR>			V
	Write	sRGB	<CR>*appmod=srgb#<CR>			X
	Write	Bright(High Bright)	<CR>*appmod=bright#<CR>			V
	Write	Living Room	<CR>*appmod=livingroom#<CR>			X
	Write	Game	<CR>*appmod=game#<CR>			X
	Write	Cinema(Video)	<CR>*appmod=cine#<CR>			V
	Write	Standard	<CR>*appmod=std#<CR>			X
	Write	User1	<CR>*appmod=user1#<CR>			X
	Write	User2	<CR>*appmod=user2#<CR>			X
	Write	User3	<CR>*appmod=user3#<CR>			X
	Write	ISF Day	<CR>*appmod=isfday#<CR>			X
	Write	ISF Night	<CR>*appmod=isfnight#<CR>			X
	Write	3D	<CR>*appmod=threed#<CR>			X
	Read	Picture Mode	<CR>*appmod=?#<CR>			V
Picture Setting	Write	Contrast +	<CR>*con=+#<CR>	Source Locked		V
	Write	Contrast -	<CR>*con=-#<CR>			V
	Read	Contrast value	<CR>*con=?#<CR>			V
	Write	Brightness +	<CR>*bri=+#<CR>	Source Locked		V
	Write	Brightness -	<CR>*bri=-#<CR>			V
	Read	Brightness value	<CR>*bri=?#<CR>			V
	Write	Color + (Saturation)	<CR>*color=+#<CR>	Source Locked & YUV		V
	Write	Color - (Saturation)	<CR>*color=-#<CR>			V
	Read	Color value (Saturation)	<CR>*color=?#<CR>			V
	Write	Sharpness +	<CR>*sharp=+#<CR>	Source Locked & YUV		V
	Write	Sharpness -	<CR>*sharp=-#<CR>			V
	Read	Sharpness value	<CR>*sharp=?#<CR>			V
	Write	Color Temperature-Warmer	<CR>*ct=warmer#<CR>	Source Locked		X

	Write	Color Temperature-Warm (6500K)	<CR>*ct=warm#<CR>			V
	Write	Color Temperature-Normal (7800K)	<CR>*ct=normal#<CR>			V
	Write	Color Temperature-Cool (9300K)	<CR>*ct=cool#<CR>			V
	Write	Color Temperature-Cooler	<CR>*ct=cooler#<CR>			X
	Write	Color Temperature-lamp native	<CR>*ct=native#<CR>			V
	Read	Color Temperature Status	<CR>*ct=?#<CR>			V
	Write	Aspect 4:3	<CR>*asp=4:3#<CR>			V
	Write	Aspect 16:9	<CR>*asp=16:9#<CR>			V
	Write	Aspect 16:10	<CR>*asp=16:10#<CR>			V
	Write	Aspect Auto	<CR>*asp=AUTO#<CR>			V
	Write	Aspect Real (Aspect **Native**)	<CR>*asp=REAL#<CR>			V
	Write	Aspect Letterbox	<CR>*asp=LBOX#<CR>	Source Locked		X
	Write	Aspect Wide	<CR>*asp=WIDE#<CR>			X
	Write	Aspect Anamorphic	<CR>*asp=ANAM#<CR>			X
	Write	Aspect 5:4	<CR>*asp=5:4#<CR>		New	V
	Write	Aspect 1.88	<CR>*asp=1.88:1#<CR>		New	V
	Write	Aspect 2.35	<CR>*asp=2.35:1#<CR>		New	V
	Read	Aspect Status	<CR>*asp=?#<CR>			V
	Write	Digital Zoom In	<CR>*zoomI#<CR>	Lamp On		V
	Write	Digital Zoom out	<CR>*zoomO#<CR>			V
	Write	Auto	<CR>*auto#<CR>	Lamp On		V
	Write	Brilliant color on	<CR>*BC=on#<CR>			X
	Write	Brilliant color off	<CR>*BC=off#<CR>			X
	Read	Brilliant color status	<CR>*BC=?#<CR>			X
Operation Settings	Write	Projector Position-Front Table	<CR>*pp=FT#<CR>	Lamp On		V
	Write	Projector Position-Rear Table	<CR>*pp=RE#<CR>			V
	Write	Projector Position-Rear Ceiling	<CR>*pp=RC#<CR>			V
	Write	Projector Position-Front Ceiling	<CR>*pp=FC#<CR>			V
	Write	Projector Position-up Front	<CR>*pp=UF#<CR>			X
	Write	Projector Position-down Front	<CR>*pp=DF#<CR>			X
	Read	Projector Position Status	<CR>*pp=?#<CR>			V
	Write	Quick auto search on(Auto Search On)	<CR>*QAS=on#<CR>	Lamp On		V
	Write	Quick auto search off (Auto Search Off)	<CR>*QAS=off#<CR>			V

	Read	Quick auto search status	<CR>*QAS=?#<CR>			V
	Write	Direct Power On-on(Auto Power On)	<CR>*directpower=on#<CR>	Lamp On		V
	Write	Direct Power On-off(Auto power off)	<CR>*directpower=off#<CR>			V
	Read	Direct Power On-Status	<CR>*directpower=?#<CR>			V
	Write	Signal Power On-on	<CR>*autopower=on#<CR>	Lamp On		X
	Write	Signal Power On-off	<CR>*autopower=off#<CR>			X
	Read	Signal Power On-Status	<CR>*autopower=?#<CR>			X
	Write	Standby Settings-Standard	<CR>*standbynet=standard#<CR>	Lamp On		V
	Write	Standby Settings-Eco	<CR>*standbynet=eco#<CR>			V
	Write	Standby Settings-Network	<CR>*standbynet=network#<CR>			V
	Write	Standby Settings-Network on (Network Standby)	<CR>*standbynet=on#<CR>			X
	Write	Standby Settings-Network off (Normal)	<CR>*standbynet=off#<CR>			X
	Read	Standby Settings-Network Status	<CR>*standbynet=?#<CR>			V
	Write	Standby Settings-Microphone on	<CR>*standbymic=on#<CR>			X
	Write	Standby Settings-Microphone off	<CR>*standbymic=off#<CR>			X
	Read	Standby Settings-Microphone Status	<CR>*standbymic=?#<CR>			X
	Write	Standby Settings-Monitor Out on	<CR>*standbymnt=on#<CR>			X
	Write	Standby Settings-Monitor Out off	<CR>*standbymnt=off#<CR>			X
	Read	Standby Settings-Monitor Out Status	<CR>*standbymnt=?#<CR>			X
	Write	2400	<CR>*baud=2400#<CR>	Any State		X
	Write	4800	<CR>*baud=4800#<CR>			X
	Write	9600	<CR>*baud=9600#<CR>			V
	Write	14400	<CR>*baud=14400#<CR>			V
	Write	19200	<CR>*baud=19200#<CR>			V
	Write	38400	<CR>*baud=38400#<CR>			V
	Write	57600	<CR>*baud=57600#<CR>			V
	Write	115200	<CR>*baud=115200#<CR>			V
	Read	Current Baud Rate	<CR>*baud=?#<CR>			V
Lamp Control	Read	Lamp Hour	<CR>*ltim=?#<CR>	Any State		V

	Read	Lamp2 Hour	<CR>*ltim2=?#<CR>			V
	Write	Lamp hour reset	<CR>*ltim=reset#<CR>			V
	Write	Lamp2 hour reset	<CR>*ltim2=reset#<CR>			V
	Write	Normal mode	<CR>*lampm=lnor#<CR>			V
	Write	Eco mode	<CR>*lampm=eco#<CR>			V
	Write	Dual lamp	<CR>*lammd=dual#<CR>			V
	Write	number 1 lamp	<CR>*lammd=num1l#<CR>			V
	Write	number 2 lamp	<CR>*lammd=num2#<CR>			V
	Write	Single lamp (minimum)	<CR>*lammd=single#<CR>			V
	Read	Current Lamp status	<CR>*lammd=?#<CR>			V
	Write	Smart Eco mode	<CR>*lampm=seco#<CR>			X
	Write	Smart Eco mode(LampCare)	<CR>*lampm=seco2#<CR>			X
	Write	Smart Eco mode(lumenCare)	<CR>*lampm=seco3#<CR>	Lamp On		X
	Write(雙燈)	Dual Brightest	<CR>* lampm =dualbr#<CR>			X
	Write(雙燈)	Dual Reliable	<CR>* lampm =dualre#<CR>			X
	Write(雙燈)	Single Alternative	<CR>* lampm =single#<CR>			X
	Write(雙燈)	Single Alternative Eco	<CR>* lampm =singleeco#<CR>			X
	Read	Lamp Mode Status	<CR>*lampm=?#<CR>			V
Miscellaneous	Read	Model Name	<CR>*modelname=?#<CR>	Any State		V
	Write	Blank On	<CR>*blank=on#<CR>			V
	Write	Blank Off	<CR>*blank=off#<CR>	Lamp On		V
	Read	Blank Status	<CR>*blank=?#<CR>			V
	Write	Freeze On	<CR>*freeze=on#<CR>			V
	Write	Freeze Off	<CR>*freeze=off#<CR>	Source Locked		V
	Read	Freeze Status	<CR>*freeze=?#<CR>			V
	Write	Menu On	<CR>*menu=on#<CR>			V
	Write	Menu Off	<CR>*menu=off#<CR>	Lamp On		V
	Read	Menu Status	<CR>*menu=?#<CR>			V
	Write	Up	<CR>*up#<CR>			V
	Write	Down	<CR>*down#<CR>	Lamp On		V
	Write	Right	<CR>*right#<CR>			V

	Write	Left	<CR>*left#<CR>			V
	Write	Enter	<CR>*enter#<CR>			V
	Write	3D Sync Off	<CR>*3d=off#<CR>	Source Locked & 3D timing		V
	Write	3D Auto	<CR>*3d=auto#<CR>			V
	Write	3D Sync Top Bottom	<CR>*3d=tb#<CR>			V
	Write	3D Sync Frame Sequential	<CR>*3d=fs#<CR>			V
	Write	3D Frame packing	<CR>*3d=fp#<CR>			X
	Write	3D Side by side	<CR>*3d=sbs#<CR>			V
	Write	3D inverter disable(3D Swap=Normal)	<CR>*3d=da#<CR>			V
	Write	3D inverter (3D Swap=Reverse)	<CR>*3d=iv#<CR>			V
	Write	2D to 3D	<CR>*3d=2d3d#<CR>			X
	Write	3D nVIDIA	<CR>*3d=nvidia#<CR>			X
	Read	3D Sync Status	<CR>*3d=?#<CR>			V
	Write	Remote Set	<CR>*rrset=0#<CR>	Any State		X
	Read	Remote Set Status	<CR>*rrset=?#<CR>			X
	Write	Remote Receiver-front+rear	<CR>*rr=fr#<CR>			X
	Write	Remote Receiver-front	<CR>*rr=f#<CR>			X
	Write	Remote Receiver-rear	<CR>*rr=r#<CR>			X
	Write	Remote Receiver-top	<CR>*rr=t#<CR>			X
	Write	Remote Receiver-top+front	<CR>*rr=tf#<CR>			X
	Write	Remote Receiver-top+rear	<CR>*rr=tr#<CR>			X
	Read	Remote Receiver Status	<CR>*rr=?#<CR>			X
	Write	Instant On-on	<CR>*ins=on#<CR>			X
	Write	Instant On-off	<CR>*ins=off#<CR>			X
	Read	Instant On Status	<CR>*ins=?#<CR>			X
	Write	Lamp Saver Mode-on	<CR>*lpsaver=on#<CR>			X
	Write	Lamp Saver Mode-off	<CR>*lpsaver=off#<CR>			X
	Read	Lamp Saver Mode Status	<CR>*lpsaver=?#<CR>			X
	Write	Projection Log In Code on	<CR>*prjlogincode=on#<CR>			X
	Write	Projection Log In Code off	<CR>*prjlogincode=off#<CR>			X
	Read	Projection Log In Code Status	<CR>*prjlogincode=?#<CR>			X
	Write	Broadcasting on	<CR>*broadcasting=on#<CR>			X

	Write	Broadcasting off	<CR>*broadcasting=off#<CR>			X
	Read	Broadcasting Status	<CR>*broadcasting=?<CR>			X
	Write	AMX Device Discovery-on	<CR>*amxdd=on#<CR>			X
	Write	AMX Device Discovery-off	<CR>*amxdd=off#<CR>			X
	Read	AMX Device Discovery Status	<CR>*amxdd=?#<CR>			X
	Read	Mac Address	<CR>*macaddr=?#<CR>			X
	Write	Trigger on	<CR>*trigger=on#<CR>	Lamp On		V
	Write	Trigger off	<CR>*trigger=off#<CR>			V
	Read	Trigger status	<CR>*trigger=?#<CR>			V
	Write	High Altitude mode on	<CR>*Highaltitude=on#<CR>	Lamp On		V
	Write	High Altitude mode off	<CR>*Highaltitude=off#<CR>			V
	Read	High Altitude mode status	<CR>*Highaltitude=?#<CR>			V
	Read	Error Code	<CR>*error=report#<CR>	Any State		V
	Write	Serial Number code1	<CR>V99N1234<CR>	Any State		X
	Read	Serial Number Query	<CR>V99N0000<CR>			X
	Write	Lens Shift Up	<CR>*lst=up#<CR>	Lamp On		V
	Write	Lens Shift Down	<CR>*lst=down#<CR>			V
	Write	Lens Shift Left	<CR>*lst=left#<CR>			V
	Write	Lens Shift Right	<CR>*lst=right#<CR>			V
	Write	Focus Plus	<CR>*focus=+#<CR>	Lamp On		V
	Write	Focus Minus	<CR>*focus=-#<CR>			V
	Write	Zoom Plus	<CR>*zoom=+#<CR>	Lamp On		V
	Write	Zoom Minus	<CR>*zoom=-#<CR>			V
	Write	Keystone-Vertical Decrease	<CR>*keyst=-#<CR>	Lamp On		V
	Write	Keystone-Vertical Increase	<CR>*keyst=+#<CR>			V
	Read	Keystone-Vertical Status	<CR>*keyst=?#<CR>			V
	Write	AutoSync	NA			X
	Read	Get Filter Timer	NA			X
	Write	System Reset	NA			X
	Read	Get F/W Version	NA			X
	Read	Get Tint	NA			X
	Write	Set Tint	NA			X
	Read	Get Keystone value	NA			X

	Write	Set Keystone value	NA			X
	Read	Get Messaging	NA			X
	Write	Set Messaging	NA			X