# 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<br>(1) Byte1: Decide which Timer is selected, and its enable/disable setting.<br>Byte1[3:0]=0x1~0x07. There are totally 7 Timers, this value is used to decide which Timer is selected.<br>Byte1[7]: Reserved, should be 0.<br>Byte1[6]: The Timer is enable or not. Byte1[6]=1 means enable.<br>Byte1[5]: The On Timer is enable or not. Byte1[5]=1 means enable.<br>Byte1[4]: The Off Timer is enable or not. Byte1[4]=1 means enable.<br>(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.<br>(3) Byte3: The Hour of the On Timer. Byte3=0x00~0x17.<br>(4) Byte4: The Minute of the On Timer. Byte4=0x00~0x3B.<br>(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<br>Byte2~Byte11=0x00<br>Byte1=0x01: Get Customer Name<br>Byte1=0x02: Get Customer Model Name<br>Byte1=0x04: Get Scaler Firmware Version<br>Byte1=0x05: Get LAN Firmware Version<br>Byte1=0x06: Get Serial Number<br><br>(2) Return value: Byte1 - Byte2 - Byte3 …Byte15<br>The Byte1 value at the return value should be the same as the value of Byte1 at input value.<br>Byte2~Byte15 should be ASCII format.<br>Ex: If Customer=Generic, Byte1=0x01, Byte2='G', Byte3='e',...Byte8='c', Byte9~Byte11=0x00.<br>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<br>(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.<br>(2) Byte1[7:4] is reserved, should be 0.<br>(3) Byte2~9 are reserverd, should be 0x00.<br><br>Return value: Byte1 - Byte2 - Byte3…Byte9<br>(1) Byte1[3:0]: Should retuen the same value as Byte1 at Input value.<br>Byte1[7]: Reserved, should be 0.<br>Byte1[6]: The Timer is enable or not. Byte1[6]=1 means enable.<br>Byte1[5]: The On Timer is enable or not. Byte1[5]=1 means enable.<br>Byte1[4]: The Off Timer is enable or not. Byte1[4]=1 means enable.<br>(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.<br>(3) Byte3: The Hour of the On Timer. Byte3=0x00~0x17.<br>(4) Byte4: The Minute of the On Timer. Byte4=0x00~0x3B.<br>(5) Byte5: The Hour of the Off Timer. Byte5=0x00~0x17.<br>(6) Byte6: The Minute of the Off Timer. Byte6=0x00~0x3B.<br>(7) Byte7: Select the Video Source.<br>0x00=VGA, 0x01=HDMI1, 0x02=HDMI2, 0x03=AV, 0x04=YPbPr,<br>0x05=S-Video, 0x06=DVI, 0x07=DisplayPort, 0x08=SDI, 0x09=Multi-Media.<br>0x0A=Network, 0x0B=USB Display<br>0xFF=Default. Other values are reserved.<br>(8) Byte8~9 are reserved, and should be 0x00. | | |
| Network Setting | 14 | g | E1 | Input Value: Byte1 - Byte2 - Byte3…Byte9<br>(1) Byte1=0x00: IP Setup Mode<br>Byte1=0x01: IP Address<br>Byte1=0x02: Get Subnet Mask<br>Byte1=0x03: Default Gateway<br>Byte1=0x04: Primary DNS<br>Byte1=0x05: Secondary DNS<br>Byte1=0x06: MAC Address<br>(2) Byte2~9 are reserved, should be 0x00.<br><br>Return value: Byte1 - Byte2 - Byte3…Byte9<br>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<br>(1) If Byte1=0x00(IP Setup Mode) at Input value, the return value should be<br>Byte1=0x00<br>Byte2=0x00: Manual<br>0x01: DHCP<br>Byte3~9 are reserved, should be 0x00.<br>(2) If Byte1=0x01(IP Address) at Input value, the return value should be<br>Ex: IP address=169.254.81.38<br>Byte1=0x01 (same as Byte1 at Input value)<br>Byte2=0xA9 (=169), Byte3=0xFE (=254), Byte4=0x51(=81), Byte5=0x26 (=38)<br>Byte6~9 are reserved, should be 0x00.<br>(3) If Byte1=0x02~0x05 at Input value, refer to (2)<br><br>(4) If Byte1=0x06(MAC Address) at Input value, the return value should be<br>Ex: MAC address=00:22:64:7E:2C:82<br>Byte1=0x06 (same as Byte1 at Input value)<br>Byte2=0x00, Byte3=0x22, Byte4=0x64, Byte5=0x7E, Byte6=0x2C, Byte7=0x82<br>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<br>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<br>RP Series<br>RS232 | Send Get Command | System Reply Command |
|---|---|---|---|---|---|---|---|
| Model Info | 20 | | g | 20 | (1) Input value: Byte1 - Byte2 - Byte3...Byte15<br>Byte2~Byte11=0x00<br>Byte1=0x01: Get Customer Name<br>Byte1=0x02: Get Customer Model Name<br>Byte1=0x04: Get Scaler Firmware Version<br>Byte1=0x05: Get LAN Firmware Version<br>Byte1=0x06: Get Serial Number<br><br>(2) Return value: Byte1 - Byte2 - Byte3...Byte15<br>The Byte1 value at the return value should be the same as the value of Byte1 at input value.<br>Byte2~Byte15 should be ASCII format.<br>Ex: If Customer=Generic, Byte1=0x01, Byte2='G', Byte3='e',...Byte8='c', Byte9~Byte11=0x00.<br>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<br>PR702 : 44 30 31 72 20 **02** 52 50 37 30 32 00 00 00 00 00 00 00 00 00 0D<br>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 ~<br>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<br>RP Series<br>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

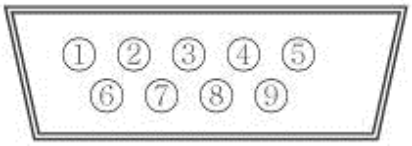
2.1 Hardware specification

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)<br>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<br>0x67 ('g'): Get command<br>0x72 ('r'): Reply command<br>0x2B ('+'): Valid command reply<br>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<br>Note: To set Pass through, the command must use the "With ID protocal", and the ID should between "01"~"98". | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | | | 003: Passthrough Slave<br>Note1: To set Pass through, the command must use the "With ID protocal", and the ID should between "01"~"98".<br>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<br>000: Small<br>001: Large | |
| | | | | | When PAP=PBP<br>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<br>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<br>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<br>(1) Byte1: Decide which Timer is selected, and its enable/disable setting.<br>Byte1[3:0]=0x1~0x07. There are totally 7 Timers, this value is used to decide which Timer is selected.<br>Byte1[7]: Reserved, should be 0.<br>Byte1[6]: The Timer is enable or not. Byte1[6]=1 means enable.<br>Byte1[5]: The On Timer is enable or not. Byte1[5]=1 means enable.<br>Byte1[4]: The Off Timer is enable or not. Byte1[4]=1 means enable.<br>(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.<br>(3) Byte3: The Hour of the On Timer.<br>Byte3=0x00~0x17.<br>(4) Byte4: The Minute of the On Timer.<br>Byte4=0x00~0x3B.<br>(5) Byte5: The Hour of the Off Timer.<br>Byte5=0x00~0x17.<br>(6) Byte6: The Minute of the Off Timer.<br>Byte6=0x00~0x3B.<br>(7) Byte7: Select the Video Source.<br>0x00=VGA, 0x01=HDMI1, 0x02=HDMI2, 0x03=AV, 0x04=YPbPr,<br>0x05=S-Video, 0x06=DVI, 0x07=DisplayPort,<br>0x08=SDI,<br>0x09=Multi-Media.<br>0x0A=Network, 0x0B=USB Display<br>(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..<br><br>Ex: Byte1=0x01 means the Timer no.1 is selected and disable.<br>Ex: Byte1=0x41 means the Timer no.1 is select and enable, and its both On and Off Timers are disable.<br>Ex: Byte1=0x61 means the Timer no.1 is select and enable, and its On Timer is enable, Off Timer is disable.<br>Ex: Byte1=0x71 means the Timer no.1 is select and enable, and its both On and Off Timers are enable.<br>Ex: Byte1=0x53 means the Timer no.3 is select and enable, and its On Timer is disable, Off Timer is enable.<br>Ex: Byte2=0x02 means the Timer is on Monday.<br>Ex: Byte3=0x08, Byte4=0x1E means the On Timer is at 8:30.<br>Ex: Byte5=0x17, Byte6=0x00 means the Off Timer is at 23:00.<br>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<br>Byte2~Byte11=0x00<br>Byte1=0x01: Get Customer Name<br>Byte1=0x02: Get Customer Model Name<br>Byte1=0x03: Get Qisda Model Name<br>Byte1=0x04: Get Scaler Firmware Version<br>Byte1=0x05: Get LAN Firmware Version<br>Byte1=0x06: Get Serial Number<br><br>(2) Return value: Byte1 - Byte2 - Byte3…Byte15<br>The Byte1 value at the return value should be the same as the value of Byte1 at input value.<br>Byte2~Byte15 should be ASCII format.<br>Ex: If Customer=Generic, Byte1=0x01, Byte2='G', Byte3='e',...Byte8='c', Byte9~Byte11=0x00.<br>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<br>(1) Byte1<br>bit0 of Byte1=1: Support SDI<br>bit1 of Byte1=1: Support Touch feature<br>bit2 of Byte1=1: Support Internal speaker<br>bit3 of Byte1=1: Support Multi-Media module (only STB supports Multi-Media module)<br>bit4 of Byte1=1: Support HDMI2 (only STA supports HDMI2)<br>bit5 of Byte1=1: Support Network<br>bit6 of Byte1=1: Support USB Display<br>bit7 of Byte1=1: Support DVI<br>(2) Byte2:<br>bit0 of Byte2=1: Support AV<br>bit1 of Byte2=1: Support S-Video<br>bit2 of Byte2=1: Support Audio2<br>bit3 of Byte2=1: Support Display Wall<br>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<br>Note: To set Pass through, the command must use the "With ID protocal", and the ID should between "01"~"98". | |
| | | | | | 003: Passthrough Slave<br>Note1: To set Pass through, the command must use the "With ID protocal", and the ID should between "01"~"98".<br>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:<br>Byte1=0x30, Byte2=0x35, Byte3=0x30, Byte4=0x30, Byte5=0x30. |

| | | | | | | |
|---|---|---|---|---|---|---|
| Thermal Sensor Value | 10 | | g | 71 | (1) Input value: Byte1-Byte2-...Byte5<br>(a) Byte1=0x01: Get the thermal sensor value from main board<br>0x02: Get the thermal sensor value from keypad board<br>(b) Byte2~Byte5 are reserved, should b 0x00<br><br>(2) Return value: Byte1-Byte2-...Byte5<br>(a) Byte1=0x01: The thermal sensor value is from main board<br>0x02: The thermal sensor value is rom kaypad board<br>(b) Byte2: If the thermal value is >=0, Byte2='+' (0x2B)<br>If the thermal value is <0, Byte2='-' (0x2D)<br>(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.<br><br>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<br>000: Small<br>001: Large | |
| | | | | | When PAP=PBP<br>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 | |

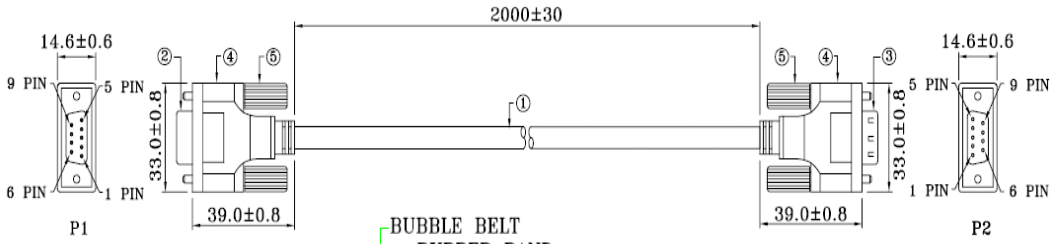
| | | | | | | |
|---|---|---|---|---|---|---|
| RTC Year | 8 | | g | C8 | 000 ~ 099 | Ex: value=012 means Year 2012<br>If the RTC is not enable, return "Invalid Command Reply" |
| RTC Month | 8 | | g | C9 | 001 ~ 012 | Ex: value=001 means January<br>If the RTC is not enable, return "Invalid Command Reply" |
| 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<br>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<br>(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.<br>(2) Byte1[7:4] is reserved, should be 0.<br>(3) Byte2~9 are reserverd, should be 0x00.<br><br>Return value: Byte1 - Byte2 - Byte3…Byte9<br>(1) Byte1[3:0]: Should retuen the same value as Byte1 at Input value.<br>Byte1[7]: Reserved, should be 0.<br>Byte1[6]: The Timer is enable or not.<br>Byte1[6]=1 means enable.<br>Byte1[5]: The On Timer is enable or not.<br>Byte1[5]=1 means enable.<br>Byte1[4]: The Off Timer is enable or not.<br>Byte1[4]=1 means enable.<br>(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.<br>(3) Byte3: The Hour of the On Timer. Byte3=0x00~0x17.<br>(4) Byte4: The Minute of the On Timer. Byte4=0x00~0x3B.<br>(5) Byte5: The Hour of the Off Timer. Byte5=0x00~0x17.<br>(6) Byte6: The Minute of the Off Timer. Byte6=0x00~0x3B.<br>(7) Byte7: Select the Video Source.<br>0x00=VGA, 0x01=HDMI1, 0x02=HDMI2, 0x03=AV, 0x04=YPbPr,<br>0x05=S-Video, 0x06=DVI,<br>0x07=DisplayPort, 0x08=SDI,<br>0x09=Multi-Media.<br>0x0A=Network, 0x0B=USB Display<br>0xFF=Default. Other values are reserved.<br>(8) Byte8~9 are reserved, and should be 0x00. | See the return value examples below:<br>Ex: Byte1=0x01 means the Timer no.1 is selected and disable.<br>Ex: Byte1=0x41 means the Timer no.1 is select and enable, and its both On and Off Timers are disable.<br>Ex: Byte1=0x61 means the Timer no.1 is select and enable, and its On Timer is enable, Off Timer is disable.<br>Ex: Byte1=0x71 means the Timer no.1 is select and enable, and its both On and Off Timers are enable.<br>Ex: Byte1=0x53 means the Timer no.3 is select and enable, and its On Timer is disable, Off Timer is enable.<br>Ex: Byte2=0x02 means the Timer is on Monday.<br>Ex: Byte3=0x08, Byte4=0x1E means the On Timer is at 8:30.<br>Ex: Byte5=0x17, Byte6=0x00 means the Off Timer is at 23:00.<br>Ex: Byte7=0x00 means the selected Video Source is VGA. |

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

# 1. RS232 Cable Requirement and Pin Assignment

## Cable Requirement:

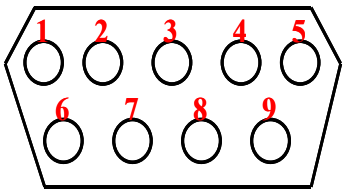



| WIRE ARRANGEMENT | | |
|---|---|---|
| P1 | COLOR | P2 |
| 1 | BLACK | 1 |
| 2 | BROWN | 3 |
| 3 | RED | 2 |
| 4 | ORANGE | 4 |
| 5 | YELLOW | 5 |
| 6 | GREEN | 6 |
| 7 | BLUE | 7 |
| 8 | PURPLE | 8 |
| 9 | GRAY | 9 |
| CASE | DRAIN WIRE | CASE |

(to be checked)

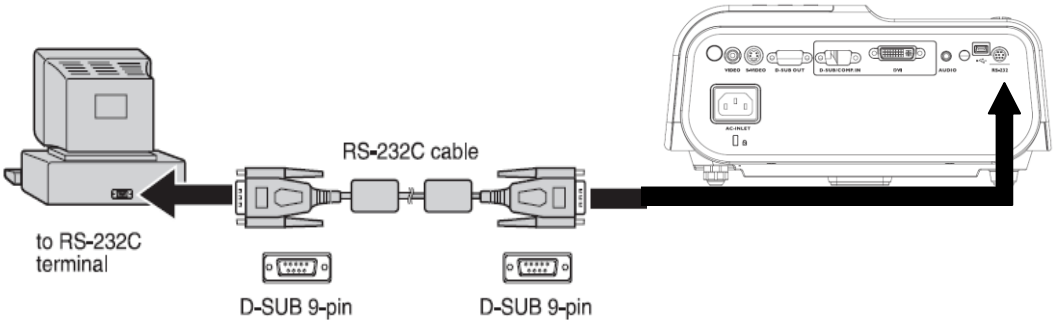
## RS232 pin assignment

| 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)<br>Changeable(2400/4800/9600/14400/19200/38400/57600/115200)<br>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#....<br>*APPMOD=USER2# | 3E 2A 61 70 70 6D 6F 64 3D 75 73 65 72 32 23 0D 0D 0A<br>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#...<br>*APPMOD=USER3# | 3E 2A 61 70 70 6D 6F 64 3D 75 73 65 72 33 23 0D 0D<br>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<br>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 #<br>(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<br>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<br>3D 3F 23 0D |
| Echo (ASCII) | | Echo (Hex) | |
| >*macaddr=?#*MACADDR=?# | | 3E 2A 61 6D 78 64 64 3D 6F 6E 23 0D 0D 0A<br>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.

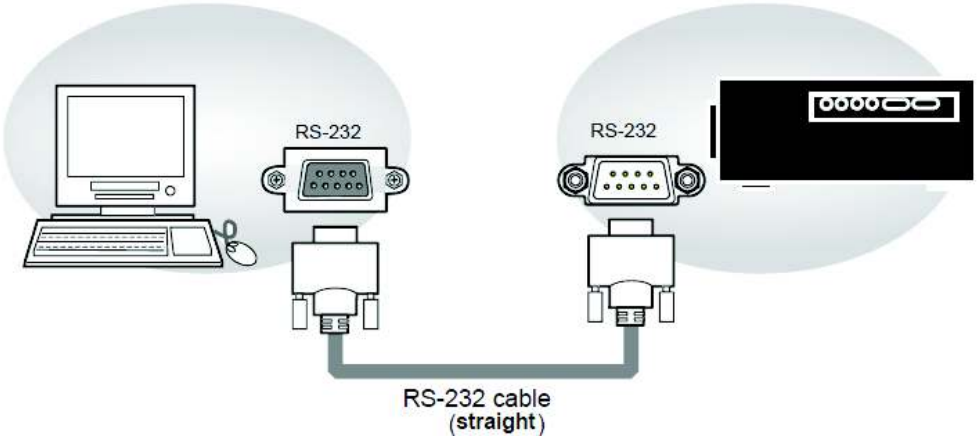
## APPENDIX2. RS-232 Communication

### 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 |