**Projector**

# CP-X10000/CP-WX11000/CP-SX12000

## User's Manual – Operating Guide

## Technical

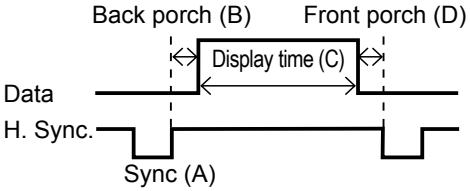
### Example of computer signal

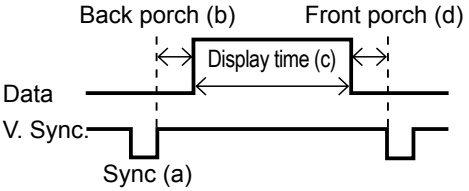
| Resolution (H x V) | H. frequency (kHz) | V. frequency (Hz) | Rating | Signal mode |
|---|---|---|---|---|
| 720 x 400 | 37.9 | 85.0 | VESA | TEXT |
| 640 x 480 | 31.5 | 59.9 | VESA | VGA (60Hz) |
| 640 x 480 | 37.9 | 72.8 | VESA | VGA (72Hz) |
| 640 x 480 | 37.5 | 75.0 | VESA | VGA (75Hz) |
| 640 x 480 | 43.3 | 85.0 | VESA | VGA (85Hz) |
| 800 x 600 | 35.2 | 56.3 | VESA | SVGA (56Hz) |
| 800 x 600 | 37.9 | 60.3 | VESA | SVGA (60Hz) |
| 800 x 600 | 48.1 | 72.2 | VESA | SVGA (72Hz) |
| 800 x 600 | 46.9 | 75.0 | VESA | SVGA (75Hz) |
| 800 x 600 | 53.7 | 85.1 | VESA | SVGA (85Hz) |
| 832 x 624 | 49.7 | 74.5 | | Mac 16” mode |
| 1024 x 768 | 48.4 | 60.0 | VESA | XGA (60Hz) |
| 1024 x 768 | 56.5 | 70.1 | VESA | XGA (70Hz) |
| 1024 x 768 | 60.0 | 75.0 | VESA | XGA (75Hz) |
| 1024 x 768 | 68.7 | 85.0 | VESA | XGA (85Hz) |
| 1152 x 864 | 67.5 | 75.0 | VESA | 1152 x 864 (75Hz) |
| 1280 x 960 | 60.0 | 60.0 | VESA | 1280 x 960 (60Hz) |
| 1280 x 1024 | 64.0 | 60.0 | VESA | SXGA (60Hz) |
| 1280 x 1024 | 80.0 | 75.0 | VESA | SXGA (75Hz) |
| *1280 x 1024 | 91.2 | 85.0 | VESA | SXGA (85Hz) |
| *1600 x 1200 | 75.0 | 60.0 | VESA | UXGA (60Hz) |
| 1280 x 768 | 47.7 | 60.0 | VESA | W-XGA (60Hz) |
| 1400 x 1050 | 65.3 | 60.0 | VESA | SXGA+ (60Hz) |
| 1280 x800 | 49.7 | 60.0 | VESA | 1280 x 800 (60Hz) |

**NOTE** • Be sure to check jack type, signal level, timing and resolution before connecting this projector to a computer.
• Some computers may have multiple display screen modes. Use of some of these modes will not be possible with this projector.
• Depending on the input signal, full-size display may not be possible in some cases. Refer to the number of display pixels above.
• Although the projector can display signals with resolution up to UXGA (1600x1200), the signal will be converted to the projector’s panel resolution before being displayed. The best display performance will be achieved if the resolutions of the input signal and projector panel are identical.
• Automatic adjustment may not function correctly with some input signals.
• The image may not be displayed correctly when the input sync signal is a composite sync or a sync on G.
• The HDMI input does not support the signals marked with *.

## Initial set signals

The following signals are used for the initial settings. The signal timing of some computer models may be different. In such case, adjust the items V POSITION and H POSITION in the IMAGE menu.

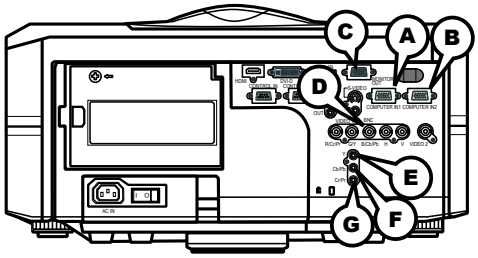


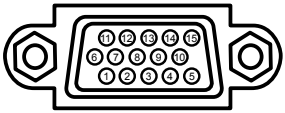

| Computer/ Signal | Horizontal signal timing (µs) | | | |
|---|---|---|---|---|
| | (A) | (B) | (C) | (D) |
| TEXT | 2.0 | 3.0 | 20.3 | 1.0 |
| VGA (60Hz) | 3.8 | 1.9 | 25.4 | 0.6 |
| VGA (72Hz) | 1.3 | 4.1 | 20.3 | 0.8 |
| VGA (75Hz) | 2.0 | 3.8 | 20.3 | 0.5 |
| VGA (85Hz) | 1.6 | 2.2 | 17.8 | 1.6 |
| SVGA (56Hz) | 2.0 | 3.6 | 22.2 | 0.7 |
| SVGA (60Hz) | 3.2 | 2.2 | 20.0 | 1.0 |
| SVGA (72Hz) | 2.4 | 1.3 | 16.0 | 1.1 |
| SVGA (75Hz) | 1.6 | 3.2 | 16.2 | 0.3 |
| SVGA (85Hz) | 1.1 | 2.7 | 14.2 | 0.6 |
| Mac 16" mode | 1.1 | 3.9 | 14.5 | 0.6 |
| XGA (60Hz) | 2.1 | 2.5 | 15.8 | 0.4 |
| XGA (70Hz) | 1.8 | 1.9 | 13.7 | 0.3 |
| XGA (75Hz) | 1.2 | 2.2 | 13.0 | 0.2 |
| XGA (85Hz) | 1.0 | 2.2 | 10.8 | 0.5 |
| 1152 x 864 (75Hz) | 1.2 | 2.4 | 10.7 | 0.6 |
| 1280 x 960 (60Hz) | 1.0 | 2.9 | 11.9 | 0.9 |
| SXGA (60Hz) | 1.0 | 2.3 | 11.9 | 0.4 |
| SXGA (75Hz) | 1.1 | 1.8 | 9.5 | 0.1 |
| SXGA (85Hz) | 1.0 | 1.4 | 8.1 | 0.4 |
| UXGA (60Hz) | 1.2 | 1.9 | 9.9 | 0.4 |
| W-XGA (60Hz) | 1.7 | 2.5 | 16.0 | 0.8 |
| SXGA+ (60Hz) | 1.2 | 1.9 | 11.5 | 0.7 |
| 1280 x 800(60Hz) | 1.6 | 2.4 | 15.3 | 0.8 |

| Computer/ Signal | Vertical signal timing (lines) | | | |
|---|---|---|---|---|
| | (a) | (b) | (c) | (d) |
| TEXT | 3 | 42 | 400 | 1 |
| VGA (60Hz) | 2 | 33 | 480 | 10 |
| VGA (72Hz) | 3 | 28 | 480 | 9 |
| VGA (75Hz) | 3 | 16 | 480 | 1 |
| VGA (85Hz) | 3 | 25 | 480 | 1 |
| SVGA (56Hz) | 2 | 22 | 600 | 1 |
| SVGA (60Hz) | 4 | 23 | 600 | 1 |
| SVGA (72Hz) | 6 | 23 | 600 | 37 |
| SVGA (75Hz) | 3 | 21 | 600 | 1 |
| SVGA (85Hz) | 3 | 27 | 600 | 1 |
| Mac 16" mode | 3 | 39 | 624 | 1 |
| XGA (60Hz) | 6 | 29 | 768 | 3 |
| XGA (70Hz) | 6 | 29 | 768 | 3 |
| XGA (75Hz) | 3 | 28 | 768 | 1 |
| XGA (85Hz) | 3 | 36 | 768 | 1 |
| 1152 x 864 (75Hz) | 3 | 32 | 864 | 1 |
| 1280 x 960 (60Hz) | 3 | 36 | 960 | 1 |
| SXGA(60Hz) | 3 | 38 | 1024 | 1 |
| SXGA (75Hz) | 3 | 38 | 1024 | 1 |
| SXGA (85Hz) | 3 | 44 | 1024 | 1 |
| UXGA (60Hz) | 3 | 46 | 1200 | 1 |
| W-XGA (60Hz) | 3 | 23 | 768 | 1 |
| SXGA+ (60Hz) | 4 | 32 | 1050 | 3 |
| 1280 x 800(60Hz) | 3 | 24 | 800 | 1 |

# Connection to the ports




## ⒶCOMPUTER IN1, ⒷCOMPUTER IN2, ⒸMONITOR OUT



D-sub 15pin mini shrink jack
• Video signal: RGB separate, Analog, 0.7Vp-p, 75Ω terminated (positive)
• H/V. sync. signal: TTL level (positive/negative)
• Composite sync. signal: TTL level

At RGB signal

| Pin | Signal | Pin | Signal |
|---|---|---|---|
| 1 | Video Red | 9 | (No connection) |
| 2 | Video Green | 10 | Ground |
| 3 | Video Blue | 11 | (No connection) |
| 4 | (No connection) | 12 | Ⓐ,Ⓑ: SDA (DDC data), Ⓒ : (No connection) |
| 5 | Ground | 13 | H. sync / Composite sync. |
| 6 | Ground Red | 14 | V. sync. |
| 7 | Ground Green | 15 | Ⓐ,Ⓑ: SCL (DDC clock), Ⓒ : (No connection) |
| 8 | Ground Blue | | |

## ⒹBNC (G/Y, B/Cb/Pb, R/Cr/Pr, H, V)

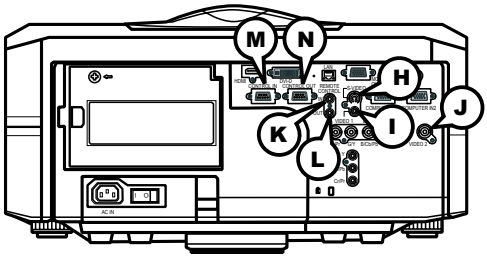
• BNC jack x 5
• Video : Analog 0.7Vp-p, 75Ω terminator
• H/V, sync, : TTL level (positive/negative)
• Composite sync, : TTL level

## COMPONENT VIDEO ⒺY, ⒻCb/Pb, ⒼCr/Pr

RCA jack x3

• System: 480i@60, 480p@60, 576i@50, 576p@50, 720p@50/60, 1080i@50/60, 1080p@50/60

| Port | Signal |
|---|---|
| Y | Component video Y, 1.0±0.1Vp-p, 75Ω terminator with composite sync |
| Cb/Pb | Component video Cb/Pb, 0.7±0.1Vp-p, 75Ω terminator |
| Cr/Pr | Component video Cr/Pr, 0.7±0.1Vp-p, 75Ω terminator |




### ⓗS-VIDEO

Mini DIN 4pin jack




| Pin | Signal |
|---|---|
| 1 | Color signal 0.286Vp-p (NTSC, burst), 75Ω terminator<br>Color signal 0.300Vp-p (PAL/SECAM, burst) 75Ω terminator |
| 2 | Brightness signal, 1.0Vp-p, 75Ω terminator |
| 3 | Ground |
| 4 | Ground |

### ⓘVIDEO 1

RCA jack

• System: NTSC, PAL, SECAM, PAL-M, PAL-N, NTSC4.43

• 1.0±0.1Vp-p, 75Ω terminator

### ⓙVIDEO 2

BNC jack

• System: NTSC, PAL, SECAM, PAL-M, PAL-N, NTSC4.43

• 1.0±0.1Vp-p, 75Ω terminator

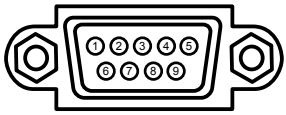
### REMOTE CONTROL ⓚIN ⓛOUT

Ø3.5 stereo mini jack

• To be connected with the remote control that came with the projector.

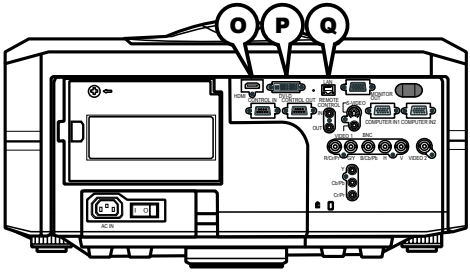
### CONTROL ⓂIN ⓃOUT

D-sub 9pin plug



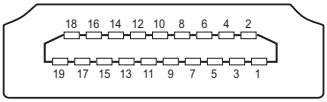

• About the details of RS-232C communication, please refer to the following RS-232C Communication in this manual.

| Pin | Signal | Pin | Signal | Pin | Signal |
|---|---|---|---|---|---|
| 1 | (No connection) | 4 | (No connection) | 7 | RTS |
| 2 | RD | 5 | Ground | 8 | CTS |
| 3 | TD | 6 | (No connection) | 9 | (No connection) |




## ⓄHDMI

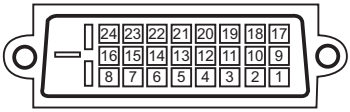
• Type :Digital video connector




| Pin | Signal | Pin | Signal | Pin | Signal |
|---|---|---|---|---|---|
| 1 | T.M.D.S. Data2 + | 8 | T.M.D.S. Data0 Shield | 15 | SCL |
| 2 | T.M.D.S. Data2 Shield | 9 | T.M.D.S. Data0 - | 16 | SDA |
| 3 | T.M.D.S. Data2 - | 10 | T.M.D.S. Clock + | 17 | DDC/CEC Ground |
| 4 | T.M.D.S. Data1 + | 11 | T.M.D.S. Clock Shield | 18 | +5V Power |
| 5 | T.M.D.S. Data1 Shield | 12 | T.M.D.S. Clock - | 19 | Hot Plug Detect |
| 6 | T.M.D.S. Data1 - | 13 | CEC | | |
| 7 | T.M.D.S. Data0 + | 14 | Reserved(N.C. on device) | | |

## ⓅDVI-D

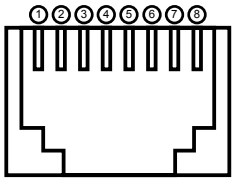
DVI-D jack (digital to digital)




| Pin | Signal | Pin | Signal | Pin | Signal |
|---|---|---|---|---|---|
| 1 | T.M.D.S. Data2 - | 9 | T.M.D.S. Data1 - | 17 | T.M.D.S. Data0 - |
| 2 | T.M.D.S. Data2 + | 10 | T.M.D.S. Data1 + | 18 | T.M.D.S. Data0 + |
| 3 | T.M.D.S. Data2/4 Shield | 11 | T.M.D.S. Data1/3 Shield | 19 | T.M.D.S. Data0/5 Shield |
| 4 | - | 12 | - | 20 | - |
| 5 | - | 13 | - | 21 | - |
| 6 | DDC Clock | 14 | +5V Power | 22 | T.M.D.S. Clock Shield |
| 7 | DDC Data | 15 | Ground (for +5V) | 23 | T.M.D.S. Clock + |
| 8 | - | 16 | Hot Plug Detect | 24 | T.M.D.S. Clock - |

## ⓆLAN

RJ-45 jack




| Pin | Signal | Pin | Signal | Pin | Signal |
|---|---|---|---|---|---|
| 1 | TX+ | 4 | - | 7 | - |
| 2 | TX- | 5 | - | 8 | - |
| 3 | RX+ | 6 | RX- | | |

## PJLink command

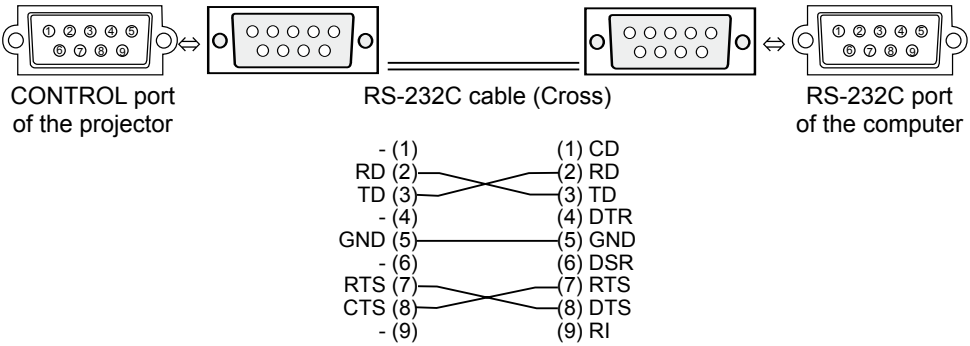
This projector is equipped with the PJLink™ Class 1.
See the following table for the commands for controlling the projector using the PJLink™ protocol are as given in the table below.

| Commands | Control Description | Parameter or Response |
|---|---|---|
| POWR | Power Contorol | 0 = Standby<br>1 = Power On |
| POWR ? | Power Status inquiry | 0 = Standby<br>1 = Power On<br>2 = Cool Down |
| INPT | Input Source selection | 11 = COMPUTER IN 1<br>12 = COMPUTER IN 2<br>13 = BNC<br>21 = COMPONENT<br>22 = S-VIDEO<br>23 = VIDEO 1<br>24 = VIDEO 2<br>31 = HDMI<br>32 = DVI-D |
| INPT ? | Input Source inquiry | 11 = COMPUTER IN 1<br>12 = COMPUTER IN 2<br>13 = BNC<br>21 = COMPONENT<br>22 = S-VIDEO<br>23 = VIDEO 1<br>24 = VIDEO 2<br>31 = HDMI<br>32 = DVI-D |
| AVMT | AV Mute | 30 = BLANK off<br>31 = BLANK on |
| AVMT ? | AV Mute inquiry | 30 = BLANK off<br>31 = BLANK on |
| ERST ? | Error Status inquiry | 1st byte: Refers to Fan error; one of 0 to 2<br>2nd byte: Refers to Lamp error; one of 0 to 2<br>3rd byte: Refers to Temptrature error; one of 0 to 2<br>4th byte: Refers to Cover error; one of 0 to 2<br>5th byte: Refers to Filter error; one of 0 to 2<br>6th byte: Refers to Other error; one of 0 to 2<br><br>The mearning of 0 to 2 is as given below<br>0 = Error is not detected;  1 = Warning;  2 = Error |

| Commands | Control Description | Parameter or Response |
|---|---|---|
| LAMP ? | Lamp Status inquiry | 1st number (digits 1 to 5): Lamp Time<br>2nd number : 0 = Lamp off, 1 = Lamp on |
| INST ? | Input Source List inquiry | 11 12 13 21 22 23 24 31 32 |
| NAME ? | Projector Name inquiry | Responds with the name set in "PROJECTOR NAME" of "NETWORK" |
| INF1 ? | Manufucturer's Name inquiry | HITACHI |
| INF2 ? | Model Name inquiry | CP-X10000 (XGA model)<br>CP-WX11000 (WXGA model)<br>CP-SX12000 (SXGA+ model) |
| INFO ? | Other Information inquiry | Responds with the factory information and so on |
| CLSS ? | Class Information inquiry | 1 |

**NOTE** • The password used in PJLink™ is the same as the password set in the Web Brouwser Comtrol. To use PJLink™ without authentication, do not set any password in Web Browser Control.
• For specifications of PJLink™, see the web site of the Japan Business Machine and Information System Industries Association.
URL: http://pjlink.jbmia.or.jp/

## RS-232C Communication




## Connecting the cable

1. Turn off the projector and the computer.
2. Connect the CONTROL port of the projector with a RS-232C port of the computer by a RS-232C cable (cross). Use the cable that fulfills the specification shown in the previous page.
3. Turn the computer on, and after the computer has started up turn the projector on.

## Communications setting

19200bps, 8N1

### 1. Protocol

Consist of header (7 bytes) + command data (6 bytes).

### 2. Header

BE + EF + 03 + 06 + 00 + CRC_low + CRC_high
CRC_low : Lower byte of CRC flag for command data
CRC_high : Upper byte of CRC flag for command data

### 3. Command data

Command data chart

| byte_0 | byte_1 | byte_2 | byte_3 | byte_4 | byte_5 |
|---|---|---|---|---|---|
| Action | | Type | | Setting code | |
| low | high | low | high | low | high |

Action (byte_0 - 1)

| Action | Classification | Content |
|---|---|---|
| 1 | SET | Change setting to desired value. |
| 2 | GET | Read projector internal setup value. |
| 4 | INCREMENT | Increment setup value by 1. |
| 5 | DECREMENT | Decrement setup value by 1. |
| 6 | EXECUTE | Run a command. |

**Requesting projector status (Get command)**

(1) Send the request code Header + Command data ('02H'+'00H'+ type (2 bytes)+'00H' +'00H') from the computer to the projector.
(2) The projector returns the response code '1DH'+ data (2 bytes) to the computer.

**Changing the projector settings (Set command)**

(1) Send the setting code Header + Command data ('01H'+'00H'+ type (2 bytes) + setting code (2 bytes)) from the computer to the projector.
(2) The projector changes the setting based on the above setting code.
(3) The projector returns the response code '06H' to the computer.

**Using the projector default settings (Reset Command)**

(1) The computer sends the default setting code Header + Command data ('06H'+'00H' + type (2 bytes) +'00H'+'00H') to the projector.
(2) The projector changes the specified setting to the default value.
(3) The projector returns the response code '06H' to the computer.

**Increasing the projector setting value (Increment command)**

(1) The computer sends the increment code Header + Command data ('04H'+'00H'+ type (2 bytes) +'00H'+'00H') to the projector.
(2) The projector in creases the setting value on the above setting code.
(3) The projector returns the response code '06H' to the computer.

**Decreasing the projector setting value (Decrement command)**

(1) The computer sends the decrement code Header + Command data ('05H'+'00H'+ type (2 bytes) +'00H' + '00H') to the projector.
(2) The projector decreases the setting value on the above setting code.
(3) The projector returns the response code '06H' to the computer.

**When the projector cannot understand the received command**

When the projector cannot understand the received command, the error code '15H' is sent back to the computer.
Sometimes the projector cannot properly receive the command. In such a case, the command is not executed and the error code '15H' is sent back to the computer. If this error code is returned, send the same command again.

**When the projector cannot execute the received command.**

When the projector cannot execute the received command, the error code '1CH' + 'xxxxH' is sent back to the computer. When the data length is greater than indicated by the data length code, the projector ignore the excess data code.
Conversely when the data length is shorter than indicated by the data length code, an error code will be returned to the computer.

**NOTE** • Operation cannot be guaranteed when the projector receives an undefined command or data.
• Provide an interval of at least 40ms between the response code and any other code.
• The projector outputs test data when the power supply is switched ON, and when the lamp is lit. Ignore this data.
• Commands are not accepted during warm-up.

# Command Control via the Network

**Communication Port**

The following two ports are assigned for the command control.

TCP #23

TCP #9715

**Command Control Settings**

Configure the following items form a web browser when command control is used.

| **Port Settings** | | | |
|---|---|---|---|
| | **Network Control Port1 (Port: 23)** | Port open | Click the **[Enable]** check box to open **[Network Control Port1 (Port: 23)]** to use TCP #23. Default setting is “Enable”. |
| | | Authentication | Click the **[Enable]** check box for the **[Authentication]** setting when authentication is required. Default setting is “Disable”. |
| | **Network Control Port2 (Port: 9715)** | Port open | Click the **[Enable]** check box to open **[Network Control Port2 (Port: 9715)]** to use TCP #9715. Default setting is “Enable”. |
| | | Authentication | Click the **[Enable]** check box for the **[Authentication]** setting when authentication is required. Default setting is “Enable”. |

When the authentication setting is enabled, the following settings are required.

| **Security Settings** | | | |
|---|---|---|---|
| | **Network Control** | Authentication Password | Enter the desired authentication password. This setting will be the same for **[Network Control Port1 (Port: 23)]** and **[Network Control Port2 (Port: 9715)]**. Default setting is blank. |
| | | Re-enter Authentication Password | |

# Command Format

## [TCP #23]

### 1. Protocol

Consist of header (7 bytes) + command data (6 bytes)

### 2. Header

BE + EF + 03 + 06 + 00 + CRC_low + CRC_high
CRC_low: Lower byte of CRC flag for command data
CRC_high: Upper byte of CRC flag for command data

### 3. Command data

Command data chart

| byte_0 | byte_1 | byte_2 | byte_3 | byte_4 | byte_5 |
|---|---|---|---|---|---|
| Action | | Type | | Setting code | |
| low | high | low | high | low | high |

Action (byte_0 - 1)

| Action | Classification | Content |
|---|---|---|
| 1 | Set | Change setting to desired value. |
| 2 | Get | Read projector internal setup value. |
| 4 | Increment | Increment setup value by 1. |
| 5 | Decrement | Decrement setup value by 1. |
| 6 | Execute | Run a command. |

**Requesting projector status (Get command)**

(1) Send the following request code from the PC to the projector.
*Header + Command data ('02H' + '00H' + type (2 bytes) + '00H' + '00H')*
(2) The projector returns the response code *'1DH' + data (2 bytes)* to the PC.

**Changing the projector settings (Set command)**

(1) Send the following setting code from the PC to the projector.
*Header + Command data ('01H' + '00H' + type (2 bytes) + setting code (2 bytes))*
(2) The projector changes the setting based on the above setting code.
(3) The projector returns the response code *'06H'* to the PC.

**Using the projector default settings (Reset Command)**

(1) The PC sends the following default setting code to the projector.
*Header + Command data ('06H' + '00H' + type (2 bytes) + '00H' + '00H')*
(2) The projector changes the specified setting to the default value.
(3) The projector returns the response code *'06H'* to the PC.

**Increasing the projector setting value (Increment command)**

(1) The PC sends the following increment code to the projector.
*Header + Command data ('04H' + '00H' + type (2 bytes) + '00H' + '00H')*
(2) The projector increases the setting value on the above setting code.
(3) The projector returns the response code *'06H'* to the PC.

**Decreasing the projector setting value (Decrement command)**
(1) The PC sends the following decrement code to the projector.
*Header + Command data ('05H' + '00H' + type (2 bytes) + '00H' + '00H')*
(2) The projector decreases the setting value on the above setting code.
(3) The projector returns the response code *'06H'* to the PC.

**When the projector cannot understand the received command**
When the projector cannot understand the received command, the error code *'15H'* is sent back to the PC.
Sometimes the projector cannot properly receive the command. In such a case, the command is not executed and the error code *'15H'* is sent back to the PC. If this error code is returned, send the same command again.

**When the projector cannot execute the received command.**
When the projector cannot execute the received command, the error code *'1CH'* + *'xxxxH'* is sent back to the PC.
When the data length is greater than indicated by the data length code, the projector ignore the excess data code. Conversely when the data length is shorter than indicated by the data length code, an error code will be returned to the PC.

**When authentication error occurred.**
When authentication error occurred, the error code the *'1FH'* + *'0400H'* is sent back to the PC.

**NOTE** • Operation cannot be guaranteed when the projector receives an undefined command or data.
• Provide an interval of at least 40ms between the response code and any other code.
• Commands are not accepted during warm-up.

## [TCP #9715]

### 1. Protocol
Consist of header (1 byte) + data length (1 byte) + command data (13 bytes) + check sum (1 bytes) + connection ID (1 byte).

### 2. Header
02, Fixed

### 3. Data Length
Network control commands byte length (0D, Fixed)

### 4. Command data
Network control commands that start with BE EF (13bytes).

### 5. Check Sum
This is the value to make zero on the addition of the lower 8 bits from the header to the checksum.

### 6. Connection ID
Random value from 0 to 255 (This value is attached to the reply data).

### 7. Reply Data

The connection ID (the data is same as the connection ID data on the sending data format) is attached to the Network control commands reply data.

ACK reply: *'06H'* + *'xxH'*
NAK reply: *'15H'* + *'xxH'*
Error reply: *'1CH'* + *'xxxxH'* + *'xxH'*
Data reply: *'1DH'* + *'xxxxH'* + *'xxH'*
Projector busy reply: *'1FH'* + *'xxxxH'* + *'xxH'*
Authentication error reply: *'1FH'* + *'0400H'* + *'xxH'*
(*'xxH'* : connection ID)

## Automatic Connection Break

The TCP connection will be automatically disconnected after there is no communication for 30 seconds after being established.

## Authentication

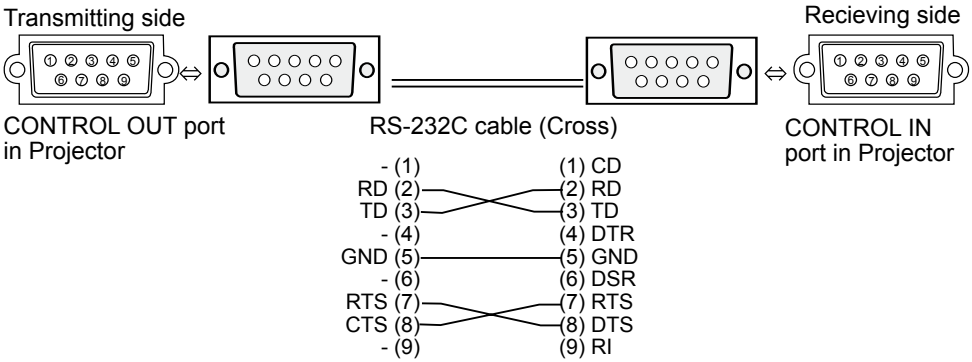
The projector does not accept commands without authentication success when authentication is enabled. The projector uses a challenge response type authentication with an MD5 (Message Digest 5) algorithm. When the projector is using a LAN, a random 8 bytes will be returned if authentication is enabled. Bind this received 8 bytes and the authentication password and digest this data with the MD5 algorithm and add this in front of the commands to send.

Following is a sample if the authentication password is set to “password” and the random 8 bytes are “a572f60c”.

1) Select the projector.
2) Receive the random 8 bytes “a572f60c” from the projector.
3) Bind the random 8 bytes “a572f60c” and the authentication password “password” and it becomes “a572f60cpassword”.
4) Digest this bind “a572f60cpassword” with MD5 algorithm.
   It will be “e3d97429adffa11bce1f7275813d4bde”.
5) Add this “e3d97429adffa11bce1f7275813d4bde” in front of the commands and send the data.
   Send “e3d97429adffa11bce1f7275813d4bde”+command.
6) When the sending data is correct, the command will be performed and the reply data will be returned. Otherwise, an authentication error will be returned.

**NOTE** • As for the transmission of the second or subsequent commands, the authentication data can be omitted when the same connection.

# Daisy Chain Communication




## 1.Communications setting

Set the same communication settings (selecting from options below) on the CONTROL terminal for transmitting and receiving side connected with a RS-232C cable.

Baud rate: 4800 / 9600 / 19200 / 38400 bps
Parity NONE / ODD / EVEN
Data bit: 8 bit (fixed)
Start bit: 1 bit (fixed)
Stop bit: 1 bit (fixed)

## 2.Commans available only for daisy chain communication

The projector supports the following commands only for daisy chain.
(1) Control the projector (Set/Increment/Decrement/Execute)
(2) Get the projector's status (Get)
(3) Get the number of connected projectors
(4) Set the communication Group identification and Communication ID.
(5) Get the communication Group identification and Communication ID.

## 3.Command format

### Protocol

Consist of header data (7 bytes) + command data (6 bytes)

### Header

BE + EF + Packet_Type + 06 + Group + ID + Checksum
Data chart

| Support Command | Packet_Type | Group | ID |
|---|---|---|---|
| Control the projector | '83H' | 0~16 | 0~64 |
| Get the projector's status | '83H' | 1~16 | 1~64 |
| Get the number of connected projectors | '84H' | 0 | 0 |
| Set the communication Group identification and Communication ID | '85H' | 1~16 | 1~64 |
| Get the communication Group identification and Communication ID | '86H' | 0 | 0 |

**Calculation of Checksum**

Sum up all of 12 bytes except the Checksum, then make the bit inversion of the lowest byte of the total, and add 1 to the inverted byte. The calculated result is the Checksum data.

Exp. Communication Group: A / Communication ID: 1

| Header data (7 bytes) | | | | | | Command data (6 bytes) | | |
|---|---|---|---|---|---|---|---|---|
| Header | Packet Type | Data Size | Group | ID | Checksum | Action | Type | Setting Code |
| BE EF | 83 | 06 | 01 | 01 | 66 | 01 00 | 00 60 | 01 00 |

BE + EF + 83 + 06 + 01 + 01 + 01 + 00 + 00 + 60 + 01 + 00 = '029AH'

The lowest byte of '029AH' is '9AH' (1001 1010). Making the bit inversion of the '9AH' gets '65H' (0110 0101), then, add 1. The calculated checksum is '66H'.

**Group and ID Settings**

This daisy chain command can adjust the control range by using the Group identification and ID.

| Group | ID | Direction | note |
|---|---|---|---|
| 1~16 | 1~64 | Individual control | The command is available to the projectors having the same Group identification and ID numbers with command setting. |
| 1~16 | 0 | Designated control according to the Group identification | The command is available to the projectors having the same Group identification with command setting. |
| 0 | 1~64 | Designated control according to the ID | The command is available to the projectors having the same ID number with command setting. |
| 0 | 0 | Unlimited. | The command is available to the all projectors. |

## Command data

① Control the projector

| byte_0 | byte_1 | byte_2 | byte_3 | byte_4 | byte_5 |
|---|---|---|---|---|---|
| Action | | Type | | Setting Code | |
| low | high | low | high | low | high |

Action (byte_0-1)

| Action | Classification | Content |
|---|---|---|
| 1 | Set | Change setting to desired value. |
| 4 | Increment | Increment setup value by 1. |
| 5 | Decrement | Decrement setup value by 1. |
| 6 | Execute | Run a command. |

Note: For the Type and Setting Code, see the RS-232C communication/ Network command table (🕮***20***).

② Get the projector's status

| byte_0 | byte_1 | byte_2 | byte_3 | byte_4 | byte_5 |
|---|---|---|---|---|---|
| Action | | Type | | Connection ID | |
| low | high | low | high | low | high |

Action (byte_0-1)

| Action | Classification | Content |
|---|---|---|
| 2 | Get | Read projector internal setup value. |

Connection ID (byte_4-5)

| Connection ID | Content |
|---|---|
| 0~255 | This value is attached to the reply data. |

③ Other commands

| byte_0 | byte_1 | byte_2 | byte_3 | byte_4 | byte_5 |
|---|---|---|---|---|---|
| Action | | Target Number | | Connection ID | |
| low | high | low | high | low | high |

| Support Command | Action | Target Number | Connection ID |
|---|---|---|---|
| Get the number of connected projectors | 2 | 0 | 0~255 |
| Set the communication Group identification and Communication ID | 1 | 1~65535 | 0~255 |
| Get the communication Group identification and Communication ID | 2 | 1~65535 | 0~255 |

## Command data

Requesting projector status (Get command)

(1) Send the following request code from the PC to the projector.
Header + Command data (‘02H’ + ‘00H’ + type (2 bytes) + connection ID (2 bytes))

(2) The projector returns the response code to the PC.
‘9DH’ + ‘02H’ + connection ID (2 bytes) + data (2 bytes)
When the projector cannot understand the received command, the error code is sent back to the PC.
‘95H’ + ‘02H’ + connection ID (2 bytes) + ‘00H’ + ‘00H’
When the projector cannot execute the received command, the error code is sent back to the PC.
‘9CH’ + ‘02H’ + connection ID (2 bytes) + error code (2 bytes)
Action (byte_0-1)

Error Code

| Error Code | Content |
|---|---|
| 0 | The command was not accepted, since the projector connected to PC was busy. |
| 1 | Communication error is happened between projectors. |
| 2 | The command was not accepted, since the designated projector was not found. |

Changing the projector settings (Set command)

(1) Send the following request code from the PC to the projector.
Header + Command data (‘01H’ + ‘00H’ + type (2 bytes) + setting code (2 bytes))
(2) The projector changes the setting based on the above setting code.
(3) Projector does not send out the response data.

Using the projector default settings (Reset Command)

(1) The PC sends the following default setting code to the projector.
Header + Command data (‘06H’ + ‘00H’ + type (2 bytes) + ‘00H’ + ‘00H’)
(2) The projector changes the specified setting to the default value.
(3) Projector does not send out the response data.

Increasing the projector setting value (Increment command)

(1) The PC sends the following increment code to the projector.
Header + Command data (‘04H’ + ‘00H’ + type (2 bytes) + ‘00H’ + ‘00H’)
(2) The projector increases the setting value on the above setting code.
(3) Projector does not send out the response data.

Decreasing the projector setting value (Decrement command)

(1) The PC sends the following decrement code to the projector.
Header + Command data (‘05H’ + ‘00H’ + type (2 bytes) + ‘00H’ + ‘00H’)
(2) The projector decreases the setting value on the above setting code.
(3) Projector does not send out the response data.

## Get the number of connected projectors

(1) Send the following request code from the PC to the projector.
Header + Command data (‘02H’ + ‘00H’ + ‘00H’ + ‘00H’ + connection ID (2 bytes))
(2) The projector returns the response code to the PC.
‘9EH’ + ‘04H’ + connection ID (2 bytes) + number of projectors (2 bytes) + group (1 byte) + ID (1 byte)
When the projector cannot understand the received command, the error code is sent back to the PC.
‘96H’ + ‘04H’ + connection ID (2 bytes) + ‘00H’ + ‘00H’ + ‘00H’ + ‘00H’
When the projector cannot execute the received command, the error code is sent back to the PC.
‘9FH’ + ‘06H’ + connection ID (2 bytes) + position number of projector having an error* (2 bytes) + group (1 byte) + ID (1 byte) + error code (2 bytes)
*The position number is counted from the projector connected to PC directly, which has No.1 as position number. Then, the next one is No.2 and so on.
Error Code

| Error Code | Content |
|---|---|
| 0 | The command was not accepted, since the projector connected to PC was busy. |
| 1 | Communication error is happened between projectors. |

## Set the communication Group identification and Communication ID

(1) Send the following setting code from the PC to the projector.
Header + Command data (‘01H’ + ‘00H’ + target number (2 bytes) + connection ID (2 bytes))
(2) The projector changes the group and ID setting based on the above setting code.
(3) Projector does not send out the response data.

## Get the communication Group identification and Communication ID

(1) Send the following request code from the PC to the projector.
Header + Command data (‘02H’ + ‘00H’ + target number (2 bytes) + connection ID (2 bytes))
(2) The projector returns the response code to the PC.
‘90H’ + ‘04H’ + connection ID (2 bytes) + target number (2 bytes) + group (1 byte) + ID (1 byte)
When the projector cannot understand the received command, the error code is sent back to the PC.
‘97H’ + ‘04H’ + connection ID (2 bytes) + ‘00H’ + ‘00H’ + ‘00H’ + ‘00H’
When the projector cannot execute the received command, the error code is sent back to the PC.
‘91H’ + ‘06H’ + connection ID (2 bytes) + position number of projector having an error* (2 bytes) + group (1 byte) + ID (1 byte) + error code (2 bytes)
* The position number is counted from the projector connected to PC directly, which has No.1 as position number. Then, the next one is No.2 and so on.
Error Code

| Error Code | Content |
|---|---|
| 0 | The command was not accepted, since the projector connected to PC was busy. |
| 1 | Communication error is happened between projectors. |
| 2 | The command was not accepted, since the designated projector was not found. |

**NOTE** • As for the transmission of the second or subsequent commands, the authentication data can be omitted when the same connection.
• Commands are not accepted during warm-up.
•To use the daisy chain communication, set the DAISY CHAIN of the COMMUNICATIONTYPE item in the OPTION menu on the OSD (On Screen Display) (📖***User's Manual (detailed) - Operating Guide***)

# RS-232C Communication / Network command table

| Names | Operation Type | | Header | | | CRC | Command Data | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Action | Type | Setting Code |
| Power | Set | OFF | BE EF | 03 | 06 00 | 2A D3 | 01 00 | 00 60 | 00 00 |
| | | ON | BE EF | 03 | 06 00 | BA D2 | 01 00 | 00 60 | 01 00 |
| | Get | | BE EF | 03 | 06 00 | 19 D3 | 02 00 | 00 60 | 00 00 |
| | | | (Example Return)<br>00 00 (Off) 01 00 (On) 02 00 (Cool Down) | | | | | | |
| Input Source | Set | COMPUTER IN 1 | BE EF | 03 | 06 00 | FE D2 | 01 00 | 00 20 | 00 00 |
| | | COMPUTER IN 2 | BE EF | 03 | 06 00 | 3E D0 | 01 00 | 00 20 | 04 00 |
| | | HDMI | BE EF | 03 | 06 00 | 0E D2 | 01 00 | 00 20 | 03 00 |
| | | VIDEO 1 | BE EF | 03 | 06 00 | 6E D3 | 01 00 | 00 20 | 01 00 |
| | | S-VIDEO | BE EF | 03 | 06 00 | 9E D3 | 01 00 | 00 20 | 02 00 |
| | | COMPONENT | BE EF | 03 | 06 00 | AE D1 | 01 00 | 00 20 | 05 00 |
| | | BNC | BE EF | 03 | 06 00 | CE D0 | 01 00 | 00 20 | 07 00 |
| | | DVI-D | BE EF | 03 | 06 00 | AE D4 | 01 00 | 00 20 | 09 00 |
| | | VIDEO 2 | BE EF | 03 | 06 00 | 5E D4 | 01 00 | 00 20 | 0A 00 |
| | Get | | BE EF | 03 | 06 00 | CD D2 | 02 00 | 00 20 | 00 00 |
| Error Status | Get | | BE EF | 03 | 06 00 | D9 D8 | 02 00 | 20 60 | 00 00 |
| | | | (Example Return)<br>00 00 (Normal) 01 00 (Cover error) 02 00 (Fan error) 03 00 (Lamp error)<br>04 00 (Temp error) 05 00 (Air flow error)<br>07 00 (Cold error) 08 00 (Filter error) 0F 00 (Shutter error) 10 00 (Lens Shift error) | | | | | | |
| BRIGHTNESS | Get | | BE EF | 03 | 06 00 | 89 D2 | 02 00 | 03 20 | 00 00 |
| | Increment | | BE EF | 03 | 06 00 | EF D2 | 04 00 | 03 20 | 00 00 |
| | Decrement | | BE EF | 03 | 06 00 | 3E D3 | 05 00 | 03 20 | 00 00 |
| CONTRAST | Get | | BE EF | 03 | 06 00 | FD D3 | 02 00 | 04 20 | 00 00 |
| | Increment | | BE EF | 03 | 06 00 | 9B D3 | 04 00 | 04 20 | 00 00 |
| | Decrement | | BE EF | 03 | 06 00 | 4A D2 | 05 00 | 04 20 | 00 00 |
| PICTURE MODE | Set | NORMAL | BE EF | 03 | 06 00 | 23 F6 | 01 00 | BA 30 | 00 00 |
| | | CINEMA | BE EF | 03 | 06 00 | B3 F7 | 01 00 | BA 30 | 01 00 |
| | | DYNAMIC | BE EF | 03 | 06 00 | E3 F4 | 01 00 | BA 30 | 04 00 |
| | | BOARD (BLACK) | BE EF | 03 | 06 00 | E3 EF | 01 00 | BA 30 | 20 00 |
| | | BOARD (GREEN) | BE EF | 03 | 06 00 | 73 EE | 01 00 | BA 30 | 21 00 |
| | | WHITE BOARD | BE EF | 03 | 06 00 | 83 EE | 01 00 | BA 30 | 22 00 |
| | | DAY TIME | BE EF | 03 | 06 00 | E3 C7 | 01 00 | BA 30 | 40 00 |
| | | CUSTOM | BE EF | 03 | 06 00 | E3 FB | 01 00 | BA 30 | 10 00 |
| | Get | | BE EF | 03 | 06 00 | 10 F6 | 02 00 | BA 30 | 00 00 |
| GAMMA | Set | 1 DEFAULT | BE EF | 03 | 06 00 | 07 E9 | 01 00 | A1 30 | 20 00 |
| | | 2 DEFAULT | BE EF | 03 | 06 00 | 97 E8 | 01 00 | A1 30 | 21 00 |
| | | 3 DEFAULT | BE EF | 03 | 06 00 | 67 E8 | 01 00 | A1 30 | 22 00 |
| | | 4 DEFAULT | BE EF | 03 | 06 00 | F7 E9 | 01 00 | A1 30 | 23 00 |
| | | 5 DEFAULT | BE EF | 03 | 06 00 | C7 EB | 01 00 | A1 30 | 24 00 |
| | | 6 DEFAULT | BE EF | 03 | 06 00 | 57 EA | 01 00 | A1 30 | 25 00 |
| | | 1 CUSTOM | BE EF | 03 | 06 00 | 07 FD | 01 00 | A1 30 | 10 00 |
| | | 2 CUSTOM | BE EF | 03 | 06 00 | 97 FC | 01 00 | A1 30 | 11 00 |
| | | 3 CUSTOM | BE EF | 03 | 06 00 | 67 FC | 01 00 | A1 30 | 12 00 |
| | | 4 CUSTOM | BE EF | 03 | 06 00 | F7 FD | 01 00 | A1 30 | 13 00 |

| Names | Operation Type | | Header | | | CRC | Command Data | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Action | Type | Setting Code |
| GAMMA | Set | 5 CUSTOM | BE EF | 03 | 06 00 | C7 FF | 01 00 | A1 30 | 14 00 |
| | | 6 CUSTOM | BE EF | 03 | 06 00 | 57 FE | 01 00 | A1 30 | 15 00 |
| | Get | | BE EF | 03 | 06 00 | F4 F0 | 02 00 | A1 30 | 00 00 |
| User Gamma Pattern | Set | Off | BE EF | 03 | 06 00 | FB FA | 01 00 | 80 30 | 00 00 |
| | | 9step Gray Scale | BE EF | 03 | 06 00 | 6B FB | 01 00 | 80 30 | 01 00 |
| | | 15step Gray Scale | BE EF | 03 | 06 00 | 9B FB | 01 00 | 80 30 | 02 00 |
| | | Ramp | BE EF | 03 | 06 00 | 0B FA | 01 00 | 80 30 | 03 00 |
| | Get | | BE EF | 03 | 06 00 | C8 FA | 02 00 | 80 30 | 00 00 |
| User Gamma Point 1 | Get | | BE EF | 03 | 06 00 | 08 FE | 02 00 | 90 30 | 00 00 |
| | Increment | | BE EF | 03 | 06 00 | 6E FE | 04 00 | 90 30 | 00 00 |
| | Decrement | | BE EF | 03 | 06 00 | BF FF | 05 00 | 90 30 | 00 00 |
| User Gamma Point 2 | Get | | BE EF | 03 | 06 00 | F4 FF | 02 00 | 91 30 | 00 00 |
| | Increment | | BE EF | 03 | 06 00 | 92 FF | 04 00 | 91 30 | 00 00 |
| | Decrement | | BE EF | 03 | 06 00 | 43 FE | 05 00 | 91 30 | 00 00 |
| User Gamma Point 3 | Get | | BE EF | 03 | 06 00 | B0 FF | 02 00 | 92 30 | 00 00 |
| | Increment | | BE EF | 03 | 06 00 | D6 FF | 04 00 | 92 30 | 00 00 |
| | Decrement | | BE EF | 03 | 06 00 | 07 FE | 05 00 | 92 30 | 00 00 |
| User Gamma Point 4 | Get | | BE EF | 03 | 06 00 | 4C FE | 02 00 | 93 30 | 00 00 |
| | Increment | | BE EF | 03 | 06 00 | 2A FE | 04 00 | 93 30 | 00 00 |
| | Decrement | | BE EF | 03 | 06 00 | FB FF | 05 00 | 93 30 | 00 00 |
| User Gamma Point 5 | Get | | BE EF | 03 | 06 00 | 38 FF | 02 00 | 94 30 | 00 00 |
| | Increment | | BE EF | 03 | 06 00 | 5E FF | 04 00 | 94 30 | 00 00 |
| | Decrement | | BE EF | 03 | 06 00 | 8F FE | 05 00 | 94 30 | 00 00 |
| User Gamma Point 6 | Get | | BE EF | 03 | 06 00 | C4 FE | 02 00 | 95 30 | 00 00 |
| | Increment | | BE EF | 03 | 06 00 | A2 FE | 04 00 | 95 30 | 00 00 |
| | Decrement | | BE EF | 03 | 06 00 | 73 FF | 05 00 | 95 30 | 00 00 |
| User Gamma Point 7 | Get | | BE EF | 03 | 06 00 | 80 FE | 02 00 | 96 30 | 00 00 |
| | Increment | | BE EF | 03 | 06 00 | E6 FE | 04 00 | 96 30 | 00 00 |
| | Decrement | | BE EF | 03 | 06 00 | 37 FF | 05 00 | 96 30 | 00 00 |
| User Gamma Point 8 | Get | | BE EF | 03 | 06 00 | 7C FF | 02 00 | 97 30 | 00 00 |
| | Increment | | BE EF | 03 | 06 00 | 1A FF | 04 00 | 97 30 | 00 00 |
| | Decrement | | BE EF | 03 | 06 00 | CB FE | 05 00 | 97 30 | 00 00 |
| COLOR TEMP | Set | 1 HIGH | BE EF | 03 | 06 00 | 0B F5 | 01 00 | B0 30 | 03 00 |
| | | 2 MID | BE EF | 03 | 06 00 | 9B F4 | 01 00 | B0 30 | 02 00 |
| | | 3 LOW | BE EF | 03 | 06 00 | 6B F4 | 01 00 | B0 30 | 01 00 |
| | | 4 Hi-BRIGHT-1 | BE EF | 03 | 06 00 | 3B F2 | 01 00 | B0 30 | 08 00 |
| | | 5 Hi-BRIGHT-2 | BE EF | 03 | 06 00 | AB F3 | 01 00 | B0 30 | 09 00 |
| | | 6 Hi-BRIGHT-3 | BE EF | 03 | 06 00 | 5B F3 | 01 00 | B0 30 | 0A 00 |
| | | 1 CUSTOM (HIGH) | BE EF | 03 | 06 00 | CB F8 | 01 00 | B0 30 | 13 00 |
| | | 2 CUSTOM (MID) | BE EF | 03 | 06 00 | 5B F9 | 01 00 | B0 30 | 12 00 |
| | | 3 CUSTOM (LOW) | BE EF | 03 | 06 00 | AB F9 | 01 00 | B0 30 | 11 00 |
| | | 4 CUSTOM (Hi-BRIGHT-1) | BE EF | 03 | 06 00 | FB FF | 01 00 | B0 30 | 18 00 |
| | | 5 CUSTOM (Hi-BRIGHT-2) | BE EF | 03 | 06 00 | 6B FE | 01 00 | B0 30 | 19 00 |
| | | 6 CUSTOM (Hi-BRIGHT-3) | BE EF | 03 | 06 00 | 9B FE | 01 00 | B0 30 | 1A 00 |
| | Get | | BE EF | 03 | 06 00 | C8 F5 | 02 00 | B0 30 | 00 00 |

| Names | Operation Type | | Header | | | CRC | Command Data | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Action | Type | Setting Code |
| COLOR TEMP GAIN R | Get | | BE EF | 03 | 06 00 | 34 F4 | 02 00 | B1 30 | 00 00 |
| | Increment | | BE EF | 03 | 06 00 | 52 F4 | 04 00 | B1 30 | 00 00 |
| | Decrement | | BE EF | 03 | 06 00 | 83 F5 | 05 00 | B1 30 | 00 00 |
| COLOR TEMP GAIN G | Get | | BE EF | 03 | 06 00 | 70 F4 | 02 00 | B2 30 | 00 00 |
| | Increment | | BE EF | 03 | 06 00 | 16 F4 | 04 00 | B2 30 | 00 00 |
| | Decrement | | BE EF | 03 | 06 00 | C7 F5 | 05 00 | B2 30 | 00 00 |
| COLOR TEMP GAIN B | Get | | BE EF | 03 | 06 00 | 8C F5 | 02 00 | B3 30 | 00 00 |
| | Increment | | BE EF | 03 | 06 00 | EA F5 | 04 00 | B3 30 | 00 00 |
| | Decrement | | BE EF | 03 | 06 00 | 3B F4 | 05 00 | B3 30 | 00 00 |
| COLOR TEMP OFFSET R | Get | | BE EF | 03 | 06 00 | 04 F5 | 02 00 | B5 30 | 00 00 |
| | Increment | | BE EF | 03 | 06 00 | 62 F5 | 04 00 | B5 30 | 00 00 |
| | Decrement | | BE EF | 03 | 06 00 | B3 F4 | 05 00 | B5 30 | 00 00 |
| COLOR TEMP OFFSET G | Get | | BE EF | 03 | 06 00 | 40 F5 | 02 00 | B6 30 | 00 00 |
| | Increment | | BE EF | 03 | 06 00 | 26 F5 | 04 00 | B6 30 | 00 00 |
| | Decrement | | BE EF | 03 | 06 00 | F7 F4 | 05 00 | B6 30 | 00 00 |
| COLOR TEMP OFFSET B | Get | | BE EF | 03 | 06 00 | BC F4 | 02 00 | B7 30 | 00 00 |
| | Increment | | BE EF | 03 | 06 00 | DA F4 | 04 00 | B7 30 | 00 00 |
| | Decrement | | BE EF | 03 | 06 00 | 0B F5 | 05 00 | B7 30 | 00 00 |
| COLOR | Get | | BE EF | 03 | 06 00 | B5 72 | 02 00 | 02 22 | 00 00 |
| | Increment | | BE EF | 03 | 06 00 | D3 72 | 04 00 | 02 22 | 00 00 |
| | Decrement | | BE EF | 03 | 06 00 | 02 73 | 05 00 | 02 22 | 00 00 |
| COLOR Reset | Execute | | BE EF | 03 | 06 00 | 80 D0 | 06 00 | 0A 70 | 00 00 |
| TINT | Get | | BE EF | 03 | 06 00 | 49 73 | 02 00 | 03 22 | 00 00 |
| | Increment | | BE EF | 03 | 06 00 | 2F 73 | 04 00 | 03 22 | 00 00 |
| | Decrement | | BE EF | 03 | 06 00 | FE 72 | 05 00 | 03 22 | 00 00 |
| TINT Reset | Execute | | BE EF | 03 | 06 00 | 7C D1 | 06 00 | 0B 70 | 00 00 |
| SHARPNESS | Get | | BE EF | 03 | 06 00 | F1 72 | 02 00 | 01 22 | 00 00 |
| | Increment | | BE EF | 03 | 06 00 | 97 72 | 04 00 | 01 22 | 00 00 |
| | Decrement | | BE EF | 03 | 06 00 | 46 73 | 05 00 | 01 22 | 00 00 |
| SHARPNESS Reset | Execute | | BE EF | 03 | 06 00 | C4 D0 | 06 00 | 09 70 | 00 00 |
| ACTIVE IRIS | Set | PRESENTATION | BE EF | 03 | 06 00 | 5B 2E | 01 00 | 04 33 | 11 00 |
| | | THEATER | BE EF | 03 | 06 00 | CB 2F | 01 00 | 04 33 | 10 00 |
| | | MANUAL | BE EF | 03 | 06 00 | CB 3B | 01 00 | 04 33 | 20 00 |
| | Get | | BE EF | 03 | 06 00 | 38 22 | 02 00 | 04 33 | 00 00 |
| MANUAL IRIS | Get | | BE EF | 03 | 06 00 | B0 22 | 02 00 | 02 33 | 00 00 |
| | Increment | | BE EF | 03 | 06 00 | D6 22 | 04 00 | 02 33 | 00 00 |
| | Decrement | | BE EF | 03 | 06 00 | 07 23 | 05 00 | 02 33 | 00 00 |
| MY MEMORY Load | Set | 1 | BE EF | 03 | 06 00 | 0E D7 | 01 00 | 14 20 | 00 00 |
| | | 2 | BE EF | 03 | 06 00 | 9E D6 | 01 00 | 14 20 | 01 00 |
| | | 3 | BE EF | 03 | 06 00 | 6E D6 | 01 00 | 14 20 | 02 00 |
| | | 4 | BE EF | 03 | 06 00 | FE D7 | 01 00 | 14 20 | 03 00 |
| MY MEMORY Save | Set | 1 | BE EF | 03 | 06 00 | F2 D6 | 01 00 | 15 20 | 00 00 |
| | | 2 | BE EF | 03 | 06 00 | 62 D7 | 01 00 | 15 20 | 01 00 |
| | | 3 | BE EF | 03 | 06 00 | 92 D7 | 01 00 | 15 20 | 02 00 |
| | | 4 | BE EF | 03 | 06 00 | 02 D6 | 01 00 | 15 20 | 03 00 |
| PROGRESSIVE | Set | OFF | BE EF | 03 | 06 00 | 4A 72 | 01 00 | 07 22 | 00 00 |
| | | TV | BE EF | 03 | 06 00 | DA 73 | 01 00 | 07 22 | 01 00 |
| | | FILM | BE EF | 03 | 06 00 | 2A 73 | 01 00 | 07 22 | 02 00 |
| | Get | | BE EF | 03 | 06 00 | 79 72 | 02 00 | 07 22 | 00 00 |

| Names | Operation Type | | Header | | | CRC | Command Data | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Action | Type | Setting Code |
| 3D-YCS | Set | OFF | BE EF | 03 | 06 00 | E6 70 | 01 00 | 0A 22 | 00 00 |
| | | MOVIE | BE EF | 03 | 06 00 | 76 71 | 01 00 | 0A 22 | 01 00 |
| | | STILL IMAGE | BE EF | 03 | 06 00 | 86 71 | 01 00 | 0A 22 | 02 00 |
| | Get | | BE EF | 03 | 06 00 | D5 70 | 02 00 | 0A 22 | 00 00 |
| VIDEO NR | Set | LOW | BE EF | 03 | 06 00 | 26 72 | 01 00 | 06 22 | 01 00 |
| | | MID | BE EF | 03 | 06 00 | D6 72 | 01 00 | 06 22 | 02 00 |
| | | HIGH | BE EF | 03 | 06 00 | 46 73 | 01 00 | 06 22 | 03 00 |
| | Get | | BE EF | 03 | 06 00 | 85 73 | 02 00 | 06 22 | 00 00 |
| ASPECT | Set | NORMAL | BE EF | 03 | 06 00 | 5E DD | 01 00 | 08 20 | 10 00 |
| | | 4:3 | BE EF | 03 | 06 00 | 9E D0 | 01 00 | 08 20 | 00 00 |
| | | 16:9 | BE EF | 03 | 06 00 | 0E D1 | 01 00 | 08 20 | 01 00 |
| | | 16:10 *3 | BE EF | 03 | 06 00 | 3E D6 | 01 00 | 08 20 | 0A 00 |
| | | 14:9 | BE EF | 03 | 06 00 | CE D6 | 01 00 | 08 20 | 09 00 |
| | | SMALL *1 | BE EF | 03 | 06 00 | FE D1 | 01 00 | 08 20 | 02 00 |
| | | NATIVE *2 | BE EF | 03 | 06 00 | 5E D7 | 01 00 | 08 20 | 08 00 |
| | | FULL *3 | BE EF | 03 | 06 00 | 5E C9 | 01 00 | 08 20 | 20 00 |
| | Get | | BE EF | 03 | 06 00 | AD D0 | 02 00 | 08 20 | 00 00 |
| OVER SCAN | Get | | BE EF | 03 | 06 00 | 91 70 | 02 00 | 09 22 | 00 00 |
| | Increment | | BE EF | 03 | 06 00 | F7 70 | 04 00 | 09 22 | 00 00 |
| | Decrement | | BE EF | 03 | 06 00 | 26 71 | 05 00 | 09 22 | 00 00 |
| OVER SCAN Reset | Execute | | BE EF | 03 | 06 00 | EC D9 | 06 00 | 27 70 | 00 00 |
| V POSITION | Get | | BE EF | 03 | 06 00 | 0D 83 | 02 00 | 00 21 | 00 00 |
| | Increment | | BE EF | 03 | 06 00 | 6B 83 | 04 00 | 00 21 | 00 00 |
| | Decrement | | BE EF | 03 | 06 00 | BA 82 | 05 00 | 00 21 | 00 00 |
| V POSITION Reset | Execute | | BE EF | 03 | 06 00 | E0 D2 | 06 00 | 02 70 | 00 00 |
| H POSITION | Get | | BE EF | 03 | 06 00 | F1 82 | 02 00 | 01 21 | 00 00 |
| | Increment | | BE EF | 03 | 06 00 | 97 82 | 04 00 | 01 21 | 00 00 |
| | Decrement | | BE EF | 03 | 06 00 | 46 83 | 05 00 | 01 21 | 00 00 |
| H POSITION Reset | Execute | | BE EF | 03 | 06 00 | 1C D3 | 06 00 | 03 70 | 00 00 |
| H PHASE | Get | | BE EF | 03 | 06 00 | 49 83 | 02 00 | 03 21 | 00 00 |
| | Increment | | BE EF | 03 | 06 00 | 2F 83 | 04 00 | 03 21 | 00 00 |
| | Decrement | | BE EF | 03 | 06 00 | FE 82 | 05 00 | 03 21 | 00 00 |
| H SIZE | Get | | BE EF | 03 | 06 00 | B5 82 | 02 00 | 02 21 | 00 00 |
| | Increment | | BE EF | 03 | 06 00 | D3 82 | 04 00 | 02 21 | 00 00 |
| | Decrement | | BE EF | 03 | 06 00 | 02 83 | 05 00 | 02 21 | 00 00 |
| H SIZE Reset | Execute | | BE EF | 03 | 06 00 | 68 D2 | 06 00 | 04 70 | 00 00 |
| AUTO ADJUST | Execute | | BE EF | 03 | 06 00 | 91 D0 | 06 00 | 0A 20 | 00 00 |
| COLOR SPACE | Set | AUTO | BE EF | 03 | 06 00 | 0E 72 | 01 00 | 04 22 | 00 00 |
| | | RGB | BE EF | 03 | 06 00 | 9E 73 | 01 00 | 04 22 | 01 00 |
| | | SMPTE240 | BE EF | 03 | 06 00 | 6E 73 | 01 00 | 04 22 | 02 00 |
| | | REC709 | BE EF | 03 | 06 00 | FE 72 | 01 00 | 04 22 | 03 00 |
| | | REC601 | BE EF | 03 | 06 00 | CE 70 | 01 00 | 04 22 | 04 00 |
| | Get | | BE EF | 03 | 06 00 | 3D 72 | 02 00 | 04 22 | 00 00 |
| COMPONENT | Set | COMPONENT | BE EF | 03 | 06 00 | 4A D7 | 01 00 | 17 20 | 00 00 |
| | | SCART RGB | BE EF | 03 | 06 00 | DA D6 | 01 00 | 17 20 | 01 00 |
| | Get | | BE EF | 03 | 06 00 | 79 D7 | 02 00 | 17 20 | 00 00 |

*1 CP-X10000, CP-SX12000 only. *2 CP-WX11000, CP-SX12000 only.
*3 CP-WX11000 only.

| Names | Operation Type | | Header | | | CRC | Command Data | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Action | Type | Setting Code |
| S-VIDEO FORMAT | Set | AUTO | BE EF | 03 | 06 00 | E6 70 | 01 00 | 12 22 | 0A 00 |
| | | NTSC | BE EF | 03 | 06 00 | 86 74 | 01 00 | 12 22 | 04 00 |
| | | PAL | BE EF | 03 | 06 00 | 16 75 | 01 00 | 12 22 | 05 00 |
| | | SECAM | BE EF | 03 | 06 00 | 16 70 | 01 00 | 12 22 | 09 00 |
| | | NTSC4.43 | BE EF | 03 | 06 00 | 26 77 | 01 00 | 12 22 | 02 00 |
| | | M-PAL | BE EF | 03 | 06 00 | 86 71 | 01 00 | 12 22 | 08 00 |
| | | N-PAL | BE EF | 03 | 06 00 | 76 74 | 01 00 | 12 22 | 07 00 |
| | Get | | BE EF | 03 | 06 00 | 75 76 | 02 00 | 12 22 | 00 00 |
| VIDEO 1 FORMAT | Set | AUTO | BE EF | 03 | 06 00 | A2 70 | 01 00 | 11 22 | 0A 00 |
| | | NTSC | BE EF | 03 | 06 00 | C2 74 | 01 00 | 11 22 | 04 00 |
| | | PAL | BE EF | 03 | 06 00 | 52 75 | 01 00 | 11 22 | 05 00 |
| | | SECAM | BE EF | 03 | 06 00 | 52 70 | 01 00 | 11 22 | 09 00 |
| | | NTSC4.43 | BE EF | 03 | 06 00 | 62 77 | 01 00 | 11 22 | 02 00 |
| | | M-PAL | BE EF | 03 | 06 00 | C2 71 | 01 00 | 11 22 | 08 00 |
| | | N-PAL | BE EF | 03 | 06 00 | 32 74 | 01 00 | 11 22 | 07 00 |
| | Get | | BE EF | 03 | 06 00 | 31 76 | 02 00 | 11 22 | 00 00 |
| VIDEO 2 FORMAT | Set | AUTO | BE EF | 03 | 06 00 | 86 72 | 01 00 | 1A 22 | 0A 00 |
| | | NTSC | BE EF | 03 | 06 00 | E6 76 | 01 00 | 1A 22 | 04 00 |
| | | PAL | BE EF | 03 | 06 00 | 76 77 | 01 00 | 1A 22 | 05 00 |
| | | SECAM | BE EF | 03 | 06 00 | 76 72 | 01 00 | 1A 22 | 09 00 |
| | | NTSC4.43 | BE EF | 03 | 06 00 | 46 75 | 01 00 | 1A 22 | 02 00 |
| | | M-PAL | BE EF | 03 | 06 00 | E6 73 | 01 00 | 1A 22 | 08 00 |
| | | N-PAL | BE EF | 03 | 06 00 | 16 76 | 01 00 | 1A 22 | 07 00 |
| | Get | | BE EF | 03 | 06 00 | 15 74 | 02 00 | 1A 22 | 00 00 |
| HDMI FORMAT | Set | AUTO | BE EF | 03 | 06 00 | BA 77 | 01 00 | 13 22 | 00 00 |
| | | VIDEO | BE EF | 03 | 06 00 | 2A 76 | 01 00 | 13 22 | 01 00 |
| | | COMPUTER | BE EF | 03 | 06 00 | DA 76 | 01 00 | 13 22 | 02 00 |
| | Get | | BE EF | 03 | 06 00 | 89 77 | 02 00 | 13 22 | 00 00 |
| DVI-D FORMAT | Set | AUTO | BE EF | 03 | 06 00 | 62 74 | 01 00 | 19 22 | 00 00 |
| | | VIDEO | BE EF | 03 | 06 00 | F2 75 | 01 00 | 19 22 | 01 00 |
| | | COMPUTER | BE EF | 03 | 06 00 | 02 75 | 01 00 | 19 22 | 02 00 |
| | Get | | BE EF | 03 | 06 00 | 51 74 | 02 00 | 19 22 | 00 00 |
| HDMI RANGE | Set | AUTO | BE EF | 03 | 06 00 | 86 D8 | 01 00 | 22 20 | 00 00 |
| | | NORMAL | BE EF | 03 | 06 00 | 16 D9 | 01 00 | 22 20 | 01 00 |
| | | ENHANCED | BE EF | 03 | 06 00 | E6 D9 | 01 00 | 22 20 | 02 00 |
| | Get | | BE EF | 03 | 06 00 | B5 D8 | 02 00 | 22 20 | 00 00 |
| DVI-D RANGE | Set | AUTO | BE EF | 03 | 06 00 | FE D4 | 01 00 | 20 20 | 10 00 |
| | | NORMAL | BE EF | 03 | 06 00 | 3E D9 | 01 00 | 20 20 | 00 00 |
| | | ENHANCED | BE EF | 03 | 06 00 | AE D8 | 01 00 | 20 20 | 01 00 |
| | Get | | BE EF | 03 | 06 00 | 0D D9 | 02 00 | 20 20 | 00 00 |
| COMPUTER IN 1 | Set | SYNC ON G OFF | BE EF | 03 | 06 00 | 5E D7 | 01 00 | 10 20 | 02 00 |
| | | AUTO | BE EF | 03 | 06 00 | CE D6 | 01 00 | 10 20 | 03 00 |
| | Get | | BE EF | 03 | 06 00 | 0D D6 | 02 00 | 10 20 | 00 00 |
| COMPUTER IN 2 | Set | SYNC ON G OFF | BE EF | 03 | 06 00 | A2 D6 | 01 00 | 11 20 | 02 00 |
| | | AUTO | BE EF | 03 | 06 00 | 32 D7 | 01 00 | 11 20 | 03 00 |
| | Get | | BE EF | 03 | 06 00 | F1 D7 | 02 00 | 11 20 | 00 00 |
| BNC | Set | SYNC ON G OFF | BE EF | 03 | 06 00 | 86 D4 | 01 00 | 1A 20 | 02 00 |
| | | AUTO | BE EF | 03 | 06 00 | 16 D5 | 01 00 | 1A 20 | 03 00 |
| | Get | | BE EF | 03 | 06 00 | D5 D5 | 02 00 | 1A 20 | 00 00 |

| Names | Operation Type | | Header | | | CRC | Command Data | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Action | Type | Setting Code |
| FRAME LOCK - COMPUTER IN 1 | Set | OFF | BE EF | 03 | 06 00 | 3B C2 | 01 00 | 50 30 | 00 00 |
| | | ON | BE EF | 03 | 06 00 | AB C3 | 01 00 | 50 30 | 01 00 |
| | Get | | BE EF | 03 | 06 00 | 08 C2 | 02 00 | 50 30 | 00 00 |
| FRAME LOCK - COMPUTER IN 2 | Set | OFF | BE EF | 03 | 06 00 | 0B C3 | 01 00 | 54 30 | 00 00 |
| | | ON | BE EF | 03 | 06 00 | 9B C2 | 01 00 | 54 30 | 00 00 |
| | Get | | BE EF | 03 | 06 00 | 38 C3 | 02 00 | 54 30 | 00 00 |
| FRAME LOCK - BNC | Set | OFF | BE EF | 03 | 06 00 | 4F C3 | 01 00 | 57 30 | 00 00 |
| | | ON | BE EF | 03 | 06 00 | DF C2 | 01 00 | 57 30 | 01 00 |
| | Get | | BE EF | 03 | 06 00 | 7C C3 | 02 00 | 57 30 | 00 00 |
| FRAME LOCK - HDMI | Set | OFF | BE EF | 03 | 06 00 | 7F C2 | 01 00 | 53 30 | 00 00 |
| | | ON | BE EF | 03 | 06 00 | EF C3 | 01 00 | 53 30 | 01 00 |
| | Get | | BE EF | 03 | 06 00 | 4C C2 | 02 00 | 53 30 | 00 00 |
| FRAME LOCK - DVI-D | Set | OFF | BE EF | 03 | 06 00 | A7 C1 | 01 00 | 59 30 | 00 00 |
| | | ON | BE EF | 03 | 06 00 | 37 C0 | 01 00 | 59 30 | 01 00 |
| | Get | | BE EF | 03 | 06 00 | 94 C1 | 02 00 | 59 30 | 00 00 |
| KEYSTONE V | Get | | BE EF | 03 | 06 00 | B9 D3 | 02 00 | 07 20 | 00 00 |
| | Increment | | BE EF | 03 | 06 00 | DF D3 | 04 00 | 07 20 | 00 00 |
| | Decrement | | BE EF | 03 | 06 00 | 0E D2 | 05 00 | 07 20 | 00 00 |
| KEYSTONE V Reset | Execute | | BE EF | 03 | 06 00 | 08 D0 | 06 00 | 0C 70 | 00 00 |
| AUTO KEYSTONE V EXECUTE | Execute | | BE EF | 03 | 06 00 | E5 D1 | 06 00 | 0D 20 | 00 00 |
| AUTO KEYSTONE V | Set | OFF | BE EF | 03 | 06 00 | EA D1 | 01 00 | 0F 20 | 00 00 |
| | | ON | BE EF | 03 | 06 00 | 7A D0 | 01 00 | 0F 20 | 01 00 |
| | Get | | BE EF | 03 | 06 00 | D9 D1 | 02 00 | 0F 20 | 00 00 |
| KEYSTONE H | Get | | BE EF | 03 | 06 00 | E9 D0 | 02 00 | 0B 20 | 00 00 |
| | Increment | | BE EF | 03 | 06 00 | 8F D0 | 04 00 | 0B 20 | 00 00 |
| | Decrement | | BE EF | 03 | 06 00 | 5E D1 | 05 00 | 0B 20 | 00 00 |
| KEYSTONE H Reset | Execute | | BE EF | 03 | 06 00 | 98 D8 | 06 00 | 20 70 | 00 00 |
| ECO MODE | Set | NORMAL | BE EF | 03 | 06 00 | 3B 23 | 01 00 | 00 33 | 00 00 |
| | | ECO | BE EF | 03 | 06 00 | AB 22 | 01 00 | 00 33 | 01 00 |
| | Get | | BE EF | 03 | 06 00 | 08 23 | 02 00 | 00 33 | 00 00 |
| MIRROR | Set | NORMAL | BE EF | 03 | 06 00 | C7 D2 | 01 00 | 01 30 | 00 00 |
| | | H:INVERT | BE EF | 03 | 06 00 | 57 D3 | 01 00 | 01 30 | 01 00 |
| | | V:INVERT | BE EF | 03 | 06 00 | A7 D3 | 01 00 | 01 30 | 02 00 |
| | | H&V:INVERT | BE EF | 03 | 06 00 | 37 D2 | 01 00 | 01 30 | 03 00 |
| | Get | | BE EF | 03 | 06 00 | F4 D2 | 02 00 | 01 30 | 00 00 |
| MONITOR OUT - COMPUTER IN 1 | Set | COMPUTER IN 1 | BE EF | 03 | 06 00 | 3E F4 | 01 00 | B0 20 | 00 00 |
| | | COMPUTER IN 2 | BE EF | 03 | 06 00 | FE F6 | 01 00 | B0 20 | 04 00 |
| | | BNC | BE EF | 03 | 06 00 | 0E F6 | 01 00 | B0 20 | 07 00 |
| | | OFF | BE EF | 03 | 06 00 | CE B5 | 01 00 | B0 20 | FF 00 |
| | Get | | BE EF | 03 | 06 00 | 0D F4 | 02 00 | B0 20 | 00 00 |
| MONITOR OUT - COMPUTER IN 2 | Set | COMPUTER IN 1 | BE EF | 03 | 06 00 | 0E F5 | 01 00 | B4 20 | 00 00 |
| | | COMPUTER IN 2 | BE EF | 03 | 06 00 | CE F7 | 01 00 | B4 20 | 04 00 |
| | | BNC | BE EF | 03 | 06 00 | 3E F7 | 01 00 | B4 20 | 07 00 |
| | | OFF | BE EF | 03 | 06 00 | FE B4 | 01 00 | B4 20 | FF 00 |
| | Get | | BE EF | 03 | 06 00 | 3D F5 | 02 00 | B4 20 | 00 00 |
| MONITOR OUT - BNC | Set | COMPUTER IN 1 | BE EF | 03 | 06 00 | 4A F5 | 01 00 | B7 20 | 00 00 |
| | | COMPUTER IN 2 | BE EF | 03 | 06 00 | 8A F7 | 01 00 | B7 20 | 04 00 |
| | | BNC | BE EF | 03 | 06 00 | 7A F7 | 01 00 | B7 20 | 07 00 |
| | | OFF | BE EF | 03 | 06 00 | BA B4 | 01 00 | B7 20 | FF 00 |
| | Get | | BE EF | 03 | 06 00 | 79 F5 | 02 00 | B7 20 | 00 00 |

| Names | Operation Type | | Header | | | CRC | Command Data | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Action | Type | Setting Code |
| MONITOR OUT - HDMI | Set | COMPUTER IN 1 | BE EF | 03 | 06 00 | 7A F4 | 01 00 | B3 20 | 00 00 |
| | | COMPUTER IN 2 | BE EF | 03 | 06 00 | BA F6 | 01 00 | B3 20 | 04 00 |
| | | BNC | BE EF | 03 | 06 00 | 4A F6 | 01 00 | B3 20 | 07 00 |
| | | OFF | BE EF | 03 | 06 00 | 8A B5 | 01 00 | B3 20 | FF 00 |
| | Get | | BE EF | 03 | 06 00 | 49 F4 | 02 00 | B3 20 | 00 00 |
| MONITOR OUT - DVI-D | Set | COMPUTER IN 1 | BE EF | 03 | 06 00 | A2 F7 | 01 00 | B9 20 | 00 00 |
| | | COMPUTER IN 2 | BE EF | 03 | 06 00 | 62 F5 | 01 00 | B9 20 | 04 00 |
| | | BNC | BE EF | 03 | 06 00 | 92 F5 | 01 00 | B9 20 | 07 00 |
| | | OFF | BE EF | 03 | 06 00 | 52 B6 | 01 00 | B9 20 | FF 00 |
| | Get | | BE EF | 03 | 06 00 | 91 F7 | 02 00 | B9 20 | 00 00 |
| MONITOR OUT - COMPONENT | Set | COMPUTER IN 1 | BE EF | 03 | 06 00 | F2 F4 | 01 00 | B5 20 | 00 00 |
| | | COMPUTER IN 2 | BE EF | 03 | 06 00 | 32 F6 | 01 00 | B5 20 | 04 00 |
| | | BNC | BE EF | 03 | 06 00 | C2 F6 | 01 00 | B5 20 | 07 00 |
| | | OFF | BE EF | 03 | 06 00 | 02 B5 | 01 00 | B5 20 | FF 00 |
| | Get | | BE EF | 03 | 06 00 | C1 F4 | 02 00 | B5 20 | 00 00 |
| MONITOR OUT - S-VIDEO | Set | COMPUTER IN 1 | BE EF | 03 | 06 00 | 86 F5 | 01 00 | B2 20 | 00 00 |
| | | COMPUTER IN 2 | BE EF | 03 | 06 00 | 46 F7 | 01 00 | B2 20 | 04 00 |
| | | BNC | BE EF | 03 | 06 00 | B6 F7 | 01 00 | B2 20 | 07 00 |
| | | OFF | BE EF | 03 | 06 00 | 76 B4 | 01 00 | B2 20 | FF 00 |
| | Get | | BE EF | 03 | 06 00 | B5 F5 | 02 00 | B2 20 | 00 00 |
| MONITOR OUT - VIDEO 1 | Set | COMPUTER IN 1 | BE EF | 03 | 06 00 | C2 F5 | 01 00 | B1 20 | 00 00 |
| | | COMPUTER IN 2 | BE EF | 03 | 06 00 | 02 F7 | 01 00 | B1 20 | 04 00 |
| | | BNC | BE EF | 03 | 06 00 | F2 F7 | 01 00 | B1 20 | 07 00 |
| | | OFF | BE EF | 03 | 06 00 | 32 B4 | 01 00 | B1 20 | FF 00 |
| | Get | | BE EF | 03 | 06 00 | F1 F5 | 02 00 | B1 20 | 00 00 |
| MONITOR OUT - VIDEO 2 | Set | COMPUTER IN 1 | BE EF | 03 | 06 00 | E6 F7 | 01 00 | BA 20 | 00 00 |
| | | COMPUTER IN 2 | BE EF | 03 | 06 00 | 26 F5 | 01 00 | BA 20 | 04 00 |
| | | BNC | BE EF | 03 | 06 00 | D6 F5 | 01 00 | BA 20 | 07 00 |
| | | OFF | BE EF | 03 | 06 00 | 16 B6 | 01 00 | BA 20 | FF 00 |
| | Get | | BE EF | 03 | 06 00 | D5 F7 | 02 00 | BA 20 | 00 00 |
| MONITOR OUT - STANDBY | Set | COMPUTER IN 1 | BE EF | 03 | 06 00 | 2A F7 | 01 00 | BF 20 | 00 00 |
| | | COMPUTER IN 2 | BE EF | 03 | 06 00 | EA F5 | 01 00 | BF 20 | 04 00 |
| | | BNC | BE EF | 03 | 06 00 | 1A F5 | 01 00 | BF 20 | 07 00 |
| | | OFF | BE EF | 03 | 06 00 | DA B6 | 01 00 | BF 20 | FF 00 |
| | Get | | BE EF | 03 | 06 00 | 19 F7 | 02 00 | BF 20 | 00 00 |
| LANGUAGE | Set | ENGLISH | BE EF | 03 | 06 00 | F7 D3 | 01 00 | 05 30 | 00 00 |
| | | FRANÇAIS | BE EF | 03 | 06 00 | 67 D2 | 01 00 | 05 30 | 01 00 |
| | | DEUTSCH | BE EF | 03 | 06 00 | 97 D2 | 01 00 | 05 30 | 02 00 |
| | | ESPAÑOL | BE EF | 03 | 06 00 | 07 D3 | 01 00 | 05 30 | 03 00 |
| | | ITALIANO | BE EF | 03 | 06 00 | 37 D1 | 01 00 | 05 30 | 04 00 |
| | | NORSK | BE EF | 03 | 06 00 | A7 D0 | 01 00 | 05 30 | 05 00 |
| | | NEDERLANDS | BE EF | 03 | 06 00 | 57 D0 | 01 00 | 05 30 | 06 00 |
| | | PORTUGUÊS | BE EF | 03 | 06 00 | C7 D1 | 01 00 | 05 30 | 07 00 |
| | | 日本語 | BE EF | 03 | 06 00 | 37 D4 | 01 00 | 05 30 | 08 00 |
| | | 简体中文 | BE EF | 03 | 06 00 | A7 D5 | 01 00 | 05 30 | 09 00 |
| | | 繁體中文 | BE EF | 03 | 06 00 | 37 DE | 01 00 | 05 30 | 10 00 |
| | | 한글 | BE EF | 03 | 06 00 | 57 D5 | 01 00 | 05 30 | 0A 00 |
| | | SVENSKA | BE EF | 03 | 06 00 | C7 D4 | 01 00 | 05 30 | 0B 00 |
| | | PYCCKNN | BE EF | 03 | 06 00 | F7 D6 | 01 00 | 05 30 | 0C 00 |
| | | SUOMI | BE EF | 03 | 06 00 | 67 D7 | 01 00 | 05 30 | 0D 00 |

| Names | Operation Type | | Header | | | CRC | Command Data | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Action | Type | Setting Code |
| LANGUAGE | Set | POLSKI | BE EF | 03 | 06 00 | 97 D7 | 01 00 | 05 30 | 0E 00 |
| | | TÜRKÇE | BE EF | 03 | 06 00 | 07 D6 | 01 00 | 05 30 | 0F 00 |
| | | DANSK | BE EF | 03 | 06 00 | A7 DF | 01 00 | 05 30 | 11 00 |
| | | ČEŠTINA | BE EF | 03 | 06 00 | 57 DF | 01 00 | 05 30 | 12 00 |
| | | اللغة العربية | BE EF | 03 | 06 00 | 37 DB | 01 00 | 05 30 | 1C 00 |
| | | فارسی | BE EF | 03 | 06 00 | A7 DA | 01 00 | 05 30 | 1D 00 |
| | Get | | BE EF | 03 | 06 00 | C4 D3 | 02 00 | 05 30 | 00 00 |
| MENU POSITION V | Get | | BE EF | 03 | 06 00 | 40 D7 | 02 00 | 16 30 | 00 00 |
| | Increment | | BE EF | 03 | 06 00 | 26 D7 | 04 00 | 16 30 | 00 00 |
| | Decrement | | BE EF | 03 | 06 00 | F7 D6 | 05 00 | 16 30 | 00 00 |
| MENU POSITION V Reset | Execute | | BE EF | 03 | 06 00 | A8 C7 | 06 00 | 44 70 | 00 00 |
| MENU POSITION H | Get | | BE EF | 03 | 06 00 | 04 D7 | 02 00 | 15 30 | 00 00 |
| | Increment | | BE EF | 03 | 06 00 | 62 D7 | 04 00 | 15 30 | 00 00 |
| | Decrement | | BE EF | 03 | 06 00 | B3 D6 | 05 00 | 15 30 | 00 00 |
| MENU POSITION H Reset | Execute | | BE EF | 03 | 06 00 | DC C6 | 06 00 | 43 70 | 00 00 |
| BLANK | Set | MyScreen | BE EF | 03 | 06 00 | FB CA | 01 00 | 00 30 | 20 00 |
| | | ORIGINAL | BE EF | 03 | 06 00 | FB E2 | 01 00 | 00 30 | 40 00 |
| | | BLUE | BE EF | 03 | 06 00 | CB D3 | 01 00 | 00 30 | 03 00 |
| | | WHITE | BE EF | 03 | 06 00 | 6B D0 | 01 00 | 00 30 | 05 00 |
| | | BLACK | BE EF | 03 | 06 00 | 9B D0 | 01 00 | 00 30 | 06 00 |
| | Get | | BE EF | 03 | 06 00 | 08 D3 | 02 00 | 00 30 | 00 00 |
| BLANK On/Off | Set | OFF | BE EF | 03 | 06 00 | FB D8 | 01 00 | 20 30 | 00 00 |
| | | ON | BE EF | 03 | 06 00 | 6B D9 | 01 00 | 20 30 | 01 00 |
| | Get | | BE EF | 03 | 06 00 | C8 D8 | 02 00 | 20 30 | 00 00 |
| START UP | Set | MyScreen | BE EF | 03 | 06 00 | CB CB | 01 00 | 04 30 | 20 00 |
| | | ORIGINAL | BE EF | 03 | 06 00 | 0B D2 | 01 00 | 04 30 | 00 00 |
| | | OFF | BE EF | 03 | 06 00 | 9B D3 | 01 00 | 04 30 | 01 00 |
| | Get | | BE EF | 03 | 06 00 | 38 D2 | 02 00 | 04 30 | 00 00 |
| MyScreen LOCK | Set | OFF | BE EF | 03 | 06 00 | 3B EF | 01 00 | C0 30 | 00 00 |
| | | ON | BE EF | 03 | 06 00 | AB EE | 01 00 | C0 30 | 01 00 |
| | Get | | BE EF | 03 | 06 00 | 08 EF | 02 00 | C0 30 | 00 00 |
| MESSAGE | Set | OFF | BE EF | 03 | 06 00 | 8F D6 | 01 00 | 17 30 | 00 00 |
| | | ON | BE EF | 03 | 06 00 | 1F D7 | 01 00 | 17 30 | 01 00 |
| | Get | | BE EF | 03 | 06 00 | BC D6 | 02 00 | 17 30 | 00 00 |
| TEMPLATE | Set | TEST PATTERN | BE EF | 03 | 06 00 | 43 D9 | 01 00 | 22 30 | 00 00 |
| | | DOT-LINE 1 | BE EF | 03 | 06 00 | D3 D8 | 01 00 | 22 30 | 01 00 |
| | | DOT-LINE 2 | BE EF | 03 | 06 00 | 23 D8 | 01 00 | 22 30 | 02 00 |
| | | DOT-LINE 3 | BE EF | 03 | 06 00 | B3 D9 | 01 00 | 22 30 | 03 00 |
| | | DOT-LINE 4 | BE EF | 03 | 06 00 | 83 DB | 01 00 | 22 30 | 04 00 |
| | Get | | BE EF | 03 | 06 00 | 70 D9 | 02 00 | 22 30 | 00 00 |
| TEMPLATE On/Off | Set | OFF | BE EF | 03 | 06 00 | BF D8 | 01 00 | 23 30 | 00 00 |
| | | ON | BE EF | 03 | 06 00 | 2F D9 | 01 00 | 23 30 | 01 00 |
| | Get | | BE EF | 03 | 06 00 | 8C D8 | 02 00 | 23 30 | 00 00 |
| CLOSED CAPTION DISPLAY | Set | OFF | BE EF | 03 | 06 00 | FA 62 | 01 00 | 00 37 | 00 00 |
| | | ON | BE EF | 03 | 06 00 | 6A 63 | 01 00 | 00 37 | 01 00 |
| | Get | | BE EF | 03 | 06 00 | C9 62 | 02 00 | 00 37 | 00 00 |
| CLOSED CAPTION MODE | Set | CAPTIONS | BE EF | 03 | 06 00 | 06 63 | 01 00 | 01 37 | 00 00 |
| | | TEXT | BE EF | 03 | 06 00 | 96 62 | 01 00 | 01 37 | 01 00 |
| | Get | | BE EF | 03 | 06 00 | 35 63 | 02 00 | 01 37 | 00 00 |

| Names | Operation Type | | Header | | | CRC | Command Data | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Action | Type | Setting Code |
| CLOSED CAPTION CHANNEL | Set | 1 | BE EF | 03 | 06 00 | D2 62 | 01 00 | 02 37 | 01 00 |
| | | 2 | BE EF | 03 | 06 00 | 22 62 | 01 00 | 02 37 | 02 00 |
| | | 3 | BE EF | 03 | 06 00 | B2 63 | 01 00 | 02 37 | 03 00 |
| | | 4 | BE EF | 03 | 06 00 | 82 61 | 01 00 | 02 37 | 04 00 |
| | Get | | BE EF | 03 | 06 00 | 71 63 | 02 00 | 02 37 | 00 00 |
| SOURCE SKIP COMPUTER IN 1 | Set | NORMAL | BE EF | 03 | 06 00 | FE 78 | 01 00 | 20 22 | 00 00 |
| | | SKIP | BE EF | 03 | 06 00 | 6E 79 | 01 00 | 20 22 | 01 00 |
| | Get | | BE EF | 03 | 06 00 | CD 78 | 02 00 | 20 22 | 00 00 |
| SOURCE SKIP COMPUTER IN 2 | Set | NORMAL | BE EF | 03 | 06 00 | CE 79 | 01 00 | 24 22 | 00 00 |
| | | SKIP | BE EF | 03 | 06 00 | 5E 78 | 01 00 | 24 22 | 01 00 |
| | Get | | BE EF | 03 | 06 00 | FD 79 | 02 00 | 24 22 | 00 00 |
| SOURCE SKIP BNC | Set | NORMAL | BE EF | 03 | 06 00 | 8A 79 | 01 00 | 27 22 | 00 00 |
| | | SKIP | BE EF | 03 | 06 00 | 1A 78 | 01 00 | 27 22 | 01 00 |
| | Get | | BE EF | 03 | 06 00 | B9 79 | 02 00 | 27 22 | 00 00 |
| SOURCE SKIP HDMI | Set | NORMAL | BE EF | 03 | 06 00 | BA 78 | 01 00 | 23 22 | 00 00 |
| | | SKIP | BE EF | 03 | 06 00 | 2A 79 | 01 00 | 23 22 | 01 00 |
| | Get | | BE EF | 03 | 06 00 | 89 78 | 02 00 | 23 22 | 00 00 |
| SOURCE SKIP DVI-D | Set | NORMAL | BE EF | 03 | 06 00 | 62 7B | 01 00 | 29 22 | 00 00 |
| | | SKIP | BE EF | 03 | 06 00 | F2 7A | 01 00 | 29 22 | 01 00 |
| | Get | | BE EF | 03 | 06 00 | 51 7B | 02 00 | 29 22 | 00 00 |
| SOURCE SKIP COMPONENT | Set | NORMAL | BE EF | 03 | 06 00 | 32 78 | 01 00 | 25 22 | 00 00 |
| | | SKIP | BE EF | 03 | 06 00 | A2 79 | 01 00 | 25 22 | 01 00 |
| | Get | | BE EF | 03 | 06 00 | 01 78 | 02 00 | 25 22 | 00 00 |
| SOURCE SKIP S-VIDEO | Set | NORMAL | BE EF | 03 | 06 00 | 46 79 | 01 00 | 22 22 | 00 00 |
| | | SKIP | BE EF | 03 | 06 00 | D6 78 | 01 00 | 22 22 | 01 00 |
| | Get | | BE EF | 03 | 06 00 | 75 79 | 02 00 | 22 22 | 00 00 |
| SOURCE SKIP VIDEO 1 | Set | NORMAL | BE EF | 03 | 06 00 | 02 79 | 01 00 | 21 22 | 00 00 |
| | | SKIP | BE EF | 03 | 06 00 | 92 78 | 01 00 | 21 22 | 01 00 |
| | Get | | BE EF | 03 | 06 00 | 31 79 | 02 00 | 21 22 | 00 00 |
| SOURCE SKIP VIDEO 2 | Set | NORMAL | BE EF | 03 | 06 00 | 26 7B | 01 00 | 2A 22 | 00 00 |
| | | SKIP | BE EF | 03 | 06 00 | B6 7A | 01 00 | 2A 22 | 01 00 |
| | Get | | BE EF | 03 | 06 00 | 15 7B | 02 00 | 2A 22 | 00 00 |
| AUTO SEARCH | Set | OFF | BE EF | 03 | 06 00 | B6 D6 | 01 00 | 16 20 | 00 00 |
| | | ON | BE EF | 03 | 06 00 | 26 D7 | 01 00 | 16 20 | 01 00 |
| | Get | | BE EF | 03 | 06 00 | 85 D6 | 02 00 | 16 20 | 00 00 |
| DIRECT ON | Set | OFF | BE EF | 03 | 06 00 | 3B 89 | 01 00 | 20 31 | 00 00 |
| | | ON | BE EF | 03 | 06 00 | AB 88 | 01 00 | 20 31 | 01 00 |
| | Get | | BE EF | 03 | 06 00 | 08 89 | 02 00 | 20 31 | 00 00 |
| AUTO OFF | Get | | BE EF | 03 | 06 00 | 08 86 | 02 00 | 10 31 | 00 00 |
| | Increment | | BE EF | 03 | 06 00 | 6E 86 | 04 00 | 10 31 | 00 00 |
| | Decrement | | BE EF | 03 | 06 00 | BF 87 | 05 00 | 10 31 | 00 00 |
| SHUTTER TIMER | Set | 1h | BE EF | 03 | 06 00 | 27 92 | 01 00 | 06 24 | 01 00 |
| | | 3h | BE EF | 03 | 06 00 | 47 93 | 01 00 | 06 24 | 03 00 |
| | | 6h | BE EF | 03 | 06 00 | 17 90 | 01 00 | 06 24 | 06 00 |
| | Get | | BE EF | 03 | 06 00 | 84 93 | 02 00 | 06 24 | 00 00 |
| LAMP TIME LOW | Get | | BE EF | 03 | 06 00 | C2 FF | 02 00 | 90 10 | 00 00 |
| LAMP TIME HIIGH | Get | | BE EF | 03 | 06 00 | 2A FD | 02 00 | 9E 10 | 00 00 |
| LAMP TIME Reset | Execute | | BE EF | 03 | 06 00 | 58 DC | 06 00 | 30 70 | 00 00 |
| FILTER TIME LOW | Get | | BE EF | 03 | 06 00 | C2 F0 | 02 00 | A0 10 | 00 00 |
| FILTER TIME HIGH | Get | | BE EF | 03 | 06 00 | D6 FC | 02 00 | 9F 10 | 00 00 |
| FILTER TIME Reset | Execute | | BE EF | 03 | 06 00 | 98 C6 | 06 00 | 40 70 | 00 00 |

| Names | Operation Type | | Header | | | CRC | Command Data | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Action | Type | Setting Code |
| MY BUTTON-1 | Set | COMPUTER IN 1 | BE EF | 03 | 06 00 | 3A 33 | 01 00 | 00 36 | 00 00 |
| | | COMPUTER IN 2 | BE EF | 03 | 06 00 | FA 31 | 01 00 | 00 36 | 04 00 |
| | | BNC | BE EF | 03 | 06 00 | 0A 31 | 01 00 | 00 36 | 07 00 |
| | | HDMI | BE EF | 03 | 06 00 | CA 33 | 01 00 | 00 36 | 03 00 |
| | | DVI-D | BE EF | 03 | 06 00 | 6A 35 | 01 00 | 00 36 | 09 00 |
| | | COMPONENT | BE EF | 03 | 06 00 | 6A 30 | 01 00 | 00 36 | 05 00 |
| | | S-VIDEO | BE EF | 03 | 06 00 | 5A 32 | 01 00 | 00 36 | 02 00 |
| | | VIDEO 1 | BE EF | 03 | 06 00 | AA 32 | 01 00 | 00 36 | 01 00 |
| | | VIDEO 2 | BE EF | 03 | 06 00 | 9A 35 | 01 00 | 00 36 | 0A 00 |
| | | INFORMATION | BE EF | 03 | 06 00 | FA 3E | 01 00 | 00 36 | 10 00 |
| | | AUTO KEYSTONE EXECUTE | BE EF | 03 | 06 00 | 6A 3F | 01 00 | 00 36 | 11 00 |
| | | MY MEMORY | BE EF | 03 | 06 00 | 9A 3F | 01 00 | 00 36 | 12 00 |
| | | ACTIVE IRIS | BE EF | 03 | 06 00 | AA 3D | 01 00 | 00 36 | 15 00 |
| | | PICTURE MODE | BE EF | 03 | 06 00 | 0A 3E | 01 00 | 00 36 | 13 00 |
| | | FILTER RESET | BE EF | 03 | 06 00 | 3A 3C | 01 00 | 00 36 | 14 00 |
| | | TEMPLATE | BE EF | 03 | 06 00 | CA 39 | 01 00 | 00 36 | 1B 00 |
| | | PbyP SWAP | BE EF | 03 | 06 00 | 5A 38 | 01 00 | 00 36 | 1A 00 |
| | | LENS MEMORY-1 | BE EF | 03 | 06 00 | CA 27 | 01 00 | 00 36 | 33 00 |
| | | LENS MEMORY-2 | BE EF | 03 | 06 00 | FA 25 | 01 00 | 00 36 | 34 00 |
| | | LENS MEMORY-3 | BE EF | 03 | 06 00 | 6A 24 | 01 00 | 00 36 | 35 00 |
| | | MY IMAGE | BE EF | 03 | 06 00 | 5A 3D | 01 00 | 00 36 | 16 00 |
| | Get | | BE EF | 03 | 06 00 | 09 33 | 02 00 | 00 36 | 00 00 |
| MY BUTTON-2 | Set | COMPUTER IN 1 | BE EF | 03 | 06 00 | C6 32 | 01 00 | 01 36 | 00 00 |
| | | COMPUTER IN 2 | BE EF | 03 | 06 00 | 06 30 | 01 00 | 01 36 | 04 00 |
| | | BNC | BE EF | 03 | 06 00 | F6 30 | 01 00 | 01 36 | 07 00 |
| | | HDMI | BE EF | 03 | 06 00 | 36 32 | 01 00 | 01 36 | 03 00 |
| | | DVI-D | BE EF | 03 | 06 00 | 96 34 | 01 00 | 01 36 | 09 00 |
| | | COMPONENT | BE EF | 03 | 06 00 | 96 31 | 01 00 | 01 36 | 05 00 |
| | | S-VIDEO | BE EF | 03 | 06 00 | A6 33 | 01 00 | 01 36 | 02 00 |
| | | VIDEO 1 | BE EF | 03 | 06 00 | 56 33 | 01 00 | 01 36 | 01 00 |
| | | VIDEO 2 | BE EF | 03 | 06 00 | 66 34 | 01 00 | 01 36 | 0A 00 |
| | | INFORMATION | BE EF | 03 | 06 00 | 06 3F | 01 00 | 01 36 | 10 00 |
| | | AUTO KEYSTONE EXECUTE | BE EF | 03 | 06 00 | 96 3E | 01 00 | 01 36 | 11 00 |
| | | MY MEMORY | BE EF | 03 | 06 00 | 66 3E | 01 00 | 01 36 | 12 00 |
| | | ACTIVE IRIS | BE EF | 03 | 06 00 | 56 3C | 01 00 | 01 36 | 15 00 |
| | | PICTURE MODE | BE EF | 03 | 06 00 | F6 3F | 01 00 | 01 36 | 13 00 |
| | | FILTER RESET | BE EF | 03 | 06 00 | C6 3D | 01 00 | 01 36 | 14 00 |
| | | TEMPLATE | BE EF | 03 | 06 00 | 36 38 | 01 00 | 01 36 | 1B 00 |
| | | PbyP SWAP | BE EF | 03 | 06 00 | A6 39 | 01 00 | 01 36 | 1A 00 |
| | | LENS MEMORY-1 | BE EF | 03 | 06 00 | 36 26 | 01 00 | 01 36 | 33 00 |
| | | LENS MEMORY-2 | BE EF | 03 | 06 00 | 06 24 | 01 00 | 01 36 | 34 00 |
| | | LENS MEMORY-3 | BE EF | 03 | 06 00 | 96 25 | 01 00 | 01 36 | 35 00 |
| | | MY IMAGE | BE EF | 03 | 06 00 | A6 3C | 01 00 | 01 36 | 16 00 |
| | Get | | BE EF | 03 | 06 00 | F5 32 | 02 00 | 01 36 | 00 00 |
| MY BUTTON-3 | Set | COMPUTER IN 1 | BE EF | 03 | 06 00 | 82 32 | 01 00 | 02 36 | 00 00 |
| | | COMPUTER IN 2 | BE EF | 03 | 06 00 | 42 30 | 01 00 | 02 36 | 04 00 |
| | | BNC | BE EF | 03 | 06 00 | B2 30 | 01 00 | 02 36 | 07 00 |
| | | HDMI | BE EF | 03 | 06 00 | 72 32 | 01 00 | 02 36 | 03 00 |

| Names | Operation Type | | Header | | | CRC | Command Data | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Action | Type | Setting Code |
| MY BUTTON-3 | Set | DVI-D | BE EF | 03 | 06 00 | D2 34 | 01 00 | 02 36 | 09 00 |
| | | COMPONENT | BE EF | 03 | 06 00 | D2 31 | 01 00 | 02 36 | 05 00 |
| | | S-VIDEO | BE EF | 03 | 06 00 | E2 33 | 01 00 | 02 36 | 02 00 |
| | | VIDEO 1 | BE EF | 03 | 06 00 | 12 33 | 01 00 | 02 36 | 01 00 |
| | | VIDEO 2 | BE EF | 03 | 06 00 | 22 34 | 01 00 | 02 36 | 0A 00 |
| | | INFORMATION | BE EF | 03 | 06 00 | 42 3F | 01 00 | 02 36 | 10 00 |
| | | AUTO KEYSTONE EXECUTE | BE EF | 03 | 06 00 | D2 3E | 01 00 | 02 36 | 11 00 |
| | | MY MEMORY | BE EF | 03 | 06 00 | 22 3E | 01 00 | 02 36 | 12 00 |
| | | ACTIVE IRIS | BE EF | 03 | 06 00 | 12 3C | 01 00 | 02 36 | 15 00 |
| | | PICTURE MODE | BE EF | 03 | 06 00 | B2 3F | 01 00 | 02 36 | 13 00 |
| | | FILTER RESET | BE EF | 03 | 06 00 | 82 3D | 01 00 | 02 36 | 14 00 |
| | | TEMPLATE | BE EF | 03 | 06 00 | 72 38 | 01 00 | 02 36 | 1B 00 |
| | | PbyP SWAP | BE EF | 03 | 06 00 | E2 39 | 01 00 | 02 36 | 1A 00 |
| | | LENS MEMORY-1 | BE EF | 03 | 06 00 | 72 26 | 01 00 | 02 36 | 33 00 |
| | | LENS MEMORY-2 | BE EF | 03 | 06 00 | 42 24 | 01 00 | 02 36 | 34 00 |
| | | LENS MEMORY-3 | BE EF | 03 | 06 00 | D2 25 | 01 00 | 02 36 | 35 00 |
| | | MY IMAGE | BE EF | 03 | 06 00 | E2 3C | 01 00 | 02 36 | 16 00 |
| | Get | | BE EF | 03 | 06 00 | B1 32 | 02 00 | 02 36 | 00 00 |
| MY BUTTON-4 | Set | COMPUTER IN 1 | BE EF | 03 | 06 00 | 7E 33 | 01 00 | 03 36 | 00 00 |
| | | COMPUTER IN 2 | BE EF | 03 | 06 00 | BE 31 | 01 00 | 03 36 | 04 00 |
| | | BNC | BE EF | 03 | 06 00 | 4E 31 | 01 00 | 03 36 | 07 00 |
| | | HDMI | BE EF | 03 | 06 00 | 8E 33 | 01 00 | 03 36 | 03 00 |
| | | DVI-D | BE EF | 03 | 06 00 | 2E 35 | 01 00 | 03 36 | 09 00 |
| | | COMPONENT | BE EF | 03 | 06 00 | 2E 30 | 01 00 | 03 36 | 05 00 |
| | | S-VIDEO | BE EF | 03 | 06 00 | 1E 32 | 01 00 | 03 36 | 02 00 |
| | | VIDEO 1 | BE EF | 03 | 06 00 | EE 32 | 01 00 | 03 36 | 01 00 |
| | | VIDEO 2 | BE EF | 03 | 06 00 | DE 35 | 01 00 | 03 36 | 0A 00 |
| | | INFORMATION | BE EF | 03 | 06 00 | BE 3E | 01 00 | 03 36 | 10 00 |
| | | AUTO KEYSTONE EXECUTE | BE EF | 03 | 06 00 | 2E 3F | 01 00 | 03 36 | 11 00 |
| | | MY MEMORY | BE EF | 03 | 06 00 | DE 3F | 01 00 | 03 36 | 12 00 |
| | | ACTIVE IRIS | BE EF | 03 | 06 00 | EE 3D | 01 00 | 03 36 | 15 00 |
| | | PICTURE MODE | BE EF | 03 | 06 00 | 4E 3E | 01 00 | 03 36 | 13 00 |
| | | FILTER RESET | BE EF | 03 | 06 00 | 7E 3C | 01 00 | 03 36 | 14 00 |
| | | TEMPLATE | BE EF | 03 | 06 00 | 8E 39 | 01 00 | 03 36 | 1B 00 |
| | | PbyP SWAP | BE EF | 03 | 06 00 | 1E 38 | 01 00 | 03 36 | 1A 00 |
| | | LENS MEMORY-1 | BE EF | 03 | 06 00 | 8E 27 | 01 00 | 03 36 | 33 00 |
| | | LENS MEMORY-2 | BE EF | 03 | 06 00 | BE 25 | 01 00 | 03 36 | 34 00 |
| | | LENS MEMORY-3 | BE EF | 03 | 06 00 | 2E 24 | 01 00 | 03 36 | 35 00 |
| | | MY IMAGE | BE EF | 03 | 06 00 | 1E 3D | 01 00 | 03 36 | 16 00 |
| | Get | | BE EF | 03 | 06 00 | 4D 33 | 02 00 | 03 36 | 00 00 |
| MY SOURCE | Set | COMPUTER IN 1 | BE EF | 03 | 06 00 | FA 38 | 01 00 | 20 36 | 00 00 |
| | | COMPUTER IN 2 | BE EF | 03 | 06 00 | 3A 3A | 01 00 | 20 36 | 04 00 |
| | | BNC | BE EF | 03 | 06 00 | CA 3A | 01 00 | 20 36 | 07 00 |
| | | HDMI | BE EF | 03 | 06 00 | 0A 38 | 01 00 | 20 36 | 03 00 |
| | | DVI-D | BE EF | 03 | 06 00 | AA 3E | 01 00 | 20 36 | 09 00 |
| | | COMPONENT | BE EF | 03 | 06 00 | AA 3B | 01 00 | 20 36 | 05 00 |
| | | S-VIDEO | BE EF | 03 | 06 00 | 9A 39 | 01 00 | 20 36 | 02 00 |
| | | VIDEO 1 | BE EF | 03 | 06 00 | 6A 39 | 01 00 | 20 36 | 01 00 |
| | | VIDEO 2 | BE EF | 03 | 06 00 | 5A 3E | 01 00 | 20 36 | 0A 00 |

| Names | Operation Type | | Header | | | CRC | Command Data | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Action | Type | Setting Code |
| MY SOURCE | Get | | BE EF | 03 | 06 00 | C9 38 | 02 00 | 20 36 | 00 00 |
| MY IMAGE | Set | OFF | BE EF | 03 | 06 00 | 3A C3 | 01 00 | 00 35 | 00 00 |
| | | IMAGE-1 | BE EF | 03 | 06 00 | AA C2 | 01 00 | 00 35 | 01 00 |
| | | IMAGE-2 | BE EF | 03 | 06 00 | 5A C2 | 01 00 | 00 35 | 02 00 |
| | | IMAGE-3 | BE EF | 03 | 06 00 | CA C3 | 01 00 | 00 35 | 03 00 |
| | | IMAGE-4 | BE EF | 03 | 06 00 | FA C1 | 01 00 | 00 35 | 04 00 |
| | Get | | BE EF | 03 | 06 00 | 09 C3 | 02 00 | 00 35 | 00 00 |
| MY IMAGE IMAGE-1 Delete | Execute | | BE EF | 03 | 06 00 | 71 C3 | 06 00 | 01 35 | 00 00 |
| MY IMAGE IMAGE-2 Delete | Execute | | BE EF | 03 | 06 00 | 35 C3 | 06 00 | 02 35 | 00 00 |
| MY IMAGE IMAGE-3 Delete | Execute | | BE EF | 03 | 06 00 | C9 C2 | 06 00 | 03 35 | 00 00 |
| MY IMAGE IMAGE-4 Delete | Execute | | BE EF | 03 | 06 00 | BD C3 | 06 00 | 04 35 | 00 00 |
| REMOTE FRONT | Set | Off | BE EF | 03 | 06 00 | FF 32 | 01 00 | 00 26 | 00 00 |
| | | On | BE EF | 03 | 06 00 | 6F 33 | 01 00 | 00 26 | 01 00 |
| | Get | | BE EF | 03 | 06 00 | CC 32 | 02 00 | 00 26 | 00 00 |
| REMOTE REAR | Set | Off | BE EF | 03 | 06 00 | 03 33 | 01 00 | 01 26 | 00 00 |
| | | On | BE EF | 03 | 06 00 | 93 32 | 01 00 | 01 26 | 01 00 |
| | Get | | BE EF | 03 | 06 00 | 30 33 | 02 00 | 01 26 | 00 00 |
| REMOTE TOP | Set | Off | BE EF | 03 | 06 00 | 47 33 | 01 00 | 02 26 | 00 00 |
| | | On | BE EF | 03 | 06 00 | D7 32 | 01 00 | 02 26 | 01 00 |
| | Get | | BE EF | 03 | 06 00 | 74 33 | 02 00 | 02 26 | 00 00 |
| REMOTE ID | Set | ALL | BE EF | 03 | 06 00 | 9F 30 | 01 00 | 08 26 | 00 00 |
| | | 1 | BE EF | 03 | 06 00 | 0F 31 | 01 00 | 08 26 | 01 00 |
| | | 2 | BE EF | 03 | 06 00 | FF 31 | 01 00 | 08 26 | 02 00 |
| | | 3 | BE EF | 03 | 06 00 | 6F 30 | 01 00 | 08 26 | 03 00 |
| | | 4 | BE EF | 03 | 06 00 | 5F 32 | 01 00 | 08 26 | 04 00 |
| | Get | | BE EF | 03 | 06 00 | AC 30 | 02 00 | 08 26 | 00 00 |
| REMOTE FREQUENCY NORMAL | Set | Disable | BE EF | 03 | 06 00 | FF 3D | 01 00 | 30 26 | 00 00 |
| | | Enable | BE EF | 03 | 06 00 | 6F 3C | 01 00 | 30 26 | 01 00 |
| | Get | | BE EF | 03 | 06 00 | CC 3D | 02 00 | 30 26 | 00 00 |
| REMOTE FREQUENCY HIGH | Set | Disable | BE EF | 03 | 06 00 | 03 3C | 01 00 | 31 26 | 00 00 |
| | | Enable | BE EF | 03 | 06 00 | 93 3D | 01 00 | 31 26 | 01 00 |
| | Get | | BE EF | 03 | 06 00 | 30 3C | 02 00 | 31 26 | 00 00 |
| FOCUS | Increment | | BE EF | 03 | 06 00 | 6A 93 | 04 00 | 00 24 | 00 00 |
| | Decrement | | BE EF | 03 | 06 00 | BB 92 | 05 00 | 00 24 | 00 00 |
| ZOOM | Increment | | BE EF | 03 | 06 00 | 96 92 | 04 00 | 01 24 | 00 00 |
| | Decrement | | BE EF | 03 | 06 00 | 47 93 | 05 00 | 01 24 | 00 00 |
| LENS SHIFT -V | Increment | | BE EF | 03 | 06 00 | D2 92 | 04 00 | 02 24 | 00 00 |
| | Decrement | | BE EF | 03 | 06 00 | 03 93 | 05 00 | 02 24 | 00 00 |
| LENS SHIFT -H | Increment | | BE EF | 03 | 06 00 | 2E 93 | 04 00 | 03 24 | 00 00 |
| | Decrement | | BE EF | 03 | 06 00 | FF 92 | 05 00 | 03 24 | 00 00 |
| LENS SHIFT CENTERING | Execute | | BE EF | 03 | 06 00 | B8 93 | 06 00 | 04 24 | 00 00 |

| Names | Operation Type | | Header | | | CRC | Command Data | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Action | Type | Setting Code |
| LENS MEMORY INDEX | Set | 1 | BE EF | 03 | 06 00 | 4B 92 | 01 00 | 07 24 | 00 00 |
| | | 2 | BE EF | 03 | 06 00 | DB 93 | 01 00 | 07 24 | 01 00 |
| | | 3 | BE EF | 03 | 06 00 | 2B 93 | 01 00 | 07 24 | 02 00 |
| | Get | | BE EF | 03 | 06 00 | 78 92 | 02 00 | 07 24 | 00 00 |
| LENS MEMORY LOAD | Execute | | BE EF | 03 | 06 00 | E8 90 | 06 00 | 08 24 | 00 00 |
| LENS MEMORY SAVE | Execute | | BE EF | 03 | 06 00 | 14 91 | 06 00 | 09 24 | 00 00 |
| LENS MEMORY CLEAR | Execute | | BE EF | 03 | 06 00 | 50 91 | 06 00 | 0A 24 | 00 00 |
| LENS MEMORY FOCUS | Get | | BE EF | 03 | 06 00 | 28 91 | 02 00 | 0B 24 | 00 00 |
| LENS MEMORY ZOOM | Get | | BE EF | 03 | 06 00 | 5C 90 | 02 00 | 0C 24 | 00 00 |
| LENS MEMORY LENS SHIFT -V | Get | | BE EF | 03 | 06 00 | A0 91 | 02 00 | 0D 24 | 00 00 |
| LENS MEMORY LENS SHIFT -H | Get | | BE EF | 03 | 06 00 | E4 91 | 02 00 | 0E 24 | 00 00 |
| LENS MEMORY LENS TYPE | Get | | BE EF | 03 | 06 00 | 18 90 | 02 00 | 0F 24 | 00 00 |
| MAGNIFY | Get | | BE EF | 03 | 06 00 | 7C D2 | 02 00 | 07 30 | 00 00 |
| | Increment | | BE EF | 03 | 06 00 | 1A D2 | 04 00 | 07 30 | 00 00 |
| | Decrement | | BE EF | 03 | 06 00 | CB D3 | 05 00 | 07 30 | 00 00 |
| FREEZE | Set | NORMAL | BE EF | 03 | 06 00 | 83 D2 | 01 00 | 02 30 | 00 00 |
| | | FREEZE | BE EF | 03 | 06 00 | 13 D3 | 01 00 | 02 30 | 01 00 |
| | Get | | BE EF | 03 | 06 00 | B0 D2 | 02 00 | 02 30 | 00 00 |
| SHUTTER | Set | OFF | BE EF | 03 | 06 00 | F3 93 | 01 00 | 05 24 | 00 00 |
| | | ON | BE EF | 03 | 06 00 | 63 92 | 01 00 | 05 24 | 01 00 |
| | Get | | BE EF | 03 | 06 00 | C0 93 | 02 00 | 05 24 | 00 00 |
| PbyP | Set | OFF | BE EF | 03 | 06 00 | 3E 26 | 01 00 | 10 23 | 00 00 |
| | | ON | BE EF | 03 | 06 00 | AE 27 | 01 00 | 10 23 | 01 00 |
| | Get | | BE EF | 03 | 06 00 | 0D 26 | 02 00 | 10 23 | 00 00 |
| PbyP RIGHT SOURCE | Set | COMPUTER IN 1 | BE EF | 03 | 06 00 | 86 27 | 01 00 | 12 23 | 00 00 |
| | | COMPUTER IN 2 | BE EF | 03 | 06 00 | 46 25 | 01 00 | 12 23 | 04 00 |
| | | BNC | BE EF | 03 | 06 00 | B6 25 | 01 00 | 12 23 | 07 00 |
| | | HDMI | BE EF | 03 | 06 00 | 76 27 | 01 00 | 12 23 | 03 00 |
| | | DVI-D | BE EF | 03 | 06 00 | D6 21 | 01 00 | 12 23 | 09 00 |
| | | COMPONENT | BE EF | 03 | 06 00 | D6 24 | 01 00 | 12 23 | 05 00 |
| | | S-VIDEO | BE EF | 03 | 06 00 | E6 26 | 01 00 | 12 23 | 02 00 |
| | | VIDEO 1 | BE EF | 03 | 06 00 | 16 26 | 01 00 | 12 23 | 01 00 |
| | | VIDEO 2 | BE EF | 03 | 06 00 | 26 21 | 01 00 | 12 23 | 0A 00 |
| | Get | | BE EF | 03 | 06 00 | B5 27 | 02 00 | 12 23 | 00 00 |
| PbyP MAIN AREA | Set | LEFT | BE EF | 03 | 06 00 | 7A 26 | 01 00 | 13 23 | 00 00 |
| | | RIGHT | BE EF | 03 | 06 00 | EA 27 | 01 00 | 13 23 | 01 00 |
| | Get | | BE EF | 03 | 06 00 | 49 26 | 02 00 | 13 23 | 00 00 |
| PbyP LEFT SOURCE | Set | COMPUTER IN 1 | BE EF | 03 | 06 00 | F2 26 | 01 00 | 15 23 | 00 00 |
| | | COMPUTER IN 2 | BE EF | 03 | 06 00 | 32 24 | 01 00 | 15 23 | 04 00 |
| | | BNC | BE EF | 03 | 06 00 | C2 24 | 01 00 | 15 23 | 07 00 |
| | | HDMI | BE EF | 03 | 06 00 | 02 26 | 01 00 | 15 23 | 03 00 |
| | | DVI-D | BE EF | 03 | 06 00 | A2 20 | 01 00 | 15 23 | 09 00 |
| | | COMPONENT | BE EF | 03 | 06 00 | A2 25 | 01 00 | 15 23 | 05 00 |
| | | S-VIDEO | BE EF | 03 | 06 00 | 92 27 | 01 00 | 15 23 | 02 00 |
| | | VIDEO 1 | BE EF | 03 | 06 00 | 62 27 | 01 00 | 15 23 | 01 00 |
| | | VIDEO 2 | BE EF | 03 | 06 00 | 52 20 | 01 00 | 15 23 | 0A 00 |
| | Get | | BE EF | 03 | 06 00 | C1 26 | 02 00 | 15 23 | 00 00 |
| PbyP SWAP | Execute | | BE EF | 03 | 06 00 | 01 27 | 06 00 | 16 23 | 00 00 |