# EIKI

# EXPAND SERIAL COMMAND

# FUNCTIONAL SPECIFICATIONS

## LC-XG400L

# Contents

## 1．Overview

- ・ This Functional Specification defines communication with PJ-Net organizer for LC-XG400L.
- ・ Supporting Farmware Ver. 1.x of the projector.
- ・ Commands in this document are to communicate with PJ-Net organizer, but most commands are used to control a projector remotely from a computer with RS-232C.　Therefore commands in this document are defined as Expand Serial Commands.

## 2. Serial Interface Specification

### 2.1 Transfer Specification

| Item | Specification |
|---|---|
| Synchronous System | Asynchronous |
| Transmission Speed | 9600 / 19200 |
| Data Length | 8 bits |
| Parity | N/A |
| Stop Bit | 1 |
| Flow Control | N/A |

Note1) Transmission Speed: initial setting value is 19200

Note2) Transmission Speed can be changed in Service mode.

### 2.2 Connection

Dedicated serial cables that come with the projector must be used for the connection between a computer and a projector.

PC　　　　　　　　　　　Projector
COM 1　　　　　　　　　Control Port



(D-Sub 9Pin)　　　　　　(mini 8Pin)
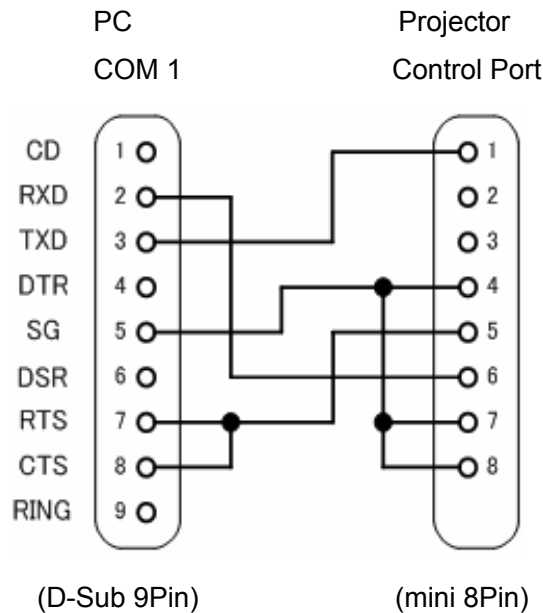
## 3. Notes for communication

· Expand Serial Command is defined as a single command per line that starts with "C" and ends with carriage return (0x0D).

· There are two types of commands; Functional Execution Commands and Status Read Command.

    - Example of Functional Execution Command: "CF_BRIGHT_032" [CR]

    - Example of Status Read Command: "CR_BRIGHT" [CR]

        Note) "_" means a space

· When it takes more than a second to receive a single command, it is not executed.

  When it takes more than a second to receive carriage return (0x0D) since the reception of the first data "C", it clears the information of the receive buffer.

· When the command pipelining, allow the interval time of no less than100ms after receiving return value.
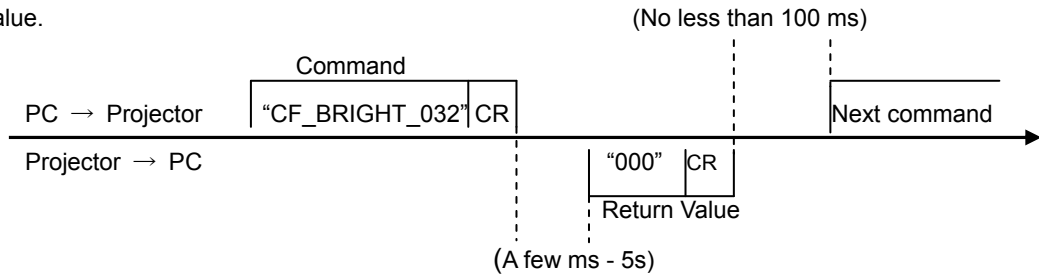


· Do not send another command before the reception of the return value; the operation by the commond is not ensured.

    However this is not the case when no response is returned after more than 5 seconds.

· It takes about 5 seconds for internal initialization after plugging in AC power. During this time, it cannot process commands. Do not issue any command.

## 4. Notation Convention

· Data from a controller to a projector is represented as COMMAND, and data from a projector to a controller in response to the incoming command is represented as RESPONSE.

· [CR]: Carriage Return Code

    Carriage Return code is added to the end of the command.

    Response is also followed by carriage return code.

· _: Space Code

    Space Code is represented as (_).

· %1: Parameter included in Command

  When there are more than one parameter, they are defined as %2, %3…

· %%%: Error Code returned from a projector

  Acceptable: "000".

  Unacceptable: See [7. Error Code Table].

## 5. Functional Execution Command Table

### 5.1 Image Command Table

| Execute command | Item |
|---|---|
| CF_BRIGHT_%1 [CR] | Set value of Brightness |
| CF_CONT_%1 [CR] | Set value of Contrast |
| CF_COLOR_%1 [CR] | Set value of Color |
| CF_TINT_%1 [CR] | Set value of Tint |
| CF_SHARP_%1 [CR] | Set value of Sharpness |
| CF_GAMMA_%1 [CR] | Set value of Gamma |
| CF_WBAL-R_%1 [CR] | Set Red value of White Balance |
| CF_WBAL-G_%1 [CR] | Set Green value of White Balance |
| CF_WBAL-B_%1 [CR] | Set Blue value of White Balance |
| CF_COLTEMP_%1 [CR] | Set level of Color Temprature |
| CF_NZRED_%1 [CR] | Set ON/OFF of Noise reduction |
| CF_PROGV_%1 [CR] | Set mode of Progressive scan |
| CF_IMAGE_%1 [CR] | Set Image mode |
| CF_IMAGEADJ_%1 [CR] | Set Store/Reset of values in Image Adjustment |

### 5.2 PC Adjust Control Command Table

| Execute command | Item |
|---|---|
| CF_FSYNC_%1 [CR] | Set value of Fine Sync |
| CF_TDOTS_%1 [CR] | Set value of Total Dots |
| CF_CLPPHASE_%1 [CR] | Set value of Clamp Phase |
| CF_H-POS_%1 [CR] | Set value of Horizontal Position |
| CF_V-POS_%1 [CR] | Set value of Vertical Position |
| CF_DDOTS_%1 [CR] | Set value of Display Dots |
| CF_DLINE_%1 [CR] | Set value of Display Line |
| CF_SETPCADJ_%1 [CR] | Apply values set in PC Adjust menu to screen image |
| CF_ORGMODE_%1 [CR] | Specify the original signal for PC mode |
| CF_PCSTORE_%1 [CR] | Store current setting values in PC Adjust menu to Mode %1 |
| CF_PCMODEFREE_%1 [CR] | Delete the values registered in Mode %1 and return it to Free status. |

### 5.3 Input Control Command Table

| Execute command | Item |
|---|---|
| CF_INPUT_%1 [CR] | Select Input |
| CF_SOURCE_%1 [CR] | Select Source of selected Input |
| CF_INPUT1_%1 [CR] | Select Input1 and also set input source to %1 |
| CF_INPUT2_%1 [CR] | Select Input2 and also set input source to %1 |
| CF_INPUT3_%1 [CR] | Select Input3 and also set input source to %1 |
| CF_INPUT4_%1 [CR] | Select Input4 and also set input source to %1 |
| CF_SYSTEM_%1 [CR] | Select System of curretnlty selected Input |

### 5.4 Screen Control Command Table

| Execute command | Item |
|---|---|
| CF_SCREEN_%1 [CR] | Select Screen size |
| CF_DZCENT _%1 [CR] | Cancel Digital Zoom mode |
| CF_KEYSTONE _%1 [CR] | Set Keystone correction |
| CF_KYSTNMODE _%1 [CR] | Set Keystone store mode |
| CF_VSCALE_%1[CR] | Set V Scale |
| CF_VPOS_%1[CR] | Set V Position |
| CF_HSCALE_%1[CR] | Set H Scale |

| CF_HPOS_%1[CR] | Set H Position |
|---|---|

## 5.5 Lamp Command Table

| Execute command | Item |
|---|---|
| **CF_LAMPH_%1 [CR]** | Reset total running time for each lamp |
| **CF_LAMPMODE_%1 [CR]** | Select Lamp mode |

## 5.6 Sound Command Table

| Execute command | Item |
|---|---|
| **CF_VOLUME_%1[CR]** | Set Volume value |
| **CF_MUTE_%1[CR]** | Control ON/OFF of Sound Mute |

## 5.7 Setting Command Table

| Execute command | Item |
|---|---|
| **CF_BACKGND_%1[CR]** | Select screen for no signal |
| **CF_DISP_%1 [CR]** | Set ON/OFF of On Screen Display |
| **CF_LOGO_%1 [CR]** | Set PIN code and mode for Logo |
| **CF_CEIL_%1 [CR]** | Set ON/OFF of Ceiling |
| **CF_REAR_%1 [CR]** | Set ON/OFF of Rear |
| **CF_RCODE_%1 [CR]** | Select Remote Control Code |
| **CF_RCSENSOR_%1 [CR]** | Select location of infrared remote receiver of remote control |
| **CF_LANG_%1 [CR]** | Select language for OSD |
| **CF_ON-STA_%1 [CR]** | Set ON/OFF of Power ON Start |
| **CF_P-MANE_%1 [CR]** | Set Power Management function |
| **CF_P-MANETIME_%1 [CR]** | Set time of Power Management |
| **CF_FANSPEED_%1 [CR]** | Set level of Fan Speed |
| **CF_HIGHLAND_%1[CR]** | Set Highland mode |
| **CF_SLANT_%1[CR]** | Set slant of projector installed |
| **CF_KEYDIS_%1 [CR]** | Prohibit RC/KEY control |
| **CF_FDEFAULT_%1 [CR]** | Reset to Factory Default settings |
| **CF_PJPINCODE_%1[CR]** | Enter PJ PIN code to cancel PJ lock |
| **CF_TESTPAT_%1[CR]** | Set Test pattern display function |
| **CF_FILH_%1[CR]** | Reset Filter used time |
| **CF_FILTIMER_%1[CR]** | Set time to display Filter cleaning / replacement warning on screen |
| **CF_POINTER_%1[CR]** | Set Pointer function |

## 5.8 Other Command Table

| Execute command | Item |
|---|---|
| **CF_KEYEMU_%1 [CR]** | The same operation as RC/Control Key |
| **CF_MENU_%1 [CR]** | Set ON/OFF of Menu |
| **CF_POWER_%1 [CR]** | Set ON/OFF of Power |
| **CF_FREEZE_%1 [CR]** | Set ON/OFF of Freeze |

## 6. Status Read Command Table

### 6.1 Image Status Read Command Table

| Status Read command | Item |
|---|---|
| CR_BRIGHT [CR] | Get value of Brightness |
| CR_CONT [CR] | Get value of Contrast |
| CR_COLOR [CR] | Get value of Color |
| CR_TINT [CR] | Get value of Tint |
| CR_SHARP [CR] | Get value of Sharpness |
| CR_GAMMA [CR] | Get value of Gamma |
| CR_WBAL-R [CR] | Get Red value of White Balance |
| CR_WBAL-G [CR] | Get Green value of White Balance |
| CR_WBAL-B [CR] | Get Blue value of White Balance |
| CR_COLTEMP [CR] | Get value of Color temperature |
| CR_NZRED [CR] | Get setting status of Noise reduction |
| CR_PROGV [CR] | Get setting status of Progressive scan |
| CR_IMAGE [CR] | Get Selected Image status |
| CR_IMGGMD [CR] | Get setting value of Image Gamma |

### 6.2 PC Adjust Status Read Command Table

| Status Read command | Item |
|---|---|
| CR_FSYNC [CR] | Get setting value of Fine Sync |
| CR_TDOTS [CR] | Get setting value of Total Dots |
| CR_CLPPHASE [CR] | Get setting value of Clamp phase |
| CR_H-POS [CR] | Get setting value of Horizontal Position |
| CR_V-POS [CR] | Get setting value of Vertical Position |
| CR_DDOTS [CR] | Get setting value of Display Dots |
| CR_DLINE [CR] | Get setting value of Display Line |
| CR_ORGMODE [CR] | Get the original signal for PC-Adjusted mode |
| CR_PCSTORE [CR] | Get status Free/ Stored for PC Adj. mode 1-10 |
| CR_SETPCADJ [CR] | Get currently displayed PC signal in system |

### 6.3 Video Status Read Command Table

| Status Read command | Item |
|---|---|
| CR_SERSYS [CR] | Get currently selected signal.  In Auto mode, it returns a result by Auto detection. |

### 6.4 Input Status Read Command Table

| Status Read command | Item |
|---|---|
| CR_INPUT [CR] | Get selected Input |
| CR_SOURCE [CR] | Get selected Source |
| CR_SRCINP1 [CR] | Get selected source for Input 1 |
| CR_SRCINP2 [CR] | Get selected source for Input 2 |
| CR_SRCINP3 [CR] | Get selected source for Input 3 |
| CR_SRCINP4 [CR] | Get selected source for Input 4 |
| CR_SYSTEM [CR] | Get selected system in current Input mode |
| CR_SYSLIST [CR] | Get possible system list |
| CR_MODELIST [CR] | Get possible mode list |
| CR_HMSLOT [CR] | Get total number of Inputs |
| CR_NMSLOT1 [CR] | Get terminal information of Input1. |
| CR_NMSLOT2[CR] | Get teminial information of Input2. |
| CR_NMSLOT3[CR] | Get terminal information of Input3 |
| CR_NMSLOT4[CR] | Get terminal information of Input4. |
| CR_IDSLOT1[CR] | Get ID information of Input1 |
| CR_IDSLOT2[CR] | Get ID information of Input2 |

| | |
|---|---|
| CR_IDSLOT3[CR] | Get ID information of Input3 |
| CR_IDSLOT4[CR] | Get ID information of Input4 |

### 6.5 Screen Status Read Command Table

| Status Read command | Item |
|---|---|
| CR_SCREEN [CR] | Get selected screen size |
| CR_KYSTNMODE[CR] | Get selected Keystone store mode |
| CR_VSCALE[CR] | Get setting status of V Scale |
| CR_VPOS[CR] | Get setting status of V Position |
| CR_HSCALE[CR] | Get setting status of H Scale |
| CR_HPOS[CR] | Get setting status of H Position |

### 6.6 Lamp Status Read Command Table

| Status Read command | Item |
|---|---|
| CR_LAMPREPL [CR] | Get information of Lamp replacement time |
| CR_LAMPH [CR] | Get information of actual Lamp runnig time |
| CR_LAMPCORRESPH [CR] | Get lamp running time multiplied by a coefficient |
| CR_LAMPMODE [CR] | Get selected Lamp mode |
| CR_PROJH [CR] | Get total running time of projector |
| CR_HMLAMP | Get the number of lamps |

### 6.7 Sound Status Read Command Table

| Status Read command | Item |
|---|---|
| CR_VOLUME[CR] | Get Volume value |
| CR_MUTE[CR] | Get Sound Mute setting status |

### 6.8 Setting Status Read Command Table

| Status Read command | Item |
|---|---|
| CR_BACKGND [CR] | Get setting status of Screen for no signal |
| CR_DISP [CR] | Get setting status of Display |
| CR_LOGO [CR] | Get setting status of Logo |
| CR_LOGOLOCK[CR] | Get setting status of Logo Lock |
| CR_CEIL [CR] | Get setting status of Ceiling |
| CR_REAR [CR] | Get setting status of Rear |
| CR_RCODE [CR] | Get selected Remote Control code |
| CR_RCSENSOR [CR] | Get setting status of Remote Control Sensor (Enable/Disable) |
| CR_RTYPE [CR] | Get supported Remote Control type (IR/RF) |
| CR_LANG [CR] | Get selected language |
| CR_ON-STA [CR] | Get ON Start setting status |
| CR_P-MANE [CR] | Get Power management setting status |
| CR_P-MANETIME [CR] | Get setting time for Power Management |
| CR_FANSPEED [CR] | Get selected Fan Control Speed |
| CR_HIGHLAND[CR] | Get selected status of Highland mode |
| CR_SLANT[CR] | Get setting status of Slant |
| CR_KEYDIS [CR] | Get RC/KEY prohibited status |
| CR_SECURITY [CR] | Get setting status of Security |
| CR_PJLOCKNOW [CR] | Get setting status of current PJ Lock |
| CR_PJLOCKMENU [CR] | Get PJ Lock setting status on the menu |
| CR_TESTPAT[CR] | Get setting status of Test pattern |
| CR_FILH[CR] | Get Filter used time |
| CR_FILCOND[CR] | Get status of filter clog |
| CR_FILREPL[CR] | Get status of Filter cleaning / replacement time |
| CR_FILTIMER[CR] | Get time to display Filter cleaning / replacement warning on screen |

| | |
|---|---|
| **CR_POINTER[CR]** | Get setting status of Pointer |

## 6.9 Other Status Read Command Table

| Status Read command | Item |
|---|---|
| **CR_STATUS [CR]** | Get operating status of Projector |
| **CR_SIGNAL [CR]** | Get status of singal existence |
| **CR_VMUTE [CR]** | Get setting status of No show |
| **CR_FREEZE [CR]** | Get setting status of Freeze |
| **CR_ALLPFAIL [CR]** | Get all information of Power Failure |
| **CR_HMPFAIL [CR]** | Get total number of detectable Power Failure |
| **CR_PFAIL01 [CR]** | Get Item name of Power Failure No.01 and error status |
| **CR_PFAIL02 [CR]** | Get Item name of Power Failure No.02 and error status |
| **CR_PFAIL12 [CR]** | Get Item name of Power Failure No.12 and error status |
| **CR_TEMPFAIL [CR]** | Get temperature when sensors approach abnormal temperature |
| **CR_TEMP [CR]** | Get current temperature |

## 7．Error Code Table

| Error Code | Contents |
|---|---|
| ? | -When the received data cannot be decoded<br>-Parameter decignation error (wrong digit number, including invalid value, etc.) |
| 000 | Normal reception (This is "Not" error) |
| 102 | Directly specified value or values are out of range. (Not reflected) |
| 103 | Command mismatched to Hardware (the command is for Optional function which is not implemented) |
| 201 | Incremented or decremented value or values are beyond upper or lower limits. |
| 301 | Not executable due to screen capturing in process. Prompting reissue of the command after a while. |
| 402 | Not executable due to PIN code in operation. Prompting reissue of the command after a while. |
| 101 | Error not applicable to above errors |

## 8. Functional Execution Command

### 8.1 Format

1) PC issues commands in format as below:

**Pattern1: "CF_ COMMAND " [CR]**

**Pattern2: "CF_ COMMAND _" %1 [CR]**

CF_: Header

COMMAND: String

%1: Parameter (String)

_: Space (To separate COMMAND and Parameter)

2) The projector decodes the received command and when it is ready to receive the next command, it returns the response.

**"000" [CR]**: （0x06,0x0D）When receiving Functional Execution Command

**"nnn" [CR]**: Except "000", when it is unable to execute command for any specific reason.

<u>See Error Code Table for details</u>

3) When the received data cannot be decoded, the projector returns **"?" [CR]**

### 8.2 Transfer Example

When setting projector's total dots to 1344 by Expand Serial command

PC → PJ: "CF_TDOTS_1344" [CR]

PC ← PJ: "000" [CR] - - - - - - - - - - Acceptable

### 8.3 Operation Requirements

Functional Execution Command is limited when the projector status is as below.

However, Status Read Command is still effective under following conditions.

| Projector Status | Available Functional Execution Command |
|---|---|
| Standby Mode | C00: Power ON<br>CF POWER ON |
| Countdown in process | C00: Power ON<br>CF POWER ON　(Terminates Count Down) |
| Cooling Down in process | N/A |
| Cooling Down due to Abnormal Temperature | N/A |
| Abnormal Temperature | N/A |
| Power Failure<br>(60 seconds after Power failure occured) | N/A |
| Power-Save Cooling Down in process | N/A |
| Cooling Down in process due to Shutter management | N/A |
| Power Save in process | C00: Power ON<br>C01: Power OFF<br>CF POWER ON<br>CF POWER OFF |

Note) When projector receives another command in the above status, it returns error code which shows the status.　And when projector receives Functional execution commands, OSD menu disappears except pop-up menu.

## 8.4 Image Command

### 8.4.1 CF_ BRIGHT Command

| Command | "CF_BRIGHT_%1" [CR] |
| --- | --- |
| %1 | "000-063"--------------- Directly specify setting value of Brightness<br>"UP"--------------------- Increment setting value of Brightness by 1<br>"DN"--------------------- Decrement setting value of Brightness by 1 |
| Details | Set user controlled value of Brightness (Available only in the normal Power ON status)<br>The value set by this command will not be stored in the projector's memory. Therefore, when the power is turned to ALL OFF status, the value returns to the original setting. (It is stored in Suspend mode.) |
| Response | Acceptable | "000" [CR] |
| | Unacceptable | "Error Code" [CR] |

### 8.4.2 CF_CONT Command

| Command | "CF_CONT_%1" [CR] |
| --- | --- |
| %1 | "000-063"--------------- Directly specify setting value of Contrast<br>"UP"--------------------- Increment setting value of Contrast by 1<br>"DN"--------------------- Decrement setting value of Contrast by 1 |
| Details | Set user controlled value of Contrast (Available only in the normal Power ON status)<br>The value set by this command will not be stored in the projector. Therefore, when the power is turned to ALL OFF status, the value returns to the original setting. (It is stored in Suspend mode.) |
| Response | Acceptable | "000" [CR] |
| | Unacceptable | "Error Code" [CR] |

### 8.4.3 CF_COLOR Command

| Command | "CF_COLOR_%1" [CR] |
| --- | --- |
| %1 | "000-063"--------------- Directly specify setting value of Color<br>"UP"--------------------- Increment setting value of Color by 1<br>"DN"--------------------- Decrement setting value of Color by 1 |
| Details | Set user controlled value of Colorl (Available only in the normal Power ON status)<br>The value set by this command will not be stored in the projector's memory. Therefore, when the power is turned to ALL OFF status, the value returns to the original setting. (It is stored in Suspend mode.) |
| Response | Acceptable | "000" [CR] |
| | Unacceptable | "Error Code" [CR] |

### 8.4.4 CF_TINT Command

| Command | "CF_TINT_%1" [CR] |
| --- | --- |
| %1 | "000-063"--------------- Directly specify setting value of Tint<br>"UP"--------------------- Increment setting value of Tint by 1<br>"DN"--------------------- Decrement setting value of Tint by 1 |
| Details | Set Tint value (Available only in the normal Power ON status)<br>The value set by this command will not be saved to the projector's memory. Therefore, when the power is turned to ALL OFF status, the value returns to the original setting. (It is stored in Suspend mode.) |
| Response | Acceptable | "000" [CR] |
| | Unacceptable | "Error Code" [CR] |

### 8.4.5 CF_SHARP Command

| Command | "CF_SHARP_%1" [CR] | |
|---|---|---|
| %1 | "000-015"-------------- Directly specify setting value of Sharpness<br>"UP"-------------------- Increment setting value of Sharpness by 1<br>"DN"-------------------- Decrement setting value of Sharpness by 1 | |
| Details | Set user controlled value of Sharpness (Available only in the normal Power ON status)<br>The value set by this command will not be stored in the projector's memory. Therefore, when the power is turned to ALL OFF status, the value returns to the original setting. (It is stored in Suspend mode.) | |
| Response | Acceptable | "000" [CR] |
| | Unacceptable | "Error Code" [CR] |

### 8.4.6 CF_GAMMA Command

| Command | "CF_GAMMA_%1" [CR] | |
|---|---|---|
| %1 | "000-015"---------------- Directly specify setting value of Gamma<br>"UP"---------------------- Increment setting value of Gamma by 1<br>"DN"---------------------- Decrenment setting value of Gamma by 1 | |
| Details | Set user controlled value of Gamma (Available only in the normal Power ON status)<br>The value set by this command will not be stored in the projector's memory. Therefore, when the power is turned to ALL OFFstatus, the value returns to the original setting. (It is stored in Suspend mode.) | |
| Response | Acceptable | "000" [CR] |
| | Unacceptable | "Error Code" [CR] |

### 8.4.7 CF_WBAL- Command

| Command | "CF_WBAL-%1_%2" [CR] | |
|---|---|---|
| %1 | "R" --------- RED<br>"G" --------- GREEN<br>"B" --------- BLUE | |
| %2 | "000-063"------ Directly specify value of Color selected in %1 of White Balance.<br>"UP"---------Increment setting value of Color specified in %1 of White Balance by 1.<br>"DN"-------- Decrement setting value of Color specified in %1 of White Balance by 1. | |
| Details | Set value of Color specified in %1 of White Balance (Available only in the normal Power ON status)<br>The value set by this command will not be stored in the projector's memory. Therefore, when the power is turned to ALL OFF status, the value returns to the original setting. (It is stored in Suspend mode.) | |
| Response | Acceptable | "000" [CR] |
| | Unacceptable | "Error Code"[CR] |

### 8.4.8 CF_COLTEMP Command

| Command | "CF_COLTEMP_%1" [CR] |
|---|---|
| %1 | "000" ------------------------------ Xlow<br>"001"------------------------------ Low<br>"002"------------------------------ Mid<br>"003"------------------------------ High |

| Details | Set Color Temperature (Available only in the normal Power ON status) The value set by this command will not be stored in the projector's memory. Therefore, when the power is turned to ALL OFF status, the value returns to the original setting. (It is stored in Suspend mode.) | |
|---|---|---|
| Response | Acceptable | "000" [CR] |
| | Unacceptable | "Error Code" [CR] |

### 8.4.9 CF_NZRED Command

| Command | "CF_NZRED_%1" [CR] | |
|---|---|---|
| %1 | "OFF" ---------------- Cancel Noise Reduction "L1" ------------------ Set Noise Reduction L1 "L2" ------------------ Set Noise Reduction L2 "UP" ----------------- Toggle between ON and OFF. (OFF→L1→L2→OFF...) "DN" ----------------- Toggle between ON and OFF. (OFF→L2→L1→OFF...) | |
| Details | Set Noise Reduction level (Available only in the normal Power ON status) The value set by this command will not be stored in the projector's memory Therefore, when the power is turned to ALL OFF status, the value returns to the original setting. (It returns to the original setting in Suspend mode as well.) | |
| Response | Acceptable | "000" [CR] |
| | Unacceptable | "Error Code" [CR] |

### 8.4.10 CF_PROGV Command

| Command | "CF_PROGV_%1" [CR] | |
|---|---|---|
| %1 | "OFF" -------------- Set Progressive scan to OFF. "L1" ----------------- Set Progressive scan to L1(for movie image). "L2" ----------------- Set Progressive scan to L2(for still image). "FILM" ------------- Set Progressive scan to Film. "UP" ---------------- Switch setting forward direction (OFF→L1→L2→FILM→OFF) "DN" ---------------- Switch setting backward direction (OFF→FILM→L2→L1→OFF) | |
| Details | Set Progressive scan mode. (Available only in the normal Power ON status) The value set by this command will not be stored in the projector's memory. Therefore, when the power is turned to ALL OFF status, the value returns to the original setting. (It is stored in Suspend mode.) | |
| Response | Acceptable | "000" [CR] |
| | Unacceptable | "Error Code" [CR] |

### 8.4.11 CF_IMAGE Command

| Command | "CF_IMAGE_%1" [CR] | |
|---|---|---|
| %1 | "DYNAMIC" ---Dynamic (Fixed value to enable projection with a sharp, powerful picture tone) "STAND" -------Standard(Image adjust value is set to factory default for Still Image) "REAL---------- Real (Fixed value to display graphic image with natural tone) "CINEMA"----- Cinema (Fixed value to focus on tone reproduction for movie) "CUSTOM1" ------------- Image1 （the value adjusted and stored by user） "CUSTOM2" ------------- Image2 （the value adjusted and stored by user） "CUSTOM3" ------------- Image3 （the value adjusted and stored by user） "CUSTOM4" ------------- Image4 （the value adjusted and stored by user） | |
| Details | Select Image Mode (Available only in the normal Power ON status) Parameter "CUSTOM1" to "CUSTOM4" corresponds to "Image1" to "Image4" displayed in projector OSD menu on selecting Image. The value set by this command is stored in EEPROM so that the setting can remain effective even after the power is turned to ALL OFF status. | |
| Response | Acceptable | "000" [CR] |

| | Unacceptable | "Error Code" [CR] |
| --- | --- | --- |

### 8.4.12 CF_IMAGEADJ Command

| | |
| --- | --- |
| Command | "CF_IMAGEADJ_%1"[CR] |
| %1 | "RST"------ Reset adjusted value for the Image<br>"STR1"---- Store current adjusted value to Image 1<br>"STR2"---- Store current adjusted value to Image 2<br>"STR3"---- Store current adjusted value to Image 3<br>"STR4"---- Store current adjusted value to Image 4 |
| Details | Reset or Store adjusted value for Image.<br>(Available only in the normal Power ON status)<br>"STR1"-"STR4" corresponds to "Image1"-"Image4" displayed in projector OSD menu on selecting "Store" for adjusted value of Image. The setting value set in "Image1" to "Image4" is stored and can be retrieved when turning on the projector again after the power is turned to ALL OFF status. |
| Response | Acceptable | "000" [CR] |
| | Unacceptable | "Error Code" [CR] |

## 8.5 PC Adjust Control Command

### 8.5.1 CF_FSYNC Command

| | |
|---|---|
| Command | "CF_FSYNC_%1" [CR] |
| %1 | "0000-0031" ----------------- Directly specify setting value of Fine Sync<br>"UP" -------------------------- Increment setting value of Fine Sync by 1<br>"DN" -------------------------- Decrement setting value of Fine Sync by 1 |
| Details | Set value of Fine Sync in PC signal (Available only in the normal Power ON status)<br>The value set by this command will not be stored in the projector's memory. Therefore, when the power is turned to ALL OFF status, the value returns to the original setting. (It is stored in Suspend mode.) |
| Response | Acceptable | "000" [CR] |
| | Unacceptable | "101" [CR] --- When input is Video signal / No signal |

### 8.5.2 CF_TDOTS Command

| | |
|---|---|
| Command | "CF_TDOTS_%1" [CR] |
| %1 | "mmmm - nnnn" --------------- Directly specify setting value of Total Dots<br>"mmmm" indicates minimum value, which is current (Display area H + Position H) value<br>"nnnn" indicates maximum value, whichi is *less than 140 MHz in Dot Clocks*<br>"UP" ------------------------ Increment setting value of Total Dots by 1<br>"DN" ------------------------ Decrement setting value of Total Dots by 1 |
| Details | Set value of Total Dots in PC signal (Available only in the normal Power ON status)<br>The value set by this command will not be stored in the projector's memory. Therefore, when the power is turned to ALL OFF status, the value returns to the original setting. (It is stored in Suspend mode.) |
| Response | Acceptable | "000" [CR] |
| | Unacceptable | "101" [CR] --- When input is Video signal / No signal |

### 8.5.3 CF_CLPPHASE Command

| | |
|---|---|
| Command | "CF_CLPPHASE_%1"[CR] |
| %1 | "mmmm~nnnn" --- Directly select Clamp phase setting value<br>"mmmm" shows minimum value, the fixed-value "0001".<br>"nnnn" shows maximum value, it depends on input signal.<br>"UP" -------------- Current Clamp setting value + 1<br>"DN" -------------- Current Clamp setting value – 1 |
| Details | Set Clamp value of PC signal (Available only in the normal Power ON status)<br>The value set by this command will not be saved to the projector. Therefore, when ALL is OFF, the value returns to the original setting (The value is held in Suspend mode) |
| Response | Acceptable | "000"[CR] |
| | Unacceptable | "101"[CR] ---- When input is Video signal / No signal |

### 8.5.4 CF_H-POS Command

| | |
|---|---|
| Command | "CF_H-POS_%1" [CR] |
| %1 | "0000-nnnn" -------- Directly specify setting value of Horizontal Position<br>"nnnn" indicates maximum value, which is current value of (Total dots - Display area H)<br>"UP" ------------------- Increment setting value of Horizontal Position by 1<br>"DN" ------------------- Decrement setting value of Horizontal Position by 1 |
| Details | Set value of Horizontal Position in PC signal (Available only in the normal Power ON status)<br>The value set by this command will not be stored in the projector's memory. |

| | | |
|---|---|---|
| | Therefore, when the power is turned to ALL OFF status, the value returns to the original setting. | |
| Response | Acceptable | "000" [CR] |
| | Unacceptable | "101" [CR] --- When input is Video signal / No signal |

### 8.5.5 CF_V-POS Command

| | |
|---|---|
| Command | "CF_V-POS_%1" [CR] |
| %1 | "0000-nnnn" ------------ Directly specify setting value of Vertical Position<br>　　　　"nnnn" indicates maximum value, which is current (Total Line – Display Area V) value<br>"UP" --------------------- Increment setting value of Vertical Position by 1<br>"DN" --------------------- Decrement setting value of Vertical Position by 1 |
| Details | Set Vertical Position value (Available only in the normal Power ON status)<br>The value set by this command will not be stored in the projector's memory. Therefore, when the power is turned to ALL OFF status, the value returns to the original setting. |
| Response | Acceptable | "000" [CR] |
| | Unacceptable | "101" [CR] ---- When input is Video signal / No signal |

### 8.5.6 CF_DDOTS Command

| | |
|---|---|
| Command | "CF_DDOTS_%1" [CR] |
| %1 | "0100-nnnn" -------------- Directly specify setting value of Display Dots<br>　　　"nnnn" indicates maximum value, which is current value of (Total Dots - Position H).<br>　　　In this projector, the value should be "even number" and if "odd number" is specified, it<br>　　　adds 1 to make the value even number.<br>"UP" ------------------------ Increment setting value of Display Dots by 2<br>"DN" ------------------------ Decrement setting value of Display Dots by 2 |
| Details | Set setting value of Display Dots in PC signal (Available only in the normal Power ON status)<br>The value set by this command will not be stored in the projector's memory. Therefore, when the power is turned to ALL OFF status, the value returns to the original setting. |
| Response | Acceptable | "000" [CR] |
| | Unacceptable | "101" [CR] --- When input is Video signal / No signal |

### 8.5.7 CF_DLINE Command

| | |
|---|---|
| Command | "CF_DLINE_%1" [CR] |
| %1 | "0100-nnnn" ----------- Directly specify setting value of Display Line<br>　　　　"nnnn" indicates maximum value, which is current value of (Total Line - Position V).<br>"UP" ------------------ Increment setting value of Display Line by 1<br>"DN" ------------------ Decrement setting value of Display line by 1 |
| Details | Set setting value of Display Line in PC signal (Available only in the normal Power ON status)<br>The value set by this command will not be stored in the projector's memory. Therefore, when the power is turned to ALL OFF status, the value returns to the original setting. (It is stored in Suspend mode.) |
| Response | Acceptable | "000" [CR] |
| | Unacceptable | "101" [CR] --- When input is Video signal / No signal |

### 8.5.8 CF_SETPCADJ Command

| Command | "CF_SETPCADJ_%1" [CR] |
|---|---|
| %1 | None<br>"EXT11-60" |
| Details | 1. Apply value set in PC Adjust Menu to projected image.<br>Specifying setting value directly in the following PC Adjust related commands immediately reflects them on projected image, while issuing this command after these commands also triggers the reflection. (Available only in the normal Power ON status)<br>・CF_FSYNC<br>・CF_TDOTS<br>・CF_CLAMPPAHSE<br>・CF_H－POS<br>・CF_V－POS<br>・CF_DDOTS<br>・CF_DLINE<br>2. When "EXT11"~"EXT60" is specified in %1, "Ex Mode" (not like XGA1) is displayed in "SYSTEM" menu. |
| Response | Acceptable | "000" [CR] |
| | Unacceptable | "101" [CR] --- When input is Video signal / No signal |

### 8.5.9 CF_ORGMODE Command

| Command | "CF_ORGMODE_%1" [CR] |
|---|---|
| %1 | When input signal is PC Analog;<br>"VGA1" ----------------------- Specify VGA1<br>"VGA2" ----------------------- Specify VGA2<br>:<br>:<br>"XGA1" ----------------------- Specify XGA1<br>:<br>:<br>"WXGA3" --------------------- Specify WXGA3<br>"1080I60" -------------------- Specify 1080i60<br>"1080I50" -------------------- Specify 1080i50<br>"1035I" ----------------------- Specify 10350i<br>"720p60" -------------------- Specify 720p60<br>"720p50" -------------------- Specify 720p50<br>"575p" ----------------------- Specify 575p<br>"480p" ----------------------- Specify 480p<br>"575I" ------------------------ Specify 575i<br>"480I" ------------------------ Specify 480i<br>"1080P60" ------------------- Specify 1080p60<br>"1080P50" ------------------- Specify 1080p50<br><br>* When input signal is not PC Analog, error code "101" is returned. |
| Details | After "EXT n" is set by PC control command such as CF_FSYNC/CF_TDOTS and CF_SETPCADJ command, specify the signal originated with by issuing this command.<br>This command is used to specify projector internal settings such as whether or not to get PC signal through IP (Available only in the normal Power ON status)<br>Note; To differentiate between *60Hz* and *50Hz* in 1080i and 720p, "60" or "50" is necessary to add to the parameter in this command. |
| Response | Acceptable | "000" [CR] |
| | Unacceptable | "101" [CR] --- When Input is other than PC Analog |

### 8.5.10 CF_PCSTORE Command

| Command | "CF_PCSTORE_%1" [CR] | |
|---|---|---|
| %1 | "1" ------------------------ Store current value of PC Adjust to Mode1<br>"2" ------------------------ Store current value of PC Adjust to Mode2<br>"3" ------------------------ Store current value of PC Adjust to Mode3<br>"4" ------------------------ Store current value of PC Adjust to Mode4<br>"5" ------------------------ Store current value of PC Adjust to Mode5<br>"6" ------------------------ Store current value of PC Adjust to Mode6<br>"7" ------------------------ Store current value of PC Adjust to Mode7<br>"8" ------------------------ Store current value of PC Adjust to Mode8<br>"9" ------------------------ Store current value of PC Adjust to Mode9<br>"10" ------------------------ Store current value of PC Adjust to Mode10 | |
| Details | Store current value of PC Adjust (each parameter status such as Total dots) to Mode1-10. This command operates the same way as storing to Mode1-10 in PC Adjust Menu.<br>(Available only in the normal Power ON status) | |
| Response | Acceptable | "000" [CR] |
| | Unacceptable | "101" [CR] --- When input is Video signal / No signal |

### 8.5.11 CF_PCMODEFREE Command

| Command | "CF_PCMODEFREE_%1" [CR] | |
|---|---|---|
| %1 | "1" ------------------------ Set Mode1 to Free status<br>"2" ------------------------ Set Mode2 to Free status<br>"3" ------------------------ Set Mode3 to Free status<br>"4" ------------------------ Set Mode4 to Free status<br>"5" ------------------------ Set Mode5 to Free status<br>"6" ------------------------ Set Mode6 to Free status<br>"7" ------------------------ Set Mode7 to Free status<br>"8" ------------------------ Set Mode8 to Free status<br>"9" ------------------------ Set Mode9 to Free status<br>"10" ------------------------ Set Mode10 to Free status | |
| Details | Delete the data registered in Custom Mode1–10 and returns it to Free status. This command operates the same way as storing to Mode1-10 in PC Adjust Menu.<br>(Available only in the normal Power ON status) | |
| Response | Acceptable | "000" [CR] |
| | Unacceptable | "101" [CR] --- When input is Video signal / No signal |

### 8.6 Input Control Command

#### 8.6.1 CF_INPUT Command

| Command | "CF_INPUT_%1" [CR] |
|---|---|
| %1 | "1"----------------------- Select Input 1 (not switching Source)<br>"2"----------------------- Select Input 2 (not switching Source)<br>"3"----------------------- Select Input 3 (not switching Source)<br>"4"----------------------- Select Input 4 (Network viewer)<br>"UP"--------------------- Increment Input No. by 1<br><with PJ-Net attached>Input1→Input2→Input3→Input4→Input1→ - - -<br><with PJ-Net unattached>Input1→Input2→Input3→Input1→ - - -<br>"DN"--------------------- Decrement Input No. by 1<br><with PJ-Net attached>Input1→Input2→Input3→Input4→Input1→ - - -<br><with PJ-Net unattached>Input1→Input2→Input3→Input1→ - - - |
| Details | Select Input (Available only in the normal Power ON status)<br>This command switches only Input No, not Source. For instance, when Input 1 has been selected, receiving the command to select Input 1 does not invoke souce-switching operation. That means it operates differently from "INPUT" button of Projector or Remote Control.<br>*When selecting Input4 on a projector with PJ-Net unattached, it comes to "103".<br>*When selecting Input1 on a projector with PJ-Net attached and power OFF, It comes to "101". |
| Response | Acceptable | "000" [CR] |
| | Unacceptable | "Error Code" [CR] |

#### 8.6.2 CF_SOURCE Command

| Command | "CF_SOURCE_%1" [CR] | |
|---|---|---|
| %1 | Input 1 | "DIGITAL" ----------- Select Digital Input<br>"ANALOG" ---------- Select Analog Input<br>"SCART" ------------ Select Scart Input<br>"HDCP" ------------- Select DVI HDCP Input<br>"UP" ------ Select in Analog -> Scart -> DVI -> HDCP -> Analog order<br>"DN" ------ Select in Analog -> HDCP -> DVI -> Scart -> Analog order |
| | Input 2 | "VIDEO" ------------- Select Composite Video Input<br>"YPBPR" ------------ Select Y,Pb/Cb,Pr/Cr Input<br>"YCBCR" ----------- Select Y,Pb/Cb,Pr/Cr Input<br>"ANALOG" --------- Select RGB<br>"UP" --- Select in Analog -> Video -> Y,Pb/Cb,Pr/Cr -> Analog order<br>"DN" --- Select in Analog -> Y,Pb/Cb,Pr/Cr -> Video -> Analog order |
| | Input 3 | "AUTO" -------------- Select Composite Video Input / S-Video Input automatically. (S-Video has priority)<br>"VIDEO" --------------Select Composite Video input<br>"S-VIDEO" -------------- Select S-Video input<br>"UP" ------ Select in Auto -> Video -> S-Video -> Auto order<br>"DN" ------ Select in Auto -> S-Video -> Video -> Auto order |
| | Input 4 | "NETWORK", "UP", "DN"<br>*Input can not be selected, but above parameter is processed as Acceptable. |
| Details | | Select Source of currently selected Input (Available only in the normal Power ON status)<br>When selected input does not include specified %1, error code "101" is returned and it is not executed.<br>When Input No is 4 and PJ-Net power is OFF, error code "101" is returned. |
| Response | Acceptable | "000" [CR] |
| | Unacceptable | "Error Code" [CR] |

### 8.6.3 CF_INPUT 1 Command

| Command | "CF_INPUT1_%1" [CR] | |
|---|---|---|
| %1 | "DIGITAL" --------------------------- Select PC Digital Input<br>"ANALOG" ------------------------- Select PC Analog Input<br>"SCART" --------------------------- Select SCART Input<br>"HDCP" --------------------------- Select DVI HDCP Input | |
| Details | Select Input 1 as well as Source specified in %1 (Available only in the normal Power ON status) | |
| Response | Acceptable | "000" [CR] |
| | Unacceptable | "Error Code" [CR] |

### 8.6.4 CF_INPUT 2 Command

| Command | "CF_INPUT2_%1" [CR] | |
|---|---|---|
| %1 | "VIDEO" ---------------------------- Select Composite Video Input<br>"YPBPR" --------------------------- Select Y/Pb/Pr Input<br>"ANALOG" ------------------------- Select RGB Input | |
| Details | Select Input 2 as well as Source specified in %1. (Available only in the normal Power ON status) | |
| Response | Acceptable | "000" [CR] |
| | Unacceptable | "Error Code" [CR] |

### 8.6.5 CF_INPUT 3 Command

| Command | "CF_INPUT3_%1" [CR] | |
|---|---|---|
| %1 | "AUTO" ------------- Select Composite Video Input / S-Video Input automatically. (S-Video has priority)<br>"VIDEO" ---------------------------- Select Composite Video Input<br>"S-VIDEO" ------------------------ Select S-Video Input | |
| Details | Select Input 3 as well as Source specified in %1.<br>(Available only in the normal Power ON status) | |
| Response | Acceptable | "000" [CR] |
| | Unacceptable | "Error Code" [CR] |

### 8.6.6 CF_INPUT 4 Command

| Command | "CF_INPUT4_%1" [CR] | |
|---|---|---|
| %1 | "NETWORK" ----------------------- Select input from PJ-Net | |
| Details | Select Input 4 as well as Source specified in %1. (Available only in the normal Power ON status)<br>*With PJ-Net unattached, this command is invalid and error code "103" is returned.<br>*With PJ-Net attached and the power OFF, error code "101" is returned. | |
| Response | Acceptable | "000" [CR] |
| | Unacceptable | "Error Code" [CR] |

### 8.6.7 CF_SYSTEM Command

| Command | "CF_SYSTEM_%1" [CR] | |
|---|---|---|
| %1 | Input is PC Analog | "VGA1" ---------------------------- Select VGA1<br>"VGA2" ---------------------------- Select VGA2<br>⋮<br>"XGA1" ---------------------------- Select XGA1<br>⋮<br>"WXGA3" --------------------- Select WXGA3<br>"1080I" ----------------------- Select 1080i<br>"1035I" ----------------------- Select 1035i<br>"720p" ----------------------- Select 720p<br>"575p" ----------------------- Select 575p<br>"480p" ----------------------- Select 480p<br>"575I" ----------------------- Select 575i<br>"480I" ----------------------- Select 480i<br>"1080P" --------------------- Select 1080p<br>"MODE1 - 10" -------------- Select MODE1 – MODE10<br>"EXT11 - 60" ---------------- Select Ex Mode11-60<br>                      * Mode1-10 is not returned. |
| | Input is PC Digital/AV HDCP | "D-XGA1" --------------------- Select D-XGA1<br>⋮<br>"D-WXGA3"------------------- Select D-WXGA3<br>"D-1080I" --------------------- Select D-1080i<br>"D-1035I" --------------------- Select D-1035i<br>"D-720p" ---------------------- Select D-720p<br>"D-575p" ---------------------- Select D-575p<br>"D-480p" ---------------------- Select D-480p<br>"D-1080p" -------------------- Select D-1080p |
| | Input is Y,Pb/Cb,Pr/Cr | "AUTO" ------------------------- Select System "Auto"<br>"1080I" -------------------------- Select 1080i<br>"1035I" -------------------------- Select 1035i<br>"720P" -------------------------- Select 720p<br>"575P" -------------------------- Select 575p<br>"480P" -------------------------- Select 480p<br>"575I" --------------------------- Select 575i<br>"480I" --------------------------- Select 480i |
| | Input is Video / S-Video | "AUTO" ------------------------- Select System "Auto"<br>"NTSC" -------------------------- Select NTSC<br>"NTSC443" -------------------- Select NTSC4.43<br>"PAL" ---------------------------- Select PAL<br>"SECAM" ----------------------- Select SECAM<br>"PAL-M" ------------------------- Select PAL-M<br>"PAL-N" ------------------------- Select PAL-N |
| Details | Select System of currently selected Input<br>(Available only in the normal Power ON status)<br>When selected input does not include specified %1, error code "101" [CR] is returned and it is not executed.<br>When Input No is 4, error code "101" [CR] is returned and it is not executed. | |
| Response | Acceptable | "000" [CR] |
| | Unacceptable | "Error Code" [CR] |

## 8.7 Screen Control Command

### 8.7.1 CF_SCREEN Command

| Command | "CF_SCREEN_%1" [CR] | |
|---|---|---|
| %1 | Input is Computer | "NORMAL" --------------------- Select Normal mode<br>"WIDE" -------------------------- Select Wide mode<br>"TRUE" ------------------------- Select True mode<br>"FULL" -------------------------- Select Full mode<br>"CUSTOM" --------------------- Select Custom mode<br>"DZOOM_UP" ----------------- Scale up with Digital zoom<br>"DZOOM_DN" ----------------- Scale down with Digital zoom<br>"UP" ----------------------------- Select   screen size with<br>  forward swiching in possible range<br>"DN" ----------------------------- Select screen size with<br>  backward swiching in possible range |
| | Input is Video | "NORMAL" --------------------- Select Normal mode<br>"WIDE" -------------------------- Select Wide mode<br>"CUSTOM" --------------------- Select Custom mode<br>"UP" ----------------------------- Select   screen size with<br>  forward swiching in possible range<br>"DN" ----------------------------- Select screen size with<br>  backward swiching in possible range |
| Details | Select screen size (Available only in the normal Power ON status)<br>When selected input does not include specified %1, error code "101" [CR] is returned and it is not executed.Receiving "DZOOM_UP" or "DZOOM_DN" command immediately executes the function. | |
| Response | Acceptable | "000" [CR] |
| | Unacceptable | "Error Code" [CR] |

### 8.7.2 CF_DZCENT Command

| Command | "CF_DZCENT_%1"[CR] | |
|---|---|---|
| %1 | "CENT" ---- Cancel Digital Zoom (CENT : "CENTER") | |
| Details | Cancel Digital Zoom<br>(Available only in the normal Power ON status and Input for Computer is selected) | |
| Response | Acceptable | "000"[CR] |
| | Unacceptable | "101"[CR] ------ when Input for Video is selected |

### 8.7.3 CF_KEYSTONE Command

| Command | "CF_KEYSTONE_%1"[CR] | |
|---|---|---|
| %1 | "UP" ------------- Correct Keystone distortion to reduce upper part of image<br>"FUP" ----------- Correct Keystone distortion to reduce upper part largely<br>"DN" ------------- Correct Keystone distortion to reduce lower part of image<br>"FDN" ----------- Correct Keystone distortion to reduce lower part largely<br>"RST" ------------ Set Keystone OFF | |
| Details | Change Keystone distortion correction<br>(Available only in the normal Power ON status)<br>When reached the limit of the correction level, projector accepts the command but does not execute it.<br>Receiving this command immediately invokes the operation.<br>When trying to set the value beyond available range, error code "201" is returned and the operation is not executed.<br>Example 1: When the correction level of the upper part has reached its upper limit and then the command "UP" is received.<br>Example 2: When the upper part correction allows only another step, and then the command "FUP" is received. | |
| Response | Acceptable | "000"[CR] |

| | Unacceptable | "Error Code"[CR] |
|---|---|---|

### 8.7.4 CF_KYSTNMODE Command

| Command | "CF_KYSTNMODE_%1"[CR] | |
|---|---|---|
| %1 | "STR" --------- Set Keystone store mode to Store<br>"RST" --------- Set Keystone store mode to Reset | |
| Details | Set Keystone store mode (Available only in the normal Power ON status) | |
| Response | Acceptable | "000"[CR] |
| | Unacceptable | "Error Code"[CR] |

### 8.7.5 CF_VSCALE Command

| Command | "CF_VSCALE_%1" [CR] | |
|---|---|---|
| %1 | "032" --------------------- +32<br>"031" --------------------- +31<br>         :<br>"002" --------------------- +2<br>"001" --------------------- +1<br>"000" --------------------- ±0<br>" - 01" -------------------- - 1<br>" - 02" -------------------- - 2<br>            :<br>" - 31" -------------------- - 31<br>" - 32" -------------------- - 32<br>"UP" --------------------- Increment setting value of Vscale by 1<br>"DN" --------------------- Decrement setting value of Vscale by 1 | |
| Details | Set Vscale (Available only in the normal Power ON status)<br>* When selected screen mode is not "Custom", error code "101" [CR] is returned and it is not executed.<br>* Error Code "101" [CR] is returned for no signal. | |
| Response | Acceptable | "000" [CR] |
| | Unacceptable | "Error Code" [CR] |

### 8.7.6 CF_VPOS Command

| Command | "CF_VPOS_%1" [CR] | |
|---|---|---|
| %1 | "015" --------------------- +15<br>"014" --------------------- +14<br>         :<br>"002" --------------------- +2<br>"001" --------------------- +1<br>"000" --------------------- ±0<br>" - 01" -------------------- - 1<br>" - 02" -------------------- - 2<br>            :<br>" - 14" -------------------- - 14<br>" - 15" -------------------- - 15<br>"UP" --------------------- Increment setting value of Vposition by 1<br>"DN" --------------------- Decrement setting value of Vposition by 1 | |
| Details | Set V Position (Available only in the normal Power ON status)<br>* When selected screen mode is not "Custom", error code "101" [CR] is returned and it is not executed.<br>* Error Code "101" [CR] is returned for no signal. | |
| Response | Acceptable | "000" [CR] |
| | Unacceptable | "Error Code" [CR] |

### 8.7.7 CF_HSCALE Command

| Command | "CF_HSCALE_%1" [CR] |
|---|---|
| %1 | "032" ---------------------- +32<br>"031" ---------------------- +31<br>      :<br>"002" ---------------------- +2<br>"001" ---------------------- +1<br>"000" ---------------------- ±0<br>" - 01" -------------------- - 1<br>" - 02" -------------------- - 2<br>      :<br>" - 31" -------------------- - 31<br>" - 32" -------------------- - 32<br>"UP" -------------------- Increment setting value of Hscale by 1<br>"DN" -------------------- Decrement setting value of Hscale by 1 |
| Details | Set Hscale (Available only in the normal Power ON status)<br>* When selected screen mode is not "Custom", error code "101" [CR] is returned and it is not executed.<br>* Error Code "101" [CR] is returned for no signal. |
| Response | Acceptable | "000" [CR] |
| | Unacceptable | "Error Code" [CR] |

### 8.7.8 CF_HPOS Command

| Command | "CF_HPOS_%1" [CR] |
|---|---|
| %1 | "015" -------------------- +15<br>"014" -------------------- +14<br>      :<br>"002" -------------------- +2<br>"001" -------------------- +1<br>"000" -------------------- ±0<br>" - 01" -------------------- - 1<br>" - 02" -------------------- - 2<br>      :<br>" - 14" -------------------- - 14<br>" - 15" -------------------- - 15<br>"UP" -------------------- Increment setting value of Hposition by 1<br>"DN" -------------------- Decrement setting value of Hposition by 1 |
| Details | Set H Position (Available only in the normal Power ON status)<br>* When selected screen mode is not "Custom", error code "101" [CR] is returned and it is not executed.<br>* Error Code "101" [CR] is returned for no signal. |
| Response | Acceptable | "000" [CR] |
| | Unacceptable | "Error Code" [CR] |

### 8.8 Lamp Command

#### 8.8.1 CF_LAMPH Command

| Command | "CF_LAMPH_%1" [CR] | |
|---|---|---|
| %1 | "RST" | |
| Details | Reset lamp running time (Available only in the normal Power ON status) | |
| Response | Acceptable | "000" [CR] |
| | Unacceptable | "Error Code" [CR] |

#### 8.8.2 CF_LAMPMODE Command

| Command | "CF_LAMPMODE_%1" [CR] | |
|---|---|---|
| %1 | "AUTO1" ------------- Set lamp status to Auto1 mode<br>"AUTO2" ------------- Set lamp status to Auto2 mode<br>"HIGH" --------------- Set lamp status to High mode<br>"NORMAL" ---------- Set Lamp status to Normal mode<br>"ECO1" --------------- Set Lamp status to Eco1 mode<br>"ECO2" --------------- Set Lamp status to Eco2 mode<br>"UP" ------------------ Select lamp mode forward direction<br>"DN" ----------------- Select lamp mode backward direction | |
| Details | Select Lamp mode (Available only in the normal Power ON status)<br>The value set by this command is stored in EEPROM and the setting remains effective after the power is turned to ALL OFF status. | |
| Response | Acceptable | "000" [CR] |
| | Unacceptable | "Error Code" [CR] |

### 8.9 Sound Command

#### 8.9.1 CF_VOLUME Command

| Command | "CF_VOLUME_%1"[CR] | |
|---|---|---|
| %1 | "000-063" --------------------------- Directly select Volume setting value<br>"UP" -------------------------------- Current Volume setting value +1<br>"DN" -------------------------------- Current Volume setting value -1 | |
| Details | Control level of volume. (Available only in the normal Power ON status)<br>Set Volume Up/Down the same way as remote control and also directly select Volume setting value. When setting Volume value, the Sound Mute ON status is canceled just like RC operation. The value set by this command is stored in Projector. | |
| Response | Acceptable | "000"[CR] |
| | Unacceptable | "Error Code"[CR] |

#### 8.9.2 CF_MUTE Command

| Command | "CF_MUTE_%1"[CR] | |
|---|---|---|
| %1 | "ON" ------------------------------ Set Sound Mute ON<br>"OFF" ---------------------------- Set Sound Mute OFF | |
| Details | Control Sound Mute ON/OFF (Available only in the normal Power ON status) | |
| Response | Acceptable | "000"[CR] |
| | Unacceptable | "Error Code"[CR] |

### 8.10 Setting Command

#### 8.10.1 CF_BACKGND Command

| Command | "CF_BACKGND_%1" [CR] |
|---|---|
| %1 | "BLUE" -------------------- Select Blue Back<br>"USER" ------------------- Select User<br>"BLACK" ------------------ Select Black Back<br>"UP" ---------- Switch forward (Blue Back→User→Black Back→Blue Back)<br>"DN" --------- Switch backward (Blue Back→Black Back→User→Blue Back) |
| Details | Set Screen status for no signal.(Available only in the normal Power ON status)<br>The status set by this command is stored in EEPROM and the setting remains even after the power is turned to ALL OFF status.<br>*When %1="USER" is received, error code "101" is returned, in the case of Capture non-practice. |
| Response | Acceptable | "000" [CR] |
| | Unacceptable | "Error Code" [CR] |

#### 8.10.2  CF_DISP Command

| Command | "CF_DISP_%1" [CR] |
|---|---|
| %1 | "ON" ----------------------------- Select Display<br>"CNTDWNOFF" --------------- Select Count down Off<br>"OFF" --------------------------- Cancel Display<br>"UP" --------------- Switch forward (On → Count down Off → Off → On → ---)<br>"DN" --------------- Switch backward (On → Off → Count down Off → On → ---) |
| Details | Set Display mode.(Available only in the normal Power ON status)<br>The value set by this command is stored in EEPROM and setting remains effective even after the power is turned to ALL OFF status. |
| Response | Acceptable | "000" [CR] |
| | Unacceptable | "Error Code" [CR] |

#### 8.10.3 CF_LOGO Command

| Command | "CF_LOGO_%1_%2" [CR] |
|---|---|
| %1 | "0000 – 9999" ------------- Directly set Logo PIN code |
| %2 | "OFF" ---------------------------Cancel Logo display<br>"DFLT" ------------------------- Select Logo of Factory Default<br>"USER" ------------------------ Select User<br>"UP" -----------Select functions to choose forward (OFF→DFLT→USER→OFF→ --)<br>"DN" ---------Select functions to choose backward(OFF→USER→DFLT→OFF→ --) |
| Details | Set Logo mode.(Available only in the normal Power ON status)<br>The status set by this command is stored in EEPROM and setting remains effective even after the power is turned to ALL OFF status.<br>Set Logo PIN code in %1.<br>When Logo Lock is enabled:<br>  PIN code is matched ------------------------- Command is valid (Acceptable)<br>  PIN code is mismatched-------------------- Command is invalid (Error code "102")<br>  PIN code is beyond %1 available range ------------ Command is invalid (Error code"?")<br>When Logo Lock is disabled:<br>  PIN code is within %1 available range ------- Command is valid (Acceptable)<br>  PIN code is out of %1 available range ------- Command is invalid (Error code "?")<br>Note: When Logo Lock is enabled, matching Logo PIN code switches Logo but Logo Lock is not cancelled (Lock status is kept).<br>*When %2="USER" is received, error code "101" is returned, in the case of Capture non-practice. |
| Response | Acceptable | "000" [CR] |
| | Unacceptable | "Error Code" [CR] |

### 8.10.4 CF_CEIL Command

| Command | "CF_CEIL_%1" [CR] | |
|---|---|---|
| %1 | "ON" -------------------------- Set Ceiling to ON.<br>"OFF" ------------------------ Set Ceiling to OFF. | |
| Details | Set/Cancel Ceiling mode.(Available only in the normal Power ON status)<br>The status set by this command is stored in EEPROM and setting remains effective even after the power is turned to ALL OFF status. | |
| Response | Acceptable | "000" [CR] |
| | Unacceptable | "Error Code" [CR] |

### 8.10.5 CF_REAR Command

| Command | "CF_REAR_%1" [CR] | |
|---|---|---|
| %1 | "ON" --------------------------- Set Rear to ON.<br>"OFF" ------------------------ Setl Rear to OFF. | |
| Details | Set/Cancel Rear mode (Available only in the normal Power ON status)<br>When Rear is ON, projected image is left/right reversed.<br>The status set by this command is stored in EEPROM and setting remains effective even after the power is turned to ALL OFF status. | |
| Response | Acceptable | "000" [CR] |
| | Unacceptable | "Error Code" [CR] |

### 8.10.6 CF_RCODE Command

| Command | "CF_RCODE_%1" [CR] | |
|---|---|---|
| %1 | "001" ------------------------------------ Select Code 1<br>"002" ------------------------------------ Select Code 2<br>"003" ------------------------------------ Select Code 3<br>"004" ------------------------------------ Select Code 4<br>"005" ------------------------------------ Select Code 5<br>"006" ------------------------------------ Select Code 6<br>"007" ------------------------------------ Select Code 7<br>"008" ------------------------------------ Select Code 8<br>"UP" ---------- Switch forward (Code1→Code2→Code3 - - - →Code8→Code1)<br>"DN" --------- Switch backward (Code8→Code7→Code6 - - -→Code1→Code8) | |
| Details | Select Code of Remote Control (Available only in the normal Power ON status)<br>The status set by this command is stored in EEPROM and setting remains effective even after the power is turned to ALL OFF status. | |
| Response | Acceptable | "000" [CR] |
| | Unacceptable | "Error Code" [CR] |

### 8.10.7 CF_RCSENSOR Command

| Command | "CF_RSENS_%1" [CR] | |
|---|---|---|
| %1 | "BOTH" -------------------------------- Select both front and back receiver of projector<br>"FRONT" ----------------------------- Select only front receiver of projector<br>"BACK" ------------------------------- Select only back receiver of projector<br>"UP" --------- Switch forward (BOTH → FRONT → BACK → BOTH)<br>"DN" --------- Switch backward (BACK → FRONT → BOTH → BACK) | |
| Details | Select location of infrared remote receiver of remote control (Available only in the normal Power ON status)<br>The status set by this command is stored in EEPROM and setting remains effective even after the power is turned to ALL OFF status. | |
| Response | Acceptable | "000" [CR] |
| | Unacceptable | "Error Code" [CR] |

### 8.10.8 CF_LANG Command

| Command | "CF_LANG_%1" [CR] | |
|---|---|---|
| %1 | "ENG" --------------------------- Select ENGLISH<br>"DEU" --------------------------- Select German<br>"FRA" --------------------------- Select French<br>"ITA" --------------------------- Select Italian<br>"ESP" --------------------------- Select Spanish<br>"POR" --------------------------- Select Portuguese<br>"NED" --------------------------- Select Dutch<br>"SVE" --------------------------- Select Swedish<br>"JPN" --------------------------- Select Japanese<br>"CHI" --------------------------- Select Chinese<br>"KOR" --------------------------- Select Korean<br>"RUS" --------------------------- Select Russian | |
| Details | Set language for OSD (Available only in the normal Power ON status)<br>The language set by this command is stored in EEPROM and setting remains effective even after the power is turned to ALL OFF status. | |
| Response | Acceptable | "000" [CR] |
| | Unacceptable | "Error Code" [CR] |

### 8.10.9 CF_ON-STA Command

| Command | "CF_ON-STA_%1" [CR] | |
|---|---|---|
| %1 | "ON" --------------------------- Set Power On Start to ON.<br>"OFF" ------------------------- Set Power On Start to OFF.<br>"UP" ---------- Toggle between ON and OFF.(On→Off→On → - - -)<br>"DN" --------- Toggle between ON and OFF.(On→Off→On → - - -)<br>*"UP" and "DN" are exactly same operation. | |
| Details | Set/Cancel Power ON Start (Available only in the normal Power ON status)<br>The status set by this command is stored in EEPROM and setting value remains effective even after the power is turned to ALL OFF status. | |
| Response | Acceptable | "000" [CR] |
| | Unacceptable | "Error Code" [CR] |

### 8.10.10 CF_P-MANE Command

| Command | "CF_P-MANE_%1" [CR] | |
|---|---|---|
| %1 | "OFF" ---------------------------------- Set Power Management to Off<br>"READY" ------------------------------ Set Power Management to Ready<br>"SHUTDOWN" --------------------- Set Power Management to Shut Down mode<br>"UP" ---------------------- Switch forward (Off→Ready→Shut down→Off)<br>"DN" ---------------------- Switch backward (Off→Shut down→Ready→Off) | |
| Details | Set/Cancel Power Management<br>(Available only in the normal Power ON status)<br>The status set by this command is stored in EEPROM and setting remains effective even after the power is turned to ALL OFF status. | |
| Response | Acceptable | "000" [CR] |
| | Unacceptable | "Error Code" [CR] |

### 8.10.11 CF_P-MANETIME Command

| Command | "CF_P-MANETIME_%1" [CR] |
|---|---|
| %1 | "01" - "30" ----------------------- Directly specify setting time by the minute<br>"UP" -------------- Increment value by 1 (Switched in 01→02→ --- → 30 → 01 order)<br>"DN" -------------- Decrement value by 1(Switched in 30→29→ --- → 01 → 30 order) |
| Details | Set time of Power Management time (Available only in the normal Power ON status)<br>The status set by this command is stored in EEPROM and setting remains effective even after the power is turned to ALL OFF status. |
| Response | Acceptable | "000" [CR] |
| | Unacceptable | "Error Code" [CR] |

### 8.10.12 CF_FANSPEED Command

| Command | "CF_FANSPEED_%1" [CR] |
|---|---|
| %1 | "MAX" ------------------------------ Select maximum fan speed<br>"NOR" ------------------------------ Select normal fan speed |
| Details | Switch Fan Control Speed mode.(Available only in the normal Power ON status)<br>The status set by this command is stored in EEPROM and setting remains effective even after the power is turned to ALL OFF status. |
| Response | Acceptable | "000" [CR] |
| | Unacceptable | "Error Code" [CR] |

### 8.10.13 CF_HIGHLAND Command

| Command | "CF_HIGHLAND_%1"[CR] |
|---|---|
| %1 | "ON" ---------------------- Set Highland mode to ON<br>"OFF" --------------------- Set Highland mode to OFF |
| Details | Set/Cancel Highland mode. (Available only in the normal Power ON status)<br>The status set by this command is stored in EEPROM and its setting is effective after ALL is OFF. |
| Response | Acceptable | "000"[CR] |
| | Unacceptable | "Error Code"[CR] |

### 8.10.14 CF_SLANT Command

| Command | "CF_HIGHLAND_%1"[CR] |
|---|---|
| %1 | "OFF" --------------------- Install a projector without slant<br>"L1" ----------------------- Slant a projector at ? ~ ? degree angle<br>"L2" ----------------------- Slant a projector at ? ~ ? degree angle<br>"UP" ---------------------- Switch forward (Off -> L1 -> L2 -> Off)<br>"DN" ---------------------- Switch backward (Off -> L2 -> L1 -> Off) |
| Details | Switch slant of the projector installed.<br>(Available only in the normal Power ON status)<br>The status set by this command is stored in EEPROM and its setting is effective after ALL is OFF. |
| Response | Acceptable | "000"[CR] |
| | Unacceptable | "Error Code"[CR] |

### 8.10.15 CF_KEYDIS Command

| Command | "CF_KEYDIS_%1" [CR] | |
|---|---|---|
| %1 | "NONE" ---------------------- RC & Projector keys are valid (All are valid)<br>"RCFULL" ------------------- All RC keys are invalid<br>"RCPART" ------------------- Specific RC keys are invalid<br>"KEYFULL" ------------------ All projector keys are invalid<br>"KEYPART" ----------------- Specific projector keys are invalid | |
| Details | Set a ban on the use of RC keys/ projector keys<br>(Available only in the normal Power ON status) | |
| Response | Acceptable | "000" [CR] |
| | Unacceptable | "Error Code" [CR] |

### 8.10.16 CF_FDEFAULT Command

| Command | "CF_FDEFAULT_%1" [CR] | |
|---|---|---|
| %1 | "RST" | |
| Details | Reset to Factory Default setting<br>(Available only in the normal Power ON status) | |
| Response | Acceptable | "000" [CR] |
| | Unacceptable | "Error Code" [CR] |

### 8.10.17 CF_PJPINCODE Command

| Command | "CF_PJPINCODE_%1" [CR] | |
|---|---|---|
| %1 | "0000 – 9999" ------------- Directly specify PJ PIN code | |
| Details | Enter PIN code to cancel PIN code lock (Available only in the normal Power ON status)<br>PIN code can not be changed. (Only PIN code lock is canceled.)<br>*When PIN code Lock is enabled:<br>  PIN code is matched ------------------------ Command is valid (Acceptable)<br>  PIN code is mismatched -------------------- Command is invalid (Error code "102")<br>  PIN code is beyond %1 available range ------------ Command is invalid (Error code "?")<br>When PIN code lock is canceled:<br>  PIN code is within %1 range ----------- Command is valid (Acceptable)<br>  PIN code is out of %1 range ----------- Command is invalid (Error code is 102)<br>This command is only valid when "PJ PIN code" dialog is displayed to enter PIN code after Power is ON and Countdown is completed.<br>When PIN code lock is set to "On1", it needs to send this command every time the projector is turned on. | |
| Response | Acceptable | "000" [CR] |
| | Unacceptable | "Error Code" [CR] |

### 8.10.18 CF_TESTPAT Command

| Command | "CF_TESTPAT_%1" [CR] |
|---|---|
| %1 | "COLOR" ---------------------- Display Color bar<br>"GRAD1" ---------------------- Display 16step(white→black)<br>"GRAD2" ---------------------- Display 16step(white←black)<br>"GRAD3" ---------------------- Display 16step(white↓black)<br>"GRAD4" ---------------------- Display 16step(white↑black)<br>"WHITE" ---------------------- Display all white<br>"BALCK" ---------------------- Display all black<br>"CROSS" -------------------- Display Cross<br>"OFF" -------------------------Do not show test pattern diplay<br>"UP" ------------------------- Switch forward<br>"DN" --------------------- Switch backward |

| Details | Execute test pattern display.(Available only in the normal Power ON status) | |
|---|---|---|
| Response | Acceptable | "000" [CR] |
| | Unacceptable | "Error Code" [CR] |

### 8.10.19 CF_FILH Command

| Command | "CF_FILH_%1" [CR] | |
|---|---|---|
| %1 | "RST" ---------------------- Reset Filter used time | |
| Details | Reset used time for filter of projector | |
| Response | Acceptable | "000" [CR] |
| | Unacceptable | "Error Code" [CR] |

### 8.10.20 CF_FILTIMER Command

| Command | "CF_FILTIMER_%1" [CR] | |
|---|---|---|
| %1 | "0100" ---------------------- Set 100 hours<br>"0200" ---------------------- Set 200 hours<br>"0300" ---------------------- Set 300 hours<br>"OFF" ---------------------- Set Off(Do not warning display) | |
| Details | Set time to display Filter cleaning / replacement warning on screen | |
| Response | Acceptable | "000" [CR] |
| | Unacceptable | "Error Code" [CR] |

### 8.10.21 CF_POINTER Command

| Command | "CF_POINTER_%1_%2"[CR] | |
|---|---|---|
| %1 | "SPOTLIGHT" --------------- Select Spotlight<br>"ARROW" --------------------- Select Arrow<br>"FINGER" --------------------- Select Finger<br>"LASER" ---------------------- Select Laser mark | |
| %2 | "MAX" ------------------------ Spotlight Large<br>"MID" ------------------------- Spotlight Medium<br>"MIN" ------------------------- Spotlight Small | |
| Details | Select Pointer display. (Available only in the normal Power ON status)<br>Note1) %2 is valid only when "SPOTLIGHT" is specified in %1. When "ARROW"/"FINGER"/"LASER" is specified in %1, the command should be "CF_POINTER_%1"[CR].<br>Note2) When "SPOTLIGHT" is specified in %1, %2 cannot be omitted. | |
| Response | Acceptable | "000"[CR] |
| | Unacceptable | "Error Code"[CR] |

## 8.11 Other Commands

### 8.11.1 CF_KEYEMU Command

| Command | "CF_KEYEMU_%1" [CR] | |
|---|---|---|
| %1 | "RIGHT" ---------------- Move Pointer rightward in On-Screen Display Menu<br>"LEFT" ------------------- Move Pointer leftward in On-Screen Display Menu<br>"UP" ---------------------- Move Pointer to upward On-Screen Display Menu<br>"DN" ---------------------- Move Pointer to downward in On-Screen Display Menu<br>"SELECT" -------------- The same operation as "SELECT" button of RC<br>"AUTOPC" ------------- Execute Auto PC Adj. operation | |

| Details | The same operation as RC/Control Key. |
|---|---|
| | Auto PC Adj. operation is not stopped before getting back a return value during this Auto PC Adj. operation even if this command is received again. |

| Response | Acceptable | "000" [CR] |
|---|---|---|
| | Unacceptable | "Error Code" [CR] |

### 8.11.2 CF_MENU Command

| Command | "CF_MENU_%1" [CR] |
|---|---|
| %1 | "ON" -------------------- Display On-Screen Display Menu <br> "OFF" -------------------- Hide On-Screen Display Menu |
| Details | Set On-Screen Display mode. (Available only in the normal Power ON status) |

| Response | Acceptable | "000" [CR] |
|---|---|---|
| | Unacceptable | "Error Code" [CR] |

### 8.11.3 CF_POWER Command

| Command | "CF_POWER_%1" [CR] |
|---|---|
| %1 | "ON" ----------------------------- Power ON <br> "OFF" ---------------------------- Power OFF <br>   * Issuing another command during countdown process forced countdown operation to be terminated. <br>   * Error Code is returned in some projector statuses, which indicates the command is impossible to be executed. (See [8.3] for details) <br>   * Returning the response "000" [CR] (acceptable) does not always mean that the status has already changed to Power ON. <br>     Example: When the temperature approaches abnormal status after returning "000" [CR] to the command CF_POWER ON. <br>     Therefore, to get the projector status requires using Status Read command. |
| Details | Set Power to ON/OFF |

| Response | Acceptable | "000" [CR] |
|---|---|---|
| | Unacceptable | "Error Code" [CR] |

### 8.11.4 CF_FREEZE Command

| Command | "CF_FREEZE_%1" [CR] |
|---|---|
| %1 | "ON" ---------------------------- Set Freeze to ON. <br> "OFF" --------------------------- Set Freeze to OFF. <br> "UP" ---------------------------- Switch forward (On→Off→On→---) <br> "DN" ---------------------------- Switch backward (On→Off→On→---) <br>   * The same operation for "UP" and "DN" as this model has only "ON" / "OFF". |
| Details | Set / Cancel Freeze function.　(Available only in the normal Power ON status) <br> Receiving FREEZE_ON command when the projector is Freeze enabled, Freeze status is kept. |

| Response | Acceptable | "000" [CR] |
|---|---|---|
| | Unacceptable | "Error Code" [CR] |

# 9. Status Read Command

## 9.1 Format

1) PC issues commands in format as below:

**"CR_ COMMAND " [CR]**

Command: String

2) When projector receives the appropriate command, it returns the required data as a string.

**"000_" %1 [CR]**

%1: Required Data (String)

3) When the received data cannot be decoded, the projector returns **"?" [CR]**

## 9.2 Transfer Example

Get total dots of projector by Expand Serial Commands

PC → PJ: "CR_TDOTS" [CR]

PC ← PJ: "000_1344" [CR]

## 9.3 Operation Condition

Basically it should be always operated.

## 9.4 Image Status Read Command

### 9.4.1 CR_BRIGHT Command

| Command | "CR_BRIGHT" [CR] | |
|---------|------------------|---|
| Details | Get user controlled value of Brightness | |
| Response | Acceptable | "000_%1" [CR] |
| | %1 | "000 – 063" |
| | Unacceptable | "?" [CR] |

### 9.4.2 CR_CONT Command

| Command | "CR_CONT" [CR] | |
|---------|----------------|---|
| Details | Get user controlled value of Contrast | |
| Response | Acceptable | "000_%1" [CR] |
| | %1 | "000 – 063" |
| | Unacceptable | "?" [CR] |

### 9.4.3 CR_COLOR Command

| Command | "CR_COLOR" [CR] | |
|---------|-----------------|---|
| Details | Get user controlled value of Color | |
| Response | Acceptable | "000_%1" [CR] |
| | %1 | "000 – 063" |
| | Unacceptable | "?" [CR] |

### 9.4.4 CR_TINT Command

| Command | "CR_TINT" [CR] | |
|---|---|---|
| Details | Get user controlled value of Tint | |
| Response | Acceptable | "000_%1" [CR] |
| | %1 | "000 – 063" |
| | Unacceptable | "Error Code" [CR] --- When command is not available in the given condition (such as being selected input).<br>"?" [CR] --- When unknown command is received |

### 9.4.5 CR_SHARP Command

| Command | "CR_SHARP" [CR] | |
|---|---|---|
| Details | Get user controlled value of Sharpness | |
| Response | Acceptable | "000_%1" [CR] |
| | %1 | "000 – 015" |
| | Unacceptable | "?" [CR] |

### 9.4.6 CR_GAMMA Command

| Command | "CR_GAMMA" [CR] | |
|---|---|---|
| Details | Get user controlled value of Gamma | |
| Response | Acceptable | "000_%1" [CR] |
| | %1 | "000 – 015" |
| | Unacceptable | "?" [CR] |

### 9.4.7 CR_WBAL-R Command

| Command | "CR_WBAL-R" [CR] | |
|---|---|---|
| Details | Get user controlled Red value of White Balance | |
| Response | Acceptable | "000_%1" [CR] |
| | %1 | "000 – 063" |
| | Unacceptable | "?" [CR] |

### 9.4.8 CR_WBAL-G Command

| Command | "CR_WBAL-G" [CR] | |
|---|---|---|
| Details | Get user controlled Green value of White Balance | |
| Response | Acceptable | "000_%1" [CR] |
| | %1 | "000 – 063" |
| | Unacceptable | "?" [CR] |

### 9.4.9 CR_WBAL-B Command

| Command | "CR_WBAL-B" [CR] | |
|---|---|---|
| Details | Get user controlled Blue value of White Balance | |
| Response | Acceptable | "000_%1" [CR] |
| | %1 | "000 – 063" |
| | Unacceptable | "?" [CR] |

### 9.4.10 CR_COLTEMP Command

| Command | "CR_COLTEMP" [CR] | |
|---|---|---|
| Details | Get Color Temperature setting status | |
| Response | Acceptable | "000_%1" [CR] |
| | %1 | "000" -------------------------------- Xlow<br>"001" -------------------------------- Low<br>"002" -------------------------------- Mid<br>"003" -------------------------------- High<br>"BLANK" ---- Processing adjusting White Balance<br>(Neither of Xlow / Low / Mid / High) |
| | Unacceptable | "?" [CR] |

### 9.4.11 CR_NZRED Command

| Command | "CR_NZRED" [CR] | |
|---|---|---|
| Details | Get Noise Reduction setting status | |
| Response | Acceptable | "000_%1" [CR] |
| | %1 | "OFF" ------ Noise Reduction OFF<br>"L1" -------- Noise Reduction L1<br>"L2" -------- Noise Reduction L2 |
| | Unacceptable | "?" [CR] |

### 9.4.12 CR_PROGV Command

| Command | "CR_PROGV" [CR] | |
|---|---|---|
| Details | Get Progressive scan setting status | |
| Response | Acceptable | "000_%1" [CR] |
| | %1 | "OFF" -------------- Progressive scan OFF<br>"L1" ---------------- Progressive Mode L1 (for moving image)<br>"L2" ---------------- Progressive Mode L2 (for still image)<br>"FILM" ------------- Progressive Model FILM |
| | Unacceptable | "?" [CR] |

### 9.4.13 CR_IMAGE Command

| Command | "CR_IMAGE" [CR] | |
|---|---|---|
| Details | Get image setting status | |
| Response | Acceptable | "000_%1" [CR] |
| | %1 | "DYNAMIC" -------------------------------------- Dynamic<br>"STAND" ------------------------------------- Standard<br>"REAL" -------------------------------------- Real<br>"CINEMA" ----------------------------------- Cinema<br>"CUSTOM1"~"CUSTOM4" -------------------- Image1~4 |
| | Unacceptable | "Error Code"[CR] ---- When the command is invalid due to condition such as Input source<br>"?"[CR] -------------------- When unclear command is received |

### 9.4.14 CR_IMGGMD Command

| Command | "CR_IMGGMD" [CR] | |
|---|---|---|
| Details | Get setting status of Dynamic/Standard/Real/Cinema in Image Gamma | |
| Response | Acceptable | "000_%1" [CR] |
| | %1 | "DYN" ------------ Dynamic<br>"STD" ------------ Standard<br>"REL" ------------ Real<br>"CNM" ------------ Cinema |
| | Unacceptable | "?" [CR] |

## 9.5 PC Adjust Status Read Command

### 9.5.1 CR_FSYNC Command

| Command | "CR_FSYNC" [CR] | |
|---|---|---|
| Details | Get value of Fine Sync | |
| Response | Acceptable | "000_%1" [CR] |
| | %1 | "0000 – 0031" |
| | Unacceptable | "Error Code" [CR] --- When command is not available in the given condition (such as being selected input)<br>"?" [CR] --- When unknown command is received |

### 9.5.2 CR_TDOTS Command

| Command | "CR_TDOTS" [CR] | |
|---|---|---|
| Details | Get value of Total Dots | |
| Response | Acceptable | "000_%1" [CR] |
| | %1 | "mmmm" – "nnnn"<br>(mmmm = Display area H + Position H)<br>(nnnn = Maximum value less than 140 MHz of Dot Clock) |
| | Unacceptable | "Error Code" [CR] ----------------------- When command is not available in the given condition (such as being selected input<br>"?" [CR] ------------------ When unknown command is received |

### 9.5.3 CR_CLPPHASE Command

| Command | "CR_CLPPHASE" [CR] | |
|---|---|---|
| Details | Get value of Clamp Phase value | |
| Response | Acceptable | "000_%1" [CR] |
| | %1 | "0001"~"nnnn"<br>("nnnn" depends on input signal) |
| | Unacceptable | "Error Code" [CR] |

### 9.5.4 CR_H-POS Command

| Command | "CR_H-POS" [CR] | |
|---|---|---|
| Details | Get value of Horizontal Position | |
| Response | Acceptable | "000_%1" [CR] |
| | %1 | "0000 – nnnn"<br>(nnnn = Total Dots – Display area H) |
| | Unacceptable | "Error Code" [CR] ------ When command is not available in the given condition (such as being selected input<br>"?" [CR] ------------------ When unknown command is received |

### 9.5.5  CR_V-POS Command

| Command | "CR_V-POS" [CR] | |
|---|---|---|
| Details | Get value of Vertical Position | |
| Response | Acceptable | "000_%1" [CR] |
| | %1 | "0000 – nnnn"<br>(nnnn = Total Line – Display area V) |
| | Unacceptable | "Error Code" [CR] ------ When command is not available in the given condition (such as being selected input<br>"?" [CR] -------------------- When unknown command is received |

### 9.5.6 CR_DDOTS Command

| Command | "CR_DDOTS" [CR] | |
|---|---|---|
| Details | Get value of Display Dots | |
| Response | Acceptable | "000_%1" [CR] |
| | %1 | "0100 – nnnn"<br>(nnnn = Total Dots – Position H) |
| | Unacceptable | "Error Code" [CR] ---- When command is not available in the given condition (such as being selected input<br>"?" [CR] ------------------- When unknown command is received |

### 9.5.7 CR_DLINE Command

| Command | "CR_DLINE" [CR] | |
|---|---|---|
| Details | Get value of Display Line | |
| Response | Acceptable | "000_%1" [CR] |
| | %1 | "0100 – nnnn"<br>(nnnn = Total Line – Position V) |
| | Unacceptable | "Error Code" [CR] ---- When command is not available in the given condition (such as being selected input)<br>"?" [CR] ------------------- When unknown command is received |

### 9.5.8 CR_ORGMODE Command

| | |
|---|---|
| Command | "CR_ORGMODE" [CR] |
| Details | Get the original signal of current selected Mode that is set in PC Adj.<br>When MODE1- 10 or EXT11-50 is not selected, get the current signal. |

| Response | | |
|---|---|---|
| | Acceptable | "000_%1" [CR] |
| | %1 | When input signal is PC Analog;<br>"VGA1" ----------------------- Indicates signal Is VGA1<br>"VGA2" ----------------------- Indicates signal is VGA2<br>⋮<br>"XGA1" ----------------------- Indicates signal is XGA1<br>⋮<br>"WXGA3" --------------------- Indicates signal is WXGA3<br>"1080i60" --------------------- Indicates signal is 1080i60<br>"1080i50" --------------------- Indicates signal is 1080i50<br>"1035i" ----------------------- Indicates signal is 10350i<br>"720p60" --------------------- Indicates signal is 720p60<br>"720p50" --------------------- Indicates signal is 720p50<br>"575p" ----------------------- Indicates signal is 575p<br>"480p" ----------------------- Indicates signal is 480p<br>"575i" ------------------------ Indicates signal is 575i<br>"480i" ------------------------ Indicates signal is 480i<br><br>Note; To differentiate between *60Hz* and *50Hz* in 1080i and 720p, "60" or "50" is necessary to add to the parameter in this command<br>* When input signal is not PC Analog, error code "101" is returned. |
| | Unacceptable | "?" [CR] |

### 9.5.9 CR_PCSTORE Command

| | |
|---|---|
| Command | "CR_PCSTORE" [CR] |
| Details | Get Free or Stored status of MODE1 -10 in PC Adjust.<br>Data consists of 10 bytes and each byte represents MODE1-10.<br>(F:Free, S:Stored) |

| Response | | |
|---|---|---|
| | Acceptable | "000_%1" [CR] |
| | %1 | "FFFFFFFFFF" ---------------- ALL Free<br>"SFFFFFFFFF" --------------- Mode1 is Stored, others are Free<br>⋮<br>"FFFFFFFFFS" --------------- Mode10 is Stored, others are Free<br>"SSSSSSSSSS" ------------- ALL Stored |
| | Unacceptable | "?" [CR] |

### 9.5.10 CR_SETPCADJ Command

| Command | "CR_SETPCADJ" [CR] |
|---|---|
| Details | Get PC signal for current system |
| Response | Acceptable | "000_%1" [CR] |
| | %1 | When input signal is PC Analog;<br>"VGA1" ----------------------- Indicates VGA1 is selected<br>"VGA2" ----------------------- Indicates VGA2 is selected<br> ⋮ <br><br>"XGA1" ----------------------- Indicates XGA1 is selected<br> ⋮ <br><br>"WXGA3" --------------------- Indicates WXGA3 is selected<br>"1080I" ----------------------- Indicates 1080i is selected<br>"1035I" ----------------------- Indicates 10350i is selected<br>"720p" ----------------------- Indicates 720p is selected<br>"575p" ----------------------- Indicates 575p is selected<br>"480p" ----------------------- Indicates 480p is selected<br>"575I" ----------------------- Indicates 575i is selected<br>"480I" ----------------------- Indicates 480i is selected<br>"1080P" ----------------------- Indicates 1080p is selected<br><br>"MODE1"---------------------- Indicates Mode1 is selected<br> ⋮ <br>"MODE10" ------------------- Indicates Mode10 is selected<br>"EXT11" ---------------------- EXT11 is selected<br> ⋮ <br>"EXT60" ---------------------- EXT60 is selected<br><br>* Error Code "101" [CR] is returned for no signal.<br>* When input signal is not PC Analog, error code "101" is returned. |
| | Unacceptable | "?" [CR] |

## 9.6 Video Status Read Command

### 9.6.1 CR_SERSYS Command

| Command | "CR_SERSYS" [CR] | |
|---|---|---|
| Details | Get selected current signal.<br>Auto detected signal is returned in Auto mode<br>Only available when Input is Y,Pb/Cb,Pr/Cr, S-Video or Video. (This is not the case for PC-Analog/PC-Digital/AV HDCP signals) | |
| Response | Acceptable | "000_%1" [CR] |
| | %1 | "1080I60" -------------- 1080i 60Hz<br>"1080I50" -------------- 1080i 50Hz<br>"1035I". ---------------- 1035i<br>"720P" ------------------ 720p<br>"575P" ------------------ 575p<br>"480P" ------------------ 480p<br>"575I" ------------- 575i (includes Composite signal such as PAL)<br>"480I" ------------ 480i (includes No Composite signal such as NTSC)<br>"NO_SIGNAL" -------------- No signal |
| | Unacceptable | "101" [CR] --- When input signal is PC-Analog, PC-Digital or PC signals in AV HDCP<br>"?" [CR] -------------------- When unknown command is received |

## 9.7 Input Read Command

### 9.7.1 CR_INPUT Command

| Command | "CR_INPUT" [CR] | |
|---|---|---|
| Details | Get selected INPUT No. | |
| Response | Acceptable | "000_%1" [CR] |
| | %1 | "1 – 4" |
| | Unacceptable | "?" [CR] |

### 9.7.2 CR_SOURCE Command

| Command | "CR_SOURCE" [CR] | |
|---|---|---|
| Details | Get selected source | |
| Response | Acceptable | "000_%1" [CR] |
| | %1 | "DIGITAL" ----------- RGB (PC Digital) is selected<br>"ANALOG" ---------- RGB (PC Analog) is selected<br>"SCART" ------------ RGB (Scart) is selected<br>"HDCP" ------------- RGB (AV HDCP) is selected<br>"VIDEO" ------------- Video is selected<br>"S-VIDEO" ---------- S-Video is selected<br>"YPBPR" ----------- Y,Pb/Cb,Pr/Cr is selected<br>"AUTO" -------------- AUTO is selected<br>"NETWORK" ------- Network is selected |
| | Unacceptable | "Error Code" [CR] --- When command is not available in the given condition (such as being selected input)<br>"?" [CR] ---------------- When unknown command is received |

### 9.7.3 CR_SRCINP1 Command

| Command | "CR_SRCINP1" [CR] | |
|---|---|---|
| Details | Get Source of INPUT1 | |
| Response | Acceptable | "000_%1" [CR] |
| | %1 | "DIGITAL" --------------------- in PC Digital mode<br>"ANALOG" ---------------------- in PC Analog mode<br>"SCART" ----------------------- in Scart mode<br>"HDCP" ------------------------- in AV HDCP mode |
| | Unacceptable | "?" [CR] |

### 9.7.4 CR_SRCINP2 Command

| Command | "CR_SRCINP2" [CR] | |
|---|---|---|
| Details | Get Source of INPUT2 | |
| Response | Acceptable | "000_%1" [CR] |
| | %1 | "VIDEO" --------------------- in Video mode<br>"YPBPR" -------------------- in Y,Pb/Cb,Pr/Cr mode<br>"ANALOG" ------------------ in RGB mode |
| | Unacceptable | "?" [CR] |

### 9.7.5 CR_SRCINP3 Command

| Command | "CR_SRCINP3" [CR] | |
|---|---|---|
| Details | Get Source of INPUT3 | |
| Response | Acceptable | "000_%1" [CR] |
| | %1 | "AUTO" -------------- Auto-selected Video/S-Video<br>"VIDEO" ------------- in Video mode<br>"S-VIDEO" ---------- in S-Video mode |
| | Unacceptable | "?" [CR] |

### 9.7.6 CR_SRCINP4 Command

| Command | "CR_SRCINP4" [CR] | |
|---|---|---|
| Details | Get Source of INPUT4 | |
| Response | Acceptable | "000_%1" [CR] |
| | %1 | "NETWORK" ------------- With PJ-Net attached and the power ON |
| | Unacceptable | "101" [CR] ------------- With PJ-Net attached and the power ON<br>"103" [CR] ------------- With PJ-Net unattached<br>"?" [CR] ---------------- When unknown command is received. |

### 9.7.7 CR_SYSTEM Command

| Command | "CR_SYSTEM" [CR] | | |
|---|---|---|---|
| Details | Get selected System | | |
| Response | | Acceptable | "000_%1" [CR] |
| | %1 | Input is PC Analog | "VGA1" ------------------------ indicates VGA1 is selected<br>"VGA2" ------------------------ indicates VGA2 is selected<br>    ⋮<br>"XGA1" ------------------------ indicates XGA1 is selected<br>    ⋮<br>"WXGA3" ---------------------- indicates WXGA3 is selected<br>"1080I" ------------------------ indicates 1080i is selected<br>"1035I" ------------------------ indicates 1035i is selected<br>"720p" ------------------------ indicates 720p is selected<br>"575p" ------------------------ indicates 575p is selected<br>"480p" ------------------------ indicates 480p is selected<br>"575I" ------------------------ indicates 575i is selected<br>"480I" ------------------------ indicates 480i is selected<br>"MODE1" -------------------- indicates Mode1 is selected<br>    ⋮<br>"MODE10" ------------------ indicates Mode10 is selected<br>" EXT11" ---------------------- indicates EXT11 is selected<br>    ⋮<br>"EXT60" ----------------------- indicates EXT60 is selected<br>* Error Code "101" [CR] is returned for no signal |
| | | Input is PC-Digital/ AV-HDCP | "D-XGA1" ------------------- indicates D-XGA1 is selected<br>    ⋮<br>"D-WXGA3" ----------------- indicates D-WXGA3 is selected<br>"D-1080I" -------------------- indicates D-1080i is selected<br>"D-1035I" -------------------- indicates D-1035i is selected<br>"D-720P" --------------------- indicates D-720p is selected<br>"D-575P" --------------------- indicates D-575p is selected<br>"D-480P" --------------------- indicates D-480p is selected<br>"D-575I" ---------------------- indicates D-575i is selected<br>"D-480I" ---------------------- indicates D-480i is selected<br>* Error Code "101" [CR] is returned for no signal |
| | | Input is Y,Pb/Cb,Pr/Cr | "AUTO" ------------------ indicates Auto is selected<br>"1080I" -------------------- indicates 1080i is selected<br>"1035I" -------------------- indicates 1035i is selected<br>"720P" -------------------- indicates 720p is selected<br>"575P" -------------------- indicates 575p is selected<br>"480P" -------------------- indicates 480p is selected<br>"575I" --------------------- indicates 575i is selected<br>"480I" --------------------- indicates 480i is selected<br>* Selected System is returned, whether or not signal is coming. |
| | | Input is Video or S-video | "AUTO" ------------------- indicates Auto is selected<br>"NTSC" ------------------- indicates NTSC is selected<br>"NTSC443" ------------- indicates NTSC4.43 is selected<br>"PAL" ---------------------- indicates PAL is selected<br>"SECAM" ---------------- indicates SECAM is selected<br>"PAL-M" ------------------ indicates PAL-M is selected<br>"PAL-N" ------------------ indicates PAL-N is selected<br>* Selected System is returned, whether or not signal is coming. |
| | | Unacceptable | "Error Code" [CR] |

### 9.7.8 CR_SYSLIST Command

| Command | "CR_SYSLIST" [CR] | |
|---|---|---|
| Details | Get possible systems for System list | |
| Response | Acceptable | "000_%1_%2_---_%x" [CR] |
| | %1 | When Input is PC Analog:<br>  "XGA" ------------------- XGA is in the list<br>  "1080I" ----------------- 1080i is in the list<br>  "1080P" ---------------- 1080p is in the list<br>*Auto, Mode1-10 shall not be returned.<br>*When no signal is coming, error code "101" is returned.<br><br>When Input is PC Digital/AV HDCP:<br>  "D-XGA" --------------- D-XGA is in the list<br>  "D-720P" -------------- D-720p is in the list<br>*When no signal is coming, error code "101" is returned.<br><br>When Input is Y,Pb/Cb,Pr/Cr:<br>All possible systems in Menu, including Auto, are returned.<br>  "AUTO" ----------------- Auto is in the list<br>  "1080I" ----------------- 1080i is in the list<br>  "1035I" ----------------- 1035i is in the list<br>     :<br>     :<br>  "575I" ------------------- 575i is in the list<br>  "480I" ------------------- 480i is in the list<br>*When no signal is coming, error code "101" is not returned.<br><br>When Input is Video/S-Video:<br>All possible systems in Menu, including Auto, are returned.<br>  "AUTO" ----------------- Auto is in the list<br>  "PAL" -------------------- PAL is in the list<br>  "SECAM" --------------- SECAM is in the list<br>     :<br>     :<br>  "PAL-N" ----------------- PAL-N is in the list<br>*When no signal is coming, error code "101" is not returned. |
| | Unacceptable | "Error Code" [CR] |

### 9.7.9 CR_MODELIST Command

| Command | "CR_MODELIST" [CR] | |
|---|---|---|
| Details | Get possible modes for Mode list | |
| Response | Acceptable | "000_%1_%2_---_%x" [CR] |
| | %1 | Error Code "101" is returned except for PC-Analog and for no signal with PC-Analog<br>Possible modes in Mode1-10 are returned when PC-Analog signal is coming.<br><br>"MODE1"<br>"MODE2"<br>"MODE3"<br>   :<br>   :<br>"MODE8"<br>"MODE9"<br>"MODE10" |
| | Unacceptable | "Error Code" [CR] |

### 9.7.10 CR_HMSLOT Command

| Command | "CR_HMSLOT" [CR] | |
|---|---|---|
| Details | Get the total number of Input. | |
| Response | Acceptable | "000_%1" [CR] |
| | %1 | "004" ------------ When PJ-Net is attached.<br>"003" ------------ When PJ-Net is not attached. |
| | Unacceptable | "Error Code" [CR] |

### 9.7.11 CR_NMSLOT1 Command

| Command | "CR_NMSLOT1" [CR] | |
|---|---|---|
| Details | Get terminal information of Input1 | |
| Response | Acceptable | "000_%1" [CR] |
| | %1 | "RGB" |
| | Unacceptable | "Error Code" [CR] |

### 9.7.12 CR_NMSLOT2 Command

| Command | "CR_NMSLOT2" [CR] | |
|---|---|---|
| Details | Get terminal information of Input2 | |
| Response | Acceptable | "000_%1" [CR] |
| | %1 | "5BNC" |
| | Unacceptable | "Error Code" [CR] |

### 9.7.13 CR_NMSLOT3 Command

| Command | "CR_NMSLOT3" [CR] | |
|---|---|---|
| Details | Get terminal information of Input3 | |
| Response | Acceptable | "000_%1" [CR] |
| | %1 | "VIDEO" |
| | Unacceptable | "Error Code" [CR] |

### 9.7.14 CR_NMSLOT4 Command

| Command | "CR_NMSLOT4" [CR] | |
|---|---|---|
| Details | Get teminal information of Input4 | |
| Response | Acceptable | "000_%1" [CR] |
| | %1 | "NETWORK" -------- When PJ-Net is attached.<br>*With PJ-Net unattached, this command is invalid and error code "103" is returned.<br>*With PJ-Net attached and the power OFF, error code "101" is returned.<br>*In models not supporting PJ-Net, error code "103" is returned. |
| | Unacceptable | "Error Code" [CR] |

### 9.7.15 CR_IDSLOT1 Command

| Command | "CR_IDSLOT1" [CR] | |
|---|---|---|
| Details | Get ID information of Input1. This command is to determine sources possible to input. | |
| Response | Acceptable | "000_%1" [CR] |
| | %1 | "30" -------------- On-borad (DVI-D and D-Sub)<br>      Available source: DIGITAL, ANALOG, SCART, HDCP |
| | Unacceptable | "Error Code" [CR] |

### 9.7.16 CR_IDSLOT2 Command

| Command | "CR_IDSLOT2" [CR] | |
|---|---|---|
| Details | Get ID information of Input2. This command is to determine sources possible to input. | |
| Response | Acceptable | "000_%1" [CR] |
| | %1 | "41" -------------- On-borad (5BNC)<br>      Available source: ANALOG, VIDEO, YPBPR |
| | Unacceptable | "Error Code" [CR] |

### 9.7.17 CR_IDSLOT3 Command

| Command | "CR_IDSLOT3" [CR] | |
|---|---|---|
| Details | Get ID information of Input3. This command is to determine sources possible to input. | |
| Response | Acceptable | "000_%1" [CR] |
| | %1 | "52" -------------- On-borad (3BNC and S-VIDEO)<br>      Available source:   AUTO, VIDEO, S-VIDEO |
| | Unacceptable | "Error Code" [CR] |

### 9.7.18 CR_IDSLOT4 Command

| Command | "CR_IDSLOT4" [CR] | |
|---|---|---|
| Details | Get ID information of Input4. This command is to determine sources possible to input. | |
| Response | Acceptable | "000_%1" [CR] |
| | %1 | "13" -------------- PJ-Net (Viewer capable)<br>      Available source: Network<br>*With PJ-Net unattached, this command is invalid and error code "103" is returned.<br>*With PJ-Net attached and the power OFF, error code "101" is returned.<br>*In models not supporting PJ-Net, error code "103" is returned. |
| | Unacceptable | "Error Code" [CR] |

### 9.8 Screen Status Read Command

#### 9.8.1 CR_SCREEN Command

| Command | "CR_SCREEN" [CR] | |
|---|---|---|
| Details | Get selected screen image size | |
| Response | Acceptable | "000_%1" [CR] |
| | %1 | "NORMAL" ---------------------- Normal mode<br>"WIDE" --------------------------- Wide mode<br>"FULL" ---------------------------- Full mode<br>"TRUE" --------------------------- True mode<br>"CUSTOM" ----------------------- Custom mode |
| | Unacceptable | "Error Code" [CR] --- When command is not available in the given condition (such as being selected input).<br>"?" [CR] --- When unknown command is received |

#### 9.8.2 CR_ KYSTNMODE Command

| Command | "CR_KYSTNMODE" [CR] | |
|---|---|---|
| Details | Get setting status of Keystone Store Mode | |
| Response | Acceptable | "000_%1" [CR] |
| | %1 | "STR" --------------------- Store mode is "Store"<br>"RST" --------------------- Store mode is "Reset" |
| | Unacceptable | "?" [CR] -------------------- When unknown command is received |

#### 9.8.3 CR_VSCALE Command

| Command | "CR_VSCALE" [CR] | |
|---|---|---|
| Details | Get setting status of V scale | |
| Response | Acceptable | "000_%1" [CR] |
| | %1 | "-32"－"032" |
| | Unacceptable | "?" [CR] -------------------- When unknown command is received |

#### 9.8.4 CR_VPOS Command

| Command | "CR_VPOS" [CR] | |
|---|---|---|
| Details | Get setting status of V Position | |
| Response | Acceptable | "000_%1" [CR] |
| | %1 | "-15"－"015" |
| | Unacceptable | "?" [CR] -------------------- When unknown command is received |

#### 9.8.5 CR_HSCALE Command

| Command | "CR_HSCALE" [CR] | |
|---|---|---|
| Details | Get setting status of H scale | |
| Response | Acceptable | "000_%1" [CR] |
| | %1 | "-32"－"032" |
| | Unacceptable | "?" [CR] -------------------- When unknown command is received |

### 9.8.6 CR_HPOS Command

| Command | "CR_HPOS" [CR] | |
|---|---|---|
| Details | Get setting status of H Position | |
| Response | Acceptable | "000_%1" [CR] |
| | %1 | "-15"－"015" |
| | Unacceptable | "?" [CR] ------------------- When unknown command is received |

## 9.9 Lamp Status Read Command

### 9.9.1 CR_LAMPREPL Command

| Command | "CR_LAMPREPL" [CR] | |
|---|---|---|
| Details | Get information of Lamp Replacement time | |
| Response | Acceptable | "000_%1" [CR] |
| | %1 | "1Y" ----------------- indicates over lamp replacement time<br>"1N" ----------------- indicates under lamp replacement time<br><br>"1" means the number of lamps<br>  (1 lamp is used→ "1")<br>"Y"/"N" means if it is time to replace lamp or not.<br>Example:<br>"1Y" ----- 1 lamp is used and it is over lamp replacement time |
| | Unacceptable | "?" [CR] |

### 9.9.2 CR_LAMPH Command

| Command | "CR_LAMPH" [CR] | |
|---|---|---|
| Details | Get Lamp running time (in hours)<br>* return actual lamp running time | |
| Response | Acceptable | "000_%1" [CR] |
| | %1 | "00000 - 99999" |
| | Unacceptable | "Error Code" [CR] |

### 9.9.3 CR_LAMPCORRESPH Command

| Command | "CR_LAMPCORRESPH" [CR] | |
|---|---|---|
| Details | Get Lamp running time (in hours)<br>*return lamp running time multiplied by a coefficient (not actual running time) | |
| Response | Acceptable | "000_%1" [CR] |
| | %1 | "00000 – 99999" |
| | Unacceptable | "Error Code" [CR] |

### 9.9.4 CR_LAMPMODE Command

| Command | "CR_LAMPMODE" [CR] | |
|---|---|---|
| Details | Get setting status of Lamp mode | |
| Response | Acceptable | "000_%1" [CR] |
| | %1 | "AUTO1" ----------------- Lamp Mode is Auto1<br>"AUTO2" ----------------- Lamp Mode is Auto2<br>"HIGH" ------------------- Lamp Mode is High<br>"NORMAL" -------------- Lamp Mode is Normal<br>"ECO1" ------------------ Lamp Mode is Eco1<br>"ECO2" ------------------ Lamp Mode is Eco2 |
| | Unacceptable | "?" [CR] |

### 9.9.5 CR_LAMPSTS Command

| Command | "CR_LAMPSTS" [CR] | |
|---|---|---|
| Details | Get Lamp status | |
| Response | Acceptable | "000_%1" [CR] |
| | %1 | "1I" ----------------------- Lamp is ON<br>"1O" ---------------------- Lamp is OFF<br>"1X" ---------------------- Lamp Failure |
| | Unacceptable | "Error Code" [CR] |

### 9.9.6 CR_PROJH Command

| Command | "CR_PROJH" [CR] | |
|---|---|---|
| Details | Get total running time of Projector (in hours) | |
| Response | Acceptable | "000_%1" [CR] |
| | %1 | "0000000 – 0099999" |
| | Unacceptable | "?" [CR] |

### 9.9.7 CR_HMLAMP Command

| Command | "CR_HMLAMP" [CR] | |
|---|---|---|
| Details | Get total lamp number | |
| Response | Acceptable | "000_%1" [CR] |
| | %1 | "001" |
| | Unacceptable | "Error Code" [CR] |

### 9.10 Sound Status Read Command

#### 9.10.1 CR_VOLUME Command

| Command | "CR_VOLUME"[CR] | |
|---|---|---|
| Details | Get Volume value of user control | |
| Response | Acceptable | "000_%1"[CR] |
| | %1 | "000"~"063" |
| | Unacceptable | "?"[CR] |

#### 9.10.2 CR_MUTE Command

| Command | "CR_MUTE"[CR] | |
|---|---|---|
| Details | Get sound mute setting status | |
| Response | Acceptable | "000_%1"[CR] |
| | %1 | "ON" ------------------------- Set Sound Mute ON<br>"OFF" ----------------------- Cancel Sound Mute |
| | Unacceptable | "?"[CR] |

### 9.11 Setting Status Read Command

#### 9.11.1 CR_BACKGND Command

| Command | "CR_BACKGND" [CR] | |
|---|---|---|
| Details | Get setting status of Screen for no signal | |
| Response | Acceptable | "000_%1" [CR] |
| | %1 | "BLUE" ------------------------------- Blue Back is selected<br>"USER" ------------------------------- User is selected<br>"BLACK" ---------------------------- Black Back is selected |
| | Unacceptable | "Error Code" [CR] |

#### 9.11.2 CR_DISP Command

| Command | "CR_DISP" [CR] | |
|---|---|---|
| Details | Get setting status of Display | |
| Response | Acceptable | "000_%1" [CR] |
| | %1 | "ON" -------------------------- Display is ON<br>"CNTDWNOFF" ------------ Count down is OFF<br>"OFF" ----------------------- Display is OFF |
| | Unacceptable | "?" [CR] |

#### 9.11.3 CR_LOGO Command

| Command | "CR_LOGO" [CR] | |
|---|---|---|
| Details | Get setting status of Logo | |
| Response | Acceptable | "000_%1" [CR] |
| | %1 | "DFLT" ----------------------------- Default Logo is enabled<br>"USER" ---------------------------- User is enabled<br>"OFF" ----------------------------- Logo is disabled |
| | Unacceptable | "?" [CR] |

### 9.11.4 CR_LOGOLOCK Command

| Command | "CR_LOGOLOCK" [CR] | |
|---|---|---|
| Details | Get setting status of Logo Lock function | |
| Response | Acceptable | "000_%1" [CR] |
| | %1 | "ON" --------------------------- Logo Lock is ON<br>"OFF" ------------------------ Logo Lock is OFF |
| | Unacceptable | "Error Code" [CR] |

### 9.11.5 CR_CEIL Command

| Command | "CR_CEIL" [CR] | |
|---|---|---|
| Details | Get setting status of Ceiling | |
| Response | Acceptable | "000_%1" [CR] |
| | %1 | "ON" --------------------------- Ceiling projection is enabled<br>"OFF" ------------------------ Ceiling projection is disabled |
| | Unacceptable | "Error Code" [CR] |

### 9.11.6 CR_REAR Command

| Command | "CR_REAR" [CR] | |
|---|---|---|
| Details | Get setting status of Rear function | |
| Response | Acceptable | "000_%1" [CR] |
| | %1 | "ON" --------------------------- Rear projection is enabled<br>"OFF" ------------------------ Rear projection is disabled |
| | Unacceptable | "Error Code" [CR] |

### 9.11.7 CR_RCODE Command

| Command | "CR_RCODE" [CR] | |
|---|---|---|
| Details | Get selected Remote Control Code | |
| Response | Acceptable | "000_%1" [CR] |
| | %1 | "001" --------------------------- Code 1 is selected<br>"002" --------------------------- Code 2 is selected<br>"003" --------------------------- Code 3 is seleccted<br>"004" --------------------------- Code 4 is selected<br>"005" --------------------------- Code 5 is selected<br>"006" --------------------------- Code 6 is selected<br>"007" --------------------------- Code 7 is selected<br>"008" --------------------------- Code 8 is selected |
| | Unacceptable | "?" [CR] |

### 9.11.8 CR_RCSENSOR Command

| Command | "CR_RCSENSOR"[CR] | |
|---|---|---|
| Details | Get selected location of infrared remote receiver of remote control | |
| Response | Acceptable | "000_%1" [CR] |
| | %1 | "BOTH" -------------- Both front and back part are valid<br>"FRONT" ------------ Front part is valid and back part is invalid<br>"BACK" -------------- Front part is invalid and back part is valid |
| | Unacceptable | "?" [CR] |

### 9.11.9 CR_RTYPE Command

| Command | "CR_RTYPE" [CR] | |
|---|---|---|
| Details | Get status of supported Remote Control (IR/RF). | |
| Response | Acceptable | "000_%1" [CR] |
| | %1 | "IR" -------- IR<br>"RF" ------- RF (cannot be returned as this model supports only IR remote control) |
| | Unacceptable | "Error Code" [CR] |

### 9.11.10 CR_LANG Command

| Command | "CR_LANG" [CR] | |
|---|---|---|
| Details | Get selected language | |
| Response | Acceptable | "000_%1" [CR] |
| | %1 | "ENG" ------------------------- English is selected<br>"DEU" ------------------------- German is selected<br>"FRA" ------------------------- French is selected<br>"ITA" ------------------------- Italian is selected<br>"ESP" ------------------------- Spanish is selected<br>"POR" ------------------------- Portuguese is selected<br>"NED" ------------------------- Dutch is selected<br>"SVE" ------------------------- Swedish is selected<br>"JPN" ------------------------- Japanese is selected<br>"CHI" ------------------------- Chinese is selected<br>"KOR" ------------------------- Korean is selected<br>"RUS" ------------------------- Russian is selected |
| | Unacceptable | "?" [CR] |

### 9.11.11 CR_ON-STA Command

| Command | "CR_ON-STA" [CR] | |
|---|---|---|
| Details | Get setting status of Power ON Start | |
| Response | Acceptable | "000_%1" [CR] |
| | %1 | "ON" ------------------------- Power ON Start is ON<br>"OFF" ------------------------ Power ON Start is OFF |
| | Unacceptable | "?" [CR] |

### 9.11.12 CR_P-MANE Command

| Command | "CR_P-MANE" [CR] | |
|---|---|---|
| Details | Get setting status of Power management | |
| Response | Acceptable | "000_%1" [CR] |
| | %1 | "OFF" ----------------------- Power Management is disabled<br>"READY" -------------------- Power Management is set to Ready<br>"SHUTDOWN" ----------- Power Management is set to Shut Down mode |
| | Unacceptable | "?" [CR] |

### 9.11.13 CR_P-MANETIME Command

| Command | "CR_P-MAETIME" [CR] | |
|---|---|---|
| Details | Get setting time for starting Power Management function | |
| Response | Acceptable | "000_%1" [CR] |
| | %1 | "001 – 030" ---------------------- 1 to 30 minutes |
| | Unacceptable | "?" [CR] |

### 9.11.14 CR_FANSPEED Command

| Command | "CR_FANSPEED" [CR] | |
|---|---|---|
| Details | Get selected Fan Contorol Speed mode. | |
| Response | Acceptable | "000_%1" [CR] |
| | %1 | "MAX" ----------------------- Max mode is seleted<br>"NOR" ----------------------- Normal mode is selected |
| | Unacceptable | "?" [CR] |

### 9.11.15 CR_HIGHLAND Command

| Command | "CR_HIGHLAND"[CR] | |
|---|---|---|
| Details | Get selected Highland mode | |
| Response | Acceptable | "000_%1"[CR] |
| | %1 | "ON" -------------- Highland mode is ON<br>"OFF" ------------- Highland mode is OFF |
| | Unacceptable | "?"[CR] |

### 9.11.16 CR_SLANT Command

| Command | "CR_SLANT"[CR] | |
|---|---|---|
| Details | Get setting status of Slant setting | |
| Response | Acceptable | "000_%1"[CR] |
| | %1 | "OFF" ------------ Projector is installed without slant<br>"L1" -------------- Projector is slanted at ?~? degree angle<br>"L2" -------------- Projector is slanted at ?~? degree angle |
| | Unacceptable | "?"[CR] |

### 9.11.17 CR_KEYDIS Command

| Command | "CR_KEYDIS" [CR] | |
|---|---|---|
| Details | Get RC/Control key prohibit status (valid or invalid) | |
| Response | Acceptable | "000_%1" [CR] |
| | %1 | "NONE" -------------------------- RC&Control keys are valid<br>"RCALL" -------------------------- All RC keys are invalid<br>"RCPART" ----------------------- Specific RC keys are invalid<br>"KEYALL" ------------------------ All Projector Keys are invalid<br>"KEYPART" ------------------- Specific Projector Keys are invalid |
| | Unacceptable | "?" [CR] |

### 9.11.18 CR_SECURITY Command

| Command | | "CR_ SECURITY" [CR] |
|---|---|---|
| Details | | Get ON/OFF setting status of Security on menu. |
| Response | Acceptable | "000_%1" [CR] |
| | %1 | "ON" --------------- PJ Lock is set to On1/ On2 on the menu<br>"OFF" -------------- PJ Lock is set to OFF on the menu |
| | Unacceptable | "Error Code" [CR] |

### 9.11.19 CR_PJLOCKNOW Command

| Command | | "CR_PJLOCKNOW" [CR] |
|---|---|---|
| Details | | Get actual setting status of PIN code lock |
| Response | Acceptable | "000_%1" [CR] |
| | %1 | "LOCK" ------ PJ is locked<br>PIN code lock is set to ON1/ON2 on the menu and PJ PIN code is not entered, therefore PJ is actually locked.<br>"FREE" ------- PJ is unlocked (either A or B)<br>   A) PJ lock is set to OFF on the menu<br>   B) PJ lock is set to ON1/ON2 on the menu, but PIN code<br>       Lock mode is canceled because PJ PIN code is entered. |
| | Unacceptable | "Error Code" [CR] |

### 9.11.20 CR_PJLOCKMENU Command

| Command | | "CR_PJLOCKMENU" [CR] |
|---|---|---|
| Details | | Get ON/OFF setting status of PIN code lock on menu |
| Response | Acceptable | "000_%1" [CR] |
| | %1 | "ON1" ------------------- PIN code lock ON 1 is set on the menu<br>"ON2" ------------------- PIN code lock ON 2 is set on the menu<br>"OFF" ------------------- PIN code lock OFF is set on the menu |
| | Unacceptable | "Error Code" [CR] |

### 9.11.21 CR_TESTPAT Command

| Command | | "CR_TESTPAT" [CR] |
|---|---|---|
| Details | | Get setting status of Test pattern |
| Response | Acceptable | "000_%1" [CR] |
| | %1 | "COLOR" ---------------------- Color bar is displayed<br>"GRAD1" ---------------------- 16step(white→black) is displayed<br>"GRAD2" ---------------------- 16step(white←black) is displayed<br>"GRAD3" ---------------------- 16step(white↓black) is displayed<br>"GRAD4" ---------------------- 16step(white↑black) is displayed<br>"WHITE" ---------------------- All white is displayed<br>"BALCK" ---------------------- All black is displayed<br>"CROSS" -------------------- Cross is displayed<br>"OFF" -------------------------Test pattern diplay is not displayed |
| | Unacceptable | "Error Code" [CR] |

### 9.11.22 CR_FILH Command

| Command | "CR_FILH" [CR] | |
|---|---|---|
| Details | Get Filter used time | |
| Response | Acceptable | "000_%1" [CR] |
| | %1 | "00000 - 99999" |
| | Unacceptable | "Error Code" [CR] |

### 9.11.23 CR_FILCOND Command

| Command | "CR_FILCOND" [CR] | |
|---|---|---|
| Details | Get status of filter clog | |
| Response | Acceptable | "000_%1" [CR] |
| | %1 | "CLOG" = Filter is clogged<br>"WARN" = Filter is nearly clogged(Warning status)<br>"CLEAN" = Filter is not clogged |
| | Unacceptable | "Error Code" [CR] |

### 9.11.24 CR_FILREPL Command

| Command | "CR_FILREPL" [CR] | |
|---|---|---|
| Details | Get status of Filter cleaning / replacement time | |
| Response | Acceptable | "000_%1" [CR] |
| | %1 | "1Y"-------Filter Exchange time is over value of Filter Message.<br>"1N"--Filter Exchange time is not over value of Filter Message. |
| | Unacceptable | "Error Code" [CR] |

### 9.11.25 CR_FILTIMER Command

| Command | "CR_FILTIMER" [CR] | |
|---|---|---|
| Details | Get Filter used time | |
| Response | Acceptable | "000_%1" [CR] |
| | %1 | "100" ------------------- 100 hours<br>"200" ------------------- 200 hours<br>"300" ------------------- 300 hours<br>"OFF" ----------------- Warning OSD is not displayed |
| | Unacceptable | "Error Code" [CR] |

### 9.11.26 CR_POINTER Command

| Command | "CR_POINTER"[CR] | |
|---|---|---|
| Details | Get setting status of Pointer | |
| Response | Acceptable | "000_%1_%2"[CR] |
| | %1 | "SPOTLIGHT" -------------- Spotlight mode<br>"ARROW" -------------------- Arrow mode<br>"FINGER" -------------------- Finger mode<br>"LASER" --------------------- Laser mark mode |
| | %2 | When %1 is "SPOTLIGHT":<br>"MAX" ----------------------- Spotlight Large<br>"MID" ------------------------ Spotlight Medium<br>"MIN" ------------------------ Spotlight Small |
| | Unacceptable | "?"[CR] |

### 9.12 Other Status Read Commands

#### 9.12.1 CR_STATUS Command

| COMMAND | "CR_STATUS" [CR] | |
|---|---|---|
| Detail | Get operating status of Projector<br>Same as "CR0" in basic command except error code follows it. | |
| Response | Acceptable | "000_%1" [CR] |
| | %1 | "00" = Power ON<br>"80" = Standby<br>"40" = Countdown in process<br>"20" = Cooling Down in process<br>"10" = Power Failure<br>"28" = Cooling Down in process due to abnormal temperature<br>"88" =Standby after Cooling Down due to abnormal temperature<br>"02" = Invalid RS-232C Command<br>"24" = Power Save/Cooling Down in process<br>"04" = Power Save<br>"21" = Cooling Down in process after turened Off due to lamp failure<br>"81"= Standby after Cooling Down due to lamp failure |
| | Unacceptable | "Error Code" [CR] |

#### 9.12.2 CR_SIGNAL Command

| Command | "CR_SIGNAL" [CR] | |
|---|---|---|
| Details | Get status whether there is any signal or not. | |
| Response | Acceptable | "000_%1" [CR] |
| | %1 | "ON" ------------------------- There is signal<br>"OFF" ------------------------ There is no signal |
| | Unacceptable | "?" [CR] |

#### 9.12.3 CR_VMUTE Command

| Command | "CR_VMUTE" [CR] | |
|---|---|---|
| Details | Get setting status of No Show. | |
| Response | Acceptable | "000_%1" [CR] |
| | %1 | "ON" ---------- No Show is ON<br>"OFF" --------- No Show is OFF |
| | Unacceptable | "?" [CR] |

#### 9.12.4 CR_FREEZE Command

| Command | "CR_FREEZE" [CR] | |
|---|---|---|
| Details | Get setting status of Freeze. | |
| Response | Acceptable | "000_%1" [CR] |
| | %1 | "ON" -------------------- Freeze is ON<br>"OFF" -------------------- Freeze is OFF |
| | Unacceptable | "?" [CR] |

### 9.12.5 CR_ALLPFAIL Command

| Command | "CR_ALLPFAIL"(CR) | |
|---|---|---|
| Details | Get all the information on Power Failure.<br>Return all the responses of "CR_PFAIL01"~"CR_PFAIL12" at once.<br>Therefore it consists of 276(23 bytes x 12) bytes totally. | |
| Response | Acceptable | "000_%1_%2"[CR]<br>"000_%3_%4"[CR]<br>"000_%5_%6"[CR]<br>:<br>:<br>"000_%21_%22"[CR]<br>"000_%23_%24"[CR]<br>(Send all 7 blocks above at one time) |
| | %1~%24 | %1, %3, ・・%23 (Odd number)<br>  ---- Item name of Power Failure (16-byte fixed length)<br>%2, %4, ・・%24 (Even number)<br> ---- Power status (2-byte fixed length)<br>   Power is failed: "NG"<br>   Power status is normal: "OK" |
| | Unacceptable | "Error Code"[CR] |

### 9.12.6 CR_HMPFAIL Command

| Command | "CR_ HMPFAIL" [CR] | |
|---|---|---|
| Details | Get total number of detectable Power Failure | |
| Response | Acceptable | "000_%1" [CR] |
| | %1 | "012" |
| | Unacceptable | "Error Code" [CR] |

### 9.12.7 CR_PFAIL01 Command

| Command | "CR_PFAIL01" [CR] | |
|---|---|---|
| Details | Get item name and status of Power Failure No.1 | |
| Response | Acceptable | "000_%1_%2" [CR] |
| | %1, %2 | %1 ------ Item name of Power Failure (16-byte fixed length)<br>%2 ------ Power status (2-byte fixed length)<br>     Power is failed: "NG"<br>     Power status is normal: "OK" |
| | Unacceptable | "Error Code" [CR] |

### 9.12.8 CR_PFAIL02 Command

| Command | "CR_PFAIL02" [CR] | |
|---|---|---|
| Details | Get the item name and status of Power Failure No.2 | |
| Response | Acceptable | "000_%1_%2" [CR] |
| | %1, %2 | %1 ------ Item name of Power Failure (16-byte fixed length)<br>%2 ------ Power status (2-byte fixed length)<br>     Power is failed: "NG"<br>     Power status is normal: "OK" |
| | Unacceptable | "Error Code" [CR] |

### 9.12.9 CR_PFAIL03 Command

| Command | | "CR_PFAIL03" [CR] |
|---|---|---|
| Details | | Get the item name and status of Power Failure No.3 |
| Response | Acceptable | "000_%1_%2" [CR] |
| | %1, %2 | %1 ------ Item name of Power Failure (16-byte fixed length)<br>%2 ------ Power status (2-byte fixed length)<br>       Power is failed: "NG"<br>       Power status is normal: "OK" |
| | Unacceptable | "Error Code" [CR] |

### 9.12.10 CR_PFAIL04 Command

| Command | | "CR_PFAIL04" [CR] |
|---|---|---|
| Details | | Get the item name and status of Power Failure No.4 |
| Response | Acceptable | "000_%1_%2" [CR] |
| | %1, %2 | %1 ------ Item name of Power Failure (16-byte fixed length)<br>%2 ------ Power status (2-byte fixed length)<br>       Power is failed: "NG"<br>       Power status is normal: "OK" |
| | Unacceptable | "Error Code" [CR] |

### 9.12.11 CR_PFAIL05 Command

| Command | | "CR_PFAIL05" [CR] |
|---|---|---|
| Details | | Get the item name and status of Power Failure No.5 |
| Response | Acceptable | "000_%1_%2" [CR] |
| | %1, %2 | %1 ------ Item name of Power Failure (16-byte fixed length)<br>%2 ------ Power status (2-byte fixed length)<br>       Power is failed: "NG"<br>       Power status is normal: "OK" |
| | Unacceptable | "Error Code" [CR] |

### 9.12.12 CR_PFAIL06 Command

| Command | | "CR_PFAIL06" [CR] |
|---|---|---|
| Details | | Get the item name and status of Power Failure No.6 |
| Response | Acceptable | "000_%1_%2" [CR] |
| | %1, %2 | %1 ------ Item name of Power Failure (16-byte fixed length)<br>%2 ------ Power status (2-byte fixed length)<br>       Power is failed: "NG"<br>       Power status is normal: "OK" |
| | Unacceptable | "Error Code" [CR] |

### 9.12.13 CR_PFAIL07 Command

| Command | "CR_PFAIL07" [CR] | |
|---|---|---|
| Details | Get the item name and status of Power Failure No.7 | |
| Response | Acceptable | "000_%1_%2" [CR] |
| | %1, %2 | %1 ------ Item name of Power Failure (16-byte fixed length)<br>%2 ------ Power status (2-byte fixed length)<br>　　　Power is failed: "NG"<br>　　　Power status is normal: "OK" |
| | Unacceptable | "Error Code" [CR] |

### 9.12.14 CR_PFAIL08 Command

| Command | "CR_PFAIL08" [CR] | |
|---|---|---|
| Details | Get the item name and status of Power Failure No.8 | |
| Response | Acceptable | "000_%1_%2" [CR] |
| | %1, %2 | %1 ------ Item name of Power Failure (16-byte fixed length)<br>%2 ------ Power status (2-byte fixed length)<br>　　　Power is failed: "NG", Power status is normal: "OK" |
| | Unacceptable | "Error Code" [CR] |

### 9.12.15 CR_PFAIL09 Command

| Command | "CR_PFAIL09" [CR] | |
|---|---|---|
| Details | Get the item name and status of Power Failure No.9 | |
| Response | Acceptable | "000_%1_%2" [CR] |
| | %1, %2 | %1 ------ Item name of Power Failure (16-byte fixed length)<br>%2 ------ Power status (2-byte fixed length)<br>　　　Power is failed: "NG", Power status is normal: "OK" |
| | Unacceptable | "Error Code" [CR] |

### 9.12.16 CR_PFAIL10 Command

| Command | "CR_PFAIL10" [CR] | |
|---|---|---|
| Details | Get the item name and status of Power Failure No.10 | |
| Response | Acceptable | "000_%1_%2" [CR] |
| | %1, %2 | %1 ------ Item name of Power Failure (16-byte fixed length)<br>%2 ------ Power status (2-byte fixed length)<br>　　　Power is failed: "NG", Power status is normal: "OK" |
| | Unacceptable | "Error Code" [CR] |

### 9.12.17 CR_PFAIL11 Command

| Command | "CR_PFAIL11" [CR] | |
|---|---|---|
| Details | Get the item name and status of Power Failure No.11 | |
| Response | Acceptable | "000_%1_%2" [CR] |
| | %1, %2 | %1 ------ Item name of Power Failure (16-byte fixed length)<br>%2 ------ Power status (2-byte fixed length)<br>　　　Power is failed: "NG", Power status is normal: "OK" |
| | Unacceptable | "Error Code" [CR] |

### 9.12.18 CR_PFAIL12 Command

| Command | | "CR_PFAIL12" [CR] |
|---|---|---|
| Details | | Get the item name and status of Power Failure No.12 |
| Response | Acceptable | "000_%1_%2" [CR] |
| | %1, %2 | %1 ------ Item name of Power Failure (16-byte fixed length)<br>%2 ------ Power status (2-byte fixed length)<br>        Power is failed: "NG", Power status is normal: "OK" |
| | Unacceptable | "Error Code" [CR] |

### 9.12.19 CR_TEMPFAIL Command

| Command | | "CR_TEMPFAIL" [CR] |
|---|---|---|
| Details | | Get the temperature inside a projector when abnormal temperature status occurs.<br>It is possible to get the temperatures all at once when several sensors installed. |
| Response | Acceptable | "000_%1_%2_%3" [CR] |
| | %1,%2,%3 | %1 ----------------- Sensor 1 temp.<br>%2 ----------------- Sensor 2 temp.<br>%3 ----------------- Sensor 3 temp.<br>  e.g. "_31.5F"<br>"_" indicates a space. When the temperature goes under 0, the first character is "-", not a space, as in "-05.5F".<br>With more than one temperature sensors installed, projector returns responses in a row.<br>  e.g. "_31.5F _ _35.2S _ _38.0W " [CR]<br>The first data indicates sensor 1 data, then one space, and sensor 2 data.<br>Last character in each data indicates the sensor's status.<br>        "F" ----------- Exceeding critical temp. (abnormal temp.)<br>        "W" ---------- Approaching critical temp. (Warning temp.)<br>        "S" ----------- Sensor temp. is safe (Safe temp.)<br>        "N" ----------- Sensor detects no critical temp.<br>        "E" ----------- Unable to return the temp. data<br>The example 1 shows that sensor 1 indicates 31.5 degrees and the temperature is abnormal, sensor 2 indicates 35.2 degrees and the temperature is safe, sensor 3 indicates 38.0 degrees and the temperature is approaching critical state.<br>When the temperature is safe, all data is represented as "_00.0S".<br>When the projector is reset, "_00.0S" is set, and every time abnormal temperature occurs, it renews the data and returns it.<br>In short, it only returns the renewed data of the latest abnormal temperature and the previous data is deleted. |
| | Unacceptable | "?" [CR] |

### 9.12.20 CR_TEMP Command

| Command | "CR_TEMP" [CR] | |
|---|---|---|
| Details | Get the current temperature information inside a projector.<br>It is possible to get the temperatures all at once when several sensors installed. | |
| Response | Acceptable | "000_%1_%2_%3" [CR] |
| | %1, %2, %3 | %1 ----------------- Sensor 1 temp. (External temp.)<br>%2 ----------------- Sensor 2 temp. (Internal temp.1)<br>%3 ----------------- Sensor 3 temp. (Internal temp.2)<br>%1, %2 are fixed 6 characters<br>There is one space between %1 and %2<br>There is one space between %2 and %3<br> e.g. "_31.5F"]<br>"_" indicates a space. When the temperature goes under 0, the first character is "-", not a space, as in "-05.5F".<br>Last character in each data indicates the sensor's status.<br> "F" ----------- Exceeding critical temp. (abnormal temp.)<br> "W" ---------- Approaching critical temp. (Warning temp.)<br> "S" ----------- Sensor temp. is safe (Safe temp.)<br> "N" ----------- Sensor detects no critical temp.<br> "E" ----------- Unable to return the temp. data<br>With more than one temperature sensors installed, projector returns responses in a row.<br> e.g. "_31.5F _ _35.2S _ _38.0W " [CR]<br>The first data indicates sensor 1 data, then one space, and sensor 2 data.<br><br>The example 1 shows that sensor 1 indicates 31.5 degrees and the temperature is abnormal, sensor 2 indicates 35.2 degrees and the temperature is safe, sensor 3 indicates 38.0 degrees and the temperature is approaching critical state.<br>When it cannot return the temperature data due to hardware error, the last character is "E" as in "_00.0E"<br>It mitght happen for some projectors that the temperature continues to go up to abnormal status as ling as lamp ballasts are hot.  Therefore when in StandBy mode or for several tens of seconds after Power is ON, any treatment of Power Failure is not processed.  In that case, the temperature data is represented as "_ - - - - N". |
| | Unacceptable | "Error Code" [CR] |