

# EIKI

**EXPAND SERIAL COMMAND**

**FUNCTIONAL SPECIFICATIONS**

LC-XG300/250

Ver. 0.01

**TENTATIVE**

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## 1. Overview

- 1.1 This Functional specification defines communication with PJ-Net for LC-XG300/250 (1.0" XGA ).
- 1.2 Compatible to Firmware Ver. 1.x of the projector.
- 1.3 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

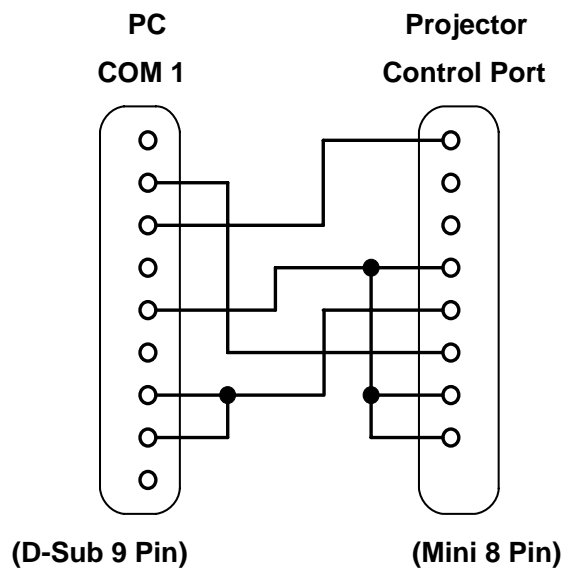
Item	Specification
Synchronous System	Asynchronous
Transmission Speed	9600 / 19200
Data Length	8 bit
Parity	N/A
Stop Bit	1
Flow Control	N/A

Note1) Transmission Speed : initial setting value is 19200

Note2) Transmission Speed can be changed in service mode.

### 2.2 Connection

Dedicated serial cable must be used for a connection to a computer and a projector.





### 3. Notes for communication

3.1. Expand Serial Command is defined as one command / one line that starts with "C" and ends with carriage return (0x0D)

3.2. There are two types of commands: Functional Execution Command and Status Read Command.

- Example of Functional Execution Command: "CF\_BRIGHT\_032"[CR]

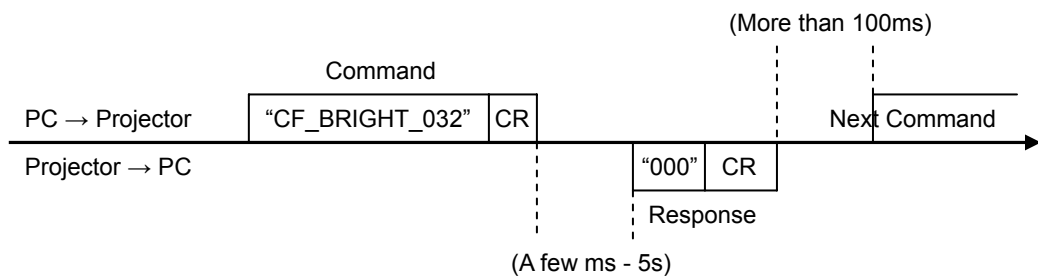
- Example of Status Read Command: "CR\_RIGHT"[CR]

Note) " \_ " means a space

3.3. When it takes more than one second to receive one command, it is not executed.

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

3.4. When the command pipelining, wait for more than 100ms till sending next command after receiving a response.



3.4.1. When a computer sends next command before receiving a response, the projector may not operate properly.

3.4.2 Except when there is no response for more than 5 seconds.

3.5. 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. Name Definition

4.1. Data from a controller to a projector is represented as COMMAND, and data from a projector to a controller for the incoming command is represented as RESPONSE.

4.2. [CR] : Carriage Return Code

Command ends with carriage return code.

Response command also ends with carriage return code.

4.3. \_ : Space Code

All space Code is indicated by (\_).

4.4. %1 : Parameter in Command

When there are some parameters, they are defined as %2, %3...

4.5. %%% : 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 Brightness value
CF_CONT_%1[CR]	Set Contrast value
CF_COLOR_%1[CR]	Set Color value
CF_TINT_%1[CR]	Set Tint value
CF_SHARP_%1[CR]	Set Sharpness value
CF_GAMMA_%1[CR]	Set Gamma value
CF_WBAL-R_%1[CR]	Set White Balance Red value
CF_WBAL-G_%1[CR]	Set White Balance Green value
CF_WBAL-B_%1[CR]	Set White Balance Blue value
CF_COLTEMP_%1[CR]	Set Color Temp. value
CF_NZRED_%1[CR]	Set/Cancel Noise reduction
CF_PROGV_%1[CR]	Set /Cancel Progressive Scan
CF_IMAGE_%1[CR]	Set Image mode
CF_IMAGEADJ_%1[CR]	Reset/Store values in Image Adjustment

### 5.2 PC Adjust Control Command Table

Execute command	Item
CF_FSYNC_%1[CR]	Set Fine Sync value
CF_TDOTS_%1[CR]	Set Total Dots value
CF_CLAMPPHASE_%1[CR]	Set Clamp Phase Value
CF_H-POS_%1[CR]	Set Horizontal Position value
CF_V-POS_%1[CR]	Set Vertical Position value
CF_DDOTS_%1[CR]	Set Display Dots value
CF_DLINE_%1[CR]	Set Display Line value
CF SETPCADJ[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 the setting value in PC Adjust menu to Mode 1-5
CF_PCMODEFREE_%1[CR]	Delete the registered value in Mode1-5 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 Input Source
CF_INPUT1_%1[CR]	Select Input 1 and also set input source to %1
CF_INPUT2_%1[CR]	Select Input 2 and also set input source to %1
CF_INPUT3_%1[CR]	Select Input 3 and also set input source to %1
CF_INPUT4_%1[CR]	Select Input 4 and also set input source to %1
CF_SYSTEM_%1[CR]	Select System

### 5.4 Screen 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
CF_KYSTNMODE_%1[CR]	Set Keystone Store mode

## 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
CF_BASS_%1[CR]	-----
CF_TREBLE_%1[CR]	-----

## 5.7 Setting Command Table

Execute command	Item
CF_BACKGND_%1[CR]	Select screen for no signal
CF_DISP_%1[CR]	Set Display function
CF_LOGO_%1[CR]	Set Logo function
CF_CEIL_%1[CR]	Set Ceiling function
CF_REAR_%1[CR]	Set Rear function
CF_RCODE_%1[CR]	Select Remote Control Reception Code
CF_RCSENSOR_%1[CR]	Select Remote Control Sensor
CF_LANG_%1[CR]	Select language for OSD
CF_ON-STA_%1[CR]	Set Power ON Start function
CF_P-MANE_%1[CR]	Set Power management function
CF_P-MANETIME_%1[CR]	Set Power management time
CF_FANSPEED_%1[CR]	Select 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
CF_FDEFAULT_%1[CR]	Set the value to Factory Default
CF_PJPINCODE_%1[CR]	Enter PIN code to unlock PJ LOCK
CF_TESTPAT_%1[CR]	Set Test Pattern display function
CF_FILH_%1[CR]	Reset total running time for filter
CF_FILTIMER_%1[CR]	Set time when Filter warning OSD is displayed.
CF_POINTER_%1[CR]	Set Pointer function

## 5.8 Other Command Table

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

### 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 mode
CR_PCSTORE[CR]	Get Free or Stored status for PC Adj. mode1-10
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 status
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 status in Input mode
CR_SYSLIST[CR]	Get possible system list
CR_MODELIST[CR]	Get possible mode list
CR_HMSLOT[CR]	Get total number of Input
CR_NMSLOT1[CR]	Get terminal information of Input1
CR_NMSLOT2[CR]	Get terminal information of Input2
CR_NMSLOT3[CR]	Get terminal information of Input3
CR_NMSLOT4[CR]	Get terminal information of Input4
CR_IDSLLOT1[CR]	Get ID information of Input1
CR_IDSLLOT2[CR]	Get ID information of Input2
CR_IDSLLOT3[CR]	Get ID information of Input3
CR_IDSLLOT4[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 Keystone Store mode setting mode

#### 6.6 Lamp Status Read Command Table

Status read command	Item
CR_LAMPREPL[CR]	Get information for Lamp replacement time
CR_LAMPH[CR]	Get information of actual lamp running time
CR_LAMPCORRESPH[CR]	Get lamp running time multiplied by a coefficient
CR_LAMPMODE[CR]	Get selected Lamp Mode
CR_PROJH[CR]	Get projector total running time
CR_HMLAMP[CR]	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
CR_BASS[CR]	-----
CR_TREBLE[CR]	-----

## 6.8 Setting Status Read Command Table

Status read command	Item
CR_BACKGND[CR]	Get screen setting status for no signal
CR_DISP[CR]	Get Display setting status
CR_LOGO[CR]	Get Logo setting status
CR_LOGOLOCK[CR]	Get Logo Lock setting status
CR_CEIL[CR]	Get Ceiling setting status
CR_REAR[CR]	Get Rear setting status
CR_RCODE[CR]	Get selected Remote Control Code
CR_RCSENSOR[CR]	Get setting status of Remote Control Sensor (Enable/Disable)
CR_RTYPE[CR]	Get Remote Control setting status (Infrared / 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 setting status of PJ Lock on the menu
CR_TESTPAT[CR]	Get setting status of Test pattern
CR_FILH[CR]	Get information of filter running time
CR_FILCOND[CR]	Get clogged status of filter
CR_FILREPL[CR]	Get information for filter cleaning/replacement time
CR_FILTIMER[CR]	Get time when filter warning OSD is displayed
CR_POINTER[CR]	Get setting status of Pointer

## 6.9 Other Status Read Command

Status read command	Item
CR_STATUS[CR]	Get operating status of Projector
CR_SIGNAL[CR]	Get status of signal existence
CR_VMUTE[CR]	Get setting status of No Show
CR_FREEZE[CR]	Get setting status of Freeze
CR_INFPPFAIL[CR]	-----
CR_ALLPPFAIL[CR]	Get all information of Power Failure
CR_HMPPFAIL[CR]	Get total number of detectable Power Failure
CR_PFAIL01[CR]	Get item name of Power Failure No.1 and error status
CR_PFAIL02[CR]	Get item name of Power Failure No.2 and error status
:	:
CR_PFAIL07[CR]	Get item name of Power Failure No.7 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 -Parameter determination error (digit number error, including invalid value, etc.)
000	Normal reception (No error)
102	Selected value is out of range (Not reflected)
103	Command mismatched to Hardware (command for Optional function which is not installed)
201	When reached upper or lower limit of increasing or decreasing data
301	Command cannot be executed during capturing display. Resend the command after a while
302	
303	
402	Command cannot be executed during PIN code operation. Resend 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 : Character line

%1 : Parameter (Character line)

\_ : 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 by any specific reason.

See Error Code Table for details

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 effective even under these conditions.

Projector Status	Available Functional Execution Command
Standby Mode	C00: POWER ON CF POWER ON
Countdown in process	C00: POWER ON CF POWER ON (Terminates Countdown)
Cooling down in process	N/A
Cooling down in process due to Abnormal Temperature	N/A
Abnormal Temperature	N/A
Power Failure (For 60 seconds after Power Failure occurred)	N/A
Power Save / Cooling down in process	N/A
Shutter Management / Cooling down in process	N/A
Power Save in process	C00: POWER ON C01: POWER OFF CF POWER ON CF POWER OFF

Note:) When the projector receives the other command in this above status, it returns error code to show the status.

When the projector receives the following Functional Execution Commands, OSD menu is closed except for pop-up menu



## 8.4 Image Command

### 8.4.1 CF\_BRIGHT Command

Command	"CF_BRIGHT_%1"[CR]	
%1	"000~063" ----- Directly select Brightness setting value "UP" ----- Current Brightness setting value + 1 "DN" ----- Current Brightness setting value - 1	
Details	Set Brightness value of user control 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 Standby mode.) This command is available in the normal Power ON status.	
Response	Acceptable	"000"[CR]
	Unacceptable	"Error Code"[CR]

### 8.4.2 CF\_CONT Command

Command	"CF_CONT_%1"[CR]	
%1	"000~063" ----- Directly select Contrast setting value "UP" ----- Current Contrast setting value + 1 "DN" ----- Current Contrast setting value - 1	
Details	Set Contrast value of user control 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 Standby mode.) This command is available in the normal Power ON status.	
Response	Acceptable	"000"[CR]
	Unacceptable	"Error Code"[CR]

### 8.4.3 CF\_COLOR Command

Command	"CF_COLOR_%1"[CR]	
%1	"000~063" ----- Directly select Color setting value "UP" ----- Current Color setting value + 1 "DN" ----- Current Color setting value - 1	
Details	Set Color value of user control 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 Standby mode) This command is available in the normal Power ON status.	
Response	Acceptable	"000"[CR]
	Unacceptable	"Error Code"[CR]

#### 8.4.4 CF\_TINT Command

Command	"CF_TINT_%1"[CR]	
%1	"000~063" ----- Directly select Tint setting value "UP" ----- Current Tint setting value + 1 "DN" ----- Current Tint setting value - 1	
Details	Set Tint value of user control 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 Standby mode) This command is available in the normal Power ON status.	
Response	Acceptable	"000"[CR]
	Unacceptable	"Error Code"[CR]

#### 8.4.5 CF\_SHARP Command

Command	"CF_SHARP_%1"[CR]	
%1	"000~015" ----- Directly select Sharpness setting value "UP" ----- Current Sharpness setting value + 1 "DN" ----- Current Sharpness setting value - 1	
Details	Set Sharpness value of user control 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 Standby mode) This command is available in the normal Power ON status.	
Response	Acceptable	"000"[CR]
	Unacceptable	"Error Code"[CR]

#### 8.4.6 CF\_GAMMA Command

Command	"CF_GAMMA_%1"[CR]	
%1	"000~015" ----- Directly set Gamma setting value "UP" ----- Current Gamma setting value + 1 "DN" ----- Current Gamma setting value - 1	
Details	Set Gamma value of user control 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 Standby mode) This command is available in the normal Power ON status.	
Response	Acceptable	"000"[CR]
	Unacceptable	"Error Code"[CR]

### 8.4.7 CF\_WBAL - Command

Command	"CF_WBAL-%1_%2"[CR]	
%1	" R " ----- Red " G " ----- Green " B " ----- Blue	
%2	"000~063" ----- Directly select Color value set by White Balance%1 "UP" ----- Current Color value set by White Balance%1 + 1 "DN" ----- Current Color value set by White Balance%1 - 1	
Details	Set Color value set by White Balance%1 of user control 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 Standby mode) This command is available in the normal Power ON status.	
Response	Acceptable	"000"[CR]
	Unacceptable	"Error Code"[CR]

### 8.4.8 CF\_COLTEMP Command

Command	"CF_COLTEMP_%1"[CR]	
%1	"000" ----- Xlow "001" ----- Low "002" ----- Mid "003" ----- High	
Details	Set Color Temp. (Available only in the normal Power ON status) 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 Standby mode) This command is available in the normal Power ON status.	
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" ----- Noise Reduction for moving image "L2" ----- Noise Reduction for still image "UP" ----- Switch setting forward direction (OFF -> L1 -> L2 -> OFF) "DN" ----- Switch setting backward direction (OFF -> L2 -> L1 -> OFF)	
Details	Set/Cancel Noise Reduction. (Available only in the normal Power ON status) 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 also returns to the original setting in Standby mode)	
Response	Acceptable	"000"[CR]
	Unacceptable	"Error Code"[CR]

### 8.4.10 CF\_PROGV Command

Command	"CF_PROGV_%1"[CR]	
%1	"OFF" ----- Cancel Progressive scan "L1" ----- Select Progressive Mode L1 "L2" ----- Select Progressive Mode L2 "FILM" ----- Select Progressive Mode FILM "UP" ----- Switch setting forward direction (OFF -> L1 -> L2 -> OFF) "DN" ----- Switch setting backward direction (OFF -> L2 -> L1 -> OFF)	
Details	Set / cancel Progressive scan (Available only in the normal Power ON status) 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 Standby mode) This command is available in the normal Power ON status.	
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) "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 set and stored by a user) "CUSTOM2" ----- Image2 (the value set and stored by a user) "CUSTOM3" ----- Image3 (the value set and stored by a user) "CUSTOM4" ----- Image4 (the value set and stored by a user)	
Details	Select Image Mode (Available only in the normal Power ON status) Parameter "CUSTOM1" to "CUSTOM4" is the same as "Image1" to "Image4" displayed when selecting Image on OSD menu. The value set by this command is stored in EEPROM and its setting is effective even after ALL is OFF.	
Response	Acceptable	"000"[CR]
	Unacceptable	"Error Code"[CR]

### 8.4.12 CF\_IMAGEADJ Command

Command	"CF_IMAGEADJ_%1"[CR]	
%1	"RST" ----- Reset Image adjustment "STR1" ----- Store current Image adjustment to Image 1 "STR2" ----- Store current Image adjustment to Image 2 "STR3" ----- Store current Image adjustment to Image 3 "STR4" ----- Store current Image adjustment to Image 4	
Details	Reset / store Image adjustment. (Available only in the normal Power ON statement) Parameter "STR1" to "STR4" is the same as "Image1" to "Image4" displayed when adjusting Image on OSD menu and selecting "Store" The value stored to "Image1-4" is saved and its setting is effective even after ALL is OFF.	
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 select Fine Sync setting value "UP" ----- Current Fine Sync setting value + 1 "DN" ----- Current Fine Sync setting value - 1	
Details	Set Fine Sync value of PC signal (Available only in the normal Power ON status) 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 Standby mode)	
Response	Acceptable	"000"[CR]
	Unacceptable	"101"[CR] --- when Input for Video is selected

### 8.5.2 CF\_TDOTS Command

Command	"CF_TDOTS_%1"[CR]	
%1	"mmmm ~ nnnn" --- Directly select Total Dots setting value "mmmm" shows minimum value, it is current Display Area H value + Position H value. "nnnn" shows maximum value when dot clock is less than 140MHz. "UP" ----- Current Total Dots setting value + 1 "DN" ----- Current Total Dots setting value - 1	
Details	Set Total Dots of PC signal (Available only in the normal Power ON status) 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 Standby mode)	
Response	Acceptable	"000"[CR]
	Unacceptable	"101"[CR] ---- when Input for Video is selected

### 8.5.3 CF\_CLPPHASE Command

Command	"CF_CLPPHASE_%1"[CR]	
%1	"mmmm~nnnn" --- Directly select Clamp phase setting value "mmmm" shows minimum value, the fixed-value "0001". "nnnn" shows maximum value, it depends on input signal. "UP" ----- Current Clamp setting value + 1 "DN" ----- Current Clamp setting value - 1	
Details	Set Clamp value of PC signal (Available only in the normal Power ON status) 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 Standby mode)	
Response	Acceptable	"000"[CR]
	Unacceptable	"101"[CR] ---- when Input for Video is selected

**8.5.4 CF\_H – POS Command**

Command	"CF_H-POS_%1"[CR]	
%1	"000~nnnn" --- Directly select Horizontal Position setting value "nnnn" shows maximum value, it is current Total Dots value - Display Area H value "UP" ----- Current Horizontal Position setting value + 1 "DN" ----- Current Horizontal Position setting value - 1	
Details	Set Horizontal Position value of PC signal. (Available only in the normal Power ON status) 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 Standby mode)	
Response	Acceptable	"000"[CR]
	Unacceptable	"101"[CR] ---- when Input for Video is selected

**8.5.5 CF\_V – POS Command**

Command	"CF_V-POS_%1"[CR]	
%1	"0000~nnnn" --- Directly select Vertical Position setting value "nnnn" shows maximum value, it is current Total Line value - Display Area V value "UP" ----- Current Vertical Position setting value + 1 "DN" ----- Current Vertical Position setting value - 1	
Details	Set Vertical Position value of PC signal (Available only in the normal Power ON status) 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 Standby mode)	
Response	Acceptable	"000"[CR]
	Unacceptable	"101"[CR] ---- When Input source is Video system

**8.5.6 CF\_DDOTS Command**

Command	"CF_DDOTS_%1"[CR]	
%1	"0100~nnnn" --- Directly select Display Dots setting value "nnnn" shows maximum value, it is current Total Dots value - Horizontal Position value Even number is available and when odd number is set, it is rounded out. "UP" ----- Current Display Dots setting value + 2 "DN" ----- Current Display Dots setting value - 2	
Details	Set Display Dots value of PC signal 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 Standby mode) This command is available in the normal Power ON status.	
Response	Acceptable	"000"[CR]
	Unacceptable	"101"[CR] ---- When Input for Video is selected

**8.5.7 CF\_DLINE Command**

Command	"CF_DLINE_%1"[CR]	
%1	<p>"0100~nnnn" --- Directly select Display Line setting value  "nnnn" shows maximum value, it is current Total Line value – Vertical Position value  "UP" ----- Current Display Line setting value + 1  "DN" ----- Current Display Line setting value – 1</p>	
Details	<p>Set Display Line value of PC signal  (Available only in the normal Power ON status)  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 Standby mode)</p>	
Response	Acceptable	"000"[CR]
	Unacceptable	"101"[CR] ---- When Input for Video is selected

**8.5.8 CF\_SETPCADJ Command**

Command	"CF_SETPCADJ"[CR]	
%1	None "EXT11"~"EXT60"	
Details	<p>1. Apply value set in PC Adjust Menu to projected image.  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)</p> <ul style="list-style-type: none"> <li>• CF_FSYNC</li> <li>• CF_TDOTS</li> <li>• CF_CLAMPPAHSE</li> <li>• CF_H - POS</li> <li>• CF_V - POS</li> <li>• CF_DDOTS</li> <li>• CF_DLINE</li> </ul> <p>2. When "EXT11"~"EXT60" is specified in %1, "Ex Mode" (not like XGA1) is displayed in "SYSTEM" menu.</p>	
Response	Acceptable	"000"[CR]
	Unacceptable	"101"[CR] ---- When Input for Video is selected

### 8.5.9 CF\_ORGMODE Command

Command	"CF_ORGMODE_%1"[CR]	
%1	<p>When input signal is PC Analog:                      "VGA 1" ----- specify VGA1                      "VGA 2" ----- specify VGA2                      :                      :                      "XGA 1" ----- specify XGA1                      :                      :                      "WXGA 3" ----- specify WXGA3                      "1080i60" ----- specify 1080i60                      "1080i50" ----- specify 1080i50                      "1035i" ----- specify 1035i                      "720P60" ----- specify 720p60                      "720P50" ----- specify 720p50                      "575P" ----- specify 575p                      "480P" ----- specify 480p                      "575i" ----- specify 575i                      "480i" ----- specify 480i                      "1080P60" ----- specify 1080p60                      "1080P50" ----- specify 1080p50</p> <p>When input signal is not PC Analog, error code "101" is returned.</p>	
Details	<p>After "EXT n" is set by CF_SETPCADJ command and PC Adj. related command such as CF_FSYNC/ CF_TDOTS, specify the signal originated with by issuing this command.                      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)</p> <p>Note ) To differentiate between 60Hz and 50Hz in 1080i and 720p, "60" or "50" is necessary to add to the parameter in this command.</p>	
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	<p>"MODE1" ---- Store current PC Adjust status to Mode1                      "MODE2" ---- Store current PC Adjust status to Mode2                      "MODE3" ---- Store current PC Adjust status to Mode3                      "MODE4" ---- Store current PC Adjust status to Mode4                      "MODE5" ---- Store current PC Adjust status to Mode5                      "MODE6" ---- Store current PC Adjust status to Mode6                      "MODE7" ---- Store current PC Adjust status to Mode7                      "MODE8" ---- Store current PC Adjust status to Mode8                      "MODE9" ---- Store current PC Adjust status to Mode9                      "MODE10" -- Store current PC Adjust status to Mode10</p>	
Details	<p>Store current PC Adjust status (each parameter status such as Total dots) to Mode1~Mode10. This command operates the same way as storing to Mode1~Mode10 in PC Adjust MENU.                      (Available only in the normal Power ON status)</p>	
Response	Acceptable	"000"[CR]
	Unacceptable	"101"[CR] ---- When Input for Video is selected



**8.5.11 CF\_PCMODEFREE Command**

Command	"CF_PCMODEFREE_%1"[CR]	
%1	"MODE1" ---- Set Mode1 to Free status "MODE2" ---- Set Mode2 to Free status "MODE3" ---- Set Mode3 to Free status "MODE4" ---- Set Mode4 to Free status "MODE5" ---- Set Mode5 to Free status "MODE6" ---- Set Mode6 to Free status "MODE7" ---- Set Mode7 to Free status "MODE8" ---- Set Mode8 to Free status "MODE9" ---- Set Mode9 to Free status "MODE10" --- Set Mode10 to Free status	
Details	Delete the registered data in Mode1~Mode10 and turns it to Free status. This command operates the same way as turning Mode1~Mode10 to Free status in PC Adjust Menu. (Available only in the normal Power ON status)	
Response	Acceptable	"000"[CR]
	Unacceptable	"101"[CR] ---- When Input for Video is selected

## 8.6 Input Control Command

### 8.6.1 CF\_INPUT Command

Command	"CF_INPUT_%1"[CR]	
%1	<p>"1" ----- Select Input 1 (not switching Source)                      "2" ----- Select Input 2 (not switching Source)                      "3" ----- Select Input 3 (not switching Source)                      "4" ----- Select Input 4 (not switching Source)                      "UP" ----- Input No + 1                      &lt; with PJ-Net attached &gt; Input 1 -&gt; Input 2 -&gt; Input 3 -&gt; Input 4 -&gt; Input 1 -&gt; ..                      &lt; with PJ-Net unattached &gt; Input 1 -&gt; Input 2 -&gt; Input 3 -&gt; Input 1 -&gt; ..                      "DN" ----- Input No - 1                      &lt; with PJ-Net attached &gt; Input 4 -&gt; Input 3 -&gt; Input 2 -&gt; Input 1 -&gt; Input 4 -&gt; ..                      &lt; with PJ-Net unattached &gt; Input 3 -&gt; Input 2 -&gt; Input 1 -&gt; Input 3 -&gt; ..</p>	
Details	<p>Select Input (Available only in the normal Power ON status)                      This command only switches Input No but not Source.                      For example, when Input 1 has been selected, receiving the command to select Input 1 does not switch Source. (just switching to Input 1)                      Therefore this command operates differently from "INPUT" button of the projector and remote control.                      *When selecting Input 4 on a projector with PJ-Net unattached, "103" is returned.                      *When selecting Input 1 for a projector which is powered OFF with PJ-Net attached, "101" is returned.</p>	
Response	Acceptable	"000"[CR]
	Unacceptable	"%%%"[CR]

### 8.6.2 CF\_SOURCE Command

Command	"CF_SOURCE_%1"[CR]	
%1	Input is 1	<p>"DIGITAL" ----- Select Digital Input                      "ANALOG" ----- Select Analog Input                      "SCART" ----- Select Scart Input                      "HDCP" ----- Select DVI HDCP Input                      "UP" ----- Select in Analog -&gt; Scart -&gt; DVI -&gt; HDCP -&gt; Analog order                      "DN" ----- Select in Analog -&gt; HDCP -&gt; DVI -&gt; Scart -&gt; Analog order</p>
	Input is 2	<p>"VIDEO" ----- Select Composite Video Input                      "YPBPR" ----- Select Y,Pb/Cb,Pr/Cr Input                      "YCBCR" ----- Select Y,Pb/Cb,Pr/Cr Input                      "ANALOG" ----- Select RGB                      "UP" ----- Select in Analog -&gt; Video -&gt; Y,Pb/Cb,Pr/Cr -&gt; Analog order                      "DN" ----- Select in Analog -&gt; Y,Pb/Cb,Pr/Cr -&gt; Video -&gt; Analog order</p>
	Input is 3	<p>"AUTO" ----- Select Composite Video Input / S-Video Input automatically. (S-Video has priority)                      "VIDEO" ----- Select Composite Video Input                      "S-VIDEO" ----- Select S-Video Input                      "UP" ----- Select in Auto -&gt; Video -&gt; S-Video -&gt; Auto order                      "DN" ----- Select in Auto -&gt; S-Video -&gt; Video -&gt; Auto order</p>
	Input is 4	<p>"NETWORK"                      "UP"                      "DN"                      * Source cannot be selected but the above parameter is ACK value.</p>
Details	<p>Select Source of currently selected Input                      (Available only in the normal Power ON status)                      When Input specified by %1 is inappropriate for selected Input, the projector returns "101" and this command is not executed.                      When Input 4 is selected and PJ-Net is powered OFF, the projector returns "101".</p>	
Response	Acceptable	"000"[CR]
	Unacceptable	"%%%"[CR]

**8.6.3 CF\_INPUT 1 Command**

Command	"CF_INPUT1_%1"[CR]	
%1	"DIGITAL" ----- Select Digital Input "ANALOG" ----- Select Analog Input "SCART" ----- Select Scart Input "HDCP" ----- Select DVI HDCP Input	
Details	Select Input 1 and also Source specified by %1. (Available only in the normal Power ON status)	
Response	Acceptable	"000"[CR]
	Unacceptable	"%%%"[CR]

**8.6.4 CF\_INPUT 2 Command**

Command	"CF_INPUT2_%1"[CR]	
%1	"VIDEO" ----- Select Composite Video Input "YPBPR" ----- Select Y,Pb/Cb,Pr/Cr Input "ANALOG" ----- Select RGB	
Details	Select Input 2 and also Source specified by %1. (Available only in the normal Power ON status)	
Response	Acceptable	"000"[CR]
	Unacceptable	"%%%"[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) "VIDEO" ----- Select Composite Video Input "S-VIDEO" ----- Select S-Video Input	
Details	Select Input 3 and also Source specified by %1. (Available only in the normal Power ON status)	
Response	Acceptable	"000"[CR]
	Unacceptable	"%%%"[CR]

**8.6.6 CF\_INPUT 4 Command**

Command	"CF_INPUT4_%1"[CR]	
%1	"NETWORK" ----- Select Input from PJ-Net	
Details	Select Input 4 and also Source specified by %1. (Available only in the normal Power ON status) *With PJ-Net unattached, this command is invalid and error code "103" is returned. *With PJ-Net attached, error code "101" is returned when PJ-Net is powered OFF.	
Response	Acceptable	"000"[CR]
	Unacceptable	"%%%"[CR]

**8.6.7 CF\_SYSTEM Command**

Command	"CF_SYSTEM_%1"[CR]	
%1	Input is PC Analog	"VGA 1" ----- Select VGA1 "VGA 2" ----- Select VGA2 : : "XGA 1" ----- Select XGA1 : : "WXGA 3" ----- Select WXGA3 "1080I" ----- Select 1080i "1035I" ----- Select 1035i "720P" ----- Select 720p "575P" ----- Select 575p "480P" ----- Select 480p "575I" ----- Select 575i "480I" ----- Select 480i "1080P" ----- Select 1080p "MODE1"~"MODE10" ----- Select Mode1~Mode10 "EXT11"~"EXT60" ----- Select ExMode11~ExMode60 * Not return Mode1~10
	Input is PC Digital /AV HDCP	"D-XGA 1" ----- Select D-XGA1 : : "D-WXGA 3" ----- Select D-WXGA3 "D-1080I" ----- Select D-1080i "D-1035I" ----- Select D-1035i "D-720P" ----- Select D-720p60 "D-575P" ----- Select D-575p "D-480P" ----- Select D-480p "D-1080P" ----- Select D-1080p
	Input is Y,Pb/Cb,Pr/Cr	"AUTO" ----- Select System "Auto" "1080I" ----- Select 1080i "1035I" ----- Select 1035i "720P" ----- Select 720p "575P" ----- Select 575p "480P" ----- Select 480p "575I" ----- Select 575i "480I" ----- Select 480i
	Input is Video / S-Video	"AUTO" ----- Select System "Auto" "NTSC" ----- Select NTSC "NTSC443" ----- Select NTSC4.43 "PAL" ----- Select PAL "SECAM" ----- Select SECAM "PAL-M" ----- Select PAL-M "PAL-N" ----- Select PAL-N
Details	Select System of currently selected Input (Available only in the normal Power ON status) When Input specified by %1 is inappropriate for selected Input, the projector returns "101"[CR] and the command is not executed When Input 4 is selected, the projector returns "101"[CR] and the command 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 "WIDE" ----- Select Wide mode "TRUE" ----- Select True mode "FULL" ----- Select Full mode "DZOOM UP" ----- Expand image size with Digital Zoom "DZOOM DN" ----- Reduce image size with Digital Zoom "UP" ----- Select screen size with forward switching in possible range "DN" ----- Select screen size with backward switching in possible range
	Input is Video	"NORMAL" ----- Select Normal mode "WIDE" ----- Select Wide mode "FULL" ----- Select Full mode "UP" ----- Select screen size with forward switching in possible range "DN" ----- Select screen size with backward switching in possible range
Details	Select screen size (Available only in the normal Power ON status) When Input specified by %1 is inappropriate for selected Input, the projector returns "101"[CR] and the command is not executed Receiving "DZOOM UP" and "DZOOM DN" command immediately executes the function.	
Response	Acceptable	"000"[CR]
	Unacceptable	"Error Code"[CR] "201"[CR] --- When reaches the correction limit

### 8.7.2 CF\_DZCENT Command

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

## 8.8 Lamp Command

### 8.8.1 CF\_LAMPH Command

Command	"CF_LAMPH_%1"[CR]	
%1	"RST"	
Details	Reset lamp total 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 "AUTO2" ----- Set lamp status to Auto2 mode "HIGH" ----- Set lamp status to High mode "NORMAL" ----- Set lamp status to Normal mode "ECO" ----- Set lamp status to Eco mode "UP" ----- Select lamp mode forward direction "DN" ----- Select lamp mode backward direction	
Details	Select Lamp Mode (Available only in the normal Power ON status) The value set by this command is stored in EEPROM and its setting is effective even after ALL is OFF.	
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 "UP" ----- Current Volume setting value +1 "DN" ----- Current Volume setting value -1	
Details	Control level of volume. (Available only in the normal Power ON status) 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 "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]





### 8.10.3 CF\_LOGO Command

Command	"CF_LOGO_%1_%2"[CR]	
%1	"OFF" ----- Cancel Logo display "DFLT" ----- Select Default Logo "USER" ----- Select User "UP" ----- Select the function with forward switching in possible range (OFF -> DFLT -> User -> OFF -> ..) "DN" ----- Select the function with backward switching in possible range (OFF -> User -> DFLT -> OFF -> ..)	
Details	Set Logo (Available only in the normal Power ON status) The value set by this command is stored in EEPROM and its setting is effective even after ALL is OFF. Set Logo PIN code in %1. * When LOGO LOCK is enabled: PIN code is matched ----- Command is valid (Acceptable) PIN code is mismatched ----- Command is invalid (Error code "102") PIN code is beyond %1 available range ---- Command is invalid (Error code "?") * When LOGO LOCK is disabled: PIN code is within %1 available range ---- Command is valid (Acceptable) PIN code is beyond %1 available range ---- Command is invalid (Error code "?")  Note) When Logo Lock is enabled, matching Logo PIN code switches Logo but Logo Lock is not canceled. (Lock status is kept)	
Response	Acceptable	"000"[CR]
	Unacceptable	"Error Code"[CR] "101" ----- When Logo is locked by Logo PIN code

### 8.10.4 CF\_CEIL Command

Command	"CF_CEIL_%1"[CR]	
%1	"ON" ----- Set Ceiling to ON "OFF" ----- Set Ceiling to OFF	
Details	Set / Cancel Ceiling mode (Available only in the normal Power ON status) The value set by this command is stored in EEPROM and its setting is effective even after ALL is OFF	
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 "OFF" ----- Set Rear to OFF	
Details	Set/Cancel Rear mode (Available only in the normal Power ON status) When Rear is ON, image is left/right reversed. 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]



**8.10.9 CF\_ON – STA Command**

Command	"CF_ON - STA_%1"[CR]	
%1	"ON" ----- Set Power On Start to ON "OFF" ----- Set Power On Start to OFF "UP" ----- Toggle between ON and OFF (On -> Off -> On -> ..) "DN" ----- Toggle between ON and OFF (On -> Off -> On -> ..) * "UP" and "DN" are exactly same operation.	
Details	Set/Cancel Power ON Start (Available only in the normal Power ON status) 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]

**8.10.10 CF\_P – MANE Command**

Command	"CF_P - MANE_%1"[CR]	
%1	"OFF" ----- Set Power Management OFF "READY" ----- Set Power Management Ready "SHUTDOWN" ----- Set Power Management to Shut Down mode "UP" ----- Switch forward (Off -> Ready -> Shut down -> Off) "DN" ----- Switch backward (Off -> Shut down -> Ready -> Off)	
Details	Set/Cancel Power Management (Available only in the normal Power ON status) 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]

**8.10.11 CF\_P – MANETIME Command**

Command	"CF_P-MANETIME_%1"[CR]	
% 1	"01" - "30" ----- Directly select setting time by the minute "UP" ----- Plus one minute (Switched in 01 -> 02 -> .. -> 30-> 01) "DN" ----- Minus one minute(Switched in 30 -> 29 -> .. -> 01-> 30)	
Details	Set Power Management time (Available only in the normal Power ON status) 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]

**8.10.12 CF\_FANSPEED Command**

Command	"CF_FANSPEED_%1"[CR]	
% 1	"MAX" ----- Select maximum fan speed "NOR" ----- Select normal fan speed	
Details	Switch Fan Control Speed (Available only in the normal Power ON status) 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]

**8.10.13 CF\_HIGHLAND Command**

Command	"CF_HIGHLAND_%1"[CR]	
%1	"ON" ----- Set Highland mode to ON "OFF" ----- Set Highland mode to OFF	
Details	Set/Cancel Highland mode. (Available only in the normal Power ON status) 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 "L1" ----- Slant a projector at ? ~ ? degree angle "L2" ----- Slant a projector at ? ~ ? degree angle "UP" ----- Switch forward (Off -> L1 -> L2 -> Off) "DN" ----- Switch backward (Off -> L2 -> L1 -> Off)	
Details	Switch slant of the projector installed. (Available only in the normal Power ON status) 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) "RCFULL" ----- All RC keys are invalid "RCPART" ----- Specific RC keys are invalid "KEYFULL" ----- All projector keys are invalid "KEYPART" ----- Specific projector keys are invalid	
Details	Set a ban on the use of RC/KEY (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	Set the value to Factory Default (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	<p>Enter PIN code to cancel PIN code lock. (Available only in the normal Power ON status)                      PIN code cannot be changed. (Only PIN code lock is canceled)</p> <p>* When PIN code Lock is enabled:                      PIN code is matched ----- Command is valid (Acceptable)                      PIN code is mismatched ----- Command is invalid (Error code "102")                      PIN code is beyond %1 available range ---- Command is invalid (Error code "?")</p> <p>* When PIN code Lock is canceled:                      PIN code is within %1 available range ---- Command is valid (Acceptable)                      PIN code is beyond %1 available range ---- Command is invalid (Error code "?")</p> <p>This command is only valid when "PJ PIN code" dialog is displayed to enter PIN code after Power is ON and Countdown is completed.                      When PIN code lock is set to "On1", it needs to send this command every time the projector is turned on.</p>	
Response	Acceptable	"000"[CR]
	Unacceptable	"Error Code"[CR]

### 8.10.18 CF\_TESTPAT Command

Command	"CF_TESTPAT_%1"[CR]	
%1	<p>"COLOR" ----- Display color bar                      "GRAD1" ----- Display 16 shades of gray (White -&gt; Black)                      "GRAD2" ----- Display 16 shades of gray (White &lt;- Black)                      "GRAD3" ----- Display 16 shades of gray (White Black)                      "GRAD4" ----- Display 16 shades of gray (White Black)                      "WHITE" ----- Display all white                      "BLACK" ----- Display all black                      "OFF" ----- No test pattern display                      "UP" ----- Switch forward                      "DN" ----- Switch backward</p>	
Details	Switch test pattern (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 filter used time (Available only in the normal Power ON status)	
Response	Acceptable	"000"[CR]
	Unacceptable	"Error Code"[CR]

**8.10.20 CF\_FILTER Command**

Command	"CF_FILTER_%1"[CR]	
%1	"100" ----- 100 hours "200" ----- 200 hours "300" ----- 300 hours "OFF" ----- OFF (No warning display)	
Details	Set time when filter warning OSD is displayed.	
Response	Acceptable	"000"[CR]
	Unacceptable	"Error Code"[CR]

**8.10.21 CF\_POINTER Command**

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

## 8.11 Other Command

### 8.11.1 CF\_KEYEMU Command

Command	"CF_KEYEMU_%1"[CR]	
%1	"RIGHT" ----- Move Pointer rightward in On-Screen Display Menu. "LEFT" ----- Move Pointer leftward in On-Screen Display Menu. "UP" ----- Move Pointer upward in On-Screen Display Menu. "DN" ----- Move Pointer downward in On-Screen Display Menu. "SELECT" ----- The same operation as "SELECT" button of RC "AUTO PC" ----- Execute Auto PC Adj. function The same operation as "AUTO PC" button of RC Sending this command during Auto PC Adj. operation stops the operation. This is the same way as pressing "AUTO PC" button of RC.	
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. "OFF" ----- Hide On-Screen Display Menu.	
Details	Display/Hide On-Screen Display Menu (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 "OFF" ----- Power OFF *Issuing another command during countdown process forced countdown operation to be terminated. *Error Code is returned in some projectors status, which indicates the command is impossible to be executed. (See [8.3 Operation Requirements] for details.) *Returning the response "000"[CR] (acceptable) does not always mean that the status has already been changed to Power ON. Example: When the temperature approaches abnormal status after returning "000"[CR] to the command CF_POWER ON. Therefore, to get the projector status requires using Status Read Command.	
Details	Display/Hide On-Screen Display Menu (Available only in the normal Power ON status)	
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 "OFF" ----- Set Freeze to OFF "UP" ----- Switch forward (On -> Off -> On -> ..) "DN" ----- Switch backward (On -> Off -> On -> ..) * "UP" and "DN" are exactly same operation as this model has only On/Off.	
Details	Set/Cancel Freeze function. (Available only in the normal Power ON status) 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 : Character Line

- 2) When projector receives the appropriate command, it returns a character line as the required data

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

%1: Required Data (Character Line. See [Basic Status Read Command Table])

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

### 9.2 Transfer Example

Get total dots of projector by Expand Commands

PC → PJ: "CR\_TDOTS" [CR]

PC ← PJ: "000\_1344" [CR]

### 9.3 Operation Condition

Basically Status Read Commands should be always operated.

## 9.4 Image Status Read Command

### 9.4.1 CR\_BRIGHT Command

Command	"CR_BRIGHT"[CR]	
Details	Get Brightness value of user control	
Response	Acceptable	"000_%1"[CR]
	%1	"000"~"063"
	Unacceptable	"?"[CR]

### 9.4.2 CR\_CONT Command

Command	"CR_CONT"[CR]	
Details	Get Contrast value of user control	
Response	Acceptable	"000_%1"[CR]
	%1	"000"~"063"
	Unacceptable	"?"[CR]

### 9.4.3 CR\_COLOR Command

Command	"CR_COLOR"[CR]	
Details	Get Color value of user control	
Response	Acceptable	"000_%1"[CR]
	%1	"000"~"063"
	Unacceptable	"?"[CR]

### 9.4.4 CR\_TINT Command

Command	"CR_TINT"[CR]	
Details	Get Tint value of user control	
Response	Acceptable	"000_%1"[CR]
	%1	"000"~"063"
	Unacceptable	"Error Code"[CR] ----- When the command is invalid due to condition such as Input source "?"[CR] ----- When unclear command is received

### 9.4.5 CR\_SHARP Command

Command	"CR_SHARP"[CR]	
Details	Get Sharpness value of user control	
Response	Acceptable	"000_%1"[CR]
	%1	"000"~"015"
	Unacceptable	"?"[CR]

**9.4.6 CR\_GAMMA Command**

Command	"CR_GAMMA"[CR]	
Details	Get Gamma value of user control	
Response	Acceptable	"000_%1"[CR]
	%1	"000"~"015"
	Unacceptable	"?"[CR]

**9.4.7 CR\_WBAL – R Command**

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

**9.4.8 CR\_WBAL – G Command**

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

**9.4.9 CR\_WBAL – B Command**

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

**9.4.10 CR\_COLTEMP Command**

Command	"CR_COLTEMP"[CR]	
Details	Get Color Temp. setting status	
Response	Acceptable	"000_%1"[CR]
	%1	"000" ----- Xlow "001" ----- Low "002" ----- Mid "003" ----- High "ADJ" ----- Processing adjusting White Balance
	Unacceptable	"?"[CR]

**9.4.11 CR\_NZRED Command**

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

**9.4.12 CR\_PROGV Command**

Command	"CR_PROGV"[CR]	
Details	Get Progressive scan setting value	
Response	Acceptable	"000_%1"[CR]
	%1	"L1" ----- Progressive Mode L1 (for moving image) "L2" ----- Progressive Mode L2 (for still image) "FILM" ----- Progressive Model FILM "OFF" ----- Progressive scan OFF
	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 "STAND" ----- Standard "REAL" ----- Real "CINEMA" ----- Cinema "CUSTOM1"~"CUSTOM4" ----- Image1~4
	Unacceptable	"Error Code"[CR] --- When the command is invalid due to condition such as Input source "?"[CR] ----- When unclear command is received

**9.4.14 CR\_IMGGMD Command**

Command	"CR_IMGGMD"[CR]	
Details	Get Standard/ Real/Cinema of Image Gamma setting status	
Response	Acceptable	"000_%1"[CR]
	%1	"DYN" ----- Dynamic "STD" ----- Standard "REL" ----- Real "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 the command is invalid due to condition such as Input source "?"[CR] ----- When unclear 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	"nnnn"~"mmmm" (nnnn = Display Area H + Horizontal Position) (mmmm= Maximum value less than 140MHz of Dot Clock)
	Unacceptable	"Error Code"[CR] ----- When the command is invalid due to condition such as Input source "?"[CR] ----- When unclear command is received

### 9.5.3 CR\_CLPPHASE Command

Command	"CR_CLPPHASE"[CR]	
Details	Get value of Clamp Phase	
Response	Acceptable	"000_%1"[CR]
	%1	"0001"~"nnnn" ("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" (nnnn = Total Dots - Display Area H)
	Unacceptable	"Error Code"[CR] ----- When the command is invalid due to condition such as Input source "?"[CR] ----- When unclear 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" (nnnn = Total Line - Display Area V)
	Unacceptable	"Error Code"[CR] ----- When the command is invalid due to condition such as Input source "?"[CR] ----- When unclear 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" (nnnn = Total Dots – Horizontal Position)
	Unacceptable	"Error Code"[CR] ----- When the command is invalid due to condition such as Input source "?"[CR] ----- When unclear 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" (nnnn = Total Line – Vertical Position)
	Unacceptable	"Error Code"[CR] ----- When the command is invalid due to condition such as Input source "?"[CR] ----- When unclear command is received

### 9.5.8 CR\_ORGMODE Command

Command	"CR_ORGMODE"[CR]	
Details	Get the original signal of current selected Mode that it set in PC Adj. When MODE1-10 or EXT11-50 is not selected, get the current signal	
Response	Acceptable	"000_%1"[CR]
	%1	<p>When input signal is PC Analog:                      "VGA 1" ----- Indicates signal is VGA1                      "VGA 2" ----- Indicates signal is VGA2                      :                      :                      "XGA 1" ----- Indicates signal is XGA1                      :                      :                      "WXGA 3" ----- Indicates signal is WXGA3                      "1080i60" ----- Indicates signal is 1080i60                      "1080i50" ----- Indicates signal is 1080i50                      "1035i" ----- Indicates signal is 1035i                      "720P60" ----- Indicates signal is 720p60                      "720P50" ----- Indicates signal is 720p50                      "575P" ----- Indicates signal is 575p                      "480P" ----- Indicates signal is 480p                      "575i" ----- Indicates signal is 575i                      "480i" ----- Indicates signal is 480i</p> <p>Note) To differentiate between 60Hz and 50Hz in 1080i and 720p, "60" or "50" is necessary to add to the parameter in this command.</p> <p>*When Input is other than PC Analog, error code "101" is returned</p>
	Unacceptable	"Error Code"[CR] ----- When the command is invalid due to condition such as Input source "?"[CR] ----- When unclear command is received

### 9.5.9 CR\_PCSTORE Command

Command	"CR_PCSTORE"[CR]	
Details	Get Free or Stored status of MODE1 – MODE10 in PC Adjust. Each data consists of 10 bytes and each byte represents MODE1~MODE10 respectively. (F:Free S:Stored)	
Response	Acceptable	"000_%1"[CR]
	Required Data	"FFFFFFFFFF" ----- All Free "SFFFFFFFFF" ----- MODE1 is Stored, others are Free : "FFFFFFFFFFS" ----- MODE10 is Stored, others are Free "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	<p>When input signal is PC Analog:                      "VGA 1" ----- Indicates VGA1 is selected                      "VGA 2" ----- Indicates VGA2 is selected                      :                      :                      "XGA 1" ----- Indicates XGA1 is selected                      :                      :                      "WXGA 3" ----- Indicates WXGA3 is selected                      "1080I" ----- Indicates 1080i is selected                      "1035I" ----- Indicates 1035i is selected                      "720P" ----- Indicates 720p is selected                      "575P" ----- Indicates 575p is selected                      "480P" ----- Indicates 480p is selected                      "575I" ----- Indicates 575i is selected                      "480I" ----- Indicates 480i is selected                      "1080P" ----- Indicates 1080p is selected                      "MODE1" ----- Indicates MODE1 is selected                      :                      :                      "MODE10" ----- Indicates MODE10 is selected                      "EXT11" ----- Indicates EXT11 is selected                      :                      :                      "EXT60" ----- Indicates EXT60 is selected</p> <p>*When there is no signal, error code "101" is returned                      *When Input is other than PC Analog, error code "101" is returned.</p>
	Unacceptable	"?"[CR]

## 9.6 Video Status Read Command

### 9.6.1 CR\_SERSYS Command

Command	"CR_SERSYS"[CR]	
Details	<p>Get currently selected signal.                      Auto-detected signal is returned in Auto mode.                      Only available when Input is Y,Pb/Cb,Pr/Cr /S-Video, Video.                      (Invalid when Input is PC Analog/ PC Digital/ AV HDCP)</p>	
Response	Acceptable	"000_%1"[CR]
	%1	<p>"1080I60" ----- 1080i 60Hz                      "1080I50" ----- 1080i 50Hz                      "1035I" ----- 1035i                      "720P60" ----- 720p60                      "720P50" ----- 720p50                      "575P" ----- 575p                      "480P" ----- 480p                      "575I" ----- 575i (includes Composite signal such as PAL)                      "480I" ----- 480i (includes Composite signal such as NTSC)                      "NO_SIGNAL" ----- There is no signal</p>
	Unacceptable	<p>"101"[CR] ----- When Input for PC is selected                      "?"[CR]</p>

## 9.7 Input Status 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" ----- DVI Input is selected "ANALOG" ----- Analog (RGB) Input is selected "SCART" ----- SCART is selected "HDCP" ----- HDCP is selected "AUTO" ----- Video Auto is selected "VIDEO" ----- Video Input is selected "S-VIDEO" ----- S-Video Input is selected "YPBPR" ----- Y,Pb/Cb,Pr/Cr Input is selected "NETWORK" ----- Network is selected
	Unacceptable	"Error Code"[CR] ----- When the command is invalid due to condition such as Input source "?"[CR] ----- When unclear command is received

### 9.7.3 CR\_SRCINP1 Command

Command	"CR_SRCINP1"[CR]	
Details	Get Source in Input 1	
Response	Acceptable	"000_%1"[CR]
	%1	"DIGITAL" ----- DVI mode "ANALOG" ----- Analog (RGB) mode "SCART" ----- SCART mode "HDCP" ----- HDCP mode
	Unacceptable	"?"[CR]

### 9.7.4 CR\_SRCINP2 Command

Command	"CR_SRCINP2"[CR]	
Details	Get Source in Input 2	
Response	Acceptable	"000_%1"[CR]
	%1	"ANALOG" ----- Analog (RGB) mode "VIDEO" ----- Video mode "YPBPR" ----- Y,Pb/Cb,Pr/Cr mode
	Unacceptable	"?"[CR]

**9.7.5 CR\_SRCINP3 Command**

Command	"CR_SRCINP3"[CR]	
Details	Get Source in Input 3	
Response	Acceptable	"000_%1"[CR]
	%1	"AUTO" ----- Auto-selected Video/S-Video "VIDEO" ----- Video mode "S-VIDEO" ----- S-Video mode
	Unacceptable	"?"[CR]

**9.7.6 CR\_SRCINP4 Command**

Command	"CR_SRCINP4"[CR]	
Details	Get Source in Input 4	
Response	Acceptable	"000_%1"[CR]
	%1	"NETWORK" ----- PJ-Net is attached and PJ-Net is powered ON
	Unacceptable	"101"[CR] ----- PJ-Net is attached and PJ-Net is powered OFF. "103"[CR] ----- PJ-Net is unattached "?"[CR] ----- When unclear 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 "VGA 1" ----- Indicates VGA1 is selected "VGA 2" ----- Indicates VGA2 is selected : : : "XGA 1" ----- Indicates XGA1 is selected : : "WXGA 3" ----- Indicates WXGA3 is selected "1080I" ----- Indicates 1080i is selected "1035I" ----- Indicates 1035i is selected "720P" ----- Indicates 720p is selected "575P" ----- Indicates 575p is selected "480P" ----- Indicates 480p is selected "575I" ----- Indicates 575i is selected "480I" ----- Indicates 480i is selected "1080P" ----- Indicates 1080p is selected "MODE1" ----- Indicates MODE1 is selected : : "MODE10" ----- Indicates MODE10 is selected "EXT11" ----- Indicates EXT11 is selected : : "EXT60" ----- Indicates EXT60 is selected *When there is no signal, error code "101" is returned

		<p>Input is PC Digital /AV HDCP</p>	<p>“D-XGA 1” ----- Indicates D-XGA1 is selected : : : “D-WXGA 3” ----- Indicates D-WXGA3 is selected “D-1080I” ----- Indicates D-1080i is selected “D-1035I” ----- Indicates D-1035i is selected “D-720P” ----- Indicates D-720p is selected “D-575P” ----- Indicates D-575p is selected “D-480P” ----- Indicates D-480p is selected “D-575I” ----- Indicates D-575i is selected “D-480I” ----- Indicates D-480i is selected</p> <p>*When there is no signal, error code “101” is returned</p>
		<p>Input is Y,Pb/Cb, Pr/Cr</p>	<p>“AUTO” ----- Indicates Auto is selected “1080I” ----- Indicates 1080i is selected “1035I” ----- Indicates 1035i is selected “720P” ----- Indicates 720p is selected “575P” ----- Indicates 575p is selected “480P” ----- Indicates 480p is selected “575I” ----- Indicates 575i is selected “480I” ----- Indicates 480i is selected</p> <p>*Selected system is returned whether or not signal is coming.</p>
		<p>Input is Video</p>	<p>“AUTO” ----- Auto is selected “NTSC” ----- NTSC is selected “NTSC443” ----- NTSC4.43 is selected “PAL” ----- PAL is selected “SECAM” ----- SECAM is selected “PAL-M” ----- PAL-M is selected “PAL-N” ----- PAL-N is selected</p> <p>*Selected system is returned whether or not signal is coming.</p>
	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	<p>When Input is PC Analog:                      "XGA" ----- XGA is in the list                      "1080I" ----- 1080i is in the list                      "1080P" ----- 1080p is in the list                      *Auto, Mode1-10 shall not be returned.</p> <p>When Input is PC Digital/AV HDCP:                      "D-XGA" ----- D-XGA is in the list                      "D-720P" ----- D-720p is in the list                      *When no signal is coming, error code "101" is returned.</p> <p>When Input is Y,Pb/Cb,Pr/Cr:                      All possible systems in Menu, including Auto, are returned.                      "AUTO" ----- Auto is in the list                      "1080I" ----- 1080i is in the list                      "1035I" ----- 1035i is in the list                      "1080P" ----- 1080p is in the list                      :                      :                      "575I" ----- 575i is in the list                      "480I" ----- 480i is in the list                      *When no signal is coming, error code "101" is not returned.</p> <p>When Input is Video/S-Video:                      All possible systems in Menu, including Auto, are returned.                      "AUTO" ----- Auto is in the list                      "PAL" ----- PAL is in the list                      "SECAM" ----- SECAM is in the list                      :                      :                      "PAL-N" ----- PAL-N is in the list                      *When no signal is coming, error code "101" is not returned.</p>
	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	<p>Error code "101" is returned except for PC Analog and for no signal with PC Analog.                      Possible modes in Mode1-10 are returned when PC Analog signal is coming.</p> <p>"MODE1"                      "MODE2"                      "MODE3"                      :                      :                      "MODE8"                      "MODE9"                      "MODE10"</p>
	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 "003" ----- When PJ-Net is unattached
	Unacceptable	"Error Code"[CR]

**9.7.11 CR\_NMSLOT1 Command**

Command	"CR_NMSLOT1"[CR]	
Details	Get terminal information of Input 1	
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 Input 2	
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 Input 3	
Response	Acceptable	"000_%1"[CR]
	%1	"VIDEO"
	Unacceptable	"Error Code"[CR]

**9.7.14 CR\_NMSLOT4 Command**

Command	"CR_NMSLOT4"[CR]	
Details	Get terminal information of Input 4	
Response	Acceptable	"000_%1"[CR]
	%1	"NETWORK" · · · When PJ-Net is attached Note) When PJ-Net is unattached, error code "103" is returned. With PJ-Net attached and the power OFF, error code "101" is returned. 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 Input 1. This command is to determine sources possible to input.	
Response	Acceptable	"000_%1"[CR]
	%1	"30" ----- On-board (DVI-D + D-SUB) 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 Input 2. This command is to determine sources possible to input.	
Response	Acceptable	"000_%1"[CR]
	%1	"41" ----- On-board (5BNC) Available source: ANALOG, VIDEO, YPBCR
	Unacceptable	"Error Code"[CR]

**9.7.17 CR\_IDSLOT3 Command**

Command	"CR_IDSLOT3"[CR]	
Details	Get ID information of Input 3. This command is to determine sources possible to input.	
Response	Acceptable	"000_%1"[CR]
	%1	"52" ----- On-board (5BNC) 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 Input 4. This command is to determine sources possible to input.	
Response	Acceptable	"000_%1"[CR]
	%1	"13" ----- PJ-Net (Viewer capable) Available source: Network *With PJ-Net unattached, this command is invalid and error code "103" is returned. *With PJ-Net attached and the power OFF, error code "101" is returned. *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" ----- Select Normal mode "WIDE" ----- Select Wide mode "TRUE" ----- True mode "FULL" ----- Full mode
	Unacceptable	"Error Code"[CR] ----- When the command is invalid due to condition such as Input source "?"[CR] ----- Command

### 9.8.2 CR\_KYSTNMODE Command

Command	"CR_KYSTNMODE"[CR]	
Details	Get Keystone Store Mode setting status	
Response	Acceptable	"000_%1"[CR]
	%1	"STR" ----- Store mode is "Store" "RST" ----- Store mode is "Reset"
	Unacceptable	"?"[CR] ----- Command

## 9.9 Lamp Status Read Command

### 9.9.1 CR\_LAMPREPL Command

Command	"CR_LAMPREPL"[CR]	
Details	Get the information of Lamp Replacement time	
Response	Acceptable	"000_%1"[CR]
	%1	"1Y" ----- over lamp replacement time "1N" ----- inside lamp replacement time  "1" means the number of lamps (1 lamp is used → "1") "Y"/"N" means if it is time to replace lamp or not. Example: "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. (by hours). *actual lamp running time is returned	
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. (by hours). *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 Lamp Mode setting status	
Response	Acceptable	"000_%1"[CR]
	%1	"AUTO1" ----- Lamp Mode is Auto1 "AUTO2" ----- Lamp Mode is Auto2 "HIGH" ----- Lamp Mode is High "NORMAL" ----- Lamp Mode is Normal "ECO" ----- Lamp Mode is Eco
	Unacceptable	"?"[CR]

**9.9.5 CR\_LAMPSTS Command**

Command	"CR_LAMPSTS"[CR]	
Details	Get Lamp status	
Response	Acceptable	"000_%1"[CR]
	%1	"1" ----- Lamp is ON "10" ----- Lamp is OFF "1X" ----- Lamp Failure
	Unacceptable	"?"[CR]

**9.9.6 CR\_PROJH Command**

Command	"CR_PROJH"[CR]	
Details	Get total running time of Projector by hour (h)	
Response	Acceptable	"000_%1"[CR]
	%1	"0000000"~"9999999"
	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 "OFF" ----- Cancel Sound Mute
	Unacceptable	"?"[CR]

## 9.11 Setting Status Read Command

### 9.11.1 CR\_BACKGND Command

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

### 9.11.2 CR\_DISP Command

Command	"CR_DISP"[CR]	
Details	Get Display setting status	
Response	Acceptable	"000_%1"[CR]
	%1	"ON" ----- Display is ON "OFF" ----- Display is OFF "CNTDWN-OFF" ----- Countdown is OFF
	Unacceptable	"?"[CR]

### 9.11.3 CR\_LOGO Command

Command	"CR_LOGO"[CR]	
Details	Get Logo setting status	
Response	Acceptable	"000_%1"[CR]
	%1	"DEFAULT" ----- Default Logo is enabled "USER" ----- User Logo is enabled "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 "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 is ON "OFF" ----- Ceiling is OFF
	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 is ON "OFF" ----- Rear is OFF
	Unacceptable	"Error Code"[CR]

**9.11.7 CR\_RCODE Command**

Command	"CR_RCODE"[CR]	
Details	Get selected Remote Control Code status	
Response	Acceptable	"000_%1"[CR]
	%1	"001" ----- Select Code1 "002" ----- Select Code2 "003" ----- Select Code3 "004" ----- Select Code4 "005" ----- Select Code5 "006" ----- Select Code6 "007" ----- Select Code7 "008" ----- Select Code8
	Unacceptable	"?"[CR]

**9.11.8 CR\_RCSENSOR Command**

Command	"CR_RCSENSOR"[CR]	
Details	Get selected Remote Control Sensor status	
Response	Acceptable	"000_%1"[CR]
	%1	"BOTH" ----- Both front and back part are valid "FRONT" ----- Front part is valid and back part is invalid "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 "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 "DEU" ----- German is selected "FRA" ----- French is selected "ITA" ----- Italian is selected "ESP" ----- Spanish is selected "POR" ----- Portuguese is selected "NED" ----- Dutch is selected "SVE" ----- Swedish is selected "JPN" ----- Japanese is selected "CHI" ----- Chinese is selected "KOR" ----- Korean is selected "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 "OFF" ----- Power ON Start is OFF
	Unacceptable	"?"[CR]

**9.11.12 CR\_P-MANE Command**

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

**9.11.13 CR\_P – MANETIME Command**

Command	"CR_P-MANETIME"[CR]	
Details	Get time setting to start Power Management	
Response	Acceptable	"000_%1"[CR]
	%1	"001"~"030" -----1 minute to 30 minutes
	Unacceptable	"?"[CR]

**9.11.14 CR\_FANSPEED Command**

Command	"CR_FANSPEED"[CR]	
Details	Get selected Fan Control Speed	
Response	Acceptable	"000_%1"[CR]
	%1	"MAX" ----- Fan Control Speed is Max "NOR" ----- Fan Control Speed is Normal
	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 "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 "L1" ----- Projector is slanted at ?~? degree angle "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 "RCALL" ----- All RC keys are invalid "RCPART" ----- Specific RC keys are invalid "KEYALL" ----- All Projector Keys are invalid "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 "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 PIN code lock is set to ON1/ON2 on the menu and PJ PIN code is not entered, therefore, PJ is actually locked. "FREE" ----- PJ is unlocked (either A or B) A) PJ lock is set to OFF on the menu. B) PJ lock is set to ON1/ON2 on the menu, but PIN code Lock mode is canceled as 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 ON1 is set on the menu "ON2" ----- PIN code lock ON2 is set on the menu "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 "GRAD1" ----- 16 shades of gray (White -> Black) is displayed "GRAD2" ----- 16 shades of gray (White <- Black) is displayed "GRAD3" ----- 16 shades of gray (White Black) is displayed "GRAD4" ----- 16 shades of gray (White Black) is displayed "WHITE" ----- All White is displayed "BLACK" ----- All Black is displayed "CROSS" ----- Cross is displayed "OFF" ----- No test pattern is 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" (Support from 0 hour to 99999 hours)
	Unacceptable	"Error Code"[CR]

**9.11.23 CR\_FILCOND Command**

Command	"CR_FILH"[CR]	
Details	Get Filter clogged status	
Response	Acceptable	"000_%1"[CR]
	%1	"CLOG" ----- Filter is already clogged "WARN" ----- Filter is nearly clogged (Warning status) "CLEAN" ----- Filter is not clogged
	Unacceptable	"Error Code"[CR]

**9.11.24 CR\_FILREPL Command**

Command	"CR_FILREPL"[CR]	
Details	Get the information of Filter Replacement time	
Response	Acceptable	"000_%1"[CR]
	%1	"1Y" ----- over filter replacement time "1N" ----- inside filter replacement time
	Unacceptable	"Error Code"[CR]

**9.11.25 CR\_FILTIMER Command**

Command	"CR_FILTIMER"[CR]	
Details	Get time when Filter warning OSD is displayed	
Response	Acceptable	"000_%1"[CR]
	%1	"100" ----- 100 hours "200" ----- 200 hours "300" ----- 300 hours "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 "ARROW" ----- Arrow mode "FINGER" ----- Finger mode "LASER" ----- Laser mark mode
	%2	When %1 is "SPOTLIGHT": "MAX" ----- Spotlight Large "MID" ----- Spotlight Medium "MIN" ----- Spotlight Small
	Unacceptable	"?"[CR]

**9.12 Other Status Read Command**

**9.12.1 CR\_STATUS Command**

Command	"CR_STATUS"(CR)	
Details	Get operating status of Projector. The same as "CR0" in basic command except error code follows it.	
Response	Acceptable	"000_%1"[CR]
	%1	"00" ----- Power ON "80" ----- Standby "40" ----- Countdown in process "20" ----- Cooling Down in process "10" ----- Power Failure "28" ----- Cooling Down in process due to abnormal temperature "88" ----- Standby after Cooling Down due to abnormal temperature "02" ----- Invalid RS-232C Command "24" ----- Power Save/Cooling Down in process "04" ----- Power Save "21" ----- Cooling down in process after turned Off due to lamp failure "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 Signal status if there is signal or not	
Response	Acceptable	"000_%1"[CR]
	%1	"ON" ----- There is signal "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 "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 "OFF" ----- Freeze is OFF
	Unacceptable	"?"[CR]

**9.12.5 CR\_ALLPFAIL Command**

Command	"CR_ALLPFAIL"(CR)	
Details	Get all the information on Power Failure. Return all the responses of "CR_PFAIL01"~"CR_PFAIL07" at once. Therefore it consists of 161(23 bytes x 7) bytes totally.	
Response	Acceptable	"000_%1_%2"[CR] "000_%3_%4"[CR] "000_%5_%6"[CR] : : "000_%11_%12"[CR] "000_%13_%14"[CR] (Send all 7 blocks above at one time)
	%1~%14	%1, %3, . . . %13 (Odd number) ---- Item name of Power Failure (16-byte fixed length) %2, %4, . . . %14 (Even number) ---- Power status (2-byte fixed length) Power is failed: "NG" 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) %2 ----- Power status (2-byte fixed length) Power is failed: "NG" Power status is normal: "OK"
	Unacceptable	"Error Code"[CR]

**9.12.8 CR\_PFAIL02 Command**

Command	"CR_PFAIL02"(CR)	
Details	Get 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) %2 ----- Power status (2-byte fixed length) Power is failed: "NG" Power status is normal: "OK"
	Unacceptable	"Error Code"[CR]

**9.12.9 CR\_PFAIL03 Command**

Command	"CR_PFAIL03"(CR)	
Details	Get 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) %2 ----- Power status (2-byte fixed length) Power is failed: "NG" Power status is normal: "OK"
	Unacceptable	"Error Code"[CR]

**9.12.10 CR\_PFAIL04 Command**

Command	"CR_PFAIL04"(CR)	
Details	Get 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) %2 ----- Power status (2-byte fixed length) Power is failed: "NG" Power status is normal: "OK"
	Unacceptable	"Error Code"[CR]

**9.12.11 CR\_PFAIL05 Command**

Command	"CR_PFAIL05"(CR)	
Details	Get 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) %2 ----- Power status (2-byte fixed length) Power is failed: "NG" Power status is normal: "OK"
	Unacceptable	"Error Code"[CR]

**9.12.12 CR\_PFAIL06 Command**

Command	"CR_PFAIL06"(CR)	
Details	Get 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) %2 ----- Power status (2-byte fixed length) Power is failed: "NG" Power status is normal: "OK"
	Unacceptable	"Error Code"[CR]

**9.12.13 CR\_PFAIL07 Command**

Command	"CR_PFAIL07"(CR)	
Details	Get 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) %2 ----- Power status (2-byte fixed length) Power is failed: "NG" Power status is normal: "OK"
	Unacceptable	"Error Code"[CR]

**9.12.14 CR\_TEMPFAIL Command**

Command	"CR_TEMPFAIL"[CR]	
Details	Get the temperature inside a projector when abnormal temperature occurs. It is possible to get the temperatures all at once with some sensors installed.	
Response	Acceptable	"000_%1_%2_%3"[CR]
	%1 %2 %3	<p>%1 ----- Sensor 1 temp. (External temp.)                      %2 ----- Sensor 2 temp. (Internal temp.1)                      %3 ----- Sensor 3 temp. (Internal temp.2)</p> <p>[Example]                      "_31.5F"[CR]                      "_" indicates a space. When the temperature sinks to -, the first character is "-" like "-05.5F"[CR]</p> <p>With more than one temperature sensors installed, projector returns responses in a row.                      e.g. "_31.5F_35.2S_38.0W" CR]                      The first data indicates sensor 1 data, then one space, and sensor 2 data.                      The last character means the sensor's status.</p> <p>"F" ----- Exceeding critical temp. (abnormal temp.)                      "W" ----- Approaching critical temp. (warning temp.)                      "S" ----- Sensor temp. is safe (Safe temp.)                      "N" ----- Sensor detects no critical temp.                      "E" ----- Usable to return the temp. data</p> <p>The example 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 status.                      When the temperature is safe, all data are represented as "_00.0S".                      When the projector is reset, "_00.0S" is set, and every time abnormal temperature occurs, it renews the data and returns it.                      In short, it only returns the renewed data of the latest abnormal temperature and the previous data is deleted.</p>
	Unacceptable	"?"[CR]

**9.12.15 CR\_TEMP Command**

Command	"CR_TEMP"[CR]	
Details	Get the current temperature information inside a projector. It is possible to get the temperatures all at once with some sensors installed.	
Response	Acceptable	"000_%1_%2_%3"[CR]
	%1 %2 %3	<p>%1 ----- Sensor 1 temp. (External temp.)                      %2 ----- Sensor 2 temp. (Internal temp.1)                      %3 ----- Sensor 3 temp. (Internal temp.2)                      %1, %2 are fixed 6 characters.                      There is one space between %1 and %2.                      There is one space between %2 and %3.                      [Example]                      "_ 31.5F"[CR]                      "_" indicates a space. When the temperature goes under 0, the first character is "-" like "-05.5F"[CR]                      The last character indicates the sensor's status.</p> <p>"F" ----- Exceeding critical temp. (abnormal temp.)                      "W" ----- Approaching critical temp. (warning temp.)                      "S" ----- Sensor temp. is safe (Safe temp.)                      "N" ----- Sensor detects no critical temp.                      "E" ----- Usable to return the temp. data</p> <p>With more than one temperature sensors installed, projector returns responses in a row.                      e.g. "_ 31.5F_ 35.2S_ 38.0W" CR]                      The first data indicates sensor 1 data, then one space, and sensor 2 data.                      The example 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 status.                      When it cannot return the temperature data due to hardware error, the last character is "E" as in "_00.0E".                      It might happen for some projectors that the temperature continues to go up to abnormal status as long 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 done. In that case, the temperature data is represented as "_----N".</p>
	Unacceptable	"Error Code"[CR]