Canon

MULTIMEDIA PROJECTOR
LV-8250 UST

EXPAND SERIAL COMMAND
FUNCTIONAL SPECIFICATIONS

Revision 1

Table of Contents

Overview

1.1　This Functional Specification defines communication functions for LV-8235 UST.

1.2　Compatible to Firmware Ver. 1.x of the projector.

1.3　Most commands can be used to control projector remotely from PC by RS-232C. Therefore, the commands are defined as Expand Serial Commands.

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.
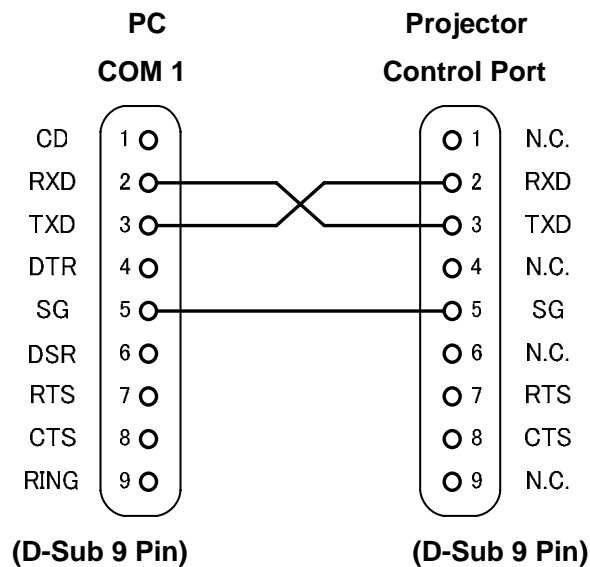
Notes for communication

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

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. 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) after the projector receives the first data "C", it clears the information of buffer.

4. On command pipelining, wait for the interval of 100ms till sending next command after receiving a response.

(More than 100ms)

	Command					
PC → Projector	"CF_BRIGHT_032"	CR				Next Command
Projector → PC				"000"	CR	
					Response	

(A few ms - 5s)
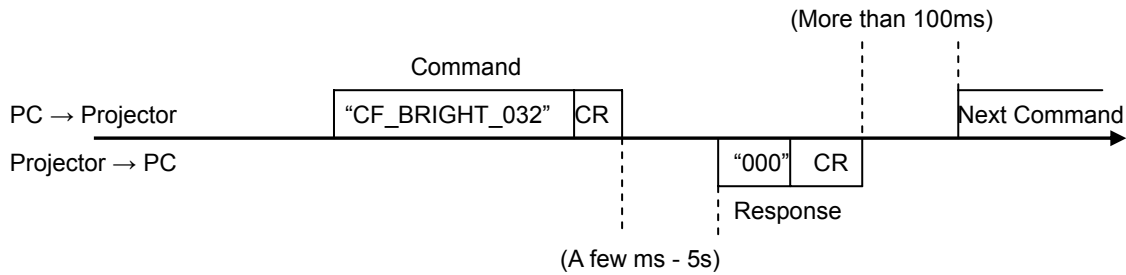
When a computer sends next command before receiving a response, the projector may not operate properly, except when there is no response for more than 5 seconds.

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

Name Definition

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.

2. [CR] : Carriage Return Code

   Command ends with cartridge return code.

   Response also ends with carriage return code.

3. _ : Space Code

   A space Code is indicated by (_).

4. %1 : Parameter in Command

   When there are several parameters, they are defined as %2, %3…

5. %%% : Error code returned from a projector

   Acceptable: "000".

   Unacceptable: See [7. Error Code Table].

6. %a : Parameter in Response Command

   When there are several parameters, they are defined as %b, %c…

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_PROGV_%1[CR]	Set /Cancel Progressive Scan
CF_NZRED_%1[CR]	Set/Cancel Noise reduction
CF_IMAGE_%1[CR]	Set Image mode
CF_IMAGEADJ_%1[CR]	Reset/Store for 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_CLAMP_%1[CR]	Set Clamp Value
CF_H-POS_%1[CR]	Set Horizontal Position value
CF_V-POS_%1[CR]	Set Vertical Position value
CF_PCSTORE_%1[CR]	Store the setting value of PC Adjust menu to Mode 1-10
CF_PCMODEFREE_%1[CR]	Delete the registered value in Mode 1-10 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 computer-1 and source selected in %1
CF_INPUT2_%1[CR]	Select computer-2 and source selected in %11
CF_INPUT3_%1[CR]	Select HDMI and source selected in %1
CF_INPUT4_%1[CR]	Select Video and source selected in %1
CF_INPUT5_%1[CR]	Select S-video and source selected in %1
CF_INPUT_%1_%2[CR]	Select Input and Source
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
CF_VSCALE_%1[CR]	Set value of Vertical scale
CF_VPOS_%1[CR]	Set value of Vertical position
CF_HSCALE_%1[CR]	Set value of Horizontal scale
CF_HPOS_%1[CR]	Set value of Horizontal position
CF_CEIL_%1[CR]	Set Ceiling function
CF_REAR_%1[CR]	Set Rear function
CF_SCREENASPECT_%1[CR]	Set Screen aspect function
CF_COLBOARD_%1[CR]	Set Colorboard mode

5.5   Lamp Command Table

Execute command	Item
CF_LAMPH_%1[CR]	Reset Lamp use time
CF_LAMPMODE_%1[CR]	Select Lamp mode

5.6   Sound Command Table

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

5.7 Setting Command Table

Execute command	Item
CF_LANG_%1[CR]	Select language for OSD
CF_MENUPOSITION_%1[CR]	Move menu position.
CF_AUTOSETUPPCADJ_%1 [CR]	Set Auto PC in Auto Setup
CF_INPUTSEARCH_%1[CR]	Set Auto input function
CF_AUTOSETUP_%1[CR]	Execute Auto Setup
CF_3DSET_%1[CR]	Set 3D function
CF_3DSYNC_%1[CR]	Set 3D Sync
CF_3DSIDE2D_%1[CR]	Set 3D 2D
CF_3DPHASE_%1[CR]	Set 3D Phase
CF_ZOOM_%1[CR]	Select Zoom store mode
CF_BACKGND_%1[CR]	Set screen mode for the case of no signal
CF_DISP_%1[CR]	Set Display function
CF_LOGO_%1_%2[CR]	Set Logo function
CF_HDMISETUP_%1[CR]	Set Image mode of HDMI menu.
CF_HDMISOUND_%1[CR]	Set Sound mode of HDMI menu.
CF_TERMINAL_%1[CR]	Select mode of Terminal menu
CF_STANDBYMODE_%1[CR]	Set Standby Mode
CF_P-MANE_%1[CR]	Set Power management mode function
CF_P-MANETIME_%1[CR]	Set Power management mode time
CF_ON-STA_%1[CR]	Set Direct power on function
CF_CCAPTIONDISP_%1[CR]	Set channel of Closed caption
CF_CCAPTIONCOLOR_%1[CR]	Set color of Closed caption
CF_RCODE_%1[CR]	Select Remote Control Reception Code
CF_KEYDIS_%1[CR]	Disable RC/Projector keys (Only available to models with top panel button)
CF_PJPINCODE_%1[CR]	Input PIN code to release PJ Lock
CF_FANMODE_%1[CR]	Select Fan mode
CF_FANCONTROL_%1[CR]	Select Fan control mode
CF_FILTIMER_%1[CR]	Set time when Filter warning OSD is displayed
CF_FILH_%1[CR]	Reset Filter used time
CF_FDEFAULT_%1[CR]	Set the value to Factory Default

5.8 Other Command Table

Execute command	Item
CF_KEYEMU_%1[CR]	Behave the same as corresponding key of the projector / remote control.
CF_MENU_%1[CR]	Switch ON/OFF of each Menu.
CF_POWER_%1[CR]	Switch ON/OFF of Power.
CF_FREEZE _%1[CR]	Set Freeze function.
CF_VMUTE _%1[CR]	Set Blank function.
CF_PTIMER_%1[CR]	Set P-Timer function

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 setting value of Color temperature
CR_NZRED[CR]	Get setting status of Noise reduction
CR_PROGV[CR]	Get setting status of Progressive scan
CR_IMAGE[CR]	Get Selected Image status
CR_IMGGMD[CR]	Get setting value of Image Gamma

6.2　PC Adjust Status Read Command Table

Status read command	Item
CR_FSYNC[CR]	Get setting value of Fine Sync
CR_TDOTS[CR]	Get setting value of Total Dots
CR_CLAMP[CR]	Get setting value of Clamp
CR_H-POS[CR]	Get setting value of Horizontal Position
CR_V-POS[CR]	Get setting value of Vertical Position
CR_PCSTORE[CR]	Get Free or Stored status for PC Adj. Mode 1-10

6.3　Video Status Read Command Table

Status read command	Item
CR_SERSYS[CR]	Get selected current signal. When in Auto mode, it returns a result by Auto detect.

6.4　Input Status Read Command Table

Status read command	Item
CR_INPUT[CR]	Get selected Input No.
CR_SOURCE[CR]	Get selected source of currently selected Input
CR_SRCINP1[CR]	Get selected source of Computer 1
CR_SRCINP2[CR]	Get selected source of Computer 2
CR_SRCINP3[CR]	Get selected source of HDMI
CR_SRCINP4[CR]	Get selected source of Video
CR_SRCINP5[CR]	Get selected source of S-video
CR_SYSTEM[CR]	Get selected system status in Input mode
CR_SYSLIST[CR]	Get selectable System table
CR_MODELIST[CR]	Get selectable Mode table

6.5　Screen Status Read Command Table

Status read command	Item
CR_SCREEN[CR]	Get selected screen size
CR_KYSTNMODE[CR]	Get setting status of Keystone Store mode
CR_VSCALE[CR]	Get setting status of Vertical Scale
CR_VPOS[CR]	Get setting status of Vertical Position
CR_HSCALE[CR]	Get setting status of Horizontal Scale
CR_HPOS[CR]	Get setting status of Horizontal Position
CR_CEIL [CR]	Get setting status of Ceiling
CR_REAR[CR]	Get setting status of Rear
CR_SCREENASPECT[CR]	Get setting status of Screen aspect
CR_COLBOARD[CR]	Get Selected Colorboard mode

6.6　Lamp Status Read Command Table

Status read command	Item
CR_LAMPREPL[CR]	Get the information for Lamp replacement time
CR_LAMPH[CR]	Get lamp total running time
CR_LAMPCORRESPH[CR]	Get corresponding lamp use time
CR_LAMPMODE[CR]	Get Lamp Mode status
CR_LAMPSTS[CR]	Get lamp lighting status
CR_PROJH[CR]	Get projector total running time
CR_HMLAMP[CR]	Get lamp number

6.7　Sound Status Read Command Table

Status read command	Item
CR_VOLUME[CR]	Get Volume value
CR_MUTE[CR]	Get Sound Mute setting status

6.8   Setting Status Read Command Table

Status read command	Item
CR_LANG[CR]	Get selected language
CR_AUTOSETUPPCADJ	Get setting status of Auto PC in Auto setup
CR_INPUTSEARCH[CR]	Get setting status of Auto input
CR_3DSET[CR]	Get setting status of 3D function
CR_3DSYNC[CR]	Get setting status of 3D Sync
CR_3DSIDE2D[CR]	Get setting status of 3D 2D
CR_3DPHASE[CR]	Get the value of 3D Phase
CR_ZOOM[CR]	Get setting status of Zoom store mode
CR_BACKGND[CR]	Get setting status screen mode for the case of no signal
CR_DISP[CR]	Get setting status of Display
CR_LOGO[CR]	Get setting status of Logo
CR_HDMISETUP[CR]	Get status of Image mode of HDMI setup.
CR_HDMISOUND[CR]	Get status of Sound mode of HDMI setup.
CR_TERMINAL[CR]	Get setting status of Terminal.
CR_STANDBYMODE[CR]	Get setting status of Standby Mode
CR_P-MANE[CR]	Get setting status of Power management mode
CR_P-MANETIME[CR]	Get setting time for Power management mode
CR_ON-STA[CR]	Get setting status of Direct power on
CR_CCAPTIONDISP[CR]	Get setting status of channel of Closed caption
CR_CCAPTIONCOLOR[CR]	Get setting status of color of Closed caption
CR_RCODE[CR]	Get selected Remote Control Code
CR_SECURITY[CR]	Get setting status of Security
CR_KEYDIS[CR]	Get RC/KEY disability status (Only available to models with top panel button)
CR_PJLOCKNOW[CR]	Get if PJ Lock is actually in operation
CR_PJLOCKMENU[CR]	Get setting status of PJ Lock
CR_FANMODE[CR]	Get selected Fan mode
CR_FANCONTROL[CR]	Get selected Fan Control Mode
CR_FILH[CR]	Get Filter used time
CR_FILREPL[CR]	Get the information for Filter replacement time
CR_FILTIMER[CR]	Get time when Filter warning OSD is displayed

6.9   Other Status Read Command

Status read command	Item
CR_STATUS[CR]	Get setting status of Projector behavior
CR_SIGNAL[CR]	Get Signal Status if there is a signal or not
CR_VMUTE[CR]	Get setting status of Blank
CR_FREEZE[CR]	Get setting status of Freeze
CR_PTIMER[CR]	Get operation status of P-timer
CR_TEMPWARN[CR]	Get if temperature is close to abnormal temperature
CR_TEMP[CR]	Get current temperature status
CR_TEMPFAIL[CR]	Get temperature when sensors approach abnormal temperature
CR_SERIALNO[CR]	Get serial number

Error Code Table

Error Code	Details
?	-When the received data cannot be decoded -Parameter determination error (digit number error, including invalid value, etc.)
101	When the function selected is not available under current condition. ex) When receiving signal-related commands while no signal is entered
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.
302	Command cannot be executed during Auto setup operation.
402	Command cannot be executed during PIN code operation.

Note) These error codes are applied to Expand Command, not to Basic Command

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

1) 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
In Standby status	C00: POWER ON only
Countdown in process	C00: POWER ON (Terminates Countdown) C01: POWER OFF C02: POWER OFF (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
Power Save in process	C00: POWER ON C01: 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

2) Functional Execution Commands are invalid when Eco mode is selected in Standby mode of

Setting menu and projector is in standby

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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 projector. Therefore, when turning into Standby status or ALL is OFF, the value returns to original setting. (The value is held in Suspend mode.) This command is available in 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 projector. Therefore, when turning into Standby status or ALL is OFF, the value returns to original setting. (The value is held in Suspend mode.) This command is available in 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 projector. Therefore, when turning into Standby status or ALL is OFF, the value returns to original setting. (The value is held in Suspend mode.) This command is available in 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 projector. Therefore, when turning into Standby status or ALL is OFF, the value returns to original setting. (The value is held in Suspend mode.) This command is available in 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 projector. Therefore, when turning into Standby status or ALL is OFF, the value returns to original setting. (The value is held in Suspend mode.) This command is available in normal Power ON status.	
Response	Acceptable	"000"[CR]
	Unacceptable	"Error Code"[CR]

8.4.6 CF_GAMMA Command

Command	"CF_GAMMA_%1"[CR]	
%1	"DFLT" --------------Set Default "18" ----------------- Set 1.8 "20" ----------------- Set 2.0 "22" ----------------- Set 2.2 "24" ----------------- Set 2.4 "26" ----------------- Set 2.6	
Details	Set Gamma value of user control The value set by this command will not be saved to projector. Therefore, when turning into Standby status or ALL is OFF, the value returns to original setting. (The value is held in Suspend mode.) This command is available in 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	" " -------------------- Red " " -------------------- Green " " -------------------- Blue	
%2	"000~063" ----------- Directly select Color value specified 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 projector. Therefore, when turning into Standby status or ALL is OFF, the value returns to original setting. (The value is held in Suspend mode.) This command is available in 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 Temperature. (Available only in the normal Power ON status) The value set by this command will not be saved to the projector. Therefore, when turning into Standby status or ALL is OFF, the value returns to original setting. (The value is held in Suspend mode.) This command is available in normal Power ON status.
Response	Acceptable	"000"[CR]
	Unacceptable	"Error Code"[CR]

8.4.9 CF_PROGV Command

Command	"CF_PROGV_%1"[CR]
%1	"FILM" -------- Select Progressive Mode FILM "L1" ----------- Select Progressive Mode L1 "L2" ----------- Select Progressive Mode L2 "OFF" --------- Cancel Progressive scan "UP" ----------- The same operation as pressing Up key or Left key "DN" -----------The same operation as pressing Down key or Right key
Details	Set / cancel Progressive scan The value set by this command will not be saved to projector. Therefore, when turning into Standby status or ALL is OFF, the value returns to original setting. (The value is held in Suspend mode.) This command is available in normal Power ON status.
Response	Acceptable	"000"[CR]
	Unacceptable	"Error Code"[CR]

8.4.10 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" -----------The same operation as pressing Up key or Left key "DN" ----------The same operation as pressing Down key or Right key
Details	Noise Reduction based on frame correlation Select L1 or L2 depending on motion detection L2 is more effective in reducing noise than L1, however, L2 can have a blur in moving image The value set by this command will not be saved to projector. Therefore, when turning into Standby status or ALL is OFF, the value returns to original setting. (The value is held in Suspend mode.) This command is available in 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" ------ Presentation (Fixed value to enable projection with a sharp, powerful picture tone) "STAND" ---------- Standard (Image adjust value is set to factory default) "REAL" ----------- High contrast (Fixed value to display graphic image with natural tone) "CINEMA" -------- Cinema (Fixed value to focus on tone reproduction for movie) "CUSTOM1" ----- User 1 (the value set and stored by a user) "CUSTOM2" ----- User 2 (the value set and stored by a user) "CUSTOM3" ----- User 3 (the value set and stored by a user) "CUSTOM4" ----- User 4 (the value set and stored by a user)
Details	Select Image Mode Parameter "CUSTOM1" to "CUSTOM4" is the same as "User 1" to "User 4" 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. This command is available in normal Power ON status.
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 User 1 "STR2" ----- Store current Image adjustment to User 2 "STR3" ----- Store current Image adjustment to User 3 "STR4" ----- Store current Image adjustment to User 4
Details	Reset / store Image adjustment. Parameter "STR1" to "STR4" is the same as "User 1" to "User 4" displayed when adjusting Image on OSD menu and selecting "Store" The value stored to "User 1-4" is saved and its setting is effective even after ALL is OFF. This command is available in normal Power ON status.
Response	Acceptable	"000"[CR]
	Unacceptable	"Error Code"[CR]

8.5 PC Adjust Control Command

8.5.1 CF_FSYNC Command

Command	"CF_FSYNC_%1"[CR]	
%1	"0000~0031" --------------- Directly 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 The value set by this command will not be saved to projector. Therefore, when turning into Standby status or ALL is OFF, the value returns to original setting. This command is available in normal Power ON status.	
Response	Acceptable	"000"[CR]
	Unacceptable	"Error Code"[CR]

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 Dots value + Horizontal
	          Position value.
	          "nnnn" shows maximum value, which is not over 150MHz.
	"UP" -------------- Current Total Dots setting value + 1
	"DN" -------------- Current Total Dots setting value - 1	

Details	Set Total Dots of PC signal The value set by this command will not be saved to projector. Therefore, when turning into Standby status or ALL is OFF, the value returns to original setting. This command is available in normal Power ON status.	
Response	Acceptable	"000"[CR]
	Unacceptable	"Error Code"[CR]

8.5.3 CF_CLAMP Command

Command	"CF_CLAMP_%1"[CR]	

%1	"mmmm~nnnn" ---- Directly select Clamp setting value
	  "mmmm" shows minimum value, 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 The value set by this command will not be saved to projector. Therefore, when turning into Standby status or ALL is OFF, the value returns to original setting. This command is available in normal Power ON status.	
Response	Acceptable	"000"[CR]
	Unacceptable	"Error Code"[CR]

8.5.4 CF_H – POS Command

Command	"CF_H-POS_%1"[CR]
%1	"0000~nnnn" --- Directly select Horizontal Position setting value "nnnn" shows maximum value, it is current Total Dots value - Display Dots value "UP" -------------- Current Horizontal Position setting value + 1 "DN" -------------- Current Horizontal Position setting value - 1
Details	Set Horizontal Position value of PC signal. The value set by this command will not be saved to projector. Therefore, when turning into Standby status or ALL is OFF, the value returns to original setting. This command is available in normal Power ON status.
Response	Acceptable	"000"[CR]
	Unacceptable	"Error Code"[CR]

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 Line value "UP" -------------- Current Vertical Position setting value + 1 "DN" -------------- Current Vertical Position setting value – 1
Details	Set Vertical Position value of PC signal The value set by this command will not be saved to projector. Therefore, when turning into Standby status or ALL is OFF, the value returns to original setting. This command is available in normal Power ON status.
Response	Acceptable	"000"[CR]
	Unacceptable	"101"[CR] ---- When Input source is Video system

8.5.6 CF_PCSTORE Command

Command	"CF_PCSTORE_%1"[CR]
%1	"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
Details	Store current PC Adjust status (each parameter status such as Total dots) to Mode1~Mode10. This command operates the same as storing to Mode1-Mode10 in PC Adjust MENU. This command is available in normal Power ON status.
Response	Acceptable	"000"[CR]
	Unacceptable	"Error Code"[CR]

8.5.7　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-Mode5 and turns it to Free status. This command operates the same as turning Mode1-Mode5 to Free in PC Adjust Menu. This command is available in normal Power ON status.
Response	Acceptable	"000"[CR]
	Unacceptable	"Error Code"[CR]

8.6　Input Control Command

8.6.1　CF_INPUT Command

Command	"CF_INPUT_%1"[CR]
%1	"COMPUTER1" ----- Select Computer1 Input "COMPUTER2" ----- Select Computer2 Input "HDMI" ---------------- Select HDMI Input "VIDEO" -------------- Select Video Input "S-VIDEO" ----------- Select S-video "UP" ---------------------- The same operation as pressing Up key or Left key "DN" --------------------- The same operation as pressing Down key or Right key
Details	Select Input The same operation as "INPUT" button of the projector and Remote Control. This command is available in normal Power ON status. Projector returns "101" by selecting Computer 2 while Monitor out is selected in Terminal menu.
Response	Acceptable	"000"[CR]
	Unacceptable	"Error code"[CR]

8.6.2　CF_SOURCE Command

Command	"CF_SOURCE_%1"[CR]	
%1	Input is Computer 1	"ANALOG" --------- Select Analog Input "YPBPR" ---------- Select Component Input "SCART" ---------- Select Scart Input "UP" --------------- The same operation as pressing Up key or Left key "DN" --------------- The same operation as pressing Down key or Right key
	Input is Computer 2	""ANALOG" --------- Select Analog Input "UP" "DN" Projector accepts parameter "UP"/"DN" but no operation is made.
	Input is HDMI	"HDMI" ---------- Select HDMI Input "UP" "DN" Projector accepts parameter "UP"/"DN" but no operation is made.
	Input is Video	"VIDEO" ------------- Select Composite Video Input "UP" "DN" Projector accepts parameter "UP"/"DN" but no operation is made.
	Input is S-video	S-VIDEO ------------- Select S-video Input "UP" "DN" Projector accepts parameter "UP"/"DN" but no operation is made.
Details		Select Source of currently selected Input When Input specified by %1 is inappropriate for selected Input, the projector returns "101" and the command is not executed. This command is available in normal Power ON status.
Response	Acceptable	"000"[CR]
	Unacceptable	"Error Code"[CR]

8.6.3　CF_INPUT1 Command

Command	"CF_INPUT1_%1_"[CR]
%1	"ANALOG" ---------- Select Analog Input "YPBPR" ------------- Select Component "SCART" ------------- Select SCART
Details	Select Input - Computer 1 and source specified in %1 at once. This command is available in normal Power ON status.
Response	Acceptable	"000"[CR]
	Unacceptable	"Error Code"[CR]

8.6.4　CF_INPUT2 Command

Command	"CF_INPUT2_%1_"[CR]
%1	"ANALOG" ---------- Select Analog PC Input
Details	Select Input - Computer 2 and source specified in %1 at once. This command is available in normal Power ON status. Projector returns "101" by selecting Computer 2 while Monitor out is selected in Terminal menu.
Response	Acceptable	"000"[CR]
	Unacceptable	"Error Code"[CR]

8.6.5　CF_INPUT3 Command

Command	"CF_INPUT3_%1_"[CR]	
%1	"HDMI" ----------------- Select HDMI	
Details	Select HDMI Input and source specified in %1 at once. This command is available in normal Power ON status.	
Response	Acceptable	"000"[CR]
	Unacceptable	"Error Code"[CR]

8.6.6　CF_INPUT4 Command

Command	"CF_INPUT4 _%1"[CR]	
%1	"VIDEO" ---------------- Select Composite video Input	
Details	Select Video input and source specified in %1 at once.. This command is available in normal Power ON status.	
Response	Acceptable	"000"[CR]
	Unacceptable	"Error Code"[CR]

8.6.7　CF_INPUT5 Command

Command	"CF_INPUT5 _%1"[CR]	
%1	"S-VIDEO" ----------------- Select S-video Input	
Details	Select S-video input and source specified in %1 at once.. This command is available in normal Power ON status.	
Response	Acceptable	"000"[CR]
	Unacceptable	"Error Code"[CR]

8.6.8　CF_INPUT_%1_%2 Command

Command	"CF_INPUT_%1_%2"[CR]	
%1	"COMPUTER1" ------ Select Computer1 Input "COMPUTER2" ------ Select Computer2 Input "HDMI" ------------------ Select HDMI Input "VIDEO" ---------------- Select Video Input "S-VIDEO" ------------- Select S-video Input	
%2	When %1 is COMPUTER1 　　ANALOG" ------ Select Analog PC Input 　　"YPBPR" -------- Select Component Input 　　"SCART" -------- Select SCART Input When %1 is COMPUTER2 　　"ANALOG" ----- Select Analog PC Input When %1 is HDMI 　　"HDMI" ---------- Select HDMI Input When %1 is VIDEO 　　"VIDEO" --------- Select Video Input When %1 is S- VIDEO 　　"S-VIDEO" ------ Select S-Video Input	
Details	Select Input specified by %1 and also Source specified in %2 This command is available in normal Power ON status. Projector returns "101" by selecting Computer 2 while Monitor out is selected in Terminal menu.	
Response	Acceptable	"000"[CR]
	Unacceptable	"Error Code"[CR]

8.6.9 CF_SYSTEM Command

Command	"CF_SYSTEM_%1"[CR]	
%1	Input is Computer	"VGA1" ------------- Select VGA1 : "XGA1" ------------- Select XGA1 : "WXGA3" ------------ Select WXGA3 "1080I" -------------- Select 1080I "720P" --------------- Select 720P "575P" --------------- Select 575P "480P" --------------- Select 480P "575I" ---------------- Select 575I "480I" ---------------- Select 480I "MODE1"~ "MODE10"------------- Select Mode 1~Mode 10
Details	Select System of currently selected Input When SYstem specified by %1 is inappropriate for selected Input, the projector returns "101"[CR] and the command is not executed This command is available in normal Power ON status.	
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 "FULL" ------------------------- Select Full screen mode "WIDE" ------------------------ Select 16:9 mode "ZOOM" ----------------------- Select Zoom mode "TRUE" ------------------------ Select True mode "CUSTOM" -------------------- Select Custom mode "DZOOM_UP" --------------- Expand image size with Digital Zoom "DZOOM_DN" --------------- Reduce image size with Digital Zoom "UP" ----------------------- The same operation as pressing Up key or Left key "DN" ----------------------- The same operation as pressing Down key or Right key
	Input is Video	"NORMAL" ---------------------- Select Normal mode "FULL" ------------------------- Select Full mode "WIDE" ------------------------- Select 16:9 mode "ZOOM" ------------------------- Select Zoom mode "NATURAL" --------------------- Select Natural wide mode "CUSTOM" ---------------------- Select Custom size "UP" ----------------------- The same operation as pressing Up key or Left key "DN" ----------------------- The same operation as pressing Down key or Right key
	AV / PC Common	" RST" ----------------------- Reset screen adjustment
Details	Select Aspect mode (image size on screen). When Input specified by %1 is inappropriate for selected Input, the projector returns "101" [CR] and the command is not executed. "DZOOM UP" and "DZOOM DN" start effecting from the first command. This command is available in normal Power ON status. Note) When Input is computer and AV sorts signals (480i / 575i…etc) are entered, the signal recognized as Video Input.	
Response	Acceptable	"000"[CR]
	Unacceptable	"Error Code"[CR]

8.7.2 CF_DZCENT Command

Command	"CF_DZCENT_%1"[CR]	
%1	"CENT" ---- Cancel Digital Zoom (CENT: "CENTER")	
Details	Cancel Digital Zoom When image is expanded or shrunk, reset its value. This command is available in normal Power ON status and when Input is Computer.	
Response	Acceptable	"000"[CR]
	Unacceptable	"Error Code"[CR]

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 by 2steps "DN" ------------- Correct Keystone distortion to reduce lower part of image "FDN" ----------- Correct Keystone distortion to reduce lower part by 2steps "RST" ----------- Reset Keystone correction	
Details	Change Keystone distortion correction This command is available in normal Power ON status.	
Response	Acceptable	"000"[CR]
	Unacceptable	"Error Code"[CR] "201" [CR] ----When reaching the Keystone correction limit or reaching 1 step to correction limit and "FDN"/"FUP" is received. (The command is not executed)

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 This command is available in normal Power ON status.	
Response	Acceptable	"000"[CR]
	Unacceptable	"Error Code"[CR]

8.7.5 CF_VSCALE Command

Command	"CF_VSCALE_%1"[CR]
%1	"032" --------- +32 "031" --------- +31 "002" --------- +2 "001" --------- +1 "000" --------- +0 "-01" ---------- -1 "-02" ---------- -2 "-31" ---------- -31 "-32" ---------- -32 "UP" --------- Vertical Scale setting value + 1 "DN" --------- Vertical Scale setting value - 1
Details	Set Vertical Scale This command is available in normal Power ON status. Note1) Aspect mode is changed into Custom by receiving this command. Note2) When there is no Input, projector returns 101 and the command does not execute.
Response	Acceptable "000"[CR]
	Unacceptable "Error Code"[CR]

8.7.6 CF_VPOS Command

Command	"CF_VPOS_%1"[CR]
%1	"015" --------- +15 "014" --------- +14 "002" --------- +2 "001" --------- +1 "000" --------- +0 "-01" ---------- -1 "-02" ---------- -2 "-14" ---------- -14 "-15" ---------- -15 "UP" --------- Vertical Position setting value + 1 "DN" --------- Vertical Position setting value – 1
Details	Set Vertical Position This command is available in normal Power ON status. Note1) Aspect mode is changed into Custom by receiving this command. Note2) When there is no Input, projector returns 101 and the command does not execute.
Response	Acceptable "000"[CR]
	Unacceptable "Error Code"[CR]

8.7.7 CF_HSCALE Command

Command	"CF_HSCALE_%1"[CR]
%1	"032" --------- +32 "031" --------- +31 "002" --------- +2 "001" --------- +1 "000" --------- +0 "-01" ---------- -1 "-02" ---------- -2 "-31" ---------- -31 "-32" ---------- -32 "UP" ---------- Horizontal Scale setting value + 1 "DN" ---------- Horizontal Scale setting value - 1
Details	Set Horizontal Scale This command is available in normal Power ON status. Note1) Aspect mode is changed into Custom by receiving this command. Note2) When there is no Input, projector returns 101 and the command does not execute.
Response	Acceptable	"000"[CR]
	Unacceptable	"Error Code"[CR]

8.7.8 CF_HPOS Command

Command	"CF_HPOS_%1"[CR]
%1	"015" --------- +15 "014" --------- +14 "002" --------- +2 "001" --------- +1 "000" --------- +0 "-01" ---------- -1 "-02" ---------- -2 "-14" ---------- -14 "-15" ---------- -15 "UP" ---------- Horizontal Position setting value + 1 "DN" ---------- Horizontal Position setting value - 1
Details	Set Horizontal Position This command is available in normal Power ON status. Note1) Aspect mode is changed into Custom by receiving this command. Note2) When there is no Input, projector returns 101 and the command does not execute.
Response	Acceptable	"000"[CR]
	Unacceptable	"Error Code"[CR]

8.7.9 CF_CEIL Command

Command	"CF_CEIL_%1"[CR]
%1	"ON" ----------------------- Set Ceiling to ON "OFF" ---------------------- Set Ceiling to OFF
Details	Set/Cancel Ceiling setting. The value set by this command is stored in EEPROM and its setting is effective even after ALL is OFF This command is available in normal Power ON status.
Response	Acceptable	"000"[CR]
	Unacceptable	"Error Code"[CR]

8.7.10   CF_REAR Command

Command	"CF_REAR_%1"[CR]	
%1	"ON" -------------------------- Set Rear to ON "OFF" ------------------------ Set Rear to OFF	
Details	Set/Cancel Rear setting. 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 This command is available in normal Power ON status.	
Response	Acceptable	"000"[CR]
	Unacceptable	"Error Code"[CR]

8.7.11   CF_SCREENASPECT Command

Command	"CF_SCREENASPECT_%1"[CR]	
%1	"43MODE" Select 4　3 mode "169MODE" Select 16　9 mode "1610MODE" Select 16　10 mode	
Details	Set Screen aspect mode. This command is available in normal Power ON status.	
Response	Acceptable	"000"[CR]
	Unacceptable	"Error Code"[CR]

8.7.12   CF_COLBOARD Command

Command	"CF_COLBOARD_%1"[CR]	
%1	"OFF" ------------------------Select OFF "RED" ------------------------Select Red "BLUE" ---------------------- Select Blue "YELLOW" ----------------- Select Yellow "GREEN" ------------------- Select Green "BLACKBOARD" --------- Select Blackboard	
Details	Select Color of Colorboard mode. Image mode is automatically switched to Colorboard mode by receiving this command. The value set by this command is stored in EEPROM and its setting is effective even after ALL is OFF. This command is available in 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 use time counter. This command is available in normal Power ON status.	
Response	Acceptable	"000"[CR]
	Unacceptable	"Error Code"[CR]

8.8.2 CF_LAMPMODE Command

Command	"CF_LAMPMODE_%1"[CR]	
%1	"NORMAL" ------- Set lamp to Normal mode status "ECO" ------------- Set lamp to 3L mode status "UP" -------------- The same operation as pressing Up key or Left key "DN" -------------- The same operation as pressing Down key or Right key	
Details	Select Lamp Mode The value set by this command is stored in EEPROM and its setting is effective even after ALL is OFF. This command is available in normal Power ON status.	
Response	Acceptable	"000"[CR]
	Unacceptable	"Error Code"[CR]

Sound Command

8.8.3 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 Volume value The same operation of Volume Up/Down as projector and RC, and 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. This command is available in normal Power ON status.	
Response	Acceptable	"000"[CR]
	Unacceptable	"Error Code"[CR]

8.8.4 CF_MUTE Command

Command	"CF_MUTE_%1"[CR]	
%1	"ON" ---------------------------- Set Sound Mute to ON "OFF" --------------------------- Set Sound Mute to OFF	
Details	Control Sound Mute ON/OFF This command is available in normal Power ON status.	
Response	Acceptable	"000"[CR]
	Unacceptable	"Error Code"[CR]

8.9 Setting Command

8.9.1 CF_LANG Command

Command	"CF_LANG_%1"[CR]	
%1	"ENG" -------------------------- Select English "DEU" -------------------------- Select German "FRA" -------------------------- Select French "ITA" -------------------------- Select Italian "ESP" -------------------------- Select Spanish "POR" -------------------------- Select Portuguese "NED" -------------------------- Select Dutch "SVE" -------------------------- Select Swedish "FIN" -------------------------- Select Finnish "NOR" -------------------------- Select Norwegian "DAN" -------------------------- Select Danish "POL" -------------------------- Select Polish "HUN" -------------------------- Select Hungarian "ROM" -------------------------- Select Romanian "RUS" -------------------------- Select Russian "BRA" -------------------------- Select Brazilian Portuguese "TUR" -------------------------- Select Turkish "ARA" -------------------------- Select Arabic "KAZ" -------------------------- Select Kazak "CHI" -------------------------- Select SimpllifiedChinese "HON" -------------------------- Select Traditional Chinese "KOR" -------------------------- Select Korean "JPN" -------------------------- Select Japanese "THA" -------------------------- Select Thai	
Details	Set language for OSD The status set by this command is stored in EEPROM and its setting is effective after ALL is OFF. This command is available in normal Power ON status.	
Response	Acceptable	"000"[CR]
	Unacceptable	"Error Code"[CR]

8.9.2 CF_MENUPOSITION Command

Command	"CF_MENUPOSITION_%1"[CR]	
%1	"SET" ----------------- Move the menu display to next position	
Details	Change the menu position This command is available in normal Power ON status. The status set by this command is stored in EEPROM and its setting is effective after ALL is OFF. Position: center – bottom left-bottom right – top left - top right –,,,	
Response	Acceptable	"000"[CR]
	Unacceptable	"Error Code"[CR]

8.9.3 CF_AUTOSETUPPCADJ Command

Command	"CF_AUTOSETUPPCADJ_%1"[CR]	
%1	"ON" ------------------ Set Auto PC function to ON "OFF" ------------------ Set Auto PC function to OFF	
Details	Set/Cancel Auto PC function This command is available in normal Power ON status. Note) It is unable to set both PC ADJ. and Auto input to OFF. If projector receives Auto PC OFF command while Auto input is OFF, it returns error code "101".	
Response	Acceptable	"000"[CR]
	Unacceptable	"Error Code"[CR]

8.9.4 CF_INPUTSEARCH Command

Command	"CF_INPUTSEARCH_%1"[CR]	
%1	"OFF" ------------------------ Set Auto input operation to OFF "ON1" ------------------------ Set Auto input operation to On1 "ON2" ------------------------ Set Auto input operation to On2	
Details	Set Auto input operation mode. The status set by this command is stored in EEPROM and its setting is effective after ALL is OFF This command is available in normal Power ON status. Note) It is unable to set both PC ADJ. and Auto input to OFF. If projector receives Auto input OFF command while Auto PC ADJ. is OFF, it returns error code "101".	
Response	Acceptable	"000"[CR]
	Unacceptable	"Error Code"[CR]

8.9.5 CF_AUTOSETUP Command

Command	"CF_AUTOSETUP_%1"[CR]	
%1	"START" ------------------ Execute Auto Setup	
Details	Execute Auto Setup Note) CF commands does not execute while Auto setup is in process. If the command is sent during this, projector returns error code "302"	
Response	Acceptable	"000"[CR]
	Unacceptable	"Error Code"[CR]

8.9.6 CF_3D SET Command

Command	"CF_3DSET_%1"[CR]	
%1	"ON" ------------------ Select ON "OFF" ------------------ Select OFF	
Details	Setup 3D function. The status set by this command is stored in EEPROM and its setting is effective after ALL is OFF. This command is available in normal Power ON status.	
Response	Acceptable	"000"[CR]
	Unacceptable	"Error Code"[CR]

8.9.7　CF_3DSYNC Command

Command	"**CF_3DSYNC**_%1"[CR]	
%1	"1" ------------------- Select 1 "2" ------------------ Select 2	
Details	Setup 3D Sync. The status set by this command is stored in EEPROM and its setting is effective after ALL is OFF. This command is available in normal Power ON status.	
Response	Acceptable	"000"[CR]
	Unacceptable	"Error Code"[CR]

8.9.8　CF_3DSIDE2D Command

Command	"**CF_3DSIDE2D** _%1"[CR]	
%1	"ON" ------------------- Select ON "OFF" ------------------ Select OFF	
Details	Setup 3D　　2D. The status set by this command is stored in EEPROM and its setting is effective after ALL is OFF. This command is available in normal Power ON status.	
Response	Acceptable	"000"[CR]
	Unacceptable	"Error Code"[CR]

8.9.9　CF_3DPHASE Command

Command	"CF_3DPHASE _%1"[CR]	
%1	"000-031" ------------------------ Directly select 3D phase setting value "UP" ------------------------------ Current 3D Phase setting value + 1 "DN" ------------------------------ Current 3D phase setting value – 1	
Details	Setup 3D phase setting value. The status set by this command is stored in EEPROM and its setting is effective after ALL is OFF. This command is available in normal Power ON status.	
Response	Acceptable	"000"[CR]
	Unacceptable	"Error Code"[CR]

8.9.10　CF_ZOOM Command

Command	"CF_ZOOM_%1"[CR]	
%1	"RST" -------------------- Set Zoom store mode to Reset "STR1" ------------------- Set Zoom store mode to Store1 "STR2" ------------------- Set Zoom store mode to Store2	
Details	Select Zoom store mode. The status set by this command is stored in EEPROM and its setting is effective after ALL is OFF. This command is available in normal Power ON status.	
Response	Acceptable	"000"[CR]
	Unacceptable	"Error Code"[CR]

8.9.11 CF_BACKGND Command

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

8.9.12 CF_DISP Command

Command	"CF_DISP_%1"[CR]
%1	"ON" ----------------------------- Select Display "OFF" --------------------------- Cancel Display "CNTDWNOFF" -------------- Count down OFF "UP" -------------- The same operation as pressing Up key or Left key "DN" --------------The same operation as pressing Down key or Right key
Details	Set / Cancel Display The value set by this command is stored in EEPROM and its setting is effective even after ALL is OFF. This command is available in normal Power ON status.
Response	Acceptable	"000"[CR]
	Unacceptable	"Error Code"[CR]

8.9.13 CF_LOGO Command

Command	"CF_LOGO_%1_%2"[CR]
%1	"0000"-"9999" ----------------- Set LOGO PIN CODE directly
%2	"OFF" --------------------------- Disable Logo function "DFLT" -------------------------- Display Default Logo "USER" ------------------------- Display Captured Logo "UP" -------------- The same operation as pressing Up key or Left key "DN" --------------The same operation as pressing Down key or Right key
Details	Set / Cancel Logo The value set by this command is stored in EEPROM and its setting is effective even after ALL is OFF This command is available in normal Power ON status. %1--- Set LOGO PIN CODE - When LOGO LOCK is in operation PIN CODE is correct ------------------ Command is valid (Acceptable) PIN CODE is incorrect ---------------- Command is invalid (Error Code "102") PIN CODE is out of %1 range ------ Command is invalid (Error Code "? ") -When LOGO LOCK is not in operation PIN CODE is within %1 range ------ Command is valid PIN CODE is out of %1 range ------ Command is invalid (Error Code "? ") Note) Receiving correct LOGO PIN CODE while LOGO LOCK is in operation enables to change LOGO setting, but it does not release LOGO LOCK. (LOGO LOCK continues.) Projector returns Error Code "101" by receiving USER in %2 when capture has not operated.
Response	Acceptable	"000"[CR]
	Unacceptable	"Error Code"[CR]

8.9.14   CF_ HDMI SETUP Command

Command	"CF_ HDMI SETUP _%1"[CR]
%1	"NORMAL" -------------------------- Select Normal mode "ENHANCED" ---------------------- Select Enhanced mode
Details	Select image mode of HDMI setup. The status set by this command is stored in EEPROM and its setting is effective after ALL is OFF This command is available in normal Power ON status.
Response	Acceptable	"000"[CR]
	Unacceptable	"Error Code"[CR]

8.9.15   CF_HDMI SOUND Command

Command	"CF_HDMI SOUND_%1"[CR]
%1	"HDMI" ----------------------- Select PCM sound (Digital sound) "EXTERNAL" ------------- Select External sound input
Details	Select sound mode of HDMI setup. The status set by this command is stored in EEPROM and its setting is effective after ALL is OFF This command is available in normal Power ON status.
Response	Acceptable	"000"[CR]
	Unacceptable	"Error Code"[CR]

8.9.16   CF_TERMINAL Command

Command	"CF_TERMINAL_%1"[CR]	
%1	"COMPUTER" ---------------Set Input mode "MONITOR" ------------------- Set Monitor Out mode	
Details	Set Terminal setup. This command is available in normal Power ON status. Terminal means Computer 2 in this model.	
Response	Acceptable	"000"[CR]
	Unacceptable	"Error Code"[CR] When Input is Computer 2, the projector returns "101" and the command is not executed.

8.9.17   CF_STANDBYMODE Command

Command	"CF_STANDBYMODE_%1"[CR]	
%1	"ECO" ---------------------- Less standby electricity "NORMAL" -------------- Normal standby electricity	
Details	Switch Standby Mode setting. This command is available in normal Power ON status.	
Response	Acceptable	"000"[CR]
	Unacceptable	"Error Code"[CR]

8.9.18   CF_P-MANE Command

Command	"CF_P MANE_%1"[CR]	
%1	"OFF" --------------------------------- Set Power Management mode to OFF "READY" ------------------------------ Set Power Management mode to Ready "SHUTDOWN" --------------------- Set Power Management mode to Shut Down mode "UP" ----------------------------- The same operation as pressing Up key or Left key "DN" -----------------------------The same operation as pressing Down key or Right key	
Details	Set/Cancel Power Management mode The status set by this command is stored in EEPROM and its setting is effective after ALL is OFF This command is available in normal Power ON status.	
Response	Acceptable	"000"[CR]
	Unacceptable	"Error Code"[CR]

8.9.19   CF_P-MANETIME Command

Command	"CF_P-MANETIME_%1"[CR]	
	"01" ~ "30" ----------------------- Directly select setting time by the minute "UP" ------------------------------ Plus one minute (01 → 02 → → 30 → 01) "DN" ----------------------------- Minus one minute(30 → 29 → → 01 → 30)	
Details	Set Power Management time The status set by this command is stored in EEPROM and its setting is effective after ALL is OFF This command is available in normal Power ON status.	
Response	Acceptable	"000"[CR]
	Unacceptable	"Error Code"[CR]

8.9.20   CF_ON-STA Command

Command	"CF_ON STA_%1"[CR]	
%1	"ON" --------------------------- Set Direct power on active "OFF" ------------------------ Set Direct power on inactive "UP" --------------------------- Switch setting (On → Off → On →) "DN" --------------------------- Switch setting (On → Off → On →) Note) "UP" and "DN" behave the same.	
Details	Set/Cancel Direct power on function The status set by this command is stored in EEPROM and its setting is effective after ALL is OFF This command is available in normal Power ON status.	
Response	Acceptable	"000"[CR]
	Unacceptable	"Error Code"[CR]

8.9.21   CF_CCAPTIONDISP Command

Command	"CF_CCAPTIONDISP_%1"[CR]	
%1	"OFF" ------------- Select Off "CC1" ------------- Select CC1 "CC2" ------------- Select CC2 "CC3" ------------- Select CC3 "CC4" ------------- Select CC4	
Details	Select channel of Closed caption. The status set with this command is stored in EEPROM and its setting is effective even after ALL is OFF. This command is available in normal Power ON status. Note)Closed caption is available under conditions below; Entered signal is appropriate (Video, NTSC signal of S-video).	
Response	Acceptable	"000"[CR]
	Unacceptable	"Error Code"[CR]

8.9.22   CF_CCAPTIONCOLOR Command

Command	"CF_CCAPTIONCOLOR_%1"[CR]	
%1	"COLOR" ------- Select Color "WHITE" -------- Select White	
Details	Select color of Closed caption. The status set with this command is stored in EEPROM and its setting is effective even after ALL is OFF. This command is available in normal Power ON status. Note)Closed caption is available under conditions below; Entered signal is appropriate (Video, NTSC signal of S-video).	
Response	Acceptable	"000"[CR]
	Unacceptable	"Error Code"[CR]

8.9.23   CF_RCODE Command

Command	"CF_RCODE_%1"[CR]
%1	"001" -------------------------- Select Code1 "002" -------------------------- Select Code2 "UP" -------------- The same operation as pressing Up key or Left key "DN" -------------The same operation as pressing Down key or Right key
Details	Select Code of Remote Control The status set by this command is stored in EEPROM and its setting is effective after ALL is OFF This command is available in normal Power ON status.
Response	Acceptable	"000"[CR]
	Unacceptable	"Error Code"[CR]

8.9.24   CF_KEYDIS Command

Command	"CF_KEYDIS_%1"[CR]
%1	"NONE" ----------------------- RC & Projector keys are valid (All are valid) "RC" -------------------------- RC keys are invalid "KEY" ------------------------- Projector keys are invalid
Details	**(This command is available to models with top panel buttons only.)** Disable RC/Projector keys This command is available in normal Power ON status.
Response	Acceptable	"000"[CR]
	Unacceptable	"Error Code"[CR]

8.9.25   CF_PJPINCODE Command

Command	"CF_PJPINCODE_%1"[CR]
%1	"0000" – "9999" ---------Set PJ PIN CODE directly
Details	Set PJ PIN CODE to release PJ LOCK. PIN CODE cannot be changed by this command. -When PJ LOCK is in operation 　PIN CODE is correct ------------------------- Command is valid (Acceptable) 　PIN CODE is incorrect ----------------------- Command is invalid(Error Code"102") 　PIN CODE is out of %1 range ------------- Command is invalid (Error Code "? ") -When PJ LOCK is not in operation PIN CODE is within %1 range ---------------- Command is valid (Acceptable) PIN CODE is out of %1 range ---------------- Command is invalid (Error Code "? ") This command is valid during a dialog "PJ PIN CODE" is displayed after Power On and Count down. Also when PJ LOCK setting is "On1", it is necessary to transmit this command every time lamp turns on.
Response	Acceptable	"000"[CR]
	Unacceptable	"Error Code"[CR]

8.9.26   CF_FANMODE Command

Command	"CF_FANMODE_%1"[CR]	
%1	"L1" ---------------------------- Set Fan Mode to L1 "L2" ---------------------------- Set Fan Mode to L2	
Details	Switch Fan Mode When L1 is selected, fan noise after POWER OFF is louder. When L2 is selected, fan noise after POWER OFF becomes quiet. However fan rotates longer than L1. The status set by this command is stored in EEPROM and its setting is effective even after ALL is OFF. This command is available in normal Power ON status.	
Response	Acceptable	"000"[CR]
	Unacceptable	"Error Code"[CR]

8.9.27   CF_FANCONTROL Command

Command	"CF_FANCONTROL_%1"[CR]	
%1	"OFF" ---------------------------- Set Fan control to Off "ON1" ---------------------------- Set Fan control to On1 "ON2" ---------------------------- Set Fan control to On2	
Details	Set Fan control setting. The status set by this command is stored in EEPROM and its setting is effective even after ALL is OFF. This command is available in normal Power ON status.	
Response	Acceptable	"000"[CR]
	Unacceptable	"Error Code"[CR]

8.9.28 CF_FILTIMER Command

Command	"CF_FILTIMER_%1"[CR]	
%1	"2000" -------------------- Set 2000 hours "3000" -------------------- Set 3000 hours "4000" -------------------- Set 4000 hours "OFF" -------------------- No warning display "UP" -------------------- The same operation as pressing Up key or Left key "DN" --------------------The same operation as pressing Down key or Right key	
Details	Set timer of Filter warning display.	
Response	Acceptable	"000"[CR]
	Unacceptable	"Error Code"[CR]

8.9.29 CF_FILH Command

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

8.9.30 CF_FDEFAULT Command

Command	"CF_FDEFAULT_%1"[CR]	
%1	"RST"	
Details	Set the value to Factory Default This command is available in normal Power ON status.	
Response	Acceptable	"000"[CR]
	Unacceptable	"Error Code"[CR]

8.10 Other Command

8.10.1 CF_KEYENU Command

Command	"CF_KEYENU_%1"[CR]	
%1	"RIGHT" ------------------------ Shift Pointer on OSD Menu to right "LEFT" ------------------------- Shift Pointer on OSD Menu to left "UP" ---------------------------- Shift Pointer on OSD Menu to right "DN" ---------------------------- Shift Pointer on OSD Menu to right "SELECT" ----------------------- Behave the same as OK key. "AUTOPC" ---------------------- Execute Auto PC	
Details	This command behave the same as corresponding RC/Projector keys Once Auto PC is started with "AUTOPC" command, it does not stop with receiving the command another time.	
Response	Acceptable	"000"[CR]
	Unacceptable	"Error Code"[CR]

8.10.2 CF_MENU Command

Command	"CF_MENU_%1"[CR]	
%1	"ON" ---------------------------- Display OSD Menu "OFF" --------------------------- Cancel OSD menu	
Details	Display / Cancel On Screen Display Menu This command is available in normal Power ON status.	
Response	Acceptable	"000"[CR]
	Unacceptable	"Error Code"[CR]

8.10.3 CF_POWER Command

Command	"CF_POWER_%1"[CR]	
%1	"ON" ------------Power ON projector "OFF" ---------- Power OFF Projector Note1) Countdown can be terminated by sending this command. Note2) Projector returns error code due to unable of command execution depends on its condition. Note3) Although projector returns "OK", operation may not be proceeding properly. (e.g. After returning "000" for Power ON command, projector gets abnormal temperature.) Use Status read command to get projector states.	
Details	Power ON / OFF projector.	
Response	Acceptable	"000"[CR]
	Unacceptable	"Error Code"[CR]

8.10.4 CF_FREEZE Command

Command	"CF_FREEZE_%1"[CR]	
%1	"ON" ------------------------ Set Freeze to ON "OFF" ----------------------- Set Freeze to OFF "UP" ----------------------------- Switch setting (On → Off → On →) "DN" ----------------------------- Switch setting (On → Off → On →) Note) "UP" and "DN" behave the same.	
Details	Set/Cancel Freeze setting. Although projector returns "000", receiving another Freeze command does not release Freeze operation. This command is available in normal Power ON status.	
Response	Acceptable	"000"[CR]
	Unacceptable	"Error Code"[CR]

8.10.5 CF_VMUTE Command

Command	"CF_VMUTE_%1"[CR]	
%1	"ON" --------------------------- Set Blank ON "OFF" ------------------------- Set Blank OFF "UP" ----------------------------- Switch setting (On → Off → On →) "DN" ----------------------------- Switch setting (On → Off → On →) Note) "UP" and "DN" behave the same.	
Details	Set/Cancel Blank setting. This command is available in normal Power ON status.	
Response	Acceptable	"000"[CR]
	Unacceptable	"Error Code"[CR]

8.10.6 CF_PTIMER Command

Command	"CF_PTIMER_%1"[CR]	
%1	"SET" ----------------------- Execute P-timer	
Details	Display, pause or exit P-timer. This command behave the same as corresponding P-TIMER key on RC.	
Response	Acceptable	"000"[CR]
	Unacceptable	"Error Code"[CR]

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

1) Basically Status Read Commands should be always operated.

2) Status Read Commands are invalid when Eco mode is selected in Standby mode of Setting menu and projector is in standby

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_ "[CR]
	%a	"000"~"063"
	Unacceptable	"Error code"[CR]

9.4.2   CR_CONT Command

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

9.4.3   CR_COLOR Command

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

9.4.4   CR_TINT Command

Command	"CR_TINT"[CR]	
Details	Get Tint value of user control	
Response	Acceptable	"000_%a"[CR]
	%a	"000"~"063"
	Unacceptable	"Error code"[CR]

9.4.5   CR_SHARP Command

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

9.4.6 CR_GAMMA Command

Command	"CR_GAMMA"[CR]	
Details	Get Gamma value of user control	
Response	Acceptable	"000_%a"[CR]
	%a	"DFLT" ------------------------ Default is selected. "18" ----------------------------- 1.8 is selected. "20" ----------------------------- 2.0 is selected. "22" ----------------------------- 2.2 is selected. "24" ----------------------------- 2.4 is selected. "26" ----------------------------- 2.6 is selected.
	Unacceptable	"Error code"[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_%a"[CR]
	%a	"000"~"063"
	Unacceptable	"Error code"[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_%a"[CR]
	%a	"000"~"063"
	Unacceptable	"Error code"[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_%a"[CR]
	%a	"000"~"063"
	Unacceptable	"Error code"[CR]

9.4.10 CR_COLTEMP Command

Command	"CR_COLTEMP"[CR]	
Details	Get Color Temp. setting value	
Response	Acceptable	"000_%a"[CR]
	%a	"000" ----------------------------- Xlow "001" ----------------------------- Low "002" ----------------------------- Mid "003" ----------------------------- High "BLANK" -------------------White balance is customized bi user
	Unacceptable	"Error code"[CR]

9.4.11 CR_NZRED Command

Command	"CR_NZRED"[CR]	
Details	Get setting status of Noise Reduction	
Response	Acceptable	"000_%1"[CR]
	%1	"L1" -------- Noise Reduction for moving image "L2" -------- Noise Reduction for still image "OFF" ----- Noise Reduction is OFF
	Unacceptable	"Error code"[CR]

9.4.12 CR_PROGV Command

Command	"CR_PROGV"[CR]	
Details	Get setting status of Progressive scan	
Response	Acceptable	"000_%a"[CR]
	%a	"L1" ---------------- Progressive Mode L1 is selected "L2" ---------------- Progressive Mode L2 is selected "FILM" ------------- Progressive Model FILM is selected "OFF" -------------- Progressive scan is disabled
	Unacceptable	"Error code"[CR]

9.4.13 CR_IMAGE Command

Command	"CR_IMAGE"[CR]	
Details	Get image setting status Required data "CUSTOM1" to "CUSTOM4" is the same as "User1" to "User 4" displayed when selecting IMAGE on OSD menu	
Response	Acceptable	"000_%a"[CR]
	%a	"DYNAMIC" ------------------------------------ Presentation "STAND" ------------------------------------- Standard "REAL" -------------------------------------- High contrast "CINEMA" ----------------------------------- Cinema "CUSTOM1"~"CUSTOM4" -------------------- User 1~4
	Unacceptable	"Error Code"[CR]

9.4.14 CR_IMGGMD Command

Command	"CR_IMGGMD"[CR]	
Details	Get Image Gamma setting status	
Response	Acceptable	"000_%a"[CR]
	%a	"DYN" ------------ Presentation "STD" ------------ Standard "REL" ------------ High contrast "CNM" ----------- Cinema
	Unacceptable	"Error code"[CR]

9.5 PC Adjust Status Read Command

9.5.1 CR_FSYNC Command

Command	"CR_FSYNC"[CR]	
Details	Get Fine Sync value	
Response	Acceptable	"000_%a"[CR]
	%a	"0000"~"0031"
	Unacceptable	"Error Code"[CR]

9.5.2 CR_TDOTS Command

Command	"CR_TDOTS"[CR]	
Details	Get Total Dots value	
Response	Acceptable	"000_%a"[CR]
	%a	"nnnn"~"mmmm" (nnnn = Display Dots + Horizontal Position) (mmmm= Maximum value depends on input signal)
	Unacceptable	"Error Code"[CR]

9.5.3 CR_CLAMP Command

Command	"CR_CLAMP"[CR]	
Details	Get Clamp value	
Response	Acceptable	"000_%a"[CR]
	%a	"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 Horizontal Position value	
Response	Acceptable	"000_%a"[CR]
	%a	"0000"~"nnnn" (nnnn = Total Dots - Display Dots)
	Unacceptable	"Error Code"[CR]

9.5.5 CR_V – POS Command

Command	"CR_V - POS"[CR]	
Details	Get Vertical Position value	
Response	Acceptable	"000_%a"[CR]
	%a	"0000"~"nnnn" (nnnn = Total Line - Display Line)
	Unacceptable	"Error Code"[CR]

9.5.6 CR_PCSTORE Command

Command	"CR_PCSTORE"[CR]
Details	Get Free/Stored status of MODE1 – MODE10 for PC Adjust The data consists of 10 bytes and each byte indicates the status of MODE1 ~ MODE10 respectively. (F:Free S:Stored)

Response	Acceptable	"000_%a"[CR]
	Requested data	"FFFFFFFFFF" ----------- All Free "SFFFFFFFFF" ----------- MODE1 is Stored, others are Free : "FFFFFFFFFS" ----------- MODE10 is Stored, others are Free "SSSSSSSSSS" ---------- All Stored
	Unacceptable	"Error code"[CR]

9.6 Video Status Read Command

9.6.1 CR_SERSYS Command

Command	"CR_SERSYS"[CR]
Details	Get currently selected signal Returns auto-detected signal in Auto mode Only available for Video input. (N/A when Input is computer)

Response	Acceptable	"000_%1"[CR]
	Demand data	"1080P60" -------------- 1080p 60Hz "1080P50" -------------- 1080p 50Hz "1080P30" -------------- 1080p 30Hz "1080P25" -------------- 1080p 25Hz "1080P24" -------------- 1080p 24Hz "720P60" --------------720p "720P50" --------------720p "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
	Unacceptable	"Error code"[CR]

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]
	Request data	"1"-"5"
	Unacceptable	"Error code"[CR]

9.7.2 CR_SOURCE Command

Command	"CR_SOURCE"[CR]	
Details	Get selected Source	
Response	Acceptable	"000_%1"[CR]
	Request data	"ANALOG" ---------- Analog (RGB) Input is selected "SCART" ------------- SCART is selected "HDMI" ---------------- HDMI is selected "VIDEO" -------------- Video Input is selected "S-VIDEO" ----------- S-Video Input is selected "YPBPR" ------------- Component Input is selected
	Unacceptable	"Error code"[CR]

9.7.3 CR_SRCINP1 Command

Command	"CR_SRCINP1" [CR]	
Details	Get selected source of Input 1_CMP1	
Response	Acceptable	"000_%1"[CR]
	Request data	"ANALOG" --------- Analog (RGB) Input is selected "YPBPR" ----------- YPBPR Input is selected "SCART" ----------- Scart Input is selected
	Unacceptable	"Error code"[CR]

9.7.4 CR_SRCINP2 Command

Command	"CR_SRCINP2" [CR]	
Details	Get selected source of Input 2_CMP2	
Response	Acceptable	"000_%1"[CR]
	Request data	"ANALOG" -------- Analog(RGB) Input is selected "OUT" ----------------Monitor out is selected
	Unacceptable	"Error code"[CR]

9.7.5 CR_SRCINP3 Command

Command	"CR_SRCINP3" [CR]	
Details	Get selected source of Input 3_HDMI	
Response	Acceptable	"000_%1"[CR]
	Request data	"HDMI" -------------- HDMI is selected
	Unacceptable	"Error code"[CR]

9.7.6 CR_SRCINP4 Command

Command	"CR_SRCINP4" [CR]	
Details	Get selected source of Input 4_Video	
Response	Acceptable	"000_%1"[CR]
	Request data	"VIDEO" ------------- Composite Video Input is selected
	Unacceptable	"Error code"[CR]

9.7.7　CR_SRCINP5 Command

Command	"CR_SRCINP5" [CR]	
Details	Get selected source of Input 5_S-video	
Response	Acceptable	"000_%1"[CR]
	Request data	"S　VIDEO" -------- S-Video Input is selected
	Unacceptable	"Error code"[CR]

9.7.8　CR_SYSTEM Command

Command		"CR_SYSTEM"[CR]	
Details		Get selected System	
Response	Acceptable		"000_%1"[CR]
	%1	Input is PC Analog	"VGA1" -------------- VGA1 is selected "VGA2" -------------- VGA2 is selected "XGA1"-------------- XGA1 is selected "WXGA3" --------- WXGA3 is selected "1080i" ------------ 1080i is selected "720p" ------------- 720p is selected "575p" ------------- 575p is selected "480p" ------------- 480p is selected "575i" -------------- 575i is selected "480i" -------------- 480i is selected "MODE1"　------- Mode1 is selected "MODE10" -------------- Mode10 is selected When there is no signal, projector returns error code"101" [CR]
		Input is HDMI	"D　XGA1" ------------- D-XGA1 is selected "D　WXGA3" ---------- D-WXGA3 is selected "D　1080I" ------------ D-1080i is selected "D　720P" ------------ D-720p is selected "D　575P" ------------ D-575p is selected "D　480P" ------------ D-480p is selected When there is no signal, projector returns error code"101" [CR]
		Input is Y,Pb/Cb,Pr/Cr	"1080i" ------------1080i is selected "720p" ------------- 720p is selected "575p" ------------- 575p is selected "480p" ------------- 480p is selected "575i" -------------- 575i is selected "480i" -------------- 480i is selected Projector returns selected System status regardless of the signal input.
		Input is Video,S-Video	"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" ------------- AL-N is selected Projector returns selected System status regardless of the signal input.
	Unacceptable		""Error Code"[CR]

9.7.9 CR_SYSLIST Command

Command		"CR_SYSLIST"[CR]
Details		Get selectable System titles
Response	Acceptable	"000_%1_%2_..._%x" [CR]

	%1	- When Input is PC-Analog
		  "XGA1" ------------ XGA1is selectable
		  "1080I " ----------- 1080i is selectable
		Projector does not return Auto, Mode 1-10
		When there is no signal, it returns Error Code "101"
		
		- When Input is HDMI
		  "D-XGA" ---------- D- XGA1is selectable
		  "D-720P" --------- D-720P is selectable
		When there is no signal, projector returns Error Code "101"
		
		-When Input is Y,Pb/Cb,Pr/Cr
		Projector return Error Code "101".
		
		-When Input is Video, S-Video
		Projector return Error Code "101".

	Unacceptable	""Error Code"[CR]

9.7.10 CR_MODELIST Command

Command		"CR_MODELIST"[CR]
Details		Get selectable Mode titles
Response	Acceptable	"000_%1_%2_..._%x" [CR]
	%1 %2 : %x	Returns Error code "101" when Input is other than PC-Analog Returns Error code "101" when Input is PC-Analog but no signal When Input is PC-Analog and signal is found, returns selectable Mode among Mode1 – 10 "MODE1" : : "MODE10
	Unacceptable	"Error Code"[CR]

9.8   Screen Status Read Command

9.8.1   CR_SCREEN Command

Command	"CR_SCREEN"[CR]		
Details	Get selected Aspect mode (on-screen image size)		
Response	Acceptable		"000_%a"[CR]
	%a	Input is PC	"NORMAL" --------------- Normal mode is selected "FULL" --------------------- Full mode is selected "WIDE" -------------------- 16:9 mode is selected "ZOOM" -------------------- Zoom mode i s selected "TRUE" -------------------- True mode is selected When the screen is set to D.Zoom, projector returns the previous status (NORMAL) "CUSTOM" --------------- Custom mode is selected
		Input is Video	"NORMAL" ---------------------- Normal mode is selected "FULL" ------------------------ Full mode is selected "WIDE" ------------------------ 16:9 mode is selected "ZOOM" ------------------------ Zoom mode is selected "NATURAL" -------------------- Natural wide is selected "CUSTOM" --------------------- Custom size is selected
	Unacceptable		"Error Code"[CR]

9.8.2   CR_ KYSTNMODE Command

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

9.8.3   CR_VSCALE Command

Command	"CR_VSCALE"[CR]	
Details	Get setting status of Vertical Scale Store Mode	
Response	Acceptable	"000_%1[CR]
	%1	"-32" ~ "032"
	Unacceptable	"Error code"[CR]

9.8.4   CR_VPOS Command

Command	"CR_VPOS"[CR]	
Details	Get setting status of Vertical Position Store Mode	
Response	Acceptable	"000_%1"[CR]
	%1	"-15" ~ "015"
	Unacceptable	"Error code"[CR]

9.8.5 CR_HSCALE Command

Command	"CR_HSCALE"[CR]	
Details	Get setting status of Horizontal Scale Store Mode	
Response	Acceptable	"000_%1"[CR]
	%1	"-32" ~ "032"
	Unacceptable	"Error code"[CR]

9.8.6 CR_HPOS Command

Command	"CR_HPOS"[CR]	
Details	Get setting status of Horizontal Position Store Mode	
Response	Acceptable	"000_%1"[CR]
	%1	"-15" ~ "015"
	Unacceptable	"Error code"[CR]

9.8.7 CR_ CEIL Command

Command	"CR_CEIL"[CR]	
Details	Get setting status of Ceiling	
Response	Acceptable	"000_%1"[CR]
	%1	"ON" --------------------- Ceiling ON is selected "OFF" ---------------------Ceiling OFF is selected
	Unacceptable	"Error code"[CR]

9.8.8 CR_ REAR Command

Command	"CR_REAR"[CR]	
Details	Get setting status of Rear	
Response	Acceptable	"000_%1"[CR]
	%1	"ON" --------------------- Rear ON is selected "OFF" ---------------------Rear OFF is selected
	Unacceptable	"Error code"[CR]

9.8.9 CR_ SCREENASPECT Command

Command	"CR_SCREENASPECT"[CR]	
Details	Get setting status of Screen aspect	
Response	Acceptable	"000_%1"[CR]
	%1	"43MODE" -------------------- 4 3 mode is selected "169MODE" -------------------- 16 9 mode is selected "1610MODE" -------------------- 16 10 mode is selected
	Unacceptable	"Error code"[CR]

9.8.10   CR_ COLBOARD Command

Command	"CR_**COLBOARD**"[CR]	
Details	Get setting status of Colorboard	
Response	Acceptable	"000_%a"[CR]
	%a	"OFF" -------------------- Off is selected "RED" -------------------- Red is selected "BLUE" -------------------- Blue is selected "YELLOW" -------------------- Yellow is selected "GREEN" -------------------- Green is selected "BLACKBOARD" --------------------Blackboard is selected"
	Unacceptable	"Error code"[CR]

9.9   Lamp Status Read Command

9.9.1   CR_LAMPREPL Command

Command	"CR_LAMPREPL"[CR]	
Details	Get information of Lamp Replacement time	
Response	Acceptable	"000_%1"[CR]
	%1	"1Y" ------------------------- Over lamp replacement time "1N" ------------------------- Within lamp replacement time "1" means the number of lamps. (1 lamp model→ "1") "Y"/"N" means if it has reached its replacement time or not. e.g. "1Y" -----------projector is 1 lamp model and Lamp is over its replacement time
	Unacceptable	"Error code"[CR]

9.9.2   CR_LAMPH Command

Command	"CR_LAMPH"[CR]	
Details	Get total running time of lamp by hour (h) *Actual running time, not corresponding value	
Response	Acceptable	"000_%1"[CR]
	%1	"00000"~"99999"
	Unacceptable	"Error code"[CR]

9.9.3   CR_LAMPCORRESPH Command

Command	"CR_LAMPCORRESPH"[CR]	
Details	Get total running time of lamp by hour (h) * Corresponding value, not actual running time	
Response	Acceptable	"000_%1"[CR]
	%1	"00000"~"99999"
	Unacceptable	Error code"[CR]

9.9.4 CR_LAMPMODE Command

Command	"CR_LAMPMODE"[CR]	
Details	Get setting status of Lamp Mode	
Response	Acceptable	"000_%1"[CR]
	%1	"NORMAL" ------------- Lamp Mode is Normal "ECO" -------------------- Lamp Mode is Eco
	Unacceptable	"Error code"[CR]

9.9.5 CR_LAMPMSTS Command

Command	"CR_LAMPSTS"[CR]	
Details	Get Lighting status of lamp	
Response	Acceptable	"000_%1"[CR]
	%1	" **** " A number of * should be among 1-4. First character shows how many lamps are incorporated in projector. (1,2 or 4) Second character shows following status in order of lamp number. "I" Lamp is ON "O" Lamp is OFF "X" Lamp failure e.g. "1I" 1 lamp model and Lamp is ON "2IO 2 lamps model and No.1 Lamp is ON and No.2Lamp is OFF "4IOXI" 4 lamps model and No.1,No.4 lamps are ON. No.2 lamp is OFF and No.3 model is failed.
	Unacceptable	"Error Code"[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"~"0099999"
	Unacceptable	"Error code"[CR]

9.9.7 CR_HMLAMP Command

Command	"CR_HMLAMP"[CR]	
Details	Get 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_%a"[CR]
	%a	"000"~"063"
	Unacceptable	"Error code"[CR]

9.10.2 CR_MUTE Command

Command	"CR_MUTE"[CR]	
Details	Get sound mute setting status	
Response	Acceptable	"000_%a"[CR]
	%a	"ON" ------------------- Sound Mute is ON "OFF" ------------------ Sound Mute is OFF
	Unacceptable	"Error code"[CR]

9.11 Setting Status Read Command

9.11.1 CR_LANG Command

Command	"CR_LANG"[CR]	
Details	Get selected language	
Response	Acceptable	"000_%a"[CR]
	%a	"ENG" ------------------------- Select English "DEU" ------------------------- Select German "FRA" ------------------------- Select French "ITA" ------------------------- Select Italian "ESP" ------------------------- Select Spanish "POR" ------------------------- Select Portuguese "NED" ------------------------- Select Dutch "SVE" ------------------------- Select Swedish "FIN" ------------------------- Select Finnish "NOR" ------------------------- Select Norwegian "DAN" ------------------------- Select Danish "POL" ------------------------- Select Polish "HUN" ------------------------- Select Hungarian "ROM" ------------------------- Select Romanian "RUS" ------------------------- Select Russian "BRA" ------------------------- Select Brazilian Portuguese "TUR" ------------------------- Select Turkish "ARA" ------------------------- Select Arabic "KAZ" ------------------------- Select Kazak "CHI" ------------------------- Select SimpllifiedChinese "HON" ------------------------- Select Traditional Chinese "KOR" ------------------------- Select Korean "JPN" ------------------------- Select Japanese "THA" ------------------------- Select Thai
	Unacceptable	"Error code"[CR]

9.11.2 CR_AUTOSETUPPCADJ Command

Command	"CR_AUTOSETUPPCADJ" [CR]	
Details	Get Auto PC setting status in Auto setup	
Response	Acceptable	"000_%a"[CR]
	%a	"ON" ----------------- Auto PC ADJ. in Auto setup is ON "OFF" ---------------- Auto PC ADJ. in Auto setup is OFF
	Unacceptable	"Error code"[CR]

9.11.3 CR_INPUTSEARCH Command

Command	"CR_INPUTSEARCH"[CR]	
Details	Get setting status of Auto input	
Response	Acceptable	"000_%a"[CR]
	%a	"OFF" -------------------- Auto input is OFF "ON1" -------------------- Auto input is On1 "ON2" -------------------- Auto input is On2
	Unacceptable	"Error Code"[CR]

9.11.4 CR_ DSET Command

Command	"CR_3DSET"[CR]	
Details	Get setting status of 3D function	
Response	Acceptable	"000_%a"[CR]
	%a	"ON" -------------------- On is selected "OFF" ---------------------Off is selected
	Unacceptable	"Error Code"[CR]

9.11.5 CR_3DSYNC Command

Command	"CR_3DSYNC"[CR]	
Details	Get setting status of 3D Sync	
Response	Acceptable	"000_%a"[CR]
	%a	"1" -------------------- 1 is selected "2" -------------------- 2 is selected
	Unacceptable	"Error Code"[CR]

9.11.6 CR_3DSIDE2D Command

Command	"CR_3DSIDE2D"[CR]	
Details	Get setting status of 3D → 2D	
Response	Acceptable	"000_%a"[CR]
	%a	"ON" -------------------- On is selected "OFF" ---------------------Off is selected
	Unacceptable	"Error Code"[CR]

9.11.7 CR_3DPHASE Command

Command	"CR_3DPHASE"[CR]	
Details	Get the value of 3D Phase	
Response	Acceptable	"000_%a"[CR]
	%a	"000" –"031"
	Unacceptable	"Error Code"[CR]

9.11.8 CR_ ZOOM Command

Command	"CR_ ZOOM"[CR]	
Details	Get setting status of Zoom store mode	
Response	Acceptable	"000_%a"[CR]
	%a	"RST" --------------------- Zoom is Reset "STR1" --------------------Zoom is store1 "STR2" --------------------Zoom is store2
	Unacceptable	"Error Code"[CR]

9.11.9 CR_BACKGND Command

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

9.11.10 CR_DISP Command

Command	"CR_DISP"[CR]	
Details	Get setting status of Display	
Response	Acceptable	"000_%a"[CR]
	%a	"ON" ------------------------- Display is ON "OFF" ----------------------- Display is OFF "CNTDWNOFF" ---------- Countdown OFF
	Unacceptable	"Error code"[CR]

9.11.11 CR_LOGO Command

Command	"CR_LOGO"[CR]	
Details	Get setting status of Logo	
Response	Acceptable	"000_%1"[CR]
	%1	"OFF" ------------------------------ Logo function is OFF "DFLT" ----------------------------- Default Logo is selected "USER" ----------------------------- User Logo is selected
	Unacceptable	"Error code"[CR]

9.11.12 CR_HDMI SETUP Command

Command	"CR_HDMI SETUP"[CR]	
Details	Get status of Image mode in HDMI setup	
Response	Acceptable	"000_%1"[CR]
	%1	"NORMAL" -------------------- Image mode is Normal "ENHANCED" ---------------- Image mode is Enhanced
	Unacceptable	"Error code"[CR]

9.11.13 CR_HDMI SETUPSOUND Command

Command	"CR_ HDMI SOUND"[CR]	
Details	Get status of Sound mode in HDMI setup	
Response	Acceptable	"000_%1"[CR]
	%1	"HDMI" ---------------------- PCM sound (Digital sound) is selected. "EXTERNAL" ------------ External sound input is selected.
	Unacceptable	"Error code"[CR]

9.11.14 CR_TERMINAL Command

Command	"CR_TERMINAL" [CR]	
Details	Get setting status of Terminal	
Response	Acceptable	"000_%1"[CR]
	%1	"COMPUTER"------------Computer Input mode "MONITOR"---------------Monitor Out mode
	Unacceptable	"?"[CR]

9.11.15 CR_STANDBYMODE Command

Command	"CR_STANDBYMODE" [CR]	
Details	Get Standby Mode setting status	
Response	Acceptable	"000_%a"[CR]
	%a	"ECO" -------------- Eco Mode "NORMAL" -------- Network Mode
	Unacceptable	"Error code"[CR]

9.11.16 CR_P-MANE Command

Command	"CR_P-MANE"[CR]	
Details	Get Power Management mode setting status	
Response	Acceptable	"000_%a"[CR]
	%a	"OFF" ------------------------- Power Management mode is OFF "READY" ---------------------- Power Management mode is Standby "SHUTDOWN" ---- Power Management mode is set to Exi t
	Unacceptable	"Error code"[CR]

9.11.17 CR_P-MANETIME Command

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

9.11.18 CR_ON-STA Command

Command	"CR_ON-STA"[CR]	
Details	Get Direct power on setting status	
Response	Acceptable	"000_%a"[CR]
	%a	"ON" ------------------------ Direct power on is active "OFF" ----------------------- Direct power on is inactive
	Unacceptable	"Error code"[CR]

9.11.19 CR_CCAPTIONDISP Command

Command	"CR_CCAPTIONDISP"[CR]	
Details	Get selected channel of Closed caption	
Response	Acceptable	"000_%a"[CR]
	a	"OFF" --------- Off "CC1" --------- CC1 is selected "CC2" --------- CC2 is selected "CC3" --------- CC3 is selected "CC4" --------- CC4 is selected
	Unacceptable	"Error Code"[CR]

9.11.20 CR_CCAPTIONCOLOR Command

Command	"CR_CCAPTIONCOLOR"[CR]	
Details	Get selected color of Closed caption	
Response	Acceptable	"000"[CR]
	%a	"COLOR" ------- Color is selected "WHITE" -------- White is selected
	Unacceptable	"Error Code"[CR]

9.11.21 CR_RCODE Command

Command	"CR_RCODE"[CR]	
Details	Get selected Remote Control Code	
Response	Acceptable	"000_%a"[CR]
	%a	"001" -------------------------- Code1 is selected "002" -------------------------- Code2 is selected
	Unacceptable	"Error code"[CR]

9.11.22 CR_SECURITY Command

Command	"CR_SECURITY" [CR]	
Details	Get Security Mode setting status	
Response	Acceptable	"000_%1[CR]
	%1	"ON" ------------- PJ Lock setting on Menu is ON-1 or ON-2 "OFF" ------------PJ Lock setting on Menu is OFF
	Unacceptable	"Error Code" [CR]

9.11.23 CR_KEYDIS Command

Command	"CR_KEYDIS"(CR)	
Details	**This command is available to models with top panel buttons only.** Get disability status of RC/Projector keys (valid or invalid)	
Response	Acceptable	"000_%a"[CR]
	%a	"NONE" ------------------------- RC / Projector keys are valid "RC" ----------------------------- RC keys are invalid "KEY" ---------------------------- Projector keys are invalid
	Unacceptable	"Error code"[CR]

9.11.24 CR_PJLOCKNOW Command

Command	"CR_PJLOCKNOW" [CR]	
Details	Get if PJ lock is actually in operation	
Response	Acceptable	"000_%1[CR]
	%1	"LOCK" ------------- PJ Lock is in operation. PJ Lock status is ON-1 or ON-2 on Menu, and PJ PIN CODE is not entered so that projector is actually locked. "FREE" ------------- PJ Lock is released. PJ Lock status is OFF, or, status is ON-1 or ON-2 on Menu but PJ PIN CODE is entered correctly so that PJ Lock is released.
	Unacceptable	"Error Code" [CR]

9.11.25 CR_PJLOCKMENU Command

Command	"CR_PJLOCKMENU" [CR]	
Details	Get status of PJ Lock on Menu	
Response	Acceptable	"000_%1[CR]
	%1	"ON1" ------------- PJ Lock status is On-1 "ON2" ------------- PJ Lock status is On-2 "OFF" ------------ PJ Lock status is OFF
	Unacceptable	"Error Code" [CR]

9.11.26 CR_FANMODE Command

Command	"CR_FANMODE"[CR]	
Details	Get selected Fan mode	
Response	Acceptable	"000_%a"[CR]
	%a	"L1" ---------------------- Fan mode is L1 "L2" ---------------------- Fan mode is L2
	Unacceptable	"Error code"[CR]

9.11.27 CR_FANCONTROL Command

Command	"CR_FANCONTROL"[CR]	
Details	Get selected Fan control setting status	
Response	Acceptable	"000_%a"[CR]
	%a	"OFF" ---------------------- Fan control is OFF "ON1" ---------------------- Fan control is ON1 "ON2" ---------------------- Fan control is ON2
	Unacceptable	"Error code"[CR]

9.11.28 CR_FILH Command

Command	"CR_FILH"[CR]	
Details	Get Filter used time	
Response	Acceptable	"000_%1"[CR]
	%1	"00000"~"99999" ------------------- 0 hour to 99999 hours
	Unacceptable	"Error Code"[CR]

9.11.29 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" ------------------ Within filter replacement time
	Unacceptable	"Error Code"[CR]

9.11.30 CR_FILTIMER Command

Command	"CR_FILTIMER" [CR]	
Details	Get setting time which filter warning OSD is displayed	
Response	Acceptable	"000_%1"[CR]
	%1	"2000" ----------------2000 hours "3000" ----------------3000 hours "4000" ----------------4000 hours "OFF" --------------- No OSD display
	Unacceptable	"Error Code"[CR]

9.12 Other Status Read Command

9.12.1 CR_STATUS Command

Command	"CR_STATUS"(CR)	
Details	Get status of Projector behavior. This command affects the same as "CR0" of Basic Serial command, but this has an error code.	
Response	Acceptable	"000_%1"[CR]
	%1	"00"= Power ON "80"= Stand by "40"= Count down "20"= Cooling down "10"= Power failure "28"= Cooling down due to abnormal temperature "88"= Stand by after Cooling down "24"= Power saving cooling down "04"= Power saving "21"= Cooling down due to Lamp failure "81"= Stand by 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_%a"[CR]
	%a	"ON" ---------------------- Signal is found "OFF" ---------------------- There is no signal
	Unacceptable	"Error code"[CR]

9.12.3 CR_VMUTE Command

Command	"CR_VMUTE"[CR]	
Details	Get setting status of Blank	
Response	Acceptable	"000_%a"[CR]
	%a	"ON" -------- Blank is ON "OFF" ------- Blank is OFF
	Unacceptable	"Error code"[CR]

9.12.4 CR_FREEZE Command

Command	"CR_FREEZE"[CR]	
Details	Get setting status of Freeze	
Response	Acceptable	"000_%a"[CR]
	%a	"ON" --------------------- Freeze is ON "OFF" -------------------- Freeze is OFF
	Unacceptable	"Error code"[CR]

9.12.5 CR_ PTIMER Command

Command	"CR_ PTIMER"[CR]	
Details	Get setting status of Presentation timer	
Response	Acceptable	"000_%a"[CR]
	%a	"ON" --------------------- Presentation timer is active "STOP" ------------------ Presentation timer is pause "OFF" -------------------- Presentation timer is inactive
	Unacceptable	"Error code"[CR]

9.12.6 CR_TEMPWARN Command

Command	"CR_TEMPWARN"[CR]	
Details	Get the temperature inside a projector and its condition if it is abnormal temperature or close to abnormal temperature If there are several sensors installed, it is possible to get information from all the sensors at once.	
Response	Acceptable	"000_%a_%b_%c"[CR]

	%a
	%b
	%c
		%a -------------------- Sensor 1 status
		%b -------------------- Sensor 2 status
		%c -------------------- Sensor 3 status
		
		  "W" ---- Approach or reach abnormal temperature
		           (dangerous temperature)
		  "S" ---- Far from abnormal temperature (safe temperature)
		  "N" ---- Sensor detects no abnormal temperature
		
		[Example]
		  "S_W_S"[CR] means Sensor 1 detects safe temperature, Sensor 2 detects abnormal temperature and Sensor 3 detects safe temperature
		Note) When the temperature difference between Sensor 1 and 3 reaches specific value, some of the models detect it as Abnormal temperature. In this case, the 3rd data shows if the temperature difference between Sensor 1 and 3 is dangerous state or not. The 3rd data means temperature abnormality due to Sensor 3
		When abnormal temperature is not detected by sensor, "N" (No connection with temperature abnormality) is returned.

	Unacceptable	"Error code"[CR]

9.12.7 CR_TEMP Command

Command	"CR_TEMP"[CR]
Details	Get current temperature inside a projector. If there are several sensors installed, it is possible to get information from all the sensors at once.

Response		
	Acceptable	"000_%1_%2_%3"[CR]
	%1,%2,%3	%1= Sensor 1 temperature (Outside temperature) %2= Sensor 2 temperature (Inside temperature1) %3= Sensor 3 temperature (Inside temperature2) %1,%2 are consists of 6 bites fixed There must be 1 space between %1 and %2, and, %2 and %3 e.g. _31.5F "_" means a space and "_" changes into "-", when temperature gets below freezing. e.g. -05.5F The last character shows if corresponding sensor is under abnormal temperature. "F" ------- Abnormal temperature "W"-------Close to abnormal temperature(Temperature is as high to display Warning) "S" -------Not close to abnormal temperature (Temperature is low enough and safe.) "N"-------Applicable sensor does not detect abnormal temperature "E" -------Not able to return temperature data When several sensors are incorporated, projector returns values continuously. e.g. "_31.5F__35.2S__38.0W"[CR] A data of sensor 1 comes first and a data of sensor 2 follows after 1 space. As described respectively in e.g., sensor 1 detects abnormal temp., sensor 2 detects 35.2 degrees which means safety, and sensor 3 is 38 degrees which is close to abnormal temp. In case projector cannot return its data due to some hard ware failure, the last character becomes "E" such as "_00.0E". Some of the projectors get abnormal temperature because of heat of Lamp ballast in Standby mode or Powering ON. Therefore detection of abnormal temperature is suspended while Standby mode or adequate time after Power ON, and during that time projector returns "_----N" as a temperature data.
	Unacceptable	"Error Code"[CR]

9.12.8   CR_TEMPFAIL Command

Command	"CR_TEMPFAIL"[CR]		
Details	Get the temperature inside a projector when abnormal temperature occurs. If there are several sensors installed, it is possible to get information from all the sensors at once.		
Response	Acceptable	"000_%a_%b_%c"[CR]	

	%a
	%b
	%c
		%a ------------------ Sensor 1 temp. (External temp.)
		%b ------------------ Sensor 2 temp. (Internal temp.1)
		%c ------------------ Sensor 3 temp. (Internal temp.2)
		
		[Example]
		"_31.5F"[CR]
		"_" indicates a space. When the temperature sinks to -, the first character is "-" like "-05.5F"[CR]
		The last character means the sensor's status if it reaches abnormal temperature
		
		    Exceeding critical temp. ---------------------------- "F"
		    Temp. is safe -- "S"
		    Sensor detects no critical temp.--------------------- "N"
		
		The example shows that sensor 1 indicates 31.5 degrees and the temperature is abnormal.
		When the temperature is safe, all data are represented as "□000S".
		When the projector is reset, "□000S" 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.	

	Unacceptable	"Error code"[CR]	

9.12.9   CR_ SERIALNO Command

Command	"CR_ SERIALNO"[CR]	
Details	Get serial number (For dealer)	
Response	Acceptable	"000_%1"[CR]
	%1	"8 digit numbers and characters "
	Unacceptable	"Error code"[CR]