

# EXPAND SERIAL COMMAND FUNCTIONAL SPECIFICATIONS

LV-7585

Ver.1.1

SANYO Electric Co., Ltd  
Personal Mobile Group  
DI Company  
Projector Division

**Contents**

1. **Overview** ..... 8

2. **Serial Interface Specification** ..... 8

    2.1 **Transfer Specification** ..... 8

    2.2 **Connection** ..... 8

3. **Notes for communication** ..... 9

4. **Notation Convention** ..... 9

5. **Functional Execution Command Table** ..... 10

    5.1 **Image Command Table** ..... 10

    5.2 **PC Adjust Control Command Table** ..... 10

    5.3 **Input Control Command Table** ..... 10

    5.4 **Screen Control Command Table** ..... 11

    5.5 **Lamp Command Table** ..... 11

    5.6 **Setting Command Table** ..... 11

    5.7 **Other Command Table** ..... 11

6. **Status Read Command Table** ..... 12

    6.1 **Image Status Read Command Table** ..... 12

    6.2 **PC Adjust Status Read Command Table** ..... 12

    6.3 **Video Status Read Command Table** ..... 12

    6.4 **Input Status Read Command Table** ..... 13

    6.5 **Screen Status Read Command Table** ..... 13

    6.6 **Lamp Status Read Command Table** ..... 13

    6.7 **Setting Status Read Command Table** ..... 13

    6.8 **Other Status Read Command Table** ..... 14

7. **Error Code Table** ..... 14

8. **Functional Execution Command** ..... 15

    8.1 **Format** ..... 15

    8.2 **Transfer Example** ..... 15

    8.3 **Operation Requirements** ..... 15

    8.4 **Image Command** ..... 16

        8.4.1 **CF\_ BRIGHT Command** ..... 16

        8.4.2 **CF\_ CONT Command** ..... 16

        8.4.3 **CF\_ COLOR Command** ..... 16

        8.4.4 **CF\_ TINT Command** ..... 16

        8.4.5 **CF\_ SHARP Command** ..... 17

        8.4.6 **CF\_ GAMMA Command** ..... 17

        8.4.7 **CF\_ WBAL- Command** ..... 17

        8.4.8 **CF\_ COLTEMP Command** ..... 17

        8.4.9 **CF\_ OFFSET- Command** ..... 18

        8.4.10 **CF\_ NZRED Command** ..... 18

8.4.11	<b>CF_PROGV Command</b>	18
8.4.12	<b>CF_IMAGE Command</b>	19
8.4.13	<b>CF_IMAGEADJ Command</b>	19
8.4.14	<b>CF_APCTRL Command</b>	19
8.4.15	<b>CF_COLMNSAV Command</b>	20
8.4.16	<b>CF_COLMNLD Command</b>	20
8.5	<b>PC Adjust Control Command</b>	20
8.5.1	<b>CF_FSYNC Command</b>	20
8.5.2	<b>CF_TDOTS Command</b>	20
8.5.3	<b>CF_CLPPHASE Command</b>	21
8.5.4	<b>CF_H-POS Command</b>	21
8.5.5	<b>CF_V-POS Command</b>	21
8.5.6	<b>CF_DDOTS Command</b>	21
8.5.7	<b>CF_DLINE Command</b>	22
8.5.8	<b>CF_SETPCADJ Command</b>	22
8.5.9	<b>CF_ORGMODE Command</b>	22
8.5.10	<b>CF_PCSTORE Command</b>	23
8.5.11	<b>CF_PCMODEFREE Command</b>	23
8.6	<b>Input Control Command</b>	24
8.6.1	<b>CF_INPUT Command</b>	24
8.6.2	<b>CF_SOURCE Command</b>	24
8.6.3	<b>CF_INPUT 1 Command</b>	25
8.6.4	<b>CF_INPUT 2 Command</b>	25
8.6.5	<b>CF_INPUT 3 Command</b>	25
8.6.6	<b>CF_INPUT 4 Command</b>	25
8.6.7	<b>CF_SYSTEM Command</b>	26
8.7	<b>Screen Control Command</b>	27
8.7.1	<b>CF_SCREEN Command</b>	27
8.7.2	<b>CF_VSCALE Command</b>	27
8.7.3	<b>CF_VPOS Command</b>	28
8.7.4	<b>CF_HSCALE Command</b>	28
8.7.5	<b>CF_HPOS Command</b>	28
8.7.6	<b>CF_DZCENT Command</b>	29
8.7.7	<b>CF_KEYSTONE Command</b>	29
8.7.8	<b>CF_KYSTNMODE Command</b>	29
8.8	<b>Lamp Command</b>	30
8.8.1	<b>CF_LAMPH Command</b>	30
8.8.2	<b>CF_LAMPMODE Command</b>	30
8.9	<b>Setting Command</b>	30
8.9.1	<b>CF_BACKGND Command</b>	30

8.9.2	<b>CF_DISP</b> Command .....	30
8.9.3	<b>CF_LOGO</b> Command .....	31
8.9.4	<b>CF_CEIL</b> Command .....	31
8.9.5	<b>CF_REAR</b> Command .....	31
8.9.6	<b>CF_RCODE</b> Command .....	32
8.9.7	<b>CF_RSENS</b> Command .....	32
8.9.8	<b>CF_LANG</b> Command .....	32
8.9.9	<b>CF_ON-STA</b> Command .....	33
8.9.10	<b>CF_P-MANE</b> Command .....	33
8.9.11	<b>CF_P-MANETIME</b> Command .....	33
8.9.12	<b>CF_FANSPEED</b> Command .....	33
8.9.13	<b>CF_KEYDIS</b> Command .....	34
8.9.14	<b>CF_FDEFAULT</b> Command .....	34
8.9.15	<b>CF_PJPINCODE</b> Command .....	34
8.9.16	<b>CF_TESTPAT</b> Command .....	34
8.9.17	<b>CF_FILH</b> Command .....	35
8.9.18	<b>CF_FILTIMER</b> Command .....	35
8.9.19	<b>CF_FILCTL</b> Command .....	35
8.9.20	<b>CF_FILSCRL</b> Command .....	35
8.9.21	<b>CF_POINTER</b> Command .....	35
8.10	<b>Other Commands</b> .....	36
8.10.1	<b>CF_KEYEMU</b> Command .....	36
8.10.2	<b>CF_MENU</b> Command .....	36
8.10.3	<b>CF_POWER</b> Command .....	36
8.10.4	<b>CF_FREEZE</b> Command .....	37
9.	<b>Status Read Command</b> .....	38
9.1	<b>Format</b> .....	38
9.2	<b>Transfer Example</b> .....	38
9.3	<b>Operation Condition</b> .....	38
9.4	<b>Image Status Read Command</b> .....	38
9.4.1	<b>CR_BRIGHT</b> Command .....	38
9.4.2	<b>CR_CONT</b> Command .....	38
9.4.3	<b>CR_COLOR</b> Command .....	38
9.4.4	<b>CR_TINT</b> Command .....	39
9.4.5	<b>CR_SHARP</b> Command .....	39
9.4.6	<b>CR_GAMMA</b> Command .....	39
9.4.7	<b>CR_WBAL-R</b> Command .....	39
9.4.8	<b>CR_WBAL-G</b> Command .....	39
9.4.9	<b>CR_WBAL-B</b> Command .....	39
9.4.10	<b>CR_COLTEMP</b> Command .....	40

9.4.11 CR_OFFSET-R Command.....	40
9.4.12 CR_OFFSET-G Command.....	40
9.4.13 CR_OFFSET-B Command.....	40
9.4.14 CR_NZRED Command.....	40
9.4.15 CR_PROGV Command.....	41
9.4.16 CR_IMAGE Command.....	41
9.4.17 CR_IMGGMD Command.....	41
9.4.18 CR_APCTRL Command.....	41
<b>9.5 PC Adjust Status Read Command.....</b>	<b>42</b>
9.5.1 CR_FSYNC Command.....	42
9.5.2 CR_TDOTS Command.....	42
9.5.3 CR_CLPPHASE Command.....	42
9.5.4 CR_H-POS Command.....	42
9.5.5 CR_V-POS Command.....	42
9.5.6 CR_DDOTS Command.....	43
9.5.7 CR_DLINE Command.....	43
9.5.8 CR_ORGMODE Command.....	43
9.5.9 CR_PCSTORE Command.....	44
9.5.10 CR_SETPCADJ Command.....	44
<b>9.6 Video Status Read Command.....</b>	<b>45</b>
9.6.1 CR_SERSYS Command.....	45
<b>9.7 Input Read Command.....</b>	<b>45</b>
9.7.1 CR_INPUT Command.....	45
9.7.2 CR_SOURCE Command.....	45
9.7.3 CR_SRCINP1 Command.....	46
9.7.4 CR_SRCINP2 Command.....	46
9.7.5 CR_SRCINP3 Command.....	46
9.7.6 CR_SRCINP4 Command.....	46
9.7.7 CR_SYSTEM Command.....	47
9.7.8 CR_SYSLIST Command.....	48
9.7.9 CR_MODELIST Command.....	48
9.7.10 CR_HMSLOT Command.....	49
9.7.11 CR_NMSLOT1 Command.....	49
9.7.12 CR_NMSLOT2 Command.....	49
9.7.13 CR_NMSLOT3 Command.....	49
9.7.14 CR_NMSLOT4 Command.....	49
9.7.15 CR_IDSLOT1 Command.....	50
9.7.16 CR_IDSLOT2 Command.....	50
9.7.17 CR_IDSLOT3 Command.....	50
9.7.18 CR_IDSLOT4 Command.....	50

<b>9.8 Screen Status Read Command</b> .....	51
9.8.1 <b>CR_SCREEN</b> Command .....	51
9.8.2 <b>CR_VSCALE</b> Command .....	51
9.8.3 <b>CR_VPOS</b> Command .....	51
9.8.4 <b>CR_HSCALE</b> Command .....	51
9.8.5 <b>CR_HPOS</b> Command .....	51
9.8.6 <b>CR_KYSTNMODE</b> Command .....	52
<b>9.9 Lamp Status Read Command</b> .....	52
9.9.1 <b>CR_LAMPREPL</b> Command .....	52
9.9.2 <b>CR_LAMPH</b> Command .....	52
9.9.3 <b>CR_LAMPCORRESPH</b> Command .....	52
9.9.4 <b>CR_LAMPMODE</b> Command .....	52
9.9.5 <b>CR_LAMPSTS</b> Command .....	53
9.9.6 <b>CR_PROJH</b> Command .....	53
9.9.7 <b>CR_HMLAMP</b> Command .....	53
<b>9.10 Setting Status Read Command</b> .....	53
9.10.1 <b>CR_BACKGND</b> Command .....	53
9.10.2 <b>CR_DISP</b> Command .....	53
9.10.3 <b>CR_LOGO</b> Command .....	54
9.10.4 <b>CR_LOGOLOCK</b> Command .....	54
9.10.5 <b>CR_CEIL</b> Command .....	54
9.10.6 <b>CR_REAR</b> Command .....	54
9.10.7 <b>CR_RCODE</b> Command .....	54
9.10.8 <b>CR_RSENS</b> Command .....	55
9.10.9 <b>CR_RTYPE</b> Command .....	55
9.10.10 <b>CR_LANG</b> Command .....	55
9.10.11 <b>CR_ON-STA</b> Command .....	55
9.10.12 <b>CR_P-MANE</b> Command .....	56
9.10.13 <b>CR_P-MANETIME</b> Command .....	56
9.10.14 <b>CR_FANSPEED</b> Command .....	56
9.10.15 <b>CR_KEYDIS</b> Command .....	56
9.10.16 <b>CR_SECURITY</b> Command .....	56
9.10.17 <b>CR_PJLOCKNOW</b> Command .....	57
9.10.18 <b>CR_PJLOCKMENU</b> Command .....	57
9.10.19 <b>CR_TESTPAT</b> Command .....	57
9.10.20 <b>CR_FILH</b> Command .....	57
9.10.21 <b>CR_FILCOND</b> Command .....	58
9.10.22 <b>CR_FILREPL</b> Command .....	58
9.10.23 <b>CR_FILTIMER</b> Command .....	58
9.10.24 <b>CR_FILREMAIN</b> Command .....	58

9.10.25 <b>CR_POINTER</b> Command .....	58
<b>9.11 Other Status Read Commands</b> .....	59
9.11.1 <b>CR_STATUS</b> Command .....	59
9.11.2 <b>CR_PRESSURE</b> Command.....	59
9.11.3 <b>CR_SIGNAL</b> Command.....	59
9.11.4 <b>CR_VMUTE</b> Command.....	59
9.11.5 <b>CR_FREEZE</b> Command .....	60
9.11.6 <b>CR_ALLPFAIL</b> Command .....	60
9.11.7 <b>CR_HMPFAIL</b> Command.....	60
9.11.8 <b>CR_PFAIL01</b> Command .....	60
9.11.9 <b>CR_PFAIL02</b> Command .....	60
9.11.10 <b>CR_PFAIL03</b> Command .....	61
9.11.11 <b>CR_PFAIL04</b> Command .....	61
9.11.12 <b>CR_PFAIL05</b> Command .....	61
9.11.13 <b>CR_PFAIL06</b> Command .....	61
9.11.14 <b>CR_PFAIL07</b> Command .....	62
9.11.15 <b>CR_PFAIL08</b> Command .....	62
9.11.16 <b>CR_PFAIL09</b> Command .....	62
9.11.17 <b>CR_PFAIL10</b> Command .....	62
9.11.18 <b>CR_PFAIL11</b> Command .....	62
9.11.19 <b>CR_PFAIL12</b> Command .....	63
9.11.20 <b>CR_PFAIL13</b> Command .....	63
9.11.21 <b>CR_PFAIL14</b> Command .....	63
9.11.22 <b>CR_PFAIL15</b> Command .....	63
9.11.23 <b>CR_PFAIL16</b> Command .....	63
9.11.24 <b>CR_PFAIL17</b> Command .....	64
9.11.25 <b>CR_PFAIL18</b> Command .....	64
9.11.26 <b>CR_PFAIL19</b> Command .....	64
9.11.27 <b>CR_PFAIL20</b> Command .....	64
9.11.28 <b>CR_PFAIL21</b> Command .....	64
9.11.29 <b>CR_PFAIL22</b> Command .....	65
9.11.30 <b>CR_PFAIL23</b> Command .....	65
9.11.31 <b>CR_PFAIL24</b> Command .....	65
9.11.32 <b>CR_PFAIL25</b> Command .....	65
9.11.33 <b>CR_PFAIL26</b> Command .....	65
9.11.34 <b>CR_PFAIL27</b> Command .....	66
9.11.35 <b>CR_TEMPFAIL</b> Command.....	66
9.11.36 <b>CR_TEMP</b> Command .....	67

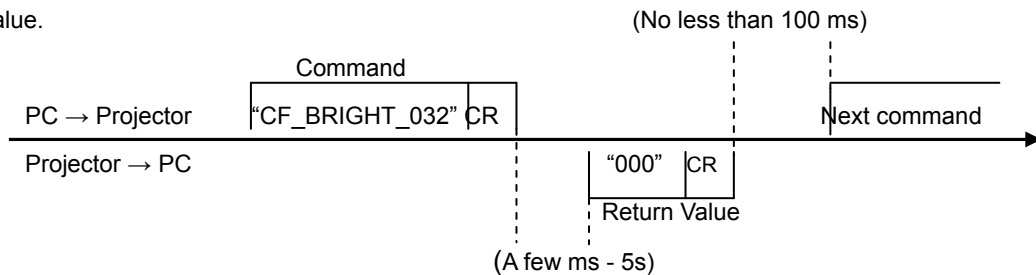


### 3. Notes for communication

- Expand Serial Command is defined as a single command per line that starts with "C" and ends with carriage return (0x0D).
- There are two types of commands; Functional Execution Commands and Status Read Command.
  - Example of Functional Execution Command: "CF\_BRIGHT\_032" [CR]
  - Example of Status Read Command: "CR\_BRIGHT" [CR]

Note) "\_" means a space

- When it takes more than a second to receive a single command, it is not executed.  
When it takes more than a second to receive carriage return (0x0D) since the reception of the first data "C", it clears the information of the receive buffer.
- When the command pipelining, allow the interval time of no less than 100ms after receiving return value.



- Do not send another command before the reception of the return value; the operation by the command is not ensured.  
However this is not the case when no response is returned after more than 5 seconds.
- It takes about 5 seconds for internal initialization after plugging in AC power. During this time, it cannot process commands. Do not issue any command.

### 4. Notation Convention

- Data from a controller to a projector is represented as COMMAND, and data from a projector to a controller in response to the incoming command is represented as RESPONSE.
- [CR]: Carriage Return Code  
Carriage Return code is added to the end of the command.  
Response is also followed by carriage return code.
- \_ : Space Code  
Space Code is represented as (\_).
- %1: Parameter included in Command  
When there are more than one parameter, they are defined as %2, %3...
- %%: Error Code returned from a projector  
Acceptable: "000".  
Unacceptable: See [7. Error Code Table].

## 5. Functional Execution Command Table

### 5.1 Image Command Table

Execute command	Item
<b>CF_BRIGHT_%1 [CR]</b>	Set value of Brightness
<b>CF_CONT_%1 [CR]</b>	Set value of Contrast
<b>CF_COLOR_%1 [CR]</b>	Set value of Color
<b>CF_TINT_%1 [CR]</b>	Set value of Tint
<b>CF_SHARP_%1 [CR]</b>	Set value of Sharpness
<b>CF_GAMMA_%1 [CR]</b>	Set value of Gamma
<b>CF_WBAL-R_%1 [CR]</b>	Set Red value of White Balance
<b>CF_WBAL-G_%1 [CR]</b>	Set Green value of White Balance
<b>CF_WBAL-B_%1 [CR]</b>	Set Blue value of White Balance
<b>CF_COLTEMP_%1 [CR]</b>	Set level of Color Temperature
<b>CF_OFFSET-R_%1 [CR]</b>	Set Red value of Offset
<b>CF_OFFSET-G_%1 [CR]</b>	Set Green value of Offset
<b>CF_OFFSET-B_%1 [CR]</b>	Set Blue value of Offset
<b>CF_NZRED_%1 [CR]</b>	Set ON/OFF of Noise reduction
<b>CF_PROGV_%1 [CR]</b>	Set mode of Progressive scan
<b>CF_IMAGE_%1 [CR]</b>	Set Image mode
<b>CF_IMAGEADJ_%1 [CR]</b>	Set Store/Reset of values in Image Adjustment
<b>CF_APCTRL_%1 [CR]</b>	Set level of Auto Picture Control
<b>CF_COLMSAV_%1 [CR]</b>	Set area to store current values of Color Management
<b>CF_COLMNLD_%1 [CR]</b>	Set area to load values of Color Management

### 5.2 PC Adjust Control Command Table

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

### 5.3 Input Control Command Table

Execute command	Item
<b>CF_INPUT_%1 [CR]</b>	Select Input
<b>CF_SOURCE_%1 [CR]</b>	Select Source of selected Input
<b>CF_INPUT1_%1 [CR]</b>	Select Input1 and also set input source to %1
<b>CF_INPUT2_%1 [CR]</b>	Select Input2 and also set input source to %1
<b>CF_INPUT3_%1 [CR]</b>	Select Input3 and also set input source to %1
<b>CF_INPUT4_%1 [CR]</b>	Select Input4 and also set input source to %1
<b>CF_SYSTEM_%1 [CR]</b>	Select System of currently selected Input

## 5.4 Screen Control Command Table

Execute command	Item
<b>CF_SCREEN_%1[CR]</b>	Select Screen size
<b>CF_VSCALE_%1[CR]</b>	Set V Scale
<b>CF_VPOS_%1[CR]</b>	Set V Position
<b>CF_HSCALE_%1[CR]</b>	Set H Scale
<b>CF_HPOS_%1[CR]</b>	Set H Position
<b>CF_DZCENT_%1[CR]</b>	Cancel Digital Zoom mode
<b>CF_KEystone_%1[CR]</b>	Set Keystone correction
<b>CF_KYSTNMODE_%1[CR]</b>	Set Keystone store mode

## 5.5 Lamp Command Table

Execute command	Item
<b>CF_LAMPH_%1[CR]</b>	Reset total running time for each lamp
<b>CF_LAMPMODE_%1[CR]</b>	Select Lamp mode

## 5.6 Setting Command Table

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

## 5.7 Other Command Table

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

## 6. Status Read Command Table

### 6.1 Image Status Read Command Table

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

### 6.2 PC Adjust Status Read Command Table

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

### 6.3 Video Status Read Command Table

Status Read command	Item
<b>CR_SERSYS [CR]</b>	Get currently selected signal. In Auto mode, it returns a result by Auto detection.

## 6.4 Input Status Read Command Table

Status Read command	Item
<b>CR_INPUT [CR]</b>	Get selected Input
<b>CR_SOURCE [CR]</b>	Get selected Source
<b>CR_SRCINP1 [CR]</b>	Get selected source for Input 1
<b>CR_SRCINP2 [CR]</b>	Get selected source for Input 2
<b>CR_SRCINP3 [CR]</b>	Get selected source for Input 3
<b>CR_SRCINP4 [CR]</b>	Get selected source for Input 4
<b>CR_SYSTEM [CR]</b>	Get selected system in current Input mode
<b>CR_SYSLIST [CR]</b>	Get possible system list
<b>CR_MODELIST [CR]</b>	Get possible mode list
<b>CR_HMSLOT [CR]</b>	Get total number of Inputs
<b>CR_NMSLOT1 [CR]</b>	Get terminal information of Input1.
<b>CR_NMSLOT2[CR]</b>	Get terminal information of Input2.
<b>CR_NMSLOT3[CR]</b>	Get terminal information of Input3
<b>CR_NMSLOT4[CR]</b>	Get terminal information of Input4.
<b>CR_IDSLOT1[CR]</b>	Get ID information of Input1
<b>CR_IDSLOT2[CR]</b>	Get ID information of Input2
<b>CR_IDSLOT3[CR]</b>	Get ID information of Input3
<b>CR_IDSLOT4[CR]</b>	Get ID information of Input4

## 6.5 Screen Status Read Command Table

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

## 6.6 Lamp Status Read Command Table

Status Read command	Item
<b>CR_LAMPREPL [CR]</b>	Get information of Lamp replacement time
<b>CR_LAMPH [CR]</b>	Get information of actual Lamp running time
<b>CR_LAMPCORRESPH [CR]</b>	Get lamp running time multiplied by a coefficient
<b>CR_LAMPMODE [CR]</b>	Get selected Lamp mode
<b>CR_PROJH [CR]</b>	Get total running time of projector

## 6.7 Setting Status Read Command Table

Status Read command	Item
<b>CR_BACKGND [CR]</b>	Get setting status of Screen for no signal
<b>CR_DISP [CR]</b>	Get setting status of Display
<b>CR_LOGO [CR]</b>	Get setting status of Logo
<b>CR_LOGOLOCK[CR]</b>	Get setting status of Logo Lock
<b>CR_CEIL [CR]</b>	Get setting status of Ceiling
<b>CR_REAR [CR]</b>	Get setting status of Rear
<b>CR_RCODE [CR]</b>	Get selected Remote Control code
<b>CR_RSENS [CR]</b>	Get selected location of infrared remote receiver of remote control
<b>CR_RTYPE [CR]</b>	Get supported Remote Control type (IR/RF)
<b>CR_LANG [CR]</b>	Get selected language
<b>CR_ON-STA [CR]</b>	Get ON Start setting status
<b>CR_P-MANE [CR]</b>	Get Power management setting status
<b>CR_P-MANETIME [CR]</b>	Get setting time for Power Management
<b>CR_FANSPEED [CR]</b>	Get selected Fan Control Speed

<b>CR_KEYDIS [CR]</b>	Get RC/KEY prohibited status
<b>CR_SECURITY [CR]</b>	Get setting status of Security
<b>CR_PJLOCKNOW [CR]</b>	Get setting status of current PJ Lock
<b>CR_PJLOCKMENU [CR]</b>	Get PJ Lock setting status on the menu
<b>CR_TESTPAT[CR]</b>	Get setting status of Test pattern
<b>CR_FILH[CR]</b>	Get Filter used time
<b>CR_FILCOND[CR]</b>	Get status of filter clog
<b>CR_FILREPL[CR]</b>	Get status of Filter cleaning / replacement time
<b>CR_FILTIMER[CR]</b>	Get time to display Filter cleaning / replacement warning on screen
<b>CR_FILREMAIN[CR]</b>	Get remaining number of usable Filter scroll
<b>CR_POINTER[CR]</b>	Get setting status of Pointer

### 6.8 Other Status Read Command Table

Status Read command	Item
<b>CR_STATUS [CR]</b>	Get operating status of Projector
<b>CR_PRESSURE [CR]</b>	Get air pressure information.
<b>CR_SIGNAL [CR]</b>	Get status of signal existence
<b>CR_VMUTE [CR]</b>	Get setting status of No show
<b>CR_FREEZE [CR]</b>	Get setting status of Freeze
<b>CR_ALLPFAIL [CR]</b>	Get all information of Power Failure
<b>CR_HMPFAIL [CR]</b>	Get total number of detectable Power Failure
<b>CR_PFAIL01 [CR]</b>	Get Item name of Power Failure No.01 and error status
<b>CR_PFAIL02 [CR]</b>	Get Item name of Power Failure No.02 and error status
<b>CR_PFAIL50 [CR]</b>	Get Item name of Power Failure No.50 and error status
<b>CR_TEMPFAIL [CR]</b>	Get temperature when sensors approach abnormal temperature
<b>CR_TEMP [CR]</b>	Get current temperature

### 7. Error Code Table

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

## 8. Functional Execution Command

### 8.1 Format

1) PC issues commands in format as below:

**Pattern1:** "CF\_ COMMAND" [CR]

**Pattern2:** "CF\_ COMMAND\_" %1 [CR]

CF\_: Header

COMMAND: String

%1: Parameter (String)

\_: Space (To separate COMMAND and Parameter)

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

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

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

See Error Code Table for details

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

### 8.2 Transfer Example

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

PC → PJ: "CF\_TDOTS\_1344" [CR]

PC → PJ: "000" [CR] ----- Acceptable

### 8.3 Operation Requirements

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

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

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

Note) When projector receives another command in the above status, it returns error code which shows the status.

## 8.4 Image Command

### 8.4.1 CF\_BRIGHT Command

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

### 8.4.2 CF\_CONT Command

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

### 8.4.3 CF\_COLOR Command

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

### 8.4.4 CF\_TINT Command

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

**8.4.5 CF\_SHARP Command**

Command	"CF_SHARP_%1" [CR]	
%1	"000-031"----- Directly specify setting value of Sharpness "UP"----- Increment setting value of Sharpness by 1 "DN"----- Decrement setting value of Sharpness by 1	
Details	Set user controlled value of Sharpness (Available only in the normal Power ON status) The value set by this command will not be stored in the projector's memory. Therefore, when the power is turned to ALL OFF status, the value returns to the original setting. (It is stored in Standby mode.)	
Response	Acceptable	"000" [CR]
	Unacceptable	"Error Code" [CR]

**8.4.6 CF\_GAMMA Command**

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

**8.4.7 CF\_WBAL- Command**

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

**8.4.9 CF\_OFFSET- Command**

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

**8.4.10 CF\_NZRED Command**

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

**8.4.11 CF\_PROGV Command**

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

8.4.12 CF\_IMAGE Command

Command	"CF_IMAGE_%1" [CR]	
%1	"STAND" ----- Standard(Image adjust value is set to factory default for Still Image) "REAL"----- High contrast (Fixed value to display graphic image with natural tone) "CINEMA"----- Cinema (Fixed value to focus on tone reproduction for movie) "CUSTOM1" ----- Custom1 (the value adjusted and stored by user) "CUSTOM2" ----- Custom 2 (the value adjusted and stored by user) "CUSTOM3" ----- Custom 3 (the value adjusted and stored by user) "CUSTOM4" ----- Custom 4 (the value adjusted and stored by user) "CUSTOM5" ----- Custom 5 (the value adjusted and stored by user) "CUSTOM6" ----- Custom 6 (the value adjusted and stored by user) "CUSTOM7" ----- Custom 7 (the value adjusted and stored by user) "CUSTOM8" ----- Custom 8 (the value adjusted and stored by user) "CUSTOM9" ----- Custom 9 (the value adjusted and stored by user) "CUSTOM10" ----- Custom 10 (the value adjusted and stored by user)	
Details	Select Image Mode (Available only in the normal Power ON status) Parameter "CUSTOM1" to "CUSTOM10" corresponds to "Custom 1" to "Custom 10" displayed in projector OSD menu on selecting Image. The value set by this command is stored in EEPROM so that the setting can remain effective even after the power is turned to ALL OFF status.	
Response	Acceptable	"000" [CR]
	Unacceptable	"Error Code" [CR]

8.4.13 CF\_IMAGEADJ Command

Command	"CF_IMAGEADJ_%1"[CR]	
%1	"RST"----- Reset adjusted value for the Image "STR1"---- Store current adjusted value to Custom 1 "STR2"---- Store current adjusted value to Custom 2 "STR3"---- Store current adjusted value to Custom 3 "STR4"---- Store current adjusted value to Custom 4 "STR5"---- Store current adjusted value to Custom 5 "STR6"---- Store current adjusted value to Custom 6 "STR7"---- Store current adjusted value to Custom 7 "STR8"---- Store current adjusted value to Custom 8 "STR9"---- Store current adjusted value to Custom 9 "STR10"---- Store current adjusted value to Custom 10	
Details	Reset or Store adjusted value for Image. (Available only in the normal Power ON status) "STR1"-"STR10" corresponds to "Custom1"-"Custom10" displayed in projector OSD menu on selecting "Store" for adjusted value of Image. The setting value set in "Image1" to "Image10" is stored and can be retrieved when turning on the projector again after the power is turned to ALL OFF status.	
Response	Acceptable	"000" [CR]
	Unacceptable	"Error Code" [CR]

8.4.14 CF\_APCTRL Command

Command	"CF_APCTRL_%1" [CR]	
%1	"L1" ----- Set Auto Picture Control to Level 1. "L2" ----- Set Auto Picture Control to Level 2. "OFF" ----- Set Auto Picture Control OFF. "UP" ----- Switch setting forward direction (OFF→L1→L2→OFF) "DN" ----- Switch setting backward direction (OFF→L2→L1→OFF)	
Details	Set Auto Picture Control (Available only in the normal Power ON status)	
Response	Acceptable	"000" [CR]
	Unacceptable	"Error Code" [CR]

**8.4.15 CF\_COLMNSAV Command**

Command	"CF_COLMNSAV_%1" [CR]	
%1	"000 – 009" ----- Specify the area to store	
Details	Store current setting status of Color Management to the area specified in %1. (Available only in the normal Power ON status)	
Response	Acceptable	"000" [CR]
	Unacceptable	"Error Code" [CR]

**8.4.16 CF\_COLMNL D Command**

Command	"CF_COLMNL D_%1" [CR]	
%1	"000 – 009" ----- Specify the area to store	
Details	Retrieve Color Management setting status from the area specified in %1. (Available only in the 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 specify setting value of Fine Sync "UP" ----- Increment setting value of Fine Sync by 1 "DN" ----- Decrement setting value of Fine Sync by 1	
Details	Set value of Fine Sync in PC signal (Available only in the normal Power ON status) The value set by this command will not be stored in the projector's memory. Therefore, when the power is turned to ALL OFF status, the value returns to the original setting. (It is stored in Standby mode.)	
Response	Acceptable	"000" [CR]
	Unacceptable	"101" [CR] --- When input is Video signal

**8.5.2 CF\_TDOTS Command**

Command	"CF_TDOTS_%1" [CR]	
%1	"mmmm - nnnn" ----- Directly specify setting value of Total Dots "mmmm" indicates minimum value, which is current (Display area H + Position H) value "nnnn" indicates maximum value, which is <i>less than 140 MHz in Dot Clocks</i> "UP" ----- Increment setting value of Total Dots by 1 "DN" ----- Decrement setting value of Total Dots by 1	
Details	Set value of Total Dots in PC signal (Available only in the normal Power ON status) The value set by this command will not be stored in the projector's memory. Therefore, when the power is turned to ALL OFF status, the value returns to the original setting. (It is stored in Standby mode.)	
Response	Acceptable	"000" [CR]
	Unacceptable	"101" [CR] --- When input is Video signal

**8.5.3 CF\_CLPPHASE Command**

Command	"CF_CLPPHASE_%1" [CR]	
%1	"0001-0255" ----- Directly specify setting value of Clamp Phase "UP" ----- Increment setting value of Clamp Phase by 1 "DN" ----- Decrement setting value of Clamp Phase by 1	
Details	Set value of Clamp Phase (Available only in the normal Power ON status) The value set by this command will not be stored in the projector. Therefore, when the power is turned to ALL OFF, the value returns to the original setting. (It is stored in Standby mode.)	
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 specify setting value of Horizontal Position "nnnn" indicates maximum value, which is current value of (Total dots - Display area H) "UP" ----- Increment setting value of Horizontal Position by 1 "DN" ----- Decrement setting value of Horizontal Position by 1	
Details	Set value of Horizontal Position in PC signal (Available only in the normal Power ON status) The value set by this command will not be stored in the projector's memory. Therefore, when the power is turned to ALL OFF status, the value returns to the original setting. (It is stored in Standby mode.)	
Response	Acceptable	"000" [CR]
	Unacceptable	"101" [CR] --- When input is Video signal

**8.5.5 CF\_V-POS Command**

Command	"CF_V-POS_%1" [CR]	
%1	"0000-nnnn" ----- Directly specify setting value of Vertical Position "nnnn" indicates maximum value, which is current (Total Line – Display Area V) value "UP" ----- Increment setting value of Vertical Position by 1 "DN" ----- Decrement setting value of Vertical Position by 1	
Details	Set Vertical Position value (Available only in the normal Power ON status) The value set by this command will not be stored in the projector's memory. Therefore, when the power is turned to ALL OFF status, the value returns to the original setting. (It is stored in Standby mode.)	
Response	Acceptable	"000" [CR]
	Unacceptable	"101" [CR] ---- When input is Video signal

**8.5.6 CF\_DDOTS Command**

Command	"CF_DDOTS_%1" [CR]	
%1	"0100-nnnn" ----- Directly specify setting value of Display Dots "nnnn" indicates maximum value, which is current value of (Total Dots - Position H). In this projector, the value should be "even number" and if "odd number" is specified, it adds 1 to make the value even number. "UP" ----- Increment setting value of Display Dots by 2 "DN" ----- Decrement setting value of Display Dots by 2	
Details	Set setting value of Display Dots in PC signal (Available only in the normal Power ON status) The value set by this command will not be stored in the projector's memory. Therefore, when the power is turned to ALL OFF status, the value returns to the original setting. (It is stored in Standby mode.)	

Response	Acceptable	"000" [CR]
	Unacceptable	"101" [CR] --- When input is Video signal

**8.5.7 CF\_DLINE Command**

Command	"CF_DLINE_%1" [CR]	
%1	"0100-nnnn" ----- Directly specify setting value of Display Line "nnnn" indicates maximum value, which is current value of (Total Line - Position V). "UP" ----- Increment setting value of Display Line by 1 "DN" ----- Decrement setting value of Display line by 1	
Details	Set setting value of Display Line in PC signal (Available only in the normal Power ON status) The value set by this command will not be stored in the projector's memory. Therefore, when the power is turned to ALL OFF status, the value returns to the original setting. (It is stored in Standby mode.)	
Response	Acceptable	"000" [CR]
	Unacceptable	"101" [CR] --- When input is Video signal

**8.5.8 CF\_SETPCADJ Command**

Command	"CF_SETPCADJ_%1" [CR]	
%1	None "EXT11-60"	
Details	When "EXT11-60" is specified in %1, "Ex Mode" (not like XGA1) is displayed in "SYSTEM" menu.	
Response	Acceptable	"000" [CR]
	Unacceptable	"101" [CR] --- When input is Video signal

**8.5.9 CF\_ORGMODE Command**

Command	"CF_ORGMODE_%1" [CR]	
%1	When input signal is PC Analog; "VGA1" ----- Specify VGA1 "VGA2" ----- Specify VGA2 : "XGA1" ----- Specify XGA1 : "WXGA3" ----- Specify WXGA3 "1080i60" ----- Specify 1080i60 "1080i50" ----- Specify 1080i50 "1035i" ----- Specify 10350i "720p60" ----- Specify 720p60 "720p50" ----- Specify 720p50 "575p" ----- Specify 575p "480p" ----- Specify 480p "575i" ----- Specify 575i "480i" ----- Specify 480i "1080psf/24" ----- Specify 1080psf/24 "1080psf/25" ----- Specify 1080psf/25 "1080psf/30" ----- Specify 1080psf/30 * When input signal is not PC Analog, error code "101" is returned.	
Details	After "EXT n" is set by PC control command such as CF_FSYNC/CF_TDOTS and CF_SETPCADJ command, specify the signal originated with by issuing this command. This command is used to specify projector internal settings such as whether or not to get PC signal through IP (Available only in the normal Power ON status) Note; To differentiate between 60Hz and 50Hz in 1080i and 720p, "60" or "50" is necessary to add to the parameter in this command.	

Response	Acceptable	"000" [CR]
	Unacceptable	"101" [CR] --- When input is Video signal

**8.5.10 CF\_PCSTORE Command**

Command	"CF_PCSTORE_%1" [CR]	
%1	"1" ----- Store current value of PC Adjust to Mode1 "2" ----- Store current value of PC Adjust to Mode2 "3" ----- Store current value of PC Adjust to Mode3 "4" ----- Store current value of PC Adjust to Mode4 "5" ----- Store current value of PC Adjust to Mode5 "6" ----- Store current value of PC Adjust to Mode6 "7" ----- Store current value of PC Adjust to Mode7 "8" ----- Store current value of PC Adjust to Mode8 "9" ----- Store current value of PC Adjust to Mode9 "10" ----- Store current value of PC Adjust to Mode10	
Details	Store current value of PC Adjust (each parameter status such as Total dots) to Mode1-10. This command operates the same way as storing to Mode1-10 in PC Adjust Menu. (Available only in the normal Power ON status)	
Response	Acceptable	"000" [CR]
	Unacceptable	"101" [CR] --- When input is Video signal

**8.5.11 CF\_PCMODEFREE Command**

Command	"CF_PCMODEFREE_%1" [CR]	
%1	"1" ----- Set Mode1 to Free status "2" ----- Set Mode2 to Free status "3" ----- Set Mode3 to Free status "4" ----- Set Mode4 to Free status "5" ----- Set Mode5 to Free status "6" ----- Set Mode6 to Free status "7" ----- Set Mode7 to Free status "8" ----- Set Mode8 to Free status "9" ----- Set Mode9 to Free status "10" ----- Set Mode10 to Free status	
Details	Delete the data registered in Custom Mode1-10 and returns it to Free status. This command operates the same way as storing to Mode1-10 in PC Adjust Menu. (Available only in the normal Power ON status)	
Response	Acceptable	"000" [CR]
	Unacceptable	"101" [CR] --- When input is Video signal

## 8.6 Input Control Command

### 8.6.1 CF\_INPUT Command

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

### 8.6.2 CF\_SOURCE Command

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

**8.6.3 CF\_INPUT 1 Command**

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

**8.6.4 CF\_INPUT 2 Command**

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

**8.6.5 CF\_INPUT 3 Command**

Command	"CF_INPUT3_%1" [CR]	
%1	"VIDEO" ----- Select Composite Video Input "S-VIDEO" ----- Select S-Video Input "YPBPR" ----- Select Y/Pb/Pr Input	
Details	Select Input 3 as well as Source specified in %1. (Available only in the normal Power ON status)	
Response	Acceptable	"000" [CR]
	Unacceptable	"%%%" [CR]

**8.6.6 CF\_INPUT 4 Command**

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

8.6.7 CF\_SYSTEM Command

Command	"CF_SYSTEM_%1" [CR]	
%1	Input is PC Analog	"VGA1" ----- Select VGA1 "VGA2" ----- Select VGA2 : "XGA1" ----- Select XGA1 : "WXGA3" ----- Select WXGA3 "1080I" ----- Select 1080i "1035I" ----- Select 1035i "720p" ----- Select 720p "575p" ----- Select 575p "480p" ----- Select 480p "575I" ----- Select 575i "480I" ----- Select 480i "1080psf/24" ----- Select 1080psf/24 "1080psf/25" ----- Select 1080psf/25 "1080psf/30" ----- Select 1080psf/30 "MODE1 - 10" ----- Select MODE1 – MODE10 "EXT11 - 60" ----- Select Ex Mode11-60 * Mode1-10 is not returned.
	Input is PC Digital/AV HDCP	"D-XGA1" ----- Select D-XGA1 : : "D-WXGA3" ----- Select D-WXGA3 "D-1080I" ----- Select D-1080i "D-1035I" ----- Select D-1035i "D-720p" ----- Select D-720p "D-575p" ----- Select D-575p "D-480p" ----- Select D-480p "D-1080psf/24" ----- Select D-1080psf/24 "D-1080psf/25" ----- Select D-1080psf/25 "D-1080psf/30" ----- Select D-1080psf/30
	Input is Y,Pb/Cb,Pr/Cr	"AUTO" ----- Select System "Auto" "1080I" ----- Select 1080i "1035I" ----- Select 1035i "720P" ----- Select 720p "575P" ----- Select 575p "480P" ----- Select 480p "575I" ----- Select 575i "480I" ----- Select 480i
	Input is Video / S-Video	"AUTO" ----- Select System "Auto" "NTSC" ----- Select NTSC "NTSC443" ----- Select NTSC4.43 "PAL" ----- Select PAL "SECAM" ----- Select SECAM "PAL-M" ----- Select PAL-M "PAL-N" ----- Select PAL-N
Details	Select System of currently selected Input (Available only in the normal Power ON status) When selected input does not include specified %1, error code "101" [CR] is returned and it is not executed. When Input No is 4, error code "101" [CR] is returned and it is not executed.	
Response	Acceptable	"000" [CR]
	Unacceptable	"Error Code" [CR]

8.7 Screen Control Command

8.7.1 CF\_SCREEN Command

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

8.7.2 CF\_VSCALE Command

Command	"CF_VSCALE_%1" [CR]	
%1	"035" ----- +35 "031" ----- +31 : "002" ----- +2 "001" ----- +1 "000" ----- ±0 "□01" ----- □1 "□02" ----- □2 : "□31" ----- □31 "□32" ----- □32 "UP" ----- Increment setting value of Vscale by 1 "DN" ----- Decrement setting value of Vscale by 1	
Details	Set Vscale (Available only in the normal Power ON status)	
Response	Acceptable	"000" [CR]
	Unacceptable	"Error Code" [CR]

**8.7.3 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" ----- Increment setting value of Vposition by 1 "DN" ----- Decrement setting value of Vposition by 1	
Details	Set V Position (Available only in the normal Power ON status)	
Response	Acceptable	"000" [CR]
	Unacceptable	"Error Code" [CR]

**8.7.4 CF\_HSCALE Command**

Command	"CF_HSCALE_%1" [CR]	
%1	"035" ----- +35 "031" ----- +31 : "002" ----- +2 "001" ----- +1 "000" ----- ±0 "□01" ----- □1 "□02" ----- □2 : "□31" ----- □31 "□32" ----- □32 "UP" ----- Increment setting value of Hscale by 1 "DN" ----- Decrement setting value of Hscale by 1	
Details	Set Hscale (Available only in the normal Power ON status)	
Response	Acceptable	"000" [CR]
	Unacceptable	"Error Code" [CR]

**8.7.5 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" ----- Increment setting value of Hposition by 1 "DN" ----- Decrement setting value of Hposition by 1	
Details	Set H Position (Available only in the normal Power ON status)	
Response	Acceptable	"000" [CR]
	Unacceptable	"Error Code" [CR]

**8.7.6 CF\_DZCENT Command**

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

**8.7.7 CF\_KEYSTONE Command**

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

**8.7.8 CF\_KYSTNMODE Command**

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

## 8.8 Lamp Command

### 8.8.1 CF\_LAMPH Command

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

### 8.8.2 CF\_LAMPMODE Command

Command	"CF_LAMPMODE_%1" [CR]	
%1	"NORMAL" ----- Set Lamp status to Normal mode "ECO1" ----- Set Lamp status to Silent1 mode "ECO2" ----- Set Lamp status to Silent2 mode "AUTO" ----- Set Lamp status to Auto mode	
Details	Select Lamp mode (Available only in the normal Power ON status) The value set by this command is stored in EEPROM and the setting remains effective after the power is turned to ALL OFF status.	
Response	Acceptable	"000" [CR]
	Unacceptable	"Error Code" [CR]

## 8.9 Setting Command

### 8.9.1 CF\_BACKGND Command

Command	"CF_BACKGND_%1" [CR]	
%1	"BLUE" ----- Select Blue Back "USER" ----- Select User "BLACK" ----- Select Black Back "UP" ----- Switch forward (Blue Back→User→Black Back→Blue Back) "DN" ----- Switch backward (Blue Back→Black Back→User→Blue Back)	
Details	Set Screen status for no signal.(Available only in the normal Power ON status) 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]

### 8.9.2 CF\_DISP Command

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

**8.9.3 CF\_LOGO Command**

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

**8.9.4 CF\_CEIL Command**

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

**8.9.5 CF\_REAR Command**

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

**8.9.6 CF\_RCODE Command**

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

**8.9.7 CF\_RSENS Command**

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

**8.9.8 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 "JPN" ----- Select Japanese "CHI" ----- Select Chinese "KOR" ----- Select Korean "RUS" ----- Select Russian	
Details	Set language for OSD (Available only in the normal Power ON status) The language set by this command is stored in EEPROM and setting remains effective even after the power is turned to ALL OFF status.	
Response	Acceptable	"000" [CR]
	Unacceptable	"Error Code" [CR]

**8.9.9 CF\_ON-STA Command**

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

**8.9.10 CF\_P-MANE Command**

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

**8.9.11 CF\_P-MANETIME Command**

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

**8.9.12 CF\_FANSPEED Command**

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

**8.9.13 CF\_KEYDIS Command**

Command	"CF_KEYDIS_%1" [CR]	
%1	"NONE" ----- RC and KEY are both enabled. "RC" ----- RC is disabled. "KEY" ----- KEY is disabled.	
Details	Disable RC and/or KEY functions (Available only in the normal Power ON status)	
Response	Acceptable	"000" [CR]
	Unacceptable	"Error Code" [CR]

**8.9.14 CF\_FDEFAULT Command**

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

**8.9.15 CF\_PJPINCODE Command**

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

**8.9.16 CF\_TESTPAT Command**

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

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

**8.9.17 CF\_FILH Command**

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

**8.9.18 CF\_FILTERTIMER Command**

Command	"CF_FILTERTIMER_%1" [CR]	
%1	"0400" ----- Set 400 hours "0700" ----- Set 700 hours "1000" ----- Set 1000 hours "OFF" ----- Set Off(Do not warning display)	
Details	Set time to display Filter cleaning / replacement warning on screen	
Response	Acceptable	"000" [CR]
	Unacceptable	"Error Code" [CR]

**8.9.19 CF\_FILCTL Command**

Command	"CF_FILCTL_%1" [CR]	
%1	"ROLL" ----- Execute operation of scroll of filter	
Details	Execute operation of scroll of filter	
Response	Acceptable	"000" [CR]
	Unacceptable	"Error Code" [CR]

**8.9.20 CF\_FILSCRL Command**

Command	"CF_FILSCRL_%1" [CR]	
%1	"RST" ----- Reset Filter scroll counter	
Details	Reset Filter scroll counter	
Response	Acceptable	"000" [CR]
	Unacceptable	"Error Code" [CR]

**8.9.21 CF\_POINTER Command**

Command	"CF_POINTER_%1" [CR]	
%1	"ARROW" ----- Select Arrow Pointer "FINGER" ----- Select Finger Pointer "LASER" ----- Select Laser mark Pointer	
Details	Select indication of Pointer.	
Response	Acceptable	"000" [CR]
	Unacceptable	"Error Code" [CR]

8.10 Other Commands

8.10.1 CF\_KEYEMU Command

Command	"CF_KEYEMU_%1" [CR]	
%1	"RIGHT" ----- Move Pointer rightward in On-Screen Display Menu "LEFT" ----- Move Pointer leftward in On-Screen Display Menu "UP" ----- Move Pointer to upward On-Screen Display Menu "DN" ----- Move Pointer to downward in On-Screen Display Menu "SELECT" ----- The same operation as "SELECT" button of RC "AUTOPC" ----- Execute Auto PC Adj. operation The same operation as "AUTO PC" button of RC When this is sent during Auto PC Adj. operation, the operation is stopped. This is same way as pressing "AUTO PC" button of RC.	
Details	The same operation as RC/Control Key.	
Response	Acceptable	"000" [CR]
	Unacceptable	"Error Code" [CR]

8.10.2 CF\_MENU Command

Command	"CF_MENU_%1" [CR]	
%1	"ON" ----- Display On-Screen Display Menu "OFF" ----- Hide On-Screen Display Menu	
Details	Set On-Screen Display mode. (Available only in the normal Power ON status)	
Response	Acceptable	"000" [CR]
	Unacceptable	"Error Code" [CR]

8.10.3 CF\_POWER Command

Command	"CF_POWER_%1" [CR]	
%1	"ON" ----- Power ON "OFF" ----- Power OFF * Issuing another command during countdown process forced countdown operation to be terminated. * Error Code is returned in some projector statuses, which indicates the command is impossible to be executed. (See [8.3] for details) * Returning the response "000" [CR] (acceptable) does not always mean that the status has already changed to Power ON. Example: When the temperature approaches abnormal status after returning "000" [CR] to the command CF_POWER ON. Therefore, to get the projector status requires using Status Read command.	
Details	Set Power to ON/OFF	
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 forward (On→Off→On→---) "DN" ----- Switch backward (On→Off→On→---) * The same operation for "UP" and "DN" as this model has only "ON" / "OFF".	
Details	Set / Cancel Freeze function. (Available only in the normal Power ON status) Receiving FREEZE_ON command when the projector is Freeze enabled, Freeze status is kept.	
Response	Acceptable	"000" [CR]
	Unacceptable	"Error Code" [CR]

## 9. Status Read Command

### 9.1 Format

- 1) PC issues commands in format as below:  
 “CR\_ **COMMAND**” [CR]  
 Command: String
- 2) When projector receives the appropriate command, it returns the required data as a string.  
 “000\_” %1 [CR]  
 %1: Required Data (String)
- 3) When the received data cannot be decoded, the projector returns “?” [CR]

### 9.2 Transfer Example

Get total dots of projector by Expand Serial Commands

PC → PJ: “CR\_TDOTS” [CR]

PC ← PJ: “000\_1344” [CR]

### 9.3 Operation Condition

Basically it should be always operated.

### 9.4 Image Status Read Command

#### 9.4.1 CR\_BRIGHT Command

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

#### 9.4.2 CR\_CONT Command

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

#### 9.4.3 CR\_COLOR Command

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

**9.4.4 CR\_TINT Command**

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

**9.4.5 CR\_SHARP Command**

Command	"CR_SHARP" [CR]	
Details	Get user controlled value of Sharpness	
Response	Acceptable	"000_%1" [CR]
	%1	"000 – 031"
	Unacceptable	"?" [CR]

**9.4.6 CR\_GAMMA Command**

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

**9.4.7 CR\_WBAL-R Command**

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

**9.4.8 CR\_WBAL-G Command**

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

**9.4.9 CR\_WBAL-B Command**

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

**9.4.10 CR\_COLTEMP Command**

Command	"CR_COLTEMP" [CR]	
Details	Get Color Temperature setting status	
Response	Acceptable	"000_%1" [CR]
	%1	"000" ----- Xlow "001" ----- Low "002" ----- Mid "003" ----- High "BLANK" ---- OSD Menu is blank (Neither of Xlow / Low / Mid / High)
	Unacceptable	"?" [CR]

**9.4.11 CR\_OFFSET-R Command**

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

**9.4.12 CR\_OFFSET-G Command**

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

**9.4.13 CR\_OFFSET-B Command**

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

**9.4.14 CR\_NZRED Command**

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

**9.4.15 CR\_PROGV Command**

Command	"CR_PROGV" [CR]	
Details	Get Progressive scan setting status	
Response	Acceptable	"000_%1" [CR]
	%1	"ON" ----- Set Progressive scan On "FILM" ----- Select FILM mode "OFF" ----- Set Progressive scan Off
	Unacceptable	"?" [CR]

**9.4.16 CR\_IMAGE Command**

Command	"CR_IMAGE" [CR]	
Details	Get image setting status	
Response	Acceptable	"000_%1" [CR]
	%1	"STAND" ----- Standard "REAL" ----- High contrast "CINEMA" ----- Cinema "CUSTOM1" ----- "Custom1" "CUSTOM2" ----- "Custom2" "CUSTOM3" ----- "Custom3" "CUSTOM4" ----- "Custom4" "CUSTOM5" ----- "Custom5" "CUSTOM6" ----- "Custom6" "CUSTOM7" ----- "Custom7" "CUSTOM8" ----- "Custom8" "CUSTOM9" ----- "Custom9" "CUSTOM10" ----- "Custom10"
	Unacceptable	"Error Code" [CR] ----- When command is not available in the given condition (such as being selected input "?" [CR] ----- When unknown command is received

**9.4.17 CR\_IMGGMD Command**

Command	"CR_IMGGMD" [CR]	
Details	Get setting status of Standard/High contrast/Cinema in Image Gamma	
Response	Acceptable	"000_%1" [CR]
	%1	"STD" ----- Standard "REL" ----- High contrast "CNM" ----- Cinema
	Unacceptable	"?" [CR]

**9.4.18 CR\_APCTRL Command**

Command	"CR_APCTRL" [CR]	
Details	Get setting status of Auto Picture Control	
Response	Acceptable	"000_%1" [CR]
	%1	"L1" ----- Operate Auto Picture Control with Level1 "L2" ----- Operate Auto Picture Control with Level2 "OFF" ----- Set Auto Picture Control OFF
	Unacceptable	"?" [CR]

### 9.5 PC Adjust Status Read Command

#### 9.5.1 CR\_FSYNC Command

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

#### 9.5.2 CR\_TDOTS Command

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

#### 9.5.3 CR\_CLPPHASE Command

Command	"CR_CLPPHASE" [CR]	
Details	Get value of Clamp Phase value	
Response	Acceptable	"000_%1" [CR]
	%1	"0001 – 0255"
	Unacceptable	"Error Code" [CR]

#### 9.5.4 CR\_H-POS Command

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

#### 9.5.5 CR\_V-POS Command

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

9.5.6 CR\_DDOTS Command

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

9.5.7 CR\_DLINE Command

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

9.5.8 CR\_ORGMODE Command

Command	"CR_ORGMODE" [CR]	
Details	Get the original signal of current selected Mode that is set in PC Adj. When MODE1- 10 or EXT11-50 is not selected, get the current signal.	
Response	Acceptable	"000_%1" [CR]
	%1	When input signal is PC Analog; "VGA1" ----- Indicates signal is VGA1 "VGA2" ----- Indicates signal is VGA2 : : : "XGA1" ----- Indicates signal is XGA1 : : : "WXGA3" ----- Indicates signal is WXGA3 "1080i60" ----- Indicates signal is 1080i60 "1080i50" ----- Indicates signal is 1080i50 "1035i" ----- Indicates signal is 10350i "720p60" ----- Indicates signal is 720p60 "720p50" ----- Indicates signal is 720p50 "575p" ----- Indicates signal is 575p "480p" ----- Indicates signal is 480p "575i" ----- Indicates signal is 575i "480i" ----- Indicates signal is 480i "1080psf/24" ----- Indicates signal is 1080psf/24 "1080psf/25" ----- Indicates signal is 1080psf/25 "1080psf/30" ----- Indicates signal is 1080psf/30 Note; To differentiate between 60Hz and 50Hz in 1080i and 720p, "60" or "50" is necessary to add to the parameter in this command * When input signal is not PC Analog, error code "101" is returned.
	Unacceptable	"?" [CR]

9.5.9 CR\_PCSTORE Command

Command	"CR_PCSTORE" [CR]	
Details	Get Free or Stored status of MODE1 - 5 in PC Adjust. Data consists of 10 bytes and each byte represents MODE1-10. (F:Free, S:Stored)	
Response	Acceptable	"000_%1" [CR]
	%1	"FFFFFFFF" ----- ALL Free "SFFFFFFFF" ----- Mode1 is Stored, others are Free : "FFFFFFFFS" ----- Mode10 is Stored, others are Free "SSSSSSSSS" ----- ALL Stored
	Unacceptable	"?" [CR]

9.5.10 CR\_SETPCADJ Command

Command	"CR_SETPCADJ" [CR]	
Details	Get PC signal for current system	
Response	Acceptable	"000_%1" [CR]
	%1	When input signal is PC Analog; "VGA1" ----- Indicates VGA1 is selected "VGA2" ----- Indicates VGA2 is selected : : "XGA1" ----- Indicates XGA1 is selected : : "WXGA3" ----- Indicates WXGA3 is selected "1080i" ----- Indicates 1080i is selected "1035i" ----- Indicates 10350i is selected "720p" ----- Indicates 720p is selected "575p" ----- Indicates 575p is selected "480p" ----- Indicates 480p is selected "575i" ----- Indicates 575i is selected "480i" ----- Indicates 480i is selected "1080psf/24" ----- Indicates 1080psf/24 is selected "1080psf/25" ----- Indicates 1080psf/25 is selected "1080psf/30" ----- Indicates 1080psf/30 is selected : "MODE10" ----- Indicates Mode10 is selected "EXT11" ----- EXT11 is selected : "EXT60" ----- EXT60 is selected  * Error Code "101" [CR] is returned for no signal. * When input signal is not PC Analog, error code "101" is returned.
	Unacceptable	"?" [CR]

## 9.6 Video Status Read Command

### 9.6.1 CR\_SERSYS Command

Command	"CR_SERSYS" [CR]	
Details	Get selected current signal. Auto detected signal is returned in Auto mode Only available when Input is Y,Pb/Cb,Pr/Cr, S-Video or Video. (This is not the case for PC-Analog/PC-Digital/AV HDCP signals)	
Response	Acceptable	"000_%1" [CR]
	%1	"1080I60" ----- 1080i 60Hz "1080I50" ----- 1080i 50Hz "1035I" ----- 1035i "720P60" ----- 720p 60Hz "720P50" ----- 720p 50Hz "575P" ----- 575p "480P" ----- 480p "575I" ----- 575i (includes Composite signal such as PAL) "480I" ----- 480i (includes Composite signal such as NTSC) "NO_SIGNAL" ----- No signal
	Unacceptable	"101" [CR] --- When input signal is PC-Analog, PC-Digital or PC signals in AV HDCP "?" [CR]

## 9.7 Input Read Command

### 9.7.1 CR\_INPUT Command

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

### 9.7.2 CR\_SOURCE Command

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

**9.7.3 CR\_SRCINP1 Command**

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

**9.7.4 CR\_SRCINP2 Command**

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

**9.7.5 CR\_SRCINP3 Command**

Command	"CR_SRCINP3" [CR]	
Details	Get Source of INPUT3	
Response	Acceptable	"000_%1" [CR]
	%1	"VIDEO" ----- in Video mode "S-VIDEO" ----- in S-video mode "YPBPR" ----- in Y,Pb/Cb,Pr/Cr mode
	Unacceptable	"?" [CR]

**9.7.6 CR\_SRCINP4 Command**

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

9.7.7 CR\_SYSTEM Command

Command	"CR_SYSTEM" [CR]	
Details	Get selected System	
Response	Acceptable	"000_%1" [CR]
	%1	Input is PC Analog "VGA1" ----- indicates VGA1 is selected "VGA2" ----- indicates VGA2 is selected : : : "XGA1" ----- indicates XGA1 is selected : : "WXGA3" ----- indicates WXGA3 is selected "1080I" ----- indicates 1080i is selected "1035I" ----- indicates 1035i is selected "720p" ----- indicates 720p is selected "575p" ----- indicates 575p is selected "480p" ----- indicates 480p is selected "575I" ----- indicates 575i is selected "480I" ----- indicates 480i is selected "1080PSF/24" ----- indicates 1080psf/24 is selected "1080PSF/25" ----- indicates 1080psf/25 is selected "1080PSF/30" ----- indicates 1080psf/30 is selected "MODE1" ----- indicates Mode1 is selected : : "MODE10" ----- indicates Mode10 is selected "EXT11" ----- indicates EXT11 is selected : : "EXT60" ----- indicates EXT60 is selected * Error Code "101" [CR] is returned for no signal
		Input is PC-Digital/ AV-HDCP "D-XGA1" ----- indicates D-XGA1 is selected : "D-WXGA3" ----- indicates D-WXGA3 is selected "D-1080I" ----- indicates D-1080i is selected "D-1035I" ----- indicates D-1035i is selected "D-720P" ----- indicates D-720p is selected "D-575P" ----- indicates D-575p is selected "D-480P" ----- indicates D-480p is selected "D-575I" ----- indicates D-575i is selected "D-480I" ----- indicates D-480i is selected "D-1080PSF/24" ----- indicates D-1080psf/24 is selected "D-1080PSF/25" ----- indicates D-1080psf/25 is selected "D-1080PSF/30" ----- indicates D-1080psf/30 is selected * Error Code "101" [CR] is returned for no signal
		Input is Y,Pb/Cb,Pr/CR "AUTO" ----- indicates Auto is selected "1080I" ----- indicates 1080i is selected "1035I" ----- indicates 1035i is selected "720P" ----- indicates 720p is selected "575P" ----- indicates 575p is selected "480P" ----- indicates 480p is selected "575I" ----- indicates 575i is selected "480I" ----- indicates 480i is selected * Selected System is returned, whether or not signal is coming.
		Input is Video or S-video "AUTO" ----- indicates Auto is selected "NTSC" ----- indicates NTSC is selected "NTSC443" ----- indicates NTSC4.43 is selected "PAL" ----- indicates PAL is selected "SECAM" ----- indicates SECAM is selected "PAL-M" ----- indicates PAL-M is selected "PAL-N" ----- indicates PAL-N is selected * Selected System is returned, whether or not signal is coming.
Unacceptable	"Error Code" [CR]	

9.7.8 CR\_SYSLIST Command

Command	"CR_SYSLIST" [CR]	
Details	Get possible systems for System list	
Response	Acceptable	"000_%1_%2_---_%x" [CR]
	%1	<p>Error Code "101" is returned for no signal.                      Otherwise following values are returned according to Source.                      When input is PC-Analog;                      "XGA1" ----- XGA1 is in the list                      "1080I" ----- 1080i is in the list                      "1080PSF/24" ----- 1080psf/24 is in the list                      "1080PSF/25" ----- 1080psf/25 is in the list                      "1080PSF/30" ----- 1080psf/30 is in the list                      * Auto, Mode1-10 shall not be returned.                      When input is PC-digital or AV-HDCP;                      "D-XGA" ----- D-XGA is in the list                      "D-720p" ----- D720p is in the list                      "D-1080PSF/24" ----- D1080psf/24 is in the list                      "D-1080PSF/25" ----- D1080psf/25 is in the list                      "D-1080PSF/30" ----- D1080psf/30 is in the list                      -When input is Y,Pb/Cb,Pr/Cr;                      All possible systems in Menu, including Auto, are returned;                      "AUTO" ----- Auto is in the list                      "1080I" ----- 1080i is in the list                      "1035I" ----- 1035i is in the list                      :                      "575I" ----- 575i is in the list                      "480I" ----- 480i is in the list                      -When input is Video or S-video;                      All possible systems in Menu, including Auto, are returned;                      "AUTO" ----- Auto is in the list                      "PAL" ----- PAL is in the list                      "SECAM" ----- SECAM is in the list                      :                      "PAL-N" ----- PAL-N is in the list</p>
	Unacceptable	"Error Code" [CR]

9.7.9 CR\_MODELIST Command

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

**9.7.10 CR\_HMSLOT Command**

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

**9.7.11 CR\_NMSLOT1 Command**

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

**9.7.12 CR\_NMSLOT2 Command**

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

**9.7.13 CR\_NMSLOT3 Command**

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

**9.7.14 CR\_NMSLOT4 Command**

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

**9.7.15 CR\_IDSLOT1 Command**

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

**9.7.16 CR\_IDSLOT2 Command**

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

**9.7.17 CR\_IDSLOT3 Command**

Command	"CR_IDSLOT3" [CR]	
Details	Get ID information of Input3. This command is to determine sources possible to input.	
Response	Acceptable	"000_%1" [CR]
	%1	"51" ----- On-borad (3BNC and S-VIDEO) Available source: VIDEO, S-VIDEO, YPBPR
	Unacceptable	"Error Code" [CR]

**9.7.18 CR\_IDSLOT4 Command**

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

**9.8 Screen Status Read Command**

**9.8.1 CR\_SCREEN Command**

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

**9.8.2 CR\_VSCALE Command**

Command	"CR_VSCALE" [CR]	
Details	Get setting status of V scale	
Response	Acceptable	"000_%1" [CR]
	%1	"-32"—"035"
	Unacceptable	"Error Code" [CR]

**9.8.3 CR\_VPOS Command**

Command	"CR_VPOS" [CR]	
Details	Get setting status of V Position	
Response	Acceptable	"000_%1" [CR]
	%1	"-15"—"015"
	Unacceptable	"Error Code" [CR]

**9.8.4 CR\_HSCALE Command**

Command	"CR_HSCALE" [CR]	
Details	Get setting status of H scale	
Response	Acceptable	"000_%1" [CR]
	%1	"-32"—"035"
	Unacceptable	"Error Code" [CR]

**9.8.5 CR\_HPOS Command**

Command	"CR_HPOS" [CR]	
Details	Get setting status of H Position	
Response	Acceptable	"000_%1" [CR]
	%1	"-15"—"015"
	Unacceptable	"Error Code" [CR]

**9.8.6 CR\_ KYSTNMODE Command**

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

**9.9 Lamp Status Read Command**

**9.9.1 CR\_LAMPREPL Command**

Command	"CR_LAMPREPL" [CR]	
Details	Get information of Lamp Replacement time	
Response	Acceptable	"000_%1" [CR]
	%1	"1Y" ----- indicates over lamp replacement time "1N" ----- indicates under lamp replacement time
	Unacceptable	"?" [CR]

**9.9.2 CR\_LAMPH Command**

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

**9.9.3 CR\_LAMPCORRESPH Command**

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

**9.9.4 CR\_LAMPMODE Command**

Command	"CR_LAMPMODE" [CR]	
Details	Get setting status of Lamp mode	
Response	Acceptable	"000_%1" [CR]
	%1	"NORMAL" ----- Lamp mode is Normal status "ECO1" ----- Lamp mode is Silent1 status "ECO2" ----- Lamp mode is Silent2 status "AUTO" ----- Lamp mode is Auto status
	Unacceptable	"?" [CR]

**9.9.5 CR\_LAMPSTS Command**

Command	"CR_LAMPSTS" [CR]	
Details	Get Lamp status	
Response	Acceptable	"000_%1" [CR]
	%1	"1" ----- Lamp is ON "0" ----- Lamp is OFF "X" ----- Lamp Failure
	Unacceptable	"Error Code" [CR]

**9.9.6 CR\_PROJH Command**

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

**9.9.7 CR\_HMLAMP Command**

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

**9.10 Setting Status Read Command**

**9.10.1 CR\_BACKGND Command**

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

**9.10.2 CR\_DISP Command**

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

9.10.3 CR\_LOGO Command

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

9.10.4 CR\_LOGOLOCK Command

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

9.10.5 CR\_CEIL Command

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

9.10.6 CR\_REAR Command

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

9.10.7 CR\_RCODE Command

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

9.10.8 CR\_RSENS Command

Command	"CR_RSENS" [CR]	
Details	Get selected location of infrared remote receiver of remote control	
Response	Acceptable	"000_%1" [CR]
	%1	"BOTH" -----Select both front and back receiver of projector "FRONT" ----- Select only front receiver of projector "BACK" ----- Select only back receiver of projector
	Unacceptable	"?" [CR]

9.10.9 CR\_RTYPE Command

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

9.10.10 CR\_LANG Command

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

9.10.11 CR\_ON-STA Command

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

**9.10.12 CR\_P-MANE Command**

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

**9.10.13 CR\_P-MANETIME Command**

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

**9.10.14 CR\_FANSPEED Command**

Command	"CR_FANSPEED" [CR]	
Details	Get selected Fan Control Speed mode.	
Response	Acceptable	"000_%1" [CR]
	%1	"MAX" ----- Max mode is selected "NOR" ----- Normal mode is selected
	Unacceptable	"?" [CR]

**9.10.15 CR\_KEYDIS Command**

Command	"CR_KEYDIS" [CR]	
Details	Get status of RC/KEY (valid or invalid)	
Response	Acceptable	"000_%1" [CR]
	%1	"NONE" ----- RC and KEY, both are valid "RC" ----- RC is invalid "KEY" ----- KEY is invalid
	Unacceptable	"?" [CR]

**9.10.16 CR\_SECURITY Command**

Command	"CR_SECURITY" [CR]	
Details	Get ON/OFF setting status of Security on menu.	
Response	Acceptable	"000_%1" [CR]
	%1	"ON" ----- PJ is locked "OFF" ----- PJ is not locked.
	Unacceptable	"Error Code" [CR]

9.10.17 CR\_PJLOCKNOW Command

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

9.10.18 CR\_PJLOCKMENU Command

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

9.10.19 CR\_TESTPAT Command

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

9.10.20 CR\_FILH Command

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

9.10.21 CR\_FILCOND Command

Command	"CR_FILCOND" [CR]	
Details	Get status of filter clog	
Response	Acceptable	"000_%1" [CR]
	%1	"CLOG" = Filter is clogged "WARN" = Filter is nearly clogged "CLEAN" = Filter is not clogged
	Unacceptable	"Error Code" [CR]

9.10.22 CR\_FILREPL Command

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

9.10.23 CR\_FILTIMER Command

Command	"CR_FILTIMER" [CR]	
Details	Get Filter used time	
Response	Acceptable	"000_%1" [CR]
	%1	"0400" ----- Display message by 400h used. "0700" ----- Display message by 700h used. "1000" ----- Display message by 1000h used. "OFF" ----- Off(Warning display is not displayed)
	Unacceptable	"Error Code" [CR]

9.10.24 CR\_FILREMAIN Command

Command	"CR_FILREMAIN" [CR]	
Details	Get remaining number of usable Filter scroll	
Response	Acceptable	"000_%1" [CR]
	%1	"09" = Remaining number of usable Filter scroll : 9 times "00" = Remaining number of usable Filter scroll : 0 time
	Unacceptable	"Error Code" [CR]

9.10.25 CR\_POINTER Command

Command	"CR_POINTER" [CR]	
Details	Get setting status of Pointer	
Response	Acceptable	"000_%a" [CR]
	%1	"ARROW" -----Arrow Pointer mode "FINGER" -----Finger Pointer mode "LASER" ----- Laser mark Pointer modr
	Unacceptable	"Error Code" [CR]

9.11 Other Status Read Commands

9.11.1 CR\_STATUS Command

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

9.11.2 CR\_PRESSURE Command

Command	"CR_PRESSURE" [CR]	
Details	Get value from Air Pressure sensor. Following is the formula to work out Air Pressure from the given value ("Vn" represents the value): $\text{Air Pressure (hPa)} = (5 \cdot Vn / 1024 - 0.204) / 0.00459 + 150$ Obtains accuracy of +/- 2%	
Response	Acceptable	"000_%1" [CR]
	%1	"0000" – "1023"
	Unacceptable	"Error Code" [CR]

9.11.3 CR\_SIGNAL Command

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

9.11.4 CR\_VMUTE Command

Command	"CR_VMUTE" [CR]	
Details	Get setting status of No Show.	
Response	Acceptable	"000_%1" [CR]
	%1	"ON" ----- No show is enabled "OFF" ----- No show is disabled
	Unacceptable	"?" [CR]

**9.11.5 CR\_FREEZE Command**

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

**9.11.6 CR\_ALLPFAIL Command**

Command	"CR_ALLPFAIL" [CR]	
Details	Get all the information on Power Failure Return all the responses of "CR_PFAIL01" – "PFAIL27" at once Therefore it consists of 648 (24 bytes x 27) bytes totally	
Response	Acceptable	"000_%1_%2" [CR] "000_%3_%4" [CR] "000_%5_%6" [CR] ..... "000_%97_%98" [CR] "000_%99_%100" [CR] (Send all 50 blocks above at one time)
	%1 - %100	%1, %3, ...%99 (Odd number) ----- Item name of Power Failure (16-byte fixed length) %2, %4, ...%100 (Even number) ----- Power status (2-byte fixed length) Power is failed: "NG" Power status is normal: "OK"
	Unacceptable	"Error Code" [CR]

**9.11.7 CR\_HMPFAIL Command**

Command	"CR_HMPFAIL" [CR]	
Details	Get total number of detectable Power Failure	
Response	Acceptable	"000_%1" [CR]
	%1	"000 – 027"
	Unacceptable	"Error Code" [CR]

**9.11.8 CR\_PFAIL01 Command**

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

**9.11.9 CR\_PFAIL02 Command**

Command	"CR_PFAIL02" [CR]	
Details	Get the item name and status of Power Failure No.2	

Response	Acceptable	"000_%1_%2" [CR]
	%1	%1 ----- Item name of Power Failure (16-byte fixed length) %2 ----- Power status (2-byte fixed length) Power is failed: "NG" Power status is normal: "OK"
	Unacceptable	"Error Code" [CR]

**9.11.10 CR\_PFAIL03 Command**

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

**9.11.11 CR\_PFAIL04 Command**

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

**9.11.12 CR\_PFAIL05 Command**

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

**9.11.13 CR\_PFAIL06 Command**

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

9.11.14 CR\_PFAIL07 Command

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

9.11.15 CR\_PFAIL08 Command

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

9.11.16 CR\_PFAIL09 Command

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

9.11.17 CR\_PFAIL10 Command

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

9.11.18 CR\_PFAIL11 Command

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

**9.11.19 CR\_PFAIL12 Command**

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

**9.11.20 CR\_PFAIL13 Command**

Command	"CR_PFAIL13" [CR]	
Details	Get the item name and status of Power Failure No.13	
Response	Acceptable	"000_%1_%2" [CR]
	%1	%1 ----- Item name of Power Failure (16-byte fixed length) %2 ----- Power status (2-byte fixed length) Power is failed: "NG", Power status is normal: "OK"
	Unacceptable	"Error Code" [CR]

**9.11.21 CR\_PFAIL14 Command**

Command	"CR_PFAIL14" [CR]	
Details	Get the item name and status of Power Failure No.14	
Response	Acceptable	"000_%1_%2" [CR]
	%1	%1 ----- Item name of Power Failure (16-byte fixed length) %2 ----- Power status (2-byte fixed length) Power is failed: "NG", Power status is normal: "OK"
	Unacceptable	"Error Code" [CR]

**9.11.22 CR\_PFAIL15Command**

Command	"CR_PFAIL15" [CR]	
Details	Get the item name and status of Power Failure No.15	
Response	Acceptable	"000_%1_%2" [CR]
	%1	%1 ----- Item name of Power Failure (16-byte fixed length) %2 ----- Power status (2-byte fixed length) Power is failed: "NG", Power status is normal: "OK"
	Unacceptable	"Error Code" [CR]

**9.11.23 CR\_PFAIL16 Command**

Command	"CR_PFAIL16" [CR]	
Details	Get the item name and status of Power Failure No.16	
Response	Acceptable	"000_%1_%2" [CR]
	%1	%1 ----- Item name of Power Failure (16-byte fixed length) %2 ----- Power status (2-byte fixed length) Power is failed: "NG", Power status is normal: "OK"
	Unacceptable	"Error Code" [CR]

**9.11.24 CR\_PFAIL17 Command**

Command	"CR_PFAIL17" [CR]	
Details	Get the item name and status of Power Failure No.17	
Response	Acceptable	"000_%1_%2" [CR]
	%1	%1 ----- Item name of Power Failure (16-byte fixed length) %2 ----- Power status (2-byte fixed length) Power is failed: "NG", Power status is normal: "OK"
	Unacceptable	"Error Code" [CR]

**9.11.25 CR\_PFAIL18 Command**

Command	"CR_PFAIL18" [CR]	
Details	Get the item name and status of Power Failure No.18	
Response	Acceptable	"000_%1_%2" [CR]
	%1	%1 ----- Item name of Power Failure (16-byte fixed length) %2 ----- Power status (2-byte fixed length) Power is failed: "NG", Power status is normal: "OK"
	Unacceptable	"Error Code" [CR]

**9.11.26 CR\_PFAIL19 Command**

Command	"CR_PFAIL19" [CR]	
Details	Get the item name and status of Power Failure No.19	
Response	Acceptable	"000_%1_%2" [CR]
	%1	%1 ----- Item name of Power Failure (16-byte fixed length) %2 ----- Power status (2-byte fixed length) Power is failed: "NG", Power status is normal: "OK"
	Unacceptable	"Error Code" [CR]

**9.11.27 CR\_PFAIL20 Command**

Command	"CR_PFAIL20" [CR]	
Details	Get the item name and status of Power Failure No.20	
Response	Acceptable	"000_%1_%2" [CR]
	%1	%1 ----- Item name of Power Failure (16-byte fixed length) %2 ----- Power status (2-byte fixed length) Power is failed: "NG", Power status is normal: "OK"
	Unacceptable	"Error Code" [CR]

**9.11.28 CR\_PFAIL21 Command**

Command	"CR_PFAIL21" [CR]	
Details	Get the item name and status of Power Failure No.21	
Response	Acceptable	"000_%1_%2" [CR]
	%1	%1 ----- Item name of Power Failure (16-byte fixed length) %2 ----- Power status (2-byte fixed length) Power is failed: "NG", Power status is normal: "OK"
	Unacceptable	"Error Code" [CR]

**9.11.29 CR\_PFAIL22 Command**

Command	"CR_PFAIL22" [CR]	
Details	Get the item name and status of Power Failure No.22	
Response	Acceptable	"000_%1_%2" [CR]
	%1	%1 ----- Item name of Power Failure (16-byte fixed length) %2 ----- Power status (2-byte fixed length) Power is failed: "NG", Power status is normal: "OK"
	Unacceptable	"Error Code" [CR]

**9.11.30 CR\_PFAIL23 Command**

Command	"CR_PFAIL23" [CR]	
Details	Get the item name and status of Power Failure No.23	
Response	Acceptable	"000_%1_%2" [CR]
	%1	%1 ----- Item name of Power Failure (16-byte fixed length) %2 ----- Power status (2-byte fixed length) Power is failed: "NG", Power status is normal: "OK"
	Unacceptable	"Error Code" [CR]

**9.11.31 CR\_PFAIL24 Command**

Command	"CR_PFAIL24" [CR]	
Details	Get the item name and status of Power Failure No.24	
Response	Acceptable	"000_%1_%2" [CR]
	%1	%1 ----- Item name of Power Failure (16-byte fixed length) %2 ----- Power status (2-byte fixed length) Power is failed: "NG", Power status is normal: "OK"
	Unacceptable	"Error Code" [CR]

**9.11.32 CR\_PFAIL25 Command**

Command	"CR_PFAIL25" [CR]	
Details	Get the item name and status of Power Failure No.25	
Response	Acceptable	"000_%1_%2" [CR]
	%1	%1 ----- Item name of Power Failure (16-byte fixed length) %2 ----- Power status (2-byte fixed length) Power is failed: "NG", Power status is normal: "OK"
	Unacceptable	"Error Code" [CR]

**9.11.33 CR\_PFAIL26 Command**

Command	"CR_PFAIL26" [CR]	
Details	Get the item name and status of Power Failure No.26	
Response	Acceptable	"000_%1_%2" [CR]
	%1	%1 ----- Item name of Power Failure (16-byte fixed length) %2 ----- Power status (2-byte fixed length) Power is failed: "NG", Power status is normal: "OK"
	Unacceptable	"Error Code" [CR]

9.11.34 CR\_PFAIL27 Command

Command	"CR_PFAIL27" [CR]	
Details	Get the item name and status of Power Failure No.27	
Response	Acceptable	"000_%1_%2" [CR]
	%1	%1 ----- Item name of Power Failure (16-byte fixed length) %2 ----- Power status (2-byte fixed length) Power is failed: "NG", Power status is normal: "OK"
	Unacceptable	"Error Code" [CR]

9.11.35 CR\_TEMPFAIL Command

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

9.11.36 CR\_TEMP Command

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