# EIKI

## BASIC SERIAL COMMAND SPECIFICATIONS

LC-XB42

Ver.1.00

# CONTENTS

## 1. Overview

1.1. These specifications define projector control commands for LC-XB42

1.2. The projector control commands are used to remotely control a projector through RS-232C from a computer.

## 2. Serial Interface Specifications

### 2.1. Transfer Specifications

| Item | Specifications |
|---|---|
| Synchronous system | Asynchronous |
| Transmission Speed | 9600 / 19200 |
| Data Length | 8 bit |
| Parity | N/A |
| Stop Bit | 1 |
| Flow Control | N/A |

1) Transmission speed: initial setting value is 19200.

2) Transmission speed can be changed in service mode.

### 2.2. Connection

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

**PC**　　　　　　　　　**Projector**

**COM 1**　　　　　　　**Control Port**

| CD | 1 |
| RXD | 2 |
| TXD | 3 |
| DTR | 4 |
| SG | 5 |
| DSR | 6 |
| RTS | 7 |
| CTS | 8 |
| RING | 9 |

**D-Sub 9 Pin**　　　　　**Mini 8 Pin**
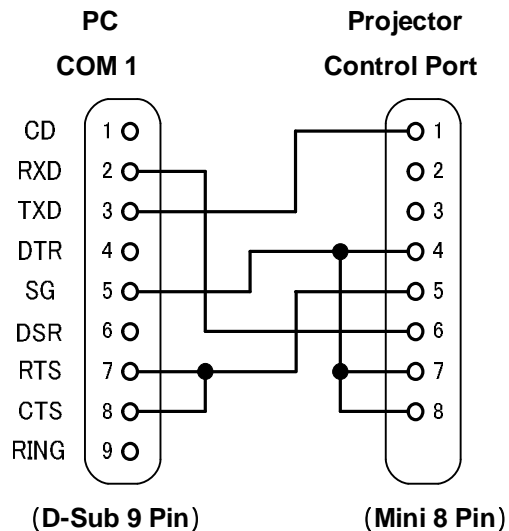
### 3.   Notes for Communication

1.   The projector control command is defined as one command/one line that starts with "C" and ends with carriage return (0x0D).

2.   There are two types of Commands: Functional Execution Commands and Status Read Commands.

>   Example of Functional Execution Command: "C05" [CR]
>
>   Example of Status Read Command: "CR0" [CR]

3.   When it takes more than one second to receive one command, it does not operate.

The information of buffer is cleared when it takes more than one second to receive carriage return (0x0D) after the projector receives the first data "C".

4.   For Command pipelining, wait for the interval of 100ms after receiving a response.
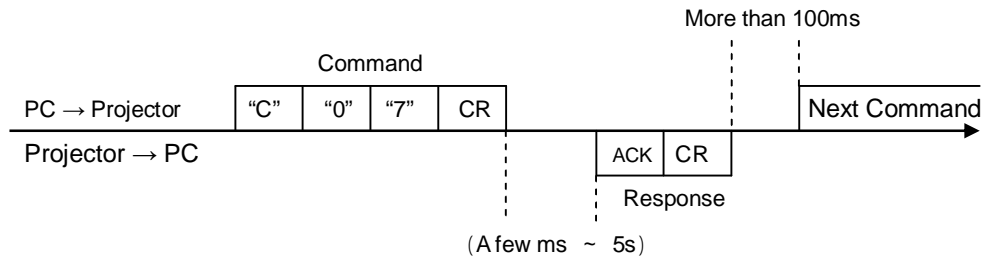


3.4.1. When a command is issued before receiving a response, the function is not executed properly.

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

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

6.   The number of characters of response to Status Read Commands depends on commands.

Please see [7. Status Read Commands].

7.   Characters for commands must be Capital (A - Z).

### 4. Functional Execution Command Table

| Command | Item | Command | Item |
|---------|------|---------|------|
| C00 | POWER ON | C20 | BRIGHTNESS + |
| C01 | POWER OFF<br> Quick Power OFF | C21 | BRIGHTNESS - |
| C02 | POWER OFF | C22 | ——— |
| C03 | ——— | C23 | ——— |
| C04 | ——— | C24 | Computer 2 Component |
| C05 | Computer 1 | C25 | Computer 2 RGB |
| C06 | Computer 2 | C26 | Computer 2 Scart |
| C07 | Video | C27 | IMAGE  Toggle |
| C08 | ——— | C28 | ON START Enable |
| C09 | VOLUME + | C29 | ON START Disable |
| C0A | VOLUME - | C2A | Power Management Ready |
| C0B | AUDIO MUTE ON | C2B | Power Management OFF |
| C0C | AUDIO MUTE OFF | C2C | ——— |
| C0D | VIDEO MUTE ON | C2D | ——— |
| C0E | VIDEO MUTE OFF | C2E | Power Management Shut down |
| C0F | Screen Normal size  4  3 | C2F | ——— |
| C10 | Screen Wide size  16  9 | C30 | D.ZOOM + |
| C11 | Image Standard | C31 | D.ZOOM - |
| C12 | Image Real | C32 | Video Auto |
| C13 | Image Cinema | C33 | Video Video |
| C14 | Image 1 | C34 | Video S-video |
| C15 | Image 2 | C35 | ——— |
| C16 | Image 3 | C36 | ——— |
| C17 | Image 4 | C37 | ——— |
| C18 | Blackboard | C38 | ——— |
| C19 | Dynamic | C39 | ——— |
| C1A | ——— | C3A | POINTER RIGHT |
| C1B | ——— | C3B | POINTER LEFT |
| C1C | MENU ON | C3C | POINTER UP |
| C1D | MENU OFF | C3D | POINTER DOWN |
| C1E | DISPLAY CLEAR | C3E | ——— |
| C1F | ——— | C3F | ENTER |

——— means no function.

| Command | Item | Command | Item |
|---------|------|---------|------|
| C40 | ———— | C80 | ———— |
| C41 | ———— | C81 | ———— |
| C42 | ———— | C82 | ———— |
| C43 | FREEZE ON | C83 | ———— |
| C44 | FREEZE OFF | C84 | ———— |
| C45 | ———— | C85 | ———— |
| C46 | ———— | C86 | ———— |
| C47 | ———— | C87 | ———— |
| C48 | ———— | C88 | ———— |
| C49 | ———— | C89 | Auto PC ADJ. |
| C4A | ———— | C8A | PRESENTATION TIMER |
| C4B | ———— | C8B | ———— |
| C4C | ———— | C8C | ———— |
| C4D | ———— | C8D | ———— |
| C4E | ———— | C8E | KEYSTONE ↑ |
| C4F | ———— | C8F | KEYSTONE ↓ |

———— means no function.

## 5.   Status Read Command Table

| Command | Item | Memo |
|---------|------|------|
| CR0 | Status Read | |
| CR1 | Input Mode Read | |
| CR2 | ———— | |
| CR3 | (Corresponding) Lamp Time Read | |
| CR4 | Setting Read | |
| CR5 | ———— | |
| CR6 | Temp Read | |
| CR7 | Lamp Mode Read | |

———— means no function.

## 6. Functional Execution Command

### 6.1. Format

6.1.1　PC issues a command in format as below.

**"C"** COMMAND **[CR]**

Command: two characters (See Basic Functional Execution Command Table)

A projector changes received data to decode and returns a result after being ready to

receive next command.

**[ACK] CR**　　0x06　0x0D　When received Functional Execution Commands.

6.1.2　**" " CR**　When the received data cannot be decoded.

### 6.2. Command Pipelining

When some functions need the command pipelining, the performance is the same as that of the

remote control;

6.2.1. System: issues any command every 100 ms.

6.2.2. When receiving the appropriate command, the function is executed for 120 ms from the

moment.

6.2.3. When receiving the same command continuously within 120 ms, the function is executed

for another 120 ms from the moment.

6.2.4. When there is no incoming command after 120 ms, the execution of pipelining is stopped.

6.2.5. When the projector receives other incoming commands within 120ms, the execution of

pipelining is stopped.

### 6.3. Transfer Example

Switch the projector to video mode with Basic Command.
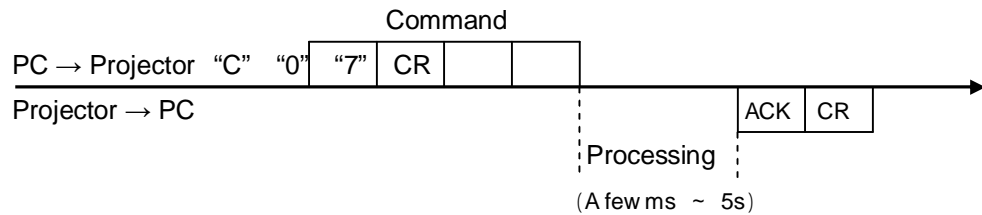
### 6.4. Operation Requirements

When the projector's status any of below, Functional Execution Commands are limited.

| Projector Status | Available Functional Execution Commands |
|---|---|
| Standby Mode | C00  POWER ON |
| Countdown in process | C00  POWER ON → Countdown is terminated<br>C01  POWER OFF<br>C02  POWER OFF → Countdown is terminated |
| Cooling Down in process | NONE    (No Execution) |
| Cooling Down due to Abnormal Temperature | NONE    (No Execution) |
| Abnormal Temperature Status | NONE    (No Execution) |
| Abnormal Power Status | NONE    (No Execution) |
| Power Save / Cooling Down in process | NONE    (No Execution) |
| Power Save Status | C00  POWER ON<br>C01  POWER OFF |
| Input search   On1/On2 setting | Although transmit Input source commands, Input search does no operate. |

Note) When the status is as above, even if the projector receives other commands,

it returns **[ACK] [CR].**

### 6.5. POWER ON Command

| Command | "C00" [CR] | |
|---|---|---|
| Detail | Power ON<br>When already Power is ON, nothing is done.<br>When sending this command during processing Countdown, Countdown is terminated. | |
| Response | Acceptable | [ACK] [CR] |
| | Unacceptable | "　"[CR] |

### 6.6. POWER OFF Command　　Quick Power OFF

| Command | "C01" [CR] | |
|---|---|---|
| Detail | Power OFF (Standby)<br>When Power is OFF with ON/STAND-BY button of the projector and remote control, "Power OFF?" is displayed. However, as soon as this command is sent, Quick Power OFF is executed. | |
| Response | Acceptable | [ACK] [CR] |
| | Unacceptable | "　"[CR] |

### 6.7. POWER OFF Command

| Command | "C02" [CR] | |
|---|---|---|
| Detail | Power OFF (Standby).<br>The command operates the same Power OFF function as ON/STAND-BY button of the projector and remote control.<br>Once this command is sent, "Power OFF?" is displayed. If this command is sent again while it is displayed, Power OFF is executed.<br>When sending this command during Countdown, Countdown is terminated. | |
| Response | Acceptable | [ACK] [CR] |
| | Unacceptable | "　"[CR] |

### 6.8. Computer 1 Command

| Command | "C05" [CR] | |
|---|---|---|
| Detail | Select Computer 1 Input<br>Although projector returns "OK", this command is not executed while Input search is On1/On2. | |
| Response | Acceptable | [ACK] [CR] |
| | Unacceptable | "　"[CR] |

### 6.9. Computer 2 Command

| Command | "C06" [CR] | |
|---|---|---|
| Detail | Select Computer2 Input<br>Although projector returns "OK", this command is not executed while Input search is On1/On2. | |
| Response | Acceptable | [ACK] [CR] |
| | Unacceptable | "　"[CR] |

### 6.10.   Video Command

| Command | "C07" [CR] | |
|---|---|---|
| Detail | Select Video Input<br>Although projector returns "OK", this command is not executed while Input search is On1/On2. | |
| Response | Acceptable | [ACK] [CR] |
| | Unacceptable | "   "[CR] |

### 6.11.   VOLUME + Command

| Command | "C09" [CR] | |
|---|---|---|
| Detail | Volume Up.<br>This command operates the same way as "VOLUME+" button of the projector and remote control. | |
| Response | Acceptable | [ACK] [CR] |
| | Unacceptable | "   "[CR] |

### 6.12.   VOLUME – Command

| Command | "C0A" [CR] | |
|---|---|---|
| Detail | Volume Down<br>This command operates the same way as "VOLUME-" button of the projector and remote control. | |
| Response | Acceptable | [ACK] [CR] |
| | Unacceptable | "   "[CR] |

### 6.13.   AUDIO MUTE ON Command

| Command | "C0B" [CR] | |
|---|---|---|
| Detail | Sound Mute ON.<br>This command works the same way as "MUTE" button of the remote control for Mute ON, but does not work for Mute OFF. | |
| Response | Acceptable | [ACK] [CR] |
| | Unacceptable | "   "[CR] |

### 6.14.   AUDIO MUTE OFF Command

| Command | "C0C" [CR] | |
|---|---|---|
| Detail | Sound Mute OFF.<br>This command works the same way as "MUTE" button of the remote control for Mute OFF, but does not work for Mute ON. | |
| Response | Acceptable | [ACK] [CR] |
| | Unacceptable | "   "[CR] |

### 6.15. VIDEO MUTE ON Command

| Command | "C0D"[CR] | |
|---|---|---|
| Detail | Video Mute ON.<br>This command works the same way as "NO SHOW" button of the remote control for No Show ON, but does not work for No Show OFF. | |
| Response | Acceptable | [ACK] [CR] |
| | Unacceptable | "  "[CR] |

### 6.16. VIDEO MUTE OFF Command

| Command | "C0E" [CR] | |
|---|---|---|
| Detail | Video Mute OFF.<br>This command works the same way as "NO SHOW" button of remote control for No Show OFF, but does not work for No Show ON. | |
| Response | Acceptable | [ACK] [CR] |
| | Unacceptable | "  "[CR] |

### 6.17. Screen Normal size Command

| Command | "C0F" [CR] | |
|---|---|---|
| Detail | Set screen mode to Normal.<br>This command is invalid while D.Zoom is in operation. | |
| Response | Acceptable | [ACK] [CR] |
| | Unacceptable | "  "[CR] |

### 6.18. Screen Wide size Command

| Command | "C10" [CR] | |
|---|---|---|
| Detail | Set screen mode to Wide.<br>This command is invalid while D.Zoom is in operation. | |
| Response | Acceptable | [ACK] [CR] |
| | Unacceptable | "  "[CR] |

### 6.19. Image Standard Command

| Command | "C11" [CR] | |
|---|---|---|
| Detail | Set image to Standard mode. | |
| Response | Acceptable | [ACK] [CR] |
| | Unacceptable | "  "[CR] |

### 6.20. Image Real Command

| Command | "C12" [CR] | |
|---|---|---|
| Detail | Set image to Real mode. | |
| Response | Acceptable | [ACK] [CR] |
| | Unacceptable | "  "[CR] |

### 6.21.    Image Cinema Command

| Command | "C13" [CR] | |
|---|---|---|
| Detail | Set image to Cinema mode. | |
| Response | Acceptable | [ACK] [CR] |
| | Unacceptable | "   "[CR] |

### 6.22.    Image1 Command

| Command | "C14" [CR] | |
|---|---|---|
| Detail | Set image to Image1 mode. | |
| Response | Acceptable | [ACK] [CR] |
| | Unacceptable | "   "[CR] |

### 6.23.    Image2 Command

| Command | "C15" [CR] | |
|---|---|---|
| Detail | Set image to Image2 mode. | |
| Response | Acceptable | [ACK] [CR] |
| | Unacceptable | "   "[CR] |

### 6.24.    Image3 Command

| Command | "C16" [CR] | |
|---|---|---|
| Detail | Set image to Image3 mode. | |
| Response | Acceptable | [ACK] [CR] |
| | Unacceptable | "   "[CR] |

### 6.25.    Image4 Command

| Command | "C17" [CR] | |
|---|---|---|
| Detail | Set image to Image4 mode. | |
| Response | Acceptable | [ACK] [CR] |
| | Unacceptable | "   "[CR] |

### 6.26.    Image Blackboard (Green) Command

| Command | "C18" [CR] | |
|---|---|---|
| Detail | Set image to Blackboard (Green) mode. | |
| Response | Acceptable | [ACK] [CR] |
| | Unacceptable | "   "[CR] |

### 6.27.    Image Dynamic Command

| Command | "C19" [CR] | |
|---|---|---|
| Detail | Set image to Dynamic mode. | |
| Response | Acceptable | [ACK] [CR] |
| | Unacceptable | "   "[CR] |

### 6.28. MENU ON Command

| Command | "C1C" [CR] | |
|---|---|---|
| Detail | Display On-Screen Display Menu. | |
| Response | Acceptable | [ACK] [CR] |
| | Unacceptable | "    "[CR] |

### 6.29. MENU OFF Command

| Command | "C1D" [CR] | |
|---|---|---|
| Detail | Hide On-Screen Display Menu. | |
| Response | Acceptable | [ACK] [CR] |
| | Unacceptable | "    "[CR] |

### 6.30. DISPLAY CLEAR Command

| Command | "C1E" [CR] | |
|---|---|---|
| Detail | Hide On-Screen Display.<br>Hide On-Screen Display unconditionally. | |
| Response | Acceptable | [ACK] [CR] |
| | Unacceptable | "    "[CR] |

### 6.31. BRIGHTNESS + Command

| Command | "C20" [CR] | |
|---|---|---|
| Detail | Brightness of User Control +1. | |
| Response | Acceptable | [ACK] [CR] |
| | Unacceptable | "    "[CR] |

### 6.32. BRIGHTNESS – Command

| Command | "C21" [CR] | |
|---|---|---|
| Detail | Brightness of User Control –1. | |
| Response | Acceptable | [ACK] [CR] |
| | Unacceptable | "    "[CR] |

### 6.33. Computer 2 Component Command

| Command | "C24"[CR] | |
|---|---|---|
| Detail | Select Component input in Computer2.<br>Although projector returns "OK", this command is not executed while Input search is On1/On2. | |
| Response | Acceptable | [ACK] [CR] |
| | Unacceptable | "    "[CR] |

## 6.34.  Computer 2 RGB Command

| Command | "C25"[CR] | |
|---|---|---|
| Detail | Select RGB input in Computer2.<br>Although projector returns "OK", this command is not executed while Input search is On1/On2. | |
| Response | Acceptable | [ACK] [CR] |
| | Unacceptable | "   "[CR] |

## 6.35.  Computer 2 SCART Command

| Command | "C26"[CR] | |
|---|---|---|
| Detail | Select Scart input in Computer2.<br>Although projector returns "OK", this command is not executed while Input search is On1/On2. | |
| Response | Acceptable | [ACK] [CR] |
| | Unacceptable | "   "[CR] |

## 6.36.  IMAGE (Toggle) Command

| Command | "C27"[CR] | |
|---|---|---|
| Detail | Switch Image Setting status.<br>This command works the same way as "IMAGE" button of the remote control. | |
| Response | Acceptable | [ACK] [CR] |
| | Unacceptable | "   "[CR] |

## 6.37.  ON START Setting Command

| Command | "C28" [CR] | |
|---|---|---|
| Detail | Enable Power ON Start.<br>This status is stored in EEPROM and retained regardless of Power OFF/ON. | |
| Response | Acceptable | [ACK] [CR] |
| | Unacceptable | "   "[CR] |

## 6.38.  ON START Cancel Command

| Command | "C29" [CR] | |
|---|---|---|
| Detail | Disable Power ON Start.<br>This status is stored in EEPROM and retained regardless of Power OFF/ON. | |
| Response | Acceptable | [ACK] [CR] |
| | Unacceptable | "   "[CR] |

## 6.39.  Power Management Ready Command

| Command | "C2A" [CR] | |
|---|---|---|
| Detail | Set Power Management to Ready mode.<br>This status is stored in EEPROM and retained regardless of Power ON/OFF. | |
| Response | Acceptable | [ACK] [CR] |
| | Unacceptable | "   "[CR] |

### 6.40. Power Management OFF Command

| Command | "C2B" [CR] | |
|---|---|---|
| Detail | Set Power Management to OFF mode.<br>This status is stored in EEPROM and retained regardless of Power ON/OFF. | |
| Response | Acceptable | [ACK] [CR] |
| | Unacceptable | "   "[CR] |

### 6.41. Power Management Shut down Command

| Command | "C2E" [CR] | |
|---|---|---|
| Detail | Set Power Management to Shut down mode.<br>This status is stored in EEPROM and retained regardless of Power OFF/ON. | |
| Response | Acceptable | [ACK] [CR] |
| | Unacceptable | "   "[CR] |

### 6.42. D.ZOOM + Command

| Command | "C30" [CR] | |
|---|---|---|
| Detail | Enter Digital Zoom mode and expand image size.<br>This command works the same way as "D.ZOOM ▲" button of the remote control. | |
| Response | Acceptable | [ACK] [CR] |
| | Unacceptable | "   "[CR] |

### 6.43. D.ZOOM – Command

| Command | "C31" [CR] | |
|---|---|---|
| Detail | Enter Digital Zoom mode and reduce image size.<br>This command works the same as "D.ZOOM ▼" button of the remote control. | |
| Response | Acceptable | [ACK] [CR] |
| | Unacceptable | "   "[CR] |

### 6.44. Video Auto Command

| Command | "C32" [CR] | |
|---|---|---|
| Detail | Select Auto input in Video.<br>Although projector returns "OK", this command is not executed while Input search is On1/On2. | |
| Response | Acceptable | [ACK] [CR] |
| | Unacceptable | "   "[CR] |

### 6.45. Video Video Command

| Command | "C33" [CR] | |
|---|---|---|
| Detail | Select Video input in Video.<br>Although projector returns "OK", this command is not executed while Input search is On1/On2. | |
| Response | Acceptable | [ACK] [CR] |
| | Unacceptable | "   "[CR] |

### 6.46.  Video S-Video Command

| Command | "C34" [CR] | |
|---|---|---|
| Detail | Select S-Video input in Video.<br>Although projector returns "OK", this command is not executed while Input search is On1/On2. | |
| Response | Acceptable | [ACK] [CR] |
| | Unacceptable | "    "[CR] |

### 6.47.  POINTER RIGHT Command

| Command | "C3A" [CR] | |
|---|---|---|
| Detail | Move the Pointer of On-Screen Display Menu to the right.<br>This command works differently from the pointer ">" of the projector and remote control, and has no function of Volume +. | |
| Response | Acceptable | [ACK] [CR] |
| | Unacceptable | "    "[CR] |

### 6.48.  POINTER LEFT Command

| Command | "C3B" [CR] | |
|---|---|---|
| Detail | Move the Pointer of On-Screen Display Menu to the left.<br>This command works differently from the pointer "<" of the projector and remote control, and has no function of Volume +. | |
| Response | Acceptable | [ACK] [CR] |
| | Unacceptable | "    "[CR] |

### 6.49.  POINTER UP Command

| Command | "C3C" [CR] | |
|---|---|---|
| Detail | Move up the Pointer of On-Screen Display Menu.<br>This command works the same way as the pointer "▲" of the projector. | |
| Response | Acceptable | [ACK] [CR] |
| | Unacceptable | "    "[CR] |

### 6.50.  POINTER DOWN Command

| Command | "C3D" [CR] | |
|---|---|---|
| Detail | Move down the Pointer of On-Screen Display Menu.<br>This command works the same way as the pointer "▼" of the projector. | |
| Response | Acceptable | [ACK] [CR] |
| | Unacceptable | "    "[CR] |

### 6.51.  ENTER Command

| Command | "C3F" [CR] | |
|---|---|---|
| Detail | This command works the same way as "SELECT" button of the projector and remote control. | |
| Response | Acceptable | [ACK] [CR] |
| | Unacceptable | "    "[CR] |

### 6.52. FREEZE ON Command

| Command | "C43" [CR] | |
|---|---|---|
| Detail | Freeze on-screen image.<br>This command works the same way as "FREEZE" button of the remote control for Freeze ON, but does not work for Freeze OFF. | |
| Response | Acceptable | [ACK] [CR] |
| | Unacceptable | "  "[CR] |

### 6.53. FREEZE OFF Command

| Command | "C44" [CR] | |
|---|---|---|
| Detail | Cancel Freeze mode.<br>This command works the same way as "FREEZE" button of the remote control for Freeze OFF, but does not work for Freeze ON. | |
| Response | Acceptable | [ACK] [CR] |
| | Unacceptable | "  "[CR] |

### 6.54. AUTO PC ADJ. Command

| Command | "C89" [CR] | |
|---|---|---|
| Detail | Execute Auto PC Adj. function.<br>This command works the same way as "AUTO PC ADJ." button of the remote control.<br>Sending the command during Auto PC Adj. operation stops the operation. This is the same operation as "AUTO PC" button of the remote control. | |
| Response | Acceptable | [ACK] [CR] |
| | Unacceptable | "  "[CR] |

### 6.55. PRESENTATION TIMER Command

| Command | "C8A" [CR] | |
|---|---|---|
| Detail | Execute Presentation Timer.<br>This command works the same way as "P-TIMER" button of the remote control. | |
| Response | Acceptable | [ACK] [CR] |
| | Unacceptable | "  "[CR] |

### 6.56. KEYSTONE ↑Command

| Command | "C8E" [CR] | |
|---|---|---|
| Detail | Correct keystone distortion by reducing upper part of image. | |
| Response | Acceptable | [ACK] [CR] |
| | Unacceptable | "  "[CR] |

### 6.57. KEYSTONE ↓Command

| Command | "C8F" [CR] | |
|---|---|---|
| Detail | Correct keystone distortion by reducing down part of image. | |
| Response | Acceptable | [ACK] [CR] |
| | Unacceptable | "  "[CR] |

## 7.  Status Read Command

### 7.1.  Format

7.1.1.    PC issues commands in format as below;

**"CR" Command [CR]**

Command    1 character    See Basic Status Read Command Table

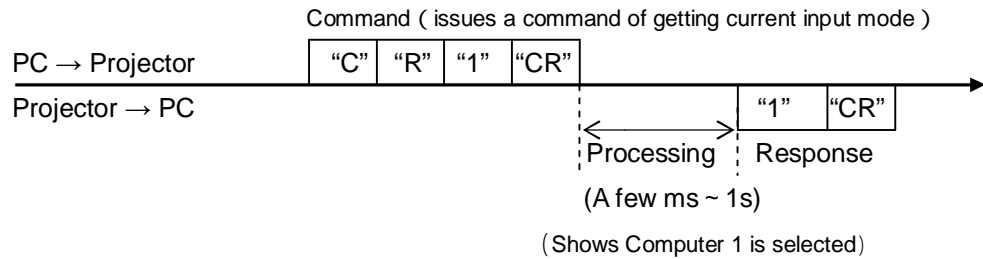7.1.2.    When a projector receives the appropriate command, it returns a character line as the required data.

**Required Data [CR]**

Required Data    A character line    See Basic Status Read Command Table

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

### 7.2.  Transfer Example

Get input mode for projector with basic commands

Command    issues a command of getting current input mode

| PC → Projector | "C" | "R" | "1" | "CR" |

| Projector → PC | | | | | "1" | "CR" |

Processing    Response

(A few ms    1s)

Shows Computer 1 is selected

### 7.3.  Status Read Command

| Command | "CR0" [CR] | |
|---|---|---|
| Detail | Get the projector's operating status | |
| Response | Acceptable | "%1" [CR] |
| | %1 | "00" = Power ON<br>"80" = Standby<br>"40" = Countdown in process<br>"20" = Cooling Down in process<br>"10" = Power Failure<br>"28" = Cooling Down in process due to Temperature Anomaly<br>"88" = Coming back after Temperature Anomaly<br>"24" = Power Save/Cooling Down in process<br>"04" = Power Save<br>"21" = Cooling Down is in process after Power off due to lamp failure<br>"81" = Standby after Cooling Down due to lamp failure |
| | Unacceptable | "?" [CR] |

**[Details of Response]**

### 7.3.1. "00" [CR]

Status : Power ON

Normal image is on the screen.

### 7.3.2. "80" [CR]

Status: Standby

When the status is Standby, Status Read Commands are always acceptable, but Functional Execution Commands are not acceptable except POWER ON Command.

### 7.3.3. "40" [CR]

Status: Countdown in process

When "Display" in Setting Menu is ON and POWER ON is executed, it starts Countdown.

When "Display" in Setting Menu is OFF, processing Countdown is not executed and the status quickly moves to Power ON.

### 7.3.4. "20" [CR]

Status: Cooling Down in process

When the status is Power ON, and POWER OFF Command ("C01"[CR]) is executed, it moves to Cooling Down status.

This status automatically moves to Standby after lamp turns off and the fan spin finishes after about 90 seconds. The fan spin time depends on a model.

This function is used to cool down the lamps and other optical parts and is quite important for projector's reliability.

During this time, Functional Execution Commands are invalid.

### 7.3.5. "10" [CR]

Status: Power Failure

When the power supply voltage inside the projector reaches abnormal status, the projector is automatically turned off. The projector returns "10"[CR], which shows it moves to Power OFF status due to power failure. Fan also stops unlike Cooling Down status.

### 7.3.6. "28" [CR]

Status: Cooling Down in process due to Temperature Anomaly

When the inside temperature is out of the operating temperature, it automatically starts Cooling Down. Response for this status is "28"[CR].

Even if the temperature decreases during this process, Cooling Down is executed.

### 7.3.7. "88"[CR]

Status: Coming back after temperature anomaly

When the status moves to Standby after Cooling Down due to temperature anomaly, it returns "88" [CR].

This shows that the status turns to Standby because of abnormal temperature.

This status maintains until next operation is done. When Power On is executed, the

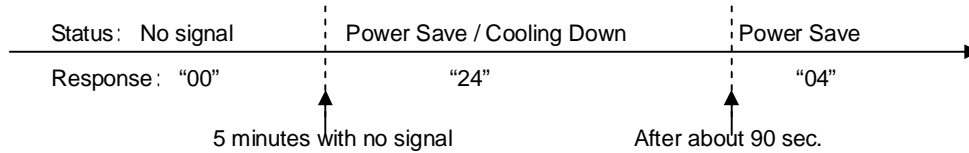information of temperature anomaly is canceled and normal operation is executed.

### 7.3.8.  "24"[CR]

Status: Processing Power Save / Cooling Down

Power management function in Setting menu works and the status goes to Power Save / Cooling Down.

During this time, Functional Execution Commands are invalid (not executed).

This status moves to Power Save at set hours after the operation of Cooling Down.

| Status | No signal | Power Save / Cooling Down | Power Save |
|---|---|---|---|
| Response | "00" | "24" | "04" |

5 minutes with no signal          After about 90 sec.

### 7.3.9. "04"[CR]

Status: Power Save

This shows that it moves to Power Save status by Power management function in Setting menu.

### 7.3.10. "21" [CR]

Status: Cooling Down in process after turned off due to lamp failure

When a projector is turned off because of lamp failure, it automatically starts Cooling Down operation, in which the projector returns "21" [CR].

### 7.3.11. "81"  CR

Status: Standby after Cooling Down due to lamp failure

This value is returned when Cooling Down operation due to lamp failure has been completed and the status has been moved to Standby. The status is kept until the next operation starts.

### 7.4. Input Mode Read Command

| Command | "CR1" [CR] | |
|---|---|---|
| Detail | Get the selected Input No. | |
| Response | Acceptable | "%1" [CR] |
| | %1 | "1" = Computer 1 is selected<br>"2" = Computer 2 is selected<br>"3" = Video is selected |
| | Unacceptable | "?" [CR] |

### 7.5. Lamp Time Read Command

| Command | "CR3" [CR] | |
|---|---|---|
| Detail | Get the total lamp running hours (Not actual lamp used hour, but Eco mode corresponding value). | |
| Response | Acceptable | "%1" [CR] |
| | %1 | Shows the time period with 5 digits numbers.<br>Example　"00410"[CR]　　shows 410 hours |
| | Unacceptable | "?" [CR] |

### 7.6. Setting Read Command

| Command | "CR4" [CR] | |
|---|---|---|
| Detail | Get screen setting status such as Ceiling / Rear. | |
| Response | Acceptable | "%1" [CR] |
| | %1 | "11"[CR] = Normal Screen Setting<br>"10"[CR] = Picture is top/bottom reversed.<br>　　　　　(Status: Rear　Ceiling ON)<br>"01"[CR] = Picture is left/right reversed. (Status: Rear ON)<br>"00"[CR] = Picture is top/bottom and left/right reversed.<br>　　　　　(Status: Ceiling ON) |
| | Unacceptable | "?" [CR] |

### 7.7. Temp Read Command

| Command | "CR6" [CR] | |
|---|---|---|
| Detail | Get the temperature data inside the projector.<br>With some temperature sensors installed in the projector, it is possible to get all the temperature at once. | |
| Response | Acceptable | "%1_%2_%3" [CR] |
| | %1<br>%2<br>%3 | %1　Temperature of sensor 1<br>%2　Temperature of sensor 2<br>%3　Temperature of sensor 3<br>Temperature data is shown as "00.0".<br>When the temperature goes down to -, the first character becomes "-" instead of a space, like "-05.5" [CR].<br>When no temperature data can be returned due to hardware problems, the first character becomes "E" like"E00.0" [CR].<br>When several temperature sensors are equipped, Responses are returned continuously.<br>"_31.5 _ _35.2 _ _33.4"[CR]<br>The first data is sensor 1, then one space, and the data of sensor 2 follows. |
| | Unacceptable | "　"[CR] |

### 7.8. Lamp Mode Read Command

| Command | "CR7" [CR] | |
|---|---|---|
| Detail | Get lamp mode status.<br>For 1 lamp projector, get if it is lighting or not. | |
| Response | Acceptable | "%1" [CR] |
| | %1 | "00" [CR]=Light is out.<br>"01" [CR]=Light is on. |
| | Unacceptable | "   "[CR] |