

Canon

Projector WUX10 MarkII

User Commands

Revision 1



Revision History

Revision No.	Version	Date	Page(s)	Changes	Revised by
1	01.0001	6/23/2009		First release	
					
					
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1. Overview

These specifications describe the methods of controlling the Projector WUX10 MarkII from the PC over an RS-232C connection or LAN.

Virtually all operations possible with the remote control can be controlled from the PC.

The following symbols are used in these specifications:

Symbol	Description	
Δ	Space with 0 or more characters (20h), Tab (09h), or other separator.	
	Space with 1 or more characters (20h), Tab (09h), or other separator.	
∇	Separator between parameters \triangle , $\triangle \mid \Box$.	
[]	Data in [] can be omitted.	
	Same as OR.	
: =	Definition name is on the left side of this mark, and definition description is on the right side.	

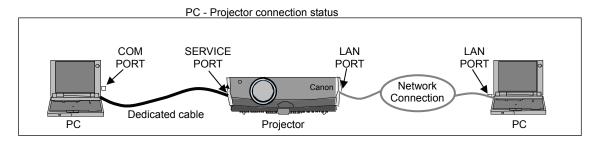
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2. Communication Specifications

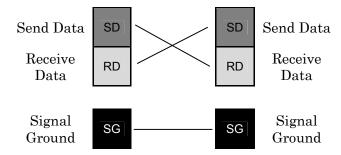
Communication Specifications

The projector can be controlled via serial or LAN connection.



Item	Specifications		
Connection system	PC and projector connected on a "1:1" basis		
Connection signal line	3-line connection of SD, RD, and SG		
Connection cable	9pin RS-232C Cable (Cross)		

Item	Specifications
Connection system	TCP/IP Connection
Connection signal line	Straight when connecting via network
Connection cable	LAN Cable



- * Signal lines other than the three lines of SD, RD and SG are not used in the projector!
- * Loop back its own signals at the PC side if necessary.

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Communication System (Serial)

Item	Specifications			
Communication system	RS-232-C Start-stop synchronization Semi-duplex communication			
Transmission speed	19.2 Kbps			
Character length	8 bits/character			
Stop bit	2 bits			
Parity	None			
Transmission format	Variable-length record with terminal as delimiter			
Maximum transmission length	Maximum of 256 characters (bytes) including delimiters.			
Delimiters	Delimiters are one of CR, LF, CR+LF, Null (0) (delimiters are identified automatically).			
	Response delimiters are identical to command delimiters.			
	ASCII code (General-purpose characters: 20h to 7Fh), Tab (09h)			
	(Codes other than those above and delimiters are considered "other			
Tananasianian andan	separator codes")			
Transmission codes	Uppercase and lowercase of alphabetic characters are considered the same character.			
	Double-byte characters and single-byte characters are not distinguished. All are considered single-byte characters.			
Communication procedure	No procedure			
Flow control	None			
Error control	None			
Break signal	Not supported			
	Tc Character: 5s (Timeout between CR and LF is 10ms.)			
Time out	Tr Command/response interval: 15s			

Communication System (LAN)

Item	Specifications
Communication system	
Transmission speed	
Character length	

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Commands

Request transmissions sent from PC to the projector.

Transmission format

 \triangle <Command character strings> \triangle <Delimiters>

<Command character strings>

Character strings consisting of 0 or more alphanumeric characters.

<Delimiters>

One of CR (0Dh), LF (0Ah), CR+LF (0Dh+0Ah), Null (00h)

Type

Туре	Description	Response
	Commands with a command character string length of 0. No command processing is performed.	■ ОК
		☐ BUSY
Null Commands Character string	<null character="" command="" string=""></null>	■ WARN
Ondracter string	:= <character 0="" length="" string="" with=""></character>	■ ERR
	Projector control command. The format is shown below.	■ OK
Control		■ BUSY
command	<pre><control character="" command="" string=""></control></pre>	■ WARN
Character string	:= <control name="">□<parameter value=""></parameter></control>	■ ERR
	Command that sets values for each parameter. The format is shown below.	■ OK
Setting		■ BUSY
command	<pre><setting character="" command="" strings=""></setting></pre>	■ WARN
Character string	:= <parameter name="">\triangle=\triangle<parameter value=""></parameter></parameter>	■ ERR
	For the definition of <parameter value="">, refer to "Parameter definitions.</parameter>	
	Requests current value of each parameter. The format is shown below.	□ ОК
		■ BUSY
Reference command	<pre><reference character="" command="" string=""> :=? \(\text{\text{C}} \) Parameter name></reference></pre>	■ WARN
Character string		■ ERR

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Response

Transmissions sent from Projector to PC in response to commands from PC.

Transmissionformat

<Response character string> <Delimiter>

<Response character string>

Character strings consisting of one or more ASCII characters.

The first two characters are always <one lowercase letter>:

The first character indicates the response type.

Response type	Meaning	Example
i	State response	i:OK i:BUSY etc.
W	Warning	w:USER_COMMAND
е	Error	e:000B INVALID
g	Reference command response	g:AVOL=10

<Delimiters>

Delimiters for commands sent from PC.

Type

OK response After processing of each command is completed, a response is sent indicating that

the next command can be received.

<OK response character string>:=i:OK

BUSY response This response is sent when a command cannot be received during processing. Wait

for a few moments, and then try sending the command again.

<BUSY response character string>:=i:BUSY

Example: > IMAGE=STANDARD

< i:BUSY

WARN response This response is sent when warning information is issued.

* that this command cannot be executed.

<Warning response character string>:= w:<Warning description>

Example: > IMAGE=STANDARD

< w:USER_COMMAND_VERSION_IS_UPDATED

ERR response An error message is output.

<Error response character string>:= e:<Error code>□<Error message>

* <Error code> is expressed as a four-digit hexadecimal number.

* Refer to "Error List"!

Example: > abcdefg

< e:0002 INVALID_COMMAND

GET response Request response for each parameter.

<GET response character string>:=g<Parameter name>=<Value>

Example: > GET LANG or ? LANG

< g:LANG=JPN

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Other

Transmission recognition

Transmission is recognized when delimiter is received.

Even if a maximum transmission length is received, the entire received transmission will be lost unless a delimiter is received.

The <Parameter value> is defined as shown below.

```
<Parameter value> := <Value 1>\nabla<Value 2> \nabla.. \nabla <Value n>  <Value> := <Numerical value> | <ID> | "<Character string>"
```

<ID> := 1 or more ASCII characters (20h to 7Fh) <Character string> := 0 or more ASCII characters (20h to 7Fh)

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3. Communication Flow

Transmission sent

At the sending side (PC), the transmission is sent within character intervals of Tc (character interval timeout).

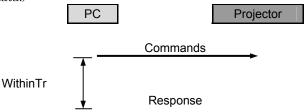
Transmission received

At the receiving side (Projector), data able to be received within the character interval of Tc is held, and receiving of a delimiter is considered "transmission received".

If a received character interval exceeds Tc or a delimiter is not received within 256 characters, all data already received is lost, and the mode is reset to receive standby again.

Command/Response

One response is always returned for each command sent from the PC. (However, note that a response may not be returned when the internal receive buffer overflows due to reception of a large amount of data.)



^{*} The timeout interval between command and response (Tr) is 15 seconds.

Response Reception Timeout

If a response is not received within Tr (timeout interval between command and response) while in response reception standby after sending a command at the PC, resend the command in the "response reception timeout".

Control Mode

"LOCAL mode" and "REMOTE mode" on previous models (SX50, SX6, SX60, X600, SX7, X700) have been removed. You do not need to be aware of which mode it is in (no need to use "REMOTE" and "LOCAL" commands) to send user commands.

Other

If AC power is supplied to the projector, communication is possible regardless of whether the power is on or off.

The PC side cannot send a next user command before a response for the first command is returned. If more than 2 user commands arrive at one port, "BAD_SEQUENCE" will be returned in response to the second user command.

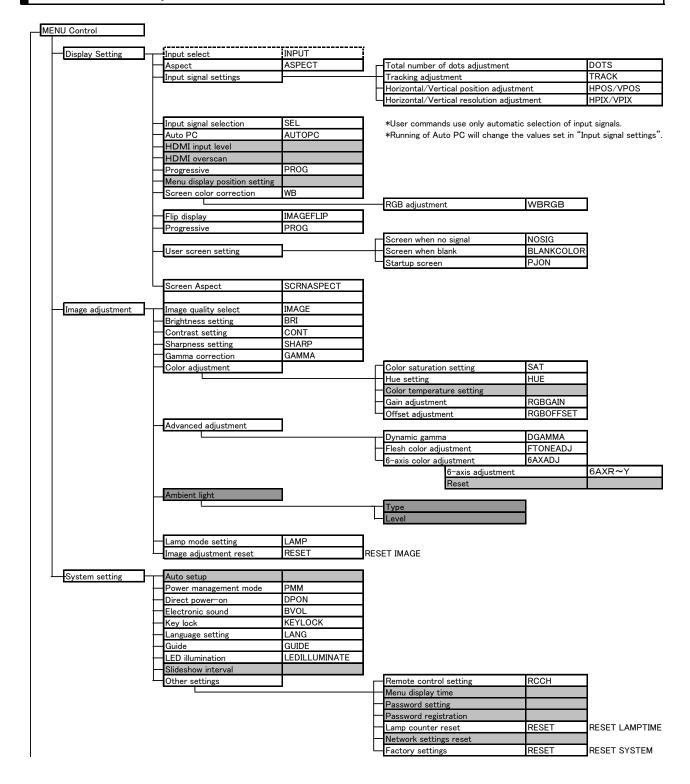
Response to the first processed user command will not be returned.

If user commands arrive at the LAN and service port simultaneously, both will be processed. It will be processed individually, and return a response to each command to individual ports.

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4. Command System



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Ш	[POWER]	POWER	
Ш	[AUTO SET]	AUTOSETEXE	7
Н	[ASPECT]	ASPECT	7
Н	[INPUT]	INPUT	7
Н	[AUTO PC]	AUTOPC	*Running of Auto PC will change the values set in "Input signal set
Н	[FOCUS]	FCONTDRV / FSETPDRV	1
Н	[ZOOM]	ZCONTDRV / ZSETPDRV	7
Н	[D.SHIFT]		1
Н	[KEYSTONE]	VKS	
Н	[MENU]		ī
Н	[D.ZOOM]		1
H	[VOL]	AVOL	
\vdash	[FREEZE]	FREEZE	
\vdash	[BLANK]	BLANK	7
Н	[MUTE]	MUTE	
Н	[IMAGE]	IMAGE	
Н	[P-TIMER]		1
Щ	[LAMP]	LAMP	
mula		LAWIF	_
Н	Key emulate	MAIN	
Ч	Remote control emulat	e RC	
efere	ence		
Ш	Retrieve each data	GET ****	7

POWER	POWER	
AUTO SET	AUTOSET	
MENU	MENU	
KEYSTONE	KEYSTONE	
FOCUS	FOCUS	
ZOOM	ZOOM	
INPUT	INPUT	
AUTOPC	AUTOPC	
↑	UP	
\downarrow	DOWN	
←	LEFT	
\rightarrow	RIGHT	
OK	OK	

POWER
AUTOSET
MENU
KEYSTONE
FOCUS
ZOOM
INPUT
AUTOPC
ASPECT
IMAGE
BLANK
MUTING
VOL+
VOL-
FREEZE
PTIMER
LAMP
DZOOM+
DZOOM-
UP
DOWN
LEFT
RIGHT
OK

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5. Command List

Item	Commands	Description
1	6AXADJ	6-axis adjustment ON/OFF
2	6AXR~Y	6-axis correction R-Y hue/saturation settings
3	ASCOMBO_*	Defines auto setup combination
4	ASPECT	Screen settings
5	AUTOPC	Auto PC
6	AUTOSETEXE	Auto setup
7	AVOL	Audio volume adjustment
8	BLANK	BLANK function
9	BLANKCOLOR	Screen when BLANK setting
10	BRI	Brightness setting
11	BVOL	BEEP sound setting
12	COMVER	User command version inquiry
13	CONT	Contrast setting
14	DGAMMA	Dynamic gamma
15	DOTS	Total number of dots adjustment
16	DPON	Direct power-on setting
17	ERR	Error information inquiry
18	FCONTDRV	Focus lens continuous drive control
19	FREEZE	Freeze status
20	FSTEPDRV	Focus lens step drive control
21	GAMMA	Gamma adjustment
22	GUIDE	Guide setting
23	HPIX / VPIX	Horizontal/Vertical resolution adjustment
24	HPOS / VPOS	Horizontal/Vertical position adjustment
25	HUE	Hue setting
26	IMAGE	Image mode setting
27	IMAGEFLIP	Flip display
28	INPUT	Input selection
29	KEYLOCK	Keylock setting
30	LAMP	Lamp output setting
31	LAMPCOUNTER	Lamp ON time inquiry
32	LANG	Language select
33	LEDILLUMINATE	Emotional LED lighting control
34	LMPT	Lamp time inquiry
35	MAIN	Front panel operation emulation
36	FTONEADJ	Flesh tone adjustment
37	MODE	Control mode switch
38	MUTE	Mute control
39	NOSIG	Display screen when no signal setting
40	PJON	Display screen at startup setting

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Item	Commands	Description
41	PMM	Power management
42	POWER	This controls the power supply
43	PRODCODE	Product information inquiry
44	PROG	Progressive setting
45	RC	Remote control operation emulate
46	RCCH	Remote control channel setting
47	RESET	Reset
48	RGBGAIN	RGB gain adjustment
49	RGBOFFSET	RGB offset adjustment
50	ROMVER	ROM version inquiry
51	SAT	Color saturation setting
52	SCRNASPECT	Screen aspect setting
53	SEL	Input signal selection
54	SHARP	Sharpness setting
55	SIGNALSTATUS	Signal status inquiry
56	TEMP	Temperature inquiry
57	TMPL	Temperature limit inquiry
58	TRACK	Tracking adjustment
59	VKS	Vertical keystone setting
60	WB	Screen color correction
61	WBRGB	Screen color correction (ADJUST)
62	ZCONTDRV	Zoom lens continuous drive control
63	ZSTEPDRV	Zoom lens step drive control

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6. Details of Command

Descriptions of each command are provided starting from the next page.

The command descriptions have the format shown below.

Alphabetic command name

This briefly describes the command function.

Format

This indicates the command format.

Environment

This defines the environments that support the command (power supply state, input signal state).

P	ower*	1		Input							
OFF	ON	PM	D-RGB	D-RGB A-RGB1 A-RGB2 COMP VIDEO HDMI Noi							
*2	*3	*4	*5	*5	*5	*5	*5	*5	*6		

*1 Power Executable regardless of power supply state when marked by "-".

*2 OFF "O" when power supply state is OFF.

*3 ON "O" when power supply state is ON.

*4 PM "O" when the power supply state is enabled while power management is in standby.

*5 Input The command is enabled in states marked by "O".

The command is executable regardless of input when marked by "-".

*6 None Input signal is required when "X".

Response

This describes the command response.

Description

This includes the command function, conditions, and notes.

Example

This provides command usage examples.

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6AXADJ

6-axis adjustment ON/OFF

Format

6AXADJ=<6-axis adjustment parameter:ID>
GET□6AXADJ / ?△6AXADJ

<6-axis adjustment parameter:ID>

ON This sets the 6-axis adjustment to ON.
OFF This sets the 6-axis adjustment to OFF.

Environment

	Power		Input							
OFF	ON	PM	D-RGB	D-RGB A-RGB1 A-RGB2 COMP VIDEO HDMI NO						
Х	0	Χ				-				

Response

"i:OK" is returned if the parameter was set properly.

For 'GET 6AXADJ' or '?6AXADJ', current 6-axis adjustment state is returned in

'g:6AXADJ=<6-axis adjustment parameter:ID>'

For details on other responses, refer to the "Error List".

Description

- (1) This command is used to select ON or OFF for the 6-axis adjustment.
- (2) This command functions in the same way as when "Image adjustments" "Advanced adjustments" "6-axis adjustment" are selected on the menu.
- (3) In the case of "6-axis adjustment," set the hue and color saturation of each axis using the 6AXR to Y "6-axis correction R to Y hue/color saturation setting" commands.
- (4) This sets the currently selected input signal and image mode.
- (5) The current 6-axis adjustment setting can be obtained using the GET command. ("GET 6AXADJ")

Example

Control

> 6AXADJ=ON The 6-axis adjustment is set to ON. < i:OK

Reference

> GET 6AXADJ or ?6AXADJ The 6-axis adjustment ON or OFF setting is obtained. < g:6AXADJ=ON

*Commands are indicated by ">", and responses are indicated by "<".

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6AXR-Y

6-axis correction R-Y hue/saturation settings

Format

```
6AXR=<R hue:Number>∇<R saturation:Number>
6AXG=<G hue:Number>∇<G saturation:Number>
6AXB=<B hue:Number>∇<B saturation:Number>
6AXC=<C hue:Number>∇<C saturation:Number>
6AXM=<M hue:Number>∇<M saturation:Number>
6AXY=<Y hue:Number>∇<Y saturation:Number>
GET□6AXR
              ?∆6AXR
GET□6AXG
           /
              ?△6AXG
GET□6AXB
              ?∆6AXB
GET□6AXC
              ?∆6AXC
GET□6AXM
              ?△6AXM
GET□6AXY
              ?∆6axy
```

Setting values for <R/G/B/C/M/Y hue:Number> are -20 to 20. Setting values for <R/G/B/C/M/Y saturation:Number> are -20 to 20.

Environment

Power Input										
OFF	ON	PM	D-RGB	D-RGB A-RGB1 A-RGB2 COMP VIDEO HDMI Non						
Х	0	Χ	-							

Response

"i:OK" is returned if the parameter was set properly.

For 'GET 6AX*' or '?6AX*', current 6-axis correction R-Y hue/saturation settings are returned as

'g:6AX*=<*hue: Number>,<*saturation:Number>'

For details on other responses, refer to the "Error List".

Description

- (1) This sets the 6-axis correction of the hue and color saturation for R to Y.
- (2) This command functions in the same way as when "Image adjustments" "Advanced adjustments" "6-axis color adjustment" are selected on the menu.
- (3) If numerical parameters are outside the range, "e:0801 INVALID_VALUE" is returned.
- (4) These commands take effect when they have been set to valid using the 6-axis adjustment command (6AXADJ), and they can be set separately.
- (5) This sets the currently selected input signal and image mode.
- (6) The current 6-axis color correction can be obtained using the GET command. ("GET 6AXR/G/B/C/M/Y")

Example

Setting

> 6AXR=-8, 5 The R hue is set to -8, and the color saturation is set to 5. < i:OK

Reference

> GET 6AXR or ?6AXR This retrieves the R hue and color saturation. < g:6AXR=12, -8

^{*} Commands are indicated by ">", and responses are indicated by "<".

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ASCOMBO *

Defines auto setup combination

Format

```
ASCOMBO_AF=<Auto set combination parameter:ID>
ASCOMBO_AVK=<Auto set combination parameter:ID>
ASCOMBO_AINP=<Auto set combination parameter:ID>
ASCOMBO_ASC=<Auto set combination parameter:ID>
GET□ASCOMBO_AF / ? ASCOMBO_AF
GET□ASCOMBO_AVK / ? ASCOMBO_AVK
GET□ASCOMBO_AINP / ? ASCOMBO_AINP
GET□ASCOMBO_ASC / ? ASCOMBO_ASC
```

Auto set combination parameter:ID>

ON Combine
OFF Do not combine

Environment

	Power		Input								
OFF	ON	PM	D-RGB	D-RGB A-RGB1 A-RGB2 COMP VIDEO HDMI N							
Х	0	Χ				-					

Response

"i:OK" is returned if automatic setup combination was set properly.

For 'GET ASCOMBO_*' or '? ASCOMBO_*', current auto setup sequence combination is returned as 'g:ASCOMBO_*=ON' or 'g:ASCOMBO_*=OFF'

For details on other responses, refer to the "Error List".

Description

- (1) This sets whether to combine a sequence in the auto setup.
- (2) This command functions in the same way as when "System settings" "Auto setup" are selected on the menu.
- (3) Even if it has been set using this command, AUTOSETEXE may not be executed depending on other status of the projector (screen aspect, etc.).
- (4) Also refer to the AUTOSETEXE command.
- (5) The current auto setup combination can be obtained using the GET command.

Example

Setting

> ASCOMBO_AF=ON Auto focusing is executed during auto setup execution.
< i:OK

Reference

- > GET ASCOMBO_AVK or ?ASCOMBO_AVK Auto focus execution setting in current auto setup is obtained.
 < g:ASCOMBO AVK=ON
- * Commands are indicated by ">", and responses are indicated by "<".

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ASPECT

Screen settings

Format

ASPECT=<Screen setting parameters:ID>
GET ASPECT / ?\(\triangle ASPECT \)

<Screen setting parameters:ID>

 AUTO
 Auto

 4:3
 4:3

 16:9
 16:9

 FULL
 Full screen

 ZOOM
 Zoom

 TRUE
 Real

Environment

	Power			Input								
OFF	ON	PM	Parameter	D-RGB	A-RGB1	A-RGB2	COMP	VIDEO	HDMI	None		
Χ	0	Х	AUTO	0	0	0	0	×	0	*4		
			4:3	0	0	0	0	0	0	*4		
			16:9	0	0	0	0	0	0	*4		
			FULL	*5	*5	*5	×	×	×	*4		
			ZOOM	×	×	×	*1	*2	*1	*4		
		TRUE	0	0	0	*3	×	*3	*4			

^{*1} Valid when screen aspect (16:9 or 16:9 DIS) and SD signals

Response

"i:OK" is returned if the parameter was set properly.

For 'get aspect' or '?aspect', current screen display mode is returned as

'g:ASPECT=<Screen setting parameters:ID>'

For details on other responses, refer to the "Error List".

Description

- (1) This sets the screen sizes.
- (2) This command functions in the same way as when "Display settings" "Aspect" are selected on the menu.
- (3) If the command cannot be supported, 'INVALID_SOURCE' is returned as an error response.
- (4) If the necessary signals are not input, 'NO_SIGNAL' is returned.
- (5) The final screen settings are retained even when the power is turned off. However, the screen settings may be different if the input terminal or input signal is changed.
- (6) The GET command can be used to retrieve the current screen display mode. ("GET ASPECT")

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^{*2} Settable when screen aspect (16:9 or 16:9 DIS)

^{*3} Progressive allowable (however, 1080p is non-allowable)

^{*4} Allowable/Non-Allowable differs according to selected input signal

^{*5} Settable when screen aspect (16:10)



Example

Setting

> ASPECT=16:9 This sets the screen size to WIDE.

> i:OK

Reference

> GET ASPECT or ?ASPECT This retrieves the screen size.

< g:ASPECT=TRUE

* Commands are indicated by ">", and responses are indicated by "<".

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AUTOPC

Auto PC

Format

AUTOPC

Environment

	Power					Input			
OFF	ON	PM	D-RGB	D-RGB A-RGB1 A-RGB2 COMP VIDEO HDMI					None
Х	0	Х	Х	0	0	Х	Х	Х	Χ

Response

"i:OK" is returned if the control was executed properly.

For details on other responses, refer to the "Error List".

Description

- (1) This executes Auto PC.
- (2) This command is identical to pressing the "AUTOPC" button on the remote control.
- (3) If the input is neither "A-RGB1" nor "A-RGB2", 'e:200X INVALID_SOURCE(***)' is returned as an error response.
- (4) If signals are not input, "e:2010 NO_SIGNAL" is returned.
- (5) Execution of this command may modify the following setting values.
 - Total number of dots
 - Tracking
 - · Horizontal/vertical positions
 - · Number of horizontal/vertical display dots
- (6) To confirm modified setting values, use the GET command of the respective parameter. For details, refer to the GET commands below.

Setting	GET
Total number of dots	GET DOTS
Tracking	GET TRACK
Horizontal position	GET HPOS
Vertical position	GET VPOS
Number of horizontal display dots	GET HPIX
Number of vertical display dots	GET VPIX

Example

> AUTOPC

< i:OK

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^{*} Commands are indicated by ">", and responses are indicated by "<".



AUTOSETEXE

Auto setup

Format

AUTOSETEXE □<Auto set parameter:ID>

<Auto set parameter:ID>

FOCUS Auto focusing

VKS Auto keystone (vertical) execution

SCRN Automatic screen color correction execution

INPUT Automatic signal sensing execution

Environment

	Power					Input			
OFF	ON	PM	D-RGB	O-RGB A-RGB1 A-RGB2 COMP VIDEO HDMI No					None
Х	0	Χ				-			

Response

"i:OK" is returned when the automatic processing was completed successfully. For details on other responses, refer to the "Error List".

Description

- (1) This command is used to execute auto setup.
- (2) One of the following responses is returned if auto setup cannot be executed due to projector settings.

Projector		Ту	ре		Error response	
settings	FOCUS	VKS	SCRN	INPUT		
BLANK	×	0	×	0	'e:1006 NOW_BLANK'	
FREEZE	×	×	×	×	'e:1009 NOW_FREEZE'	
D.ZOOM	×	×	×	×	'e:100A NOW_D.ZOOM'	○ : Executable
DIS*	×	×	×	0	'e:1008 INVALID_SCREEN_ASPECT'	× : Non-executable

^{*} DIS:Digital Image Shift

(3) One of the following responses is returned if an error has been detected at any part of the auto setup.

Туре	Response
FOCUS	'e:F002 SYSTEM (AF)'
VKS	'e:F004 SYSTEM (AK)'
SCRN	'e:F005 SYSTEM (ASC)'

- (4) If the input signal cannot be detected using the automatic signal sensing,
 - 'i:INPUT NOT FOUND' is returned.
- (5) When automatic screen color correction (SCRN) has been completed successfully, the screen color correction (WB) is set to "ADJUST".
- (6) There are no parameters to be executed together. Execute them separately.

Example

Setting

> AUTOSETEXE FOCUS

Auto focusing is executed.

< i:OK

^{*} Commands are indicated by ">", and responses are indicated by "<".

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AVOL

Audio volume adjustment

Format

AVOL=<Audio volume level:Number>
GET AVOL / ? AVOL

Setting values for <Audio volume level:Number> are 0 to 20.

Environment

	Power					Input			
OFF	ON	PM	D-RGB	A-RGB1	A-RGB2	COMP	VIDEO	HDMI	None
Х	0	Х				-			

Response

"i:OK" is returned if the parameter was set properly.

For 'GET AVOL' or '?AVOL', current audio volume level is returned as

'g:AVOL=<Audio volume level:Number>'

For details on other responses, refer to the "Error List".

Description

- (1) This adjusts the volume.
- (2) This command is identical to pressing the "VOL+" and "VOL-" button on the remote control or the "VOL" on the front panel.
- (3) If numerical parameters are outside the range, "e:0801 INVALID_VALUE" is returned.
- (4) The volume level can be set even while the sound is muted.
- (5) The GET command can be used to retrieve the current volume. ("GET AVOL")

Example

Setting

> AVOL=18 This sets the volume to 18.

< i:OK

Reference

> GET AVOL or ?AVOL This retrieves the volume.

< g:AVOL=18

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^{*} Commands are indicated by ">", and responses are indicated by "<".



BLANK

BLANK function

Format

BLANK=<BLANK parameter:ID>
GET BLANK / ?\triangleBLANK

<BLANK parameter:ID>

ON BLANK ON BLANK OFF.

Environment

	Power					Input			
OFF	ON	PM	D-RGB	D-RGB A-RGB1 A-RGB2 COMP VIDEO HDMI Nor					None
Х	0	Х		-					

Response

"i:OK" is returned if the parameter was set properly.

For 'GET BLANK' or '?BLANK', current BLANK status is returned as

'g:BLANK=ON'

'g:BLANK=OFF'

For details on other responses, refer to the "Error List".

Description

- (1) This command is used to set the BLANK function.
- (2) This command is identical to pressing the "VOL+" and "VOL-" button.
- (3) The current BLANK settings can be obtained using the GET command. ("GET BLANK")

Example

Setting

> blank=on Blank is set to ON.

< i:OK

Reference

> GET BLANK or ?BLANK The current BLANK status is referenced.

< g:BLANK=ON

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^{*} Commands are indicated by ">", and responses are indicated by "<".



BLANKCOLOR

Screen when BLANK setting

Format

BLANKCOLOR=<Screen when BLANK setting parameter:ID>
GET BLANKCOLOR / ?\triangle BLANKCOLOR

<Screen when BLANK setting parameter:ID>

BLACK Black screen
BLUE Blue screen

Environment

Power			Input							
OFF	ON	PM	D-RGB	A-RGB1	A-RGB2	COMP	VIDEO	HDMI	None	
Х	0	Х				-				

Response

"i:OK" is returned if the parameter was set properly.

For 'GET BLANKCOLOR' or '?BLANKCOLOR', current screen when BLANK setting is returned as

'g:BLANKCOLOR=<BLANK display screen setting parameter:ID>'

For details on other responses, refer to the "Error List".

Description

- (1) This command is used to set the screen when BLANK.
- (2) This command functions in the same way as when "Display settings" "User screen setting" "Screen when blank" are selected on the menu.
- (3) The current screen when BLANK setting can be obtained using the GET command. ("GET BLANKCOLOR")

Example

Setting

> BLANKCOLOR=BLACK Set to "Black screen" when screen is BLANK.

< 0k

Reference

> GET BLANKCOLOR or ?BLANKCOLOR Screen when BLANK setting is obtained.

< g:BLANKCOLOR=BLACK

Revision History	/ Date	Changes	Revised by	Approved by

^{*} Commands are indicated by ">", and responses are indicated by "<".



BRI

Brightness setting

Format

BRI=<Brightness setting:Number>
GET□BRI / ?△BRI

Setting values for <Brightness setting: Number> are -20 to 20.

Environment

	Power			Input							
OFF	ON	PM	D-RGB	-RGB A-RGB1 A-RGB2 COMP VIDEO HDMI No					None		
Х	0	Χ				-					

Response

"i:OK" is returned if the parameter was set properly.

For 'GET BRI' or '?BRI', current brightness is returned as

'g:BRI=<Brightness setting:Number>'

For details on other responses, refer to the "Error List".

Description

- (1) This sets the screen brightness.
- (2) This command functions in the same way as when "Image adjustments" "Brightness" are selected on the menu.
- (3) If numerical parameters are outside the range, "e:0801 INVALID VALUE" is returned.
- (4) This sets the currently selected input signal and image mode.
- (5) The current brightness can be acquired using the applicable GET command. ("GET BRI")

Example

Setting

> BRI=-10 This sets the brightness to -10. < i:OK

Reference

> GET BRI or ?BRI This retrieves the brightness. < g:BRI=-10

Revision Hi	story / Date	Changes	Revised by	Approved by

^{*} Commands are indicated by ">", and responses are indicated by "<".



BVOL

BEEP sound setting

Format

BVOL=<Beep sound setting:Number>
GET BVOL / ? \(\triangle BVOL \)

<Beep sound setting: Number>

0 BEEP sound mute 1 BEEP sound output

Environment

	Power		Input							
OFF	ON	PM	D-RGB	D-RGB A-RGB1 A-RGB2 COMP VIDEO HDMI					None	
Χ	0	Х				-				

Response

"i:OK" is returned if the parameter was set properly.

For 'GET BVOL' or '?BVOL', current BEEP sound setting is returned as

'g:BVOL=<Beep sound setting:Number>'

For details on other responses, refer to the "Error List".

Description

- (1) This sets the BEEP sound output.
- (2) This command functions in the same way as when "System setting" "Electronic sound" are selected on the menu.
- (3) The beep sound can be set even while the sound is muted, but it will not sound even if (beep sound output) has been set.
- (4) The current beep sound output status can be acquired using the applicable GET command. ("GET BVOL")

Example

Setting

> BVOL=0 This mutes the BEEP sound.

< i:OK

Reference

> GET BVOL or ?BVOL This retrieves the BEEP sound output state.

< g:BVOL=1

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^{*} Commands are indicated by ">", and responses are indicated by "<".



COMVER

User command version inquiry

Format

GET□COMVER / ?△COMVER

Environment

Power			Input							
OFF	ON	PM	D-RGB	O-RGB A-RGB1 A-RGB2 COMP VIDEO HDMI N				None		
-					-					

Response

Returns the user command version as

g:COMVER="<User command version:Character string>"

<User command version>:=99.9999

For details on other responses, refer to the "Error List".

Description

- (1) This inquires about the user command version of the projector.
- (2) This inquiry can be executed in any status provided that AC power is supplied to the projector.
- (3) The user command version consists of a 2-digit number followed by a 4-digit number. Question marks may appear in place of the numerals if the firmware has not been upgraded correctly. (Example "??:????")

Example

- > GET COMVER or ? COMVER
- < g:COMVER="01.0000"
- * Commands are indicated by ">", and responses are indicated by "<".

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CONT

Contrast setting

Format

CONT=<Contrast setting:Number>
GET□CONT / ?△CONT

Setting values for <Contrast setting:Number> are -20 to 20.

Environment

	Power			Input							
OFF	ON	PM	D-RGB	-RGB A-RGB1 A-RGB2 COMP VIDEO HDMI No					None		
Х	0	Χ				-					

Response

"i:OK" is returned if the parameter was set properly.

For 'GET CONT' or '?CONT', current contrast setting is returned as

'g:CONT=<Contrast setting:Number>'

For details on other responses, refer to the "Error List".

Description

- (1) This sets the screen contrast.
- (2) This command functions in the same way as when "Image adjustment" "Contrast setting" are selected on the menu.
- (3) If numerical parameters are outside the range, "e:0801 INVALID VALUE" is returned.
- (4) This sets the currently selected input signal and image mode.
- (5) The current contrast can be acquired using the applicable GET command. ("GET CONT")

Example

Setting

> CONT=3 This sets the contrast to +3.

< i:OK

Reference

> GET CONT or ?CONT This retrieves the contrast.

< g:CONT=3

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^{*} Commands are indicated by ">", and responses are indicated by "<".



DGAMMA

Dynamic gamma

Format

DGAMMA=<Dynamic gamma setting parameter:ID>
GET DGAMMA / ?\(\times \) DGAMMA

<Dynamic gamma setting parameter:ID>

OFF Off WEAK Weak STRONG Strong

Environment

Power Input									
OFF	ON	PM	D-RGB	O-RGB A-RGB1 A-RGB2 COMP VIDEO HDMI No					None
Х	0	Χ				-			

Response

"i:OK" is returned if the parameter was set properly.

For 'GET DGAMMA' or '?DGAMMA', current dynamic gamma setting is returned as

'g:DGAMMA=<Dynamic gamma setting parameter:ID>'

For details on other responses, refer to the "Error List".

Description

- (1) The command is used to set the dynamic gamma function.
- (2) This command functions in the same way as when "Image adjustment" "Advanced adjustment" "Dynamic gamma" are selected on the menu.
- (3) This sets the currently selected input signal and image mode.
- (4) The current dynamic gamma function status can be acquired using the applicable GET command. ("GET DGAMMA")

Example

Setting

> DGAMMA=WEAK This sets the dynamic gamma function to WEAK.

Reference

> GET DGAMMA or ?DGAMMA This retrieves the dynamic gamma function state.

< g:DGAMMA=WEAK

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^{*} Commands are indicated by ">", and responses are indicated by "<".



DOTS

Total number of dots adjustment

Format

DOTS=<Number of dots:Number>
GET DOTS / ? DOTS

Environment

	Power			D-RGB A-RGB1 A-RGB2 COMP VIDEO HDMI N					
OFF	ON	PM	D-RGB	D-RGB A-RGB1 A-RGB2 COMP VIDEO HDMI					None
Χ	0	Х	Х	0	0	Х	Х	Х	Х

Response

"i:OK" is returned if the parameter was set properly.

For 'GET DOTS' or '?DOTS', current total number of dots is returned as

'g:DOTS=<Number of dots:Number>'

For details on other responses, refer to the "Error List".

Description

- (1) This designates the total number of dots for one horizontal period.
- (2) This command functions in the same way as when "Display setting" "Input signal settings" "Total number of dots" are selected on the menu.
- (3) If the input is neither "A-RGB1" nor "A-RGB2", 'e:200X INVALID_SOURCE(***)' is returned as an error response.
- (4) If signals are not input, 'e:2010 NO_SIGNAL' is returned.
- (5) Adjustment range is limited. If number is invalid, "e:0801 INVALID_VALUE" is returned.
- (6) The GET command can be used to obtain the current total number of dots. ("GET DOTS")

Example

Setting

> DOTS=1650 The total number of dots is 1650.

< i:OK

Reference

> GET DOTS or ?DOTS This retrieves the total number of dots.

< g:DOTS=1200

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^{*} Commands are indicated by ">", and responses are indicated by "<".



DPON

Direct power-on setting

Format

DPON=<Direct power-on setting parameter:ID>
GET DPON / ?\(\text{DPON} \)

<Direct power-on setting parameter:ID>

ON This sets direct power-on to ON.
OFF This sets direct power-on to OFF.

Environment

Power						Input RGB2 COMP VIDEO HDMI None			
OFF	ON	PM	D-RGB	A-RGB1	A-RGB2	COMP	VIDEO	HDMI	None
Χ	0	Х				-			

Response

"i:OK" is returned if the parameter was set properly.

For 'GET DPON' or '?DPON', current direct power-on setting is returned as

'g:DPON=<Direct power-on setting parameter:ID>'

For details on other responses, refer to the "Error List".

Description

- (1) This command is used to set direct power-on function to ON or OFF.
- (2) This command functions in the same way as when "System setting" "Direct power-on" are selected on the menu.
- (3) Direct power-on cannot be set to ON when "OFF" has been selected as the power management setting (pmm=off).

("e:1004 POWER_MANAGEMENT_OFF" is returned.)

(4) The current direct power on setting can be obtained using the GET command. ("GET DPON")

Example

Setting

> DPON=ON Direct power-on is set to ON.

< i:OK

Reference

> GET DPON on ?DPON The current direct power-on setting is obtained.

< g:DPON=ON

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^{*} Commands are indicated by ">", and responses are indicated by "<".



ERR

Error information inquiry

Format

GET□ERR / ?△ERR

Environment

	Power					Input			
OFF	ON	PM	D-RGB	A-RGB1	A-RGB2	COMP	VIDEO	HDMI	None
	-			-					

Response

Returns the current error information as

'g:ERR=<ErrorID:Character string>'

<ErrorID:Character string>

NO_ERROR No error

ABNORMAL_TEMPERATURE Temperature error

FAULTY_LAMP Lamp error
FAULTY_LAMP_COVER Lamp cover error
FAULTY_COOLING_FAN Cooling fan error
FAULTY_POWER_SUPPLY Power supply error

 $\begin{array}{lll} \text{FAULTY_AK} & \text{AK error} \\ \text{FAULTY_ASC} & \text{ASC error} \\ \text{FAULTY_AF} & \text{AF error} \\ \text{FAULTY_POWER_ZOOM} & \text{Zoom error} \\ \text{FAULTY_POWER_FOCUS} & \text{Focus error} \end{array}$

For details on other responses, refer to the "Error List".

Description

- (1) This inquires about the current error information.
- (2) This inquiry can be executed in any status provided that AC power is supplied to the projector.
- (3) Information when the warning LED of the projector is flashing can be obtained. "NO_ERROR" is returned when the warning LED is not lighted.

Example

```
> GET ERR or ? ERR < g:ERR=FAULTY_LAMP
```

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^{*} Commands are indicated by ">", and responses are indicated by "<".



FCONTDRV

Focus lens continuous drive control

Format

FCONTDRV=<Focus lens continuous control parameter:ID>

<Focus lens continuous control parameter:ID>

STOP This stops the focusing.

FAR This initiates focusing toward the far end.
NEAR This initiates focusing toward the near end.

Environment

Power				Input A-RGB2 COMP VIDEO HDMI None					
OFF	ON	PM	D-RGB	A-RGB1	A-RGB2	COMP	VIDEO	HDMI	None
Х	0	Х				-			

Response

"i:OK" is returned when the drive was completed successfully.

For details on other responses, refer to the "Error List".

Description

- (1) This command is used to drive the focus lens.
- (2) This command functions in the same way as when first the "FOCUS" button on the remote control or main unit panel is pressed and then the "↑" or "↓" button is pressed.
- (3) Focus drive is started by specifying "NEAR" or "FAR".
 - To stop the drive, add the "STOP" parameter and send this command.
 - If no instruction was given to stop the drive, the drive stops at the drive direction end.
- (4) The following commands are acknowledged during focus drive, but focus drive will also stop at the same time.
 - a. POWER
 - b. FCONTDRV=STOP
- (5) The following commands are acknowledged during focus drive, and a response is returned while the drive continues.
 - a. GET MODE
 b. GET POWER
 c. GET ERR
 d. GET LAMPCOUNTER
 e. GET PRODCODE
 i. LOCAL
 j. RC
 k. MAIN
 l. GET LAMPCOUNTER
 h. REMOTE
 l. [NULL]
- (6) For other commands not included in (4) nor (5), "i:BUSY (FOCUS)" is returned, and focus drive continues.
- (7) There are no GET commands available for this command.

Example

Control

> FCONTDRV=NEAR Control over the focusing to the near end is started.

< i:OK

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Г				

^{*} Commands are indicated by ">", and responses are indicated by "<".



FREEZE

Freeze status

Format

FREEZE=<FREEZE parameter:ID>
GET | FREEZE / ? \(\times \) FREEZE

<FREEZE parameter:ID>

ON Image now frozen
OFF Image now not frozen

Environment

Power					Input RGB2 COMP VIDEO HDMI None				
OFF	ON	PM	D-RGB	A-RGB1	A-RGB2	COMP	VIDEO	HDMI	None
Х	0	Χ				-			

Response

"i:OK" is returned if the parameter was set properly.

For 'GET FREEZE' or '?FREEZE', current freeze status is returned as

'gFREEZE=ON'

'g:FREEZE=OFF'

For details on other responses, refer to the "Error List".

Description

- (1) This command is used to freeze the image.
- (2) This command is identical to pressing the "FREEZE" button on the remote control.
- (3) The current freeze status can be obtained using the GET command. ("GET FREEZE")

Example

Setting

> FREEZE=ON Freezes image.

< i:OK

Reference

> GET FREEZE or ?FREEZE The current freeze status is referenced.

< g:FREEZE=ON

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^{*} Commands are indicated by ">", and responses are indicated by "<".



FSTEPDRV

Focus lens step drive control

Format

FSTEPDRV=<Focus lens step control parameter:ID>

<Focus lens step control parameter:ID>

FAR This initiates focusing toward the far end.
NEAR This initiates focusing toward the near end.

Environment

Power			Input							
OFF	ON	PM	D-RGB	A-RGB1	A-RGB2	COMP	VIDEO	HDMI	None	
X	0	Х				-				

Response

"i:OK" is returned when focusing was completed successfully after step drive.

For details on other responses, refer to the "Error List".

Description

- (1) This command is used to drive the focus lens.
- (2) This command functions in the same way as when first the "FOCUS" button on the remote control or main unit panel is pressed and then the "←" or "→" button is pressed.
- (3) The amount by which the lens is focused is constant, and it is fixed for the system.
- (4) If a focusing error occurs, step drive cannot be controlled.
- (5) There are no GET commands available for this command.

Example

Control

> FSTEPDRV=NEAR

1-step control is exercised over the focus toward the NEAR end.

< I:OK

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 $^{^{\}star}$ Commands are indicated by ">", and responses are indicated by "<"..



FTONEADJ

Flesh tone adjustment

Format

FTONEADJ=<Flesh tone adjustment parameter:ID>
GET | FTONEADJ / ? \(\times \) FTONEADJ

<Memory color adjustment parameter:ID>

OFF No adjustment

FTONE_L Flesh tone adjustment - light
FTONE_M Flesh tone adjustment - medium
FTONE_H Flesh tone adjustment - heavy

Environment

Power				Input							
OFF	ON	PM	D-RGB	A-RGB1	A-RGB2	COMP	VIDEO	HDMI	None		
Х	0	Χ				-					

Response

"i:OK" is returned when flesh tone has been adjusted successfully.

For 'GET FTONEADJ' or '?FTONEADJ', current flesh tone adjustment is returned as

'g:FTONEADJ=<Flesh tone adjustment parameter:ID>'

For details on other responses, refer to the "Error List".

Description

- (1) This command is used by selecting "No adjustment", "Flesh tone adjustment light" to "Flesh tone adjustment heavy".
- (2) This command functions in the same way as when "Image adjustment" "Advanced adjustment" "Flesh tone adjustment" are selected on the menu.
- (3) This sets the currently selected input signal and image mode.
- (4) The current flesh tone adjustment setting can be obtained using the GET command. ("GET FTONEADJ")
- (5) With the WUX10, "Memory color adjustment" function is not available.

Example

Control

> FTONEADJ=FTONE_M This sets the tone adjustment to "Flesh tone adjustment - medium".

Reference

> GET FTONEADJ or ?FTONEADJ

This retrieves the flesh tone adjustment level.

< g:FTONEADJ=FTONE M

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^{*} Commands are indicated by ">", and responses are indicated by "<".



GAMMA

Gamma adjustment

Format

GAMMA=<Gamma adjustment:Number>
GET□GAMMA / ?△GAMMA

Setting values for <Gamma adjustment: Number> are -10 to 10.

Environment

	Power		Input							
OFF	ON	PM	D-RGB	O-RGB A-RGB1 A-RGB2 COMP VIDEO HDMI Non					None	
Х	0	Χ				-				

Response

"i:OK" is returned if the parameter was set properly.

For 'GET GAMMA' or '?GAMMA', current gamma adjustment is returned as

'g:GAMMA=<Gamma adjustment:Number>'

For details on other responses, refer to the "Error List".

Description

- (1) This performs the Gamma adjustment.
- (2) This command functions in the same way as when "Image adjustment" "Gamma adjustment" are selected on the menu.
- (3) If numerical parameters are outside the range, "e:0801 INVALID VALUE" is returned.
- (4) This sets the currently selected input signal and image mode.
- (5) The current gamma adjustment can be acquired using the applicable GET command. ("GET GAMMA")

Example

Setting

> GAMMA=-1 This sets the gamma correction to -1. < i:OK

Reference

> GET GAMMA or ?GAMMA This retrieves the gamma adjustment. < g:GAMMA=3

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^{*} Commands are indicated by ">", and responses are indicated by "<".



GUIDE

Guide setting

Format

GUIDE=<Guide setting parameter:ID>
GET□GUIDE / ?△GUIDE

<Guide setting parameter: ID>

ON Guide display ON OFF Guide display OFF

Environment

	Power			Input							
OFF	ON	PM	D-RGB	A-RGB1	A-RGB2	COMP	VIDEO	HDMI	None		
Χ	0	Х				-					

Response

"i:OK" is returned if the parameter was set properly.

For 'GET GUIDE' or '?GUIDE', current guide setting is returned as

'g:GUIDE=<Guide setting parameter:ID>'

For details on other responses, refer to the "Error List".

Description

- (1) This command is used to set the guide function display to ON or OFF.
- (2) This command functions in the same way as when "System setting" "Guide" are selected on the menu.
- (3) The guide is cleared immediately when "GUIDE=OFF" is received while the guide is displayed.
- (4) The current guide setting can be obtained using the GET command. ("GET GUIDE")

Example

Setting

> GUIDE=ON The guide display is set to ON.

< i:OK

Reference

> GET GUIDE or ?GUIDE The guide display setting status is obtained.

< g:GUIDE=ON

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^{*} Commands are indicated by ">", and responses are indicated by "<".



HPIX/VPIX

Horizontal/Vertical resolution adjustmen

Format

HPIX=<Horizontal resolution:Number>
VPIX=<Vertical resolution:Number>
GET□HPIX / ?△HPIX
GET□VPIX / ?△VPIX

Environment

Power				Input							
OFF	ON	PM	D-RGB	A-RGB1	A-RGB2	COMP	VIDEO	HDMI	None		
Χ	0	Χ	0	0	0	Х	Х	Х	Х		

Response

"i:OK" is returned if the parameter was set properly.

For 'GET HPIX' or '?HPIX' ('GET VPIX' or '?VPIX'), current horizontal (vertical) resolution is returned as 'g:HPIX=<Horizontal resolution:Number>'

('g:VPIX=<Vertical resolution:Number>')

For details on other responses, refer to the "Error List".

Description

- (1) This adjusts the horizontal and vertical resolution (number of dots) on the screen.
- (2) This command functions in the same way as when "Display setting" "Input signal settings" "Horizontal resolution adjustment" or "Vertical resolution adjustment" are selected on the menu.
- (3) If the input is neither "A-RGB1" nor "A-RGB2", 'e:200X INVALID_SOURCE(***)' is returned as an error response.
- (4) If signals are not input, 'e:2010 NO_SIGNAL' is returned.
- (5) Adjustment range is limited. If number is invalid, "e:0801 INVALID_VALUE" is returned.
- (6) The GET command can be used to retrieve the current horizontal and vertical position. ("GET HPIX" "GET VPIX")

Example

Setting

> HPIX=1024 This sets the horizontal resolution to 1024.

Reference

> GET VPIX or ?VPIX This retrieves the vertical resolution. < g:VPIX= 864

Revision Hi	story / Date	Changes	Revised by	Approved by

^{*} Commands are indicated by ">", and responses are indicated by "<".



HPOS/VPOS

Horizontal/Vertical position adjustment

Format

HPOS=<Horizontal position:Number>
VPOS=<Vertical position:Number>
GET□HPOS / ?△HPOS
GET□VPOS / ?△VPOS

Environment

Power				Input							
OFF	ON	PM	D-RGB	D-RGB A-RGB1 A-RGB2 COMP VIDEO HDMI					None		
Х	0	Χ	Χ	0	0	Χ	Χ	Χ	Χ		

Response

"i:OK" is returned if the parameter was set properly.

For 'GET HPOS' or '?HPOS' ('GET VPOS' or '?VPOS'), current horizontal (vertical) position is returned as 'g:HPOS=<Horizontal position:Number>'

('g:VPOS=<Vertical position:Number>')

For details on other responses, refer to the "Error List".

Description

- (1) This adjusts the horizontal and vertical position on the screen.
- (2) This command functions in the same way as when "Display setting" "Input signal settings" "Horizontal position adjustment" or "Vertical position adjustment" are selected on the menu.
- (3) If the input is neither "A-RGB1" nor "A-RGB2", 'e:200X INVALID_SOURCE(***)' is returned as an error response.
- (4) If signals are not input, 'e:2010 NO_SIGNAL' is returned.
- (5) Adjustment range is limited. If number is invalid, "e:0801 INVALID VALUE" is returned.
- (6) The GET command can be used to retrieve the current horizontal and vertical position. ("GET HPOS" "GET VPOS")

Example

Setting

>HPOS=12 This sets the horizontal position to 12.

Reference

>GET VPOS or ?VPOS This acquires the vertical position. <g:VPOS=8

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^{*} Commands are indicated by ">", and responses are indicated by "<".



HUE

Hue setting

Format

HUE=<Hue setting value:Number>
GET□HUE / ?△HUE

Setting values for <Hue setting value: Number> are -20 to 20.

Environment

	Power			Input							
OFF	ON	PM	D-RGB	A-RGB1	A-RGB2	COMP	VIDEO	HDMI	None		
Y	0	Y	Y	Y	Y	0		Y	0		
_ ^		^	^	^	^		0	^	Χ		

Response

"i:OK" is returned if the parameter was set properly.

For 'GET HUE' or '?HUE', current hue setting is returned as

'g:HUE=<Hue setting value:Number>'

For details on other responses, refer to the "Error List".

Description

- (1) This sets the screen hue.
- (2) This command functions in the same way as when "Image adjustment" "Color adjustment" "Hue setting" are selected on the menu.
- (3) If the input is neither "COMP" nor "VIDEO", 'e:200X INVALID_SOURCE(***)' is returned as an error response.
- (4) When input is "VIDEO" and signals are not input, 'e:2010 NO_SIGNAL' is returned.
- (5) If numerical parameters are outside the range, "e:0801 INVALID_VALUE" is returned.
- (6) This sets the currently selected input signal and image mode.
- (7) The GET command can be used to retrieve the current hue. ("GET HUE")

Example

Setting

>HUE=8

This sets the hue to +8.

<i:0K

Reference

>GET HUE or ?HUE

This retrieves the hue.

<g:HUE=1

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^{*} Commands are indicated by ">", and responses are indicated by "<".



IMAGE

Image mode setting

Format

IMAGE=<Image mode setting parameter:ID>
GET□IMAGE / ?△IMAGE

<Image mode setting parameter:ID>

STANDARD Standard
PRESENTATION Presentation
SRGB sRGB

SRGB sRGB MOVIE Movie

PHOTO Environmental light compatible sRGB

DCM_SIM DICOM monochrome *

Environment

Power			Input							
OFF	ON	PM	D-RGB	A-RGB1	A-RGB2	COMP	VIDEO	HDMI	None	
Х	0	Χ				-				

Response

"i:OK" is returned if the parameter was set properly.

For 'GET IMAGE' or '?IMAGE', current image mode is returned as

'g:IMAGE=<Image mode setting parameter:ID>'

For details on other responses, refer to the "Error List".

Description

- (1) This sets the image quality.
- (2) This command functions in the same way as when "Image adjustment" "Image mode setting" are selected on the menu.
- (3) The final settings for the image mode are retained even when the power is turned off.
- (4) Changing the setting may modify the following setting values.

Setting	Commands related to the settings
Brightness	BRI
Contrast	CONT
Sharpness	SHARP
Gamma adjustment	GAMMA
Dynamic gamma	DGAMMA
Progressive	PROG
Saturation/Hue	SAT/ HUE
Memory color adjustment	MEMCADJ
RGB gain/offset adjustment	RGBGAIN/RGBOFFSET
Lamp mode	LAMP
6-axis adjustment	6AXADJ
6-axis color correction	6AXR~Y

(5) The current image quality can be acquired using the applicable GET command. ("GET IMAGE")

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^{* &}quot;e:000A INVALID_PARAMETER" is returned if the model is not DICOM compatible



Example

Setting

> IMAGE=PRESENTATION This sets the image mode to "Presentation".

< i:OK

Reference

> GET IMAGE or ?IMAGE This references the current image mode.

< g:IMAGE=CINEMA

* Commands are indicated by ">", and responses are indicated by "<".

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IMAGEFLIP

Flip display

Format

IMAGEFLIP=<Image flip setting parameters:ID>
GET□IMAGEFLIP / ?△IMAGEFLIP

<Image flip setting parameters:ID>

NONE None

CEILING Ceiling, Flip horizontally REAR Rear, Flip vertically

REAR_CEILING Rear ceiling, Flip horizontally and vertically

Environment

	Power		Input						
OFF	ON	PM	D-RGB	A-RGB1	A-RGB2	COMP	VIDEO	HDMI	None
Х	0	Χ				-			

Response

"i:OK" is returned if the parameter was set properly.

For 'GET IMAGEFLIP' or '?IMAGEFLIP', current flip display setting is returned as

'g:IMAGEFLIP=<Image flip setting parameters:ID>'

For details on other responses, refer to the "Error List".

Description

- (1) This command is used to flip the screen display in various ways (vertically or horizontally).
- (2) This command functions in the same way as when "Display setting" "Flip display" are selected on the menu.
- (3) When the display is flipped, the "keystone distortion" settings are initialized (set to VKS:0).
- (4) The current flip display status can be acquired using the applicable GET command. ("GET IMAGEFLIP")

Example

Setting

> IMAGEFLIP=REAR

This displays the image backwards (flip vertically) on the screen.

< i:OK

Reference

> GET IMAGEFLIP or ?IMAGEFLIP This retrieves the flip display state.
< g:IMAGEFLIP=REAR_CEILING

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^{*} Commands are indicated by ">", and responses are indicated by "<".



INPUT

Input selection

Format

INPUT=<Input selection parameters:ID>
GET INPUT / ?\(\triangle \) INPUT

<Input selection parameters:ID>

D-RGB D-RGB
A-RGB1 A-RGB1
A-RGB2 A-RGB2
COMP Component
VIDEO Video
HDMI HDMI

Environment

Power Input									
OFF	ON	PM	D-RGB	A-RGB1	A-RGB2	COMP	VIDEO	HDMI	None
X	0	Χ				-			

Response

"i:OK" is returned if the parameter was set properly.

For 'GET INPUT' or '?INPUT', current input selection is returned as

'g:INPUT=<Input selection parameters:ID>'

For details on other responses, refer to the "Error List".

Description

- (1) This controls the input selection.
- (2) This command is identical to pressing the "INPUT" button on the remote control.
- (3) The input can be selected automatically using the auto setup command (AUTOSETEXE=INPUT).
- (4) The current input can be acquired using the applicable GET command. ("GET INPUT")

Example

Setting

> INPUT=VIDEO The input is set to VIDEO.

< i:OK

Reference

> GET INPUT or ?INPUT This retrieves the input signal.

< g:INPUT=A-RGB1

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^{*} Commands are indicated by ">", and responses are indicated by "<".



KEYLOCK

Keylock setting

Format

KEYLOCK=<Key lock setting parameters:ID>
GET KEYLOCK / ? AKEYLOCK

<Key lock setting parameters:ID>

OFF No locking (OFF)
MAIN Main key lock

RC Remote control key lock

Environment

	Power								
OFF	ON	PM	D-RGB	A-RGB1	A-RGB2	COMP	VIDEO	HDMI	None
Х	0	Χ				-			

Response

"i:OK" is returned if the parameter was set properly.

For 'GET KEYLOCK' or '?KEYLOCK', current keylocking setting is returned as

'g:KEYLOCK=<Key lock setting parameters:ID>'

For details on other responses, refer to the "Error List".

Description

- (1) This command is used to lock the keys so as to restrict the operations performed using the remote control or main unit.
- (2) This command functions in the same way as when "System setting" "Key lock" are selected on the menu.
- (3) This command will not affect the emulation function (remote control or main unit commands) even if the main unit or remote control keys are locked.
- (4) The current key lock setting can be acquired using the applicable GET command. ("GET KEYLOCK")

Example

Setting

> KEYLOCK=RC This locks the remote control keys.

< i:OK

Reference

> GET KEYLOCK or ?KEYLOCK This retrieves the key lock state.

< g:KEYLOCK=OFF

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^{*} Commands are indicated by ">", and responses are indicated by "<".



LAMP

Lamp output setting

Format

LAMP=<Lamp output setting parameters:ID>
GET LAMP / ? \(\triangle LAMP \)

<Lamp output setting parameters:ID>

NORMAL Normal SILENT Silent cooling

Environment

	Power					Input			I None				
OFF	ON	PM	D-RGB	RGB A-RGB1 A-RGB2 COMP VIDEO HDMI Nor									
Χ	0	Х		-									

Response

"i:OK" is returned if the parameter was set properly.

For 'GET LAMP' or '?LAMP', current lamp output is returned as

'g:LAMP=<Lamp output setting parameters:ID>'

For details on other responses, refer to the "Error List".

Description

- (1) This command is used to set the light quantity of the lamp to "NORMAL" or "SILENT" (reduced light quantity appropriate for silent cooling).
- (2) This command functions in the same way as when "Image adjustment" "Lamp mode setting" are selected on the menu.
- (3) This sets the currently selected input signal and image mode.
- (4) The current lamp output can be acquired using the applicable GET command. ("GET LAMP")

Example

Setting

> LAMP=NORMAL The lamp output is set to "NORMAL".

< i:OK

Reference

> GET LAMP or ?LAMP This retrieves the lamp output.

< g:LAMP=SILENT

Revision Hi	story / Date	Changes	Revised by	Approved by

^{*} Commands are indicated by ">", and responses are indicated by "<".



LAMPCOUNTER

Lamp ON time inquiry

Format

GET□LAMPCOUNTER / ?△LAMPCOUNTER

Environment

	Power					Input			
OFF	ON	PM	D-RGB	RGB A-RGB1 A-RGB2 COMP VIDEO HDMI None					None
-						-			

Response

Returns current lamp on time as

'g:LAMPCOUNTER="<Lamp ON time:Character string>"'

For details on other responses, refer to the "Error List".

<Lamp ON time:Character string>

Lamp ON time	ON time:H
"[G]"	0~ 359
"[GG]"	360~ 719
"[GGG]"	720~ 1079
"[GGGG]"	1080~1439
"[GGGGG]"	1440~1799
"[GGGGGY]"	1800~1899
"[GGGGGYY_]"	1900~1999
"[GGGGGYYR]"	2000~

For all other responses, refer to "Error List."

Description

- (1) This inquires about the current lamp ON time.
- (2) This inquiry can be executed in any status provided that AC power is supplied to the projector.

Example

>	GET	LAMPCOUNTER	or	?	LAMPCOUNTER
<	α: T.7	AMPCOUNTER="	GG		1"

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^{*} Commands are indicated by ">", and responses are indicated by "<".



LANG

Language select

Format

LANG=<Language selection parameters:ID>
GET LANG / ?\(\text{LANG} \)

<Language selection parameters:ID>

ENG	English	DUT	Dutch	NOR	Norwegian
FRA	French	RUS	Russian	TUR	Turkish
GER	German	CHS	Chinese (simplified)	POL	Polish
ITA	Italian	CHT	Chinese (traditional)	HUN	Hungarian
SPA	Spanish	KOR	Korean	CZE	Czech
POR	Portuguese	JPN	Japanese	ARA	Arabic
SWE	Swedish	FIN	Finnish	DAN	Danish

Environment

Power						Input			
OFF	ON	PM	D-RGB	RGB A-RGB1 A-RGB2 COMP VIDEO HDMI Nor					
Х	0	Х		-					

Response

"i:OK" is returned if the parameter was set properly.

For 'GET LANG' or '?LANG', current selected language is returned as

'g:LANG=<Language selection parameters:ID>'

For details on other responses, refer to the "Error List".

Description

- (1) This switches the screen display language.
- (2) This command functions in the same way as when "System setting" "Languages" are selected on the menu.
- (3) The currently set language can be acquired using the applicable GET command. ("GET LANG")

Example

Setting

> LANG=SWE This sets the display language to "Swedish".

< i:OK

Reference

> GET LANG or ?LANG This retrieves the language.

< g:LANG=SWE

Revision Hi	story / Date	Changes	Revised by	Approved by

^{*} Commands are indicated by ">", and responses are indicated by "<".



LEDILLUMINATE

Emotional LED lighting control

Format

LEDILLUMINATE=<LED lighting control setting parameter:ID>
GET LEDILLUMINATE / ?\(\triangle LEDILLUMINATE \)

<LED lighting control setting parameter:ID>

ON This sets the LED display to ON.
OFF This sets the LED display to OFF.

Environment

	Power			D-RGB A-RGB1 A-RGB2 COMP VIDEO HDMI None						
OFF	ON	PM	D-RGB	A-RGB1	A-RGB2	COMP	VIDEO	HDMI	None	
Х	0	Х				-				

Response

"i:OK" is returned if the parameter was set properly.

For 'GET LEDILLUMINATE' or '?LEDILLUMINATE', current emotional LED lighting setting is returned as 'g:LEDILLUMINATE=<LED lighting control setting parameter:ID>'

For details on other responses, refer to the "Error List".

Description

- (1) This command is used to control the lighting of the emotional LED.
- (2) This command functions in the same way as when "System setting" "LED illumination" are selected on the menu.
- (3) The current LED illumination setting can be obtained using the GET command. ("GET LEDILLUMINATE")

Example

Setting

> LEDILLUMINATE=ON

The LED display is set to ON.

< i:OK

Reference

> GET LEDILLUMINATE or ?LEDILLUMINATE

The ON or OFF setting for the LED display is obtained.

< g:LEDILLUMINATE=ON

Revision History	/ Date	Changes	Revised by	Approved by

^{*} Commands are indicated by ">", and responses are indicated by "<".



LMPT

Lamp time inquiry

Format

GET LMPT / ? LMPT LMPT=< h h h h>:<mm>

<hhhh>

Hours $0\sim65565$

<mm>

Minutes $00\sim59$

Environment

Power Input									
OFF	ON	PM	D-RGB	A-RGB1	A-RGB2	COMP	VIDEO	HDMI	None
Х	0	Χ				-			

Response

For 'GET LMPT' or '?LMPT', current lamp time is returned as

 $g:LMPT=\langle hhhh \rangle:\langle mm \rangle'$

For details on other responses, refer to the "Error List".

Description

- (1) This inquires the lamp time. Value of 0h0m to 65565h59m is returned.
- (2) Because inner equivalent value is returned, the hour of the lamp is not the same as the actual hour.
- (3) This inquiry can be executed during stand-by.
- (4) There are no setting commands available.

Example

Setting

None

Reference

> GET LMPT This retrieves the lamp time.

Revision Hi	story / Date	Changes	Revised by	Approved by

^{*} Commands are indicated by ">", and responses are indicated by "<".



MAIN

Front panel operation emulation

Format

MAIN□<Main unit panel emulation button parameters:ID>

<Main unit panel emulation button parameters:ID>

POWER POWER

POWER_OFF, POWER button pressed twice

MENU MENU
AUTO SET AUTOSET
INPUT INPUT
AUTOPC AUTOPC
KEYSTONE KEYSTONE

UP UP

UP+REP, Button press start

DOWN DOWN

DOWN+REP, Button press start

LEFT LEFT

LEFT+REP, Button press start

RIGHT RIGHT

RIGHT+REP, Button press start

OK OK
FOCUS
ZOOM ZOOM

*-REP, Button press end

Environment

	Power		Input							
OFF	ON	PM	D-RGB	RGB A-RGB1 A-RGB2 COMP VIDEO HDMI None						
Χ	0	Χ				-				

Response

"i:OK" is returned when the button press request has been acknowledged successfully. (It does not indicate if the operation for the pressed button was executed properly.)

Description

- (1) This emulates the pressing of the front panel buttons for controlling the projector.
- (2) With the emulation of the front panel operations, the functions of the buttons corresponding to the parameters cannot necessarily be executed. Emulation simply consists in emulating the pressing of the buttons.
- (3) A parameter with '+REP' signifies "button press start." (This is the same as the status in which the front panel button is held down.)

Be absolutely sure to send the $^{+}$ -REP parameter, and end the button pressing last of all. The button pressing is ended in the cases below as well.

- <1> When a panel or remote control button has been operated
- <2> When some command has been received

Example

Setting

> MAIN FOCUS

< i:OK

* Commands are indicated by ">", and responses are indicated by "<".

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^{*} Use the application to adjust the time between pressing of keys.



MODE

Control mode switch

Format

REMOTE LOCAL

GET□MODE / ?△MODE

Environment

	Power			Input							
OFF	ON	PM	D-RGB	-RGB A-RGB1 A-RGB2 COMP VIDEO HDMI None							
-						-					

Response

"i:OK" is always returned with the control mode switch setting.

For 'GET MODE' or '?MODE', current control mode is returned as

- 'g:MODE=REMOTE'
- 'q:MODE=LOCAL'

For details on other responses, refer to the "Error List".

Description

- (1) There are no 'local' and 'remote' control modes with this version of the user commands, however, this command exists to maintain compatibility with previous versions of the user commands.
- (2) However, differences between previous versions of the user commands are as follows.
 - <1> Drive will not stop during zoom or focus. (Stopped with previous versions.)
 - <2> The power management standby status will not change. (Changed to "Power ON" (Lamp ON) with previous versions.)
 - <3> The digital zoom will not change. (Cancelled with previous versions.)
 - <4> The presentation timer display will not change. (Cancelled with previous versions.)
 - <5> The BLANK status will not change. (Cancelled 'NoShow' with previous versions.)
 - <6> The FREEZE status will not change. (Cancelled FREEZE with previous versions.)
 - <7> Process under execution will continue. (Process was interrupted with previous versions.)
 The current control mode can be obtained using the GET command. ("GET MODE")

Example

Mode switch

- > REMOTE
- < i:OK

Mode reference

- > GET MODE or ?MODE
- < g:MODE=LOCAL

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^{*} Commands are indicated by ">", and responses are indicated by "<".



MUTE

Mute control

Format

MUTE=<Mute control parameter: ID>
GET MUTE / ?\(\triangle MUTE \)

<Mute control parameter: ID>

ON This turns off the audio/beep sound.

OFF This returns the audio/beep sound to its original setting.

Environment

	Power			Input							
OFF	ON	PM	D-RGB	RGB A-RGB1 A-RGB2 COMP VIDEO HDMI None							
Χ	0	Х				-					

Response

"i:OK" is returned if the parameter was set properly.

For 'GET MUTE' or '?MUTE', current mute setting is returned as

'g:MUTE=<Mute control parameter: ID>'

For details on other responses, refer to the "Error List".

Description

- (1) This command is used to set the sound output muting to ON or OFF.
- (2) Mute control enables simultaneous control of the audio and beep sound.
- (3) This command is identical to pressing the MUTE button on the remote control.
- (4) The mute setting is always "OFF" when the power has just been turned on.
- (5) The volume can be set even when it is on "MUTE".
- (6) The current muting status can be acquired using the applicable GET command. ("GET MUTE")

Example

Setting

> MUTE=ON This mutes the volume.

< i:OK

Reference

> GET MUTE or ?MUTE This retrieves the volume state.

< g:MUTE=ON

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^{*} Commands are indicated by ">", and responses are indicated by "<".



NOSIG

Display screen when no signal setting

Format

NOSIG=<Parameters for setting display screen in no-signal mode:ID> $GET \square NOSIG$ / $? \triangle NOSIG$

<Parameters for setting display screen in no-signal mode:ID>

BLACK Black screen
BLUE Blue screen

Environment

Power				Input							
OFF	ON	PM	D-RGB	D-RGB A-RGB1 A-RGB2 COMP VIDEO HDMI I					None		
Х	0	Χ				-					

Response

"i:OK" is returned if the parameter was set properly.

For 'GET NOSIG' or '?NOSIG', current display screen when no signal setting is returned as

'g:NOSIG=<Parameters for setting display screen in no-signal mode:ID>'

For details on other responses, refer to the "Error List".

Description

- (1) This sets the display screen when no image signals are input.
- (2) This command functions in the same way as when "Display setting" "User screen setting" "Screen when no signal" are selected on the menu.
- (3) The GET command can be used to obtain the current display screen at no signal. ("GET NOSIG")

Example

Setting

> NOSIG=BLUE This sets the "Blue" screen when no signals are input.

< i:OK

Reference

> GET NOSIG or ?NOSIG This retrieves the screen when no signals are input.

< g:NOSIG=BLUE

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^{*} Commands are indicated by ">", and responses are indicated by "<".



PJON

Display screen at startup setting

Format

PJON=<Parameters for setting display screen at startup:ID> $GET \Box PJON / ? \triangle PJON$

<Parameters for setting display screen at startup:ID>

CANON Canon logo SKIP No display

Environment

Power				Input							
OFF	ON	PM	D-RGB	A-RGB1	A-RGB2	COMP	VIDEO	HDMI	None		
Х	0	Х				-					

Response

"i:OK" is returned if the parameter was set properly.

For 'GET PJON' or '?PJON', current display screen at startup setting is returned as

'g:PJON=<Parameters for setting display screen at startup:ID>'

For details on other responses, refer to the "Error List".

Description

- (1) This sets the screen displayed at startup.
- (2) This command functions in the same way as when "Display setting" "User screen setting" "Startup screen" are selected on the menu.
- (3) The GET command can be used to obtain the current screen displayed at startup. ("GET PJON")

Example

Setting

> PJON=CANON This sets the startup screen to "Canon logo".

< i:OK

Reference

> GET PJON or ?PJON This retrieves the startup screen.

< g:PJON=SKIP

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^{*} Commands are indicated by ">", and responses are indicated by "<".



PMM

Power management

Format

 $\begin{array}{ll} {\tt PMM=<Power \ management \ setting \ parameters:ID>} \\ {\tt GET} \square {\tt PMM} & / & ? \triangle {\tt PMM} \end{array}$

<Power management setting parameters:ID>

OFF OFF

STANDBY Standby mode EXIT Exit mode

Environment

Power				Input							
OFF	ON	PM	D-RGB	RGB A-RGB1 A-RGB2 COMP VIDEO HDMI None							
Х	0	Χ				-					

Response

"i:OK" is returned if the parameter was set properly.

For 'GET PMM' or '?PMM', current power management setting is returned as

'g:PMM=<Power management setting parameters:ID>'

For details on other responses, refer to the "Error List".

Description

- (1) This sets the power management mode.
- (2) This command functions in the same way as when "System setting" "Power management mode" are selected on the menu.
- (3) Power management cannot be set to OFF if ON has been selected as the direct power-on setting (DPON=ON).

("e:1005 direct_power_on" is returned)

(4) The current power management mode can be acquired using the applicable GET command. ("GET PMM")

Example

Setting

> PMM=STANDBY This sets the power management to "standby".

< i:OK

Reference

> GET PMM or ?PMM This retrieves the power management mode.

< g:PMM=EXIT

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	·			

^{*} Commands are indicated by ">", and responses are indicated by "<".



POWER

This controls the power supply

Format

POWER□<Parameter:ID>
GET□POWER / ?△POWER

<Parameter:ID>

ON Power ON OFF Power OFF

Environment

Power						Input			
OFF	ON	PM	D-RGB	D-RGB A-RGB1 A-RGB2 COMP VIDEO HDMI				None	
-						-			

Response

"i:OK" is returned if the parameter was set properly.

For 'GET POWER' or '?POWER', current power supply status is returned as shown in the table below.

Response	Status
'g:POWER=OFF'	OFF
'g:POWER=OFF2ON'	OFF -> ON in transition
'g:POWER=ON'	ON
g:POWER=ON2PMM'	ON -> Standby in transition
'g:POWER=PMM'	Standby
'g:POWER=PMM2ON'	Standby -> ON in transition
'g:POWER=ON2OFF'	ON -> OFF in transition

For details on other responses, refer to the "Error List".

Description

- (1) This performs ON/OFF control of the power supply.
- (2) This command is identical to pressing the POWER button on the remote control.
- (3) Processing of other commands (including ZOOM/FOCUS) will be interrupted at "POWER OFF" when the power is ON.
- (4) 'i:BUSY' will be returned at "POWER ON" during power OFF transition. For other cases, 'I:OK' will always be returned.
- (5) After sending this command, use GET POWER to obtain the power supply state at regular intervals, and check that it is in the controlled state (off or on).
- (6) The current power supply status can be referenced using the applicable GET command. ("GET POWER")
- (7) Even when it is powered up by using this command, "Prepare for lamp replacement", "Lamp replacement warning", "Clean filter warning" will display for 10 seconds as usual.

Example

Control

> POWER ON

< i:OK

Reference

> GET POWER or ?POWER

< g:POWER=OFF

* Commands are indicated by ">", and responses are indicated by "<".

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PRODCODE

Product information inquiry

Format

GET□PRODCODE / ?△PRODCODE

Environment

Power				Input						
OFF	ON	PM	D-RGB	D-RGB A-RGB1 A-RGB2 COMP VIDEO HDMI I				None		
-					-					

Response

Product name is returned as

g:PRODCODE="<Product name:Character string>"

<Product name: Character string>

WUX10MarkII

WUX10MarkIIM

For details on other responses, refer to the "Error List".

Description

- (1) This inquires about the product name of the projector.
- (2) This inquiry can be executed in any status provided that AC power is supplied to the projector.

Example

- > GET PRODCODE or ? PRODCODE
- < g:PRODCODE="WUX10MarkII"

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^{*} Commands are indicated by ">", and responses are indicated by "<".



PROG

Progressive setting

Format

PROG=<Progressive conversion setting parameters:ID>
GET PROG / ? \(\text{PROG} \)

<Progressive conversion setting parameters:ID>

0 OFF 1 ON 2 AUTO

Environment

	Power			Input						
OFF	ON	PM	D-RGB	D-RGB A-RGB1 A-RGB2 COMP VIDEO HDMI N					None	
Х	0	Χ	Х	Х	Х	0	0	0	Х	

Response

"i:OK" is returned if the parameter was set properly.

For 'GET PROG' or '?PROG', progressive conversion setting is returned as

'g:PROG=<Progressive conversion setting parameters:ID>'

For details on other responses, refer to the "Error List".

Description

- (1) This command is used to set the progressive conversion processing to ON or OFF.
- (2) This command functions in the same way as when "Display setting" "Progressive" are selected on the menu.
- (3) This sets the currently selected input signal and image mode.
- (4) The current value can be acquired using the applicable GET command. ("GET PROG")
 - * The menu display statuses are as listed in the table below by model.

Menu display statuses, etc.

When signals from a progressive source are input, the progressive conversion setting cannot be selected, and the field will be blank on the menu.

Example

Setting

> PROG=0

This sets the progressive conversion setting to OFF.

< i:OK

Reference

> GET PROG or ?PROG

This acquires the progressive conversion processing status.

< g:PROG=1

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^{*} Commands are indicated by ">", and responses are indicated by "<".



RC

Remote control operation emulate

Format

RC□<Remote control emulation button parameters:ID>

<Remote control emulation button parameters:ID>

POWER POWER

POWER_OFF, POWER button pressed twice

MENU MENU
AUTO SET AUTOSET
INPUT INPUT
ASPECT ASPECT
AUTOPC AUTOPC
KEYSTONE KEYSTONE

UP UP

UP+REP, Button press start

DOWN DOWN

DOWN+REP, Button press start

LEFT LEFT

LEFT+REP, Button press start

RIGHT RIGHT

RIGHT+REP, Button press start

OK OK IMAGE IMAGE FREEZE FREEZE VOL + VOL P

VOL_P+REP, Button press start

VOL - VOL_M

VOL_M+REP, Button press start

BLANK BLANK
MUTE MUTE
P-TIMER P_TIMER
LAMP LAMP
DZOOM + DZOOM_P

DZOOM_P+REP, Button press start

DZOOM - DZOOM_M

DZOOM_M+REP, Button press start

FOCUS FOCUS ZOOM

*-REP, Button press start

Environment

	Power			Input							
OFF	ON	PM	D-RGB	A-RGB1	A-RGB2	COMP	VIDEO	HDMI	None		
	_					-					

Response

"i:OK" is returned when the button press request has been acknowledged successfully. (It does not indicate if the operation for the pressed button was executed properly.)

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^{*} Use the application to adjust the time between pressing of keys.



Description

- (1) This emulates pressing of the remote control buttons for controlling the projector.
- (2) With the emulation of the remote control operations, the functions of the buttons corresponding to the parameters cannot necessarily be executed.

 Emulation simply consists in emulating the pressing of the buttons.
- (3) Function for transfer to special mode (service mode) is unavailable.
- (4) A parameter with '+REP' signifies "button press start". (This is the same as the status in which the remote control button is held down.)

Be absolutely sure to send the '*-REP' parameter, and end the button pressing last of all. The button pressing is ended in the cases below as well.

- <1> When a panel or remote control button has been operated
- <2> When a command has been received

Example

Setting

> RC POWER

< i:OK

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^{*} Commands are indicated by ">", and responses are indicated by "<".



RCCH

Remote control channel setting

Format

RCCH=<Remote control setting parameters:ID>
GET RCCH / ? ARCCH

<Remote control setting parameters:ID>

1 Remote control channel 1 2 Remote control channel 2

Environment

Power						Input			
OFF	ON	PM	D-RGB	A-RGB1	A-RGB2	COMP	VIDEO	HDMI	None
Х	0	Χ				-			

Response

"i:OK" is returned if the parameter was set properly.

For 'GET RCCH' or '?RCCH', current remote control channel setting is returned as

'g:RCCH=<Remote control setting parameters:ID>'

For details on other responses, refer to the "Error List".

Description

- (1) This command is used to set the channel of the remote control used at the projector end to 1 or 2.
- (2) This command functions in the same way as when "System setting" "Other settings" "Remote control setting" are selected on the menu.
- (3) The current remote control setting can be acquired using the applicable GET command. ("GET RCCH")

Example

Setting

> RCCH=1 This sets the remote control channel to ch1.

< i:OK

Reference

> GET RCCH or ?RCCH This retrieves the remote control setting state.

< g:RCCH=2

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^{*} Commands are indicated by ">", and responses are indicated by "<".



RESET

Reset

Format

RESET < Reset parameters: ID>

<Reset parameters:ID>

LAMPTIME Lamp on time reset

IMAGE Current image adjustment reset

SYSTEM Initial system settings(same as "Factory settings" in the menu)

ALL Initialize all

Environment

Power Input									
OFF	ON	PM	D-RGB	A-RGB1	A-RGB2	COMP	VIDEO	HDMI	None
Х	0	Χ				-			

Response

"i:OK" is returned if the reset process is successful.

Furthermore, the internal status established when a response other than the normal response ("i:OK") has been returned is indeterminate.

For details on other responses, refer to the "Error List".

Description

- (1) This resets the projector settings.
- (2) What can be specified by the reset parameters for each "reset type" is provided below.
 - Reset of lamp on time
 - (a) The counter indicating the lamp replacement period is reset.
 - (b) This command functions in the same way as when "System setting" "Lamp counter" "Reset" are selected on the menu.
 - (c) Execute this command after replacing the lamp.
 - Current image adjustment reset
 - (a) The adjustment settings of the currently-selected image mode are initialized.
 - (b) This command functions in the same way as when "Image adjustment" "Image adjustment reset" are selected on the menu.
 - * If there is an input signal, the image adjustment items are initialized and then the adjustment values are optimized for the signal.
 - Reset of system settings
 - (a) The following items are initialized.
 - Image adjustment items (all image modes)
 - · Initial settings executed
 - * For details, refer to 'RESET items' at the end of these specifications.
 - (b) This command functions in the same way as when "System setting" "Other settings" "Factory settings" are selected on the menu.
 - Initialize all
 - (a) The following items are initialized.
 - Image adjustment items (all image modes)
 - · Initial settings executed
 - · Input source
 - Language
 - * For details, refer to 'RESET items' at the end of these specifications.

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Notes

- (a) The power must never be turned off while this command is being executed!
- (b) After the 'Factory settings,' be absolutely sure to turn the power off and then restart.
- (c) NO_SIGNAL' may be returned as the response to the command after 'Current image adjustment reset' or 'System initial setting' has been executed.

Example

Control

> reset lamptime This

This resets the lamp on time.

< i:OK

* Commands are indicated by ">", and responses are indicated by "<".

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RGBGAIN

RGB gain adjustment

Format

RGBGAIN=<R gain setting:Number> ∇ <G gain setting:Number> ∇ <B gain setting:Number>GET \Box RGBGAIN / ? \triangle RGBGAIN

Setting values for <R/G/B gain setting:Number> are -60 to 60.

Environment

	Power			Input					
OFF	ON	PM	D-RGB	A-RGB1	A-RGB2	COMP	VIDEO	HDMI	None
Х	0	Χ				-			

Response

"i:OK" is returned if the parameter was set properly.

For 'GET RGBGAIN' or '?RGBGAIN', current RGB gain adjustment values are returned as

'g:RGBGAIN=<R gain setting:Number>,<B gain setting:Number>' For details on other responses, refer to the "Error List".

Description

- (1) This command is used to adjust the gain of the R, G and B colors.
- (2) This command functions in the same way as when "Image adjustment" "Color adjustment" "Gain adjustment" are selected on the menu.
- (3) If numerical parameters are outside the range, "e:0801 INVALID VALUE" is returned.
- (4) This sets the currently selected input signal and image mode.
- (5) The current RGB gain values can be obtained using the GET command. ("GET RGBGAIN")

Example

Setting

> RGBGAIN=10, 11, 12

The R gain is set to 10, G gain to 11 and B gain to 12.

< i:OK

Reference

> GET RGBGAIN or ?RGBGAIN

The RGB gain values are obtained.

< g:RGBGAIN=-10, 0, 19

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^{*} Commands are indicated by ">", and responses are indicated by "<".



RGBOFFSET

RGB offset adjustment

Format

RGBOFFSET=<R offset setting:Number> ∇ <B offset setting:Number> ∇ <B offset setting:Number>GET \Box RGBOFFSET / ? \triangle RGBOFFSET

Setting values for <R/G/B offset setting:Number> are -60 to 60.

Environment

Power			Input						
OFF	ON	PM	D-RGB	RGB A-RGB1 A-RGB2 COMP VIDEO HDMI None					
Χ	0	Х				-			

Response

"i:OK" is returned if the parameter was set properly.

For 'GET rgboffset' or '?rgboffset', current RGB offset adjustment values are returned as

'g:RGBOFFSET=<R offset setting:Number>,<G offset setting:Number>,<B offset setting:Number>'For details on other responses, refer to the "Error List".

Description

- (1) This command is used to adjust the offset of the R, G and B colors.
- (2) This command functions in the same way as when "Image adjustment" "Color adjustment" "Offset adjustment" are selected on the menu.
- (3) If numerical parameters are outside the range, "e:0801 INVALID VALUE" is returned.
- (4) This sets the currently selected input signal and image mode.
- (5) The current RGB offset values can be obtained using the GET command. ("GET RGBOFFSET")

Example

Setting

> RGBOFFSET=10, 11, 12

The R offset is set to 10, G offset to 11 and B offset to 12.

< i:OK

Reference

> GET RGBOFFSET or ?RGBOFFSET

The RGB offset values are obtained.

< g:RGBOFFSET=-10, 0, 19

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^{*} Commands are indicated by ">", and responses are indicated by "<".



ROMVER

ROM version inquiry

Format

GET□ROMVER / ?△ROMVER

Environment

Power				Input						
OFF	ON	PM	D-RGB	A-RGB1	A-RGB2	COMP	VIDEO	HDMI	None	
	-					-				

Response

ROM version of the firmware is returned as

g:ROMVER="<ROM version:Character string>"

<ROM version>:=99.999999

For details on other responses, refer to the "Error List".

Description

- (1) This inquires about the version of the firmware.
- (2) This inquiry can be executed in any status provided that AC power is supplied to the projector.

Example

- > GET ROMVER or ? ROMVER
- < g:ROMVER="01.030602"
- * Commands are indicated by ">", and responses are indicated by "<".

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SAT

Color saturation setting

Format

RGBGAIN=<R gain setting:Number> ∇ <G gain setting:Number> ∇ <B gain setting:Number>GET \Box RGBGAIN / ? \triangle RGBGAIN

Setting values for <Color saturation setting value: Number> are -20 to 20.

Environment

Power				Input						
OFF	ON	PM	D-RGB	O-RGB A-RGB1 A-RGB2 COMP VIDEO HDMI None				None		
Х	0	Χ	0	0	0	0	0	Х	0	

Response

"i:OK" is returned if the parameter was set properly.

For 'GET SAT' or '?SAT', current saturation setting value is returned as

'g:SAT=<Color saturation setting value:Number>'

For details on other responses, refer to the "Error List".

Description

- (1) This sets the screen color saturation.
- (2) This command functions in the same way as when "Image adjustment" "Color adjustment" "Color saturation setting" are selected on the menu.
- (3) If the input is "HDMI", 'e:200X INVALID SOURCE(***)' is returned as an error response.
- (4) When image mode is not set to "PHOTO", 'e:2020 INVALID_IMAGE_MODE' is returned as an error response even if the input is "D-RGB", "A-RGB1" or "A-RGB2".
- (5) If numerical parameters are outside the range, "e:0801 INVALID_VALUE" is returned.
- (6) This sets the currently selected input signal and image mode.
- (7) The GET command can be used to retrieve the current color saturation. ("GET SAT")

Example

Setting

> SAT=-10 This sets the color saturation to -10.

Reference

> GET SAT or ?SAT This retrieves the color saturation.
< g:SAT=1</pre>

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^{*} Commands are indicated by ">", and responses are indicated by "<".



SCRNASPECT

Screen aspect setting

Format

SCRNASPECT=<Screen aspect setting parameter:ID>
GET SCRNASPECT / ? \(\Delta \) SCRNASPECT

<Screen aspect setting parameter:ID>

4:3 4:3 display 16:9 16:9 display

4:3_DIS 4:3 digital image shift 16:9_DIS 16:9 digital image shift

16:10 16:10 display

Environment

Power			Input							
OFF	ON	PM	D-RGB	A-RGB1	A-RGB2	COMP	VIDEO	HDMI	None	
X	0	Χ				-				

Response

"i:OK" is returned if the parameter was set properly.

For 'GET SCRNASPECT' or '?SCRNASPECT', current screen aspect setting is returned as

'g:SCRNASPECT=<Screen aspect setting parameter:ID>'

For details on other responses, refer to the "Error List".

Description

- (1) This sets the screen aspect.
- (2) This command functions in the same way as when "Display setting" "Screen aspect" are selected on the menu.
- (3) The GET command can be used to retrieve the current screen aspect. ("GET SCRNASPECT")
- (4) The final screen aspect settings are retained even when the power is turned off.

Example

Setting

> SCRNASPECT=16:9 This sets the screen aspect to 16:9.

> i:OK

Reference

> GET SCRNASPECT or ?SCRNASPECT This retrieves the screen aspect.

< g:SCRNASPECT=4:3

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^{*} Commands are indicated by ">", and responses are indicated by "<".



SEL

Input signal selection

Format

SEL=<Input signal selection parameter:ID>
GET SEL / ?\(\triangle SEL \)

<Input signal selection parameter:ID>

AUTO Aut

Environment

Power				Input							
OFF	ON	PM	D-RGB	A-RGB1	A-RGB2	COMP	VIDEO	HDMI	None		
Х	0	Χ	Х	Х	Х	0	0	Х	Х		

Response

"i:OK" is returned if the parameter was set properly.

For 'GET SEL' or '?SEL', current input signal is returned as

'g:SEL=<Detected input signal:ID>'

(Refer to "Description".)

For details on other responses, refer to the "Error List".

Description

- (1) This selects the input signal.
- (2) This command functions in the same way as when "Display setting" "Input signal selection" "AUTO" are selected on the menu.
- (3) If the input is neither "COMP", "S-VIDEO" nor "VIDEO", 'e:200X INVALID_SOURCE(***)' is returned as an error response.
- (4) If signals are not input, 'e:2010 NO_SIGNAL' is returned.
- (5) The current input signal can be acquired using the applicable GET command. ("GET SEL")

List of signals which can be detected (1)

Parameter	Remarks
PAL	Includes PAL-M and PAL-N
SECAM	
NTSC	Includes NTSC4.43
1080p	
1080i	Includes 540p (1080i non-interlaced signal)
1035i	

List of signals which can be detected (2)

Parameter	Remarks
720p	
576p	
480p	
576i	Includes 288p (PAL non-interlaced signal)
480i	Includes 240p (NTSC non-interlaced signal)
UNKNOWN	No-color, 1080p, and other signals

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Example

Setting

> SEL=AUTO This sets the input signal selection to "AUTO".

< i:OK

Reference

> GET SEL or ?SEL This retrieves the input signal.

< g:SEL=575p

* Commands are indicated by ">", and responses are indicated by "<".

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SHARP

Sharpness setting

Format

SHARP=<Sharpness setting:Number>
GET□SHARP / ?△SHARP

Setting values for <Sharpness setting:Number> are -10 to 10.

Environment

Power			Input						
OFF	ON	PM	D-RGB	A-RGB1	A-RGB2	COMP	VIDEO	HDMI	None
Х	0	Х				-			

Response

"i:OK" is returned if the parameter was set properly.

For 'GET SHARP' or '?SHARP', current sharpness setting is returned as

'g:SHARP=<Sharpness setting:Number>'

For details on other responses, refer to the "Error List".

Description

- (1) This sets the screen sharpness.
- (2) This command functions in the same way as when "Image adjustment" "Sharpness setting" are selected on the menu.
- (3) If numerical parameters are outside the range, "e:0801 INVALID VALUE" is returned.
- (4) This sets the currently selected input signal and image mode.
- (5) The current sharpness can be acquired using the applicable GET command. ("GET SHARF")

Example

Setting

> SHARP=3 This sets the sharpness to 3.

Reference

> GET SHARP or ?SHARP This retrieves the sharpness. < g:SHARP=3

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^{*} Commands are indicated by ">", and responses are indicated by "<".



SIGNALSTATUS

Signal status inquiry

Format

GET□SIGNALSTATUS / ?△SIGNALSTATUS

Environment

Power			Input							
OFF	ON	PM	D-RGB	A-RGB1	A-RGB2	COMP	VIDEO	HDMI	None	
Х	0	Χ				-				

Response

Current image signal input status is returned as

'g:SIGNALSTATUS=<Signal status:ID>'

<Signal status:ID>

Signal status	Meaning
NO_SIGNAL	Signal not detected
DISPLAYING	Image now displayed or display enable status
SETTING	Signal detection and display preparation in progress

For details on other responses, refer to the "Error List".

Description

- (1) This inquires about the current image signal input status.
- (2) This returns the signal status of the selected input. Use INPUT command for the input selection.
- (3) "e:1006:NOW_BLANK" is returned during blanking.

Example

- > GET SIGNALSTATUS or ? SIGNALSTATUS
- < g:SIGNALSTATUS=NO_SIGNAL

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 $^{^{\}star}$ Commands are indicated by ">", and responses are indicated by "<".



TEMP

Temperature inquiry

Format

GET□**TEMP**

<n>

Number

0 to 255

<v>

Temperature value 0.0 to 127.9 °C

Environment

Power				Input						
OFF	ON	PM	D-RGB	A-RGB1	A-RGB2	COMP	VIDEO	HDMI	None	
Χ	0	Х				-				

Response

Temperature is returned as 'g: TEMP=<n>{, <v>}'

For details on other responses, refer to the "Error List".

Description

- (1) This inquires about the temperature sensor value.
- (2) Number of temperature sensors varies according to model.
- (3) When returning multiple temperature sensor values, values will be separated with a comma. There are cases when a number of sensors is 0. In this case, there will not be a comma.
- (4) For correspondence of temperature sensor sequence and actual installation location, inquire separately.

Example

Setting

None

Reference

> GET TEMP

This retrieves the temperature sensor values.

< g:TEMP=5,37.1,63.0,38.9,29.7,32.4

* Commands are indicated by ">", and responses are indicated by "<".

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TMPL

Temperature limit inquiry

Format

 $GET \square TMPL$

<n>

Number

0 to 255

<v>

Temperature value 0.0 to 127.9 °C

Environment

	Power			Input						
OFF	ON	PM	D-RGB	A-RGB1	A-RGB2	COMP	VIDEO	HDMI	None	
X	0	Χ				-				

Response

Private commands (disclosed upon request)

Temperature limit is returned as 'g: TMPL=<n>{, <v>}'

For details on other responses, refer to the "Error List".

Description

- (1) This returns the limit value (of machine-stoppage) of each temperature sensors.
- (2) Number of temperature sensors varies according to model.
- (3) When returning multiple temperature sensor values, values will be separated with a comma. There are cases when a number of sensors is 0. In this case, there will not be a comma.
- (4) For correspondence of temperature sensor sequence and actual installation location, inquire separately.

Example

Setting

None

Reference

> GET TMPL

This retrieves the temperature sensor limit values.

< g:TMPL=5,71.0,90.0,57.0,44.0,53.0

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^{*} Commands are indicated by ">", and responses are indicated by "<".



TRACK

Tracking adjustment

Format

TRACK=<Adjustment value:Number>
GET TRACK / ? ATRACK

Environment

	Power		Input						
OFF	ON	PM	D-RGB	A-RGB1	A-RGB2	COMP	VIDEO	HDMI	None
Х	0	Χ	Х	0	0	Х	Х	Х	Х

Response

"i:OK" is returned if the parameter was set properly.

For 'GET TRACK' or '?TRACK', current tracking adjustment value is returned as

'g:TRACK=<Adjustment value:Number>'

For details on other responses, refer to the "Error List".

Description

- (1) This is used for adjustment when tracking (synchronization) is out of sync and the screen flickers.
- (2) This command functions in the same way as when "Display setting" "Input signal selection" "Tracking adjustment" are selected on the menu.
- (3) If the input is neither "A-RGB1" nor "A-RGB2", 'e:200X INVALID_SOURCE(***)' is returned as an error response.
- (4) If signals are not input, 'e:2010 NO_SIGNAL' is returned.
- (5) Adjustment range is limited. If number is invalid, "e:0801 INVALID_VALUE" is returned.
- (6) The GET command can be used to retrieve the current tracking adjustment values. ("GET TRACK")

Example

Setting

> TRACK=25 The tracking adjustment value is set to 25. < i:OK

Reference

> GET TRACK or ?TRACK This retrieves the tracking adjustment setting value. < g:TRACK=21

* Commands are indicated by ">", and responses are indicated by "<".

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VKS

Vertical keystone setting

Format

Environment

Power			Input							
OFF	ON	PM	D-RGB	A-RGB1	A-RGB2	COMP	VIDEO	HDMI	None	
Χ	0	Χ				-				

Response

"i:OK" is returned if the parameter was set properly.

For 'GET VKS' or '?VKS', current vertical keystone setting value is returned as

'g:VKS=<Vertical keystone distortion value:Number>

For details on other responses, refer to the "Error List".

Description

- (1) This sets the vertical keystones.
- (2) This command is identical to pressing the "KEYSTONE" button on the remote control.
- (3) The settable keystone range varies depending on the input signal, screen size, number of horizontal and vertical dots, and other factors.
 - If keystone values are outside the range, "e:0801 INVALID_VALUE" is returned.
- (4) The GET command can be used to obtain the current vertical/horizontal keystone value. ("GET vks")

Example

Setting

> VKS=-23 This sets the vertical keystone to -23.

Reference

> GET VKS or ?VKS
This retrieves the vertical keystone.
< g:VKS=-23

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^{*} Commands are indicated by ">", and responses are indicated by "<".



WB

Screen color correction

Format

WB=<Screen color correction parameters:ID>
GET□WB / ?△WB

<Screen color correction parameters:ID>

NORMAL Standard
GREENBOARD Blackboard
ADJUST Adjust

Environment

Power			Input							
OFF	ON	PM	D-RGB	O-RGB A-RGB1 A-RGB2 COMP VIDEO HDMI				None		
Х	0	Х		-						

Response

"i:OK" is returned if the parameter was set properly.

For 'GET WB' or '?WB', current screen color correction is returned as

'g:WB=<Screen color correction parameters:ID>'

For details on other responses, refer to the "Error List".

Description

- (1) The screen color correction is set to "Normal", "Blackboard", or "Adjust".
- (2) This command functions in the same way as when "Display setting" "Screen color correction" are selected on the menu.
- (3) When "ADJUST" has been selected, adjust the RGB adjustment values using the WBRGB command.
- (4) The current screen color correction can be acquired using the applicable GET command. ("GET WB")

Example

Setting

> WB=NORMAL This sets the screen color correction to "Normal".

Reference

> GET WB or ?WB This retrieves the screen color correction.
< g:WB=GREENBOARD

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^{*} Commands are indicated by ">", and responses are indicated by "<".



WBRGB

Screen color correction (ADJUST)

Format

WBRGB=<R adjustment value:Number> ∇ <G adjustment value:Number> ∇ <B adjustment value:Number>GET \square WBRGB / ? \triangle WBRGB

Setting values for <R/G/B adjustment value: Number> are -20 to 20.

Environment

Power			Input							
OFF	ON	PM	D-RGB	A-RGB1	A-RGB2	COMP	VIDEO	HDMI	None	
Х	0	Χ				-				

Response

"i:OK" is returned if the parameter was set properly.

For 'GET WBRGB' or '? WBRGB', current screen color correction (adjustment) value are returned as 'g:WBRGB=<R adjustment value:Number>,<G adjustment value:Number>,<B adjustment value:Number>'For details on other responses, refer to the "Error List".

Description

- (1) This sets the RGB adjustment values of the screen color correction.
- (2) This command functions in the same way as when "Display setting" "Screen color correction" "RGB adjustment" are selected on the menu.
- (3) If numerical parameters are outside the range, "e:0801 INVALID VALUE" is returned.
- (4) Although this setting is enabled when Adjustment (ADJUST) is selected by the screen color correction command (WB), it can be made independently.
- (5) The GET command can be used to retrieve the current RGB adjustment values. ("GET WBRGB")

Example

Setting

Reference

> GET WBRGB or ?WBRGB
This retrieves the RGB adjustment values.
< g:WBRGB=-10, 0, 19

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^{*} Commands are indicated by ">", and responses are indicated by "<".



ZCONTDRV

Zoom lens continuous drive control

Format

ZCONTDRV=<Zoom lens continuous control parameter:ID>

<Zoom lens continuous control parameter:ID>

STOP This stops the zooming.

WIDE This zooms to the wide-angle end.
TELE This zooms to the telephoto end.

Environment

	Power			Input							
OFF	ON	PM	D-RGB	A-RGB1	A-RGB2	COMP	VIDEO	HDMI	None		
Χ	0	Х				-					

Response

"i:OK" is returned when the drive was completed successfully.

For details on other responses, refer to the "Error List".

Description

- (1) This command is used to drive the zoom lens continuously.
- (2) This command functions in the same way as when first the "ZOOM" button on the remote control or main unit panel is pressed and then the "↑" or "↓" button is pressed.
- (3) Zoom drive is started by specifying "TELE" or "WIDE".
 - To stop the drive, send the "ZCONTDRV=STOP" command.
 - If no instruction was given to stop the drive, the drive stops at the drive direction end.
- (4) The following commands are acknowledged during zoom drive, but zoom drive will also stop at the same time.
 - a. POWER
 - b. ZCONTDRV=STOP
- (5) The following commands are acknowledged during zoom drive, and a response is returned while the drive continues.

a. GET MODE e. GET PRODCODE i. LOCAL
b. GET POWER f. GET ROMVER j. RC
c. GET ERR g. GET COMVER k. MAIN
d. GET LAMPCOUNTER h. REMOTE 1. [NULL]

(6) There are no GET commands available for this command.

Example

Control

> ZCONTDRV=TELE

Control over the zooming to the telephoto end is started.

< I:OK

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^{*} Commands are indicated by ">", and responses are indicated by "<".



ZSTEPDRV

Zoom lens step drive control

Format

ZSTEPDRV=<Zoom lens step control parameter:ID>

<Zoom lens step control parameter:ID>

WIDE This zooms to the wide-angle end.
TELE This zooms to the telephoto end.

Environment

Power			Input						
OFF	ON	PM	D-RGB	A-RGB1	A-RGB2	COMP	VIDEO	HDMI	None
Х	0	Χ				-			

Response

"i:OK" is returned when zooming was completed successfully after step drive.

For details on other responses, refer to the "Error List".

Description

- (1) This command is used to drive the zoom lens.
- (2) This command functions in the same way as when first the "ZOOM" button on the remote control or main unit panel is pressed and then the "←" or "→" button is pressed.
- (3) The amount by which the lens is zoomed is constant, and it is fixed in the system.
- (4) If a zooming error occurs, step drive cannot be controlled.
- (5) There are no GET commands available for this command.

Example

Control

> ZSTEPDRV=TELE

1-step control is exercised over the zoom toward the TELE end.

< I:OK

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 $^{^{\}star}$ Commands are indicated by ">", and responses are indicated by "<".



7. Error List

Item	Code	TYPE	Error character strings	Error	Remedy
1	0001	е	BAD_SEQUENCE	Communication sequence error	Wait until a response is received before sending the next command.
2	0002	е	INVALID_COMMAND	Invalid (undefined) command.	Send a valid command.
3	0004	е	INVALID_FORMAT	Invalid command format.	Send the command in the valid format.
4	0005	е	NOT_POWER_SUPPLIED	The projector's power is off.	Turn on the power using the POWER ON command.
5	-	i	BUSY (POWER)	The projector is switching power modes.	Wait until the power mode is ON, OFF or PMM.
6	000A	е	INVALID_PARAMETER	The parameter (type) is invalid (undefined). Includes cases when the number of parameters is incorrect.	Use the correct parameters.
7	000B	е	JOB_TIMEOUT	Internal processing in the projector has timed out.	Resend the command.
		i	BUSY (FOCUS)	The focus lens is being driven.	Wait until the projector has finished driving the focus lens.
		i	BUSY (ZOOM)	The zoom lens is being driven.	Wait until the projector has finished driving the zoom lens.
		i	BUSY (LOGO_CAPTURE)	User image registration is in progress.	Wait until user image registration is complete.
9	-	i	BUSY (IMAGE)	Image mode switching is in progress.	Wait until the projector has switched the image mode.
		i	BUSY (NOW_SETTING)	Signal setting (detection) in progress.	Wait until the processing is completed.
		i	BUSY	Internal processing in the projector is in progress.	Wait until the current processing is complete.
	1006	е	NOW_BLANK	Cannot execute command since blanking operation is in progress.	Resend the command after canceling the blanking operation.
10	1009	е	NOW_FREEZE	Cannot execute command since freeze operation is in progress.	Resend the command after canceling the freeze operation.
	100A	е	NOW_D.ZOOM	Cannot execute command since D. zooming is in progress.	Resend the command after canceling D. zooming.
	100B	е	NOW_SPECIAL_MENU	Cannot execute command in current menu mode.	Resend the command after exiting the current menu mode.

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Item	Code	TYPE	Error character strings	Error	Remedy
	F001	е	SYSTEM (UNKNOWN)	An internal error has occurred.	Resend the command.
	F002	е	SYSTEM (AF)	An error occurred at AUTOSETEXE=FOCUS.	
11	F004	Ф	SYSTEM (AK)	An error occurred at AUTOSETEXE=VKS.	Eliminate the cause of the error, and resend the command.
	F005	Φ	SYSTEM (ASC)	An error occurred at AUTOSETEXE=SCRN.	
12	E0XX	е	COMMUNICATION_ERROR	A communication protocol violation has occurred in the projector.	Resend the command.
	1008	е	INVALID_SCREEN_ASPECT	Cannot execute command under current screen aspect ratio setting.	Change the screen aspect ratio setting.
14	200X	Ф	INVALID SOURCE (****)	Cannot execute command with current input source.	Change the input source.
	200%	0		Current input source is indicated in parentheses.	
	2010	е	NO_SIGNAL	No input signal.	Supply the input signal.
15	201X	е	INVALID_SIGNAL (****)	Cannot execute command with current input signal.	Change the input signal.
				Current input signal is indicated in parentheses.	
16	2020	е	INVALID_IMAGE_MODE	Cannot execute command with current image mode.	Change the image mode.
17	0801	е	INVALID_VALUE	I	Set the parameters in the correct range.
	1003	е	IP_NOT_AVAILABLE	IP conversion is not possible.	Switch to the correct input signal.
	1004		POWER_MANAGEMENT_O FF	DPON=ON cannot be set when PMM=OFF.	Use a setting other than PMM=OFF.
	1005	е	DIRECT_POWER_ON	PMM=OFF cannot be set when DPON=ON.	Use the DPON=OFF setting.
				Invalid input signal resolution.	
	203X	е	INVALID_RESOLUTION	Additional information is indicated in parentheses.	Switch to an input signal with the
		,	(***)	■OVER_PANEL_RES: input signal resolution exceeds panel resolution.	correct resolution.
19	-	i	INPUT_NOT_FOUND	Input was not switched since there is no input signal at AUTOSETEXE=INPUT.	Notification of status only; no particular measures needed.

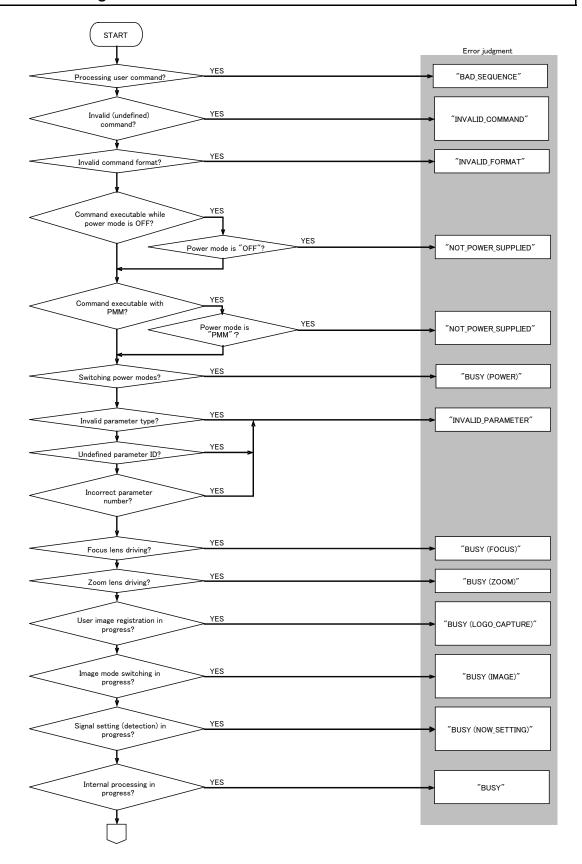
^{*} Error codes are 4-digit hexadecimal strings. X represents any character from 0 to 9 or from A to F.

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^{*} Items with lower numbers have a higher priority. (Even when multiple errors have occurred, the error with the highest rank is returned. However, errors of the same item number are ranked with the same priority.)

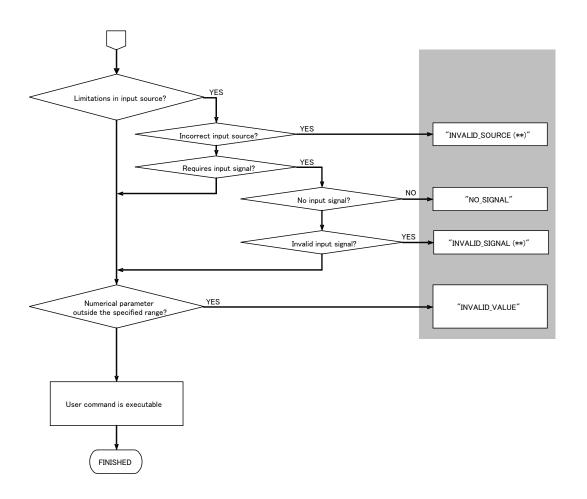


8. Error Processing



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9. Other

Use the remote control emulation function (RC command) for the following functions.

Function	PC command parameter		
Digital zoom	DZOOM_P, DZOOM_M		
Presentation timer	P_TIMER		

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Appendix 1. Reset Items

What is initialized by the "RESET" command is set forth in the table below.

ALL	SYSTEM	IMAGE	Item	Setting	Reference command
•			Input source switching	A-RGB1	INPUT
•	•		Screen aspect	4:3	SCRNASPECT
			Aspest	Video: 4:3	ASPECT
			Aspect	Other: AUTO	ASPECT
•	•		HDMI overscan	ON	
•	•		HDMI input level	AUTO	
•	•		Input signal select	AUTO	SEL
•	•		Progressive	2	PROG
•	•		Menu display position	Center	
•	•		Screen color correction	NORMAL	WB
•	•		" adjustment values (R,G,B)	0, 0, 0	WBRGB
•	•		Flip display	NONE	IMAGEFLIP
•	•		No signal screen	BLUE	NOSIG
•	•		Screen when BLANK	BLACK	BLANKCOLOR
•	•		Startup screen	CANON	PJON
			Imaga mada	DICOM model: DCM_SIM	IMAGE
			Image mode	Other: STANDARD	TIVIAGE
•	•	•	Brightness	0	BRI
•	•	•	Contrast	0	CONT
•	•	•	Sharpness	0	SHARP
•	•	•	Gamma	0	GAMMA
•	•	•	Saturation	0	SAT
•	•	•	Hue	0	HUE
•	•	•	Color temperature	0	
•	•	•	RGB gain adjustment	0, 0, 0	RGBGAIN
•	•	•	RGB offset adjustment	0, 0, 0	RGBOFFSET
_			Divinoraio garage	Video: WEAK	DCAMMA
•			Dynamic gamma	Other: OFF	DGAMMA
•			Floor to no odiveterant	IMAGE is PHOTO: MEDIUM	ETONEADI
•			Flesh tone adjustment	Other: OFF	FTONEADJ
•	•	•	6-axis adjustment ON/OFF	OFF	6AXADJ
•	•	•	6-axis adjustment (SAT, HUE)	0, 0	6AXR∼Y
•	•	•	Ambient light type	Fluorescent lamp	
•	•	•	Ambient light level	Medium	
•	•	•	Lamp mode	NORMAL	LAMP
				Auto focus: ON	
•	•		Auto setup	Auto keystone: ON	
_			, tato sotup	Auto input: ON	
				Automatic screen color correction: OFF	

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ALL	SYSTEM	IMAGE	Item	Setting	Reference command	
•	•		Power management	OFF	PMM	
•	•		Direct power-on	OFF	DPON	
•	•		BEEP sound	1	BVOL KEYLOCK	
•	•		Keylock	OFF		
•			Language	ENG	LANG	
•	•		Guide	ON	GUIDE	
•	•		LED illumination	ON	LEDILLUMINATION	
•			Remote control	1	RCCH	
•	•		Menu display time	Normal		
•	•		Password setting	OFF		
•	•		Password character	None		
•			Network function	OFF		
•	•		Volume	10	AVOL	
•	•		Vertical keystone	0	VKS	
•	•		Digital image shift	0		
•	•		Presentation timer	OFF		
•	•		Mute	OFF	MUTE	
•	•		Lamp ready indicator off flag	OFF		

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