MULTIMEDIA PROJECTOR
WX6000 / SX6000

User Commands

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1. Overview

These specifications describe the methods of controlling both the Projector WX6000 / SX6000 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:

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>˚</td>
<td>Space (20h) with 0 or more characters, or other separator.</td>
</tr>
<tr>
<td>˘</td>
<td>Space (20h) with 1 or more characters, or other separator.</td>
</tr>
<tr>
<td>˜</td>
<td>Separator between parameters.</td>
</tr>
<tr>
<td></td>
<td>˚, ˘ (comma enclosed in more than 0 space) or</td>
</tr>
<tr>
<td></td>
<td>˘ (1 or more space)</td>
</tr>
<tr>
<td>[ ]</td>
<td>Data in [ ] can be omitted.</td>
</tr>
<tr>
<td></td>
<td>Same as OR.</td>
</tr>
<tr>
<td>: =</td>
<td>Definition name is on the left side of this mark, and definition description is on the right side.</td>
</tr>
</tbody>
</table>
## 2. Communication Specifications

The projector can be controlled via RS-232C or LAN connection.

### PC - Projector connection configuration

<table>
<thead>
<tr>
<th>Item</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection system</td>
<td>PC and projector connected on a &quot;1:1&quot; basis</td>
</tr>
<tr>
<td>Connection signal line</td>
<td>3-line connection of SD, RD, and SG</td>
</tr>
<tr>
<td>Connection cable</td>
<td>9-pin RS-232C Cable (Cross)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Item</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection system</td>
<td>TCP / IP Connection</td>
</tr>
<tr>
<td>Connection signal line</td>
<td>Straight when connecting via network</td>
</tr>
<tr>
<td>Connection cable</td>
<td>LAN Cable</td>
</tr>
<tr>
<td>LAN</td>
<td>100BASE-TX / 10BASE-T</td>
</tr>
</tbody>
</table>

Send Data: SD --- SD
Receive Data: RD --- RD
Signal Ground: SG --- SG

* Signal lines other than the three SD, RD, and SG lines are not used in the projector.
* Loop back its own signals on the PC side as necessary.
Usable Character Codes

Use ASCII codes in the red and blue areas. No distinction is made between double-byte characters and single-byte characters. Do not use double-byte or triple-byte characters. They will all be recognized as single-byte characters. Uppercase and lowercase versions of the same alphabetic characters will be recognized as the same character (case insensitive).

<table>
<thead>
<tr>
<th>Item</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delimiters</td>
<td>CR(0Dh), LF(0Ah), null (00h)</td>
</tr>
<tr>
<td></td>
<td>Characters usable as delimiters. These characters alone (single characters) or CR+LF (0D0Ah) can be used as delimiters.</td>
</tr>
<tr>
<td>General Characters</td>
<td>20h to 7Eh</td>
</tr>
<tr>
<td></td>
<td>Characters usable in commands.</td>
</tr>
<tr>
<td>Invalid Characters</td>
<td>Do not use the codes in regions other than the red and blue areas. Even if they are used, they are considered &quot;other separator codes&quot;, and they are handled in the same way as SP(20h).</td>
</tr>
</tbody>
</table>
### Communication System (Serial)

<table>
<thead>
<tr>
<th>Item</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication system</td>
<td>RS-232-C Start-stop synchronization Semi-duplex communication</td>
</tr>
<tr>
<td>Transmission speed</td>
<td>19.2 Kbps</td>
</tr>
<tr>
<td>Character length</td>
<td>8 bits / character</td>
</tr>
<tr>
<td>Stop bit</td>
<td>2 bits</td>
</tr>
<tr>
<td>Parity</td>
<td>None</td>
</tr>
<tr>
<td>Transmission format</td>
<td>Variable-length records with terminals as delimiters</td>
</tr>
<tr>
<td>Maximum transmission length</td>
<td>Maximum of 256 characters (bytes) including delimiters.</td>
</tr>
<tr>
<td>Delimiters</td>
<td>Delimiters are one of the following: CR, LF, CR+LF, Null (0).</td>
</tr>
<tr>
<td></td>
<td>Response delimiters are identical to command delimiters.</td>
</tr>
<tr>
<td>Transmission codes</td>
<td>ASCII code (General-purpose characters: 20h to 7Fh)</td>
</tr>
<tr>
<td></td>
<td>(Codes other than those above and delimiters are considered “other separator codes”)</td>
</tr>
<tr>
<td>Communication procedure</td>
<td>No procedure</td>
</tr>
<tr>
<td>Flow control</td>
<td>None</td>
</tr>
<tr>
<td>Error control</td>
<td>None</td>
</tr>
<tr>
<td>Break signal</td>
<td>Not supported</td>
</tr>
<tr>
<td>Timeout</td>
<td>Tc Between characters: 5s (Timeout between CR and LF is 10ms.)</td>
</tr>
<tr>
<td></td>
<td>Tr Between command / response interval: 15s</td>
</tr>
</tbody>
</table>

* For information about timeouts, refer to “3. Communication Flow” on P. 8.

### Communication System (LAN)

<table>
<thead>
<tr>
<th>Item</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication system</td>
<td>Uses the TCP / IP protocol. Port: 33336</td>
</tr>
</tbody>
</table>
## Commands
Transmissions sent from the PC to the projector.

### Transmission format

```
[]<Command character strings> []<Delimiter>
```

- **<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
Possibilities of responses from the projector □: possible, □: not possible

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
<th>Response</th>
</tr>
</thead>
</table>
| Null Commands   | Character string

- Commands with a command character string length of 0. No command processing is performed.

  ```
  <Null command character string>
  := <Character string with length 0>
  ```

| Control command | Character string

- Projector control command. The format is shown below.

  ```
  <Control command character string>
  := <Control name>[□<Parameter value>]
  ```

| Setting command | Character string

- Command that sets values for each parameter. The format is shown below.

  ```
  <Setting command character strings>
  := <Parameter name>[□<Parameter value>]
  ```

  For the definition of <Parameter value>, refer to the parameter definitions.

| Reference command | Character string

- Requests current value of each parameter. The format is shown below.

  ```
  <Reference command character string>
  := ? [□<Parameter name> | GET □<Parameter name>]
  ```
Response

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

### Transmission format

<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 and a : (colon). The first character indicates the response type.

<table>
<thead>
<tr>
<th>Response type</th>
<th>Meaning</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>i</td>
<td>State response</td>
<td>:OK :BUSY etc.</td>
</tr>
<tr>
<td>w</td>
<td>Warning</td>
<td>:USER_COMMAND..</td>
</tr>
<tr>
<td>e</td>
<td>Error</td>
<td>:000B INVALID..</td>
</tr>
<tr>
<td>g</td>
<td>Reference command response</td>
<td>:AVOL=10</td>
</tr>
</tbody>
</table>

**<Delimiter>**

Delimiters for commands sent from the PC.

### Type

**OK response**

After the 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
```

* Commands are indicated by “>”, and responses are indicated by “<”.

**WARN response**

This response is sent when warning information is issued. Note that the command is not executed in this case.

<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
```
Transmission recognition

On the receiving side (the Projector), the data that is able to be received within the character interval of Tc is held, and the transmission is considered received when the delimiter is received.
If the character interval received exceeds the Tc or if a delimiter is not received within 256 characters, all data already received is lost, and the mode is reset to standby to receive commands again.

Parameter value

The \textless Parameter value\textgreater is defined as shown below.

\[
\text<Parameter value>: = \text<Value 1\rangle , \ldots , \text<Value n> \\
\text<Value>: = \text<Numerical value> | \text<ID> | \text"<Character string>"
\]

\[
\text<Numerical value>: = [\text<Sign>] \text<Decimal character string (Min. 1 character to Max. 5 characters)> \\
\text<ID>: = 1 \text{ or more ASCII characters (20h to 7Eh)} \\
\text<Character string>: = 0 \text{ or more ASCII characters (20h to 7Eh)}
\]

* The range of valid values is from -32768 to 32767.
3. Communication Flow

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

Transmission received
At the Projector, the data that is able to be received within the character interval of Tc is held, and the transmission is considered received when the delimiter is received.
If the character interval received exceeds the Tc or if a delimiter is not received within 256 characters, all data already received is lost, and the mode is reset to standby to receive commands again.

Command / Response
One response is always returned for each command sent from the PC.

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

Response Reception Timeout
If a response is not received within the Tr (timeout interval between command and response) while standing by a waiting response after sending a command from the PC, it is deemed to have exceeded the “response reception timeout.” Please resend the command.

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 the 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.
For procedures which return “BAD_SEQUENCE”, change the procedure, and do not send the next user command on the PC side before a response for the first command is returned.
# 4. Command System

<table>
<thead>
<tr>
<th>Menu Group</th>
<th>Input setting</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Display setting</td>
<td>Input signal</td>
<td>Input signal selection (SEL)</td>
</tr>
<tr>
<td></td>
<td>Aspect</td>
<td>Auto: AUTO, User: USER</td>
</tr>
<tr>
<td></td>
<td>Auto: AUTO, User: USER</td>
<td>User commands use only automatic selection of input signals.</td>
</tr>
<tr>
<td></td>
<td>Input mode</td>
<td>SELECTED, DYNAMIC, DYNAMIC-G, DYNAMIC-B, DYNAMIC-L, DYNAMIC-S, DYNAMIC-OPT</td>
</tr>
<tr>
<td></td>
<td>Color mode</td>
<td>HDMI, DVI, SCART, S-VIDEO</td>
</tr>
<tr>
<td></td>
<td>Auto color</td>
<td>Progressive</td>
</tr>
</tbody>
</table>

## Image Adjustment

<table>
<thead>
<tr>
<th>Menu Group</th>
<th>Input setting</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Image mode</td>
<td>Image mode setting</td>
<td>IMAGE, SAT, DUAL</td>
</tr>
<tr>
<td></td>
<td>Color saturation setting</td>
<td>SAT, HUE, COLOR, TEMP</td>
</tr>
<tr>
<td></td>
<td>Hue settings</td>
<td>SAT, HUE, COLOR, TEMP</td>
</tr>
<tr>
<td></td>
<td>Gain adjustment</td>
<td>IN, OUT, CENTER</td>
</tr>
<tr>
<td></td>
<td>Offset adjustment</td>
<td>IN, OUT, CENTER</td>
</tr>
<tr>
<td></td>
<td>Sharpness setting</td>
<td>SP, FAQP, FAQP-R</td>
</tr>
<tr>
<td></td>
<td>Brightness setting</td>
<td>BRIGHT, FACTORY</td>
</tr>
<tr>
<td></td>
<td>Gamma adjustment</td>
<td>GAMMA, FACTORY</td>
</tr>
<tr>
<td></td>
<td>Advanced adjustment</td>
<td>FACTORY, USER</td>
</tr>
<tr>
<td></td>
<td>Lamp mode setting</td>
<td>FACTORY, USER</td>
</tr>
<tr>
<td></td>
<td>Color mode</td>
<td>FACTORY, USER</td>
</tr>
<tr>
<td></td>
<td>Base</td>
<td>FACTORY, USER</td>
</tr>
</tbody>
</table>

## Installation setting

<table>
<thead>
<tr>
<th>Menu Group</th>
<th>Input setting</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Installation lock</td>
<td>Installation lock</td>
<td>FACTORY, USER</td>
</tr>
<tr>
<td></td>
<td>Test pattern</td>
<td>NTSC, PAL</td>
</tr>
<tr>
<td></td>
<td>Input signal</td>
<td>SELECTED, DYNAMIC, DYNAMIC-G, DYNAMIC-B, DYNAMIC-L, DYNAMIC-S, DYNAMIC-OPT</td>
</tr>
<tr>
<td></td>
<td>Input image shift</td>
<td>IN, OUT, CENTER</td>
</tr>
<tr>
<td></td>
<td>Input polarity</td>
<td>IN, OUT, CENTER</td>
</tr>
<tr>
<td></td>
<td>System display</td>
<td>FACTORY, USER</td>
</tr>
<tr>
<td></td>
<td>On-screen</td>
<td>FACTORY, USER</td>
</tr>
</tbody>
</table>

## System setting

<table>
<thead>
<tr>
<th>Menu Group</th>
<th>Input setting</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reset management mode</td>
<td>Reset management mode</td>
<td>FACTORY, USER</td>
</tr>
<tr>
<td></td>
<td>Direct power on</td>
<td>FACTORY, USER</td>
</tr>
<tr>
<td></td>
<td>User screen setting</td>
<td>FACTORY, USER</td>
</tr>
<tr>
<td></td>
<td>Electronic sound</td>
<td>FACTORY, USER</td>
</tr>
<tr>
<td></td>
<td>Key sound</td>
<td>FACTORY, USER</td>
</tr>
<tr>
<td></td>
<td>Remote control setting</td>
<td>FACTORY, USER</td>
</tr>
<tr>
<td></td>
<td>HTTP input</td>
<td>HTML-IN</td>
</tr>
<tr>
<td></td>
<td>Language</td>
<td>FACTORY, USER</td>
</tr>
<tr>
<td></td>
<td>Other settings</td>
<td>FACTORY, USER</td>
</tr>
</tbody>
</table>

## Network setting

<table>
<thead>
<tr>
<th>Menu Group</th>
<th>Input setting</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change network setting</td>
<td>Change network setting</td>
<td>FACTORY, USER</td>
</tr>
<tr>
<td></td>
<td>Network function</td>
<td>FACTORY, USER</td>
</tr>
<tr>
<td></td>
<td>IP network setting</td>
<td>FACTORY, USER</td>
</tr>
<tr>
<td></td>
<td>Network function</td>
<td>FACTORY, USER</td>
</tr>
<tr>
<td></td>
<td>IP address</td>
<td>FACTORY, USER</td>
</tr>
<tr>
<td></td>
<td>DHCP setting</td>
<td>FACTORY, USER</td>
</tr>
<tr>
<td></td>
<td>TCP setting</td>
<td>FACTORY, USER</td>
</tr>
<tr>
<td></td>
<td>Gateway setting</td>
<td>FACTORY, USER</td>
</tr>
</tbody>
</table>

## Information

<table>
<thead>
<tr>
<th>Menu Group</th>
<th>Input setting</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product code</td>
<td>Product code</td>
<td>FACTORY, USER</td>
</tr>
<tr>
<td></td>
<td>Signal information</td>
<td>FACTORY, USER</td>
</tr>
<tr>
<td></td>
<td>Firmware version</td>
<td>FACTORY, USER</td>
</tr>
<tr>
<td></td>
<td>Product card number</td>
<td>FACTORY, USER</td>
</tr>
<tr>
<td></td>
<td>IP address</td>
<td>FACTORY, USER</td>
</tr>
<tr>
<td></td>
<td>Gateway address</td>
<td>FACTORY, USER</td>
</tr>
<tr>
<td></td>
<td>Mail sender address</td>
<td>FACTORY, USER</td>
</tr>
<tr>
<td></td>
<td>Mail recipient address</td>
<td>FACTORY, USER</td>
</tr>
<tr>
<td></td>
<td>Fix user name</td>
<td>FACTORY, USER</td>
</tr>
<tr>
<td></td>
<td>System information ID</td>
<td>FACTORY, USER</td>
</tr>
</tbody>
</table>

- Indicates functions that are available in the menu but not available in the user commands.
## 5. Command List

<table>
<thead>
<tr>
<th>Item</th>
<th>Commands</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>6AXADJ</td>
<td>6-axis adjustment ON/OFF</td>
</tr>
<tr>
<td>2</td>
<td>6AXR-Y</td>
<td>6-axis correction R-Y hue/saturation settings</td>
</tr>
<tr>
<td>3</td>
<td>AMBADJ</td>
<td>Ambient light correction adjustment ON/OFF</td>
</tr>
<tr>
<td>4</td>
<td>AMBLEVEL</td>
<td>Ambient light level settings</td>
</tr>
<tr>
<td>5</td>
<td>AMBTYPE</td>
<td>Ambient light type settings</td>
</tr>
<tr>
<td>6</td>
<td>ASELA1</td>
<td>Analog PC-1 audio terminal selection</td>
</tr>
<tr>
<td>7</td>
<td>ASELA2</td>
<td>Analog PC-2 audio terminal selection</td>
</tr>
<tr>
<td>8</td>
<td>ASELC</td>
<td>Component audio terminal selection</td>
</tr>
<tr>
<td>9</td>
<td>ASELD</td>
<td>Digital PC audio terminal selection</td>
</tr>
<tr>
<td>10</td>
<td>ASELH</td>
<td>HDMI audio terminal selection</td>
</tr>
<tr>
<td>11</td>
<td>ASPECT</td>
<td>Screen settings</td>
</tr>
<tr>
<td>12</td>
<td>AUTOPC</td>
<td>Auto PC</td>
</tr>
<tr>
<td>13</td>
<td>AUTOSETEXE</td>
<td>Auto setup</td>
</tr>
<tr>
<td>14</td>
<td>AVOL</td>
<td>Audio volume adjustment</td>
</tr>
<tr>
<td>15</td>
<td>BLANK</td>
<td>BLANK function</td>
</tr>
<tr>
<td>16</td>
<td>BRI</td>
<td>Brightness setting</td>
</tr>
<tr>
<td>17</td>
<td>COLOR_TEMP</td>
<td>Color temperature setting</td>
</tr>
<tr>
<td>18</td>
<td>COMVER</td>
<td>User command version inquiry</td>
</tr>
<tr>
<td>19</td>
<td>CONT</td>
<td>Contrast setting</td>
</tr>
<tr>
<td>20</td>
<td>DGAMMA</td>
<td>Dynamic gamma</td>
</tr>
<tr>
<td>21</td>
<td>DZOOM_POS</td>
<td>DZOOM position setting</td>
</tr>
<tr>
<td>22</td>
<td>DZOOM_RAT</td>
<td>DZOOM ratio setting</td>
</tr>
<tr>
<td>23</td>
<td>ERR</td>
<td>Error information inquiry</td>
</tr>
<tr>
<td>24</td>
<td>FINE_GAMMA_B</td>
<td>Fine gamma (B) adjustment</td>
</tr>
<tr>
<td>25</td>
<td>FINE_GAMMA_G</td>
<td>Fine gamma (G) adjustment</td>
</tr>
<tr>
<td>26</td>
<td>FINE_GAMMA_R</td>
<td>Fine gamma (R) adjustment</td>
</tr>
<tr>
<td>27</td>
<td>FLTWRN</td>
<td>Filter warning indication at startup</td>
</tr>
<tr>
<td>28</td>
<td>FREEZE</td>
<td>Freeze status</td>
</tr>
<tr>
<td>29</td>
<td>GAMMA</td>
<td>Gamma adjustment</td>
</tr>
<tr>
<td>30</td>
<td>HDMI_IN</td>
<td>HDMI input setting</td>
</tr>
<tr>
<td>31</td>
<td>HDMI_OVSCAN</td>
<td>HDMI overscan setting</td>
</tr>
<tr>
<td>32</td>
<td>HUE</td>
<td>Hue setting</td>
</tr>
<tr>
<td>33</td>
<td>IMAGE</td>
<td>Image mode setting</td>
</tr>
<tr>
<td>34</td>
<td>IMAGEFLIP</td>
<td>Flip display</td>
</tr>
<tr>
<td>35</td>
<td>INPUT</td>
<td>Input selection</td>
</tr>
<tr>
<td>Item</td>
<td>Commands</td>
<td>Description</td>
</tr>
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<td>------</td>
<td>------------</td>
<td>-----------------------------------------</td>
</tr>
<tr>
<td>36</td>
<td>KREP</td>
<td>Key repeat</td>
</tr>
<tr>
<td>37</td>
<td>LAMP</td>
<td>Lamp output setting</td>
</tr>
<tr>
<td>38</td>
<td>LAMPCOUNTER</td>
<td>Lamp ON time inquiry</td>
</tr>
<tr>
<td>39</td>
<td>LMPWRN</td>
<td>Lamp warning indication at startup</td>
</tr>
<tr>
<td>40</td>
<td>MAIN</td>
<td>Side control operation emulation</td>
</tr>
<tr>
<td>41</td>
<td>MEMCADJ</td>
<td>Memory color adjustment</td>
</tr>
<tr>
<td>42</td>
<td>MODE</td>
<td>Control mode switch</td>
</tr>
<tr>
<td>43</td>
<td>MUTE</td>
<td>Mute control</td>
</tr>
<tr>
<td>44</td>
<td>NR</td>
<td>Noise reduction</td>
</tr>
<tr>
<td>45</td>
<td>POWER</td>
<td>This controls the power supply</td>
</tr>
<tr>
<td>46</td>
<td>PRODCODE</td>
<td>Product information inquiry</td>
</tr>
<tr>
<td>47</td>
<td>RC</td>
<td>Remote control operation emulate</td>
</tr>
<tr>
<td>48</td>
<td>RGBGAIN</td>
<td>RGB gain adjustment</td>
</tr>
<tr>
<td>49</td>
<td>RGBOFFSET</td>
<td>RGB offset adjustment</td>
</tr>
<tr>
<td>50</td>
<td>ROMVER</td>
<td>ROM version inquiry</td>
</tr>
<tr>
<td>51</td>
<td>SAT</td>
<td>Color saturation setting</td>
</tr>
<tr>
<td>52</td>
<td>SAVEIMGPROF</td>
<td>Create user memory</td>
</tr>
<tr>
<td>53</td>
<td>SCRNASPECT</td>
<td>Screen aspect setting</td>
</tr>
<tr>
<td>54</td>
<td>SEL</td>
<td>Input signal selection</td>
</tr>
<tr>
<td>55</td>
<td>SHARP</td>
<td>Sharpness setting</td>
</tr>
<tr>
<td>56</td>
<td>SIGNAL_INFO</td>
<td>Input signal information inquiry</td>
</tr>
<tr>
<td>57</td>
<td>SIGNALSTATUS</td>
<td>Signal status inquiry</td>
</tr>
<tr>
<td>58</td>
<td>TEMP</td>
<td>Temperature sensor value inquiry</td>
</tr>
<tr>
<td>59</td>
<td>TPTN</td>
<td>Test pattern</td>
</tr>
</tbody>
</table>
### 6. Details of Commands

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).

<table>
<thead>
<tr>
<th>Power*1</th>
<th>Input</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFF</td>
<td>ON</td>
</tr>
<tr>
<td>*2</td>
<td>*3</td>
</tr>
</tbody>
</table>

*1 Power Executable regardless of power supply state when marked by "-".
*2 OFF  "O" if enabled in a power OFF state.
*3 ON   "O" if enabled in a power ON state.
*4 PM   "O" if enabled while the power management state is in standby state.
*5 Input The command is enabled in states marked by "O".
       The command is executable regardless of input when marked by "-".

#### Response
This describes the command response.

#### Description
This includes the command function, conditions, and notes.

#### Example
This provides command usage examples.
**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**

<table>
<thead>
<tr>
<th>Power</th>
<th>Input</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFF</td>
<td>PM</td>
</tr>
<tr>
<td></td>
<td>D-RGB</td>
</tr>
<tr>
<td></td>
<td>A-RGB</td>
</tr>
<tr>
<td></td>
<td>COMP</td>
</tr>
<tr>
<td></td>
<td>HDMI</td>
</tr>
<tr>
<td></td>
<td>None</td>
</tr>
</tbody>
</table>

**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 "<".*
6AXR-Y

6-axis correction R-Y hue / saturation settings

**Format**

6AXR=<R hue:Number> \[<R saturation:Number> \[<R brightness:Number>]
6AXG=<G hue:Number> \[<G saturation:Number> \[<G brightness:Number>]
6AXB=<B hue:Number> \[<B saturation:Number> \[<B brightness:Number>]
6AXC=<C hue:Number> \[<C saturation:Number> \[<C brightness:Number>]
6AXM=<M hue:Number> \[<M saturation:Number> \[<M brightness:Number>]
6AXY=<Y hue:Number> \[<Y saturation:Number> \[<Y brightness: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.
Setting values for <R/G/B/C/M/Y brightness:Number> are -20 to 20.

**Environment**

<table>
<thead>
<tr>
<th>Power</th>
<th>Input</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFF</td>
<td>ON</td>
</tr>
<tr>
<td>PM</td>
<td>D-RGB</td>
</tr>
<tr>
<td>A-RGB</td>
<td>COMP</td>
</tr>
<tr>
<td>HDMI</td>
<td>None</td>
</tr>
</tbody>
</table>

**Response**

"i:OK" is returned if the parameter was set properly.
For 'GET 6AX*', or '?6AX*', current 6-axis correction R-Y hue/saturation/brightness settings are returned as

'g:6AX*=<*hue: Number>,<*saturation:Number>,<*brightness: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, 3
< i:OK

**Reference**

> GET 6AXR or ?6AXR
< g:6AXR=12, -8, 4

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

---

**Note:**

- 15 -
**AMBADJ**

Ambient light correction adjustment ON / OFF

### Format

```
AMBADJ=<Ambient light correction adjustment parameter:ID>
GET AMBADJ / ? AMBADJ
```

### <Ambient light correction adjustment parameter:ID>

- **ON**: This sets the ambient light correction adjustment to ON.
- **OFF**: This sets the ambient light correction adjustment to OFF.

### Environment

<table>
<thead>
<tr>
<th>Power</th>
<th>Input</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFF</td>
<td>ON</td>
</tr>
<tr>
<td>PM</td>
<td>D-RGB</td>
</tr>
<tr>
<td>A-RGB</td>
<td>COMP</td>
</tr>
<tr>
<td>HDMI</td>
<td>None</td>
</tr>
<tr>
<td>X</td>
<td>O</td>
</tr>
<tr>
<td>X</td>
<td>-</td>
</tr>
</tbody>
</table>

### Response

"i:OK" is returned if ON / OFF of ambient light correction adjustment was set properly.

For 'GET AMBADJ' or '?AMBADJ', current ambient light correction adjustment setting is returned as

```
g:AMBADJ=<Ambient light correction 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 ambient light correction adjustment.
2. This command functions in the same way as when "Image adjustment" - "Advanced adjustment" - "Ambient light" are selected on the menu.
3. In the case of "Ambient light correction adjustment" to OK, set the level using AMB_LEVEL of "Ambient light level" command, and set the type using AMB_TYPE of "Ambient light type" command.
4. This sets the currently selected input signal and image mode.
5. The current ambient light correction adjustment setting can be obtained using the GET command. ("GET AMBADJ")

### Example

**Control**

```
> AMBADJ=ON
< i:OK
```

**Reference**

```
> GET AMBADJ or ?AMBADJ
< g:AMBADJ=ON
```

* Commands are indicated by ">", and responses are indicated by "<".
AMBLEVEL
Ambient light level settings

Format

AMBLEVEL=<Ambient light level settings parameter:ID>
GET AMBLEVEL / ? AMBLEVEL

<Ambient light level settings parameter:ID>
WEAK This sets the ambient light level to WEAK.
MIDDLE This sets the ambient light level to MIDDLE.
STRONG This sets the ambient light level to STRONG.

Environment

<table>
<thead>
<tr>
<th>Power</th>
<th>Input</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFF</td>
<td>ON</td>
</tr>
<tr>
<td>X</td>
<td>O</td>
</tr>
</tbody>
</table>

Response

"i:OK" is returned if ambient light level was set properly.
For 'GET AMBLEVEL' or '?AMBLEVEL', current ambient light level is returned as
'g:AMBLEVEL=<ambient light level settings parameter:ID>'
For details on other responses, refer to the "Error List".

Description

(1) This sets the ambient light level.
(2) This command functions in the same way as when "Image adjustment" - "Advanced adjustment" - "Ambient light" - "Level" are selected on the menu.
(3) This sets the currently selected input signal and image mode.
(4) The current ambient light level setting can be obtained using the GET command. ("GET AMBLEVEL")

Example

Setting

> AMBLEVEL=MIDDLE This sets the ambient light level to MIDDLE.
< i:OK

Reference

> GET AMBLEVEL or ?AMBLEVEL This retrieves the ambient light level.
< g:AMBLEVEL=MIDDLE

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

Ambient light type settings

**Format**

```
AMBTYP=<Ambient light type settings parameter:ID>
GET() AMBTYP / ? AMBTYP

<Ambient light type settings parameter:ID>

TG  This sets the ambient light type to Tungsten.
FL  This sets the ambient light type to Fluorescent.
FL_H This sets the ambient light type to Fluorescent H.
```

**Environment**

<table>
<thead>
<tr>
<th>Power</th>
<th>Input</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFF</td>
<td>ON</td>
</tr>
<tr>
<td>X</td>
<td>O</td>
</tr>
</tbody>
</table>

**Response**

"i:OK" is returned if ambient light type was set properly.
For 'GET AMBTYP' or '?AMBTYP', current ambient light type is returned as
'g:AMBTYP=<Ambient light type settings parameter:ID>'
For details on other responses, refer to the "Error List".

**Description**

1. This sets the ambient light type.
2. This command functions in the same way as when "Image adjustment" - "Advanced adjustment" - "Ambient light" - "Type" are selected on the menu.
3. This sets the currently selected input signal and image mode.
4. The current ambient light type setting can be obtained using the GET command. ("GET AMBTYP")

**Example**

Setting

```
> AMBTYP=FL
< i:OK
```

Reference

```
> GET AMBTYP or ?AMBTYP
< g:AMBTYP=FL
```

* Commands are indicated by ">", and responses are indicated by "<".
ASELA1
Analog PC-1 audio terminal selection

Format
ASELA1=<Analog PC-1 audio terminal selection: ID>
GET ASELA1 / ?ASELA1

<Analog PC-1 Audio terminal selection parameter: ID>
1 Audio In 1
2 Audio In 2
OFF Turned off

Environment

<table>
<thead>
<tr>
<th>Power</th>
<th>Input</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFF</td>
<td>X</td>
</tr>
<tr>
<td>ON</td>
<td>O</td>
</tr>
<tr>
<td>PM</td>
<td>X</td>
</tr>
<tr>
<td>D-RGB</td>
<td>-</td>
</tr>
<tr>
<td>A-RGB</td>
<td>-</td>
</tr>
<tr>
<td>COMP</td>
<td>-</td>
</tr>
<tr>
<td>HDMI</td>
<td>-</td>
</tr>
<tr>
<td>None</td>
<td>-</td>
</tr>
</tbody>
</table>

Response
"i:OK" is returned when audio selection was successfully completed.
For 'GET ASELA1' or '?ASELA1', current Analog PC-1 audio selection is returned as
'g:ASELA1=<Analog PC-1 audio terminal selection parameter: ID>
For details on other responses, refer to the "Error List".

Description
(1) This command is used to select Analog PC-1 audio terminal.
(2) This command functions in the same way as when "System setting" - "Audio terminal selection" - "Analog PC-1" are selected on the menu.
(3) The current Analog PC-1 audio terminal selection setting can be obtained using the GET command. ("GET ASELA1")
(4) Analog PC-1 Audio terminal selection retains the last setting after the power is turned off.

Example
Setting
> ASELA1=1 Audio IN1 is set for Analog PC-1 audio terminal selection.
< i:OK

Reference
> GET ASELA1 or ?ASELA1 Analog PC-1 audio terminal selection is acquired.
< g:ASELA1=1

*Commands are indicated by ">", and responses are indicated by "<".
**ASELA2**

**Analog PC-2 Audio terminal selection**

<table>
<thead>
<tr>
<th>Format</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASEL2=&lt;Analog PC-2 audio terminal selection: ID&gt;</td>
</tr>
<tr>
<td>GET&lt;</td>
</tr>
</tbody>
</table>

**<Analog PC-2 audio terminal selection: ID>**

- 2 Audio In 2
- 2 Audio In 2
- OFF Turned off

**Environment**

<table>
<thead>
<tr>
<th>Power</th>
<th>Input</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFF</td>
<td>ON</td>
</tr>
<tr>
<td>X</td>
<td>O</td>
</tr>
</tbody>
</table>

**Response**

"i:OK" is returned when audio selection was successfully completed.
For 'GET ASEL2' or '?ASELA2', current Analog PC-2 audio selection is returned as
'g:ASELA2=<Analog PC-2 audio terminal selection parameter: ID>'
For details on other responses, refer to the "Error List".

**Description**

1. This command is used to select Analog PC-2 audio terminal.
2. This command functions in the same way as when "System setting" - "Audio terminal selection" - "Analog PC-2" are selected on the menu.
3. The current Analog PC-2 audio terminal selection setting can be obtained using the GET command. ("GET ASEL2")
4. Analog PC-2 Audio terminal selection retains the last setting after the power is turned off.

**Example**

**Setting**

- > ASEL2=2
  - Audio IN2 is set for Analog PC-2 audio terminal selection.
  - < i:OK

**Reference**

- > GET ASEL2 or ?ASELA2
  - Analog PC-2 Audio terminal selection is acquired.
- < g:ASELA2=2

*Commands are indicated by ">", and responses are indicated by "<".*
ASELC
Component audio terminal selection

Format

```
ASELC=<Component audio terminal selection parameter: ID>
GET ASELC / ?ASELC

<Component audio terminal selection parameter: ID>
1    Audio In 1
2    Audio In 2
OFF  Turned off
```

Environment

<table>
<thead>
<tr>
<th>Power</th>
<th>Input</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFF</td>
<td>X</td>
</tr>
<tr>
<td>ON</td>
<td>O</td>
</tr>
<tr>
<td>PM</td>
<td>X</td>
</tr>
<tr>
<td>D-RGB</td>
<td>-</td>
</tr>
<tr>
<td>A-RGB</td>
<td>-</td>
</tr>
<tr>
<td>COMP</td>
<td>-</td>
</tr>
<tr>
<td>HDMI</td>
<td>-</td>
</tr>
<tr>
<td>None</td>
<td>-</td>
</tr>
</tbody>
</table>

Response

"i:OK" is returned when audio terminal selection was completed successfully.
For 'GET ASELC' or '?ASELC', current component audio selection is returned as
'g:ASELC=<Component audio terminal selection parameter: ID >'
For details on other responses, refer to the "Error List".

Description

(1) This command is used to select Component audio terminal.
(2) This command is same as the operations of "System setting" - "Audio terminal selection" - "Component".
(3) The current Component audio terminal selection setting can be obtained using the GET command. ("GET ASELC")
(4) Component audio terminal selection retain the last setting after the power is turned off.

Example

Setting
```
> ASELC=1
Audio IN 1 is set for Component audio terminal selection.
< i:OK
```

Reference

```
> GET ASELC or ?ASELC
Component audio terminal selection is acquired.
< g:ASELC=1
```

*Commands are indicated by ", and responses are indicated by "."
ASELD
Digital PC audio terminal selection

Format

ASELD=<Digital PC audio terminal selection parameter: ID>
GET ASELD / ?ASELD

<Digital PC audio terminal selection parameter: ID>
1 Audio In 1
2 Audio In 2
OFF Turned off

Environment

<table>
<thead>
<tr>
<th>Power</th>
<th>Input</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFF</td>
<td>X</td>
</tr>
<tr>
<td>ON</td>
<td>O</td>
</tr>
<tr>
<td>PM</td>
<td>X</td>
</tr>
<tr>
<td>D-RGB</td>
<td></td>
</tr>
<tr>
<td>A-RGB</td>
<td></td>
</tr>
<tr>
<td>COMP</td>
<td></td>
</tr>
<tr>
<td>HDMI</td>
<td></td>
</tr>
<tr>
<td>None</td>
<td></td>
</tr>
</tbody>
</table>

Response

"i:OK" is returned when audio terminal selection was completed successfully.
For 'GET ASELD' or '?ASELD', current Digital PC audio selection is returned as
'g:ASELD=<Digital PC audio terminal selection parameter: ID>'
For details on other responses, refer to the "Error List".

Description

(1) This command is used to select Digital PC audio terminal.
(2) This command is same as the operations of .This command functions in the same way as when
"System setting" - "Audio terminal selection" - "Digital PC" are selected on the menu.
(3) The current Digital PC audio terminal selection setting can be obtained using the GET
command. ("GET ASELD")
(4) Digital PC audio terminal selection retains the last setting after the power is turned off.

Example

Setting

> ASELD=1 Audio IN1 is set for Digital PC audio terminal selection.
< i:OK

Reference

> GET ASELD or ?ASELD Digital PC audio terminal selection is acquired.
< g:ASELD=1

*Commands are indicated by ">", and responses are indicated by "<".
ASELH
HDMI audio terminal selection

Format
ASELH=<HDMI audio terminal selection parameter: ID>
GET ASELH / ?ASELH

<HDMI audio terminal selection parameter: ID>
H HDMI audio
1 Audio In 1
2 Audio In 2
OFF Turned off

Environment

<table>
<thead>
<tr>
<th>Power</th>
<th>Input</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFF</td>
<td>D-RGB A-RGB COMP HDMI None</td>
</tr>
<tr>
<td>ON</td>
<td>X     O     X     -</td>
</tr>
<tr>
<td>PM</td>
<td></td>
</tr>
</tbody>
</table>

Response
"i:OK" is returned when audio terminal selection was completed successfully.
For 'GET ASELH' or '?ASELH', current HDMI audio terminal selection is returned as 'g:ASELH=<HDMI audio terminal selection parameter: ID>'.
For details on other responses, refer to the "Error List".

Description
(1) This command is used to select HDMI audio terminal.
(2) This command functions in the same way as when "System setting" - "Audio terminal selection" - "HDMI" are selected on the menu.
(3) The current HDMI audio terminal selection setting can be obtained using the GET command. ('GET ASELH')
(4) HDMI audio terminal selection retains the last setting after the power is turned off.

Example
Setting
> ASELH=H
< i:OK

Reference
> GET ASELH or ?ASELH
< g:ASELH=H

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

**Screen settings**

<table>
<thead>
<tr>
<th>Format</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASPECT=&lt;Screen setting parameters: ID&gt;</td>
</tr>
<tr>
<td>GET[]ASPECT / ?ASPECT</td>
</tr>
</tbody>
</table>

<Screen setting parameters:ID>

- AUTO Auto
- 4:3 4:3
- 16:9 16:9
- 16:10 16:10
- ZOOM Zoom
- TRUE Real

**Environment**

<table>
<thead>
<tr>
<th>Power</th>
<th>Parameter</th>
<th>D-RGB</th>
<th>A-RGB</th>
<th>COMP</th>
<th>HDMI</th>
<th>None</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFF</td>
<td>AUTO</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>ON</td>
<td>4:3</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>PM</td>
<td>16:9</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td></td>
<td>16:10</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td></td>
<td>ZOOM</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td></td>
<td>TRUE</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

*1 Enabled when "HDMI input" setting is PC or "HDMI input" is auto and the input signal is PC system.
*2 Depend on Input setting. Enabled when "HDMI input" setting is PC.
*3 Enabled when "HDMI input" is auto and the input signal is video system.
*4 Depend on Input setting. Enabled when "HDMI input" setting is auto.
*5 Enabled when the input signal resolution is smaller than the screen aspect domain resolution.

**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" - "Aspects" 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")
Example
Setting
> ASPECT=16:9
< i:OK

Reference
> GET ASPECT or ?ASPECT
< g:ASPECT=TRUE

This sets the screen size to 16:9.
This retrieves the screen size.

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

**Auto PC**

**Format**

```
AUTOPC
```

**Environment**

<table>
<thead>
<tr>
<th>Power</th>
<th>Input</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFF</td>
<td>X</td>
</tr>
<tr>
<td>ON</td>
<td>O</td>
</tr>
<tr>
<td>PM</td>
<td>X</td>
</tr>
<tr>
<td>D-RGB</td>
<td>O</td>
</tr>
<tr>
<td>A-RGB</td>
<td>X</td>
</tr>
<tr>
<td>COMP</td>
<td>X</td>
</tr>
<tr>
<td>HDMI</td>
<td>X</td>
</tr>
<tr>
<td>None</td>
<td>X</td>
</tr>
</tbody>
</table>

**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 not "A-RGB1" or "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

**Example**

```
> AUTOPC
< i:OK
```

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

Auto setup

Format
AUTOSETEXE <Auto set parameter:ID>

<Auto set parameter:ID>
- INPUT Automatic signal sensing execution

Environment

<table>
<thead>
<tr>
<th>Power</th>
<th>Input</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFF</td>
<td>X</td>
</tr>
<tr>
<td>ON</td>
<td>O</td>
</tr>
<tr>
<td>PM</td>
<td>X</td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>Projector settings</th>
<th>Type</th>
<th>Error response</th>
</tr>
</thead>
<tbody>
<tr>
<td>set to BLANK</td>
<td></td>
<td>‘e:1006 NOW_BLANK’</td>
</tr>
<tr>
<td>set to FREEZE</td>
<td></td>
<td>‘e:1009 NOW_FREEZE’</td>
</tr>
<tr>
<td>set to D.ZOOM</td>
<td></td>
<td>‘e:100A NOW_D.ZOOM’</td>
</tr>
<tr>
<td>set to DIS</td>
<td></td>
<td>‘e:1008 INVALID_SCREEN_ASPECT’</td>
</tr>
</tbody>
</table>

3. If the input signal cannot be detected using the automatic signal sensing, ‘i:INPUT_NOT_FOUND’ is returned.

Example

Setting

> AUTOSETEXE INPUT Automatic signal sensing is executed.
< i:OK

* Commands are indicated by ‘>’, and responses are indicated by ‘<’. 
**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**

<table>
<thead>
<tr>
<th>Power</th>
<th>D-RGB</th>
<th>A-RGB</th>
<th>COMP</th>
<th>HDMI</th>
<th>None</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFF X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>ON O</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PM</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>X O X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**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 side control.
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
< i:OK
```

This sets the volume to 18.

**Reference**

```
>GET AVOL or ?AVOL
< AVOL=18
```

This retrieves the volume.

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

Format

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

<BLANK parameter:ID>
ON BLANK ON
OFF BLANK OFF

Environment

<table>
<thead>
<tr>
<th>Power</th>
<th>Input</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFF</td>
<td>ON</td>
</tr>
<tr>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

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 "BLANK" button on the remote control.
(3) Executing this command in a FREEZE status will cancel the FREEZE status and become BLANK.
(4) The current BLANK settings can be obtained using the GET command. ("GET BLANK")

Example

Setting

> BLANK=ON
<i:OK

Set to "User" screen when screen is BLANK.

Reference

> GET BLANK or ?BLANK
<:g:BLANK=ON

The current BLANK status is referenced.

* 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.

<table>
<thead>
<tr>
<th>Environment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Power</strong></td>
</tr>
<tr>
<td>OFF</td>
</tr>
<tr>
<td>X</td>
</tr>
</tbody>
</table>

**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
< i:OK
```

**Reference**

```
> GET BRI or ?BRI
< g:BRI=-10
```

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

Color temperature setting

**Format**

```
COLOR_TEMP=<Color temperature setting:Number>
GET[]COLOR_TEMP   /   ?COLOR_TEMP
```

Setting values for `<Color temperature setting:Number>` are -17 to 21.

**Environment**

<table>
<thead>
<tr>
<th>Power</th>
<th>Input</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFF</td>
<td>D-RGB</td>
</tr>
<tr>
<td>X</td>
<td>O</td>
</tr>
</tbody>
</table>

**Response**

"i:OK" is returned if color temperature was set properly.
For 'GET COLOR_TEMP' or '?COLOR_TEMP', current color temperature setting is returned as
`g:COLOR_TEMP=<Color temperature setting:Number>`
For details on other responses, refer to the "Error List".

**Description**

1. This sets the color temperature of the screen.
2. This command functions in the same way as when "Image adjustment" - "Color adjustment" - "Color temperature" 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 color temperature can be obtained using the GET command. ("GET COLOR_TEMP")

**Example**

**Setting**

```
> COLOR_TEMP=3
< i:OK
```

This sets the color temperature to +3.

**Reference**

```
> GET COLOR_TEMP or ?COLOR_TEMP
< g:COLOR_TEMP=1
```

This obtains the color temperature.

* Commands are indicated by ">", and responses are indicated by "<".
COMVER
User command version inquiry

Format
GET COMVER /  ? COMVER

Environment

<table>
<thead>
<tr>
<th>Power</th>
<th>Input</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFF</td>
<td>-</td>
</tr>
<tr>
<td>ON</td>
<td>D-RGB</td>
</tr>
<tr>
<td>PM</td>
<td>A-RGB</td>
</tr>
<tr>
<td>PM</td>
<td>COMP</td>
</tr>
<tr>
<td>PM</td>
<td>HDMI</td>
</tr>
<tr>
<td>PM</td>
<td>None</td>
</tr>
</tbody>
</table>

Response
Returns the user command version as

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

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

<User command version>=99.9999

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 "<".
**CONT**

Contrast setting

### Format

```
CONT=<Contrast setting:Number>
GET[] CONT /  ?[] CONT
```

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

### Environment

<table>
<thead>
<tr>
<th>Power</th>
<th>Input</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFF</td>
<td>D-RGB</td>
</tr>
<tr>
<td>ON</td>
<td>A-RGB</td>
</tr>
<tr>
<td>PM</td>
<td>COMP</td>
</tr>
<tr>
<td>X</td>
<td>HDMI</td>
</tr>
<tr>
<td>O</td>
<td>None</td>
</tr>
</tbody>
</table>

### 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
< i:OK
```

This sets the contrast to +3.

**Reference**

```
> GET CONT or ?CONT
< g:CONT=3
```

This retrieves the contrast.

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

Dynamic gamma

**Format**

```
DGAMMA=<Dynamic gamma setting parameter:ID>
GET DGAMMA / ?DGAMMA
```

```
<Dynamic gamma setting parameter:ID>
OFF Off
WEAK Weak
MIDDLE Middle
STRONG Strong
```

**Environment**

<table>
<thead>
<tr>
<th>Power</th>
<th>Input</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFF</td>
<td>X</td>
</tr>
<tr>
<td>ON</td>
<td>O</td>
</tr>
<tr>
<td>PM</td>
<td></td>
</tr>
<tr>
<td>D-RGB</td>
<td></td>
</tr>
<tr>
<td>A-RGB</td>
<td></td>
</tr>
<tr>
<td>COMP</td>
<td></td>
</tr>
<tr>
<td>HDMI</td>
<td></td>
</tr>
<tr>
<td>None</td>
<td></td>
</tr>
</tbody>
</table>

**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.
< i:OK

**Reference**

> GET DGAMMA or ?DGAMMA     This retrieves the dynamic gamma function state.
< g:DGAMMA=WEAK

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

**DZOOM position setting**

**Format**

```
DZOOM_POS=<DZOOM position X:Number>,<DZOOM position Y:Number>
GET DZOOM_POS / ? DZOOM_POS
```

<DZOOM position X/Y:Number> is a signed integer indicating the central position of the enlarged input image.

**Environment**

<table>
<thead>
<tr>
<th>Power</th>
<th>Input</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFF</td>
<td>ON</td>
</tr>
<tr>
<td>X</td>
<td>O</td>
</tr>
</tbody>
</table>

**Response**

"i:OK" is returned when the DZOOM position setting was completed successfully.

For 'GET DZOOM_POS' or '?DZOOM_POS', the current DZOOM position is returned as

```
g:DZOOM_POS=<DZOOM position X:Number>,<DZOOM position Y:Number>
```

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

**Description**

1. This command is used to set the DZOOM position (center position of the displayed enlarged input image).
2. This command is identical to pressing the arrow keys to move while DZOOM is enabled, however, the position can be specified in more detail.
3. If a position outside the range is specified, the position is automatically moved to the nearest position within the range.
4. 0 for <DZOOM position X/Y:Number> indicates the center position of the input image.
5. Positive direction for <DZOOM position X/Y:Number> corresponds to RIGHT and UP keys, and negative direction corresponds to LEFT and DOWN keys.
6. The numerical value for <DZOOM position X/Y:Number> represents units in pixels of the input image.
   * For example, in a case where an input image of XGA (1024 x 768) size is enlarged twice the size (range of 512 x 384 is displayed), up to ±256 for <DZOOM position X:Number>, and up to ±192 for <DZOOM position Y:Number> can be specified.

**Example**

**Control**

```
> DZOOM_POS=100,200
< i:OK
```

**Reference**

```
> GET DZOOM_POS or ?DZOOM_POS 
< g:DZOOM_POS=100,200
```

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

**DZOOM ratio setting**

**Format**

```
DZOOM_RAT=<DZOOM ratio parameter:ID>
GET DZOOM_RAT / ? DZOOM_RAT
```

<**DZOOM ratio parameter:ID**>

- 1   same size (DZOOM disabled)
- 1.5 1.5x
- 2   2x
- 3   3x
- 4   4x
- 5   5x
- 6   6x
- 8   8x
- 10  10x
- 12  12x

**Environment**

<table>
<thead>
<tr>
<th>Power</th>
<th>Input</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFF</td>
<td>X</td>
</tr>
<tr>
<td>ON</td>
<td>O</td>
</tr>
<tr>
<td>PM</td>
<td>X</td>
</tr>
<tr>
<td>D-RGB</td>
<td>O</td>
</tr>
<tr>
<td>A-RGB</td>
<td>O</td>
</tr>
<tr>
<td>COMP</td>
<td>O</td>
</tr>
<tr>
<td>HDMI</td>
<td>O</td>
</tr>
<tr>
<td>None</td>
<td>X</td>
</tr>
</tbody>
</table>

**Response**

"i:OK" is returned if DZOOM ratio was set properly.

For 'GET DZOOM_RAT' or '?DZOOM_RAT', current DZOOM ratio is returned as

`g:DZOOM_RAT=<DZOOM ratio parameter:Number>`

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

**Description**

1. This sets the DZOOM ratio.
2. This command is identical to pressing the "DZOOM +" and "DZOOM -" button to set the desired ratio.
3. The SET command can be used when DZOOM is disabled and set to other than "1", to enable DZOOM and display the ratio on the screen.
4. The SET command can be used when DZOOM is enabled and set to "1", to disable DZOOM and hide the ratio from the screen.
5. The GET command can be used to obtain current DZOOM ratio. ("GET DZOOM_RAT")

**Example**

**Control**

```
> DZOOM_RAT=12
< i:OK
```

**Reference**

```
> GET DZOOM_RAT or ?DZOOM_RAT
< g:DZOOM_RAT=12
```

* Commands are indicated by ">"., and responses are indicated by "<".
ERR
Error information inquiry

Format

```
GET  ERR   /   ?  ERR
```

Environment

<table>
<thead>
<tr>
<th>Power</th>
<th>Input</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFF</td>
<td>ON</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Response

Returns the current error information as

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

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

<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
- **FAULTY_AIR_FILTER**  Air filter error
- **FAULTY_POWER_ZOOM**  Zoom error
- **FAULTY_POWER_FOCUS**  Focus error
- **FAULTY_POWER_LENS_SHIFT**  Lens shift error
- **FAULTY_LENS_CONNECTOR**  Lens connector error

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
```

* Commands are indicated by ">", and responses are indicated by "<".
细调 (R) 伽玛调整

### 格式

```
FINE_GAMMA_R=<细调 (R) 调整点 1 调整值:Number>,
<Fine gamma (R) adjustment point 2 adjustment value:Number>,
...,<Fine gamma (R) adjustment point n adjustment value:Number>
```

### 获取

```
GET[] FINE_GAMMA_R   /   ?[] FINE_GAMMA_R
```

### 调整点

调整值对于 `<Fine gamma (R) adjustment point n adjustment value:Number>` 是 0 到 1024。

### 环境

<table>
<thead>
<tr>
<th>功率</th>
<th>输入</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFF</td>
<td>D-RGB</td>
</tr>
<tr>
<td>ON</td>
<td>X</td>
</tr>
</tbody>
</table>

### 响应

"i:OK" 表示细调 (R) 调整设置正确。

对于 GET FINE_GAMMA_R 或 ?FINE_GAMMA_R，当前的细调 (R) 调整值返回为

```
g:FINE_GAMMA_R=<调整点的数量:Number>,<Fine gamma (R) adjustment point 1
 adjustment value:Number>,<Fine gamma (R) adjustment point 2
 adjustment value:Number>,
...,<Fine gamma (R) adjustment point n adjustment value:Number>
```

### 描述

1. 这执行了细调 (R) 调整。
2. 这个命令在菜单上选择 "图像调整" - "高级调整" - "细调伽玛调整" 时以相同方式工作。
3. 如果数值参数超出范围，"e:0801 INVALID_VALUE" 被返回。
4. 这设置当前选择的输入信号和图像模式。
5. 当前的细调伽玛设置可以使用相应的 GET 命令获取。("GET FINE_GAMMA_R")

### 示例

设置

```
> FINE_GAMMA_R=0,128,256,384,512,640,768,896,1024
```

这执行了细调 (R) 调整。

```
<i:OK
```

### 参考

```
> GET FINE_GAMMA_R or ?FINE_GAMMA_R
```

这检索细调 (R) 调整值。

```
<g:FINE_GAMMA_R=9:0,128,256,384,512,640,768,896,1024
```

* 命令由 ">" 标明，响应由 "<" 标明。
FINE_GAMMA_G

Fine gamma (G) adjustment

Format

FINE_GAMMA_G=<Fine gamma (G) adjustment point 1 adjustment value:Number>,
  <Fine gamma (G) adjustment point 2 adjustment value:Number>,
  ..., <Fine gamma (G) adjustment point n adjustment value:Number>

GET [] FINE_GAMMA_G / ? [] FINE_GAMMA_G

Adjustment values for <Fine gamma (G) adjustment point n adjustment value:Number> are 0 to 1024.

Environment

<table>
<thead>
<tr>
<th>Power</th>
<th>Input</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFF</td>
<td>D-RGB</td>
</tr>
<tr>
<td>ON</td>
<td>A-RGB</td>
</tr>
<tr>
<td>PM</td>
<td>COMP</td>
</tr>
<tr>
<td>X</td>
<td>HDMI</td>
</tr>
<tr>
<td>O</td>
<td>None</td>
</tr>
<tr>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

Response

"i:OK" is returned if the fine gamma (G) adjustment was set properly.
For 'GET FINE_GAMMA_G' or '?FINE_GAMMA_G', current fine gamma (G) adjustment value is returned as

'g:FINE_GAMMA_G=<Number of adjustment points>:<Fine gamma (G) adjustment point 1 adjustment value:Number>, <Fine gamma (G) adjustment point 2 adjustment value:Number>,
  ..., <Fine gamma (G) adjustment point n adjustment value:Number>

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

Description

(1) This executes the fine gamma (G) adjustment.
(2) This command functions in the same way as when "Image adjustment" - "Advanced adjustment" - "Fine 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 fine gamma setting can be acquired using the applicable GET command. ("GET FINE_GAMMA_G")

Example

Setting

> FINE_GAMMA_G=0,128,256,384,512,640,768,896,1024
  This executes the fine gamma (G) adjustment.

< i:OK

Reference

> GET FINE_GAMMA_G or ?FINE_GAMMA_G
  This retrieves the fine gamma (G) adjustment value.

< g:FINE_GAMMA_G=9:0,128,256,384,512,640,768,896,1024

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

Fine gamma (B) adjustment

Format
FINE_GAMMA_B=<Fine gamma (B) adjustment point 1 adjustment value:Number>,
   <Fine gamma (B) adjustment point 2 adjustment value:Number>,
   ...<Fine gamma (B) adjustment point n adjustment value:Number>
GET FINE_GAMMA_B / ? FINE_GAMMA_B

Adjustment values for <Fine gamma (B) adjustment point n adjustment value:Number> are 0 to 1024.

Environment

<table>
<thead>
<tr>
<th>Power</th>
<th>Input</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFF</td>
<td>D-RGB</td>
</tr>
<tr>
<td>ON</td>
<td>A-RGB</td>
</tr>
<tr>
<td>PM</td>
<td>COMP</td>
</tr>
<tr>
<td>X</td>
<td>HDMI</td>
</tr>
<tr>
<td>O</td>
<td>None</td>
</tr>
</tbody>
</table>

Response
"i:OK" is returned if the fine gamma (B) adjustment was set properly.
For 'GET FINE_GAMMA_B' or '?FINE_GAMMA_B', current fine gamma (B) adjustment value is returned as:
g:FINE_GAMMA_B=<Number of adjustment points>:<Fine gamma (B) adjustment point 1 adjustment value:Number>,
   <Fine gamma (B) adjustment point 2 adjustment value:Number>,
   ...<Fine gamma (B) adjustment point n adjustment value:Number>

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

Description
(1) This executes the fine gamma (B) adjustment.
(2) This command functions in the same way as when "Image adjustment" - "Advanced adjustment" - "Fine 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 fine gamma setting can be acquired using the applicable GET command. ("GET FINE_GAMMA_B")

Example
Setting
> FINE_GAMMA_B=0,128,256,384,512,640,768,896,1024
   This executes the fine gamma (B) adjustment.
   <i:OK

Reference
> GET FINE_GAMMA_B or ?FINE_GAMMA_B
   This retrieves the fine gamma (B) adjustment value.
   < g:FINE_GAMMA_B=9:0,128,256,384,512,640,768,896,1024

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

Filter warning indication at startup

### Format

```
FLTWRN=<Filter warning parameter: ID>
GET FLTWRN / ?FLTWRN
```

<Filter warning parameter: ID>

- OFF: Turned off
- ON: Turned on

### Environment

<table>
<thead>
<tr>
<th>Power</th>
<th>Input</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFF</td>
<td>PM</td>
</tr>
<tr>
<td>ON</td>
<td>X</td>
</tr>
</tbody>
</table>

### Response

"i:OK" is returned when setting of filter warning indication at startup was completed successfully.

For 'GET FLTWRN' or '?FLTWRN', current setting of filter warning indication at startup is returned as

```
g:FLTWRN=<Filter warning parameter: ID>
```

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

### Description

1. This command is used to set the indication of filter warning at startup.
2. This command functions in the same way as when "Installation setting" - "On screen" - "Filter warning indication" are selected on the menu.
3. The current setting of filter warning indication at startup can be obtained using the GET command. ("GET FLTWRN")
4. The setting of Filter warning indication at startup retains the last setting after the power is turned off.

### Example

**Setting**

```
> FLTWRN=OFF
< i:OK
```

**Reference**

```
> GET FLTWRN or ?FLTWRN
< g:FLTWRN
```

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

Freeze status

<table>
<thead>
<tr>
<th>Environment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Power</strong></td>
</tr>
<tr>
<td>OFF</td>
</tr>
<tr>
<td>X</td>
</tr>
</tbody>
</table>

**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

* 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

<table>
<thead>
<tr>
<th>Power</th>
<th>Input</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFF</td>
<td>D-RGB</td>
</tr>
<tr>
<td>ON</td>
<td>COMP</td>
</tr>
<tr>
<td>PM</td>
<td>HDMI</td>
</tr>
<tr>
<td>X</td>
<td>None</td>
</tr>
</tbody>
</table>

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
< i:OK

This sets the gamma correction to -1.

Reference
> GET GAMMA or ?GAMMA
< g:GAMMA=3

This retrieves the gamma adjustment.

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

HDMI input setting

Format

HDMI_IN=<HDMI input setting parameter:ID>
GET HDMI_IN / ? HDMI_IN

<HDMI input setting parameter:ID>
AUTO
Select this when connecting to an AV equipment. Image processing and menu displays are adjusted respective to the connected video equipment.

PC
Select this when connecting to a computer. Image processing and menu displays are adjusted respective to the connected computer.

Environment

<table>
<thead>
<tr>
<th>Power</th>
<th>D-RGB</th>
<th>A-RGB</th>
<th>COMP</th>
<th>HDMI</th>
<th>None</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFF</td>
<td>X</td>
<td>O</td>
<td>X</td>
<td></td>
<td>-</td>
</tr>
<tr>
<td>ON</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PM</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Response

"i:OK" is returned if HDMI input was set properly.
For 'GET HDMI_IN' or '?HDMI_IN', current HDMI input setting status is returned as
'g:HDMI_IN=<HDMI input setting parameter:ID>'
For details on other responses, refer to the "Error List".

Description

(1) This switches the HDMI input setting to [AV input] / [PC input].
(2) This command functions in the same way as when "System setting" - "HDMI input" are selected on the menu.
(3) The current HDMI input setting can be acquired using the applicable GET command. ("GET HDMI_IN").

Example

Setting

> HDMI_IN=AUTO
This sets the HDMI input to AV source.
< i:OK

Reference

> GET HDMI_IN or ?HDMI_IN This retrieves the setting status of the HDMI input setting.
< g:HDMI_IN=AUTO

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

**Format**

```
HDMI_OVSCAN=<HDMI overscan setting parameter:ID>
GET []HDMI_OVSCAN / ? []HDMI_OVSCAN
```

<HDMI overscan setting parameter:ID>

- OFF   Turns overscan to OFF
- ON    Turns overscan to ON

**Environment**

<table>
<thead>
<tr>
<th>Power</th>
<th>Input</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFF</td>
<td>ON</td>
</tr>
<tr>
<td>X</td>
<td>O</td>
</tr>
</tbody>
</table>

**Response**

"i:OK" is returned if HDMI overscan was set properly.

For 'GET HDMI_OVSCAN' or '?HDMI_OVSCAN', current HDMI overscan setting status is returned as 'g:HDMI_OVSCAN=<HDMI overscan setting parameter:ID>'

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

**Description**

1. This switches the HDMI overscan setting to [OFF] / [ON].
2. This command functions in the same way as when "Display setting" - "HDMI overscan" are selected on the menu.
3. The current HDMI overscan setting can be acquired using the applicable GET command ("GET HDMI_OVSCAN").
4. The setting is fixed to [OFF] depending on the setting status of other functions or the status of the input signal.

**Example**

**Setting**

```text
> HDMI_OVSCAN=ON
<i:OK
```

**Reference**

```text
> GET HDMI_OVSCAN or ?HDMI_OVSCAN
 This retrieves the setting status of the HDMI overscan setting.
< g:HDMI_OVSCAN=ON
```

* 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

<table>
<thead>
<tr>
<th>Power</th>
<th>Input</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFF</td>
<td>D-RGB</td>
</tr>
<tr>
<td>ON</td>
<td></td>
</tr>
<tr>
<td>PM</td>
<td></td>
</tr>
</tbody>
</table>

### 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 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 GET command can be used to retrieve the current hue. ("GET HUE")

### Example

**Setting**

```
>HUE=8
<i:OK
```

This sets the hue to +8.

**Reference**

```
>GET HUE or ?HUE
<g:HUE=1
```

This retrieves the hue.

* 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
- VIVID_PHOTO: Vivid photo
- PHOTO_SRGB: Photo/sRGB
- DCM_SIM: DICOM Sim*
- DYNAMIC: Dynamic
- VIDEO: Video
- CINEMA: Cinema
- USER_1: User 1
- USER_2: User 2
- USER_3: User 3
- USER_4: User 4
- USER_5: User 5

* Only available on DICOM models.

### Environment

<table>
<thead>
<tr>
<th>Power</th>
<th>Input</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFF</td>
<td>ON</td>
</tr>
<tr>
<td>D-RGB</td>
<td>A-RGB</td>
</tr>
<tr>
<td>X</td>
<td>O</td>
</tr>
</tbody>
</table>

### 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.

<table>
<thead>
<tr>
<th>Setting</th>
<th>Commands related to the settings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brightness</td>
<td>BRI</td>
</tr>
<tr>
<td>Contrast</td>
<td>CONT</td>
</tr>
<tr>
<td>Sharpness</td>
<td>SHARP</td>
</tr>
<tr>
<td>Gamma adjustment</td>
<td>GAMMA</td>
</tr>
<tr>
<td>Dynamic gamma</td>
<td>DGAMMA</td>
</tr>
<tr>
<td>Saturation / Hue</td>
<td>SAT / HUE</td>
</tr>
<tr>
<td>Color temperature</td>
<td>COLOR_TEMP</td>
</tr>
<tr>
<td>Ambient light / Type / Level</td>
<td>AMBADJ / AMBTYPE / AMBLEVEL</td>
</tr>
<tr>
<td>Noise reduction</td>
<td>NR</td>
</tr>
</tbody>
</table>
### Setting Commands related to the settings

<table>
<thead>
<tr>
<th>Setting</th>
<th>Commands related to the settings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dynamic gamma</td>
<td>FINE_GAMMA_R→B</td>
</tr>
<tr>
<td>Memory color adjustment</td>
<td>MEMCADJ</td>
</tr>
<tr>
<td>RGB gain / offset adjustment</td>
<td>RGBGAIN / RGBOFFSET</td>
</tr>
<tr>
<td>Lamp mode</td>
<td>LAMP</td>
</tr>
<tr>
<td>6-axis adjustment</td>
<td>6AXADJ</td>
</tr>
<tr>
<td>6-axis color correction</td>
<td>6AXR→Y</td>
</tr>
</tbody>
</table>

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

**Example**

**Setting**

```
> IMAGE=PRESENTATION
< i:OK
```

This sets the image mode to "Presentation".

**Reference**

```
> GET IMAGE or ?IMAGE
< g:IMAGE=CINEMA
```

This references the current image mode.

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

Flip display

**Format**

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

<Image flip setting parameters:ID>

- NONE  None
- CEILING  Ceiling
- REAR  Rear projection
- REAR_CEILING  Rear projection with ceiling

**Environment**

<table>
<thead>
<tr>
<th>Power</th>
<th>Input</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFF</td>
<td>D-RGB</td>
</tr>
<tr>
<td>ON</td>
<td>X</td>
</tr>
</tbody>
</table>

**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.
4. The current flip display status can be acquired using the applicable GET command. ("GET IMAGEFLIP")

**Example**

**Setting**

```
> IMAGEFLIP=REAR
```

This displays the image in a rear projection (flip vertically).

```
< i:OK
```

**Reference**

```
> GET IMAGEFLIP or ?IMAGEFLIP
```

This retrieves the flip display state.

```
< g:IMAGEFLIP=REAR_CEILING
```

* Commands are indicated by ">". and responses are indicated by "<".
INPUT
Input selection

Format

INPUT=<Input selection parameters:ID>
GET INPUT / ? INPUT

<Input selection parameters:ID>
D-RGB Digital PC
A-RGB1 Analog PC-1
A-RGB2 Analog PC-2
COMP Component
HDMI HDMI

Environment

<table>
<thead>
<tr>
<th>Power</th>
<th>Input</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFF</td>
<td>ON</td>
</tr>
<tr>
<td>X</td>
<td>O</td>
</tr>
</tbody>
</table>

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=HDMI
< i:OK

Reference
> GET INPUT or ? INPUT This retrieves the input signal.
< g:INPUT=A-RGB1

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

Format
KREP=<Key repeat parameter: ID>
GET KREP / ?KREP

<Key repeat parameter: ID>
OFF               Turned off
ON                Turned on

Environment

<table>
<thead>
<tr>
<th>Power</th>
<th>Input</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFF</td>
<td>PM</td>
</tr>
<tr>
<td>X</td>
<td>O</td>
</tr>
</tbody>
</table>

Response
"i:OK" is returned when Key repeat parameter was completed successfully.
For 'GET KREP' or '?'KREP', current Key repeat setting is returned as
  'g:KREP=<Key repeat parameter: ID>'
For details on other responses, refer to the "Error List".

Description
(1) This command is used to set Key repeat.
(2) This command functions in the same way as when "System setting" - "Other setting" - Key repeat" are selected on the menu.
(3) The current Key repeat setting can be obtained using the GET command. ("GET KREP")
(4) Key repeat setting retains the last setting after the power is turned off.

Example
Setting
 KREP=OFF
 Key repeat setting is disabled.
  i:OK

Reference
 GET KREP or ?KREP
 Key repeat setting is acquired.
  g:KREP=OFF

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

Lamp output setting

Format
LAMP=<Lamp output setting parameters:ID>
GET[LAMP] / ?LAMP

<Lamp output setting parameters:ID>
NORMAL Normal
SILENT Silent cooling

Environment

<table>
<thead>
<tr>
<th>Power</th>
<th>Input</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFF</td>
<td>ON</td>
</tr>
<tr>
<td>X</td>
<td>O</td>
</tr>
</tbody>
</table>

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
<i:OK

The lamp output is set to “NORMAL”.

Reference

> GET LAMP or ?LAMP
<g:LAMP=SILENT

This retrieves the lamp output.

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

Lamp ON time inquiry

### Format

```
GET LAMPCOUNTER / ? LAMPCOUNTER
```

### Environment

<table>
<thead>
<tr>
<th>Power</th>
<th>Input</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFF</td>
<td>ON</td>
</tr>
<tr>
<td>PM</td>
<td>D-RGB</td>
</tr>
<tr>
<td>A-RGB</td>
<td>COMP</td>
</tr>
<tr>
<td>HDMI</td>
<td>None</td>
</tr>
</tbody>
</table>

### 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>

<table>
<thead>
<tr>
<th>Lamp ON time</th>
<th>ON time:H</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;[G_______]&quot;</td>
<td>0–539</td>
</tr>
<tr>
<td>&quot;[GG____]&quot;</td>
<td>540–1079</td>
</tr>
<tr>
<td>&quot;[GGG___]&quot;</td>
<td>1080–1619</td>
</tr>
<tr>
<td>&quot;[GGGG____]&quot;</td>
<td>1620–2159</td>
</tr>
<tr>
<td>&quot;[GGGGG___]&quot;</td>
<td>2160–2699</td>
</tr>
<tr>
<td>&quot;[GGGGGY_]&quot;</td>
<td>2700–2849</td>
</tr>
<tr>
<td>&quot;[GGGGGY_]&quot;</td>
<td>2850–2999</td>
</tr>
<tr>
<td>&quot;[GGGGGYR]&quot;</td>
<td>3000–</td>
</tr>
</tbody>
</table>

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
< g:LAMPCOUNTER="[GG____]"
```

* Commands are indicated by ">", and responses are indicated by "<".
LMPWRN
Lamp warning indication at startup

Format
LMPWRN=<Lamp warning parameter: ID>
GET LMPWRN / ?LMPWRN

<Lamp warning parameter: ID>
OFF Turned off
ON Turned on

Environment

<table>
<thead>
<tr>
<th>Power</th>
<th>Input</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFF</td>
<td>PM</td>
</tr>
<tr>
<td>ON</td>
<td>X</td>
</tr>
</tbody>
</table>

Response
"i:OK" is returned when setting of lamp warning indication at startup was completed successfully.
For 'GET LMPWRN' or '?LMPWRN', current setting of lamp warning indication at startup is returned as 'g:LMPWRN=<Lamp warning parameter: ID>'
For details on other responses, refer to the "Error List".

Description
(1) This command is used to set the indication of lamp warning at startup.
(2) This command functions in the same way as when "Installation setting" - "On screen" - "Lamp warning indication" are selected on the menu.
(3) The current setting of lamp warning indication at startup can be obtained using the GET command. ("GET LMPWRN")
(4) The setting of Lamp warning indication at startup retains the last setting after the power is turned off.

Example
Setting
> LMPWRN=OFF Lamp warning indication at startup is disabled.
< i:OK

Reference
> GET LMPWRN or ?LMPWRN The setting of Lamp warning indication at startup is acquired.
< g:LMPWRN

*Commands are indicated by ">", and responses are indicated by "<".
MAIN
Side control operation emulation

Format

```
MAIN[]<Side control emulation button parameters:ID>
```

```
<Side control emulation button parameters:ID>
POWERS POWER button
POWER_OFF POWER button pressed twice
MENUMENU
LENSLENS
INPUTINPUT
UPUP
UP+REP Hold down the UP button
* -REP Release the button
DOWNDOWN
DOWN+REP Hold down the DOWN button
* -REP Release the button
LEFTLEFT
LEFT+REP Hold down the LEFT button
* -REP Release the button
RIGHTRIGHT
RIGHT+REP Hold down the RIGHT button
* -REP Release the button
OKOK
```

* After setting the status of the button to be pressed down, send a command from the PC to release the pressed status after predetermined time.

Environment

<table>
<thead>
<tr>
<th>Power</th>
<th>Input</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFF</td>
<td>D-RGB</td>
</tr>
<tr>
<td>ON</td>
<td>A-RGB</td>
</tr>
<tr>
<td>PM</td>
<td>COMP</td>
</tr>
<tr>
<td>D-RGB</td>
<td>HDMI</td>
</tr>
<tr>
<td>A-RGB</td>
<td>None</td>
</tr>
</tbody>
</table>

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 side control buttons for controlling the projector.
(2) With the emulation of the side 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) A parameter with ‘+REP’ signifies “button press start.” (This is the same as the status in which the side 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 side control or remote control button has been operated
<2> When some command has been received

Example

Setting

```
> MAIN MENU
< i:OK
```

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

Memory color adjustment

Format

MEMCADJ=<Memory color adjustment parameter:ID>

GET MEMCADJ / ? MEMCADJ

<Memory color adjustment parameter:ID>

OFF No adjustment
MEM_L Memory color adjustment - light
MEM_M Memory color adjustment - medium
MEM_H Memory color adjustment - heavy

Environment

Power | Input
---|---
OFF | ON | PM | D-RGB | A-RGB | COMP | HDMI | None
X | O | X

Response

i:OK' is returned when memory color has been adjusted successfully.
For 'GET MEMCADJ' or '?MEMCADJ', current memory color adjustment is returned as
'g:MEMCADJ=<Memory color adjustment parameter:ID>'
For details on other responses, refer to the "Error List".

Description

(1) This command is used by selecting "No adjustment", "Memory color adjustment - light" to
    "Memory color adjustment - heavy".
(2) This command functions in the same way as when "Image adjustment" - "Advanced
    adjustment" - "Memory color adjustment" are selected on the menu.
(3) This sets the currently selected input signal and image mode.
(4) The current memory color adjustment setting can be obtained using the GET command. ("GET
    MEMCADJ")

Example

Control

> MEMCADJ=MEM_M
< i:OK

This sets the tone adjustment to "Memory color adjustment - medium".

Reference

> GET MEMCADJ or ?MEMCADJ
< g:MEMCADJ=MEM_M

This retrieves the memory color adjustment level.

* Commands are indicated by ">", and responses are indicated by "<".
MODE
Control mode switch

Format

REMOTE
LOCAL
GET [MODE] / ? [MODE]

Environment

<table>
<thead>
<tr>
<th>Power</th>
<th>Input</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFF</td>
<td>D-RGB</td>
</tr>
<tr>
<td>ON</td>
<td>A-RGB</td>
</tr>
<tr>
<td>PM</td>
<td>COMP</td>
</tr>
<tr>
<td>HDMI</td>
<td>None</td>
</tr>
</tbody>
</table>

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'
'g: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) 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

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

Format

MUTE=<Mute control parameter: ID>
GET MUTE / ? MUTE

<Mute control parameter: ID>
ON Disables the audio / beep sound.
OFF Enables the audio / beep sound.

Environment

<table>
<thead>
<tr>
<th></th>
<th>Input</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power</td>
<td></td>
</tr>
<tr>
<td>OFF</td>
<td>PM</td>
</tr>
<tr>
<td>X</td>
<td>O</td>
</tr>
</tbody>
</table>

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

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

Format
NR=<Noise reduction setting parameter:ID>
GET NR / ? NR

<Noise reduction setting parameter:ID>
OFF Off
WEAK Weak
MIDDLE Middle
STRONG Strong

Environment

<table>
<thead>
<tr>
<th>Power</th>
<th>Input</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFF</td>
<td>X</td>
</tr>
<tr>
<td>ON</td>
<td>O</td>
</tr>
<tr>
<td>PM</td>
<td>X</td>
</tr>
<tr>
<td>D-RGB</td>
<td>X</td>
</tr>
<tr>
<td>A-RGB</td>
<td>X</td>
</tr>
<tr>
<td>COMP</td>
<td>O</td>
</tr>
<tr>
<td>HDMI</td>
<td>O</td>
</tr>
<tr>
<td>None</td>
<td>O</td>
</tr>
</tbody>
</table>

Response
"i:OK" is returned if noise reduction was set properly.
For 'GET NR' or '?NR', current noise reduction setting is returned as
'g:NR=<Noise reduction setting parameter:ID>'
"FUNCTION_NOT_AVAILABLE" is returned if PC is selected for HDMI input.
For details on other responses, refer to the "Error List".

Description
(1) This sets the noise reduction function.
(2) This command functions in the same way as when "Image adjustment" - "Advanced adjustment" - "Noise reduction" are selected on the menu.
(3) This sets the currently selected input signal and image mode.
(4) The current noise reduction function status can be acquired using the applicable GET command ("GET NR").

Example
Setting
> NR=MIDDLE
< i:OK

Reference
> GET NR or ?NR
< g:NR=MIDDLE

* Commands are indicated by ">", and responses are indicated by "<".
POWER
This controls the power supply

**Format**

```
POWER <Parameter: ID>
GET POWER / ? POWER
```

<Parameter: ID>

<table>
<thead>
<tr>
<th>Parameter: ID</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ON</td>
<td>Power ON</td>
</tr>
<tr>
<td>OFF</td>
<td>Power OFF</td>
</tr>
</tbody>
</table>

**Environment**

<table>
<thead>
<tr>
<th>Power</th>
<th>Input</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFF</td>
<td>ON</td>
</tr>
<tr>
<td>ON</td>
<td>PM</td>
</tr>
</tbody>
</table>

**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.

<table>
<thead>
<tr>
<th>Response</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>'g:POWER=OFF'</td>
<td>OFF</td>
</tr>
<tr>
<td>'g:POWER=OFF2ON'</td>
<td>OFF -&gt; ON in transition</td>
</tr>
<tr>
<td>'g:POWER=ON'</td>
<td>ON</td>
</tr>
<tr>
<td>'g:POWER=ON2PMM'</td>
<td>ON -&gt; Standby in transition</td>
</tr>
<tr>
<td>'g:POWER=PMM'</td>
<td>Standby</td>
</tr>
<tr>
<td>'g:POWER=PMM2ON'</td>
<td>Standby -&gt; ON in transition</td>
</tr>
<tr>
<td>'g:POWER=ON2OFF'</td>
<td>ON -&gt; OFF in transition</td>
</tr>
</tbody>
</table>

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. The current power supply status can be referenced using the applicable GET command. ("GET POWER")
6. 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).
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 "<".
# PRODCODE

## Product information inquiry

### Format

- **GET PRODCODE** / ? PRODCODE

### Environment

<table>
<thead>
<tr>
<th>Power</th>
<th>Input</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFF</td>
<td>PM</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Response

Product name is returned as

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

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

```
<Product name:Character string>

WX6000 / SX6000
```

### 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="WX6000"
```

* Commands are indicated by ">", and responses are indicated by "<".
## Remote Control Operation Emulation

### Format

`RC[]<Remote control emulation button parameters:ID>`

<Remote control emulation button parameters:ID>

<table>
<thead>
<tr>
<th>Button</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>POWER</td>
<td>POWER button</td>
</tr>
<tr>
<td>POWER_OFF</td>
<td>POWER button pressed twice</td>
</tr>
<tr>
<td>MENU</td>
<td>MENU</td>
</tr>
<tr>
<td>EXIT</td>
<td>EXIT</td>
</tr>
<tr>
<td>INPUT</td>
<td>INPUT</td>
</tr>
<tr>
<td>DPC</td>
<td>DIGITAL</td>
</tr>
<tr>
<td>APC1</td>
<td>ANALOG PC1</td>
</tr>
<tr>
<td>APC2</td>
<td>ANALOG PC2</td>
</tr>
<tr>
<td>HDMI</td>
<td>HDMI</td>
</tr>
<tr>
<td>COMP</td>
<td>COMPONENT</td>
</tr>
<tr>
<td>ASPECT</td>
<td>ASPECT</td>
</tr>
<tr>
<td>AUTOPC</td>
<td>AUTOPC</td>
</tr>
<tr>
<td>UP</td>
<td>UP</td>
</tr>
<tr>
<td>UP+REP</td>
<td>Hold down the UP button</td>
</tr>
<tr>
<td>*-REP</td>
<td>Release the button</td>
</tr>
<tr>
<td>DOWN</td>
<td>DOWN</td>
</tr>
<tr>
<td>DOWN+REP</td>
<td>Hold down the DOWN button</td>
</tr>
<tr>
<td>*-REP</td>
<td>Release the button</td>
</tr>
<tr>
<td>LEFT</td>
<td>LEFT</td>
</tr>
<tr>
<td>LEFT+REP</td>
<td>Hold down the LEFT button</td>
</tr>
<tr>
<td>*-REP</td>
<td>Release the button</td>
</tr>
<tr>
<td>RIGHT</td>
<td>RIGHT</td>
</tr>
<tr>
<td>RIGHT+REP</td>
<td>Hold down the RIGHT button</td>
</tr>
<tr>
<td>*-REP</td>
<td>Release the button</td>
</tr>
<tr>
<td>FOCUS</td>
<td>FOCUS</td>
</tr>
<tr>
<td>ZOOM</td>
<td>ZOOM</td>
</tr>
<tr>
<td>SHIFT</td>
<td>SHIFT</td>
</tr>
<tr>
<td>TPTN</td>
<td>TEST PATTERN</td>
</tr>
<tr>
<td>KEYSTONE</td>
<td>KEYSTONE</td>
</tr>
<tr>
<td>NUM_0</td>
<td>0</td>
</tr>
<tr>
<td>NUM_1</td>
<td>1</td>
</tr>
<tr>
<td>NUM_2</td>
<td>2</td>
</tr>
<tr>
<td>NUM_3</td>
<td>3</td>
</tr>
<tr>
<td>NUM_4</td>
<td>4</td>
</tr>
<tr>
<td>NUM_5</td>
<td>5</td>
</tr>
<tr>
<td>NUM_6</td>
<td>6</td>
</tr>
<tr>
<td>NUM_7</td>
<td>7</td>
</tr>
<tr>
<td>NUM_8</td>
<td>8</td>
</tr>
<tr>
<td>NUM_9</td>
<td>9</td>
</tr>
<tr>
<td>DZOOM_P</td>
<td>DZOOM+</td>
</tr>
<tr>
<td>DZOOM_P+REP</td>
<td>Hold down the DZOOM + button</td>
</tr>
<tr>
<td>*-REP</td>
<td>Release the button</td>
</tr>
<tr>
<td>DZOOM_M</td>
<td>DZOOM-</td>
</tr>
<tr>
<td>DZOOM_M+REP</td>
<td>Hold down the DZOOM - button</td>
</tr>
<tr>
<td>*-REP</td>
<td>Release the button</td>
</tr>
<tr>
<td>VOL_P</td>
<td>VOL +</td>
</tr>
<tr>
<td>VOL_P+REP</td>
<td>Hold down the VOL + button</td>
</tr>
<tr>
<td>MUTE</td>
<td>MUTE</td>
</tr>
<tr>
<td>FN</td>
<td>FN</td>
</tr>
<tr>
<td>IMAGE</td>
<td>IMAGE</td>
</tr>
<tr>
<td>FREEZE</td>
<td>FREEZE</td>
</tr>
<tr>
<td>BLANK</td>
<td>BLANK</td>
</tr>
</tbody>
</table>
* After setting the status of the button to be pressed down, send a command from the PC to release the pressed status after predetermined time.

* Although emulation parameters for both values and function are available for the common key for 1/DZOOM+, 3/VOL+, 4/DZOOM-, 6/VOL- and 9/MUTE, there is no difference in operation so that it works in the same manner as when the "Common key" on the remote controller is pressed.

In other words, depending on the status of UI, it acts as a value key or a function key.

### Environment

<table>
<thead>
<tr>
<th>Power</th>
<th>Input</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFF</td>
<td>-</td>
</tr>
<tr>
<td>ON</td>
<td>-</td>
</tr>
<tr>
<td>PM</td>
<td>-</td>
</tr>
<tr>
<td>D-RGB</td>
<td>-</td>
</tr>
<tr>
<td>A-RGB</td>
<td>-</td>
</tr>
<tr>
<td>COMP</td>
<td>-</td>
</tr>
<tr>
<td>HDMI</td>
<td>-</td>
</tr>
<tr>
<td>None</td>
<td>-</td>
</tr>
</tbody>
</table>

### 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 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) 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 side control or remote control button has been operated

<2> When a command has been received

(4) The combined use key to 1/DZOOM+, 3/VOL+, 4/DZOOM-, 6/VOL-, 9/MUTE works as a numerical key or function key by a state of UI.

### Example

Setting

> RC POWER

< i:OK

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

**RGB gain adjustment**

<table>
<thead>
<tr>
<th>Power</th>
<th>Input</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFF</td>
<td>ON</td>
</tr>
<tr>
<td>PM</td>
<td>D-RGB</td>
</tr>
<tr>
<td>A-RGB</td>
<td>COMP</td>
</tr>
<tr>
<td>HDMI</td>
<td>None</td>
</tr>
</tbody>
</table>

**Format**

```
RGBGAIN=<R gain setting:Number>,<G gain setting:Number>,<B gain setting:Number>
GET RGBGAIN / ? RGBGAIN
```

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

**Environment**

- **Power**: OFF, ON, PM
- **Input**: D-RGB, A-RGB, COMP, HDMI, None

**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>,<G 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
< i:OK
```

**Reference**

```
> GET RGBGAIN or ?RGBGAIN
< g:RGBGAIN=-10, 0, 19
```

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

RGB offset adjustment

<table>
<thead>
<tr>
<th>Format</th>
</tr>
</thead>
<tbody>
<tr>
<td>RGBOFFSET=&lt;R offset setting:Number&gt;&lt;G offset setting:Number&gt;&lt;B offset setting:Number&gt;</td>
</tr>
<tr>
<td>GET RGBOFFSET / ? RGBOFFSET</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power</td>
</tr>
<tr>
<td>OFF</td>
</tr>
<tr>
<td>X</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;i:OK&quot; is returned if the parameter was set properly.</td>
</tr>
<tr>
<td>For 'GET RGBOFFSET' or '?'RGBOFFSET', current RGB offset adjustment values are returned as &quot;g:RGBOFFSET=&lt;R offset setting:Number&gt;,&lt;G offset setting:Number&gt;,&lt;B offset setting:Number&gt;''</td>
</tr>
<tr>
<td>For details on other responses, refer to the &quot;Error List&quot;.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) This command is used to adjust the offset of the R, G and B colors.</td>
</tr>
<tr>
<td>(2) This command functions in the same way as when &quot;Image adjustment&quot; - &quot;Color adjustment&quot; - &quot;Offset adjustment&quot; are selected on the menu.</td>
</tr>
<tr>
<td>(3) If numerical parameters are outside the range, &quot;e:0801 INVALID_VALUE&quot; is returned.</td>
</tr>
<tr>
<td>(4) This sets the currently selected input signal and image mode.</td>
</tr>
<tr>
<td>(5) The current RGB offset values can be obtained using the GET command. (&quot;GET RGBOFFSET&quot;)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Setting</td>
</tr>
<tr>
<td>&gt; RGBOFFSET=10, 11, 12</td>
</tr>
<tr>
<td>&lt; i:OK</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; GET RGBOFFSET or ?RGBOFFSET</td>
</tr>
<tr>
<td>&lt; g:RGBOFFSET=-10, 0, 19</td>
</tr>
</tbody>
</table>

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

ROM version inquiry

- **Format**
  
  GET ROMVER / ? ROMVER

- **Environment**

<table>
<thead>
<tr>
<th>Power</th>
<th>Input</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFF</td>
<td>-</td>
</tr>
<tr>
<td>ON</td>
<td>-</td>
</tr>
<tr>
<td>PM</td>
<td>D-RGB</td>
</tr>
<tr>
<td>A-RGB</td>
<td>COMP</td>
</tr>
<tr>
<td>HDMI</td>
<td>None</td>
</tr>
</tbody>
</table>

- **Response**

  ROM version of the firmware is returned as
  
  g:ROMVER="<ROM version:Character string>"

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

  <ROM version>=99.999999

- **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 "<".*
SAT
Color saturation setting

Format
RGBGAIN=<R gain setting:Number> [G gain setting:Number] [B gain setting:Number>
GET RGBGAIN / ? RGBGAIN

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

Environment

<table>
<thead>
<tr>
<th>Power</th>
<th>Input</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFF</td>
<td>ON</td>
</tr>
<tr>
<td>X</td>
<td>O</td>
</tr>
</tbody>
</table>

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 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 GET command can be used to retrieve the current color saturation. ("GET SAT")

Example
Setting
> SAT=-10
< i:OK

Reference
> GET SAT or ?SAT
< g: SAT=1

* Commands are indicated by ">", and responses are indicated by "<".
SAVEIMGPROF
Create, save, delete user memory / Create user memory status

Format
SAVEIMGPROF=<User memory save to parameter:ID>

User memory save to parameter:ID
- USER_1 Save to User 1
- USER_2 Save to User 2
- USER_3 Save to User 3
- USER_4 Save to User 4
- USER_5 Save to User 5
- DEL_ALL Delete all User memory

User memory presence parameter:ID
- 0 User memory not created
- 1 User memory created

Environment

<table>
<thead>
<tr>
<th>Power</th>
<th>Input</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFF</td>
<td>ON</td>
</tr>
<tr>
<td>X</td>
<td>O</td>
</tr>
</tbody>
</table>

Response
"i:OK" is returned if the user memory was saved properly.
For 'GET SAVEIMGPROF' or '?'SAVEIMGPROF', presence of user memory can be confirmed as
'g:SAVEIMGPROF=<Number of user memories>:<User 1 present parameter>,
<User 2 present parameter>,<User 3 present parameter>,
<User 4 present parameter>,<User 5 present parameter>'

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

Description
(1) This command is used to create user memory.
(2) This command functions in the same way as "Image adjustment" - "Create user memory " and "Save user memory".
(3) The create user memory status can be confirmed using the GET SAVEIMGPROF command ("GET SAVEIMGPROF").

Example
Setting
> SAVEIMGPROF=USER_2 Saves the current image adjustment value to user memory 2.
< i:OK

Reference
> GET SAVEIMGPROF Confirms the create user memory status.
< g:SAVEIMGPROF=5:0,1,0,0 User memory 3 and user memory 3 have been created.

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

- 68 -
**SCRNASPECT**

Screen aspect setting

### Format

```
SCRNASPECT=<Screen aspect setting parameter:ID>
GET [] SCRNASPECT / ? [] SCRNASPECT
```

<Screen aspect setting parameter:ID>

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
<th>Available with</th>
</tr>
</thead>
<tbody>
<tr>
<td>16:10</td>
<td>16:10</td>
<td>WX6000</td>
</tr>
<tr>
<td>16:9</td>
<td>16:9 display</td>
<td></td>
</tr>
<tr>
<td>4:3</td>
<td>4:3 display</td>
<td></td>
</tr>
<tr>
<td>16:10_DIS</td>
<td>16:10 digital image shift</td>
<td>WX6000</td>
</tr>
<tr>
<td>16:9_DIS</td>
<td>16:9 digital image shift</td>
<td></td>
</tr>
<tr>
<td>4:3_DIS</td>
<td>4:3 digital image shift</td>
<td>SX6000</td>
</tr>
</tbody>
</table>

*Not available with WX6000

### Environment

<table>
<thead>
<tr>
<th>Power</th>
<th>Input</th>
<th>D-RGB</th>
<th>A-RGB</th>
<th>COMP</th>
<th>HDMI</th>
<th>None</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>X</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

### 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 "Installation 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
> i:OK
```

**Reference**

```
> GET SCRNASPECT or ?SCRNASPECT
< g:SCRNASPECT=4:3
```

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

Sharpness setting

### Format

```
SHARP=<Sharpness setting:Number>
GET [] SHARP / ? [] SHARP
```

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

### Environment

<table>
<thead>
<tr>
<th>Power</th>
<th>Input</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFF</td>
<td>D-RGB  X</td>
</tr>
<tr>
<td>ON</td>
<td>A-RGB  O</td>
</tr>
<tr>
<td>PM</td>
<td>COMP X</td>
</tr>
<tr>
<td></td>
<td>HDMI -</td>
</tr>
<tr>
<td></td>
<td>None</td>
</tr>
</tbody>
</table>

### 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 SHARP")

### Example

**Setting**

```
> SHARP=3
< i:OK
```

**Reference**

```
> GET SHARP or ?SHARP
< g:SHARP=3
```

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

Input signal information inquiry

<table>
<thead>
<tr>
<th>Environment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Power</strong></td>
</tr>
<tr>
<td>OFF</td>
</tr>
<tr>
<td>X</td>
</tr>
</tbody>
</table>

**Format**

```plaintext
GET SIGNAL_INFO / ? SIGNAL_INFO
```

**Response**

Current input signal information is returned as

```plaintext
g:SIGNAL_INFO="Input signal information:Character string"
```

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

**Description**

1. This acquires the status of the input signal entering the projector.
2. This functions in the same way as "Information" - "Input signal".

**Example**

```plaintext
> GET SIGNAL_INFO or ? SIGNAL_INFO
< g:SIGNAL_INFO="1920 x 1200 60"
```

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

Signal status inquiry

**Format**

```
GET SIGNALSTATUS / ? SIGNALSTATUS
```

**Environment**

<table>
<thead>
<tr>
<th>Power</th>
<th>Input</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFF</td>
<td>D-RGB</td>
</tr>
<tr>
<td>ON</td>
<td>A-RGB</td>
</tr>
<tr>
<td>PM</td>
<td>COMP</td>
</tr>
<tr>
<td></td>
<td>HDMI</td>
</tr>
<tr>
<td></td>
<td>None</td>
</tr>
</tbody>
</table>

**Response**

Current image signal input status is returned as

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

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

**<Signal status:ID>**

<table>
<thead>
<tr>
<th>Signal status</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO_SIGNAL</td>
<td>Signal not detected</td>
</tr>
<tr>
<td>DISPLAYING</td>
<td>Image now displayed or display enable status</td>
</tr>
<tr>
<td>SETTING</td>
<td>Signal detection and display preparation in progress</td>
</tr>
</tbody>
</table>

**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 when it is set to BLANK.

**Example**

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

* Commands are indicated by ">", and responses are indicated by "<".
TEMP
Temperature sensor value inquiry

Format
GET TEMP / ? TEMP

Environment

<table>
<thead>
<tr>
<th>Power</th>
<th>D-RGB</th>
<th>A-RGB</th>
<th>COMP</th>
<th>HDMI</th>
<th>None</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFF</td>
<td>ON</td>
<td>PM</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>ON</td>
<td>PM</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Response
For ‘GET TEMP’ or ‘? TEMP’, temperature sensor value is returned as
‘TEMP=<Number of sensors>,<Sensor 1 value>,…,<Sensor n value>’

Description
(1) There are cases when number of sensors is 0. In this case, there will not be a comma.

Example
> GET TEMP or ? TEMP
This retrieves the temperature sensor value.
< g:TEMP=1,80.5

* Commands are indicated by “>”, and responses are indicated by “<”. 
**TPTN**

Test pattern

**Format**

```
TPTN=<Test pattern parameter: ID>
GET TPTN / ?TPTN

<Test pattern parameter: ID>
  OFF          Turned off
  CB1          Color bar
  SSH1         Stair step H No.1
  SSH2         Stair step H No.2
  SSH3         Stair step H No.3
  SSV1         Stair step V No.1
  SSV2         Stair step V No.2
  SSV3         Stair step V No.3
  RTF1         Raster 100% White
  RTF2         Raster 100% Red
  RTF3         Raster 100% Green
  RTF4         Raster 100% Blue
  RTH1         Raster 50% White
  RTH2         Raster 50% Red
  RTH3         Raster 50% Green
  RTH4         Raster 50% Blue
  CKR1         Checker No.1
  CKR2         Checker No.2
  MUL1         Multi No.1
  MUL2         Multi No.2
  CHR1         Character
  BDR1         Border
  CRS1         Cross hatch 8 divided
  CRS2         Cross hatch 12 divided
  CRS3         Cross hatch 4 divided
```

**Environment**

<table>
<thead>
<tr>
<th>Power</th>
<th>Input</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFF</td>
<td>ON</td>
</tr>
<tr>
<td>X</td>
<td>O</td>
</tr>
</tbody>
</table>

**Response**

"i:OK" is returned when Test pattern setting was completed successfully.

For "GET TPTN" or "?TPTN", current Test pattern setting is returned as
`g:TPTN=<Test pattern parameter: ID>`

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

**Description**

(1) This command is used to set Test pattern.

(2) This command functions in the same way as when "Installation setting" - "Test pattern" are selected on the menu.

(3) The current Test pattern setting can be obtained using the GET command ("GET TPTN")

(4) Test pattern setting retains the last setting after the power is turned off.

**Example**

Setting

```
> TPTN=OFF
Test pattern is disabled.
< i:OK
```
Reference

> GET TPTN or ?TPTN GET TPTN or ?TPTN
< g:TPTN=OFF

Test pattern is acquired.

*Commands are indicated by “>“, and responses are indicated by “<“.
### 7. Error List

<table>
<thead>
<tr>
<th>Item</th>
<th>Code</th>
<th>TYPE</th>
<th>Error character strings</th>
<th>Error character strings</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0001</td>
<td>e</td>
<td>BAD_SEQUENCE</td>
<td>Communication sequence error</td>
<td>Wait until a response is received before sending the next command.</td>
</tr>
<tr>
<td>2</td>
<td>0002</td>
<td>e</td>
<td>INVALID_COMMAND</td>
<td>Invalid (undefined) command.</td>
<td>Send a valid command.</td>
</tr>
<tr>
<td>3</td>
<td>0004</td>
<td>e</td>
<td>INVALID_FORMAT</td>
<td>Invalid command format.</td>
<td>Send the command in the valid format.</td>
</tr>
<tr>
<td>4</td>
<td>0005</td>
<td>e</td>
<td>NOT_POWER_SUPPLIED</td>
<td>The projector's power is off.</td>
<td>Turn on the power using the POWER ON command.</td>
</tr>
<tr>
<td>5</td>
<td></td>
<td>i</td>
<td>BUSY (POWER)</td>
<td>The projector is switching power modes.</td>
<td>Wait until the power mode is ON, OFF or PMM.</td>
</tr>
<tr>
<td>6</td>
<td>000A</td>
<td>e</td>
<td>INVALID_PARAMETER</td>
<td>The parameter (type) is invalid (undefined). Includes cases when the number of parameters is incorrect.</td>
<td>Use the correct parameters.</td>
</tr>
<tr>
<td>7</td>
<td>000B</td>
<td>e</td>
<td>JOB_TIMEOUT</td>
<td>Internal processing in the projector has timed out.</td>
<td>Resend the command.</td>
</tr>
<tr>
<td>9</td>
<td></td>
<td>i</td>
<td>BUSY (NETWORK)</td>
<td>Executing network related functions.</td>
<td>Wait until the network related functions have finished execution.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>i</td>
<td>BUSY (FOCUS)</td>
<td>The focus lens is being driven.</td>
<td>Wait until the projector has finished driving the focus lens.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>i</td>
<td>BUSY (ZOOM)</td>
<td>The zoom lens is being driven.</td>
<td>Wait until the projector has finished driving the zoom lens.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>i</td>
<td>BUSY (IMAGE)</td>
<td>Image mode switching is in progress.</td>
<td>Wait until the projector has switched the image mode.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>i</td>
<td>BUSY (NOW_SETTING)</td>
<td>Signal setting (detection) in progress.</td>
<td>Wait until the processing is completed.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>i</td>
<td>BUSY</td>
<td>Internal processing in the projector is in progress.</td>
<td>Wait until the current processing is complete.</td>
</tr>
<tr>
<td>10</td>
<td>1006</td>
<td>e</td>
<td>NOW_BLANK</td>
<td>Cannot execute command since blanking operation is in progress.</td>
<td>Resend the command after canceling the blanking operation.</td>
</tr>
<tr>
<td>10</td>
<td>1009</td>
<td>e</td>
<td>NOW_FREEZE</td>
<td>Cannot execute command since freeze operation is in progress.</td>
<td>Resend the command after canceling the freeze operation.</td>
</tr>
<tr>
<td>10</td>
<td>100A</td>
<td>e</td>
<td>NOW_D.ZOOM</td>
<td>Cannot execute command since D. zooming is in progress.</td>
<td>Resend the command after canceling D. zooming.</td>
</tr>
<tr>
<td>10</td>
<td>100B</td>
<td>e</td>
<td>NOW_SPECIAL_MENU</td>
<td>Cannot execute command in current menu mode. (E.g., Password indication)</td>
<td>Resend the command after exiting the current menu mode.</td>
</tr>
<tr>
<td>11</td>
<td>F001</td>
<td>e</td>
<td>SYSTEM (UNKNOWN)</td>
<td>Internal error has occurred.</td>
<td>Resend the command.</td>
</tr>
<tr>
<td>12</td>
<td>E0XX</td>
<td>e</td>
<td>COMMUNICATION_ERROR</td>
<td>A communication protocol violation has occurred in the projector.</td>
<td>Resend the command.</td>
</tr>
<tr>
<td>13</td>
<td>1008</td>
<td>e</td>
<td>INVALID_SCREEN_ASPECT</td>
<td>Cannot execute command under current screen aspect ratio setting.</td>
<td>Change the screen aspect ratio setting.</td>
</tr>
<tr>
<td>14</td>
<td>200X</td>
<td>e</td>
<td>INVALID_SOURCE (****)</td>
<td>Cannot execute command with current input source.</td>
<td>Change the input source.</td>
</tr>
<tr>
<td>15</td>
<td>2010</td>
<td>e</td>
<td>NO_SIGNAL</td>
<td>No input signal.</td>
<td>Supply the input signal.</td>
</tr>
<tr>
<td>15</td>
<td>201X</td>
<td>e</td>
<td>INVALID_SIGNAL (****)</td>
<td>Cannot execute command with current input signal. Current input signal is indicated in parentheses.</td>
<td>Change the input signal.</td>
</tr>
<tr>
<td>Item</td>
<td>Code</td>
<td>TYPE</td>
<td>Error character strings</td>
<td>Error character strings</td>
<td>Error</td>
</tr>
<tr>
<td>------</td>
<td>--------</td>
<td>------</td>
<td>-------------------------</td>
<td>----------------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------</td>
</tr>
<tr>
<td>201F</td>
<td>e</td>
<td>801</td>
<td>INVALID_SIGNAL</td>
<td>Cannot execute command with current input signal.</td>
<td>Change the input signal.</td>
</tr>
<tr>
<td>17</td>
<td>0801</td>
<td>e</td>
<td>INVALID_VALUE</td>
<td>Numerical parameters are invalid or outside the specified range.</td>
<td>Set the parameters in the correct range.</td>
</tr>
<tr>
<td>1002</td>
<td>e</td>
<td>0801</td>
<td>NO_LOGO_CAPTURED</td>
<td>Cannot execute command because the user image is not registered.</td>
<td>Register the user image.</td>
</tr>
<tr>
<td>1003</td>
<td>e</td>
<td>0801</td>
<td>IP_NOT_AVAILABLE</td>
<td>Cannot execute PROGRESSIVE conversion.</td>
<td>Switch to the correct input signal.</td>
</tr>
<tr>
<td>1004</td>
<td>e</td>
<td></td>
<td>POWER_MANAGEMENT_OFF</td>
<td>DPON=ON cannot be set when PMM=OFF.</td>
<td>Use a setting other than PMM=OFF.</td>
</tr>
<tr>
<td>1005</td>
<td>e</td>
<td></td>
<td>DIRECT_POWER_ON</td>
<td>PMM=OFF cannot be set when DPON=ON.</td>
<td>Use the DPON=OFF setting.</td>
</tr>
<tr>
<td>1010</td>
<td>e</td>
<td></td>
<td>INACTIVE_PARAMETER</td>
<td>Parameter is currently in a disabled state.</td>
<td>Set the parameter when it is enabled.</td>
</tr>
<tr>
<td>1011</td>
<td>e</td>
<td></td>
<td>FUNCTION_NOT_AVAILABLE</td>
<td>Objective function is currently in a disabled state.</td>
<td>Set the function when it is enabled.</td>
</tr>
<tr>
<td>2020</td>
<td>e</td>
<td></td>
<td>INVALID_IMAGE_MODE</td>
<td>Cannot set in current image mode.</td>
<td>Set when other image mode is selected.</td>
</tr>
<tr>
<td>203X</td>
<td>e</td>
<td></td>
<td>INVALID_RESOLUTION (**)</td>
<td>Invalid input signal resolution. Additional information is indicated in parentheses.</td>
<td>Switch to an input signal with the correct resolution.</td>
</tr>
<tr>
<td>19</td>
<td>-</td>
<td>i</td>
<td>INPUT_NOT_FOUND</td>
<td>Input was not switched since there is no input signal at AUTOSETEXE=INPUT.</td>
<td>Notification of status only; no particular measures needed.</td>
</tr>
</tbody>
</table>

* Error codes are 4-digit hexadecimal strings. X represents any character from 0 to 9 or from A to F.
* 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.)
* Even though the projector is under one of the conditions listed in the Error List, a command that is executable is performed.
  For example, an executable command is activated while the zoom lens is driven.
8. Error Processing

START

Processing user command? 

Invalid (undefined) command?

Invalid command format?

Command executable while power mode is OFF?

Power mode is "OFF"?

YES

Command executable with PMM?

Power mode is "PMM"?

YES

Switching power modes?

YES

Invalid parameter type?

YES

Undefined parameter ID?

YES

Incorrect parameter number?

YES

Network in progress?

YES

Focus lens driving?

YES

Zoom lens driving?

YES

Image mode switching in progress?

YES

Signal setting (detection) in progress?

YES

Internal processing in progress?

YES

Error judgment

*BAD_SEQUENCE*

*INVALID_COMMAND*

*INVALID_FORMAT*

*NOT_POWER_SUPPLIED*

*NOT_POWER_SUPPLIED*

*BUSY (POWER)*

*INVALID_PARAMETER*

*BUSY (NETWORK)*

*BUSY (FOCUS)*

*BUSY (ZOOM)*

*BUSY (IMAGE)*

*BUSY (NOW_SETTING)*

*BUSY*
Limitations in input source? YES

Incorrect input source? YES

Requires input signal? YES

No input signal? NO

Invalid input signal? YES

Numerical parameter outside the specified range? YES

User command is executable

FINISHED

"INVALID_SOURCE (**)"

"NO_SIGNAL"

"INVALID_SIGNAL (**)"

"INVALID_VALUE"