Thank you for choosing our product.

To ensure the best performance of this product, please read this user guide fully and carefully before using it and keep this manual together with the product for future reference as needed.

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● All other company and product names mentioned in this manual are either registered trademarks or trademarks of their respective owners. In this manual, the “®” or “™” marks may not be specified.
Before reading this manual

- All rights reserved.
- Some information contained in this User guide such as exact product appearance, diagrams, menu operations, and so on may differ depending on the product version.
- This User guide is subject to change without notice. You can download the latest version from IDK’s website at: http://www.idkav.com

The reference manual consists of the following two volumes:

- User guide (this document):
  Provides explanations and procedures for operations, installation, connections among devices, I/O adjustment and settings.
- Command guide: Please download the command guide from the website above.
  Provides explanations and procedures for external control using RS-232C and LAN communications.
FCC STATEMENT
This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

CE MARKING
This equipment complies with the essential requirements of the relevant European health, safety and environmental protection legislation.

WEEE MARKING
Waste Electrical and Electronic Equipment (WEEE), Directive 2002/96/EC
(This directive is only valid in the EU.)
This equipment complies with the WEEE Directive (2002/96/EC) marking requirement.
The left marking indicates that you must not discard this electrical/electronic equipment in domestic household waste.
Safety Instructions

Read and understand all safety and operating instructions before using this product. Follow all instructions and heed all warnings/cautions.

<table>
<thead>
<tr>
<th>Enforcement Symbol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>⚠️ Warning</td>
<td>Indicates the presence of a hazard that may result in death or serious personal injury if the warning is ignored or the product is handled incorrectly.</td>
</tr>
<tr>
<td>⚠️ Caution</td>
<td>Indicates the presence of a hazard that may cause minor personal injury or property damage if the caution is ignored or the product is handled incorrectly.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caution</td>
<td>This symbol is intended to alert the user. (Warning and caution)</td>
<td>![Hot surfaces Caution]</td>
</tr>
<tr>
<td>Prohibited</td>
<td>This symbol is intended to prohibit the user from specified actions.</td>
<td>![Do not disassemble]</td>
</tr>
<tr>
<td>Instruction</td>
<td>This symbol is intended to instruct the user.</td>
<td>![Unplug]</td>
</tr>
</tbody>
</table>
### Warning

#### For lifting heavy products:

| Instruction | • Lifting must be done by two or more personnel.  
To avoid injury: When lifting the product, bend your knees, keep your back straight and get close to it with two or more persons. |

#### For installing and connecting products:

| Prohibited | • Do not place the product upon a surface that may give way or that may become unstable.  
Install the product in a secure and stable place to prevent it from falling and possibly causing injury. |
|理工大学 | • Secure the product if installing in locations prone to vibration or movement.  
Otherwise, it may move unexpectedly or it may fall and lead to injury. |

| Instruction | • Installation work must be performed by professionals.  
The product is intended to be installed by skilled technicians. For installation, please contact a system integrator or IDK. Improper installation may lead to the risk of fire, electric shock, injury, or property damage. |
|理工大学 | • Insert the power plug into an outlet that is unobstructed.  
Unobstructed access to the plug enables unplugging the product in case of any extraordinary failure, abnormal situation or for easy disconnection during extended periods of non-use. |
|理工大学 | • Insert the power plug into an appropriate outlet completely.  
If the plug is partially inserted, arching may cause the connection to overheat, increasing the risk of electrical shock or fire. Do not use a damaged plug or connect to a damaged outlet. |
|理工大学 | • Unplug the product from the AC power source during installation or service.  
When connecting peripheral devices to this product, unplug all involved devices from outlets. Ground potential differences may cause fire or other difficulties. |

#### For operating products:

| Prohibited | • Keep out any foreign objects.  
To avoid fire or electric shock, do not permit foreign objects, such as metal and paper, to enter the product from vent holes or other apertures. |
|理工大学 | • For power cable/plug:  
• Do not scratch, heat, or modify, including splicing or lengthening them.  
• Do not pull, place heavy objects on them, or pinch them.  
• Do not bend, twist, tie or clamp them together forcefully.  
Misuse of the power cable and plug may cause fire or electric shock. If power cables/plugs become damaged, contact your IDK representative. |

| Do not disassemble | • Do not repair, modify or disassemble.  
Since the product includes circuitry that uses potentially lethal, high voltage levels, disassembly by unauthorized personnel may lead to the risk of fire or electric shock. For internal inspection or repair, contact your IDK representative. |

| Do not touch | • Do not touch the product and connected cables during electrical storms.  
Contact may cause electric shock. |

| Instruction | • Clean the power plug regularly.  
If the plug is covered in dust, it may increase the risk of fire. |
|理工大学 | • The product must be earthed.  
To reduce the risk of electrical shock, ensure the product is connected to a mains socket outlet with a protective earthing connection. |
### If the following problem occurs:

| **Unplug immediately if the product smokes, makes unusual noise, or produces a burning odor.** | If you continue to use the product under these conditions, it may cause electric shock or fire. |
| **Unplug immediately if the product is damaged by falling or having been dropped.** | If you continue to use the product under these conditions, it may increase the risk of electrical shock or fire. For maintenance and repair, contact your IDK representative. |
| **Unplug immediately if water or other objects are directed inside.** | If you continue to use the product under these conditions, it may increase the risk of electrical shock or fire. For maintenance and repair, contact your IDK representative. |

### Caution

### For installing and connecting products:

| **Prohibited** | **Do not place the product in a location where it will be subjected to high temperatures.** |
| **Prohibited** | If the product is subjected to direct sunlight or high temperatures while under operation, it may affect the product’s performance and reliability and may increase the risk of fire. |
| **Prohibited** | **Do not store or operate the product in dusty, oil smoke filled, or humid place.** |
| **Prohibited** | If the product is placed near humidifiers or in a dusty area, it may increase the risk of fire or electric shock. |
| **Prohibited** | **Do not block the vent holes.** |
| **Prohibited** | If ventilation slots are blocked, it may cause the product to overheat, affecting performance and reliability and may increase the risk of fire. |
| **Prohibited** | **Do not place or stack heavy items on the product.** |
| **Prohibited** | Failure to observe this precaution may result in damage to the product and other property and may lead to the risk of personal injury. |
| **Prohibited** | **Do not exceed ratings of outlet and wiring devices.** |
| **Prohibited** | Exceeding the rating of an outlet may increase the risk of fire and electric shock. |
| **No wet hands** | **Do not handle power plug with wet hands.** |
| **No wet hands** | Failure to observe this precaution may increase the risk of electrical shock. |
| **Instruction** | **Use and store the product within the specified temperature/humidity range.** |
| **Instruction** | If the product is used outside the specified range for temperature and humidity continuously, it may increase the risk of fire or electric shock. |
| **Instruction** | **Do not place the product at elevations of 1.24 mi. (2,000 m) or higher above sea level.** |
| **Instruction** | Failure to do so may shorten the life of the internal parts and result in malfunctions. |
| **Instruction** | **When mounting the product into the rack, provide sufficient cooling space.** |
| **Instruction** | Mount the product in a rack meeting EIA standards, and maintain spaces above and below for air circulation. For your safety as required, attach an L-shaped bracket in addition to the panel mount bracket kit to improve mechanical stability. |
| **Instruction** | **Never insert screws without the rubber feet into the threaded holes on the bottom of the product.** |
| **Instruction** | Never insert screws without the rubber feet into the threaded holes on the bottom of the product. Doing so may lead to damage when the screws contact electrical circuitry or components inside the product. |
| **Instruction** | Reinstall the originally supplied rubber feet using only the originally supplied screws. |
### For operating products:

<table>
<thead>
<tr>
<th>Hot surfaces Caution</th>
<th>For products with the hot surfaces caution label only:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Do not touch the product’s hot surface.</td>
<td></td>
</tr>
<tr>
<td>If the product is installed without enough space, it may cause failures of other products operation.</td>
<td></td>
</tr>
<tr>
<td>If you touch product’s hot surface, it may cause burn.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Prohibited</th>
<th>• Use only the supplied power cable and AC adapter.</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Do not use the supplied power cable and AC adapter with other products.</td>
<td></td>
</tr>
<tr>
<td>If non-compliant adapter or power cables are used, it may increase the risk of fire or electrical shock.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Unplug</th>
<th>• If the product won’t be used for an extended period of time, unplug it.</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Unplug the product before cleaning.</td>
<td></td>
</tr>
<tr>
<td>To prevent electric shock.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Instruction</th>
<th>• If cooling fan stops, power off the product and contact us.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Failure to do so may rise internal temperature and increase the risk of malfunction, fire, or electric shock.</td>
<td></td>
</tr>
<tr>
<td>• Keep vents clear of dust.</td>
<td></td>
</tr>
<tr>
<td>If the vent holes near the cooling fan or near the fan are covered with dust, internal temperature rises and it may increase the risk of malfunction. Clean the vent holes and near the fan as needed.</td>
<td></td>
</tr>
<tr>
<td>If dust accumulates inside of the product, it may increase the risk of malfunction, fire, or electric shock. Periodic internal cleaning, especially before humid rainy season, is recommended. For internal cleaning, contact your IDK representative.</td>
<td></td>
</tr>
</tbody>
</table>
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1 Included Items

Ensure that all items below are included in the package. If any items are missing or damaged, please contact IDK.

One (1) main unit (SWC-2000)

One (1) AC adapter with screw locking mechanism (6 ft. (1.8 m))

[Fig. 1.1] Included items
2 Rack mount kit

We offer rack mount kits for SWC-2000 as optional extra. By using this kit, you can mount one or two SWC-2000s to an EIA rack.

*The actual color of kits is black.

<table>
<thead>
<tr>
<th>Table 2.1 Part number of rack mount kit</th>
</tr>
</thead>
<tbody>
<tr>
<td>RM-SWC2001</td>
</tr>
<tr>
<td>RM-SWC2002</td>
</tr>
</tbody>
</table>
2.1 Rack mount kit for one SWC-2000

Check if all the following items are included.

<table>
<thead>
<tr>
<th>Part number</th>
<th>Included items</th>
</tr>
</thead>
<tbody>
<tr>
<td>RM-SWC2001</td>
<td>• 701A05 mounting bracket (1)</td>
</tr>
<tr>
<td></td>
<td>• 701A06 mounting bracket for one SWC-2000 (1)</td>
</tr>
<tr>
<td></td>
<td>• Screw: Nickel-plated iron M3x6 screws (4)</td>
</tr>
</tbody>
</table>

[Fig. 2.3] RM-SWC2001

701A05 Mounting bracket

701A06 Mounting bracket for one SWC-2000
2.1.1 Attaching mounting bracket for one SWC-2000

1. Remove the bracket below from the SWC-2000’s bottom.

[Fig. 2.4] Removing bracket

2. Attach the mounting brackets (701A05 and 701A06) with screws to the SWC-2000’s bottom. The tightening torque is 0.59 N·m (6.1 kgf·cm approx.).

701A05 and 701A06 can be left-right reverse.

[Fig. 2.5] Attaching brackets
# 2.2 Rack mount kit for two SWC-2000s

Check if all the following items are included.

<table>
<thead>
<tr>
<th>Part number</th>
<th>Included items</th>
</tr>
</thead>
</table>
| RM-SWC2002  | ・ 701A04 rack mounting bracket (1)  
                     ・ 701A05 mounting bracket for double  
                        SWC-2000 (2)  
                     ・ Screw: Nickel-plated iron M3x6 screws (8) |

![Fig. 2.6] For RM-SWC2002
### 2.2.1 Attaching mounting bracket for two SWC-2000s

1. Remove the bracket below from SWC-2000’s bottom.

![Fig. 2.7] Removing bracket

2. Attach the mounting bracket (701A04) to the two SWC-2000s’ bottoms with screws to connect them. Attach the mounting brackets (701A05) to the two SWC-2000’s sides as shown below. The tightening torque is 0.59 N·m (6.1 kgf·cm approx.).

![Fig. 2.8] Attaching brackets
3  About SWC-2000

The SWC-2000 is a remote controller that controls Matrix switchers, multiple switchers, and projectors. The SWC-2000 allows you to power on/off projectors and switch video of matrix switchers remotely. You can set and operate the SWC-2000 remotely over a WEB browser using a PC.

![Remote operation using WEB browser](image1)

**[Fig. 3.1] Remote operation using WEB browser**

![System configuration](image2)

**[Fig. 3.2] System configuration**

*Tip:*
JavaScript is used for SWC-2000's WEB browser. If setting the SWC-2000 using a WEB browser, make sure to enable JavaScript of the WEB browser by referring to the HELP of each WEB browser.
4 Features

- Control system management
  Powers on/off projectors, switches video of matrix switchers, and so on.

- Remote control using a WEB browser
  Switches the SWX-2000’s power on/off and executes control commands.

- Control output
  - Controls external devices via RS-232C and LAN
  - Outputs control command
    (Controls matrix switchers, multiple switchers, and projectors)
  - Supports PJLink

- Other features
  - Powers off using the Standby button
  - Key lock
  - Backs up and restores all settings
  - Rack and tabletop mountable

[See: 2 Rack mount kit]
[See: 7.2 Powering ON/OFF]
[See: 7.8 Key lock]
[See: 9.14 BACKUP / RESTORE menu]
5 Front and Rear panels

[Fig. 5.1] Panel drawings

[Table 5.1] Part names and descriptions

<table>
<thead>
<tr>
<th>Number</th>
<th>Part name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>①</td>
<td>Control status LED</td>
<td>• COMMAND EXECUTION&lt;br&gt; Blinks in orange: Control commands are being executed.&lt;br&gt; Does not light: No commands are executed.&lt;br&gt; • COMMAND ERROR&lt;br&gt; Blinks in red: An error occurs while control commands are sent or received.&lt;br&gt; Does not light: No error occurs. 【See: 7.6 Control status LED】</td>
</tr>
<tr>
<td>②</td>
<td>Power status LED</td>
<td>Lights in green: Powered on.&lt;br&gt; Lights in orange: Powered off.</td>
</tr>
<tr>
<td>③</td>
<td>Standby button</td>
<td>Powers on/off the SWC-2000.&lt;br&gt; Lights in green: Powered on.&lt;br&gt; Does not light: Powered off. 【See: 7.2 Powering ON/OFF】</td>
</tr>
<tr>
<td>④</td>
<td>Control command button (1 to 16)</td>
<td>Executes control commands 1 to 16. 【See: 9.10 COMMAND LINK menu】</td>
</tr>
<tr>
<td>⑤</td>
<td>KEY LOCK button</td>
<td>Locks/releases Standby button and control command buttons.&lt;br&gt; Lights in green: Being locked.&lt;br&gt; Does not light: Not locked. 【See: 7.8 Key lock】</td>
</tr>
<tr>
<td>⑥</td>
<td>Power connector</td>
<td>For provided AC adapter with screw-type lock.</td>
</tr>
<tr>
<td>⑦</td>
<td>Maintenance connector</td>
<td>For maintenance. Do not use.</td>
</tr>
<tr>
<td>⑧</td>
<td>RS-232C port</td>
<td>For controlling external devices using commands.</td>
</tr>
<tr>
<td>⑨</td>
<td>LAN port</td>
<td>For controlling external devices using commands or WEB browser.</td>
</tr>
</tbody>
</table>
6 Connecting to External device

6.1 Preparations

Prepare a LAN cable or RS-232C cable before connecting to external devices.

6.2 Precautions

Follow the instructions below when installing the SWC-2000.

**Installation**
- Before connecting a cable to the SWC-2000 or an external device that is connected to the SWC-2000, touch a ground metal to remove electricity from your body.
- Do not place the SWC-2000 on top of another one.
- Prepare ventilating equipment to keep the ambient temperature at 40 degrees C/104 degrees F or less. If inadequately vented, the life of parts may be shortened and operations may be affected.

**Attaching and removing AC plug**

The shapes of AC plugs with screw-type lock differ from country to country. Use the appropriate AC plug. Contact us if you have any questions.

**Removing AC plug:**
Slide the AC plug (②) from the AC adapter while holding down the portion mentioned below (①).

![Fig. 6.1] Removing AC plug

**Attaching AC plug:**
Gently slide the AC plug into the AC adapter (③) until it clicks (④).

![Fig. 6.2] Attaching AC plug
6.3 Typical SWC-2000 applications

[Fig. 6.3] System application example
7 Basic operations

7.1 Starting SWC-2000

Two seconds after power is supplied from the AC adapter, the hardware will be initialized and the SWC-2000 can be operated.

7.2 Powering ON/OFF

Press the Standby button to power on/off the SWC-2000.

<table>
<thead>
<tr>
<th>Power</th>
<th>Functions can be used</th>
<th>Functions cannot be used</th>
</tr>
</thead>
<tbody>
<tr>
<td>ON</td>
<td>All functions</td>
<td>None</td>
</tr>
<tr>
<td>OFF</td>
<td>Standby button, Control command execution while power-off, remote operation (WEB browser, control command)</td>
<td>Control command buttons1 to 16, KEYLOCK button</td>
</tr>
</tbody>
</table>

[See: 9.10.2 TOGGLE and COMMAND (Linking control command)]

7.3 Rebooting

Control commands assigned to power-on and power-off operations are not executed when the SWC-2000 is rebooted.

1. Press the “KEYLOCK” button to lock control command buttons.
2. Press the Standby button, Control command “8” button, and Control command “9” button at the same time for three seconds.

[See: 7.8 Key lock]

7.4 Power-on (supplied from AC adapter) status

You can set the status for when power is supplied from the AC adapter using a WEB browser by referring to “9.15.2 POWER ON SETTING STANDBY BUTTON”.

[See: 9.15.2 POWER ON SETTING STANDBY BUTTON]
7.5 Initializing

You can initialize settings to factory default:
1. Press the following three buttons at the same time and supply power from the AC adapter.
   “KEYLOCK” button, Control command “6” button, and Control command “13” button
2. Press these buttons until you hear beep sound (three seconds or longer).
3. The SWC-2000 reboots and starts with factory default settings.

Note:
Once settings are initialized, control command and other settings are also deleted. Set them again as needed.

7.6 Control status LEDs

You can check current control status with the control status LEDs.

<table>
<thead>
<tr>
<th>COMMAND EXECUTION</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LED blinks in orange:</td>
<td>Control commands are being executed.</td>
</tr>
<tr>
<td>LED does not light:</td>
<td>No control commands are executed.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>COMMAND ERROR</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LED blinks in red:</td>
<td>Timeout between the SWC-2000 and controlled device occurs or an error of IDK or PJLink product is replied.</td>
</tr>
<tr>
<td>LED does not light:</td>
<td>No error occurs.</td>
</tr>
</tbody>
</table>

[Table 7.2] COMMAND ERROR LED

<table>
<thead>
<tr>
<th>REPLY COMMAND LINK</th>
<th>REPLY DISPLAY</th>
<th>COMMAND ERROR LED blinks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disabled</td>
<td>Disabled</td>
<td>Only when an error occurs in IDK or PJLink product.</td>
</tr>
<tr>
<td>Disabled</td>
<td>Enabled</td>
<td>When an error occurs in IDK or PJLink product When timeout occurs</td>
</tr>
<tr>
<td>Enabled</td>
<td>Disabled</td>
<td>Only when timeout occurs</td>
</tr>
</tbody>
</table>

See each section for settings of REPLY COMMAND LINK and REPLY DISPLAY.

[See: 9.6.2 Setting control command]
[See:9.6.3 LINK button]
7.7 Executing control commands

Control commands can be executed when a control command button or the Standby button is pressed. For control command buttons: Normally, only PLANE A’s control commands are executed, but commands of PLANE A and PLANE B can be executed alternately by enabling the toggle operation.

Each control command button has PLANE A and PLANE B.

[Fig. 7.1] Executing control commands

You can set control commands using commands or WEB pages.

【See: Command Guide】
【See: 9.10 COMMAND LINK menu】
7.8 Key lock

You can lock and unlock buttons to prevent operational mistakes. The LED of the KEY LOCK button lights when a button is locked.

**Table 7.3 Key lock**

<table>
<thead>
<tr>
<th>Function</th>
<th>Buttons to be locked</th>
<th>Buttons not to be locked</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Locking for only control command buttons</td>
<td>Control command buttons 1 to 16</td>
<td>Standby button, Remote operations (WEB browser, control commands)</td>
</tr>
<tr>
<td>2. Locking for all buttons</td>
<td>All buttons*</td>
<td>Remote operations (WEB browser, control commands)</td>
</tr>
</tbody>
</table>

*Only the KEY LOCK button is available for unlocking buttons.

[See: 9.15.4 AUTO LOCK]

- Locking for only control command buttons:
  - For locking: Press the KEY LOCK button.
  - For unlocking: Press the KEY LOCK button while control command buttons are locked.

![Fig. 7.2] Buttons to be locked (Control command button)

- Locking for all buttons:
  - For locking: Press the KEY LOCK button for about two seconds.
  - For unlocking: Press the KEY LOCK button for about two seconds while buttons are locked.

![Fig. 7.3] Buttons to be locked
8 How to use SWC-2000

Set the SWC-2000 using commands or WEB browser by referring to the Command Guide or WEB menu, respectively.

Note:
The SWC-2000 does not support automatic acquisition of IP address using DHCP (Dynamic Host Configuration Protocol). If you use the SWC-2000 in a network with DHCP, keep a static IP address. If controlling peripheral devices connected over LAN from the SWC-2000, keep several static IP addresses.

【See: Command Guide】
【See: 9 WEB menu】

8.1 Application example

Example:
Before using the SWC-2000, you set it using a WEB browser as follows.
- Remote switching channel: Video and audio that are input from matrix switcher’s IN1 are output from all outputs by pressing Control command button1.

![Application Diagram]

[Fig. 8.1] Application

[Table 8.1] Setting for matrix switcher

<table>
<thead>
<tr>
<th>IP address</th>
<th>Port number</th>
</tr>
</thead>
<tbody>
<tr>
<td>192.168.1.100</td>
<td>1100</td>
</tr>
</tbody>
</table>

8.1.1 Preparation for LAN connection

First prepare LAN connection and then set “8.1.2 Setting SWC-2000”.

1. Connect a PC to the SWC-2000 via a LAN cable
2. Set the PC’s static IP address. (e.g. “192.168.1.10”) 
8.1.2 Setting SWC-2000

1. Start the WEB browser program (e.g. Microsoft Internet Explorer)
2. Enter “http://(SWC-2000’s IP address)/lancom.html” in the browser’s Address field. When LAN communication is established, the communication setting page is displayed.
3. Default IP address is “192.168.1.199”

4. Enter the following values for matrix switcher, as an example, into the LAN1 row (A).

   **[Table 8.2] LAN1 setting example**

<table>
<thead>
<tr>
<th>Item</th>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>FUNCTION</td>
<td>TRANSMITER</td>
<td>Transmitter mode</td>
</tr>
<tr>
<td>TRANSMITTER IP</td>
<td>192.168.1.100</td>
<td>Matrix switcher’s IP address</td>
</tr>
<tr>
<td>TRANSMITTER PORT</td>
<td>1100</td>
<td>Matrix switcher’s port number</td>
</tr>
</tbody>
</table>

5. Click the “SEND” button (B) to change the setting. When settings are changed, connections with a WEB browser may be disconnected. In that case, enter “http://(SWC-2000’s IP address)/lancom.html” into the address bar again to confirm the settings are applied correctly.

6. Click “COMMAND EDIT” (C) to display the following command list menu.  

   **[See: 9.13 LAN / COM menu]**
7. Click the “CMD1” button (D) to edit control command 1 in the following advanced setting page for control command.

【See: 9.5 COMMAND EDIT menu (Control command list)】
【See: 9.6 COMMAND EDIT menu (Advanced setting of control command)】

![Advanced setting page for control command](image)

**[Fig. 8.3] Control command list**

**[Fig. 8.4] Advanced setting page for control command**
8. Enter the following values in the (E) area.

**Table 8.3** Setting values for control command

<table>
<thead>
<tr>
<th>Item</th>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEMO</td>
<td>CH1</td>
<td>Desired one-byte alphabet and numbers (up to 14 characters)</td>
</tr>
<tr>
<td>&lt;PORT&gt;</td>
<td>Tick “LAN1”.</td>
<td>Using settings of LAN1 when sending control command.</td>
</tr>
</tbody>
</table>

9. Click the "TEMPLATE" button to display the following template page.  
[See: 9.5 COMMAND EDIT menu (Control command list)]

![Template Page](image)

**Fig. 8.5** Template

10. Set the template as below in (G) to switch video and audio of the matrix switcher.

**Table 8.4** Setting values for template

<table>
<thead>
<tr>
<th>Item</th>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MODE</td>
<td>IDK</td>
<td>Control command display mode for IDK products</td>
</tr>
<tr>
<td>PRODUCT</td>
<td>MATRIX SWITCHER</td>
<td>Matrix switcher mode.</td>
</tr>
<tr>
<td>FUNCTION</td>
<td>CHANNEL SELECT (V+A)</td>
<td>Control command setting mode for switching video and audio of matrix switcher</td>
</tr>
</tbody>
</table>
11. After template is set, the following page (H) is displayed. Input channel numbers and output channel numbers are displayed in the left and right sides, respectively.

Register the switching control command: outputs video and audio that are input from matrix switcher’s IN1 to all outputs. After selecting “IN1” and “ALL” for input channel number and output channel number, respectively, click the “OK” button (I).

[Fig. 8.6] Switching video and audio
12. The template page disappears and the control command that is selected in the template is entered in the “<DATA>” box (J). Make sure that the control command is entered.
   Click the “SEND” button (K) to apply the setting to the SWC-2000.

13. Click “COMMAND LINK” (L).

[Fig. 8.7] After control command is set
14. The following WEB menu for control command link is displayed. Click the desired control condition number (M).
   Example: Linking the control command to Control command button 1 → Click “1”.

![Fig. 8.8] Control command link

   [See: 9.9 COMMAND LINK menu (Selecting button)]

15. The control command link (advanced setting) page is displayed. Select “CMD1:CH1” (N).

![Fig. 8.9] Control command link (advanced setting)

16. Click the “SEND” button (O) to link the control command.
   [See: 9.10 COMMAND LINK menu]

Now setting a control command to the SWC-2000 is complete.
8.2 Controlling external device from SWC-2000

Three following methods are available to control external devices using control commands registered in the SWC-2000.
- Using control command buttons
- Using WEB browser
- Using control commands (Refer to “SWC-2000 Command Guide”.)

8.2.1 Control from control command buttons

The control commands are sent to external devices by pressing the desired control command button that is linked to the control command.

[Fig. 8.10] Control command buttons

8.2.2 Control from WEB browser

Procedure for controlling from WEB browser:
1. Start the WEB browser program (e.g. Microsoft Internet Explorer).
2. Enter “http://(SWC-2000’s IP address)/” into the address bar. When LAN communication is established, the MAIN menu is displayed.
3. Click the desired command button of the WEB browser to send the control command to external devices.

[Fig. 8.11] Control from WEB browser

【See: 9.2 MAIN menu】
9 WEB menu

9.1 About WEB menu

The WEB menu is divided into two settings, for operation and for setting, and their procedures differ from each other. After setting the SWC-2000, it can be operated remotely only using menu for operation.

Menu for operation
Enter “http://(SWC-2000’s IP address)” into the address bar.

Menu for setting
Enter “http://(SWC-2000’s IP address)/ *****.html” into the address bar.

*****: Depends on WEB menus.
9.2 MAIN menu

You can display the MAIN menu by entering “http://(SWC-2000’s IP address)” into the address bar. This menu is for operating the Standby button (2) and control command buttons (3). Power and control commands can be executed from a WEB browser.

[Fig. 9.2] MAIN menu

1. Control status
2. Control status boxes
3. Control command button
4. AUTO RELOAD TIMER
5. RELOAD button
9.2.1 Control status boxes

Show the current control status.

- COMMAND EXECUTION lights in orange while the SWC-2000 executes a control command for external device.
- COMMAND ERROR lights in red if timeout between the SWC-2000 and controlled device occurs or if an error of IDK or PJLink product is replied.

【See: 7.6 Control status LED】

9.2.2 Standby button

Powers on and off the SWC-2000.

- Green: Operation mode
- Black: Standby mode

9.2.3 Control command buttons

Operate the control command buttons.

Numbers displayed on top of control command button can be changed from “9.3 NAME EDIT menu”.

Button colors:

- Green: An executable control command is linked.
- Orange: An executable control command is linked. (PLANE B)
- Black: No executable control command is linked.

* Only when “TOGGLE” of each control command is selected.

【See: 9.3 NAME EDIT menu】
【See: 9.10.2 TOGGLE and COMMAND (Linking control command)】
9.2.4 AUTO RELOAD TIMER

Updates the WEB menu automatically and displays it on the WEB browser.

Enter the desired number of seconds (10 to 65535) into the “AUTO RELOAD TIMER” field.
- 0: Does not update [Default]
- 10 to 65535 seconds

Click the SET button to apply the setting.

9.2.5 RELOAD button

Reloads the displayed WEB menu and displays it on the WEB browser.
Click the “RELOAD” button.
9.3 NAME EDIT menu

You can display the NAME EDIT menu by entering “http://(SWC-2000’s IP address)/nameedit.html” into the address bar.

This menu is for editing the name of control command button.

[Fig. 9.3] NAME EDIT menu

① WEB menu link
② BUTTON NAME EDIT
③ RELOAD button
④ SEND button
9.3.1 WEB menu links
Jump to the selected Web menu.
Click the desired link.

9.3.2 BUTTON NAME EDIT
Edits names of control command buttons displayed on the MAIN menu.
Type the desired name (Up to 10 one-byte alphabet and numbers) directly into boxes 1 to 16 to change the name and click the “SEND” button.

【See: 9.2 MAIN menu】

9.3.3 RELOAD button
Reloads the displayed WEB menu and displays it on the WEB browser.
Click the “RELOAD” button.

9.3.4 SEND button
Registers the name of control command button.
Click the “SEND” button.
9.4 DATA MONITOR menu

You can display the DATA MONITOR menu by entering “http://(SWC-2000’s IP address)/ datamonitor.html” into the address bar.

This menu is for displaying communication history of sent and received control commands.

[Fig. 9.4] DATA MONITOR menu

① WEB menu
② DATA MONITOR
③ HEX / ASCII button
④ STOP / RUN button
⑤ CLEAR button
9.4.1 WEB menu links
Jump to the selected Web menu.
Click the desired link.

9.4.2 DATA MONITOR
Shows the communication histories of sent control commands and received reply commands for LAN1 to LAN7 and RS-232C.

9.4.3 HEX / ASCII button
Switches HEX/ASCII.
Click the HEX button or ASCII button.

9.4.4 STOP / RUN button
Stops or starts automatic updating of DATA MONITOR menu.

STOP: Stops the automatic updating temporarily.
RUN : Restarts the automatic updating.

9.4.5 CLEAR button
Deletes communication histories of sent control commands and received reply commands.
Click the “CLEAR” button.
9.5 COMMAND EDIT menu (Control command list)

You can display the COMMAND EDIT menu by entering “http://(SWC-2000’s IP address)/commandedit.html” into the address bar.

Click the command number button you want to edit to jump to the COMMAND EDIT menu.

[Fig. 9.7] COMMAND EDIT menu (Control command list)

① WEB menu links
② EXTERNAL CONTROL COMMAND LIST
③ COMMAND COPY / DELETE
④ RELOAD button
9.5.1 WEB menu links

Jump to the selected Web menu.
Click the desired link.

9.5.2 EXTERNAL CONTROL COMMAND LIST

Edits control commands 1 to 32.
Click the desired CMD button to open the advanced setting page.
Notes entered in “9.6 COMMAND EDIT menu (Advanced setting of control command)” are displayed in the “MEMO” field.

【See: 9.6 COMMAND EDIT menu (Advanced setting of control command)】

9.5.3 COMMAND COPY / DELETE

Copies and deletes registered control commands.
For copying: Select the desired CMD numbers and click the “COPY” button.
For deleting: Select the desired CMD number and click the “DELETE” button.

Example: COPY
A control command registered in CMD1 will be copied to CMD10 when the “COPY” button is clicked.

[COPY CMD1 TO CMD10 COPY] [Fig. 9.8] Copy

Example: DELETE
A control command registered in CMD1 will be deleted when the “DELETE” button is clicked.

[DELETE CMD1 DELETE] [Fig. 9.9] Delete

9.5.4 RELOAD button

Reloads the displayed WEB menu and displays it on the WEB browser.
Click the “RELOAD” button.
9.6 COMMAND EDIT menu (Advanced setting of control command)

You can display the COMMAND EDIT menu by clicking the desired CMD button.

[Fig. 9.10] COMMAND EDIT menu (Advanced setting of control command)

① WEB menu
② Setting control command
③ LINK button
④ TEMPLATE button
⑤ RELOAD button
⑥ BACK button
⑦ SEND button
9.6.1 WEB menu links

Jump to the selected Web menu.
Click the desired link.

9.6.2 Setting control command

You can set control commands by setting the following items.

[Table 9.1] Setting control command

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Setting value</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEMO</td>
<td>Register up to 14 characters as a note. The registered note is displayed on the control command list.</td>
<td>20 to 7D in ASCII codes except for 2C (,)</td>
</tr>
<tr>
<td>&lt;PORT&gt; (Communication port)</td>
<td>Select communication port that sends control commands</td>
<td>Not ticked: Does not send [Default]</td>
</tr>
<tr>
<td></td>
<td>The port can be set separately, and communication commands can be sent to multiple communication ports at the same time.</td>
<td>Ticked: Sends</td>
</tr>
<tr>
<td></td>
<td>• RS1: RS-232C CH1 *1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• LOOP BACK: Internal loop back</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• LAN1 to LAN7: LAN connection 1 to 7 *2</td>
<td></td>
</tr>
<tr>
<td>&lt;COMMAND SETTING&gt;</td>
<td>DELAY Set the waiting time of the control command. Use this item for devices such as projectors that requires time to cool down after powering off.</td>
<td>“0” ms to “999999” ms [Default]: 0 ms</td>
</tr>
<tr>
<td>TIME OUT<em>3</em>4</td>
<td>Set the timeout time for reply command to a sent command. If you do not use the function, set this item to “0”.</td>
<td>“0” ms to “999999” ms [Default]: “0” ms</td>
</tr>
<tr>
<td>INTERVAL for retry<em>3</em>4</td>
<td>Set the retry interval to resend the command.</td>
<td>“0” ms to “999999” ms [Default]: “0” ms</td>
</tr>
<tr>
<td>RETRY (the number of retries)<em>3</em>4</td>
<td>Set the number of retries to resend the same command again if no valid response is replied.</td>
<td>“0” to “99” times [Default]: “0”</td>
</tr>
<tr>
<td>RETRY OVER (when a retry error occurs)*3</td>
<td>Set whether the next command is to be executed or not if no valid response is replied, even after completing retry for the set number of retries.</td>
<td>STOP: Stops control command [Default] EXEC: Continues control commands</td>
</tr>
</tbody>
</table>
### Table 9.2 Setting control command (Cont’d)

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Setting value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>&lt;DATA&gt;</strong></td>
<td><strong>INPUT MODE</strong> (Input mode of sent command data)</td>
<td>Set the input mode of sent command data. Select “ASCII” if “DATA” of “COMMAND” consists of only 0A, 0D, and 20 to 7D of ASCII codes. Select “HEX” if “DATA” of “COMMAND” includes other codes.</td>
</tr>
<tr>
<td></td>
<td><strong>SIZE</strong></td>
<td>Set the number of bytes to be sent starting with the first byte. Selectable only if “INPUT MODE” is set to “HEX”.</td>
</tr>
<tr>
<td></td>
<td><strong>DATA</strong> (Sent command data)</td>
<td>Set the command from the first byte according to the number of bytes set in “COM SIZE” (up to 30 bytes).</td>
</tr>
<tr>
<td><strong>&lt;REPLY&gt;</strong></td>
<td><strong>REPLY DISPLAY</strong> (Checking received data)</td>
<td>Select “ASCII” or “HEX” to check the timeout for when an error occurs in IDK products and PJLink.</td>
</tr>
<tr>
<td></td>
<td><strong>DELIMITER</strong> (Checking delimiter)</td>
<td>Check the “DELIMITER” box and specify the desired value to check the delimiter which is sent at the very last of the received data. If you uncheck the box, all received data within the time that is set for “TIME OUT” will be effective. If you check the box, received data including delimiter will be effective.</td>
</tr>
<tr>
<td></td>
<td><strong>REPLY COMMAND LINK</strong></td>
<td>Set a possible reply command to the sent command. Click the “LINK” button to open the &lt;REPLY COMMAND LINK&gt; page.</td>
</tr>
</tbody>
</table>

*1 If “RS-232C” is set to “ON”, RS-232C needs to be set to “TRANSMITTER” in “9.13 LAN / COM menu”.
*2 If you set commands to be output from LAN1 to LAN7, set “LAN/COM” to “TRANSMITTER”.
*3 If “REPLY COMMAND LINK” is set to “Not checked”, this item does not need to be set.
*4 If only “LOOP BACK” is sent, this item does not need to be set.
*5 If “REPLY DISPLAY” is set to “OFF”, this item does not need to be set.
*6 If “REPLY DISPLAY” is set to “ASCII” or “HEX”, this item cannot be set.
Loop back function
The SWC-2000 sends a communication command back to the SWC-2000 itself using the loop back function. It replies “OK” if processed normally while replying “NG” if parameter or command is incorrect. To check the reply command, set reply command 31 and 32 to “CHECK”.

Example: “INPUT MODE” is set to “ASCII”.

![Input box of control command (in ASCII)]

For special characters in ASCII, use the characters in the following table.

<table>
<thead>
<tr>
<th>HEX</th>
<th>ASCII</th>
<th>HEX</th>
<th>ASCII</th>
</tr>
</thead>
<tbody>
<tr>
<td>00</td>
<td>'NUL'</td>
<td>11</td>
<td>'DC1'</td>
</tr>
<tr>
<td>01</td>
<td>'SOH'</td>
<td>12</td>
<td>'DC2'</td>
</tr>
<tr>
<td>02</td>
<td>'STX'</td>
<td>13</td>
<td>'DC3'</td>
</tr>
<tr>
<td>03</td>
<td>'ETX'</td>
<td>14</td>
<td>'DC4'</td>
</tr>
<tr>
<td>04</td>
<td>'EOT'</td>
<td>15</td>
<td>'NAK'</td>
</tr>
<tr>
<td>05</td>
<td>'ENQ'</td>
<td>16</td>
<td>'SYN'</td>
</tr>
<tr>
<td>06</td>
<td>'ACK'</td>
<td>17</td>
<td>'ETB'</td>
</tr>
<tr>
<td>07</td>
<td>'BEL'</td>
<td>18</td>
<td>'18'</td>
</tr>
<tr>
<td>08</td>
<td>'BS'</td>
<td>19</td>
<td>'EM'</td>
</tr>
<tr>
<td>09</td>
<td>'HT'</td>
<td>1A</td>
<td>'SUB'</td>
</tr>
<tr>
<td>0A</td>
<td>'LF'</td>
<td>1B</td>
<td>'ESC'</td>
</tr>
<tr>
<td>0B</td>
<td>'VT'</td>
<td>1C</td>
<td>'FS'</td>
</tr>
<tr>
<td>0C</td>
<td>'0C'</td>
<td>1D</td>
<td>'GS'</td>
</tr>
<tr>
<td>0D</td>
<td>'CR'</td>
<td>1E</td>
<td>'RS'</td>
</tr>
<tr>
<td>0E</td>
<td>'SO'</td>
<td>1F</td>
<td>'US'</td>
</tr>
<tr>
<td>0F</td>
<td>'SI'</td>
<td>7F</td>
<td>'DEL'</td>
</tr>
<tr>
<td>10</td>
<td>'DLE'</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Example: “INPUT MODE” is set to “HEX”.

<table>
<thead>
<tr>
<th>INPUT MODE</th>
<th>HEX</th>
<th>CLEAR</th>
</tr>
</thead>
<tbody>
<tr>
<td>SIZE</td>
<td>8</td>
<td></td>
</tr>
</tbody>
</table>

```
<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
<th>15</th>
</tr>
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<td>20</td>
<td>20</td>
<td>20</td>
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<td>20</td>
<td>20</td>
<td>20</td>
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<td>20</td>
<td>20</td>
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<td></td>
</tr>
<tr>
<td>2</td>
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<td>20</td>
<td>20</td>
<td>20</td>
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<td></td>
</tr>
<tr>
<td>3</td>
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</tr>
</tbody>
</table>
```

[Fig. 9.12] Input box of control command (in HEX)
9.6.3 LINK button

Links reply commands.
Click the “LINK” button to open the page for setting reply commands and select the desired command.

![REPLY COMMAND LINK]

Check the LINK box and click the “OK” button to determine if the reply command is returned when the control command is sent.
If a reply command is received you can cancel the control command, send another control command, or the like.

【See: 9.7 REPLY COMMAND menu (Reply command list)】
9.6.4 TEMPLATE button

Registers control commands only by switching “MODE”.
You can open the template by clicking the “TEMPLATE” button.
IDK's control commands and PJLink commands are originally registered. You can register other commands directly.

【See: 10 Product specification】
【See: 9.6.2 Setting control command】

You can display buttons for inputting ASCII codes by selecting “ASCII” from the “MODE” in order to prevent incorrect input. (These buttons are displayed only if you set “INPUT MODE” to “HEX”.)

[Fig. 9.14] Input support for control commands
Control commands registered in the input support page supports commands for matrix switchers, multiple switchers, PJLink, and other products. The mode is switched depending on each product automatically.

![Diagram](image)

**[Fig. 9.15] Supported products**

**[Table 9.4] MODE**

<table>
<thead>
<tr>
<th>MODE</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>IDK</td>
<td>Displays control command’s templates for matrix switchers and multiple switchers.</td>
</tr>
<tr>
<td>MAKER</td>
<td>Displays control command templates for other companies' sink device.</td>
</tr>
<tr>
<td>PJLink</td>
<td>Displays PJLink command’s template.</td>
</tr>
<tr>
<td>ASCII *</td>
<td>Displays buttons for inputting ASCII codes.</td>
</tr>
</tbody>
</table>

* Displayed only if you set “INPUT MODE” to “HEX”.

---

52
If you set “MODE” to “IDK”, the “PRODUCT” list is displayed.

1. Select the desired “PRODUCT” to display supported control commands on the “COMMAND” list.

2. Select the desired control command and click the “OK” button to apply it to “9.6 COMMAND EDIT menu (Advanced setting of control command)”.

3. The control command is entered on the field below mentioned in red.

4. Since you can set the “DATA” items from this template, you need to edit “PORT” and “MEMO” as needed.
5. When you finish setting, click the “SEND” button.

![Figure 9.17](image-url) Control command has been input using input support
Setting PJLink
The SWC-2000 supports PJLink, which is a standard protocol to control projectors.
For "PORT", select the LAN port which is used for PJLink protocol so that you can select PJLink command when entering "DATA".

<table>
<thead>
<tr>
<th>No.</th>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>%1P0WR[SP]0[CR]</td>
<td>Power off (Standby)</td>
</tr>
<tr>
<td>2</td>
<td>%1P0WR[SP]1[CR]</td>
<td>Power on (Lamp on)</td>
</tr>
<tr>
<td>3</td>
<td>%1P0WR[SP]?[CR]</td>
<td>Get power status</td>
</tr>
<tr>
<td>4</td>
<td>%1INPT[SP]1*1[CR]</td>
<td>Switch input to RGB</td>
</tr>
<tr>
<td>5</td>
<td>%1INPT[SP]2*1[CR]</td>
<td>Switch input to VIDEO</td>
</tr>
<tr>
<td>6</td>
<td>%1INPT[SP]3*1[CR]</td>
<td>Switch input to DIGITAL</td>
</tr>
<tr>
<td>7</td>
<td>%1INPT[SP]4*1[CR]</td>
<td>Switch input to STORAGE</td>
</tr>
<tr>
<td>8</td>
<td>%1INPT[SP]5*1[CR]</td>
<td>Switch input to NETWORK</td>
</tr>
<tr>
<td>9</td>
<td>%1INPT[SP]?[CR]</td>
<td>Get input selection settings</td>
</tr>
<tr>
<td>10</td>
<td>%1AVMT[SP]10[CR]</td>
<td>Switch off video mute</td>
</tr>
<tr>
<td>11</td>
<td>%1AVMT[SP]11[CR]</td>
<td>Switch on video mute</td>
</tr>
<tr>
<td>12</td>
<td>%1AVMT[SP]20[CR]</td>
<td>Switch off audio mute</td>
</tr>
<tr>
<td>13</td>
<td>%1AVMT[SP]21[CR]</td>
<td>Switch on audio mute</td>
</tr>
<tr>
<td>14</td>
<td>%1AVMT[SP]30[CR]</td>
<td>Video+audio mute off</td>
</tr>
<tr>
<td>15</td>
<td>%1AVMT[SP]31[CR]</td>
<td>Video+audio mute on</td>
</tr>
<tr>
<td>16</td>
<td>%1AVMT[SP]?[CR]</td>
<td>Get mute settings</td>
</tr>
<tr>
<td>17</td>
<td>%1ERS? [CR]</td>
<td>Get error status</td>
</tr>
<tr>
<td>18</td>
<td>%1LAMPS? [CR]</td>
<td>Get time and status of lamp</td>
</tr>
<tr>
<td>19</td>
<td>%1INS? [CR]</td>
<td>Get list of switching input</td>
</tr>
<tr>
<td>20</td>
<td>%1NAME? [CR]</td>
<td>Get projector name</td>
</tr>
<tr>
<td>21</td>
<td>%1NAME2? [CR]</td>
<td>Get manufacture name</td>
</tr>
<tr>
<td>22</td>
<td>%1NAME2? [CR]</td>
<td>Get product name</td>
</tr>
<tr>
<td>23</td>
<td>%1INFO? [CR]</td>
<td>Get other information (optional of manufacturer)</td>
</tr>
</tbody>
</table>

(SP): space; (CR): delimiter
*1: You can specify the input number from 1 to 9, but types and the number of selectable input connectors differ depending on the projector. “1” is displayed by default.
Reply command structure for PJLink commands:
The first 6 bites: the sent command data without change; the 7th bite: "="; after the 8th bite: processing result
PJLink specifications regulate that projectors are required to reply the reply commands within 2 seconds after receiving the PJLink command. However, some projectors have different specifications. Check the manual of your projector and apply the response time indicated in the manual if there is one listed.

**[Table 9.6] Reply commands to PJLink command (class1)**

<table>
<thead>
<tr>
<th>No.</th>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>% 1 x x x x = O K (CR)</td>
<td>Terminated normally</td>
</tr>
<tr>
<td>2</td>
<td>% 1 x x x x = E R R 1 (CR)</td>
<td>Mistake in command itself</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Undefined command)</td>
</tr>
<tr>
<td>3</td>
<td>% 1 x x x x = E R R 2 (CR)</td>
<td>Invalid parameter</td>
</tr>
<tr>
<td>4</td>
<td>% 1 x x x x = E R R 3 (CR)</td>
<td>Currently not acceptable</td>
</tr>
<tr>
<td>5</td>
<td>% 1 x x x x = E R R 4 (CR)</td>
<td>Malfunction of projector</td>
</tr>
</tbody>
</table>

**[Table 9.7] Reply commands to status query command**

<table>
<thead>
<tr>
<th>No.</th>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Reply command to power status commands</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>% 1 P O W R = 0 (CR)</td>
<td>Stand by</td>
</tr>
<tr>
<td>2</td>
<td>% 1 P O W R = 1 (CR)</td>
<td>Power ON</td>
</tr>
<tr>
<td>3</td>
<td>% 1 P O W R = 2 (CR)</td>
<td>Cooling</td>
</tr>
<tr>
<td>4</td>
<td>% 1 P O W R = 3 (CR)</td>
<td>Warming up</td>
</tr>
<tr>
<td></td>
<td>Reply command to input status commands</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>% 1 I N P T = 1 *2 (CR)</td>
<td>RGB selected</td>
</tr>
<tr>
<td>2</td>
<td>% 1 I N P T = 2 *2 (CR)</td>
<td>VIDEO selected</td>
</tr>
<tr>
<td>3</td>
<td>% 1 I N P T = 3 *2 (CR)</td>
<td>DIGITAL selected</td>
</tr>
<tr>
<td>4</td>
<td>% 1 I N P T = 4 *2 (CR)</td>
<td>STORAGE selected</td>
</tr>
<tr>
<td>5</td>
<td>% 1 I N P T = 5 *2 (CR)</td>
<td>NETWORK selected</td>
</tr>
<tr>
<td></td>
<td>Get mute settings</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>% 1 A V M T = 3 0 (CR)</td>
<td>Video+audio Mute OFF</td>
</tr>
<tr>
<td>2</td>
<td>% 1 A V M T = 1 1 (CR)</td>
<td>Video Mute ON</td>
</tr>
<tr>
<td>3</td>
<td>% 1 A V M T = 2 1 (CR)</td>
<td>Audio Mute ON</td>
</tr>
<tr>
<td>4</td>
<td>% 1 A V M T = 3 1 (CR)</td>
<td>Video+audio mute ON</td>
</tr>
<tr>
<td></td>
<td>Get error status</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>% 1 E R S T = *3 *4 *5 *6 *7 *8 (CR)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Get time and status of lamp</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>% 1 L A M P = *9 (SP) *10 (CR)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Get list of input switching</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>% 1 I N S T = *11 (CR)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Get projector name</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>% 1 N A M E = *12 (CR)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Get manufacturer name</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>% 1 I N F 1 = *13 (CR)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Get product name</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>% 1 I N F 2 = *13 (CR)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Get other information (optional)</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>% 1 I N F O = *13 (CR)</td>
<td></td>
</tr>
</tbody>
</table>

*2: Input number, which is any of “1” to “9”, but types and the numbers of selectable input connectors differ depending on connected projectors.

*3: Fan error

*4: Lamp error
*5: Temperature error
*6: Cover open error
*7: Filter error
  0: No error/No error detection function, 1: Warning, 2: Error
*8: Other errors
*9: Accumulated time of lamp, which is any of 0 to 99999.
  (For projectors that do not count the accumulated time, the value is 0 at all times.)
*10: Whether the lamp illuminates or not (0 or 1).
    0: Not illuminate, 1: Illuminates
    For devices containing multiple lamps, the accumulated time and status separated with a (SP) are sent.
*11: Source number, which is input switchable. Any of 11 to 59 (Meaning is the same as that of “%INPT” command). For devices containing several inputs, several statuses separated with a (SP) are sent.
*12: Up to 64 characters, 20 to FF in hex.
*13: Up to 32 characters, 20 to 7F in hex.
9.6.5 **RELOAD button**

Reloads the displayed WEB menu and displays it on the WEB browser. Click the “RELOAD” button.

9.6.6 **BACK button**

Returns to the COMMAND EDIT menu (control command list). Click the “BACK” button.

9.6.7 **SEND button**

Applies settings of COMMAND EDIT menu to the SWC-2000. Click the “SEND” button.
9.7 REPLY COMMAND menu (Reply command list)

You can display the REPLY COMMAND menu (Reply command list) by entering “http://(SWC-2000’s IP address)/replycommand.html” into the address bar.

Up to 32 reply commands can be registered

Click the command number button you want to edit to jump to the COMMAND EDIT menu. Select the reply command number you want to edit.

![Fig. 9.18] Rely command edit page

① WEB menu link
② REPLY COMMAND LIST
③ REPLY COMMAND COPY/DELETE
④ Reload button
9.7.1 WEB menu links

Jump to the clicked WEB menu.
Click the desired link.

9.7.2 REPLY COMMAND LIST

Displays MEMOs (notes) that includes reply command CMD and reply command name of reply commands1 to 32. You can set MEMOs in “9.8 REPLY COMMAND menu (Advanced setting of reply command)”. Click the desired CMD button to display the detailed setting page.

Prerequisite N/A
Settable range “CMD” button: CMD 1 to CMD 32

9.7.3 REPLY COMMAND COPY/DELETE

Copies and deletes registered reply commands.
For copying: Select the desired CMD numbers and click the “COPY” button.
For deleting: Select the desired CMD number and click the “DELETE” button.

Example: COPY
A reply command registered in CMD1 will be copied to CMD10 when the “COPY” button is clicked.

[Fig. 9.19] Copy setting

Example: DELETE
A reply command registered in CMD1 will be deleted when the “DELETE” button is clicked.

[Fig. 9.20] Delete setting

9.7.4 Reload button

Reloads the displayed WEB menu and displays it on the WEB browser.
Click the “RELOAD” button.
9.8  REPLY COMMAND menu (Advanced setting of reply command)

You can display the following page by clicking the “CMD” button on REPLY COMMAND menu (Reply command list)

[Fig. 9.21] REPLY COMMAND menu (Advanced setting of reply command)

① WEB menu link  
② Setting reply command  
③ TEMPLATE button  
④ RELOAD button  
⑤ BACK button  
⑥ SEND button
9.8.1 WEB menu links

Jump to the clicked WEB menu.
Click the desired link.

9.8.2 Setting reply command

You can set reply commands by setting the following items.

[Table 9.8] Setting items of reply command

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Setting value</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEMO</td>
<td>Register up to 14 characters as a note. The registered note is displayed on the reply command list.</td>
<td>20 to 7D in ASCII codes except for “2C” (,) “20” [Default] 20</td>
</tr>
<tr>
<td>PROCESS</td>
<td>Select “STOP” (to stop the next operation), “EXEC” (to execute it), or “RETRY” (to send the command again) for when received data and reply command data match.</td>
<td>STOP EXEC [Default] RETRY: Resend commands</td>
</tr>
<tr>
<td>INPUT MODE</td>
<td>Set the input mode of reply command data. Select “ASCII” if “DATA” of “COMMAND” consists of only 0A, 0D, and 20 to 7D of ASCII codes. Select “HEX” if “DATA” of “COMMAND” includes other codes.</td>
<td>ASCII [Default] HEX</td>
</tr>
<tr>
<td>SIZE</td>
<td>Set the number of bytes to be received starting with the first byte. Selectable only if “INPUT MODE” is set to “HEX”.</td>
<td>“0” to “30” “0” [Default]</td>
</tr>
<tr>
<td>DATA</td>
<td>Set the command from the first byte according to the number of bytes set in “SIZE” (up to 30 bytes, case sensitive).</td>
<td>0A, 0D, 20 to 7D in ASCII, 00 to FF in hex [Default]: 20 (space)</td>
</tr>
<tr>
<td>MASK</td>
<td>The binary AND operation is executed for the received data and MASK data. The result data is compared with the reply command data. (Use this item to determine the state using the received data bit. Settable if “COMMAND INPUT MODE” is set to “HEX”; if “ASCII” is selected, “FF” is set automatically.)</td>
<td>00 to FF (Hex) [Default]: All: “FF”</td>
</tr>
</tbody>
</table>

Those default values do not apply to reply commands 31 and 32
Click the “CLEAR” button to restore the default value of SIZE, DATA and MASK.
### Loop back function

If the SWC-2000 sends a communication command back to the SWC-2000 itself using the loop back function, it replies “OK” if processed normally while it replies “NG” if parameter or command is incorrect. (This differs from reply commands to communication commands received externally; not loop back.) Since “OK” and “NG” are registered to reply commands 31 and 32 by factory default, respectively, do not edit or delete those commands if you use the loop back function and check reply commands.

<table>
<thead>
<tr>
<th>Number</th>
<th>SIZE</th>
<th>PROCESS</th>
<th>DATA</th>
<th>MASK</th>
<th>MEMO</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0 byte</td>
<td>EXEC</td>
<td>All: 00</td>
<td>All: FF</td>
<td>All: 20 (space)</td>
</tr>
<tr>
<td>2</td>
<td>0 byte</td>
<td>EXEC</td>
<td>All: 00</td>
<td>All: FF</td>
<td>All: 20 (space)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Number</th>
<th>SIZE</th>
<th>PROCESS</th>
<th>DATA</th>
<th>MASK</th>
<th>MEMO</th>
</tr>
</thead>
<tbody>
<tr>
<td>30</td>
<td>0 byte</td>
<td>EXEC</td>
<td>All: 00</td>
<td>All: FF</td>
<td>All: 20 (space)</td>
</tr>
<tr>
<td>31</td>
<td>2 bytes</td>
<td>EXEC</td>
<td>OK</td>
<td>All: FF</td>
<td>OK</td>
</tr>
<tr>
<td>32</td>
<td>2 bytes</td>
<td>STOP</td>
<td>NG</td>
<td>All: FF</td>
<td>NG</td>
</tr>
</tbody>
</table>

【See: 9.6.2 Setting control command】
### Mask data

The binary AND operation is executed for the received data and MASK data. The result data is compared with the reply command data. You can set the AND operation if you want to check the status by bits of the received data.

[If ASCII codes (text) are replied from an external device]

Since the received data and “Reply command data” are compared without any changes, set “MASK” to “FF”. (If you set “COMMAND INPUT MODE” of reply command to “ASCII”, it is automatically set to “FF”.)

For example, if "0" of ASCII codes (“30” in hex) is replied:

<table>
<thead>
<tr>
<th>Binary (Received data)</th>
<th>00110000</th>
<th>Binary (MASK)</th>
<th>11111111</th>
<th>Hexadecimal</th>
<th>=30</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Reply command data)</td>
<td>00110000</td>
<td></td>
<td></td>
<td>=30 matched</td>
<td></td>
</tr>
</tbody>
</table>

[If status is determined using bits of the received data]

Set only bits that determine the Mask data to “1” and set other bits to “0”.

For example, if determining status using the second bit from the left:

<table>
<thead>
<tr>
<th>Binary (Received data)</th>
<th>11111111</th>
<th>&amp; (MASK)</th>
<th>01000000</th>
<th>Hexadecimal</th>
<th>=40</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Reply command data)</td>
<td>01000000</td>
<td></td>
<td></td>
<td>=40 matched</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Binary (Received data)</th>
<th>10111111</th>
<th>&amp; (MASK)</th>
<th>01000000</th>
<th>Hexadecimal</th>
<th>=00</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Reply command data)</td>
<td>01000000</td>
<td></td>
<td></td>
<td>=00 not matched</td>
<td></td>
</tr>
</tbody>
</table>
9.8.3 TEMPLATE button

Registers reply commands only by selecting the desired command from list.
You can open the template for reply command by clicking the “TEMPLATE” button.
IDK’s reply commands and PJLink commands are originally registered. You can register other commands directly.

You can display buttons for inputting ASCII codes by selecting “ASCII” from the “MODE” in order to prevent incorrect input. (These buttons are displayed only if you set “INPUT MODE” to “HEX”.)

![Figure 9.22] Input support for reply command

The mode is switched automatically in accordance with the product.
### [Fig. 9.23] Supported products

### [Table 9.10] MODE

<table>
<thead>
<tr>
<th>MODE</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>IDK</td>
<td>Displays reply command’s templates for matrix switchers and multiple switchers.</td>
</tr>
<tr>
<td>PJLink</td>
<td>Displays PJLink command’s template.</td>
</tr>
<tr>
<td>ASCII*</td>
<td>Displays buttons for inputting ASCII codes. For all products</td>
</tr>
</tbody>
</table>

* Displayed only if you set “INPUT MODE” to “HEX”.

If you set “INPUT MODE” to “ASCII”, the following input box is displayed.

![Control command input box for ASCII](image)

Enter ‘CR’ for 0D in hex.
Use the following values if you set “INPUTMODE” to “ASCII” and enter special characters.

### Table 9.11 Values for special characters

<table>
<thead>
<tr>
<th>HEX</th>
<th>ASCII</th>
<th>HEX</th>
<th>ASCII</th>
</tr>
</thead>
<tbody>
<tr>
<td>“00”</td>
<td>‘NUL’</td>
<td>“11”</td>
<td>‘DC1’</td>
</tr>
<tr>
<td>“01”</td>
<td>‘SOH’</td>
<td>“12”</td>
<td>‘DC2’</td>
</tr>
<tr>
<td>“02”</td>
<td>‘STX’</td>
<td>“13”</td>
<td>‘DC3’</td>
</tr>
<tr>
<td>“03”</td>
<td>‘ETX’</td>
<td>“14”</td>
<td>‘DC4’</td>
</tr>
<tr>
<td>“04”</td>
<td>‘EOT’</td>
<td>“15”</td>
<td>‘NAK’</td>
</tr>
<tr>
<td>“05”</td>
<td>‘ENQ’</td>
<td>“16”</td>
<td>‘SYN’</td>
</tr>
<tr>
<td>“06”</td>
<td>‘ACK’</td>
<td>“17”</td>
<td>‘ETB’</td>
</tr>
<tr>
<td>“07”</td>
<td>‘BEL’</td>
<td>“18”</td>
<td>‘18’</td>
</tr>
<tr>
<td>“08”</td>
<td>‘BS’</td>
<td>“19”</td>
<td>‘EM’</td>
</tr>
<tr>
<td>“09”</td>
<td>‘HT’</td>
<td>“1A”</td>
<td>‘SUB’</td>
</tr>
<tr>
<td>“0A”</td>
<td>‘LF’</td>
<td>“1B”</td>
<td>‘ESC’</td>
</tr>
<tr>
<td>“0B”</td>
<td>‘VT’</td>
<td>“1C”</td>
<td>‘FS’</td>
</tr>
<tr>
<td>“0C”</td>
<td>‘0C’</td>
<td>“1D”</td>
<td>‘GS’</td>
</tr>
<tr>
<td>“0D”</td>
<td>‘CR’</td>
<td>“1E”</td>
<td>‘RS’</td>
</tr>
<tr>
<td>“0E”</td>
<td>‘00’</td>
<td>“1F”</td>
<td>‘US’</td>
</tr>
<tr>
<td>“0F”</td>
<td>‘SI’</td>
<td>“7F”</td>
<td>‘DEL’</td>
</tr>
<tr>
<td>“10”</td>
<td>‘DLE’</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

If you set “INPUT MODE” to “HEX”, the following input boxes for reply command data and mask data are displayed.

### Fig. 9.25 Reply command input boxes for HEX

### Fig. 9.26 Mask data input boxes for HEX
If you set "MODE" to "IDK", the "PRODUCT" list is displayed.

1. Select the desired "PRODUCT" to display reply commands for each product on the "COMMAND" list.

2. Select the desired control command and click the “OK” button to apply it to “9.7 REPLY COMMAND menu (Reply command list)".

3. The control command is entered on the field below mentioned in red.

4. Since you can set the “DATA” and “MASK” items from this template, you need to edit “MEMO” and “PROCESS” as needed.
5. When you finish setting, click the “SEND” button.

![Fig. 9.28] Reply command has been input using input support

### 9.8.4 RELOAD button

Reloads the displayed WEB menu and displays it on the WEB browser. Click the “RELOAD” button.

### 9.8.5 BACK button

Returns to the REPLYCOMMAND menu (Reply command list). Click the “BACK” button.

### 9.8.6 SEND button

Applies settings of REPLYCOMMAND menu (Advanced setting of reply command) to the SWC-2000. Click the “SEND” button.
9.9 COMMAND LINK menu (Selecting button)

You can display the COMMAND LINK menu by entering “http://(SWC-2000’s IP address)/commandlink.html” into the address bar.

This menu is for selecting the button to which registered control command is linked.

[Fig. 9.29] COMMAND LINK

① WEB menu
② STANDBY BUTTON
③ INVALID TIME
④ RELOAD
9.9.1 WEB menu links

Jump to the clicked WEB menu.
Click the desired link.

9.9.2 STANDBY BUTTON

Edits linking between Standby buttons and control command buttons.

[Table 9.12] Link edit button

<table>
<thead>
<tr>
<th>POWER</th>
<th>BUTTON</th>
</tr>
</thead>
<tbody>
<tr>
<td>POWER ON</td>
<td>POWER OFF</td>
</tr>
<tr>
<td></td>
<td>Control command buttons 1 to 16</td>
</tr>
</tbody>
</table>

【See: 7.7 Executing control command】

9.9.3 COMMAND LINK COPY/DELETE

Copies and deletes linking.
For copying: Select the desired CMD numbers and click the “COPY” button.
For deleting: Select the desired CMD number and click the “DELETE” button.

Example: COPY
Control commands linked to POWER ON will be copied to Control command button 1 when the “COPY” button is clicked.

[Fig. 9.30] Copy

Example: DELETE
Control commands linked to POWER ON will be deleted when the “DELETE” button is clicked.

[Fig. 9.31] Delete
9.9.4 INVALID TIME

Sets the waiting time from starting control command execution to receiving the next command. Use this menu to prevent repeated execution caused by pressing the control command execution key twice. Enter the desired number of milliseconds (0 to 999999) into the “INVALID TIME” field.
- 0ms to 999999ms
- [Default]: 0 ms

![INVALID TIME](image)

The longer time either of control command execution time or the time set in this menu will be applied as the invalid operation time. Only operations from ports that execute control commands will be invalid; operations from other ports can be performed. For example, if you execute a control command from the front panel, you cannot perform all operations from the front panel until the control command execution time or time set in this menu passes.

9.9.5 RELOAD button

Reloads the displayed WEB menu and displays it on the WEB browser. Click the “RELOAD” button.
## 9.10 COMMAND LINK menu

Links control commands to each execution condition.

![COMMAND LINK menu](image)

### [Fig. 9.33] COMMAND LINK menu (Linking)

1. WEB menu
2. TOGGLE and COMMAND (Linking control command)
3. RELOAD
4. BACK button
5. SEND button
9.10.1 WEB menu links

Jump to the clicked WEB menu.
Click the desired link.

9.10.2 TOGGLE and COMMAND (Linking control command)

Links up to 10 commands to an execution condition of control command.
If multiple commands are linked, commands are executed in order of registration. If the same command is
linked for several times, it is repeatedly executed.
When you finish setting, click the “SET” button.
Setting values:
- OFF [Default]
- Control command1 to 32

* Functions can be executed also from “9.2 MAIN menu” and control commands. (Power ON/OFF is not
executed if power is supplied from the AC adapter.)

Select a control command that is registered in “9.6.2 Setting control command”. If you do not want to
execute, select “OFF”.

Tick “TOGGLE” to execute PLANE-A and PLANE-B commands alternately and select “AUTO”, “PLANE A”, or
“PLANE B” for “STARTUP STATUS”. If you select “AUTO”, the condition at the time of power OFF will be
maintained.
[Default] All “TOGGLE”: Unticked (disabled)
9.10.3 **RELOAD button**

Reloads the displayed WEB menu and displays it on the WEB browser. Click the “RELOAD” button.

9.10.4 **BACK button**

Returns to the COMMAND LINK menu (Selecting button). Click the “BACK” button.

9.10.5 **SEND button**

Applies settings of COMMAND LINK menu to the SWC-2000. Click the “SEND” button.
9.11 COMMAND EXECUTION menu

You can display the COMMAND EXECUTION menu by entering “http://(SWC-2000’s IP address)/commandexecution.html)” into the address bar. This menu is for executing a control command that is registered to the SWC-2000 if the SWC-2000 is powered on.

[Fig. 9.35] COMMAND EXECUTION menu

① WEB menu link
② EXTERNAL CONTROL COMMAND LIST…
③ COMMAND EXECUTION/COMMAND ERROR
9.11.1 WEB menu links

Jump to the clicked WEB menu.
Click the desired link.

9.11.2 EXTERNAL CONTROL COMMAND LIST

Executes a registered control command
Click the desired control command button.

9.11.3 COMMAND EXECUTION/COMMAND ERROR indicator

Shows the current control status.

COMMAND EXECUTION:
- Black : The SWC-2000 does not execute a control command of external devices.
- Orange : The SWC-2000 executes a control command of external devices.

COMMAND ERROR:
- Black : No error occurs.
- Red : Timeout between the SWC-2000 and controlled device occurs or an error of IDK or PJLink products is replied.

[See: 7.6 Control status LED]
9.12 LED menu

You can display the LED menu by entering “http://(SWC-2000's IP address)/ led.html)” into the address bar. This menu is for setting LED’s lighting and its conditions.

![LED menu diagram]

[Fig. 9.36] LED menu

① WEB menu link
② Blinking pattern
③ Lighting condition
④ RELOAD
⑤ SEND button
⑥ LAST BUTTON MEMORY (Start-up lighting by group)
9.12.1 WEB menu links

Jump to the clicked WEB menu.
Click the desired link.

9.12.2 Blinking pattern

Sets the LED's blinking pattern of control command button.

If the execution is not complete even after the specified time passes, the LED continues to blink until the execution is complete.
If you specify the desired “TIME”, the LED continues to blink until the specified time comes.
When you finish setting, click the “SEND” button.

“FLASH TIME”:
- EXECUTION: Blinks while control commands are being executed [Default]
- OFF: Does not
“1-1000sec”: Continues to blink until the specified time (1 to 1000 seconds) comes.

9.12.3 Lighting condition

Sets when and which control command buttons will light.
Select one of the following options for “COMMAND TALLY”:
• REGISTERED: Lights when a control command is registered.
• EXECUTION: Lights while a control command is being executed.
• GROUP1 to 8: Control command buttons are divided into up to eight groups and the last clicked buttons of each group will light.
  ▪ Lights only if the control command is linked to the control command button and the button is pressed.
  ▪ Lights regardless of the execution result.
  ▪ If another button in the same group lights, the button keeps lighting.

When you finish setting, click the “SEND” button.
Example: Control commands are linked to control command buttons 1, 2, 7 to 10, and 13 to 18.

[Fig. 9.37] Grouping control command buttons

**Setting for** Each control command button

Each control command button has PLANE A and PLANE B. If you register commands for the both sides, they are executed alternately every time pressing the button.

**[Table 9.13] Toggle operation for control command button**

<table>
<thead>
<tr>
<th>COMMAND TALLY</th>
<th>You register a command only for one PLANE.</th>
<th>You register a command for both PLANES.</th>
</tr>
</thead>
<tbody>
<tr>
<td>REGISTERED</td>
<td>Lights if a control command is registered.</td>
<td>Lights if PLANE A will be executed at the next press; blinks if PLANE B will be executed at the next press.</td>
</tr>
<tr>
<td>EXECUTION</td>
<td>Lights while a control command is being executed.</td>
<td>Lights if PLANE A will be executed at the next press; does not light if PLANE B will be executed at the next press.</td>
</tr>
</tbody>
</table>

If execution time is 500 ms. or shorter, it lights for only 500 ms.
9.12.4 RELOAD button

Reloads the displayed WEB menu and displays it on the WEB browser. Click the “RELOAD” button.

9.12.5 SEND button

Applies settings of LED menu to the SWC-2000. Click the “SEND” button.

9.12.6 LAST BUTTON MEMORY (Start-up lighting by group)

Sets start-up lighting for control command buttons which are grouped in “9.12.3 Lighting condition”. Select “ON” or “OFF” for “LAST BUTTON MEMORY”.
- ON : The last lighting status will be maintained.
- OFF: Does not light. [Default]
9.13 LAN / COM menu

You can display the LAN/COM menu by entering “http://(SWC-2000’s IP address)/lancom.html” into the address bar.

This menu is for setting LAN and RS-232C communication to connect the SWC-2000 and external devices.

[Fig. 9.38] LAN / COM menu

① WEB menu
② LAN SETTING
③ Operation mode of LAN communication
④ COM SETTING
⑤ RELOAD
⑥ SEND button
9.13.1 WEB menu links

Jump to the clicked WEB menu.
Click the desired link.

9.13.2 LAN SETTING

Sets IP address, subnet mask, and gateway address to control the SWC-2000 externally.
The SWC-2000’s MAC address is also displayed, but it cannot be set.

When you finish setting, click the “SEND” button.

[Table 9.14] Setting address

<table>
<thead>
<tr>
<th>Item</th>
<th>Settable values</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>IP address</td>
<td>0.0.0.0 to 255.255.255.255</td>
<td>192.168.1.199</td>
</tr>
<tr>
<td>Subnet mask</td>
<td>0.0.0.0 to 255.255.255.255</td>
<td>255.255.255.0</td>
</tr>
<tr>
<td>Gateway address</td>
<td>0.0.0.0 to 255.255.255.255</td>
<td>192.168.1.200</td>
</tr>
</tbody>
</table>
9.13.3 Operation mode of LAN communication

Sets the operation mode of LAN communication.
Select “RECEIVER” or “TRANSMITTER” for “FUNCTION”.
- “RECEIVER” : The SWC-2000 is controlled externally.
- “TRANSMITTER”: The SWC-2000 controls external devices. Set the information of external device as shown below.

Connection is divided into the two purpose depending on the set port number: for communication commands and for WEB browser control.

When you finish setting, click the “SEND” button.

**[Table 9.15] LAN communication setting**

<table>
<thead>
<tr>
<th>Setting item</th>
<th>Operating mode</th>
</tr>
</thead>
<tbody>
<tr>
<td>[FUNCTION]</td>
<td></td>
</tr>
<tr>
<td>Operation mode</td>
<td>RECEIVER [Default]</td>
</tr>
<tr>
<td>[TRANSMITTER IP]</td>
<td></td>
</tr>
<tr>
<td>Destination IP address</td>
<td>N/A</td>
</tr>
<tr>
<td>[PJLink]</td>
<td></td>
</tr>
<tr>
<td>PjLink protocol connection</td>
<td>N/A</td>
</tr>
<tr>
<td>[TRANSMITTER PORT]</td>
<td></td>
</tr>
<tr>
<td>Destination port number&lt;sup&gt;1&lt;/sup&gt;</td>
<td>N/A</td>
</tr>
<tr>
<td>[PASSWORD]</td>
<td></td>
</tr>
<tr>
<td>PjLink protocol’s password&lt;sup&gt;2&lt;/sup&gt;</td>
<td>N/A</td>
</tr>
</tbody>
</table>

<sup>1</sup>: If “PJLink” is set to “ON”, the port number is “4352” fixed.
<sup>2</sup>: UP to 32 characters. You do not need to set a password if you do not want to use password authentication.

**[Table 9.16] TCP port number**

<table>
<thead>
<tr>
<th>Port</th>
<th>Setting value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication port for</td>
<td>23,1100,6000 to 6999</td>
</tr>
<tr>
<td>control commands</td>
<td></td>
</tr>
<tr>
<td>Communication port for WEB</td>
<td>80,5000 to 5999</td>
</tr>
<tr>
<td>browser</td>
<td></td>
</tr>
</tbody>
</table>

<sup>Default</sup> Connections1 to 3: 1100, Connections4 to 6: 23, Connection7: 80

**Tip:**
The SWC-2000 has a communication port only for WEB browser. You do not need to set connection if using only one PC.
9.13.4 COM SETTING

Set the RS-232C communication.

Select “RECEIVER” or “TRANSMITTER” for “FUNCTION”.
- “RECEIVER” : The SWC-2000 is controlled externally.
- “TRANSMITTER” : The SWC-2000 controls external devices. Set the information of external device as shown below.

When you finish setting, click the “SEND” button.

<table>
<thead>
<tr>
<th>Setting item</th>
<th>Setting value</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>[FUNCTION] Operation mode</td>
<td>RECEIVER,TRANSMITTER</td>
<td>RECEIVER</td>
</tr>
<tr>
<td>[BAUDRATE(bps)]</td>
<td>4800, 9600, 19200, 38400</td>
<td>9600</td>
</tr>
<tr>
<td>[DATA BITS] (bit)</td>
<td>8, 7</td>
<td>8</td>
</tr>
<tr>
<td>[PARITY CHECK]</td>
<td>NONE, EVEN, ODD</td>
<td>NONE</td>
</tr>
<tr>
<td>[STOP BITS] (bit)</td>
<td>1, 2</td>
<td>1</td>
</tr>
</tbody>
</table>

9.13.5 RELOAD button

Reloads the displayed WEB menu and displays it on the WEB browser.
Click the “RELOAD” button.

9.13.6 SEND button

Applies settings of LAN / COM menu.
Click the “SEND” button.
9.14 BACKUP / RESTORE menu

You can display the BACKUP / RESTORE menu by entering “http://(SWC-2000’s IP address)/backup.html” into the address bar.
This menu is for backing up the SWC-2000’s settings on the PC as a file that can be applied to other SWC-2000s.

[Fig. 9.39] BACKUP / RESTORE menu

① WEB menu links
② BACKUP
③ RESTORE
9.14.1 WEB menu links

Jump to the clicked WEB menu.
Click the desired link.

9.14.2 BACKUP

Downloads and save the settings saved in the SWC-2000.
Click the “DOWNLOAD” link to save the downloaded data on a PC as a backup file.

9.14.3 RESTORE

Applies saved setting data to the SWC-2000.

Click the “Browse…” button to select the backed up file and then click the “RESTORE” button to overwrite all settings.
9.15 OTHERS

You can display the OTHERS menu by entering “http://(SWC-2000’s IP address)/others.html” into the address bar.

![OTHERS menu diagram]

[Fig. 9.40] OTHERS menu

① WEB menu
② POWER ON SETTING STANDBY BUTTON
③ KEY LOCK BUTTON
④ AUTO LOCK
⑤ BUZZER
⑥ VERSION
⑦ RELOAD
⑧ SEND button
9.15.1 WEB menu links

Jump to the clicked WEB menu.
Click the desired link.

9.15.2 POWER ON SETTING STANDBY BUTTON

Sets the start-up status for when power is supplied from the AC adapter.

- AUTO: The last status is kept. [Default]
- OFF : Power off (standby)
- ON : Power on (the SWC-2000 is powered on completely)

Table 9.18] Start-up status setting

<table>
<thead>
<tr>
<th>Default setting of Standby button</th>
<th>Start-up status last time AC adapter is disconnected</th>
<th>Start-up status when power is supplied from AC adapter</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUTO</td>
<td>OFF</td>
<td>OFF</td>
</tr>
<tr>
<td>OFF</td>
<td>ON</td>
<td>ON</td>
</tr>
<tr>
<td>ON</td>
<td></td>
<td>OFF</td>
</tr>
</tbody>
</table>

9.15.3 KEY LOCK BUTTON

Enables/disables the KEYLOCK button.
If you select "DISABLE", the automatic lock of control command buttons ("9.15.4 AUTO LOCK") will be "OFF" automatically.
- ENABLE : Enables the KEYLOCK button. [Default]
- DISABLE : Disable the KEYLOCK button.

9.15.4 AUTO LOCK

Enables/disables the automatic lock.

- ON : When no operation is performed for 30 seconds, control command buttons will be locked automatically.
  Enable the keylock button ("9.15.3 KEY LOCK BUTTON") in order to enable this function.
- OFF : Disable the automatic lock. [Default]

9.15.5 BUZZER

Enables/disables the buzzer sound for when control command buttons or the KEYLOCK button are pressed.

- ON : Enables the buzzer sound. [Default]
- OFF : Disables the buzzer sound.
9.15.6 VERSION
Displays the firmware version.

9.15.7 RELOAD button
Reloads the displayed WEB menu and displays it on the WEB browser. Click the “RELOAD” button.

9.15.8 SEND button
Applies settings of OTHERS. Click the “SEND” button is clicked.
10 Product specification

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of control command buttons</td>
<td>16 buttons</td>
</tr>
<tr>
<td>Number of control commands that can be linked</td>
<td>Up to 10 commands per button</td>
</tr>
<tr>
<td>Number of control commands that can be registered</td>
<td>Up to 32 commands</td>
</tr>
<tr>
<td>Control</td>
<td></td>
</tr>
<tr>
<td>RS-232C</td>
<td>1 port/male D-sub (9-pin)</td>
</tr>
<tr>
<td>LAN</td>
<td>1 port/RJ-45 10Base-T/100Base-TX (Auto Negotiation), Auto MDI/MDI-X</td>
</tr>
</tbody>
</table>

Recommended products

- IDK’s MSD/FDX series
- PJLink supported products, and others (General purpose products)

General

- **AC adapter**
  - Input: 100 – 240 VAC ± 10%, 50 Hz/60 Hz ± 3 Hz
  - Output: DC 5 V 3 A (A dedicated AC adapter is provided)

- **Power consumption**
  - About 3 Watts

- **Dimensions**
  - 8.5 (W) x 3.5 (H) x 1.6 (D)" (215 (W) x 88 (H) x 40.6 (D) mm)
  - (Excluding connectors and the like) (*1)

- **Weight**
  - 1.8 lbs. (0.8 kg)

- **Temperature**
  - Operating: 32°F to 104°F (0°C to +40°C)
  - Storage: -4°F to +176°F (-20°C to +80°C)

- **Humidity**
  - Operating/Storage: 20% to 90% (Non Condensing)

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*1 When mounting the SWC-2000 to an EIA rack, use the optional rack mounting brackets. By using the mounting kit, one or two SWC-2000s can be mounted to the 2U EIA rack.

### Recommended products

<table>
<thead>
<tr>
<th>Items</th>
<th>Parts number</th>
</tr>
</thead>
<tbody>
<tr>
<td>IDK’s products</td>
<td></td>
</tr>
<tr>
<td>FDX-S series</td>
<td>FDX-S18U, FDX-S32U, FDX-S16, FDX-S32</td>
</tr>
<tr>
<td>FDX series</td>
<td>FDX-12UHD, FDX-32UHD, FDX-32, FDX-64</td>
</tr>
<tr>
<td>Other products</td>
<td>PJLink supported products, and others (General purpose products)</td>
</tr>
</tbody>
</table>
11 Troubleshooting

This chapter recommends what to do if you have problems operating the SWC-2000.

In case the SWC-2000 does not work correctly, please check the following items first.
- Are the SWC-2000 and all devices plugged in and powered on normally?
- Are cables connected correctly?
- Are there no loose connections?
- Are appropriate cables supported by devices being used?
- Are specifications of connected devices matched to each other?
- Are settings of the sink device correct?
- Are there any close objects that may cause noise?

If the problem still cannot be solved, perform the following actions. Refer to manuals of connected devices as well, since they may possibly be the cause of the problem.

<table>
<thead>
<tr>
<th>Problem</th>
<th>Cause/Check item/Solution</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>● Button operation</td>
<td>Buttons do not operate. Ensure that keys are not locked.</td>
<td>26</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Since no control command is registered by factory default, control command buttons do not work. Register and link control commands in order to enable these keys.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>When a control command is executed using a control command button or external device, all buttons are disabled until the command is executed or &quot;INVALID TIME&quot; passes.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Control command buttons can be set to be disabled for a desired time. Check the setting.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Immediately after start-up, all buttons are disabled until the connection of the sink device is confirmed.</td>
</tr>
<tr>
<td>● Control command</td>
<td>Control command control from the PC to the SWC-2000 cannot be executed. Are the following items set correctly? For RS-232C: baud rate and data length For LAN: IP address and subnet mask</td>
<td>83</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Is the operation mode of the communication port set to &quot;RECEIVER&quot; mode? If it is set to &quot;TRANSMITTER&quot; mode, the communication command of the SWC-2000 cannot be executed externally.</td>
</tr>
<tr>
<td></td>
<td>“@ERR,6” is returned. If control commands are executed by communication commands, control command communication are disabled until the control commands are executed or &quot;INVALID TIME&quot; passes.</td>
<td>72</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Immediately after start-up, the communication command control function is disabled until the connection of the external device is confirmed.</td>
</tr>
<tr>
<td>Problem</td>
<td>Cause/Check item/Solution</td>
<td>Page</td>
</tr>
<tr>
<td>---------</td>
<td>--------------------------</td>
<td>------</td>
</tr>
<tr>
<td>● Sending control command function</td>
<td>Control command is not sent.</td>
<td>46</td>
</tr>
<tr>
<td></td>
<td>Ensure that the registered control command and the number of bytes are correct. Devices requiring delimiters may not execute commands if the delimiters are not sent. If the set number of bytes is not correct, the control command is not sent completely or unnecessary data is sent after the control command.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Is the registered control command linked to the desired control command execution condition?</td>
<td>74</td>
</tr>
<tr>
<td></td>
<td>Is the communication operation mode set to “TRANSMITTER” mode? In order to send the control command, set the communication port to “TRANSMITTER” mode. If using LAN, set the IP address and other settings of the connected device.</td>
<td>82</td>
</tr>
<tr>
<td>● WEB menu</td>
<td>Settings are not saved or applied to the operation.</td>
<td>35</td>
</tr>
<tr>
<td></td>
<td>For some WEB menus, settings are not applied until the “SEND” button or “SET” button is clicked.</td>
<td></td>
</tr>
</tbody>
</table>

If additional assistance is required, please perform the following tests and then contact us.

<table>
<thead>
<tr>
<th>No.</th>
<th>Checking items</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The problem occurs at all connectors?</td>
<td>Yes or No</td>
</tr>
<tr>
<td>2</td>
<td>Connect the devices using genuine cables without connecting the SWC-2000. The problem still cannot be solved? Please contact us for assistance.</td>
<td>Yes or No</td>
</tr>
</tbody>
</table>