Panasonic

Please store this document in a safe place.

FULL-2WAY
Web Server Unit
(Panel Use)
(English)
WR3330-801

User's Manual

1st. edition

- Thank you for purchasing the product
- Please read this manual thoroughly before using the product
- Please store this manual in a safe place for further reference

Introduction

Thank you for purchasing the WR3330-801 FULL-2WAY Web Server Unit (Panel Use). This document is the user's manual and installation manual for the Web Server Unit. The Web Server Unit enables network connectivity to the FULL-2WAY Remote Lighting Control System functionalities.

Intended Audience

This document is intended for the following users.

- Users who install and configure the product or a system containing the product (personnel in charge of indoor wiring and network administration)
- Users who operate and maintain or configure the product or a system containing the product (personnel in charge of server administration and lighting control system management)
- Users who control lighting circuits using the product or a system containing the product (general users)

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- The official name for Microsoft Windows XP is the Microsoft® Windows® XP Operating System.
- Screen shots are used according to the guidelines of Microsoft Corporation.

Further Inquiries

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Disclaimer

The changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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Revisions

Information contained in this document is subject to change without notice.

Package Contents

Check that the package contains the main unit and accessories before using the product. If anything is missing, please contact your retailer or Matsushita Electric Works, Ltd.

Unit 1

CD (User's Manual) 1

Before Using This Product

Read and understand this user's manual thoroughly before using the product.

Requirements for Use

(1) Purpose and Usage of the product

The product and related products have been developed mainly for lighting control applications. Therefore, do not use the product for security applications, such as crime prevention, protection from disasters, or other applications involving protection of human lives.

Other general requirements:

- Please ensure easy recovery of any system failure (i.e. data backup, etc.).
- Please ensure safety of system usage by installation of protective devices, protective circuits, or by any other means deemed appropriate.

* Please ensure that incorporation of this product with any other components or products as a system is done with respect to the above-mentioned safety instructions.

(2) Operating Environment

Products compatible with the FULL-2WAY Remote Lighting Control System

- Network Control Units (NCUs), WR3387-8 Series
- Local Interface Units (LIUs), WR3388-8 Series
- Transmission Units, WRT2050-80, WRT2040-82, WRT2040-81, WRT2040-894 Series

Supported Client PC Environment

- OS : Microsoft® Windows® XP Operating System (SP1 or SP1a recommended)
- Browser : Microsoft® Internet Explorer® version 5.5 or later (version 6.0 recommended)
- Java applet : Sun Microsystems® Java™ 2 Platform, Standard Edition 1.4.2 (J2SE)

* The Web Server Unit (WR3330-801) may not function in response to operations from a Microsoft OS earlier than Microsoft Windows XP, such as Microsoft® Windows® 2000, NT, Me, 98, 95, or CE, and from portable devices.

* Update the OS and browser before hand to ensure normal functionality.

Safety Precautions

Always observe these precautions to prevent injuries or accidents.

WARNING

- Tighten unit screws firmly.
  Loose screws may cause overheating, resulting in burning or fire.
  Applicable tightening torque :0.5 N·m to 1.0 N·m {5.1 kgf·cm to 10.2 kgf·cm}
- Do not repair, disassemble, or modify the product.
  Doing so may cause electric shock, fire, or malfunction.
- Do not exceed the rated current and voltage.
  Doing so may cause overheating resulting in fire.

CAUTION

- Do not install the product outdoors or in any location subject to splashes of water.
  Doing so may result in smoking, ignition, or malfunction.
- Do not touch live units.
  Doing so may cause electric shock.

About FCC

FULL-2WAY
Web Server Unit
WR3330-801

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Table of Contents

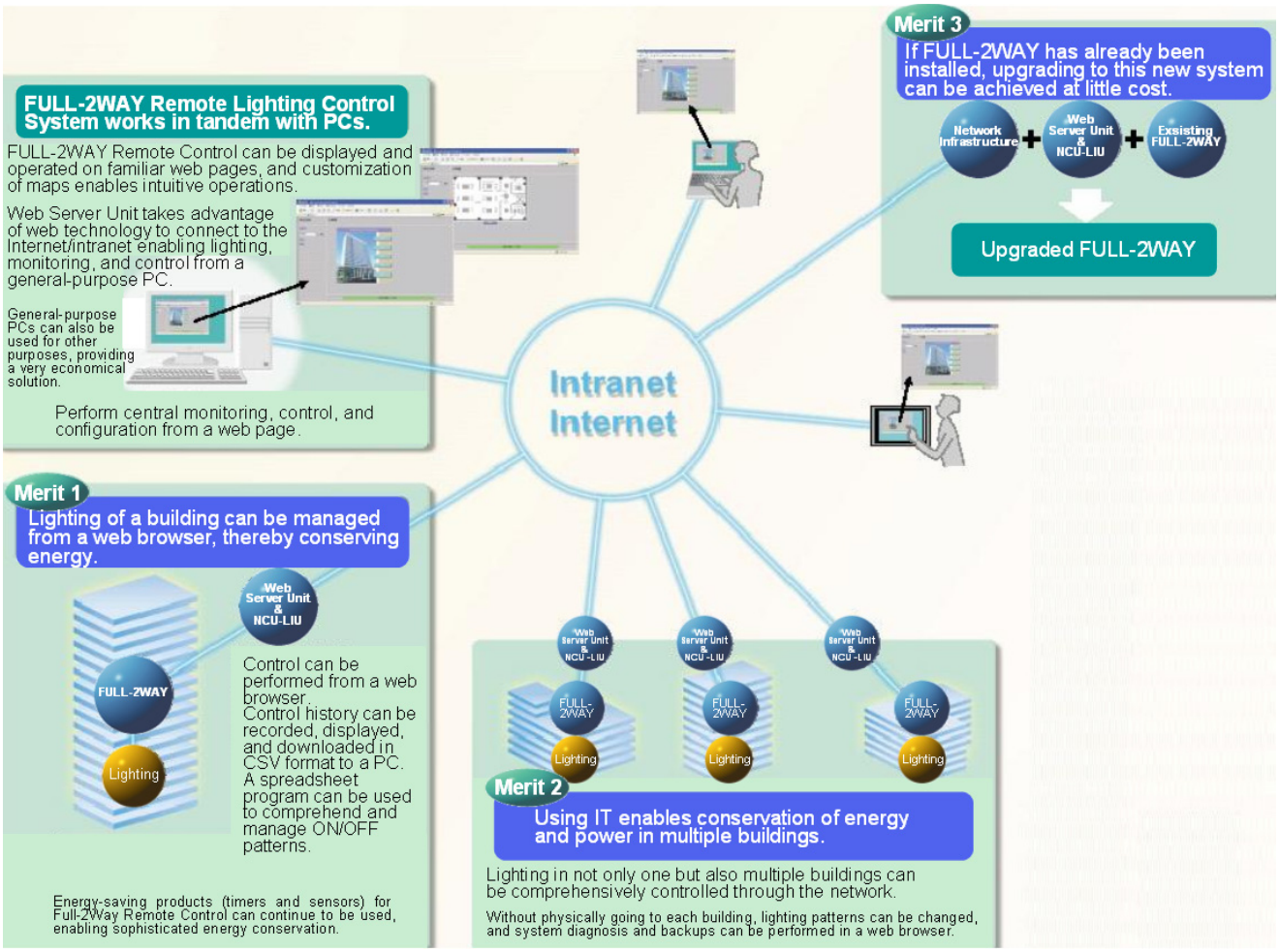
Summary

This section provides an overview of the whole system.

Summary

I. Functions and Characteristics

The FULL-2WAY Remote Control takes advantage of a Web browser on a PC to provide a control history and schedule control in addition to conventional monitoring and control, offering the best user interface for daily administration. It is designed not only for new installations, but enables upgrading existing systems, thereby enabling full utilization of the previous FULL-2WAY Lighting Control System and network infrastructure.

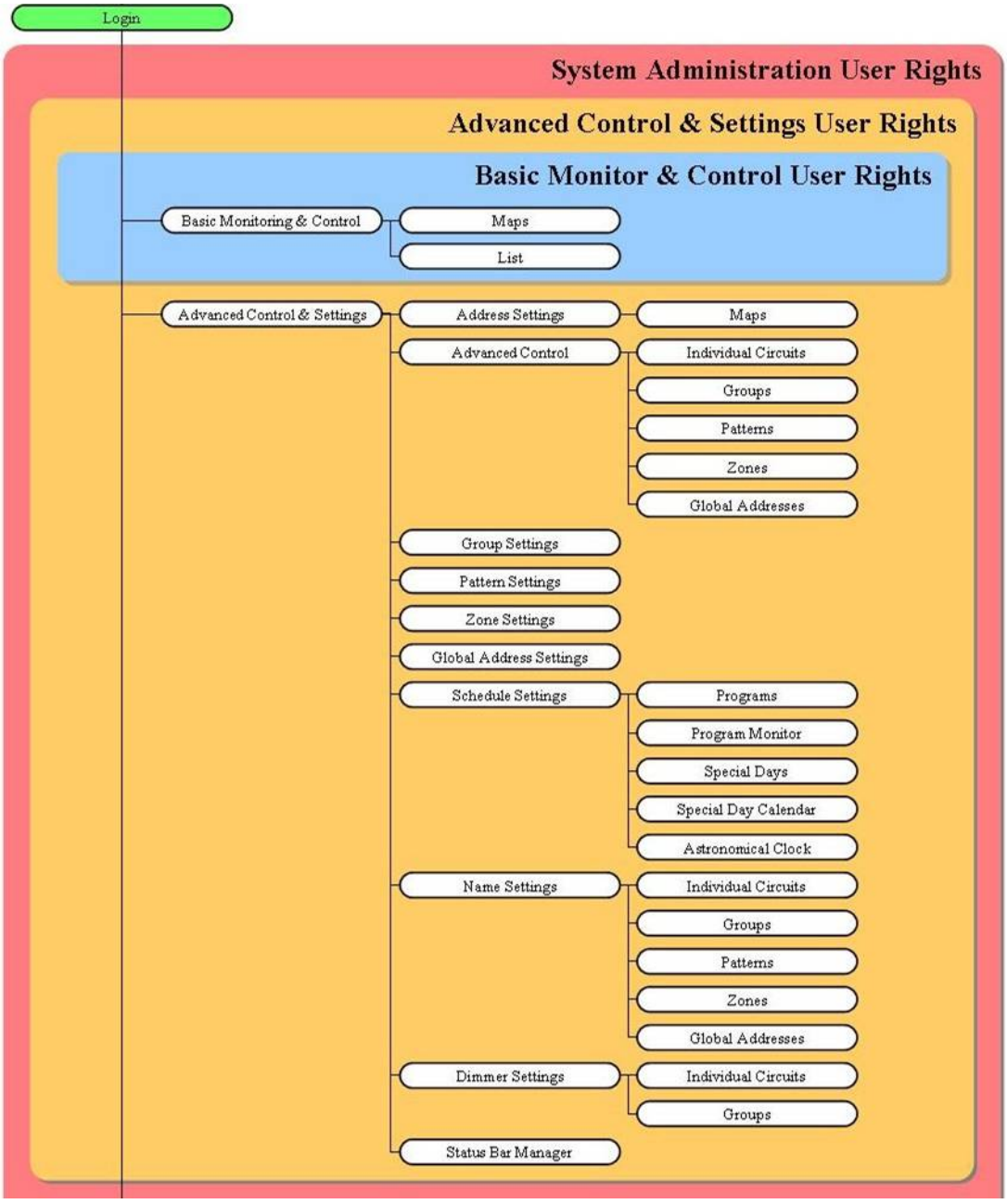


- Central Control of Large-scale Systems
  Multiple FULL-2WAY lighting systems can be controlled from a single or multiple PC
- Network Connection
  Remote control is possible from a Web browser through an intranet or the Internet.
- Customized Interface
  Monitoring and control windows (maps) that match the actual facility can be easily constructed.
- Programmable Controlling
  A timer inside the Web Server Unit enables detailed schedule control.
- Data Management and Editing
  Various data can be downloaded and uploaded in CSV format.

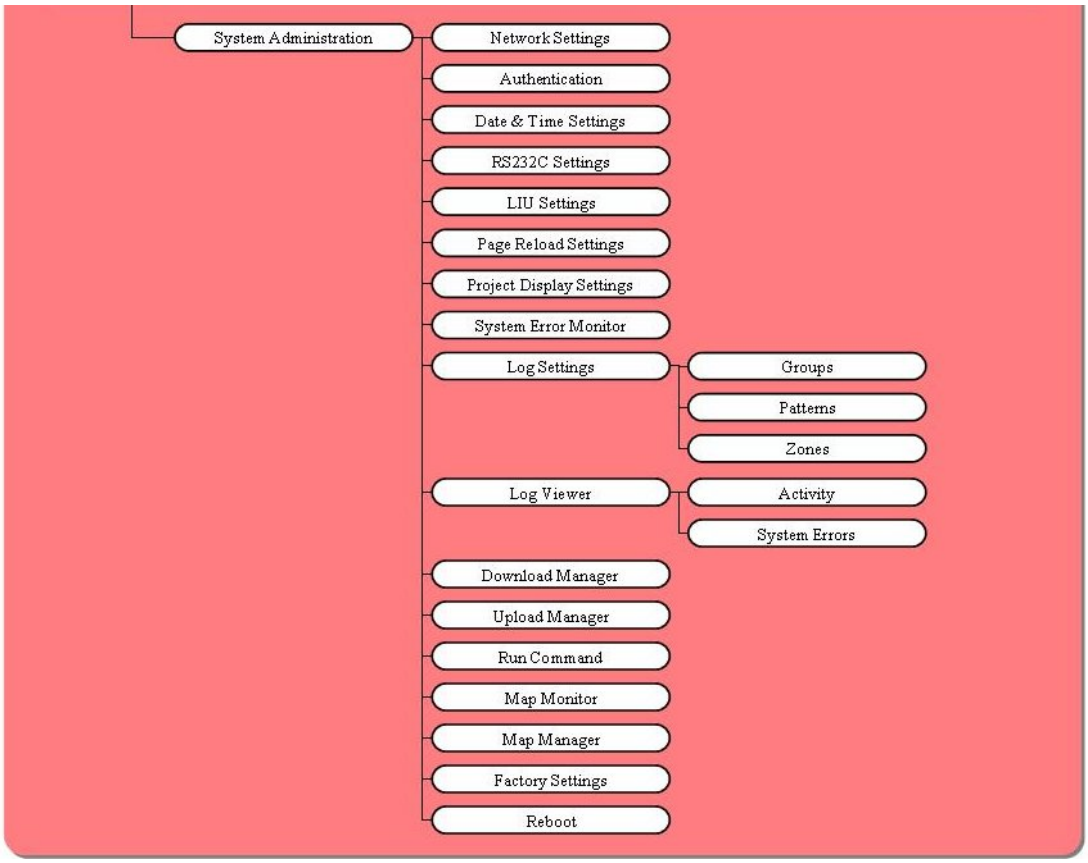
Summary

Functions

The functions of the Web Server Unit can be split depending on the different user rights as follows:



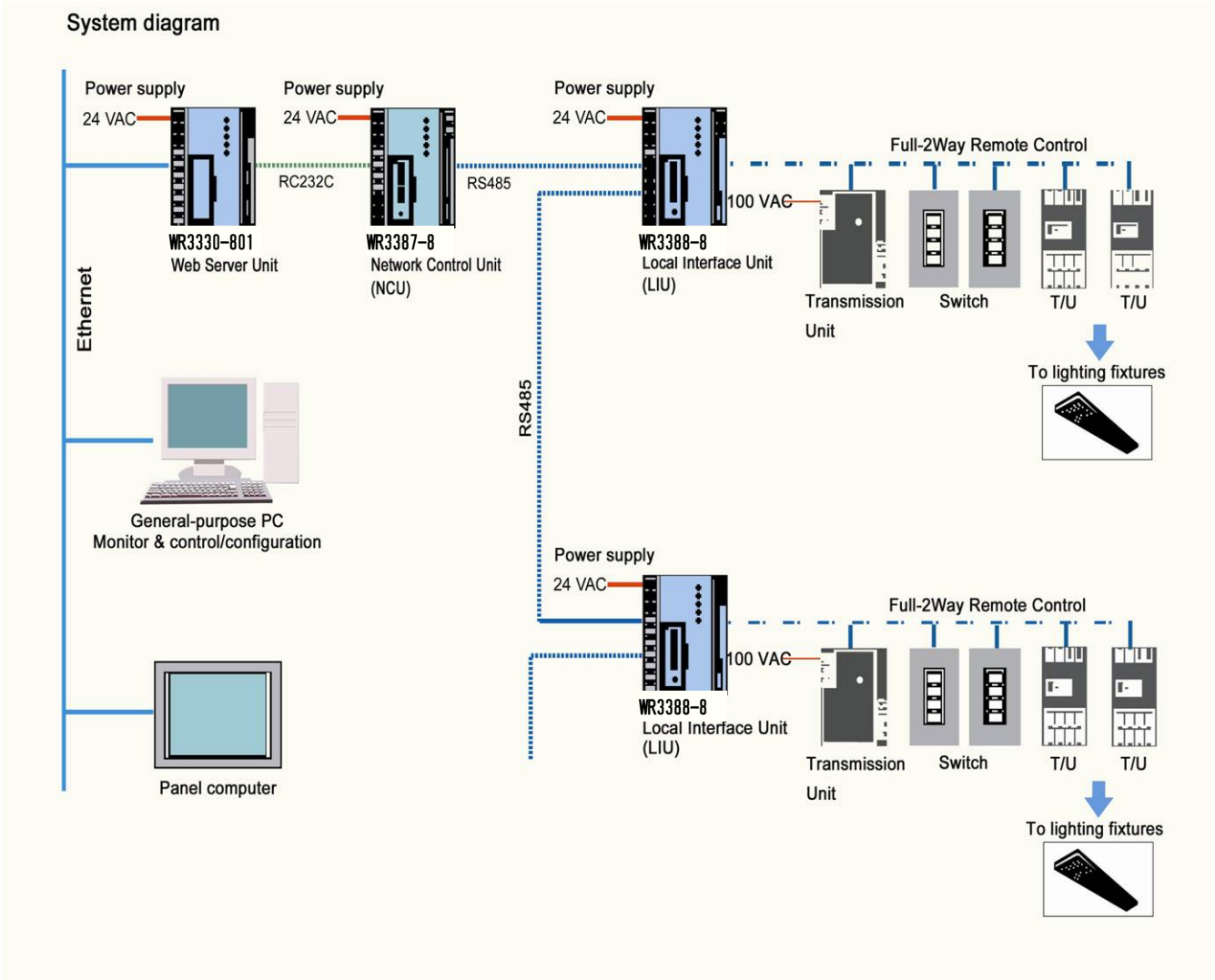
Summary


System Administration
Network Settings
Authentication
Date & Time Settings
RS232C Settings
LIU Settings
Page Reload Settings
Project Display Settings
System Error Monitor
Log Settings
Groups
Patterns
Zones
Log Viewer
Activity
System Errors
Download Manager
Upload Manager
Run Command
Map Monitor
Map Manager
Factory Settings
Reboot

Summary

II. Operating Principles of Major Functions

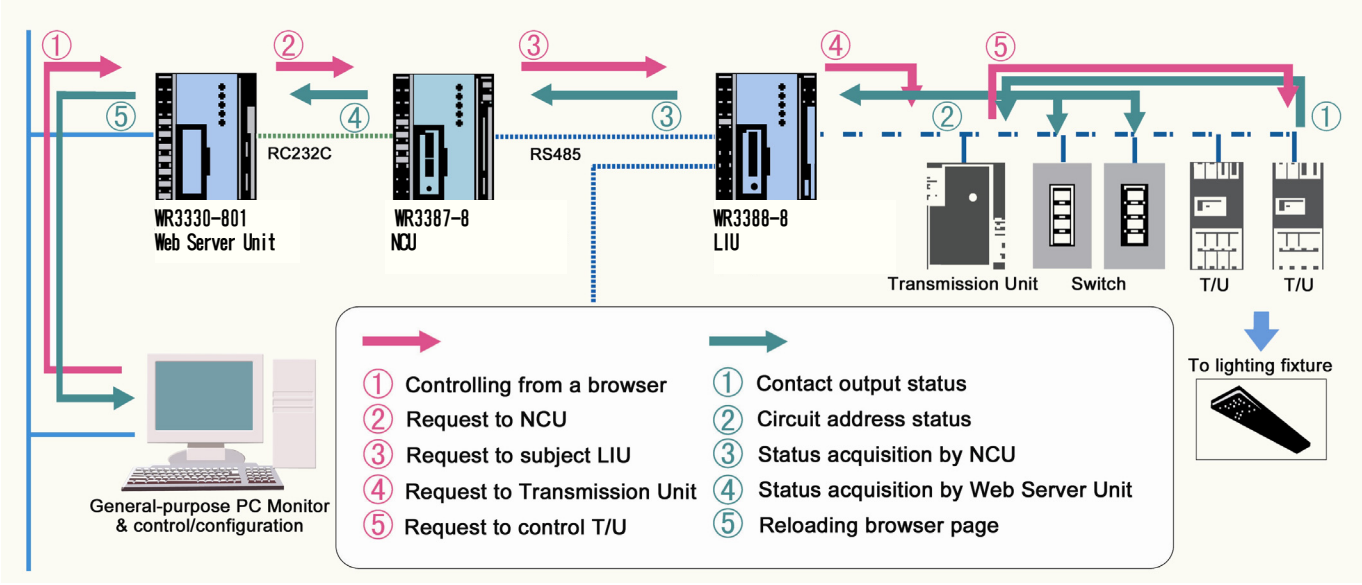
The system configuration and data flow are explained here. The system configuration is based on the system shown in the following diagram. The actual control of lighting fixtures requires devices on the lighting control (local) system, namely a FULL-2WAY Remote Control consisting of Network Control Units (NCUs) (WR3387-8), Local Interface Units (LIUs) (WR3388-8), Transmission Units (WRT2050-80, WRT2040-82, -81, -894 Series), and their terminal circuits (T/Us, Switches, etc.).The Web Server Unit functions as the interface between the PC (client) connected through the Ethernet on the network side of the system, and the local lighting control system.



Summary

The data flow for major functions is described here.

(1) Manual Control from a Web Browser

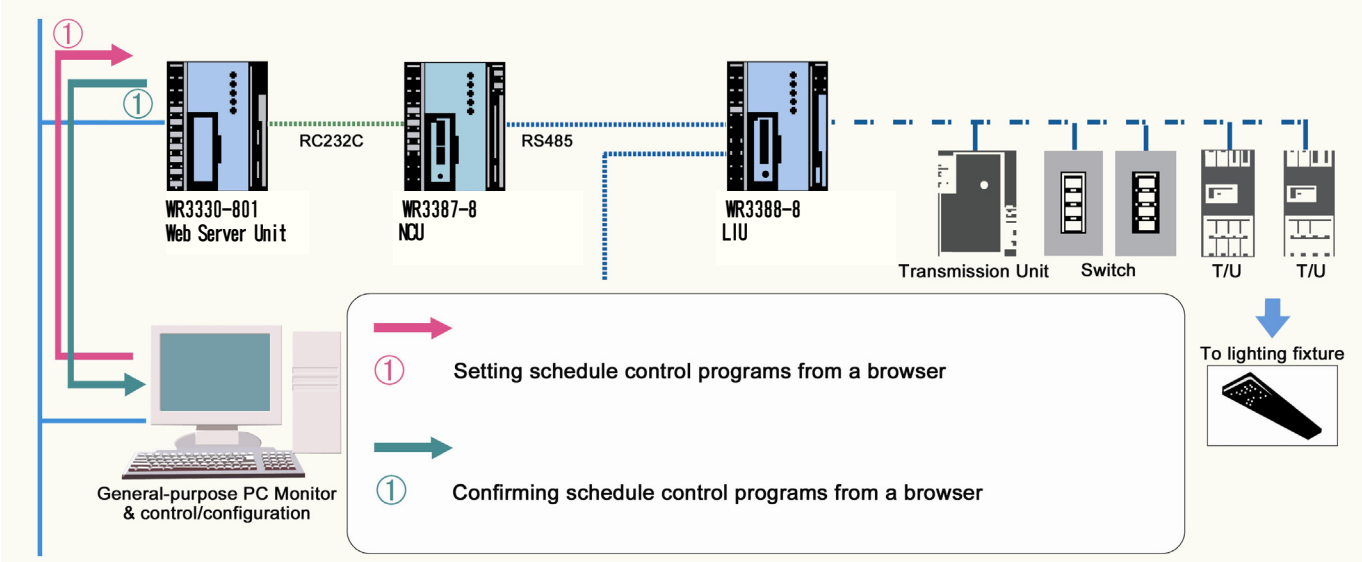


* The Java applet running on the Web browser displays a window according to the operation.
* Control requests from multiple Web browsers are stored on the Web Server Unit and executed sequentially.
* If the present status of the circuit is already requested status, the control request will still be issued.

Summary

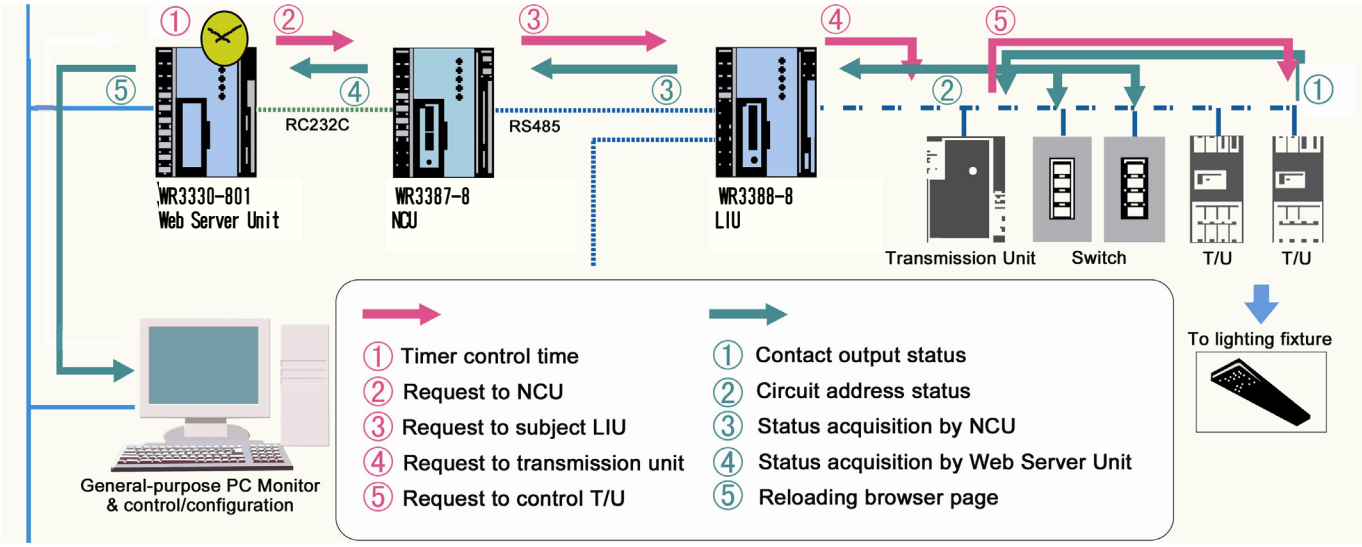
(2) Operation Controlled by a Schedule (Timer)

1. Program Setup



* Program data for schedule control is stored in the Web Server Unit.

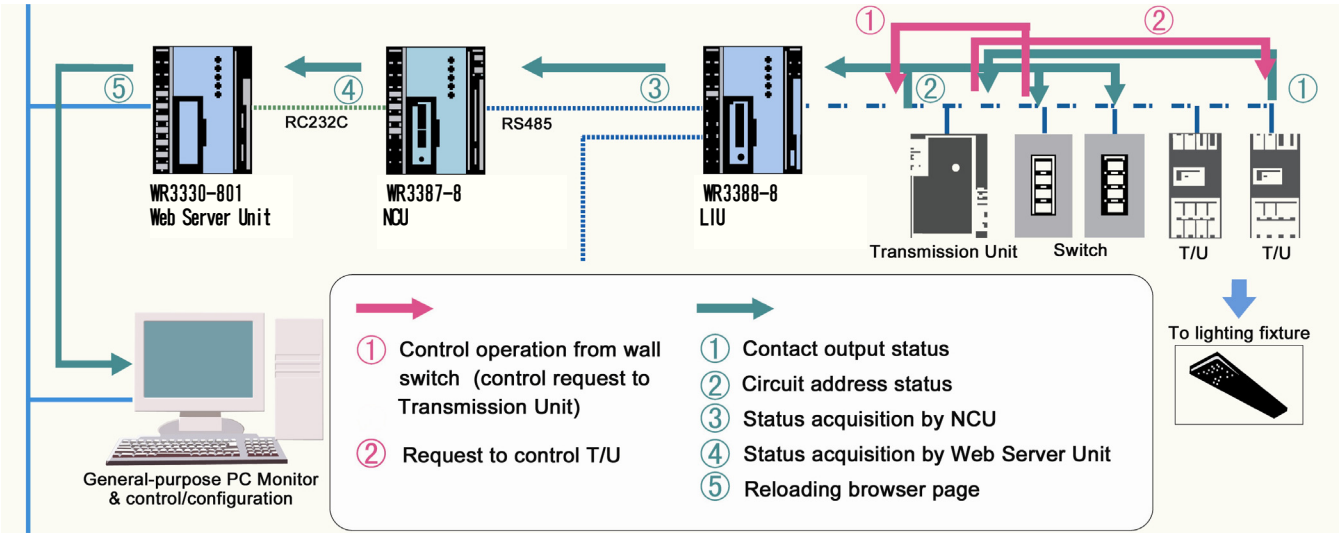
2. Program Execution



* Operations are based on the clock inside the Web Server Unit.

Summary

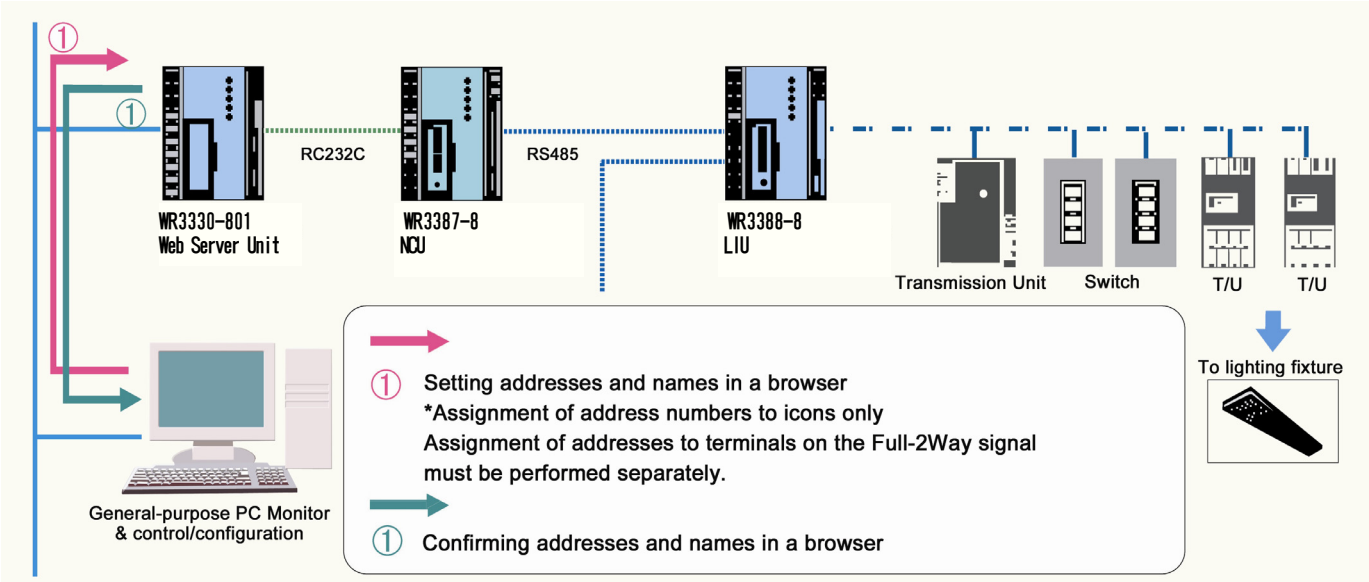
(3) Monitoring Circuit Status Changes Controlled by the Wall Switches of the Local System



* Basic monitoring is performed periodically on all circuits. Data for groups, patterns, and zones, however, can be reported to the higher levels in the hierarchy only when the status changes due to local switch operations at registered addresses.

Summary

(4) Address Settings for Symbols on the Web Browser

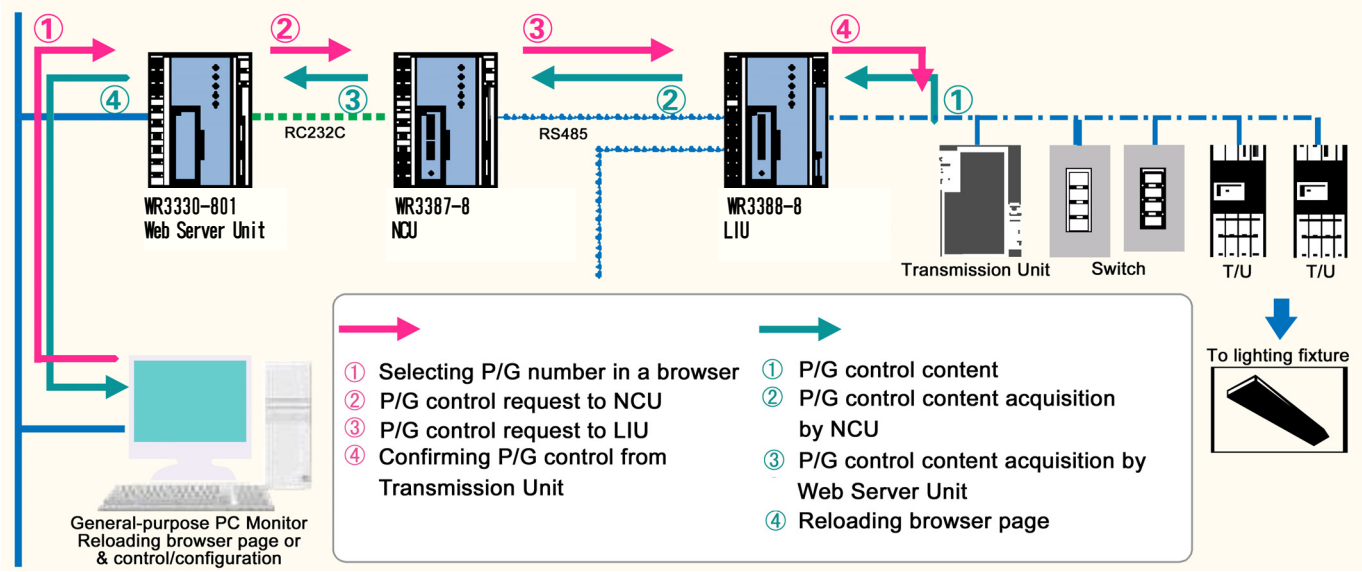


* Address settings on the Web browser are only for the symbols (buttons for monitoring and control) located on the maps. Therefore, address settings for switches and devices such as the T/U on the local system must be performed separately.
* The mapping data between symbols on the window and addresses of FULL-2WAY Remote Control circuits is stored in the Web Server Unit.

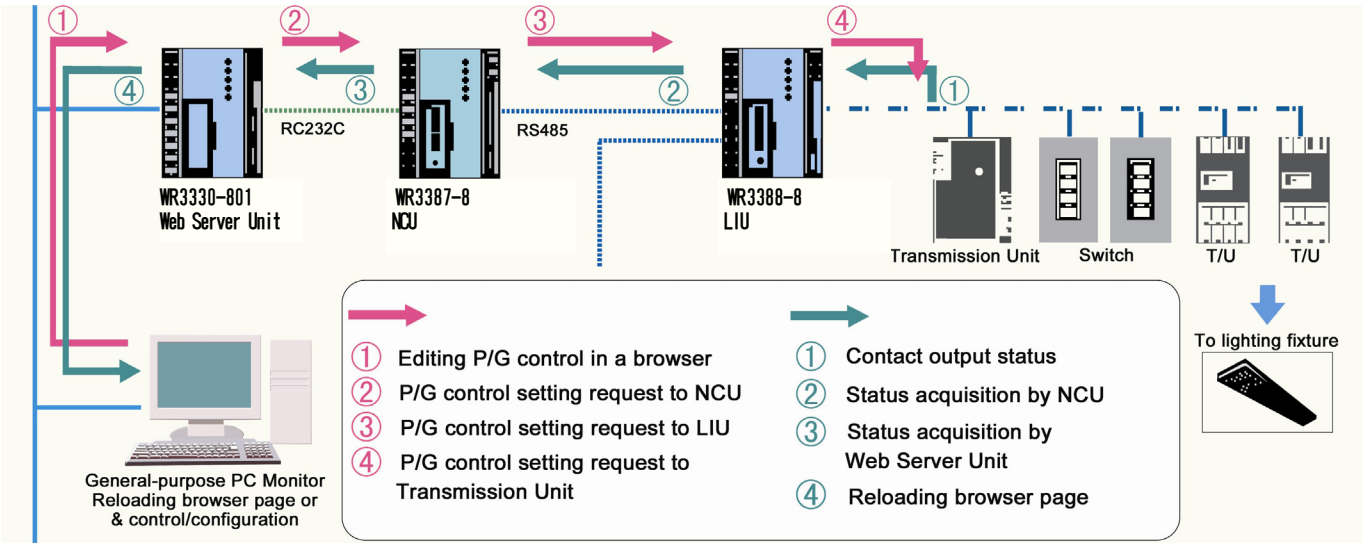
Summary

(5) Patterns/Groups (P/G) Settings on the Web Browser

1. P/G Number Selection (Confirmation of Control Content)



2. P/G Settings Control Content (Content Change)



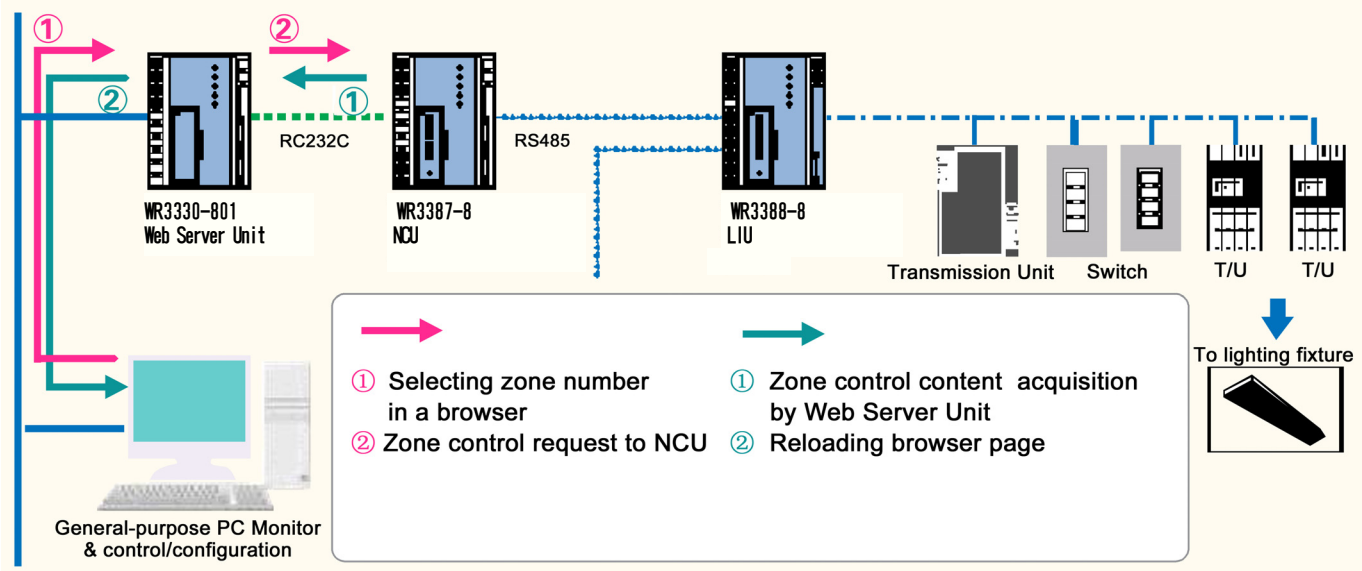
* Pattern and group settings are stored in the Transmission Units.

Summary

(6) Zone Settings on the Web Browser

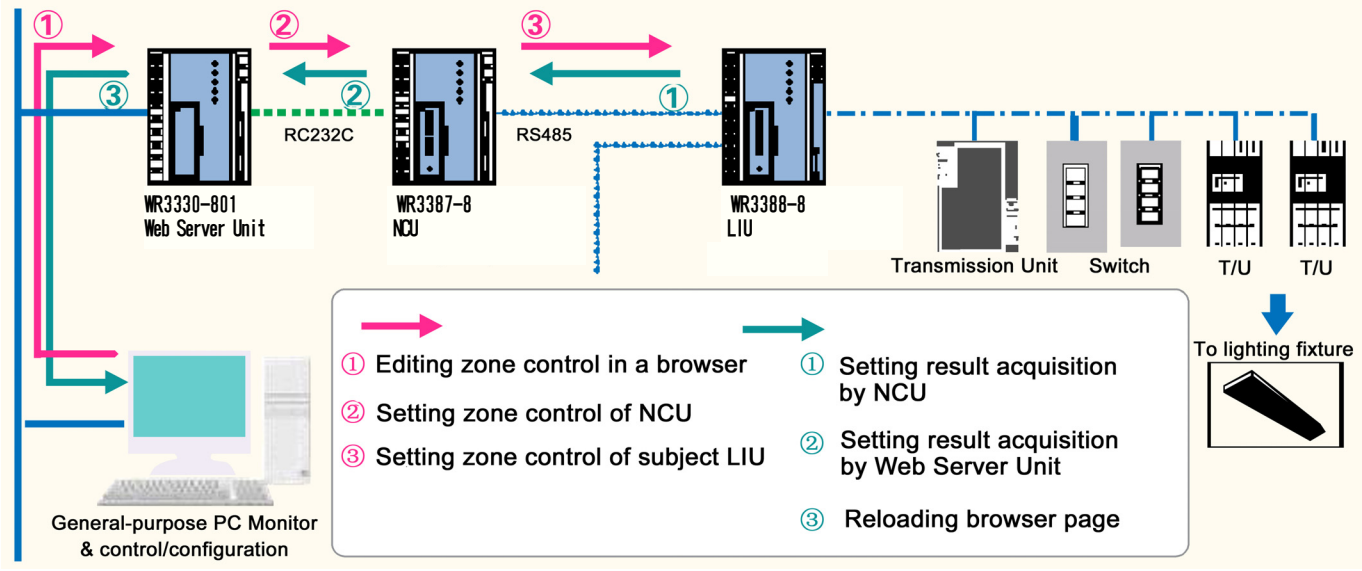
In principle, zone controls in this system are performed on the Web window in the Web Server Unit.

1. Zone Number Selection (Confirmation of Control Content)



* Zone settings can be retrieved from the Web Server Unit and NCU.
* Data on the Web Server Unit and that on the NCU must be identical.

2. Zone Setting Control Content (Content Change)

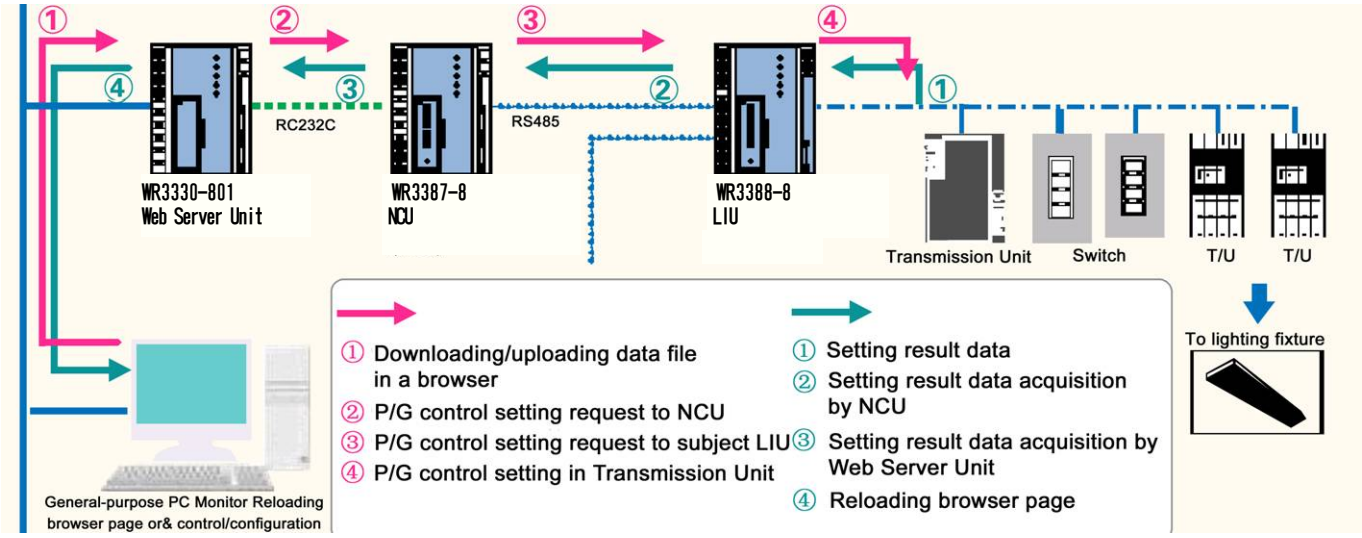


* Zone settings are stored in the Web Server Unit, NCU, and LIU.
* Data displayed on the browser is the data used to synchronize the settings on the Web Server Unit, NCU, and LIU.
* When replacing the Web Server Unit, existing data in the NCU must be read into the browser page, and set again to use the data in the NCU to write to the Web Server Unit.

Summary

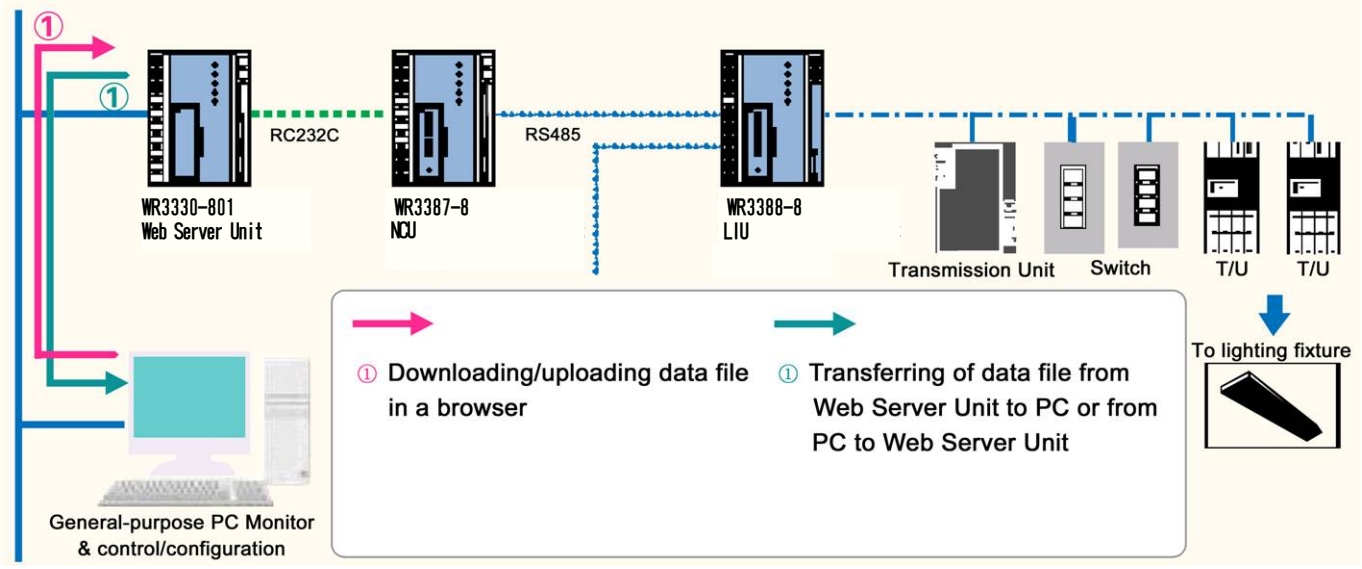
(7) Transmission of Settings Files

1. Patterns/Groups (P/G) Settings



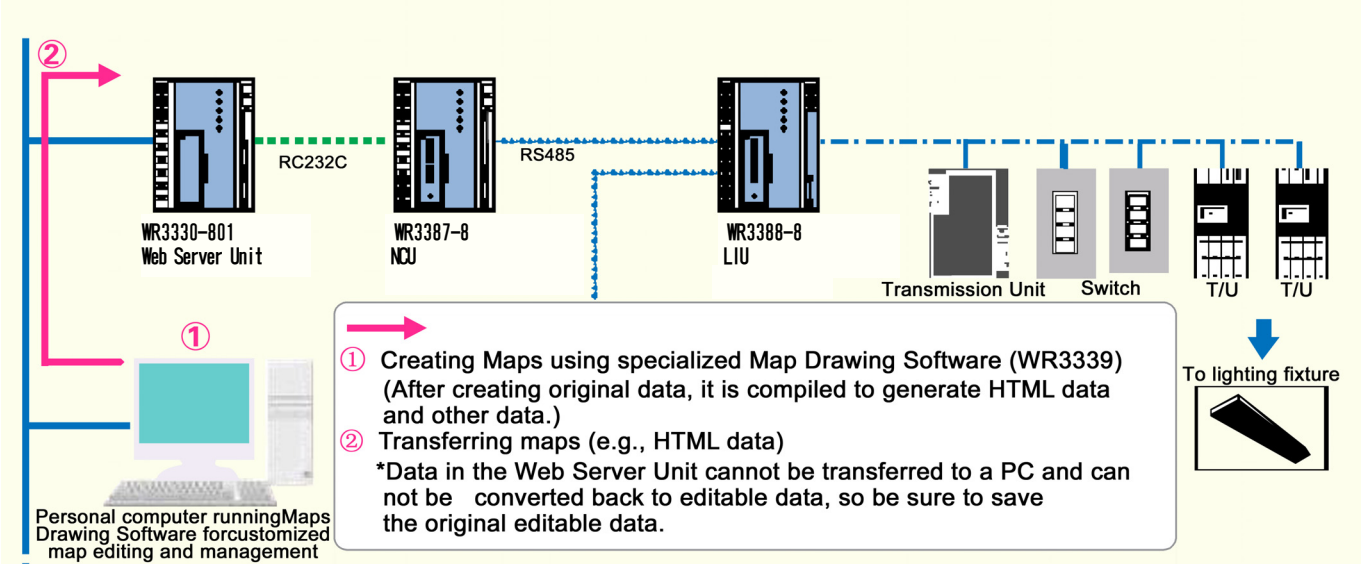
* When data in the Web Server Unit is downloaded to a PC, settings contained in the Transmission Unit are collected into a file and then transferred.
* When a valid data file on a PC is successfully uploaded to the Web Server Unit, setting of Transmission Units automatically takes place from the Web Server Unit.

2. Other Settings Data



Summary

(8) Transfer of Map Data from the Screen Builder



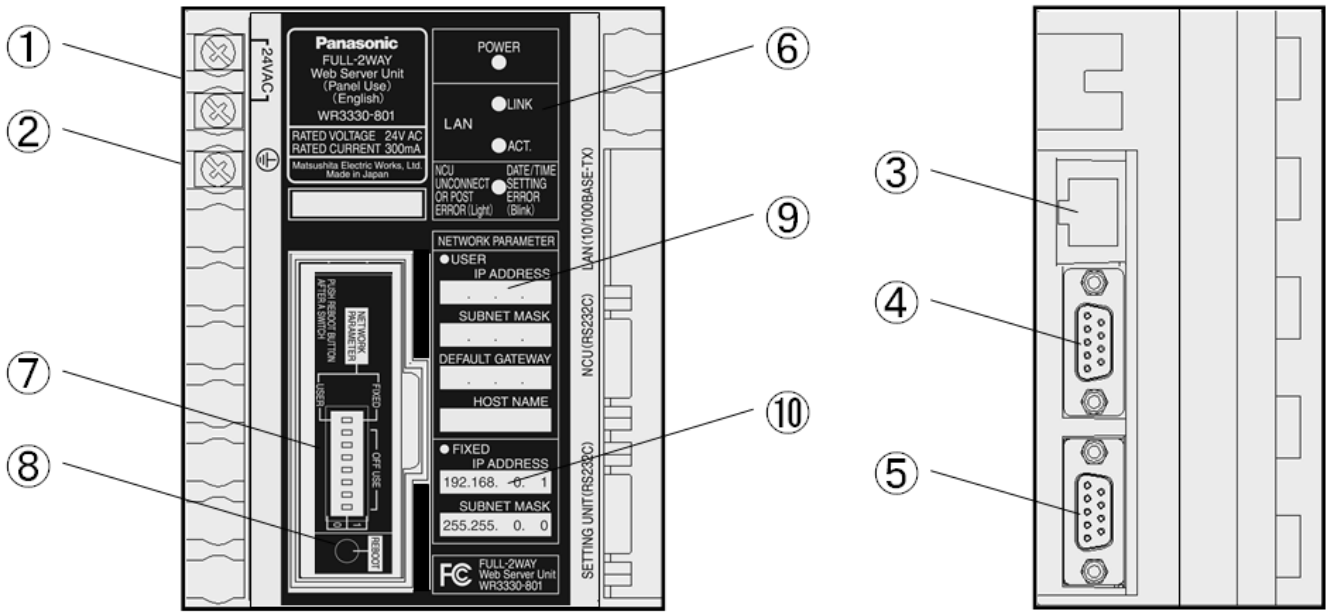
* The customized maps displayed on the Web browser are created in a specialized Map Drawing Software. The map data can be sent to the Web Server Unit using FTP from the PC running the Drawing Software via Ethernet.
* Data formats on the Screen Builder (e.g., HAD) are different from those generated (compiled) for display on the Web browser (e.g., HTML).
* The data in formats to be displayed on the Web browser only are stored in the Web Server Unit. Because the data cannot be converted back to editable state, it is recommended to keep a backup of the original editable data (e.g., HAD).
* Refer to the Screen Builder for Web Server Unit (WR3339-801) user's manual for further details.

Product Description

This section describes the external appearance and other aspects of the product.

Product Description

I. Name and Function of Parts



Front view & Right side view

1. Power Terminals

These terminals connect to the transformer (WR2301-811, WR2311-821 series) and supply power to the product.

2. Ground Terminal

This terminal is connected to a ground of 100Ω or less (class-D grounding based on Internal Wiring Regulations) and to ensure the electrical quality of the product.

3. LAN modular jack

This socket connects to the Ethernet cable plug. This port is used for communications with PCs through the Ethernet.

4. NCU Connector (Male)

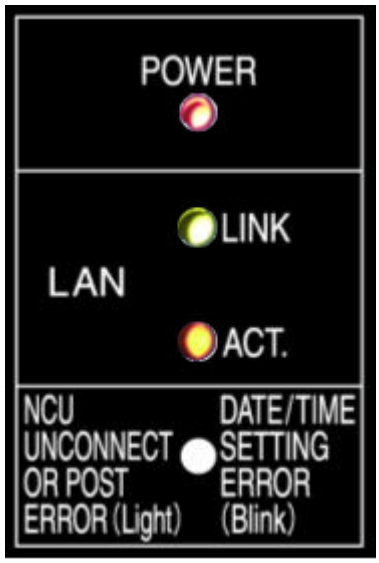
This connector connects to the D-sub 9-pin female connector of the RS-232C communications cable. This port is used for serial communications with the WR3387-8 series FULL-2WAY Remote Control Network Controller Unit (NCU) for Switchboards.

5. Setting Unit Connector (Male)

This connector is for maintenance purposes only.

Product Description

6. Status Indicators (LEDs)



Power (Red)

- ON : Power is being supplied.
- OFF : Power is not being supplied.

Ethernet LINK (Green)

- ON : Ethernet is connected normally.
- OFF : Ethernet is not connected normally.

Ethernet ACT (Orange)

- ON : Data is being transferred via Ethernet.
- OFF : Data is not being transferred via Ethernet.

NCU Unconnection Or Post Error / Date & Time Setting Error Indicator (Red)

- ON : NCU connection is abnormal. (Clock in the Web Server Unit may not be set.)
- Blink : NCU connection is normal, but the date and time are out of order. "Date & Time Setting Error" status indicates that the date and time could not be kept (e.g. after a power supply interruption longer than the clock's battery maximum time range).
- OFF : NCU connection is normal, and the date and time on the Web Server Unit are properly set.

7. DIP Switch

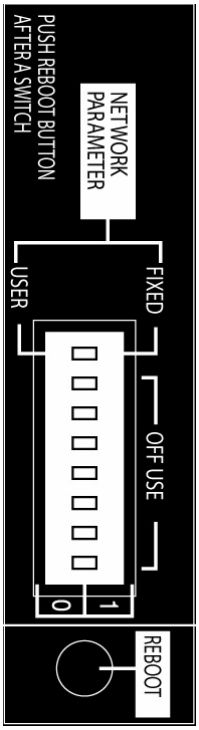
One 8-pin DIP switch is provided.

Pin 1 of this DIP switch is used to set the network settings and is assigned the following functions.

0 (OFF) : User-settings are used when the power is turned ON or the Unit is rebooted.

1 (ON) : The following default values are used when the power is turned ON or the Unit is rebooted.

- IP address : 192.168. 0. 1
- Subnet mask : 255.255. 0. 0
- Default gateway : None
- Host name : None



* Always set pins 2 to 8 to 0 (OFF).

8. Reboot Switch

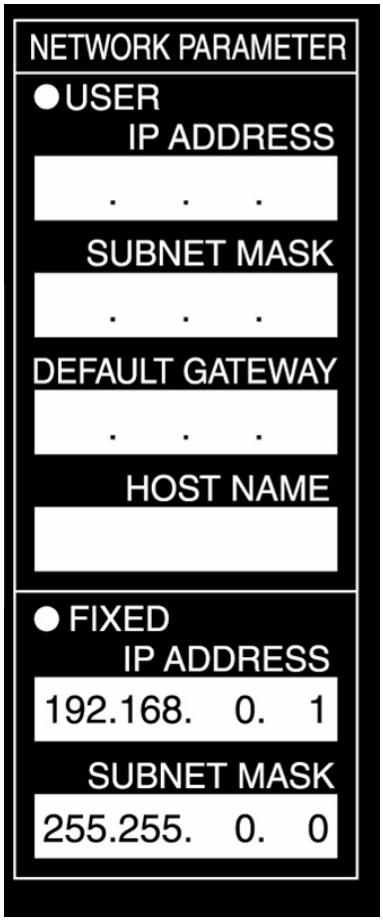
This switch is used, for example, to enable changes made to network settings using the DIP switch. Power is turned ON or the Unit is rebooted.

Product Description

9. User-defined Network Value Fields

These fields are used to record the user-defined network values for the following parameters, which are enabled for the Web Server Unit when it is restarted with pin 1 of the DIP switch set to user settings (0).

- IP address
- Subnet mask
- Default gateway
- Host name



10. Default Network Settings Record

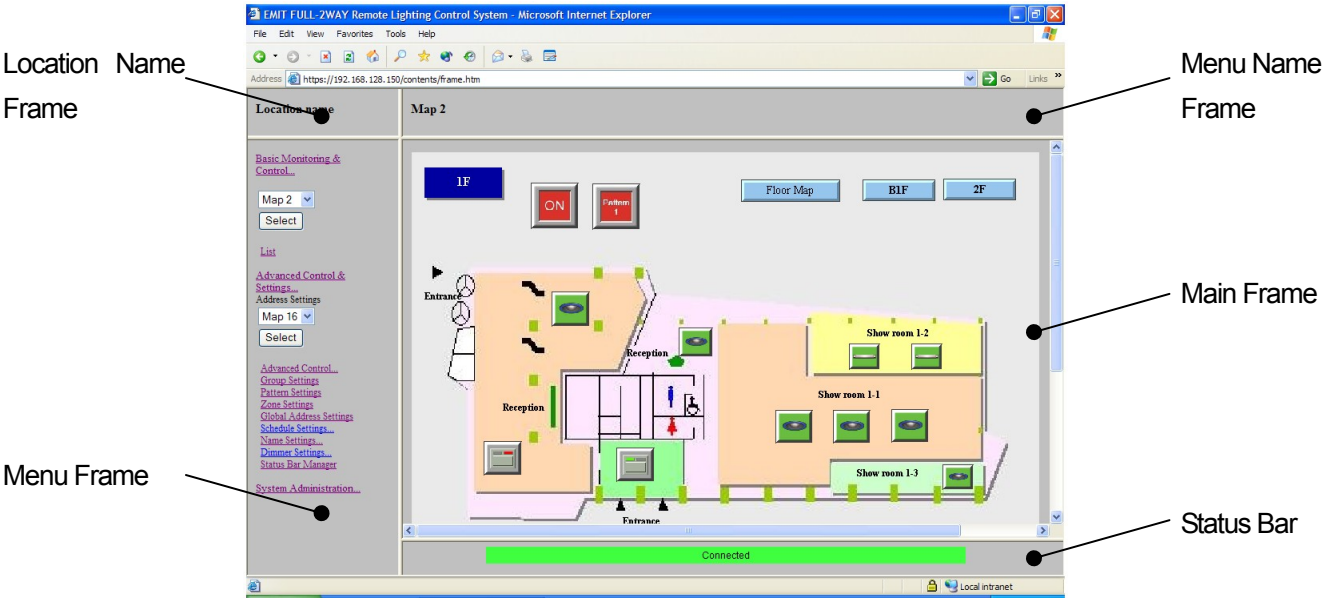
Default network values, which are enabled for the Web Server Unit when it is restarted with pin 1 of the DIP switch set to default settings (1), are printed here. When the default network settings are used, the default gateway and host name are *None*.

- IP address : 192.168. 0. 1
- Subnet mask : 255.255. 0. 0

Product Description

II. Page Layout

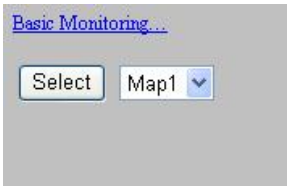
(1) Frame Layout



(2) Menu Configuration (Menu Frame)

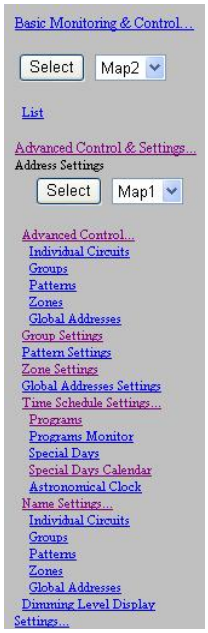
The menu that is displayed depends on the authentication rights of the user who logged in.

1. Menu for Basic Monitoring Rights



2. Menu for Basic Monitoring & Control Rights

3. Menu for Advanced Control & Settings Rights



4. Menu for System Administration Rights

1. Basic monitoring rights = monitoring only
2. Basic monitoring & control rights = 1 + control
3. Advanced control & settings rights = 2 + advanced control & settings for control & monitoring
4. System administration rights = 3 + Settings for system administration

Product Description

(3) Menu Descriptions

(a) Basic Monitoring & Control Menu

- Maps selection : Selects maps to monitor and control.
- Basic Monitoring & Control list : Monitors and Controls the lighting status of items at specified addresses in a table format. (Addresses to display can be selected with either the advanced control & settings or administration rights.)

(b) Advanced Control & Settings Menu

- Maps selection for Address Settings : Selects maps by name to allocate addresses to symbols.
- Advanced Control : Monitors and controls the lighting status of all circuit addresses in a table format.
  - Individual Circuits : Displays all individual and dimmer addresses with LIU units.
  - Groups : Displays all group addresses with LIU units.
  - Patterns : Displays all pattern addresses with LIU units.
  - Zones : Displays all zones.
  - Global Addresses : Displays all global addresses.
- Group Settings : Configures group settings with Transmission Units.
- Pattern Settings : Configures pattern settings with Transmission Units.
- Zone Settings : Configures zone settings with NCU/LIU.
  *Here, zone is a method of controlling the set status pattern of the specified area.
- Global Address Settings : Configures global settings.
  *Here, global is a method of comprehensively controlling one global point shared by multiple systems.
- Schedule Settings : Configures how circuits are automatically controlled on specified dates.
  - Programs : Configures the contents of schedule control programs.
  - Program Monitor : Confirms control scheduling for specified data.
  - Special Days : Configures days, such as national holidays, when Special functions are to be performed.
  - Special Day Calendar : Confirms special day settings and overlapping.
  - Astronomical Clock : Sets sunrise/sunset functions and daylight savings time functions
- Name Settings : Sets names for control items.
  - Individual Circuits : Displays all individual and dimmer addresses with LIU units
  - Groups : Displays all group addresses with LIU units.
  - Patterns : Displays all pattern addresses with LIU units.
  - Zones : Displays zones.
  - Global Addresses : Displays global point addresses.

Product Description

- Dimmer Settings : Configures the display of dimmer levels.
  - Individual Circuits : Displays all individual circuit addresses with LIU units
  - Groups : Displays all group addresses with LIU units.
- Status Bar Manager : Sets and clears the display to notify users that settings are in progress

(c) System Administration Menu

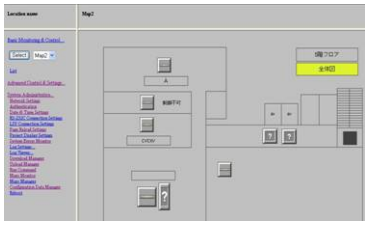
- Network Settings : Configures Ethernet communications settings.
- Authentication : Configures login rights, user name, and password.
- Date & Time Settings : Configures the date and time of the clock in the Web Server Unit.
- RS-232C Settings : Configures serial communications setting between the Web Server Unit and NCU.
- LIU Settings : Configures LIU addresses for the communications link.
- Page Reload Settings : Configures reload intervals in the browser.
- Project Display Settings : Configures project and map display.
- System Error Monitor : Confirms information on current system errors.
- Log Settings : Sets control points for local circuits for which changes in status are to be logged.
  - Groups : Displays all group addresses with LIU units.
  - Patterns : Displays all pattern addresses with LIU units.
  - Zones : Displays all zones addresses.
- Log Viewer : Displays the activity log and system error log.
  - Activity : Displays window operation, schedule, and status change log by date.
  - System Errors : Displays system error log by date.
- Download Manager : Transfers data files from Web Server Unit to the client PC.
- Upload Manager : Transfers data files from the client PC to the Web Server Unit.
- Run Command : Reserved for maintenance.
- Data Monitor : Displays used and unused space reserved for map data.
- Map Manager : Erases map data by page.
- Factory Settings : Initializes and erases user data.
- Reboot : Reboots Web Server Unit.

Product Description

(4) Main Frame

Once a menu has been selected, all operations including Basic Monitoring & Control, Advanced Control & Settings will be processed within the main frame. Buttons, pull-down menus, panes for key input, and other elements are displayed as necessary.

1. Basic Monitoring & Control screen (Maps)



2. Basic Monitoring & Control Window (List)

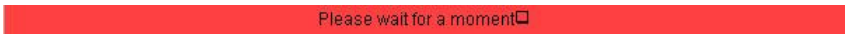
(5) Status Bar

Statuses 1 to 8 shown below can be displayed in the status bar.

If more than one status exists at the same time, the lower numbered status has higher priority for display.

1. Please wait for a moment… (Red)

Indicates the network connection to the Web Server Unit has been temporarily disconnected (e.g. broken wire, a device that has stopped, etc.).



2. Date & Time out of order. (Red)

Indicates that the date and time could not be kept (e.g. after a power supply interruption longer than the clock's battery maximum time range).

3. System error occurred. (Red)

Indicates errors in the Web Server Unit or local system.

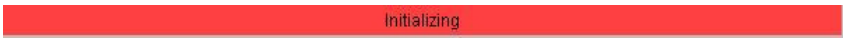
* This error includes situations when the local system is being set using the patterns/groups setting switches.

4. Settings inconsistencies. (Red)

Indicates normal monitoring and control has been disabled because the LIU Settings or Zone Settings are inconsistent with those of the NCU.

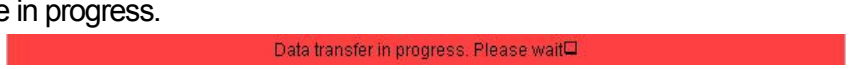
5. Initializing (Red)

Indicates that the Web Server Unit is being initialized.



6. Data transfer in progress. Please wait…" (Red)

Indicates communications with the NCU, such as group settings, pattern settings, zone settings, and LIU Settings are in progress.

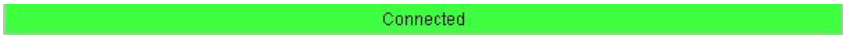


7. Performing setup. (Red)

Indicates that setup operations have been started in the Status Bar Manager.

8. Connected (Green)

Indicates that normal operations can be performed.



Installation Section

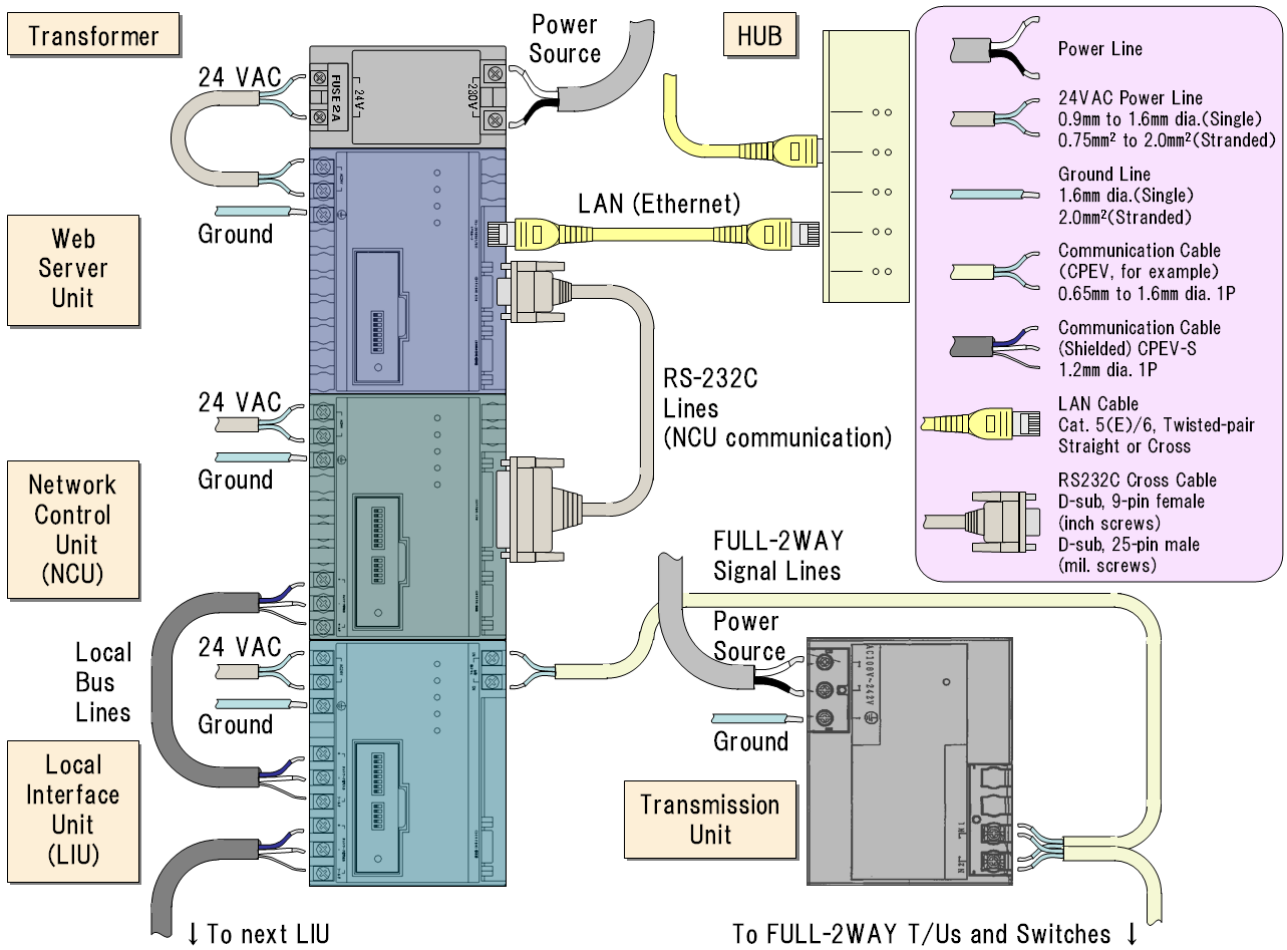
This section describes installation procedures for electrical connections and network connections.

Installation Section

I. Device (Unit) Connection and Configuration (Installation)

This section describes installation of the main unit and connections to peripherals.

(1) Connections between Devices



(a) Connections between the Web Server Unit and Network (Ethernet) Devices

- Requires LAN cables (with modular plugs).
- The Ethernet communications port is always used as an MDI-type port and requires a straight cable when connected to normal ports (MDI-X type) of hubs and routers.

* A cross cable can be used for connections to MDI-type ports or ports that can be configured as MDI.

* Use a cross cable when directly connecting to a PC (MDI type).

(b) Connections between the Web Server Unit and the Network Control Unit (NCU).

- Always use the WR3387-8 series Network Control Unit.
- An RS-232C (serial) communications cable is required.
- The connectors at the ends of the cable are a D-sub 9-pin (female) and a D-sub 25-pin (male) and are cross-linked.
- Connect the connector labeled "NCU (RS232C)" on the Web Server Unit to the connector labeled "Host (RS232C)" on the NCU.

* Do not connect anything to the connectors labeled "Setting Unit (RS-232C)".

* For details on terminal arrangement, refer to *Specifications*.

Installation Section

(c) Connections between Local Interface Unit (LIU) and NCU.

- Always use the WR3388-8 Local Interface Unit.
- The local bus (network) between the NCU and LIU requires a shielded cable (CPEV-S).
- Connect the terminals labeled "Network signal output" on the NCU and "Network signal input" on the LIU with matching polarities.
- When connecting multiple LIUs, terminals labeled "Network signal output" must be connected in a bus configuration.
- Connect the NCU to the end terminal of the local bus (local network).
  (Bus terminating resistance is built in.).

* Do not connect anything to the terminals on the Configurator (RS-232C).

(d) Connections between FULL-2WAY Remote Control System and LIU

- Always use the WRT2050-80, WRT2040-82, -81, -894 series Transmission Unit.
- Communications cables such as CPEV are recommended for connections.
- The output signal for the Transmission Unit must be sent to the FULL-2WAY signal terminal of the LIU. FULL-2WAY devices, such as circuit control devices (T/U) and switches, must be connected to the same communications cable.

* Wire connections using a star or bus configuration. Do not use a loop. Doing so may cause malfunctions.
* Do not wire signal lines parallel to power lines. If unavoidable, separate the cables by at least 30 cm, or lay the cables in a metal conduit grounded to 100Ω or less (class D grounding).
* A distance of 30 cm or less is allowable within the power board. The signal line, however, must be separated from the power line (more than100 A.) by at least 5 cm.
* For details on FULL-2WAY Remote Control, refer to the specific catalog and technical manuals.

(e) Power Supply to Each Unit

- Use the WR2301-811, WR2311-821 series Transformer (Panel Use) for the power supply.

* These items are NOT applicable to U.S.A market. Required UL approval, but NOT approval.

- Input the secondary output of the Compact Remote Control Transformer to the 24-V terminals of the Web Server Unit, NCUs, and LIUs.
- Use multiple transformers if the total rated current of the connected devices exceeds the capacity of a single Compact Remote Control Transformer (1.5 A).

(f) Grounding Units

- Always ground the ground terminals of the Web Server Unit, NCUs, LIUs, and Transmission Units to 100Ω or less.

Installation Section

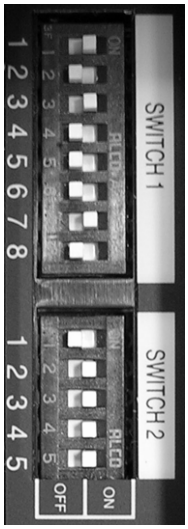
(2) Hardware Device Settings

(a) DIP Switch Settings for Network Control Units (NCUs)

* Set the DIP switches on the Unit as follows:

For details on DIP switch pin number assignments, refer to the NCU product specifications

1. Set host-to-host communications (RS-232C).



RS-232C communications settings for the Web Server Unit can be changed from the browser, make sure to much the settings for the baud rate (19,200 bps), word length (7 bits), and parity (even), and set the same parameters on the NCU.

Baud rate 19,200 bps	: Pin 1 of switch 1 = ON
	Pin 2 = OFF
	Pin 3 = ON
Word length 7 bits	: Pin 4 of switch 1 = OFF
Even parity	: Pin 5 of switch 1 = OFF
	Pin 6 of switch 1 = OFF

* The word length of 7 bits cannot be set if parity is set to none.

2. Set the baud rate on the local network.

Set to 19200 bps.

Baud rate 19,200 bps	: Pin 7 of switch 1 = ON

3. Set zone command specifications.

Set to 1#.

Zone command specifications 1#	: Pin 2 of switch 2 = ON

4. Set the status change notification for patterns, groups, and zones.

Set the corresponding DIP switch pins to "Yes" (ON) if notifications are necessary.

(All pins are set to "Yes" in the example.)

Pattern status change notification Yes [No]	: Pin 3 of switch 2 = ON [OFF]
Group status change notification Yes [No]	: Pin 4 of switch 2 = ON [OFF]
Zone status change notification Yes [No]	: Pin 5 of switch 2 = ON [OFF]

* Status change notification DIP switch pins on the LIU must be set to the same values.

5. Set unused pins.

Always set unused pins to the values indicated below.

Unused	: Pin 8 of switch 1 = OFF
Unused	: Pin 1 of switch 2 = OFF

6. Press the Reboot Button (switch 3).

When all settings have been completed, always cycle the power or press the **Reboot** Button to enable the changed settings.

Installation Section

(b) DIP switch settings for the Local Interface Units (LIU)

Set the DIP switches on the Unit as follows:

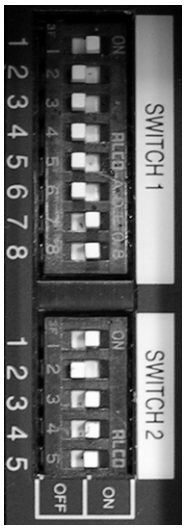
* For details on DIP switch pin number assignments, refer to the LIU product specifications.

1. Set the local network address (LIU address).

Assign addresses between 1 and 31, set a unique address for each interconnected LIU.

Addresses 1 to 31 : Pins 1 to 5 of switch 1 = 10000 to 11111

* Do not set address 00000.



2. Set the baud rate on the local network.

Set to 19,200 bps and Pin 7 of switch 1 = ON

3. Set the terminating resistance.

Set the terminating resistance to "ON" for the LIU at the end of the network.

Terminating resistance ON/OFF : Pin 1 of switch 2 = ON [OFF].

* If the LIU is not physically terminating the network, always set to "OFF."

4. Set the status change notification for patterns, groups, and zones.

Set the corresponding DIP switch to "ON" (1) if notifications are necessary

(All status pins are set to "ON" in the example.)

Pattern status change notification Yes [No] : Pin 3 of switch 2 = ON [OFF]

Group status change notification Yes [No] : Pin 4 of switch 2 = ON [OFF]

Zone status change notification Yes [No] : Pin 5 of switch 2 = ON [OFF]

* Status change notification DIP switches on the NCU must be set to the same values.

5. Set unused pins.

Always set unused pins to the values indicated on the nameplate.

Unused : Pin 6 of switch 1 = OFF

Unused : Pin 8 of switch 1 = ON

Unused : Pin 2 of switch 2 = OFF

6. Press the Reboot Button (switch 3).

When all settings have been completed, always cycle the power or press the **Reboot** Button to enable the changed settings.

(c) Settings for FULL-2WAY Remote Control System Terminals Address settings for T/Us and terminal switches installed in switchboards or on walls must be completed using the DIP switches on the terminals or through the light address configurator. Addresses for these terminals cannot be set from the Web Server Unit.

* It is possible to set the patterns and groups control content of Transmission Units using Pattern and Group Configurators if required. For details, refer to FULL-2WAY Remote Control catalogs and technical manuals.

Installation Section

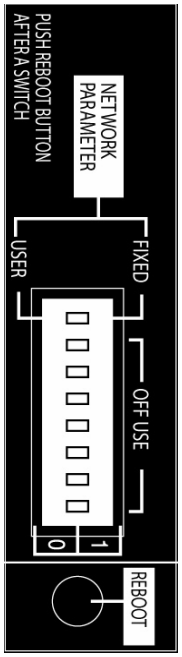
(d) DIP Switch Settings for the Web Server Unit

Set the DIP switches on the front of the Unit as follows

1. Select the network settings.

Select the pre-registered network settings (IP address, subnet mask, default gateway, and host name) The Web Server Unit has two types of network settings: fixed (default) settings and user-defined (user) settings. Select either type.

Network setting switch default [user] : Pin 1 = 1 [0]



(i) Default Settings

The network is connected to using the fixed conditions indicated on the label. Set the following settings if connecting for the first time, or if user values are unknown.

IP address	: 192. 168. 0. 1
Subnet mask	: 255. 255. 0. 0
Default gateway	: None
Host name	: None

(ii) User Settings

Set the following settings when user-defined network parameters registered under Network Settings are to be used.

IP address	: Parameters set in "Network Settings"
Subnet mask	: Parameters set in "Network Settings"
Default gateway	: Parameters set in "Network Settings"
Host name	: Parameters set in "Network Settings"

* For details on Network Settings, refer to Administration and Setting Section I. Settings for System Administration.

* The DIP switch is set to the default settings at the factory.

2. Set unused switches.

Always set to 0. Unused : 2 to 8 = All 0

3. Press the Reboot Button.

When all settings have been completed, always cycle the power or press the **Reboot** Button to enable the changed settings.

(e) Set the connections between the Web Server Unit and Ethernet devices.

Refer to II. Network Connection and Settings (Implementation).

Installation Section

II. Network Connection and Settings (Installation)

Communications settings for connection to network devices are explained here.

(1) Check the operating environment of the PC.

Users must prepare the following client PC environment.

The information provided in this manual assumes that this environment is being used.

1. Hardware Requirements

The following must be used.

- LAN port : Modular socket to connect to Ethernet
  (requires a LAN card or board to be installed in advance)
- Input device : Mouse and keyboard

The following are recommended.

- Memory : 128 MB min.
- Graphic adapter : 1024 × 768 dots (XGA) 256 colors or better

2. Software Requirements

The following are all required.

- OS : Microsoft® Windows® XP Operating System
  (SP1 or SP1a recommended)
- Web Browser : Microsoft® Internet Explorer® Version 5.5 or later
  (Version 6.0 recommended)
- Java applets : Sun Microsystems® Java™ 2 Platform, Standard Edition,
  Version 1.4.2 (J2SE).
  Java installer is included in the accompanying CD.

Installation Section

(2) Set the network address for the Web Server Unit.

(a) If network parameters (user-defined) have not been set for the Web Server Unit:

1. Set the Network Configuration using pin 1 of the DIP switch on the front of the Unit to default and turn ON the Reboot switch.

2. The Web Server Unit will start up with the following parameters.

- IP address = 192.168.0.1
- Subnet mask = 255.255.0.0

* Rebooting takes about 2 to 7 minutes.

3. With these parameters set, connect the Web Server Unit directly to the PC.

4. Set the network parameters for the PC.

For details, refer to (3) Setting network parameters for PC.

5. Configure the Web browser on the PC.

For details, refer to (4) Setting browser parameters for PC

6. Enter the address (URL) of the Web Server Unit in the browser and connect to it.

For details, refer to (6) Opening the home page of the Web Server Unit

7. The start page will be displayed if it is connected. Log in with the system administration right (User name: **admin, Password**: **admin).**

Other windows will appear for other authentication rights, but always click the **Yes** Button to proceed.

For details, refer to (6) Opening the home page of the Web Server Unit

8. Set the actual network parameters (user-defined) in the Network Settings window.

(For details, refer to I. System Operation and Administration in Administration and Setting.)

9. Set the Network Configuration to user setting by changing pin 1 of the DIP switch on the front of the Unit to user settings and press ON the Reboot switch.

The steps above will reboot the Web Server Unit with user-defined parameters.

(b) If network parameters (user-defined) have been set for the Web Server Unit:

1. Set the Network Configuration to user setting by changing pin 1 of the DIP switch on the front of the Unit to user settings and press ON the Reboot switch.

2. The Web Server Unit will reboot with user-defined network parameters.

* It will take 2 to 7 minutes to reboot.

3. Connect the Web Server Unit to the actual onsite network and check the settings for peripheral devices such as routers.

For details, refer to (5) Setting network peripheral devices.

4. to 8.

Same as the procedure in the preceding section, so refer to the previous section (a)-□ to □.

9. To enable the settings, reboot the Web Server Unit in the Reboot menu.

The steps above will reboot the Web Server Unit with user-defined parameters.

Installation Section

(3) Set the network parameters for the PC.

Set the IP address, subnet mask, and default gateway.

Set the parameters according to the connected network in the Internet protocol (TCP/IP) properties window, as described below. For details, consult the network administrator of the network to which you are connecting.

* The details below are based on the TCP/IP setup window of Microsoft® Windows® XP Operating System.

(a) Connecting to an Intranet

1. Select *Control Panel* from the Start Menu.

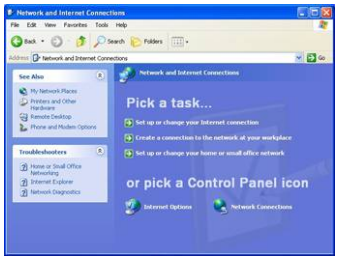
2. Select *Switch to Category View* in the Control Panel. Then select *Network and Internet Connections* under *Pick a category*. Next, select *Network Connections* under *or pick a Control Panel icon* in the Network and Internet Connections Window.

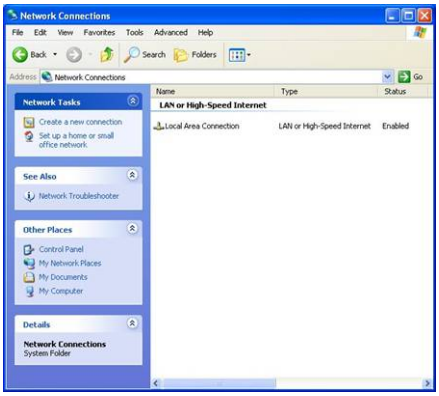
Alternately, select ***Switch to Classic View*** in the Control Panel. Then select ***Network Connections***.

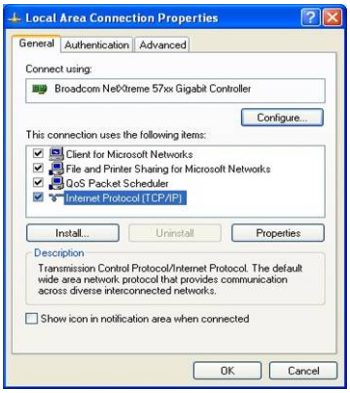
3. Right-click *Local Area Connection* in the Network Connections Window. Then select *Property*.

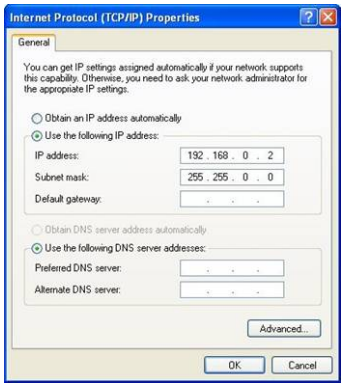
4. Select *Internet Protocol [TCP/IP]* in the General Tab Page under *Local Area Connection* Properties.

Select ***Property*** (The Properties Button will be displayed with a check mark (☑).









5. Select the General Tab in the Internet Protocol (TCP/IP) Properties Window.

If a fixed IP address is to be used, select ***Use the following IP address*** and then enter the IP address, subnet mask, and default gateway.

* For the actual values and the IP address of the DNS server, consult the network administrator of the network to which you are connecting.

Installation Section

* If pin 1 of the DIP switch is set to default settings, set the following parameter values:

IP address : 192.168.0.X (X is any value between 2 to 255.)
Subnet mask : 255.255.0.0
Default gateway : leave blank

If an IP address is obtained from the DNS server (DHCP), select ***Obtain an IP address automatically***.

* For the IP address of the DNS server, consult the network administrator of the network to be connected to.

6. Click the OK Button to complete the procedure.

(b) Connecting to the Internet

1.For step 1 to 4

Refer to the preceding section 1 to 4.

5. Select the General Tab in the Internet Protocol (TCP/IP) Properties Window.

If a fixed IP address is to be used, select ***Use the following IP address*** and enter the IP address, subnet mask, and default gateway.

* For the actual values and the IP address of the DNS server, consult the network administrator of the network to which you are connecting.

If an IP address is obtained from DNS server (DHCP), select ***Obtain an IP address automatically***.

* For the address of the DNS server, consult the network administrator of the network to which you are connecting.

6. Click the OK Button to complete the procedure.

* For Internet connections, users need to subscribe to an Internet service provider (ISP) and obtain a user name and password. Depending on the ISP, the DNS server address may also be required.
* ISPs may refer to user names and passwords by other names, as follows:

- User name : Authentication ID, Login ID, Connection ID, Network ID, etc.
- Password : Authentication password, Login password, Connection password, Network password, etc.

* Check with the ISP for details.
* For the network connection speed, ADSL or faster is recommended.

Installation Section

(4)Set the browser on the PC.

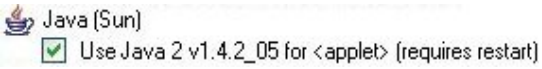
Set the browser (Internet Explorer) as follows: (The details below are based on the TCP/IP setup window of Microsoft® Windows® XP)

1. Settings for Internet Option (Internet Properties)

Right-click the **Internet Explorer** Icon and select ***Internet Properties***. (Alternately, left-click ***Internet Properties*** and select ***Tool - Internet Options***.)

Enable Java (Sun)

Select (☑) ***Use Java 2 v1.4.2_05 for <applet> (requires restart)*** under *Java (Sun)*.



Click the **OK** Button to complete the procedure.

To enable the changed settings, close the browser.

* Java Version 1.4.2 is required.

* If this item is missing or another version is specified, follow step 2 to install Java.

* Setting for Microsoft VM does not require changes.

Enable SSL 3.0

Select the **Advanced** Tab.

Select (☑) ***Use SSL 3.0*** under *Security*.

Click the **OK** Button to complete the procedure.

Disable Cookies

Select the **Privacy** Tab.

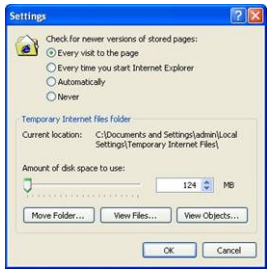
Select ***Advanced***.

Select (☑) ***Override automatic cookie handling*** in the Advanced Privacy Settings Window.

Select ***Block*** under *First party Cookies* and *Third-party Cookies*.

Click the **OK** Button to complete the procedure.

Disable the Cache



Select the **General** Tab.

Click the **Settings…** Button under *Temporary Internet*

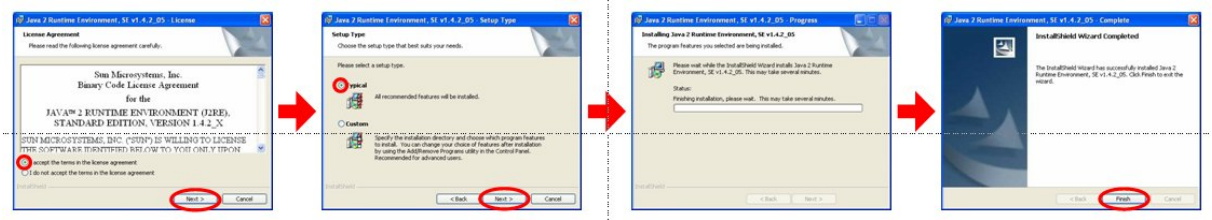
Select ***Every visit to the page*** under *Check for newer pages*.

Click the **OK** Button to complete the procedure.

Installation Section

2. Installing Java

Run **the installer on the included CD. (**Execute j2re-1_4_2_03-windows-i586-p.exe included in the CD to start installation and Follow the instructions from the installer application.)



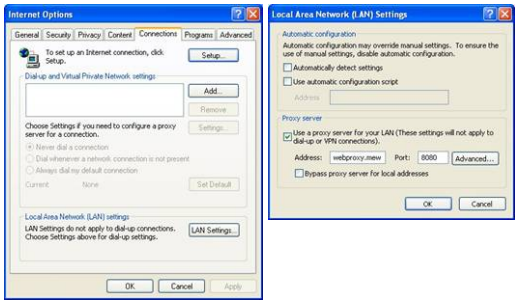
3. Proxy Server

Set the connection to the proxy server and other connections if needed.

Right-click the Internet Explorer Icon and select ***Internet Properties***. (Alternately, left-click ***Internet Properties*** and select ***Tool - Internet Options***.)

Select the **Connections** Tab.

Click the **LAN Settings…** Button.



* Make the settings under *Proxy server* in the Local Area Network (LAN) Settings Window. Consult your network administrator for setup parameters.

* Some applications, such as direct connections, do not require **Use a proxy server for your LAN** to be selected (☑).

Installation Section

(5) Network peripheral devices.

* Consult your network administrator for details of the network peripheral devices and their environments.

1. Ports.

The product uses the ports listed below. It is required that these ports be open on the firewalls and routers between this device and the remote PCs.

- **443** for **HTTPS** services
- 6001 for **proprietary**

* If port 6001 is closed, the refresh cycle of status display will take 30 seconds or more.

* If the port 6001 is open, it can be refreshed in real time. Therefore, it is recommended that this port be open.

2. Firewalls and routers.

When connecting to the Internet, firewalls and routers must be installed to maintain security, but be sure to enable the ports listed in 1.

3. Internet connection.

- Requirements **for the Internet Connection to Web Server Unit (Publishing to the Web):**

* Always-ON network connection

* Availability of fixed (Global) IP address

* Connection speed : ADSL or faster (Recommended)

- **Carrier and ISP**

The user is responsible for entering a contract with an ADSL carrier and an Internet service provider (ISP) that provide a fixed IP address service.

- **PPPoE**

The Web Server Unit is not equipped with PPPoE connection functionality. If you subscribe to a service that requires the user authentication by PPPoE, a router with PPPoE functionality (or an ADSL modem with routing functionality) will be needed in addition to an ADSL modem.

Installation Section

(6) Open the home page of the Web Server Unit.

Follow the steps below to access the Web site through the browser (Internet Explorer).

1. Enter the address (URL) of the Server Unit.

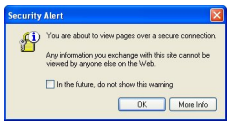
As follows

https://*.***.***.***/**

* denotes the IP address digits of the Server Unit. (e.g. if the IP address is 192.168.0.1, enter *https://192.168.0.1/* as the URL).

* "https" is used at the beginning of the URL.

2. Proceed to the Security Alert Window.



Two Security Alert Windows will be displayed because the data is encrypted (SSL).

Click the **OK** Button in the first window

Click the **Yes** Button in the second window

The Start Window (Web page) will be displayed if connection is established.

3. Login (start operation).

Click the image in the Start Window to display the Login Window.

Login with the system administration rights.

The following parameters are set for login as the factory settings.

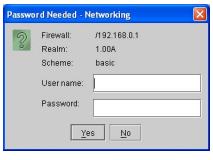
- User name (U) : **admin**
- Password (P) : **admin**

The Main Frame will be displayed if connection is established.

4. Proceed to the Java Warning Window.

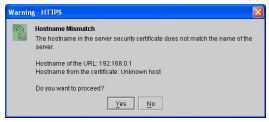
Two warning windows and a login window will be displayed before the Main Frame is completely displayed. This is related to the use of Java (Sun).

Click the **Yes** Button in the Warning – Security Window.



Enter the user name and password exactly the same as those entered in the Login Window in step 3 in the corresponding fields of the Password Needed – Networking Window, and then click the **Yes** Button.

* Do not enter a user name or password (authentication right) different from those entered in the Login Window.



Click the **Yes** Button in the Warning -- HTTPS Window.

The Main Frame will be displayed normally if the connection has been established.

Installation Section

5. Logout (operation complete).

Logout by closing the browser window.

* To login with a different authentication rights, close the browser window first. The authentication rights at login are retained, even after returning to the Start Window, until the browser is closed.

Java Authentication Problems.

* It may take a while before the Java Warning (Authentication) Dialog Box is displayed.

If you ignore the Warning (Authentication) Dialog Box and minimize the browser before the dialog box is displayed, the Warning (Authentication) Dialog Box will remain hidden even after maximizing the browser again, preventing the user from operating the browser.

In this situation, press the **ALT-Tab** keys simultaneously to display the Windows task switcher view. Select the Java icon in the tag switcher view by pressing the **ALT-Tab** keys.

This will bring back the Java warning (authentication) dialog box. From there, proceed as described above.

* If the user name or password that had been entered at login is not entered correctly three times in succession, or if the **Cancel** Button is clicked, the Authentication Required Window will be displayed. In this situation, the browser must be closed and then reopened.

* Java applets and the browser run on the client computer, so if the computer does not have sufficient resources, they may not function properly.

System Administration

This section provides information on the system administration functionalities of the system.

System Administration

I. System Administration Settings

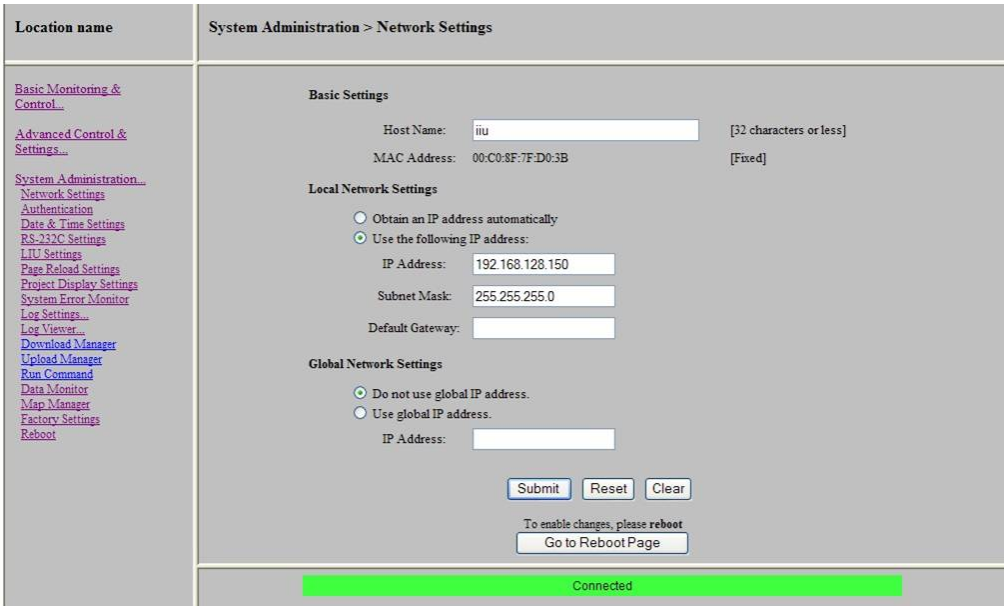
The following administrative functionalities are supported when logged in with the system administration rights. These functions can be selected in System Administration Menu.

(1) Network Settings
(2) Authentication
(3) Date & Time Settings
(4) RS-232C Settings
(5) LIU Connection Settings
(6) Page Reload Settings
(7) Project Display Settings
(8) System Errors Monitor
(9) Log Settings
    (a) Groups
    (b) Patterns
    (c) Zones
(10) Log Viewer
(a) Activity
(b) System Errors
(11) Download Manager
(12) Upolad Manager
(13) Run command
(14) Data Monitor
(15) Map Manager
(16) Factory Settings
(17) Reboot

System Administration

(1) Network Settings

Specify Ethernet communications settings (e.g. IP address) in the Network Settings Window.



1. Basic settings.

Host Name : Identification name for the Web Server Unit

* 32 characters or less, excluding hyphens (-), and underscores (_)
* The host name becomes valid when the browser is reopened or the page is reloaded after rebooting the Web Server Unit.
* The host name denotes a machine identification text string on a network and is used in a network environment with DNS.
* The MAC address denotes the physical address of the Web Server Unit.

2. Local network settings.

If the IP address is to be obtained dynamically, select ***Obtain an IP address automatically***.

If the IP address is to be specified directly, select ***Use the following IP address*** and enter the following:

IP Address : IP address to be assigned to the Web Server

* Enter XXX. XXX. XXX. XXX (XXX : Alphanumeric characters)
* Enter a global address if the IP unnumbered functionality is used by the router.

Subnet mask : The subnet mask for the network the Web Server Unit connects to

* Enter XXX. XXX. XXX. XXX (XXX : Alphanumeric characters)

Default gateway : The gateway for the network the Web Server Unit connects to

* Enter XXX. XXX. XXX. XXX (XXX : Alphanumeric characters)

System Administration

3.Global network settings.

If not connecting to the Internet, select ***Do not use global IP address***.

If connecting to the Internet, select ***Use global IP address*** and enter the IP address.

IP Address : Global IP (Fixed) address provided by the Internet Provider

* Ports must be set for the router independently.

* Port 6001 is used for the status displayed using symbols in the Monitor & Control List and Maps Windows. If this port is not supported, realtime symbol refreshing is not supported in response to local circuits status changes, but they can still be monitored by periodically reloading the Main Frame by selecting ***Enable automatic reload of basic monitoring & control pages*** in the Page Reload Settings Menu.

4. Submit button.

When the submit button is clicked, the parameters specified and shown in the window will be submitted to the Web Server Unit as the user-defined values.

5. Enable the submitted parameters.

To enable the submitted values, reboot the web server unit.

* If the DIP switch pin is set to ***Default***, user-defined values can be submitted and the web server unit can be rebooted. But after rebooting, the DIP switch settings will override the defined values.

* Rebooting can be performed either from this window or by setting the DIP switch on the Unit.

6. Other

Click the "Reset" Button to display the current network settings. Click the "Clear" Button to clear all entries.

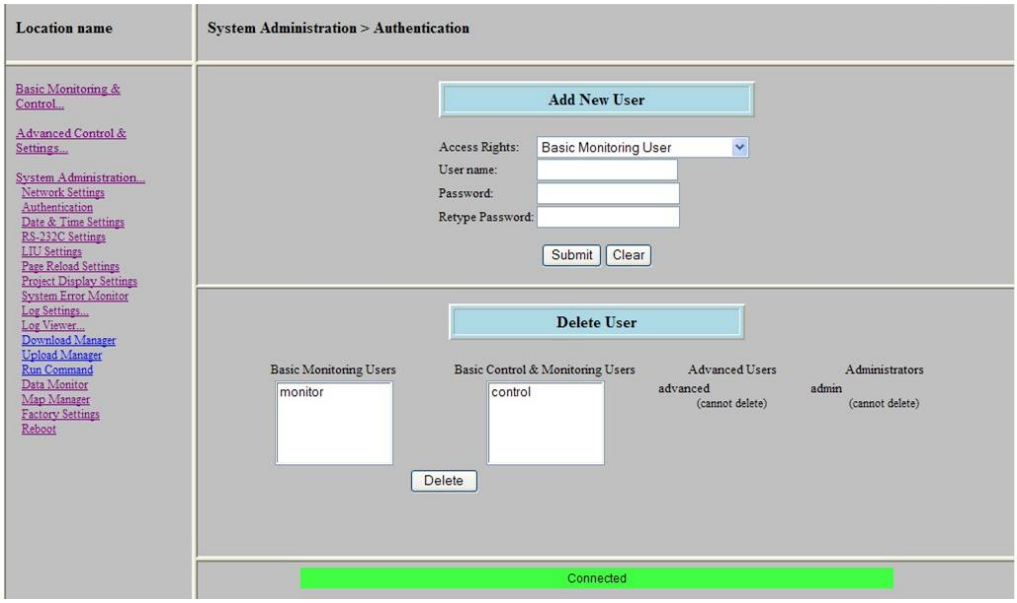
7. Factory default values

Host name	: host
Local network	: Use the following IP address
IP address	: 192.168.0.1
Subnet mask	: 255.255.0.0
Default gateway	: Blank
Global address settings	: Do not use global IP address

System Administration

(2) Authentication

The user's access rights, user name, and password can be registered or deleted in the Authentication Dialog Box.



(i) Registering a User (Add/Change)

Perform these settings under *Add New User*.

1. Select the access right from the pull-down menu in the *Access Rights* field.

Types of Access Rights are described as follows:

- **Basic Monitoring User** : Enables monitoring only of lighting circuits operations.
- **Basic Monitoring & Control User** : Enables monitoring and control of lighting circuits operations.
- **Advanced Monitoring & Control User** : Enables setting in addition to monitoring and control of lighting circuits operations.
- **System Administrator** : Enables all operations including those related to system administration settings.

2. Enter the user name and password, and retype the password.

The following is a list of conditions for user names and passwords to be valid:

- Valid user names and passwords can be of 4 and 8 characters long, excluding hyphens, underscores, and other special characters.
- Same user names cannot be used more than once, regardless of whether the access rights are different
- User names are not case-sensitive.

System Administration

- The number of user accounts is limited depending on the user type as described in the following table:

User Type	Minimum number of user accounts	Maximum number of user accounts
Basic Monitoring	1	5
Basic Monitoring & Control	1	5
Advanced Control & Settings	1	1
System Administration	1	1

* Click the **Clear** Button to delete text entries in the *User Name*, *Password*, and *Retype Password* fields.
* An **Advanced** User and **Administrator** can be registered by overwriting the default text.

3.Click the Submit Button.

* Registrations are disabled for a period of one minute after one registration/deletion operation has beed performed. This restriction applies when registering multiple users in succession.
* Also, simultaneous registration from multiple clients is not possible.

(ii) Deleting User Registrations

Registered users can be deleted under *Delete User*.

1. Select the displayed user names for Basic Monitoring and Basic Monitoring & Control Users

2. Click the Delete Button.

* Note that there must be at least one user registered for all types of users.
* Also, entries for the **Advanced Control & Settings User** and **System Administrator User** cannot be deleted, but can be overwritten under *Add New User*.
* If another **administrator** concurrently logged in has changed/deleted the registration, the changes are not displayed until operating windows are reloaded. Therefore, even if operations have been completed, actual registrations may not be stored in the Web Server Unit, because the user registration has not yet been enabled.
* A user registration may be deleted while a user is still logged in. In this situation, a window requiring the user authentication will be displayed to that user. Also, the "Please wait for a moment…" message will be displayed on the task bar .

In that case, the user must reopen the browser and log in again with another user name and password that are valid.

System Administration

(iii) Changing a Password

Perform these settings under *Add New User*.

1.Select the access right from the pull-down menu in the *Access Rights* field.

2. Enter the user name in the *User name* field.

3. Enter a new password in the *Password* and *Retype Password* fields.

4. Click the Submit Button.

* Password changes can be performed by the user with the system administration right only.
* If the system administration password has been changed, a new login is required immediately after clicking the Submit Button.

* **Important notice**: The user name and password for the system administrator cannot be recovered by the user if they are ever forgotten after being changed. They do not respond to initialization using the hardware switches for security. Therefore, be sure to store this information in a safe place.

(iv) Factory defaults values

The factory default values for users and passwords are as described in the following table:

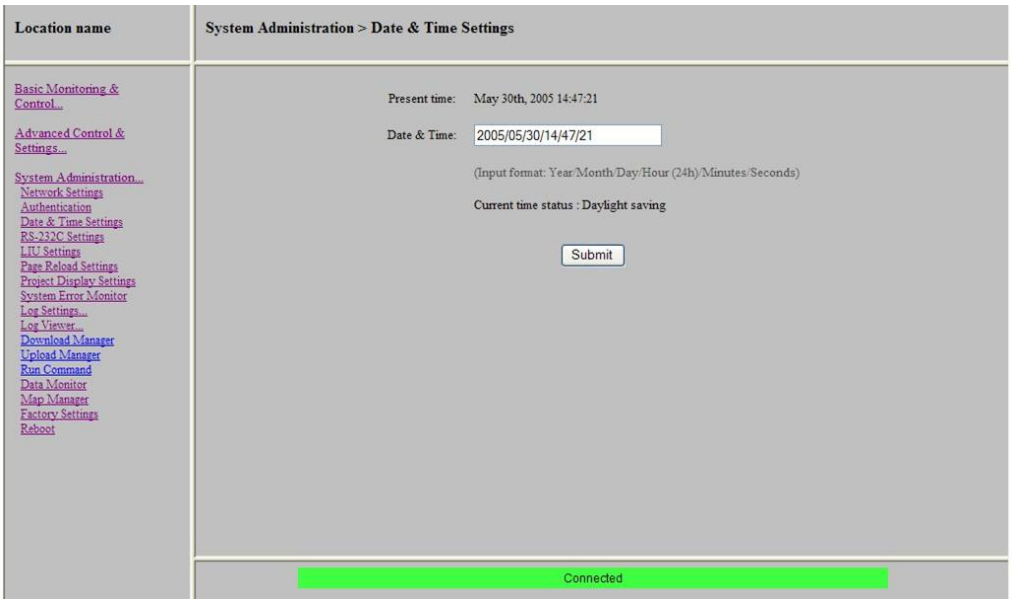
User Type	User Name	Password
Basic Monitoring	monitor	monitor
Basic Monitoring & Control	control	control
Advanced Control & Settings	advanced	advanced
System Administration	admin	admin

* Be sure to change user **names** and passwords before operation for security.
* User names and passwords can be reset to the above text in the Factory Settings Menu.

System Administration

(3) Date & Time Settings

The clock inside the Web Server Unit can be adjusted in the **Date & Time Settings** Dialog Box. Date and time must be set for schedule control and log keeping.



1. Enter the date and time in the *Date & Time* field.

The required format to enter the new date and time is as follows :

year/month/day/hour (24 hours format)/minutes/seconds

e.g., December 1st 2004 11:01:59 p.m. will be set as "2004/12/01/23/01/59".

* Always use four digits for the year, two digits each for the month, day, hour, minutes, and seconds.
* Also use a single-byte slash "/" as the delimiter.

The maximum range for the date & time settings is as follows :

2000/01/01/00/00/00 to 2037/12/31/23/59/59

2. Click the Submit Button.

* Changes to the Date & Time Settings will affect the stored log data. The logs recorded up to six days before the renewed date will be deleted
* If the date changes naturally due to the passing of time while this window is displayed before clicking the Submit Button, a registration error will occur to protect the log.

Current Time Status

Current time status, daylight saving time or normal time, is indicated below the date & time setting field.

Supplementary Information:

* Periodic adjustment is required due to the clock's precision.

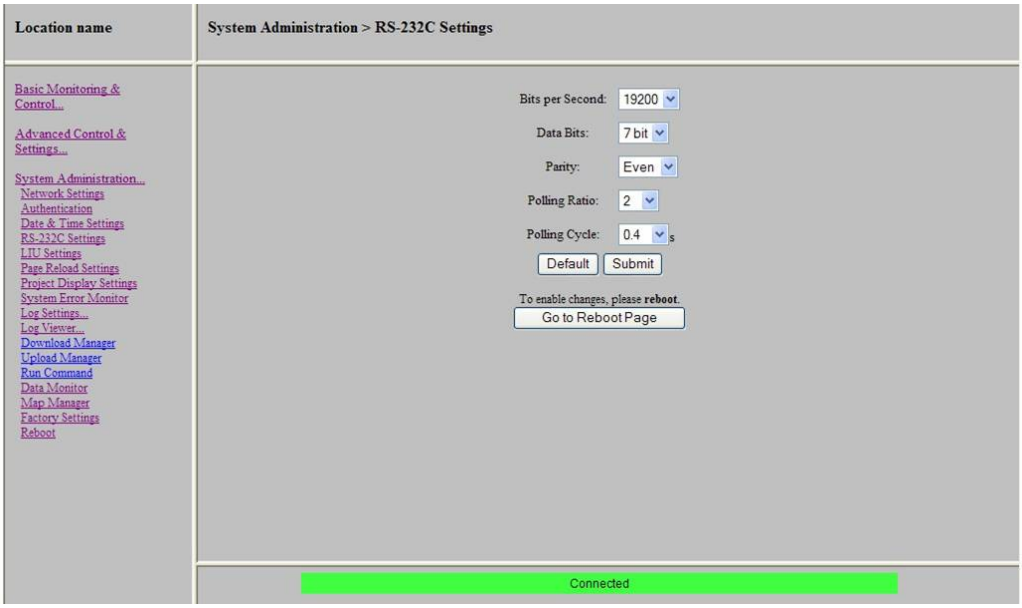
System Administration

* The time displayed in the *Present time* field is the time set on the Web Server Unit when Date & Time Settings is displayed on the client PC. Because this value is not automatically refreshed, it should not be interpreted as a functional clock.
* The clock will return to January 1, 2000 after December 31, 2037.
* The clock will start with 1980/01/01/00/00/00 on initialization after a power failure longer then the clock's batteries maximum longevity (Date & Time Out of Order).
* When the clock is in "Date & Time Out of Order" status, the LED indicator on the Unit will be flashing and the error message will remain until a valid date and time are specified.
* Value at rebooting: 2000/01/01/00/00/00

System Administration

(4) RS-232C Settings

This page provides an interface in order to set the RS-232C communications parameters between the Web Server Unit and NCU.



1. Select the values.

Use the following values

- Bits per Second : 19200 or 9600 [bps] *
- Data Bits : 7 bits *
- Parity : Even *
- Polling Ratio : 2
- Polling Cycle : 0.4 [s]

* The DIP switch on the NCU must be set to the same values.

Factory settings:

- Bits per Second : 19200 [bps]
- Data Bits : 7 bits
- Parity : Even
- Polling Ratio : 2
- Polling Cycle : 0.4 [s]

* Click the Default Button to display the above values.

2. Click the Submit Button.

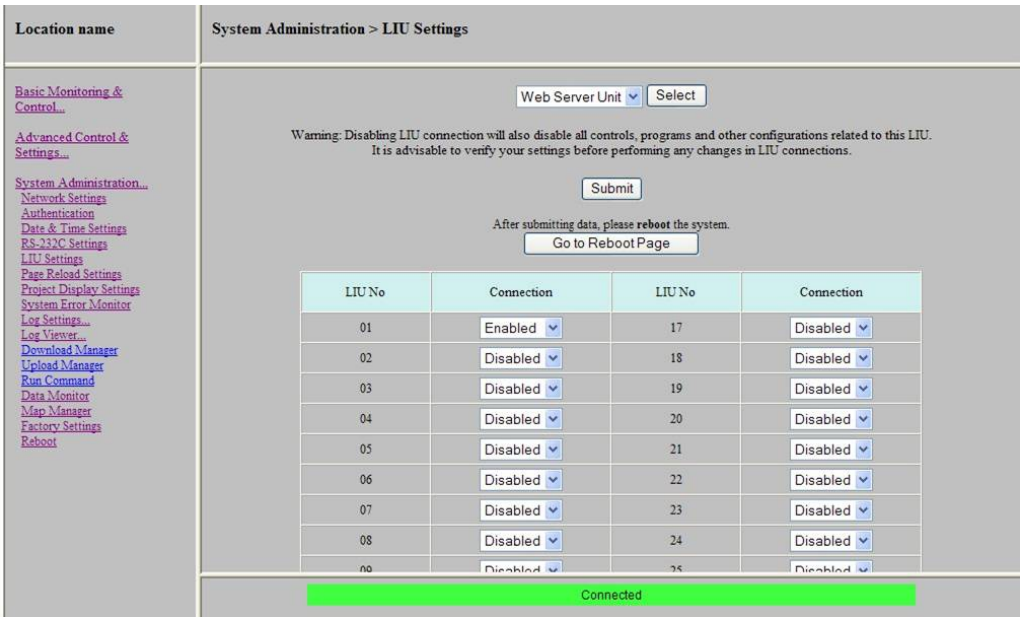
3. Enable the registered values.

Registered values are enabled by rebooting the web server unit.

System Administration

(5) LIU Settings

This page provides the interface for configuring LIU connections. An LIU can be physically connected but communications with it can be disabled in these settings.



1. Check the data.

* Select a Unit in the drop down list at the top of the view and click the **Select** Button. Data will be displayed.
* When the window opens, values stored on the Web Server Unit are displayed. LIU connection settings are set in the Web Server Unit and NCU, and the settings must be identical.
* If not, they can be matched using this page.If the settings of the Web Server Unit and NCU remain different, monitoring and control will not function normally.
* The NCU must be connected to the Web Server Unit in order to check the Web Server Unit's data.

2. Enable/disable the connection.

Select *Enabled* or *Disabled* for each of the LIU (01 to 31).

3. Click the Submit Button.

The values shown in the window will be submitted and saved to the Web Server Unit and the NCU.

* The NCU must be connected when values are submitted.

Saving and Resetting Zone Settings

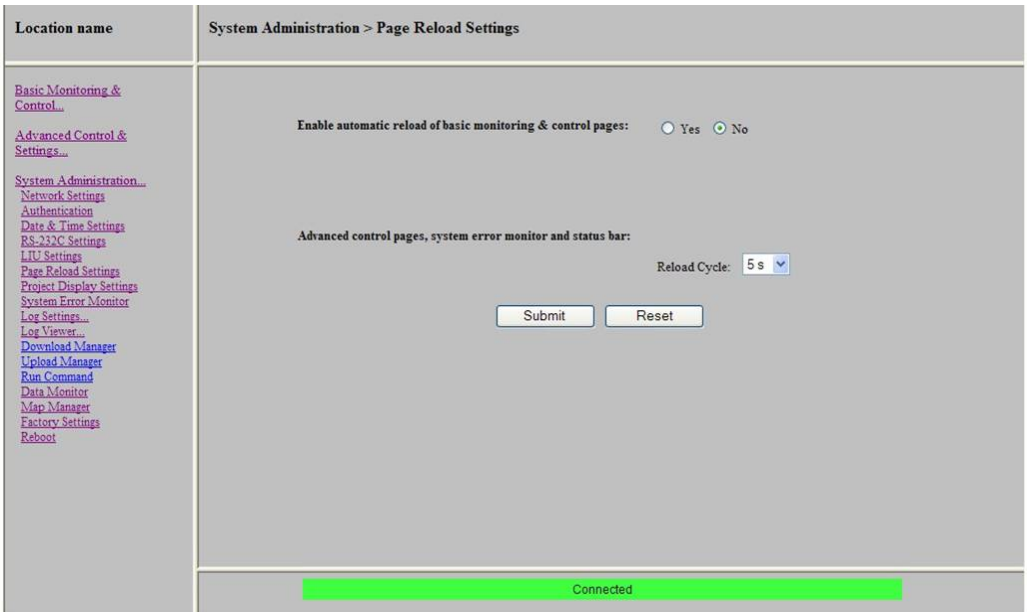
Zone settings data will be deleted when the LIU connection is set. Therefore, when the **Submit** Button is clicked, a warning message to that effect will be displayed. Zone settings data that have already been set will not be lost if the user follows the following instructions.

To prevent loosing zone settings, first save the zone settings data to the client PC in the Download Window prior to modifying LIU connections settings. Once LIU Connection Settings modifications are completed, transfer the zone data back to the Web Server Unit in the Upload Window. Edit the zone settings in the Zone Settings Window to correspond with the new LIU Connection Settings.

System Administration

(6) Page Reload Settings

This window is used to enable automatic reload of basic monitoring & control pages and periodically refresh advanced control pages, system error monitor page, and the status bar.



(i) Enabling Automatic Reloading of Basic Monitoring & Control Pages

These pages communicate through a proprietary port (6001). Even if this port is closed in the user's PC environment, status monitoring is still possible.

1. Select *Yes/No*.

By selecting Yes in the Enable automatic reload of basic monitoring & control pages field, the Main Frame will be reloaded periodically, and the status data can be automatically refreshed.

* If the proprietary port is open, this reloading is unnecessary. It is set to No in the factory settings.

* If Yes is selected, the Page Reload Button will be displayed in both windows. Clicking this button will reload the Main Frame once, regardless of the reload cycle.

2. If *Yes* is set, select the reload cycle.

Reload Cycle : Select from 30 seconds or 1, 2, 3, 4, 5, 10, 15, 20, 25, or 30 minutes.

3. Click the Submit Button.

(ii) Set the advanced control pages, system error monitor page, and status bar reload cycles.

In order to be refreshed, the advanced control pages, the system error page and the status bar communicate through http service 443.

1. Select *Reload Cycle*.

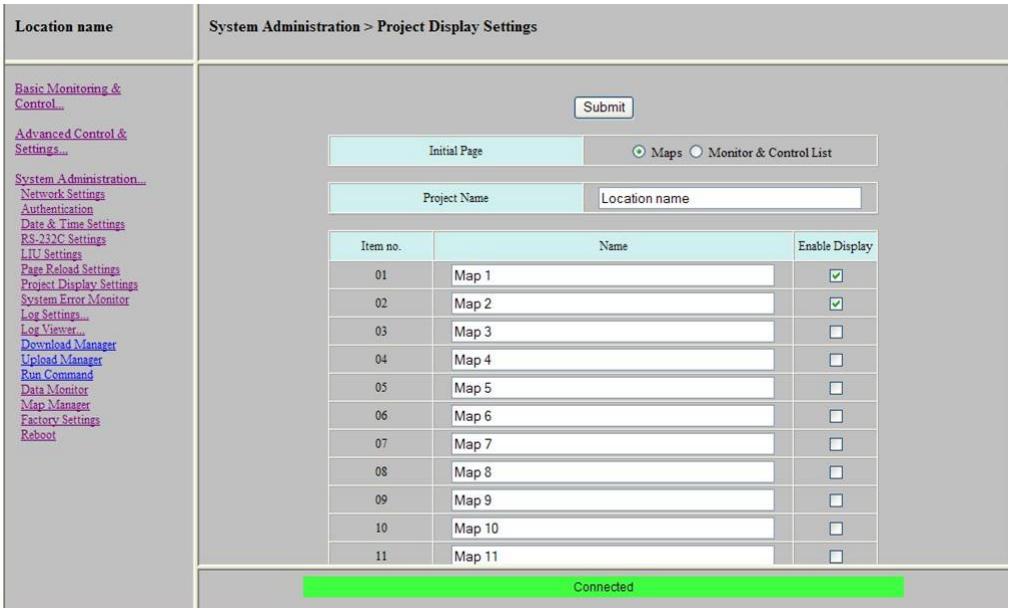
Reload Cycle : Select from 5, 6, 7, 8, 9, or 10 seconds

2. Click the Submit Button.

System Administration

(7) Project Display Settings

Text displayed in Project Name Frame, names for each Map Window, and displays of Maps and Monitor & Control List can be setup.



1. Select the initial page.

Select either ***Maps*** or ***Monitor & Control List*** as the initial page to be shown to the user after login.

(i) When *Maps* Is Selected

* The first item in the map list will be displayed to the user after login, regardless to its display status (enabled display checkbox). If the map data of the first item has not been transferred to the Web Server Unit, an empty background will be displayed to the user after login.

* Please refer to Ⅱ. Creating and Administering Maps for details on map data.

(ii) When *Monitor & Control List* Is Selected

The Monitor & Control List will be displayed to the user after login.

* Please refer to Ⅲ. Monitor & Control List for details on the Monitor & Control List.

2. Enter the *Project Name* and *Map Names*.

- **Project Name** : Text displayed in the Project Name Frame (Upper left corner of the window)
- **Map Name** : Names for maps 01 to 99.

* Entries must be 32 alpha numerical characters long or less.

* Invalid characters entry will cause an error message to be displayed after the Submit Button is clicked.

* Long text strings, such as a 32 characters long, may be displayed with both ends truncated.

3. Select the maps to display.

The display of maps in the map list (pull-down menu in the Menu Frame) can be enabled by selecting (☑) the check boxes in the Enable Display column. Maps can be disabled by unselecting the check boxes. Maps can be disabled even if the corresponding map data has been transferred and remains on Web Server Unit.

System Administration

Supplemental Information:

* In order to complete enabling of map display, the web server unit must be rebooted after clicking the "Submit" button.
* If none of the maps are enabled, maps pull-down list will not be displayed in the Menu Frame.
* When map data has not been transferred to the web server unit but maps display are enabled, maps pull-down list will be displayed in the Menu Frame but will be empty.

4. Enable/Disable the Monitor & Control List display.

In order to enable display of the monitor & control lists to the Basic Monitoring & Control users, in the last row of the map table, select the "Monitor & Control List (Enabled only when logged in with Basic Monitoring and Basic Monitoring & Control rights)" check box.

* When logged in as the advanced control & setting user or as a system administrator, Monitor & Control List will be displayed regardless of selection of this item.
* *Enable Display* is selected in the factory settings for this item.

5. Click the Submit Button.

6. Enable the submitted settings.

Rebooting will enable the submitted settings.

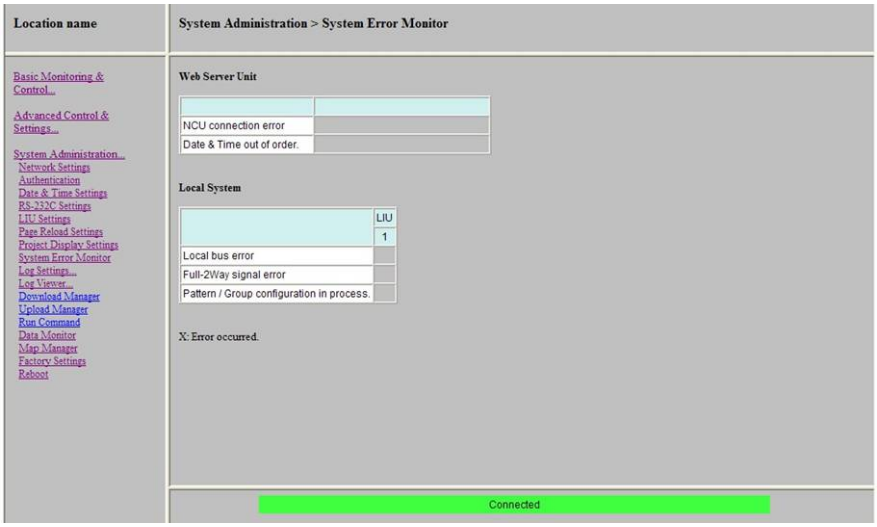
Factory Settings:

- Initial Page : Maps
- Project Name : Location name
- Name : Map 1 to Map 99
- Enable Display : All unselected (display disabled)
- Monitor & Control List : Selected (display enabled)

System Administration

(8) System Error Monitor

Errors related to the circuit status monitor and control, such as communications errors between the Web Server Unit and local lighting systems, can be checked.



Errors Types

- NCU connection errors : RS-232C communications error between the Web Server Unit and NCU (unmatched communications parameters broken/unmatched cable, NCU power interruption, etc.)
- Date & time out of order : Occurs when the clock has been re-initialize after a power interruption longer than the clock's battery maximum time range.
- Local bus error : Communications error between NCU and LIU (unmatched baud rate or addresses, connection problem, LIU power interruption, etc.)
- FULL-2WAY signal errors : Channel errors between LIU and Transmission Unit (connection problem, short circuit, Transmission Unit power interruption, etc.)
- Pattern / Group configuration in progress. in process. : Occurs when setting is in progress with the pattern/group configurator. Some configurators, such as Web Server Units, WRT9600 and WRT9103-series Units, employ configuration methods that do not affect monitoring and controls. These configurations do not trigger error indications.

Supplemental Information:

*"X" is displayed to indicate an error. If any error occurs, a message to that effect will be displayed in the Status Bar.

* Unknown address status of circuits (T/U) and patterns/groups (both red and green LEDs of wall switches are OFF) due to disconnected terminals, unregistered addresses, nonexistent P/G settings, etc. will not trigger errors because they can be defined either as normal or as errors depending on the operating methods.

* If a local bus error, FULL-2WAY bus error, or pattern/group configuration in progress error occurs after an NCU connection error, the error will not be displayed in the System Error Monitor because local errors cannot be detected under those conditions.

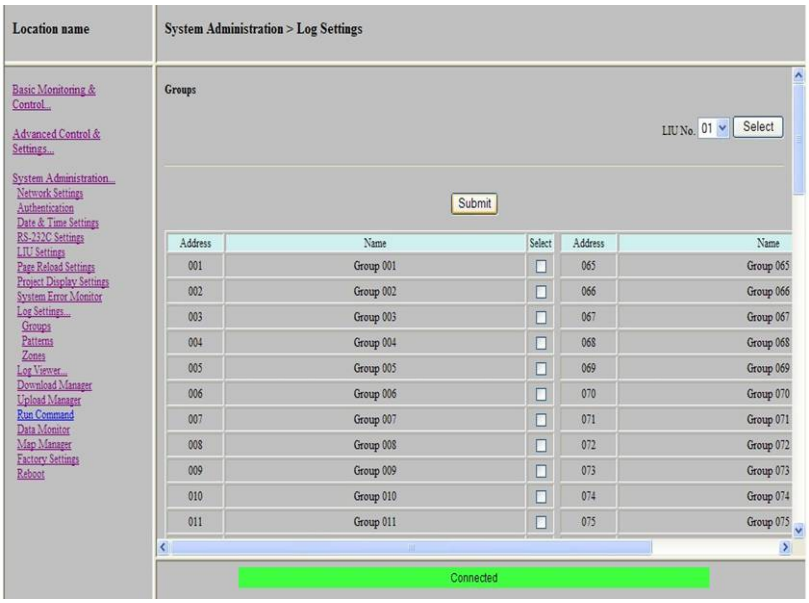
* NCU connection errors are displayed at the time of recovery.

System Administration

(9) Log Settings

The history of status changes in response to local control can be recorded as a log for group, pattern, and zone addresses. The logs can be selected/deselected by address (point).

(a) Groups



(b) Patterns

(c) Zones

1. Select *LIU No.* (* Groups and Patterns Log Settings)

Select an LIU number from the pull-down menu and click the **Select** Button to display all corresponding items.

2. Select the addresses. (* Groups, Patterns and Zones Log Settings)

The addresses of the items to be logged can be selected by selecting its check box

(a) Group address range : 001 to 127 (per LIU)

(b) Pattern address range : 001 to 72 (per LIU)

(c) Zone address range : 01 to 96.

3. Click the Submit Button. (* Groups, Patterns and Zones Log Settings)

Supplemental Information:

* Logs can only be checked and recorded for group, pattern, and zone addresses.
* DIP switches on both NCUs and LIUs must be set to enable the Web Server Unit to obtain logs. (Refer to Installtion Section I. Connection and Configuration (Installation) of Device (Unit) for details.)
* Changes due to On-timer/Off-delay controls included in the Patterns and Groups settings may not result in group, pattern, or zone status changes, depending on whether the individual circuit address or dimmer address is a part or the entire address contained in the settings.
* Undefined system errors (circuit status changes data being lost, undetected data, etc.), excluding date & time out of order errors, will not be recorded in the log

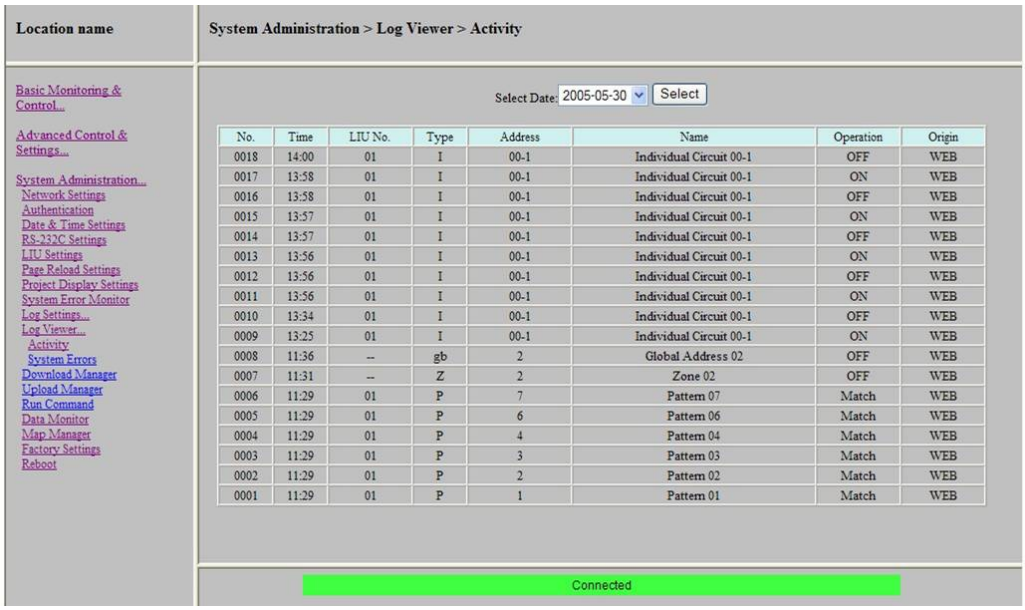
System Administration

(10) Log Viewer

The history log of circuit controls can be viewed for up to seven days.

(a) Activity

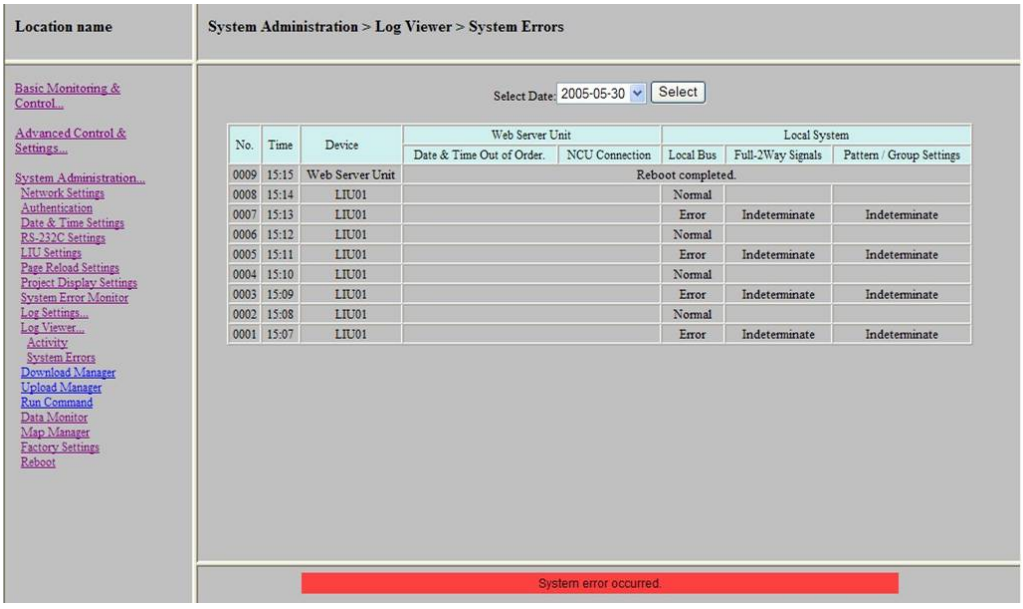
The history log of group, pattern or zone status changes can be viewed in table format. The origin of the control action, WEB (control from web page) or schedule is also displayed



No.	Time	LIU No.	Type	Address	Name	Operation	Origin
0018	14:00	01	I	00-1	Individual Circuit 00-1	OFF	WEB
0017	13:58	01	I	00-1	Individual Circuit 00-1	ON	WEB
0016	13:58	01	I	00-1	Individual Circuit 00-1	OFF	WEB
0015	13:57	01	I	00-1	Individual Circuit 00-1	ON	WEB
0014	13:57	01	I	00-1	Individual Circuit 00-1	OFF	WEB
0013	13:56	01	I	00-1	Individual Circuit 00-1	ON	WEB
0012	13:56	01	I	00-1	Individual Circuit 00-1	OFF	WEB
0011	13:56	01	I	00-1	Individual Circuit 00-1	ON	WEB
0010	13:34	01	I	00-1	Individual Circuit 00-1	OFF	WEB
0009	13:25	01	I	00-1	Individual Circuit 00-1	ON	WEB
0008	11:36	--	gb	2	Global Address 02	OFF	WEB
0007	11:31	--	Z	2	Zone 02	OFF	WEB
0006	11:29	01	P	7	Pattern 07	Match	WEB
0005	11:29	01	P	6	Pattern 06	Match	WEB
0004	11:29	01	P	4	Pattern 04	Match	WEB
0003	11:29	01	P	3	Pattern 03	Match	WEB
0002	11:29	01	P	2	Pattern 02	Match	WEB
0001	11:29	01	P	1	Pattern 01	Match	WEB

(b) System Errors

The history (log) of system errors can be viewed in table format.



No.	Time	Device	Web Server Unit		Local System		
			Date & Time Out of Order.	NCU Connection	Local Bus	Full-2Way Signals	Pattern / Group Settings
0009	15:15	Web Server Unit	Reboot completed.				
0008	15:14	LIU01			Normal		
0007	15:13	LIU01			Error	Indeterminate	Indeterminate
0006	15:12	LIU01			Normal		
0005	15:11	LIU01			Error	Indeterminate	Indeterminate
0004	15:10	LIU01			Normal		
0003	15:09	LIU01			Error	Indeterminate	Indeterminate
0002	15:08	LIU01			Normal		
0001	15:07	LIU01			Error	Indeterminate	Indeterminate

System Administration

1. Select a date. (Activity log and System Error log)

After selecting a date, the log content corresponding to that date will be displayed.

2. Click the Select Button. (Activity log and System Error log)

* The page is not automatically refreshed. In order to obtain the latest data, click the **Select** Button.
* Also, If the date changes during this operation, the display will be disabled. In that case, click the Select button to refresh the window.

Items Displayed in the Activity Log Page

- No : Serial number of the log entry (listed in decreasing order)
- Time : Time at which the control activity occurred (listed in reversed chronological order)
- LIU No. : Local LIU number where control activity occurred.
- Type : Address type as described in the following table:

Type	Designation
Individual Circuit	I
Dimmer	D
Group	G
Pattern	P
Zone	Z
Global Address	gb

- Address : Address number
- Name : Name of the corresponding address as set in Name Settings
- Operation : Status of control address.
  * If the control command was not transmitted to the lower system and is invalid, *Invalid* will be displayed.
  * Also, if the control command was transmitted to the lower system but the result was the same as before the control, *Abnormal OFF/Abnormal ON* will be displayed.
  * Finally, global addresses control do not have *Abnormal ON/OFF* or *Invalid* statues.
- Origin : Origin of control command, as described in the following table:

System Administration

Designation	Description
WEB	Control command originated from a web page.
Schedule	Control command originated from a program.
Local	Control command originated locally. Local control command are logged as configured in the Log Settings. Status changes of individual circuit and dimmer addresses are not logged.

Items Displayed in the System Error Log

- No : Serial number of the log entry (listed in decreasing order)
- Time : Time at which the error occurred (listed in reversed chronological order)
- Device : Device in which the error occurred (Including channels)
- Date & Time Out of Order : *Error* is displayed if an error has occurred and *Normal* when it has recovered. *Reboot Completed* is displayed when the Web Server Unit has rebooted.
- NCU Connection : *Error* is displayed if an error has occurred and *Normal* when it has recovered. *Indeterminate* is displayed for all items in the local system if an error has occurred.
- Local Bus : *Indeterminate* is displayed for all items in the local system if an error has occurred and *Normal* when it has recovered.
- FULL-2WAY Signals : *Error* is displayed if an error has occurred and *Normal* when it has recovered.
- Pattern/Group Settings : *Error* is displayed when pattern/group settings have started on a local system and *Normal* when settings have been completed.

* The types of errors that can be recorded are identical to those that can be checked in the System Error Monitor (Refer to (8) System Error Monitor for details.).
* *Indeterminate* is displayed for lower items whose data cannot be collected when an error has occurred in the higher part of the system.
* When the Web Server Unit is started, errors are logged independently from logs before startup. Therefore, identical logs may be displayed.

Supplemental Information:

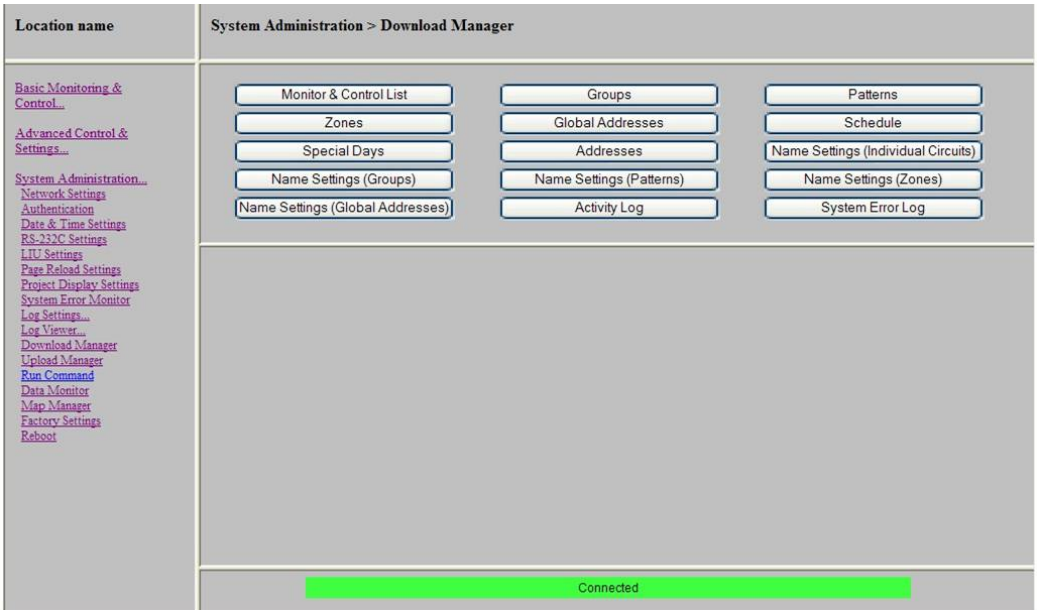
Maximum number of log entries: 1,000 entries/day × 7 days (including the current day)

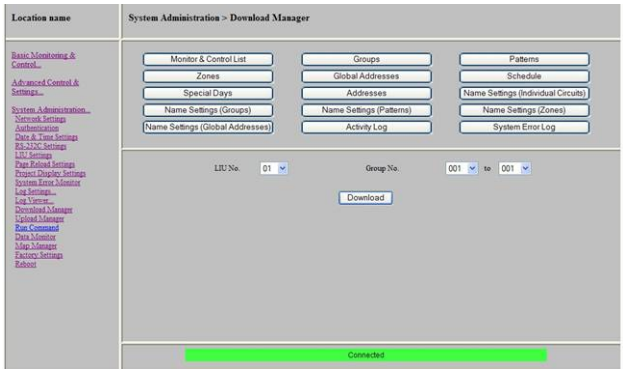
* Time 00:00 through 23:59 is counted as one day.
* If there are more then 1,000 log entries for a single day, the oldest log entry will be replaced by the newest log entry as the 1,000th case. (bottom of the table)
* If the log exceeds seven days, the oldest day's log data (all 1,000 records) will be deleted to make room for the current day's log.
* If the date is changed in the Date & Time Setting Window, all seven days' logs (all 7,000 records) will be deleted.
* The log dates may not be correct (arbitrary dates are logged) if a date & time out of order error has occurred.

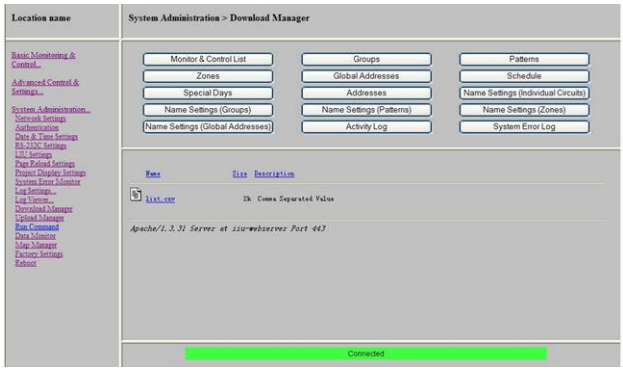
System Administration

(11) Download Manager

Download Manager is used when major settings, data, and history logs are to be back up on a client PCs.







System Administration

Downloadable Data File Types

Data in CSV (Comma Separated Value) format can be generated and downloaded from the web server unit. Microsoft® Excel is recommended to view and edit these files.

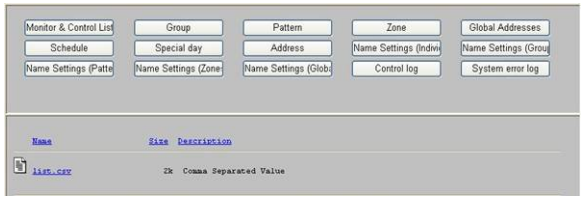
- Monitor & Control List : List data registered in Monitor & Control List Settings.
  * list.csv
- Group : Group control settings data registered in Group Settings.
  * group01.csv to group31.csv
- Pattern : Pattern control settings data registered in Pattern Settings.
  * pattern01.csv to pattern31.csv
- Zone : Zone control settings data registered in Zone Settings.
  * zone.csv
- Global Addresses : Global address control settings data registered in Global Address Settings.
  * global.csv
- Schedule : Programs settings data registered in Programs Settings.
  * schedule.csv
- Special day : Special days settings data registered in Special Days.
  * days of the week: Special _week.csv
  * days of the month: Special_day_every.csv
  * dates: Special_day_once.csv
- Address : Address settings data assigned to maps symbols in Address Settings.
  * address.csv
- Name Settings (Individual Circuits) : Individual circuit and dimmer name settings data registered in Individual Circuit Settings.
  * i_name01.csv to i_name31.csv
- Name Settings (Groups) : Groups data registered in Groups.
  * g_name01.csv to g_name31.csv
- Name Settings (Patterns) : Patterns data registered in Patterns.
  * p_name01.csv to p_name31.csv
- Name Settings (Zones) : Patterns data registered in Zones.
  * z_name.csv
- Name Settings (Global Addresses) : Global addresses data registered in Global Addresses.
  * gb_name.csv
- Control log : Activity data displayed in Activity
  * yymmddco.csv where "yy" denotes the year, "mm" denotes the month, and "dd" denotes the day
- System error log : System error data displayed in System Errors.
  * yymmddal.csv where "yy" denotes the year, "mm" denotes the month, and "dd" denotes the day

System Administration

(i) How to download a file (Excluding Groups and Patterns)

1. Select the type of data file.

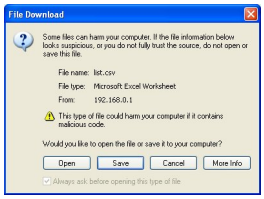
When a button for a file type is selected in the upper frame, the file names will be displayed in the lower frame.

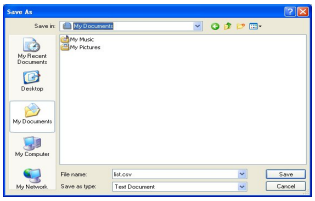


2. Click on the file name.

The File Download Dialog Box will be displayed.

3. Click the Save Button in the File Download Dialog Box.





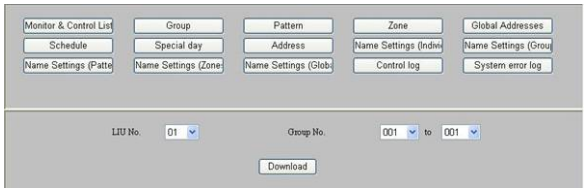
The Save As Dialog Box will be displayed.

4. Enter the file destination and name in the *Save in* and *File name* fields, and click the Save Button.

* When Zones data is downloaded, data currently stored on the Web Server Unit is converted into a file. Therefore, downloaded data indicated by the message "Settings inconsistencies" is different from that on the NCU.

(ii) How to download a file (Groups and Patterns)

Data for groups and patterns is not stored on the Web Server Unit. Therefore, it must be retrieved from Transmission Units.



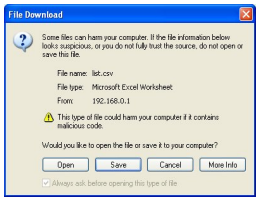
* When groups and patterns data is downloaded, communications with the Transmission Units occur during operation. Therefore, LIU connection settings must be enabled and Transmission Units must be connected.

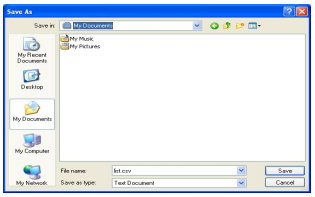
1. Click the Group or Patterns Button.

2. Select a LIU number.

3. Select the address range (groups /patterns).

4. Click the Download Button.





Communications to transmit data from the selected LIU system Transmission Unit to the Web Server Unit will be initiated. When this transmission is in progress, the "Data transfer in progress. Please wait…" message is displayed.

Wait until the message changes to "Connected" and the communications are completed.

* Responses may be delayed or not occur during the operation.

* When the Pause Button is clicked, communications with the Transmission Unit are interrupted, but data up to that point is obtained.

* While data is downloading, downloading from other browsers is disabled.

* System Errors cannot be detected while downloading is in progress.

* Old CSV files are also displayed, so delete them under *Temporary download files* in Factory Settings

5. Click on the file name.

The File Download Dialog Box will be displayed.

6. Click the Save Button in the File Download Dialog Box.

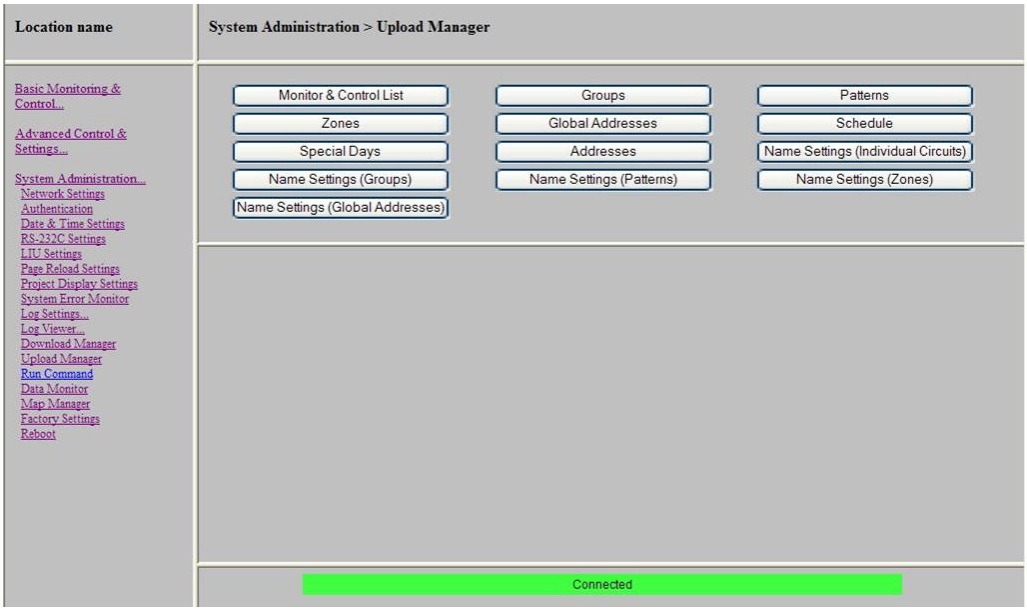
The Save As Dialog Box will be displayed.

7. Enter the file destination and name in the *Save in* and *File name* fields, and click the Save Button.

System Administration

(12) Upload Manager

The Upload Manager is used when settings data is transferred from PCs to the Web Server Unit.



Uploadable Data File Types

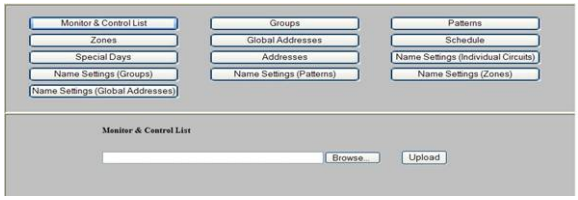
The same file types can be uploaded as the downloadable files in Download Managerexcept *Activity* and *System Errors*.

* Uploading requires the same format as that used for downloading (Refer to Miscellaneous I. Appendix for details).

Operations

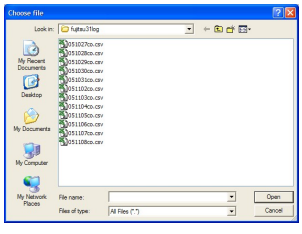
1. Select the type of data file.

When a button for a type is clicked in the upper frame, the file name input field will be displayed in the lower frame.



2. Enter a file name.

When the Browse… Button is clicked, the Choose File Dialog Box will be displayed. Select a file name and click the **Open** Button. File names can also be entered manually.



3. Click the Upload Button.

For Groups and Patterns, communications to transmit data to the selected LIU's Transmission Unit will be initiated. During this transmission, the message "Data transfer in progress. Please wait…" will be displayed, as the following: Wait until the message changes to "Connected" and communications are completed.

* Responses may be delayed or not occur during the operation.
* When the Pause Button is clicked, communications to the Transmission Unit are interrupted, but data up to that point is obtained.

System Administration

General Precautions

* Microsoft® Excel is recommended to view and edit uploaded files.
* Uploaded files with the wrong format or values are invalid.
* CSV files use the Iso-8859-1 character set. Other codes are invalid and will result in the message "File data acquisition from CGI parameter failed."
* Blanks in data files will cause the actual data to be deleted(* This does not include Groups and Patterns.)
* Any file name is valid as long as the extension is CSV.

Precautions Specific to Groups and Patterns

* The Transmission Unit must be connected for uploads.
* The connected Transmission Unit will be updated with CSV file contents at the time of the upload operation.
* While data is uploading, uploads from other browsers are disabled.
* System errors cannot be detected while uploading is in progress.
* Addresses with descriptions will update data in the Transmission Unit, but those without descriptions will not.
* One registration takes 20 to 30 seconds. The registration of all data on one Transmission Unit will take approximately 30 minutes.

Precautions Specific to Zones

* Contents described when uploading will be transferred to the Web Server Unit and registered as "Data read from the Web Server Unit" in Zone Settings. At this point, however, this data is not registered in the NCU or LIU, so manual registration is required by clicking the Submit button in Zone Settings.
* From upload to completion of registration in the Zones Window, the "Settings inconsistencies" message will be displayed.

Precautions Specific to Special Days

* The files for the 3 types of special days (day of the week, day of the month and dates) are required at the same time for uploads.
* The range for Special Days is January 1, 2000 to December 31, 2037, and the day must be within the month of upload plus the following 13 months. Consider these restrictions when changing the clock settings and past data.

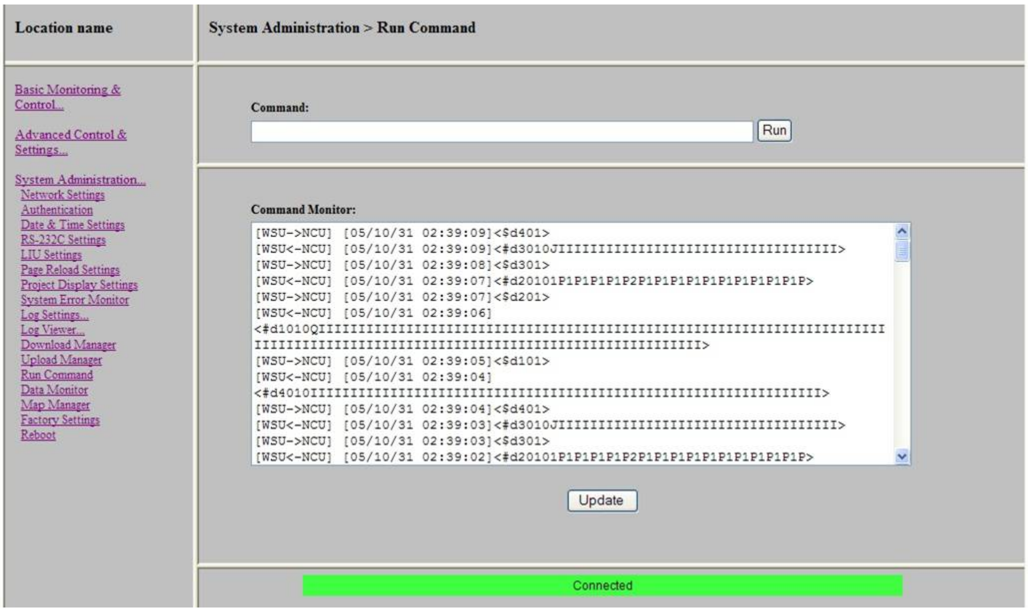
Error messages when uploading data files that Contain disconnected LIU numbers

- Monitor & Control List : "Cannot specify unconnected LIU."
- Groups : "Cannot specify unconnected LIU."
- Patterns : "Cannot specify unconnected LIU."
- Zones : "Cannot specify unconnected LIU."
- Global Addresses : "Cannot specify unconnected LIU for global address control."
- Schedule : "Cannot specify unconnected LIU."
- Address : "Cannot specify unconnected LIU."

System Administration

(13) Run Command

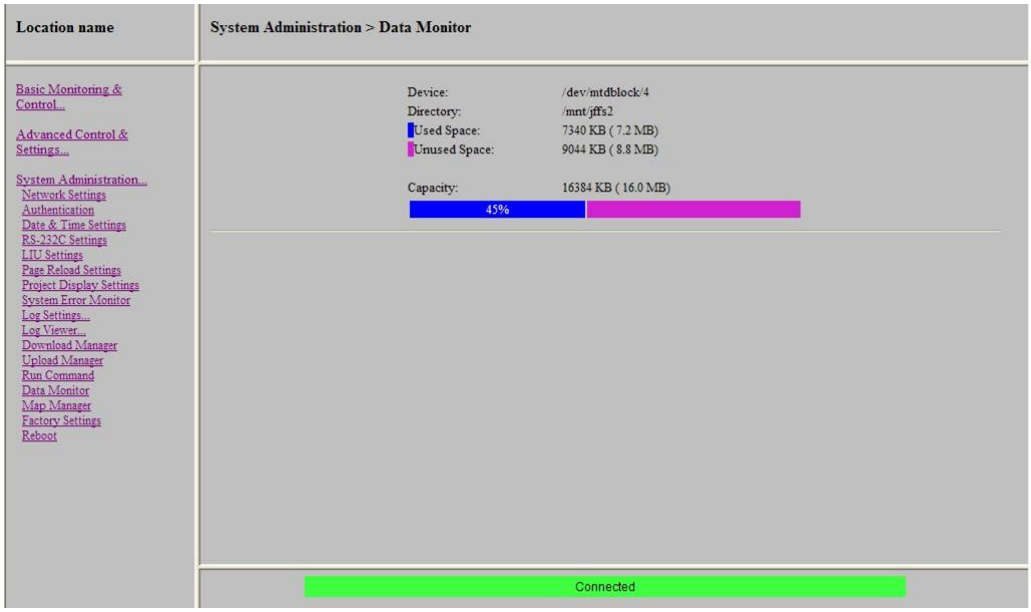
* This function is for manufacturer maintenance, so descriptions is not provided.



System Administration

(14) Data Monitor

The remaining storage capacity for saving data in the Web Server Unit can be checked.



- Used Space : Total memory space used by data and the system
- Unused Space : Total unused memory space that can be used for data

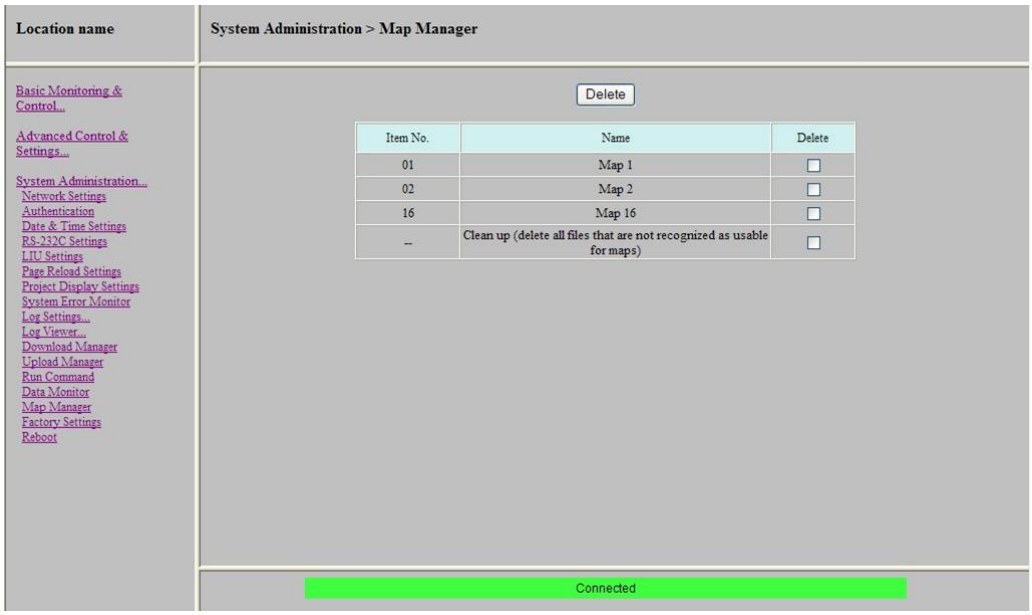
Supplemental Information

* Creation of map data requires separate special software. (Refer to II. Creation and Administration of Map Data for details.)

System Administration

(15) Maps Manager

The Maps Manager is used to delete map data saved in the Web Server Unit.



- Item No. : Serial number of maps
- Name : Name of maps registered in *Project Display Settings*.

1. Select the item to delete.

Select (☑) the checkboxes of items to delete.

2. Click the Delete Button.

The data for all selected maps will be deleted.

Supplemental Information

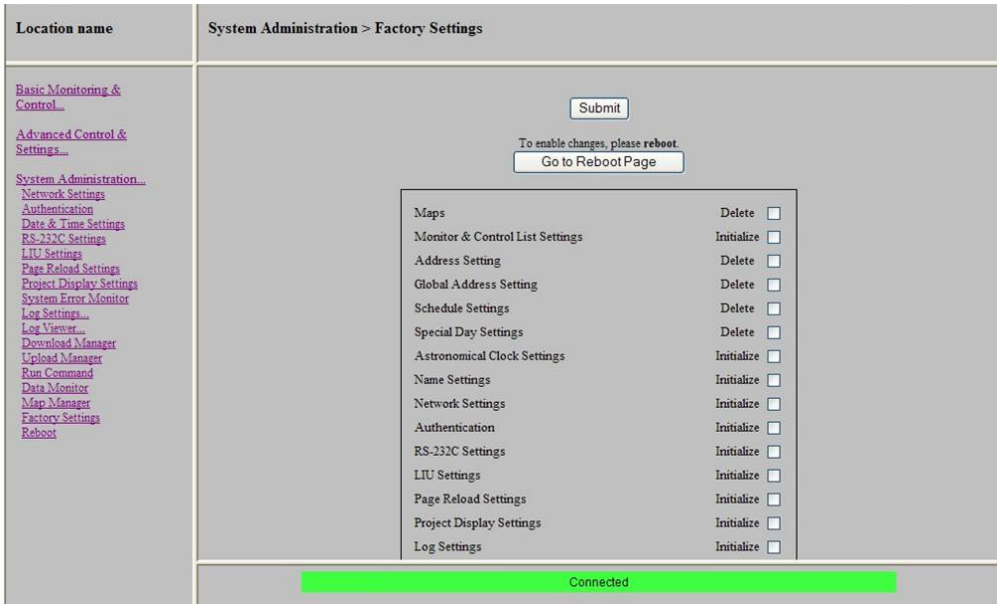
* Creation of map data requires separate special software. (Refer to II. Creation and Administration of Map Data for details.)
* The name for the map data file transferred from the special software is fixed as *iiu_screenXX*.*. However, it is still possible that invalid files (file with an invalid file names) be saved in the Web Server Unit. In that case, select (☑) the *Delete* checkbox in the *Clean up* row at the bottom and click the **Delete** Button to delete those undesirable files.
* Image files used in maps cannot be deleted because their use may be shared. As a result, these files can only be deleted in batch from the Factory Settings page. Therefore, consider the capacity management when using a large amount of image data.

System Administration

(16) Factory Settings

Settings data can be initialized or deleted to reset it to factory default settings.

* Once this operation is done, the lost data cannot be recovered.



List of Items that can be initialized/deleted

- Maps : Map data transferred from The Screen Builder. All map data will be deleted in one batch operation. For details on deleting by window, refer to Maps Manager page.
- Monitor & Control List Settings : List setting data registered in Monitor & Control List Settings page. Data will be initialized.
- Address Settings : Address Settings data assigned to maps symbols in Address Settings page. Data will be deleted.
- Global Address Settings : Global address settings data registered in Global Address Settings page. Data will be deleted.
- Schedule Settings : Programs settings data registered in Programs Settings page. Data will be initialized.
- Special Days : Special days settings data registered in Special Days page. All Special Days Settings will be deleted in one batch operation.
- Astronomical Clock Settings : Location, longitude, latitude time zone and daylight savings settings data registered in Astronomical Clock page. Data will be initialized.
- Names Settings : Names Settings data registered in Names Settings page. All Names Settings data will be initialized in one batch operation.
- Network Settings : Network Settings data registered in Network Settings page. Date will be initialized.

System Administration

- Authentication : Authentication settings data registered in Authentication page. Data will be initialized and execution will transfer to the start (Login) Window.
- RS-232C Connection Settings : NCU connection Settings data registered in RS-232C Settings page. Data will be initialized.
- LIU Settings (also covers zone settings) : LIU connection and zone settings registered in LIU Settings page and Zone Settings page. Data will be initialized. (LIU Settings disabled and Zone Settings unregistered)
- Page Reload Settings : Page Reload Settings data registered in Page Reload Settings page. Data will be initialized.
- Project Display Settings : Project Display Settings data registered in Project Display Settings page. Data will be initialized.
- Log Settings : Logs Settings data registered in Logs Settings… page. Data will be initialized.
- Activity Log (Today) :Current day activity log enteries (Activity Log). Data will be deleted.
- Activity Log (Past) : All activity Log entries except current day ones (Activity Log). Data will be deleted.
- System Error Log (Today) : Current day system error log entries (System Error Log). Data will be deleted.
- System Error Log (Past) : All system error log entries except current day ones (System Error Log). Data will be deleted.
- Temporary download files (pattern and group settings) : Remaining temporary files created when downloading patterns and group settings data DownloadManager page. The original data for pattern and group settings is stored in the Transmission Units. Therefore, temporary files is generated each time the data is downloaded. Those temporary files are not deleted automatically and remain in the Web Server Unit. Data will be deleted.

How to initialized/deleted items

1. Select data to be initialized/deleted.

Select the checkbox (☑) for the data.

2. Click the Submit Button.

3. Move to the Reboot Page and click the Reboot Button.

Click the **Go to Reboot Page** Button or select Reboot from the menu bar.

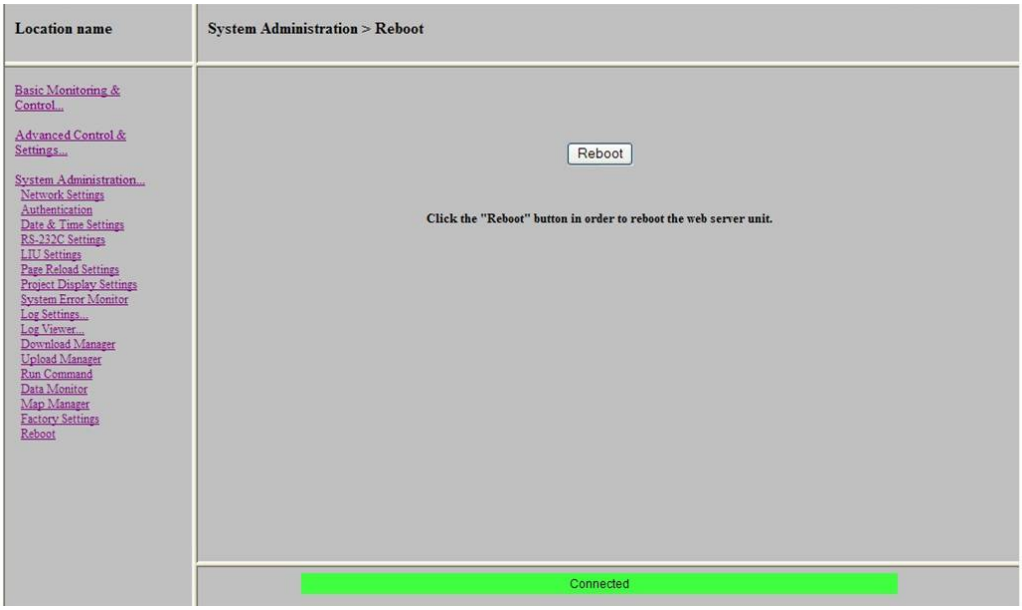
* If you continue operations without rebooting, unexpected operations may occur, so be sure to reboot.

System Administration

(17) Reboot

Reboot is used to restart the Web Server Unit from the browser.

* Some settings pages require rebooting to enable the submited parameters.



Settings that Require Rebooting

- Network Settings
- Project Display Settings
- RS-232C Connection Settings
- Factory Settings

1. Click the Reboot Button.

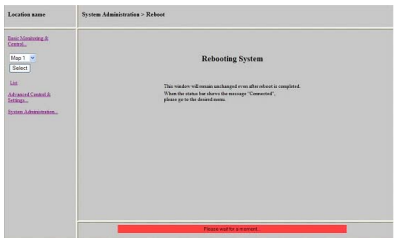
2. Select *OK* or *Cancel*.

Click the **OK** Button in the Okay to Reboot? Dialog Box to execute.

Click the **Cancel** Button to cancel.

3. Wait for rebooting to complete.

The Web Server Unit will start to reboot. During this process, messages such as "Please wait for a moment…" and "Initializing" will be displayed in the status bar. Wait until the process is completed and the message in the status bar changes to "Connected."



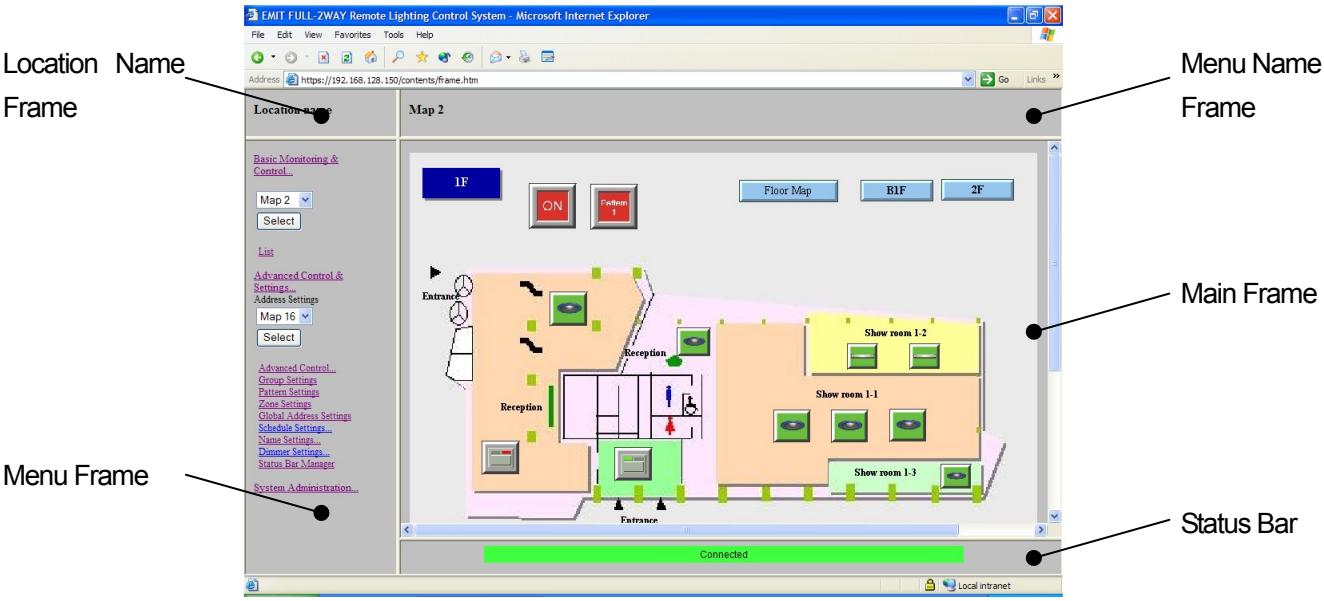
Supplemental Information

* The display within the Main Frame remains the same even when rebooting is completed.
* If the unit is rebooted while *"Performing setup"* status being activated (Status Bar Manager),*"Performing setup"* status will be deactivated after rebooting.
* If another PC attempts connection during rebooting, the Status Bar may not display anything because Java applets cannot be loaded. In that case, wait for a moment and then try to reconnect.

System Administration

Ⅱ. Creation and Management of Maps

Lighting circuit status can be monitored and controlled visually on a map screen. For example, display and operation are possible on a window displaying a map depicting the physical layout of the facilities. In this manual, a window specially drawn for a facility is called a map.



Maps are accessible from Basic Monitoring & Control…, but original map data must be registered first, and configured, or the maps drop down menu itself will not be displayed. Map data is created with special drawing software and transferred to the Web Server Unit.

(1) Drawing Software (Sold Separately)

Users must purchase the following product separately to create and manage map data for lighting control.

"WR3339-801 FULL-2WAY Screen Builder for Web Server Unit"

* Refer to the specifications and the user's manual for operating environment and other information.

(2) Map Data File

Format : Proprietary format

Number of maps that can be managed : 99 max.

* Window data created in excess of the maximum number of maps cannot be transferred to the Web Server Unit.

Map data volume : Approximately 8 MB (* Web Server Unit available storage space)

* Map data files to be transferred to the Web Server Unit have the following extensions: *.html, *.ezs,*.hsl,*.hpf (iiu_screenXX; where "XX" is the map number, from 01 to 99),*.jpg,*.gif
* The number of maps that can be stored (transferred) will decrease as the data per map increases. It is recommended to verify the web server unit unused memory capacity in Data Monitor before adding map data to the Web Server Unit.
* Data in Web Server Unit memory can be deleted in: Data Manager or Factory Settings.

System Administration

(3) Monitoring and Control Symbols

Buttons (symbols) that have special functions to process lighting circuits specific to the FULL-2WAY Remote Control system are used on the windows.

If these symbols are placed on the maps, they may be assigned addresses of FULL-2WAY Remote Controls from Address Settings on the Web browser, providing functionality equivalent to switches.

(4) Transferring Data Files

Data files are transferred between the PC on which the map drawing software is running and the Web Server Unit via Ethernet. The PC for drawing maps must therefore be connected to the Ethernet, meaning that if network configuration of the map-drawing PC is necessary, it must be completed beforehand.

Transmission of map data to the Web Server Unit is initiated from the map drawing software, but the following preparations must be followed on the Web Server Unit before the transmission.

Refer to II. Network Connection and Configuration (Installation) in Installation Section for changes to user defined parameters and use with default values.

1. Set pin 4 of the DIP switch on the Web Server Unit to 1.

* In normal operation, this pin is set to 0.

2. Click the Reboot Button.

When rebooting has been completed, the Web Server Unit will be ready to receive data.

3. Start the map drawing software and open the map data file already edited (compiled).

4. Transfer to the Web Server Unit in the Transmit to Server Menu.

* Refer to the user's manual of the drawing software for operating details.
* Data files transferred to the Web Server Unit are not editable, and the Web Server Unit does not have a function to transfer them to PCs. Therefore, original data that can be edited with drawing software (*.had and accessed image files) should be backed up by the user.

5. Return pin 4 of the DIP switch on the Web Server Unit to 0.

When the map data has been transferred, set the switch to the normal position.

* If it is not returned to the normal position, the communications security level will be lower.

6. Click the Reboot Button.

Wait for the Web Server Unit to reboot.

7. Open the Web browser and log in with the system administration rights.

8. Enable maps display in Project Display Settings under *System Administration…*

Enable the display of transferred map data in the window.

This step will enable display of the maps pull-down menu in the Menu Frame.

* If network settings have been changed for connection to the map drawing software, reset the parameters.

(5) Deleting Data Files

Map data can be deleted in the Web browser on the Web Server Unit.

(Refer to Maps Manager or Factory Settings for details.)

Advanced Control & Settings

This section provides information on the system advanced control and settings features.

I. Advanced Controls &Settings ***(P. 71)***

Advanced Control & Settings

I. Advanced Controls & Settings

The following functions can be used when logged in as the advanced control & settings user or administrator.

(1) Monitor & Control List Settings.
(2) Address Settings
(3) Advanced Control
  (a) Groups
  (b) Patterns
  (c) Zones
  (d) Global Addresses
(4) Schedule Settings
  (a) Programs
  (b) Program Monitor
  (c) Special Days
  (d) Special Day Calendar
  (e) Astronomical Clock
(5) Name Settings
  (a) Individual Circuits
  (b) Groups
  (c) Patterns
  (d) Zones
  (e) Global Addresses
(6) Dimmer Settings
  (a) Individual Circuits
  (b) Groups
(7) Status Bar Manager

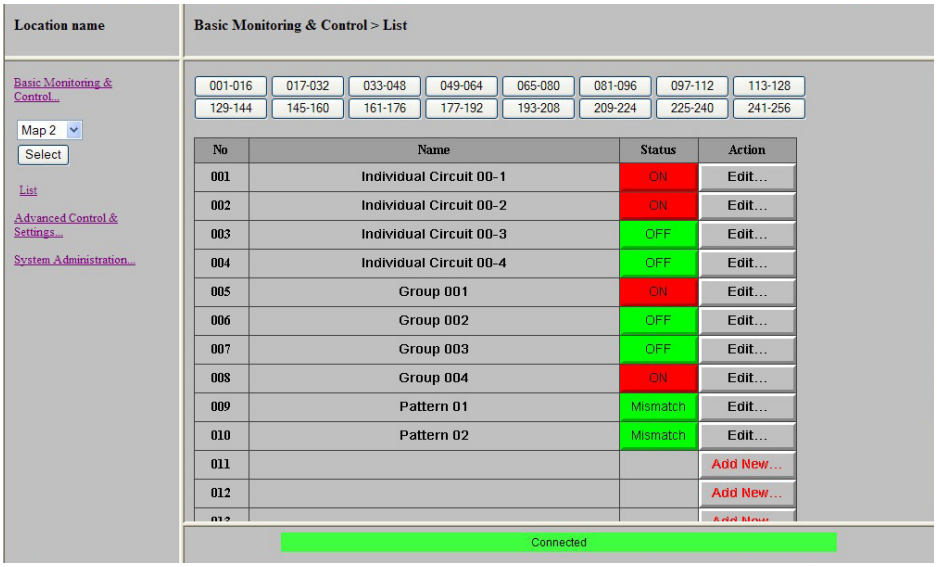
Advanced Control & Settings

(1) Monitor & Control List Settings

The light circuit addresses that are used frequently in monitoring and control can be selected and displayed in a *List*.

* *List* under *Basic Monitoring & Control* can be used to register addresses to be displayed in a list if the user is logged in as the advanced user or administrator (address registration cannot be performed if the user is logged in as a basic monitoring user or basic monitoring & control user).

Refer to II. Operations on Monitor & Control List PageT in Monitoring & Control Section for details.



Specifications

- Address types that can be registered : Individual circuits, Dimmers, Groups, Patterns, Zones, Global Addresses
- Number of addresses that can be registered : 256 max. (Address types can be mixed.)
- Number of addresses displayable in a page : 16 max. (16 pages)

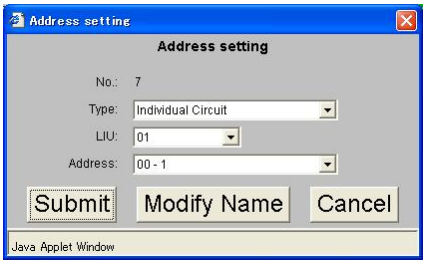
Display

- No : Serial number (001 to 256)
- Name : Names registered in *Name Settings*

(i) Registering a New List

1. Click the Add New… Button of the item to applicable list number.

The Address Setting Dialog Box will be displayed.



2. Select an address.

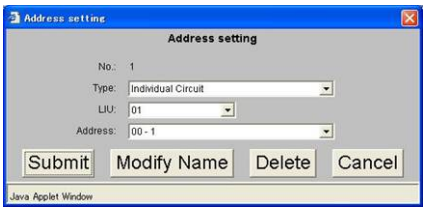
Select the address type in the *Type* field, LIU number in the *LIU* field, and address number in the *Address* field of the Address Setting Dialog Box.

3. Click the Submit Button.

The address will be added to the table under *List*.

Advanced Control & Settings

(ii) Changing the List Contents



1. Click the Edit… Button for the applicable item in the List.

An address setting dialog Box will be displayed.

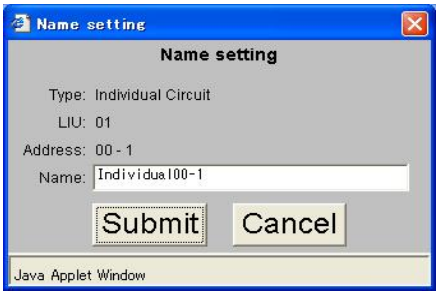
2. Select another address.

Enter the information in the *Type*, *LIU*, and *Address* fields again.

3. Change the name of the circuit.

If the Modify Name Button is clicked, the Name Setting Dialog Box will be displayed.

* Enter the name in the *Name* field. The name must be 32 characters long or less.
* Non Iso-8859-1 (CP932) characters will be corrupted.



4. Click the Submit Button.

The change will be reflected in the list.

* Names can also be modified under Name Settings… menu in Advanced Control & Setting.

(iii) Deleting an Item in the List

1. Click the Edit… Button for the item in the list to delete.

The Address Setting Dialog Box will be displayed.

2. Click the Delete Button.

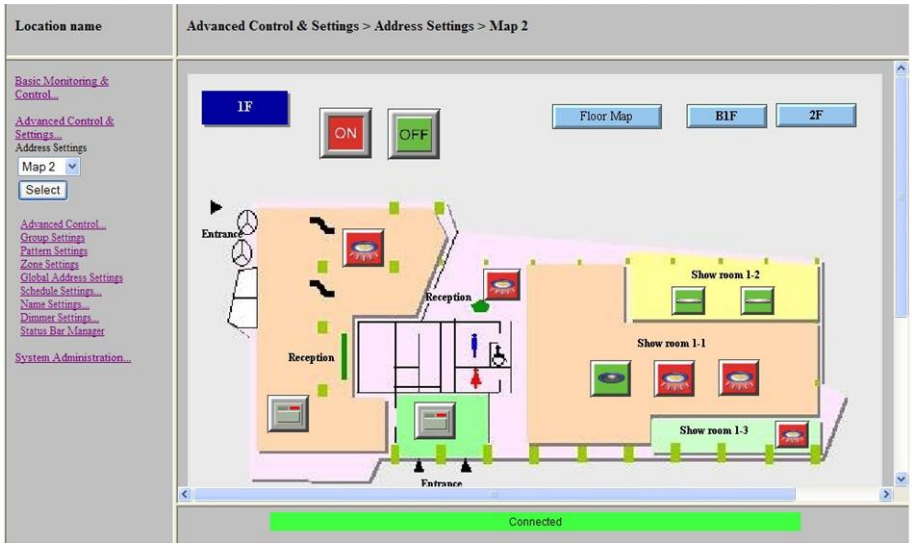
The item will be deleted from the list.

Advanced Control & Settings

(2) Address Settings

A symbol for lighting circuit monitoring on a page that was created with map drawing software will not function unless it is assigned an address. This setting page is used to assign an address to each symbol on the map.

(Refer to Ⅱ. Creation and Management of map data) and Monitoring & Control Section Ⅲ. Operation on Maps.)



Selecting the Map Number

Select a map number under *Address Settings* in Advanced Control & Settings and click the **Select** Button.

* The menu will be displayed if the checkbox for the map number in Project Display Settings in Systems Administration is selected (☑) after the map data has been transferred to the Web Server Unit.

Applicable Symbols (Icons)

Addresses can be set for the following symbols:

- Normal Circuit Symbols : 256 max. (total of individual circuits, dimmers, groups, patterns, and global addresses)
- Zone Symbols : 40 max.

* Addresses are not directly assigned to name symbols (generic and zone) and dimmer level symbols.
* Name symbols use the settings for normal circuit symbols or zone circuit symbols defined with the drawing software using symbol numbers. These definitions cannot be changed on a browser page.
* Dimmer level symbols (level gauge) use the settings for normal circuit symbols defined with the drawing software using symbol numbers. These definitions cannot be changed on a browser page.
* Dimmer level symbols apply to individual circuits, dimmer, and groups.
* Dimmer level symbols, with their assigned normal circuit symbol addresses set to patterns or global addresses, are not equipped with level monitoring function.
* A symbol with multiple symbol numbers can be assigned the same address.
* Name symbols and dimmer level symbols can be set to share symbol numbers with monitor & control symbols on the drawing software. If so, their circuit address values will change in sync with those set for monitor & control symbols. Symbol numbers, however, cannot be changed on a Web browser

Advanced Control & Settings

(a) Generic Status Symbols

	ON
	OFF
	Timer
	Indeterminate

(b) Zone Status Symbols

	Pattern A match
	Pattern B match
	Pattern C match
	Pattern D match
	Pattern E match
	Pattern F match
	Indeterminate

(i) Registering a New Address

1. Select a symbol (icon).

Address setting dialog Box will be displayed.

* Symbols without symbol numbers assigned (icon numbers) cannot be selected. Symbol numbers must be assigned using the drawing software before map data is transmitted to the Web Server Unit.

2. Select the address type (generic circuit symbols).

* Zone circuit symbols are always set to *Zone*.

3. Select the LIU number for the system (excluding global addresses and zones).

4. Select an address number.

5. Click the Submit Button.

The changes will be applied to the map.

(ii) Change the address parameters.

1. Select a symbol (icon).

A dialog box will be displayed showing the current values.

2. Click the Modify Button.

The Address Setting Dialog Box will be displayed (* The remaining procedure is the same as for registering a new address).

3. Select the address type (generic circuit symbols).

* Zone circuit symbols are always set to *Zone*.

4. Select LIU number for the system (excluding global addresses and zones).

5. Select an address number.

6. Click the Submit Button.

The changes will be applied to the map.

Advanced Control & Settings

(3) Advanced Control

Advanced Control can be used to monitor and control the circuit status of all addresses in a table (list). This menu is available to a user logged in as the advanced user or administrator only. There are no parameters to set on this page.

Refer to Monitor & Control Section Ⅳ. Advanced Control Operations for details on window operations for monitoring and controlling.

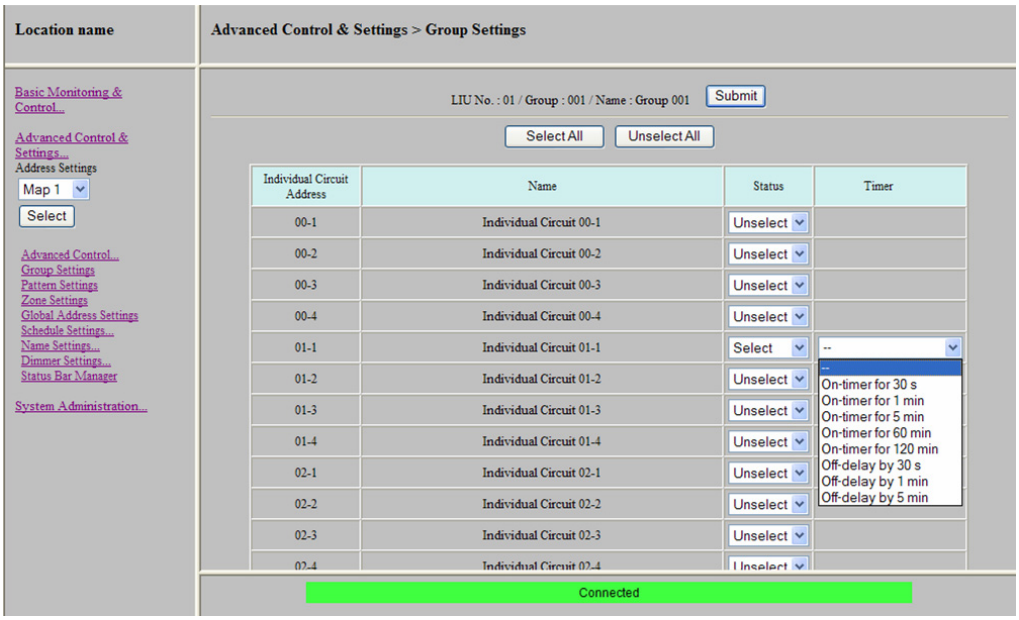
Advanced Control & Settings

(4) Group Settings

Group Settings is used to configure group control settings for Transmission Units of each system.

1. Select the system LIU number.

* Select a **LIU No.** and click the **Select** Button. The registration status of the Transmission Unit will be shown. Only LIU numbers that have been registered in LIU connection settings can be selected.
* Settings are saved in the Transmission Unit. Therefore LIUs and NCUs must be connected when these parameters are written. (Those parameters are not stored on the Web Server Unit.)
* When the Web Server Unit has booted with local devices and channels in error status, registered parameters cannot be obtained, and they all will be shown as **Add new**. If the system errors are then corrected, the **Add new** indications will not be refreshed. The menu command must be selected to refresh the page after the system becomes normal.



Advanced Control & Settings

2. Select an address number.

Click the **Add new…** or **Edit…** Button for the address to register. The communications for the Web Server Unit to obtain registered data from Transmission Units will start and the window will switch to an editable page when communications have been completed.

* "Data transfer in progress. Please wait..." will be displayed in the status bar until the editable window opens (less than a minute).
* Confirmation and registration from another browser will be disabled while the Transmission Unit is communicating with the Web Server Unit.

3. Select addresses (circuits) to control.

Select the row number for individual circuit and dimmer address (circuit) for which to perform group control (batch ON/OFF control).

Content : **Exclude** or **Include** for group control

Timer : Timer control is enabled when **included** is selected. The following values can be applied up to 8 circuits per group.:
On-timer for 30 s, 1 min, 5 min, 60 min, or 120 min
Off-delay by 30 s, 1 min, 5 min, or -- (circuits without timers)

* On-timer : Turns OFF when specified time elapsed after ON control.
* Off-delay : Stays ON for specified time after OFF control and then turns OFF.

* If **Include All** or **Exclude All** Button is clicked**,** all individual circuit and dimmer addresses can be selected with identical parameters.
* Select ***Group Settings*** from the Menu Frame to return to address selection page.

4. Click the Submit Button.

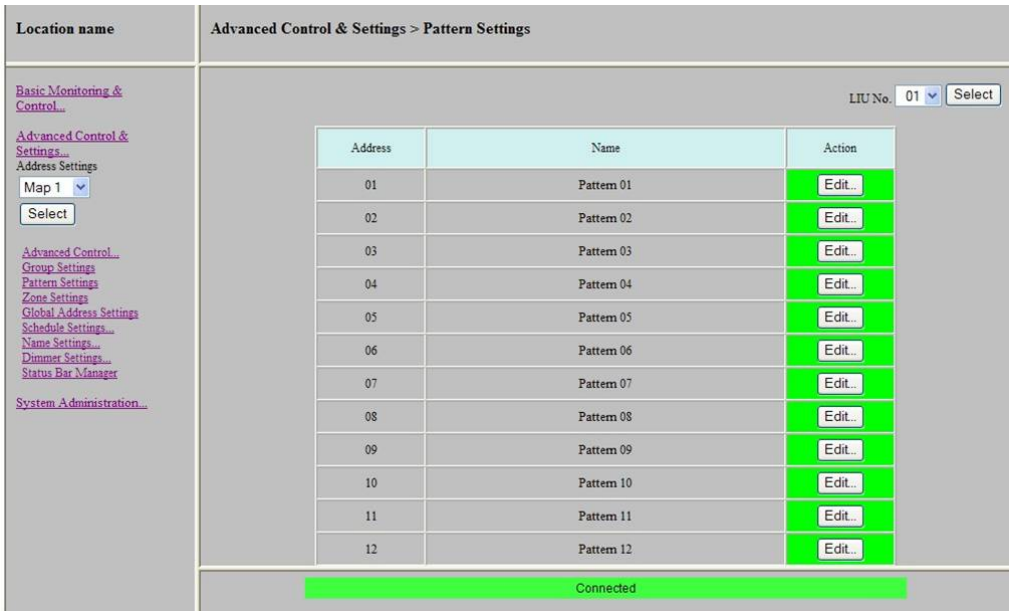
Communications to transfer settings data from Web Server Unit to Transmission Units will start and switch to address selection page when communications have been completed.

* "Data transfer in progress. Please wait..." will be displayed in the status bar until the editor window opens (less than a minute).
* Confirmation and registration from another browser will be disabled while the Transmission Unit is communicating with the Web Server Unit.
* System errors cannot be detected while transmission is in progress.
* If registration (setting) fails due to system errors, an error warning will be displayed. The user must repeat the data submission after the system returns to normal condition.

Advanced Control & Settings

(5) Pattern Settings

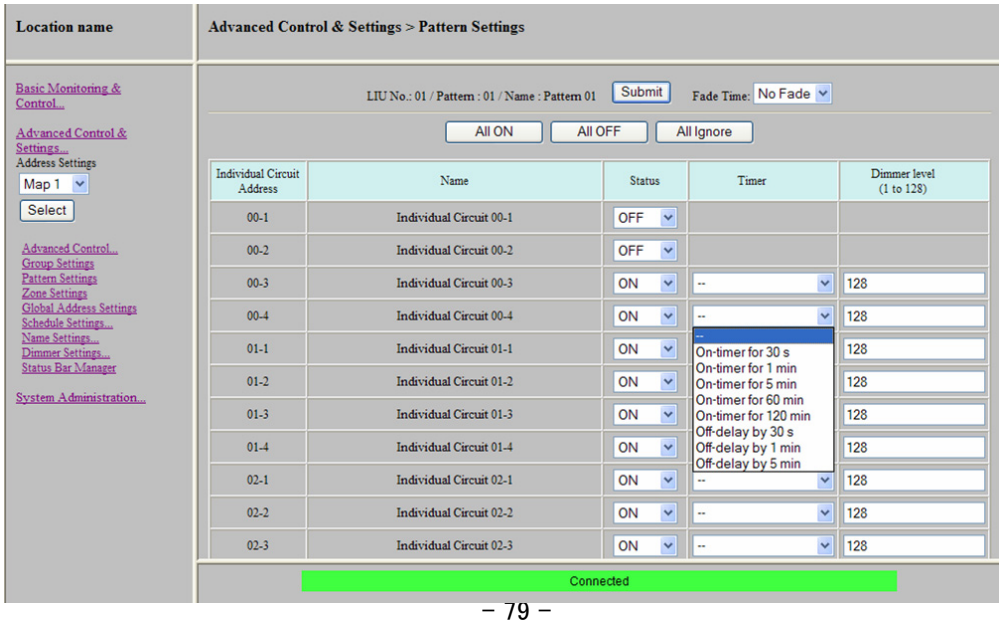
Pattern Settings is used to configure pattern control settings for Transmission Units of each system.



1. Select system LIU number.

Select a **LIU No.** and click the Select Button. The registration status of the Transmission Unit will be shown.

* Only LIU numbers that have been registered in LIU Settings can be selected.Settings are saved in the Transmission Unit.
* LIUs and NCUs must be connected when these parameters are written. (These parameters are not stored in the Web Server Unit.)
* When the Web Server Unit has booted with local devices and channels in error status, registered parameters cannot be obtained, and they all will be shown as **Add new**. If the system errors are then corrected, the **Add new** indications will not be refreshed. The menu command must to be selected to refresh the page after the system becomes normal.



Advanced Control & Settings

2. Select an address number.

Click the **Add new…** or **Edit…** button for the address to register. Communications for the Web Server Unit to obtain registered data from Transmission Units will start and the window will switch to an editor page when communications have been completed.

* "Data transfer in progress. Please wait…" will be displayed in the status bar until the editor window opens (less than a minute).
* Confirmation and registration from another browser will be disabled while the Transmission Unit is communicating with the Web Server Unit.

3. Select addresses (circuits) to control.

Select the row number for individual circuit and dimmer address (circuit) for which to perform pattern control (control to replay the registration scene).

Content : **Exclude** from pattern control or Circuit **ON**/**OFF**

Timer : **Timer control** is enabled when **ON.** The following values can beapplied up to 8 circuits per pattern.
On-timer for 30 s, 1 min, 5 min, 60 min, or 120 min
Off-delay by 30 s, 1 min, 5 min, or -- (circuits without timers)
* On-timer : Turns OFF when specified time elapses after turning ON.
* Off-delay : When patterns match, lighting turns ON first and then OFF control is performed, turning OFF after the timer has timed out. This behavior appears exactly the same as the On-timer. Off-delay control is selected with timer value as **ON**.
* Dimmer level: Enter the dimmer level for **ON** status.

Range of values : 1 to 128 for individual circuits addresses) and 1 to 7 for dimmer addresses. The smaller the number, the brighter the light will be.
(Refer to Miscellaneous I. Appendix for specifications of dimmers.)
Devices not used as dimmers but as relay controls should be set to 128.

* Clicking All ON, All OFF, or All Ignore Button set all individual circuit and dimmer addresses to the same content.
* By selecting Patterns Settings in the menu frame, it is possible to return to Address selection page.

4. Select the fade.

Fade : Time it takes to converge from point of control to the specified dimmer level specified in 3. Instant (no fade), 3 s, 6 s, 1 min

5. Click the Submit Button.

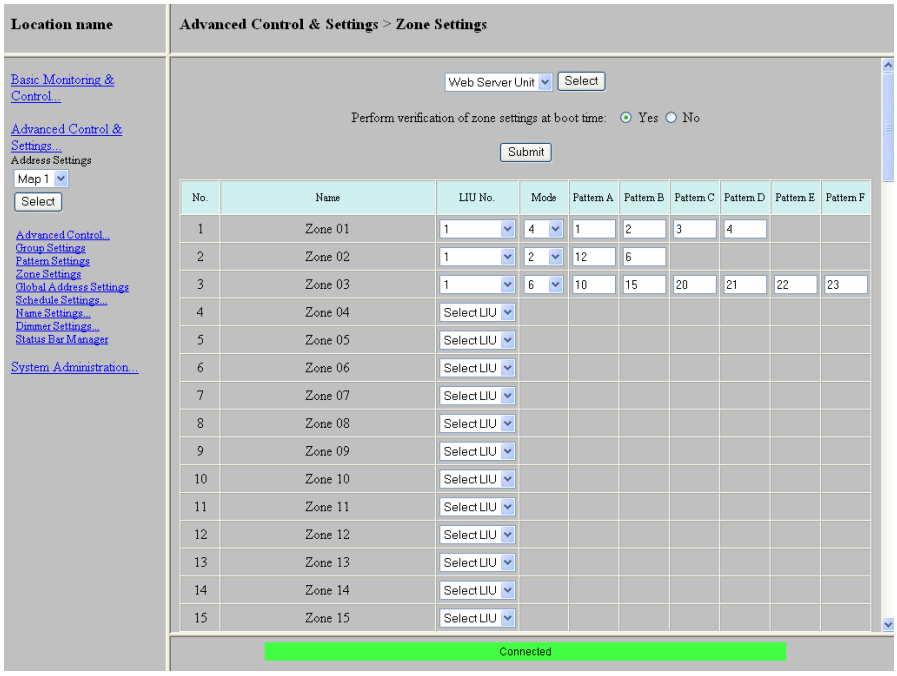
Communication to transfer settings data from Web Server Unit to Transmission Units will start and switch to address selection page when it is complete.

* "Data transfer in progress. Please wait..." will be displayed until the editor window opens (less than a minute).
* Confirmation and registration from another browser will disabled while the Transmission Unit is communicating with the Web Server Unit.
* System errors cannot be detected while transmission is in progress. If registration fails due to system errors, an error warning will be displayed.
* The user must repeat the registration after the system returns to normal condition.

Advanced Control & Settings

(6) Zone Settings

Zone Settings is used to configure zone control settings. (Refer to *Zone* for details on zone settings.)



1. Select the Unit.

Retrieve the original data to edit on the browser by selecting **Web Server Unit / NCU**. Click the **Select** button to start retrieval.

* When this page is selected from the menu, data on the Web Server Unit will be automatically read and displayed.
* Registered data will be saved in the Web Server Unit, NCU, and LIU. Therefore, when this process is in progress, LIU and NCU must be physically connected.

2. Select the LIU number.

Select the LIU No. of the zone addresses (up to 96) to work on.

* Only LIU numbers that have been registered in LIU connection settings can be selected.
* Select *Select LIU* for zone addresses not to work on.

3. Select the mode.

Select the number of states mode to assign patterns to one zone. Six is the maximum number of states.

Mode : **2…ON/OFF**
3…ON/OFF/Pattern 1
4…ON/OFF/Pattern 1/Pattern 2
6…ON/OFF/Pattern 1/Pattern 2/Pattern 3/Pattern 4

4. Enter the pattern address number to assign to each zone status.

The pattern number selected for the LIU system (Transmission Unit) in **2** is set to the same zone number (line).

- Range of number : 1 to 72
- The same pattern number cannot be set more than once in the same LIU system regardless of zone numbers.

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5. Repeat 2. to 4. for other addresses.

6. Click the Submit Button.

The contents shown on the page will be registered in the Web Server Unit, NCU, and LIU.

* If registration is performed during successive control operations or system errors, such as an NCU interconnection errors, occur, processing will be interrupted due to timeouts and: "System error occurred or communications with FULL-2WAY system congested with other controls" will be displayed in the status bar.
* If the Web Server Unit is shut down while registration communications are in progress, rebooting will still result in unsuccessful registration. Reboot NCU and LIU.

Zone Setting Data Integrity

- Zone settings are stored in the Web Server Unit, NCU, and LIU. If they are not identical, monitoring and control will not function properly.
- When connecting to a NCU and LIU that underwent zone setting separately, their settings must be checked for integrity.
- When **NCU** is selected for the unit and the **Select** Button clicked, the Web Server Unit will obtain data from the NCU and compare the data with its own. If they do not match, an error message, "Settings inconsistencies," will be displayed in the status bar.
  Edit the settings and click the **Submit** Button**.** The same data will be registered in both devices, correcting the integrity problem.
- Also, editing LIU Settings will delete zone settings on the Web Server Unit and NCU. Settings on the LIU, however, are not deleted at this stage. Therefore, if data is manually read from the NCU, data on the NCU will be read through the LIU resulting in setting inconsistencies.
  Zone settings stored in LIUs disabled in LIU Settings are not compared.
  * If LIUs are enabled in LIU Settings but not physically connected, a local bus error (system error) will occur.
  * If this occurs, zone settings will be registered in connected LIUs but disconnected LIUs that are enabled will result in errors.

  Either connect the relevant LIUs or modify the LIU connection settings.
- **Perform zones configuration verification at boot time**: **Yes/No** will determine whether comparison is automatically performed or not when booting. "Boot time" includes turning ON the power, rebooting, and recovery from NCU connection errors. No function is provided to perform periodical comparison. Therefore, if **No** is selected, no mismatch will be detected until reading from the NCU is manually performed from the menu, because even if setting data does not match, the system keeps on functioning using the setting data on the Web Server Unit.
  Comparison of zone settings takes about a minute and a half at most, so it is recommended to select **Yes**. Under normal operating conditions, comparison need not be performed once the zone settings are registered.
- When zone settings are uploaded to the Web Server Unit in Upload Manager page, the data is registered as the settings for the Web Server Unit but not for NCU and LIU yet. It will thus be necessary to register them manually by moving to the zone setting page and clicking the **Submit** Button.
  Whenever zone settings are uploaded, error message "Setting data inconsistencies" will be displayed in the status bar.

Requirements for Zone Operations (Conditions on the Contents of Patterns)

In zones, multiple conditions in one zone (within address range of the circuit) are assigned as patterns, but in principle, patterns contained in one zone should have the following characteristics, otherwise

Advanced Control & Settings

monitoring and control may produce unexpected results:

* Control areas for the patterns must be the same. (That is, the areas **excluded** from pattern settings must be the same.)
* The contents for patterns must all be distinct. (Additionally, ON and OFF must be suitably set in the pattern.)

Factory Settings

- Zones configuration verification at boot time : No
- LIU No. : Select LIU (for all zone addresses)

Zone Controls

(i) Concept of Zones

Zones are a method of monitoring and control in terms of preset lighting patterns which considers the state a certain zone (area) must be in respect to the state it currently is in.

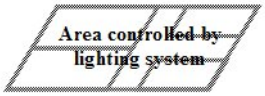
The states defined here correspond to pattern controls, i.e., zones are controlled areas to which associated patterns are applied.

If only one state is defined, it is identical to pattern control, but zone control is characterized where one address can define multiple states. That is, it functions analogous to pattern control switching integrated into one pattern.

Lighting Status of Lighting Control Area

*For monitoring only

Status	Mode 2	Mode 3	Mode 4	Mode 6	Pattern Address
Pattern A					P1
Pattern C	×				P3
Pattern C (Other Case)	×	Other status	Other status	Other status	×
Pattern D	×	×			P4
Pattern E	×	×	×		P5
Pattern F	×	×	×		P6
Pattern B					P2



(ii) Requirements for Patterns (Principles)

The areas of all associated patterns must be the same as the areas of the zone.

One zone must consist of pattern addresses for the same Transmission Unit system.

Each pattern address must have a unique pattern setting.

The pattern settings must match the name indicating the zone (ON or OFF).

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(iii) Modes and States

The number of states defined for a zone can be selected from 2, 3, 4, and 6 and is called a mode. A different mode can be selected for each zone address.

Number of zone addresses : 96

Mode : 2…Pattern A/ Pattern B/ (Pattern C *only for monitoring)
3…Pattern A/ Pattern B/ Pattern C
4…Pattern A/ Pattern B/ Pattern C/ Pattern D
6…Pattern A/ Pattern B/ Pattern C/ Pattern D/ Pattern E/ Pattern F

* There also is indeterminate state. While the status of a pattern has not been checked, the status for the zone is not determined. This also can be defined as a state.

(iv) Definitions of Status and Comparison

The LIU verifies zone status according to the status of the corresponding pattern (called "pattern A" through "pattern F" in this description).

Pattern A : Corresponding pattern A matches (ON)

Pattern B : Corresponding pattern B matches (ON)

Pattern C : Corresponding pattern C matches (ON) or none of corresponding patterns A through F matches (OFF) (Other status).
* If zone status does not match any registered pattern, the output will be the same as for pattern C, so be careful of interpretation in modes 3 through 6.
* In mode 2, pattern C is used only for *Other status*.

Pattern D : Corresponding pattern D matches (ON)

Pattern E : Corresponding pattern E matches (ON)

Pattern F : Corresponding pattern F matches (ON)

Indeterminate : More than one of corresponding patterns A through F is indeterminate.
* Indeterminate status occurs when operational status has not been checked after the status of addresses has just been destroyed, such as after booting.
* Blank status of pattern settings results from checking addresses and is different from indeterminate status.
* If a zone operation results in matches (ON) for more than one pattern (such as redundant pattern contents, one pattern including part of another, or indicating other area) zone matching will return various statuses (including **indeterminate**). Therefore, take extra care when setting pattern controls associated with zone status as the basis for operation.

* Comparisons of zones that include blank pattern numbers will be compared excluding blank patterns or set to pattern C.
* Zone comparison is performed by comparing pattern status, so if all pattern status included in the zone change in sync with local controls, pattern C may be returned while the pattern statuses are being checked one by one.

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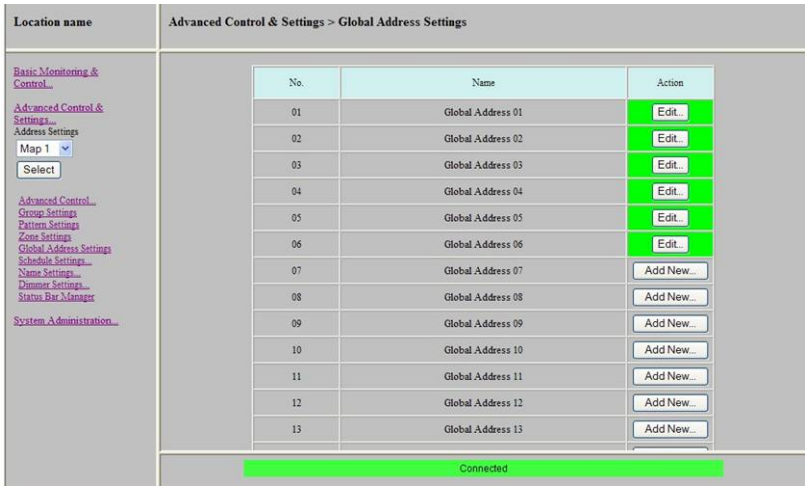
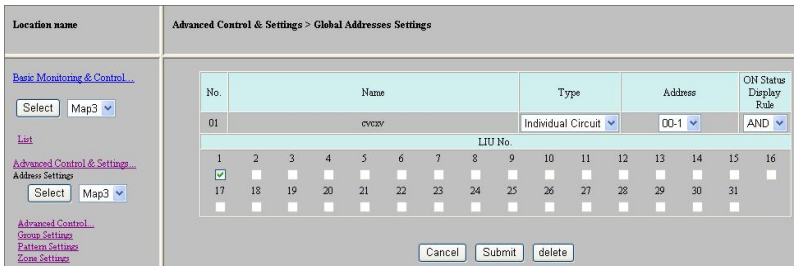
(7) Global Address Settings

Global Address Settings is used to configure global controls. (Refer to Global Address Settings for details on global address settings.)



1. Select an address.

Click the **Add new…** or **Edit…** Button for the global address (32 maximum). The page will move to the Global Address Setting Page.



2. Select the addresses to control.

Select the *type* and *address* of the addresses to control (monitor) as a group.

3. Select the LIU numbers.

Select the (☑) checkboxes of the corresponding LIU.

* Only LIU numbers selected and registered in LIU Settings can be selected.
* If LIU numbers are unselected in LIU Settings after being selected here, settings will remain and the control commands will be sent.

4. Select the ON status display rule.

For *ON Status Display Rule* (Logical AND or Logical OR), select the logic to use to determine the status for the global address based on multiple system statuses.

5. Click the Submit Button.

Settings in the window will be registered in the Web Server Unit.

* If the **Cancel** Button is clicked, registration will be aborted and you'll return to the Address Setting Page.
* If the **Delete** Button is clicked, the contents of the global addresses will be reset to *blank*.

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Cautions on Setting Schedules

* If operations for global addresses in scheduling Programs include **OFF** controls, such as **ON-OFF**, patterns cannot be selected for global address setting. Pattern control will be restricted to **ON (match)**. Scheduling in Programs must be changed first to enable using patterns.
* Program numbers with registered global addresses are displayed as "Registered Programs number XX" in the editor page. This display will be always shown regardless of the Enable/Disable settings of schedule controls.

Factory Settings

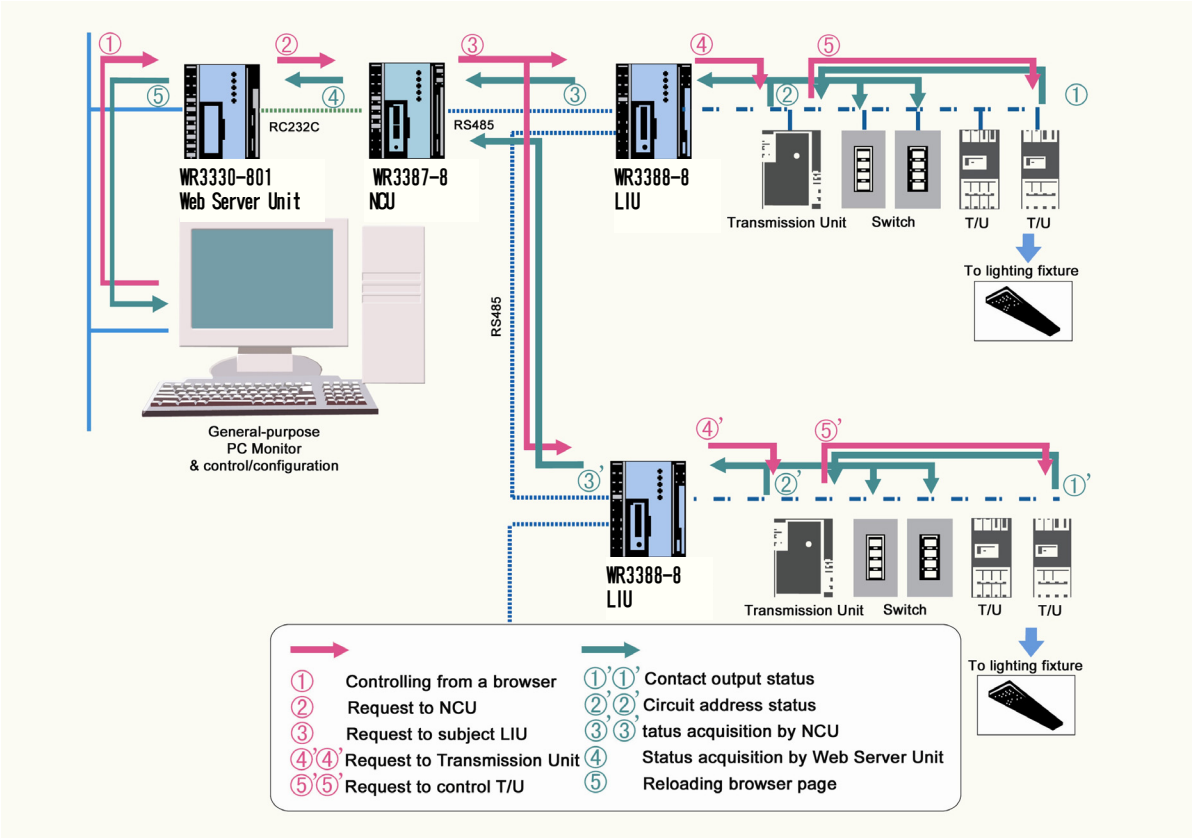
Action : Add New… (For all global addresses)

Global Controls

(i) Concept of "Global"

Global controls are a method of monitoring and control where multiple local systems exist, and specified multiple systems are managed using the same address. Addresses controlled here can be individual circuits, dimmer, group, and patterns.
(Zones are not independent in terms of systems and therefore not applicable.)
Control points (addresses) will be restricted to **one address of one type**. Global control is characterized by the ability to define control points for multiple systems using the same address. That is, it functions analogous to control switches for integrated into one address for multiple systems.

(a) Global Control on a Web Browser Page (Two-system Example)



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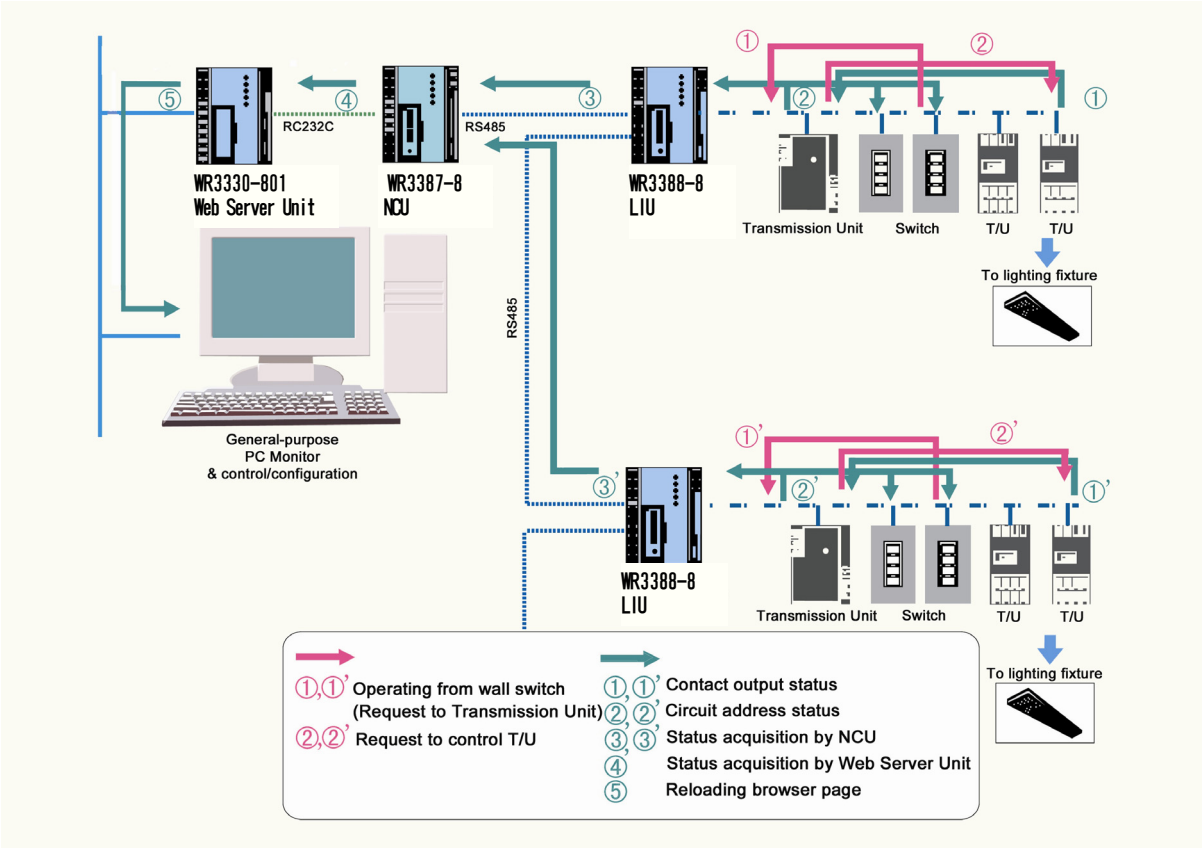
(b) Monitoring on Circuit Status Controlled by Wall Switches of Multiple Local Systems (Two-system Example)



(ii) Status and Processing Definitions

The status of global addresses is determined using logical ANDs and ORs of the statuses of the addresses. "1" and "0" are used in logical operations and correspond to the status of the address as follows:

- 1 : ON, match, and timing
- 0 : OFF, mismatch, no T/U, No setup (Unregistered),

Control failure/Error response(invalid, Abnormal ON, and Abnormal OFF)、Response of unknown status (indeterminate)

If the result of AND and OR operations is 1, ON is applied, if 0, OFF is applied.

* AND operation: Logical product is 0 if one or more statuses are 0. (Logical product is 1 only if all statuses are 1.)
* OR operation: Logical sum is 1 if one or more statuses are 1. (Logical sum is 0 if all statuses are 0.)
* Global status can be only either ON or OFF.

Example:

The following example is for a global control registered for individual circuit 00-1 of systems LIU 1 to L 4. By normal monitoring after global control, the following data was obtained:

- LIU 1 - Individual circuit 00-1 → ON → 1
- LIU 2 - Individual circuit 00-1 → OFF → 0
- LIU 3 - Individual circuit 00-1 → Indeterminate (assumed OFF) → 0
- LIU 4 - Individual circuit 00-1 → Timing (assumed ON) → 1

The result will be:

- If *AND* is selected: (1 * 0 * 0 * 1 =) 0 (OFF) (*At least one system contains OFF or equivalent).
- If *OR* is selected: (1 + 0 + 0 + 1 =) 1 (ON) (*At least one system contains ON or equivalent).

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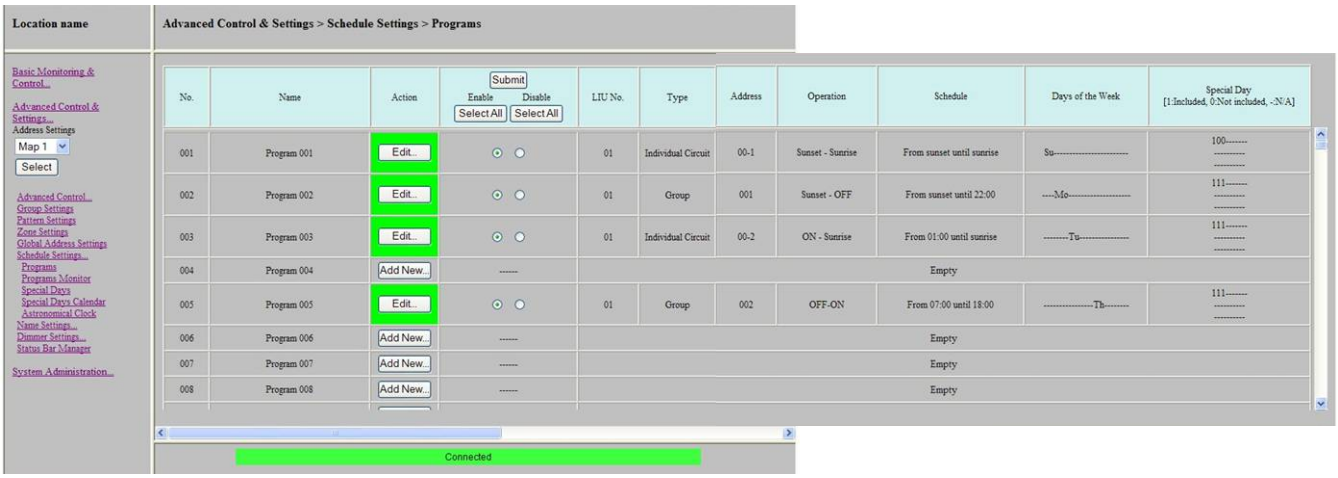
(8) Schedule Settings

Schedule Settings is used to configure schedule control programs. Date and time, addresses, statuses, and other settings to control automatically from the Web Server Unit are configured using the following menu commands.

(a) Programs : Configures time schedule.
(b) Programs Monitor : Monitors schedule settings for events to occur on specified days.
(c) Special Days : Configures dates requiring special functions such as national holidays.
(d) Special Day Calendar : Monitors special day settings and duplications of special days.
(e) Astronomical Clock : Configures sunrise/sunset functions and daylight savings time functions.

(a) Programs

Programs are used to configure time schedules.



(i) Viewing the Status of Programs

Registered Programs are shown in a table.

- No. : Number of the program (930 max)
- Name : Name of program
- LIU No. : LIU number
- Type : Type of address
- Address : Address
- Operation : Time controls, sunrise/sunset controls, inter-day control, and repetitive control
- Schedule : Start and end times
- Days of the Week : Days of the week for weekly control
- Special Day : Matrix displays of the special days to which the program is applicable
  - * **1** Included : Denotes that the program will execute on that special day.
  - * **0** Not Included : Denotes the special day is excluded from program execution
  - * N/A : Special day is not applicable for the program

  The matrix display (10 × 3) correspond to special day numbers as follows:
  Line 1 : Special Day 01, Special Day 02, Special Day 03, …Special Day 10
  Line 2 : Special Day 11, Special Day 12, Special Day 13, …Special Day 20
  Line 3 : Special Day 21, Special Day 22, Special Day 23, …Special Day 30

Advanced Control & Settings

(ii) Enabling/Disabling Programs

1. Select *Enable/Disable*.

Programs can be disabled.

- Disable: Preset controls of programs will not be performed. However, the program will not be deleted.
- Enable: Preset controls of programs will be performed. When newly registered, programs are enabled by default.

* If **Select All** Button is clicked, all programs (930 in all) will be enabled or disabled.

* When the day changes**,** enabled/disabled status will be preserved.

2. Click the Submit Button.

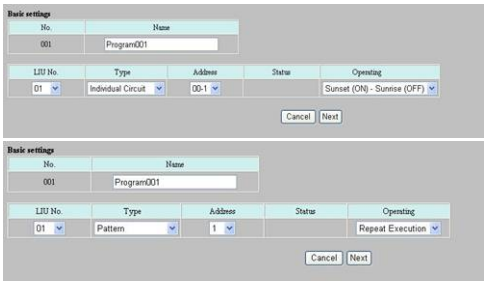
The entered data will be submitted and registered.

(iii) Registering and Deleting Programs

Programs cannot be set if the date and time have not been set. Set the correct date and time in Date & Time Settings.

1. Select the programs.

Click the **Add new…** or **Edit…** Button for the line number (up to 930). The page will switch to the Address Selection Page.



2. Enter the program name.

* The program name must be 16 characters or less.

* Characters that are not iso-8859-1(CP932) will be corrupted.

3. Select the LIU No. for the system (excluding zones and global addresses).

Select an individual circuit, dimmer, group, or pattern.

* LIU numbers selected and registered in LIU Connection Settings can be selected.

* If LIU numbers are deselected in LIU Connection Settings, program settings will remain, so programs must be set again if LIU numbers selected for a program are deleted.

4. Select the type.

5. Select the address.

Unregistered (not set) addresses can also be selected and control request will be submitted.

6. Select the status (for zones only).

With a zone, status is selected from ON, OFF, Pattern 1, Pattern 2, Pattern 3, and Pattern 4.

7. Select the operating method.

Select the method and controlled status for timed control, sunrise/sunset control, inter-day control, or repetitive control. There are two methods that can be selected depending on address type to control.

Advanced Control & Settings

(A) Individual Circuits, Dimmers, Groups, and Global Addresses (Patterns are excluded from Global Addresses.)

- Sunset (ON)-Sunrise (OFF) : ON operation at Sunset and OFF operation at Sunrise
- Sunset (ON)-OFF : ON operation at Sunset and OFF operation at End Time
- ON-Sunrise (OFF) : ON operation at Start Time and OFF operation at Sunrise
- ON-OFF : ON operation at Start Time and OFF operation at End Time
- OFF-ON : OFF operation at Start Time and ON operation at End Time
- ON-ON : ON operation at Start Time and ON operation at End Time
- OFF-OFF : OFF operation at Start Time and OFF operation at End Time
- ON : ON operation at Start Time
- OFF : OFF operation at Start Time

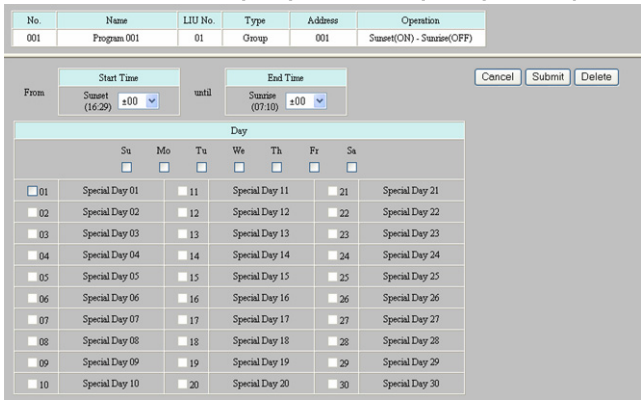
(B) Patterns, Zones, and Global Addresses (Patterns Only for Global Addresses)

- ON (run) : Execute operation at Start Time
- Sunset (Execute) : Execute operation at Sunset
- Sunrise (Execute) : Execute operation at Sunrise
- Repetition (Execute) : Execute operation periodically from Start to End Times (Repetitive Control)

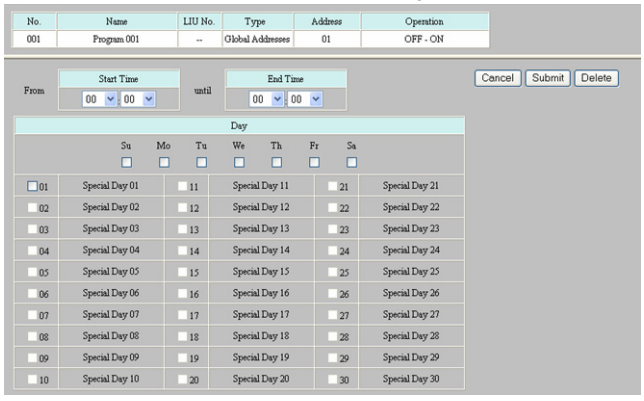
8. Click the Next Button.

The window will switch to the Date & Time Setting Page. If the **Cancel** Button is clicked, the process will end without registration and switch to the Programs Selection Page.

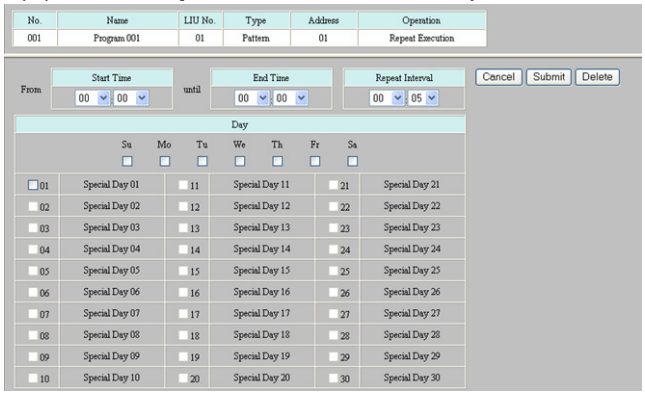
(A) Group **Sunset (ON)-Sunrise (OFF)** Example



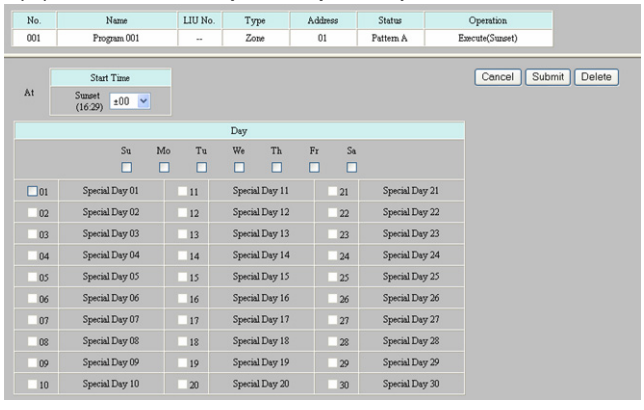
(B) Global Address **OFF-ON** Example



(C) Pattern **Repetition Execution** Example



(D) Zone **Execute (Sunset)** Example



Advanced Control & Settings

9. Select the times.

Select the start time, end time, and/or repeat interval.

* All of these may not be displayed for all operations.
* If sunrise or sunset is selected for the operation, the sunrise and sunset times will be automatically displayed as control times for the district. (Refer to Astronomical Clock for setting districts.)
* Although sunrise/sunset times are displayed for the day the program is registered, controls are based on the actual sunrise/sunset times for the day the controls are performed. (Refer to Miscellaneous Information I. Appendix Sunrise/Sunset Timetable for sunrise and sunset times.)
* Minimum configurable control time unit is 1 minute.
* The range of adjustments to sunrise/sunset times is ±90 minutes (Minimum adjustable unit: 1 minute).
* The range of adjustments to repeat interval is 1 minute to 1 hour 30 minutes (Minimum adjustable unit: 1 minute).
* An error will occur if the same fixed time is set for both ON and OFF.
* If sunset or sunrise time is included, the same start and end times for the day can be registered, but if they are still the same on the day the control is scheduled for execution, no control will be executed.
* For inter-day control, the OFF time will be for the day after the ON time. (Refer to Schedule Control Program Specifications for details.)
* Repetitive controls will revert back to the originally set times even if the control on the start time was delayed for some reason.

10. Select program execution days.

Day of execution of a program can be specified by selecting or clearing check marks (☑).

- Execution Day of Week : If the day of week is selected ☑, control will be executed on that day every week.
- Canceled Special Day of Week : If the day of week is cleared ☐, control will be canceled on that day every week.
- Execution Special Day : If the special day is selected ☑, control will be executed on the special day. If the day falls on a Canceled Special day of week, Execution Special Day will take priority and the control will be executed.
- Canceled Special Day : If the special day is cleared ☐, control will be canceled on the special day. If it falls on an Execution day of week, canceled special day will override and it is canceled.

* Special days are used to execute or cancel an operation as an exception, such as for holidays or anniversaries, for operations otherwise set to be executed on a day of week every week. Special days can be specified as day of the month, day of the week of as specific dates. (Refer to Special Day Settings for details.)
* Special days can be registered without execution days, but no controls will be performed.

11. Click the Submit Button.

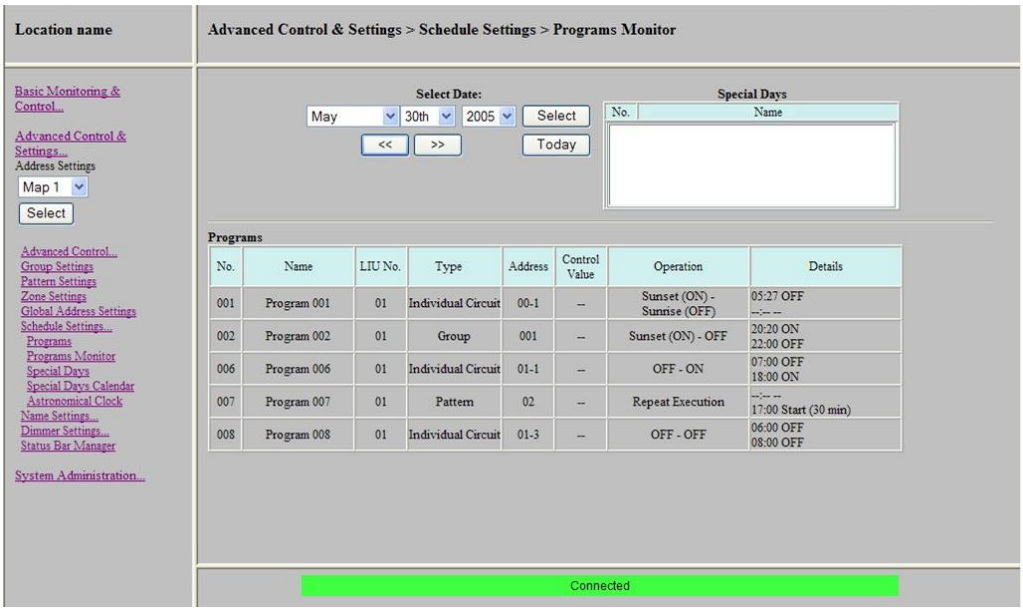
The settings will be enabled.

* If the **Cancel** Button is clicked, registration will be aborted and you'll be switched to the programs select page.
* If the **Delete** Button is clicked, the content of the corresponding program number will be reset to unselected status.
* The settings will be saved in the Web Server Unit.
* Registration from another browser is disabled during registration.
* Even while editing data for registration, schedule controls will be performed except for the program being edited.

Advanced Control & Settings

(b) Programs Monitor

Programs Monitor is used to confirm scheduled controls to be executed on specified days. Times and values are displayed for only controls actually executed based on the combinations of the day of week, special day, sunrise/sunset times, disabled operations, and other parameters.



1. Select the date.

Select the month/day/year and click the **Select** Button.

* Clicking the << or >> Button will move the selected date back and forward.

* Clicking the **Today** Button will reset the date to the current day.

Programs

Programs displays all the programs executed on the specified day in a table.

- No. : Number of program to be executed
- Name : Name of program to be executed
- LIU No. : LIU number
- Type : Type of address
- Address : Address
- Control Value : Status in zone controls
- Time : Control start time to end time
- Operation : Time control, sunrise/sunset control, inter-day control, or repetitive control

Special Days

Special Days display a list of special days.

- No. : Number of the special day
- Name : Name of the special day

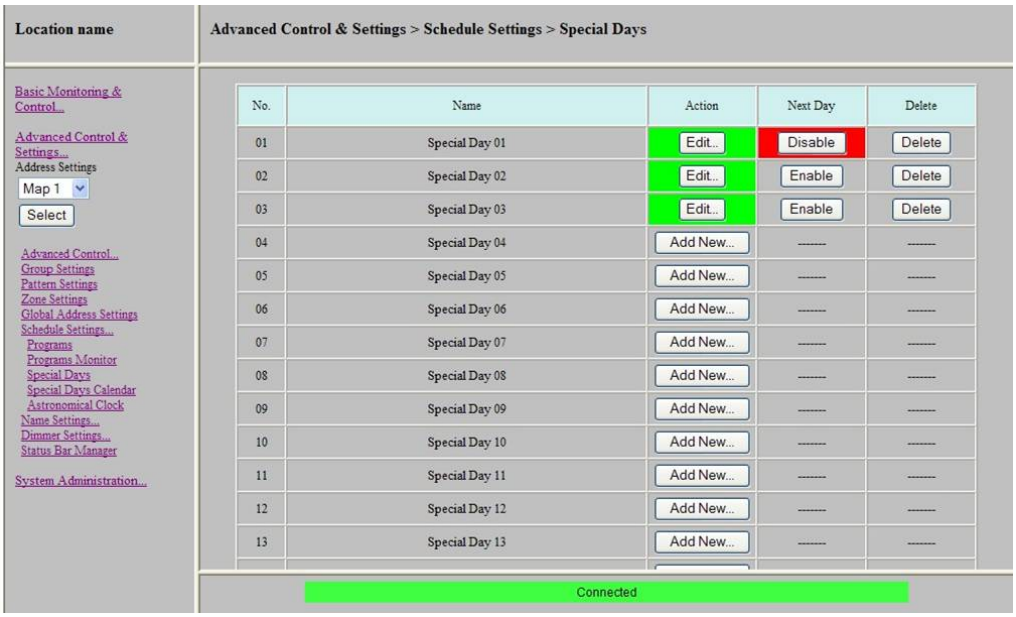
Advanced Control & Settings

* If ON and OFF operations are specified for the same address at the same time, both program contents are displayed but only the OFF operation will be executed.
* If the same day is registered as a special day more than once (duplicated special day) for a program and set as a Special Day (i.e., set for execution) and a Canceled Special Day in the other, the Special Day registration will take priority and the control will be performed.
* When special days are deleted, they will no longer be displayed as a special day but if ON control has been executed, the corresponding OFF control will be executed and the relevant program will remain in the list.

Advanced Control & Settings

(c) Special Days

Special Days is used to configure holidays and days on which to execute special activities.



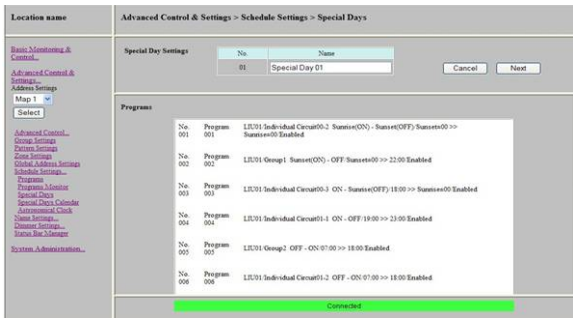
(i) Registering and Changing Special Days

* Special days cannot be set if the clock is not set. Set the clock to the correct date and time in Date & Time Settings.

1. Select the special day.

Click the **Add New…** or **Edit…** Button of the line (up to 30). The page will switch to the Special Day Setting Page.

* Programs including the day as an execution special day will be displayed in the lower pane. (Disabled programs are also displayed.)



2. Enter the name of the special day.

Enter Text in **Name** field.

* In 16 characters or less. (Characters that are not iso-8859-1 will be corrupted).

3. Click the Next Button.

The page will switch to Special Day Setting Method Selection Page.

* If the Cancel Button is clicked, the registration will be aborted, and the page will be switched to Special Day Number Selection Page.

4. Select the special day setting method.

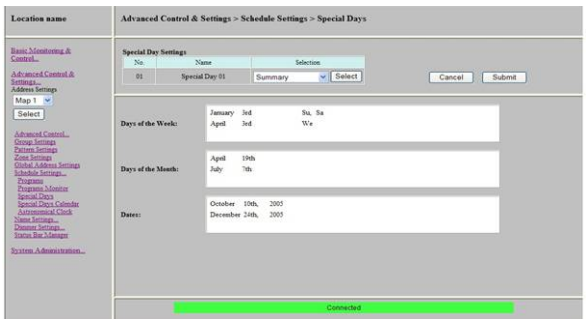
Select the following in the special day settings.

Days of the Week : Specify as Month X Week Y Day of week Z.

Days of the Month : Specify as Month X Day Y.

Dates : Specify as Month Y Day Z Year X.

Summary : Will display special day settings in a table.



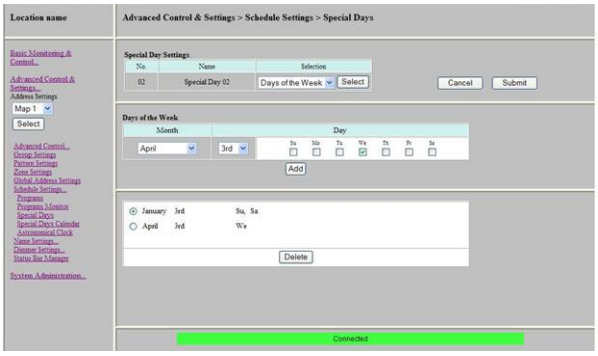
Advanced Control & Settings

Three methods can be mixed for one special day setting.

5. Click the Select Button.

The page will switch to setting window for the selected method.

(A) **Days of the Week (Every Year/Month/Week/Day of Week)**



6. Select the month and day.

Select (☑) the days to be set in the special day setting.

7. Click the Add Button.

Added days will be displayed in the lower pane.

* Selected days can be deleted by selecting them and clicking the **Delete** Button.

8. Repeat 6 through 7..

* Data has not yet been registered in the Web Server Unit.

9. Return to 4 for other setting methods.

(B) **Days of the Month**

6. Select a month and a day.

7. Click the Add Button.

Added days will be displayed in the lower pane.

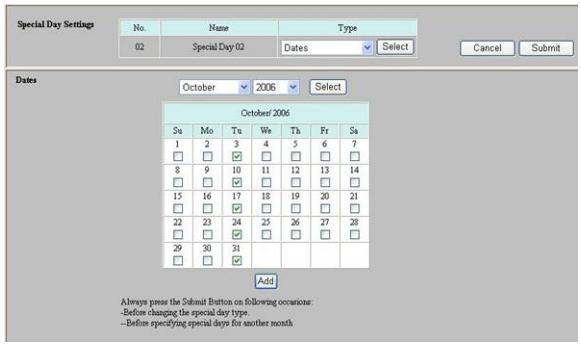
* Selected days can be deleted by selecting them and clicking the **Delete** Button.

8. Repeat 6 through 7.

* Data has not yet been registered in the Web Server Unit.

9. Return to 4 for other setting methods.

(C) **Dates**



6. Select the month and year.

Selectable range for special days is January 1, 2000 through December 31, 2037 and it must be within 13 months of the current month.

* If it were 2037 now, 2038 could not be selected.

7. Click the Select Button.

The calendar for the selected month will be displayed.

8. Select (☑) the desired days.

9. Click the Add Button.

* Switching calendar pages without clicking the **Add** Button will clear the check marks (☑).

10. Repeat 6 through 9.

* Data has not yet been registered in the Web Server Unit.

11. Return to 4 for other setting methods.

12. Click the Submit Button.

Special days selected in all three methods will be registered.

Advanced Control & Settings

* If the Cancel Button is clicked, the registration will be aborted, and the page will be switched to the Special Day Number Selection Page.
* If no special days are selected after the name is entered, the name will be initialized when the special day is registered.
* If a past date is selected for a special day for a date setting, it will be retained until the date is set again.

(ii) Deleting Special Days

1. Click the Delete Button.

The selected lined (up to 30) will be reset to *Blank*.

* Schedule control by programs specifying execution special days will not be performed after special days have been deleted, but if the control start time has passed when the special day is deleted, the control will be performed if the clock is set back.

(iii) Adding the Next Day as a Special Day for One Day Only

The next day can temporally be added to a special day setting that does not originally include the next day. Special day settings that do not include the next day in the original settings (including overriding execution and cancellations) can be added to the program.

1. Click the Submit Button for the next day.

The *Next Day* cell in the line will turn red.

* "Next Day" indicates the day following the day when the next day setting operation is performed. This operation can thus be performed only the day before the special day.
* Next day settings will not persist and will not be saved as special day data.
* This operation does not register special days to be repeated every year.

(iv) Disabling Special Day Setting for Next Day for One Day Only

The next day can temporally be deleted from a special day setting. Special days set for the next day in the original program settings (including overriding execution and cancellations) can be disabled.

1. Click the Next Day Disable Button (red background).

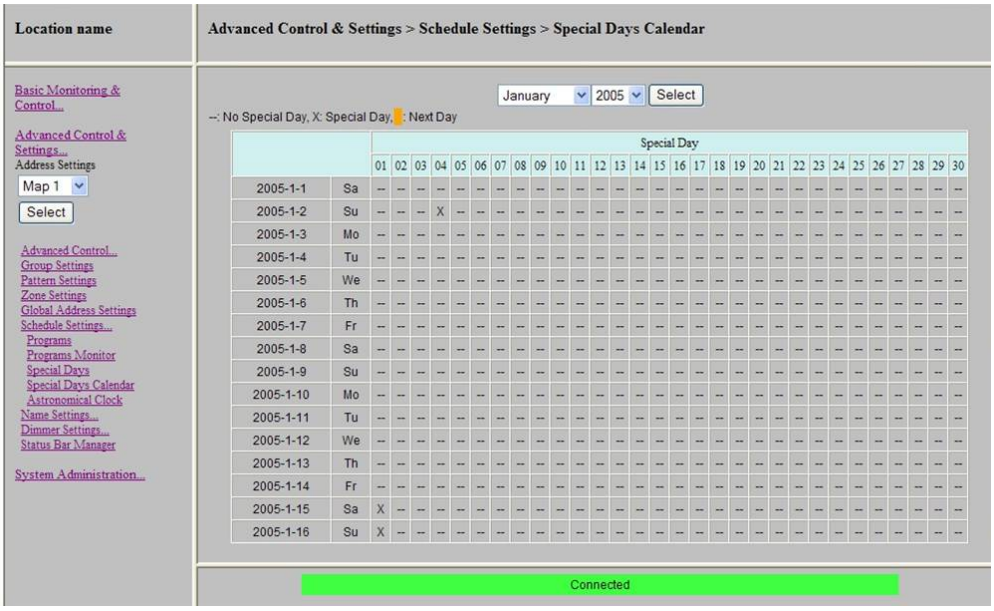
The *Next Day* cell in the line will turn gray.

* "Next Day" indicates the day following the day when the next day setting operation is performed. This operation can thus be performed only the day before the special day.
* Next day settings will not persist and will not be saved as special day data.
* This operation does not disable special days repeated every year.

Advanced Control & Settings

(d) Special Days Calendar

The *Special Days Calendar* is used to confirm special day settings and duplication of special days.



1. Select the month and year and click the Select Button.

One month of special days 1 through 30 set in Special Days Settings will be displayed in a table. The current day is highlighted.

● (Gray) : Special day set

-- (Gray) : No special day set

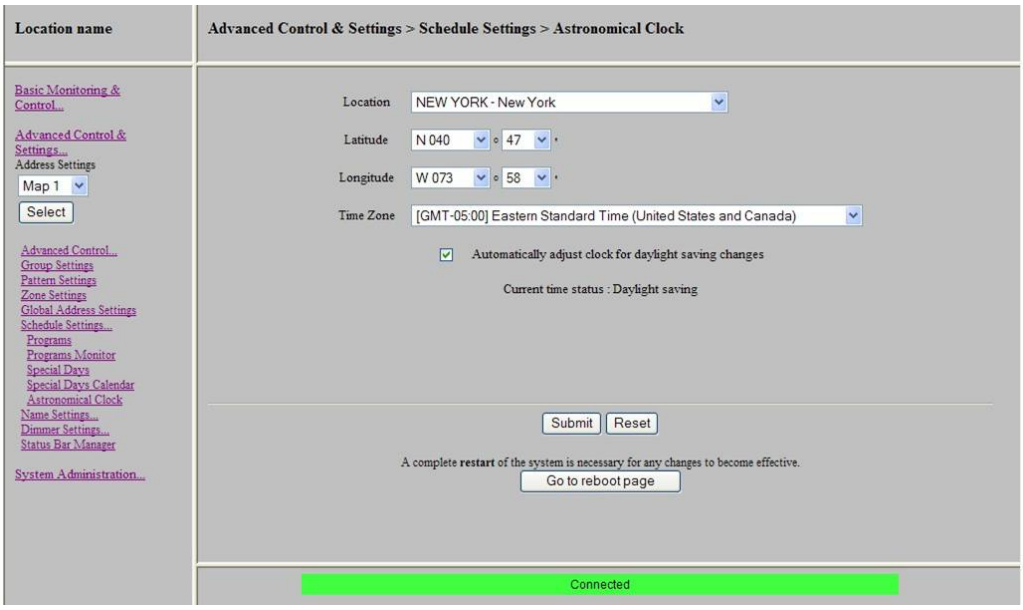
● (Orange) : Day set as next day execution.

-- (Orange) : Day set as next day cancellation.

Advanced Control & Settings

(e) Astronomical Clock

The *Astronomical Clock* is used to calibrate sunrise, sunset and daylight savings time calculations. In order to calculate the sunrise and sunset times, it is necessary to specify the longitude and latitude.



(i) Specifying the longitude, latitude, time zone and daylight saving rule from preset location

1. Select a location.

Select a preset location from the "Location" drop down menu.

* Upon selection, longitude, latitude, time zone and daylight saving rule corresponding to the selected location will be automatically selected. There may be some differences between the preset values and the actual location, time zone and applicable daylight saving rule of the system. In order to increase the accuracy of the calculations, longitude, latitude, time zone and daylight saving rule can be adjusted after selecting the location.

2. Click the submit button.

If the input values for longitude, latitude, time zone and daylight saving rules are different then the preset values for the selected location, a confirmation window showing those differences will be displayed. If the specified values are correct, click the "OK" button in order to submit the new settings. Clicking the "Cancel" button will close the confirmation window without any information being submitted.

3. Go to the reboot page.

* After submission of the new settings, a Reboot of the Web Server Unit is necessary to enable changes to astronomical clock settings. Click the "Go to reboot page" button and proceed to rebooting the Web Server Unit.

(ii) Specifying the longitude, latitude, time zone and daylight saving rule manually

1. Specify longitude and latitude.

From the "Location" drop down menu, select "Specify Longitude and Latitude" option. Proceed to the input of longitude and latitude.

Advanced Control & Settings

2. Select a time zone.

Select a time zone. If a daylight saving rule exist for the selected time zone, a checkbox labeled "Automatically adjust clock for daylight saving changes" will be displayed. It is possible to ignore the daylight saving rule by unselecting the "Automatically adjust clock for daylight saving changes" option. Note that if a daylight saving rule does not exist for the selected time zone, the checkbox will not be displayed.

3. Click the submit button.

A confirmation window showing the specified values will be displayed. If the specified values are correct, click the "OK" button in order to submit the new settings. Clicking the "Cancel" button will close the confirmation window without any information being submitted.

4. Go to the reboot page.

After submission of the new settings, a Reboot of the Web Server Unit is necessary to enable changes to astronomical clock settings. Click the "Go to reboot page" button and proceed to rebooting the Web Server Unit.

(iii) Specifying a custom time zone and daylight saving rule.

It is possible to specify a custom time zone and daylight saving rule.

1. Select custom time zone.

From the "Time Zone" drop down menu, select "Custom time zone" option. This will make visible the time zone editor controls, just below the "Time Zone" drop down menu.

2. Select GMT.

Select the difference in hours with the Greenwich Mean Time (GMT), also refered as Universal Time Coordinated (UTC) in the "GMT" drop down box.

The following chart maybe used to be determined the standard time zone.

3. Specify the Daylight saving start and end rules.

From the "Daylight saving start " and "Daylight saving end " drop down menus, specify the rules for daylight saving start and end. e.g., for the following rules to be enabled, selections should be made as the shown in the following picture:

- Daylight saving start rule : April's first Sunday at 02:00 a.m.
- Daylight saving end rule : October's last Sunday at 03:00 a.m.

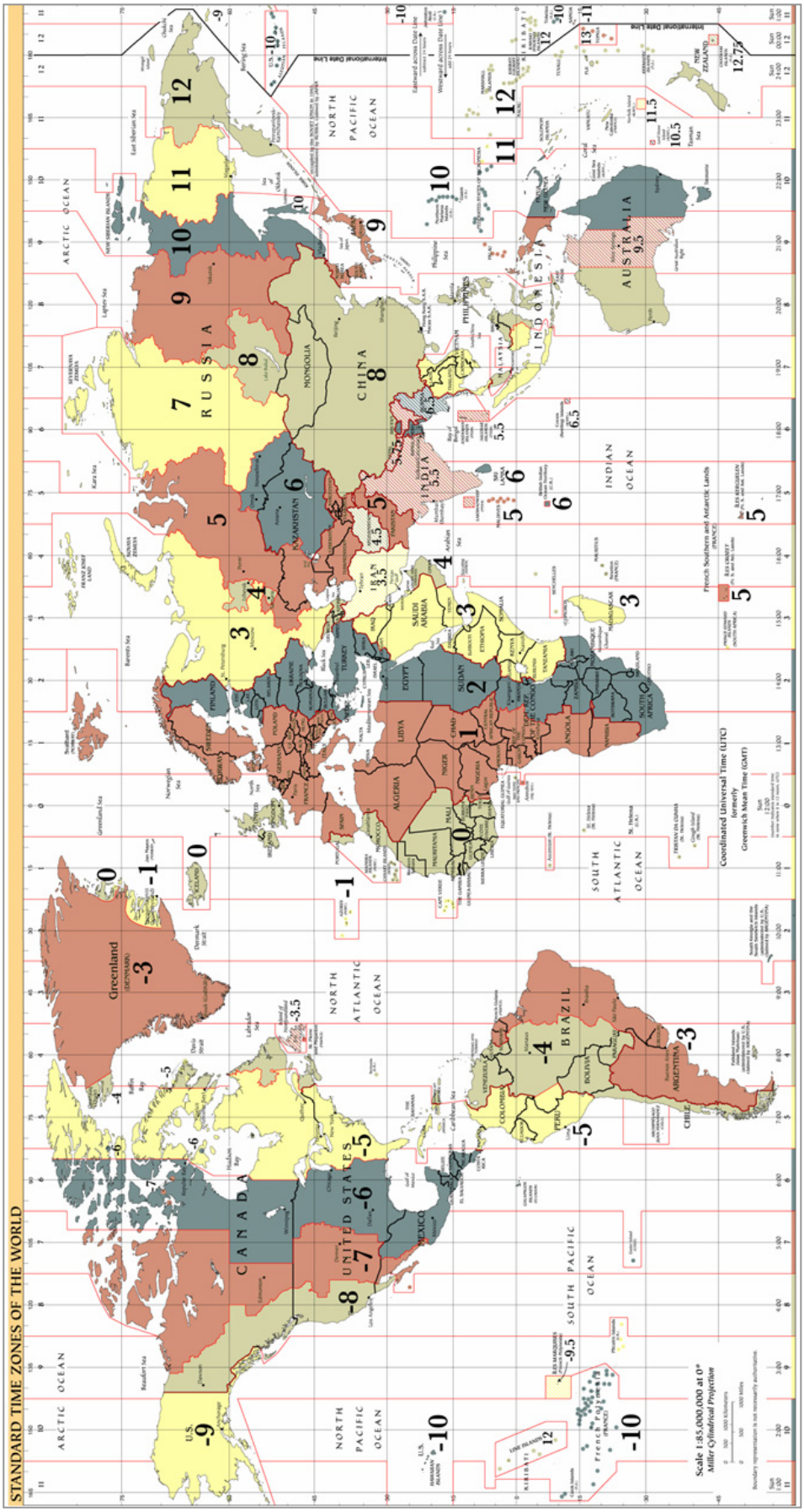
4. Click the submit button.

A confirmation window showing the specified values will be displayed. If the specified values are correct, click the "OK" button in order to submit the new settings. Clicking the "Cancel" button will close the confirmation window without any information being submitted.

5. Go to the reboot page.

After submission of the new settings, a Reboot of the Web Server Unit is necessary to enable changes to astronomical clock settings. Click the "Go to reboot page" button and proceed to rebooting the Web Server Unit.

Advanced Control & Settings



Advanced Control & Settings

Functional Specifications for Schedule Controls

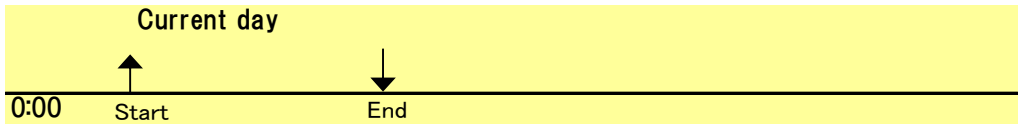
(i) Basic Functions

* The clock for programs sets the time to perform control commands from the Web Server Unit, so circuits on the local system start functions several seconds behind the set time.

(1) Start and End Time Pairs (Start time < End time)

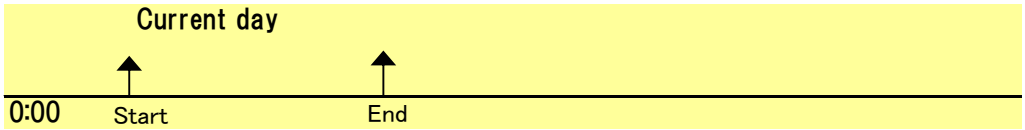
* Even if the start control was not performed for some reason, the end control will still be performed.

Sunset (ON)-Sunrise (OFF), Sunset (ON)-OFF, ON-Sunrise (OFF), and ON-OFF



OFF-ON

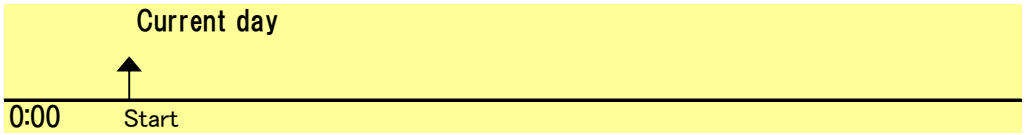
ON-ON



OFF-OFF

(2) Single Operation

ON



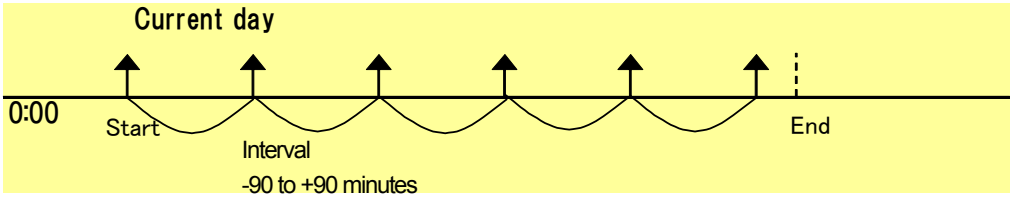
OFF

ON (Execute), Sunset (Execute), and Sunrise (Execute)

(3) Repetitions

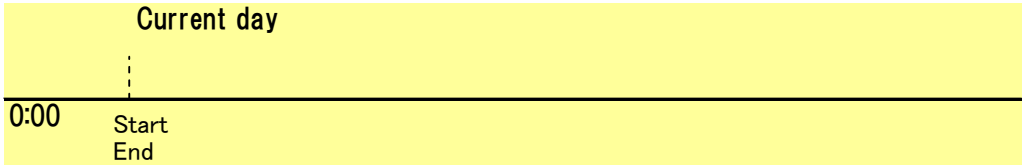
* Controls are repeated from the start time to end time (inclusive of end time) at a fixed interval.
* In repetition execution, even if the start control was delayed for some reason, the end control will be still be performed at the time originally set.

Advanced Control & Settings



(4) Start Time = End Time

* For Sunset (ON)-OFF and ON-Sunrise (OFF), start and end times may be set to the same time, but no control will be performed if they are. Furthermore, the times may be different when settings are configured, but they may become the same time as the sunrise/sunset time shifts.
* In this case, controls will not be performed either. For fixed-time ON and OFF, the start and end times must be different when the settings are configured.



(5) End Time ≦ Start Time (Inter-day Control)

* End control will be performed the next day.

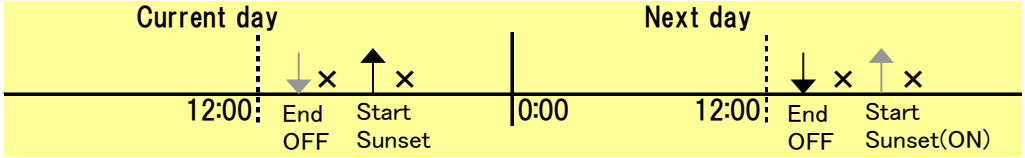
Sunset (ON)-Sunrise (OFF), Sunset (ON)-OFF, ON-Sunrise (OFF), and ON-OFF

OFF-ON

(6) 12:00 < OFF Time ≦ Sunset (ON) Time in Sunset (ON)-OFF (*Item (5) is a special case.)

* Neither the start nor the end control will be performed.

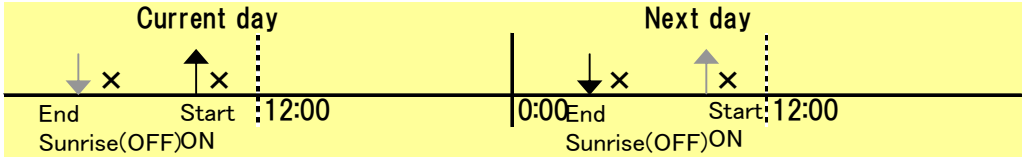
Sunset (ON)-OFF



(7) Sunrise (OFF) Time ≦ ON Time ≦ 12:00 in ON-Sunrise (OFF) (*Item (5) is a special case.)

* Neither the start nor the end control will be performed.

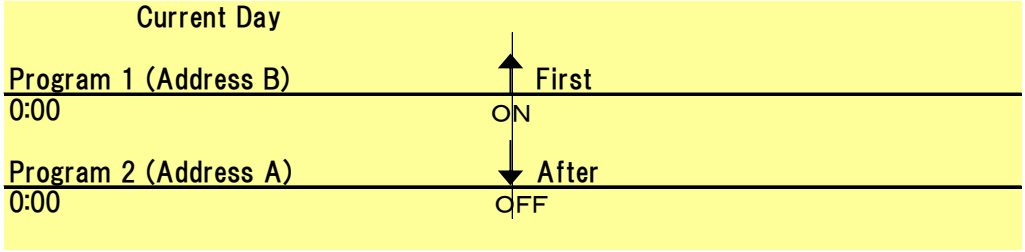
ON-Sunrise (OFF)



Advanced Control & Settings

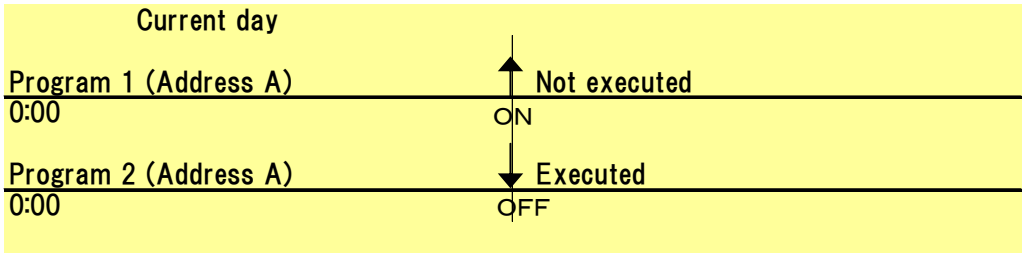
(8) Multiple Programs Controlling Different Addresses Simultaneously

* Program will be executed in order of their serial numbers.



(9) Multiple Programs Controlling the Same Addresses Simultaneously with Different Statuses

* Only OFF controls will be executed for the address and not the ON controls.



(ii) Complex Operations

If the start time for a program has already passed when a new schedule is set, changes are made to special day/normal day settings, or the clock is adjusted, the program will ignore the start control but will execute the end control. When controls are in progress from a Web page at the scheduled control time, the scheduled control may be delayed by a small margin.

(1) Interday Controls before or after Special Days

1. Normal Day Crossing to Special Day

* An end time control falling on a special day will be executed.

2. Special Day Crossing to Normal Day

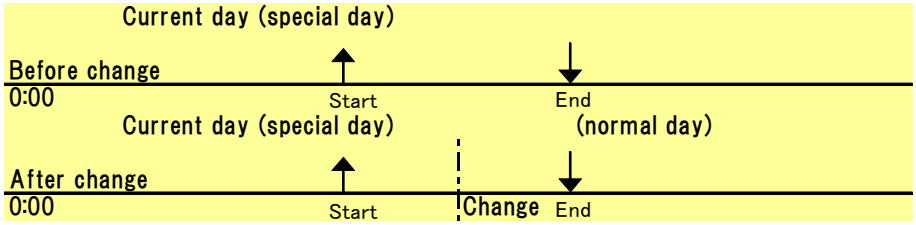
* The end time control falling on a normal day will be executed.

Advanced Control & Settings

(2) Changes to Special/Normal Days

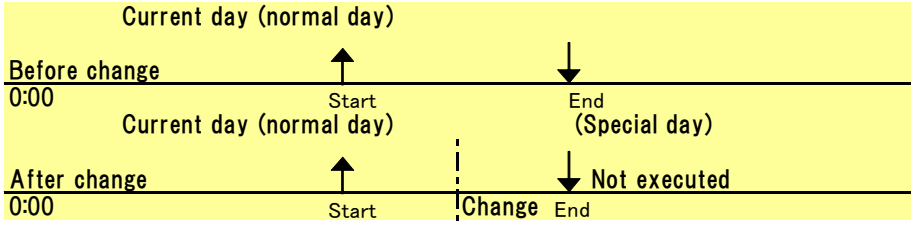
1. Programming Beginning on a Special Day Changed to a Normal Day on that Day (Cleared Special Day)

* If the controls had already started when the change was made, the end control will be performed after the change.



2. Programming Beginning on a Normal Day Changed to a Special Day on that Day

* Even if the program had started before change was made, the end control will not be performed after the change.



(3) Changes to Daylight Savings Time Setting

* When *Automatically adjust clock for daylight saving changes* is selected, all scheduled controls for the hour that is advanced will be executed. Programs will be executed in order of program number, and only OFF controls will be executed and none of the ON controls if there are multiple programs for the same address with different status controls.

Advanced Control & Settings

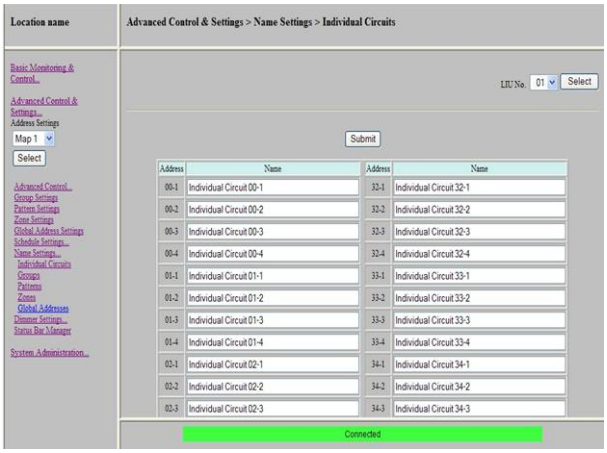
(9) Circuit Name Settings

Circuit Name Settings is used to configure names for circuit (addresses). Configure from the following menus by address type.

(a) Individual Circuit Names : All addresses for Individual Circuits and Dimmers
(b) Groups : All Groups
(c) Patterns : All Patterns
(d) Zones : All Zones
(e) Global Addresses : All Global Addresses

(a) Individual Circuits (Including Dimmers)

Individual Circuits is used to set names for all individual circuits and dimmers by LIU system.



1. Select the LIU No. for the system and click the Select Button.

The currently registered data will be displayed.

* All 31 systems can be set regardless of the status of the LIU connections.

2. Enter the names.

Number of characters: 32 characters or less

* Characters not included in iso-8859-1 (CP932) will be corrupted.
* If a comma "," is entered, an error message will be displayed after the **Submit** Button is clicked.
* Some names, such as 32 characters long ones, may be displayed with both ends truncated.

3. Click the Submit Button.

The settings will be applied to the page.

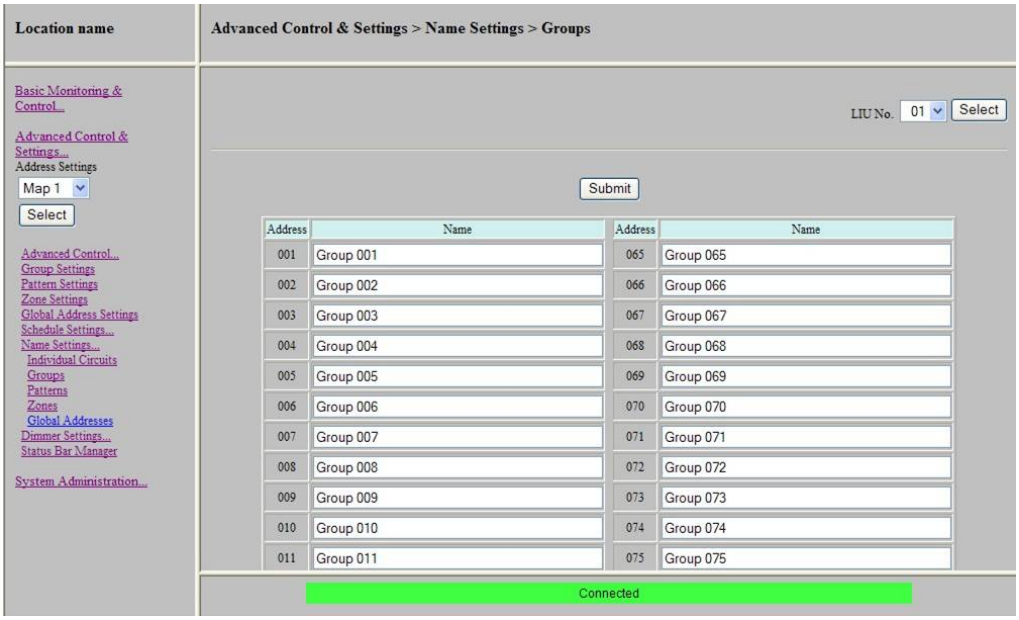
Factory Settings

Name : "Individual Circuit XX-X" (XX-X = 00-1 to 63-4)
and "Dimmer XX" (XX = 01 to 16)

Advanced Control & Settings

(b) Groups

Groups is used to set names for all groups by LIU system.



1. Select the LIU No. for the system and click the Select Button.

The currently registered data will be displayed.

* All 31 systems can be set regardless of the status of the LIU connections.

2. Enter the names.

Number of characters : 32 characters or less

* Characters not included in iso-8859-1 (CP932) will be corrupted.
* If a comma "," is entered, an error message will be displayed after the **Submit** Button is clicked.
* Some names, such as 32 characters long ones, may be displayed with both ends truncated.

3. Click the Submit Button.

The settings will be applied to the page.

Factory Settings

Name : Group XXX (* XXX = 00 1 to 127)

Advanced Control & Settings

(c) Patterns

Patterns is used to set names for all patterns by LIU system.

1. Select the LIU No. for the system and click the Select Button.

* The currently registered data will be displayed. All 31 systems can be set regardless of the status of the LIU connections.

2. Enter the names.

Number of characters : 32 characters or less

* Characters not included in iso-8859-1 (CP932) will be corrupted.
* If a comma "," is entered, an error message will be displayed after the Submit Button is clicked.
* Some names, such as 32 characters long ones, may be displayed with both ends truncated.

3. Click the Submit Button.

The settings will be applied to the page.

Factory Settings

Name : Pattern XX (* XX = 01 to 72)

Advanced Control & Settings

(d) Zones

Zones is used to set names for all zones by LIU system.

The currently registered data will be displayed.

1. Enter the names.

Number of characters : 32 characters or less

* Characters not included in iso-8859-1 (CP932) will be corrupted.
* If a comma "," is entered, an error message will be displayed after the Submit Button is clicked.
* Some names, such as 32 characters long ones, may be displayed with both ends truncated.

2. Click the Submit Button.

The settings will be applied to the page.

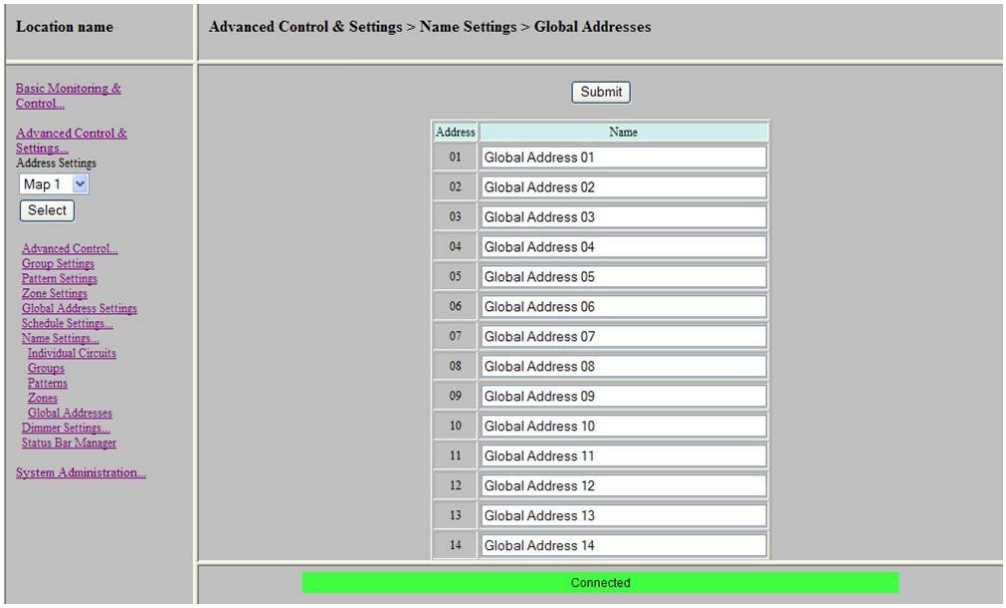
Factory Settings

Name : Zone XX (* XX = 01 to 96)

Advanced Control & Settings

(e) Global Addresses

Global Addresses is used to set names for all global addresses by LIU system.



The currently registered data will be displayed.

1. Enter names

Number of characters : 32 characters or less

* Characters not included in iso-8859-1 (CP932) will be corrupted.
* If a comma "," is entered, an error message will be displayed after the Submit Button is clicked.
* Some names, such as 32 characters long ones, may be displayed with both ends truncated.

2. Click the Submit Button.

The settings will be applied to the page.

Factory Settings

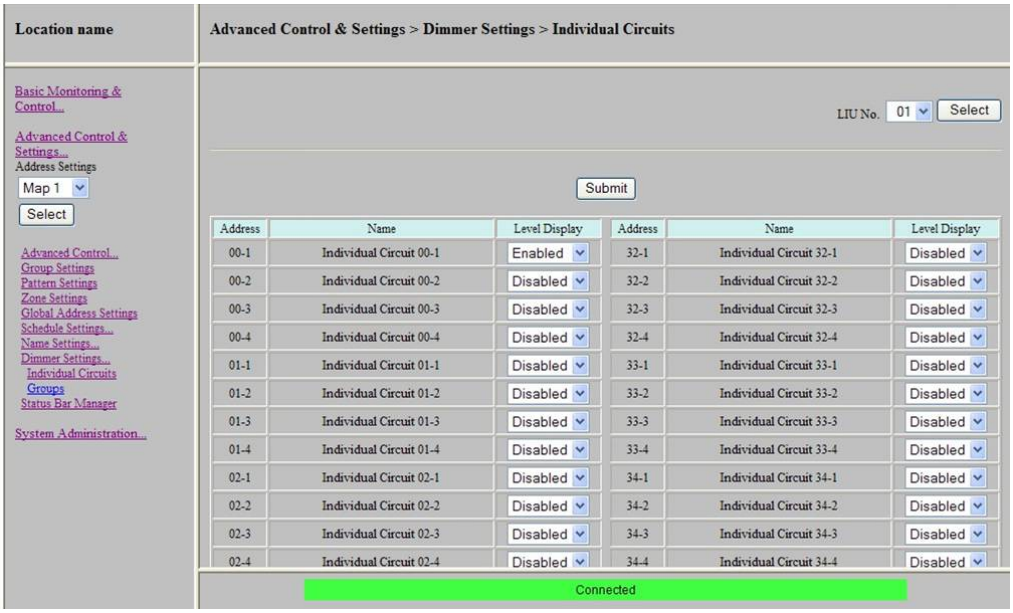
Name : Global XX (* XX = 01 to 32)

Advanced Control & Settings

(10) Dimming Level Display Settings

Dimming Level Display Settings is used to set parameters to obtain dimming levels for individual circuits and for individual circuit addresses that are dimming devices in group settings. For dimmer addresses (dimmer 1 through 16), data is always obtained.

(a) Individual Circuits



1. Select the LIU No. for the system and click the Select Button.

The currently registered data will be displayed.

* Only numbers enabled in LIU Connection Settings can be selected.

2. Select *Enabled/Disabled* for the level display.

If enabled, the **Get Level** Button will be displayed on the following pages:

- Control dialog boxes for symbols on maps and individual circuits in Monitor & Control List.
- Dimmer level pane in Advanced Contol (Individual Circuit)

3. Click the Submit Button.

The settings will be applied to the page.

* Dimming levels for individual circuits will be displayed between 000 to 128. To obtain and display dimming levels, dimmer T/Us must be installed at the addresses.

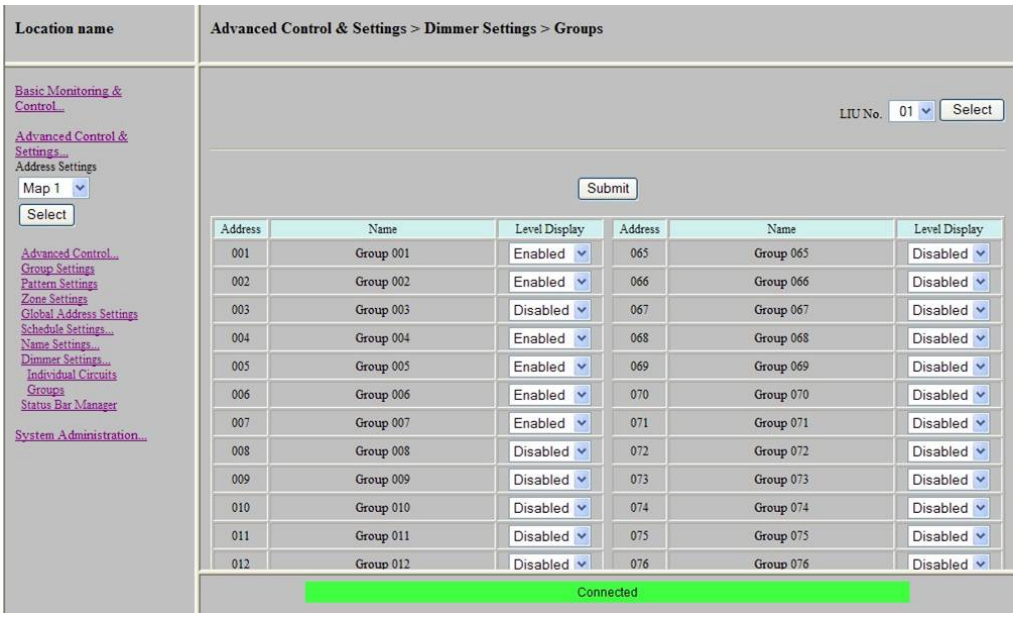
* If the address happens to be a relay control T/U, the level will be displayed at the fixed level of 000.

Factory Settings

Level Display: Disabled (for all addresses)

Advanced Control & Settings

(b) Groups



1. Select the LIU No. for the system and click the Select Button.

The currently registered data will be displayed.

* Only numbers enabled in LIU Connection Settings can be selected.

2. Select enabled/disabled for the level display.

If enabled, the **Get Level** Button will be displayed on the following pages:

- Control dialog boxes for symbols on maps and individual circuits in Monitor & Control List.
- Dimmer level pane in Advanced Control (Individual Circuit)

3. Click the Submit Button.

* The settings will be applied to the page. Dimming levels for groups will be displayed from 0 to 7.
* To obtain and display dimming levels, dimmer T/Us must be installed at the addresses included in the groups. If the address included in the group happens to be a relay control T/U, the level will be displayed as 1 for ON and 0 for OFF.

Factory Settings

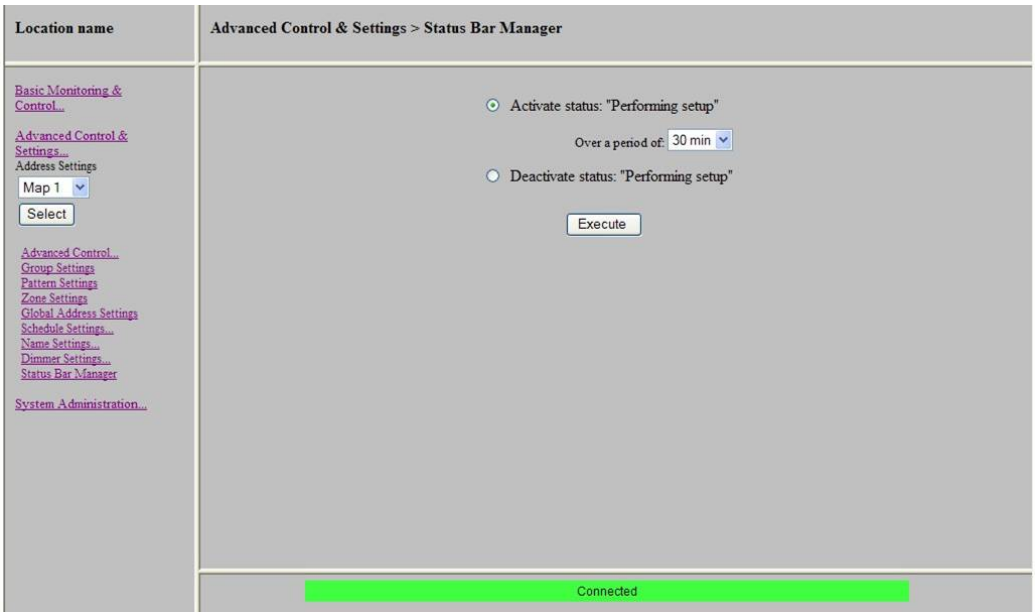
Level Display: Disabled (for all addresses)

Advanced Control & Settings

(11) Status Bar Manager

Some of setting functions for control and setting menus will affect other functions and therefore other users connected at the same time should be notified.

The Status Bar Manager is used when the status bar, which is a common interface among browsers, is used to display a "Performing setup" message in the status bar.



(i) Activating the "Performing setup" Display

1. Select "Activate status 'Performing setup'."

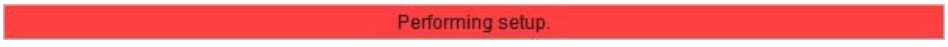
2. Select the maximum period of display.

Set the maximum period of display after which the display will be deactivated.

Over a period of: 30 min, 1 hour, 2 hours, or 3 hours.

3. Click the Execute Button.

The following message will be displayed in the status bar.



* Although the message will be displayed, it cannot restrict operations on other connected windows due to the characteristics of Web connections.

* To prevent unexpected settings from taking place, configurations should be performed from one place.

(ii) Deactivating the "Performing setup" Display

1. Select "Deactivate status 'Performing setup'."

2. Click the Execute Button.

The setting will be applied in the status bar.

Monitoring & Control

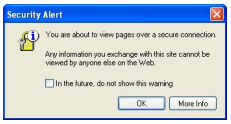
Operations on windows to monitor and control are described in this section.

Monitoring & Control

I. Basic Operations for Connection (Login)

Follow the steps below to access the Web site through the browser (Internet Explorer).

1. Enter the address (URL) of the Server Unit.



As follows:

https://*.***.***.***/**

(*) denotes the IP address digits of the Server Unit. (e.g. if the IP address is 192.168.0.1, enter *https://192.168.0.1/* as the URL).

* "https" is used at the beginning of the URL.

2. Proceed to the Security Alert Window.

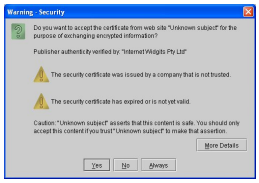
- Two Security Alert Windows will be displayed because the data is encrypted (SSL).
  Click the **OK** Button in the first window
  Click the **Yes** Button in the second window

- The Start Window (Web page) will be displayed if connection is established.

3. Login (start operation).

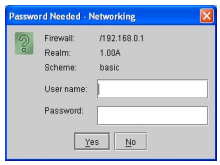
Click the image in the Start Window to display the Login Window.
Log in as a registered user. Enter a user name and password that have been set by the administrator in the Authentication page:

- User name (U) : **Enter user ID**
- Password (P) : **Enter password**

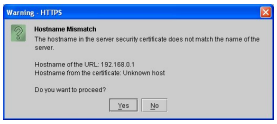


The Main Frame will be displayed if connection is established.

4. Proceed to the Java Warning Window.



- Two warning windows and a login window will be displayed before the Main Frame is completely displayed. This is related to the use of Java (Sun).
  Click the **Yes** Button in the Warning – Security Window.
  Enter the user name and password exactly the same as those entered in the Login Window in step 3 in the in the corresponding fields of the Password Needed -- Networking Window, and then click the **Yes** Button.



  * Do not enter a user name or password (authentication right) different from those entered in the Login Window.
  Click the **Yes** Button in the Warning -- HTTPS Window.

- The Main Frame will be displayed normally if the connection has been established.

5. Logout (operation complete).

Logout by closing the browser window.

* To login with a different authentication right, close the browser window first. The authentication right at login is retained, even after returning to the Start Window, until the browser is closed.

Monitoring & Control

Java Authentication Problems.

* It may take a while before the Java Warning (Authentication) Dialog Box is displayed. If you ignore the Warning (Authentication) Dialog Box and minimize the browser before the dialog box is displayed, the Warning (Authentication) Dialog Box will remain hidden even after maximizing the browser again, preventing the user from operating the browser. In this situation, press the **ALT-Tab** keys simultaneously to display the Windows task switcher view. Select the Java icon in the tag switcher view by pressing the **ALT-Tab** keys.This will bring back the Java warning (authentication) dialog box. From there, proceed as described above.
* If the user name or password that had been entered at login is not entered correctly three times in succession, or if the **Cancel** Button is clicked, the Authentication Required Window will be displayed. In this situation, the browser must be closed and then reopened.
* Java applets and the browser run on the client computer, so if the computer does not have sufficient resources, they may not function properly.

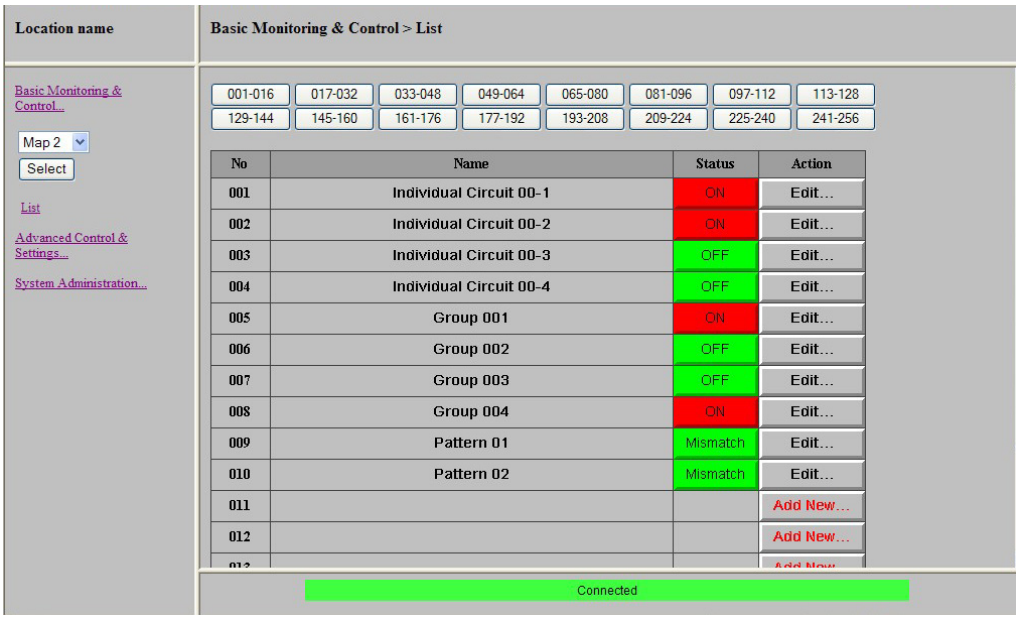
Monitoring & Control

II. List Window Operations

In this section, monitoring, control and setting operations in the List Window are described. The List Window provides access to frequently monitored and controlled lighting circuit addresses, which are displayed conveniently in a list as a table. The ***List*** window, accessed by clicking the List item in the side menu frame, allows monitoring, control and setting of addresses, as described in the following table:

Basic Monitoring Rights	Monitoring only
Basic Monitoring and Control Rights	Monitoring and control
Advanced Control & Settings Rights	Monitoring, control and settings
Administration Rights	Monitoring, control and settings

If logged in with a monitoring rights only, the window title is "Basic Monitoring > List."



* The ***List*** menu item will not be displayed unless the Monitor and Control List (for users with basic monitor and control right only) option of Project Display Settings is selected. The ***List*** menu is always displayed regardless of this setting if a user with Advanced Control & Settings rights or System Administration rights is logged in.

* For details, refer to *System Administration and Setting* and *Setting List*.

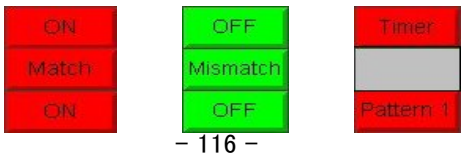
(i) Monitoring

1. Click one of the buttons from 001-016 to 241-256.

The statuses of the selected addresses range are displayed in a table format

As shown in the figure below, ON is indicated in red, OFF in green, indeterminate (No T/U or unregistered) in gray. Other statuses are displayed as text.

(a) Example of Status



Monitoring & Control

* The status display uses port 6001.
  If this port is closed, the status display will not be changed until the display is refreshed. To enable refreshing, select *Enable Automatic Reload of Basic* Monitoring & Control Pages in the Page Reload Settings.
* If the connection from the Web Server Unit to the NCU to the LIU to the Transmission Unit is cut, all address statuses will be displayed as "indeterminate".
* Statuses of addresses disabled in the LIU Connection Settings will be displayed as "indeterminate".

(ii) Controls

1. Click the red/green button in the Status Field.

A dialog box, as the ones displayed below, will open.

* Symbols in indeterminate state cannot be selected.Symbols cannot be used if a user with monitor rights only is logged in.

2. Click the button for the status to control.

The dialog box will close, and the status will change. The status display uses port 6001.

* If the port is closed, the status display will not be changed until the display is refreshed.

(iii) Display the Dimmer Level.

The dimmer level can be displayed manually for each address.
Only individual and group addresses whose level display has been enabled in the Dimmer Settings… can be displayed.

1. Click the red/green button in the Status Field.

A dialog box, as the ones displayed below, will open.

* The first operation after connecting to the Web Server Unit takes more time than usual.
* The dimmer address can be confirmed at this stage.

Monitoring & Control

2. Click the Get Level Button.

The dialog box will close.

3. Wait for a while.

4. Click the status button.

A dialog box will open with the dimmer level being displayed.

Dimmer Level Value Table

Control Type	ON / Brightest	Least Bright	OFF
Individual Circuit	128	001	000
Dimmer	128	001	000
Group	7	1	0

* Displaying the dimmer level for individual addresses requires the dimmer T/U for the address. If the address is to a relay control T/U, the level is displayed as 000.

* Displaying the dimmer level for group addresses requires the dimmer T/U for the address. If the addresses included in the group are to relay control T/Us, the level will be displayed as 1 for ON and 0 for OFF.

* If the dialog box is closed by clicking the **Cancel** Button while the dimmer level is being retrieved, start again from step **3**.

5. Click the Cancel Button.

The dialog box will close.

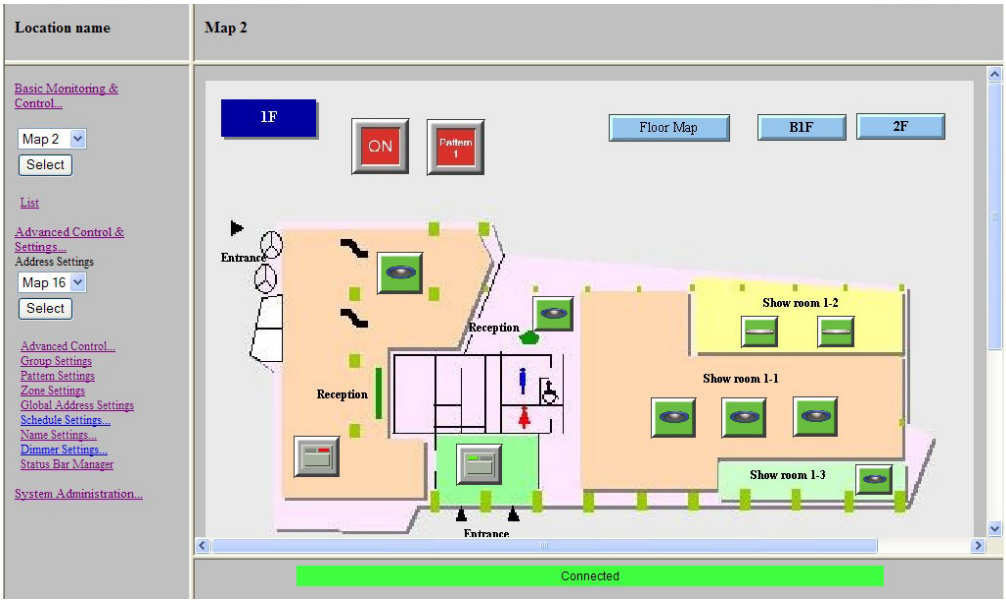
* If any button is clicked after the level has been displayed, the value will be discarded.

* The value will be retained if the dialog box is closed by clicking the Close Button in the upper right corner.

Monitoring & Control

III. Map Window Operations

Lighting circuit status can be monitored and controlled visually on a map screen.
For example, display and operation are possible on a window displaying a map depicting the physical layout of the facilities.
In this manual, a window specially drawn for a facility is called a map. Monitoring and control operations using maps are described here.



* Maps must have been prepared with special software and transmitted to the Web Server Unit. For details, refer to *Administration and Setting* under *II. Creation and Administration of Maps.*
* The selection menu for map numbers in the Administration and Setting Window will be displayed if the corresponding map number checkbox is selected in the *Project Display Settings* under *System Administration….*

Monitoring and Control Symbols

Status buttons (symbols) on the window provide functions equivalent to switches in order to control and monitor lighting circuits specific to FULL-2WAY Remote Control Systems. If these symbols are placed on the maps, they may be assigned addresses for FULL-2WAY Remote Controls from the Address Settings in the Web browser.

(i) Monitoring

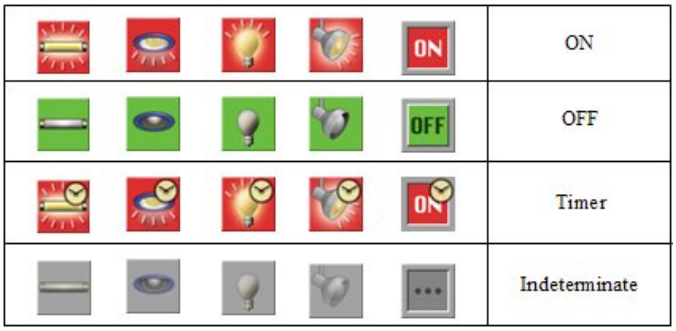
1. Select the map name in the menu frame and click the Select Button.

The map will be displayed in the Main Frame.

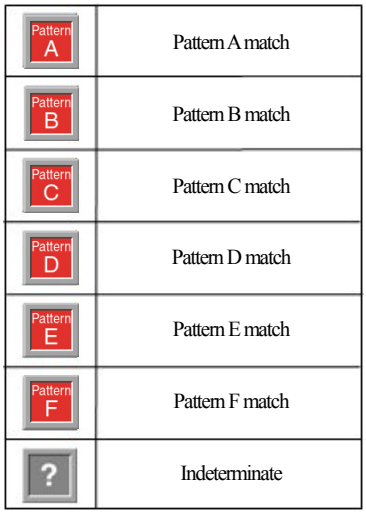
* The status of corresponding addresses will indicated by the status symbols.
  In general, the ON state is displayed in red, OFF state in green, timer state in red with a clock, and indeterminate (no T/U or unregistered) state in gray, as shown in the figures below. As for zone addresses, there can be up to seven different status symbols.
* Hyperlinks to other maps can be defined in the map drawing software.

Monitoring & Control

(a) Generic Status Symbols



(b) Zone Status Symbols



* The status display uses port 6001. If this port is closed, the status display will not be changed until the display is refreshed. To enable refreshing, select *Enable Automatic Reload of Basic* Monitoring & Control Pages in the Page Reload Settings.
* If the connection from the Web Server Unit to the NCU to the LIU to the Transmission Unit is cut, all address statuses will be displayed as "indeterminate".
* Statuses of addresses disabled in the LIU Connection Settings will be displayed as "indeterminate".

(ii) Controls

Please refer to previous section II. List Window Operations, (ii Controls) for further details on how to use control windows.

(iii) Dimmer level monitoring and control

The dimmer level at each address can manually controlled and monitored with the gauge display format, such as described in the following figure:

The dimmer level can be easily retrieved and displayed, as described in (II. List Window Operations, (ii Controls), step 3.)

* This status display uses port 6001. If this port is closed, the display of status will not be changed until the window is refreshed.
* The dimming level cannot be monitored for a global address even if the global address is defined individually or in a group.

		Lighting Number	Individual Circuit Level	Dimmer Level	Group Level
	Level 7	6	128 - 121	128	7
	Level 6	5	120 – 97	115	6
	Level 5	4	96 – 73	90	5
	Level 4	3	72 – 49	65	4
	Level 3	4	48 – 25	40	3
	Level 2	1	24 – 2	15	2
	Level 1 (OFF)	0	1 – 0 (OFF)	1 – 0 (OFF)	1 – 0 (OFF)
?	Indeterminate	---	---	---	---

Monitoring & Control

IV. Advanced Control…

When logged in with Settings or System Administration right, advanced control functions can be used to monitor and control the lighting patterns of all the addresses of circuits in a table. This function can be used if logged in with Advanced Control and Settings or System Administration rights.

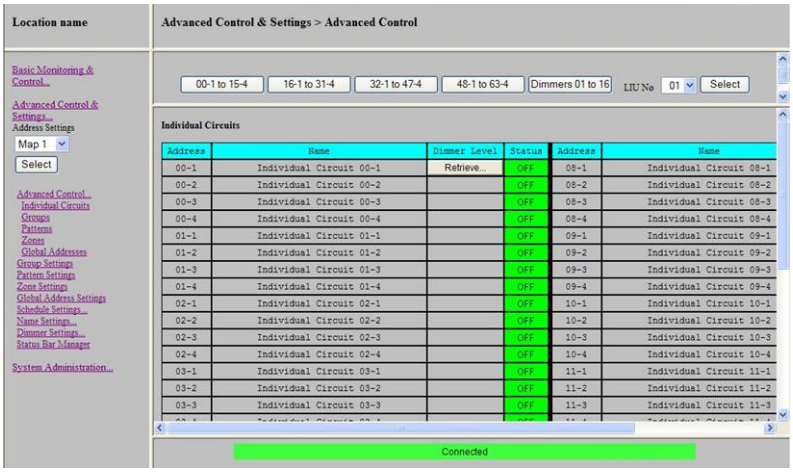
Windows display each address type (function) as follows:

(1) Individuals Circuits & Dimmers:	Displays all 256 individual circuits and 16 dimmers addresses per LIU unit 64 individual circuits addresses x 4 windows (16 addresses per window) 16 dimmers addresses x 1 window
(2) Groups:	Displays all 127 group addresses per LIU unit 64 addresses x 2 windows
(3) Patterns:	Displays all 72 pattern addresses per LIU unit 36 addresses x 2 windows
(4) Zones:	Displays all 96 zone point addresses 96 addresses x 1 window
(5) Global Addresses:	Displays all 32 global point addresses 32 addresses x 1 window

Monitoring & Control

(1) Advanced Control… Individual Circuits and Dimmers

(a) Individual Addresses (00-1 to 63-4)



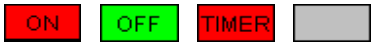
(i) Monitoring

1. Select the LIU number and click the Select Button.

2. Click one of the individual circuits address range buttons (00-1 to 15-4 … 48-1 to 63-4).

The display of addresses is split into 4 windows of 64 addresses each.

The statuses of the selected addresses are displayed in the Status Fields.



As shown in the figure, ON is indicated in red, OFF in green, indeterminate (No T/U or unregistered) in gray, and details are given in text (e.g TIMER).

* If the connection from the Web Server Unit to the NCU to the LIU to the Transmission Unit is cut, all address statuses will be displayed as "indeterminate".

* Statuses of addresses disabled in the LIU Connection Settings will be displayed as "indeterminate".

(ii) Controls

1. Click the red/green button in the Status column.

A dialog box, as the one displayed below, will open.

* Symbols in indeterminate state cannot be selected.

* Symbols cannot be used if a user with monitor rights only is logged in.

* Does not apply to On-timer and Off-delay timer controls.

* Does not apply to dimmer level controls.

2. Click the button for the status to control.

The dialog box will close, and the status will change.

(iii) Viewing the dimmer level.

The dimmer level can be verified manually for each address. Only addresses whose level display has been enabled in the Dimmer Settings… can be verified.

1. Click the Get Level Button in the Dimmer Level Dialog Box.

A dialog box, as the one displayed below, will open

Monitoring & Control

2. Click the Get Level Button.

The dialog box will close.

3. Wait for a while.

4. Click the Get Level Button in the Dimmer Level Dialog Box.

A dialog box will open with the dimmer level being displayed.

Dimmer Level Value Table

Control Type	ON / Brightest	Least Bright	OFF
Individual Circuit	128	001	000

* Displaying the dimmer level for individual addresses requires the dimmer T/U for the address.

If the address is to a relay control T/U, the level is displayed as 000.

* If the dialog box is closed by clicking the **Cancel** Button while the dimmer level is being retrieved, start again from step 3.

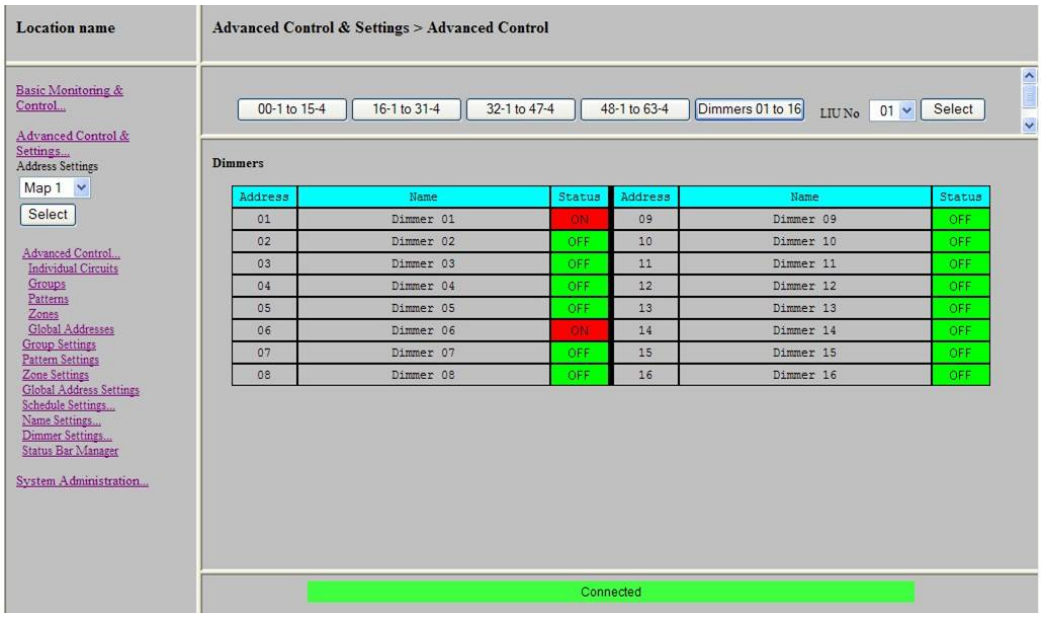
5. Click the Cancel Button.

The dialog box will close.

* If any button is clicked after the level has been displayed, the value will be discarded.
* The value will be retained if the dialog box is closed by clicking the Close Button in the upper right corner.

Monitoring & Control

(b) Dimmer Addresses (01 to 16)

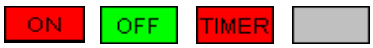


(i) Monitoring

1. Select the LIU number and click the Select Button.

2. Click the "Dimmers 01 to 16" button .

This opens the display of the 16 dimmer addresses The statuses of the selected addresses are displayed in the Status Fields.



As shown in the figure, ON is indicated in red, OFF in green, indeterminate (No T/U or unregistered) in gray, and details are given in text (e.g TIMER).

* If the connection from the Web Server Unit to the NCU to the LIU to the Transmission Unit is cut, all address statuses will be displayed as "indeterminate".

* Statuses of addresses disabled in the LIU Connection Settings will be displayed as"indeterminate".

(ii) Controls

1. Click the red/green button in the Status column.

A dialog box, as the ones displayed below, will open.

* Symbols in indeterminate state cannot be selected.

* Does not apply to On-timer and Off-delay timer controls.

* Does not apply to dimmer level controls.

2. Click the button for the status to control.

The dialog box will close, and the status will change.

Monitoring & Control

(iii) Viewing the Dimmer Level

1. Click the red/green button in the Status column.

A dialog box will open with the dimmer level displayed if the status is ON.

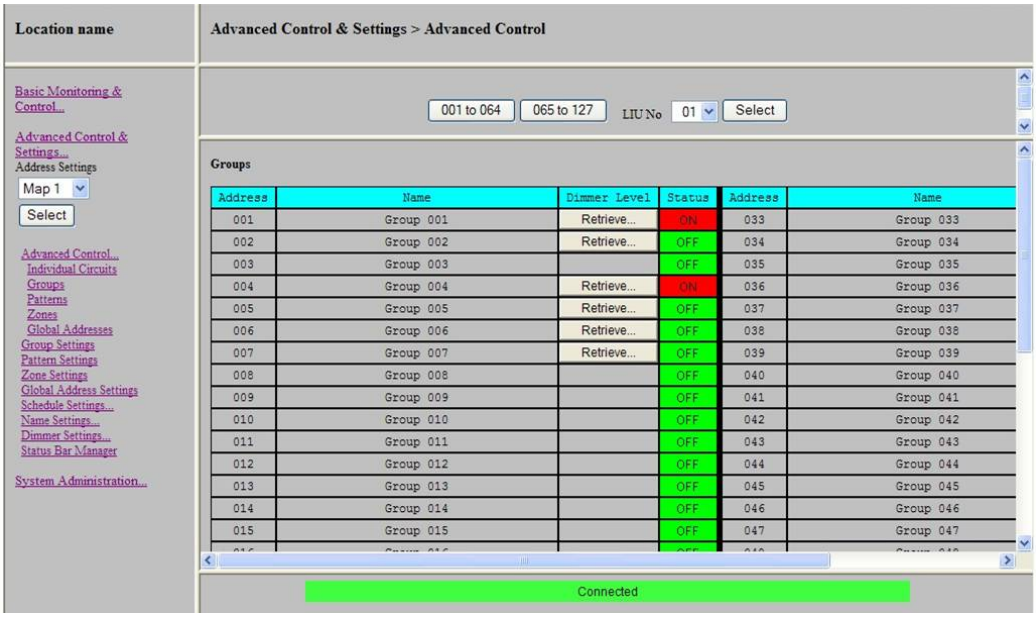
* The level may not be obtained and displayed immediately after the circuit is turned ON.

Dimmer Level Value Table

Control Type	ON / Brightest	Least Bright	OFF
Dimmer	128	001	000

Monitoring & Control

(2) Advanced Control… Groups (Group Addresses 001 to 127)



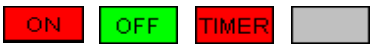
(i) Monitoring

1. Select the LIU number and click the Select Button.

2. Click the "001 to 064" or "065 to 127" button

The display of group addresses is split into 2 windows of 64 addresses each.

The statuses of the selected addresses are displayed in the Status Fields.



As shown in the figure, ON is indicated in red, OFF in green, indeterminate (No T/U or unregistered) in gray, and details are given in text (e.g TIMER).

* If the connection from the Web Server Unit to the NCU to the LIU to the Transmission Unit is cut, all address statuses will be displayed as "indeterminate".

* Statuses of addresses disabled in the LIU Connection Settings will be displayed as "indeterminate".

(ii) Controls

1. Click the red/green button in the Status column.

A dialog box, as the one displayed below, will open.

* Symbols in indeterminate state cannot be selected.

* Does not apply to On-timer and Off-delay timer controls.

* Does not apply to dimmer level controls.

2. Click the button for the status to control.

The dialog box will close, and the status will change.

(iii) Viewing the Dimmer Level

The dimmer level can be verified manually for each address.

Only addresses whose level display has been enabled in the Dimmer Settings… can be viewed.

1. Click the Get Level Button in the Dimmer Level Dialog Box.

A dialog box will open, such as the one below.

Monitoring & Control

2. Click the Get Level Button.

The dialog box will close.

3. Wait for a while.

4. Click the Get Level Button in the Dimmer Level Dialog Box.

A dialog box will open with the dimmer level being displayed.

Dimmer Level Value Table

Control Type	ON / Brightest	Least Bright	OFF
Group	7	1	0

* Displaying the dimmer level for group addresses requires the dimmer T/U for the address.
  If the addresses included in the group are to relay control T/Us, the level will be displayed as 1 for ON and 0 for OFF.
* If the dialog box is closed by clicking the **Cancel** Button while the dimmer level is being retrieved, start again from step 3.

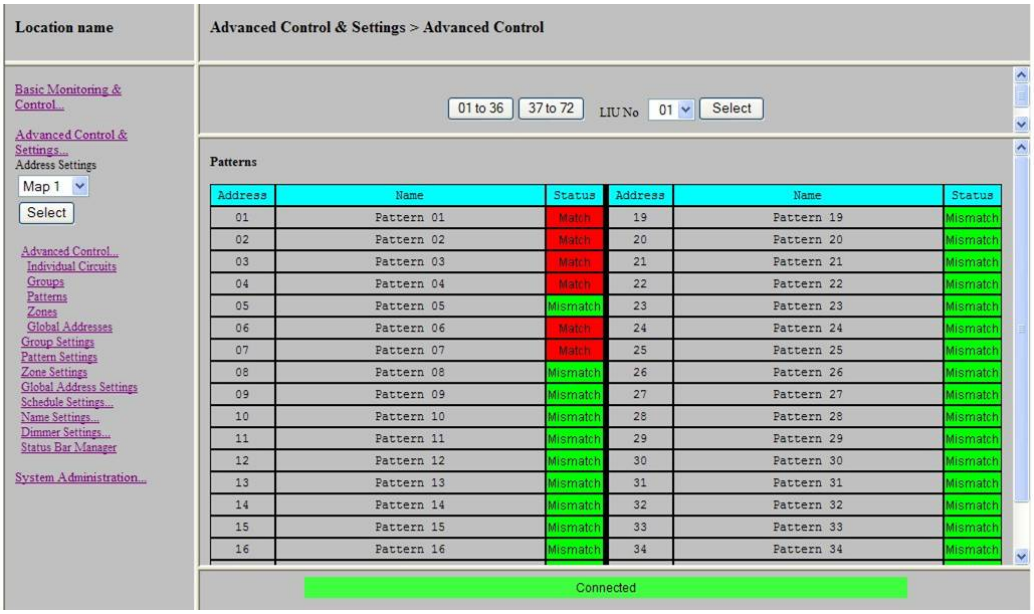
5. Click the Cancel Button.

The dialog box will close.

* If any button is clicked after the level has been displayed, the value will be discarded.
* The value will be retained if the dialog box is closed by clicking the Close Button in the upper right corner.

Monitoring & Control

(3) Advanced Control… Patterns (Pattern Addresses 01 to 72)



(i) Monitoring

1. Select the LIU number and click the Select Button.

2. Click "01 to 36" or "37 to 72" button.

The display of pattern addresses is split into 2 windows of 36 addresses each.

The statuses of the selected addresses are displayed in the Status Fields.

As shown in the figure, a pattern MATCH is indicated in red, MISMATCH in green, and indeterminate (No T/U or unregistered) in gray.

* If the connection from the Web Server Unit to the NCU to the LIU to the Transmission Unit is cut, all address statuses will be displayed as "indeterminate".

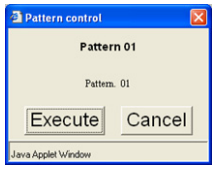
* Statuses of addresses disabled in the LIU Connection Settings will be displayed as "indeterminate".

(ii) Controls

1. Click the red/green button in the Status column.

A dialog box, as the one displayed below, will open.

* Symbols in indeterminate state cannot be selected.

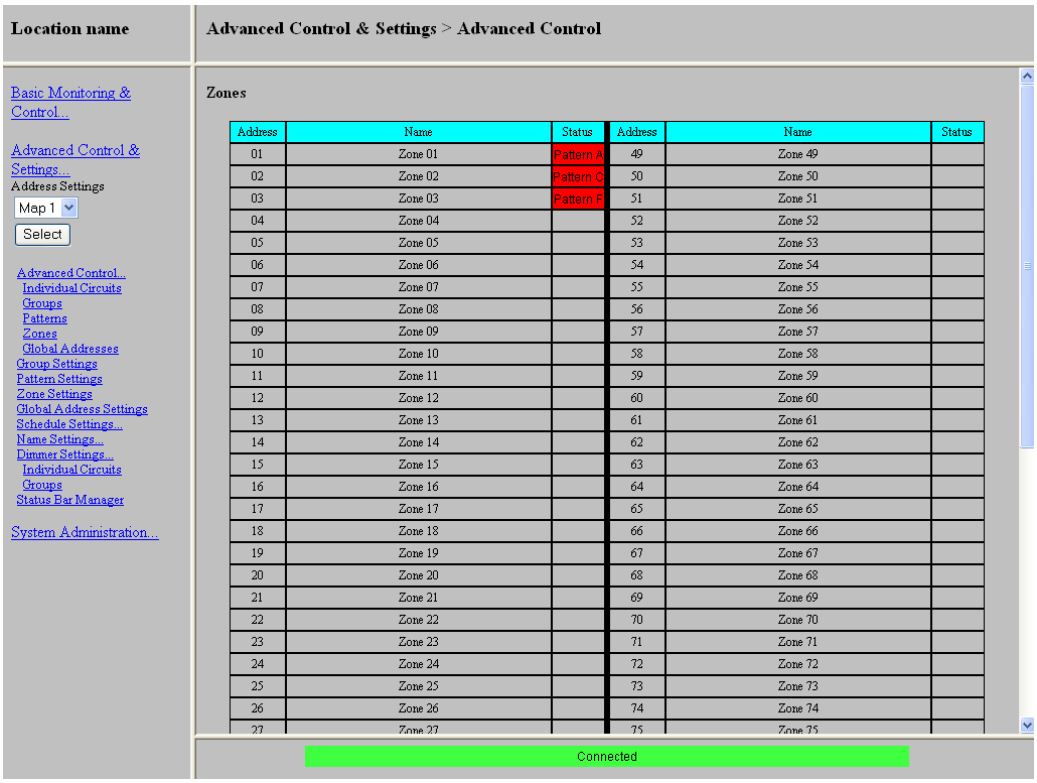


2. Click the Execute Button.

The dialog box will close, and the status will change.

Monitoring & Control

(4) Advanced Control… Zones (Zone Addresses (Points) 01 to 96)



(i) Monitoring

All 96 zone addresses are displayed in one window.

The statuses of the selected addresses are displayed in the Status Fields.

PatternA PatternB PatternC PatternD PatternE PatternF

As shown in the figure, ON is indicated in red, OFF in green, indeterminate (No T/U or unregistered) in gray, and details are given in text (e.g TIMER). The possible statuses of zone modes are explained in the following table:

Mode 2	Pattern A, Pattern B and Pattern C (in this case, Pattern C is used to denote other conditions.)
Mode 3	Pattern A, Pattern B and Pattern C
Mode 4	Pattern A, Pattern B, Pattern C and Pattern D
Mode 6	Pattern A, Pattern B, Pattern C, Pattern D, Pattern E and Pattern F

* If the connection from the Web Server Unit to the NCU to the LIU to the Transmission Unit is cut, all address statuses will be displayed as "indeterminate".
* Statuses of addresses disabled in the LIU Connection Settings will be displayed as "indeterminate".

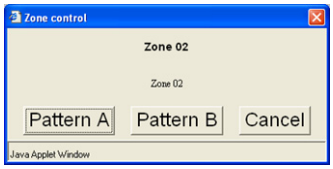
Monitoring & Control

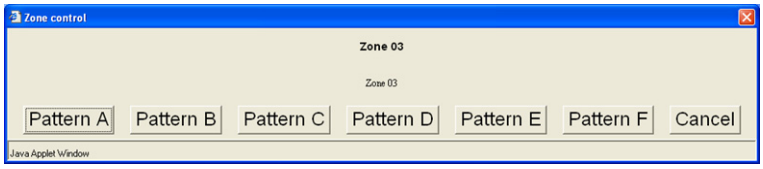
(ii) Controls

1. Click the red/green button in the Status column.

A dialog box, as the one displayed below, will open.

* Symbols in indeterminate state cannot be selected.





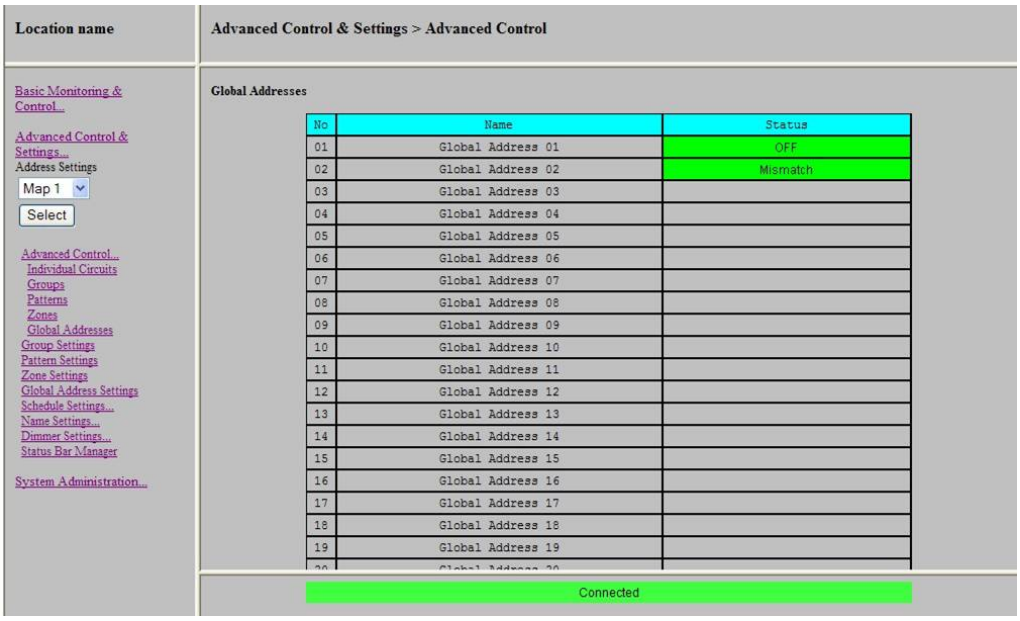
2. Click the button for the status to control.

The dialog box will close, and the status will change.

* In mode 2, Pattern 1 can be monitored but cannot be controlled.
* For details on zone control, refer to *Zone Control* under *Administration and Settings*.

Monitoring & Control

(5) Advanced Control… Global Addresses (Global Addresses (Points) 01 to 32)



(i) Monitoring

All 32 global addresses are displayed in one window.

The statuses of the selected addresses are displayed in the Status Fields

Individual / Dimmer / Group: ON OFF TIMER

Patterns: Match Mismatch

As shown in the figure, ON is indicated in red, OFF in green, indeterminate (No T/U or unregistered) in gray, and details are given in text (e.g. TIMER).

* If the connection from the Web Server Unit to the NCU to the LIU to the Transmission Unit is cut, all address statuses will be displayed as "indeterminate".

(ii) Controls

1. Click the red/green button in the Status column.

A dialog box, as the one displayed below, will open.

* Symbols in indeterminate state cannot be selected.

2. Click the button for the status to control.

The dialog box will close, and the status will change.

* Displaying control buttons varies in response to the addresses for global settings.
* The dimming level cannot be monitored for a global address even if the global address is defined individually or in a group.
* For details on global control, refer to *Global Control* under *Administration and Settings.*

Monitoring & Control

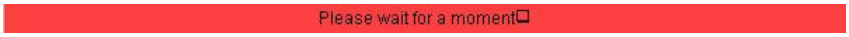
V. Error Status Displays

(1) Status Bar

Statuses 1 to 8 shown as follows are displayed in the Status Bar. If more than one state exists at the same time, the lower numbered state has higher priority for display.

1. Please wait for a moment… (Red)

Indicates the network connection to the Web Server Unit has been temporarily disconnected (e.g. broken wire, a device that has stopped, etc.).



When this error occurs, it is suggested to verify the following settings.

- Network status (channels, power supply for devices, device settings, etc.)
- Power to the Web Server Unit
- Connection status with the NCUs (channels, NCU power supply, communications settings such as the NCU DIP switches and the RS-232C Settings of the Web Server Unit)

* When this error occurs, nothing will be displayed after connecting (reconnecting) from the Web browser.

2. Date & Time out of order. (Red)

Indicates that the date and time could not be kept (e.g. after a power supply interruption longer than the clock's battery maximum time range).

When this error occurs, it is suggested to verify and reset the date and time settings in the Date & Time Settings.

3. System error occurred. (Red)

- Indicates errors in the Web Server Unit or local system.

* This error includes situations when the local system is being set using the patterns/groups setting switches.

- Details on the error can be checked in the System Errors Monitor.

When this error occurs, it is suggested to verify the following items:

- FULL-2WAY signal error
- Pattern/Group configuration in process

Monitoring & Control

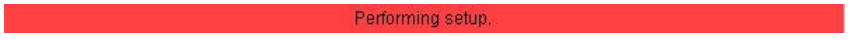
4. Settings inconsistencies. (Red)
   Indicates normal monitoring and control has been disabled because the LIU Settings or Zone Settings are inconsistent with those of the NCU. Consistency of the zone settings is checked on the following occasions:

- When data is read from the NCU for Zone Settings
- When zone settings are uploaded in Upload Manager
- When the data is being uploaded, this message is displayed regardless of the data on the NCU side.
- When booting with the "zone settings verification" option enabled in the Zone Settings, make sure the settings on the Web Server Unit match those on NCU. This can be done in the LIU Connection Settings view or Zone Settings view.

5. Initializing (Red)
   Indicates that the Web Server Unit is being initialized. It is recommended that you wait until the initialization process has been completed before performing any operation.

6. Data transfer in progress. Please wait…" (Red)
   Indicates communications with the NCU, such as group settings, pattern settings, zone settings, and LIU Settings are in progress. It is recommended that you wait until the initialization process has been completed before performing any operation. If connection become disabled, this message might be displayed for approximately 5 minutes.

7. Performing setup. (Red)
   Indicates that the "Performing setup" status has been enabled. The display of this status message is not a result of any setting operations, but is enabled intentionally by a user with Advanced Control & Settings righs System Administration rights. It is presumable that the display of this message is done concurrently with some setting operation.



8. Connected (Green)
   Indicates that normal operations can be performed. This status is not displayed until all errors and warnings have been cleared.

Monitoring & Control

(2) System Error Monitor Displays

1. NCU connection error
   NCU communication error include NCU power interruptions, a broken RS-232C cable, incorrect wiring and/or a communication setting error in the NCU (DIP switches).
2. Date & Time out of order.
   The clock became in out of order status and has to be reset in the Date & Time settings.
3. Local bus error
   Local bus error include broken connections between the NCU and LIU, incorrect communications settings between the NCU and LIU (mismatch), power interruptions of the LIU, and incorrect LIU number settings (local network address).
4. FULL-2WAY signal error
   FULL-2WAY signal error include disconnected channels, short-circuited signals, Transmission Unit power interruptions, and amplifier power interruptions.
5. Pattern/Group configuration in process.
   The local system are being set into the setting mode. Can also indicate errors in the FULL-2WAY remote terminal following a power interruption, failure, wiring problems or duplicated addresses setting.

(3) Integrated LED Indications (Web Server Unit)

1. Power (Red)
   ON : Power is being supplied.
   OFF : Power is not being supplied.
2. Ethernet LINK (Green)
   ON : Ethernet is connected normally.
   OFF : Ethernet is not connected normally.
3. Ethernet ACT (Orange)
   ON : Data is being transferred via Ethernet.
   OFF : Data is not being transferred via Ethernet.
4. NCU Connection Error/Date & Time Out of Order Indicator (Red)
   ON : NCU connection is abnormal. (No relations with the clock status)
   Flashing : NCU connection is normal, but the date and time are out of order. "Date & Time Out of Order" status indicates that the date and time could not be kept (e.g. after a power supply interruption longer than the lock's battery maximum time range).
   OFF : NCU connection is normal, and the date and time on the Web Server Unit are properly set.

(4) Integrated LED Indications (NCU and LIU)

1. The following communications errors can be detected:
   Network error : Communications error between the LIU and Transmission Unit.
   Host computer post error : Communications error between the Web Server Unit and NCU.
   FULL-2WAY error : Signal error between the LIU and Transmission Unit.

Specifications & Important Information

Specifications & Important Information

I. Hardware Specifications

Ratings

- Rated voltage : 24 VAC
- Rated frequency : 50 Hz/60 Hz
- Rated current consumption : 300 mA

* Use the WR2301-811, WR2311-821 series Transformer for the power supply.

Applicable Unit Numbers

- Network Control Units : WR3387-8 series
- Local Interface Units : WR3388-8 series
- Transmission Units : WRT2050-80, WRT2040-82, WRT2040-81, WRT2040-894 (For USA) series

Capabilities

- NCU (WR3387-8) connections : 1 Unit * One unit per Web Server Unit
- LIU (WR3388-8) connections (controls) : 1 to 31 Units * One Unit per Transmission Unit
- Individual Control Circuits : 8,432 circuits max. (31 Transmission Units) [{256 (individual)+16 (dimmer)} circuits× 31 systems]
- Simultaneous accesses : 5 max.

  * This is the maximum number of CGIs concurrently executed and not the maximum number of connected PCs. Accesses exceeding this limit will wait in a queue and displays will be delayed.
  * Simultaneous operations from multiple browsers on one CGI may suffer from display problems and operational delays due to applet specifications and client PC performances.
- Time required for booting : Approx. 2 to 7 minutes
- Network error detection time : 1 minute max.
- Network recovery detection time : 1 minute max.
- NCU connection error detection time : 1 minute max.
- NCU connection recovery detection time : 30 seconds max.
- Local bus error detection time : 1 minute max.
- Local bus recovery detection time : 3 seconds max.
- FULL-2WAY signal error detection time : 3 seconds max.
- FULL-2WAY signal recovery detection time : 3 seconds max.
- Pattern/group setting detection time : 3 seconds max.
- Pattern/group recovery detection time : 3 seconds max.
- Web window reload time : 5 seconds or more when using PORT443 and 6001
  30 seconds or more when NOT using PORT6001
  * Depends on the connection status of user network environment.

Specifications & Important Information

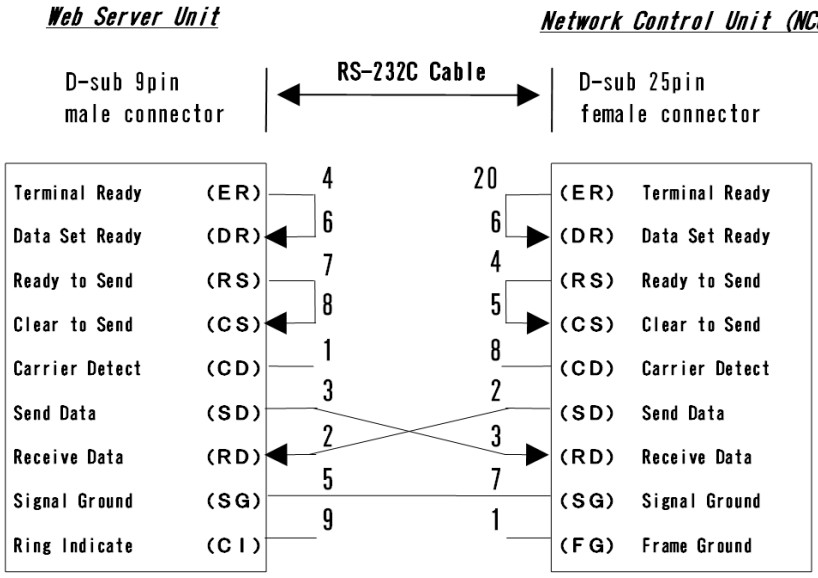
Communications Interface

(1) Ethernet Communications Interface

- Port number : 1 (MDI type) (* MDI-X is not supported.)
- Connection : 10Base-T (half/full-duplex)/100Base-TX (half/full-duplex). Auto-negotiation
- Connection speed : 10/100 Mbps
- Communications standards (media access) : IEEE 802.3/IEEE 802.3u (CSMA/CD)
- Protocol : TCP/IP, HTTPS (443), Proprietary (6001)
- Encryption : SSL 3.0 (RSA 128-bit)
- Connector : RJ-45type 8-pin connector

(2) NCU (RS-232C) Communications Interface

- Port number : 1
- Hardware standard : CCITT V24 (JIS X 5101)
- Connection : Direct connection
- Transmission : Half-duplex
- Baud rate : 19,200 (or 9,600) bps
- Transmission code : JIS 7 bit + 1 parity
- Synchronization : Asynchronous with 1 start bit and 1 stop bit
- Protocol : Polling/selecting (JIS X 5002 equivalent)
- Polling/selecting ratio : 2
- Polling cycle : 0.4 second
- Error correction : Vertical parity (even parity), horizontal parity (LRC algorithm), transmission time monitoring timer
- Connector : D-Sub, 9-pin male connector (inch screws)
- Pin connections : Shown below



Specifications & Important Information

Indicators

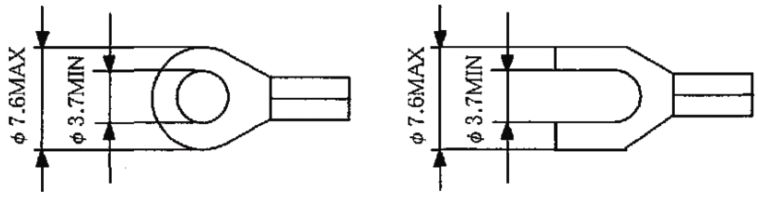
- Power (ON) : Red (×1)
- Ethernet LINK : Green (×1)
- Ethernet ACT. : Orange (×1)
- NCU Connection Error/Date & Time Out of Order : Red (×1)

Terminals and Connectors

- 24-VAC power terminal : M3.5 screw (×2)
- Grounding terminal : M3.5 screw (×1)
- Ethernet connector : RJ45 modular jack (×1)
- NCU connector : D-sub 9-pin male (inch screw) (×1)
- Setting Unit connector (*for maintenance) : D-sub 9-pin male (inch screw) (×1)

Applicable Cables

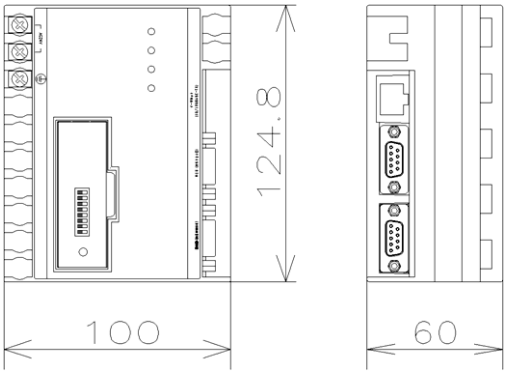
- 24-VAC power cable : Solid 0.9-mm to 1.6-mm dia.,
  Stranded 0.75 mm^2 to 2.0 mm^2,
  Maximum extension 50 m
- Grounding cable : Solid 1.6-mm dia.,
  Stranded 2.0 mm^2
- Ethernet cable : Modular cable for LAN category 5(E)/6 twisted-pair,
  Straight connection (Use cross connection when connecting PCs directly.),
  Maximum extension 100 m
- RS-232C cable : D-sub, 9-pin female (inch screw) to D-sub 25-pin male (metric screw) cross connection,
  Maximum extension 15 m
- Applicable crimp terminals : As shown below.



units [mm]

Structure

- Outer dimensions (W×H×D) : 100×124.8×60 mm
  (JIS approved dim. (5))
- Installation method : Mounting Strap
  (WR9910-8)
  for Panel use
- Weight : Approx. 325 g
- Material : ABS plastic (chassis)



Specifications & Important Information

Quality Assurance

Tests were conducted at room temperature (0 to 35°C) and room humidity (45% to 85%).

- Operating voltage : 18 to 30 VAC
- Current consumption : 300 mA
- Temperature rise : 30°C max. at exterior
- Insulation resistance : 100 MΩ between charged metal and non-charged metal
- Withstand voltage : 500 V for 1 minute between charged metal to non-charged metal
- Terminal strength : 1.2 N·m {12.2 kgf·cm} min.
- Power backup time : 24 hours
- Clock precision : ±30 seconds per month (25°C ±1°C)

* Values in { } use conventional units as opposed to international (SI) units.

Operating Environment

(1) Operating temperature range : -10°C to 50°C (inside panel)

(2) Grounding

Connect a ground of 100Ω or less (class-D grounding based on Internal Wiring Regulations) to the grounding terminal on the chassis.

(3) Operating Location

- Use indoors.
- Do not install in high-temperature or high-humidity environments.
- Maintain a distance of 10 cm min. from wires carrying a 15 A or higher current.

Specifications & Important Information

II. Software Specifications

PC (Client) Requirements

- Applicable OS : Microsoft® Windows® XP Operating System required. (SP1 or SP1a recommended.)
- Applicable Web browser : Microsoft® Internet Explorer® version 5.5 or later required. (Version 6.0 recommended.)
- Applicable Java applet : Sun Microsystems® Java™ 2 Platform, Standard Edition, version 1.4.2 (J2SE) required.
- LAN port : Modular socket for Ethernet connection required.
- Input devices : Mouse and keyboard required.
- Memory : 128 MB min. recommended.
- Graphic display : 1024 × 768 dots (XGA) 256 colors min. recommended.

Monitoring and Control of Lighting Circuits

(1) Number of Control Points

- Individual Circuits : 7,936 circuits max. in total (256 circuits max. per Transmission Unit)
- Dimmers : 496 circuits max. in total (16 circuits max. per Transmission Unit)
- Groups : 3,937 circuits max. in total (127 circuits max. per Transmission Unit)
- Patterns : 2,232 circuits max. in total (72 circuits max. per Transmission Unit)
- Zones : 96 zones max. in total (36 max. (with mode 2), 24 max. (with mode 3), 18 max. (with mode 4), and 12 max. (with mode 6) per Transmission Unit)
- Global Addresses : 32 max.

(2) Monitored Status

- Individual Circuits : ON, OFF, Timed, No T/U, and Dimmer level
- Dimmers : ON, OFF, Timed, No T/U, and Dimmer level
- Groups : ON, OFF, Not set, and Dimmer level
- Patterns : ON (match), OFF(no match), and Not set
- Zones : Pattern A, Pattern B, Pattern C, Pattern D, Pattern E and Pattern F
- Global Addresses : ON and OFF

* Timed denotes a status controlled by the timer function of a Transmission Unit, and not by the schedule (program timer) control function of the Web Server Unit.
* Dimmer levels for individual circuits, dimmers, and groups can be monitored only if they are defined with points.
* Dimmer levels are 128 gradations for individual circuits and dimmers, and 7 gradations for groups.

Specifications & Important Information

* If the status of a zone does not match the status defined in each mode (other status), it is assumed to be pattern C.
* When zones are used in mode 2, other zone statuses are monitored with pattern C.
* Refer to the product specifications of NCU (WR3387-8) for details on zones.
* Only individual circuits, dimmers, groups, and patterns (but not zones) can be set as points to be monitored with global addresses.
* Statuses of global addresses are logical AND or logical OR of the points. For these logical operations, timed status is treated as ON (match), and No T/U (Not set) is treated as OFF (no match).
* Dimmer levels of global addresses cannot be monitored.

(3) Control Status

- Individual Circuits : ON and OFF
- Dimmers : ON and OFF
- Groups : ON and OFF
- Patterns : ON (execution)
- Zones : Pattern A, Pattern B, Pattern C, Pattern D, Pattern E and Pattern F
- Global Addresses : ON and OFF

* The dimmer levels for individual circuits, dimmers, and groups cannot be increased or decreased from a browser.
* Timers for individual circuits, dimmers, and groups cannot be controlled from a browser.
* Pattern addresses are subject to only ON controls. (The same is true for global control of patterns.)
* Only individual circuits, dimmers, patterns and groups (but not zones) can be points of global controls.
* The control method of global controls conforms to the control method of the point.

(4) Schedule (Program Timer) Controls

- Points (addresses) subject to controls : Individual circuits, dimmers, groups, patterns, zones and global addresses
- Number of control programs : 930 max. (930 max. per Transmission Unit)

(5) Monitoring and Control by Symbols

- Number of Symbols for Monitoring and Control
  - Normal circuits : 256 max. per map (total of individual circuits, dimmers, groups, patterns, and global addresses)
  - Zones : 40 max. per map
- Number of Symbols Names:
  - Normal circuits : 256 max. per map (total of individual circuits, dimmers, groups, patterns, and global addresses)
  - Zones : 40 max. per map
- Number of Symbols for Dimmer Level
  - Normal circuits : 256 max. per map (total of individual circuits, dimmers and groups)

Specifications & Important Information

* Normal circuit symbols apply to individual circuits, dimmers, groups, patterns, and global addresses.
* Circuit name symbols conform to the settings for associated normal circuit symbols or zone symbols. These associations must have been set with the Screen Builder for Web Server Unit and cannot be changed on the Web page.
* Dimmer level symbols conform to associated normal circuit symbols. These associations must have been set on the map drawing software and cannot be changed on the Web page.
* Dimmer level symbols apply to individual circuits, dimmers, and groups.
* Levels cannot be monitored for dimmer level symbols if the symbols are associated with patterns and global addresses.
* Addresses are not directly assigned to dimmer levels and circuit symbols (normal symbols and zones).

(6) Monitoring and Control by Lists

Number of Symbols for Monitoring and Control : 256 points max. (= 16 points × 16 windows)

Configuration of Lighting Circuits

(1) Address Assignment to Symbols

- Applicable symbols : Circuits symbol (for normal symbols or zones)
- Addresses for control : Individual circuits, dimmers, groups, patterns, global addresses, and zones of connected LIUs

* LIU connection configuration must have been completed before assigning addresses.
* One address can be assigned to multiple symbols.
* Global addresses and zones can be configured regardless of status of LIU connection configuration.
* Assignments of addresses to symbols will be retained even if the LIU is disconnected in the LIU connection settings.
* Addresses cannot be assigned to actual circuits (T/U) in a browser page.
* Layout of symbols for lighting circuit controls must be performed using the separately available the Screen Builder for Web Server Unit (WR3339-801).
* If the symbol number of the circuit symbol is assigned to a circuit name symbol and dimmer level symbol and they share the same circuit, the circuit addresses will be interlocked.

(2) Group Settings

- Applicable circuit address : Number of connected LIU + Dimmers ((256 circuits + 16 circuits) max. per Transmission Unit)
- Value to set for the circuit : Out of area, ON, and timer
- Value for the circuit timer : On-timer for 30 s, 1 min, 5 min, 60 min, or 120 min, Off-delay 30 s/1 min/5 min

* LIU connection configuration must have been completed before group settings are made.
* NCUs, LIUs, and Transmission Units must be connected for configuration.
* Up to eight timers total can be used per group for On-timers and Off-delays combined.

Specifications & Important Information

(3) Pattern Settings

- Applicable circuit address : Number of connected LIU + Dimmers ((256 circuits + 16circuits) max. per Transmission Unit)
- Value of status for the circuit : Out of area, OFF, ON, and timer
- Value for the circuit timer : On-timer for 30 s, 1 min, 5 min, 60 min, or 120 min. Off-delay 30 s/1 min/5 min
- Dimmer level of the circuits : 1 (Dark) to 128 (Bright)
- Fading (dimmer) time : Immediate (No fading), 2 s, 6 s, and 1 min

* LIU connection configuration must have been completed before setting patterns.
* NCUs, LIUs, and Transmission Units must be connected for configuration.
* Up to eight timers total can be used per pattern for On-timers and Off-delays combined.

(4) Zone Settings

- Number of registrations : 96 max.
- Applicable points : Patterns of connected LIUs (72 max. per Transmission Unit)
- Modes : 2, 3, 4, and 6

* LIU connection configuration must have been completed before setting zones.
* NCUs and LIUs must be connected for configuration.
* Modes can be arbitrarily selected for each zone number.
* Zone settings will be retained even if the LIU is disconnected in LIU connection settings.

(5) Global Address Settings

- Number of registrations : 32 max.
- Applicable points : Individual circuits, dimmers, groups, and patterns of connected LIUs
- Operations on statuses : Logical AND and logical OR

* LIU numbers can be configured regardless of LIU connection setting status.
* Controls do not apply to zones.

(6) Schedule Settings

- Number of programs : 930 max. (No limit per Transmission Unit)
- Program names : 16 characters max. (iso-8859-1 (CP932))
- Applicable points : Individual circuits, dimmers, groups, patterns, global addresses, and zones of connected LIUs
- Operations

  Individual circuits, dimmers, groups, and global addresses (patterns excluded): sunset (ON)-sunrise (OFF), sunset (ON)-OFF, ON-sunrise (OFF), ON-OFF, OFF-ON, ON-ON, OFF-OFF, and ON/OFF

  Patterns, zones, and global addresses (patterns only) : ON, sunset, sunrise,and repetition
- Smallest increment to set clock : 1 minute

Specifications & Important Information

- Input method of districts for Astronomical Clock : Latitude, Longitude and time zone
- Sunrise/sunset time adjustment range : ±90 minutes (by increment of 1 minute)
- Repetition interval adjustment range : 1 minute to 1 hour and 30 minutes (increments of 1 minute)
- Units of programs that can be enabled : 1 program or all programs
- Number of special day settings : 30 max.
- Special day name : 16 characters max. (iso-8859-1 (CP932))
- Special day setting format : Yth Z day of the week, Month X Day Y Every year, and Month X Day Y Year Z
- Special day input method : Using calendar
- Range of special days to be set : January 1, 2000 to December 31, 2037 and13 months from current month
- Enabled special day display unit : 1 month
- Setting/clearing next day in special day range : 30 max.
- Daylight saving time adjustment : +1 hour (when enabled)

* LIU connection configuration must have been completed before setting schedules.
* Programs will be retained even if the LIU is disconnected in the LIU connection settings.
* Programs and special days cannot be set if the date and time are out of order.

(7) Monitor & Control List Settings

- Number of selected points : 256 max. (type and order are arbitrary)
- Applicable points : Individual circuits, dimmers, groups, patterns, zones,and global addresses of connected LIUs

* LIU connection configuration must have been completed before monitoring and controls are set.
* NCUs, LIUs, and Transmission Units must be connected for configuration.
* Contents of the list will be retained even if the LIU is disconnected in the LIU connection settings.

(8) Dimmer Level Display Settings

- Applicable points : Individual circuits, dimmers, and groups of connected LIUs
- Monitoring method : Manually obtained by selecting points

(9) Name Settings

- Applicable points : Individual circuits, dimmers, groups, patterns, global addresses, and zones
- Name settings : 16 characters max. (iso-8859-1 (CP932))

Specifications & Important Information

System

(1) Clock (Day & time) Settings

- Timekeeping range : 00:00:00 January 1, 2000 to 23:59:59 December 31, 2037 (*)
- Range for settings : 00:00:00 January 1, 2000 to 23:59:59 December 31, 2037
- Smallest unit that can be set: : 1 second

* The clock will revert to January 1, 2000 after December 31, 2037.
* Booting when status is "Date & time out of order" will reset the date and time to 00:00:00 January 1, 1980.
* The indicator on the chassis will keep on flashing and message on the page remains until the date & time will be set within the above range.

(2) Rights and User Setting

- Types of rights (level) : Basic Monitoring, Basic Monitoring & Control, Advanced Control & Settings, and System Administration
- Number of registered user
  Basic Monitoring Right : 5 max. (at least 1)
  Basic Monitoring & Control Right : 5 max. (at least 1)
  Advanced Control & Settings Right : Only 1
  System Administration Right : Only 1
- User name and password : 4 to 8 characters

(3) Network Connection Settings

- Host name : 32 alphanumerics max.
- IP address : User defined (for user defined) or 192.168.0.1 (default)
- Subnet mask : User defined (for user defined) or 255.255.0.0 (default)
- Default gateway : User defined (for user defined) or None (default)
- MAC (physical) address : 00:C0:8F:XX.XX.XX

* The Web Server Unit does not have PPPoE connection capability.

(4) NCU Connection (RS-232C) Settings

* Settings on the NCU must be set with DIP switches on the main body.

- Bits per second : 19200 [bps] (*recommended)
- Data bits : 7 [bits] (*recommended)
- Parity : Even (*recommended)
- Polling ratio : 2 (*recommended)
- Polling cycle : 0.4 [second] (*recommended)

Specifications & Important Information

(5) Name Settings

- Project name : 32 characters max. (iso-8859-1 (CP932))
- Maps : 32 characters max. (iso-8859-1 (CP932))

(6) Page Displays

- Page Reload Cycle

  Maps and Lists : 30 s, 1, 2, 3, 4, 5, 10, 15, 20, 25, and 30 minutes

  Lighting, System Errors, Status Bar : 5, 6, 7, 8, 9, and 10 s

(7) Message Display Control

- Performing setup Message display duration : 30 min, 1 hour, 2 hours, and 3 hours

(8) Monitoring and Warning of System Status

- System errors monitored : NCU connection error, Date & time out of control, local bus error, FULL-2WAY signal error, and Pattern/group configuration in progress

(9) Control History (LOG)

- Number of Control history records : Most recent 1,000 records per day for most recent seven days
- Control History Subjects : Web Window control, schedule control, status change of local controls, and control errors
- Applicable Points for Status Changes History : Selected points from groups, patterns, and zones for the connected LIU

* The original information on status change will not be transmitted to the higher layer if the DIP switch pin for status change notification is set to "No" (0) on the NCU and LIU.

- Number of System Error History Records : Most recent 1,000 records per day for most recent seven days
- System Error History : NCU connection error, date & time out of order, local bus error, FULL-2WAY signal error, pattern/group being set
- Recorded files : 1 file per day (*00:00 through 23:59 is counted as a day.)

(10) Managed Data Files

- Data File Format : CSV
- Type of Data Files : Monitor & Control list settings, group settings, pattern settings,zone settings, global settings, schedule control programs, special day settings, address settings (symbol), circuit name settings (individual circuit, dimmer, groups, patterns, zones, global addresses), control log, and system errors
- File Transfers : Downloads and uploads (*)
- Control log and system error log can be saved only on the PC (downloaded).

Specifications & Important Information

Maps

(1) Map Data Management

- Number of managed maps : 99 pages
- Map data area capacity : Approx 8 MB (*area of memory in the Web Server Unit)
- Map drawing software : WR3339-801 FULL-2WAY Screen Builder for Web Server Unit
- Data transfers : From the Screen Builder to Web Server Unit only
- Maps display enable/disable : Per page (from Web page)
- Map data deletion : One page/all pages (from Web page)

* As the size of each map increases, the number of maps that can be stored (transmitted) decreases.
* If maps have been created exceeding the maximum number, they cannot be transmitted to the Web Server Unit.
* Data transmitted to the Web Server Unit is not in an editable format. To enable subsequent editing, original files for drawing software must be saved.

(2) Map Data

- File format : Proprietary
- Number of symbols
  - Normal circuit symbols : 256 max. per map (total for individual circuits, dimmers, groups, patterns, and global addresses)
  - Zone symbols : 40 max. per map
- Number of symbols names
  - Normal circuit symbols : 256 max. per map (total for individual circuits, dimmers, groups, patterns, and global addresses)
  - Zone symbols : 40 max.

* Normal circuits include individual circuits, dimmers, groups, patterns, and global addresses
* Circuit name symbols conform to the settings for normal circuit symbols or zone symbols associated beforehand.
  * This association can be set only using the Screen Builder and cannot be changed in the Web browser.
* Dimmer level symbols conform to the settings for normal circuit symbols associated beforehand.
* This association can be set only using the Screen Builder and cannot be changed in the Web browser.
* Dimmer level symbols are for individual circuits, dimmers, and groups only.
* Addresses are not directly assigned to dimmer level and circuit name (normal and zone) symbols.

Specifications & Important Information

III. Warranty

Warranty Period

The product has a warranty for the period of one year from the data of purchase (delivery date).

Scope of Warranty

If the product fails to function properly under applications described in the user's manual and labels attached to the product within the warranty period, it will be repaired free of charge.

Disclaimer on the Warranty

In principle, repairs for the following failures will be charged for even if they occur within the warranty period.

(1) Failure or damage resulting from misuse or improper repair and modification
(2) Failure or damage resulting from relocation, transportation, or dropping after the purchase
(3) Failure or damage resulting from fire, earthquake, lightning, or other acts of God, or environmental pollution, salt erosion, or gas erosion (such as hydrosulfuric gas)
(4) Failure or damage resulting from voltage and frequency of the power supply different from those specified.
(5) Failure or damage resulting from installation on a vehicle or ship
(6) Failure or damage resulting from improper installation
(7) Failure or damage resulting from negligence in the routine maintenance check required by regulations and user's manual
(8) Failure or damage resulting from application exceeding the conditions and environments specified in product specifications, catalogs, and other documents
(9) Failure or damage resulting from special applications in combination with other manufacturers' products not specified by us
(10) Failure or damage resulting from application outside of Japan

Specifications & Important Information

IV. Prohibited Matters for Safety Reasons

We will not be responsible for problems resulting from applications not satisfying the following conditions.

Prohibited Applications

Observe the following prohibition when using the product.

The product and related products have been developed mainly for lighting control applications.
Therefore, do not use the product for security applications, such as crime prevention, protection from disasters, or other applications involving protection of human lives.

Requirements for applications other than general lighting control that require safety:

・Implementation of redundancy in the system so that a single failure will not make it unsafe.

・Installation of protective devices, protective circuits, or other means to ensure the safety of the system.

* Switchboards or other systems incorporating the product must be clearly labeled indicating the above instructions to secure safety.

Installation Requirements

(1) Screws for terminals must be tightened firmly to a torque of 0.5 to 1.0 N·m.
Otherwise, malfunction, failure, excessive heat, or ignition may occur.

(2) Do not install outdoors or anywhere subject to splashes of water.
Doing so may result in malfunction, failure, excessive heat, or ignition.

(3) Use applicable power sources only.
Do not mix different cables, such as combination of solid and strand wires, on the same terminal or combine wires of different radii.
Incorrect use may cause overheating or bad connections.

(4) Use only the rated voltage.
Excessive voltage may cause overheating and ignition.

Specifications & Important Information

V. Precautions and Disclaimers

Precautions and Disclaimers before Purchase

(1) Refer to specifications for the following products in addition to this manual for information on system configuration and communications.
WR3387-8 FULL-2WAY Remote Control Network Control Unit (NCU)
WR3388-8 FULL-2WAY Remote Control Local Interface Unit (LIU)

(2) Connection of the Web Server Unit to the customer's facility may require configuration of the customer's network device environment. Detailed discussions may be necessary to configure the network environment. Consult Matsushita Electric Works, Ltd. for details.

(3) Specifications and exterior appearances may be changed without notice due to product improvement.

(4) Windows and symbols of the software shown in this document may be different from those actually displayed.

(5) PCs, network devices, and other peripheral devices are expected to be provided by the customer.

Precautions and Disclaimers for Installation

(1) Please use the following power supply.
WR2301-811, WR2311-821 series Transformer (Panel Use)
* These items are NOT applicable to U.S.A market. Required UL approval, but NOT approval.

(2) The power supply for devices must be a non-interruptive power supply (switching time less than 10 ms). It should output a sine curve. Waveforms other than sine waves may damage the remote control transformer specified above.

(3) Outdoor wiring must be enclosed in a metal conduit to shield it from lightning.

(4) Do not perform an insulation test on the wiring. Do not perform an insulation test on the signal lines.

(5) Only devices designed specially for the FULL-2WAY Remote Control System can be used for the FULL-2WAY multiplex signal lines.

(6) The Web Server Unit is not compatible with auto MDI/MDI-X functions. Therefore, a straight cable must be used. Direct connection between PCs, however, requires a cross cable.

(7) Configurator ports are reserved for manufacturer maintenance, and customers cannot use them.

Precautions and Disclaimers for Usage

(1) Initialization after turning ON the power supply requires about 2 to 7 minutes (for the maximum number of connections).

(2) Determinations and monitoring are disabled for up to 3 minutes after restarting Transmission Units, recovering from signal errors, and completing pattern/group settings from a local configuration. Errors during this period are not recorded.

(3) Short circuits on the secondary side of the amplifier cannot be detected, and failures in control or monitoring under this condition, although very unlikely, will not be recorded in the error log.

(4) When control operations are continuously performed in excess of the maximum circuit control speed, the controls will keep on being performed after operations have been completed.

(5) Several tens of seconds are required to reflect the results of all local point control in the display windows.

(6) Duplicated addresses for devices and excessive connections to circuits cannot be detected.

(7) If some error occurs during circuit control, the aborted control will not resume, nor will the whole control be repeated automatically, even after error recovery.

Specifications & Important Information

(8) Warnings during patterns/groups configuration are displayed only while setting on the local system with patterns/groups setting switches. Of all FULL-2WAY system Patterns/Groups settings, those that can control circuits during configuration are not subject to warnings during configuration because they do not interfere with controls.

(9) Settings from a browser are disabled while setting local patterns/groups.

(10) Controls from a browser may be ignored during local dimmer level up/down control.

(11) High volume controls on the local side may delay the execution of new requests, such as monitoring and control, settings for Transmission Units, and system errors.

(12) Continuous controls on the local side (such as wall switches) during system booting may be reported as FULL-2WAY signal errors because they congest LIU's checking of FULL-2WAY signals. Suspending continuous operation will reset the error condition and disable the errors even when continuous operation is resumed.

(13) If controls are run locally or from a browser while transmitting patterns/groups settings and download/upload settings, processing will result in longer that usual execution times for both.

(14) Download/upload transmissions for patterns/groups settings will cause error displays after a forced termination of the Web Server Unit (2 minutes), but the LIUs that continue processing may complete the process before the LIUs are forced to terminate.

(15) If controlled addresses do not actually exist or are not recognized (registration errors and address setting errors in the controlled T/U or disconnection) in patterns/groups controls, system errors (FULL-2WAY signal errors) may be reported. Check that individual circuit devices subject to controls function normally beforehand.

(16) Local bus errors or FULL-2WAY signal errors may not be reported during patterns/groups settings made asdescribed in 1 to 4 below, until forced termination is completed (2 minutes).

1. The **Edit…** or **Add new…** Button is clicked in the Patterns/Groups Settings Page
2. Submitting Patterns/Groups Settings
3. Downloading of Patterns/Groups CSV Files
4. Uploading of Patterns/Groups CSV Files

(17) Settings and registration during the power down period during the reboot operation in the browser will not be completed and will not be effective after rebooting.

(18) LIU settings and zone settings may be deleted if the Web Server Unit is turned OFF while setting zones. Repeat the LIU and zone settings after booting.

(19) The renew button in the browser (and its equivalent functions in the menu) will return to the initial window after login because the whole page will be reloaded.

(20) Do not use forward/backward buttons of the browser (likewise, do not use **Display-Move-Go forward/Go backward** in the menus) to avoid inconsistency between frame displays.

(21) It a screen saver is running on the PC, system errors will not release it. If monitoring regularly, disable the screen saver.

(22) If PC performance is low, dragging borders in Java applet generated pages may distort displayed figures.

(23) Opening more than 5 instances of the Web browser at a time may slow down processing or cause transmission errors.

(24) Powering down or rebooting the Web Server Unit during configuration may disable operations on the

Specifications & Important Information

Web browser. If that happens, reopen the menu from the menu frame or close the browser first and reopen it.

(25) Due to the nature of Web pages, it is possible to log in from multiple PCs with one user name and password at the same time, so passwords must be managed with care (especially for advanced control& settings and system administration rights).

(26) When logging out, the Web browser should be closed for security reasons. In particular, the browser should not be left logged in with the system administration right.

(27) To log in with a different access right, the Web browser must be closed first.

Precautions and Disclaimers for Internet Connections

(1) We have incorporated network security technology (controls to prevent unauthorized access and encryption in SSL) to connections between the Web Server Unit and customers' facilities, but should customers incur any damages resulting from information theft from unexpected wrongdoing or password misuse from theft on the Internet connections, we will not be held responsible whatsoever except for cases where we are at fault.

(2) When connecting the Web Server Unit to the customer's facility, we will not be responsible for necessary procedures and installation, configuration, and maintenance of equipment and their associated costs to maintain the security of the network. The customer is responsible for them. If the security measures mentioned above are not sufficient and result in damages, we will not be held responsible unless we are at fault. Communications fees will be borne by the customer.

(3) SSL is incorporated through encryption, but SSL server authentication (issuance of certificate) is not provided.

(4) When connecting to the Internet, secure a continuous connection network environment that offers open ports to be used and enables the Web Server Unit to set to a global IP address provided by the ISP.

(5) When connecting to the Internet, the user is responsible for contracting with a provider for a user name and password. Depending on the provider, a DNS server address may be necessary.

(6) The connection speed of ADSL or better is recommended.

(7) The user is responsible for contracting with an ADSL carrier and an Internet service provider (ISP) who provides a fixed IP address service.

(8) The Web Server Unit is not equipped with PPPoE connection functionality. If you subscribe to a service that requires the user authentication by PPPoE, a router with PPPoE functionality (or an ADSL modem with routing functionality) will be needed in addition to an ADSL modem.

Miscellaneous Information

Miscellaneous Information

I. Appendix

Data File Formats

The formats of the CSV data files handled on the Download Manager and Upload Manager pages are shown below along with examples.

● Monitor & Control List (File Name: list.csv)

```
List
No., LIU NO., Type, Address
1,1,I,00_1
2,1,gb,1
                    1 to 256:  Basic Monitoring and Control (001 to 256)
256,0,0,0
```

No.	: 1 to 256 (in ascending order)
LIU number	: 1 to 31 (*1 for global address)
Type	: I (individual circuits), D (dimmers), G (groups), P (patterns), Z (zones), or gb (global addresses)
Address	: 00_1 to 63_4 (individual circuits), 1 to 16 (dimmers), 1 to 127 (groups), 1 to 72 (patterns), 1 to 96 (zones), or 1 to 32 (global addresses)

* LIU numbers, types and addresses for unused list numbers are all zeros.

● Address (File Name: address.csv)

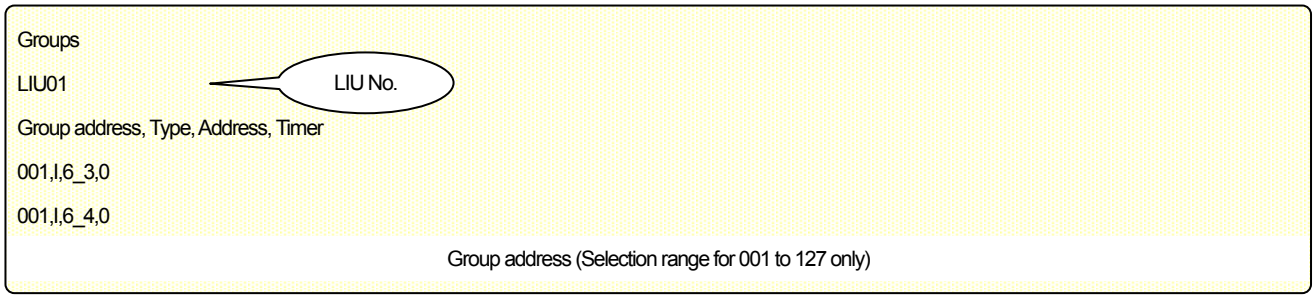
```
Map address,,,
Screen No, Icon No., LIU No., TYPE, ADDR No.
1,1,1,P,40
                    1 to 256: Standard circuit symbol number (001 to 256)
1,256,1,G,16
1,257,0,Z,2
                    257 to 296: Zone symbol number (01 to 40)
1,296,0,0,0
2,1,0,gb,1
                    Screen number (Selection range for 01 to 99 only)
```

Screen No	: 1 to 99 (in ascending order)
Icon No	: 1 to 256 (in ascending order)
LIU No.	: 1 to 31 (*0 for zone and global address)
TYPE	: I (individual circuits), D (dimmers), G (groups), P (patterns), Z (zones), or gb (global addresses)
ADDR No.	: 00_1 to 63_4 (individual circuits), 1 to 16 (dimmers), 1 to 127 (groups), 1 to 72 (Patterns), 1 to 96 (zones), or 1 to 32 (global addresses)

* LIU numbers, types and addresses for unused symbol numbers are all zeros.

Miscellaneous Information

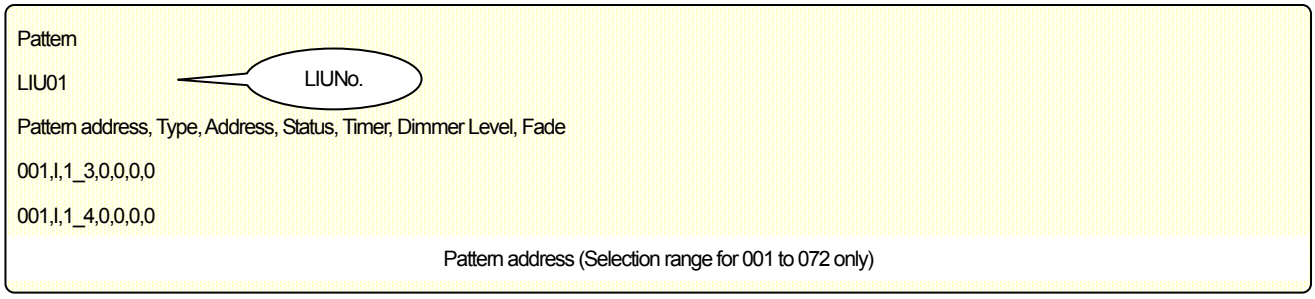
● Groups (File name: groupXX.csv * XX denotes the two-digit system LIU number 01 - 31.)



LIUXX	: LIU01 to LIU31
Group address	: 001 to 127 (in ascending order)
Type	: I (individual circuits) or D (dimmers)
Address	: 00_1 to 63_4 (individual circuits) or 1 to 16 (dimmers)
Timer	: 0 (no timer), 1 (On-timer for 30 s), 2 (On-timer for 1 min), 3 (On-timer for 5 min), 4 (On-timer for 60 min), 5 (On-timer for 120 min), -1(Off-delay by 30 s), -2 (Off-delay by 1 min), or -3 (Off-delay by 5 min)

* Described for group downloads and uploads only

● Patterns (File Name: patternXX.csv * XX denotes the two-digit system LIU number 01 - 31.)



LIUXX	: LIU01 to LIU31
Pattern address	: 001 to 072 (in ascending order)
Type	: I (individual circuits) or D (dimmers)
Address	: 00_1 to 63_4 (individual circuits) or 1 to 16 (dimmers)
Status	: 1 (ON) or 0 (OFF)
Timer	: 0 (no timer), 1 (On-timer for 30 s), 2 (On-timer for 1 min), 3 (On-timer for 5 min), 4 (On-timer for 60 min), 5 (On-timer for 120 min), -1(Off-delay by 30 s), -2 (Off-delay by 1 min), -3 (Off-delay by 5 min)
Dimmer level	: 1 to 128 (ON state) or 0 (OFF state)
Fade	: 0 (Instant), 1 (3 s), 2 (6 s), 3 (1 min)

* If different fade values are specified in patterns when uploading, the value in the last line will be used.

* This applies to pattern addresses subject to downloads and uploads.

Miscellaneous Information

● Zones (File Name: zone.csv)

```
Zone
Boost setting confirmation,1
Zone address, LIU No., Pattern A, Pattern B, Pattern C, Pattern D, Pattern E, Pattern F
1,1,1,2,0,0,0,0
2,0,0,0,0,0,0,0
                                    1 to 96: Zone address (01 to 96)
96,0,0,0,0,0,0,0
```

Boost setting confirmation

Setting confirmed at boot : 1 (Executed) or 0 (Not executed)
Zone addresses : 1 to 96 (in ascending order)
LIU number : 1 to 31 (* 1 for global address)
ON to Pattern 4 : 1 to 72 (Pattern number)
* LIU number, Pattern A, Pattern B, Pattern C, Pattern D, Pattern E and Pattern F are zeros for unused zone addresses.

● Global Addresses (File Name: global.csv)

```
Global
Global address, Type,
Address,AND/OR,L01,L02,L03,L04,L05,L06,L07,L08,L09,L10,L11,L12,L13,L14,L15,L16,L17,L18,L19,L20,L21,L22,L23,L24,L25,L26,L27,L28,L29,L30,L31
1,P,01,0,1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
2, G, 001, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0
                                    1 to 32:  Global address  (01 to 32)
32, , 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0
```

Global address : 1 to 32 (in ascending order)
Type : I (individual circuits), D (dimmers), G (groups), or P (patterns)
Address : 00_1 to 63_4 (individual circuits), 1 to 16 (dimmers), 1 to 127 (groups), or 1 to 72 (patterns)
AND or OR : 0 (AND) or 1 (OR)
L01 to L31 : 0 (subject) or 1(not subject)
* Type, address, AND/OR, and L01 through L31 are zeros for unused global addresses.

Miscellaneous Information

● Schedule (File Name: schedule.csv) * Scheduler

```
Schedule
Schedule No., Name, LIU No., Type, Address, Control Value, Operation, Start Time, Start Time
Adjustment, End Time, End Time Adjustment, Su, Mo, Tu, We, Th, Fr, Sa,
"Special day 01, Special day 02, Special day 03, Special day 04, Special day 05, Special day 06,
Special day 07, Special day 08, Special day 09, Special day 10, Special day 11, Special day 12,
Special day 13, Special day 14, Special day 15, Special day 16, Special day 17, Special day 18,
Special day 19, Special day 20, Special day 21, Special day 22, Special day 23, Special day 24,
Special day 25, Special day 26, Special day 27, Special day 28, Special day 29. Special day 30.
Enabled/Disabled

1,Program 001,1,P,1,,Repeat Execution,17:30,,19:00,20,0,0,0,0,0,0,1,0,0,0,0,1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1

2,Program 002,1,P,1,,Sunrise (Execute),0:00,75,0:00,,0,1,1,1,1,1,0,0,0,0,0,1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
                    1 to 930:   Schedule Programs (numbers)    (001 to 930)

930,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
```

Schedule number	: 1 to 930 (in ascending order)
Name	: 16 characters max.
LIU number	: 1 to 31 (* 1 for global address)
Type	: I (individual circuits), D (dimmers), G (groups), P (patterns), Z (zones), or gb (global addresses)
Address	: 00_1 to 63_4 (individual circuits), 1 to 16 (dimmers), 1 to 127 (groups), 1 to 72 (patterns), 1 to 96 (Zones), or 1 to 32 (global addresses)
Control value	: ON, Pattern 1, Pattern 2, Pattern 3, Pattern 4, or OFF(Zones) * numbers are single-byte.

* Input values when uploading addresses other than zones will be ignored.

Operation	: Sunset-Sunrise, Sunset-OFF, ON-Sunrise, ON-OFF, OFF-ON, ON-ON, OFF-OFF, ON, OFF, ON (Execute), Sunset (Execute), Sunrise (Execute), Repeat (Execute)
Start time	: 0:00 to 23:59
Start adjustment time	: -90 to 90
End time	: 0:00 to 23:59
End adjustment time	: -90 to 90
Sun to Sat	: 0 (Canceled date) or 1 (Execution date)
Special day 01 to Special day 30	: 0 (Canceled date) or 1 (Execution date)
Enable/Disable	: 0 (Disable)/1 (Enable)

* Schedule numbers (program numbers) without descriptions when uploading will be deleted (unregistered).
* Start time and end time for sunset/sunrise will be ignored when uploading.
* Names, LIU numbers, …, and Enable/Disable are blank for unused schedule numbers.

Miscellaneous Information

● Special Days (Annual Month X Yth Z Day of Week) (File Name: Special_Week.csv)

```
Special Day, Days of the Week
Special Day No., Name, Week, Sun, Mo, Tue, We, Th, Fr, Sa.
1,Special Day 01 National holiday, 1,2,0,1,0,0,0,0,0
1,Special Day 01 National holiday, 7,3,0,1,0,0,0,0,0
```

Special day number	: 1 to 30 (in ascending order)
Name	: 16 characters max.
Month	: 1 to 12
Week	: 1 to 5
Sun to Sat	: 0 (not special day) or 1 (special day)

* Descriptions are provided only for special days.

● Special Days (Annual Month X Day Y) (File Name: Special_day_every.csv)

```
Special Day, Days of the Month
Special Day No., Name, Month, Week
1, Special Day 01 National holiday, 1, 1
1, Special Day 01 National holiday, 2, 11
```

Special day number	: 1 to 30 (in ascending order)
Name	: 16 characters max.
Month	: 1 to 12
Day	: 1 to 31

* Descriptions are provided only for special days.

● Special Days (Year X Month Y Day Z) (File Name: Special_day_once.csv)

```
Special Day, Dates
Special Day No., Name, Year, Month, Day
1, Special Day 01 National holiday, 2005, 3, 21
1, Special Day 01 National holiday, 2005, 9, 23
```

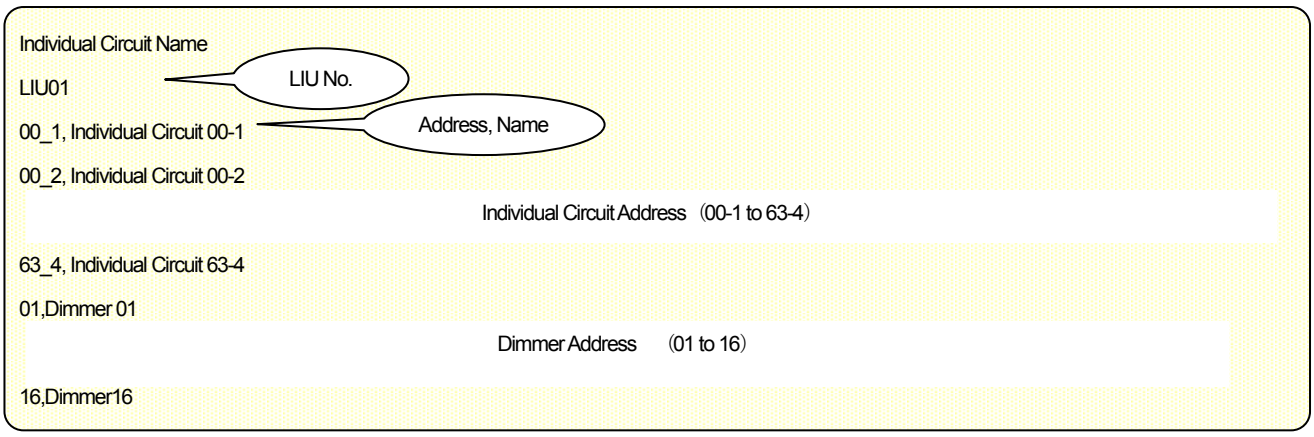
Special day number	: 1 to 30 (in ascending order)
Name	: 16 characters max.
Year	: 2000 to 2037
Month	: 1 to 12
Day	: 1 to 31

* Error occurs if date in not within 13 months of upload date.

* Descriptions are provided only for special days.

Miscellaneous Information

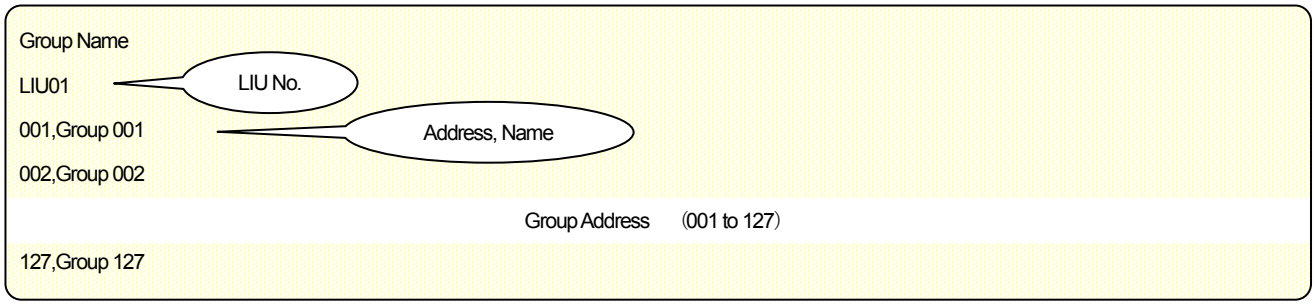
● Individual Circuit Names(File Name: i_nameXX.csv,XXdenotes the two-digit system LIU number 01 - 31.)



LIUXX : LIU01 to LIU31
Address : 00_1 to 63_4 (individual circuits) or 1 to 16 (dimmers) (in ascending order)
Name : 32 characters max.

* The initial values for names are individual circuit00-1 to individual circuit63-4 and dimmer01 to dimmer16.

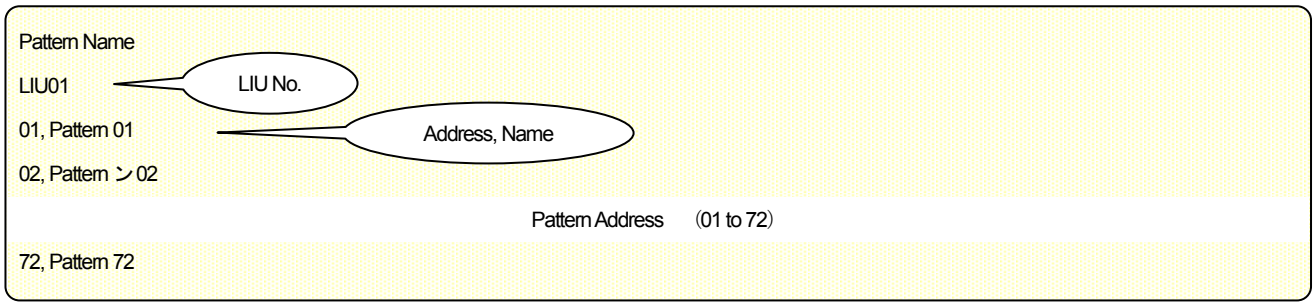
● Group Names (File Name: g_nameXX.csv, XX denotes the two-digit system LIU number 01 - 31.)



LIUXX : LIU01 to LIU31
Address : 001 to 127 (in ascending order)
Name : 32 characters max.

* The initial values for names are group001 to group127.

● Pattern Names (File Name: p_nameXX.csv, XX denotes the two-digit system LIU number 01 - 31.)

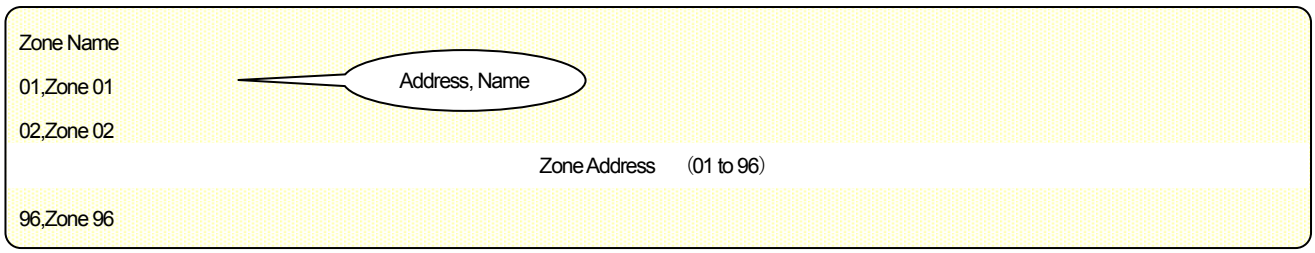


LIUXX : LIU01 to LIU31
Address : 01 to 72 (in ascending order)
Name : 32 characters max.

* The initial values for names are pattern01 to pattern72.

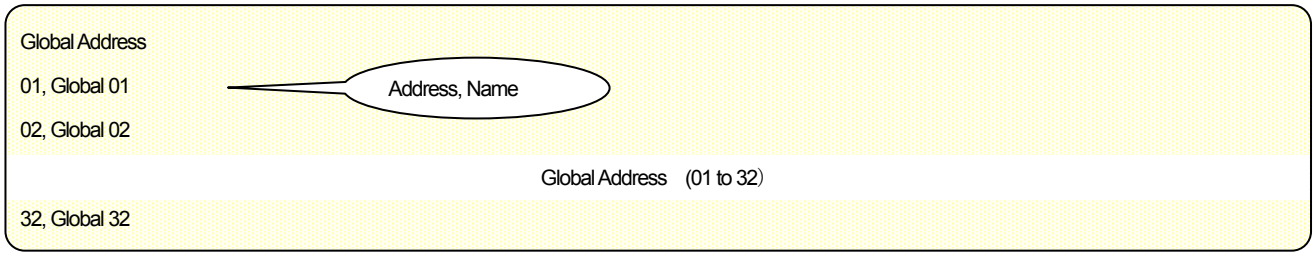
Miscellaneous Information

● Zone Names (File Name: z_name.csv)



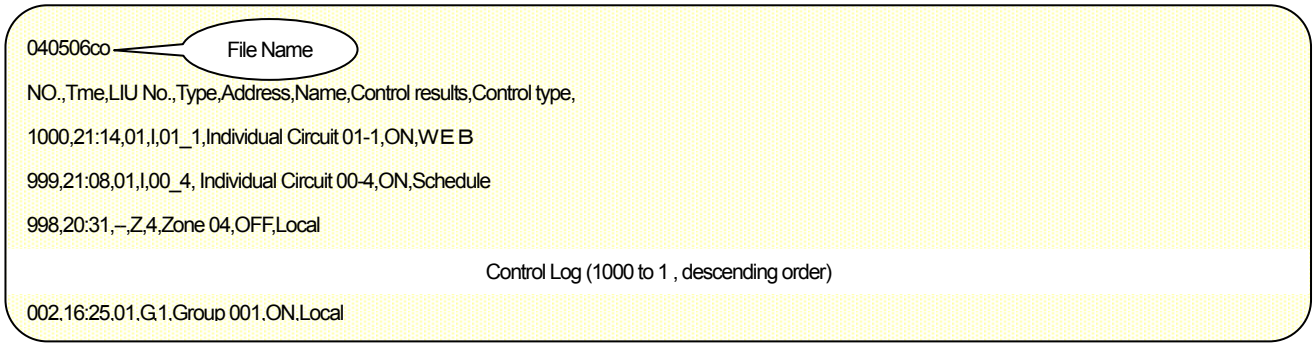
Address : 01 to 96 (in ascending order)
Name : 32 characters max.
* The initial values for names are zone01 to zone96.

● Global Address Names) (File Name: gb_name.csv)



Address : 01 to 32 (in ascending order)
Name : 32 characters max.
* The initial values for name are global address01 to global address32.

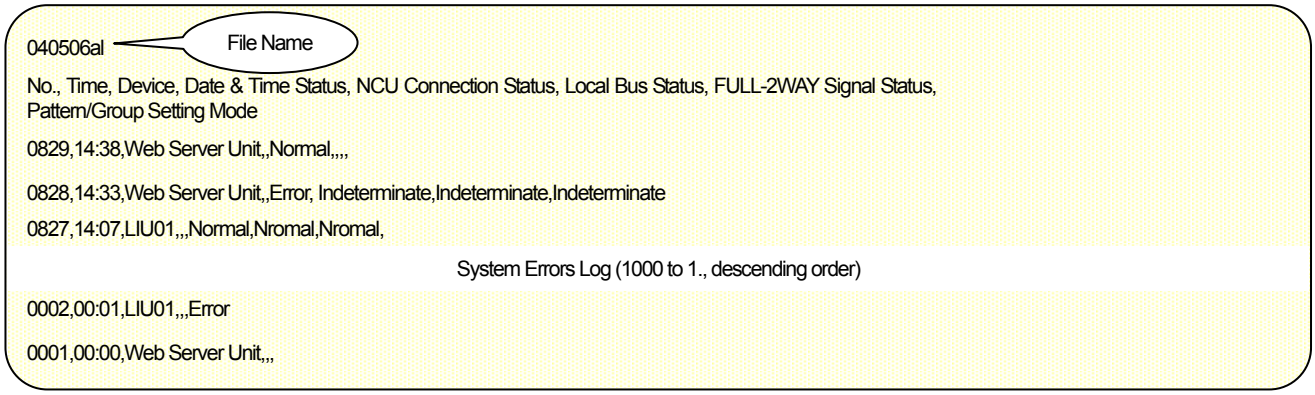
● Control Log (File Name: XXXXXXco.csv, XXXXXX denotes two digits for the year, two digits for the month, and two digits for the day.)



No. : 1000 to 1 (in descending order)
Time : 0:00 to 23:59
LIU number : 1 to 31
Type : I (individual circuits), D (dimmers), G (groups), P (patterns), Z (zones), or gb (global addresses)
Address : 00_1 to 63_4 (individual circuits), 1 to 16 (dimmers), 1 to 127 (groups), 1 to 72 (patterns), 1 to 96 (zones), or 1 to 32 (global addresses)
Name : 32 characters max.
Control result : ON, OFF, Match, Mismatch, ON, Pattern 1, Pattern 2, Pattern 3, Pattern 4, OFF, Invalid, Abnormal OFF, Abnormal ON
Control type : Web, Schedule, or Local

Miscellaneous Information

● System Error Log (File name: XXXXXXal.csv, * XXXXXX denotes two digits for the year, two digits for the month, and two digits for the day.)



No.	: 1000 to 1 (in descending order)
Time	: 0:00 to 23:59
Generating device	: Web Server Unit, NCU, or LIU01 to LIU31
Date & Time out of order	: Normal, abnormal, or boot complete
NCU connection	: Normal or abnormal
Local bus	: Normal or indeterminate
FULL-2WAY signal	: Normal, abnormal, or indeterminate
Patterns/groups settings	: Normal, abnormal, or indeterminate

Miscellaneous Information

Dimmer Level Specifications

The 7-level shades and 128-level shades of dimmer levels correspond as follows:

Brightness	Dimmer Level	128 Levels	to	7 Levels	7 Levels	to	128 Levels
high	6	128 ~ 121	⇒	7	7	⇒	128
	5	120 ~ 97	⇒	6	6	⇒	115
	4	96 ~ 73	⇒	5	5	⇒	90
	3	72 ~ 49	⇒	4	4	⇒	65
	2	48 ~ 25	⇒	3	3	⇒	40
	1	24 ~ 2	⇒	2	2	⇒	15
low	0	1	⇒	1	1	⇒	1

Dimmer level expressions differ by address as follows:

		Lighting Number	Individual Circuit Level	Dimmer Level	Group Level
	Level 7	6	128 - 121	128	7
	Level 6	5	120 – 97	115	6
	Level 5	4	96 – 73	90	5
	Level 4	3	72 – 49	65	4
	Level 3	4	48 – 25	40	3
	Level 2	1	24 – 2	15	2
	Level 1 (OFF)	0	1 – 0 (OFF)	1 – 0 (OFF)	1 – 0 (OFF)
	Indeterminate	---	---	---	---

Miscellaneous Information

II. Troubleshooting

Q. IP address among others have been changed from the initial values from network settings but connections fails.

A. Is pin 1 on the DIP switch on the body of the Web Server Unit set to "User"?
It is possible to register user-defined values and reboot on the window even if the DIP switch is set to "default," but DIP switch setting will take precedence after rebooting, so default network values will be enabled. Be careful especially after installation.

Q. PCs that connected successfully in the LAN environment failed to connect one-to-one.

A. Is the proxy server setting for the browser correct?
If IP addresses and subnet masks are set properly, but if a nonexistent proxy server is specified, connection will fail in the proxy server environment.
If connecting to a PC directly, be sure that "Use proxy server in LAN" is not selected.

Q. Ethernet LINK indicator does not light.

A. The following causes are likely:
Network parameters are not properly set. (Do not match those on PC.)
LAN cable is not properly plugged into a device.
LAN cable is broken.
Counterpart device (or devices on the way) or LAN switch failed.

Q. Ethernet ACT indicator does not flash.

A. The following causes are likely:
The PC is not sending data due to incorrect settings or other cause.
The LAN adapter failed, and frames are not transmitted.
LAN switch failed.

Q. I have forgotten the user name and password for the administrator I changed.

A. Should a user forget the user name and password for the administrator, he/she cannot recover it by him/herself, once it has been changed. Please contact Matsushita Electric Works, Ltd. in that situation.
For security, initialization with a hardware switch is not supported, so please maintain this information carefully.

WR3330-801
FULL-2WAY
Web Server Unit (Panel Use) (English) User's manual

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We cannot answer to questions relating to the operation of PCs or software unrelated to the product or this document.

This document has been created with careful attention to details, but if you have any questions or find any errors or omissions, please contact us in writing.

Panasonic

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