HERUTU

Production Process Support Software for WCL

WCL plus

INSTRUCTION MANUAL V2.10

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Before using

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1. Introduction

1-1. Overview

“Production Process Support Software for WCL series WCL plus” is a Windows-compatible application that can be used with a LAN connection type Andon receiver WCL-426R or WCL-920R*1 (hereinafter called “receiver”).

The receiver can wirelessly receive in real-time trouble occurrence reports transmitted from the AN426TⅡ /AN920T transmitter*2 installed at the workstations and machines of the production line and can externally output the trouble occurrence reports via LAN.
By connecting WCL plus with receivers, you can save the trouble occurrence history received by up to 10 receivers in the CSV format and check the call status on the Web browser*3.
Also, by connecting WCL plus with an I/O unit, WCL plus can receive abnormal signals from equipment and transmit them to other equipment by contact output.

*1: WCL-426R is available in the Japanese and Thai markets, and WCL-920R is available in the North American market (US and Canada). For details of each product, refer to "WCL-426R Instruction Manual" or "WCL-920R Instruction Manual".
*2: At the transmitter, there are two selectable input methods for reporting trouble occurrences: one for workers with four push-buttons (orange, red, green and white) and one for machines with four external inputs (orange, red, green, and white). According to possible trouble occurrences in the production line, you can assign each color a meaning, such as red for an exception occurrence, orange for parts out of stock, green for requesting transportation of finished products, or white for trouble solved.
*3: When using WCL-920R, CH must be set within the range of 1 to 10. When CH is set to 11-16, the call status cannot be checked using a Web browser. History data is saved regardless of the receiver's channel setting.

1-2. System Requirements

The following system requirements are necessary to use this application.

Supported OS	Windows® 10 32-bit / 64-bit Windows® 11 64-bit (*)
CPU	Intel® Core™ 1.5GHz or above (*)
Memory	2GB or above (*)
Screen Resolution	1366×768(FWXGA) or above
Storage free space	1GB or above (Excluding data / log)
Network Adapter	100Mbps or above (one or more network adapters available)
.NET Framework	4.6 or later installed
Web Browser	Google Chrome (Chromium based web browser)

* For Windows 11, the minimum system requirements of Windows 11 apply additionally.

2. Compatible Instruments and Installation Methods

2-1. Compatible Instruments

WCL plus can be used in combination with the devices with the following model.

Andon Transmitter

Andon Transmitter　AN426TII、AN920T

Wireless call system transmitters with 4 push buttons and 4 external inputs.

AN426TII

AN920T

Andon Receiver

LAN connection type Andon Receiver　WCL-426R、WCL-920R

Receivers of wireless Andon series AN426II and AN920 without display. The receiver receives calls from the transmitter and externally outputs via LAN.

WCL-426R

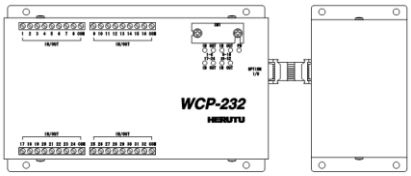
WCL-920R

I/O Unit

WCP-232-EXL

LAN connection type I/O unit with 32 contacts (16 input contacts and 16 output contacts).
To use the device by connecting it to POKAYOKE plus, it runs according to the specifications below.

・Input: 1-8, 17-24 / Output: 9-16, 25-32
(input signal must be 500ms or more)
・A-Contact



WCP-232-EXL

For details, refer to each manual.

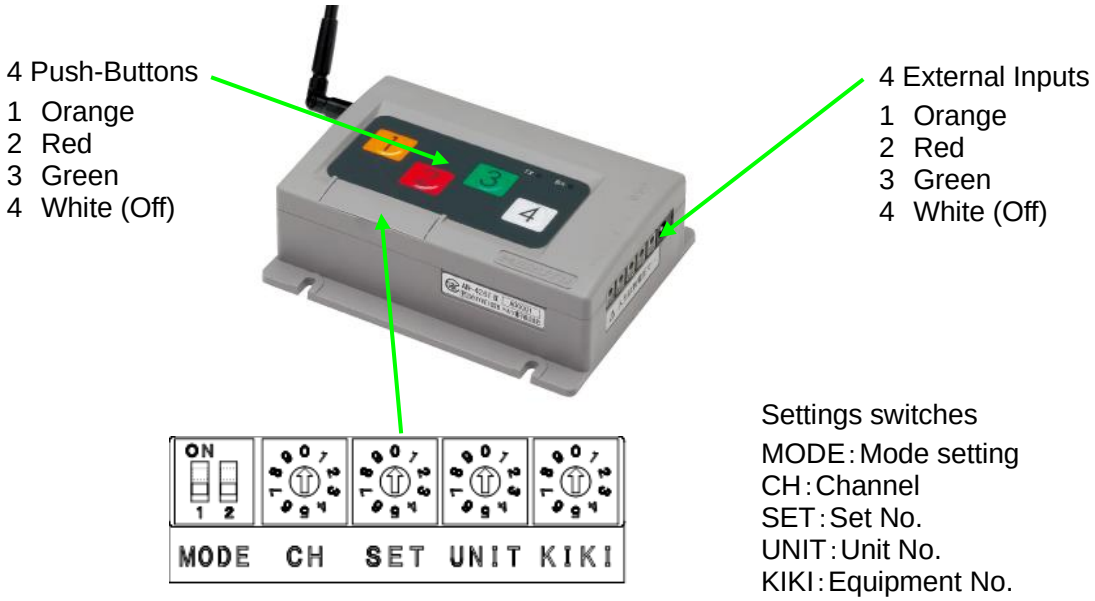
2-2. Transmitter and calls

The transmitter has four push buttons, four external inputs and settings switches.

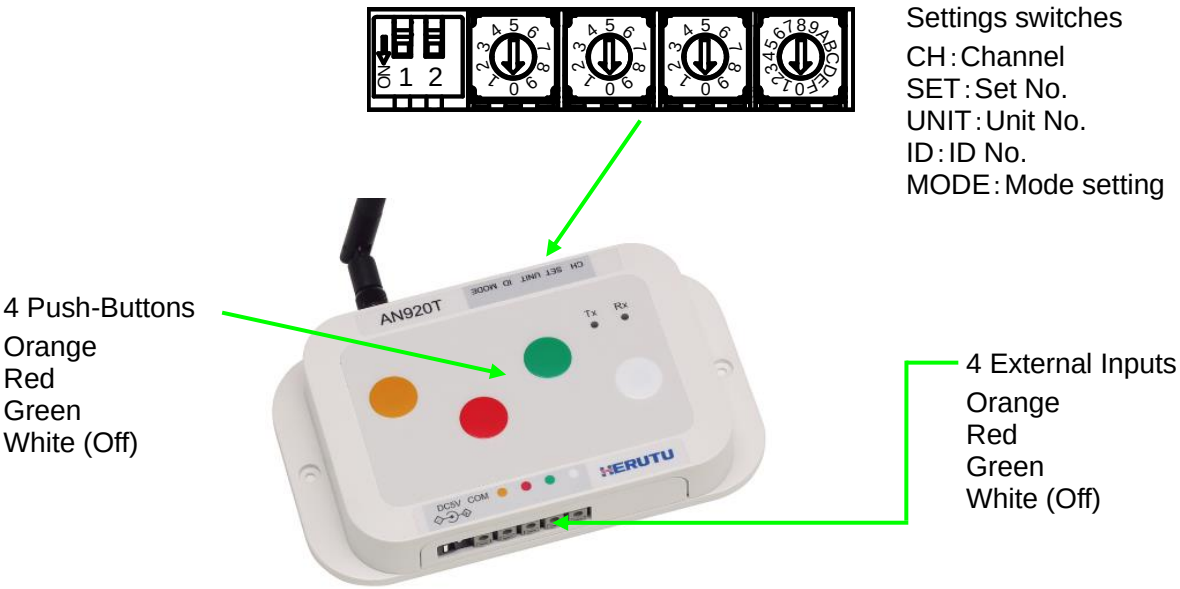
According to possible trouble occurrences in the production line, you can assign each color a meaning, such as red for an exception occurrence, orange for parts out of stock, or green for requesting transportation of finished products. Use a white button for trouble solved.

For details, refer to "AN426T II Instruction Manual" or "AN920 Instruction Manual".

●AN426TⅡ



●AN920T

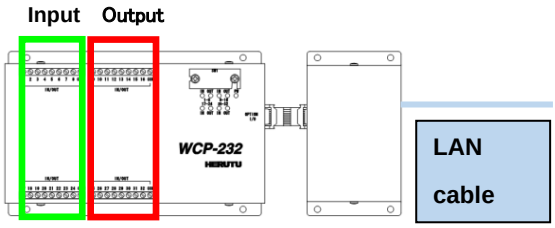


2-3. Contact point input/output (Linked with the I/O unit)

The following operations are enabled by registering and setting the I/O unit in WCL plus.

・Input of an I/O unit allows for operation of the output port on the I/O unit that received the input or on another I/O unit.

When receiving an input from a PLC or equipment, WCL plus notifies another PLC or equipment of troubles or other messages from the output port.



Connection interface: Ethernet (RJ45)
Communication protocol: TCP
Status check and setting interval of I/O port: Approx. 100ms
16 inputs (8 upper + 8 lower)
16 outputs (upper 8 + lower 8)
Contact type: A contact
Required input time: 500 ms min.

■Basic specifications for I/O unit control

- **Connections and Disconnections**

  As long as WCL plus is starting, it will attempt to connect to all registered I/O units.
  This is done cyclically until a connection can be made, and works the same way if the connection is broken. The connection is automatically disconnected when the WCL plus service is terminated or the I/O unit registration is deleted.

- **The timing of the event occurring, which is triggered by the I/O port status**

  The I/O port and WCL plus are connected via TCP and controlled by a software. Actions in the unit of milliseconds (ms) or faster are not guaranteed.
  In our ideal environment *1, it is confirmed that an event occurs within 500ms after the port changed the status. However, the same level of performance is not guaranteed in all environments.

- **Control of operations on a single I/O unit, output I/O port**

  By setting, operations on the output I/O port of an I/O unit will reflect the result of the last operation.

- **Initial value of output I/O port**

  When the I/O unit and PC are connected, the I/O unit is initialized. As a result of initialization, all output I/O ports are turned off .After initialization is completed, control by WCL plus starts.

- **When connection with the I/O unit is cut off during control of the output I/O port**

  When connection between the I/O unit and PC is cut off, the status at the time of being disconnected is maintained until they are reconnected. When reconnected, all output I/O ports will be OFF due to device initialization. After initialization is completed, control by WCL plus is restarted.

*1) The environment satisfies the system requirements and is capable of dominating the bandwidth, and where other applications do not start up.

2-4. Network Settings

This application communicates with the receiver via LAN. To use the receiver on the network, first, set the IP address according to the network environment.

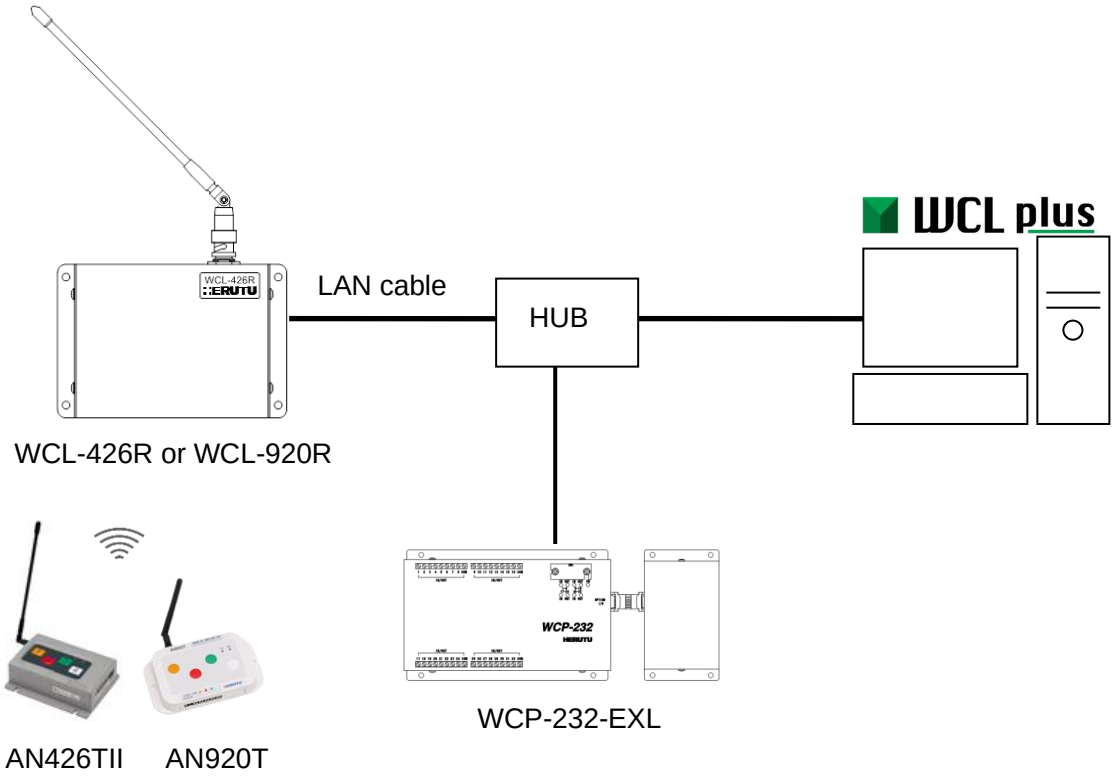
Use the IP address assigned by the LAN administrator.

For details, refer to "WCL-426R Instruction Manual" or "WCL-920R Instruction Manual".

2-5. Equipment configuration

- Connect the LAN connector of the receiver to the switching hub or the PC's LAN connector with the cable.

  Please use the cable of the category 5 or higher standard.
- The receiver is not equipped with AutoMDI/MDI-X function to determine the LAN port. To connect the receiver to the PC's LAN port directly, use a cross-wired LAN cable.



3. WCL plus

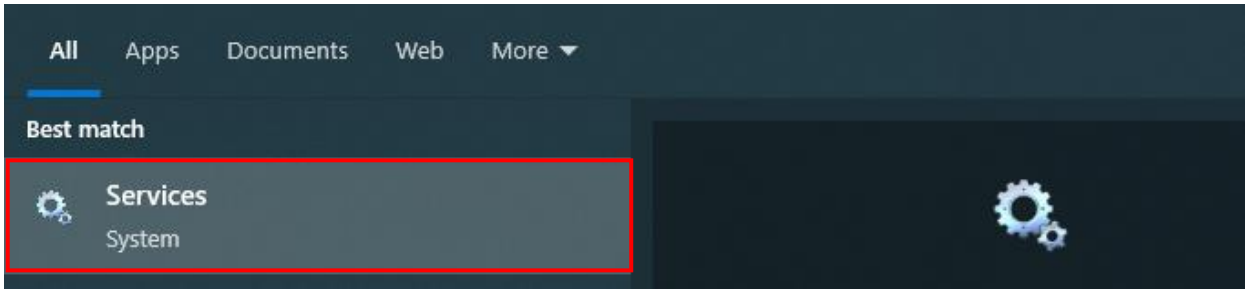
The call history from AN426T Ⅱ/AN920T, received by up to 10 receivers is saved in CSV format.
Also, WCL plus checks the call status on the Web browser and can be linked with WCP-232-EXL.

3-1. Application Type

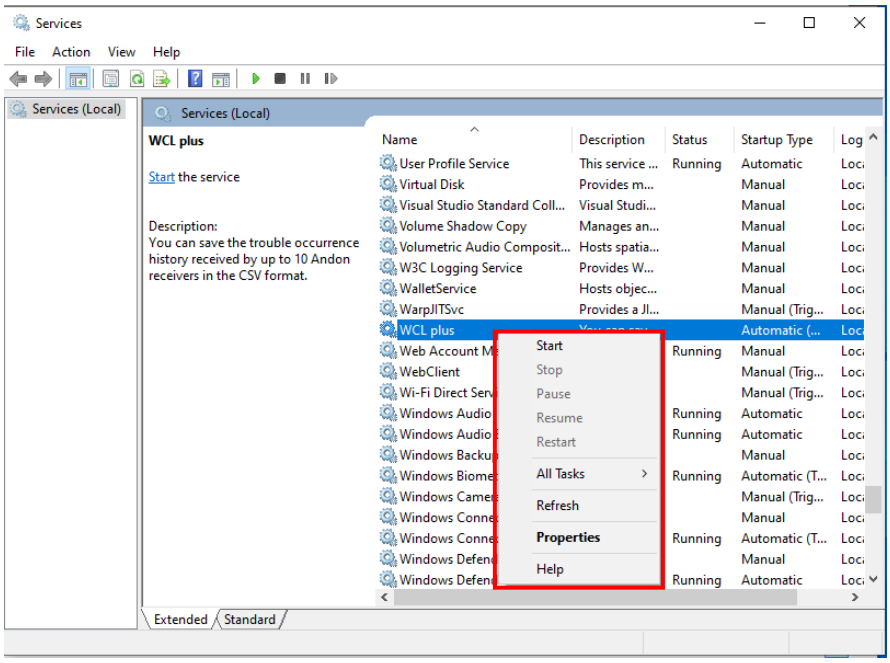
WCL plus runs as a Windows Service. By default, immediately after installation, WCL plus starts automatically at PC startup and continues to run in the background while the PC is running. Check the running status of WCL or stop the running (service) of WCL using the Windows Services administrative tool.

Windows services administrative tool

To start “Service administration tool”, search for “Services” from Start menu and select “Services”.



The “Services administrative tool” window is displayed. This allows for the administration of services, such as such as starting / stopping the Windows service.



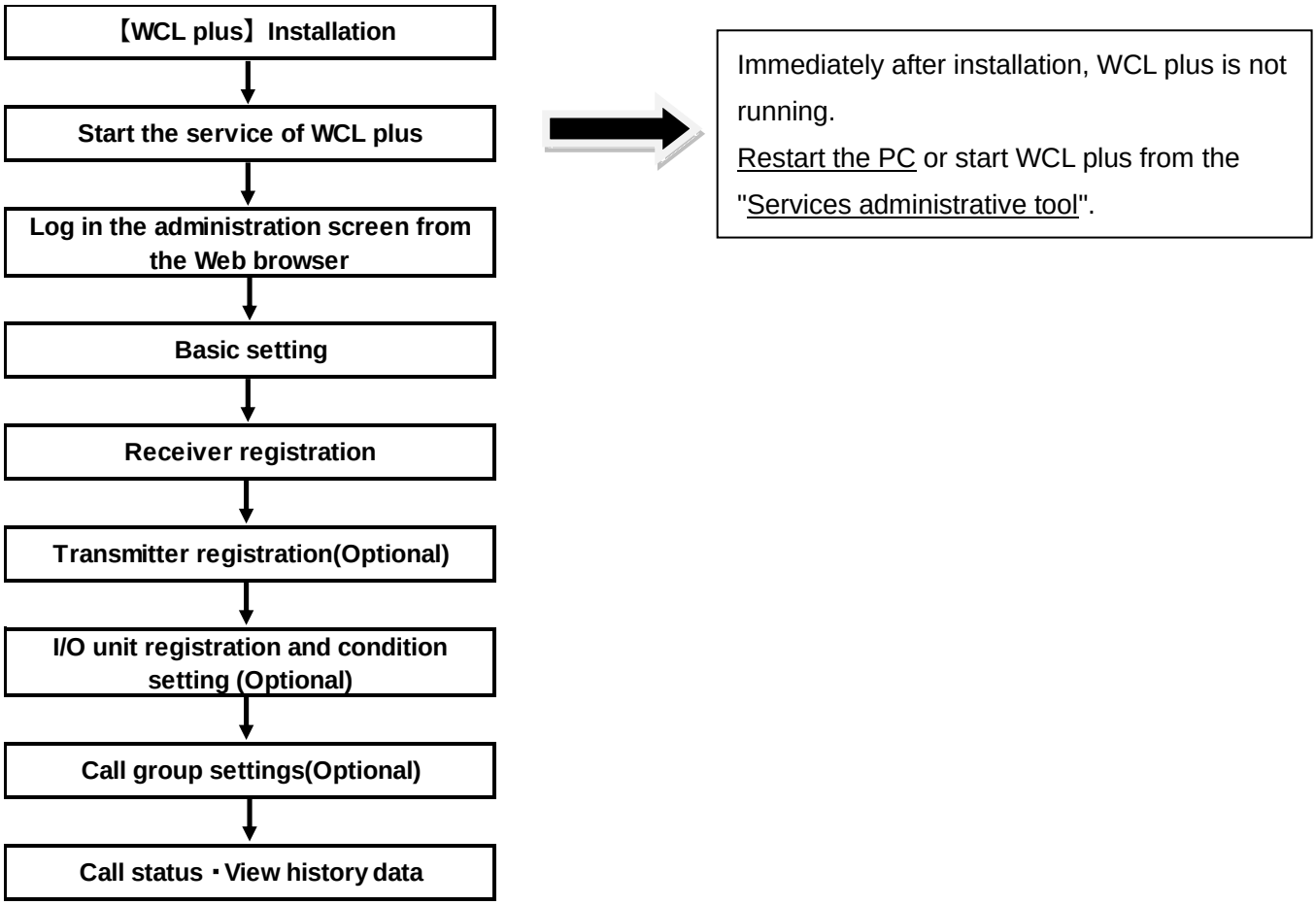
*1 Even after closing the web browser displaying the administration screen or call status confirmation screen, WCL plus will continue to collect call data in the background, unless the service of WCL plus is stopped.

*2 Stopping or restarting the service will clear all call status of WCL plus.

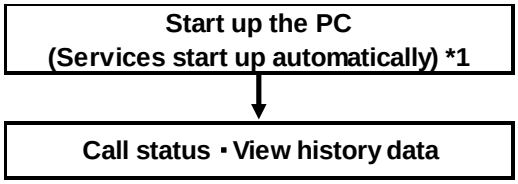
*3 While the PC is sleeping, the application is also stopped. When the PC restores from sleep, the application also starts.

3-2. Procedure for Use of WCL plus

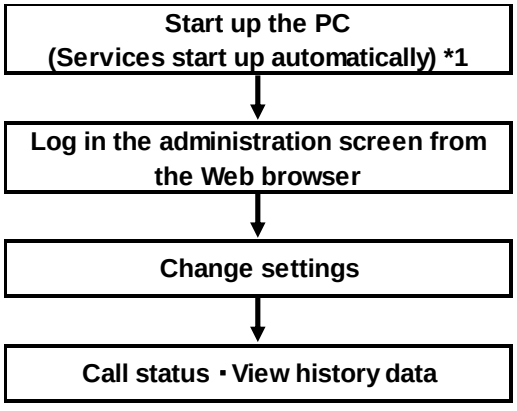
●Immediately after purchase of the application (before installation)



●Regular operation after various settings is completed.



●Adding receivers or transmitters or changing various settings



*1 Default settings for installation. When the settings are changed after installation, you need to manually start the service of WCL plus.

3-3. Installation

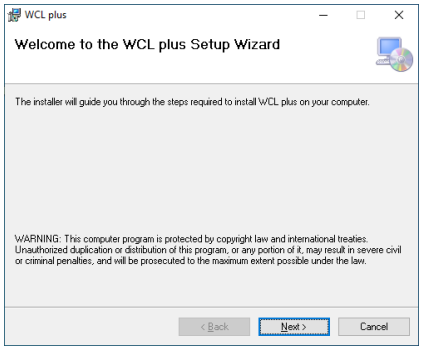
Install the application according to the following procedure.

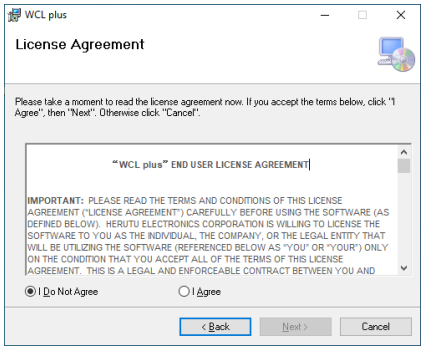
* If WCL plus V1.00 is already installed, uninstall it first and then proceed with installation.
(Even after uninstalling WCL plus V1.00, the settings are not deleted, but retained.)

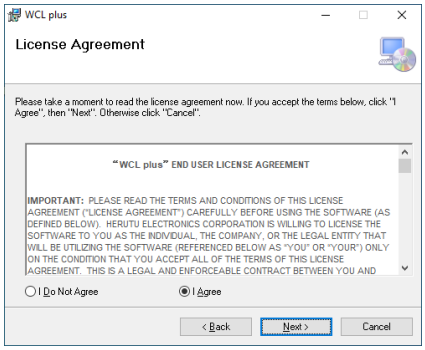
①Insert the CD-R into the PC.

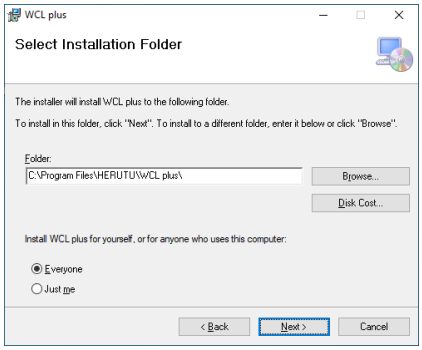
From “Explorer”, double click the “setup” file in the Installer folder in the CD-R drive.

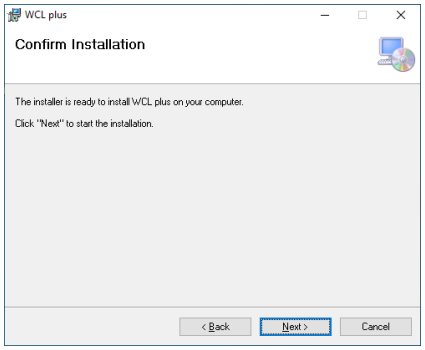
②Click “Next (N) >” and follow the instructions on the screen.

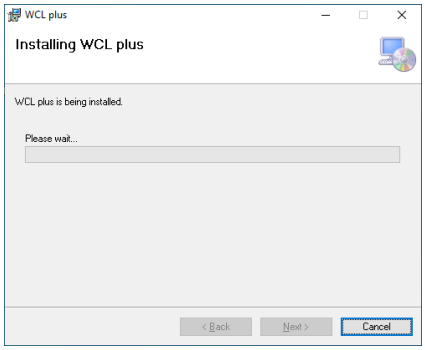




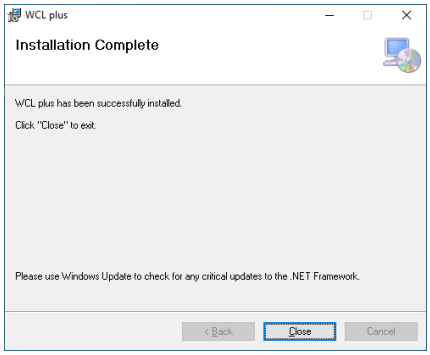








③「When “Installation Complete” appears, WCL plus is installed successfully.

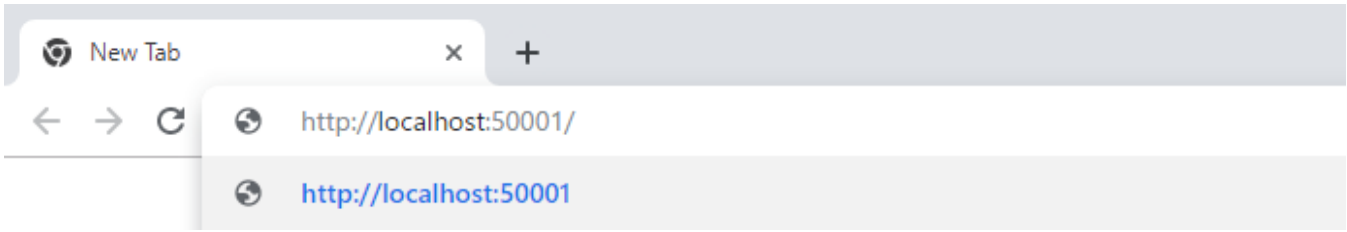


3-4. Access to the administration screen

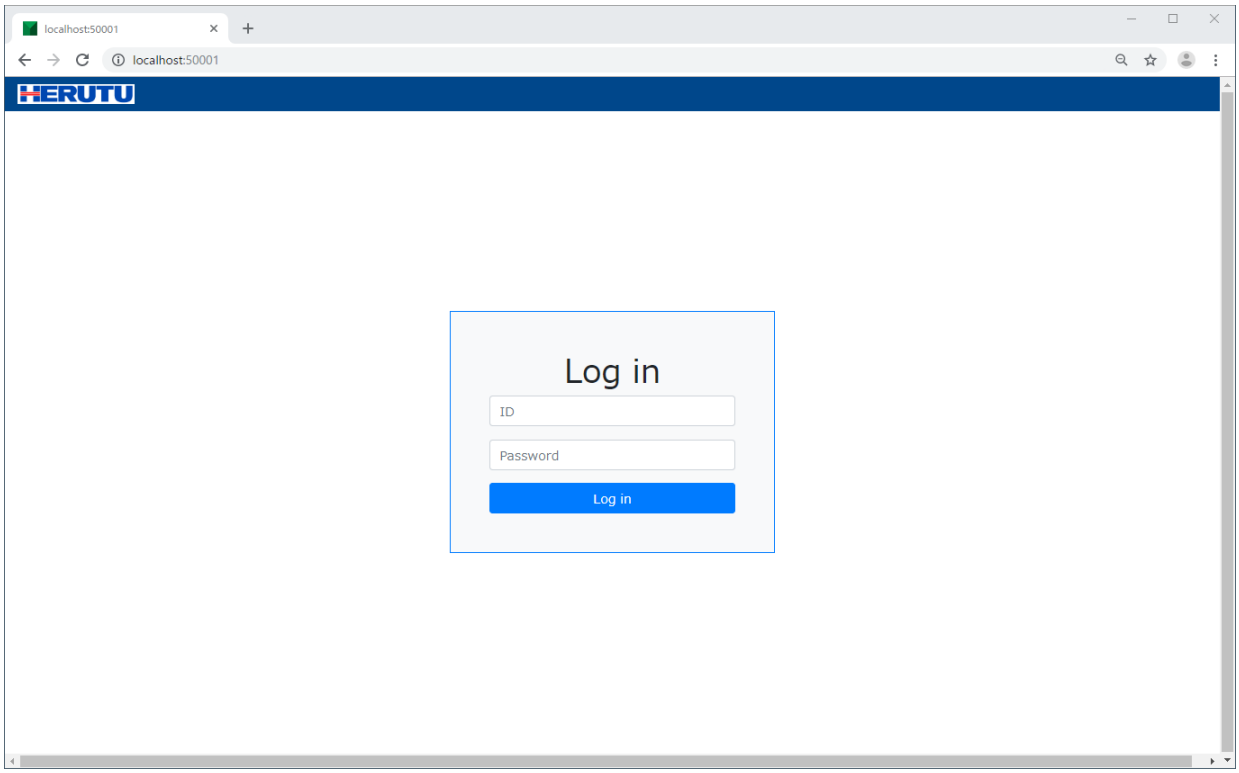
Set WCL plus from the administration screen. To access to the administration screen, follow the steps below.

* Use Web browser described in “1-2. System Requirements”.

1. Open a web browser on the PC on which WCL plus is installed, type "http://localhost:50001" (default) in the address bar, and press the Enter key.



2. The login screen is displayed. Enter the ID and Password, and then click the Log in button.
   The default ID and Password are as follows. (case sensitive)
   ID: Admin
   Password: Herutu001



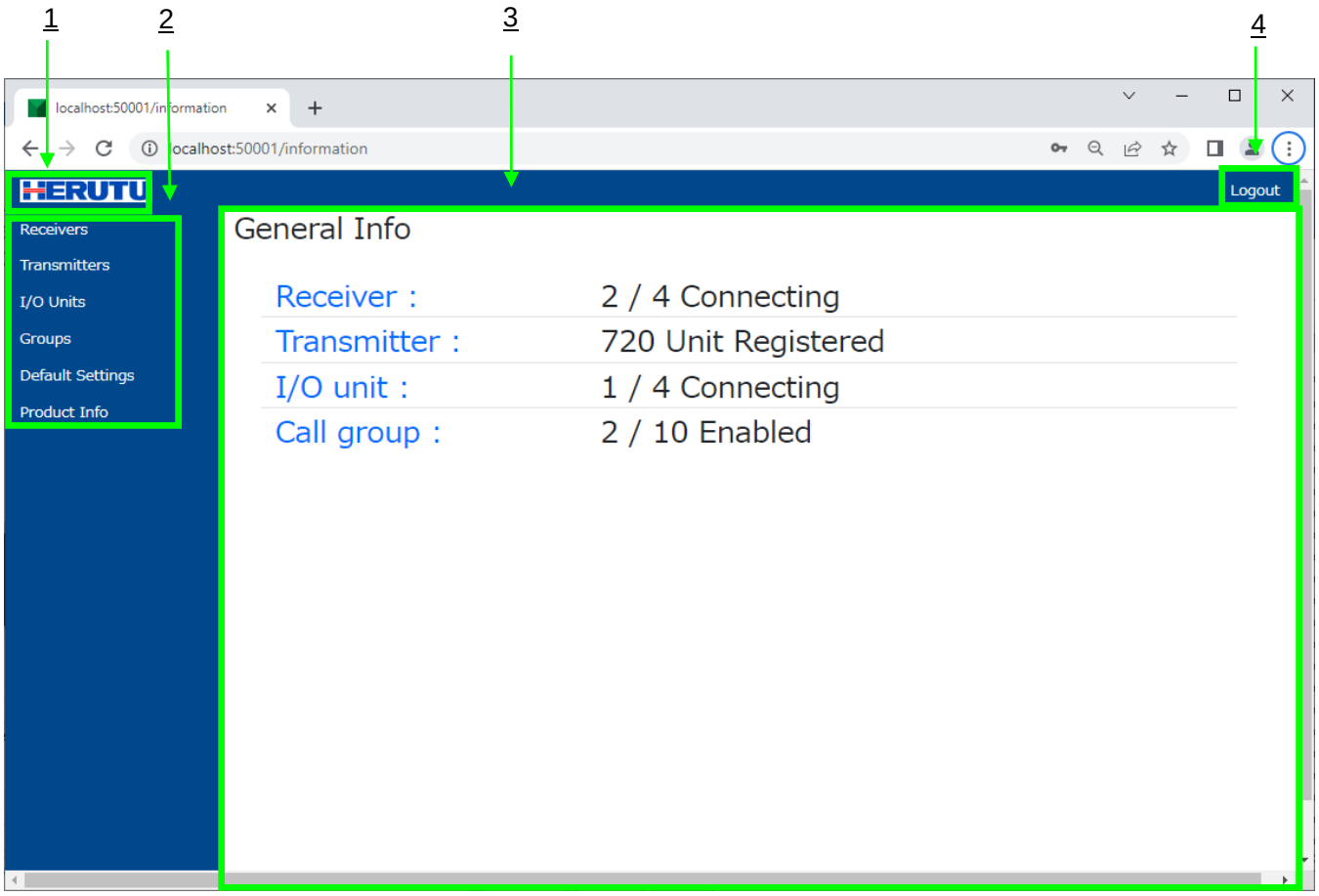
3. When the log in is completed successfully, the general information screen is displayed.

*1 To maintain data integrity, the number of simultaneous logins is limited. Please be sure to log out after completing the setup. If you close the window without logging out, you will not be able to log in for approximately 10 minutes.

*2 After approximately 10 minutes with some screens open after login, the login status may be forcibly released and the user may be returned to the login screen. In that case, please enter your ID and Password again to log in.

3-5. Screen Configuration

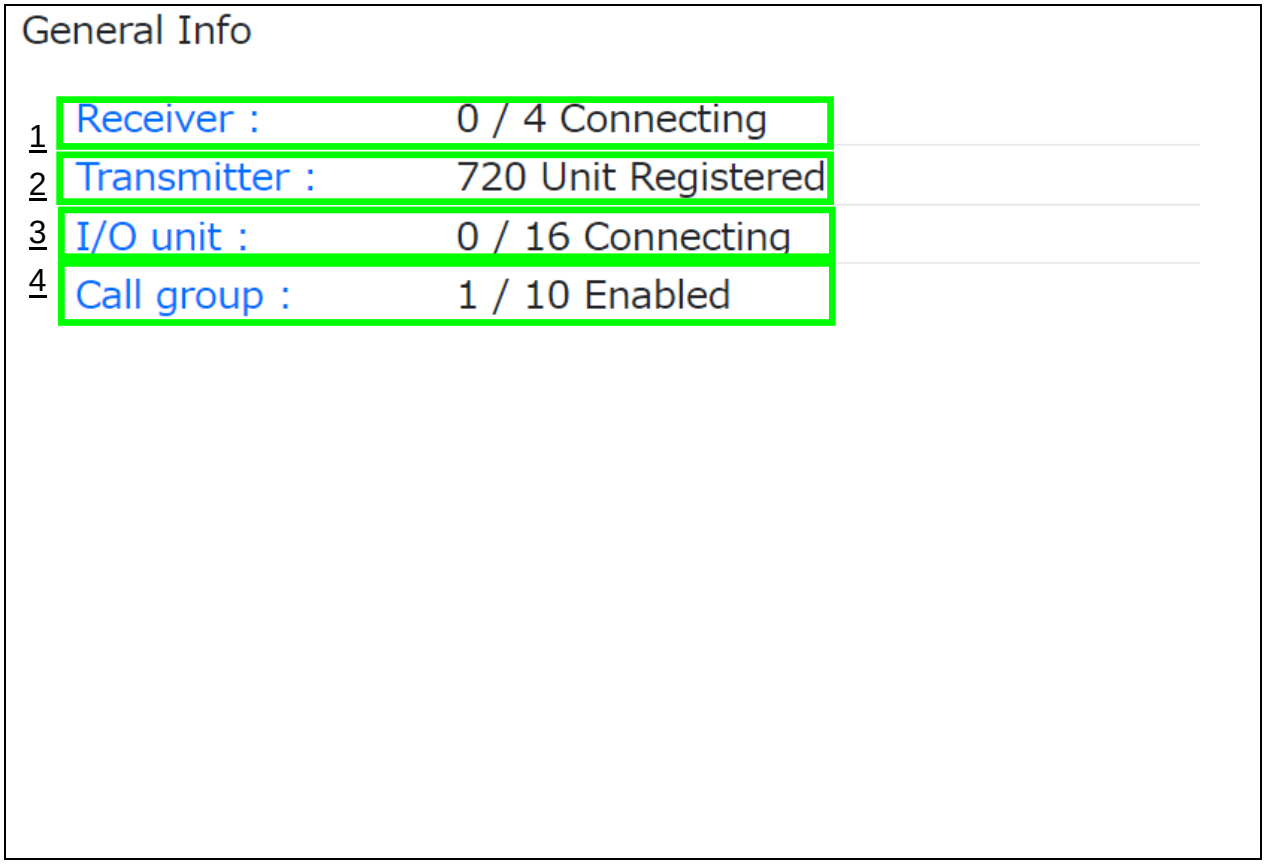
The basic screen configuration is shown below.



	Item name	Description
1	HERUTU logo	Click it to display the “General information” screen in 3.
2	Menu	Menu for navigating to each screen. Click it to display the Corresponding screen in 3.
3	Main screen	This is a main screen. This is primarily used for displaying, editing and deleting data.
4	Logout button	Clicking on the button executes the logout process and returns to the login screen. After completing the necessary settings, click this button to log out.

3-6. General Information Screen

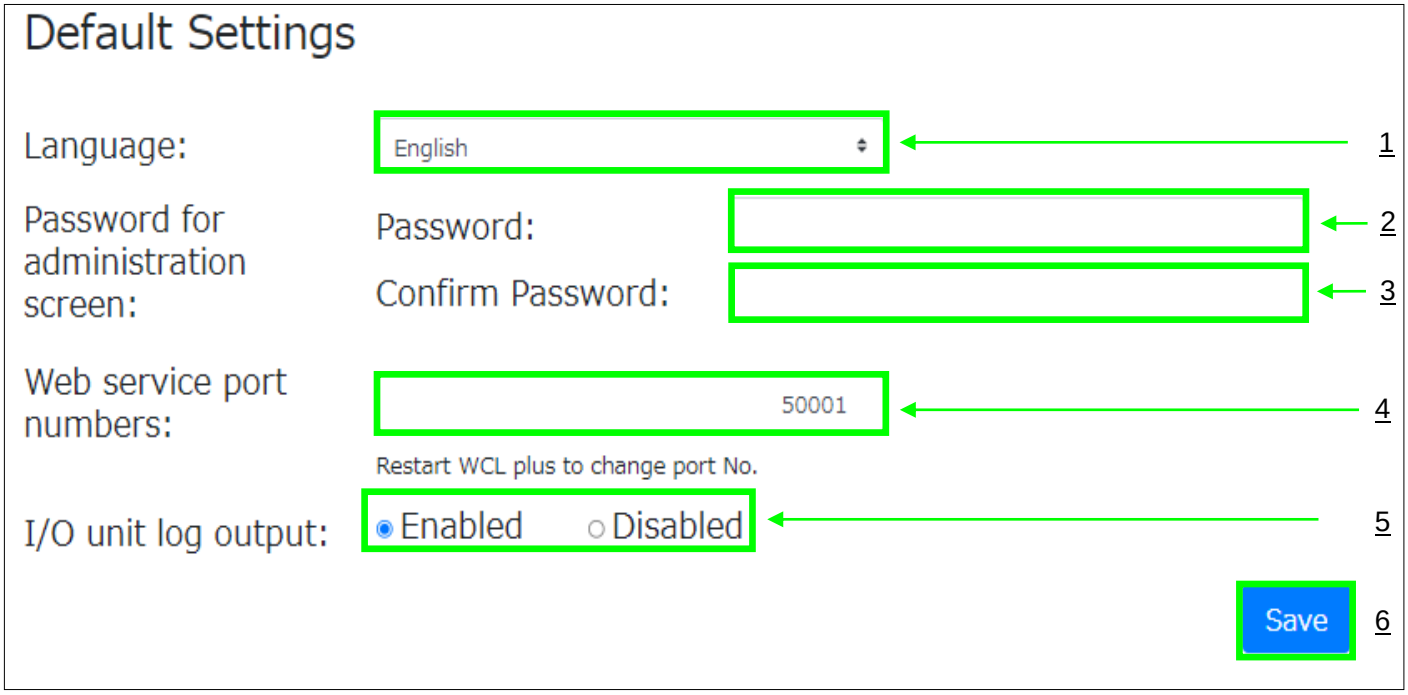
Displays the summary of the current status of the receivers, transmitters, I/O units and call groups that are registered in WCL plus.



	Item name	Description
1	Number of connected / registered receivers	Out of all the receivers registered in WCL plus, the number of connected receivers and the number of registered receivers is displayed. “0/4” indicates that 4 receivers are registered and no receiver out of 4 is connected. The number of connected receivers is updated approx. every 5 seconds. Click Item to display the “Receiver list” screen.
2	Number of registered transmitters	Displays the number of transmitters registered in WCL plus. Click Item to display the “Transmitter list” screen.
3	Number of connected / registered I/O unit	Out of all the I/O unit registered in WCL plus, the number of connected I/O unit and the number of registered I/O unit is displayed. “1/16” indicates that 16 I/O units are registered and 1 I/O unit out of 16 is connected. The number of connected I/O unit is updated approx. every 5 seconds. Click Item to display the “I/O unit list” screen.
4	Number of valid views of call groups	Displays the number of call groups registered in WCL plus and the number of call groups for which “View” is enabled. “2/10” indicates that “View” is enabled for 2 of 10 call groups.(For the groups with “View” enabled, you can check the current call status on the “Call status confirmation “screen.) Click Item to display the “Call group list” screen.

3-7. Default setting screen

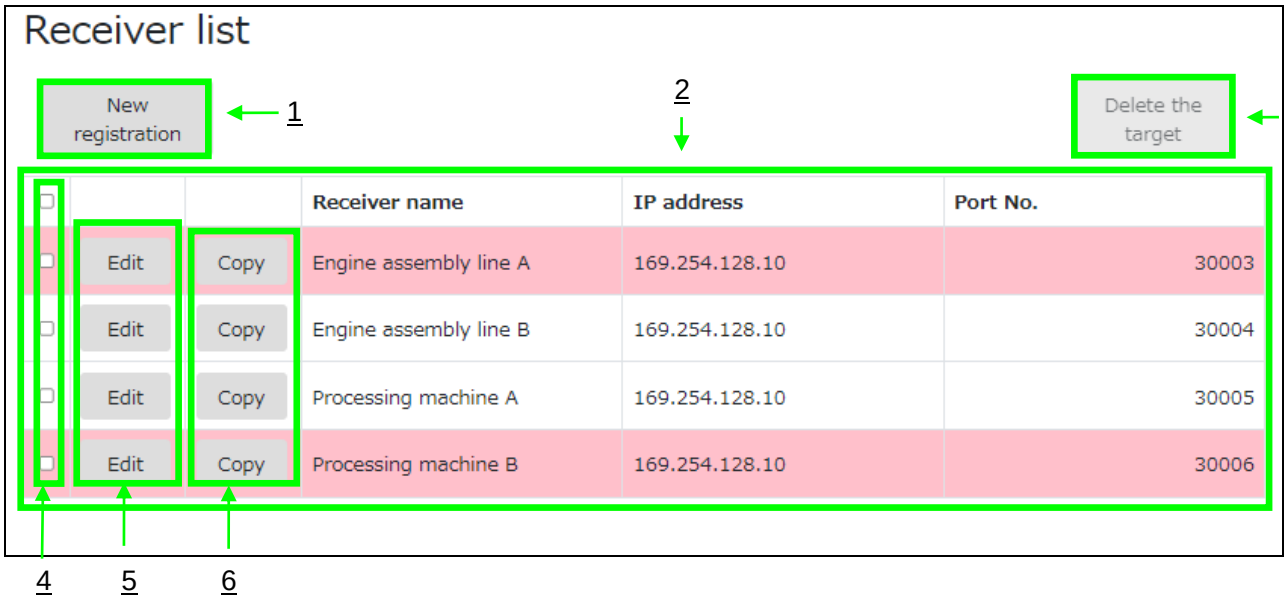
The default settings of WCL plus are displayed on this screen. You can also change the settings on this screen.



	Item name	Description	Input example
1	Language	Select a language to be displayed in WCL plus. [Choices: Japanese, English]	Default value depends on OS language setting
2	Password for administration screen	To change the password to log in to the administration screen, enter a new password here. If no password is entered, the current password remains unchanged. [If required: 4-20 characters]	Blank (Default)
3	Password for administration screen (confirm password)	To change the password to log in to the administration screen, enter the same password as you entered in 2 here. [If required: 4-20 characters]	Blank (Default)
4	Web service port	Set the port number so that WCL plus listens for a Web request. If there is no particular problem with operation, do not change the port number. The change of the port number will not be reflected until the service is restarted.	50001(Default)
5	I/O unit log output	Select whether to enable or disable the output of the I/O unit operation history data.	Enabled(Default)
6	Save button	Save the conditions with the set information. If the entered data is incomplete, an error message is displayed in the field above this button and the data is not saved.	-

3-8. Receiver list screen

The registered receivers are listed below. Also, register a new receiver, update or delete the registered information on this screen.



	Item name	Description
1	Register new receiver button	Button used for registering a new receiver in WCL plus. Click the button to display the Register receiver dialog. The button will be disabled if 10 receivers are registered.
2	List of registered receivers	Displays a list of receivers registered in WCL plus. Each row corresponds to one receiver and displays the receiver name, IP address and port No. The background color of each line indicates whether or not the connection has been completed; a white background color indicates that the connection has been made, while a pink background color indicates that the connection has not been made. The connection status with the receiver is updated approximately every 5 seconds.
3	Delete receiver button	Button used for deleting the registered receivers from WCL plus. Click the checkbox of the receiver to be deleted, indicated by 4, to ON and click this button to display the Delete receiver dialog. If none of the checkboxes indicated by 4 are ON, this button is disabled.
4	Check box for selecting the receivers to be deleted	Checkbox used to select receivers to be deleted. When the check box is ON, click 3, and the Delete receiver dialog is displayed. When turning ON/OFF the checkbox in the header row, the check boxes of all receivers are linked to ON/OFF.
5	Edit receiver information button	Button used for editing the information of the registered receiver. Click the button in the row of the receiver to be edited, and the Edit receiver information dialog is displayed.
6	Copy receiver information button	Button for copying the information of an already registered receiver and using the information for registering a new one. It is useful for registering a new receiver by using partly modified information of the registered receiver. The button will be disabled if 10 receivers are registered.

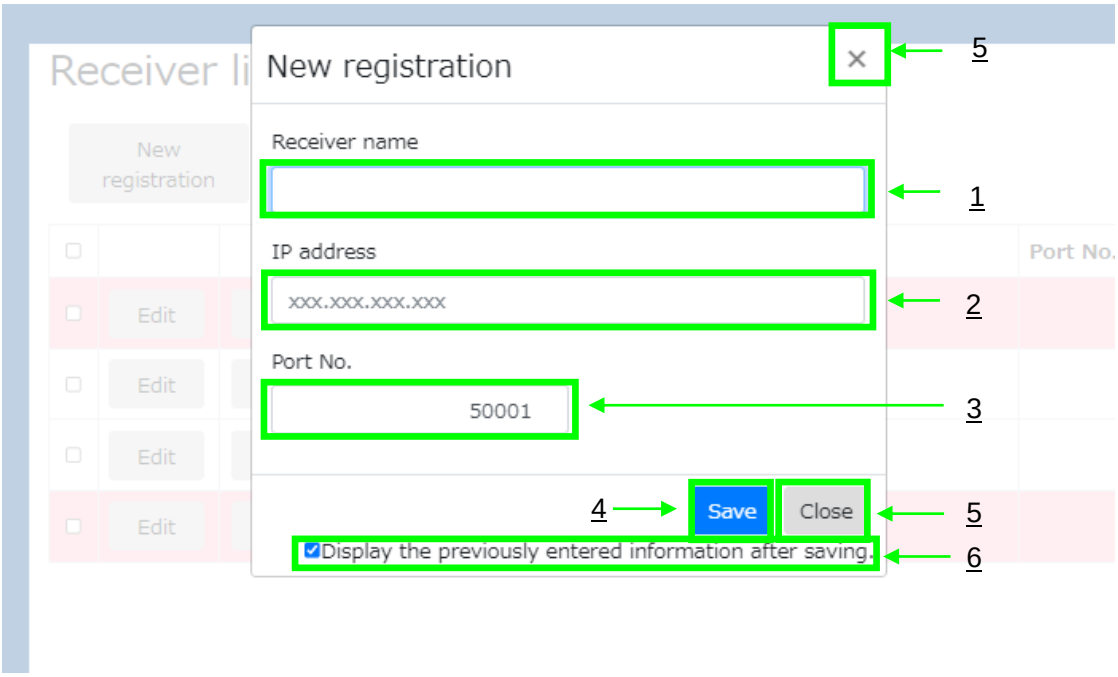
3-9. New receiver registration

To register a new receiver, click the “New registration” button on the Receiver list screen.

Click the “New registration” button to display the Register receiver dialog.

While the Register receiver or other dialog, is displayed, the menu or log-out is disabled.

Enter required data and click the “Register” button, and the receiver is registered.



	Item name	Description	Input example
1	Receiver name	Enter a receiver name for identification. [Required: 1-30characters]	Engine assembly A line
2	IP address	Enter the IP address of the receiver. Receivers with the same IP address and port number cannot be registered. [Required]	192.168.100.10
3	Port No.	Enter the Port No. of the receiver. [Required: 1-65535]	50001(Default)
4	Save button	Register the receiver using entered information. When the entered information is incomplete, an error message is displayed below each item, and the receiver is not registered. Check the entered information carefully. After correcting the information, save it again. When registration is completed, the dialog does not close and continues to be displayed until 10 receivers are registered. Depending on the status of 6, the items of 1,2, and 3 are initialized.	-
5	Close button	Click the button to close the dialog. All unsaved information will be discarded.	-
6	Display the previously entered information after saving	It is a checkbox to determine whether to initialize the items 1,2, and 3 when the receiver is registered by the Save button. When the checkbox is ON, data of the items 1,2, and 3 will be carried over after being saved.	ON(Default)

WCL plus tries connecting to the registered receivers automatically. Check whether the connection is completed on the “Receiver list“ screen.

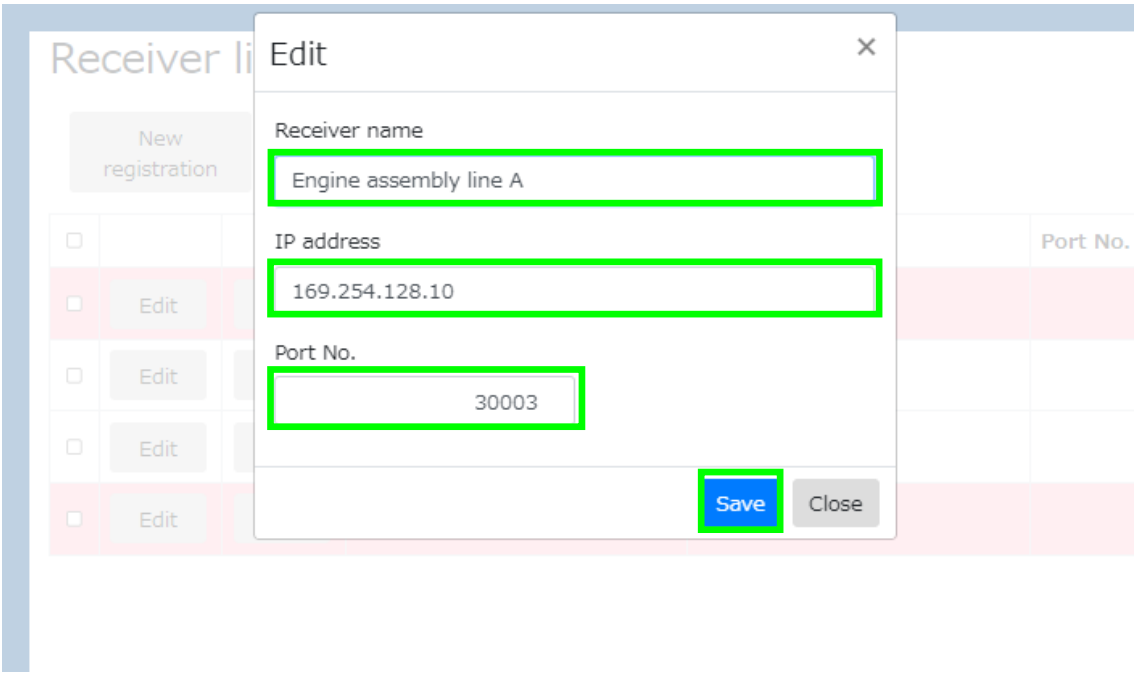
3-10. Edit receiver information

To edit the information of a registered receiver, click the “Edit” button on the Receiver list screen.

Click the “Edit” button in the row displaying the receiver information to be edited.

Click the “Edit” button to display the Edit receiver information dialog.

Edit the required item, and click the “Save” button.



When the save is completed, the Edit receiver information dialog will close automatically.

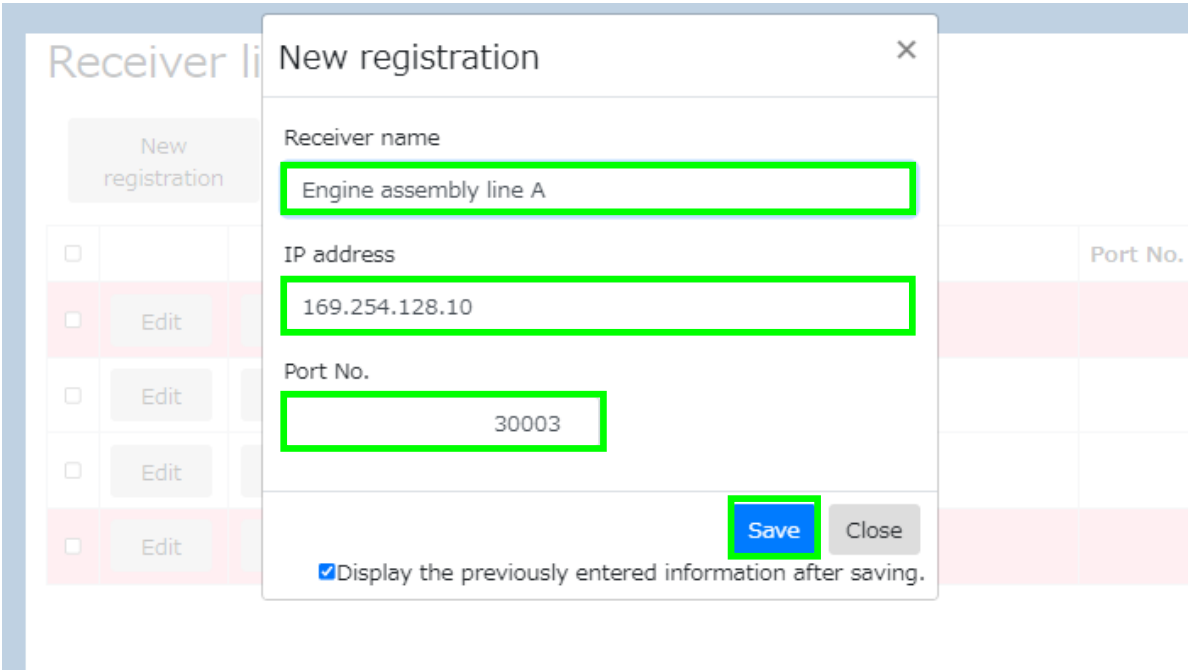
3-11. Copy receiver information

To register a new receiver based on the information of the registered receiver, click the “Copy” button on the Receiver list screen.

Click the “Copy” button in the row displaying the receiver information to be copied.

The Register receiver dialog is displayed with the information of the copy source is entered in each item.

Like new registration, enter and edit the necessary items and click the “Save” button.

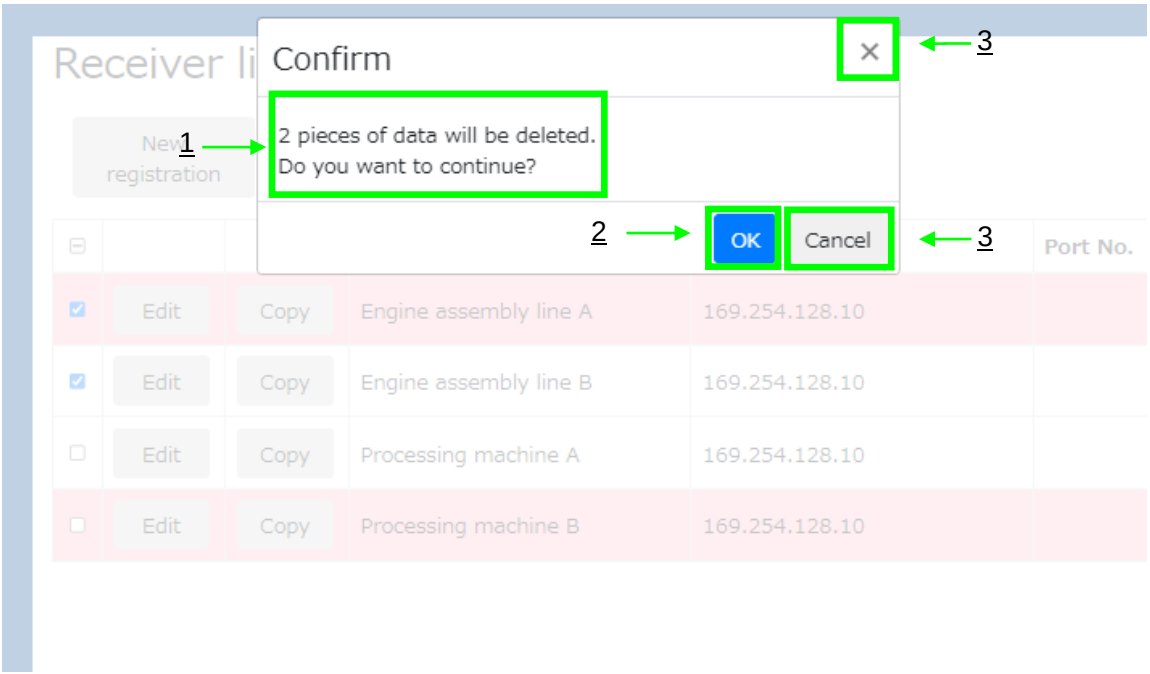


3-12. Delete receiver

To delete a registered receiver, click the “Delete target” button on the Receiver list screen.

The “Delete target” button is disabled by default. From the list of registered receivers, click the checkbox in the row of the receiver to be deleted to ON. The “Delete target” button becomes enabled.

Click the “Delete target” button to display the Delete receiver dialog.



	Item name	Description	Input example
1	Number of deletions	The number of receivers to be deleted is displayed in a message.	-
2	OK button	Click the button to delete the receivers.	-
3	Cancel button	Click the button to close the dialog. The receivers will not be deleted.	-

When WCL plus deletes a registered receiver, it also disconnects the connection with the receiver.

3-13. Transmitter list screen

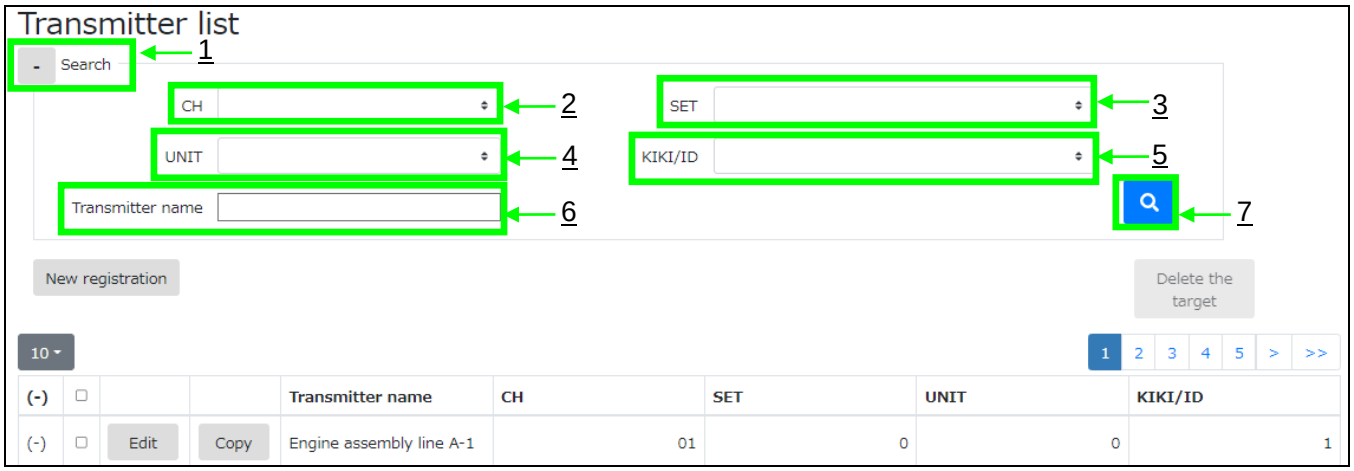
The registered transmitters are listed below. Also, register a new transmitter, update or delete the registered information on this screen.

	Item name	Description
1	Transmitter filter form show/hide button	Button used for narrowing down the transmitters to be displayed in 5. Click the button once to display the filter form. Clicking while the filter form is displayed will hide the narrowing down form. For details, refer 3-14. Narrow down transmitter.
2	Register new transmitter button	Button used for registering a new transmitter in WCL plus. Click the button to display the Register transmitter dialog. The button will be disabled if 8000 transmitters are registered.
3	Delete transmitter button	Button used for deleting the registered transmitters from WCL plus. Click the checkbox of the transmitter to be deleted, indicated by 8, to ON and click this button to display the Delete transmitter dialog. If none of the checkboxes indicated by 8 are ON, this button is disabled.
4	Switching the number of items to display, page switching	Used for switching the number of displayed items per page and for switching the displayed page. Select one of the number of items to display from [10(Default), 25, 50]. The selected data is saved in the Web browser, and will be selected automatically when the “Transmitter list” screen is opened next time. Page switching is done by selecting「<, >」, or「<<, >>」.「<, >」switches to the previous or next page, respectively.「<<, >>」switches the page to the first page or the last page, respectively.
5	List of registered transmitters	Displays a list of transmitters registered in WCL plus. Each row corresponds to one transmitter, and displays a transmitter name, CH, SET, UNIT and KIKI/ID.

6	Status name of each button and external input	Displays the state name respectively set to buttons1-3 and external inputs 1-3. It is hidden by default.
7	Toggle showing/hiding the state names	Used to toggle showing/hiding the state names. Each click will toggle showing/hiding the 6 state names. Click the header row to toggle showing /hiding the state names of all displayed transmitters.
8	Check box for selecting the receivers to be deleted	Checkbox used to select transmitters to be deleted. When the check box is ON, click 3, and the Delete transmitter dialog is displayed. When turning ON/OFF the checkbox in the header row, the check boxes of all transmitters are linked to ON/OFF.
9	Edit transmitter information button	Button used for editing the information of the registered transmitter. Click the button in the row of the transmitter to be edited, and the edit transmitter information dialog is displayed.
10	Copy transmitter information button	Button for copying the information of an already registered transmitter and using the information for registering a new one. It is useful for registering a new transmitter by using partly modified information of the registered transmitter. The button will be disabled if 8000 transmitters are registered.

3-14. Narrow down transmitter

When using the filter form on the “Transmitter list” screen, the transmitters to be displayed in the list can be narrowed down. It is useful to check or change the settings of a specific transmitter.



	Item name	Description
1	Transmitter filter form show/hide button	This is a button to show/hide the transmitter filter form. Click the button once to display the filter form. Clicking while the filter form is displayed will hide the narrowing down form.
2	CH selection	You can narrow down the transmitters by CH. If you set blank, filtering by CH is not performed. [If required: Blank, 01-16] (Default: Blank)
3	SET selection	You can narrow down the transmitters by SET. If you set blank, filtering by SET is not performed. [If required: Blank, 0-9] (Default: Blank)
4	UNIT selection	You can narrow down the transmitters by UNIT. If you set blank, filtering by UNIT is not performed. [If required: Blank, 0-9] (Default: Blank)
5	KIKI/ID selection	You can narrow down the transmitters by KIKI/ID. If you set blank, filtering by KIKI/ID is not performed. [If required: Blank, 0-9] (Default: Blank)
6	Transmitter name	You can narrow down the transmitters by transmitter name.The entered transmitter names are narrowed down by a partial match (partially included). If you set blank, filtering by transmitter name is not performed. [If required: Enter as you like] (Default: Blank)
7	Filter button	Narrows down the transmitters based on the data set to 2, 3, 4, 5, and 6. Only the transmitters satisfying all the set values for 2, 3, 4, 5, and 6 will be filtered.

After narrowing down the transmitters, the displayed page is forcefully changed to the first page.

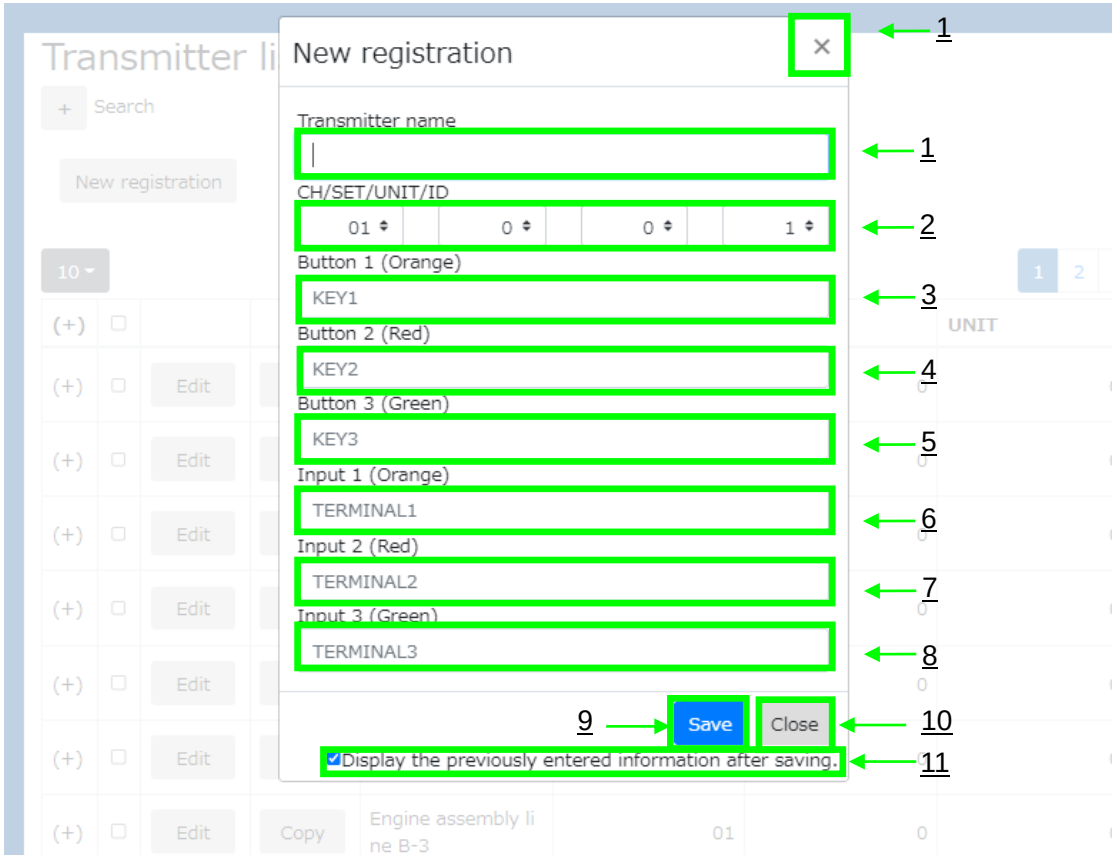
3-15. New transmitter registration

To register a new transmitter, click the “New registration” button on the Transmitter list screen.

Click the “New registration” button to display the Register transmitter dialog.

While the Register transmitter or other dialog, is displayed, the menu or log out is disabled.

Enter required data and click the “Register” button, and the transmitter is registered.



	Item name	Description	Input example
1	Transmitter name	Enter a transmitter name for identification. [Required: 0-30characters]	Engine assembly line A
2	CH/SET/UNIT/ID(KIKI)	Set CH/SET/UNIT/ID of transmitter. From left to right: CH/SET/UNIT/ID. Transmitters with the same CH/SET/UNIT/ID cannot be registered. CH: [Required: 01-16] SET: [Required: 0-9] UNIT: [Required: 0-9] ID: [Required: 0-9]	CH: 01(Default) SET: 0(Default) UNIT: 0(Default) ID: 1(Default)
3	Button 1(Orange)	Enter the name of the state when button 1(Orange) is clicked. If nothing is entered, KEY1 is displayed. [Required: 0-30characters]	Production Department out of stock
4	Button 2(Red)	Enter the name of the state when button 2(Red) is clicked. If nothing is entered, KEY2 is displayed. [Required: 0-30characters]	plague
5	Button 3(Green)	Enter the name of the state when button 3(Green) is clicked. If nothing is entered, KEY3 is displayed. [Required: 0-30characters]	Request for transportation of production finished goods

6	Input 1(Orange)	Enter the name of the state when input 1(Orange) is clicked. If nothing is entered, TERMINAL1 is displayed. [Required: 0-30characters]	Production Department out of stock
7	Input 2(Red)	Enter the name of the state when input 2(Red) is clicked. If nothing is entered, TERMINAL2 is displayed. [Required: 0-30characters]	plague
8	Input 3(Green)	Enter the name of the state when input 3(Green) is clicked. If nothing is entered, TERMINAL3 is displayed. [Required: 0-30characters]	Request for transportation of production finished goods
9	Save button	Register the transmitter using entered information. When the entered information is incomplete, an error message is displayed below each item, and the receiver is not registered. Check the entered information carefully. After correcting the information, save it again. When registration is completed, the dialog does not close and continues to be displayed until 8000 transmitters are registered. Depending on the status of 11, the items of 1,2,3,4,5,6,7, and 8 are initialized.	-
10	Close button	Click the button to close the dialog. All unsaved information will be discarded.	-
11	Display the previously entered information after saving	It is a checkbox to determine whether to initialize the items 1,2, and 3. When the checkbox is ON, data of the items 1,2, and 3 will be carried over after being saved.	ON(Default)

The data set to transmitter name, buttons 1-3 and inputs 1-3 is used for output to “Processing data”.

The first 5 characters of the transmitter names are displayed on the “Call status confirmation “screen.

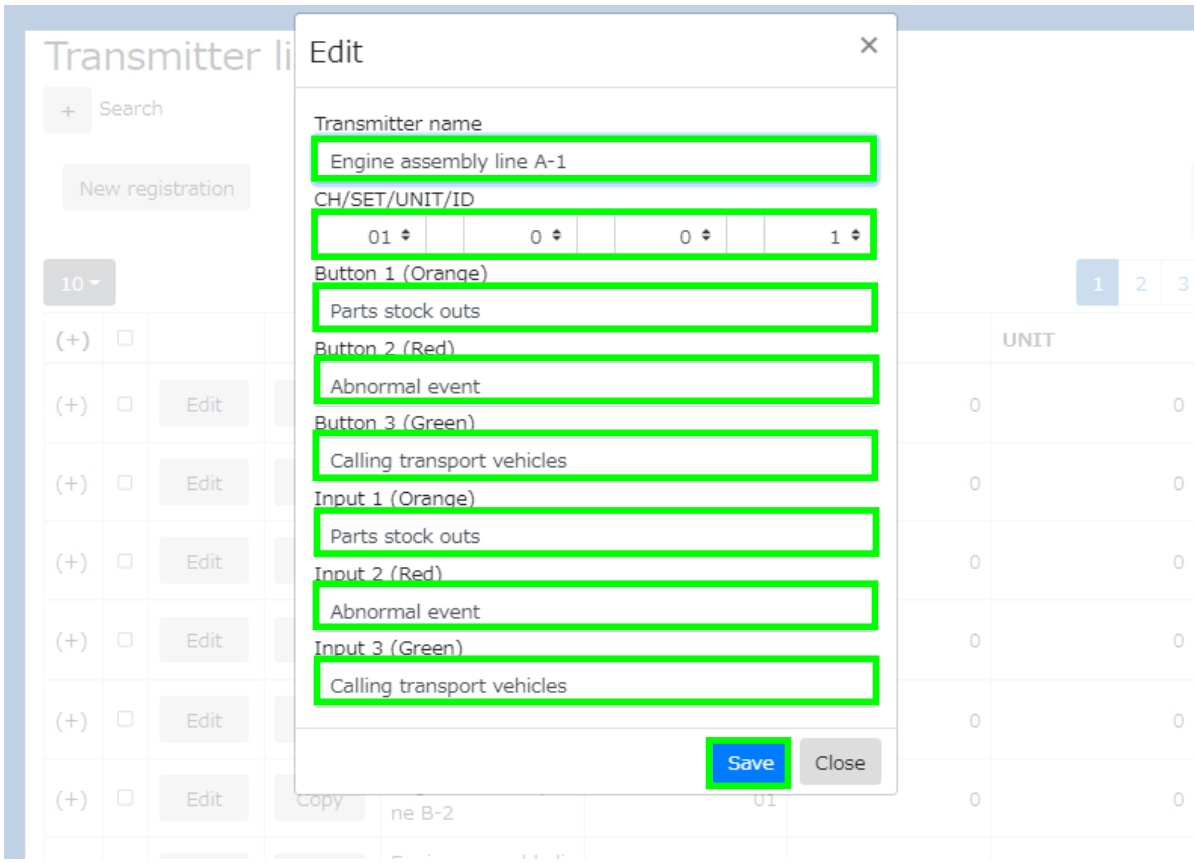
3-16. Edit transmitter information

To edit the information of a registered transmitter, click the “Edit” button on the Transmitter list screen.

Click the “Edit” button in the row displaying the transmitter information to be edited.

Click the “Edit” button to display the Edit transmitter information dialog.

Edit the required item, and click the “Save” button.



When the save is completed, the Edit transmitter information dialog will close automatically.

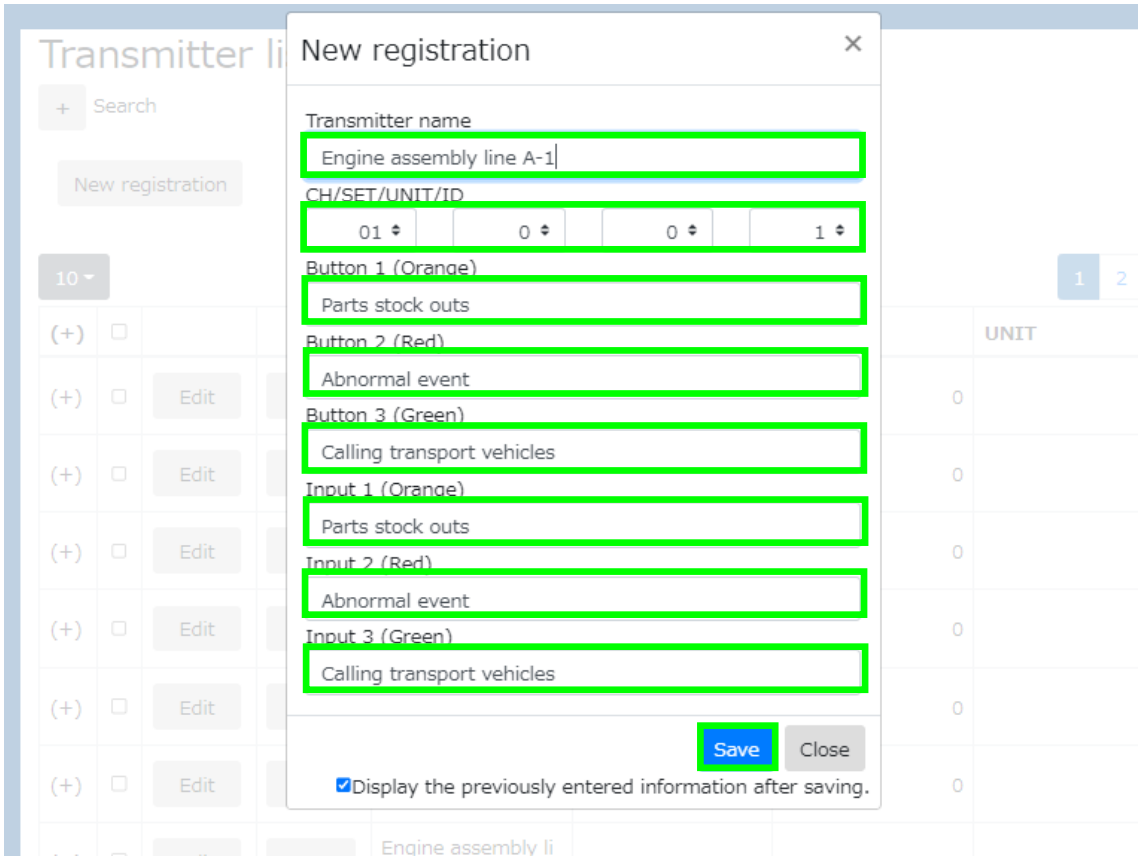
3-17. Copy transmitter information

To register a new transmitter based on the information of the registered transmitter, click the “Copy” button on the Transmitter list screen.

Click the “Copy” button in the row displaying the transmitter information to be copied.

The Register transmitter dialog is displayed with the information of the copy source is entered in each item.

Like new registration, enter and edit the necessary items and click the “Save” button.

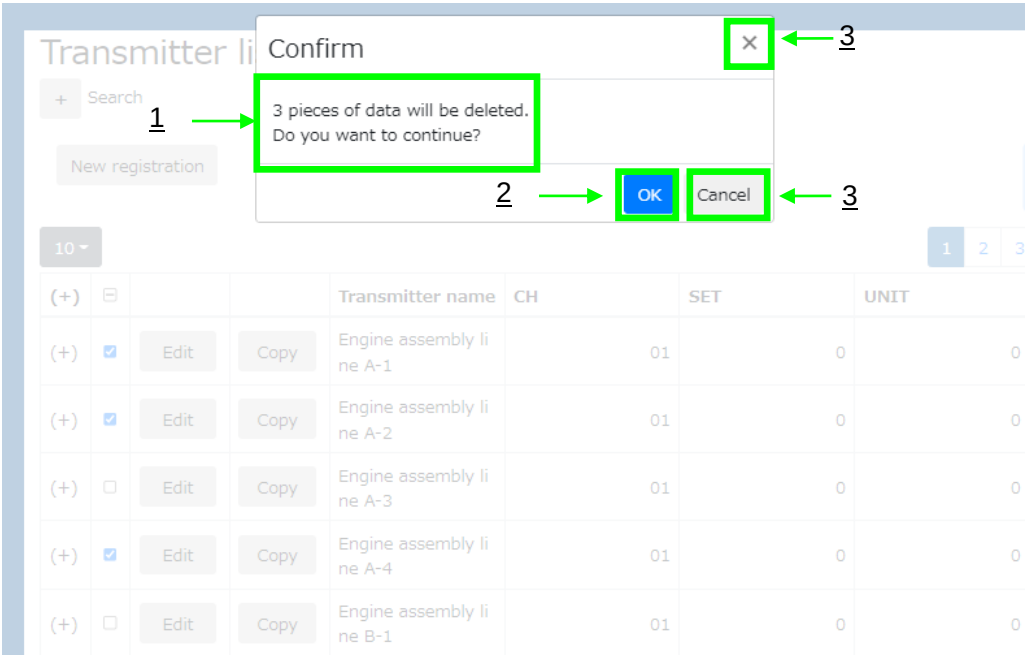


3-18. Delete transmitter

To delete a registered transmitter, click the “Delete target” button on the Transmitter list screen.

The “Delete target” button is disabled by default. From the list of registered transmitters, click the checkbox in the row of the transmitter to be deleted to ON. The “Delete target” button becomes enabled.

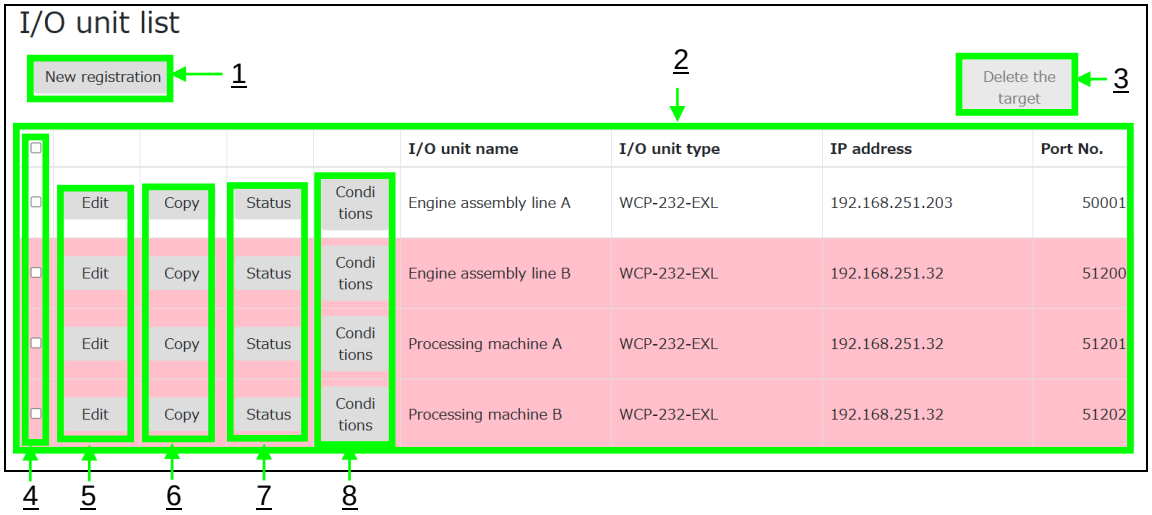
Click the “Delete target” button to display the Delete transmitter dialog.



	Item name	Description	Input example
1	Number of deletions	The number of transmitters to be deleted is displayed in a message.	-
2	OK button	Click the button to delete the transmitters.	-
3	Cancel button	Click the button to close the dialog. The transmitters will not be deleted.	-

3-19. I/O unit list screen

The registered I/O units are listed below. Also, register a new I/O unit, update or delete the registered information on this screen.



	Item name	Description
1	Register new I/O unit button	Button used for registering a new I/O unit in WCL plus. Click the button to display the Register I/O unit dialog. The button will be disabled if 16 I/O units are registered.
2	List of registered I/O unit	Displays a list of I/O units registered in WCL plus. Each row corresponds to one I/O unit and displays the I/O unit name, IP address and port No. The background color of each line indicates whether or not the connection has been completed; a white background color indicates that the connection has been made, while a pink background color indicates that the connection has not been made. The connection status with the I/O unit is updated approximately every 5 seconds.
3	Delete I/O unit button	Button used for deleting the registered I/O units from WCL plus. Click the checkbox of the I/O unit to be deleted, indicated by 4, to ON and click this button to display the Delete I/O unit dialog. If none of the checkboxes indicated by 4 are ON, this button is disabled.
4	Check box for selecting the I/O units to be deleted	Checkbox used to select I/O units to be deleted. When the check box is ON, click 3, and the Delete I/O unit dialog is displayed. When turning ON/OFF the checkbox in the header row, the check boxes of all I/O units are linked to ON/OFF.
5	Edit I/O unit information button	Button used for editing the information of the registered I/O unit. Click the button in the row of the I/O unit to be edited, and the Edit I/O unit information dialog is displayed.
6	Copy I/O unit information button	Button for copying the information of an already registered I/O unit and using the information for registering a new one. It is useful for registering a new I/O unit by using partly modified information of the registered I/O unit. The button will be disabled if 16 I/O units are registered.
7	I/O port status display button	Button used for displaying the status of each I/O port of the I/O unit. Click the button in the row of the I/O unit to be displayed, to display the I/O port status display dialog. For details, refer 3-23. Checking the status of the I/O port.
8	I/O unit condition setting button	Button used for setting what action to take when the status of each I/O port of the I/O unit changes. For details, refer 3-24. Displaying conditions of the I/O unit.

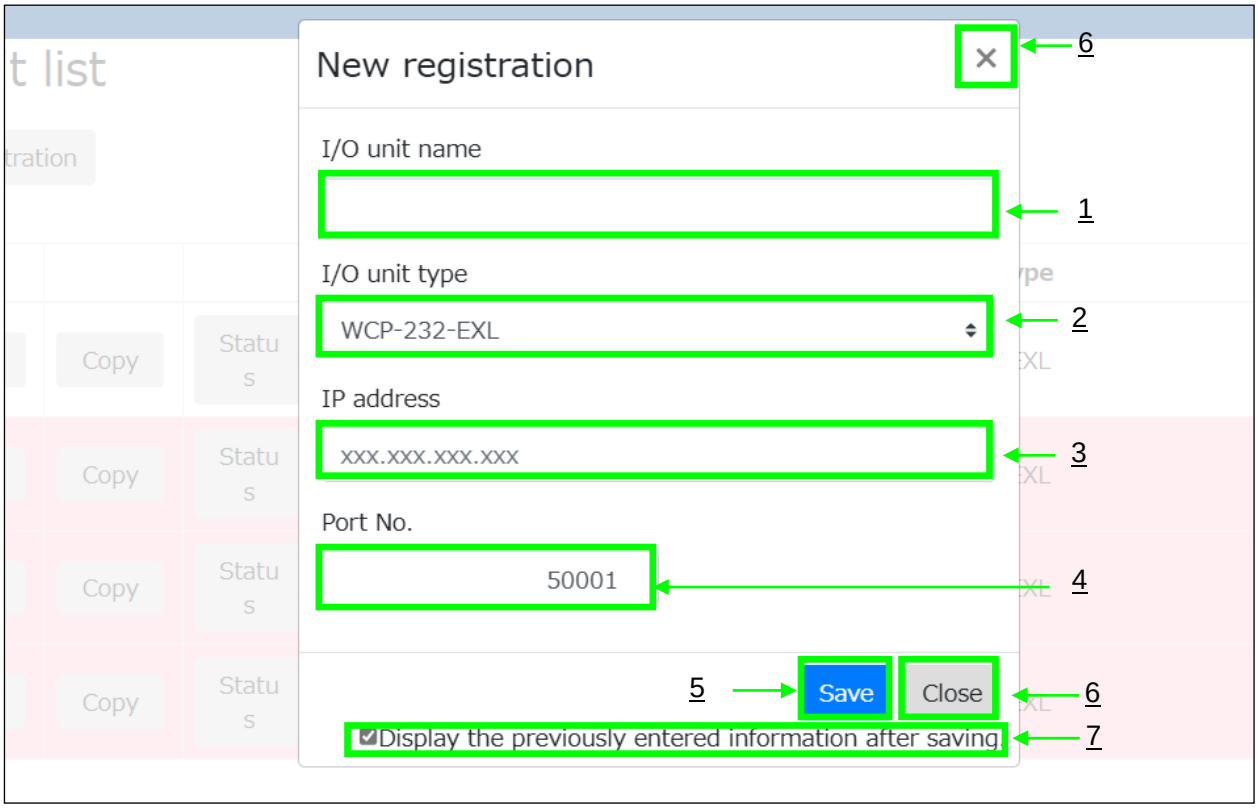
3-20. New I/O unit registration

To register a new I/O unit, click the “New registration” button on the I/O unit list screen.

Click the “New registration” button to display the Register I/O unit dialog.

While the Register I/O unit or other dialog, is displayed, the menu or log-out is disabled.

Enter required data and click the “Register” button, and the I/O unit is registered.



	Item name	Description	Input example
1	I/O unit name	Enter a I/O unit name for identification. [Required: 1-30characters]	Engine assembly line A
2	I/O unit type	Select the I/O unit type. [Required]	WCP-232-EXL
3	IP address	Enter the IP address of the I/O unit. I/O units with the same IP address and port number cannot be registered. [Required]	192.168.100.10
4	Port No.	Enter the Port No. of the I/O unit. [Required: 1-65535]	50001(Default)
5	Save button	Register the I/O unit using entered information. When the entered information is incomplete, an error message is displayed below each item, and the I/O unit is not registered. Check the entered information carefully. After correcting the information, save it again. When registration is completed, the dialog does not close and continues to be displayed until 16 I/O units are registered. Depending on the status of 7, the items of 1,2,3, and 4 are initialized.	-
6	Close button	Click the button to close the dialog. All unsaved information will be discarded.	-
7	Display the previously entered information after saving	It is a checkbox to determine whether to initialize the items 1,2,3, and 4 when the I/O unit is registered by the Save button. When the checkbox is ON, data of the items 1,2,3, and 4 will be carried over after being saved.	ON(Default)

WCL plus tries connecting to the registered I/O units automatically. Check whether the connection is completed on the “I/O unit list” screen.

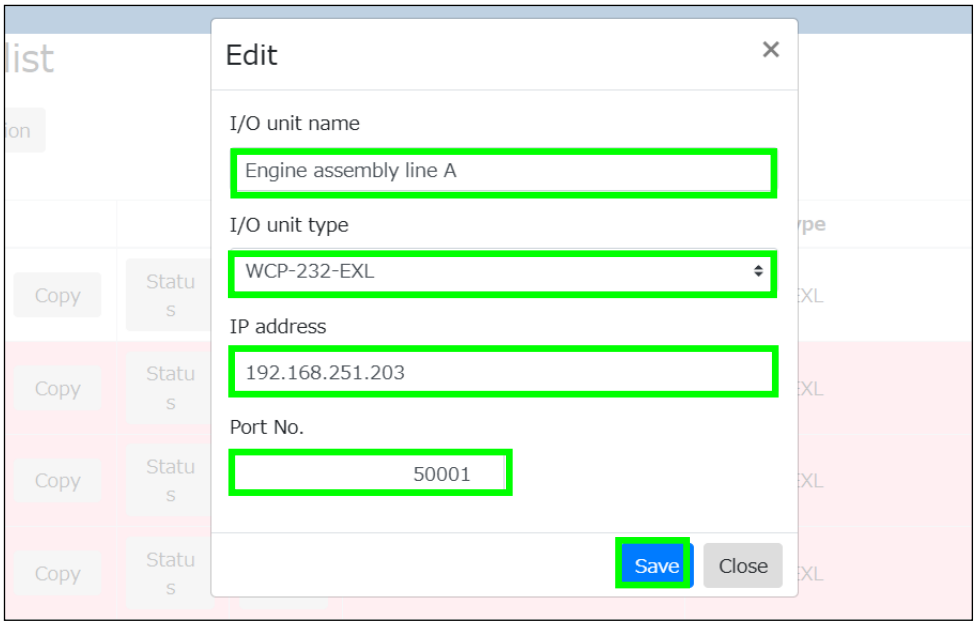
3-21. Edit I/O unit information

To edit the information of a registered I/O unit, click the “Edit” button on the I/O unit list screen.

Click the “Edit” button in the row displaying the I/O unit information to be edited.

Click the “Edit” button to display the Edit I/O unit information dialog.

Edit the required item, and click the “Save” button.



When the save is completed, the Edit I/O unit information dialog will close automatically.

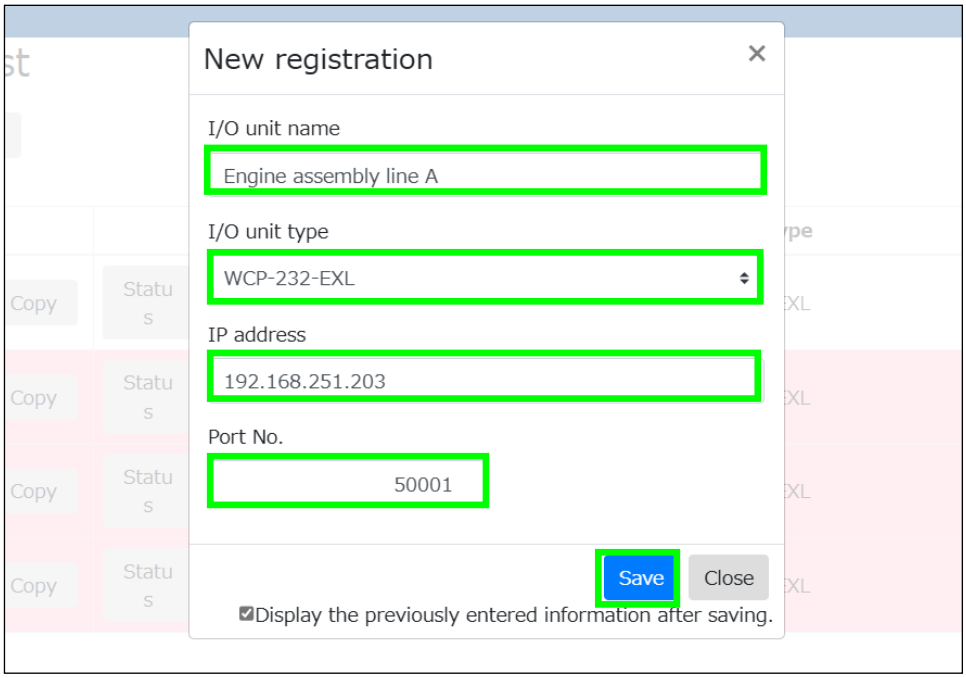
3-22. Copy I/O unit information

To register a new I/O unit based on the information of the registered I/O unit, click the “Copy” button on the I/O unit list screen.

Click the “Copy” button in the row displaying the I/O unit information to be copied.

The Register I/O unit dialog is displayed with the information of the copy source is entered in each item.

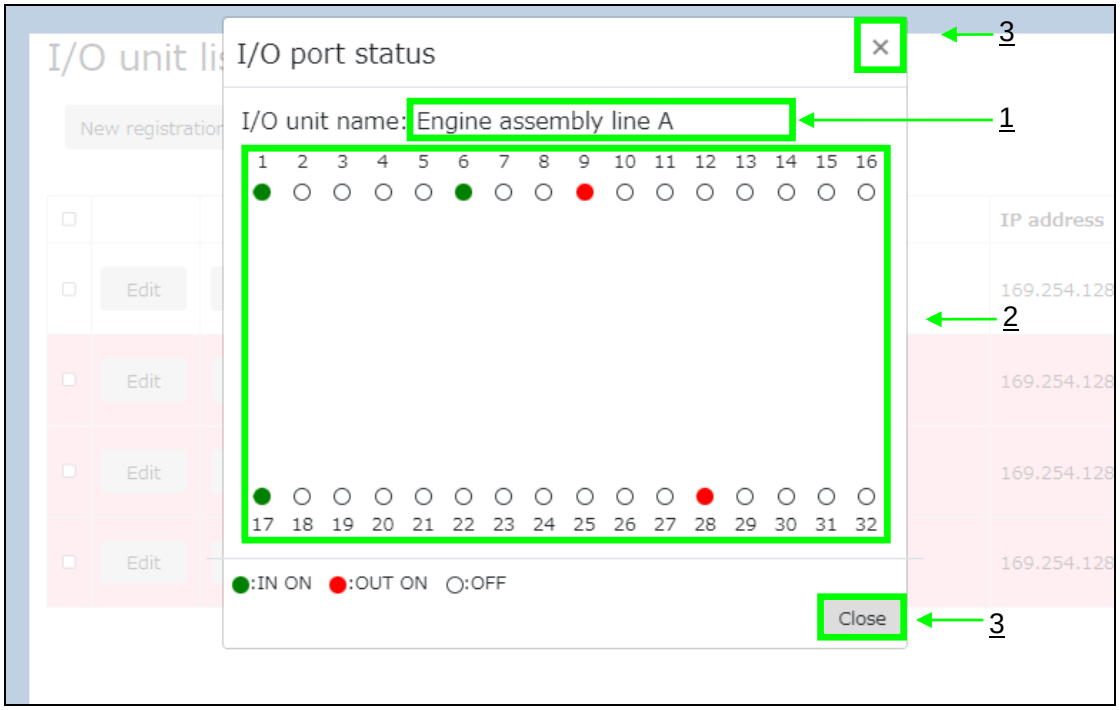
Like new registration, enter and edit the necessary items and click the “Save” button.



3-23. Checking the status of the I/O port

To check the I/O port status of the I/O unit, click the “Status” button on the I/O unit list screen.

Click the “Status” button in the row displaying the I/O unit information including the I/O port status to be checked. Click the “Status” button to display the I/O port status confirmation dialog.



	Item name	Description
1	I/O unit name	Name of the I/O unit displaying the status.
2	I/O port status	The status of each I/O port is displayed. Since the display is updated approximately every 2 seconds, it may take some time from the time the I/O port status changes until it is reflected in the display on the screen, but the operation on the actual device is immediate.
3	Close button	Click the button to close the dialog.

3-24. Displaying conditions of the I/O unit

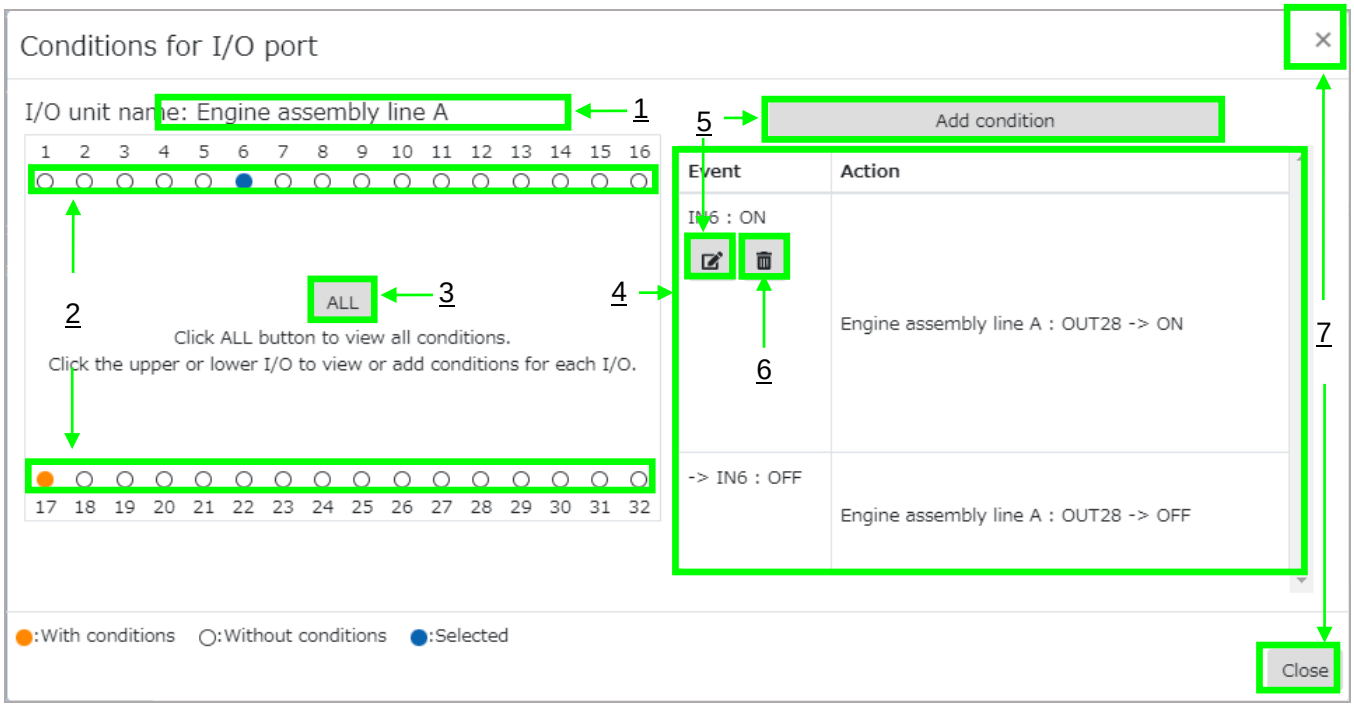
To display or set conditions of the I/O unit in WCL plus, click the “Conditions” button on the I/O unit list screen. Click the “Conditions” button in the row displaying the I/O unit information including conditions to be displayed or set. Click the “Conditions” button to display the I/O unit condition display dialog.

Add, edit or delete conditions in this dialog.

*In WCL plus, set the operation of the I/O unit in units of “Condition”, “Event” and “Action”.

A “Condition” is a combination of two “Events”, and only one condition is assigned to each port.

An “Event” is a trigger to execute an “Action”. In WCL plus, there are two types of events, “I/O port changes from OFF to ON” and “I/O port changes from ON to OFF”. When a “Condition“ is added, the event is automatically set. “Actions” are concrete processing. There are two types of actions, “Turn ON the I/O port” and “Turn OFF the I/O port”. Several “Actions” can be set for an “Event”. Up to 16 “Actions” can be set for one “Condition”.



	Item name	Description
1	I/O unit name	Name of the I/O unit whose I/O port condition setting state is displayed.
2	I/O port condition setting status, Select target I/O port for condition setting	The operating condition setting state for each I/O port is displayed in background color for each I/O port. Select I/O ports for which you want to set the operating conditions. Select I/O ports to display all the operating conditions set in 4.
3	Displaying detailed conditions set for all I/O ports	Clicking this button means that all I/O ports are selected. Details of all conditions set for the I/O ports 1-32 are displayed in 4.
4	Displaying detailed conditions	Displays the details of the conditions (events and actions) for the selected I/O ports.
5	Adding or editing conditions	Button used for adding or editing a condition for the selected I/O port. I/O unit condition setting button Click the button to display the I/O unit condition setting dialog. For details, refer 3-25. Adding/editing a condition for the I/O unit.
6	Deleting conditions	Button used for deleting the conditions for the selected I/O port. Click the button to display the I/O unit condition delete dialog.
7	Close button	Click the button to close the dialog.

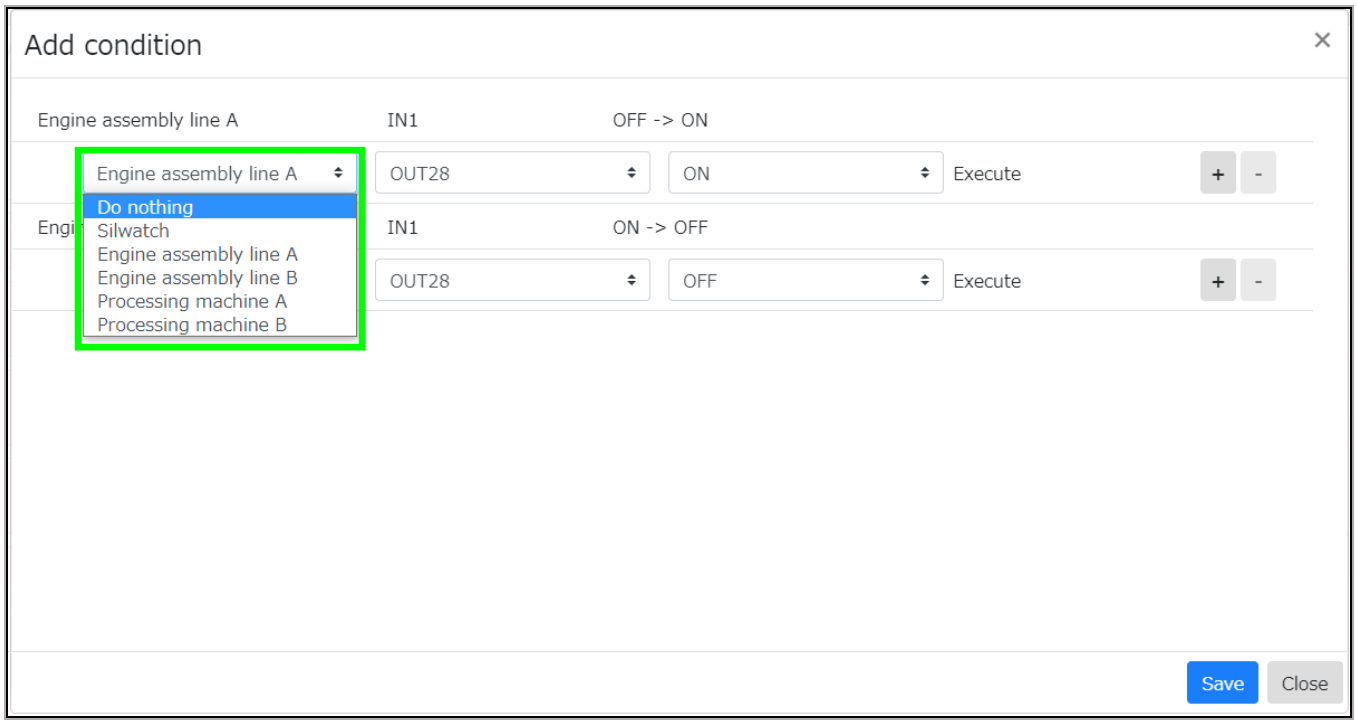
3-25. Adding/editing a condition for the I/O unit

To add or edit a condition for the I/O unit in WCL plus, click the “Add conditions” button in the I/O unit condition display dialog, or the button while the I/O port for which you want to add or edit a condition, is selected.

Click the button to display the I/O unit condition setting dialog.

	Item name	Description
1	Event 1	This is a first event that is set in the condition automatically. Displays “What happened” to “which I/O port” of “which I/O unit”. The above figure shows when “I/O port 6(input)” of the I/O unit named "Engine assembly A line" “Changes from OFF to ON”, the action set in 2 is executed.
2	Action to be executed when Event 1 occurs	Action to be executed when event 1 occurs. In the example above, the action of turning ON “I/O port 28(output)” of the I/O unit named “Engine assembly line A ” is executed.
3	Event 2	This is a second event that is set in the condition automatically. An event to be paired with event 1 is automatically set.
4	Action to be executed when Event 2 occurs	Action to be executed when event 3 occurs.
5	Add Action Button	Button used for adding an action. Click the button to add an action below the clicked button. If there are a total16 actions in the condition, the button becomes disabled and no more actions can be added.
6	Delete Action Button	Button used for deleting an action.Click the button to delete the action in the row of the clicked button. If there is only one action belonging to the event, the button is disabled and the action cannot be deleted.
7	Save button	Save the conditions with the set information. If the entered data is incomplete, an error message is displayed in the field above this button and the data is not saved. Check the entered information carefully. After correcting the information, save it again.
8	Close button	Click the button to close the dialog. All unsaved information will be discarded.

To set an action, click the combo box displayed in the field of actions corresponding to each event and select an action to be executed. Click the combo box to display actions that can be executed.



List of actions that can be configured

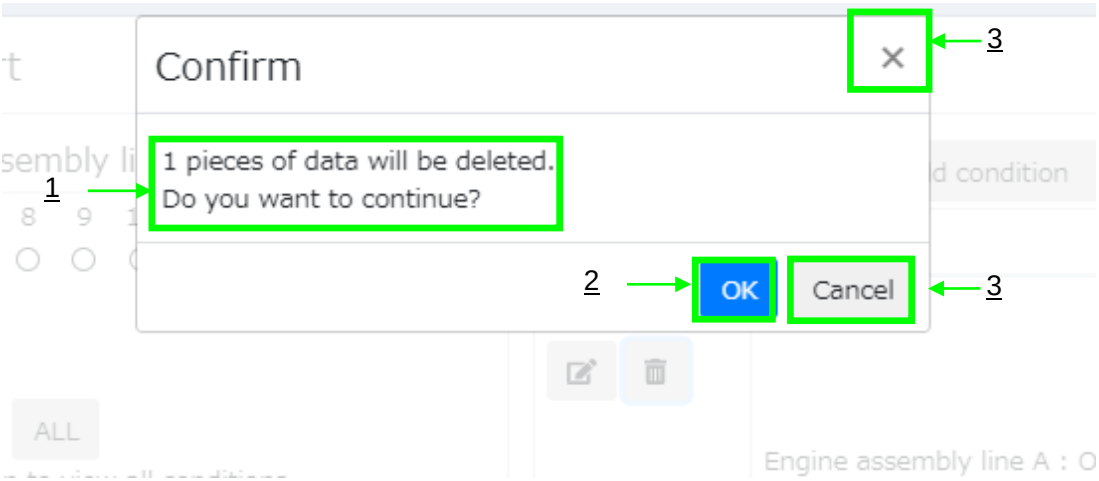
Action	Description	Additional setting items
Do nothing	No action is executed when an event occurs. Used for the cases, such as executing an action only when the I/O port “Changes from ON to OFF”.	None
Operation of the I/O port	The output I/O port of the specified I/O unit is operated. The name of the registered I/O units are displayed in the combo box. Select the one you want to operate.	Output I/O port to be operated(Required、Selectable) Operation type[Required、Selectable(ON, OFF)]

*Silwatch cannot be used if English is selected in the language selection on the Default Settings screen.

3-26. Deleting conditions for I/O unit

To delete a registered condition, click the button in the I/O unit condition display dialog.

Click the button to display the I/O unit condition delete dialog.



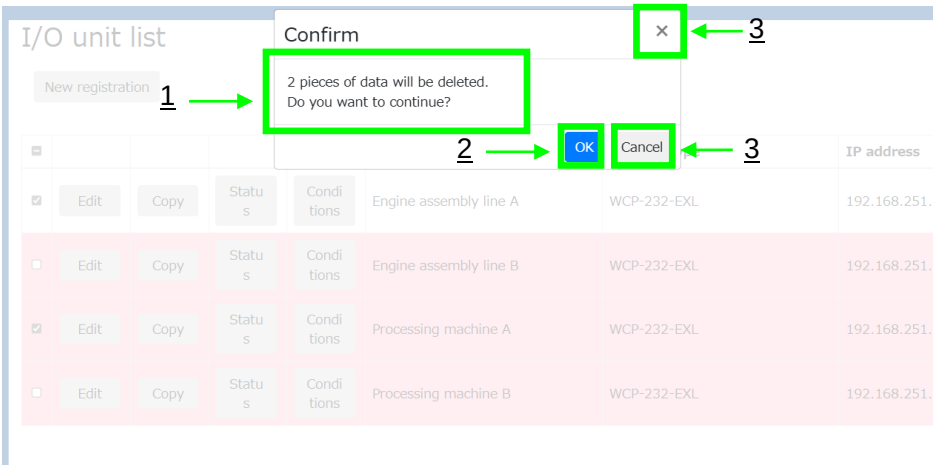
	Item name	Description	Input example
1	message	Displays a message saying that the data will be deleted.	-
2	OK button	Click the button to delete conditions.	-
3	Cancel button	Click the button to close the dialog. The conditions will not be deleted.	-

3-27. Delete I/O unit

To delete a registered I/O unit, click the “Delete target” button on the I/O unit list screen.

The “Delete target” button is disabled by default. From the list of registered I/O units, click the checkbox in the row of the I/O unit to be deleted to ON. The “Delete target” button becomes enabled.

Click the “Delete target” button to display the Delete I/O unit dialog.



	Item name	Description	Input example
1	Number of deletions	The number of I/O units to be deleted is displayed in a message.	-
2	OK button	Click the button to delete the I/O units.	-
3	Cancel button	Click the button to close the dialog. The I/O units will not be deleted.	-

When WCL plus deletes a registered I/O unit, it also disconnects the connection with the I/O unit.

All the conditions set on the deleted I/O units will also be deleted.

3-28. Call group list screen

The status of call groups is displayed in a list. The setting change of the call groups can be also made on this screen. A call group is an administrative unit of the receivers (and the transmitters corresponding to the receivers) in WCL plus Set whether to check the call status per call group.

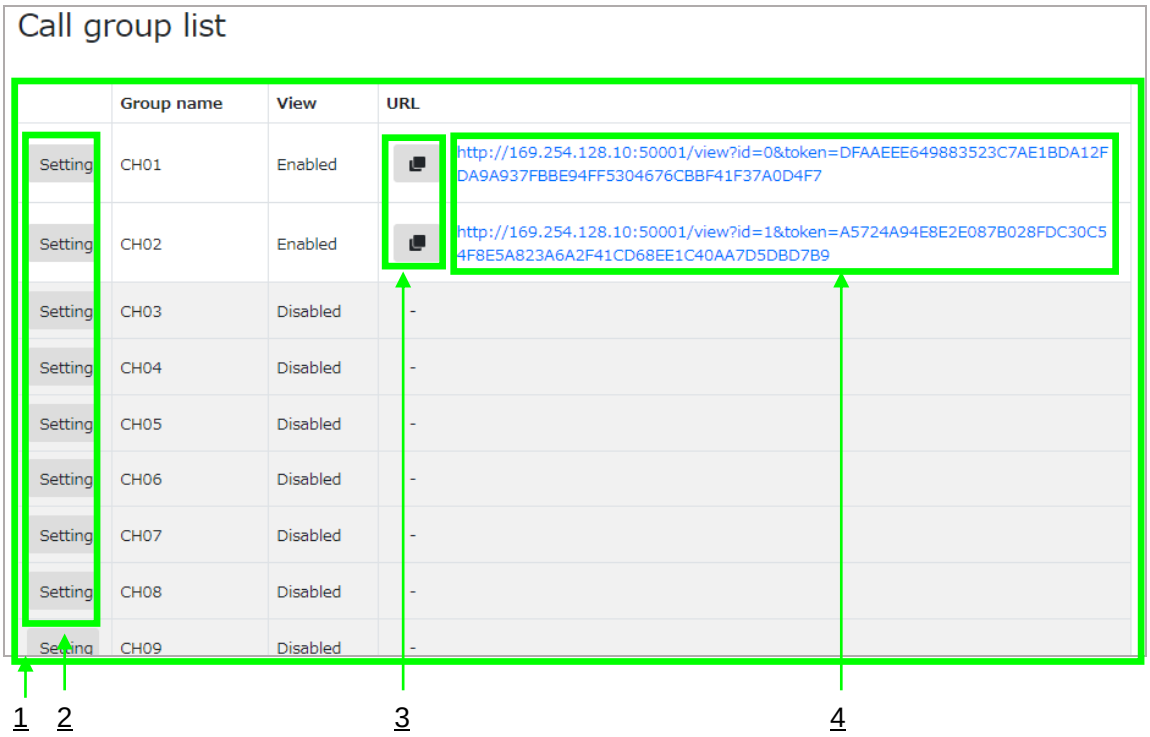
A call group exists per CH of the receiver. A total of 10 groups for CH01-CH10 are registered.

Set the call group corresponding to the CH set on the receiver.

Example: When the CH set on the receiver is 1CH, the corresponding call group is “CH01”.

For the transmitter corresponding to the call group “CH01”, CH is 1CH and KIKI/ID is 1-8.

If KIKI/ID is 0 or 9, a call is not treated as a call corresponding to the call group. (The call history remains.)



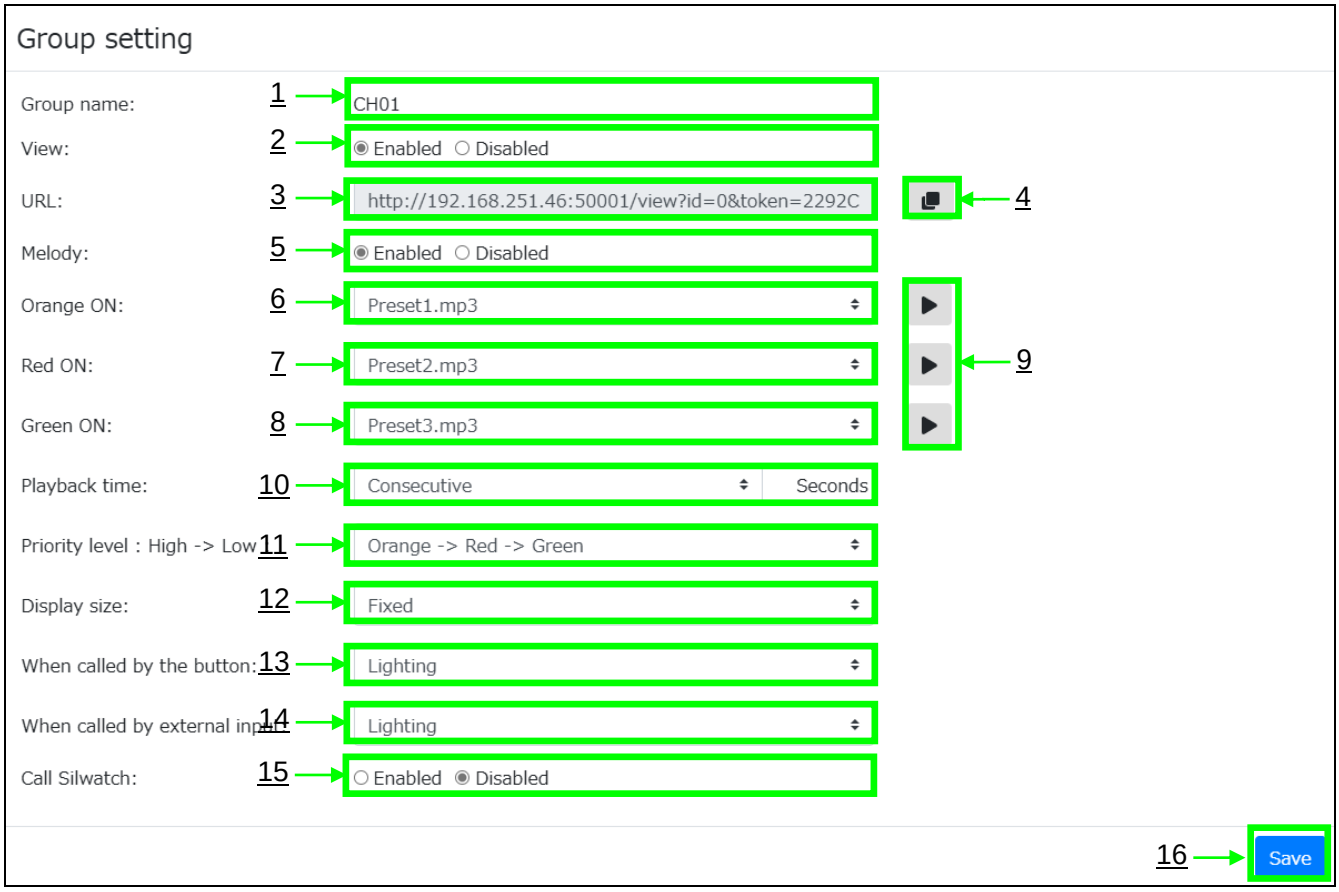
	Item name	Description
1	Call group list	The call groups is displayed in a list. One row represents one call group (CH). A group name, enable/disable view, the URL of the Call status confirmation screen and a copy button are displayed. The background color of each row indicates whether view is enabled. The white background color indicates the view is enabled, and the grey background color indicates the view is disabled.
2	Call group setting button	Button used for changing the settings for call groups. Click the button to display the Call group setting dialog. For details, refer 3-29. Call group setting.
3	Call status confirmation screen URL copy button	Click the button to copy the URL of the call status confirmation screen of the call group in the clicked row to the clipboard. When “View” is not “Enabled” in the settings of call groups, this button is not displayed.
4	Call status confirmation screen URL	Click the button to display the Call status confirmation screen of the call group in the clicked row in a different tab or window. When “View” is not “Enabled” in the settings of call groups, this button is not displayed.

3-29. Call group setting

To change settings for the call groups, click the “Setting” button on the Call group list screen.

Click the “Setting” button in the row displaying the call group to be edited.

Click the “Setting” button to display the call group setting dialog.



	Item name	Description	Input example
1	Group name	The name of the calling group that is being set up. It cannot be changed.	-
2	View	Select whether to enable or disable view of the call status. To confirm the call status, select “Enabled”. Set it to Enabled to display all items in 3-14.	Disabled (Default)
3	Call status confirmation screen URL	URL to access to the Call status view screen of the call group currently being set. Displays the URL enabled only when the dialog is opened while “View” is “Enabled”.	-
4	Call status confirmation screen URL copy button	Click the button to copy the URL of 3 to the clipboard. When “View” is not “Enabled” in the settings of call groups, this button is not displayed.	-
5	Enable/disable playback of melody	Select whether to enable or disable a playback of melody on the Call status confirmation screen. If you want to be notified by a melody in addition to the window color display on the call status confirmation screen, set to "Enabled". When enabled, each item in 6-11 will be displayed.	Disabled (Default)
6	Melody played when the window lights up or blinks in orange	Select a melody to be played when an orange window is displayed on the Call status confirmation screen. When the field is blank, the music is not played.	Blank (Default)
7	Melody played when the window lights up or blinks in red	Select a melody to be played when a red window is displayed on the Call status confirmation screen. When the field is blank, the music is not played.	Blank (Default)

8	Melody played when the window lights up or blinks in green	Select a melody to be played when a green window is displayed on the Call status confirmation screen. When the field is blank, the music is not played.	Blank (Default)
9	Melody listening button	Button used for listening to the melody selected in 6-8. The melody selected in the same row is played once (from the beginning to the end). If the melody has already been played, after the melody being played is stopped, playback will start.	-
10	Playback time	Select the melody playback time. When “Consecutive” is selected, playback of the melody continues repeatedly from the beginning to the end until the playback condition is cancelled. When a value is selected, the melody is played only once from the beginning for the selected seconds. When “Consecutive” is selected, 11 is enabled and selectable. [Choices: Consecutive, 5, 10, 15, 20, 25, 30]	Consecutive (Default)
11	Priority level	When several color windows are displayed at the same time on the Call status confirmation screen, select a color to play melody with priority. This set value works only when 10 is “Consecutive”. [Choices: Orange->Red->Green、Orange->Green->Red、 Red->Orange->Green、Red->Green->Orange、 Green->Orange->Red、Green->Red->Orange]	Orange->Red-> Green (Default)
12	Display size	Select a display size of the window to be displayed on the Call status confirmation screen. When “Fixed” is selected, the fixed- size windows are displayed in order from top left to top right, and bottom left to bottom right. When“Variable” is selected, up to 5 calls can be displayed while changing the size of the window to full screen. Displaying the windows of 6 or more calls switched to the same display as when “Fixed” is selected. For details, refer 3-30. Call status confirmation screen . [Choices: Fixed,Variable]	Fixed (Default)
13	When called by the button	Select a display method of the window called by pressing the button from the windows displayed on the Call status confirmation screen. [Choices: Lighting,Blinking (ON for 1sec.,OFF for 0.5sec.)]	Lighting(Default)
14	When called by external input	Select a display method of the window called by external input from the windows displayed on the Call status confirmation screen. [Choices: Lighting,Blinking (ON for 1sec.,OFF for 0.5sec.)]	Lighting(Default)
15	Call Silwatch	This function is not available.	Disable
16	Save button	Save setting. When the settings are saved, the call group settings dialog can close automatically.	-

* When changing Enable/disable melody (5), Melody (6-8), Playback time (10), or Priority (11) while the Call status confirmation screen is open, the melody is played according to the settings before change until the browser is reloaded.

For rules on melody playback, refer to 3-30.Call status confirmation screen.

* Silwatch cannot be used if English is selected in the language selection on the Default Settings screen.

■Custom melody playback settings

By storing the following sound files in a given location, it is possible to play an arbitrary melody when a call occurs.

Supported file formats (extensions): wav, mp3

File size limit: 1.5MB

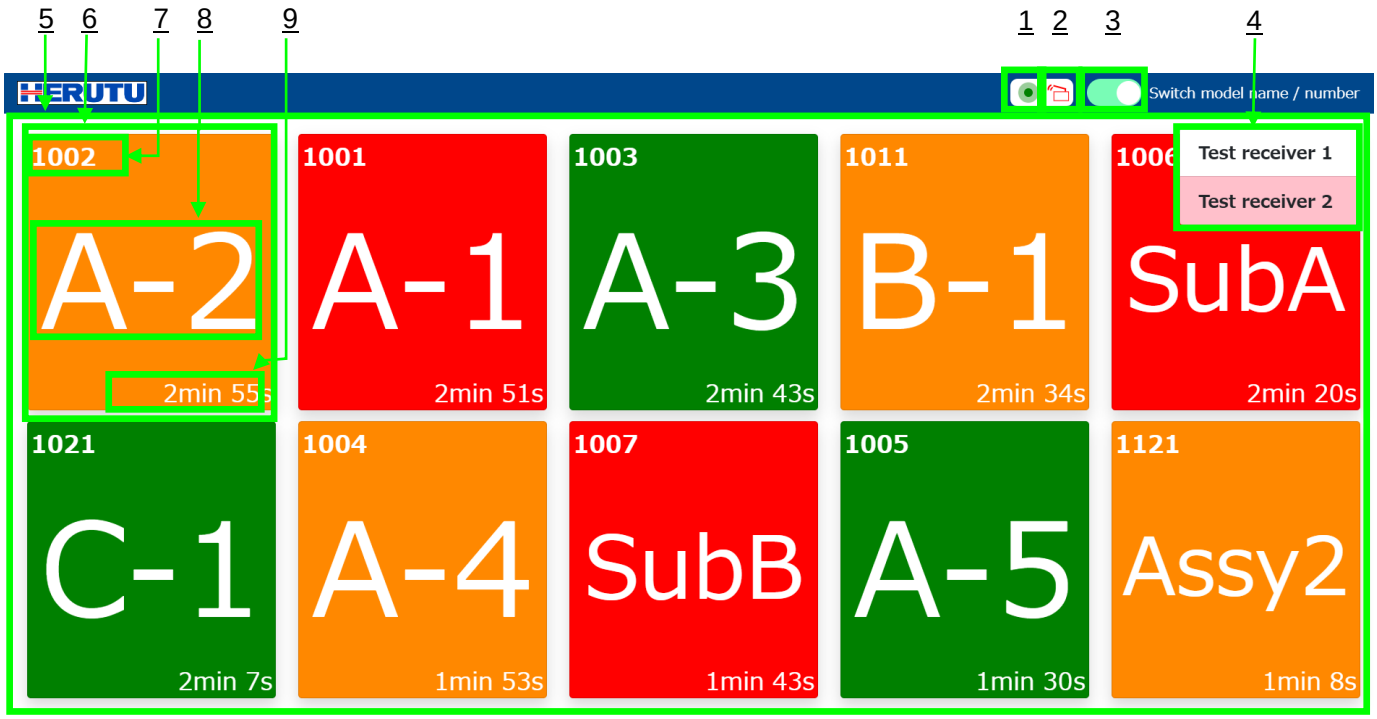
File Location: C:¥HERUTU¥WCL plus¥melody¥

After the file is stored, reload the Call group list screen. Then, click the setting button of the call group for which you want to set a melody, and select melodies to play when the window lights up or blinks in orange, red and green. The file names matching the conditions for the above sound source file are displayed as choices.

3-30. Call status confirmation screen

The call status of the call groups is identified by the window colors and melodies to display the current occurring calls. Each call group is independently displayed. By displaying several browser windows, the call status of several call groups can be checked on one screen.

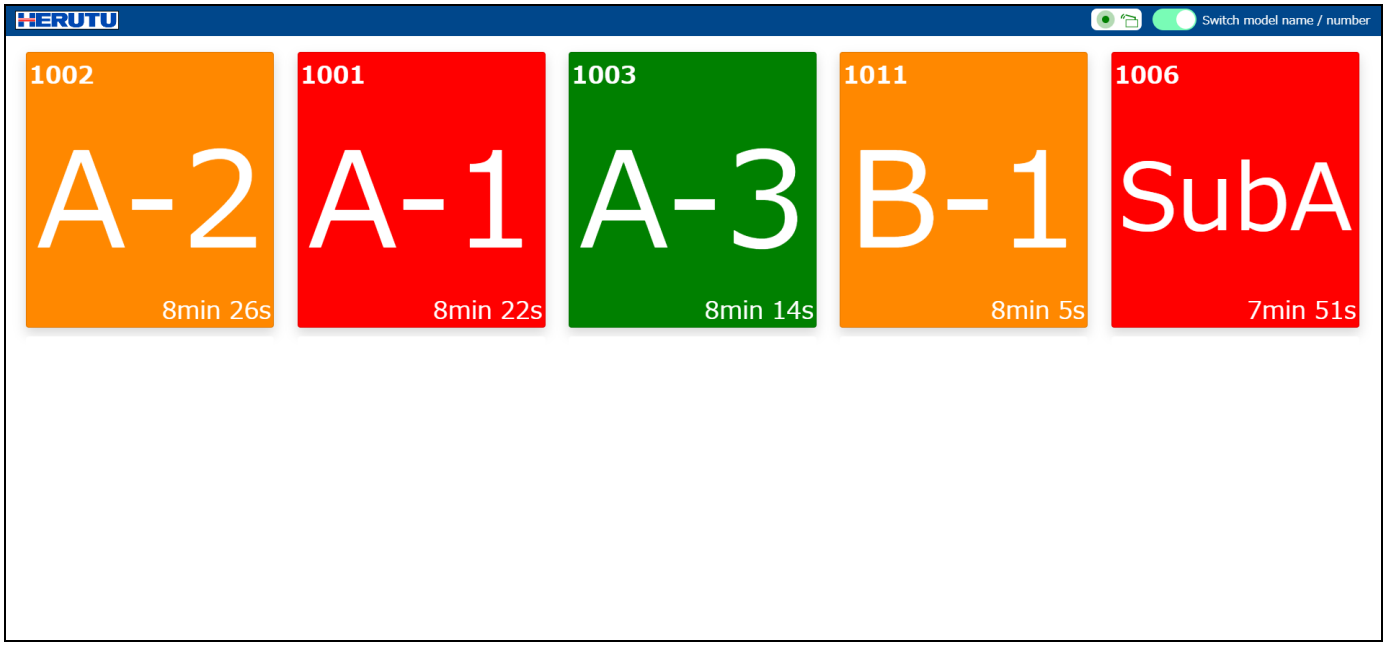
To display this screen, set “View” in the call group settings to “Enabled” to access to the displayed URL. Even after the Web browser is closed, as long as the service continues, the call status is not cleared and maintained.



■When the display size “Fixed” is selected

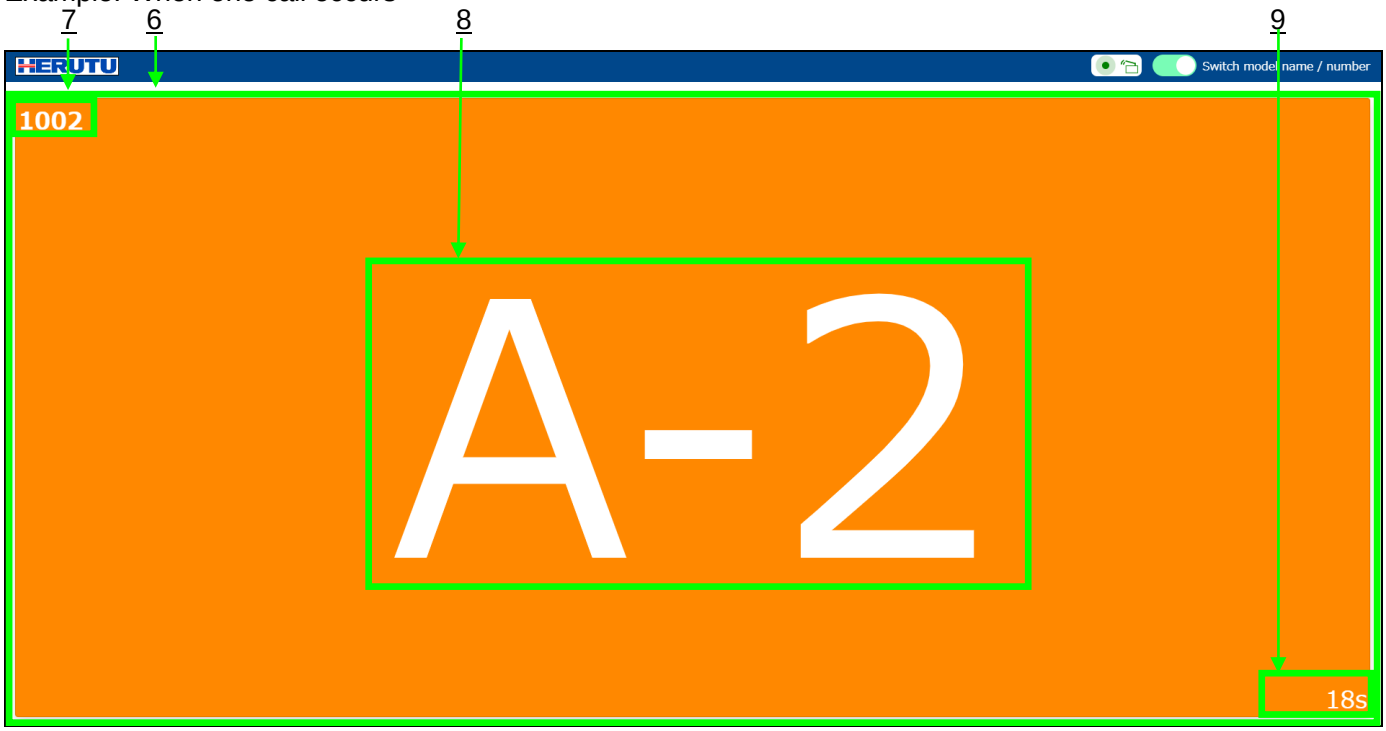
Example: When one call occurs

Example: When 5 calls occur

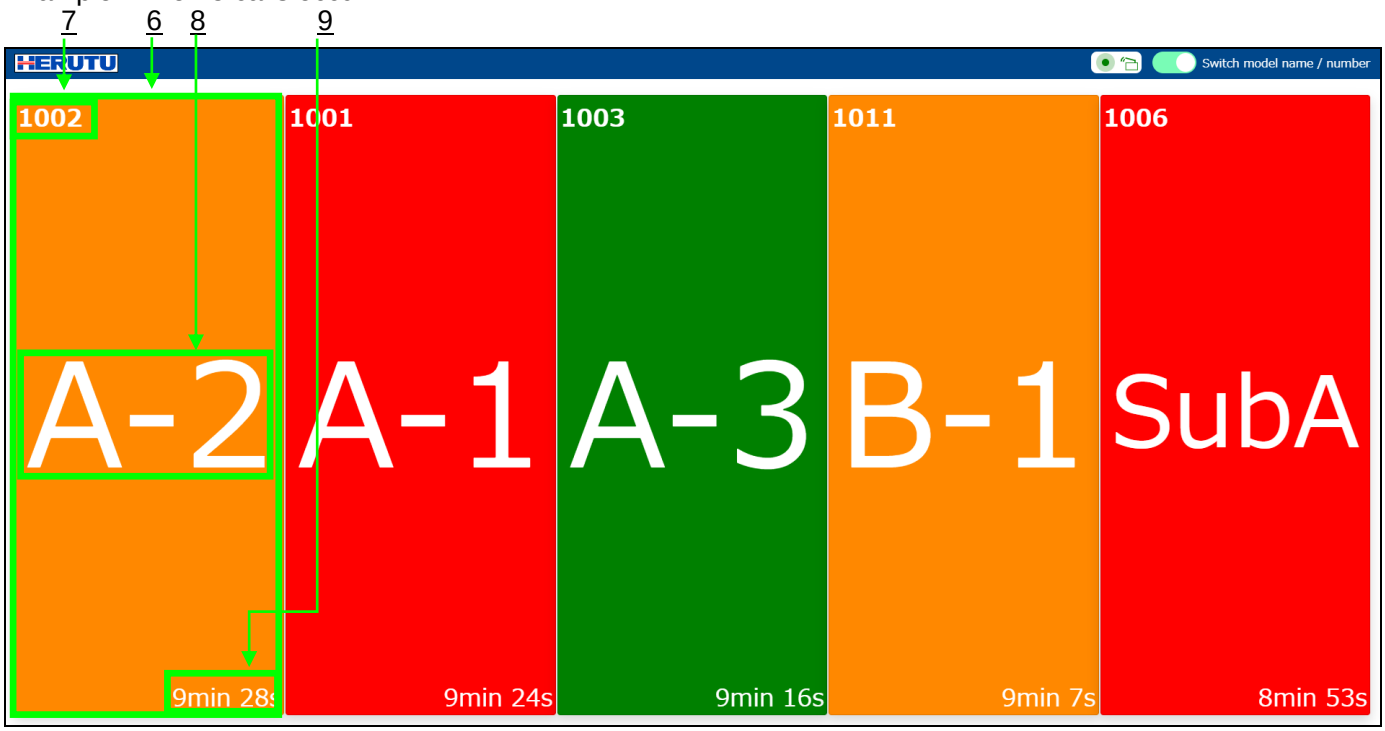


■When the display size “Variable” is selected

Example: When one call occurs

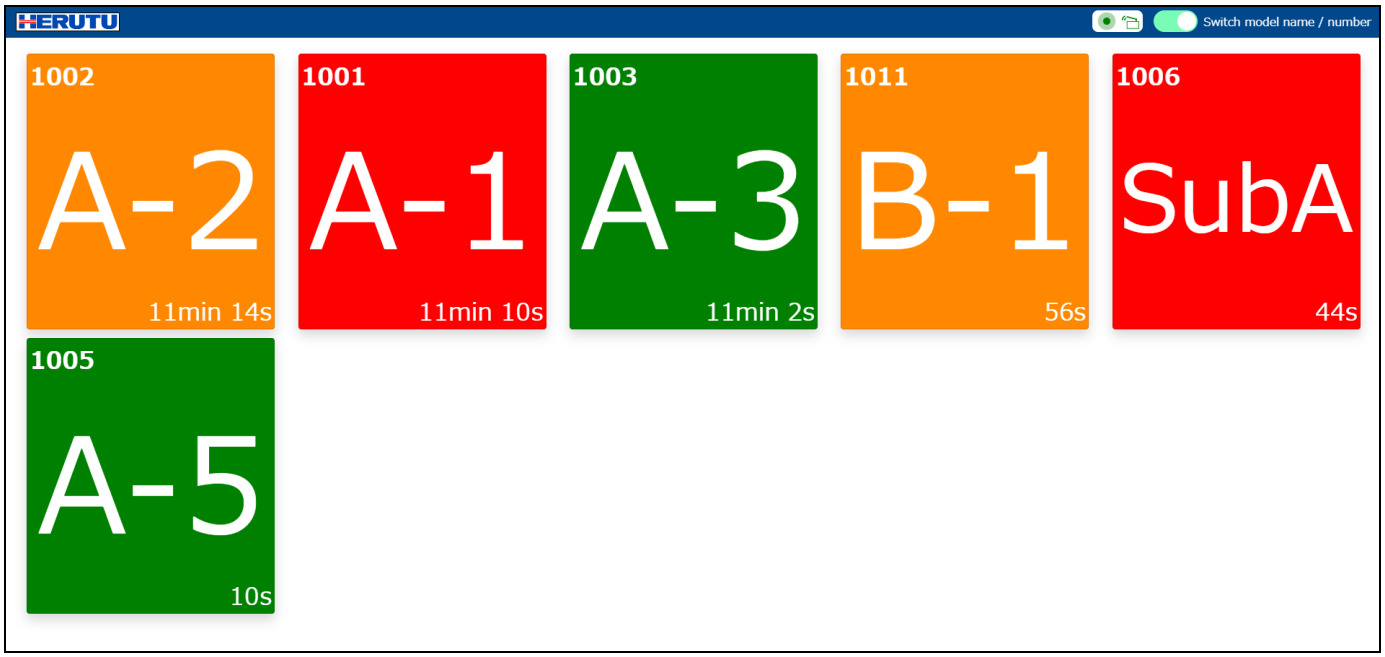


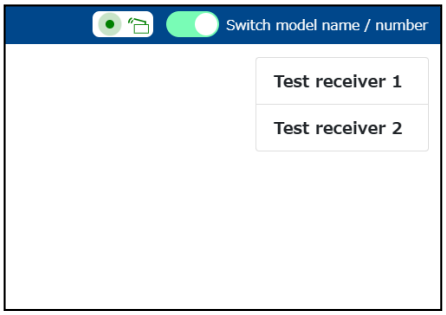
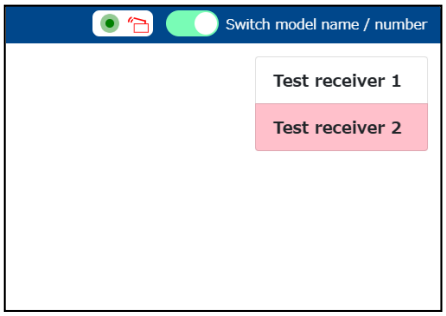
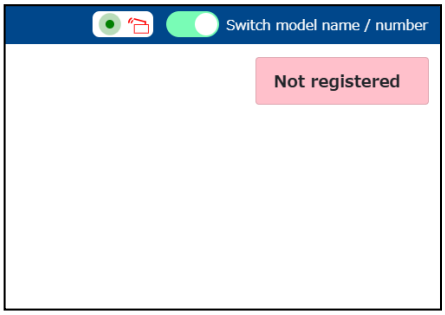
Example: When 5 calls occur



■When the display size common to “Fixed” and “Variable”

Example: When 6 calls occur



	Item name	Description
1	Loading icon	The icon is displayed during update of the call status. As the call status is updated about every 2 seconds, the icon blinks about every 2 seconds. If the icon stays lit or off, WCL plus may not work. To check the operation of WCL plus, refer to 3-1.Application Type.
2	Receiver icon	With this icon, you can check the connection status with the receiver. If all registered receivers are connected, the color of the icon is green. If not, the icon is displayed in red. Even if no receiver is connected, the icon is displayed in red. Click the icon to switch between show/hide 4. Receiver name list.
3	Switching model name/number	Switch for changing the display position of 7 and 8. Each click toggles between ON and OFF. To display the call number larger, click the switch to OFF. This setting is saved in the Web browser, and will be selected automatically when the call status confirmation screen is opened next time.
4	Receiver list	It is a list of receiver names.All registered receiver names are displayed. The background color of each receiver indicates if the connection is completed. A white background color indicates that the receiver is connected, and a pink background color indicates that it is not connected. Click 2. Receiver icon to switch between show/hide. ■Display examples of receiver list Registered receivers: Test receiver 1, test receiver 2 (1, 2) 1. All registered receivers are connected  2. Test receiver 2 is not connected  3. No receiver is registered 
5	Call in the call group	Displays a maximum of 10 calls in the call groups in the order of occurrence. Each time a call occurs, it is displayed in order from top left to top right and from bottom left to bottom right. When the display size “Variable” is selected, up to 5 calls are displayed in full screen while changing the size of the windows to full screen. Displaying the windows of 6 or more calls switched to the same display as when “Fixed” is selected. If a call is cleared (by the (white)button 4 or an external input.4), the corresponding call becomes hidden and the calls that have occurred after the cleared call are crammed and displayed. When a call has already occurred and another call from the same transmitter occurs, the display location is not moved and only 9 is reset to 0 second. When the number of calls exceeds 10, the window where the 10th call on the bottom right is displayed in gray background, and the number of calls that were hidden are displayed largely. When“Blinking”is selected from the display method for calling by button/external input, the window called by the method blinks. Among the

		number of hidden items displayed in the window of the 10th call, if there are calls that are called by the selected method “Blinking”, the window displaying the number of hidden items blinks.
6	Call	The calls from one transmitter are represented in a rectangular window. The background color indicates which button (or externa input) of the transmitter was pressed (applied).
7	Call number	This is the value that connects the CH/SET/UNIT/ID of the transmitter that made the call. For example, if CH/SET/UNIT/ID is 2/1/2/5, the call number is 2125. Helps identify the transmitter that made the call.
8	Transmitter name	Displays the transmitter names corresponding to the call numbers (CH/SET/UNIT/ID). Register a transmitter name on the “Transmitter list screen” from the Administration screen. The maximum length for the transmitter name that can be displayed is 5 characters from the beginning. The transmitter name is displayed as -, if it is not registered.
9	Elapsed time since the call occurred	Displays the time elapsed since the call occurred. The minimum display unit is seconds, and the display increases with the passage of time to minutes, hours, and days. Example: 1day 1hour 1minute 1second

■Melody playback rules

If melody playback is "enabled" in the call group settings and the melody is selected when orange, red, or green lights up or blinks,the melody will be played each time a call is made.

If multiple calls occur and multiple colored windows are displayed, the melody to be played will be determined according to the "playback time" and "priority level" of the call group setting.

・When the playback time is "Consecutive".

The melody of the color set with the highest priority is played in a loop according to the "priority level" of the call group setting. If more than 10 calls have occurred, the melody in the color set with the highest priority among the orange, red, and green windows shown will be played (only the 1st-9th call will be considered).

・When the playback time is other than "Consecutive".

Of the orange, red, and green windows displayed, the melody of the color of the most recent call is played only once for the specified time from the beginning. "Priority level" is not taken into account.

Note that if all calls are cleared during melody playback, melody playback will stop.

■Blocking melody playback through web browser settings

If the melody is not played even if a call occurs even though the melody playback is "enabled",

Your web browser settings may block the melody playback.

Please change the setting of your web browser so that the melody is played.

Example of how to set up (details may vary depending on the version of your web browser)

1. Open the web browser settings window.
2. Under "Privacy and Security," click on "Site Settings."
3. Click on "Audio" under "Contents."
4. Add the URL of the call status confirmation screen to the site where audio is allowed to be played.
5. Display the call status confirmation screen and confirm that the melody is played (if it is already displayed, refresh it).

■Change of URL for call status confirmation screen

The call status confirmation screen does not require a login; anyone can view it as long as they know the URL. If the URL is known to an unintended party, the following steps can be taken to change the URL and invalidate the previous URL. After the URL change is completed, please notify the necessary persons of the changed URL.

1. Log in to WCL plus.
2. Open the group list.
3. Click the "Setting" button for the call group whose URL you wish to change.
4. Set "View" to "Disabled" and click the "Save" button.
5. Again, click the "Setting" button for the call group whose URL you wish to change.
6. Set "View" to "Enabled" and click the "Save" button.
7. Open the old call status confirmation screen URL in a web browser and verify that the call status is not displayed.
8. Click on the URL of the calling group whose settings you have changed and verify that the calling status is displayed.

*After execution of the above procedure, if you access to the previous URL, “Display token is an invalid value.” is displayed and the call status cannot be confirmed. If “Display token is an invalid value.” is displayed even after accessing to the URL that should be correct, ensure that the URL you are trying to access from the Call group list screen is correct.

3-31. Product Information screen

The application information, including the version information, can be checked.

3-32. History Data

In the history, there are a total of 3 types of data, 2 types of data related to calls from the transmitters and 1 type of data related to the I/O units.

○Calls from the transmitters

・Raw data transmitted from the transmitter.(below, referred to as “raw data”)

・Data processed to indicate the time from the occurrence of the state until the reset of the state.(below referred to as “processed data”)

* Call history data from the transmitter is saved regardless of the receiver's CH setting.

○I/O unit

・Data for each I/O port when the I/O port status of the I/O unit changes (below, referred to as” I/O unit data”)

■Raw data

Raw data transmitted from the transmitter.

Output destination folder : C:¥HERUTU¥WCL plus¥log

File name : raw_yyyyMMdd.csv (y: Year, M: Month, d: Day)

Character encoding : UTF-8(With Byte order mark)

The output of the CSV file is generated in days. When the date changes while WCL plus is running, a new file is created automatically and output is generated.

Information output in CSV file

A header line indicating the item does not exist. (History data starts at the first line.)

The data is listed in order below.

Item	Description	Example:
Received date	Data received date	2018/05/01
Received time	Data received time	12:00:00
Model	Receiver model	WCL-426R
Serial No.	Receiver serial No.	A00001
CH	Channel setting value (00 to 16)	01
SET	Transmitter SET No. (0 to 9)	1
UNIT	Transmitter UNIT No. (0 to 9)	1
KIKI/ID	Transmitter KIKI/ID No. (0 to 9)	1
Push button 1	Input value of Push button 1 on the transmitter (0 or 1)	1
Push button 2	Input value of Push button 2 on the transmitter (0 or 1)	0
Push button 3	Input value of Push button 3 on the transmitter (0 or 1)	0
Push button 4	Input value of Push button 4 on the transmitter (0 or 1)	0
External input 1	Input value of External input 1 on the transmitter (0 or 1)	0
External input 2	Input value of External input 2 on the transmitter (0 or 1)	0
External input 3	Input value of External input 3 on the transmitter (0 or 1)	0
External input 4	Input value of External input 4 on the transmitter (0 or 1)	0
Communication type[*1]	Communication type (0 or 5 or 6) 0: Undefined / 5: Normal transmission / 6: Event transmission	5

The input value “1” of “Transmitter Push buttons1-4” and “Transmitter External inputs 1 -4” indicates “Input is made”.

*1: Communication type

For AN426TⅡ, set the communication type with MODE setting DIP switch “2” of “Settings switches” on the transmitter.

（ON：Normal transmission / OFF：Event transmission）

For AN920T, this item is always set to “0: Undefined”, as it is not used.

Example: The receiver (Model: WCL-426R, Serial No.: A00001) receives the input signal from Push button 1 of the transmitter (CH: 01, SET: 2, UNIT: 3, KIKI: 4, Normal transmission) at 12:00:00, 05/01/2018.

File name : raw_20180501.csv

History data : 2018/05/01,12:00:00,WCL-426R,A00001,01,2,3,4,1,0,0,0,0,0,0,0,5

■Processed data

Data processed to indicate the time from the occurrence of the state until the reset of the state.

Output destination folder : C:¥HERUTU¥WCL plus¥log

File name : call_yyyyMMdd.csv (y: Year, M: Month, d: Day)

Character encoding : UTF-8(With Byte order mark)

Rules for collecting history data

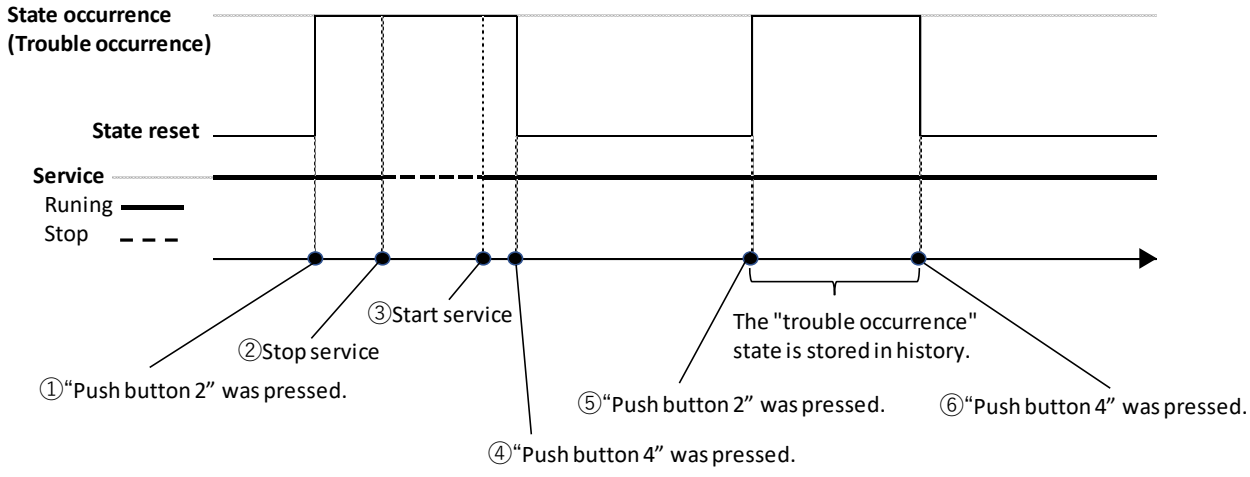
1. After “Push button 1” was pressed, “Push button 4” was pressed.
   →Reset the state of “Push button 1” (Returns to the state before trouble occurrence)
   The output of the history data from the occurrence of the state of “Push button 1” to the reset of the state is generated.

2. After “Push button 1” was pressed, “Push button 2” was pressed.
   →The state of “Push button 1” is reset and the state of “Push button 2” occurs.
   The output of the history data from the occurrence of the state of “Push button 1” to the reset of the state is generated. The output of the history data of “Push button 2” is not generated until any push button other than “Push button 2” is pressed.

3. After “Push button 1” was pressed, “Push button 1” was pressed again.
   →The state of “Push button 1” occurs and does not change. The output of the history data of “Push button 1” is not generated.

4. “Push button 4” was pressed when no trouble occurred.
   →The state remains unchanged. “Push button 4” is used for resetting the state.

The output of the CSV file is generated in days. When the date changes while WCL plus is running, a new file is created automatically and output is generated.
When the date changes during the time from the occurrence of the state until the reset of the state, output of the data is generated into the CSV file for the date of the state reset.
When stopping the service during the time from the state occurred until the state reset, the state will be abandoned. (Not stored in the history data.)
Example)
When pressing Push button 2 of the transmitter (①) and stopping the service while calling up trouble occurrence (②), the “trouble occurrence” state will be abandoned.
When starting the service during trouble occurrence(③), the state is not stored in history even after pressing Push button 4 and resetting the state. The occurrence/reset of the state during start- up of the service is stored in history (⑤,⑥).



Information output in CSV file

A header line indicating the item does not exist. (History data starts at the first line.)

The data is listed in order below.(*1)

Item	Description	Example:
Transmitter name	Transmitter name set in the transmitter settings file(*2)	Unit ASSY A
Model	Receiver model	WCL-426R
Serial No.	Receiver serial No.	A00001
CH	Channel setting value (00 to 16)	01
SET	Transmitter SET No. (0 to 9)	1
UNIT	Transmitter UNIT No. (0 to 9)	1
KIKI/ID	Transmitter KIKI/ID No. (0 to 9)	1
Communication type(*3)	Communication type (0 or 5 or 6) 0: Undefined / 5: Normal transmission / 6: Event transmission	5
State	State name set in the transmitter settings file(*4)	Parts out of stock
State occurrence date	Date when the state occurred	2018/04/28
State occurrence time	Time when the state occurred	15:00:00
State reset date	Date when the state was reset	2018/04/28
State reset time	Time when the state was reset	15:15:00
State maintaining time	Time elapsed from the occurrence of the state to the reset of the state(*5)	00:15:00

*1: If multiple receivers receive the same signal, the information of the receiver received first and the date and time of receiving the signal are reflected and output.

*2: If the transmitter is not registered, “-“ is displayed.

*3: Communication type

For AN426TⅡ, set the communication type with MODE setting DIP switch “2” of “Settings switches” on the transmitter.（ON：Normal transmission / OFF：Event transmission）

For AN920T, this item is always set to “0: Undefined”, as it is not used.

*4:When the transmitter is not registered, a default string is provided by the transmitter’s button or an external input.

Button1(Orange): KEY1

Button2(Red): KEY2

Button3(Green): KEY3

external input1: TERMINAL1

external input2: TERMINAL2

external input3: TERMINAL3

*5: When the elapsed time is 1,000 hrs., “1000:00:00” is displayed. There is no upper time limit.

Example: After the receiver (Model: WCL-426R, Serial No.: A00001) receives the input signal from Push button 1 of the transmitter (CH: 01, SET: 2, UNIT: 3, KIKI/ID: 4, Normal transmission) at 12:00:00, 05/01/2018, it receives the input signal from Push button 4 of same transmitter a minute later.

(Transmitter is not registered)

File name : call_20180501.csv

History data : -,WCL-426R,A0001,01,2,3,4,5,KEY1,2018/05/01,12:00:00,2018/05/01,12:01:00,00:01:00

■I/O unit data

Data recording each I/O port status when the I/O port status of the I/O unit changes.

If log output of the I/O unit is “Enabled” in basic settings, the log output is executed.

Output destination folder : C:¥HERUTU¥WCL plus¥log

File name : io_unit_yyyyMMdd.csv (y: Year, M: Month, d: Day)

Character encoding : UTF-8(With Byte order mark)

The output of the CSV file is generated in days. When the date changes while WCL plus is running, a new file is created automatically and output is generated.

Information output in CSV file

A header line indicating the item does not exist. (History data starts at the first line.)

The data is listed in order below.

Item name	Description	Example:
Status change date	Date when the I/O port status changes	2020/09/01
State change time	Time when the I/O port status changes	12:00:00
IP address	IP address of I/O unit	192.168.0.10
Port No.	Port No. of I/O unit	50001
I/O unit name	I/O unit name	Engine assembly line A
Each I/O port status	Each I/O port status represented by a bit string of 0(OFF) and 1(ON).	00000000000000100000000 00000000

Example: Immediately after initialization at 12:00:00, Sep.1, 2020, the I/O port 3 (input) of the I/O unit (IP address: 192.168.0.10, Port No.: 50001, I/O unit name: Engine assembly line A) changes from OFF to ON.

File name : io_unit_20180501.csv

History data : "2020/09/01","12:00:00","192.168.0.10","50001"," Engine assembly line A","00000000000000000000000000000100"

3-33. Backup of settings files

WCL plus manages all settings in a file. Backing up settings files makes it easier to migrate settings and recover in the event of file corruption, so regular backups are recommended.

The settings files are *.csv, *.json, and *.dat in C:¥HERUTU¥WCL plus¥.

3-34. Troubleshooting

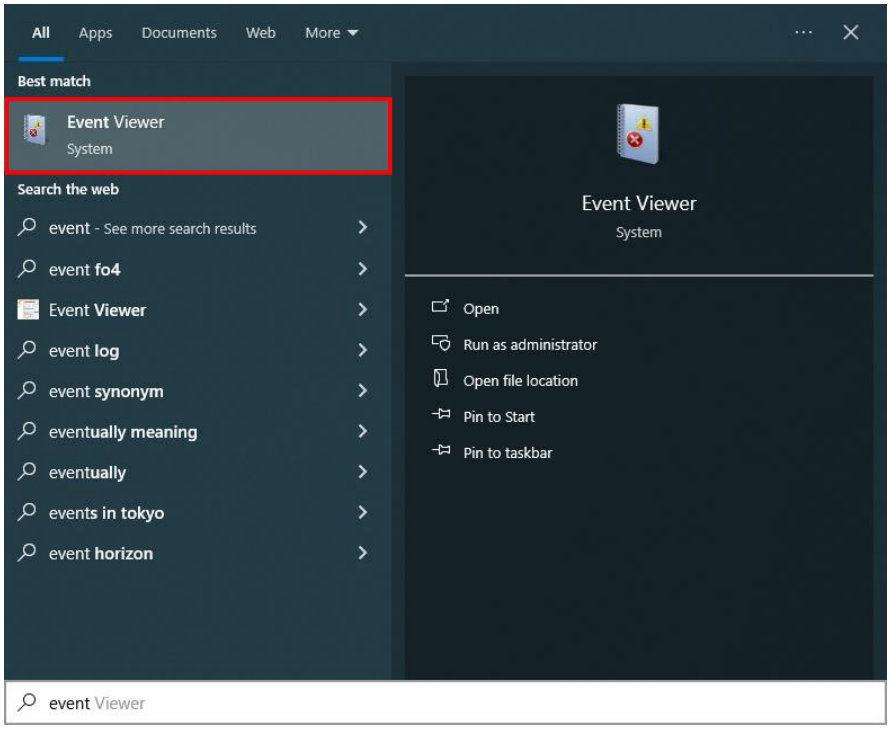
If there are problems, such as the Web browser display is abnormal, the performance is slow, the loading icon does not blink, or the screen terminates, “reload” or “restart” the Web browser to check if the performance is improved.

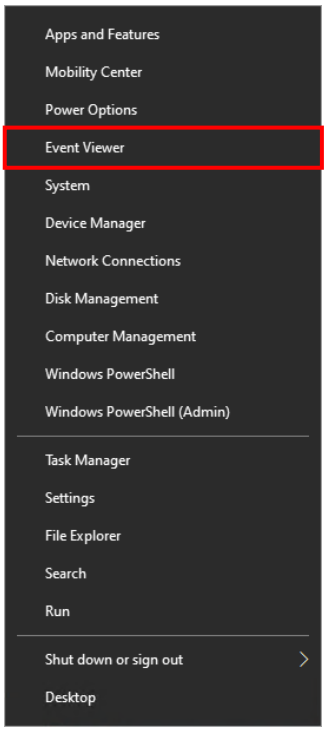
If the operation does not improve after "reloading" and "restarting" the Web browser, please restart WCL plus from the "services administrative tool" to see if the operation improves (the call status will be cleared after restarting).

If the behavior is still not improved, check the event log. The event log records a history of WCL plus's internal operation, which is useful for identifying the cause of malfunctions.

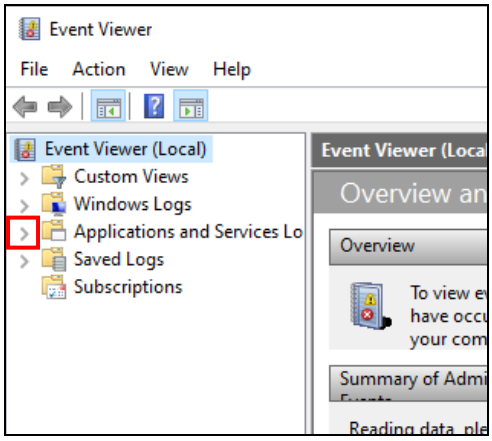
Windows Event viewer

Search for “Event” from Start menu, or right-click the start button and select “Event viewer”.

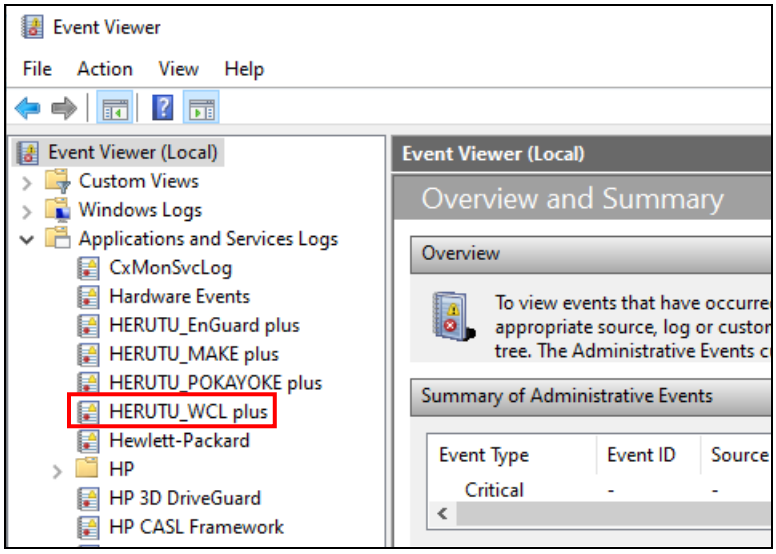




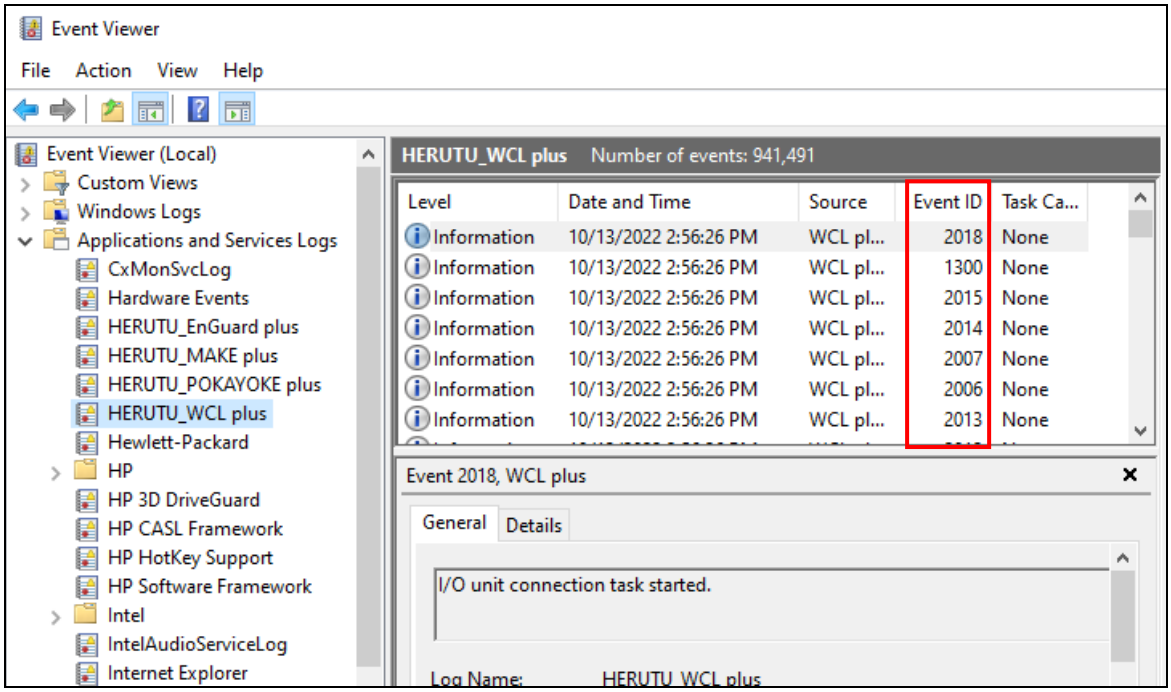
“Event Viewer” is displayed. Click “>” to the left of “Applications and Services Logs”.



Click “HERUTU_WCL_plus”.



Event log is displayed. For detailed information of event ID, refer to “Event ID list”.



Event ID list

Event ID	Event Description	Level	Remedy
1000	Application startup	Information	-
1001	Application shutdown	Information	-
1002	Enable the evaluation mode	Information	-
1003	Evaluation is expired	Information	-
1100	Receiver setting file reading start	Information	-
1101	Receiver setting file reading completed	Information	-
1200	Transmitter setting file reading start	Information	-
1201	Transmitter setting file reading completed	Information	-
1300	Start connecting to receiver	Information	-
1301	Start resetting connection to receiver	Information	-
1302	Try connecting to receiver	Information	-
1303	Establish connection to receiver	Information	-
1304	Reset connection to receiver	Information	-
1400	Start acquiring settings of receiver	Information	-
1401	Acquire settings of receiver	Information	-
1500	Create raw data file	Information	-
1600	Create call history file	Information	-
2000	Application settings file reading start	Information	-
2001	Application settings file reading completed	Information	-
2002	Settings file locking start	Information	-
2003	Settings file locking completed	Information	-
2004	Setting file upgrading start	Information	-
2005	Setting file upgrading completed	Information	-
2006	Basic setting file reading start	Information	-
2007	Basic setting file reading completed	Information	-
2008	I/O unit setting file reading start	Information	-
2009	I/O unit setting file reading completed	Information	-
2010	I/O unit operation settings file reading start	Information	-
2011	I/O unit operation settings file reading completed	Information	-
2012	Call group definition file reading start	Information	-
2013	Call group definition file reading completed	Information	-
2018	Start connecting to I/O unit	Information	-
2019	Try connecting to I/O unit	Information	-
2020	Establish connection to I/O unit	Information	-
2021	Start resetting connection to I/O unit	Information	-
2022	Reset connection to I/O unit	Information	-
2023	Start initialization of I/O unit	Information	-
2024	Complete initialization of I/O units	Information	
2032	Update of receiver settings completed	Information	-
2033	Update of receiver setting file completed	Information	-
2034	Update of transmitter settings completed	Information	-
2035	Update of transmitter settings file completed	Information	-
2036	Update of I/O unit settings completed	Information	-
2037	Update of I/O unit settings file completed	Information	-
2038	Update of basic settings completed	Information	-
2039	Update of basic settings file completed	Information	-
2040	Update of call groups settings completed	Information	-

2041	Update of call groups settings file completed	Information	-
2042	Update of I/O unit operation settings completed	Information	-
2043	Update of I/O unit operation settings file completed	Information	-
2044	Create the I/O unit operation history file	Information	-
9000 9001 9002 9003	Services initialization error	Error	Back up the settings files of the receiver and transmitter. Uninstall the WCL plus and reinstall it.
9004	Failed to upgrade the settings file	Error	The settings file is corrupt. Delete the settings file or replace it with a backup settings file and start WCL plus again.
9005	Cannot read basic settings file	Error	The settings file is corrupt. Delete the settings file or replace it with a backup settings file and start WCL plus again.
9006	Basic settings file format error		
9007	Cannot read LAN-I/O unit settings file		
9008	LAN-I/O unit settings file format error		
9009	Cannot read LAN-I/O unit operation settings file		
9010	LAN-I/O unit operation settings file format error		
9011	Cannot read call group definition file	Error	Built-in settings file is corrupt. Delete the settings file or replace it with a backup settings file and start WCL plus again.
9012	Call group definition file format error		
9013	Cannot read call group definition file	Error	The settings file is corrupt. Delete the settings file or replace it with a backup settings file and start WCL plus again.
9014	Call group definition file format error		
9018	Cannot connect to target I/O unit	Warning	・Confirm that the registered IP address and Port No. are correct. ・Make sure that the power of I/O unit is ON. ・Confirm that cables are connected to the I/O unit. ・Make sure that the network between the PC and I/O unit is properly working. ・Make sure that the network settings of I/O unit are properly configured.
9019	Connection with target I/O unit was accidentally reset	Warning	
9020	Failed to initialize LAN-I/O unit	Warning	
9027	Cannot generate history (I/O unit data)	Error	・Make sure that the PC's disk is not full. ・Check if the output destination folder (C:¥HERUTU¥WCL plus¥log¥) exists.
9028	Failed to create a system directory	Error	・Make sure that the PC's disk is not full. ・Confirm that C:¥ has write permissions under user permissions.
9029	Failed to update receiver settings file	Warning	・Make sure that the PC's disk is not full. ・Restart WCL plus and perform settings again.
9030	Failed to update transmitter settings file	Warning	
9031	Failed to update I/O unit settings file	Warning	
9032	Failed to update basic settings file	Warning	
9033	Failed to update call group settings file	Warning	
9034	Failed to update I/O unit operation settings file	Warning	
9100	Cannot read receiver settings file	Error	The settings file is corrupt. Delete the settings file or replace it with a backup settings file and start WCL plus again.
9101	Receiver settings file format error	Error	
9200	Cannot read transmitter settings file	Error	
9201	Transmitter settings file format error	Error	
9300	Cannot find valid network connections	Error	Make sure that the network cable is properly connected.
9302	Cannot connect to target receiver	Warning	・Make sure that the power of the receiver is ON. ・Make sure that the network cable is properly connected. ・Make sure that the network between the PC and the receiver is properly working. ・Make sure that the network settings of the receiver are properly configured.
9303	Connection with target receiver was accidentally reset	Warning	・Make sure that the power of the receiver is ON. ・Make sure that the network between the PC and the receiver is properly working. ・Check if no error is indicated by the LED of the receiver.
9400	Could not acquire settings from receiver	Warning	
9401	Received memory related error from receiver	Warning	Please contact Sales Department of HERUTU ELECTRONICS CORPORATION.
9402	Received wireless module error from receiver	Warning	
9403	Received communication command error from receiver	Warning	
9500	Cannot generate history (raw data)	Error	・Make sure that the PC's disk is not full. ・Check if the output destination folder (C:¥HERUTU¥WCL plus¥log¥) exists.
9600	Cannot generate history (processed data)	Error	

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