

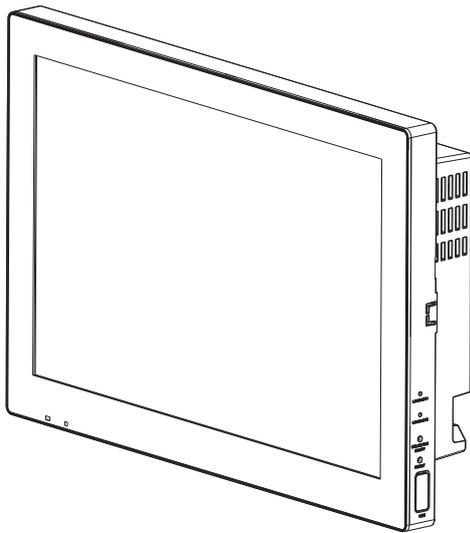
Air Conditioning Control System Centralized Controller



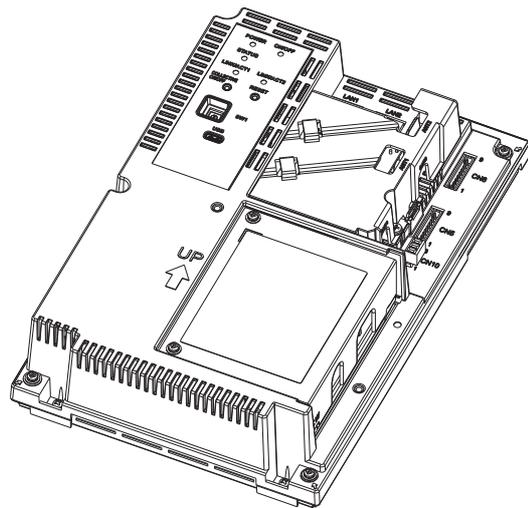
MODEL

AE-C400 EW-C50

Instruction Book – Detailed operations –



AE-C400



EW-C50

Proper installation is important for your safety and proper functioning of the units. Thoroughly read the following safety precautions prior to installation.

Safety notes are marked with **⚠WARNING** or **⚠CAUTION**, depending on the severity of possible consequences that may result when the instructions are not followed exactly as stated.

Before installing the controller, please read this Instruction Book carefully to ensure proper operation.
Retain this manual for future reference.



Manual Download



<http://www.mitsubishielectric.com/ldg/ibim/>

- en** Go to the above website to download manuals, select model name, then choose language.
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- es** Visite el sitio web anterior para descargar manuales, seleccione el nombre del modelo y luego elija el idioma.
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- ru** Чтобы загрузить руководства, перейдите на указанный выше веб-сайт; выберите название модели, а затем язык.
- 中<简> 前往上述网站下载手册，选择产品型号，然后选择语言。

MEMO

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Safety precautions

- ◆ Thoroughly read the following safety precautions prior to installation.
- ◆ Observe these precautions carefully to ensure safety.

 WARNING	: indicates a hazardous situation which, if not avoided, could result in death or serious injury.
 CAUTION	: indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

- ◆ After reading this manual, pass the manual on to the end user to retain for future reference.
- ◆ The user should keep this manual for future reference and refer to it as necessary. The manual should be made available to those who repair or relocate the product. Make sure that the manual is passed on to any future air conditioning system user.

■ General precautions

WARNING

Do not use the product where large amounts of oil, steam, organic solvents, or corrosive gases (such as ammonia, sulfuric compounds, and acids) are present or where acidic/alkaline solutions or special chemical sprays are used frequently. These substances may corrode the internal parts, resulting in electric shock, performance degradation, malfunction, smoke, or fire.

To reduce the risk of injury, electric shock, or fire, do not alter or modify the product.

To reduce the risk of injury, keep children away while installing, inspecting, or repairing the product.

To reduce the risk of fire or explosion, do not place flammable materials or use flammable sprays around the product.

To reduce the risk of short circuits, current leakage, electric shock, malfunction, smoke, or fire, do not wash the product with water or any other liquid.

To reduce the risk of electric shock, malfunctions, smoke, or fire, do not touch the electrical parts, USB memory device, or touch panel with wet hands.

To reduce the risk of injury or electric shock, before spraying a chemical around the product, stop the operation and cover the product.

If you notice any abnormality (e.g. a burning smell), stop the operation, turn off the product, and contact your dealer. Continuing the use of the product without correcting the abnormality may result in electric shock, malfunction, or fire.

Properly install all required covers to keep dust and moisture out of the product. Dust or moisture entering the product may result in electric shock, smoke, or fire.

 CAUTION

To reduce the risk of injury from broken glass, do not apply excessive force to the glass parts.

To reduce the risk of electric shock or malfunction, do not touch the touch panel, switches, or buttons with a pointed object.

To reduce the risk of injury, electric shock, or malfunction, do not touch sharp edges of parts.

Consult an authorized agency for proper disposal of the product. Inappropriate disposal can lead to environmental pollution.

■ Precautions for relocating or repairing the product** WARNING**

The product must be relocated or repaired only by qualified personnel. The user must not disassemble or modify the product. Improper installation or repair may result in injury, electric shock, or fire.

1. Introduction

The AE-C/EW-C controller is a Web-based system used to monitor and control air-conditioning and refrigeration units via a Web browser. The AE-C allows you to monitor and control the units from its LCD screen.

1-1. About this manual

- This manual explains basic controller operations and initial settings.
- For monitoring or operation from a Web browser on a computer, you need to log in to the controller from the Web browser.

Check the IP address, ID, and password of the AE-C/EW-C.

The factory default IP address is [192.168.1.1].

The default settings are as follows:

URL: <https://192.168.1.1/control/>

User ID: administrator

Password: Admin + DP

For DP, refer to the back cover of the Instruction Book (supplied with the controller).

ex.) When DP is 123456, the password will be Admin123456.

- When accessing the AE-C/EW-C from a computer for the first time, you need to import the root CA certificate.
- To make initial settings, you need to log in to the controller from the Initial Setting Tool.
The default settings are as follows:
User ID: initial
Password: Init + DP
For DP, refer to the back cover of the Instruction Book (supplied with the controller).
ex.) When DP is 123456, the password will be Init123456.
- Controller models are abbreviated as "AE-C" or "EW-C" in this manual.
- In this manual, unless otherwise specified, "unit" means general air-conditioning and refrigerant equipment.
- In this manual, an action of selecting an item by tapping it with your finger or a pen or by clicking it with a computer mouse is referred to as "tapping."
- Displayed items and screen transfer patterns may differ, depending on the equipment connected to the units and the licenses purchased by users.

1-2. Related manuals

- Installation Manual (supplied with the controller)
- Instruction Book (supplied with the controller)
- Instruction Book (Detailed operations): this manual

Note

- For the latest version of the manuals, refer to "Manual Download."

1-3. Trademarks and registered trademarks



MicroSDHC logo is a trademark of SD-3C, LLC.

Android and Google Chrome are trademarks of Google LLC.

BACnet is a trademark of ASHRAE.

IOS is a trademark or registered trademark of Cisco in the U.S. and other countries and is used under license.

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MODBUS is a registered trademark of Schneider Electric USA Inc.

Oracle and Java are registered trademarks of Oracle Corporation and/or its affiliates in the U.S. and other countries.

Other company names and product names shown in this manual may be trademarks or registered trademarks of their respective companies.

1-4. Compliance with applicable laws and regulations

- For information about the compliance of the controller with applicable laws and regulations, refer to the web site of Mitsubishi Electric Corporation.
- The apportioned electricity billing function uses our unique analysis method of energy apportionment, which is based on the analysis of the operation status data exchanged between the controller and the air conditioning units, not based on the actual measurement of the energy consumption of each air conditioning unit.

The entire energy consumption obtained by the apportioned electricity billing function is for internal use, and is not intended for disclosure to tenant owners.

1-5. Software details

Details of the open source integrated in the controller are available at the following URL:

[https://\(IP address of the controller\)/license/](https://(IP address of the controller)/license/)

The access to the above URL is allowed only to commissioning users.

1-6. Precautions regarding radio waves

The controller emits radio waves, which may affect peripheral devices in some cases.

Check that the radio waves do not cause any problems before use.

If any problems may be caused by the use of the controller, consult your dealer.

1-7. Action to be taken if the controller shows "!" or the controller does not behave as intended

If an exclamation mark "!" appears on the controller (including the web browser), see "Notice screen (Error list screen)." If the controller does not behave as intended, refer to "Before requesting repairs."

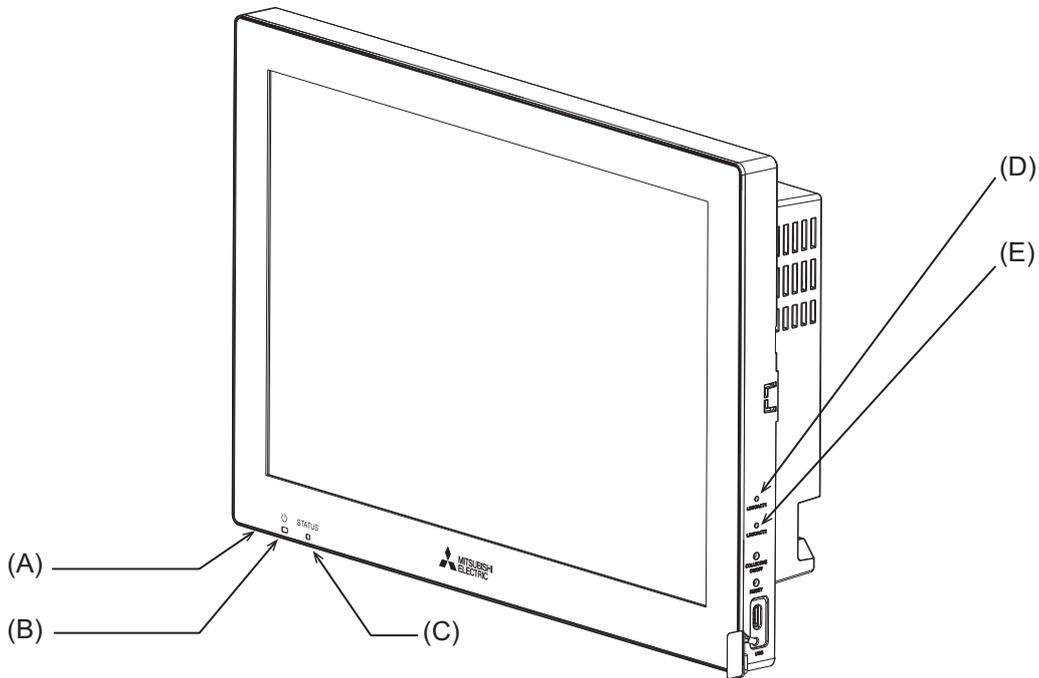
1-8. If a pop-up screen appears during use

An error or warning may appear on the screen. In this case, see "Pop-up screen."

2. Parts names

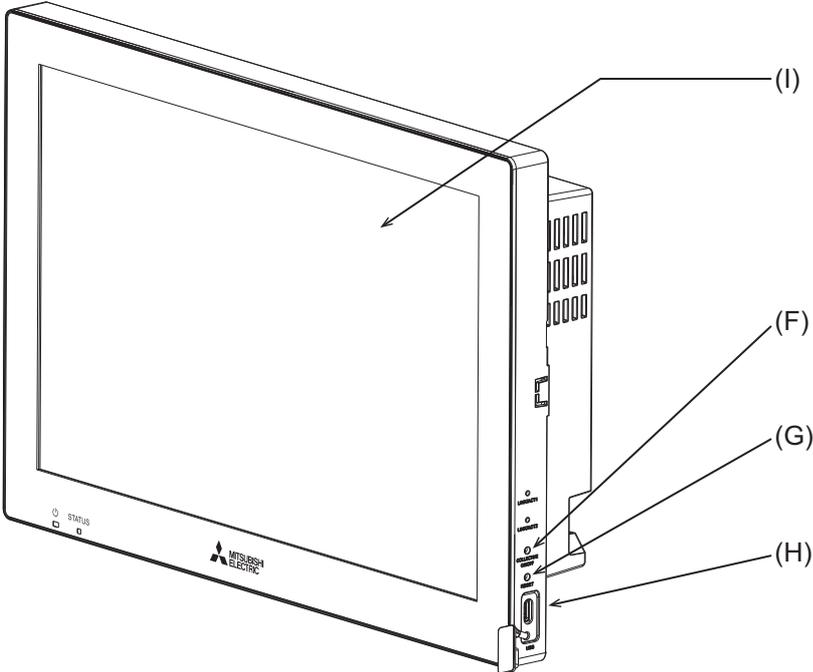
2-1. AE-C

■ AE-C (Front)



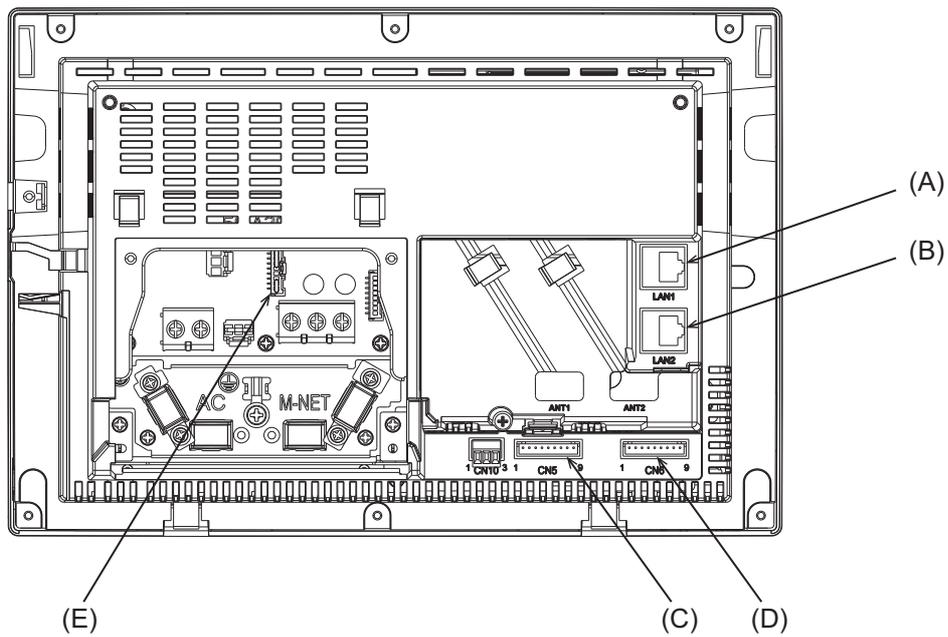
Item	
Function and description	
LED	
(A)	<p>①(Bottom)</p> <p>Lit in green: The controller is receiving power. Unlit: The controller is not receiving power.</p>
(B)	<p>⏻*1</p> <p>Lit in green: On Blinking in green: Error Unlit: Off</p>
(C)	<p>STATUS</p> <p>Indicates the status of the controller. The lamp is lit off, or lit or blinks in green during normal operation of the controller. If the lamp is blinking in orange, yellow, or pink, consult your dealer.</p>
(D)	<p>LINK/ACT1</p> <p>Blinking in white: Data transmission in progress (LAN1) Unlit: No data transmission</p>
(E)	<p>LINK/ACT2</p> <p>Blinking in white: Data transmission in progress (LAN2) Unlit: No data transmission</p>

*1 This LED shows the operation status of the devices controlled directly by the controller or the devices controlled by the entire system.

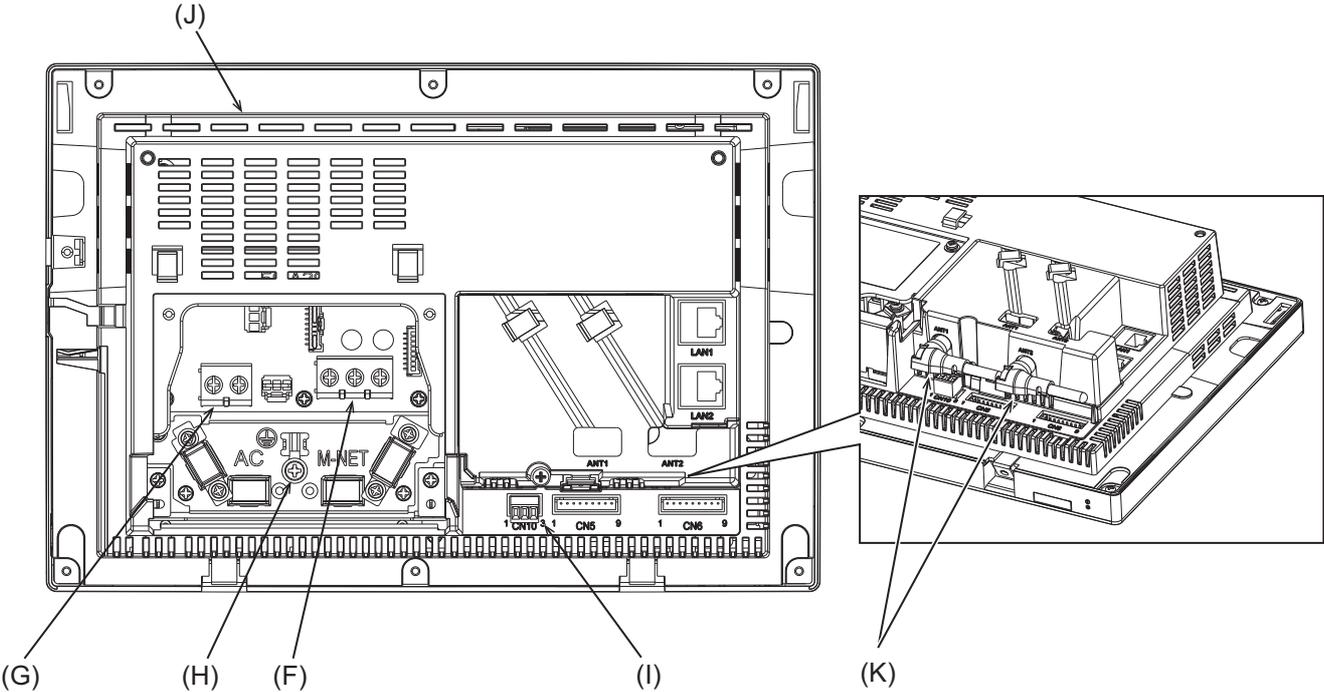


	Item
	Function and description
(F)	Push switch
	ON/OFF
	Pressing the switch turns the backlight on or off.
(G)	RESET
	Restarts the controller.
(H)	USB port (Type-C) (USB 3.1 Gen1)
	Remove the cover when connecting a device to the USB port.
	Leave the cover attached while not using the USB port.
(I)	LCD screen
	Touch panel

■ AE-C (Rear (without the service cover))

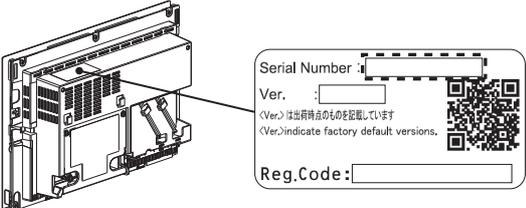


	Item
	Function and description
(A)	<p>LAN1</p> <p>LAN port for controlling air-conditioning and refrigeration units. Connects to other AE-C or EW-C with a LAN cable via a switching HUB.</p>
(B)	<p>LAN2</p> <p>LAN port for BACnet connection. Connects to a building management system with a LAN cable via a switching HUB.</p>
(C) (D)	<p>CN5 CN6</p> <p>Connector for connecting the external input/output adapter (PAC-YG10HA-E).</p>
(E)	<p>CN21</p> <p>Connector for M-NET power supply. Attaching this connector to the controller supplies power to M-NET from the controller. (The controller is shipped with the connector attached.) To supply power to M-NET from other devices, remove this connector.</p>



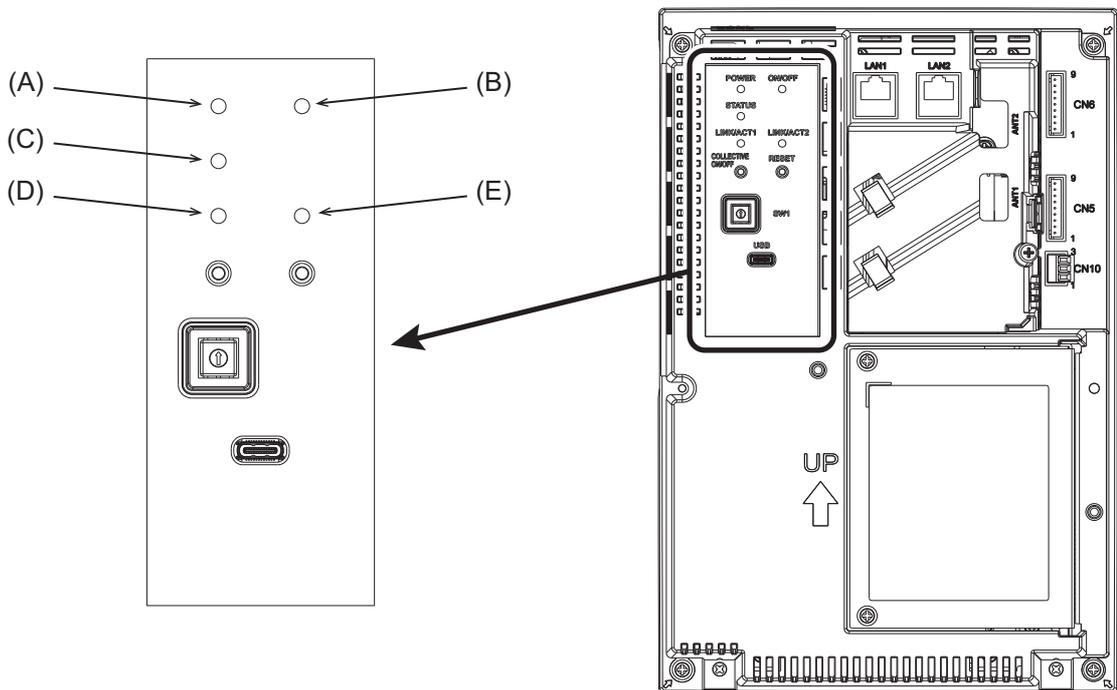
Item	Function and description
(F)	TB3 (M3.5) Terminal block for connecting the M-NET transmission cable.
(G)	TB1 (M3.5) Terminal block for connecting the AC power wires (L/L1, N/L2).
(H)	Ground (M4) Terminal for connecting the protective ground wire.
(I)	CN10 RS-485 connector for connecting a watt-hour meter.
(J)	Serial number label The serial label is on the rear of the controller. See the figure below.
(K)	Antenna for cellular communication Do not remove the antennas from the controller if they are already installed on the controller. After installing the controller, place the antennas to the default position as shown in the figure.

Serial number label



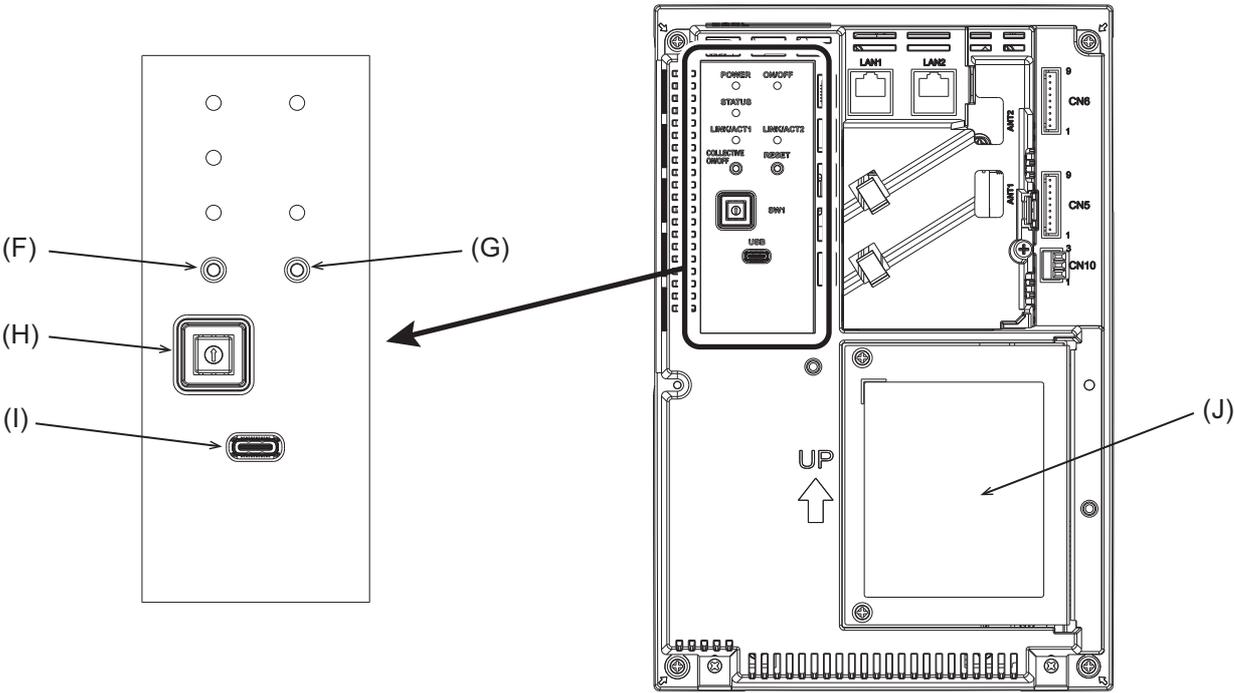
2-2. EW-C

■ EW-C (with the service cover)



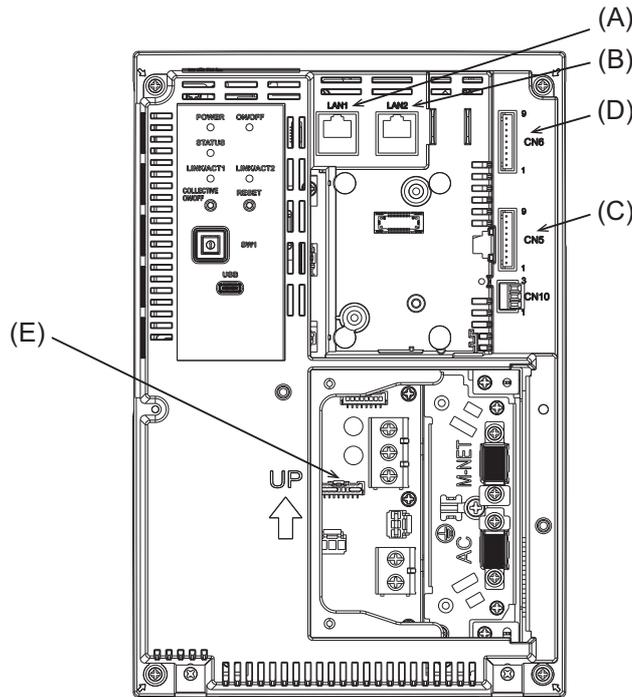
Item	
Function and description	
	LED
	(A) POWER
	(B) ON/OFF ^{*1}
	(C) STATUS
	(D) LINK/ACT1
(E) LINK/ACT2	
	<p>Lit in green: The controller is receiving power. Unlit: The controller is not receiving power.</p> <p>Lit in green: On Blinking in green: Error Unlit: Off</p> <p>Indicates the status of the controller. The lamp is lit off, or lit or blinks in green during normal operation of the controller. If the lamp is blinking in orange, yellow, or pink, consult your dealer.</p> <p>Blinking in orange: Data transmission in progress (LAN1) Unlit: No data transmission</p> <p>Blinking in orange: Data transmission in progress (LAN2) Unlit: No data transmission</p>

*1 This LED shows the operation status of the devices controlled directly by the controller or the devices controlled by the entire system.

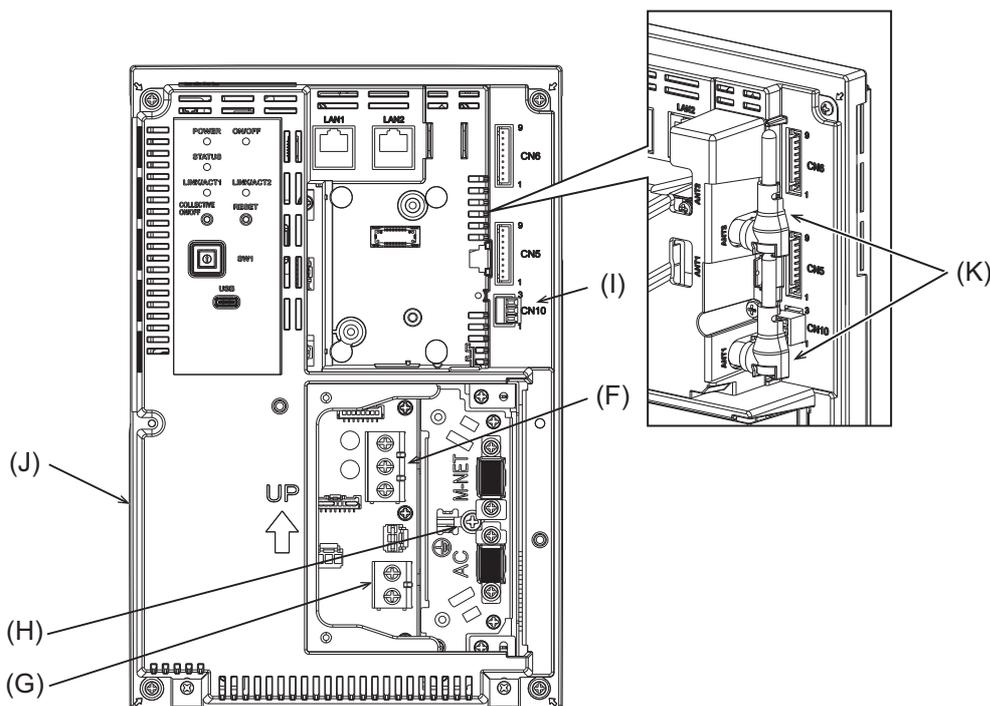


Item	
Function and description	
(F)	Push switch
	-
(G)	RESET Restarts the controller.
(H)	Rotary switch
	SW1 0 to F Sets the IP address of LAN1. When the rotary switch is set to 0 (factory default), the setting made with the Initial Setting Tool is valid. When the rotary switch is set to a value other than 0, the value set with the rotary switch is valid.
(I)	USB port (Type-C) (USB 3.1 Gen1)
	—
(J)	Service cover
	To be removed when the AC power cable or M-NET transmission cable is connected to the controller.

■ EW-C (without the service cover)

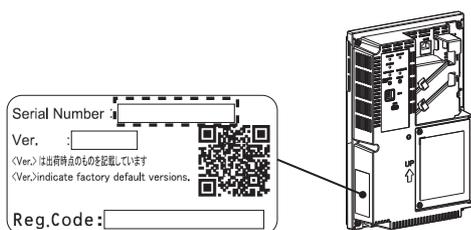


	Item
	Function and description
(A)	<p>LAN1</p> <p>LAN port for controlling air-conditioning and refrigeration units. Connects to other AE-C or EW-C with a LAN cable via a switching HUB.</p>
(B)	<p>LAN2</p> <p>LAN port for BACnet connection. Connects to a building management system with a LAN cable via a switching HUB.</p>
(C) (D)	<p>CN5 CN6</p> <p>Connector for connecting the external input/output adapter (PAC-YG10HA-E).</p>
(E)	<p>CN21</p> <p>Connector for M-NET power supply. Attaching this connector to the controller supplies power to M-NET from the controller. (The controller is shipped with the connector attached.) To supply power to M-NET from other devices, remove this connector.</p>



Item	Function and description
(F)	TB3 (M3.5) Terminal block for connecting the M-NET transmission cable.
(G)	TB1 (M3.5) Terminal block for connecting the AC power wires (L/L1, N/L2).
(H)	Ground (M4) Terminal for connecting the protective ground wire.
(I)	CN10 RS-485 connector for connecting a watt-hour meter.
(J)	Serial number label The serial label is on the rear of the controller. See the figure below.
(K)	Antenna for cellular communication Do not remove the antennas from the controller if they are already installed on the controller. After installing the controller, place the antennas to the default position as shown in the figure.

Serial number label



3. Before using the controller

- The controller must not be installed by the user. (Proper safety level and functionality may not be ensured.)
- The controller must be installed by the dealer (or the contractor) in accordance with the applicable laws, regulations, and certifications.
- When the installation work is completed, check that the initial settings are made properly.
- After the installation work is completed by a professional contractor, attend the commissioning performed by the dealer (or the contractor) to obtain instructions on correct use to ensure safety.
- Make sure that all the items on the checklist of the Installation Manual are ticked off by the dealer (or the contractor). Receive the checklist from the dealer (or the contractor).

MEMO

4. Usage (Common to all models: basic operation and display)

This chapter explains the items and buttons that are displayed on all screens, screen transition patterns, and error indications. For the operation procedure for each product, refer to the following sections.

Air conditioning unit:

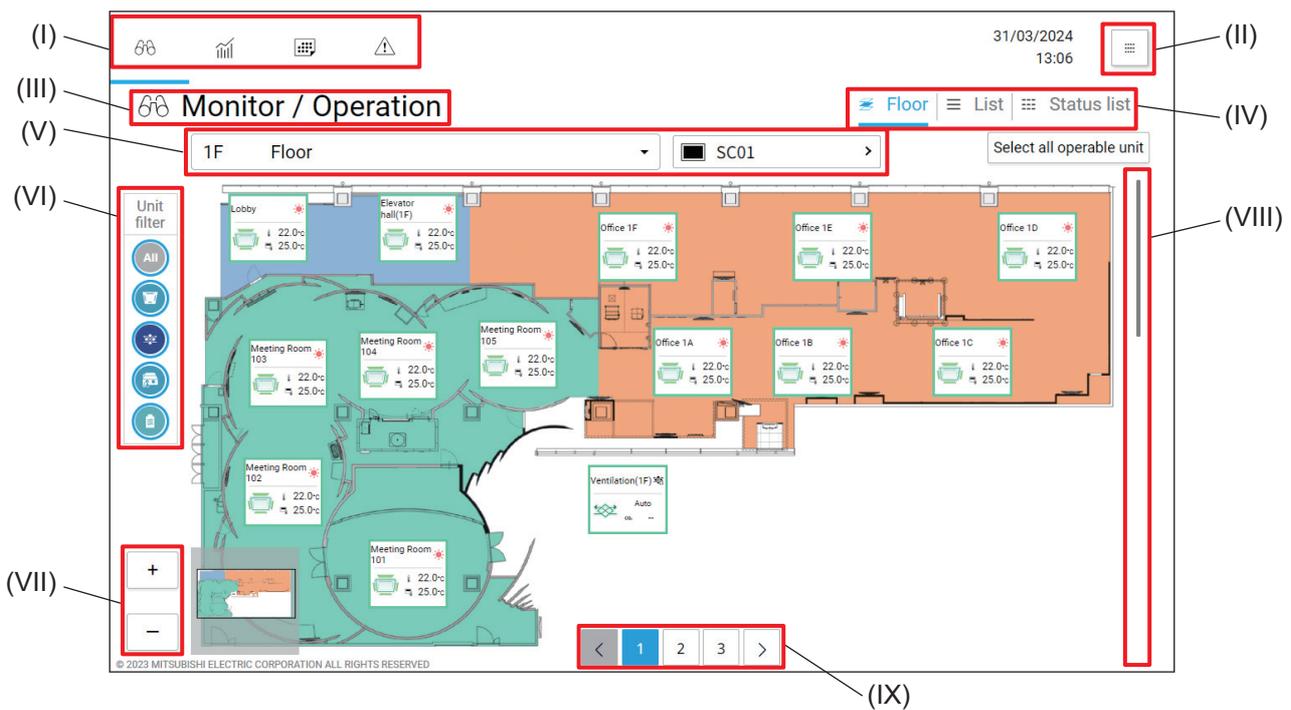
- "Usage (Air conditioning unit/ventilating unit: basic operation)"
- "Usage (Air conditioning unit/ventilating unit: schedule settings)"
- "Usage (Air conditioning unit/ventilating unit: operation management)"

Other products:

- "Usage (Products other than air conditioning unit: basic operation)"
- "Usage (Products other than air conditioning unit: schedule settings)"

4-1. Common items and buttons

Items and buttons that appear on all screens are explained below.

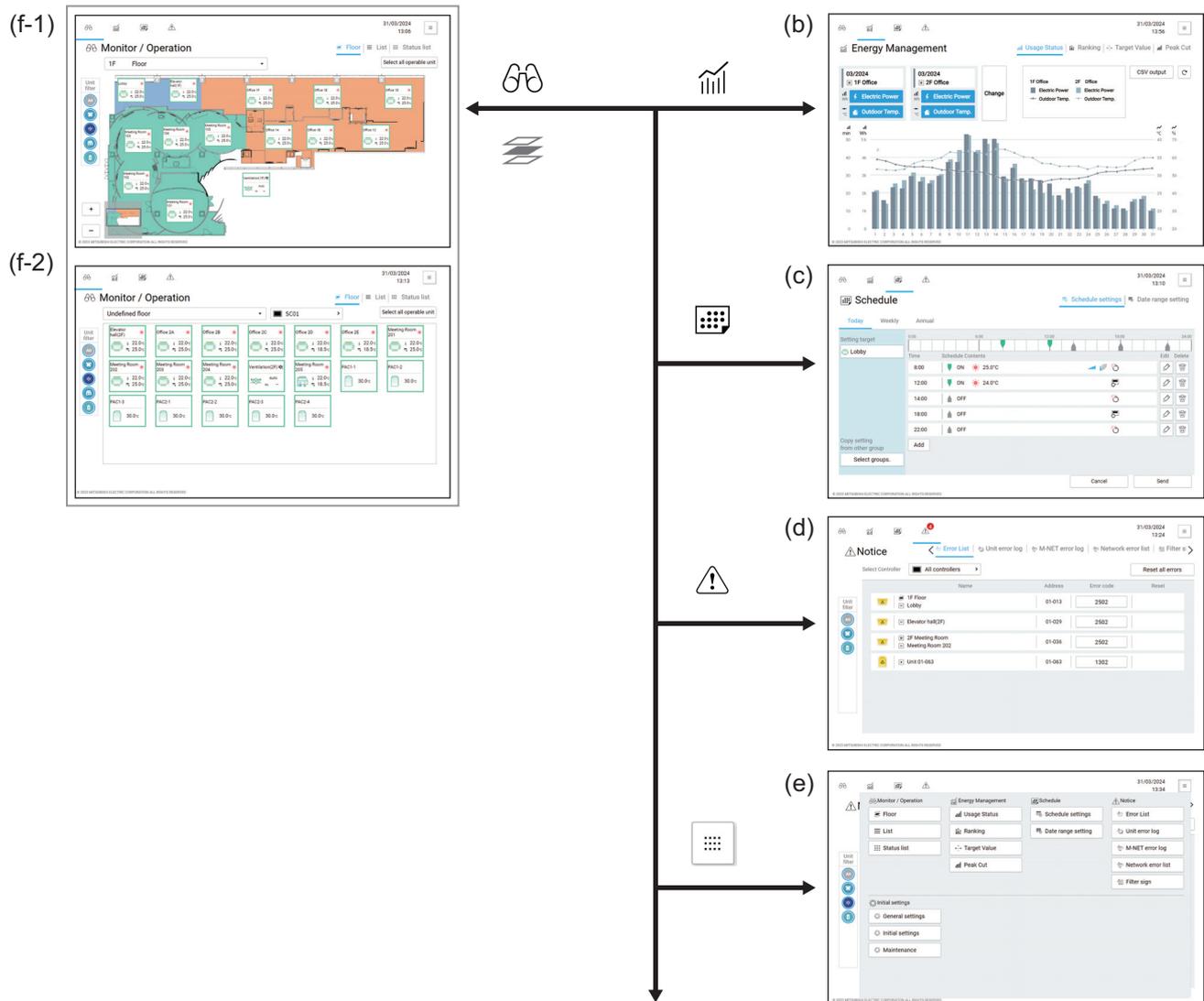


	Item	Function and description
(I)	Main menu	Tapping the buttons on the main menu will display the following screens. 【】 Monitor/Operation screen, which shows floor layouts. 【】 Energy Management screen, which shows the energy consumption status. 【】 Schedule screen, which shows the schedule settings. 【】 Notice screen, which shows the occurrence of filter signs and errors.

	Item	Function and description
(II)	Various operations and displays	<p> (Panorama view): Tapping this button will show the list of setting items.</p> <p> (Radio signal intensity): Tapping this button will show the radio signal intensity during communication.</p> <p> (Error alarm stop): Tapping this button will mute the error alarm. (Web browser only)</p>
(III)	Screen name	The name of the screen selected by the main menu buttons is displayed. Monitor/Operation, Energy Management, Schedule, Notice
(IV)	Sub menu	<p>Tapping the buttons on the sub menu will display the control or setting items.</p> <p>Different items appear on different screens.</p> <p>To view items not visible on the screen, tap [<] or [>] to scroll the screen to the left or the right.</p>
(V)	Floor name/selection button Controller name/selection button	<p>The functions of the item and the button to be displayed vary, depending on the screens selected by the main menu buttons.</p> <ul style="list-style-type: none"> • Floor name/floor selection button The name of the floor being monitored is displayed. Monitoring target floors are selectable from the pull-down menu. • Controller name/controller selection button Tapping [All controllers] and selecting the AE-C/EW-C number will display the units that are controlled by the selected AE-C/EW-C.
(VI)	Unit filter	Tap the buttons below to select the types of units to display. ex.) [ All]: All units, [ Indoor]: Indoor units, [ LOSSNAY]: LOSSNAY units
(VII)	[+]/[-]	These buttons appear on the floor layout screen, and zoom in or out the screen.
(VIII)	Scroll bar	<p>The scroll bar appears when the content of the screen is not entirely visible.</p> <p>Moving the scroll bar up or down will scroll the screen up or down.</p>
(IX)	Page number buttons	<p>These buttons appear when the content of the screen is not entirely visible on the scrollable area.</p> <p>Tapping the page number buttons or [<] or [>] will move the screen pages forward or backward.</p>

4-2. Screen transition

4-2-1. Air conditioning units

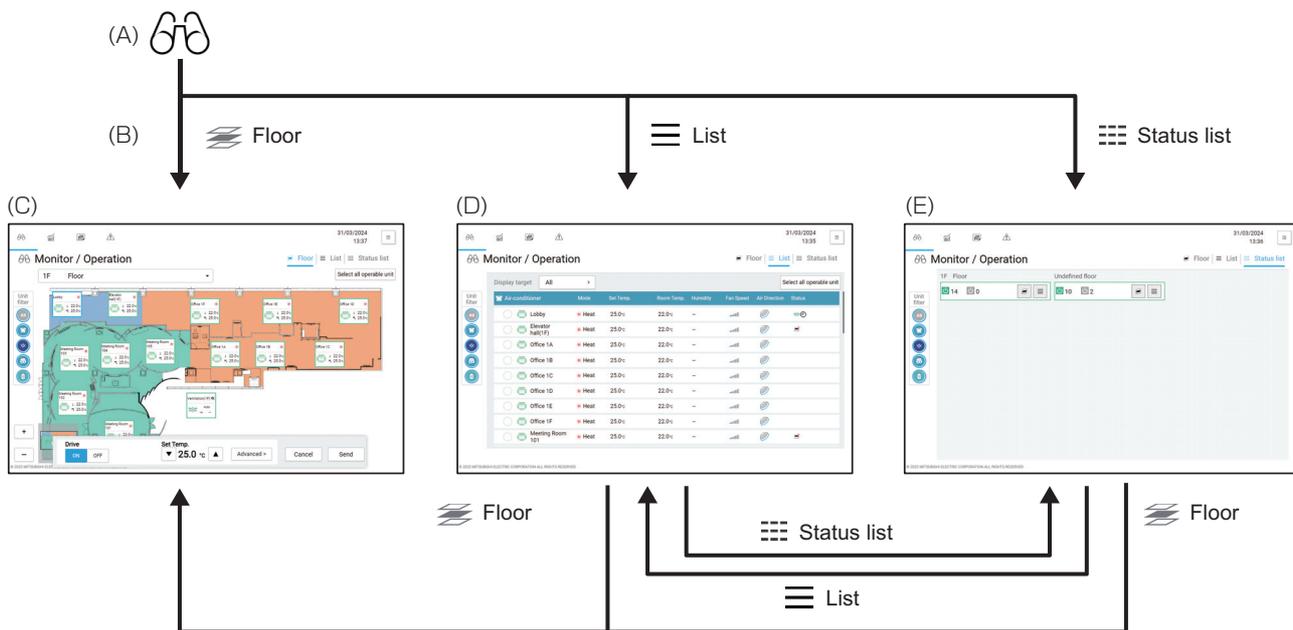


	Screen name	Function and description
(f-1) (f-2)	Monitor/Operation (Floor layout display)	This screen shows the units to be monitored or operated on a floor layout.
(b)	Energy Management	This screen shows the energy consumption status.
(c)	Schedule	This screen shows the schedule settings.
(d)	Notice	This screen shows the occurrence of filter signs and errors.
(e)	Panorama view	This screen shows the list of menu buttons.

4-3. Monitor/Operation screen

4-3-1. Monitor/Operation screen transition

Tapping  on the main menu (A) and then a button on the sub menu (B) will display the Monitor/Operation screen corresponding to the button tapped.



	Screen name	Function and description
(A)	Main menu	Tapping  will display the Monitor/Operation (floor layout) screen.
(B)	Sub menu	Floor layout screen, list screen, or status list screen will be displayed.
(C)	Floor layout screen	This screen shows the units to be monitored or operated on a floor layout.
(D)	List screen	This screen shows the list of the units to be monitored or operated. On this screen, floors or blocks that contain target units can be selected.
(E)	Status list screen	This screen shows the information about the units to be monitored or operated on each floor.

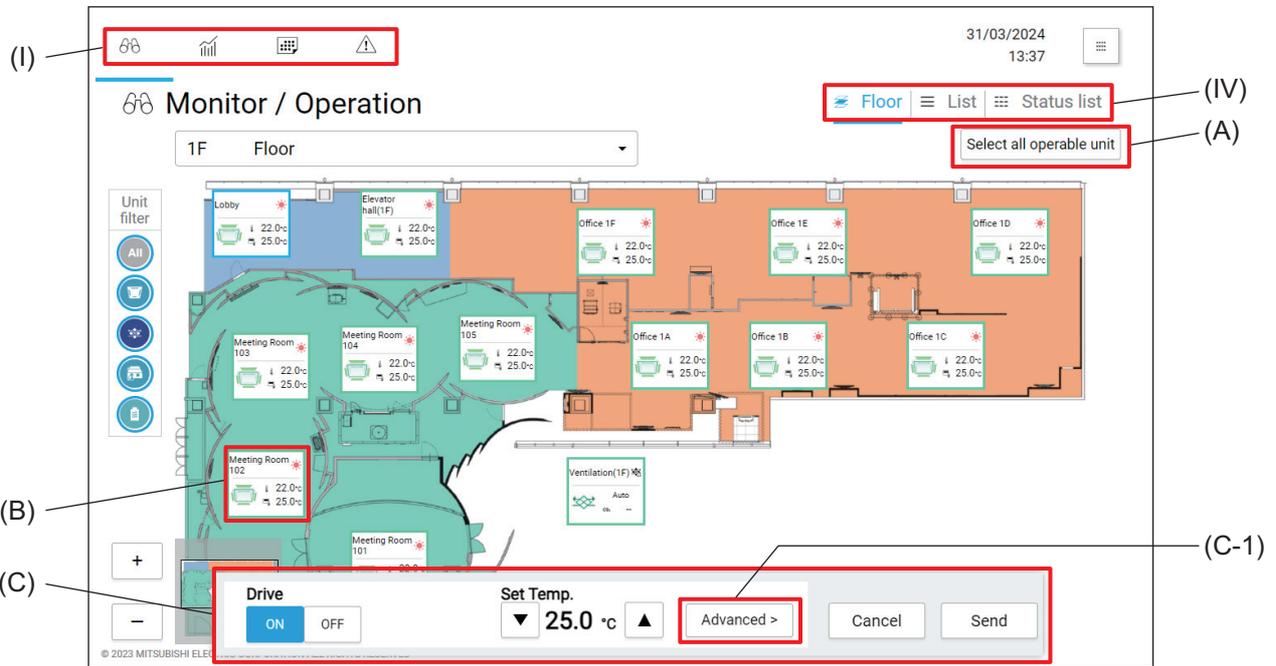
Note

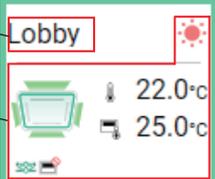
- When no floor layouts are registered, the icons are displayed in order of address.

4-3-2. Floor layout screen

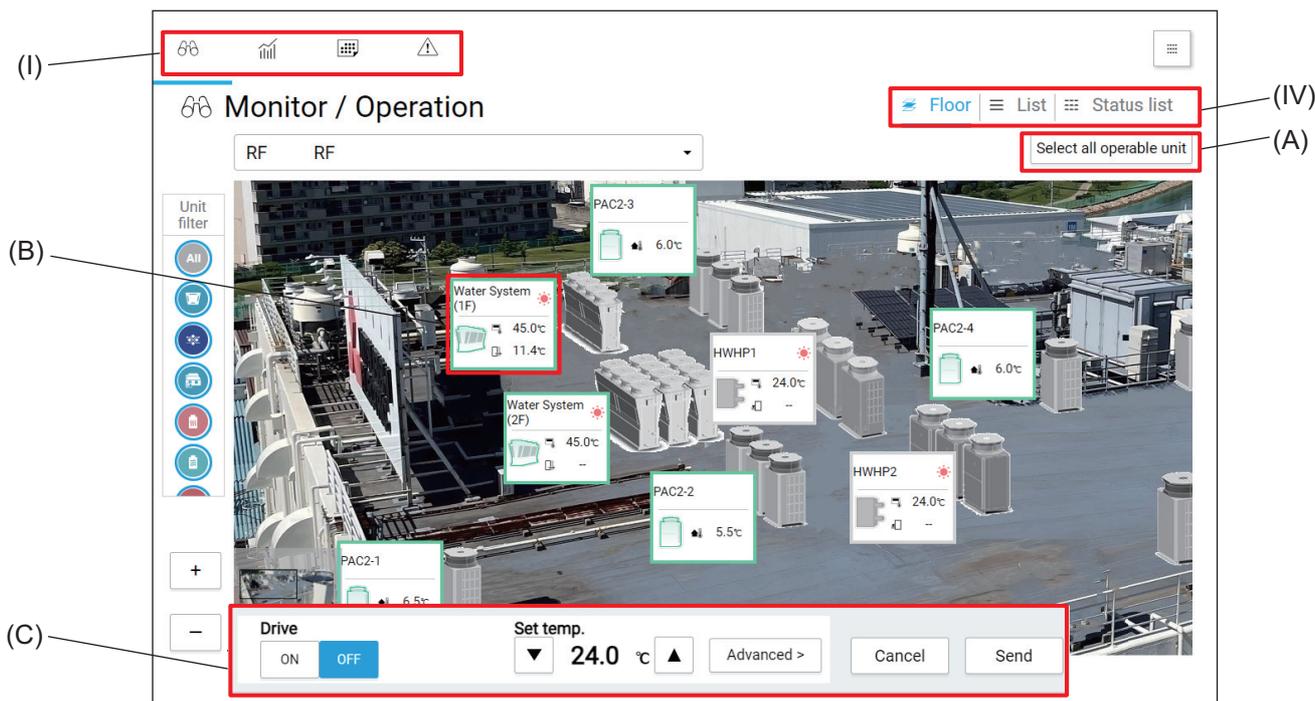
Tapping **[🏠]** on the main menu (I) and then **[🏠 Floor]** on the sub menu (IV) will display the floor layout screen.

[1] Air conditioning units



	Item	Function and description
(A)	[Select all operable unit]	Tapping this button will select all the displayed units to be controlled.
(B)	Unit icon	<p>Tapping this icon will show the unit information.</p> <div style="display: flex; align-items: center;"> <div style="margin-right: 10px;">(B-1)</div> <div style="border: 1px solid green; padding: 5px; margin-right: 10px;">Lobby</div> <div style="margin-right: 10px;">(B-2)</div> <div style="border: 1px solid green; padding: 5px;">  </div> </div> <p>(B-1) Group name The registered group name is displayed.</p> <p>(B-2) Unit operation status The operation status of the unit is displayed.</p>
(C)	Simple operation panel	<p>When a unit icon (B) is selected, the icon frame will turn blue and the Simple operation panel (C) will appear. Basic control, such as turning on/off the unit, is possible on the Simple operation panel.</p> <p>Tapping [Advanced] (C-1) will display the Advanced setting screen.</p>

[2] Products (outdoor units on the heat source side) other than air conditioning units

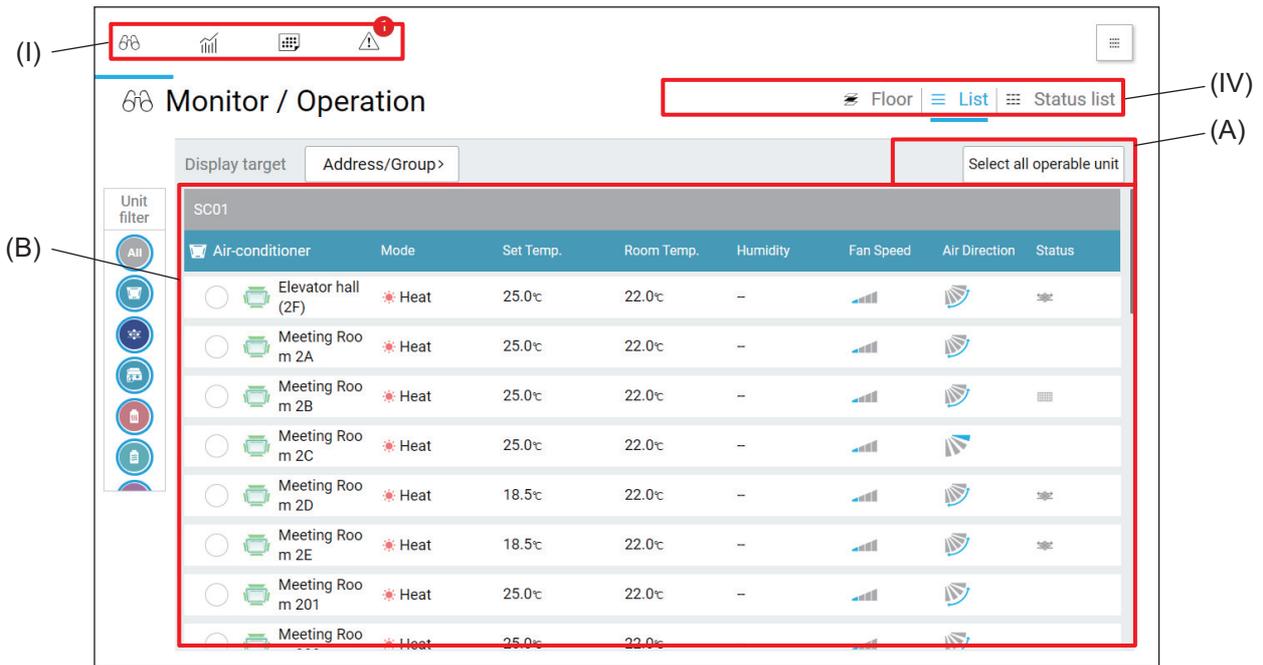


	Item	Function and description
(A)	[Select all operable unit]	Tapping this button will select all the displayed units to be controlled.
(B)	Unit icon	<p>Tapping this icon will show the unit information.</p> <div style="border: 1px solid gray; padding: 5px; margin: 10px 0;"> <p>(B-1) Chiller 🔴</p> <p>(B-2) 45.0°C 11.4°C</p> </div> <p>(B-1) Group name The registered group name is displayed.</p> <p>(B-2) Unit operation status The operation status of the unit is displayed.</p>
(C)	Simple operation panel	<p>When a unit icon (B) is selected, the icon frame will turn blue and the Simple operation panel (C) will appear. Basic control, such as turning on/off the unit, is possible on the Simple operation panel.</p> <p>Tapping [Advanced] (C-1) will display the Advanced setting screen.</p>

4-3-3. List screen

This screen lists the operation statuses and error statuses of the units to be monitored.

Tapping **[🏠]** on the main menu (I) and then **[☰ List]** on the sub menu (IV) will display the List screen.



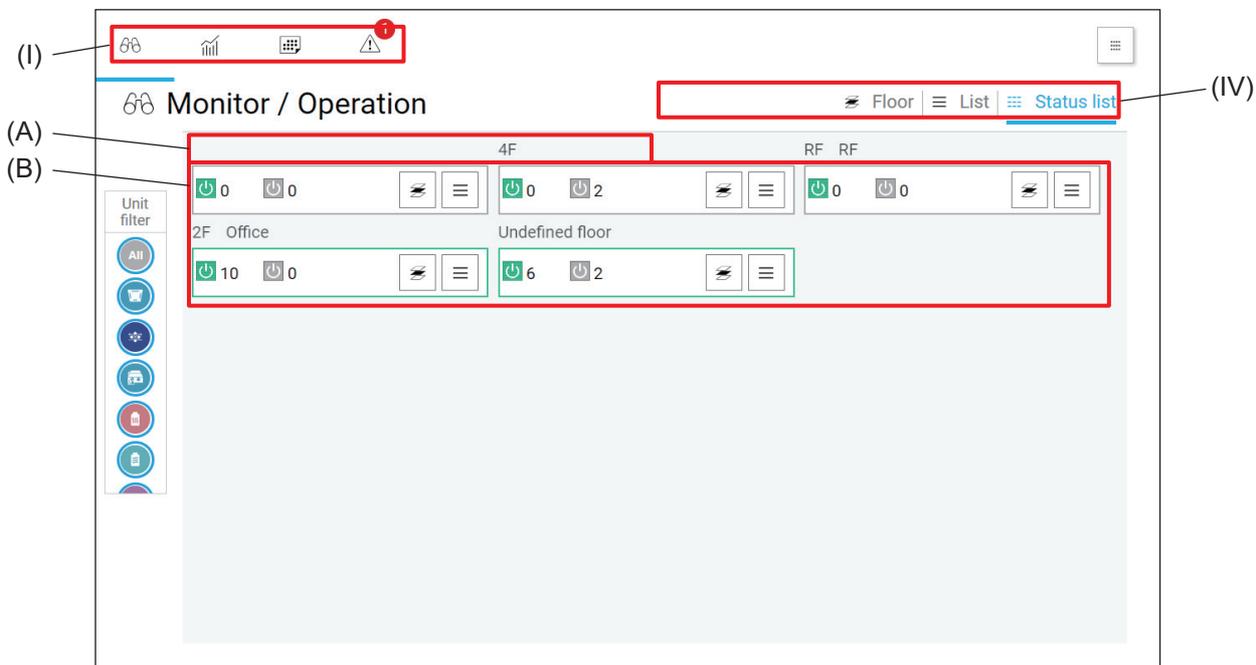
	Item	Function and description
(A)	[Select all operable unit]	Tapping this button will select all the displayed units to be controlled.
(B)	List	The operation statuses and error statuses of the units to be monitored are listed.

4-4. Status list screen

This screen shows the statuses of all the units to be monitored. Operation statuses (ON/OFF) of the units and the presence/absence of errors on each floor are displayed.

Tapping on the main menu (I) and then **Status list** on the sub menu (IV) will display the Status list screen.

While the screen is being displayed, any status changes will not be reflected on the information shown on the screen.



	Item	Function and description
(A)	Floor number/floor name	The floor number and the floor name are displayed.
(B)	Status	<p>The numbers of indoor units, LOSSNAY units, and OA handling units (direct expansion type with built-in heater/humidifier) registered to each floor are counted based on their operation status (ON, OFF, or error), and the counts are listed.</p> <p> (green frame) shows that there are units that are ON or under test run. (gray frame) shows that all units are OFF. (yellow frame) shows that there are units that have an error.</p> <p> shows the number of units that are ON or under test run. shows the number of units that are OFF. shows the number of units that have an error.</p>

4-5. Pop-up screen

When using a model that uses R32 refrigerant or low-temperature equipment, an error or warning may be displayed on the screen.

For details, refer to each chapter below.

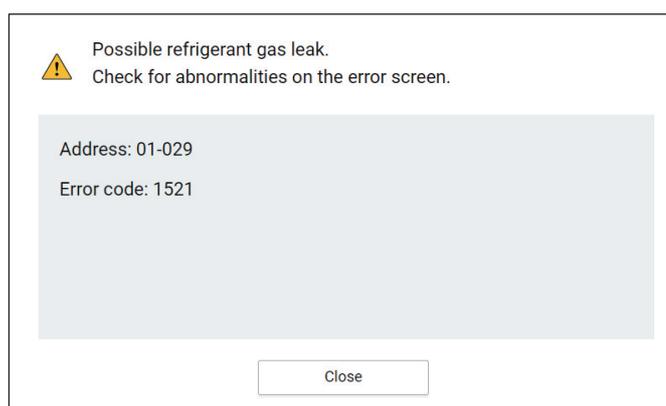
4-5-1. R32 refrigerant leak detection screen

If the refrigerant sensor detects a leak when using R32 refrigerant, the refrigerant leak notification screen appears, the buzzer sounds, and the LED lights up pink.

If this screen appears, follow the procedure below.

Note

- The error code differs depending on the leak detection sensor.



Step

1. Display the error list screen.

Open the error list screen and identify which unit, group, or chlorofluorocarbon alarm detected the refrigerant leak.

- Open the window to ventilate the room where the identified unit is installed.
- Contact the equipment manager and check the chlorofluorocarbon alarm, refrigerant sensor, and refrigerant system.
- The error code and leak detection sensor are related as follows.

Error code	Error code detection sensor
1521 1522	Leak detected by indoor unit built-in sensor
1524	Leak detected by chlorofluorocarbon alarm

2. Turn the buzzer off.

Check the Notice screen (error list screen) and turn the buzzer off.

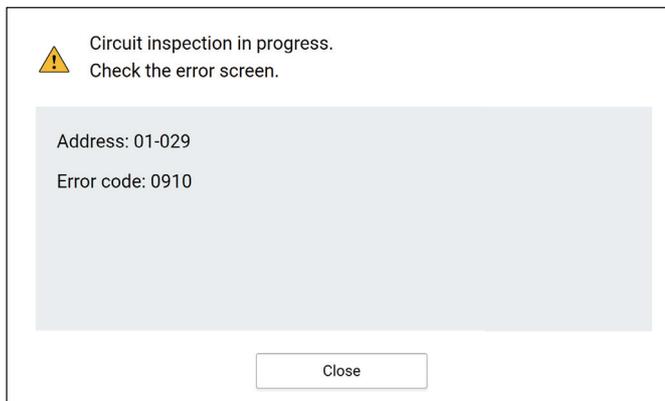
4-5-2. Refrigerant gas leak error (during circuit inspection) screen

When conducting a circuit inspection while using R32 refrigerant, the refrigerant gas leak error (during circuit inspection) screen appears and the buzzer sounds.

If this screen appears, follow the procedure below.

Note

- The error code differs depending on the leak detection sensor.



Step

1. Display the error list screen.

Open the error list screen and identify which unit, group, or chlorofluorocarbon alarm detected the circuit test refrigerant leak.

- The leak detection sensor and error code are related as follows.

Error code	Error code detection sensor
0910 0911	Inspection code notifying that the indoor unit for which a circuit inspection was run is currently running a circuit inspection
0912	Inspection code notifying that the shut-off valve kit or chlorofluorocarbon alarm interface connected to the chlorofluorocarbon alarm for which a circuit inspection was run is currently running a circuit inspection

2. Turn the buzzer off.

Check the Notice screen (error list screen) and turn the buzzer off.

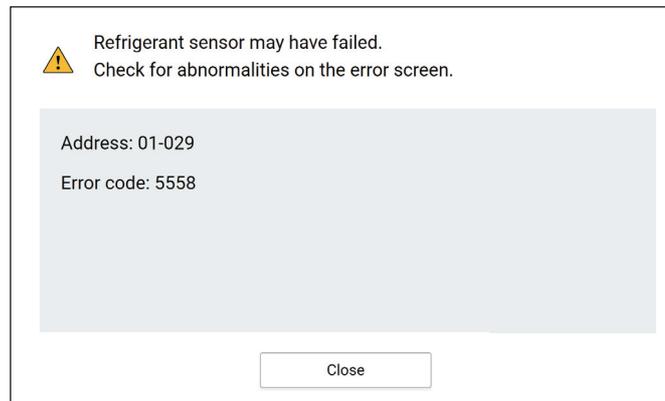
Note

- Once the buzzer is reset and turned off, the same error will not trigger the buzzer again. Be sure to contact the equipment manager and perform an inspection and check.

4-5-3. Refrigerant sensor failure notification screen

If a malfunction is detected on the air conditioning unit refrigerant detection sensor or chlorofluorocarbon alarm, the refrigerant sensor failure notification screen appears.

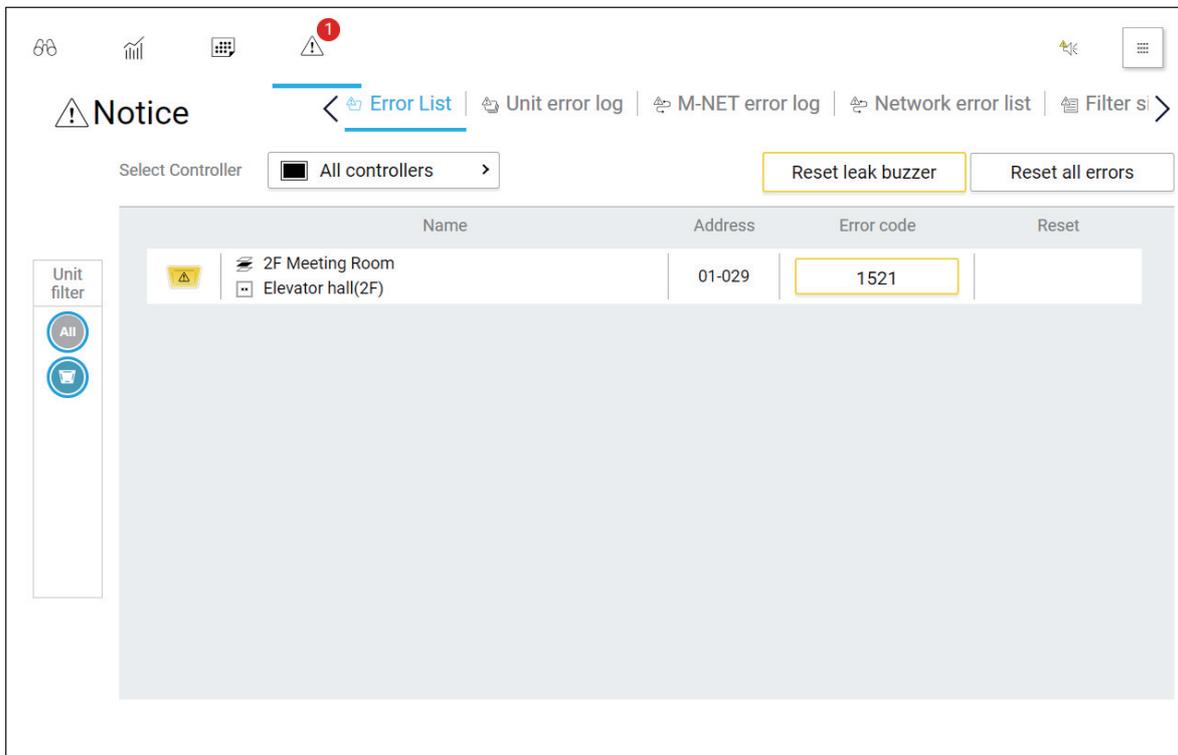
If this screen appears, contact the equipment manager and inspect the refrigerant detection sensor. Follow the instructions in "Turning the alarm off" and turn the buzzer off.



4-5-4. Turning the alarm off

On the error list screen, tap **[Reset leak buzzer]**, then tap **[Reset]**.

Once the buzzer is reset and turned off, the same error will not trigger the buzzer again. Be sure to contact the equipment manager and perform an inspection and check.



4-6. Notice screen

4-6-1. Notice screen transition

Tapping [⚠️] (A) on the main menu and then a button on the sub menu (B) will display the screen corresponding to the button pressed, such as Filter sign screen, error list screen, or error log screen.



	Screen name	Function and description
(A)	Main menu	Tapping [⚠️] will display the Notice screen.
(B)	Sub menu	Filter sign screen, error list screen, network error list screen, unit error log screen, or M-NET error log screen will be displayed.
(C)	Filter sign	The indoor units and the ventilating units that bear a filter sign will be listed.
(D)	Error list	Units that have an error are listed.
(E)	Network error list	Units that have a network error are listed.
(F)	Unit error log	Error logs are listed.
(G)	M-NET error log	Units that have an M-NET communication error are listed.

4-6-2. Filter sign screen

Tapping [**⚠ Filter sign**] on the main menu and then [**📄 Filter sign**] (IV) on the sub menu will display the list of the indoor units and the ventilating units that bear a filter sign.



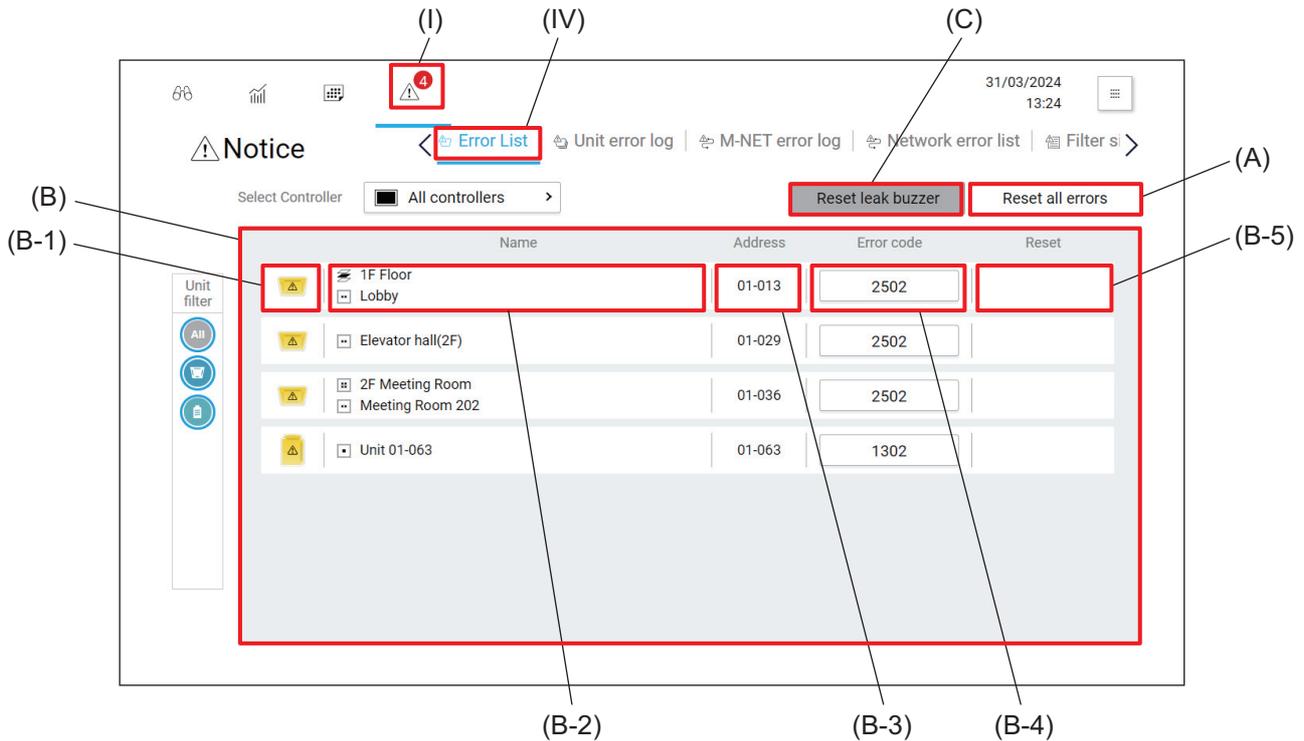
	Item	Function and description
(A)	[Reset all errors]	Tapping this button will clear all filter signs.
(B)	Filter sign list	The indoor units and the ventilating units that bear a filter sign will be listed.
(B-1)	Unit icon	Each icon shows an indoor unit or a ventilating unit.
(B-2)	Name	The name and the number of the group containing the indoor units or the ventilating units that bear a filter sign are displayed.
(B-3)	Address	The number of the AE-C/EW-C that controls the indoor unit or the ventilating unit that bear a filter sign and the address of the indoor unit or the ventilating unit are displayed. ex.) 01-012: 01 is the number of the AE-C/EW-C, and 012 is the address of the indoor unit or the ventilation unit.
(B-4)	[Reset sign]	Tapping this button will clear the filter sign.

Note

- Resetting the filter signs by **[Reset sign]** should be performed after cleaning the unit.
- After resetting the filter signs, it can take up to 1 hour for the filter signs shown on the re-remote controller at hand to disappear. After resetting the filter signs shown on the remote controller at hand, it can also take up to one hour for filter signs shown on the AE-C/EW-C to disappear.
- While the filter signs are being reset, a message "Resetting..." may appear.

4-6-3. Error list screen

Tapping [] on the main menu (I) and then [] **Error List** on the sub menu (IV) will display the list of the units that have an error and the units that have failed to communicate with the AE-C/EW-C.



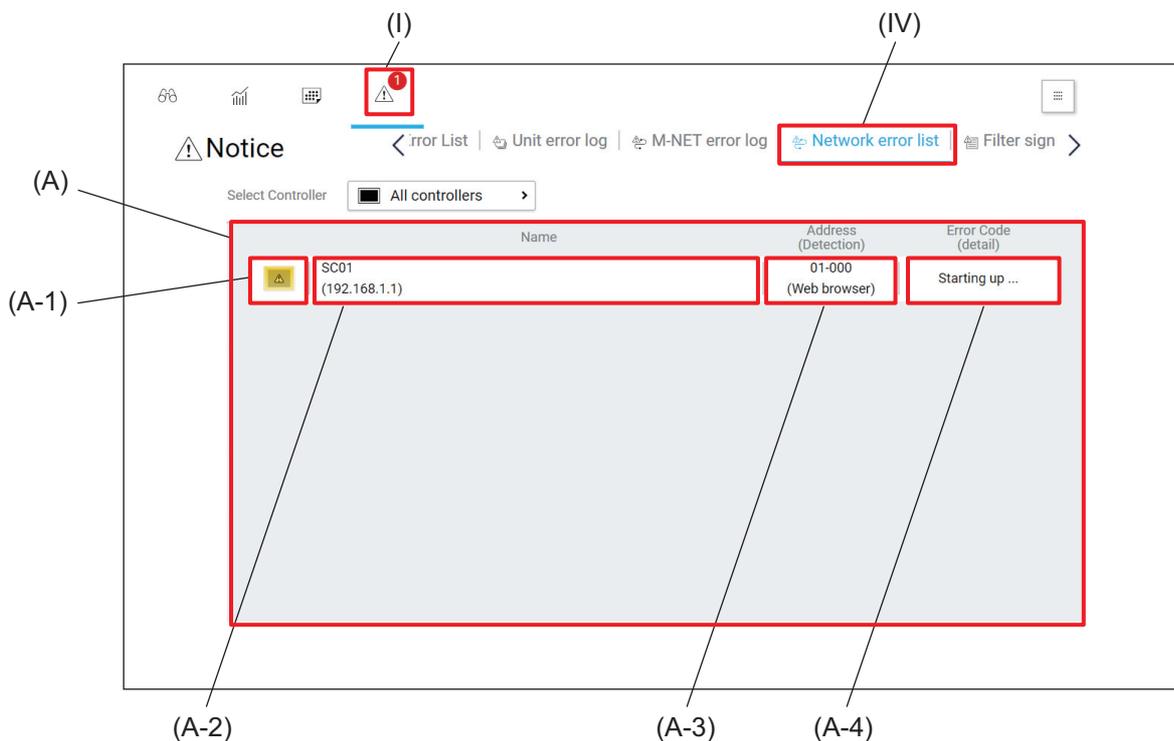
	Item	Function and description
(A)	[Reset all errors]	Tapping this button will clear all errors.
(B)	Error list	Units that have an error are listed.
(B-1)	Unit icon	Each icon shows a unit.
(B-2)	Name	The name and the number of the group containing the units that have an error are displayed.
(B-3)	Address	The number of the AE-C/EW-C that controls the unit that has an error and the address of the unit are displayed. ex.) 01-012: 01 is the number of the AE-C/EW-C, and 012 is the address of the unit.
(B-4)	Error Code	Tapping the error code will display the details of the error.
(B-5)	[Reset error]	Tapping the button displayed here will clear the error.
(C)	[Reset leak buzzer]	Tapping the button will display the leak buzzer reset dialog to stop the buzzer.

Note

- The reset unit will stop.
- Resetting errors will take place on the controllers selected in the Select Controller box.

4-6-4. Network error list screen

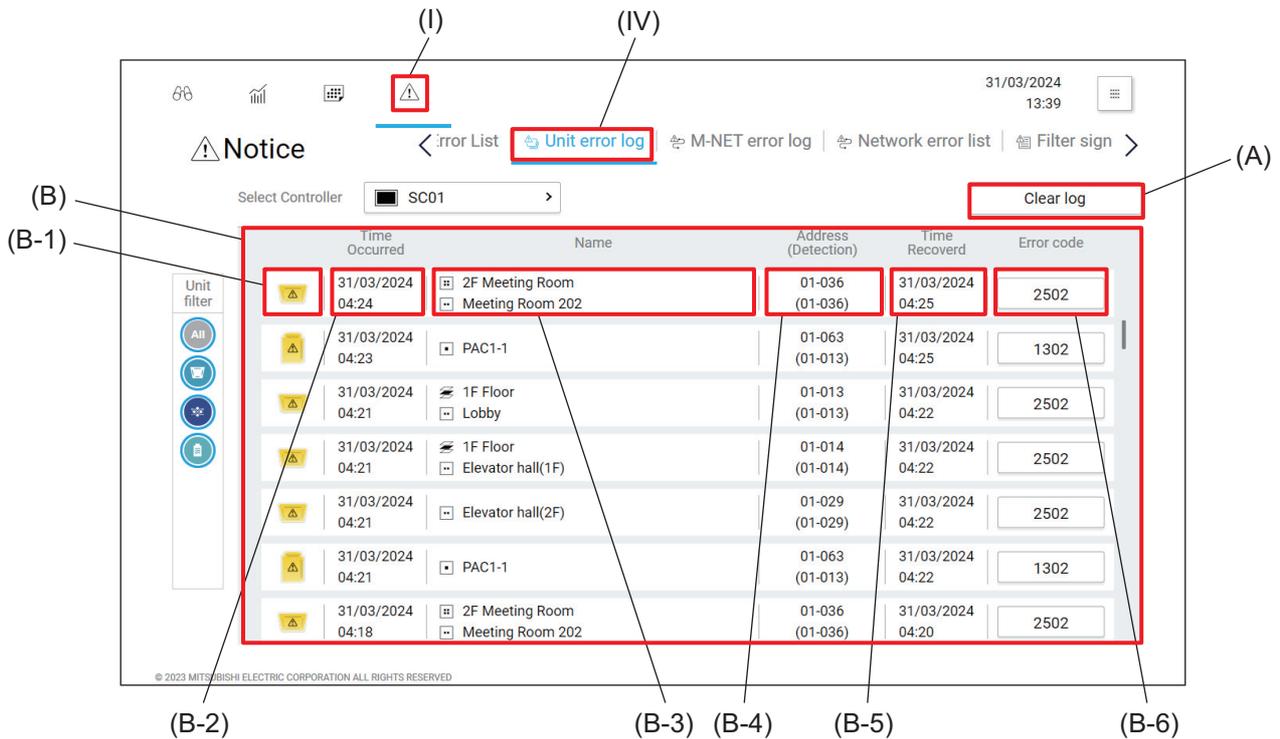
Tapping [⚠] on the main menu (I) and then [🔍 Network error list] on the sub menu (IV) will display the list of the networks that have an error.



	Item	Function and description
(A)	Network error list	Networks that have an error are listed.
(A-1)	Unit icon	Each icon shows a unit.
(A-2)	Name	The name and IP address/host name of the units that have an error are displayed.
(A-3)	Address	The number of the AE-C/EW-C that controls the unit that has an error and the address of the unit are displayed. The number shown in the parentheses indicates the address of the unit or the AE-C/EW-C that detected the error and the number of another AE-C/EW-C that controls the unit or the AE-C/EW-C that detected the error. ex.) 01-000: 01 is the number of the AE-C/EW-C, and 000 is the address of the unit.
(A-4)	Error Code	Tapping the error code will display the details of the error.

4-6-5. Unit error log screen

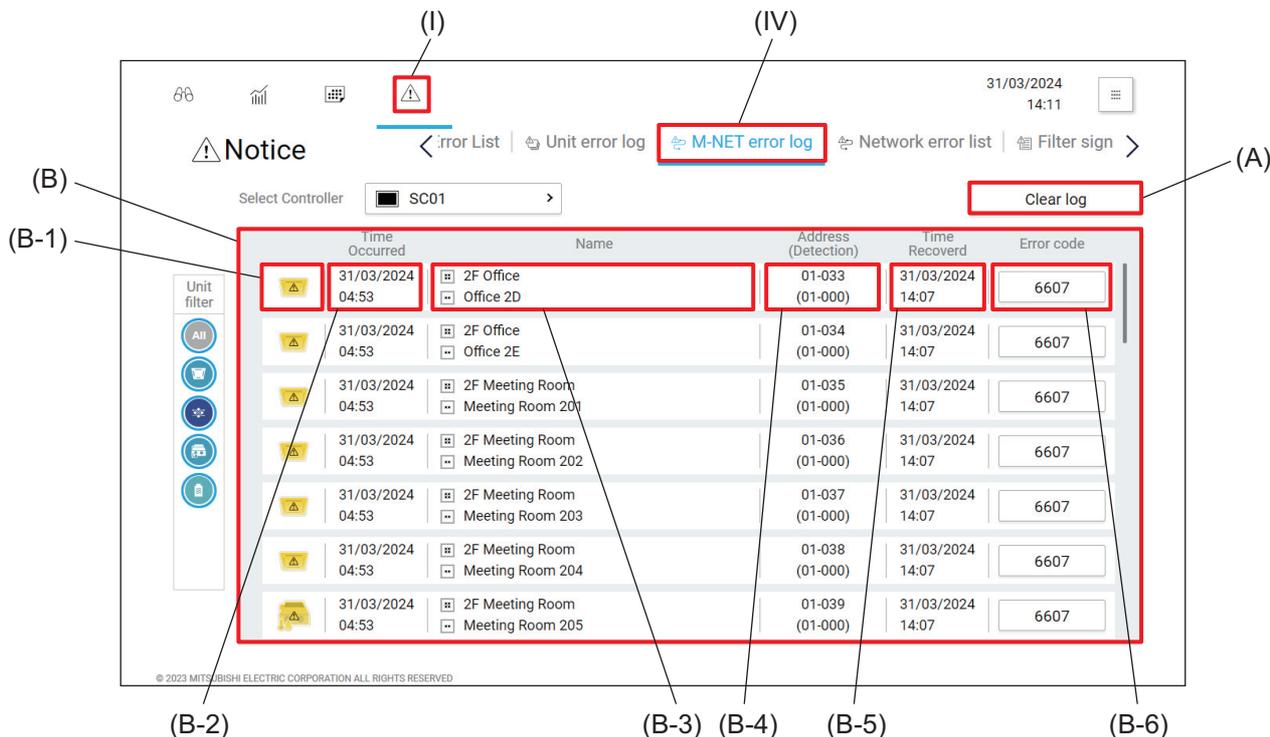
Tapping [⚠️] on the main menu (I) and then [📄 Unit error log] on the sub menu (IV) will display the error logs of the units.



	Item	Function and description
(A)	[Clear log]	Tapping this button will clear all error logs.
(B)	Error log	Error logs are displayed.
(B-1)	Unit icon	Each icon shows a unit.
(B-2)	Time Occurred	The date and time when the error occurred is displayed.
(B-3)	Name	The name and the number of the group containing the units that had an error are displayed.
(B-4)	Address	The number of the AE-C/EW-C that controlled the unit that had an error and the address of the unit are displayed. The number shown in the parentheses indicates the address of the unit or the AE-C/EW-C that detected the error and the number of another AE-C/EW-C that controls the unit or the AE-C/EW-C that detected the error. ex.) 01-036: 01 is the number of the AE-C/EW-C, and 036 is the address of the unit.
(B-5)	Time Recovered	The date and time when the unit recovered from the error is displayed.
(B-6)	Error Code	Tapping the error code will display the details of the error.

4-6-6. M-NET error log screen

Tapping [⚠️] on the main menu (I) and then [🔍 M-NET error log] on the sub menu (IV) will display the M-NET communication error logs of the units.



	Item	Function and description
(A)	[Clear log]	Tapping this button will clear all M-NET communication error logs.
(B)	M-NET communication error log	M-NET communication error logs of the units are displayed.
(B-1)	Unit icon	Each icon shows a unit.
(B-2)	Time Occurred	The date and time when the error occurred is displayed.
(B-3)	Name	The name and the number of the group containing the units that had an error are displayed.
(B-4)	Address	The number of the AE-C/EW-C that controlled the unit that had an error and the address of the unit are displayed. The number shown in the parentheses indicates the address of the unit or the AE-C/EW-C that detected the error and the number of another AE-C/EW-C that controls the unit or the AE-C/EW-C that detected the error. ex.) 01-033: 01 is the number of the AE-C/EW-C, and 033 is the address of the unit.
(B-5)	Time Recovered	The date and time when the unit recovered from the error is displayed.
(B-6)	Error Code	Tapping the error code will display the details of the error.

4-7. Schedule functions

This function automatically switches the preset operation patterns, operation modes, and temperature settings of the air conditioning units depending on the season or on the service hours and calendar of offices and shops.

- To use this function, make the following settings in advance.
 - 1) Set "Schedule" for each unit to "Enable" on the Monitor/Operation screen.
 - 2) Set "Schedule: Season setting" to "Enable" under "Advanced Setting" of the Initial Setting Tool.

Note

- The schedule with the highest priority is valid throughout the day (on a daily basis).

4-7-1. Summary and usage of the schedule function

(1) To set the operation start/end time and operation mode for each day of the week

The operation patterns can be set for each day of the week. For example, according to the preset operation patterns, air conditioning units automatically turn on in the morning on weekdays or shut down regularly at a preset time outside of the business hours.

Up to 24 events can be set for each day of the week.

→ Use "Weekly Schedule."

(2) To automatically switch cooling/heating mode or to set room temperature depending on the season

Seasonal cooling/heating switching patterns and temperature settings can be preset and applied to a specified period of time.

A year can be divided into up to five periods, and a schedule can be set for each period by day of the week.

→ Use "Weekly schedule" and "Date range setting" in combination.

(3) To set operation schedules for specific months and days, such as public holidays and consecutive holidays

Operation schedules can be applied to specific days, such as summer vacation and holidays, by designating the year/month/day.

Applicable operation schedules can be selected from five preset patterns, and can be set up to 50 days in the range up to 24 months ahead.

→ Use "Annual schedule."

(4) To set an operation schedule for today

To accommodate sudden changes in the ongoing operation schedules, an operation schedule only for today can be set.

This setting will become invalid after the next day.

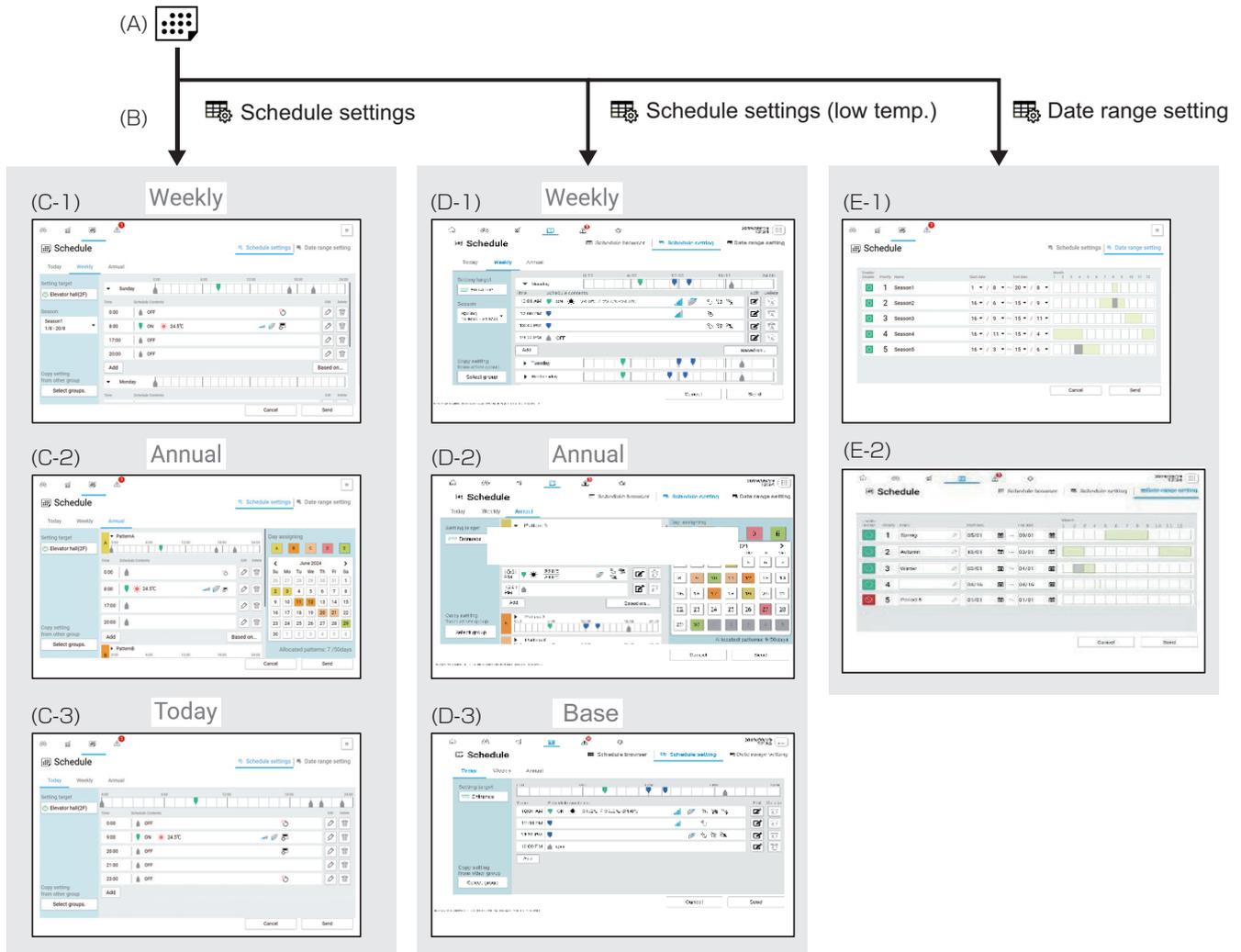
→ Use "Today's schedule."

MEMO

4-7-2. Screen transition of schedule function setting

Tapping  on the main menu (A) and then  **Schedule settings** or  **Schedule settings (low temp.)** on the sub menu (B) will display the schedule settings screen for air conditioning units, dehumidifiers, or low temperature systems.

By tapping each menu item on the screen, you can set or change the weekly, annual, or today/base schedules. Tapping  **Date range setting** will display the screen for setting the periods to which the schedules are applied. You can set the periods, in consideration of seasons and other factors.



	Item	Function and description
(A)	Main menu	Tapping  will display the Schedule screen.
(B)	Sub menu	Tapping a sub menu button will display the screen corresponding to the button pressed, such as the Schedule settings, Schedule settings (low temp.), or Date range setting screen.
(C-1)	Schedule settings (Weekly schedule)	A weekly operation schedule can be set for each day of the week and each date range.
(C-2)	Schedule settings (Annual schedule)	A schedule that is independent of weekly schedules can be set for public holidays and consecutive holidays.
(C-3)	Schedule settings (Today's schedule)	You can set a schedule that is valid only on the day you set.

	Item	Function and description
(D-1)	Schedule settings (low temp.) (Weekly schedule)	A weekly operation schedule can be set for each day of the week and each hour of the day.
(D-2)	Schedule settings (low temp.) (Annual schedule)	A schedule that is independent of weekly schedules can be set for public holidays and consecutive holidays.
(D-3)	Schedule settings (low temp.) (Base schedule)	You can set a schedule that is valid only on the day you set.
(E-1)	Date range setting (common)	You can set periods of time to which weekly schedules apply.
(E-2)	Date range setting (dehumidifier)	

4-7-3. Schedule setting examples

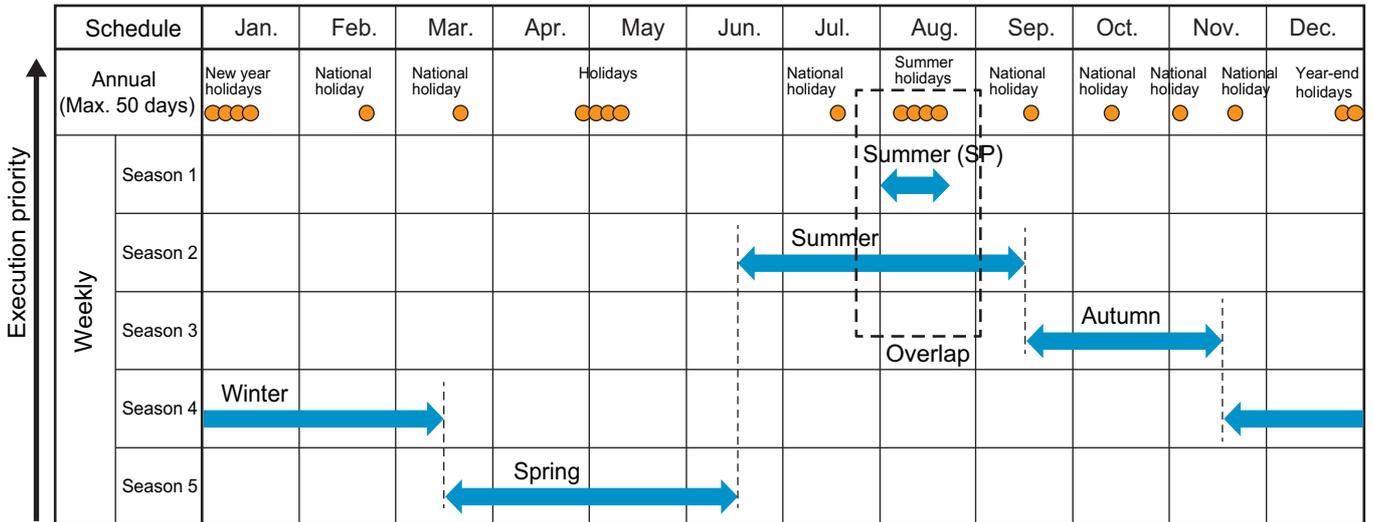
Shown below is a setting example of weekly schedules and annual schedules used in combination and an annual operation diagram.

First, you need to set the time periods to run schedules. In the example below, four seasonal periods are assigned to Seasons 2 to 5, and especially hot days are assigned to Season 1. A weekly schedule is set for each Season, and the preset operation patterns run on each day of the week during the Season. Annual schedules are set for certain dates, such as public holidays and consecutive holidays.

Schedule setting example

- Annual schedule: Set for public holidays, vacations, consecutive holidays
- Weekly schedule: See the table below.

	Name	Start date	End date	Settings
Season 1	Summer (special)	August 1	August 20	Operation patterns for especially hot days
Season 2	Summer	June 16	September 15	Operation patterns for summer
Season 3	Autumn	September 16	November 15	Operation patterns for autumn
Season 4	Winter	November 16	March 15	Operation patterns for winter
Season 5	Spring	March 16	June 15	Operation patterns for spring



4-7-4. Schedule priorities

If the weekly schedules and the annual schedules overlap, they will be executed according to the execution priority.

Execution priority

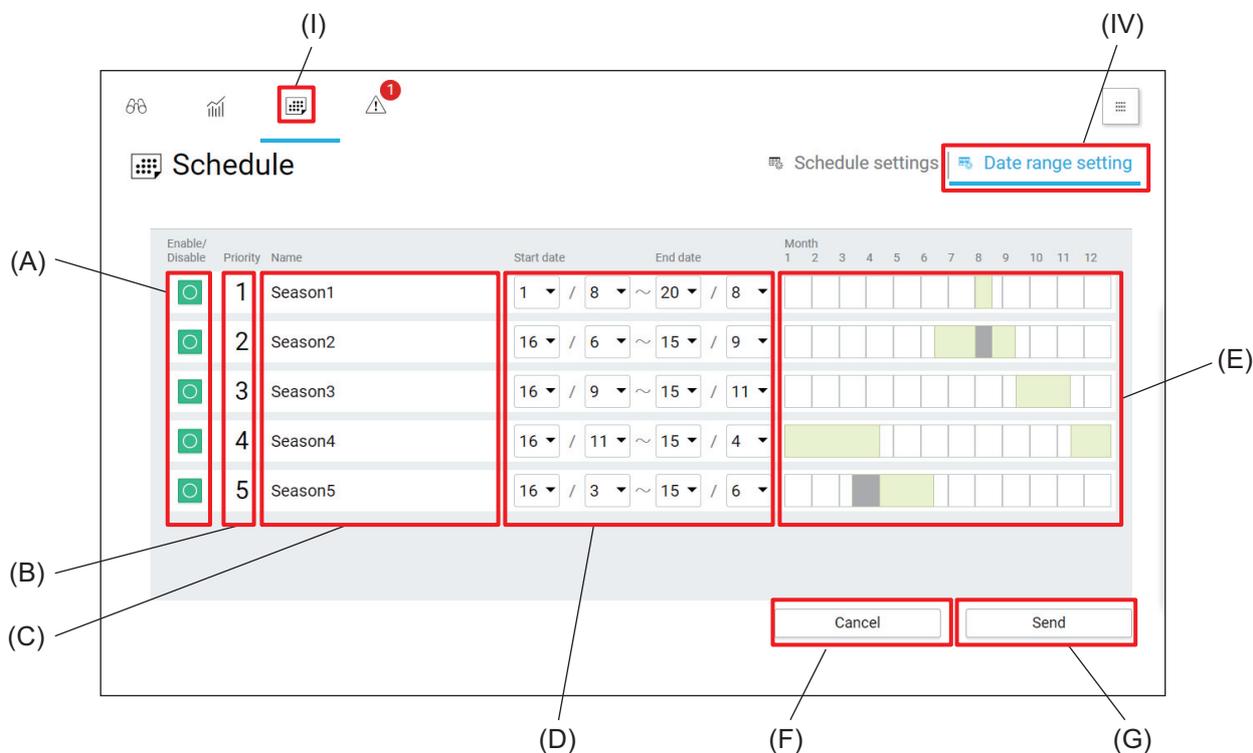
- In the setting example above, the schedule shown at the top of the table takes priority. During August, enclosed with a dashed line, the weekly schedule set for Season 1 "Summer (special)" takes priority over the weekly schedule set for Season 2 "Summer," and on the days set as "Summer (special)," the annual schedule takes priority over the weekly schedule.
- Today's schedule will take priority over annual and weekly schedules.

4-7-5. Date range setting screen

You can set periods to which weekly schedules apply.

Up to five periods can be set within a year.

Tapping **[☰]** on the main menu (I) and then **[Date range setting]** on the sub menu (IV) will display the screen to set periods, Seasons 1 to 5, to which weekly schedules apply.



	Item	Function and description
(A)	Enable/Disable	Select whether to enable or disable the period. If all periods are disabled, the same settings will apply throughout the year.
(B)	Priority	Overlapped schedules are executed according to their priorities.
(C)	Name	Names of the periods, Seasons 1 to 5, are displayed.
(D)	Start date/End date	The start and end dates of each period can be set.
(E)	Month	The periods defined by the start and end dates (E) are graphically displayed.
(F)	[Cancel]	Tap this button to go back to the previous screen without saving the setting changes.
(G)	[Send]	Tap this button to save the setting changes.

Note

- If "Schedule: Season setting" is set to "Disable" under "Advanced Setting" of the Initial Setting Tool, the date range setting is unavailable.
- The date range setting of all the connected AE-C/EW-C controllers must be the same, "Enable" or "Disable."
- If schedules overlap, periods where the schedules are disabled will be displayed in gray.

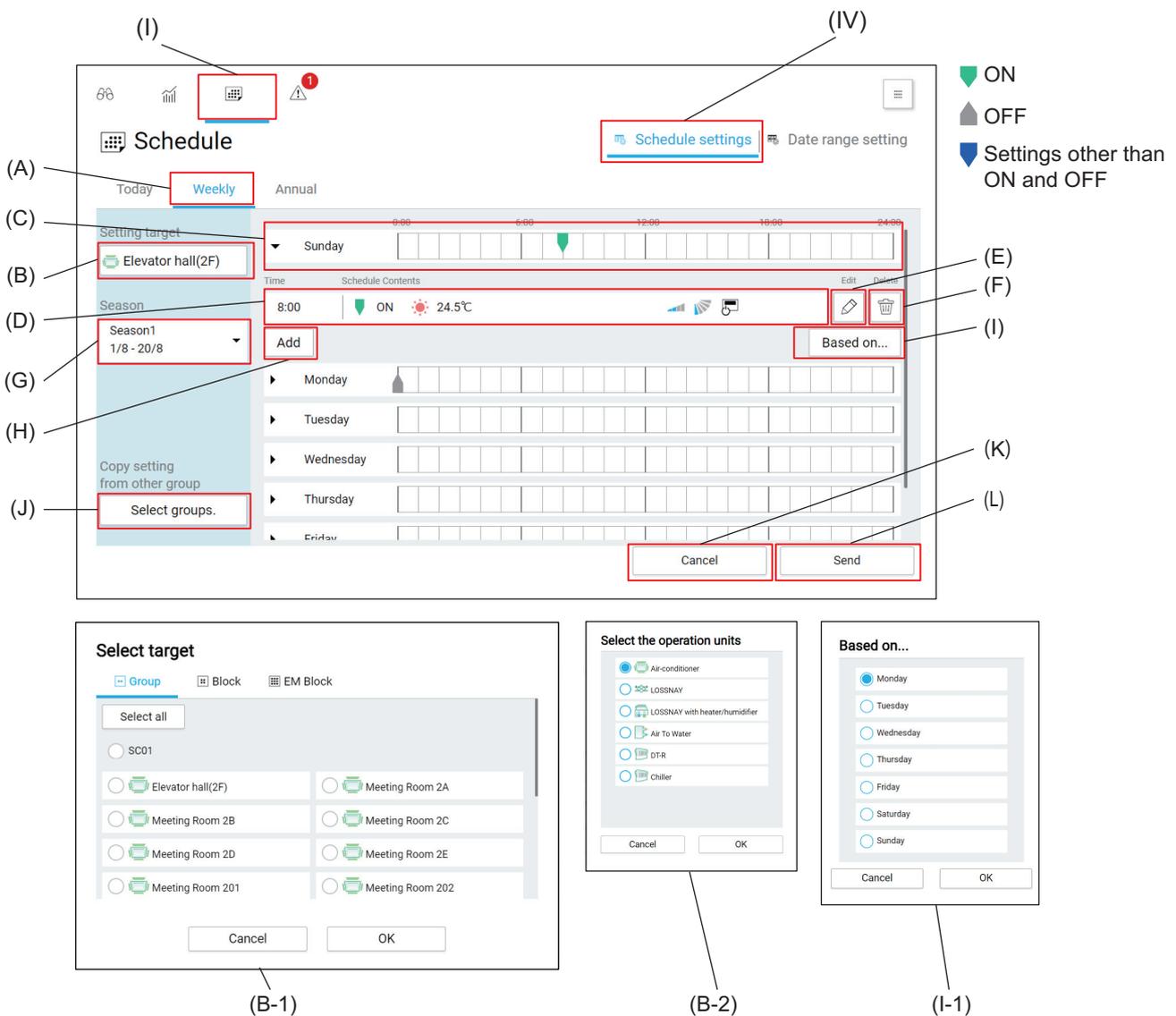
4-7-6. Weekly schedule

On the weekly schedule screen, you can set operation patterns for each day of the week. By using the weekly schedule in combination with the date range setting, you can apply a given weekly schedule to a given period within the year.

Weekly schedules for low temperature systems need to be set separately.

[1] Weekly schedule screen

Tapping **[☰]** on the main menu (I) and then **[Schedule settings]** on the sub menu (IV) will display the Schedule screen. Tapping **[Weekly]** (A) will display the weekly schedule screen.



	Item	Function and description
(A)	Weekly/Annual/Today	Tap [Weekly] to display the weekly schedule.
(B)	Setting target	Tapping this item will display the Select target screen (B-1).
(B-1)	Select target screen	When more than one type of unit exists in a group, the Select the operation units screen (B-2) will be displayed.
(B-2)	Select the operation units screen	Select a target, and tap [OK] . Tapping [Cancel] will close the screen without selecting a target.
(C)	Event list	The times and actions of the events set for each day of the week are displayed by markers. Tapping this item will display events (D) in time order, and you can edit, delete, or add events.

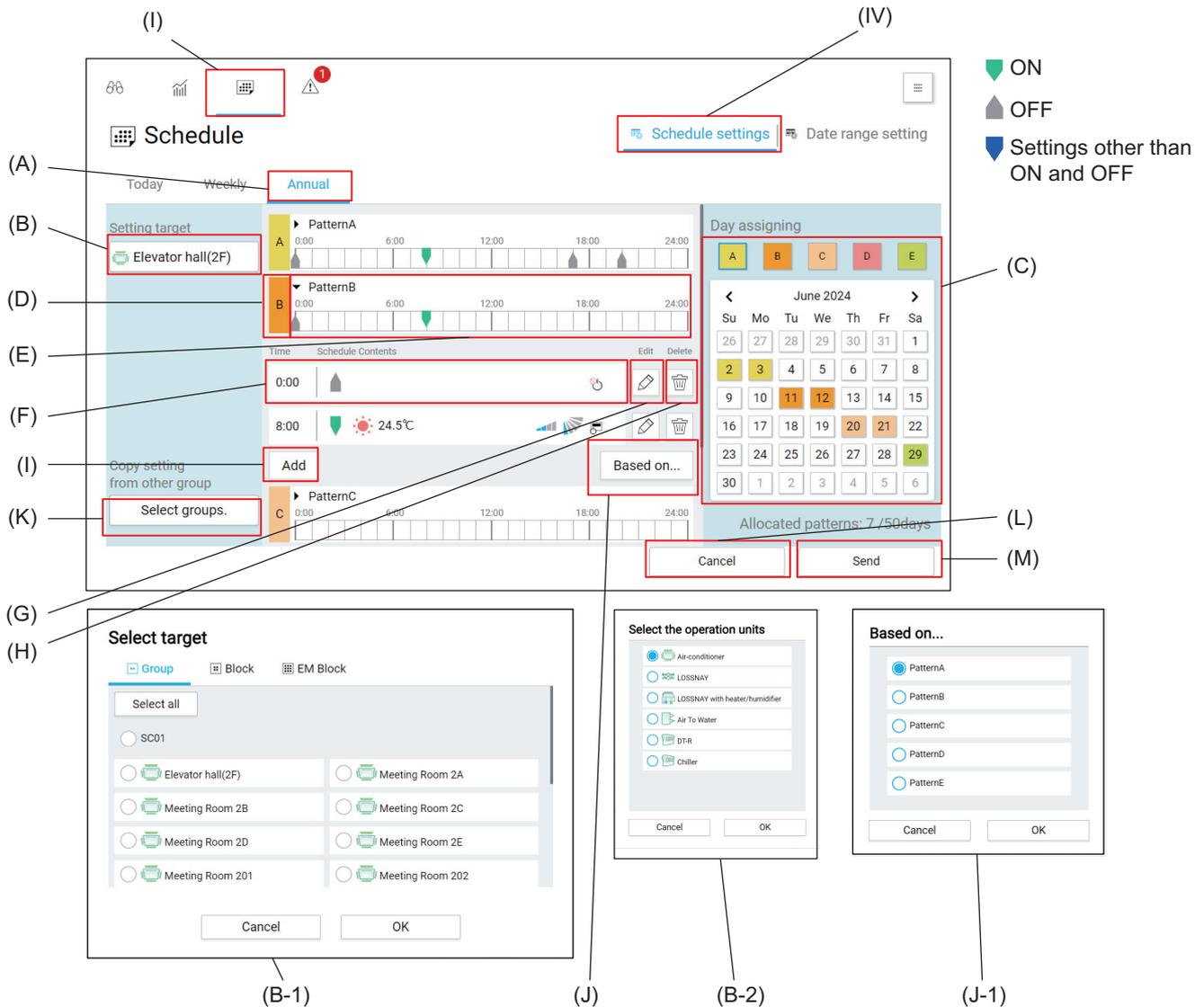
	Item	Function and description
(D)	Event	The activation time and action of the event are displayed.
(E)	Edit	Tap this button to edit the event.
(F)	Delete	Tap this button to delete the event.
(G)	Season	Select the period to which the weekly schedule is applied, from Seasons 1 to 5, that are defined on the Date range setting screen.
(H)	[Add]	Tapping this button will display the Advanced setting screen for schedule setting.
(I)	[Based on...]	Tapping this button will display the Based on... screen (I-1).
(I-1)	Based on... screen	Select a copy source day of the week, and tap [OK] . Tapping [Cancel] will close the screen without selecting a target.
(J)	Copy setting from other group	Tapping this button will display the Select target screen (B-1). Select a copy source group, and tap [OK] . Tapping [Cancel] will close the screen without selecting a target.
(K)	[Cancel]	Tap this button to go back to the previous screen without saving the setting changes.
(L)	[Send]	Tap this button to save the setting changes.

4-7-7. Annual schedule

The annual schedule allows you to set schedules for the days that are excluded from the periods to which weekly schedules are applied, such as public holidays and summer holidays, for each group. You can set up to five operation patterns for each group, with a range of 50 days up to 24 months ahead. (Annual schedules prior to the previous day are automatically deleted.) Weekly schedules for low temperature systems need to be set separately.

[1] Annual schedule screen

Tapping **[Schedule settings]** on the main menu (I) and then **[Schedule settings]** on the sub menu (IV) will display the Schedule screen. Tapping **[Annual]** (A) will display the annual schedule screen.



Item	Function and description
(A)	Weekly/Annual/Today Tap [Annual] to display the annual schedule.
(B)	Setting target
(B-1)	Select target screen
(B-2)	Select the operation units screen
(C)	Allocated patterns

When more than one type of unit exists in a group, the Select the operation units screen (B-2) will be displayed.
 Select a target, and tap **[OK]**.
 Tapping **[Cancel]** will close the screen without selecting a target.
 Select dates from the calendar to which patterns A to E are allocated. Patterns can be identified by color.

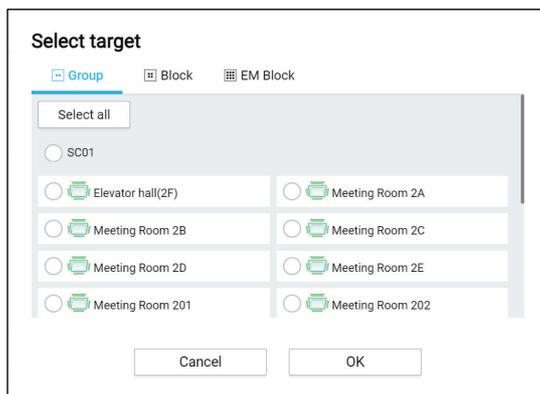
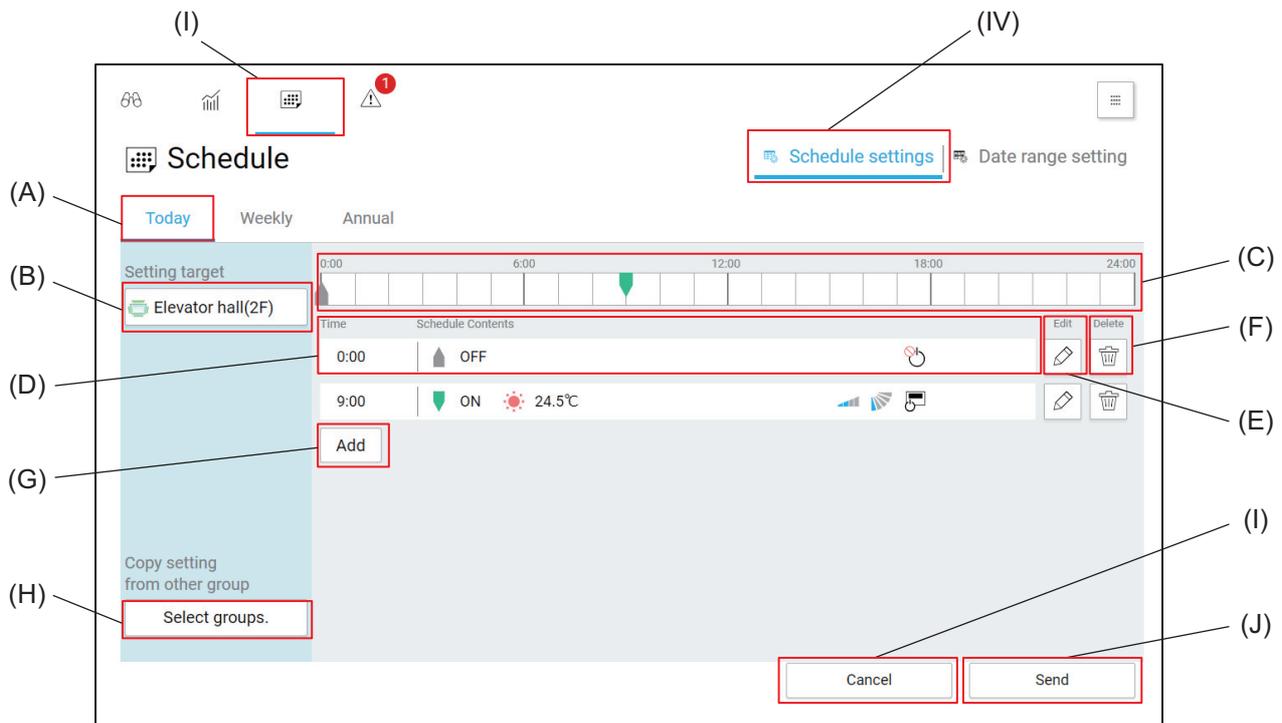
	Item	Function and description
(D)	Pattern name	Pattern names (A to E) are displayed.
(E)	Event list	The times and actions of the events set for each pattern are displayed by markers. Tapping this item will display events (F) in time order, and you can edit, delete, or add events.
(F)	Event	The activation time and action of the event are displayed.
(G)	Edit	Tap this button to edit the event.
(H)	Delete	Tap this button to delete the event.
(I)	[Add]	Tapping this button will display the Advanced setting screen for schedule setting.
(J)	[Based on...]	Tapping this button will display the Based on... screen (J-1). Select a pattern you want to use, and tap [OK] .
(J-1)	Based on... screen	Tapping [Cancel] will close the screen without selecting a pattern.
(K)	Copy setting from other group	Tapping this button will display the Select target screen (B-1). Select a copy source group, and tap [OK] . Tapping [Cancel] will close the screen without selecting a target.
(L)	[Cancel]	Tap this button to go back to the previous screen without saving the setting changes.
(M)	[Send]	Tap this button to save the setting changes.

4-7-8. Today's schedule

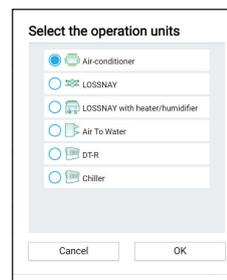
[1] Today's schedule screen

Today's schedule allows you to set a schedule that is valid only for today, without affecting the weekly and annual schedules. Today's schedule will be executed only on today and will become invalid after the next day. Tapping **[⋮]** on the main menu (I) and then **[Schedule settings]** on the sub menu (IV) will display the Schedule screen. Tapping **[Today]** (A) will display the today's schedule screen that shows the schedule to be executed on today. Edit the schedule as necessary.

- Once tapping **[Send]** (J) to save the settings made on the today's schedule screen, you cannot restore the weekly or annual schedule on that day.



(B-1)



(B-2)

- ON
- OFF
- Settings other than ON and OFF

	Item	Function and description
(A)	Weekly/Annual/Today	Tap [Today] to display today's schedule.
(B)	Setting target	Tapping this button will display the Select target screen (B-1).
(B-1)	Select target screen	When more than one type of unit exists in a group, the Select the operation units screen (B-2) will be displayed.
(B-2)	Select the operation units screen	Select a target, and tap [OK] . Tapping [Cancel] will close the screen without selecting a target.

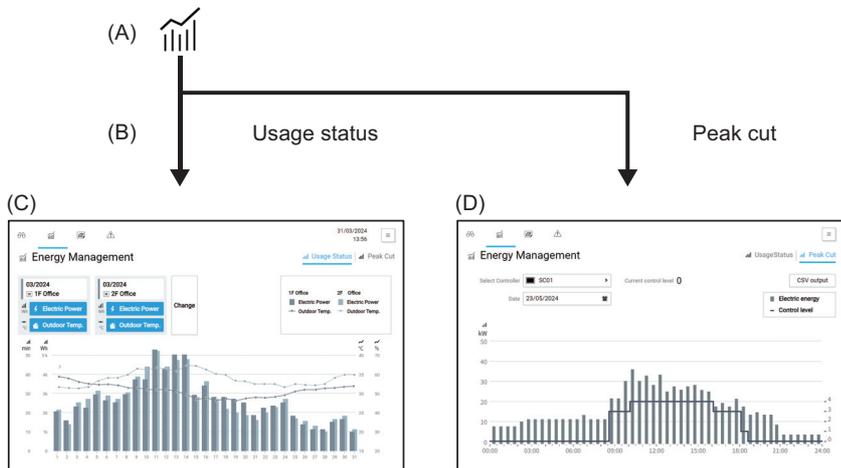
	Item	Function and description
(C)	Event list	The times and actions of the events set for today are displayed by markers. Tapping this item will display events (F) in time order, and you can edit, delete, or add events.
(D)	Event	The activation time and action of the event are displayed.
(E)	Edit	Tap this button to edit the event.
(F)	Delete	Tap this button to delete the event.
(G)	[Add]	Tapping this button will display the Advanced setting screen for schedule setting.
(H)	Copy setting from other group	Tapping this button will display the Select target screen (B-1). Select a copy source group, and tap [OK] . Tapping [Cancel] will close the screen without selecting a target.
(I)	[Cancel]	Tap this button to go back to the previous screen without saving the setting changes.
(J)	[Send]	Tap this button to save the setting changes.

4-8. Energy management

The energy management data, such as electric energy consumption, operating hours, and outdoor temperature, can be displayed in graph.

You can view the energy usage of a given unit by specifying the day/month/year. You can also compare the energy usages of units in different areas.

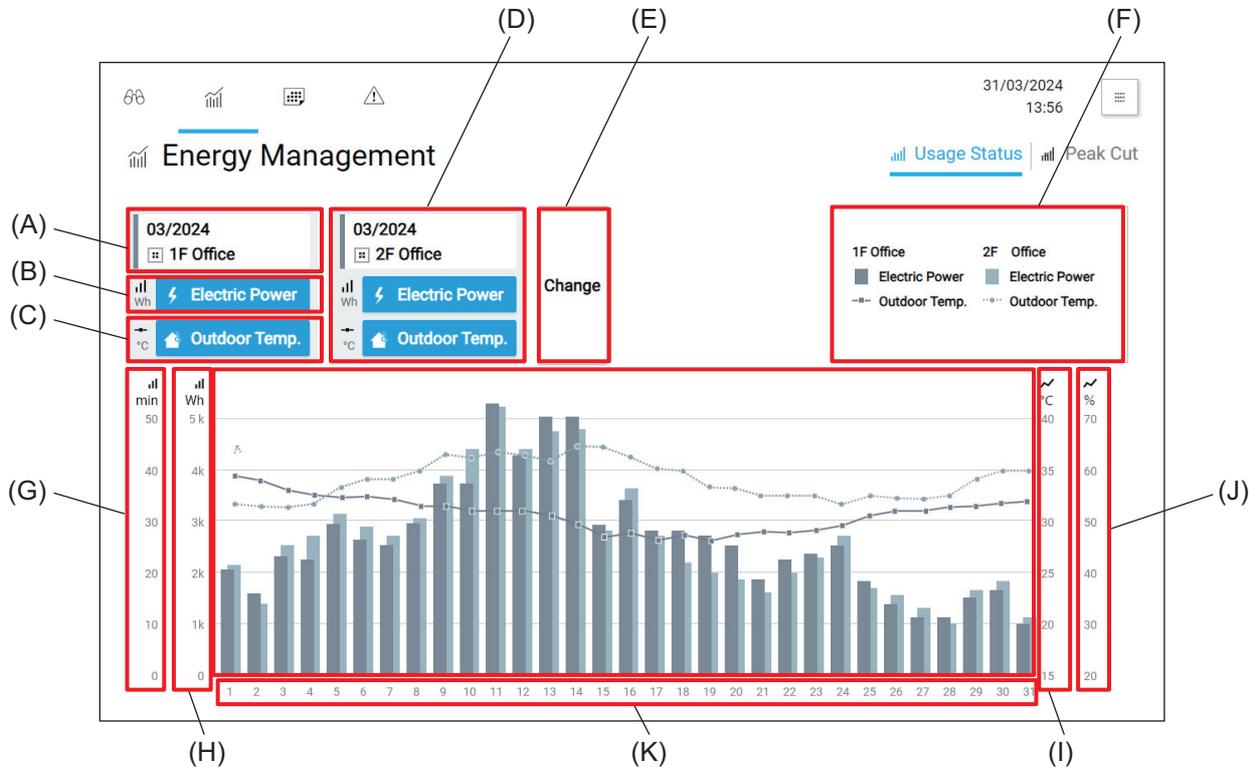
4-8-1. Energy management screen transition



	Screen name	Function and description
(A)	Main menu	Tapping [] will display the Energy Management screen.
(B)	Sub menu	Tapping a sub menu button will display the screen corresponding to the button pressed, such as the usage status screen and peak cut screen.
(C)	Usage status	The usage status screen shows energy management data, such as electric energy consumption, operating hours, and outdoor temperature in graph. Details of energy usage of a given unit can be viewed.
(D)	Peak cut	This screen shows peak cut status history (daily report) in graph.

4-8-2. Usage status

The usage status screen shows energy management data, such as electric energy consumption, operating hours, and outdoor temperature in graph. Details of energy usage of a given unit can be viewed. The energy usages of different units can be displayed at the same time for comparison. Hourly, daily, or monthly energy usage is displayed in graph to visualize the energy saving status. Tapping [🏠] on the main menu (I) and then selecting **[Usage Status]** will display the usage status screen.



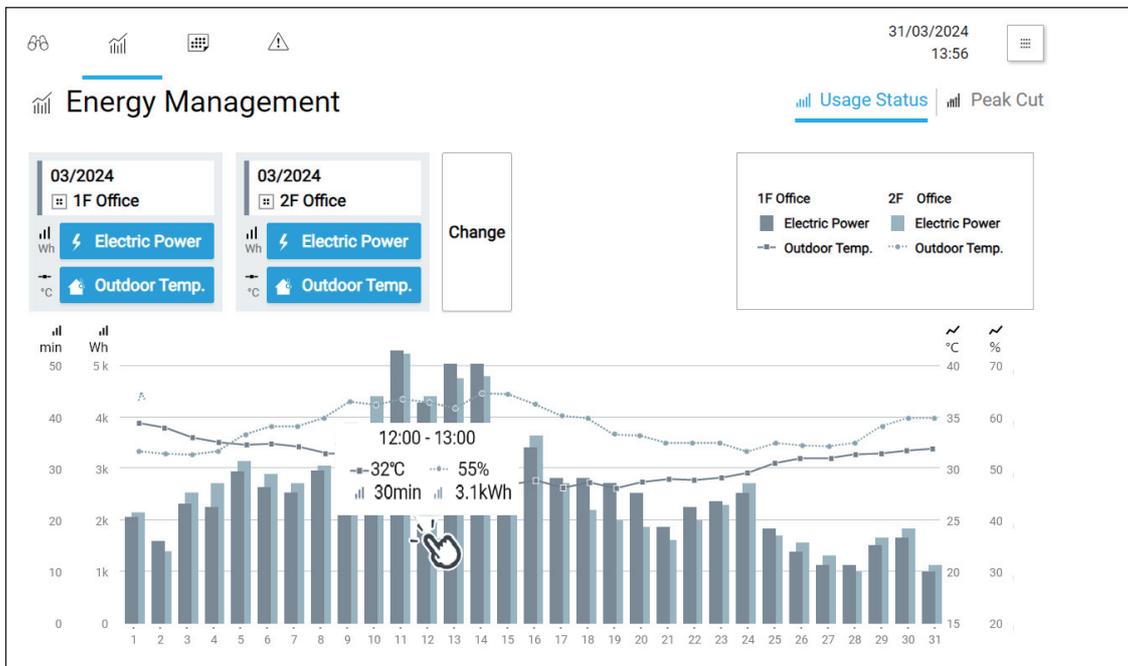
	Item	Function and description
(A)	Display target	Bar graph details and line graph details are shown in the display target area.
(B)	Bar graph legend	
(C)	Line graph legend	
(D)	Comparison target	Bar graph details and line graph details are shown in the comparison target area.
(E)	[Change]	Tap this button to change the settings of the display target (A) and the comparison target (D).
(F)	Graph legend	Legends of the graph are displayed.
(G)	Vertical axis 1 for bar graph	Bar graph scales are displayed depending on the numerical unit, target date, and items to be displayed.
(H)	Vertical axis 2 for bar graph	
(I)	Vertical axis 1 of line graph	Line graph scales are displayed depending on the numerical unit, target date, and items to be displayed.
(J)	Vertical axis 2 of line graph	
(K)	Graph display area	Graphs are displayed.

4-8-3. Selecting items displayed on graphs

By tapping **[Change]** on the Usage Status screen, you can select the period of time, numerical unit, display target, and comparison target.

The bar and line graphs displayed on the Usage Status screen will vary depending on the numerical unit to be selected.

Usage Status screen



Display item setting screen

(A) Date range
 (B) Display target
 (C) Date
 (D) Target
 (E) Bar graph
 (F) Line graph
 (G) Comparison target
 (H) Date
 (I) Target
 (J) Cancel
 (K) OK

	Item	Function and description
(A)	Date range	Date range filters (year/month/day) are selectable.
(B)	Display target	Display target can be set.
(C)	Date	Displayed period can be selected according to the filter selected under Date range (A).
(D)	Target	Target unit can be selected.
(E)	Bar graph	Items displayed on bar graphs can be selected.
(F)	Line graph	Items displayed on line graphs can be selected. <ul style="list-style-type: none"> • Two line graphs can be plotted when they use the same units. • Items to be displayed on bar graphs can be also selected.
(G)	Comparison target	Comparison target can be set.
(H)	Same as display target (Date)	Tapping this checkbox will synchronize the date of the comparison target with the date of the display target. <ul style="list-style-type: none"> • This checkbox is displayed under Comparison target only.
(I)	Same as display target (Target)	Tapping this checkbox will synchronize the unit selected as the comparison target with the unit selected as the display target. <ul style="list-style-type: none"> • This checkbox is displayed under Comparison target only. • When the display target unit is changed with this checkbox being selected, the comparison target unit will be changed accordingly.
(J)	[Cancel]	Tap this button to go back to the previous screen without saving the setting changes.
(K)	[OK]	Tap this button to save the setting changes.

Items displayed on the bar graph

Items displayed on bar graphs can be selected.

Four types of display units can be selected, including addresses, groups, blocks, and energy management blocks.

Some items cannot be displayed on the graph depending on the display unit. When a display unit is selected, the display item selection button disappears from the screen.

Items that can be displayed on a graph in each display unit are shown below.



Items displayed on the bar graph

■ Indoor units

Display unit	Display item				
Address	*1, *2 ⚡ Electric Energy	*3, *4 🌀 FAN operation time	*3 ⌚ Thermo-ON time (Total)	*3 ❄️ Thermo-ON time (Cool)	*3 🔥 Thermo-ON time (Heat)
Group					
Block					
Energy management block					

*1 The amount of electricity consumed (kWh) by the indoor unit is apportioned based on the indoor unit apportioning mode and displayed in a graph.

*2 A very small amount of electricity consumed (kWh) may be shown on the graph even when the indoor unit is not on at all because standby power is being apportioned.

*3 The cumulative operation time of the indoor unit (minutes) for the selected item is displayed in a graph.

- FAN operation time is the cumulative value of time the indoor unit has been on.
- Thermo-ON time (Total, Cool, Heat) is the cumulative value of time that refrigerant has been running in the indoor unit.
(Cool: when cooling mode is selected, Heat: when heating mode is selected, Total: when either mode is selected)

*4 When using LOSSNAY, only the FAN operation time is displayed.

Items displayed on the line graph

Items displayed on line graphs can be selected.

Note

- When the display unit is set to **[Block]** or **[Energy management block]**, the line graph display items are not displayed.



Items displayed on the line graph

■ Indoor units

Display unit	Display item		
Address	*1	*1, *2	*1, *2
Group	🏠 Room Temp.	🌡️ Set Temp. (Cool)	🌡️ Set Temp. (Heat)

*1 If the date is set to **[Day]**, the temperature value is displayed every hour on the hour and every half hour.

If the date is set to **[Month]**, the average temperature value is displayed every day.

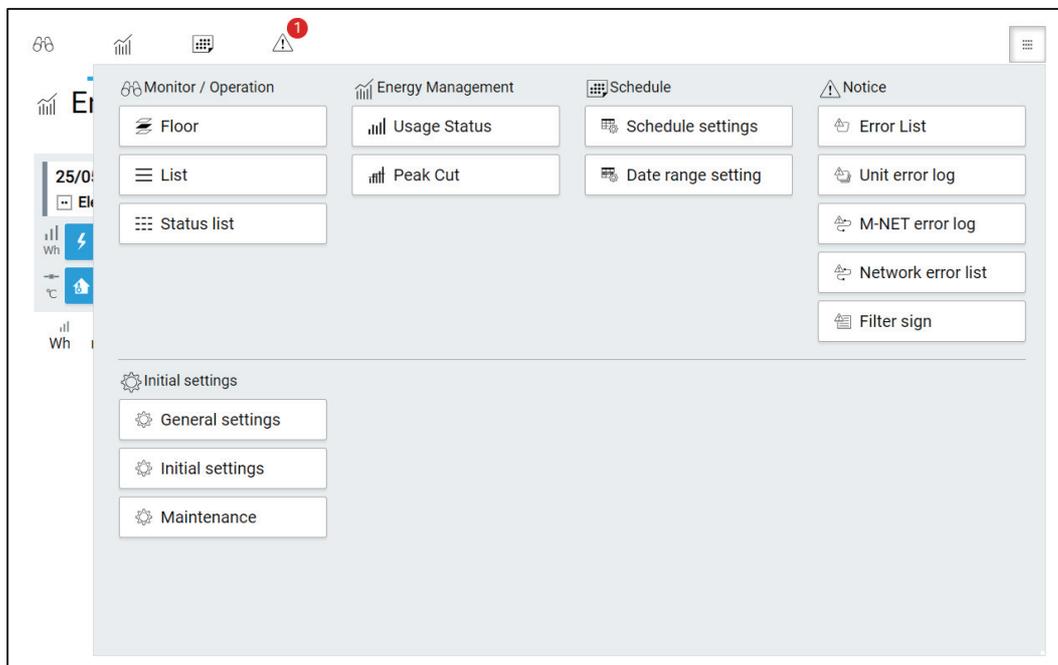
If the date is set to **[Year]**, the average temperature value is displayed every month.

*2 When using an indoor unit that supports dual-set-point mode, the set temperature of the current mode (cooling and heating) is displayed.

4-9. Panorama view screen

Available functions are listed as buttons on the panorama view screen, and tapping the buttons will display the screens corresponding to the buttons tapped.

Tapping [] at the top right of the screen will display the Panorama view screen.



MEMO

5. Usage (Air conditioning unit/ventilating unit: basic operation)

5-1. Advanced setting screen for different types of products (basic operation)

Tapping **[Advanced]** on the Simple operation panel of the Monitor/Operation screen will display the Advanced setting screen for the selected group.

On the Advanced setting screen, you can view the operation status of the selected group or change the settings of the selected group.

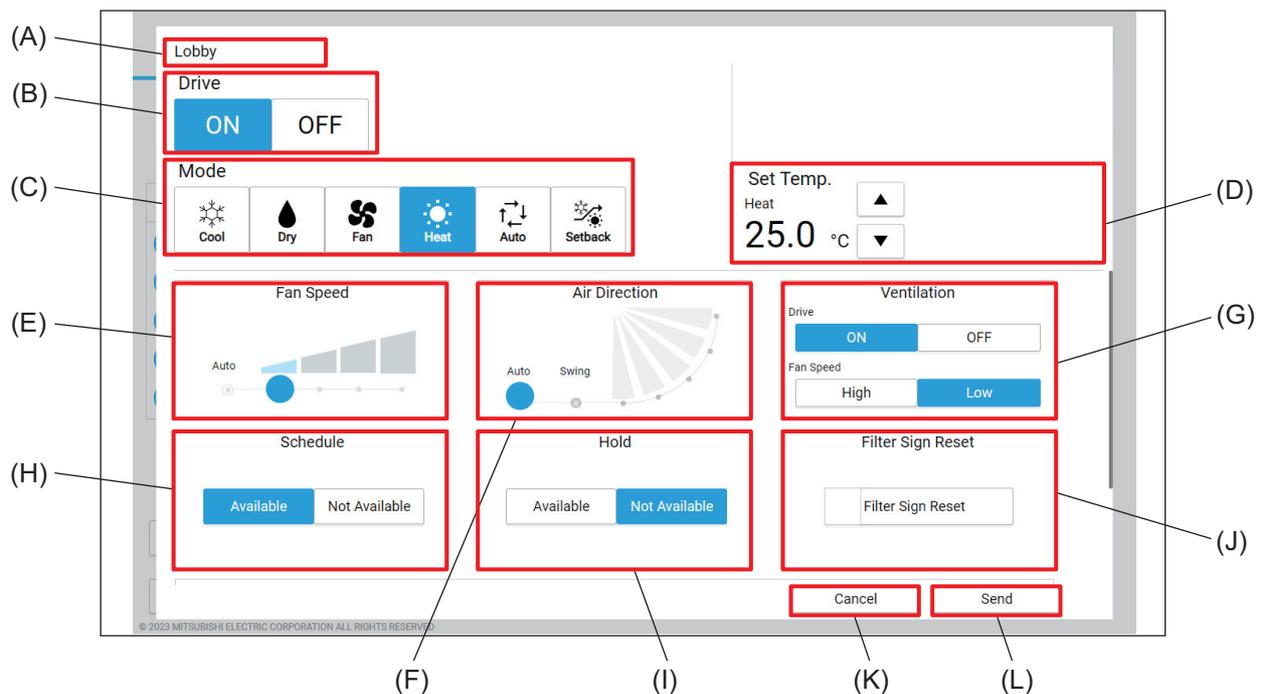
After changing the settings, tap **[Send]** (L) to save the changes.

To go back to the previous screen without saving the changes, tap **[Cancel]** (K).

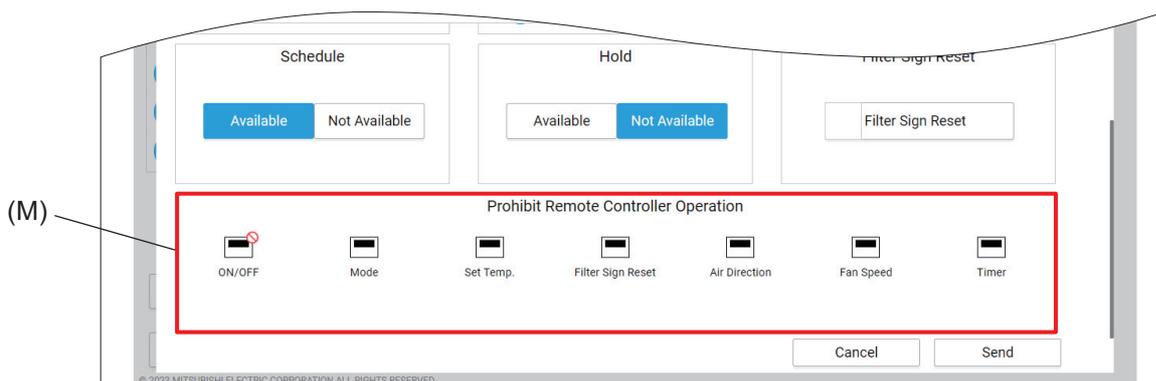
- While the Advanced setting screen is being displayed, any changes in the operation status will not be reflected on the information shown on the screen.
- Buttons being selected are displayed in blue.

[1] Air conditioning unit (indoor unit) group

Top half of the screen



Bottom half of the screen



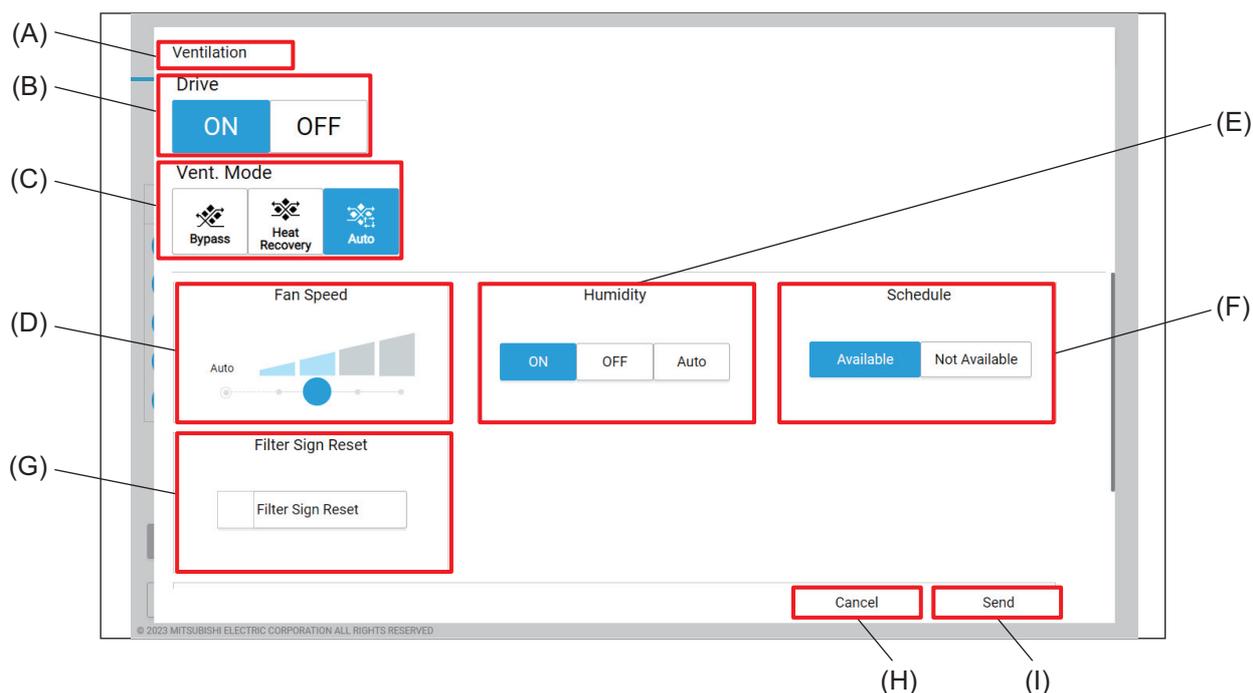
	Item	Function and description
(A)	Group name	The name of the selected group is displayed.
(B)	Drive	Tap [ON] or [OFF] to turn on or off the indoor unit.
(C)	Mode	Select the operation mode.
(D)	Set Temp.	Tap [▲] or [▼] to change the set temperature. • The temperature setting range vary with models.
(E)	Fan Speed	Set the fan speed.
(F)	Air Direction	Set the air direction.
(G)	Ventilation	Tap [ON] or [OFF] to turn on or off the interlocked LOSSNAY unit. Tap [High] or [Low] to change the fan speed of the interlocked LOSSNAY unit.
(H)	Schedule	Tap [Available] or [Not Available] to enable or disable the schedule. • When [Not Available] is selected, the controller will not operate according to the set schedule.
(I)	Hold	Select to allow or not allow the controller and other system controllers or remote controllers to make the schedule settings of the controller.
(J)	Filter Sign Reset	Tap this button to turn off the reminder to clean the filter. (The total operation time will be reset.)
(K)	[Cancel]	Tap this button to go back to the previous screen without saving the setting changes.
(L)	[Send]	Tap this button to save the setting changes.
(M)	Prohibit Remote Controller Operation	Tap the buttons to allow or prohibit access from the remote controller or the Web browser for general users to each item. The following settings can be allowed or prohibited: ON/OFF, Mode, Set Temp., Filter Sign Reset, Air Direction, Fan Speed, and Timer. Prohibited settings are marked with [🚫].

Note

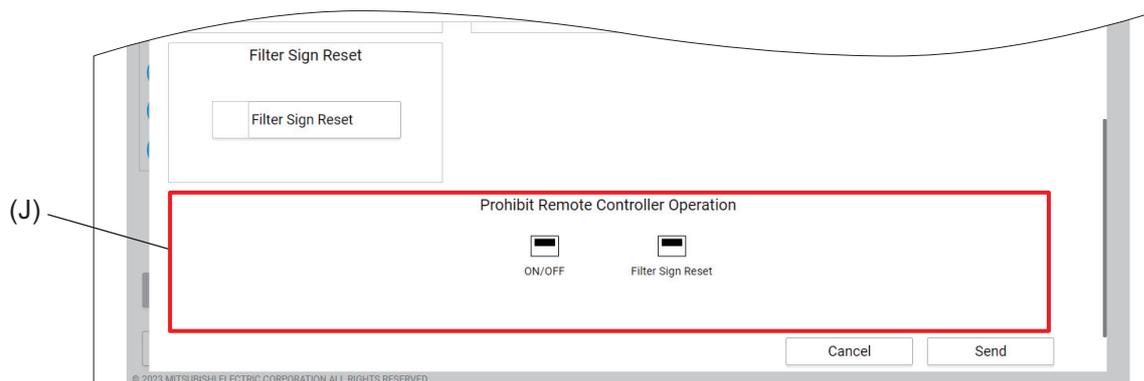
- Configurable settings differ depending on the unit model.
- When remotely turned ON/OFF via an indoor unit external input, it is not possible to turn the unit ON/OFF from a centralized controller.
- If heating and cooling are mixed on a cooling/heating switching model, the mode will not be changed for a group whose mode has been changed later, and the selected mode will blink.
- Even if [Auto] mode is selected on a Mr. SLIM air conditioning unit, [Auto] will not be displayed on the AE-C/EW-C.
- Set Temp. can be set in 0.5°C or 1°C increments depending on the model.
- When the indoor units support a dual-set-point mode, two different Set Temp. options (one for cooling and the other for heating) are available. When running on [Auto] mode, indoor units automatically switch over between cooling and heating, based on the room temperature, to maintain the room temperature within the two predetermined temperatures.
- When using a unit that supports dual-set-point mode and a unit that does not in the same indoor group, the set temperature is treated as the non-supported group.
- [Auto] will not be displayed for Air Direction and Fan Speed when using a Mr. SLIM or room air conditioning unit model.
- The selectable items for Prohibit Remote Controller Operation settings differ depending on the model.
- Night setback and Hold only appear on North American models.

[2] LOSSNAY group

Top half of the screen



Bottom half of the screen



	Item	Function and description
(A)	Group name	The name of the selected group is displayed.
(B)	Drive	Tap [ON] or [OFF] to change the operation of the LOSSNAY unit.
(C)	Vent. Mode	Tap [Bypass], [Heat Recovery], or [Auto] to change the ventilation mode of the LOSSNAY unit.
(D)	Fan Speed	Set the fan speed.
(E)	Humidify	Tap [ON], [OFF], or [Auto] to change the humidifier operation. • This item will not be displayed during night purge operation.
(F)	Schedule	Tap [Available] or [Not Available] to enable or disable the schedule. • When [Not Available] is selected, the controller will not operate according to the set schedule.
(G)	Filter Sign Reset	Tap this button to turn off the reminder to clean the filter. (The total operation time will be reset.)
(H)	[Cancel]	Tap this button to go back to the previous screen without saving the setting changes.

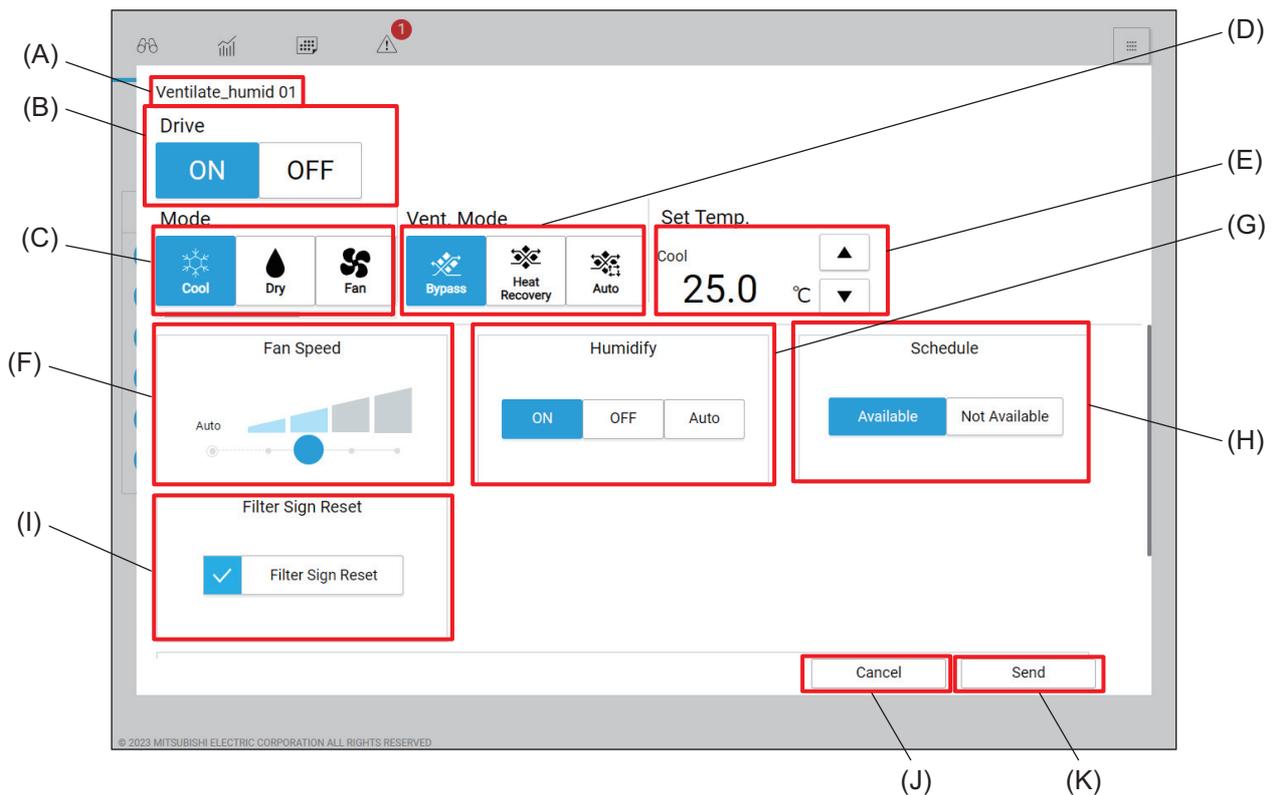
	Item	Function and description
(I)	[Send]	Tap this button to save the setting changes.
(J)	Prohibit Remote Controller Operation	Tap the buttons to allow or prohibit access from the remote controller or the Web browser for general users to each item. The following settings can be allowed or prohibited: ON/OFF and Filter Sign Reset. Prohibited settings are marked with [⊘].

Note

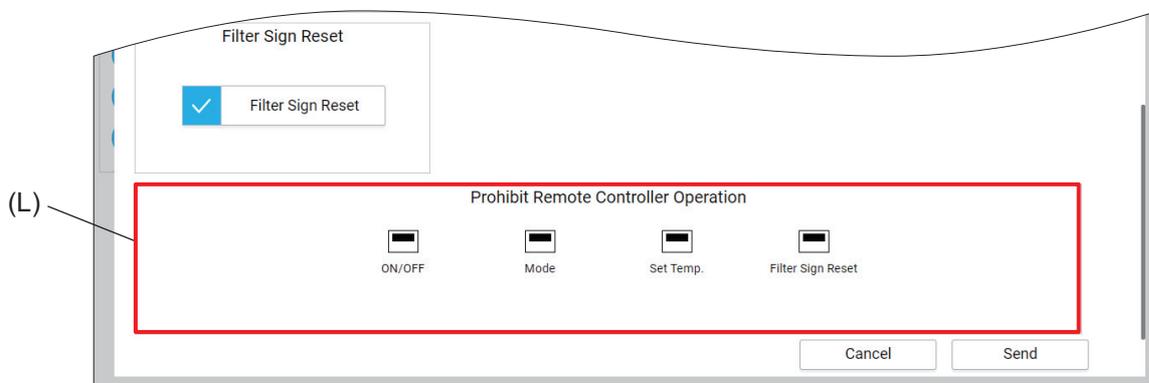
- The LOSSNAY group includes commercial-use LOSSNAY, an independent humidifier unit, and free plan adapter.
- Vent. Mode and Humidify will not be displayed during night purge operation.
- The selectable fan speed differs depending on the model.
- Fan Speed is not displayed on single-step models.
- Fan Speed **[Auto]** appears when using the optional CO₂ sensor.
- Fan Speed can be changed during night purge operation. **[Auto]** is not displayed.
- When using an independent humidifier unit, **[OFF]** is not displayed for Humidify. When there is no auto humidification option, only **[ON]** is displayed.
- Filter Sign Reset should be performed after cleaning the filter of the unit.

[3] OA handling unit (direct expansion type with built-in heater/humidifier) group

Top half of the screen



Bottom half of the screen



	Item	Function and description
(A)	Group name	The name of the selected group is displayed.
(B)	Drive	Tap [ON] or [OFF] to turn on or off the OA handling unit (direct expansion type with built-in heater/humidifier).
(C)	Mode	Select the operation mode.
(D)	Vent. Mode	Tap [Bypass], [Heat Recovery], or [Auto] to change the ventilation mode of the OA handling unit (direct expansion type with built-in heater/humidifier).
(E)	Set temp.	Tap [\blacktriangle] or [\blacktriangledown] to change the set temperature. • The temperature setting range vary with models.
(F)	Fan Speed	Set the fan speed.
(G)	Humidify	Tap [ON], [OFF], or [Auto] to change the humidifier operation. • This item will not be displayed during night purge operation.

	Item	Function and description
(H)	Schedule	Tap [Available] or [Not Available] to enable or disable the schedule. <ul style="list-style-type: none"> When [Not Available] is selected, the controller will not operate according to the set schedule.
(I)	Filter Sign Reset	Tap this button to turn off the reminder to clean the filter. (The total operation time will be reset.)
(J)	[Cancel]	Tap this button to go back to the previous screen without saving the setting changes.
(K)	[Send]	Tap this button to save the setting changes.
(L)	Prohibit Remote Controller Operation	Tap the buttons to allow or prohibit access from the remote controller or the Web browser for general users to each item. The following settings can be allowed or prohibited: ON/OFF, Mode, Set Temp. and Filter Sign Reset. Prohibited settings are marked with [].

Note

- The available mode differs depending on the model.
- If heating and cooling are mixed on a cooling/heating switching model, the mode will not be changed for a group whose mode has been changed later, and the selected mode will blink.
- Vent. Mode and Humidify will not be displayed during night purge operation.
- The selectable fan speed differs depending on the model.
- Fan Speed **[Auto]** appears when using the optional CO₂ sensor.
- Hold only appears on North American models.
- Filter Sign Reset should be performed after cleaning the filter of the unit.

6. Usage (Air conditioning unit/ventilating unit: schedule settings)

6-1. Advanced setting screen for different types of products (schedule setting)

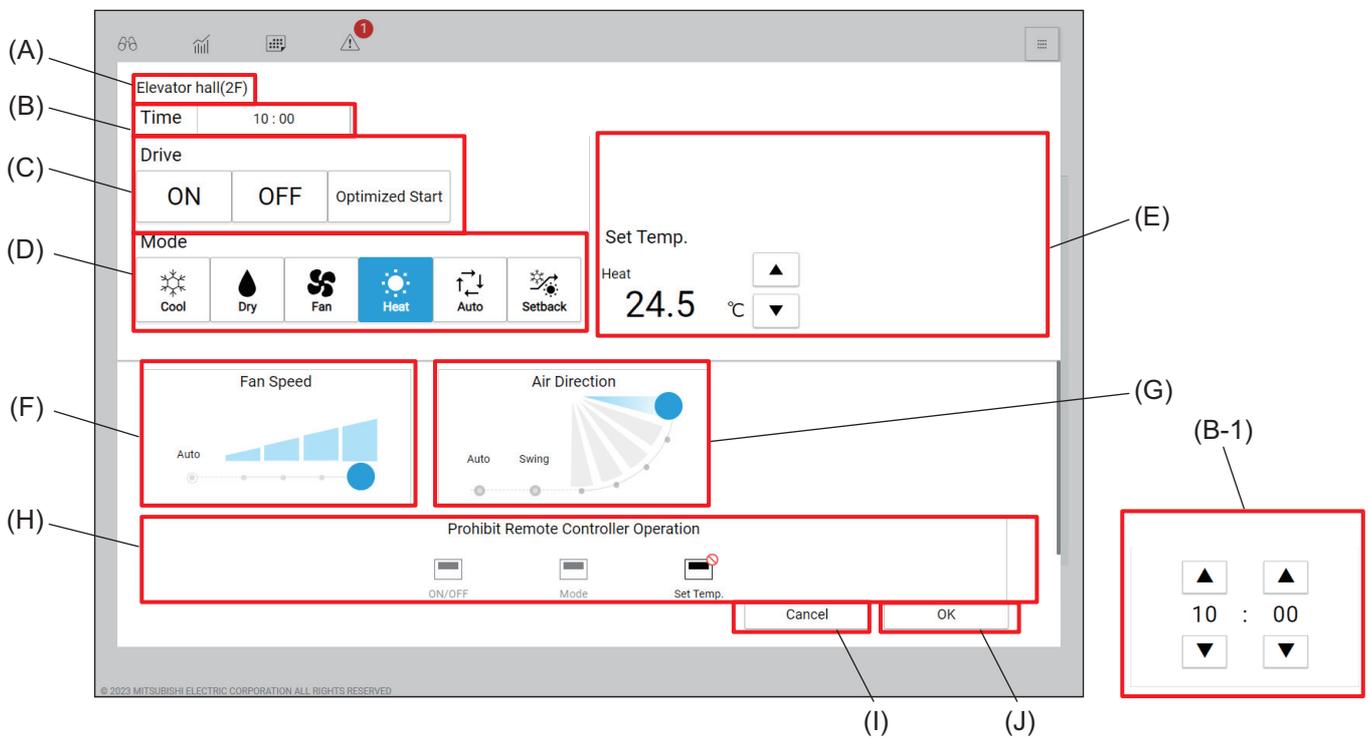
Tapping **[Add]** or **[Edit]** on the Schedule screen will display the Advanced setting screen for the selected group.

After changing the settings on the Advanced setting screen, tap **[OK]** to save the changes.

To go back to the previous screen without saving the changes, tap **[Cancel]**.

- Buttons being selected are displayed in blue.

[1] Air conditioning unit (indoor unit) group



	Item	Function and description
(A)	Group name	The name of the selected group is displayed.
(B)	Time	Set the activation time of the event. Tapping this item will display the time setting dialog (B-1).
(B-1)	Time setting dialog	Tap [▲] or [▼] to change the hour and minute.
(C)	Drive	Tap [ON], [OFF], or [Optimized Start] to select the operation method.
(D)	Mode	Select the operation mode.
(E)	Set temp.	Tap [▲] or [▼] to change the set temperature. • The temperature setting range vary with models.
(F)	Fan Speed	Set the fan speed.
(G)	Air Direction	Set the air direction.

	Item	Function and description
(H)	Prohibit Remote Controller Operation	Tap the buttons to allow or prohibit access from the remote controller to each item. The following settings can be allowed or prohibited: ON/OFF, Mode, and Set Temp. Prohibited settings are marked with [].
(I)	[Cancel]	Tap this button to go back to the previous screen without saving the setting changes.
(J)	[OK]	Tap this button to save the setting changes.

(1) Startup via the schedule

1) Optimized Start schedule

The time until the set temperature is reached is calculated from past operating data (room temperature and set temperature), and the unit is pre-cooled/pre-heated so that the set temperature is reached by the specified time.

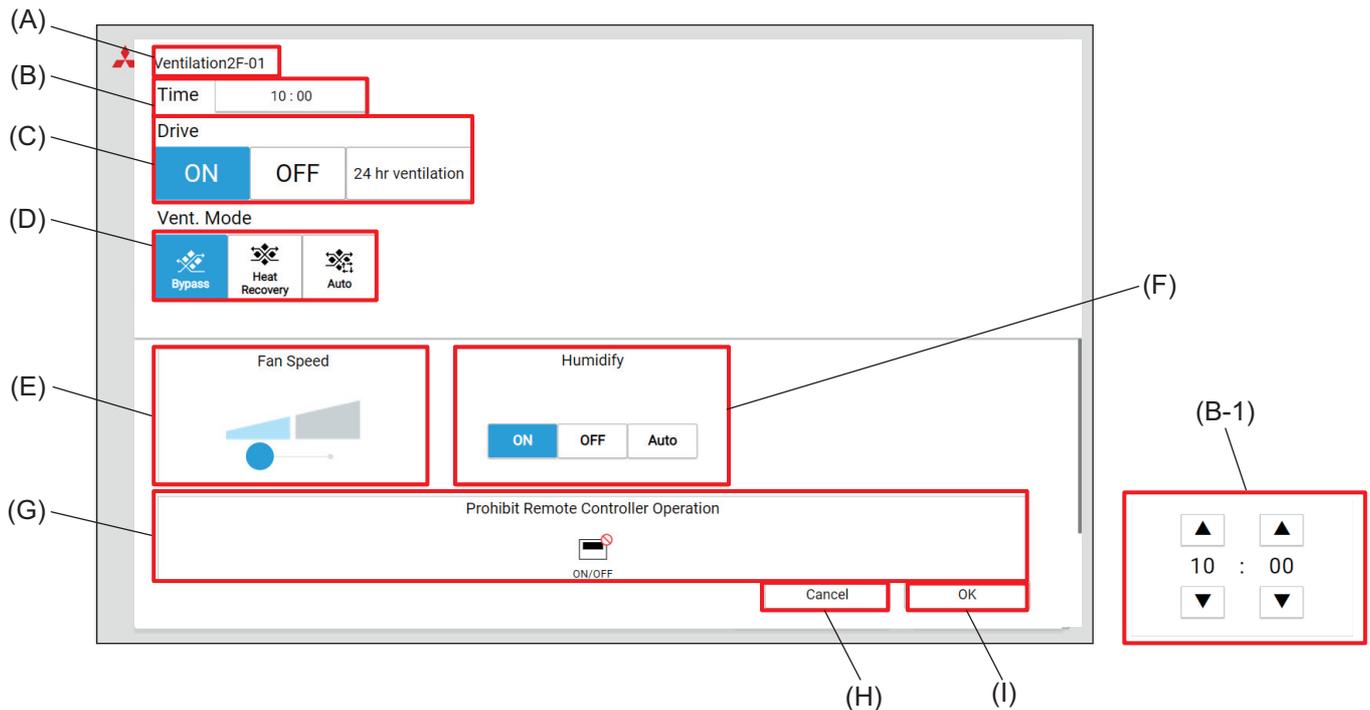
Note

- If the Optimized Start schedule is set at the same time as Prohibit Remote Controller Operation, the settings will be applied from the set time onward.

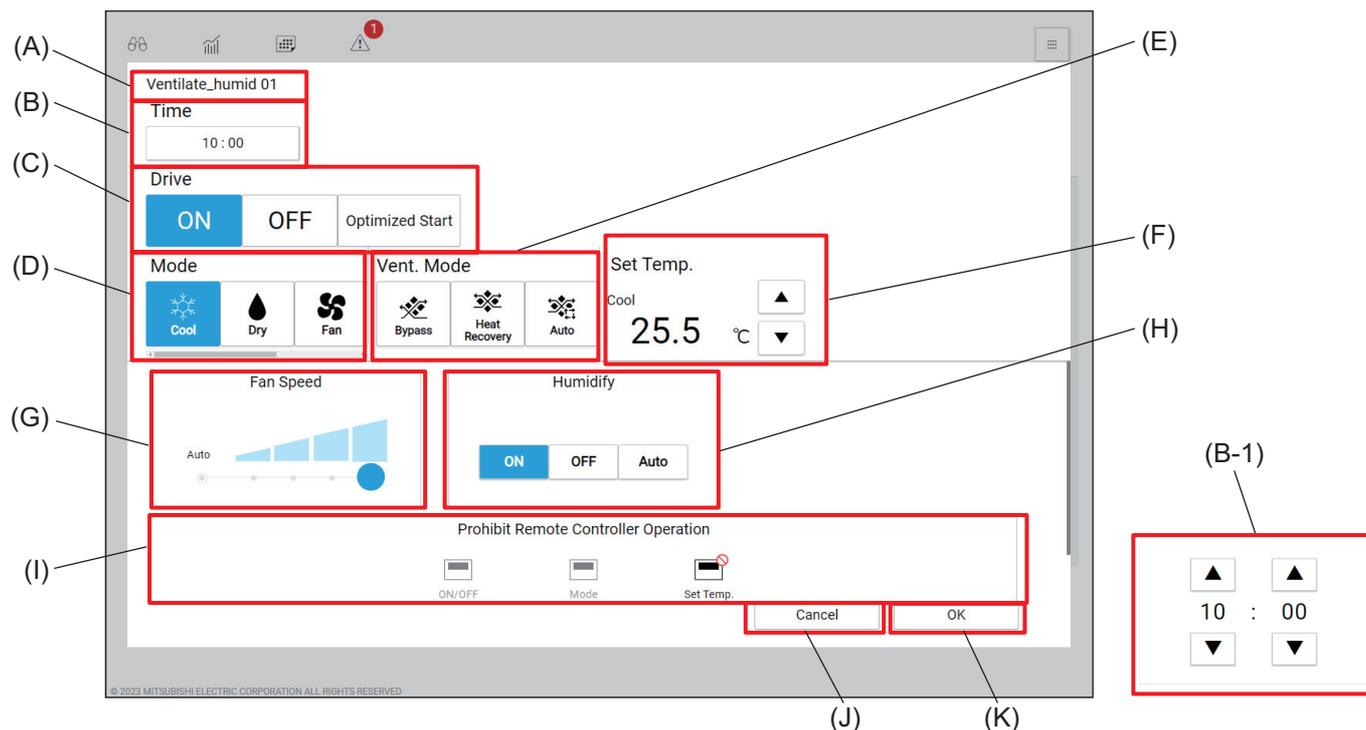
2) Normal schedule

The unit is turned on with the schedule settings at the specified time.

[2] LOSSNAY group



	Item	Function and description
(A)	Group name	The name of the selected group is displayed.
(B)	Time	Set the activation time of the event. Tapping this item will display the time setting dialog (B-1).
(B-1)	Time setting dialog	Tap [▲] or [▼] to change the hour and minute.
(C)	Drive	Tap [ON], [OFF], or [24 hr ventilation] to select the operation method.
(D)	Vent. Mode	Tap [Bypass], [Heat Recovery], or [Auto] to change the ventilation mode of the LOSSNAY unit.
(E)	Fan Speed	Set the fan speed.
(F)	Humidify	Tap [ON], [OFF], or [Auto] to change the humidifier operation.
(G)	Prohibit Remote Controller Operation	Tap the buttons to allow or prohibit access from the remote controller to each item. The following settings can be allowed or prohibited: ON/OFF. Prohibited settings are marked with [🚫].
(H)	[Cancel]	Tap this button to go back to the previous screen without saving the setting changes.
(I)	[OK]	Tap this button to save the setting changes.

[3] OA handling unit (direct expansion type with built-in heater/humidifier) group

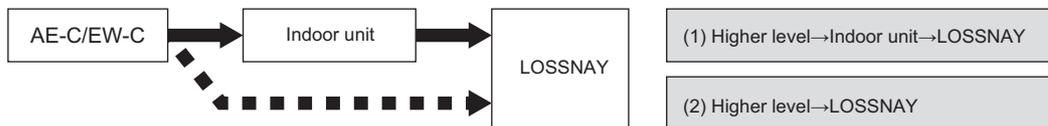
	Item	Function and description
(A)	Group name	The name of the selected group is displayed.
(B)	Time	Set the activation time of the event. Tapping this item will display the time setting dialog (B-1).
(B-1)	Time setting dialog	Tap [▲] or [▼] to change the hour and minute.
(C)	Drive	Tap [ON], [OFF], or [Optimized Start] to select the operation method.
(D)	Mode	Select the operation mode.
(E)	Vent. Mode	Tap [Bypass], [Heat Recovery], or [Auto] to change the ventilation mode of the OA handling unit (direct expansion type with built-in heater/humidifier).
(F)	Set temp.	Tap [▲] or [▼] to change the set temperature. • The temperature setting range vary with models.
(G)	Fan Speed	Set the fan speed.
(H)	Humidify	Tap [ON], [OFF], or [Auto] to change the humidifier operation.
(I)	Prohibit Remote Controller Operation	Tap the buttons to allow or prohibit access from the remote controller to each item. The following settings can be allowed or prohibited: ON/OFF, Mode, and Set Temp. Prohibited settings are marked with [⊘].
(J)	[Cancel]	Tap this button to go back to the previous screen without saving the setting changes.
(K)	[OK]	Tap this button to save the setting changes.

Note

- When all groups, a block, or batch EM block is selected, all modes are available, however, the specified mode will not run if the configured air conditioning unit does not have the applicable function. Be sure to configure the schedule settings in consideration of the air conditioning unit's functions.
- The available operation patterns differ depending on the air conditioning unit group, LOSSNAY group, OA handling unit (direct expansion type with built-in heater/humidifier) group, and general equipment group.
- When using a LOSSNAY unit, Set Temp. is not displayed.
Also, only [ON/OFF] is available for Prohibit Remote Controller Operation.
- The humidifier button is displayed and available when the OA handling unit (direct expansion type with built-in heater/humidifier) group mode is set to heating.
- Only ON/OFF are available for the general equipment group.
- Interlocked LOSSNAY ventilation schedule settings

There are two basic operations for interlocked LOSSNAY units set to be turned on/off in line with indoor unit operation:

- (1) Turn the air conditioning unit on via the indoor unit operation screen to turn the LOSSNAY unit on (air conditioning unit interlocked operation)
- (2) Operate the ventilation via the indoor unit operation screen and directly turn the interlocked LOSSNAY unit on (direct LOSSNAY unit operation)



Setting (2) is not available on the indoor unit Schedule settings screen.

To use interlocked LOSSNAY schedule operation, refer to the following.

- : LOSSNAY operation is available via schedule settings
- ×: LOSSNAY operation is not available via schedule settings

Operation procedures	Air conditioning unit schedule	LOSSNAY unit schedule
(1) Air conditioning unit interlocked operation	○ Air conditioning unit also turns on	—
(2) Direct LOSSNAY unit operation	× Cannot be set	○ ON is not displayed on the air conditioner remote control

- Configurable settings differ depending on the ventilation model.
- Also refer to the ventilating unit technical documentation.
- The FU attribute OA handling unit (direct expansion type with built-in heater/humidifier) cannot be turned on independently via schedule settings.

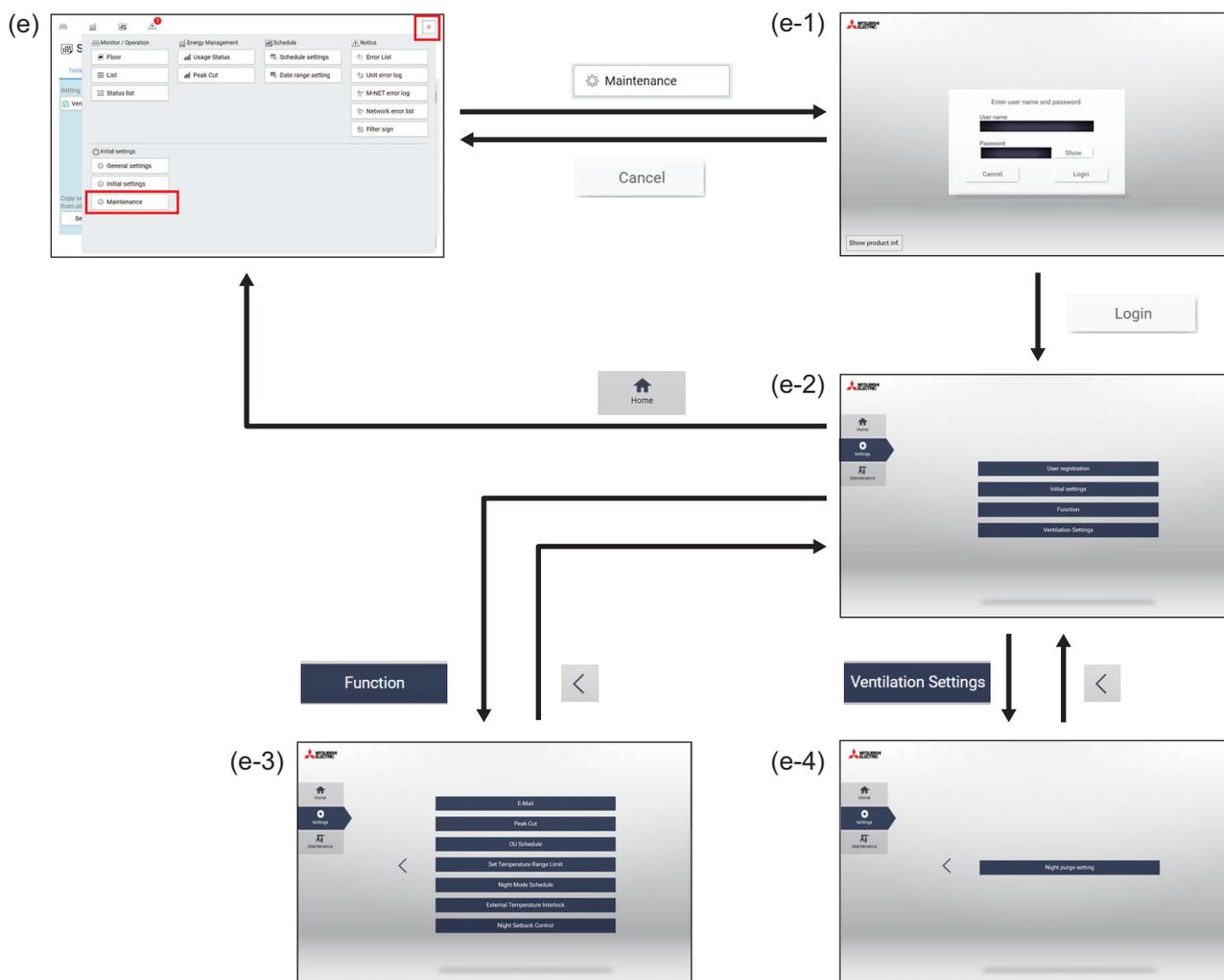
To set the schedule settings on the interlock source air conditioning unit, interlock it and turn it on.

MEMO

7. Usage (Air conditioning unit/ventilating unit: operation management)

7-1. Common matters

7-1-1. Screen transition



	Item	Function and description
(e)	Panorama view	Tapping [Maintenance] will display the operation management login screen.
(e-1)	Login	The login screen to access the operation management screen (e-2) will be displayed. Enter the user ID and password, and tap [Login] . To go back to the Panorama view screen (e), tap [Cancel]

	Item	Function and description
(e-2)	Operation management	
	Home	The floor layout screen is displayed.
	Settings	The operation settings are displayed.
	User registration	The user registration screen is displayed.
	Initial settings	The initial settings screen is displayed.
	Function	The function settings screen (e-3) is displayed.
	Ventilation Set- tings	The ventilation settings screen (e-4) is displayed.
	Maintenance	Maintenance items are displayed.

7-2. Set temperature range limit settings

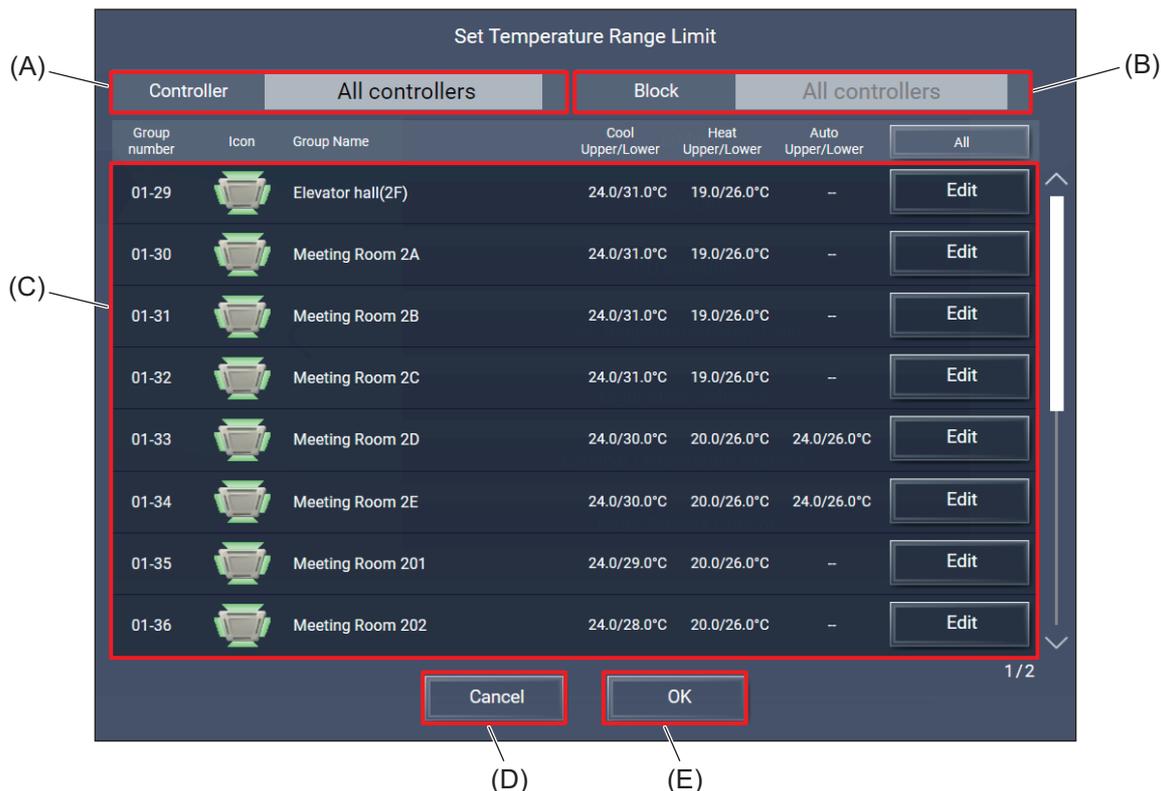
7-2-1. Function

- The set temperature range on the local remote controller or general user web browser can be limited. Limiting the min./max. cooling, heating, and Auto mode set temperatures can help save energy.

7-2-2. Setting screen

Tapping **[Settings]** and then **[Function]** on the operation management screen (e-2) will display the function settings screen.

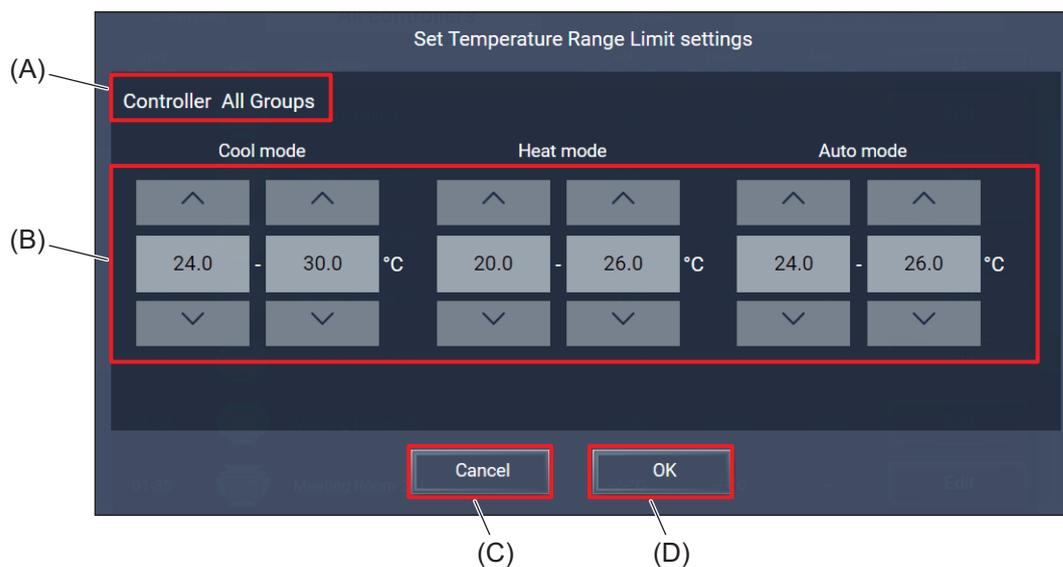
Tapping **[Set Temperature Range Limit]** on the function settings screen will display the Set Temperature Range Limit screen.



	Item	Function and description
(A)	Controller	Select the target AE-C/EW-C.
(B)	Block	Select the target block to display.
(C)	List of settings	Setting targets and setting values are displayed. Tapping [Edit] will display the Set Temperature Range Limit settings screen.
(D)	[Cancel]	Tap this button to go back to the previous screen without saving the setting changes.
(E)	[OK]	Tap this button to save the setting changes.

[1] Set Temperature Range Limit settings screen

The temperature setting range (lower and upper limits) in the cooling, heating, and auto modes of the target group can be set.



	Item	Function and description
(A)	Controller	The target group name is displayed.
(B)	Temperature range limit settings	Tap [▲] or [▼] to set the temperature setting range (lower and upper limits) in the cooling, heating, and auto modes.
(C)	[Cancel]	Tap this button to go back to the previous screen without saving the setting changes.
(D)	[OK]	Tap this button to save the setting changes.

Note

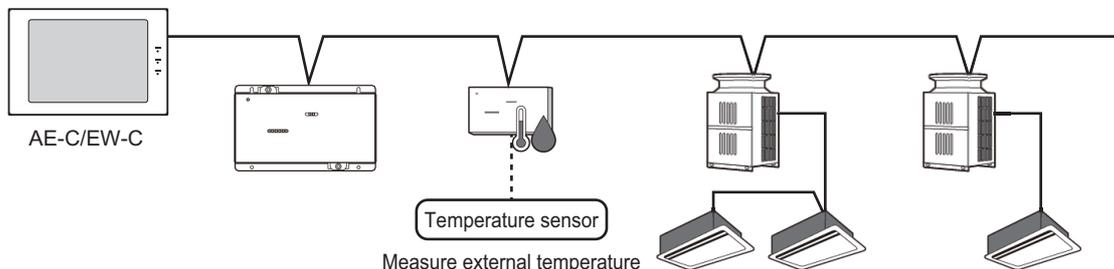
- The available modes differ depending on the model.
- Temperature range limit settings may not be available depending on the model.

7-3. External temperature interlock settings

7-3-1. Function

External temperature interlock control minimizes temperature differences between the outside and inside (entrance) while cooling or heating is being used, preventing heat shock (stress placed on the body due to sudden temperature differences) when entering the building.

This setting can be configured on the AE-C/EW-C or the AE-C/EW-C web browser.



7-3-2. Details of control

The maximum set temperature variation range of the air conditioning unit can be set on each unit, from Level 1 to Level 4 for each area depending on the temperature difference. (Set Temp. - 4 to - 1°C or + 1 to 4°C)

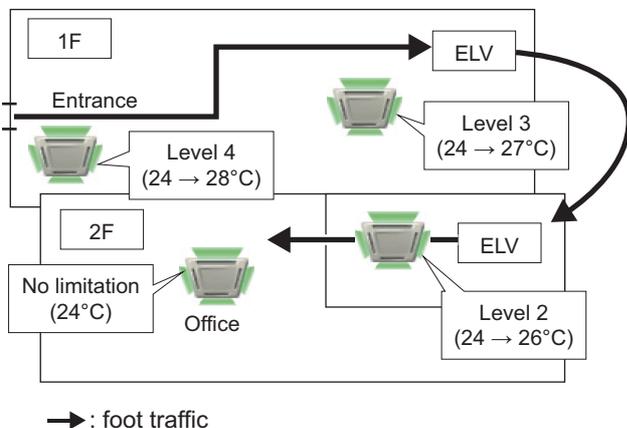
You can exclude areas from the external temperature interlock (no control).

For example, the area near the entrance (significant temperature difference) can be set to Level 4, the hallway to Level 3, the office entrance to Level 2, and the inside of the office with no control.

Setting levels allows you to gradually change the temperature from the building entrance to the office, preventing heat shock and ensuring comfort.

This setting can also be configured using a web browser.

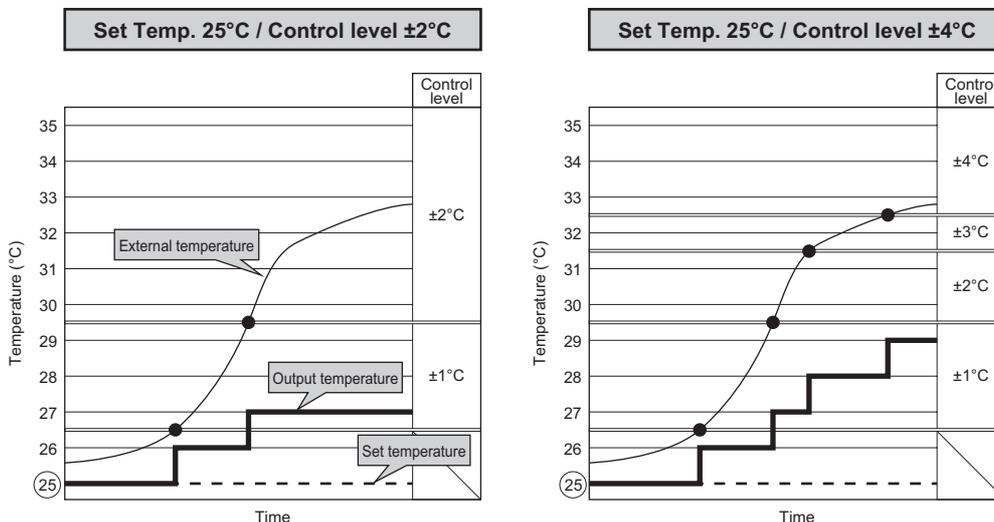
■ Control example



7-3-3. Control examples

[1] Cooling or dry modes

The following diagram shows the set temperature as the output temperature after being adjusted in each control level when cooling at a Set Temp. of 25°C and the external temperature has changed. The Set Temp. is the cooling target temperature set with the remote controller, etc., and is displayed on the local remote controller or AE-C/EW-C.



Control level	External temperature interlock control conditions and set temperature value change		Cooling, Set Temp. of 25°C	
	Difference between external temperature and set temperature	Set temperature value change according to interlock control	External temperature	Output temperature
±4°C	7.5°C and up	Set Temp. + 4°C	32.5°C and up	29°C
±3°C	6.5 to less than 7.5°C	Set Temp. + 3°C	31.5 to less than 32.5°C	28°C
±2°C	4.5 to less than 6.5°C	Set Temp. + 2°C	29.5 to less than 31.5°C	27°C
±1°C	1.5 to less than 4.5°C	Set Temp. + 1°C	26.5 to less than 29.5°C	26°C
—	Less than 1.5°C	No change	Less than 26.5°C	Maintains 25°C

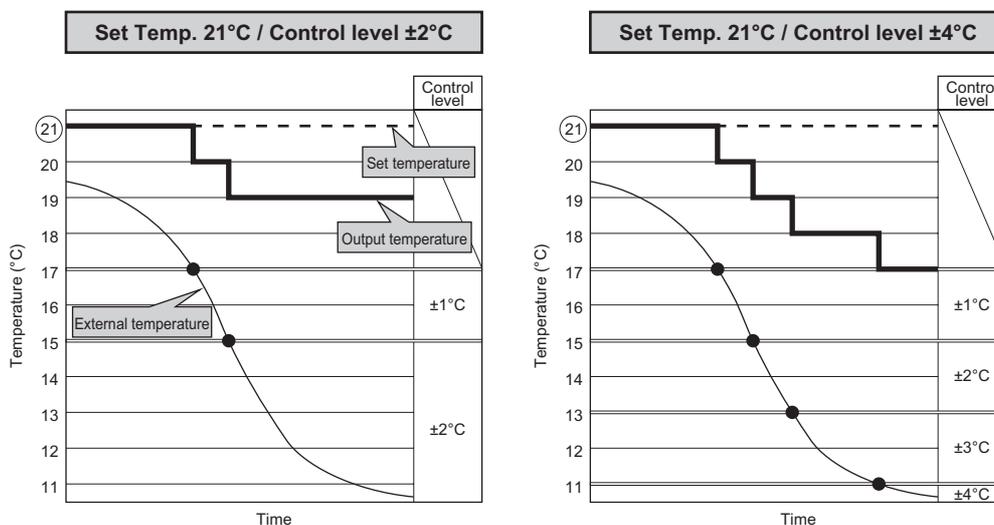
Cooling operation example:

External temperature interlock control level set to ±2°C and the air conditioning unit Set Temp. is 25°C

- (1) When the external temperature is 29.5°C and the Set Temp. is 25°C, the difference is 4.5°C, and temperature control of +2°C changes the Set Temp. from 25°C to 27°C.
- (2) When the external temperature is 32°C and the Set Temp. is 25°C, the difference is 7°C and the temperature control condition of +3°C applies, however, because the control level setting is up to ±2°C, temperature control of +2°C changes the Set Temp. from 25°C to 27°C.
- (3) When the external temperature is 26°C and the Set Temp. is 25°C, the difference is 1°C and the temperature control condition (difference between the external temperature and Set Temp. is 1.5°C or more) does not apply for cooling, so the external temperature interlock control remains inactive and the Set Temp. is maintained at 25°C.

[2] Heating mode

The following diagram shows the set temperature as the output temperature after being adjusted in each control level when heating at a Set Temp. of 21°C and the external temperature has changed. The Set Temp. is the heating target temperature set with the remote controller, etc., and is displayed on the local remote controller or AE-C/EW-C.



Control level	External temperature interlock control conditions and set temperature value change		Heating, Set Temp. of 21°C	
	Difference between external temperature and set temperature	Set temperature value change according to interlock control	External temperature	Output temperature
—	Less than 4°C	No change	More than 17°C	Maintains 21°C
±1°C	4 to less than 6°C	Set Temp. - 1°C	More than 15 to 17°C	20°C
±2°C	6 to less than 8°C	Set Temp. - 2°C	More than 13 to 15°C	19°C
±3°C	8 to less than 10°C	Set Temp. - 3°C	More than 11 to 13°C	18°C
±4°C	10°C and up	Set Temp. - 4°C	1°C or lower	17°C

Heating operation example:

External temperature interlock control level set to ±4°C and the air conditioning unit Set Temp. is 21°C

- (1) When the external temperature is 17°C and the Set Temp. is 21°C, the difference is 4°C, and temperature control of -1°C changes the Set Temp. from 21°C to 20°C.
- (2) When the external temperature is 11°C and the Set Temp. is 21°C, the difference is 10°C, and temperature control of -4°C changes the Set Temp. from 21°C to 17°C.
- (3) When the external temperature is 18°C and the Set Temp. is 21°C, the difference is 3°C and the temperature control condition (difference between the external temperature and Set Temp. is 4°C or more) does not apply for heating, so the external temperature interlock control remains inactive and the Set Temp. is maintained at 21°C.

7-3-4. Setting screen

Tapping **[Settings]** and then **[Function]** on the operation management screen (e-2) will display the function settings screen.

Tapping **[External Temperature Interlock]** on the function settings screen will display the AE-C/EW-C selection dialog (A).

Selecting an AE-C/EW-C and tapping **[Next]** on the dialog will display the External Temperature Interlock screen.



	Item	Function and description
(A)	AE-C/EW-C selection dialog	Selecting an AE-C/EW-C and tapping [Next] on the dialog will display the External Temperature Interlock screen. Tapping [Cancel] will close the dialog.
(B)	Controller	The target AE-C/EW-C is displayed.
(C)	External Temperature Sensor	External temperature sensor registered to the AE-C/EW-C is displayed. Tapping this item will display the External temperature sensor selection dialog (C-1).
(C-1)	External temperature sensor selection dialog	Select an external temperature sensor. Tapping [Cancel] will close the dialog without saving the setting changes. Tapping [OK] will save the settings and close the dialog.
(D)	Interlock control area	The numbers and names of the external temperature interlock control groups registered to the AE-C/EW-C are displayed.
(E)	Set Temperature Variation Range	Select the range to vary the set temperature depending on the external temperature.
(F)	[Cancel]	Tap this button to go back to the previous screen without saving the setting changes.
(G)	[OK]	Tap this button to save the setting changes.

Note

- Connect the temperature sensor to the AI controller, then measure the external temperature.
- Connect multiple AE-C/EW-C controllers, and when using external temperature interlock control for each system, connect the AI controller temperature sensor to each.
- Only air conditioner groups are subject to control. LOSSNAY units and general equipment cannot be controlled.
- This function cannot be used with indoor unit outlet temperature control.

7-4. Night Setback Control settings

7-4-1. Function

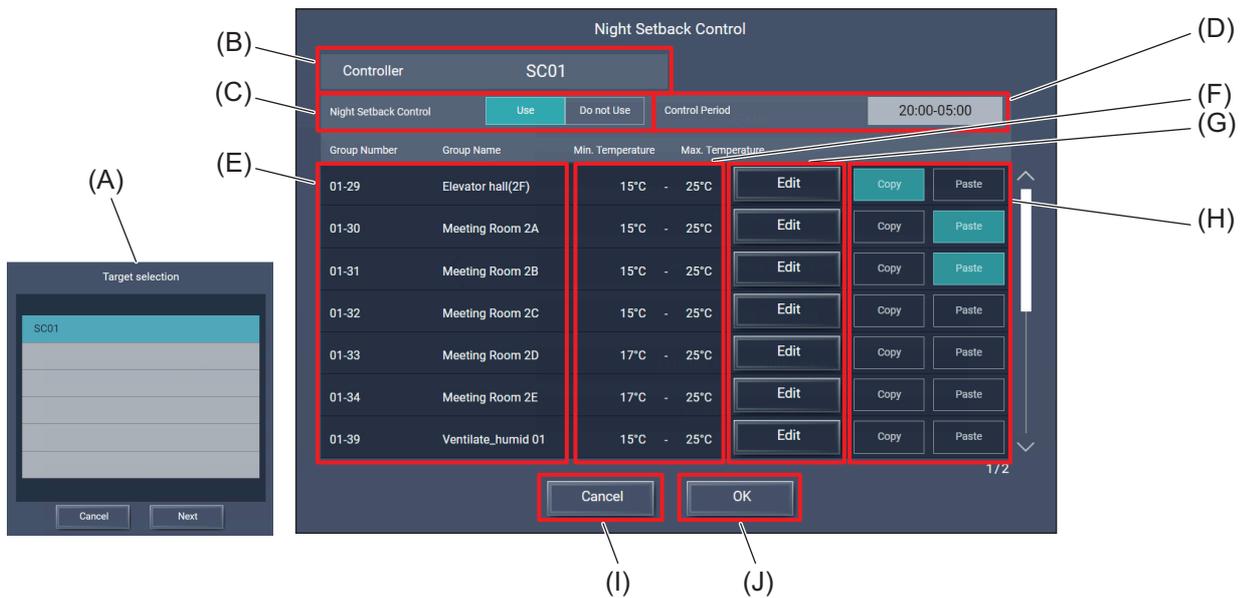
Night setback control automatically activates an air conditioning unit that is off and operates cooling or heating when the room temperature is outside of the min./max. temperature range within a set time period, preventing condensation or excessive temperature rise in the room.

7-4-2. Setting screen

Tapping **[Settings]** and then **[Function]** on the operation management screen (e-2) will display the function settings screen.

Tapping **[Night Setback Control]** on the function settings screen will display the AE-C/EW-C selection dialog (A).

Selecting an AE-C/EW-C and tapping **[Next]** on the dialog will display the Night Setback Control screen.



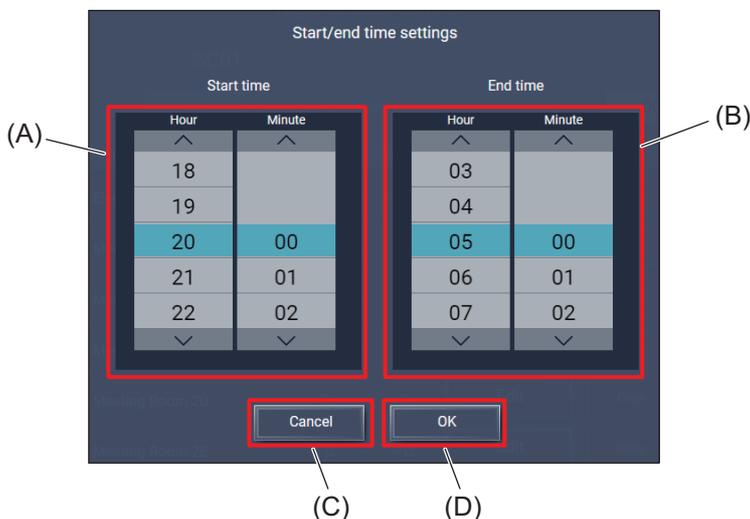
	Item	Function and description
(A)	AE-C/EW-C selection dialog	Selecting an AE-C/EW-C and tapping [Next] on the dialog will display the Night Setback Control screen. Tapping [Cancel] will close the dialog.
(B)	Controller	The target AE-C/EW-C is displayed.
(C)	Night Setback Control	Select whether to use or not the setback control.
(D)	Control Period	Set the setback control period. Tapping this item will display the Start/end time settings screen.
(E)	Group Number, Group Name	The numbers and names of the target groups are displayed.
(F)	Min./Max. Temperature	The min. and max. temperatures of each group are displayed.
(G)	Edit	Tapping this button will display the Temperature range settings screen.
(H)	Copy/Paste	Tap [Copy] of the group of which settings you want to copy, and tap [Paste] of the group to which you want to paste the copied settings.
(I)	[Cancel]	Tap this button to go back to the previous screen without saving the setting changes.
(J)	[OK]	Tap this button to save the setting changes.

Note

- When measuring the room temperature with the air conditioning unit intake temperature sensor, air stagnates in the room while the air conditioner unit is off, resulting in differences from the actual room temperature. If this happens, switch to the exterior temperature sensor or remote controller sensor and measure the room temperature.
- Night setback control may be prohibited if the building administrator is logged in.
- When using the AE-C/EW-C, make sure night setback control is configured with the AE-C/EW-C properly connected so that it is set correctly.
Settings configured when the AE-C/EW-C is not connected will not be applied.
- If, during night setback control, the local remote controller is used to turn the system ON/OFF, or to change the mode or set temperature, the status will be maintained and the settings will not be reverted to the pre-night setback control status.

[1] Start/end time settings screen

The start and end times of the control can be set.



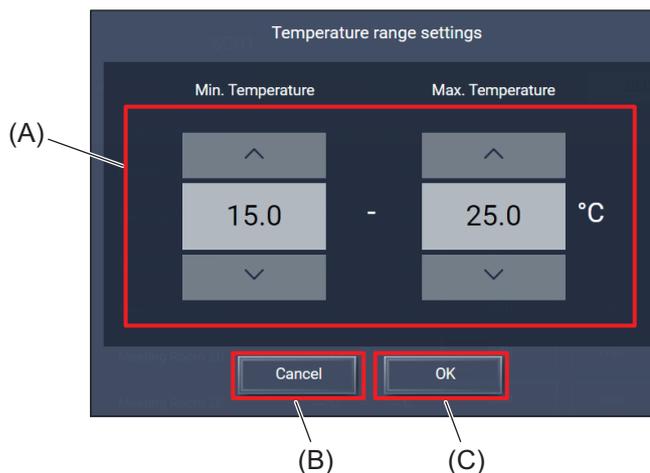
	Item	Function and description
(A)	Start time	Tap [▲] or [▼] to set the hour and minute of the start time.
(B)	End time	Tap [▲] or [▼] to set the hour and minute of the end time.
(C)	[Cancel]	Tap this button to go back to the previous screen without saving the setting changes.
(D)	[OK]	Tap this button to save the setting changes.

Note

- If 00:00 is set for the start and end times, night setback control will be available at all times (24 hours).

[2] Temperature range settings screen

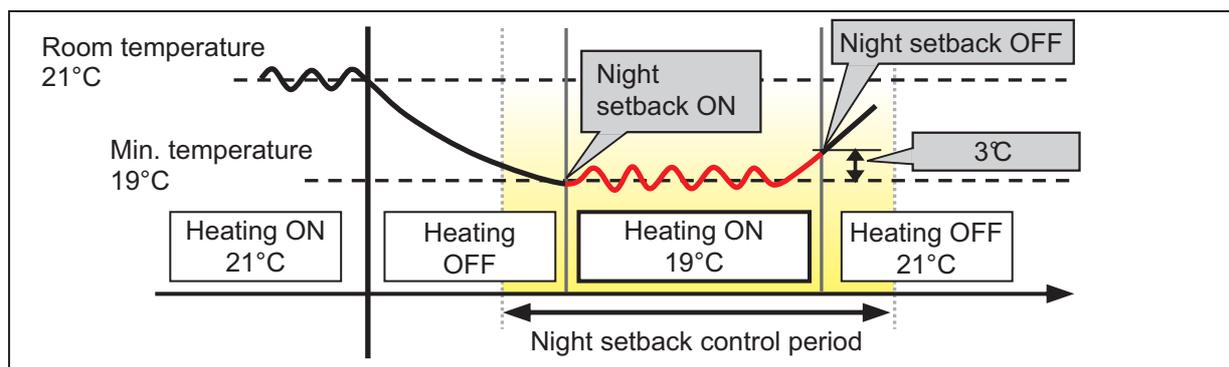
The temperature setting range (min. and max.) of the target group can be set.



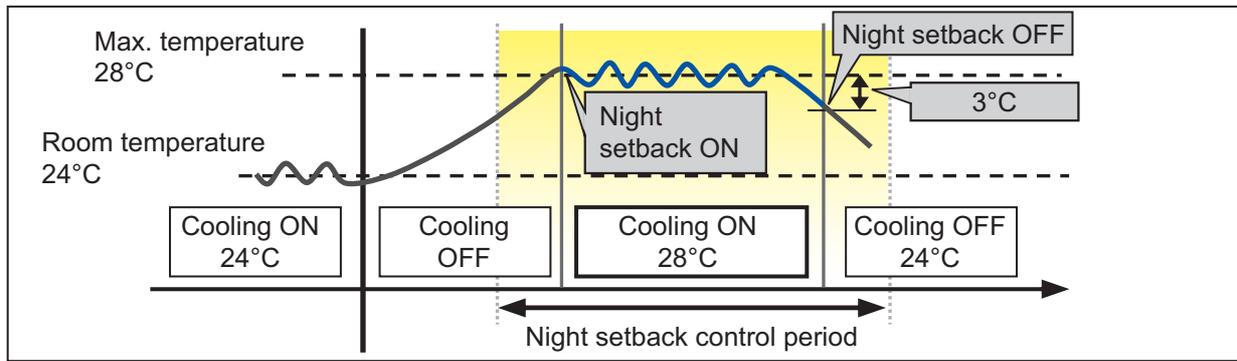
	Item	Function and description
(A)	Temperature range	Tap [▲] or [▼] to set the temperature range (min. and max.) of the target group.
(B)	[Cancel]	Tap this button to go back to the previous screen without saving the setting changes.
(C)	[OK]	Tap this button to save the setting changes.

Note

- The setting is the min. temperature < max. temperature.
- Available temperature settings differ depending on the model.
- When the air conditioning unit is in heating mode, it will stop when the night setback control time ends or if the room temperature rises 3°C or more from the min. temperature, and will revert to the Set Temp. Similarly, when the air conditioning unit is in cooling mode, it will stop when the night setback control time ends or if the room temperature drops 3°C or more from the max. temperature, and will revert to the Set Temp.



Min. temperature exceeded (heating control)



Max. temperature exceeded (cooling control)

7-5. Night purge setting

7-5-1. Function

Night purge takes in cool outside air at night and ejects inside air to minimize the cooling load the next day when cooling begins.

Launch night purge when the room temperature is high and there is a significant difference from the external temperature.

Night purge execution is controlled from the LOSSNAY unit.

7-5-2. Details of control

The following items can be set on the AE-C/EW-C to enable night purge operation.

Setting	Function and description	Example setting
Start time	Control start time	1:00
End time	Control end time	6:00
OT threshold	Outdoor temperature for control start conditions	28°C
RoomTemp dif	Difference between room and outdoor temperatures	5°C

* The OT threshold setting range is 15 to 30°C.

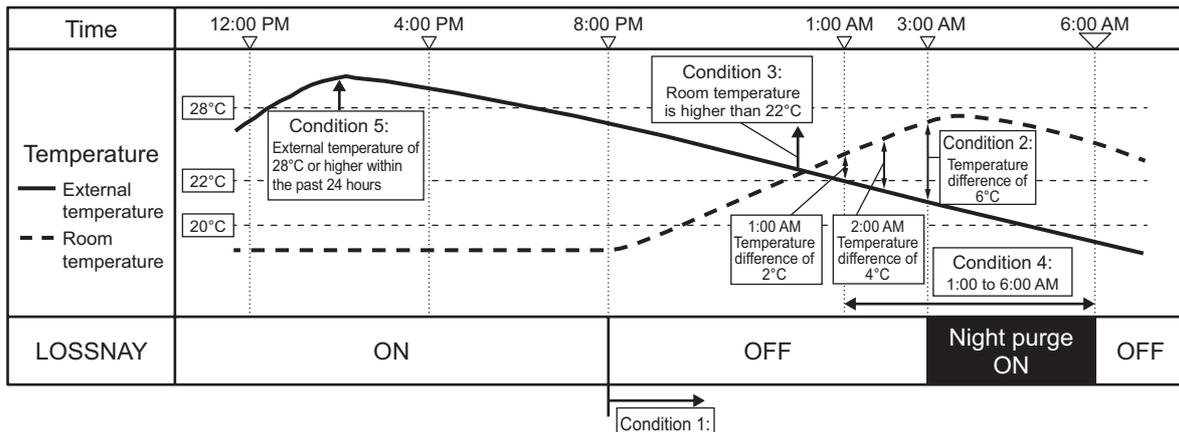
* The RoomTemp dif setting range is 0 to 7°C.

The night purge start conditions are shown below (under above example settings).

- Condition 1: The unit operation status is OFF or 24 hr ventilation.
- Condition 2: The room temperature minus the outdoor temperature is higher than the setting value of RoomTemp dif (5°C).
- Condition 3: If the current room temperature is higher than 22°C, the night purge setting cannot be configured on the AE-C. Configure the unit settings on the LOSSNAY or OA handling unit (direct expansion type with built-in heater/humidifier).
- Condition 4: The current time is between the start time of 1:00 and end time of 6:00.
- Condition 5:
 - The LOSSNAY or OA handling unit (direct expansion type with built-in heater/humidifier) detected an external temperature above the setting value of OT threshold (28°C) within the past 24 hours.
 - While interlocking a Mitsubishi Electric Corporation multi-air conditioner system with MELANS (free plan), the multi-air conditioner system is operating in cooling mode (for LOSSNAY).
 - The system is operating in cooling (dry) mode (for OA handling units (direct expansion type with built-in heater/humidifier)).

The start conditions are shown in the below figure.

* When night purge is ON, the system operates as a Bypass. (The Vent. Mode cannot be changed.)



Night purge is turned off when any of conditions 1 to 3 below are met.

Condition 1: The room temperature falls below 22°C.

Condition 2: The difference between room and outdoor temperatures falls below the set temperature.

Condition 3: The end time has been reached

* The room/outdoor temperature is the value detected by the LOSSNAY or OA handling unit (direct expansion type with built-in heater/humidifier).

* For details on night purge start conditions, see the LOSSNAY or OA handling unit (direct expansion type with built-in heater/humidifier) technical documentation.

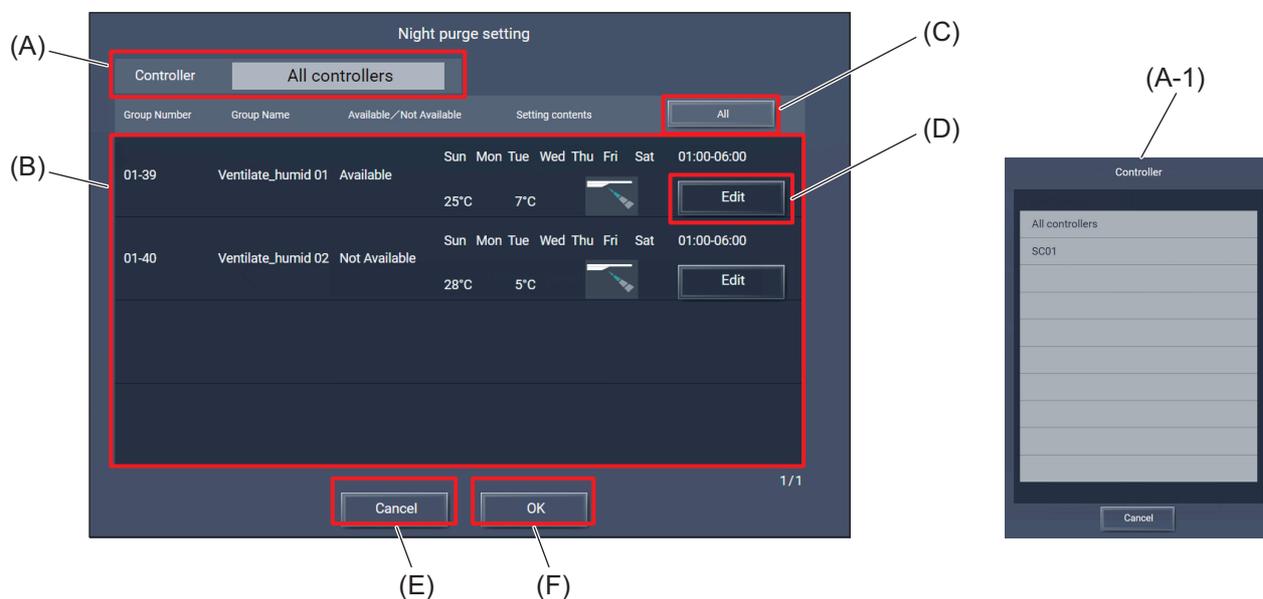
* When night purge start conditions are met and the LOSSNAY or OA handling unit (direct expansion type with built-in heater/humidifier) is turned off, night purge begins.

* The start and end times can only be set on the AE-C/EW-C. (They cannot be set using the MA smart remote controller.)

7-5-3. Setting screen

Tapping **[Settings]** and then **[Ventilation Settings]** on the operation management screen (e-2) will display the ventilation settings screen.

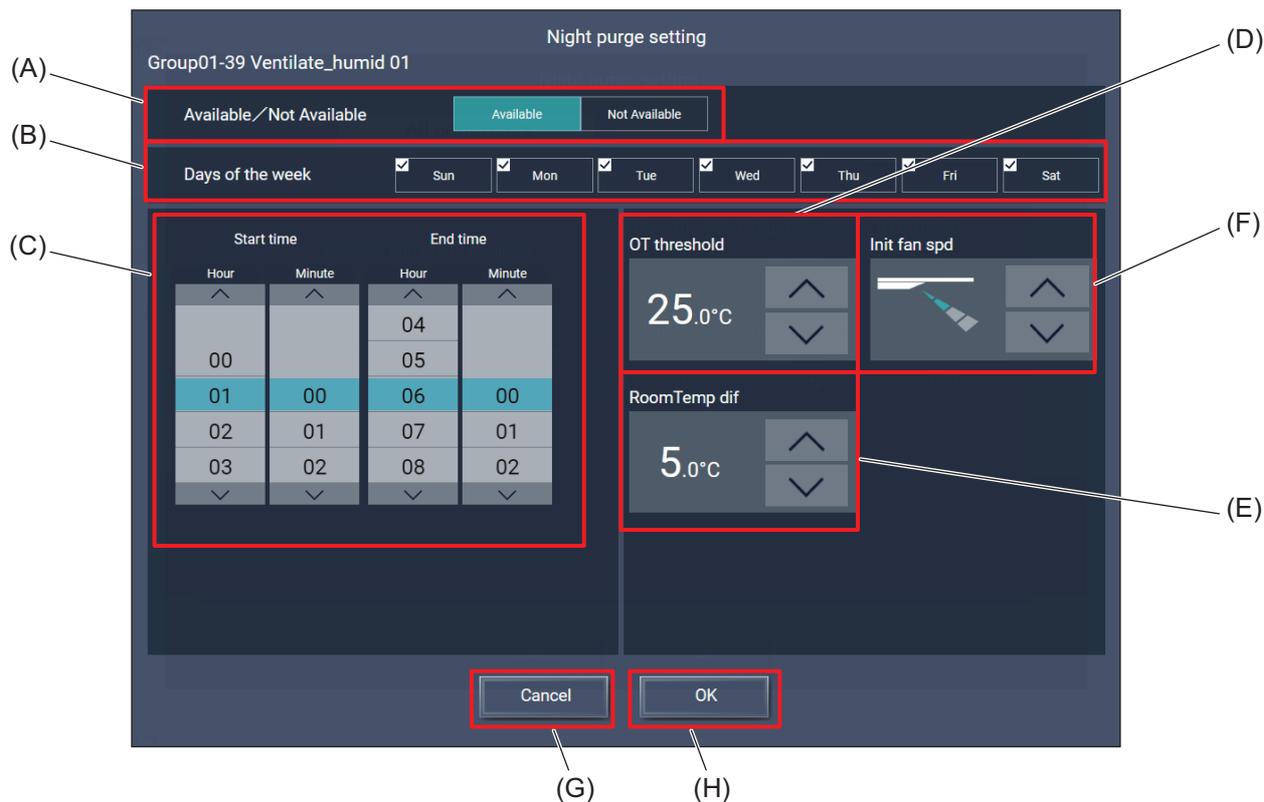
Tapping **[Night purge setting]** on the ventilation settings screen will display the Night purge setting screen.



	Item	Function and description
(A)	Controller	Tapping this item will display the AE-C/EW-C selection dialog (A-1).
(A-1)	AE-C/EW-C selection dialog	Select the target AE-C/EW-C. Tapping [Cancel] will close the dialog without saving the setting changes.
(B)	Group Number, Group Name, current setting	The numbers and names of the target groups and their settings are displayed. <ul style="list-style-type: none"> • Available/Not Available • Day of the week • Outside air temperature threshold and indoor-outdoor temperature difference • Initial fan speed
(C)	[All]	Tapping this button will display the Night purge setting change screen.
(D)	[Edit]	Tapping [All] will apply the settings to all groups.
(E)	[Cancel]	Tap this button to go back to the previous screen without saving the setting changes.
(F)	[OK]	Tap this button to save the setting changes.

[1] Night purge setting change screen

Set the time period during which the night purge is allowed, and the threshold values of outdoor air temperature and indoor-outdoor temperature difference at which the night purge is activated.



	Item	Function and description
(A)	Available/ Not Available	Tap [Available] or [Not Available] to enable or disable the night purge.
(B)	Days of the week	Select the days of the week to execute the night purge.
(C)	Start/end time	Set the start and end times of the time period during which the night purge is allowed.
(D)	OT threshold	Set the outdoor air temperature at which the night purge is activated.
(E)	RoomTemp dif	Set the difference between indoor and outdoor temperatures at which the night purge is activated.
(F)	Init fan spd	Set the initial fan speed of the night purge.
(G)	[Cancel]	Tapping this button will close the dialog without saving the setting changes.
(H)	[OK]	Tapping this button will save the settings and close the dialog.

7-5-4. Notice

[1] Grouping

Units that support and ones that do not support night purge must not be included in the same group.

If they are included in the same group and the base unit (the unit with the lowest address number in the group) does not support night purge, night purge will not be available even if the counterpart unit supports the feature.

* The unit with the lowest address number in the group is the base unit.

[2] Night purge will not be activated during level operation via an external input (level input)

[3] Resuming night purge

If night purge is turned off while running, it cannot be resumed on the same day.

[4] Schedule settings

If a schedule is set during the night purge time period, the schedule settings take priority.

[5] Interlock control

If interlock control is set during the night purge time period, the interlock control settings take priority.

- Configurable settings differ depending on the ventilation model.
- Also refer to the ventilating unit technical documentation.

7-6. Night mode (low noise mode) schedule settings

7-6-1. Function

Night mode (low noise mode) switches the outdoor unit to low noise mode for the set time.
This feature is useful when you want to run the outdoor unit in low noise mode at nighttime only.

7-6-2. Details of control

There are two night mode (low noise mode) settings: the outdoor unit schedule settings (outdoor unit schedule 2) and the normal setting. Settings can be made with either of the above methods.

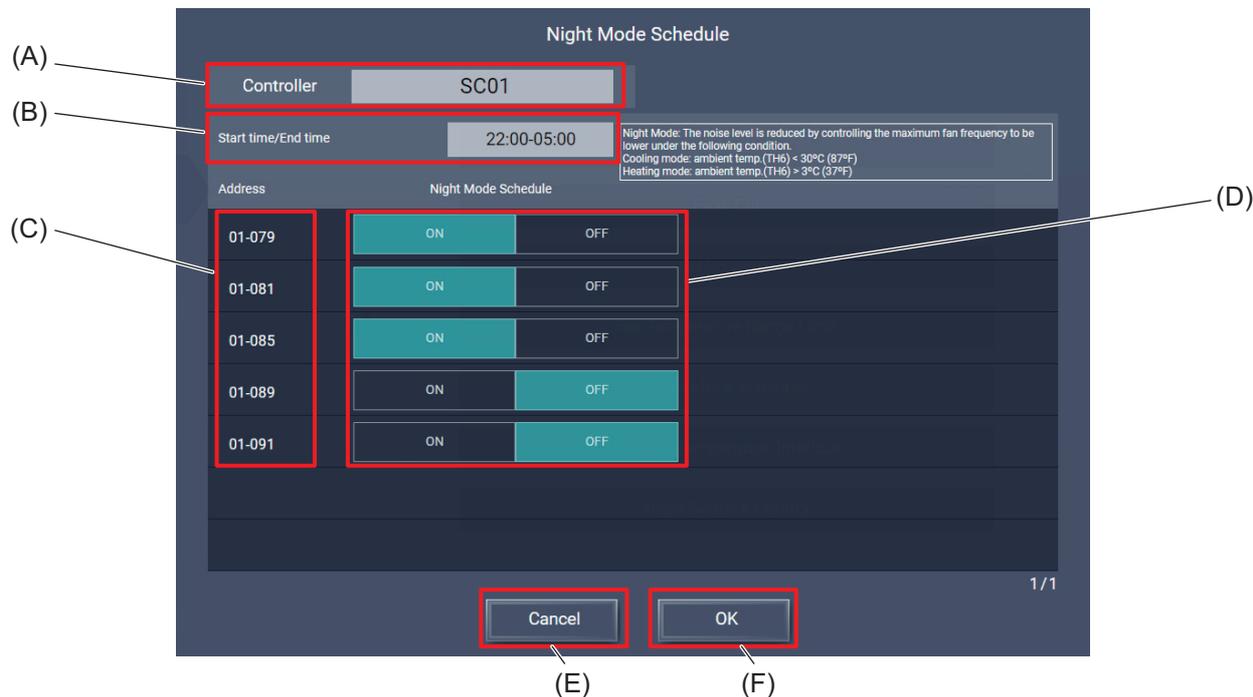
(1) Night mode [normal setting]

- There are two low noise mode options: silent priority and performance priority. Control is determined by the outdoor unit settings. For the outdoor unit configuration method, refer to the installation manual for the unit.
- Set the control start and end times. (Setting common to all outdoor addresses subject to control)
- Set night mode control [ON] (control) or [OFF] (do not control) to each address.
- This schedule can be set across multiple days. (Example: 22:00 to 6:00)

7-6-3. Normal setting

Tapping **[Settings]** and then **[Function]** on the operation management screen (e-2) will display the function settings screen.

Tapping **[Night Mode Schedule]** on the function settings screen will display the Night Mode Schedule screen.



	Item	Function and description
(A)	Controller	Select the target AE-C/EW-C.
(B)	Start time/End time	Set the start and end times of the night mode schedule.
(C)	Address	The M-NET addresses of the outdoor units are displayed.
(D)	ON/OFF	Tap [ON] or [OFF] to turn on or off the night mode schedule.
(E)	[Cancel]	Tap this button to go back to the previous screen without saving the setting changes.
(F)	[OK]	Tap this button to save the setting changes.

7-6-4. Notice

- The control level of the night mode is not displayed on the monitoring screen.
- Depending on the type of outdoor unit, it may not be possible to configure it via the outdoor unit schedule.
- When deleting the outdoor unit schedule settings from the outdoor unit schedule, make sure the function controlled by the schedule is disabled (or OFF). If you delete the schedule settings while control is available (or ON), control may be activated and cooling or heating could fail to reach the set temperature.
- Settings via the outdoor unit schedule and normal settings may not be used together on an outdoor unit with the same address.
- If night mode has been enabled (or ON) by settings via the outdoor unit schedule or normal settings, Available (or ON) will be displayed. When both settings are disabled (or OFF), Not Available (or OFF) will be displayed.
- The normal setting schedule is activated every day at the set time period. To enable control via a different schedule on different days, use the settings via the outdoor unit schedule.
- If the night mode control level is not displayed in three levels (low, medium, high) on the setting screen via the outdoor unit schedule, the outdoor unit switch settings must be changed. For details on the unit configuration method, contact your dealer.
- Night mode control via normal settings is determined by the outdoor unit settings. The reduced noise value differs depending on the model. Also, depending on the outdoor unit model, the low noise level configured by switch settings may be available in three levels.
- When not using the AE-C/EW-C, the low noise mode is available via the outdoor unit external contact input (remote input/output control: CN3D). If the settings via the outdoor unit schedule from the AE-C/EW-C or night mode normal settings and night mode via the outdoor unit contact input are available in the same time period, they operate in the following order: outdoor unit contact point > settings via the outdoor unit schedule > normal settings. Therefore, a night mode command cannot be executed on the AE-C/EW-C while in low noise mode on the outdoor unit contact point.
- If the outdoor unit contact input is released in the time period while night mode control is available on the AE-C/EW-C, it can take up to 20 minutes until night mode control is available on the AE-C/EW-C.

MEMO

8. Usage (Products other than air conditioning unit: basic operation)

8-1. Advanced setting screen for different types of products (basic operation)

Tapping **[Advanced]** on the Simple operation panel of the Monitor/Operation screen will display the Advanced setting screen for the selected group.

On the Advanced setting screen, you can view the operation status of the selected group or change the settings of the selected group.

After changing the settings, tap **[Send]** to save the changes.

To go back to the previous screen without saving the changes, tap **[Cancel]**.

- While the Advanced setting screen is being displayed, any changes in the operation status will not be reflected on the information shown on the screen.
- Buttons being selected are displayed in blue.

[1] e-Series 1



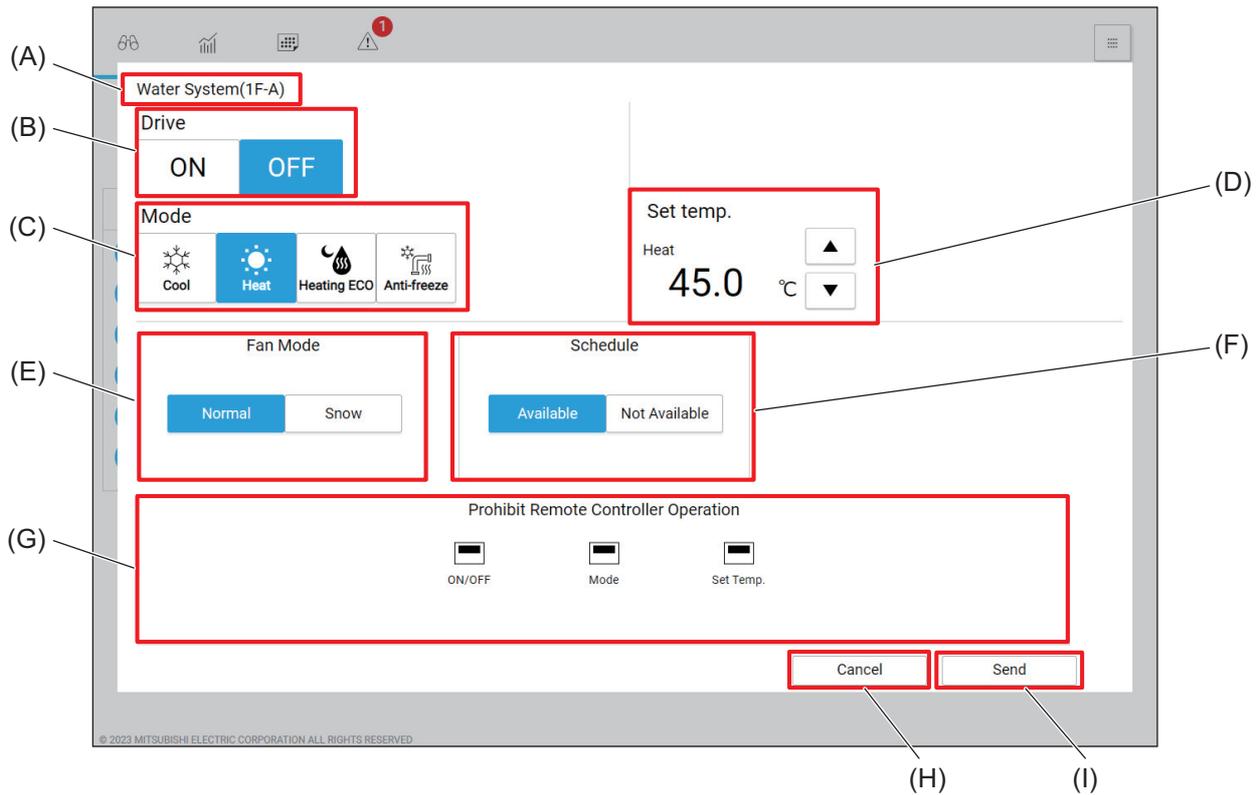
	Item	Function and description
(A)	Group name	The name of the selected group is displayed.
(B)	Drive	Tap [ON] or [OFF] to turn on or off the unit.
(C)	Mode	Select the operation mode.
(D)	Set temp.	Tap [▲] or [▼] to change the set water temperature.
(E)	Fan Mode	Tap [Normal] or [Snow] to switch the fan mode.
(F)	Schedule	Tap [Available] or [Not Available] to enable or disable the schedule. <ul style="list-style-type: none"> • When [Not Available] is selected, the controller will not operate according to the set schedule.

	Item	Function and description
(G)	Prohibit Remote Controller Operation	Tap the buttons to allow or prohibit access from the remote controller to each item. The following settings can be allowed or prohibited: ON/OFF, Mode, and Set temp. Prohibited settings are marked with [⊘].
(H)	[Cancel]	Tap this button to go back to the previous screen without saving the setting changes.
(I)	[Send]	Tap this button to save the setting changes.

Note

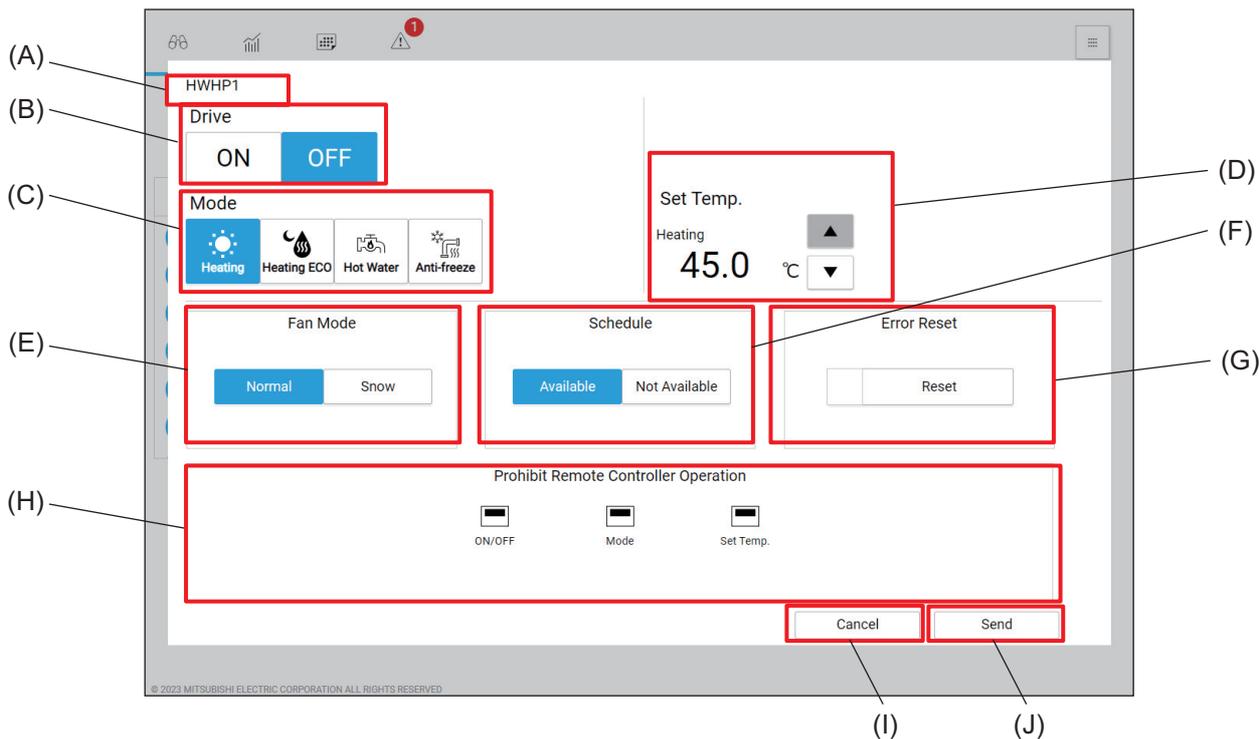
- e-Series monitoring/operation is not available on a smartphone.

[2] e-Series 2



	Item	Function and description
(A)	Group name	The name of the selected group is displayed.
(B)	Drive	Tap [ON] or [OFF] to turn on or off the unit.
(C)	Mode	Select the operation mode.
(D)	Set temp.	Tap [▲] or [▼] to change the set water temperature.
(E)	Fan Mode	Tap [Normal] or [Snow] switch the fan mode.
(F)	Schedule	Tap [Available] or [Not Available] to enable or disable the schedule. <ul style="list-style-type: none"> When [Not Available] is selected, the controller will not operate according to the set schedule.
(G)	Prohibit Remote Controller Operation	Tap the buttons to allow or prohibit access from the remote controller to each item. The following settings can be allowed or prohibited: ON/OFF, Mode, and Set temp. Prohibited settings are marked with [🚫].
(H)	[Cancel]	Tap this button to go back to the previous screen without saving the setting changes.
(I)	[Send]	Tap this button to save the setting changes.

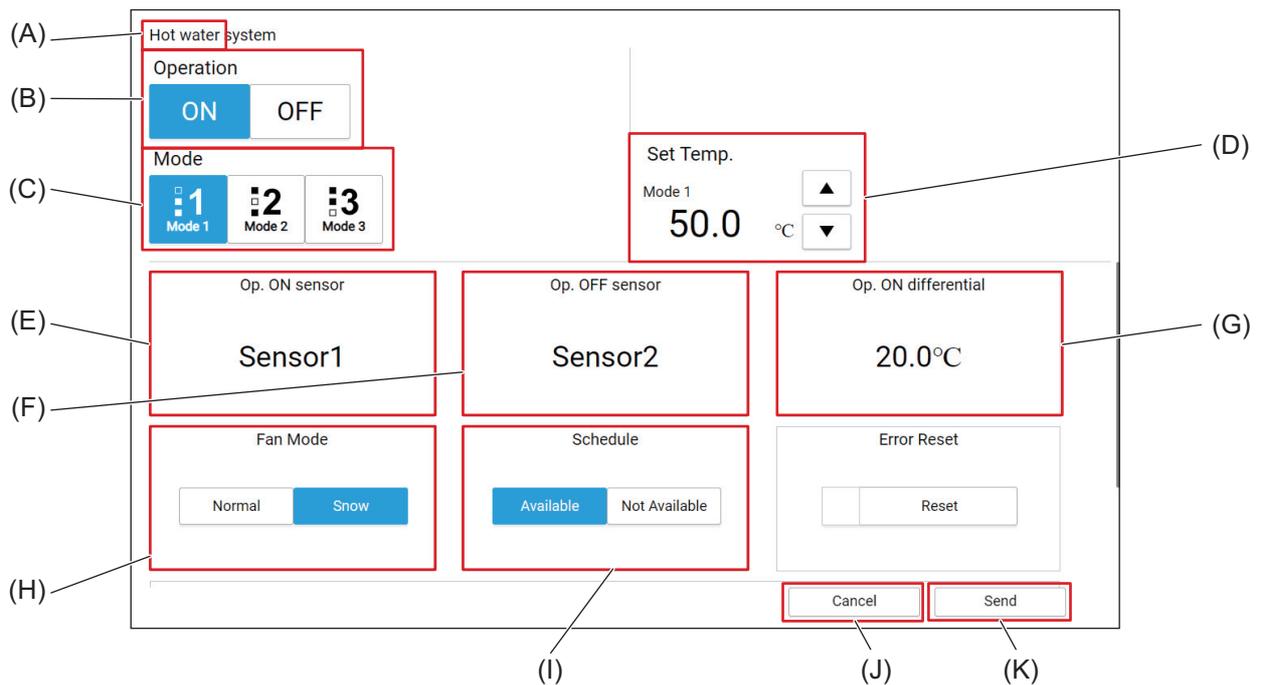
[3] HWHP (CAHV, CRHV)



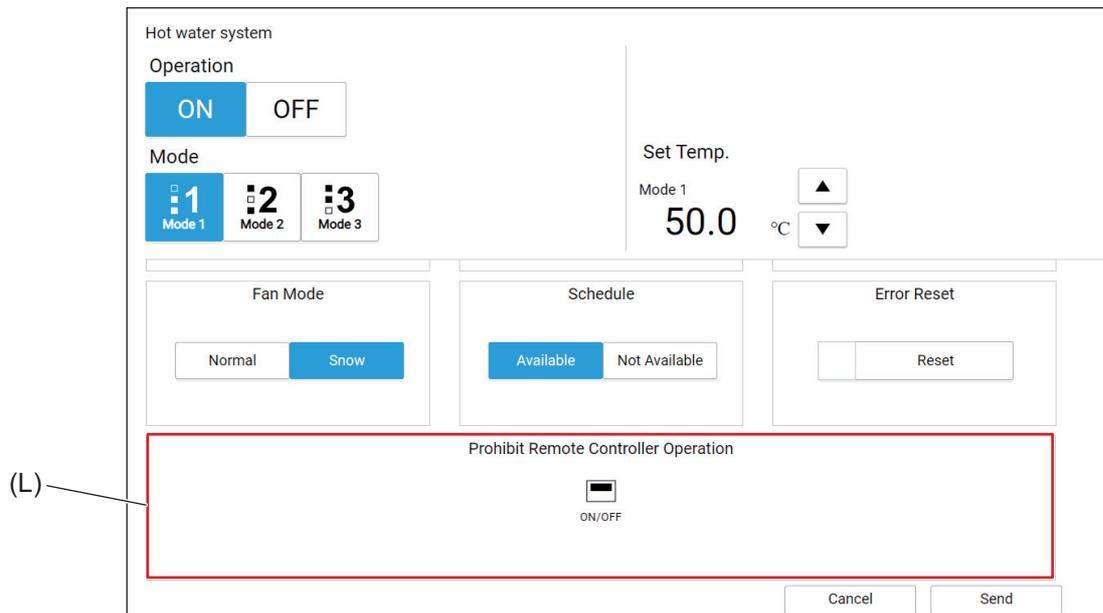
	Item	Function and description
(A)	Group name	The name of the selected group is displayed.
(B)	Drive	Tap [ON] or [OFF] to turn on or off the unit.
(C)	Mode	Select the operation mode.
(D)	Set Temp.	Tap [▲] or [▼] to change the hot water set temperature.
(E)	Fan Mode	Tap [Normal] or [Snow] switch the fan mode.
(F)	Schedule	Tap [Available] or [Not Available] to enable or disable the schedule. <ul style="list-style-type: none"> When [Not Available] is selected, the controller will not operate according to the set schedule.
(G)	Error Reset	Tap [Reset] to send an error reset command to the unit.
(H)	Prohibit Remote Controller Operation	Tap the buttons to allow or prohibit access from the remote controller to each item. The following settings can be allowed or prohibited: ON/OFF, Mode, and Set Temp. Prohibited settings are marked with [⊘].
(I)	[Cancel]	Tap this button to go back to the previous screen without saving the setting changes.
(J)	[Send]	Tap this button to save the setting changes.

[4] QAHV (sealed 3 sensor)

(1) Advanced operation screen (top half of the screen)



(2) Advanced operation screen (bottom half of the screen)



	Item	Function and description
(A)	Group Name	The name of the selected group is displayed.
(B)	Operating status	Tap [ON] or [OFF] to turn on or off the unit.
(C)	Mode	Tap [Mode 1], [Mode 2], or [Mode 3] and select the operation mode.
(D)	Set Temp.	Tap [▲] or [▼] to change the hot water set temperature.
(E)	Operation ON sensor	The sensor value set in each mode is displayed.
(F)	Operation OFF sensor	The sensor value set in each mode is displayed.
(G)	Operation ON differential	The operation start Differential Temp is displayed.

	Item	Function and description
(H)	Fan Mode	Tap [Normal] or [Snow] to switch between fan mode normal/snow for the target system.
(I)	Schedule	Tap [Available] or [Not Available] to enable or disable the schedule.
(J)	Cancel	Tap this button to go back to the previous screen without saving the setting changes.
(K)	Send	Tap this button to save the setting changes.
(L)	Prohibit Remote Controller Operation	Tap the buttons to allow or prohibit access from the remote controller to each item. The following settings can be allowed or prohibited: ON/OFF. Prohibited settings are marked with [⊘].

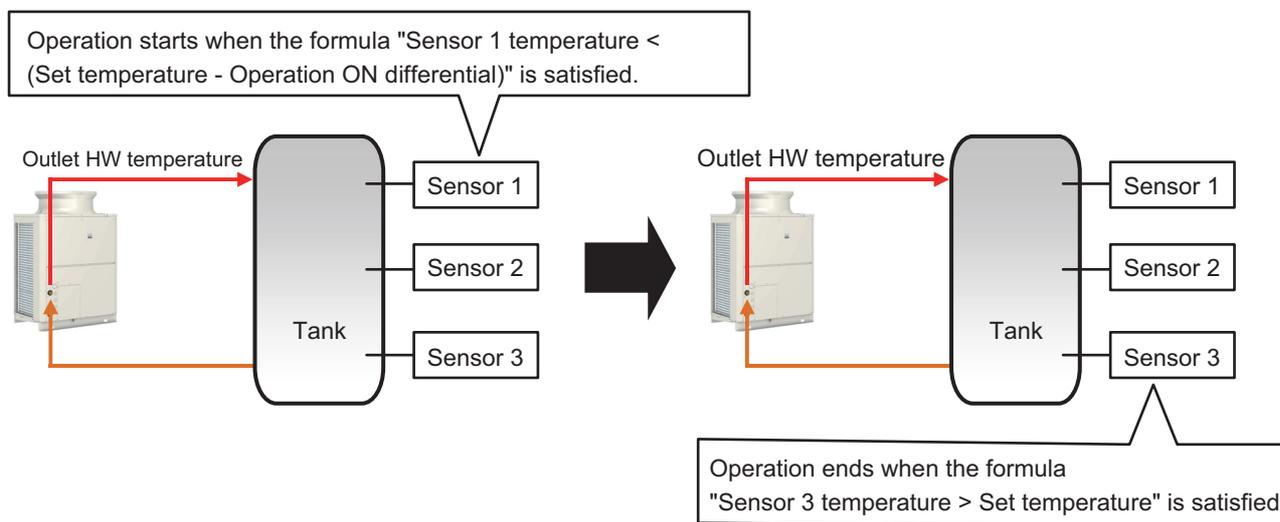
Note

- Mode setting examples are shown below.
- Hot water supply monitoring/operation is not available on a smartphone.

[Mode setting examples]

Mode	Operation ON/OFF sensor	Sensor No.
Mode 1	Operation ON sensor	3
	Operation OFF sensor	3
Mode 2	Operation ON sensor	1
	Operation OFF sensor	2
Mode 3	Operation ON sensor	1
	Operation OFF sensor	3

When operated in Mode 3 above



8. Usage (Products other than air conditioning unit: basic operation)

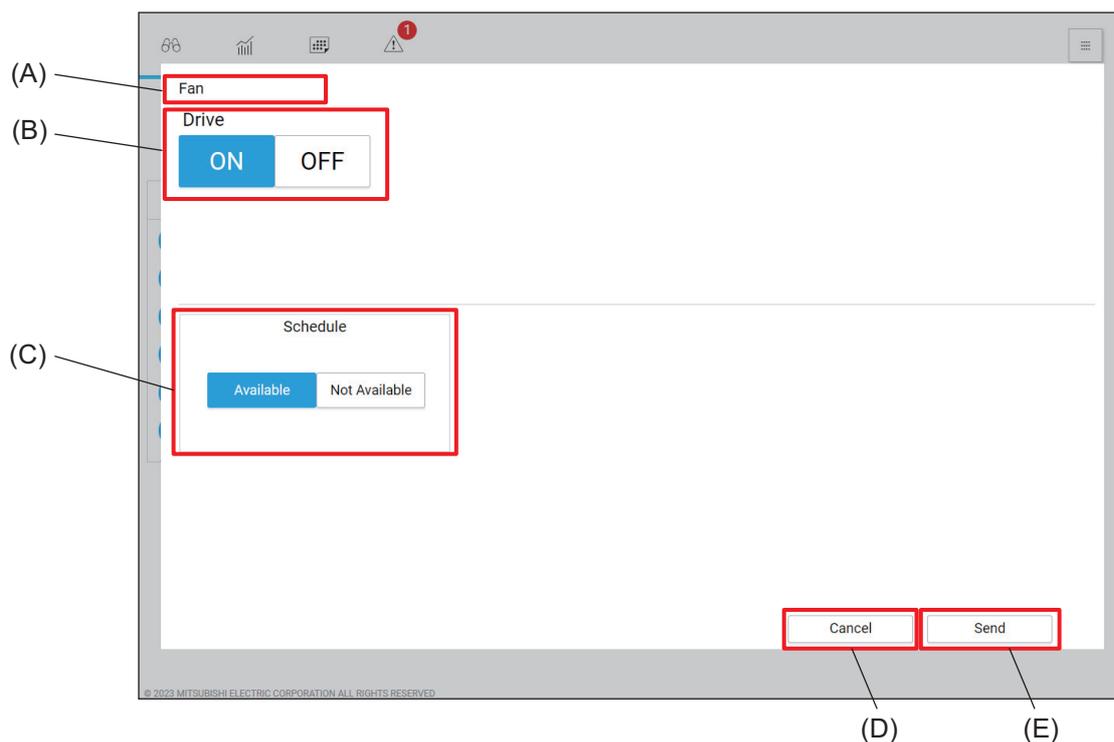
Operation mode settings (Mode 1, Mode 2, Mode 3) can be configured in hot water supply settings by opening the initial settings screen from the panorama view.

No.	System name	System configuration	Action
1	Hot water system	15,16	Detail setting
2			Detail setting
3			Detail setting
4			Detail setting
5			Detail setting

Mode	Op. ON sensor	Op. OFF sensor	Op. ON differential
Mode 1	Sensor1	Sensor2	20.0 °C
Mode 2	Sensor1	Sensor3	20.0 °C
Mode 3	Sensor1	Sensor3	22.0 °C
Control setting	Outlet HW: 53.5 °C		

Note

- It takes up to 5 minutes for the changes in detail settings to apply.

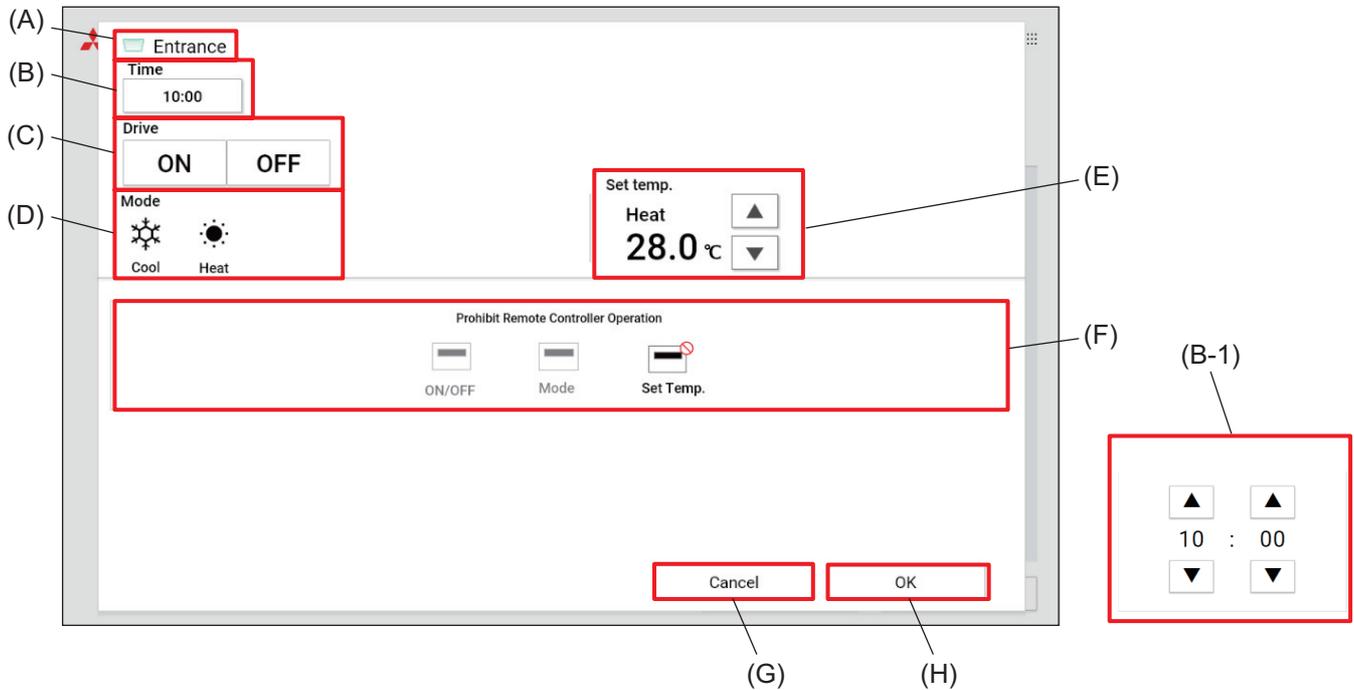
[5] DIDO controller (66)

	Item	Function and description
(A)	Group name	The name of the selected group is displayed.
(B)	Drive	Tap [ON] or [OFF] to turn on or off the general equipment.
(C)	Schedule	Tap [Available] or [Not Available] to enable or disable the schedule. <ul style="list-style-type: none"> When [Not Available] is selected, the controller will not operate according to the set schedule.
(D)	[Cancel]	Tap this button to go back to the previous screen without saving the setting changes.
(E)	[Send]	Tap this button to save the setting changes.

9. Usage (Products other than air conditioning unit: schedule settings)

9-1. Advanced setting screen for different types of products (schedule setting)

[1] e-Series 1

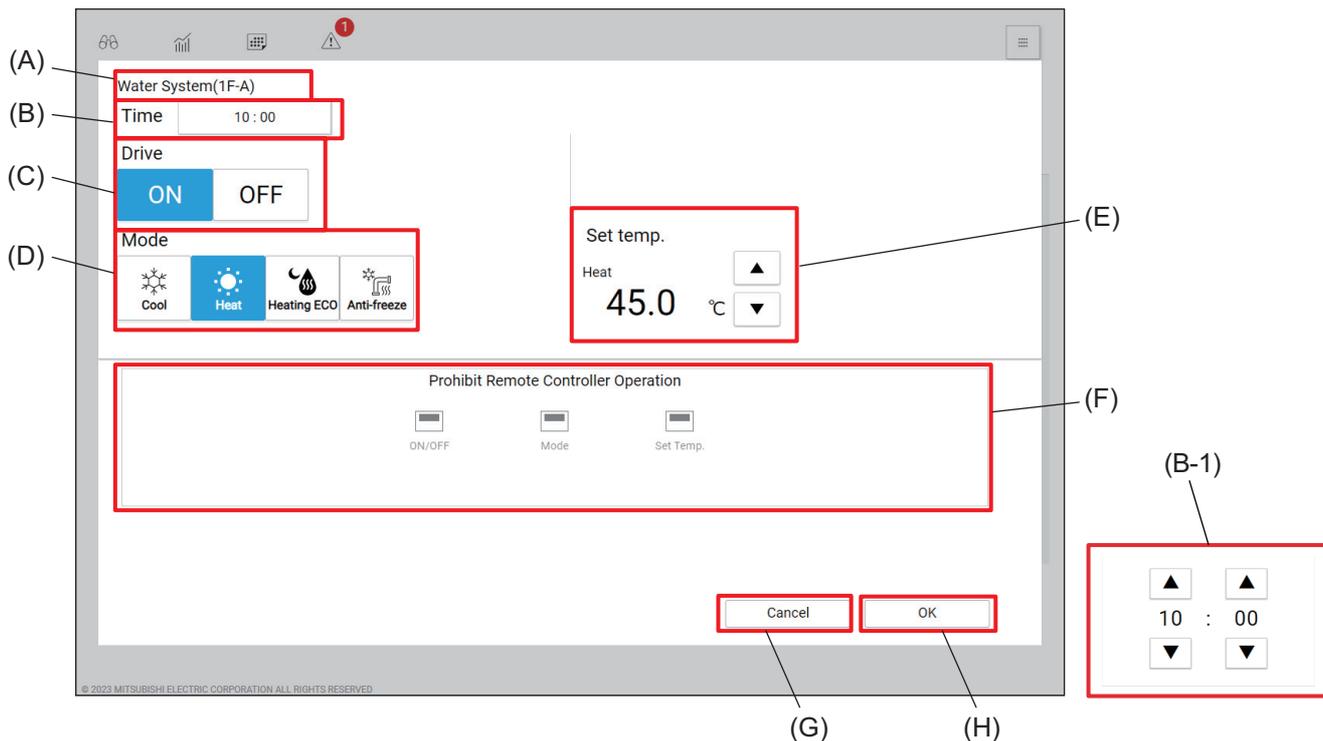


	Item	Function and description
(A)	Group name	The name of the selected group is displayed.
(B)	Time	Set the activation time of the event. Tapping this item will display the time setting dialog (B-1).
(B-1)	Time setting dialog	Tap [▲] or [▼] to change the hour and minute.
(C)	Drive	Tap [ON] or [OFF] to turn on or off the unit.
(D)	Mode	Select the operation mode.
(E)	Set temp.	Tap [▲] or [▼] to change the set water temperature.
(F)	Prohibit Remote Controller Operation	Tap the buttons to allow or prohibit access from the remote controller to each item. The following settings can be allowed or prohibited: ON/OFF, Mode, and Set Temp. Prohibited settings are marked with [⊘].
(G)	[Cancel]	Tap this button to go back to the previous screen without saving the setting changes.
(H)	[OK]	Tap this button to save the setting changes.

Note

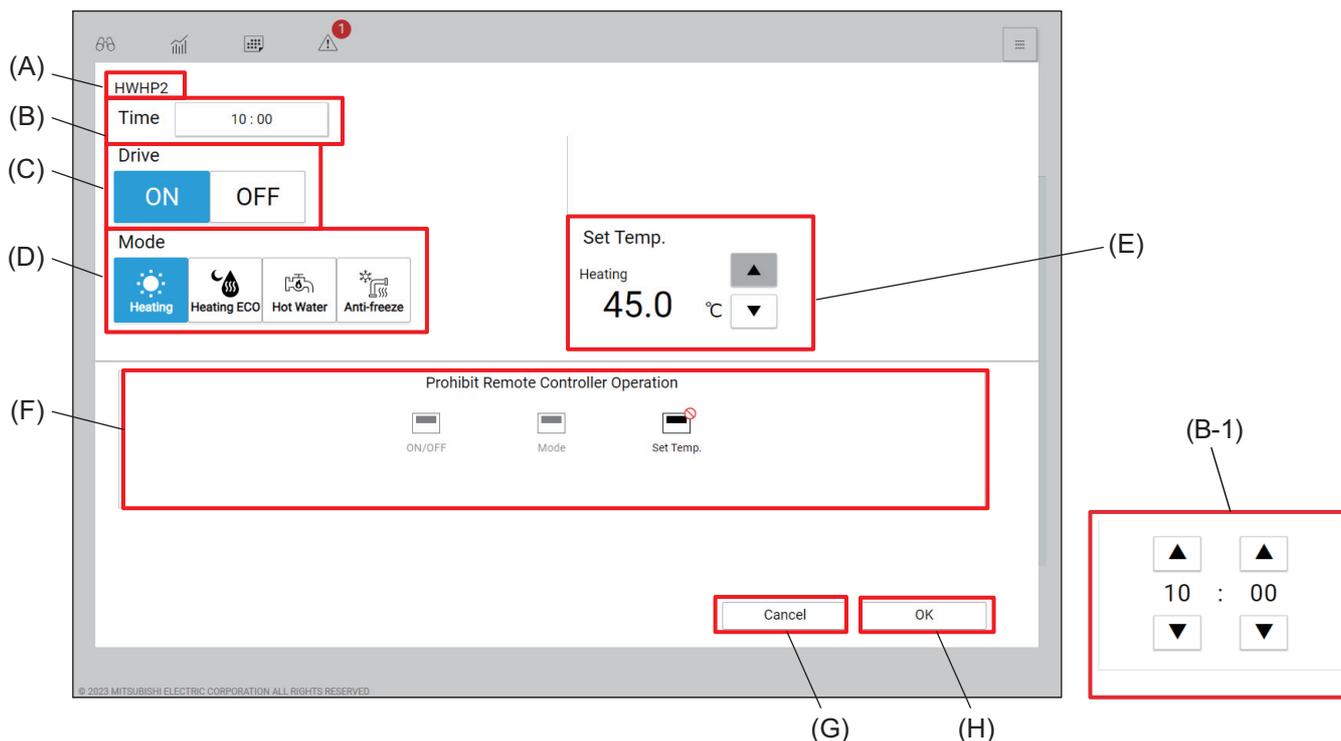
- The operation mode can be changed when an e-Series model is OFF.
When changing the operation mode in Schedule, configure "[OFF], operation mode change schedule" and one minute later, configure "[ON] schedule."

[2] e-Series 2



	Item	Function and description
(A)	Group name	The name of the selected group is displayed.
(B)	Time	Set the activation time of the event. Tapping this item will display the time setting dialog (B-1).
(B-1)	Time setting dialog	Tap [▲] or [▼] to change the hour and minute.
(C)	Drive	Tap [ON] or [OFF] to turn on or off the unit.
(D)	Mode	Select the operation mode.
(E)	Set temp.	Tap [▲] or [▼] to change the set water temperature.
(F)	Prohibit Remote Controller Operation	Tap the buttons to allow or prohibit access from the remote controller to each item. The following settings can be allowed or prohibited: ON/OFF, Mode, and Set temp. Prohibited settings are marked with [⊘].
(G)	[Cancel]	Tap this button to go back to the previous screen without saving the setting changes.
(H)	[OK]	Tap this button to save the setting changes.

[3] HWHP (CAHV, CRHV)

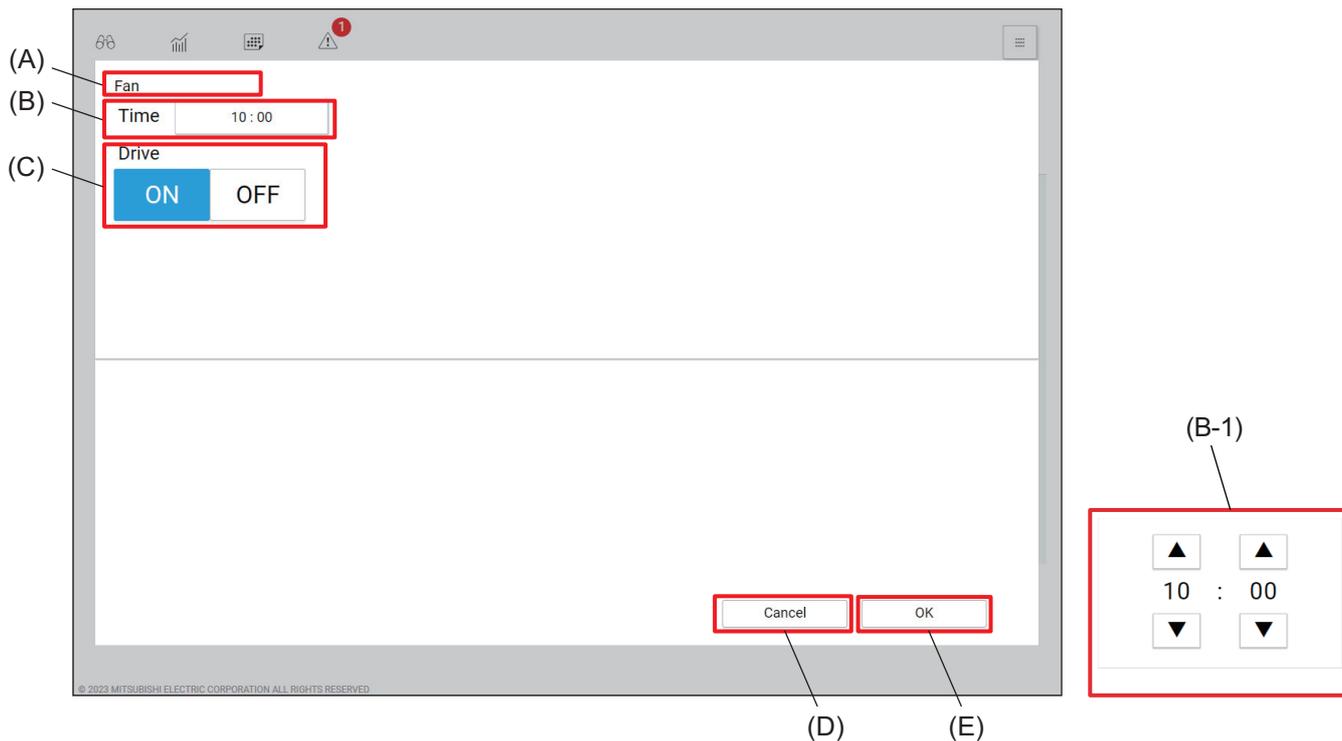


	Item	Function and description
(A)	Group name	The name of the selected group is displayed.
(B)	Time	Set the activation time of the event. Tapping this item will display the time setting dialog (B-1).
(B-1)	Time setting dialog	Tap [▲] or [▼] to change the hour and minute.
(C)	Drive	Tap [ON] or [OFF] to turn on or off the unit.
(D)	Mode	Select the operation mode.
(E)	Set temp.	Tap [▲] or [▼] to change the hot water set temperature.
(F)	Prohibit Remote Controller Operation	Tap the buttons to allow or prohibit access from the remote controller to each item. The following settings can be allowed or prohibited: ON/OFF, Mode, and Set Temp. Prohibited settings are marked with [🚫].
(G)	[Cancel]	Tap this button to go back to the previous screen without saving the setting changes.
(H)	[OK]	Tap this button to save the setting changes.

Note

- On an commercial-use EcoCute (sealed 3-sensor) and hot water heat pump, configure the schedule so that all 365 days are filled and there are no days without a set schedule.
- Weekly schedule season settings are shared on the AE-C/EW-C.
Therefore, if a hot water supply and other air conditioning unit or refrigeration unit is connected to the AE-C/EW-C, the weekly schedule period in season settings is the same setting, so make sure the lowest priority weekly schedule pattern is set to [Available] for all periods.

[4] DIDO controller (66)



	Item	Function and description
(A)	Group name	The name of the selected group is displayed.
(B)	Time	Set the activation time of the event. Tapping this item will display the time setting dialog (B-1).
(B-1)	Time setting dialog	Tap [▲] or [▼] to change the hour and minute.
(C)	Drive	Tap [ON] or [OFF] to turn on or off the general equipment.
(D)	[Cancel]	Tap this button to go back to the previous screen without saving the setting changes.
(E)	[OK]	Tap this button to save the setting changes.

10. Usage (Common to all models: other functions)

10-1. External input/output settings

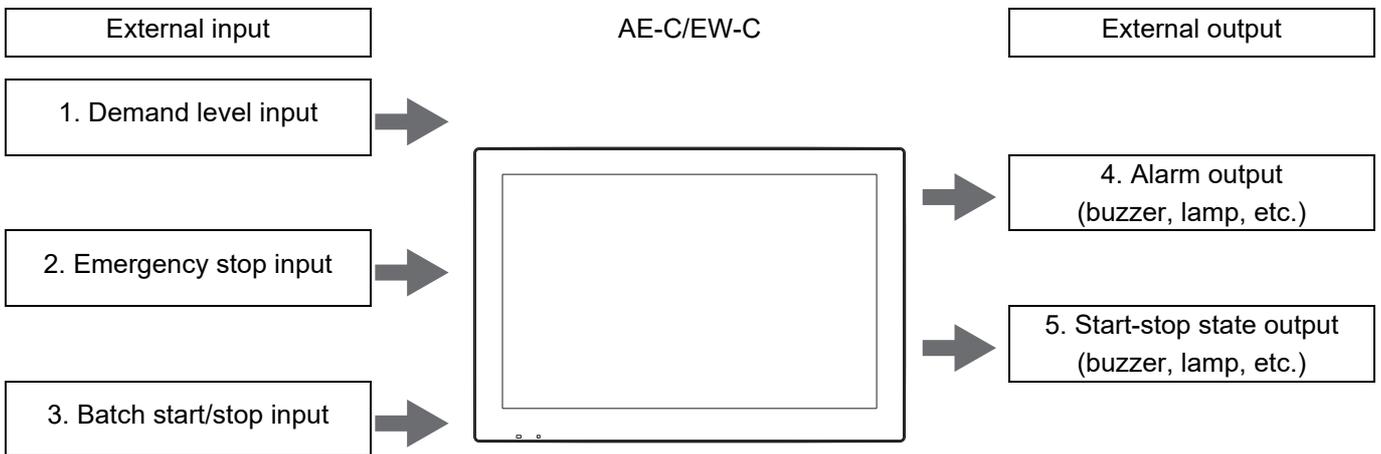
Configure external input and output settings as needed.

10-1-1. Summary of external input/output

The controller is equipped with an external input/output function that allows batch start/stop control and emergency stop of the units by external signal input, as well as notification of the unit's operation status and error conditions by external signal output.

- To use external input and output, select one mode used for each.
- External I/O signals should be connected to CN5 or CN6 on the controller via an external I/O adapter (option).
- For connection, refer to the installation manuals included with the external input/output device.

[1] Image of use



[2] Settings

For setting, refer to "External input and output settings."

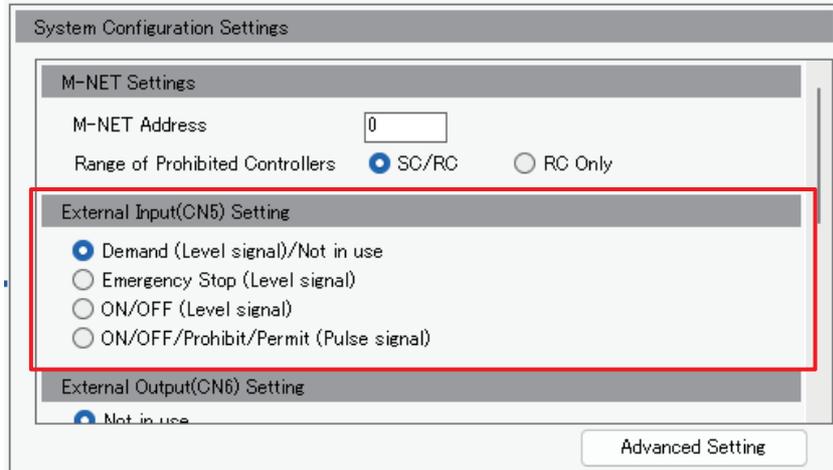
10-1-2. External input and output settings

Configure the settings to use external inputs.

Set the mode for external input/output in **[System Configuration Settings]** on the **[Basic System Settings]** screen under **[Basic Settings]** of the Initial Setting Tool.

- For connection, refer to the installation manuals included with the external input/output device.

[1] External input setting



The screenshot shows the 'System Configuration Settings' dialog box. It has a title bar 'System Configuration Settings' and a 'Settings' label. The main content is divided into sections: 'M-NET Settings' with 'M-NET Address' (input field '0') and 'Range of Prohibited Controllers' (radio buttons for 'SC/RC' and 'RC Only'); 'External Input(CN5) Setting' (highlighted with a red box) with radio buttons for 'Demand (Level signal)/Not in use', 'Emergency Stop (Level signal)', 'ON/OFF (Level signal)', and 'ON/OFF/Prohibit/Permit (Pulse signal)'; and 'External Output(CN6) Setting' with a radio button for 'Not in use'. An 'Advanced Setting' button is at the bottom right.

The usage method (mode) must be set for each AE-C/EW-C unit.

10-2. Demand control

10-2-1. Overview of demand control

The controller is equipped with an energy-saving peak cut control function that can perform energy-saving control and peak cut control based on the average power over 30 minutes, according to the initially set level.

[1] Air conditioning units

Control method	Control time	Control target	Control details	Control setting
±2°C	Select from 3 min 6 min 9 min 15 min 30 min	Indoor unit	Shifts the set temperature by +2°C in cooling and dry modes, and -2°C in heating mode. Shifts the set temperature by ±2°C at the control start time and returns to the original set temperature at the control end time. The shifted set temperature during control is displayed on the local remote controller, etc.	Level 0 to 4 • Level 0 is for energy-saving control
Fan			At the start of control, the indoor unit is set to thermo OFF, and returns to the original operating status at the end of control. During control, the display on the local remote controller continues to show cooling or heating. If the mode is changed by operation or schedule during control, and it is not in fan mode at the end of control, it will not return to the mode before control even when the control end time is reached.	
OFF			At the start of control, the indoor unit is stopped, and returns to the original operating status at the end of control. During OFF control, the local remote controller and other displays will show OFF. When the control time is set to [30 min] , operation via local remote controller, LCD screen, web browser, schedule, etc., is not possible (an operation prohibition mark is displayed). • When the control time is set to [3-15 min], if operation control continues due to local remote controller operation or schedule during OFF control, the indoor unit will be stopped again. This action is performed in 1-minute cycles.	
Capacity control	Select from 3 min 6 min 9 min 15 min 30 min	Outdoor unit	Selects from 50%, 60%, 70%, 80%, or 90% of the operating capacity of the outdoor unit's compressor, which varies according to the indoor unit load, and prevents it from exceeding the set maximum value.	Level 0 to 4 (By address) • Level 0 is for energy-saving control

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10-2-2. Outdoor unit control settings

Set the energy-saving control for the outdoor unit at each energy-saving control level.

Tap **[Settings]** - **[Function]** - **[Peak Cut]** on the operation management screen to display the peak cut settings screen, and then tap **[Advanced]** - **[Outdoor Unit]** to display the outdoor unit control settings screen.

(A) Controller: SC01
Peak Cut method: PI Controller

(B) Peak Cut | **Outdoor unit** | Indoor unit

(C) All

Address	Maximum Capacity/Control Time					Edit
	Level 0	Level 1	Level 2	Level 3	Level 4	
01-033	90%/3min	80%/6min	70%/9min	60%/15min	50%/30min	Edit
01-034	90%/3min	80%/6min	70%/9min	60%/15min	50%/30min	Edit
01-079	90%/3min	80%/6min	70%/9min	60%/15min	50%/30min	Edit
01-081	90%/3min	80%/6min	70%/9min	60%/15min	50%/30min	Edit
01-085	90%/3min	80%/6min	70%/9min	60%/15min	50%/30min	Edit

(D)

(E)

(F) Cancel (G) OK

(C-1)

Maximum Capacity/Control Time settings

Outdoor units : All

Control level	Maximum Capacity					Control Time					
	100%	90%	80%	70%	60%	50%	3min	6min	9min	15min	30min
4	100%	90%	80%	70%	60%	50%	3min	6min	9min	15min	30min
3	100%	90%	80%	70%	60%	50%	3min	6min	9min	15min	30min
2	100%	90%	80%	70%	60%	50%	3min	6min	9min	15min	30min
1	100%	90%	80%	70%	60%	50%	3min	6min	9min	15min	30min
0	100%	90%	80%	70%	60%	50%	3min	6min	9min	15min	30min

(H)

(I)

(F) Cancel (G) OK

	Item	Function and description
(A)	Controller/Peak cut method	The selected AE-C/EW-C controller and peak cut method are displayed.
(B)	Control setting selection	Select [Outdoor unit] .
(C)	[All]	Tapping this item will display the Maximum Capacity/Control Time settings dialog (C-1).
(C-1)	Maximum Capacity/ Control Time settings dialog	Set the maximum operating capacity and control time for the outdoor unit for each address. For All (C), it applies to all outdoor units; for Edit (E), it applies to outdoor units at each address.
(D)	Setting content	The maximum operating capacity and control time for each control level is displayed for each address.
(E)	[Edit]	Tapping this item will display the Maximum Capacity/Control Time settings dialog (C-1).
(F)	[Cancel]	Tap this button to go back to the previous screen without saving the setting changes.
(G)	[OK]	Tap this button to save the setting changes.
(H)	Maximum Capacity	Set the maximum operating capacity for each control level.
(I)	Control Time	Set the control time for each control level.

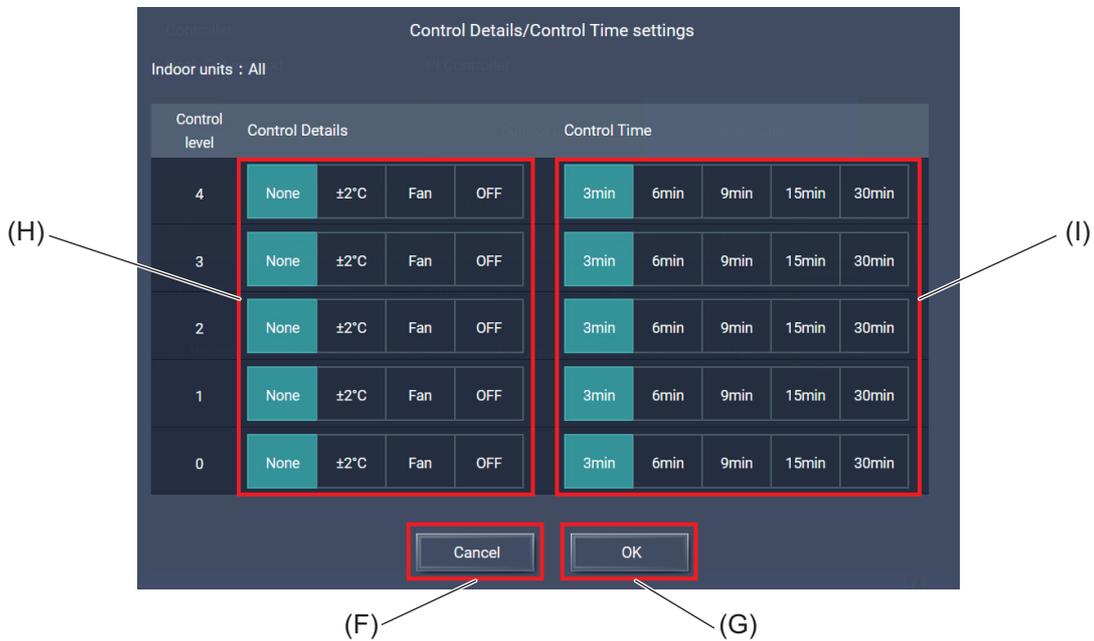
10-2-3. Indoor unit control settings

Set the energy-saving control for the indoor unit at each energy-saving control level.

Tap **[Settings]** - **[Function]** - **[Peak Cut]** on the operation management screen to display the peak cut settings screen, and then tap **[Advanced]** - **[Indoor Unit]** to display the indoor unit control settings screen.



(C-1)



	Item	Function and description
(A)	Controller/Peak cut method	The selected AE-C/EW-C controller and peak cut method are displayed.
(B)	Control setting selection	Select [Indoor unit] .
(C)	[All]	Tapping this item will display the Control Details/Control Time settings dialog (C-1).
(C-1)	Control Details/Control Time settings dialog	Set the control details and control time for indoor units for each block. For All (C), it applies to all indoor units in all blocks; for Edit (E), it applies to indoor units in each block.
(D)	Setting content	The control details and control time for each control level is displayed for each block.
(E)	[Edit]	Tapping this item will display the Control Details/Control Time settings dialog (C-1).
(F)	[Cancel]	Tap this button to go back to the previous screen without saving the setting changes.
(G)	[OK]	Tap this button to save the setting changes.
(H)	Control Details	Set the control details for each control level.
(I)	Control Time	Set the control time for each control level.

10-3. Operation explanation for level zero

To perform constant energy-saving control 24 hours a day, 365 days a year, set control level "0."
Control settings can be made for both outdoor units and indoor units.

[1] Outdoor unit control settings

(A) Controller SC01
Peak Cut method PI Controller

(B) Peak Cut Outdoor unit Indoor unit

(C) All

Address	Maximum Capacity/Control Time					Edit
	Level 0	Level 1	Level 2	Level 3	Level 4	
01-033	80%/15min	100%/3min	100%/3min	100%/3min	100%/3min	Edit
01-034	80%/15min	100%/3min	100%/3min	100%/3min	100%/3min	Edit
01-079	80%/15min	100%/3min	100%/3min	100%/3min	100%/3min	Edit
01-081	80%/15min	100%/3min	100%/3min	100%/3min	100%/3min	Edit
01-085	80%/15min	100%/3min	100%/3min	100%/3min	100%/3min	Edit

(D)

(E)

(F) Cancel (G) OK

(C-1)

Maximum Capacity/Control Time settings

Outdoor units : All

Control level	Maximum Capacity						Control Time				
	100%	90%	80%	70%	60%	50%	3min	6min	9min	15min	30min
4	100%	90%	80%	70%	60%	50%	3min	6min	9min	15min	30min
3	100%	90%	80%	70%	60%	50%	3min	6min	9min	15min	30min
2	100%	90%	80%	70%	60%	50%	3min	6min	9min	15min	30min
1	100%	90%	80%	70%	60%	50%	3min	6min	9min	15min	30min
0	100%	90%	80%	70%	60%	50%	3min	6min	9min	15min	30min

(H)

(I)

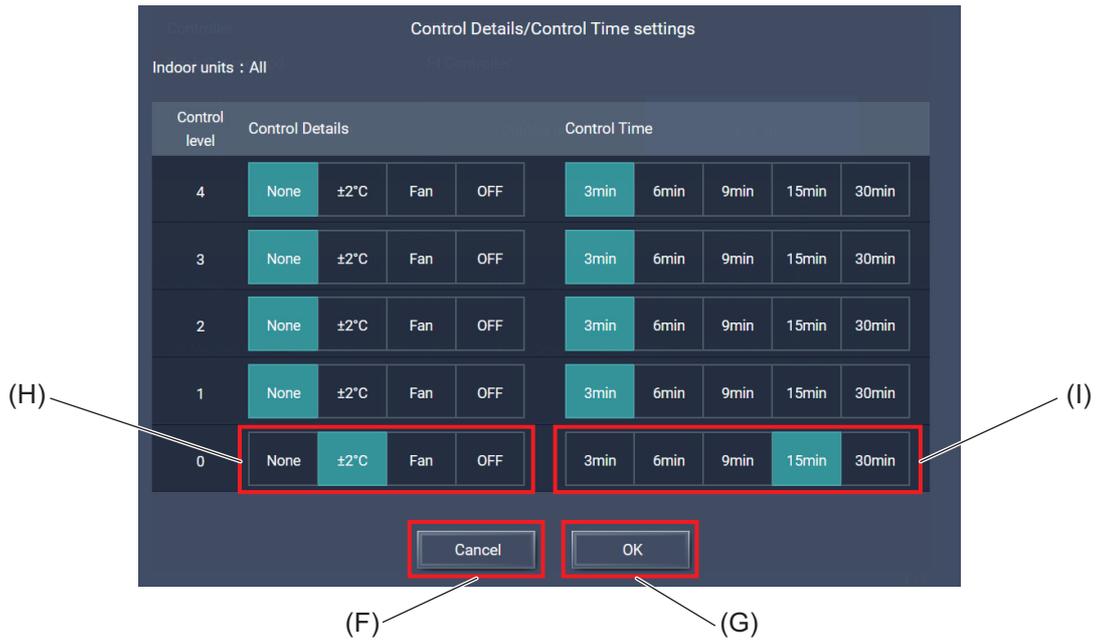
(F) Cancel (G) OK

	Item	Function and description
(A)	Controller/Peak cut method	The selected AE-C/EW-C controller and peak cut method are displayed.
(B)	Control setting selection	Select [Outdoor unit] .
(C)	[All]	Tapping this item will display the Maximum Capacity/Control Time settings dialog (C-1).
(C-1)	Maximum Capacity/ Control Time settings dialog	Set the maximum operating capacity and control time for the outdoor unit for each address. For All (C), it applies to all outdoor units in all blocks; for Edit (E), it applies to outdoor units at each address.
(D)	Setting content	The maximum operating capacity and control time for each control level is displayed for each address.
(E)	[Edit]	Tapping this item will display the Maximum Capacity/Control Time settings dialog (C-1).
(F)	[Cancel]	Tap this button to go back to the previous screen without saving the setting changes.
(G)	[OK]	Tap this button to save the setting changes.
(H)	Maximum Capacity	Set the maximum operating capacity for control level 0.
(I)	Control Time	Set the control time for control level 0.

[2] Indoor unit control settings



(C-1)

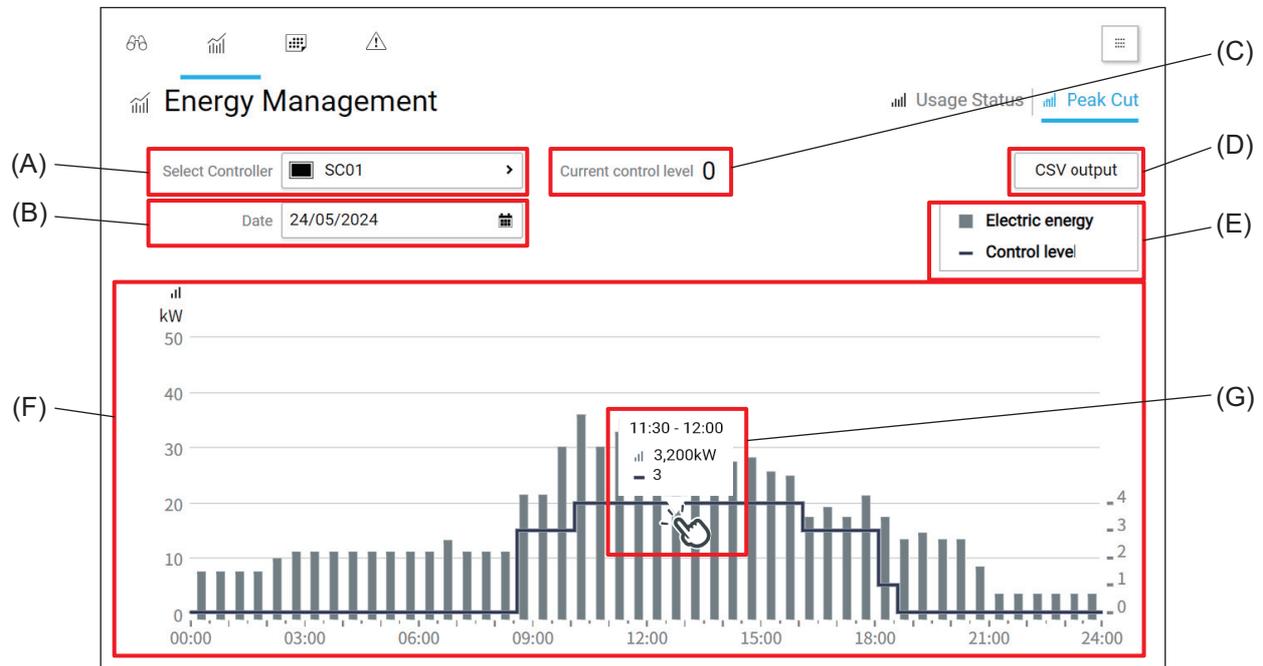


	Item	Function and description
(A)	Controller/Peak cut method	The selected AE-C/EW-C controller and peak cut method are displayed.
(B)	Control setting selection	Select [Indoor unit] .
(C)	[All]	Tapping this item will display the Control Details/Control Time settings dialog (C-1).
(C-1)	Control Details/Control Time settings dialog	Set the control details and control time for indoor units for each block. For All (C), it applies to all indoor units; for Edit (E), it applies to indoor units at each block.
(D)	Setting content	The control details and control time for each control level is displayed for each block.
(E)	[Edit]	Tapping this item will display the Control Details/Control Time settings dialog (C-1).
(F)	[Cancel]	Tap this button to go back to the previous screen without saving the setting changes.
(G)	[OK]	Tap this button to save the setting changes.
(H)	Control Details	Set the maximum operating capacity for control level 0.
(I)	Control Time	Set the control time for control level 0.

10-4. Peak cut control status

Tap [] in the Main Menu (I) to display the Energy Management screen, and select [Peak Cut] to display the history of peak cut control in a graph.

It is also possible to download the displayed data as a CSV format file.



- Note**
- The power graph is displayed only when the peak cut method is set to "Electric Amount Count PLC" or "PI Controller" in the peak cut settings screen of [Function Settings 1] - [Peak Cut].

	Item	Function and description
(A)	Controller	The AE-C/EW-C to show the peak cut control status is displayed.
(B)	Measurement date	The measurement date is displayed.
(C)	Current control level	The current control level is displayed.
(D)	[CSV output]	Tapping this item will output the displayed data as a CSV file.
(E)	Legend	Legends of the graph are displayed.
(F)	Graph display area	Graphs are displayed.
(G)	Popup	Tapping this item will display the average power and control level for the specified range.

10-5. User management

10-5-1. User management overview

There are four types of users, and the available functions differ for each user.

- 1) Commissioning user
Can perform initial settings and manage all air conditioning units.
- 2) Building manager
Can manage all air conditioning units.
- 3) Tenant manager
Can manage specific air conditioning units.
- 4) General user
Can monitor and operate specific air conditioning units.

Tap **[Settings] - [User Management]** on the operation management screen to display the user registration screen.



	Item	Function and description
(A)	Operation target	Tapping this item will select the operation target.

10-5-2. User privileges

The following is a list of available functions for each user.

○: Available —: Not available

Item		Commissioning user	Building manager	Tenant manager	General user
Monitor/Operation	Floor layout screen	○	○	—	—
	List screen	○	○	○	○
	Simple operation	○	○	○	○
	Advanced operation	○	○	○	○
	Status list screen	○	○	—	—
	Quality controller status display	○	○	○	○
	Refrigeration unit status display	○	○	○	—
Energy management	Usage status	○	○	○	—
	Peak cut control status	○	○	—	—
Schedule	Schedule setting	○	○	○	—
	Date range setting	○	○	—	—
	Schedule contents setting	○	○	○	—
Notice	Error list	○	○	—	—
	Unit error log	○	○	—	—
	M-NET error log	○	○	—	—
	Network error list	○	○	—	—
	Filter sign	○	○	—	—
	Error list (low temp.)	○	○	—	—
	Unit error log (low temp.)	○	○	—	—
	Pre-alarms in progress	○	○	—	—
Initial setting	Pre-alarm log	○	○	—	—
	Controller setting	○	○	—	—
	Network setting	○	○	—	—
	System controller update	○	○	—	—
	Hot water supply setting	○	○	—	—
	CSV output	○	○	—	—
General setting	Energy management setting	○	○	—	—
	Controller setting	○	○	—	—
	Home setting	○	○	—	—
	Product information	○	○	—	—
	Privacy policy	○	○	—	—
	LCD cleaning	○	○	—	—
Energy management output	○	○	—	—	

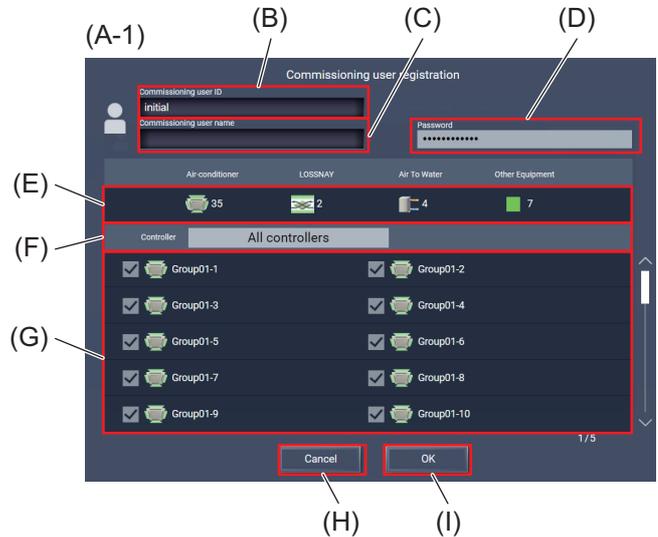
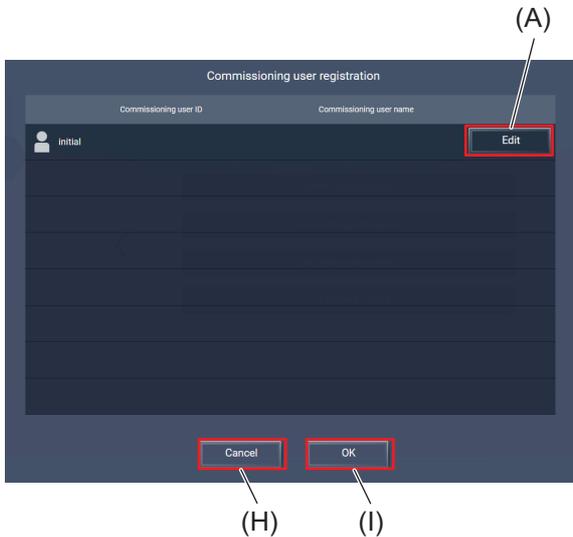
○: Available —: Not available

Item		Commissioning user	Building manager	Tenant manager	General user
Setting	User management	○	○	—	—
	License registration	○	○	—	—
	E-mail setting	○	○	—	—
	Peak cut setting	○	○	—	—
	Set temperature range limit	○	○	—	—
	Night mode schedule	○	○	—	—
	External temperature interlock setting	○	○	—	—
	Night setback control setting	○	○	—	—
Maintenance	Send mail log	○	○	—	—
	Monitoring status	○	○	—	—
	Gas refrigerant amount check	○	○	—	—
	Utility	○	○	—	—
	Backup/import of settings data	○	○	—	—
	Initialize learning data for AI start	○	○	—	—

10-5-3. User management settings

[1] Commissioning user

On the Commissioning user registration screen, the commissioning user ID, commissioning user name, and password can be set.

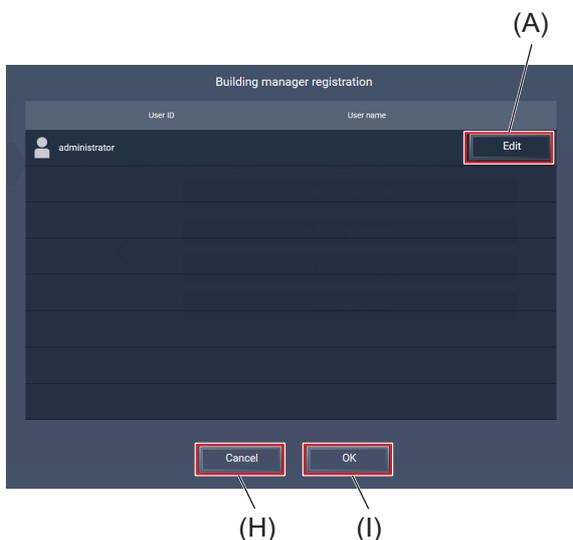


	Item	Function and description
(A)	[Edit]	Tapping this item will display the Commissioning user registration screen (A-1).
(B)	Commissioning user ID	Enter the commissioning user ID.
(C)	Commissioning user name	Enter the commissioning user name.
(D)	Password	Enter the password.
(E)	Number of control units	The number of units under operation is displayed by model.
(F)	Controller	ALL is displayed.
(G)	Operation target	All groups under management/operation are displayed.
(H)	[Cancel]	Tap this button to go back to the previous screen without saving the setting changes.
(I)	[OK]	Tap this button to save the setting changes.

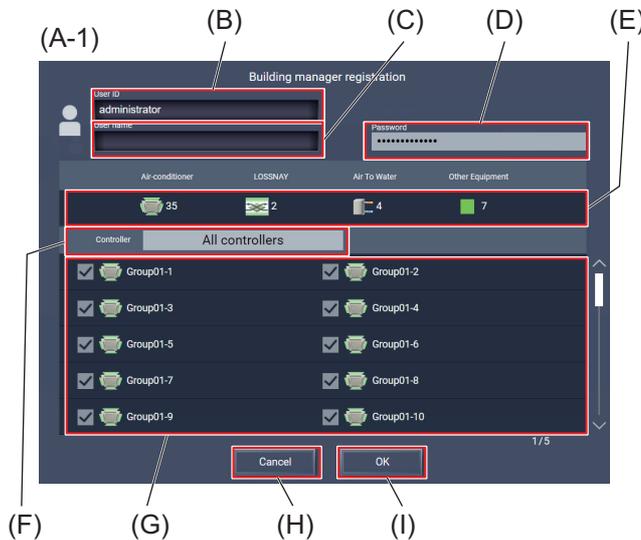
[2] Building manager

On the Building manager registration screen, the building manager ID, building manager name, and password can be set.

Building manager list



Building manager registration



	Item	Function and description
(A)	[Edit]	Tapping this item will display the Building manager registration screen (A-1).
(B)	Building manager ID	Enter the building manager ID.
(C)	Building manager name	Enter the building manager name.
(D)	Password	Enter the password.
(E)	Number of control units	The number of units under operation is displayed by model.
(F)	Controller	The AE-C/EW-C that controls the equipment is displayed.
(G)	Operation target	The groups monitored by the AE-C/EW-C selected in (F) are displayed.
(H)	[Cancel]	Tap this button to go back to the previous screen without saving the setting changes.
(I)	[OK]	Tap this button to save the setting changes.

[3] Tenant manager/General user

On the Tenant manager registration screen, up to 200 tenant managers can be registered.

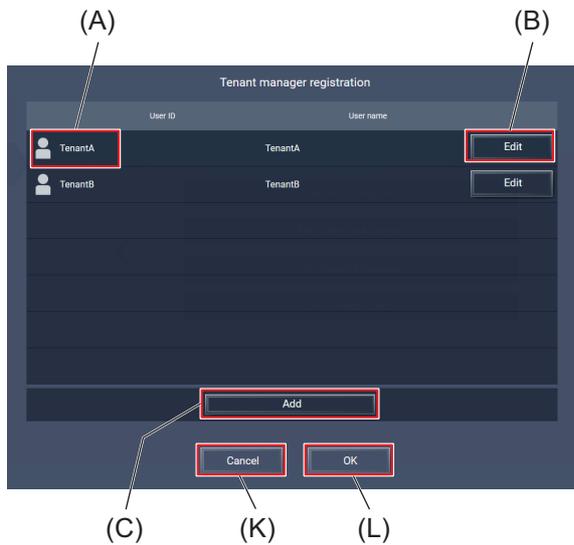
On the General user registration screen, up to 2000 general users can be registered.

The groups that each user can monitor and operate can be set.

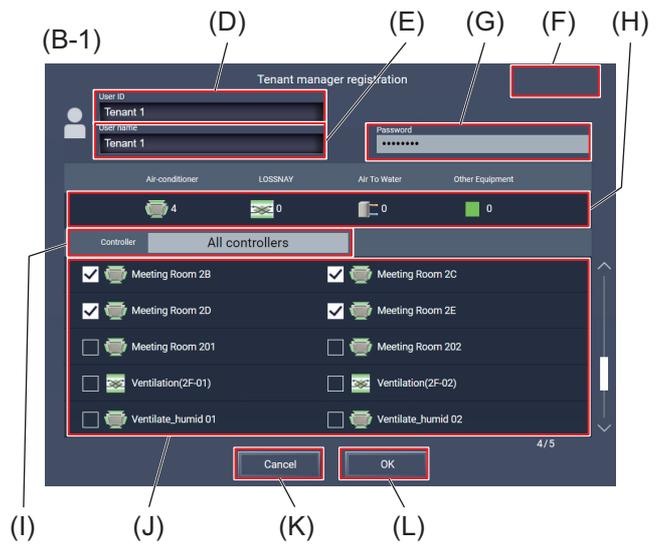
Note

- After creating tenant managers and general users, inform the users of their user ID, password, and login URL.

Tenant manager list



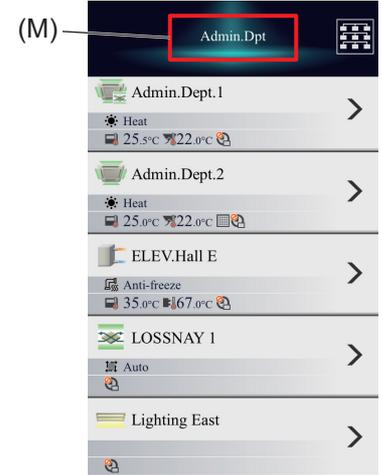
Tenant manager registration



	Item	Function and description
(A)	Tenant manager	Registered tenant managers are displayed.
(B)	[Edit]	Tapping this item will display the Tenant manager registration screen (B-1).
(C)	[Add]	Add a new tenant manager. Tapping this item will display a blank Tenant manager registration screen (B-1).
(D)	Tenant ID	Enter the tenant ID.
(E)	Tenant manager name	Enter the tenant manager name.
(F)	[Delete]	Delete the displayed tenant manager name.
(G)	Password	Enter the password.
(H)	Number of control units	The number of units under operation is displayed by model.
(I)	Controller	The AE-C/EW-C that controls the equipment is displayed.
(J)	Operation target	Select the monitor/operation target.
(K)	[Cancel]	Tap this button to go back to the previous screen without saving the setting changes.
(L)	[OK]	Tap this button to save the setting changes.

Note

- When tenant managers/general users log in, only the groups specified here will be operable.
- Tenant IDs/user IDs and passwords are case-sensitive. Passwords must contain 8 to 127 alphanumeric characters.
- A tenant ID/user ID and password are required for login.
- The user name (M) for general users is displayed when using a smartphone.



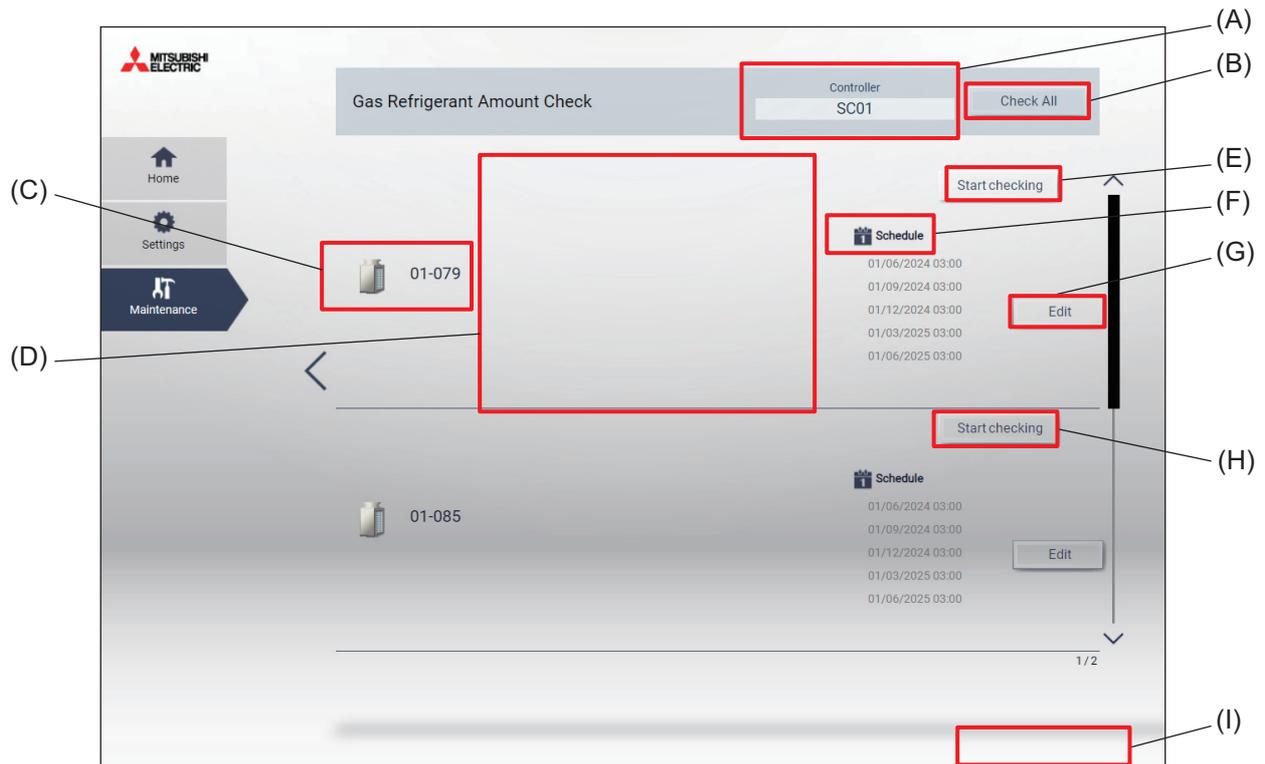
10-6. Gas refrigerant amount check

[1] Overview of gas refrigerant amount check

The gas refrigerant amount check is a feature that supports the periodic inspection work required for users of air conditioning equipment under the Act on Rational Use and Appropriate Management of Fluorocarbons. By specifying the date and time using the schedule function, this function can be utilized as a periodic inspection.

[2] Usage

Tap [Maintenance] - [Gas Refrigerant Amount Check] on the operation management screen to display the Gas Refrigerant Amount Check screen.



	Item	Function and description
(A)	Controller	Select the controller to display the check screen.
(B)	[Check All]	Tapping this item will check all indoor units. <ul style="list-style-type: none"> To check specific indoor units, select [Start checking] for the units to be checked.
(C)	Indoor unit addresses	The addresses of the indoor units are displayed.
(D)	Log data of gas refrigerant amount check	The log of gas refrigerant amount check is displayed.
(E)	[Start checking]	Tapping this item will start the gas refrigerant amount check.
(F)	Schedule	A list of schedules for gas refrigerant amount check is displayed. <ul style="list-style-type: none"> A maximum of 16 events can be made. When scheduling gas refrigerant amount check for multiple indoor units, it is recommended to stagger the check times for each indoor unit to avoid exceeding contract power. When using the gas refrigerant amount check on a schedule, note that the unit will operate in refrigerant mode for 30 minutes to 1 hour during the check, especially in winter.
(G)	[Edit]	Tapping this item will allow you to change the schedule settings for gas refrigerant amount check schedules.
(H)	[Start checking]	Tapping this item will perform the initial gas refrigerant amount check. <ul style="list-style-type: none"> During trial operation or after installing an indoor unit, the first gas refrigerant amount check will be an initial measurement. The initial measurement result does not measure the insufficiency of the initial refrigerant charge. Charge the specified amount of refrigerant according to regulations. The initial measurement result will serve as an indicator of refrigerant decrease when performing gas refrigerant amount check from the second time onward.
(I)	[CSV output]	Tapping this item will output the log data of the gas refrigerant amount check in CSV format. <ul style="list-style-type: none"> For LCD screen: Output to USB flash drive from the USB port of AE-C/ EW-C For browser: Output to PC via LAN

10-7. Monitoring status

Using the monitoring status, it is possible to check the free contacts of indoor units.

[1] Indoor unit free contacts

It is possible to check the input/output status of indoor unit free contacts.

Tap **[Maintenance]** - **[Monitoring Status]** on the operation management screen, then tap **[Free Contact]** to display the indoor unit free contacts screen.

Note

- The free contact settings for indoor units are made using the dip switch on the indoor unit side.



	Item	Function and description
(A)	Controller	Narrow down the display target by AE-C/EW-C.
(B)	Indoor unit icon	 : Normal  : Communication error or unit error
(C)	Indoor unit address	The AE-C/EW-C number and indoor unit address are displayed.
(D)	Input status	The input status of the indoor unit free contacts is displayed.
(E)	Output status	The output status of the indoor unit free contacts is displayed.

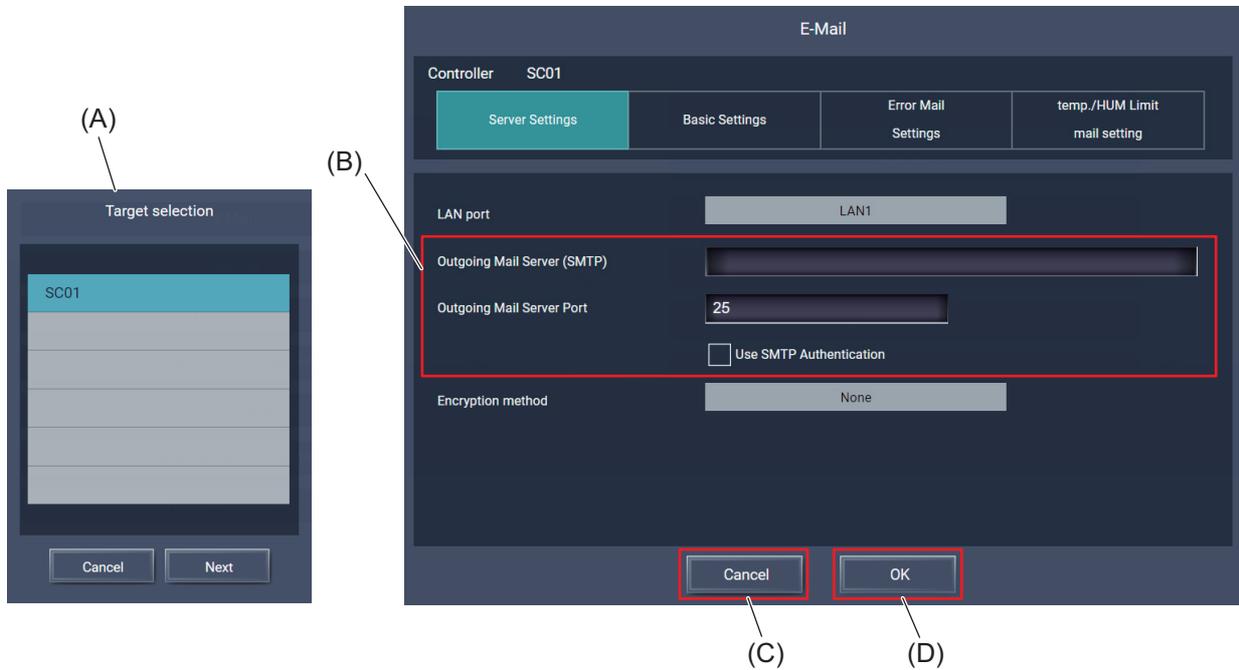
MEMO

10-8. E-mail settings

To use various e-mail functions, e-mail settings are necessary.

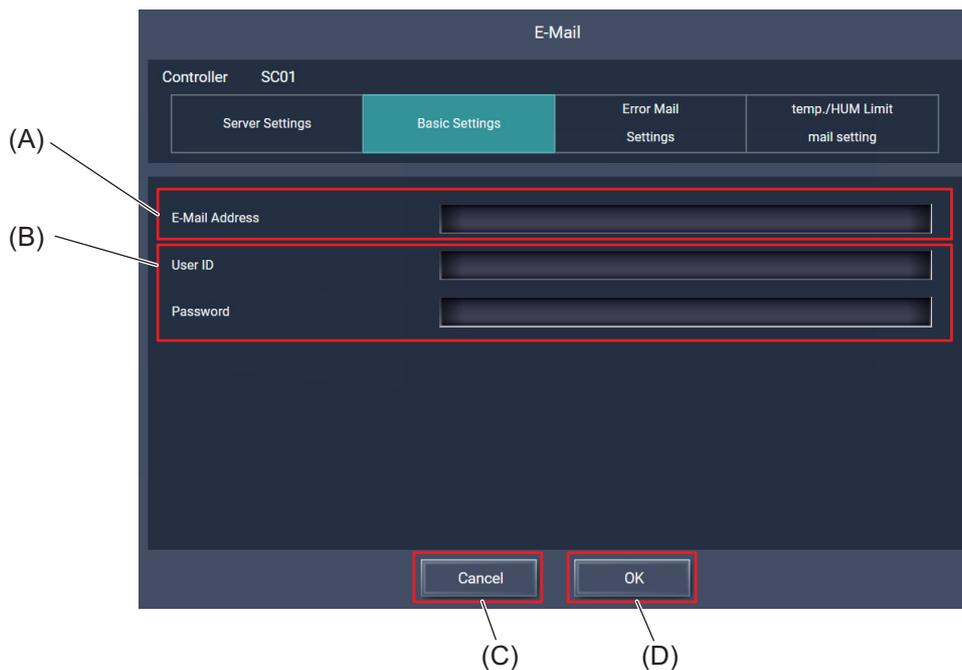
Tap **[Settings]** - **[Function Settings]** on the operation management screen (e-2) to display the function settings screen. Tap **[E-mail Settings]** on the function settings screen to display the e-mail settings screen.

10-8-1. Server settings screen



	Item	Function and description
(A)	E-mail settings target selection dialog	Select the target system controller for e-mail settings.
(B)	Sending mail server settings	Enter the IP address or host name and port number of the sending mail server. Check "Use SMTP Authentication" if necessary.
(C)	[Cancel]	Tap this button to go back to the previous screen without saving the setting changes.
(D)	[OK]	Tap this button to save the setting changes.

10-8-2. Basic settings screen



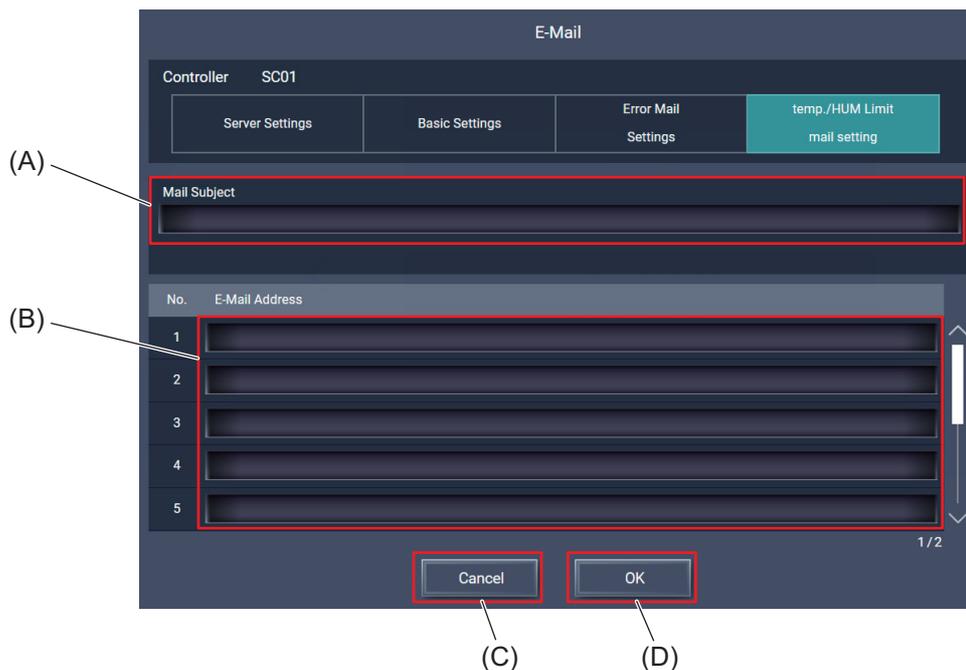
	Item	Function and description
(A)	E-Mail Address	Enter the e-mail address obtained from your internet provider or system administrator.
(B)	Mail server connection information	Enter the user ID and password obtained from your internet provider or system administrator.
(C)	[Cancel]	Tap this button to go back to the previous screen without saving the setting changes.
(D)	[OK]	Tap this button to save the setting changes.

10-8-3. Error e-mail settings screen



	Item	Function and description
(A)	Mail Subject	Set the title displayed in the sending e-mail.
(B)	Kind of Errors	Select the type of error. Tapping this item will display the Error type selection dialog (F).
(C)	E-Mail Address	Set the e-mail address to send to for each type of error.
(D)	[Cancel]	Tap this button to go back to the previous screen without saving the setting changes.
(E)	[OK]	Tap this button to save the setting changes.
(F)	Error type selection dialog	Set the tapped type as the error type and return to the previous screen.

10-8-4. Temperature/humidity upper/lower limit notification e-mail settings screen

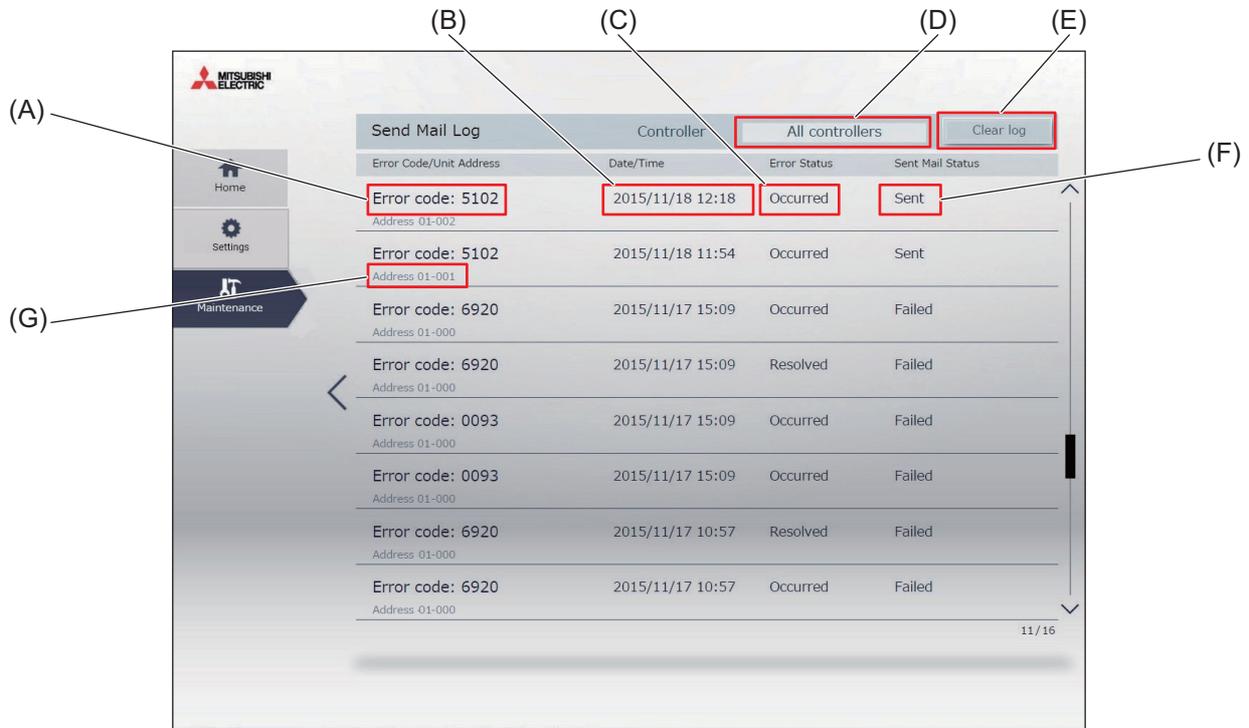


	Item	Function and description
(A)	Mail Subject	Set the title displayed in the sending e-mail.
(B)	E-Mail Address	Set the e-mail address to send to.
(C)	[Cancel]	Tap this button to go back to the previous screen without saving the setting changes.
(D)	[OK]	Tap this button to save the setting changes.

10-9. Send mail log

Tap [Maintenance] – [Send Mail Log] in the menu.

[1] Send Mail Log



	Item	Send Mail Log
(A)	Error code	The error code that corresponds to the error will appear.
(B)	Sent date and time	The date and time when the e-mail was sent will appear. Date and time format will use the format set in the initial settings.
(C)	Error Status	Occurred: The e-mail was sent when an error occurred. Resolved: The e-mail was sent when the error was resolved.
(D)	Controller	Display target e-mail logs can be narrowed down by selecting a centralized controller.
(E)	Clear log	Tap to clear the e-mail log. Note: Only the e-mail log of the centralized controller selected in [Controller] will be reset. To clear all logs, select "All controllers."
(F)	Sent Mail Status	Occurred: The e-mail was sent when an error occurred. Resolved: The e-mail was sent when the error was resolved.
(G)	M-NET address	Sent: The e-mail was successfully sent. Failed: The e-mail failed to be sent.

MEMO

11. Operation (supplementary material)

11-1. Operation using a smartphone

This section explains how to monitor and operate the air conditioning units, LOSSNAY units, OA handling unit (direct expansion type with built-in heater/humidifier), and other equipment that are connected to the AE-C/ EW-C.

Login URL: [https://\[IP address of the login destination centralized controller AE-C/EW-C\]/mobile/index.html](https://[IP address of the login destination centralized controller AE-C/EW-C]/mobile/index.html)

Note: Be sure to use a smartphone in portrait mode.

11-1-1. Monitoring the operation status

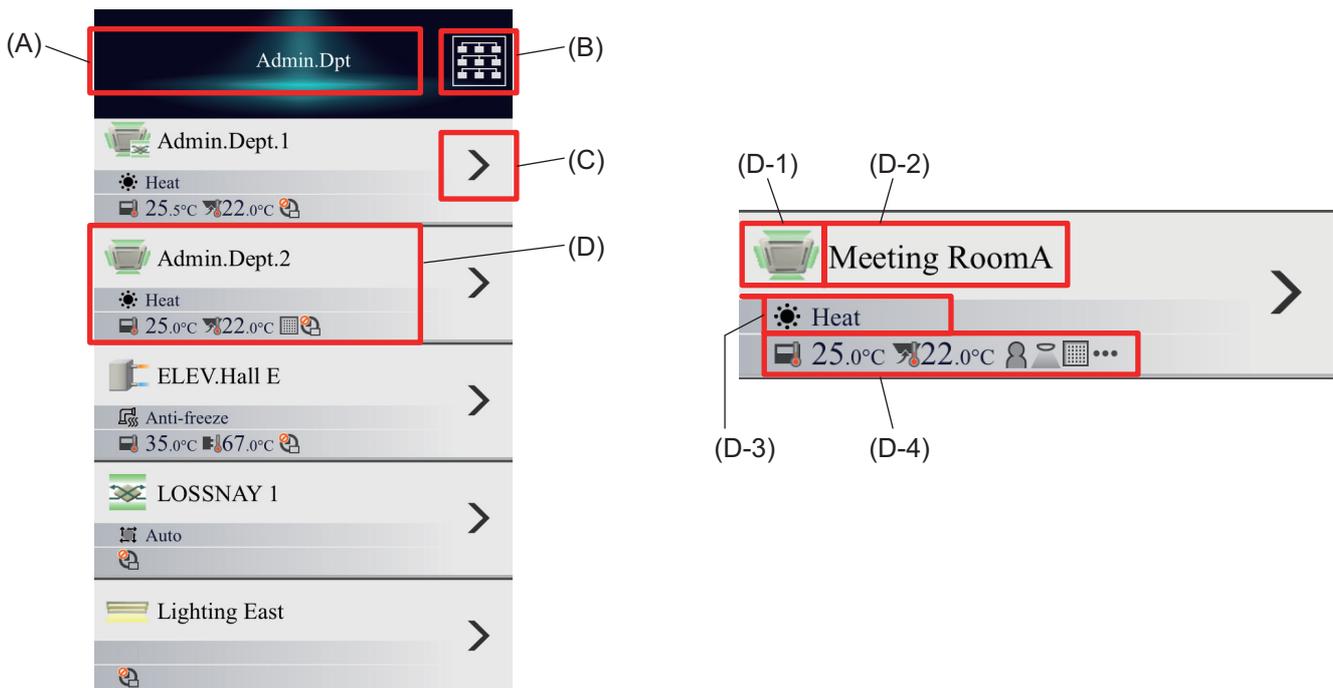
This section explains how to monitor the operation status of all groups collectively.

After login, the group list will appear, showing the operation statuses of all air conditioning unit groups, LOSSNAY unit (ventilation equipment) groups, OA handling unit (direct expansion type with built-in heater/humidifier) groups, and other equipment.

[1] All groups

In the group list, the operation status of all groups can be monitored. The operator can also check the unit malfunctions in this list and prevent the units from being left on unintentionally.

Group list



	Item	Function and description
(A)	User name	The login user name will appear.
(B)	Batch unit	Tapping this item will switch to the Batch Operations screen.
(C)	[>]	Tap this button to display the operation screen.
(D)	Group operation status	The operation status of the group is displayed.
(D-1)	Status display icon	The status such as ON/OFF/error is displayed.
(D-2)	Group name	The group name is displayed.

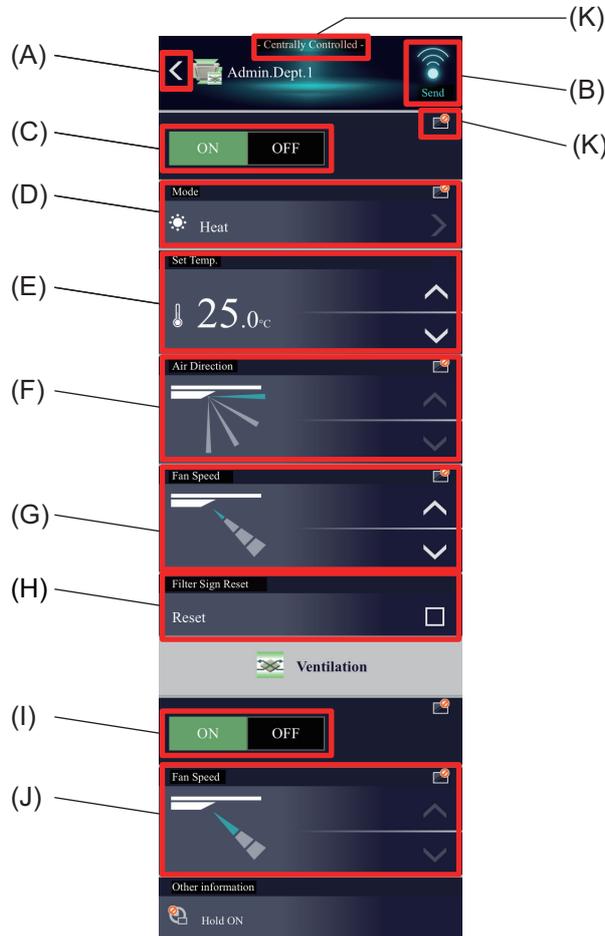
	Item	Function and description
(D-3)	Operation mode	The set operation mode is displayed.
(D-4)	Operating status	The status such as set temperature, intake temperature, and humidity is displayed.

11-1-2. Unit operation

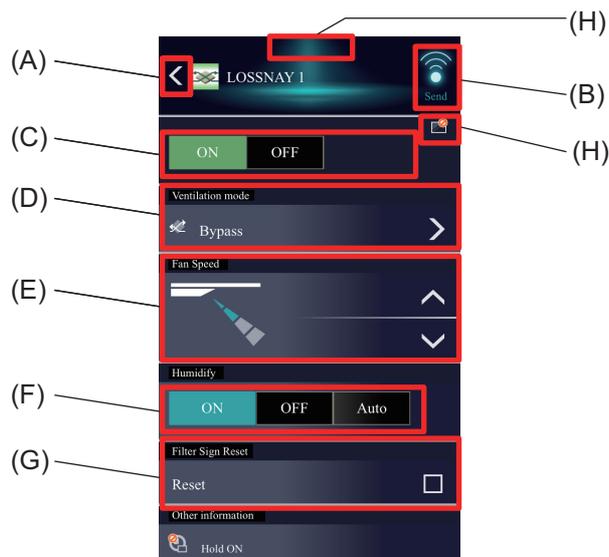
Tap [➤] on the group list screen to switch to the operation screen.

[1] Air conditioning unit (indoor unit) group

If ventilation is set, the operation items for the ventilation are displayed after the air conditioning unit group operation items.

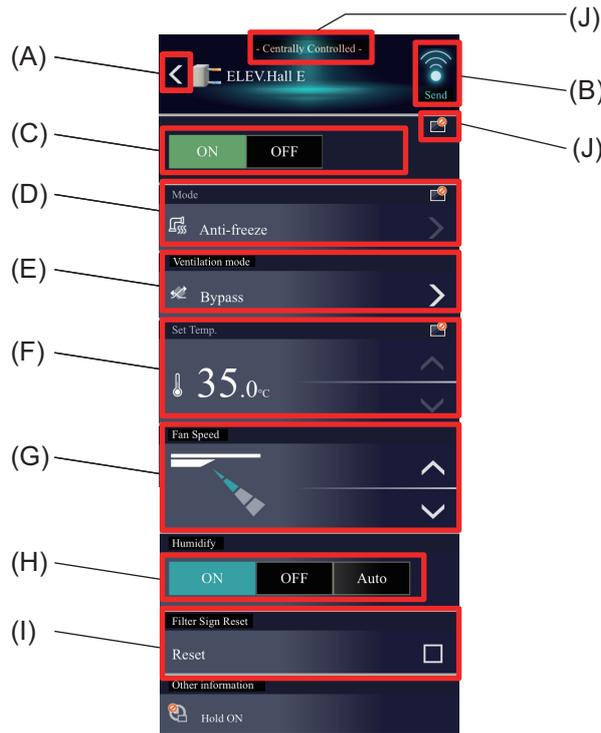


	Item	Function and description
(A)	[<]	Tap this button to return to the group list screen without changing settings.
(B)	Send	Tap this button to save the setting changes and display the group list screen.
(C)	Operating status	Tap [ON] or [OFF] to turn on or off the indoor unit.
(D)	Mode	Tap [➤] to display the operation mode selection screen and select the desired operation mode. Tap [<] to return to the operation screen.
(E)	Set Temp.	Tap [▲] or [▼] to change the set temperature. • The temperature setting range differs depending on the model.
(F)	Air Direction	Tap [▲] or [▼] to set the air direction.
(G)	Fan Speed	Tap [▲] or [▼] to set the fan speed.
(H)	Filter Sign Reset	Tap [☐] to switch whether to clear/not clear the notification that informs the filter cleaning time. To reset, check the box [☑]. (Resetting will reset the total operation time.)
(I)	Ventilation operation status	Tap [ON] or [OFF] to turn on or off the interlocked LOSSNAY unit.
(J)	Ventilation Fan Speed	Tap [▲] or [▼] to set the fan speed of the interlocked LOSSNAY.
(K)	Operation prohibition mark	Prohibited settings are marked with [⊘]. When one or more operation items are prohibited, [Centrally Controlled] is displayed.

[2] LOSSNAY group

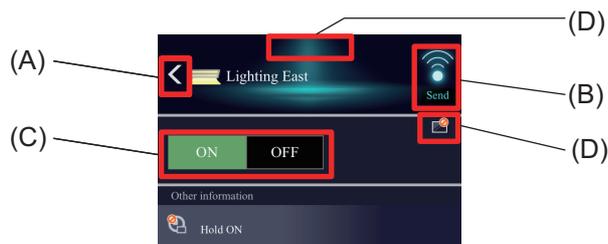
	Item	Function and description
(A)	[<]	Tap this button to return to the group list screen without changing settings.
(B)	Send	Tap this button to save the setting changes and display the group list screen.
(C)	Operating status	Tap [ON] or [OFF] to change the operation of the LOSSNAY unit.
(D)	Ventilation mode	Tap [>] to display the Vent. Mode selection screen and select the desired ventilation mode. Tap [<] to return to the operation screen.
(E)	Fan Speed	Tap [^] or [v] to set the fan speed.
(F)	Humidify	Tap [ON] , [OFF] , or [Auto] to change the humidifier operation.
(G)	Filter Sign Reset	Tap <input type="checkbox"/> to switch whether to clear/not clear the notification that informs the filter cleaning time. To reset, check the box <input checked="" type="checkbox"/> . (Resetting will reset the total operation time.)
(H)	Operation prohibition mark	Prohibited settings are marked with [⊘] . When one or more operation items are prohibited, [Centrally Controlled] is displayed.

[3] OA handling unit (direct expansion type with built-in heater/humidifier) group



	Item	Function and description
(A)	[<]	Tap this button to return to the group list screen without changing settings.
(B)	Send	Tap this button to save the setting changes and display the group list screen.
(C)	Operating status	Tap [ON] or [OFF] to turn on or off the OA handling unit (direct expansion type with built-in heater/humidifier).
(D)	Mode	Tap [>] to display the operation mode selection screen and select the desired operation mode. Tap [<] to return to the operation screen.
(E)	Ventilation mode	Tap [>] to display the Vent. Mode selection screen and select the desired ventilation mode. Tap [<] to return to the operation screen.
(F)	Set Temp.	Tap [^] or [v] to change the set temperature. • The temperature setting range differs depending on the model.
(G)	Fan Speed	Tap [^] or [v] to set the fan speed.
(H)	Humidify	Tap [ON] , [OFF] , or [Auto] to change the humidifier operation.
(I)	Filter Sign Reset	Tap <input type="checkbox"/> to switch whether to clear/not clear the notification that informs the filter cleaning time. To reset, check the box <input checked="" type="checkbox"/> . (Resetting will reset the total operation time.)
(J)	Operation prohibition mark	Prohibited settings are marked with [⊘] . When one or more operation items are prohibited, [Centrally Controlled] is displayed.

[4] Other equipment



	Item	Function and description
(A)	[<]	Tap this button to return to the group list screen without changing settings.
(B)	Send	Tap this button to save the setting changes and display the group list screen.
(C)	Operating status	Tap [ON] or [OFF] to turn on or off equipment.
(D)	Operation prohibition mark	Prohibited settings are marked with []. When one or more operation items are prohibited, [Centrally Controlled] is displayed.

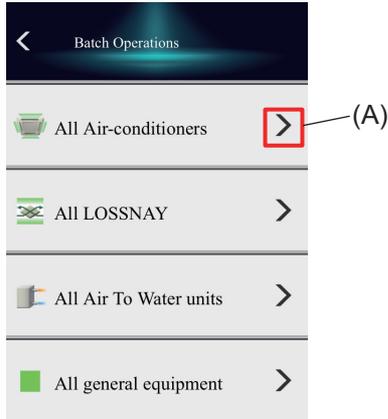
Note

- Equipment set to "No operations (Monitor only)" in the operation settings on the Group Settings screen of the initial setup cannot be operated.
If set to "No operations (Monitor only)", [] is displayed.

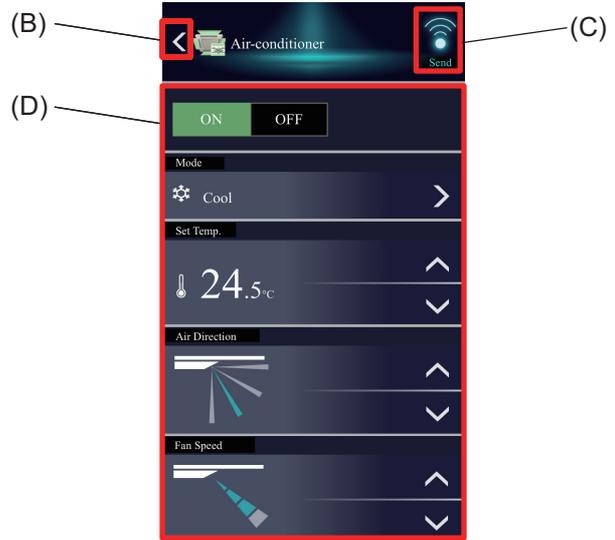
11-1-3. All group batch operation

Tap [⌂] on the group list screen to switch to the Batch Operations screen.

Batch Operations screen



Operation screen



	Item	Function and description
(A)	[>]	Tap this button to display the operation screen.
(B)	[<]	Tap this button to return to the group list screen without changing settings.
(C)	Send	Tap this button to save the setting changes and display the group list screen.
(D)	Settings	The settings are changed.

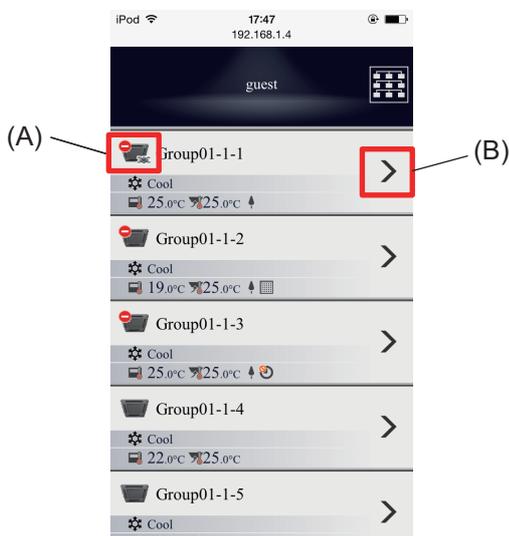
Note

- For groups with set temperature range limits, the range of settable temperatures is limited. When there are groups having prohibited operation items among the batch operation target groups, prohibited items settings are not sent to those groups.

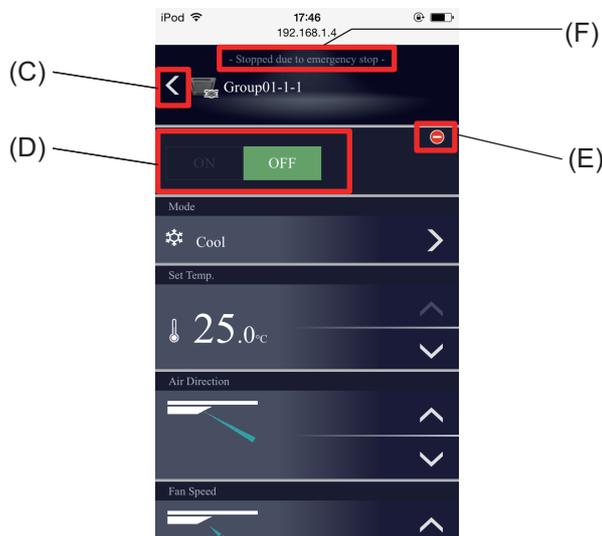
11-1-4. OFF control

When an emergency stop signal is received from an external contact or building management system (BACnet®), or when peak cut control with control method: OFF and control time: 30 minutes set in the energy-saving control/peak cut control function is performed, the control status is displayed with icons and text. During OFF control, the operation status becomes OFF and cannot be switched to ON until the OFF control is released.

Group list screen



Operation screen



	Item	Function and description
(A)	OFF controlled unit icon	When air conditioning units are OFF controlled, [⊖] is displayed.
(B)	[>]	Tap this button to display the operation screen.
(C)	[<]	Tap this button to return to the group list screen without changing settings.
(D)	Operating status	During OFF control, [OFF] is displayed. Units cannot be switched to [ON].
(E)	OFF controlled mark	During OFF control, [⊖] is displayed.
(F)	OFF control details	[Stopped due to emergency stop] is displayed during OFF control due to an emergency stop signal from an external contact or building management system (BACnet®). [Stopped due to energy-save control] is displayed during OFF control due to peak cut control.

11-2. Icon explanation

11-2-1. Equipment filter buttons (icons)

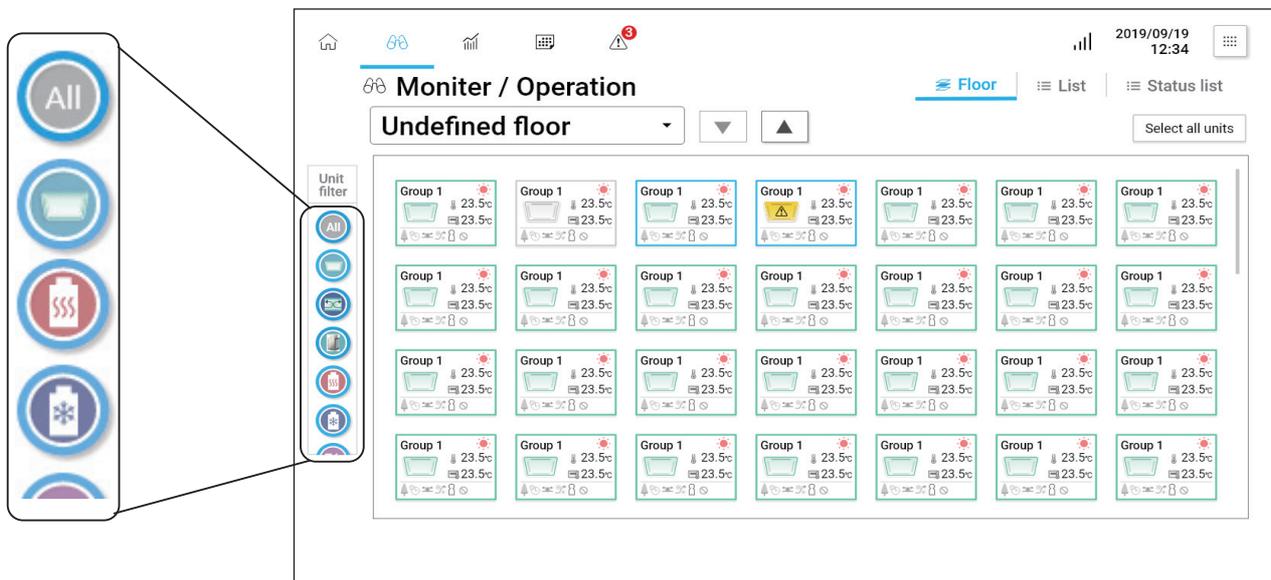
This section explains the buttons and icons for equipment used in the equipment filter.

Note

- The screens where the equipment filter is displayed are as follows: See the table below for detailed explanations of each screen.

Screen	Example setting
Floor screen	Floor layout display screen
List screen	List display screen

Example: Monitoring screen (when not using floor layout)



■ **Equipment filter icons**

Item	Description	
	Selected	Unselected
Select all button		
Indoor unit button		
Ventilating unit button		
OA handling unit (direct expansion type with built-in heater/humidifier) button		
HWHP button		

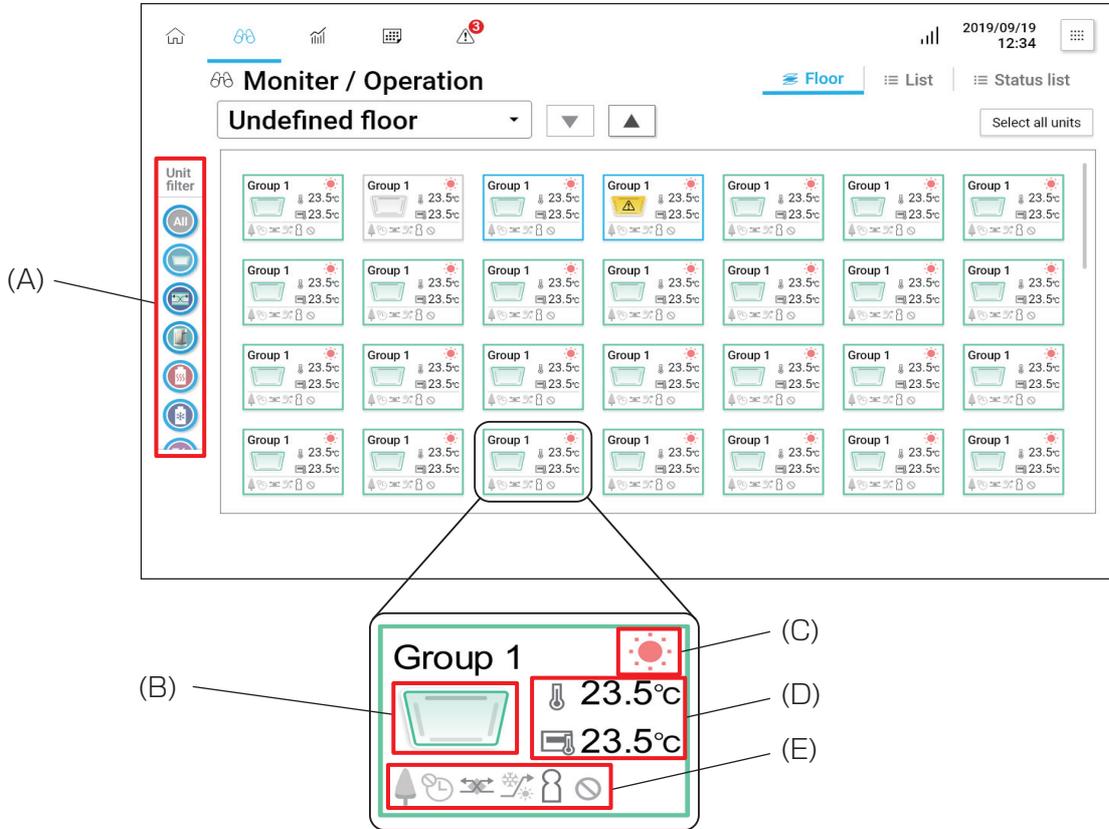
Item	Description	
	Selected	Unselected
e-Series button		
Outdoor unit button		
PI controller/ AI controller/ Modbus watt-hour meter button		
Remote controller/ system controller button		
Dehumidifier button		
Quality controller button		
Condensing unit button		
AHC (HC) button		
Other equipment button		

Icon		Model	Description
Normal	Error		
		System controller	The status of the system controller is displayed.
		Remote controller	The status of the remote controller is displayed.

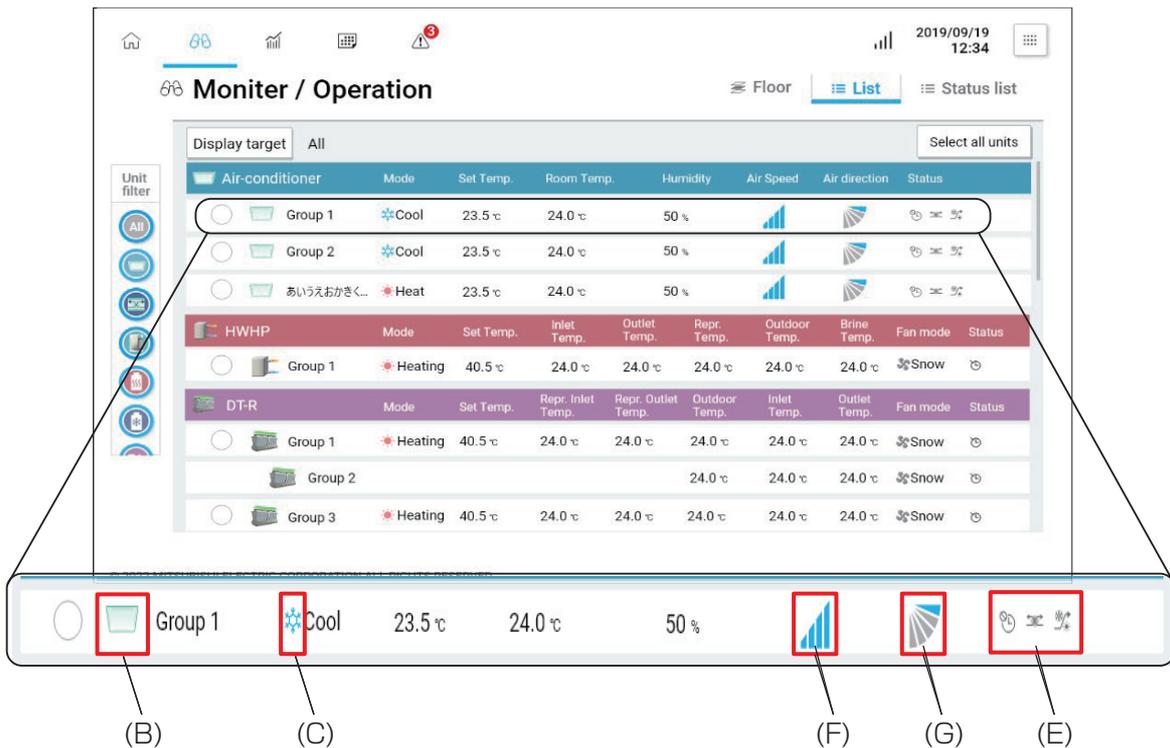
11-2-2. Icons used on the Monitor/Operation screen

The status of groups displayed on the floor layout screen is expressed by combining respective icons. See below for the list screen of each icon.

Example: Floor layout display screen



Example: List display screen



	Item	Function and description
(A)	Equipment filter buttons (icons)	Refer to "Equipment filter buttons (icons)."
(B)	Unit icon	Refer to "Unit icons."
(C)	Mode icon display	Refer to "Mode icon display."
(D)	Information display	–
(E)	Sub icon display	–
(F)	Fan speed display	Refer to "Fan speed display."
(G)	Air direction display	Refer to "Air direction display."

11-2-3. Unit icons

The icons for each model are as follows.

Icons can be selected for respective units according to their appearance. Icon selection can be set on the Group Settings screen.

Item		Description		
		ON	OFF	Error
Indoor unit icon	Ceiling cassette type (4-way blow)			
	Ceiling cassette type (2-way blow)			
	Ceiling cassette type (1-way blow)			
	Ceiling embedded type 1			
	Ceiling embedded type 2			
	Ceiling suspended type			
	Floor standing type 1			
	Floor standing type 2			
	Floor standing type 3			
	Wall mounted type			
	Floor standing type 4			
OA handling unit (direct expansion type with built-in heater/humidifier)	—			
LOSSNAY	—			

Item		Description		
		ON	OFF	Error
e-Series 1	—			
e-Series 2	—			
Chiller 1	—			
Chiller 2	—			
Chiller 3	—			
Chiller 4	—			
Chiller 5	—			
Chiller 6	—			
Chiller 7	—			
Water heater	—			
HWHP (CAHV) 1	—			
HWHP (CAHV) 2	—			
Hot water supply (QAHV) 1	—			
Hot water supply (QAHV) 2	—			
Hot water supply (QAHV) 3	—			
Hot water supply (QAHV) 4	—			

Item		Description		
		ON	OFF	Error
Outdoor unit	—		—	
Other equipment	Pump			
	Fan			
	Door (electronic lock)			
	Humidifier			
	Hotel window			
	Card key			
	Lighting (fluorescent)			
	Lighting (downlight)			
	General equipment via free contacts			
HA fan (Health Air)	—			
Condensing unit	—	 CND	 CND	 CND
		 CND		
Quality controller	Thermo ON operation			
	Thermo OFF operation			
	Defrost operation	 DF		

Item		Description		
		ON	OFF	Error
Dehumidifier 1	Thermo ON operation			
	Thermo OFF operation			
	Defrost operation			
Dehumidifier 2	Thermo ON operation			
	Thermo OFF operation			
	Defrost operation			
PI controller	—		—	
AI controller	Temperature		—	
	Humidity		—	

11-2-4. Mode icon display

The icons that display the mode of the equipment are as follows.

Item	Description				
Indoor unit	Cooling	Heating	Fan	Dry	Auto
					
	Auto cooling	Auto heating	—	—	—
			—	—	—
	Night setback (cooling)	Night setback (heating)	Night setback	—	—
				—	—
LOSSNAY	Auto	Bypass	Heat Recovery	—	—
				—	—
e-Series	Heating	Cooling	—	—	—
			—	—	—
Chiller 1	Heating	Cooling	Hot water ECO	Freeze prevention	—
					—
Chiller 2	Heating	Cooling	—	—	—
			—	—	—
Water heater	Warm water	Freeze prevention	Cold water	Warm water ECO	Hot water
					
HWHP (CAHV, CRHV)	Warm water	Freeze prevention	Warm water ECO	Hot water	—
					—
HWHP (QAHV)	Mode 1	Mode 2	Mode 3	—	—
				—	—
Dehumidifier	Dehumidifying	Fan	Cooling	Auto	—
					—

11-2-5. Fan speed display

The icon displays for the fan speed button are as follows.

Model	Low	Medium 2	Medium 1	High	Auto
4-step model					
3-step model			—		
2-step model		—	—		

11-2-6. Air direction display

The icon displays for the air direction button are as follows.

Model	Horizontal	Angle 0	Angle 1	Angle 2	Vertical
5-step model					
4-step model		—			
Model	Swing	Auto			
5-step model					
4-step model					

11-2-7. Information display

The icons that display the equipment information are as follows.

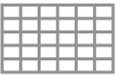
Item	Description				
Indoor unit	Set temperature	Room temperature	Humidity	—	—
				—	—
LOSSNAY	CO ₂	Humidity (ME remote controller)	Humidity (Unit)	—	—
	CO₂			—	—
LOSSNAY with heater and humidifier	Set temperature	Room temperature	CO ₂	Humidity (ME remote controller)	Humidity (Unit)
			CO₂		
e-Series	Set water temperature	Inlet representative water temperature	Outlet representative water temperature	Outdoor temperature	—
					—
	—	Inlet water temperature	Outlet water temperature	—	—
	—			—	—
Chiller 1	Set water temperature	Inlet representative water temperature	Outlet representative water temperature	Outdoor temperature	—
					—
	—	Inlet water temperature	Outlet water temperature	—	—
	—			—	—
PWFY (Air to Water)	Set temperature	Water temperature	—	—	—
			—	—	—

Item	Description				
HWHP (CAHV, CRHV)	Set temperature	Representative water temperature	Heat source temperature	Outdoor temperature	—
					—
	—	Inlet water temperature	Outlet water temperature	—	—
	—			—	—
Commercial-use EcoCute (QAHV)	Set temperature	Control water temperature	Warm water temperature	External temperature	—
					—
	—	Inlet water temperature	Outlet water temperature	—	—
	—			—	—
Outdoor unit	—	—	—	External temperature	—
	—	—	—		—
Dehumidifier	Set temperature	Room temperature	—	—	—
			—	—	—

11-2-8. Sub icons

The sub icons that display the equipment status are as follows.

Item	Description				
Indoor unit	Operation prohibited	—	Ventilation ON	Ventilation OFF	Night setback control in progress
		—			
	—	AI Start in progress	Energy-saving control in progress	Filter sign	Hold in progress
	—				
	Schedule not available	Schedule available	Bright	Dark	Local remote controller operation prohibited
					
LOSSNAY	Operation prohibited	24 hour ventilation being set	—	—	—
			—	—	—
	Night purge operation in progress	—	Energy-saving control in progress	Filter sign	—
		—			—
	Schedule not available	Schedule available	—	—	Local remote controller operation prohibited
			—	—	

Item	Description				
OA handling unit (direct expansion type with built-in heater/humidifier)	Operation prohibited	24 hour ventilation being set	Ventilation ON	Ventilation OFF	Night setback control in progress
					
	Night purge operation in progress	—	Energy-saving control in progress	Filter sign	—
		—			—
	Schedule not available	Schedule available	—	—	Local remote controller operation prohibited
			—	—	
e-Series HWHP (CAHV/CRHV)	Schedule not available	Schedule available	—	—	Local remote controller operation prohibited
			—	—	
Commercial-use EcoCute (QAHV)	Schedule not available	Schedule available	Power save operation in progress	—	Local remote controller operation prohibited
				—	
Dehumidifier	Schedule not available	Schedule available	—	—	—
			—	—	—
(High) quality controller	Schedule not available	Schedule available	Energy-saving control in progress	Pre-alarm	Local remote controller operation prohibited
					
Condensing unit	—	—	—	Pre-alarm	—
	—	—	—		—

11-2-9. Fan speed display (detailed)

The icons that display the fan speed are as follows.

Item	Description				
4-step model	Low	Medium 1	Medium 2	High	Auto
3-step model	Low	Medium 1	—	High	Auto
			—		
2-step model	Low	—	—	High	Auto
		—	—		

11-2-10. Air direction display (detailed)

The icons that display the air direction are as follows.

Item	Description			
5-step model	Horizontal	Angle 0	Angle 1	Angle 2
	Vertical	Swing	Auto	—
4-step model		—	Angle 1	Angle 2
	Vertical	Swing	Auto	—
		—		
			—	—

11-2-11. Model icon display (smartphone operation screen)

The operating status of each model is displayed as an icon.

Model	ON/OFF	Error occurring	Interlocked LOSSNAY ON/OFF	Unknown model	OFF controlled
Air conditioning unit/ OA handling unit (direct expansion type with built-in heater/humidifier)					
LOSSNAY (ventilating unit)			—	—	
Water heater			—	—	—
General equipment			—	—	—

Note

- Icons for air conditioning units/OA handling units (direct expansion type with built-in heater/humidifier) can be selected from types other than 4-way, such as 2-way or ceiling suspended. Also, general equipment icons can be selected for items such as pumps or card keys in addition to lighting icons.
- Icon settings are made in the group settings of the initial setup.

11-2-12. Operation mode icons (smartphone operation screen)

The operating mode of each model is displayed.

Model	Cooling	Dry	Fan	Heating	Auto	Auto (cooling)	Auto (heating)
Air conditioning unit							
Model	Cooling	Dry	Fan	Heating	Auto	Auto (cooling)	Auto (heating)
OA handling unit (direct expansion type with built-in heater/humidifier)							
Model	Normal	Heat exchange	Auto				
LOSSNAY (ventilating unit)							
Model	Warm water	Warm water ECO	Hot water	Freeze prevention	Cold water		
Water heater							

11-2-13. Information display icons (smartphone operation screen)

The setting information and operating status of each model is displayed as an icon.

Icon	Meaning
 22.5°C/19.0°C	Set temperature (cooling/heating)
 25.0°C	Room temperature
	Night purge operation in progress
	24 hour ventilation in progress
	Night setback control in progress
	Energy-saving control
	Occupied/Unoccupied
	Bright/Dark
	Filter sign occurring
	Hold in progress
	Schedule not available
	Schedule available
	AI Start control in progress
	Information display omitted

11-2-14. Fan speed display icon

The icon displays for the fan speed button are as follows.

Model	Low	Medium 2	Medium 1	High	Auto
4-step model					
3-step model		—			
2-step model		—	—		

11-2-15. Air direction display icon

The icon displays for the air direction button are as follows.

Model	Horizontal	Angle 0	Angle 1	Angle 2	Vertical
5-step model					
4-step model		—			
Model	Swing	Auto			
5-step model					
4-step model					

11-3. CSV format

The controller can save the following operation data to a USB flash drive in CSV format.
 The data that can be saved are as follows.

Item		CSV file type	Indoor unit		
		USB			
Energy Management	Peak Cut	123	○		
Gas refrigerant amount check		802	○		
Energy management output	Air conditioning unit	Indoor unit	5-minute intervals	501	○
			30-minute intervals	502	○
			1-day intervals	503	○
			1-month intervals	504	○
			1-year intervals	505	○
	OA processing unit (Interlocked LOSSNAY)		5-minute intervals	512	○
			30-minute intervals	513	○
			1-day intervals	514	○
			1-month intervals	515	○
			1-year intervals	516	○
	LOSSNAY		5-minute intervals	517	○
			30-minute intervals	518	○
			1-day intervals	519	○
			1-month intervals	520	○
			1-year intervals	521	○
	Charge Parameters		201	○	
	Charge Parameters (30-minute intervals)		621	○	
	Metering device data		202	○	
	Metering device data (30-minute intervals)		622	○	

11-3-1. Peak cut

Item	Description																										
<p>CSV output</p>	<p>Touch [CSV output] to export the displayed Peakcut control status data in the CSV format as shown below.</p> <ul style="list-style-type: none"> ■ <u>File output destination</u> [Serial No. of connected AE-C/EW-C] ¥“OperationalData”¥“EnergyManagement”¥“Peakcut” ■ <u>File name</u> Peakcut_[yyyy]-[mm]-[dd]_[AE-C/EW-C No.].csv <table border="1"> <thead> <tr> <th>File-name contents</th> <th>Format</th> </tr> </thead> <tbody> <tr> <td>[yyyy]</td> <td>The year specified in the [Date] field</td> </tr> <tr> <td>[mm]</td> <td>The month specified in the [Date] field</td> </tr> <tr> <td>[dd]</td> <td>The date specified in the [Date] field</td> </tr> </tbody> </table> <ul style="list-style-type: none"> ■ <u>File format</u> <table border="1"> <thead> <tr> <th>Row</th> <th>Item</th> <th>Format</th> </tr> </thead> <tbody> <tr> <td>1st</td> <td>File Type</td> <td>123</td> </tr> <tr> <td>2nd</td> <td>Date</td> <td>yyyy/mm/dd *1</td> </tr> <tr> <td>3rd</td> <td>Target</td> <td>“Peakcut energy”</td> </tr> <tr> <td>4th</td> <td>Measurement item</td> <td>“Time,Power[kW],Control level”</td> </tr> <tr> <td>5th–</td> <td>Data</td> <td>hh:mm (1-minute intervals), average electric power consumption, control level Note: Average electric power consumption (kW) in 30-minute period will appear in 30-minute increments.</td> </tr> </tbody> </table> <p>*1 The date will appear in the format that has been set on the [Unit Info.] screen.</p> <ul style="list-style-type: none"> ■ <u>File sample</u> <div style="border: 1px solid black; padding: 5px;"> <pre> 123 03/13/2015 Peakcut energy Time,Power[kW],Control level 00:00,8.0,1 00:01,8.0,1 00:02,8.0,1 : : 23:58,6.0,0 23:59,6.0,0 </pre> </div>	File-name contents	Format	[yyyy]	The year specified in the [Date] field	[mm]	The month specified in the [Date] field	[dd]	The date specified in the [Date] field	Row	Item	Format	1st	File Type	123	2nd	Date	yyyy/mm/dd *1	3rd	Target	“Peakcut energy”	4th	Measurement item	“Time,Power[kW],Control level”	5th–	Data	hh:mm (1-minute intervals), average electric power consumption, control level Note: Average electric power consumption (kW) in 30-minute period will appear in 30-minute increments.
	File-name contents	Format																									
	[yyyy]	The year specified in the [Date] field																									
	[mm]	The month specified in the [Date] field																									
	[dd]	The date specified in the [Date] field																									
	Row	Item	Format																								
	1st	File Type	123																								
	2nd	Date	yyyy/mm/dd *1																								
	3rd	Target	“Peakcut energy”																								
	4th	Measurement item	“Time,Power[kW],Control level”																								
5th–	Data	hh:mm (1-minute intervals), average electric power consumption, control level Note: Average electric power consumption (kW) in 30-minute period will appear in 30-minute increments.																									

11-3-2. Energy management (Indoor unit)

Item	Description														
Energy management data	<ul style="list-style-type: none"> ■ File name Data type: 5-minute intervals "EnergyManagement"_ "5MIN" _[YYYY]-[MM]-[DD]_[yyyy]-[mm]-[dd].csv Data type: 30-minute intervals "EnergyManagement"_ "30MIN" _[YYYY]-[MM]-[DD]_[yyyy]-[mm]-[dd].csv Data type: 1-day intervals "EnergyManagement"_ "1DAY" _[YYYY]-[MM]-[DD]_[yyyy]-[mm]-[dd].csv Data type: 1-month intervals "EnergyManagement"_ "1MONTH" _[YYYY]-[MM]_[yyyy]-[mm].csv Data type: 1-year intervals "EnergyManagement"_ "1YEAR" _[YYYY]-[yyyy].csv <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>File-name contents</th> <th>Format</th> </tr> </thead> <tbody> <tr> <td>[YYYY]</td> <td>Start year</td> </tr> <tr> <td>[MM]</td> <td>Start month</td> </tr> <tr> <td>[DD]</td> <td>Start date</td> </tr> <tr> <td>[yyyy]</td> <td>End year</td> </tr> <tr> <td>[mm]</td> <td>End month</td> </tr> <tr> <td>[dd]</td> <td>End date</td> </tr> </tbody> </table>	File-name contents	Format	[YYYY]	Start year	[MM]	Start month	[DD]	Start date	[yyyy]	End year	[mm]	End month	[dd]	End date
File-name contents	Format														
[YYYY]	Start year														
[MM]	Start month														
[DD]	Start date														
[yyyy]	End year														
[mm]	End month														
[dd]	End date														

Item	Description														
Energy management data	<ul style="list-style-type: none"> ■ File output destination [Serial No. of connected AE-C/EW-C]¥“OperationalData”¥“EnergyManagement2” ¥[Serial No.]_SC[AE-C/EW-C No.]¥[Date] ■ File format [Data type: 5-minute intervals] 														
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">Row</th> <th style="width: 30%;">Item</th> <th style="width: 60%;">Format</th> </tr> </thead> <tbody> <tr> <td>1st</td> <td>File Type</td> <td>501</td> </tr> <tr> <td>2nd</td> <td>Data range</td> <td>Start date + “-” + End date</td> </tr> </tbody> </table>	Row	Item	Format	1st	File Type	501	2nd	Data range	Start date + “-” + End date					
	Row	Item	Format												
	1st	File Type	501												
	2nd	Data range	Start date + “-” + End date												
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tbody> <tr> <td style="width: 10%;">3rd</td> <td style="width: 30%;">Item *1*2</td> <td style="width: 60%;">“DateTime,Data1(51),...Data1(100),Data2(51),...Data2(100),Data3(51),...Data3(100),OutdoorTemp(51),...OutdoorTemp(100),CoolSetTemp(1),...CoolSetTemp(50),HeatSetTemp(1),...HeatSetTemp(50),RoomTemp(1),...RoomTemp(50),MCP1(1),...MCP1(50),MCP2(1),...MCP2(50),MCP3(1),...MCP3(50),MCP4(1),...MCP4(50),MCT1(1),...MCT1(50),MCT2(1),...MCT2(50),AHC1(201),...AHC1(250),AHC2(201),...AHC2(250),MCP1,MCP2,MCP3,MCP4”³</td> </tr> </tbody> </table>	3rd	Item *1*2	“DateTime,Data1(51),...Data1(100),Data2(51),...Data2(100),Data3(51),...Data3(100),OutdoorTemp(51),...OutdoorTemp(100),CoolSetTemp(1),...CoolSetTemp(50),HeatSetTemp(1),...HeatSetTemp(50),RoomTemp(1),...RoomTemp(50),MCP1(1),...MCP1(50),MCP2(1),...MCP2(50),MCP3(1),...MCP3(50),MCP4(1),...MCP4(50),MCT1(1),...MCT1(50),MCT2(1),...MCT2(50),AHC1(201),...AHC1(250),AHC2(201),...AHC2(250),MCP1,MCP2,MCP3,MCP4” ³											
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Item	Unit														
Data1, Data2, Data3	Blank														
OutdoorTemp, CoolSetTemp, HeatSetTemp, RoomTemp	°C, °F														
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<table border="1" style="width: 100%; border-collapse: collapse;"> <tbody> <tr> <td style="width: 10%;">5th–17860th</td> <td style="width: 30%;">Data *1*2*4*5</td> <td style="width: 60%;">Date and time, Data 1 (51), ... (100), Data 2 (51), ... (100), Data 3 (51), ... (100), Outdoor temperature (51), ... (100),Cooling set temperature (1), ... (50), Heating set temperature (1), ... (50),Room temperature (1), ... (50), MCP 1 (1), ... (50), MCP 2 (1), ... (50), MCP 3 (1), ... (50), MCP 4 (1), ... (50), MCT 1 (1), ... (50), MCT 2 (1), ... (50),AHC temperature 1 (201), ... (250), AHC temperature 2 (201), ... (250), MCP 1, MCP 2, MCP 3, MCP 4</td> </tr> </tbody> </table>	5th–17860th	Data *1*2*4*5	Date and time, Data 1 (51), ... (100), Data 2 (51), ... (100), Data 3 (51), ... (100), Outdoor temperature (51), ... (100),Cooling set temperature (1), ... (50), Heating set temperature (1), ... (50),Room temperature (1), ... (50), MCP 1 (1), ... (50), MCP 2 (1), ... (50), MCP 3 (1), ... (50), MCP 4 (1), ... (50), MCT 1 (1), ... (50), MCT 2 (1), ... (50),AHC temperature 1 (201), ... (250), AHC temperature 2 (201), ... (250), MCP 1, MCP 2, MCP 3, MCP 4												
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Item	Description																	
Energy management data	[Data type: 30-minute intervals]																	
	Row	Item	Format															
	1st	File Type	502															
	2nd	Data range	Start date + “-” + End date															
	3rd	Item *1*2	“DateTime,Data1(51),...Data1(100),Data2(51),...Data2(100), Data3(51),...Data3(100),OutdoorTemp(51),...OutdoorTemp(100), CoolSetTemp(1),...CoolSetTemp(50),HeatSetTemp(1),...HeatSetTemp(50), RoomTemp(1),...RoomTemp(50),FanTime(1),...FanTime(50), CoolTime(1),...CoolTime(50),HeatTime(1),...HeatTime(50), ThermoTime(1),...ThermoTime(50),CoolThermoTime(1),...CoolThermoTime(50), HeatThermoTime(1),...HeatThermoTime(50), ThermoCount(1),...ThermoCount(50), SaveValue(1),...SaveValue(50),CoolSaveValue(1),...CoolSaveValue(50), HeatSaveValue(1),...HeatSaveValue(50), ApporionedElectricEnergy(1),...ApporionedElectricEnergy(50), MCP1(1),...MCP1(50),MCP2(1),...MCP2(50),MCP3(1),...MCP3(50), MCP4(1),...MCP4(50),MCT1(1),...MCT1(50),MCT2(1),...MCT2(50), AHC1(201),...AHC1(250),AHC2(201),...AHC2(250), MCP1,MCP2,MCP3,MCP4*3”															
	4th	Measurement unit *6	<table border="1"> <thead> <tr> <th>Item</th> <th>Unit</th> </tr> </thead> <tbody> <tr> <td>ApporionedElectricEnergy</td> <td>kWh</td> </tr> <tr> <td>ThermoCount, Data1, Data2, Data3</td> <td>Blank</td> </tr> <tr> <td>OutdoorTemp, CoolSetTemp, HeatSetTemp, RoomTemp</td> <td>°C, °F</td> </tr> <tr> <td>FanTime, CoolTime, HeatTime, ThermoTime, CoolThermoTime, HeatThermoTime, SaveValue, CoolSaveValue, HeatSaveValue</td> <td>Minute</td> </tr> <tr> <td>MCP (PI controller/Modbus watt-hour meter)</td> <td>kWh, m3, MJ, --</td> </tr> <tr> <td>MCT (AI controller)</td> <td>°C, °F, %</td> </tr> <tr> <td>AHC (Advanced HVAC CONTROLLER)</td> <td>°C, °F</td> </tr> </tbody> </table>	Item	Unit	ApporionedElectricEnergy	kWh	ThermoCount, Data1, Data2, Data3	Blank	OutdoorTemp, CoolSetTemp, HeatSetTemp, RoomTemp	°C, °F	FanTime, CoolTime, HeatTime, ThermoTime, CoolThermoTime, HeatThermoTime, SaveValue, CoolSaveValue, HeatSaveValue	Minute	MCP (PI controller/Modbus watt-hour meter)	kWh, m3, MJ, --	MCT (AI controller)	°C, °F, %	AHC (Advanced HVAC CONTROLLER)
Item	Unit																	
ApporionedElectricEnergy	kWh																	
ThermoCount, Data1, Data2, Data3	Blank																	
OutdoorTemp, CoolSetTemp, HeatSetTemp, RoomTemp	°C, °F																	
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MCP (PI controller/Modbus watt-hour meter)	kWh, m3, MJ, --																	
MCT (AI controller)	°C, °F, %																	
AHC (Advanced HVAC CONTROLLER)	°C, °F																	
5th–37204th	Data *1*2*4*5	Date and time, Data 1 (51), ... (100), Data 2 (51), ... (100), Data 3 (51), ... (100), Outdoor temperature (51), ... (100), Cooling set temperature (1), ... (50), Heating set temperature (1), ... (50), Room temperature (1), ... (50), Fan operation time (1), ... (50), Cooling operation time (1)... (50), Heating operation time (1), ... (50), Thermo-ON time (1), ... (50), Cooling Thermo-ON time (1), ... (50), Heating Thermo-ON time (1), ... (50), Number of Thermo-ON/OFF (1), ... (50), Capacity-save value (1), ... (50), Cooling capacity-save value (1), ... (50), Heating capacity-save value (1), ... (50), Apporioned electric energy (1), ... (50), MCP 1 (1), ... (50), MCP 2 (1), ... (50), MCP 3 (1), ... (50), MCP 4 (1), ... (50), MCT 1 (1), ... (50), MCT 2 (1), ... (50), AHC temperature 1 (201), ... (250), AHC temperature 2 (201), ... (250), MCP 1, MCP 2, MCP 3, MCP 4																
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Item	Description																	
Energy management data	[Data type: 1-day intervals]																	
	Row	Item	Format															
	1st	File Type	503															
	2nd	Data range	Start date + “-” + End date															
	3rd	Item *1*2	“Date,Data1(51),...Data1(100),Data3(51),...Data3(100), OutdoorTemp(51),...OutdoorTemp(100),CoolSetTemp(1),...CoolSetTemp(50), HeatSetTemp(1),...HeatSetTemp(50),RoomTemp(1),...RoomTemp(50), FanTime(1),...FanTime(50),CoolTime(1),...CoolTime(50), HeatTime(1),...HeatTime(50),ThermoTime(1),...ThermoTime(50), CoolThermoTime(1),...CoolThermoTime(50), HeatThermoTime(1),...HeatThermoTime(50), SaveValue(1),...SaveValue(50),CoolSaveValue(1),...CoolSaveValue(50), HeatSaveValue(1),...HeatSaveValue(50), ApporionedElectricEnergy(1),...ApporionedElectricEnergy(50), TargetElectricEnergy(1),...TargetElectricEnergy(50), MCP1(1),...MCP1(50),MCP2(1),...MCP2(50),MCP3(1),...MCP3(50), MCP4(1),...MCP4(50),MCT1(1),...MCT1(50),MCT2(1),...MCT2(50), AHC1(201),...AHC1(250),AHC2(201),...AHC2(250), MCP1,MCP2,MCP3,MCP4*3”															
4th	Measurement unit *6	<table border="1"> <thead> <tr> <th>Item</th> <th>Unit</th> </tr> </thead> <tbody> <tr> <td>ApporionedElectricEnergy, TargetElectricEnergy</td> <td>kWh</td> </tr> <tr> <td>Data1, Data3</td> <td>Blank</td> </tr> <tr> <td>OutdoorTemp, CoolSetTemp, HeatSetTemp, RoomTemp</td> <td>°C, °F</td> </tr> <tr> <td>FanTime, CoolTime, HeatTime, ThermoTime, CoolThermoTime, HeatThermoTime, SaveValue, CoolSaveValue, HeatSaveValue</td> <td>Minute</td> </tr> <tr> <td>MCP (PI controller/Modbus watt-hour meter)</td> <td>kWh, m3, MJ, --</td> </tr> <tr> <td>MCT (AI controller)</td> <td>°C, °F, %</td> </tr> <tr> <td>AHC (Advanced HVAC CONTROLLER)</td> <td>°C, °F</td> </tr> </tbody> </table>	Item	Unit	ApporionedElectricEnergy, TargetElectricEnergy	kWh	Data1, Data3	Blank	OutdoorTemp, CoolSetTemp, HeatSetTemp, RoomTemp	°C, °F	FanTime, CoolTime, HeatTime, ThermoTime, CoolThermoTime, HeatThermoTime, SaveValue, CoolSaveValue, HeatSaveValue	Minute	MCP (PI controller/Modbus watt-hour meter)	kWh, m3, MJ, --	MCT (AI controller)	°C, °F, %	AHC (Advanced HVAC CONTROLLER)	°C, °F
Item	Unit																	
ApporionedElectricEnergy, TargetElectricEnergy	kWh																	
Data1, Data3	Blank																	
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MCT (AI controller)	°C, °F, %																	
AHC (Advanced HVAC CONTROLLER)	°C, °F																	
5th–779th	Data *1*2*4*5	Date, Data 1 (51), ... (100), Data 3 (51), ... (100), Outdoor temperature (51), ... (100), Cooling set temperature (1), ... (50), Heating set temperature (1), ... (50), Room temperature (1), ... (50), Fan operation time (1), ... (50), Cooling operation time (1), ... (50), Heating operation time (1), ... (50), Thermo-ON time (1), ... (50), Cooling Thermo-ON time (1), ... (50), Heating Thermo-ON time (1), ... (50), Capacity-save value (1), ... (50), Cooling capacity-save value (1), ... (50), Heating capacity-save value (1), ... (50), Apporioned electric energy (1), ... (50), Target electric energy (1), ... (50), MCP 1 (1), ... (50), MCP 2 (1), ... (50), MCP 3 (1), ... (50), MCP 4 (1), ... (50), MCT 1 (1), ... (50), MCT 2 (1), ... (50), AHC temperature 1 (201), ... (250), AHC temperature 2 (201), ... (250), MCP 1, MCP 2, MCP 3, MCP 4																
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Item	Description																
Energy management data	[Data type: 1-month intervals]																
	Row	Item Format															
	1st	File Type 504															
	2nd	Data range Start year and month + “-” + End year and month															
	3rd	Item *1*2 “Month,Data1(51),...Data1(100),Data3(51),...Data3(100), OutdoorTemp(51),...OutdoorTemp(100),CoolSetTemp(1),...CoolSetTemp(50), HeatSetTemp(1),...HeatSetTemp(50),RoomTemp(1),...RoomTemp(50), FanTime(1),...FanTime(50),CoolTime(1),...CoolTime(50), HeatTime(1),...HeatTime(50),ThermoTime(1),...ThermoTime(50), CoolThermoTime(1),...CoolThermoTime(50), HeatThermoTime(1),...HeatThermoTime(50), SaveValue(1),...SaveValue(50),CoolSaveValue(1),...CoolSaveValue(50), HeatSaveValue(1),...HeatSaveValue(50), ApporionedElectricEnergy(1),...ApporionedElectricEnergy(50). TargetElectricEnergy(1),...TargetElectricEnergy(50), MCP1(1)...MCP1(50),MCP2(1),...MCP2(50),MCP3(1),...MCP3(50), MCP4(1),...MCP4(50),MCT1(1),...MCT1(50),MCT2(1),...MCT2(50), AHC1(201),...AHC1(250),AHC2(201),...AHC2(250), MCP1,MCP2,MCP3,MCP4*3”															
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Item	Unit																
ApporionedElectricEnergy, TargetElectricEnergy	kWh																
Data1, Data3	Blank																
OutdoorTemp, CoolSetTemp, HeatSetTemp, RoomTemp	°C, °F																
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5th–29th	Data *1*2*4*5 yyyy/mm, Data 1 (51), ... (100), Data 3 (51), ... (100), Outdoor temperature (51), ... (100), Cooling set temperature (1), ... (50), Heating set temperature (1), ... (50), Room temperature (1), ... (50), Fan operation time (1), ... (50), Cooling operation time (1), ... (50), Heating operation time (1), ... (50), Thermo-ON time (1), ... (50), Cooling Thermo-ON time (1), ... (50), Heating Thermo-ON time (1), ... (50), Capacity-save value (1), ... (50), Cooling capacity-save value (1), ... (50), Heating capacity-save value (1), ... (50), Apporioned electric energy (1), ... (50), Target electric energy (1), ... (50), MCP 1 (1), ... (50), MCP 2 (1), ... (50), MCP 3 (1), ... (50), MCP 4 (1), ... (50), MCT 1 (1), ... (50), MCT 2 (1), ... (50), AHC temperature 1 (201), ... (250), AHC temperature 2 (201), ... (250), MCP 1, MCP 2, MCP 3, MCP 4																
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Item	Description											
Energy management data	[Data type: 1-year intervals]											
	Row	Item	Format									
	1st	File Type	505									
	2nd	Data range	Start year + “-” + End year									
	3rd	Item *1*2	“Year,Data1(51),...Data1(100),Data3(51),...Data3(100), FanTime(1),...FanTime(50),CoolTime(1),...CoolTime(50), HeatTime(1),...HeatTime(50),ThermoTime(1),...ThermoTime(50), CoolThermoTime(1),...CoolThermoTime(50), HeatThermoTime(1),...HeatThermoTime(50),SaveValue(1),...SaveValue(50), CoolSaveValue(1),...CoolSaveValue(50), HeatSaveValue(1),...HeatSaveValue(50), ApporionedElectricEnergy(1),...ApporionedElectricEnergy(50) TargetElectricEnergy(1),...TargetElectricEnergy(50), MCP1(1),...MCP1(50),MCP2(1),...MCP2(50),MCP3(1),...MCP3(50), MCP4(1),...MCP4(50), MCP1,MCP2,MCP3,MCP4*3”									
	4th	Measurement unit *6	<table border="1"> <thead> <tr> <th>Item</th> <th>Unit</th> </tr> </thead> <tbody> <tr> <td>ApporionedElectricEnergy, TargetElectricEnergy</td> <td>kWh</td> </tr> <tr> <td>Data1, Data3</td> <td>Blank</td> </tr> <tr> <td>FanTime, CoolTime, HeatTime, ThermoTime, CoolThermoTime, HeatThermoTime, SaveValue, CoolSaveValue, HeatSaveValue</td> <td>Minute</td> </tr> <tr> <td>MCP (PI controller/Modbus watt-hour meter)</td> <td>kWh, m3, MJ, -</td> </tr> </tbody> </table>	Item	Unit	ApporionedElectricEnergy, TargetElectricEnergy	kWh	Data1, Data3	Blank	FanTime, CoolTime, HeatTime, ThermoTime, CoolThermoTime, HeatThermoTime, SaveValue, CoolSaveValue, HeatSaveValue	Minute	MCP (PI controller/Modbus watt-hour meter)
Item	Unit											
ApporionedElectricEnergy, TargetElectricEnergy	kWh											
Data1, Data3	Blank											
FanTime, CoolTime, HeatTime, ThermoTime, CoolThermoTime, HeatThermoTime, SaveValue, CoolSaveValue, HeatSaveValue	Minute											
MCP (PI controller/Modbus watt-hour meter)	kWh, m3, MJ, -											
5th–9th	Data *1*2*4*5	yyyy, Data 1 (51), ... (100), Data 3 (51), ... (100), Fan operation time (1), ... (50), Cooling operation time (1), ... (50), Heating operation time (1), ... (50), Thermo-ON time (1), ... (50), Cooling Thermo-ON time (1), ... (50), Heating Thermo-ON time (1), ... (50), Capacity-save value (1), ... (50), Cooling capacity-save value (1), ... (50), Heating capacity-save value (1), ... (50), Apporioned electric energy (1), ... (50), Target electric energy (1), ... (50), MCP 1 (1), ... (50), MCP 2 (1), ... (50), MCP 3 (1), ... (50), MCP 4 (1), ... (50), MCP 1, MCP 2, MCP 3, MCP 4										
*1 The numbers shown after “MCP” and “MCT” indicate channel No. *2 The numbers in the parentheses indicate M-NET addresses. *3 The measurement value of the Modbus watt-hour meter to AE-C/EW-C is only MCP1– MCP4, and the addresses are not displayed. *4 The value will not appear if the data does not exist. *5 Each file contains the data for up to the last 5 years including the current year. *6 The measurement units are displayed only when an air conditioning unit or measurement device is connected.												

11-3-3. Energy management

■ OA processing unit

Item	Description														
Energy management data	<p>■ File name</p> <p>Data type: 5-minute intervals "IC" "OA" "EnergyManagement" "5MIN"_[YYYY]-[MM]-[DD]_[yyyy]-[mm]-[dd]_A(Address No).csv</p> <p>Data type: 30-minute intervals "IC" "OA" "EnergyManagement" "30MIN"_[YYYY]-[MM]-[DD]_[yyyy]-[mm]-[dd]_A(Address No).csv</p> <p>Data type: 1-day intervals "IC" "OA" "EnergyManagement" "1DAY"_[YYYY]-[MM]-[DD]_[yyyy]-[mm]-[dd]_A(Address No).csv</p> <p>Data type: 1-month intervals "IC" "OA" "EnergyManagement" "1MONTH"_[YYYY]-[MM]_[yyyy]-[mm]_A(Address No).csv</p> <p>Data type: 1-year intervals "IC" "OA" "EnergyManagement" "1YEAR"_[YYYY]-[yyyy]_A(Address No).csv</p> <table border="1"> <thead> <tr> <th>File-name contents</th> <th>Format</th> </tr> </thead> <tbody> <tr> <td>[YYYY]</td> <td>Start year</td> </tr> <tr> <td>[MM]</td> <td>Start month</td> </tr> <tr> <td>[DD]</td> <td>Start date</td> </tr> <tr> <td>[yyyy]</td> <td>End year</td> </tr> <tr> <td>[mm]</td> <td>End month</td> </tr> <tr> <td>[dd]</td> <td>End date</td> </tr> </tbody> </table>	File-name contents	Format	[YYYY]	Start year	[MM]	Start month	[DD]	Start date	[yyyy]	End year	[mm]	End month	[dd]	End date
File-name contents	Format														
[YYYY]	Start year														
[MM]	Start month														
[DD]	Start date														
[yyyy]	End year														
[mm]	End month														
[dd]	End date														

Item	Description																															
Energy management data	<ul style="list-style-type: none"> ■ File output destination [Serial No. of connected AE-C/EW-C]¥“OperationalData”¥“EnergyManagement2” ¥[Serial No.]_SC[AE-C/EW-C No.]¥[Date] ■ File format [Data type: 5-minute intervals] 																															
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">Row</th> <th style="width: 20%;">Item</th> <th style="width: 70%;">Format</th> </tr> </thead> <tbody> <tr> <td>1st</td> <td>File Type</td> <td>512</td> </tr> <tr> <td>2nd</td> <td>Data range</td> <td>Start date + “-” + End date</td> </tr> <tr> <td>3rd</td> <td>Address</td> <td>“Address” + Address No.</td> </tr> <tr> <td>4th</td> <td>Item</td> <td>“DateTime, CoolSetTemp, HeatSetTemp, RoomTemp, CO2Concentration, RelativeHumidity, AbsoluteHumidity”</td> </tr> <tr> <td>5th</td> <td>Measurement unit *1</td> <td> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 70%;">Item</th> <th style="width: 30%;">Unit</th> </tr> </thead> <tbody> <tr> <td>CoolSetTemp, HeatSetTemp, RoomTemp</td> <td>°C, °F</td> </tr> <tr> <td>CO2Concentration</td> <td>ppm</td> </tr> <tr> <td>RelativeHumidity</td> <td>%</td> </tr> <tr> <td>AbsoluteHumidity</td> <td>Kg/Kg</td> </tr> </tbody> </table> </td> </tr> <tr> <td>6th –</td> <td>Data *2*3</td> <td>Date and time, CoolSetTemp, HeatSetTemp, RoomTemp, CO2Concentration, RelativeHumidity, AbsoluteHumidity</td> </tr> </tbody> </table>	Row	Item	Format	1st	File Type	512	2nd	Data range	Start date + “-” + End date	3rd	Address	“Address” + Address No.	4th	Item	“DateTime, CoolSetTemp, HeatSetTemp, RoomTemp, CO2Concentration, RelativeHumidity, AbsoluteHumidity”	5th	Measurement unit *1	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 70%;">Item</th> <th style="width: 30%;">Unit</th> </tr> </thead> <tbody> <tr> <td>CoolSetTemp, HeatSetTemp, RoomTemp</td> <td>°C, °F</td> </tr> <tr> <td>CO2Concentration</td> <td>ppm</td> </tr> <tr> <td>RelativeHumidity</td> <td>%</td> </tr> <tr> <td>AbsoluteHumidity</td> <td>Kg/Kg</td> </tr> </tbody> </table>	Item	Unit	CoolSetTemp, HeatSetTemp, RoomTemp	°C, °F	CO2Concentration	ppm	RelativeHumidity	%	AbsoluteHumidity	Kg/Kg	6th –	Data *2*3	Date and time, CoolSetTemp, HeatSetTemp, RoomTemp, CO2Concentration, RelativeHumidity, AbsoluteHumidity
	Row	Item	Format																													
	1st	File Type	512																													
	2nd	Data range	Start date + “-” + End date																													
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Item	Description	
Energy management data	[Data type: 30-minute intervals]	
	Row	Item
	1st	File Type
	2nd	Data range
	3rd	Address
	4th	Item
	5th	Measurement unit *1
6th –	Data *2*3	

Row	Item	Format																
1st	File Type	513																
2nd	Data range	Start date + “-” + End date																
3rd	Address	“Address” + Address No.																
4th	Item	“DateTime, CoolSetTemp, HeatSetTemp, RoomTemp, FanTime, CoolTime, HeatTime, ThermoTime, CoolThermoTime, HeatThermoTime, ThermoCount, SaveValue, CoolSaveValue, HeatSaveValue, ApporionedElectricEnergy, CO2Concentration, RelativeHumidity, AbsoluteHumidity”																
5th	Measurement unit *1	<table border="1"> <thead> <tr> <th>Item</th> <th>Unit</th> </tr> </thead> <tbody> <tr> <td>CoolSetTemp, HeatSetTemp,RoomTemp</td> <td>°C, °F</td> </tr> <tr> <td>FanTime, CoolTime, HeatTime, ThermoTime, CoolThermoTime, HeatThermoTime, SaveValue, CoolSaveValue, HeatSaveValue</td> <td>Minute</td> </tr> <tr> <td>ThermoCount</td> <td>-</td> </tr> <tr> <td>ApporionedElectricEnergy</td> <td>kWh</td> </tr> <tr> <td>CO2Concentration</td> <td>ppm</td> </tr> <tr> <td>RelativeHumidity</td> <td>%</td> </tr> <tr> <td>AbsoluteHumidity</td> <td>Kg/Kg</td> </tr> </tbody> </table>	Item	Unit	CoolSetTemp, HeatSetTemp,RoomTemp	°C, °F	FanTime, CoolTime, HeatTime, ThermoTime, CoolThermoTime, HeatThermoTime, SaveValue, CoolSaveValue, HeatSaveValue	Minute	ThermoCount	-	ApporionedElectricEnergy	kWh	CO2Concentration	ppm	RelativeHumidity	%	AbsoluteHumidity	Kg/Kg
Item	Unit																	
CoolSetTemp, HeatSetTemp,RoomTemp	°C, °F																	
FanTime, CoolTime, HeatTime, ThermoTime, CoolThermoTime, HeatThermoTime, SaveValue, CoolSaveValue, HeatSaveValue	Minute																	
ThermoCount	-																	
ApporionedElectricEnergy	kWh																	
CO2Concentration	ppm																	
RelativeHumidity	%																	
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6th –	Data *2*3	Date and time, CoolSetTemp, HeatSetTemp, RoomTemp, FanTime, CoolTime, HeatTime, ThermoTime, CoolThermoTime, HeatThermoTime, ThermoCount, SaveValue, CoolSaveValue, HeatSaveValue, ApporionedElectricEnergy, CO2Concentration, RelativeHumidity, AbsoluteHumidity																

*1 The measurement units are displayed only when an air conditioning unit or measurement device is connected.

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Item	Description									
Energy management data	[Data type: 1-day intervals]									
	Row	Item	Format							
	1st	File Type	514							
	2nd	Data range	Start date + "-" + End date							
	3rd	Address	"Address" + Address No.							
	4th	Item	"Date, CoolSetTemp, HeatSetTemp, RoomTemp, FanTime, CoolTime, HeatTime, ThermoTime, CoolThermoTime, HeatThermoTime, SaveValue, CoolSaveValue, HeatSaveValue, ApporionedElectricEnergy, TargetElectricEnergy"							
	5th	Measurement unit *1	<table border="1"> <thead> <tr> <th>Item</th> <th>Unit</th> </tr> </thead> <tbody> <tr> <td>CoolSetTemp, HeatSetTemp,RoomTemp</td> <td>°C, °F</td> </tr> <tr> <td>FanTime, CoolTime, HeatTime, ThermoTime, CoolThermoTime, HeatThermoTime, SaveValue, CoolSaveValue, HeatSaveValue</td> <td>Minute</td> </tr> <tr> <td>ApporionedElectricEnergy, TargetElectricEnergy</td> <td>kWh</td> </tr> </tbody> </table>	Item	Unit	CoolSetTemp, HeatSetTemp,RoomTemp	°C, °F	FanTime, CoolTime, HeatTime, ThermoTime, CoolThermoTime, HeatThermoTime, SaveValue, CoolSaveValue, HeatSaveValue	Minute	ApporionedElectricEnergy, TargetElectricEnergy
Item	Unit									
CoolSetTemp, HeatSetTemp,RoomTemp	°C, °F									
FanTime, CoolTime, HeatTime, ThermoTime, CoolThermoTime, HeatThermoTime, SaveValue, CoolSaveValue, HeatSaveValue	Minute									
ApporionedElectricEnergy, TargetElectricEnergy	kWh									
6th –	Data *2*3	Date, CoolSetTemp, HeatSetTemp, RoomTemp, FanTime, CoolTime, HeatTime, ThermoTime, CoolThermoTime, HeatThermoTime, SaveValue, CoolSaveValue, HeatSaveValue, ApporionedElectricEnergy, TargetElectricEnergy								
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Item	Description									
Energy management data	[Data type: 1-month intervals]									
	Row	Item	Format							
	1st	File Type	515							
	2nd	Data range	Start year and month + “-” + End year and month							
	3rd	Address	“Address” + Address No.							
	4th	Item	“Month, CoolSetTemp, HeatSetTemp, RoomTemp, FanTime, CoolTime, HeatTime, ThermoTime, CoolThermoTime, HeatThermoTime, SaveValue, CoolSaveValue, HeatSaveValue, ApporionedElectricEnergy, TargetElectricEnergy”							
	5th	Measurement unit *1	<table border="1"> <thead> <tr> <th>Item</th> <th>Unit</th> </tr> </thead> <tbody> <tr> <td>CoolSetTemp, HeatSetTemp,RoomTemp</td> <td>°C, °F</td> </tr> <tr> <td>FanTime, CoolTime, HeatTime, ThermoTime, CoolThermoTime, HeatThermoTime, SaveValue, CoolSaveValue, HeatSaveValue</td> <td>Minute</td> </tr> <tr> <td>ApporionedElectricEnergy, TargetElectricEnergy</td> <td>kWh</td> </tr> </tbody> </table>	Item	Unit	CoolSetTemp, HeatSetTemp,RoomTemp	°C, °F	FanTime, CoolTime, HeatTime, ThermoTime, CoolThermoTime, HeatThermoTime, SaveValue, CoolSaveValue, HeatSaveValue	Minute	ApporionedElectricEnergy, TargetElectricEnergy
Item	Unit									
CoolSetTemp, HeatSetTemp,RoomTemp	°C, °F									
FanTime, CoolTime, HeatTime, ThermoTime, CoolThermoTime, HeatThermoTime, SaveValue, CoolSaveValue, HeatSaveValue	Minute									
ApporionedElectricEnergy, TargetElectricEnergy	kWh									
6th –	Data *2*3	yyyy/mm, CoolSetTemp, HeatSetTemp, RoomTemp, FanTime, CoolTime, HeatTime, ThermoTime, CoolThermoTime, HeatThermoTime, SaveValue, CoolSaveValue, HeatSaveValue, ApporionedElectricEnergy, TargetElectricEnergy								
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Item	Description							
Energy management data	[Data type: 1-year intervals]							
	Row	Item	Format					
	1st	File Type	516					
	2nd	Data range	Start year + “-” + End year					
	3rd	Address	“Address” + Address No.					
	4th	Item	“Year, FanTime, CoolTime, HeatTime, ThermoTime, CoolThermoTime, HeatThermoTime, SaveValue, CoolSaveValue, HeatSaveValue, ApporionedElectricEnergy, TargetElectricEnergy”					
	5th	Measurement unit *1	<table border="1"> <thead> <tr> <th>Item</th> <th>Unit</th> </tr> </thead> <tbody> <tr> <td>FanTime, CoolTime, HeatTime, ThermoTime, CoolThermoTime, HeatThermoTime, SaveValue, CoolSaveValue, HeatSaveValue</td> <td>Minute</td> </tr> <tr> <td>ApporionedElectricEnergy, TargetElectricEnergy</td> <td>kWh</td> </tr> </tbody> </table>	Item	Unit	FanTime, CoolTime, HeatTime, ThermoTime, CoolThermoTime, HeatThermoTime, SaveValue, CoolSaveValue, HeatSaveValue	Minute	ApporionedElectricEnergy, TargetElectricEnergy
Item	Unit							
FanTime, CoolTime, HeatTime, ThermoTime, CoolThermoTime, HeatThermoTime, SaveValue, CoolSaveValue, HeatSaveValue	Minute							
ApporionedElectricEnergy, TargetElectricEnergy	kWh							
6th –	Data *2*3	yyyy, Fantime, CoolTime, HeatTime, ThermoTime, CoolThermoTime, HeatThermoTime, SaveValue, CoolSaveValue, HeatSaveValue, ApporionedElectricEnergy, TargetElectricEnergy”						
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■ LOSSNAY

Item	Description														
Energy management data	<p>■ File name</p> <p>Data type: 5-minute intervals "LC" "EnergyManagement" "5MIN" _[YYYY]-[MM]-[DD]_[yyyy]-[mm]-[dd] _A(Address No).csv</p> <p>Data type: 30-minute intervals "LC" "EnergyManagement" "30MIN" _[YYYY]-[MM]-[DD]_[yyyy]-[mm]-[dd] _A(Address No).csv</p> <p>Data type: 1-day intervals "LC" "EnergyManagement" "1DAY" _[YYYY]-[MM]-[DD]_[yyyy]-[mm]-[dd] _A(Address No).csv</p> <p>Data type: 1-month intervals "LC" "EnergyManagement" "1MONTH" _[YYYY]-[MM]_[yyyy]-[mm] _A(Address No).csv</p> <p>Data type: 1-year intervals "LC" "EnergyManagement" "1YEAR" _[YYYY]-[yyyy] _A(Address No).csv</p> <table border="1"> <thead> <tr> <th>File-name contents</th> <th>Format</th> </tr> </thead> <tbody> <tr> <td>[YYYY]</td> <td>Start year</td> </tr> <tr> <td>[MM]</td> <td>Start month</td> </tr> <tr> <td>[DD]</td> <td>Start date</td> </tr> <tr> <td>[yyyy]</td> <td>End year</td> </tr> <tr> <td>[mm]</td> <td>End month</td> </tr> <tr> <td>[dd]</td> <td>End date</td> </tr> </tbody> </table>	File-name contents	Format	[YYYY]	Start year	[MM]	Start month	[DD]	Start date	[yyyy]	End year	[mm]	End month	[dd]	End date
File-name contents	Format														
[YYYY]	Start year														
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Item	Description																											
Energy management data	<ul style="list-style-type: none"> ■ File output destination [Serial No. of connected AE-C/EW-C]¥“OperationalData”¥“EnergyManagement2” ¥[Serial No.]_SC[AE-C/EW-C No.]¥[Date] 																											
	<ul style="list-style-type: none"> ■ File format [Data type: 5-minute intervals] 																											
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Item	Description										
Energy management data	[Data type: 30-minute intervals]										
	Row	Item	Format								
	1st	File Type	518								
	2nd	Data range	Start date + "-" + End date								
	3rd	Address	"Address" + Address No.								
	4th	Item	"DateTime, FanTime, CO2Concentration, RelativeHumidity"								
	5th	Measurement unit *1	<table border="1"> <thead> <tr> <th>Item</th> <th>Unit</th> </tr> </thead> <tbody> <tr> <td>FanTime</td> <td>Minute</td> </tr> <tr> <td>CO2Concentration</td> <td>ppm</td> </tr> <tr> <td>RelativeHumidity</td> <td>%</td> </tr> </tbody> </table>	Item	Unit	FanTime	Minute	CO2Concentration	ppm	RelativeHumidity	%
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	FanTime	Minute									
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Item	Description						
Energy management data	[Data type: 1-day intervals]						
	Row	Item	Format				
	1st	File Type	519				
	2nd	Data range	Start date + "-" + End date				
	3rd	Address	"Address" + Address No.				
	4th	Item	"Date, FanTime"				
	5th	Measurement unit *1	<table border="1"> <thead> <tr> <th>Item</th> <th>Unit</th> </tr> </thead> <tbody> <tr> <td>FanTime</td> <td>Minute</td> </tr> </tbody> </table>	Item	Unit	FanTime	Minute
	Item	Unit					
	FanTime	Minute					
	6th -	Data *2*3	Date, FanTime				
*1 The measurement units are displayed only when an air conditioning unit or measurement device is connected.							
*2 The value will not appear if the data does not exist.							
*3 Each file contains the data for up to the last 25 months including the current month.							

Item	Description						
Energy management data	[Data type: 1-month intervals]						
	Row	Item	Format				
	1st	File Type	520				
	2nd	Data range	Start date + "-" + End date				
	3rd	Address	"Address" + Address No.				
	4th	Item	"Date, FanTime"				
	5th	Measurement unit *1	<table border="1"> <thead> <tr> <th>Item</th> <th>Unit</th> </tr> </thead> <tbody> <tr> <td>FanTime</td> <td>Minute</td> </tr> </tbody> </table>	Item	Unit	FanTime	Minute
	Item	Unit					
	FanTime	Minute					
	6th -	Data *2*3	Date, FanTime				
*1 The measurement units are displayed only when an air conditioning unit or measurement device is connected.							
*2 The value will not appear if the data does not exist.							
*3 Each file contains the data for up to the last 25 months including the current month.							

Item	Description						
Energy management data	[Data type: 1-year intervals]						
	Row	Item	Format				
	1st	File Type	521				
	2nd	Data range	Start date + “-” + End date				
	3rd	Address	“Address” + Address No.				
	4th	Item	“Date, FanTime”				
	5th	Measurement unit *1	<table border="1"> <thead> <tr> <th>Item</th> <th>Unit</th> </tr> </thead> <tbody> <tr> <td>FanTime</td> <td>Minute</td> </tr> </tbody> </table>	Item	Unit	FanTime	Minute
	Item	Unit					
FanTime	Minute						
6th –	Data *2*3	Date, FanTime					
*1 The measurement units are displayed only when an air conditioning unit or measurement device is connected.							
*2 The value will not appear if the data does not exist.							
*3 Each file contains the data for up to the last 5 years including the current year.							

11-3-4. Gas refrigerant amount check

Item	Description															
CSV output	<ul style="list-style-type: none"> File name <For AE-C> "OC"_RefrigerantCharge_[YYYY]-[MM]-[DD]_"AE"[AE- C No.].csv <For EW-C> "OC"_RefrigerantCharge_[YYYY]-[MM]-[DD]_"AE"[AE- No.]-[EW-C No.].csv Example: OC_RefrigerantCharge_2024_03_10_AE01-2.csv * Date format ([YYYY], [MM], [DD]) will use the format set in the initial settings. File format 															
	<table border="1"> <thead> <tr> <th>Row</th> <th>Item</th> <th>Format</th> </tr> </thead> <tbody> <tr> <td>1st</td> <td>File Type</td> <td>802</td> </tr> <tr> <td>2nd</td> <td>Data output date</td> <td>Output date</td> </tr> <tr> <td>3rd</td> <td>Item</td> <td>"Address,Date and Time 1,CheckResult1,Date and Time 2, CheckResult2,Date and Time 3,CheckResult3, Date and Time 4, CheckResult4,Date and Time 5,CheckResult5,Date and Time 6, CheckResult6,Date and Time 7, CheckResult7,Date and Time 8, CheckResult8,Date and Time 9,CheckResult9,Date and Time 10, CheckResult10"</td> </tr> <tr> <td>4-35th</td> <td>Data</td> <td>Outdoor unit address, Check date and time 1, Check result 1, Check date and time 2, Check result 2, Check date and time 3, Check result 3, Check date and time 4, Check result 4, Check date and time 5, Check result 5, Check date and time 6, Check result 6, Check date and time 7, Check result 7, Check date and time 8, Check result 8, Check date and time 9, Check result 9, Check date and time 10, Check result 10 * Only the addresses of the connected units will appear.</td> </tr> </tbody> </table>	Row	Item	Format	1st	File Type	802	2nd	Data output date	Output date	3rd	Item	"Address,Date and Time 1,CheckResult1,Date and Time 2, CheckResult2,Date and Time 3,CheckResult3, Date and Time 4, CheckResult4,Date and Time 5,CheckResult5,Date and Time 6, CheckResult6,Date and Time 7, CheckResult7,Date and Time 8, CheckResult8,Date and Time 9,CheckResult9,Date and Time 10, CheckResult10"	4-35th	Data	Outdoor unit address, Check date and time 1, Check result 1, Check date and time 2, Check result 2, Check date and time 3, Check result 3, Check date and time 4, Check result 4, Check date and time 5, Check result 5, Check date and time 6, Check result 6, Check date and time 7, Check result 7, Check date and time 8, Check result 8, Check date and time 9, Check result 9, Check date and time 10, Check result 10 * Only the addresses of the connected units will appear.
	Row	Item	Format													
	1st	File Type	802													
	2nd	Data output date	Output date													
3rd	Item	"Address,Date and Time 1,CheckResult1,Date and Time 2, CheckResult2,Date and Time 3,CheckResult3, Date and Time 4, CheckResult4,Date and Time 5,CheckResult5,Date and Time 6, CheckResult6,Date and Time 7, CheckResult7,Date and Time 8, CheckResult8,Date and Time 9,CheckResult9,Date and Time 10, CheckResult10"														
4-35th	Data	Outdoor unit address, Check date and time 1, Check result 1, Check date and time 2, Check result 2, Check date and time 3, Check result 3, Check date and time 4, Check result 4, Check date and time 5, Check result 5, Check date and time 6, Check result 6, Check date and time 7, Check result 7, Check date and time 8, Check result 8, Check date and time 9, Check result 9, Check date and time 10, Check result 10 * Only the addresses of the connected units will appear.														
<ul style="list-style-type: none"> File sample <pre> 802 2024/10/14 Address Date and Time 1,CheckResult1,Date and Time 2,CheckResult2,Date and Time3,CheckResult3,Date and Time4, CheckResult4,Date and Time5,CheckResult5,Date and Time6,CheckResult6,Date and Time7,CheckResult7,Date and Time8, CheckResult8,Date and Time9,CheckResult9,Date and Time10,CheckResult10 51,2023/11/29 21:45,Normal,2023/08/25 23:01,Normal,2023/05/30 22:15,Normal,2023/02/27 21:05,Normal,2023/02/26 22:04,Normal,2023/1/25 21:20,Normal,2023/08/27 22:36,Normal,2023/05/26 22:11,Normal,2023/02/19 21:05,Normal,, 55,2023/02/19 22:45,Low,2023/11/29 21:46,Normal,2023/8/25 23:02,Normal,2023/05/30 22:16,Normal,2023/02/26 22:41,Normal,,,,,,,,, 61,2024/10/14 11:51,Unmeasurable,,,,,,,,,,,,, </pre>																

11-3-5. Charge Parameters/Metering device data

Item	Description																	
Charge Parameters	<p>■File name</p>																	
	<p>"ChargeParameter"_[yyyy]-[mm]-[dd]-"A"[Address No]-[Unit price (1-5)].csv</p>																	
	<table border="1"> <thead> <tr> <th>Item</th> <th>Format</th> </tr> </thead> <tbody> <tr> <td>[yyyy]</td> <td>Year</td> </tr> <tr> <td>[mm]</td> <td>Month</td> </tr> <tr> <td>[dd]</td> <td>Day</td> </tr> </tbody> </table>	Item	Format	[yyyy]	Year	[mm]	Month	[dd]	Day									
	Item	Format																
	[yyyy]	Year																
	[mm]	Month																
	[dd]	Day																
	<p>■File output destination</p>																	
	<p>[Serial No. of connected AE-C/EW-C]¥"OperationalData"¥"ChargeParameters"\ ¥[Serial No.]_SC[AE-C/EW-C No.]¥[Date]</p>																	
	<p>■File format</p>																	
<table border="1"> <thead> <tr> <th>Row</th> <th>Item</th> <th>Format</th> </tr> </thead> <tbody> <tr> <td>1st</td> <td>File Type</td> <td>201</td> </tr> <tr> <td>2nd</td> <td>Data range</td> <td>Start date+"-"+End date</td> </tr> <tr> <td>3rd</td> <td>Address</td> <td>"Address"+M-NET address</td> </tr> <tr> <td>4th</td> <td>Item</td> <td>"Date,SaveValue,ThermoTime,FanTime,SubHeaterTime"</td> </tr> <tr> <td>5 - 66th</td> <td>Data^{*1 *2 *3}</td> <td>Date, Capacity-save value(min), Thermo-ON time(min), Fan operation time(min), Sub-heater time(min)^{*4}</td> </tr> </tbody> </table>	Row	Item	Format	1st	File Type	201	2nd	Data range	Start date+"-"+End date	3rd	Address	"Address"+M-NET address	4th	Item	"Date,SaveValue,ThermoTime,FanTime,SubHeaterTime"	5 - 66th	Data ^{*1 *2 *3}	Date, Capacity-save value(min), Thermo-ON time(min), Fan operation time(min), Sub-heater time(min) ^{*4}
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<p>*3 Each file contains the data for up to the last 62 days including the current day.</p>																		
<p>*4 Even if the indoor unit is not equipped with a sub heater, "Sub-heater-ON time" is counted when the sub-heater-ON conditions are met, not when the sub heater actually turns on.</p>																		

Item	Description																										
Charge Parameters (30-minute intervals)	<p>■File name</p> <p>"ChargeParameter30m"_[yyyy]-[mm]-[dd]-"A"[Indoor unit address]-[Unit price (1-5)].csv</p> <table border="1"> <thead> <tr> <th>Item</th> <th>Format</th> </tr> </thead> <tbody> <tr> <td>[yyyy]</td> <td>Year</td> </tr> <tr> <td>[mm]</td> <td>Month</td> </tr> <tr> <td>[dd]</td> <td>Day</td> </tr> </tbody> </table> <p>■File output destination</p> <p>[Serial No. of connected AE-C/EW-C]¥"OperationalData"¥"ChargeParameters30m"\ ¥[Serial No.]_SC[AE-C/EW-C No.]¥[Date]</p> <p>■File format</p> <table border="1"> <thead> <tr> <th>Row</th> <th>Item</th> <th>Format</th> </tr> </thead> <tbody> <tr> <td>1st</td> <td>File Type</td> <td>621</td> </tr> <tr> <td>2nd</td> <td>Data range</td> <td>Start time+"-"+End time</td> </tr> <tr> <td>3rd</td> <td>Address</td> <td>"Address"+M-NET address</td> </tr> <tr> <td>4th</td> <td>Item</td> <td>"Date,Time,SaveValue,ThermoTime,FanTime,SubHeaterTime"</td> </tr> <tr> <td>5th -</td> <td>Data^{*1 *2 *3}</td> <td>Date, Time, Capacity-save value(min), Thermo-ON time(min), Fan operation time(min), Sub-heater time(min)^{*4}</td> </tr> </tbody> </table> <p>*1 Each value is the cumulative value between the start date/time and the end date/time. *2 The value will not appear if the data does not exist. *3 Each file contains the data of up to 4 days. *4 Even if the indoor unit is not equipped with a sub heater, "Sub-heater-ON time" is counted when the sub-heater-ON conditions are met, not when the sub heater actually turns on.</p>	Item	Format	[yyyy]	Year	[mm]	Month	[dd]	Day	Row	Item	Format	1st	File Type	621	2nd	Data range	Start time+"-"+End time	3rd	Address	"Address"+M-NET address	4th	Item	"Date,Time,SaveValue,ThermoTime,FanTime,SubHeaterTime"	5th -	Data ^{*1 *2 *3}	Date, Time, Capacity-save value(min), Thermo-ON time(min), Fan operation time(min), Sub-heater time(min) ^{*4}
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Item	Description																		
Metering device data	<p>■File name</p> <p>"ChargeParameter30m"_[yyyy]-[mm]-[dd]"MCPA"[PI controller address]-[Unit price (1-5)].csv</p>																		
	<table border="1"> <thead> <tr> <th>Item</th> <th>Format</th> </tr> </thead> <tbody> <tr> <td>[yyyy]</td> <td>Year</td> </tr> <tr> <td>[mm]</td> <td>Month</td> </tr> <tr> <td>[dd]</td> <td>Day</td> </tr> </tbody> </table>	Item	Format	[yyyy]	Year	[mm]	Month	[dd]	Day										
	Item	Format																	
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	<p>■File output destination</p> <p>[Serial No. of connected AE-C/EW-C]¥"OperationalData"¥"ChargeParameters"\ ¥[Serial No.]_SC[AE-C/EW-C No.]¥[Date]</p>																		
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	<table border="1"> <thead> <tr> <th>Row</th> <th>Item</th> <th>Format</th> </tr> </thead> <tbody> <tr> <td>1st</td> <td>File Type</td> <td>202</td> </tr> <tr> <td>2nd</td> <td>Data range</td> <td>Start date+"-"+End date</td> </tr> <tr> <td>3rd</td> <td>Address</td> <td><When a PI controller (PAC-YG60MCA) is used> "MCP"+M-NET address+"-"+Unit price(1-5)</td> </tr> <tr> <td>4th</td> <td>Item</td> <td>"Date,Time,SaveValue,ThermoTime,FanTime, SubHeaterTime"</td> </tr> <tr> <td>5th -</td> <td>Data *1 *2 *3</td> <td><When a PI controller (PAC-YG60MCA) is used> MCP address + Unit price, Date, MCP 1, MCP 2, MCP 3, MCP 4</td> </tr> </tbody> </table>	Row	Item	Format	1st	File Type	202	2nd	Data range	Start date+"-"+End date	3rd	Address	<When a PI controller (PAC-YG60MCA) is used> "MCP"+M-NET address+"-"+Unit price(1-5)	4th	Item	"Date,Time,SaveValue,ThermoTime,FanTime, SubHeaterTime"	5th -	Data *1 *2 *3	<When a PI controller (PAC-YG60MCA) is used> MCP address + Unit price, Date, MCP 1, MCP 2, MCP 3, MCP 4
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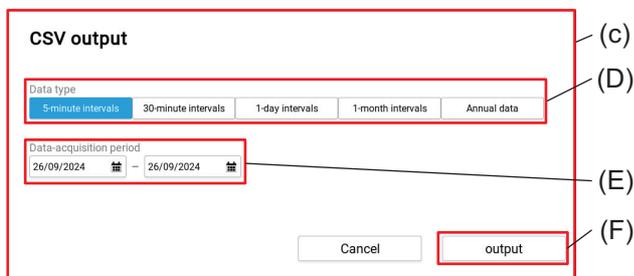
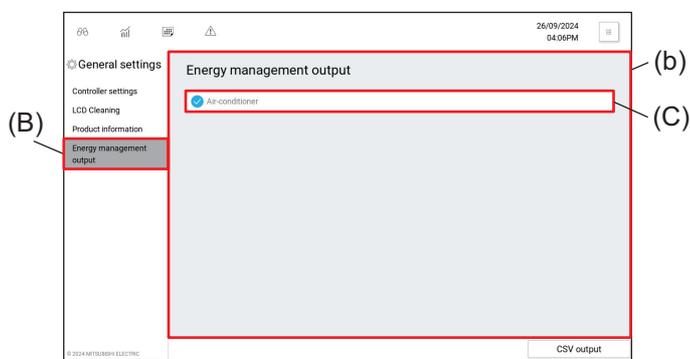
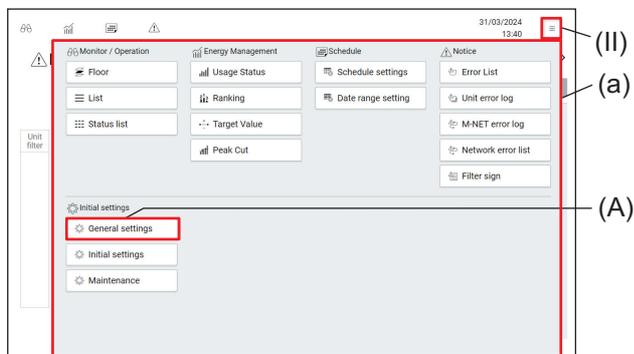
11-3-6. CSV output method

Preparation

- To output CSV data from the AE-C using a USB flash drive, insert the USB flash drive into the AE-C.

Step

- Tap (II) to display screen (a).
- Tap (A) to display screen (b).
- Tap (B) to display the Energy management output screen (b).
- Tap the target unit in (C), and the CSV output screen (c) will be displayed.
- Select the data type in (D).
- Specify the data acquisition period in (E).
- Tap (F).



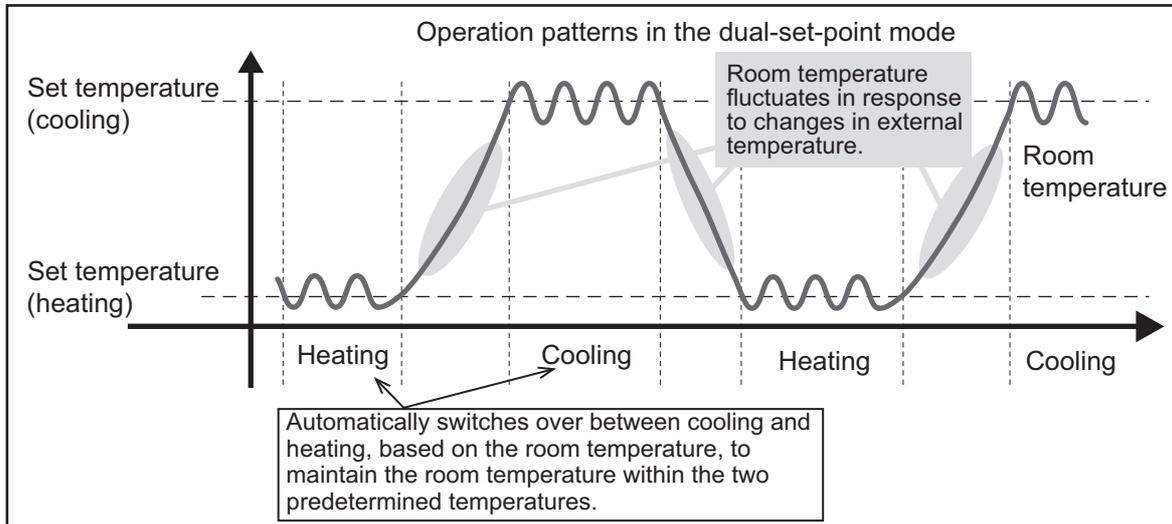
Note

- When you output CSV data from the AE-C to the USB flash drive, data of all AE-C/EW-C controllers under control of that AE-C will be output.
- When you output CSV data using a browser, data of all AE-C/EW-C controllers under System manager (billing/no billing) will be output.

11-4. Dual-set-point mode

When the indoor units support a dual-set-point function, two different set temperatures (one for cooling and the other for heating) can be set for the Auto mode. When this function is used, indoor units automatically switch over between cooling and heating, based on the room temperature, to maintain the room temperature within the two predetermined temperatures.

The graph below shows an example of operation patterns of units operated in the dual-set-point mode.



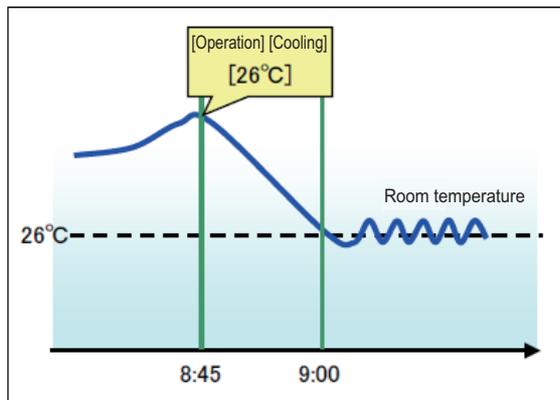
When the indoor unit of the selected group icon supports a dual-set-point mode, both cooling and heating settings can be configured.

11-5. Schedule startup method

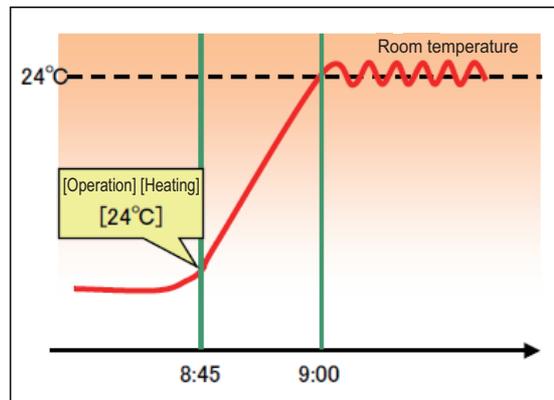
Operate the air conditioning unit in advance to achieve the set room temperature at the specified time.

There are three types of schedule startup methods: a method that turns ON and OFF at the set time, AI Start that determines the optimal startup time and efficiency from past operation data, and Optimized Start that determines the startup time from room temperature and set temperature. This section explains AI Start and Optimized Start.

Case 1) When set to cooling at 26°C at 9:00



Case 2) When set to heating at 24°C at 9:00



11-5-1. Optimized start

Based on past operation data (room temperature, set temperature), this function performs pre-cooling/pre-heating operation to achieve the set room temperature at the specified time.

Note

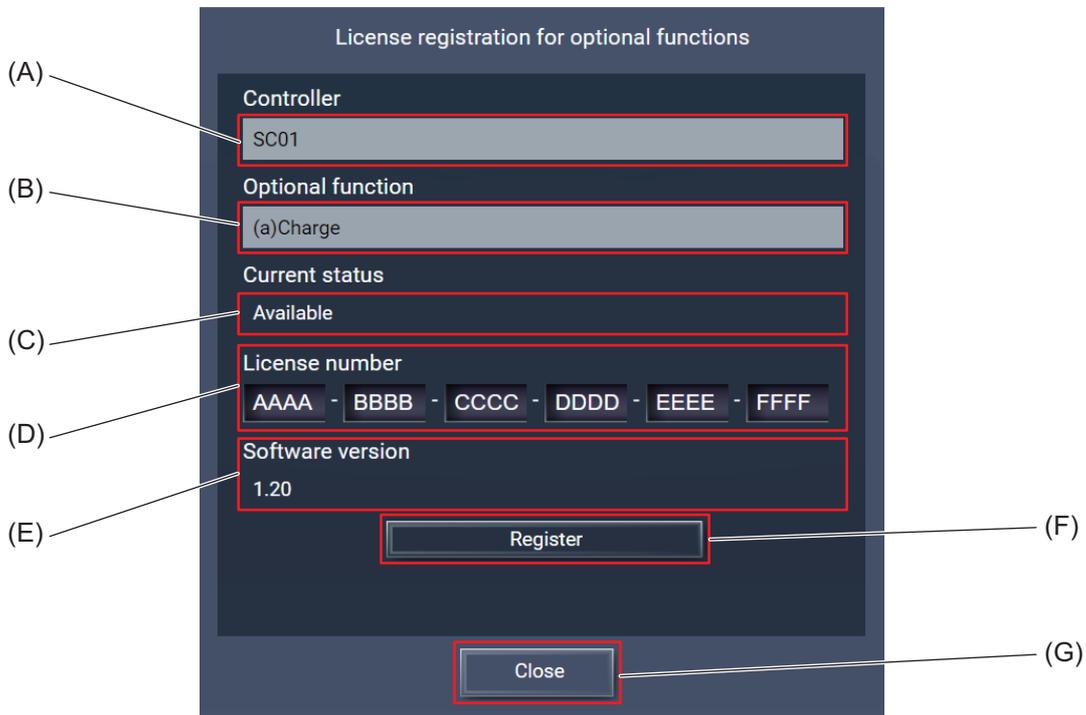
- This function can be selected only for groups that include air conditioning units and OA handling units (direct expansion type with built-in heater/humidifier).
- When this function is enabled, pre-cooling/pre-heating operation starts up to 60 minutes before the set time (30 minutes for the first time).
- If "Prohibit Remote Controller Operation" is set simultaneously with this function, remote controller operation will be prohibited after the set time.

11-6. License registration

Move the operation management screen (e-2). (Refer to "Screen transition.")

Select **[Settings]** - **[Initial settings]** - **[License Registration]** to register licenses for optional functions.

For how to purchase licenses for optional functions, contact your dealer.



	Item	Function and description
(A)	Controller	Select the AE-C/EW-C to which the license is registered.
(B)	Optional function	Select the optional function to be registered.
(C)	Current status	Availability of the optional function is displayed.
(D)	License number	Enter the license number.
(E)	Software version	Software version is displayed.
(F)	[Register]	Tap to register the license.
(G)	[Close]	Tap to close the license registration screen.

Note

- The license registration is required for all connected centralized controllers (AE-C/EW-C). Switch the centralized controller using the Controller box to register the licenses respectively.

Step

- In the Optional function box, select the optional function to be registered.
The availability of the selected optional function will appear in the Current status box.
- In the License number box, enter the license number and click **[Register]**.
"Available" will appear in the Current status box.
If the registration is unsuccessful, check that the selected optional function and the license number are correct.

Note

- Alphabet "O" and "I" are not used for license number.

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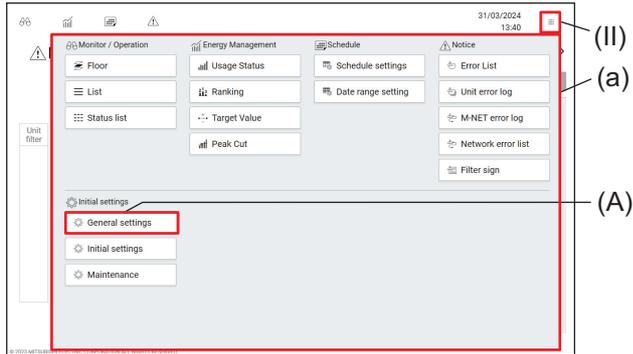
12. Adjustment and maintenance



To reduce the risk of short circuits, current leakage, electric shock, malfunction, smoke, or fire, do not wash the product with water or any other liquid.

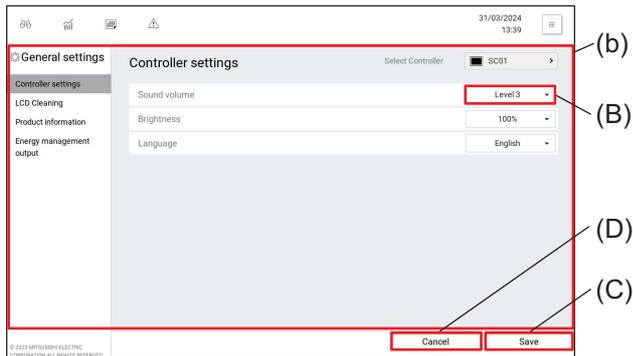
12-1. Adjusting the sound volume

The screen sound volume of the AE-C is adjustable.



Step

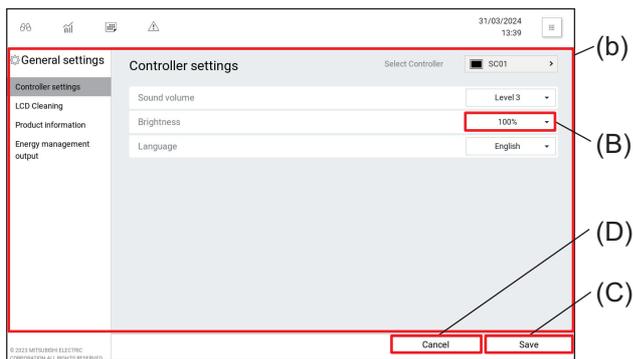
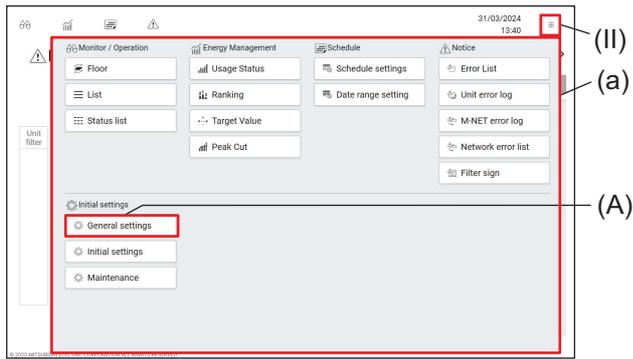
1. Tap (II) to display screen (a).
2. Tap (A) to display screen (b).



3. Select the sound volume from the pull-down list (B). (Factory default: Level 2)
4. Tap (C) to save the setting.
 - To cancel the setting, tap (D).
5. Tap any button on the main menu to go back to the regular operation screen.

12-2. Adjusting the screen brightness

The LCD screen brightness of the AE-C is adjustable.



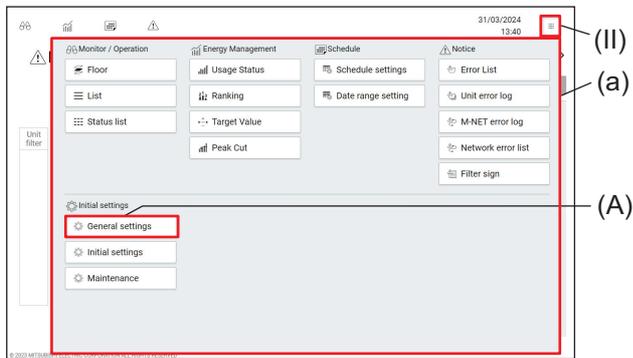
Step

1. Tap (II) to display screen (a).
2. Tap (A) to display screen (b).
3. Select the brightness value from the pull-down list (B). (Factory default: 100%)
4. Tap (C) to save the setting.
 - To cancel the setting, tap (D).
5. Tap any button on the main menu to go back to the regular operation screen.

12-3. Cleaning the LCD screen and the casing

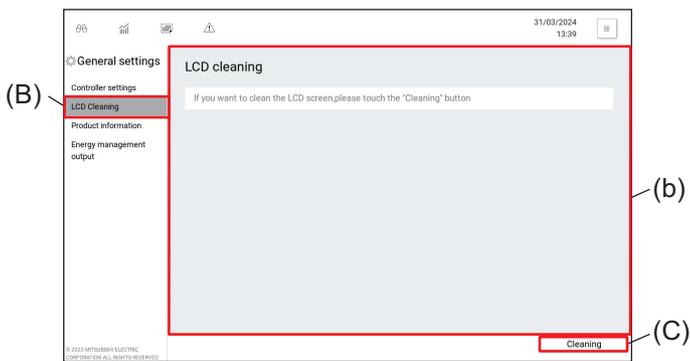
- Wipe off dirt with a soft cloth soaked in diluted neutral detergent, and then wipe off the detergent with a dry cloth. (Dilute neutral detergent with water according to its usage instructions. Do not use undiluted detergent.)
- Do not use benzene or thinner. Do not touch the controller with a chemical cloth. Doing so may cause discoloration.

Clean the LCD screen using the following steps.

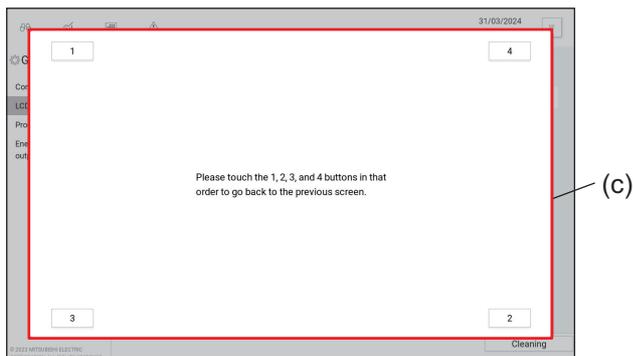


Step

1. Tap (II) to display screen (a).
2. Tap (A).



3. Tap (B) to display screen (b).
4. Tap (C) to display screen (c).
 - The LCD cleaning screen will be displayed.
5. Clean the LCD screen.



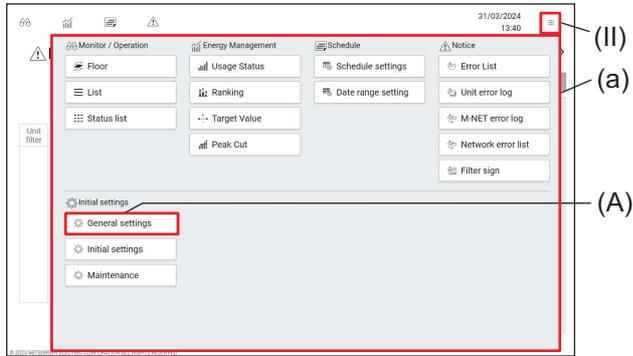
6. After completing the cleaning, tap the numbers [1] through [4] at the corners of screen (c) to return to screen (b).
 - The numbers tapped will turn dark gray.
 - Unless the numbers are tapped in the correct order, all the numbers tapped will be canceled. If this happens, start with [1] again.
7. Tap any button on the main menu to go back to the regular operation screen.

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13. Viewing the product information

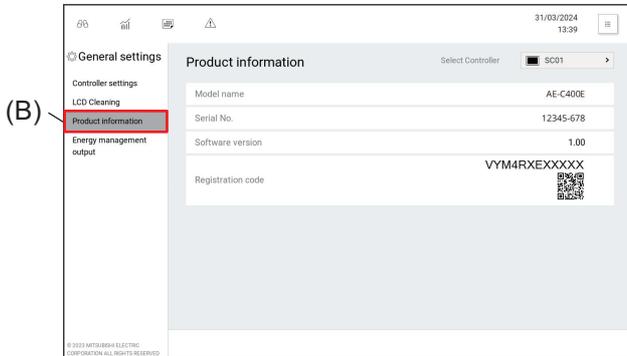
13-1. Viewing the product information

Follow the steps below to view the model name, serial number, software version, and registration code of the AE-C/EW-C.



Step

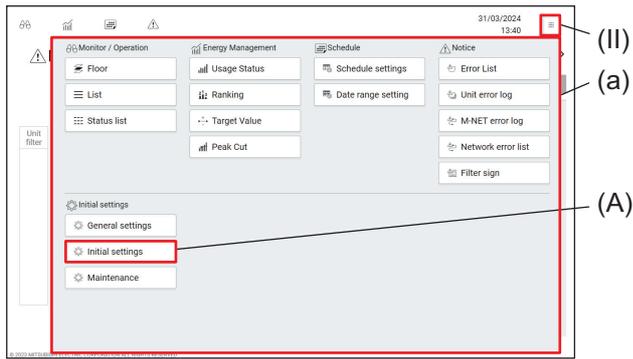
1. Tap (II) to display screen (a).
2. Tap (A).



3. Tap (B) to view the product information (model name, serial number, software version, and registration code).
4. Tap any button on the main menu to go back to the regular operation screen.

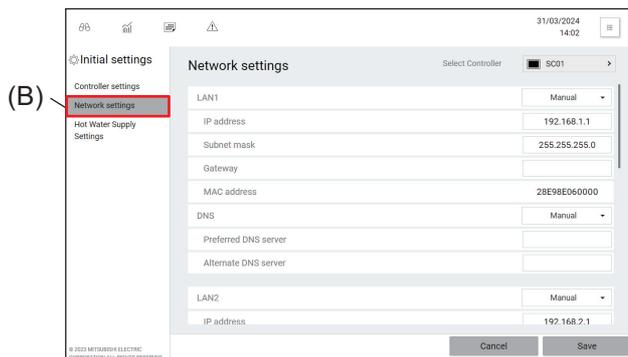
13-2. Viewing the IP address

Follow the steps below to view the IP address of the AE-C/EW-C.



Step

1. Tap (II) to display screen (a).
2. Tap (A), and enter the user ID and the password according to the screen instructions.
 - For the user ID and password, refer to "About this manual."
3. Tap (B) to display the network settings.
4. Check the IP address, and then tap any button on the main menu to go back to the regular operation screen.



Note

- The default IP address of the LAN1 port of the controller is 192.168.1.1.

14. Initial settings (overview)

14-1. Overview of the Initial Setting Tool

The Initial Setting Tool is used to configure settings via a PC.

Initial settings can be performed for multiple AE-C/EW-C systems, enabling up to 40 controllers to be initialized at once.

This chapter explains the common operations for each setting screen of the Initial Setting Tool.

14-2. Flow of AE-C/EW-C initial settings and test runs

This section explains how to perform the initial settings and test runs required for using AE-C/EW-C.

The flow of initial settings will vary for "Initial (unset)" and "When changing."

- "Initial (unset)" refers to a state in which the AE-C/EW-C has never been configured (initial setting data is not retained/factory default).
- "When changing" refers to a state in which already configured initial settings are changed.

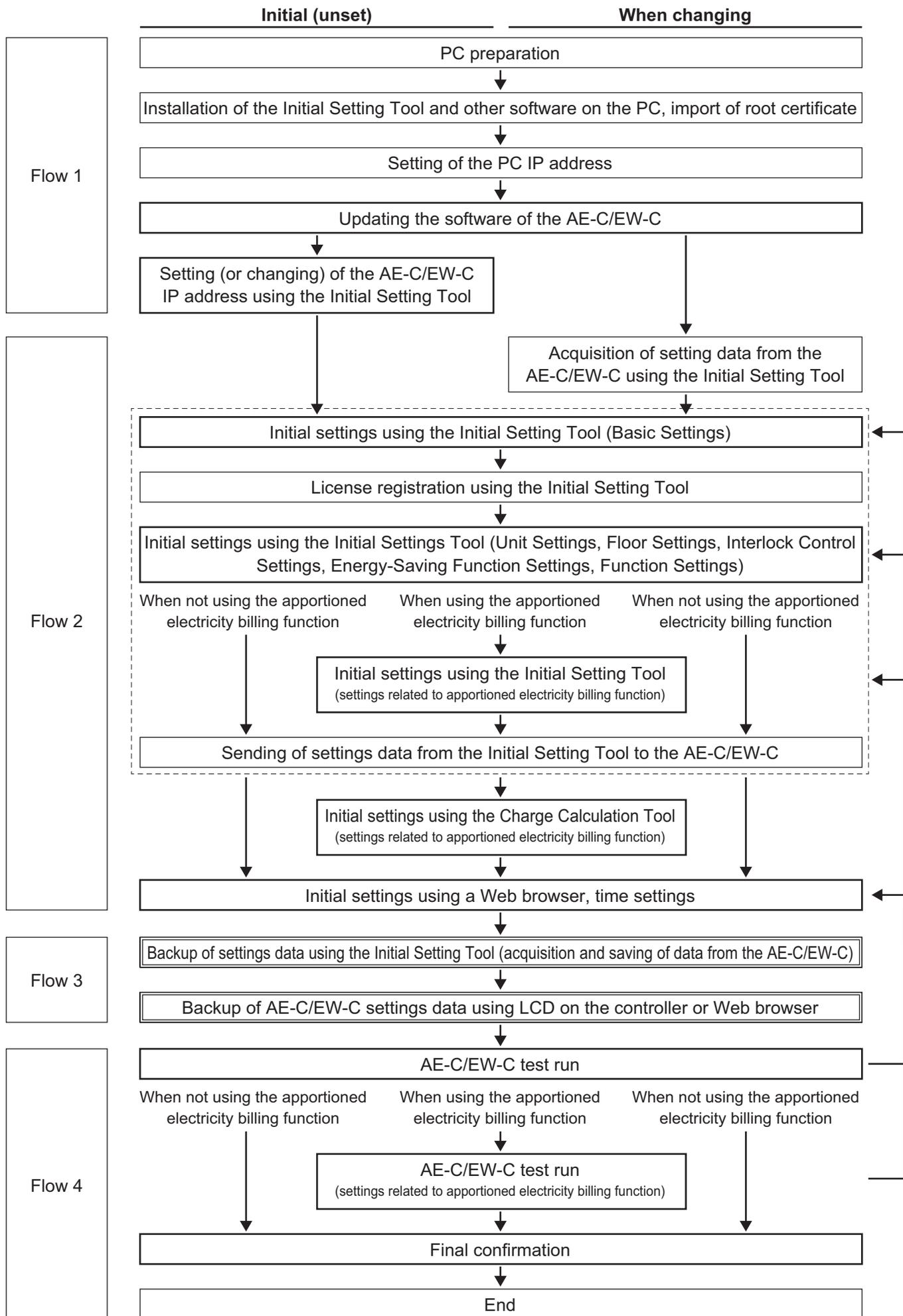
Flow 1: Preparation of the initial setting environment (PC, network devices, etc.)

Flow 2: Initial settings (Initial Setting Tool, unit settings)

Flow 3: Backup of configuration data

Flow 4: Test run





14-3. Flow of billing function settings

Preparation

Normal initial settings*1 and test runs for all AE-C/EW-C systems

Initial settings

AE-C/EW-C unit settings

Settings using the Initial Settings Tool

Settings using the Charge Calculation Tool

Billing test run

Confirmation of billing function settings
(confirmation before billing test run)

Normal air conditioning unit operation*3

1st confirmation (after continuous air conditioning unit operation)	Test run period (1 day or more)*2 Charge calculation (calculation with specified deadline)
---	---

Normal air conditioning unit operation

2nd confirmation (at least 10 days after the 1st confirmation)	Test run period (10 days or more)*2 Charge calculation (calculation with specified deadline)
--	---

Normal air conditioning unit operation

3rd confirmation (at least 1 month after the 2nd confirmation)*4	Test run period (1 month or more)*2 Charge calculation (calculation with specified deadline)
--	---

[Example of billing test run]

April 1 Start of billing test run

April 2 Billing test run period (a)

April 3 1st confirmation (calculation with specified deadline for a)

April 4 - 13 Billing test run period (b)

April 14 2nd confirmation (calculation with specified deadline for b)

April 15 - May 20 Billing test run period (c)

May 21 3rd confirmation (calculation with specified deadline for c)

- *1 Complete configuration of settings such as unit settings, network settings, license registration, group settings, block settings, and measurement settings.
- *2 If any settings are changed during billing test runs, use the Initial Setting Tool to configure settings.
- *3 Operate each indoor unit continuously for at least 2 hours.
- *4 Perform this on the day after the closing date following 1 month or more passing since the 2nd billing test run.

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14-4. Required settings for using each function

Shown below are examples of setting configuration procedures required for using each function.

○: Required △: May be required ×: Not required

Initial settings	Basic settings			Unit settings								Floor settings				
	Connection settings	Control target settings	Basic system Settings	Group settings	Hot water supply settings	Refrigerant system settings	Outdoor unit name settings	Interlocked LOSSNAY settings	Block settings	Energy management block settings	Low-temperature group settings	Freezer settings	Floor settings for LCD	Floor layout settings for LCD	Floor settings for Web	Floor layout settings for Web
Equipment types																
Air conditioning unit	○	○	○	○	×	○	○	○	△	△	×	×	△	△	△	△
Mr. SLIM	○	○	○	○	×	×	×	○	△	△	×	×	△	△	△	△
Ventilation equipment	○	○	○	○	×	○	×	○	△	△	×	×	△	△	△	△
OA handling unit (direct expansion type with built-in heater/humidifier)	○	○	○	○	×	×	×	○	△	△	×	×	△	△	△	△
Hot water supply	○	○	○	○	×	○	○	○	△	△	×	×	△	△	△	△
Water heater	○	○	○	×	○	×	×	×	×	△	×	×	△	△	△	△
HWHP	○	○	○	○	×	×	×	×	×	△	×	×	△	△	△	△
DT-R/e-Series	○	○	○	○	×	×	×	×	×	△	×	×	△	△	△	△
Brine cooler	○	○	○	○	×	×	×	×	×	△	×	×	△	△	△	△
Low-temperature equipment	○	○	○	×	×	×	×	×	×	△	○	○	△	△	△	△
Dehumidifier	○	○	○	×	×	×	×	×	×	△	○	×	△	△	△	△

Setting configurable without using the Initial Settings Tool

Setting configurable using the AE-C/ EW-C Web browser	×	×	△	×	○	×	×	×	×	×	×	×	×	×	×	×
Setting configurable on the AE-C/ EW-C LCD	×	×	△	×	○	×	×	×	×	×	×	×	×	×	×	×

If the settings do not take effect, log in again.

○: Required △: May be required ×: Not required

Initial settings	Unit settings					Billing function settings					Inter-lock control settings	Energy-saving function settings	Function settings	
	Refrigerant system settings	PI controller settings	AI controller settings	Modbus connection settings	AHC port name settings	Billing function settings	Outdoor unit settings	Indoor unit settings	Measurement settings	Charges settings	Interlock control settings	High sensible heat control settings	Energy management settings	System-changeover settings
Function														
Billing (with WHM)	○	△	×	×	×	○	○	○	○	○	×	×	×	×
Billing (without WHM)	○	×	×	×	×	○	○	○	○	○	×	×	×	×
Watt-hour measurement	×	△	×	△	×	×	×	×	×	×	×	×	×	×
Demand control	×	△	×	×	×	×	×	×	×	×	×	×	×	×
Energy management	×	△	×	△	×	×	×	×	×	×	×	×	○	×
Temperature/humidity measurement	×	×	○	×	×	×	×	×	×	×	×	×	×	×
Interlock control	×	×	×	×	×	×	×	×	×	×	○	×	×	×
High sensible heat	○	×	×	×	×	×	×	×	×	×	×	○	×	×
System-changeover	○	×	×	×	×	×	×	×	×	×	×	×	×	○

Setting configurable without using the Initial Settings Tool

Setting configurable using the AE-C/ EW-C Web browser	×	×	×	×	×	×	×	×	×	×	×	×	×	×
Setting configurable on the AE-C/ EW-C LCD	×	×	×	×	×	×	×	×	×	×	×	×	×	×

14-5. Setting items and reference sections

Settings items and sections to be referred to are shown below.

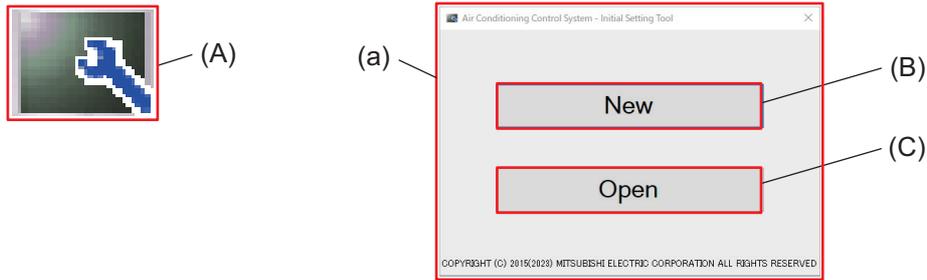
Item	Reference section
General settings	—
Controller settings	21-2.
LCD cleaning	12-3.
Product information	13-1.
Energy management output	11-3.
Initial settings	—
Controller settings	21-2-1.
Network settings	21-2-2.
CSV output	11-3-6.
HWHP	8-1. [4]
Maintenance (login required)	—
Settings	—
User management	10-5.
Commissioning user	10-5-3.
Building manager	
Tenant manager	
General user	
Initial settings	—
License registration	11-6.
Function settings	—
E-mail settings	10-8.
Peak cut settings	17-1.
Set temperature range limit	7-2.
Night mode schedule	7-6.
External temperature interlock settings	7-3.
Night setback control settings	7-4.
Ventilation settings	—
Night purge settings	7-5.
Maintenance	—
Send mail log	10-9.
Monitoring status	10-7.
Gas refrigerant amount check	10-6.
Utility	24-3.

Item	Reference section
Initial Setting Tool	—
Basic settings	16-1.
Unit settings	16-2.
Floor settings	16-3.
Billing function settings	16-4.
Interlock control settings	16-5.
Function settings	16-6.
Energy management settings	16-6-1.
System-changeover settings	16-6-2.
Outdoor unit measurement settings	16-6-3.
Others	—
License registration	15-3-5.

15. Initial settings (overview of Initial Setting Tool)

This chapter explains how to configure settings using the Initial Setting Tool on a computer. Initial settings can be made for multiple AE-C/EW-C systems, and controllers connected can be set up in batch.

15-1. Launching the setting tool and importing setting files



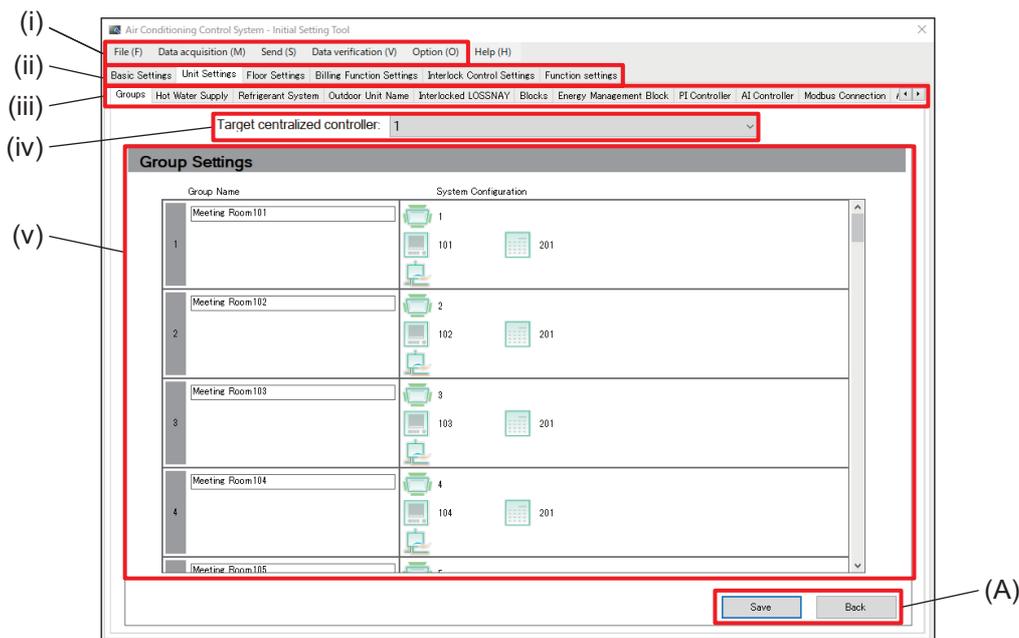
	Item
(A)	Initial Setting Tool icon
(B)	[New]
(C)	[Open]

Step

1. Tap (A) to display screen (a).
2. To create a new setting file, tap (B).
 - To use an existing setting file, tap (C) to load the existing setting file (with the dat file extension).

15-2. Screen configuration and common items

This section explains the screen configuration for common parts of the Initial Setting Tool.

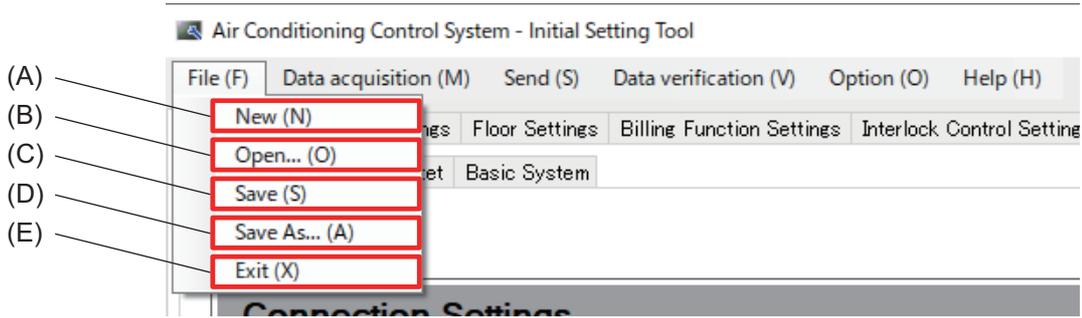


	Item	Function and description
(i)	Toolbar	Use to create, save, load, and send setting files and to monitor setting status from the AE-C/EW-C.
(ii)	Menu tab	Use to display the setting screens for each menu item.
(iii)	Sub menu tab	Use to display the setting items available under the selected menu tab. <ul style="list-style-type: none"> After entering settings, tap [Save] to save them to the Initial Setting Tool.
(iv)	Target centralized controller	Select the controller to be configured from among the AE-C/EW-C whose connections have been configured. <ul style="list-style-type: none"> Settings must be configured for each AE-C/EW-C.
(v)	Settings area	Configure settings here.
(A)	[Save]/[Back]	After completing the setting, tap [Save] . To cancel the setting, tap [Back] .

15-3. List of toolbar operations

15-3-1. File

Create, open (import), overwrite, and save setting files.

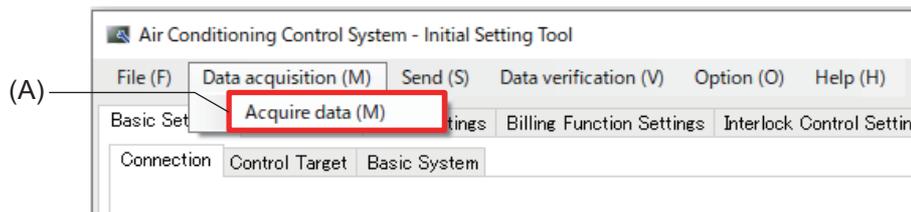


	Item	Function and description
(A)	New	Create a new setting file.
(B)	Open	Import a setting file saved on the PC.
(C)	Save	Save the setting file to the PC.
(D)	Save As	Tap [Save As...] to save settings as a new file and tap [Save] to add new settings and changes to the existing settings.
(E)	Exit	Exit the Initial Setting Tool.

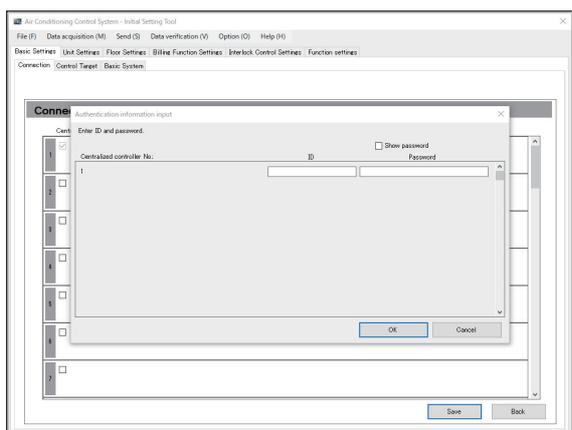
15-3-2. Data acquisition

Acquire the existing settings from the AE-C/EW-C.

To make changes to the existing settings, perform data acquisition first.



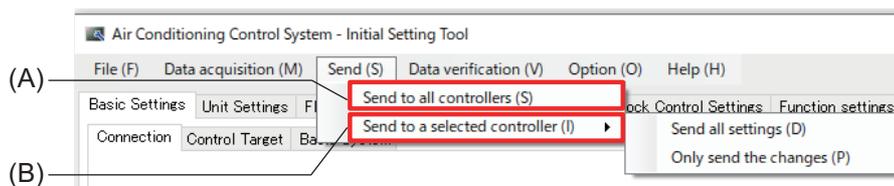
	Item	Function and description
(A)	Acquire data	Import the settings of the AE-C/EW-C to the Initial Setting Tool.



The Authentication information input screen for the AE-C/EW-C for which data will be acquired will be displayed. For the user ID and password, refer to "About this manual."

15-3-3. Send

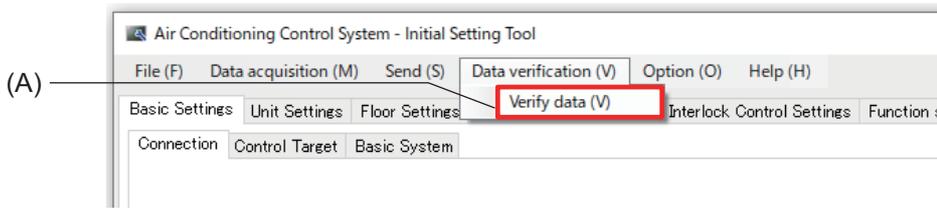
Send settings to the AE-C/EW-C.



	Item	Function and description	
(A)	Send to all controllers	Send all settings to all AE-C/EW-C at once.	
(B)	Send to a selected controller	Send all settings	Send all settings to the AE-C/EW-C with edited settings.
	Only send the changes		Send only setting changes to the AE-C/EW-C with edited settings.

15-3-4. Data verification

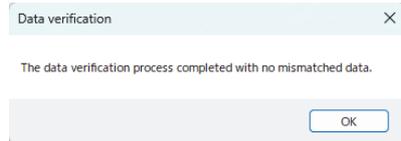
Verify whether the settings retained in the Initial Setting Tool have been correctly sent to the AE-C/EW-C. Data verification results will be displayed on the screen or exported as an Excel file.



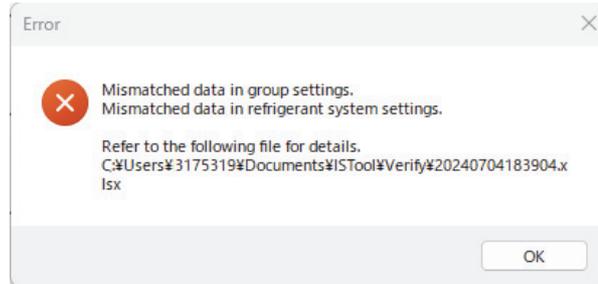
	Item	Function and description
(A)	Verify data	The settings of this tool are verified through comparison with those of the AE-C/EW-C.

If the verification reveals any differences in settings or if data acquisition fails, those results are displayed and saved to the PC as an Excel file. Refer to the screen display for the file save location.

Example of screen display when there are no differences



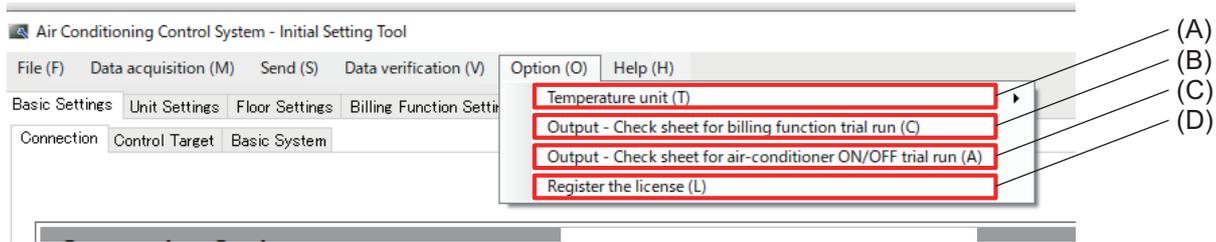
Example of screen display when differences are detected



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15-3-5. Option

This section explains various optional functions available with the Initial Setting Tool.

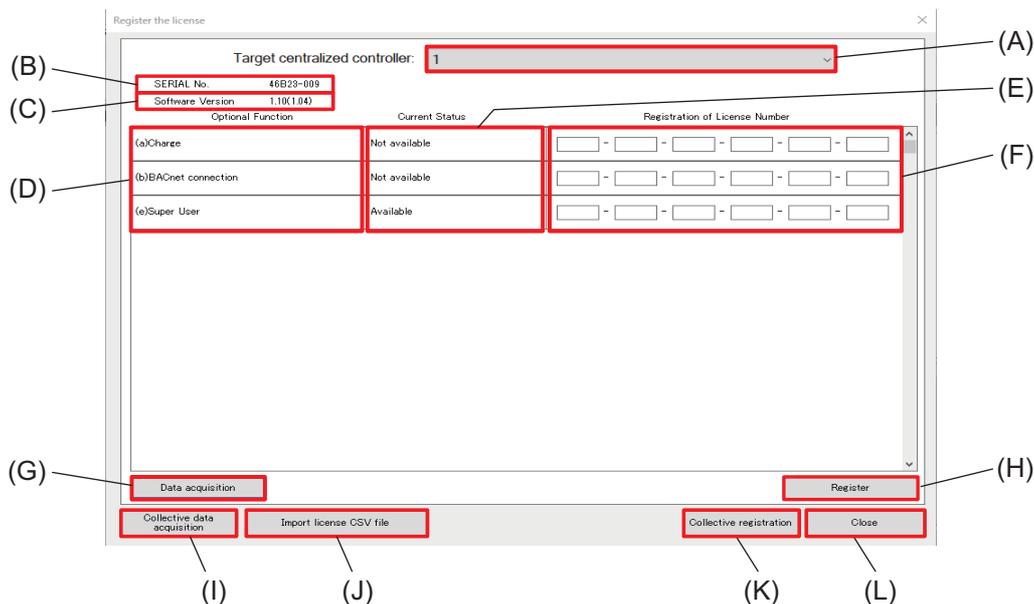


	Item	Function and description
(A)	Temperature unit	Select whether the Initial Setting Tool displays the temperature in Centigrade (°C) or Fahrenheit (°F).
(B)	Output - Check sheet for billing function trial run	Output a trial run check sheet for the apportioned electricity billing function.
(C)	Output - Check sheet for unit ON/OFF trial run	Output an ON/OFF trial run check sheet for connected units.
(D)	Register the license	Register licenses for each AE-C/EW-C.

[1] License registration

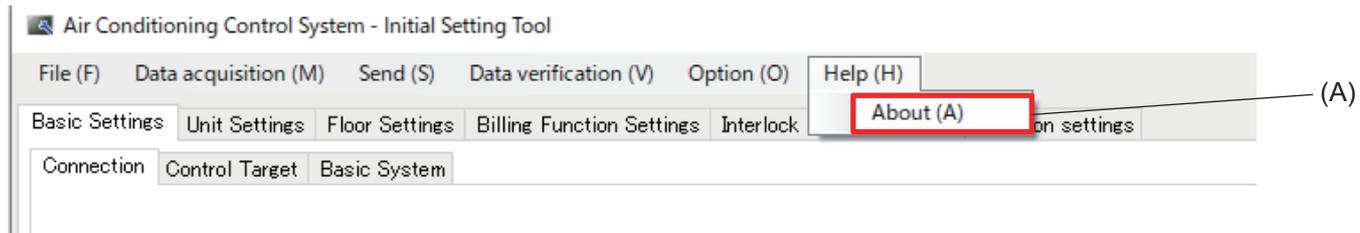
Register licenses using the Initial Setting Tool.

For information on optional functions and on purchasing license numbers, contact your dealer.



	Item	Function and description
(A)	Target centralized controller	Select the number of the AE-C/EW-C controller from the pull-down list.
(B)	SERIAL No.	The serial number of the AE-C/EW-C is displayed. Use to import license CSV files.
(C)	Software Version	The software version of the AE-C/EW-C is displayed.
(D)	Optional Function	Optional functions (license names) to be registered are displayed.
(E)	Current Status	The registration statuses of optional functions (license names) are displayed.
(F)	License Number	Input the license numbers of optional functions to be registered.
(G)	[Data acquisition]	Acquire the software versions, serial numbers and license information of selected AE-C/EW-C.
(H)	[Register]	Register a license.
(I)	[Collective data acquisition]	Acquire the software versions, serial numbers and license information of all AE-C/EW-C.
(J)	[Import license CSV file]	Import a license CSV file to automatically input license number registration information.
(K)	[Collective registration]	Register the licenses entered to all AE-C/EW-C.
(L)	[Close]	Close this screen.

15-3-6. Help



	Item	Function and description
(A)	About	The version of this software is displayed.

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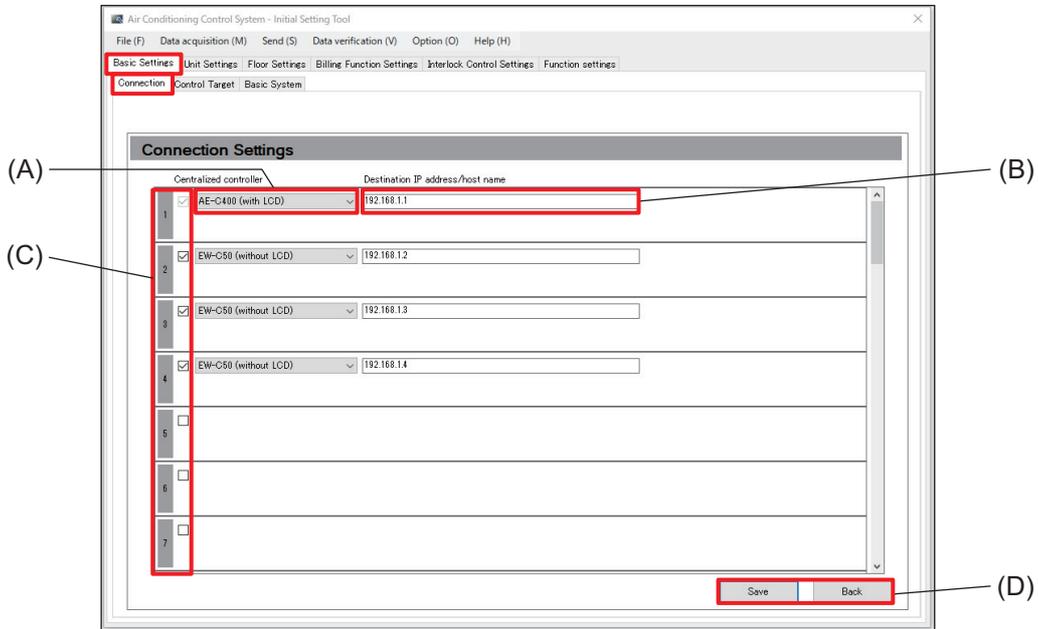
16. Initial settings (basic settings)

16-1. Menu tab: Basic Settings

16-1-1. Sub menu tab: Connection

Register AE-C/EW-C controllers that are connected to the system.

Tapping **[Basic Settings]** - **[Connection]** will display the Connection Settings screen.



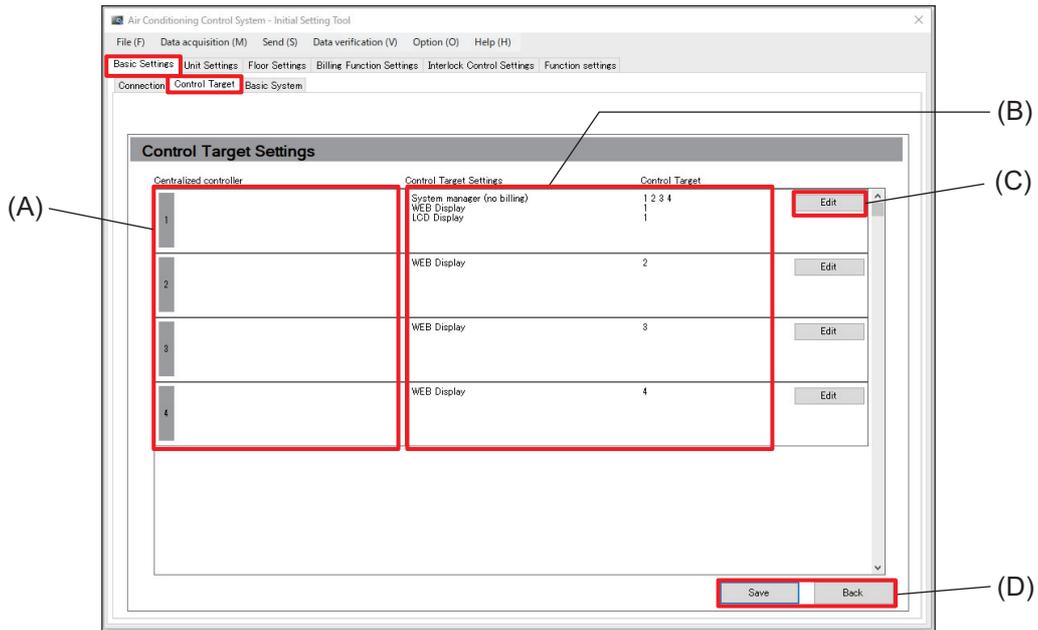
	Item	Function and description
(A)	Centralized controller	Select the AE-C or EW-C from the pull-down list.
(B)	Destination IP address/ host name	Enter the IP address or host name assigned by the connection destination. ex.) 192.168.1.1 ...
(C)	Controller number and check box	When multiple AE-C/EW-C controllers are connected to the same system, select the AE-C/EW-C controllers you want to register by tapping their check box, and set (A) and (B). <ul style="list-style-type: none"> When only one AE-C/EW-C controller exists in the system, only controller number 1 is displayed.
(D)	[Save]/[Back]	After completing the setting, tap [Save] . To cancel the setting, tap [Back] .

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16-1-2. Sub menu tab: Control Target

This tab is for making settings to monitor and operate the units that are connected to different AE-C/EW-C controllers.

Tapping **[Basic Settings]** - **[Control Target]** will display the Control Target Settings screen.



	Item	Function and description
(A)	Centralized controller	The number and the name of the AE-C/EW-C controller that has been registered on the Connection tab are displayed.
(B)	Control Target Settings and Control Target	Set the following items to monitor and operate the units that are connected to different AE-C/EW-C controllers. <ul style="list-style-type: none"> • System manager (billing), System manager (no billing) This item shows the AE-C/EW-C controller that manages the entire system. Only one AE-C/EW-C controller can be the system manager. • WEB Display The numbers of the controllers (B) that are monitored and operated via the Web are displayed. • LCD Display The numbers of the controllers (B) that are monitored and operated on the LCD screen are displayed.
(C)	[Edit]	Tapping this button displays the AE-C/EW-C settings screen to configure the settings for the system manager, Web display, and LCD display.
(D)	[Save]/[Back]	After completing the setting, tap [Save] . To cancel the setting, tap [Back] .

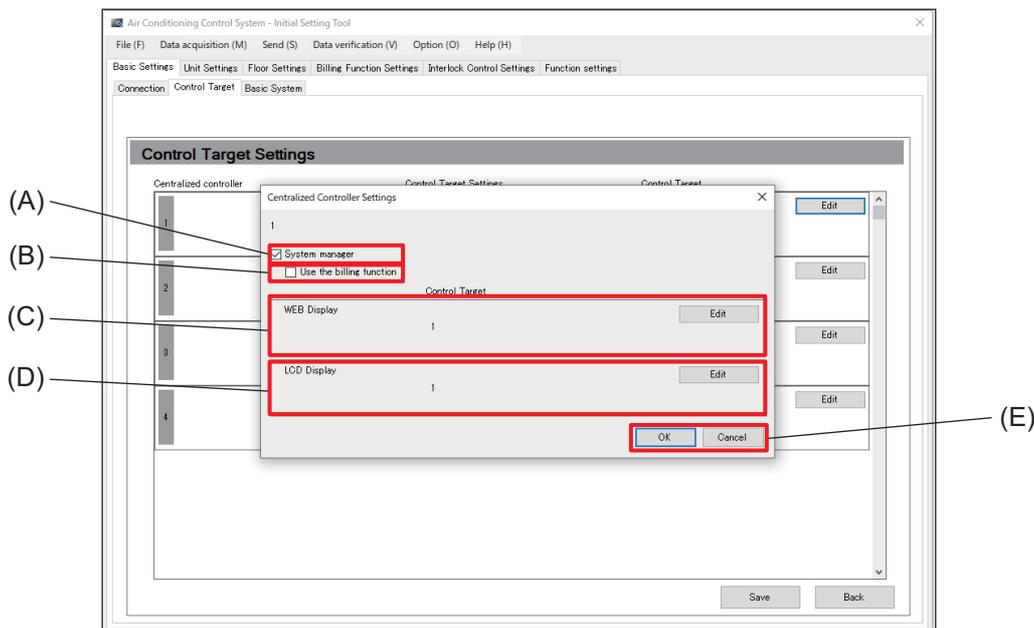
Note

- When there is only one connected AE-C/EW-C controller (or only one M-NET network) in the system, the items on this tab do not need to be set.

[1] AE-C/EW-C settings screen

Configure settings for the AE-C/EW-C controllers added on the Connection Settings screen that will be displayed and managed on the LCD screen or Web screen.

Tapping **[Edit]** on the Control Target Settings screen will display the Centralized Controller Settings screen.

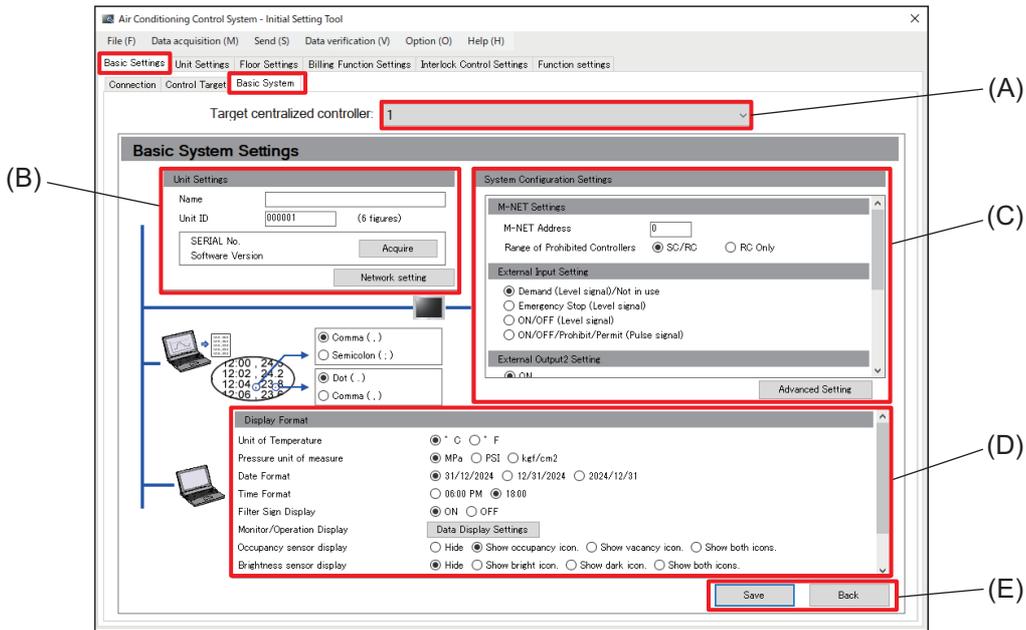


	Item	Function and description
(A)	System manager	This item is used to specify the AE-C/EW-C that will manage the system. Put a check here to allow the AE-C/EW-C to control other AE-C/EW-C. Only one AE-C/EW-C in a system can be used to manage the system.
(B)	Use the billing function	Entering a check here enables the apportioned electricity billing function of the system manager.
(C)	WEB Display	The numbers of the AE-C/EW-C to be displayed on the Web browser are displayed. Tap [Edit] to change the AE-C/EW-C to be controlled.
(D)	LCD Display	The numbers of the AE-C/EW-C to be displayed on the LCD are displayed. Tap [Edit] to change the AE-C/EW-C to be controlled.
(E)	[OK]/[Cancel]	After completing the setting, tap [OK] . To cancel the setting, tap [Cancel] .

16-1-3. Sub menu tab: Basic System

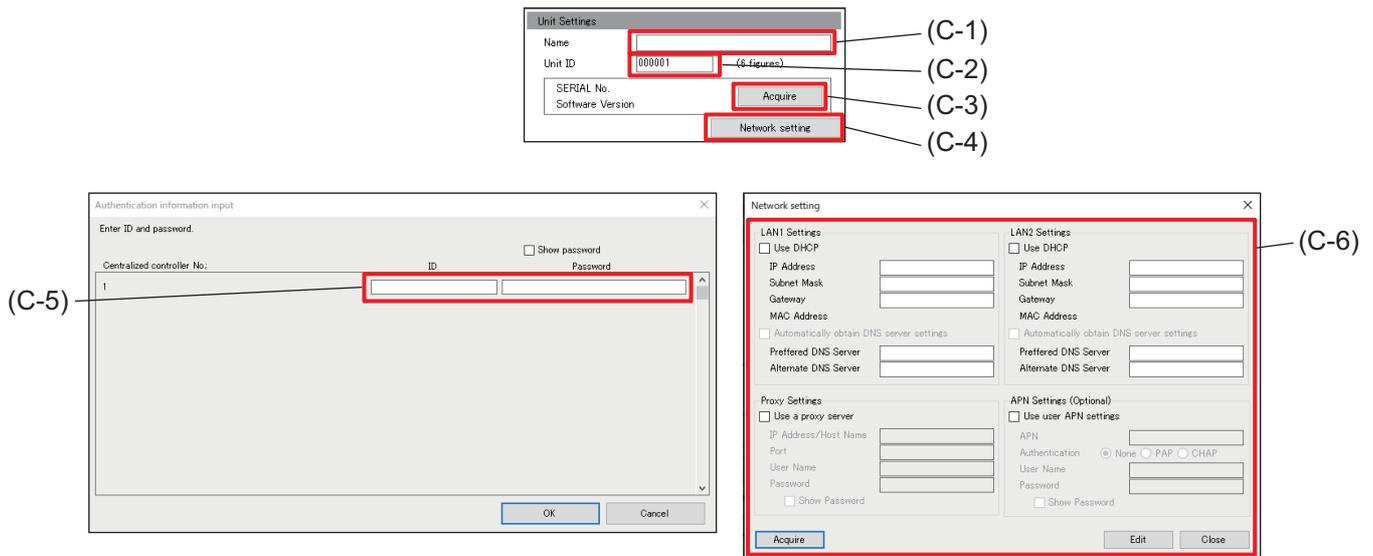
Configure the AE-C/EW-C settings.

Tapping **[Basic Settings]** - **[Basic System]** will display the Basic System Settings screen.



	Item	Function and description
(A)	Target centralized controller	The number and the name of the AE-C/EW-C controller that has been registered on the Connection tab are displayed.
(B)	Unit Settings	Set the name and unit ID of the target AE-C/EW-C controller. Name: Enter the site name, building name, floor number, etc. (Up to 40 characters) Unit ID: Enter any number. (Six digits)
(C)	System Configuration Settings	Configure settings such as the M-NET address and external input/output method for the AE-C/EW-C controller.
(D)	Display Format	Set the items related to the display format of the AE-C/EW-C controller.
(E)	[Save]/[Back]	After completing the setting, tap [Save] . To cancel the setting, tap [Back] .

[1] Unit Settings



	Item	Function and description
(C-1)	Name	Enter information for identifying the AE-C/EW-C such as the site name, building name, floor number, etc. (Up to 40 characters)
(C-2)	Unit ID	Enter a number for identifying the AE-C/EW-C. (Six digits) This item is for managing the AE-C/EW-C using a Unit ID.
(C-3)	[Acquire]	Tapping this button displays the authentication ID and password input screen (C-5).
(C-4)	[Network setting]	Tapping this button displays the Network setting screen (C-6).
(C-5)	User ID/password	Inputting the user ID and password and tapping [OK] displays the serial number and software version of the AE-C/EW-C selected as the Target centralized controller.
(C-6)	Network setting	Configure settings for LAN1 and LAN2 of the AE-C/EW-C, such as the IP address, subnet mask, gateway address, and proxy. Tapping [Acquire] displays the current network settings for the AE-C/EW-C selected as the Target centralized controller. Tapping [Edit] applies the network settings to the Target centralized controller. Tapping [Close] returns to the previous screen without saving the settings.

Note

- Names and unit IDs can be configured for each AE-C/EW-C that can be selected as the Target centralized controller.
- The Unit ID is also used as an ID for identifying the senders of error notifications and warnings.

(1) Network setting

1) LAN1/LAN2 common settings

Use the following table to set valid values for each item.

○: Configurable setting

	Use DHCP	Use DHCP			Automatically obtain DNS server settings		Example setting		
		IP Address	Subnet mask	Gateway	Preferred DNS server	Alternate DNS server			
If not using DHCP	—	Input required			—	Input required		<1>	
If using DHCP	○	Input not required			—	—			
If not automatically obtaining DNS server settings	○				—	Input required		<2>	
If automatically obtaining DNS server settings	○				○	Input not required		<3>	

Example setting (1)

LAN1 Settings

Use DHCP

IP Address: 192.168.1.1

Subnet Mask: 255.255.255.0

Gateway: 192.168.1.254

MAC Address: [empty]

Automatically obtain DNS server settings

Preferred DNS Server: 8.8.8.8

Alternate DNS Server: 8.8.4.4

Example setting (2)

LAN1 Settings

Use DHCP

IP Address: [empty]

Subnet Mask: [empty]

Gateway: [empty]

MAC Address: [empty]

Automatically obtain DNS server settings

Preferred DNS Server: 8.8.8.8

Alternate DNS Server: 8.8.4.4

Example setting (3)

LAN1 Settings

Use DHCP

IP Address: [empty]

Subnet Mask: [empty]

Gateway: [empty]

MAC Address: [empty]

Automatically obtain DNS server settings

Preferred DNS Server: [empty]

Alternate DNS Server: [empty]

2) Settings only for LAN2

Select whether to enable or disable the cloud connection setting.

Network setting

LAN1 Settings

Use DHCP

IP Address: [empty]

Subnet Mask: [empty]

Gateway: [empty]

MAC Address: [empty]

Automatically obtain DNS server settings

Preferred DNS Server: [empty]

Alternate DNS Server: [empty]

Proxy Settings

Use a proxy server

IP Address/Host Name: [empty]

Port: [empty]

User Name: [empty]

Password: [empty]

Show Password

LAN2 Settings

Use DHCP

IP Address: [empty]

Subnet Mask: [empty]

Gateway: [empty]

MAC Address: [empty]

Automatically obtain DNS server settings

Preferred DNS Server: [empty]

Alternate DNS Server: [empty]

APN Settings (Optional)

Use user APN settings

APN: [empty]

Authentication: None PAP CHAP

User Name: [empty]

Password: [empty]

Show Password

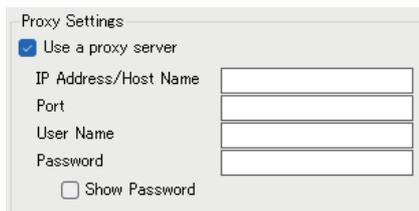
Cloud Connection Settings

Available

Acquire Edit Close

3) Proxy settings

If configuring via a proxy server, enter a check for **[Use a proxy server]** and configure each item. Obtain the IP address, subnet mask, and gateway address from the system administrator and set them accordingly.

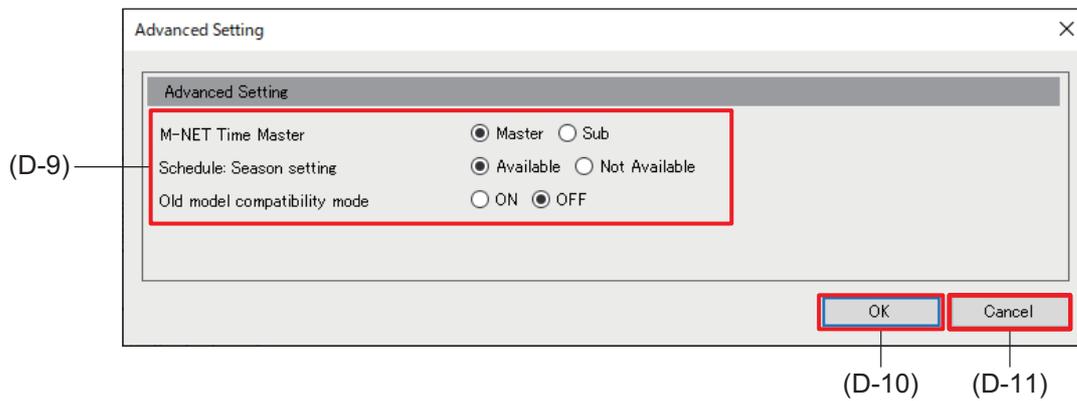
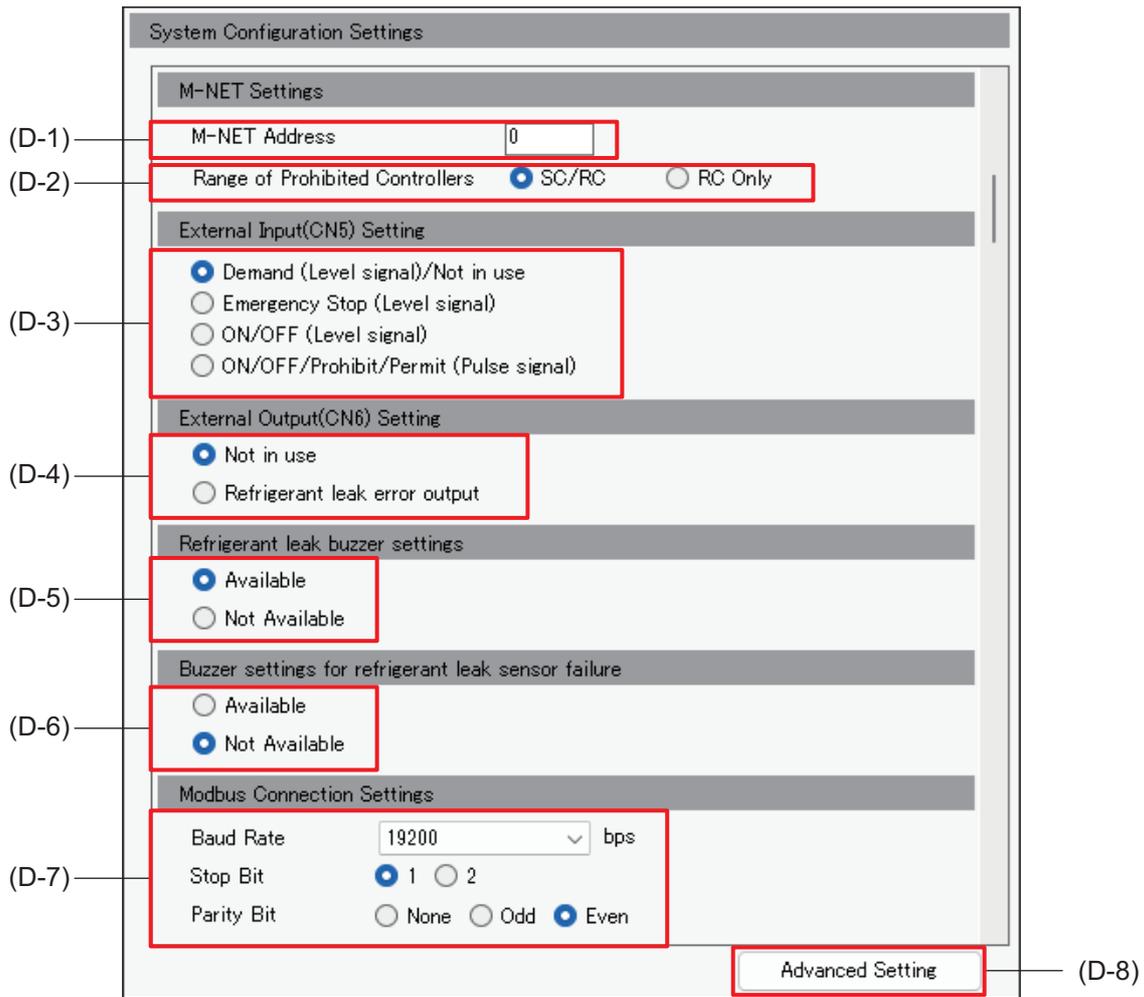


The image shows a 'Proxy Settings' dialog box. It contains a checked checkbox for 'Use a proxy server'. Below this are four text input fields labeled 'IP Address/Host Name', 'Port', 'User Name', and 'Password'. At the bottom, there is an unchecked checkbox for 'Show Password'.

4) APN settings (optional)

Do not change these settings.

[2] System configuration settings



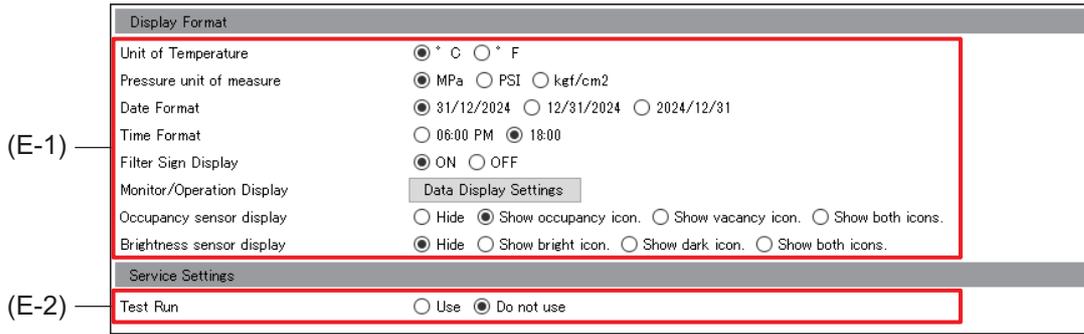
	Item	Function and description
(D-1)	M-NET Settings - M-NET Address	Normally, enter [0] .
(D-2)	M-NET Settings - Range of Prohibited Controllers	Select [SC/RC] to prohibit operation from both sub system controllers and local remote controllers. Select [RC Only] to prohibit operation from only local remote controllers.
(D-3)	External Input (CN5) Setting	If using an external contact input, select its function from the list.

	Item	Function and description
(D-4)	External Output (CN6) Setting	If using an external contact output (CN6), select its function from the list.
(D-5)	Refrigerant leak buzzer settings	Set whether or not the controller buzzer will sound when a refrigerant leak is detected.
(D-6)	Buzzer settings for refrigerant leak sensor failure	Set whether or not the controller buzzer will sound when a refrigerant leak detection sensor fails.
(D-7)	Modbus Connection Settings	Configure settings according to Modbus unit settings.
(D-8)	[Advanced Setting]	Tapping this button displays the Advanced Setting screen (D-9).
(D-9)	Advanced Setting screen	
	M-NET Time Master	Select [Master] to synchronize the time using a central monitoring device in a system configuration that uses the BACnet function.
	Schedule: Season setting	Select [Available] to use seasonal settings in the weekly schedule.
	Old model compatibility mode	Select [ON] to set all units not to support the dual-set-point mode.
(D-10)	[OK]	Tap this button to save the setting changes.
(D-11)	[Cancel]	Tap this button to go back to the previous screen without applying the setting changes.

Note

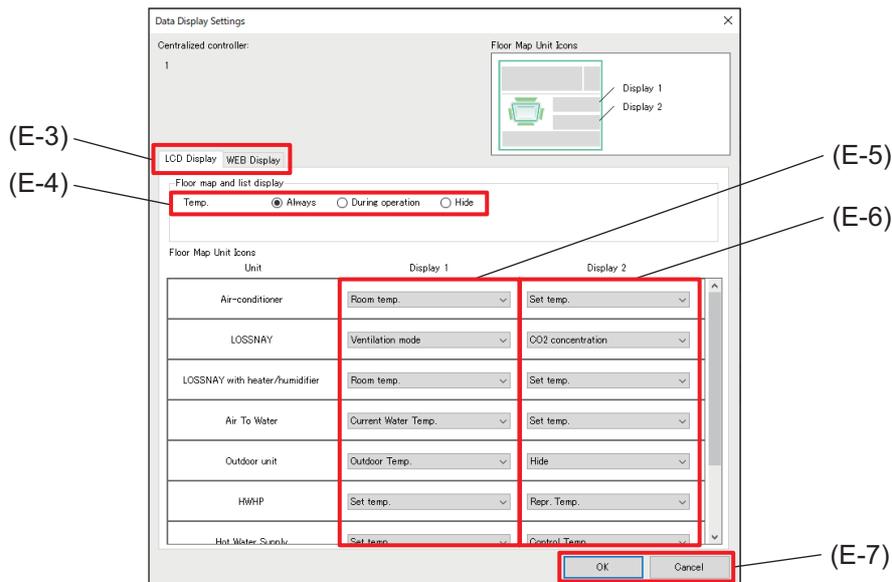
- To use an external output, a separately sold external input/output adapter (PAC-YG10HA-E) is required.
- The setting for the range of prohibited controllers is effective when local remote controller operation is prohibited for the AE-C/EW-C.
- When an alarm (remote) or error (buzzer/lamp) is output, the error code display screen will appear at the same time.
- Error-level based output cannot be configured for air conditioning units.
- Select **[ON]** for "Old model compatibility mode" when using indoor units that support and do not support the dual mode together, or when a higher-level building management system that is connected using the BACnet function does not support the dual-set-point mode.

[3] Configuring display settings and services



	Item	Function and description
(E-1)	Unit of Temperature	Select the temperature unit.
	Pressure unit of measure	Select the pressure unit.
	Date Format	Select the date format.
	Time Format	Select the time format.
	Filter Sign Display	Select whether or not to display filter signs on the Monitor/Operation screen displayed on the AE-C/EW-C LCD screen and the Web browser.
	Monitor/Operation Display	Tapping [Data Display Settings] displays the Data Display Settings screen.
	Occupancy sensor display	Set whether to show or hide the detection status of the occupancy sensor built in the ME remote controller.
	Brightness sensor display	Set whether to show or hide the detection status of the brightness sensor built in the ME remote controller (PAR-F30ME1).
(E-2)	Test Run	Select whether or not to use test run.

(1) Data Display Settings screen



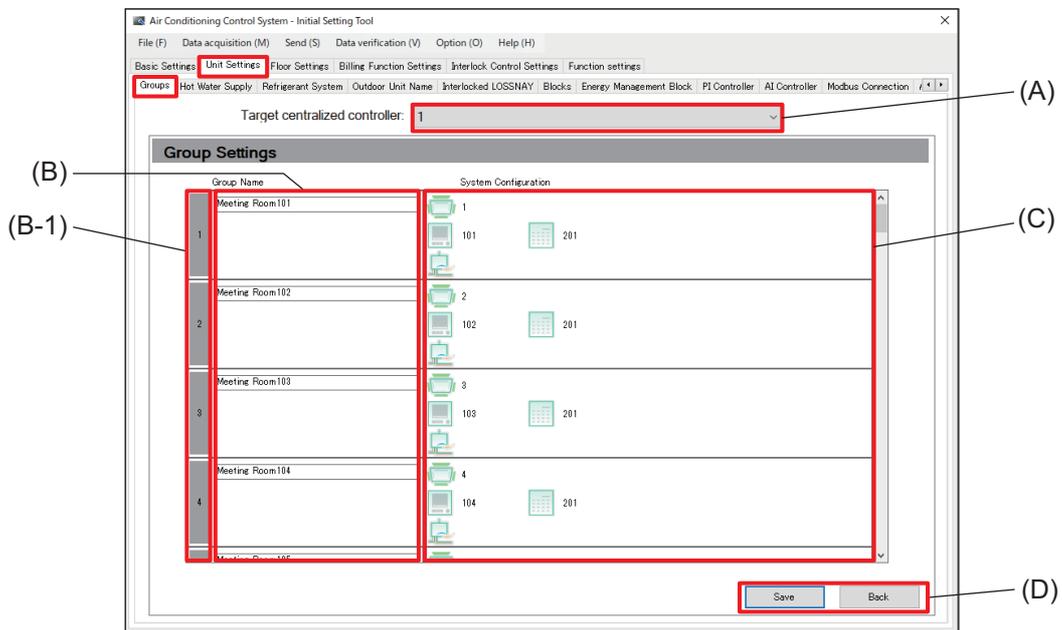
	Item	Function and description
(E-3)	Control target tab	Select the LCD Display tab or WEB Display tab.
(E-4)	Floor map and list display	Configure the temperature and humidity displays on the Monitor/Operation screen.
(E-5)	Display 1	From the pull-down list, select information shown by the unit icon displayed on the Monitor/Operation (floor layout) screen. Displays 1 and 2 can be configured separately.
(E-6)	Display 2	
(E-7)	[OK]/[Cancel]	After completing the setting, tap [OK] . To cancel the setting, tap [Cancel] .

16-2. Menu tab: Unit Settings

16-2-1. Sub menu tab: Groups

Register the units connected to each AE-C/EW-C.

Tapping **[Unit Settings]** - **[Groups]** will display the Group Settings screen.



	Item	Function and description
(A)	Target centralized controller	Select the number of the AE-C/EW-C controller from the pull-down list.
(B)	Group name	Set the group name for each group number (B-1). The group name set here will be displayed on the AE-C/EW-C screen.
(C)	System Configuration	Register the information of the connected unit. <ul style="list-style-type: none"> • Select the unit type, and set the unit address. • To add a local remote controller (ME remote controller) to the system, select its icon and set the address. • When a sub system controller exists in the system, select its icon and set the address.
(D)	[Save]/[Back]	After completing the setting, tap [Save] . To cancel the setting, tap [Back] .

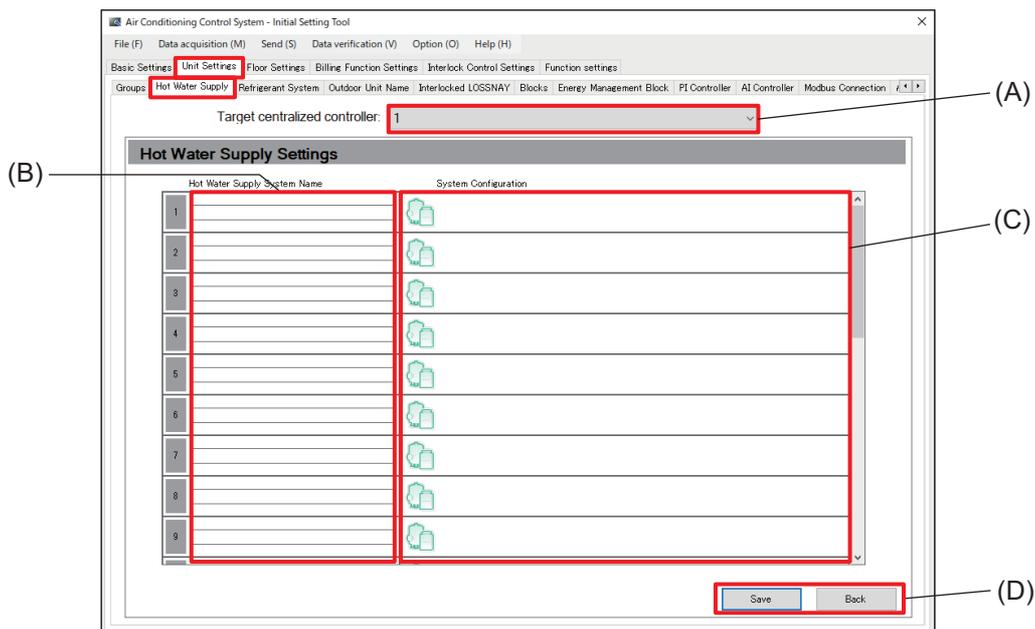
Note

- Group names can be up to 20 characters in length. (Recommended name length is 12 characters or less.)
However, the following characters cannot be used. < > & " ' "

16-2-2. Sub menu tab: Hot Water Supply

Register the hot water supply systems connected to each AE-C/EW-C.

Tapping **[Unit Settings]** - **[Hot Water Supply]** will display the Hot Water Supply Settings screen.



	Item	Function and description
(A)	Target centralized controller	Select the number of the AE-C/EW-C controller from the pull-down list.
(B)	Hot Water Supply System Name	Input system names.
(C)	System Configuration	Configure the addresses of the hot water supply systems.
(D)	[Save]/[Back]	After completing the setting, tap [Save] . To cancel the setting, tap [Back] .

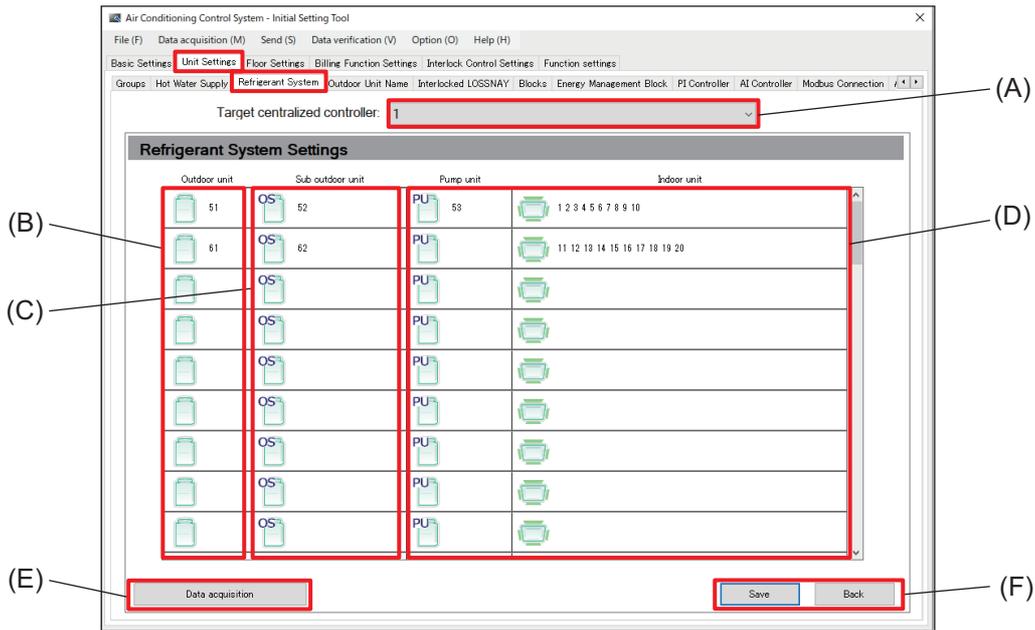
Note

- System names can be up to 20 characters in length. (Recommended name length is 12 characters or less.)
However, the following characters cannot be used. < > & " ' "

16-2-3. Sub menu tab: Refrigerant System

Register the refrigerant system connected to each AE-C/EW-C.

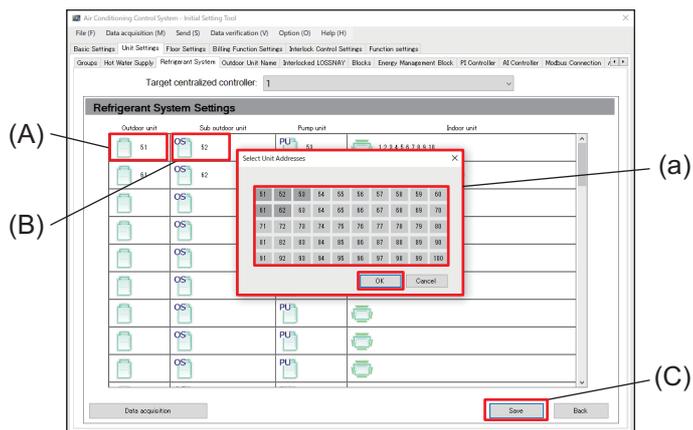
Tapping **[Unit Settings]** - **[Refrigerant System]** will display the Refrigerant System Settings screen.



	Item	Function and description
(A)	Target centralized controller	Select the number of the AE-C/EW-C controller from the pull-down list.
(B)	Outdoor unit	Tapping this item displays the screen for registering outdoor units.
(C)	Sub outdoor unit	Tapping this item displays the screen for registering sub outdoor units.
(D)	Indoor unit	Tapping this item displays the screen for registering indoor units.
(E)	Data acquisition	Acquire data on refrigerant system connections that have already been configured and update settings.
(F)	[Save]/[Back]	After completing the setting, tap [Save] . To cancel the setting, tap [Back] .

[1] Configuring refrigerant systems

(1) Configuring outdoor unit addresses and sub outdoor unit addresses



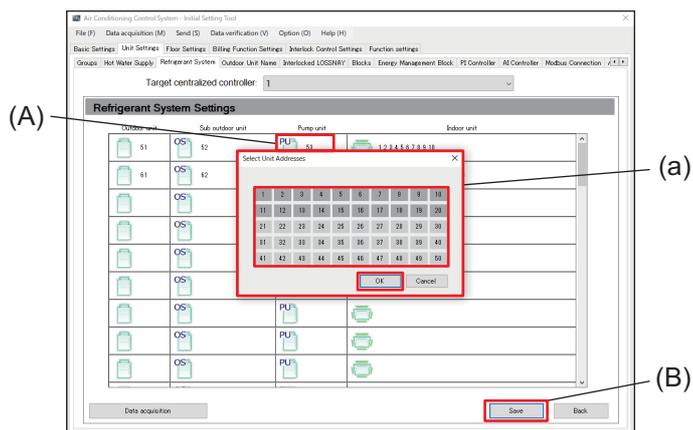
Step

1. Tap **[Unit Settings] - [Refrigerant System]** to display the Refrigerant System Settings screen.
2. Register outdoor units by tapping (A) to display (a).
3. Register sub outdoor units by tapping (B) to display (a).
4. Select the outdoor unit address or sub outdoor unit address to be registered from (a).
5. Tap **[OK]** in (a) to close (a).
6. Tap (C) to save the settings.

Note

- Both outdoor unit and indoor unit addresses within the same system must be configured. If either of them is not configured, the unit addresses will not be registered and will return to an unset state.

(2) Configuring indoor unit addresses



Step

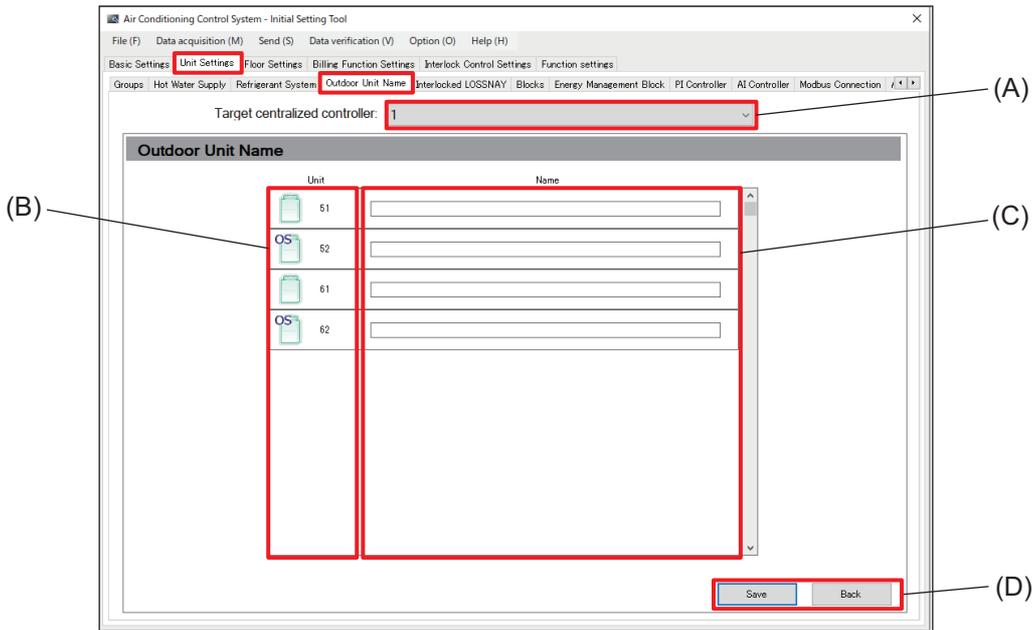
1. Tap **[Unit Settings] - [Refrigerant System]** to display the Refrigerant System Settings screen.
2. Tap (A) to display (a).
3. Select the indoor unit address to be registered from (a).
4. Tap **[OK]** in (a) to close (a).
5. Tap (B) to save the settings.

Note

- Both outdoor unit and indoor unit addresses within the same system must be configured. If either of them is not configured, the unit addresses will not be registered and will return to an unset state.

16-2-4. Sub menu tab: Outdoor Unit Name

Register the names of the outdoor units and sub outdoor units connected to each AE-C/EW-C.
 Tapping **[Unit Settings]** - **[Outdoor Unit Name]** will display the Outdoor Unit Name screen.



	Item	Function and description
(A)	Target centralized controller	Select the number of the AE-C/EW-C controller from the pull-down list.
(B)	Unit	Outdoor unit and sub outdoor unit addresses are displayed in order of address number.
(C)	Name	Use to configure the names of outdoor units configured on the Refrigerant System Settings screen.
(D)	[Save]/[Back]	After completing the setting, tap [Save] . To cancel the setting, tap [Back] .

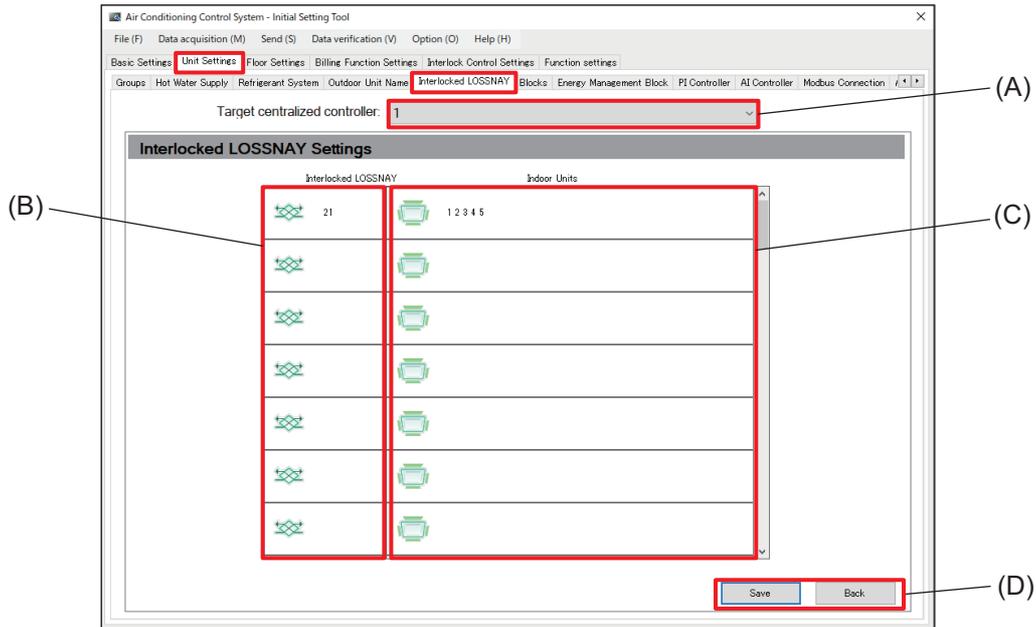
Note

- Outdoor unit names can be up to 20 characters in length. (Recommended name length is 12 characters or less.)
 However, the following characters cannot be used. < > & " ' .

MEMO

16-2-5. Sub menu tab: Interlocked LOSSNAY

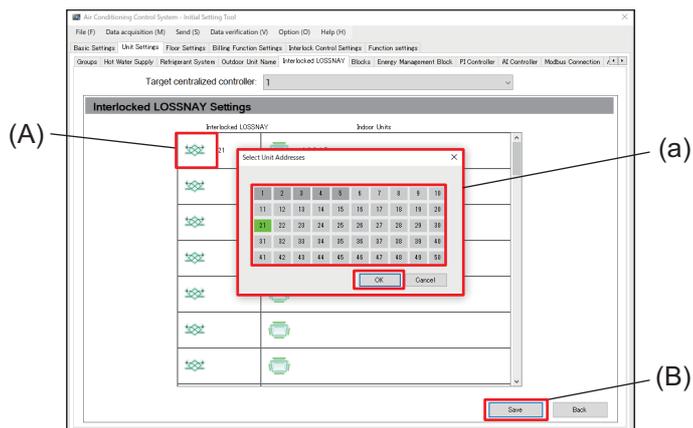
This tab is for registering the interlock settings of the LOSSNAY units for each AE-C/EW-C controller. Tapping **[Unit Settings]** - **[Interlocked LOSSNAY]** will display the Interlocked LOSSNAY Settings screen.



	Item	Function and description
(A)	Target centralized controller	Select the number of the AE-C/EW-C controller from the pull-down list.
(B)	Interlocked LOSSNAY	Tap the icon displayed here, and select the address (1 to 50) of the interlocked LOSSNAY unit.
(C)	Indoor Units	Tap the icon displayed here, and select the address (1 to 50) of the indoor unit to be interlocked. <ul style="list-style-type: none"> Multiple indoor units can be selected as interlock sources.
(D)	[Save]/[Back]	After completing the setting, tap [Save] . To cancel the setting, tap [Back] .

[1] Configuring interlocked LOSSNAY units

(1) Configuring interlocked LOSSNAY units



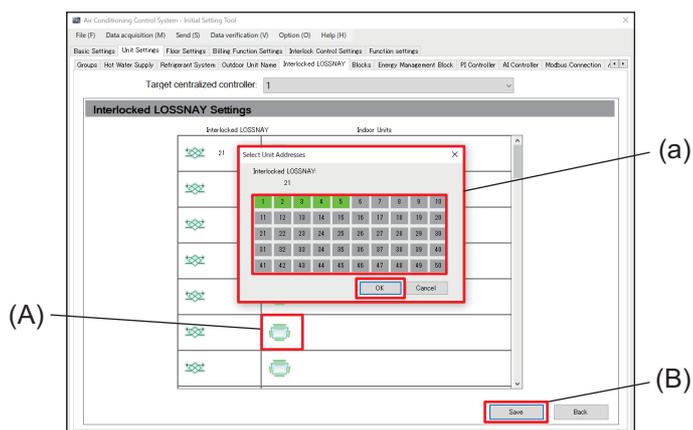
Step

1. Tap **[Unit Settings] - [Interlocked LOSSNAY]** to display the Interlocked LOSSNAY Settings screen.
2. Tap (A) to display (a).
3. Select the address of the interlocked LOSSNAY unit to be registered from (a).
4. Tap **[OK]** in (a) to close (a).
5. Tap (B) to save the settings.

Note

- It is necessary for both the interlocked LOSSNAY and source indoor units to be configured. If either of them is not configured, the addresses will not be registered and will return to an unset state.

(2) Configuring interlock source indoor units



Step

1. Tap **[Unit Settings] - [Interlocked LOSSNAY]** to display the Interlocked LOSSNAY Settings screen.
2. Tap (A) to display (a).
3. Select the indoor unit address to be registered from (a).
4. Tap **[OK]** in (a) to close (a).
5. Tap (B) to save the settings.

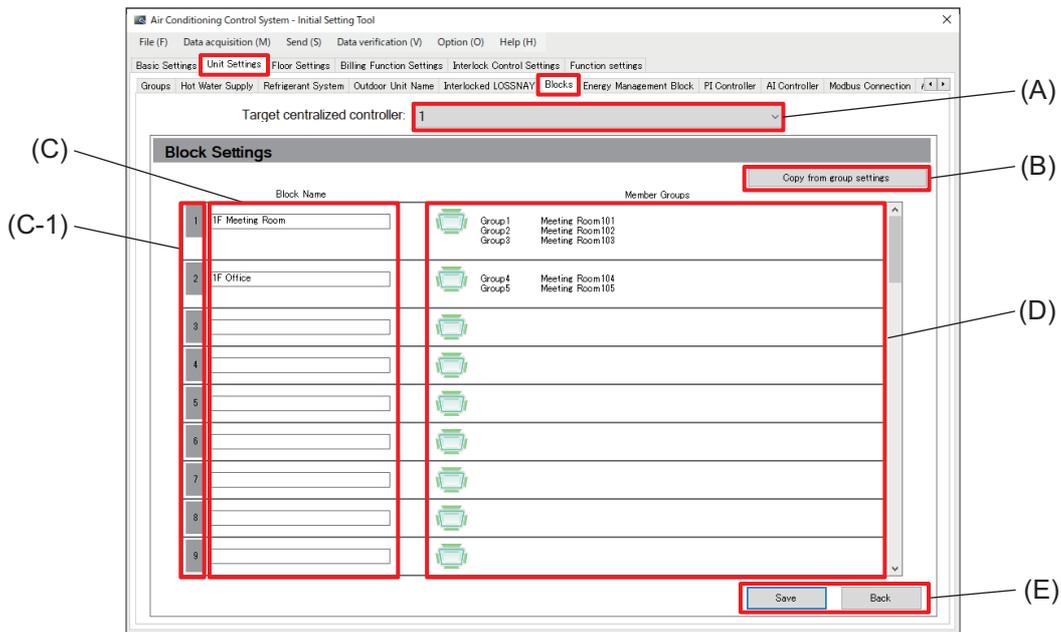
Note

- It is necessary for both the interlocked LOSSNAY and source indoor units to be configured. If either of them is not configured, the addresses will not be registered and will return to an unset state.

16-2-6. Sub menu tab: Blocks

Register the operation units (blocks) for each AE-C/EW-C.

Tapping **[Unit Settings]** - **[Blocks]** will display the Block Settings screen.



	Item	Function and description
(A)	Target centralized controller	Select the number of the AE-C/EW-C controller from the pull-down list.
(B)	Copy from group settings	Create blocks by copying group settings.
(C)	Block Name	Enter block names for each block number (C-1).
(D)	Member Groups	Tapping the icon displays the group selection screen.
(E)	[Save]/[Back]	After completing the setting, tap [Save] . To cancel the setting, tap [Back] .

[1] Configuring blocks



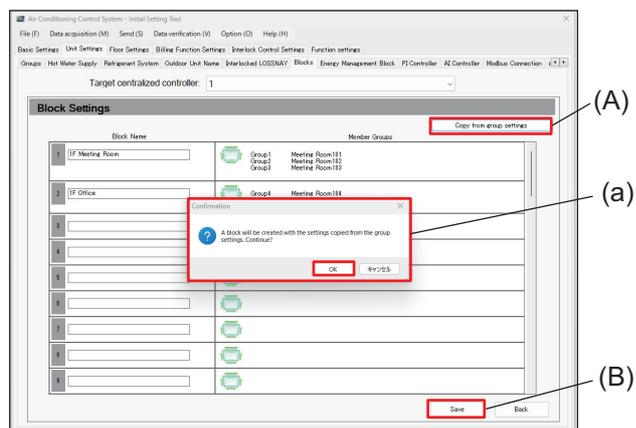
Step

1. Tap **[Unit Settings] - [Blocks]** to display the Block Settings screen.
2. Tap (A) to input block names.
3. Tap (B) to display (a).
4. Select the block to be registered from (a).
5. Tap **[OK]** in (a) to close (a).
6. Tap (C) to save the settings.

Note

- Block names can be up to 20 characters in length. (Recommended name length is 12 characters or less.) However, the following characters cannot be used. < > & " ' "

[2] Copying from group settings



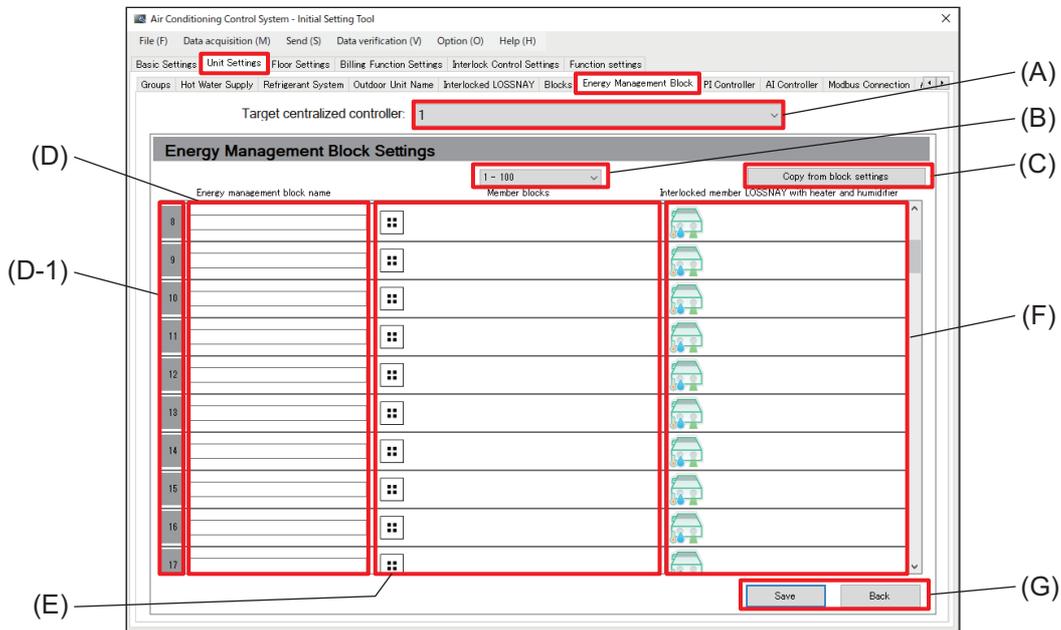
Step

1. Tap **[Unit Settings] - [Blocks]** to display the Block Settings screen.
2. Tap (A) to display (a).
3. Tap **[OK]** in (a) to close (a).
4. Tap (B) to save the settings.

16-2-7. Sub menu tab: Energy Management Block

Set blocks for aggregation units.

Tapping **[Unit Settings]** - **[Energy Management Block]** will display the Energy Management Block Settings screen.

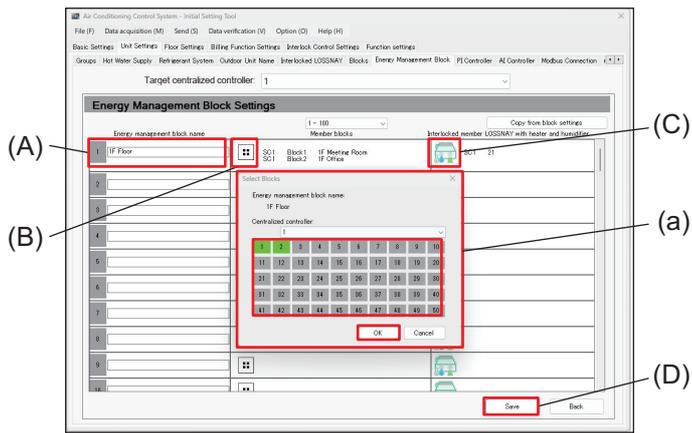


	Item	Function and description
(A)	Target centralized controller	Select the number of the AE-C/EW-C controller from the pull-down list.
(B)	Page navigation	The page for the energy management block number selected from the pull-down list is displayed.
(C)	Copy from block settings	Create energy management blocks by copying block settings.
(D)	Energy management block name	The energy management block name for each energy management block number (D-1) is displayed.
(E)	Member blocks	Tapping the icon displays the screen for registering blocks.
(F)	Interlocked member LOSSNAY with heater and humidifier	Tapping the icon displays the screen for registering unit addresses.
(G)	[Save]/[Back]	After completing the setting, tap [Save] . To cancel the setting, tap [Back] .

Note

- Energy management block names can be up to 20 characters in length. (Recommended name length is 12 characters or less.)
However, the following characters cannot be used. < > & " ' "

[1] Configuring energy management blocks



Step

1. Tap **[Unit Settings] - [Energy Management Block]** to display the Energy Management Block Settings screen.
2. Tap (A) to input energy management block names.
3. Tap (B) to display (a).
4. Select the block to be registered from (a).
5. Tap **[OK]** in (a) to close (a).
6. Tap (D) to save the settings.

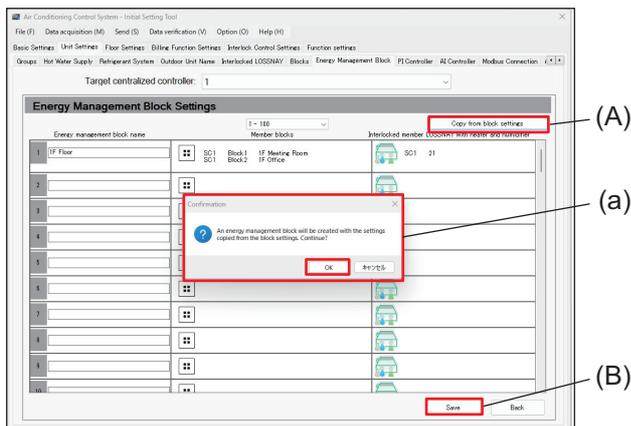
Configure interlocked member LOSSNAY with heater and humidifier by performing the following.

Step

1. Tap (C) to display (a).
2. Select the unit address to be registered from (a).
3. Tap **[OK]** in (a) to close (a).
4. Tap (D) to save the settings.

[2] Copy from block settings

Use this configuration to make block settings and energy block settings the same. After copying, configure LOSSNAY with heater and humidifier if necessary.



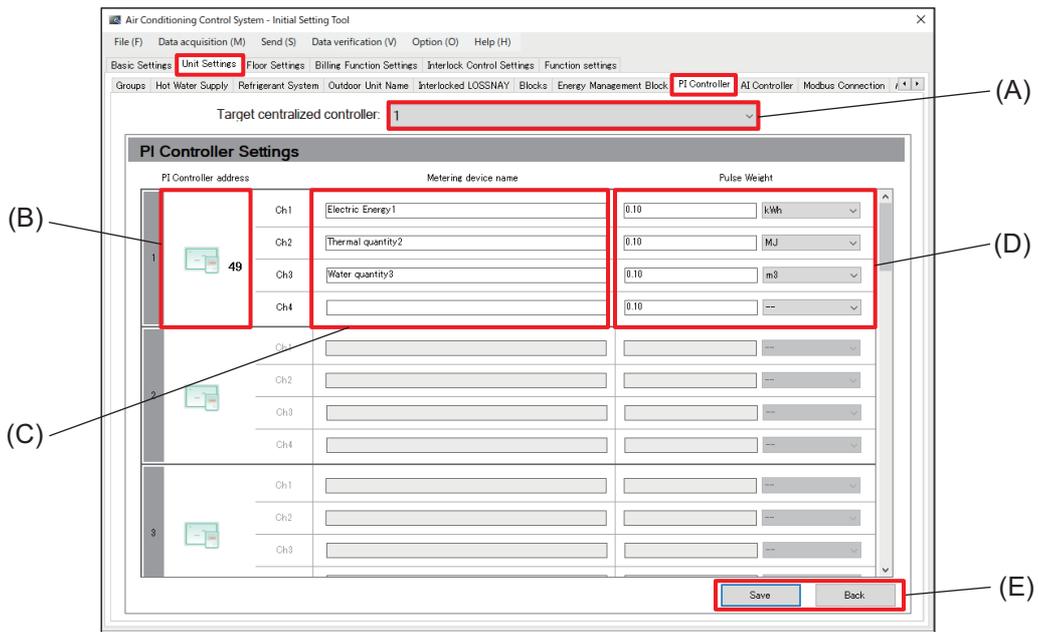
Step

1. Tap **[Unit Settings] - [Energy Management Block]** to display the Energy Management Block Settings screen.
2. Tap (A) to display (a).
3. Tap **[OK]** in (a) to close (a).
4. Tap (B) to save the settings.

16-2-8. Sub menu tab: PI Controller

Register the PI controller.

Tapping **[Unit Settings]** - **[PI Controller]** will display the PI Controller Settings screen.

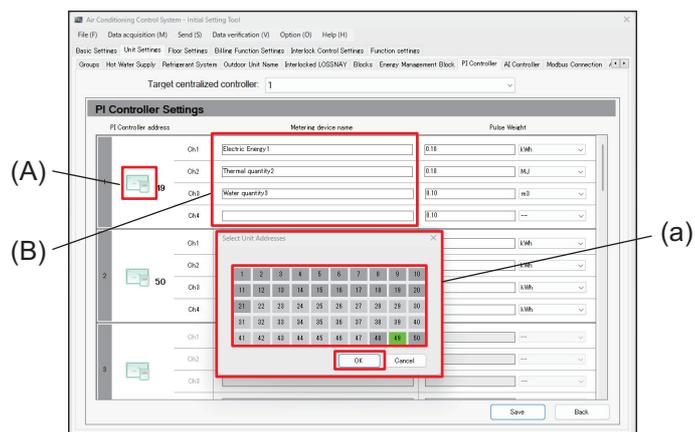


	Item	Function and description
(A)	Target centralized controller	Select the number of the AE-C/EW-C controller from the pull-down list.
(B)	PI controller address	Select the addresses of PI controllers to be registered.
(C)	Metering device name	Configure the names of metering devices.
(D)	Pulse Weight	Enter a pulse weight between 0.01 and 100. Select a unit of measurement.
(E)	[Save]/[Back]	After completing the setting, tap [Save] . To cancel the setting, tap [Back] .

Note

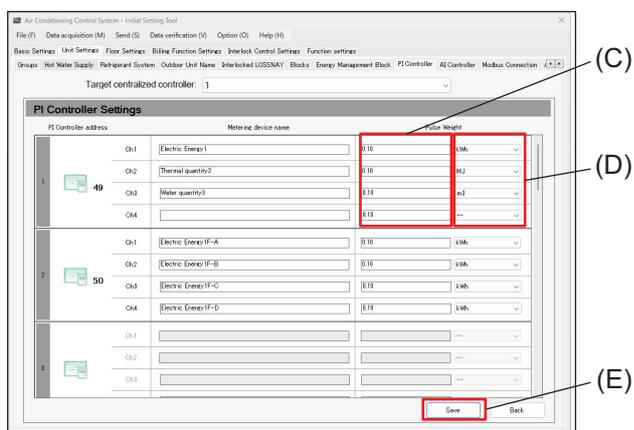
- Metering device names can be up to 20 characters in length. (Recommended name length is 12 characters or less.)
However, the following characters cannot be used. < > & " ' "

[1] Configuring PI controllers



Step

1. Tap **[Unit Settings] - [PI Controller]** to display the PI Controller Settings screen.
2. Tap (A) to display (a).
3. Select the addresses of PI controllers to be registered from (a).
4. Tap **[OK]** in (a) to close (a).
5. Tap (B) to input metering device names for registered channels.
6. Tap (C) to input pulse values.
7. Select the pulse unit from the pull-down list in (D).
8. Tap (E) to save the settings.



Important

- Select a unit of measurement from among [kWh], [m3], [MJ] and [--] (no unit).
- If not using a metering device, select [--] (no unit).

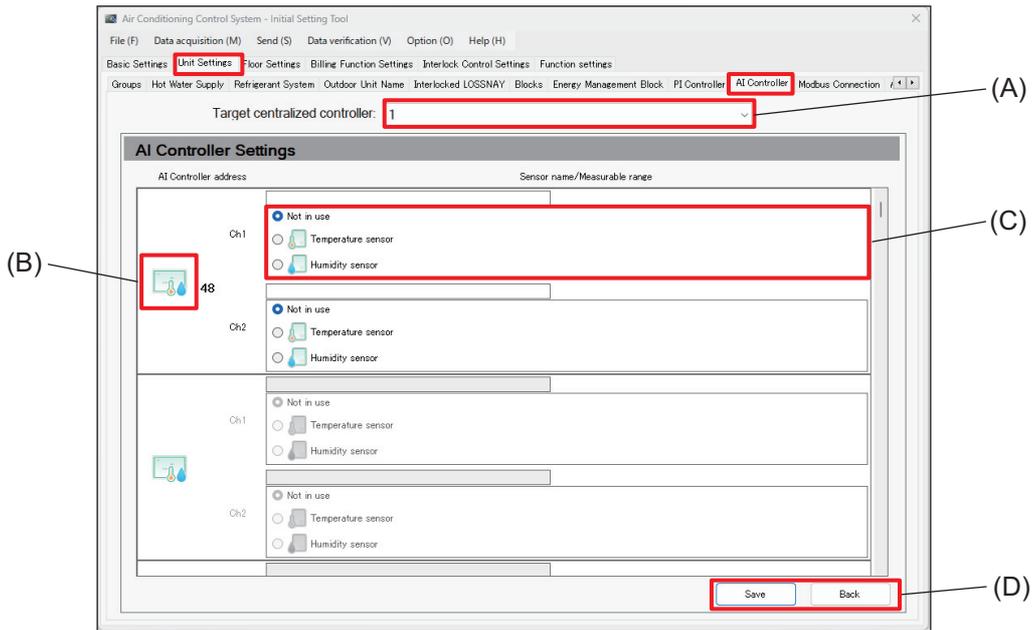
Note

- Metering device names can be up to 20 characters in length. (Recommended name length is 12 characters or less.)
However, the following characters cannot be used. < > & " ' "

16-2-9. Sub menu tab: AI Controller

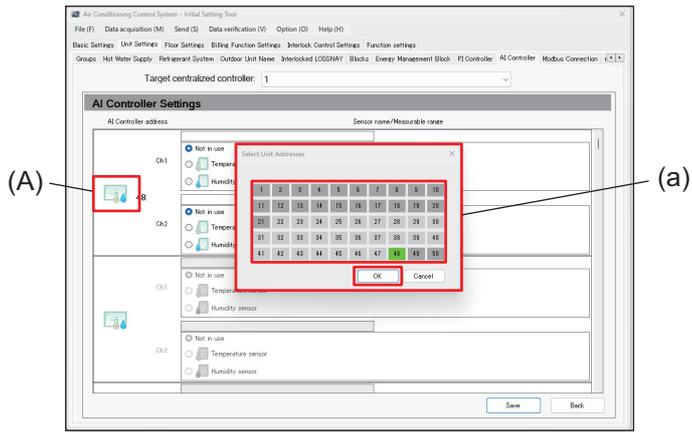
Configure AI controllers (sensors).

Tapping **[Unit Settings]** - **[AI Controller]** will display the AI Controller Settings screen.



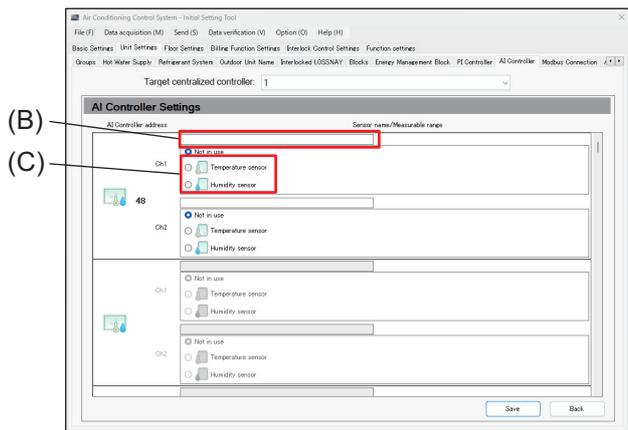
	Item	Function and description
(A)	Target centralized controller	Select the number of the AE-C/EW-C controller from the pull-down list.
(B)	AI Controller address	Select the address numbers of AI controllers (sensors) to be registered.
(C)	Measurable range	Configure the measurement ranges of temperature and humidity sensors, as well as modified values.
(D)	[Save]/[Back]	After completing the setting, tap [Save] . To cancel the setting, tap [Back] .

[1] Configuring AI controllers

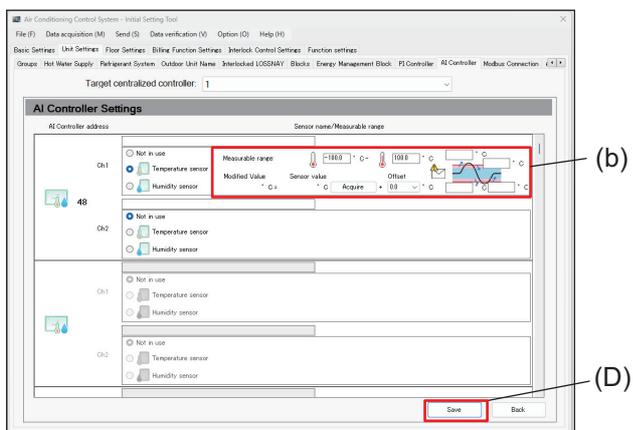


Step

1. Tap **[Unit Settings] - [AI Controller]** to display the AI Controller Settings screen.
2. Tap (A) to display (a).
3. Select the addresses of AI controllers to be registered from (a).
4. Tap **[OK]** in (a) to close (a).



5. Tap (B) to input the sensor name.
6. Select the sensor to be used in (C) to display the measurement range input screen (b).

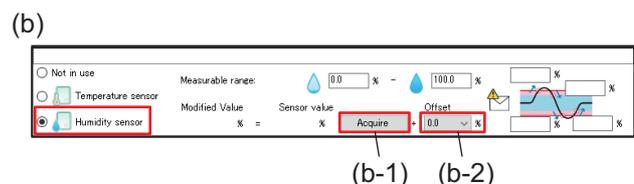
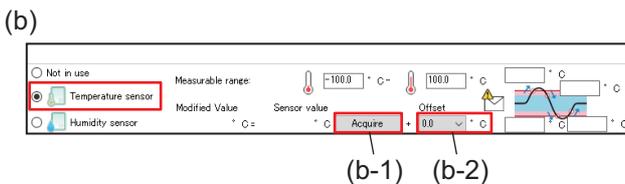


7. Configure the contents of (b).
8. Tap (D) to save the settings.

Input upper and lower limits for the measurement range on the measurement range input screen (b).

If a temperature sensor is selected

If a humidity sensor is selected

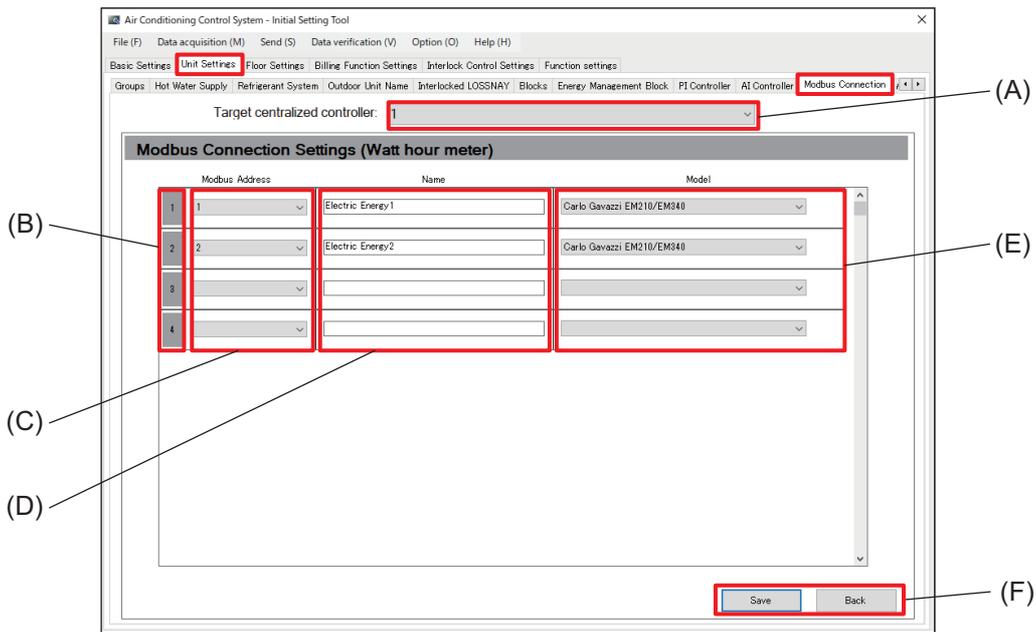


	Item	Function and description
(b-1)	[Acquire]	The ID and password input screen opens. Once authenticated, sensor values will be acquired and measurement values are displayed.
(b-2)	Offset	Select an offset from the pull-down list. The selection will be reflected to modified values.

16-2-10. Sub menu tab: Modbus Connection

Configure connections with Modbus units.

Tapping **[Unit Settings]** - **[Modbus Connection]** will display the Modbus Connection Settings screen.



	Item	Function and description
(A)	Target centralized controller	Select the number of the AE-C/EW-C controller from the pull-down list.
(B)	Modbus number	Modbus numbers are displayed.
(C)	Modbus Address	Select the addresses of Modbus units.
(D)	Name	Enter the names of Modbus units.
(E)	Model	Select a watt-hour meter capable of communicating with the Modbus from the pull-down list.
(F)	[Save]/[Back]	After completing the setting, tap [Save] . To cancel the setting, tap [Back] .

Note

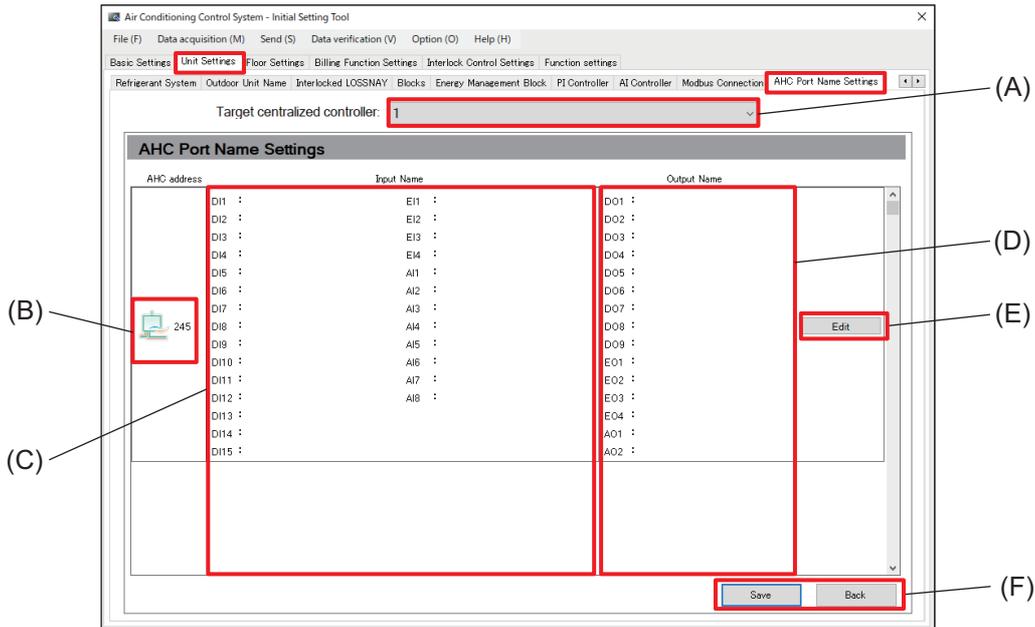
- Modbus unit names can be up to 20 characters in length. (Recommended name length is 12 characters or less.)
However, the following characters cannot be used. < > & " ' "

MEMO

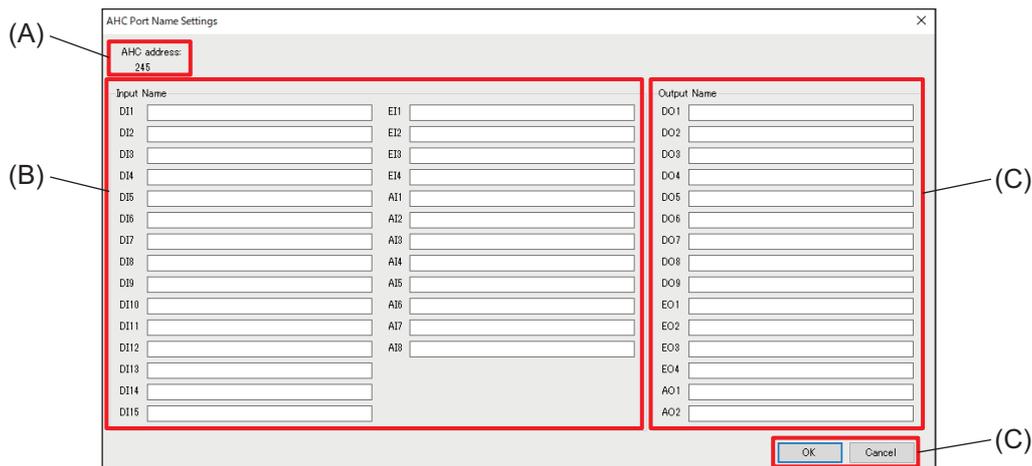
16-2-11. Sub menu tab: AHC Port Name Settings

Set the name of the AHC port.

Tapping **[Unit Settings]** - **[AHC Port Name Settings]** will display the AHC Port Name Settings screen.



	Item	Function and description
(A)	Target centralized controller	Select the number of the AE-C/EW-C controller from the pull-down list.
(B)	AHC address	The addresses of AHC ports configured on the Group Settings screen are displayed in ascending order.
(C)	Input Name	The input names of AHC ports configured on the AHC Port Name Settings screen are displayed.
(D)	Output Name	The output names of AHC ports configured on the AHC Port Name Settings screen are displayed.
(E)	[Edit]	The AHC Port Name Settings screen is displayed.
(F)	[Save]/[Back]	After completing the setting, tap [Save] . To cancel the setting, tap [Back] .

[1] AHC Port Name Settings screen

	Item	Function and description
(A)	AHC address	The selected AHC address is displayed.
(B)	Input Name	Set input names for AHC ports.
(C)	Output Name	Set output names for AHC ports.
(D)	[OK]/[Cancel]	After completing the setting, tap [OK] . To cancel the setting, tap [Cancel] .

Note

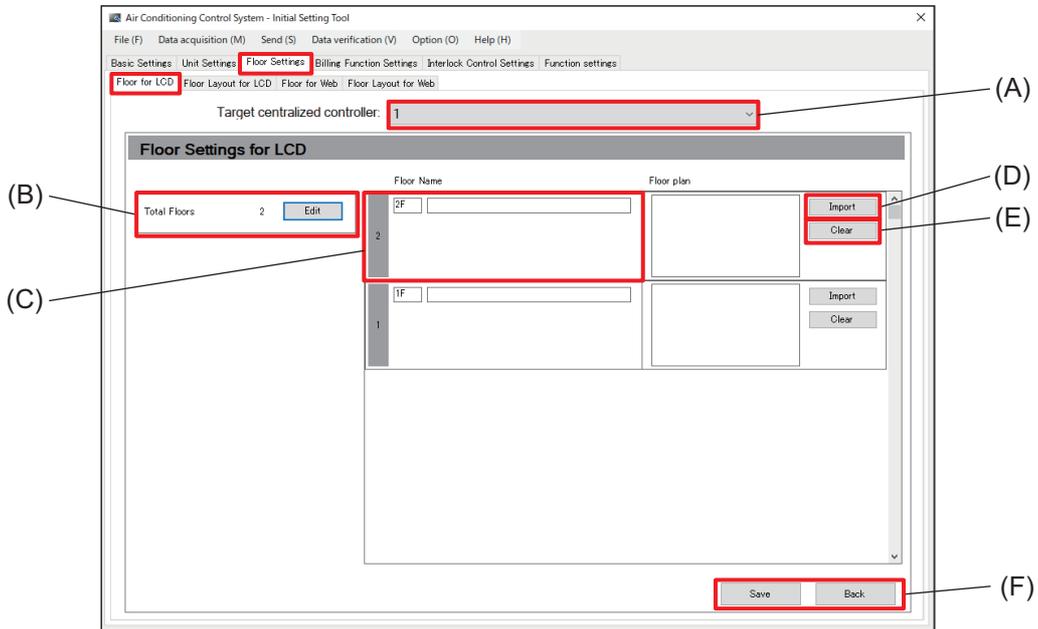
- Input and output names can be up to 20 characters in length. (Recommended name length is 12 characters or less.)
However, the following characters cannot be used. < > & " ' "

16-3. Menu tab: Floor Settings

16-3-1. Sub menu tab: Floor for LCD

Configure the floor layout displayed on the LCD screen.

Tapping **[Floor Settings]** - **[Floor for LCD]** will display the Floor Settings for LCD screen.



	Item	Function and description
(A)	Target centralized controller	Select the number of the AE-C/EW-C controller from the pull-down list.
(B)	Total Floors	Set the total number of floors for the target site.
(C)	Floor Name	Set the floor number and floor name.
(D)	[Import]	Import an image file of the floor plan displayed on the floor layout.
(E)	[Clear]	Delete the imported floor plan.
(F)	[Save]/[Back]	After completing the setting, tap [Save] . To cancel the setting, tap [Back] .

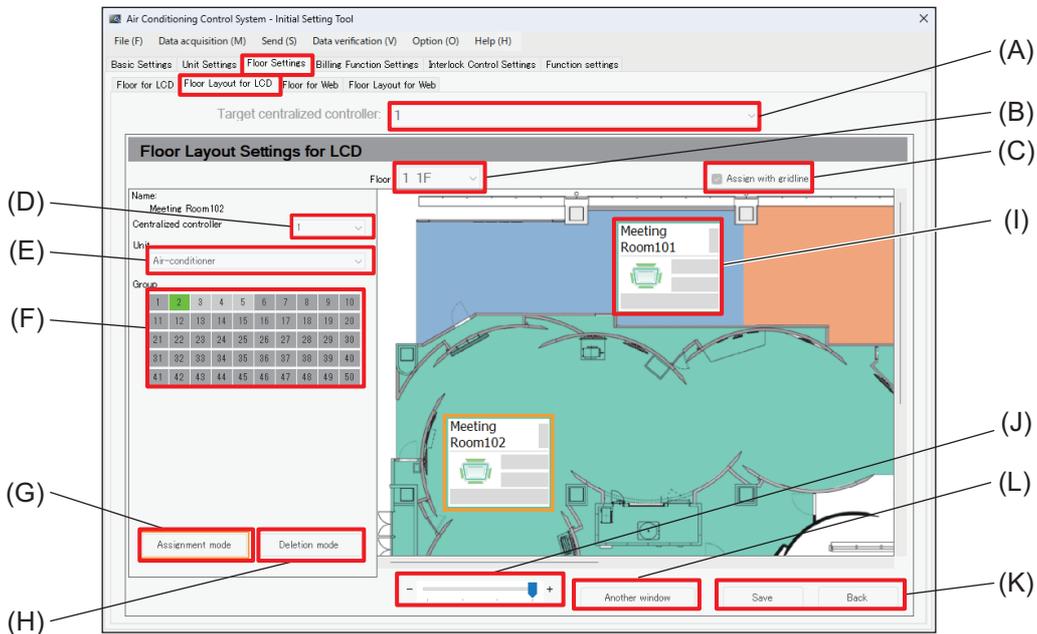
Note

- Image file of floor layout can be imported on one AE-C/EW-C and connect to this AE-C/EW-C via Web browser.

16-3-2. Sub menu tab: Floor Layout for LCD

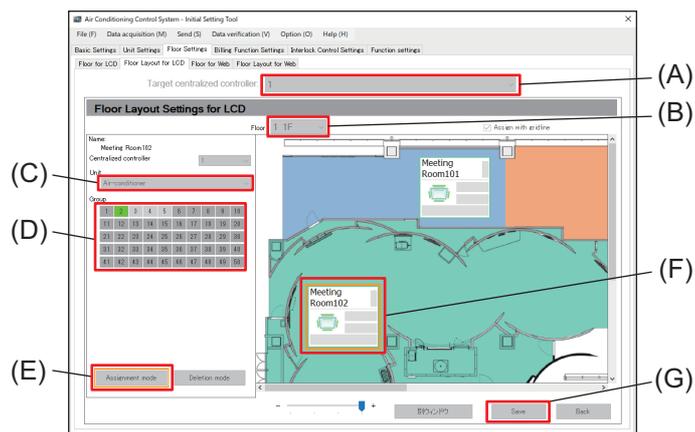
Icons for air conditioning units and other units can be assigned on the floor layout configured using Floor Settings for LCD.

Tapping **[Floor Settings]** - **[Floor Layout for LCD]** will display the Floor Layout Settings for LCD screen.



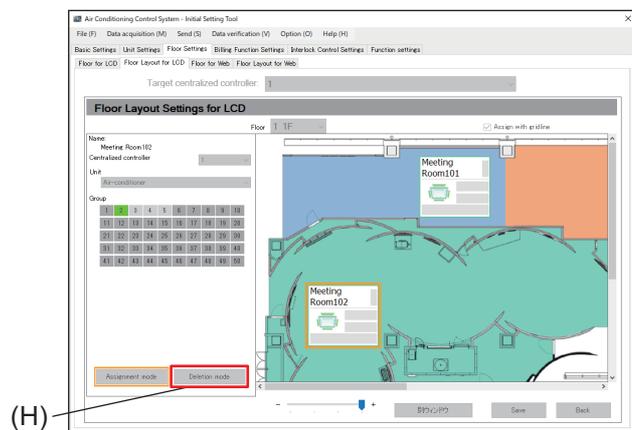
	Item	Function and description
(A)	Target centralized controller	Select the number of the AE-C/EW-C controller from the pull-down list.
(B)	Floor	Select the floor to be displayed.
(C)	Assign with gridline	When a check is entered here, group icons will be placed at regular intervals.
(D)	Centralized controller	Select the AE-C/EW-C to which the icon to be assigned to the floor layout belongs.
(E)	Unit	Select a unit type.
(F)	Group	Select a group.
(G)	[Assignment mode]	Unit icons are displayed on the floor plan.
(H)	[Deletion mode]	Unit icons selected on the floor plan are deleted.
(I)	Unit icon	Icons assigned to the floor plan are displayed.
(J)	Zoom in/out	The floor plan image is zoomed in or out.
(K)	[Save]/[Back]	After completing the setting, tap [Save] . To cancel the setting, tap [Back] .
(L)	Another window	Another window for configuring settings will open.

[1] Configuring floor layouts for LCD



Step

1. Tap **[Floor Settings] - [Floor Layout for LCD]** to display the Floor Layout Settings for LCD screen.
2. Select the number of the AE-C/EW-C to be configured from the pull-down list in (A).
 - The number of the AE-C/EW-C to be configured is the number shown on the Connection Settings screen.
 - The names displayed are the settings/names of the unit configured using Basic System Settings.
3. Select a floor from the pull-down list in (B).
4. Tap (E) to start the Assignment mode.
5. Select a unit from the pull-down list in (C).
6. Select a unit group from among those shown in (D).
7. Assign unit icons (F) on the floor plan.
8. Tap (G) to save the settings.



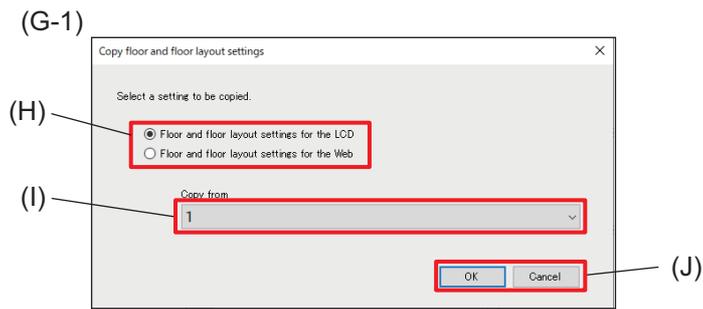
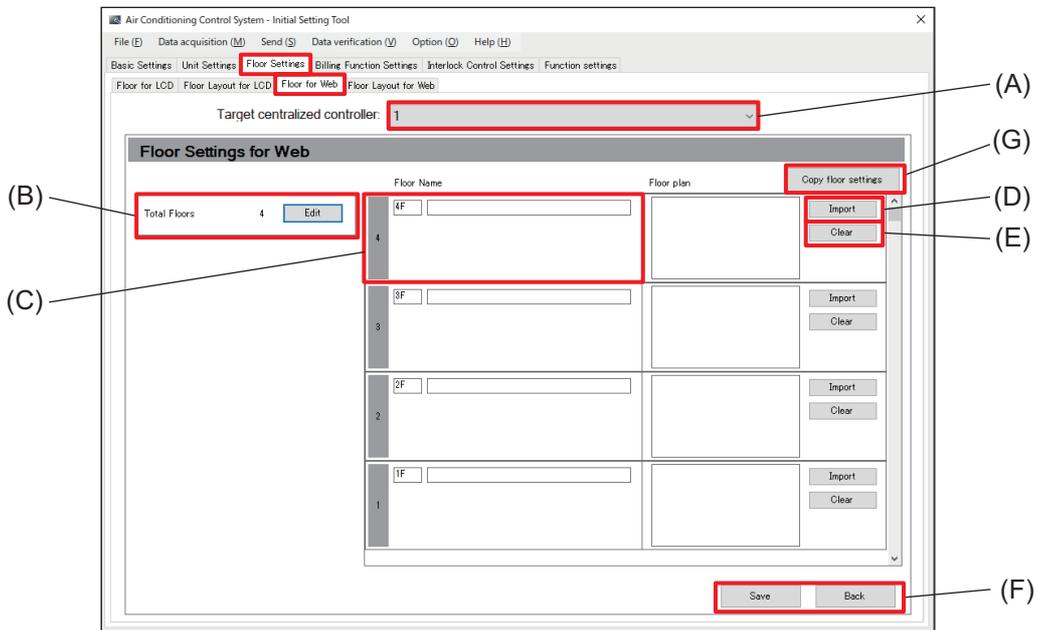
To cancel the assignment, tap (H) and then tap the unit icon to be deleted.

16-3-3. Sub menu tab: Floor for Web

Configure the floor layout displayed on the Web.

Tapping **[Floor Settings]** - **[Floor for Web]** will display the Floor Settings for Web screen.

Floor Settings for Web can be configured using the same procedure as that for Floor Settings for LCD.



	Item	Function and description
(A) to (F)		Same as those of Floor Settings for LCD.
(G)	[Copy floor settings]	Tapping this item displays the screen for copying floor settings (G-1).
(G-1)	Copy floor and floor layout settings	
(H)	Select a setting to be copied	Select the floor settings to be copied.
(I)	Copy from	Select the AE-C/EW-C floor settings to be copied from the pull-down list.
(J)	[OK]/[Cancel]	After completing the setting, tap [OK] . To cancel the setting, tap [Cancel] .

Note

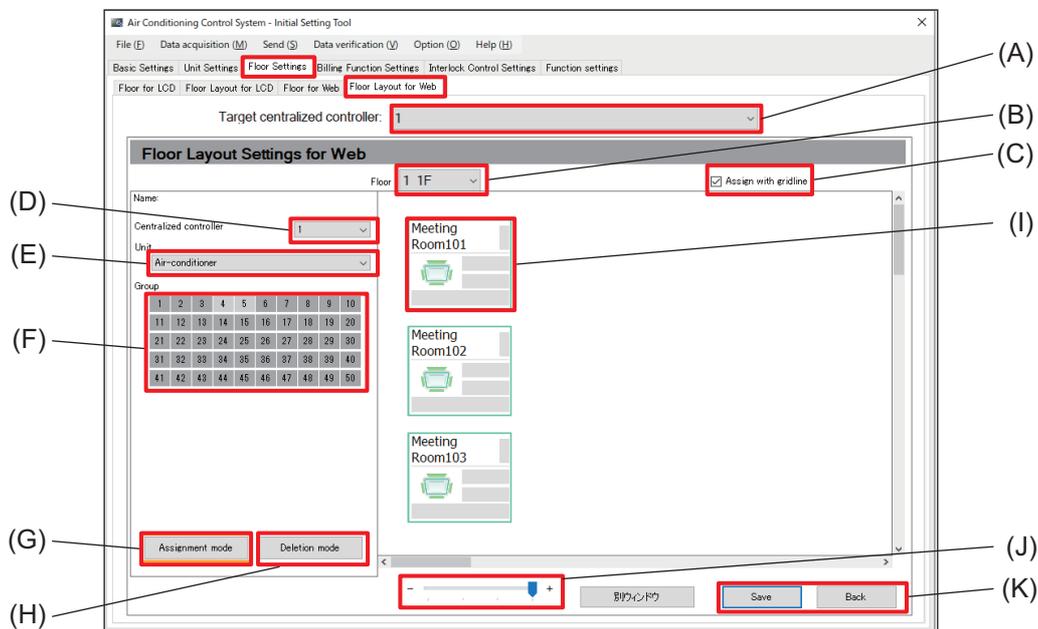
- A maximum of 40 total floors can be entered.

16-3-4. Sub menu tab: Floor Layout for Web

Icons for air conditioning units and other units can be assigned on the floor layout configured using Floor Settings for Web.

Tapping **[Floor Settings]** - **[Floor Layout for Web]** will display the Floor Layout Settings for Web screen.

Floor Layout Settings for Web can be configured using the same procedure as that for Floor Layout Settings for LCD.



	Item	Function and description
(A) to (L)		Same as those of Floor Layout Settings for LCD.

16-4. Menu tab: Billing Function Settings

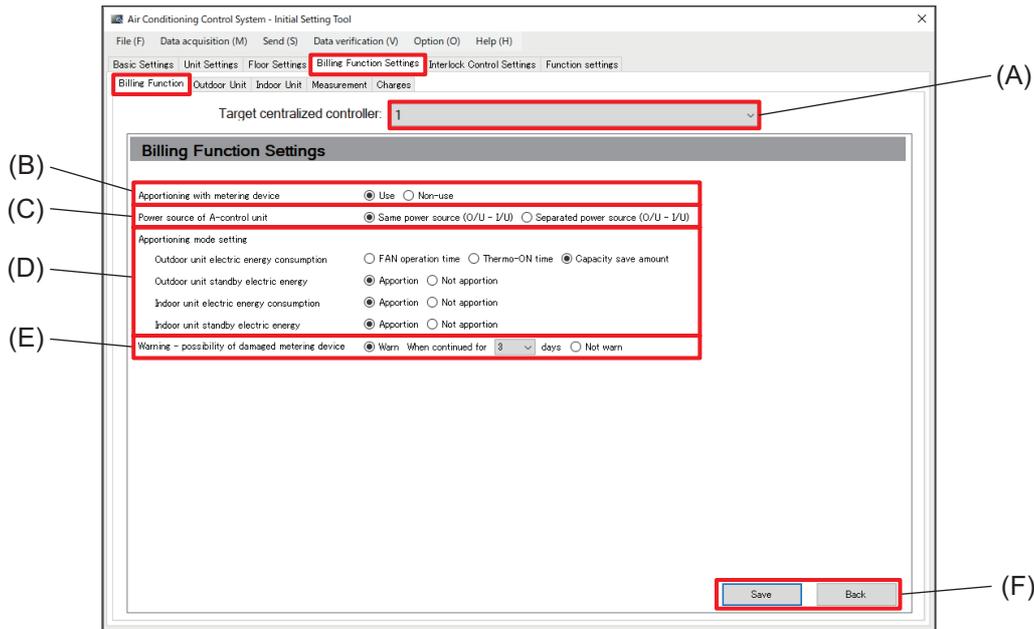
This section explains how to configure billing function settings using the Initial Setting Tool.

16-4-1. Sub menu tab: Billing Function

These settings are for calculating charges using the apportioned electricity billing function.

- On the Control Target Settings screen, put a check mark for **[Use the billing function]**.
- Each AE-C/EW-C must be configured individually if there are multiple AE-C/EW-C using the apportioned electricity billing function.

Tapping **[Billing Function Settings]** - **[Billing Function]** will display the Billing Function Settings screen.

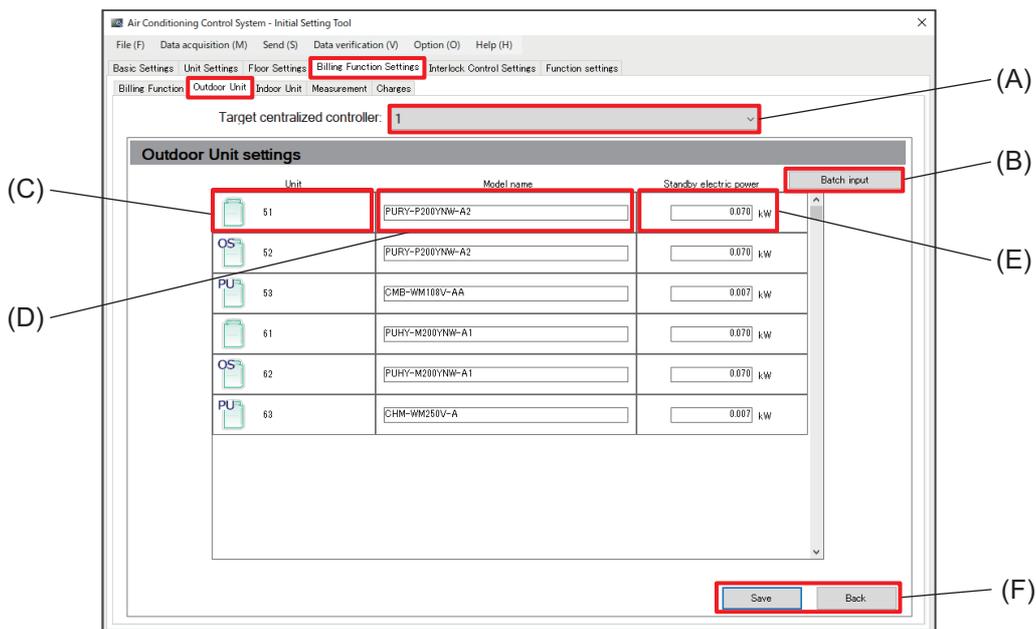


	Item	Function and description
(A)	Target centralized controller	Select the number of the AE-C/EW-C controller from the pull-down list.
(B)	Apportioning with metering device	Select whether metering devices are connected or not.
(C)	Power source of A-control unit	Select the power source setting for outdoor and indoor units that are A-control units. <ul style="list-style-type: none"> • A selection can be made when "Apportioning with metering device" (B) is set to [Use].
(D)	Apportioning mode setting	Set the apportioning mode when using an outdoor unit (electric energy consumption and standby electric power) and an indoor unit (electric energy consumption and standby electric power). <ul style="list-style-type: none"> • One of the following selections can be made when "Apportioning with metering device" (B) is set to [Use]. Outdoor unit (Standby electric power) Outdoor unit (electric energy consumption and standby electric power)
(E)	Warning - possibility of damaged metering device	Set the number of days until the warning for predicted metering device damage is displayed, and whether to warn or not warn. <ul style="list-style-type: none"> • A selection can be made when "Apportioning with metering device" (B) is set to [Use].
(F)	[Save]/[Back]	After completing the setting, tap [Save] . To cancel the setting, tap [Back] .

16-4-2. Sub menu tab: Outdoor Unit

Set the standby electric power of connected outdoor units.

Tapping **[Billing Function Settings]** - **[Outdoor Unit]** will display the Outdoor Unit settings screen.

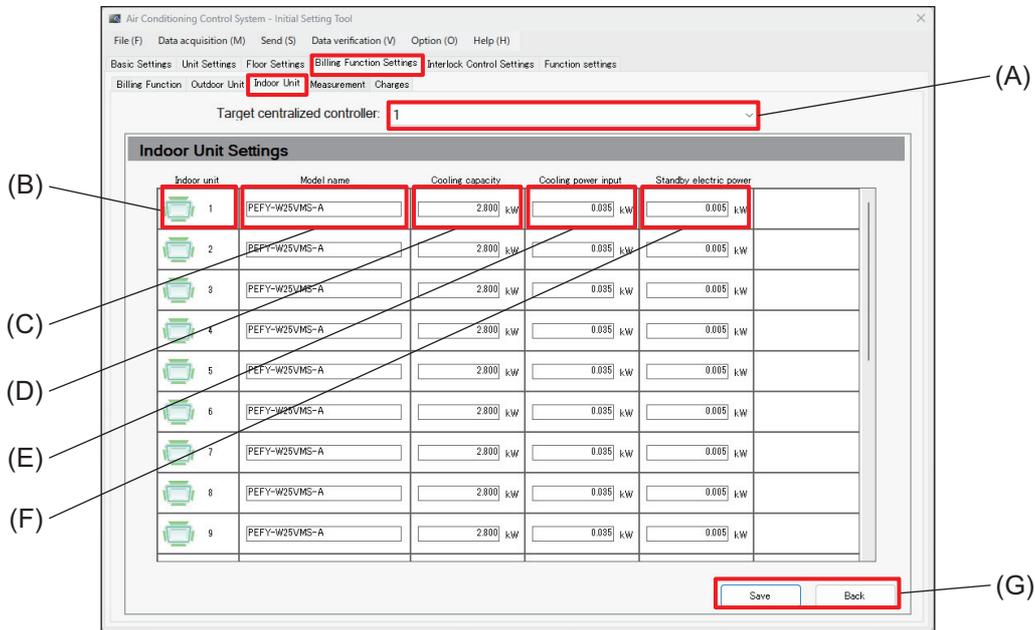


	Item	Function and description
(A)	Target centralized controller	Select the number of the AE-C/EW-C controller from the pull-down list.
(B)	[Batch input]	Set the model names of outdoor units all at once.
(C)	Unit	Outdoor units and sub outdoor units configured in the Refrigeration System Settings are displayed.
(D)	Model name	Set the model names of outdoor units.
(E)	Standby electric power	Set the standby electric power of outdoor units.
(F)	[Save]/[Back]	After completing the setting, tap [Save] . To cancel the setting, tap [Back] .

16-4-3. Sub menu tab: Indoor Unit

Set the cooling capacity, cooling power input, and standby electric power of connected indoor units. These settings are also necessary when "Indoor unit electric energy consumption" is set to **[Not apportion]** under "Sub menu tab: Billing Function."

Tapping **[Billing Function Settings] - [Indoor Unit]** will display the Indoor Unit Settings screen.



	Item	Function and description
(A)	Target centralized controller	Select the number of the AE-C/EW-C controller from the pull-down list.
(B)	Indoor unit	Indoor units configured in the Refrigeration System Settings are displayed.
(C)	Model name	Set the model names of indoor units.
(D)	Cooling capacity	Enter the cooling capacity of indoor units.
(E)	Cooling power input	Enter the cooling power input of indoor units.
(F)	Standby electric power	Enter the standby electric power of indoor units.
(G)	[Save]/[Back]	After completing the setting, tap [Save] . To cancel the setting, tap [Back] .

[1] Manual input

Check the catalog of the indoor units and enter the Cooling capacity (D), Cooling power input (E), and Standby electric power (F).

Ceiling cassette type **R410A** 4-way airflow type **PLFY-M VEM6-E**

		PLFY-M20VEM6-E	PLFY-M25VEM6-E	
Power source				1-phase 220V
Cooling capacity (Nominal)	*1 kW	2.2	2.8	
	*1 BTU/h	7,500	9,600	
Power input	kW	0.03	0.03	
	A	0.31	0.31	
Heating capacity (Nominal)	*2 kW	2.5	3.2	
	*2 BTU/h	8,500	10,900	
Power input	kW	0.03	0.03	
	A	0.24	0.24	
External finish				
External dimension HxWxD	mm	258 x 840		
	in.	10-3/16 x 33-3/8		
Net weight	kg (lbs)	19 (42)	19 (42)	
	Grille model	PLP-6EA	PLP-6EA	
External finish				
Dimension H x W x D	mm			
	in.			
Net weight	kg (lbs)			
	Heat exchanger			
FAN		Turbo fan x 1		Cross flow fan x 1
External static press.	Type x Quantity	0		0
	Pa	0		0
Motor Type	mmH ₂ O	0		0
	Motor output	0.050		0.050
Driving mechanism				
Air flow rate (l/s) (ft ³ /min)	m ³ /min	12 - 13 - 14 - 15		12 - 13 - 14 - 15

ex.) The following values are used in the case of PLFY-M25VEM6-E shown in the table to the left.

Cooling capacity: 2.8 kW

Cooling power input: 0.03 kW

Step

1. Enter the cooling capacity (kW) of the indoor unit in Cooling capacity (D).
2. Enter the cooling power input (kW) of the indoor unit in Cooling power input (E).
3. Enter the standby electric power (kW) of the indoor unit in Standby electric power (F).

Note

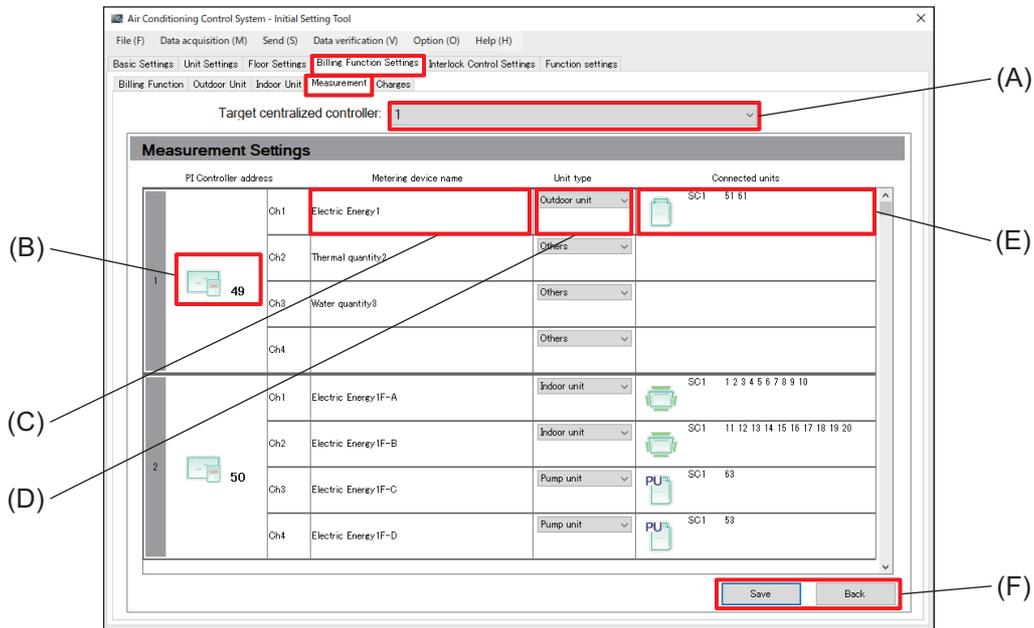
- When using a LOSSNAY unit, Cooling capacity (D) cannot be entered.
- Set the Cooling capacity (D) of the indoor unit to between 0 and 999.999 kW.
- Set the Cooling power input (E) of the indoor unit to between 0 and 999.999 kW.
- Set the Standby electric power (F) of the indoor unit to between 0 to 1.000 kW.

16-4-4. Sub menu tab: Measurement

Configure settings for the watt-hour meter and indoor/outdoor units required for using the apportioned electricity billing function.

These settings are not necessary when "Apportioning with metering device" is set to **[Non-use]** under "Sub menu tab: Billing Function."

Tapping **[Billing Function Settings] - [Measurement]** will display the Measurement Settings screen.

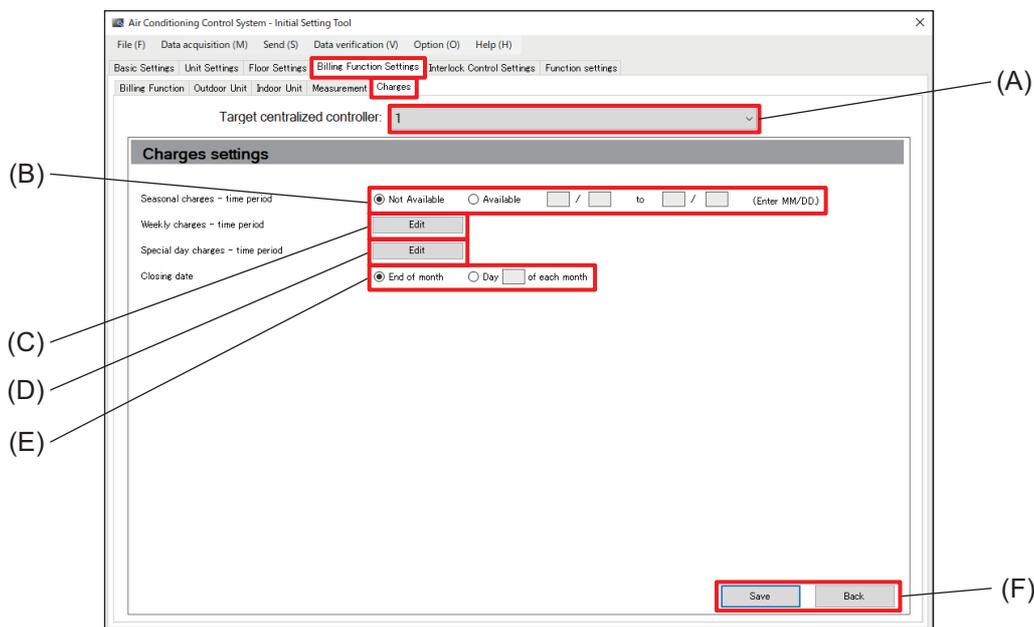


	Item	Function and description
(A)	Target centralized controller	Select the number of the AE-C/EW-C controller from the pull-down list.
(B)	PI Controller address	Addresses of connected PI controllers are displayed.
(C)	Metering device name	Names of metering devices connected to each channel of the PI controller are displayed.
(D)	Unit type	Select the models of the units connected to each channel of the PI controller.
(E)	Connected units	The selection screen for unit addresses is displayed.
(F)	[Save]/[Back]	After completing the setting, tap [Save] . To cancel the setting, tap [Back] .

16-4-5. Sub menu tab: Charges

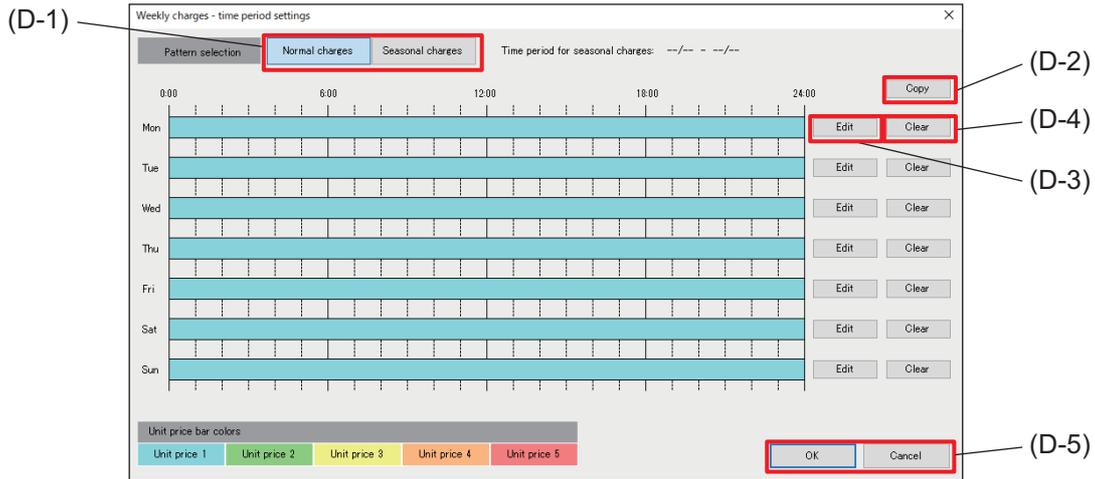
Configure the applicable electricity charges and time period for using the apportioned electricity billing function.

Tapping **[Billing Function Settings]** - **[Charges]** will display the Charges settings screen.

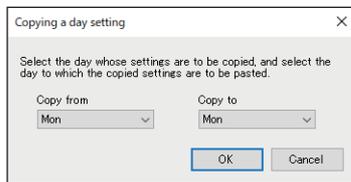


	Item	Function and description
(A)	Target centralized controller	Select the number of the AE-C/EW-C controller from the pull-down list.
(B)	Seasonal charges - time period	Select whether to enable a time period for seasonal charges. If enabled, set the validity period.
(C)	Weekly charges - time period	Set this item when using weekly charges or seasonal charges. Tapping [Edit] will display the Weekly charges - time period settings screen.
(D)	Special day charges - time period	Set this item when using special day charges. Tapping [Edit] will display the Special day settings screen.
(E)	Closing date	Set the closing date. If selecting each month, specify a date.
(F)	[Save]/[Back]	After completing the setting, tap [Save] . To cancel the setting, tap [Back] .

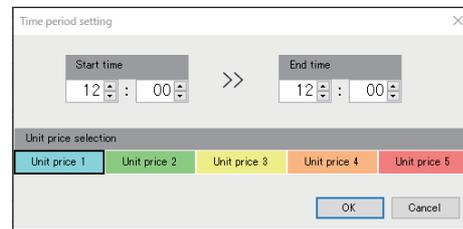
[1] Weekly charges - time period settings screen



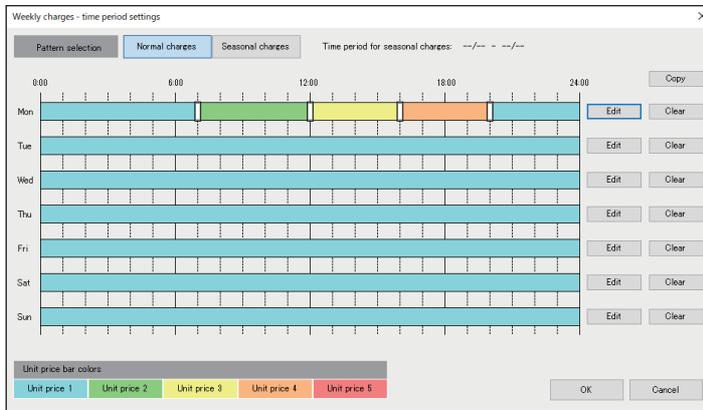
(a)



(b)



Example setting

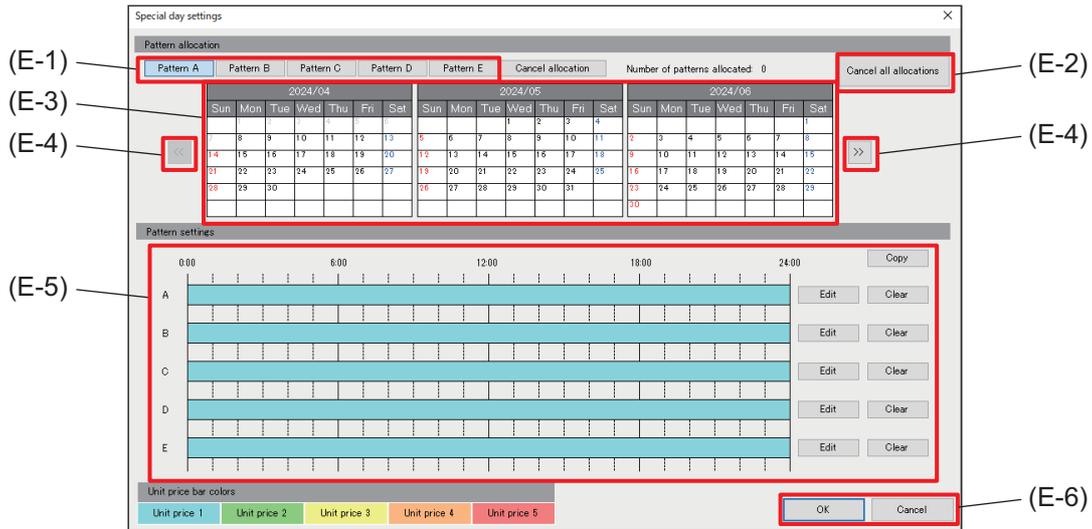


Monday

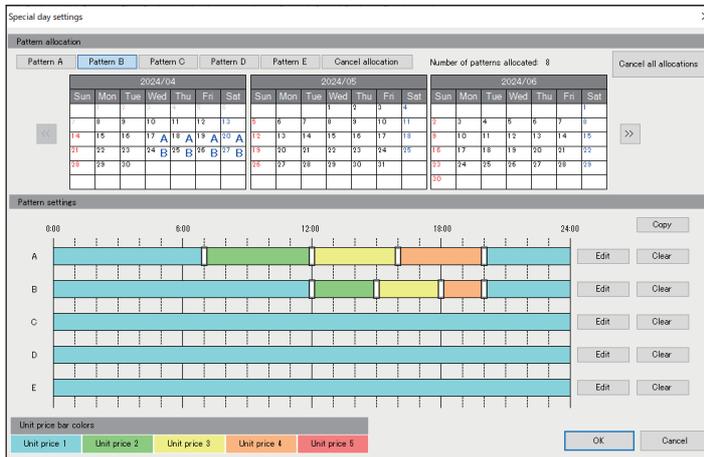
- Unit price 1: Default setting
- Unit price 2: 7:00 to 12:00
- Unit price 3: 12:00 to 16:00
- Unit price 4: 16:00 to 20:00

	Item	Function and description
(D-1)	Pattern selection	Select [Normal charges] or [Seasonal charges] .
(D-2)	[Copy]	Copy the time period for which the unit price applies. Tapping this button displays (a). Set "Copy from" and "Copy to" and tap [OK] .
(D-3)	[Edit]	Set the time period for which the unit price applies. Tapping this button displays (b). Select the unit price and tap [OK] after setting the "Start time" and "End time."
(D-4)	[Clear]	Clear the set time period for which the unit price applies.
(D-5)	[OK]/[Cancel]	After completing the setting, tap [OK] . To cancel the setting, tap [Cancel] .

[2] Special day settings screen



Example setting



June 8 to 11: Pattern A
June 15 to 18: Pattern B

Pattern A
Unit price 1: Default setting
Unit price 2: 7:00 to 12:00
Unit price 3: 12:00 to 16:00
Unit price 4: 16:00 to 20:00

Pattern B
Unit price 1: Default setting
Unit price 2: 12:00 to 15:00
Unit price 3: 15:00 to 18:00
Unit price 4: 18:00 to 20:00

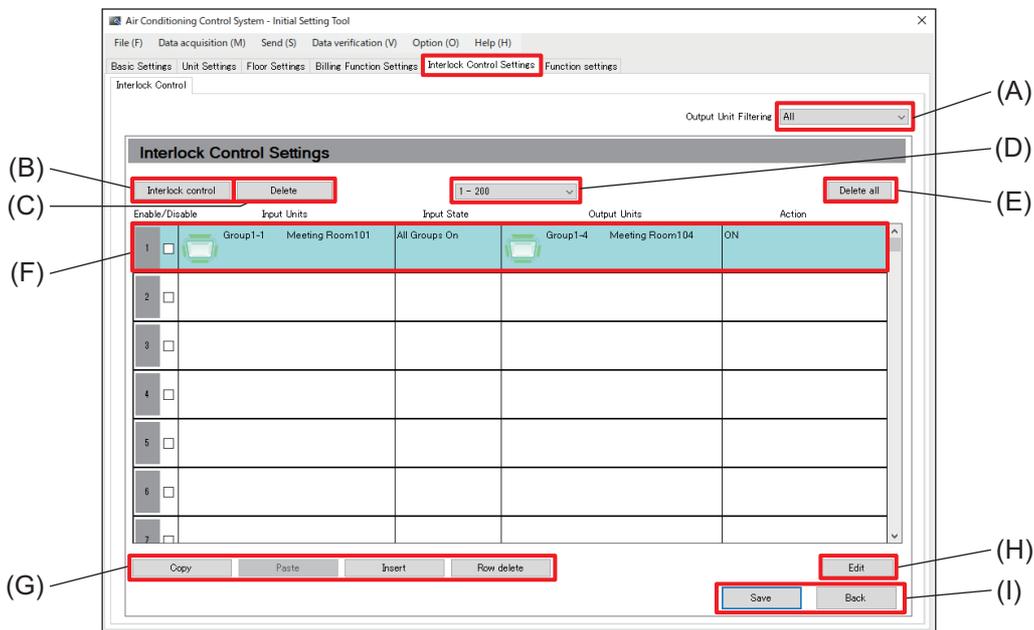
	Item	Function and description
(E-1)	Pattern selection	Select the special day charges setting pattern to be assigned to the calendar. Selecting "Cancel allocation" will deselect the allocated pattern.
(E-2)	[Cancel all allocations]	Delete all special day settings.
(E-3)	Calendar	Assign a special day settings pattern. Tapping a date sets the selected pattern.
(E-4)	[<<], [>>]	Move the calendar month forward or backward.
(E-5)	Pattern settings	Configure the unit price time periods for patterns. Make settings in the same manner as using (D-2) to (D-4) on the "Weekly charges - time period settings screen."
(E-6)	[OK]/[Cancel]	After completing the setting, tap [OK] . To cancel the setting, tap [Cancel] .

16-5. Menu tab: Interlock Control Settings

16-5-1. Sub menu tab: Interlock Control

Set interlock control to operate multiple units in tandem.

Tapping **[Interlock Control Settings]** will display the Interlock Control Settings screen.



	Item	Function and description
(A)	Output Unit Filtering	Select the centralized controller for which interlock control settings are to be made from among the centralized controllers whose connections have been configured.
(B)	[Interlock control]	Tap this button to set whether to enable/disable interlock control.
(C)	[Delete]	Tap this button to delete the centralized controller settings that execute interlock control.
(D)	Page navigation	Use this item to change the page showing interlock control settings.
(E)	[Delete all]	Tap this button to delete all interlock control settings.
(F)	Control settings	Individual settings are displayed.
(G)	Edit buttons	Tap these buttons to copy, paste, insert or delete rows of interlock control conditions.
(H)	[Edit]	Tap this button to display the Interlock Control screen.
(I)	[Save]/[Back]	After completing the setting, tap [Save] . To cancel the setting, tap [Back] .

Note

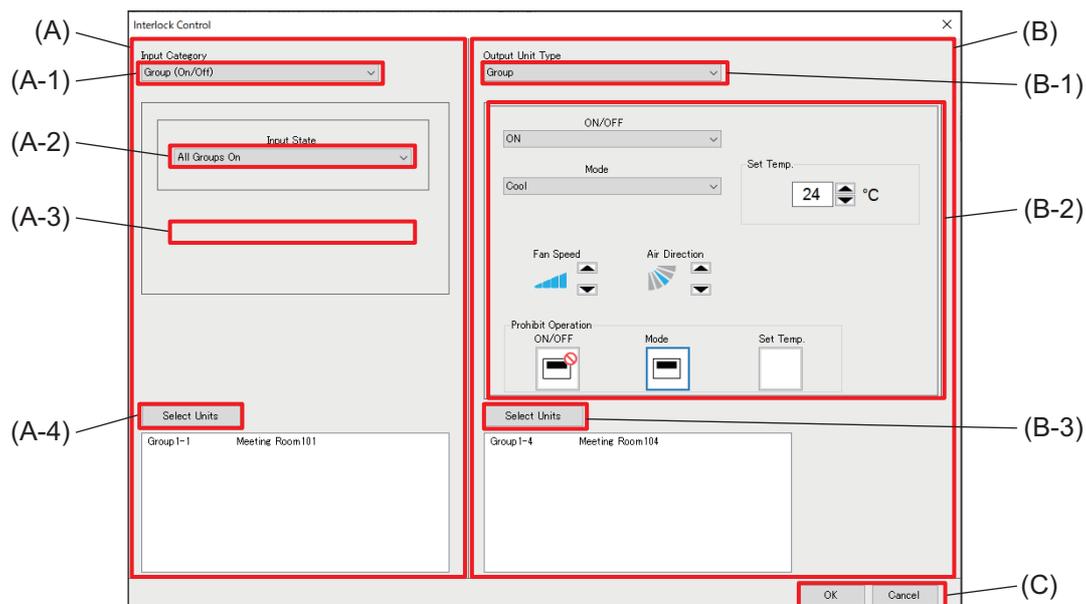
Interlock control may not work properly outside the control range.

ex.) When Unit 2 does not support the Auto mode, the following interlock control does not work.

- Once Unit 1 starts operating, Unit 2 will start in the Auto mode.
- When Unit 2 enters the Auto mode, Unit 1 will start operating.

Important

- After making interlock control settings, check that the interlock control work properly according to the settings you made.

[1] Interlock Control screen

	Item	Function and description
(A)	Interlock control source configuration area	
(A-1)	Input Category	Select an interlock source from the pull-down list.
(A-2)	Input State	Select an interlock condition from the pull-down list.
(A-3)	Mode	Select a mode from the pull-down list.
(A-4)	[Select Units]	The screen for selecting interlock source units is displayed.
(B)	Interlock control target configuration area	
(B-1)	Output Unit Type	Select the interlocked unit category from the pull-down list.
(B-2)	Interlock actions	Select the operation details to be sent to the interlocked units.
(B-3)	[Select Units]	The screen for selecting interlocked units is displayed.
(C)	[OK]/[Cancel]	After completing the setting, tap [OK] . To cancel the setting, tap [Cancel] .

(1) Configuring interlock conditions

Set the interlock source category and interlock conditions.

Refer to the table below to select the Input Category, Input State, and Mode.

Input Category	Input State	Mode	
Group (On/Off)	All Groups On All Groups Off One or more Groups On One or more Groups Off	—	
Group (Mode)	All groups in the mode All groups out of the mode One or more groups in the mode One or more groups out of the mode	Air conditioning unit group, ventilating unit (OA handling unit)	Cool, Dry, Fan, Heat, Auto
		Ventilation group (LOSSNAY)	Bypass, Heat Recovery, Auto
Group (Error/Normal)	All units in error All units in normal operation One or more units in error One or more units in normal operation	—	
Free contacts (ON/OFF)	All Units On All Units Off One or more Units On One or more Units Off	—	
Outdoor unit (Defrost operation)	All Units Defrost On All Units Defrost Off One or more Units Defrost On One or more Units Defrost Off	—	

(2) Configuring interlock actions

Configure interlocked unit types and interlock conditions.

Refer to the table below to select an interlocked unit type and configure interlock actions.

Input Category	Interlock actions		
	Setting	Setting options	
Group	On/Off	On, Off ^{*1}	
	Mode ^{*2}	Air conditioning unit group, ventilating unit (OA handling unit)	Cool, Dry, Fan, Heat, Auto
		Ventilation group (LOSSNAY)	Bypass, Heat Recovery, Auto
	Set Temp. ^{*2}	Specified temperature	
	Air Direction ^{*2}	Air Direction, Swing, Auto	
	Fan Speed ^{*2}	Fan Speed, Auto	
	Prohibit Remote Controller Operation (ON/OFF)	Permit, Prohibit	
	Prohibit Remote Controller Operation (Mode)	Permit, Prohibit	
	Prohibit Remote Controller Operation (Set Temp.)	Permit, Prohibit	
Free contacts	ON/OFF	ON, OFF	

^{*1} If the interlocked unit is a LOSSNAY group with 24 hour ventilation function or an OA handling unit (direct expansion type with built-in heater/humidifier), setting 24 hour ventilation operation is not possible. Note that if set to OFF, 24 hour ventilation operation will turn OFF by interlock control.

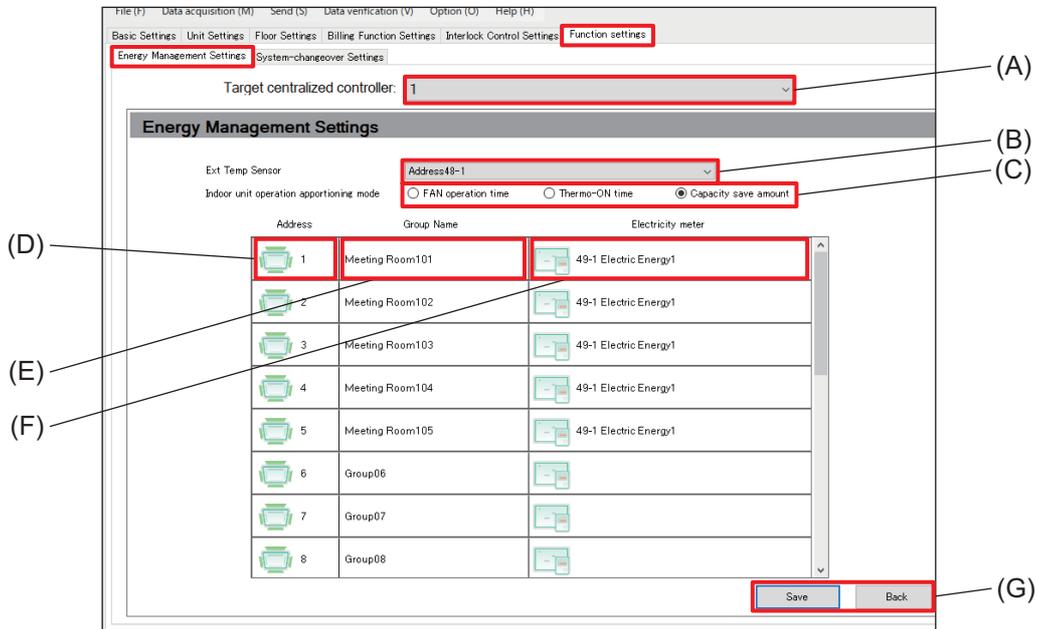
^{*2} Some settings may not be available depending on the models of connected indoor units. When configuring interlock actions, be sure to make settings that are available to the interlocked units.

16-6. Menu tab: Function settings

16-6-1. Sub menu tab: Energy Management Settings

Register external temperature sensors, apportioning modes, and watt-hour meters.

Tapping **[Function settings]** - **[Energy Management Settings]** will display the Energy Management Settings screen.



	Item	Function and description
(A)	Target centralized controller	Select the number of the AE-C/EW-C controller from the pull-down list.
(B)	Ext Temp Sensor	Select the temperature sensor used to measure the external temperature from the pull-down list. The pull-down list shows temperature sensors connected to the AI controller.
(C)	Indoor unit operation apportioning mode	Select the method used to calculate the operation times of indoor units used for apportioning the power consumption displayed on the Energy Management screen.
(D)	Address	The M-NET addresses of the indoor units are displayed.
(E)	Group Name	Group names are displayed.
(F)	Electricity meter	Set the electricity meter to be used for billing.
(G)	[Save]/[Back]	After completing the setting, tap [Save] . To cancel the setting, tap [Back] .

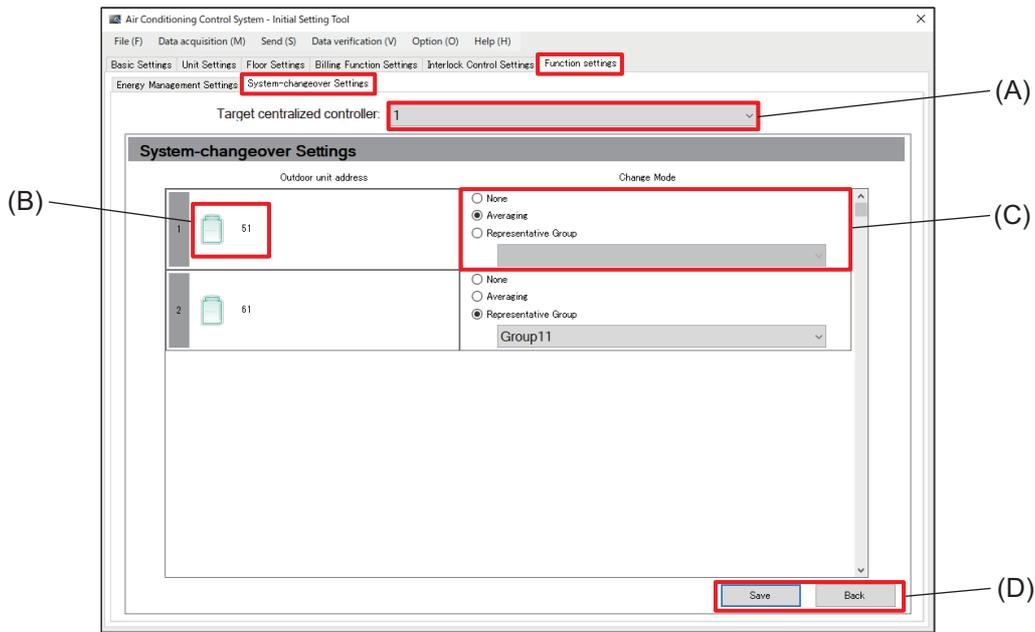
MEMO

16-6-2. Sub menu tab: System-changeover Settings

Configure system-changeover settings. The system-changeover function automatically switches the mode (cooling or heating) of indoor units connected to the same outdoor unit based on the room temperature and set temperature.

The system-changeover function can be used for Y-series outdoor units without the Auto mode. Use this function such as for turning on the heating in the morning and switching to cooling all at once in the afternoon. Because the modes of all indoor units are switched automatically, there is no need to manually switch modes using the remote control.

Tapping **[Function settings]** - **[System-changeover Settings]** will display the System-changeover Settings screen.



	Item	Function and description
(A)	Target centralized controller	Select the number of the AE-C/EW-C controller from the pull-down list.
(B)	Outdoor unit address	The M-NET addresses of the outdoor units are displayed.
(C)	Change Mode	Select the control mode. When selecting "Representative Group," select the representative group from the pull-down list.
(D)	[Save]/[Back]	After completing the setting, tap [Save] . To cancel the setting, tap [Back] .

Step

1. Referring to the following table, select a Change Mode (C).

When selecting "Representative Group," select the representative group from among the groups.

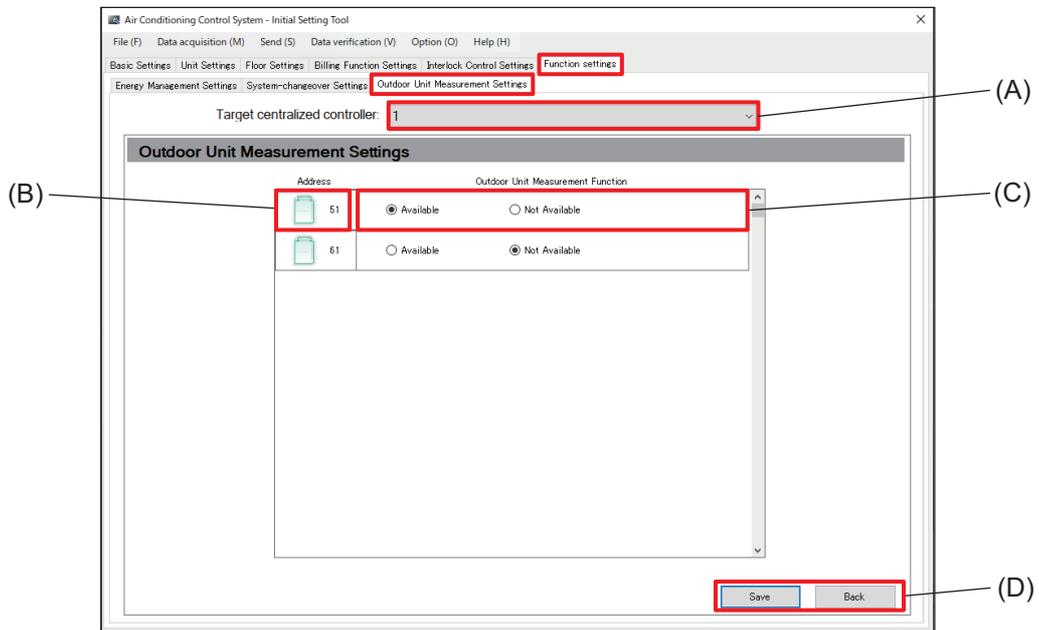
Change Mode	Function and description
None	The system-changeover function is not used.
Averaging	The mode (cooling or heating) is switched by considering the difference between the set temperatures and room temperatures of all indoor groups connected to the outdoor unit, as well as the capacity values of each indoor unit included in the indoor group. <ul style="list-style-type: none"> Modes cannot be switched for groups that are OFF or operating in Fan mode or Auto mode.
Representative Group	The mode (cooling or heating) is switched depending on the difference between the set temperature of the representative group and the room temperature. <ul style="list-style-type: none"> If air conditioning units in the representative group are OFF or operating in Fan mode or Auto mode, the system will be controlled in Averaging mode instead of Representative Group mode.

2. After completing the setting, tap **[Save]** (D).

16-6-3. Sub menu tab: Outdoor Unit Measurement Settings

Register the measurement settings of outdoor units.

Tapping **[Function settings]** - **[Outdoor Unit Measurement Settings]** will display the Outdoor Unit Measurement Settings screen.



	Item	Function and description
(A)	Target centralized controller	Select the number of the AE-C/EW-C controller from the pull-down list.
(B)	Address	The M-NET addresses of the outdoor units are displayed.
(C)	Outdoor Unit Measurement Function	Select to enable or disable the function.
(D)	[Save]/[Back]	After completing the setting, tap [Save] . To cancel the setting, tap [Back] .

MEMO

17. Initial settings (supplementary information)

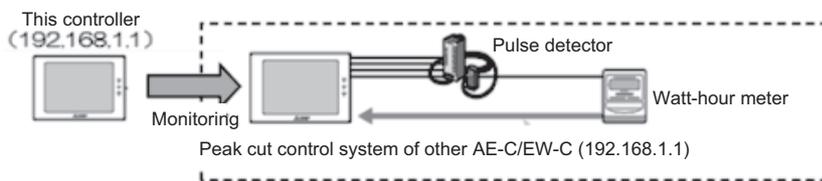
17-1. Input method for peak cut control

To use the peak cut control, power pulses or demand levels need to be input to the controller.

	Peak cut control method	Remarks
1	External contact input (Input image) 	A method in which control level signals from the demand controller are directly input to the controller.
2	Modbus watt-hour meter (Input image) 	A method in which the amount of electric energy is directly input from a Modbus (RS-485) watt-hour meter to the controller.
3	PI controller input (Input image) 	A method in which power pulses are input to a PI controller and the controller predicts the control level.

When the above inputs are made to other AE-C/EW-C controllers connected via LAN, their peak cut control levels can be referenced.

(Input image)



17-1-1. Settings for peak cut control method (energy-save control)

For energy-save control, the control level is determined from the demand level and electric energy value according to the selected peak cut method, and the outdoor/indoor units are operated at the capacity appropriate to the control level.

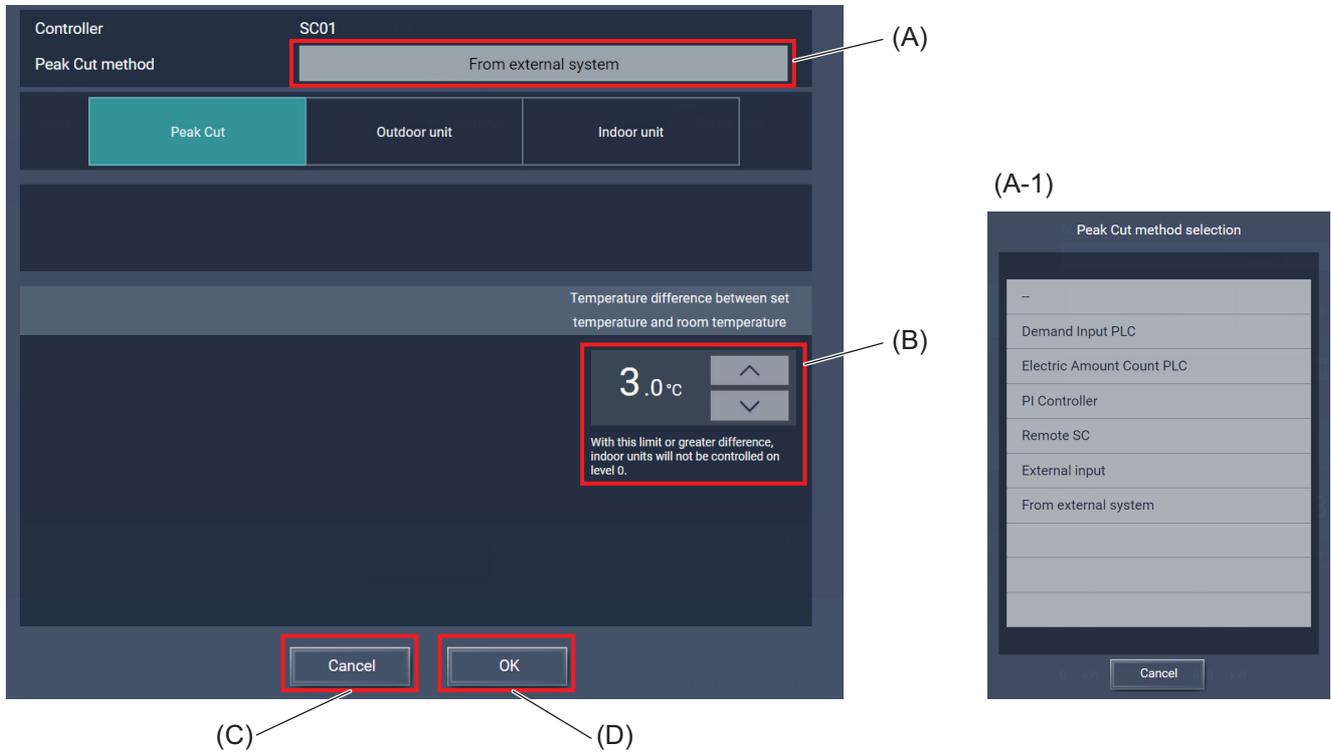
Tap **[Settings]** on the operation management screen and then tap **[Function]** to display the function settings screen. Tap **[Peak Cut]** to display the peak cut settings screen.



	Item	Function and description
(A)	AE-C/EW-C settings	The numbers and names of the AE-C/EW-C controllers to be displayed and the selected peak cut method are displayed.
(B)	[Advanced]	Tapping this button will display the peak cut control settings screen.
(C)	[Close]	Tapping this button will close the settings screen and display the function settings screen.

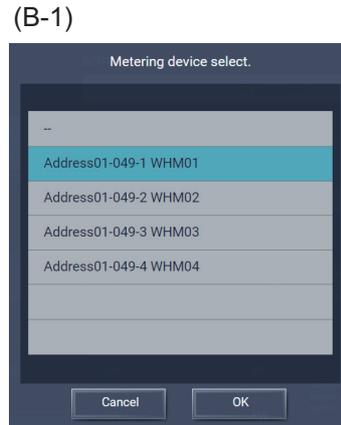
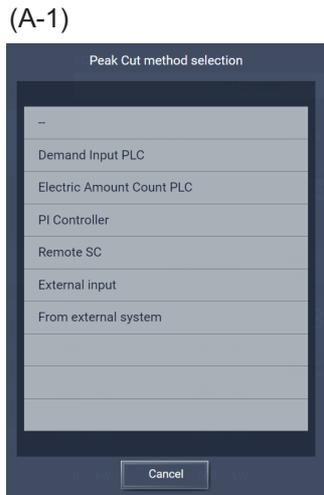
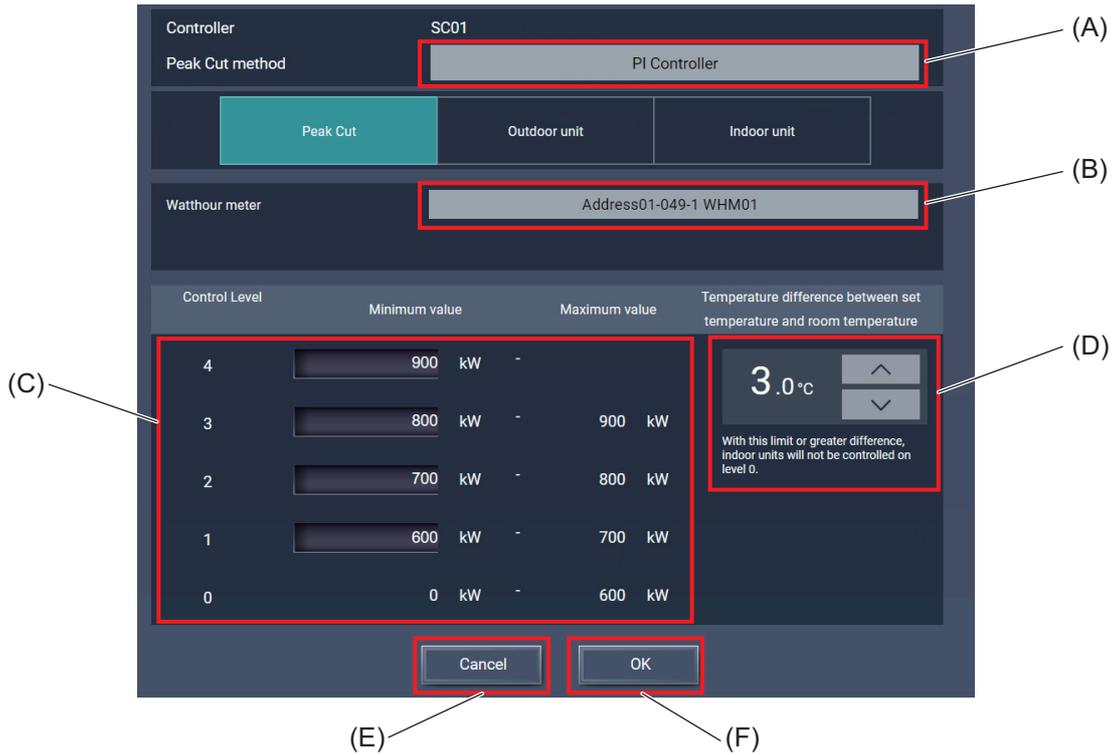
[1] When external contact input method or other system method is selected

To perform demand control by inputting a level signal from a demand controller to the external input terminal on the controller, or by inputting a level signal from other systems such as EcoServer to the controller via LAN, the demand value setting (including setting of restrictions and control operations) need to be done on the demand controller or EcoServer.



	Item	Function and description
(A)	Peak cut method selection	The peak cut method selected for the AE-C/EW-C is displayed. Tapping this item will display the Peak Cut method selection dialog (A-1).
(A-1)	Peak Cut method selection dialog	Tapping a method will enable that method and display the peak cut control settings screen. When you don't change the selected method, tap [Cancel].
(B)	Temperature difference between set temperature and room temperature	Set the threshold of the temperature difference between the set temperature and room temperature at which the energy saving control is disabled. The energy-saving control is not performed on the indoor unit group of which temperature difference between the set temperature and room temperature is greater than the threshold with the control level 0.
(C)	[Cancel]	Tap this button to go back to the previous screen without saving the setting changes.
(D)	[OK]	Tap this button to save the setting changes.

[2] When use of a PI controller or a Modbus watt-hour meter is selected



	Item	Function and description
(A)	Peak cut method selection	The peak cut method selected for the AE-C/EW-C is displayed. Tapping this item will display the Peak Cut method selection dialog (A-1).
(A-1)	Peak Cut method selection dialog	Tapping a method will enable that method and display the peak cut control settings screen (A). When you don't change the selection, tap [Cancel] .
(B)	Watt-hour meter	The selected watt-hour meter is displayed. Tapping this item will display the Metering device select dialog (B-1).
(B-1)	Metering device select dialog	Select a watt-hour meter and tap [OK] , and the selection will become effective and the peak cut control settings screen will be displayed. When you don't change the selected watt-hour meter, tap [Cancel] .
(C)	Control level threshold settings	Set the threshold for each control level.

17. Initial settings (supplementary information)

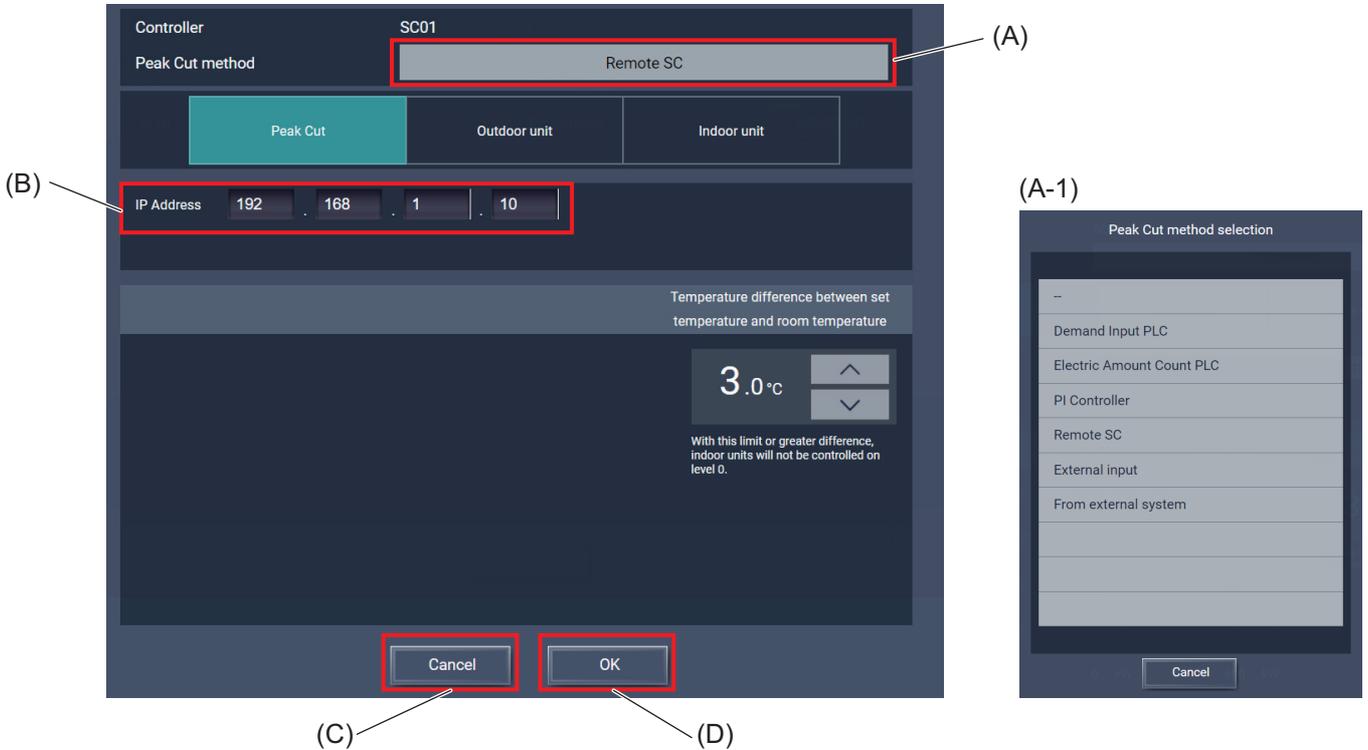
	Item	Function and description
(D)	Temperature difference between set temperature and room temperature	Set the threshold of the temperature difference between the set temperature and room temperature at which the energy saving control is disabled. The energy-saving control is not performed on the indoor unit group of which temperature difference between the set temperature and room temperature is greater than the threshold with the control level 0.
(E)	[Cancel]	Tap this button to go back to the previous screen without saving the setting changes.
(F)	[OK]	Tap this button to save the setting changes.

[3] When other SC method is selected

Demand levels can be input to the controller via LAN from other AE-C/EW-C controllers that have been selected for demand input.

The IP addresses of the input source AE-C/EW-C controllers need to be set.

Up to 10 other AE-C/EW-C controllers can be connected. For 11 or more controllers, prepare another AE-C/EW-C to set another demand input.

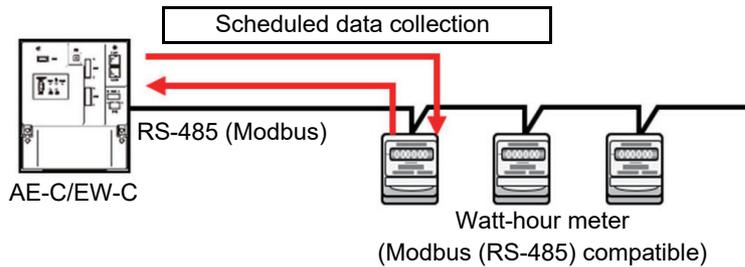


	Item	Function and description
(A)	Peak cut method selection	The peak cut method selected for the AE-C/EW-C is displayed. Tapping this item will display the Peak Cut method selection dialog (A-1).
(A-1)	Peak Cut method selection dialog	Tapping a method will select that method and display the peak cut control settings screen. When you don't change the selected method, tap [Cancel] .
(B)	IP address of SC	Set the IP address of the AE-C/EW-C to which a watt-hour meter or a demand controller used for peak cut control is connected.
(C)	Temperature difference between set temperature and room temperature	Set the threshold of the temperature difference between the set temperature and room temperature at which the energy saving control is disabled. The energy-saving control is not performed on the indoor unit group of which temperature difference between the set temperature and room temperature is greater than the threshold with the control level 0.
(D)	[Cancel]	Tap this button to go back to the previous screen without saving the setting changes.
(E)	[OK]	Tap this button to save the setting changes.

17-2. Modbus watt-hour meter

17-2-1. Summary

By connecting a watt-hour meter that supports Modbus communication, you can collect electric energy data.



17-2-2. Specified watt-hour meter

(As of September 2024)

Model	Manufacturer
ME96SS*-MB EMU4-FD1-MB	Mitsubishi Electric

Note

Watt-hour meters other than those listed above can also be used. Names of manufacturers are in parentheses.

- EM210/EM340 (Carlo Gavazzi)
- B23 (ABB)
- EC*380D (Hagar)
- iEM3150, PM8000/PM8240 (Schneider)

17-2-3. Basic settings

Before using a Modbus watt-hour meter connected to the controller, make the following settings.

Controller settings

(1) Modbus connection settings (Refer to "Sub menu tab: Modbus Connection.")

- 1) Modbus address: Set the address in order from 1.
- 2) Name: Set an easy-to-understand watt-hour meter name.
- 3) Model: Select the model (model name) of the watt-hour meter to be connected.

(2) Modbus connection settings (Refer to "Sub menu tab: Basic System.")

- 1) Baud rate: 19200
- 2) Stop bit: 1
- 3) Parity bit: EVEN

Watt-hour meter settings

Make the following settings, referring to the instruction manual for the watt-hour meter.

- (1) Communication settings
- (2) Termination resistance (when the watt-hour meter is the last terminal)

17-2-4. Specifications

Item	Specifications
Communication system	RS-485 2-wire half-duplex communication
Synchronization method	Start-stop synchronization
Communication protocol	Modbus RTU (binary data communication)
Baud rate	19200 (default), 9600, 38400, 57600, 115200 bps
Bit length	8 bits
Stop bit	1 (initial value), 2 bit
Parity bit	EVEN (default), ODD, NONE
Termination resistance	120 Ω , built-in (non-removable) Install the controller as a terminal. Attach a termination resistor to the watt-hour meter located at the end of the transmission line.
Topology	Cascade connection (cross-wiring) (Star wiring and midway branching are not acceptable.)
Number of units connected	Max. 4 units
Address setting	Watt-hour meter 1 to 4

17-2-5. Transmission distance

Refer to the related technical manual.

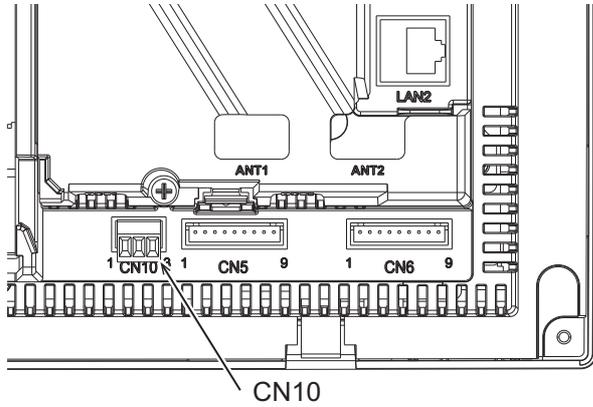
Note

- After making settings, check that data are input correctly.

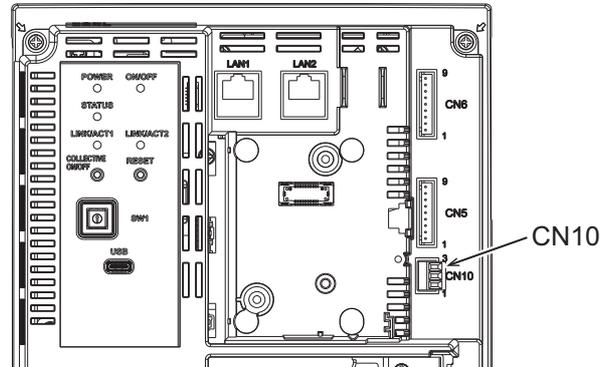
17-2-6. Connection

- Connector on the controller
Connect the cable to CN10. For the location of the connector, refer to the Installation Manual supplied with the controller.

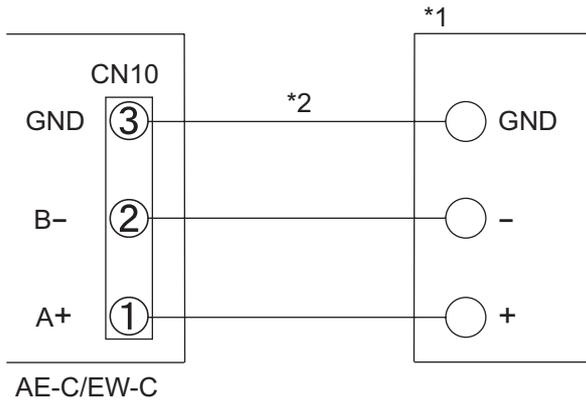
AE-C



EW-C



- Wiring
Connect the controller and the watt-hour meter with a twisted pair cable. Be sure to check the polarity of the terminal before connecting the cable.



*1 Watt-hour meter

*2 Connect both twisted pair wires for GND to GND.
When using a shielded wire, connect the shield to GND.

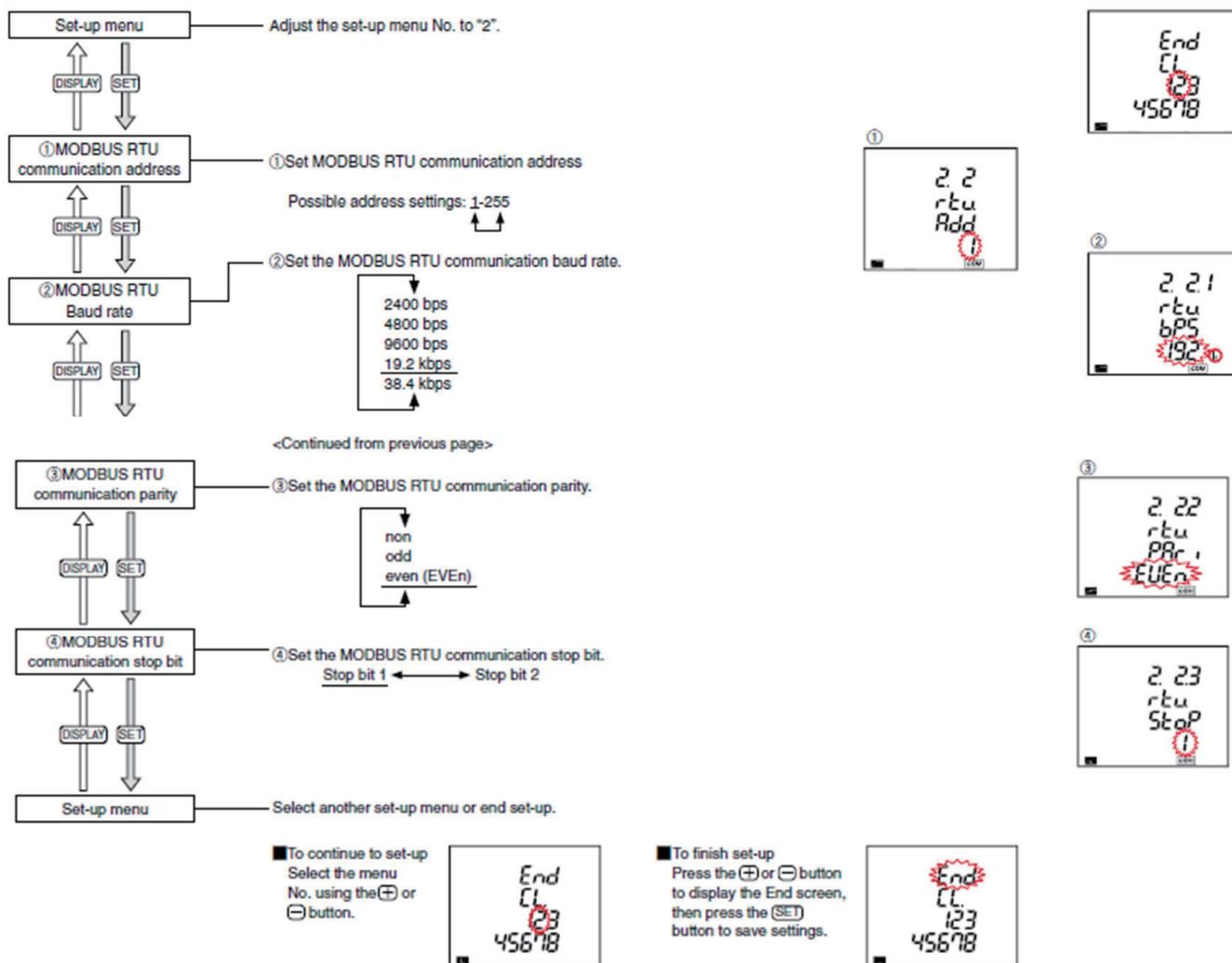
17-2-7. Communication settings on the watt-hour meter (for reference)

Make necessary settings, referring to the instruction manual for the watt-hour meter to be used.

(Example setting for ME-96SS**-MB (manufactured by Mitsubishi Electric))

Item	Setting
Baud rate	19200 bps
Stop bit	1 bit
Parity bit	EVEN
Address	1
Termination resistance	Connected

Set-up menu 2: MODBUS RTU Communication settings (When ME-0040C-SS96, ME-0000MT-SS96 and ME-0040MT2-SS96 are not installed)



17-3. List of external input/output settings

(1) External signal input specifications

CN5	Lead wire (PAC- YG10HA-E)	Mode 1	Mode 2	Mode 3	Mode 4	Mode 5
		Demand mode (Level signal)	Emergency Stop (Level signal)	Emergency Stop/ Restoration mode (Level signal)	ON/OFF (Level signal)	ON/OFF/ Prohibit/Permit (Pulse signal)
No.5	Orange	Demand Level 1	Emergency stop/ normal input	Emergency stop/ normal input	ON/OFF	ON input
No.6	Yellow	Demand Level 2	Demand Level 2	Demand Level 2	Not used	OFF input
No.7	Blue	Demand Level 3	Demand Level 3	Demand Level 3	Not used	Local remote controller operation prohibit input
No.8	Gray	Demand Level 4	Demand Level 4	Demand Level 4	Not used	Local remote controller operation enable input
No.9	Red	External DC source "+ 12 VDC" or "+ 24 VDC"				

CN6	Lead wire (PAC-YG10HA-E)	
No. 9	Red	External DC power supply (+12 V or +24 V)
No. 8	Gray	—
No. 7	Blue	—
No. 6	Yellow	—
No. 5	Orange	Clear refrigerant leak buzzer

Supports PUMY series (R32) only

Pulse input

Note

- For an example of a recommended circuit for the connectors (CN5, CN6), refer to the "Installation Manual" of AE-C/EW-C.

(2) Operations of external signal input

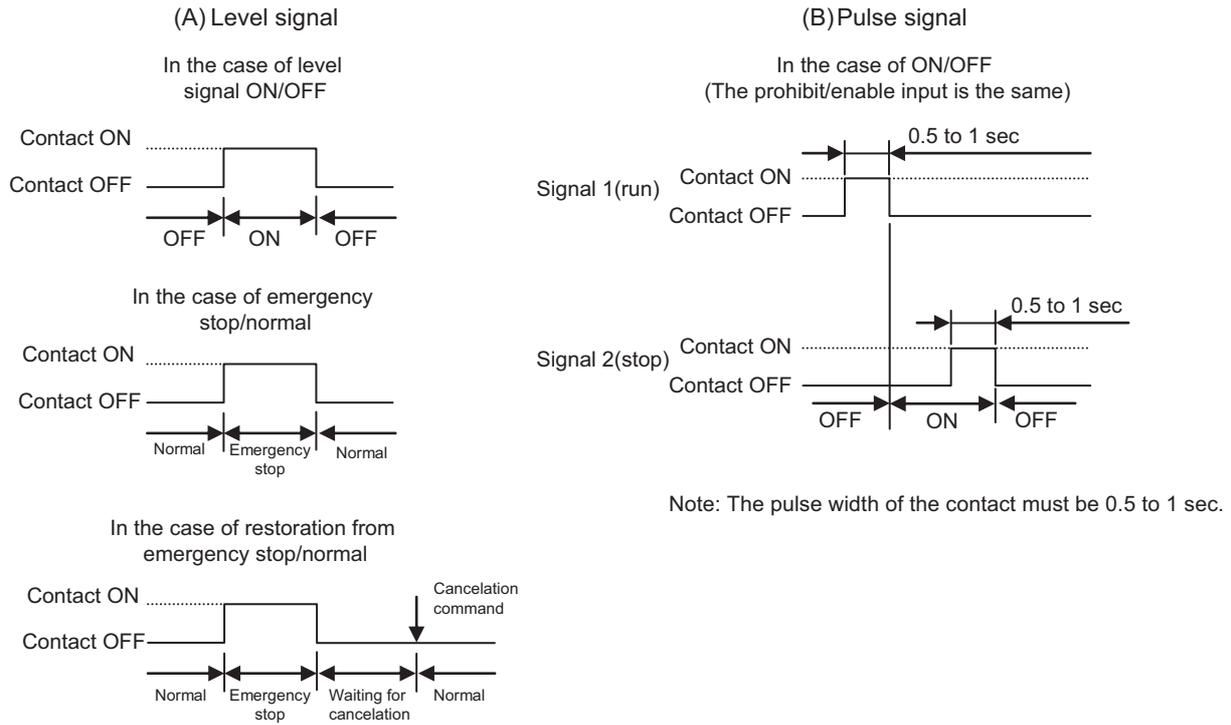
Mode	Setting mode	Equipment	Description
Mode 1	Demand mode (Level signal)	Air conditioners	The use of the level signal: <ul style="list-style-type: none"> enables selection of the “demand level 1 to 4” input from 4 levels. (When no external signal is input, use Mode 1.)
		HWHP (CAHV, CRHV, QAHV) unit	Non-controllable
		Chiller unit	Non-controllable
Mode 2	Emergency stop (Level signal)	Air conditioners	The use of the level signal: <ul style="list-style-type: none"> enables selection of the “demand level 2 to 4” input from 3 levels, stops all air conditioners connected to each line of AE-C/EW-C when “emergency stop” is input, prohibits the starting/stopping operation from a remote controller and prohibits the starting/stopping operation and prohibition/permission setting on AE-C/EW-C when “emergency stop” is input, and discontinues the scheduled operation, night setback control and night purge operation and interlock control when the system is stopped.
		HWHP (CAHV, CRHV, QAHV) unit	Non-controllable
		Chiller unit	Non-controllable
Mode 3	ON/OFF (Level signal)	Air conditioners	The use of the level signal (emergency stop): <ul style="list-style-type: none"> starts and stops all air conditioners connected to each line of AE-C/EW-C when “ON/OFF” is input, prohibits the starting/stopping operation from a remote controller and prohibits the starting/stopping operation and prohibition/permission setting on AE-C/EW-C when “ON/OFF” is input, and discontinues the scheduled operation, night setback control and night purge operation and interlock control.
		HWHP (CAHV, CRHV, QAHV) unit	Non-controllable
		Chiller unit	Non-controllable
Mode 4	ON/OFF/Prohibit/Permit (Pulse signal)	Air conditioners	The use of the pulse signal: <ul style="list-style-type: none"> starts and stops all air conditioners connected to each line of AE-C/EW-C when “ON/OFF” is input, and prohibits or permits the operation of the air conditioners connected to each line of AE-C/EW-C from a remote controller when “prohibition/permission” is input.
		HWHP (CAHV, CRHV, QAHV) unit	Non-controllable
		Chiller unit	Non-controllable

(3) R32 refrigerant leak buzzer usage

CN6 can be used for external input to clear the R32 refrigerant leak buzzer.

No particular settings are required.

(4) Level signal and pulse signals (12 or 24 VDC)



(5) External signal output specifications

CN5	Lead wire (PAC-YG10HA-E)	Signal
No. 3	Brown	Error signal, Normal signal
No. 2	Black	ON signal*, OFF signal
No. 1	Green	Common ground for external output (Ground for the external power supply)

* The operation status of general equipment (via a DIDO controller (PAC-YG66DCA)) will not be output.
* The ON signal will be output even during an error.

CN6	Lead wire (PAC-YG10HA-E)	Function and description
No. 3	Brown	Refrigerant leak error output
No. 2	Black	—
No. 1	Green	GND (Ground for external power supply)

(6) Operation of external signal output

Setting	Description
Start/stop output Abnormal/normal state output	(Air conditioners) • The operating state and error state of air conditioners connected to all lines of AE-C/EW-C are output with level signals. When one or more air conditioners are operating, the ON signal is output. When one or more air conditioners are in trouble, the Error signal is output.

(7) R32 refrigerant leak error output usage

CN6 can be used for external output of R32 refrigerant leak errors.
To use it, set the external output (CN6) according to "Sub menu tab: Basic System."

MEMO

18. Billing function (Operation)

This section describes how to print or output the AE-C/EW-C billing data to a CSV file using the Charge Calculation Tool.

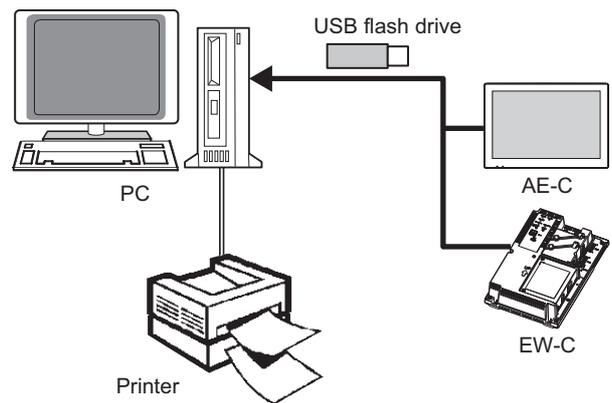
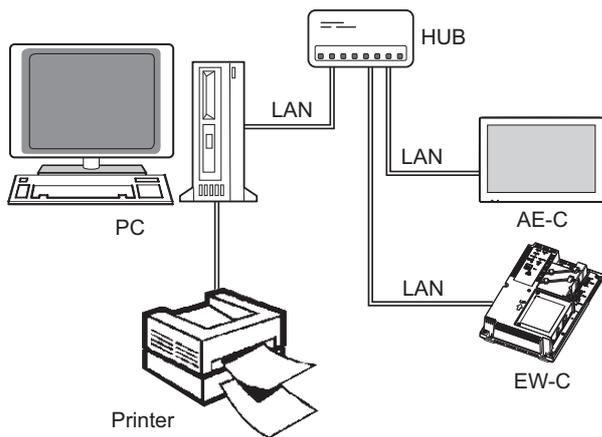
The settings and outputs vary depending on the charge calculation method and the billing data collection method to be used.

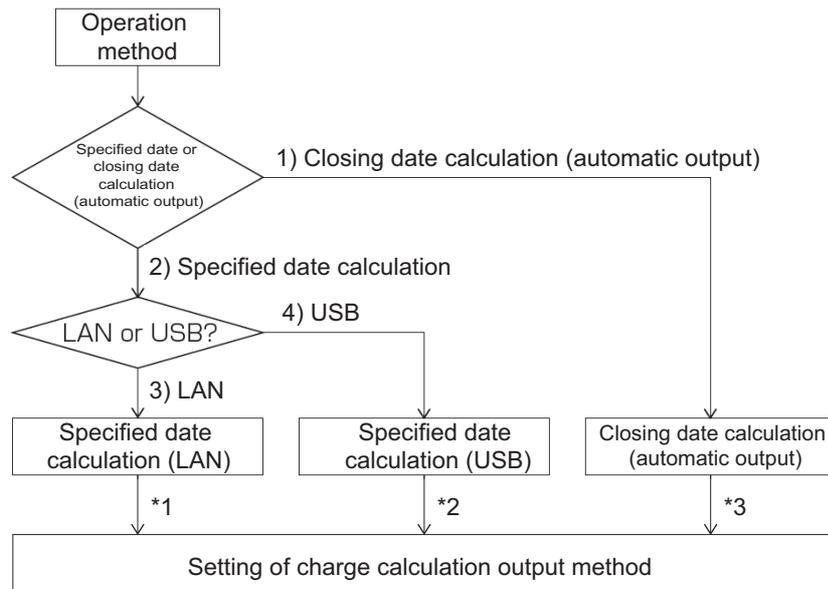
Charge calculation method

- 1) Closing date calculation (Automatic output) Method in which a PC automatically collects the apportioned electricity billing data and outputs the charge calculation results on the next day of the designated closing date.
On the next day of the closing date, the Charge Calculation Tool needs to be running on the PC that is connected to the AE-C/EW-C via LAN.
- 2) Specified date calculation Method in which the apportioned electricity billing data for a manually specified period are collected, based on which the charge calculation results are output. With this method, you can run the Charge Calculation Tool to calculate the charges at any time when necessary.

Method to collect apportioned electricity billing data

- 3) When the AE-C/EW-C and PC are connected via LAN
- 4) When exporting data from the AE-C/EW-C to a USB flash drive



Operation method

*1 When metering devices are used:

"LAN connection – Specified date calculation (page 286)"

When no metering devices are used:

"LAN connection – Specified date calculation (page 293)"

*2 When metering devices are used:

"USB connection – Specified date calculation (page 287)"

When no metering devices are used:

"USB connection – Specified date calculation (page 294)"

*3 When metering devices are used:

"Usage – Basic: metering devices used, LAN connection, closing date calculation (automatic output) (page 285)"

When no metering devices are used:

"LAN connection - Closing date calculation (automatic output) (page 292)"

Note

- Closing date calculation method (automatic output) is available only for LAN connection.
- When using the specified date calculation method (USB), the data to be exported from the AE-C/EW-C will differ depending on whether metering devices are used or not.
- When no metering devices are used, the charge ratio is calculated and output.
- To print the calculation results, connect a printer to the PC, and set the printer as the default printer.

18-1. Usage – Basic: metering devices used, LAN connection, closing date calculation (automatic output)

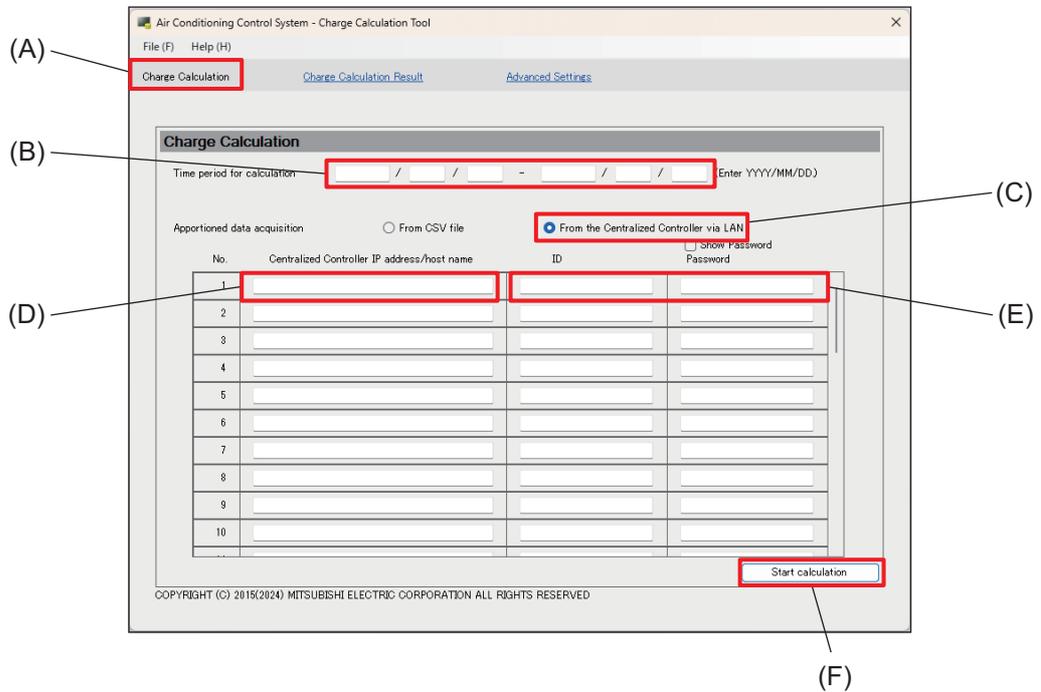
When automatic calculation is enabled with a PC connected to the AE-C/EW-C via LAN, the calculation results will be output to a designated folder (when CSV output is selected) or printed (when print is selected) at the cycle specified by the initial settings for billing function.

- On the next day of the closing date, the Charge Calculation Tool needs to be running on the PC that is connected to the AE-C/EW-C via LAN.
- If the calculation results are not printed due to a network error or a printer error, collect the billing data using the specified date calculation method to print out the calculation results.

18-2. Usage – Advanced 1: when metering devices are used

Explained below is the method to calculate and output the charge ratio when metering devices are used.

18-2-1. LAN connection – Specified date calculation



	Item	Function and description
(A)	Menu	Select [Charge Calculation] .
(B)	Time period for calculation	Enter the period (start and end dates) for which you want to calculate the charge.
(C)	Apportioned data acquisition	Select [From the Centralized Controller via LAN] .
(D)	IP address/host name of AE-C/EW-C	Enter the IP address or host name of the AE-C/EW-C that has been designated as the system manager under Control Target Settings of the Initial Setting Tool.
(E)	ID, Password	Enter the administrator user ID and password of the AE-C/EW-C that has been entered in (D).
(F)	[Start calculation]	Tapping this button will display the charge calculation results.

Note

- The IP address/host name (D) of the AE-C/EW-C can be up to 254 single-byte alphanumeric characters.

18-2-2. USB connection – Specified date calculation

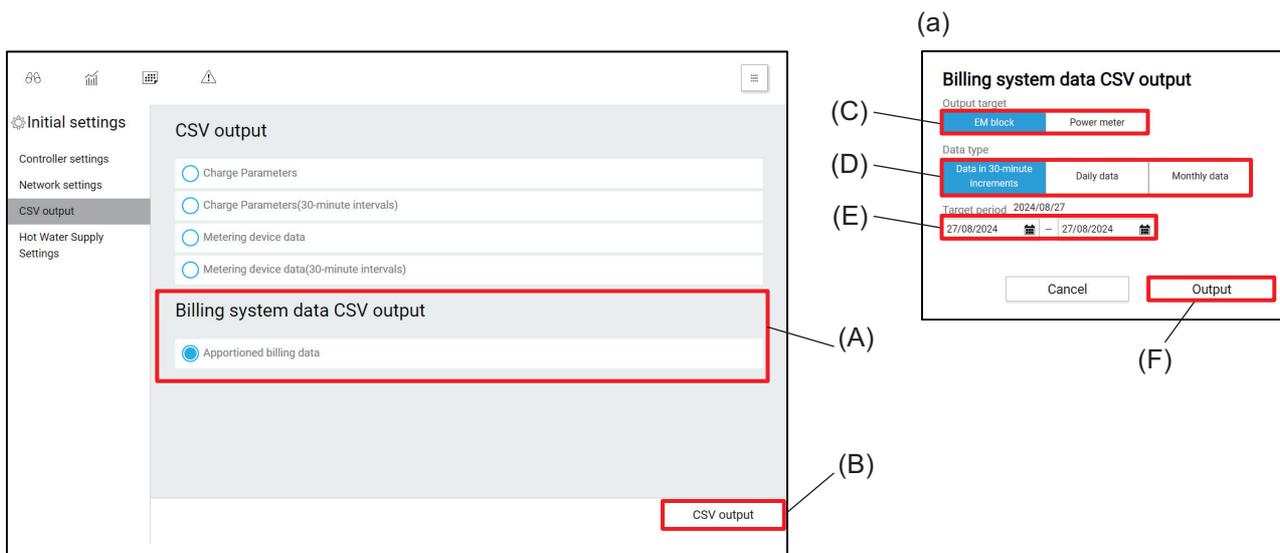
Explained below is how to export CSV data (apportion results) from the AE-C/EW-C with a metering device connected to a USB flash drive, using the specified date calculation method.

[1] Output to a USB memory device

On the AE-C, remove the cover on the right side and connect a USB flash drive to the USB port (type C).
On the EW-C, connect a USB flash drive to the USB port (type C) on the top.

[2] Exporting CSV data (apportion results)

Select [Initial Settings] - [CSV Output] to output the apportion results data to the USB flash drive.
For the EW-C, display the Energy Management screen on a browser connected to the EW-C.



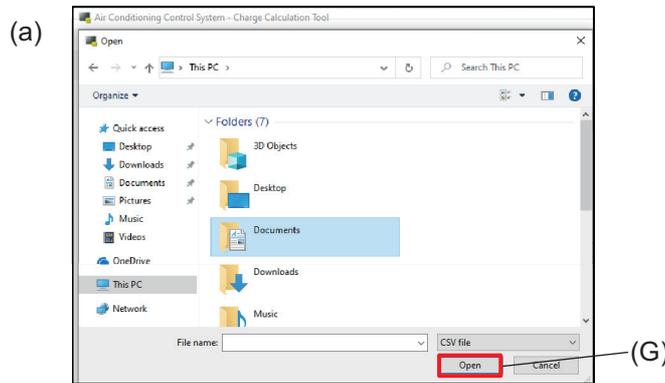
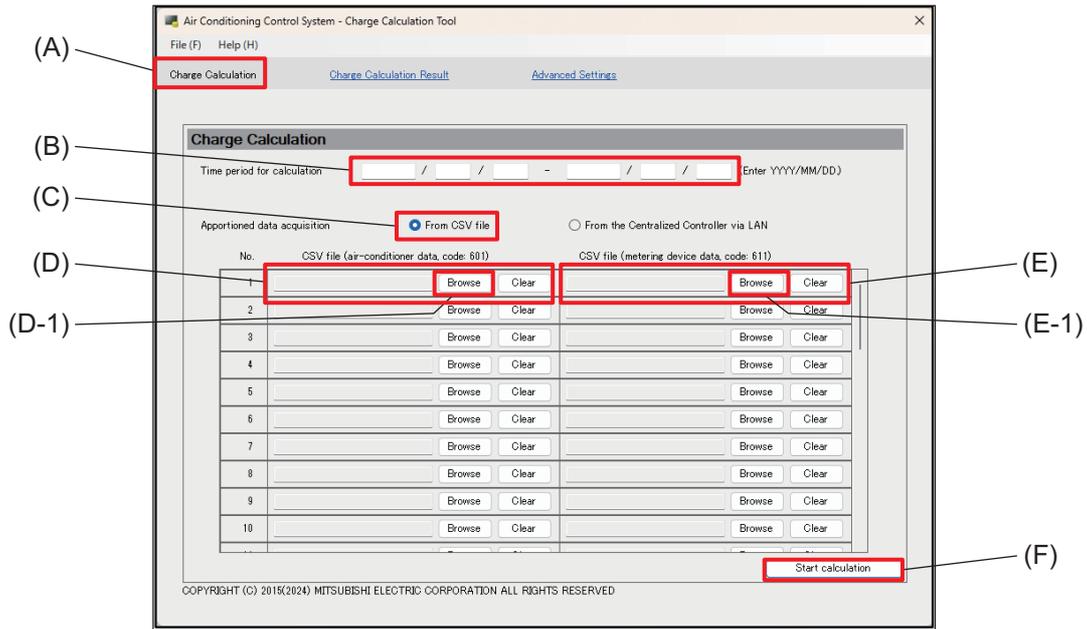
	Item	Function and description
(A)	CSV output data selection	Select the apportion results data.
(B)	[CSV Output]	Tapping this button will display the CSV output screen (a).
(C)	Output target	Select the target for CSV data (apportion results) output. When metering devices are used, output two CSV data, one for the energy management blocks and the other for the metering devices, and save the data to the USB flash drive.
(D)	Data type	Select [Daily data] .
(E)	Target period	Set the period (start and end dates) for which you want to output data in CSV format. The target period needs to be longer than the period for which you want to calculate the charge.
(F)	[Output]	Tapping this button will output the CSV data (apportion results) to the USB flash drive.

Note

- The CSV data (apportion results) will be saved to a folder "AE-C/EW-C serial number\ApportionData\" under the root folder of the USB flash drive. Save data as a backup, if necessary.

[3] Operating the Charge Calculation Tool

Import the CSV data (apportionment results) from the USB flash drive to the PC to calculate the charge.



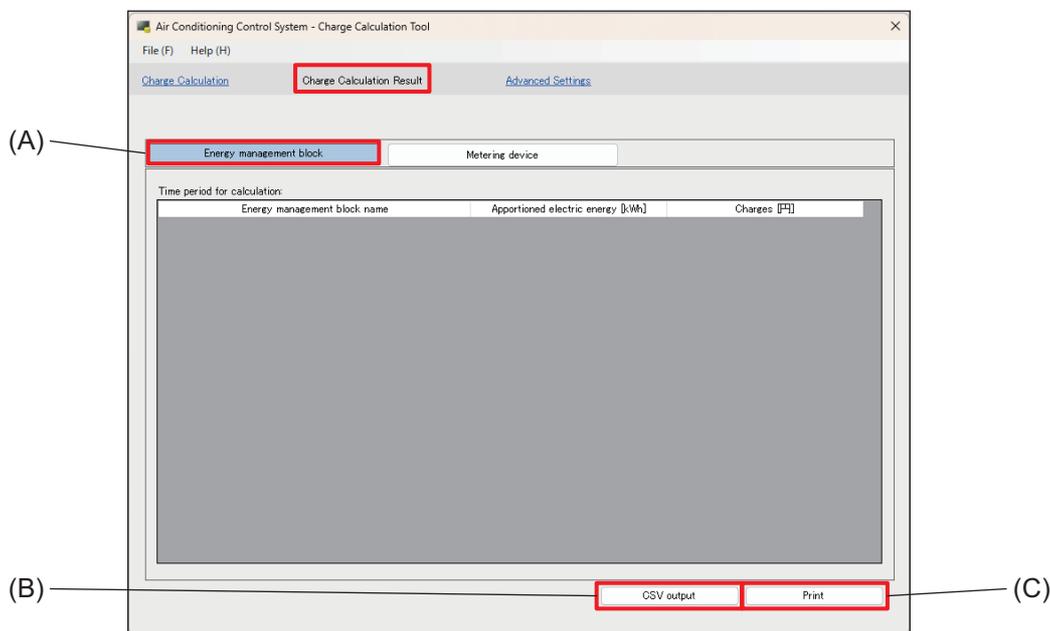
	Item	Function and description
(A)	Menu	Select [Charge Calculation] .
(B)	Time period for calculation	Enter the period (start and end dates) for which you want to calculate the charge. The period of the CSV data (apportionment results) to be selected in (D) or (E) must be longer than the calculation period entered here.
(C)	Apportioned data acquisition	Select [From CSV file] .
(D)	CSV file (air-conditioner data)	Tap [Browse] (D-1) to display the file selection dialog (a). Select a CSV file (energy management block data) to load on the dialog (a), and tap [Open] (G).
(E)	CSV file (metering device data)	Tap [Browse] (E-1) to display the file selection dialog (a). Select a CSV file (metering device data) to load on the dialog (a), and tap [Open] (G).
(F)	[Start calculation]	Tapping this button will start the charge calculation and display the calculation results.

18-2-3. Displaying the charge calculation results

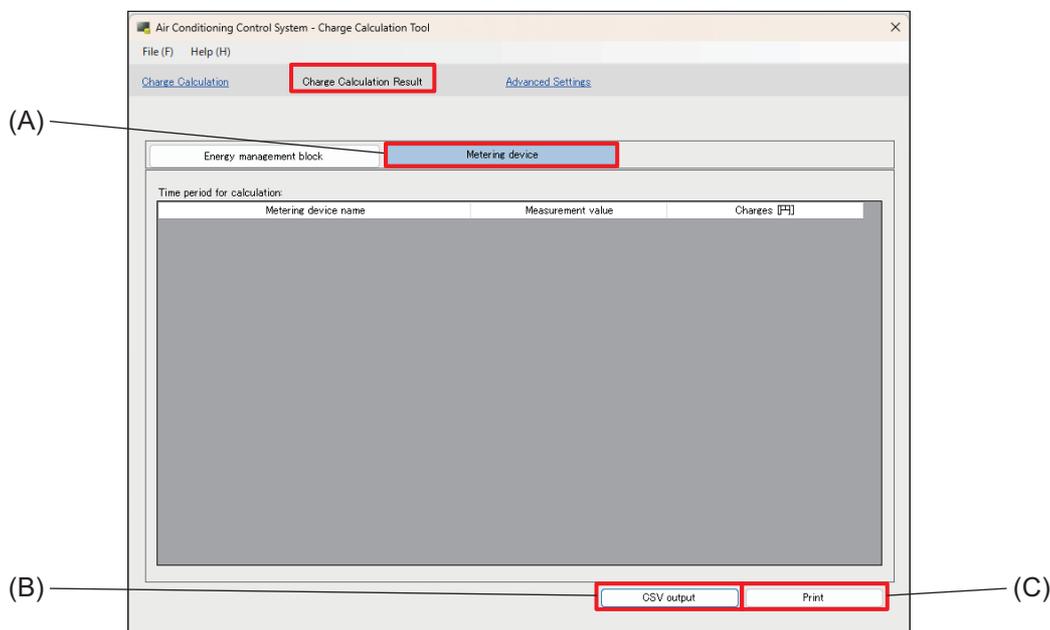
Tapping **[Start calculation]** on the Charge Calculation screen will display the charge calculation result screen at the completion of the charge calculation.

Two charge calculation results, one for the energy management blocks and the other for the metering devices, will be displayed.

When [Energy management block] is selected



When [Metering device] is selected



	Item	Function and description
(A)	Menu	Select [Energy management block] or [Metering device] under Charge Calculation Result.
(B)	[CSV Output]	Tap this button to output the charge calculation results in CSV format. Tapping this button will display the dialog for selecting where to save the output file. Save the output file with any file name.
(C)	[Print]	Tap this button to print the charge calculation results with the printer set as the default printer.

18-2-4. Printing the charge calculation results

When metering devices are used, two charge calculation results, one for the energy management blocks and the other for the metering devices, will be printed.

- If the calculation results are not printed due to a network error or a printer error, collect the billing data using the specified date calculation method to print out the calculation results.

(1) Example printout – Energy management blocks

(The charge calculation results are displayed in the order of the block number, and those of the energy management blocks with the same name are merged.)

Air conditioning charge – Energy management block (by unit price)						
Calculation period:2015/04/01–2015/04/31						
Energy management block name	Apportioned electric energy [kWh]	Item Unit price	[kWh]	[USD]	Total air conditioning charge [USD]	
Tenant A	46.0	Unit price 1	46.0	9.20	9.20	
		Unit price 2	0.0	0.00		
		Unit price 3	0.0	0.00		
		Unit price 4	0.0	0.00		
		Unit price 5	0.0	0.00		
Tenant B	33.6	Unit price 1	33.6	6.72	6.72	
		Unit price 2	0.0	0.00		
		Unit price 3	0.0	0.00		
		Unit price 4	0.0	0.00		
		Unit price 5	0.0	0.00		
Tenant C	26.2	Unit price 1	26.2	5.24	5.24	
		Unit price 2	0.0	0.00		
		Unit price 3	0.0	0.00		
		Unit price 4	0.0	0.00		
		Unit price 5	0.0	0.00		
Tenant D	13.1	Unit price 1	13.1	2.62	2.62	
		Unit price 2	0.0	0.00		
		Unit price 3	0.0	0.00		
		Unit price 4	0.0	0.00		
		Unit price 5	0.0	0.00		
Tenant E	10.0	Unit price 1	10.0	2.00	2.00	
		Unit price 2	0.0	0.00		
		Unit price 3	0.0	0.00		
		Unit price 4	0.0	0.00		
		Unit price 5	0.0	0.00		
Tenant F	7.1	Unit price 1	7.1	1.42	1.42	
		Unit price 2	0.0	0.00		
		Unit price 3	0.0	0.00		
		Unit price 4	0.0	0.00		
		Unit price 5	0.0	0.00		

(2) Example printout – Metering device

(The charge calculation results are displayed in the order of the metering device number.)

Air conditioning charge – Metering device (by unit price)					
Calculation period:2015/04/01–2015/04/31					
Metering device name	Measurement value	Unit	Item Unit price	[USD]	Total air conditioning charge [USD]
AE-C No.1 Outdoor unit 1~4F	44.0	kWh	Unit price 1	44.0	8.80
			Unit price 2		
			Unit price 3		
			Unit price 4		
			Unit price 5		
AE-C No.1 Outdoor unit 5~8F	49.0	kWh	Unit price 1	49.0	9.80
			Unit price 2		
			Unit price 3		
			Unit price 4		
			Unit price 5		
AE-C No.1 Outdoor unit 9~12F	51.0	kWh	Unit price 1	51.0	10.20
			Unit price 2		
			Unit price 3		
			Unit price 4		
			Unit price 5		
AE-C No.1 Indoor unit 1~4F	11.0	kWh	Unit price 1	11.0	2.20
			Unit price 2		
			Unit price 3		
			Unit price 4		
			Unit price 5		
AE-C No.1 Indoor unit 5~8F	13.0	kWh	Unit price 1	13.0	2.60
			Unit price 2		
			Unit price 3		
			Unit price 4		
			Unit price 5		
AE-C No.1 Indoor unit 9~12F	15.0	kWh	Unit price 1	15.0	3.00
			Unit price 2		
			Unit price 3		
			Unit price 4		
			Unit price 5		

18-2-5. CSV output example of charge calculation results

When metering devices are used, two CSV files containing the charge calculation results, one for the energy management blocks and the other for the metering devices, will be output.

(1) Example CSV output – Energy management blocks

(The charge calculation results are displayed in the order of the block number, and those of the energy management blocks with the same name are merged.)

701 Charge Calculation Result (Energy management block)														
Time period:2015/04/01-2015/04/31														
Energy management block name	Outdoor units - Apportioned electric energy		(Unit price 1)	(Unit price 2)	(Unit price 3)	(Unit price 4)	(Unit price 5)	Indoor units - Apportioned electric energy		(Unit price 1)	(Unit price 2)	(Unit price 3)	(Unit price 4)	(Unit price 5)
	[kWh]	[kWh]	[kWh]	[kWh]	[kWh]	[kWh]	[kWh]	[kWh]	[kWh]	[kWh]	[kWh]	[kWh]	[kWh]	[kWh]
Tenant A	205.7	175.3	175.3	0	0	0	0	0	30.4	30.4	0	0	0	0
Tenant B	264.9	224.3	224.3	0	0	0	0	40.6	40.6	0	0	0	0	0
Tenant C	439.3	374.1	374.1	0	0	0	0	65.2	65.2	0	0	0	0	0
Tenant D	162	144.9	144.9	0	0	0	0	17.1	17.1	0	0	0	0	0
Tenant E	203.4	185.3	185.3	0	0	0	0	18.1	18.1	0	0	0	0	0
Tenant F	364.2	337.1	337.1	0	0	0	0	27.1	27.1	0	0	0	0	0

701 Charge Calculation Result (Energy management block)															
Time period:2015/04/01-2015/04/31															
Apportioned charges		Outdoor units - Apportioned charges		(Unit price 1)	(Unit price 2)	(Unit price 3)	(Unit price 4)	(Unit price 5)	Indoor units - Apportioned charges		(Unit price 1)	(Unit price 2)	(Unit price 3)	(Unit price 4)	(Unit price 5)
[USD]	[USD]	[USD]	[USD]	[USD]	[USD]	[USD]	[USD]	[USD]	[USD]	[USD]	[USD]	[USD]	[USD]	[USD]	[USD]
41.14	35.06	35.06	0	0	0	0	0	6.08	6.08	0	0	0	0	0	0
52.98	44.86	44.86	0	0	0	0	0	8.12	8.12	0	0	0	0	0	0
87.86	74.82	74.82	0	0	0	0	0	13.04	13.04	0	0	0	0	0	0
32.4	28.98	28.98	0	0	0	0	0	3.42	3.42	0	0	0	0	0	0
40.68	37.06	37.06	0	0	0	0	0	3.62	3.62	0	0	0	0	0	0
72.84	67.42	67.42	0	0	0	0	0	5.42	5.42	0	0	0	0	0	0

(2) Example CSV output – Metering device

(The charge calculation results are displayed in the order of the metering device number.)

711 Charge Calculation Result (metering device)							
Time period:2015/04/01-2015/04/31							
Metering device name	Measurement value	(Unit price 1)	(Unit price 2)	(Unit price 3)	(Unit price 4)	(Unit price 5)	Measurement unit
AE-C No.1 PI-Ch1	44	44	0	0	0	0	kWh
AE-C No.1 PI-Ch2	44	44	0	0	0	0	kWh
AE-C No.1 PI-Ch3	24	24	0	0	0	0	kWh
AE-C No.1 PI-Ch4	24	24	0	0	0	0	kWh

711 Charge Calculation Result (metering device)					
Time period:2015/04/01-2015/04/31					
Charges	(Unit price 1)	(Unit price 2)	(Unit price 3)	(Unit price 4)	(Unit price 5)
[USD]	[USD]	[USD]	[USD]	[USD]	[USD]
8.8	8.8	0	0	0	0
8.8	8.8	0	0	0	0
4.8	4.8	0	0	0	0
4.8	4.8	0	0	0	0

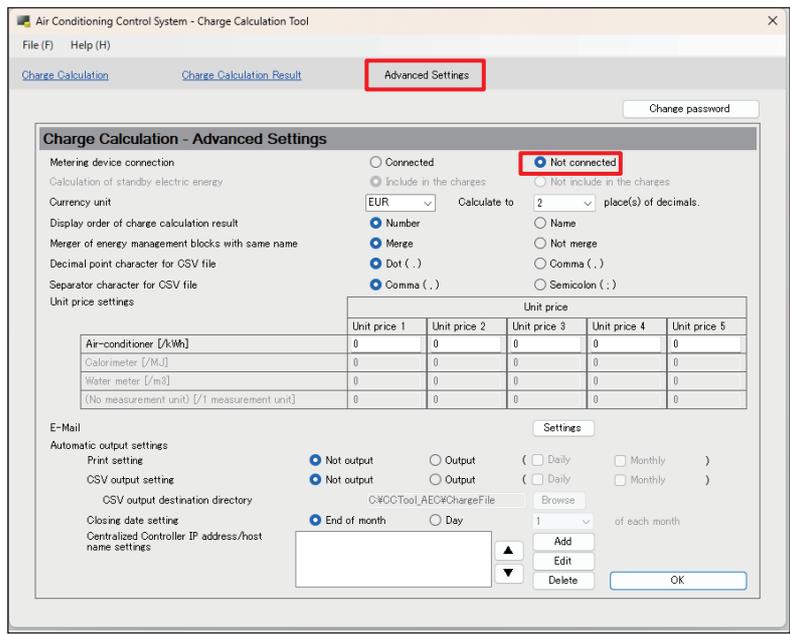
18-3. Usage – Advanced 2: when no metering devices are used

Explained below is the method to calculate and output the charge ratio when no metering devices are used.

18-3-1. LAN connection - Closing date calculation (automatic output)

When automatic calculation is enabled with a PC connected to the AE-C/EW-C via LAN, the calculation results will be output to a designated folder (when CSV output is selected) or printed (when print is selected) at the cycle specified by the initial settings for billing function.

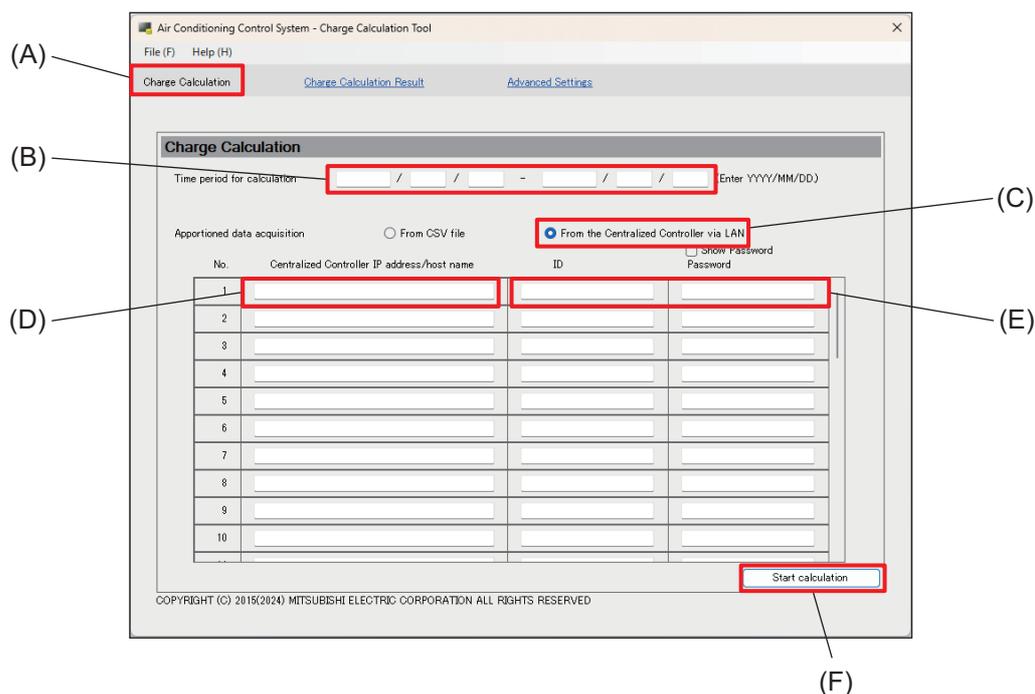
- On the next day of the closing date, the Charge Calculation Tool needs to be running on the PC that is connected to the AE-C/EW-C via LAN.
- If the calculation results are not printed due to a network error or a printer error, collect the billing data using the specified date calculation method to print out the calculation results.



18-3-2. LAN connection – Specified date calculation



AE-C Charge Calculation Tool



	Item	Function and description
(A)	Menu	Select [Charge Calculation] .
(B)	Time period for calculation	Enter the period (start and end dates) for which you want to calculate the charge.
(C)	Apportioned data acquisition	Select [From the Centralized Controller via LAN] .
(D)	IP address/host name of AE-C/EW-C	Enter the IP address or host name of the AE-C/EW-C that has been designated as the system manager under Control Target Settings of the Initial Setting Tool.
(E)	ID, Password	Enter the administrator user ID and password of the AE-C/EW-C that has been entered in (D).
(F)	[Start calculation]	Tapping this button will display the charge calculation results.

Note

- The IP address/host name (D) of the AE-C/EW-C can be up to 254 single-byte alphanumeric characters.

18-3-3. USB connection – Specified date calculation

Explained below is the specified date calculation using the CSV data (apportion results) exported from the AE-C/EW-C to a USB flash drive when no metering devices are used.

[1] Output to a USB flash drive

On the AE-C, remove the cover on the right side and connect a USB flash drive to the USB port (type C).
On the EW-C, connect a USB flash drive to the USB port (type C) on the top.

[2] Exporting CSV data (apportion results)

Select [Initial Settings] - [CSV Output] to output the apportion results data to the USB flash drive.
Even if no watt-hour meter is connected, the charge ratio can be calculated by using the energy management block data.

For the EW-C, display the Energy Management screen on a browser connected to the EW-C.



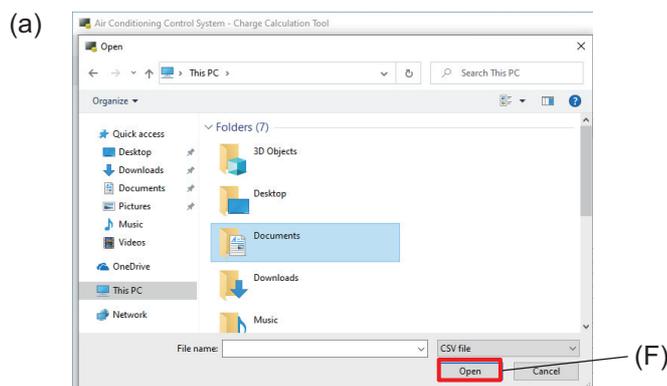
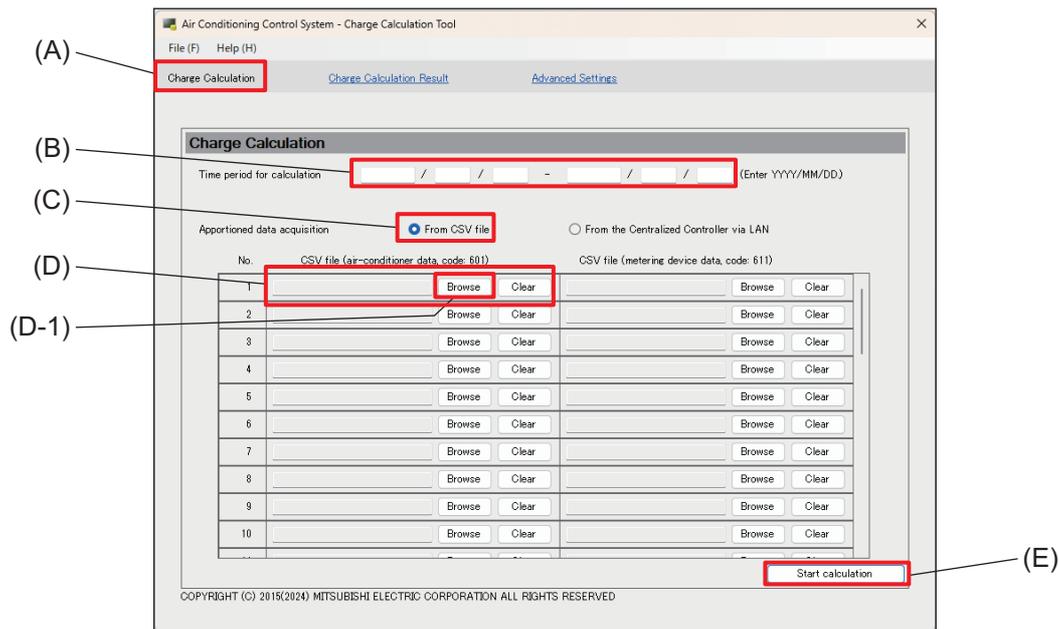
	Item	Function and description
(A)	CSV output data selection	Select the apportion results data.
(B)	[CSV Output]	Tapping this button will display the CSV output screen (a).
(C)	Output target	Select the target for CSV data (apportion results) output. When metering devices are used, output two CSV data, one for the energy management blocks and the other for the metering devices, and save the data to the USB flash drive.
(D)	Data type	Select [Daily data] .
(E)	Target period	Set the period (start and end dates) for which you want to output data in CSV format. The target period needs to be longer than the period for which you want to calculate the charge ratio.
(F)	[Output]	Tapping this button will output the CSV data (apportion results) to the USB flash drive.

Note

- The CSV data (apportion results) will be saved to a folder "AE-C/EW-C serial number\ApportionData\" under the root folder of the USB flash drive. Save data as a backup, if necessary.

[3] Operating the Charge Calculation Tool

Import the CSV data (apportion results) from the USB flash drive to the PC to calculate the charge ratio.



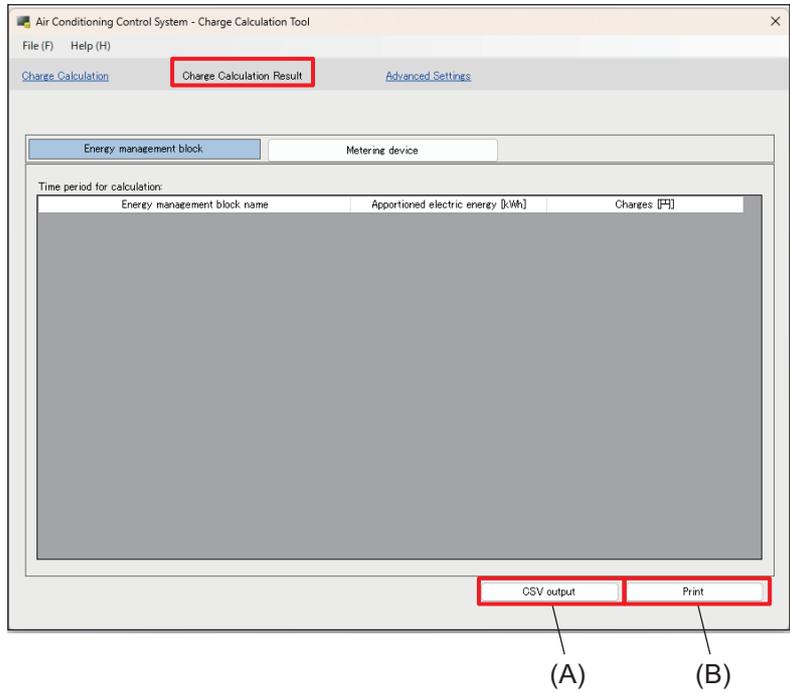
	Item	Function and description
(A)	Menu	Select [Charge Calculation] .
(B)	Time period for calculation	Enter the period (start and end dates) for which you want to calculate the charge ratio. The period of the CSV data (apportion results) to be selected in (D) must be longer than the calculation period entered here.
(C)	Apportioned data acquisition	Select [From CSV file] .
(D)	CSV file (air-conditioner data)	Tap [Browse] (D-1) to display the file selection dialog (a). Select a CSV file (energy management block data) to load on the dialog (a), and tap [Open] (F).
(E)	[Start calculation]	Tapping this button will start the charge calculation and display the calculation results.

18-3-4. Display, print, and CSV output of charge calculation results

[1] Display example of charge calculation results

Tapping **[Start calculation]** on the Charge Calculation screen will display the charge calculation result screen at the completion of the charge calculation.

When no metering devices are used, the charge ratios of the energy management blocks will be displayed.



	Item	Function and description
(A)	[CSV Output]	Tap this button to output the charge ratios of the energy management blocks in CSV format. Tapping this button will display the dialog for selecting where to save the output file. Save the output file with any file name.
(B)	[Print]	Tap this button to print the charge calculation results with the printer set as the default printer.

[2] Print example of charge calculation results

When no metering devices are used, only the charge ratios of energy management blocks will be printed.

- If the calculation results are not printed due to a network error or a printer error, collect the billing data using the specified date calculation method to print out the calculation results.

Print example

(The charge calculation results are displayed in the order of the block number, and those of the energy management blocks with the same name are merged.)

Air conditioning charge - Energy management block (by unit price)						
Calculation period:2015/04/01-2015/04/31						
Energy management block name	Apportionment Parameter (inclusive sum)	Item Unit price	Apportionment Parameter (for indoor unit)	Charge rate[%] (for indoor unit)	Apportionment Parameter (for outdoor unit)	Charge rate[%] (for outdoor unit)
Tenant A	42.0	Unit price 1	23.3	50.9847	18.7	21.9741
		Unit price 2	0.0		0.0	
		Unit price 3	0.0		0.0	
		Unit price 4	0.0		0.0	
		Unit price 5	0.0		0.0	
Tenant B	29.6	Unit price 1	10.9	23.8512	18.7	21.9741
		Unit price 2	0.0		0.0	
		Unit price 3	0.0		0.0	
		Unit price 4	0.0		0.0	
		Unit price 5	0.0		0.0	
Tenant C	23.6	Unit price 1	5.4	11.8162	18.2	21.3866
		Unit price 2	0.0		0.0	
		Unit price 3	0.0		0.0	
		Unit price 4	0.0		0.0	
		Unit price 5	0.0		0.0	
Tenant D	11.8	Unit price 1	2.7	5.9081	18.2	21.3866
		Unit price 2	0.0		0.0	
		Unit price 3	0.0		0.0	
		Unit price 4	0.0		0.0	
		Unit price 5	0.0		0.0	
Tenant E	8.8	Unit price 1	2.0	4.3764	6.8	7.9906
		Unit price 2	0.0		0.0	
		Unit price 3	0.0		0.0	
		Unit price 4	0.0		0.0	
		Unit price 5	0.0		0.0	
Tenant F	5.9	Unit price 1	1.4	3.0635	4.5	5.2879
		Unit price 2	0.0		0.0	
		Unit price 3	0.0		0.0	
		Unit price 4	0.0		0.0	
		Unit price 5	0.0		0.0	

[3] CSV output example of charge calculation results

When no metering devices are used, only the charge ratios of energy management blocks will be printed.

CSV output example

(The charge calculation results are displayed in the order of the block number, and those of the energy management blocks with the same name are merged.)

702 Charge Calculation Result (Energy management block)							
Time period: 2015/04/01-2015/04/31							
Energy management block name	Apportionment parameter	Apportionment parameter for outdoor units	(Unit price 1)	(Unit price 2)	(Unit price 3)	(Unit price 4)	(Unit price 5)
Tenant A	42	18.7	18.7	0	0	0	0
Tenant B	29.6	18.7	18.7	0	0	0	0
Tenant C	23.6	18.2	18.2	0	0	0	0
Tenant D	11.8	9.1	9.1	0	0	0	0
Tenant E	8.8	6.8	6.8	0	0	0	0
Tenant F	5.9	4.5	4.5	0	0	0	0

Apportionment parameter for indoor units	(Unit price 1)	(Unit price 2)	(Unit price 3)	(Unit price 4)	(Unit price 5)	Charge rate (for outdoor units) [%]	Charge rate (for indoor units) [%]
23.3	23.3	0	0	0	0	24.6053	50.9847
10.9	10.9	0	0	0	0	24.6053	23.8512
5.4	5.4	0	0	0	0	23.8474	11.9162
2.7	2.7	0	0	0	0	11.9737	5.9081
2	2	0	0	0	0	8.8474	4.3764
1.4	1.4	0	0	0	0	5.9211	3.0635

Note

- When no metering devices are used, the charge ratio will be output.
The respective total percentage of [Charge rate [%] (for indoor unit)] and [Charge rate [%] (for outdoor unit)] will be 100%.
For a system containing multiple AE-C/EW-C controllers, the total percentage of all the AE-C/EW-C controllers will be 100%.
- If the electric energy is metered individually for indoor units and outdoor units, calculate the charges using the electric energy for outdoor units and [Charge rate [%] (for outdoor unit)], and the electric energy for indoor units and [Charge rate [%] (for indoor unit)].
If the electric energy is metered for outdoor units or for indoor and outdoor units, calculate the charges using the electric energy and [Charge rate [%] (for outdoor unit)].
- The data to be used are [Charge rate [%] (for indoor unit)] and [Charge rate [%] (for outdoor unit)].
The values of Apportionment Parameter (inclusive sum), Apportionment Parameter (for indoor unit), and Apportionment Parameter (for outdoor unit) will not be used. (These values are for reference only.)

18-4. Notes for using the billing function

18-4-1. Need for periodic data storage

CSV data (apportion results) can be collected from the AE-C/EW-C and saved to a USB flash drive for a period of 123 days (4 months) from the previous day.

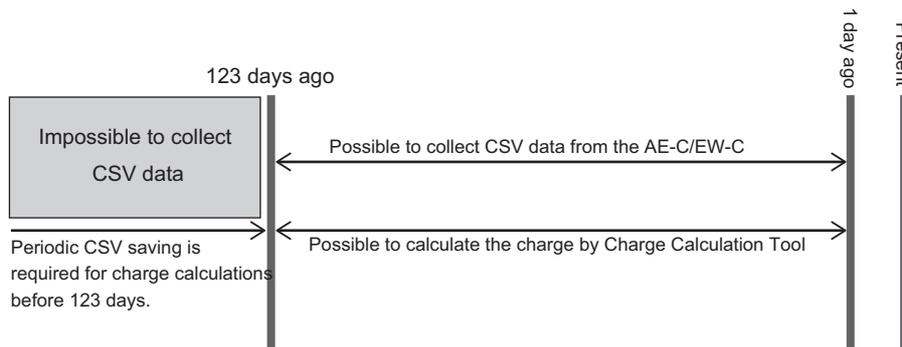
It is recommended to collect and save CSV data (apportion results) periodically (once a month).

- Save the CSV data from the master units for the billing function.
- There may be more than one master units for the billing function in the system.

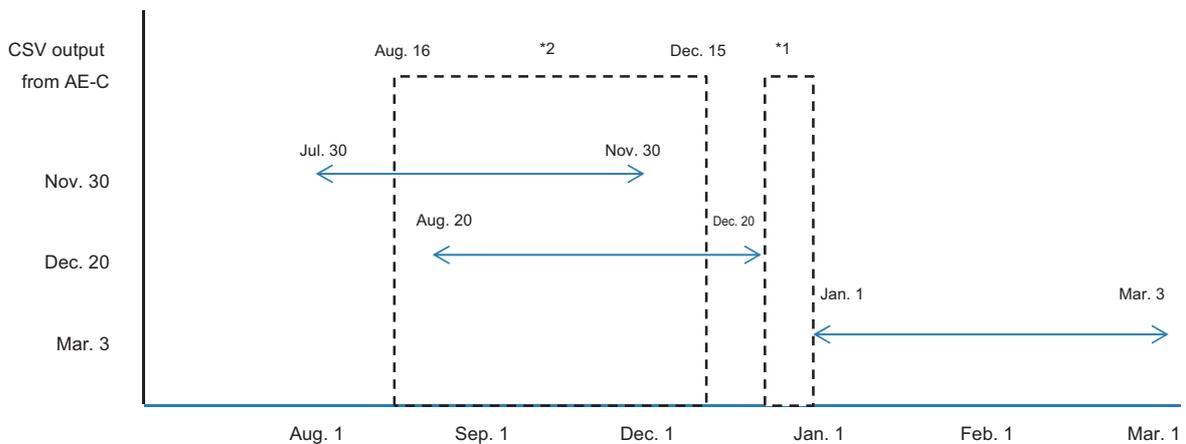
18-4-2. Calculating the charges before 123 days (4 months)

CSV data (apportion results) before 123 days (4 months) cannot be collected from the AE-C/EW-C.

To calculate the charges for a period before 123 days (4 months), backup data are required.



Charge calculation example



*1 In the example above where CSV data (apportioned results) are collected from the AE-C, the charge for the period from Dec. 21 to Dec. 31, where CSV data are missing, cannot be calculated.

*2 To calculate the charge for the period from Aug. 16 to Dec. 15 in the example above, calculate the charge for the period from Aug. 16 to Nov. 30 using the CSV file containing data from Jul. 30 to Nov. 30, and then calculate the charge for the period from Dec. 1 to Dec. 15 using the CSV file containing data from Aug. 20 to Dec. 20.

The total of these two calculation results will be the charge for the period from Aug. 16 to Dec. 15.

The charge to be calculated with two different files (containing data from the same AE-C) cannot be obtained in a single calculation.

18-5. Various billing settings

18-5-1. Changing the closing date

The period for which the charge is calculated by the closing date calculation (automatic output) is one month. If the closing date is changed, the charge for some part of the period needs to be calculated by the specified date calculation method.

[1] Moving the closing date forward

e.g.) After the charge calculation on the closing date (Apr. 20), the closing date is changed to the 15th of each month.

When the closing date is changed from Apr. 20 (where the calculation period will be Mar. 21 to Apr. 20) to May 15 (Apr. 16 to May 15), the charge for the period from Apr. 16 to Apr. 20 will be duplicated. So, do not use the result of the closing date calculation for May 15. Use the result of the specified date calculation for the period from Apr. 21 to May 15.

From the next period (May 16 to Jun. 15) onward, you can calculate the charge by the closing date calculation method only.

[2] Moving the closing date backward

e.g.) After the charge calculation on the closing date (Apr. 20), the closing date is changed to the 25th of each month.

When the closing date is changed from Apr. 20 (where the calculation period will be Mar. 21 to Apr. 20) to May 25 (Apr. 26 to May 25), the charge for the period from Apr. 21 to Apr. 25 will not be calculated. So, to obtain the charge for the period from Apr. 21 to Apr. 25, use the specified date calculation method.

Do not use the result of the closing date calculation for May 15, and use the result of the specified date calculation for the period from Apr. 21 to May 15.

From the next period (May 26 to Jun. 25) onward, you can calculate the charge by the closing date calculation method only.

18-5-2. Changing the unit price (special days, seasonal)

Use the following procedure to change the unit price.

[1] To change the price during a period with specified dates:

e.g.) When the closing date is the 20th of each month and the price change is made on May 1.

Step

1. Set the "Time period for calculation" under **[Charges settings]** to Apr. 21 to Apr. 30, and tap **[Start calculation]**.
2. Enter new prices under "Unit price settings" under **[Advanced Settings]**.
3. Set the "Time period for calculation" under **[Charges settings]** to May 1 to May 20, and tap **[Start calculation]**.

[2] To change the time period setting for the price:

The time period setting cannot be changed retroactively.

- Contact your dealer, an authorized service agent, or a customer service desk designated by the manufacturer.

[3] Changing the tenant name

When a tenant is replaced, before changing the tenant name, calculate the charge billed to the departing tenant for the period until the last day of its tenancy using the specified date calculation method.

If the closing date calculation (automatic output) is implemented, the energy consumption for the period before and after the tenant's replacement date must be calculated using the specified date calculation and apportioned to each tenant.

e.g.) When the closing date is the 20th, and the departing tenant "A" occupies until Apr. 15, and the new tenant "B" occupies from Apr. 16.

Step

1. The charge for the period until Mar. 20 has been billed. Bill the departing tenant "A" for the charge calculated for the period from Mar. 21 to Apr. 15 using the specified date calculation method on or after Apr. 16.
2. After the calculation in step 1 and before the next closing date, change the tenant name (energy management block name) under **[Unit Settings] - [Energy management block settings]** of the Initial Setting Tool.
3. Bill the new tenant "B" for the charge calculated for the period from Apr. 16 to Apr. 20 using the specified date calculation method.
Do not bill the new tenant "B" for the charge calculated on the closing date Apr. 20 (for the period from Mar. 21 to Apr. 20).

Note

- If the tenant name is changed from "A" to "B" and then the charge is calculated for the period of the old tenant "A," the data printed under the name of new tenant "B" will be different from the actual data.
- Contact your dealer, an authorized service agent, or a customer service desk designated by the manufacturer.

[4] Changing the tenant (energy management block) floor plan

Note

- Contact your dealer, an authorized service agent, or a customer service desk designated by the manufacturer.

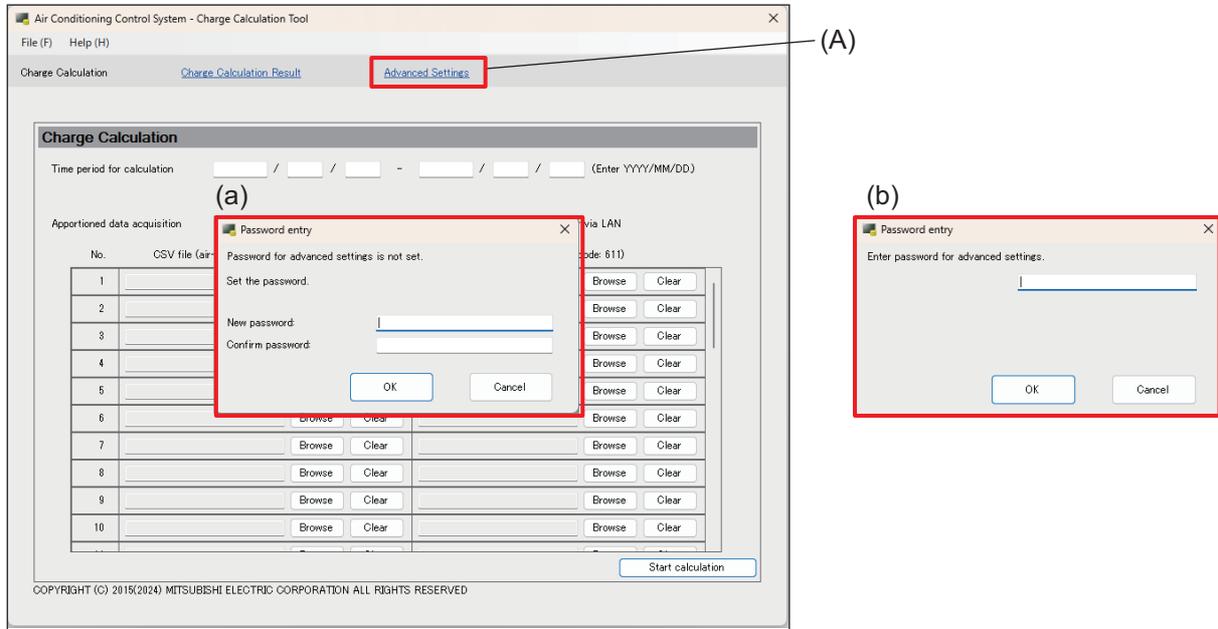
18-6. Settings for the Charge Calculation Tool

18-6-1. Password for advanced charge calculation settings

[1] Initial registration

Tapping **[Advanced Settings]** (A) for the first time will display the Password entry screen (a).
On this screen, enter your password twice.

Tapping **[Advanced Settings]** for the second time and later will display the password entry screen (b).



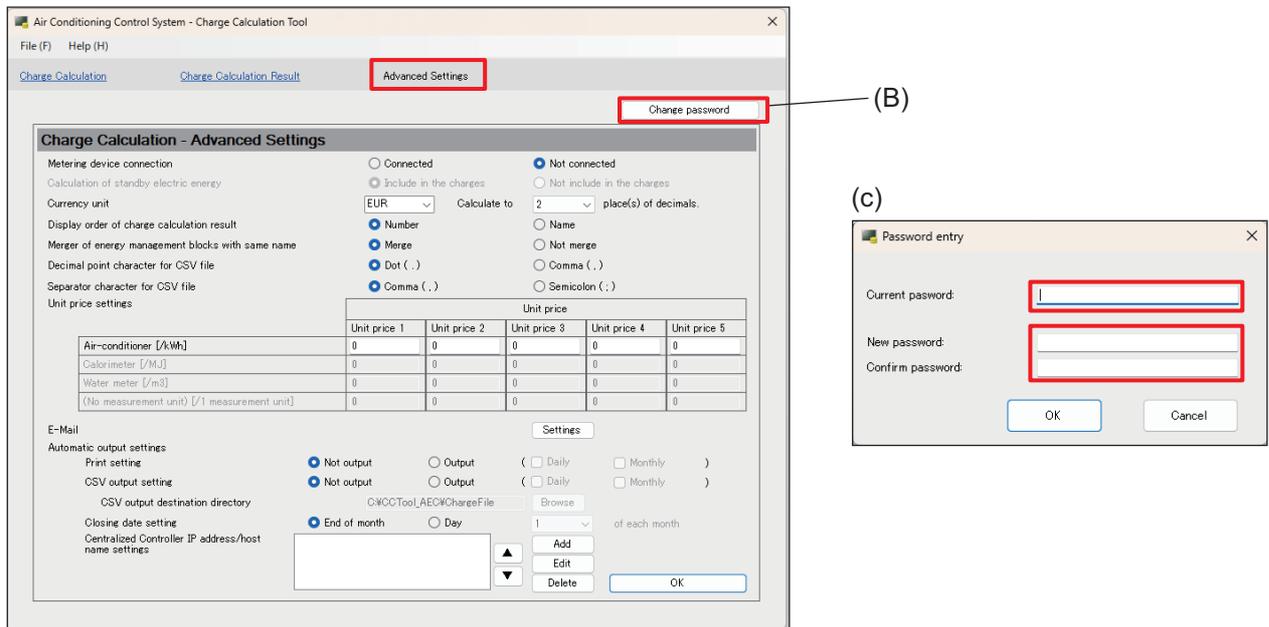
Note

- Make a note of your password so that you do not forget it.
- If you forget your password, contact your dealer.
- The password must be at least eight and no more than 20 characters long.
However, the following characters cannot be used. < > & " ' "

[2] Changing the password

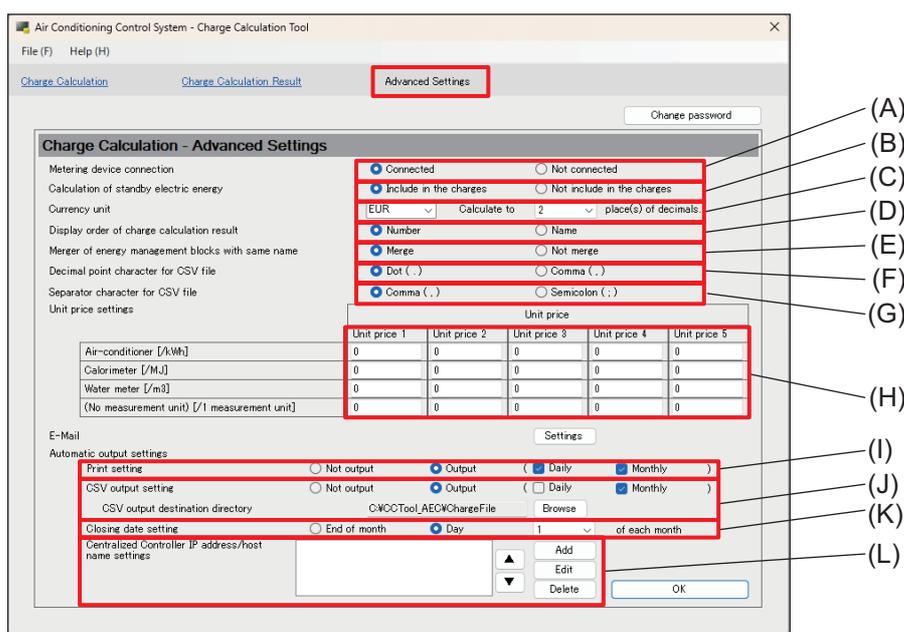
Tapping **[Change password]** (B) on the advanced settings screen for charge calculation will display the password entry screen (c).

Enter the old password and the new password (twice).



18-6-2. Charge Calculation Tool settings

[1] Setting items



	Item	Function and description
(A)	Metering device connection	Select whether or not to connect a metering device (a PI controller connected to the watt-hour meter used with the apportioned electricity billing function). When "Not connected" is selected, the charge rate [%] will be output instead of the apportioned electric energy [kWh].
(B)	Calculation of standby electric energy	Select whether or not to include the charge for the standby electric power consumed by indoor units or outdoor units in the amount billed to tenants. <ul style="list-style-type: none"> This item does not need to be set when "Metering device connection" is set to "Not connected."
(C)	Currency unit	Select the currency unit and the number of decimal places from the pull-down list. The total charge for each energy management block (tenant) per unit price will be rounded down to the specified number of decimal places.
(D)	Display order of charge calculation result	Select "Number" or "Name." When "Name" is selected, the calculation results will be displayed in the order of the energy management block names. The calculation results of the energy management blocks having a name starting with numbers will be displayed first, and then those starting with alphabets.
(E)	Merger of energy management blocks with same name	When two or more AE-C/EW-C controllers have energy management blocks of the same name, select "Merge" to combine their results.
(F)	Decimal point character for CSV file	Select "Dot" or "Comma." <ul style="list-style-type: none"> Select either according to the setting made under [Basic Settings] - [Basic System Settings] of the Initial Setting Tool of the AE-C.
(G)	Separator character for CSV file	Select "Comma" or "Semicolon." <ul style="list-style-type: none"> Select either according to the setting made under [Basic Settings] - [Basic System Settings] of the Initial Setting Tool of the AE-C.

18. Billing function (Operation)

	Item	Function and description
(H)	Unit price settings	<p>When "Metering device connection" is set to "Connected," set unit prices 1 to 5 per kWh.</p> <ul style="list-style-type: none"> Unit prices can be set per calorimeter [MJ], water meter [m³], or no measurement unit [1 measurement unit]. <p>When "Metering device connection" is set to "Not connected," set the charge rate.</p> <ul style="list-style-type: none"> With the Initial Setting Tool, you can assign unit prices 1 to 5 to the days of the week, seasons, etc. Enter electricity charge rate under unit prices 1 to 5.
(I)	Print settings	Select "Output." Set the timing for printing by selecting "Daily" or "Monthly."
(J)	CSV output setting	Set the timing for output by selecting "Daily" or "Monthly."
	CSV output destination directory	Set the destination for the CSV file to be automatically output.
(K)	Closing date setting	<p>Select "end of month" or "Day."</p> <p>When selecting "Day," select a closing date from the pull-down list.</p>
(L)	IP address/host name settings	To set up a new one, tap [Add] to add and set the IP address of the centralized controller to which the automatic acquisition is to be performed.

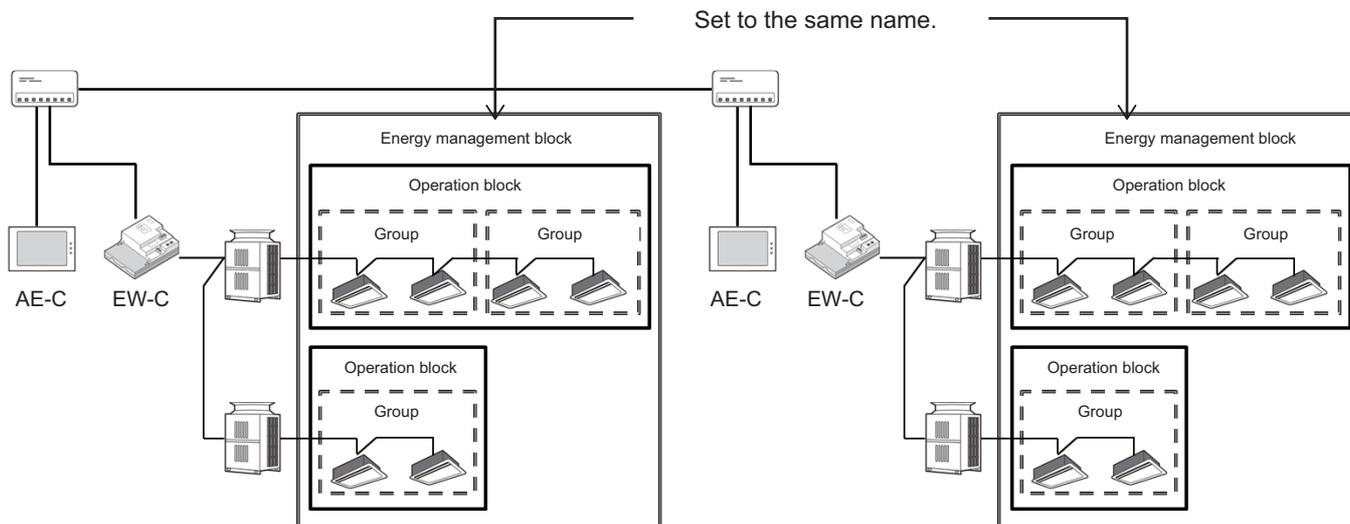
Note

- Metering device connection (A)
 When "Not connected" is selected, charge ratio [%] will be output instead of the apportioned electric energy [kWh].
 The settings of "Apportioning with metering device" under "Billing Function Settings" of the Initial Setting Tool of the AE-C controllers must be the same (Connected/Not connected).
- Currency unit (C)
 The calculation results are rounded down to the specified digit.
- Unit price settings (H)
 When "Metering device connection" is set to "Not connected," enter electricity charge rate under unit prices 1 to 5.
 e.g.) When the nighttime rate is one-third of the daytime rate, set unit price 1 (nighttime) to "1" and unit price 2 (daytime) to "3."
 Set the unit price time periods with the Initial Setting Tool.

[2] Merger of energy management blocks with same name

(1) Example of a case where a tenant is under control of multiple AE-C controllers

When a tenant is under control of multiple AE-C/EW-C controllers, you can merge the charge calculation results or charge rates of the energy management blocks to which the tenant is belonging by setting the energy management blocks to the same name on the AE-C/EW-C controllers.



Display order: Number	Merge	Calculation results for each AE-C/EW-C will be output in order of AE-C/EW-C IP addresses. Calculation results within each AE-C/EW-C will be output in order of energy management block numbers registered on the Initial Setting Tool. Calculation results of energy management blocks will be merged in order of AE-C/EW-C numbers.
	Not merge	Calculation results for each AE-C/EW-C will be output in order of AE-C/EW-C IP addresses. Calculation results within each AE-C/EW-C will be output in order of energy management block numbers registered on the Initial Setting Tool.
Display order: Name	Merge	Calculation results will be output in order of energy management block names. Calculation results of energy management blocks will be merged in order of AE-C/EW-C names.
	Not merge	Calculation results for each AE-C/EW-C will be output in order of AE-C/EW-C IP addresses. Calculation results within each AE-C/EW-C will be output in order of energy management block names.

19. Billing function (initial settings)

19-1. Summary

- Please understand that the apportioned electricity billing function uses our unique analysis method of energy apportionment, and explain it to the user (and conclude a license agreement to use this function).
- Trial run check for the billing function must be performed three times. This will take approximately 1.5 months and should be done well in advance of the start of operations.
- If a group/block is changed in a system that is in billing operation, a trial run must be performed to see that there are no incorrect settings.

19-2. Unit settings

19-2-1. Items set by the Initial Setting Tool

○: Items that can be set

Setting item		Initial Setting Tool	Charge Calculation Tool	LCD on the AE-C	Browser
Basic settings	License registration (individual)	○		○	○
	License registration (batch)	○ *1			

*1 Batch license registration is possible with a license CSV file.

19-2-2. License registration and control target settings

- Register licenses using the Initial Setting Tool.
- Select "Use the billing function" for the system control targets of the AE-C/EW-C.

19-3. Settings using the Charge Calculation Tool

For details of the initial settings of the Charge Calculation Tool, refer to the sections given in the table below.

○ Items that need to be set for using the apportioned electricity billing function

Setting item		Charge Calculation Tool	Section to be referred to
Settings for charge calculation	Metering device connection	○	"Charge Calculation Tool settings"
	Charge calculation of standby electric energy	○	
	Currency unit	○	
	Display order of charge calculation results	○	
	Merger of energy management blocks with same name	○	
	Decimal point character for CSV file	○	
	Separator character for CSV file	○	
	Unit price settings	○	
	Print settings	○	
	CSV output settings	○	
	Closing date settings	○	
	IP address settings	○	

19-3-1. Charges settings

[1] Summary of charges settings

Time periods to which unit prices are applied can be set for particular seasons, days of the week, or special days.

Unit price settings can be made on the Charge Calculation Tool.

- To delete a charging time period setting after the operation starts, the "carried-over data" for the time period to be deleted must be cleared. If the carried-over data is not cleared, "0095 Warning - possibility of damaged metering device" will be displayed.

(1) Seasonal charges - time period

You can select whether or not to use seasonal unit prices.

When you select to use seasonal unit prices, you can set the time period for seasonal charges.

(2) Weekly charges setting

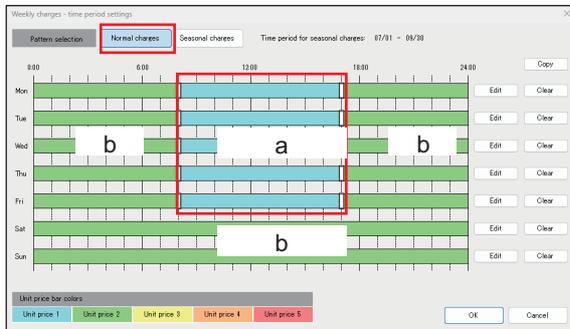
In "Pattern selection," you can select normal charges or seasonal charges set in "(1) Time period setting for seasonal charges" and apply them as unit prices to specific days of the week or specific time period.

Example 1: Setting a high electricity charge for the high-demand period in summer (Jul. 1 to Sep. 30)

Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
Normal charges						Seasonal charges			Normal charges		
Unit price 1 (a)		Unit price 2 (b)		Unit price 3 (c)		Unit price 4 (d)					
\$0.20/kWh		\$0.22/kWh		\$0.24/kWh		\$0.23/kWh					

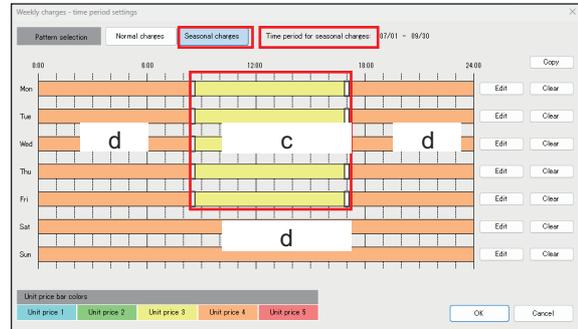
[Normal charges]

Jan. 1 to Jun. 30, Oct. 1 to Dec. 31



[Seasonal charges]

Jul. 1 to Sep. 30



For the seasonal charges above:

		Mon.	Tue.	Wed.	Thu.	Fri.	Sat.	Sun.
Time period	8:30 to 17:00	Unit price 3					Unit price 4	
	17:00 to 08:30	Unit price 4						

Set one unit price for the time period from 8:30 to 17:00 on weekdays and another unit price for other time periods.

During regular hours on weekdays: Unit price 3 (\$0.24/kWh),

During after-hours on weekdays: Unit price 4 (\$0.23/kWh)

Set separate unit prices for weekdays and weekends.

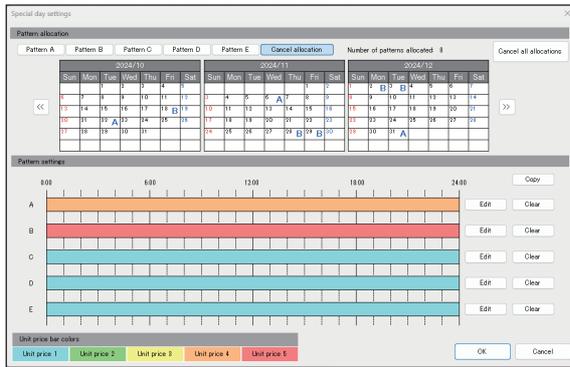
Weekends: Unit price 4 (\$0.23/kWh)

(3) Special day charges setting

You can specify special days and set a unit price for those days.

Example: Set a unit price for public holidays and special days that does not fall to the weekly unit price set in (2) Weekly charges setting.

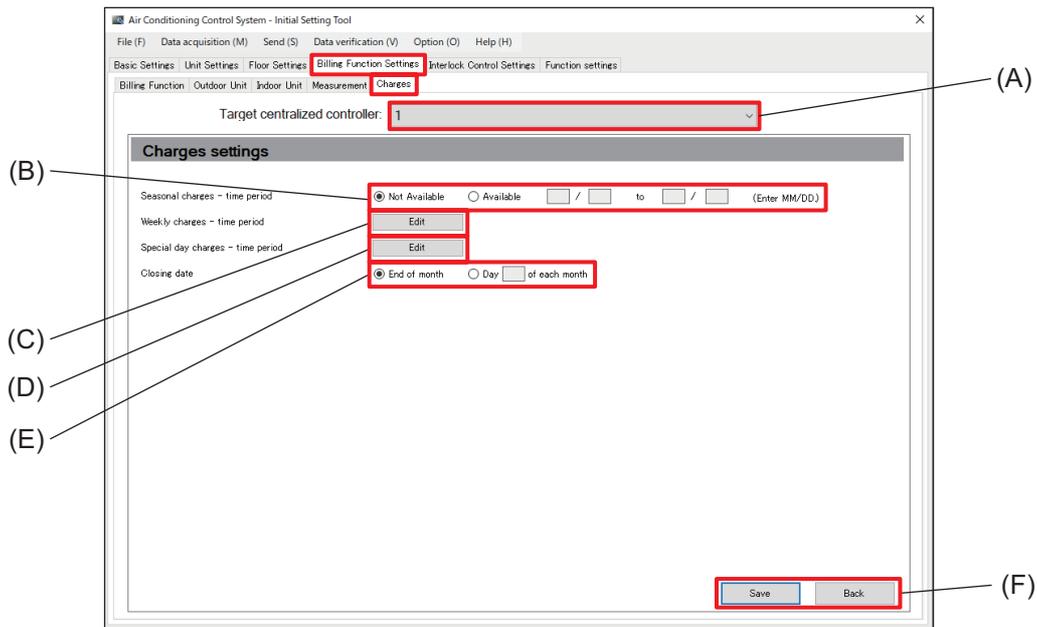
A: Company event B: Holiday



You can assign patterns (A to E) in which the charge time periods have been set to respective special days.

[2] Charges settings

To use the billing function, set applicable electricity charges and time periods on the Charges settings screen.



	Item	Function and description
(A)	Target centralized controller	The number and the name of the AE-C/EW-C controller that has been registered on the Connection tab are displayed.
(B)	Seasonal charges - time period	To use seasonal charges, select [Available] and enter the seasonal charge period. <ul style="list-style-type: none"> The period can be set across years. e.g.) Dec. 1 to Jan. 31 Regardless of the leap year, Feb. 29 can be set. In this case, years other than leap years are treated as starting on Mar. 1 and ending on Feb. 28.
(C)	Weekly charges - time period	Set this item when using weekly charges or seasonal charges. Tapping [Edit] will display the Weekly charges - time period settings screen.
(D)	Special day charges - time period	Set this item when using special day charges. Tapping [Edit] will display the Special day settings screen.
(E)	Closing date	Set the closing date that has been agreed on with the building owner. <ul style="list-style-type: none"> When [End of month] is selected, the amount of electricity consumed from the 1st day to the end of the month will be obtained. Any number from 1 to 28 can be set in the box of [Day XX of each month]. 29 to 31 cannot be set. There are two types of closing date: one is set by the Initial Setting Tool, and the other is set by the Charge Calculation Tool. Set the same closing date for both.
(F)	[Save]/[Back]	After completing the setting, tap [Save] . To cancel the setting, tap [Back] .

[3] Weekly charges - time period settings screen

Set the time of day for each day of the week to which the unit price is applied.

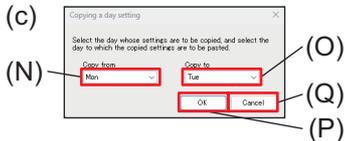
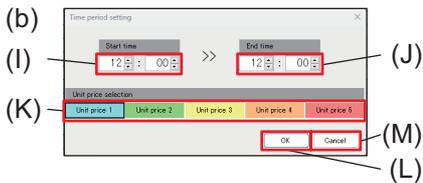
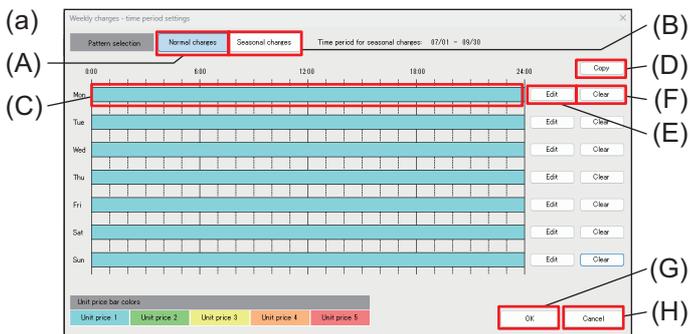
The unit prices are displayed in different colors.

Up to five different unit prices can be registered.

Up to 10 time periods can be set for each day of the week.

When setting "Seasonal charges - time period" to **[Available]** on the Charges settings screen, you can set seasonal charges in addition to normal charges. Seasonal charges are applicable only to the time period set under "Seasonal charges - time period."

- Set the unit prices using the Charge Calculation Tool.
- When the system is started up for the first time, Unit price 1 is set for all days of the week and all time periods.



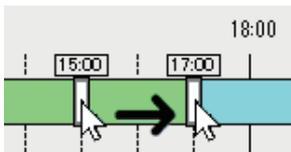
Step

1. Tap **[Edit]** under "Weekly charges - time period" on the Charges settings screen to display the Weekly charges - time period settings screen (a).
2. Tap Normal charges (A).
3. Tap **[Edit]** (E) of the day of the week for which you want to set the charge to display the Time period setting screen (b).
 - To reset the setting to the default value (Unit price 1 from 0:00 to 24:00), tap **[Clear]** (F).
4. Set the start time (I) and end time (J) of the time period.
5. Select the unit price from Unit price 1 to Unit price 5 under Unit price selection (K).
6. Tap **[OK]** (L) to save the settings.
 - To cancel the setting, tap **[Cancel]** (M).
7. To copy the normal charge settings to other day of the week, tap **[Copy]** (D) to display the Copying a day setting screen (c).
8. Select days of the week under "Copy from" (N) and "Copy to" (O).
9. Tap **[OK]** (P) to save the settings.
 - To cancel the setting, tap **[Cancel]** (Q).
10. To use seasonal charges, tap Seasonal charges (B) and repeat steps 3 to 9.
11. Tap **[OK]** (G) to save the settings.
 - To cancel the setting, tap **[Cancel]** (H).

On the charge time period bar (C), you can change the time period in 10-minute increments by dragging the separator lines.

[4] Setting the unit price and charges period for each day

(1) To register new settings

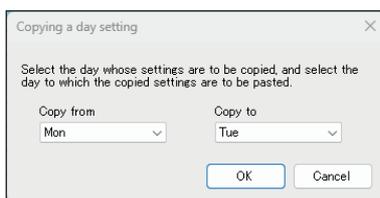


(2) To change charges periods

Step

- On the Weekly charges - time period settings screen, tap the time period you want to change.
 - The Time period setting screen will be displayed showing the time period you tapped and the unit price.
- Enter or select the settings, and tap **[OK]**.

(3) To copy from another day



Note

- Copying across "Normal charges - time period" and "Seasonal charges - time period" is not allowed.

Step

- Tap **[Billing Function Settings] - [Charges settings]** to display the Charges settings screen.
- Tap **[Edit]** under Weekly charges - time period to display the Weekly charges - time period settings screen.
- Tap **[Edit]** of the day of the week for which you want to make settings to display the Time period setting screen.
- Enter the start and end times (in 1-minute increments), select the unit price, and then tap **[OK]**.
 - If you register a new time that overlaps a time period for which a charges period has already been set, the new time period overwrites the previous time period.
 - You cannot set multiple unit prices and times in one process. To set multiple prices or times, set the unit prices and time periods one at a time.

Note

- You can change the time period in 10-minute increments by dragging the separator lines.

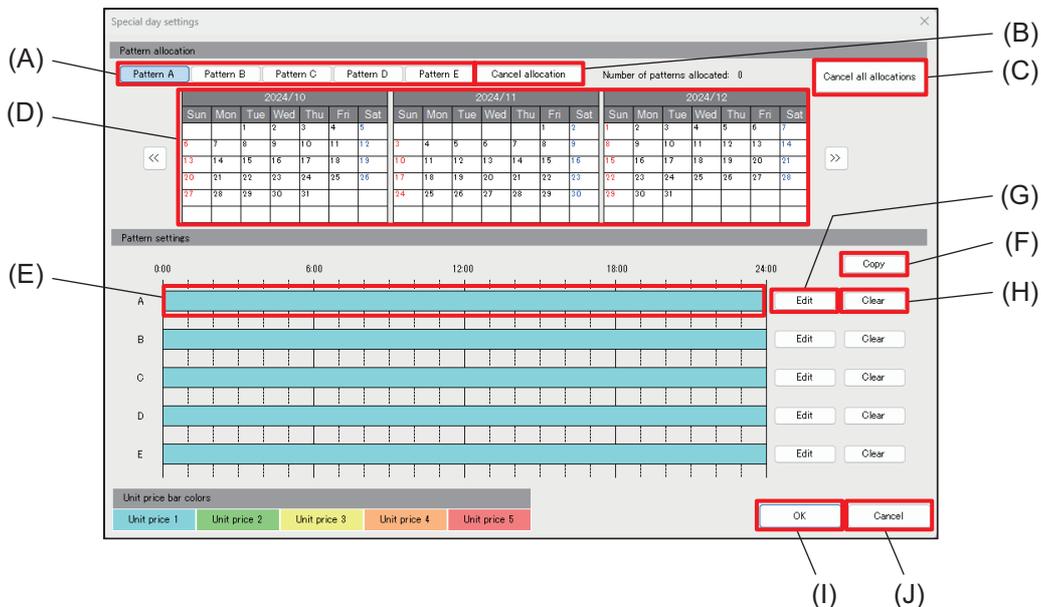
Step

- On the Weekly charges - time period settings screen, tap **[Copy]**.
- Set "Copy from" and "Copy to," and tap **[OK]**.
 - The settings of the copy source will be copied to the copy destination.

[5] Special day settings screen

You can register five types of time-of-day unit price (patterns A to E), and assign the patterns to special days.

- "Special day settings" take precedence over "Weekly charges - time period settings."
- The settings can be made from the current day to the end of 24 months ahead.
- Up to 10 time periods can be set per pattern.
- The number of pattern allocations can be set for a total of 50 days for all patterns. Patterns set before the current day are not included.
- When the system is started up for the first time, Unit price 1 is set for all patterns and all time periods.



	Item	Function and description
(A)	Pattern allocation	Select a pattern to be allocated to the special day.
(B)	Cancel allocation	The allocated pattern is canceled.
(C)	[Cancel all allocations]	Tap this button to cancel all pattern allocations of special day settings.
(D)	Calendar for setting special days	Select a pattern and tap a date, and the selected pattern will be allocated to the date. On the dates to which a pattern has been allocated, the letters A through E are displayed.
(E)	Hourly price	The prices of pattern A through E are displayed on an hourly basis.
(F)	[Copy]	The pattern of the selected special day is copied to another pattern.
(G)	[Edit]	Tapping this button will display the Time period setting screen.
(H)	[Clear]	Tapping this button will reset the pattern settings to the defaults (Unit price 1 from 0:00 to 24:00).
(I)	[OK]	Tap this button to save the setting changes.
(J)	[Cancel]	Tap this button to go back to the previous screen without saving the setting changes.

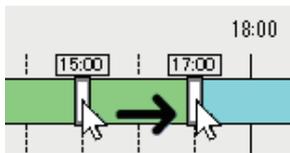
[6] Setting the unit price and charges period for special days

(1) To register new settings



Step

1. Tap **[Billing Function Settings] - [Charges settings]** to display the Charges settings screen.
2. Tap **[Edit]** of "Special day charges - time period" to display the Special day settings screen.
3. Tap **[Edit]** of the pattern you want to set to display the Time period setting screen.
4. Enter the start and end times (in 1-minute increments), select the unit price, and then tap **[OK]**.
 - If you register a new time that overlaps a time period for which a charges period has already been set, the new time period overwrites the previous time period.
 - You cannot set multiple unit prices and times in one process. To set multiple prices or times, set the unit prices and time periods one at a time.



Note

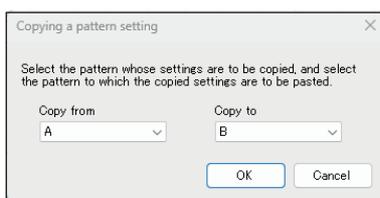
- You can change the time period in 10-minute increments by dragging the separator lines.

(2) To change charges periods

Step

1. On the Special day settings screen, tap the time period to be changed.
 - The Time period setting screen will be displayed showing the time period you tapped and the unit price.
2. Enter or select the settings, and tap **[OK]**.

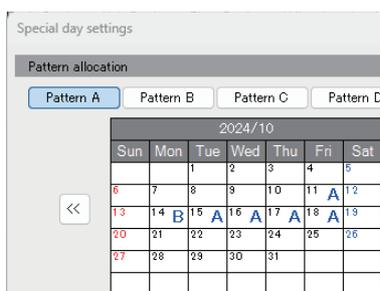
(3) To copy from another pattern



Note

1. On the Special day settings screen, tap **[Copy]**.
2. Set "Copy from" and "Copy to," and tap **[OK]**.
 - The settings of the copy source will be copied to the copy destination.

(4) To register a pattern to a special day



Step

1. Select a pattern under "Pattern allocation" on the Special day settings screen.
2. Tap a date to which you want to register the pattern you selected on the calendar.
 - To cancel a registered pattern, select **[Cancel allocation]**, and tap the date you want to cancel on the calendar.
 - To cancel all special day settings, tap **[Cancel all allocations]** to display the confirmation screen, and tap **[OK]**.

20. Billing function (test run)

20-1. Flow of the billing test run

Test run check for the apportioned electricity billing function must be performed three times.

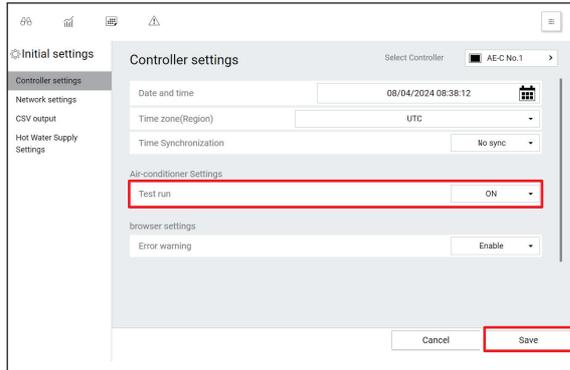
Billing test run checks should be performed well in advance of handover.

During the billing function trial run period, check that output is as set on the Charge Calculation Tool.

20-1-1. Correcting AE-C measurement values

[1] Correcting AE-C measurement values

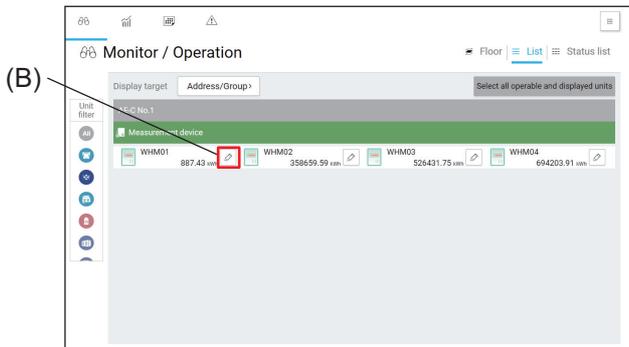
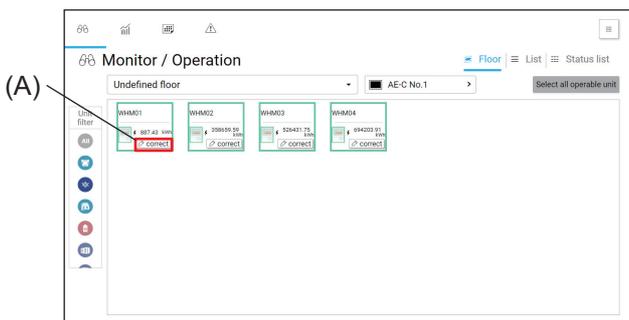
Match the measurement values on the Measurement screen on the AE-C's LCD to the watt-hour meter measurements used by the apportioned electricity billing function.



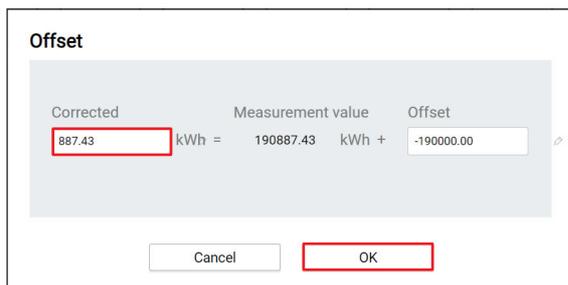
Step

1. Select [Initial settings] - [Controller settings], set Trial run to [ON] under Air-conditioner Settings, and tap [Save].

2. Select a measurement device in the floor screen or the list screen, and tap (A) or (B).



3. Enter a correction value, and tap [OK].



4. After completing the correction, select [Initial settings] - [Controller settings], set Trial run to [OFF] under Air-conditioner Settings, and tap [Save].

20-1-2. Checking the time settings

[1] Checking the time settings

Check for time discrepancies between AE-C and EW-C. Check that the current time of the AE-C and EW-C is correct, referring to the current time settings of the Web browser.

[3] Charges settings

Check that none of the settings differ from those set on the Charges settings screen.

Charges settings			
Weekly charges	Seasonal charges	Special day charges	Closing date
Available	Available	Available	End of month
(G)	(H)	(I)	(J)

(G) Weekly charges (Available)

(H) Seasonal charges (Available/Not available)

(I) Special day charges (Available/Not available)

- This will be judged based on the number of pattern allocations "0" (Not Available) or "1 or more" (Available).

(J) Closing date (End of month/Day XX of each month)

- There are two types of "Closing date": one is for the calculation on the closing date (automatic output) set by "Charge Calculation Tool settings," and the other is for the energy management chart (monthly) displayed on the AE-C set by "Initial Setting Tool settings." Set these closing dates to the same date so that the amount of electricity consumed by each tenant matches with that displayed on the energy management chart displayed on the AE-C.

[4] Centralized controller settings (for systems with metering devices)

Check that none of the settings differ from those set on the PI Controller Settings screen.

Centralized controller settings information					
Address	Ch.	Metering device name	Metering device type	Pulse weight	Measurement unit
1-050	1	50-1	Outdoor unit	1	kWh
1-050	2	50-2	Indoor unit	1	kWh
(K)	(L)	(M)	(N)	(O)	

(K) Address

- For a PI controller, this will be shown as "(Expansion controller No.) - (Unit address)."

(L) Ch.

(M) Metering device name

- For a PI controller, if the name of the metering device is not registered, this will be shown as "(Unit address) - (Ch)."

(N) Metering device type

- This shows the unit type set on the Measurement Settings screen.

(O) Pulse weight, Unit

- If the pulse weight of the actual watt-hour meter is stated in "pulse/kWh," set the value of the reciprocal "kWh/pulse."

Example: In the case of 10 pulse/kWh, the pulse setting value is 0.1 kWh/pulse.

[5] Checking the watt-hour meter

Enter the information about the watt-hour meter installed at the site.

Visual confirmed information				
Metering device model	Serial number	Pulse weight	Measurement unit	Linear weight
M2LHM-XX	064247	1	kWh/pulse	100
M2LHM-XX	064240	1	kWh/pulse	100
(P)	(Q)	(R)		(S)

(P) Metering device model

- Enter the metering device model name.

(Q) Serial number

- Enter the serial number of the metering device.

(R) Pulse weight, Unit

- Enter the value and units for the primary side pulse constant.
- If the pulse unit of the actual watt-hour meter is stated in "pulse/kWh," enter the reciprocal value "kWh/pulse."

Example: In the case of 1/100 pulse/kWh, the pulse setting value is 100 kWh/pulse.

(S) Linear weight

- Enter the linear weight.

20-2-2. Unit-related item sheet

This sheet is output for each AE-C.

[1] Outdoor/indoor unit settings

Check that there are no errors in the settings.

Floor No.	Floor name	Centralized controller No.	Outdoor unit			Pump unit			Indoor unit					Indoor unit WHM	Outdoor unit WHM	Pump unit WHM	
			Unit address	Model name	Standby electric power	Unit address	Model name	Standby electric power	Unit address	Unit type	Model name	Cooling capacity	Cooling power input				Standby electric power
1	1F	1-1	51/52	PUHY-P700YSJM-A-(BS)	0.14	-	-	-	1	Air-conditioner	PLFY-P25VLM-D-E	2.8	0.072	0.005	1-1-049-1	1-1-049-2	-
1	1F	1-1	51/52	PUHY-P700YSJM-A-(BS)	0.14	-	-	-	2	Air-conditioner	PLFY-P25VLM-D-E	2.8	0.072	0.005	1-1-049-1	1-1-049-2	-
1	1F	1-1	51/52	PUHY-P700YSJM-A-(BS)	0.14	-	-	-	3	Air-conditioner	PLFY-P32VLM-D-E	3.6	0.072	0.005	1-1-049-1	1-1-049-2	-
1	1F	1-1	51/52	PUHY-P700YSJM-A-(BS)	0.14	-	-	-	4	Air-conditioner	PLFY-P25VLM-D-E	2.8	0.072	0.005	1-1-049-1	1-1-049-2	-
1	1F	1-1	55	PURY-EM500YNW-A-(BS)	0.07	56	CMB-WM108V-AA	0.007	5	Air-conditioner	PEFY-W20VMA2-A	2.5	0.121	0.005	1-1-049-1	1-1-049-3	1-1-049-4
1	1F	1-1	55	PURY-EM500YNW-A-(BS)	0.07	56	CMB-WM108V-AA	0.007	6	Air-conditioner	PEFY-W20VMA2-A	2.5	0.121	0.005	1-1-049-1	1-1-049-3	1-1-049-4
1	1F	1-1	55	PURY-EM500YNW-A-(BS)	0.07	56	CMB-WM108V-AA	0.007	7	Air-conditioner	PEFY-W20VMA2-A	2.5	0.121	0.005	1-1-049-1	1-1-049-3	1-1-049-4

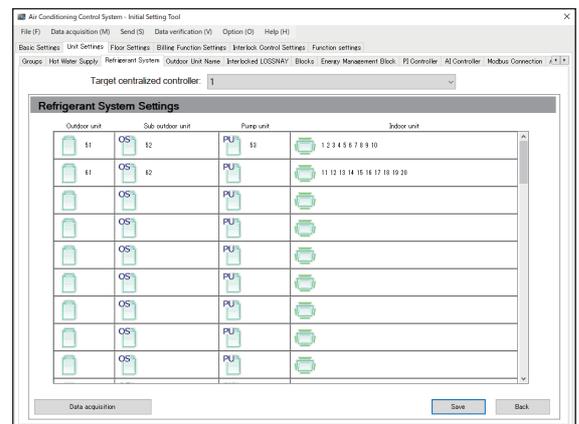
(A) (B) (C) (D) (E) (F) (G) (H) (I) (J) (K) (L) (M) (N)

(A) Floor No., Floor name

- Select [Monitor/Operation] - [Floor] on the AE-C's LCD, enter the floor number and name, and then check that there are no incorrect settings.

(B) Outdoor unit - Unit address

- Tap [Monitor] on the Refrigerant System Settings screen of the Initial Setting Tool to check the connections between the outdoor units and indoor units.



(C) Outdoor unit - Model name

- Enter the model name of the outdoor unit, and check that the combinations of outdoor units (C) and indoor units (G) are correct.

(D) Outdoor unit - Standby electric power

- Check that the settings are correct according to the outdoor unit addresses and standby electric power values set on the Outdoor Unit settings screen.
- If sub outdoor units (OS1 and OS2) are connected, the standby power will be the sum of the main and sub units.

(E) (HVRF system only) Pump unit - Address

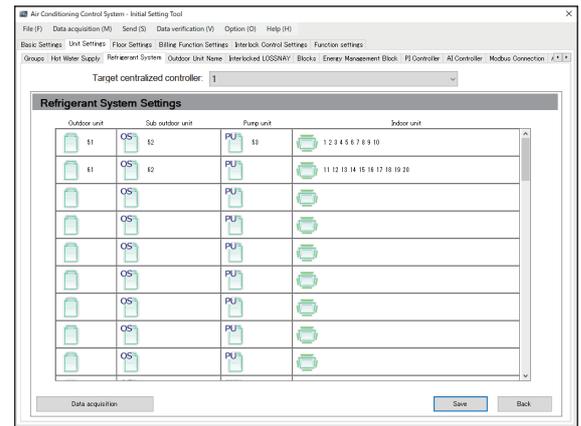
(F) (HVRF system only) Pump unit - Model name

- When the Initial Setting Tool Ver. 1.80 or later is used, the model name set in "Outdoor unit settings" will be output.

(G) (HVRF system only) Pump unit - Standby electric power

(H) Indoor unit - Unit address

- Tap **[Monitor]** on the Refrigerant System Settings screen of the Initial Setting Tool to check the connections between the outdoor units and indoor units.



(I) Indoor unit- Unit type

- Check that the settings are correct according to the addresses and unit types set on the Group Settings screen.

(J) Indoor unit - Model name

- Enter the model name of the indoor unit, and check that the combinations of outdoor units (C) and indoor units (G) are correct.
- For Initial Setting Tool Ver. 1.20 or later, the model name set on the Indoor Unit Settings screen is output.

(K) Indoor unit - Cooling capacity, Cooling power input, Standby electric power

- Check that the settings are correct according to the cooling capacity, cooling power input, and standby electric power of each indoor unit address set on the Indoor Unit Settings screen.

(L) Indoor unit WHM *1

- Check that the output to the watt-hour meter connected to the indoor unit is correct.
- Check that the input is correct from the indoor unit addresses and indoor units' watt-hour meters set on the Measurement Settings screen.

*1

1-1-050-1
(a) (b) (c)

(a) Expansion controller No.

(b) Unit address

(c) CH No.

(M) Outdoor unit WHM *1

- Check that the output to the watt-hour meter connected to the outdoor unit is correct.
- Check that the input is correct from the outdoor unit addresses and outdoor units' watt-hour meters set on the Measurement Settings screen.

(N) Pump unit WHM*

- (HVRF system only) Check that this is correctly output on the electricity meter connected to the pump unit.

Note

- For the outdoor unit (address: 51) and outdoor sub-unit (address: 52), the output unit address will be 51/52 and the output standby electric power will be 0.14.
- For a LOSSNAY unit, [-] will be displayed for the outdoor unit address, standby electric power, and indoor unit cooling capacity.
- For a DIDO controller, AI controller and PI controller, [-] will be displayed for the unit address and standby electric power of the outdoor unit, and the cooling capacity, cooling power input, and standby electric power of the indoor unit.
- The charge calculation results will be output for each energy management block.
- A-control units will not be displayed on the "System View" screen. Check their connection status by other means.

[2] Indoor unit settings (group, block, energy management block)

Check that there are no errors in the settings.

Floor No.	Floor name	Centralized controller No.	Indoor unit	Group		Block		Energy management block	
			Unit address	No.	Name	No.	Name	No.	Name
1	1F	1-1	1	1	Tenant A	1	Tenant ABC	1	Tenant ABC
1	1F	1-1	2	2	Tenant B	1	Tenant ABC	1	Tenant ABC
1	1F	1-1	3	3	Tenant C	1	Tenant ABC	1	Tenant ABC
1	1F	1-1	4	4	Tenant D	2	Tenant DE	2	Tenant DE
1	1F	1-1	5	5	Tenant E	2	Tenant DE	2	Tenant DE
1	1F	1-1	6	6	Tenant F	3	Tenant F	3	Tenant FGH
1	1F	1-1	7	7	Tenant G	4	Tenant GH	3	Tenant FGH

(O)
(P)
(Q)

(O) Group

- Check that there are no errors in the group names or in the correlations between the indoor unit addresses and group numbers set on the Group Settings screen.

(P) Block

- Check that there are no errors in the block names or in the correlations between the group numbers and block numbers set on the Block Settings screen.

(Q) Energy management block

- Check that there are no errors in the energy management block names or in the correlations between the block numbers and energy management block numbers set on the Energy Management Block Settings screen.

20-2-3. Entering the electric energy

Enter the electric power value of the watt-hour meter and the AE-C/EW-C measurement values in the billing-related item sheet.

Visually confirmed information							
					Current reading of the metering (A) Before trial run (2015/ 04/ 02 10:04)		Current reading of the centralized controller (D) Monitored value before trial run (2015/ 04/ 02 10:13)
Metering device model	Serial Number	Pulse weight	Unit	Linear weight	Meter display	Measurement value	
M2LHM-*	064247	1	kWh/ pulse	100	10	1000	1001
M2LHM-*	064248	1	kWh/ pulse	100	17	1700	1700
					(B)	(C)	(E)

Current reading of the metering device

(A) Date and time before trial run

- Enter the confirmation date and time.

(B) Monitored value before trial run

- Enter the reading of the meter before the trial run (5-digit number).

(C) Measurement value before trial run

- Enter the measurement value before the trial run. (Meter reading × linear weight)

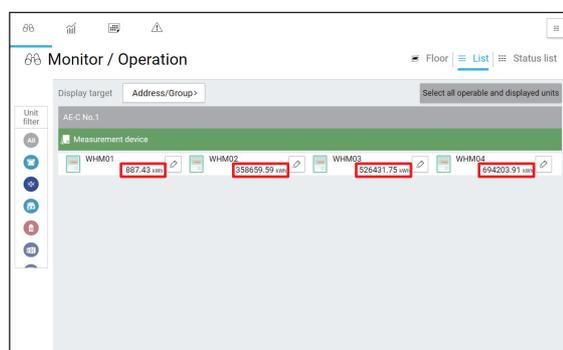
Current reading of the centralized controller

(D) Date and time before trial run

- Enter the confirmation date and time.

(E) Monitored value before trial run

- Select a measurement device from the floor or list display on the AE-C's LCD screen, and enter the monitored values before trial run.



(2) Checking the difference

Centralized controller settings information				Visually confirmed information								
Address	Ch	Metering device name	Metering device model	Current reading of the metering device				Current reading of the centralized controller				
				Before trial run (2015/04/02 10:04)		After trial run (2015/04/03 9:12)		Meter difference value	Monitored value before trial run (2015/04/02 10:13)	Monitored value after trial run (2015/04/03 9:24)	Monitored value difference	Check
Meter display	Measurement value	Meter display	Measurement value									
1-1-050	1	Outdoor Unit	M2LHM-**	1000	1000	1060	1060	60	1001	1061	60	☑
1-1-050	2	Indoor Unit	M2LHM-**	170	170	185	185	15	171	185	14	☑

(F)

(G)

(H)

Current reading of the metering device

(F) Meter difference value

- Calculate the meter difference value using the current reading of the metering device, which is obtained by subtracting the measurement value before trial run from the measurement value after trial run.
- Check that the difference in the measurement value of the watt-hour meter is not "0."

(G) Monitored value difference

- Calculate the monitored value difference using the current value of the centralized controller.
- Check that the difference in the monitored value is not "0."

If the difference is "0," check if the pulse value setting on the PI Controller Settings screen is correct.

(H) Check

- Check that the measurement value and monitored value have increased from the values before the trial run.
- Check that (F) and (G) are almost identical. If there are no problems, put a check in the check column.

Note

- The actual electric energy calculations may not match perfectly due to differences in the times when visual confirmation was carried out.

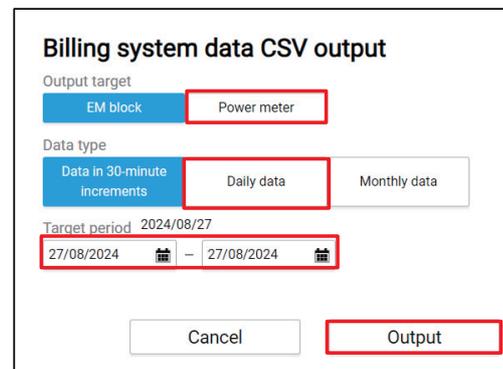
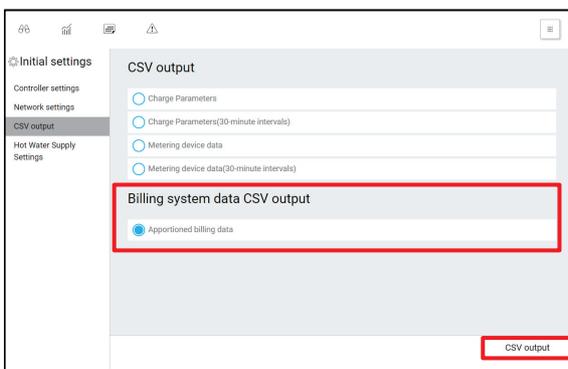
(3) Checking the data by unit price

Output CSV data (apportioned calculation results) "PI Controller (metering device)" from the AE-C and enter the values.

How to output CSV data (Acquisition from the AE-C using a USB flash drive)

Step

1. Remove the AE-C cover and connect a USB flash drive.
2. Select [Initial Settings] - [CSV Output] screen, and select apportioned results data.
3. Set the period when the billing function trial run was carried out, and with [Metering device] and [Daily data] selected, tap [Output].
4. The electric energy for each unit price in the specified time period will be displayed. Enter the information on the check sheet.



(4) Checking the data of the different types

Total - Outdoor unit (kWh)	60	} (K)
Total - Pump unit (kWh)	40	
Total - Indoor unit (kWh)	15	
Total - Others (kWh)	0	
Total - MJ	0	
Total - m ³	0	
Total - --	0	

(K) Calculate the totals for each metering device, and enter the total value.

- Total - Outdoor unit (kWh), Total - Indoor unit (kWh), Total - Others (kWh)
 1. Select [Unit Settings] - [PI Controller Settings] - [kWh].
 2. Select [Billing Function Settings] - [Measurement]. When [Outdoor unit] is selected as unit type, the total is calculated in "Total - Outdoor unit (kWh)." When [Indoor unit] is selected as unit type, the total is calculated in "Total - Indoor unit (kWh)." When [Other] is selected, the total is calculated in "Total - Others (kWh)."
- When selecting [Unit Settings] - [PI Controller Settings] - [MJ], the total is calculated in "Total - MJ."
- When selecting [Unit Settings] - [PI Controller Settings] - [m³], the total is calculated in "Total - M³."
- When selecting [Unit Settings] - [PI Controller Settings] - [--], the total is calculated in "Total --."

Note

- When selecting [Billing Function Settings] - [Billing Function] - [Same power source (O/U - I/U)] under Power source of A-control unit, the total is calculated in "Total - Outdoor unit (kWh)."
- When selecting [Billing Function Settings] - [Billing Function] - [Separated power source (O/U - I/U)] under Power source of A-control unit, the total is calculated separately in "Total - Indoor unit (kWh)" and "Total - Outdoor unit (kWh)."

(5) Check

Carry out final checks, and if there are no incorrect settings, put a check in the check column.

Check item	Check
Are the settings for the indoor units that are connected to the outdoor unit refrigerant system made correctly? (Check that the cables for the outdoor unit and indoor unit are not mixed up.)	
Are the settings for the metering device that is connected to the outdoor unit made correctly? (Check that the cables for the outdoor unit and metering device are not mixed up.)	
Are the settings for the metering device that is connected to the indoor unit made correctly? (Check that the cables for the indoor unit and metering device are not mixed up.)	
Operate the outdoor unit/indoor unit that are connected to a given watt-hour meter, and check that only the reading of the watt-hour meter goes up. (Check that the power cables for the watt-hour meter and air conditioner are not mixed up.)	
Does the pulse unit of the watt-hour meter match the pulse weight setting made via the centralized controller?	
Are the watt-hour meter readings read by the centralized controller correctly? (Check that the power cables for the watt-hour meter and PI controller are not mixed up.)	
Are the watt-hour meter readings read by the BACnet [®] object equally?	

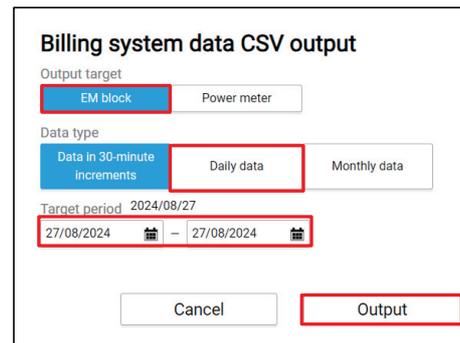
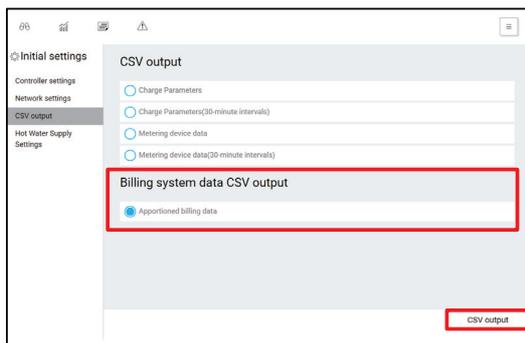
[2] Unit-related item sheet

Output the "Energy management block" CSV data (apportioned results) from the AE-C, and enter the values.

How to output CSV data (Acquisition from the AE-C using a USB flash drive)

Step

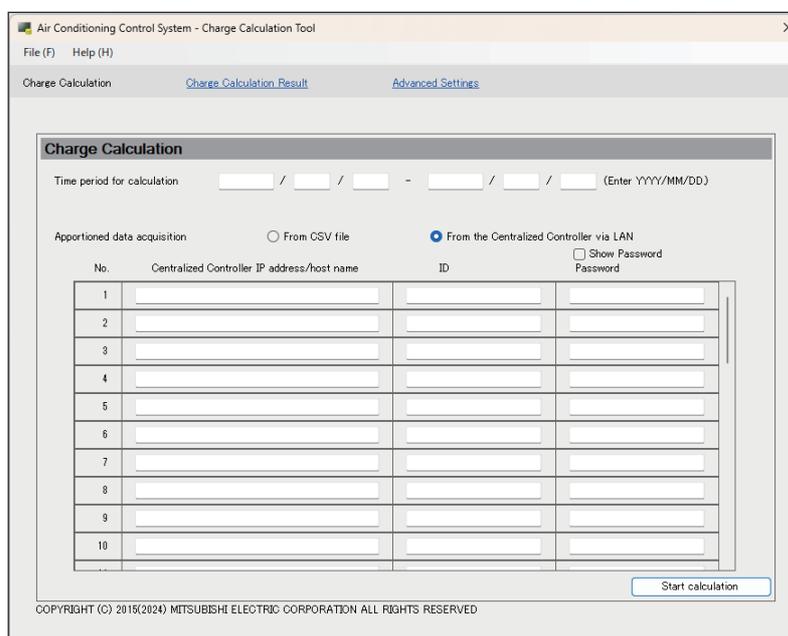
1. Remove the AE-C cover and connect a USB flash drive.
2. Select [Initial Settings] - [CSV Output] screen, and select apportioned results data.
3. Set the period when the billing function trial run was carried out, and with [EM block] and [Daily data] selected, tap [Output].
4. The electric energy for each unit price in the specified time period will be displayed. Enter the information on the check sheet.



How to output CSV data (Acquisition via LAN using the Charge Calculation Tool)

Step

1. Start the Charge Calculation Tool, and make the following settings on the Charge Calculation screen.
 - Set the trial run time period in "Time period for calculation."
 - Select [From the Centralized Controller via LAN] in "Apportioned data acquisition."
 - Set the address of the target AE-C/EW-C and the ID and password of the building manager.
2. Tap [Start calculation].
3. After the charge calculation, open the CSV file used for the calculation (App_IC_D_[YYYY]-[MM]-[DD]_[YYYY]-[MM]-[DD].csv (YYYY: year, MM: month, DD: day) in "My Documents\CCTool\Log\Date)" folder.



CSV data (apportioned calculation results) "Energy management block"

- If "-2" is shown in "Status," data was carried over for that day because apportionment could not be calculated for that day.

Energy management block	Unit address	Date					Outdoor units - Apportioned electric energy [kWh]	(Unit price 1)		Status	(Unit price 2)		Indoor units - Apportioned electric energy [kWh]	(Unit price 1)		Status	(Unit price 2)			
		[Year]	[Month]	[Day]	[Hour]	[Minute]		Electric energy consumption [kWh]	Standby electric energy [kWh]		Electric energy consumption [kWh]	Standby electric energy [kWh]		Electric energy consumption [kWh]	Standby electric energy [kWh]		Electric energy consumption [kWh]	Standby electric energy [kWh]		
		1	Tenant A	1-001	2015	4		2	0		0	7.36		4.8	0.12			2.4	0.04	
2	Tenant B	1-002	2015	4	2	0	0	14.36	9.6	0.12		4.8	0.04		7.12	4.8	0.01		2.3	0.01

Unit-related item sheet

Centralized controller No.	Outdoor unit Unit address	Indoor unit Unit address	Energy management block No.	Name	Operation check	Error display check	Apportioned electric energy								Check
							Before trial run (2015/04/03)				After trial run (2015/04/03) (A)				
							Unit price 1		Unit price 2		Unit price 1		Unit price 2		
Outdoor unit	Indoor unit	Outdoor unit	Indoor unit	Outdoor unit	Indoor unit	Outdoor unit	Indoor unit	Outdoor unit	Indoor unit						
Electric energy consumption	Standby electric energy	Electric energy consumption	Standby electric energy	Electric energy consumption	Standby electric energy	Electric energy consumption	Standby electric energy	Electric energy consumption	Standby electric energy						
1-1	51/52	1	1	Tenant ABC	✓	✓	2.1	0.16	0.29	0.02	0.63	0.04	0.21	0.01	✓
1-1	51/52	2	1	Tenant ABC	✓	✓	2.3	0.16	0.32	0.02	0.7	0.04	0.26	0.01	✓

(B) (C) (D) (E) (D) (E) (G)

Total of apportioned electric energy	75
--------------------------------------	-----------

(F)

(1) Check that the trial run was carried out successfully.

- (A) Enter the date and time for the billing function trial run period.
- (B) Check that the trial run was able to be carried out successfully (with no errors) during the trial run and, if so, put a check in the check column.
- (C) Cause an error and check that the error is displayed. If so, put a check in the check column.

(2) Complete the check sheet using the CSV data for the AE-C energy management block for 1-day intervals.

- (D) In the check sheet, enter the amounts of operating electric energy and standby electric energy for unit prices 1-5 for each of the outdoor units.
- (E) In the check sheet, enter the amounts of operating electric energy and standby electric energy for unit prices 1-5 for each of the indoor units.

(3) Check that the total amount of electric energy is correct.

- (F) Check that electric energy totals for the indoor and outdoor units connected to each watt-hour meter and the watt-hour meter differences are more or less identical.
 - Because the 2nd decimal place in fractions in the total electric energy values are rounded off so that there is only one decimal place, the values may not match perfectly.
 - The actual electric energy values may not match perfectly due to differences in the times when visual confirmation was carried out.
- (G) Check that electric energy was able to be apportioned correctly for each unit price, and if so, put a check in the check column.
 - Check that the amounts of operating electric energy and standby electric energy for the unit price set are not "0."
 - If the amounts are "0," check that the settings are set correctly.
 - If the settings are incorrect, carry out the billing function trial run check again.
 - Even if the amount is "0," the unit may not be running or the pulse may not be input because the electric energy consumed is small. If the settings are correct, check the charge parameter.
 - Check that total values for operating electric energy and standby electric energy are more or less the same as the metering device electric energy for the same system.

Note

- The amount of standby electric energy is apportioned by proportion of cooling capacity when the indoor unit is stopped.
- If [Not apportion] is set for the amount of standby electric energy, it will all be taken to be operating electric energy, and the amount of standby electric energy will be "0."

[3] Perform specified date calculation using the Charge Calculation Tool.

Check that the correct charge is output.

20-3-2. 2nd run check (at least 10 days after the 1st billing function trial run)

Select [Option] - [Output - Check sheet for billing function trial run] on the Initial Setting Tool to output the "Items to be checked after 10 days" check sheet (Excel sheet).

If there are multiple AE-C/EW-C systems, output check sheet for each system.

As in the case of the 1st trial run, carry out checks in the period from the 1st billing function trial run to the beginning of operation.

20-3-3. 3rd run check (at least 1 month after the 2nd billing function trial run)

Select [Option] - [Output - Check sheet for billing function trial run] on the Initial Setting Tool to output the "Items to be checked on the next day of the closing date" check sheet (Excel sheet).

If there are multiple AE-C/EW-C systems, output check sheet for each system.

As in the case of the 1st trial run, carry out checks in the period from the 2nd billing function trial run to the closing date.

Before performing a closing date calculation, check that the CSV data have been printed or output.

20-4. Final check

Check that you have all the check sheets, and check again that there are no errors.

20-4-1. Final checks for the operation settings

Check again that there are no errors in the settings.

Checking the actual operation settings after the setting change

Item	Billing Function						Charges settings			
	Apportioning with metering device	Power source of A-control unit	Outdoor unit electric energy consumption	Outdoor unit standby electric energy	Indoor unit electric energy consumption	Indoor unit standby electric energy	Weekly charges	Seasonal charges	Special day charges	Closing date
Check	Use	Same	Capacity save amount	Apportion	Apportion	Apportion	Available	Available	Available	End of month
	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)

Checking the Charge Calculation Tool settings

Apportioning with metering	Calculation of standby electric	Currency unit	Display order of charge calculation	Merger of energy management blocks with same name	Decimal point character for CSV file	Separator character for CSV file	Automatic output settings			
							Print	CSV output	Closing date	IP address
Connected	Include in the charges	USD	Number	Merge	Dot	Comma	Monthly	Monthly	End of month	↳
(K)	(L)	(M)	(N)	(O)	(P)	(Q)	(R)	(S)	(T)	(U)

	Unit price 1	Unit price 2	Unit price 3	Unit price 4	Unit price 5
kWh	0.2	0.25	0	0	0
MJ	0	0	0	0	0
m3	0	0	0	0	0
--	0	0	0	0	0

(V)

When starting practical operation according to the settings in the table above, check them on the Initial Setting Tool and the Charge Calculation Tool.

Make sure that there are no errors in the settings for practical operation.

Settings to be checked on the Initial Setting Tool

(A)-(F): [Billing Function Settings] - Billing Function Settings screen

(G)-(J): [Billing Function Settings] - Charges settings screen

Settings to be checked on the Charge Calculation Tool

(K)-(V): Advanced Settings screen

20-4-2. Final report

Check that there are no problems with the settings or with the billing function trial run checks, and then present all the check sheets to the customer.

MEMO

20-5. Data verification

You can check whether there are discrepancies between the settings of the Initial Setting Tool and those of the centralized controller.

After sending the settings, perform the check using this function.

Step

1. Tap [Data verification] - [Verify data] in the tool bar of the Initial Setting Tool.
 - The PC and the centralized controller need to be connected via LAN.
 - Microsoft® Excel® needs to be installed on the PC.

When the data verification is completed, the messages in the table below will be displayed.

Message	Definition	Remedy
The data verification process completed with no mismatched data.	The settings data are consistent between the Initial Setting Tool and the centralized controller.	No action needs to be taken.
Microsoft® Excel® is not installed. The verification result file will not be created. Do you still want to perform data verification?	Because Microsoft® Excel® is not installed, the verification result file cannot be saved in the Excel format.	Install Microsoft® Excel®, and carry out data verification again.
Failed to output the data.	The verification results could not be output in a Excel file.	Remove the check from Read-only check box of the output folder.
The unit configuration settings for the following centralized controller do not match with the actual unit configuration. Settings for centralized controller	The centralized controller type or the number of connected expansion controllers set in the System Configuration screen of the Initial Setting Tool do not match with the actual configuration.	Change the settings in the System Configuration screen of the Initial Setting Tool so that the settings match with the actual configuration.
The version of this tool is not compatible with the version of the following centralized controller.	Because the version of the centralized controller is old, the Initial Setting Tool is not compatible with the centralized controller.	Update the centralized controller.
Failed to acquire the data for the following centralized controller. Check for proper connection of the centralized controller.	A communication error is occurring on the centralized controller.	Check for proper LAN connection between the Initial Setting Tool and the centralized controller.
Mismatched data in [(Setting screen name)].	There are mismatched data in the settings between the Initial Setting Tool and the centralized controller.	Go to step 2 below to deal with the mismatched data, referring to the verification result Excel file.

2. If there are mismatched data in the settings, open the following verification result Excel file.

My Documents\IsTool\Verify\yyyyMMddHHmmss.xlsx

(yyyy: year, MM: month, dd: day, HH: hour, mm: minute, ss: second)

	(A)	(B)	(C)	(D)	(E)	(F)	G
	Centralized controller No.	Mismatch Error code	Screen	Error message	Settings for Initial Setting Tool	Settings for centralized controller	
1	1-1			Matched			
2	1-2	1-1-1	Groups	No group exists in the settings for centralized controller.	11		
3	1-2	1-1-2	Groups	No group exists in the settings for Initial Setting Tool.		14	
4	1-2	1-1-3	Groups	No contact number of group exists in the settings for centralized controller.	13,13,1		
5	1-2	1-1-4	Groups	No contact number of group exists in the settings for Initial Setting Tool.		15,13,1	
6	1-2	1-1-6	Groups	No unit address of group exists in the settings for Initial Setting Tool.		16,16	
7							
8	3			Communication error			

	Item	Function and description
(A)	Centralized controller No.	-
(B)	Mismatch error code	-
(C)	Screen name	The name of the screen where a verification error has occurred will appear.
(D)	Error message	The verification error message will appear.
(E)	Settings for Initial Setting Tool	The settings made by the Initial Setting Tool will appear.
(F)	Settings for centralized controller	The settings made by the centralized controller will appear.

21. Initial settings: configuring the LCD screen

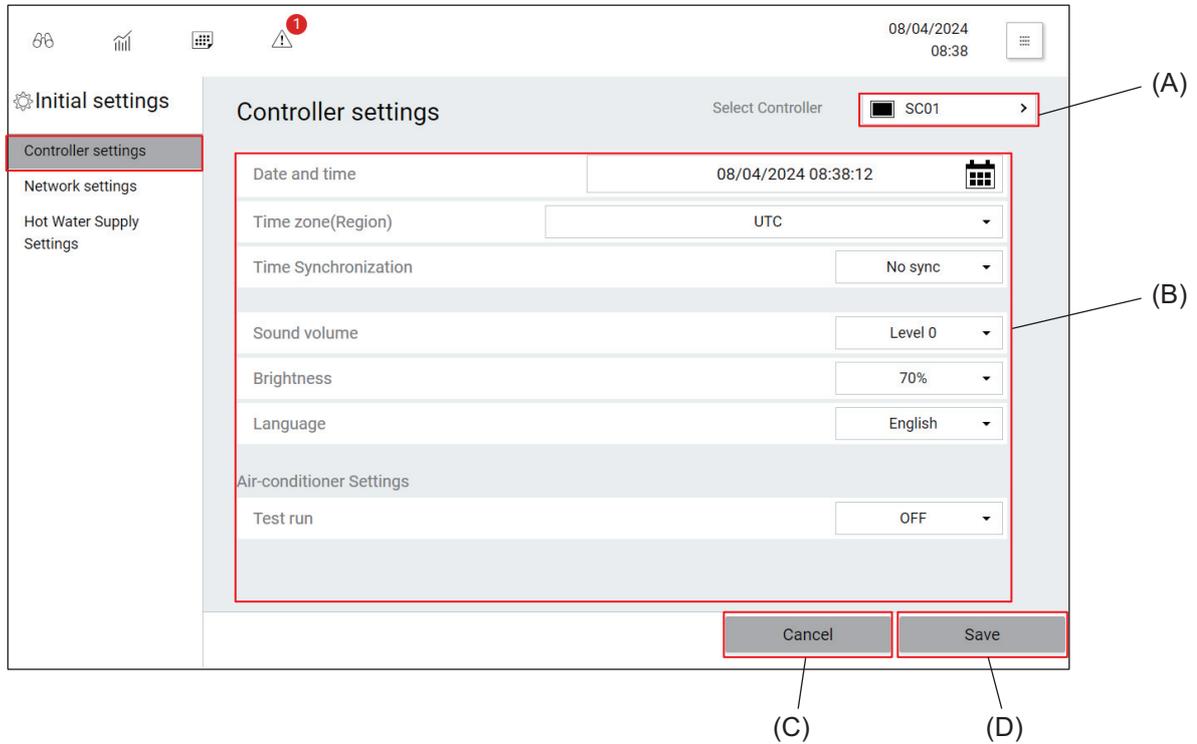
21-1. Initial settings

- For the initial password, refer to "Introduction."
- For password management (changes), refer to "User management settings."

21-2. Controller settings

21-2-1. Controller settings screen (common areas)

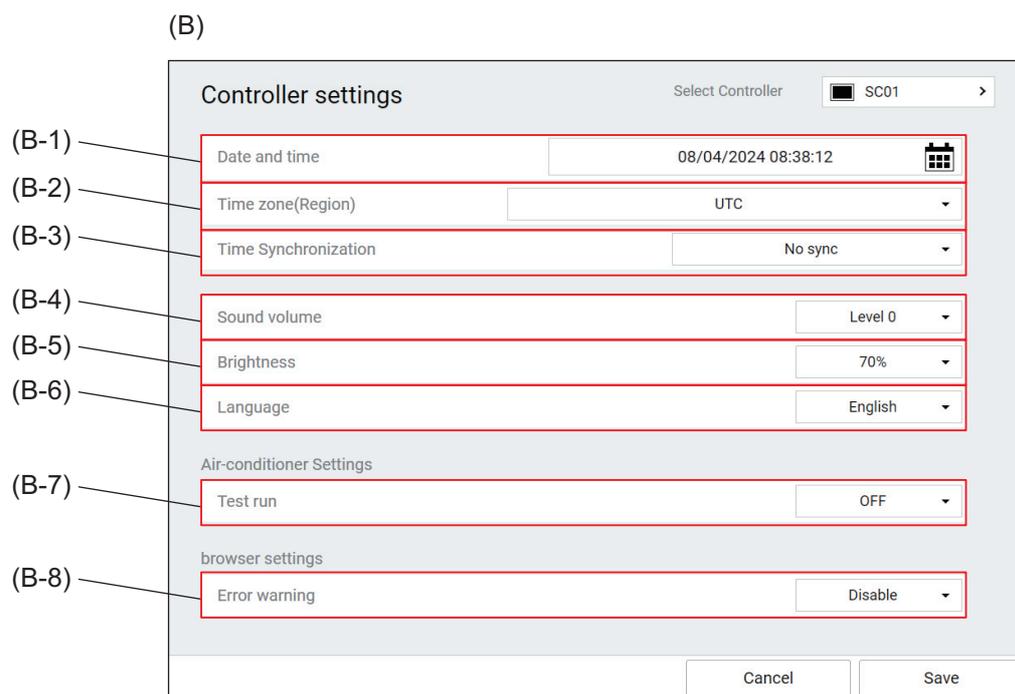
Configure controller settings.



	Item	Function and description
(A)	Select Controller	Select the AE-C/EW-C to be configured.
(B)	Setting item details	Configure controller settings.
(C)	[Cancel]	Tap this button to go back to the previous screen without saving the setting changes.
(D)	[Save]	Tap this button to save the setting changes.

[1] Setting item details

Details of each setting item are as follows.



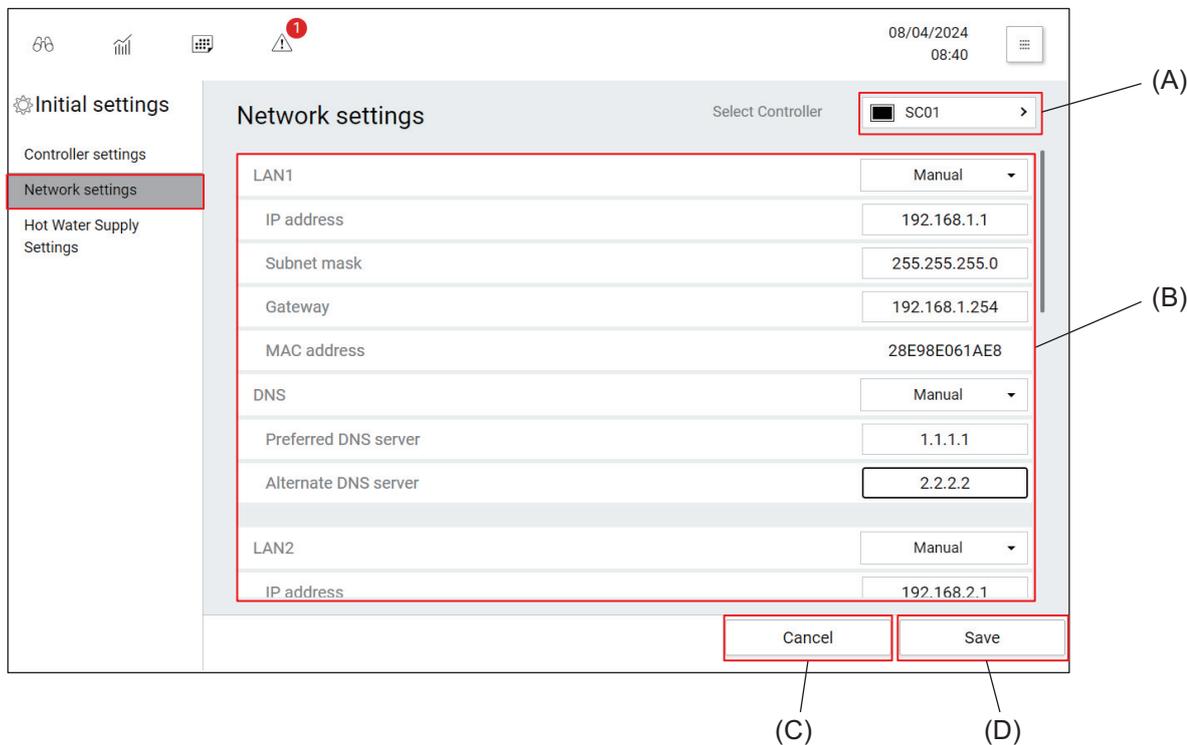
	Item	Function and description
(B-1)	Date and time	Manually set the date and time of the AE-C/EW-C.
(B-2)	Time zone (Region)	Set the time zone in which the AE-C/EW-C is used.
(B-3)	Time Synchronization	Set the time synchronization method. No sync, System control equipment/NTP
(B-4)	Sound volume	Adjust the volume of the sound made when the LCD screen is tapped. Any edits to this setting will be immediately applied. Level 0 to 3 (0: Mute, 3: Max.)
(B-5)	Brightness	Set the LCD screen brightness. The higher the number, the brighter the LCD screen. Any edits to this setting will be immediately applied. 70%, 80%, 90%, 100%
(B-6)	Language	Set the controller display language.
(B-7)	Test run	Set whether to turn ON or OFF the air conditioning unit test run.
(B-8)	Error warning	Select to enable/disable the warning sound from the browser when an error occurs.

Note

- If M-NET Time Master is set to Master in the Initial Setting Tool, "System control equipment" will not appear in Time Synchronization (B-3).

21-2-2. Network settings screen

Configure network settings such as the IP address and subnet mask for LAN ports 1 to 2 on the controller, as well as proxy server settings and APN settings.



	Item	Function and description
(A)	Select Controller	Select the AE-C/EW-C to be configured.
(B)	Setting item details	Configure network settings.
(C)	[Cancel]	Tap this button to go back to the previous screen without saving the setting changes.
(D)	[Save]	Tap this button to save the setting changes.

[1] Setting item details

Details of each setting item are as follows.

(B)

The screenshot shows a 'Network settings' configuration page for controller 'SC01'. It is divided into several sections:

- LAN1 Section (B-1 to B-8):**
 - (B-1) LAN1: Manual
 - (B-2) IP address: 192.168.1.1
 - (B-3) Subnet mask: 255.255.255.0
 - (B-4) Gateway: 192.168.1.254
 - (B-5) MAC address: 28E98E061AE8
 - (B-6) DNS: Manual
 - (B-7) Preferred DNS server: 1.1.1.1
 - (B-8) Alternate DNS server: 2.2.2.2
- LAN2 Section (B-9 to B-16):**
 - (B-9) LAN2: Manual
 - (B-10) IP address: 192.168.2.1
 - (B-11) Subnet mask: 255.255.255.0
 - (B-12) Gateway: 192.168.1.254
 - (B-13) MAC address: 28E98E061AE9
 - (B-14) DNS: Manual
 - (B-15) Preferred DNS server: (empty)
 - (B-16) Alternate DNS server: (empty)
- Proxy server Section (B-17 to B-21):**
 - (B-17) Proxy server: OFF
 - (B-18) IP address / Host name: (empty)
 - (B-19) Port: (empty)
 - (B-20) User Name: (empty)
 - (B-21) Password: (empty) with a 'Show' button.
- APN setting Section (B-22):**
 - (B-22) APN setting: ON
 - APN: (empty)
 - Authentication: None
 - User Name: (empty)
 - Password: (empty) with a 'Show' button.

	Item	Function and description
LAN1		
(B-1)	LAN1	Set the configuration method for the IP address, subnet mask, and gateway. Manual, Auto (DHCP)
(B-2)	IP address	Set the IP address, subnet mask, and gateway. <ul style="list-style-type: none"> If (B-1) is set to Auto (DHCP), the IP address, subnet mask, and gateway assigned by the DHCP will be displayed. If (B-1) is set to Manual, the IP address, subnet mask, and gateway manually set will be displayed.
(B-3)	Subnet mask	
(B-4)	Gateway	
(B-5)	MAC address	The MAC address is displayed.
(B-6)	DNS	Set the DNS configuration method. Manual, Auto (DHCP)
(B-7)	Preferred DNS server	Set the preferred DNS server and alternate DNS server. <ul style="list-style-type: none"> If (B-6) is set to Auto(DHCP), the preferred DNS server and alternate DNS server assigned by the DHCP will be displayed. If (B-6) is set to Manual, the preferred DNS server and alternate DNS server manually set will be displayed.
(B-8)	Alternate DNS server	
LAN2		
(B-9)	LAN2	Set the configuration method for the IP address, subnet mask, and gateway. Manual, Auto (DHCP)
(B-10)	IP address	Set the IP address, subnet mask, and gateway. <ul style="list-style-type: none"> If (B-9) is set to Auto (DHCP), the IP address, subnet mask, and gateway assigned by the DHCP will be displayed. If (B-9) is set to Manual, the IP address, subnet mask, and gateway manually set will be displayed.
(B-11)	Subnet mask	
(B-12)	Gateway	
(B-13)	MAC address	The MAC address is displayed.
(B-14)	DNS	Set the DNS configuration method. Manual, Auto (DHCP)
(B-15)	Preferred DNS server	Set the preferred DNS server and alternate DNS server. <ul style="list-style-type: none"> If (B-14) is set to Auto(DHCP), the preferred DNS server and alternate DNS server assigned by the DHCP will be displayed. If (B-14) is set to Manual, the preferred DNS server and alternate DNS server manually set will be displayed.
(B-16)	Alternate DNS Server	
Proxy server		
(B-17)	Proxy server	Set the proxy server to ON or OFF.
(B-18)	IP address / Host name	Set the IP address or host name.
(B-19)	Port	Set the port number.
(B-20)	User Name	Set the user name.
(B-21)	Password	Set the password.
APN setting		
(B-22)		Do not set these items.

21-2-3. System controller update screen

[1] Before updating

(1) PC environment settings

Software updates can be performed via a Web browser or USB flash drive.

When updating via a Web browser, configure the PC as follows.

- 1) Installing .NET Framework
For details, refer to ".NET Framework installation procedure."
- 2) Installing the Initial Setting Tool
For details, refer to "Initial Setting Tool installation procedure."
- 3) Importing the root CA certificate
For details, refer to "Importing the root CA certificate."
- 4) Setting the IP address of the computer
For details, refer to "Setting the PC IP address."

(2) Obtaining consent from customers in advance

Before performing a software update, inform the customer of the following and obtain their consent.

- 1) The following control functions will not operate during the software update.
Perform the update by first considering what impact it will have on the following functions.
 - Schedule control
 - Billing data processing
 - Peak cut
 - Energy management function
 - Measurement pulse input function
 - Demand control signal via LAN or contact / External input/output
- 2) In the case of system configurations without local remote controllers or Mr. SLIM models, inform the customer that air conditioning units may experience an abnormal stoppage during the update.
For configurations other than above, although the local remote controller of the air conditioning unit may display an error, the air conditioning unit will continue operating and can be controlled by the local remote controller.

(3) Preparing for the update

- 1) Acquire the update file (AC_FW####.dat).
Note: #### can be any number (software version).
- 2) If multiple AE-C/EW-C controllers are connected, update all of them.
If using a PC for initial settings, update the Initial Setting Tool as well.
- 3) If using the following functions, perform the update outside of hours in which updating is prohibited.

Available functions	Hours during which update is prohibited
Apportioned billing function (using Charge Calculation Tool)	5:00 a.m. to 5:10 a.m.
PI controller usage	12:00 a.m. to 12:05 a.m.
Energy management data	11:50 p.m. to 12:20 a.m.

(4) Precautions during updates

- 1) Do not turn off the AE-C/EW-C during the AE-C/EW-C update.
- 2) If using a USB flash drive:
 - Do not remove the USB flash drive until the update is complete.
 - Do not insert and then immediately remove the USB flash drive.
Doing so may prevent the controller from recognizing the USB flash drive.

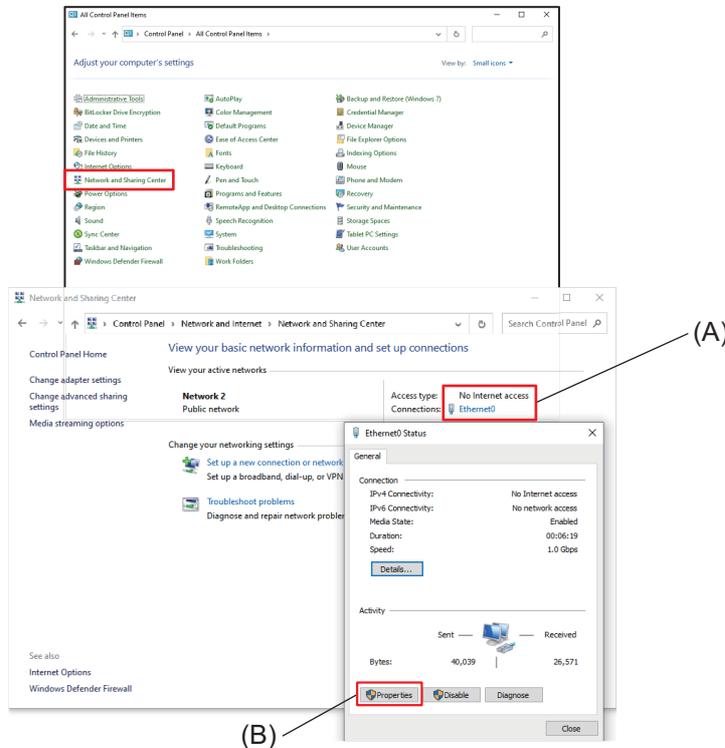
[2] Software updates using a Web browser

(1) Setting the IP address of the update PC

Check that the update PC satisfies the requirements given in "PC environment."

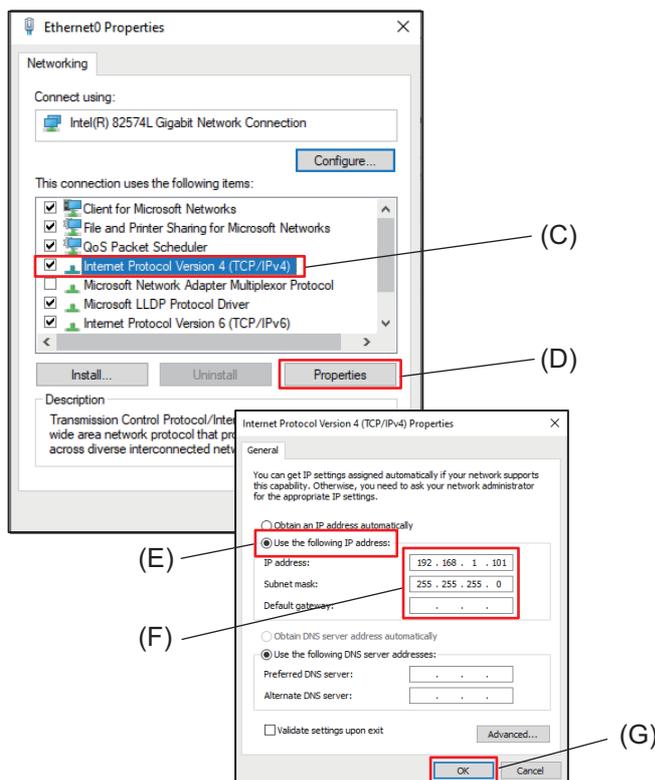
Set the IP address of the update PC so that it can connect to the AE-C/EW-C via LAN.

For update using a Web browser on a PC that is connected to an internal LAN, request your network administrator to provide the IP address, subnet mask, etc.



Step

1. Tap [Control Panel] on the Start menu to open the Control Panel.
2. Tap [Network and Sharing Center].
3. Tap (A).
4. Tap (B).
5. Select (C) and tap (D).
6. Select (E).



7. In (F), enter the IP address and subnet mask.

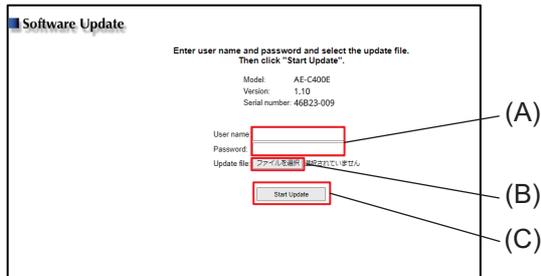
The factory default IP address of the AE-C/EW-C is 192.168.1.1.

If the IP address of the AE-C/EW-C is 192.168.1.1, set the IP address to 192.168.1.2 by entering the same value up to the third digit and making the fourth digit different.

If no particular subnet mask is specified, enter 255.255.255.0.

8. Enter a default gateway if necessary.
9. Tap (G).

(2) Update operation



Step

1. Connect the update PC and the LAN1 port on the AE-C/EW-C using a LAN cable.
2. Use a Web browser to access the following Web page address.
The factory default IP address of the AE-C/EW-C is 192.168.1.1.
<https://192.168.1.1/swupdate/>
3. Enter the user name and password in (A).

The default settings are as follows:

User ID: initial

Password: Init + DP

For DP, refer to the back cover of the Instruction Book (supplied with the controller).

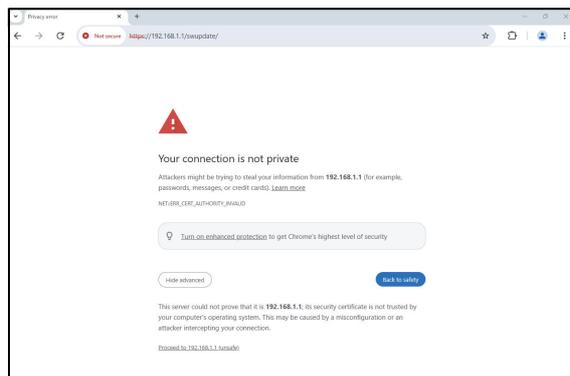
ex.) When DP is 123456, the password will be Init123456.

4. Tap (B) to configure the update file.
5. Tap (C).

The STATUS LED will blink during the update.

The controller will automatically reboot once the update is complete.

Unplug the LAN connection once the update is complete.



When accessing a Web page address

The screen on the left will appear if the security certificate is invalid.

- 1) Tap [Proceed to 192.168.1.1 (unsafe)].
- 2) A security warning screen will appear.
Tap [Yes].

Note

The update proceeds as follows.

It takes approximately 10 minutes to complete the update.

For STATUS LED, refer to "Parts names."

	STATUS LED		AE-C operation panel status	Remarks
	Color	Status		
1	Off	Off	No change	Update start
2	Blue	Blinking	No change	
3	Blue	Blinking	Backlight off	
4	Off	Off	Backlight off	
5	Off	Off	"Initializing" displayed	
6	White	Blinking	"Initializing" displayed	
7	White	Blinking	"Starting" displayed	
8	White	Blinking	Backlight on	
9	Off	Off	Monitor/Operation screen	Update complete

[3] Software updates using a USB flash drive

(1) Preparing the USB flash drive

Save the update file (AC_FW####.dat) to the root folder of the USB flash drive.

Note: #### can be any number (software version).

(2) Updating using the AE-C operation screen

Step

1. Power off the AE-C/EW-C.
2. Connect the USB flash drive containing the update file.
3. Turn on the power while holding down the ON/OFF button.
Hold down the button until the STATUS LED lights up in blue (approx. 1 minute).
Start the update.
4. Remove the USB flash drive once the update is complete.
5. Reset the power of the AE-C/EW-C.

Note

The update proceeds as follows.

It takes approximately 10 minutes to complete the update.

For STATUS LED, refer to "Parts names."

	STATUS LED		AE-C operation panel status	Remarks
	Color	Status		
1	Off	Off	"Initializing" displayed	Update start
2	Blue	On	"Initializing" displayed	
3	Blue	Blinking	"Initializing" displayed	
4	Off	Off	Backlight off	
5	Off	Off	"Initializing" displayed	
6	Blue	Blinking	"Initializing" displayed	
7	Blue	On	"Initializing" displayed	
8	Blue	On	"Starting" displayed	
9	Blue	On	Backlight on	
10	Blue	On	Monitor/Operation screen	Update complete

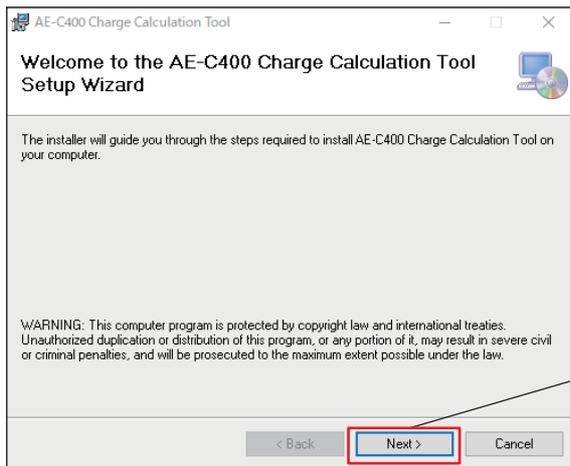
22. Initial settings: installing various software

22-1. Charge Calculation Tool installation procedure

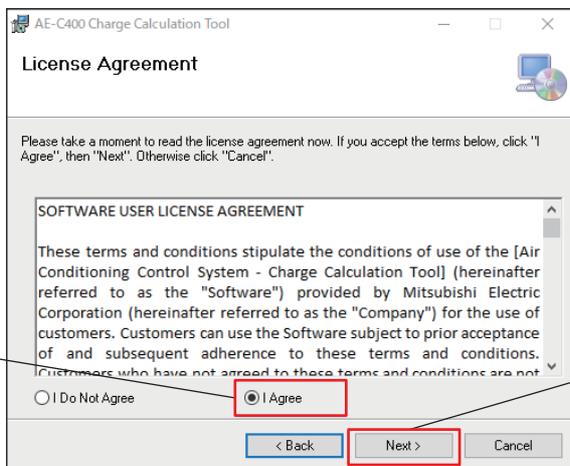
This section explains the installation procedure for the Charge Calculation Tool.
To acquire the Charge Calculation Tool, consult your dealer.
The following installation procedure can also be used to upgrade the Charge Calculation Tool.

Step

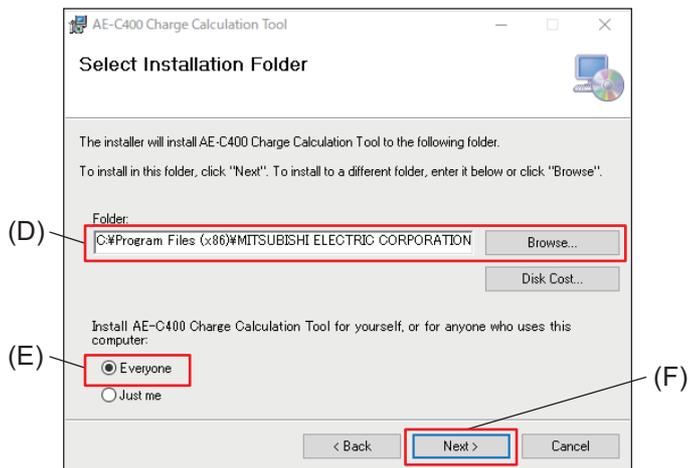
1. Before starting the procedure, check that the version of .NET Framework is Ver. 4.8 or later.
 - You can find the version of .NET Framework installed on your PC by selecting Control Panel in the Windows Start menu and then Programs and Features.
 - For the installation procedure, refer to ".NET Framework installation procedure."
 - When installing the tool in an offline environment, first download the offline installer.
2. Launch the setup file (setupCCToolAC*_V***.msi) for the Charge Calculation Tool.
 - The setup wizard screen will appear.
 - V*** indicates the version. ex.) For V410, the version is 4.10.
 - If a security warning screen appears, tap **[Run]**.



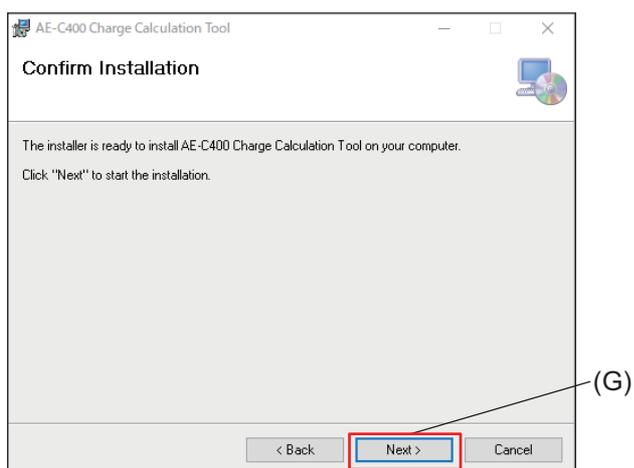
3. Tap (A).



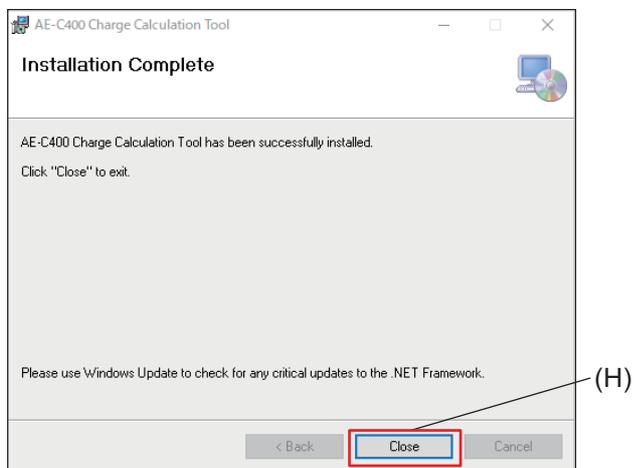
4. Select (B) and tap (C).



5. Select the installation folder (D) and tap (F).
 - To allow all log-in users to use the tool, select (E) and then tap (F).



6. Tap (G).
 - Installation of the Charge Calculation Tool will start.



7. Once installation is complete, tap (H).
 - A shortcut icon for the Charge Calculation Tool will be created on the PC desktop. To launch the tool, double-click on the icon.

22-2. Initial Setting Tool installation procedure

This section explains the installation procedure for the Initial Setting Tool.

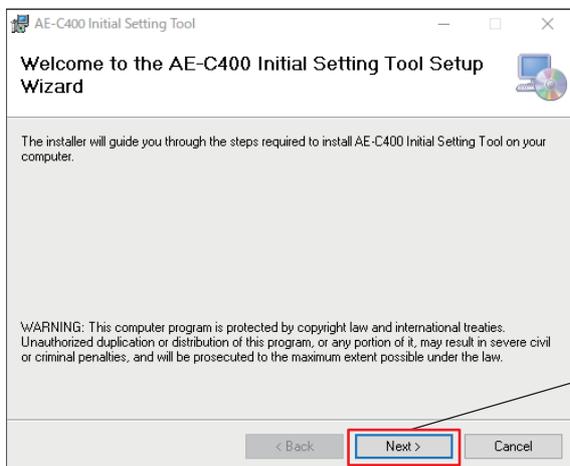
To use the apportioned electricity billing function, the Initial Setting Tool that is capable of configuring the settings of the function is required.

To acquire the Initial Setting Tool, consult your dealer.

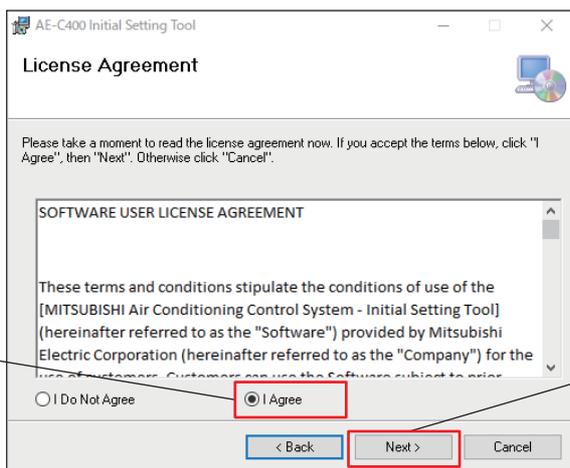
The following installation procedure can also be used to upgrade the Initial Setting Tool.

Step

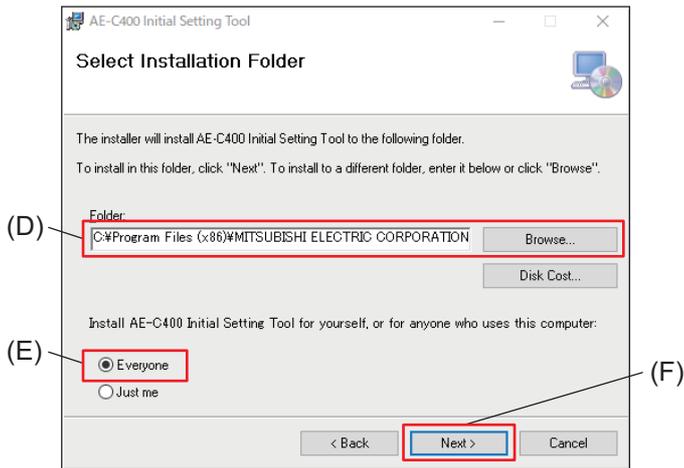
1. Before starting the procedure, check that the version of .NET Framework is Ver. 4.8 or later.
 - You can find the version of .NET Framework installed on your PC by selecting Control Panel in the Windows Start menu and then Programs and Features.
 - When installing the tool in an offline environment, first download the offline installer.
2. Launch the setup file (setupIStoolAEC*_V***.msi) for the Initial Setting Tool.
 - The setup wizard screen will appear.
 - V*** indicates the version. ex.) For V110, the version is 1.10.
 - If a security warning screen appears, tap **[Run]**.



3. Tap (A).

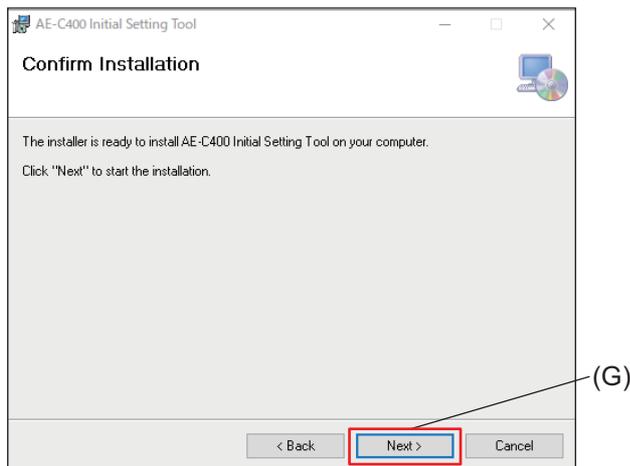


4. Select (B) and tap (C).



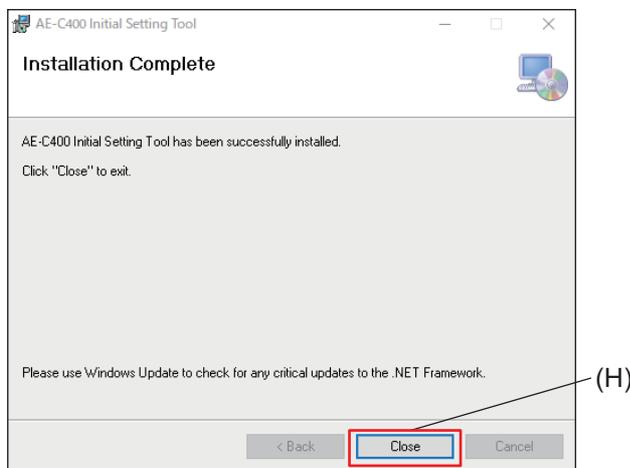
5. Select the installation folder (D) and tap (F).

- To allow all log-in users to use the tool, select (E) and then tap (F).



6. Tap (G).

- Installation of the Initial Setting Tool will start.



7. Once installation is complete, tap (H).

- A shortcut icon for the Initial Setting Tool will be created on the PC desktop.
To launch the tool, double-click on the icon.

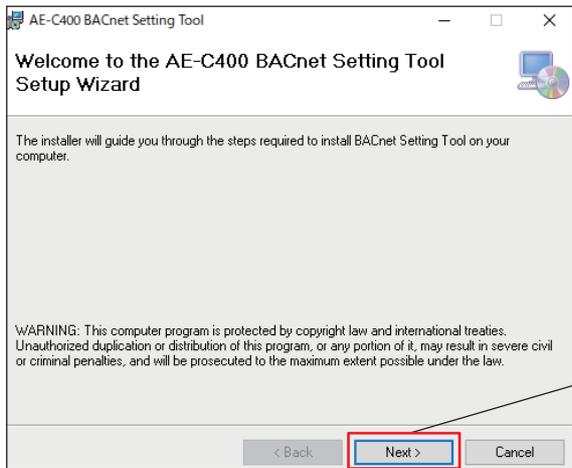
22-3. BACnet Setting Tool installation procedure

This section explains the installation procedure for the BACnet Setting Tool.

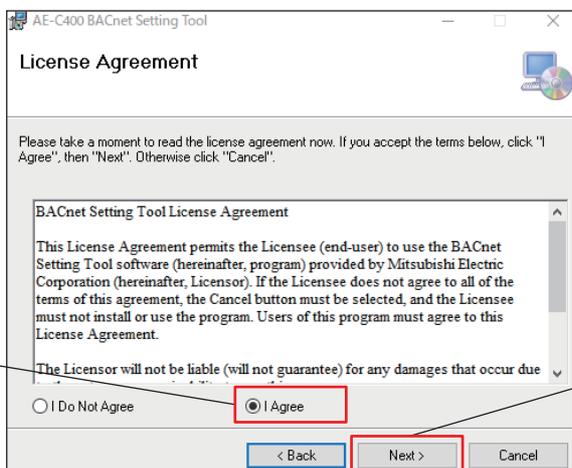
The following installation procedure can also be used to upgrade the BACnet Setting Tool.

Step

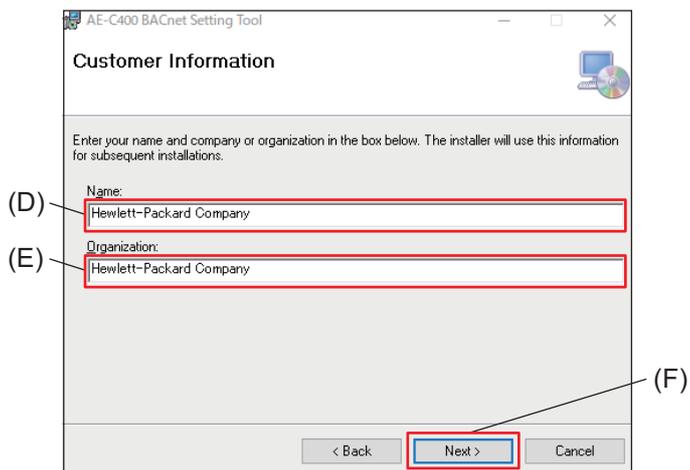
1. Before starting the procedure, check that the version of .NET Framework is Ver. 4.8 or later.
 - You can find the version of .NET Framework installed on your PC by selecting Control Panel in the Windows Start menu and then Programs and Features.
 - When installing the tool in an offline environment, first download the offline installer.
2. Launch the setup file (SetBACnetAEC_V***.msi) for the BACnet Setting Tool.
 - The setup wizard screen will appear.
 - V*** indicates the version. ex.) For V410, the version is 4.10.
 - If a security warning screen appears, tap **[Run]**.



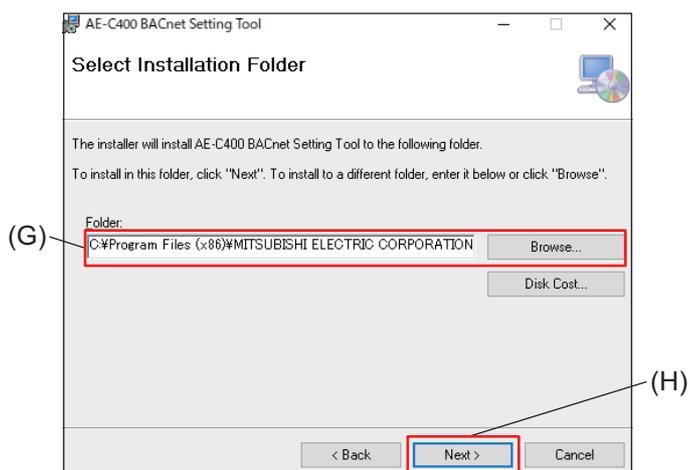
3. Tap (A).



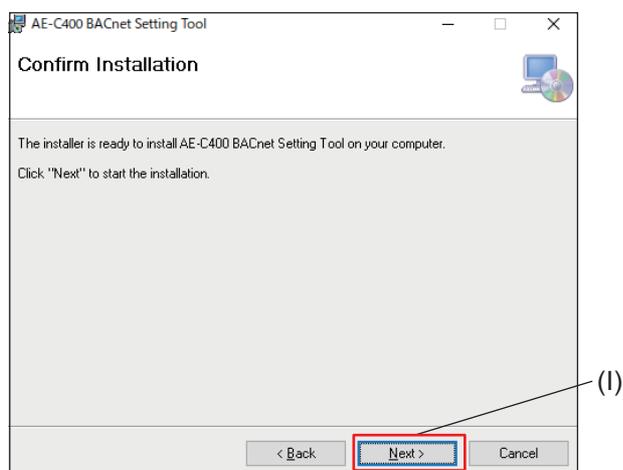
4. Select (B) and tap (C).



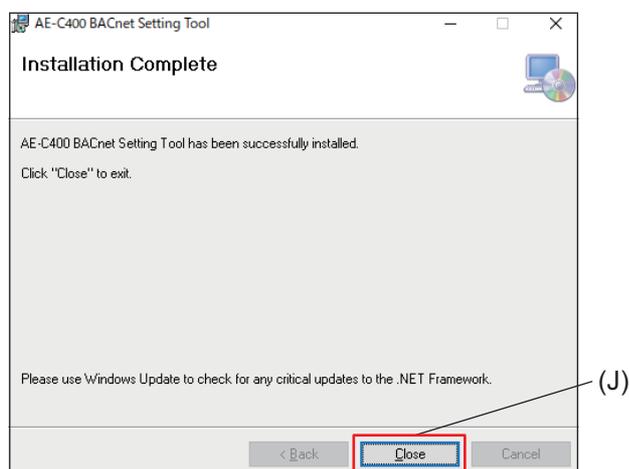
5. Enter the name in (D) and the organization in (E), and tap (F).



6. Select the installation folder (G) and tap (H).



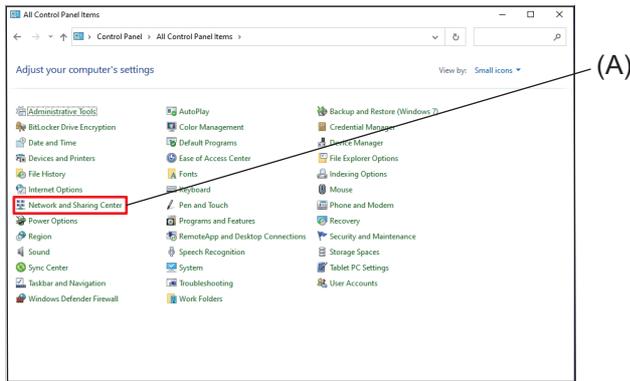
7. Tap (I).
- Installation of the BACnet Setting Tool will start.



8. Once installation is complete, tap (J).
- A shortcut icon for the BACnet Setting Tool will be created on the PC desktop.
To launch the tool, double-click on the icon.

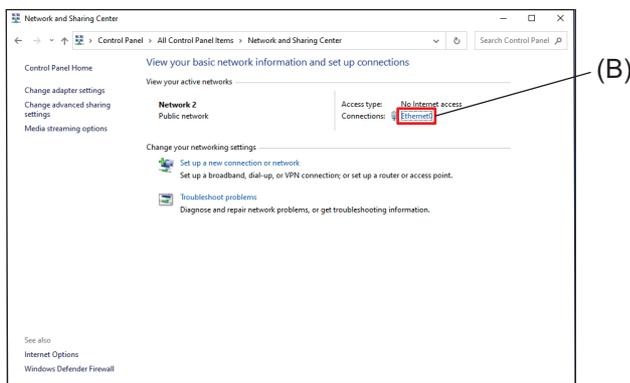
22-4. Setting the PC IP address

22-4-1. For Windows 10 and 11

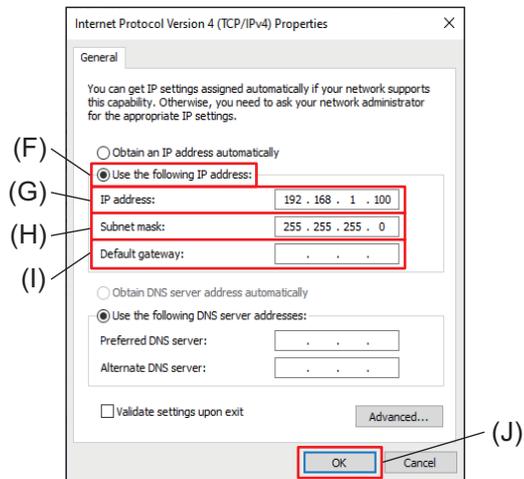
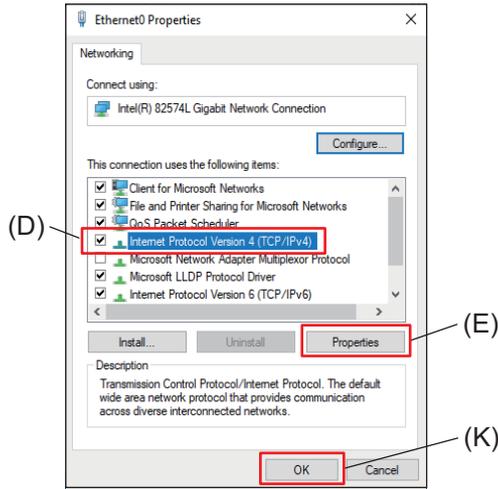
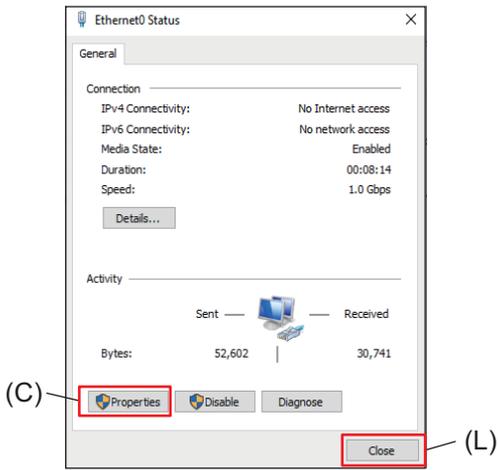


Step

1. Search for [Control Panel] in the PC search box, and then open the Control Panel.
2. Tap [Network and Sharing Center] (A), and the Network and Sharing Center window will appear.



3. Tap [Ethernet] (B).



4. Tap (C).
5. Select [Internet Protocol 4 (TCP/IPv4) (D)], and tap (E).
6. Select (F).
7. Enter the PC IP address in (G).
ex.) 192.168.1.101
8. Enter the subnet mask in (H).
ex.) 255.255.255.0
9. Enter the gateway address in (I) if necessary.
10. Tap (J), (K), and (L), and close the screen.
11. Close the Control Panel.

- Request your system administrator to provide the IP address (G), subnet mask (H), and gateway address (I).

22-5. .NET Framework installation procedure

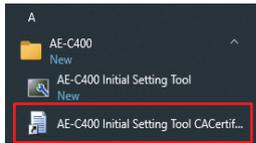
If the version of .NET Framework is earlier than 4.8, download the .NET Framework 4.8 installer from the following URL and install it.

<https://go.microsoft.com/fwlink/?LinkId=2085155>

22-6. Importing the root CA certificate

[1] Importing using the installed tools

Check that the tools are already installed.



Tap the root certificate in the menu of each tool on the Windows Start menu.

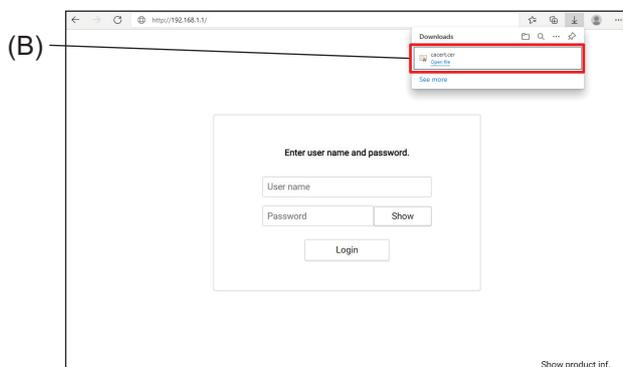
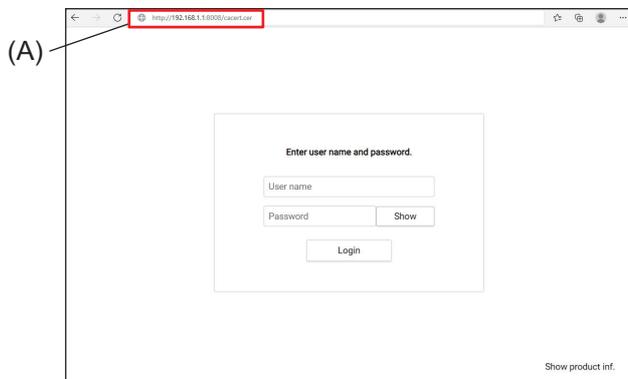
[2] Importing the certificate via browser

The controller encrypts communication data using HTTPS (SSL).

Therefore, it is necessary to configure the following settings to monitor and control the operation status via an encrypted Web page.

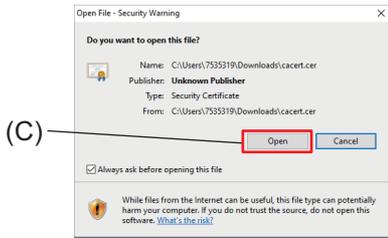
Register the AE-C/EW-C certificate managed by the browser to the PC to be used.

(1) When using a Windows device

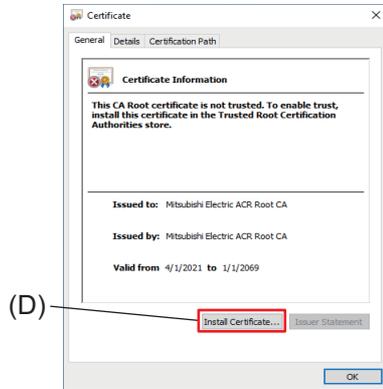


Step

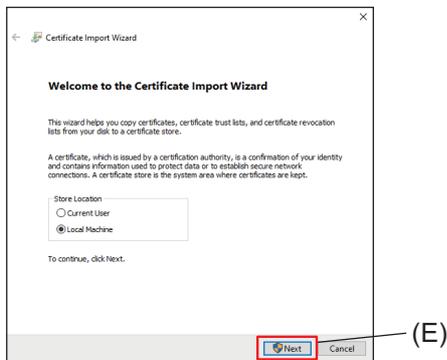
1. Enter the following Web page address in the address bar (A), and tap [Enter].
`http://(IP address of AE-C or EW-C):8008/cacert.cer`
ex.: `http://192.168.1.1:8008/cacert.cer`
 - Although this system integrates multiple AE-C/EW-C controllers to monitor and operate air conditioning units, the certificate can be registered from any one of the controllers to the PC.
2. Tap (B) on the taskbar.
 - Depending on the browser used, downloaded files may not be displayed on the taskbar. If not displayed, run cacert.cer in the installation folder.



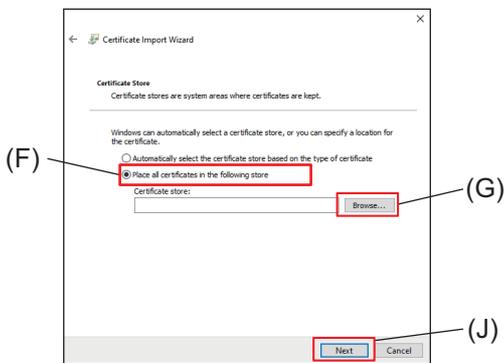
3. Tap (C).



4. Tap (D).



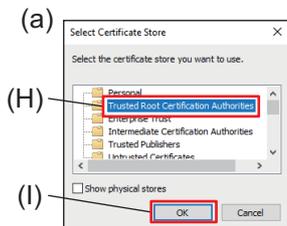
5. Tap (E).

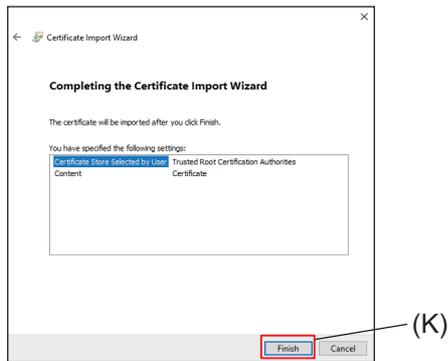


6. Select (F), and tap (G) to open (a).

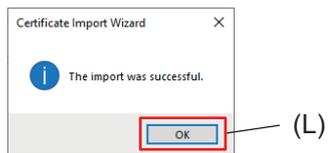
7. Select (H), and tap (I) to close (a).

8. Tap (J).





9. Tap (K).



10. Tap (L).

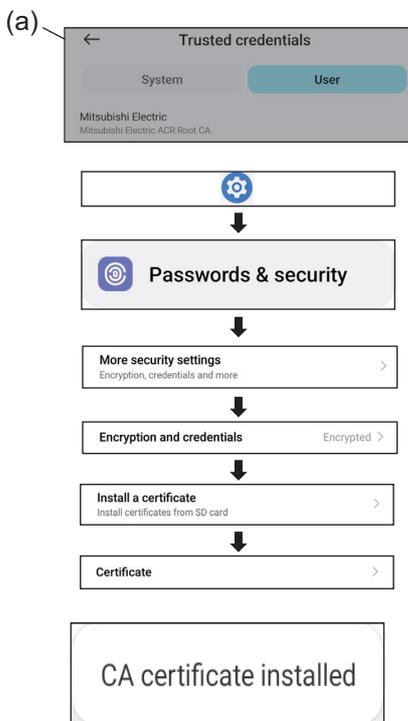
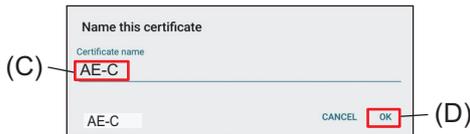
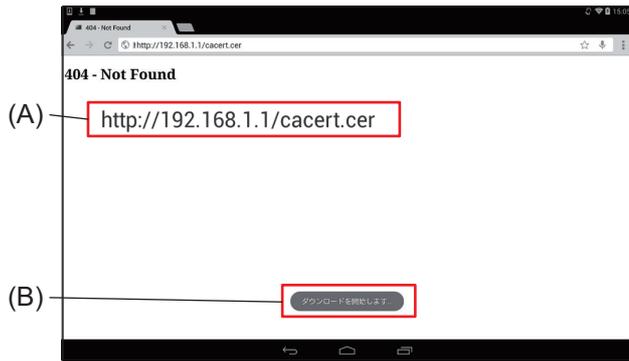
11. Log in by entering the following Web page address in the address bar of the Web browser.
- [https://\(IP address of AE-C/EW-C to be logged in\)/control/](https://(IP address of AE-C/EW-C to be logged in)/control/)
- Use the Initial Setting Tool to configure the AE-C/EW-C to be logged in.

(2) When using an iOS device (Safari)

When using an iOS device (Safari), you do not need to register a root CA certificate, but you need to access the IP addresses of all AE-C/EW-C from your iOS device (<https://AE-C> or [EW-C IP address/control/index.html](https://EW-C)) and make sure that an operation screen of each AE-C/EW-C is displayed.

When a warning message about website access appears, allow access to the website.

(3) When using an Android device (Chrome)



Step

1. Launch Chrome, enter the following Web page address in the address bar (A), and tap (B).
 http://(IP address of AE-C or EW-C):8008/cacert.cer
 ex.: http://192.168.1.1:8008/cacert.cer
 - You must enter your passcode.

2. Enter any certificate name in (C), and tap (D).
 - Installation will start.
 - Once installation is complete, the message [(certificate name) has been installed] appears.

3. Tap [Settings] > [Passwords & security] > [More security settings] > [Encryption and credentials] > [Install a certificate] > [Certificate].

4. Check that the user certificate has been registered.

5. Log in by entering the following Web page address in the address bar.

On a tablet

https://(IP address of AE-C/EW-C to be logged in)/control/index.html

ex.: https://192.168.1.1/control/index.html

On a smartphone

https://(IP address of AE-C/EW-C to be logged in)/mobile/index.html

ex.: https://192.168.1.1/mobile/index.html

MEMO

22-7. Operational environment and limitations

22-7-1. Limitations on initial settings

The Initial Setting Tool can configure up to 40 systems at once.

However, for the system configurations listed below, each group of systems must be divided and set separately.

[1] When using billing, batch configuration can only be applied to the maximum billing system configuration (up to 8 systems).

→ In the Initial Setting Tool, configure each billing group separately, with a maximum of 8 systems per group.

*1. The Charge Calculation Tool can support up to 40 systems at once. (No need to divide into groups.)

*2. The BACnet Setting Tool can support up to 40 systems at once. (No need to divide into groups.)

22-7-2. Time settings and synchronization

[1] Target unit and setup procedure for initial configuration

*1. For the first setup, each unit (AE-C/EW-C) must be configured individually.

*2. If multiple units (AE-C/EW-C) are present, a slight time difference may occur between them. By enabling [System control equipment/NTP] in the time synchronization setting, the system's time will automatically synchronize every day at 5:00 AM starting the following day.

Step

1. Time zone setting

→ After setting, the system will automatically restart.

2. Select "System control equipment" in the time synchronization setting.

* If the system can synchronize the time using NTP through the local LAN or similar network, select "NTP."

* If synchronizing time from another unit, such as a building management system, select "No sync."

[2] Need for configuration after operation start/target units for configuration

*1. If "NTP" is selected, no time configuration is necessary after the system starts operation.

*2. If "System control equipment" is selected, regularly configure the time for the following units.

→ Units in the system will be synchronized.

Units requiring regular time configuration (AE-C/EW-C)

- System manager (billing)
- System manager (no billing)

22-7-3. Backup of login IDs, passwords, and data

(1) Save the configuration data of the Initial Setting Tool. "Backup of configuration data"

(2) Back up the configuration data from the browser.

Note

- Always perform a backup of the data whenever the configuration is changed, for instance.
- The following data cannot be backed up (or confirmed). Save it using other methods, such as by taking notes.

Various login IDs and password settings

(The backup will save the passwords, but you will not be able to confirm them.)

*1 For the initial password, refer to "Introduction."

*2 For password management (changes), refer to "User management settings."

	Backup of Initial Setting Tool configuration data	Backup of configuration data from browser
Data that can be backed up	Data that was configured using the Initial Setting Tool	All settings

22-7-4. Access limitations for browsers

- The Web browser function works differently depending on the user who logs in.
- When you want to log in as a tenant manager or general user, you need to be registered as such user by the building manager in advance.
- There are restrictions on the access to the Web browser function.
 - (1) There is a limit on the number of simultaneously accessible users.
Users exceeding the limit will not be able to access the Web browser function.
 - (2) Once you close the browser, you will be logged out.
After you work on a temporary task on the browser, close the browser.

Software version	Ver. 1.0 to 1.10	Ver. 1.20 and later
Number of users that can be connected simultaneously	10 users	(Same as left)

22-7-5. Data size limitations

Restrictions on floor layout background image

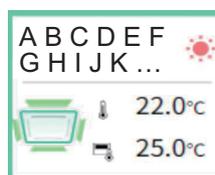
- The default size of the background image is 1140 x 570 pixels.
- Make sure that the background image meets the following conditions before saving it.

Software version	Ver. 1.0 to 1.10	Ver. 1.20 and later
Image resolution (horizontal × vertical)	630 × 450 to 1920 × 1080 pixels	630 × 450 to 3840 × 2160 pixels
File size (per floor)	250 KB or less	(Same as left)
File type	gif, jpeg, jpg, png	(Same as left)
Number of floors		(Same as left)
LCD	10 floors	
Browser	40 floors	

22-7-6. Monitor/Operation screen

Display limitations for unit icons

- You can enter up to 20 characters. The maximum number of characters displayed on the monitoring screen for unit icons is 20 for one-byte characters and 12 for two-byte characters.
(For entries with 13 or more one-byte characters, the twelfth and later characters are not displayed.)

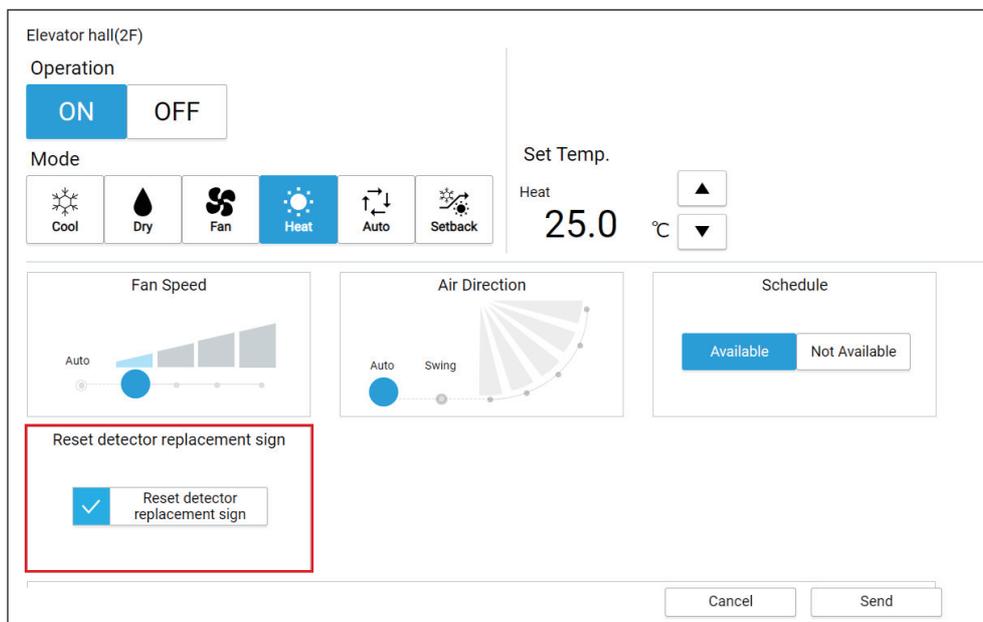


Note

- Up to 20 characters can be entered.
However, the following characters cannot be used. < > & " '

22-7-7. Use of R32 refrigerant

- When using the controller as an R32 refrigerant leak alarm device (remote controller for building manager rooms), observe the following key points.
 - Leave the "External RefLeakAlarm Setting" in the Initial Setting Tool at ON.
If set to OFF, the alarm will not sound during a refrigerant leak.
 - Install in a location where the background noise level is 50 dB or lower.
 - If using an external alarm buzzer, ensure that it has a volume of 65 dB or more.
 - To prevent impact from air conditioning unit inspections or failures, supply power to the controller from a system separate from the air conditioning unit.
 - Connect the controller to the central management transmission line, not the indoor/outdoor system transmission line.
- When a refrigerant leak is detected, the controller will indicate on the screen that an abnormality has occurred and will sound an alarm, with the status LED turning pink.
- In the event of a refrigerant leak error (alarm), take the following actions:
 - Open the windows in the room where the indoor unit/chlorofluorocarbon alarm is installed for ventilation.
 - Contact the equipment manager to inspect the chlorofluorocarbon alarm, refrigerant sensor, and refrigerant system.
- If the indoor unit or chlorofluorocarbon alarm shows a refrigerant sensor replacement indicator, replace the sensor and reset the detector replacement indicator on the controller.



How to reset the detector replacement sign

Step

1. Check "Reset detector replacement sign" on the Advanced settings screen, and tap **[Send]**.

22-7-8. Apportioned electricity billing function

When using the apportioned electricity billing function, please understand and explain to users that this is our proprietary apportionment method (and an end-user license agreement must be signed).

- The billing function requires three test run checks, which will take about 1.5 months to complete, and so allow sufficient time before starting operation.
- If the group/block settings are changed during the operation of the billing system, a new test run check of billing function must be performed to ensure there are no misconfigurations.

For users (end-user license agreement)

- **This product (function) does not directly measure the energy consumption of each air conditioning unit. It uses our unique method where the operation status of air conditioning units is assessed based on the communication between indoor and outdoor units, and apportions the energy that was input via a pulse-emitting watt-hour meter according to the usage conditions.**
- **The energy input via the pulse-emitting watt-hour meter is for internal use for apportioning purposes, and it is not intended to be disclosed to tenants.**
- **When using this system, please include the clause "Air conditioning charges will be collected based on an apportioning calculation based on the operation status of the air conditioning unit" in the individual contracts between building owners and tenants.**
- **Mitsubishi Electric or its distributors will not be liable for any incidental, consequential, or special damages to the customer, even if the distributor was informed of the possibility of such damages. We will not be responsible for any claims made by third parties.**

Note

- This is not a system for directly measuring the energy consumption of air conditioning units at the power supply point.
- This is a system that estimates the energy consumption based on the air conditioning unit operation, and therefore cannot be used for certification purposes.
- Since the apportioning method is based on the operating status of the indoor air conditioning unit, the energy consumption may differ even if the operating hours of the indoor units are the same, depending on the model configuration and operating status of the outdoor units.
- Even when the air conditioning unit is not in use, it remains powered on and the standby power will still be apportioned.
- Since charges calculation is processed by truncating figures for each tenant (energy management block) based on different unit prices and the number of display digits, there may be discrepancies between the total energy consumption charges and the calculated charges for individual tenants.
- If there is a discrepancy in time, the apportioning process may not function correctly based on the accurate time, and so please perform time synchronization on a regular basis.
- Power, water, and gas usage are captured via pulse conversion, and the performance and accuracy vary depending on the respective metering devices.
- In the event of a power outage in the AE-C/EW-C system, even if the air conditioning unit continues operating, power allocation cannot be performed correctly if the power to the AE-C/EW-C system and the PI controllers is interrupted.
- Due to the fan operation function* of the air conditioning units (indoor units), the fan may continue to operate after the indoor unit has stopped, which may result in unexpected apportioning.

In individual contracts between building owners and tenants, please ensure that the information on the above-mentioned operations is included into the contract.

If it is not possible to include this into the contract, please implement one of the following measures:

- (1) If using watt-hour meters for indoor units, please install them for each tenant.
- (2) Disable the fan operation function of the air conditioning units (indoor units).

22-7-9. Interlock control settings

If a feature that is not available is mistakenly set for interlock control, that feature will not function correctly. Be sure to verify during the test run that interlock control works properly.

Example of operation not working properly:

When Unit 2 does not have the mode (Auto) installed

Settings: When Unit 1 operates, Unit 2 is set to operate in the mode (Auto).

When Unit 2 switches to the mode (Auto), Unit 1 operates.

22-7-10. Version table

AE-C/EW-C unit

AE-C/EW-C unit version	Installed functions
Ver. 1.00	Newly supported
Ver. 1.10	Support for 8 systems and other features
Ver. 1.20	Billing and other features

Initial Setting Tool

Software version	Installed functions
Ver. 3.00	Newly supported
Ver. 3.10	Billing and other features

BACnet Setting Tool

Software version	Installed functions
Ver. 6.00	Newly supported
Ver. 6.10	Support for GreenMark and other features

BACnet Trial Run Tool

Software version	Installed functions
Ver. 1.2.0.7	Newly supported

Charge Calculation Tool

Software version	Installed functions
Ver. 2.00	Newly supported

22-7-11. Version combination constraints

Initial Setting Tool

Initial Setting Tool version	AE-C/EW-C (controller) version
Unavailable	Ver. 1.00
Ver. 3.00	Ver. 1.00 to 1.10
Ver. 3.10	Ver. 1.00 and later

BACnet Setting Tool

BACnet Setting Tool version	AE-C/EW-C unit version
Unavailable	Ver. 1.00
Ver. 6.00	Ver. 1.10
Ver. 6.10	Ver. 1.10 and later

BACnet Commissioning Tool

BACnet Commissioning Tool version	AE-C/EW-C unit version
Unavailable	Ver. 1.00
Ver. 1.2.0.7	Ver. 1.10 and later

Charge Calculation Tool

Charge Calculation Tool version	AE-C/EW-C unit version
Unavailable	Ver. 1.00 to 1.10
Ver. 2.00	Ver. 1.20 and later

22-7-12. PC environment

The PC operating environment for using the installed tools is as follows.
Ensure that the PC is connected to the same network as the AE-C/EW-C.

PC operating environment

Item	Requirements	(4) BACnet Setting Tool				Remarks
		(3) Charge Calculation Tool				
		(2) Initial Setting Tool				
		(1) Browser				
CPU	1.0 GHz or more	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
RAM	4 GB or more	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Image resolution	1024 × 768 or more	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Supported OS	Microsoft Windows 11 (64-bit) *1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
	Microsoft Windows 10 (64-bit) *1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
	MacOS®	<input type="radio"/>				
Operating environment	.NET Framework 4.8 or higher		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
	Microsoft Excel 2016 32-bit		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	(2) When using the test run check sheet (3) When using the automatic printing function (4) For interlock control data integration files
	Microsoft Excel 2019 32-bit		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
	Microsoft Excel 2021 32-bit		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Supported browser	Microsoft Edge	<input type="radio"/>				
	Google Chrome	<input type="radio"/>				
	Safari	<input type="radio"/>				
USB	1 port or more		<input type="radio"/>	<input type="radio"/>		Used for importing and exporting data
LAN port	100Base-TX or higher	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	

*1 Operation confirmed on Pro versions of Windows.

Tablet/smartphone operating environment

Item	Browser
Tablet/ smartphone	iOS / Safari
	Android / Google Chrome

22-7-13. Periodic display update of the LCD screen on the controller

The AE-C performs an LCD screen display update once a month (on the 2nd of each month at 4:25:30 AM). During the display update, screen operations will be unavailable for approximately 2 minutes. Therefore, please avoid operating the LCD screen during the update time. After the display update is completed, the Monitor/Operation screen is displayed. The display update operation does not affect communication or control.

22-7-14. Indication of undefined floor on the Monitor/Operation screen

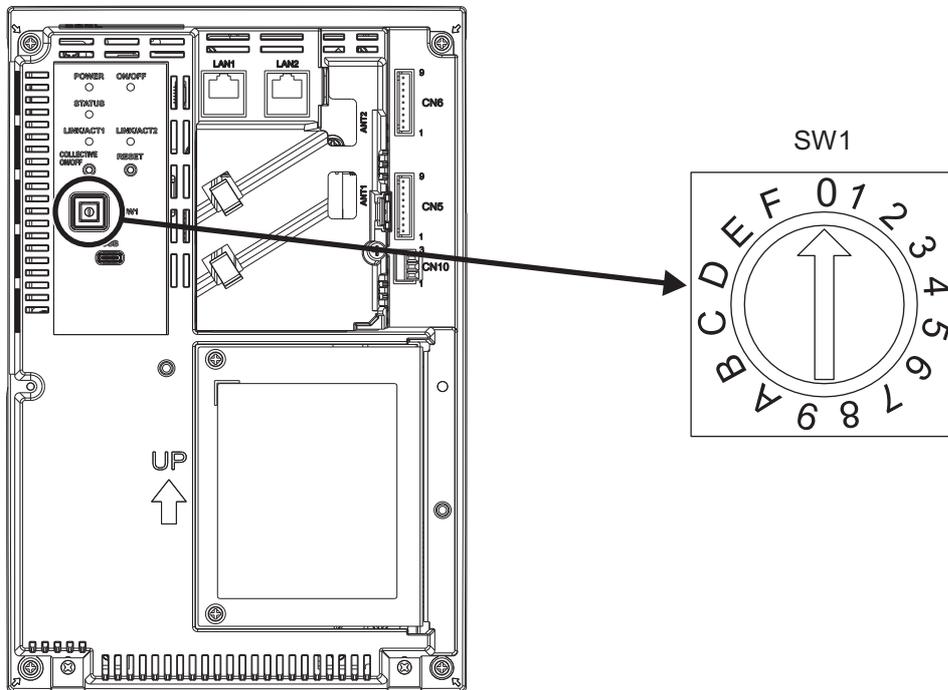
When no floor layouts are registered, "Undefined floor" will be displayed, and the following limitations apply.

Software version	Ver. 1.0 to 1.10	Ver. 1.20 and later
LCD	Not displayed	Controller is selected and displayed
Browser	Displayed	(Same as left)

22-8. Quick IP address (LAN1) setting

When connecting the EW-C alone to a dedicated LAN system, the IP address (LAN1) and the network settings of the EW-C can be set using the rotary switch (SW1). (Set SW1 to 1 to F.)

When the EW-C is connected to an existing LAN or when other AE-C/EW-C controllers exist in the same network, the IP address and the network settings cannot be set with the SW1. In such cases, use the Initial Setting Tool instead of the SW1. (Set the SW1 to 0.)



SW1	IP address (LAN1)	Subnet mask	Gateway
0	User setting (Set the IP address, subnet mask, and gateway address using the Initial Setting Tool.)		
	Factory default 192.168.1.1	Factory default 255.255.255.0	Factory default 0.0.0.0
1	192.168.1.1	255.255.255.0	0.0.0.0
2	192.168.1.2		
3	192.168.1.3		
4	192.168.1.4		
5	192.168.1.5		
6	192.168.1.6		
7	192.168.1.7		
8	192.168.1.8		
9	192.168.1.9		
A	192.168.1.10		
B	192.168.1.11		
C	192.168.1.12		
D	192.168.1.13		
E	192.168.1.14		
F	192.168.1.15		

Setting using the SW1 (1 to F)**Step**

1. Turn off the EW-C.
2. Point the arrow of the SW1 at the alphanumeric character you want to select.
3. Turn on the EW-C.

The EW-C will start with the address (192.168.1.1 to 15) corresponding to the alphanumeric character you selected with the SW1.

Setting using the Initial Setting Tool**Step**

1. Set the IP address and the network settings using the Initial Setting Tool.
2. Point the arrow of the SW1 at 0.
3. Restart the EW-C.

The EW-C will start with the address set with the Initial Setting Tool.

Note

- Do not point the arrow of the SW1 between alphanumeric characters.
- To set the address, use a precision screwdriver [(-), 2.0 mm (W)] to avoid damaging the rotary switch. (Specified torque: 19.6 m N·m)

23. Regular inspection

Product components deteriorate over time and can pose safety hazards.

Regularly conduct safety inspections to use the product safely and in good condition.

24. Checking for proper installation and conducting commissioning

24-1. Checking for proper installation

- The controller must be installed by the dealer (or the contractor) in accordance with the applicable laws, regulations, and certifications.
- Attend the commissioning to be conducted by the dealer (or the contractor).
- Receive instructions on the correct usage from the dealer (or the contractor) to ensure safety.
- When the installation work is completed, check the following items yourself.

Check item	Check-off column
Did you receive instructions on safety precautions?	
Did you receive instructions on operation procedures and correct usage to ensure safety?	
Did you make sure that the items listed on the installation work checklist of the Installation Manual are checked off?	
Did you receive instructions on the initial settings?	
Did you receive a report on the commissioning result? Did you attend the commissioning?	

24-2. Commissioning

- Before the commissioning for the controller is conducted, a test run for the indoor units must be completed. For details, refer to the installation manual for the indoor units.
The following checks must be conducted to make sure that the initial settings of the controller are correct and that the air-conditioning system is configured properly.
 - (1) Start and stop the indoor units from the AE-C/EW-C, and make sure the indoor units operate accordingly.
 - (2) Start and stop the indoor units from the local remote controller, and make sure the correct operation statuses appear on the AE-C/EW-C.
 - (3) Perform items (1) and (2) for all indoor unit groups.

Important

- Conduct a test run for each group. Incorrect initial settings (e.g., incorrect group settings) for the controller can result in operation problems (e.g., target/non-target indoor units do not operate or stop as intended).

Note

- Item (2) can be skipped when testing a system without local remote controllers.
- EW-C needs to be operated from the Web browser.

24-3. Backing up/importing settings data

Settings made with the Web browser or the Initial Setting Tool can be backed up on a PC. The exported data can be imported back to the AE-C/EW-C to restore the previous settings after AE-C/EW-C replacement. The settings data can be backed up or imported using the Web browser or the LCD.

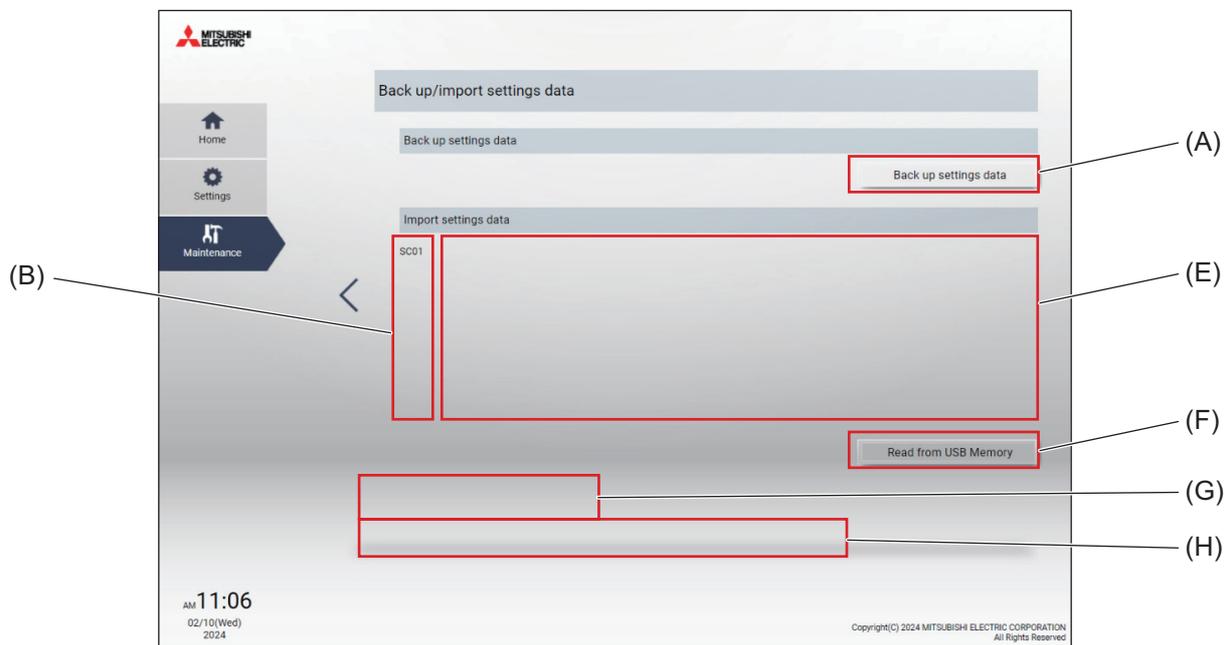
Display the operation management screen (e-2).

Tap [Maintenance] - [Utility] - [Back up/import settings data] to display the Back up/import settings data screen.

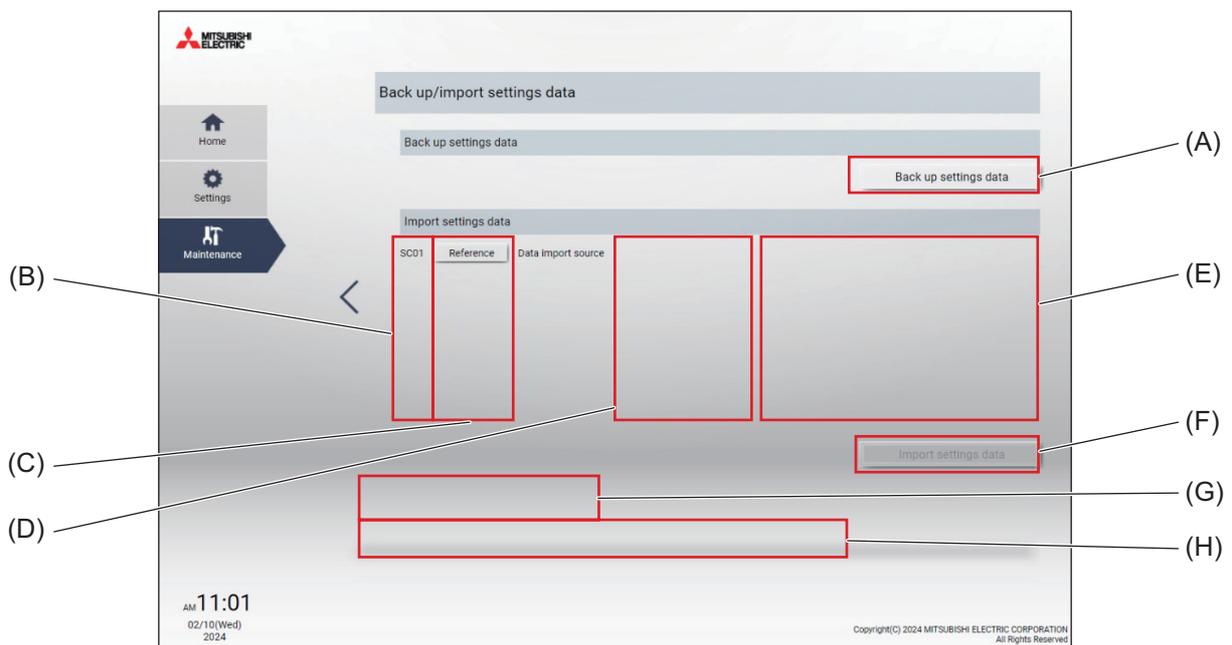
Note

- This function is only available to building managers. Tenant managers and general users cannot use this function.

(LCD)



(Web browser)



	Item	Description
(A)	[Backup settings data]	Tap this button to back up the AE-C/EW-C settings data.
(B)	System controller number	The number of the AE-C/EW-C is displayed.
(C)	[Reference]	Tap this button to refer to the imported file.
(D)	Data import source	The name of the imported file is displayed.
(E)	Messages for controllers	Messages for each controller are displayed.
(F)	[Read from USB Memory]/[Import settings data]	Tap these buttons to import the file contained in the USB flash drive or the file specified in the Data import source area (D) to each AE-C/EW-C.
(G)	System-wide message	System-wide messages are displayed.
(H)	Progress bar	The system-wide progress is displayed.

[1] Backing up settings data

Step

1. Tap **[Backup settings data]** (A).

After creating settings data, a file download dialog will be displayed, and you can back up the AE-C/EW-C settings data files all at once.

Note

- It takes a few minutes to create the settings data.
- The name of the settings data file will be "SettingData_SC [SC number]_[serial number].dat".
- The file structure is as follows.

(LCD)

[Root folder of USB flash drive]/

```

├── SetupData_SC01_12345-111/
│   ├── RestoreTargetAddress.txt
│   ├── SettingData_SC01_12345-111.dat
│   ├── SettingData_SC02_12345-222.dat
│   ├── SettingData_SC03_12345-333.dat
│   ├── SettingData_SC04_12345-444.dat
│   └── SettingData_SC05_12345-555.dat

```

(Web browser)

[Destination directory set by the Web browser]/

```

├── SettingData_SC01_12345-111.dat
├── SettingData_SC02_12345-222.dat
├── SettingData_SC03_12345-333.dat
├── SettingData_SC04_12345-444.dat
└── SettingData_SC05_12345-555.dat

```

[2] Importing settings data

Step

(LCD)

1. Insert a USB flash drive to the USB port of the AE-C.
2. Tap **[Read from USB Memory]** (F) on the Back up/import settings data screen.
The settings data will be imported to the AE-C/EW-C.

(Web browser)

1. Tap **[Reference]** (C) on the Back up/import settings data screen.
2. Select a file you want to import, and tap **[Open]**.
3. Tap **[Import settings data]** (F).
The settings data will be imported to the AE-C/EW-C.

Note

- It takes a few minutes to import the settings data.

MEMO

25. Specifications

■ AE-C

Item		Specifications
Power supply	Rating	100-240 VAC \pm 10%, 50/60 Hz, single phase
Power consumption		22 W
LAN		LAN1 100BASE-TX (for connection to other AE-C/EW-C) LAN2 100BASE-TX (for connection to building management systems)
RS-485		Modbus RTU, 2-wire half-duplex communication (for connection to watt-hour meter) Transmission rate: 9600, 19200, 38400, 57600, 115200 bps
USB Type C		USB 3.2 Gen 1 (For USB flash drive only, FAT32, no security)
External input/ output	Input	Photocoupler input (4 inputs x 2)
	Output	Transistor output (2 outputs x 2) (sink type)
Ambient conditions	Operating temperature range	0°C to +40°C (+32°F to +104°F)
	Storage temperature range	-20°C to +60°C (-4°F to +140°F)
	Humidity	30% to 90% RH (non-condensing)
Exterior		PC + ABS - GF10 (Munsell 1.0Y 9.2/0.2)
External dimensions	W x H x D	306 × 211 × 71.8 mm (12-1/16 × 8-5/16 × 2-27/32 in) When embedded, the controller protrudes from the wall or the metal control box by 19.7 mm (25/32 in).
Weight		2.9 kg (7 lbs)
Installation conditions		Indoor only <ul style="list-style-type: none"> The controller is for use in an indoor or equivalent environment.

The clock accuracy is \pm 10 seconds per month (at 25°C). Backup time in case of power failure is 3 days.

EW-C

Item		Specifications
Power supply	Rating	100-240 VAC \pm 10%, 50/60 Hz, single phase
Power consumption		15 W
LAN		LAN1 100BASE-TX (for connection to other AE-C/EW-C) LAN2 100BASE-TX (for connection to building management systems)
RS-485		Modbus RTU, 2-wire half-duplex communication (for connection to watt-hour meter) Transmission rate: 9600, 19200, 38400, 57600, 115200 bps
USB Type C		USB 3.2 Gen 1 (For USB flash drive only, FAT32, no security)
External input/ output	Input	Photocoupler input (4 inputs x 2)
	Output	Transistor output (2 outputs x 2) (sink type)
Ambient conditions	Operating temperature range	-10°C to +55°C (+14°F to +131°F)
	Storage temperature range	-20°C to +60°C (-4°F to +140°F)
	Humidity	30% to 90% RH (non-condensing)
Exterior		Body: Electrogalvanized steel sheet Cover: PC + ABS
External dimensions	W x H x D	185 x 278 x 60.3 mm (7-5/16 x 10-31/32 x 2-3/8 in) (185 x 278 x 81.5 mm (7-5/16 x 10-31/32 x 3-7/32 in) when installed on the installation frame)
Weight		1.9 kg (5 lbs)
Installation conditions		In the metal control box installed indoors

The clock accuracy is \pm 10 seconds per month (at 25°C). Backup time in case of power failure is 3 days.

Specifications of commercial parts

Unsupplied parts		No.	Specifications
AC power wire/ Protective ground wire		S-1	Type: Sheathed cable (designated by 60227 IEC 53) (Do not use sheathed cables lighter than ordinary IEC 60227 sheathed cables.) <ul style="list-style-type: none"> Wire type (recommended): VCT, VVF, VVR, or equivalent Wire size: 2 mm² (ø1.6 mm) (AWG 14) Cables with outer diameter of 10 mm (13/32 in) (thick enough to be held by cable clamps under the terminal block) are recommended. Protective ground wire color: Green-and-yellow
M-NET transmission cable (Connected to the controller)		S-2	Type: Shielded cable <ul style="list-style-type: none"> CPEV-S 1P (pair) ø1.2 mm (AWG 16): PE^{*1} insulated PVC^{*1} shielded cable for communication CVV-S, MVV-S (two cores) 1.25 to 2 mm² (AWG 16 to 14): PVC^{*1} insulated PVC^{*1} shielded cable for control Type: Environmentally friendly cable (reference) <ul style="list-style-type: none"> EM-CPEE-S 1P (pair) ø1.2 mm (AWG 16): PE^{*1} shielded cable for communication EM-CEE-S, EM-MEE-S (two cores) 1.25 to 2 mm² (AWG 16 to 14): PE^{*1} shielded cable for control
Sleeved ring terminal		S-3	M3.5 ring terminal (for AC power wires (L/L1, N/L2) and M-NET transmission wires (A, B, S)) M4 ring terminal (for protective ground wire)
Watt-hour meter cable		S-4	Type: Twisted-pair cable 2P (pair) (Shielded cables (1P (pair)) are allowed for use.) Wire size: 0.3 to 1.25 mm ² (AWG 22 to 16)
Screw (M4)		S-5	ISO metric screw thread
Wood screw (M4.1)		S-6	ISO metric screw thread Used to install the EW-C directly on a wall that can hold the weight of the EW-C, such as a gypsum-board wall.
Overcurrent breaker (Either one of the right)	Fuse	S-11	Rated current: 3 A (A fuse must be used in combination with a switch with a rated current of 3 A.)
	Circuit breaker		Type: 2-pole circuit breaker (2P2E) Rated current: 3 A
Earth leakage breaker		S-12	Type: 2-pole circuit breaker (2P2E) Rated current: 3 A or greater Rated current sensitivity: 30 mA Operating time: 0.1 second or shorter
External power supply (DC power supply)		S-15	Rated voltage: 12 VDC or 24 VDC
Extension cable		S-16	Conductor size: 0.3 mm ² (AWG 22) or greater
DC power supply (for external input/output relays)		S-17	Rated voltage: 12 VDC or 24 VDC
Relay/ Relay with diode (for external input)	S-18	Contact rating Rated voltage: 12 VDC or 24 VDC Rated current: 10 mA or greater Minimum applied load: 1 mA DC	
Relay/ Relay with diode (for external output)		Coil rating Rated voltage: 12 VDC or 24 VDC Power consumption: 0.9 W or less	
LAN cable		S-20	Category 5 or higher straight cable (100 m (328-1/16 ft) or shorter)
Switching HUB		S-21	Transmission rate: 100 Mbps or higher

*1 PE: Polyethylene; PVC: Polyvinyl chloride

MEMO

26. Before requesting repairs

If the problem cannot be solved by referring to the following, stop the operation, and turn off the molded-case circuit breaker. Contact the dealer (contractor, service provider) with the information on the nature of the problem and the error code. (Refer to "Notice screen.")

	Symptom	Possible cause	Countermeasure
1	The LCD screen is off. Tapping the screen displays nothing. (The backlight does not light up.)	<ul style="list-style-type: none"> Is the  (power) LED lit in green? Foreign substances or dirt on the screen may cause a malfunction. It may take up to 5 minutes before the initial screen appears on the LCD after the controller is turned on. 	<p>Press the push switch (ON/OFF) on the side of the controller once, wait for two seconds, press the push switch again, and then tap the screen.</p> <ul style="list-style-type: none"> The screen and the touch panel will be reset, and the screen display will recover. The controller will not be reset. After the screen display recovers, clean the LCD screen. <p>* For power reset of the controller, contact the dealer (contractor, service provider).</p>
2	The LCD screen does not respond to tapping while it is lit. The screen operating sound is heard or the screen switches when the screen is not tapped.	<ul style="list-style-type: none"> The screen sometimes takes time to switch. Does the screen switch after five seconds or so? Foreign substances or dirt on the screen may cause a malfunction. It may take up to 5 minutes before the initial screen appears on the LCD after the controller is turned on. 	<p>Press the push switch (ON/OFF) on the side of the controller once, and then tap the screen.</p> <ul style="list-style-type: none"> The screen and the touch panel will be reset, and the screen display will recover. The controller will not be reset. After the screen display recovers, clean the LCD screen. To ensure stable operation, perform a power reset of the controller periodically (about once a year). <p>* For power reset of the controller, contact the dealer (contractor, service provider).</p>
3	The outdoor unit icon is marked with  (error).	<ul style="list-style-type: none"> Is the error code of the outdoor unit "6607" on the Error list screen? Unless the power of the outdoor unit is on, indoor units do not perform cooling or heating operation or emit cool or warm air. 	<ul style="list-style-type: none"> Check that the power of the outdoor unit is on. If it is not on, turn it on. If an error code other than "6607" is displayed, the outdoor unit needs to be inspected.

	Symptom	Possible cause	Countermeasure
4	When the controller is not operated, an indoor unit or a LOSSNAY unit starts or stops.	<p>Even when the controller is not operated, indoor units may be started or stopped by the following event:</p> <ol style="list-style-type: none"> 1) Control from the local remote controller 2) Activation of the schedule function or the timer of the local remote controller 3) Activation of the schedule function of the controller 4) Activation of the interlocked control 	<p>When an indoor unit or a LOSSNAY unit is started or stopped by the events listed on the left, it is not a malfunction.</p> <p>Cause 1) Indoor units or LOSSNAY units may start or stop according to the operation of the local remote controller.</p> <p>Cause 2) Indoor units or LOSSNAY units may start or stop according to certain settings of the local remote controller, such as the schedule setting, ON/OFF timer setting, and Auto-OFF timer setting.</p> <p>Cause 3) Indoor units or LOSSNAY units may start or stop according to the schedule settings (day, weekly, and annual schedule settings) of the controller.</p> <p>Cause 4) LOSSNAY units may start or stop, interlocking with multiple indoor units.</p>

This product is designed and intended for use in the residential, commercial and light-industrial environment.

The product at hand is based on the following EU regulations:

- Low Voltage Directive 2014/35/EU
- Electromagnetic Compatibility Directive 2014/30/EU

2011/65/EU; (EU) 2015/863; (EU) 2017/2102:

The restriction of the use of certain hazardous substances in electrical and electronic equipment

Please be sure to put the contact address/telephone number
on this manual before handing it to the customer.

MITSUBISHI ELECTRIC CORPORATION

HEAD OFFICE: TOKYO BLDG., 2-7-3, MARUNOUCHI, CHIYODA-KU, TOKYO 100-8310, JAPAN
MANUFACTURER: MITSUBISHI ELECTRIC CORPORATION Air-conditioning & Refrigeration Systems Works
5-66, Tebira 6 Chome, Wakayama-city, 640-8686, Japan