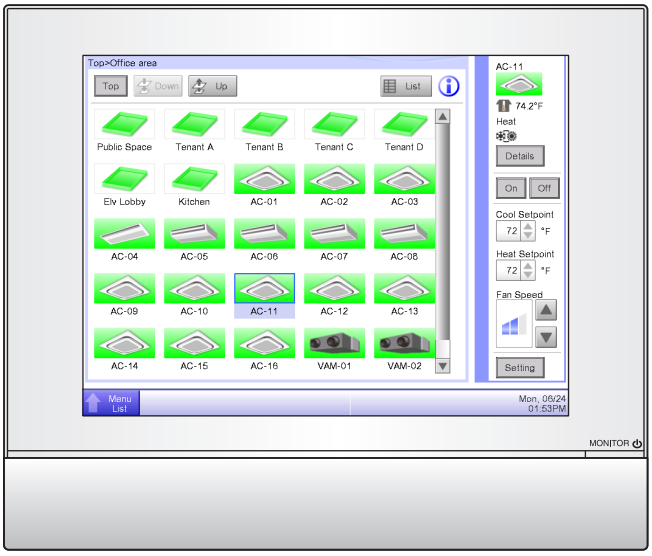
User's Manual

Version 2.14.00

touch intelligent Manager

Model

DCM601A71
DCM601A72
DCM002A71
DCM008A71
DCM009A51
DCM014A51
DCM601B71



Disclosure

To the User in USA

Part 15 of FCC

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

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

The FCC responsible party is Daikin Comfort Technologies Manufacturing, L.P., and may be contacted
by calling (855)-324-5461, or at 19001 Kermier Rd., Waller, TX 77484.
(www.daikinac.com)

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

To the User in CANADA

Canadian ICES-003

This Class B digital apparatus complies with Canadian ICES-003.
Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

Safety Considerations

Read these **SAFETY CONSIDERATIONS** carefully before operating the controller.

Train the customer to operate and maintain the controller.

Inform customers that they should store this User's Manual with the Installation Manual for future reference.

Meanings of **WARNING, CAUTION and NOTE** Symbols:

⚠**WARNING**	Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
⚠**CAUTION**	Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.
⚠**NOTE**	Indicates situation that may result in equipment or property-damage only accidents.

• The following pictograms are used in this manual.

	Never do.		Always follow the instructions given.
	Keep wet hands away.		Keep water and moisture away.

⚠**WARNING**	
	**• Do not modify or repair the controller.** Consult your Daikin dealer for any modification or for repairs.
	**• Do not relocate or reinstall the controller by yourself.** Improper installation may result in electric shocks or fire. Consult your Daikin dealer to relocate or for any reinstallation.
	**• Do not use flammable materials (e.g., hairspray or insecticide) near the controller.** Do not clean the product with organic solvents such as paint thinner. The use of organic solvents may cause cracking, damaging the product, causing electric shocks, or fire.
	**• Consult the dealer if the controller was submerged under water due to a natural disaster, such as a flood or hurricane.** **Do not operate the controller if it was submerged under water or a malfunction, electric shock, or fire can occur.**

⚠ CAUTION

	• **Never disassemble the controller.** Touching the interior parts may result in electric shocks or fire. Consult your Daikin dealer for internal inspections and adjustments.
	• **Do not allow children to play with the controller to avoid causing damage to the product.**
	• **Do not touch the controller buttons with wet fingers.** Touching the buttons with wet fingers can cause an electric shock.
	• **Do not wash the controller.** Doing so may cause electric leakage and result in electric shocks or fire.
	• **Never let the controller to get wet.** Water can cause damage to the controller, and may cause an electric shock or fire.

⚠ NOTE

	• **Never press the button of the controller with a hard, pointed object.** The controller may be damaged.
	• **Never pull or twist the electric wire of the controller.** It may cause the unit to malfunction.
	• **Do not wipe the controller operation panel with benzine, thinner, chemical dustcloth, etc.** The panel may get discolored or the coating peeled off. If it is heavily dirty, soak a cloth in water-diluted neutral detergent, squeeze it well and wipe the panel clean. And wipe it with another dry cloth.

Contents

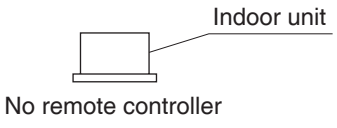
System Overview

1. About the iTM (intelligent Touch Manager)

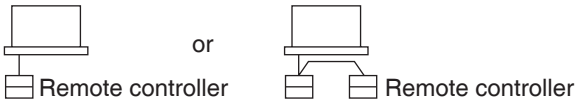
1-1 Main Features

- iTM is an advanced central controller operated by using a 10.4" touch panel. It allows you to easily monitor as well as operate air conditioners and generic equipment connected to the iTM from the touch panel.
- One iTM can monitor and control a maximum of 64 groups of indoor units (128 units), including Ventilator. The iTM can be expanded with up to a maximum of 7 iTM plus adaptors, which similarly to the iTM, can connect a maximum of 64 groups of indoor units (128 units); that is, with one iTM you can control and monitor a maximum of 512 groups of indoor units (1024 units).
  A group of indoor units refers to the following:

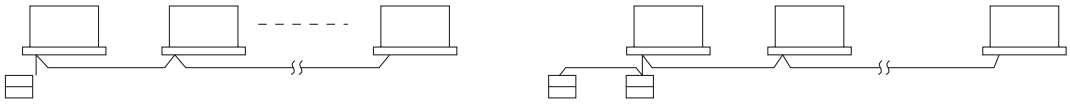
(1) One indoor unit without remote controller



(2) One indoor unit controlled with one or two remote controllers



(3) Up to 16 indoor units controlled as group with one or two remote controllers

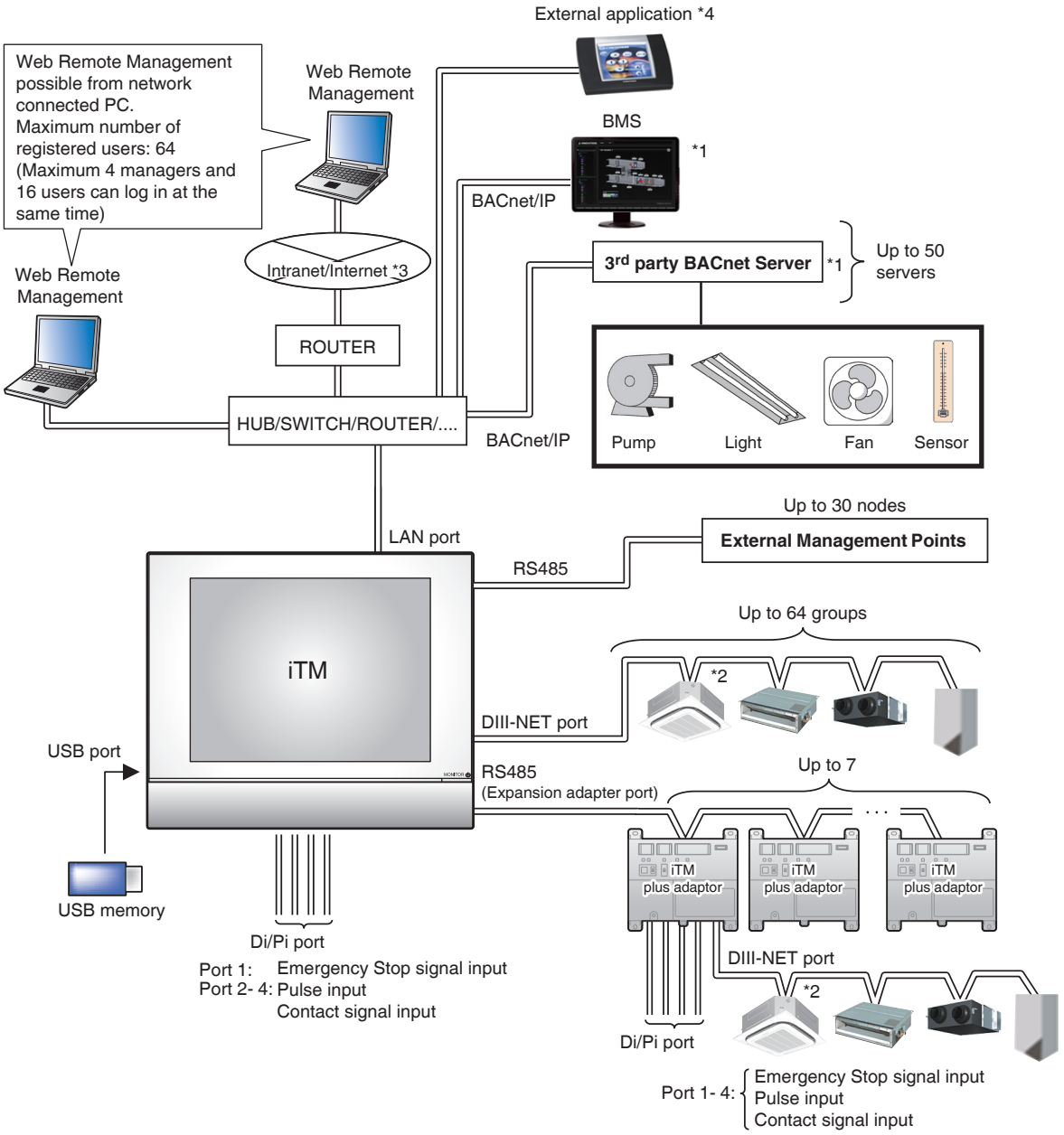


- The iTM allows you to define privileges for Users and Managers, so that you can set up and manage them according to their respective privileges. Furthermore, by connecting the iTM with computers in a LAN, you can set up Web Remote Management and allow a maximum of 4 managers and 16 users to simultaneously access the iTM, and if a connection to the Internet is available, then, you can monitor and operate the iTM remotely, via the Internet.
- The iTM allows you to schedule the operation of each air conditioner in detail.
  You can set up an annual schedule by setting up a schedule by the day of the week and defining Special Days such as extra holidays.
  Changes by the season are achieved by setting up a validity period to programs.
- By using optional functions, you can display the floor plan of individual buildings and the like as background on the iTM monitoring screen, and monitor and operate by viewing the actual layout of the air conditioners.
- You can use Interlocking Control to start/stop air conditioners in conjunction with other equipment or Setback function to save energy.
- You can use Power Proportional Distribution function (option software) to distribute the electric bill among tenants or the Energy Navigator function (option software) to manage the energy consumption systematically.
- By connecting a USB memory to the iTM, you can output billing data, budget/actual energy consumption data, function settings, history data, etc. to a CSV file.

NOTE

- Periodical data saving is recommended in order to prevent loss of your important data due to an accidental problem.

1-2 System Configuration



NOTE

- The total number of management points that can be registered is 650.

  For more information on the number of management points that can be registered, see Appendix in the User's Manual (EM11A017).

*1 iTM BACnet Server/Gateway software (DCM014A51) cannot be used together with iTM BACnet client software (DCM009A51) on the same iTM.

*2 The iTM BACnet Server/Gateway software (DCM014A51) guarantees performance for BMS to monitor and control up to 128 indoor units management points. Furthermore, Do not use WAGO nodes, Demand Control with the DCM014A51. The iTM has to be set as the DIII-NET master for this option to work.

*3 If connecting to the Internet, connection must always be via a VPN router, and security must be ensured by the customer.

*4 If you use iTM Web Interface software (DCM007A51), you can monitor and operate D3 devices connected to the iTM with an external application.

NOTE

When using the Web Remote Management function

<To prevent unauthorized use>

- As a product using network technology, this product faces the following security risks:
  * Information leakage
  * Unauthorized operation as a result of impersonation
  * Equipment stoppage as a result of an attack

  For the reasons above, be sure to use this product in a secure network environment.

- To strengthen security, observe the following points when managing users:
  * Restrict users that can log in by setting user names and passwords
  * Passwords must be a combination of alphanumeric characters that cannot be easily guessed by others

- This product logs user operation and the equipment operational status for the purpose of system maintenance.

  The logs can be viewed on the History screen.

1-3 What is a Management Point/Area?

What is a management point?

A management point is the target equipment monitored and operated using the iTM.

The types of management points that can be controlled by iTM are as follows:

Indoor*1, Ventilator, Dio*2, Analog*3, Pulse*4, Outdoor, MultiState*5

*1 The management points Indoor and Hydrobox are treated as indoor unit management point type.

*2 The management points Di, D3Di, D3Dio, External Di, External Dio, BACnet Di,and BACnet Dio are treated as the Dio management point type.

*3 The management points External Ai, External Ao, Internal Ai, BACnet Ai, and BACnet Ao are treated as the Analog management point type.

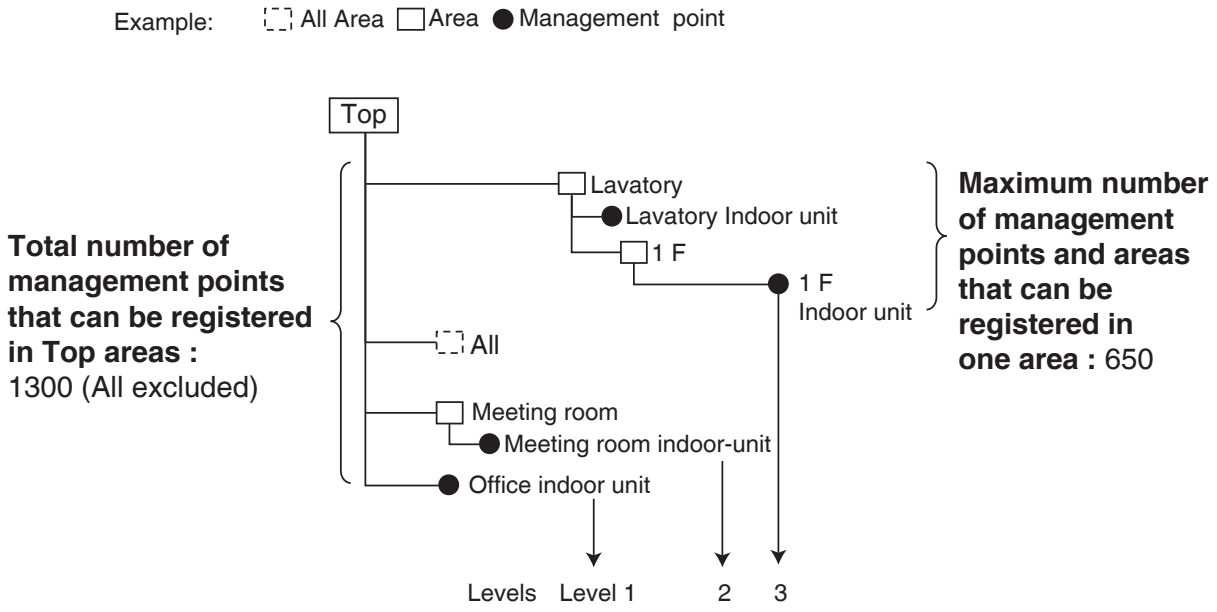
*4 The management points Pi, External Pi, and Internal Pi are treated as the Pi management point type.

*5 The management points BACnet Mi and BACnet Mo are treated as the MultiState management point type.

What is an area?

An area is a hierarchical group into which management points, monitored and operated by the iTM, are classified. You can populate an area with member areas and management points. An All area, to which you cannot manually register or delete members from, is provided by default.

Maximum number of areas that can be created: 650 (All excluded)

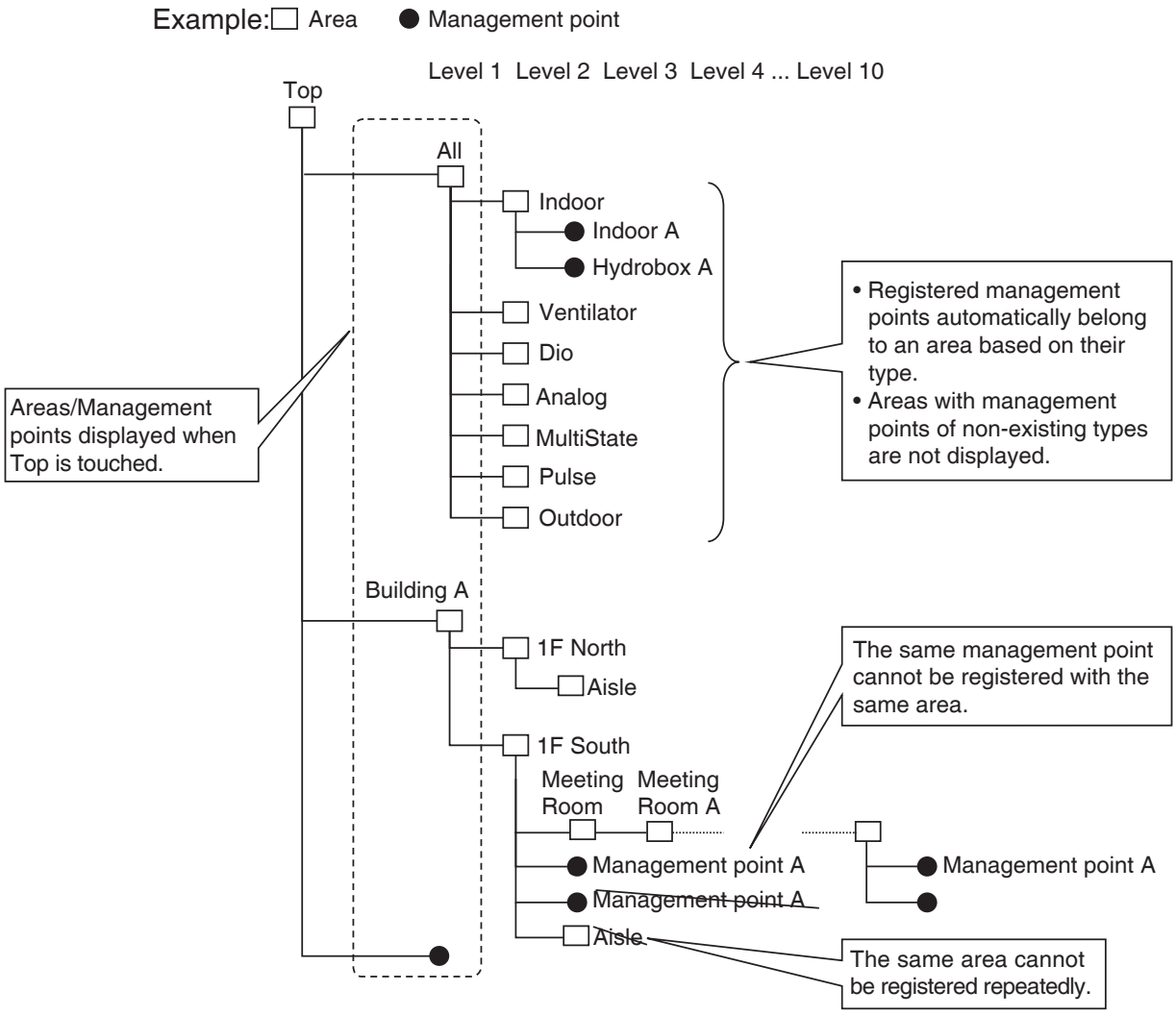


Maximum number of hierarchal levels that can be created: 10 levels

NOTE

Registered management points are automatically registered in the folder for the corresponding management point type set up under All.

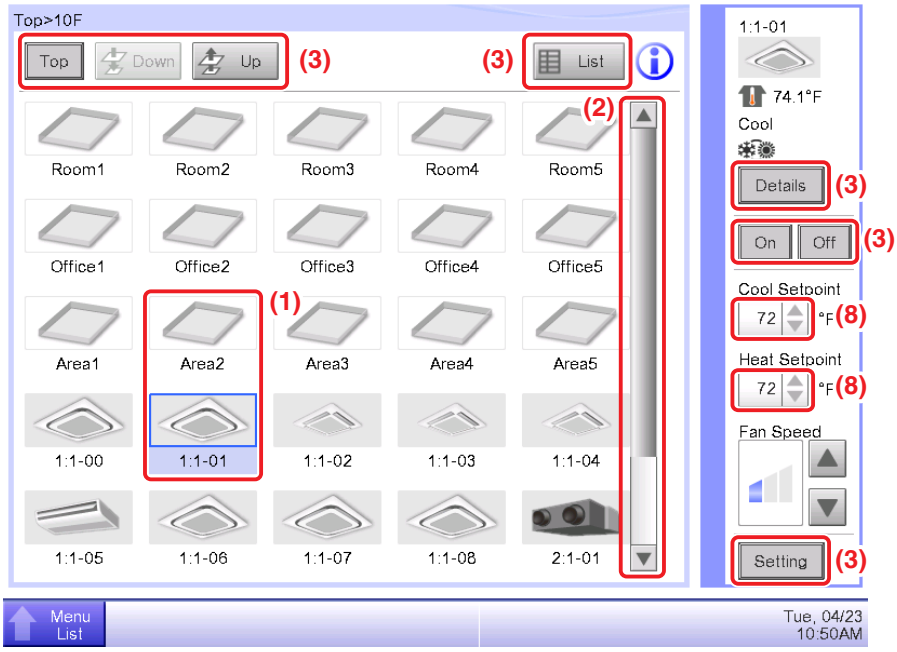
You can register a management point in two or more areas. However, you cannot register the same management point two or more times in one area. You cannot register the same area in two or more areas either.



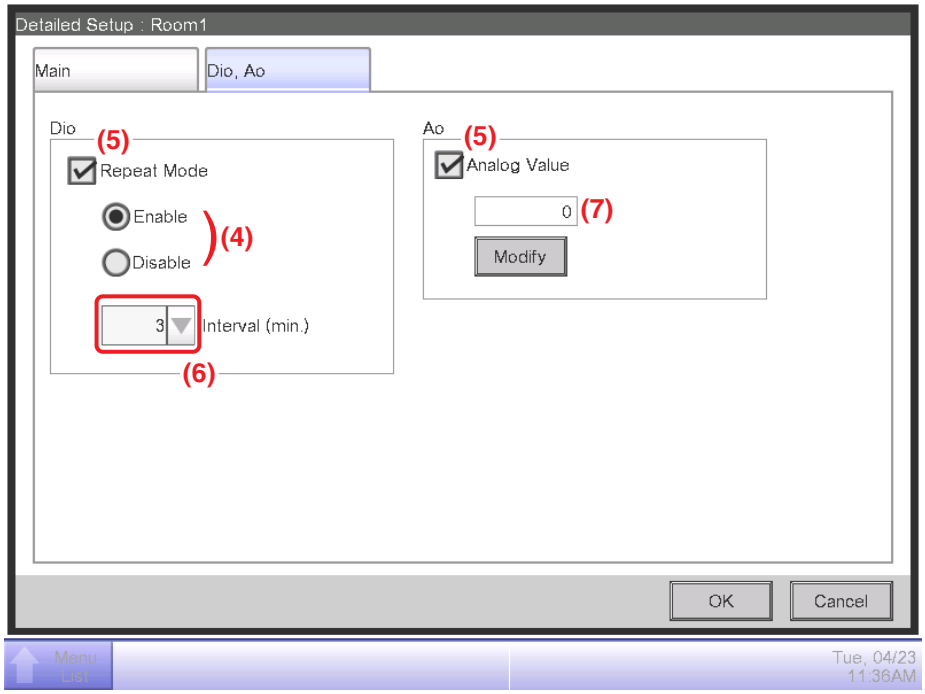
1-4 Touch Panel Operation Method

Operation is possible by touching the panel with your fingers or a touch pen. Be sure not to use sharp edged items as this could damage the touch screen permanently.

<Standard View (Icon) Screen>



<Detailed Setup dialog>



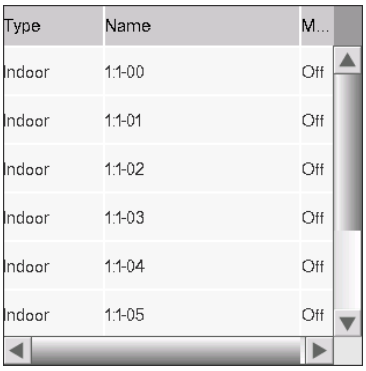
The following describes how the text on each component, displayed on screen, looks like in normal state, when it is selected (it has been touched), or is grayed out. (* For components not shown in the Standard view above, see the respective detailed description page.)

(1) Icon of centrally monitored management point/area

Unselected status

Selected status

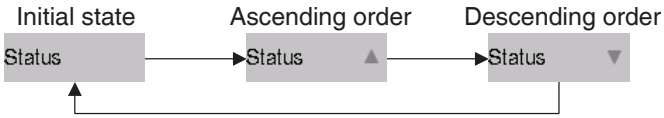
(2) List, scroll bars, and sorting



Type	Name	M...
Indoor	1:1-00	Off
Indoor	1:1-01	Off
Indoor	1:1-02	Off
Indoor	1:1-03	Off
Indoor	1:1-04	Off
Indoor	1:1-05	Off

List image

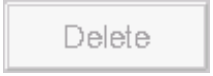
- Scroll bars appear when there are hidden lines and columns.
- To display hidden lines and columns, press ▲▼, or slide the scroll bars.
- Truncated column text is displayed in a tool tip.
- When sorting is enabled, touch the header to sort the column according to the sequence shown in the figure below



(3) Button

Normal status

Pressed status



Grayed out status

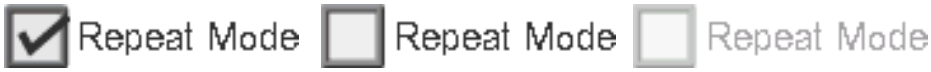
NOTE

- Components such as buttons and check boxes are not selectable unless all the conditions for operating the management point/area are satisfied. Operation, such as touching and selecting a component that is not selectable, is not possible.
- "..." is displayed on buttons and the like when the label text is truncated due to space availability.
  To display the label text completely, touch the component for a while. A tool tip with the complete text will appear.

(4) Radio button

Selected status　　Unselected status　　Grayed out status

(5) Check box

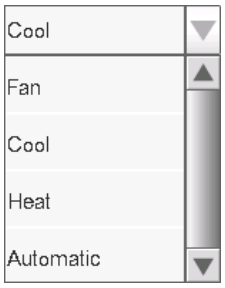


Selected status　　Unselected status　　Grayed out status

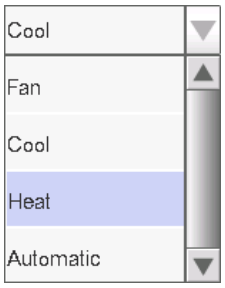
(6) Drop down menu

Closed status

Grayed out status



Open status
When the list opens downward

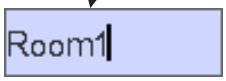


Open status
(When a row is selected)

(7) Text box

Cursor
Indicates the position where the next character will be entered.

Text box (When unfocused)



Text box (When focused)

(8) Spin box

Closed status

Grayed out status

(When an intermediate value is selected)

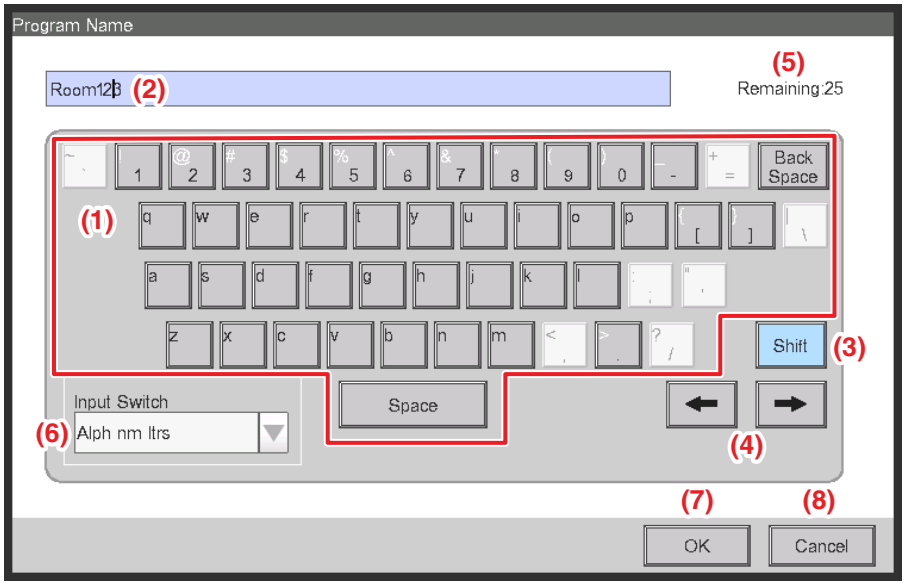
(When the maximum value is selected)

Open status

(When the minimum value is selected)

1-5 Dialog Operation

Text /Password input dialog operation



(1) Character key buttons

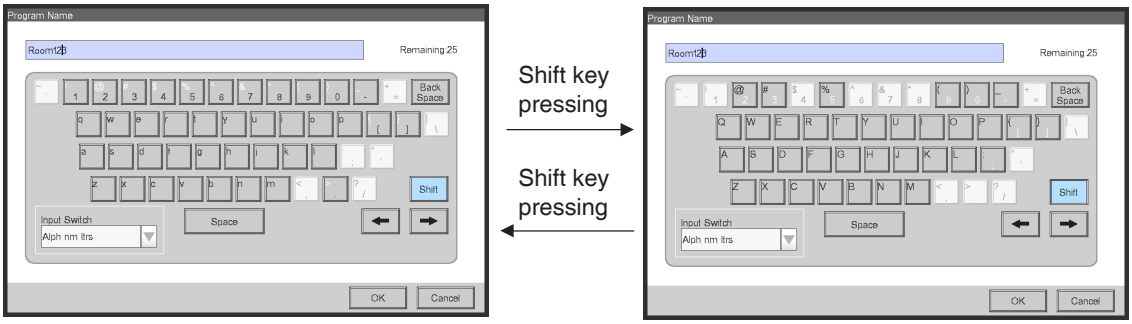
Key buttons for entering characters.

(2) Input area text box

Displays the entered characters. For the Password input dialog, it displays asterisks (*).

(3) Shift key toggle button

Toggles between upper and lower case.



(4) Right and left arrow buttons

Moves right and left the cursor in the input area text box.

(5) Character input range label

Displays three types of information regarding the number of characters that can be entered.

Remaining: Indicates the difference between the number of characters entered and the maximum permitted by the function

Exceeded: Indicates the number of characters entered in excess from the maximum permitted

Missing: Indicates the number of characters still necessary to comply with the minimum required

(6) Input switch drop down menu

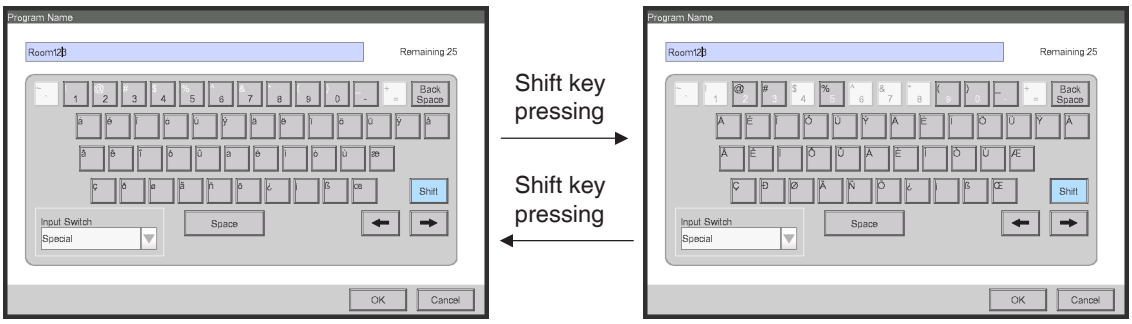
Toggles the keyboard between Special and Alph nm ltrs.

Special: Sets the keyboard to special keyboard

Alph nm ltrs: Sets the keyboard to alphanumeric keyboard

Not displayed for the Password input dialog.

To toggle between upper and lower case, use the Shift key.



(7) OK button

Touching this button commits the input.

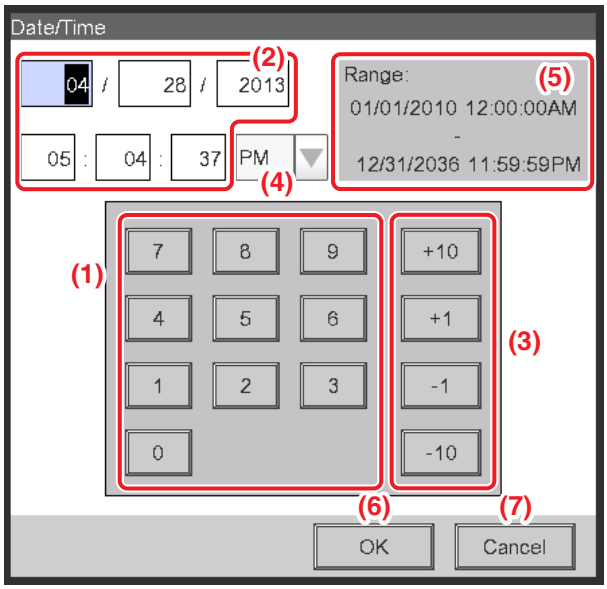
(8) Cancel button

Touching this button cancels the edit and closes the screen.

NOTE

- Grayed out characters are unavailable for input.

Time input dialog operation



(1) Number key button

Key buttons for entering numeric values.

(2) Input area text box

Displays the entered numeric values. Touch the text box and enter the required numeric value. The input position changes depending on the locale setting.

(3) Up/Down button

Increases or decreases the numeric value selected in the input area text box **(2)** by +1, +10, –1, or –10.

(4) AM/PM setting drop down menu

Specifies whether the time is AM or PM when time is indicated using 12-hour clock. This drop down menu is not displayed when 24-hour clock is set in the System Settings.

(5) Input range label

Displays the range of values that can be entered.

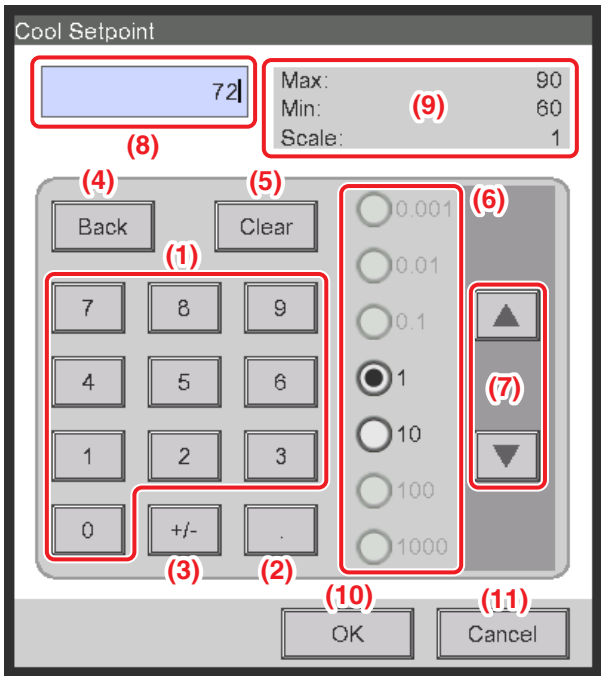
(6) OK button

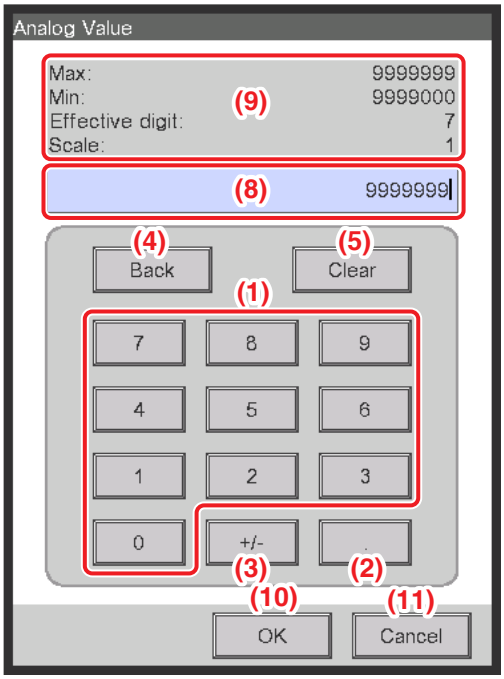
Touching this button commits the input.

(7) Cancel button

Touching this button cancels the edit and closes the screen.

Numerical input dialog operation





(1) Number key button

Key buttons for entering numeric values.

(2) Decimal point key button

Press this button to enter a decimal point.

(3) +/– key button

Press this button to change the sign of a numeric value. Adds a minus sign before a positive value while for a negative value, deletes the minus sign and makes the value positive.

(4) Back button

Deletes one digit at a time from the last number displayed in the input area text box.

(5) Clear button

Completely deletes the numeric value displayed in the input area text box.

(6) Up/Down step radio button

Specifies the step by which the Up/Down button increases/decreases when pressed. You can only select buttons with higher step values than the minimum step defined for the value to be input, see frame **(9)**.

(7) Up/Down button

Increases or decreases the numeric value by the step specified in the Up/Down step radio button.

(8) Input area text box

Displays the entered numeric values. You can input up to 10 characters.

(9) Input range label

Displays the range of values that can be entered.

(10) OK button

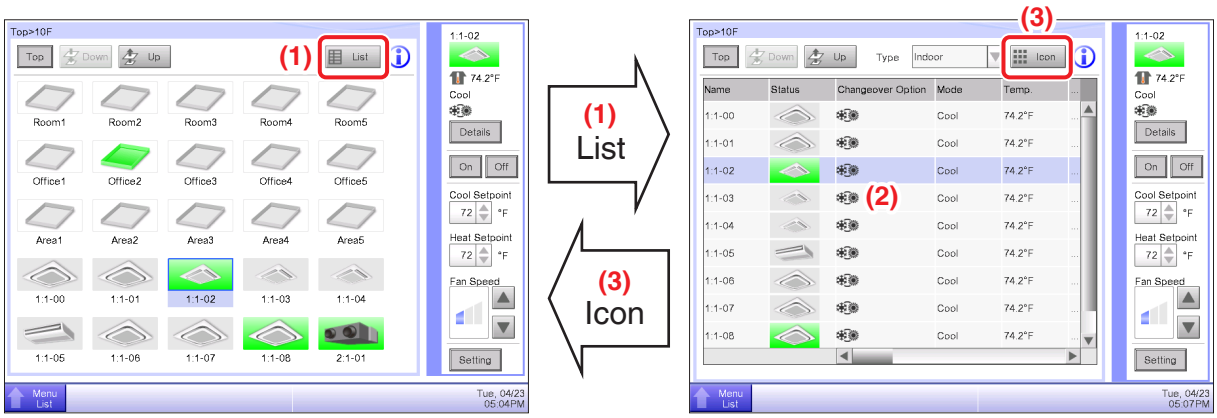
Touching this button commits the input.

(11) Cancel button

Touching this button cancels the edit and closes the screen.

2. Simple Operations

2-1 Displaying the List of Areas and Management Points



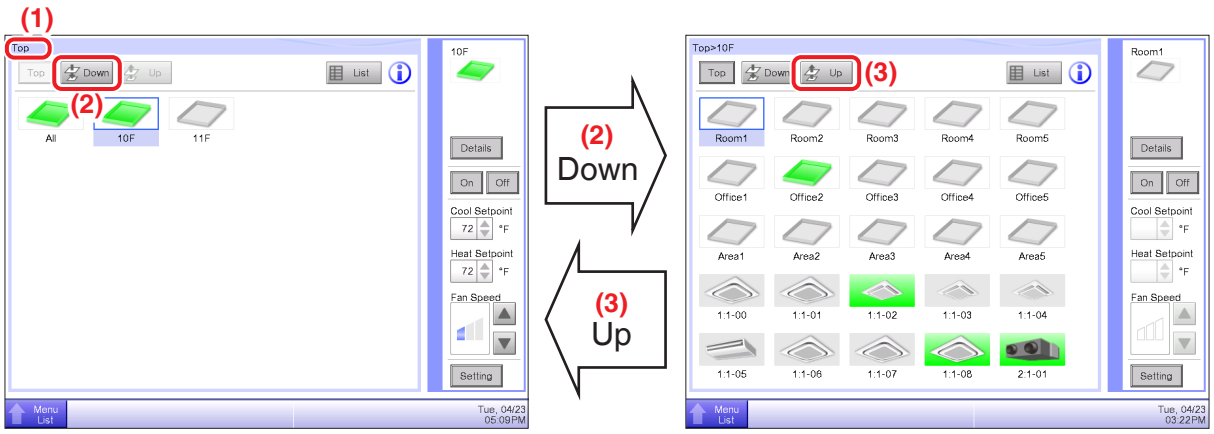
(1) Touch the **List** button.

(2) The screen changes to the List View, where selecting “Indoor” in the Type drop down menu causes the name, operation mode, setpoint, and fan speed of each area and indoor unit to be listed.

(For detailed operation, see “4-3 Standard View (List) Screen”.)

(3) Touch the Icon button to return to the previous view.

2-2 Displaying Areas and Management Points



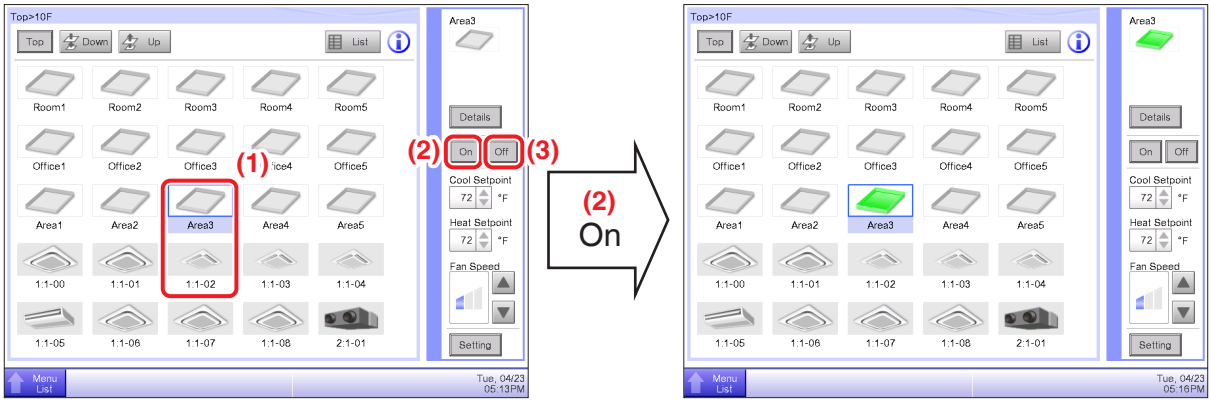
(1) Displays the hierarchical level of the current area and indoor unit.

(2) Touch the **Down** button to move into the selected area and display the areas and management points included there.

(3) Touch the **Up** button to move one level up from the currently selected one.

(For detailed operation, see “4-2 Standard View (Icon) Screen”.)

2-3 Starting/Stopping Areas and Management Points

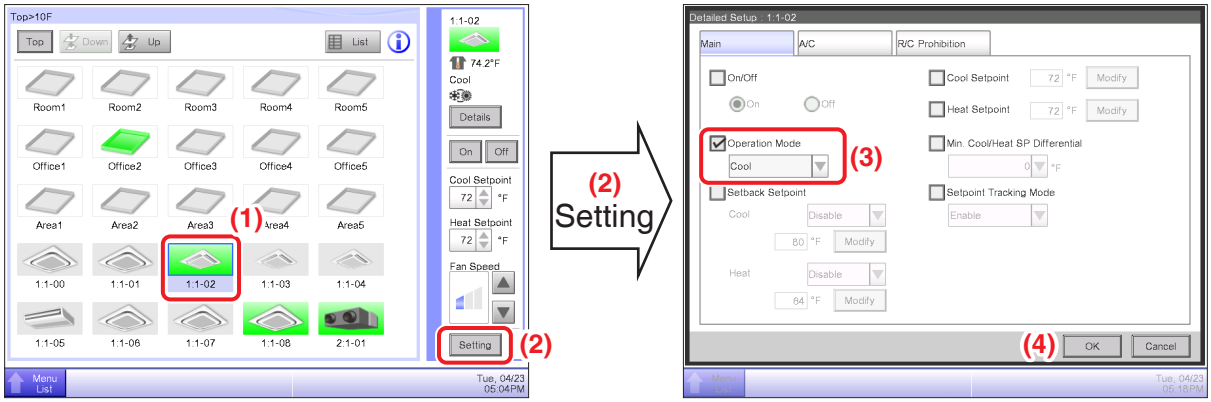


(1) Select the area or management point you want to start or stop.

(2) Touching the On button causes the selected area or management point to start, while **(3)** touching the Off button causes the selected area or management point to stop. The icon turns green or red (depending on the system settings) when the selected area or management point has been started while the icon turns gray when it is stopped.

(4) When Confirm is “enabled” in the system settings, a confirmation dialog appears accordingly. Press the **Yes** button to commit. (For detailed operation, see “6-9 Setting up the Confirm Operation”.)

2-4 Setting up the Operation Mode for an Indoor Unit



(1) Select the indoor unit for which you want to set up the operation mode.

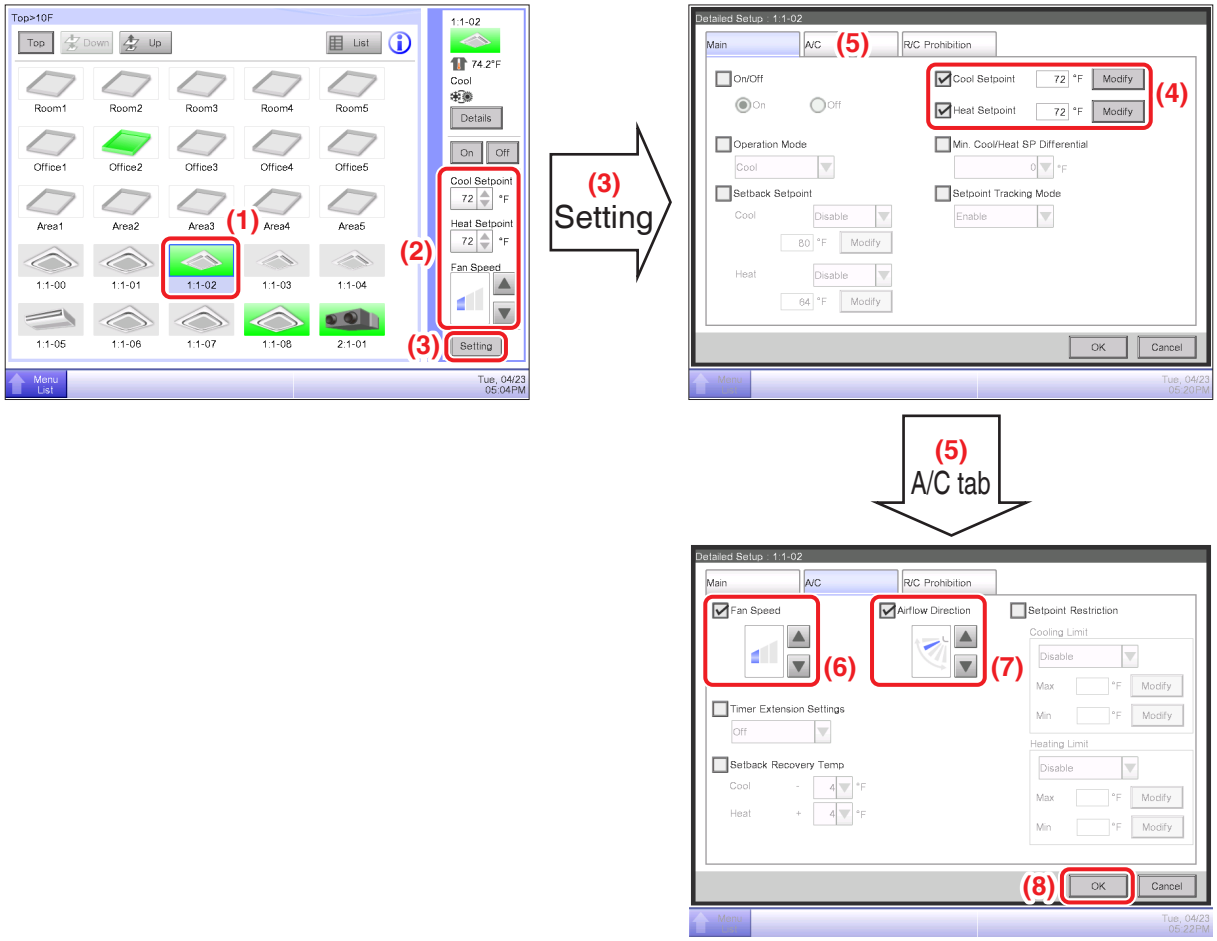
(2) Touch the **Setting** button and display the Detailed Setup screen.

(3) Select the **Operation Mode** check box and select Fan, Cool, Heat, Dependent, or Dry from the drop down menu.

(4) Touch the **OK** button to commit and close the screen.

(For detailed operation, see “4-2 Detailed Setup Screen”.)

2-5 Setting up the Setpoint, Fan Speed, and Airflow Direction for an Indoor Unit



(1) Select the indoor unit for which you want to set up the setpoint, fan speed, and airflow direction.

(2) Set up the setpoint in the **Setpoint** spin box, and the **Fan Speed** using the ▲▼ buttons.

3-speed fan

(Low) **(Medium)** **(High)** **(Automatic)**

NOTE

Available fan speed settings depend on the indoor unit.

You can also set up the setpoint and fan speed in the Detailed Setup screen.

(3) Touch the Setting button to display the Detailed Setup screen.

(4) Select the Setpoint check box and touch the Modify button. Then, in the Numerical Input dialog that appears, enter the desired value.

(5) Select the **A/C** tab.

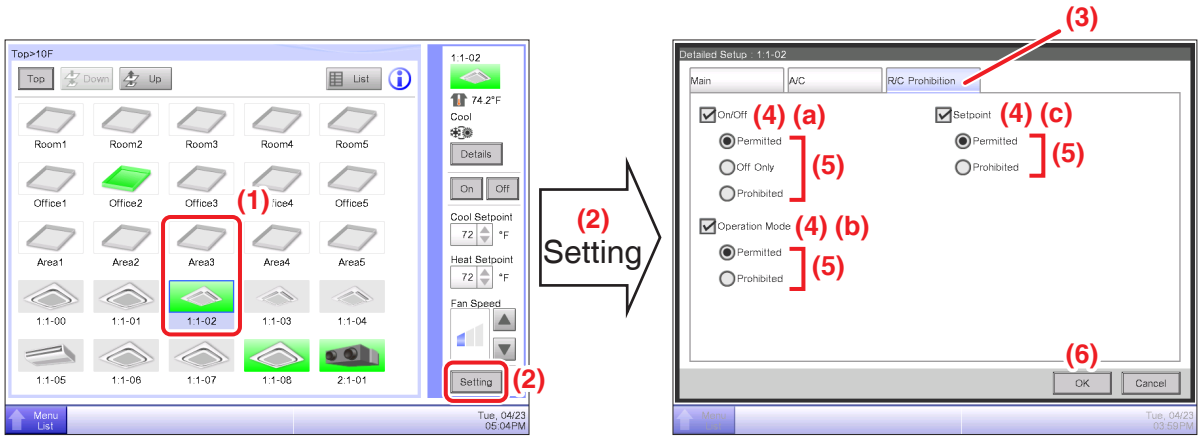
(6) Select the **Fan Speed** check box and set up the fan speed using the ▲▼ buttons.

(7) Select the **Airflow Direction** check box and set up the Airflow Direction using the ▲▼ buttons.

<Airflow direction 0> <Airflow direction 1> <Airflow direction 2> <Airflow direction 3> <Airflow direction 4> <Swing>

(8) Touch the **OK** button to commit and close the screen. (For detailed operation, see "4-2 Detailed Setup Screen".)

2-6 Enabling/Disabling Remote Controller



(1) Select the area or management point for which you want enable/disable remote controller.

(2) Touch the **Setting** button and display the Detailed Setup screen.

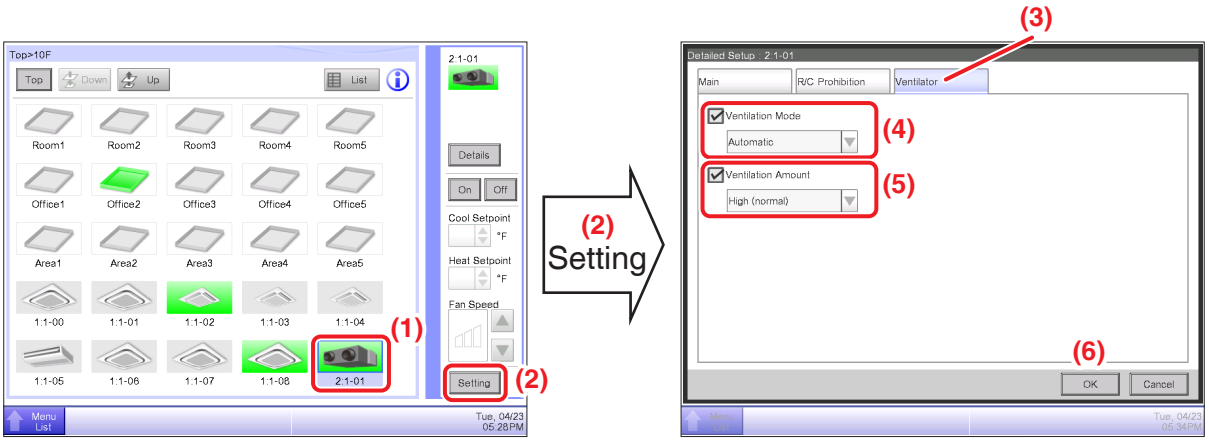
(3) Select the **R/C Prohibition** tab.

(4) You can permit/prohibit the following remote controller operations: **(a)** On/Off, **(b)** set up the operation mode, and **(c)** set up the setpoint. Select the check box for the item(s) you want to set up.

(5) Select the radio button for the operation you want to set up.

(6) Touch the **OK** button to commit and close the screen.
(For detailed operation, see "4-2 Detailed Information Screen".)

2-7 Setting up the Operation Mode and Ventilation Amount for Ventilator



(1) Select the Ventilator for which you want to set up the operation mode and ventilation amount.

(2) Touch the **Setting** button and display the Detailed Setup screen.

(3) Select the **Ventilator** tab.

(4) Select the check box for **Ventilation Mode** and select Automatic, ERVentilation, or Bypass from the drop down menu.

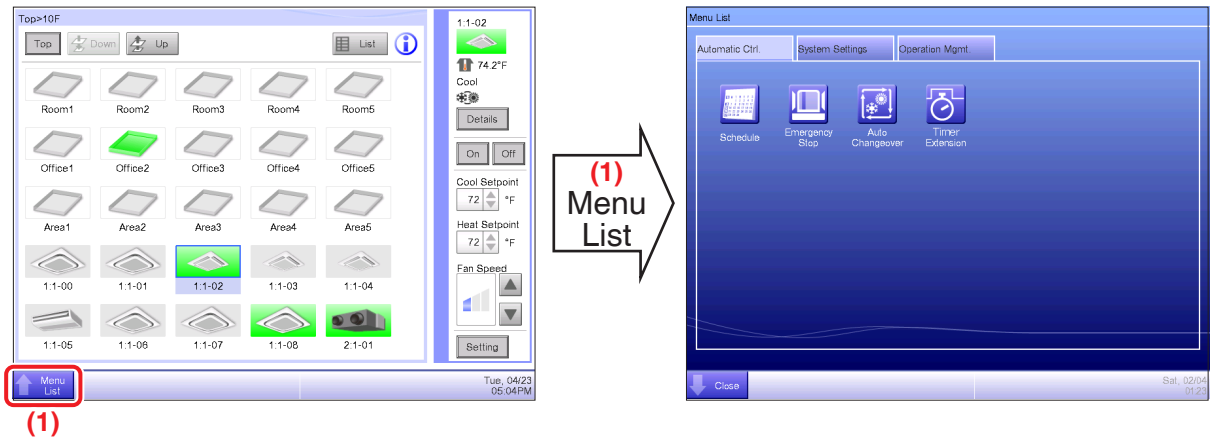
(5) Select the check box for **Ventilation Amount** and select Auto(normal), Low(normal), High(normal), Auto(fresh up), Low(fresh up), or High(fresh up) from the drop down menu.

(6) Touch the **OK** button to commit and close the screen.

(For detailed operation, see “4-2 Detailed Setup Screen”.)

2-8 Performing Operations with the Menu List Screen

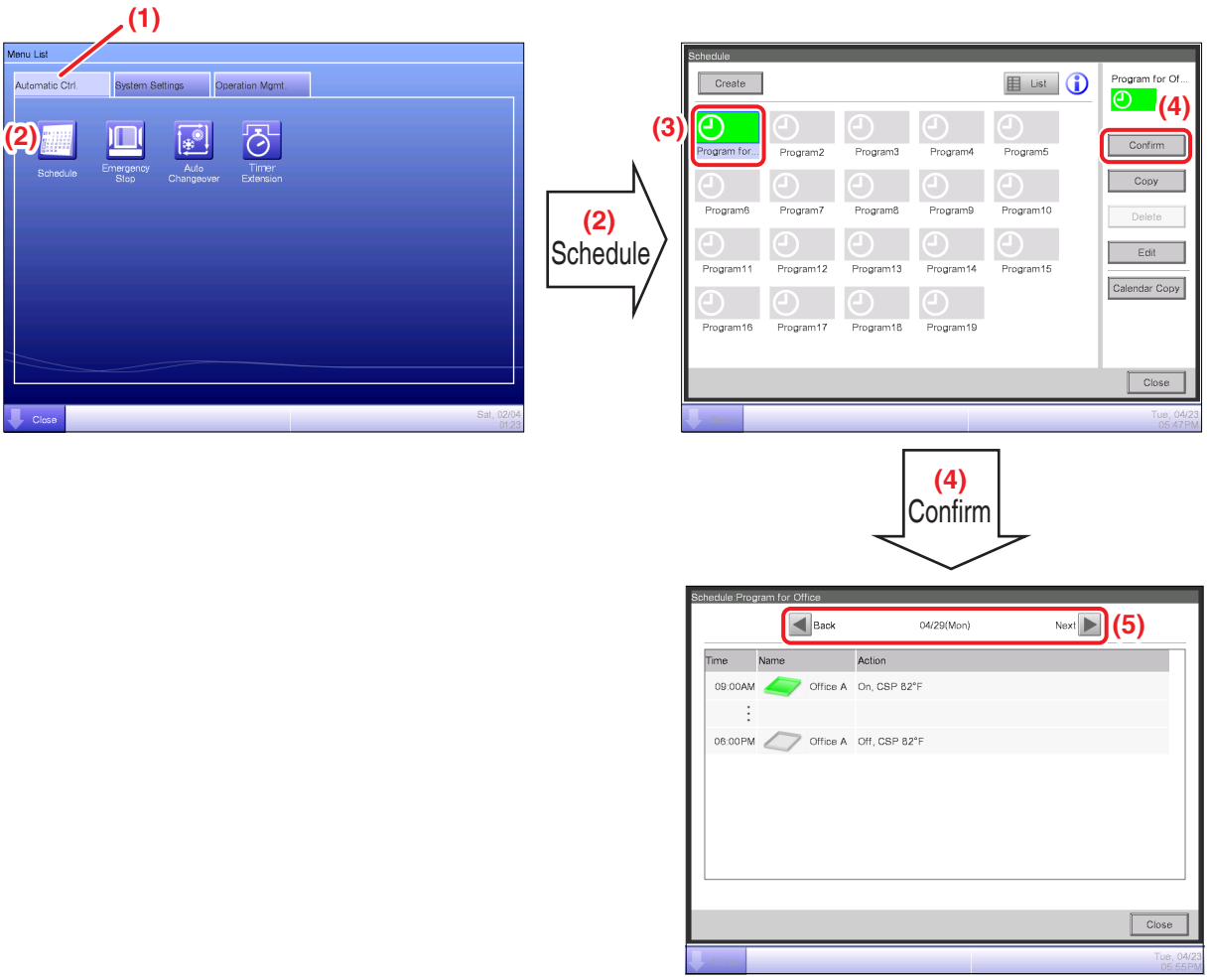
The Menu List screen allows you to check schedules, set up areas/management points, set up the time, check history, etc.



(1) Touch the **Menu List** button and display the Menu List screen.

(For detailed operation, see “4-5 Menu List Screen”.)

Checking the schedule



(1) Select the **Automatic Ctrl.** tab on the Menu List screen.

(2) Touch the **Schedule** button and display the Schedule screen.

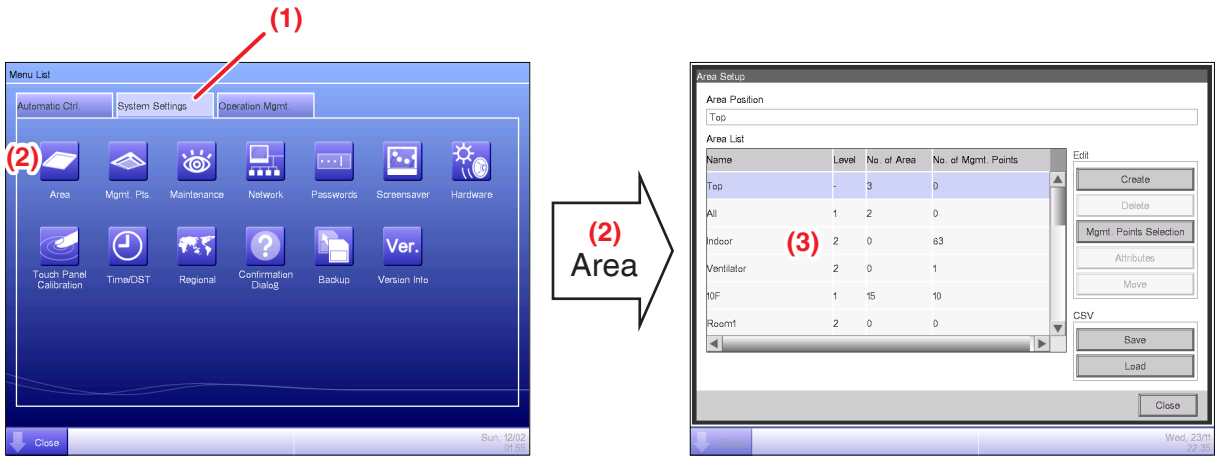
(3) Select the schedule program to check.

(4) Touch the **Confirm** button on the Schedule screen and display the Confirm screen.

(5) Select the date for which you want to check the schedule.

(For detailed operation, see “5-1 Detailed screen and button descriptions”.)

Checking settings such as Area Name, Detailed Info., and Icon



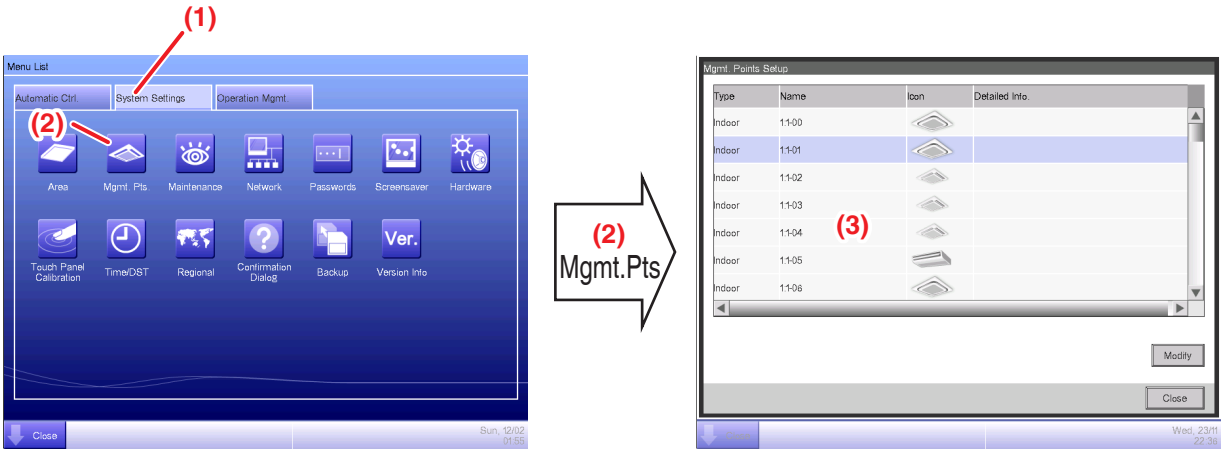
(1) Select the **System Settings** tab on the Menu List screen.

(2) Touch the **Area** button and display the Area Setup screen.

(3) Check settings in the Area List

(For detailed operation, see “6-1 Naming and setting up the detailed information of an area”.)

Checking settings such as Mgmt. Point Name, Detailed Info., and Icon



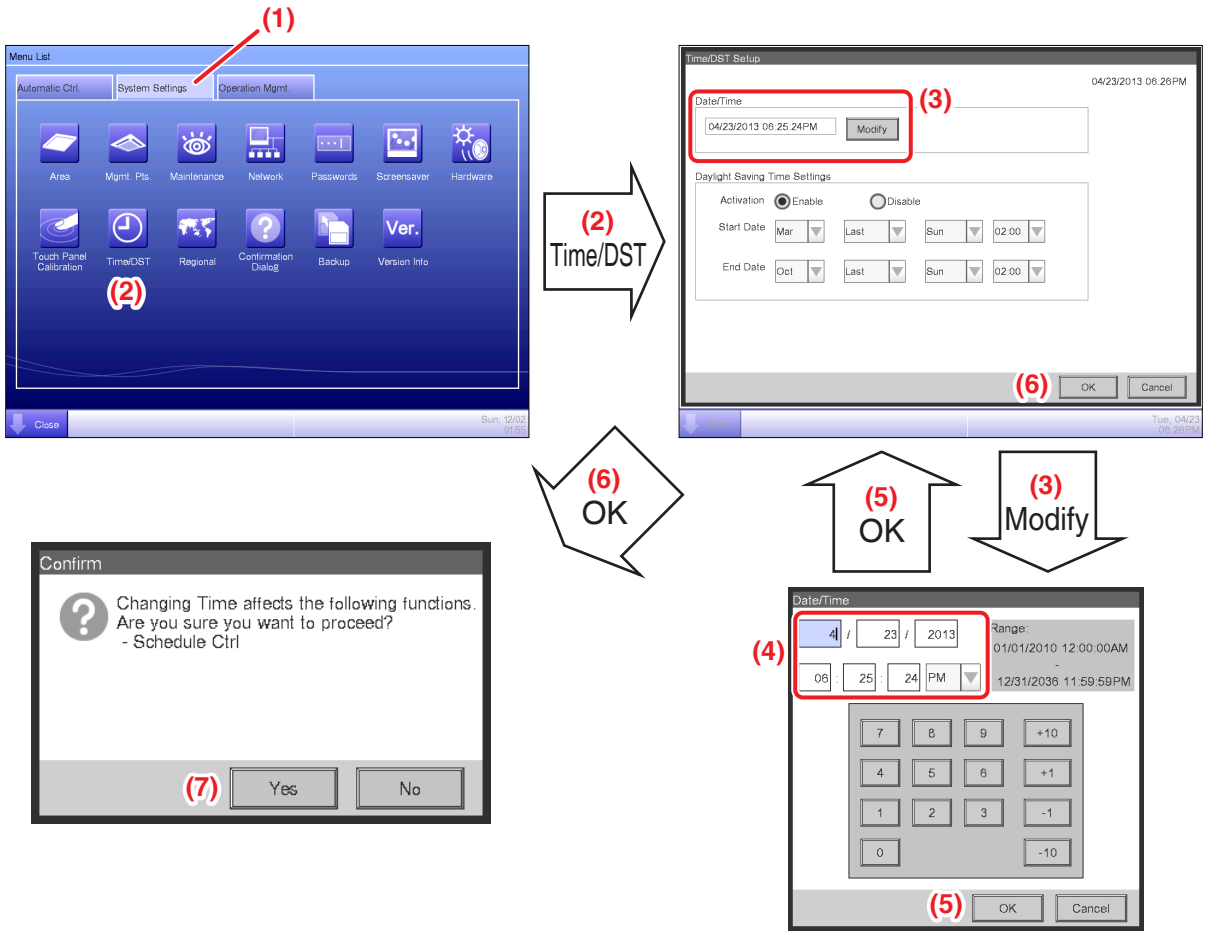
(1) Select the **System Settings** tab on the Menu List screen.

(2) Touch the **Mgmt. Pts.** button and display the Mgmt. Points Setup screen.

(3) Check settings in the Mgmt. member list.

(For detailed operation, see “6-2 Setting up a Management Point”.)

Setting up the time



<Time Input dialog>

(1) Select the **System Settings** tab on the Menu List screen.

(2) Touch the **Time/DST** button and display the Time/DST Setup screen.

(3) On the screen, the current time is displayed. To change, touch the **Modify** button.

(4) Enter the time in the Time Setup dialog that appears.

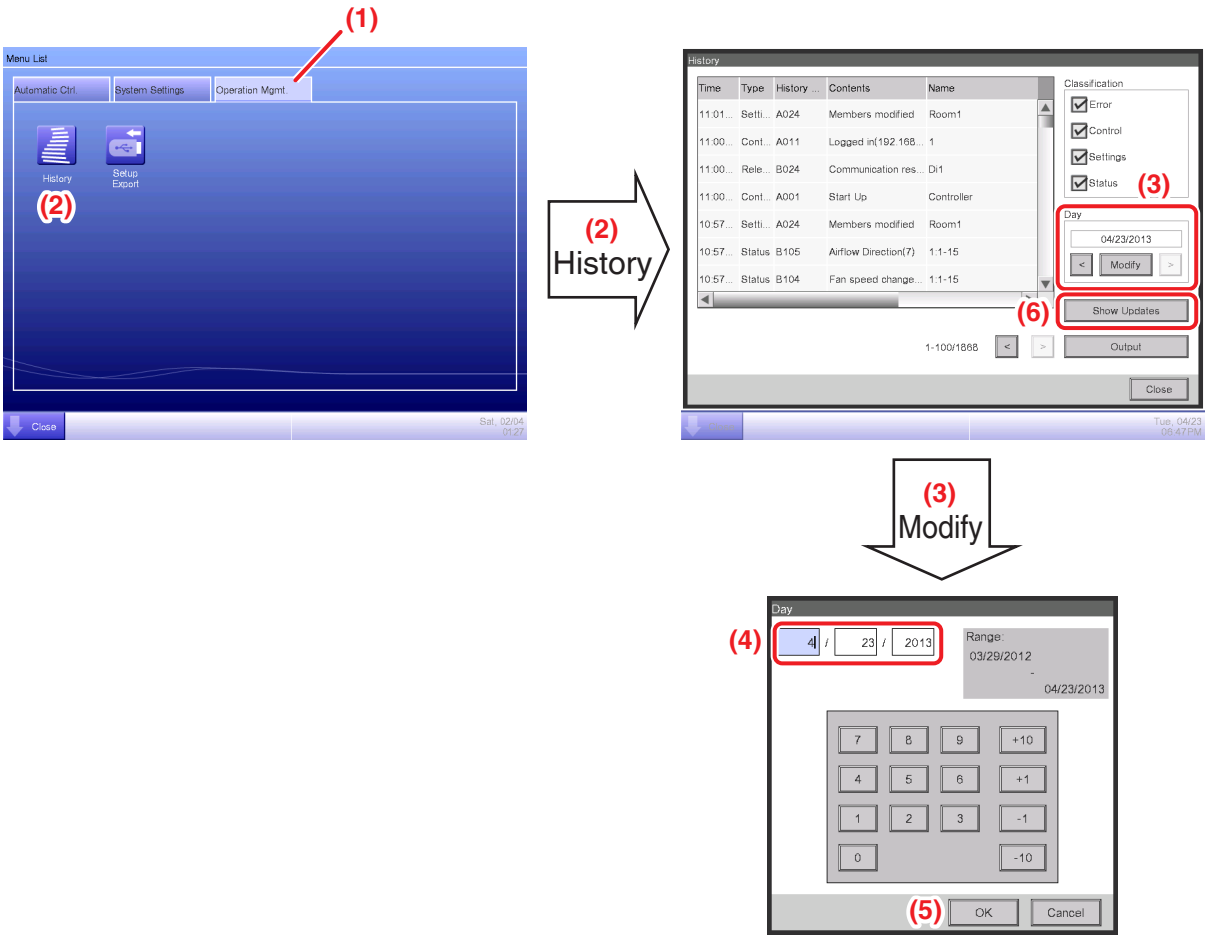
(5) Touch the **OK** button.

(6) Touch the **OK** button on the Time Setup dialog.

(7) Touch the **Yes** button on the Confirm dialog that appears and close the screen.

(For detailed operation, such as setting the daylight saving time, see “6-6 Setting up the Time”.)

Checking the history



(1) Select the **Operation Mgmt.** tab on the Menu List screen.

(2) Touch the **History** button and display the History screen.

(3) You can use the < and > buttons to specify the date for which you want to check the history. Alternatively, you can display the Time Setup dialog by touching the **Modify** button and specify the date there.

(4) Enter the time in the Time Setup dialog.

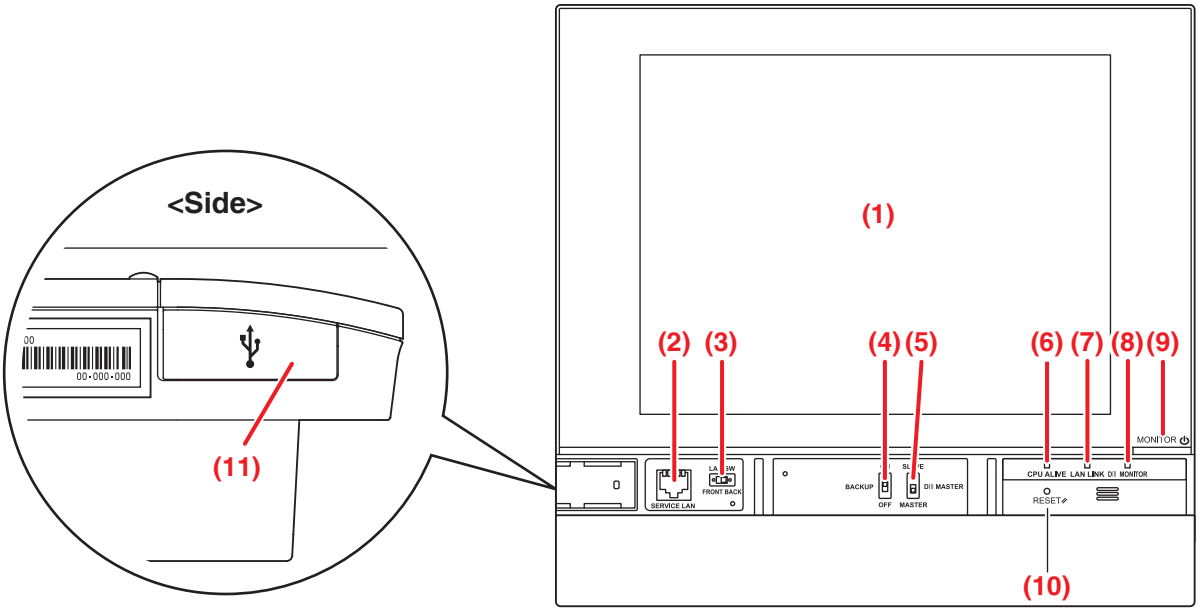
(5) Touch the **OK** button.

(6) Touching the **Show Updates** button displays the list of setup execution dates and time.

3. Names and Functions of Each Part

3-1 Front Panel and Side View

<Front panel>



(1) MONITOR

LCD touch panel for monitoring and performing operations.

(2) SERVICE LAN

Service LAN connection port. Unused.

(3) LAN SW

Switch for toggling between the LAN port on the rear and the SERVICE LAN port on the front.

When set to FRONT, you cannot close the cover.

To close the cover, set it to Back. (Be careful not to touch the switch inadvertently.)

(4) BACKUP

Power ON/OFF switch for settings backup battery. (Be careful not to touch the switch inadvertently.)

(5) DIII MASTER

Switch for setting up the MASTER and SLAVE when there are two or more DIII-NET central control devices such as the intelligent Touch Manager.

(6) CPU ALIVE (Green)

This LED flashes when the CPU is operating normally.

If it is not flashing, an operational error occurred in the CPU. (It takes about 10 seconds to determine the cause of an error.)

On: Software error

Off: Hardware error, power-off

(7) LAN LINK (Green)

This LED indicates whether the LAN connection between the intelligent Touch Manager and the connected hardware is correct. The LED is On when the connection is correct.

(8) DIII MONITOR (Yellow)

This LED flashes when data transmission occurs on the DIII-NET communication line.

(9) MONITOR key/LED (Orange/Green)

Press this switch to turn on/off the monitor. Doing so also causes the LED color to change as follows.

Off: Indicates that the power is off.

On (Orange): Indicates that the monitor is on.

On (Green): Indicates that the monitor is on.

(10) RESET//

Restart switch for restarting the intelligent Touch Manager.

(11) USB socket cover (side)

USB memory port.

NOTE

Do not use the socket for any purpose other than connecting a USB memory.

4. Detailed Screen Description

4-1 Setup Screen Structure

Standard functions

Icon View	Displays the operational status of areas and indoor units.	(See page 37.)
List View	Displays the operational status of areas and indoor units as a list.	(See page 51.)
Menu List Screen	Displays the list of menu items.	(See page 56.)
Schedule	Sets up weekly and annual schedules.	(See page 64.)
Weekly Schedule	Sets up a weekly schedule for each day.	(See page 67.)
Annual Schedule	Sets up schedules for special days, such as extra holidays.	(See page 76.)
Timer Extension	Sets up the off-timer to prevent failure to turn off indoor units.	(See page 117.)
Auto Changeover	Sets up the automatic change between cool and heat modes.	(See page 119.)
Emergency Stop	Sets up the emergency stop at fire alarms.	(See page 151.)
Area	Creates and sets up areas.	(See page 163.)
Mgmt. Pts.	Creates and sets up management points.	(See page 176.)
Passwords	Sets up passwords, such as the administrator password.	(See page 178.)
Maintenance	Places the management points under maintenance.	(See page 180.)
Regional	Changes the date format and unit of temperature to those appropriate for the locale.	(See page 181.)
Time/DST	Sets the current time and the daylight saving time.	(See page 184.)
Screensaver	Sets up the screensaver.	(See page 185.)
Hardware	Sets up the luminance for the screen and volume for the touch sound.	(See page 186.)
Confirmation Dialog	Enables or disables the display of a confirmation dialog at On/Off.	(See page 187.)
Touch Panel Calibration	Corrects the contact points of the touch panel.	(See page 188.)
Backup	Saves iTM data.	(See page 189.)
Version Information	Displays version information for the iTM.	(See page 190.)
History	Function for checking and exporting history, such as that of error occurrences.	(See page 191.)
Setup Export	Settings for exporting the entire setup information.	(See page 197.)
Operation Data Export	Operation data export.	(See page 198.)

See page 109 for the Optimum Start function and page 153 for the Setback function, respectively.

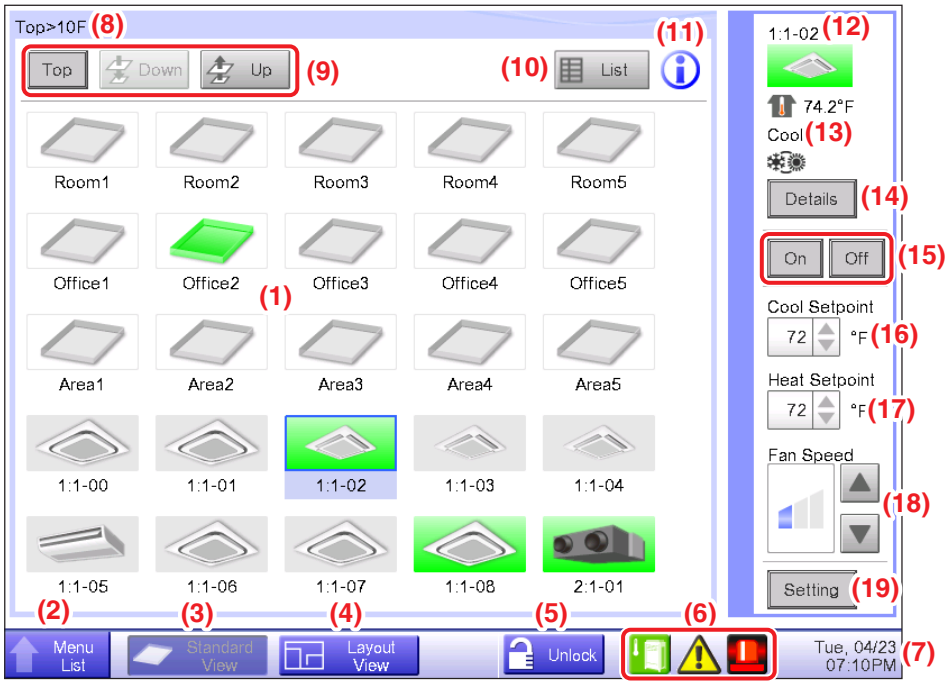
Optional functions

Icon View	Displays the operational status of areas and indoor units.	(See page 37.)
List View	Displays the operational status of areas and indoor units as a list.	(See page 51.)
Layout View	Displays the areas and operational statuses of indoor units on the relevant floor plan.	(See page 54.)
Menu List Screen	Displays the list of menu items.	(See page 56.)
Interlocking Control	Function for starting/stopping management points in conjunction with other equipment.	(See page 200.)
Emergency Stop	Sets up an arbitrary emergency stop program.	(See page 242.)
Network	Sets up the network IP address and the like.	(See page 259.)
Web Access Users	Sets up users of the Web Remote Management.	(See page 262.)
E-mail	Sets up e-mail transmission at error occurrence and the like.	(See page 272.)
Power Limit Control	Function for reducing power consumption.	(See page 246.)

Maker option

Menu List Screen	Displays the list of menu items.	(See page 56.)
Power Proportional Distribution	Function for distributing power to each tenant.	(See page 279.)
Energy Navigator	Function for managing the budget/actual energy consumption.	(See page 282.)

4-2 Standard View (Icon) Screen



(1) Area/Management Point view area

Displays area and management point icons.

(2) Menu List switch button

Switches to the Menu List screen, which consists of Automatic Ctrl., System Settings, Operation Mgmt. and Energy Navigator (optional) tabs.

The button changes to Close while the Menu List screen is being displayed.

(3) Standard View switch button

Switches from the Layout View screen (optional) to the Standard View screen.

(4) Layout View switch button

Switches the screen to the Layout View, which displays icons on a floor plan.

NOTE

Displayed only when the Layout View option (see “4-4 Layout View (Optional) Screen”) is enabled.

(5) Lock/Unlock button

Locks/Unlocks switching to the Menu List screen.

The button is not displayed when the screen lock is disabled.

(6) Group monitoring icon

A Error detection Reports error when any of the following faults is detected.


(Red)

Flashing indicator: System error
Text: System error occurred. Touch this icon to check and restore.


(Yellow)

Flashing indicator: Unit/Limit Error
Text: Error occurred. Touch this icon to check.


(Blue)

Lit indicator: Communication error

B Emergency Stop Reports emergency stop.

Emergency Stop
Text: Emergency stop occurred. Touch this icon to release.

Waiting for Release
Text: Emergency stop occurred. Touch this icon to release.
*A balloon is displayed when the target unit entered into waiting for release status automatically, without the icon being touched even once. The balloon is not displayed if the target unit was put into waiting for release status manually, by touching the icon.

OFF

C Energy Save Displays the Energy Save status.

Enabled
Energy Saving control is enabled and being active.

Suspended
Energy Saving control is suspended.

Under Control
Energy Saving control is disabled.

D Demand Control Displayed when the cut-off level exceeds the start level set for the demand control group.

Executing

(7) Time

Displays the current time.

(8) Area hierarchy indicator

Displays the hierarchical level of the currently displayed area.

(9) Top, Down, and Up buttons

Top button: Displays the area and management points at the Top.

Down button: Moves into the selected area and displays the areas and management points there.

Up button: Moves up one hierarchical level from that of the currently displayed area and displays the areas and management points there.

(10) List switch button

Toggles the Standard View screen between Icon View and List View.

(11) Information button

Displays the legend for an icon or contact information for inquiries regarding the system.

(12) Selected area/management point information indicator

Displays the name, icon, and filter sign of the selected area or management point.

(13) Room Temp/Operation Mode/Changeover Option indicator

Displays the room temperature and settings of the selected management point. Not displayed for areas.

NOTE

- When the selected management point is in error, it displays the error code.
- Since the built-in sensor of the air conditioner is used, the temperature displayed may differ from the actual room temperature.

(14) Details button

Displays the Detailed Setup screen for the selected area or indoor unit.

(15) On/Off button

Starts/Stops the selected area or management point.

(16) Cool Setpoint spin box

Sets up the cooling temperature for indoor units in the selected area, or the selected indoor unit.

(17) Heat Setpoint spin box

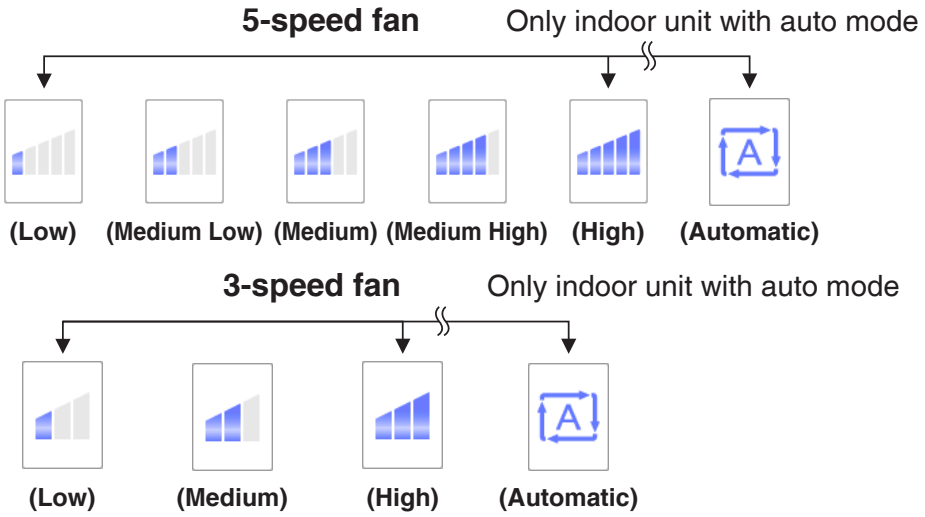
Sets up the heating temperature for indoor units in the selected area, or the selected indoor unit.

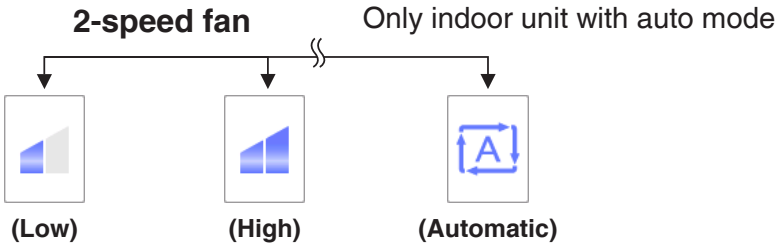
NOTE

In areas containing Hydrobox management points and Indoor management points, if the Heat Setpoint is set up, the Hydrobox Setpoint is also set up.

(18) Fan Speed button

Sets up the fan speed for the indoor unit of the selected area, or the selected indoor unit.





(19) Setting button

Displays the Detailed Setup screen for the selected area or management point.

Detailed Setup Screen

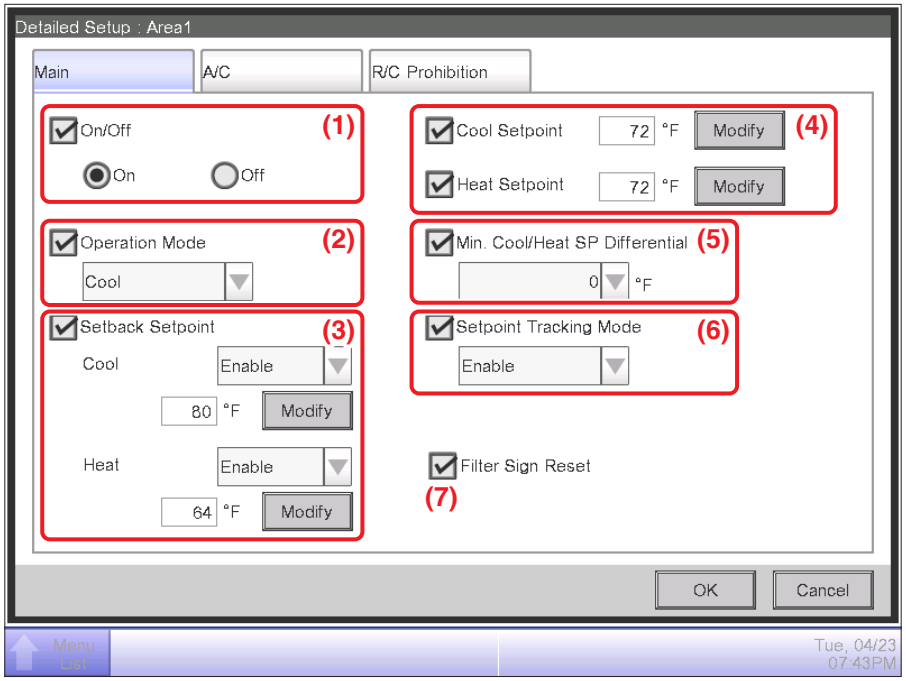
The Detailed Setup screen appears when you touch the **Setting** button **(19)** (see "4-2 Standard View (Icon) Screen" and "4-3 Standard View (List) Screen") on the Standard View screen. Necessary tab is displayed in accordance with the selected management points/areas. Set up the Main, A/C, R/C Prohibition, Ventilator, and Dio, Ao, Mo tabs as required. To change the settings on each tab, select the relevant check boxes. To commit the settings, touch the OK button.

For items for which manual setup is prohibited, you can only reset the filter sign.

- **Main Tab**

  Sets up items common to the indoor unit, Ventilator, Dio, and area.

  Change settings by selecting the relevant check boxes.



(1) On/Off

Starts/Stops the selected area or management point.

On: Start

Off: Stop

(2) Operation Mode

Switches the operation mode.

Set up the desired operation mode by selecting from Fan, Cool, Heat, Dependent, and Dry.

NOTE

- Dependent means either Cool or Heat. This is because the operation mode follows the Cool or Heat operation mode set up in the air conditioner with Changeover option.
- To select the Dry operation mode, you need to complete the initial setup. Some air conditioner models do not provide the Dry function.
- Setting up “Dry” in an indoor unit with Changeover option does not change the operation mode of indoor units without Changeover option that belong to the same Outdoor Unit group and are operating in Cool or Dry mode.

(3) Setback Setpoint setting

Sets up the temperatures at which the iTM starts setback operation.

Cool: Set up the temperatures at which to start setback operation during absence, when the operation mode is set to Cool.

Select Enable or Disable in the drop down menu to enable the setpoint and enter the setback setpoint in the text box.

Heat: Set up the temperatures at which to start setback operation during absence, when the operation mode is set to Heat.

Select Enable or Disable in the drop down menu to enable the setpoint and enter the setback setpoint in the text box.

For details, see “5-6 Setting up the Setback”.

(4) Setpoint setting

Cool Setpoint: Set up the cooling temperature.

Heat Setpoint: Set up the heating temperature.

*If the target is a dedicated cooling or heating unit or Hydrobox, this is labelled as Setpoint, allowing the following operations.

Indoor: You can set up only the corresponding setpoint.

Hydrobox: You can set up the setpoint.

NOTE

In areas containing Hydrobox management points and Indoor management points, if the Heat Setpoint is set up, the Hydrobox Setpoint is also set up.

(5) Min. Cool/Heat SP Differential setting

Min. Cool/Heat SP Differential refers to the setting value that makes the temperature difference between the cooling and heating setpoints into the constant value or more.

Select the check box and enter the differential value in the drop down menu.

When displayed in Fahrenheit: Select from 0, 1, 2, 3, 4, 5, 6, and 7.

The display unit for the temperature varies depending on the System Settings.

For details, see “Appendix 9. Min. Cool/Heat SP Differential”.

(6) Setpoint Tracking Mode setting

Setpoint Tracking Mode refers to the control mode in which the iTM fixes the temperature difference between the cooling and heating setpoints to the Min. Cool/Heat SP Differential value. Selecting Enable allows the iTM to adjust the other setpoint value automatically when you change one of the setpoints so that the temperature difference between the cooling and heating setpoints equals the Min. Cool/Heat SP Differential value.

Select the Setpoint Tracking Mode check box and then select Enable or Disable in the drop down menu.

For details, see “Appendix 10. Setpoint Tracking Mode”.

(7) Filter Sign Reset

Resets the filter sign for the indoor unit and Ventilator.

This check box is displayed only when the filter sign is displayed.

NOTE

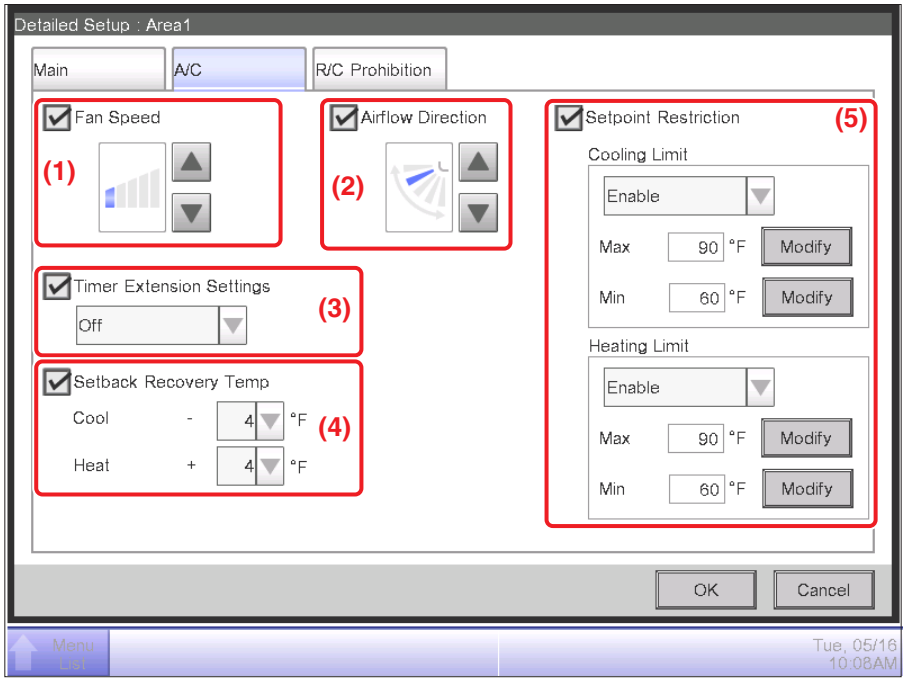
The setting areas **(3)**, **(5)**, **(6)** are not available on iTM in either one of the following cases:

- The BACnet or Lon Interface is connected, and the DIII-NET Engineering setting is set to “Automatic”.
- The iTM Main/Sub controller Settings is set to “Sub”.

- **A/C Tab**

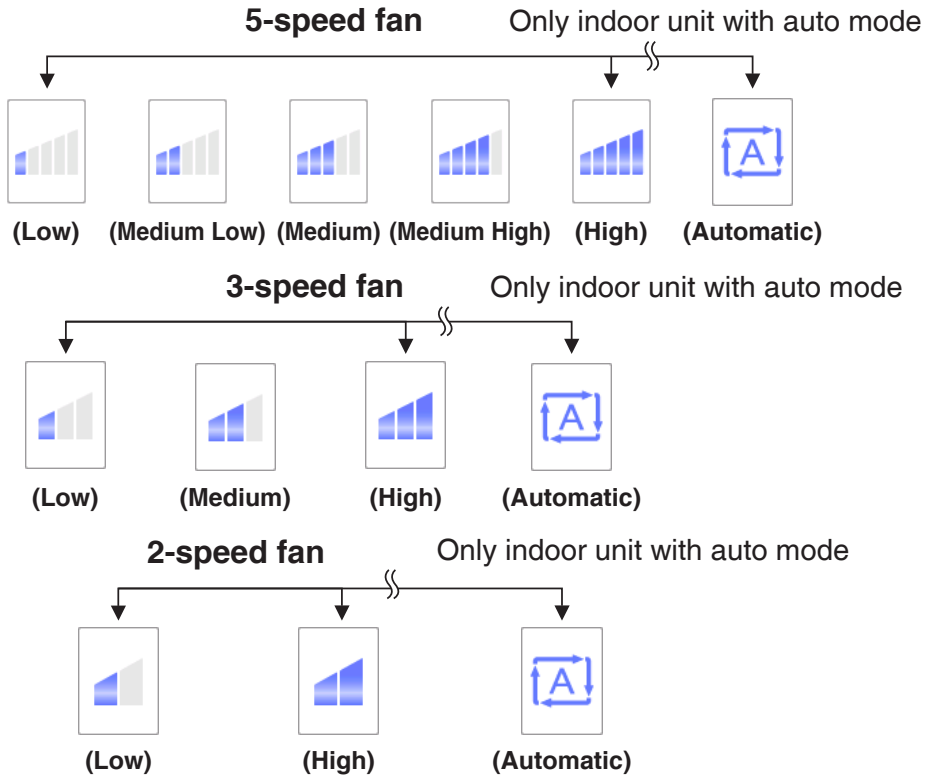
  Sets up the indoor unit.

  Change settings by selecting the relevant check boxes. The range of values and items you can set up will depend on the selected equipment.



(1) Fan Speed

Sets up the fan speed.



(2) Airflow Direction

Sets up the fan direction.

<Airflow direction 0> <Airflow direction 1> <Airflow direction 2> <Airflow direction 3> <Airflow direction 4> <Swing>

(3) Timer Extension Settings

Enables/disables the Timer Extension function.

(4) Setback Recovery Temp setting

Sets up the setback recovery temperature for the indoor unit.

Cool: Set up the setback recovery temperature (for cooling).

Heat: Set up the setback recovery temperature (for heating).

(5) Setpoint Restriction

Use this setting to limit the setpoint range that can be achieved.

Cooling Limit: Sets up the setpoint range for the indoor unit in cooling mode. Enable or disable, and enter the maximum and minimum temperatures.
If Cooling Limit is disabled, maximum and minimum temperatures will not display.

Heating Limit: Sets up the setpoint range for the indoor unit in heating mode. Enable or disable, and enter the maximum and minimum temperatures.
If Heating Limit is disabled, maximum and minimum temperatures will not display.

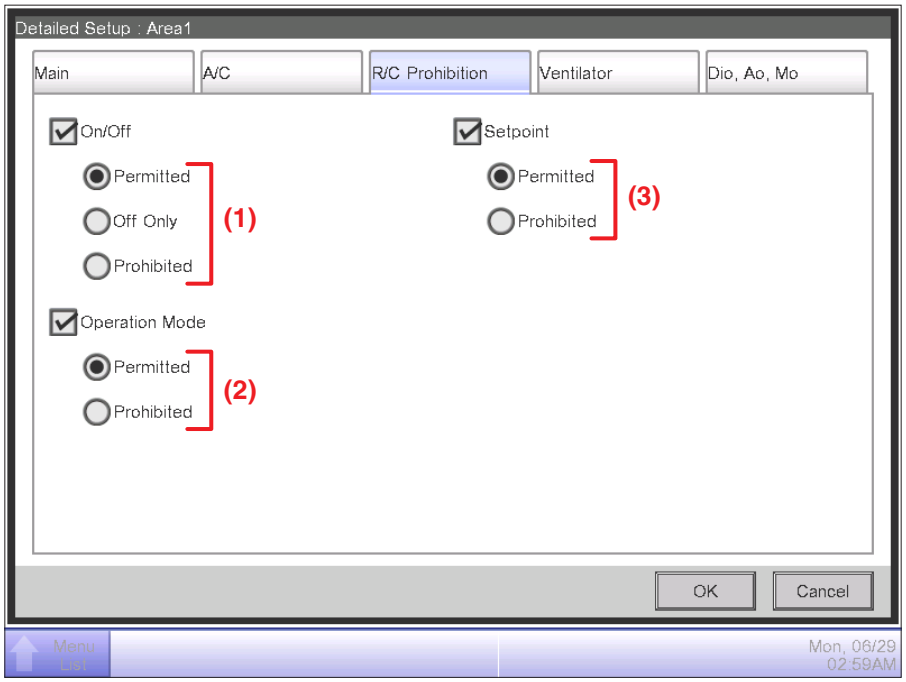
NOTE

- The Setpoint Restriction does not apply to the following items;
  Hydrobox: leaving water setpoint and storage setpoint.
- The setting areas **(4)**, **(5)** are not available on iTM in either one of the following cases:
  * The BACnet or Lon Interface is connected, and the DIII-NET Engineering setting is set to "Automatic".
  * The iTM Main/Sub controller Settings is set to "Sub".

- **R/C Prohibition Tab**

  Enables/disables remote controller of the indoor unit, Ventilator, and area.

  Change settings by selecting the relevant check boxes.



(1) On/Off

Sets up whether On/Off the management point from the remote controller will be enabled or disabled.

Permitted: Enabled.

Off Only: Only stopping is enabled.

Prohibited: Disabled.

NOTE

In the case of the system with Hydrobox, choosing “Stop Only” or “Prohibited” makes the On/Off (Reheat) to operate as “Permitted”.

(2) Operation Mode

Sets up whether changing the operation mode from the remote controller will be enabled or disabled.

Permitted: Enabled.

Prohibited: Disabled.

(3) Setpoint

Sets up whether changing the management points' setpoint from the remote controller will be enabled or disabled.

Permitted: Enabled.

Prohibited: Disabled.

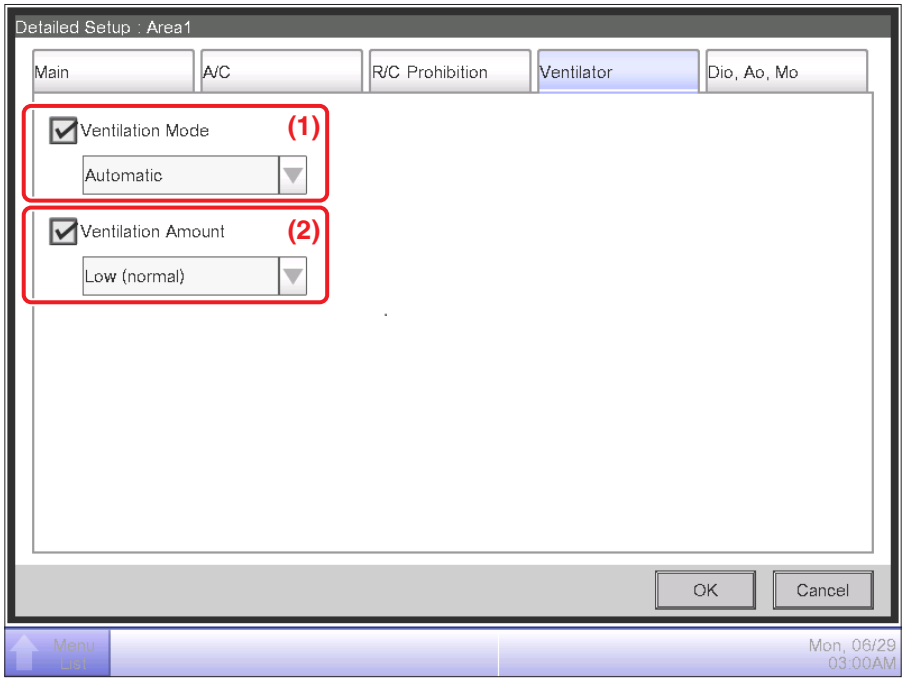
NOTE

In the case of the system with Hydrobox, the storage water setpoint can be changed even when "Prohibited" is selected.

- **Ventilator Tab**

Sets up the Ventilator.

Change settings by selecting the relevant check boxes.



(1) Ventilation Mode

Select and set up a ventilation mode from Automatic, ERVentilation, and Bypass.

NOTE

This setting may not be available depending on the model.

(2) Ventilation Amount

Select and set up a ventilation amount from Auto (normal), Low (normal), High (normal), Auto (fresh up), Low (fresh up), and High (fresh up).

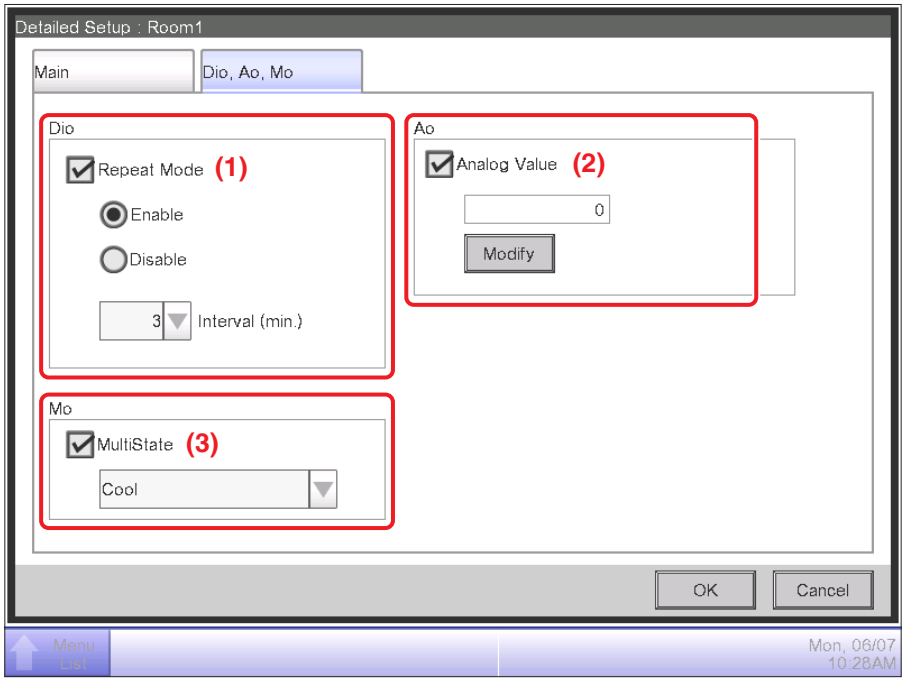
NOTE

This setting may not be available depending on the model.

- **Dio, Ao, Mo Tab**

  Sets up the Dio, Ao and Mo.

  Change settings by selecting the relevant check boxes.



(1) Dio

Enable/disable Repeat Mode for Dio, and select and set up a repetition interval in the 1 to 10-minute range, in increments of 1 minute.

When the Repeat Mode is enabled, a start/stop attempt will be repeated again at the specified repetition interval.

(2) Ao

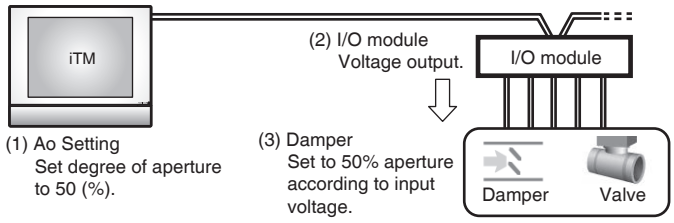
Ao refers to analog signal output.

This function enables the signal output equipment (I/O module) connected to the iTM to output a current/voltage corresponding to the adjustment value from external equipment.

(It is used for the adjustment of building equipment, such as degree of aperture of a damper/valve.)

The range, incremental width, and unit of the analog values are set on the screen during trial. (The unit setting may not be available.)

Ao control image (Example: Changing the degree of damper aperture)
(1) On the iTM, set the degree of aperture (analog value).
(2) A voltage corresponding to the analog value is output from the I/O module.
(3) The damper aperture is set according to the input voltage.



(3) Mo

Select and set a MultiState value for Mo.

The MultiState value set on the screen is set up during the trial.

NOTE

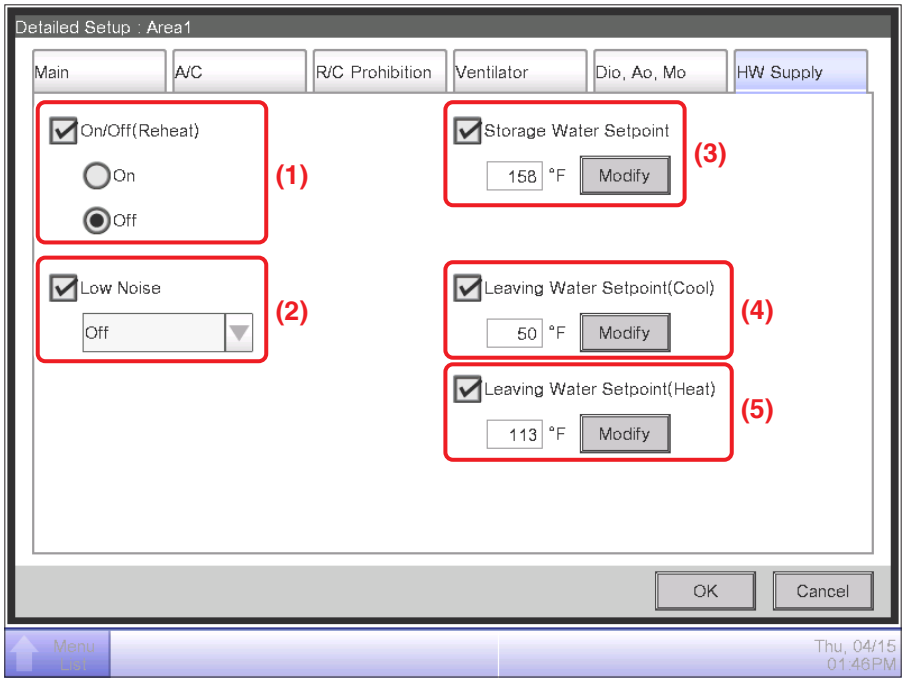
You cannot set MultiState in the area.

- **HW Supply Tab**

Sets up the hot water supply.

Change settings by selecting the relevant check boxes.

The range of values that can be set up varies depending on the selected equipment.



(1) On/Off (Reheat)

Sets up whether starting/stopping.

Start : Reheat start

Stop : Reheat stop

(2) Low Noise

Enables or disables the Low Noise function.

(3) Storage Water Setpoint

Sets up the storage water setpoint.

NOTE

When displayed in Fahrenheit, Some temperatures cannot be set.

Setting Setpoint	Actual Setpoint	Setting Setpoint	Actual Setpoint	Setting Setpoint	Actual Setpoint	Setting Setpoint	Actual Setpoint
113°F	113°F	127°F	127°F	141°F	142°F	155°F	154°F
114°F	115°F	128°F	127°F	142°F	142°F	156°F	156°F
115°F	115°F	129°F	129°F	143°F	144°F	157°F	156°F
116°F	117°F	130°F	129°F	144°F	144°F	158°F	158°F
117°F	117°F	131°F	131°F	145°F	145°F	159°F	160°F
118°F	118°F	132°F	133°F	146°F	145°F	160°F	160°F
119°F	118°F	133°F	133°F	147°F	147°F	161°F	162°F
120°F	120°F	134°F	135°F	148°F	147°F	162°F	162°F
121°F	120°F	135°F	135°F	149°F	149°F	163°F	163°F
122°F	122°F	136°F	136°F	150°F	151°F	164°F	163°F
123°F	124°F	137°F	136°F	151°F	151°F	165°F	165°F
124°F	124°F	138°F	138°F	152°F	153°F	166°F	165°F
125°F	126°F	139°F	138°F	153°F	153°F	167°F	167°F
126°F	126°F	140°F	140°F	154°F	154°F		

(4) Leaving Water Setpoint (Cool)

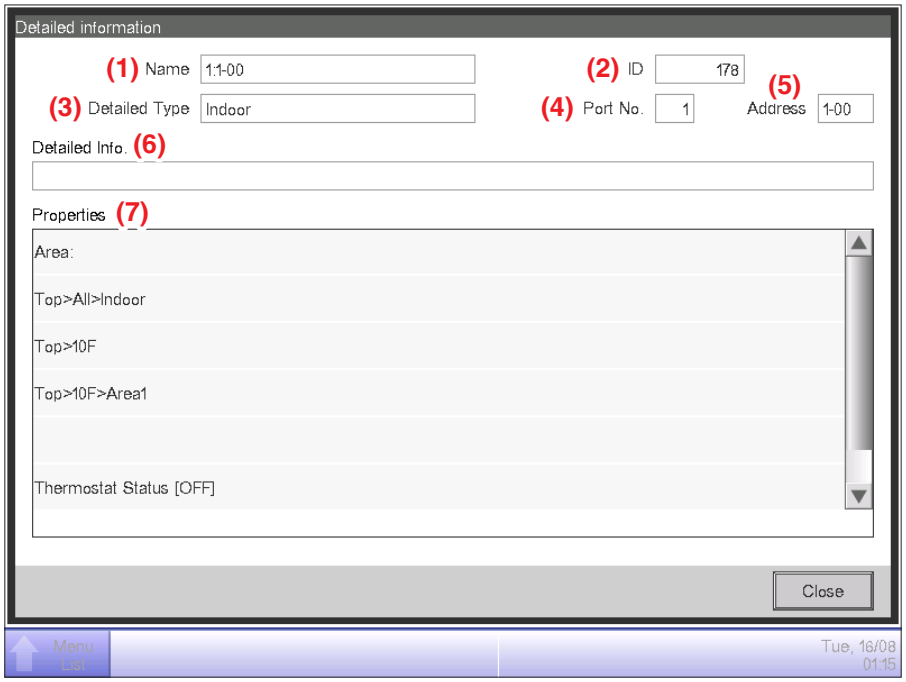
Sets up the leaving water setpoint in cooling.

(5) Leaving Water Setpoint (Heat)

Sets up the leaving water setpoint in heating.

Detailed Information Screen

The Detailed Information screen appears when you touch the **Details** button **(14)** (see “4-2 Standard View (Icon) Screen” and “4-3 Standard View (List) Screen”) on the Standard View screen.



(1) Name field

Displays the name of the area or management point.

(2) ID field

Displays the ID of the area or management point.

(3) Detailed Type field

Displays the type of the area or management point.

(4) Port No. field

Displays the port number to which the management point is connected.

NOTE

Not displayed for areas.

(5) Address field

Displays the address of the management point.

NOTE

Not displayed for areas.

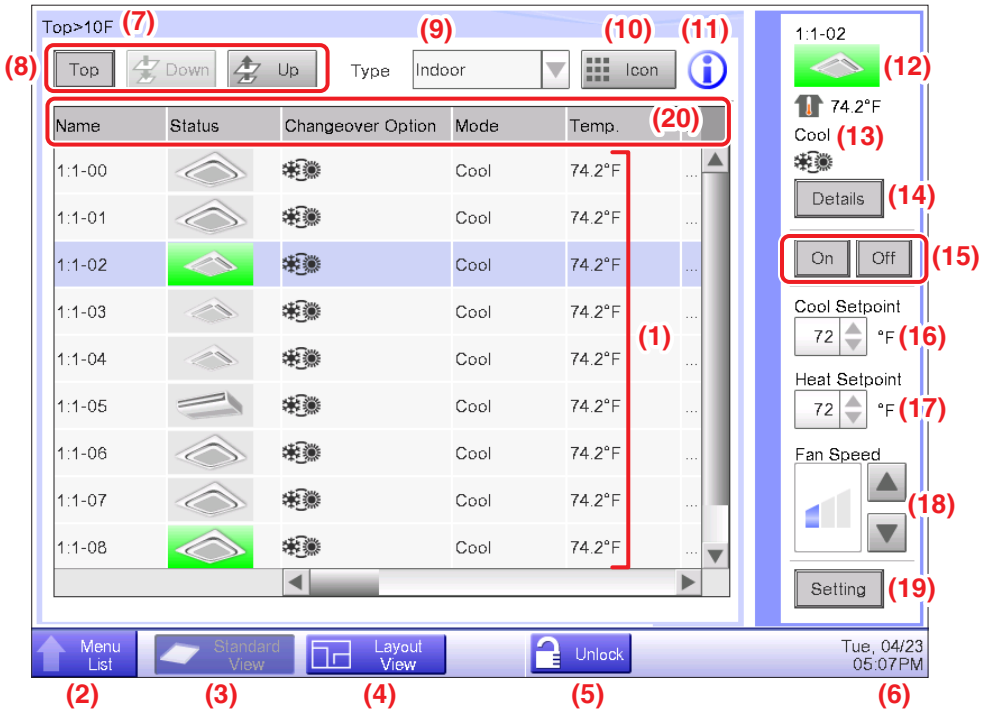
(6) Detailed Info. field

Displays detailed information of the area or management point.

(7) Properties field

Displays information such as attributes, status, and setting details of the area or management point.

4-3 Standard View (List) Screen



(1) Area/Management Point view

Displays information on the areas and management points of the hierarchical level displayed in the area hierarchy indicator.

(2) Menu List switch button

Switches to the Menu List screen, which consists of Automatic Ctrl., System Settings, Operation Mgmt. and Energy Navigator (optional) tabs.

(3) Standard View switch button

Switches from the Layout View screen (optional) to the Standard View screen.

(4) Layout View switch button

Switches the screen to the Layout View screen (optional), which displays indoor units in a floor plan.

NOTE

Displayed only when the Layout View option (see “4-4 Layout View (Optional) Screen”) is enabled.

(5) Lock/Unlock button

Locks/Unlocks the switching of the screen from the Menu List screen. The button is grayed out when the screen lock is disabled.

(6) Time

Displays the current time.

(7) Area hierarchy indicator

Displays the hierarchical level of the currently displayed area.

(8) Top, Down, and Up buttons

Top button: Displays the area and management points at the Top.

Down button: Moves into the selected area and displays the areas and management points there.

Up button: Moves up one hierarchical level from that of the currently displayed area and displays the areas and management points there.

(9) Type drop down menu

Selects the type of the areas and management points to display.

Types available for selection are: All, Indoor, Ventilator, Outdoor, Dio, Analog, and Pulse.

The displayed items vary depending on the management point type you selected.

(10) Icon switch button

Switches the screen to a view in which settings of areas and management points are displayed using icons.

(11) Information button

Displays the legend for an icon or contact information for inquiries regarding the system.

(12) Selected area/management point status

Displays the name, icon, and filter sign of the selected area or management point.

(13) Room Temp/Operation Mode/Changeover Option indicator

Displays the room temperature and settings of the selected indoor unit. Not displayed for areas.

NOTE

- When the selected indoor unit is in error, it displays only the error code.
- Since the built-in sensor of the air conditioner is used, the temperature displayed may differ from the actual room temperature.

(14) Details button

Displays the Detailed Information screen for the selected area or management point.

(15) On/Off button

Starts/Stops the selected area or management point.

(16) Cool Setpoint spin box

Sets up the cooling temperature for indoor units in the selected area, or the selected indoor unit.

(17) Heat Setpoint spin box

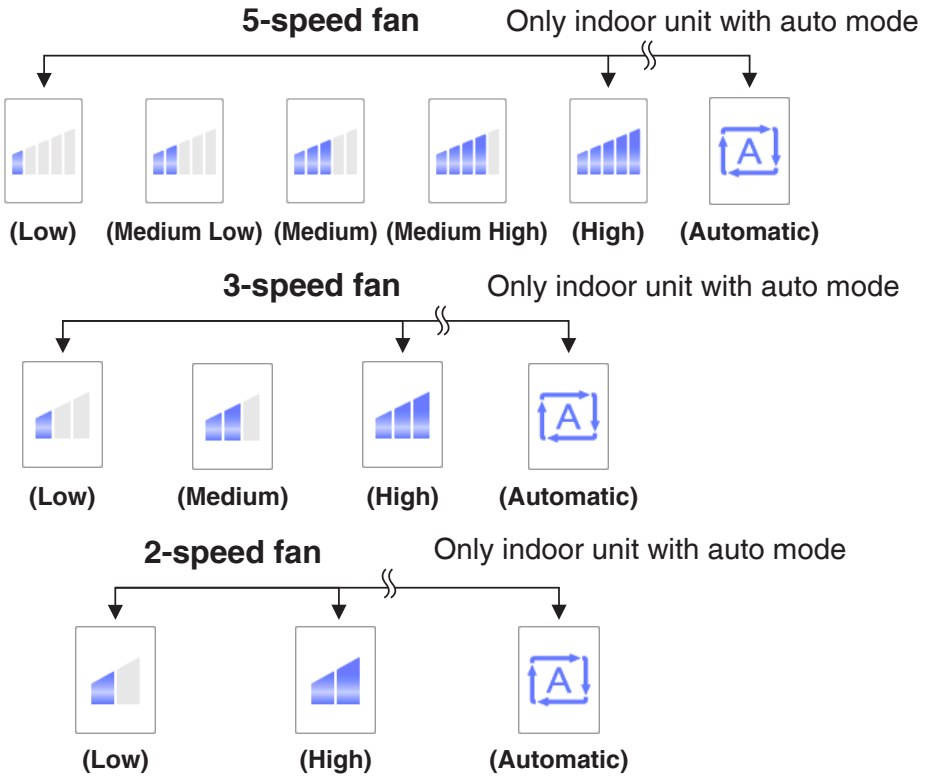
Sets up the heating temperature for indoor units in the selected area, or the selected indoor unit.

NOTE

In areas containing Hydrobox management points and Indoor management points, if the Heat Setpoint is set up, the Hydrobox Setpoint is also set up.

(18) Fan Speed button

Sets up the fan speed for the indoor unit of the selected area, or the selected indoor unit.



(19) Setting button

Displays the Detailed Setup screen for the selected area or management point.

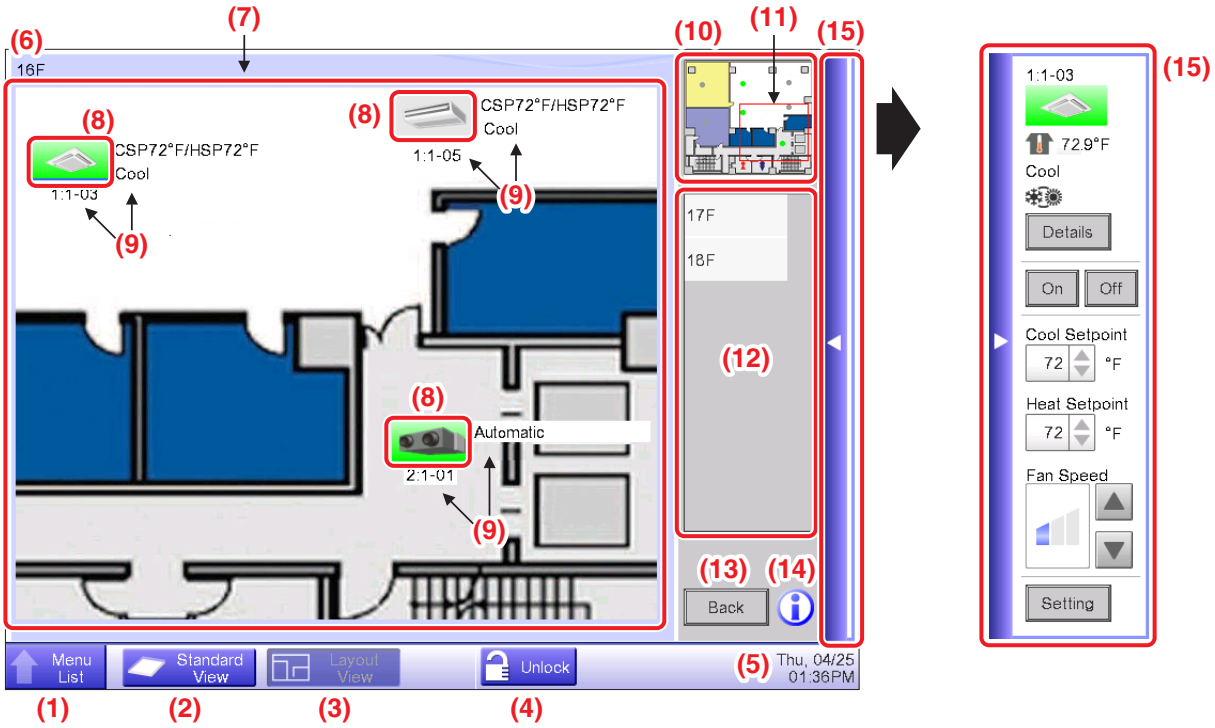
(20) Header

Each time you touch an item header, the displayed entries are sorted according to the contents of that item.

4-4 Layout View (Optional) Screen

The Layout View screen is displayed only when the Layout option is enabled.

The Layout View screen appears when you touch the **Layout View** switch button on the Standard View screen (see “4-2 Standard View (Icon) Screen” and “4-3 Standard View (List) Screen”).



(1) Menu List switch button

Switches to the Menu List screen, which consists of Automatic Ctrl., System Settings, Operation Mgmt. and Energy Navigator (maker option) tabs.

(2) Standard View switch button

Switches from the Layout View to the Standard View screen

(3) Layout View switch button

Displayed when the button is pressed while the Layout View is being displayed.

(4) Lock/Unlock button

Locks/Unlocks the screen. Not displayed when screen lock is not enabled.

(5) Time

Displays the current time.

(6) Title

Displays the name of the displayed screen.

(7) Background

Displays the background image set up to the screen.

(8) Icon (Area, Management Point)

Displays area and management point icons.

(9) Information

Displays auxiliary information of the area or management point.

(10) View panel

Displays the entire background image.

(11) Scope

Indicates the portion of the background image that is displayed as background on the screen. To move, touch the scope and drag.

(12) Layout selection list

The title selected in this list is the displayed layout.

(13) Back button

Displays the previous screen again.

(14) Information button

Displays the legend for an icon or contact information for inquiries regarding the system.

(15) Operation Window bar

Touching the bar displays the Operation Window. To close, touch the bar again.

The operating procedure of the Operation Window is the same as that of the Standard View screen. See the descriptions for the Standard View screen (“4-2 Standard View (Icon) Screen” and “4-3 Standard View (List) Screen”).

4-5 Menu List Screen

The Menu List screen appears when you touch the **Menu List** button on the Standard View screen (see “4-2 Standard View (Icon) Screen” and “4-3 Standard View (List) Screen”) or the **Menu List** button on the Layout View screen (see “4-4 Layout View (Optional) Screen”).

It consists of the following tabs: Automatic Ctrl., System Settings, Operation Mgmt., and Energy Navigator (only when the corresponding maker option is enabled).

Automatic Ctrl. Tab

NOTE

Some optional functions require local settings that are not available with the default intelligent Touch Manager settings. The buttons used with these functions are displayed only when the corresponding functions are enabled.

(1) Schedule

Allows you to set up weekly as well as annual schedules including special holidays by setting up the time to start/stop air conditioners by the day of the week, for example.

(2) Interlocking Control (Option)

This function starts/stops management points registered with the iTM in an interlocked manner, for example.

(3) Emergency Stop (Option)

This function immediately stops registered management points in emergencies, such as, fire.

(4) Auto Changeover

This function automatically toggles between cooling and heating.

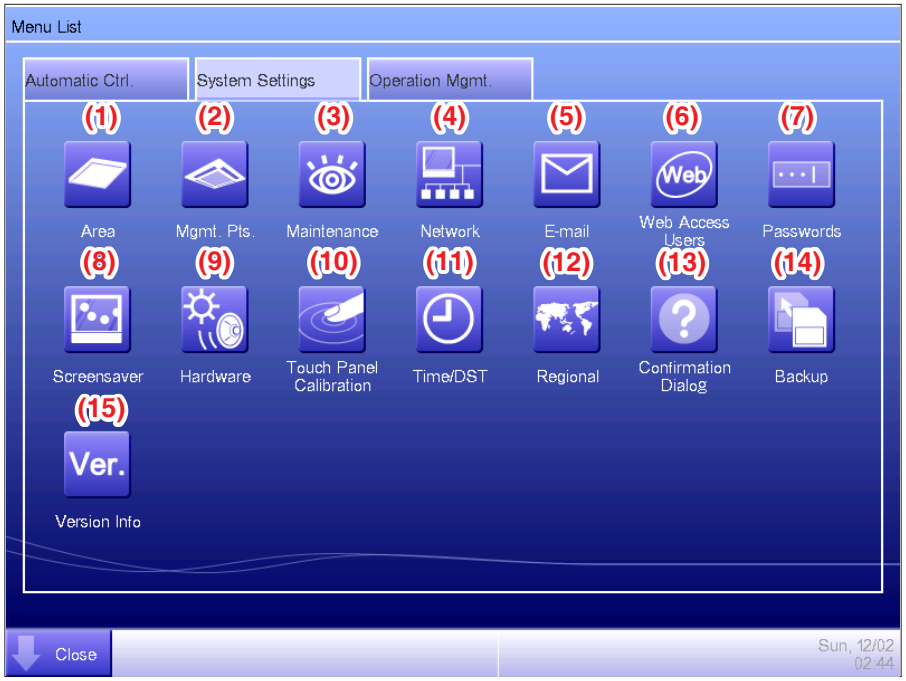
(5) Timer Extension

This function sets up the time to stop the indoor unit and prevent the failure to turn it off.

(6) Power Limit Control (Option)

This function limits power consumption.

System Settings Tab



NOTE

Some optional functions require local settings that are not available with the default intelligent Touch Manager settings. The buttons used with these functions are displayed only when the corresponding functions are enabled.

(1) Area

Creates areas and registers management points to the areas, as well as sets up various area settings. You can set up to 10 hierarchical levels.

(2) Mgmt. Pts.

Changes the name, detailed information, and icon of management points.

(3) Maintenance

Sets up a management point maintenance.

(4) Network

Sets up the network IP addresses as well as Web Servers.

(5) E-mail (Option)

Sets up mail addresses to which e-mails will be sent in the event of an error, as well as mail servers.

(6) Web Access Users (Option)

Sets up Web users for Web Remote Management.

(7) Passwords

Sets up the password for managers as well as that for unlocking screens.

(8) Screensaver

Changes the screensaver as well as cancels the screensaver in the event of an error.

(9) Hardware

Sets up the brightness for the screen as well as the volume for the touch panel tone and buzzer.

(10) Touch Panel Calibration

Corrects the contact points of the touch panel.

(11) Time/DST

Sets up the current time and the daylight saving time.

(12) Regional

Sets up the date and time format, unit of temperature, icon color, etc.

(13) Confirmation Dialog

Enables or disables the display of a confirmation dialog box at start/stop.

(14) Backup

Saves the backup data stored in the iTM unit to a USB memory.

(15) Version Info

Displays the iTM version information and details of optional software.

Operation Mgmt. Tab

NOTE

To use the Power Proportional Distribution function, the corresponding optional software is required separately.

(1) History

Displays history such as that of errors, status changes, control information, etc. You can also save history data to the data folder on a USB memory.

(2) PPD (Maker Option)

This function calculates and displays the proportional distribution to each air conditioner of the total amount of power used by air conditioners, obtained from measurement.

(3) Setup Export

This function saves setting information such as schedule control and interlocking control to a USB memory as CSV format, in one data file.

(4) Operation Data Export

This function allows you to output air conditioner and equipment operation data to a CSV file on the Web or a USB memory.

Energy Navigator Tab

NOTE

To use this function, the corresponding optional software is required separately.

(1) E budget/actual Mgmt.

This function displays the state of the actual consumption over the planned energy consumption per year/month on a graph and the like. You can also compare this year's actual consumption with that of last year's.

(2) Equipment op. Mgmt.

This function shows equipment operating out of the planned hours or, air conditioners operating at a temperature different from the setpoint based on the operation plan.

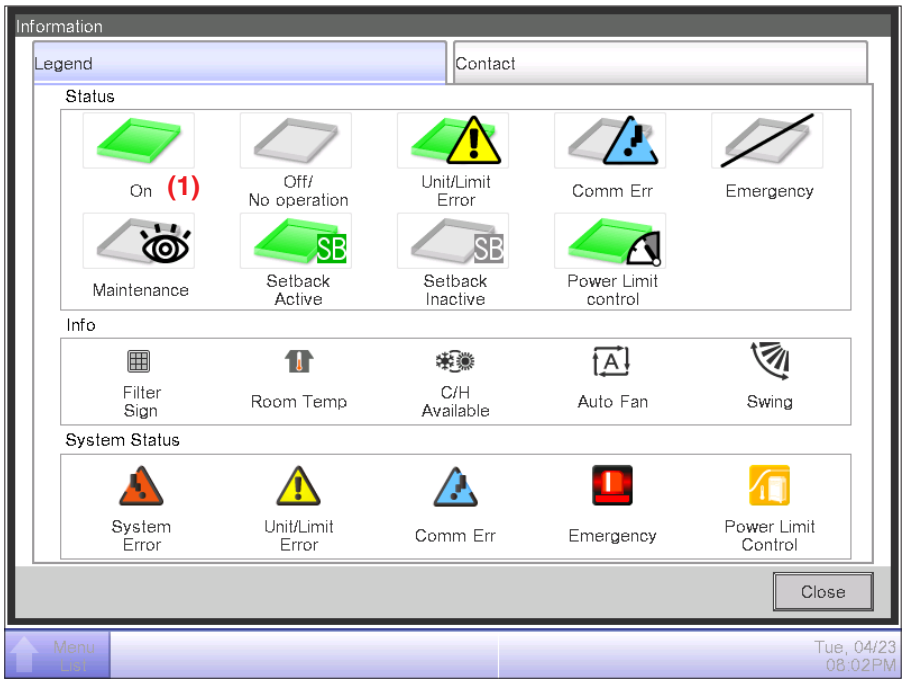
(3) Data output

This function saves measured data to the connected USB memory.

4-6 Information Screen

The Information screen appears when you touch the **Information** button **(11)** on the Standard View screen (see “4-2 Standard View (Icon) Screen” and “4-3 Standard View (List) Screen”) or the **Information** button **(14)** on the Layout View screen (see “4-4 Layout View (Optional) Screen”). The Information screen consists of the Legend and Contact tabs.

Legend Tab



(1) The icon color is displayed in the color set up in the System Settings.

• Icon View in Each Status

	On (*1)	Setback Active	Setback Inactive	Off/No operation
Area				
	When there is at least one management point in the area that is start (*1)	When there is at least one management point in the area where Setback is active	When there is at least one management point in the area where Setback is inactive	• When all management points in the area are Off/No operation • When there are no management points in the area
Manage-ment point				

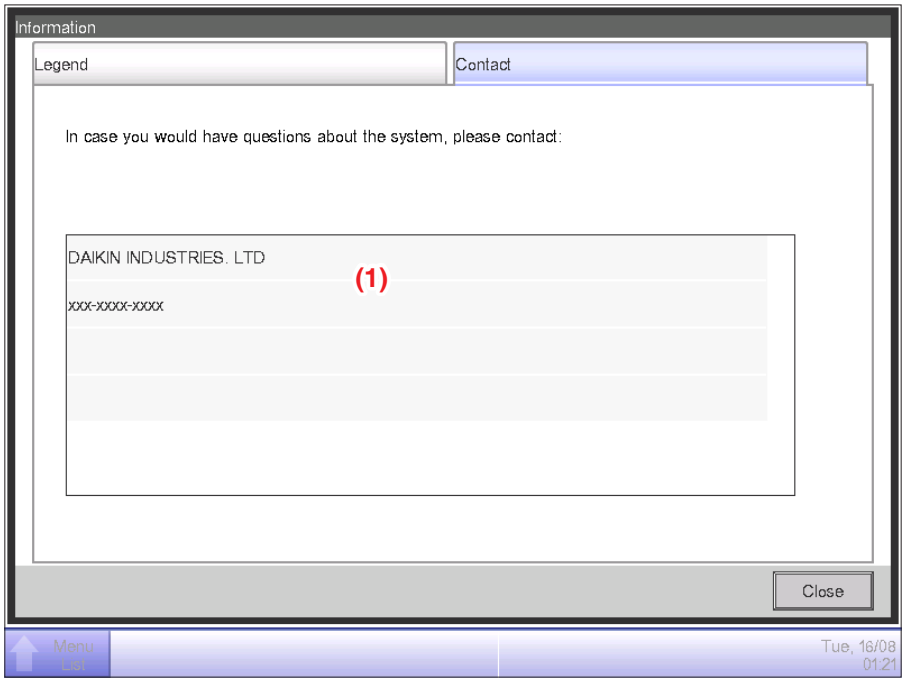
	Unit Limit Error (*2)	Comm Err	Emergency	Maintenance	Power Limit control (Demand control)
Area					
	When there is at least one management point in error in the area (Error sign is displayed over start, Off/No operation icon)	When there is at least one management point with communication error in the area	When there is at least one management point in emergency stop in the area	When all management points are in maintenance in the area	When there is at least one management point for which the demand control is being performed. (the Demand control indicator appears on the On and Off/No operation icon.)
Manage-ment point					

(*1) The icon color is displayed in the color configured in the System Settings.
(*2) For outdoor units, no Equipment error icon is displayed even if an error is detected.

NOTE

- Outdoor unit icon
  The operation status does not change even if an indoor unit in the same group becomes “On”. (The icon remains gray.)
- Priority order of management point icons
  When two or more statuses overlap, that with the highest priority is displayed with an icon.
  “On/Off/Setback Active/Setback Inactive/No operation” < “Demand control” < “Unit/Limit Error” < “Comm Err” < “Maintenance” < “Emergency”
- Priority order of area icons
  When the area includes two or more management points with different statuses, that with the highest priority is displayed with an icon.
  “Maintenance” < “Off/No operation” < “Setback Inactive” < “Setback Active” < “On” < “Demand control” < “Comm Err” < “Unit/Limit Error” < “Emergency”

Contact Tab



(1) Consult your authorized dealer to change the information provided on the Contact screen.

5. Set up the Automatic Control

5-1 Set up a Schedule

Outline

The iTM uses the Schedule function to set up weekly and annual scheduled events by Management point(s) or Area(s) to operate automatically at specified times.

The Schedule function provides four Weekly Patterns:

- 7 Days
- Weekday + Saturday + Sunday
- Weekday + Weekend
- Everyday

The following tables describe which control functions are available for specific Management point and Area.

Target (management point type)		On/Off	Setback Setpoint (for cooling/heating)	Operation Mode	Optimum Start
	Target management point				
Indoor unit	Indoor	✓	✓	✓	✓
	Hydrobox	✓	✓	✓	N/A
Outdoor unit	Outdoor	N/A	N/A	N/A	N/A
Ventilator	Ventilator	✓	N/A	N/A	N/A
Dio	D3Dio, External Dio, BACnet Dio*	✓	N/A	N/A	N/A
Analog (Ao)	External Ao, BACnet Ao*	N/A	N/A	N/A	N/A
MultiState (Mo)	BACnet Mo*	N/A	N/A	N/A	N/A
Area	All	✓	✓	✓	✓

Target (management point type)		Fan	Setpoint	Setpoint (for cooling/ heating)	Setpoint Shift	Setpoint Shift (for cooling/ heating)	Leaving Water Setpoint (for cooling/ heating)	Ventilation Mode	Ventilation Amount
	Target management point								
Indoor unit	Indoor	✓	N/A	✓	N/A	✓	N/A	N/A	N/A
	Hydrobox	N/A	✓	N/A	✓	N/A	✓	N/A	N/A
Outdoor unit	Outdoor	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ventilator	Ventilator	N/A	N/A	N/A	N/A	N/A	N/A	✓	✓
Dio	D3Dio, External Dio, BACnet Dio*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Analog (Ao)	External Ao, BACnet Ao*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MultiState (Mo)	BACnet Mo*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Area	All	✓	N/A	✓	N/A	✓	✓	✓	✓

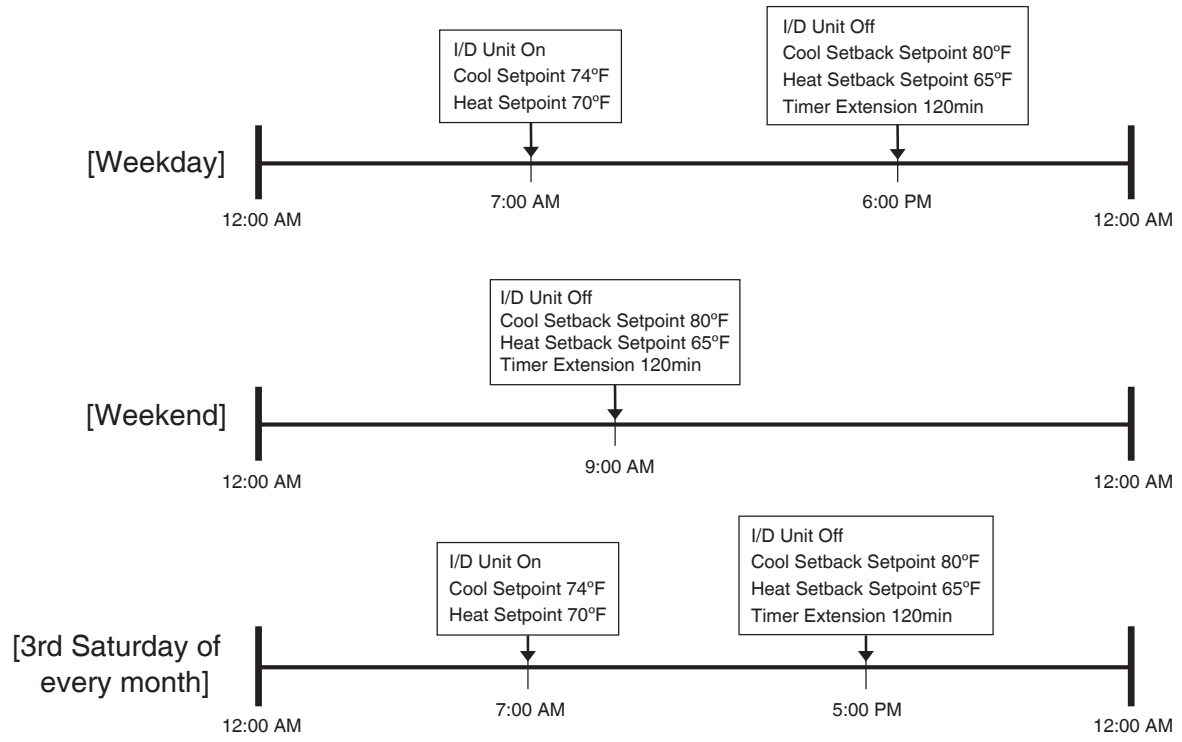
Target (management point type)		Remote Controller Prohibited			Timer Extension	Analog Value	Low Noise	MultiState Value	Low Noise (Outdoor)	Capacity value
	Target management point	On/Off	Setpoint	Operation Mode						
Indoor unit	Indoor	✓	✓	✓	✓	N/A	N/A	N/A	N/A	N/A
	Hydrobox	✓	✓	✓	✓	N/A	✓	N/A	N/A	N/A
Outdoor unit	Outdoor	N/A	N/A	N/A	N/A	N/A	N/A	N/A	✓	✓
Ventilator	Ventilator	✓	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dio	D3Dio, External Dio, BACnet Dio*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Analog (Ao)	External Ao, BACnet Ao*	N/A	N/A	N/A	N/A	✓	N/A	N/A	N/A	N/A
MultiState (Mo)	BACnet Mo*	N/A	N/A	N/A	N/A	N/A	N/A	✓	N/A	N/A
Area	All	✓	✓	✓	✓	✓	✓	N/A	✓	✓

* BACnet Dio, BACnet Ao and BACnet Mo are optional.

Set up a schedule program

The following describes how to create and set up a schedule program based on the example below.

Program Name	Office Schedule
Target	Office A (Area has indoor units only)
Weekly Pattern	Weekday + Weekend
Weekday	7:00 AM I/D Unit On / Cool Setpoint 74°F / Heat Setpoint 70°F 6:00 PM I/D Unit Off Cool Setback Setpoint 80°F / Heat Setback setpoint 65°F Timer Extension 120min (*default Timer Extension value is 120min. See “5-3 Setting up the Timer Extension”.)
Weekend	9:00 AM I/D Unit Off Cool Setback Setpoint 80°F / Heat Setback Setpoint 65°F Timer Extension 120min
3rd Saturday of every month	Work Day 7:00 AM I/D Unit On / Cool Setpoint 74°F / Heat Setpoint 70°F 5:00 PM I/D Unit Off Cool Setback Setpoint 80°F / Heat Setback Setpoint 65°F Timer Extension 120min



[Create the Weekly Schedule]

1. Set up the Program Name and Weekly Pattern

[Create the schedule for Weekday]

2. Set up the schedule time

3. Set up the target

4. Set up the control details for weekdays
   (I/D On, Cool Setpoint, Heat Setpoint)

5. Set up the control details for weekdays 2
   (I/D Off , Setback Control, Timer Extension)

[Create the schedule for weekend]

6. Set up the control details
   (I/D Off , Setback Control, Timer Extension)

[Create the schedule for the Special Day]

7. Setting up the special day name

8. Setting the On/Off time and control details
   (I/D On, Cool Setpoint, Heat Setpoint)

9. Setting up the special day in the calendar

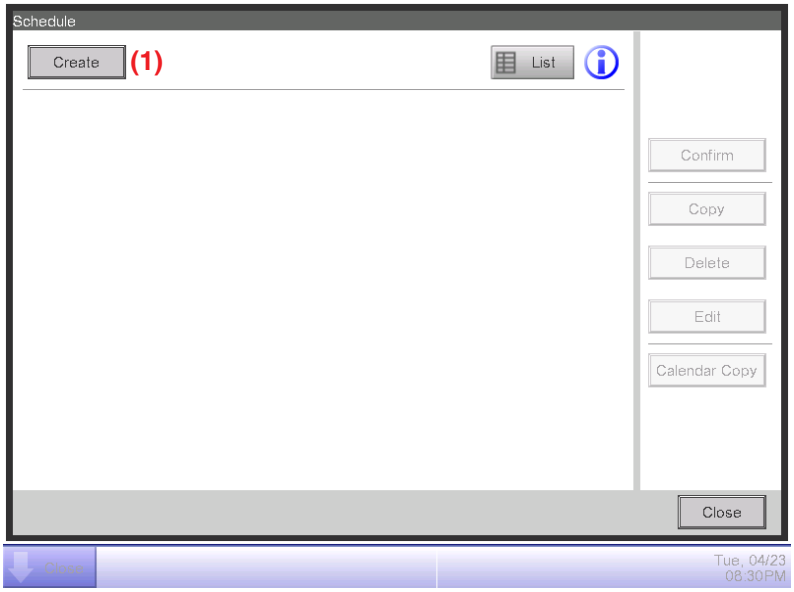
[Start Using the Schedule Program]

10. Enable the schedule program

- **Create the Weekly Schedule**

Touch the Schedule button on the Auto Ctrl tab of the Menu List screen.

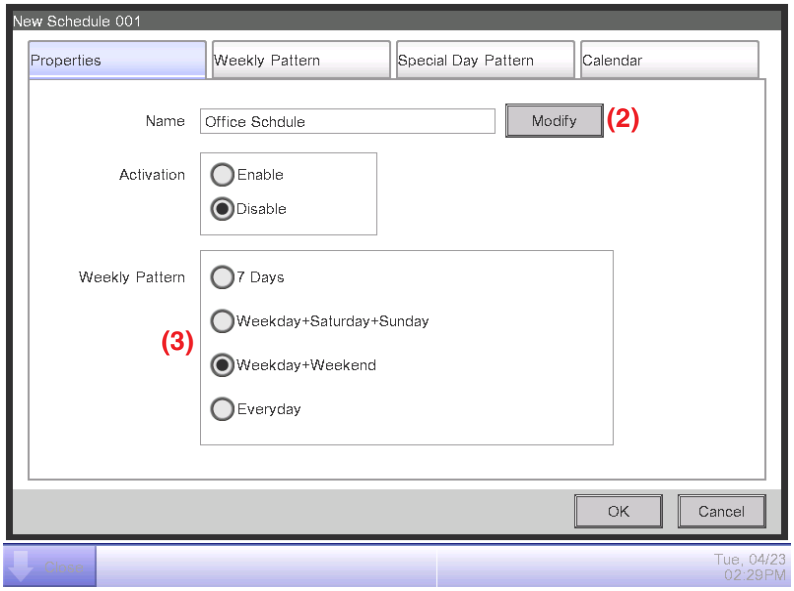
The Schedule screen appears (see “4-5 Menu List Screen: Automatic Ctrl. Tab”).



1. Set up the Program Name and Weekly Pattern

Touch the **Create** button **(1)**. The Program Edit screen appears.

The Program Edit screen consists of 4 tabs. Change these tab as necessary to set up the Weekly Schedule.



On the Properties tab, touch the **Modify** button **(2)** and, in the Input dialog that appears, set up the program name.

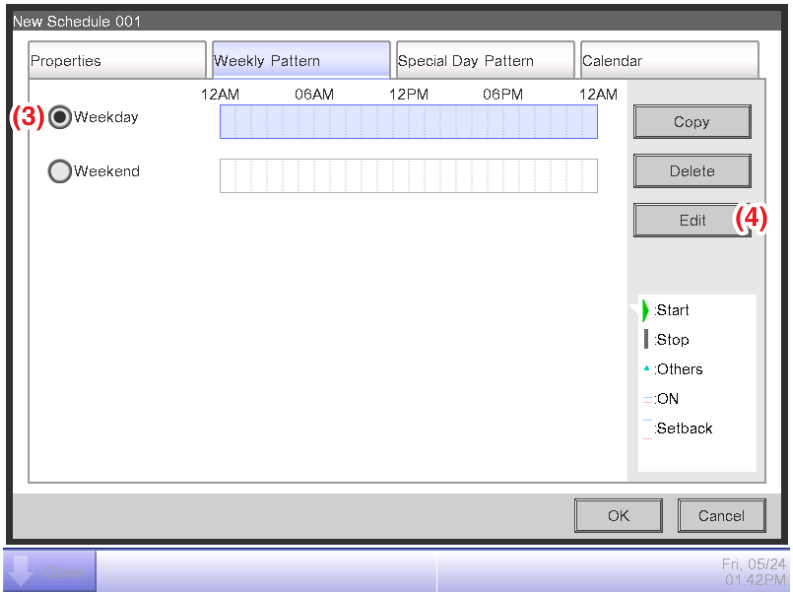
Enter “**Office Schedule**”.

Under Weekly Pattern **(3)**, select the **Weekday+Weekend** radio button and then touch the Weekly Pattern tab.

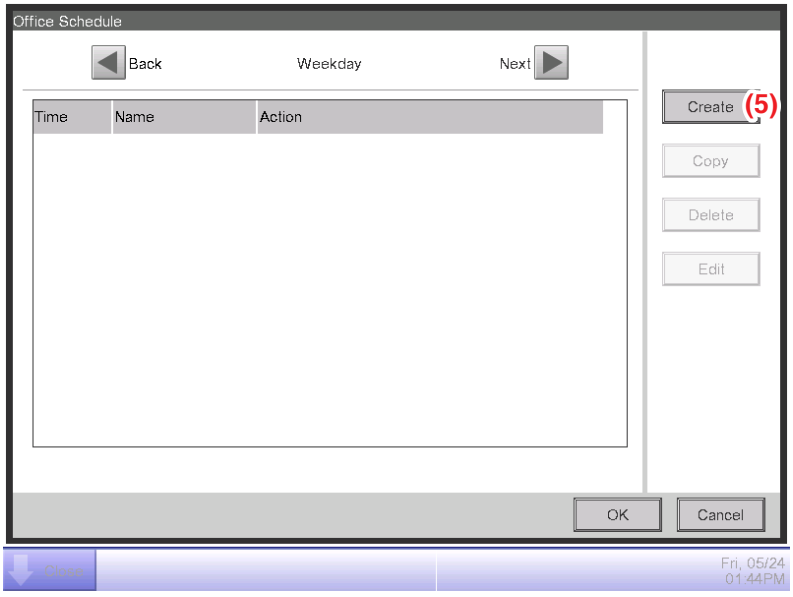
[Create the schedule for Weekday]

2. Set up the schedule time

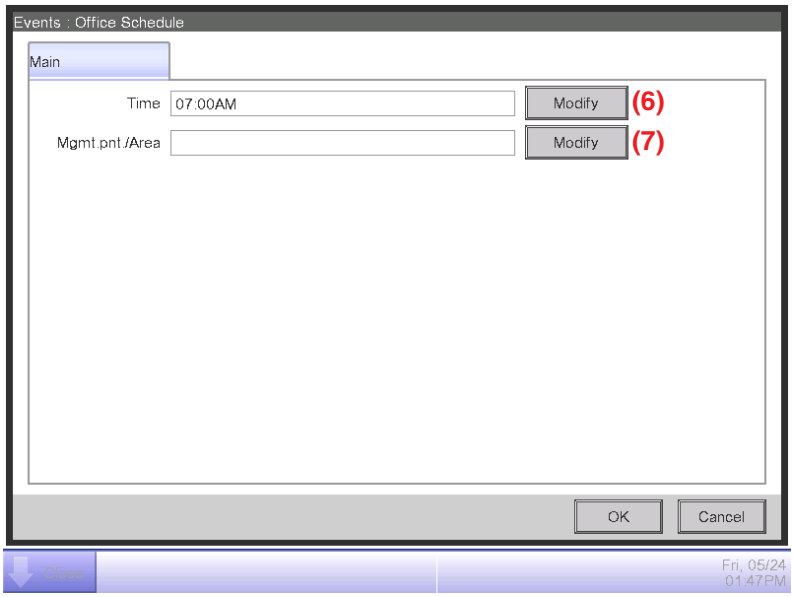
On the Weekly Pattern tab **(3)**, select the Weekday to set the **Weekday** radio button.



Touch the **Edit** button **(4)**. The Event list screen appears.



Touch the **Create** button **(5)**. The Events screen appears.

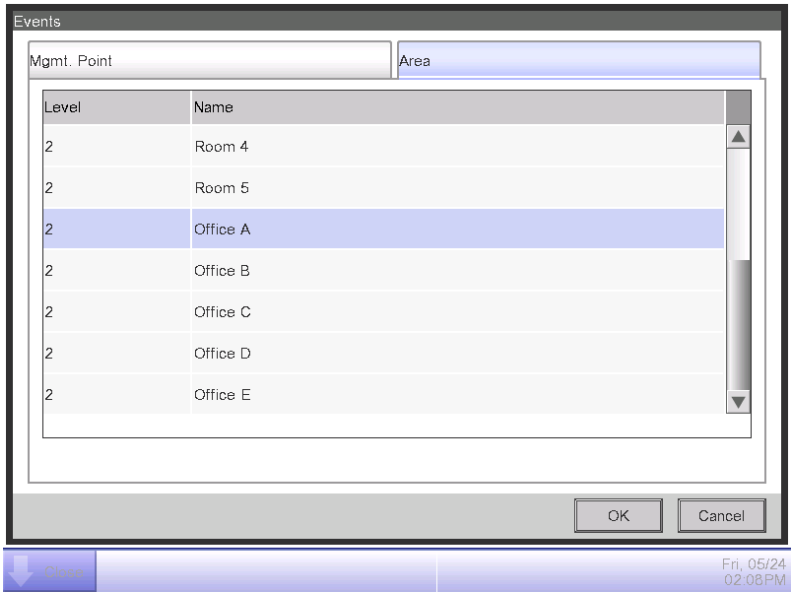


Touch the **Modify** button **(6)** and, in the Time input dialog box that appears, set up the time at which you want to turn on indoor units.

Here, enter “7:00 AM” (“7:00” when using 24-hour clock) and then touch the OK button to return to the Events screen.

3. Set up the target

Touch the **Modify** button **(7)**. The Mgmt.pnt./Area dialog appears.



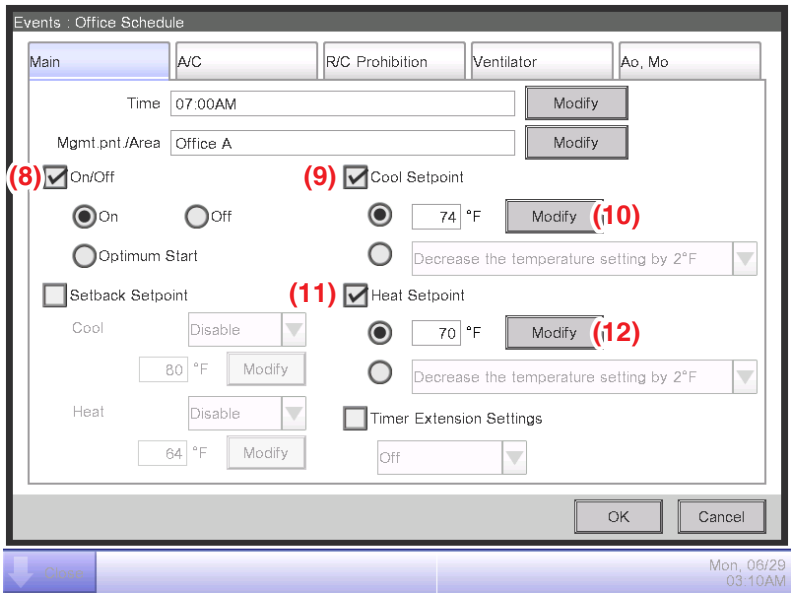
The Mgmt.pnt/Area dialog consists of 2 tabs: Mgmt. Point and Area.

Touch the Area tab, select “**Office A**” from the list, and then touch the OK button.

For the procedure for creating an area, see “6-1 Setting up an Area”.

4. Set up the control details for weekdays (I/D On, Cool Setpoint, Heat Setpoint)

To set up the On/Off and Setpoints, touch the Main tab.



Select the **On/Off** check box **(8)** and then select the On radio button.

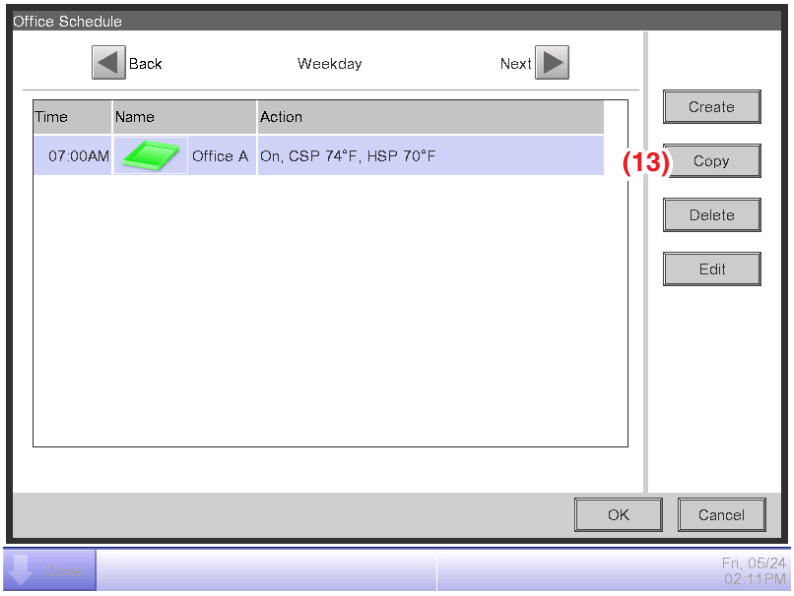
Select the **Cool Setpoint** check box **(9)** and then select the setpoint input radio button below it.

Touch the **Modify** button **(10)**, enter “74°F” in the Setpoint input dialog, and then touch the OK button to return to the Main tab.

Select the **Heat Setpoint** check box **(11)** and then select the setpoint input radio button below it.

Touch the **Modify** button **(12)**, enter “70°F” in the Setpoint input dialog, and then touch the OK button to return to the Main tab.

When finished, touch the OK button to return to the Event list screen.

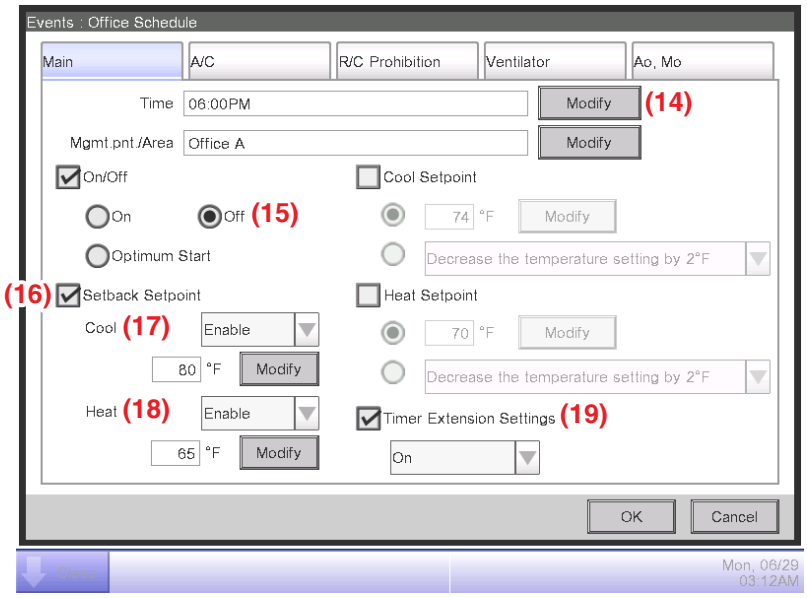


The Event list screen lists the events you have set up.

Now, you have an event that “**Turns On the indoor units in the Office A area at 7:00 AM on Weekdays with the Cool Setpoint set to 74°F and Heat Setpoint set to 70°F**”.

5. Set up the control details for weekdays 2 (I/D Off , Setback Control, Timer Extension)

Select the event which you created in step 4. Then touch **Copy** button **(13)**, The event screen appears.



Touch the **Modify** button **(14)**, enter the stop time “6:00 PM” (“18:00” when using 24-hour clock) in the Time input dialog, and then touch the OK button to return.

Select the **Off** radio button **(15)**.

Select the **Setback Setpoint** check box **(16)**.

Select Enable in the Cool and Heat drop down menus.

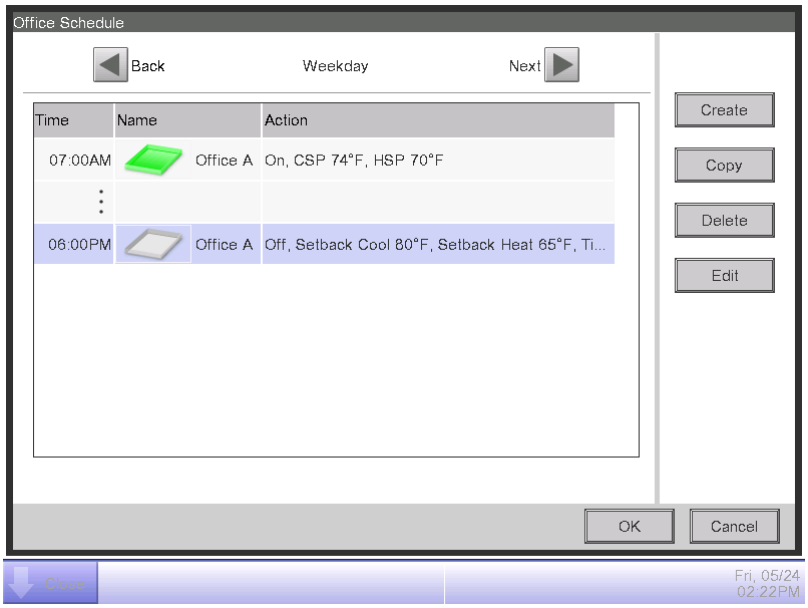
First, select Enable in the **Cool** drop down menu **(17)** and then touch the **Modify** button. Enter “80°F” in the Setpoint input dialog that appears and then touch the OK button.

Similarly, select Enable in the **Heat** drop down menu **(18)** and then touch the **Modify** button.

Enter “65°F” in the Setpoint input dialog that appears and then touch the OK button to return to the Main tab.

Select the **Timer Extension Settings** check box **(19)** and, in the drop down menu below it, select ON.

Touch the OK button to return to the Event list screen.



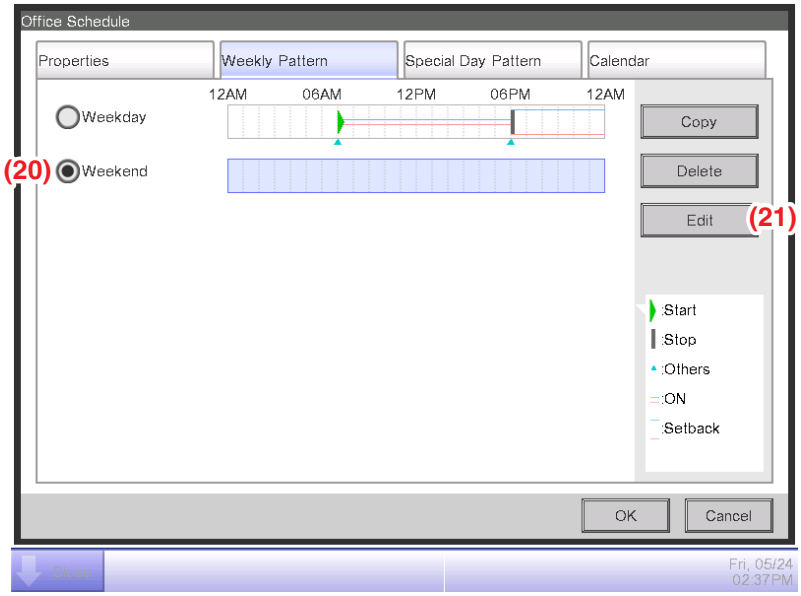
The Event list screen lists the events you have set up.

Now, you have an event that "**Turns On the indoor units in the Office A Area at 7:00 AM on Weekdays with the Cool Setpoint set to 74°F and Heat Setpoint set to 70°F" and another event that "Turns Off the indoor units in the Office A Area at 6:00 PM with Setback Control and the Timer Extension set to 120min**". Touch the OK button to return to the Program Edit screen.

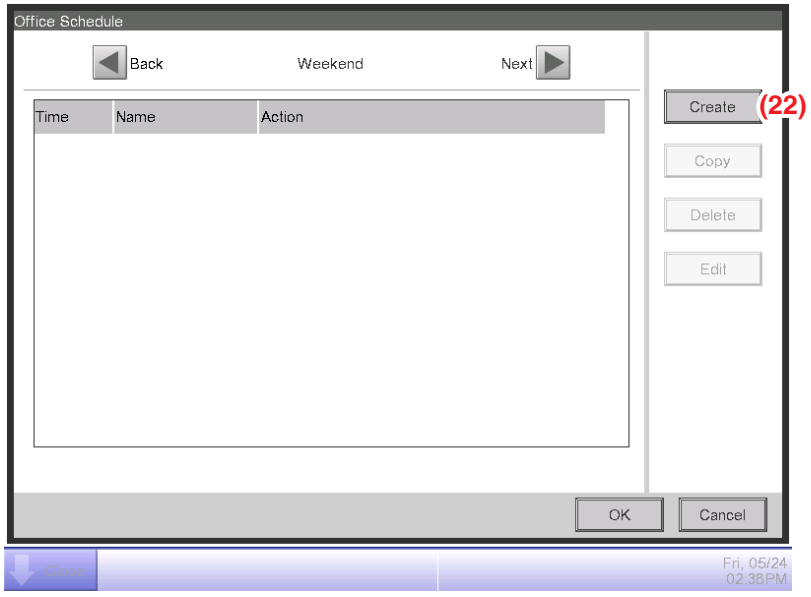
[Create the schedule for weekend]

6. Set up the control details (I/D Off , Setback Control, Timer Extension)

On the Weekly Pattern tab, set the **Weekend** radio button **(20)**.



Touch the **Edit** button **(21)**. The Event list screen appears.

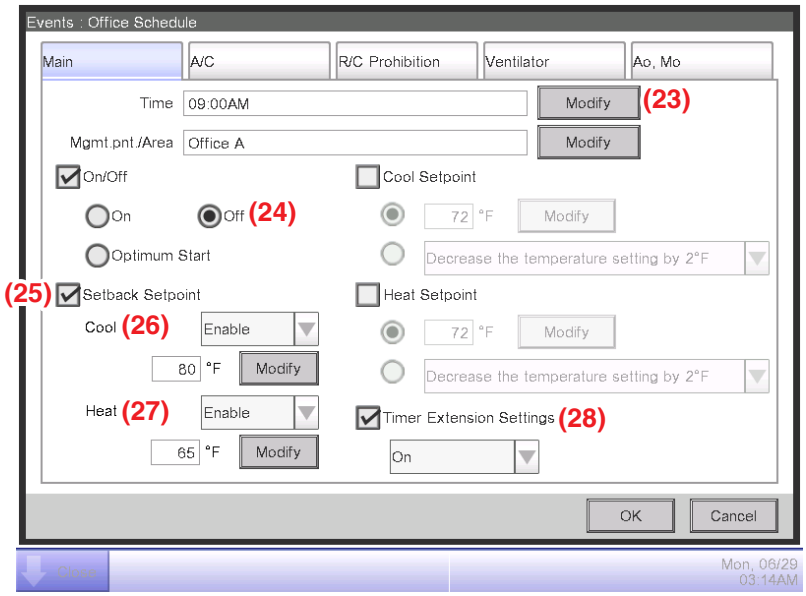


Touch the **Create** button **(22)**. The Events screen appears.

Touch the **Modify** button of the “Mgmt.pnt/Area” .

Touch the Area tab, select “**Office A**” from the list, and then touch the OK button.

For Weekend, perform the same Unit Off setup operation as you did in step 5 of “Creating the schedule for Weekday” to create a schedule that “**Turns off the indoor units in the Office A Area at 9:00 AM with the Setback Control and the Timer Extension set to 120min**”.



Touch the **Modify** button **(23)**, enter the time “9:00 AM” (“9:00” when using 24-hour clock) in the Time input dialog, and then touch the OK button to return.

Select the **Off** radio button **(24)**.

Select the **Setback Setpoint** check box **(25)**.

Select Enable in the Cool and Heat drop down menus.

First, select Enable in the **Cool** drop down menu **(26)** and then touch the **Modify** button. Enter “80°F” in the Setpoint input dialog that appears and then touch the OK button.

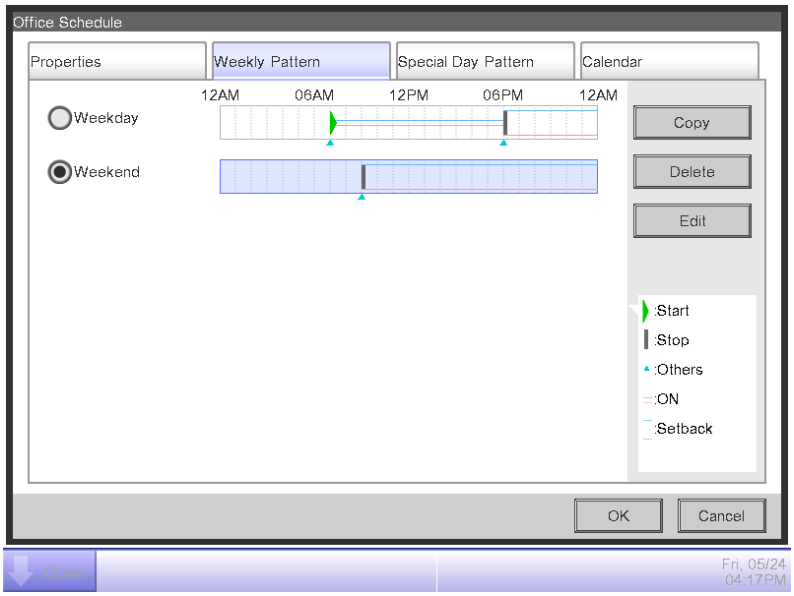
Similarly, select Enable in the **Heat** drop down menu **(27)** and then touch the **Modify** button.

Enter “65°F” in the Setpoint input dialog that appears and then touch the OK button to return to the Main tab.

Select the **Timer Extension Settings** check box **(28)** and, in the drop down menu below it, select ON.

Touch the OK button to return to the Event list screen.

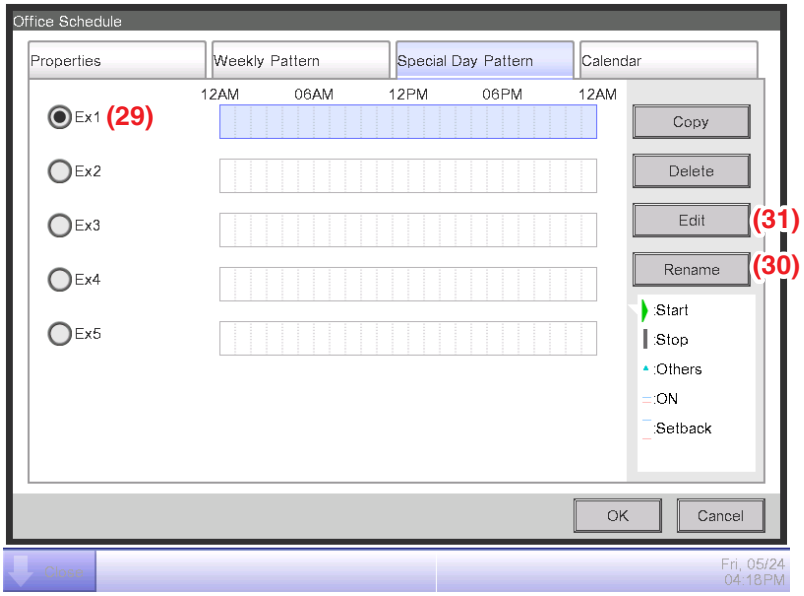
Now, you have an event on weekend that "**Turns Off the indoor units in the Office A Area at 9:00 AM with Setback Control and the Timer Extension set to 120min**". Touch the OK button to return to the Program Edit screen.



Now, you have created the weekly schedule.

[Create the schedule for the Special Day]

7. Setting up the special day name



Select **Ex1** in **(29)** and touch the **Rename** button **(30)**. Then, in the Name Input dialog that appears, enter “Work Day” as the name of this special day and touch the OK button. The default name displayed in **(29)** is renamed.

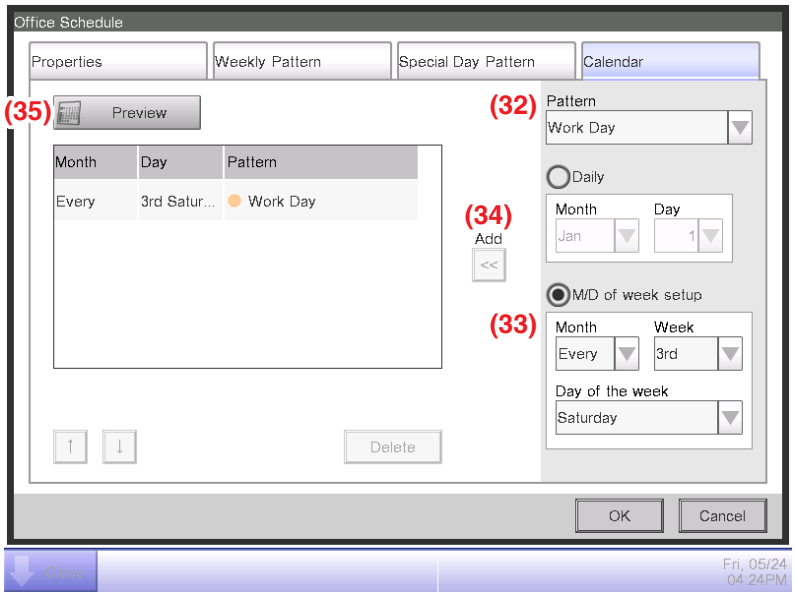
8. Setting the On/Off time and control details (I/D On, Cool Setpoint, Heat Setpoint)

Touch the **Edit** button **(31)** to set up the event details.

Repeat the steps for creating the weekly schedule, set up a schedule that “**Turns the indoor units in the Office A Area at 7:00 AM with the Cool Setpoint to 74°F and Heat Setpoints to 70°F” and “Turns Off the indoor units in the Office A Area at 5:00 PM with Setback Control and the Timer Extension set to 120min**”.

9. Setting up the special day in the calendar

On the Program Edit screen, touch the Calendar tab.



In the **Pattern** drop down menu **(32)** , select the special day named “Work Day” you created.

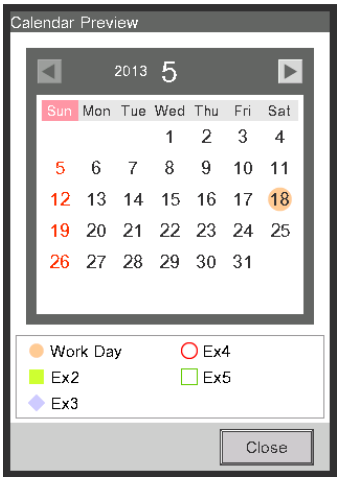
Select the **M/D of week setup** radio button **(33)** and then, in the Day of the week drop down menu, select the day of the week you want to set up.

Here, select as follows to set up the “3rd Saturday of every month”.

Month: Every, **Week**: 3rd, **Day of the week**: Saturday

Touch the **Add** button. The special day pattern is now registered and listed in **(34)**.

To preview the calendar with the registered special day pattern, touch the **Preview** button **(35)**.



Touch the Close button to return to the Program Edit screen.

Now, you have created a special day schedule "**Turns on the indoor units in the Office A Area from 7:00 AM to 5:00 PM on the 3rd Saturday of every month with the Cool Setpoint set to 74°F and Heat Setpoints set to 70°F", and "Turns Off the indoor units in the Office A Area at 5:00 PM with Setback Control and the Timer Extension set to 120min**".

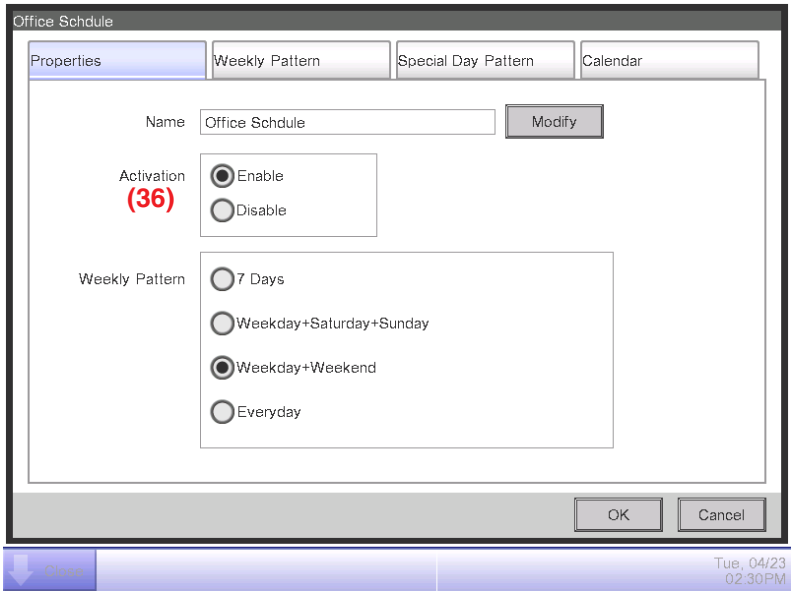
The "Office Schedule" with both the weekly and the special day program has been completed.

[Start Using the Schedule Program]

10. Enable the schedule program

Enable the schedule you created.

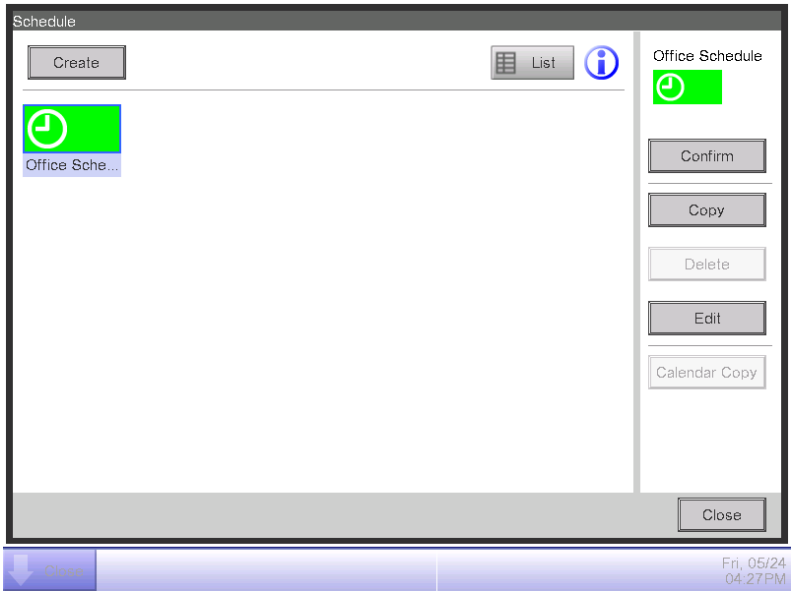
On the Program Edit screen, touch the Properties tab.



Select the **Enable** radio button **(36)** to enable this "**Office Schedule**".

This completes the procedure for creating a schedule program.

Touch the OK button to save and return to the Schedule screen.



Check that the created program, "**Office Schedule**", is displayed on the Schedule screen and then touch the Close button to close the screen.

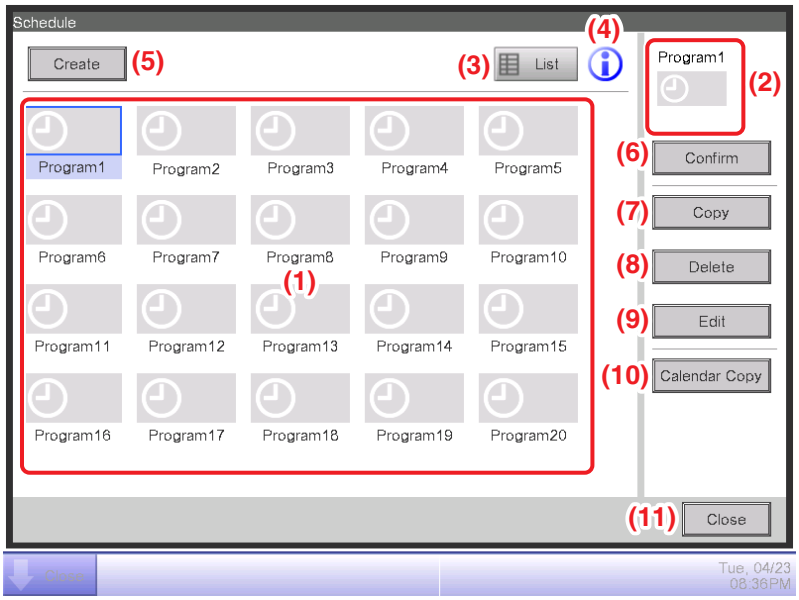
Detailed screen and button descriptions

- **Schedule Screen (Icon view)**

  This screen is displayed when you touch the Schedule button on the Automatic Ctrl. tab of the Menu List screen.

  It is also displayed when you touch the Icon button on the Schedule screen (List view).

  This screen allows you to check, create, edit, and delete schedule programs as well as copy a calendar.



(1) Schedule Info view area

Displays registered schedule programs.

(2) Selected schedule view area

Displays information of the program selected in the Schedule Info view area.

(3) List button

Switches the screen to the List view.

(4) Information button

Displays the Legend screen.

(5) Create button

Displays the Schedule Edit screen for creating a new schedule program.

You can create a maximum of 100 schedule programs.

(6) Confirm button

Displays the Schedule Confirmation screen that allows you to check the setting details of the program selected in the Schedule Info view area.

(7) Copy button

Copies the program selected in the Schedule Info view area and displays it on the Schedule Edit screen.

(8) Delete button

Deletes the program selected in the Schedule Info view area. Touching the button displays a deletion confirmation dialog.

(9) Edit button

Displays the Schedule Edit screen that allows you to edit the program selected in the Schedule Info view area.

(10) Calendar Copy button

Displays the Calendar Copy screen that allows you to copy the calendar of the program selected in the Schedule Info view area.

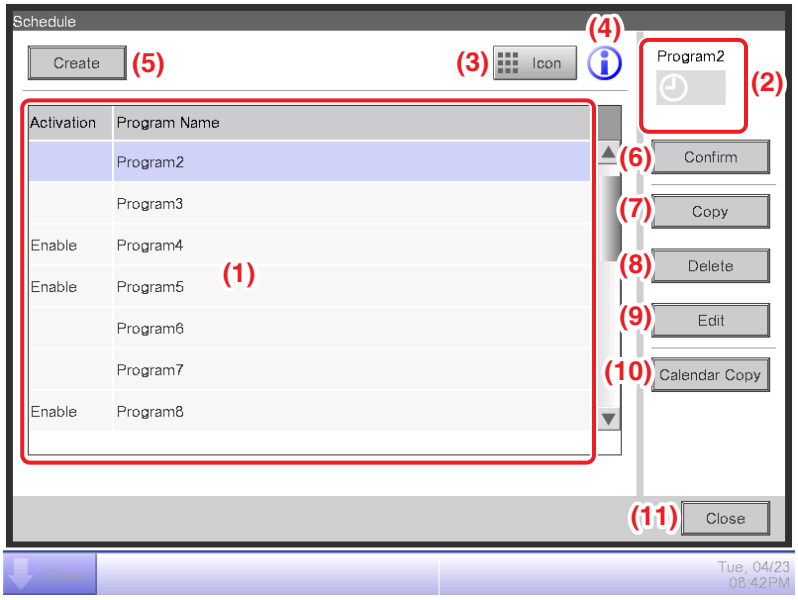
(11) Close button

Closes the screen.

- **Schedule Screen (List View)**

  This screen is displayed when you touch the List button on the Schedule screen (Icon view).

  This screen allows you to check, create, edit, and delete schedule programs as well as copy a calendar.



(1) Schedule Info view area

Displays a list of registered schedule programs in order of its registration.

(2) Selected schedule view area

Displays information of the program selected in the Schedule Info view area.

(3) Icon button

Switches the screen to Icon view.

(4) Information button

Displays the Legend screen.

(5) Create button

Displays the Schedule Edit screen for creating a new schedule program.

You can create a maximum of 100 schedule programs.

(6) Confirm button

Displays the Schedule Confirmation screen that allows you to check the setting details of the program selected in the Schedule Info view area.

(7) Copy button

Copies the program selected in the Schedule Info view area and displays it on the Schedule Edit screen.

(8) Delete button

Deletes the program selected in the Schedule Info view area. Touching the button displays a deletion confirmation dialog.

(9) Edit button

Displays the Schedule Edit screen that allows you to edit the program selected in the Schedule Info view area.

(10) Calendar Copy button

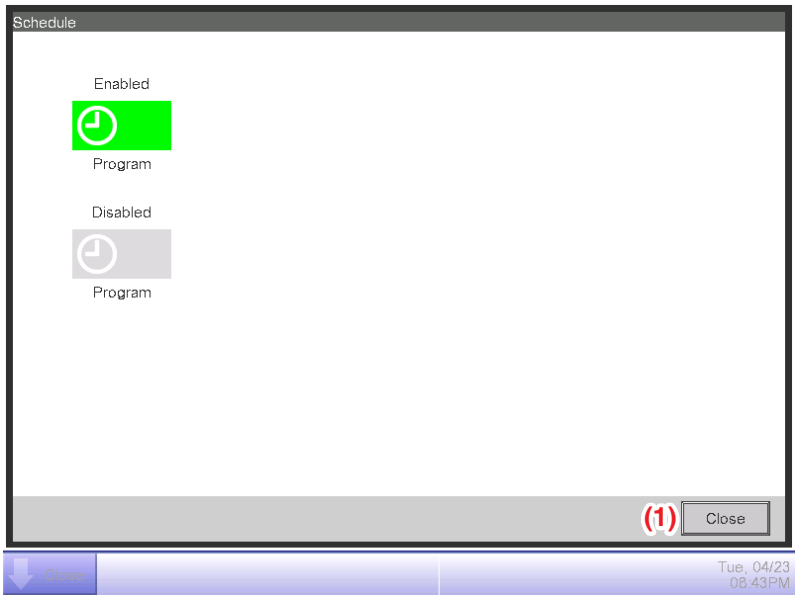
Displays the Calendar Copy screen that allows you to copy the calendar of the program selected in the Schedule Info view area.

(11) Close button

Closes the screen.

• **Legend Screen**

This screen is displayed when you touch the Information button on the Schedule screen. It displays the legend for icons available in the Schedule screen (Icon view).



<Icon>

Program → Name

<Displayed information>

• Icon of scheduled program (Green: Enable, Gray: Disable)

Displays legends for the Icon view.

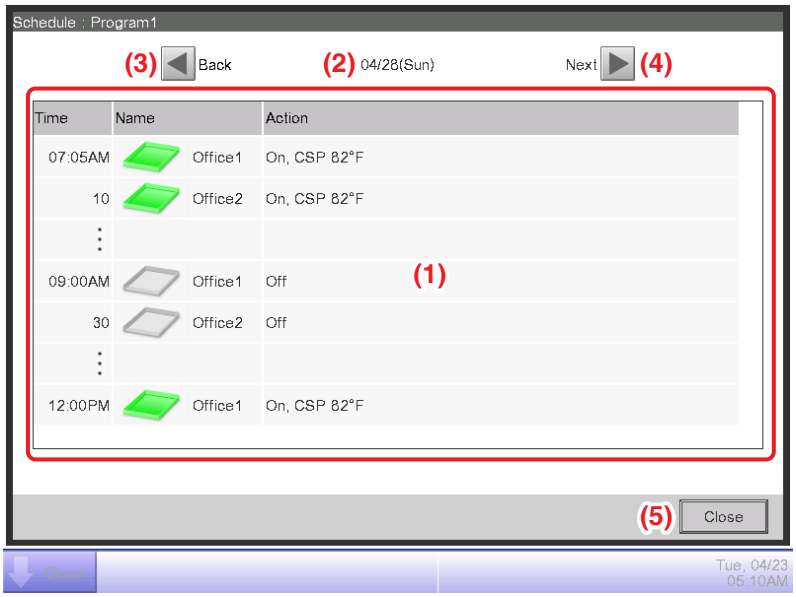
(1) Close button

Closes the screen.

- **Schedule Confirmation Screen**

  This screen is displayed when you touch the Confirm button on the Schedule screen.

  It allows you to check the setting details of schedule programs with the Schedule Settings list.



(1) Schedule Settings list

Displays the list of events for the date indicated in the Date area **(2)** for the selected schedule program.

(2) Date area

Displays the date and day of the week for which the events are displayed.

(3) Back button

Changes the content displayed in the Schedule Settings list to that of the previous day.

(4) Next button

Changes the content displayed in the Schedule Settings list to that of the next day. You can specify up to the next 7 days.

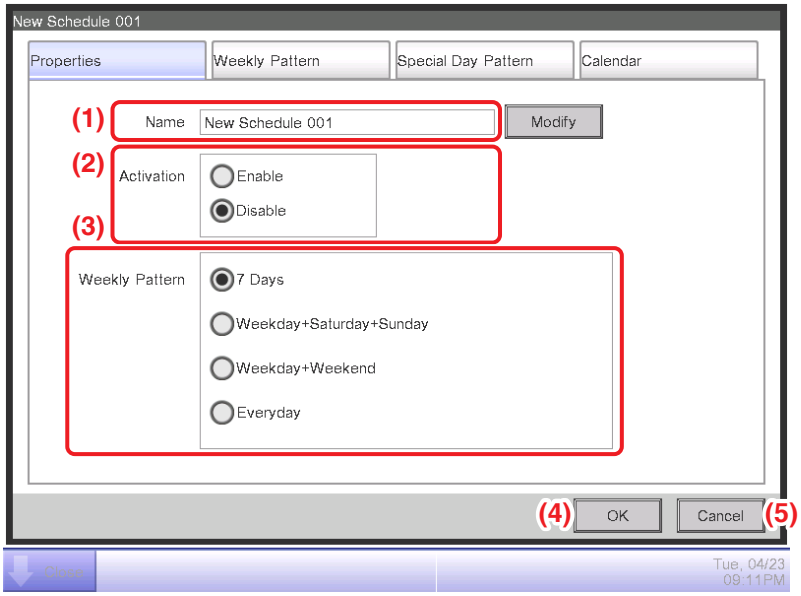
(5) Close button

Closes the screen.

- **Properties Tab (Program Edit Screen)**

  This screen is displayed when you touch the Create, Copy, or Edit button on the Schedule screen.

  It allows you to set up the name, activation (Enable/Disable), and Weekly Pattern of the schedule program.



(1) Name display

Displays the schedule program name.

To change the displayed name, touch the Modify button and, in the Text Input dialog that appears, enter a new name.

A program name must consist of 1 to 32 characters.

It must be unique and different from the existing program names.

(2) Activation radio buttons

Enable/disable the schedule program.

(3) Weekly Pattern radio buttons

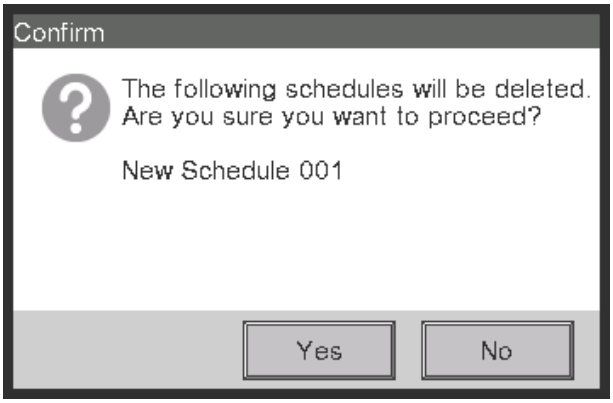
Select the Weekly Pattern from the following:

7 Days/Weekday + Saturday + Sunday/Weekday + Weekend/Everyday

The Weekly Pattern corresponding to the selected radio button will be displayed on the Weekly Pattern tab.

NOTE

If you attempt to change the Weekly Pattern once set up by selecting a different Weekly Pattern radio button, the following Confirm dialog will be displayed.



At this time, touching the Yes button causes program data other than the schedule name to be initialized.

Be sure to confirm this before touching the Yes button.

(4) OK button

Saves the edit and closes the screen.

(5) Cancel button

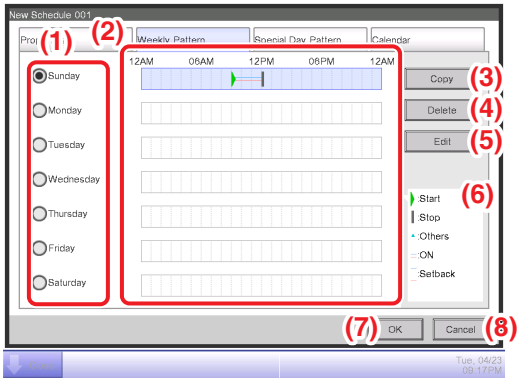
Cancels the edit and closes the screen. Touching the button displays a Confirm dialog.

- **Weekly Pattern Tab (Program Edit Screen)**

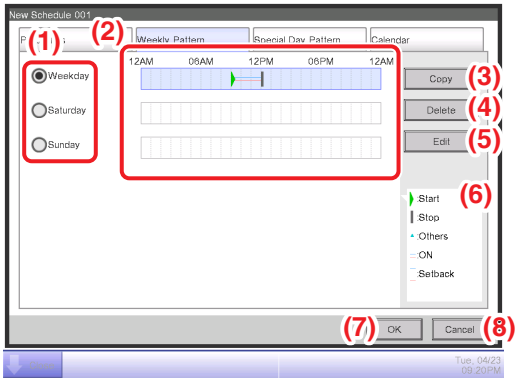
  This screen allows you to set up the weekly schedule.

  It is displayed when you touch the Weekly Pattern tab on the Program Edit screen.

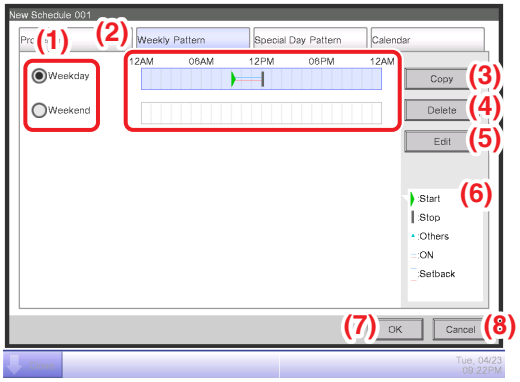
  The display items on this tab vary depending on the weekly pattern selected on the Properties tab.



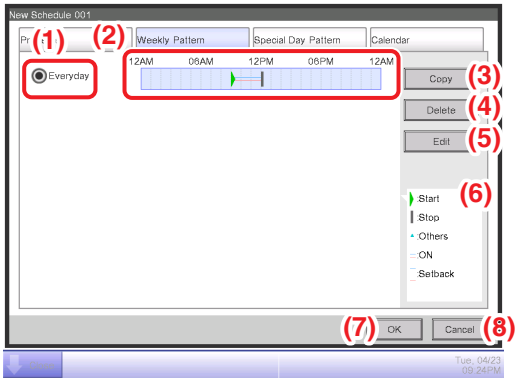
7 Days



Weekday + Saturday + Sunday



Weekday + Weekend



Everyday

(1) Day of the week radio button

Select the day of the week you want to edit.

(2) Schedule setting view

Displays the schedule setting for each day of the week.

(3) Copy button

Copies the schedule setting for the day of the week selected using day of the week radio button.

Touching this button displays the Copy destination selection screen.

(4) Delete button

Deletes the schedule setting for the day of the week selected using a day of the week radio button.

Touching the button displays a deletion confirmation dialog.

(5) Edit button

Displays the Event list screen that allows you to edit the schedule setting for the day of the week selected using day of the week radio button.

(6) Legend display

Displays the legends for icons available in the Schedule setting view.

(7) OK button

Saves the edit and closes the screen.

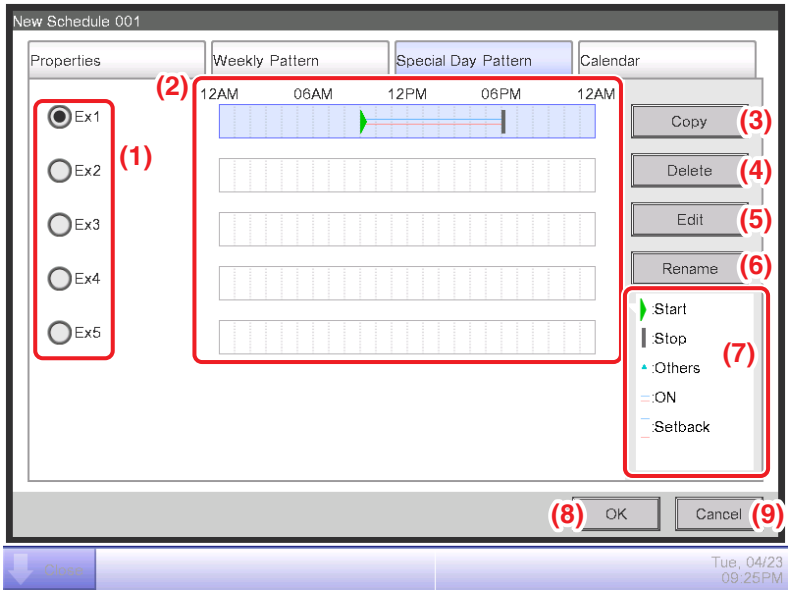
(8) Cancel button

Cancels the edit and closes the screen. Touching the button displays a Confirm dialog.

- **Special Day Pattern Tab (Schedule Edit Screen)**

This screen is displayed when you touch the Special Day Pattern tab on the Schedule Edit screen.

It allows you to set up the schedule for a special day.



(1) Special Day radio button

Selects the special day to edit.

You can set up to 5 types of special day.

(2) Schedule Settings view

Displays the schedule set to each special day.

(3) Copy button

Displays the Copy to Selection screen that allows you to select the destination, to which the schedule set for the special day, selected with the radio button, will be copied.

(4) Delete button

Deletes the schedule set to the special day selected with radio button. Touching the button displays a deletion confirmation dialog.

(5) Edit button

Displays the Event List screen that allows you to edit the schedule set for the special day selected with the radio button.

(6) Rename button

Changes the name of the special day.

Touching the button displays the Text Input dialog.

Specify a name for the special day using 1 to 15 characters.

(7) Legend view area

Displays legends available in the Schedule Settings view area.

(8) OK button

Saves the edit and closes the screen.

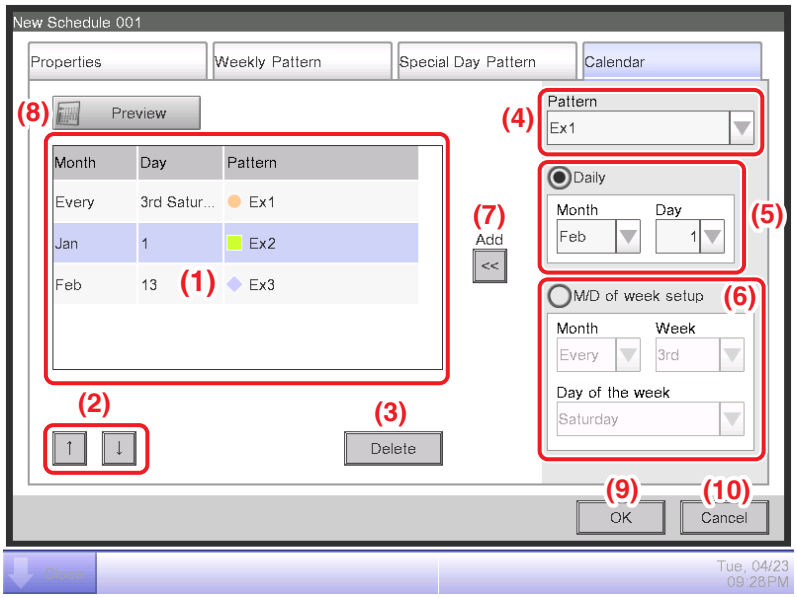
(9) Cancel button

Cancels the edit and closes the screen. Touching the button displays a confirmation dialog.

- **Calendar Tab (Schedule Edit Screen)**

  This screen is displayed when you touch the Calendar tab on the Schedule Edit screen.

  It allows you to register special day schedules in the calendar.



(1) Calendar Settings list

Displays the list of registered special day patterns.

You can register a maximum of 40 special day patterns in one calendar.

(2) ↑ ↓ button

Moves up and down the order of the special day pattern selected in the Calendar Settings list.

(3) Delete button

Deletes the special day pattern selected in the Calendar Settings list.

(4) Pattern drop down menu

Selects the type of the special day to register.

(5) Daily radio button

Sets up the special day setting pattern with the Daily drop down menu.

The selectable range in each drop down menu is as follows:

Month: Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec, Every

Day: 1 to 31 (Non-existing days cannot be selected)

(6) M/D of week setup radio button

Sets up the special day setting pattern with the M/D of week setup drop down menu.

The selectable range in each drop down menu is as follows:

Month: Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec, Every

Week: 1st, 2nd, 3rd, 4th, Last

Day of the week:Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, Saturday

(7) Add button

Registers the set up special day pattern.

(8) Preview button

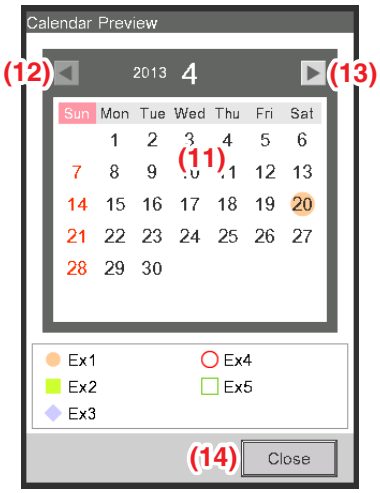
Previews the calendar with the registered special day in the Calendar Settings list.

(9) OK button

Saves the edit and closes the screen.

(10) Cancel button

Cancels the edit and closes the screen. Touching the button displays a confirmation dialog.



<Calendar Preview>

(11) Calendar view area

Previews the calendar with the special day.

(12) ◀ button

Moves the view to the month previous to that displayed in the Calendar view area.

(13) ▶ button

Moves the view to the month next to that displayed in the Calendar view area. You can specify up to the next one year.

(14) Close button

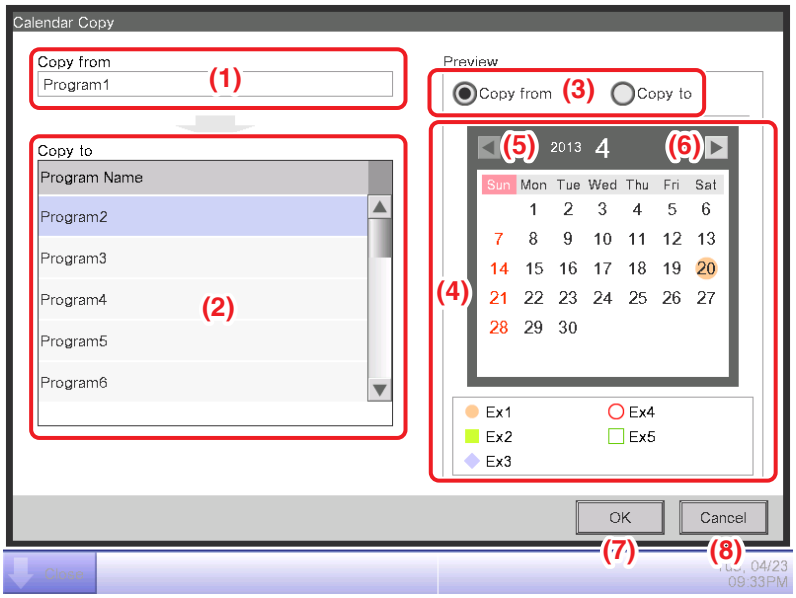
Closes the screen.

NOTE

- If a special day set using the Date setup and Month/Day of the week setup drop down menus overlap, the special day set using the Date setup drop down menu takes precedence when setting the calendar.
- If two or more special days set using the Date setup drop down menu overlap (for example, single day designation overlaps with a period designation) the latter (lower in the list) takes precedence.
- If two or more special days set using the Month/Day setup drop down menu overlap, the latter (lower in the list) takes precedence.
- Setting up a Special Day overrides the weekly schedule set up on that day.
- The special day schedule setting you created in the Calendar Settings list will be kept for the next year and later. Unless the schedule is changed, it is unnecessary to recreate the calendar setting every year.
- Remember that, if you perform calendar setting by selecting the Daily radio button, schedule control is activated on the specified day of the month also for the next year and later.

- **Calendar Copy Screen**

This screen is displayed when you touch the Calendar Copy button on the Schedule screen. It allows you to copy the Special Day Calendar set up in a schedule program to another schedule program.



(1) Copy from text area

Displays the name of the schedule program source of the copy.

(2) Copy to list

Displays a list of schedule program names from which to select the destination of the copy.

(3) Preview radio button

Selects the schedule to be displayed in the Calendar view area.

You can select the schedule program source of the copy or a schedule program destination of the copy.

(4) Calendar view area

Displays the schedule program selected with the Preview radio button.

(5) ◀ button

Moves the view to the month previous to that displayed in the Calendar view area.

(6) ▶ button

Moves the view to the month next to that displayed in the Calendar view area. You can specify up to the next one year.

(7) OK button

Saves the edit and closes the screen.

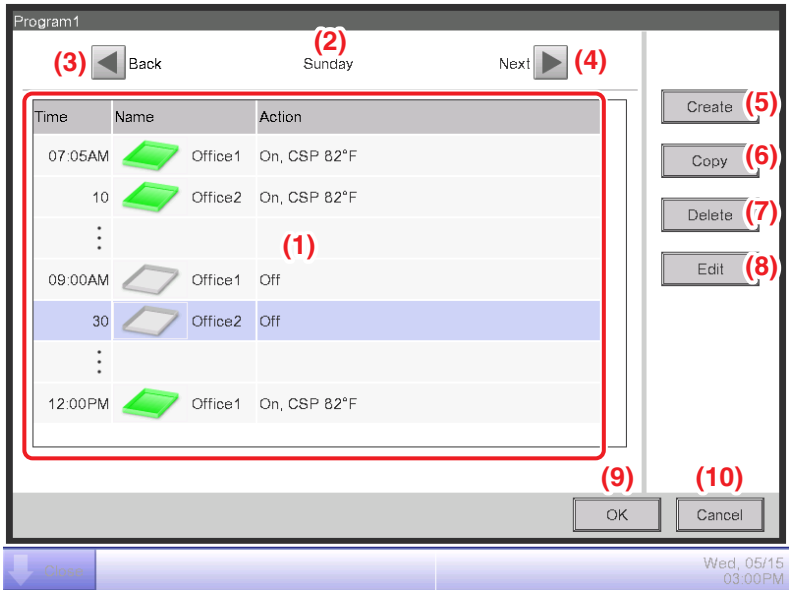
(8) Cancel button

Cancels the edit and closes the screen.

- **Event List Screen**

  This screen is displayed when you touch the Edit button on the Weekly Pattern tab or Special Day Pattern tab of the Schedule Edit screen.

  It lists events registered in the weekly schedule/special day schedule.



(1) Event list

Displays the list of events set to each day of the week/special day.

(2) Day of the week view area

Displays the name of the day of the week/weekday/weekend/Everyday/special day for the pattern selected on the Program Edit screen.

(3) Back button

Sorts the listed items in reverse to the display order for each pattern in the event list.

(4) Next button

Sorts the listed items in accordance with the display order for each pattern in the event list.

(5) Create button

Displays the Events screen that allows you to register new events.

You can register a maximum of 20 events in one schedule.

(6) Copy button

Displays the Event screen with a copy of the event selected in the Event list.

(7) Delete button

Deletes the event selected in the Event list. Touching the button displays a deletion confirmation dialog.

(8) Edit button

Displays the Event screen with the event selected in the Event list for editing.

(9) OK button

Saves the edit and closes the screen.

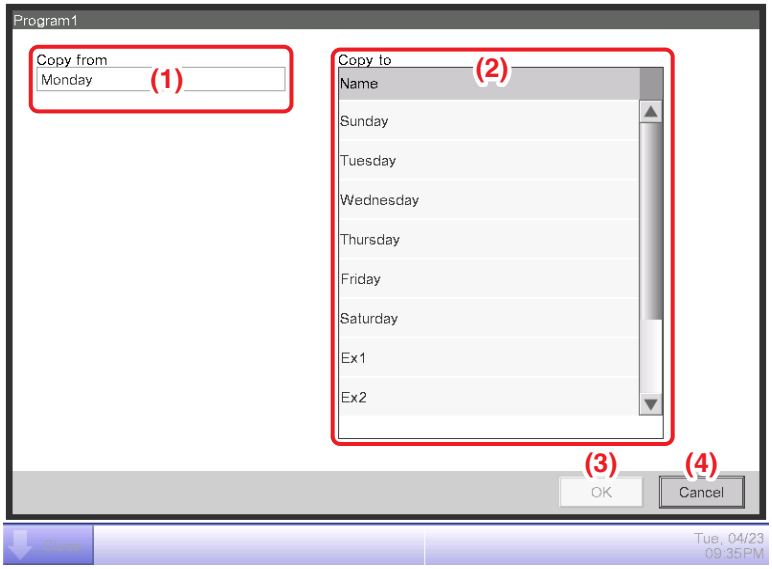
(10) Cancel button

Cancels the edit and closes the screen.

- **Copy to Selection Screen**

  This screen is displayed when you touch the Copy button on the Weekly Pattern tab or Special Day Pattern tab of the Schedule Edit screen.

  Copy the event you set up to another day of the week/weekday/weekend/Everyday/special day.



(1) Copy from text field

Displays the name of day of the day of the week/weekday/weekend/Everyday/special day selected in the Schedule Edit screen.

(2) Copy to list

Displays a list of days of the day of the week/weekday/weekend/Everyday/special day from which to select the destination of the copy.

(3) OK button

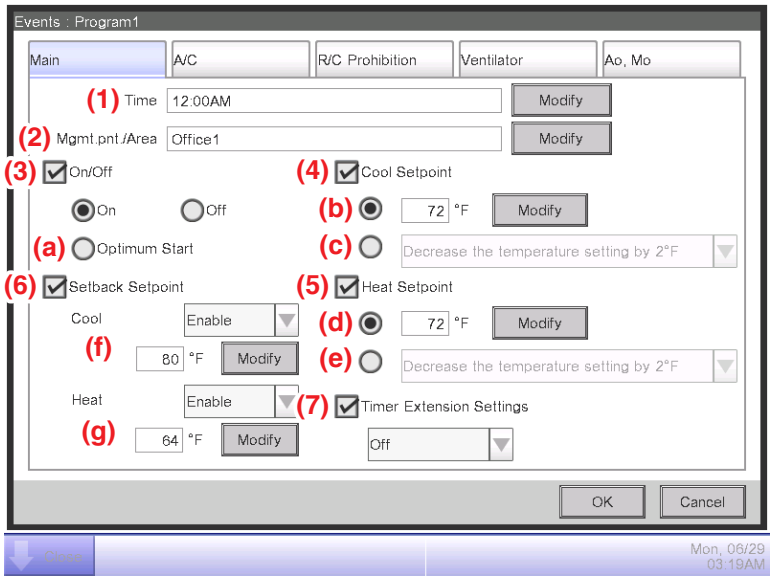
Saves the edit and closes the screen.

(4) Cancel button

Cancels the edit and closes the screen.

- **Main Tab (Events Screen)**

This screen is displayed when you touch the Create button, or the Edit button, on the Event list screen. It allows you to set up the event trigger Time, target Mgmt.pnt./Area setting, On/Off, Cooling/ Heating Setpoint, Setback Setpoint, and Timer Extension Settings.



(1) Time setting display

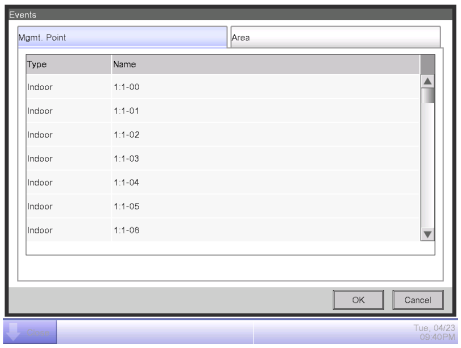
Set the time at which the event is triggered. Touch the Modify button and, in the Time Input dialog box that appears, enter the event trigger time. The range of values you can enter is 12:00 AM to 11:59 PM (00:00 to 23:59 when using 24-hour clock).

(2) Mgmt.pnt./Area setting display

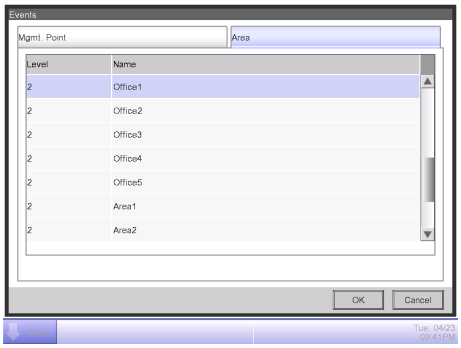
Select the target management point or area.

Touch the Modify button and, in the Mgmt.pnt./Area dialog that appears, select the target management point/area.

Management point selection screen



Area selection screen



(3) On/Off setting

Select the On/Off check box to turn On/Off the target.

(a) Optimum Start radio button

Select this radio button to enable the Optimum Start function. (See “5-2 Setting up the Optimum Start”.)

(4) Cool Setpoint settings

Set the cooling setpoint for the target.

Select the Cool Setpoint check box and then select either the **setpoint setting** radio button **(b)** or the **setpoint shift** radio button **(c)**.

If you select the **setpoint setting** radio button **(b)**, enter the setpoint in the Numerical Input dialog.

Setting range: The range of temperatures set for an air conditioner is limited to the setpoint range of the target air conditioner. You can enter a value in increments of 1°F.

Default : 72°F when displayed in Fahrenheit

If you selected **Setpoint shift (c)**, select the amount to shift using the drop down menu.

Setpoint shift amount: When displayed in Fahrenheit, select the desired shift amount from

"Decrease the temperature setting by 7°F, Decrease the temperature setting by 6°F,
Decrease the temperature setting by 5°F, Decrease the temperature setting by 4°F,
Decrease the temperature setting by 3°F, Decrease the temperature setting by 2°F,
Decrease the temperature setting by 1°F, Increase the temperature setting by 1°F,
Increase the temperature setting by 2°F, Increase the temperature setting by 3°F,
Increase the temperature setting by 4°F, Increase the temperature setting by 5°F,
Increase the temperature setting by 6°F, and Increase the temperature setting by 7°F".

(5) Heat Setpoint/Setpoint settings

Set the heating setpoint or setpoint for the target.

If the target is a Hydrobox management point, this is labelled as Setpoint.

Select the **Heat Setpoint/Setpoint** check box and then select either the **setpoint setting** radio button **(d)** or the **setpoint shift** radio button **(e)**.

If you select the **Setpoint Setting** radio button **(d)**, enter the setpoint in the Numerical Input dialog.

Setting range: The range of temperatures set for an air conditioner is limited to the setpoint range of the target air conditioner. You can enter a value in increments of 1°F.

Default : 72°F when displayed in Fahrenheit

If you selected **Setpoint Shift (e)**, select the amount to shift using the drop down menu.

Setpoint shift amount: When displayed in Fahrenheit, select the desired shift amount from

"Decrease the temperature setting by 7°F, Decrease the temperature setting by 6°F,
Decrease the temperature setting by 5°F, Decrease the temperature setting by 4°F,
Decrease the temperature setting by 3°F, Decrease the temperature setting by 2°F,
Decrease the temperature setting by 1°F, Increase the temperature setting by 1°F,
Increase the temperature setting by 2°F, Increase the temperature setting by 3°F,
Increase the temperature setting by 4°F, Increase the temperature setting by 5°F,
Increase the temperature setting by 6°F, and Increase the temperature setting by 7°F".

NOTE

- If the Heat Setpoint is set up for an area, the setpoints for the Hydrobox management points in that area are also set up.
- Setpoint shift is a function that allows you to set up the setpoint relative to the current setpoint.

  A “Decrease the temperature setting by ...” setting increases the setpoint in the cooling mode and decreases the setpoint by the specified amount in the heating mode, respectively.

  An “Increase the temperature setting by ...” setting decreases the setpoint in the cooling mode and increases the setpoint by the specified amount in the heating mode, respectively.
- The Setpoint shift function does not work when the operation mode is Fan, Auto, or Dry.
- The Setpoint shift does not apply to the following items;

  Hydrobox: leaving water setpoint and storage setpoint.

(6) Setback Setpoint settings

To use the Setback function for the target, select the Setback Setpoint check box.

(f) Setback Setpoint (Cool) setting area

Enable/disable the setback setpoint function (for cooling) and set up the setback setpoint of the indoor units.

For details, see “5-6 Setting up the Setback”.

(g) Setback Setpoint (Heat) setting area

Enable/disable the setback setpoint function (for heating) and set up the setback setpoint of the indoor units.

For details, see “5-6 Setting up the Setback”.

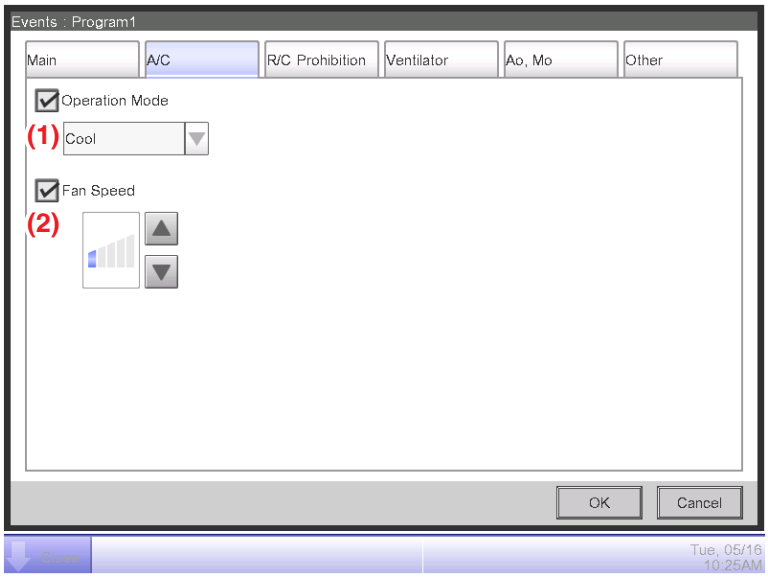
(7) Timer Extension Settings

In the drop down menu, select On/Off to turn ON/OFF the Timer Extension for the indoor units.

- **A/C Tab**

  This screen is displayed when you touch the A/C tab on the Events screen.

  It allows you to set up the operation of the air conditioners.



(1) Operation Mode settings

Set up the operation mode. Select the desired operation mode from Fan, Cool, Heat, Dependent, and Dry.

This drop down menu displays only the options supported by the target.

(2) Fan Speed

Set up the fan speed.

Touching the ▲ button increases the fan speed by one level, while touching the ▼ button decreases the fan speed by one level.

The fan speed you can set up depends on the target.

NOTE

- The fan speed in the Schedule function is for 5-speed fans, so if the connected fan is a 2-speed fan or 3-speed fan, select the fan speed according to the table below.

Fan speed	Indoor	
	Desired fan speed	Schedule setting
2-speed fan		
		
		
3-speed fan		
		
		
		

- If a setting different from that in the table above is selected, fan operation will be as follows.

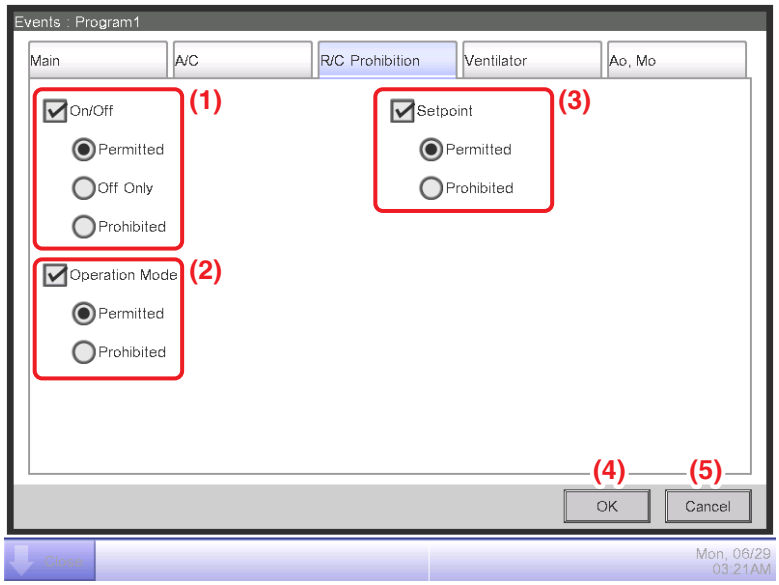
Fan speed	Indoor	
	Schedule setting	Fan speed after Schedule command
2-speed fan		
		
		
3-speed fan		
		

- If Fan Speed is set for an indoor unit that does not have adjustable fan speed or the Auto fan speed setting is selected for an indoor unit without Auto, Schedule will not send a command.

- **R/C Prohibition Tab (Events Screen)**

  This screen is displayed when you touch the R/C Prohibition tab on the Events screen.

  It allows you to permission/prohibition the remote controller.



Select the check box of the items to set up and select the setting from the radio buttons.

(1) R/C On/Off permission/prohibition setting area

Restricts On/Off from the remote controller.

Select the setting from Permitted, Off Only, and Prohibited.

(2) R/C Operation Mode permission/prohibition setting area

Restricts changing the operation mode from the remote controller.

Select the setting from Permitted and Prohibited.

This setting area is not displayed when the target is Ventilator.

(3) R/C Setpoint permission/prohibition setting area

Restricts changing the setpoint from the remote controller.

Select the setting from Permitted and Prohibited.

This setting area is not displayed when the target is Ventilator.

(4) OK button

Saves the edit and closes the screen.

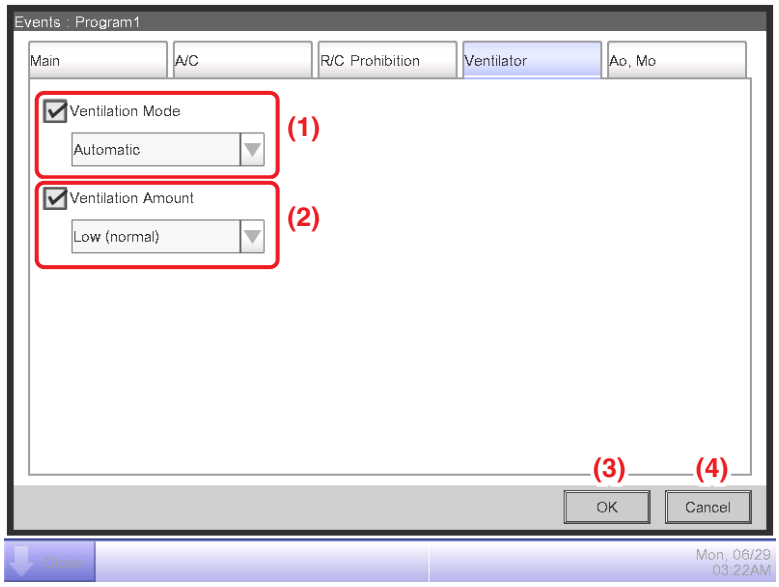
(5) Cancel button

Cancels the edit and closes the screen.

- **Ventilator Tab (Events Screen)**

  This screen is displayed when you touch the Ventilator tab on the Events screen.

  Sets up the Ventilator actions.



Select the check box of the items to set up and select the setting from the drop down menu.

(1) Ventilation Mode setting area

Sets up the ventilation mode.

Select the setting from Automatic, ERVentilation, and Bypass.

(2) Ventilation Amount setting area

Sets up the ventilation amount.

Select the setting from Auto (normal), Low (normal), High (normal), Auto (fresh up), Low (fresh up), and High (fresh up).

(3) OK button

Saves the edit and closes the screen.

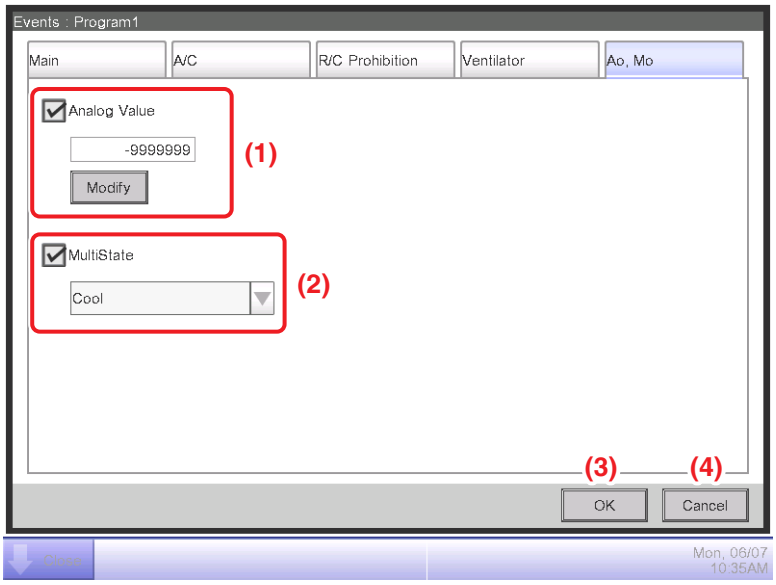
(4) Cancel button

Cancels the edit and closes the screen.

- **Ao, Mo Tab (Events Screen)**

  This screen is displayed when you touch the Ao, Mo tab on the Events screen.

  Set up the operation of Ao and Mo.



Select the check box of the item to set up, and select/enter the setting using the drop down menu/Modify button.

(1) Analog Value setting area

Ao refers to analog signal output.

This function enables the signal output equipment (I/O module) connected to the iTM to output a current/voltage corresponding to the adjustment value from external equipment.

(It is used for the adjustment of building equipment, such as degree of aperture of a damper/valve.)

The range, incremental width, and unit of the analog values are set on the screen during trial.

(The unit setting may not be available.)

For details, consult your authorized dealer.

(2) MultiState setting area

It allows you to select and set a MultiState value for Mo.

The MultiState value set on the screen is set up during the trial.

NOTE

You cannot schedule MultiState in Area setting.

(3) OK button

Saves the edit and closes the screen.

(4) Cancel button

Cancels the edit and closes the screen.

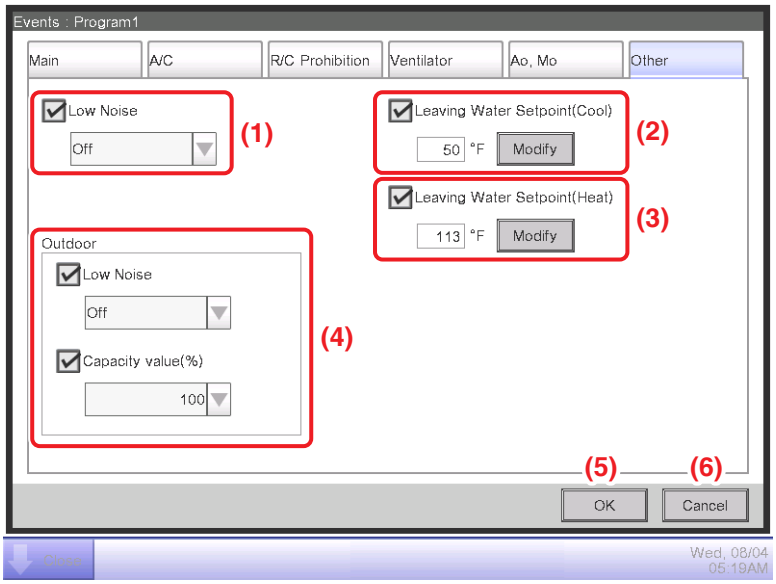
NOTE

For information on the setting items and range of values you can set in each tab, see “Appendix 2. Setup items”.

- **Other Tab (Events Screen)**

This screen is displayed when you touch the Other tab on the Events screen.

It allows you to set up the Hot water supply and outdoor unit actions.



Select the check box of the item to set up, and select/enter the setting using the drop down menu/Modify button.

(1) Low Noise setting area (Hot water supply setting)

Sets up the low noise feature.

Select whether to enable (On) or disable (Off) the function using the drop down menu.

(2) Leaving Water Setpoint (Cool) setting area (Hot water supply setting)

Sets up the leaving water setpoint in cooling.

Touch the Modify button and enter the leaving water setpoint in the Numerical Input dialog that appears.

The range of values you can enter is –22 to 158°F.

(3) Leaving Water Setpoint (Heat) setting area (Hot water supply setting)

Sets up the leaving water setpoint in heating.

Touch the Modify button and enter the leaving water setpoint in the Numerical Input dialog that appears.

The range of values you can enter is 77 to 176°F.

(4) Outdoor unit area

These items can be set up only when the demand address of management points for outdoor units is enabled.

Sets up the low noise settings and the values of capacity for outdoor units.

(a) Low noise setup

The low noise control function is used to reduce operating noise from outdoor units.

Set up the low noise control for outdoor units.

Select On/Off from the drop down menu.

(b) Capacity value(%) setup

From the drop down menu, select the value of capacity of outdoor units (100/70/40/0).

NOTE

- The low noise setup/capacity setup require the demand address of management points for outdoor units.
  If the demand address of an outdoor unit is disabled, the unit is excluded from the scope of control.
- If you delete the management point of an outdoor unit or change the demand address of the unit when the low noise setting/capacity control is enabled, you cannot change the low noise setting to Off or change the capacity to 100%.
- Low noise control/capacity control are disabled during maintenance.
- Low noise control/capacity control are disabled when a higher level central device (Intelligent Manager) is connected.
- Low noise control stops if you restart the iTM while the control is enabled. So, be careful when you restart the iTM.
- Note that if you restart the iTM during low noise control/capacity control, the settings will be as follows.
  · Low noise control: Off
  · Capacity control: 100%
- Changing low noise settings/capacity control settings is allowed only by the schedule function.
  So, when you want to change these settings, always do so on the schedules.
- Low noise setting and capacity control are unavailable when the iTM is set as Sub.

(5) OK button

Saves the edit and closes the screen.

(6) Cancel button

Cancels the edit and closes the screen.

5-2 Setting up the Optimum Start

Outline

Optimum Start is the function to turn on the indoor units earlier than the time set in the schedule so that the room temperature can reach the setpoint at the scheduled time.

It calculates the time at which the target indoor units turn on, according to the room temperature and the setpoint for the current operation mode.

It learns and adjusts the turn on time appropriately.

NOTE

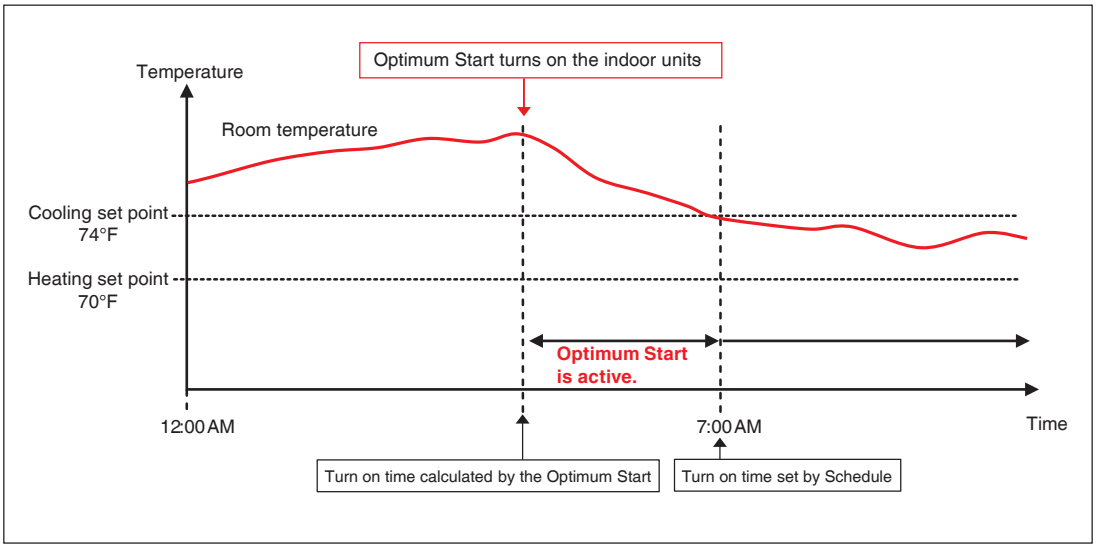
This function is not supported in systems that contain a Hydrobox.

Operation of the Optimum Start

The figure below shows the operation of the Optimum Start function.

It assumes the Schedule function is used to:

"turn on the indoor units at 7:00 AM with Optimum Start enabled and with the cooling and heating setpoints set to 74°F and 70°F, respectively".



Setting up the Optimum Start

You can enable/disable the Optimum Start function only in the Schedule function settings.

The following describes how to set up the Optimum Start function based on the model case below.

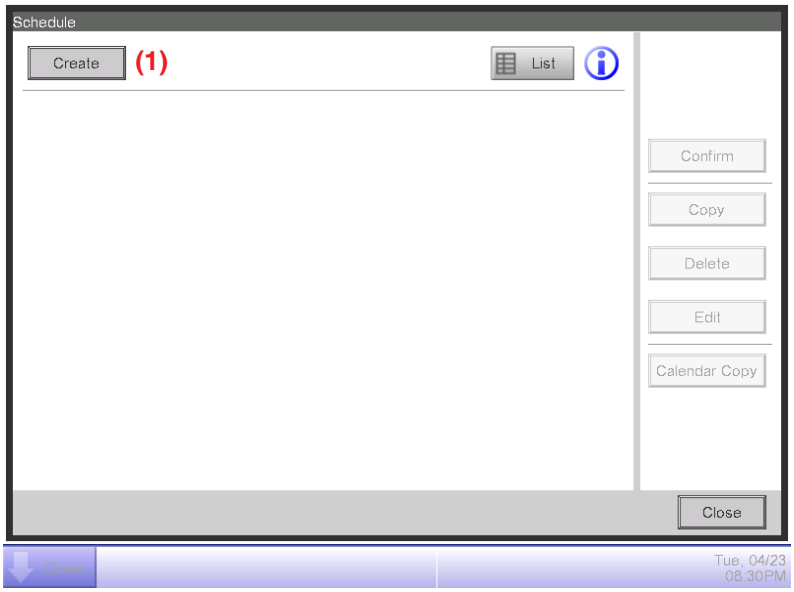
Name of schedule program	Program for Showrooms
Target	Showrooms (Area comprising indoor units only)
Weekly Pattern	Everyday
Control details	7:00 AM I/D Unit On / Cool Setpoint set 74°F /Heat Setpoint 70°F **Optimum Start Enabled** 6:00 PM I/D Unit Off Cool Setback Setpoint 80°F /Heat Setback Setpoint 65°F Timer Extension 120 min

1. Setting up the schedule program name and Weekly Pattern
2. Setting up the schedule time
3. Setting up the target
4. Setting up the control details (Setpoints)
5. Setting up the indoor unit turn off time

- **Creating the Weekly Schedule**

  Touch the Schedule button on the Auto Ctrl tab of the Menu List screen.

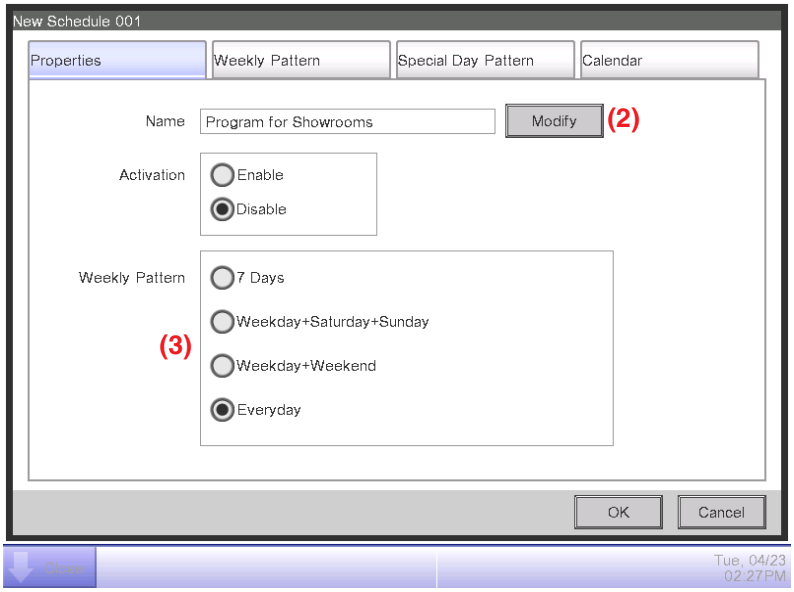
  The Schedule screen appears (see “4-5 Menu List Screen: Automatic Ctrl. Tab”).



1. Setting up the schedule program name and Weekly Pattern

Touch the **Create** button **(1)**. The Program Edit screen appears.

The Program Edit screen consists of 4 tabs. Access each tab as necessary to set up the weekly schedule.

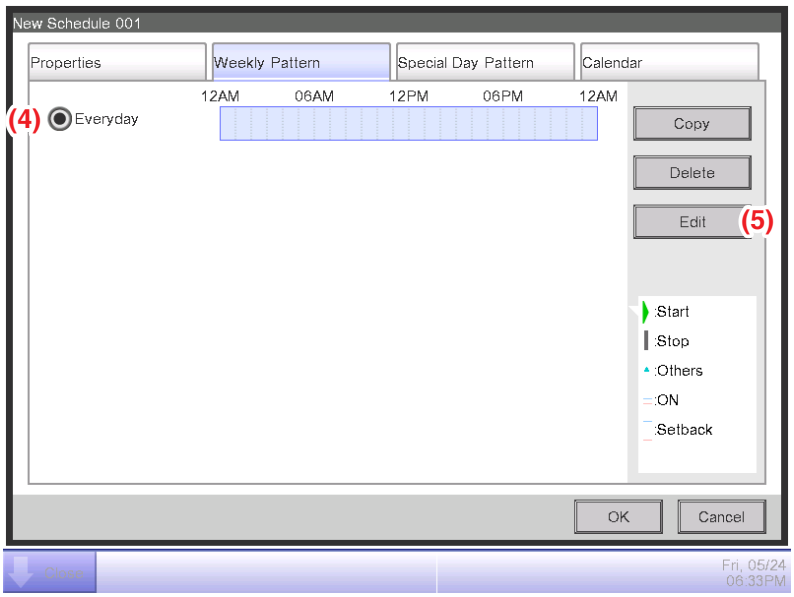


On the Properties tab, touch the **Modify** button **(2)** and, in the Input dialog that appears, set up the program name. Enter “**Program for Showrooms**”.

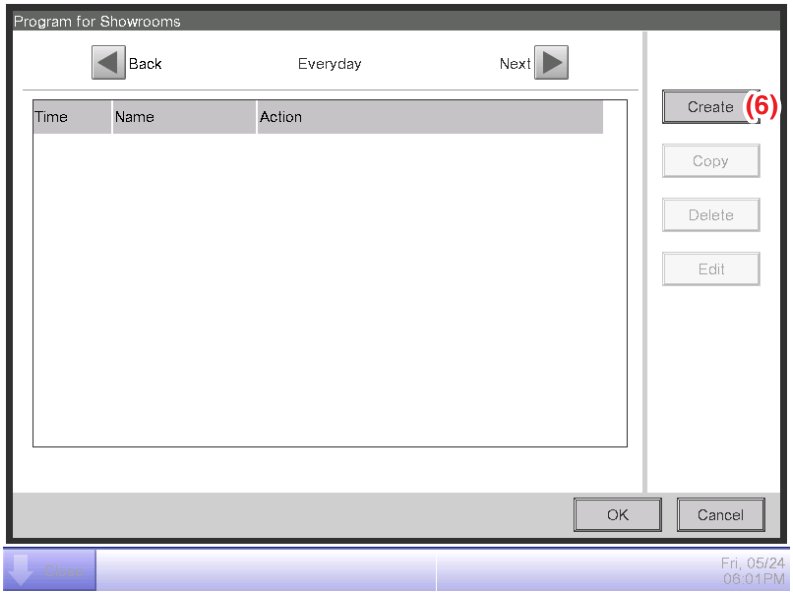
Under Weekly Pattern **(3)**, select the **Everyday** radio button and then touch the Weekly Pattern tab.

2. Setting up the schedule time

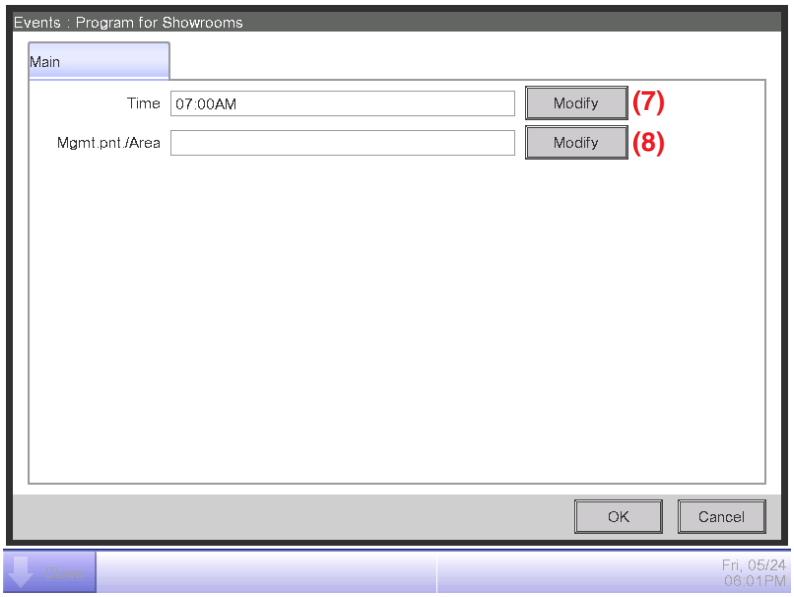
On the Weekly Pattern tab, check that the **Everyday** radio button **(4)** is selected.



Touch the **Edit** button **(5)**. The Event list screen appears.



Touch the **Create** button **(6)**. The Events screen appears.

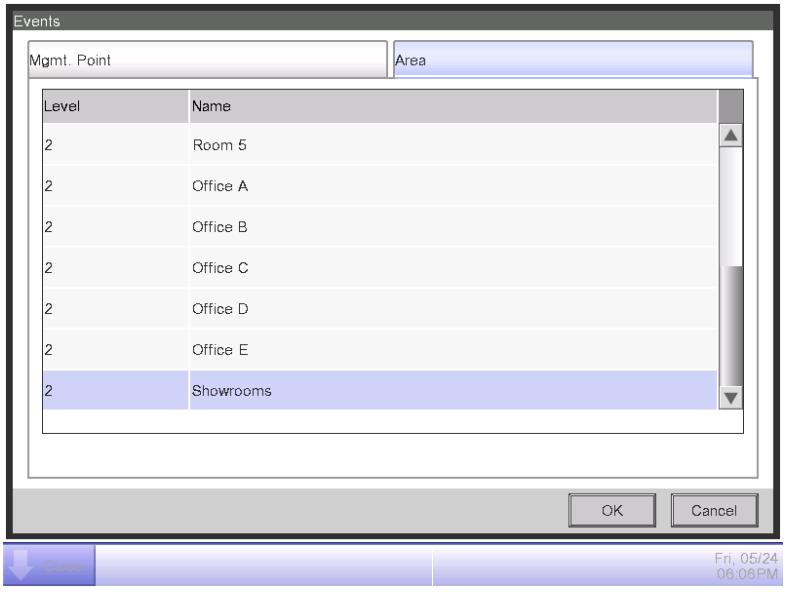


Touch the **Modify** button **(7)** and, in the Time input dialog that appears, set up the time at which you want to start the indoor units.

Here, enter “7:00 AM” (“7:00” when using 24-hour clock) and then touch the OK button to return to the Events screen.

3. Setting up the target

Touch the **Modify** button **(8)**. The Mgmt.pnt./Area screen appears.



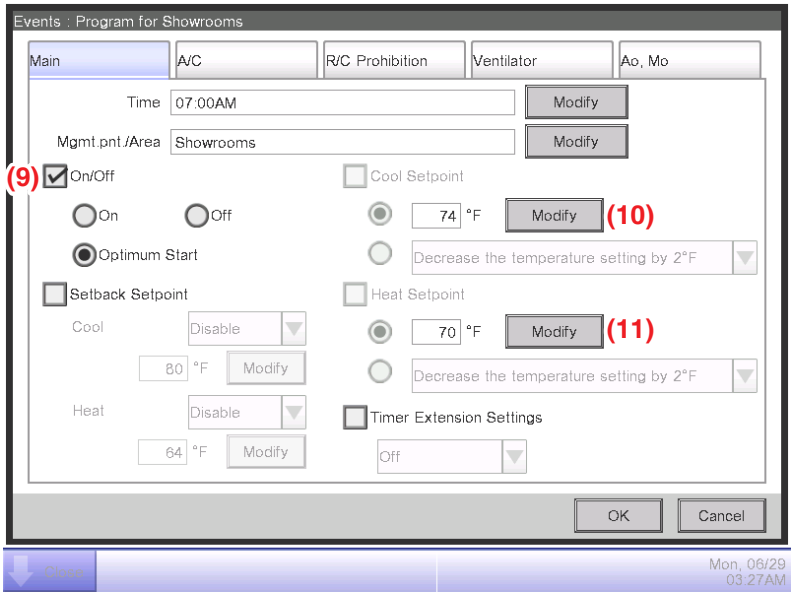
The Mng. Point/Area screen consists of two tabs: Mgmt. Point and Area.

Touch the Area tab, select “**Showrooms**” from the list, and then touch the OK button.

For the procedure for creating an area, see ”6-1 Setting up an Area”.

4. Setting up the control details (Setpoints)

To set up the operation mode/setpoints, touch the Main tab.

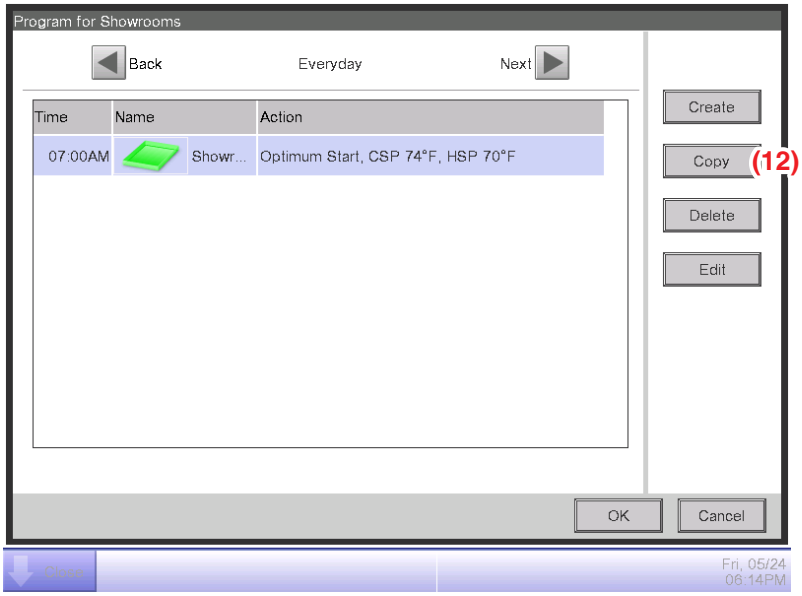


Select the **On/Off** check box **(9)** and then select the **Optimum Start** radio button.

Under Cool Setpoint **(10)**, touch the **Modify** button and, in the Setpoint input dialog box that appears, enter “74°F”.

Under Heat Setpoint **(11)**, touch the **Modify** button and, in the Setpoint input dialog box that appears, enter “70°F”.

When finished, touch the OK button to return to the Event list screen.

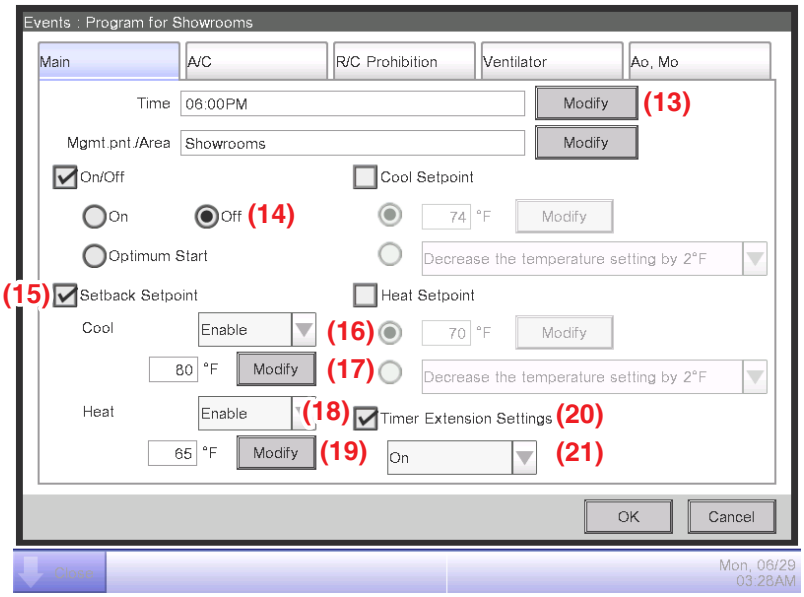


The Event list screen lists the events you have set up.

Now, you have an event that “**starts the indoor units in the Showrooms area at 7:00 AM with Optimum Start enabled and with the cooling and heating setpoints set to 74°F and 70°F, respectively**”.

5. Setting up the indoor unit turn off time

Select the event you created in step 4, which **"turns on the indoor units in the Showrooms area At 7:00 AM with Optimum Start enabled and with the cooling and heating setpoints set to 74°F and 70°F, respectively",** and then touch the **Copy** button **(12)**. The Events screen appears.



This creates an exact copy of the selected event.

Touch the **Modify** button **(13)**, enter the turn on time "6:00 PM" ("18:00" when using 24-hour clock) in the Time input dialog, and then touch the OK button to return.

Select the **Off** radio button **(14)**.

Select the **Setback Setpoint** Check box **(15)**. Select Enable in Cool and Heat drop down menus.

First, select Enable in the **Cool** drop down menu **(16)** and then touch the **Modify** button **(17)**. Enter "80°F" in the Setpoint input dialog that appears and then touch the OK button.

Similarly, select Enable in the **Heat** drop down menu **(18)** and then touch the **Modify** button **(19)**. Enter "65°F" in the Setpoint input dialog that appears and then touch the OK button to return to the Main tab.

Select the **Timer Extension Settings** check box **(20)** and, in the drop down menu **(21)** below it, select ON.

Touch the OK button to return to the Events list screen.

This completes the setup of the schedule with the Optimum Start function enabled.

Restrictions on using the Optimum Start

The Optimum Start setting:

takes effect the day after the setting was made.

will be ignored if system date is changed.

will be ignored for one day if there is power interruption or iTM reboots.

will be ignored if the scheduled turn on time is during period of 12:00 AM to 2:59 AM.

- **Operation after a schedule setting change**

  A change to the Schedule function settings takes effect on the next calendar day.

- **Operation on the start/end date of the daylight saving time period**

  Depending on the Date/Time setting, the iTM may not execute the Optimum Start setting, or may execute it twice.

- **Operation of dependent indoor units (not changeover master)**

  If Optimum Start is enabled for an indoor unit which is not changeover master, its operation mode will be dependent on the changeover master.

NOTE

- The iTM may not adjust the start time if the setpoint for the Optimum Start function is outside of the setpoint range limitation set for the local remote controller.
- Enabling the Optimum Start function for an area causes the iTM to send the setpoint and operation instruction set up for the function to the management points in the area when the set time arrives. If you have management points for which you do not want to enable the Optimum Start function, do not include them in the same area.
- The Optimum Start function can start indoor units, but cannot change the operation mode. It only calculates the start time according to the current operation mode.

5-3 Setting up the Timer Extension

Outline

Using this function, you can prevent failure to turn off the indoor unit by automatically stopping the indoor unit after a certain period of time from the operation start.

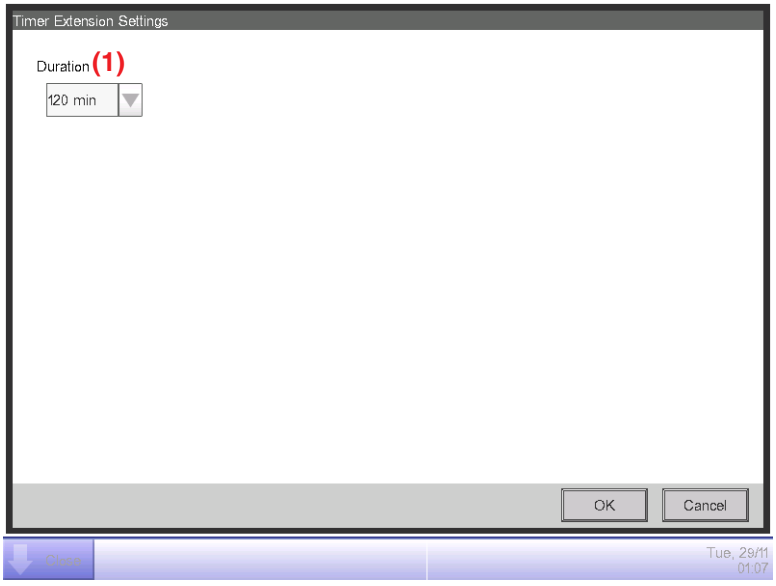
If this function is enabled, the indoor units are stopped when Duration elapses from the time they were started.

The following describes how to set this function up.

NOTE

- When the indoor unit encounters the communication error or maintenance has been started, the counted Duration will be cleared.
- You cannot set the Timer Extension when you log in as a user from a PC using the Web Remote Management function.
- In the case of the system with Hydrobox, this function controls the air conditioners only, but unable to control the On/Off (Reheat) operation.

1. Touch the Timer Extension button on the Automatic Ctrl. tab of the Menu List screen and display the Timer Extension screen (see “4-5 Menu List Screen: Automatic Ctrl. Tab”).



2. In the **Duration** drop down menu **(1)**, select the time until the indoor units are stopped between 30 and 180 minutes, in increments of 30 minutes.
3. When finished, touch the OK button to close the screen.
4. The Timer Extension function can be enabled/disabled from the A/C tab displayed in the Detailed Setup screen of the Standard screen, or from the Main tab displayed in the Events screen of Schedule screen, and Action Setup screen of the Interlocking Control screen.

   For details, see the relevant page.

NOTE

- When the control using the scheduled events is started for an indoor unit for which the Timer Extension is set enabled, the Timer Extension will be set to Off.
  * Similar to the scheduled events, when the Optimum Start control is started, the Timer Extension will be set to Off.
- In the case that the indoor units and devices in the area were stopped by the Timer Extension function which was set to On for the scheduled events, the Timer Extension control starts when the indoor units are restarted by using the remote controller.

5-4 Auto Changeover function

Outline

The Auto Changeover function automatically switches the operation mode of the indoor units between cool and heat modes for the Heat Pump and Heat Recovery Systems. The operation mode change is dependent on the change in the room temperature and the setpoint. When the operation mode is changed the preset setpoint in the indoor unit for the new operation mode will be applied.

When the Auto Changeover function is enabled, it evaluates the room temperature and the setpoint every 5 minutes to change the operation mode. Once the changeover occurs by Auto Changeover function, another changeover will be prevented by the Guard Timer which can be configured for 15, 30, or 60 (default) minutes time periods.

However, if the setpoint is changed, the mode may be changed by the Auto Changeover function immediately if the changeover condition is met regardless of the Guard Timer.

The Auto Changeover function is configured with the Changeover Group. The Changeover Group has a changeover method and targeted indoor units.

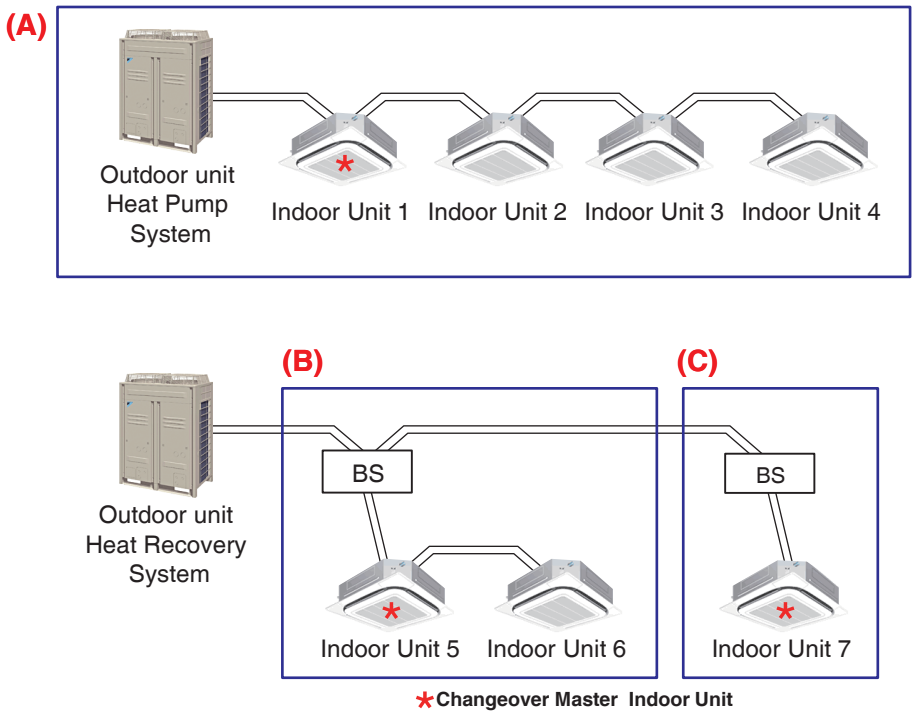
There are 4 changeover methods: Fixed, Average, Individual, and Vote.

The targeted indoor units are made up of the Refrigerant Groups. The "**Refrigerant Group**" is defined as all indoor units connected to the same Heat Pump system or Branch Selector Box in the Heat Recovery system having the same operation mode. Each refrigerant group has a Changeover Master indoor unit.

NOTE

This function is not supported in systems that contain a Hydrobox.

Example of the Refrigerant Group



1. [Fixed method] (default)

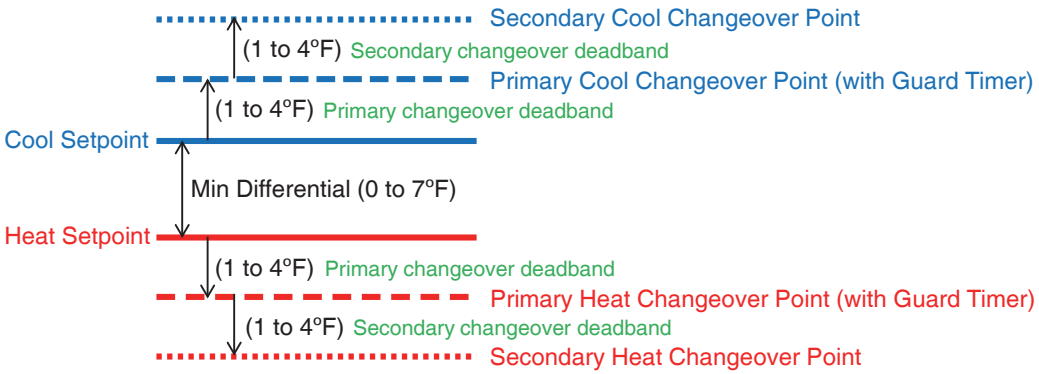
   This method allows an evaluation of the room temperature and setpoint for the first indoor unit registered in the changeover group.

   In heating mode, when the room temperature is greater than the primary cool changeover point (Cool setpoint + primary changeover deadband) and the guard timer has timed out, Auto Changeover will change the operation mode from heating to cooling. If the room temperature is greater than the secondary cool changeover point (primary cool changeover point + secondary changeover deadband) Auto changeover will ignore the guard timer and change the operation mode to cooling immediately.

   In the cooling mode, the same is true to change to heating with the changeover point to Setpoint relationship and is the opposite of the previous statement.

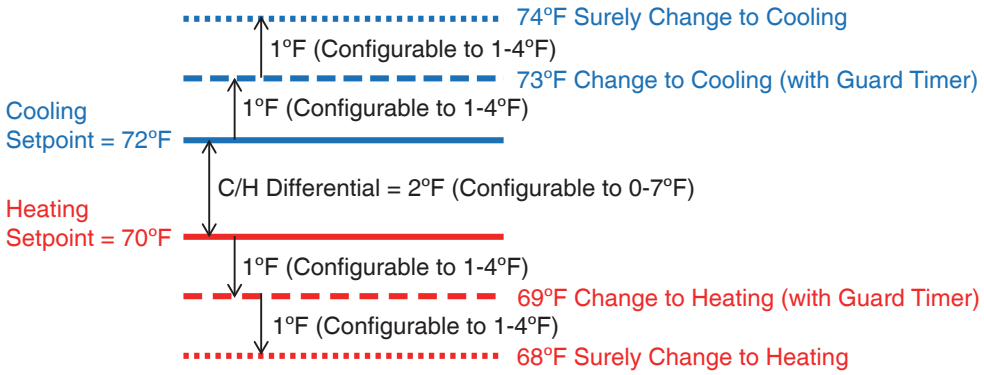
   The Primary and the Secondary Changeover Deadbands are configurable between 1°F – 4°F.

   The above information is true for both Dual and Single Setpoint.

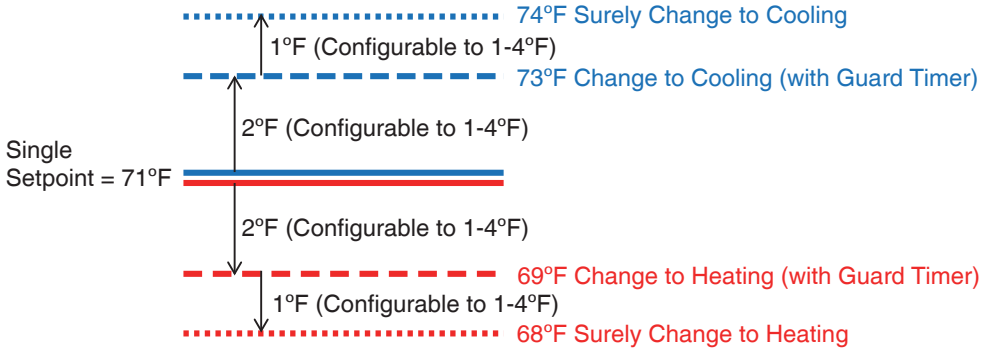


- **Examples for Changeover deadband for Dual Setpoints and Single Setpoint**

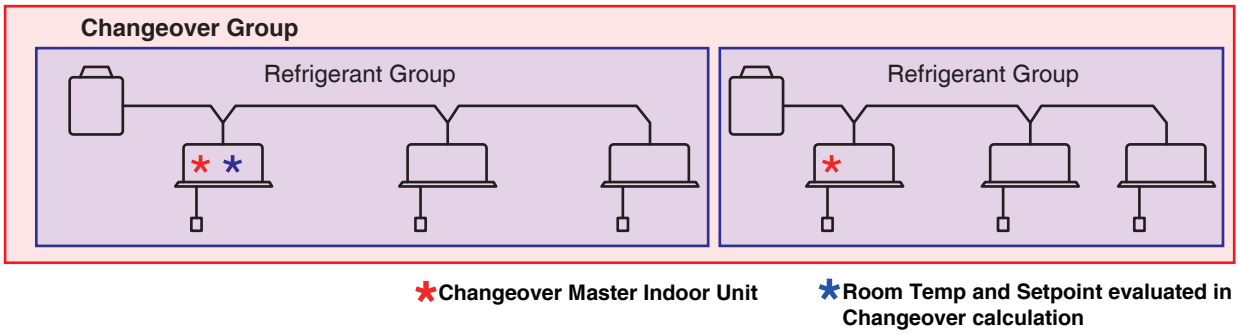
Example #1 = Dual Setpoints



Example #2 = Single Setpoints



Fixed method is typically used for Heat Pump systems and Heat Recovery systems with multiple indoor units connected to the same port of the Branch Selector Box.



The weight setting for the indoor unit will be not be considered in this method.

NOTE

- Even if the first indoor unit registered in the changeover group (master indoor unit) is Off, the unit shall be subject to control using its room temperature and setpoint.
- Even if an indoor unit in a changeover group is Off, the operation mode of that indoor unit are still subject to control.
- If the operation mode of the master indoor unit of the changeover group is Fan or Dry, it will not be subject to the Auto Changeover function. Therefore, indoor units registered in the changeover group will remain unchanged.

2. [Average method]

This method enables the iTM to determine the operation mode by calculating the average room temperatures and the average setpoints of all indoor units in the changeover group.

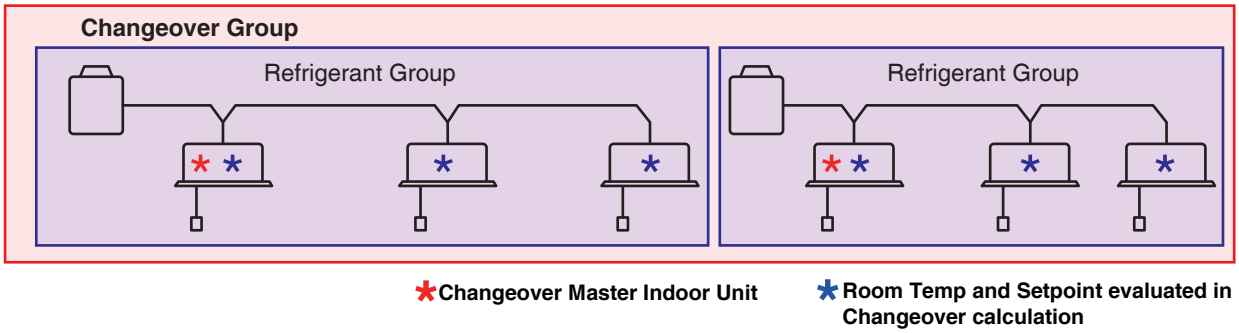
A weight (0-3) can be added to each indoor unit in the changeover group. The default setting is 1.

The weight 0 (zero) means the indoor unit is not included in the average.

The weight 2 or 3 means the indoor unit is counted 2 or 3 times in the averaging calculation, respectively.

It is optimal in cases where you want to evaluate temperatures throughout a large physical space, for example, when multiple indoor units are installed in the hallways.

The Average method uses the same changeover sequence explained in the Fixed method with the primary and secondary changeover deadbands.



NOTE

- Even if an indoor unit is Off, the unit shall be subject to control using its room temperature and setpoint.
- Even if an indoor unit is Off, the operation mode of that indoor unit are still subject to control.
- Indoor units in Fan or Dry operation mode will be excluded from average room temperature and average setpoint calculations.

  Indoor units excluded from the above calculation will switch to Cool or Heat when the Auto Changeover function switches operation between Cool and Heat.

3. [Individual method]

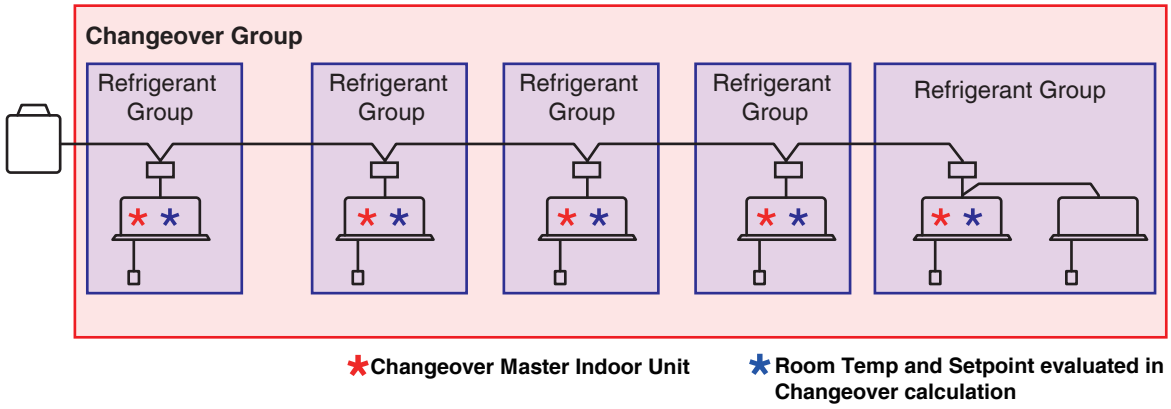
This method enables switching between the cooling and heating modes individually for each indoor unit in the changeover group.

This method is the easiest way to configure Auto Changeover for multiple Fixed changeover groups for each refrigerant group in a Heat Recovery system with the same changeover configuration.

The Individual method uses the same changeover sequence explained in the Fixed method with the primary and secondary changeover deadbands.

The weight setting for the indoor unit will be not be considered in this method.

For example, in a hotel or nursing home where there are many refrigerant groups which can be can configured with the same changeover configuration.



In this method, although the room temperature and setpoint of each indoor unit is evaluated individually and the changeover condition is met, the mode will not change on the indoor unit which is not a Changeover Master Indoor unit. This is the case for the far right indoor unit above. The operation mode of this unit will follow the Changeover Master Indoor unit in the Refrigerant Group.

NOTE

- Even if an indoor unit is Off, the unit shall be subject to control using its room temperature and setpoint.
- Even if an indoor unit is Off, the operation mode of that indoor unit are still subject to control.
- Indoor units in Fan or Dry operation mode will not be subject to the Auto Changeover function.

4. [Vote method]

This method enables user to configure the system mode changeover based upon the greater demand for cooling or heating in the Changeover Group.

For example, if the total cooling demand is greater than the total heating demand, to satisfy the cooling demand first the cooling mode is selected. Once the total cooling demand has become less than the total heating demand the mode is switched to heating.

In each indoor unit, the cooling demand is calculated based upon the difference between the room temperature and cooling setpoint. If the room temperature falls below the primary cool changeover point (cool setpoint plus the primary changeover deadband) the cooling demand is 0 (zero). Then the total cooling demand is calculated as the sum of each indoor unit's cooling demand.

The opposite is true for the total heating demand.

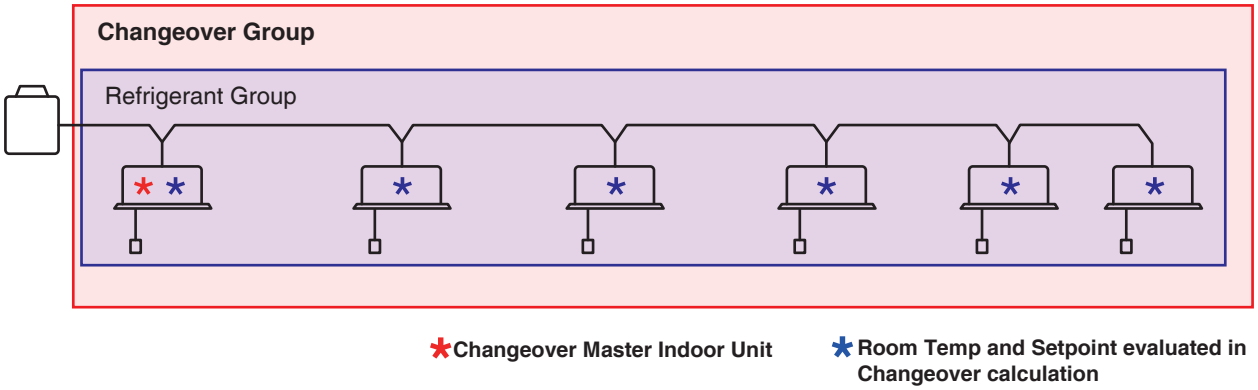
A weight (0-3) can be added to each indoor unit's demand in the changeover group. The default setting is 1.

The weight 0 (zero) means the indoor unit's demand is not added in the total demand, so the indoor unit's demand is considered to be 0 (zero).

The weight 2 or 3 means the indoor unit's demand is added 2 or 3 times in the total demand, respectively.

In addition, Vote supports a Heating Override option, which prioritizes switching to the heating mode if at least one room temperature falls below the secondary heat changeover point (heat setpoint minus the secondary changeover deadband) even if the total cooling demand is greater than the total heating demand.

The Vote method provides you with a pseudo Heat Recovery for Heat Pump system or multiple indoor units connected to the same Branch Selector Box.



NOTE

Indoor units that are Off, or in Fan or Dry operation mode, will be excluded from demand calculations.

Indoor units excluded from the above calculation will switch to Cool or Heat when the Auto Changeover function switches operation between Cool and Heat.

Setting up the Auto Changeover

The following examples describes Auto Changeover settings for Fixed, Average, Individual, and Vote methods.

[Fixed method]

Group name	First Floor Office	
Indoor unit (Representative model = Indoor unit 1)	Indoor unit 1 (Changeover Master Unit)	Indoor unit 2
	Indoor unit 3	Indoor unit 4
Primary Changeover Deadband	2°F (adjustable 1-4°F)	
Secondary Changeover Deadband	1°F (adjustable 1-4°F)	
Heat Over Ride	—	
Reference Method	[Fixed]	

[Average method]

Group name	Common Areas			
Indoor unit	Indoor unit 1 (Changeover Master Unit)	Weight 3	Indoor unit 2	Weight 1
	Indoor unit 3	Weight 1	Indoor unit 4	Weight 1
Primary Changeover Deadband	2°F (adjustable 1-4°F)			
Secondary Changeover Deadband	1°F (adjustable 1-4°F)			
Heat Over Ride	—			
Reference Method	[Average]			

[Individual method]

Group name	Hotel Guest Rooms	
Indoor unit	Indoor unit 1 (Changeover Master Unit)	Indoor unit 2 (Changeover Master Unit)
	Indoor unit 3 (Changeover Master Unit)	Indoor unit 4 (Changeover Master Unit)
Primary Changeover Deadband	2°F (adjustable 1-4°F)	
Secondary Changeover Deadband	1°F (adjustable 1-4°F)	
Heat Over Ride	—	
Reference Method	[Individual]	

[Vote method]

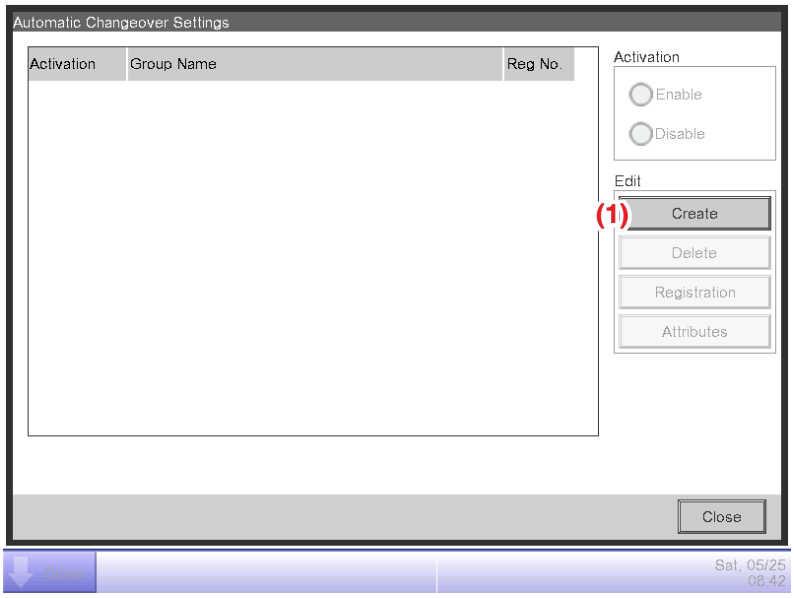
Group name	Second Floor Offices			
Indoor unit	Indoor unit 1 (Changeover Master Unit)	Weight 3	Indoor unit 2	Weight 1
	Indoor unit 3	Weight 1	Indoor unit 4	Weight 1
Primary Changeover Deadband	2°F (adjustable 1-4°F)			
Secondary Changeover Deadband	1°F (adjustable 1-4°F)			
Heating Over Ride	Enable			
Reference Method	[Vote]			

[Fixed method]

1. Create an Auto Changeover group (Name the Group)
2. Set attributes (Auto Changeover control settings)
3. Register indoor units
4. Specify the representative indoor unit
5. Enable the group

1. Create an Auto Changeover group (Name the Group)

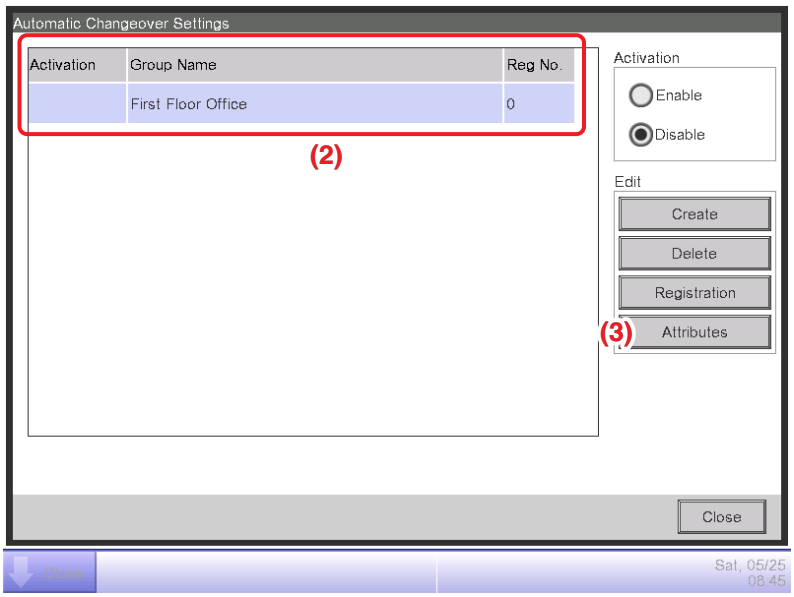
Touch the Auto Changeover button on the Auto Ctrl tab of the Menu List screen and display the Auto Changeover Settings screen.



Touch the **Create** button **(1)** and, in the Group Name input dialog that appears, enter "**First Floor Office**" as the group name.

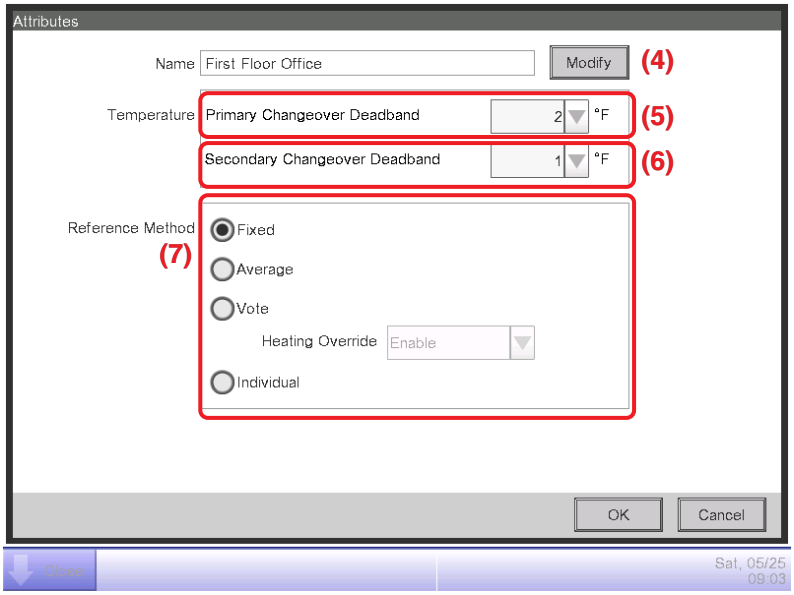
2. Set attributes (Auto Changeover control settings)

Set up the control attributes of the **First Floor Office** group.



Touch "**First Floor Office**" in the Group Name list **(2)** and then touch the **Attributes** button **(3)**.

The Attribute screen appears.



You can use the **Modify** button **(4)** to change the Group Name.

Touch the **Primary Changeover Deadband** drop down menu **(5)** and select "**2°F**".

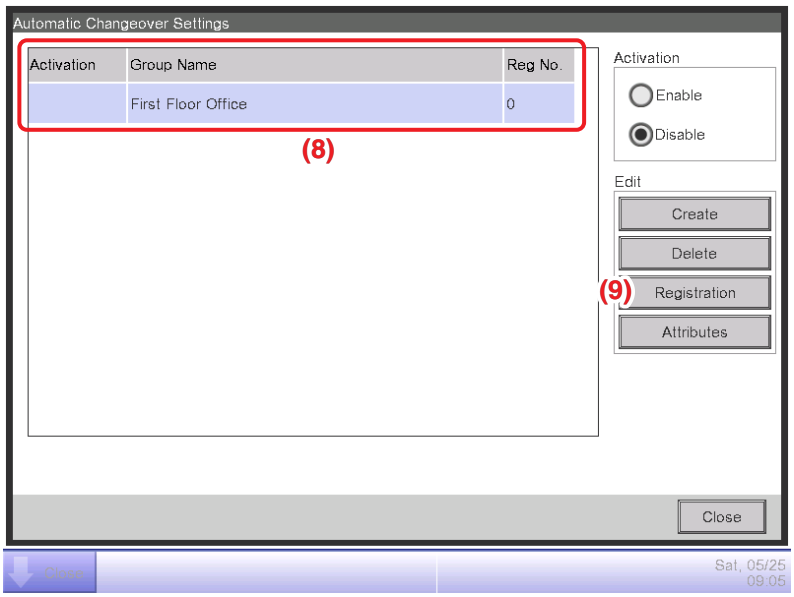
Touch the **Secondary changeover Deadband** drop down menu **(6)** and select "**1°F**".

In the **Reference Method** setting area **(7)**, select the "**Fixed**" radio button.

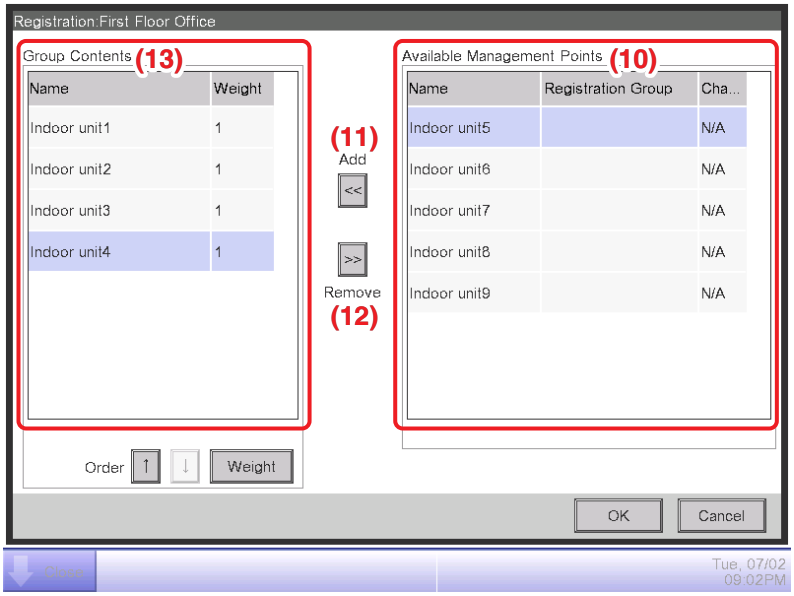
When finished, touch the OK button to return to the Auto Changeover Settings screen.

3. Register indoor units

Register the indoor units you want to control under the group "**First Floor Office**".



Touch "**First Floor Office**" in the Group Name list **(8)** and then touch the **Registration** button **(9)**.

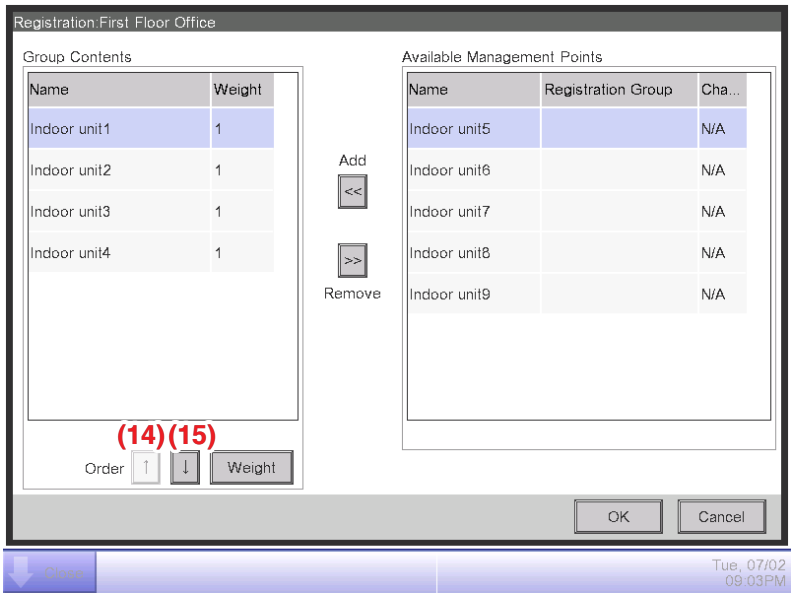


Under "**Available Management Points**" **(10)**, the management points you can include in the Auto Changeover group are listed.

Select each Indoor unit 1 to 4 and touch the **Add** button **(11)**. The selected indoor units are now listed under Group Contents **(13)**.

To remove a registered indoor unit from the Group Contents list, select it and touch the **Remove** button **(12)**.

4. Specify the representative indoor unit



Among those listed under Group Contents, the indoor unit at the top position is regarded as the representative unit.

Here, make sure that Indoor unit 1 is listed at the top position.

If Indoor unit 1 is not at the top position, select Indoor unit 1 in the Group Contents list and touch the ↑ button **(14)** to change the position in the list.

Similarly, the ↓ button **(15)** can be used to move the position in the list downwards.

When finished, touch the OK button to return to the Auto Changeover Settings screen.

Now,

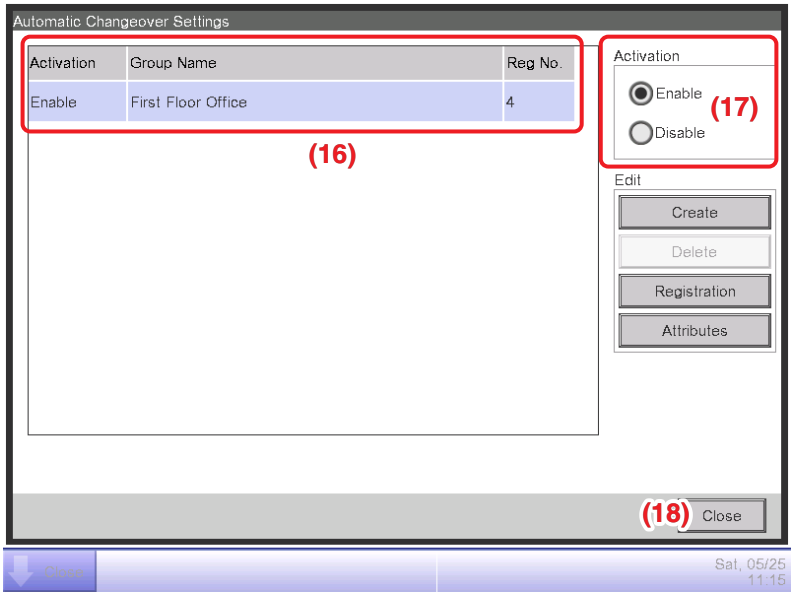
Four indoor units: Indoor unit 1 (Changeover Master Unit), Indoor unit 2,
Indoor unit 3, Indoor unit 4
Group Name: **First Floor Office**
Primary Changeover Deadband: **2°F**
Secondary Changeover Deadband: **1°F**
Reference Method: **Fixed**

the Auto Changeover settings have been completed as above.

5. Enable the group

The group is disabled by default after creation.

Select and enable the group.



In the Group Name list **(16)**, select the **Group** and, using the **Activation** radio buttons **(17)** select Enable.

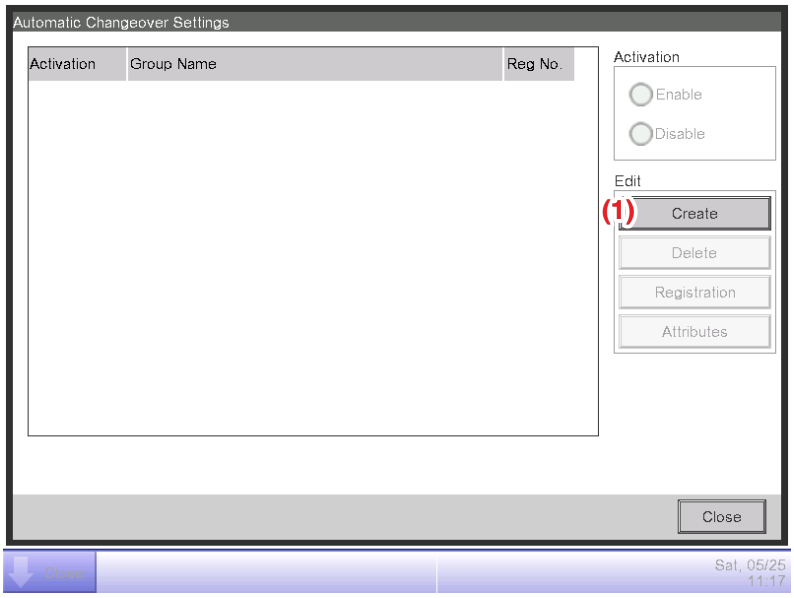
Touch the **Close** button **(18)** to return the Menu List screen.

[Average method]

1. Create an Auto Changeover group (Name the Group)
2. Set attributes (Auto Changeover control settings)
3. Register indoor units
4. Set the weight
5. Enable the group

1. Create an Auto Changeover group (Name the Group)

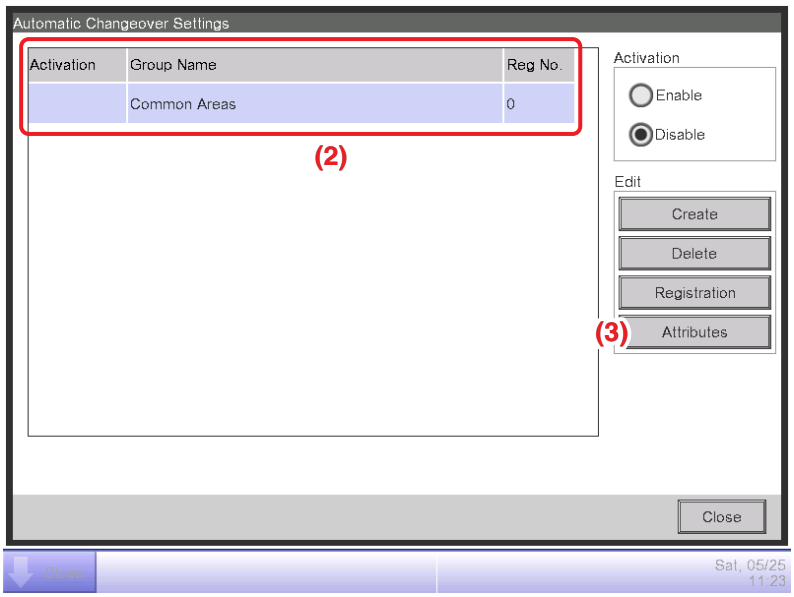
Touch the Auto Changeover button on the Auto Ctrl tab of the Menu List screen and display the Auto Changeover Settings screen.



Touch the **Create** button **(1)** and, in the Group Name input dialog that appears, enter "**Common Areas**" as the group name.

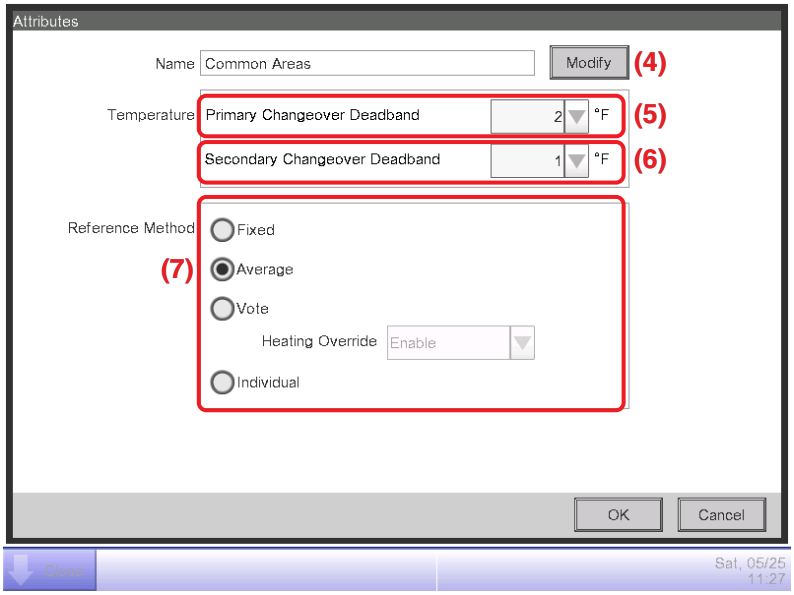
2. Set attributes (Auto Changeover control settings)

Set up the control attributes of the **Common Areas** group.



Touch **Common Areas** in the Group Name list **(2)** and then touch the **Attributes** button **(3)**.

The Attribute screen appears.



You can use the **Modify** button **(4)** to change the Group Name.

Touch the **Primary Changeover Deadband** drop down menu **(5)** and select "**2°F**".

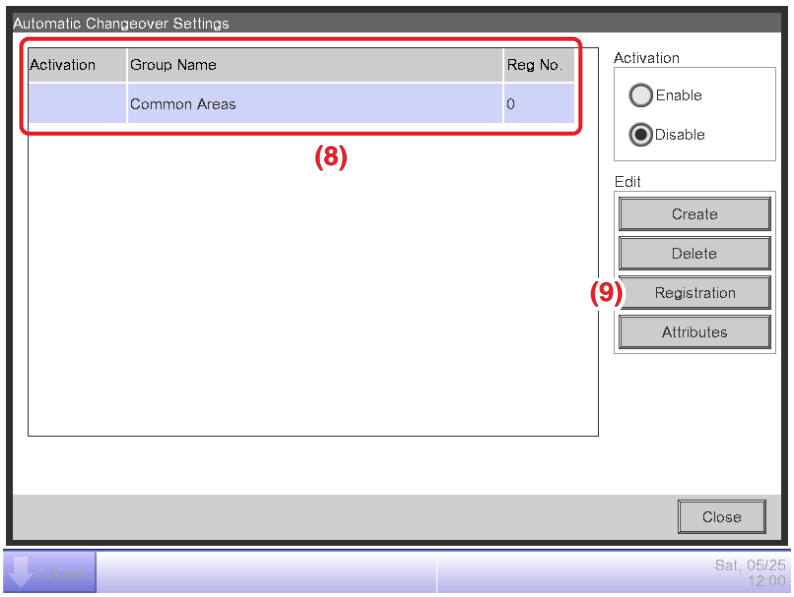
Touch the **Secondary Changeover Deadband** drop down menu **(6)** and select "**1°F**".

In the **Reference Method** setting area **(7)**, select the **Average** radio button.

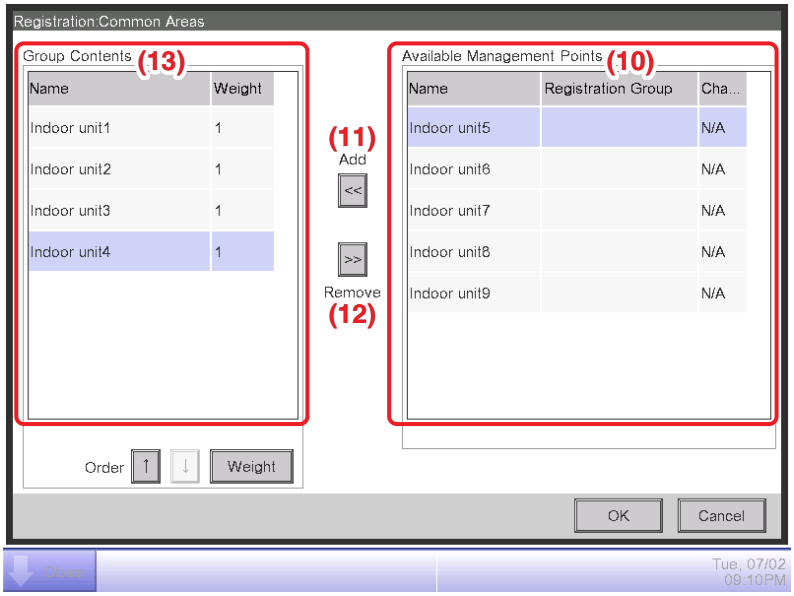
When finished, touch the OK button to return to the Auto Changeover Settings screen.

3. Register indoor units

Register the indoor units you want to control under the group “**Common Areas**”.



Touch “**Common Areas**” in the Group Name list **(8)** and then touch the **Registration** button **(9)**.



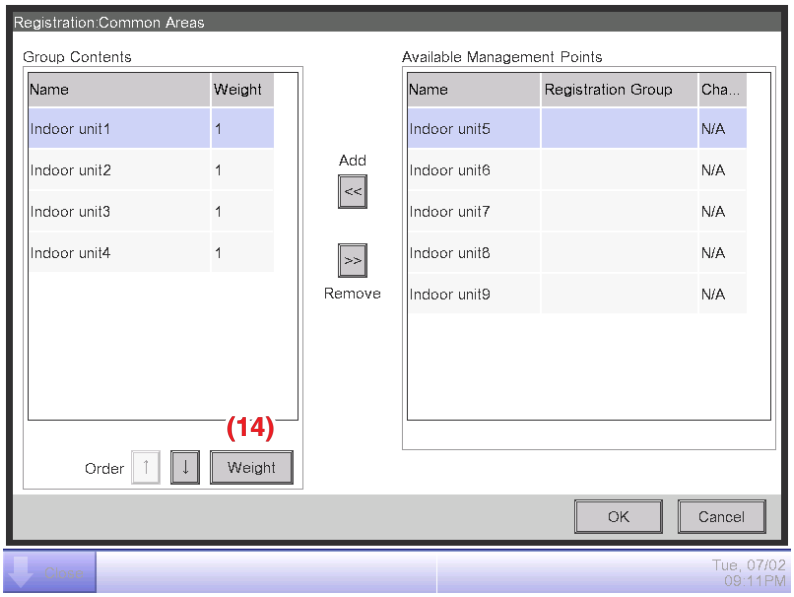
Under “**Available Management Points**” **(10)**, the management points you can include in the Auto Changeover group are listed.

Select each Indoor unit 1 to 4 and touch the **Add** button **(11)**. The selected indoor units are now listed under Group Contents **(13)**.

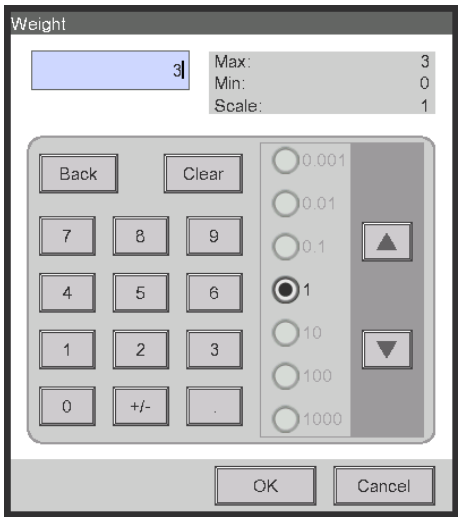
To remove a registered indoor unit from the Group Contents list, select it and touch the **Remove** button **(12)**.

4. Set the weight

Set the weight for each indoor unit.



Select Indoor unit 1 and then touch the **Weight** button **(14)**. The Numerical Input dialog appears.



For Indoor unit 1, set the weight to “**3**”.

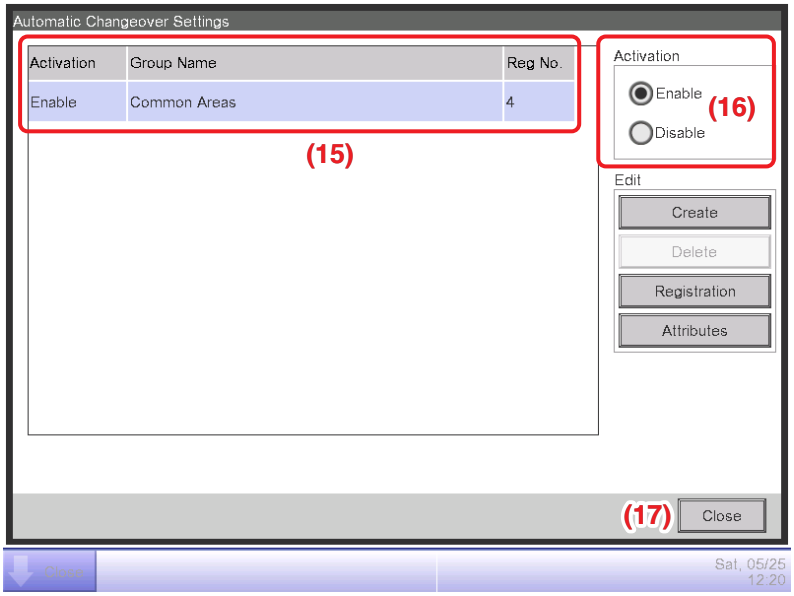
For Indoor unit 2 to 4, use the default weight“**1**”.

When finished, touch the OK button to return to the Auto Changeover Settings screen.

5. Enable the group

The group is disabled by default after creation.

Select and enable the group.



In the Group Name list **(15)**, select the **Group**, using the **Activation** radio buttons **(16)** select Enable.

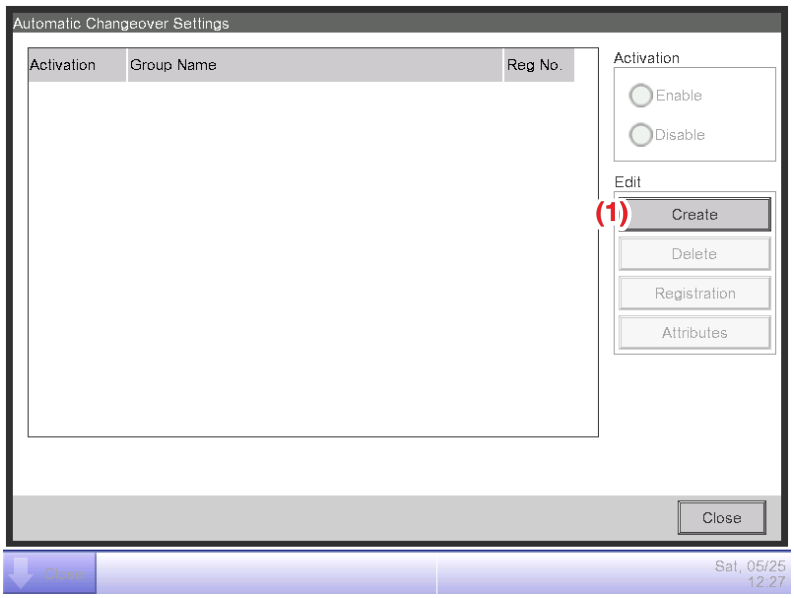
Touch the **Close** button **(17)** to return the Menu List screen.

[Individual method]

1. Create an Auto Changeover group (Name the Group)
2. Set attributes (Auto Changeover control settings)
3. Register indoor units
4. Enable the group

1. Create an Auto Changeover group (Name the Group)

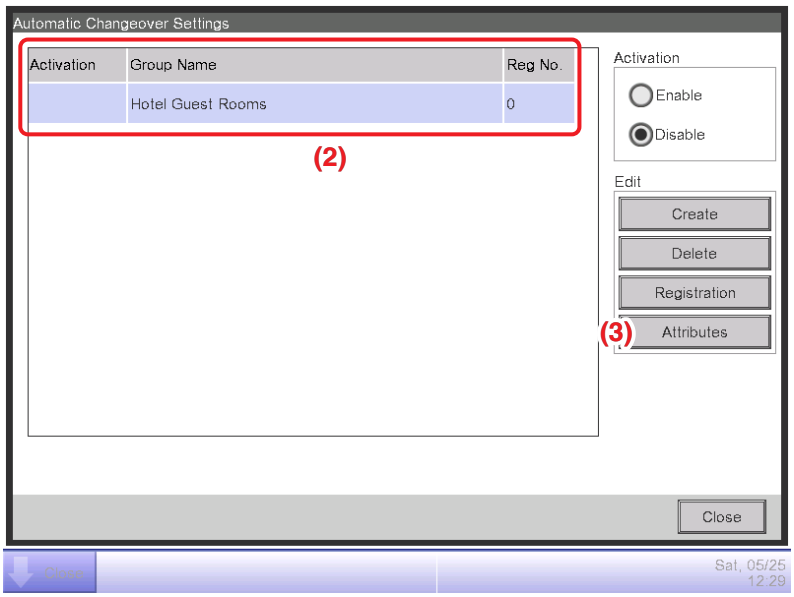
Touch the Auto Changeover button on the Auto Ctrl tab of the Menu List screen and display the Auto Changeover Settings screen.



Touch the **Create** button **(1)** and, in the Group Name input dialog that appears, enter "**Hotel Guest Rooms**" as the group name.

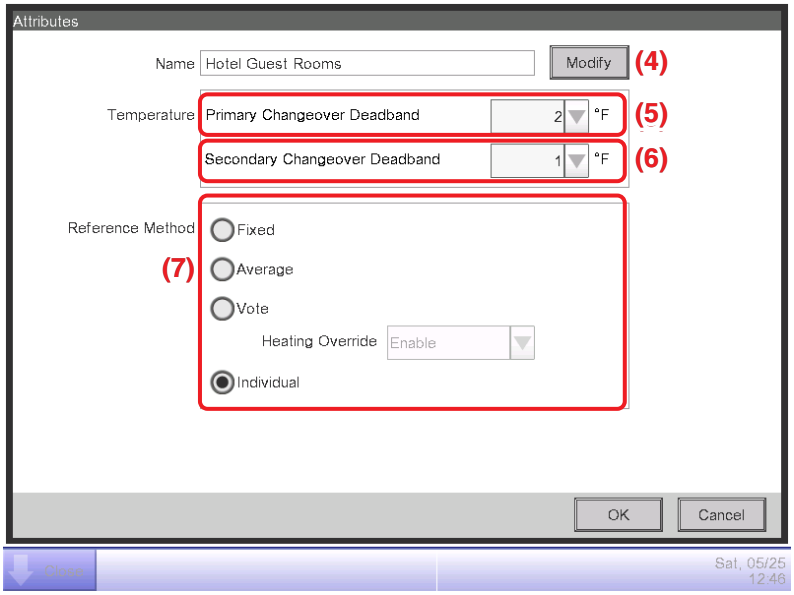
2. Set attributes (Auto Changeover control settings)

Set up the control attributes of the **Hotel Guest Rooms** group.



Touch "**Hotel Guest Rooms**" in the Group Name list **(2)** and then touch the **Attributes** button **(3)**.

The Attribute screen appears.



You can use the **Modify** button **(4)** to change the Group Name.

Touch the **Primary Changeover Deadband** drop down menu **(5)** and select "**2°F**".

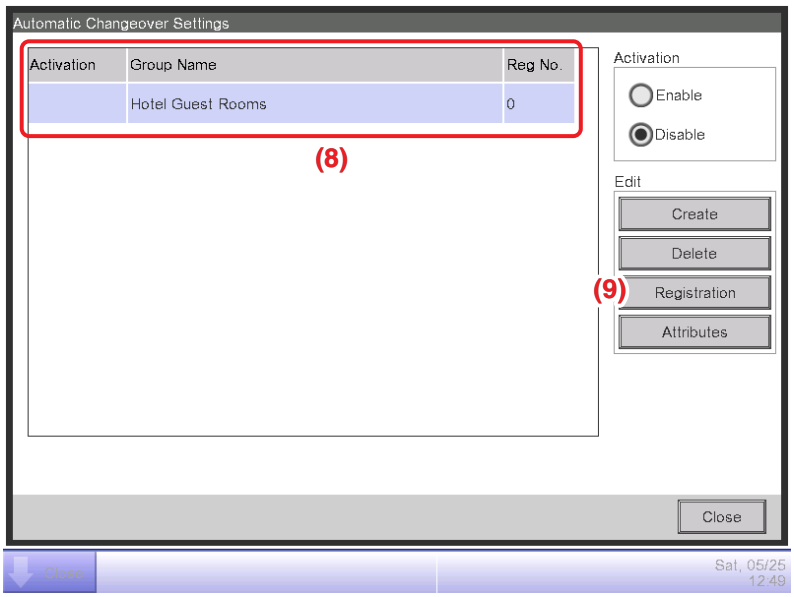
Touch the **Secondary Changeover Deadband** drop down menu **(6)** and select "**1°F**".

In the **Reference Method** setting area **(7)**, select the **Individual** radio button.

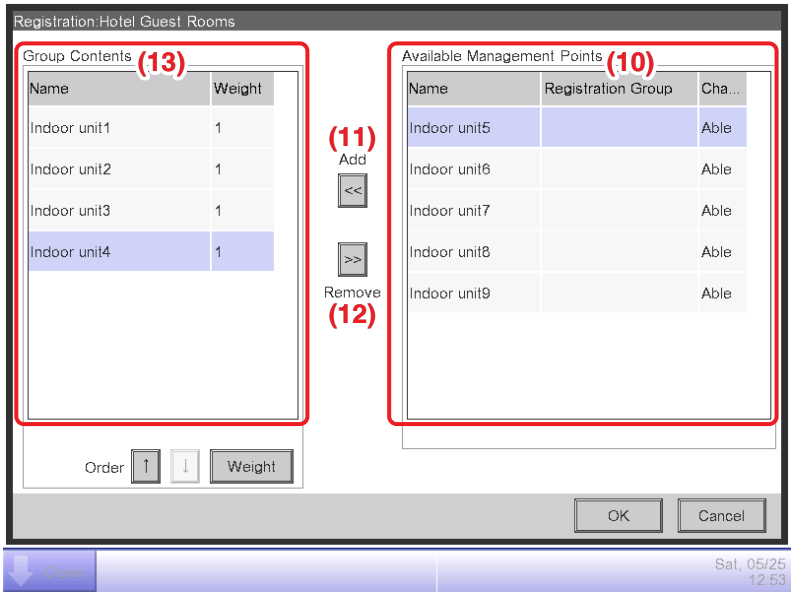
When finished, touch the OK button to return to the Auto Changeover Settings screen.

3. Register indoor units

Register the indoor units you want to control under the group “**Hotel Guest Rooms**”.



Touch “**Hotel Guest Rooms**” in the Group Name list **(8)** and then touch the **Registration** button **(9)**.



Under “**Available Management Points**” **(10)**, the management points are listed you can include in the Auto Changeover group.

Select each Indoor unit 1 to 4 and touch the **Add** button **(11)**. The selected indoor units are now listed under Group Contents **(13)**.

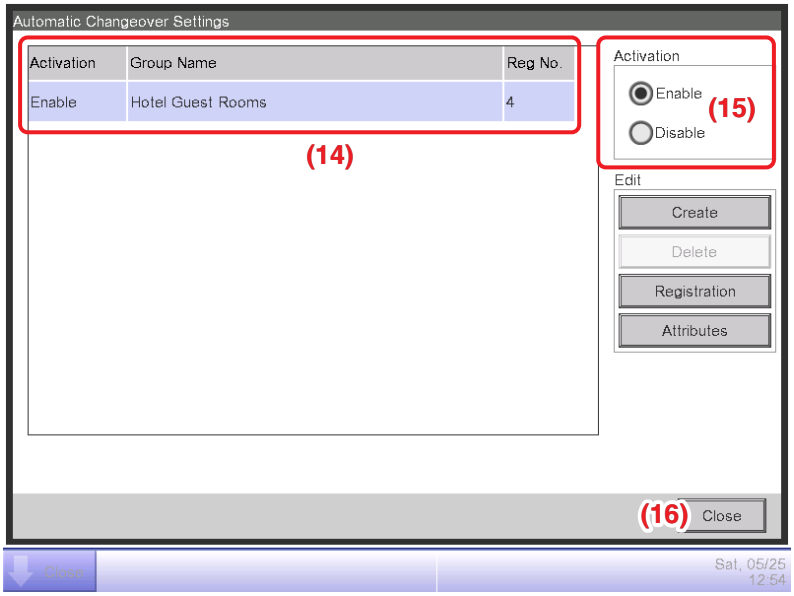
To remove a registered indoor unit from the Group Contents list, select it and touch the **Remove** button **(12)**.

When finished, touch the OK button to return to the Auto Changeover Settings screen.

4. Enable the group

The group is disabled by default after creation.

Select and enable the group.



In the Group Name list **(14)**, select the **Group** at which want to start control and, using the **Activation** radio buttons **(15)** select Enable.

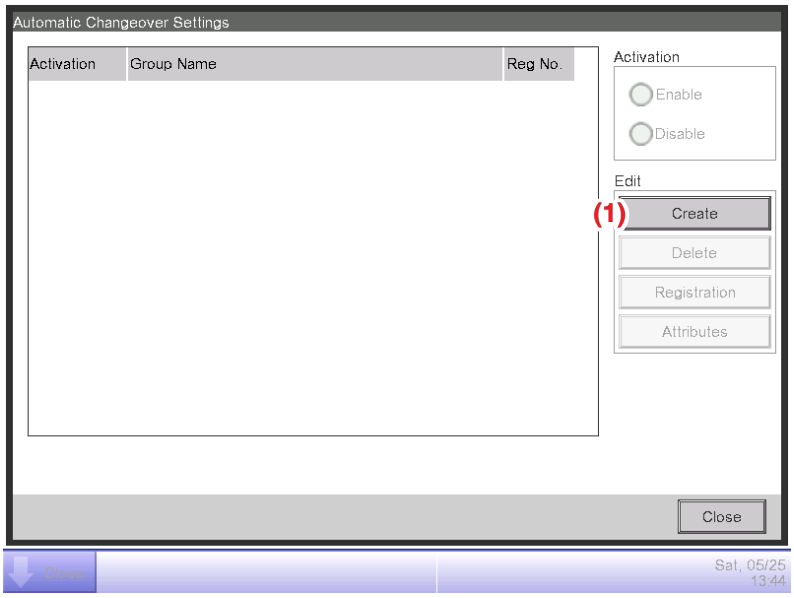
Touch the **Close** button **(16)** to return the Menu List screen.

[Vote method]

1. Create an Auto Changeover group (Name the Group)
2. Set attributes (Auto Changeover control settings)
3. Register indoor units
4. Set the weight
5. Enable the group

1. Create an Auto Changeover group (Name the Group)

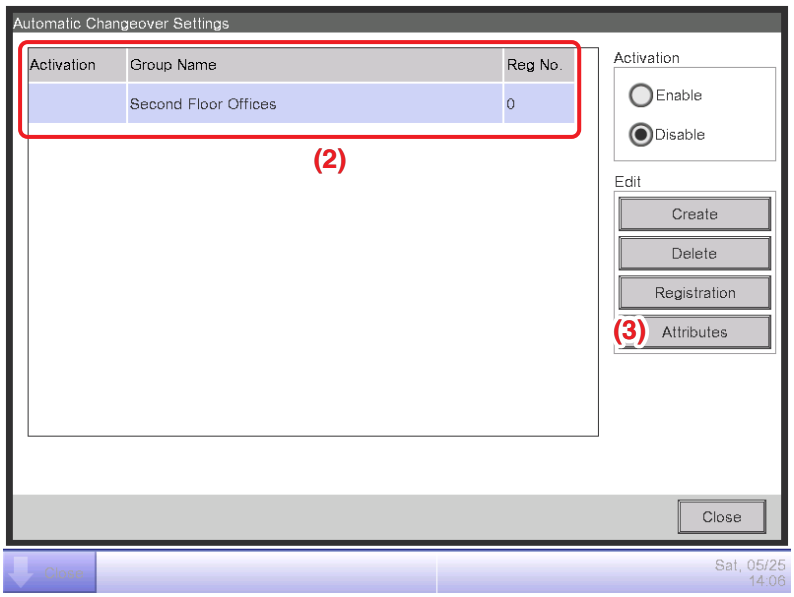
Touch the Auto Change Over button on the Auto Ctrl tab of the Menu List screen and display the Auto Changeover Settings screen.



Touch the **Create** button **(1)** and, in the Group Name input dialog that appears, enter "**Second Floor Offices**" as the group name.

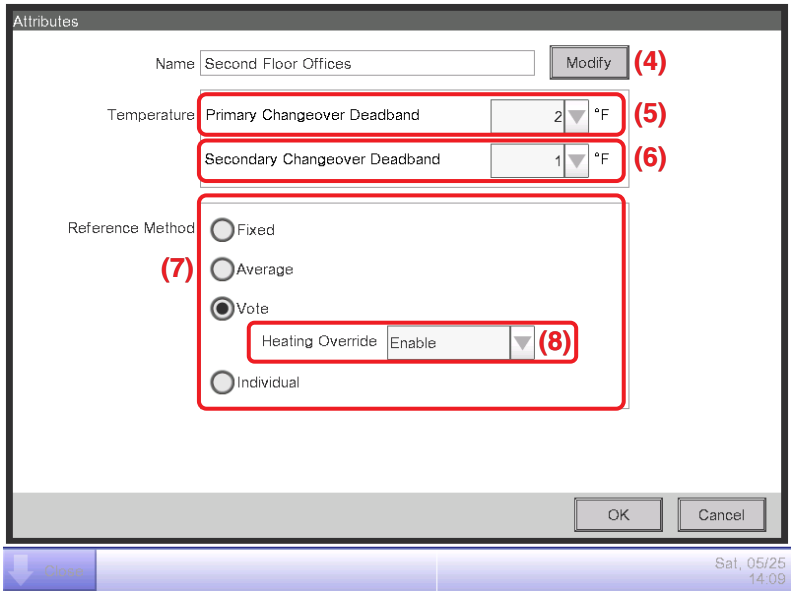
2. Set attributes (Auto Changeover control settings)

Set up the control attributes of the “**Second Floor Offices**” group.



Touch **Second Floor Offices** in the Group Name list **(2)** and then touch the **Attributes** button **(3)**.

The Attribute screen appears.



You can use the **Modify** button **(4)** to change the Group Name.

Touch the **Primary Changeover Deadband** drop down menu **(5)** and select “**2°F**”.

Touch the **Secondary Changeover** drop down menu **(6)** and select “**1°F**”.

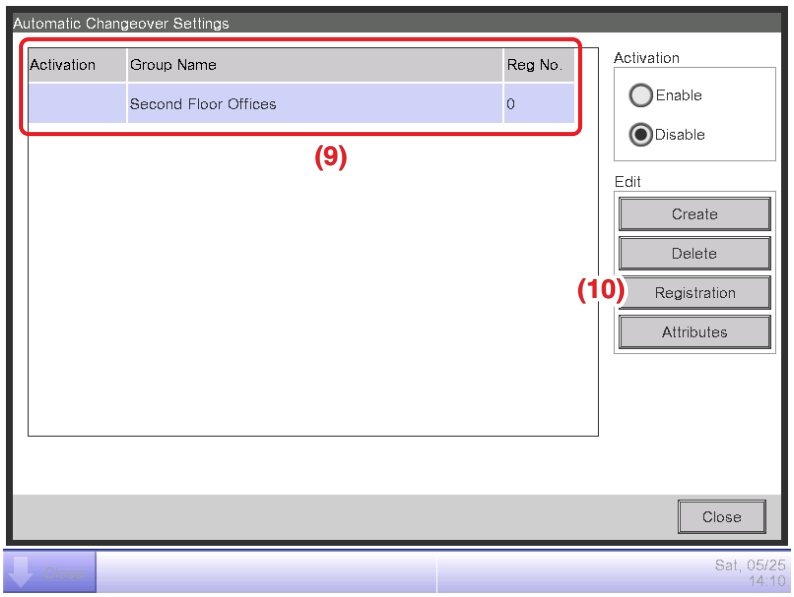
In the **Reference Method** setting area **(7)**, select the **Vote** radio button.

In the **Heating Override** drop down menu **(8)** , select Enable.

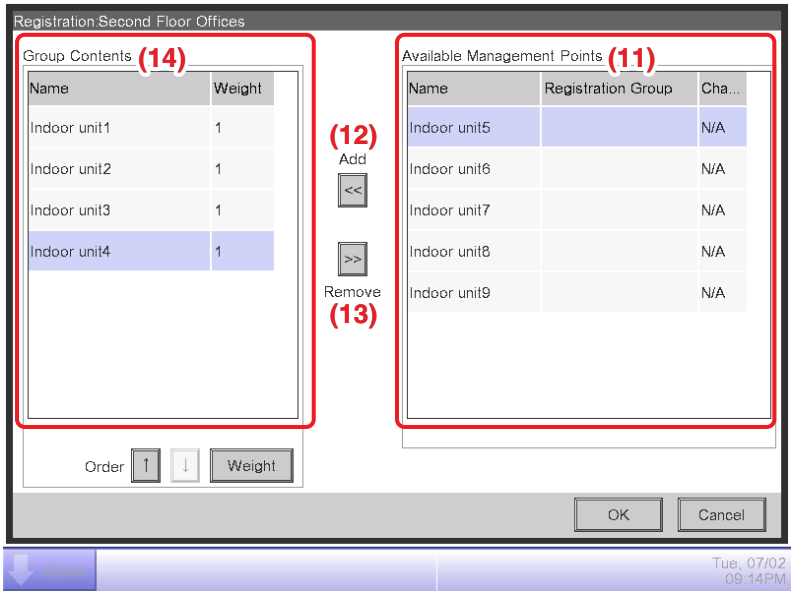
When finished, touch the OK button to return to the Auto Changeover Settings screen.

3. Register indoor units

Register the indoor units you want to control under the group "**Second Floor Offices**".



Touch "**Second Floor Offices**" in the Group Name list **(9)** and then touch the **Registration** button **(10)**.



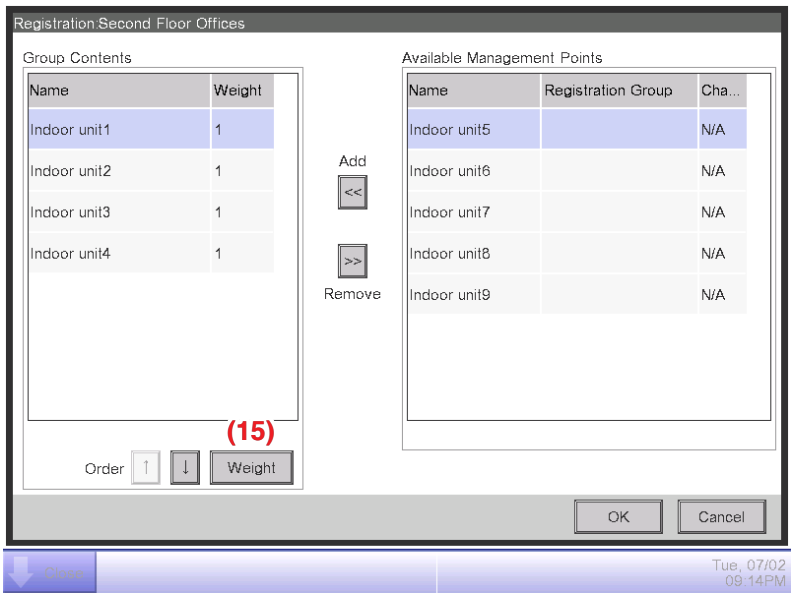
Under "**Available Management Points**" **(11)**, the management points you can include in the Auto Changeover group are listed.

Select each Indoor unit 1 to 4 and touch the **Add** button **(12)**. The selected indoor units are now listed under Group Contents **(14)**.

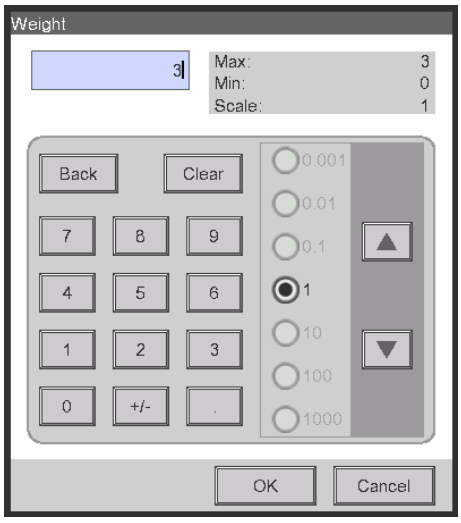
To remove a registered indoor unit from the Group Contents list, select it and touch the **Remove** button **(13)**.

4. Set the weight

Set the weight for each indoor unit registered as Group Contents.



Select Indoor unit 1 and then touch the **Weight** button **(15)**. The Numerical Input dialog appears.



For Indoor unit 1, set the weight to "**3**".

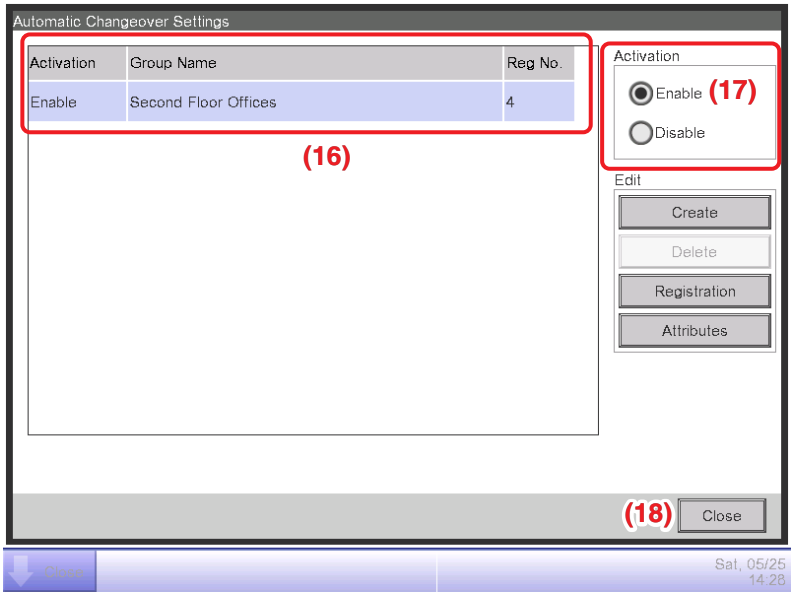
For Indoor unit 2 to 4, use the default weight "**1**".

When finished, touch the OK button to return to the Auto Changeover Settings screen.

5. Enable the group

The group is disabled by default after creation.

Select and enable the group.



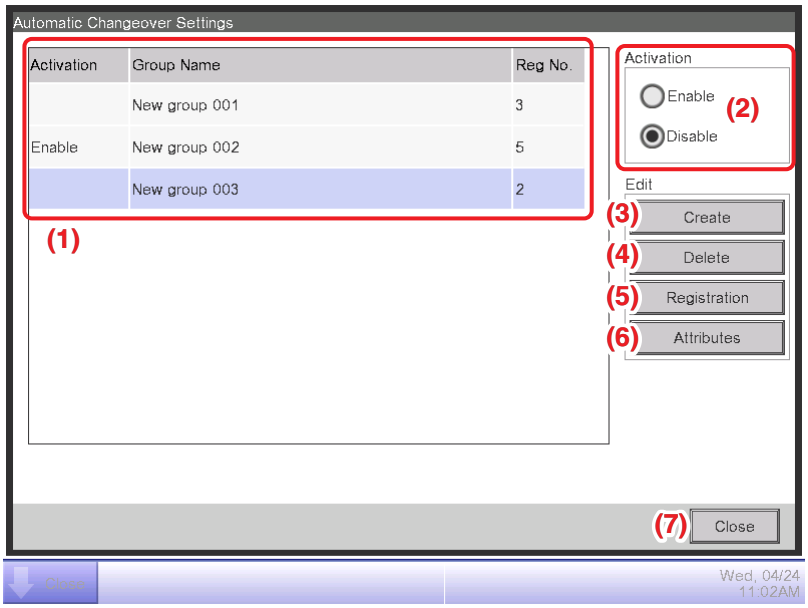
In the Group Name list **(16)**, select the **Group** at which want to start control and, using the **Activation** radio buttons **(17)**, select Enable.

Touch the **Close** button **(18)** to return the Menu List screen.

Detailed screen and button descriptions

- **Automatic Changeover Settings** screen

  This screen is displayed when you touch the Auto Changeover button on the Automatic Ctrl tab of the Menu List screen.



(1) Automatic Changeover group list

Displays registered Auto Changeover group. This list displays the following 3 items.

Activation: Displays whether the Auto Changeover function is enabled or disabled (blank) for each group.

Group Name: Displays the name of each group.

Reg No.: Displays the number of management points registered for each group.

(2) Activation radio buttons

Enable or disable the selected group.

(3) Create button

Displays the Name Setup dialog for creating a new group.

You can create up to 512 groups.

(4) Delete button

Deletes the selected group from the group list. Touching the button displays a deletion confirmation dialog.

(5) Registration button

Displays the Registration screen where you can register management points with the selected group in the group list.

(6) Attributes button

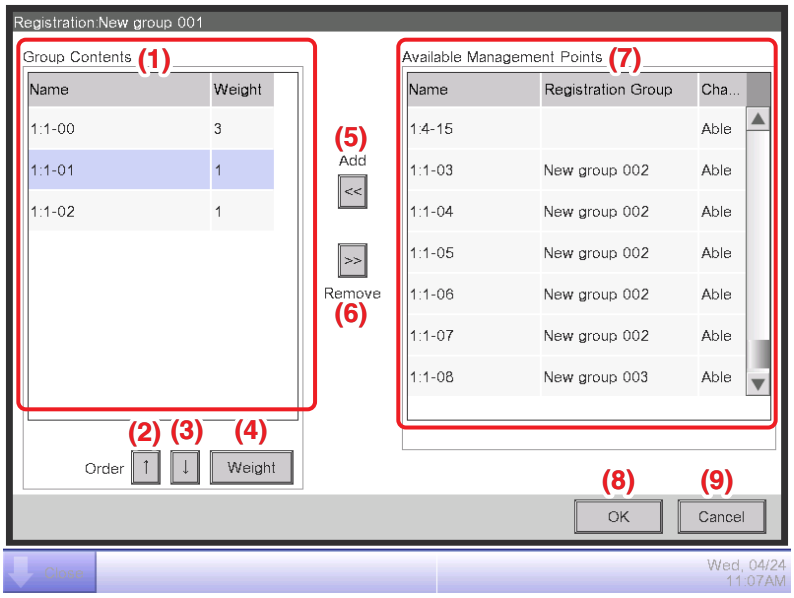
Displays the Attribute screen where you can change the attributes of the selected group in the group list.

(7) Close button

Closes the screen.

- **Registration** screen (Group contents registration screen)

This screen is displayed when you touch the Registration button on the Automatic Changeover Settings screen.



(1) Group Contents list

Displays the management points registered with the group being edited.

The displayed items are Management Point Name and Weighting Value.

(2) Order button ↑

Moves the selected management point one position up in the Group Contents list.

(3) Order button ↓

Moves the selected management point one position down in the Group Contents list.

(4) Weight button

Sets the weight of the selected management point in the Group Contents list.

Touching the button displays the Numerical Input dialog.

(5) Add button

Moves the selected management point from the Available Management Points list **(7)** to the Group Contents list **(1)** to register it with the group.

(6) Remove button

Remove the selected management point from the Group Contents list **(1)**.

(7) Available Management Points list

Lists the management points available for registration with the group. This list displays the following 3 items.

Name: Displays the name of each management group that can be registered with the group.

Registration Group: Displays the group with which each management group is currently registered. (Left blank if not registered.)

Changeover Option: Displays whether or not each management point has the Changeover option.

(8) OK button

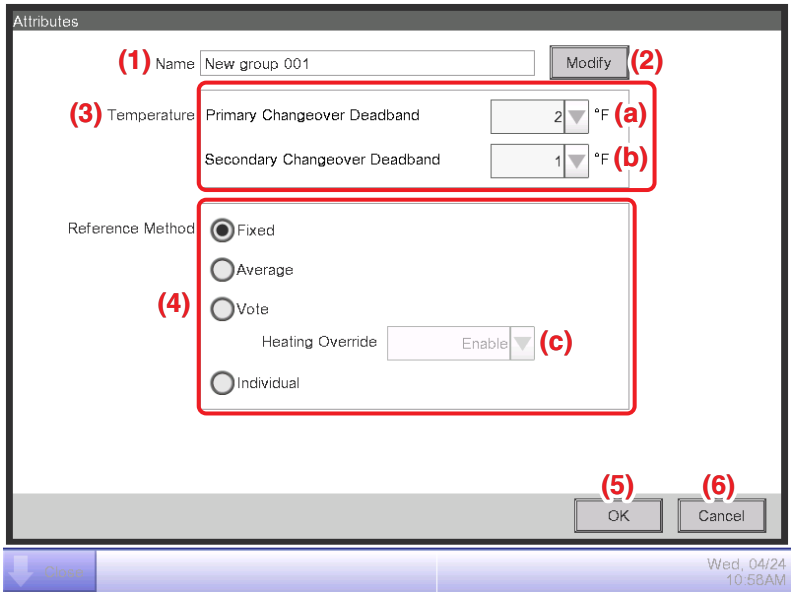
Saves the edit and closes the screen.

(9) Cancel button

Cancels the edit and closes the screen.

- **Attributes** screen

This screen is displayed when you touch the Attributes button on the Automatic Changeover group list screen.



(1) Name

Displays the name of the current Auto Changeover group.

(2) Modify button

Touching the button displays the Name Setup dialog where you can modify the group name. Set up a name using 1 to 32 characters.

(3) Temperature setting area

Displays the following temperature settings.

(a) Primary Changeover Deadband drop down menu

Set up the Auto Changeover temperature.

(b) Secondary Changeover Deadband drop down menu

Set up the Auto Changeover prohibition time disabled temperature.

(4) Reference Method setting area

Set up the operation mode the Auto Changeover group by selecting from the following 4 radio buttons:

Fixed radio button

Average radio button

Vote radio button

Individual radio button

(c) Heating Override drop down menu

Enable/disable the Heating Override function.

The Heating Override drop down menu can be used to enable/disable the function only when the Vote radio button is selected.

(5) OK button

Saves the edit and closes the screen.

(6) Cancel button

Cancels the edit and closes the screen.

5-5 Checking an Emergency Stop

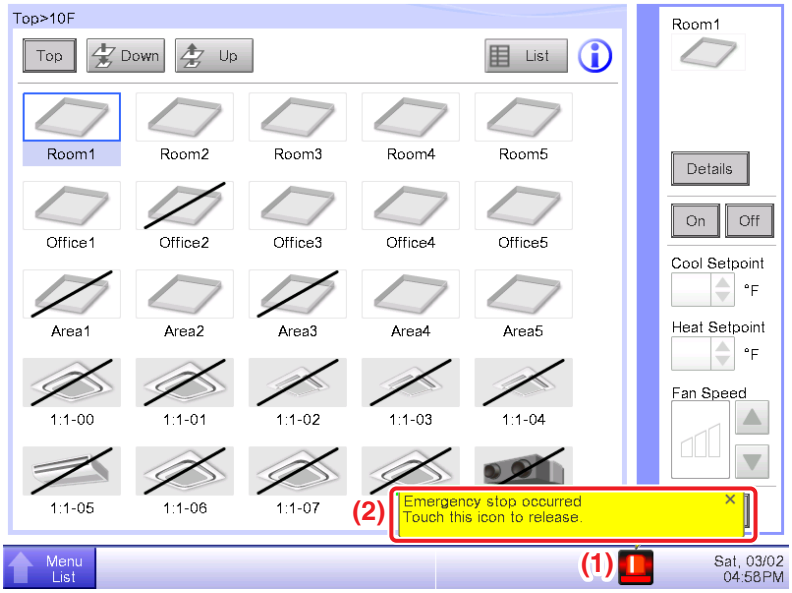
When an emergency such as fire occurs, the iTM automatically stops all management points and sounds the buzzer in conjunction with devices such as fire alarms. The iTM recovers all management points automatically when all disaster prevention signals disappear.

When the emergency stop is a result of an operating mistake during maintenance, you can recover the iTM forcibly.

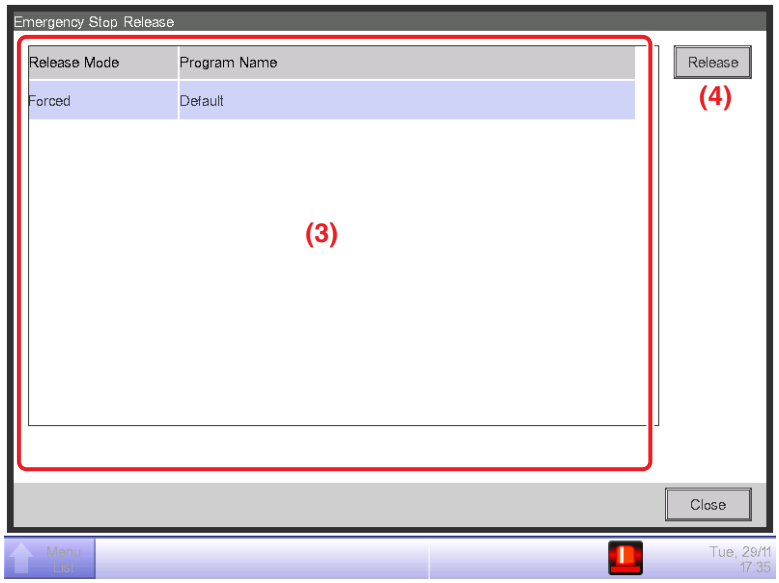
The following describes how to interpret the Emergency Stop view and release an emergency stop.

NOTE

- In the case of the system with Hydrobox, this function controls the air conditioners only, but unable to control the On/Off (Reheat) operation.
- If the optional function is enabled, you can divide the emergency stop by arbitrary disaster prevention zones (see “8-2 Setting up the Emergency Stop”).
- If the optional function is disabled, all air conditioners are stopped at once.



1. When an emergency stop occurs, an Emergency Stop icon appears in **(1)** and the buzzer sounds. Simultaneously, the message “Emergency stop occurred. Touch this icon to release.” appears in **(2)**.
2. Touching the icon **(1)** displays the Emergency Stop Release dialog.



3. **(3)** is the list of emergency stop programs. Select the program to release and touch the **Release** button **(4)**. (Only “Default” is displayed for programs if the optional function is disabled.) When the Confirm dialog appears, touch the Yes button to release the emergency stop.

NOTE

- To create an arbitrary Emergency Stop program, the optional function must be enabled.
- Depending on the connection status of the equipment, emergency stop function may not be operated. (Communication error or equipment error, etc.)

5-6 Setting up the Setback

Outline

The Setback function keeps the room temperature at a moderate level with the setback setpoints when the indoor unit is off (when the room is unoccupied).

It only turns on the indoor unit if the room temperatures rises to meet the Cool Setback Setpoint in the Cooling mode or if the room temperature falls to meet the Heat Setback Setpoint in the Heating mode. Once the room temperature has recovered, it turns the indoor unit back off. Room temperature and Setback Setpoint are evaluated at each indoor unit every five minutes.

A guard timer keeps the indoor unit on for at least 30 minutes after Setback function turn on the indoor unit.

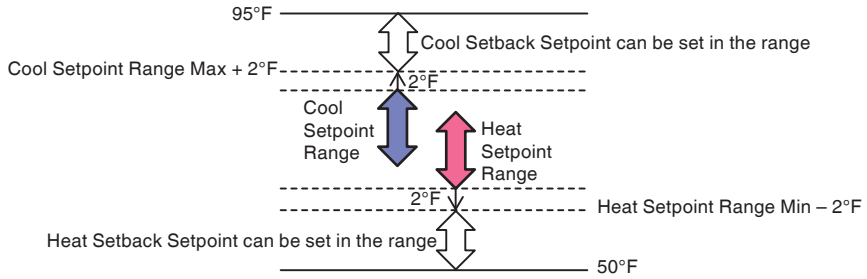
If the indoor unit is placed in Fan mode or Dry mode, the Setback function will not work.

NOTE

In the case of the system with Hydrobox, this function controls the air conditioners only, but unable to control the On/Off (Reheat) operation.

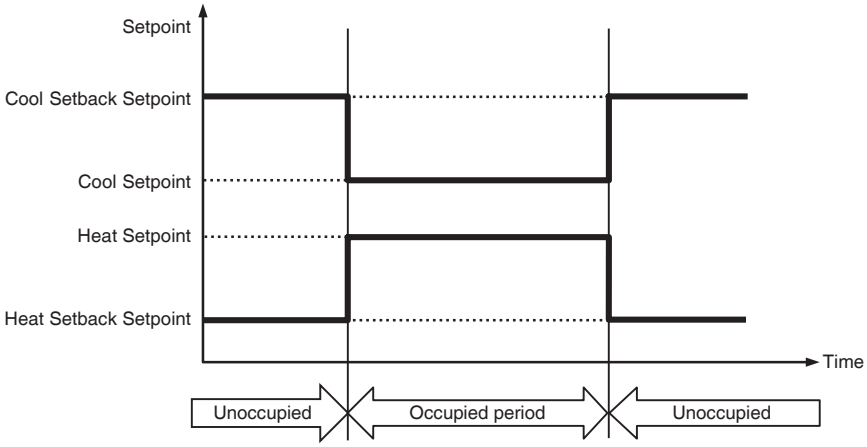
Setback setpoints can be set outside of the setpoint range as follows.

- Cool Setback Setpoint: Cool Setpoint Range Max + 2°F (1°C) to 95°F (35°C)
- Heat Setback Setpoint: Heat Setpoint Range Min – 2°F (1°C) to 50°F (10°C)

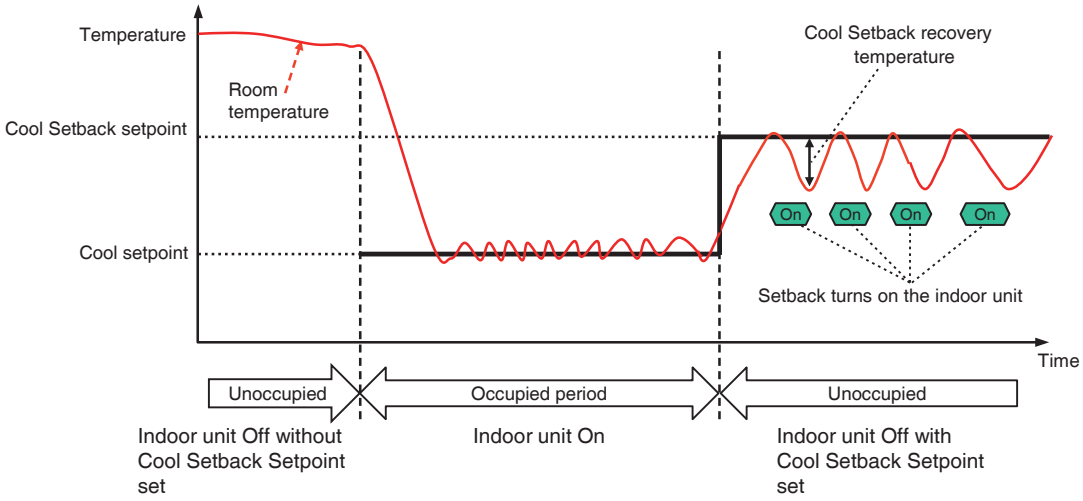


Setback setpoints can be set to the management point directly or Area by Schedule or manually.

Example: Typical Setpoints and Setback Setpoints Schedule



Example: Operation in Cooling mode



Notes on using the Setback function

1. When the Setback function turns on the indoor unit, if it is turned on by the iTM manually or by the Schedule function, the indoor units goes to the normal operation which means the indoor unit maintains the room temperature around the setpoint.
2. When the Setback function turns on the indoor unit, if it is turned off by the iTM manually, by the Schedule function, or by a remote controller, the Setback function maintains the room temperature below (or above) Setback setpoint.
3. Timer Extension function will not turn off the indoor unit which is turned on by the Setback function.

Setting up the Setback

Set up the Setback Setpoints from the Detailed Setup screen for the indoor unit.
It is also possible to set up the Setback Setpoints for the target indoor unit directly or by Area using the Schedule or Interlocking function.
The following example shows how to set up the Setback setpoints from the Detailed Setup screen.
See Schedule or Interlocking Control functions also. (“5-1 Set up a Schedule” and “8-1 Setting up the Interlocking Control”.)

Example:
Cool Setback setpoint: 80°F
Heat Setback setpoint: 65°F
Cool Setback recovery temperature: –4°F
Heat Setback recovery temperature: +4°F

1. Set up the Setback Setpoint
⇩
2. Set up the Setback Recovery Temperature

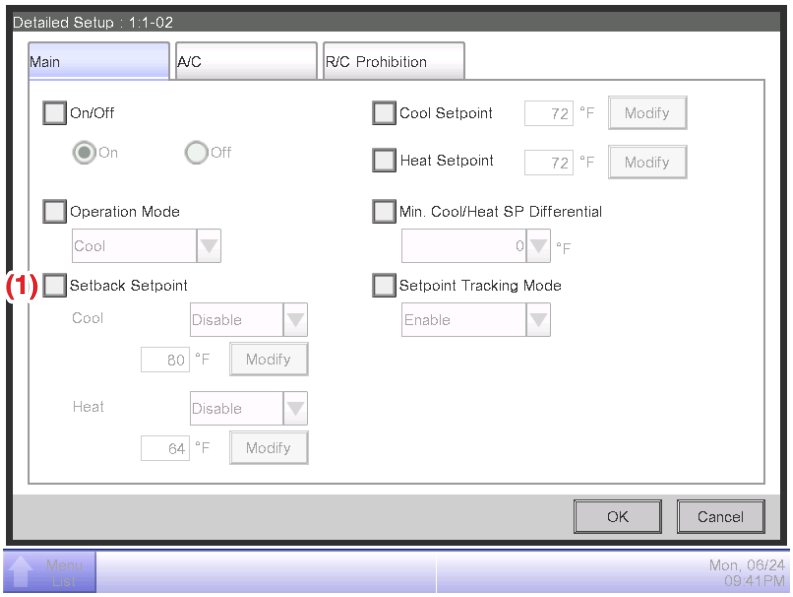
NOTE

If you set up different setback setpoint for the same indoor unit in conjunction with different functions (Detailed Setup screen for the indoor unit, Schedule event settings, etc.), the setback setpoint you set up last will take effect.

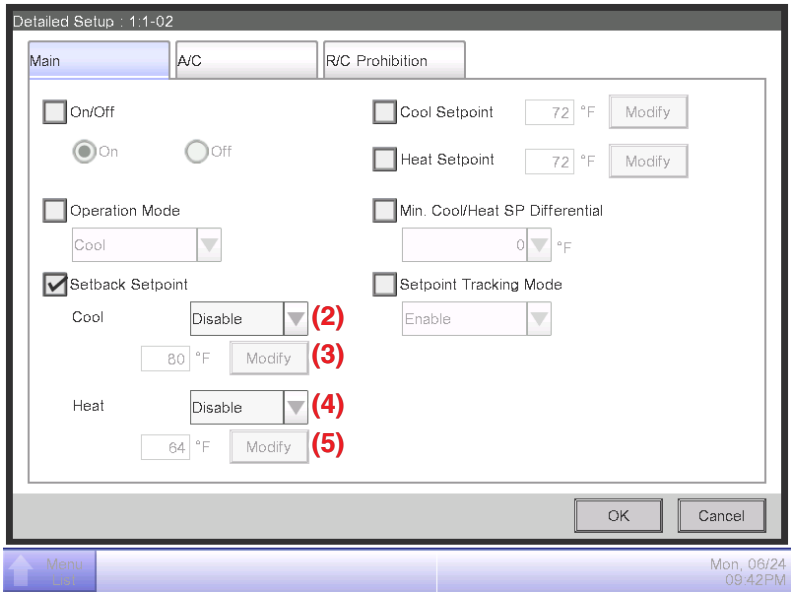
1. Set up the Setback Setpoint

From the Standard View screen, select the target indoor unit, touch the Setting button **(19)** (see "4-2 Standard View (Icon) Screen" and "4-3 Standard View (List) Screen"). The Detailed Setup screen appears.

On the Main tab, set up each Setback Setpoint.

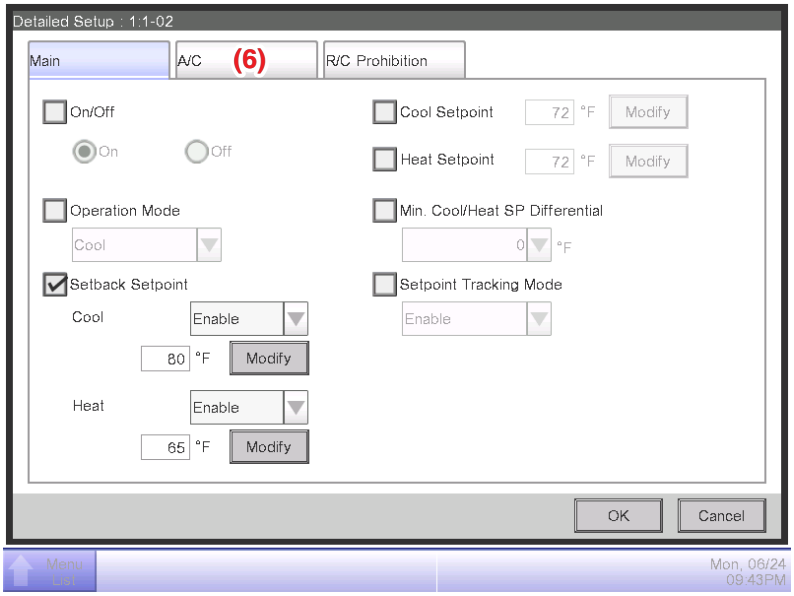


Selecting the **Setback Setpoint** check box **(1)** enables the drop down menus for the Setback Setpoint Enabled/Disabled.



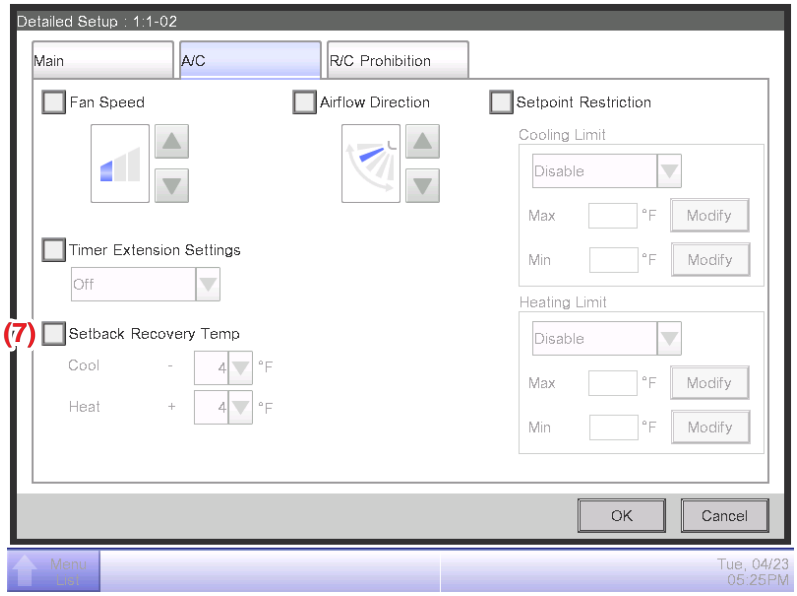
Select Enable in the **Cool** drop down menu **(2)**, touch the **Modify** button **(3)**, and enter 80°F in the Numerical Input dialog.

Similarly, select Enable in the **Heat** drop down menu **(4)**, touch the **Modify** button **(5)**, and enter 65°F in the Numerical Input dialog.

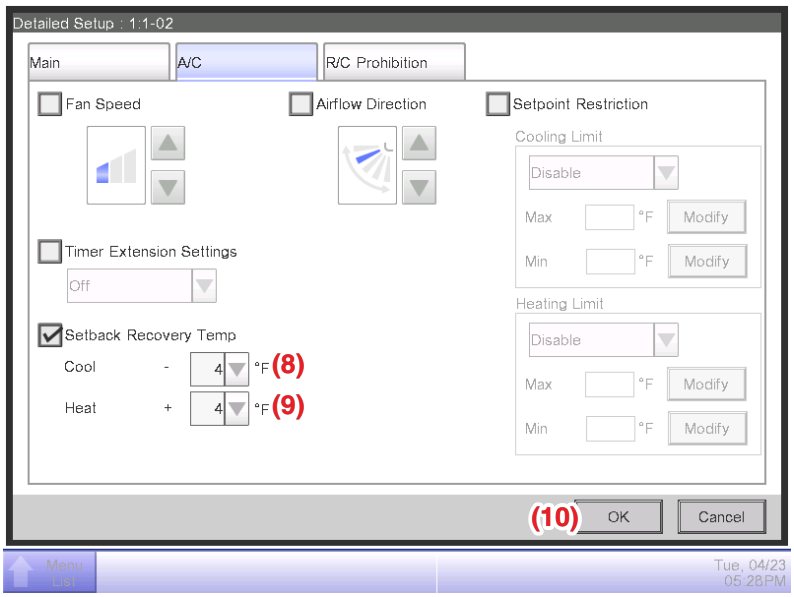


2. Set up the Setback Recovery Temperature

In the Detailed Setup screen, touch the A/C tab **(6)**.



Selecting the **Setback Recovery Temp** check box **(7)** enables the drop down menus for the Setback Recovery Temperatures (for cooling and heating).



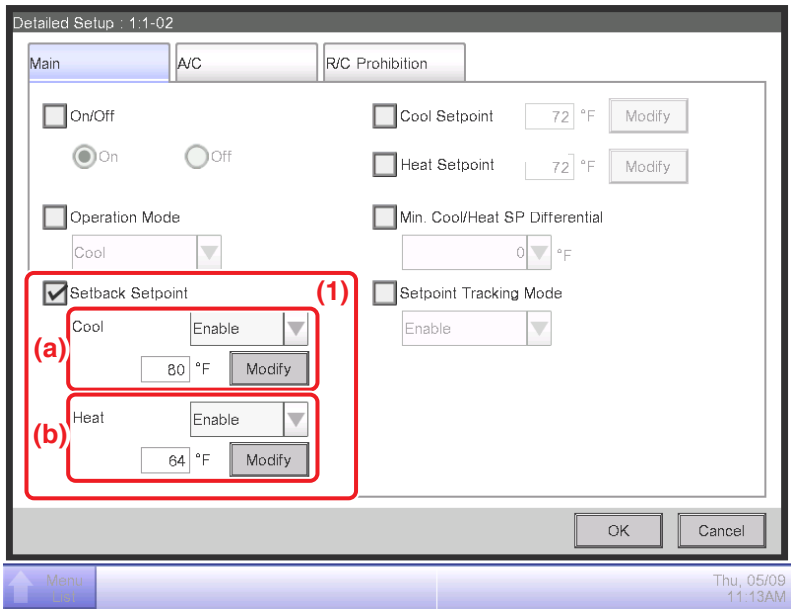
In the **Cool** drop down menu **(8)**, select 4.

In the **Heat** drop down menu **(9)**, select 4.

When finished, touch the **OK** button **(10)** to save the settings and return to the Standard View screen.

Detailed screen and button descriptions

- **Detailed Setup screen for indoor unit (Main tab)**



(1) Setback Setpoint setting area

Set the temperatures at which the Setback function becomes active for the target indoor unit when it is turned off.

Select the **Setback Setpoint** check box and then select Enable/Disable in the **Cool (a)** and **Heat (b)** drop down menus.

Touch the Modify button for the setback setpoint you want to enable and, in the Numerical Input dialog that appears, enter the setback setpoint.

The display unit for the temperature varies depending on the System Settings.

NOTE

The Setback Setpoint setting is not available on iTM in either one of the following cases:

- The BACnet or Lon Interface is connected, and the DIII-NET Engineering setting is set to “Automatic”.
- The iTM Main/Sub controller Settings is set to "Sub".

It is also not available on a PC when you log in as a user using the Web Remote Management function.

(a) Cool settings [Setback setpoint (for cooling)]

Setting range: 62 to 95°F in 1°F increments when displayed in Fahrenheit

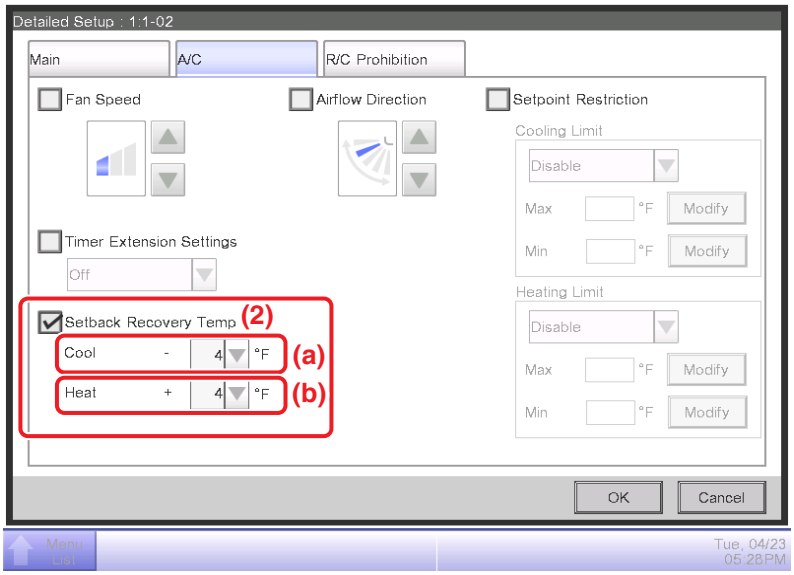
Default : 80°F when displayed in Fahrenheit

(b) Heat settings [Setback setpoint (for heating)]

Setting range: 50 to 88°F in 1°F increments when displayed in Fahrenheit

Default : 64°F when displayed in Fahrenheit

• **Detailed Setup screen for indoor unit (A/C tab)**



(2) Setback Recovery Temp setting area

Set the temperature difference from the current setback temperature that will turn the target indoor unit back off if turned on by the setback function.

Select the **Setback Recovery Temp** check box and then select the thermal difference values in the **Cool (a)** and **Heat (b)** drop down menus.

The display unit for the temperature varies depending on the System Settings.

NOTE

The Setback Setpoint setting is not available on iTM in either one of the following cases:

- The BACnet or Lon Interface is connected, and the DIII-NET Engineering setting is set to “Automatic”.
- The iTM Main/Sub controller Settings is set to "Sub".

It is also not available on a PC when you log in as a user using the Web Remote Management function.

(a) Cool settings [Setback recovery temperature (for cooling)]

Setting range: 2 to 10°F in 1°F increments when displayed in Fahrenheit

Default : 4°F when displayed in Fahrenheit

(b) Heat settings [Setback recovery temperature (for heating)]

Setting range: 2 to 10°F in 1°F increments when displayed in Fahrenheit

Default : 4°F when displayed in Fahrenheit

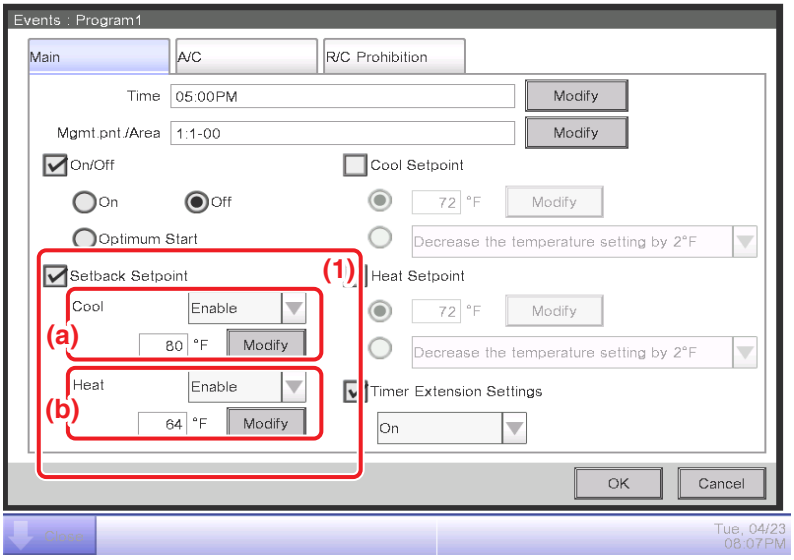
• **Events screen of the Schedule screen**

To use the Setback function in conjunction with the Schedule function, set the Setback function from the Events screen of the Schedule setting.

Create a schedule program according to “5-1 Set up a Schedule”.

Select the event of the schedule program you created, and then touch the Edit button.

The Schedule Events screen appears. On the Main tab, set each setback setpoint.



(1) Setback Setpoint setting area

Set the temperatures at which the Setback function becomes active for the target indoor unit.

Select the **Setback Setpoint** check box and then select Enable/Disable in the **Cool (a)** and **Heat (b)** drop down menus.

Touch the Modify button for the setback setpoint you want to enable and, in the Numerical Input dialog that appears, enter the setback setpoint.

The display unit for the temperature varies depending on the System Settings.

(a) Cool settings [Setback setpoint (for cooling)]

Setting range: 62 to 95°F in 1°F increments when displayed in Fahrenheit

Default : 80°F when displayed in Fahrenheit

(b) Heat settings [Setback setpoint (for heating)]

Setting range: 50 to 88°F in 1°F increments when displayed in Fahrenheit

Default : 64°F when displayed in Fahrenheit

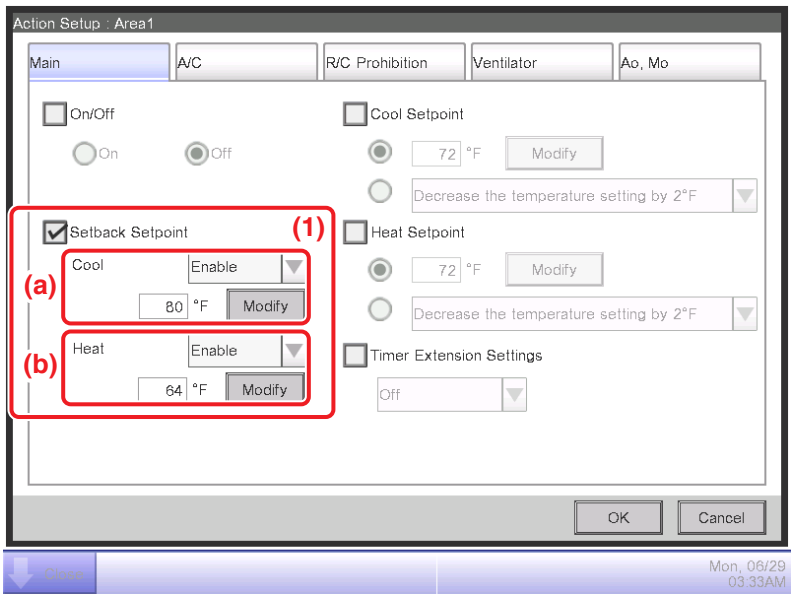
• **Action Setup screen of the Interlocking Control screen**

To use the Setback function in conjunction with the Interlocking Control function, set the Setback function from the Action Setup screen of the Interlocking Control screen.

Create an interlocking program according to “8-1 Setting up the Interlocking Control”.

Select the indoor unit to which you want to output the events of the interlocking program you created and then touch the Action Setup button. The Action Setup screen appears.

On the Main tab, set up each setback setpoint.



(1) Setback Setpoint setting area

Set the temperatures at which the Setback function becomes active for the target indoor unit.

Select the **Setback Setpoint** check box and then select Enable/Disable in the **Cool (a)** and **Heat (b)** drop down menus.

Touch the Modify button for the setback setpoint you want to enable and, in the Numerical Input dialog that appears, enter the setback setpoint.

The display unit for the temperature varies depending on the System Settings.

(a) Cool settings [Setback setpoint (for cooling)]

Setting range: 62 to 95°F in 1°F increments when displayed in Fahrenheit

Default : 80°F when displayed in Fahrenheit

(b) Heat settings [Setback setpoint (for heating)]

Setting range: 50 to 88°F in 1°F increments when displayed in Fahrenheit

Default : 64°F when displayed in Fahrenheit

6. System Settings

6-1 Setting up an Area

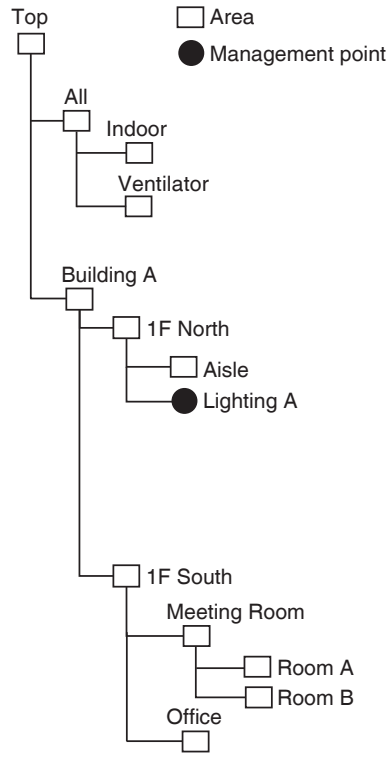
The following describes how to create, delete, and move an area, as well as register a management point to an area. It also includes descriptions on how to name and set up the detailed settings and icon, as well as how to sequentially start/stop areas in association with the above.

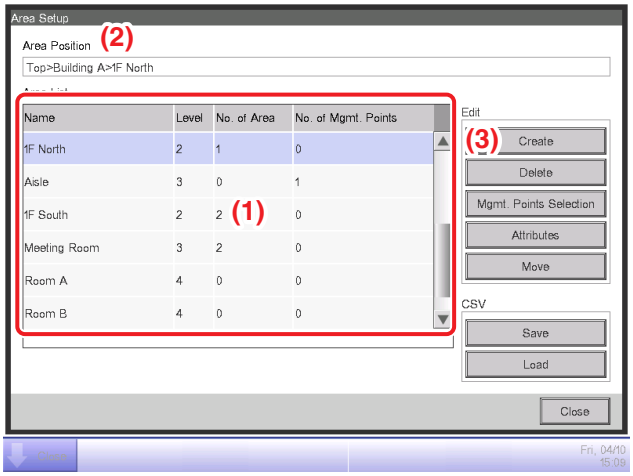
The procedures are as follows.

Creating an area

1. Touch the Area button on the System Settings tab of the Menu List screen and display the Area Setup screen (see “4-5 Menu List screen: System Settings Tab”).

Fig. 1

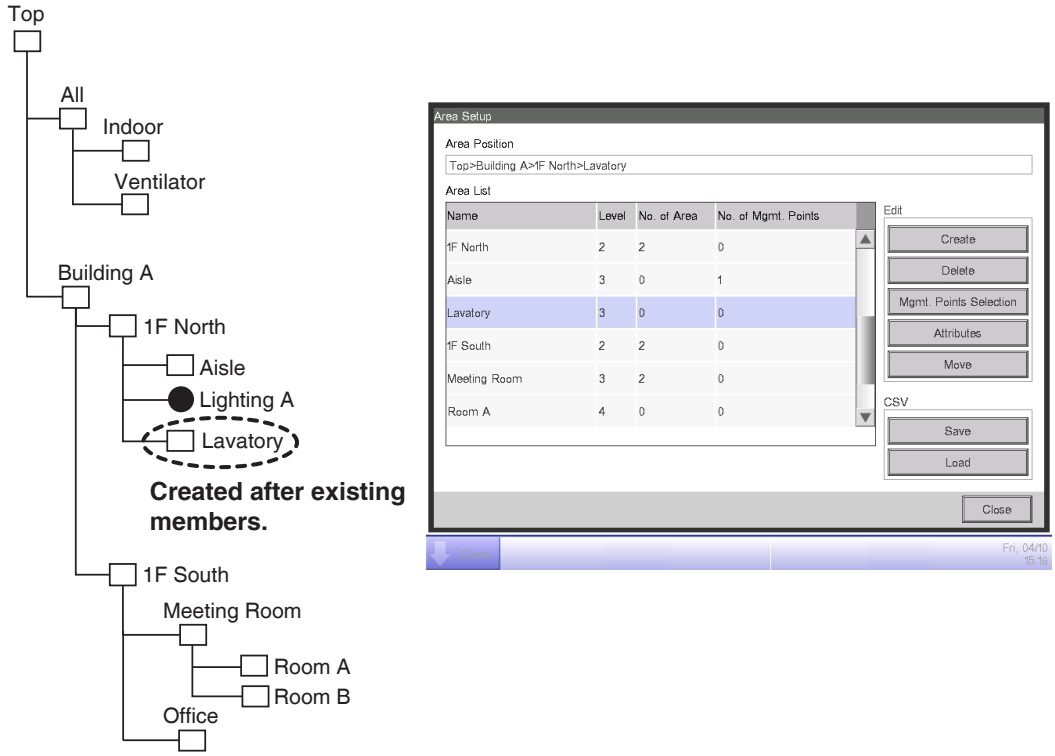




2. **(1)** on the Area Setup screen is the list of areas displayed as a tree structure organized in descending order (Fig. 1). Select the higher level area (for example, 1F North) into which to create the new one. **(2)** indicates the position of the currently displayed area (for example, Top>Building A>1F North).

3. Touch the **Create** button **(3)**. Enter the name of the new area (for example, Lavatory) in the Name Input dialog that appears and touch the OK button.

Fig. 2



4. The area created in step 3 (for example, Lavatory) is added to the area selected in step 2 (for example, 1F North) as a member (Fig. 2).

NOTE

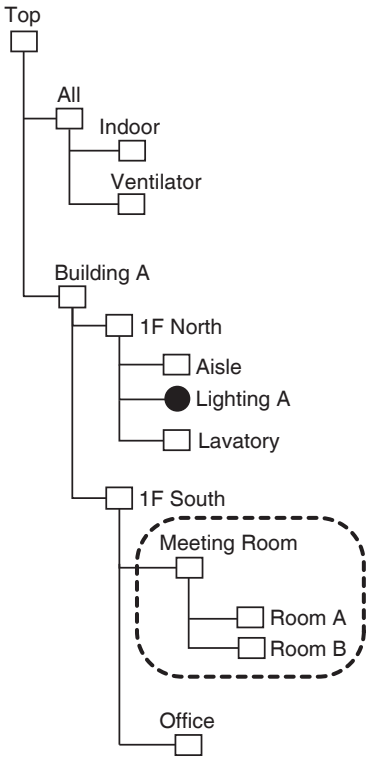
A newly created area is created under existing management points and areas.

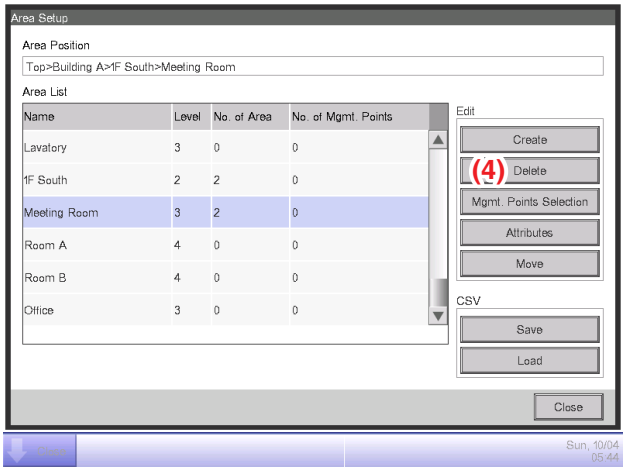
You will not be able to create new areas in the following cases.

- The number of areas exceeds 650.
- The area selected in the Area List is a 10th hierarchical level area.
- The management points and areas included in the selected area total 650.
- The selected area is All or an area immediately under All.
- The name is the same as that of another area. (However, the name may overlap with that of an Indoor, Ventilator, Dio, Analog, MultiState, Pulse, or Outdoor unit predefined in the All area.)

Example: To delete the Area

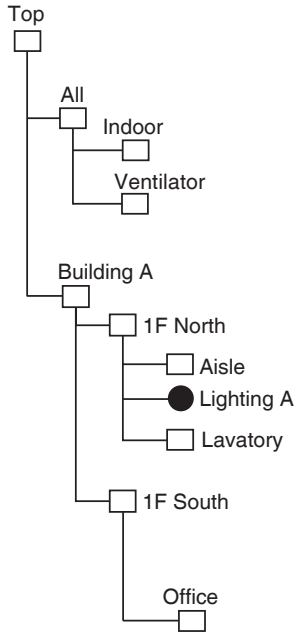
Fig. 3

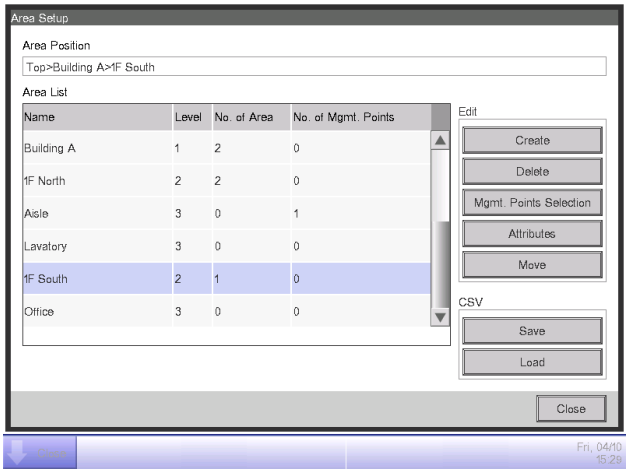




1. To delete an area, select the area to delete (for example, Meeting Room) and touch the **Delete** button **(4)**. Touching the YES button on the deletion confirmation dialog that appears deletes the selected area.

Fig. 4





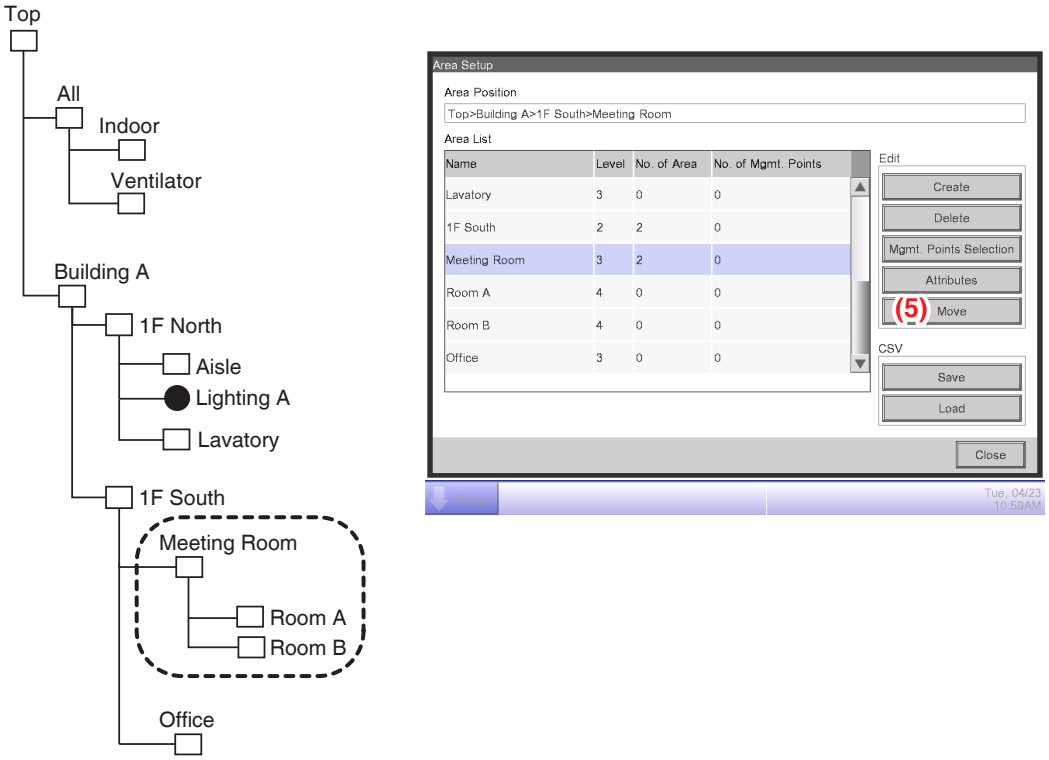
2. On the Area Setup screen, the list of currently registered areas is displayed.
   The area deleted in step 1 (for example, Meeting Room) and the areas included in it (for example, Room A/B) are also deleted.

NOTE

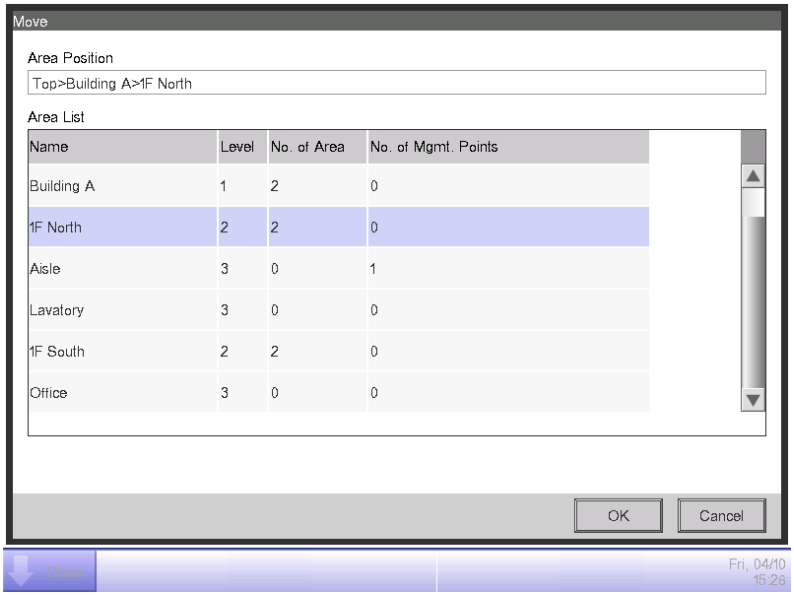
Top, All and areas immediately under All cannot be deleted.

Moving an area

Fig. 5



1. To move an area, select the area you want to move (for example, Meeting Room) and touch the **Move** button **(5)** to display the Area Move screen.

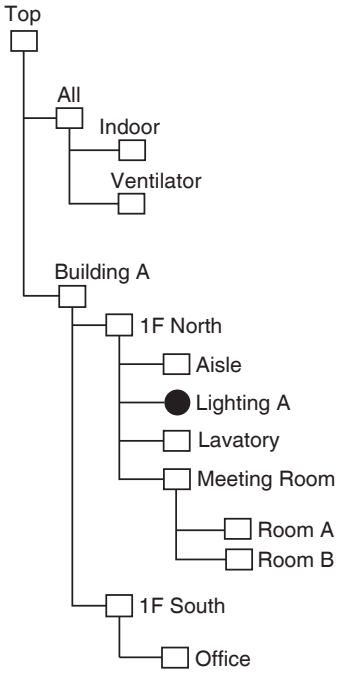


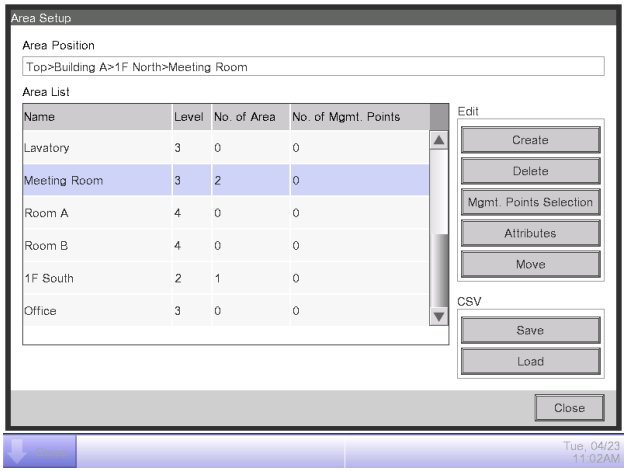
NOTE

The area to move and lower level areas (for example, Meeting Room, Room A/B) are not displayed. Furthermore, areas where a move makes the number of members exceed the maximum are not displayed.

2. Select the destination area (for example, 1F North) on the Area Move screen and touch the OK button.

Fig. 6





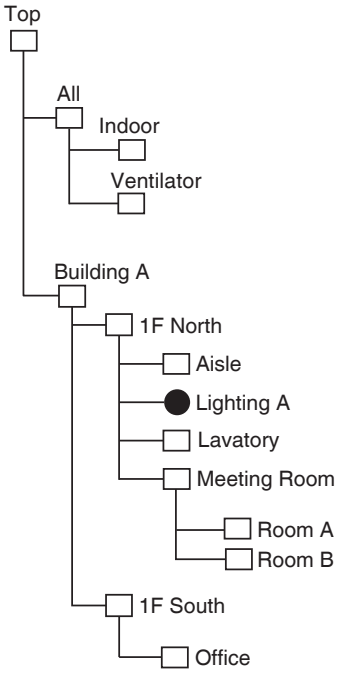
3. The moved area (for example, Meeting Room) is displayed under the area selected in step 2 (for example, 1F North).

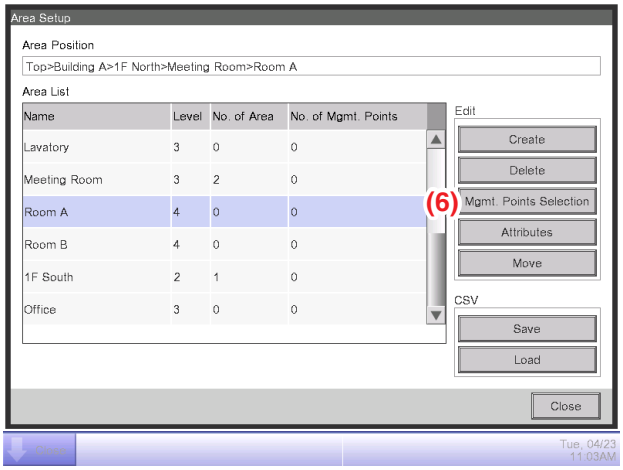
NOTE

Top, All and areas immediately under All cannot be moved. You cannot move an area into these areas either.

Registering a management point or area to an area

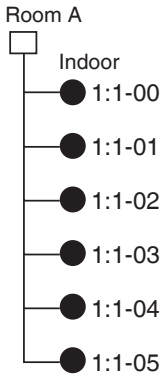
Fig. 7

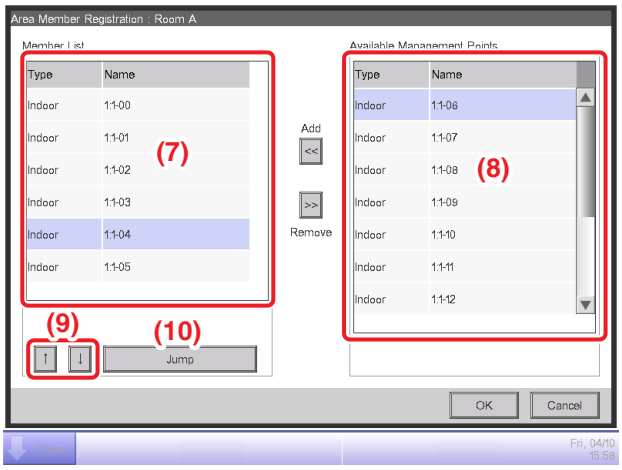




1. On the Area Setup screen, select the area to which you want to register a member and touch the **Mgmt. Points Selection** button **(6)** to display the Area Member Registration screen.

Fig. 8





2. The list **(7)** displays management points and areas directly under the area being edited in the order they were registered. The list **(8)** displays non-registered management points. Select the management point you want to register (multiple selection possible). To change the order in which the management points and areas are displayed in **(7)**, use the ↑↓ buttons **(9)**. To delete a member, select it from **(7)** and then touch the Remove button.

NOTE

<About the buttons>

The Add button cannot be used in the following cases.

- The displayed area is All or an area immediately under All.
- The area includes 650 or more members.
- The number of management points registered with all areas exceeds 1300.

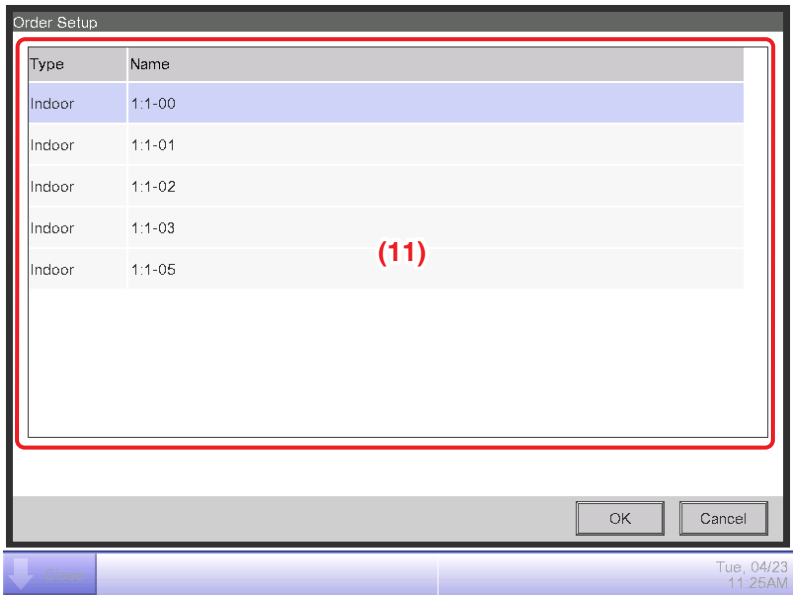
The Remove button cannot be used in the following cases.

- The displayed area is All or an area immediately under All.
- An area is selected.

<Cautions when registering management points in an area>

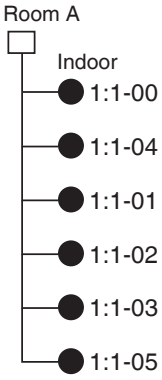
- If a model that cannot perform setpoint change from the iTM (for example, an outdoor air processing unit) and a model that can perform setpoint change from the iTM are placed in the same area, be sure to register the model that can perform setpoint change from the iTM at the very top of the Member List on the Area Member Registration screen.

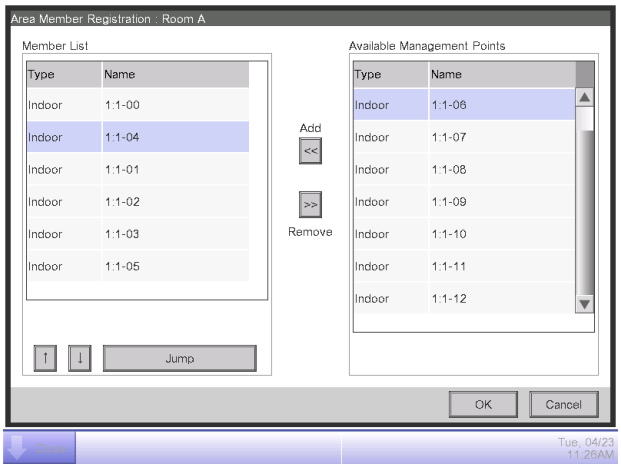
3. The **Jump** button **(10)** for changing the order of members displayed in **(7)** at once. Selecting a management point or area (for example, 1:1-04) to move and touching the **Jump** button **(10)** displays the Order Setup screen. You can select multiple management points/areas to move.



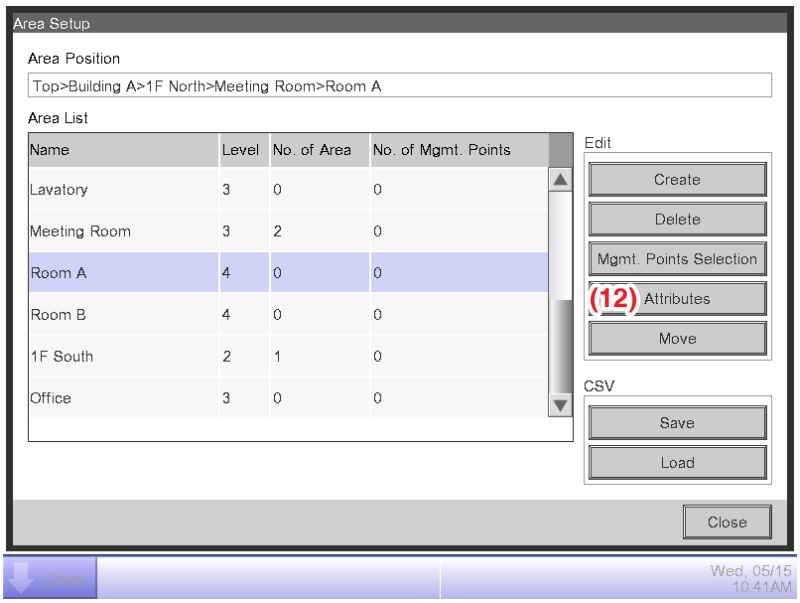
4. **(11)** is the list of management points and areas that were not selected in the Area Member Registration screen. Select the destination to move to and touch the OK button. The management points/areas that you selected in step 3 will be moved to the under management points/areas that you have selected in the Order Setup screen.

Fig. 9

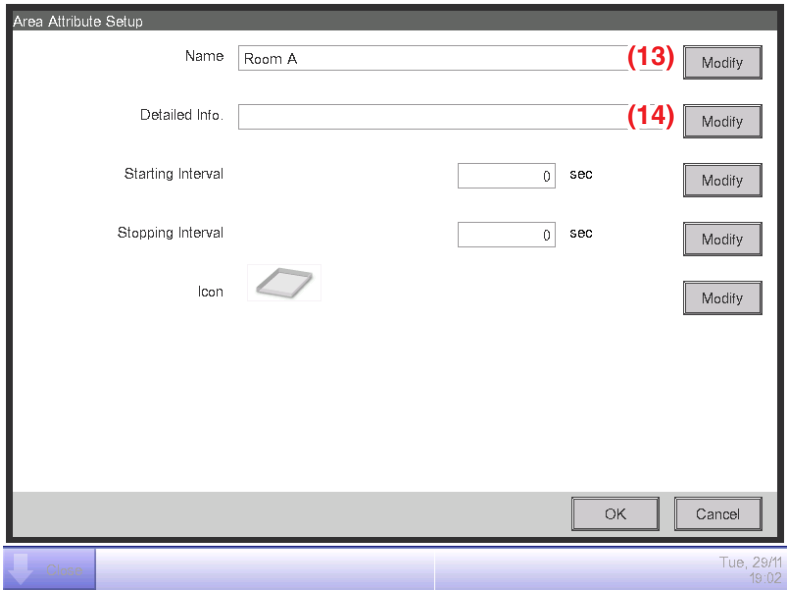




Naming and setting up the detailed information of an area



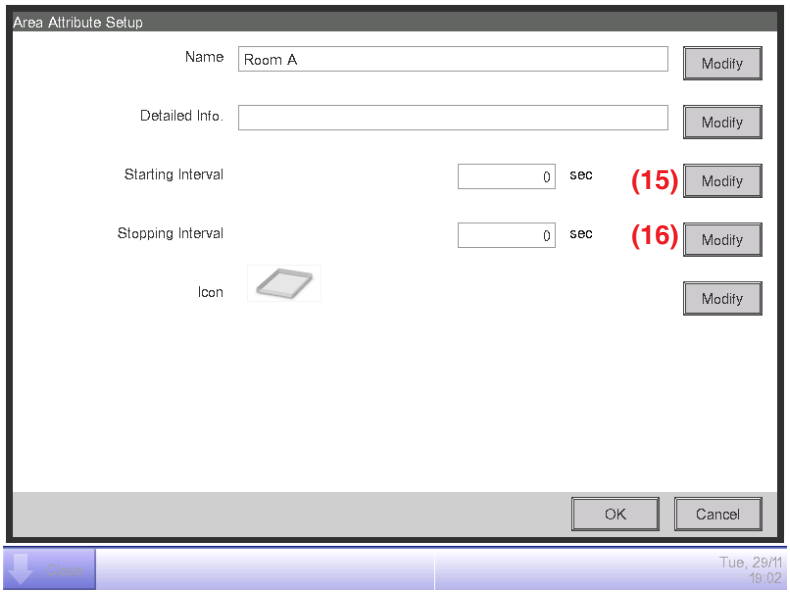
1. Select the area to name and set up the detailed information from the Area Setup screen and touch the **Attributes** button **(12)** to display the Area Attribute Setup screen.



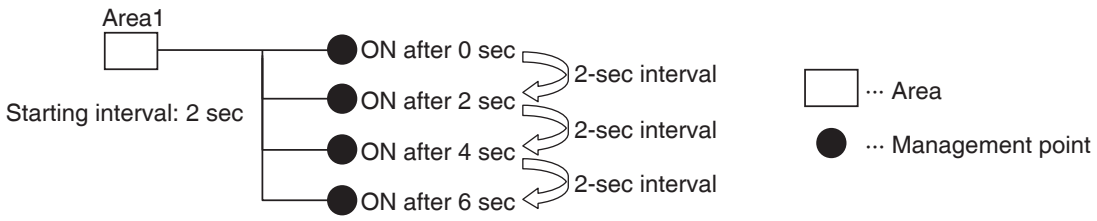
2. Touch the **Modify** buttons **(13)** and **(14)**. Set up the name and detailed information in the Text Input dialog box that appears.

Setting up the interval for sequential start/stop

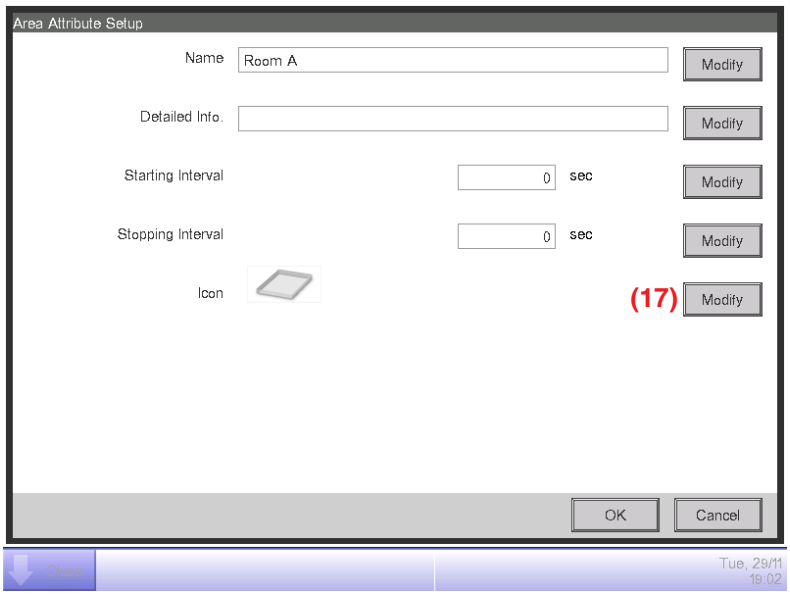
This function prevents all management points to be started or stopped at once when start/stop is ordered for an area by sequentially starting or stopping its member management points and areas in the order they are listed in the Area Member Registration screen.



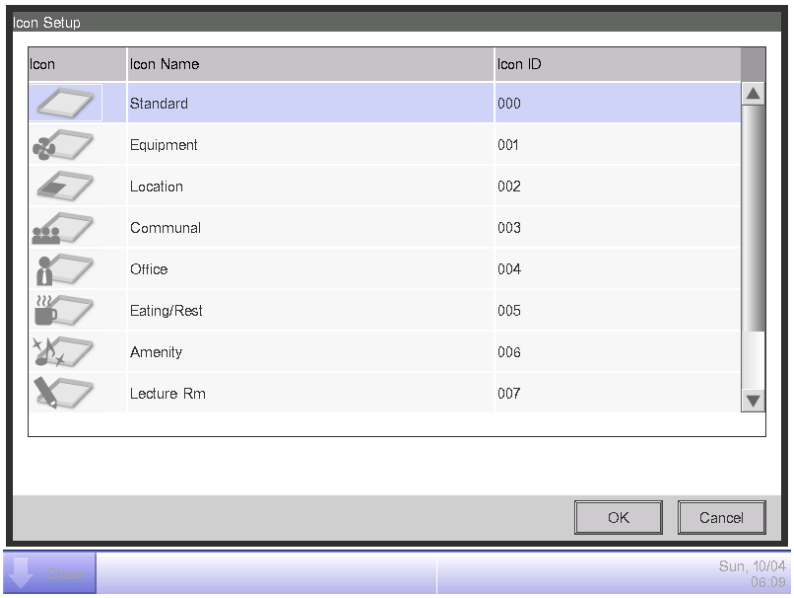
1. Touch the **Modify** buttons **(15)** and **(16)** on the Area Attribute Setup screen. Enter the interval for starting or stopping in the Numerical Input dialog box that appears. The range of values you can specify is 0 to 180 seconds.



Setting up icons



1. Touch the **Modify** button **(17)** on the Area Attribute Setup screen to display the Icon Setup screen.

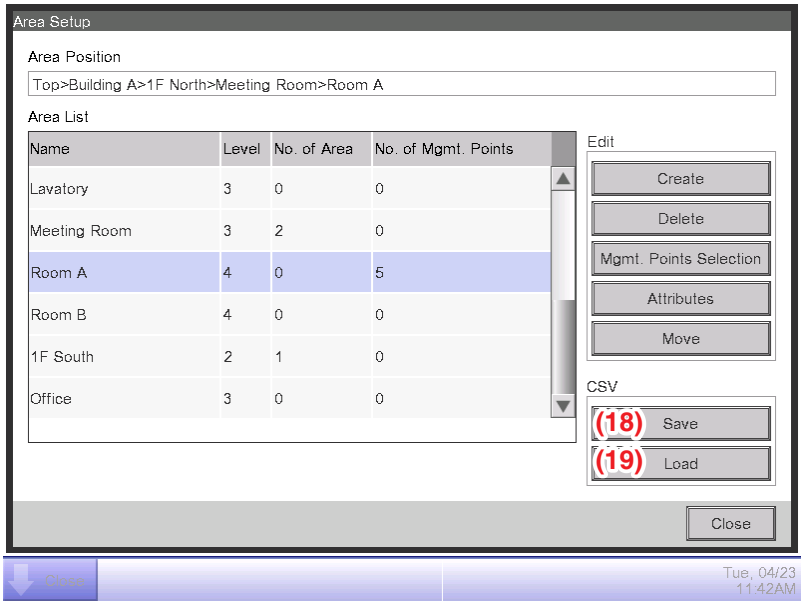


2. Select an icon from the displayed icon list and touch the OK button to set it up.

Saving and loading the area data CSV file

You can save the area settings in a USB memory as a CSV file (AreaData.csv). You can also load a CSV file from a USB memory. Make sure the file is named “AreaData.csv” as it is the only readable file name.

For the USB memory requirements, see “14-2 Peripheral Equipment Specifications”.



1. To save, connect a USB memory to the iTM unit and touch the **Save** button **(18)** on the Area Setup screen. A confirmation dialog with the message “Do you want to save area data in CSV format? Max Time : 15 sc” will appear. Touch the Yes button to save. When successfully saved, the message “File has been saved.” will appear.
2. To load, connect the USB memory with the CSV file to the iTM unit and touch the **Load** button **(19)** on the Area Setup screen. A confirmation dialog with the message “Loaded data will delete existing data. Max Time : 15 sc” will appear. Touching the Yes button will start loading the data. When the CSV file to load is corrupt, an error screen is displayed. After the error dialog is displayed, remove the USB memory and, on the error display screen, clear the contents of the error list sequentially from the top.

NOTE

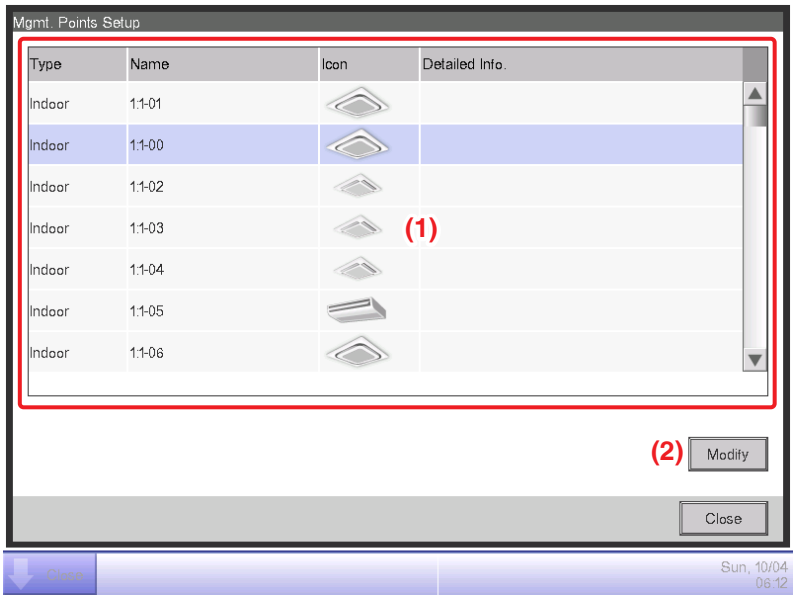
For information on the CSV file format, see “Appendix 3. Area Setup CSV file format”.

6-2 Setting up a Management Point

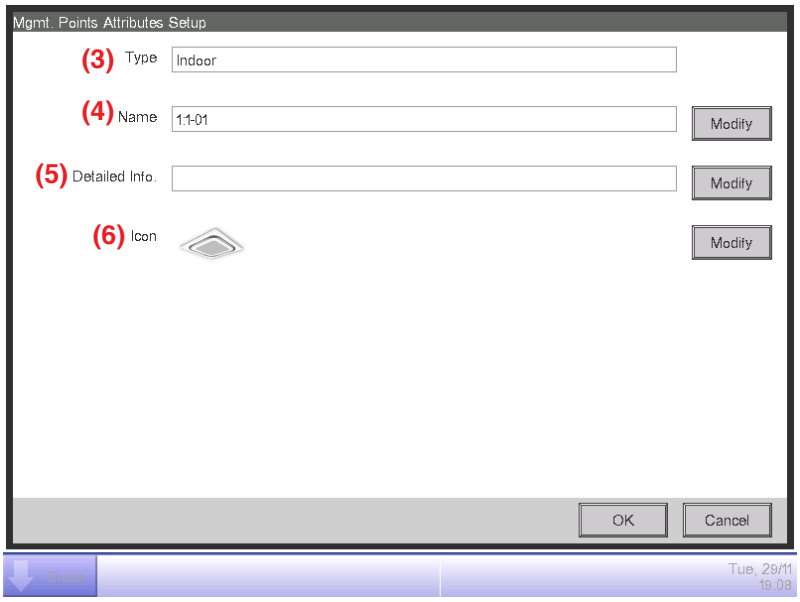
Changes the name, detailed information, and icon of management points.

The following describes how to set this up.

1. Touch the Mgmt.Pts. button on the System Settings tab of the Menu List screen and display the Mgmt. Points Setup screen (see “4-5 Menu List Screen: System Settings Tab”).

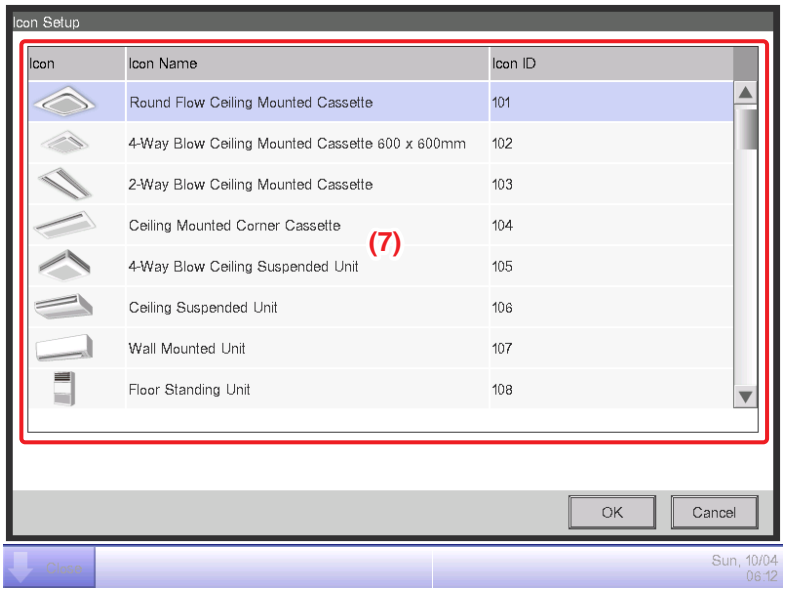


2. **(1)** is the list of management points. Select a management point and touch the **Modify** button **(2)** to display the Mgmt. Points Attributes Setup screen.



3. The Type of the management point is displayed in **(3)**. However, you cannot change it here.
   Touch the Modify button **(4)** for the management point name. Enter the new name in the Text Input dialog box that appears. The number of characters you can enter is 1 to 12.
   If the entered name is duplicated, a dialog with the message “Same Mgmt. Point name is already registered” appears and it is rejected.
   Touch the Modify button **(5)** for Detailed Info. Enter the detailed information in the Text Input dialog that appears. The maximum number of characters you can enter is 50. You can omit entering detailed information if there is nothing to enter.

4. To set up the icon **(6)**, touch the Modify button and display the Icon Setup screen.



   Select an icon from **(7)** and touch the OK button to set it up. Return to the Mgmt. Points Attributes Setup screen to check the whole view and touch the OK button to close the screen.

6-3 Setting up the Password

You can set up the administrator password as well as the screen unlock password. If administrator password is enabled, touching the button for switching to the Menu List view on the Standard View or the optional Layout View screen displays the Password dialog, so that a user who does not know the administrator password cannot display the Menu List view.

When the screen lock function is enabled, touching the Lock button on the Standard View or Layout View screen causes the screen lock to be applied, preventing operations other than monitoring the screen.

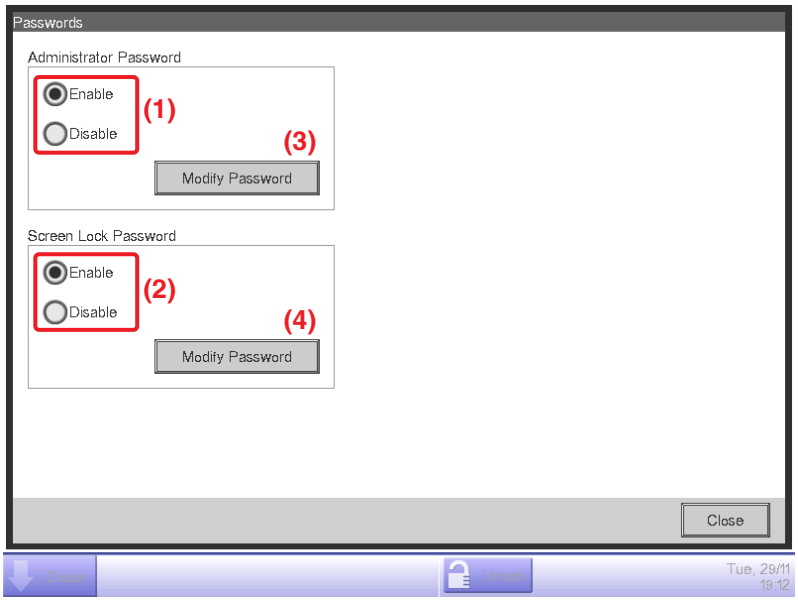
To unlock, you must touch the Lock button and display the Password dialog to enter the password for unlocking the screen.

NOTE

- When administrator password and screen lock are simultaneously enabled, entering the administrator password after touching the Menu List switch button unlocks the screen and displays the Menu List screen.
- Note that, unlocking the screen lock allows ordinary users to also perform operations other than monitoring, although you can do so using the Web Remote Management function (option) (see “9-2 Web Access Settings and Remote Management”).
- Keep the set password carefully. If you forget the set password, you will be forced to sign a separate paid service maintenance agreement.

The following describes how to set this function up.

1. Touch the Passwords button on the System Settings tab of the Menu List screen and display the Passwords screen (see “4-5 Menu List Screen: System Settings Tab”).



2. To enable the Administrator Password, select Enable in **(1)**. To disable, select Disable.
   Selecting Enable displays the Password dialog box for entering a new password. Set a password using 1 to 15 alphanumeric characters.
   The dialog will appear again. Enter the password again for confirmation. Touch the OK button to close the screen.

3. To enable the Screen Lock, select Enable in **(2)**. To disable, select Disable.
   Selecting Enable displays the Password dialog for entering a new password. Set a password using 1 to 15 alphanumeric characters.
   The dialog will appear again. Enter the password again for confirmation. Touch the OK button to save and close the screen.

4. To change the administrator password or the screen lock password, touch the respective **Modify Password** button, **(3)** or **(4)**.
   Enter the current password in the Password dialog for entering the existing password.
   Thereafter, enter the new password twice. Touch the OK button to save and close the screen.

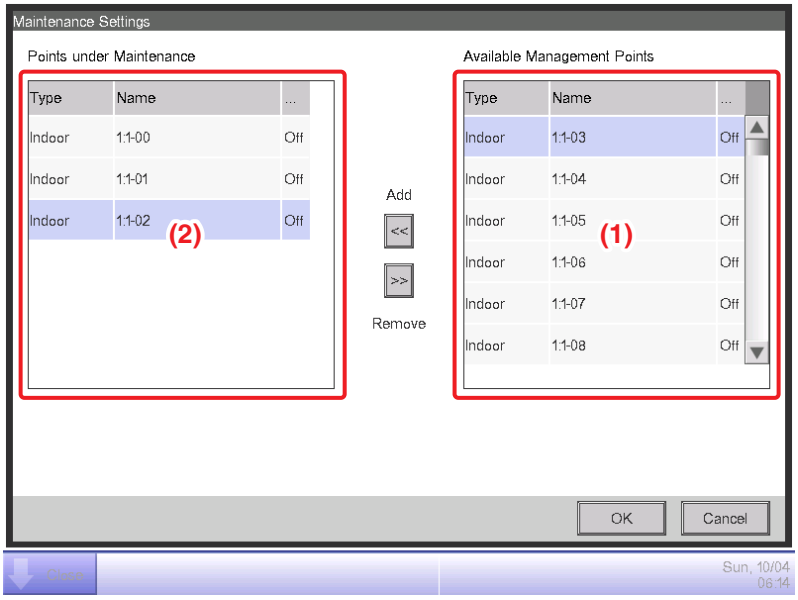
6-4 Setting up Maintenance and Checking

You can set a specific management point to “maintenance” or release it from “maintenance”.

A management point set to “maintenance” cannot be controlled from the iTM, that is, it cannot receive input signals such as orders of operation, automatic control, status monitoring, etc. However, emergency stop is possible.

The following describes how to set this function up.

1. Touch the Maintenance button on the System Settings tab of the Menu List screen and display the Maintenance Settings screen (see “4-5 Menu List Screen: System Settings Tab”).



2. To set a management point to the “under maintenance” state, select it from the list of Available Management Points displayed in **(1)** and touch the Add button. Then, the management point is moved into the Points under Maintenance list in **(2)**. Touch the OK button to close the screen.

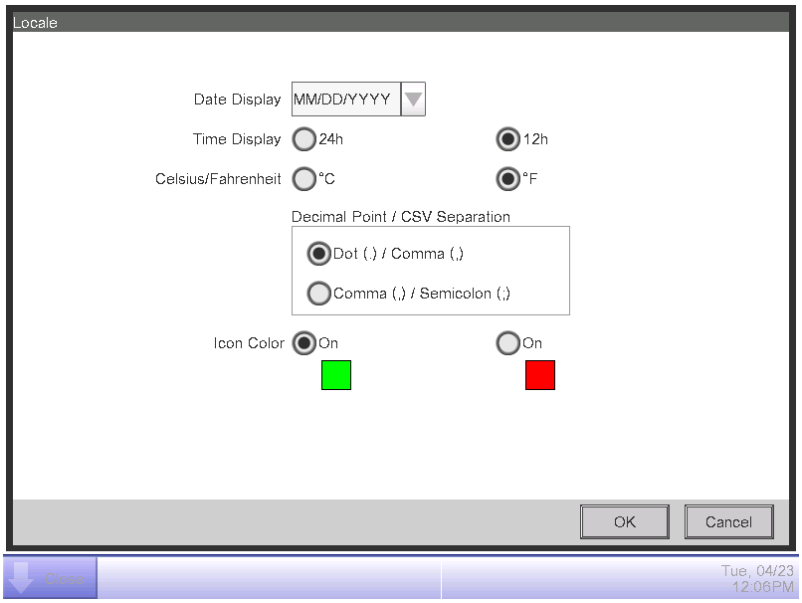
3. To release from maintenance, select a points under maintenance from **(2)** and touch the Remove button to move it to **(1)**. The management point is released from maintenance.

   When finished, touch the OK button to close the screen.

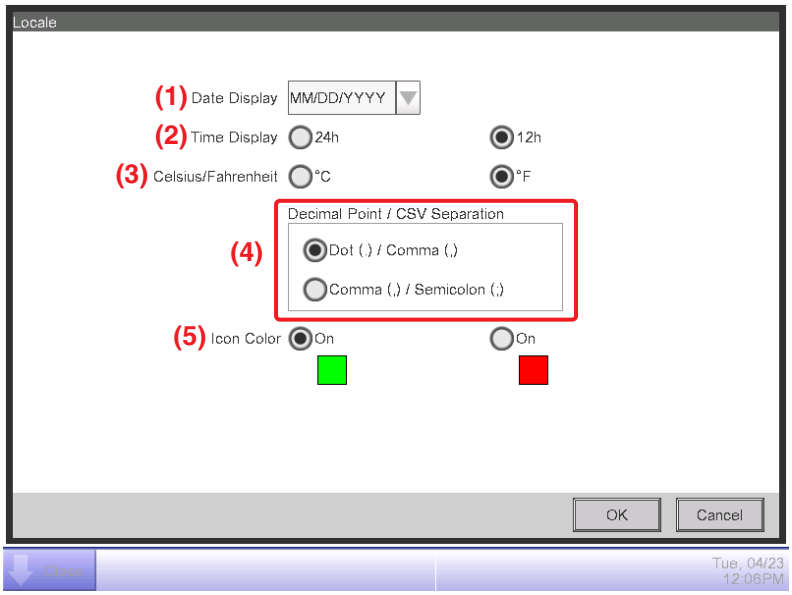
6-5 Setting up the Locale

You can set up the display date/time display format, Celsius/Fahrenheit decimal point/CSV separator style, and icon color used in the iTM unit.

1. Touch the Regional button on the System Settings tab of the Menu List screen and display the Locale screen (see “4-5 Menu List Screen: System Settings Tab”).



2. Set up the display format and unit.



Set up the date display format using the **Date Display** drop down menu **(1)**.
You can select from DD/MM/YYYY, MM/DD/YYYY, YYYY/MM/DD.

Select the time display format using the **Time Display** radio button **(2)**.

Select the temperature unit from Fahrenheit and Celsius using the **Celsius/Fahrenheit** radio button **(3)**.

Select the decimal point/CSV file separator style using the **Decimal Point/CSV Separation** radio buttons **(4)**.

Select the icon color for operating management points using the **Icon Color** radio button **(5)**.

When finished, touch the OK button to close the screen.

NOTE

- When the unit of temperature is changed between Celsius and Fahrenheit, the change should be followed by a restart by the Restart switch.
- The icon color may not change to the specified color although Icon Color has been changed. (See the next page)

The following icons are available in and after Ver. 2.06.00.

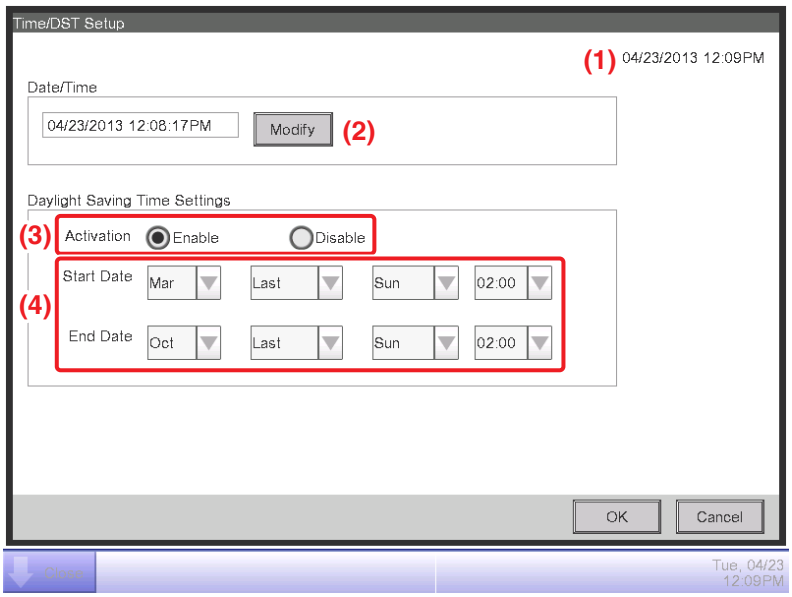
Classification	Name	Icon ID	ON (Green) *1 Active Green	ON (Red) *1 Active Red	OFF (Gray) InActive
Area	Alarm	010			
	Air Handler	011			
Management point	Setpoint	801			
	On/Off	802			
	Enable/Disable	803			
	Status Alarm	804			
	Active/Inactive	805			
	Occupancy Sensor	806			
	External Heater	807			
	Carbon Di-Oxide Value	808			
	Discharge Temperature	809			
	Return Air Temperature	810			
	Mixed Air Temperature	811			
	Outside Air Temperature	812			
	Pressure	813			

*1 When Icon Color is set to ON (Green) and ON (Red) on Setting up the Locale.

6-6 Setting up the Time

You can set up the current time and daylight saving time.

1. Touch the Time/DST button on the System Settings tab of the Menu List screen and display the Time/DST screen (see “4-5 Menu List Screen: System Settings Tab”).

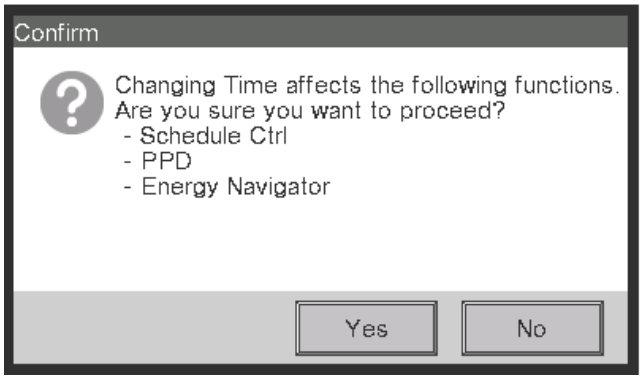


2. **(1)** displays the time when this screen was opened. Touch the **Modify** button **(2)** and, in the Time Input dialog box, enter the current time. Touch the OK button and close the screen.
   Entering an inappropriate value displays an error dialog where you will be able to enter the correct value.

3. When using daylight saving time, enable it in **(3)** and select the start and end dates from the drop down menus **(4)**. When not using daylight saving time, select Disable.
   The selectable ranges are as follows.

Start month: Jan – Dec	End month: Jan – Dec
Start week: 1st – 4th, Last	End week: 1st – 4th, Last
Start day of the week: Sun – Sat	End day of the week: Sun – Sat
Start Time: 01:00 – 04:00	End Time: 02:00 – 04:00

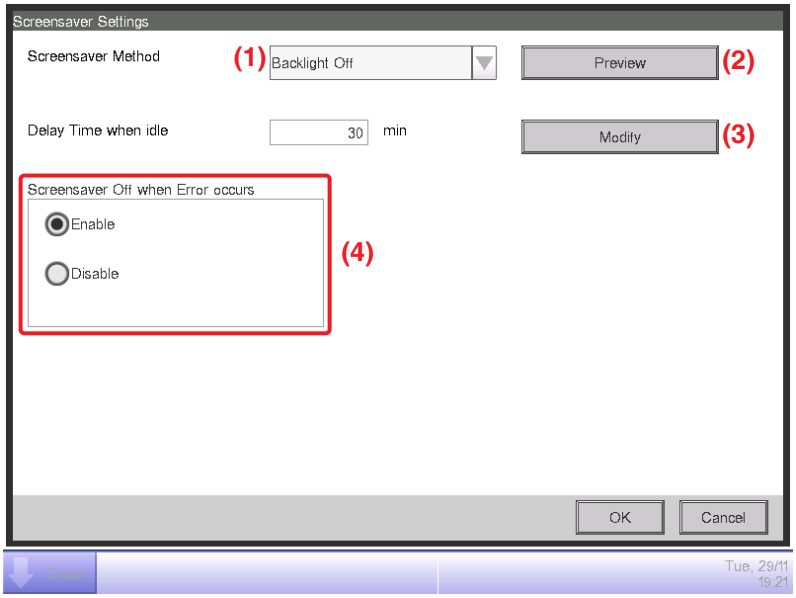
4. When finished, touch the OK button. The following Confirm dialog appears. The following dialog appears. After confirmation, touch the Yes button to close the screen.



6-7 Setting up the Screensaver

You can set up or change the screensaver, as well as set up the setting for turning the screen off.

1. Touch the Screensaver button on the System Settings tab of the Menu List screen and display the Screensaver Settings screen (see “4-5 Menu List Screen: System Settings Tab”).



2. Enable/disable and set up the screensaver type using the **Screensaver Method** **(1)** drop down menu.

   Select from Disable, Backlight Off, Screen1, Screen2, and Screen3. Selecting Backlight Off will turn off the screen when the idle time set in step 3 elapses.

   Touch the **Preview** button **(2)** to preview the selected screensaver. Touch the screen to return to the Screensaver screen.

3. Touch the **Modify** button **(3)** and enter the idle time until displaying the screensaver or turning off the screen. You can specify an idle time of 1 to 60 minutes.

4. To automatically stop the screensaver, sound the buzzer, and display the Error Notification icon when an error occurs while the screensaver is being displayed or when the emergency stop occurred, select the **Screensaver Off when Error occurs** radio button **(4)**.

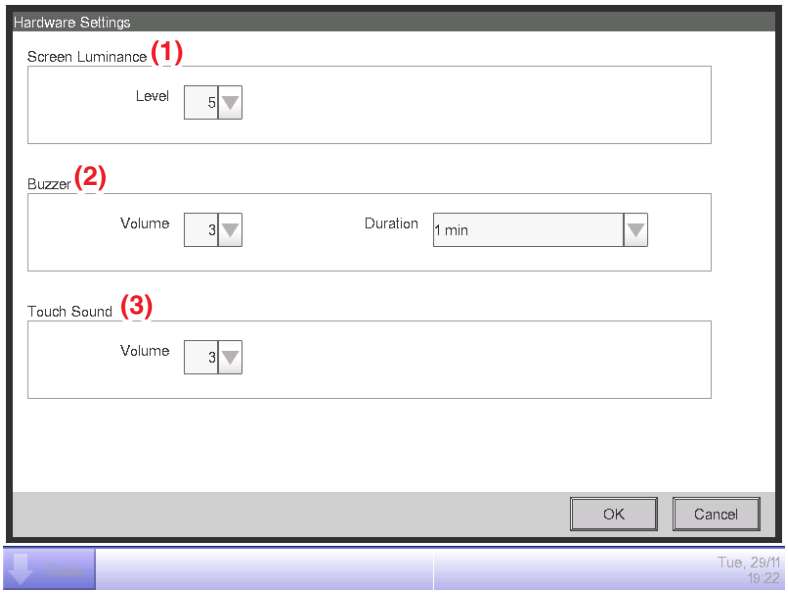
   To continue displaying the screensaver, select Disable.

5. Touch the OK button to close the screen.

6-8 Setting up the Hardware

You can set up the hardware settings, such as the screen luminance and buzzer volume of the iTM unit.

1. Touch the Hardware button on the System Settings tab of the Menu List screen and display the Hardware Settings screen (see “4-5 Menu List Screen: System Settings Tab”).

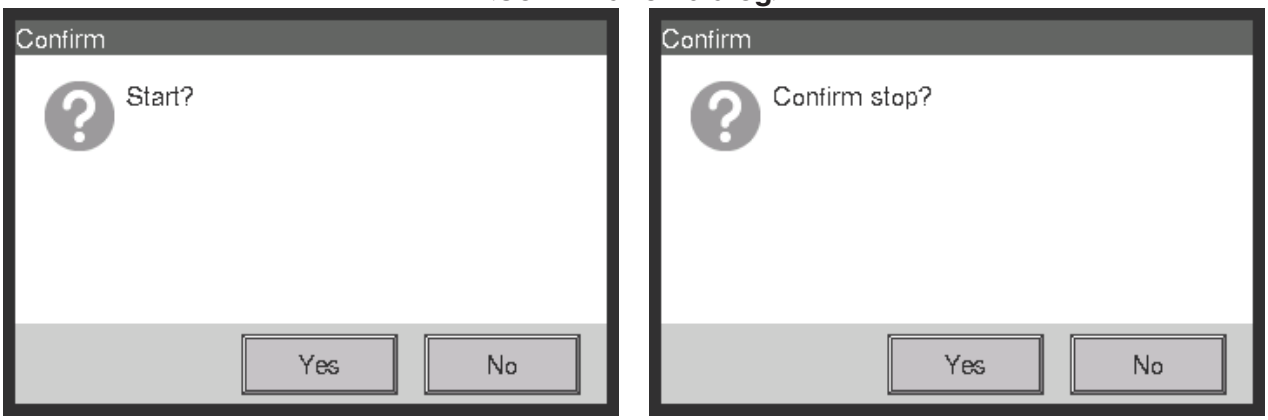


2. In the **Screen Luminance** drop down menu **(1)**, select and set the luminance level for the iTM screen to a value between 1 and 8.
3. In the **Buzzer** drop down menu **(2)**, select and set the volume for the buzzer that will sound at error or emergency stop to a value between 0 and 5. Also select and set a sound duration from 1 min, 3 min, 5 min, and Continuous.
4. In the **Touch Sound** drop down menu **(3)**, select and set the volume for the touch sound, the sound when the screen is touched to a value between 0 and 5.
5. Touch the OK button to close the screen.

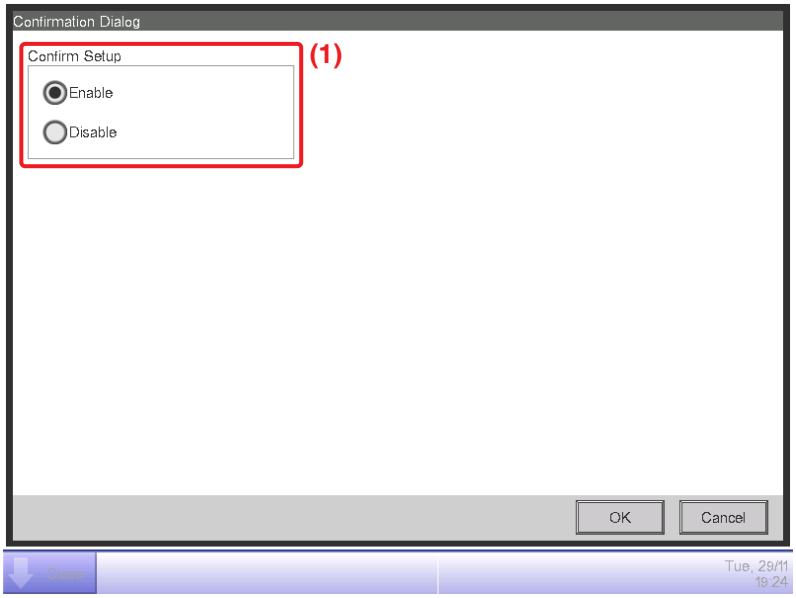
6-9 Setting up the Confirm Operation

You can set up the setting for whether or not to display the confirmation dialog box when you perform start/stop operation from the iTM's Standard View screen.

<Confirmation dialog>



1. Touch the Confirmation Dialog button on the System Settings tab of the Menu List screen to display the Confirmation Dialog screen (see "4-5 Menu List Screen: System Settings Tab").

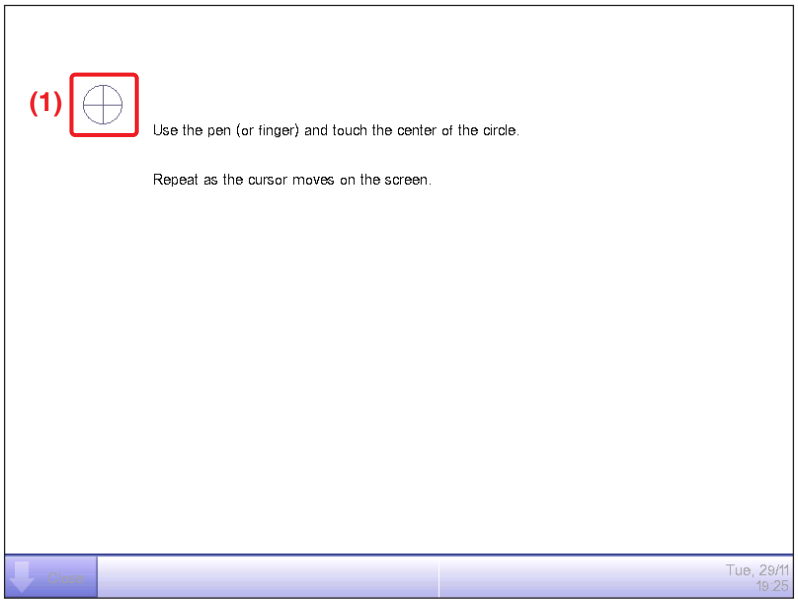


2. Select Enable for the **Confirm Setup** radio button **(1)** to display the Confirm dialog, and Disable to not display.
3. Touch the OK button to close the screen.

6-10 Calibrating the Touch Panel

You can calibrate the touch panel. To calibrate more accurately, use a touch pen.

1. Touch the Touch Panel Calibration button on the System Settings tab of the Menu List screen to display the touch panel calibration screen (see “4-5 Menu List Screen: System Settings Tab”).



2. A **cross (1)** will appear 5 times on the screen. Touch the center of each cross in order. You can start the calibration again by touching a point far from the cross.
3. The calibration is complete when you touched the cross 5 times. Touch anywhere on the screen to close.

NOTE

If the screen is not touched for 30 seconds after the calibration is complete, the correction is canceled and the screen returns to the Menu List screen.

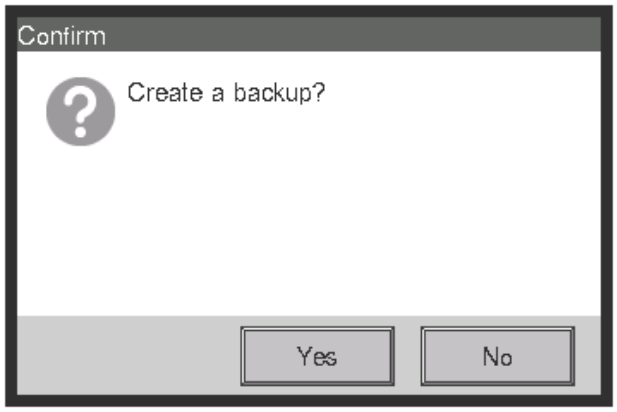
6-11 Backing up

You can back up various iTM data to a USB memory. You cannot perform any operation from the iTM unit screen during backup. However, functions will be working normally.

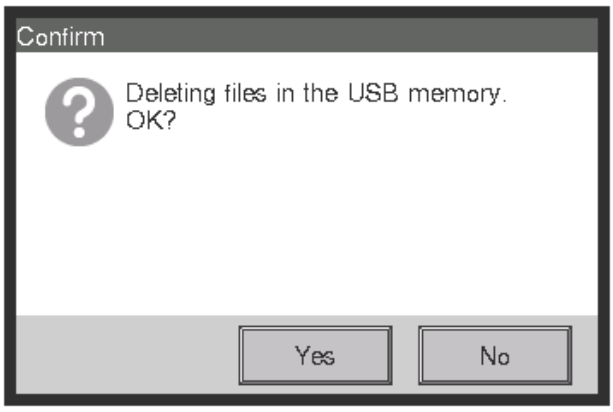
You can copy the backed up data to a computer for the purpose of management.

For the USB memory requirements, see “14-2 Peripheral Equipment Specifications”.

1. Touch the Backup button on the System Settings tab of the Menu List screen (see “4-5 Menu List Screen: System Settings Tab”).



2. When the dialog that confirms the start of the backup is displayed, connect the USB memory to the iTM unit and touch the Yes button.

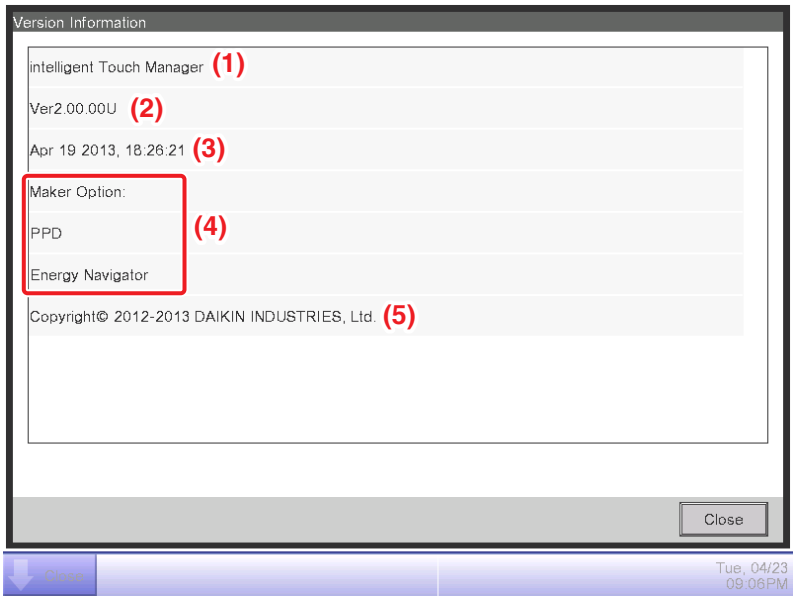


3. All files on the connected USB memory will be deleted. Touch the Yes button on the Confirm dialog that appears to commit and start the backup.
4. Backup takes up to 30 minutes per 1 GB. Backup is complete when the message “Backup is complete.” appears. Touch the Close button to close the screen.

6-12 Viewing the Version Information

You can display the version information of the software installed in the iTM. The information displayed is as indicated below.

1. Touch the Version Info button on the System Settings tab of the Menu List screen to display the Version Information screen (see “4-5 Menu List Screen: System Settings Tab”).



2. The information above consists of:
   - **(1)** Product name
   - **(2)** Software version
   - **(3)** Date and time the software was created
   - **(4)** Available options
   - **(5)** Copyright

3. Touch the Close button to close the screen.

7. Data Management

7-1 Checking and Outputting History

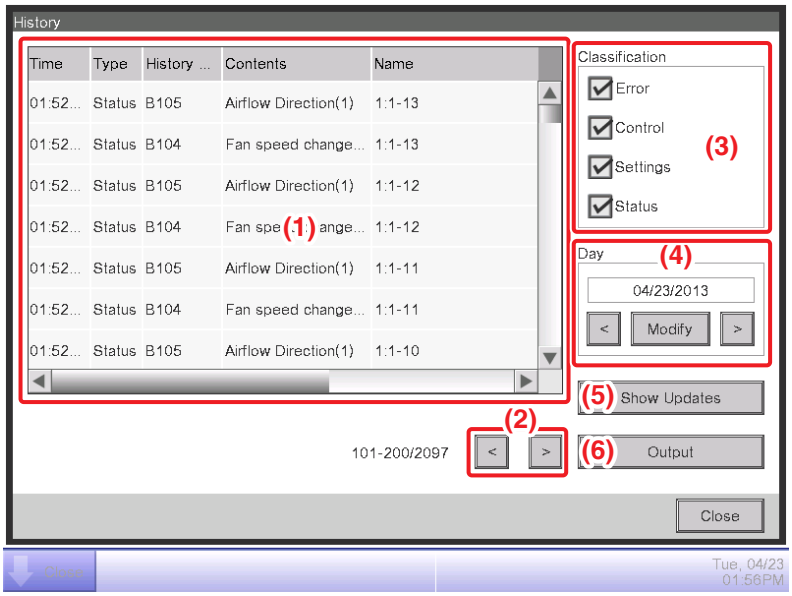
The iTM automatically saves various status changes and equipment errors as history. You can utilize this history data for maintenance and bug fixing by either displaying or re-saving it on a USB memory. For the PC/USB memory requirements to use this function, see “14-2 Peripheral Equipment Specifications”.

The following describes how to display and output the history data.

1. Touch the History button on the Operation Mgmt. tab of the Menu List screen and display the History screen (see “4-5 Menu List Screen: Operation Mgmt. Tab”).

NOTE

A Wait dialog is displayed while the history is being acquired.



2. **(1)** displays the latest 100 history records.

   Touch the < button in **(2)** to display the previous 100 history records and touch the > button to display the next 100 history records.

   The screen consists of the following columns from the left: Time, Type, History No., Contents, Name, Instructed by, Port, Address, ID, and Code.

   The type of history to be displayed can be selected in the **Classification** area **(3)**. **(1)** displays the history records of the selected types.

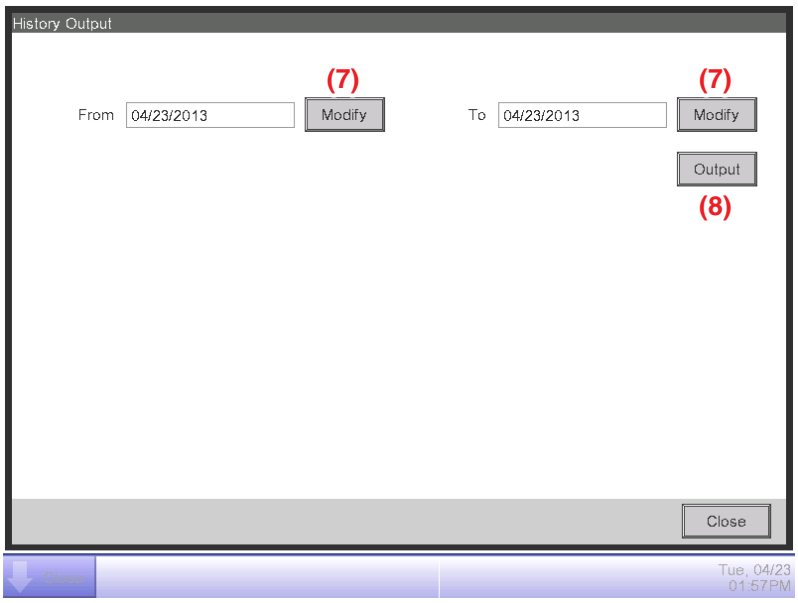
   The **Day** field **(4)** specifies the date for which the history records will be displayed. When opened, the current date is specified. To display the history records of a specific date, touch the Modify button and enter the date in the Date Input dialog that appears.

   Furthermore, touch the < button to display the history records of the previous day, and touch

the > button to display the history records of the next day.

Touching the **Show Updates** button **(5)** displays in **(1)** the latest 100 history records of the type specified in **(3)** as well as the date specified in **(4)**.

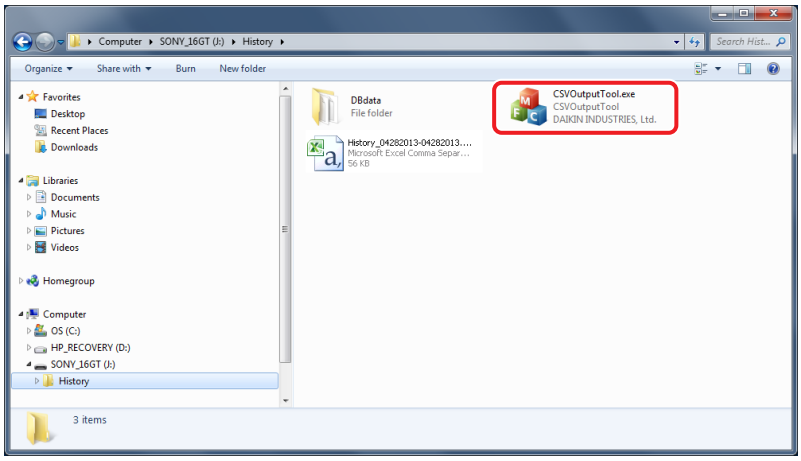
3. Touch the **Output** button **(6)** to display the History Output screen.



4. Touch the **Modify** button **(7)** and display the Data Input dialog to specify the output period of the CSV file. Touching the **Output** button **(8)** displays a confirmation dialog. Connect a USB memory to the iTM unit and Touch Yes button.

   Output is complete when the message “File has been saved.” appears. Touch the **Close** button to close the screen.

5. Open History folder in USB memory and execute “CSV Output Tool” to create a CSV file of the data.



NOTE

For information on the history data items, see “Appendix 4. Historical Data Item List”.

7-2 CSV Output Tool

The CSV output tool is an external tool that runs on a PC to convert the output data from the iTM into the CSV format.

Data is saved at the same time when output from the iTM unit or when downloaded via the Web Remote Management function.

For the PC/USB memory requirements to use this function, see “14-2 Peripheral Equipment Specifications”.

The following output data must be converted into the CSV format:

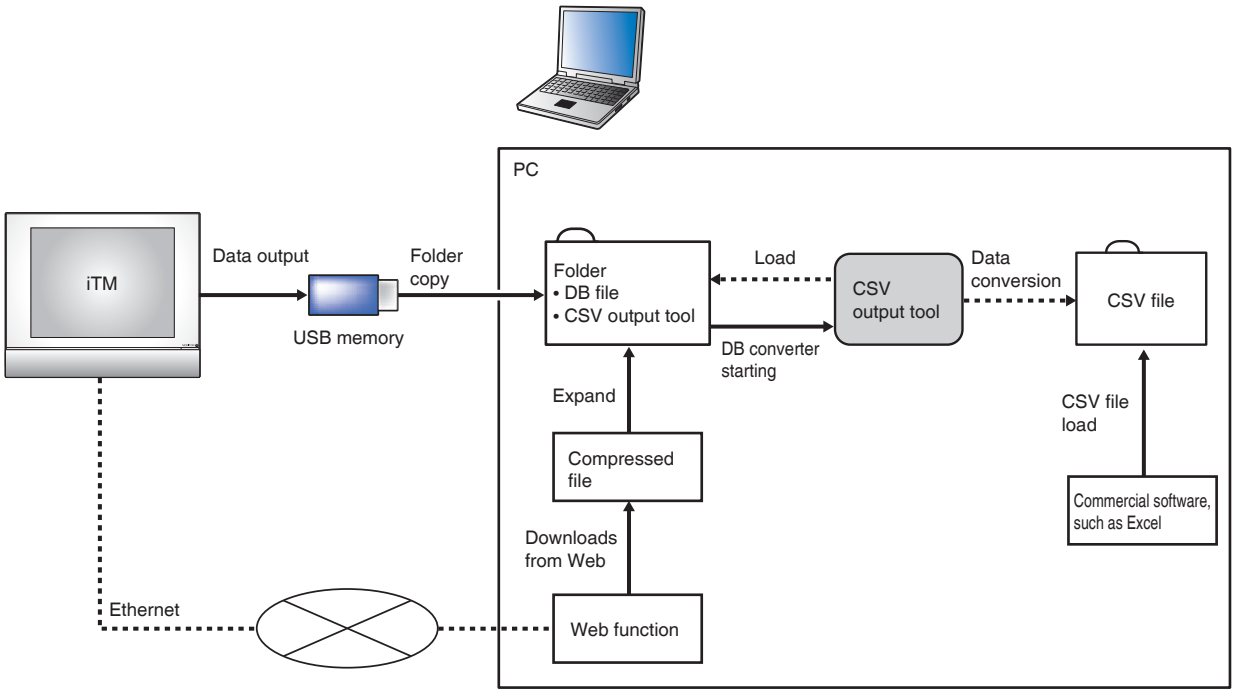
- History data
- Energy Navigator

  Energy data

  Management point data

  Failure to turn off data

  Setpoint gap data



Data output flow figure

NOTE

If an error message appears when you start the CSV output tool, see “13-1 Before Having the Product Serviced: <About CSV output tool>”.

Output Data Conversion Steps

The following describes the steps you need to follow to convert output data into the CSV format before checking.

Operation on iTM

1. Save the data.*

*When using the Web Remote Management function (option), you can save data in a compressed format (.zip) via the Web browser on your PC.
Unzip the compressed files and go to step 3.

Operation on PC

2. Connect the USB memory that contains the output data and copy the data folder to your PC.

3. Start the CSV output tool in the data folder to convert the data.

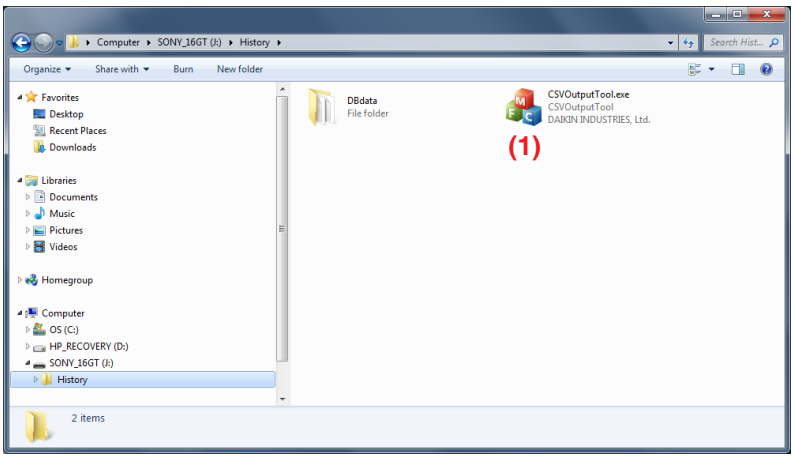
4. Load the CSV file in Excel etc. and check the converted data.

See:

"Data Conversion" on the next page.

Data Conversion

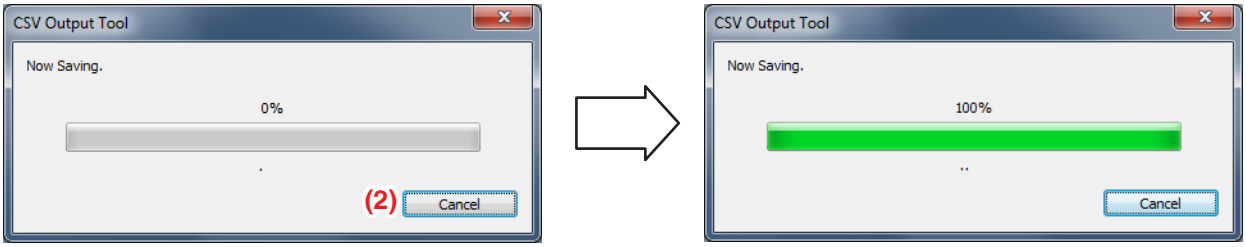
1. Open the output data from the iTM on your PC.



NOTE

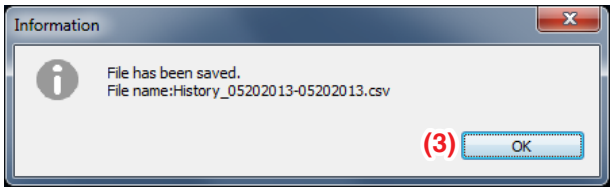
- The folder name varies depending on the output data.

2. Double-click CSVOutputTool.exe **(1)** to start the CSV output tool. Data conversion starts. During data conversion, the CSV Output Tool dialog as shown below appears.



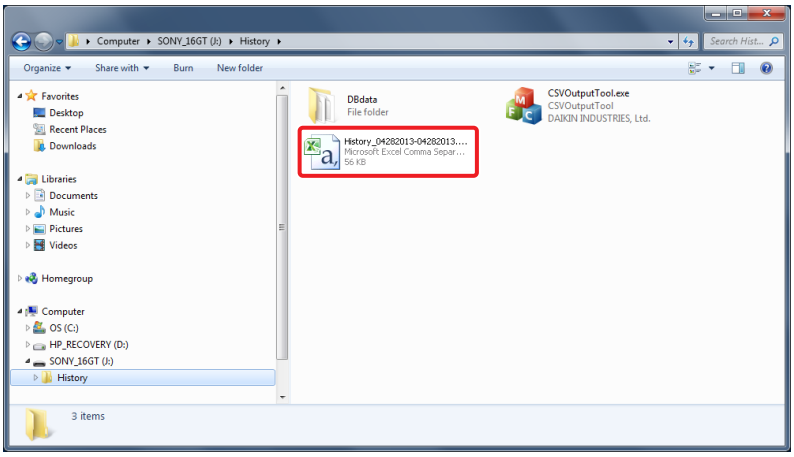
To cancel the data conversion, click the **Cancel** button **(2)**.

3. The conversion process is complete when the Information dialog with the message “File has been saved.” appears.



After checking the filename, click the **OK** button **(3)** to close the Information dialog.

4. The file has been saved in the CSV format in the folder.



NOTE

- The saved CSV filename varies depending on the output data.
- The display order of the year, month, and day depends on the date display format selected in the locale/time zone/daylight saving time settings of the iTM from which you output data.
- The following data items in the saved CSV file are displayed in the date display format selected in the locale settings of the iTM from which you output data:

  Date format

  Time format

  Celsius/Fahrenheit

  Decimal point/CSV separator

7-3 Outputting Function Settings

The iTM includes various functions, and each of them needs settings. You can save them to a CSV file using the Setup Export function and use a computer to check the current settings.

The following describes how to output the settings.

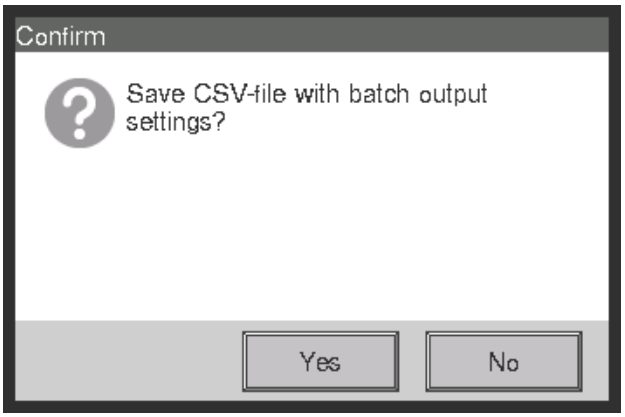
See below for settings you can output using this function.

For the USB memory requirements, see “14-2 Peripheral Equipment Specifications”.

<Setup Export details>

Function	Output content
Schedule	Settings of programs registered with the Schedule Control.
Interlocking Control	Settings of programs registered with the Interlocking Control.
Emergency Stop	Settings of programs registered with the Emergency Stop.
Auto Changeover	Settings of programs registered with the Auto Changeover.
Power Proportional Distribution	Excluded time settings of the past 13 months.
Demand Control (Power Limit Control)	Settings of groups that are registered for the Demand Control.

1. Touch the Setup Export button on the Operation Mgmt. tab of the Menu List screen (see “4-5 Menu List Screen: Operation Mgmt. Tab”).



2. A confirmation dialog with the message “Save CSV-file with batch output settings?” appears. Connect a USB memory to the iTM unit and touch the Yes button. Saving to the USB memory takes up to 2 minutes per 1MB.
3. Output is complete when the message “File has been saved.” appears. Touch the Close button to close the screen.

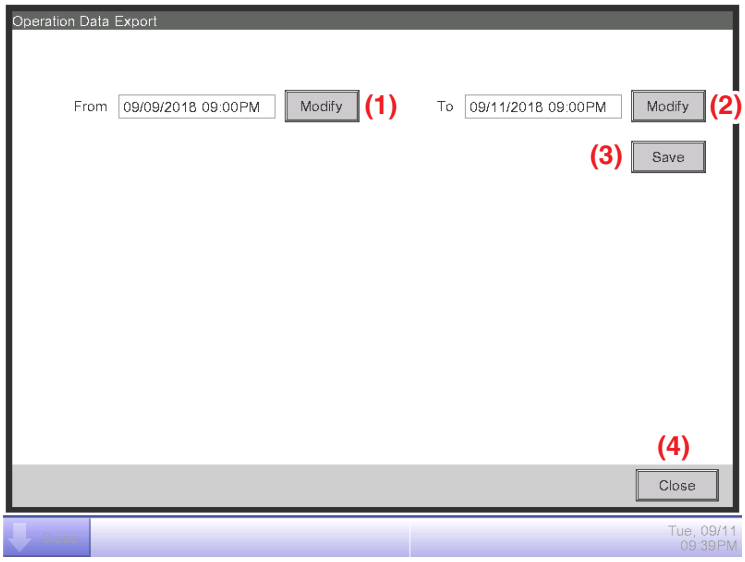
NOTE

For information on the CSV file format for each function, see “Appendix 5. Setup Export CSV File Format”.

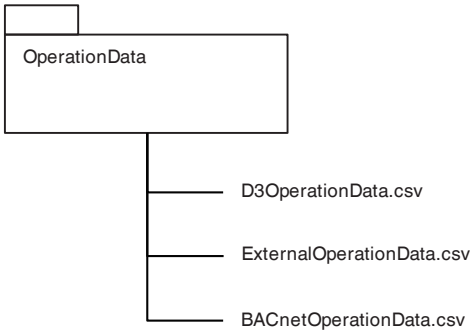
7-4 Operation Data Export

- Collects operation data from air conditioner and equipment and stores the operation data collected at 1 minute intervals for up to 5 days.
- The operation data can be output to a CSV file on the Web or a USB memory.

1. Touch the **Operation Data Export** button **(4)** on the Operation Mgmt. tab of the Menu List screen to display the **Operation Data Export** screen.
   (See 4-5 Menu List Screen: Operation Mgmt. tab)



2. Touch the **Modify** button **(1)** to display the Date and Time input dialog and specify the data output start date and time.
   Touch the **Modify** button **(2)** to display the Date and Time input dialog and specify the data output end date and time.
   Touching the **Save** button **(3)** displays a confirmation dialog. When saving to a USB memory, connect a USB memory to the iTM unit and touch the **Yes** button.
   Files are output with the following folder configuration to the root directory of the USB memory.



The correspondence between file name and target management point is as follows.

CSV file	Target management point
D3OperationData.csv	Outdoor, Indoor
ExternalOperationData.csv	External Di, External Dio, External Ai, External Ao, External Pi
BACnetOperationData.csv	BACnet Di, BACnet Dio, BACnet Ai, BACnet Ao, BACnet Mi, BACnet Mo

See Appendix 8. Operation Data Export for data items collected for each management point.

Touch the **Close** button **(4)** to close the Operation Data Export screen.

Output Time Examples

In the case of 25 outdoor units, 128 indoor units, 30 point BACnet Mi equipment

	Output Time(by actual tests)	
Output period	**USB from iTM**	**Web access**
2 hours	Approx. 10 min.	Approx. 10 min.
6 hours	Approx. 15 min.	Approx. 20 min.
24 hours	Approx. 45 min.	Approx. 80 min.

In the case of 10 outdoor units, 64 indoor units, 30 point BACnet Mi equipment

	Output Time(by actual tests)	
Output period	**USB from iTM**	**Web access**
2 hours	Approx. 5 min.	Approx. 5 min.
6 hours	Approx. 10 min.	Approx. 10 min.
24 hours	Approx. 25 min.	Approx. 35 min.

[PC performance spec at the time of measurement]

CPU: Intel® Core™ i5-6600 CPU@3.3 GHz 3.3 GHz

Memory: 16 GB

NOTE

- Output Time varies with USB and PC performance spec in some measure.
- If output takes a long time or output fails, carry it out with a shortened output period.

8. Setting up Automatic Control Functions

8-1 Setting up the Interlocking Control

Outline

Interlocking Control is a function that enables interlocking operation of management point(s) and area(s) according to the operation status of the specified management point(s).

To use this function, you need to set the input condition(s) and the control(s) for the interlocking program. When the input conditions are true, the specified output action for the target management points or areas will be performed.

The following controls can be performed: operations interlocked with room access control, free cooling, security interlocking operation, error reporting and etc.

Application example:

Operations interlocked with room access control and lighting

- Turn on the air conditioner if any of the lightings is turned on.
  [Input condition] The lighting “a”, “b” or “c” in the area is turned on.
  [Controls] If any of the input conditions are true, turn on the indoor unit.
- Turn off the Ventilator if all indoor units in the room are turned off.
  [Input condition] The indoor unit “a”, “b” or “c” in the area is operating.
  [Controls] If none of input conditions are true, turn off the Ventilator.
- Start/Stop the indoor unit according to the lock signal detection function performed by the key management system.
  [Input condition] The Dio (lock signal detected by the key management system) is On.
  [Controls] If all input conditions are true, turn on the indoor unit.
  If none of input conditions are true, turn off the indoor unit.

Energy saving free cooling

- Stop the cooling operation of the indoor unit and activate the ventilation device for free cooling if the outdoor temperature is lower than the set temperature.
  [Input condition] The analogue value (outdoor temperature) is lower than the set temperature.
  [Controls] If all input conditions are true, stop the cooling operation of the indoor unit and activate the ventilation device.

Security interlocking operation

- Turn on/off the security device according to the operation result of the occupancy sensor.
  [Input condition] The Dio (occupancy sensor) “a”, “b” or “c” is On.
  [Controls] If any of the input conditions are true, turn off the security device.
  If none of input conditions are true, turn on the security device.

Error report

- Report an error to the alarm device that notifies the security company if an error signal of the facility is detected.

  [Input condition] The Dio (error signal of the facility) “a”, “b” or “c” is On.

  [Controls] If any of the input conditions are true, report an error to the alarm device.

The management point types that can be specified as input, as well as the relationship between the management point and conditions are indicated in the tables below.

Management point type		Switch	Equipment error *2	Analog upper/lower limit error	Operation mode	Analog value	MultiState value
	Target management point						
Indoor unit	Indoor unit	✓	✓	N/A	✓	N/A	N/A
	Hydrobox	✓	✓	N/A	N/A	N/A	N/A
Ventilator	Ventilator	✓	✓	N/A	N/A	N/A	N/A
Dio	D3Dio External Dio BACnet Dio*1 D3Di External Di Di BACnet Di*1	✓	✓	N/A	N/A	N/A	N/A
Analog (Ai)	External Ai Internal Ai BACnet Ai*1	N/A	N/A	✓	N/A	✓	N/A
MultiState	BACnet Mi*1	N/A	N/A	N/A	N/A	N/A	✓

*1 BACnet Dio, BACnet Di, BACnet Ai, and BACnet Mi are optional.

*2 Equipment error does not include communication error.

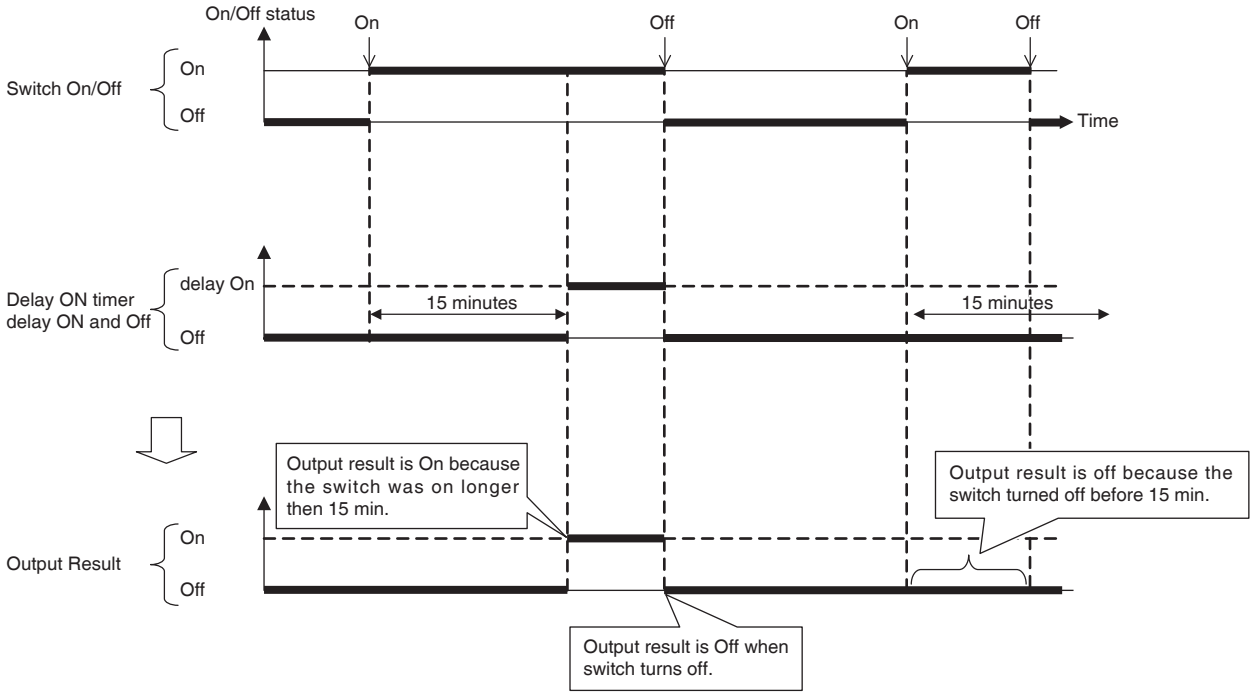
Condition to detect	Required condition	
	Required duration*3	Status
Switch	Specify the time during which the required condition is continuously cleared in the 0 to 30-minute range, in increments of 1 minute.	Specify which will be considered condition cleared: On or error, or Off or normal. * On/Off, or error/normal must be set on the management point side.
Equipment error		
Analog upper/lower limit error		
Operation mode		Specify which operation mode clears the condition.
Analog value	Specify the time during which the required condition is continuously cleared in the 1 to 30-minute range, and in increments of 1 minute.	Specify the analog value that clears the condition as an expression.

*3 For the explanation of the required duration, see “Example: Delay ON timer (15 min. example)” on the next page.

Example:Delay ON timer (15 min. example)

After input status changes (On or Off) then status will be accessed after 15 min., not when the input status changed.

The figure below shows the example of an assessment when the required condition is “On” and timer has been set for 15 min.



There are two outputs for each interlocking program.

Different outputs can be set (for example On/Off) for the same input depending on the status of input.

The possible relationship between the targets and outputs are indicated in tables below.

Target (management point type)	Target management point	On/Off	Setback Setpoint (for cooling/ heating)	Ventilation Amount/ Ventilation Mode	Operation Mode
Indoor unit	Indoor	✓	✓	N/A	✓
	Hydrobox	✓	✓	N/A	✓
Ventilator	Ventilator	✓	N/A	✓	N/A
Dio	D3Dio, External Dio, BACnet Dio*	✓	N/A	N/A	N/A
Analog (Ao)	External Ao, BACnet Ao*	N/A	N/A	N/A	N/A
MultiState (Mo)	BACnet Mo*	N/A	N/A	N/A	N/A
Area	All	✓	✓	✓	✓

Target (management point type)	Target management point	Fan	Setpoint	Setpoint (for cooling/ heating)	Setpoint Shift	Setpoint Shift (for cooling/ heating)	Leaving Water Setpoint (for cooling/ heating)	On/Off by remote controller enabled/ disabled
Indoor unit	Indoor	✓	N/A	✓	N/A	✓	N/A	✓
	Hydrobox	N/A	✓	N/A	✓	N/A	✓	✓
Ventilator	Ventilator	N/A	N/A	N/A	N/A	N/A	N/A	✓
Dio	D3Dio, External Dio, BACnet Dio*	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Analog (Ao)	External Ao, BACnet Ao*	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MultiState (Mo)	BACnet Mo*	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Area	All	✓	N/A	✓	N/A	✓	✓	✓

Target (management point type)	Target management point	Setpoint by remote controller enabled/ disabled	Operation mode by remote controller	Timer Extension	Analog Value	MultiState Value	Low Noise
Indoor unit	Indoor	✓	✓	✓	N/A	N/A	N/A
	Hydrobox	✓	✓	✓	N/A	N/A	✓
Ventilator	Ventilator	N/A	N/A	N/A	N/A	N/A	N/A
Dio	D3Dio, External Dio, BACnet Dio*	N/A	N/A	N/A	N/A	N/A	N/A
Analog (Ao)	External Ao, BACnet Ao*	N/A	N/A	N/A	✓	N/A	N/A
MultiState (Mo)	BACnet Mo*	N/A	N/A	N/A	N/A	✓	N/A
Area	All	✓	✓	✓	✓	N/A	✓

* BACnet Dio, BACnet Ao and BACnet Mo are optional.

Interlocking Control Restrictions

- **Communication error**

  The input condition is either a “valid” or “invalid” status of the target (input management point). When a communication error occurs, the status is set as “unfixed” because it cannot be assessed.

- **Start**

  The initial status of a target (input management point) when started is set as “unfixed”.

  If equipment is turned on after the iTM, in some cases, its status will be set to “unfixed”.

  When turning on, be sure to turn on the iTM last.

  Alternatively, reset the iTM after turning on the equipment.

- **Handling of equipment error**

  When an equipment error occurs, if the detection target is anything but the “equipment error”, the status of the management point is handled as “unfixed”.

- **Maintenance mode**

  If the management point of the detection target is being checked, the status of the management point is handled as “unfixed”.

  This function does not work when the management point target of condition control has been set to maintenance mode.

- **Handling of “unfixed”**

  The changes in the status from “valid (invalid)” to “unfixed” or “unfixed” to “valid (invalid)” are not considered triggers of status change.

  When returning from the status of “unfixed”, the status before “unfixed” remains until the change in a status occurs.

- **Operation when the detection target includes “unfixed”**

  When “unfixed” is included in the status of the management point of the detection target, if all management points excluding “unfixed” become valid (invalid), its interlocking program may be executed.

  <When interlocking control is performed>

  When one management point changes to valid (invalid), and all management points excluding “unfixed” become valid (invalid) accordingly, the interlocking program is executed.

  Example:

Time sequence	Air conditioner 1	Air conditioner 2	Air conditioner 3
1	Valid	Invalid	“Unfixed”
2	Valid	Valid	“Unfixed”

  <When interlocking control is not performed>

  When one management point changes to “unfixed”, and all management points excluding “unfixed” become valid (invalid) accordingly, the interlocking program is not executed.

Example:

Time sequence	Air conditioner 1	Air conditioner 2	Air conditioner 3
1	Valid	Valid	Invalid
2	Valid	Valid	“Unfixed”

- **Target (input management point)**

  The interlock control may not be executed when the value is out of range within the required duration.

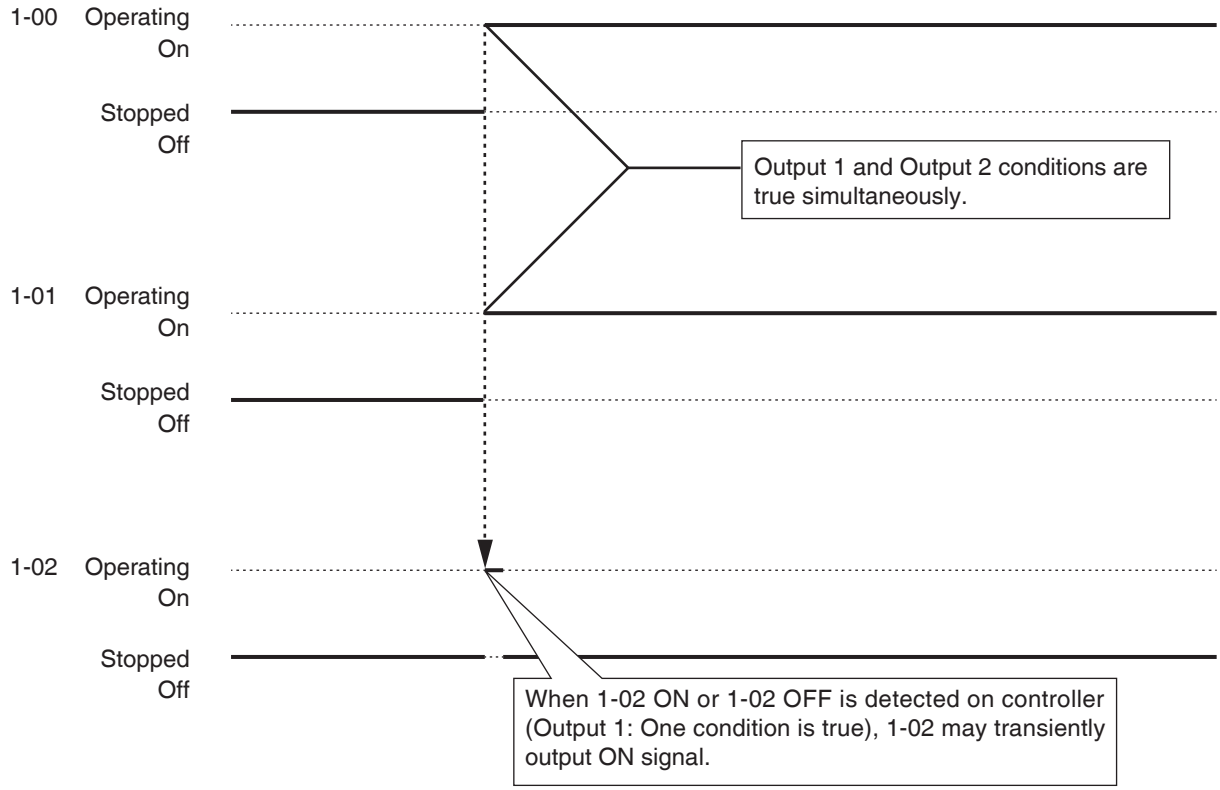
- **Condition changes immediately after program set up**

  If the input changes while the program is being edited or when toggling from disabled to enabled, status may be considered On/Off depending on the timing. Do not change settings when input is about to change.

- **Simultaneous status change effects**

  In the event where input conditions becomes true for output 1 and output 2 simultaneously and the target of both outputs is the same with opposite On and Off the function may temporarily show unexpected behavior.

Example:
When the program is set as follows.
Input: 1-00, 1-01 Output 1: One input status change → 1-02 turns ON
Output 2: All inputs status change → 1-02 turns OFF
Required duration: 0 min



NOTE

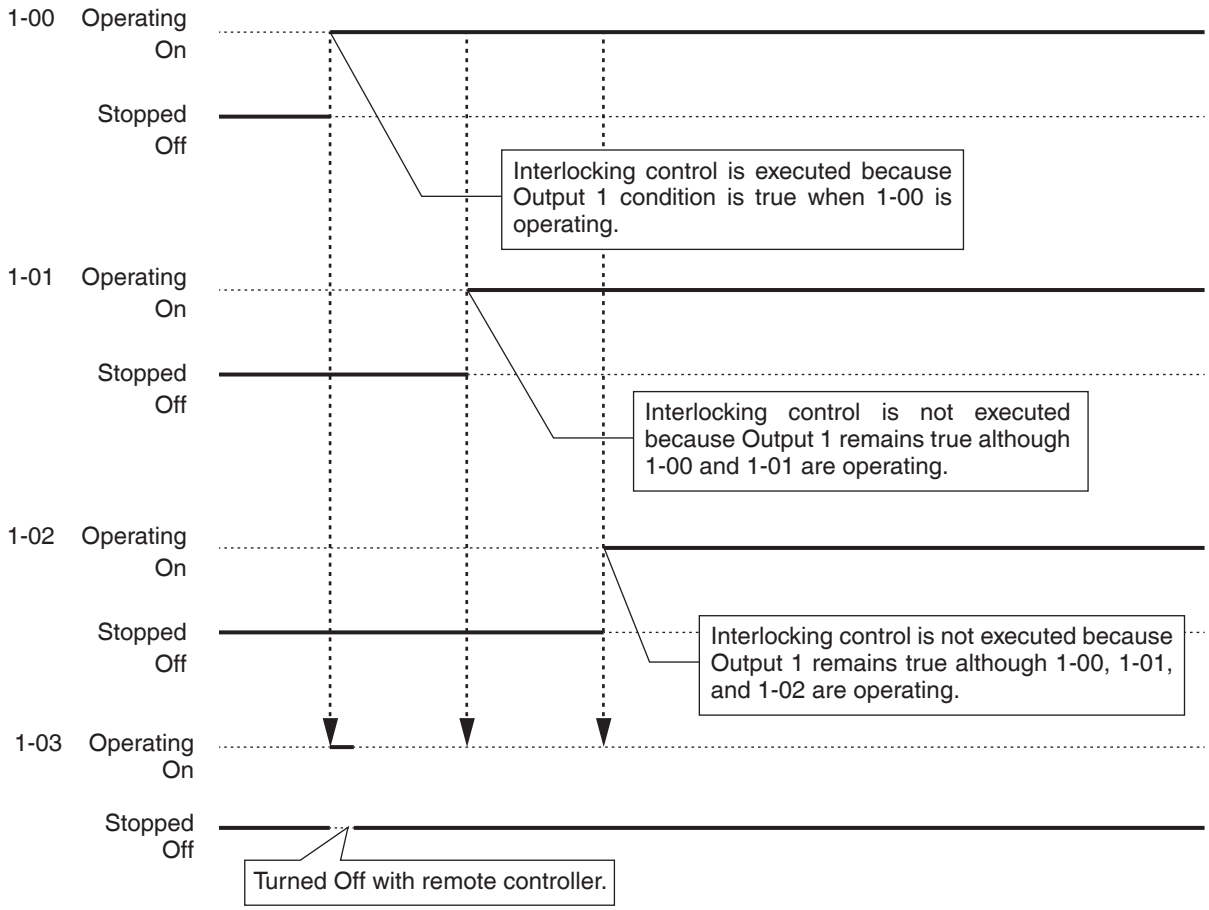
Settings for the interlocking control is designed for general purposes, therefore a complex program can be set, too.

However, the system will not issue any warning or error message even if an inconsistent or inadequate setting is specified.

Check carefully before using.

Once the trigger condition is true to turn On/Off output, the iTM will not execute On/Off even if the condition remains true. A change in the status of input must be recognized.

Example:
When the program is set as follows.
Input: 1-00, 1-01, 1-02 Output 1: One input is On → 1-03 turns ON
Required duration: 0 min



Setting up an interlocking program

The following example describes how to create and set up an interlocking program.

Example:

(1) Turn On the Ventilator if any of the indoor units in Office B is turned On.

(2) Turn Off the Ventilator if all indoor units in Office B are turned Off.

Interlocking program name: Ventilator control program

Target: Office B (the area where the indoor unit “a”, indoor unit “b”, and Ventilator “c” are located).

Input conditions: [Target for detection] Turning On/Off of the indoor unit “a” or “b”.

[Required conditions] The indoor unit operates (delay On timer set to 10 minutes).

Control: (1) If any of the input conditions are true, turn on [Output1] the Ventilator “c”.

(2) If none of the input conditions are true, turn off [Output2] the Ventilator “c”.

1. Creating the interlocking program (setting up the interlocking program name)

⇩

2. Setting up the input condition

⇩

3. Setting up the required conditions (condition and timer setup)

⇩

4. Setting up Output 1

⇩

5. Setting up the output actions (Output1)

⇩

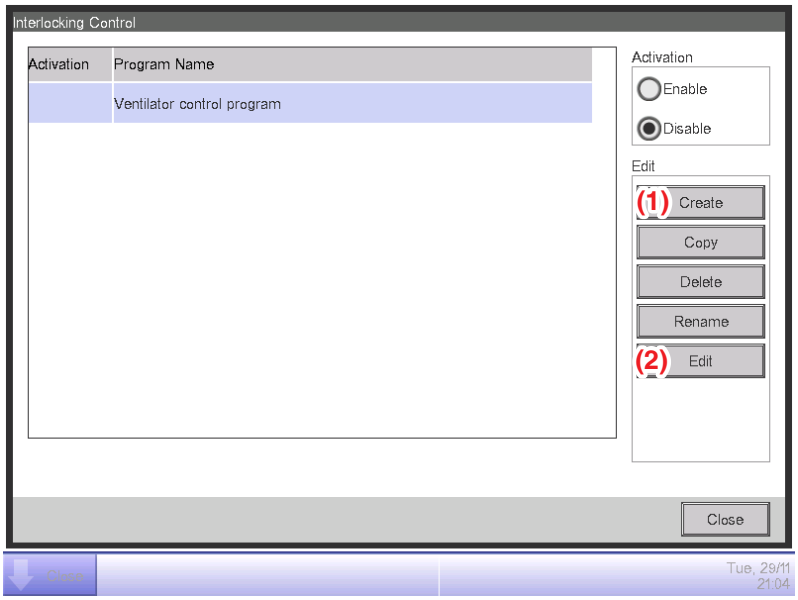
6. Setting up Output2

⇩

7. Enabling the Interlocking Program

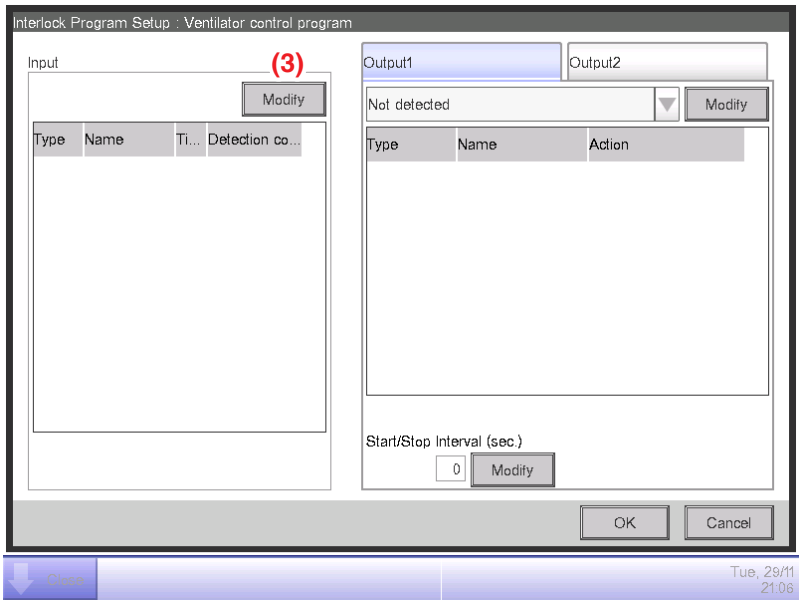
1. Creating the Interlocking Program (setting up the interlocking program name)

Touch the Interlocking Control button on the Automatic Ctrl. tab of the Menu List screen and display the main Interlocking Control screen (see “4-5 Menu List Screen: Automatic Ctrl. Tab”).



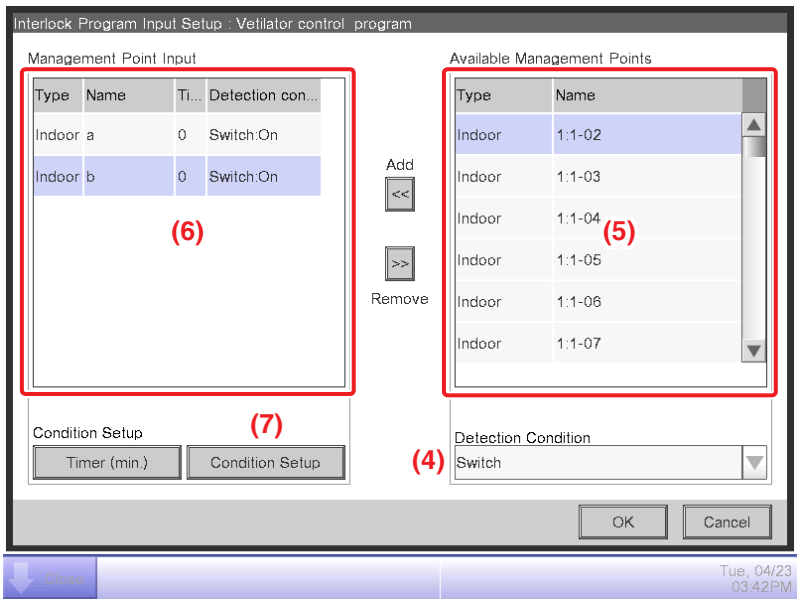
Touch the **Create** button **(1)** and enter the program name in the Name Input dialog that appears. Enter **“Ventilator control program”**.

Select the **“Ventilator control program”** registered in the list and touch the **Edit** button **(2)** to display the Interlock Program Setup screen.



2. Setting up the input condition

Touch the **Modify** button **(3)** and display the Interlock Program Input Setup screen.



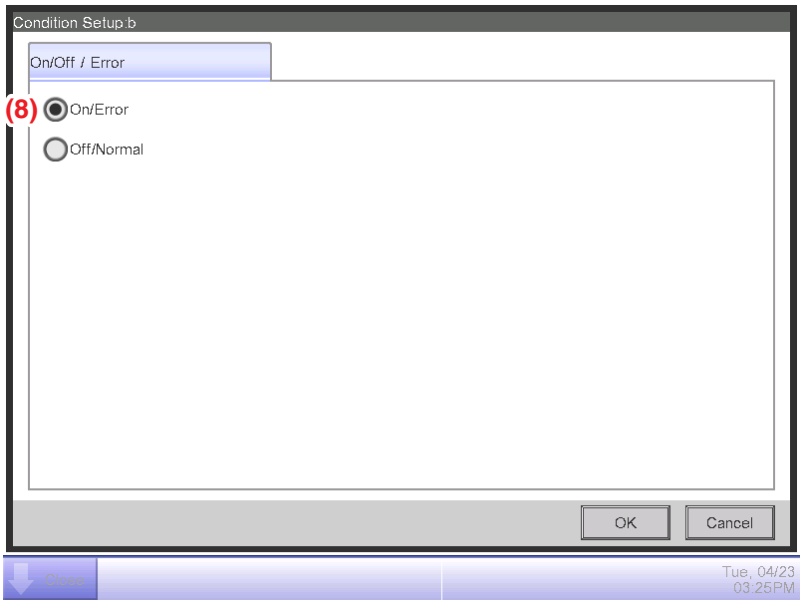
Selecting **"Switch"** in the **Detection Condition** drop down menu **(4)** displays a list of management points **(5)** for which On/Off can be registered as the condition to be detected.

Selecting the indoor unit **"a"** and touching the Add button registers it in **(6)**.

Similarly, register the indoor unit **"b"**.

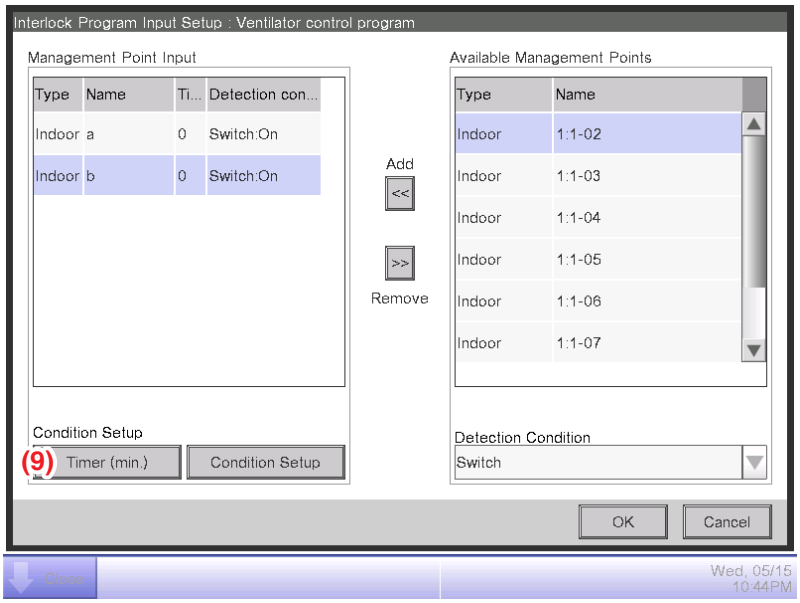
3. Setting up the required conditions (condition and timer setup)

Select the indoor unit **"a"** from the list **(6)** and touch the **Condition Setup** button **(7)** to display the Condition Setup screen.



Select **"On/Error"** **(8)** and touch the OK button to return to the Interlock Program Input screen.

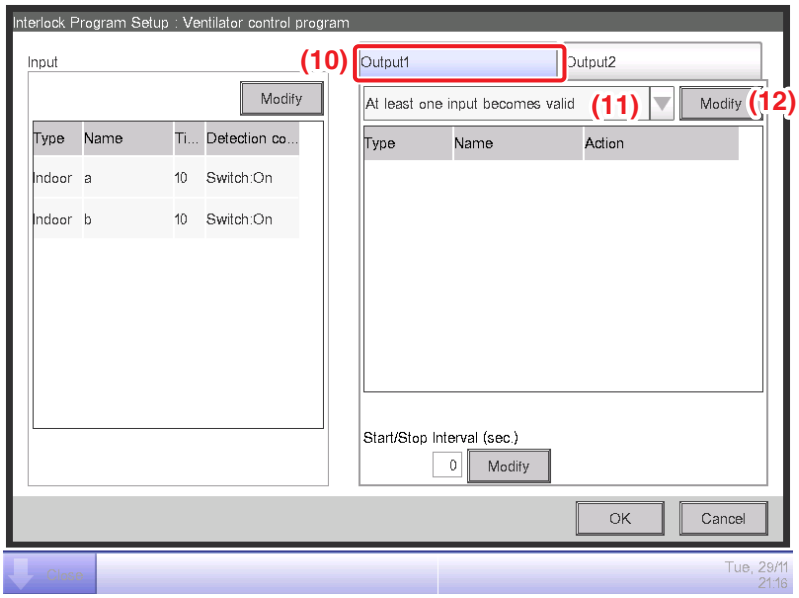
Similarly, set up the indoor unit **"b"**.



Select the indoor unit **"a"** and touch the **Timer (min.)** button **(9)** and enter **"10"** for required duration in the Numerical Input dialog that appears.

Touch the OK button and return to the Interlock Program Setup screen.

Similarly, set up the indoor unit **"b"**.



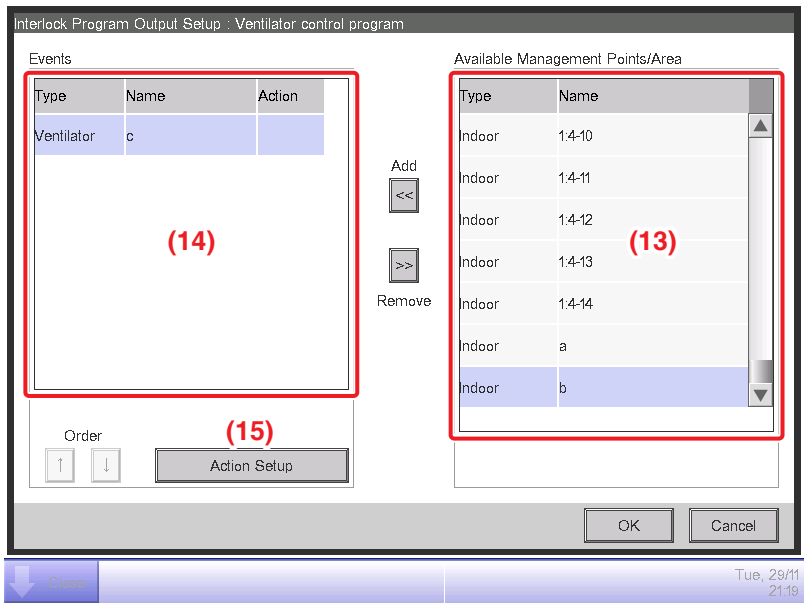
Check that the **Output1** tab **(10)** is displayed and

Select **"At least one input becomes valid"** in the **Input condition** drop down menu **(11)**.

The step above finishes the setup of the required conditions, **"which is either indoor unit "a" or "b" to be On for 10 minutes"**.

4. Setting up Output 1

Touch the **Modify** button **(12)** and display the Interlock Program Output Setup screen.

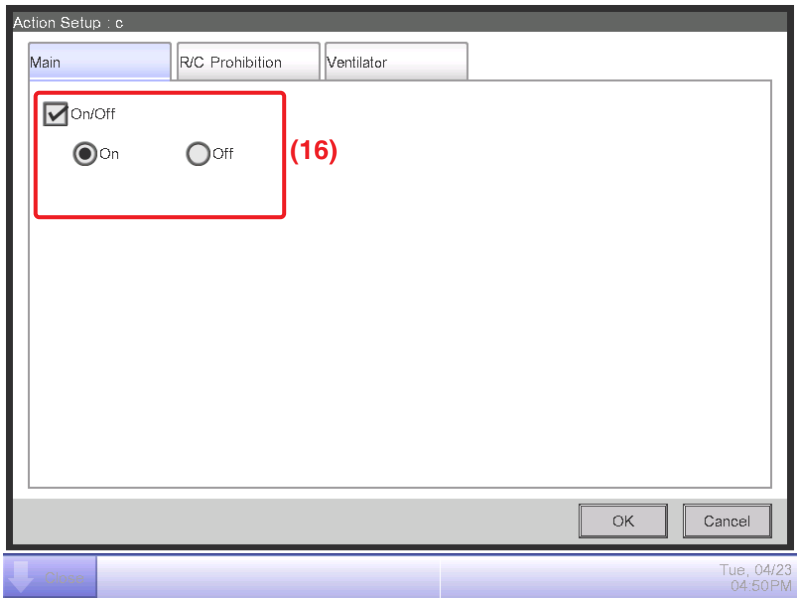


(13) is the list of management points and areas that can be registered.

Select Ventilator **"c"** and touch the Add button to register it as target of the output event in **(14)**.

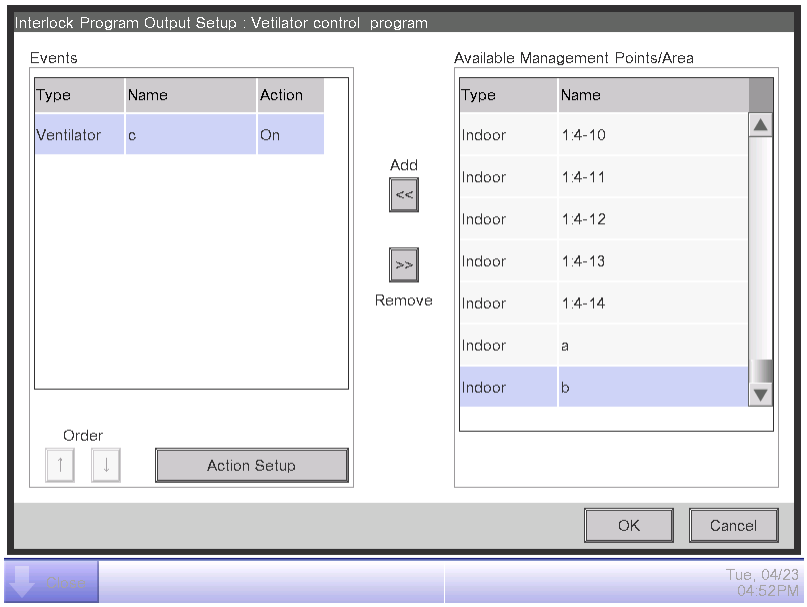
5. Setting up the output actions (Output 1)

Select the Ventilator **"c"** registered in **(14)** and touch the **Action Setup** button **(15)**. The Action Setup screen appears.



Select the **On/Off** check box **(16)** on the Main tab and then, select the **On** radio button.

Touch the OK button and return to the Interlock Program Output Setup screen.

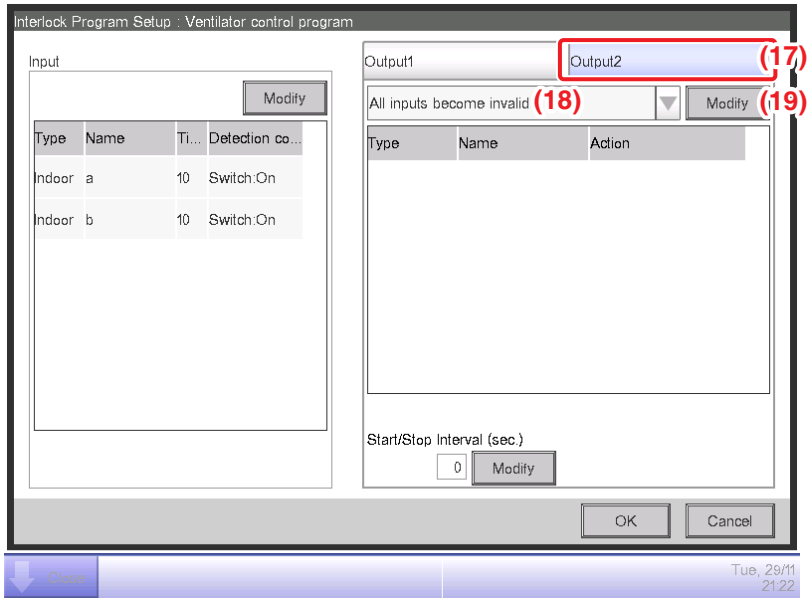


Touch the OK button and return to the Interlock Program Setup screen.

The step above finishes the setup of **Output1** for the program, **"which turns on Ventilator "c" when either indoor unit "a" or "b" is On for 10 minutes"**.

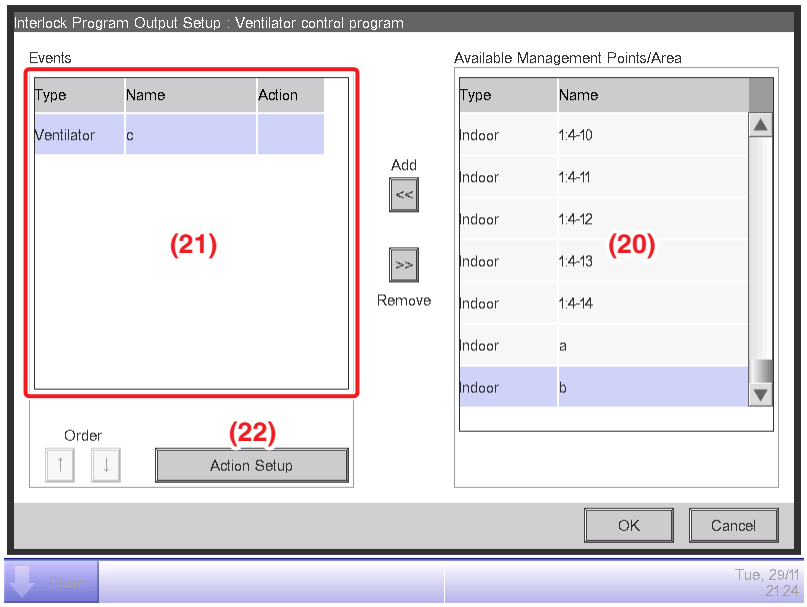
6. Setting up Output2

Set up a different output action for the same condition to detect and target.



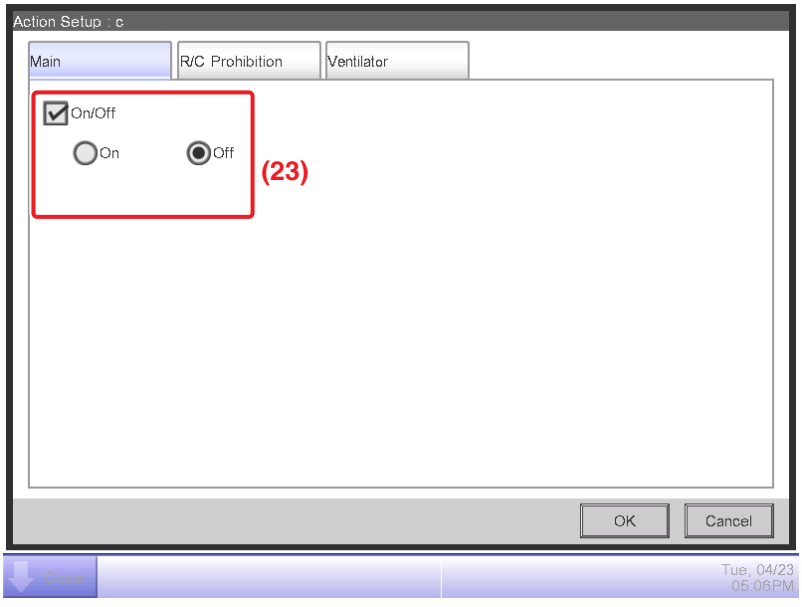
Select the **Output2** tab **(17)** and then, **"All inputs become invalid"** in the **Input condition** drop down menu **(18)**.

Touch the **Modify** button **(19)** and display the Interlock Program Output Setup screen.



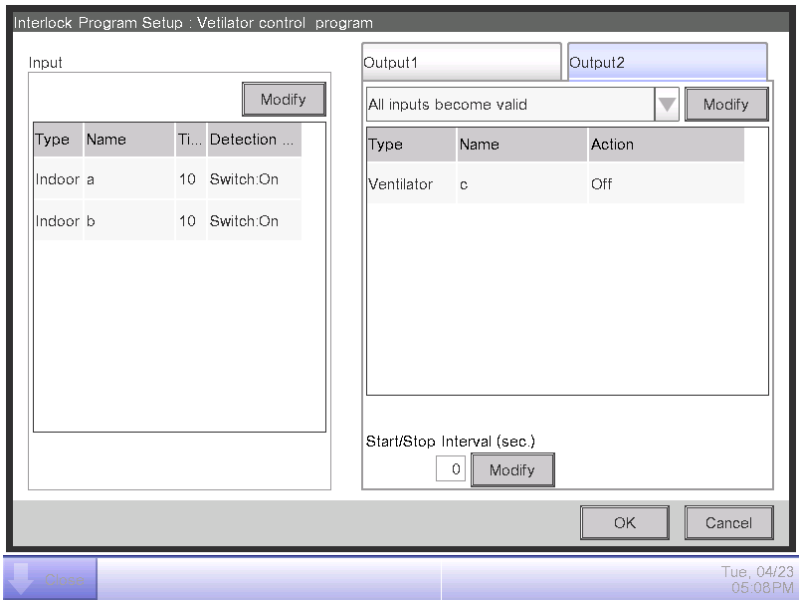
Select Ventilator **"c"** from **(20)** and touch the Add button to register it as target of the output event in **(21)**.

Select the Ventilator **"c"** registered in **(21)** and touch the **Action Setup** button **(22)** to display the Action Setup screen.



Select the On/Off check box **(23)**, select the Off radio button, and touch the OK button to return to the Interlock Program Setup screen.

Likewise touch the OK button on the Interlock Program Output Setup screen and return to the Interlock Program Setup screen.



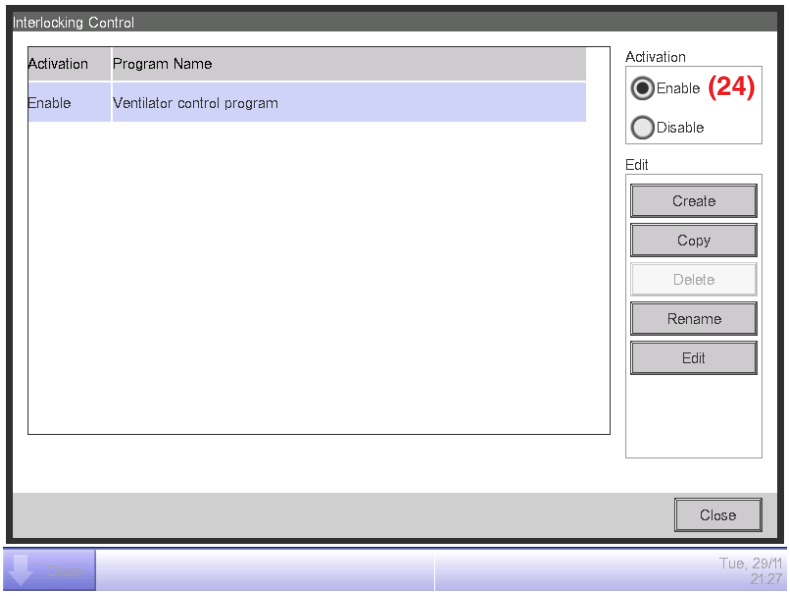
The step above finishes the setup of **Output2** for the program, **"which turns off Ventilator "c" when both indoor units "a" and "b" go off"**.

The **"Ventilator control program"** is now complete.

Touch the OK button and return to the main Interlocking Control screen.

7. Enabling the Interlocking Program

Enable the created interlocking program.



Select **"Ventilator control program"** and select the **Enable** radio button **(24)**.

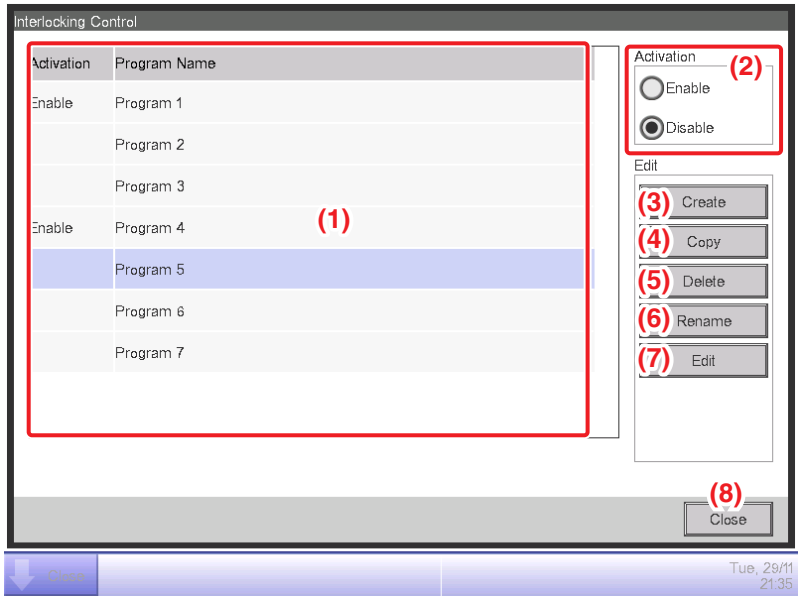
Check that the Activation column of the list is set to Enable and touch the Close button to close the screen.

Detailed screen and button descriptions

- **Main Interlocking Control Screen**

This screen is displayed when you touch the Interlocking Control button on the Automatic Ctrl. tab of the Menu List screen (see “4-5 Menu List Screen: Automatic Ctrl. Tab”).

This screen allows you to create and delete interlocking programs, as well as enable/disable the interlocking programs.



(1) Interlocking program list

Displays registered interlocking programs.

(2) Activation area

Enables and disables an interlocking program.

(3) Create button

Creates a new interlocking program. Touching the button displays the Name Input dialog.

The maximum number of interlocking programs you can create is 500.

Set up a name using 1 to 32 characters.

Duplicate names are not permitted.

(4) Copy button

Copies the program selected in the interlocking program list. Touching the button displays the Name Input dialog.

(5) Delete button

Deletes the program selected in the interlocking program list. Touching the button displays a deletion confirmation dialog.

(6) Rename button

Renames the program selected in the interlocking program list. Touching the button displays the Text Input dialog.

(7) Edit button

Displays the Interlock Program Setup screen that allows you to edit the program selected in the interlocking program list.

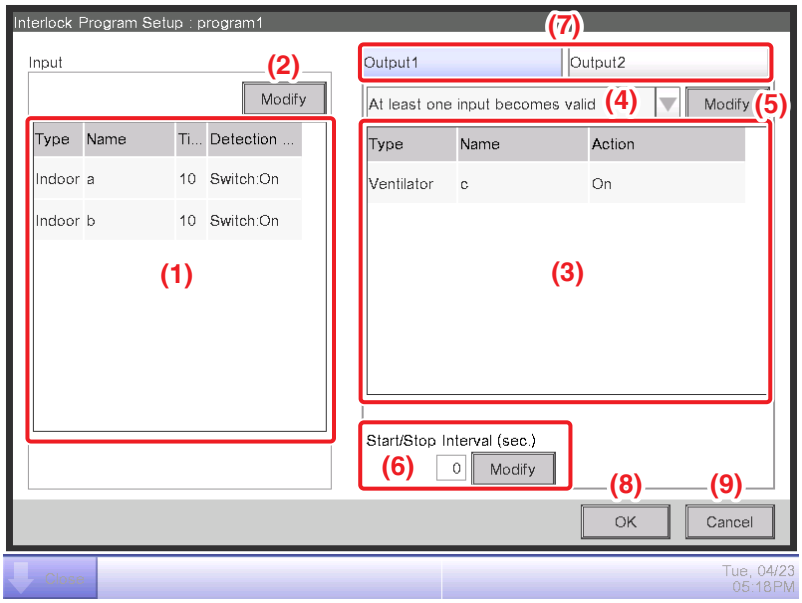
(8) Close button

Closes the screen.

- **Interlock Program Setup Screen**

  This screen is displayed when you touch the Edit button on the main Interlocking Control screen.

  Sets up details for the interlocking program.



(1) Input list

Displays the input conditions of the interlocking program.

(2) Modify button (Input)

Displays the Interlock Program Input screen that allows you to set the input conditions for interlocking.

(3) Output list

Displays the outputs of the interlocking program.

(4) Input condition drop down menu

Selects the input conditions for an interlocking program output.

Select an input condition from: Not detected, At least one input becomes valid, All inputs become valid, At least one input becomes invalid, and All inputs become invalid.

(5) Modify button (Output)

Displays the Interlock Program Output Setup screen that allows you to set up the event to be output by the interlocking program.

(6) Start/Stop interval (sec.) field

Sets up the delay for the outputs. When sending a switch order to multiple management points, you can set up an interval for outputting the orders.

Touch the Modify button and enter the time in the Numerical Input dialog that appears.

The range of values you can enter is 0 to 60 seconds, in increments of 1 second.

(7) Output1/Output2 selection tab

Toggles between settings for Output1 and Output2. You can set up to two outputs to one interlocking program.

(8) OK button

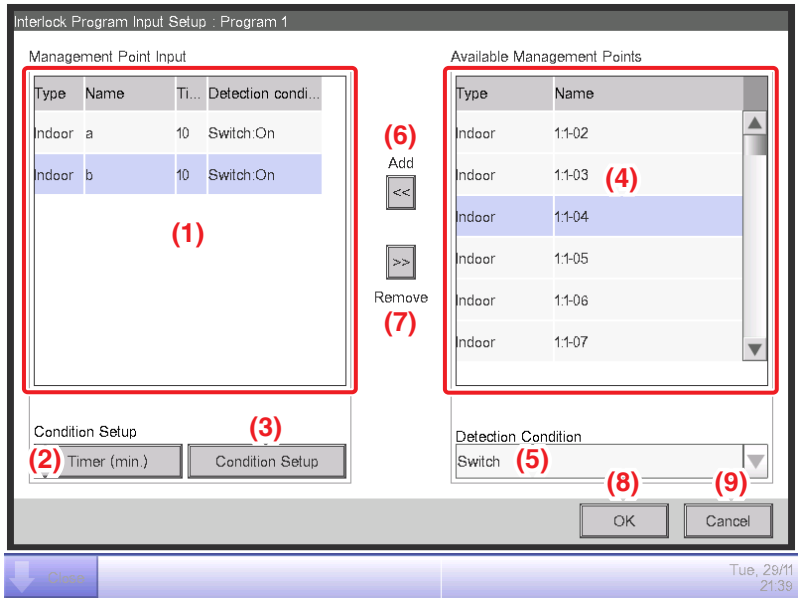
Saves the edit and closes the screen.

(9) Cancel button

Cancels the edit and closes the screen.

- **Interlock Program Input Setup Screen**

  This screen is displayed when you touch the Modify button on the Interlock Program Setup screen.
  Sets up the inputs to the interlocking program.



(1) Management Point Input list

Displays a list of management points monitored as inputs to the interlocking program.

(2) Timer (min.) button

Displays the Numerical Input dialog that allows you to set the required duration.

The range of values you can enter is 0 to 30 seconds, in increments of 1 second.

(It is 1 to 30 seconds when the Detection Condition is Analog value.)

(3) Condition Setup button

Displays the Condition Setup screen that allows you to set up the conditions required for the management point selected in the Management Point Input list.

(4) Available Management Points list

Displays a list of management points that can be selected as input for the condition to detect selected in the Detection Condition drop down menu.

(5) Detection Condition drop down menu

Selects the condition to detect at an available management point in the Available Management Points list.

Select a condition to detect from Switch, Equipment error, Analog upper limit error, Analog lower limit error, Operation mode, Analog value, and MultiState Value.

(6) Add button

Registers an available management point selected in the Available Management Points list to the Management Point Input list.

You can register up to 50 management points to monitor. However, you cannot register areas.

(7) Remove button

Removes the management point selected in the Management Point Input list from monitoring.

(8) OK button

Saves the edit and closes the screen.

(9) Cancel button

Cancels the edit and closes the screen.

- **Condition Setup Screen**

  This screen is displayed when you touch the Condition Setup button on the Interlock Program Setup screen.

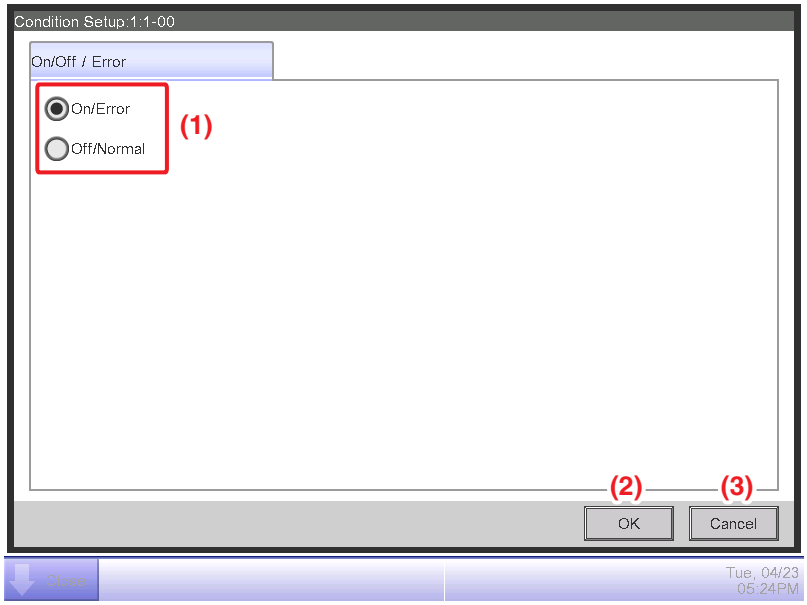
  Sets up the conditions to be required to the input.

  The screen consists of four tabs: On/Off / Error, Operation Mode, Analog Value and MultiState Value, each detecting different conditions. The screen opens on the tab that corresponds to the type of the monitored management point.

- **On/Off / Error Tab (Condition Setup Screen)**

  This screen is displayed when you touch the On/Off / Error tab on the Condition Setup screen.

  Sets up the conditions required for Switch, Equipment error, Analog upper limit error, or Analog lower limit error to be detected.



(1) Required condition radio button

Select either On/Error or Off/Normal as the required condition.

(2) OK button

Saves the edit and closes the screen.

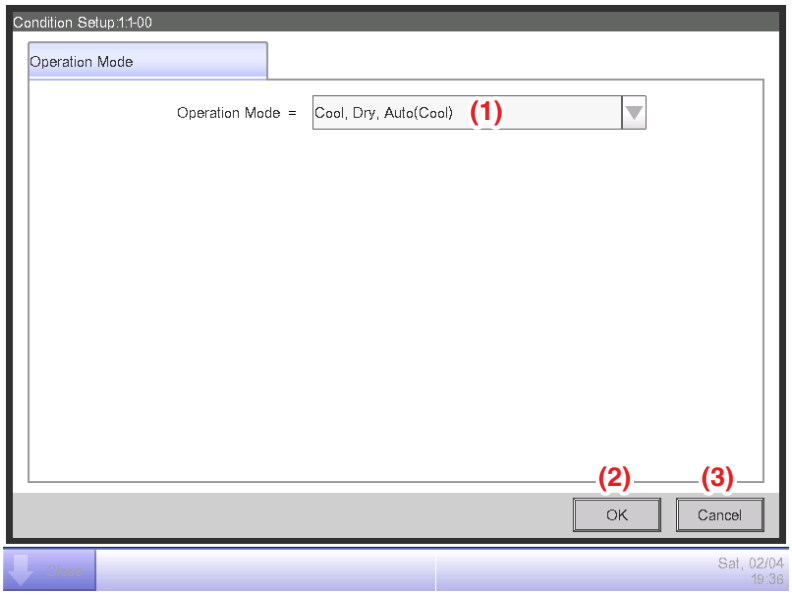
(3) Cancel button

Cancels the edit and closes the screen.

- **Operation Mode Tab (Condition Setup Screen)**

  This screen is displayed when you touch the Operation Mode tab on the Condition Setup screen.

  Sets up the conditions required for the operation mode to be detected.



(1) Operation Mode drop down menu

Select the operation mode required for clearing the condition.

Select an operation mode from: “Cool, Dry, Auto(Cool)”, “Heat, Auto(Heat)”, and “Fan”.

(2) OK button

Saves the edit and closes the screen.

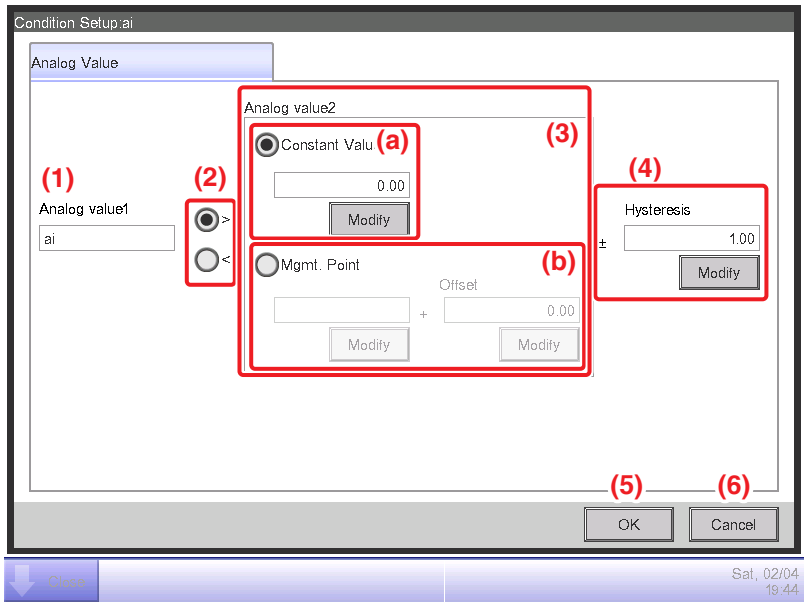
(3) Cancel button

Cancels the edit and closes the screen.

- **Analog Value Tab (Condition Setup Screen)**

  This screen is displayed when you touch the Analog Value tab on the Condition Setup screen.

  Sets up the analog value requirement for the condition to be detected.



(1) Analog Value1 field

Displays the name of the management point selected in the Management Point Input list.

(2) Inequality Sign Selection radio button

Select the inequality sign to be used in the analog value condition from “>” and “<”.

(3) Analog Value2 setting area

Sets up the right side of the analog value condition.

(a) Constant Value setting area

Select this area when specifying a constant value on the right side.

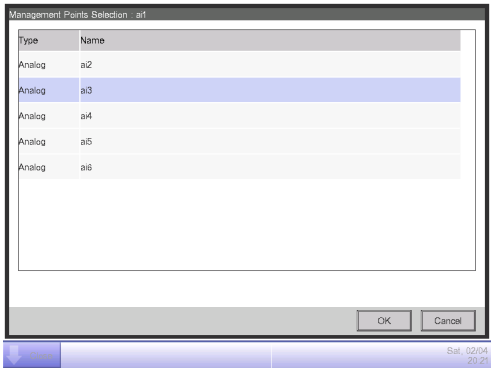
Touch the Modify button and enter a value in the Numerical Input dialog that appears.

For information on the range of values you can enter, see “Appendix 2. Setup items”.

(b) Mgmt. Point setting area

Select this area when specifying the right side using a management point and offset.

Touch the Modify button under Mgmt. Point and display the Management Points Selection screen and select one from the list.



Touch the Modify button under Offset and display the Numerical Input dialog to enter the offset.

For information on the range of values you can enter, see “Appendix 2. Setup items”.

(4) Hysteresis setting area

Sets up the range of the dead zone.

Touch the Modify button and enter the range in the Numerical Input dialog that appears.

For information on the range of values you can enter, see “Appendix 2. Setup items”.

(5) OK button

Saves the edit and closes the screen.

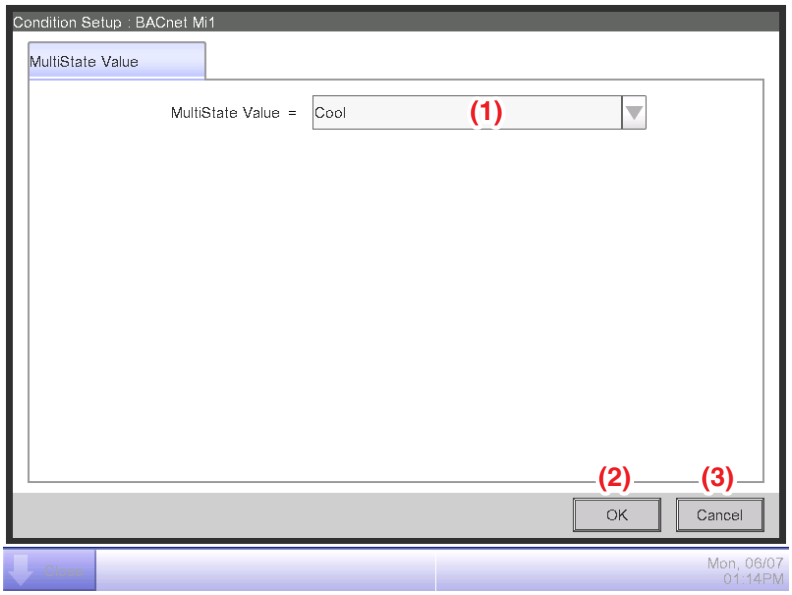
(6) Cancel button

Cancels the edit and closes the screen.

- **MultiState Value Tab (Condition Setup Screen)**

  This screen is displayed when you touch the MultiState Value tab on the Condition Setup screen.

  Sets up the MultiState value requirement for the condition to be detected.



(1) MultiState Value drop down menu

Select the MultiState value required for clearing the condition.

(2) OK button

Saves the edit and closes the screen.

(3) Cancel button

Cancels the edit and closes the screen.

- **Setting up an Analog Value Condition**

  An analog value can be used as a condition to detect when using free cooling or, when starting/stopping the air conditioners only while the room temperature is within a set range.

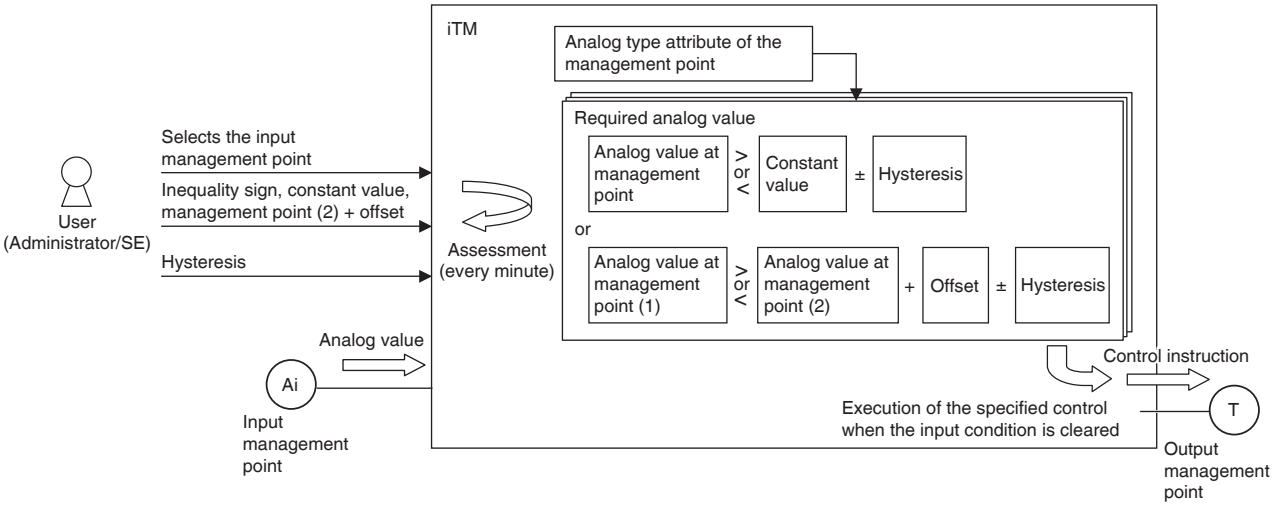
  The condition may be a comparison against a constant value or a comparison between analog values. Furthermore, “>” and “<” can be used to allow for range specification.

  When the condition is cleared, the input is considered valid and when the condition is not cleared, the input is considered invalid.

  Whether input is valid or invalid is assessed every minute.

  In addition, you can set a hysteresis around the valid/invalid border value to prevent hunting.

  In case that the condition is set between analog values, the conditions can only be set to the management points with the same analog type (temperature/general-purpose).

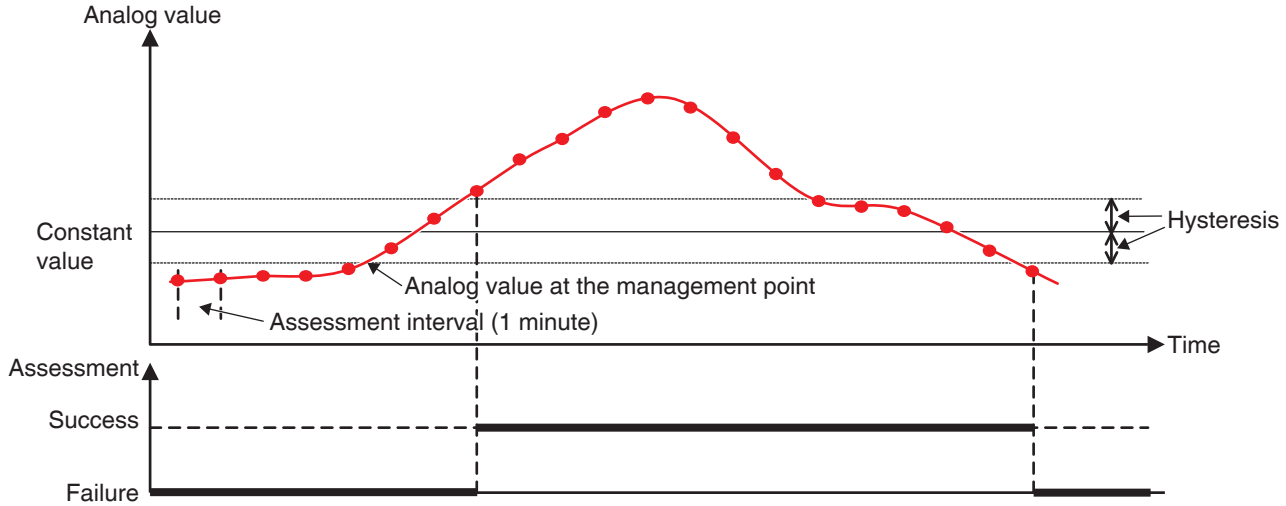


The following shows an example of how an analog value condition is assessed.

• The value at the management and constant value are compared as follows.

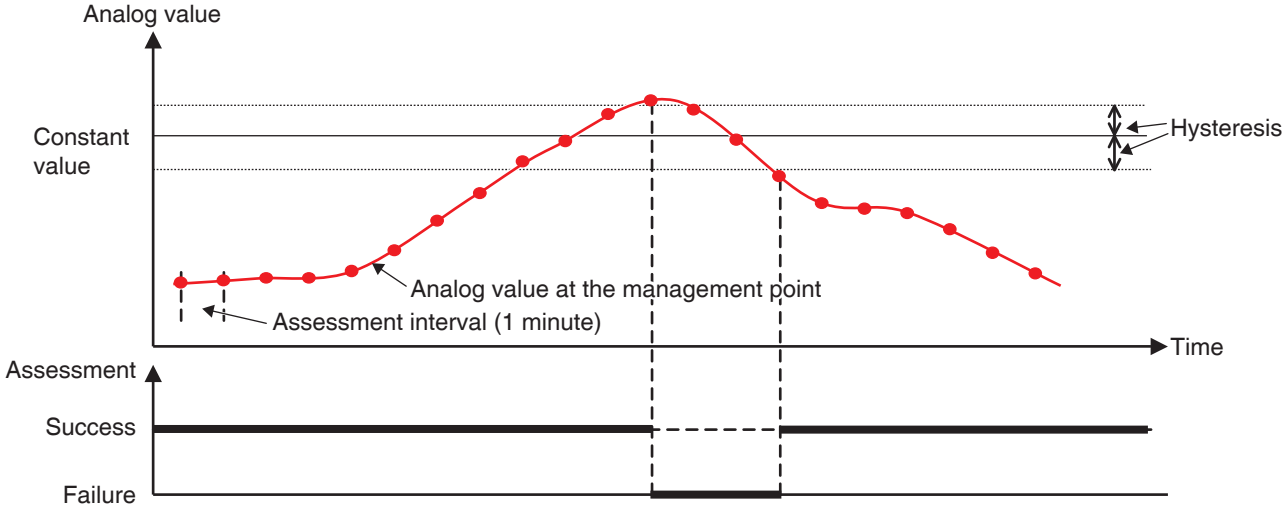
Example: [Analog value at the management point > Constant value ± Hysteresis]

Analog value at the management point > Constant value + Hysteresis	Success
Analog value at the management point < Constant value – Hysteresis	Failure
Except above	Not assessed (Previous assessment kept)



Example: [Analog value at the management point < Constant value ± Hysteresis]

Analog value at the management point < Constant value – Hysteresis	Success
Analog value at the management point > Constant value + Hysteresis	Failure
Except above	Not assessed (Previous assessment kept)

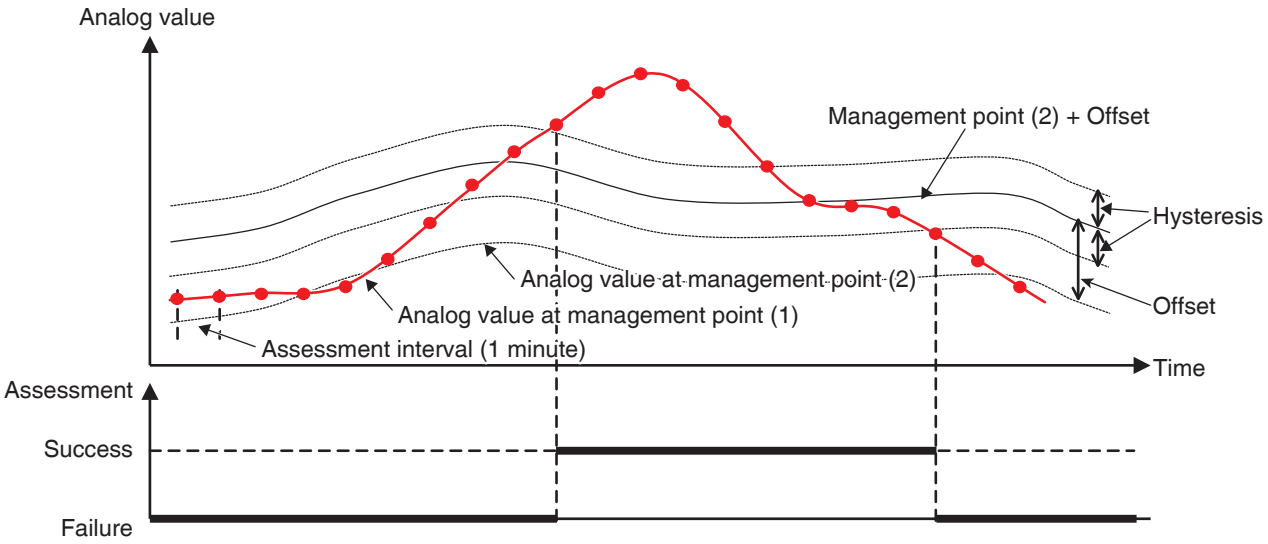


Range condition can be defined by combining the two cases above.

• Similarly, two analog values are compared as follows.

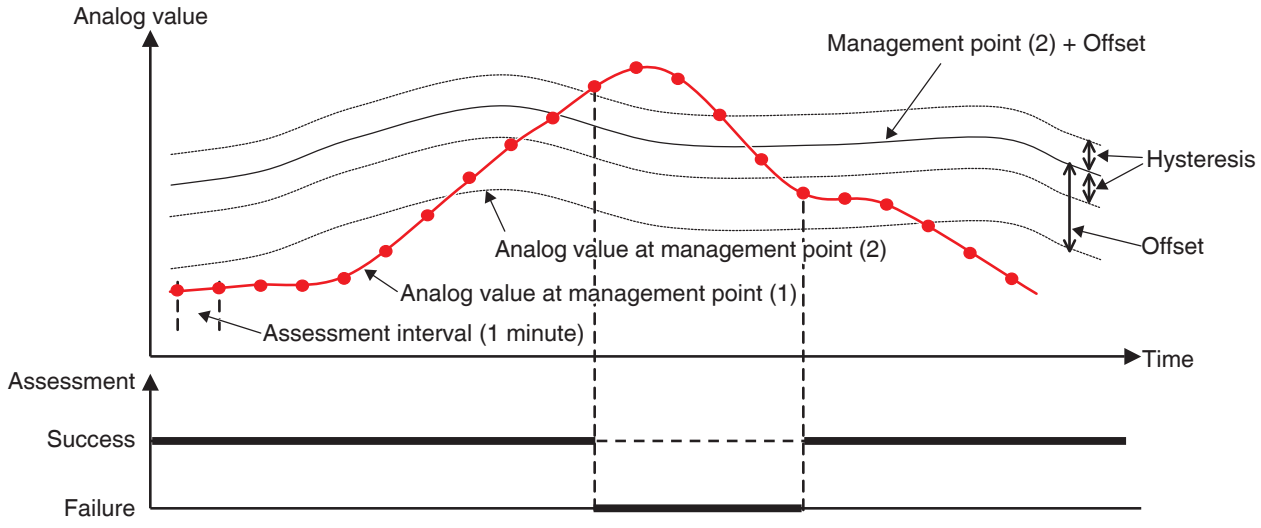
Example: [Analog value at the management point > Analog value at the management point + Offset ± Hysteresis]

Analog value at management point (1) > Analog value at management point (2) + Offset + Hysteresis	Success
Analog value at management point (1) < Analog value at management point (2) + Offset – Hysteresis	Failure
Except above	Not assessed (Previous assessment kept)



Example: [Analog value at the management point < Analog value at the management point + Offset ± Hysteresis]

Analog value at management point (1) < Analog value at management point (2) + Offset – Hysteresis	Success
Analog value at management point (1) > Analog value at management point (2) + Offset + Hysteresis	Failure
Except above	Not assessed (Previous assessment kept)



Range condition can be defined by combining the two cases above.

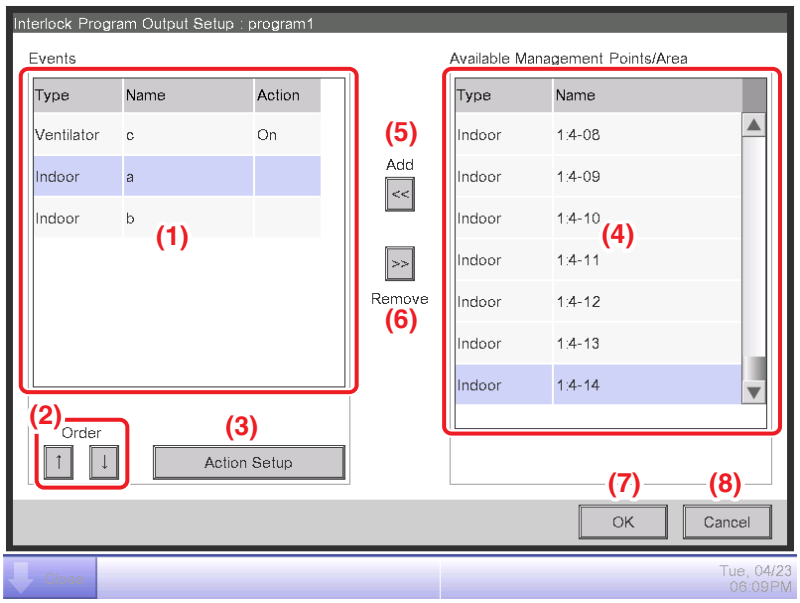
NOTE

- Be careful when setting up analog value conditions as no warning will be output even if any inappropriate setting exists (for example, room temperature > 392°F).
- If an abnormal value is entered due to an analog sensor malfunction, the analog value condition may be always cleared (or not cleared). When using an analog value condition, the creation of a separate interlocking program for analog upper/lower limit error is recommended.

- **Interlock Program Output Setup Screen**

  This screen is displayed when you touch the Modify button on the Interlock Program Setup screen.

  Sets events that will be output by the interlocking program.



(1) Events list

Displays a list of management points/areas to which events are output.

(2) Order button

Moves up and down the output event selected in the Events list.

(3) Action Setup button

Displays the Action Setup screen that allows you to set up the action to be performed by the output event selected in the Events list.

(4) Available Management Points/Area list

Displays a list of management points/areas to which events can be output.

(5) Add button

Registers an available management point or area selected in the Available Management Points/Area list to the Events list as a target of event output.

You can register up to 25 management points or 1 area as target of an event output.

You cannot simultaneously register management points and areas in one interlocking program.

(6) Remove button

Removes the management point or area selected in the Events list.

(7) OK button

Saves the edit and closes the screen.

(8) Cancel button

Cancels the edit and closes the screen.

- **Action Setup Screen**

  This screen is displayed when you touch the Action Setup button on the Interlock Program Output Setup screen.

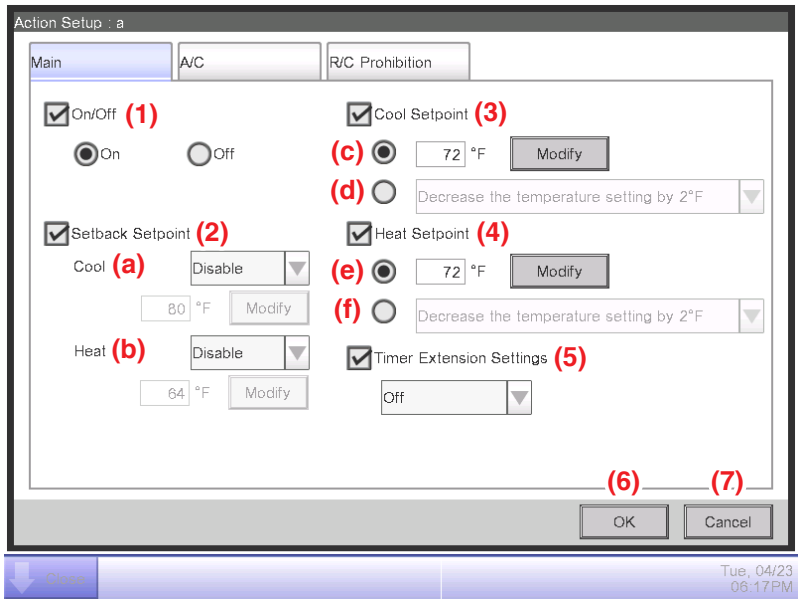
  Sets the actions that will be performed by an output event of the interlocking program.

  This screen consists of five tabs: Main, R/C Prohibition, A/C, Ventilator, and Ao, Mo each outputting different event actions. The screen opens on the tab that corresponds to the type of the selected management point/area.

- **Main Tab (Action Setup Screen)**

  This screen is displayed when you touch the Main tab on the Action Setup screen.

  Sets up actions for Main items.



(1) On/Off

Select the On/Off check box to On/Off the target.

(2) Setback Setpoint setting

Select the Setback Setpoint check box to set the setback function for the target.

(a) Cool (Setback temperature)

Set whether to use or not the Setback temperature (cooling) setting for the indoor unit and set the Setback temperature (cooling).

(b) Heat (Setback temperature)

Set whether use or not the Setback temperature (heating) setting for the indoor unit and set the Setback temperature (heating).

For details, see “5-6 Setting up the Setback”.

(3) Cool Setpoint setting

Set the cool setpoint for the target.

Select the Cool Setpoint check box and select either **(c)** Setpoint radio button or **(d)** Setpoint shift radio button.

If you selected **(c)** Setpoint, touch the Modify button and enter the temperature in the displayed Numerical Input dialog.

Setting range: –22 to 158°F in increments of 1°F when displayed in Fahrenheit. The range of temperatures set for an air conditioner is limited to the setpoint range of the target air conditioner.

Default: 72°F in Fahrenheit display.

If you selected Setpoint shift **(d)**, select the amount to shift using the drop down menu.

Setpoint shift amount: When displayed in Fahrenheit, select the desired shift amount from “Decrease the temperature settings by 7°F, Decrease the temperature settings by 6°F, Decrease the temperature settings by 5°F, Decrease the temperature settings by 4°F, Decrease the temperature settings by 3°F, Decrease the temperature settings by 2°F, Decrease the temperature settings by 1°F, Increase the temperature settings by 1°F, Increase the temperature settings by 2°F, Increase the temperature settings by 3°F, Increase the temperature settings by 4°F, Increase the temperature settings by 5°F, Increase the temperature settings by 6°F, and Increase the temperature settings by 7°F”.

(4) Heat Setpoint/Setpoint setting

Set the heating setpoint or setpoint for the target.

If the target is a Hydrobox management point, this is labelled as Setpoint.

Select the Heat Setpoint/Setpoint check box and select either **(e)** Setpoint radio button or **(f)** Setpoint shift radio button.

If you selected Setpoint **(e)**, touch the Modify button and enter the temperature in the displayed Numerical Input dialog.

Setting range: –22 to 158°F in increments of 1°F when displayed in Fahrenheit. The range of temperatures set for an air conditioner is limited to the setpoint range of the target air conditioner.

Default: 72 °F in Fahrenheit display.

If you select **(f)** Setpoint shift, select the amount to shift using the drop down menu.

Setpoint shift amount: When displayed in Fahrenheit, select the desired shift amount from “Decrease the temperature settings by 7°F, Decrease the temperature settings by 6°F, Decrease the temperature settings by 5°F, Decrease the temperature settings by 4°F, Decrease the temperature settings by 3°F, Decrease the temperature settings by 2°F, Decrease the temperature settings by 1°F, Increase the temperature settings by 1°F, Increase the temperature settings by 2°F, Increase the temperature settings by 3°F, Increase the temperature settings by 4°F, Increase the temperature settings by 5°F, Increase the temperature settings by 6°F, and Increase the temperature settings by 7°F”.

NOTE

- If the Heat Setpoint is set up for an area, the setpoints for the Hydrobox management points in that area are also set up.
- Setpoint shift is a function that allows you to set the setpoint with respect to the current setpoint.
  “Decrease the temperature settings” increases the setpoint for Cool mode, while for Heatmode, it decreases the setpoint by the specified shift amount.
  “Increase the temperature settings” decreases the setpoint for Cool mode, while for Heatmode, it increases the setpoint by the specified shift amount.
- Setpoint shift does not function when the operation mode is Fan or Dry.
- The Setpoint shift does not apply to the following items;
  Hydrobox: leaving water setpoint and storage setpoint.

(5) Timer Extension Settings

Set up the function that prevents failure to turn off.

Select whether to enable (On) or disable (Off) the function using the drop down menu.

(6) OK button

Saves the edit and closes the screen.

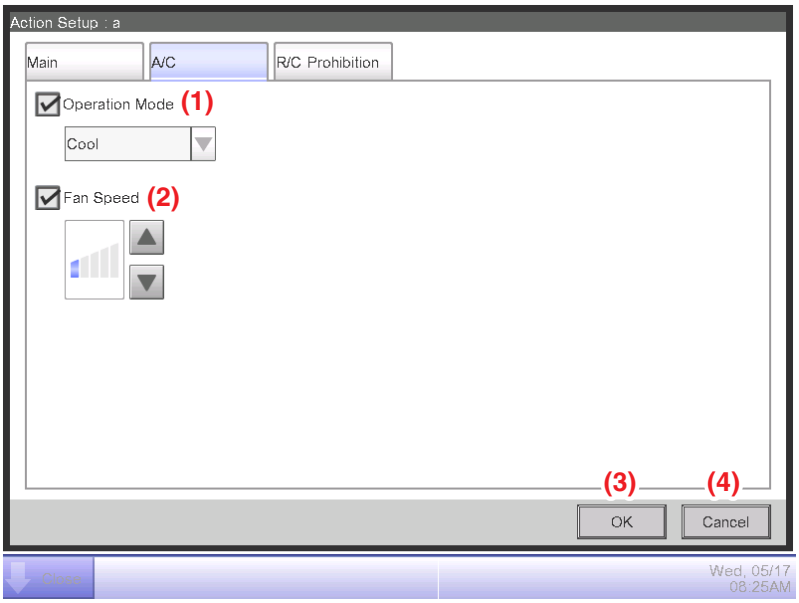
(7) Cancel button

Cancels the edit and closes the screen.

- **A/C Tab (Action Setup Screen)**

  This screen is displayed when you touch the A/C tab on the Action Setup screen.

  Sets up the air conditioner actions.



  Select the check box of the items to set up and select the setting from the drop down menu.

  (1) Operation Mode setting area

  Sets up the operation mode.

  Select the setting from Fan, Cool, Heat, Dependent and Dry.

  (2) Fan Speed setting area

  Sets up the fan speed.

  Touching the ▲ button increases the fan speed by one level while touching the ▼ button decreases the fan speed by one level.

  The fan speed you can set depends on the target.

NOTE

- The fan speed in the Interlocking Control function is for 5-speed fans, so if the connected fan is a 2-speed fan or 3-speed fan, select the fan speed according to the table below.

Fan speed	Indoor	
	Desired fan speed	Interlocking Control setting value
2-speed fan		
		
		
3-speed fan		
		
		
		

- If a setting different from that in the table above is selected, fan operation will be as follows.

Fan speed	Indoor	
	Interlocking Control setting value	Fan speed after Interlocking Control command
2-speed fan		
		
		
3-speed fan		
		

- If Fan Speed is set for an indoor unit that does not have adjustable fan speed or the Auto fan speed setting is selected for an indoor unit without Auto, Interlocking Control will not send a command.

(3) OK button

Saves the edit and closes the screen.

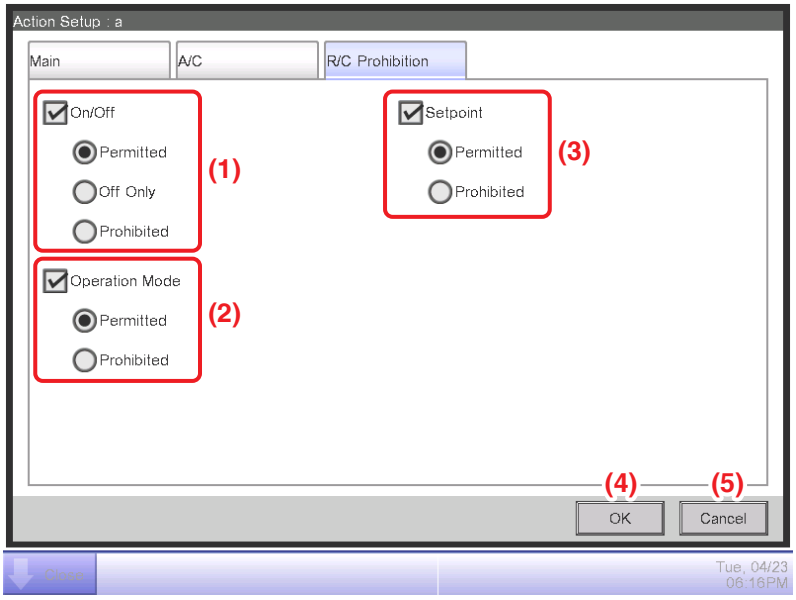
(4) Cancel button

Cancels the edit and closes the screen.

- **R/C Prohibition Tab (Action Setup Screen)**

  This screen is displayed when you touch the R/C Prohibition tab on the Action Setup screen.

  Enables or disables the remote controller. This tab is not displayed when the R/C Prohibition function is disabled.



Select the check box of the items to set up and select the setting using the radio buttons.

(1) On/Off setting area

Sets up whether starting/stopping the management point from the remote controller will be permitted or prohibited.

(2) Operation Mode setting area

Sets up whether changing the operation mode from the remote controller will be permitted or prohibited.

This setting area is not displayed when the target is Ventilator.

(3) Setpoint setting area

Sets up whether changing the management points' setpoint from the remote controller will be permitted or prohibited.

This setting area is not displayed when the target is Ventilator.

(4) OK button

Saves the edit and closes the screen.

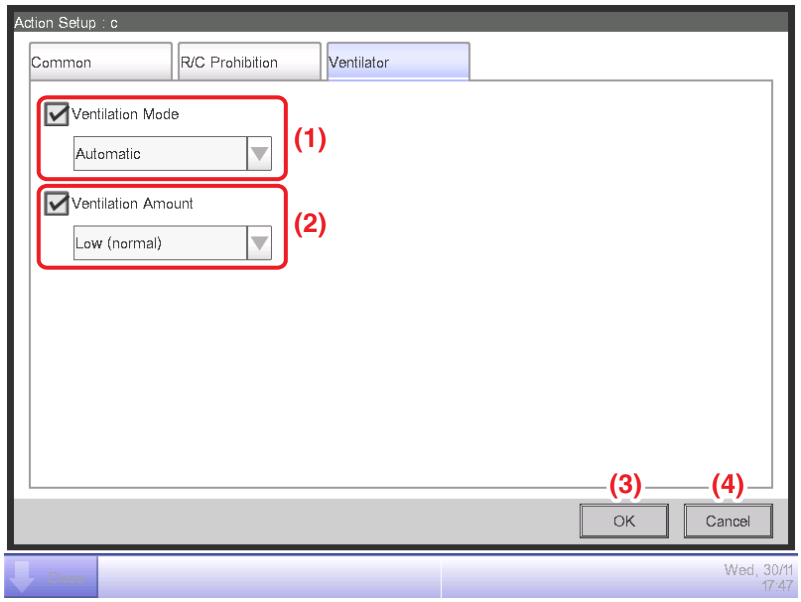
(5) Cancel button

Cancels the edit and closes the screen.

- **Ventilator Tab (Action Setup Screen)**

  This screen is displayed when you touch the Ventilator tab on the Action Setup screen.

  Sets up the Ventilator actions.



  Select the check box of the items to set up and select the setting from the drop down menu.

  (1) Ventilation Mode setting area

  Sets up the ventilation mode.

  Select the setting from Automatic, ERVentilation, and Bypass.

  (2) Ventilation Amount setting area

  Sets up the ventilation amount.

  Select the setting from Auto (normal), Low (normal), High (normal), Auto (fresh up), Low (fresh up), and High (fresh up).

  (3) OK button

  Saves the edit and closes the screen.

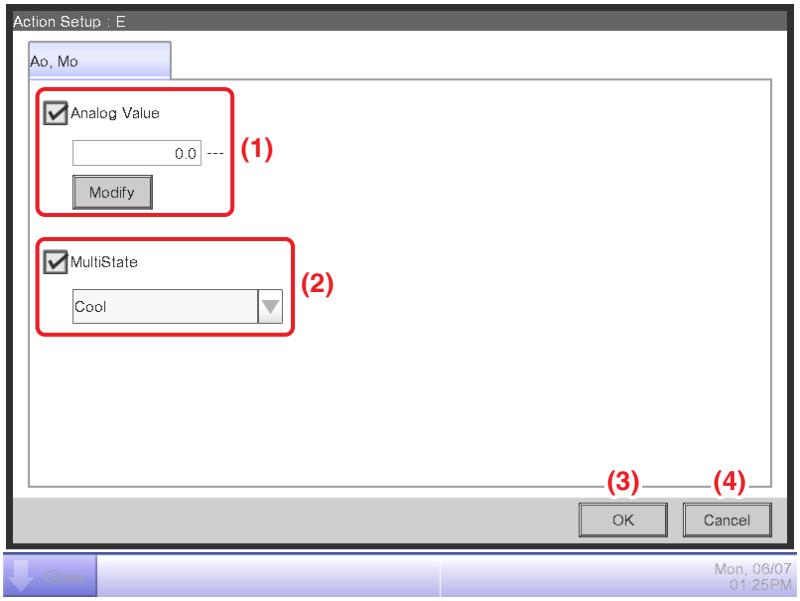
  (4) Cancel button

  Cancels the edit and closes the screen.

- **Ao, Mo Tab (Action Setup Screen)**

This screen is displayed when you touch the Ao, Mo tab on the Action Setup screen.

Sets up the operation of Ao and Mo.



Select the check box of the items to set up and select/enter the setting using the drop down menu/Modify button.

(1) Analog Value setting area

Ao refers to analog signal output.

This function enables the signal output equipment (I/O module) connected to the iTM to output a current/voltage corresponding to the adjustment value from external equipment.

(It is used for the adjustment of building equipment, such as degree of aperture of a damper/valve.)

The range, incremental width, and unit of the analog values are set on the screen during trial.

(The unit setting may not be available.)

(2) MultiState setting area

It allows you to select and set a MultiState value for Mo.

The MultiState value set on the screen is set up during the trial.

NOTE

You cannot set up MultiState for an area.

(3) OK button

Saves the edit and closes the screen.

(4) Cancel button

Cancels the edit and closes the screen.

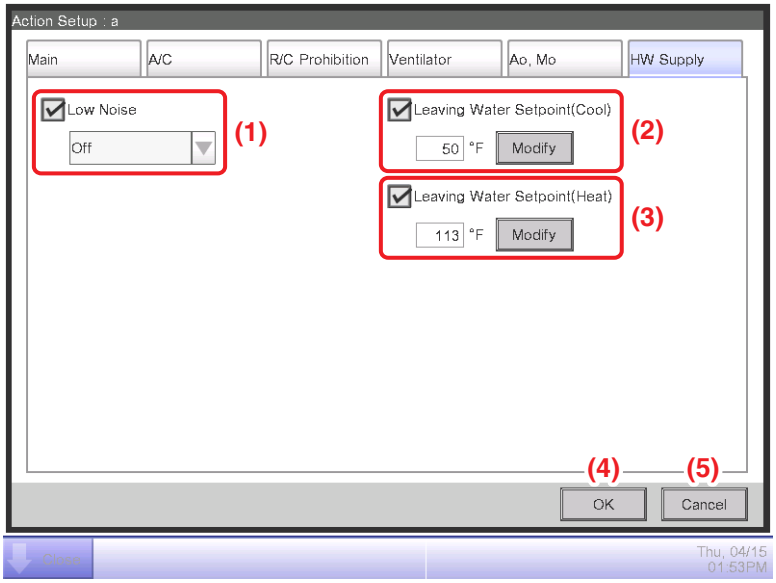
NOTE

- For information on the setting items and range of values you can set in each tab, see “Appendix 2. Setup items”.

- **HW Supply Tab (Action Setup Screen)**

This screen is displayed when you touch the HW Supply tab on the Action Setup screen.

It allows you to set up the Hot water supply actions.



Select the check box of the item to set up, and select/enter the setting using the drop down menu/Modify button.

(1) Low Noise setting area

Sets up the low noise feature.

Select whether to enable (On) or disable (Off) the function using the drop down menu.

(2) Leaving Water Setpoint (Cool) setting area

Sets up the leaving water setpoint in cooling.

Touch the Modify button and enter the leaving water setpoint in the Numerical Input dialog that appears.

The range of values you can enter is -22 to 158°F.

(3) Leaving Water Setpoint (Heat) setting area

Sets up the leaving water setpoint in heating.

Touch the Modify button and enter the leaving water setpoint in the Numerical Input dialog that appears.

The range of values you can enter is 77 to 176°F.

(4) OK button

Saves the edit and closes the screen.

(5) Cancel button

Cancels the edit and closes the screen.

8-2 Setting up the Emergency Stop

The iTM includes the Emergency Stop as standard function (see “5-5 Checking an Emergency Stop”).

The Emergency Stop is a control function envisioned primarily as a measure against fire. Based on the emergency stop program, this function stops the management points set up as output when the input signal set up as the emergency stop signal is received.

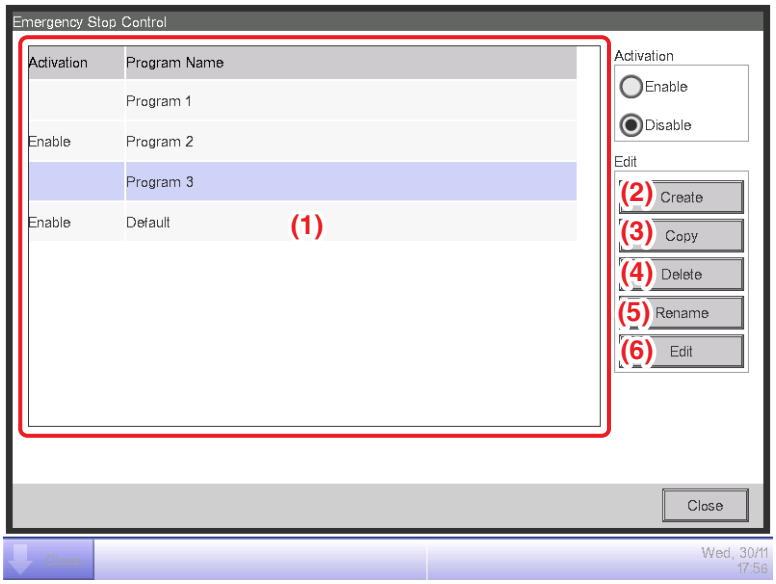
The Default program stops all DIII units registered as management points when an emergency stop signal is received.

The Default program cannot be edited, except from toggling enable and disable.

If the optional Emergency Stop function is enabled, you can create your own emergency stop program.

The following describes how to create and set up an emergency stop program.

1. Touch the Emergency Stop button on the Automatic Ctrl. tab of the Menu List screen and display the Emergency Stop Control screen (see “4-5 Menu List Screen: Automatic Ctrl. Tab”).



2. **(1)** is the list of emergency stop programs. Perform the intended operation by touching the relevant button on the right.

   (2) Create button

   Creates a new program. You can create up to 32 emergency stop programs (including the Default program).

   (3) Copy button

   Copies the selected program.

   (4) Delete button

   Deletes the selected program.

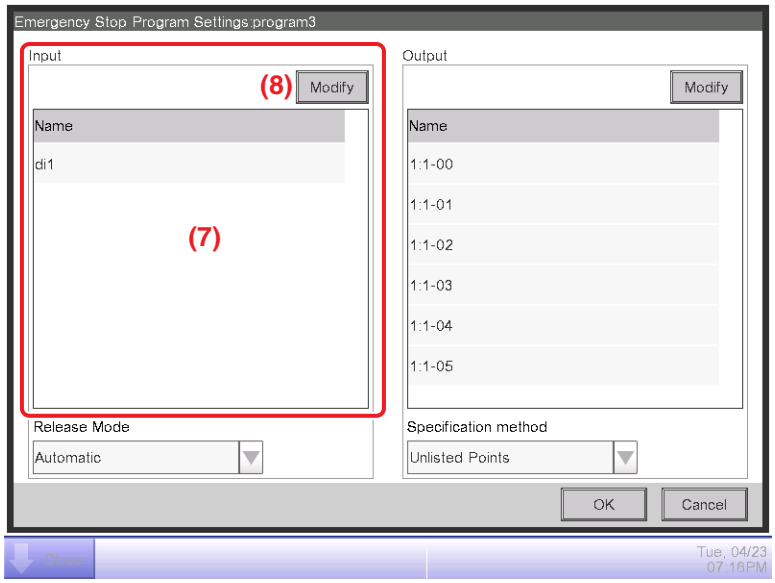
(5) Rename button

Displays the Name Setup dialog where you can rename the selected program.

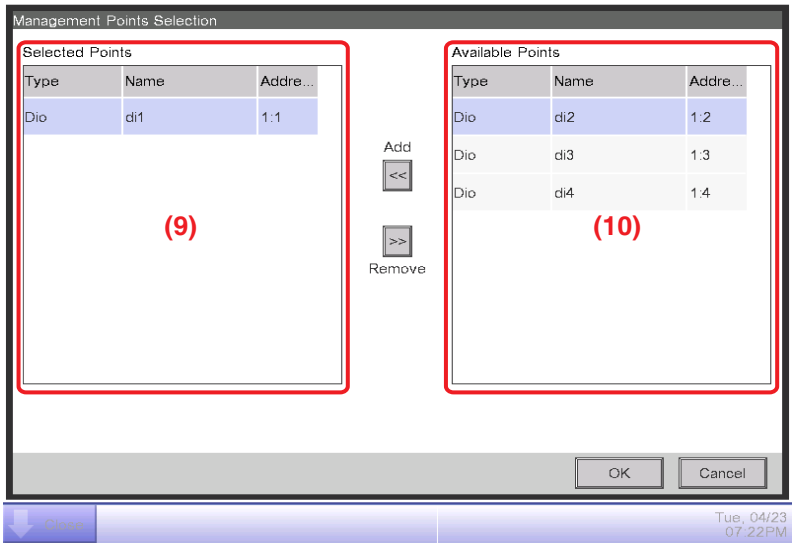
(6) Edit button

Allows you to edit a program.

3. Touching the Create, Copy, or Rename button displays the Name Setup dialog that allows you to enter the program name. You can name the program using up to 20 characters. Enter a name and touch the OK button to close the screen. The program is added to the list **(1)**. Then, touch the **Edit** button **(6)** and display the Emergency Stop Program Settings screen.



4. **(7)** is the list of management points input as emergency stop signal. Touch the **Modify** button **(8)** and display the Management Points Selection screen.

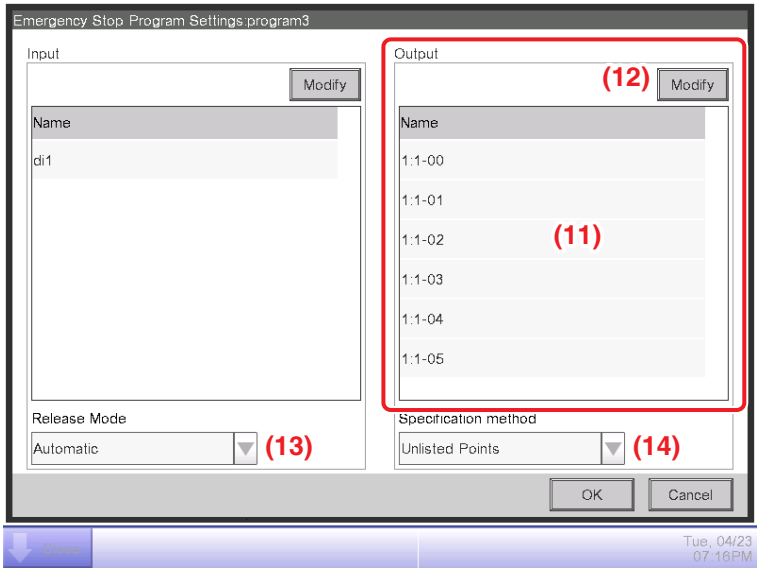


5. **(9)** is the list of registered management points while **(10)** is the list of management points that can be registered.

To add a management point, select one from **(10)** and touch the Add button. To remove a management point, select one from **(9)** and touch the Remove button.

You can register up to 6 management points to monitor.

When finished, touch the OK button to return to the Emergency Stop Program Settings screen.



6. **(11)** is the list of management points target of the Emergency Stop. Touch the **Modify** button **(12)** and register management points, as in step 5.

NOTE

In the case of the system with Hydrobox, this function controls the air conditioners only, but unable to control the On/Off (Reheat) operation.

7. Using the **Release Mode** drop down menu **(13)**, select the method of releasing the emergency stop program from Automatic and Manual.

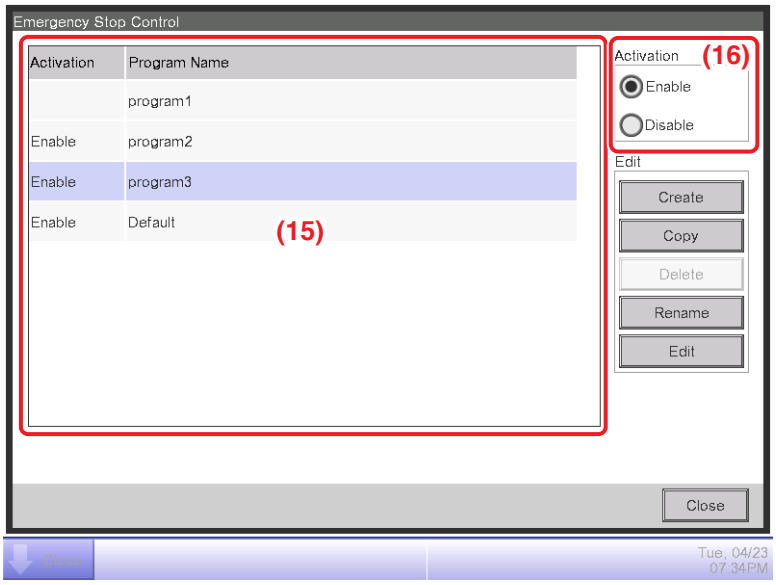
   Using the **Specification method** drop down menu **(14)**, select whether the Output list **(11)** is the list of emergency stop targets or the list of those excluded.

NOTE

The management points, which was newly registered after creating the emergency stop program, can be used as follows.

- On the program which uses the list **(11)** as the list of emergency stop targets, it cannot be stopped emergently.
- On the program which uses the list **(11)** as the list of those excluded, it can be stopped emergently.

When finished, touch the OK button to return to the Emergency Stop Control screen.



8. Select the program in **(15)** and enable or disable the program in **(16)**.
   When finished, touch the Close button and close the screen.

Releasing the Emergency Stop

For the Default program, canceling the emergency stop signal input automatically releases the emergency stop. (Forcible release possible.)

Programs created in this chapter can be manually released. When a program is set to manual release, touching the Release button on the Emergency Stop Release dialog (see “5-5 Checking an Emergency Stop”) displays a confirmation dialog. After checking, touch the Yes button and release the Emergency Stop.

8-3 Demand Control

Demand Control

The demand control (power limit control) is a function for limiting power consumption.

The iTM receives up to three cut-off levels.

You can set up the control of target units that are performed when a cut-off level is received.

To use this function, you must set up input signals, input devices and other items required for the demand control and conduct a test run.

This function controls units such as air conditioners to limit power consumption. The types of controls are: the indoor unit* setpoint shifting, indoor unit forced Thermostat OFF, Outdoor unit capacity control, and the combinations of these controls.

Also, the On/Off function allows you to control devices such as a ventilator, **D3Dio**, **External Dio** and **BACnet Dio**, as well as other devices than air conditioners via a multi-purpose adaptor.

* **Includes Hydrobox.**

Steps from Setting up Demand Control to Starting Operation

The steps needed to start the demand control are as follows.

[Demand Control Setup Procedure (should be done by the customer)]

- Set up the Setpoint Shift control.
  Set up the control group, cooling setpoint upper limit, heating setpoint lower limit, start level, and amount of shifting.

⇩

- Set up the Outdoor unit capacity control.
  Set up the control group and capacity (%).

⇩

- Set up the ON/OFF control.
  Set up the control group and start level.

⇩

- Set up the controls.
  Enable/disable the Setpoint Shift control.
  Enable/disable the Outdoor unit capacity control.
  Enable/disable the ON/OFF control.

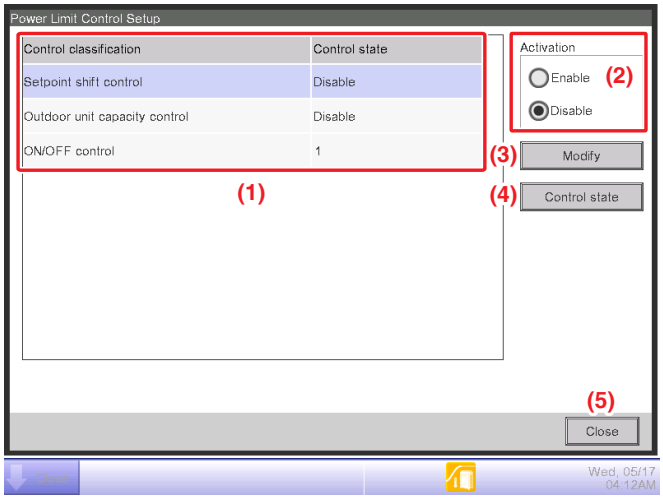
[Starting Operation]

- Starting the demand control in the operation.

Setup Screens

- **Power Limit Control Setup screen**

1. Touch the **Power Limit Control** button **(6)** on the Automatic Ctrl. tab of the Menu List screen to display the Power Limit Control Setup screen (see “4-5 Menu List Screen”).



(1) Control Type and Status area

The control types (Setpoint shift control, Outdoor unit capacity control, and ON/OFF control) are displayed with their current status.

You can select only one item at a time.

The status column displays “Disabled” when the control is disabled. It displays the cut-off level when the control is enabled. The cut-off level ranges from 0 to 3. The display is Refreshed automatically every 30 seconds.

(2) Enabled/Disabled radio button

Use this button to change the enabled/disabled status of the selected control classification. When you touch the button, the Confirm dialog appears. Touch the **Yes** button to save the change you made for the enabled/disabled status of the selected control type, and close the Confirm dialog to return to the Power Limit Control Setup screen.

Touch the **No** button to close the Confirm dialog and return to the Power Limit Control Setup screen.

NOTE

- The Cool Setpoint and Heat Setpoint, which are used as references in setpoint shifting, are the Cool Setpoint and Heat Setpoint at the time when the demand level at which setpoint shifting is set to operate is reached.
- Setpoint shifting shifts the Cool Setpoint when the operation mode is set to Cool and the Heat Setpoint when the operation mode is set to Heat.
  However, if Setpoint Tracking Mode is enabled, both the Cool Setpoint and the Heat Setpoint will shift.
- If you start the iTM while the setpoint shifting is left enabled, the setpoint (Cooling/Heating) at the time of the starting will be used as the reference.

(3) Modify button

Displays the setup change screen of the selected control group.

All you can do on the setup change screen is checking the settings when the selected control type is enabled.

(4) Control state button

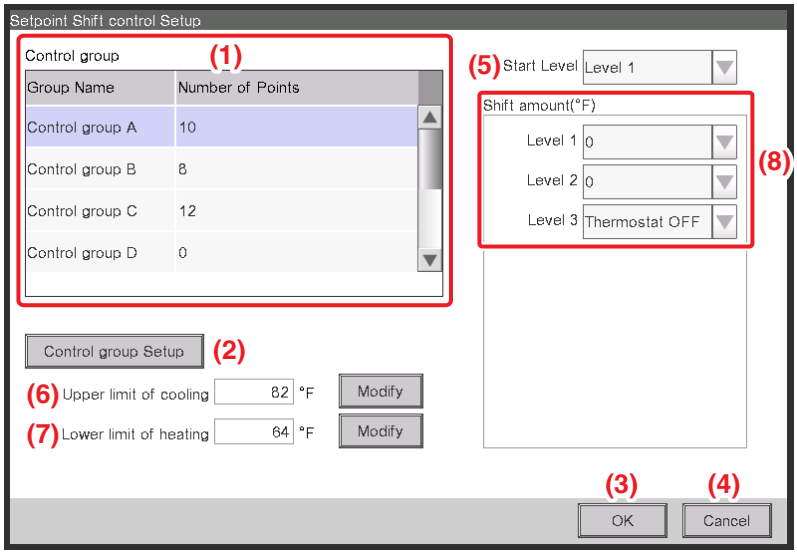
Displays the Control state screen of the selected control group.

(5) Close button

Closes the Power Limit Control Setup screen to return to the Automatic Ctrl. tab.

• **Setpoint Shift control Setup screen**

1. On the Power Limit Control Setup screen, select **Setpoint shift control** from the **Control group** list and touch the **Modify** button to display the Setpoint Shift control Setup screen (see “8-3 Setup Screens”).



(1) Control group list

Displays the control groups. (8 groups fixed)

You cannot select multiple groups at a time.

The list contains the following items.

• Group Name: the name of the groups to control (Control group A to H)

• No. of Management Points: the number of management points included in the control group

(2) Control group Setup button

Displays the Control Group Setup screen.

In this screen you can set up the management points included in the control group.

(3) OK button

Closes the Setpoint Shift control Setup screen to return to the Power Limit Control Setup screen.

When the setpoint shift control is enabled, this button is disabled and you can only check the settings.

<Processing on error>

• Select options. The larger the cut-off level is, the more strict the power consumption limitation should be.

The degree of the power consumption limitation

[high] Thermostat OFF > 29°F > 28°F …1°F > 0°F [low]

Right setting		Wrong setting	
Cut-off level 1	4°F	Cut-off level 1	Thermostat OFF
Cut-off level 2	5°F	Cut-off level 2	5°F
Cut-off level 3	Thermostat OFF	Cut-off level 3	4°F

(4) Cancel button

Closes the Setpoint Shift control Setup screen to return to the Power Limit Control Setup screen.

(5) Start Level drop down menu (the text area is displayed when the setpoint shift control is enabled.)

Sets the cut-off level that triggers the control.

When the setpoint shift control is enabled, the text area is displayed and you cannot change the start level.

The default is level 1.

(6) Cooling Setpoint Upper Limit text field

When cooling, you can set the upper limit for the setpoint shifting for the demand control.

Touch the **Modify** button to display the numerical input dialog that allows you to change the cooling setpoint upper limit. You can set the value in increments of 1°F.

When the setpoint shift control is enabled, you cannot change the cooling setpoint upper limit. (The **Modify** button is not displayed.)

The default value is 82°F

(7) Heating Setpoint Lower Limit text field

When heating, you can set the lower limit for the setpoint shifting for the demand control.

Touch the **Modify** button to display the numerical input dialog that allows you to change the heating setpoint lower limit.

You can set the value in increments of 1°F.

When the setpoint shift control is enabled, you cannot change the heating setpoint lower limit. (The **Modify** button is not displayed.)

The default value is 64 °F.

(8) Shift amount (°F) drop down menu (the text area is displayed when the setpoint shift control is enabled.)

Displays the amount of the setpoint shifting for the cut-off level 1 to 3.

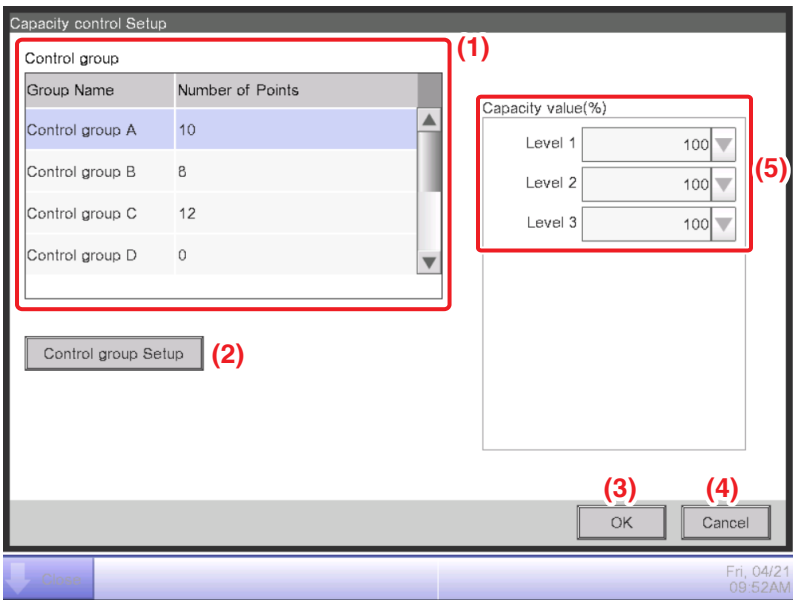
You can set the value in increments of 1°F.

The default value is 0°F for all the levels.

When the setpoint shift control is enabled, the text area is displayed and you cannot change the Shift amount (°F).

• **Capacity control Setup screen**

1. On the Power Limit Control Setup screen, select the **Outdoor unit capacity control** from the **Control group** list and touch the **Modify** button to display the Capacity control Setup screen (see "8-3 Setup Screens").



(1) Control group list

Displays the control groups. (8 groups fixed)

You can select only one item at a time.

The list contains the following items.

• Group Name: the name of the groups to control (Control group A to H)

• No.of Management Points: the number of management points included in the control group.

(2) Control group Setup button

Displays the Control Group Setup screen.

In this screen you can set up the management points included in the control group.

(3) OK button

Closes the Capacity control Setup screen to return to the Power Limit Control Setup screen.

When the Outdoor unit capacity control is enabled, this button is disabled and you can only check the settings.

<Processing on error>

• Select options. The larger the cut-off level is, the more strict the power consumption limitation should be.

The degree of the power consumption limitation

[high] 0% > 40% > 70% > 100% [low]

Right setting		Wrong setting	
Cut-off level 1	70%	Cut-off level 1	0%
Cut-off level 2	40%	Cut-off level 2	40%
Cut-off level 3	0%	Cut-off level 3	70%

(4) Cancel button

Closes the Capacity control Setup screen to return to the Power Limit Control Setup screen.

(5) Capacity drop down menu (the text area is displayed when the Outdoor unit capacity control is enabled.)

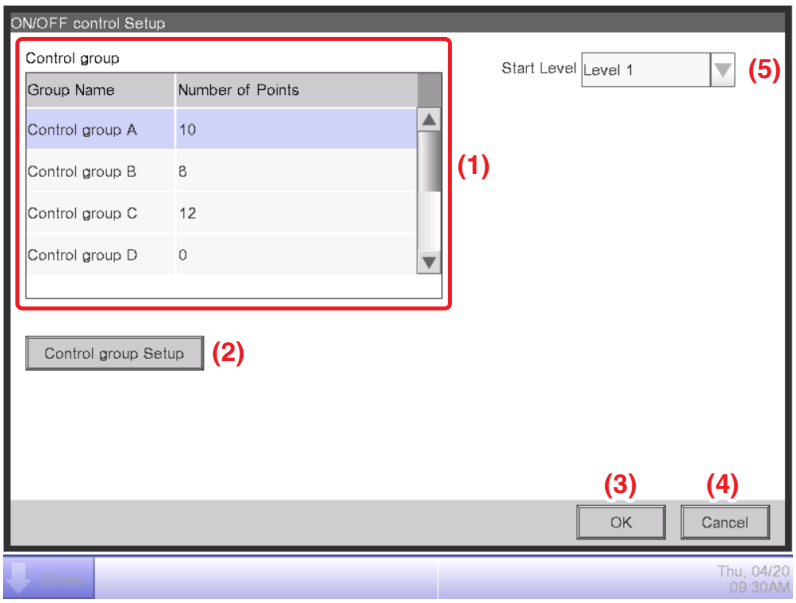
Displays the value of the outdoor unit capacity for the cut-off level 1 to 3.

The default value is 100% for all the levels.

When the Outdoor unit capacity control is enabled, the text area is displayed and you cannot change the value of the outdoor unit capacity.

• **ON/OFF control Setup screen**

1. On the Power Limit Control Setup screen, select **ON/OFF control** from the **Control group** list and touch the **Modify** button to display the ON/OFF control Setup screen (see “8-3 Setup Screens”).



(1) Control group list

Displays the control groups. (8 groups fixed)

You can select only one item at a time.

The list contains the following items.

• Group Name: the name of the groups to control (Control group A to H)

• No. of Management Points: the number of management points included in the control group.

(2) Control group Setup button

Displays the Control Group Setup screen.

In this screen you can set up the management points included in the control group.

(3) OK button

Closes the ON/OFF control Setup screen to return to the Power Limit Control Setup screen.

When the ON/OFF control is enabled, this button is disabled and you can only check the settings.

(4) Cancel button

Closes the ON/OFF control Setup screen to return to the Power Limit Control Setup screen.

(5) Start Level drop down menu (the text area is displayed when the ON/OFF control is enabled.)

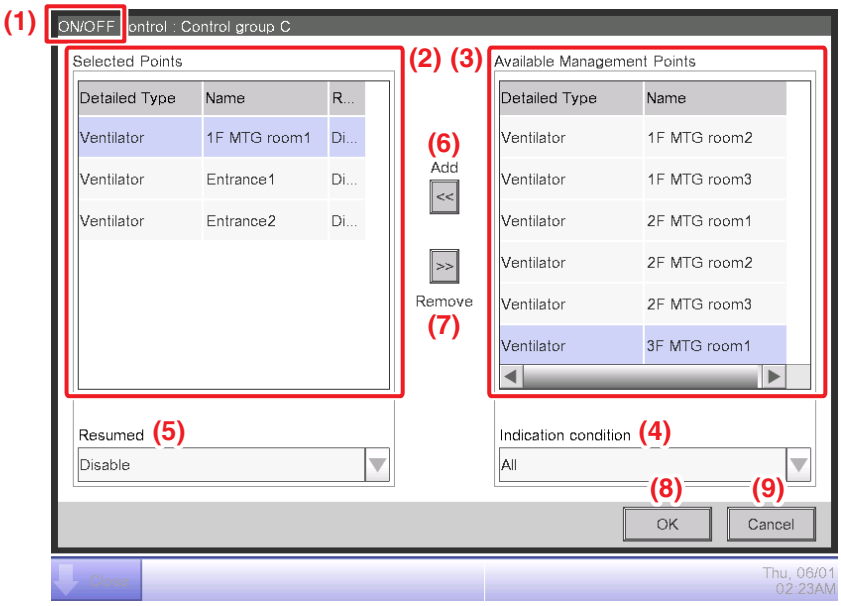
Sets the cut-off level that triggers the control.

The default is level 1.

When the ON/OFF control is enabled, the text area is displayed and you cannot change the start level.

• **Control Group Setup screen**

1. Touch the **Control group Setup** button in the Setpoint Shift control Setup screen, Capacity control Setup screen, or ON/OFF control Setup screen to display the Control Group Setup screen (see “8-3 Setup Screens”).



(1) Control group field

Displays “Setpoint shift control”, “Capacity control” or “ON/OFF control” based on the type of control selected in the Power Limit Control Setup screen.

(2) Selected Points list

Lists the management points that are currently registered in the control group. You can select multiple management points at a time.

The list contains the type and name of each management point. If a management point is deleted, “Unknown” will be displayed in the list.

“Unknown” will also be displayed if a demand address of an outdoor unit is disabled.

(3) Available Management Points list

Lists the management points that are ready to be registered in a control group. You can select multiple management points at a time.

The list contains the type and name of each management point.

The list does not contain management points that are registered in other control groups.

(4) Indication Condition drop down menu

Specifies the type of management points displayed in the Available Management Points list.

The display conditions you can select are: All/Indoor unit/Outdoor unit/Others.

After you select one of them, the first list in the Available Management Points list will be highlighted.

(5) Auto Recovery drop down menu

Select Enable/Disable to specify whether the selected management point recovers its operation automatically after the demand control is cancelled.

If you select Enable, the management point will automatically restart after it is stopped by the demand control and then the demand control was cancelled.

(6) Add button

Adds management points that are selected from the **Available Management Points** list **(3)** to the **Selected Points** list **(2)**.

After you touch the **Add** button and the items are added to the **Selected Points** list **(2)**, the added items will be highlighted.

The **Add** button is disabled if one of the following conditions is true.

- The sum of the items in the **Selected Points** list **(2)** and items selected in the **Available Management Points** list **(3)** exceeds the number of units that can be registered in a control group
- The **Available Management Points** list **(3)** is empty
- The control is enabled

(7) Remove button

Returns the management points selected in the Selected Points list **(2)** to the **Available Management Points** list **(3)**.

After you touch the **Remove** button and the items are returned to the **Available Management Points** list **(3)**, the returned items will be highlighted.

If you select a management point that has “Unknown” indication and touch the **Remove** button, the item is deleted from the **Selected Points** list **(2)**. In this case, the item will not return to the **Available Management Points** list **(3)**.

The **Remove** button is disabled if one of the following conditions is true.

- The **Selected Points** list **(2)** is empty
- The control is enabled

(8) OK button

Saves the change you made and close the Control Group Setup Screen to return to the previous screen (i.e. Setpoint Shift control Setup screen, Capacity control Setup screen, or ON/OFF control Setup screen).

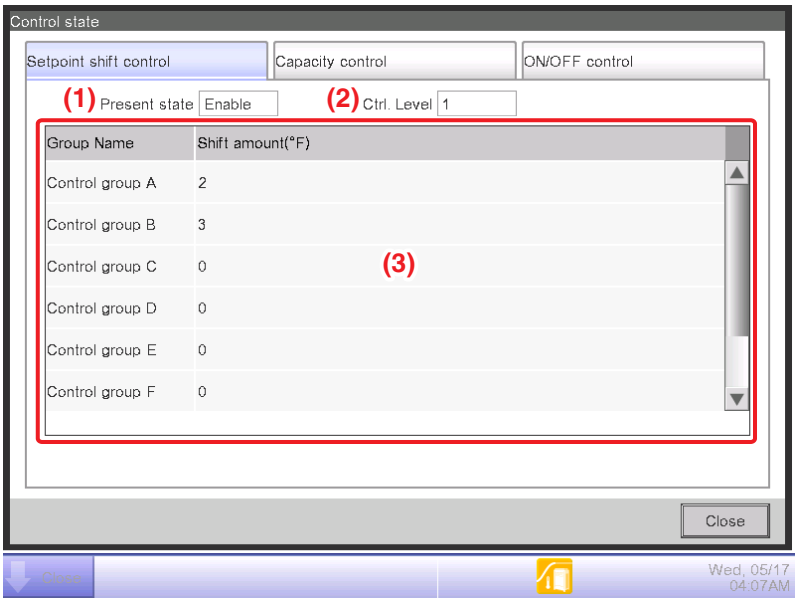
When the selected controls are enabled, this button is disabled and you can only check the settings.

(9) Cancel button

Discards the change you made and close the Control Group Setup Screen to return to the previous screen (i.e. Setpoint Shift control Setup screen, Capacity control Setup screen, or ON/OFF control Setup screen).

• **Setpoint shift control: Control state screen**

1. On the Power Limit Control Setup screen, touch the **Control state** button to display the Control state screen (in the **Setpoint shift control**) (see “8-3 Setup Screens”).



(1) Present state

Displays the Enabled/Disabled status of the control.

(2) Ctrl. Level

Displays the current cut-off level.

When the control is disabled, “Disabled” is displayed. When enabled, a number between 0 and 3 is displayed.

The display is refreshed automatically every 30 seconds.

(3) Status list

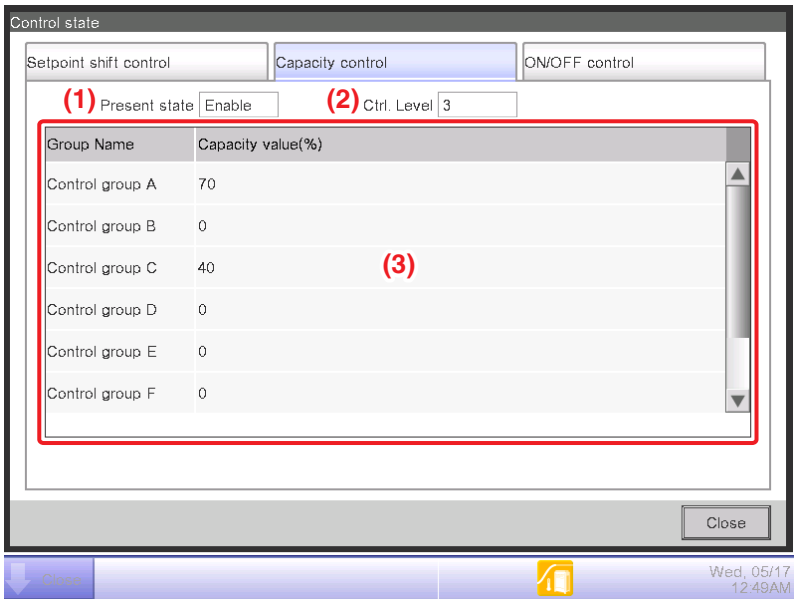
Lists the control group names and current amounts of shifting.

When the control is disabled or the cut-off level is 0, the amount of shifting is displayed as “– –”.

The display is refreshed automatically every 30 seconds.

• **Capacity control: Control state screen**

1. On the Power Limit Control Setup screen, touch the **Control state** button to display the control state screen (**Capacity control** tab) (see “8-3 Setup Screens”).



(1) Present state

Displays the Enabled/Disabled status of the control.

(2) Ctrl. Level

Displays the current cut-off level.

When the control is disabled, “Disabled” is displayed. When enabled, a number between 0 and 3 is displayed.

The display is refreshed automatically every 30 seconds.

(3) Status list

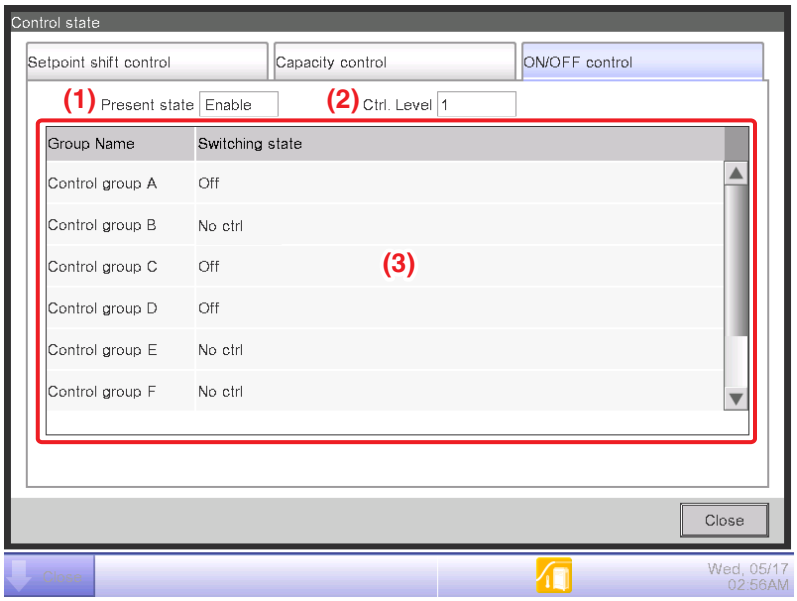
Lists the control group names and current value of Capacity.

When the control is disabled or the cut-off level is 0, the value of Capacity is displayed as “– –”.

The display is refreshed automatically every 30 seconds.

• **ON/OFF control: Control state screen**

1. On the Power Limit Control Setup screen, touch the **Control state** button to display the Control state screen (in the **ON/OFF control** tab) (see “8-3 Setup Screens”).



(1) Present state

Displays the Enabled/Disabled status of the control.

(2) Ctrl. Level

Displays the current cut-off level.

When the control is disabled, “Disabled” is displayed. When enabled, a number between 0 and 3 is displayed.

The display is refreshed automatically every 30 seconds.

(3) Status list

Lists the control group names and current On/Off status.

When the control is disabled or the cut-off level is 0, the On/Off status is displayed as “– –”.

The display is refreshed automatically every 30 seconds.

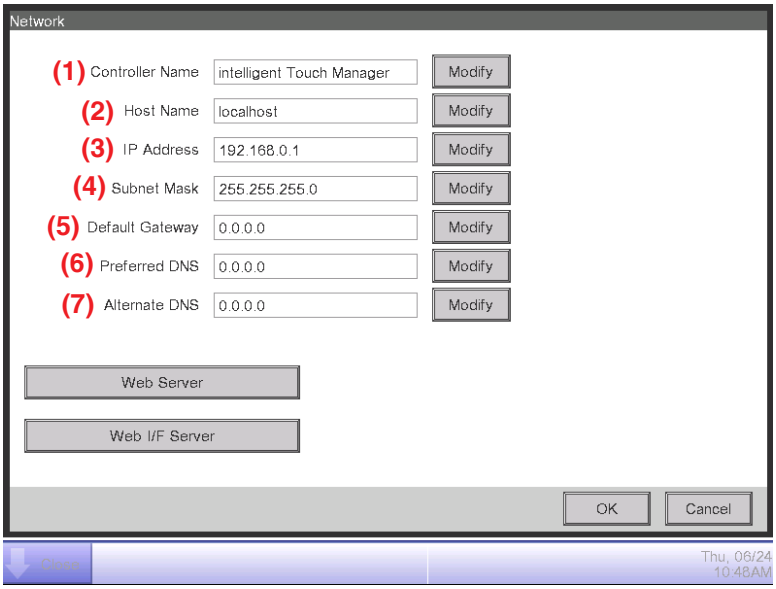
9. System Settings

9-1 Network Settings

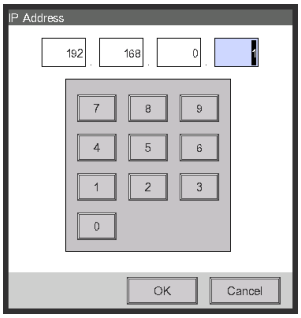
With iTM, you can operate it remotely via the Internet, or receive notification via E-mail in the case of an error. To use these functions, you must set up the network on the iTM unit.

The following describes how to set this up.

1. Touch the Network button on the System Settings tab of the Menu List screen and display the Network screen (see “4-5 Menu List screen: System Settings Tab”).



<Text Input dialog>



<IP Address Input dialog>

2. The current settings are displayed. Touch the Modify button and change the settings in the Input dialog that appears. For information necessary for the settings, consult your network administrator.

   (1) Controller Name

   (2) Host Name

   (3) IP Address

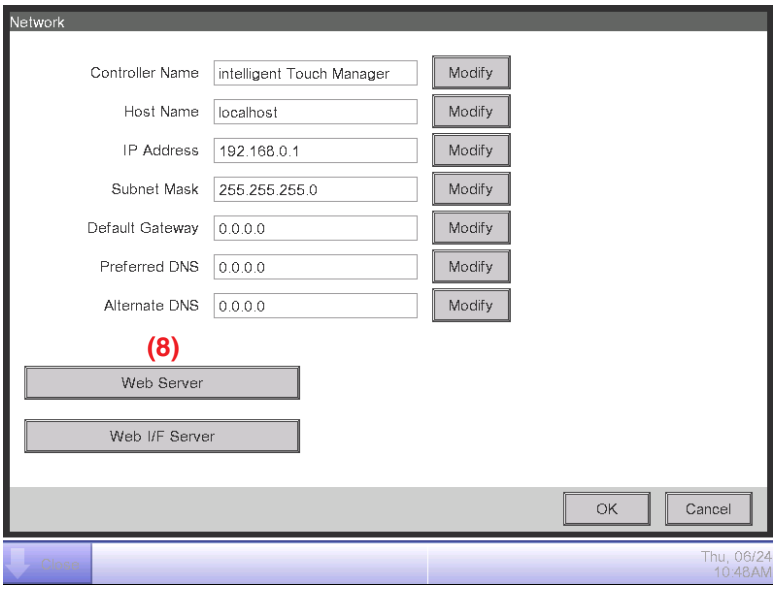
   (4) Subnet Mask

   (5) Default Gateway address

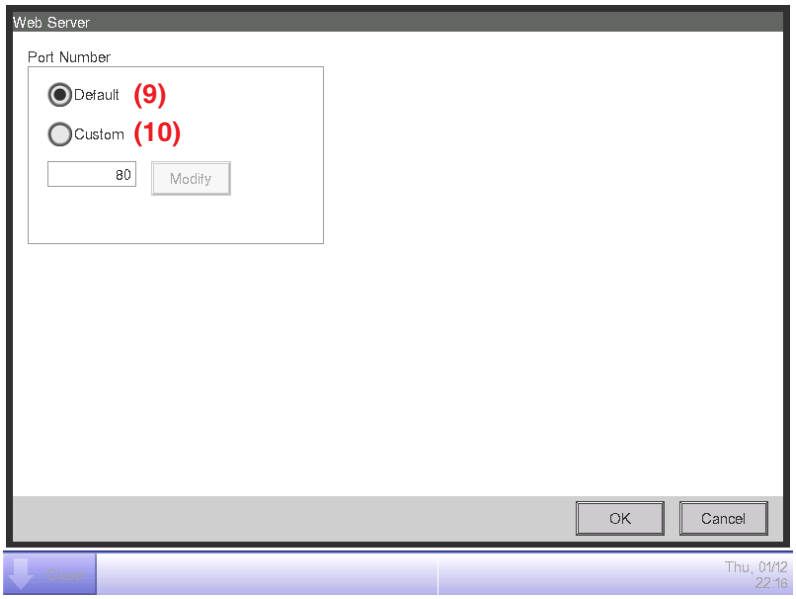
   (6) Preferred DNS address

   (7) Alternate DNS address

3. Set the Web server port number.



Touch the **Web Server** button **(8)** and display the Web Server screen to set the port number.

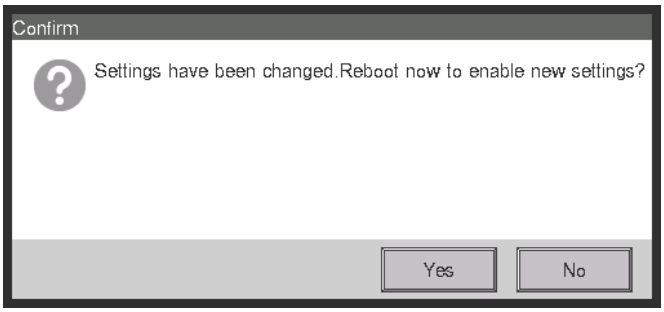


Select **(9)** to use the default port 80.

Selecting **(10)** displays the port number 8080. Touching the Modify button allows you change the settings in the Numerical Input dialog that appears.

Touch the OK button to close the screen.

4. When finished, touch the OK button. A confirmation dialog appears.



5. A restart confirmation message will be displayed. Touch the Yes button to reflect the setting and restart the iTM.

NOTE

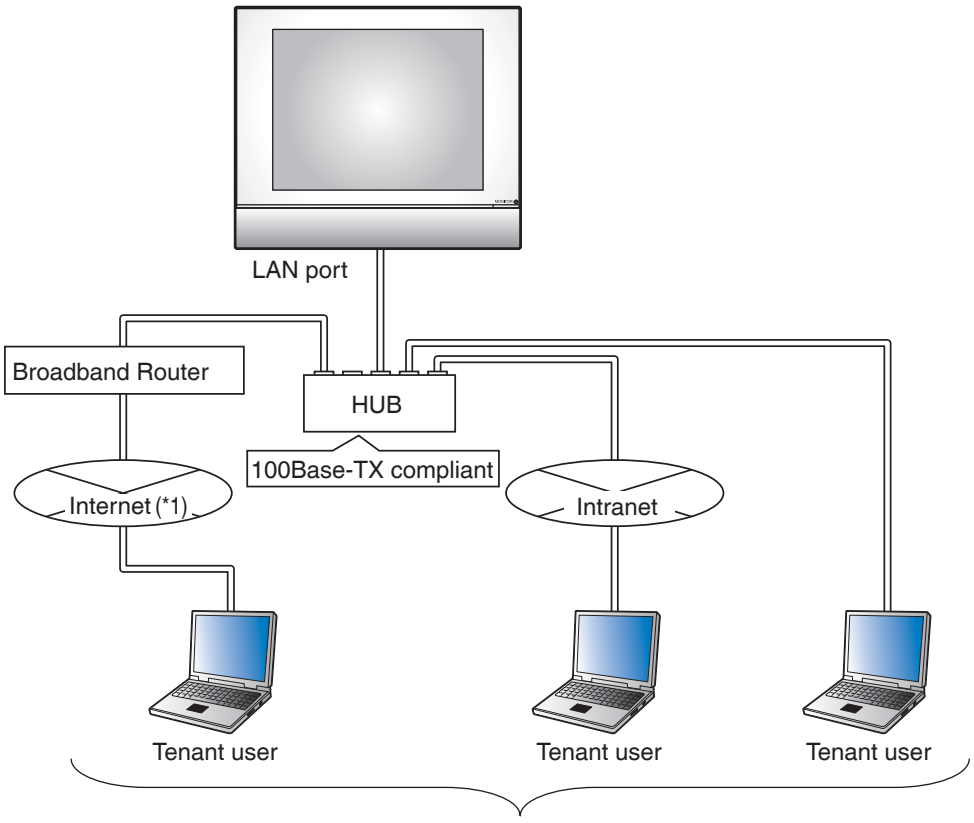
The following numbers are not available as a port number.

8082, 17821, 20000-20010

9-2 Web Access Settings and Remote Management

An iTM with network setting can be accessed via the Internet for remote operation from a PC. You can register multiple Web users with different ranges of operations permitted in accordance with their privileges.

For the PC requirements to use this function, see “14-2 Peripheral Equipment Specifications”.



Maximum number of registered users: 20
(Maximum 4 managers and 16 users can log in at the same time)

NOTE

Do not zoom in or out the Web screen.

- Set the DPI settings on your PC (the sizes of text and other items) to 100%.
- Set the percentage zoom of the Web browser to 100%.

(*1) If connecting to the Internet, connection must always be via a VPN router, and security must be ensured by the customer.

NOTE

When using the Web Remote Management function

<To prevent unauthorized use>

- As a product using network technology, this product faces the following security risks:
  * Information leakage
  * Unauthorized operation as a result of impersonation
  * Equipment stoppage as a result of an attack

  For the reasons above, be sure to use this product in a secure network environment.

- To strengthen security, observe the following points when managing users:
  * Restrict users that can log in by setting user names and passwords
  * Passwords must be a combination of alphanumeric characters that cannot be easily guessed by others

- This product logs user operation and the equipment operational status for the purpose of system maintenance.

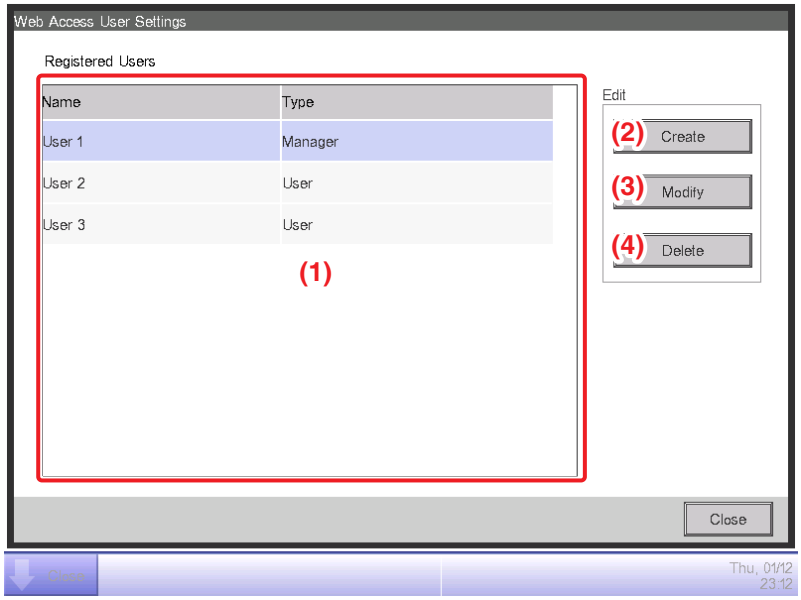
  The logs can be viewed on the History screen.

The following describes how to create users and operate.

Registering Web users

Register Web users that can access the Web. There are two types of Web users: managers and users, and the operations permitted to users can be limited by settings. You can register is up to 4 managers and up to 60 users. It is allowed to access up to 4 managers and 16 users simultaneously.

1. Touch the Web Access Users button on the System Settings tab of the Menu List screen and display the Web Access Users Settings screen (see “4-5 Menu List screen: System Settings Tab”).



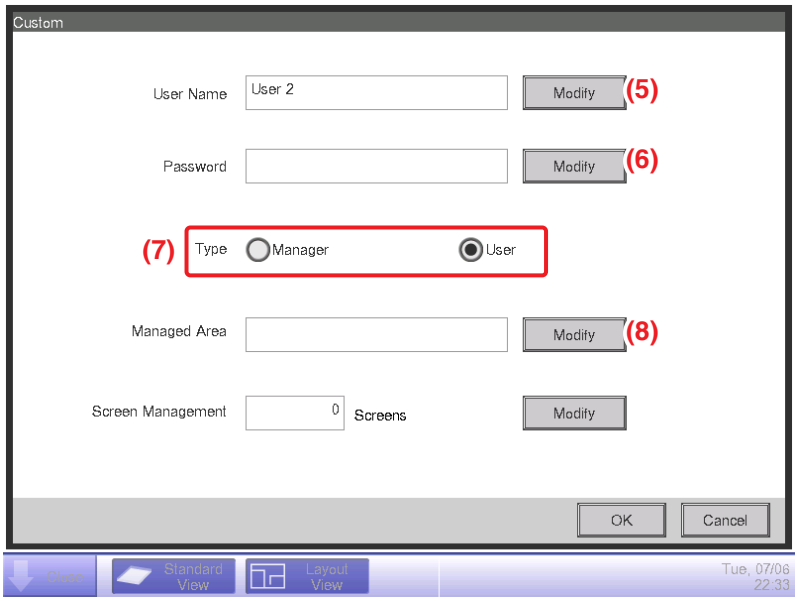
(1) is the list of registered Web users.

The **Create** button **(2)** allows you to create new users.

The **Modify** button **(3)** allows you to edit the settings of the selected user.

The **Delete** button **(4)** allows you to delete the selected user.

2. Touch the **Create** button **(2)** or **Modify** button **(3)** and display the Custom screen.



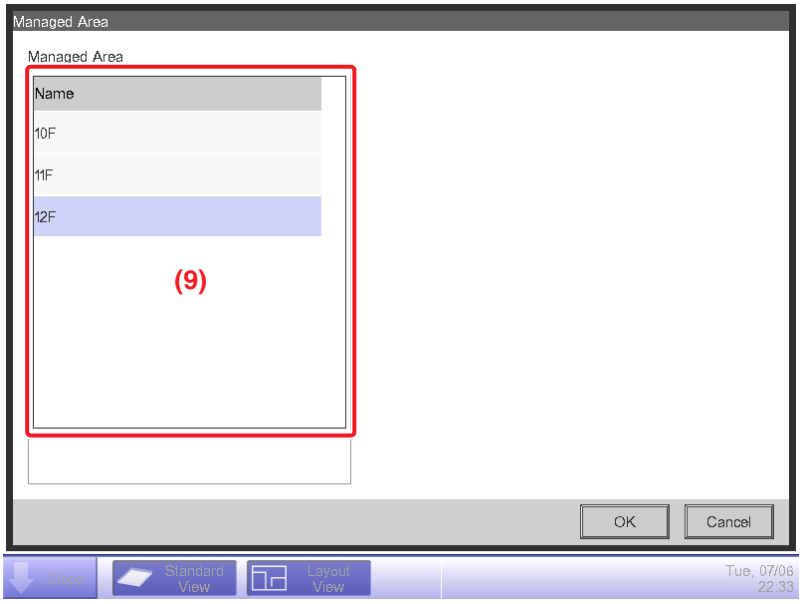
To enter the user name, touch the **Modify** button **(5)** and display the Text Input dialog. Specify a name using 1 to 15 characters.

To set the login password, touch the **Modify** button **(6)** and display the Password Input dialog. Enter the same password twice for confirmation. Set a password using 0 to 15 alphanumeric characters.

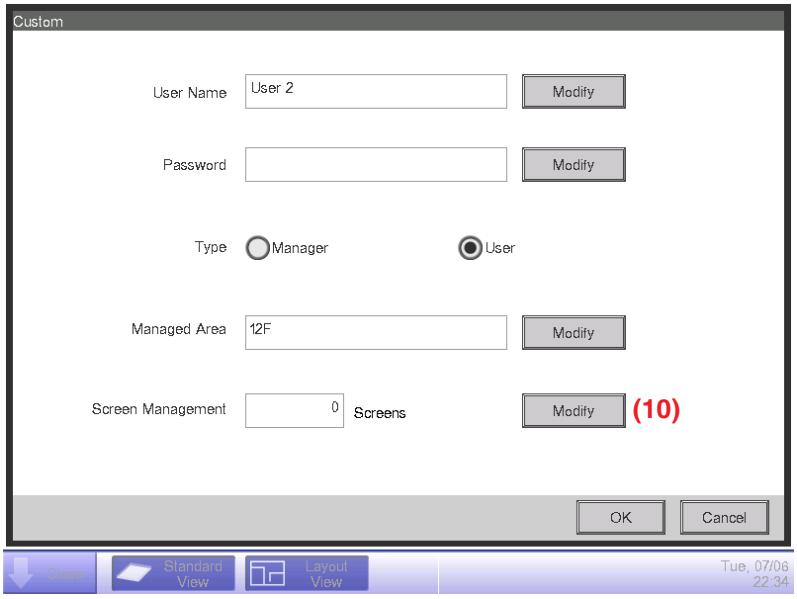
Select the type of user in **(7)**.

In the case of a user, set up the Managed Area and Screen Management (number of Layout View screens) settings to register the target the user can manage.

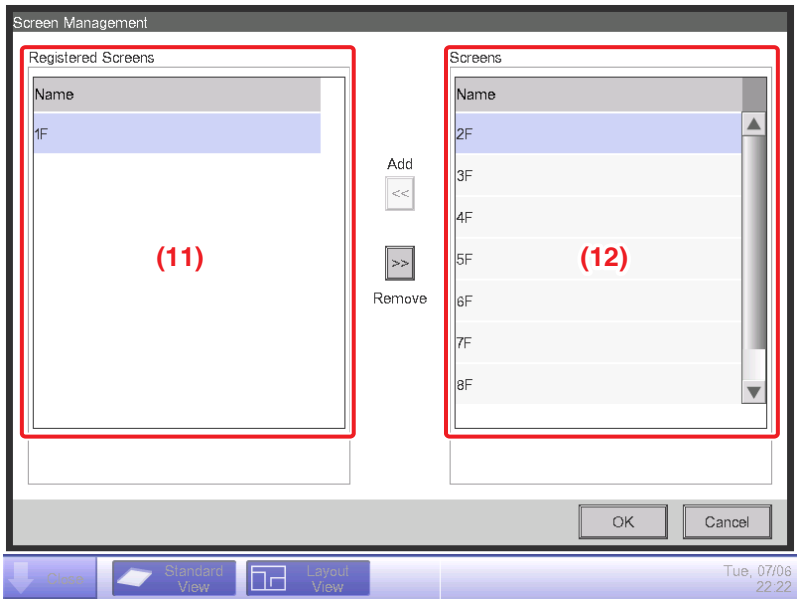
3. Touch the **Modify** button **(8)** and display the Managed Area screen.



(9) is the list of areas that can be registered. Select one area and touch the OK button to save the settings and return to the Custom screen.



4. Touch the **Modify** button **(10)** and display the Screen Management screen.



(11) is the list of registered target screens while **(12)** is the list of Layout View screens that can be registered.

Select a screen from **(12)** and touch the Add button to register it as the target Layout View screen. You can only register one Layout View.

Select a registered screen from **(11)** and touch the Remove button to remove it from the Registered Screens list.

When finished, touch the OK button to return to the Custom screen.

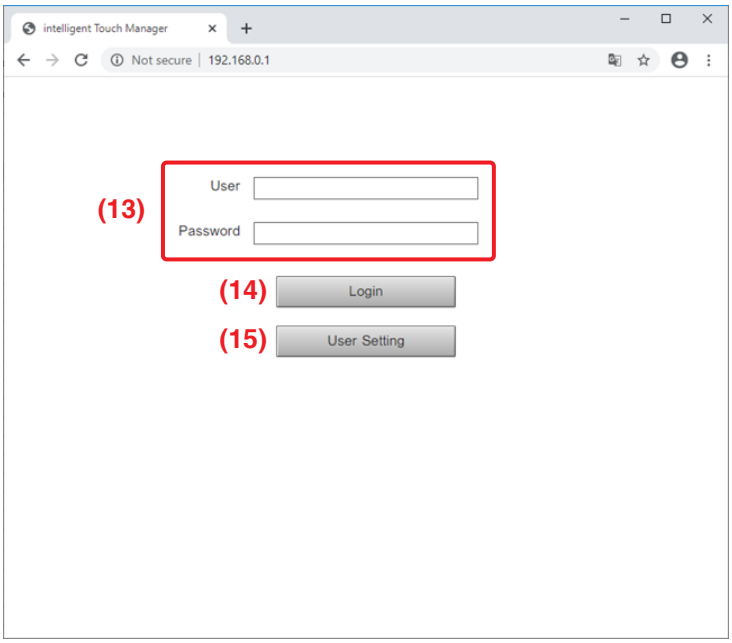
Touching the OK button on the Custom screen saves the settings and registers the Web user.

NOTE

- In the case of a manager, setting up the Managed Area and Managed Screen (number of Layout View screens) settings is unnecessary.
- In the User Name text box, you cannot use some special characters.
- In the Password text box, you cannot use special characters.
- On the Layout View Screen (see “4-4 Layout View (Optional) Screen”), you can monitor management points/areas even if they are not included in the Managed Area list.
- When the Layout View screen is registered by a Web user, the Screen Management screen must be set up so that users can switch among screens.

Logging in/out to/from a PC

1. The Login screen appears when you access the iTM by launching the Web browser on a PC and entering the IP address of an iTM unit with network settings (http:// iTM IP address).

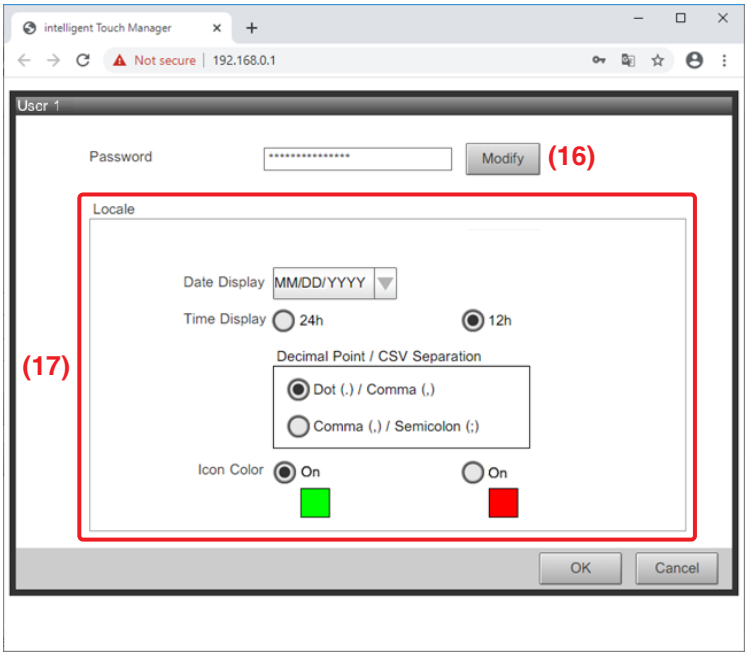


Enter the user name and password in **(13)** and click the **Login** button **(14)**. The Web Remote Management screen (Icon view) appears if authentication is successful. (See the next page.)

NOTE

If an incorrect password is entered repeatedly,login will become imposssble.
Please wait about 5 minutes,then try to log again.

2. Entering the user name and password, and clicking the **User Setting** button **(15)** displays the User Setup screen where you can change the login password and set the locale.

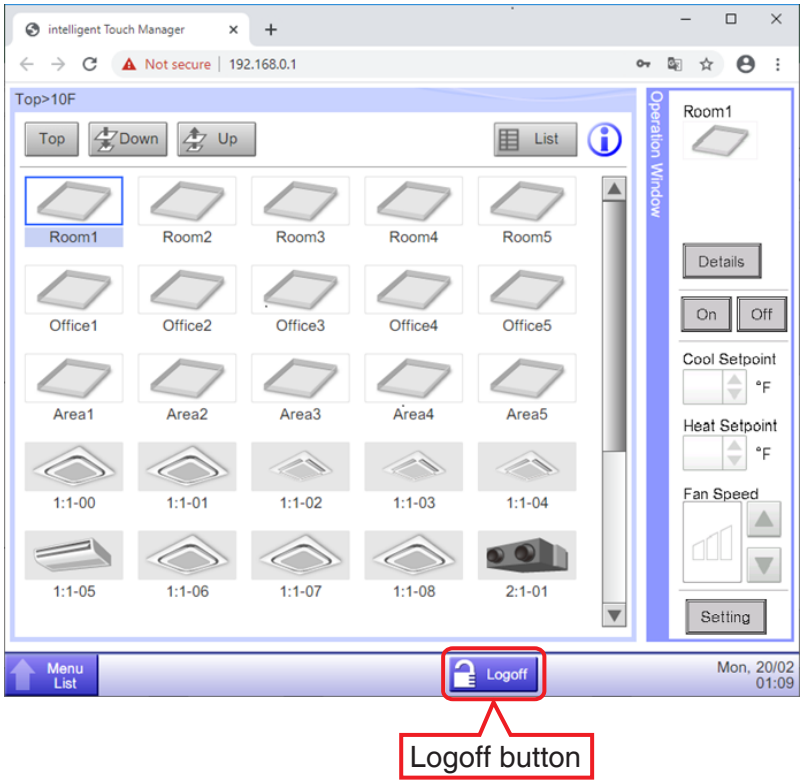


The **Modify** button **(16)** allows you to change the login password.

(17) is for setting the locale to be used by the PC. The information you can set is the same as that of the iTM unit locale setting. Set this as described in “6-5 Setting up the Locale”.

3. To log off, click the Logoff button on the Web Remote Management screen (see below on this page). Click the Yes button on the confirmation screen that appears and log off.

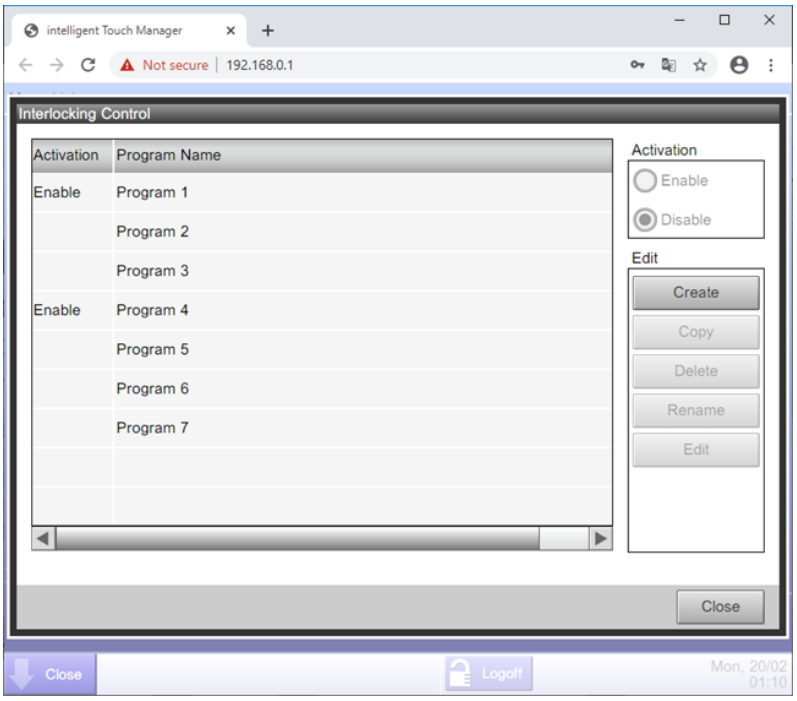
Web Remote Management Screen



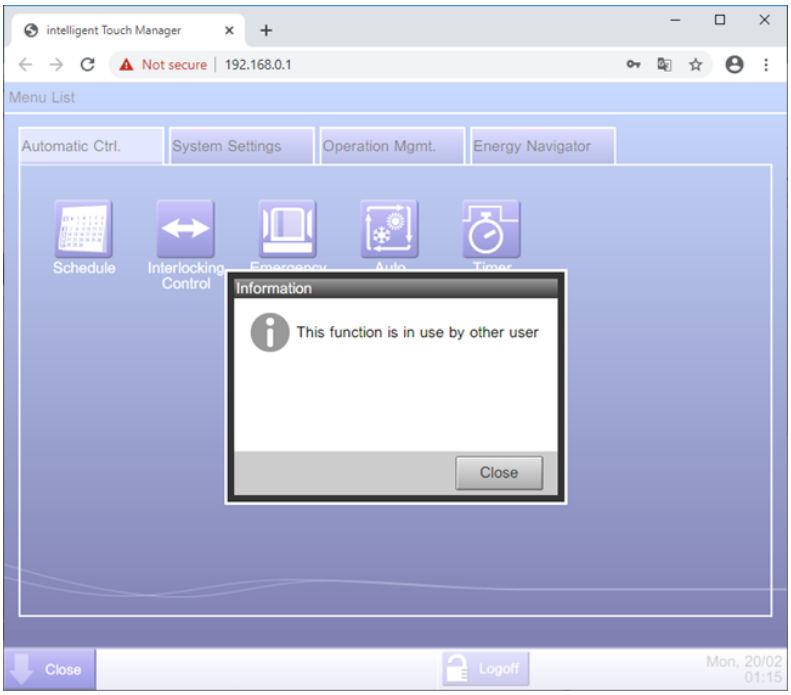
The operation after login is basically the same as from the iTM unit. For the operating procedure, see the relevant page.

Users can only use functions he/she is permitted in the User Setup. Furthermore, even a manager cannot open the same function setup screen as that being used by another manager.

Web user A has the Interlocking Control screen open.



Information dialog is displayed when the Web user B presses the Interlock button.



NOTE

- While the iTM unit stores data on a USB memory, the Web Remote Management function stores data on a PC's hard disk drive.
- With the Web Remote Management function, it is possible to store data for the following functions on a PC's hard disk drive:
  Power Proportional Distribution (see "10-1 Power Proportional Distribution Function"), Energy Navigator (see "11. Energy Navigator"), History (see "7-1 Checking and Outputting History"), Setup Export (see "7-3 Outputting Function Settings").
- The Web Remote Management function stores data as a ZIP-compressed file on a PC's hard disk drive.
- While the iTM unit can read data from a USB memory for iTM area settings etc., the Web Remote Management function cannot read data from a PC.
- The Web Remote Management function does not support the screen lock function on a PC (see "6-3 Setting up the Password") because the Login screen can restrict the users.
- The Web Remote Management function does not support iTM-specific functions (screensaver, hardware setup, touch panel calibration) to prevent incorrect setup of the iTM unit hardware.
- The Web Remote Management function supports the opening/closing of the Operation Window for the Standard View (List) screen displayed on the PC so that the screen can display more items.
- If communication is disconnected while you log in, the Web Remote Management function requires approximately 4 minutes to be ready for you to log in again from the PC.

9-3 Setting up the E-Mail Error Report

With correct network settings, the iTM can send an E-mail containing the date/time of occurrence, error code, and other information to predefined E-mail addresses if an error such as equipment error or analog upper/lower limit error occurs in a management point.

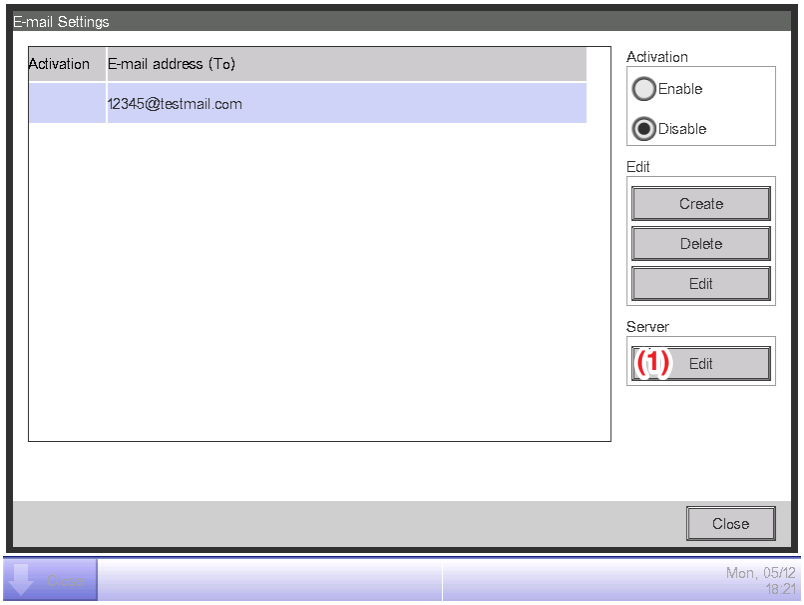
NOTE

An SMTP server and a terminal for receiving E-mails are necessary in addition to the iTM unit.

The following describes how to set this up.

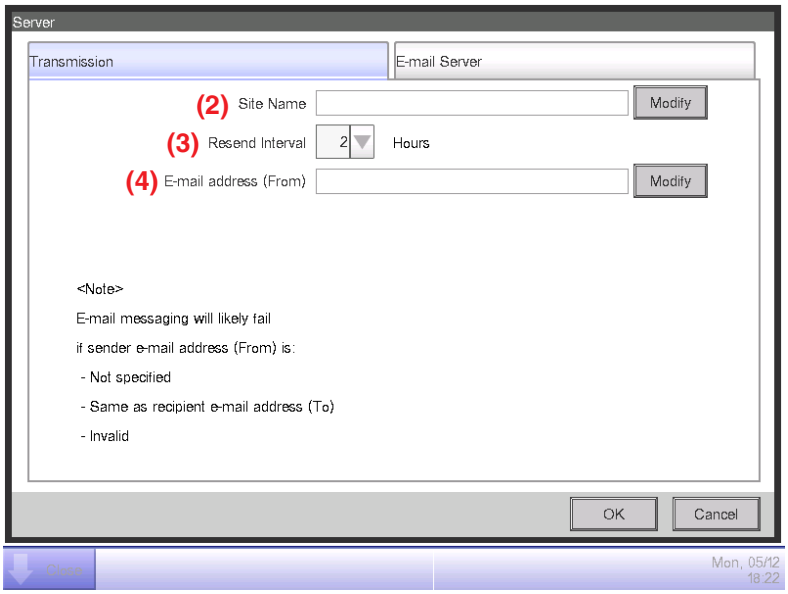
Setting up the Mail Server

Touch the E-mail button on the System Settings tab of the Menu List screen and display the E-mail Settings screen (see “4-5 Menu List screen: System Settings Tab”).



Touch the Edit button **(1)** and display the Server dialog (see the next page). The dialog consists of two tabs: Transmission and E-mail Server. Switch and set up each of the tabs. When finished, touch the OK button to return to the E-mail Settings screen.

• **Transmission Tab**

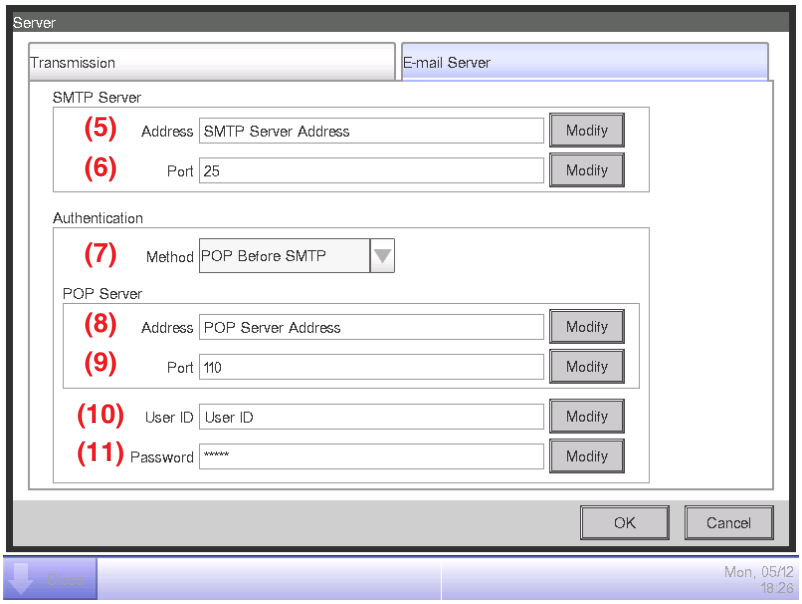


Set the site name in **(2)**. Touch the Modify button and enter a name of up to 20 characters in the Site Name Setup dialog that appears. The site name will be used as subject of the E-mails.

Select the E-mail resending interval in the drop down menu **(3)**. You may select an interval of 1 to 72 hours, in increments of 1 hour. If after sending the E-mail once, the error remains even after the time set here elapses, the E-mail is resent.

Set the sender address in **(4)**. Touch the Modify button and enter an address of up to 128 characters in the From Address Setup dialog that appears.

- **E-mail Server Tab**



Displays information of the server that will send the E-mails. Set each item using the Modify button or drop down menu. For information necessary for the settings, consult your network administrator.

(5) URL or IP address of the SMTP Server

(6) Port number of the SMTP Server

(7) Authentication method for outgoing E-mails: Select one from No Authentication, POP Before SMTP, and SMTP-AUTH

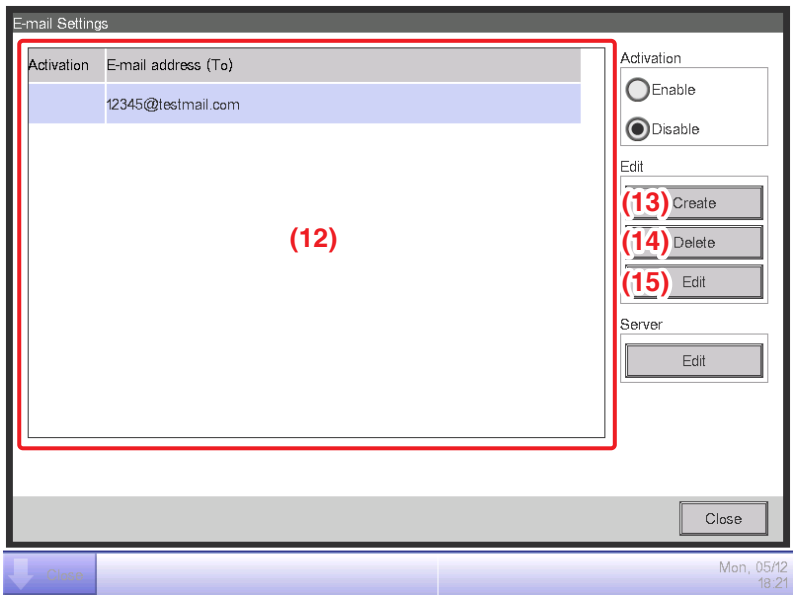
(8) URL or IP address of the POP Server to be used in the POP Before SMTP authentication

(9) Port number of the POP Server to be used in the POP Before SMTP authentication

(10) User ID for the POP Server or SMTP authentication

(11) Password for the POP Server or SMTP authentication

Setting up the recipient E-mail address and sending an E-mail



(12) is the list of registered recipient E-mail addresses. Perform the intended operation by touching the relevant button on the right.

(13) Create button

Creates a new E-mail address. Touch the button and enter an address of up to 128 characters in the E-mail Address Setup dialog that appears.

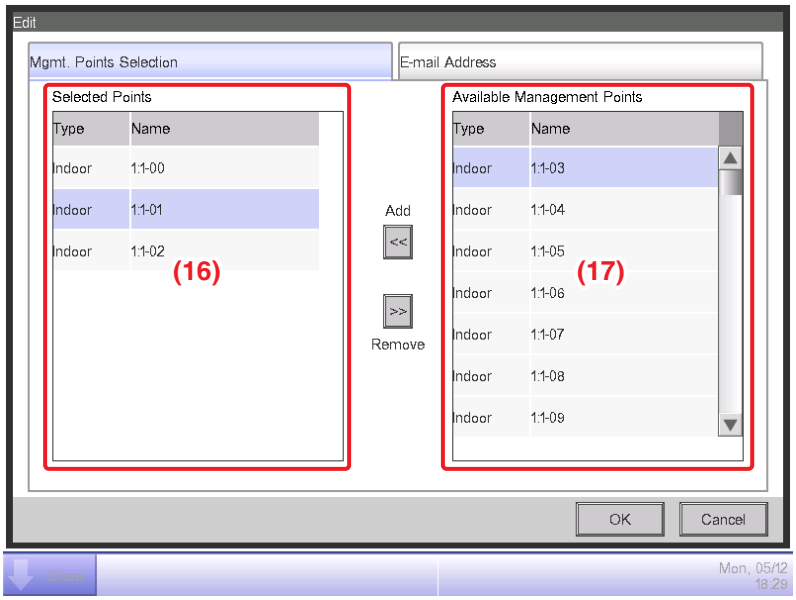
(14) Delete button

Deletes the selected E-mail address.

(15) Edit button

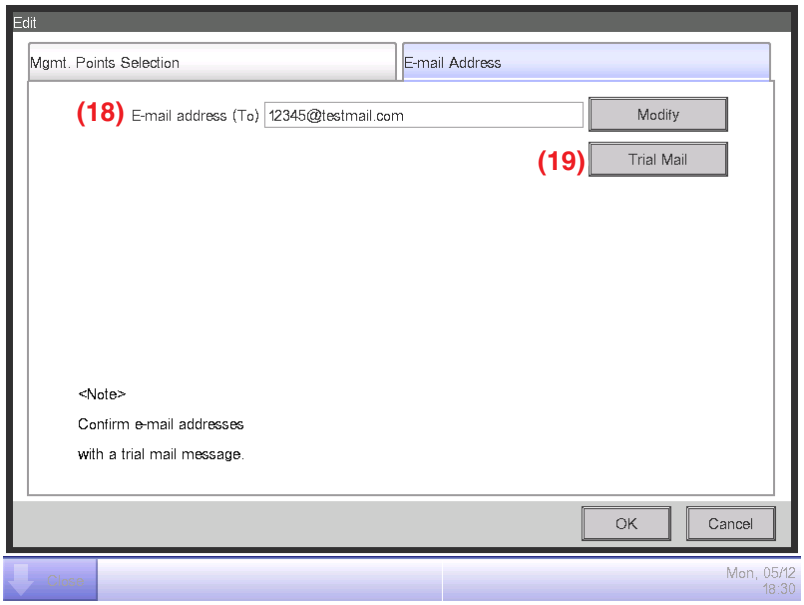
Edits the selected E-mail address. Touch the button to display the Edit dialog (see the next page). Then, edit the settings on the Mgmt. Points Selection and E-mail Address tabs.

• **Mgmt. Points Selection Tab**



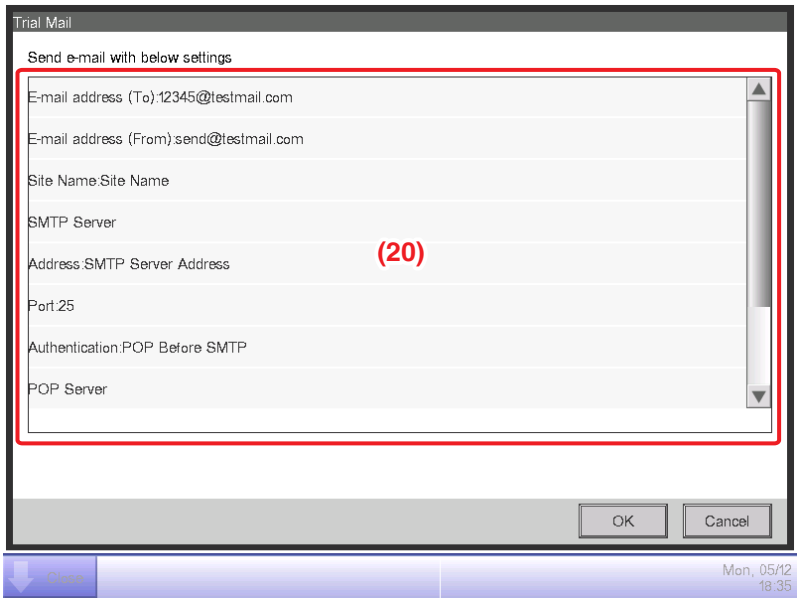
(16) is the list of management points registered as the target of error monitoring while **(17)** is the list of management points that can be registered. To register, select a management point that will be target of monitoring from **(17)** and touch the Add button. You can register up to 512 management points. Selecting a management point from **(16)** and touching the Remove button cancels its registration.

• **E-mail Address Tab**



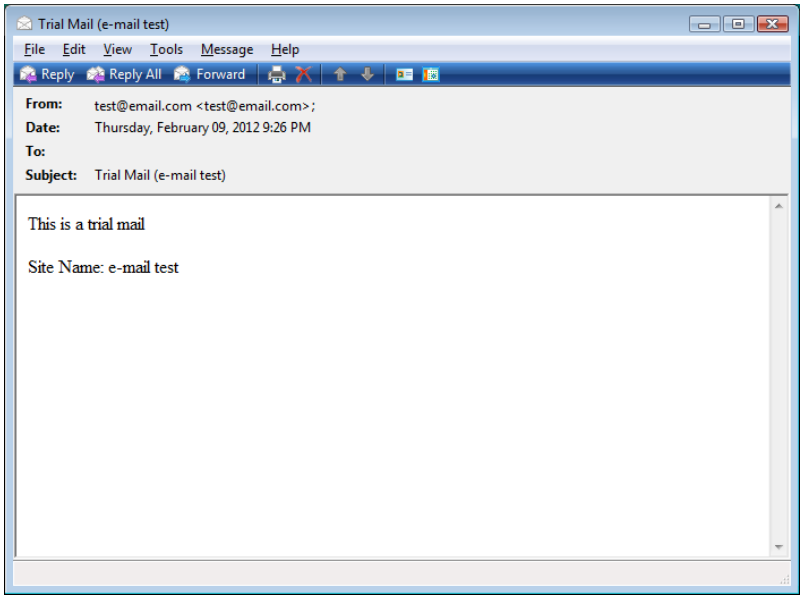
(18) is the current E-mail address. To change, touch the Modify button and enter the E-mail address in the E-mail Address Setup dialog that appears.

Touching the **Trial Mail** button **(19)** displays the Trial Mail dialog.



(20) displays the current settings whose details are as indicated in Table below.

Item		Displayed information	Remarks
To E-mail address		E-mail Address (To):[address]	
From E-mail address		E-mail Address (From):[address]	
Site Name		Site Name:[name]	
SMTP Server	Title	SMTP Server	
	Address	Address:[address]	
	Port number	Port:[port]	
Authentication	Authentication method	Authentication: [Authentication method]	[Authentication method] is one among [No Authentication], [POP Before SMTP], and [SMTP-AUTH].
	Title	POP Server	Displayed when [Authentication method] is [POP Before SMTP].
	POP Server Address	Address:[address]	
	POP Server Port No.	Port:[port]	
	User ID	User ID:[ID]	Displayed when [Authentication method] is other than [No Authentication].



Touch the OK button to send the trial e-mail. The screen returns to the E-mail Address tab. When finished, touch the OK button to close the screen.

10. Power Proportional Distribution

10-1 Power Proportional Distribution Function

Power Proportional Distribution is a function that proportionally distributes the total power used by the air conditioners in a rental building and the like, measured using an electricity meter among the tenants. The proportional distribution calculation can also be exported to a CSV file.

For the USB memory requirements, see “14-2 Peripheral Equipment Specifications”.

To use this function, you must set up groups for proportional distribution, input devices, etc. as well as run a trial on a PC in advance. Consult your authorized dealer.

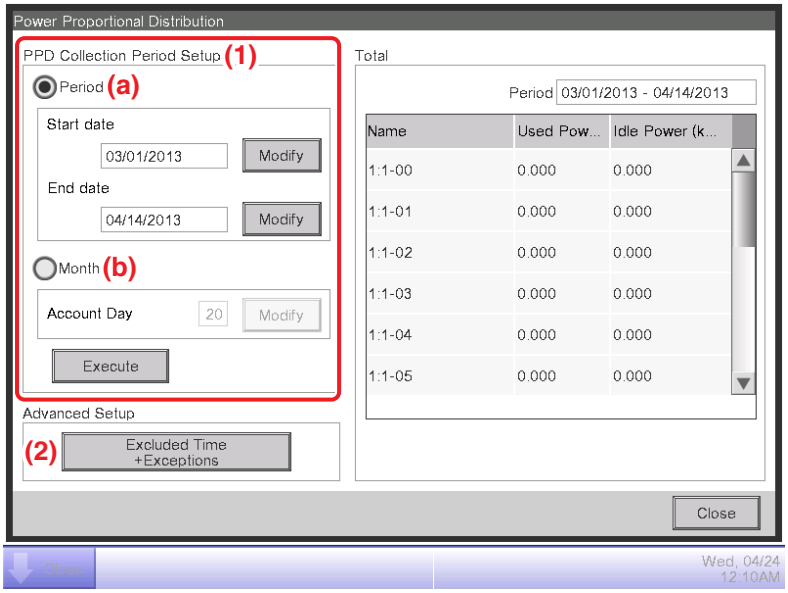
Proportional distribution cannot be calculated if the controller is turned off. Do not turn off the controller if calculating proportional distribution.

This chapter describes operations to be performed on the iTM unit.

The iTM is designed to measure the accumulated value using a pulse-output accumulator installed to the mains power supply line for an air conditioner and calculate the distribution (proportional distribution) value based on the estimated load ratio for each indoor unit. It does not perform calculation based on the metric method.

Setting up the data collection period

Touch the PPD button on the Operation Mgmt. tab of the Menu List screen and display the Power Proportional Distribution screen (see “4-5 Menu List Screen: Operation Mgmt. Tab”).



Set the data collection period in **(1)**.

Select the **Period** radio button **(a)** to set the collection start and end dates.

Touch the Modify button for Start date and End date, and enter the dates in the respective Date Input dialog that appears.

The range of dates you can enter is between the 1st of the same month of the previous year and the previous day of the day you opened the dialog. The order of the start date and end date must not be inverted.

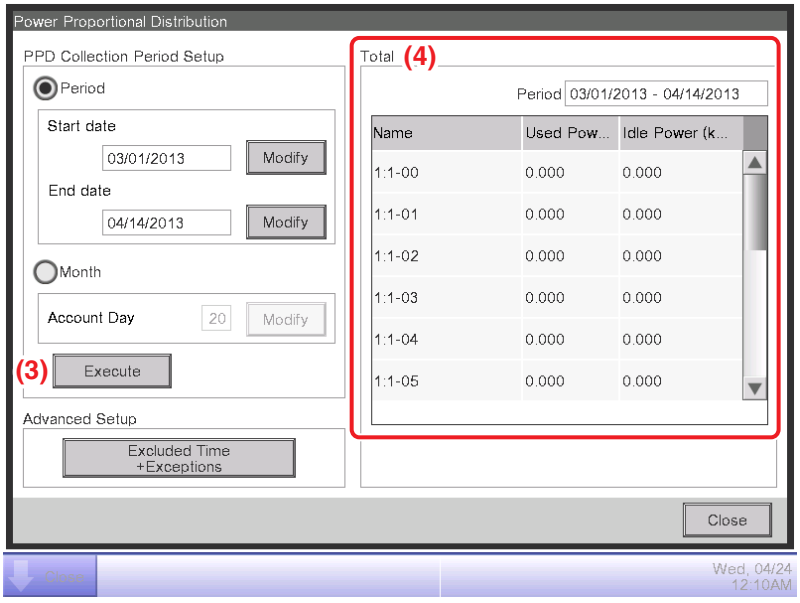
Select the Month radio button **(b)** to set the Account Day. The data collection period is determined as the 1-month period starting from the Account Day of the previous month.

For example, if the date on the iTM unit is October 20 and the Account Day is set to the 20, then the proportional distribution result for the period from September 20 to October 19 will be stored.

Touch the Modify button and enter the Account Date. You can enter a value in the 1 to 31 range. However, if the specified counting date does not exist in the month, the counting period will be automatically adjusted to match the calendar dates.

Excluded Time + Exceptions button **(2)** is the button for advanced settings.

Collecting data and outputting the Power Proportional Distribution results



Touching the Execute button **(3)** displays a confirmation dialog. Connect a USB memory to the iTM unit and touch the Yes button to start data collection and store the result in a folder created on the USB memory.

Data collection may take up to 40 minutes. When data collection finishes, the iTM displays the data collection period and the list of data collection results in **(4)**, then saves the result data in a file named “PPD_collection start date_collection end date.csv”.

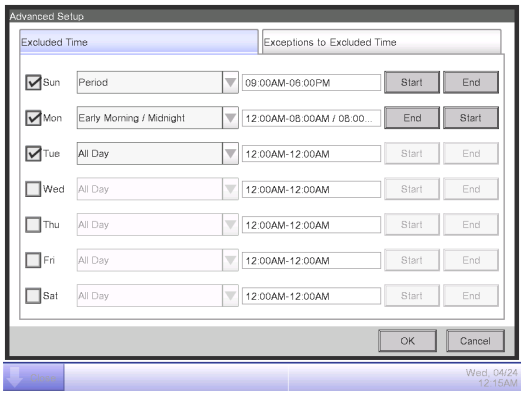
If you start data collection without connecting the USB memory, the iTM displays the data collection results, but does not store any data file. Touch the Close button to close the screen.

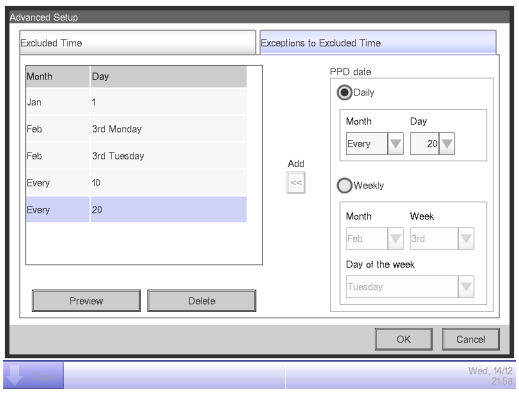
NOTE

Touching the Excluded Time + Exceptions button **(2)** on the Power Proportional Distribution screen displays the Advanced Setup screen.

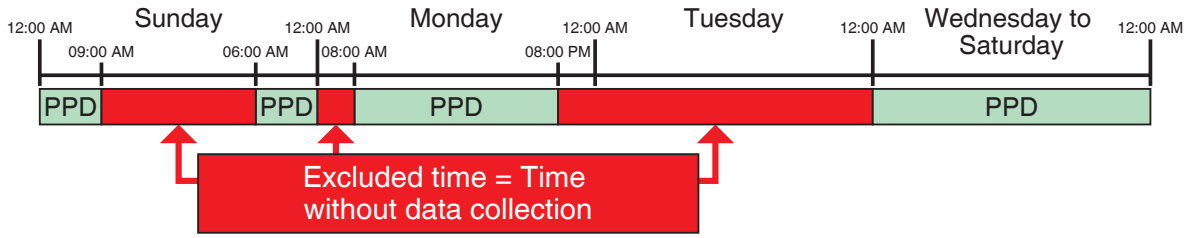
In this screen, you can set times to be excluded from the data collection period. Data for proportional distribution are not collected during excluded times.

This setting is normally unnecessary. Set this up only when necessary and after a thorough check.





Excluded Time will be as indicted in the figure below when the information in the left screen above is set.

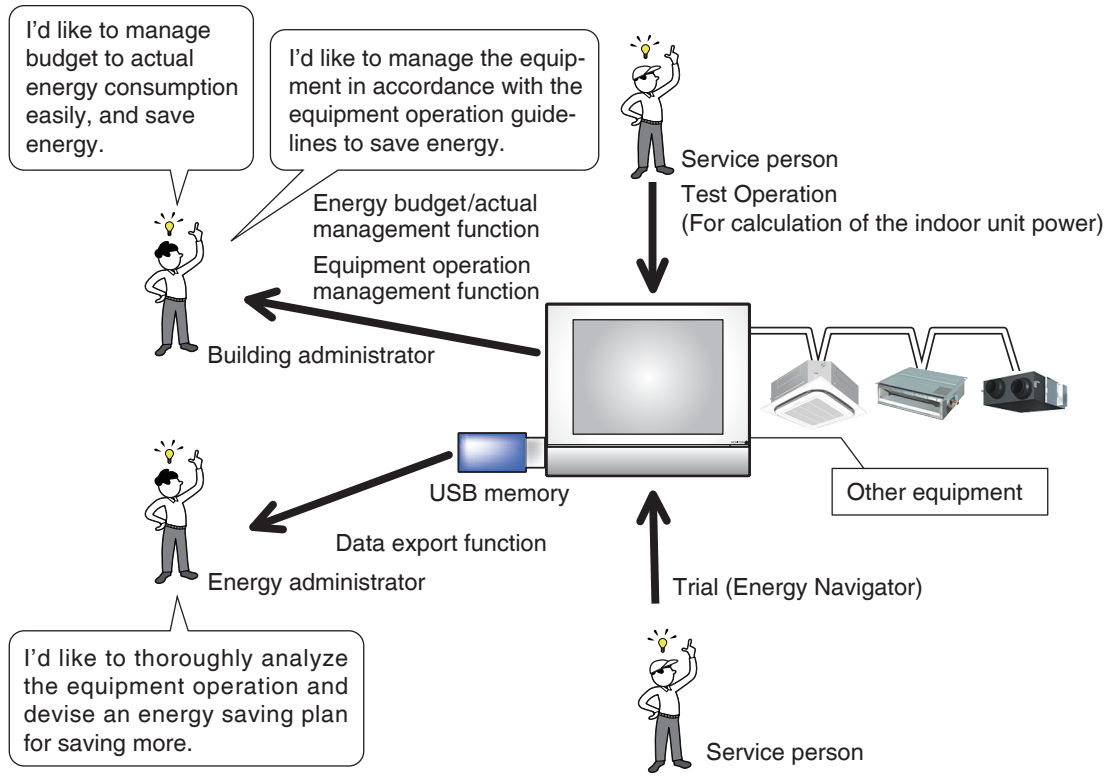


11. Energy Navigator

11-1 Energy Navigator Function

Recently, the laws and regulations related to energy reduction and CO_2 reduction of many countries are being strengthened. For that reason, for each facility, it is necessary to know the current energy consumption or the current performance against the energy consumption plan in order to comply with applicable laws, and make improvements to reduce the energy consumption if necessary.
Equipment administrators and energy administrators are required to systematically manage equipment by analyzing the operational status of the equipment and devising energy reduction plans, defining equipment operation guidelines to save energy, etc.

Energy Navigator Overview

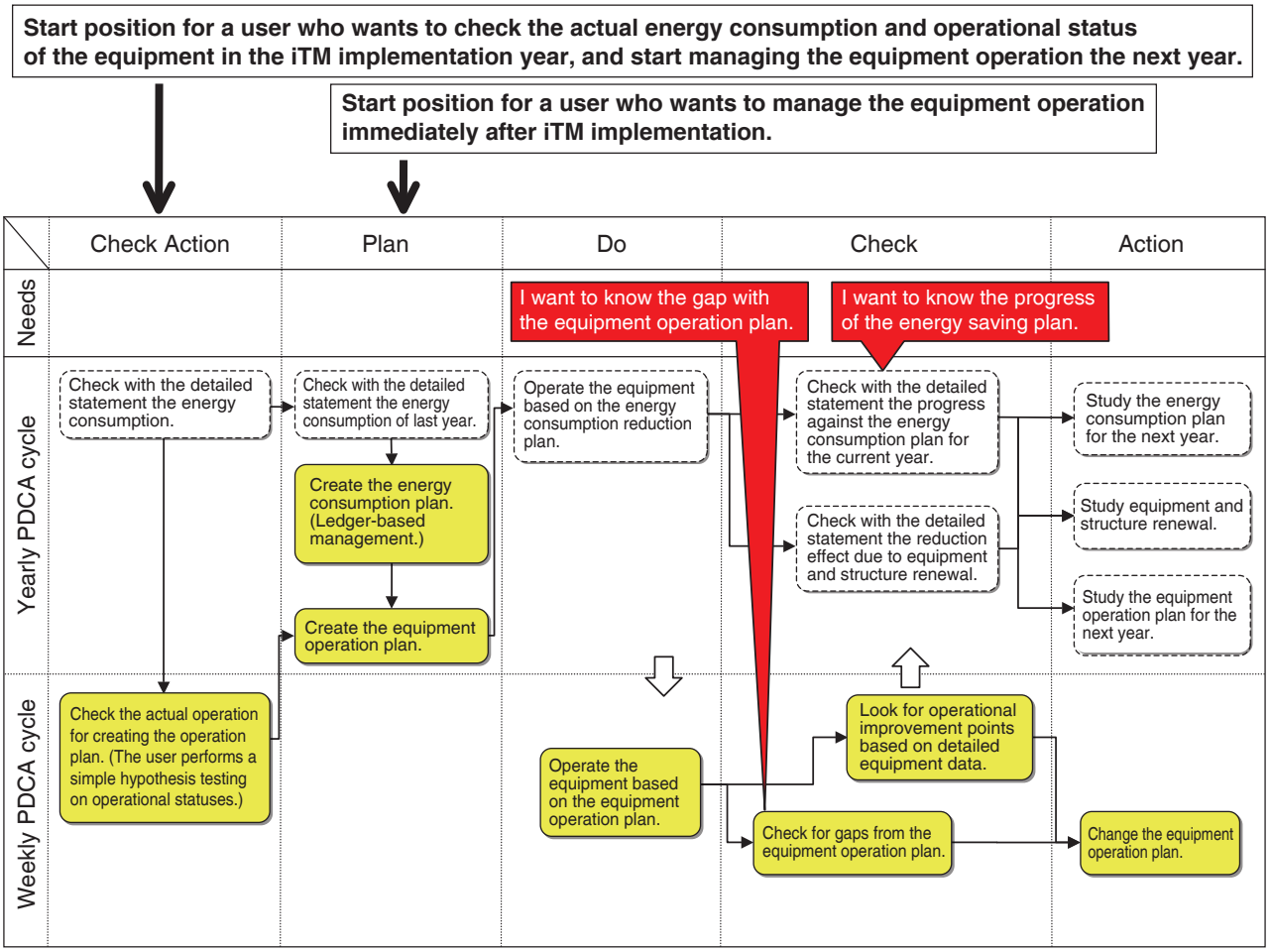


The Energy Navigator is a function for supporting the management of budget and actual energy consumption and/or equipment management. It includes the following three functions.

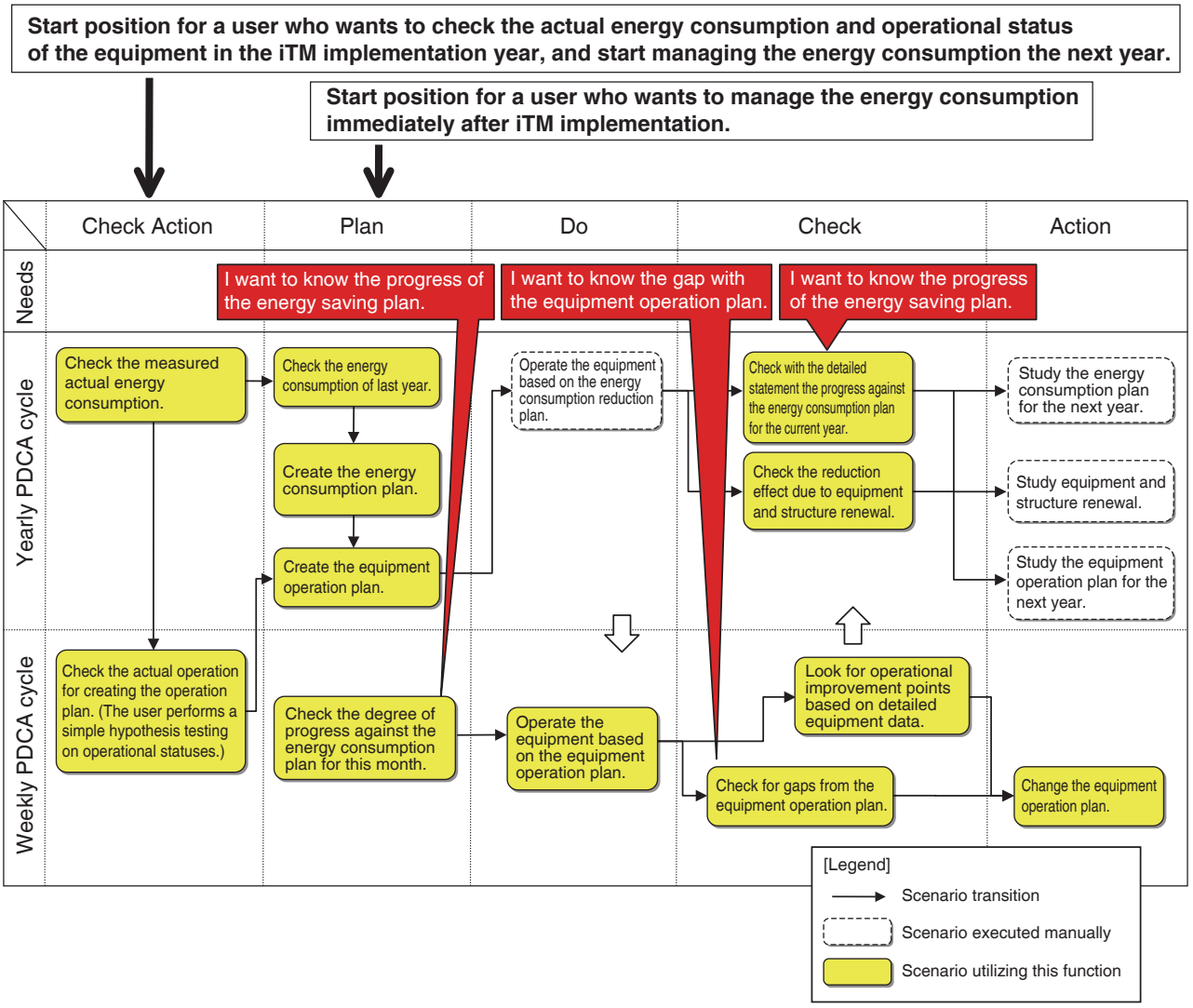
- **Energy budget/actual management function**
- **Equipment operation management (deviation from the operation plan)**
- **Data output function**

By using these functions together with power meters and the trial power proportional distribution, you can support various needs and use scenarios. For details, consult your authorized dealer.

<To know the operational status of air conditioning for a building easily>



<To know the energy consumption for the whole building>



This chapter describes the functions, their settings, and how to use them.

NOTE

Prior trial is necessary for using this function. Consult your authorized dealer before use.

11-2 Energy Budget/Actual Management

This functions can calculate the level of achievement of the energy consumption plan from the actual energy consumption and the estimated consumption when the plan is fully achieved, as well as plot the budget and actual energy consumption in yearly/monthly graphs for easy management. Furthermore, it can compare last year's actual energy consumption with this year's actual energy consumption.

Functions you can use depend on the availability of power meters and availability of an energy consumption plan, as indicated in the tables below.

Engineering details		**Energy budget/actual management function**			
Availability of meters	Availability of energy consumption plan	(Monthly) Energy consumption estimation function	Energy budget/actual visualization function (see "11-3 Checking the Budget to Actual Energy Consumption")		
			Annual energy budget/ actual visualization function	Monthly energy budget/ actual visualization function	Year-to-year energy comparison function
Yes	Yes	○	○	○	○
Yes	No	×	△	△	○
No	Yes	×	○ (Budget/actual can be visualized by manually entering the actual energy consumption)	×	○ (Available by manually entering the actual energy consumption)
No	No	×	△	×	○ (Available by manually entering the actual energy consumption)

Engineering details		**Energy budget/actual management function**				
Availability of meters	Availability of energy consumption plan	Energy consumption plan registration function (see "Setting up the Planned Energy Consumption")	Actual energy consumption registration function (see "Setting up the Actual Energy Consumption")	Energy Group registration function (see "Setting up Energy Groups")	Energy type/Energy conversion factor registration function	
					Energy type registration function (see "Setting up the Energy Type")	Energy conversion factor registration function
Yes	Yes	○	○	○	○	○
Yes	No	○	○	○	○	○
No	Yes	○	○	○ (Creation of group to which to manually enter the actual energy consumption)	○	○
No	No	○	○	○ (Creation of group to which to manually enter the actual energy consumption)	○	○

[Legend] ○: Available
△: Some functions available
×: Not available

The steps of energy budget/actual management are as follows:

- Setting up the Energy Type
- Setting up Energy Groups
- Setting up the Planned Energy Consumption
- Setting up the Actual Energy Consumption

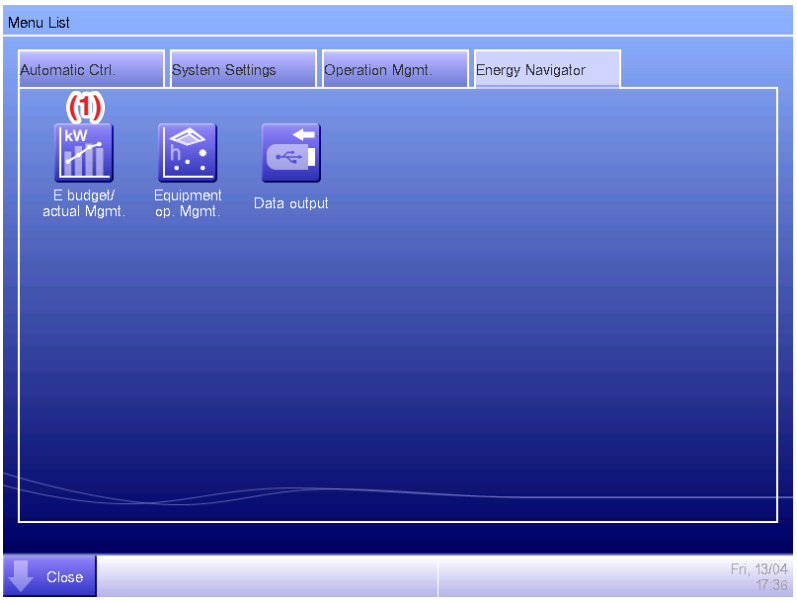
The following describes how to set this up and use.

Setting up the Energy Type/Setting up Energy Groups

- **Setting up the Energy Type**

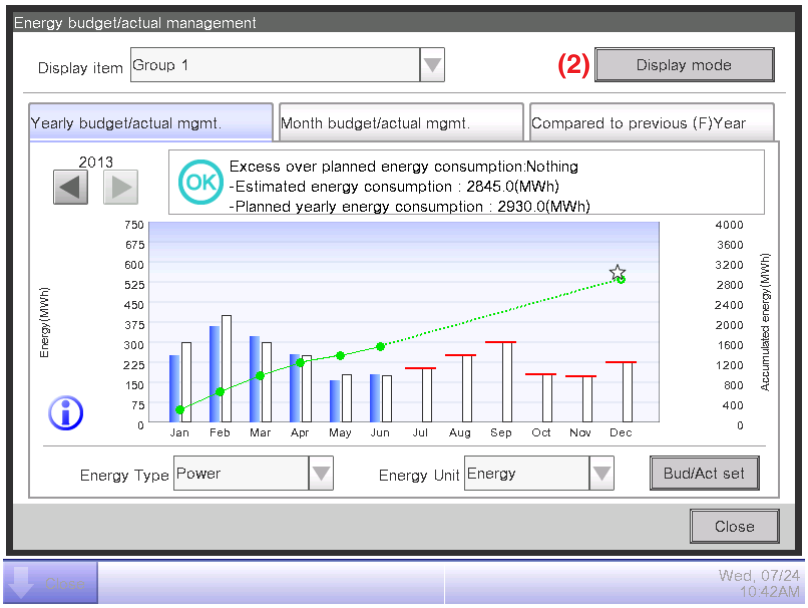
  Set up the energy type and energy group target of the energy budget/actual management.

  Display the Energy Navigator tab of the Menu List screen (see “4-5 Menu List Screen: Energy Navigator Tab”).

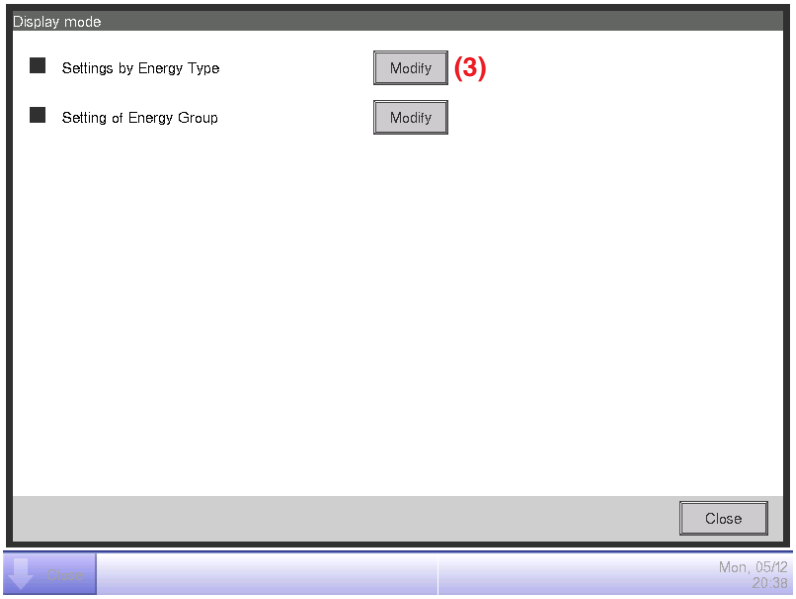


  Touch the **E budget/actual Mgmt.** button **(1)** and display the Energy budget/actual management screen.

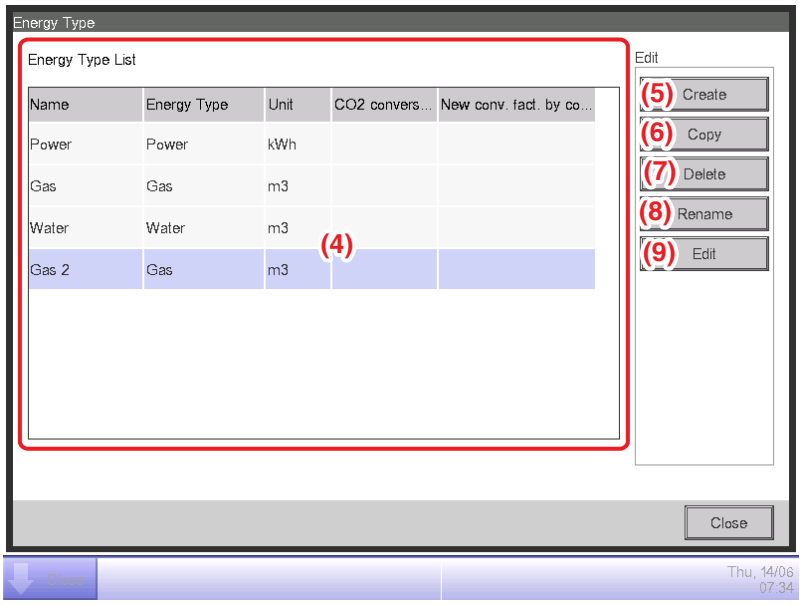
  The Energy budget/actual management screen consists of three tabs: Yearly budget/actual mgmt., Month budget/actual mgmt, and Compared to previous **(F)** Year.



Touch the **Display mode** button **(2)** and display the Display mode screen. The Display mode button is available on all tabs.



Touch the **Modify** button **(3)** and display the Energy Type screen.



Set up the energy type for which to plot the energy budget/actual management graph.

(4) is the list of registered energy types.

Perform the intended operation by touching the relevant button on the right.

(5) Create button

Creates a new energy type. You can register up to 30 energy types including the power, gas and water registered by default.

Enter a name in the Name Input dialog that appears. Touch the OK button to register the name in **(4)** as a new energy type.

You can name the energy type using up to 16 characters.

(6) Copy button

Creates a new energy type by copying the selected energy type.

Enter a name in the Name Input dialog that appears. Touch the OK button to register the name in **(4)**.

You can name the energy type using up to 16 characters.

(7) Delete button

Deletes the selected energy type.

(8) Rename button

Renames the selected energy type.

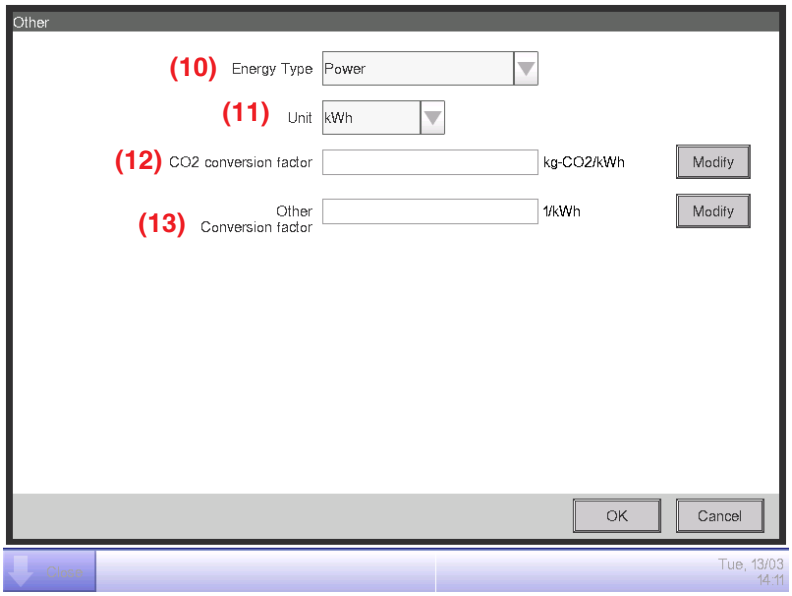
Enter a name in the Name Input dialog that appears. Touch the OK button to change the name.

You can name the energy type using up to 16 characters.

You cannot change the name of energy types registered by default.

(9) Edit button

Displays the Energy Type/CO_2 Conversion Factor screen that allows you to edit the selected energy type.



Sets up details for the selected energy type.

In the drop down menu **(10)**, select the energy type from Power, Gas and Water.

Select the unit **(11)** from the candidate corresponding to the selected Energy Type **(10)** in the drop down menu. The unit is fixed for each Energy Type: it is kWh for power, and m^3 for gas and water.

Set the CO_2 Conversion factor in **(12)**.

Touch the Modify button and enter the conversion factor in the Numerical Input dialog that appears. You can enter a value in the 0 to 9999.999 range, in increments of 0.001. The unit is displayed in accordance with the energy type selected in **(10)**.

If a new energy conversion type is registered on the Energy Conversion Type Setup screen, enter the new conversion factor in the Other Conversion factor field **(13)**.

Touch the Modify button and enter the conversion factor in the Numerical Input dialog that appears. You can enter a value in the 0 to 9999.999 range, in increments of 0.001. The unit is displayed in accordance with the energy type selected in **(10)**.

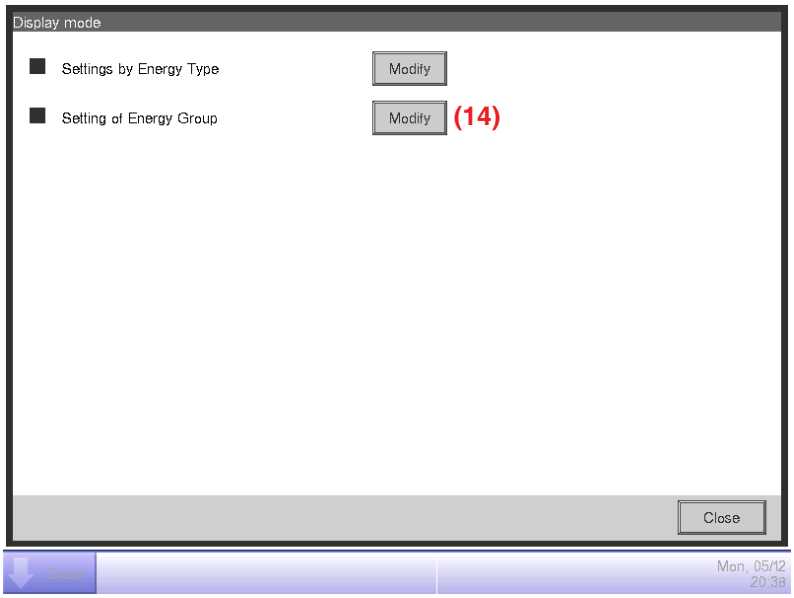
Touch the OK button to save the settings and return to the Energy Type screen.

When finished, touch the Close button to return to the Display Mode screen.

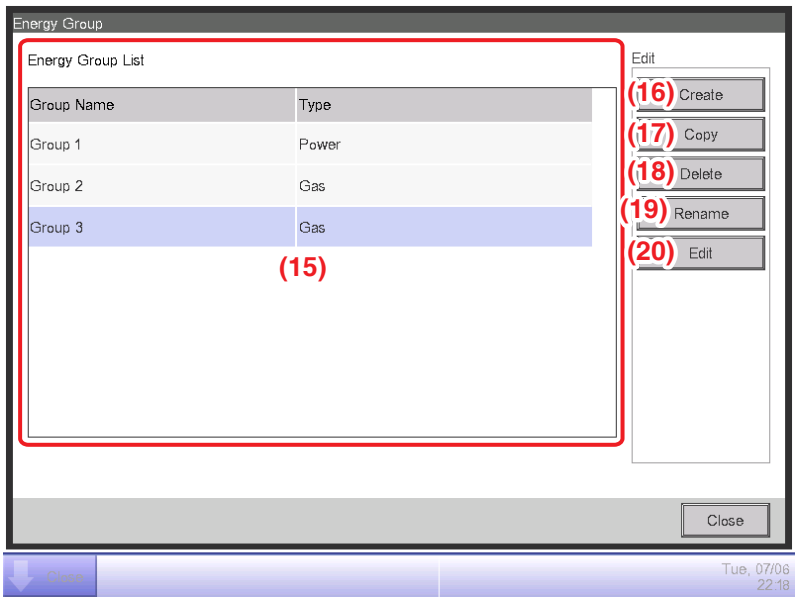
NOTE

For information on registering new conversion types, consult your authorized dealer.

• **Setting up the Energy Group**



To set up energy groups, touch the **Modify** button **(14)** to display the Energy Group screen.



Set up the Energy Group target of energy budget/actual management.

(15) is the list of Energy Groups.

Perform the intended operation by touching the relevant button on the right.

(16) Create button

Creates a new Energy Group. You can create up to 30 Energy Groups.

Enter a name in the Name Input dialog that appears. Touch the OK button to register the name in **(15)** as a new Energy Group.

You can name the Energy Group using up to 16 characters.

(17) Copy button

Creates a new Energy Group by copying the selected group.

Enter a name in the Name Input dialog that appears. Touch the OK button to register the name in **(15)**.

You can name the Energy Group using up to 16 characters.

(18) Delete button

Deletes the selected Energy Group.

(19) Rename button

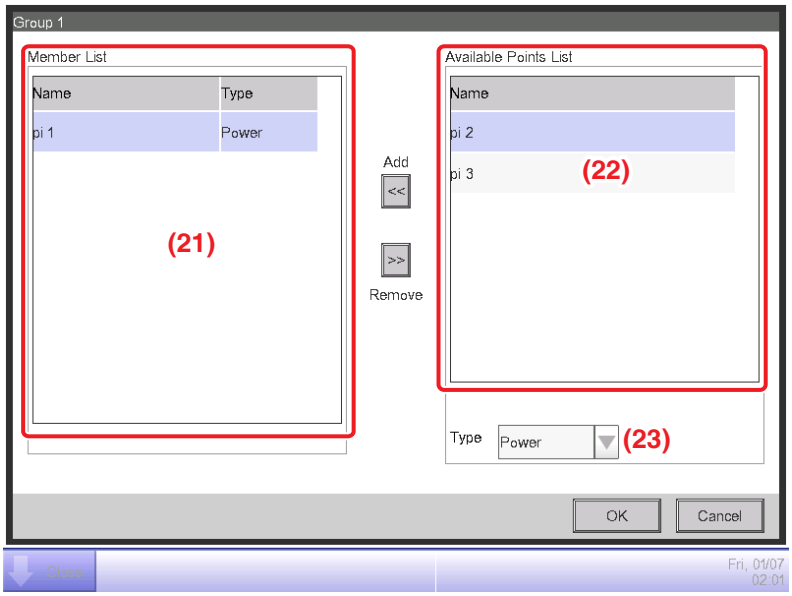
Renames the selected Energy Group.

Enter a name in the Name Input dialog that appears. Touch the OK button to change the name.

You can name the Energy Group using up to 16 characters.

(20) Edit button

Displays the Group screen that allows you to set up the selected group.



Set the management point from which to acquire the data to be used in energy budget/actual management.

In an Energy Group, you can only register Pi management points. You can register up to 100 per group. Furthermore, you can register Pi management points including multiple energy types.

You can also register multiple Pi management points in one Energy Group.

(21) is the list of registered management points.

Select a management point from the list of available management points **(22)** and, in the **Type** drop down menu **(23)**, select its type from Power, Gas, and Water. You can select an energy type registered in the Energy Type screen.

Touch the Add button to register in **(21)**.

Selecting an energy type from **(21)** and touching the Remove button cancels its registration.

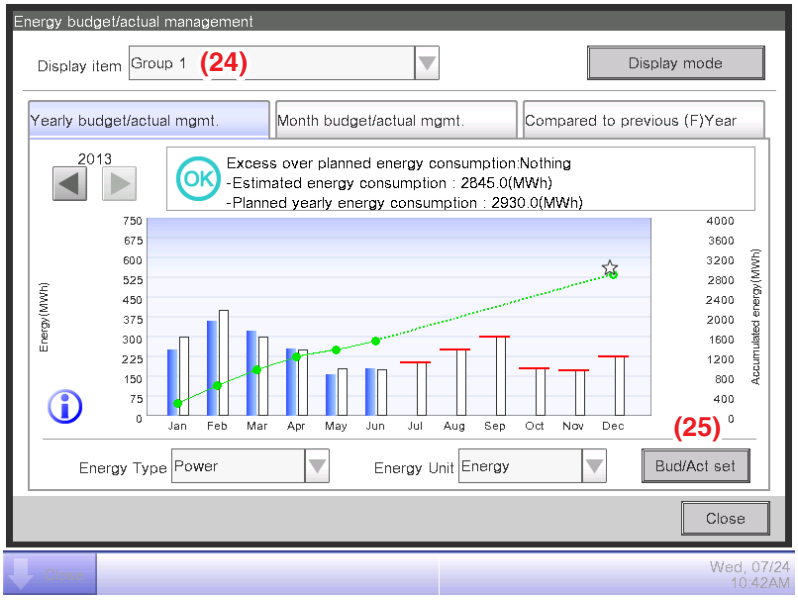
Touch the OK button to save the settings and return to the Energy Group screen.
When finished, touch the Close button to return to the Display Mode screen.

Touch the Close button on the Display Mode screen to close the screen and return to the Energy budget/actual management screen.

Setting up the Planned Energy Consumption/Setting up the Actual Energy Consumption

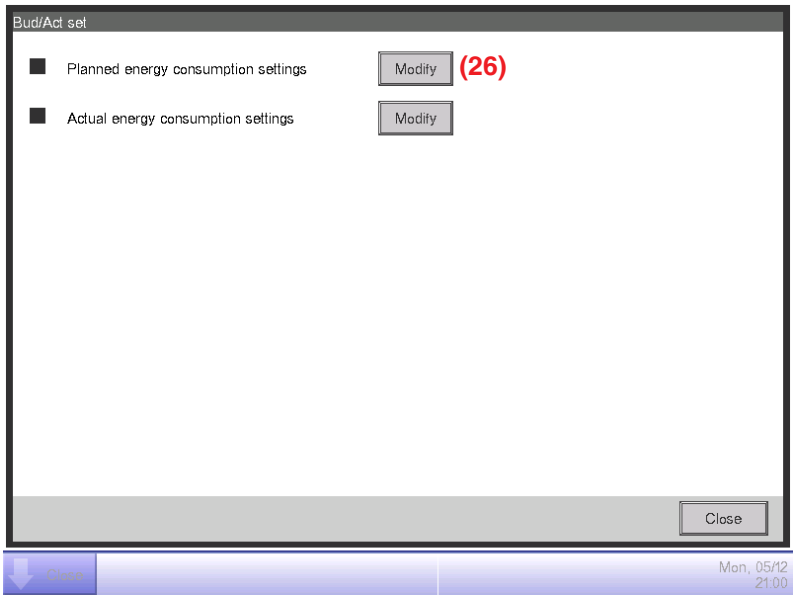
- **Setting up the Planned Energy Consumption**

Set up the energy consumption plan (planned value) and actually consumed energy (actual value).

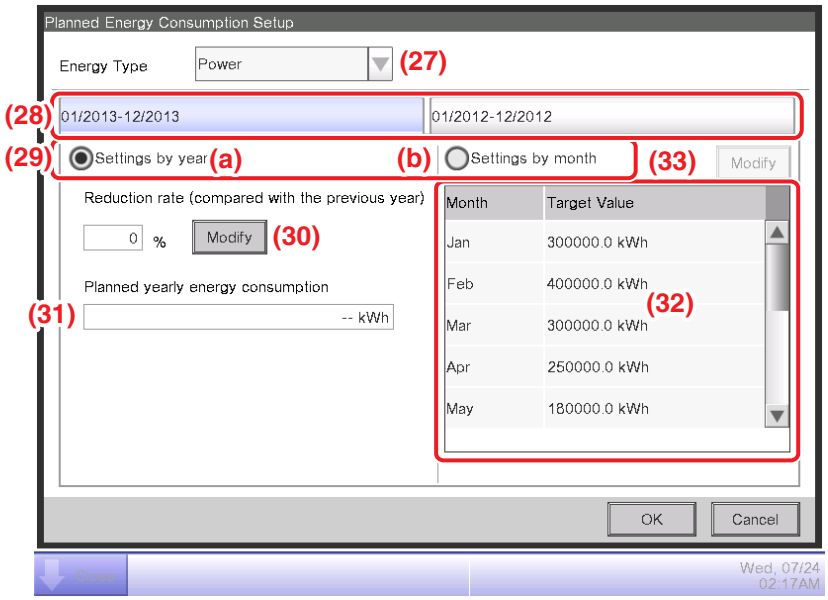


You can select a registered Energy Group using the **Display item** drop down menu **(24)** available on each tab of the Energy budget/actual management screen.

Select the Energy Group to which to set the energy consumption plan and register the actually consumed energy, and touch the **Bud/Act set** button **(25)** to display the Bud/Act set screen.



To set up the planned energy consumption, touch the **Modify** button **(26)** to display the Planned Energy Consumption Setup screen.



Set up the energy consumption plan for the Energy Group selected in the Energy budget/actual management screen.

In the **Energy Type** drop down menu **(27)**, select the energy type for which to set the energy consumption plan from Power, Gas and Water. You can select from the energy types included in the selected Energy Group.

By switching this year and last year with the **Year** tab **(28)**, set the objective of each year. This year is the period between the collection start month that includes the present and the end month of that year, while last year is the previous year.

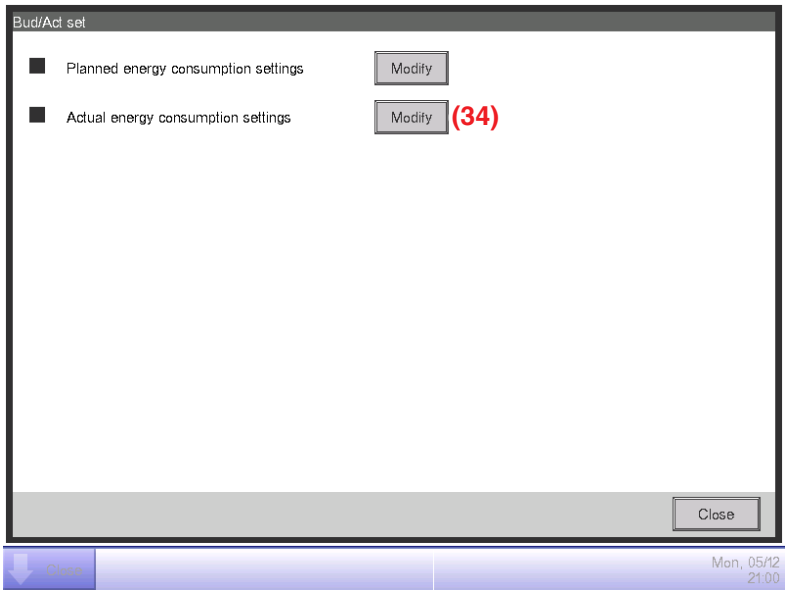
Select the unit for the objective setting in **(29)**. Select either **(a) Settings by year** or **(b) Settings by month**.

When the objective is **(a)** by year, touch the **Modify** button **(30)** and enter the reduction rate with respect to the previous year in the Numerical Input dialog that appears. The **planned yearly energy consumption** value is displayed in **(31)** in accordance with the value in **(30)**.

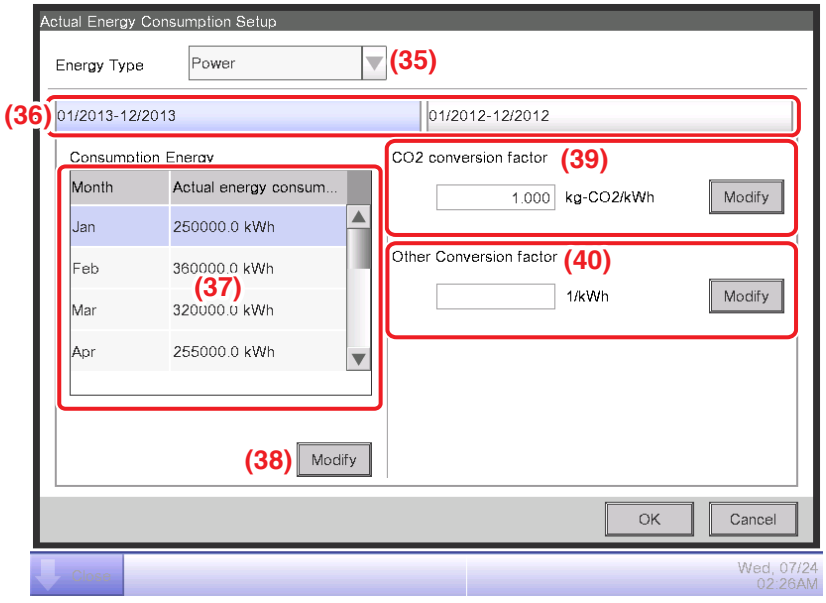
When the objective is **(b)** by month, a list for setting the objective for the 12 months from the collection start month appears in **(32)**. Select one month at a time and enter the objective for each month in the Numerical Input dialog that appears when you touch the **Modify** button **(33)**. You can enter a value in the 0 to 2000000 range, in increments of 0.1.

When finished, touch the OK button to save the settings and return to the Bud/Act set screen.

• **Setting up the Actual Energy Consumption**



To set up the actual energy consumption, touch the **Modify** button **(34)** to display the Actual Energy Consumption Setup screen.



Register the actual energy consumption for the Energy Group selected in the Energy budget/ actual management screen.

In the **Energy Type** drop down menu **(35)**, select the energy type for which to enter the actual energy consumption from Power, Gas and Water. You can select from the energy types included in the selected Energy Group.

By switching this year and last year with the **Year** tab **(36)**, enter the actual values for each year. This year is the period between the collection start month that includes the present and the end month of that year, while last year is the previous year.

A list for setting the actual value for the 12 months from the collection start month appears in **(37)**.

Select one month at a time and enter the actual value for each month in the Numerical Input dialog that appears when you touch the **Modify** button **(38)**.

The actual values which measured by Pi management points cannot be modified.

You can enter a value in the 0 to 2000000 range, in increments of 0.1.

The CO_2 conversion factor for the energy consumption appears in **(39)**. The unit displayed depends on the selected energy type. Touch the Modify button and enter the conversion factor in the Numerical Input dialog that appears.

You can enter a value in the 0 to 9999.999 range, in increments of 0.001.

If a new energy conversion type is registered on the Energy Conversion Type screen, the Other Conversion factor **(40)** field is displayed. The displayed unit will depend on the energy type ([Unit registered in the new conversion type]/kWh). Enter the conversion factor if necessary.

You can enter a value in the 0 to 9999.999 range, in increments of 0.001.

When finished, touch the OK button to save the settings and return to the Bud/Act set screen.

11-3 Checking the Budget to Actual Energy Consumption

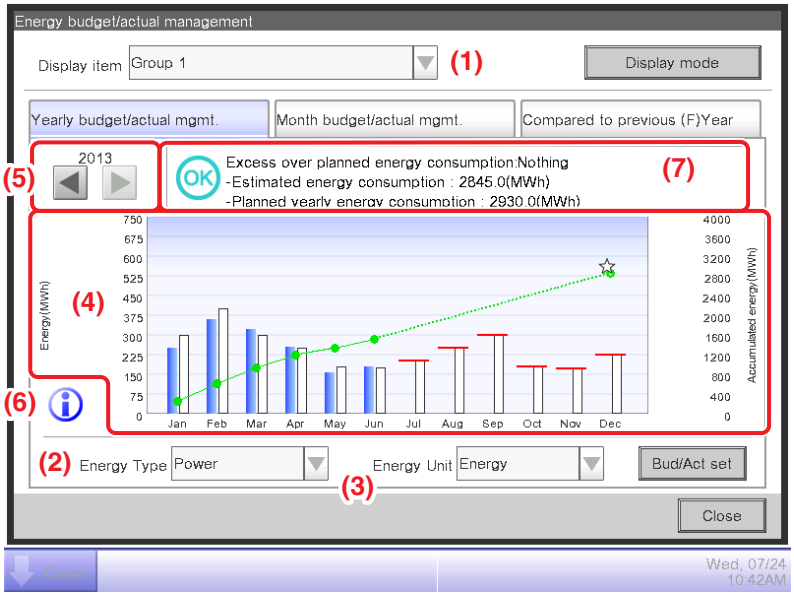
Assess the level of achievement by comparing the value set in the energy consumption plan and the actual energy consumption, and display it graphically.

Furthermore, display the estimated consumption when the plan is fully achieved and the objective for achieving the plan by calculating from the current actual value.

The Energy budget/actual management screen consists of three tabs: Yearly budget/actual mgmt., Month budget/actual mgmt, and Compared to previous (F) Year. Check with each tab the budget to actual energy consumption.

Touch the E budget/actual Mgmt. button on the Energy Navigator tab of the Menu List screen (see “4-5 Menu List Screen: Energy Navigator Tab”).

Yearly budget/actual mgmt. Tab (Energy budget/actual management Screen)



This screen displays the yearly budget to actual energy consumption status for the Energy Group selected in the **Display item** drop down menu **(1)**.

Set the energy type to plot in the **Energy Type** drop down menu **(2)**.

Select from Power, Gas and Water.

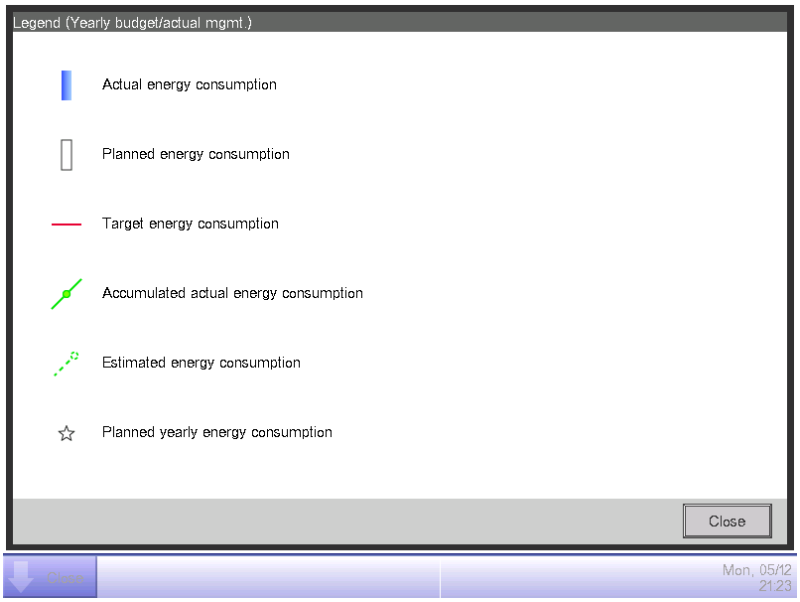
Only when the unit of energy is CO_2 or new conversion type, you will be able to select the “total” of CO_2 emitted by all types of energy.

Selecting the unit of energy to display in the graph from Energy, CO_2, and new conversion type in the **Energy Unit** drop down menu **(3)** plots the graph in **(4)**.

In the graph, the horizontal axis represents each month of the year from the collection start month, the left vertical axis the monthly energy consumption, and the right vertical axis the accumulated energy consumption.

To switch the displayed year, use **(5)**.

Touching the **Information** button **(6)** displays a legend of each symbol in the graph.



(7) displays icons along with messages in accordance with the level of achievement of the energy consumption plan.

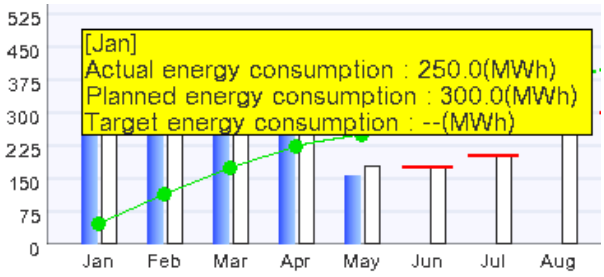
Also, touching a month on the graph displays the actual energy consumption, planned value, and target value for that month in a tool tip.

When the screen is displaying the last year

Classification		Displayed information	
		Icon	Message
When both actual energy consumption and planned energy consumption exist	Accumulated energy consumption – Planned accumulated energy consumption >0		Excess over planned energy consumption: ..% (...kWh) – Accumulated energy consumption: .....kWh – Planned yearly energy consumption: .....kWh
	Accumulated energy consumption – Planned accumulated energy consumption ≤0		Excess over planned energy consumption: .....Nothing – Accumulated energy consumption: .....kWh – Planned yearly energy consumption: .....kWh
When only the actual energy consumption exists (When energy consumption plan is not set)		–	Accumulated energy consumption: .....kWh
When neither actual energy consumption nor planned energy consumption exists		–	(No messages are displayed)

When the screen is displaying the this year

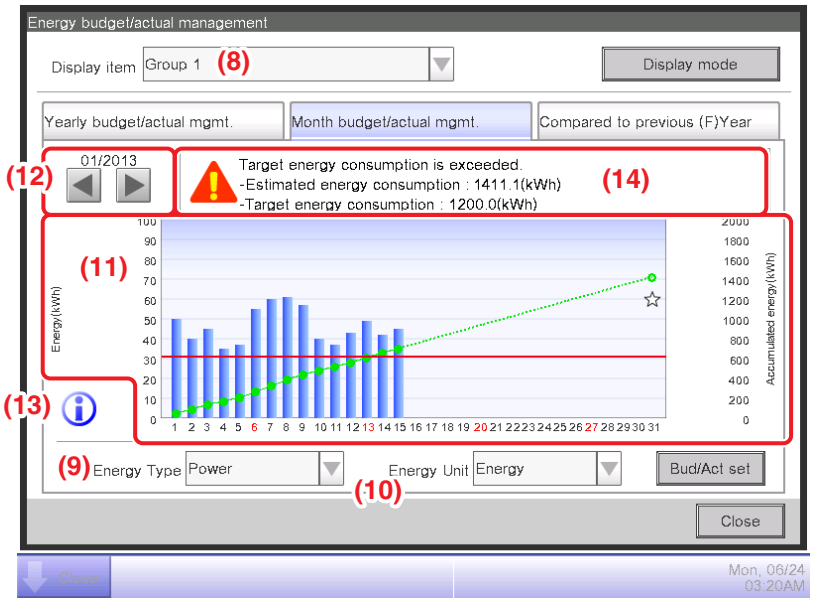
Classification		Displayed information	
		Icon	Message
When both estimated energy consumption and planned energy consumption exists	Estimated energy consumption - Planned accumulated energy consumption >0		Excess over planned energy consumption: ..% (...kWh) – Estimated energy consumption: .....kWh – Planned yearly energy consumption: .....kWh
	Estimated energy consumption – Planned accumulated energy consumption ≤0		Energy consumption plan achieved: .....Nothing – Estimated energy consumption: .....kWh – Planned yearly energy consumption: .....kWh
When only the estimated energy consumption exist (When energy consumption plan is not set)		–	Estimated energy consumption: .....kWh
When neither estimated energy consumption nor planned energy consumption exists		–	(No messages are displayed)



NOTE

Results may not be displayed when there are missing actual and/or planned values.

Month budget/actual mgmt. Tab (Energy budget/actual management Screen)



This screen displays the monthly budget to actual energy consumption status for the Energy Group selected in the **Display item** drop down menu **(8)**.

Select the energy type to plot in the **Energy Type** drop down menu **(9)**.

Select from Power, Gas and Water.

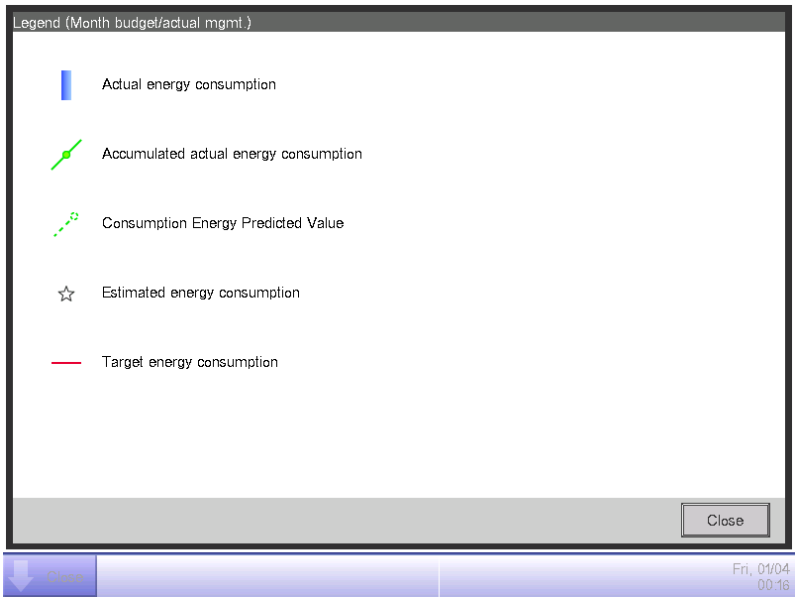
Only when the unit of energy is CO_2 or new conversion type, you will be able to select the “total” of CO_2 emitted by all types of energy.

Selecting the unit of energy to display in the graph from Energy, CO_2, and new conversion type in the **Energy Unit** drop down menu **(10)** plots the graph in **(11)**.

In the graph, the horizontal axis represents each day of the month from the collection start day to the collection end day, the left vertical axis the daily energy consumption, and the right vertical axis the accumulated daily energy consumption.

Use **(12)** to switch the displayed month between the current and previous month.

Touching the **Information** button **(13)** displays a legend of each symbol in the graph.



(14) displays icons along with messages in accordance with the level of achievement of the energy consumption plan.

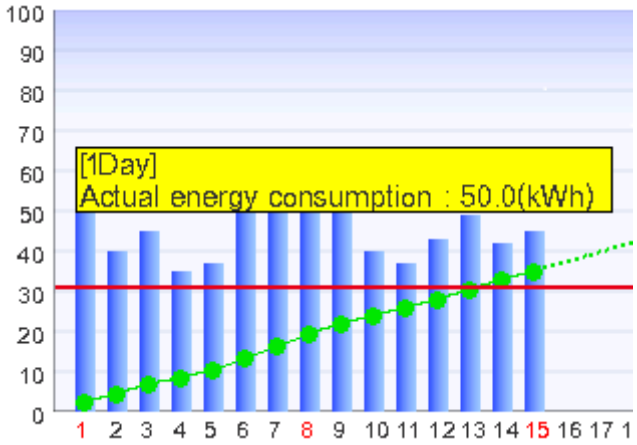
Also, touching a day on the graph displays the actual energy consumption for that day in a tool tip.

When the screen is displaying the current month

Level of achievement	Icon	Message for the level of achievement
Safe		If this trend continues, the target can be achieved. – Estimated energy consumption: .....kWh – Target energy consumption: .....kWh
Caution		Excess over target energy consumption: Nothing: ..% (...kWh) – Estimated energy consumption: .....kWh – Target energy consumption: .....kWh
Danger		Target energy consumption already exceeded. – Estimated energy consumption: .....kWh – Target energy consumption: .....kWh

When the screen is displaying a past month

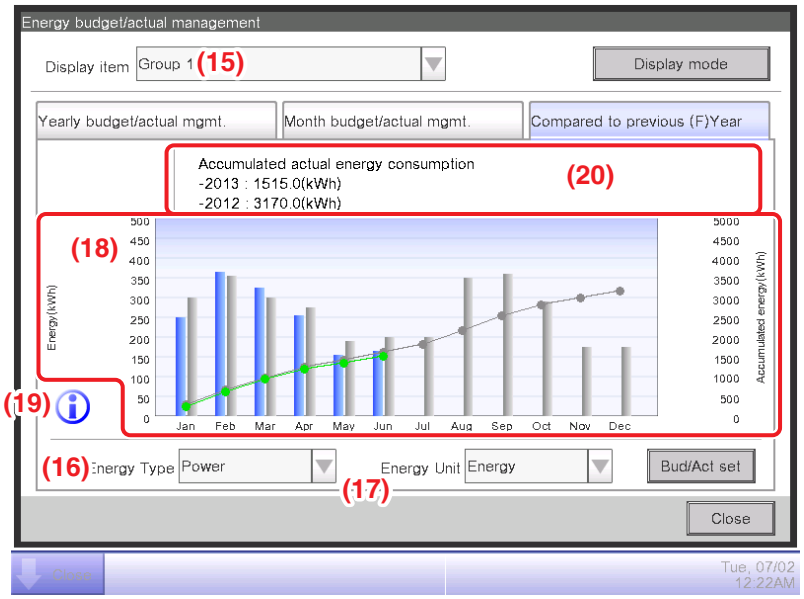
Classification	Classification information Icon	Message
Accumulated energy consumption – Planned accumulated energy consumption >0		Excess over target energy consumption: ..% (...kWh) – Accumulated energy consumption: .....kWh – Target energy consumption: .....kWh
Accumulated energy consumption – Planned accumulated energy consumption ≤0		Target energy consumption is achieved. – Accumulated energy consumption: .....kWh – Target energy consumption: .....kWh



NOTE

Results may not be displayed when there are missing actual and/or planned values.

Compared to previous (F)Year Tab (Energy budget/actual management Screen)



This screen displays the energy consumption of the current year against the previous year on a monthly basis for the Energy Group selected in the **Display item** drop down menu **(15)**.

Select the energy type to plot in the **Energy Type** drop down menu **(16)**.

Select from Power, Gas and Water.

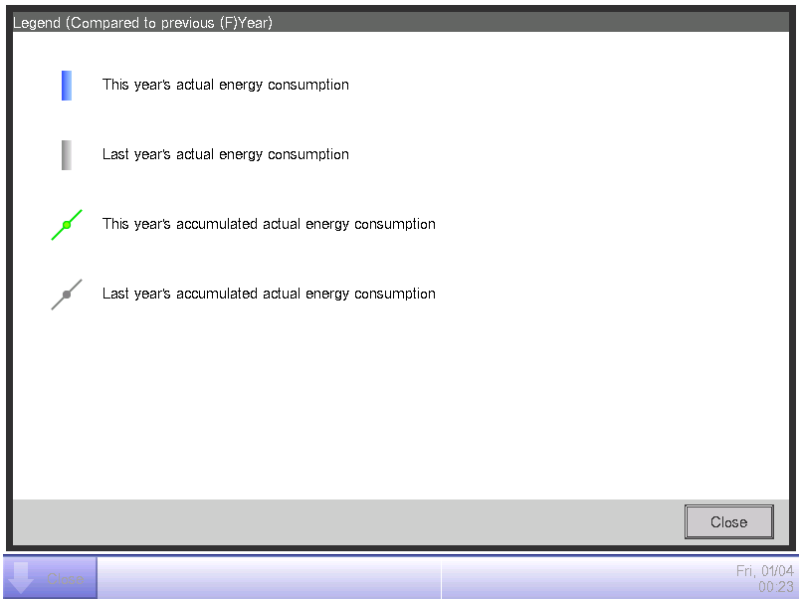
Only when the unit of energy is CO_2 or new conversion type, you will be able to select the “total” of CO_2 emitted by all types of energy.

Selecting the unit of energy to display in the graph from Energy, CO_2, and new conversion type in the **Energy Unit** drop down menu **(17)** plots the graph in **(18)**.

In the graph, the horizontal axis represents each month of the year from the collection start month, the left vertical axis the energy consumption of each month for the energy type selected in the Yearly budget/actual mgmt. tab of the Energy budget/actual management screen, and the right vertical axis, similarly to the left axis, the accumulated energy consumption corresponding to each month of the Yearly budget/actual mgmt. tab.

By using this graph, you can easily figure out the result of this year’s energy saving measures with regard to last year’s.

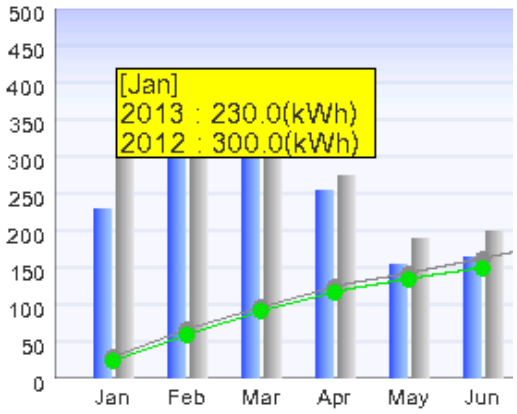
Touching the **Information** button **(19)** displays a legend of each symbol in the graph.



(20) displays messages in accordance with the level of achievement of the energy consumption plan.

Also, touching a month on the graph displays the actual energy consumption for that month and the previous year's actual value in a tool tip.

Message
Accumulated actual energy consumption – ....: .....kWh – ....: .....kWh



NOTE

Results may not be displayed when there are missing actual and/or planned values.

11-4 Equipment operation management (Deviation from the operation plan)

You can define operation rules for the purpose of saving energy and then, sample management points deviating from those rules.

This is a function for extracting and plotting/listing equipment operating at periods of time they were supposed to be stopped, air conditioners operating at a different setpoint than defined in the air conditioners operation plan, etc.

Functions you can use depend on whether trial power proportional distribution is enabled or not, or the availability of operation rules, as indicated in the tables below.

Engineering details		**Equipment operation management**		
Trial Power Proportional Distribution	Operation rules	Operation rule creation function	Sampling period/target setup function	
			Sampling period setup function	Sampling target setup function
Yes	Yes	○	○	○
Yes	No	○	○	○
No	Yes	○	○	○
No	No	○	○	○

Engineering details		**Equipment operation management**	
Trial Power Proportional Distribution	Operation rules	Failure to turn off sampling function	
		Failure to turn off sampling result display function	Detailed display function
Yes	Yes	○	○
Yes	No	△ (Sampling possible by default rule)	○
No	Yes	△ (Displays power consumed during failure to turn off, based on CT value.) *1	○
No	No	△ (Displays power consumed during failure to turn off, based on CT value.) *1 (Sampling possible by default rule)	○

Engineering details		**Equipment operation management**	
Trial Power Proportional Distribution	Operation rules	Setpoint gap sampling function	
		Setpoint gap sampling function	Detailed display function
Yes	Yes	○	○
Yes	No	△ (Sampling possible by default rule)	○
No	Yes	△ (Displays power consumption when there is setpoint gap, based on CT value.) *1	○
No	No	△ (Displays power consumption when there is setpoint gap, based on CT value.) *1 (Sampling possible by default rule)	○

*1 CT value is the power calculated from the outdoor unit's current. For details, consult your authorized dealer.

[Legend] ○: Available
△: Some functions available
×: Not available

NOTE

This function is not supported in systems that contain a Hydrobox.

Two operation rules are provided by default. Customize them as necessary for your use as their contents can be changed and/or deleted.

- Failure to turn off

  Day of the week: Monday to Sunday, No special day settings/Operating hours: 9:00 AM to 9:00 PM (9:00 to 21:00 when 24-hour clock is used)/Setpoint: None

- Setpoint gap

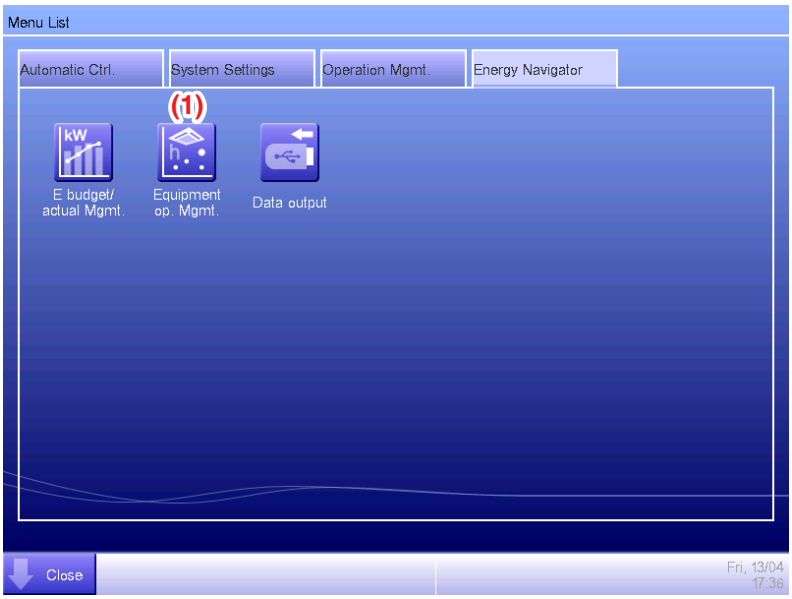
  Day of the week: Monday to Sunday, No special day settings/Operating hours: 9:00 AM to 9:00 PM (9:00 to 21:00 when 24-hour clock is used)/Setpoint: Cool 75°F, Heat 75°F

The following describes how to set this up and use.

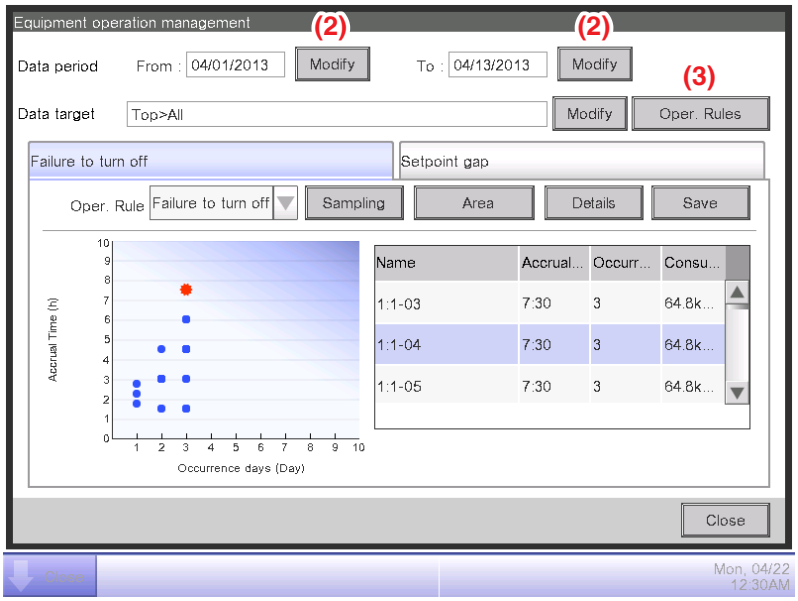
Setting up the Equipment Operation Rules

Set up the equipment operation rules.

Display the Energy Navigator tab on the Menu List screen (see “4-5 Menu List Screen: Energy Navigator Tab”).

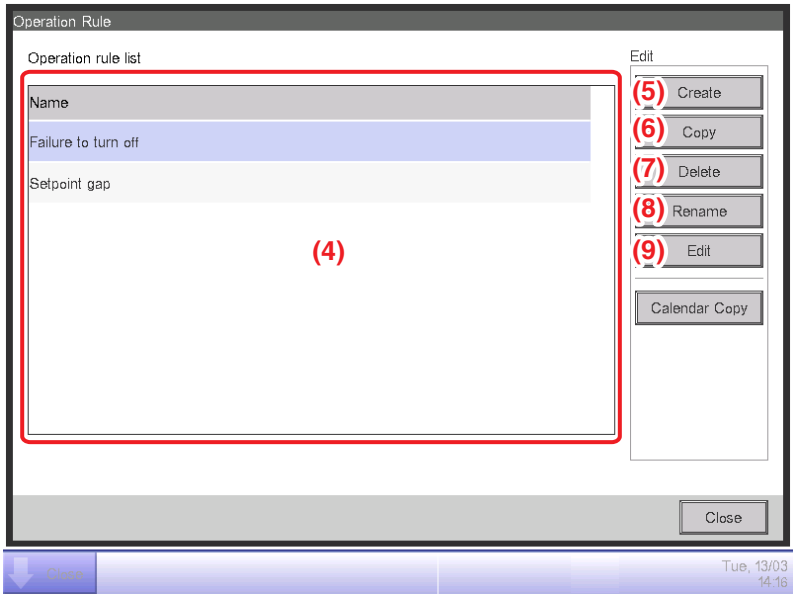


Touch the **Equipment op. Mgmt.** button **(1)** and display the Equipment operation management screen. The Equipment operation management screen consists of two tabs: Failure to turn off and Setpoint gap.



Touch **Modify** button **(2)** and display the data input dialog to specify the period of the data shown on the screen. The period is up to 31 days. The date of past 13 months is stored in iTM.

Touch the **Oper. Rules** button **(3)** and display the Operation Rule screen. The Oper. Rules button is available on both tabs.



(4) is the list of registered operation rules. Perform the intended operation by touching the relevant button on the right.

(5) Create button

Creates a new operation rule. You can create up to 10 operation rules including those registered by default.

Enter a name in the Name Input dialog that appears. Touch the OK button to register the name in **(4)**.

You can name the operation rule using up to 16 characters.

(6) Copy button

Creates a new operation rule by copying the selected rule.

Enter a name in the Name Input dialog that appears. Touch the OK button to register the name in **(4)**.

You can name the operation rule using up to 16 characters.

(7) Delete button

Deletes the selected operation rule.

(8) Rename button

Renames the selected operation rule.

Enter a name in the Name Input dialog that appears. Touch the OK button to change the name.

You can name the operation rule using up to 16 characters.

(9) Edit button

Displays the Operation Rule Setup screen that allows you to set up the selected operation rule.

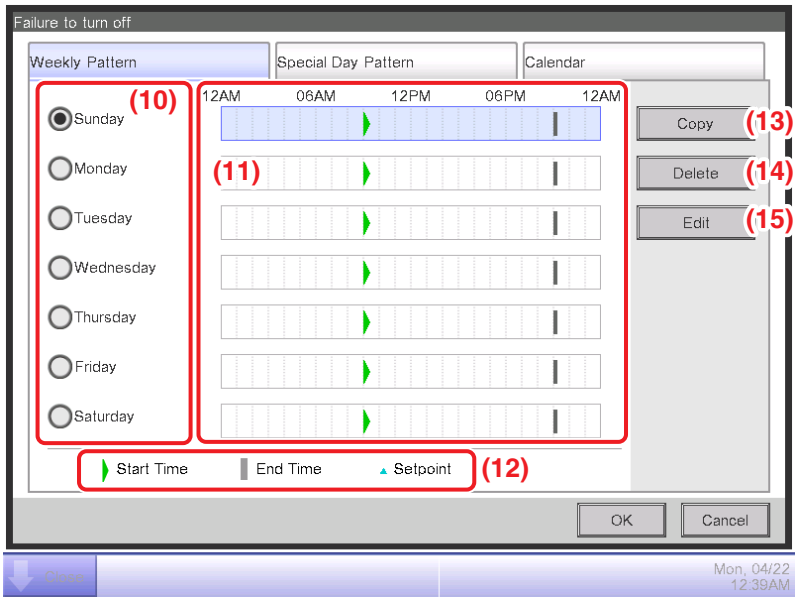
The Operation Rule Setup screen consists of three tabs: Weekly Pattern, Special Day Pattern, and Calendar. Set up each of them by switching.

NOTE

Changing the operation rules deletes the data sampled up to that point.

The following pages describe how to set up each tab.

Weekly Pattern Tab (Operation Rule Setup Screen)

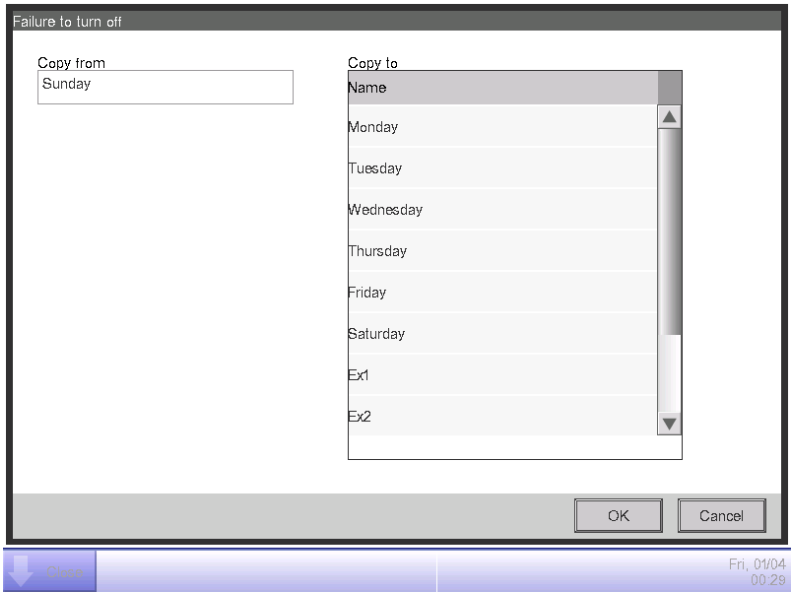


Set ups a weekly equipment operation rule. Enter to all days of the week to which you want to set up a rule.

Select the day of the week to edit from **(10)**.

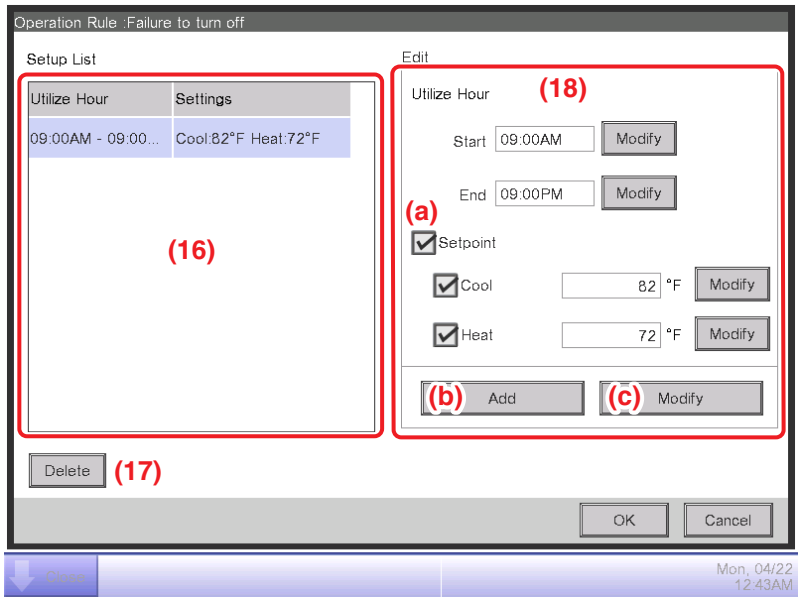
(11) is the content of operation rules. **(12)** displays the legend.

Touch the **Copy** button **(13)** to copy the operation rule of the currently selected day of the week and paste it to the day of the week selected in the Copy to Selection screen. The operation rule in the destination of the copy is overwritten.



Touching the **Delete** button **(14)** deletes the selected day of the week operation rule.

Touching the **Edit** button **(15)** displays the Operation Rule screen that allows you to edit the selected day of the week operation rule.



(16) is the list of registered operation rules with operating hours and setpoint details.

Selecting an operation rule and touching the **Delete** button **(17)** deletes the selected operation rule.

Utilize Hours and Setpoints in **(18)**.

Enter the Start Time and End Time in Utilize Hours. Touch the Modify button and enter the times in the Time Setup dialog that appears.

You can set up in the 12:00 AM to 11:59 PM (00:00 to 24:00 when using 24-hour clock) range, and in increments of 15 minutes. If the entered value is not a multiple of 15 minutes, a dialog is displayed and the value rounded to a multiple of 15 minutes.

In addition, you cannot set hours spanning two days.

Select the check box **(a)** if applying a setpoint to the utilize hours.

You can set temperatures for both cooling and heating. To enter a temperature, select the check box and touch the Modify button to display the Numerical Input dialog.

You can enter values in the –22 to 158°F range, in increments of 1°F.

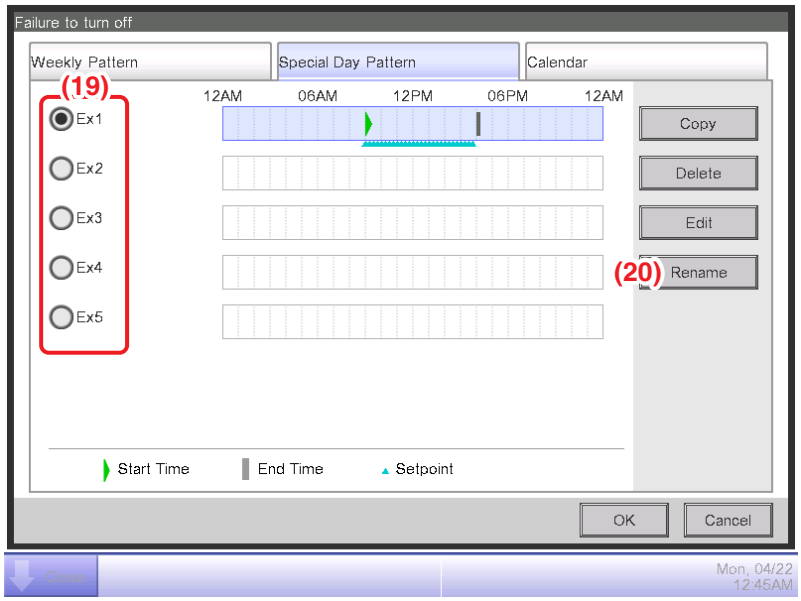
Touch the **Add** button **(b)** to add the new setting to **(16)**.

You can set up to 10 operating hours to one operation rule.

To change the settings, you can select an existing operation rule from **(16)**, enter new settings for it in **(18)**, and then touch the **Modify** button **(c)**.

Touch the OK button to return to the Operation Rule Setup screen.

Special Day Pattern Tab (Operation Rule setup Screen)



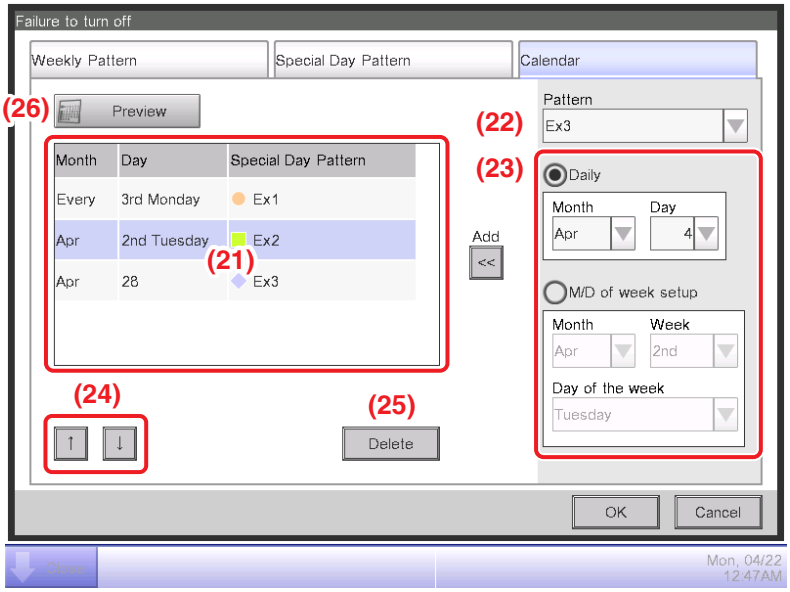
Sets up operation rules for special days, apart from the weekly operation rule. You can set up to 5 types of special day patterns.

Select the special day to edit in **(19)**.

The subsequent steps and screen interpretation are the same as for the Weekly Pattern. Set up the operation rule using the same steps.

Touch the **Rename** button **(20)** to display the Name Input dialog where you can change the name of the selected special day.

Calendar Tab (Operation Rule Setup Screen)



Registers the special day pattern created in the Special Day Pattern tab to the calendar. You can set up to 40 special day patterns.

(21) is the list of already registered special day patterns.

Select the special day pattern to register in the **Pattern** drop down menu **(22)** and set the day to which you want to register in **(23)**. You can select a Date or a Month/Day of the week to set.

If a Date and Month/Day of the week overlap, the Month/Day of the week takes precedence.

The range of values you can specify in the respective drop down menus are as follows.

Month: Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec, and Every.

Day: 1 to 31. However, non-existing days cannot be selected.

Week: 1st, 2nd, 3rd, 4th, and Last.

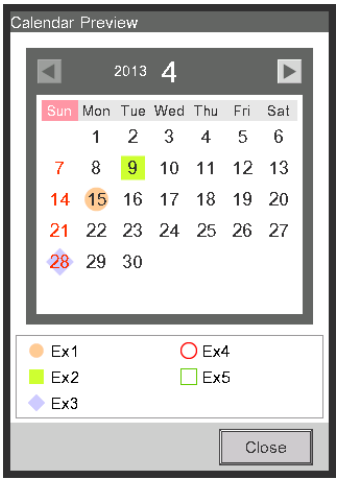
Day of the week: Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, and Saturday.

Touch the Add button to register the special day pattern to the calendar.

To change the order of the special day patterns in the list, move up and down using the ↑↓ buttons **(24)**.

Selecting a special day pattern from the list and touching the **Delete** button **(25)** deletes the selected setting.

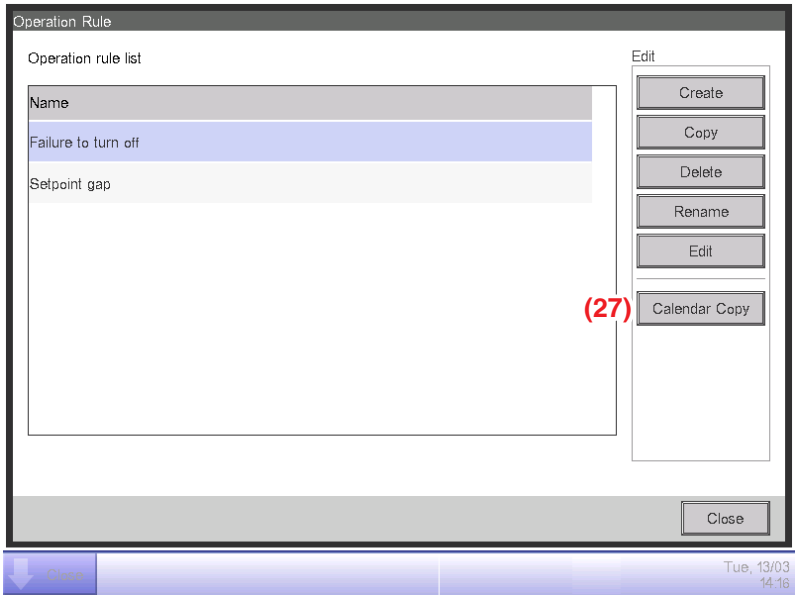
Touching the **Preview** button **(26)** allows you to check in calendar format the registration status for one year, from the current day.



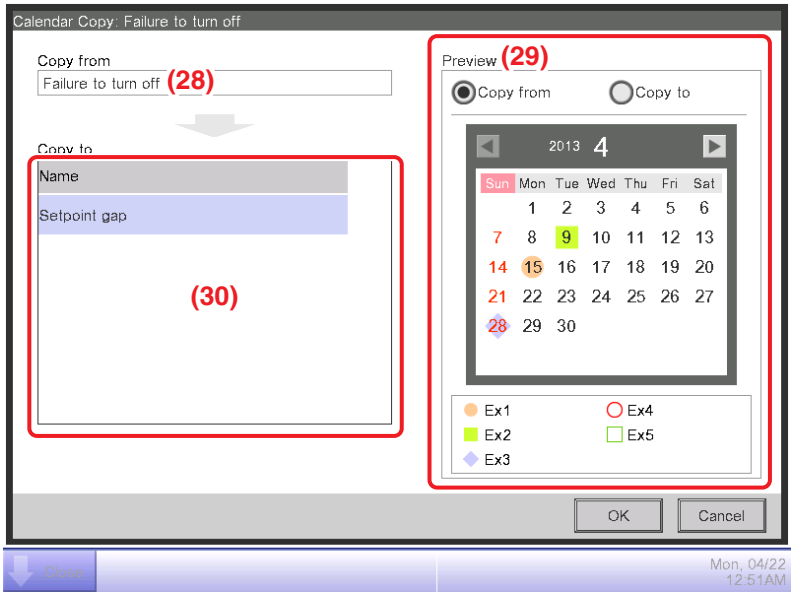
Close the calendar preview and touch the OK button on the Operation Rule Setup screen to return to the Operation Rule screen.

Copying the Special Day Calendar

You can copy the calendar with special day settings among operation rules. Display the Operation Rule screen.



Select the operation rule where the calendar to copy is registered and touch the **Calendar Copy** button **(27)** to display the Calendar Copy screen.



The name of the selected operation rule is displayed in **(28)**.

In **(29)**, you can preview the operation rule calendar of both the source and destination of the copy. Check by switching the button.

To paste, select the operation rule to copy to in **(30)** and touch the OK button. This will overwrite any calendar setting in the operation rule destination of the copy.

When the setup on the Operation Rule screen is finished, touch the Close button to return to the Equipment operation management screen.

Cautions when Using Simultaneously with Other Control Functions

1. Automatic control functions that work when there is no one in the room (such as Setback, Optimum Start) are exempt from the operation rules during their operating hours.
2. Automatic control functions that work when there are people in the room (Auto Changeover, Timer Extension, Schedule, Interlocking Control) are subject to the operation rules during their operating hours.
3. The operation rules do not apply to management points under maintenance.

11-5 Checking the Equipment Operational Status

Executes a sampling and displays management points operating out of the set up operation rules. The checking results can also be saved to a memory.

For the PC/USB memory requirements to use this function, see “14-2 Peripheral Equipment Specifications”.

Selecting a sampling period, the sampling targets and applicable operation rules, and executing a sampling displays a graph and a list.

Specify the sampling target by area. Sub areas and management points included in the area will become targets.

There are two modes for displaying the sampling results: area sampling and management point sampling.

In area sampling mode, results are sampled by area and only sub areas included in the selected area are displayed.

In the management point sampling mode, the management points (including management points of sub areas) included in the selected area are displayed.

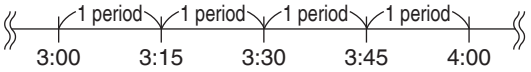
The sampled information is presented in two tabs: Failure to turn off tab where management points that were operating when they should be stopped are sampled, and Setpoint gap tab where indoor units with gaps between the actual setpoint and the setpoint that should be set are sampled.

NOTE

Failure to turn off and setpoint gap times are sampled per period.

* 1 period ... 15 minutes obtained by dividing 1 hour by 4.

Example:



- Failure to turn off time

  The equipment has been in operation the whole period though according to the operation rule, it should be stopped.

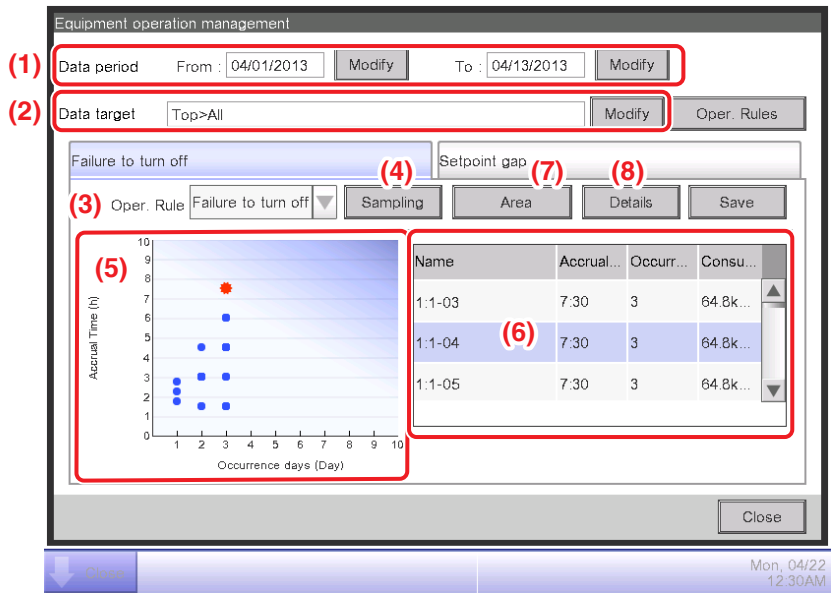
- Setpoint gap time

  The equipment has been in operation the whole period and the energy gap between the average setpoint (actual value) and setpoint (operation rule) is positive.

  However, if the operation during the period is due to multiple operation modes, sampling is not performed.

Touch the Equipment op. Mgmt. button on the Energy Navigator tab of the Menu List screen and display the Equipment operation management screen (see “4-5 Menu List Screen: Energy Navigator Tab”).

Failure to turn off Tab (Equipment operation management Screen)



The sampling period is displayed in **(1)**. The sampling period is a period of 31 days or less, starting from the 1st day of the same month of the last year to today of this month.

Set the Data target in **(2)**. Touching the Modify button displays the list of registered areas on the Data Target Setup screen. Select the targets from the screen and touch the OK button.

In the **Oper. Rule** drop down menu **(3)**, select an operation rule from those registered and touch the **Sampling** button **(4)**.

The graph corresponding to the sampling result is displayed in **(5)**.

<Interpreting the Graph>

- The horizontal axis represents the number of days on which failure to turn off occurred. When displayed by area, the total days on which the management points included in the area were not turned off is displayed.
- The vertical axis represents the total time.
- Management points and areas where failure to turn off occurred are displayed with a blue ●.
- Management points and areas selected in the list are displayed with an orange ✸.
- If the number of management points and areas where failure to turn off occurred exceeds 50, the top 50 are displayed.

(6) is the list of sampling results. The list displays the name of the management points and areas, the number of days on which failure to turn off occurred, the accrual time, and the amount of energy consumed.

If the number of management points and areas where failure to turn off occurred exceeds 50, the 50 with the most occurrence days and duration are displayed.

Both **(5)** and **(6)** display results by management point by default. To display by area, touch the **Area** button **(7)**. The button becomes **Mgmt. Point** while in Area view. Touching the button, changes the view to Mgmt. Point.

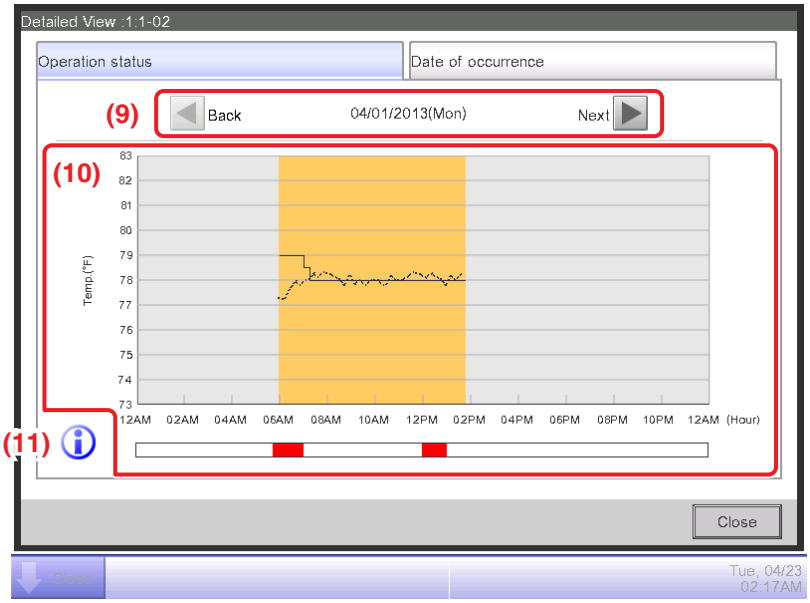
Selecting a management point from the list in Mgmt. Point view and touching the **Detail** button **(8)** displays the Detail View Screen.

The Detail View Screen consists of two tabs: Operation status and Date of occurrence.

NOTE

Graph and list display only the sampled indoor unit management points.

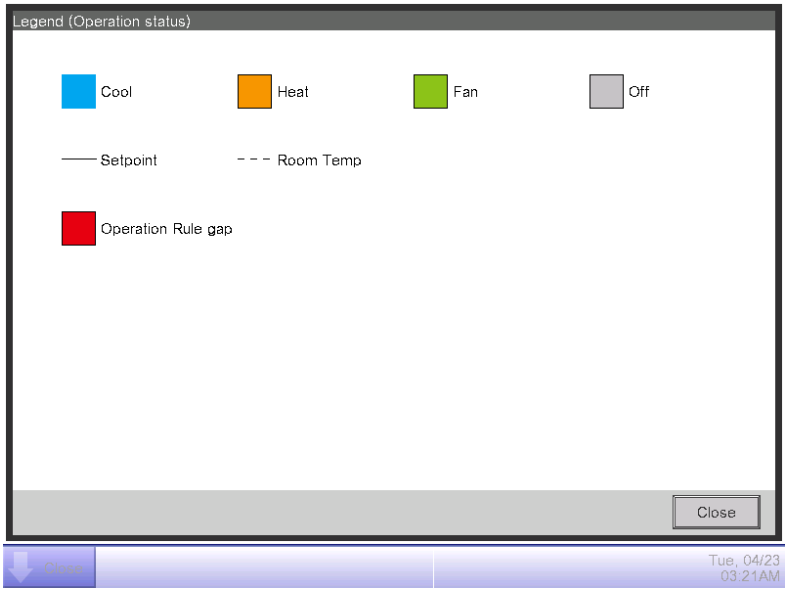
• **Operation status Tab (Detailed View Screen)**



Set the date for which to display the details in **(9)**. The From date of the Date period is displayed by default. You can change the date by touching the Next and Back buttons.

(10) is the operational status graph. The horizontal axis represents time and the vertical axis, the temperature.

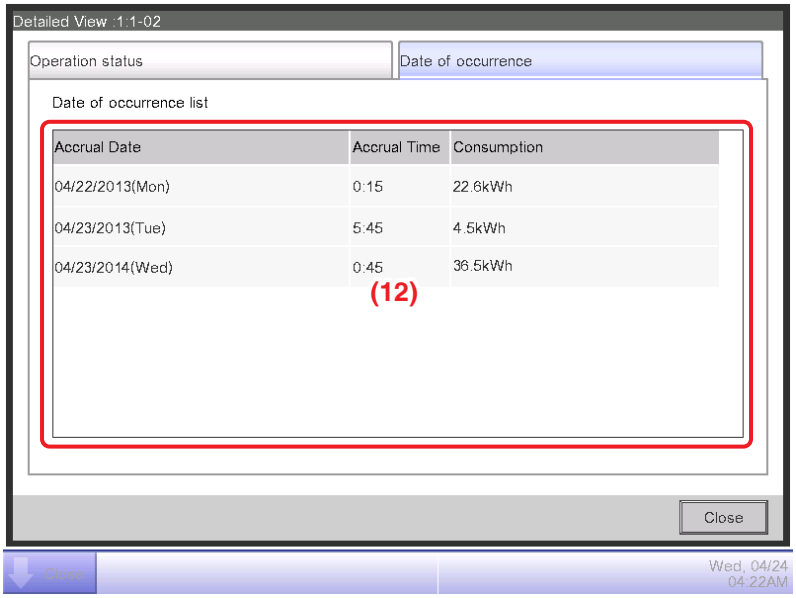
Touching the Information button **(11)** displays a legend of each symbol in the graph.



NOTE

The setpoint is not displayed when the operation mode is Fan or Dry.

- **Date of occurrence Tab (Detailed View Screen)**

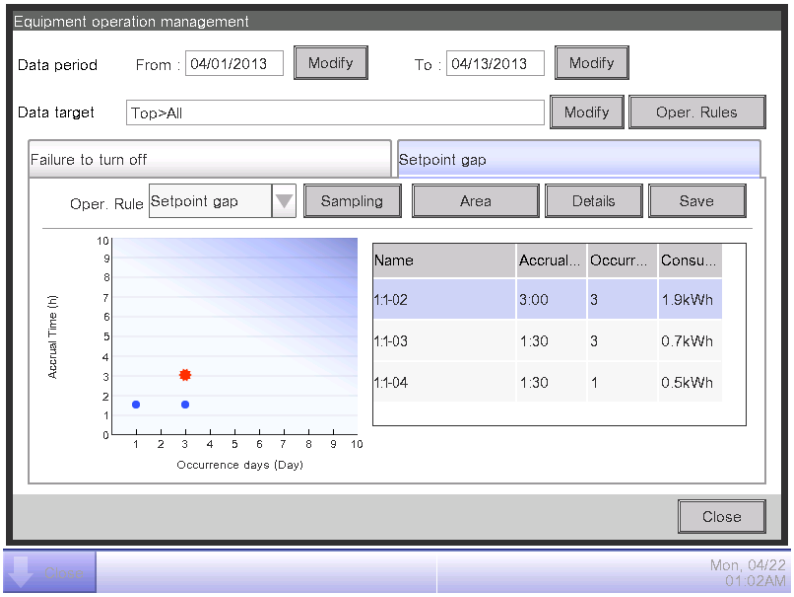


(12) is the list of dates on which deviations from the operation rule found in the selected management points.

The list displays the accrual dates, accrual time, and amount of energy consumed.

When finished checking, touch the Close button to close the screen and return to the Equipment operation management screen.

- **Setpoint gap Tab (Equipment operation management Screen)**



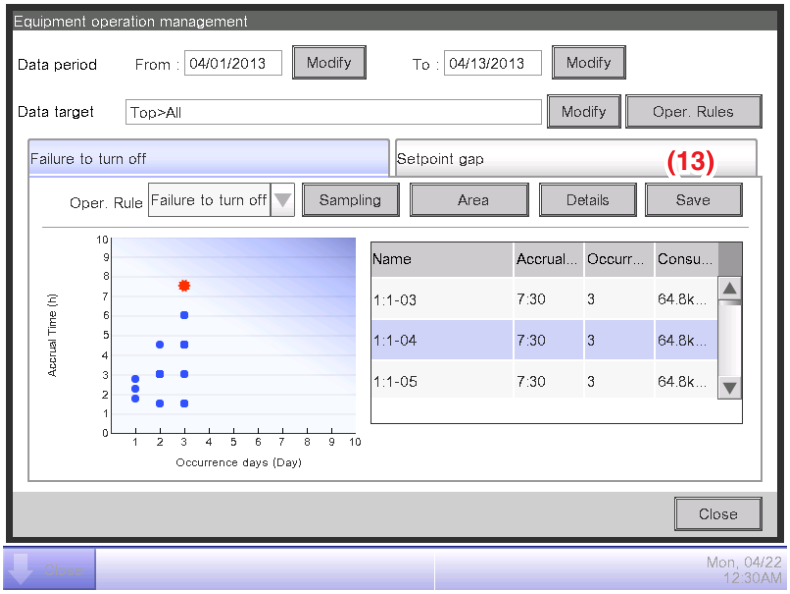
Similarly to the Failure to turn off tab, this screen displays the operational status for the set sampling period, sampling targets and operation rules.

The screen interpretation and steps are the same as for the Failure to turn off tab (see “11-5 Failure to turn off Tab (Equipment operation management Screen)”).

When finished sampling and checking, touch the Close button and close the screen.

Outputting Sampling Data

You can output the conditions and results of sampling: the failure to turn off the management points and the setpoint gap.



Connect a USB memory to the iTM unit and touch the **Save** button **(13)** to store the sampled data in a folder, based on the conditions displayed on the current screen.

The data of top 50 management point/area will be saved.

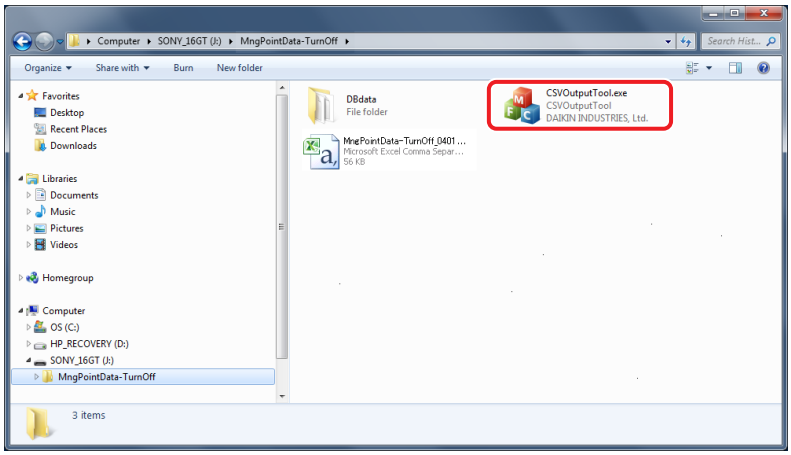
The name of the file to be output changes depending on the source tab as below.

Failure to turn off tab: MngPointData-TurnOff folder

Setpoint gap tab: MngPointData-SetPoint folder

When save is complete, a dialog appears. Touch **Close** button and close the screen.

Open the folder in the USB memory and execute “CSV Output Tool” to create a CSV file.



NOTE

For information on the CSV file format, see “Appendix 7. Energy Navigator CSV File Format”.

11-6 Data output function

Besides the Energy Navigator function, the iTM also has an ability to save measured data to a USB memory for sophisticated analysis.

Data regarding management points and areas with occurrences of failure to turn off and setpoint gap can be output from the Equipment operation management screen.

For the PC/USB memory requirements to use this function, see “14-2 Peripheral Equipment Specifications”.

The following describes the steps to output the energy budget/actual management data as well as data of a specific management point.

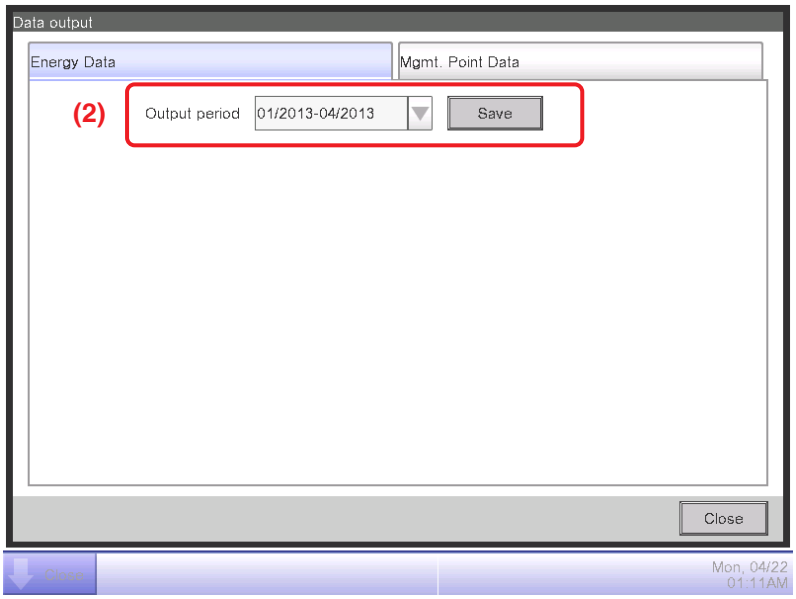
Display the Energy Navigator tab on the Menu List screen (see “4-5 Menu List Screen: Energy Navigator Tab”).

Touch the **Data output** button **(1)** and display the Data output screen. The Data output screen consists of two tabs: Energy Data and Mgmt. Point Data.

Energy Data/Management Point Data

- **Energy Data Tab (Data output Screen)**

  Outputs energy budget/actual management information.



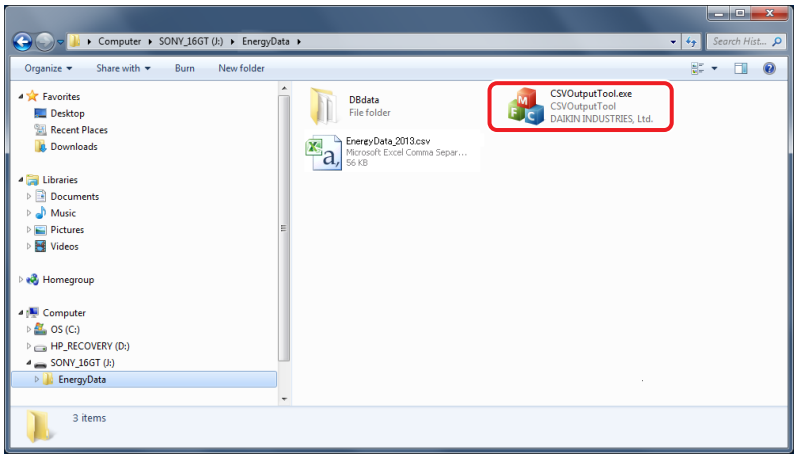
In the Output period drop down menu **(2)**, select the desired data output period between this year and the last year.

Connect a USB memory to the iTM unit and touch the Save button. In the confirmation dialog that appears, touch the Yes button to start outputting data.

When save is complete, a dialog appears. Touch “Close” button to close the screen.

The data is saved in “EnergyData” folder.

Open the folder saved in the USB memory and execute “CSV Output Tool” to create the CSV file.

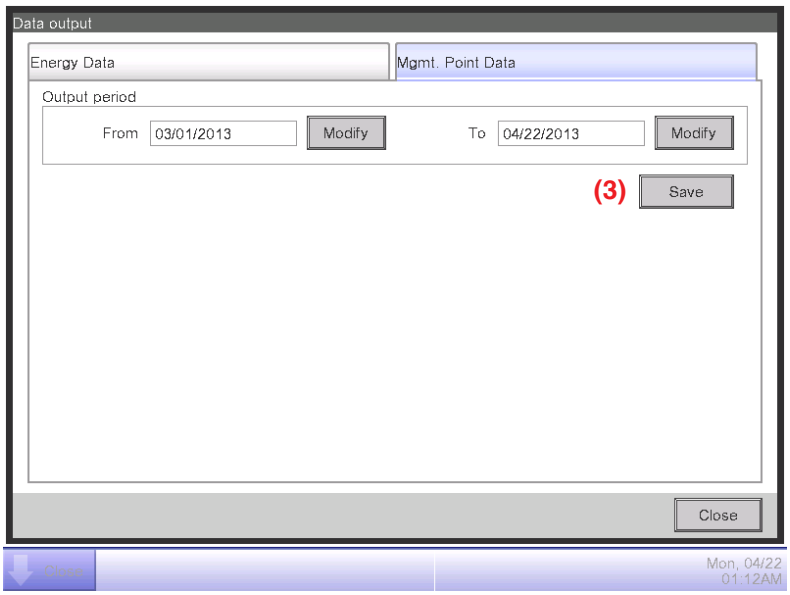


NOTE

For information on the CSV file format, see “Appendix 7. Energy Navigator CSV File Format”.

- **Mgmt. Point Data Tab (Data output Screen)**

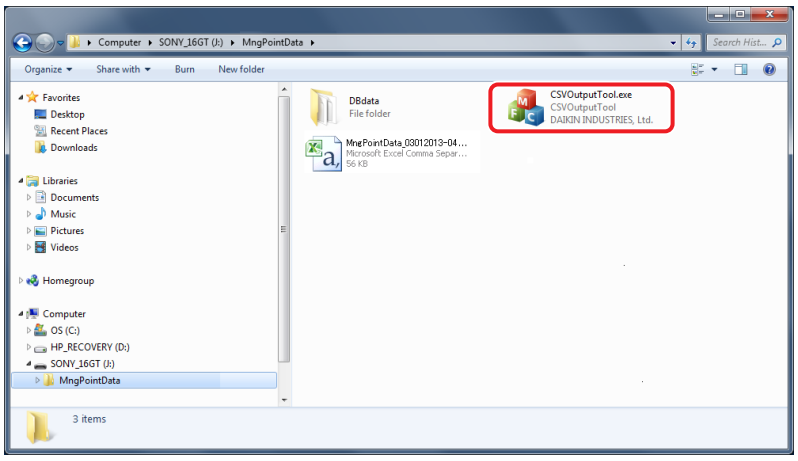
  Outputs data of an arbitrary management point.



Connect a USB memory to the iTM unit and touch the **Save** button **(3)**. In the confirmation dialog that appears, touch the Yes button to start outputting data.

When save is complete, a dialog appears. Touch the Close button to close the screen. The data is saved in “MngPointData” folder.

Open the folder saved in the USB memory and execute “CSV Output Tool” to create the CSV file.



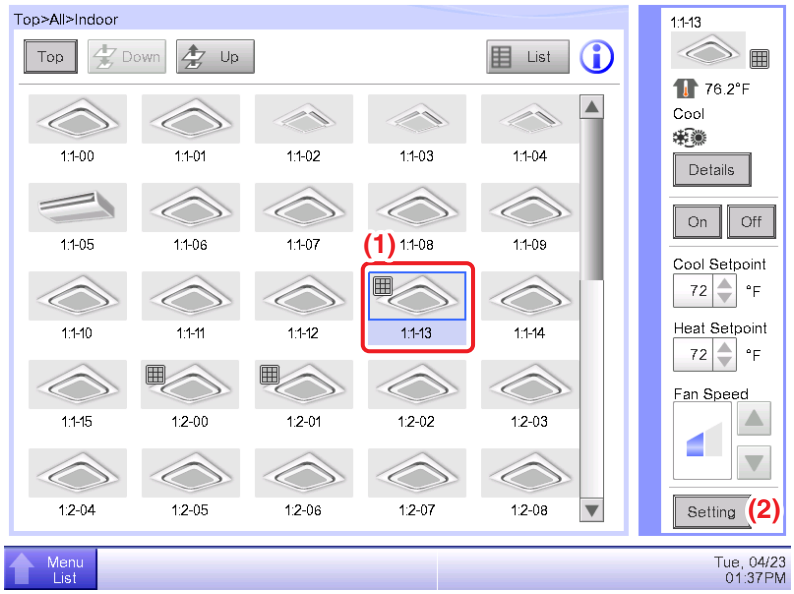
NOTE

For information on the CSV file format, see “Appendix 7. Energy Navigator CSV File Format”.

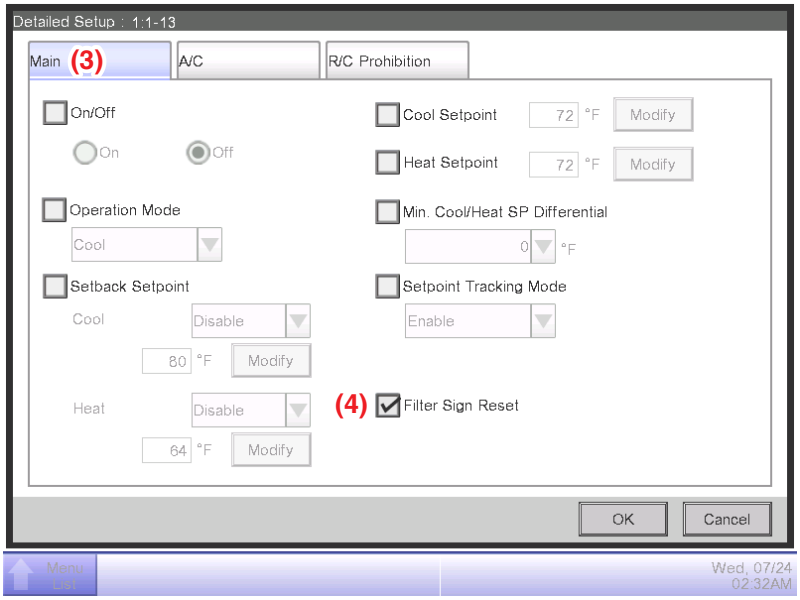
12. Maintenance

12-1 Resetting the Filter Sign

Reset filter sign after cleaning the air conditioner with the sign ON.



1. Select **(1)** with the filter sign ON on the Standard View screen and touch the **Setting** button **(2)** to display the Detailed Setup screen.



2. Touch the **Main** tab **(3)** of the Detailed Setup screen and display the Main screen. Select the **Filter Sign Reset** check box **(4)** to enable the reset. Touch the OK button and close the screen.

NOTE

Not selectable when there are no filter signs.

12-2 Maintaining the LCD display

When the surface of the LCD of the iTM or the iTM unit is dirty, wipe the dirt off with a piece of soft cloth soaked in a diluted neutral detergent and wrung sufficiently.

⚠ CAUTION

- Do not use non-neutral detergents, organic solvents (alcohol, benzine, thinner, etc.) and disinfectants (hypochlorite water, etc.). The print may fade, or wear out and discolor.
- Forcibly rubbing with hard cloth may damage the LCD display. Always use soft cloth to remove dirt.
- Leaving the LCD display with water droplets and/or dirt may stain the LCD or peel off the coating.

13. Troubleshooting

13-1 Before Having the Product Serviced

<About iTM unit>

■ The display of the iTM has gone out.

- Check the MONITOR button LED on the unit.
  If it is lit in orange, the monitor is turned off. Press the MONITOR button and turn the monitor on. The LED lights on in green.
- When Backlight Auto Off is set in the screensaver settings of the iTM, the screen goes off if left untouched for a certain period of time.
  Touch the screen with your finger. The display will come back on.

■ The iTM display lights on and off.

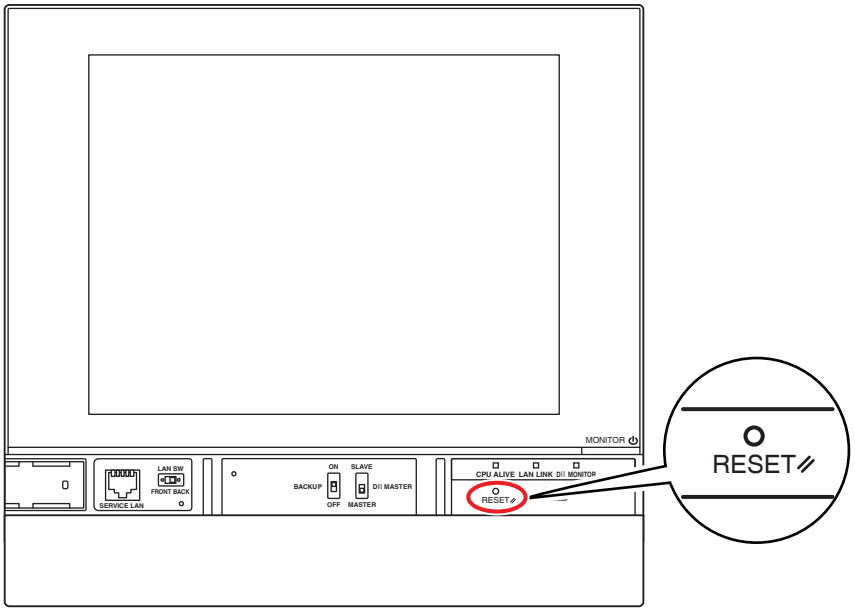
- The fixing screws, used in securing the iTM in place, are over-tightened, causing the MONITOR button to be held down.
  Request repair at your Daikin dealer.

■ The backlight does not go out although Backlight Auto is set to OFF.

- Backlight Auto Off is a function that automatically turns the display OFF when the screen is left untouched for a certain period of time.
  The display does not go out automatically when it is displaying “Configure/Details”, “System Settings”, etc.

■ The iTM cannot be operated or monitoring does not work.

- Move the sliding front cover and press the RESET button at the bottom right of the iTM.
  Pressing this switch restarts the iTM.
  (Pressing this switch does not erase area/management point settings, schedules, etc.)
- When using the Power Proportional Distribution function, no pulse input is accepted while iTM is being restarted.



■ Turn off the power supply to the iTM.

• To turn on/off the power supply to the iTM, turn on/off the circuit breaker.
iTM does not have a power on/off switch.

⚠ CAUTION

• Do not press the switch with excessive force. Doing so may damage the components and cause malfunction.

• The iTM contains static-sensitive components.
To prevent electrostatic discharge damage to these components, discharge the static electricity accumulated in your body before attempting operation.
You can discharge static electricity accumulated in your body by touching a grounded metal part of the unit (control panel etc.).

■ A system error has occurred, and “In safe mode SD card failure” and an error dialog are displayed.

• Request repair at your Daikin dealer.

<About iTM operation>

■ When operating on the Standard View screen, touch sound is heard even when an area not allocated for a button is pressed.

• The iTM screen is designed to sound wherever it is touched. This is normal.

■ The screen flickers at a regular interval.

• The Standard View screen of the iTM is refreshed every 3 seconds to reflect the air conditioners current status. The screen flickers each time it is refreshed, but this is normal.

■ The operation performed by touching the iTM screen takes some time to be reflected on the screen view.

• Depending on the status of the communication with the connected air conditioners, update of the screen view may take some time. Please wait a few seconds.

■ LCD display

• LCD displays are produced using high precision technology but there may be some dots that never go on, or dots that are permanently on. Furthermore, the LCD display may generate unevenness due to temperature change and the like. However, these are phenomena inherent to LCD panels, and are not faults.

■ An area filter sign is ON on the Standard View screen.

• The filter sign does not go off even when the air conditioner filter has been cleaned and the cleaning sign has been reset using remote controller.

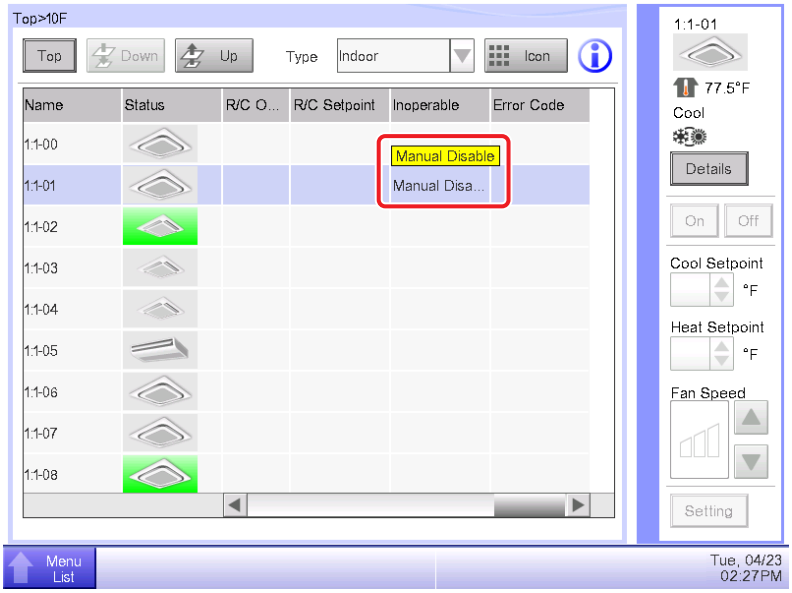
The filter sign on the Standard View screen is designed to go off only when the cleaning signs for all of the air conditioners in the area are reset.

Check for any air conditioner in the area with the cleaning sign ON apart from the cleaned air conditioner.

■ The Setting button is not available for touch on the Standard View screen.

• "Prohibit Manual Operation" may be set up for the selected management point.

If "Manual Disable" is displayed in the List View as shown in the figure below, "Prohibit Manual Operation" is set up.



■ R/C Prohibition is not displayed.

The Setpoint Restriction is not displayed in the Area/Management Point List on the System Settings screen.

• When a higher level central device (Interface for use in BACnet, etc.) is connected, R/C Prohibition and Setpoint Restriction become unavailable. Furthermore, when there are two iTMs connected, R/C Prohibition and Setpoint Restriction are unavailable for the iTM set as sub.

■ Air conditioners cannot be started or stopped as the iTM went out of order when remote controller operation is disabled.

- As an emergency measure, turn off the iTM power supply. By doing so, operating the air conditioners from the remote controller will become possible in about 5 minutes.
  If there are other central control devices than the iTM connected, turn off the power to all central control devices once.

■ Communication error is displayed for indoor units and the like.

- The status of indoor units may not display (communication error) immediately after a start that follows an iTM restart, etc.
  Please wait; conditions will become normal in about 10 minutes at most.

■ The Setback function does not work although enabled.

Cause (1)

- The BACnet/Lon Interface is connected, and the DIII-NET Engineering setting is set to “Automatic”.

Checking method

- In DIII-NET Engineering in System Settings, check the status of Setpoint Range Limit if another controller exists.

Measure

- In DIII-NET Engineering in System Settings, set Setpoint Range Limit if another controller exists to Enabled.

Cause (2)

- The DIII-NET Engineering Setting is set to “Sub”.

Checking method

- In DIII-NET Engineering in System Setting, check the status of Main/Sub controller Settings.

Measure

- Setback control cannot be enabled from Sub equipment. Set up the setback on the Main equipment.

■ The cooling/heating setpoint does not change although the setpoint tracking mode is enabled.

Cause (1)

- The BACnet/Lon Interface is connected, and the DIII-NET Engineering setting is set to “Automatic”.

Checking method

- In DIII-NET Engineering in System Settings, check the status of Setpoint Range Limit if another controller exists.

Measure

- In DIII-NET Engineering in System Settings, set Setpoint Range Limit if another controller exists to Enabled.

Cause (2)

- The DIII-NET Engineering Setting is set to “Sub”.

Checking method

- In DIII-NET Engineering in System Setting, check the status of Main/Sub controller Settings.

Measure

- The setpoint tracking mode cannot be enabled from Sub equipment. Enable the setpoint tracking mode on the Main equipment.

■ The equipment does not operate according to the schedule although the set time/date has arrived.

Cause (1)

- The target equipment is under maintenance.

Checking method

- Check if the target equipment icon on the centralized monitoring screen shows the under maintenance status.

Measure

- Commands cannot be sent to equipment under maintenance. When maintenance is completed, clear the equipment under maintenance status from System Settings.

Cause (2)

- The target equipment is in an emergency stop state.

Checking method

- Check the Emergency icon displayed on the centralized monitoring screen.

Measure

- Operation commands cannot be sent to equipment in an emergency stop state.

Cause (3)

- A power failure occurred.

Checking method

• Use the iTM's Schedule function to check if "Start Up" remains after the scheduled date/time.

Measure

• Commands cannot be sent to equipment during a power failure.

■ Switching the operation mode causes the setpoint to change.

■ Switching the operation mode and changing the setpoint simultaneously does not cause the unit to display the setpoint you specified.

Cause

• If the master and slave iTMs are set to different setpoints, the unit applies the setpoint of one that did not command the setpoint.

Checking method

• Check the setpoints of the two iTMs that have the master-slave relationship.

Measure

• Set up the two iTMs with the master-slave relationship to have the same setpoint.

■ File output to a USB memory fails.

iTM provides multiple functions such as Backup and Setup Export for saving files to a connected USB memory.

Check the following items if file output to a USB memory fails.

• Free space of the destination USB memory is not enough.
  Check free space of the USB memory.
• The destination USB memory is write protected.
  Unlock the write protection before use.
  For how to unlock, see the instruction manual or etc, of the USB memory used.
• If the destination USB memory contains any file with the same name, take one of the following measures.
  Move the file contained in the USB memory to a computer.
  Change the name of the file contained in the USB memory.
  Delete the file contained in the USB memory. (Confirm that deleting the file does not cause a problem.)
• The USB memory is not connected to iTM.
  Connect the USB memory to iTM and output the file again.
• The USB memory is disconnected during file output.
  Do not disconnect the USB memory during file output.
  Connect the USB memory to iTM and output the file again.

■ When using analog management points, be sure that the Displayed accuracy is the same on the iTM as on the equipment.

<About air conditioner operation>

■ An air conditioner is not working.

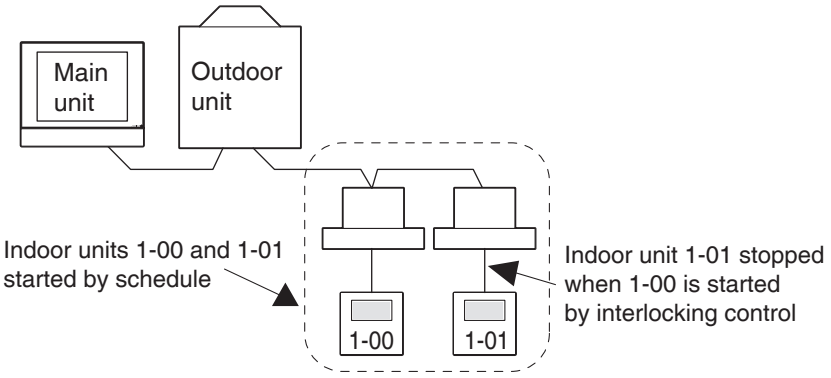
• The air conditioner may be stopped by Interlocking Control. Check the Interlocking Control settings.

Under the following conditions, the indoor units 1-01 will not work.

(1-00 and 1-01 are both started but thereafter, 1-01 is stopped by Interlocking Control.)

1-00 1-01 schedule starts indoor units 1-00 and 1-01.

When indoor unit 1-00 is ON, 1-01 is stopped by Interlocking Control.



In the case above, Interlocking Control stops 1-01 though it was started by Schedule. ⇒ It looks as if it is not working.

When setting up a schedule or interlocking control, carefully consider interaction with other schedule programs and interlocking programs.

■ Other equipment stops when an indoor unit and the like are started from iTM. (Unexpected behavior.)

• Check interlocking control settings.

Interlocking Control function may be set to stop other equipment when an indoor unit is put into operation.

Check the settings as indicated below.

1. Check interlocking control settings using the Setup Export function.
   For details of the Setup Export function, see “7-3 Outputting Function Settings”.
2. Check control state of the relevant equipment in the history.
   For details of History function, see “7-1 Checking and Outputting History”.

■ An indoor unit cannot be started using remote controller.

• Remote controller may be disabled.

An indoor unit may not be started/stopped, or its operation mode, set temperature changed depending on the remote controller operation settings.

Check remote controller operation settings from the Standard View screen (List View) or R/C Prohibition tab of the Detailed Setup screen.

For details of remote controller operation settings, see “2-6 Enabling/Disabling Remote Controller”.

■ Operation of room air conditioners is no longer possible.

• If “Operation Mode” in “R/C Prohibition” is set to “Prohibited”, “On/Off” and “Setpoint” will be set to “Prohibited” even if you set “On/Off” to “Permitted”.

■ The temperature set via the remote controller changes after a moment.

Cause (1)

• The setpoint was changed when a communications error occurred in the iTM.

Checking method

• Use the iTM’s history function to investigate what happened during the time period in which you set the temperature.

Measure

• If the iTM changes the setpoint in the event of a communications error, it will reset the setpoint when it recovers from the communications error. Therefore, you need to change the setpoint again via the remote controller.

Cause (2)

• The setpoint was changed when the indoor unit was under maintenance.

Checking method

• Use the iTM’s history function to investigate what happened during the time period in which you set the temperature.

Measure

• If the setpoint is changed when an indoor unit is under maintenance, the iTM will apply the new setpoint when the maintenance status is cancelled. Therefore, you need to change the setpoint again via the remote controller.

Cause (3)

1. The setpoint was changed by the Schedule function.
2. If the setback setpoint is changed by the Schedule function, the setpoint will be revised by the Setback setpoint function. (For more information, see “Appendix 10. Setpoint Tracking Mode”.)

Checking method

- Check the setback setpoint and the setpoint restriction setting.

■ The temperature set via the remote controller changes immediately to a different temperature.

Cause (1)

- If you change the operation mode and the setpoint simultaneously via the remote controller, the temperature set on the iTM will become the setpoint.

Checking method

- Check the cooling/heating setpoint on the iTM.

Measure

- Change only the setpoint via the remote controller.

Cause (2)

- The setpoint value was revised by the setpoint restriction function of the iTM. (For more information, see “Appendix 10. Setpoint Tracking Mode”.)

Checking method

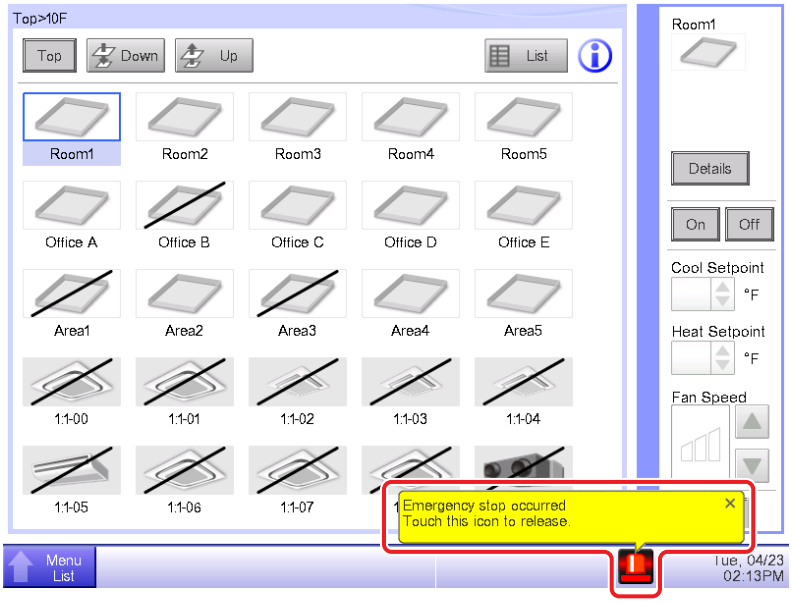
- Check the Min. Cool/Heat SP Differential, setback setpoint, and setpoint restriction on the iTM.

■ An area or indoor unit cannot be operated from the Standard View screen.

• Check the Standard View screen for the “Emergency Stop” icon, as shown in the figure below.

If an emergency stop order is received, all air conditioners connected to the iTM will stop by default. Furthermore, operating air conditioners from a central control device or remote controller is impossible while an emergency stop order is present.

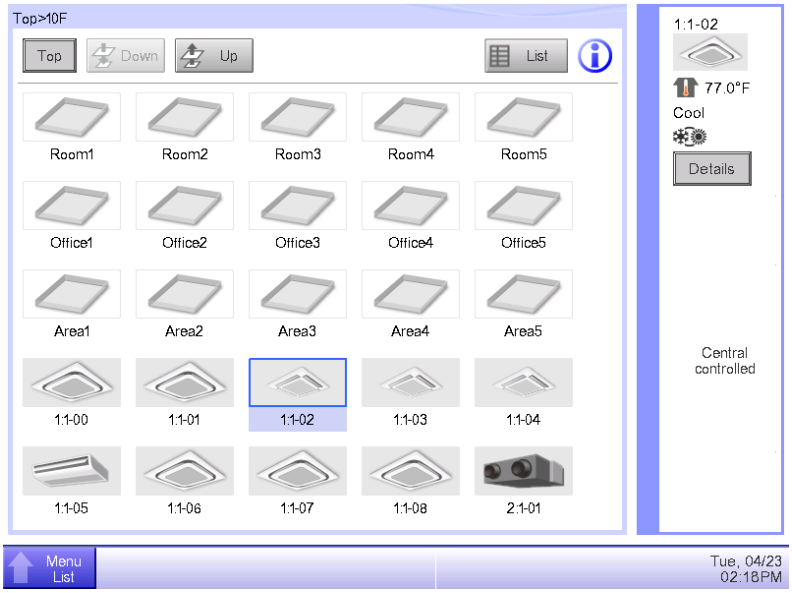
The “Emergency Stop” icon will disappear and operation from the iTM will become possible when the emergency stop order stops.



■ Starting/stopping air conditioners is not possible from the Standard View screen.

• Check the monitoring screen for the “Central controlled” sign, as shown in the figure below.

When “Central controlled” is displayed, the iTM only performs monitoring if it is instructed by a higher-level central device (Interface for use in BACnet etc.) to put priority on it by stopping the central control of lower-level equipment.



■ Indoor units have started although you did not instruct to do so.

Cause

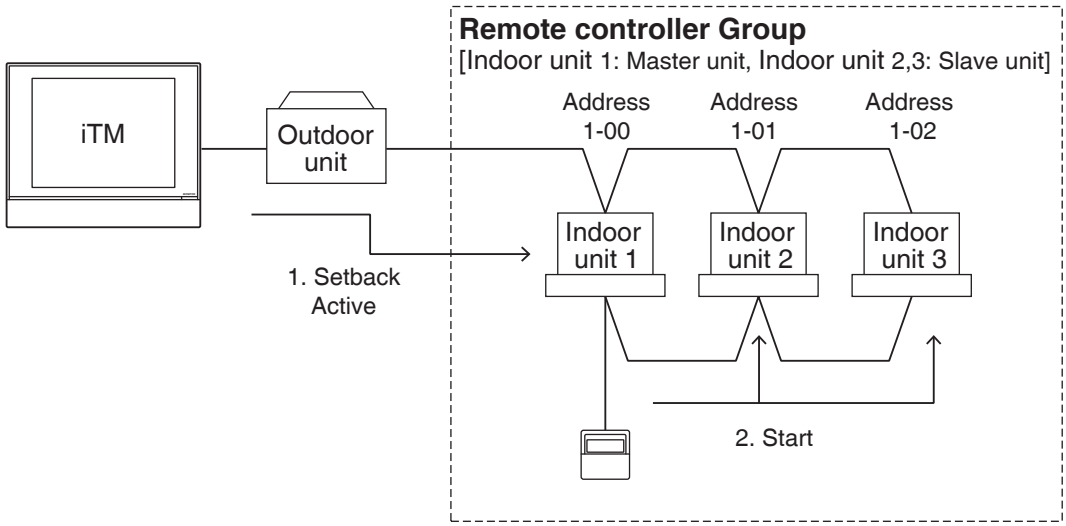
When the Setback function is enabled on the master unit in the remote controller group, starting the master unit also causes all slave units to start.

Check method

1. Check whether the starting indoor units are set up as slave units in the remote controller group*. (When setting up as a slave unit, it is indicated as “Slave unit” in the item “Inoperable” displayed in the iTM standard list view.)
2. Check whether the Setback function is enabled on the master unit in the remote controller group*.

* Remote controller group: This function enables you to control (start/stop for example) multiple indoor units in a large room etc. with a single remote controller.

Control flow from the master unit to the slave unit in a remote controller group by the Setback command



1. The Setback command turns the master unit in the remote controller group (Indoor unit 1) to the Setback Active state.
2. The slaves in the remote controller group (Indoor unit 2 and Indoor unit 3) turn start.

<About Web Access function>

■ The screen for the Web access function is not displayed correctly.

- Network settings may be at fault.

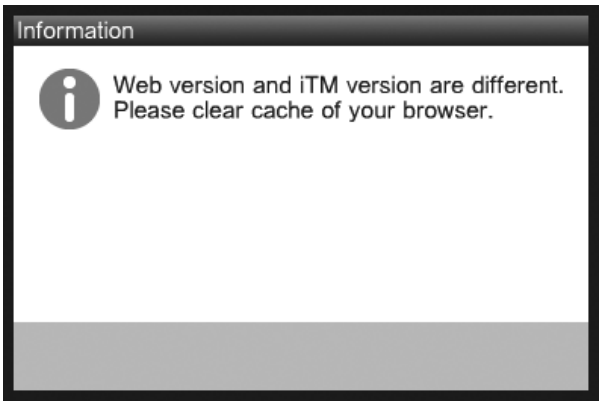
  Correct network settings are necessary for using the Web access function.

  For details of network settings, see “9-1 Network Settings”.

- Passwords are displayed as * or •, there are no distinction.

- Screen may not display correctly if old content is stored in the browser’s cache.

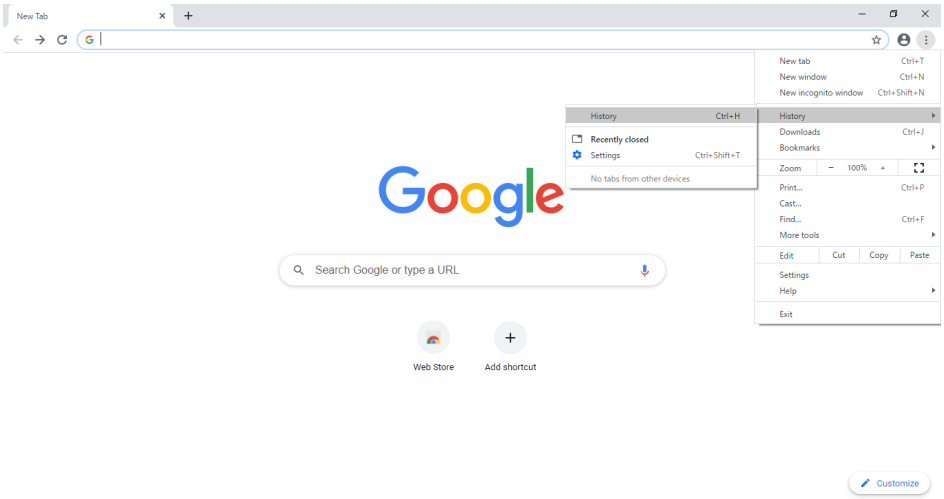
  When accessing iTM with a PC, the following message is displayed if old content is stored in the browser’s cache.



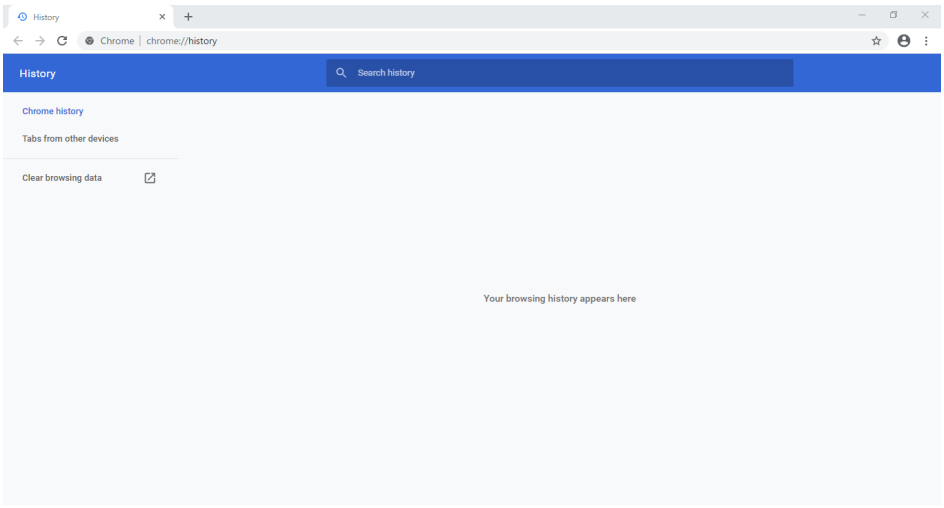
Please clear the browser’s cache according to the steps on the next page.

<Google Chrome>

1. Select [History]-[History] from the Settings tool.



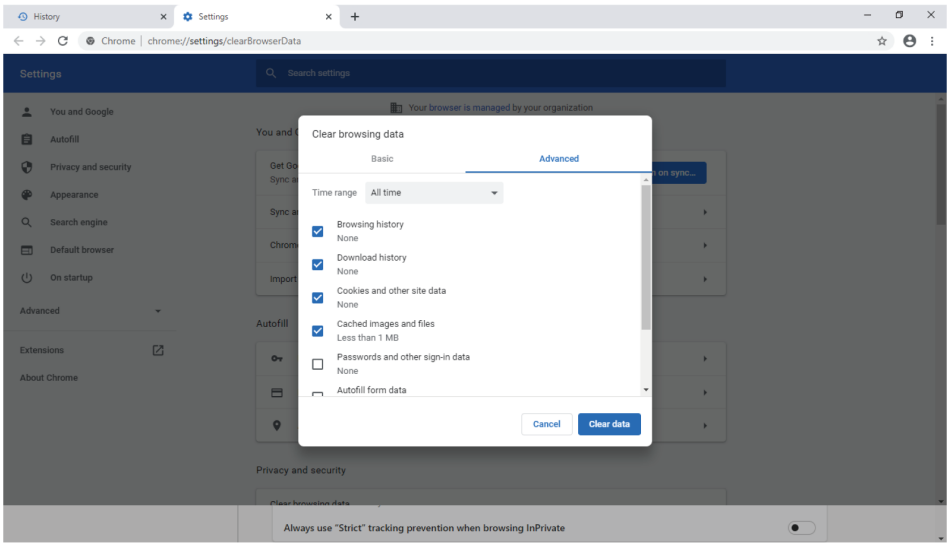
2. Select **[Clear browsing data]**



3. At [Advanced] Tab,

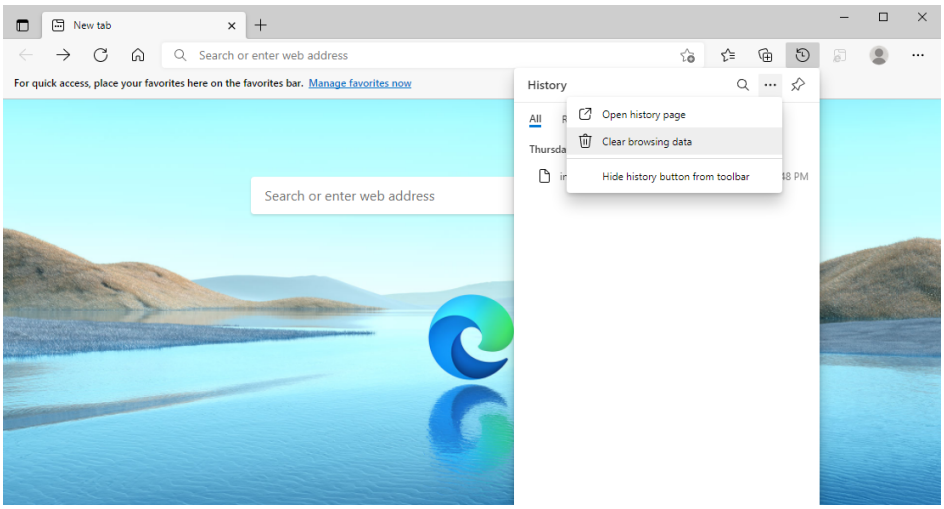
   Set the [Time range] to [All time],

   Check the [Browsing history], [Download history], [Cookies and other site data], [Cached images and files], and Click [Clear data].

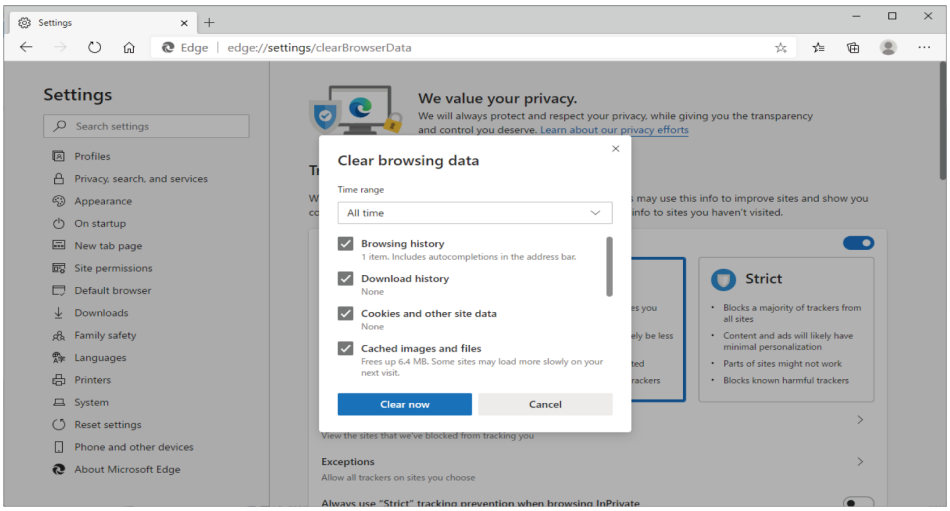


<Edge (Chromium Based)>

1. Select [History]-[…]-[Clear browsing data] from the Settings tool.



2. Set the [Time range] to [All time],
   Check the [Browsing history], [Download history], [Cookies and other site data], [Cached images and files], and Click [Clear now].



■ If authentication is unsuccessful, the reason may be one of the following.

(1) The password may be incorrect

Please input the correct password.

(2) The user with that user name may already be logged in

Please log in as a different user.

(3) If attempting to log in as a general user, the upper limit of simultaneously logged in users (16 users) may be exceeded

Please wait for one of the users to log out, then try to log in again.

(4) An incorrect password may have been entered repeatedly

Please wait about 5 minutes, then try to log in again.

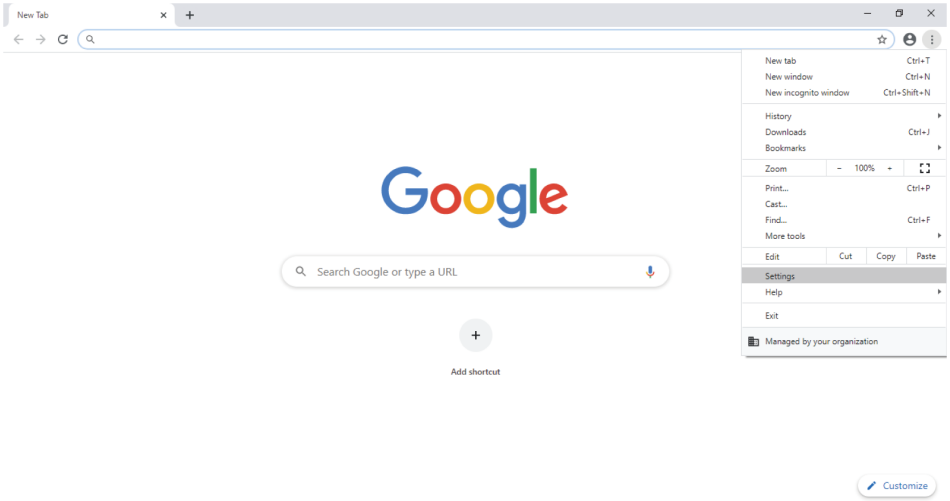
■ When saving a file with the Web Access function, the save destination dialog is not displayed.

• Dialog may not display correctly depending on the browser's settings.

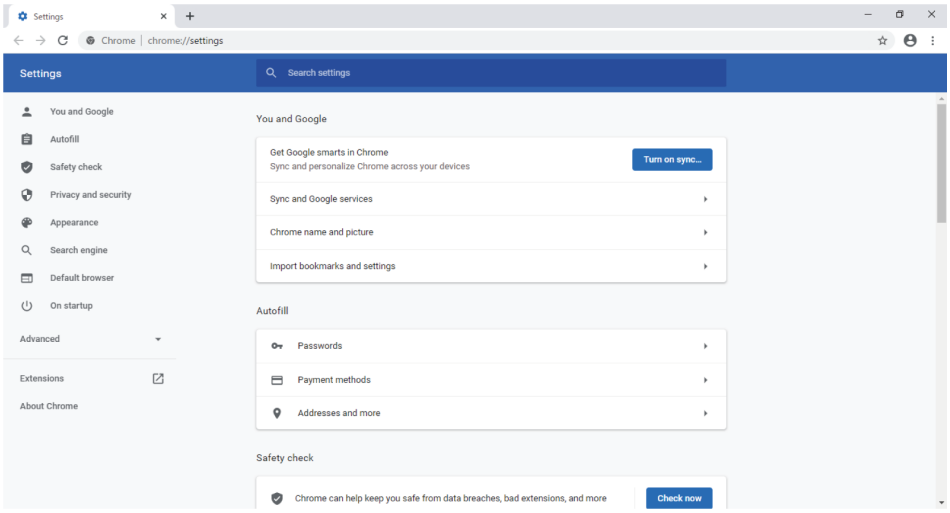
Set the save destination for the download according to the steps below.

<Google Chrome>

1. Select **[Settings]** from the Settings tool.

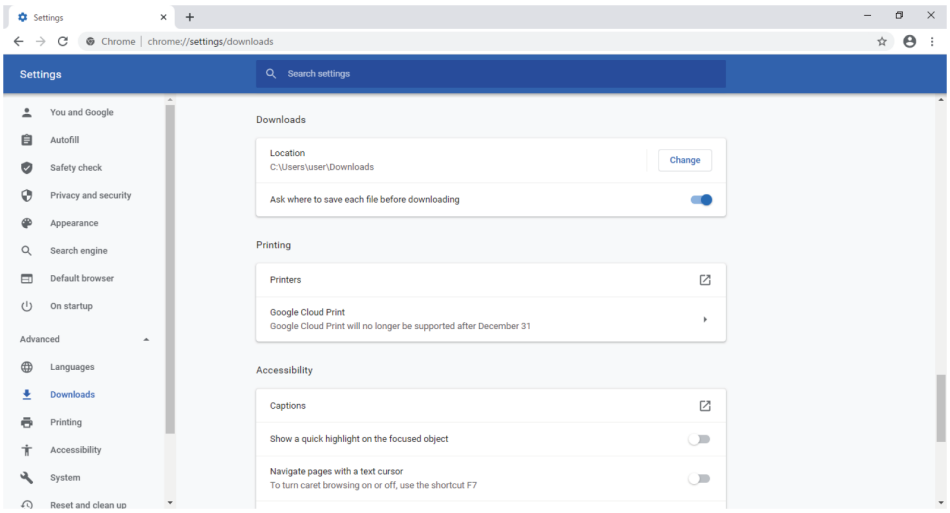


2. Select **[Advanced]**



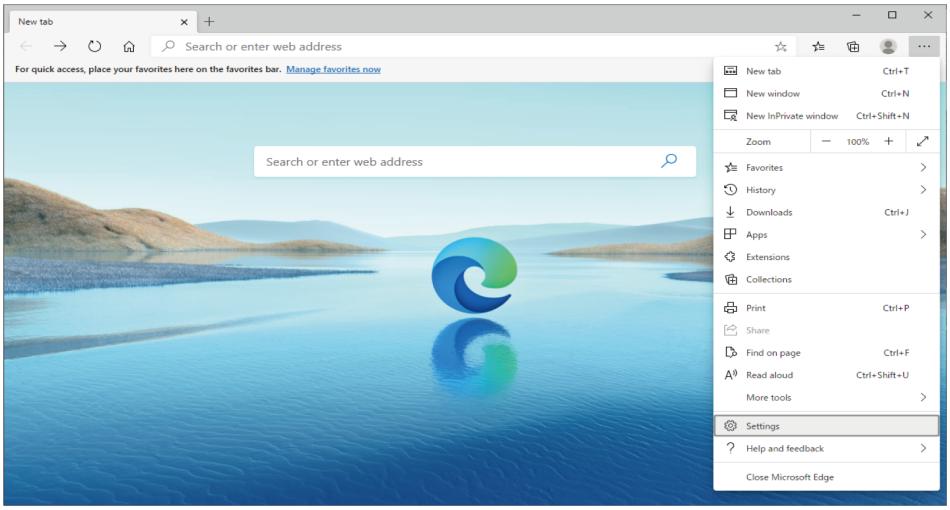
3. Select [Downloads] and

   Set the Location and activate the button [Ask where to save each file before downloading]

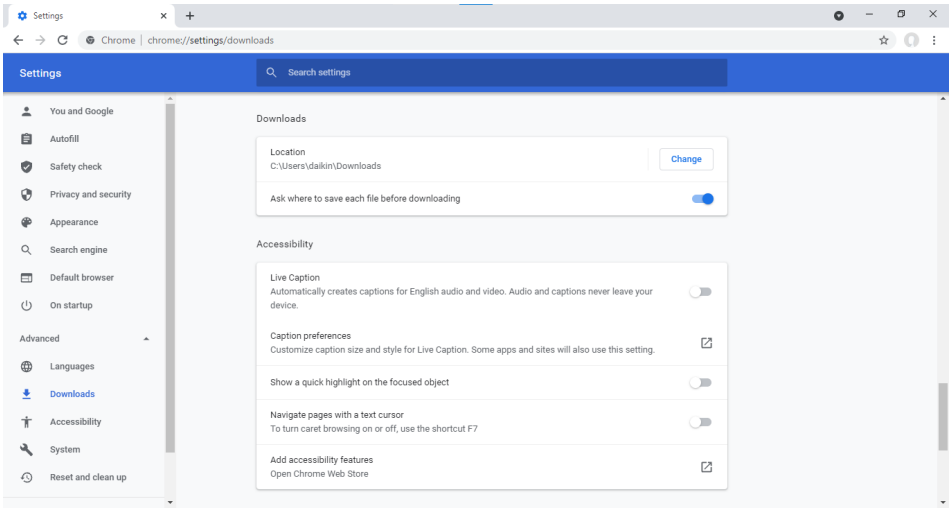


<Edge (Chromium Based)>

1. Select [Settings] from the Settings tool.



2. Select [Advanced]-[Downloads] and
   Set the Location and activate the button [Ask me what to do with each download].

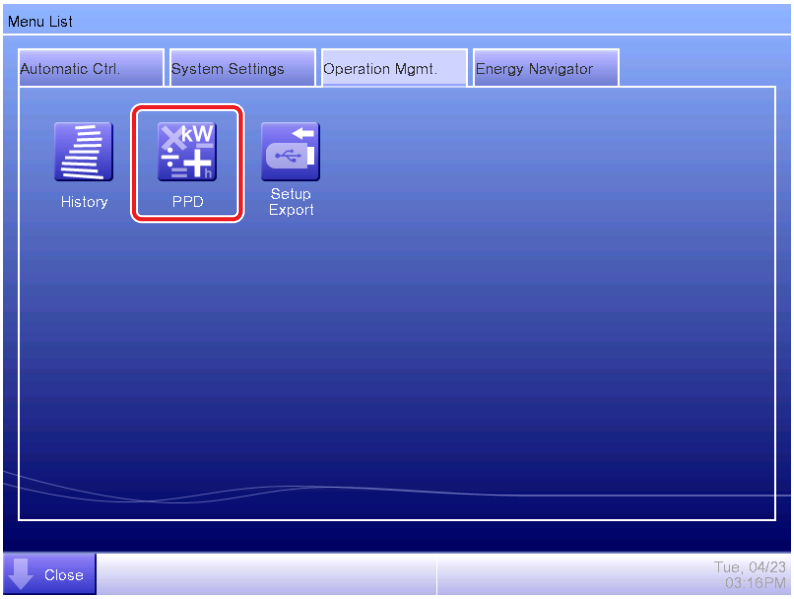


After performing the setting above, when downloading files using the Web Access function, you can specify the save destination by touching the [Save as] button displayed at the bottom of the browser.

<About Power Proportional Distribution function>

■ “PPD” icon is not displayed.

The Power Proportional Distribution function is not enabled. Consult your authorized dealer.



■ About standby power.

“Standby power” in the Power Proportional Distribution result displays the total of the crank case heater power consumed by an air conditioner in a standby state, because it cannot be distributed to any other air conditioner when it is set up not to distribute the power.

This total power needs to be separately handled as common utility expenses etc.

■ To display the power consumption by tenant.

The iTM unit displays the power consumption by air conditioner or by area in the Power Proportional Distribution result.

■ To convert the power consumption into power charges.

The iTM unit does not support the conversion of the power consumption into power charges.

■ To print the Power Proportional Distribution result.

The iTM unit does not have the print function.

<About Demand Control Function>

■ If the demand control is not performed for air conditioners even after it is enabled, the possible causes are the following.

- Control group registration and setting up the control for the cut-off levels are not completed.
- The cut-off control (i.e. Setpoint shift control, Outdoor unit capacity control, and/or ON/OFF control) is not enabled.
- The cut-off signal is not input.

■ We want to change control groups and the control of air conditioners at different cut-off levels. When should we make such changes?

- You should change the settings during a period of time that can minimize the effect of stopping the demand control. For example, in early morning and midnight.

  To change control groups or the control of air conditioners at different cut-off levels, you need to disable Setpoint shift control, Outdoor unit capacity control, and/or ON/OFF control.

  When the control status is set “Disable”, the demand control is not performed.

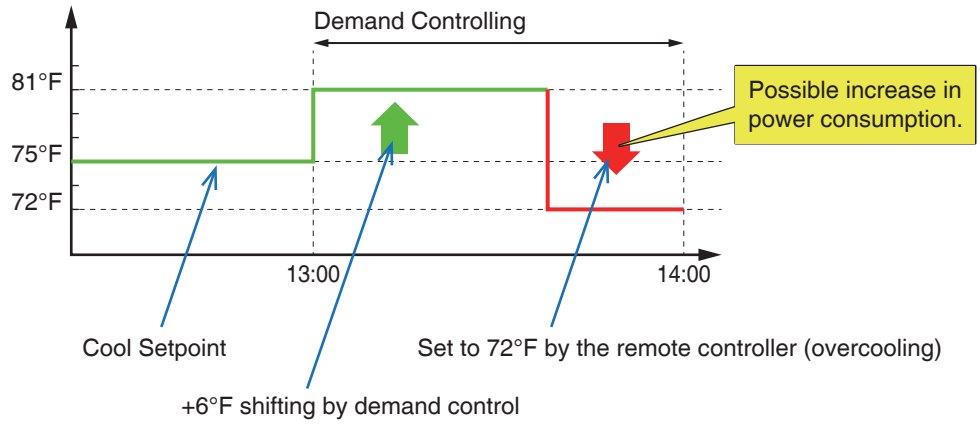
■ The indoor unit is performing setpoint shifting, but the Cool setpoint or the Heat setpoint is changing.

- Check if the setpoint was changed using the remote controller.

  If you change the setpoint using the remote controller when the demand control is enabled, the change overrides the demand control.

  So, we recommend you to disable the remote controller if you want to make the best use of the demand control function.

  (See “2-6 Enabling/Disabling Remote Controller”)



■ Is it possible to use the demand control function and proportional distribution function simultaneously?

- It is possible to use the both functions simultaneously.

  However, it requires three Di/Pi ports, so you need to add an iTM plus adaptor.

■ We are currently controlling the ventilators by the iTM. Is it possible to perform the demand control for them?

• It is possible to stop them by the ON/OFF control.

■ Is it possible to perform the demand control for the same target device from multiple iTMs?

• It is not an efficient way to use multiple iTMs to perform the demand control for the same target device.

We recommend you to use one iTM to perform demand control.

■ Is it possible to stop other devices by using contact outputs?

• The demand control allows the ON/OFF control of devices other than air conditioners via the contact control products such as: D3Dio, ExternalDio and BACnetDio.

* Be careful not to permit changes from the remote controller when you set up management points for the D3Dio, ExternalDio and BACnetDio.

■ Is it possible to use the Outdoor unit capacity control and the Setpoint shift control simultaneously in the same system?

• It is possible. However, in the case of the following setting for the same cut-off level

· Outdoor unit capacity control: 0%

· Setpoint shifting: 6°F

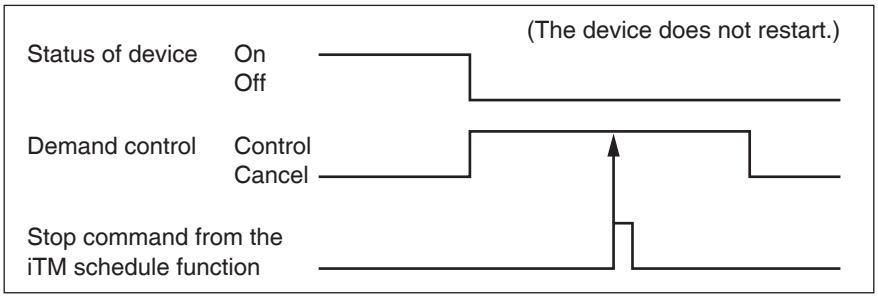
the benefit of the setpoint shifting control is not gained, because the outdoor unit will enter a thermo-OFF state.

Therefore, it is important to consider the relationship between the controls when you design the demand control settings.

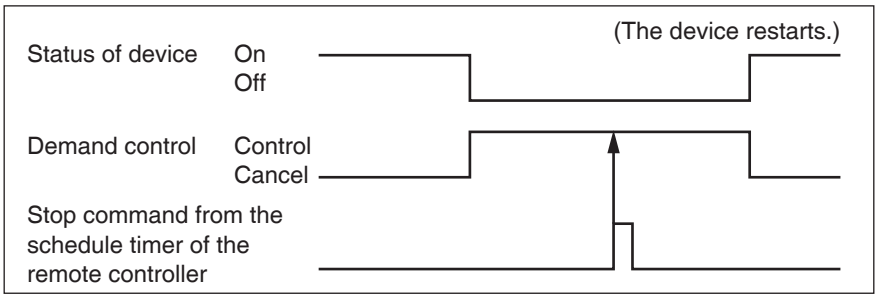
■ About ON/OFF control auto recovery

- When the auto recovery function is enabled, devices that are stopped by the demand control will restart automatically after the demand control is cancelled.
- If the devices are stopped by the iTM's auto controls such as the schedule control and interlocking control during the demand control, these devices remain stopped even after the demand control is cancelled.
- If the devices are stopped by an auto control function (e.g. schedule function) of a higher level central device (e.g. Interface for use in BACnet) or remote controller during the demand control, such devices will restart when the demand control is cancelled. So, you should not use the demand control together with auto control functions. For example, if a device is stopped by the schedule timer function of the remote controller during the demand control, the device will restart when the demand control is cancelled.

When a device is stopped by the schedule control function during the demand control



When a device is stopped by the schedule timer function of the remote controller during the demand control



- If the status of a device changes to "Maintenance" after the demand control starts performing, the device restarts automatically when the demand control is cancelled after the Maintenance status is cleared.

  If the Maintenance status is cleared after the demand control is cancelled, the device restarts when the Maintenance status is cleared.
- The behaviour of a device that entered a communication error state after the demand control is started depends on the type of the device.

<About CSV output tool>

■ An error message appears when you start the CSV output tool.

• If the Invalid data message appears, the following causes may be considered.

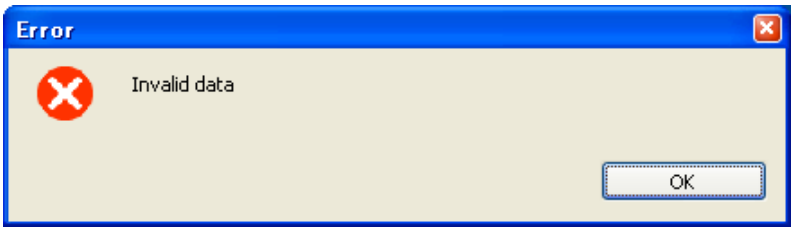
(1) The DB data is not supported by the software version.

Save the data from the iTM to a USB memory and start the CSV output tool.

(2) The DB file is corrupt, or the file is invalid due to a filename change etc.

Save the data again from the iTM to a USB memory and start the CSV output tool.

Invalid data message



• If the “File Output Error” message appears, the following causes may be considered.

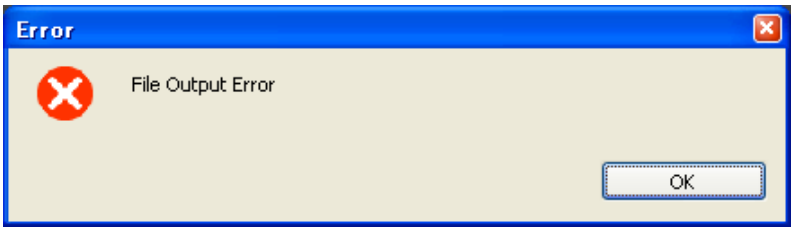
(1) The USB memory capacity is insufficient.

Copy the output data with the folder to your PC and start the CSV output tool. Alternatively, you may use a USB memory with a larger available space.

(2) The folder is write-protected

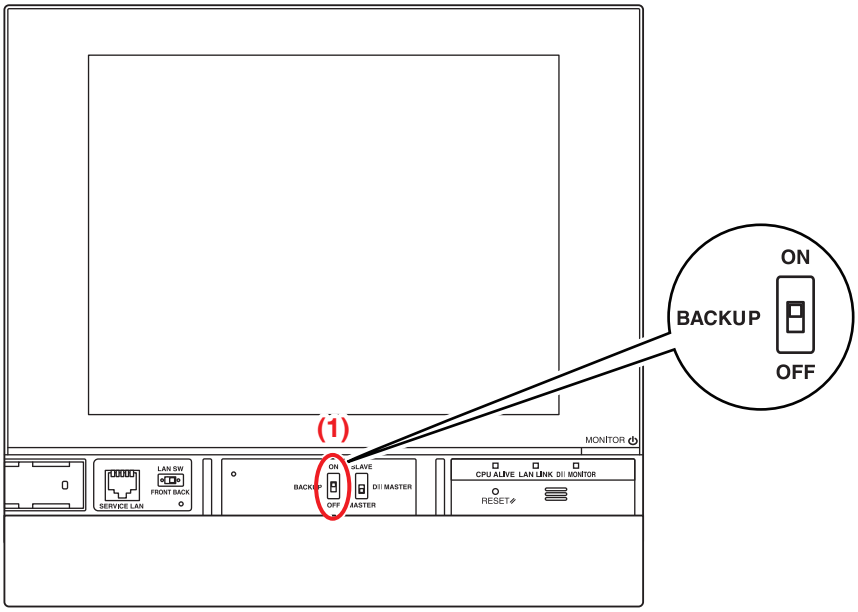
Make the folder writable and start the CSV output tool.

File Output Error massage



13-2 Turning ON/OFF the Internal Battery

The iTM is equipped with an internal battery to feed the clock during power failures and shutdown. The internal battery is turned ON/OFF by using the **BACKUP** switch **(1)**. The BACKUP switch is located beneath the screwed cover that appears when the unit's sliding front cover is moved. (See figure below.) Normally, it is set to ON.



When Turning OFF the Unit for a Long Time

When leaving the controller turned OFF for a long time (6 months or more), set the BACKUP switch to OFF.

(Setting this switch to OFF does not erase area/management point settings, schedules, etc.)

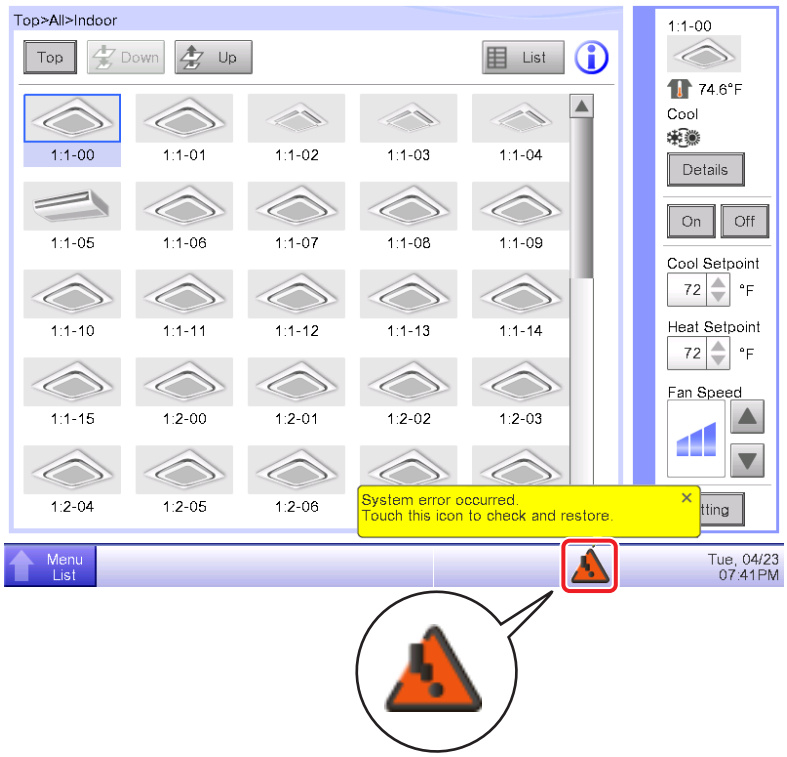
- If power is not supplied to the iTM for a long time, the battery may discharge completely.
- When starting to use the iTM again, set the BACKUP switch to ON.

⚠ CAUTION

- Do not touch other switches.
- Do not turn the switch ON/OFF with excessive force. Doing so may damage the components and cause malfunction.
- The iTM contains static-sensitive components.
  To prevent electrostatic discharge damage to these components, discharge the static electricity accumulated in your body before attempting operation.
  You can discharge static electricity accumulated in your body by touching a grounded metal part of the unit (control panel etc.).

13-3 Error Information Function

When an error occurs, the management point where the error occurred can be checked from the group monitoring icon indicating error displayed on the Standard View screen.



1. When an error is detected, it is notified by a flashing (Red) or (Yellow), and displaying a balloon. If set up, the buzzer will also sound.

   (Red) **Flashing: System error**
   Text: System error occurred. Touch this icon to check and restore.

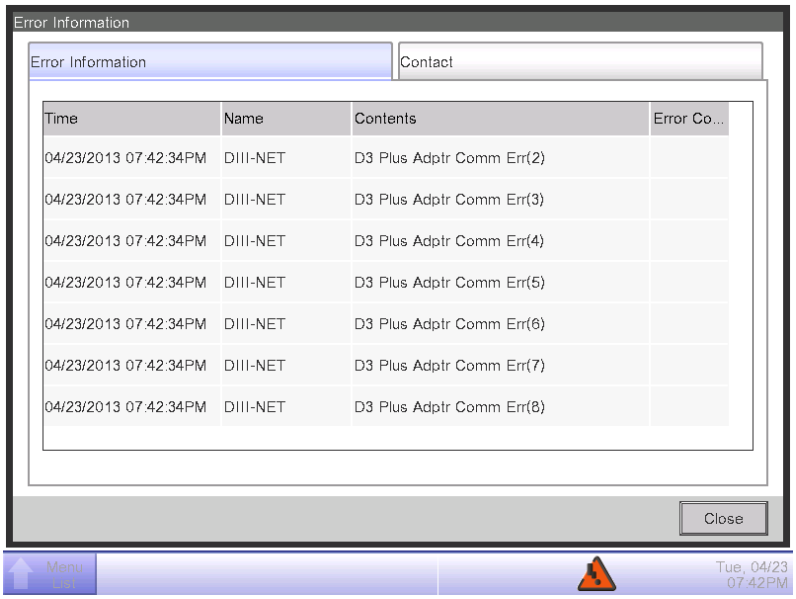
   (Yellow) **Flashing: Unit/Limit Error**
   Text: Error occurred. Touch this icon to check.

   (Blue) **ON: Communication error** * Neither will the buzzer sound nor a message appear.

   Touching the icon displays the Error Information dialog.

NOTE

Touching the icon when privilege restriction is set up displays the Password Input dialog. Entering the correct password displays the Error Information dialog.



2. The Error Information dialog displays a list of errors.

   The information provided in the list is as follows:

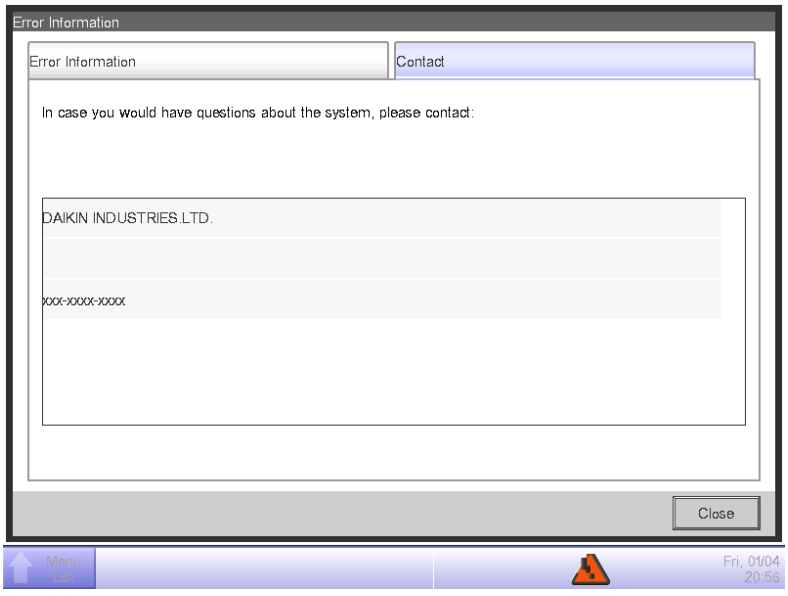
   Time: The time the error occurred

   Name: The name of the management point/system where the error occurred

   Contents: The content of the error

   Error Code: The error code

   Contact an authorized dealer registered in the following Contact screen.

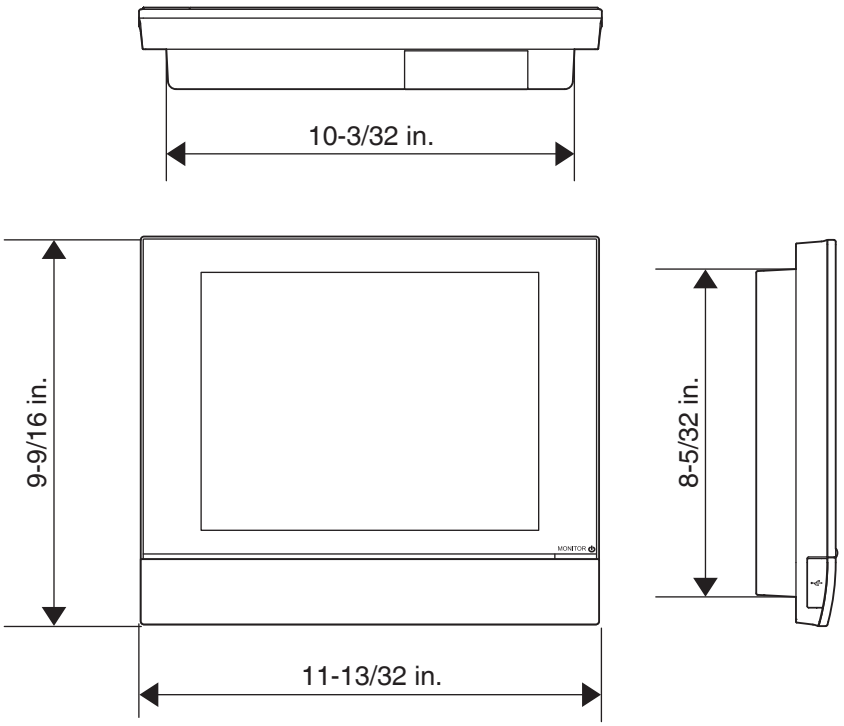


NOTE

Once listed system error such as equipment error/Analog error/power proportional distribution (Optional) will not be displayed again.

14. Hardware Specifications

14-1 iTM Hardware Specifications



Power	24 VAC 60 Hz
Power consumption	19 W (31 VA)
Emergency stop input	Always “a” contact Contact current approximately 10 mA
Size	11-13/32 × 9-9/16 × 1-31/32 (W × H × D)
Weight (Mass)	4.9 lbs
Time accuracy	within-195.7 to 79.1 sec/month
Operating temperature range	32 - 104°F
Operating humidity range	85% or less

14-2 Peripheral Equipment Specifications

Ver2.00.00U (Dual Setpoint compatible version)

The following functions are tested and confirmed in the environment below respectively.

Function: PC for Web Remote Management

Required Specifications	
Display resolution	1024×768 or higher
Network	100BASE-TX Real transfer rate: 115 kbps or higher
Supported Security software	McAfee Internet Security 2013
	Norton 360
	Virus Buster Cloud
Flash Player	Version 11.7.700.224
Web browser	Internet Explorer 10
	Firefox 21.0
	Google Chrome 27.0 *1

NOTE

When using the Web Remote Management function over the Internet, in order to prevent unauthorized access from the outside, please improve the network security on the site such as by setting firewall.

Function: History, Energy Navigator

Required Specifications		Windows PC	
CPU	Equivalent to Intel Core 2 Duo 1.2GHz or higher	Windows XP Professional SP3 (32bit)	Windows 7 Professional SP1 (32bit, 64bit)
Memory	2GByte or more	✓	✓
Free HDD space	10GByte or more	✓	✓
Network	100BASE-TX	✓	✓
Display resolution	1024×768 or higher	✓	✓
Supported Security software	McAfee Internet Security 2013	✓	✓
	Norton 360	✓	✓
	Virus Buster Cloud	✓	✓

Function: Backup Area Save/Load, Setup Export, PPD Result Output

Required Specifications	
USB memory	USB2.0 Memory capacity: 8GByte or more, 32GByte or less ==Recommended product (Operation confirmed)== Kingston Data Traveler Generation 3 (G3) 32GByte *Be sure to format the USB memory before use.

*1 When using Google Chrome by Windows 8, use “Relaunch Chrome on the desktop”.

Ver2.01.00U (Dual Setpoint compatible version)

The following functions are tested and confirmed in the environment below respectively.

Function: PC for Web Remote Management

Required Specifications	
Display resolution	1024×768 or higher
Network	100BASE-TX Real transfer rate: 115 kbps or higher
Supported Security software	McAfee Internet Security 2014.7.0.1255
	Norton Security with Backup 21.00.100
	Virus Buster Cloud
Flash Player	Version 15.0.0.223
Web browser	Internet Explorer 11
	Firefox 33.1
	Google Chrome 39.0 *1

Function: History, Energy Navigator

Required Specifications		Windows PC	
CPU	Equivalent to Intel Core 2 Duo 1.2GHz or higher	Windows XP Professional SP3 (32bit)	Windows 7 Professional SP1 (32bit, 64bit)
Memory	2GByte or more	✓	✓
Free HDD space	10GByte or more	✓	✓
Network	100BASE-TX Real transfer rate: 115 kbps or higher	✓	✓
Display resolution	1024×768 or higher	✓	✓
Supported Security software	McAfee Internet Security 2014.7.0.1255	✓	✓
	Norton Security with Backup 21.00.100	✓	✓
	Virus Buster Cloud	✓	✓

Function: Backup Area Save/Load, Setup Export, PPD Result Output

Required Specifications	
USB memory	USB2.0 Memory capacity: 8GByte or more, 32GByte or less ==Recommended product (Operation confirmed)== Kingston Data Traveler Generation 3 (G3) 32GByte *Be sure to format the USB memory before use.

*1 When using Google Chrome by Windows 8, use “Relaunch Chrome on the desktop”.

Ver2.02.00U (Dual Setpoint compatible version)

The following functions are tested and confirmed in the environment below respectively.

Function: PC for Web Remote Management

Required Specifications	
Display resolution	1024×768 or higher
Network	100BASE-TX Real transfer rate: 115 kbps or higher
Supported Security software	McAfee Internet Security 2015 Scan Engine version 5700.7163
	Norton Security with Backup 21.6.0.32
	Virus Buster Cloud 8.0.1257
Flash Player	Version 17.0.0.188
Web browser	Internet Explorer 11
	Firefox 38.0
	Google Chrome 43.0 *1

Function: History, Energy Navigator

Required Specifications		Windows PC	
CPU	Equivalent to Intel Core 2 Duo 1.2GHz or higher	Windows 7 Professional SP1 (32bit, 64bit)	Windows 8.1 Pro (32bit, 64bit)
Memory	2GByte or more	✓	✓
Free HDD space	10GByte or more	✓	✓
Network	100BASE-TX Real transfer rate: 115 kbps or higher	✓	✓
Display resolution	1024×768 or higher	✓	✓
Supported Security software	McAfee Internet Security 2015 Scan Engine version 5700.7163	✓	✓
	Norton Security with Backup 21.6.0.32	✓	✓
	Virus Buster Cloud 8.0.1257	✓	✓

Function: Backup Area Save/Load, Setup Export, PPD Result Output

Required Specifications	
USB memory	USB2.0 Memory capacity: 8GByte or more, 32GByte or less ==Recommended product (Operation confirmed)== Kingston Data Traveler Generation 3 (G3) 32GByte *Be sure to format the USB memory before use.

*1 When using Google Chrome by Windows 8, use “Relaunch Chrome on the desktop”.

Ver2.03.00U (Dual Setpoint compatible version)

The following functions are tested and confirmed in the environment below respectively.

Function: PC for Web Remote Management

Required Specifications	
Display resolution	1024×768 or higher
Network	100BASE-TX Real transfer rate: 115 kbps or higher
Supported Security software	McAfee Internet Security 2016 Scan Engine version 5800.7501
	Norton Security with Backup 22.5.4.24
	Virus Buster Cloud 10.0.1186
Flash Player	Version 20.0.0.306
Web browser	Internet Explorer 11
	Firefox 44.0
	Google Chrome 49.0 *1

Function: History, Energy Navigator

Required Specifications		Windows PC	
CPU	Equivalent to Intel Core 2 Duo 1.2GHz or higher	Windows 7 Professional SP1 (32bit, 64bit)	Windows 8 Pro (32bit, 64bit)
Memory	2GByte or more	✓	✓
Free HDD space	10GByte or more	✓	✓
Network	100BASE-TX Real transfer rate: 115 kbps or higher	✓	✓
Display resolution	1024×768 or higher	✓	✓
Supported Security software	McAfee Internet Security 2016 Scan Engine version 5800.7501	✓	✓
	Norton Security with Backup 22.5.4.24	✓	✓
	Virus Buster Cloud 10.0.1186	✓	✓

Function: Backup Area Save/Load, Setup Export, PPD Result Output

Required Specifications	
USB memory	USB2.0 Memory capacity: 8GByte or more, 32GByte or less ==Recommended product (Operation confirmed)== Kingston Data Traveler Generation 3 (G3) 32GByte *Be sure to format the USB memory before use.

*1 When using Google Chrome by Windows8, use “Relaunch Chrome on the desktop”.

Ver2.04.00U (Dual Setpoint compatible version)

The following functions are tested and confirmed in the environment below respectively.

Function: PC for Web Remote Management

Required Specifications	
Display resolution	1024×768 or higher
Network	100BASE-TX Real transfer rate: 115 kbps or higher
Supported Security software	McAfee LiveSafe 18.0
	Norton Security with Backup 22.7.0.76
	Virus Buster Cloud 10.0.1265
Flash Player	Version 22.0.0.192
Web browser	Internet Explorer 11
	Firefox 47.0
	Google Chrome 51.0 *1

Function: History, Energy Navigator

Required Specifications		Windows PC	
CPU	Equivalent to Intel Core 2 Duo 1.2GHz or higher	Windows 7 Professional SP1 (32bit, 64bit)	Windows 8.1 Pro (32bit, 64bit)
Memory	2GByte or more	✓	✓
Free HDD space	10GByte or more	✓	✓
Network	100BASE-TX Real transfer rate: 115 kbps or higher	✓	✓
Display resolution	1024×768 or higher	✓	✓
Supported Security software	McAfee LiveSafe 18.0	✓	✓
	Norton Security with Backup 22.7.0.76	✓	✓
	Virus Buster Cloud 10.0.1265	✓	✓

Function: Backup Area Save/Load, Setup Export, PPD Result Output

Required Specifications	
USB memory	USB2.0 Memory capacity: 8GByte or more, 32GByte or less ==Recommended product (Operation confirmed)== Kingston Data Traveler Generation 3 (G3) 32GByte *Be sure to format the USB memory before use.

*1 When using Google Chrome by Windows8, use “Relaunch Chrome on the desktop”.

Ver2.05.00U (Dual Setpoint compatible version)

The following functions are tested and confirmed in the environment below respectively.

Function: PC for Web Remote Management

Required Specifications	
Display resolution	1024×768 or higher
Network	100BASE-TX Real transfer rate: 115 kbps or higher
Supported Security software	McAfee LiveSafe VirusScan 19.1.480 Scan Engine version 2778.0
	Norton Security 22.7.1.32
	Virus Buster Cloud 10.0.1288
Flash Player	Version 23.0.0.185
Web browser	Internet Explorer 11
	Firefox Ver.49.0
	Google Chrome Ver.54.0 *1

Function: History, Energy Navigator

Required Specifications		Windows PC	
CPU	Equivalent to Intel Core 2 Duo 1.2GHz or higher	Windows 7 Professional SP1 (32bit, 64bit)	Windows 8.1 Pro (32bit, 64bit)
Memory	2GByte or more	✓	✓
Free HDD space	10GByte or more	✓	✓
Network	100BASE-TX Real transfer rate: 115 kbps or higher	✓	✓
Display resolution	1024×768 or higher	✓	✓
Supported Security software	McAfee LiveSafe VirusScan 19.1.480 Scan Engine version 2778.0	✓	✓
	Norton Security 22.7.1.32	✓	✓
	Virus Buster Cloud 10.0.1288	✓	✓

Function: Backup Area Save/Load, Setup Export, PPD Result Output

Required Specifications	
USB memory	Memory capacity: 8GByte or more, 32GByte or less ==Recommended product (Operation confirmed)== Silicon Power SP032GBUF2M01V1K (32GByte) *Be sure to format the USB memory before use.

*1 When using Google Chrome by Windows8, use “Relaunch Chrome on the desktop”.

Ver2.06.00U (Dual Setpoint compatible version)

The following functions are tested and confirmed in the environment below respectively.

Function: PC for Web Remote Management

Required Specifications		Windows PC	
		Windows 7 Professional SP1 (32bit, 64bit)	Windows 10 Pro(64bit) Ver.1803
Display resolution	1024×768 or higher Use with DPI settings set at 100%	✓	✓
Network	100BASE-TX Real transfer rate: 115 kbps or higher	✓	✓
Supported Security software	McAfee LiveSafe • Version 21.4 • Engine version 3466.0		✓
	McAfee LiveSafe • Version 21.4 • Engine version 3442.0	✓	
	Norton Security 22.12.0.104	✓	✓
	Virus Buster Cloud 12.0.1226	✓	✓
Flash Player	Version 30.0.0.113	✓	✓ *1
Web browser	Internet Explorer 11	✓	✓
	Firefox Ver.61.0	✓	✓
	Google Chrome Ver.68.0	✓	✓

Function: History, Energy Navigator, Operation Data Export

Required Specifications		Windows PC	
CPU	Equivalent to Intel Core 2 Duo 1.2GHz or higher	Windows 7 Professional SP1 (32bit, 64bit)	Windows 10 Pro(64bit) Ver.1803
Memory	2GByte or more	✓	✓
Free HDD space	10GByte or more	✓	✓
Network	100BASE-TX Real transfer rate: 115 kbps or higher	✓	✓
Display resolution	1024×768 or higher	✓	✓
Supported Security software	McAfee LiveSafe • Version 21.4 • Engine version 3466.0		✓
	McAfee LiveSafe • Version 21.4 • Engine version 3442.0	✓	
	Norton Security 22.12.0.104	✓	✓
	Virus Buster Cloud 12.0.1226	✓	✓

Function: Backup Area Save/Load, Setup Export, PPD Result Output

Required Specifications	
USB memory	Memory capacity: 8GByte or more, 32GByte or less ==Recommended product (Operation confirmed)== Silicon Power SP032GBUF2M01V1K (32GByte) *Be sure to format the USB memory before use.

*1 The Flash Player version follows the version of the browser.

Ver2.08.00U (Dual Setpoint compatible version)

The following functions are tested and confirmed in the environment below respectively.

Function: PC for Web Remote Management

Required Specifications		Windows PC
		Windows 10 Pro(64bit) Ver.2004
Display resolution	1024×768 or higher Use with DPI settings set at 100%	✓
Network	100BASE-TX Real transfer rate: 115 kbps or higher	✓
Supported Security software	McAfee LiveSafe • Version 23.4 • Engine version 4244.0	✓
	Norton Security 22.20.5.39	✓
	Virus Buster Cloud 16.0.1409	✓
Web browser	Microsoft Edge Ver. 86.0.622.58 (Chromium base)	✓
	Google Chrome Ver. 86.0.4240.111	✓

Function: History, Energy Navigator, Operation Data Export

Required Specifications		Windows PC
CPU	1.0GHz or higher	Windows 10 Pro(64bit) Ver.2004
Memory	2GByte or more	✓
Free HDD space	32GByte or more	✓
Network	100BASE-TX Real transfer rate: 115 kbps or higher	✓
Display resolution	1024×768 or higher	✓
Supported Security software	McAfee LiveSafe • Version 23.4 • Engine version 4244.0	✓
	Norton Security 22.20.5.39	✓
	Virus Buster Cloud 16.0.1409	✓

Function: Backup Area Save/Load, Setup Export, PPD Result Output

Required Specifications	
USB memory	Memory capacity: 8GByte or more, 32GByte or less ==Recommended product (Operation confirmed)== Silicon Power SP032GBUF2M01V1K (32GByte) *Be sure to format the USB memory before use.

Ver2.09.00U (Dual Setpoint compatible version)

The following functions are tested and confirmed in the environment below respectively.

Function: PC for Web Remote Management

Specifications*		Soft Version
OS	Windows 10 Pro (64bit) version 20H2	
Network	100BASE-TX or higher	
Display resolution	1024×768 or higher Use with DPI settings set at 100%	
Supported Security software	McAfee LiveSafe • Version • Engine version	 24.1.216 4389.0
	Norton Security	22.21.1.151
	Virus Buster Cloud	17.0.1257
Web browser	Microsoft Edge (Chromium base)	89.0.774.63
	Google Chrome	89.04389.90

* Not tested and confirmed if using a smartphone or tablet.

Function: History, Energy Navigator, Operation Data Export

Specifications		Soft Version
OS	Windows 10 Pro (64bit) version 20H2	
Network	100BASE-TX or higher	
Display resolution	1024×768 or higher	
Supported Security software	McAfee LiveSafe • Version • Engine version	 24.1.216 4389.0
	Norton Security	22.21.1.151
	Virus Buster Cloud	89.04389.90

Function: Backup Area Save/Load, Setup Export, PPD Result Output

Specifications	
USB memory	Memory capacity: 8GByte or more, 32GByte or less ==Recommended product (Operation confirmed)== Silicon Power SP032GBUF2M01V1K (32GByte) *Be sure to format the USB memory before use.

Ver2.10.00U (Dual Setpoint compatible version)

The following functions are tested and confirmed in the environment below respectively.

Function: PC for Web Remote Management

Specifications*		Soft Version
OS	Windows 10 Pro (64bit) version 21H1	
Network	100BASE-TX or higher	
Display resolution	1024×768 or higher Use with DPI settings set at 100%	
Supported Security software	McAfee LiveSafe • Version • Engine version	 24.3.169 4473.0
	Norton Security	22.21.5.44
	Virus Buster Cloud	17.0.1299
Web browser	Microsoft Edge (Chromium base)	91.0.864.54
	Google Chrome	91.04472.114

* Not tested and confirmed if using a smartphone or tablet.

Function: History, Energy Navigator, Operation Data Export

Specifications		Soft Version
OS	Windows 10 Pro (64bit) version 21H1	
Network	100BASE-TX or higher	
Display resolution	1024×768 or higher	
Supported Security software	McAfee LiveSafe • Version • Engine version	 24.3.169 4473.0
	Norton Security	22.21.5.44
	Virus Buster Cloud	17.0.1299

Function: Backup Area Save/Load, Setup Export, PPD Result Output

Specifications	
USB memory	Memory capacity: 8GByte or more, 32GByte or less ==Recommended product (Operation confirmed)== Silicon Power SP032GBUF2M01V1K (32GByte) *Be sure to format the USB memory before use.

Ver2.12.00U (Dual Setpoint compatible version)

The following functions are tested and confirmed in the environment below respectively.

Function: PC for Web Remote Management

Specifications*		Soft Version	
OS		Windows 10 Pro (64bit) version 21H2	Windows 11 Pro (64bit) version 21H2
Network	100BASE-TX or higher		
Display resolution	1024×768 or higher Use with DPI settings set at 100%		
Supported Security software	McAfee LiveSafe • Version • Engine version	 25.3.140 4642.0	 25.3.140 4642.0
	Norton Security	22.21.10.40	22.21.10.40
	Virus Buster Cloud	17.7.1130	17.7.1130
Web browser	Microsoft Edge (Chromium base)	96.0.1054.43	96.0.1054.43
	Google Chrome	96.0.4664.93	96.0.4664.93

* Not tested and confirmed if using a smartphone or tablet.

Function: History, Energy Navigator, Operation Data Export

Specifications		Soft Version
OS	Windows 10 Pro (64bit) version 21H2	
Network	100BASE-TX or higher	
Display resolution	1024×768 or higher	
Supported Security software	McAfee LiveSafe • Version • Engine version	 25.3.140 4642.0
	Norton Security	22.21.10.40
	Virus Buster Cloud	17.7.1130

Function: Backup Area Save/Load, Setup Export, PPD Result Output

Specifications	
USB memory	Memory capacity: 8GByte or more, 32GByte or less ==Recommended product (Operation confirmed)== Silicon Power SP032GBUF2M01V1K (32GByte) *Be sure to format the USB memory before use.

Ver2.13.00U (Dual Setpoint compatible version)

The following functions are tested and confirmed in the environment below respectively.

Function: PC for Web Remote Management

Specifications*		Soft Version	
OS		Windows 10 Pro (64bit) version 21H2	Windows 11 Pro (64bit) version 21H2
Network	100BASE-TX or higher		
Display resolution	1024×768 or higher Use with DPI settings set at 100%		
Supported Security software	McAfee LiveSafe • Version • Engine version	 25.7.148 4864.0	 25.7.148 4864.0
	Norton Security	22.22.6.10	22.22.6.10
	Virus Buster Cloud	17.7.1383	17.7.1383
Web browser	Microsoft Edge (Chromium base)	103.0.1264.62	103.0.1264.62
	Google Chrome	103.0.5060.114	103.0.5060.114

* Not tested and confirmed if using a smartphone or tablet.

Function: History, Energy Navigator, Operation Data Export

Specifications		Soft Version	
OS		Windows 10 Pro (64bit) version 21H2	Windows 11 Pro (64bit) version 21H2
Network	100BASE-TX or higher		
Display resolution	1024×768 or higher		
Supported Security software	McAfee LiveSafe • Version • Engine version	 25.7.148 4864.0	 25.7.148 4864.0
	Norton Security	22.22.6.10	22.22.6.10
	Virus Buster Cloud	17.7.1383	17.7.1383

Function: Backup Area Save/Load, Setup Export, PPD Result Output

Specifications	
USB memory	Memory capacity: 8GByte or more, 32GByte or less ==Recommended product (Operation confirmed)== Silicon Power SP032GBUF2M01V1K (32GByte) *Be sure to format the USB memory before use.

Ver2.14.00U (Dual Setpoint compatible version)

The following functions are tested and confirmed in the environment below respectively.

Function: PC for Web Remote Management

Specifications*		Soft Version	
OS		Windows 10 Pro (64bit) version 22H2	Windows 11 Pro (64bit) version 22H2
Network	100BASE-TX or higher		
Display resolution	1024×768 or higher Use with DPI settings set at 100%		
Supported Security software	McAfee LiveSafe • Version • Engine version	 26.6.161 5155.0	 26.6.161 5155.0
	Norton Security	22.23.4.5	22.23.4.5
	Virus Buster Cloud	17.7.1903	17.7.1903
Web browser	Microsoft Edge (Chromium base)	113.0.1774.35	113.0.1774.35
	Google Chrome	113.0.5672.64	113.0.5672.64

* Not tested and confirmed if using a smartphone or tablet.

Function: History, Energy Navigator, Operation Data Export

Specifications		Soft Version	
OS		Windows 10 Pro (64bit) version 22H2	Windows 11 Pro (64bit) version 22H2
Network	100BASE-TX or higher		
Display resolution	1024×768 or higher		
Supported Security software	McAfee LiveSafe • Version • Engine version	 26.6.161 5155.0	 26.6.161 5155.0
	Norton Security	22.23.4.5	22.23.4.5
	Virus Buster Cloud	17.7.1903	17.7.1903

Function: Backup Area Save/Load, Setup Export, PPD Result Output

Specifications	
USB memory	Memory capacity: 8GByte or more, 32GByte or less ==Recommended product (Operation confirmed)== Silicon Power SP032GBUF2M01V1K (32GByte) *Be sure to format the USB memory before use.

Download Site List

Necessary software can be downloaded from Microsoft, Adobe, Google and other sites for free.

Download from the following sites (as of Apr 20,2023).

Google Chrome

https://www.google.com/intl/en/chrome/browser

Microsoft Edge

https://www.microsoft.com/en-us/edge

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/* zlib.h -- interface of the 'zlib' general purpose compression library version 1.2.3, July 18th, 2005

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The data format used by the zlib library is described by RFCs (Request for Comments) 1950 to 1952 in the files http://www.ietf.org/rfc/rfc1950.txt (zlib format), rfc1951.txt (deflate format) and rfc1952.txt (gzip format).

*/

Appendix

1. iTM Monitoring Control Functions

Setting location				Number of settings
Central Monitoring	Area		Number of areas that can be created	Up to 650 (All excluded)
			Total number of management points that can be registered in areas	Up to 1300
			Number of registered management points per area	Up to 650
			Number of hierarchical levels	Up to 10 levels
	Management point * The total of all management points is 650.		Indoor unit management point (Indoor unit/Hydrobox/Ventilator management points)	Up to 512 (The total of Indoor/Hydrobox/Ventilator)
			Outdoor unit management point	Up to 56
			External management point	Up to 512 (Total of External management point, BACnet management point and Internal.Ai)
			BACnet management point	
			Unit's port management point	Up to 32 (Port 1: Port 1 is for emergency stop)
			Internal Pi management point	Up to 80
		Layout View screen	Number of images that can be used in a layout	Up to 60 sheets
			Number of icons that can be placed in one image	Up to 100 icons
	History		Number of records that can be saved	Up to 500,000 (iTM) * Including the number of internal development records. The internal development records cannot be viewed.
Automatic Control function	Schedule function		Number of schedule programs	Up to 100
			Number of schedule patterns	7Days: 7 patterns Weekday+Saturday+Sunday: 3 patterns Weekday+Weekend: 2 patterns Everyday: 1 patterns
				Special day: 5 patterns
			Number of events	Up to 20 per schedule
		Yearly calendar	Calendar view	1 year
			Maximum number of calendars that can be registered	40 affairs
	Interlocking Control function		Number of interlocking programs	Up to 500
			Number of management points that can be used as input	Up to 50
			Number of events for Output1	Up to 25 management points, area: 1 area (management points cannot be registered)
			Number of events for Output2	Up to 25 management points, area: 1 area (management points cannot be registered)
	Emergency Stop function		Number of emergency stop programs	Up to 32 (Including the Default program)
			Number of management points that can be registered in one group	Up to 650
			Number of management points that can be used in an emergency stop signal	Up to 6
	Auto Changeover function		Number of groups that can be created	Up to 512 groups
			Number of management points that can be registered in one group	Up to 64
	Timer Extension function		Timer Extension times	Selectable from 30 Min, 60 Min, 90 Min, 120 Min, 150 Min, 180 Min
Automatic Control function	Setback function		Recovery setpoint	Selectable in the range Cool Recovery Temperature: 2 to 10°F Heat Recovery Temperature: 2 to 10°F

Setting location				Number of settings
Data management function	Power Proportional Distribution Function		Maximum number of Power Proportional Distribution groups	Up to 80 groups
			Number of input ports that can be registered in one group	Up to 80 ports
			Number of management points that can be registered in one group	Up to 512
			Special PPD calculation range	For the last year from the day the screen is opened
		PPD data output	Data retention days	Up to 13 months
		Excluded Time setting	Excluded Time periods	Weekly: 7 patterns
	Energy Navigator function		Energy Budget /Actual Management	Displayed for each Energy Group
			Planned energy consumption	Reduction rate of 0 to 100 with respect to previous year can be entered
				Input planned annual energy consumption
				Input planned monthly energy consumption for January to December
			Actual energy consumption registration	Conversion factor of 0 to 9999.999 can be entered
			Number of Energy Groups	Up to 30 groups
			Number of Pi management points that can be registered in one group	Up to 100
			Number of energy types that can be registered	Up to 30
			Energy conversion factor registration	1 for each energy type
			Number of operation rules that can be created	Up to 10
			Operation rule patterns	Weekly: 7 patterns
				Special day: 5 patterns
			Detailed operation rules	10 patterns
			Sampling period	Up to 13 months of storage
			Timer Extension sampling period	Up to 13 months of storage
			Setpoint gap sampling period	Up to 13 months of storage
			Month of year setting	1 to 12
		Data output	Yearly budget/actual energy consumption data	2 years
			Monthly budget/actual energy consumption data	Up to 13 months of storage
			Failure to turn off data	Up to 13 months of storage
			Setpoint gap data	Up to 13 months of storage
			Management point data	Up to 13 months of storage * 2 months for Web Remote Management
	Operation Data Export function		D3 operation data	Up to 5 days of storage
			External operation data	
			BACnet operation data	
Eco Mode function	Setpoint shift control		Temperature shift range	Decrease the temperature settings by 1 to 7°F Increase the temperature settings 1 to 7°F

Setting location				Number of settings
Remote access function	Web Remote Management function		Number of Web Users that can be registered	Up to 4 Managers
				Up to 60 Users
	E-Mail Error Report function		SMTP Server settings	SMTP server address: 0 to 128 characters SMTP server port No.: 1 to 65535 Authentication method: No Authentication POP before SMTP SMTP-AUTH POP server address: 0 to 128 characters POP server port No.: 1 to 65535 User ID: 0 to 64 characters Password: 0 to 64 characters can be set
			Condition for transmission	Recipients: Up to 512 management points Resend interval: 1 to 72 hours (in increments of 1 hour) Site name: 0 to 20 characters
			E-mail	Up to 10 To E-mail addresses
				Up to 1 From E-mail addresses
System functions	System Settings function	Passwords	Administrator password	1 to 15 characters
			Screen unlock password	1 to 15 characters
		Management point, area settings	See Central Monitoring.	
		Time/DST Setup	Date/Time	From 1/1/2010 12:00:00 AM to 12/31/2035 11:59:59 PM
			Daylight Saving Time Settings	Start Date: Month Jan to Dec The Week 1st to 4th, Last Day of the week Mon to Sun Time 1:00 to 4:00(in increments of 1 hour) End Date: Month Jan to Dec The Week 1st to 4th, Last Day of the week Mon to Sun Time 2:00 to 4:00(in increments of 1 hour)
		Network	Host name	1 to 63 characters
			IP Address	1 to 223(*), 0 to 255, 0 to 255, 0 to 255 *127 cannot be used.
			Subnet Mask	0 to 255, 0 to 255, 0 to 255, 0 to 252
			Default Gateway	1 to 223(*), 0 to 255, 0 to 255, 0 to 255 or 0, 0, 0, 0 *127 cannot be used.
			Preferred DNS	
			Alternate DNS	
			Web Server Port Number	1024 to 65535
			Web I/F Server Port Number	80 or 1024 to 65535
			Controller Name	1 to 64 characters
		History records	See Central Monitoring.	

Setting location				Number of settings
System functions	Locale function	Date Display	Available date formats	Three patterns available: “DD/MM/YYYY”, “MM/DD/YYYY”, “YYYY/MM/DD”
		Decimal point	CSV separator	“.” “,” or “.” “;”
		Unit of temperature	Temperature symbol	°C, °F
		Icon color	Icon color	Red, green
	Hardware		Luminance	8 levels, between 1 and 8
			Buzzer volume	6 levels, between 0 and 5
			Buzzer duration	Four patterns: 1 min, 3 min, 5 min, Continuous
			Touch volume	6 levels, between 0 and 5
	Screensaver		Screensaver settings	Disable, Backlight off, Screensaver1 to 3
			Idle time	1 to 60 minutes
			Screen Saver OFF on error	Enable/Disable
Demand control	Setpoint shift control		Setpoint shift control enabled/disabled	Enable/Disable
			Number of control groups	Up to 8 groups
			Number of management points that can be registered	Up to 512 management points
			Cooling Setpoint Upper Limit	60 to 90°F
			Heating Setpoint Lower Limit	60 to 90°F
			Start level	1 to 3
			Amount of shifting for each level	0 to 29°F or Thermostat OFF
	Outdoor unit capacity control		Outdoor unit capacity control enabled/disabled	Enable/Disable
			Number of control groups	Up to 8 groups
			Number of management points that can be registered	Up to 80 management points
			Capacity setting for each level	100/70/40/0%
	ON/OFF control		ON/OFF control enabled/disabled	Enable/Disable
			Number of control groups	Up to 8 groups
			Number of management points that can be registered	Up to 512 management points
			Start level	1 to 3

2. Setup Items

The setting items and range of values you can set in each tab are as indicated in the table below.

<Detailed Setup Screen Settings List>

Setting location		Item			Setting details	Possible range [○ : Visible, △: Conditionally visible, ×: Invisible, Between ( ) : Numerical range]							Remarks
						Management point type							
						Indoor		Ventilator	Dio	Analog (Ao)	MultiState (Mo)	Outdoor	
						Indoor	Hydrobox						
Detailed Setup Screen	Main tab	On/Off			On	○	○	○	○	×	×	×	
					Off	○	○	○	○	×	×	×	
					Optimum Start								Schedule setup only
			Optimum Start										
		Operation Mode			Fan	○	×	×	×	×	×	×	
					Cool	○	○	×	×	×	×	×	
					Heat	○	○	×	×	×	×	×	
					Dependent	○	×	×	×	×	×	×	
					Dry	△*1	×	×	×	×	×	×	
		Cool Setpoint	Setpoint	Celsius	Example: 22.2°C	△*6*9 (–30.0~70.0°C)	×	×	×	×	×	×	
				Fahrenheit	Example: 72°F	△*6*9 (–22~158°F)	×	×	×	×	×	×	
			Shift Amount										Schedule setup, Event setup only
		Heat Setpoint/ Setpoint (Hydrobox)	Setpoint	Celsius	Example:22.2°C	△*6*8 (–30.0~70.0°C)	○*6	×	×	×	×	×	
				Fahrenheit	Example:72°F	△*6*8 (–22~158°F)	○*6	×	×	×	×	×	
			Shift Amount										Schedule setup, Event setup only
		Setback Setpoint	Cool	Enable/ Disable	Enable	△*9	△*9	×	×	×	×	×	
					Disable	△*9	△*9	×	×	×	×	×	
				Celsius	Example:26.7°C	△*6*9 (16.7~35.0°C)	△*6*9 (16.7~35.0°C)	×	×	×	×	×	
				Fahrenheit	Example:80°F	△*6*9 (62~95°F)	△*6*9 (62~95°F)	×	×	×	×	×	
			Heat	Enable/ Disable	Enable	△*8	△*8	×	×	×	×	×	
					Disable	△*8	△*8	×	×	×	×	×	
				Celsius	Example:17.8°C	△*6*8 (10.0~31.1°C)	△*6*8 (10.0~31.1°C)	×	×	×	×	×	
				Fahrenheit	Example:64°F	△*6*8 (50~88°F)	△*6*8 (50~88°F)	×	×	×	×	×	
		Min. Cool/Heat SP Differential		Celsius	0°C	△*6*10*12	×	×	×	×	×	×	
					1°C	△*6*10*12	×	×	×	×	×	×	
					2°C	△*6*10*12	×	×	×	×	×	×	
					3°C	△*6*10*12	×	×	×	×	×	×	
					4°C	△*6*10*12	×	×	×	×	×	×	
				Fahrenheit	0°F	△*6*10*12	×	×	×	×	×	×	
					1°F	△*6*10*12	×	×	×	×	×	×	
					2°F	△*6*10*12	×	×	×	×	×	×	
					3°F	△*6*10*12	×	×	×	×	×	×	
					4°F	△*6*10*12	×	×	×	×	×	×	
					5°F	△*6*10*12	×	×	×	×	×	×	
					6°F	△*6*10*12	×	×	×	×	×	×	
					7°F	△*6*10*12	×	×	×	×	×	×	
		Setpoint Tracking Mode			Enable	△*6*10*12	×	×	×	×	×	×	
					Disable	△*6*10*12	×	×	×	×	×	×	
		Filter Sign				○*7	×	○*7	×	×	×	×	
	A/C tab	Fan Speed			Low	○	×	×	×	×	×	×	
					Medium Low	○	×	×	×	×	×	×	
					Medium	○	×	×	×	×	×	×	
					Medium High	○	×	×	×	×	×	×	
					High	○	×	×	×	×	×	×	
					Auto	○	×	×	×	×	×	×	
		Airflow Direction			Airflow direction 0	○	×	×	×	×	×	×	
					Airflow direction 1	○	×	×	×	×	×	×	
					Airflow direction 2	○	×	×	×	×	×	×	
					Airflow direction 3	○	×	×	×	×	×	×	
					Airflow direction 4	○	×	×	×	×	×	×	
					Swing	○	×	×	×	×	×	×	
		Timer Extension			ON	○	○	×	×	×	×	×	
					OFF	○	○	×	×	×	×	×	
		Setback Recovery Temp	Cool	Celsius	1°C	△*6*9*12	△*6*9*12	×	×	×	×	×	
					2°C	△*6*9*12	△*6*9*12	×	×	×	×	×	
					3°C	△*6*9*12	△*6*9*12	×	×	×	×	×	
					4°C	△*6*9*12	△*6*9*12	×	×	×	×	×	
					5°C	△*6*9*12	△*6*9*12	×	×	×	×	×	
					6°C	△*6*9*12	△*6*9*12	×	×	×	×	×	
				Fahrenheit	2°F	△*6*9*12	△*6*9*12	×	×	×	×	×	
					3°F	△*6*9*12	△*6*9*12	×	×	×	×	×	
					4°F	△*6*9*12	△*6*9*12	×	×	×	×	×	
					5°F	△*6*9*12	△*6*9*12	×	×	×	×	×	
					6°F	△*6*9*12	△*6*9*12	×	×	×	×	×	

Setting location		Item				Setting details	Possible range [○ : Visible, △: Conditionally visible, ×: Invisible, Between ( ) : Numerical range]							Remarks
							Management point type							
							Indoor		Ventilator	Dio	Analog (Ao)	MultiState (Mo)	Outdoor	
							Indoor	Hydrobox						
Detailed Setup Screen	A/C tab	Setback Recovery Temp	Cool		Fahrenheit	7°F	△*6*9*12	△*6*9*12	×	×	×	×	×	
						8°F	△*6*9*12	△*6*9*12	×	×	×	×	×	
						9°F	△*6*9*12	△*6*9*12	×	×	×	×	×	
						10°F	△*6*9*12	△*6*9*12	×	×	×	×	×	
			Heat		Celsius	1°C	△*6*8*12	△*6*8*12	×	×	×	×	×	
						2°C	△*6*8*12	△*6*8*12	×	×	×	×	×	
						3°C	△*6*8*12	△*6*8*12	×	×	×	×	×	
						4°C	△*6*8*12	△*6*8*12	×	×	×	×	×	
						5°C	△*6*8*12	△*6*8*12	×	×	×	×	×	
						6°C	△*6*8*12	△*6*8*12	×	×	×	×	×	
					Fahrenheit	2°F	△*6*8*12	△*6*8*12	×	×	×	×	×	
						3°F	△*6*8*12	△*6*8*12	×	×	×	×	×	
						4°F	△*6*8*12	△*6*8*12	×	×	×	×	×	
						5°F	△*6*8*12	△*6*8*12	×	×	×	×	×	
						6°F	△*6*8*12	△*6*8*12	×	×	×	×	×	
						7°F	△*6*8*12	△*6*8*12	×	×	×	×	×	
						8°F	△*6*8*12	△*6*8*12	×	×	×	×	×	
						9°F	△*6*8*12	△*6*8*12	×	×	×	×	×	
						10°F	△*6*8*12	△*6*8*12	×	×	×	×	×	
		Setpoint Restriction	Cooling Limit	Enable/Disable		Enable	△*9*12	△*9*12	×	×	×	×	×	
						Disable	△*9*12	△*9*12	×	×	×	×	×	
				MAX	Celsius	Example: 32°C	△*6*9*12	△*6*9*12	×	×	×	×	×	
					Fahrenheit	Example: 90°F	△*6*9*12	△*6*9*12	×	×	×	×	×	
				MIN	Celsius	Example: 16°C	△*6*9*12	△*6*9*12	×	×	×	×	×	
					Fahrenheit	Example: 60°F	△*6*9*12	△*6*9*12	×	×	×	×	×	
			Heating Limit	Enable/Disable		Enable	△*8*12	△*8*12	×	×	×	×	×	
						Disable	△*8*12	△*8*12	×	×	×	×	×	
				MAX	Celsius	Example: 32°C	△*6*8*12	△*6*8*12	×	×	×	×	×	
					Fahrenheit	Example: 90°F	△*6*8*12	△*6*8*12	×	×	×	×	×	
				MIN	Celsius	Example: 16°C	△*6*8*12	△*6*8*12	×	×	×	×	×	
					Fahrenheit	Example: 60°F	△*6*8*12	△*6*8*12	×	×	×	×	×	
	R/C Prohibition tab	R/C Prohibition	On/Off			Permitted	△*11	△*11	△*11	×	×	×	×	All settings on the tab are not displayed when R/C Prohibition function is disabled.
						Off Only	△*11	△*11	△*11	×	×	×	×	
						Prohibited	△*11	△*11	△*11	×	×	×	×	
			Operation Mode			Permitted	△*11	△*11	×	×	×	×	×	
						Prohibited	△*11	△*11	×	×	×	×	×	
			Setpoint			Permitted	△*11	△*11	×	×	×	×	×	
						Prohibited	△*11	△*11	×	×	×	×	×	
	Ventilator tab	Ventilation Amount				Auto (normal)	×	×	△*2*3	×	×	×	×	When Ventilation Mode is disabled for the selected Ventilator management point, the tab itself is hidden.
						Low (normal)	×	×	△*2	×	×	×	×	
						High (normal)	×	×	△*2	×	×	×	×	
						Auto (fresh up)	×	×	△*2*3*4	×	×	×	×	
						Low (fresh up)	×	×	△*2*4	×	×	×	×	
						High (fresh up)	×	×	△*2*4	×	×	×	×	
		Ventilation Mode				Automatic	×	×	△*2	×	×	×	×	
						ERVentilation	×	×	△*2	×	×	×	×	
						Bypass	×	×	△*2	×	×	×	×	
	Dio, Ao, Mo tab	Repeat Mode	Enable/Disable			Enable	×	×	×	○	×	×	×	
						Disable	×	×	×	○	×	×	×	
			Interval			1	×	×	×	○	×	×	×	
						2	×	×	×	○	×	×	×	
						3	×	×	×	○	×	×	×	
						4	×	×	×	○	×	×	×	
						5	×	×	×	○	×	×	×	
						6	×	×	×	○	×	×	×	
						7	×	×	×	○	×	×	×	
						8	×	×	×	○	×	×	×	
						9	×	×	×	○	×	×	×	
						10	×	×	×	○	×	×	×	
		Analog				Example: 0.00	×	×	×	×	○*5 *13	×	×	
		MultiState Value				Example: Cool/Heat Recovery	×	×	×	×	×	○	×	Cannot be set up for areas.

Setting location		Item		Setting details	Possible range [○ : Visible, △: Conditionally visible, ×: Invisible, Between ( ) : Numerical range]							Remarks
					Management point type							
					Indoor		Ventilator	Dio	Analog (Ao)	MultiState (Mo)	Outdoor	
					Indoor	Hydrobox						
Detailed Setup Screen	HW Supply tab	On/Off (Reheat)		On	×	○	×	×	×	×	×	
				Off	×	○	×	×	×	×	×	
		Low Noise		On	×	○	×	×	×	×	×	
				Off	×	○	×	×	×	×	×	
		Storage Water Setpoint	Celsius	Example: 32°C	×	○*6	×	×	×	×	×	
			Fahrenheit	Example: 90°F	×	○*6	×	×	×	×	×	
		Leaving Water Setpoint (Cool)	Celsius	Example: 30°C	×	○*6	×	×	×	×	×	
			Fahrenheit	Example: 90°F	×	○*6	×	×	×	×	×	
		Leaving Water Setpoint (Heat)	Celsius	Example: 30°C	×	○*6	×	×	×	×	×	
			Fahrenheit	Example: 90°F	×	○*6	×	×	×	×	×	
		Outer Low Noise		On (On)								Schedule setup only.
				Off (Off)								
		Capacity value (%)		100								
				70								
				40								
				0								

*1 Not displayed when Operation Mode (Dry) is disabled.
*2 Not displayed when Ventilation Mode is disabled.
*3 Not displayed when Ventilation Amount/Auto Air Volume is disabled.
*4 Not displayed when Ventilation fresh up is disabled.
*5 The value will be displayed in set unit, upper/lower limit range, displayed accuracy.
*6 Displayed in °C or °F depending on the unit selected in the System Settings.
*7 Not displayed when the filter sign is OFF.
*8 Not displayed when the indoor unit has no heating setpoint setup capability and the Hydrobox has no heating function.
*9 Not displayed when the indoor unit has no cooling setpoint setup capability and the Hydrobox has no cooling function.
*10 Not displayed when the indoor unit has no cooling or heating setpoint setup capability.
*11 Not displayed when R/C Prohibition is disabled in the Service Settings with the central device connected.
*12 Not displayed when Setpoint Restriction is disabled in the Service Settings with the central device connected.
*13 You can check the available value range in detailed Information Screen. (See “4-2 Standard View (Icon) Screen”, the please touch the Details button.)

<Schedule Setup List>

Setting location		Item				Setting details	Possible range [○ : Visible, △: Conditionally visible, ×: Invisible, Between ( ) : Numerical range]								Remarks
							Management point type								
							Indoor		Ventilator	Dio	Analog (Ao)	MultiState (Mo)	Outdoor	Area	
							Indoor	Hydrobox							
Event Setup Screen	Main tab	On/Off				On	○	○	○	○	×	×	×	○	
						Off	○	○	○	○	×	×	×	○	
						Optimum Start									
			Optimum Start	Cool	Celsius	Example: 22.2°C	○*6 (16.0~32.0°C)	×	×	×	×	×	×	○*6 (16.0~32.0°C)	
					Fahrenheit	Example: 72°F	○*6 (60~90°F)	×	×	×	×	×	×	○*6 (60~90°F)	
				Heat	Celsius	Example: 22.2°C	○*6 (16.0~32.0°C)	×	×	×	×	×	×	○*6 (16.0~32.0°C)	
					Fahrenheit	Example: 72°F	○*6 (60~90°F)	×	×	×	×	×	×	○*6 (60~90°F)	
		Cool Setpoint	Setpoint		Celsius	Example: 22.2°C	○*6 (–30.0~70.0°C)	×	×	×	×	×	×	○*6 (–30.0~70.0°C)	
					Fahrenheit	Example: 72°F	○*6 (–22~158°F)	×	×	×	×	×	×	○*6 (–22~158°F)	
			Shift Amount		Celsius	Decrease the temperature settings by 4°C	○*6	×	×	×	×	×	×	○*6	
						Decrease the temperature settings by 3°C	○*6	×	×	×	×	×	×	○*6	
						Decrease the temperature settings by 2°C	○*6	×	×	×	×	×	×	○*6	
						Decrease the temperature settings by 1°C	○*6	×	×	×	×	×	×	○*6	
						Increase the temperature settings by 1°C	○*6	×	×	×	×	×	×	○*6	
						Increase the temperature settings by 2°C	○*6	×	×	×	×	×	×	○*6	
						Increase the temperature settings by 3°C	○*6	×	×	×	×	×	×	○*6	
						Increase the temperature settings by 4°C	○*6	×	×	×	×	×	×	○*6	
					Fahrenheit	Decrease the temperature settings by 7°F	○*6	×	×	×	×	×	×	○*6	
						Decrease the temperature settings by 6°F	○*6	×	×	×	×	×	×	○*6	
						Decrease the temperature settings by 5°F	○*6	×	×	×	×	×	×	○*6	
						Decrease the temperature settings by 4°F	○*6	×	×	×	×	×	×	○*6	
						Decrease the temperature settings by 3°F	○*6	×	×	×	×	×	×	○*6	
						Decrease the temperature settings by 2°F	○*6	×	×	×	×	×	×	○*6	
						Decrease the temperature settings by 1°F	○*6	×	×	×	×	×	×	○*6	
						Increase the temperature settings by 1°F	○*6	×	×	×	×	×	×	○*6	
						Increase the temperature settings by 2°F	○*6	×	×	×	×	×	×	○*6	
						Increase the temperature settings by 3°F	○*6	×	×	×	×	×	×	○*6	
						Increase the temperature settings by 4°F	○*6	×	×	×	×	×	×	○*6	
						Increase the temperature settings by 5°F	○*6	×	×	×	×	×	×	○*6	
						Increase the temperature settings by 6°F	○*6	×	×	×	×	×	×	○*6	
						Increase the temperature settings by 7°F	○*6	×	×	×	×	×	×	○*6	
		Heat Setpoint/Setpoint (Hydrobox)	Setpoint		Celsius	Example:22.2°C	○*6 (–30.0~70.0°C)	○*6 (–30.0~70.0°C)	×	×	×	×	×	○*6 (–30.0~70.0°C)	
					Fahrenheit	Example:72°F	○*6 (–22~158°F)	○*6 (–22~158°F)	×	×	×	×	×	○*6 (–22~158°F)	
			Shift Amount		Celsius	Decrease the temperature settings by 4°C	○*6	○*6	×	×	×	×	×	○*6	
						Decrease the temperature settings by 3°C	○*6	○*6	×	×	×	×	×	○*6	
						Decrease the temperature settings by 2°C	○*6	○*6	×	×	×	×	×	○*6	
						Decrease the temperature settings by 1°C	○*6	○*6	×	×	×	×	×	○*6	
						Increase the temperature settings by 1°C	○*6	○*6	×	×	×	×	×	○*6	
						Increase the temperature settings by 2°C	○*6	○*6	×	×	×	×	×	○*6	
						Increase the temperature settings by 3°C	○*6	○*6	×	×	×	×	×	○*6	
						Increase the temperature settings by 4°C	○*6	○*6	×	×	×	×	×	○*6	
					Fahrenheit	Decrease the temperature settings by 7°F	○*6	○*6	×	×	×	×	×	○*6	
						Decrease the temperature settings by 6°F	○*6	○*6	×	×	×	×	×	○*6	
						Decrease the temperature settings by 5°F	○*6	○*6	×	×	×	×	×	○*6	
						Decrease the temperature settings by 4°F	○*6	○*6	×	×	×	×	×	○*6	
						Decrease the temperature settings by 3°F	○*6	○*6	×	×	×	×	×	○*6	
						Decrease the temperature settings by 2°F	○*6	○*6	×	×	×	×	×	○*6	
						Decrease the temperature settings by 1°F	○*6	○*6	×	×	×	×	×	○*6	
						Increase the temperature settings by 1°F	○*6	○*6	×	×	×	×	×	○*6	
						Increase the temperature settings by 2°F	○*6	○*6	×	×	×	×	×	○*6	
						Increase the temperature settings by 3°F	○*6	○*6	×	×	×	×	×	○*6	
						Increase the temperature settings by 4°F	○*6	○*6	×	×	×	×	×	○*6	
						Increase the temperature settings by 5°F	○*6	○*6	×	×	×	×	×	○*6	
						Increase the temperature settings by 6°F	○*6	○*6	×	×	×	×	×	○*6	
						Increase the temperature settings by 7°F	○*6	○*6	×	×	×	×	×	○*6	
		Setback Setpoint	Cool		Enable/ Disable	Enable	○	○	×	×	×	×	×	○	
						Disable	○	○	×	×	×	×	×	○	
					Celsius	Example:26.7°C	○*6 (16.7~35.0°C)	○*6 (16.7~35.0°C)	×	×	×	×	×	○*6 (16.7~35.0°C)	
					Fahrenheit	Example:80°F	○*6 (62~95°F)	○*6 (62~95°F)	×	×	×	×	×	○*6 (62~95°F)	
			Heat		Enable/ Disable	Enable	○	○	×	×	×	×	×	○	
						Disable	○	○	×	×	×	×	×	○	
					Celsius	Example:17.8°C	○*6 (10.0~31.1°C)	○*6 (10.0~31.1°C)	×	×	×	×	×	○*6 (10.0~31.1°C)	
					Fahrenheit	Example:64°F	○*6 (50~88°F)	○*6 (50~88°F)	×	×	×	×	×	○*6 (50~88°F)	

Setting location		Item			Setting details	Possible range [○ : Visible, △: Conditionally visible, ×: Invisible, Between ( ) : Numerical range]								Remarks
						Management point type								
						Indoor							Area	
						Indoor	Hydrobox	Ventilator	Dio	Analog (Ao)	MultiState (Mo)	Outdoor		
Event Setup Screen	Main tab	Timer Extension			ON	○	○	×	×	×	×	×	○	
					OFF	○	○	×	×	×	×	×	○	
		Min. Cool/Heat SP Differential												Only Detailed Setup for centralized monitoring
		Setpoint Tracking Mode												
		Filter Sign												
	A/C tab	Operation Mode			Fan	○	×	×	×	×	×	×	○	
					Cool	○	○	×	×	×	×	×	○	
					Heat	○	○	×	×	×	×	×	○	
					Dependent	○	×	×	×	×	×	×	○	
					Dry	△*1	×	×	×	×	×	×	△*1	
		Fan Speed			Low	○	×	×	×	×	×	×	○	
					Medium Low	○	×	×	×	×	×	×	○	
					Medium	○	×	×	×	×	×	×	○	
					Medium High	○	×	×	×	×	×	×	○	
					High	○	×	×	×	×	×	×	○	
					Auto	○	×	×	×	×	×	×	○	
		Airflow Direction												Only Detailed Setup for centralized monitoring
		Setback Recovery Temp												
		Setpoint Restriction												
	R/C Prohibition tab	R/C Prohibition	On/Off		Permitted	○	○	○	×	×	×	×	○	
					Off Only	○	○	○	×	×	×	×	○	
					Prohibited	○	○	○	×	×	×	×	○	
			Operation Mode		Permitted	○	○	×	×	×	×	×	○	
					Prohibited	○	○	×	×	×	×	×	○	
			Setpoint		Permitted	○	○	×	×	×	×	×	○	
					Prohibited	○	○	×	×	×	×	×	○	
	Ventilator tab	Ventilation Amount			Auto (normal)	×	×	△*2*3	×	×	×	×	○	When Ventilation Mode is disabled for the selected Ventilator management point, the tab itself is hidden.
					Low (normal)	×	×	△*2	×	×	×	×	○	
					High (normal)	×	×	△*2	×	×	×	×	○	
					Auto (fresh up)	×	×	△*2*3*4	×	×	×	×	○	
					Low (fresh up)	×	×	△*2*4	×	×	×	×	○	
					High (fresh up)	×	×	△*2*4	×	×	×	×	○	
		Ventilation Mode			Automatic	×	×	△*2	×	×	×	×	○	
					ERVentilation	×	×	△*2	×	×	×	×	○	
					Bypass	×	×	△*2	×	×	×	×	○	
	Ao, Mo tab	Analog			Example: 0.00	×	×	×	×	○*5 *7	×	×	○ (–9999999~ 9999999, w/o unit)	
		MultiState			Example: Cool/Heat Recovery	×	×	×	×	×	○*8	×	×	
		Dio	Repeat Mode											Only Detailed Setup for centralized monitoring
	Other tab	On/Off (Reheat)			On (On)									Only Detailed Setup for centralized monitoring
					Off (Off)									
		Low Noise			On (On)	×	○	×	×	×	×	×	○	
					Off (Off)	×	○	×	×	×	×	×	○	
		Storage Water Setpoint		Celsius	Example: 30°C									Only Detailed Setup for centralized monitoring
				Fahrenheit	Example: 90°F									
		Leaving Water Setpoint (Cool)		Celsius	Example: 30°C	×	○	×	×	×	×	×	○	
				Fahrenheit	Example: 90°F	×	○	×	×	×	×	×	○	
		Leaving Water Setpoint (Heat)		Celsius	Example: 30°C	×	○	×	×	×	×	×	○	
				Fahrenheit	Example: 90°F	×	○	×	×	×	×	×	○	
		Outer Low Noise			On (On)	×	×	×	×	×	×	○	○	
					Off (Off)	×	×	×	×	×	×	○	○	
		Capacity value (%)			100	×	×	×	×	×	×	○	○	
					70	×	×	×	×	×	×	○	○	
					40	×	×	×	×	×	×	○	○	
					0	×	×	×	×	×	×	○	○	

*1 Not displayed when Operation Mode (Dry) is disabled.
*2 Not displayed when Ventilation Mode is disabled.
*3 Not displayed when Ventilation Amount/Auto Air Volume is disabled.
*4 Not displayed when Ventilation fresh up is disabled.
*5 The value will be displayed in set unit, upper/lower limit range, displayed accuracy.
*6 Displayed in °C or °F depending on the unit selected in the System Settings.
*7 You can check the available value range in detailed Information Screen. (See “4-2 Standard View (Icon) Screen”, the please touch the Details button.)
*8 MultiState value set up in Service Settings (Mgmt. Point Data Register).

<Interlocking Control Setup List>

Setting location		Item			Setting details	Possible range [○ : Visible, △: Conditionally visible, ×: Invisible, Between ( ) : Numerical range]								Remarks
						Management point type								
						Indoor		Ventilator	Dio	Analog (Ao)	MultiState (Mo)	Outdoor	Area	
						Indoor	Hydrobox							
Action Setup Screen	Main tab	On/Off			On	○	○	○	○	×	×	×	○	
					Off	○	○	○	○	×	×	×	○	
					Optimum Start									Schedule setup only
			Optimum Start											
		Cool Setpoint	Setpoint	Celsius	Example: 22.2°C	○*6 (–30.0~70.0°C)	×	×	×	×	×	×	○*6 (–30.0~70.0°C)	
				Fahrenheit	Example: 72°F	○*6 (–22~158°F)	×	×	×	×	×	×	○*6 (–22~158°F)	
			Shift Amount	Celsius	Decrease the temperature settings by 4°C	○*6	×	×	×	×	×	×	○*6	
					Decrease the temperature settings by 3°C	○*6	×	×	×	×	×	×	○*6	
					Decrease the temperature settings by 2°C	○*6	×	×	×	×	×	×	○*6	
					Decrease the temperature settings by 1°C	○*6	×	×	×	×	×	×	○*6	
					Increase the temperature settings by 1°C	○*6	×	×	×	×	×	×	○*6	
					Increase the temperature settings by 2°C	○*6	×	×	×	×	×	×	○*6	
					Increase the temperature settings by 3°C	○*6	×	×	×	×	×	×	○*6	
					Increase the temperature settings by 4°C	○*6	×	×	×	×	×	×	○*6	
				Fahrenheit	Decrease the temperature settings by 7°F	○*6	×	×	×	×	×	×	○*6	
					Decrease the temperature settings by 6°F	○*6	×	×	×	×	×	×	○*6	
					Decrease the temperature settings by 5°F	○*6	×	×	×	×	×	×	○*6	
					Decrease the temperature settings by 4°F	○*6	×	×	×	×	×	×	○*6	
					Decrease the temperature settings by 3°F	○*6	×	×	×	×	×	×	○*6	
					Decrease the temperature settings by 2°F	○*6	×	×	×	×	×	×	○*6	
					Decrease the temperature settings by 1°F	○*6	×	×	×	×	×	×	○*6	
					Increase the temperature settings by 1°F	○*6	×	×	×	×	×	×	○*6	
					Increase the temperature settings by 2°F	○*6	×	×	×	×	×	×	○*6	
					Increase the temperature settings by 3°F	○*6	×	×	×	×	×	×	○*6	
					Increase the temperature settings by 4°F	○*6	×	×	×	×	×	×	○*6	
					Increase the temperature settings by 5°F	○*6	×	×	×	×	×	×	○*6	
					Increase the temperature settings by 6°F	○*6	×	×	×	×	×	×	○*6	
					Increase the temperature settings by 7°F	○*6	×	×	×	×	×	×	○*6	
		Heat Setpoint/Setpoint (Hydrobox)	Setpoint	Celsius	Example:22.2°C	○*6 (–30.0~70.0°C)	○*6 (–30.0~70.0°C)	×	×	×	×	×	○*6 (–30.0~70.0°C)	
				Fahrenheit	Example:72°F	○*6 (–22~158°F)	○*6 (–22~158°F)	×	×	×	×	×	○*6 (–22~158°F)	
			Shift Amount	Celsius	Decrease the temperature settings by 4°C	○*6	○*6	×	×	×	×	×	○*6	
					Decrease the temperature settings by 3°C	○*6	○*6	×	×	×	×	×	○*6	
					Decrease the temperature settings by 2°C	○*6	○*6	×	×	×	×	×	○*6	
					Decrease the temperature settings by 1°C	○*6	○*6	×	×	×	×	×	○*6	
					Increase the temperature settings by 1°C	○*6	○*6	×	×	×	×	×	○*6	
					Increase the temperature settings by 2°C	○*6	○*6	×	×	×	×	×	○*6	
					Increase the temperature settings by 3°C	○*6	○*6	×	×	×	×	×	○*6	
					Increase the temperature settings by 4°C	○*6	○*6	×	×	×	×	×	○*6	
				Fahrenheit	Decrease the temperature settings by 7°F	○*6	○*6	×	×	×	×	×	○*6	
					Decrease the temperature settings by 6°F	○*6	○*6	×	×	×	×	×	○*6	
					Decrease the temperature settings by 5°F	○*6	○*6	×	×	×	×	×	○*6	
					Decrease the temperature settings by 4°F	○*6	○*6	×	×	×	×	×	○*6	
					Decrease the temperature settings by 3°F	○*6	○*6	×	×	×	×	×	○*6	
					Decrease the temperature settings by 2°F	○*6	○*6	×	×	×	×	×	○*6	
					Decrease the temperature settings by 1°F	○*6	○*6	×	×	×	×	×	○*6	
					Increase the temperature settings by 1°F	○*6	○*6	×	×	×	×	×	○*6	
					Increase the temperature settings by 2°F	○*6	○*6	×	×	×	×	×	○*6	
					Increase the temperature settings by 3°F	○*6	○*6	×	×	×	×	×	○*6	
					Increase the temperature settings by 4°F	○*6	○*6	×	×	×	×	×	○*6	
					Increase the temperature settings by 5°F	○*6	○*6	×	×	×	×	×	○*6	
					Increase the temperature settings by 6°F	○*6	○*6	×	×	×	×	×	○*6	
					Increase the temperature settings by 7°F	○*6	○*6	×	×	×	×	×	○*6	
		Setback Setpoint	Cool	Enable/ Disable	Enable	○	○	×	×	×	×	×	○	
					Disable	○	○	×	×	×	×	×	○	
				Celsius	Example:26.7°C	○*6 (16.7~35.0°C)	○*6 (16.7~35.0°C)	×	×	×	×	×	○*6 (16.7~35.0°C)	
				Fahrenheit	Example:80°F	○*6 (62~95°F)	○*6 (62~95°F)	×	×	×	×	×	○*6 (62~95°F)	
			Heat	Enable/ Disable	Enable	○	○	×	×	×	×	×	○	
					Disable	○	○	×	×	×	×	×	○	
				Celsius	Example:17.8°C	○*6 (10.0~31.1°C)	○*6 (10.0~31.1°C)	×	×	×	×	×	○*6 (10.0~31.1°C)	
				Fahrenheit	Example:64°F	○*6 (50~88°F)	○*6 (50~88°F)	×	×	×	×	×	○*6 (50~88°F)	

Setting location		Item			Setting details	Possible range [○ : Visible, △: Conditionally visible, ×: Invisible, Between ( ) : Numerical range]								Remarks
						Management point type								
						Indoor							Area	
						Indoor	Hydrobox	Ventilator	Dio	Analog (Ao)	MultiState (Mo)	Outdoor		
Action Setup Screen	Main tab	Timer Extension			ON	○	○	×	×	×	×	×	○	
					OFF	○	○	×	×	×	×	×	○	
		Min. Cool/Heat SP Differential												Only Detailed Setup for centralized monitoring
		Setpoint Tracking Mode												
		Filter Sign												
	A/C tab	Operation Mode			Fan	○	×	×	×	×	×	×	○	
					Cool	○	○	×	×	×	×	×	○	
					Heat	○	○	×	×	×	×	×	○	
					Dependent	○	×	×	×	×	×	×	○	
					Dry	△*1	×	×	×	×	×	×	△*1	
		Fan Speed			Low	○	×	×	×	×	×	×	○	
					Medium Low	○	×	×	×	×	×	×	○	
					Medium	○	×	×	×	×	×	×	○	
					Medium High	○	×	×	×	×	×	×	○	
					High	○	×	×	×	×	×	×	○	
					Auto	○	×	×	×	×	×	×	○	
		Airflow Direction												Only Detailed Setup for centralized monitoring
		Setback Recovery Temp												
		Setpoint Restriction												
	R/C Prohibition tab	R/C Prohibition	On/Off		Permitted	○	○	○	×	×	×	×	○	
					Off Only	○	○	○	×	×	×	×	○	
					Prohibited	○	○	○	×	×	×	×	○	
			Operation Mode		Permitted	○	○	×	×	×	×	×	○	
					Prohibited	○	○	×	×	×	×	×	○	
			Setpoint		Permitted	○	○	×	×	×	×	×	○	
					Prohibited	○	○	×	×	×	×	×	○	
	Ventilator tab	Ventilation Amount			Auto (normal)	×	×	△*2*3	×	×	×	×	○	When Ventilation Mode is disabled for the selected Ventilator management point, the tab itself is hidden.
					Low (normal)	×	×	△*2	×	×	×	×	○	
					High (normal)	×	×	△*2	×	×	×	×	○	
					Auto (fresh up)	×	×	△*2*3*4	×	×	×	×	○	
					Low (fresh up)	×	×	△*2*4	×	×	×	×	○	
					High (fresh up)	×	×	△*2*4	×	×	×	×	○	
		Ventilation Mode			Automatic	×	×	△*2	×	×	×	×	○	
					ERVentilation	×	×	△*2	×	×	×	×	○	
					Bypass	×	×	△*2	×	×	×	×	○	
	Ao, Mo tab	Analog			Example: 0.00	×	×	×	×	○*5 *7	×	×	○ (–9999999~ 9999999, w/o unit)	
		MultiState			Example: Cool/Heat Recovery	×	×	×	×	×	○*8	×	×	
		Dio	Repeat Mode											Only Detailed Setup for centralized monitoring
	HW Supply tab	On/Off (Reheat)			On (On)									Only Detailed Setup for centralized monitoring
					Off (Off)									
		Low Noise			On (On)	×	○	×	×	×	×	×	○	
					Off (Off)	×	○	×	×	×	×	×	○	
		Storage Water Setpoint		Celsius	Example: 30°C									Only Detailed Setup for centralized monitoring
				Fahrenheit	Example: 90°F									
		Leaving Water Setpoint (Cool)		Celsius	Example: 30°C	×	○*6 (–30.0~70.0°C)	×	×	×	×	×	○*6 (–30.0~70.0°C)	
				Fahrenheit	Example: 90°F	×	○*6 (–22~158°F)	×	×	×	×	×	○*6 (–22~158°F)	
		Leaving Water Setpoint (Heat)		Celsius	Example: 30°C	×	○*6 (25.0~80.0°C)	×	×	×	×	×	○*6 (25.0~80.0°C)	
				Fahrenheit	Example: 90°F	×	○*6 (77~176°F)	×	×	×	×	×	○*6 (77~176°F)	
		Outer Low Noise			On (On)									Schedule setup only.
					Off (Off)									
		Capacity value (%)			100									
					70									
					40									
					0									

*1 Not displayed when Operation Mode (Dry) is disabled.
*2 Not displayed when Ventilation Mode is disabled.
*3 Not displayed when Ventilation Amount/Auto Air Volume is disabled.
*4 Not displayed when Ventilation fresh up is disabled.
*5 The value will be displayed in set unit, upper/lower limit range, displayed accuracy.
*6 Displayed in °C or °F depending on the unit selected in the System Settings.
*7 You can check the available value range in detailed information Screen. (See “4-2 Standard View (Icon) Screen”, the please touch the Details button.)
*8 MultiState value set up in Service Settings (Mgmt. Point Data Register).

<Interlocking Control for Condition Setup Screen>

Setting location		Item					Setting details	Possible range [○: Visible, ×: Invisible, Between ( ) : Numerical range]					
								Condition to detect					
								On/Off	Equipment error	Analog upper/lower limit error	Operation mode	Analog value condition Single	MultiState Value
Condition Setup Screen	On/Off / Error tab	Required condition for On/Off / Error					On/Error	○	○	○	×	×	×
							Off/Normal	○	○	○	×	×	×
	Operation Mode tab	Operation Mode					Cool, Dry	×	×	×	○	×	×
							Heat	×	×	×	○	×	×
							Fan	×	×	×	○	×	×
	Analog Value tab	Analog Value 1					Example: Outdoor Temp1	×	×	×	×	○	×
		Inequality Sign Selection					>	×	×	×	×	○	×
							<	×	×	×	×	○	×
		Analog Value2	Const Value	Temperature	Celsius		Example: 0.0°C	×	×	×	×	○ (–512.0~512.0) *1*2*4 Step: 0.1	×
					Fahrenheit		Example: 32°F	×	×	×	×	○ (–890~954) *1*2*4 Step: 1	×
				Generic			Example: 0.00	×	×	×	×	○ (–9999999~9999999) *1*4 Step: 0.01	×
			Mgmt. Point				Example: Room Temp1	×	×	×	×	○ *3	×
				Offset	Temperature	Celsius	Example: 0.0	×	×	×	×	○ (–512.0~512.0) *1*2*3 Step: 0.1	×
						Fahrenheit	Example: 0	×	×	×	×	○ (–922~922) *1*2*3 Step: 1	×
					Generic		Example: 0.00	×	×	×	×	○ (–9999999~9999999) *1*3 Step: 0.01	×
			Hysteresis		Temperature	Celsius	Example: 1.0	×	×	×	×	○ (0.0~512.0) *1*2 Step: 0.1	×
						Fahrenheit	Example: 1	×	×	×	×	○ (0~922) *1*2 Step: 1	×
					Generic		Example: 1.00	×	×	×	×	○ (0~9999999) *1 Step: 0.01	×
	MultiState Value tab	MultiState Value			String corresponding to PV Value: 1		○*5	×	×	×	×	×	○
					String corresponding to PV Value: 2			×	×	×	×	×	○
					String corresponding to PV Value: 3			×	×	×	×	×	○
					String corresponding to PV Value: 4			×	×	×	×	×	○
					String corresponding to PV Value: 5			×	×	×	×	×	○
					String corresponding to PV Value: 6			×	×	×	×	×	○
					String corresponding to PV Value: 7			×	×	×	×	×	○
					String corresponding to PV Value: 8			×	×	×	×	×	○
					String corresponding to PV Value: 9			×	×	×	×	×	○
					String corresponding to PV Value: 10			×	×	×	×	×	○

*1 Displayed in accordance with the analog type of the selected management point.
*2 Displayed in °C or °F depending on the unit selected in the System Settings.
*3 Grayed out when Const Value is selected.
*4 Grayed out when Mgmt. Point is selected.
*5 The first item, in order from PV Value: 1, with a corresponding string becomes the default value.

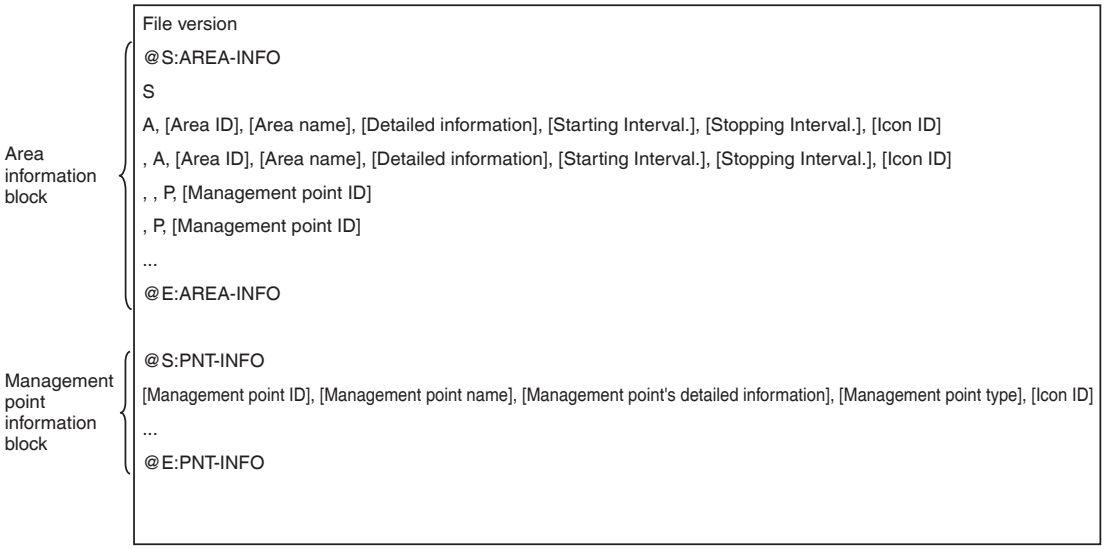
<Web Access Users Setup List>

[Legend] ○ : Visible, × : Invisible

Screen		Function		Use of the Web	Remarks
Standard View Screen	Icon View	Area Group operations		○	
		Area Group monitoring		○	
		Mgmt. Pts. operation		○	
		Mgmt. Pts. monitoring		○	
	List View	Area Group operations		○	
		Area Group monitoring		○	
		Mgmt. Pts. operation		○	
		Mgmt. Pts. monitoring		○	
	Layout View	Area Group operations		○	Optional.
		Area Group monitoring		○	
		Mgmt. Pts. operation		○	
		Mgmt. Pts. monitoring		○	
Menu List Screen	Automatic Ctrl. Tab	Schedule		○	
		Interlocking Control		○	Dealer Option.
		Emergency Stop		○	
		Auto Changeover		○	
		Timer Extension		○	
	System Settings Tab	Area Setup		○	Not possible to input and output of the CSV file.
		Mgmt. Pts. Setup		○	
		Maintenance		○	
		Network		○	
		Setting of e-mail		○	
		Web Access Users		○	
		Passwords			
			Administrator password	○	
			Screen unlock password	○	Screen unlock function is only available in iTM.
		Screensaver Setup		×	only available in iTM.
		Hardware Setup		×	only available in iTM.
		Touch Panel Calibration Setup		×	only available in iTM.
		Time/DST Setup		○	
		Regional		×	Locale setting of the iTM is not available. However, in the user settings for the Web login screen, each Web user can set the locale of Web-based remote management capabilities.
		Confirmation Dialog Setup		○	
		Backup		×	only available in iTM.
		Remote Maintenance		×	only available in iTM.
		Version Information		○	
	Operation Mgmt. Tab	History			
			History display	○	
			History output	○	File output is done on the hard disk of the PC.
		Power Proportional Distribution			
			PPD data output	○	File output is done on the hard disk of the PC.
			Excluded Time setting	○	
		Setup Export		○	File output is done on the hard disk of the PC.
		Operation Data Export		○	File output is done on the hard disk of the PC.
	Energy Navigator Tab	Energy Budget/Actual Management		○	Optional functions. Maximum output period of Mgmt. point data is 2 months.
		Equipment operation Management		○	
		Data output			
			Energy Data	○	
			Management Point Data	○	
Web Login screen	User Setting	Locale Setting			The each Web user, Locale setting of Web remote management function can be.
			Date display	○	
			Time display	○	
			Decimal point/CSV separator	○	
			Icon color	○	

3. Area Setup CSV file format

The format of the CSV file used for saving and loading is as follows.



Area information block

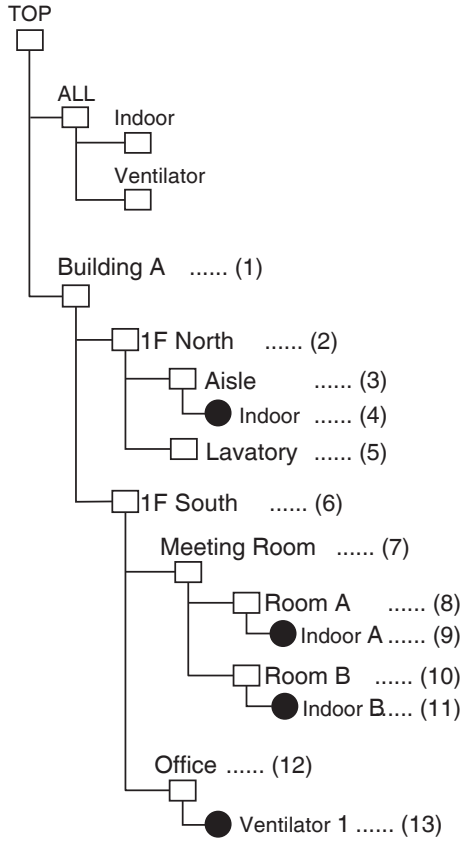
- The area information block is the section that starts with the @S: AREA-INFO line and ends with the @E: AREA-INFO line.
- All areas are described with the identifier “S”.
- The line following the line that starts with “S” does not start with any separator (a comma in the above example). This line must contain the identifier “A” or “P”.
- Information on one area or one management point is described in a single line.
- The area information identifier is described as the single-byte character “A”, while the management point information identifier is described as a single-byte character “P”.
- The number of separators prefixed to “A” or “P” indicates the hierarchical level of the parent area.
- No separator is prefixed to “A” or “P” of the management point information that belongs to the area immediately below the top area.
- One separator is prefixed to “A” or “P” of the area or management point information that belongs to the area in the hierarchical level 1.
- Two separators are prefixed to “A” or “P” of the area or management point information that belongs to the area in the hierarchical level 2.
  (A maximum of 9 separators can be prefixed to “A” while a maximum of 10 separators can be prefixed to “P”.)
- The first line of the area information block must contain area/management point information located in the hierarchical level 1.
  (This line always starts with “A”, “P”, or “S”.)

Management point information block

- Because the management point information block is displayed as reference information (treated as a comment), changing data in this block and then loading the CSV file does not affect the management point information.

<Examples of area configuration and CSV file format>

Area configuration example



CSV file format example

	Target No.	Supplementary explanation
Area CSV-file iTM Ver.1		File version information
@S:AREA-INFO		Area information block start
S		All Area
A,113,Building A,,0,0,000	·····(1)	
,A,112,1F North,,0,0,000	·····(2)	
,,A,114,Aisle,,0,0,000	·····(3)	
,,,P,101	·····(4)	
,,A,122,Lavatoty,,0,0,000	·····(5)	
,A,117,1F South,,0,0,000	·····(6)	
,,A,118,Meeting Room,,0,0,000	·····(7)	
,,,A,125,Room A,,0,0,000	·····(8)	
,,,,P,102	·····(9)	
,,,A,126,Room B,,0,0,000	·····(10)	
,,,,P,103	·····(11)	
,,A,128,Office,,0,0,000	·····(12)	
,,,P,111	·····(13)	
@E:AREA-INFO		Area information block end
@S:PNT-INFO		Management point information block start
101,Indoor,1F North Area,Indoor,101		
102,Indoor A,1F South Area,Indoor,101		
103,Indoor B,1F South Area,Indoor,101		
111,Ventilator 1,1F South Area,Ventilator,201		
@E:PNT-INFO		Management point information block end

4. Historical Data Item List

Large classification	Middle classification	History type	History Record No.	Message*1		
				Content	Name	Instructed by*2
A. System	Start Up	Control	A001	Start Up	Controller	
	Login/Logout	Control	A011	Logged in ([IP Address of PC])	[Web User Name]	
		Control	A012	Logged out ([IP Address of PC])	[Web User Name]	
		Control	A013	Web user login locked for several minutes. ([IP Address of PC])	[Web User Name]	
	Area Setup	Settings	A021	Area added	[Area Name]	[Setup Source]
		Settings	A022	Area deleted	[Area Name]	[Setup Source]
		Settings	A023	Area renamed ([Area Name After Renaming])	[Area Name Before Renaming]	[Setup Source]
		Settings	A024	Members modified	[Area Name]	[Setup Source]
		Settings	A025	Seq ON Interval modified ([Starting Interval] sec)	[Area Name]	[Setup source]
		Settings	A026	Seq OFF Interval modified ([Stopping Interval] sec)	[Area Name]	[Setup Source]
		Settings	A027	Area moved	[Area Name]	[Setup Source]
		Settings	A028	Area CSV ipt	Area	[Setup Source]
	Mgmt. Pts.	Settings	A031	Modify Management Point Name ([Management Point Name After Renaming])	[Management Point Name Before Renaming]	[Setup Source]
	Maintenance	Settings	A041	[Maintenance mode/Clear Maintenance mode]	[Management Point Name]	[Status Source]
	Network	Settings	A051	Modify Host name ([Host Name])	Network	[Setup Source]
		Settings	A052	Modify IP address ([IP Address])	Network	[Setup Source]
		Settings	A053	Modify Subnet mask ([Subnet Mask])	Network	[Setup Source]
		Settings	A054	Modify Default gateway ([Default Gateway])	Network	[Setup Source]
		Settings	A055	Modify Preferred DNS ([Preferred DNS])	Network	[Setup Source]
		Settings	A056	Modify Alternate DNS ([Alternate DNS])	Network	[Setup Source]
		Settings	A057	Web Svr Port No. modified ([Web Svr Port No.])	Network	[Setup Source]
	E-mail	Settings	A061	E-mail [enabled/disabled] (E-mail address (To): [Destination No.])	E-mail	[Setup Source]
		Control	A062	E-mail sent. (E-mail address (To): [Destination No.] Mail ID: [E-mail ID])	E-mail	
		Error	A063	Failed to send E-mail. (E-mail address (To): [Destination No.] Mail ID: [E-mail ID])	E-mail	
		Error	A064	Resend E-mail. (E-mail address (To): [Destination No.] Mail ID: [E-mail ID])	E-mail	
		Error	A065	Communication timeout. (E-mail address (To): [Destination No.] Mail ID: [E-mail ID])	E-mail	
		Error	A066	Unable to connect to POP server. (E-mail address (To): [Destination No.] Mail ID: [E-mail ID])	E-mail	
		Error	A067	Unable to connect to SMTP server. (E-mail address (To): [Destination No.] Mail ID: [E-mail ID])	E-mail	
		Error	A068	User credentials for POP server failed. (E-mail address (To): [Destination No.] Mail ID: [E-mail ID])	E-mail	
		Error	A069	SMTP server did not respond. (E-mail address (To): [Destination No.] Mail ID: [E-mail ID])	E-mail	
		Error	A070	Connection was rejected by SMTP server. (E-mail address (To): [Destination No.] Mail ID: [E-mail ID])	E-mail	
		Error	A071	SMTP user authentication failed. (E-mail address (To): [Destination No.] Mail ID: [E-mail ID])	E-mail	
		Error	A072	Other authentication method is required. (E-mail address (To): [Destination No.] Mail ID: [E-mail ID])	E-mail	
	Web Access Settings	Settings	A081	Web User registered	[Web User Name]	[Setup Source]
		Settings	A082	Web User deleted	[Web User Name]	[Setup Source]
		Settings	A083	Web Pwd modified	[Web User Name]	[Setup Source]
	Passwords	Settings	A091	Password for administrator [Enabled/Disabled]	Password	[Setup Source]
		Settings	A092	Modify Password for administrator	Password	[Setup Source]
		Settings	A093	Password to release Screen Lock [Enabled/Disabled]	Password	[Setup Source]
		Settings	A094	Modify Password to release Screen Lock	Password	[Setup Source]
	Screensaver Method	Settings	A101	Screen Saver modified ([Screensaver Method])	Screensaver Settings	[Setup Source]
		Settings	A102	Modify Delay Time when idle modified ([Delay Time] min)	Screensaver Settings	[Setup Source]
		Settings	A103	Screen Saver OFF on error [Enabled/Disabled]	Screensaver Settings	[Setup Source]
	Hardware Settings	Settings	A111	ScLum modified ([ScLum])	Hardware	[Setup Source]
		Settings	A112	Buzzer Volume modified ([Buzzer Volume])	Hardware	[Setup Source]
		Settings	A113	Buzzer Duration modified ([Buzzer Duration])	Hardware	[Setup Source]
		Settings	A114	Touch Vol modified ([Touch Vol])	Hardware	[Setup Source]
	Time/DST	Settings	A121	Time modified ([Time After Modification])	Time	[Setup Source]
		Settings	A122	Daylight Saving Time Settings [Enabled/Disabled]	Time	[Setup Source]
		Settings	A123	Daylight Saving Time Settings modified (From: [Daylight Saving Time Start Date] To: [Daylight Saving Time End Date])	Time	[Setup Source]
	Locale	Settings	A132	Display Date modified ([Date])	Locale	[Setup Source]
		Settings	A133	Time modified ([Time])	Locale	[Setup Source]
		Settings	A134	Temp modified (°C/°F)	Locale	[Setup Source]
		Settings	A135	DecPnt/CSV Sep modified (DecPt: [DecPt] CSV Sep: [CSV Sep])	Locale	[Setup Source]
		Settings	A136	Icon Color modified ([Icon Color])	Locale	[Setup Source]
	Confirm Setup	Settings	A141	Confirm Dialogue [Enabled/Disabled]	Confirm	[Setup Source]
	Backup	Control	A151	Backup executed.	Backup	
		Control	A152	Backup interrupted.	Backup	
	Contact Information Setup	Settings	A171	Modify Contact (Line [Line No.])	Contact	[Setup Source]

Large classification	Middle classification	History type	History Record No.	Message*1		
				Content	Name	Instructed by*2
B. Monitoring/ Operation	Error (including External/ BACnet)	Error	B001	Instrument Combination Err	DIII-NET	
		Error	B002	Address Duplicated	DIII-NET	
		Error	B003	D3 port master duplication error	DIII-NET	
		Error	B004	D3 Plus Adptr Comm Err	DIII-NET	
		Error	B005	Instr Comm Err	DIII-NET	
		Error	B006	D3 port autoconfig. error	DIII-NET	
		Error	B007	D3 port transmission buffer overflow	DIII-NET	
		Error	B010	A/C error Detection (Unit[Unit No.])	[Management Point Name]	
		Error	B011	A/C error detected (Unit[Unit No.])	[Management Point Name]	
		Release	B012	A/C error Restoration	[Management Point Name]	
		Error	B013	A/C error Detection	[Management Point Name]	
		Error	B014	A/C error detected	[Management Point Name]	
		Error	B016	Equipment error Detection	[Management Point Name]	
		Error	B017	Equipment error detected	[Management Point Name]	
		Release	B018	Equipment error Restoration	[Management Point Name]	
		Error	B019	Analog upper limit error detected	[Management Point Name]	
		Error	B020	Analog lower limit error detected	[Management Point Name]	
		Release	B021	Analog upper limit error Restoration	[Management Point Name]	
		Release	B022	Analog lower limit error Restoration	[Management Point Name]	
		Error	B023	Communication error detected	[Management Point Name]	
		Release	B024	Communication restored	[Management Point Name]	
	BACnet-related Error	Error	B031	Communication error detected*3	[Management Point Name]	
		Release	B032	Communication restored	[Management Point Name]	
	Status Change	Status	B101	[On/Off]	[Management Point Name]	[Status Source]*4
		Status	B102	Operation mode changed ([Operation Mode])	[Management Point Name]	[Status Source]
		Status	B103	Setpoint changed ([Setpoint]°F)	[Management Point Name]	[Status Source]
		Status	B104	Fan speed changed ([Fan])	[Management Point Name]	
		Status	B105	Airflow Direction ([Airflow Direction])	[Management Point Name]	
		Status	B106	Rmt Ctlr setup ([Rmt Ctlr enabled/Rmt Ctlr disabled/Rmt Ctlr enable stop] Mode enabled/Mode disabled] [Temp. enabled/Temp. disabled])	[Management Point Name]	
		Status	B107	Filter Sign Reset	[Management Point Name]	
		Status	B108	[Start/End] Timer Extension	[Management Point Name]	
		Status	B109	Cool set temp limit [enabled/disabled] ([Cool Set Temp Limit Range])	[Management Point Name]	
		Status	B110	Heat set temp limit [enabled/disabled] ([Heat Set Temp Limit Range])	[Management Point Name]	
		Status	B112	Ventilation mode changed ([Ventilation Mode])	[Management Point Name]	
		Status	B113	Ventilation amount changed ([Ventilation Amount])	[Management Point Name]	
		Status	B114	Repeat Mode [enabled/disabled] ([Interval] min)	[Management Point Name]	
		Status	B115	Modify [Analog Value] [°C/°F]	[Management Point Name]	
		Status	B116	Cool Setpoint changed ([Setpoint] °C/°F)	[Management Point Name]	[Status Source]
		Status	B117	Heat Setpoint changed ([Setpoint] °C/°F)	[Management Point Name]	[Status Source]
		Status	B118	Min.Cool/Heat SP Differential changed ([Min.Cool/Heat SP Differential] °C/°F)	[Management Point Name]	
		Status	B119	Setpoint Tracking Mode [enabled/disabled]	[Management Point Name]	
		Status	B120	Setback (Cool) [enabled/disabled]	[Management Point Name]	
		Status	B121	Setback (Heat) [enabled/disabled]	[Management Point Name]	
		Status	B122	Setback Recovery Temp (Cool) changed ([Setback Recovery Temp (Cool)] °C/°F)	[Management Point Name]	
		Status	B123	Setback Recovery Temp (Heat) changed ([Setback Recovery Temp (Heat)] °C/°F)	[Management Point Name]	
		Status	B124	Setback Cool changed ([Setback Temp (Cool)] °C/°F)	[Management Point Name]	
		Status	B125	Setback Heat changed ([Setback Temp (Heat)] °C/°F)	[Management Point Name]	
		Status	B126	Modify [MultiState Value]	[Management Point Name]	
		Status	B127	Modify [Analog Value] [°C/°F]	[Management Point Name]	
		Status	B128	Energy Saving [enabled/disabled]	[Management Point Name]	
		Status	B130	[Reheat On/Reheat Off]	[Management Point Name]	[Status Source]
		Status	B131	Leaving water setpoint (Cool) changed ([Leaving Water setpoint (Cool)]°C/°F)	[Management Point Name]	[Status Source]
		Status	B132	Leaving water setpoint (Heat) changed ([Leaving Water setpoint (Heat)]°C/°F)	[Management Point Name]	[Status Source]
		Status	B133	Storage water setpoint changed ([Storage Water setpoint]°C/°F)	[Management Point Name]	[Status Source]
		Status	B135	[Low Noise On/Low Noise Off]	[Management Point Name]	[Status Source]
		Status	B136	[Storage On/Storage Off]	[Management Point Name]	
		Status	B137	Low Noise [On/Off]	[Management Point Name]	
		Status	B138	Capacity value [100/70/40/0]%	[Management Point Name]	[Status Source]

Large classification	Middle classification	History type	History Record No.	Message*1		
				Content	Name	Instructed by*2
C. Automatic Ctrl.	Schedule control	Settings	C001	Schedule [Enabled/Disabled]	[Program Name]	[Setup Source]
		Control	C002	Schedule executed	[Program Name]	Schedule
		Control	C004	On by Optimum Start	[Program Name]	Optimum Start
	Interlocking	Settings	C011	Interlocking control [Enabled/Disabled]	[Program Name]	[Setup Source]
		Control	C012	Ilk Ctrl executed	[Program Name]	Interlocking Control
	Emergency Stop	Settings	C021	Emergency Stop [Enabled/Disabled]	[Program Name]	[Setup Source]
		Control	C022	Perform Emergency stop	[Program Name]	Emergency Stop
		Error	C023	Signal on	[Program Name]	
		Release	C024	Signal off	[Program Name]	
		Release	C025	Forcibly release Emergency stop	[Program Name]	[Unit/Web: User Name]
		Release	C026	Release Emergency stop	[Program Name]	[Unit/Web: User Name]
	Automatic Change Over	Settings	C031	Automatic Change Over [enabled/disabled]	[Program Name]	[Setup Source]
	Timer Extension	Control	C071	Timer Start	[Management Point Name]	Timer Extension Settings
		Control	C072	Stopped by Timer Extension	[Management Point Name]	Timer Extension Settings
	Energy Save	Control	C081	Peak Cut: Ctrl. Level[Level], Est.kW: [Estimated kW] kW, Target kW: [Target kW] kW	O/D Unit	Energy Save
		Control	C082	Peak Cut: Resumed, Est.kW: [Est.kW] kW, Target kW: [Target kW] kW	O/D Unit	Energy Save
		Settings	C083	Suspend Energy Saving Control	Energy Save	[Setup Source]/Auto Ctrl
		Settings	C084	Resume Energy Saving Control	Energy Save	[Setup Source]/Auto Ctrl
	Higher-level Central Control	Control	C101	Central Control is enabled.	DIII-NET	
		Control	C102	Central Control is disabled.	DIII-NET	
	Demand Control	Settings	C121	Setpoint shift control (Enabled)	Power Limit control	[Setup Source]
		Settings	C122	Setpoint shift control (Disabled)	Power Limit control	[Setup Source]
		Settings	C123	ON/OFF control (Enabled)	Power Limit control	[Setup Source]
		Settings	C124	ON/OFF control (Disabled)	Power Limit control	[Setup Source]
		Settings	C125	Outdoor unit capacity control (Enabled)	Power Limit control	[Setup Source]
		Settings	C126	Outdoor unit capacity control (Disabled)	Power Limit control	[Setup Source]
		Control	C134	Power Limit control: [Ctrl.Level]	Power Limit control	
D. Operation Mgmt.	Energy Navigator	Error	D001	Database save failed	Controller	
		Settings	D002	Group Settings modified	[Group Name]	[Setup Source]
		Settings	D003	Planned energy consumption modified	[Group Name]	[Setup Source]
		Settings	D004	Consumed energy modified	[Group Name]	[Setup Source]
	Power Proportional Distribution	Error	D051	Invalid PPD data (Pw ovrflow)	[Management Point Name]	
		Error	D052	Invalid PPD data (IdlePw ovrflow)	[Management Point Name]	
		Error	D053	Invalid PPD data (Abnormal electric input pulse)	[Management Point Name]	
		Error	D055	PPD Backup Start.	Controller	
		Error	D056	Corrupt PPD data	Controller	
		Control	D057	Data Clear	Controller	

*1 Text in brackets [ ] indicates a variable. A slash / in brackets [ ] indicates "or", meaning that either one of the values before and after it must be selected.
*2 For the specific Setup/Status Source value, see <Adding "Instructed by" information>.
*3 Based on the error type, the Content column displays only "Communication error detected", or this message with one of the following 3 types of information:
(1) (SF [Object Status Flag])
(2) (Object not found)
(3) (Server communication error)
*4 The Status Source under the Source column is displayed for DIII management points only and not displayed for Unit Di/External/BACnet management points.

<Adding “Instructed by” information>

“Instructed by” information in Setup history (Setup Source)

This information indicates whether the Setup was performed via the iTM unit or Web (Setup Source). When the Setup Source is “Web”, the User Name is also added.

The table below describes the Setup Source.

Setup Source		Text string added to history (USER represents the User Name)
		English
iTM	Unit	iTM
	Web	Web: USER

“Instructed by” information in Status history (Status Source)

This information indicates which function’s instruction caused the status change (Status Source). When the Status Source is “Web”, the User Name is also added.

When the Status Source is other than control equipment other than “iTM”, the “Instructed by” information is not added.

The table below describes the Status Source.

Status Source	Text string added to history (USER represents the User Name)
	English
Unit	iTM
Web	Web: USER
Web I/F	Web I/F
Schedule	Schedule
Interlocking Control	Interlocking Control
Optimum Start	Optimum Start
Emergency Stop	Emergency Stop
Automatic Change Over	Automatic Change Over
Timer Extension Settings	Timer Extension Settings
Setback	Setback
BACnet Server	BACnet
Demand Control	Power Limit control

5. Setup Export CSV File Format

<Schedule Control CSV file format>

A	B	C	D
Blank			
Controller Name	Controller name		
Export Date	Output date		
iTM Version	iTM version		
Program Name	Program name		
Enable/Disable	Program enabled/disabled Enable/ Disable		
Weekly Pattern	• 7Days • Weekday+Saturday+Sunday • Weekday+Weekend • Everyday		
Sun			
Time	P/A	Name	Action
Event time	Area/Mgmt. Point	Area/Mgmt. point name	Event action
Ditto	Ditto	Ditto	Ditto
;	;	;	;
Mon			
Time	P/A	Name	Action
;	;	;	;
Tue			
Time	P/A	Name	Action
;	;	;	;
Wed			
Time	P/A	Name	Action
;	;	;	;
Thu			
Time	P/A	Name	Action
;	;	;	;
Fri			
Time	P/A	Name	Action
;	;	;	;
Sat			
Time	P/A	Name	Action
;	;	;	;

A	B	C	D
Name of the Special day 1			
Time	P/A	Name	Action
;	;	;	;
Name of the Special day 2			
Time	P/A	Name	Action
;	;	;	;
Name of the Special day 3			
Time	P/A	Name	Action
;	;	;	;
Name of the Special day 4			
Time	P/A	Name	Action
;	;	;	;
Name of the Special day 5			
Time	P/A	Name	Action
;	;	;	;
Special Day			
Name of the Special day 1			
Date or Month/Day of the week setting of Special day 1 • Month/day			
;			
Name of the Special day 2			
Date or Month/Day of the week setting of Special day 2			
;			
Name of the Special day 3			
Date or Month/Day of the week setting of Special day 3			
;			
Name of the Special day 4			
Date or Month/Day of the week setting of Special day 4			
;			
Name of the Special day 5			
Date or Month/Day of the week setting of Special day 5			
;			

A	B	C	D	..
Calendar Preview				
+:Week				
Date	1	2	3	..
Year Month	(Example: Special 2)	(Example: +)	(Example: +)	(Example: +)
Ditto	;	;	;	;
Ditto	;	;	;	;
Ditto	;	;	;	;
Ditto	;	;	;	;
Ditto	;	;	;	;
Ditto	;	;	;	;
Ditto	;	;	;	;
Ditto	;	;	;	;
Ditto	;	;	;	;
Ditto	;	;	;	;
Ditto	;	;	;	;
Ditto	;	;	;	;
Blank				
Program Name				
;				

The settings of the second or subsequent program will be output following above.

<Interlocking Control CSV file format>

A	B	C
Blank		
Controller Name	Controller name	
Export Date	Output date	
iTM Version	iTM version	
Program Name	Program name	
Enable/Disable	Program enabled/disabled Enable/Disable	
Input		
Mgmt. Point	Detection Conditions	Timer (min.)
Management point name	Detection Target	Continuous completion time
Ditto	Ditto	Ditto
;	;	;
Output 1		
Detection Conditions	Input condition for interlocked output	
Start/Stop Interval (sec.)	Sequential start/stop interval	
P/A	Name	Action
Area/Mgmt. Point	Area/Management point name	Management point/area action
Ditto	Ditto	Ditto
;	;	;
Output 2		
Detection Conditions	Same as Output 1	
Start/Stop Interval (sec.)	Same as Output 1	
P/A	Name	Action
Same as Output 1	Same as Output 1	Same as Output 1
;	;	;
Blank		
Program Name	Program name	
;	;	;

The settings of the second or subsequent program will be output following above.

<Emergency Stop Control CSV file format>

A	B
Blank	
Controller Name	Controller name
Export Date	Output date
iTM Version	iTM version
Program Name	Program name
Enable/Disable	Program enabled/disabled Enable/Disable
Input	
Release Mode	Release mode Automatic/Manual
Mgmt. Point	
Input signal's management point name	
Ditto	
;	
Output	
Specification method	Output method Listed Points/Unlisted Points
Mgmt. Point	
Name of the registered management point	
Ditto	
;	
Blank	
Program Name	Program name
;	

The settings of the second or subsequent program will be output following above.

∗Default program outputs only the name of default program and enable/disable, at the end of the registered program.

<Auto Changeover CSV file format>

A	B
Blank	
Controller Name	Controller name
Export Date	Output date
iTM Version	iTM version
Changeover Guard Timer (min.)	Changeover Guard Timer 15/30/60
Group Name	Group name
Enable/Disable	Control enable/disable Enable/Disable
Primary Changeover Deadband	Auto Changeover temperature
Secondary Changeover Deadband	Auto Changeover prohibition time disabled temperature
Reference	Reference Method Fixed/Average/Vote/Individual
Heating Override	Enable/Disable is displayed only when Vote is selected in Reference Method.
Mgmt. Point	Weight
Name of management point included in the group	
Ditto	
;	
Blank	
Group Name	
Enable/Disable	
;	

The settings of the second or subsequent program will be output following above.

<Power Proportional Distribution CSV file format>

A	B	C	D	..	..	..
Blank						
Controller Name	Controller name					
Export Date	Output date					
iTM Version	iTM version					
Excluded Time						
Week	Enable/Disable	Excluded Time				
Sun	Excluded Time enable/disable Enable/ Disable	Set up excluded time				
Mon	Ditto	Ditto				
Tue	Ditto	Ditto				
Wed	Ditto	Ditto				
Thu	Ditto	Ditto				
Fri	Ditto	Ditto				
Sat	Ditto	Ditto				
Exceptions to Excluded Time						
+:Normal #:Exceptions to Excluded Time						
Date	1	2	3	..	30	31
Year Month (The format follows the System Settings)	(Example: +)*	(Example: +)	(Example: +)	(Example: +)	(Example: +)	
Ditto	(Example: #)*	(Example: #)	(Example: +)	(Example: +)	(Example: +)	(Example: +)
Ditto	;	;	;	;	;	;
Ditto	;	;	;	;	;	;
Ditto	;	;	;	;	;	;
Ditto	;	;	;	;	;	;
Ditto	;	;	;	;	;	;
Ditto	;	;	;	;	;	;
Ditto	;	;	;	;	;	;
Ditto	;	;	;	;	;	;
Ditto	;	;	;	;	;	;
Ditto	;	;	;	;	;	;
Ditto	;	;	;	;	;	;

*The following symbols indicate whether the “Special Calculation Days” setting is applied or not.

#: Applied

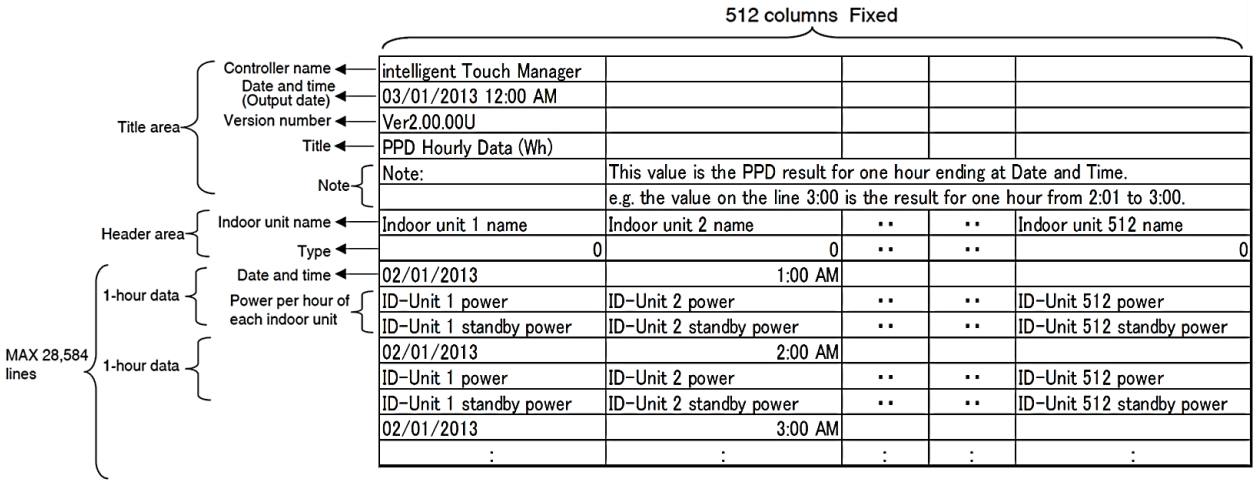
+: Not applied

<Demand Control (Power Limit Control) CSV file format>

A	B	C	D
Blank			
Controller Name	Controller name		
Export Date	Output date and time		
iTM Version	iTM version		
Setpoint shift control			
Enable/Disable	Control enabled/disabled		
Control group	Control group A		
Start Level	Start level 1 to 3		
Shift a mount	Amount of shifting at level 1 0 to 29°F/thermo-OFF in increments of: 1°F	Amount of shifting at level 2 0 to 29°F/thermo-OFF in increments of: 1°F	Amount of shifting at level 3 0 to 29°F/thermo-OFF in increments of: 1°F
Upper Limit of cooling	Cooling Setpoint Upper Limit 60 to 90.0°F Step (increments): 1°F		
Lower Limit of heating	Heating Setpoint Lower Limit 60 to 90.0°F Step (increments): 1°F		
Mgmt. Point			
Management point name			
. . .			
Blank			
Control group	Control group B		
. . .			
Blank			

A	B	C	D
Capacity control			
Enable/Disable	Control enabled/disabled		
Control group	Control group A		
Capacity value	Capacity at level 1 100%/70%/40%/0%	Capacity at level 2 100%/70%/40%/0%	Capacity at level 3 100%/70%/40%/0%
Mgmt. Point			
Management point name			
. . .			
Blank			
Control group	Control group B		
Blank			
. . .			
ON/OFF control			
Enable/Disable	Control enabled/disabled		
Control group	Control group A		
Start Level	1 to 3		
Mgmt. Point	Resumed		
Management point name	Auto recovery enabled/ disabled		
. . .			
Blank			
Control group	Control group B		
. . .			

6. Proportional Power Distribution CSV file



intelligent Touch Manager				
03/01/2013 12:00 AM				
Ver2.00.00U				
PPD Hourly Data (Wh)				
Note:	This value is the PPD result for one hour ending at Date and Time.			
	e.g. the value on the line 3:00 is the result for one hour from 2:01 to 3:00.			
Indoor unit 1 name	Indoor unit 2 name	･･	･･	Indoor unit 512 name
0	0	･･	･･	0
02/01/2013	1:00 AM			
ID-Unit 1 power	ID-Unit 2 power	･･	･･	ID-Unit 512 power
ID-Unit 1 standby power	ID-Unit 2 standby power	･･	･･	ID-Unit 512 standby power
02/01/2013	2:00 AM			
ID-Unit 1 power	ID-Unit 2 power	･･	･･	ID-Unit 512 power
ID-Unit 1 standby power	ID-Unit 2 standby power	･･	･･	ID-Unit 512 standby power
02/01/2013	3:00 AM			
:	:	:	:	:

7. Energy Navigator CSV File Format

The contents of the output data and file format are as follows.

<MngPointData-TurnOffXXX.csv File Format>

A	B	C	D
Blank			
Controller Name	Controller name		
Export Date	Output date (The format for date and time follow the System Settings)		
iTM Version	iTM version		
Data period	Data period		
Data target	Name (Example: All>1F)		
Mgmt. pnt/Area	Area/Mgmt. pnt (Example: Mgmt. pnt)		
Blank			
Administering Rules Name	Administering Rules Name		
Month	Day	Special Day Pattern	
Jan	3rd Wed	Special Day 1	
⋮	⋮	⋮	
Weekly Pattern or Special Day Pattern	Day of the week (Example: Monday, Tuesday, Wednesday, Thursday) or Special Day		
Time Zone	Setpoint (Cool) [°F]	Setpoint (Heat) [°F]	
⋮	⋮	⋮	⋮
Blank			
Mgmt.point name/ Area Name	Occurrence days [Day]	Accrual Time	Consumption [kwh]
⋮	⋮	⋮	⋮

<MngPointData-SetPointXXX.csv File Format>

A	B	C	D
Blank			
Controller Name	Controller name		
Export Date	Output date (The format for date and time follow the System Settings)		
iTM Version	iTM version		
Data period	Data period		
Mgmt. pnt/Area	Area/Mgmt .pnt (Example: Mgmt. pnt)		
Blank			
Administering Rules Name	Administering Rules Name		
Month	Day	Special Day Pattern	
Jan	3rd Wed	Special Day 1	
⋮	⋮	⋮	
Weekly Pattern or Special Day Pattern	Day of the week (Example: Monday, Tuesday, Wednesday, Thursday) or Special Day		
Time Zone	Setpoint (Cool) [°F]	Setpoint (Heat) [°F]	
⋮	⋮	⋮	⋮
Blank			
Mgmt.point name/ Area Name	Occurrence days [Day]	Accrual Time	Consumption [kwh]
⋮	⋮	⋮	⋮

<Energy Data CSV File Format>

The contents of the output data and format are as follows.

- Energy Groups are output in the order they are registered.
- Energy Types are output in the order of: Power ⇒ Gas ⇒ Water ⇒ CO_2 ⇒ New conversion factor name.
- Files within the same energy type are output per unit of energy and in the order of: Energy ⇒ CO_2 ⇒ New conversion factor name.

A	B	C	D	···	
Blank					
Controller Name	Controller name				
Export Date	Output date (The format for date and time follow the System Settings)				
iTM Version	iTM version				
Export Year	Output year				
Blank					
Group Name	Energy group name				
Energy Type	Power				
Energy Unit	Energy				
Estimated energy consumption or Actual energy consumption [kWh/m³]*	150000 (Actual value displayed when data is of the past)				
Planned yearly energy consumption [kWh/m³]*	140000("--" displayed when data is of the past or there are no planned values)				
Month	Data collection start month (Example : 1)			···	Data collection end month (Example : 12)
Actual energy consumption [kWh/m³]*					
Planned energy consumption [kWh/m³]*					
Target energy consumption [kWh/m³]*					
Energy Unit	CO_2				
Month	Data collection start month (Example : 1)			···	Data collection end month (Example :12)
Actual energy consumption [kg-CO_2]*					
Energy Unit	[New conversion factor name]				
Month	Data collection start month (Example : 1)			···	Data collection end month (Example : 12)
Actual energy consumption [New Conversion Type Unit]*					
Month	Data collection start month (Example : 1)			···	Data collection end month (Example : 12)
Management point name 1 [kWh/m³]* (Displays only management point registered with an Energy Group and matching Energy Type)	10000			···	15000
⋮	⋮				
Energy Type	Gas				
⋮	⋮				
Energy Type	CO_2				
Month	Data collection start month (Example : 1)			···	Data collection end month (Example : 12)
CO_2 [kg-CO_2]*	14000				
Energy Type	[New conversion factor name]				
Month	Data collection start month (Example : 1)			···	Data collection end month (Example : 12)
[New Conversion Type Name] factor [New Conversion Type Unit]*					
Group Name	Energy group name				

As many as registered Energy Types.

As many as registered Energy Groups.
(Not output when no Energy Group is registered)

*Converted and displayed according to Energy Type and Energy amount.

Continued on next table

A	B	....	AF
Blank			
Group Name	Energy group name		
Month	Month (Example: 1)		
Energy Type	Power		
Energy Unit	Energy		
Estimated energy consumption or Actual energy consumption [kWh/m^3]*	150000 (Actual value displayed when data is of the past)		
Target energy consumption [kWh/m^3]*	140000 ("--" displayed when data is of the past)		
Day	1		End of the month (Example: 31)
Actual energy consumption [kWh/m^3]*	1000	....	1500
Energy Unit	CO_2		
Day	1		End of the month (Example: 31)
Actual energy consumption [kg-CO_2]*	1000	....	1500
Energy Unit	[New conversion factor name]		
Day	1st		End of the month (Example: 31)
Actual energy consumption [New Conversion Type Unit]*	1000	....	1500
Day	1		End of the month (Example: 31)
Management point name 1 [kWh/m^3]* (Displays only management point registered with an Energy Group and matching Energy Type)	1000	....	1500
⋮	⋮	⋮	⋮
Energy Type	Gas		
	...		
Energy Unit	CO_2		
Day	1		End of the month (Example: 31)
CO_2[kg-CO_2]*	1000	....	1500
Energy Type	[New conversion factor name]		
Day	1		End of the month (Example: 31)
[New Conversion Type Name] factor [New Conversion Type Unit]*	1000	....	1500
Month	Month (Example: 1)		
⋮	⋮		
Group Name	Energy group name		
⋮	⋮		

As many as registered Energy Types.

As many times as the number of months from collection start to collection end, or to the current month.

As many as registered Energy Groups.
(Not output when no Energy Group is registered)

*Converted and displayed according to Energy Type and Energy amount.

<Management Point Data CSV File Format>

The contents of the output data and format are as follows.

- The data are output in the order of the management point name.
- Date, time, and data of each management point are output as hourly data.
- The management points that can be output are as follows.

Indoor unit	Indoor
Ventilator	Ventilator
Dio	Di, D3Di, D3Dio, External Di, External Dio, BACnet Di, BACnet Dio
Analog (Ai)	External Ai, Internal Ai, BACnet Ai
Pulse	Pi, External Pi, Internal Pi

As many as the number of dates included in the Output period.

As many as the number of management points to be output.

A	B	C	D	....
Blank				
Controller Name	Controller name			
Export Date	Output date (The format for date and time follow the System Settings)			
iTM Version	iTM version			
Output Period	Output period			
Blank				
Mgmt. point name	Management point name to output			
Mgmt. point classification	Management point type to output			
Date	Time	Item 1 *	Item 2 *	....
Output date	Output time			
⋮	⋮	⋮	⋮	⋮
Blank				

*Output item varies for each management point type.
For output items, see the tables below.

[Indoor Unit]

Output indoor Unit (DIII) data items

No.	Item	Collection method	Unit	Valid output range
1	Setpoint (Average)	15-minute average of 1-minute data over 1-hour (data collection time)	˚C * ˚F *	0≤Value≤50.0 * 32≤Value≤122 *
2	Setpoint (Maximum Value)	Maximum 1-minute value in 1-hour (data collection time)	˚C * ˚F *	0≤Value≤50.0 * 32≤Value≤122 *
3	Setpoint (Minimum Value)	Minimum 1-minute value in 1-hour (data collection time)	˚C * ˚F *	0≤Value≤50.0 * 32≤Value≤122 *
4	Suction Temperature (Average)	15-minute average of 1-minute data over 1-hour (data collection time)	˚C * ˚F *	–50.0≤Value≤120.0 * –58.0≤Value≤248.0 *
5	Suction Temperature (Maximum Value)	Maximum 1-minute value in 1-hour (data collection time)	˚C * ˚F *	–50.0≤Value≤120.0 * –58.0≤Value≤248.0 *
6	Suction Temperature (Minimum Value)	Minimum 1-minute value in 1-hour (data collection time)	˚C * ˚F *	–50.0≤Value≤120.0 * –58.0≤Value≤248.0 *
7	Operation time of cooling (Total)	Accumulated indoor unit's operation time in Cooling mode, in minutes	Minutes	0≤Value≤60
8	Operation time of heating (Total)	Accumulated indoor unit's operation time in Heating mode, in minutes	Minutes	0≤Value≤60
9	Operation time of fan (Total)	Accumulated indoor unit's Ventilation mode operation time, in minutes	Minutes	0≤Value≤60
10	Operation time of dry (Total)	Accumulated indoor unit's Dry mode operation time, in minutes	Minutes	0≤Value≤60
11	Start/Stop count	Number of times indoor unit has been in operation.	Times	0≤Value≤9999

*Room temperature is output in Celsius or Fahrenheit depending on the System Settings.

[Ventilator]

Output Ventilator data items

No.	Item	Collection method	Unit	Valid output range
1	Operation time (Total)	Accumulated Ventilator operation time, in minutes	Minutes	0≤Value≤60
2	Start/Stop count	Number of times Ventilator has been in operation.	Times	0≤Value≤9999

[Dio]

Output Di/Dio data items

No.	Item	Collection method	Unit	Valid output range
1	Operation time (Total)	Accumulated Di/Dio operation time, in minutes	Minutes	0≤Value≤60
2	Start/Stop count	Number of times Di/Dio has been in operation.	Times	0≤Value≤9999

[Pulse]

Output Pi data items

No.	Item	Collection method	Unit	Valid output range
1	Meter value (Total)	Hourly (data collection time) total	-	0≤Value≤999999.99

[Analog]

Output Ai data items

No.	Item	Collection method	Unit	Valid output range
1	Analog value (Average)	15-minute average of 1-minute data over 1-hour (data collection time)	-	–9999999≤Value≤9999999

8. Operation Data Export

<Display order>

CSV file	Output order
D3OperationData.csv	• Operation data is output in the order of outdoor unit ⇒ indoor unit. • Outdoor unit operation data is output in the order of port number and AirNet address. • Indoor unit operation data is output in the order of port number ⇒ Address1 ⇒ Address2.
ExternalOperationData.csv	• The operation data of each management point is output in the order of management point ID.
BACnetOperationData.csv	• The operation data of each management point is output in the order of management point ID.

<CSV format>

A	B	C	D	E
Blank				
File Type	*2			
iTouch Manager Name	Controller name			
Export Date	Output date			
iTM Version	iTM version			
Output period	Output period			
Blank				
Time	Item 1 *1	Item 2 *1	Item 3 *1	Item 4 *1
11/01/2018 12:00 AM				
11/01/2018 12:00 AM				
11/01/2018 12:00 AM				
11/01/2018 12:00 AM				
11/01/2018 12:00 AM				
11/01/2018 12:01 AM				
⋮	⋮	⋮	⋮	⋮
11/01/2018 12:59 AM				
Blank				

Data with the same timestamp and corresponding management points are arranged vertically.

*1 Output items vary for each CSV file.
See List of Operation Data for items output to each CSV file.

*2 The File Type of each CSV file is output as shown in the table below.

CSV file	File Type
D3OperationData.csv	D3 Operation Data
ExternalOperationData.csv	External Operation Data
BACnetOperationData.csv	BACnet Operation Data

<List of Operation Data>

[D3OperationData.csv]

No.	Item	Value range	Unit
1	Device	Outdoor Unit: ODU Indoor Unit: IDU	-
2	Port No	1≤Value≤8	-
3	Address1	1≤Value≤4	-
4	Address2	0≤Value≤15	-
5	Airnet Address	Outdoor Unit: 1≤Value≤63 Indoor Unit: 2≤Value≤128	-
6	Name	Outdoor Unit: String of 1 to 30 characters Indoor Unit: String of 1 to 12 characters	-
7	Communication Status	Normal/Alarm	-
8	Operation Mode	Outdoor Unit: Cool/Heat/Fan/Heat&Cool Indoor Unit: Cool/Heat/Fan/Dry	-
9	Outdoor unit Alarm Status	Normal/Alarm	-
10	Outdoor Unit Error Code	Error code (2 or 5 characters)	-
11	Defrost Mode	Off/On	-
12	Oil Return Mode	Off/On	-
13	Electric Power	0.0≤Value≤1000.0	kW
14	Electric Current	0.0≤Value≤300.0	A
15	System Capacity Code	0≤Value≤64	HP
16	Outdoor Air Temperature	˚F: –197≤Value≤261 ˚C: –127≤Value≤127	˚F ˚C *1
17	Tes	˚F: –58.0≤Value≤122.0 ˚C: –50.0≤Value≤50.0	˚F ˚C *1
18	Tcs	˚F: 50≤Value≤140 ˚C: 10≤Value≤60	˚F ˚C *1
19	M_Condensing Pressure	–14.22≤Value≤711.17	psi
20	M_Evaporating Pressure	–28.45≤Value≤284.47	psi
21	M_Condensing Temperature	˚F: –198≤Value≤261 ˚C: –128≤Value≤127	˚F ˚C *1
22	M_Evaporating Temperature	˚F: –198≤Value≤261 ˚C: –128≤Value≤127	˚F ˚C *1
23	M_Inverter Compressor 1 Speed	0≤Value≤255	rps
24	M_Inverter Compressor 2 Speed	0≤Value≤255	rps
25	M_Fan Step	0≤Value≤255	-
26	M_EV Position 1	pulse: 0≤Value≤3000 %: 0≤Value≤100	pulse %
27	M_EV Position 2	pulse: 0≤Value≤3000 %: 0≤Value≤100	pulse %
28	M_Hot Gas Temperature (Compressor 1)	˚F: 32≤Value≤491 ˚C: 0≤Value≤255	˚F ˚C *1
29	M_Hot Gas Temperature (Compressor 2)	˚F: 32≤Value≤491 ˚C: 0≤Value≤255	˚F ˚C *1
30	M_Liquid Pipe Temperature	˚F: –58≤Value≤248 ˚C: –50≤Value≤120	˚F ˚C *1
31	M_Liquid Pipe Temperature (HX Upper)	˚F: –197≤Value≤261 ˚C: –127≤Value≤127	˚F ˚C *1
32	M_Liquid Pipe Temperature (HX Lower)	˚F: –197≤Value≤261 ˚C: –127≤Value≤127	˚F ˚C *1
33	M_Liquid Pipe Temperature (Deicer)	˚F: –197≤Value≤261 ˚C: –127≤Value≤127	˚F ˚C *1

No.	Item	Value range	Unit
34	M_Gas Pipe Temperature (HX Upper)	˚F: –197≤Value≤261 ˚C: –127≤Value≤127	˚F ˚C *1
35	M_Gas Pipe Temperature (HX Lower)	˚F: –197≤Value≤261 ˚C: –127≤Value≤127	˚F ˚C *1
36	M_Suction Temperature	˚F: –197≤Value≤261 ˚C: –127≤Value≤127	˚F ˚C *1
37	M_Compressor Suction Temperature	˚F: –197≤Value≤261 ˚C: –127≤Value≤127	˚F ˚C *1
38	M_Subcool Inlet Temperature	˚F: –197≤Value≤261 ˚C: –127≤Value≤127	˚F ˚C *1
39	M_Subcool Outlet Temperature	˚F: –197≤Value≤261 ˚C: –127≤Value≤127	˚F ˚C *1
40	M_Subcool EV Position	pulse: 0≤Value≤3000 %: 0≤Value≤100	pulse %
41	S1_Condensing Pressure	–14.22≤Value≤711.17	psi
42	S1_Evaporating Pressure	–28.45≤Value≤284.47	psi
43	S1_Condensing Temperature	˚F: –198≤Value≤261 ˚C: –128≤Value≤127	˚F ˚C *1
44	S1_Evaporating Temperature	˚F: –198≤Value≤261 ˚C: –128≤Value≤127	˚F ˚C *1
45	S1_Inverter Compressor 1 Speed	0≤Value≤255	rps
46	S1_Inverter Compressor 2 Speed	0≤Value≤255	rps
47	S1_Fan Step	0≤Value≤255	-
48	S1_EV Position 1	pulse: 0≤Value≤3000 %: 0≤Value≤100	pulse %
49	S1_EV Position 2	pulse: 0≤Value≤3000 %: 0≤Value≤100	pulse %
50	S1_Hot Gas Temperature (Compressor 1)	˚F: 32≤Value≤491 ˚C: 0≤Value≤255	˚F ˚C *1
51	S1_Hot Gas Temperature (Compressor 2)	˚F: 32≤Value≤491 ˚C: 0≤Value≤255	˚F ˚C *1
52	S1_Liquid Pipe Temperature	˚F: –58≤Value≤248 ˚C: –50≤Value≤120	˚F ˚C *1
53	S1_Liquid Pipe Temperature (HX Upper)	˚F: –197≤Value≤261 ˚C: –127≤Value≤127	˚F ˚C *1
54	S1_Liquid Pipe Temperature (HX Lower)	˚F: –197≤Value≤261 ˚C: –127≤Value≤127	˚F ˚C *1
55	S1_Liquid Pipe Temperature (Deicer)	˚F: –197≤Value≤261 ˚C: –127≤Value≤127	˚F ˚C *1
56	S1_Gas Pipe Temperature (HX Upper)	˚F: –197≤Value≤261 ˚C: –127≤Value≤127	˚F ˚C *1
57	S1_Gas Pipe Temperature (HX Lower)	˚F: –197≤Value≤261 ˚C: –127≤Value≤127	˚F ˚C *1
58	S1_Suction Temperature	˚F: –197≤Value≤261 ˚C: –127≤Value≤127	˚F ˚C *1
59	S1_Compressor Suction Temperature	˚F: –197≤Value≤261 ˚C: –127≤Value≤127	˚F ˚C *1
60	S1_Subcool Inlet Temperature	˚F: –197≤Value≤261 ˚C: –127≤Value≤127	˚F ˚C *1
61	S1_Subcool Outlet Temperature	˚F: –197≤Value≤261 ˚C: –127≤Value≤127	˚F ˚C *1
62	S1_Subcool EV Position	pulse: 0≤Value≤3000 %: 0≤Value≤100	pulse %
63	S2_Condensing Pressure	–14.22≤Value≤711.17	psi

No.	Item	Value range	Unit
64	S2_Evaporating Pressure	–28.45≤Value≤284.47	psi
65	S2_Condensing Temperature	˚F: –85≤Value≤165 ˚C: –65≤Value≤74	˚F ˚C *1
66	S2_Evaporating Temperature	˚F: –110≤Value≤91 ˚C: –79≤Value≤33	˚F ˚C *1
67	S2_Inverter Compressor 1 Speed	0≤Value≤255	rps
68	S2_Inverter Compressor 2 Speed	0≤Value≤255	rps
69	S2_Fan Step	0≤Value≤255	-
70	S2_EV Position 1	0≤Value≤3000	pulse
71	S2_EV Position 2	0≤Value≤3000	pulse
72	S2_Hot Gas Temperature (Compressor 1)	˚F: 32≤Value≤491 ˚C: 0≤Value≤255	˚F ˚C *1
73	S2_Hot Gas Temperature (Compressor 2)	˚F: 32≤Value≤491 ˚C: 0≤Value≤255	˚F ˚C *1
74	S2_Liquid Pipe Temperature	˚F: –58≤Value≤248 ˚C: –50≤Value≤120	˚F ˚C *1
75	S2_Liquid Pipe Temperature (HX Upper)	˚F: –58≤Value≤248 ˚C: –50≤Value≤120	˚F ˚C *1
76	S2_Liquid Pipe Temperature (HX Lower)	˚F: –58≤Value≤248 ˚C: –50≤Value≤120	˚F ˚C *1
77	S2_Liquid Pipe Temperature (Deicer)	˚F: –58≤Value≤248 ˚C: –50≤Value≤120	˚F ˚C *1
78	S2_Gas Pipe Temperature (HX Upper)	˚F: –58≤Value≤248 ˚C: –50≤Value≤120	˚F ˚C *1
79	S2_Gas Pipe Temperature (HX Lower)	˚F: –58≤Value≤248 ˚C: –50≤Value≤120	˚F ˚C *1
80	S2_Suction Temperature	˚F: –58≤Value≤248 ˚C: –50≤Value≤120	˚F ˚C *1
81	S2_Compressor Suction Temperature	˚F: –58≤Value≤248 ˚C: –50≤Value≤120	˚F ˚C *1
82	S2_Subcool Inlet Temperature	˚F: –58≤Value≤248 ˚C: –50≤Value≤120	˚F ˚C *1
83	S2_Subcool Outlet Temperature	˚F: –58≤Value≤248 ˚C: –50≤Value≤120	˚F ˚C *1
84	S2_Subcool EV Position	0≤Value≤3000	pulse
85	Occupancy Mode	Unocc/Occ/Standby	-
86	Unit On_Off Status	Off/On	-
87	Alarm Status	Normal/Alarm	-
88	Error Code	Error code (2 or 5 characters)	-
89	Room Temperature	˚F: –58.0≤Value≤248.0 ˚C: –50.0≤Value≤120.0	˚F ˚C *1
90	Occ Cooling Setpoint	˚F: 32≤Value≤122 ˚C: 0≤Value≤50.0	˚F ˚C *1
91	Occ Heating Setpoint	˚F: 32≤Value≤122 ˚C: 0≤Value≤50.0	˚F ˚C *1
92	Unocc Cooling Setpoint	˚F: 62≤Value≤95 ˚C: 16.7≤Value≤35.0	˚F ˚C *1
93	Unocc Heating Setpoint	˚F: 50≤Value≤88 ˚C: 10.0≤Value≤31.1	˚F ˚C *1
94	Max Cooling Setpoint	˚F: 60≤Value≤90 ˚C: 16.0≤Value≤32.0	˚F ˚C *1
95	Min Cooling Setpoint	˚F: 60≤Value≤90 ˚C: 16.0≤Value≤32.0	˚F ˚C *1

No.	Item	Value range	Unit
96	Max Heating Setpoint	˚F: 60≤Value≤90 ˚C: 16.0≤Value≤32.0	˚F ˚C *1
97	Min Heating Setpoint	˚F: 60≤Value≤90 ˚C: 16.0≤Value≤32.0	˚F ˚C *1
98	Min Setpoint Differential (Cooling & Heating)	˚F: 0≤Value≤7 ˚C: 0≤Value≤4	˚F ˚C *1
99	Cooling & Heating Setpoint Tracking Mode	Disable/Enable	-
100	Fan Speed	Low/Medium Low/Medium/Medium High/High/Auto	-
101	Airflow Direction	P0/P1/P2/P3/P4/P7	-
102	Timed Override Operation	Disable/Enable	-
103	Current Unit Operation	Off/Normal/Override/Setback	-
104	Remote Controller Prohibit (On_Off)	Permit/Prohibit/Stop Only	-
105	Remote Controller Prohibit (Operation Mode)	Permit/Prohibit	-
106	Remote Controller Prohibit (Setpoint)	Permit/Prohibit	-
107	Filter Sign Status	Normal/Alarm	-
108	Filter Sign Reset	Reset/Alarm	-
109	Indoor Fan Status	Off/On	-
110	Thermo-on Status	Off/On	-
111	Compressor Status	Off/On/Defrost/Hot Start	-
112	Aux Heater Status	Off/On	-
113	Forced Thermo-off	Disable/Enable	-
114	Indoor Unit Changeover Option	Not Avaliable/Avaliable	-
115	Return Air Temperature	˚F: –58.0≤Value≤248.0 ˚C: –50.0≤Value≤120.0	˚F ˚C *1
116	Discharge Air Temperature	˚F: –58.0≤Value≤248.0 ˚C: –50.0≤Value≤120.0	˚F ˚C *1
117	Liquid Pipe Temperature	˚F: –58.0≤Value≤248.0 ˚C: –50.0≤Value≤120.0	˚F ˚C *1
118	Gas Pipe Temperature	˚F: –58.0≤Value≤248.0 ˚C: –50.0≤Value≤120.0	˚F ˚C *1
119	EV Position	0≤Value≤2000	pulse
120	Freeze Protection	Off/On	-

*1 The unit of temperature follows the locale settings.

[ExternalOperationData.csv]

No.	Item	Value range	Unit
1	Point Type	External Di/External Dio/External Ai/External Ao/ External Pi	-
2	WAGO Port No	1≤Value≤30	-
3	Point ID	101≤Value≤1000000	-
4	Name	String of 1 to 12 characters	-
5	Point Description	String of 0 to 50 characters	-
6	Communication Status	Normal/Alarm	-
7	Status Value	Off/On	-
8	Operation Value	Off/On	-
9	Analog Value	–9999999≤Value≤9999999 *2	*1
10	External Pi	0≤Value≤999999.99	-
11	Error Value	Off/On	-
12	Upper Limit Error	Off/On	-
13	Lower Limit Error	Off/On	-

*1 When the analog type of a management point is temperature, the unit of temperature follows the locale settings.

*2 The accuracy of a management point data follows the displayed / designated accuracy.

[BACnetOperationData.csv]

No.	Item	Value range	Unit
1	Point Type	BACnet Di/BACnet Dio/BACnet Ai/BACnet Ao/ BACnet Mi/BACnet Mo	-
2	BACnet Server Device Instance	0≤Value≤4194302	-
3	Point ID	101≤Value≤1000000	-
4	Name	String of 1 to 12 characters	-
5	Point Description	String of 0 to 50 characters	-
6	Communication Status	Normal/Alarm	-
7	Status Value	Off/On	-
8	Operation Value	Off/On	-
9	Analog Value	–9999999≤Value≤9999999 *2	*1
10	Multi State	String of 1 to 25 characters	-
11	Error Value	Off/On	-
12	Upper Limit Error	Off/On	-
13	Lower Limit Error	Off/On	-

*1 When the analog type of a management point is temperature, the unit of temperature follows the locale settings.

*2 The accuracy of a management point data follows the displayed / designated accuracy.

9. Min. Cool/Heat SP Differential

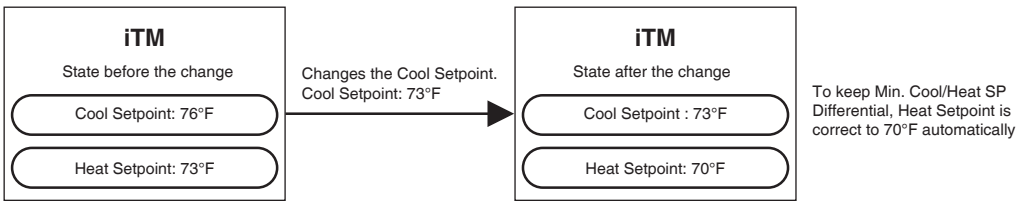
Cool Setpoint is higher than Heat Setpoint, with keeping Min. Cool/Heat SP Differential or more.

You can enter a value in the 0 to 7°F range, in increments of 1°F.

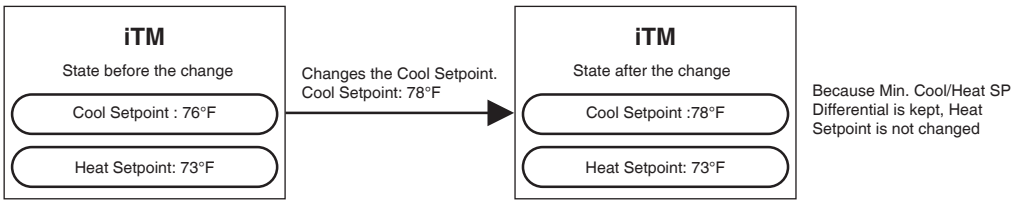
For the method of entering data to the iTM unit, see “4-2 Detailed Setup Screen”.

The following shows how the iTM correct automatically the setpoint when the Min. Cool/Heat SP Differential is set to 3°F.

If changing Cool setpoint cause Heat setpoint to correct automatically.



If changing the Cool Setpoint does not cause the Heat Setpoint to change

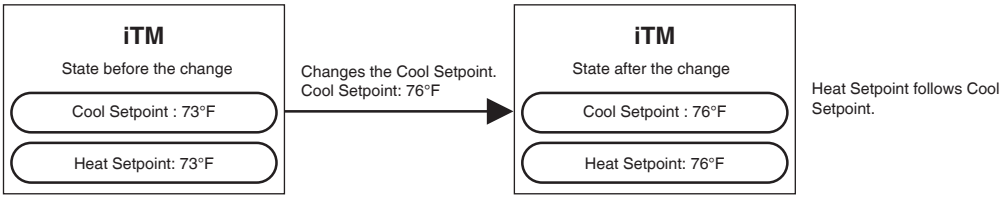


10.Setpoint Tracking Mode

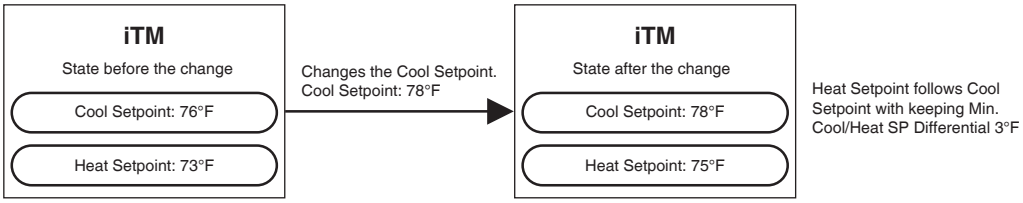
Use this mode to set the setpoint differential for cooling/heating to a fixed value (the same value as the Min. Cool/Heat SP Differential).

To use this mode, you need to set up to enable the Setpoint Tracking Mode. For the method of entering data to the iTM unit, see “4-2 Detailed Setup Screen”.

If the Min. Cool/Heat SP Differential is 0°F



If the Min. Cool/Heat SP Differential is 3°F



NOTE

Cool/Heat Setpoint may be corrected automatically depending on the Min. Cool/Heat SP Differential, Setback Setpoint, and Setpoint Restriction.

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