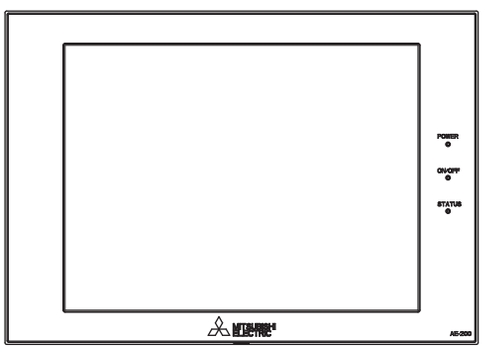
MITSUBISHI ELECTRIC

Air Conditioning Control System
Centralized Controller
AE-200A/AE-50A
AE-200E/AE-50E

CE

Instruction Book
–Detailed operations–



Contents

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

Ver. 7.3

Contents

1. Safety precautions

- ► **Observe these precautions carefully to ensure safety.**
- ► **After reading this manual, pass the manual on to the end user to retain for future reference.**
- ► **The user should keep this manual for future reference and refer to it as necessary. This manual should be made available to those who repair or relocate the units. Make sure that the manual is passed on to any future air conditioning system user.**

⚠ WARNING	: indicates a hazardous situation which, if not avoided, could result in death or serious injury.
⚠ CAUTION	: indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.
CAUTION	: addresses practices not related to personal injury, such as product and/or property damage.

1-1. General precautions

⚠ WARNING

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

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

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

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

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

If you notice any abnormality (e.g., burning smell), stop the operation, turn off the controller, and consult your dealer. Continuing the operation may result in electric shock, malfunction, or fire.

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

⚠ CAUTION

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

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

To avoid injury from broken glass, do not apply excessive force to the glass parts.

To reduce the risk of injury, electric shock, or malfunction, avoid contact with the sharp edges of certain parts.

Consult your dealer for the proper disposal of the controller. Improper disposal will pose a risk of environmental pollution.

1-2. Precautions for relocating or repairing the unit

⚠ WARNING

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

1-3. Additional precautions

CAUTION

To avoid discoloration, do not use benzene, thinner, or chemical rag to clean the controller. When the controller is heavily soiled, wipe the controller with a well-wrung cloth that has been soaked in water with mild detergent, and then wipe off with a dry cloth.

This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.

2. Introduction

AE-200A/AE-50A/AE-200E/AE-50E is a centralized controller.
EW-50A/EW-50E is an LCD-less total management system.
Any connected air conditioning systems can be operated or monitored on the AE-200A/AE-50A/AE-200E/AE-50E's LCD or the Web browser.
By using a PI controller that is built-in on the AE-200A/AE-50A/EW-50A/AE-200E/AE-50E/EW-50E, the energy-control-related status can be displayed and Peak Cut control can be performed without a use of a PI controller (PAC-YG60MCA).
Each AE-200A/AE-50A/AE-200E/AE-50E can control up to a total of 50 indoor units and other equipment. By connecting AE-200A/AE-200E (main controller) and AE-50A/AE-50E/EW-50A/EW-50E (sub controllers), up to 200 indoor units and other equipment can be controlled.

2-1. Terms used in this manual

- "Centralized Controller AE-200A/AE-200E" is referred to as "AE-200."
- "Centralized Controller AE-50A/AE-50E" is referred to as "AE-50."
- "Centralized Controller EW-50A/EW-50E" is referred to as "EW-50."
- "Booster unit" and "Water HEX unit" are referred to as "Air To Water (PWFY) unit."
- "Advanced HVAC CONTROLLER" is referred to as "AHC."
- "Hot Water Heat Pump unit" is referred to as "HWHP (CAHV, CRHV) unit."

2-2. Required licenses

The required licenses vary, depending on the functions to be used. Refer to the License Classification List for details. Purchase the required licenses from your dealer. Refer to the Instruction Book (Initial Settings) for how to register licenses.

2-3. "Group", "Block", and "EM block" definitions

The terms "Group" and "Block" used in this manual are defined as follows.

Group: Group is a group of air conditioning units and controllers and is the smallest unit that the AE-200/AE-50 can control. The maximum number of units that each group can contain is 16.

Block: Each block consists of one or more groups. Multiple groups of units in a given block can be monitored or operated collectively.

EM block: EM block stands for Energy management block, and this groups multiple blocks. Use for charge apportioning units and for settings of blocks spanning AE-200 and AE-50/EW-50.

2-4. Main and Sub system controllers (M-NET)

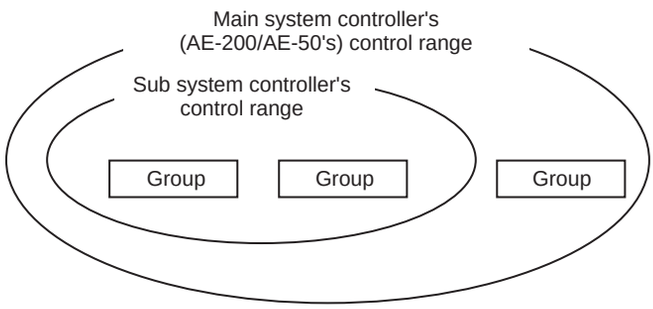
Each group can be controlled by a Main system controller or a Sub system controller.
AE-200/AE-50 is exclusively for use as a Main system controller and cannot be used as a Sub system controller.

Main system controller

Main system controller refers to a system controller that controls all other system controllers including the units they control. If a given system has only one system controller, that controller becomes a Main system controller. Group settings and interlock settings can be made only from a Main system controller.

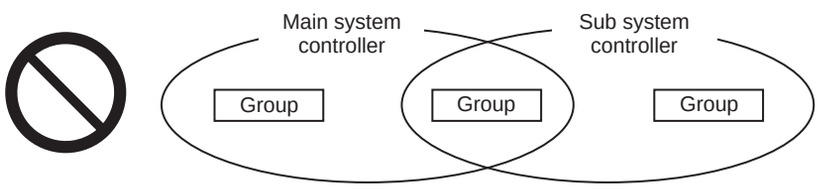
Sub system controller

Sub system controller refers to a system controller that is controlled by a Main system controller.

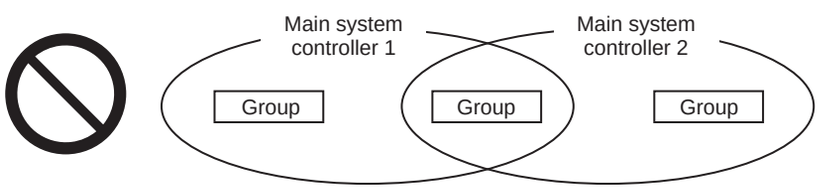


The system cannot be configured as shown in the examples below.

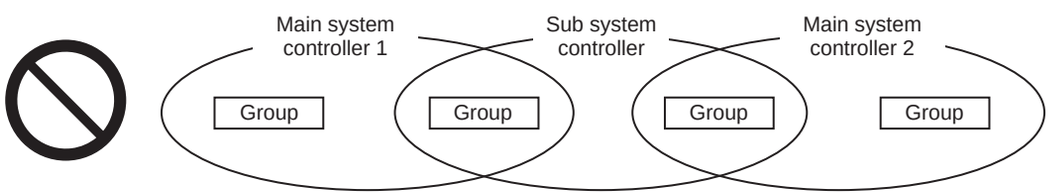
- Groups that are not under the control of a Main system controller cannot be controlled from a Sub system controller.



- Each group cannot be placed under the control of two or more Main system controllers.



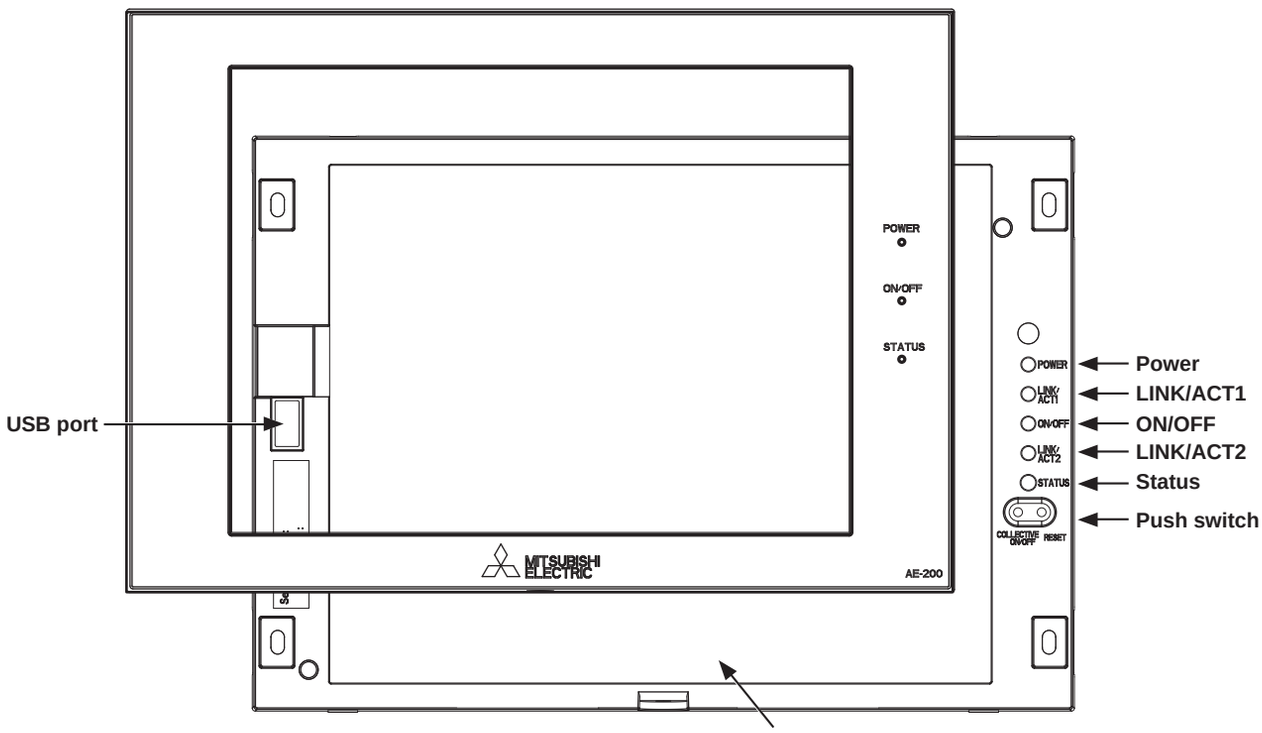
- Sub system controllers cannot be placed under the control of two or more Main system controllers.



2-5. Controller interface

Important

- Before using the controller, remove the protective sheet on the cover to avoid the sheet from sticking to the touch panel and causing malfunctions.
- Use the supplied L-shaped driver to remove or attach the cover.



Display/Touch panel
When the backlight is off, touching the panel turns the backlight on, and it will stay lit for three minutes. The backlight stays lit while an error is occurring.

Item			Description
LED	Power	Lit in green	Power ON
		Unlit	Power OFF
	ON/OFF	Lit in green	One or more air conditioning units are ON.
		Blink in green	One or more air conditioning units or other related equipment are in error.
		Unlit	All air conditioning units are OFF.
	Status	Blink in orange	Startup failed
		Blink in blue	Software update in progress
		Blink in pink	Software update failed
LINK/ACT1		Blink in orange	Data transmission in progress (LAN1)
LINK/ACT2		Blink in orange	BACnet® data transmission in progress (LAN2)
Push switch	ON/OFF		Used to turn the connected air conditioning units and the other related equipment ON and OFF all at once.
	Reset		Used to reboot the AE-200/AE-50. (This will not affect the operation status of the air conditioning units.)
USB port			Used when the settings data is backed up to or imported from a USB memory device, when the energy management data is output in a CSV format to a USB memory device, and when the software needs to be updated.

2-6. Number of connectable units

The table below summarizes the number of connectable units in an AE-200/AE-50/EW-50 M-NET system.

Unit type	Number of connectable units
Indoor units, independent OA processing units, LOSSNAY units, DIDO controllers (PAC-YG66DCA), Air To Water (PWFY) units, Advanced HVAC CONTROLLERs, HWHP (CAHV, CRHV) units, AI controllers (PAC-YG63MCA), PI controllers (PAC-YG60MCA)	Up to 50 units (including the interlocked LOSSNAY units)*1*2*3*4
Indoor units, independent OA processing units, LOSSNAY units, DIDO controllers (PAC-YG66DCA), Air To Water (PWFY) units, HWHP (CAHV, CRHV) units in a group	1–16 units (Indoor units, independent OA processing units, LOSSNAY units, DIDO controllers (PAC-YG66DCA), Air To Water (PWFY) units, and HWHP (CAHV, CRHV) units cannot be combined in one group.)
Remote controllers in a group	0–2 units
System controllers in a group (AE-200/AE-50/EW-50 excluded)	0–4 units (Up to four remote and system controllers combined can be assigned to each group.)
Advanced HVAC CONTROLLER in a group	0–1 unit
LOSSNAY unit that can be interlocked with each indoor unit	1 unit
Indoor units that can be interlocked with each LOSSNAY unit	1–16 units

*1 The maximum number of controllable units varies, depending on the number of channels used for the DIDO controller. In a system with connection to Advanced HVAC CONTROLLERs, the number of connectable units is 60 units when using the monitoring function on the Maintenance Tool, and 70 units when not using the monitoring function on the Maintenance Tool.

*2 By connecting AE-50/EW-50 controllers to an AE-200, up to 200 units can be controlled.

*3 Each contact of DIDO controller (PAC-YG66DCA) counts as one unit.

*4 Although the maximum settable total number of built-in Pulse Input (PI) and PI controllers (PAC-YG60MCA) for each AE-200/AE-50/EW-50 is 15, the number of them in a system with connection to one or more AE-50/EW-50 controllers must be 20 or less. (Each built-in Pulse Input (PI) counts as one unit.)

2-7. Product features

The table below summarizes the items that can be displayed or set on the AE-200/AE-50.

Note: The items may not be displayed, depending on the model of the connected units.

Function		Description
Operation	ON/OFF	The ON/OFF operation can be performed for units in a given group.
	Operation mode	The operation mode can be switched.
	Ventilation mode (LOSSNAY unit)	The ventilation mode can be switched.
	Fan speed	The fan speed (2 to 4 speeds and Auto) can be changed.
	Fan speed (LOSSNAY unit)	The fan speed (4 speeds and Auto) can be changed.
	Set temperature	The set temperature can be set.
	Air direction	The air direction (5 directions, Swing, and Auto) can be changed.
	ON/OFF/Fan speed (LOSSNAY unit)	Interlocked LOSSNAY units can be operated or stopped. The fan speed (2 speeds) can be changed.
	Schedule (Available/Not Avail.)	The scheduled operations can be enabled or disabled.
	Hold (AE-200A/AE-50A only)	The Hold function can be enabled or disabled.
	Prohibition of local remote controller operation	Some operations or settings from the local remote controllers can be prohibited.
	Filter sign reset	Filter sign can be reset.
	Schedule Settings	Weekly, annual, and today's schedules can be set.
	Malfunction reset	Displayed errors can be reset.
	Clear malfunction log	Displayed unit errors and communication errors can be cleared.
	External input	Using external contact signals, the following collective operations can be controlled: Demand level, Emergency stop, ON/OFF operation, and Prohibit/Permit local remote controller operation. (An external input/output adapter is required.)

Function		Description
Monitor	ON/OFF/Blink (LED on the controller)	ON: One or more units are in operation. OFF: All units are stopped. Blink: One or more units are in error.
	Operation status of each group	The operation status of each group can be displayed.
	Filter sign	The filter sign indicates that the filter is due for cleaning.
	Prohibition of local remote controller operation	The icon to indicate that the operation is prohibited by the AE-200/AE-50 can be displayed.
	Measurement List	The readings of the temperature sensor, humidity sensor, and metering device can be displayed.
	AHC List	The input and output status of Advanced HVAC CONTROLLERs can be displayed.
	Malfunction List	The address of the unit in error and the error code can be displayed.
	Malfunction Log	Up to the latest 128 errors can be displayed for each AE-200/AE-50/EW-50.
	External output	The ON/OFF and Error signals can be output to an external device. (An external input/output adapter is required.)
	Energy Use Status	The energy consumption data and comparison data can be displayed in a graph, and be output in a CSV format to a USB memory device.
	Ranking	The rankings in electric energy consumption and the fan operation time of given indoor units can be displayed in a bar graph, and be output in a CSV format to a USB memory device.
	Target Value Setting	The target electric energy consumption values for the entire system can be set.
	Peakcut Control Status	The Peakcut control status can be checked, and be output in a CSV format to a USB memory device.
	Energy data output	Energy management data can be displayed, and be output in a CSV format to a USB memory device.
Maintenance	Backing up settings data	The settings data can be stored to a USB memory device.
	Importing settings data	Backed-up settings data can be restored from a USB memory device.
	Energy data output	Energy management data can be output in a CSV format to a USB memory device.
	CSV output	The operation data, such as apportioning parameters and metering device data, can be output to a USB memory device. (Each file contains the data of up to 62 days (or 4 days when the data type is 30-minute intervals).)
	Touch Panel Calibration	The touch panel can be calibrated.
Data back-up	Group setting information/ Interlocked LOSSNAY information	The group setting information and interlocked LOSSNAY information are retained in the hardware, even if power is turned off.
	Malfunction log	The malfunction log is retained in the hardware, even if power is turned off.
	Scheduled operations	The scheduled operations set for each group are retained in the hardware, even if power is turned off.
	Current date and time	The current date and time are retained by the built-in capacitor when power is turned off.
Maintenance	Screen lock function	The touch panel operation can be locked.
	Touch panel cleaning	The touch panel can be locked when it needs to be cleaned.
	Time synchronization	Clocks on the controllers and the units that are under the control of the main system controller are synchronized once a day.

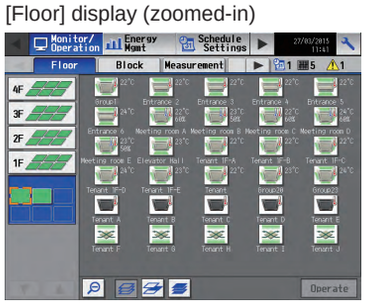
3. Basic operations

3-1. Monitor/Operation

This section explains how to monitor and operate the unit groups.

3-1-1. Screen sequence

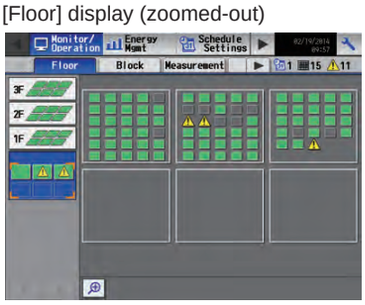
[Floor] display (zoomed-in)



Touch [ ].

Touch [ ].

[Floor] display (zoomed-out)



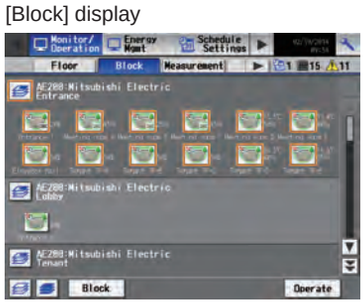
Touch [Floor].

Touch [Block].

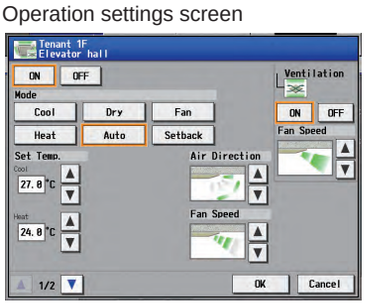
Select a group and touch [Operate].

Touch [OK] or [Cancel].

[Block] display



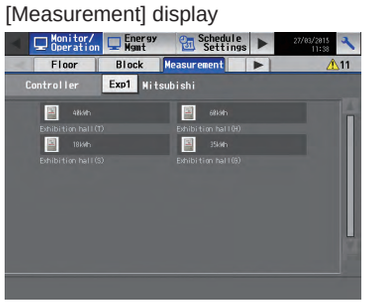
Operation settings screen



Select a group and touch [Operate].

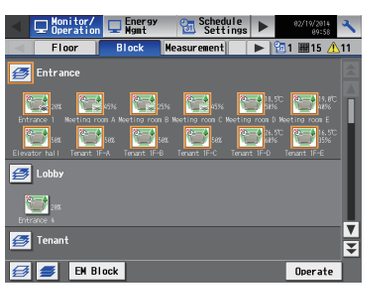
Touch [OK] or [Cancel].

[Measurement] display



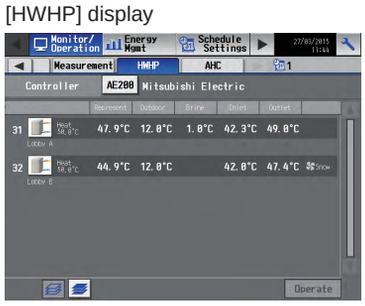
Touch [Block].

Touch [EM Block].



* The [Measurement] tab will appear only when an AI or PI controller is connected or when the AE-200 built-in Pulse Input (PI) is enabled.

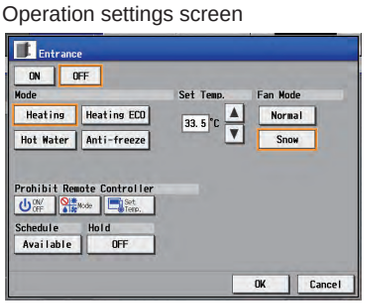
[HWHP] display



Select a group and touch [Operate].

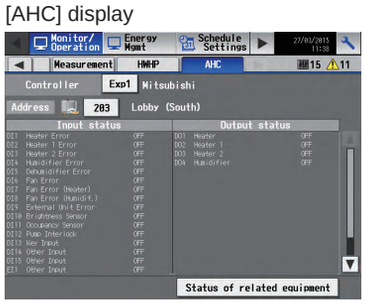
Touch [OK] or [Cancel].

Operation settings screen



* The [HWHP] tab will appear only when an HWHP (CAHV, CRHV) unit is connected.

[AHC] display



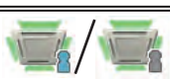
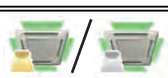
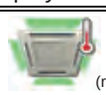
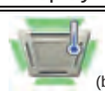
3-1-2. Group icons

Each group icon indicates the operation condition of the group. Touch the icon, and then touch [Operate] to bring up the operation settings screen.

[1] Air conditioning unit group

ON	OFF	Error	Interlocked LOSSNAY ON *1 *6	Interlocked LOSSNAY OFF *6
				

Schedule set *2	Schedule disabled	Energy-saving ON *3 *12	Setback ON *9	Starting up *10
				

Occupied/Vacant *4 *5 *6	Bright/Dark *7 *8 *9	Room temperature display *12 *13	Room humidity display	HOLD ON *11
 (blue) (gray)	 (yellow) (gray)	 (red)	 (blue)	

Note: Besides the 4-way airflow unit icons, 2-way airflow or ceiling-suspended unit icons are also available. Icons can be selected on the [Groups] screen.

*1 If the LOSSNAY unit is interlocked with the operation of Mr. Slim units, “Interlocked LOSSNAY ON” icon will appear, even when the LOSSNAY unit is operated individually.
(Applicable M-NET adapter model: PAC-SF48/50/60/70/80/81MA-E)

*2 If any schedule setting is applied to a DIDO controller whose prohibition setting is enabled ([Allow operations] is set to [No operations] on the [Groups] screen), the “Schedule set” icon will appear, but the scheduled operations will not be performed.

*3 The “Energy-saving ON” icon will appear while the Peak Cut control is performed on the group or on the outdoor unit that is connected to the group.

*4 The Occupancy/Vacancy status icon will appear only when [ ] (blue), [ ] (gray), or [ ] (blue/gray) is selected in the [Occupancy] section on the [Unit Info.] screen.

*5 The Occupancy/Vacancy status icon will not appear if the remote controller in the group does not have an occupancy sensor.

*6 The Occupancy/Vacancy status icon takes priority over the “Interlocked LOSSNAY ON” or “Interlocked LOSSNAY OFF” icon.

*7 The Brightness/Darkness status icon will appear only when [ ] (yellow), [ ] (gray), or [ ] (yellow/gray) is selected in the [Brightness] section on the [Unit Info.] screen.

*8 The Brightness/Darkness status icon will not appear if the remote controller in the group does not have a brightness sensor.

*9 The “Setback ON” icon takes priority over the Brightness/Darkness status icon.

*10 The “Starting up” icon will stay when the unit cannot be recognized after startup. Check for proper connection of the air conditioning unit and proper group settings.

*11 The Hold function can be used on the AE-200A/AE-50A, but not on the AE-200E/AE-50E.

*12 The “Energy-saving ON” icon takes priority over the “Room temperature display” icon.

*13 Whether to show or hide the room temperature can be set in the [Room temperature] section on the [Unit Info.] screen.

[2] LOSSNAY unit (ventilator) group

ON	OFF	Error	Schedule set *2	Schedule disabled *2
				

Energy-saving ON *1	HOLD ON	Night purge ON/OFF *2
		 ON (Yellow) OFF (Gray)*3

*1 The “Energy-saving ON” icon will appear while the Peak Cut control is performed on the LOSSNAY unit group.

*2 When the scheduled operations exist during the Night purge operation, the “Night purge ON” icon takes priority over the “Schedule set” icon. When the scheduled operations exist but are disabled during the Night purge operation, the “Night purge ON” icon takes priority over the “Schedule disabled” icon.

*3 The “Night purge OFF” icon will appear only on operation setting screens.

[3] Air To Water (PWFY) unit group and HWHP (CAHV, CRHV) unit group

ON	OFF	Error	Schedule set	Schedule disabled
				

Energy-saving ON *1	Water temperature display *2	HOLD ON
	 (red)	

*1 The “Energy-saving ON” icon will appear while the Peak Cut control is performed on the Air To Water (PWFY) unit group. This icon will not appear for the HWHP (CAHV, CRHV) unit groups.

*2 The “Water temperature display” icon will not appear for the HWHP (CAHV, CRHV) unit groups.

[4] General equipment group

ON	OFF	Error	Schedule set	Schedule disabled
				

HOLD ON


Note: Besides the lighting icons, pump or card key icons are also available. The icon can be selected on the [Groups] screen.

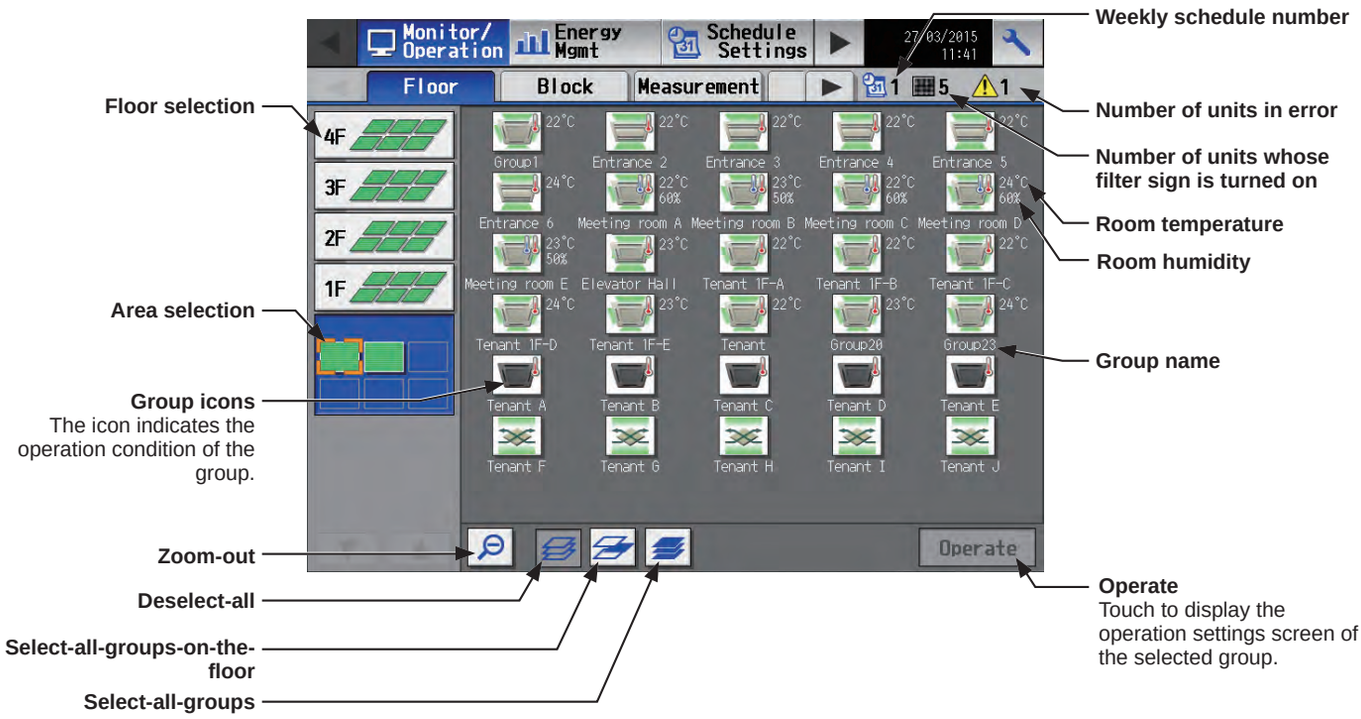
3-1-3. Checking the operation conditions

This section explains how to display the operation conditions of units.

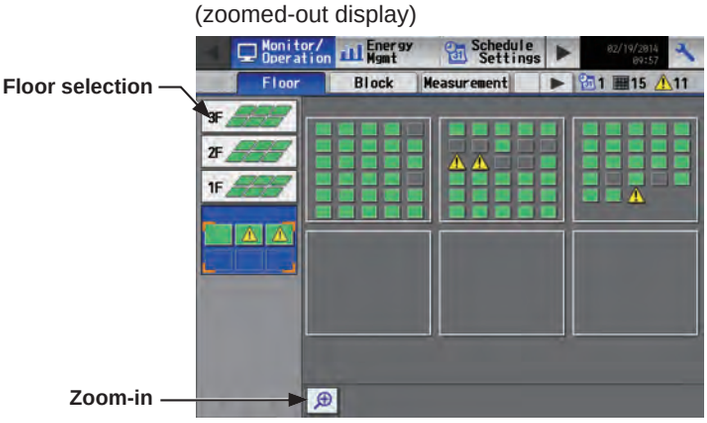
[1] [Floor] display

Touch [Monitor/Operation] in the menu bar, and then touch [Floor].

Note: The unit groups that are under the control of AE-200, AE-50, and EW-50 can be displayed.



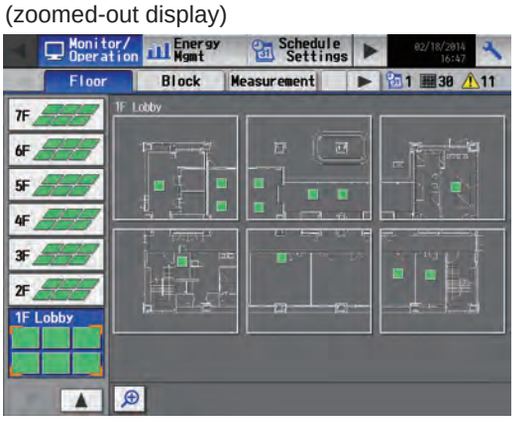
(zoomed-out display)



Screen images when using the Floor Layout function (Refer to the Instruction Book (Initial Settings) for floor layout settings.)

(zoomed-in display)

(zoomed-out display)

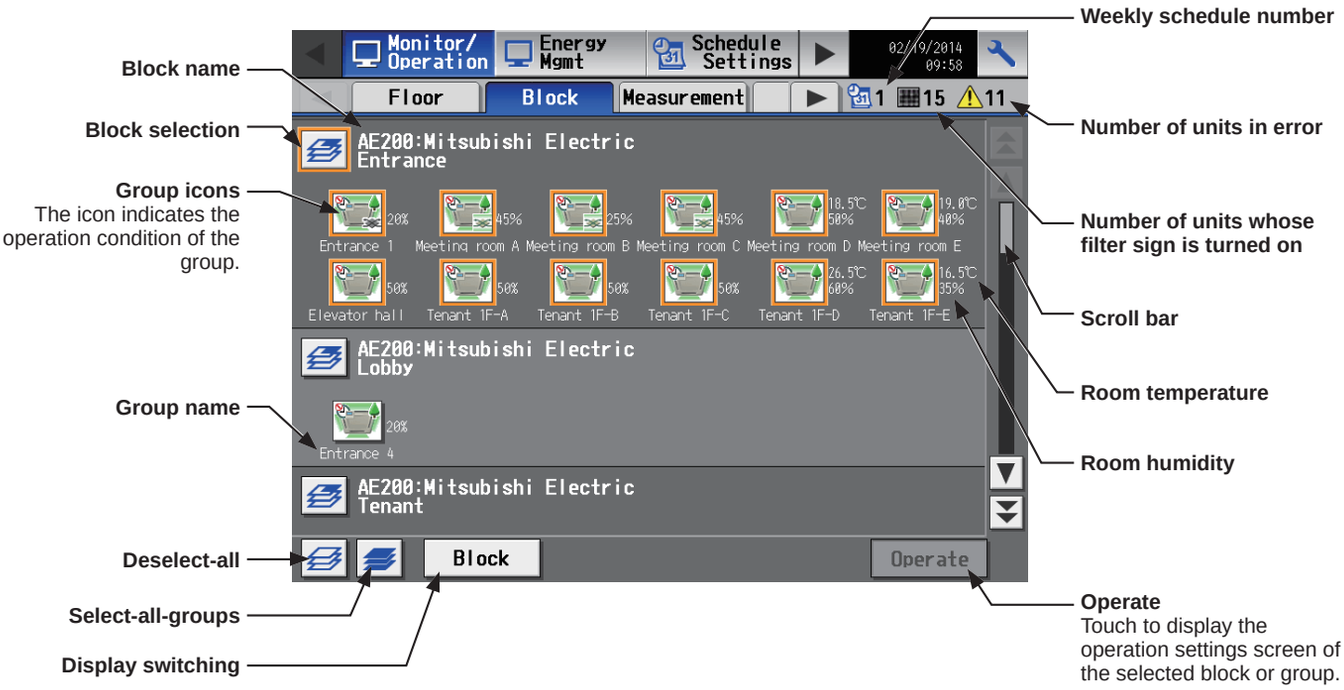


Item	Description
Floor selection	Select a floor you want to monitor.
Area selection	Select an area of the selected floor you want to monitor.
Group name	The name of the group will appear.
Room temperature	Indoor unit return air temperature will appear. Note: The temperature shown may be different from the actual room temperature. Note: The temperature shown may be higher than the actual temperature especially when the unit is stopped during the Heat mode. Note: Whether to show or hide the room temperature can be set on the [Unit Info.] screen. Note: For Air To Water (PWFY) unit groups, the current water temperature will appear. Note: The temperature unit °C or °F will appear, depending on the temperature unit that has been selected on the [Unit Info.] screen.
Room humidity	The room humidity will appear.
Weekly schedule number	The weekly schedule number that is currently effective will appear.
Number of units whose filter sign is turned on *1	The number of units whose filter sign is currently turned on will appear. Touching “  ” will bring up the [Filter Sign] screen. (See section 3-4-2 “Filter Sign List”.)
Number of units in error *1	The number of units that are currently in error will appear. Touching “  ” will bring up the [Malfunction] screen. (See section 3-4-1 “Malfunction List”.) Note: AE-200/EW-50 errors will not appear on the AE-50’s LCD.
Deselect-all	Touch to cancel all group selections.
Select-all-groups-on-the-floor	Touch to select all groups on the currently selected floor.
Select-all-groups	Touch to select all groups.
Zoom-out	Touch to display the status of the whole floor.
Zoom-in	Touch to go to the zoomed-in screen.

*1 The item will not appear if the number of units is “0.”

[2] [Block] display

Touch [Monitor/Operation] in the menu bar, and then touch [Block].

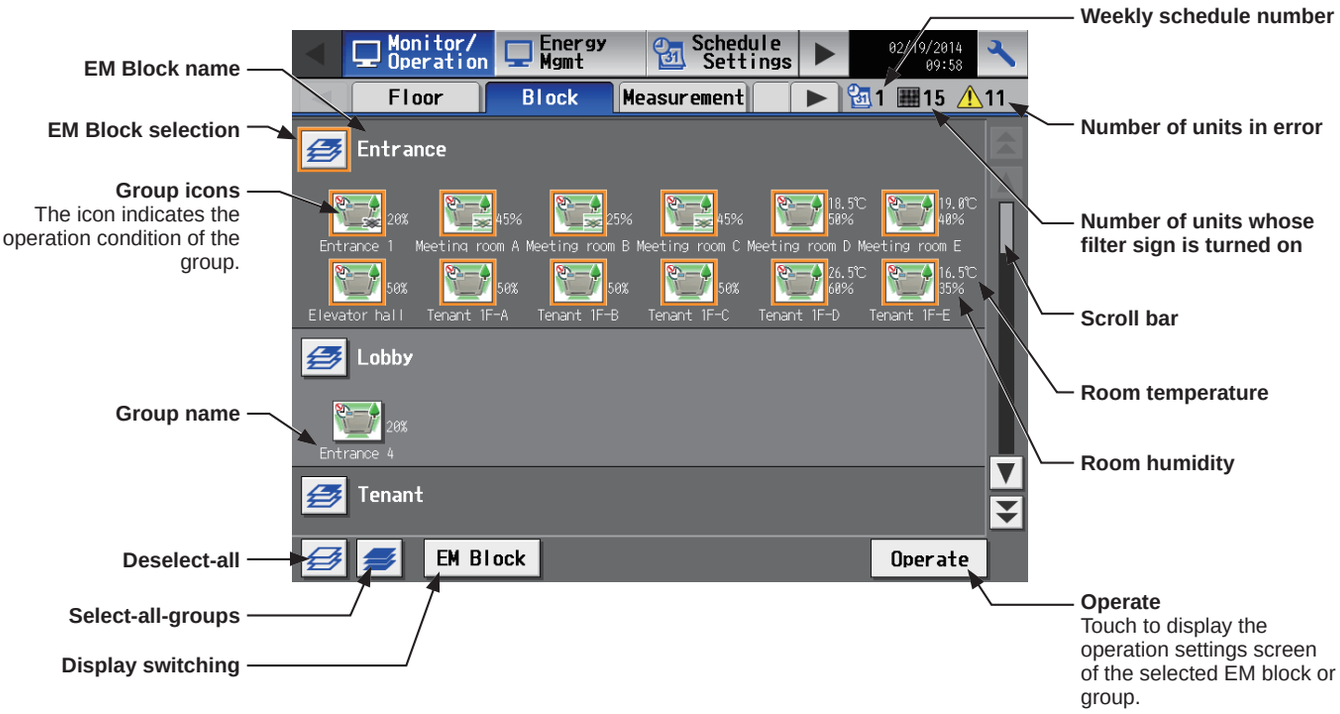


Item	Description
Block selection	Select a block you want to monitor.
Group name	The name of the group will appear.
Room temperature	Indoor unit return air temperature will appear. Note: The temperature shown may be different from the actual room temperature. Note: The temperature shown may be higher than the actual temperature especially when the unit is stopped during the Heat mode. Note: Whether to show or hide the room temperature can be set on the [Unit Info.] screen. Note: For Air To Water (PWFY) unit groups, the current water temperature will appear. Note: The temperature unit °C or °F will appear, depending on the temperature unit that has been selected on the [Unit Info.] screen.
Room humidity	The room humidity will appear.
Weekly schedule number	The weekly schedule number that is currently effective will appear.
Number of units whose filter sign is turned on *1	The number of units whose filter sign is currently turned on will appear. Touching "▦" will bring up the [Filter Sign] screen. (See section 3-4-2 "Filter Sign List".)
Number of units in error *1	The number of units that are currently in error will appear. Touching "⚠" will bring up the [Malfunction] screen. (See section 3-4-1 "Malfunction List".) Note: AE-200/EW-50 errors will not appear on the AE-50's LCD.
Deselect-all	Touch to cancel all group selections.
Select-all-groups	Touch to select all groups.
Display switching	Switch between Block display and EM Block display.

*1 The item will not appear if the number of units is "0."

[3] [EM Block] display

Touch [Monitor/Operation] in the menu bar, and then touch [Block].



Item	Description
Block selection	Select a block you want to monitor.
Group name	The name of the group will appear.
Room temperature	Indoor unit return air temperature will appear. Note: The temperature shown may be different from the actual room temperature. Note: The temperature shown may be higher than the actual temperature especially when the unit is stopped during the Heat mode. Note: Whether to show or hide the room temperature can be set on the [Unit Info.] screen. Note: For Air To Water (PWFY) unit groups, the current water temperature will appear. Note: The temperature unit °C or °F will appear, depending on the temperature unit that has been selected on the [Unit Info.] screen.
Room humidity	The room humidity will appear.
Weekly schedule number	The weekly schedule number that is currently effective will appear.
Number of units whose filter sign is turned on *1	The number of units whose filter sign is currently turned on will appear. Touching "▦" will bring up the [Filter Sign] screen. (See section 3-4-2 "Filter Sign List".)
Number of units in error *1	The number of units that are currently in error will appear. Touching "⚠" will bring up the [Malfunction] screen. (See section 3-4-1 "Malfunction List".) Note: AE-200/EW-50 errors will not appear on the AE-50's LCD.
Deselect-all	Touch to cancel all group selections.
Select-all-groups	Touch to select all groups.
Display switching	Switch between Block display and EM Block display.

*1 The item will not appear if the number of units is "0."

[4] [Measurement] display

Touch [Monitor/Operation] in the menu bar, and then touch [Measurement].

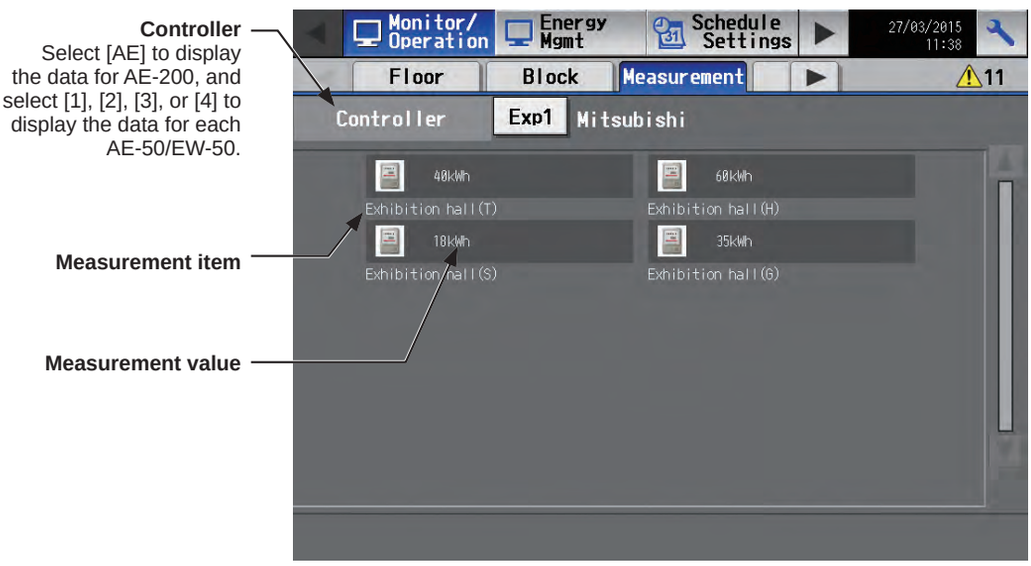
The measurement data of the temperature sensors, humidity sensors, and metering devices will appear.

Note: Measurement settings on the [Measurement] screen under the [Function1] menu are required to display the measurement data on this screen. Refer to the Instruction Book (Initial Settings) for details.

Note: An AI controller (PAC-YG63MCA), a commercially available temperature sensor, and a humidity sensor are required to measure the temperature and humidity.

Note: A commercially available pulse-output metering device is required to measure the electric, water, heat, and gas consumptions using a built-in Pulse Input (PI) or PI controller (PAC-YG60MCA).

Note: The [Controller] setting will appear (only on the AE-200's LCD) when the [System Exp] setting on the [Unit Info.] screen is set to [Expand]. Switch the [Controller] setting between [AE200] and [Exp1] through [Exp4] to display the data for each AE-200, AE-50, and EW-50 individually.



Item	Description
Measurement value	The current measurement values will appear. Note: The following icons are used to indicate the measuring devices. Icons will appear in orange when the measurement value reaches the upper or lower alarm threshold value that has been set on the [Measurement] screen.

	Normal	Upper/lower alarm threshold value is reached.	Communication error/sensor error
Temperature sensor			 *1
Humidity sensor			 *1
Metering device			 *2*3

*1 When there is a communication error, the measurement value of the temperature or humidity sensor will be "--."

*2 When there is a communication error, the measurement value of the metering device will be the measured value immediately before the error detection.

*3 When there is a communication error between AE-200 and AE-50/EW-50, the measurement value of the metering device will be "--."

[5] [HWHP] display

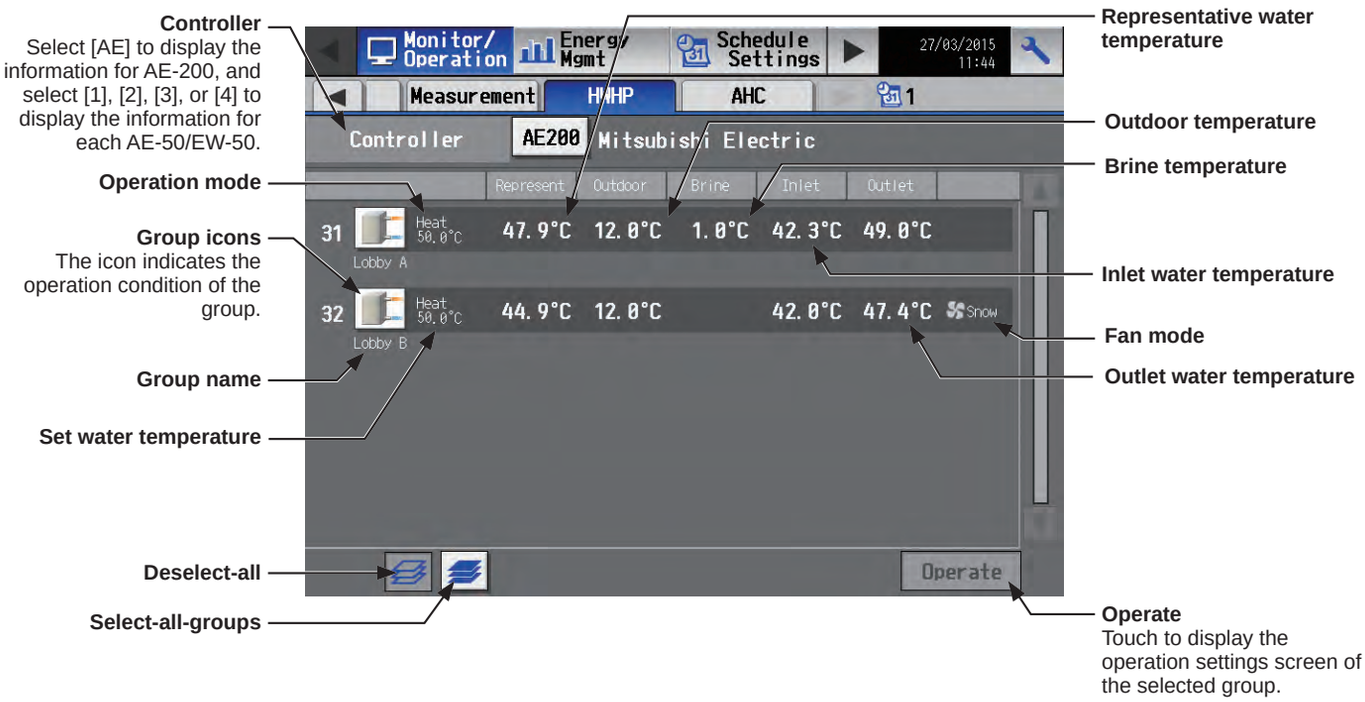
Touch [Monitor/Operation] in the menu bar, and then touch [HWHP].

The operation status of each HWHP (CAHV, CRHV) unit group will appear.

Note: The [Controller] setting will appear (only on the AE-200's LCD) when the [System Exp] setting on the [Unit Info.] screen is set to [Expand]. Switch the [Controller] setting between [AE200] and [Exp1] through [Exp4] to display the information for each AE-200, AE-50, and EW-50 individually.

Note: Fan mode will appear for CAHV units.

Note: Brine temperature will appear for CRHV units.

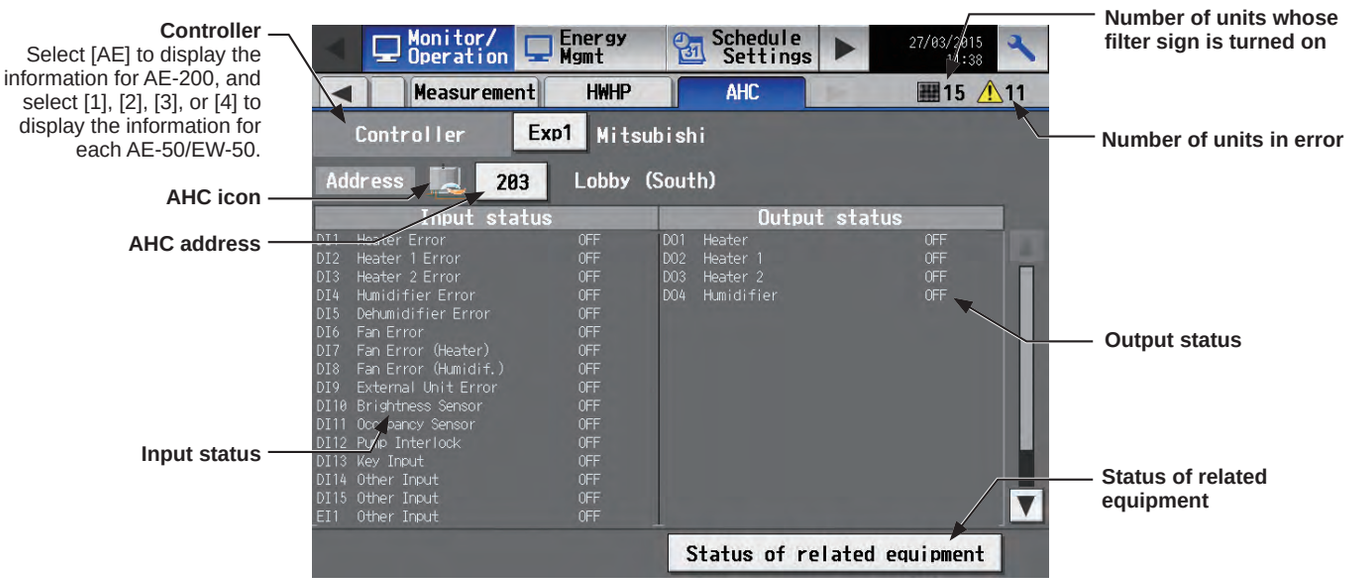


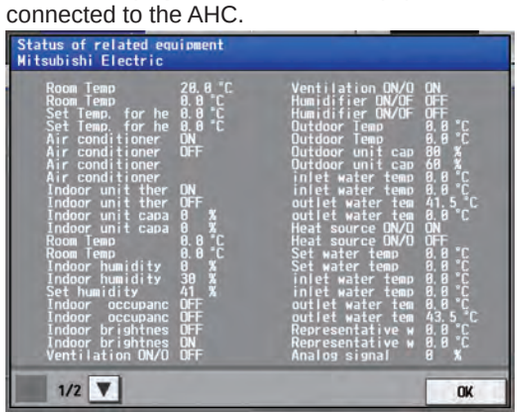
[6] [AHC] display

Touch [Monitor/Operation] in the menu bar, and then touch [AHC].

The status of input and output ports of each Advanced HVAC CONTROLLER (AHC) can be monitored.

Note: The [Controller] setting will appear (only on the AE-200's LCD) when the [System Exp] setting on the [Unit Info.] screen is set to [Expand]. Switch the [Controller] setting between [AE200] and [Exp1] through [Exp4] to display the information for each AE-200, AE-50, and EW-50 individually.



Item	Description
AHC icon	The following icons indicate the AHC status.  : Normal  : A communication error is occurring or an error signal has been input to the AHC.
AHC address	The address of the connected AHC will appear.
Input status	[Input port code * + Input port name + Input status] will appear. * DI1–DI15 (Digital input), EI1–EI4 (Extended digital input), AI1–AI8 (Analog input) Note: The status of the unused ports will not appear. Note: If a communication error occurs with AHC, no port information will appear.
Output status	[Output port code * + Output port name + Output status] will appear. * DO1–DO9 (Digital output), EO1–EO4 (Extended digital output), AO1–AO2 (Analog output) Note: The status of the unused ports will not appear. Note: If a communication error occurs with AHC, no port information will appear.
Status of related equipment	Touch to display the status of the equipment that are used to control the equipment that are connected to the AHC. 
Number of units whose filter sign is turned on *1	The number of units whose filter sign is currently turned on will appear. Touching "▦" will bring up the [Filter Sign] screen. (See section 3-4-2 "Filter Sign List".)

Item	Description
Number of units in error *1	The number of units that are currently in error will appear. Touching "⚠" will bring up the [Malfunction] screen. (See section 3-4-1 "Malfunction List".)

*1 The item will not appear if the number of units is "0."

3-1-4. Selecting the icons of the groups to be operated

On the [Floor] or [Block] display under the [Monitor/Operation] menu, select the icon(s) of the group(s) to be operated as explained below, and then touch [Operate] to bring up the operation settings screen.

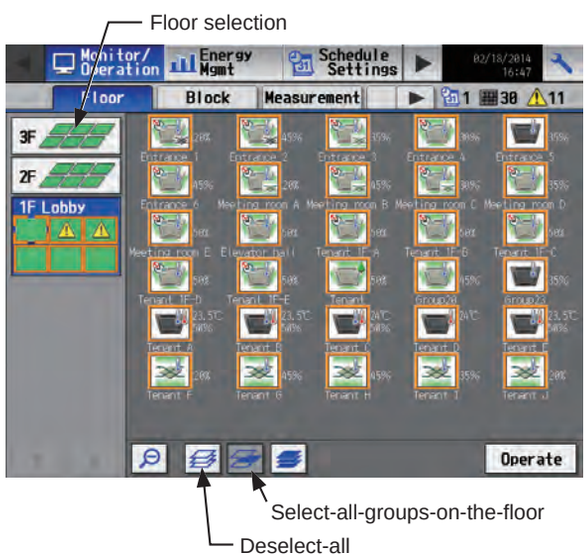
[1] Selecting group icons

(1) Selecting a group

On the [Floor] or [Block] display, touch the icon(s) of the group(s) you want to operate. The selected group icon(s) will appear with an orange frame.
Touch again to deselect.
To cancel all group selections, touch the “Deselect-all” button.

(2) Selecting all groups on the selected floor

On the [Floor] display, touch the floor(s) you want to operate, and then touch the “Select-all-groups-on-the-floor” button. The selected floor and group icons will appear with an orange frame.
To cancel all group selections, touch the “Deselect-all” button.



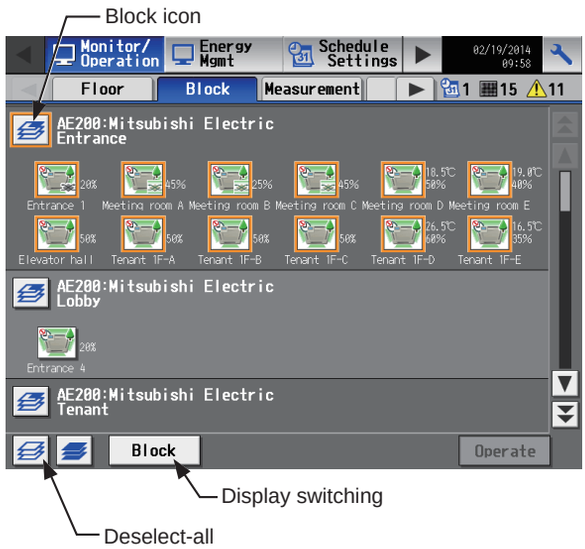
(3) Selecting all groups on all floors

On the [Floor] or [Block] display, touch the “Select-all-groups” button. All floor and group icons will appear with an orange frame.
To cancel all group selections, touch the “Deselect-all” button.

(4) Selecting all groups in the selected block

On the [Block] display, touch the block(s) you want to operate. The selected block and group icons will appear with an orange frame.
Touch again to deselect.
To cancel all group selections, touch the “Deselect-all” button.

Note: To select groups in the given EM block(s), touch the [Display switching] button to change it to [EM Block] first.



[2] Selecting equipment type

(1) When the equipment types of all selected groups are the same

Selecting the group icons and touching [Operate] will bring up the operation settings screen for the selected groups.
Refer to section 3-1-5 “Operation settings screen” for details about the operation settings.

(2) When the equipment types of the selected groups are different

Selecting the group icons and touching [Operate] will bring up the equipment type selection screen.
Touch the equipment type(s) you want to operate, and then touch [OK] to bring up the operation settings screen for the selected equipment groups.
Refer to section 3-1-5 “Operation settings screen” for details about the operation settings.

Note: When two or more equipment types are selected, only the [ON/OFF], [Schedule], and [Hold] settings will appear on the operation settings screen.

3-1-5. Operation settings screen

On the screen under the [Monitor/Operation] menu, selecting the group icon and touching [Operate] will bring up the operation settings screen for the selected group. The current operation conditions will appear.

Change necessary operation settings, and then touch [OK] to save the settings. Touch [Cancel] to return to the previous screen without making any changes.

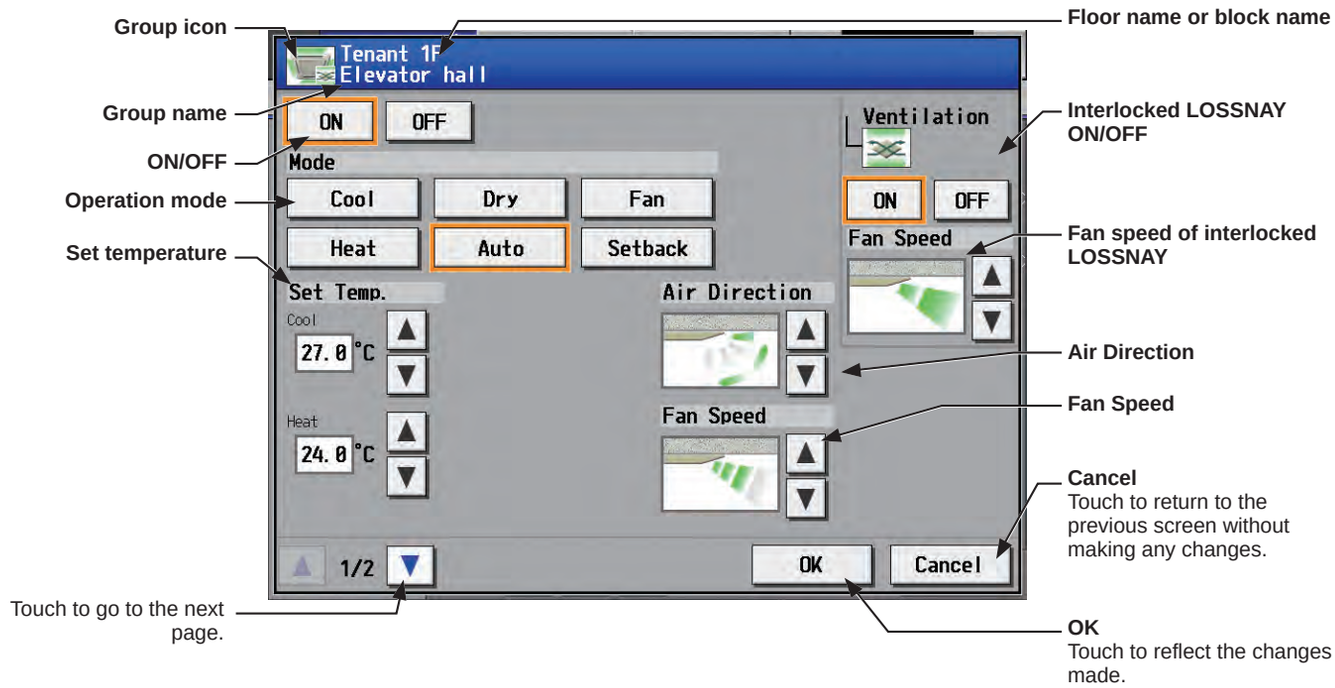
Note: The selected buttons will appear with an orange frame.

Note: When the setting is changed from other controllers, the operation conditions shown on the screen will not be updated while the screen is open.

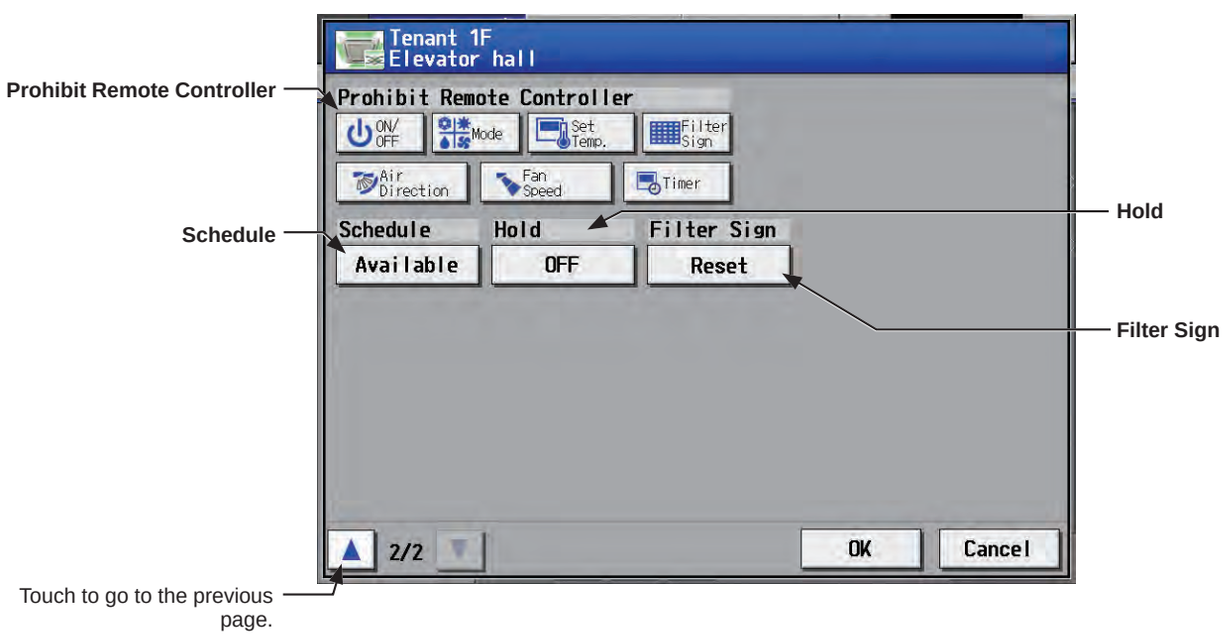
[1] Air conditioning unit group

Refer to section 3-1-6 for details about the setting items.

1st page

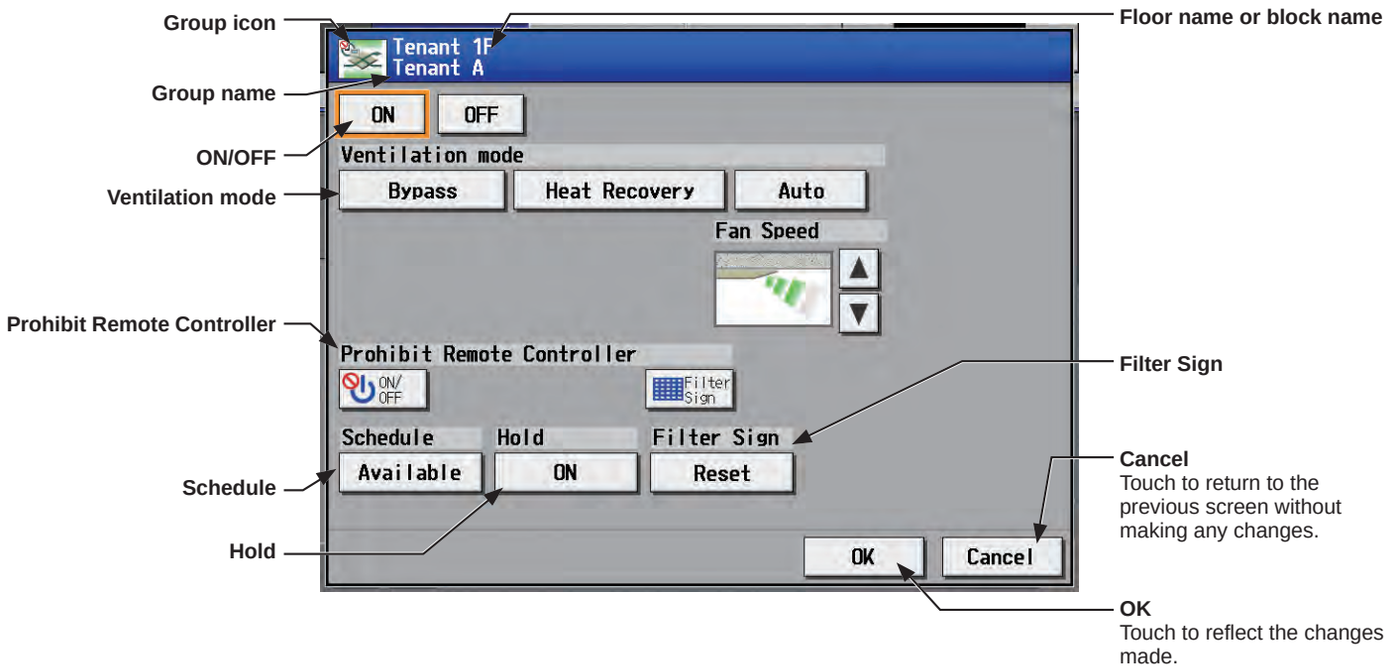


2nd page



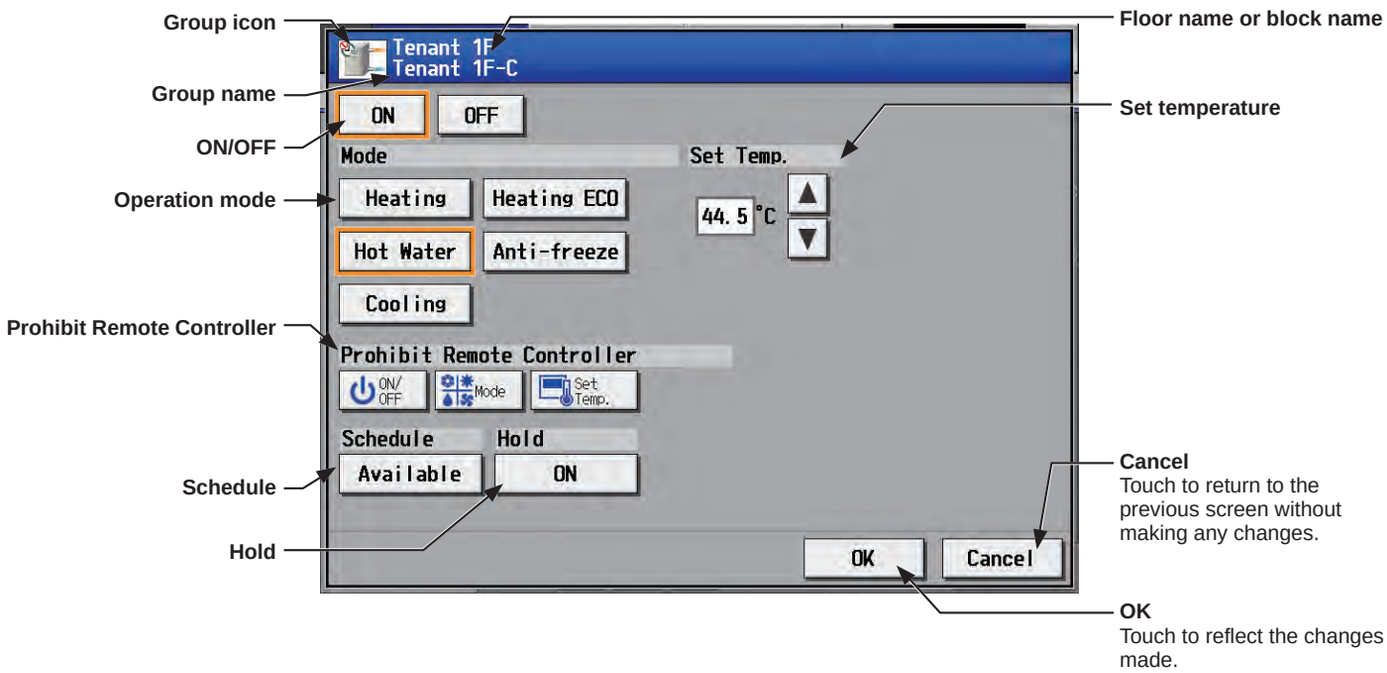
[2] LOSSNAY unit group

Refer to section 3-1-6 for details about the setting items.



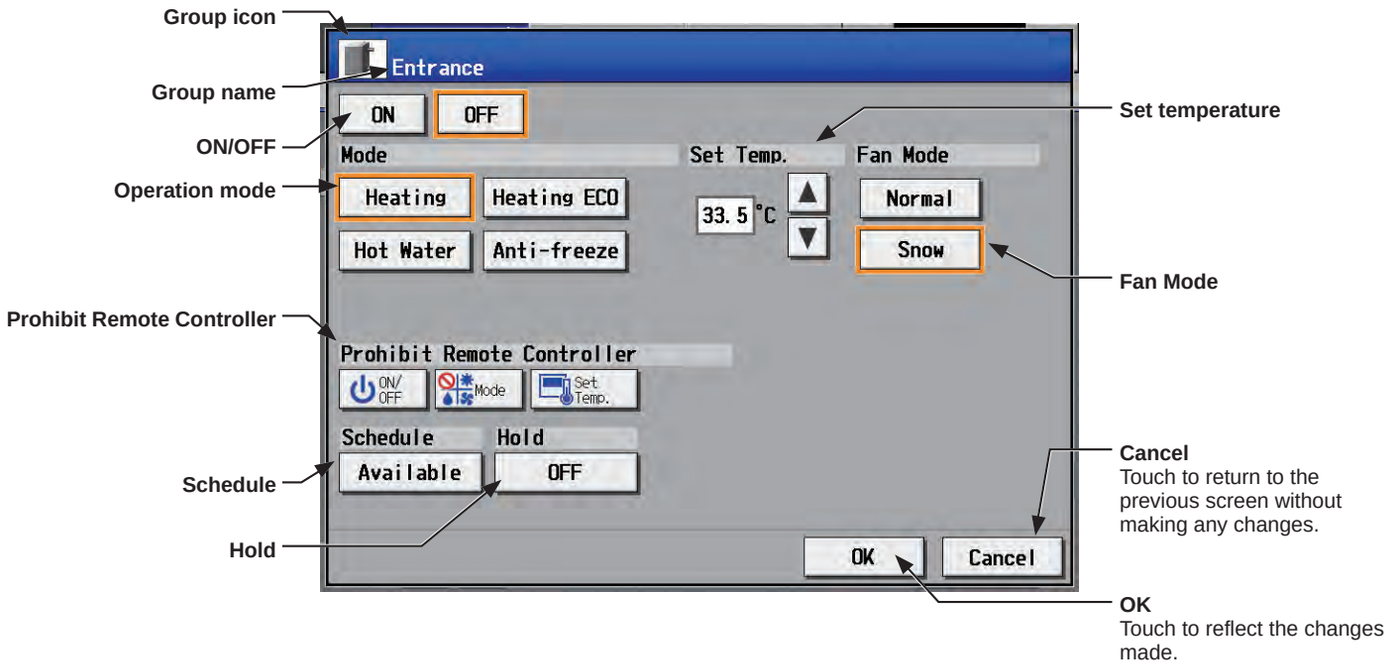
[3] Air To Water (PWFY) unit group

Refer to section 3-1-6 for details about the setting items.



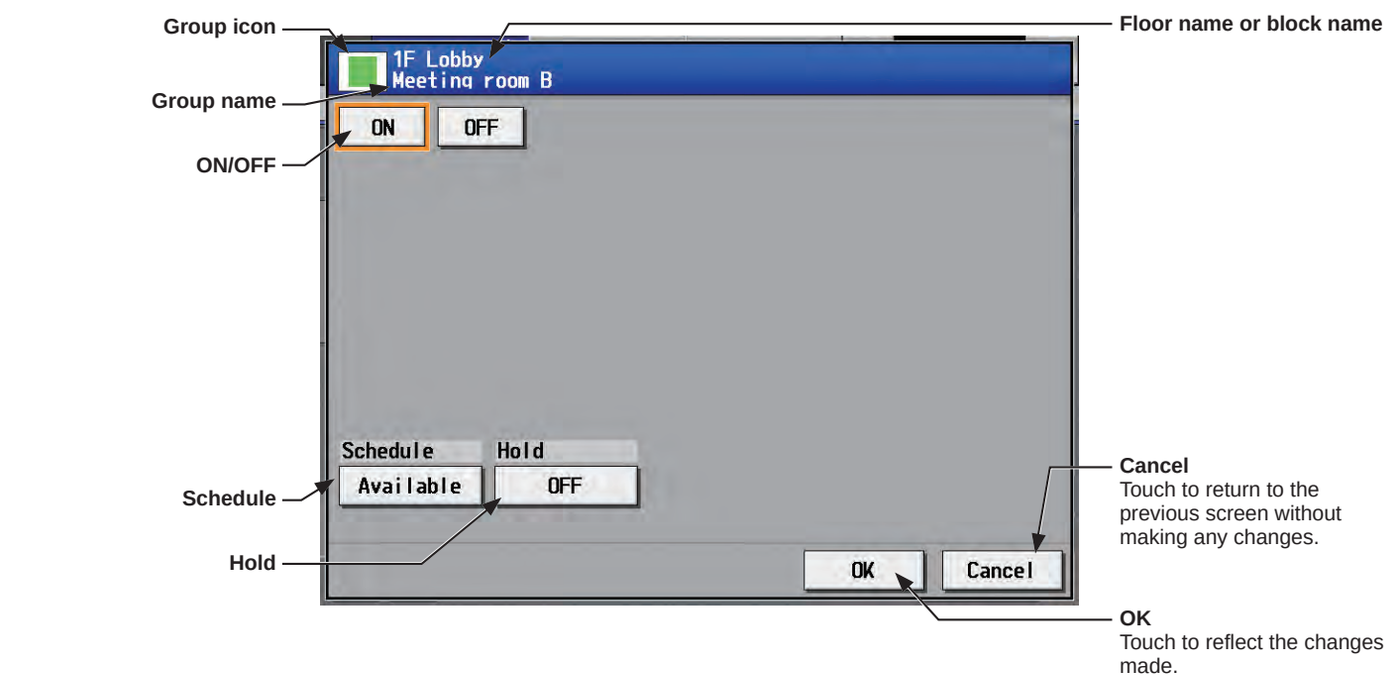
[4] HWHP (CAHV, CRHV) unit group

Refer to section 3-1-6 for details about the setting items.



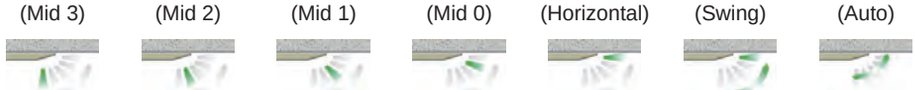
[5] General equipment group

Refer to section 3-1-6 for details about the setting items.



3-1-6. Operation setting items

Note: The items in the table below may not be displayed, depending on the model of the connected units.

Item	Description
ON/OFF	Touch [ON] or [OFF] to turn on or off the units in a given group. Note: Switching this setting will turn on or off the LOSSNAY unit as well that is interlocked with the operation of indoor units in the group. To turn on or off the LOSSNAY unit only, use the “Interlocked LOSSNAY ON/OFF” switch.
Operation mode	Touch the desired operation mode. Air conditioning unit: Cool, Dry, Fan, Heat, Auto, Setback LOSSNAY unit: Bypass, Heat Recovery, Auto Air To Water (PWFY) unit: Heating, Heating ECO, Hot Water, Anti-freeze, Cooling HWHP (CAHV, CRHV) unit: Heating, Heating ECO, Hot Water, Anti-freeze Note: Only the operation modes available for the unit model will appear. Note: The Setback mode can be selected on the AE-200A/AE-50A, but not on the AE-200E/AE-50E. Note: When the operation mode signals from the cooling/heating switchover model of units are mixed (Cool and Heat), the operation mode will not change and the color of the operation mode button will change to a pale orange.
Set temperature	Touch ▲ or ▼ to adjust the set temperature. <Setting range> Air conditioning unit Cool/Dry: 19°C–30°C (67°F–87°F) Heat: 17°C–28°C (63°F–83°F) Auto: 19°C–28°C (67°F–83°F) Air To Water (PWFY) unit (Booster unit) Heating: 30°C–50°C (87°F–122°F) Hot Water: 30°C–70°C (87°F–158°F) Anti-freeze: 10°C–45°C (50°F–113°F) (Water HEX unit) Heating: 30°C–45°C (87°F–113°F) Anti-freeze: 10°C–45°C (50°F–113°F) Cooling: 10°C–30°C (50°F–87°F) HWHP (CAHV, CRHV) unit Heating: 25°C–70°C (77°F–158°F) Hot Water: 25°C–70°C (77°F–158°F) Note: The range of temperatures that can be set depends on the unit model and may be restricted by the function settings. Note: If the indoor unit supports the dual set point function in the Auto mode and when the operation mode above is set to Auto or Setback, two set temperatures for Cool mode and Heat mode can be set. Note: The temperature unit (°C or °F) can be selected on the [Unit Info.] screen.
Air Direction	Touch ▲ or ▼ to adjust the air direction. (Mid 3) (Mid 2) (Mid 1) (Mid 0) (Horizontal) (Swing) (Auto)  Note: Available air directions depend on the unit model.
Fan Speed	Touch ▲ or ▼ to adjust the fan speed. (Low) (Mid 2) (Mid 1) (High) (Auto)  Note: Available fan speeds depend on the unit model.
Fan Mode	This item will appear only on the operation settings screen for HWHP (CAHV) unit groups. The fan can be set to keep rotating even while the unit is stopped to avoid snow accumulation on the fan guard during the winter. Select [Normal] to stop the fan while the unit is stopped. Select [Snow] to operate the fan even while the unit is stopped. Note: The fan mode for CRHV units cannot be operated.

<table>
<tr><th>Item</th><th>Description</th></tr>
<tr><td>Interlocked LOSSNAY ON/OFF</td><td>Touch [ON] or [OFF] to turn on or off the interlocked LOSSNAY unit.
Note: For a group that is not connected to an interlocked LOSSNAY unit (ventilator), this item will not appear.
Note: It takes a while for the status of the LOSSNAY unit group icons on the [Floor] or [Block] display to be updated.
Note: If a LOSSNAY unit is interlocked with the operation of indoor units in multiple groups, the LOSSNAY unit may be in operation, even when the “Interlocked LOSSNAY OFF” icon is displayed.</td></tr>
<tr><td>Fan speed of interlocked LOSSNAY</td><td>Touch [▲] or [▼] to adjust the fan speed of the interlocked LOSSNAY unit (ventilator).
Note: For a group that is not connected to an interlocked LOSSNAY unit (ventilator), this item will not appear.
Note: It takes a while for the status of the LOSSNAY unit group icons on the [Floor] or [Block] display to be updated.</td></tr>
<tr><td>Prohibit Remote Controller Operation</td><td>The following operations or setting change from the local remote controllers can be prohibited.
<table>
<tr><th></th><th>(Permit)</th><th>(Prohibit)</th></tr>
<tr><td>ON/OFF</td><td>  </td><td>  </td></tr>
<tr><td>Operation mode</td><td>  </td><td>  </td></tr>
<tr><td>Set temperature</td><td>  </td><td>  </td></tr>
<tr><td>Filter Sign</td><td>  </td><td>  </td></tr>
<tr><td>Air Direction</td><td>  </td><td>  </td></tr>
<tr><td>Fan Speed</td><td>  </td><td>  </td></tr>
<tr><td>Timer</td><td>  </td><td>  </td></tr>
</table>
Note: The settable items depend on the unit model.
Note: Prohibiting the [Timer] setting will disable the schedules that have been set from the local remote controllers.
Note: When the [ON/OFF] operation is prohibited and the “Automatic recovery after power failure” switch on the indoor unit is set to “Turn off the power, or restore operation regardless of the operation status immediately before power failure,” the operation of the indoor unit will not be restored, even when turned on after power restoration. When the switch is set to “Turn off the power, or restore operation if the unit was in operation immediately before power failure,” the operation of the indoor unit will be restored regardless of whether the [ON/OFF] operation is prohibited or not. Refer to the indoor unit Installation Manual for details about switch settings.</td></tr>
<tr><td>Schedule</td><td>Touch [Available] or [Not Avail.] to enable/disable the scheduled operations. When [Not Avail.] is set, the scheduled operations are disabled even if schedules are set.
Note: The operations that have been scheduled on the remote controller will not be disabled.</td></tr>
<tr><td>Hold</td><td>Touch [ON] or [OFF] to enable/disable the Hold function. When the Hold function is enabled, the scheduled operations are disabled.
Note: The operations that have been scheduled on the remote controller will also be disabled.
Note: [Hold type] can be specified on the [Advanced] screen.
Note: The Hold function can be used on the AE-200A/AE-50A, but not on the AE-200E/AE-50E.</td></tr>
<tr><td>Filter Sign</td><td>Touch [Reset] to switch between resetting and not resetting the filter sign after cleaning the filter.
Note: If a filter sign in the group has not been triggered, then this item will not appear.
Note: Filter sign of LOSSNAY units will not be reset.
Note: After the filter sign is reset, it takes up to an hour to clear the filter sign display on the local remote controllers.</td></tr>
</table>

3-2. Energy Management

The energy-control-related status, such as electric energy consumption, operation time, and outdoor temperature, can be displayed in a graph. Also, preset target value of the electric energy consumption can be checked.

Note: Energy use status data and ranking data can be output in a CSV format.

Note: File names, as well as date formats, delimiter characters, and temperature units (°C, °F) within the files output as CSV will use formats set as initial settings. Refer to the Instruction Book (Initial Settings) for settings methods.

3-2-1. Energy Use Status

On the [Energy Use Status] screen, the energy-control-related status, such as electric energy consumption, operation time, and outdoor temperature, can be displayed in a graph.

Operators can check the detailed status of given indoor units by specifying the date to display the data per group, block, EM block, or unit address. Also, the status of other indoor units can be displayed at the same time for comparison.

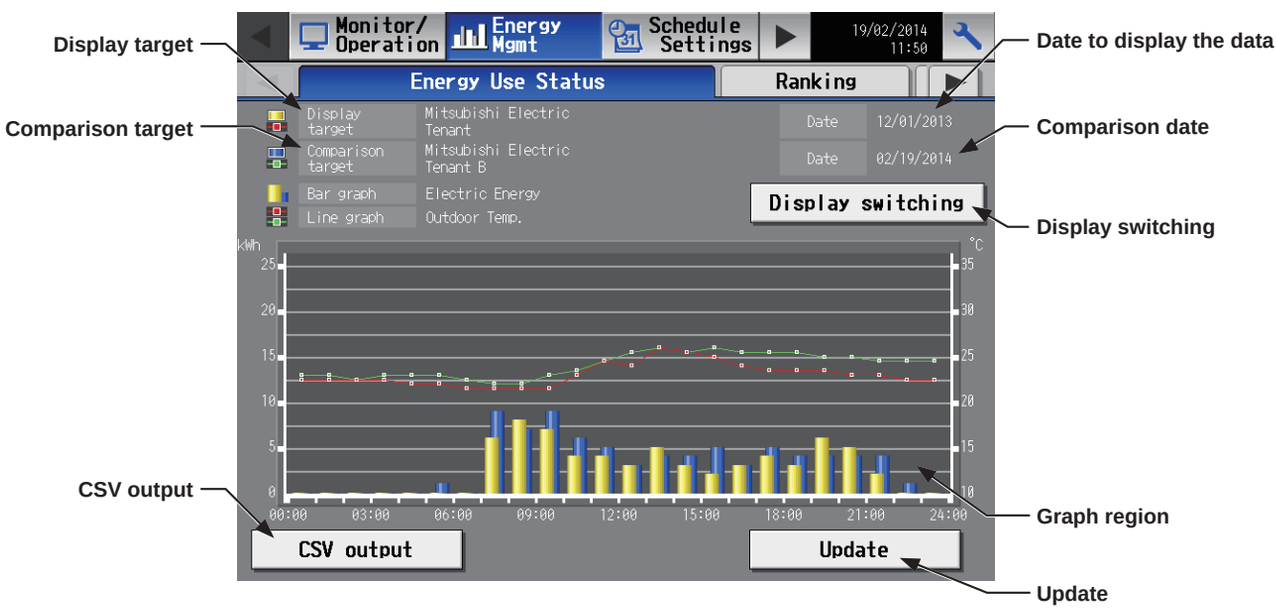
Displaying energy-control-related status of each hour, day, and month in a graph visualizes the energy-saving status.

Touch [Energy Mgmt] in the menu bar, and then touch [Energy Use Status].

Important: The following settings are required beforehand to display a graph.
- Energy Management (Refer to the Instruction Book (Initial Settings) for details.) (This setting is not required when using an AE-200 apportioned electricity billing function.)
- Measurement (Refer to the Instruction Book (Initial Settings) for details.)

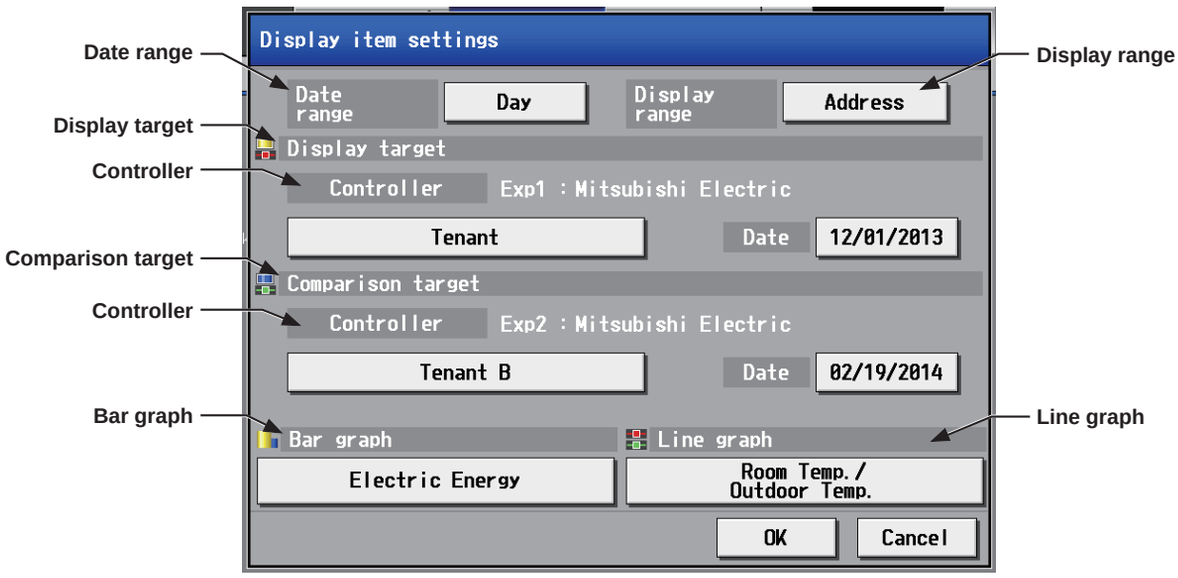
Note: A separate license is required, depending on the selected date range, display range, and display item.

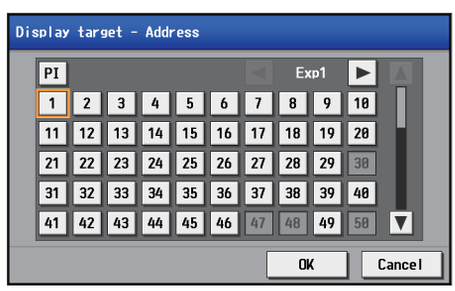
Note: In case the AE-200/AE-50/EW-50 malfunctions, it is recommended to periodically save the file in the CSV format by touching [CSV output] on this screen or by touching [Output as CSV file] on the CSV output screen (see section 5-3 “CSV output”).



(1) Touch [Display switching] to set the display items.

Note: The [Controller] setting will appear (only on the AE-200's LCD) when the [System Exp] setting on the [Unit Info.] screen is set to [Expand]. Switch the [Controller] setting between [AE200] and [Exp1] through [Exp4] to display the data for each AE-200, AE-50, and EW-50 individually.

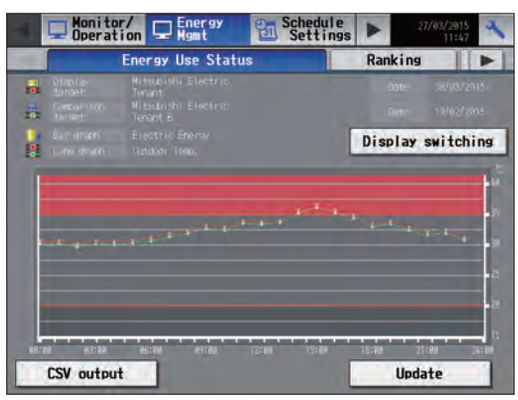


Item		Description
Date range		Select [Day], [Month], or [Year]. Note: Only the data for the period during which the AE-200/AE-50/EW-50 was powered on will appear in the graph. The data for the period during which the AE-200/AE-50/EW-50 was powered off will not appear in the graph.
Display range		Select [EM block], [Block], [Group], or [Address] to display its data.
Display target	Target	Select an EM block name, block name, group name, or address number to display its data. <Display range: EM block> An EM block name list will appear. Note: If the EM block name has not been registered, ["EM block" + EM block number] will appear. Note: EM blocks of general equipment (connected via DIDO controller PAC-YG66DCA) groups are excluded. <Display range: Block> A block name list will appear. Note: If the block name has not been registered, ["Block" + block number] will appear. Note: Blocks of general equipment (connected via DIDO controller PAC-YG66DCA) groups are excluded. <Display range: Group> A group name list will appear. Note: If the group name has not been registered, ["Group" + group number] will appear. Note: General equipment (connected via DIDO controller PAC-YG66DCA) groups are excluded. <Display range: Address> A unit address list will appear. Note: To display input values of a built-in Pulse Input (PI), select the first option [PI]. 

<table>
<tr><th colspan="2">Item</th><th>Description</th></tr>
<tr><td>Display target</td><td>Date</td><td>Specify a date to display the data.
<table>
<tr><th>Date range</th><th>Data storage period</th></tr>
<tr><td>[Day]</td><td>The last 24 months</td></tr>
<tr><td>[Month]</td><td>The last 24 months</td></tr>
<tr><td>[Year]</td><td>The last 2 years</td></tr>
</table></td></tr>
<tr><td rowspan="3">Comparison target</td><td>Controller</td><td>Select [AE] to display the data for AE-200 for comparison, and select [1], [2], [3], or [4] to display the data for each AE-50/EW-50 for comparison.</td></tr>
<tr><td>Target</td><td>Select an EM block name, block name, group name, or address to display the comparison data.
Note: The selectable items vary, depending on the item selected in the [Display range] field.</td></tr>
<tr><td>Date</td><td>Specify a date to display the comparison data.
Note: The same rule as for the [Date] under the [Display target] section apply.</td></tr>
<tr><td colspan="2">Bar graph</td><td>Select an item to display its data in the bar graph.
Note: The selectable items vary, depending on the items selected in the [Display range] and [Display target] fields.
  Display items for bar graph
<table>
<tr><th rowspan="2">Display target</th><th rowspan="2">Display item</th><th colspan="4">Display range</th></tr>
<tr><th>Address</th><th>Group</th><th>Block</th><th>EM block</th></tr>
<tr><td rowspan="6">Indoor unit</td><td>Target value</td><td>-</td><td>-</td><td>V *1*5</td><td>V *1*5</td></tr>
<tr><td>Electric Energy *3*6</td><td>V *1</td><td>V *1</td><td>V *1</td><td>V *1</td></tr>
<tr><td>Fan operation time *4</td><td>V *1</td><td>V *1</td><td>-</td><td>-</td></tr>
<tr><td>Thermo-ON time *4</td><td>V *1</td><td>V *1</td><td>-</td><td>-</td></tr>
<tr><td>Thermo-ON time (Cool) *4</td><td>V *1</td><td>V *1</td><td>-</td><td>-</td></tr>
<tr><td>Thermo-ON time (Heat) *4</td><td>V *1</td><td>V *1</td><td>-</td><td>-</td></tr>
<tr><td rowspan="4">MCP
(PI controller)</td><td>Name of the metering device 1</td><td>V *2</td><td>-</td><td>-</td><td>-</td></tr>
<tr><td>Name of the metering device 2</td><td>V *2</td><td>-</td><td>-</td><td>-</td></tr>
<tr><td>Name of the metering device 3</td><td>V *2</td><td>-</td><td>-</td><td>-</td></tr>
<tr><td>Name of the metering device 4</td><td>V *2</td><td>-</td><td>-</td><td>-</td></tr>
<tr><td rowspan="4">MCP
(Built-in Pulse Input (PI))</td><td>Name of the metering device 1</td><td>V *2</td><td>-</td><td>-</td><td>-</td></tr>
<tr><td>Name of the metering device 2</td><td>V *2</td><td>-</td><td>-</td><td>-</td></tr>
<tr><td>Name of the metering device 3</td><td>V *2</td><td>-</td><td>-</td><td>-</td></tr>
<tr><td>Name of the metering device 4</td><td>V *2</td><td>-</td><td>-</td><td>-</td></tr>
</table>
V: Item that can be displayed in the graph
*1 “Energy Management License Pack” is required. (AE-200E/AE-50E/EW-50E only)
*2 If “Energy Management License Pack” has not been registered, only [Day] is available for selection as a Date range. To select [Month] or [Year], “Energy Management License Pack” is required.
*3 The electric energy consumed by indoor units will appear in the graph. The values are apportioned based on the setting for [Indoor unit operation apportioning mode] that has been made on the [Energy Management] screen.
*4 The indoor unit’s cumulative operation time for the selected item will appear in the graph.
• [FAN operation time] is the cumulative duration of time in which the indoor unit is ON.
• [Thermo-ON time] is the cumulative duration of time in which the refrigerant is flowing into the indoor unit. (Thermo-ON time (Cool): when the Cool mode is selected; Thermo-ON time (Heat): when the Heat mode is selected; Thermo-ON time: when either mode is selected)
*5 The target values will appear in the graph when the target electric energy values are specified on the [Target value] screen and when the electricity meter is selected in the [Indoor unit electricity meter] section on the [Energy Management] screen.
*6 A small amount of electric energy consumption may appear in the graph even when no indoor units have been operated. This is because the standby electric energy is apportioned, which is normal.</td></tr>
</table>

<table>
<tr><th>Item</th><th>Description</th></tr>
<tr><td>Line graph</td><td>
Select an item to display its data in the line graph.
Note: The selectable items vary, depending on the items selected in the [Display range] and [Display target] fields.
Note: For line graph, two items can be selected if the units are the same.

Display items for line graph
<table>
<tr><th rowspan="2">Display target</th><th rowspan="2">Display item</th><th colspan="4">Display range</th></tr>
<tr><th>Address</th><th>Group</th><th>Block</th><th>EM block</th></tr>
<tr><td>-</td><td>Outdoor Temp. *4</td><td>V *1</td><td>V *1</td><td>V *1</td><td>-</td></tr>
<tr><td rowspan="3">Indoor unit</td><td>Set Temp. for cool *4*6</td><td>V *2</td><td>V *2</td><td>-</td><td>-</td></tr>
<tr><td>Set Temp. for heat *4*6</td><td>V *2</td><td>V *2</td><td>-</td><td>-</td></tr>
<tr><td>Room Temp. *4</td><td>V *2</td><td>V *2</td><td>-</td><td>-</td></tr>
<tr><td rowspan="2">MCT
(AI controller)
*4*5</td><td>Name of the temperature sensor 1 or humidity sensor 1</td><td>V *3</td><td>-</td><td>-</td><td>-</td></tr>
<tr><td>Name of the temperature sensor 2 or humidity sensor 2</td><td>V *3</td><td>-</td><td>-</td><td>-</td></tr>
<tr><td rowspan="2">AHC *4*5</td><td>Name of the temperature sensor 1</td><td>V *2</td><td>-</td><td>-</td><td>-</td></tr>
<tr><td>Name of the temperature sensor 2</td><td>V *2</td><td>-</td><td>-</td><td>-</td></tr>
</table>
V: Item that can be displayed in the graph
*1 Selectable only when the outdoor temperature sensor is selected in the [External Temperature Sensor] section on the [Energy Management] screen.
*2 “Energy Management License Pack” is required. (AE-200E/AE-50E/EW-50E only)
*3 If “Energy Management License Pack” has not been registered, only [Day] is available for selection as a Date range. To select [Month] or [Year], “Energy Management License Pack” is required.
*4 When [Day] is selected as a Date range, the temperature values obtained every hour will appear. When [Month] is selected, the average daily temperature values will appear. When [Year] is selected, the average monthly temperature values will appear.
*5 The background of the graph will appear in red when the measurement value reaches the upper or lower alarm threshold value that has been set on the [Measurement] screen. (Refer to the Instruction Book (Initial Settings) for details.) The background will stay in red even when the measurement value becomes between the upper and lower threshold values.



*6 If the indoor unit supports the dual set point function in the AUTO mode, only the set temperature for the current operation mode (Cool or Heat mode) can be displayed in a graph.
</td></tr>
</table>

(2) Touch [OK] to go back to the previous screen.
The display target's data and the comparison target's data will appear in a bar graph and a line graph.
Note: No graph will appear if no data that meet the specified criteria exist.

<table>
<tr><th>Item</th><th>Description</th></tr>
<tr><td>Graph region</td><td>
<table>
<tr><th></th><th>Display target</th><th>Comparison target</th><th>Target value</th></tr>
<tr><td>  Bar graph</td><td>  (Yellow)</td><td>  (Blue)</td><td>  (Red)</td></tr>
<tr><td rowspan="2">  Line graph</td><td>  (Red)</td><td>  (Green)</td><td rowspan="2"></td></tr>
<tr><td>  (Orange)</td><td>  (Blue)</td></tr>
</table>
Note: If no item is selected in the [Comparison target] field, only the data of the item selected in the [Display target] field will appear in the graph.
Note: The data for a certain period of time may not appear if it does not exist due to the changes of the daylight saving time setting or current time setting.
If the data overlap for a certain period of time due to the time overlap that was occurred when daylight saving ended or the current time setting was changed, the newer data will appear in the graph.
</td></tr>
</table>

(3) To export the displayed measurement data in the CSV format, remove the controller cover and insert a USB memory device to the USB port.
Touch [CSV output] with the measurement data to be output being displayed.

<table>
<tr><th>Item</th><th>Description</th></tr>
<tr><td>CSV output</td><td>
Touch [CSV output] to export the displayed measurement data in the CSV format.
The CSV file name and file format will vary as shown below, depending on the selected date range.

■ File output destination
[Root folder of the USB memory]\[Serial No.]\“OperationalData”\“EnergyManagement”\

■ File name
<When any item in the [Comparison target] field is selected>
Date range: Day
“EM”_“DailyTrend”_[yyyy]-[mm]-[dd]_[Display target]_[YYYY]-[MM]-[DD]_[Comparison target]_[Bar graph type]_[Line graph type1]_[Line graph type2].csv

Date range: Month
“EM”_“MonthlyTrend”_[yyyy]-[mm]_[Display target]_[YYYY]-[MM]_[Comparison target]_[Bar graph type]_[Line graph type1]_[Line graph type2].csv

Date range: Year
“EM”_“AnnualTrend”_[yyyy]_[Display target]_[YYYY]_[Comparison target]_[Bar graph type]_[Line graph type1]_[Line graph type2].csv

<When no item in the [Comparison target] field is selected>
Date range: Day
“EM”_“DailyTrend”_[yyyy]-[mm]-[dd]_[Display target]_[Bar graph type]_[Line graph type1]_[Line graph type2].csv

Date range: Month
“EM”_“MonthlyTrend”_[yyyy]-[mm]_[Display target]_[Bar graph type]_[Line graph type1]_[Line graph type2].csv

Date range: Year
“EM”_“AnnualTrend”_[yyyy]_[Display target]_[Bar graph type]_[Line graph type1]_[Line graph type2].csv
</td></tr>
</table>

<table>
<tr><th>Item</th><th>Description</th></tr>
<tr><td>CSV output</td><td>
<table>
<tr><th>File-name contents</th><th colspan="2">Format</th></tr>
<tr><td>[yyyy]</td><td colspan="2">The year specified in the [Date to display the data] field</td></tr>
<tr><td>[mm]</td><td colspan="2">The month specified in the [Date to display the data] field</td></tr>
<tr><td>[dd]</td><td colspan="2">The date specified in the [Date to display the data] field</td></tr>
<tr><td rowspan="4">[Display target]</td><td>Address</td><td><Indoor unit>
“AE” + AE No. + “-” + “A” + M-NET address (001–050) + “_” + “00”
<PI controller>
“AE” + AE No. + “-” + “A” + M-NET address (001–050) + “_” + Metering device No.
<Built-in Pulse Input (PI)>
“AE” + AE No. + “-” + “A” + “_” + Metering device No. (01–04)
<AI controller or AHC>
“AE” + AE No. + “-” + “A” + M-NET address (001–050) + “_” + Sensor No. (01–04)</td></tr>
<tr><td>Group</td><td>“G” + Group No. (001–050) + “_” + “00”</td></tr>
<tr><td>Block</td><td>“B” + Block No. (000, 001–050, 999 *1) + “_” + “00”</td></tr>
<tr><td>EM block</td><td>“E” + EM block No. (001–200, 999 *2) + “_” + “00”</td></tr>
<tr><td>[YYYY]</td><td colspan="2">The year specified in the [Comparison date] field</td></tr>
<tr><td>[MM]</td><td colspan="2">The month specified in the [Comparison date] field</td></tr>
<tr><td>[DD]</td><td colspan="2">The date specified in the [Comparison date] field</td></tr>
<tr><td rowspan="4">[Comparison target]</td><td>Address</td><td rowspan="4">The same output format as for [Display target] apply.</td></tr>
<tr><td>Group</td></tr>
<tr><td>Block</td></tr>
<tr><td>EM block</td></tr>
<tr><td rowspan="10">[Bar graph type]</td><td colspan="2">B01: Electric energy (Indoor unit)</td></tr>
<tr><td colspan="2">B02: Fan operation time</td></tr>
<tr><td colspan="2">B03: Thermo-ON time (Total)</td></tr>
<tr><td colspan="2">B04: Thermo-ON time (Cool)</td></tr>
<tr><td colspan="2">B05: Thermo-ON time (Heat)</td></tr>
<tr><td colspan="2">B06: PI controller/Built-in Pulse Input (PI) electric energy</td></tr>
<tr><td colspan="2">B08: PI controller/Built-in Pulse Input (PI) water quantity</td></tr>
<tr><td colspan="2">B09: PI controller/Built-in Pulse Input (PI) heat quantity</td></tr>
<tr><td colspan="2">B00: No selection</td></tr>
<tr><td rowspan="9">[Line graph type]</td><td colspan="2">L00: No selection</td></tr>
<tr><td colspan="2">L01: Set temperature (Cool)</td></tr>
<tr><td colspan="2">L02: Set temperature (Heat)</td></tr>
<tr><td colspan="2">L03: Room temperature</td></tr>
<tr><td colspan="2">L04: AI controller temperature</td></tr>
<tr><td colspan="2">L05: AHC temperature</td></tr>
<tr><td colspan="2">L06: Outdoor temperature</td></tr>
<tr><td colspan="2">L08: AI controller humidity</td></tr>
</table>
*1 “B999” = Total of all blocks, “B000” = Unregistered block
*2 “E999” = Total of all EM blocks
</td></tr>
</table>

<table>
<tr><th>Item</th><th>Description</th></tr>
<tr><td>CSV output</td><td>

■ File format

<table>
<tr><th>Row</th><th>Item</th><th>Date range</th><th colspan="2">Format</th></tr>
<tr><td rowspan="3">1st</td><td rowspan="3">File Type</td><td>Day</td><td colspan="2">401</td></tr>
<tr><td>Month</td><td colspan="2">402</td></tr>
<tr><td>Year</td><td colspan="2">403</td></tr>
<tr><td rowspan="3">2nd</td><td rowspan="3">Date</td><td>Day</td><td colspan="2">yyyy/mm/dd:YYYY/MM/DD</td></tr>
<tr><td>Month</td><td colspan="2">yyyy/mm:YYYY/MM</td></tr>
<tr><td>Year</td><td colspan="2">yyyy:YYYY</td></tr>
<tr><td>3rd</td><td colspan="2">Target</td><td colspan="2">Display target/Comparison target</td></tr>
<tr><td rowspan="3">4th</td><td rowspan="3">Measurement item</td><td>Day</td><td>“Time”,</td><td rowspan="3"><Display range: Address>
“Address” + Address number (Display target) (Bar) + “–” + Display item (Bar), “Address” + Address number (Comparison target) (Bar) + “–” + Display item (Bar), “Address” + Address number (Display target) (Line1) + “–” + Display item (Line1), “Address” + Address number (Comparison target) (Line1) + “–” + Display item (Line1), “Address” + Address number (Display target) (Line2) + “–” + Display item (Line2), “Address” + Address number (Comparison target) (Line2) + “–” + Display item (Line2)

<Display range: Group>
Group name*2 (Display target) (Bar) + “–” + Display item (Bar), Group name*2 (Comparison target) (Bar) + “–” + Display item (Bar), Group name*2 (Display target) (Line1) + “–” + Display item (Line1), Group name*2 (Comparison target) (Line1) + “–” + Display item (Line1),Group name*2 (Display target) (Line2)+ “–” + Display item (Line2), Group name*2 (Comparison target) (Line2) + “–” + Display item (Line2)

<Display range: Block>
Block name*2 (Display target) (Bar) + “–” + Display item (Bar), Block name*2 (Comparison target) (Bar) + “–” + Display item (Bar), “Target electric energy(kWh)”*1, Block name*2 (Display target) (Line1) + “–” + Display item (Line1), Block name*2 (Comparison target) (Line1) + “–” + Display item (Line1)

<Display range: EM block>
EM block name*2 (Display target) (Bar) + “–” + Display item (Bar), EM block name*2 (Comparison target) (Bar) + “–” + Display item (Bar), “Target electric energy(kWh)”*1</td></tr>
<tr><td>Month</td><td>“Day”,</td></tr>
<tr><td>Year</td><td>“Month”,</td></tr>
<tr><td rowspan="3">5th–*4</td><td rowspan="3">Data</td><td>Day</td><td>hh:mm,</td><td rowspan="3">Data value (Bar), Comparison data value (Bar), Target electric energy value*1, Data value (Line1), Comparison data value (Line1), Data value (Line2), Comparison data value (Line2)</td></tr>
<tr><td>Month</td><td>dd,</td></tr>
<tr><td>Year</td><td>mm,</td></tr>
</table>

*1 “Target electric energy(kWh)” and the target electric energy value will appear only when the data is displayed in the graph.

*2 If the group name has not been registered, [“Group” + group number] will appear. If the block name has not been registered, [“Block” + block number] will appear. If the EM block name has not been registered, [“EM block” + EM block number] will appear.

*3 The data for the item that is not selected will not be output.

*4 The number of rows varies with the selected date range. (Day: 5th–28th; Month: 5th–35th; Year: 5th–16th)

</td></tr>
</table>

Item	Description
CSV output	■ File sample (Display range: Block) Date range: Day 401 2014/08/19:2013/06/01 Block1/Block5 Time,Block1 - Indoor Unit Electric Energy,Block5 - Indoor Unit Electric Energy,Block1 - Outdoor Temp.,Block5 - Outdoor Temp. 00:00,0.61,0.25,23.2,17.8 01:00,0.65,0.51,23.1,17.6 02:00,0.66,0.48,22.1,18.1 03:00,0.66,0.58,23.3,18.2 04:00,0.63,0.47,24.5,17.5 05:00,0.59,0.39,26.8,19.1 06:00,0.52,0.52,28.1,22.1 : 23:00,0.59,0.23,23.4,17.1 Date range: Month 402 2014/04:2013/04 Block1/Block5 Day,Block1 - Indoor Unit Electric Energy,Block5 - Indoor Unit Electric Energy,Target electric energy (kWh),Block1 - Outdoor Temp.,Block5 - Outdoor Temp. 01,24.69,8.74,22,26.2,17.9 02,25.31,8.22,22,27,17.4 03,12.36,22.33,10,25.2,16.6 04,10.37,21.36,10,25.1,19.3 05,27.02,17.55,22,27.7,20.5 06,24.55,16.58,22,26.3,19 07,24.69,17.96,22,24.9,18.9 : 31,13.2,20.22,10,27.3,20.2 Date range: Year 403 2014:2013 Block1/Block5 Month,Block1 - Indoor Unit Electric Energy,Block5 - Indoor Unit Electric Energy,Target electric energy (kWh),Block1 - Outdoor Temp.,Block5 - Outdoor Temp. 01,675.17,661.93,600,0.4,0.5 02,697.38,683.71,700,0.3,3.2 03,528.63,518.26,400,4.5,3.8 04,403.67,395.75,500,9.8,10 05,420.28,412.04,500,15.9,15.6 06,450.33,477.88,500,18.2,20.6 07,594.13,582.48,550,22.8,24.8 : 12,602.58,590.76,550,3.3,3.4

3-2-2. Ranking

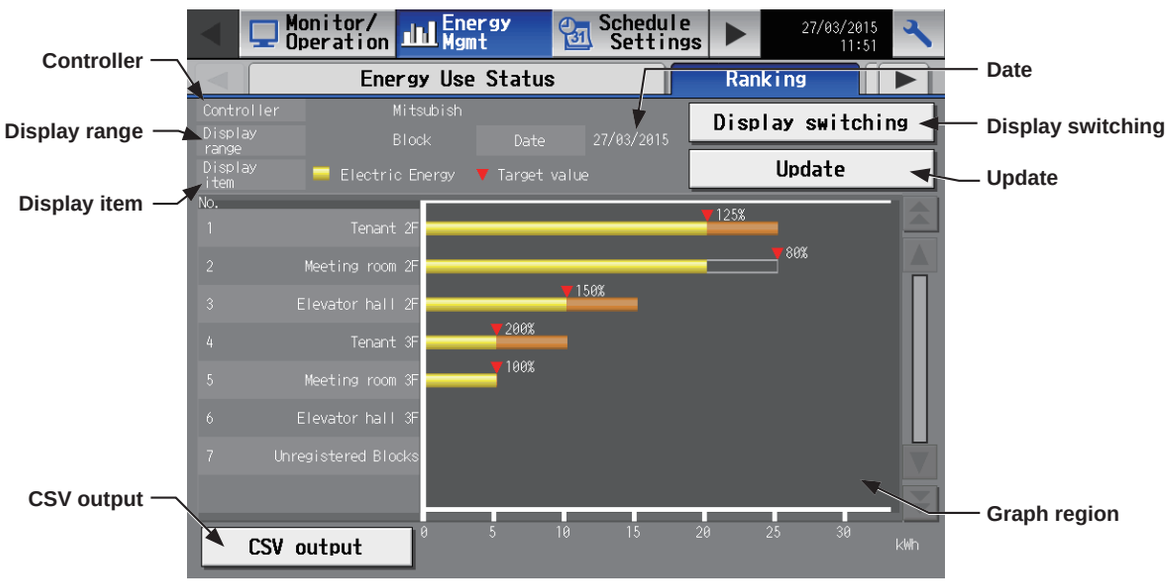
On the Ranking screen, the rankings in electric energy consumption, fan operation time, and Thermo-ON time (Total/Cool/Heat) of given indoor units can be displayed per block, group, and unit address in descending order in the bar graph.

Touch [Energy Mgmt] in the menu bar, and then touch [Ranking].

> Important: The following settings are required beforehand to display a graph.
> • Energy Management (Refer to the Instruction Book (Initial Settings) for details.)
> • Measurement (Refer to the Instruction Book (Initial Settings) for details.)

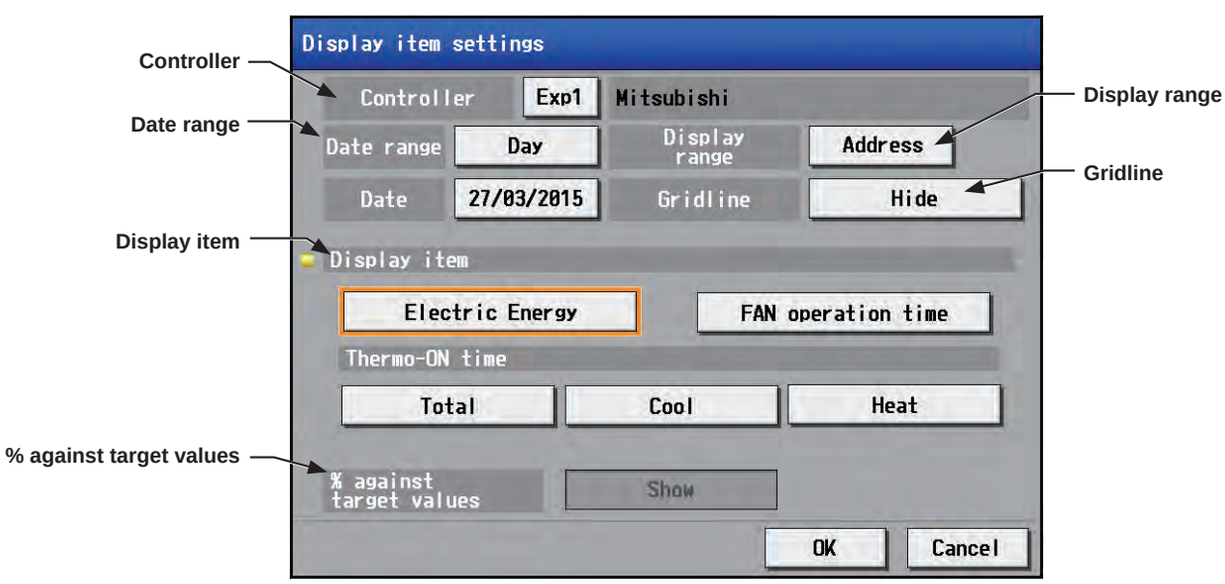
Note: “Energy Management License Pack” is required to access the Ranking screen. (AE-200E/AE-50E/EW-50E only)

Note: In case the AE-200/AE-50/EW-50 malfunctions, it is recommended to periodically save the file in the CSV format by touching [CSV output] on this screen or by touching [Output as CSV file] on the CSV output screen (see section 5-3).



(1) Touch [Display switching] to set the display items.

Note: The [Controller] setting will appear (only on the AE-200's LCD) when the [System Exp] setting on the [Unit Info.] screen is set to [Expand]. Switch the [Controller] setting between [AE200] and [Exp1] through [Exp4] to display the data for each AE-200, AE-50, and EW-50 individually, or select [ALL] (All controllers) to display the data for all controllers collectively.



Item	Description
Date range	Select [Day], [Month], or [Year]. Note: Only the data for the period during which the AE-200/AE-50/EW-50 was powered on will appear in the graph. The data for the period during which the AE-200/AE-50/EW-50 was powered off will not appear in the graph.
Display range	Select [EM block], [Block], [Group], or [Address] to display its data in the ranking graph. Note: [EM block] can be selected only when [ALL] (All controllers) is selected as [Controller].

<table>
<tr><th>Item</th><th>Description</th></tr>
<tr><td>Date</td><td>Specify a date to display the data in the ranking graph.
<table>
<tr><th>Date range</th><th>Data storage period</th></tr>
<tr><td>[Day]</td><td>The last 24 months</td></tr>
<tr><td>[Month]</td><td>The last 24 months</td></tr>
<tr><td>[Year]</td><td>The last 5 years</td></tr>
</table>
Note: Only the data for the period during which the AE-200/AE-50/EW-50 was powered on will appear in the graph. The data for the period during which the AE-200/AE-50/EW-50 was powered off will not appear in the graph.</td></tr>
<tr><td>Gridline</td><td>Select [Show] to show the gridline in the ranking graph, and [Hide] not to.</td></tr>
<tr><td>Display item</td><td>Select an item to display its data in the ranking graph.
Note: The selectable items vary, depending on the item selected in the [Display range] field.

Display items
<table>
<tr><th rowspan="2">Display item</th><th colspan="4">Display range</th></tr>
<tr><th>Address</th><th>Group</th><th>Block</th><th>EM block</th></tr>
<tr><td>Electric Energy (kWh)</td><td>V</td><td>V</td><td>V</td><td>V</td></tr>
<tr><td>Fan operation time (min)</td><td>V</td><td>V</td><td>-</td><td>-</td></tr>
<tr><td>Thermo-ON time (Total) (min)</td><td>V</td><td>V</td><td>-</td><td>-</td></tr>
<tr><td>Thermo-ON time (Cool) (min)</td><td>V</td><td>V</td><td>-</td><td>-</td></tr>
<tr><td>Thermo-ON time (Heat) (min)</td><td>V</td><td>V</td><td>-</td><td>-</td></tr>
</table>
V: Item that can be displayed in the graph</td></tr>
<tr><td>Target value</td><td>A red triangle mark will appear to indicate a target value.
Note: Target value will appear only when [Block] or [EM block] is selected in the [Display range] field and [Electric Energy] is selected in the [Display item] field.
Note: Target value will not appear when the target value is not set or set to “0”.</td></tr>
<tr><td>% against target values</td><td>Select [Show] to show the percentage of the current cumulative value against the target values, and [Hide] not to. When the current cumulative value exceeds the target value, the percentage will be greater than 100.</td></tr>
</table>

(2) Touch [OK] to go back to the previous screen.
The graph will be created based on the specified criteria.
Note: No graph will appear if no data that meet the specified criteria exist.

<table>
<tr><th>Item</th><th>Description</th></tr>
<tr><td>Graph region</td><td>Ranking graph will appear in descending order of the value of the selected display item.
<table>
<tr><th>Cumulative value</th><th>Cumulative value
(value exceeded the target value)</th><th>Target value</th></tr>
<tr><td>  (Yellow)</td><td>  (Orange)</td><td>  (Gray frame + red triangle)</td></tr>
</table>
Note: “Cumulative value (value exceeded the target value)” will appear when [Electric Energy] is selected in the [Display item] field.</td></tr>
</table>

(3) To export the displayed ranking data in the CSV format, remove the controller cover and insert a USB memory device to the USB port.
Touch [CSV output] with the ranking data to be output being displayed.

<table>
<tr><th>Item</th><th>Description</th></tr>
<tr><td>CSV output</td><td>
Touch [CSV output] to export the displayed ranking data in the CSV format.
The CSV file name and file format will vary as shown below, depending on the selected date range.

■ File output destination
[Root folder of the USB memory]\[Serial No.]\“OperationalData”\“EnergyManagement”\

■ File name
Date range: Day
“EM”_“DailyRanking”_[yyyy]-[mm]-[dd]_[Display range]_[Ranking graph type].csv

Date range: Month
“EM”_“MonthlyRanking”_[yyyy]-[mm]_[Display range]_[Ranking graph type].csv

Date range: Year
“EM”_“AnnualRanking”_[yyyy]_[Display range]_[Ranking graph type].csv

<table>
<tr><th>File-name contents</th><th colspan="2">Format</th></tr>
<tr><td>[yyyy]</td><td colspan="2">The year specified in the [Date] field</td></tr>
<tr><td>[mm]</td><td colspan="2">The month specified in the [Date] field</td></tr>
<tr><td>[dd]</td><td colspan="2">The date specified in the [Date] field</td></tr>
<tr><td rowspan="4">[Display range]</td><td>Address</td><td>“A999”</td></tr>
<tr><td>Group</td><td>“G999”</td></tr>
<tr><td>Block</td><td>“B999”</td></tr>
<tr><td>EM block</td><td>“E999”</td></tr>
<tr><td rowspan="5">[Ranking graph type]</td><td colspan="2">B01: Electric energy (Indoor unit)</td></tr>
<tr><td colspan="2">B02: Fan operation time</td></tr>
<tr><td colspan="2">B03: Thermo-ON time (Total)</td></tr>
<tr><td colspan="2">B04: Thermo-ON time (Cool)</td></tr>
<tr><td colspan="2">B05: Thermo-ON time (Heat)</td></tr>
</table>

■ File format
<table>
<tr><th>Row</th><th>Item</th><th>Date range</th><th colspan="2">Format</th></tr>
<tr><td rowspan="3">1st</td><td rowspan="3">File Type</td><td>Day</td><td colspan="2">404</td></tr>
<tr><td>Month</td><td colspan="2">405</td></tr>
<tr><td>Year</td><td colspan="2">406</td></tr>
<tr><td rowspan="3">2nd</td><td rowspan="3">Date</td><td>Day</td><td colspan="2">dd/mm/yyyy</td></tr>
<tr><td>Month</td><td colspan="2">mm/yyyy</td></tr>
<tr><td>Year</td><td colspan="2">yyyy</td></tr>
<tr><td rowspan="4">3rd</td><td rowspan="4" colspan="2">Display range</td><td>Address</td><td>“All addresses”</td></tr>
<tr><td>Group</td><td>“All groups”</td></tr>
<tr><td>Block</td><td>“All blocks”</td></tr>
<tr><td>EM block</td><td>“All EM blocks”</td></tr>
<tr><td rowspan="4">4th</td><td rowspan="4" colspan="2">Measurement item</td><td>Address</td><td>“Address number”, Display item</td></tr>
<tr><td>Group</td><td>“Group name”*1, Display item</td></tr>
<tr><td>Block</td><td>“Block name”*1, Display item, “Target electric energy(kWh)”*2</td></tr>
<tr><td>EM block</td><td>“EM block name”*1, Display item, “Target electric energy(kWh)”*2</td></tr>
<tr><td rowspan="4">5th–28th</td><td rowspan="4" colspan="2">Data</td><td>Address</td><td>Address number, Data value</td></tr>
<tr><td>Group</td><td>Group name*1, Data value</td></tr>
<tr><td>Block</td><td>Block name*1, Data value, Target electric energy value*2</td></tr>
<tr><td>EM block</td><td>EM block name*1, Data value, Target electric energy value*2</td></tr>
</table>
*1 If the group name has not been registered, [“Group” + group number] will appear. If the block name has not been registered, [“Block” + block number] will appear. If the EM block name has not been registered, [“EM block” + EM block number] will appear.
*2 “Target electric energy(kWh)” and the target electric energy value will appear only when the data is displayed in the graph.
</td></tr>
</table>

Item	Description
CSV output	■ File sample (Display range: Block) Date range: Day 404 03/13/2014 All blocks Block name,Indoor Unit Electric Energy,Target electric energy (kWh) Block1,25.19,21.2 Block5,19.58,18.13 Unregistered Blocks,17.01,19.73 Block3,11.2,16.9 Block6,6.19,5.24 Block2,5.98,10.96 Date range: Month 405 04/2014 All blocks Block name,Indoor Unit Electric Energy,Target electric energy (kWh) Block1,780.89,657.2 Block5,606.98,562.03 Unregistered Blocks,527.31,611.63 Block3,347.2,523.9 Block6,191.89,162.44 Block2,185.38,339.76 Date range: Year 406 2014 All blocks Block name,Indoor Unit Electric Energy,Target electric energy (kWh) Block1,9370.68,7886.4 Block5,7283.76,6744.36 Unregistered Blocks,6327.72,7339.56 Block3,4166.4,6286.8 Block6,2302.68,1949.28 Block2,2224.56,4077.12

3-2-3. Target value

This section explains how to set the target electric energy consumption values for the entire system for the current year, each month, each day of the week, and each block. The set values will be displayed in the graph on the [Energy Use Status] screen (see section 3-2-1) and the [Ranking] screen (see section 3-2-2).

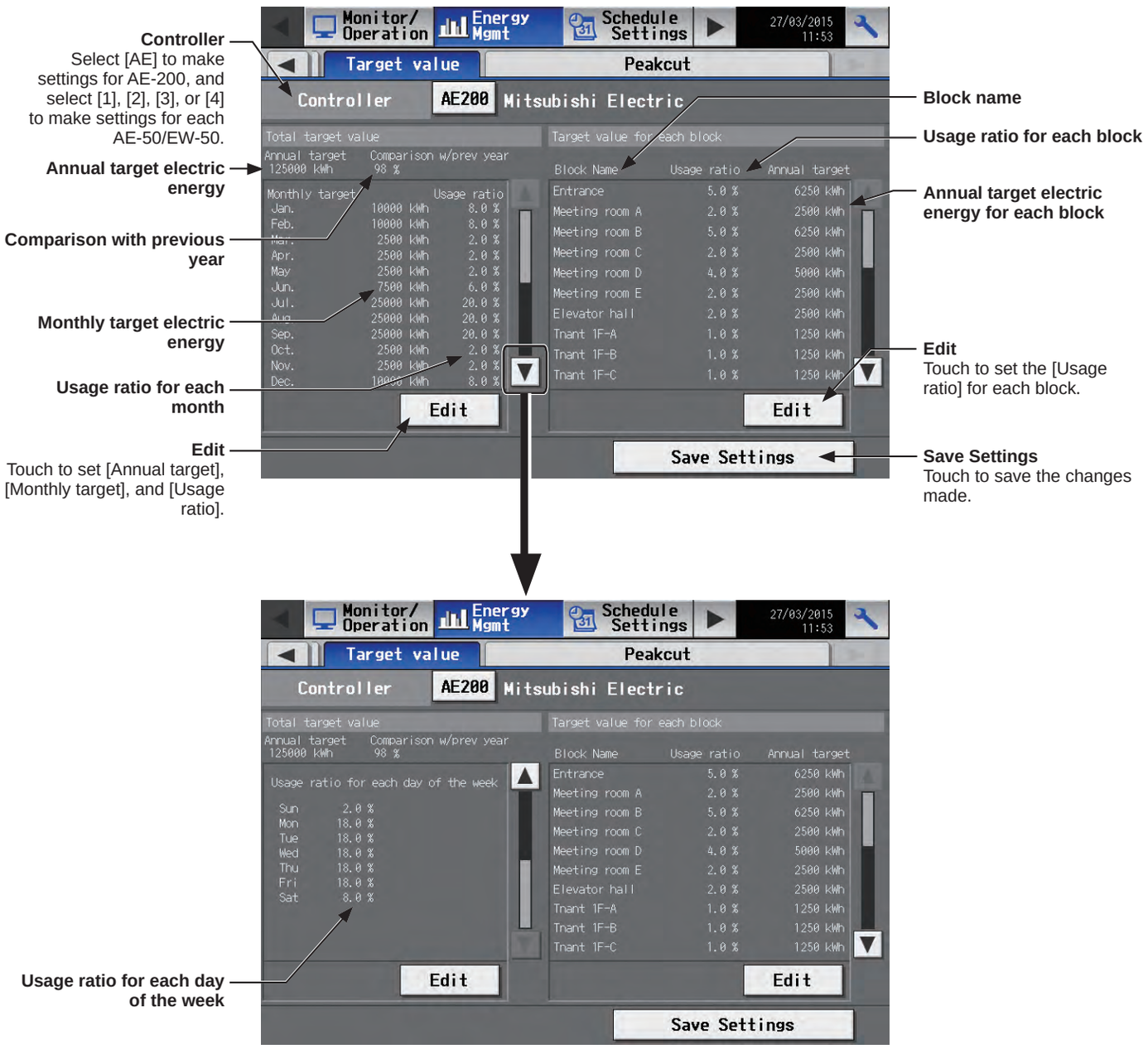
Touch [Energy Mgmt] in the menu bar, and then touch [Target value].

Set the annual target electric energy, usage ratio for each month, and usage ratio for each day of the week to automatically calculate the monthly target electric energy. Also set the usage ratio for each block to automatically calculate the annual target electric energy for each block.

Note: The [Controller] setting will appear (only on the AE-200's LCD) when the [System Exp] setting on the [Unit Info.] screen is set to [Expand]. Switch the [Controller] setting between [AE200] and [Exp1] through [Exp4] to make settings for each AE-200, AE-50, and EW-50 individually.

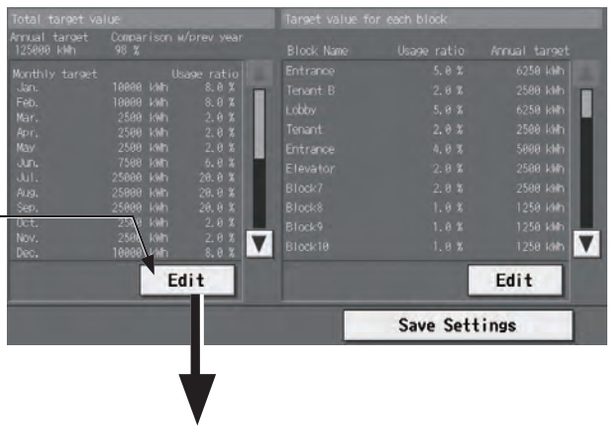
Important

- The target value settings must be made after all units have been started up. If the settings are made while one or more units are starting up, the calculation result will be inaccurate. The settings that have been saved while one or more units are starting up may be lost.



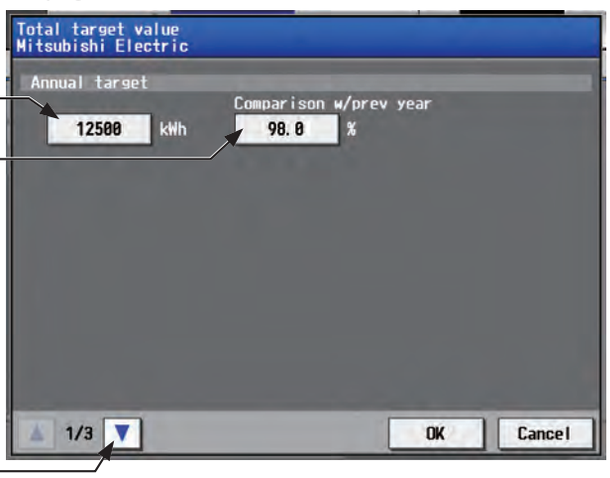
(1) In the [Controller] section, select [AE] to make settings for AE-200, and select [1], [2], [3], or [4] to make settings for each AE-50/EW-50.

(2) Touch [Edit] on the left, and set the annual target electric energy, the target usage ratios of the annual electric energy for each month, and the target usage ratios of the electric energy for each day of the week.



Edit
Touch to set [Annual target], [Monthly target], and [Usage ratio for each day of the week].

1st page

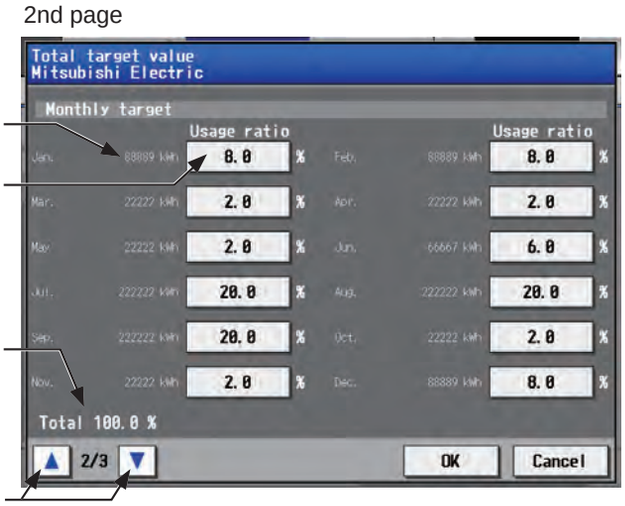


Annual target electric energy

Comparison with previous year

Touch to go to the next page.

2nd page



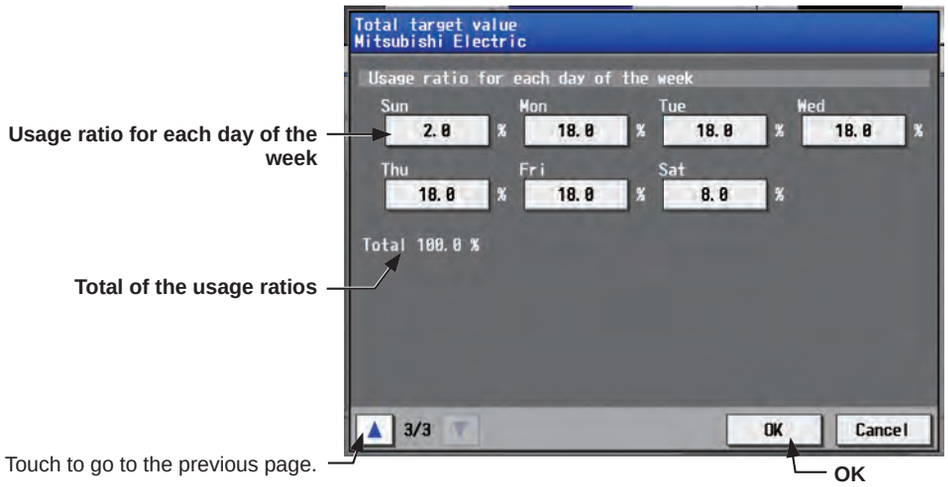
Monthly target electric energy

Usage ratio for each month

Total of the usage ratios

Touch to switch between the pages.

3rd page

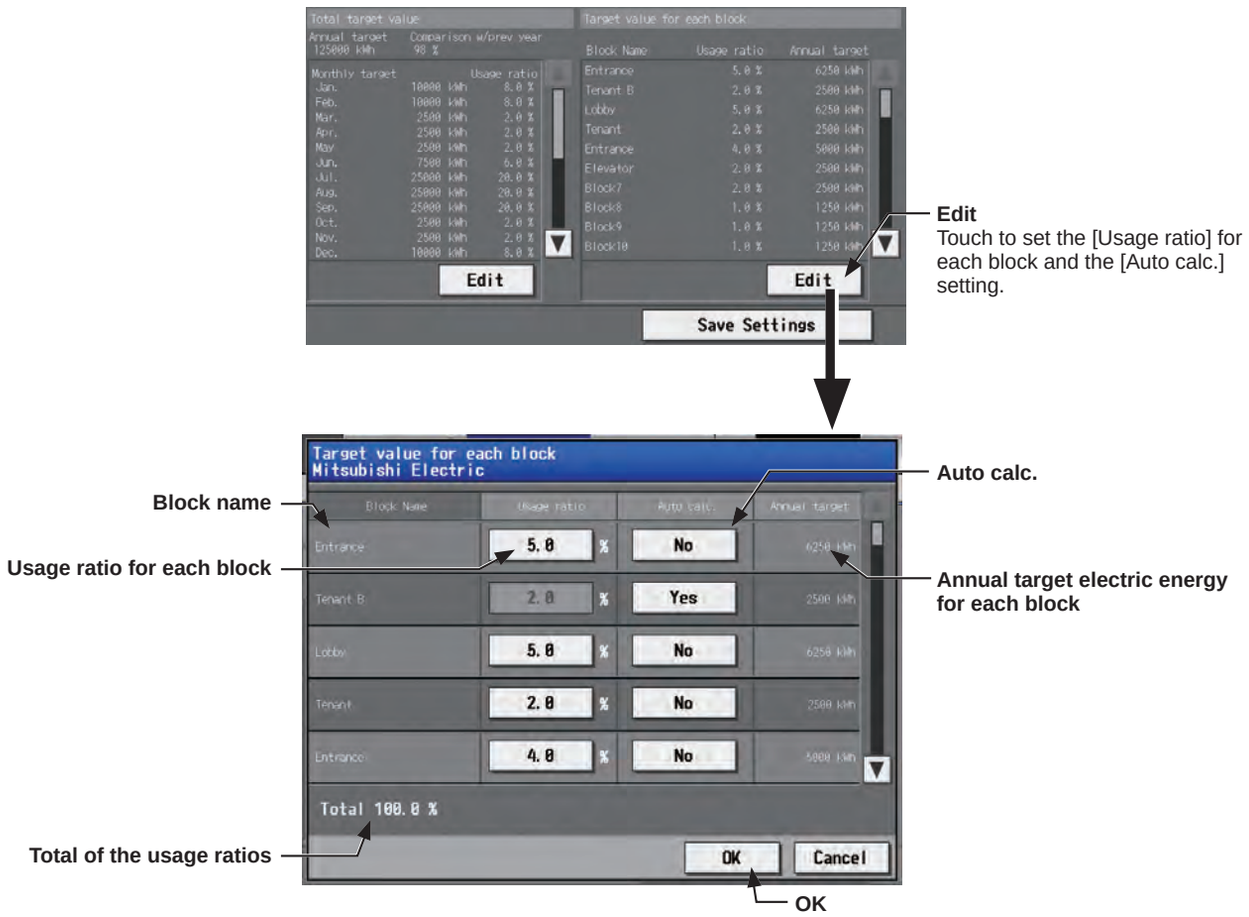


Item	Description
Annual target electric energy	Enter the annual target electric energy consumption value. Note: The value must be between 0 and 4294967 kWh. Note: If the ratio is entered in the “Comparison with previous year” field, the annual target electric energy will be calculated automatically, based on the electric energy consumption data of the previous year.
Comparison with previous year	Enter the ratio of the annual target electric energy of the current year to the electric energy consumed in the previous year. Note: The ratio must be between 0.0 and 999.9%. Note: If the value is entered in the “Annual target electric energy” field, the ratio will be calculated automatically based on the electric energy consumption data of the previous year. Note: When no data of the previous year exists, “--” will appear.
Monthly target electric energy	The target electric energy value for each month will appear. Note: The values cannot be entered. The values will be calculated automatically, based on the values entered in the “Annual target electric energy” and “Usage ratio for each month” fields.
Usage ratio for each month	Enter the target usage ratios of the annual electric energy for each month. Note: Each ratio must be between 0.0 and 100.0%. Note: The total of the ratios must be 100%. Note: When the ratios are entered, the values in the “Monthly target electric energy” field will be calculated automatically, based on the value in the “Annual target electric energy” field.
Usage ratio for each day of the week	Enter the target usage ratios of the electric energy for each day of the week. Note: The total of the ratios must be 100%. Note: When the ratios are entered, the values in the “Monthly target electric energy” field may change after being recalculated.

(3) Touch [OK] to go back to the previous screen.

Note: If the total of the usage ratios for each month and each day of the week are not 100%, the [OK] button cannot be touched.

(4) Touch [Edit] on the right, and set the target usage ratios of the electric energy for each block and the [Auto calc.] setting.



Item	Description
Block name	The names of all the registered blocks will appear in the order of the block number. Note: If the block name has not been registered, [“Block” + block number] will appear.
Usage ratio for each block	Enter the target usage ratios of the electric energy for each block. Note: The ratios cannot be entered if the [Auto calc.] setting is set to [Yes]. To enter the desired ratios, change the setting to [No]. Note: The total of the ratios must be 100%.
Auto calc.	Set to [Yes] to automatically calculate the usage ratio for each block based on the indoor unit capacity. Note: This function is useful when it is hard to determine the target electric energy, such as when no data of the previous year exists and it is unknown how much electric energy is consumed by each block.
Annual target electric energy for each block	The annual target electric energy for each block will appear after being calculated based on the ratios in the “Usage ratio for each block” field and the value entered in the “Annual target electric energy” field.

(5) Touch [Save Settings].

3-2-4. Peak Cut

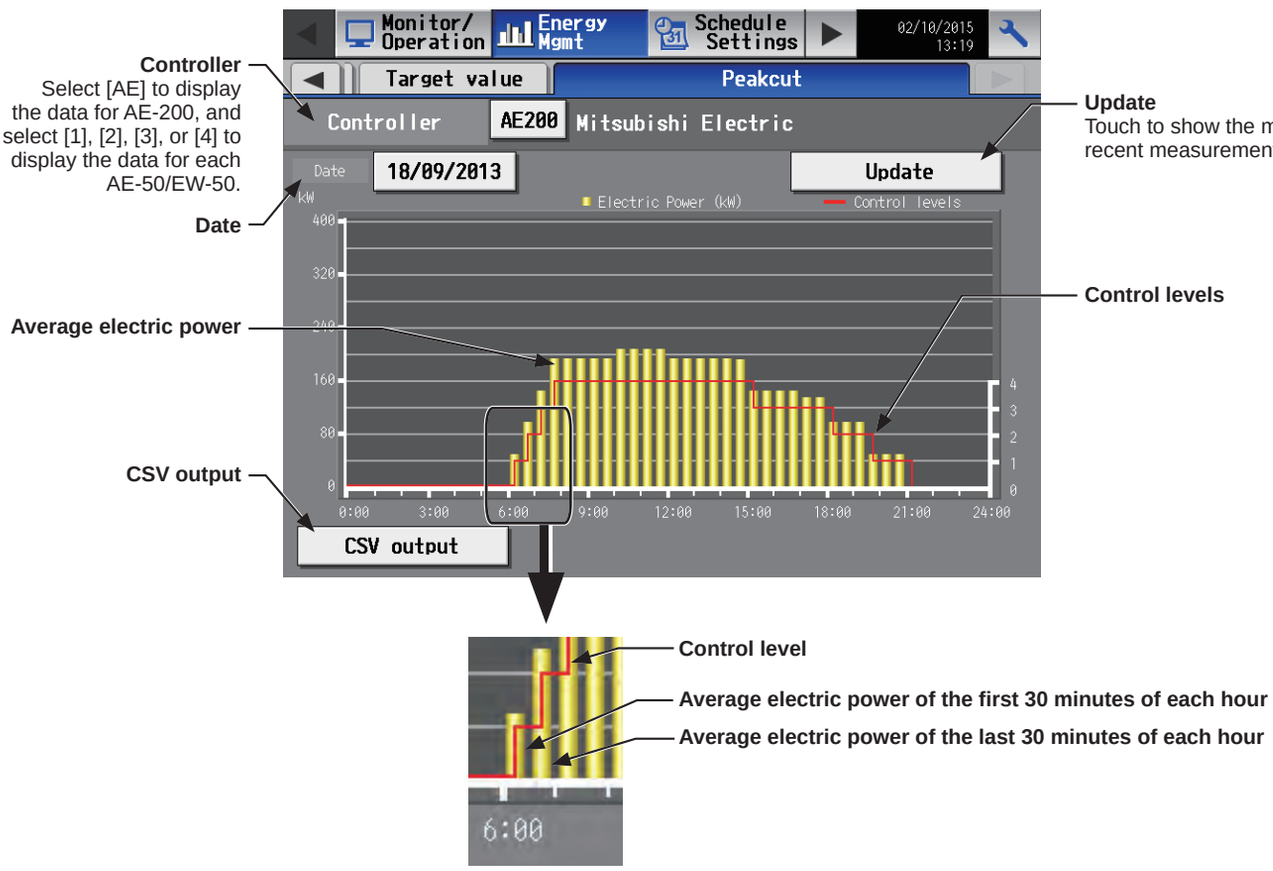
This section explains how to check the Peakcut control status.

Touch [Energy Mgmt] in the menu bar, and then touch [Peakcut].

The average electric power consumption (kW) and the control level will appear in the graph.

Note: The [Controller] setting will appear (only on the AE-200's LCD) when the [System Exp] setting on the [Unit Info.] screen is set to [Expand]. Switch the [Controller] setting between [AE200] and [Exp1] through [Exp4] to display the data for each AE-200, AE-50, and EW-50 individually.

Note: Make the Peak Cut function settings on the "Peak Cut" screen. (Refer to the Instruction Book (Initial Settings) for details.)



(1) In the [Controller] section, select [AE] to display a graph for AE-200, and select [1], [2], [3], or [4] to display a graph for each AE-50/EW-50.
The most recent measurement data will appear in a graph.

Item	Description
Update	Touch to show the most recent measurement data.
Date	Select the measurement date. Note: The data of the past 24 months including the current day can be displayed.
Average electric power	Average electric power consumption (kW) will appear in 30-minute increments. Note: Average electric power consumption data are stored every hour and half hour. If a power failure occurs, up to 30-minute worth of data will be lost. Note: The graph can be displayed only when the Peak Cut method is set to [Electric Amount Count Software] or [PI Controller] on the Peak Cut settings screen. (Refer to the Instruction Book (Initial Settings) for details.). Note: Average electric power consumption is based on the electric power consumed in 30-minute period in the past.
Control levels	Peak Cut control level will appear.

(2) To export the displayed Peak Cut data in the CSV format, remove the controller cover and insert a USB memory device to the USB port.
Touch [CSV output] with the Peak Cut data to be output being displayed.

<table>
<tr><th>Item</th><th>Description</th></tr>
<tr><td>CSV output</td><td>
Touch [CSV output] to export the displayed Peakcut control status data in the CSV format as shown below.

■ File output destination
[Root folder of the USB memory]\[Serial No.]\“OperationalData”\“EnergyManagement”\

■ File name
Peakcut_[yyyy]-[mm]-[dd].csv
<table>
<tr><th>File-name contents</th><th>Format</th></tr>
<tr><td>[yyyy]</td><td>The year specified in the [Date] field</td></tr>
<tr><td>[mm]</td><td>The month specified in the [Date] field</td></tr>
<tr><td>[dd]</td><td>The date specified in the [Date] field</td></tr>
</table>
■ File format
<table>
<tr><th>Row</th><th>Item</th><th>Format</th></tr>
<tr><td>1st</td><td>File Type</td><td>123</td></tr>
<tr><td>2nd</td><td>Date</td><td>yyyy/mm/dd *1</td></tr>
<tr><td>3rd</td><td>Target</td><td>“Peakcut energy”</td></tr>
<tr><td>4th</td><td>Measurement item</td><td>“Time,Power(kW),Control level”</td></tr>
<tr><td>5th–</td><td>Data</td><td>hh:mm (1-minute intervals), average electric power consumption, control level
Note: Average electric power consumption (kW) in 30-minute period will appear in 30-minute increments.</td></tr>
</table>
*1 The date will appear in the format that has been set on the [Unit Info.] screen.

■ File sample

123
03/13/2015
Peakcut energy
Time,Power(kW),Control level
00:00,8,1
00:01,8,1
00:02,8,1
:
:
23:58,6,0
23:59,6,0
</td></tr>
</table>

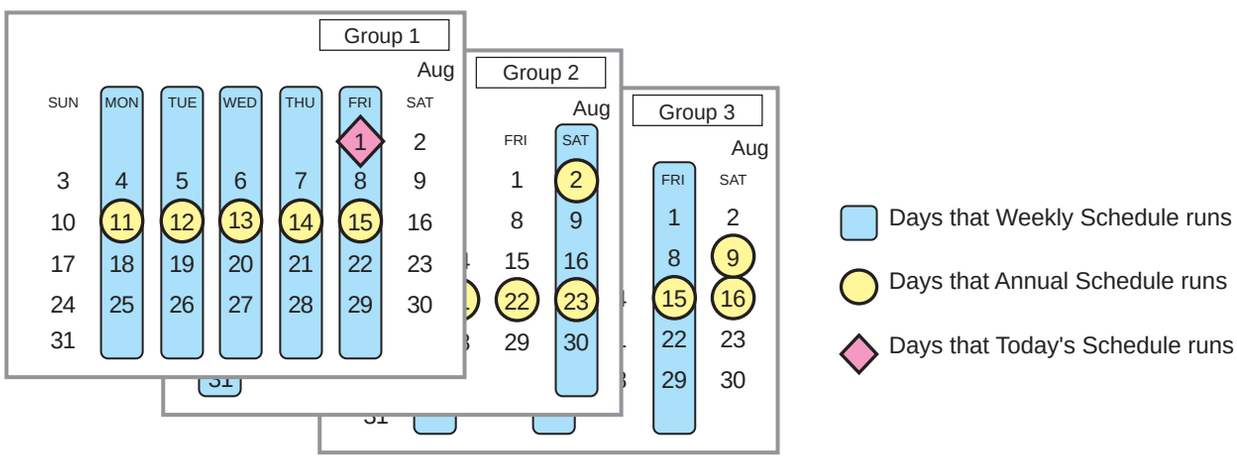
3-3. Schedule

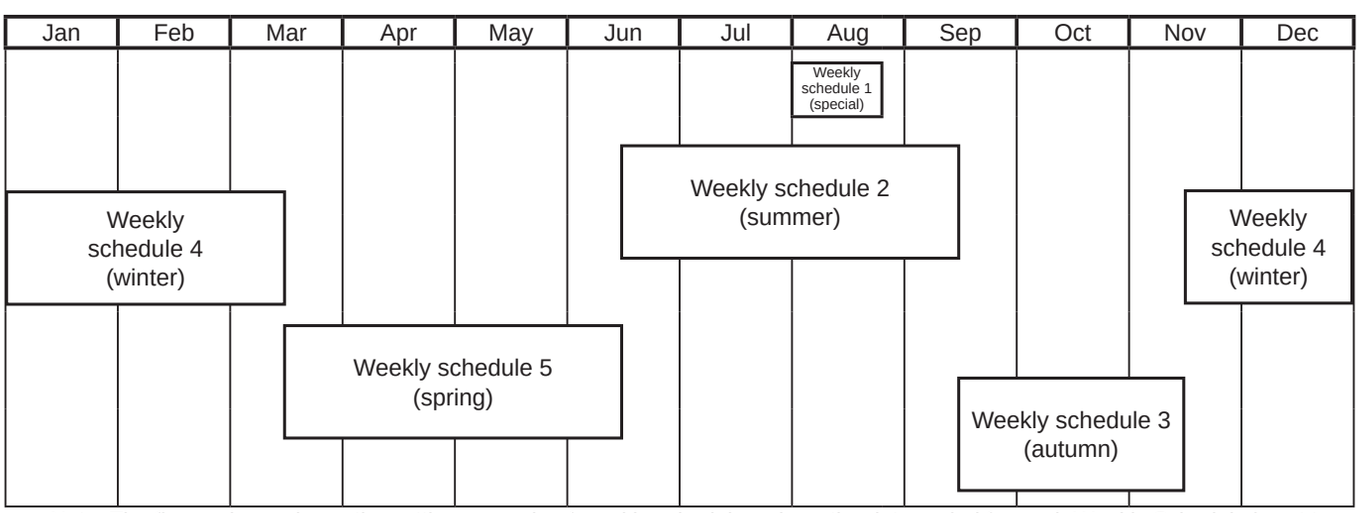
Weekly (5 types), annual (5 types), and current day scheduling are available. Schedules can be set for each group, each floor, each block, or all groups.

Important

- When one or more AE-50/EW-50 controllers are connected, the schedule settings must be made with the AE-50/EW-50 properly connected to ensure proper settings.
- Set the [Schedule] setting on the operation settings screen to [Available] to enable the scheduled events. (Refer to section 3-1-5 “Operation settings screen” for details.)

Schedule setting example

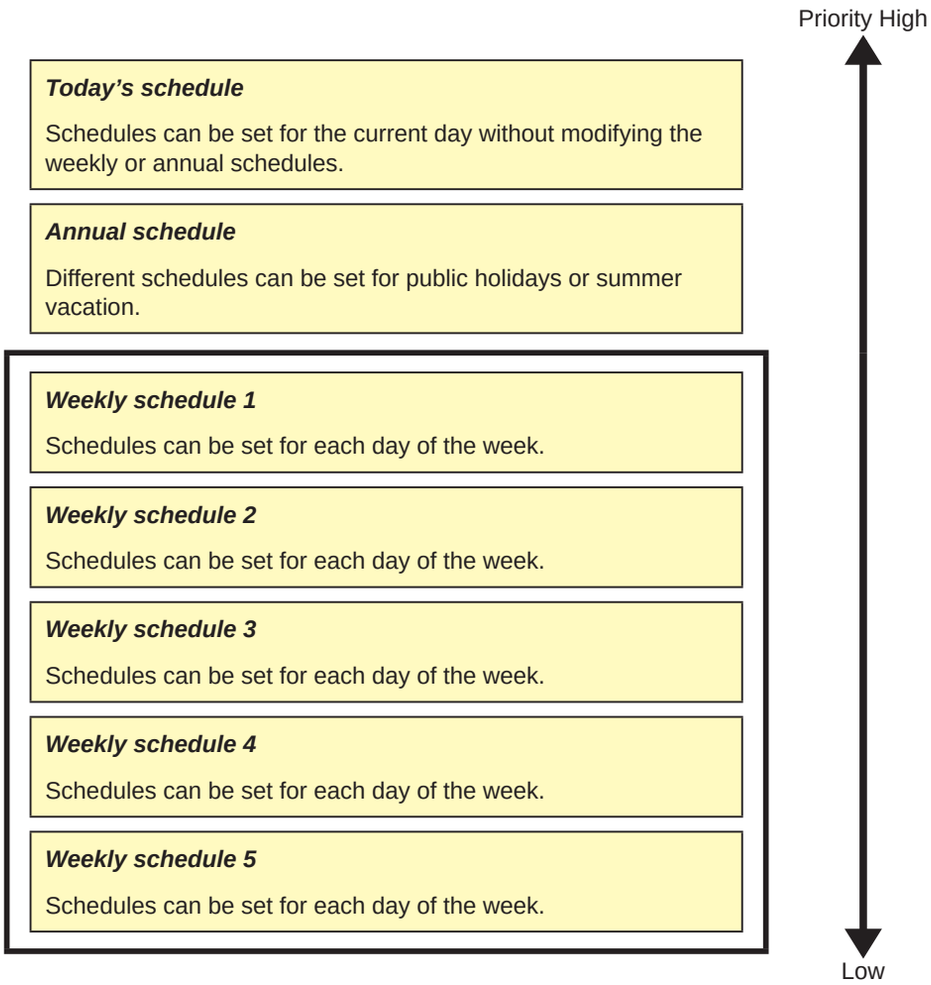




Note: The figure above shows the setting example of weekly schedules where the date period for each Weekly Schedule is set to the followings.
Weekly Schedule 1: Aug 1 - Aug 20
Weekly Schedule 2: Jun 16 - Sep 15
Weekly Schedule 3: Sep 16 - Nov 15
Weekly Schedule 4: Nov 16 - Mar 15
Weekly Schedule 5: Mar 16 - Jun 15

Note: When any of the Weekly Schedules 1, 2, 3, 4, and 5 overlap, the schedule with the lower number takes priority. For example, Weekly Schedule 1 takes precedence over Weekly Schedule 2.

Note: When the schedules overlap, schedule with the highest priority will run as shown below.



3-3-1. Weekly Schedule

Touch [Schedule Settings] in the menu bar, and then touch [Weekly1], [Weekly2], [Weekly3], [Weekly4], or [Weekly5]. On the Weekly Schedule settings screen, schedules can be set for each day of the week.

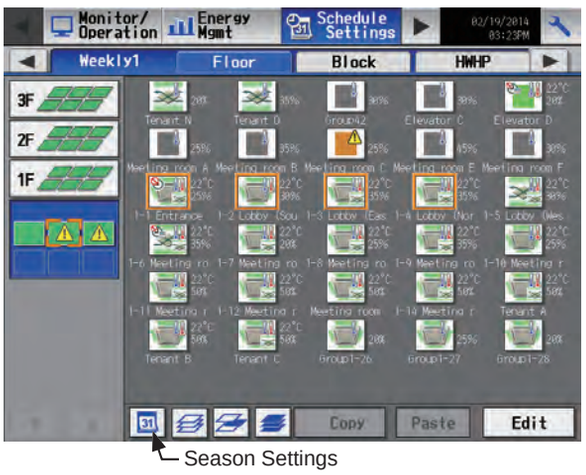
Note: When today's schedule and weekly schedule are set for the same day, today's schedule settings take precedence over weekly schedule settings.

Note: If the [Schedule: Season setting] setting on the [Advanced] screen is set to [Not Available], only the [Weekly1] setting is enabled and the scheduled events for [Weekly 2] through [Weekly 5] will not be performed.

[1] Setting the date periods

(1) Touch the "Season Settings" button on the [Floor] or [Block] display.

Note: If the [Schedule: Season setting] setting on the [Advanced] screen is set to [Not Available], the "Season Settings" button will not appear, and seasonal settings cannot be made.



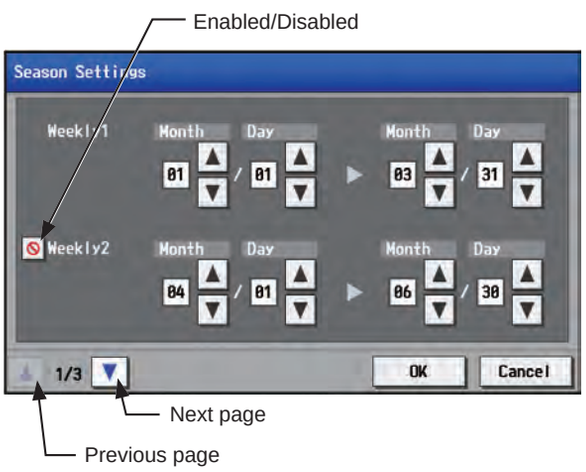
(2) Enter the date periods in which each weekly schedule will be effective.
Touch the "Enabled/Disabled" buttons on the left side to enable or disable each weekly schedule.

☐ : Enabled
⊘ : Disabled (default)

Note: When any of the Weekly Schedules 1, 2, 3, 4, and 5 overlap, the schedule with the lower number takes priority. For example, Weekly Schedule 1 takes precedence over Weekly Schedule 2.

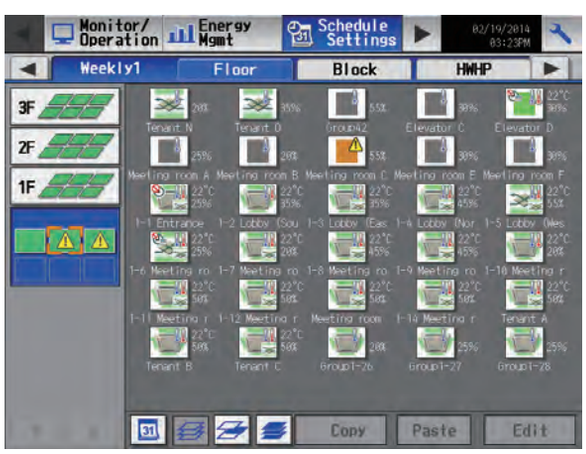
Note: The date period over the next year (such as 11/01 - 03/31) can be set.

Note: The settings made on this screen on the AE-200 will be reflected on this screen on the AE-50.

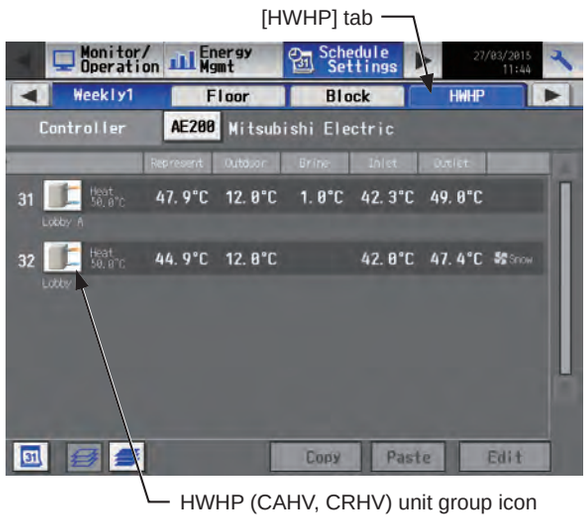


[2] Selecting a target to which the schedule will be applied

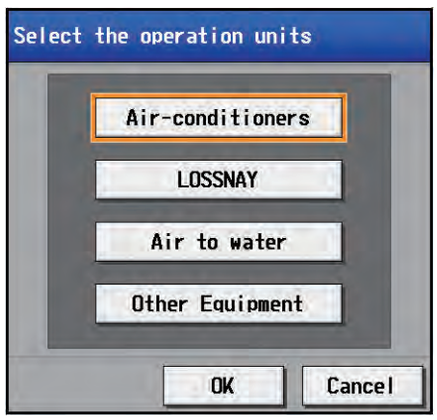
(1) On the [Floor] or [Block] display, select a group(s), block(s), or floor(s) to which the schedule will be applied. (Refer to 3-1-4 "Selecting the icons of the groups to be operated" for details.)



Note: The [HWHP] tab will appear when an HWHP (CAHV, CRHV) unit is connected.
On the [HWHP] display, touch the icon(s) of the HWHP (CAHV, CRHV) unit group(s) to set the schedule.



(2) If different equipment types exist together, a screen to select an equipment type will appear.
Touch one of the equipment types to set the schedule.



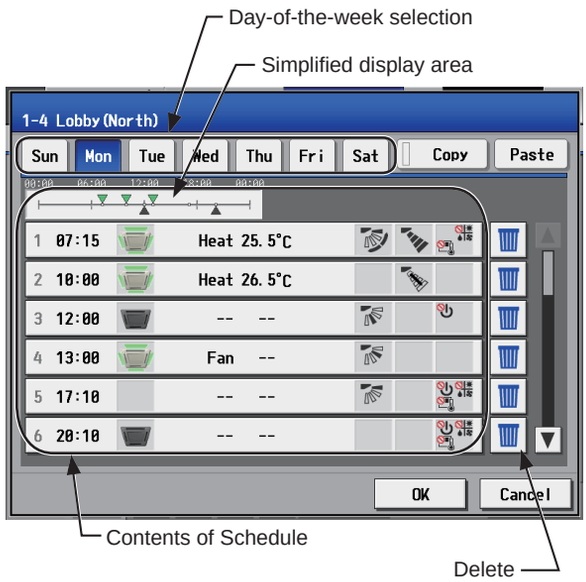
(3) A [Schedule Settings] screen will appear.
To create a schedule for the given block from scratch, touch [New settings] and touch [OK].
To create a schedule based on the existing setting of another group, touch [Based on the following group settings], select the name of the group whose schedule is to be based on, and touch [OK]. The contents of the schedule that have been set for the selected group will appear in the “Contents of Schedule” section on the screen that will appear next.

[3] Selecting a day of the week

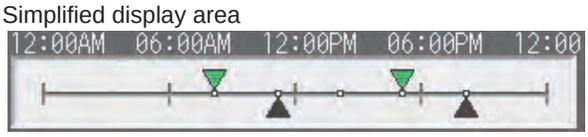
(1) Touch the day to set the schedule.
The icons of the events that have been set for the selected group will appear in the “Contents of Schedule” section.

Icons in the simplified display area
: ON
: OFF
: Other scheduled events

Note: To delete each scheduled events, touch the “Delete” button in the row of the schedule to be deleted.



Simplified display area



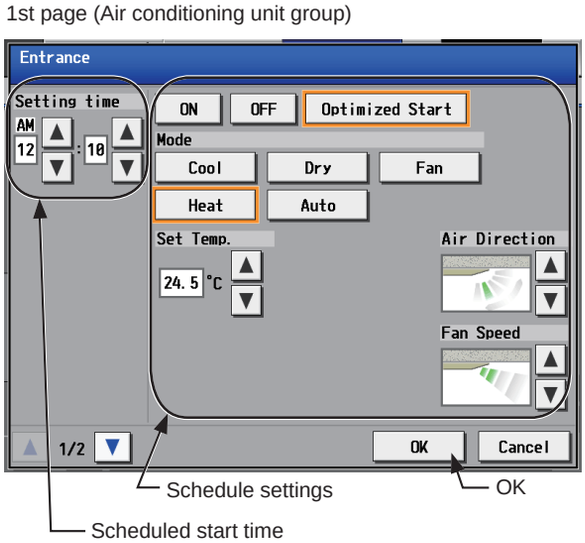
[4] Setting the contents of the schedule

(1) Touch the row of the schedule to be set in the “Contents of Schedule” section to display the schedule settings screen.
Set the start time to apply to the schedule, set the operations to be scheduled, and then touch [OK].

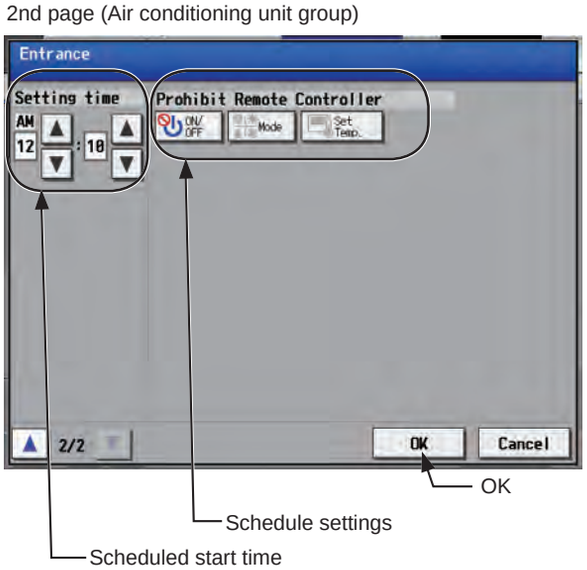
Note: If [Optimized Start] is selected, the operation mode and the set temperature need to be set as well. Refer to the next page for details about the Optimized Start function.

To copy the schedule settings between groups, see [7] below.
To copy the schedule settings between days of the week, see [5] below.

1st page (Air conditioning unit group)

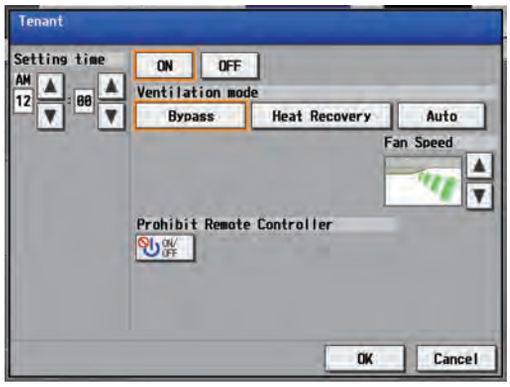


2nd page (Air conditioning unit group)

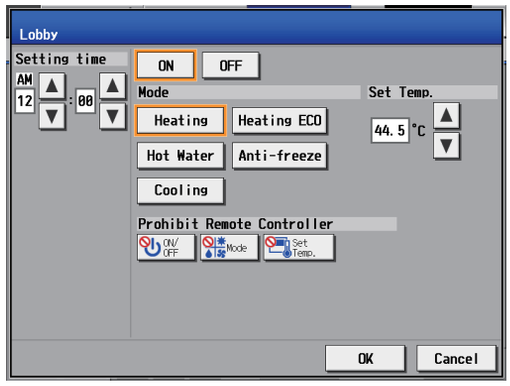


Note: The operation items that will appear on the screen vary, depending on the equipment type. Refer to section 3-1-5 “Operation settings screen” for setting details for each unit group.

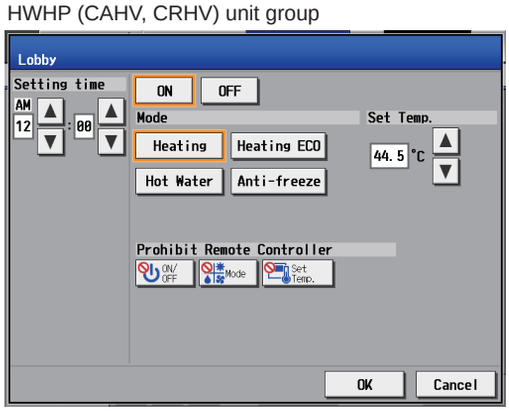
LOSSNAY unit group



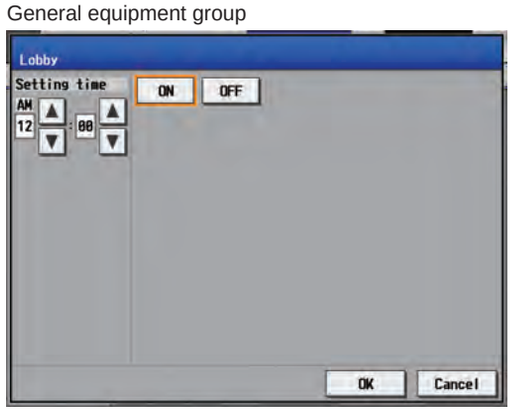
Air To Water (PWFY) unit group



HWHP (CAHV, CRHV) unit group

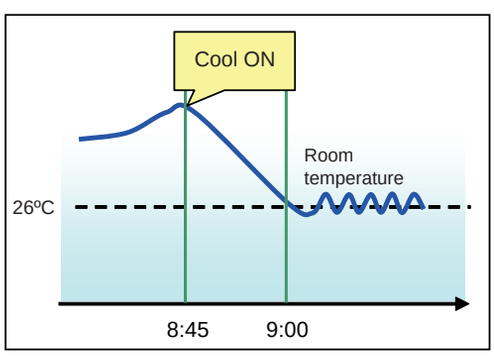


General equipment group

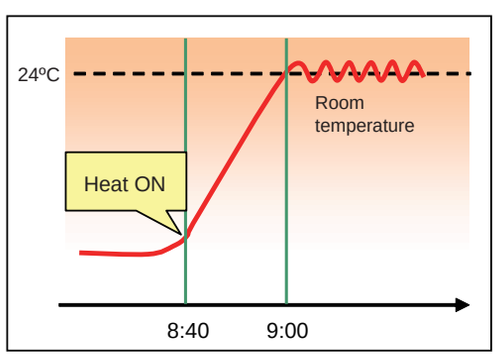


Note: When setting a schedule for a block or all groups, all operation modes are available for selection, but the available operation modes depend on the unit model. The units will not operate in the selected mode not supported by the units.

Note: About Optimized Start function



Operation mode: Cool
Start time: 9:00
Set temperature: 26ºC



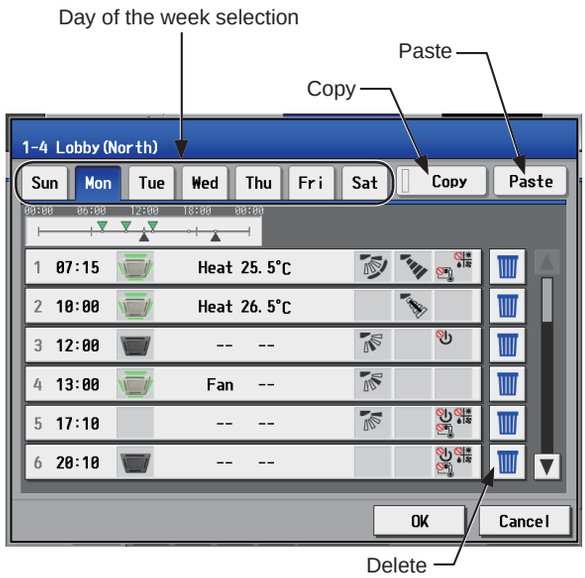
Operation mode: Heat
Start time: 9:00
Set temperature: 24ºC

- If [Optimized Start] is selected, the operation mode and the set temperature need to be set as well. The Optimized Start function will start the units 5 to 60 minutes prior to the scheduled start time to reach the set temperature at the scheduled start time, based on the operation data in the past. (When the units start the first time after a power reset, the units will start operation 30 minutes before the scheduled start time.)
- [Optimized Start] can be selected only for the air conditioning unit groups.
- If the room temperature is measured by the return air temperature sensor on the air conditioning unit, the measured value may not be an accurate representation of the temperature in the room. The temperature shown may be higher than the actual temperature especially when the unit is stopped during the Heat mode. When this is the case, use an external temperature sensor (PAC-SE40TSA) or remote controller sensor to measure the room temperature.
- If [Optimized Start] is selected and the [Prohibit Remote Controller] setting is set to Prohibit or Permit at the same time, the operations from the remote controllers will be prohibited or permitted at the scheduled start time.

[5] Copying a schedule to another day of the week

(1) To copy the schedule settings of a day to the schedule settings for another day of the week, select the day whose schedule settings are to be copied, touch [Copy], select the day to which the copied schedule settings are to be pasted, and touch [Paste].

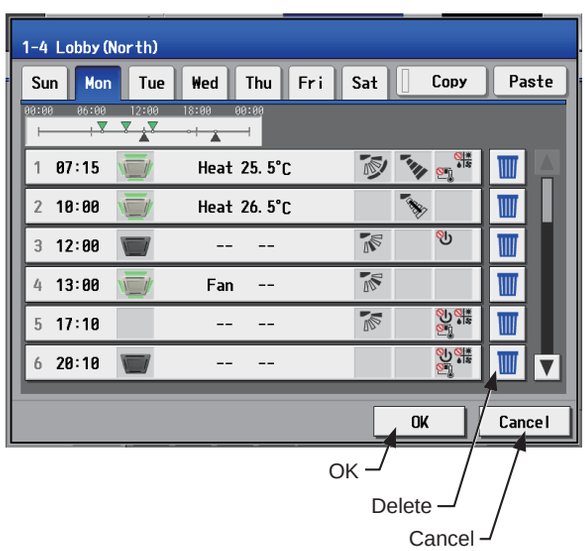
Note: To delete each scheduled events, touch the “Delete” button in the row of the schedule to be deleted.



[6] Saving the schedules

(1) To undo the changes made, touch [Cancel] before saving the schedules.
After completing the settings, touch [OK] to save the schedules.

Note: To delete each scheduled events, touch the “Delete” button in the row of the schedule to be deleted.



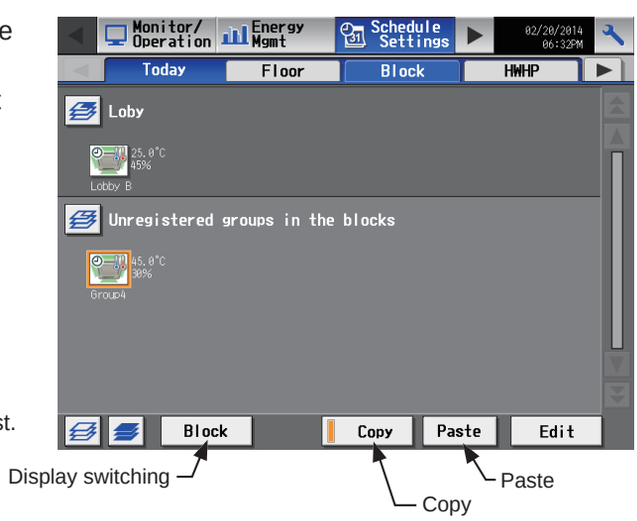
[7] Copying a schedule to another group

(1) To copy the schedule settings of a group to the schedule settings for another group, select the group whose schedule settings are to be copied, touch [Copy], select the group to which the copied schedule settings are to be pasted, and touch [Paste].

Note: Schedules of a group cannot be copied to a different type of group. For example, the schedules of an air conditioning unit group cannot be copied to the schedules for a LOSSNAY unit group.

Note: The operation mode and set temperature may not be copied because the available operation modes or operable set temperature range differ among the units.

Note: To select groups in the given EM block(s), touch the [Display switching] button to change it to [EM Block] first.



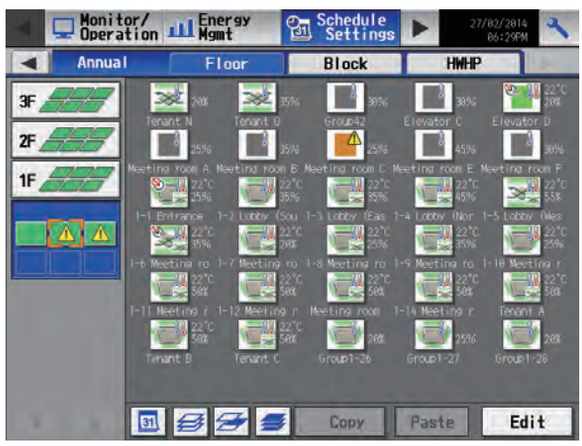
3-3-2. Annual Schedule

Touch [Schedule Settings] in the menu bar, and then touch [Annual].
On the Annual Schedule settings screen, schedules can be set for public holidays or summer vacation.
Up to five operation patterns (Pattern A through E) can be set for the 24 months including the current month, and total of 50 days can be allocated to the patterns.

Note: When today's schedule and annual schedule are set for the same day, today's schedule settings take precedence over annual schedule settings.

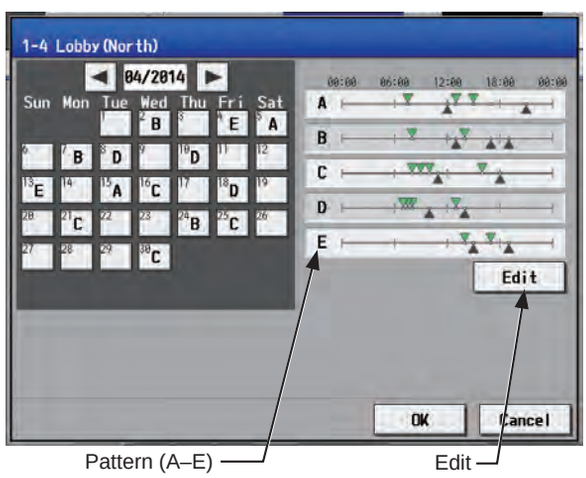
[1] Selecting a target to which the schedule will be applied

(1) On the [Floor] or [Block] display, select a group(s), block(s), or floor(s) to which the schedule will be applied. (Refer to 3-1-4 "Selecting the icons of the groups to be operated" for details.)



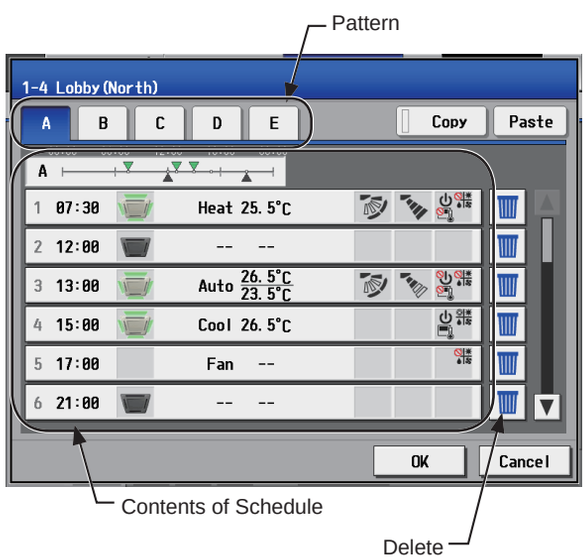
[2] Selecting a schedule pattern

(1) Touch a pattern or [Edit] to display the pattern settings screen.



(2) Touch a pattern tab to set the schedule.

Note: To delete each scheduled events, touch the "Delete" button in the row of the schedule to be deleted.



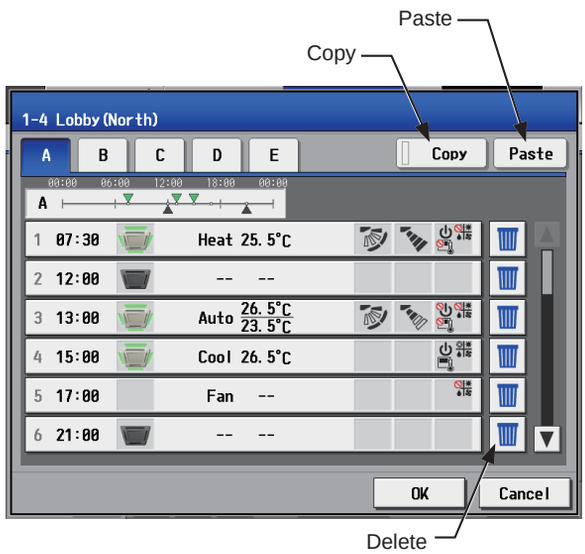
[3] Setting the contents of the schedule

(1) Touch the row of the schedule to be set in the “Contents of Schedule” section to display the schedule settings screen.
Set the start time to apply to the schedule, set the operations to be scheduled, and then touch [OK]. (Refer to section 3-3-1 [4] for details.)

[4] Copying a schedule to another pattern

(1) To copy the schedule settings of a pattern to the schedule settings for another pattern, select the pattern whose schedule settings are to be copied, touch [Copy], select the pattern to which the copied schedule settings are to be pasted, and touch [Paste].

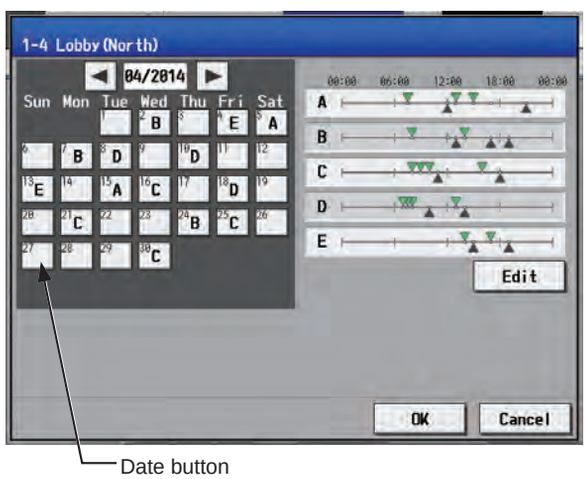
Note: To delete each scheduled events, touch the “Delete” button in the row of the schedule to be deleted.



[5] Assigning schedule patterns to special dates

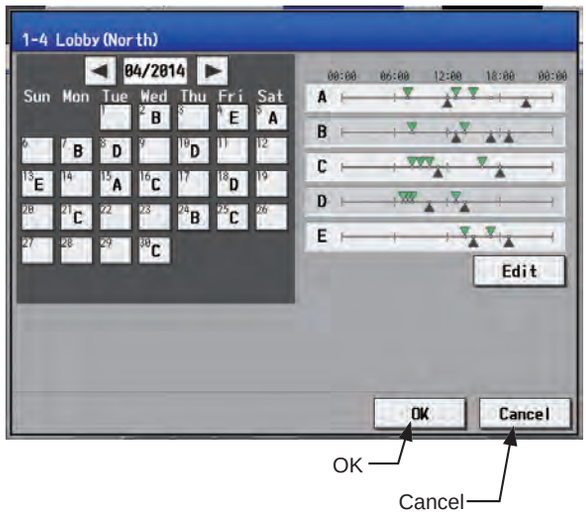
(1) Each schedule pattern can be assigned to the specified dates.
The date buttons will appear with the alphabet of the pattern that has been assigned.
Touching the date buttons toggles through the following options: A, B, C, D, E, and blank.

To cancel the pattern assignment, select blank.



[6] Saving the schedules

(1) To undo the changes made, touch [Cancel] before saving the schedules.
After completing the settings, touch [OK] to save the schedules.



[7] Copying a schedule to another group

(1) Refer to 3-3-1 [7] for details.

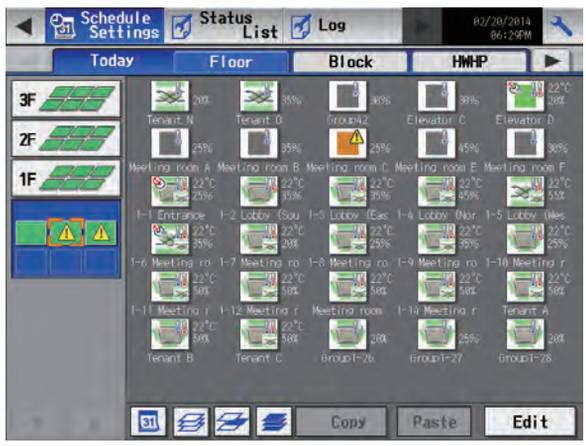
3-3-3. Today's Schedule

Touch [Schedule Settings] in the menu bar, and then touch [Today].
On the Today's Schedule settings screen, schedules can be set for the current day without modifying the weekly or annual schedules.

Note: Be sure to set the contents of schedule in a way that will not impact on the next day's operation. For example, if Prohibit setting of remote controller operation is made for any time such as 17: 00, Permit setting needs to be made for any time before the date changes such as 23: 59.

[1] Selecting a target to which the schedule will be applied

(1) On the [Floor] or [Block] display, select a group(s), block(s), or floor(s) to which the schedule will be applied. (Refer to 3-1-4 "Selecting the icons of the groups to be operated" for details.)



[2] Setting the contents of the schedule

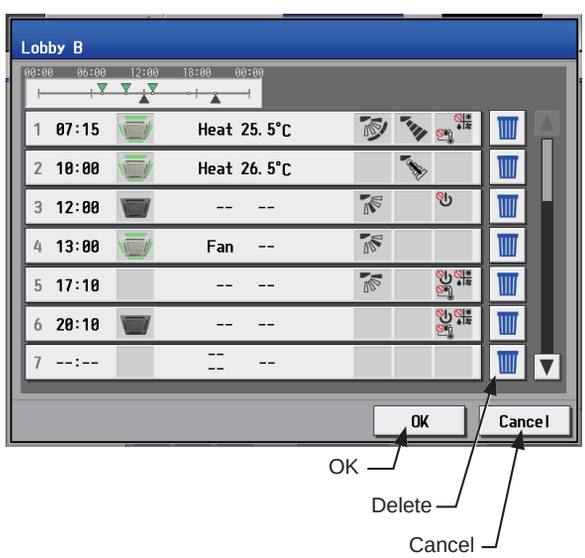
(1) Touch the row of the schedule to be set in the "Contents of Schedule" section to display the schedule settings screen.
Set the start time to apply to the schedule, set the operations to be scheduled, and then touch [OK]. (Refer to section 3-3-1 [4] for details.)

[3] Saving the schedules

To undo the changes made, touch [Cancel] before saving the schedules.
After completing the settings, touch [OK] to save the schedules.

Note: To delete each scheduled events, touch the "Delete" button in the row of the schedule to be deleted.

Note: If no schedule setting is made and [OK] is touched, the weekly or annual schedules for the same day will not be performed.



[4] Copying a schedule to another group

(1) Refer to 3-3-1 [7] for details.

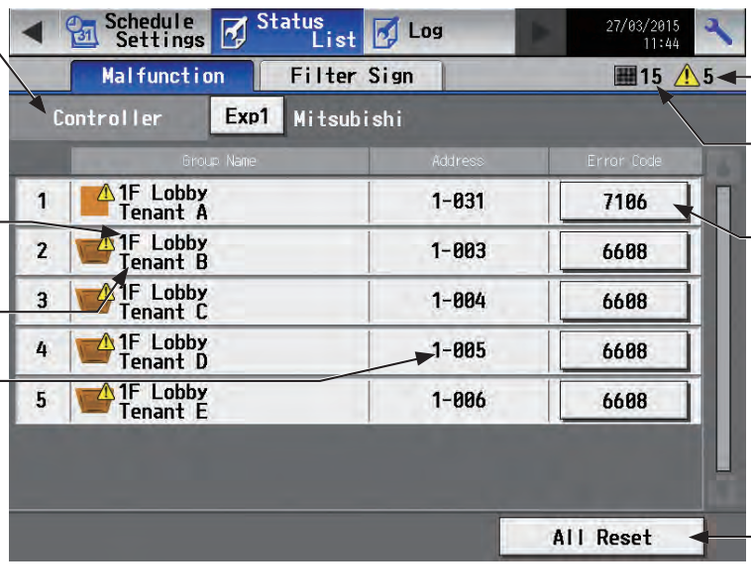
3-4. Status List

3-4-1. Malfunction List

Touch [Status List] in the menu bar, and then touch [Malfunction].

A list of units that are currently malfunctioning will appear.

Note: The [Controller] setting will appear (only on the AE-200's LCD) when the [System Exp] setting on the [Unit Info.] screen is set to [Expand]. Switch the [Controller] setting between [AE200] and [Exp1] through [Exp4] to display the list for each AE-200, AE-50, and EW-50 individually.



Controller
Select [AE] to display the list for AE-200, and select [1], [2], [3], or [4] to display the list for each AE-50/EW-50.

Floor name or block name

Group name

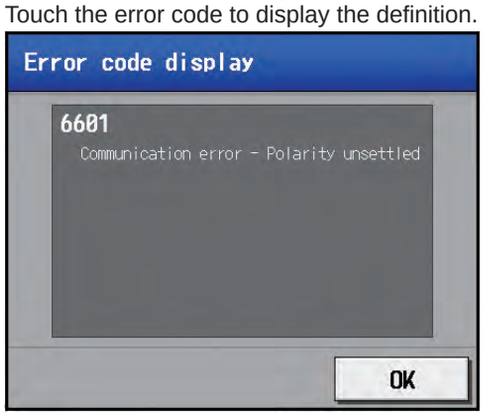
Unit address

Number of units in error

Number of units whose filter sign is turned on

Error code

All Reset
Touch to reset all errors at once.

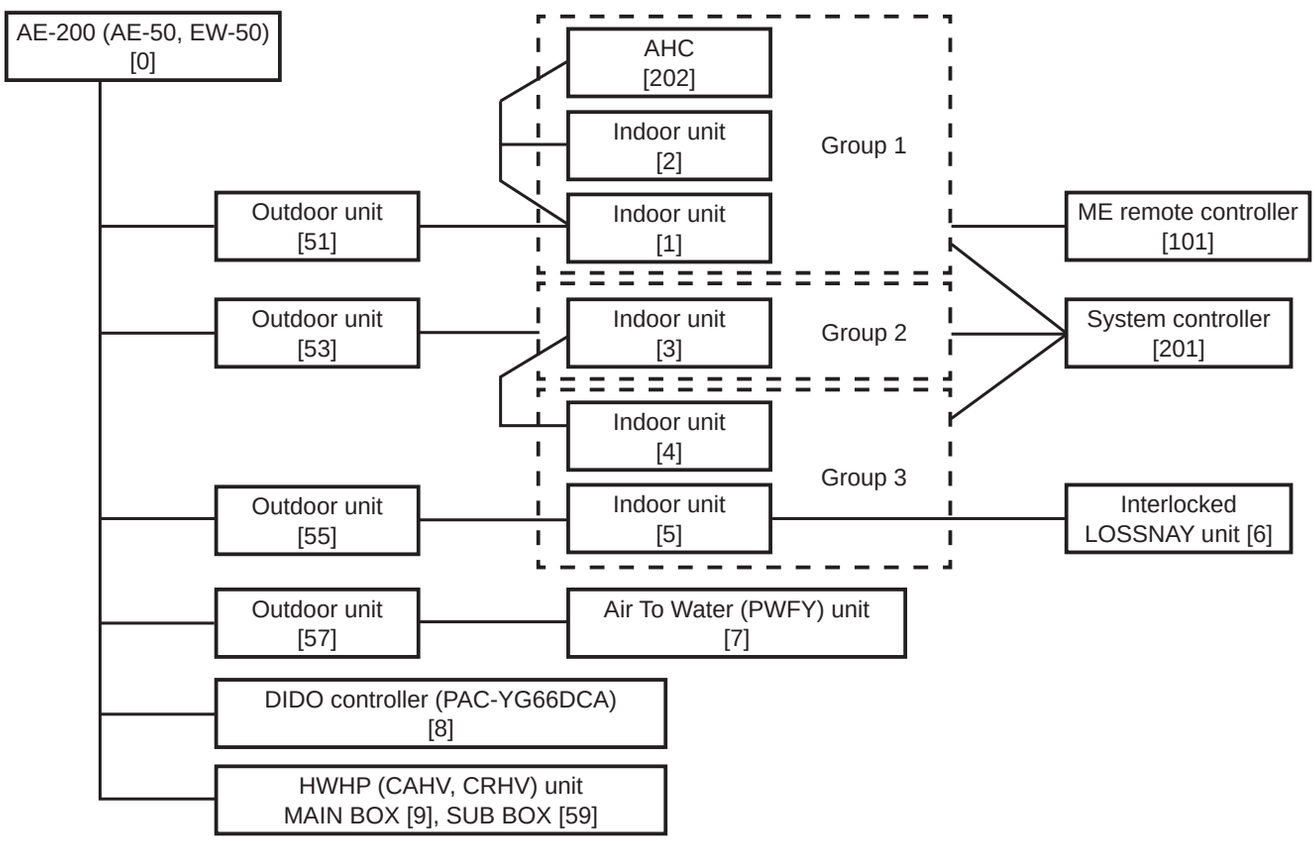
Item	Description
Floor name or block name	The name of the floor or the block that the unit in error belongs to will appear. Note: This area will be blank if the unit in error is a unit such as an outdoor unit or a system controller. Note: This area will be blank if the unit in error is a unit that does not belong to any block or floor.
Group name	The name of the group that the unit in error belongs to will appear. Note: This area will be blank if the unit in error is a unit such as an outdoor unit or a system controller.
Unit address	The address of the unit in error will appear. Note: When [1], [2], [3], or [4] is selected as [Controller], AE-50/EW-50 No. and unit address will appear. (When the AE-50/EW-50 No. is 1 and the unit address is 012, "1-012" will appear.)
Number of units in error	The number of malfunctioning units will appear.
All Reset	Touch to reset all errors at once. Note: The units whose error has been reset will stop.
Error code	The error code that corresponds to the error will appear. Touch the error code to display the definition. 

Types of units in error and the units that will stop when errors are reset

Types of units in error and the units that will stop

Units in error	Units that will stop
AE-200 (AE-50, EW-50)	None
Outdoor unit	All indoor units that are connected to the outdoor unit in error
Indoor unit	Indoor unit in error and all other indoor units in the same group
ME remote controller	All indoor units that are connected to the remote controller in error
System controller	All indoor units that are connected to the system controller in error
Advanced HVAC CONTROLLER	None
Interlocked LOSSNAY unit	Indoor units with which the LOSSNAY unit in error is interlocked
Air To Water (PWFY) unit	Air To Water (PWFY) unit in error and all other Air To Water (PWFY) units in the same group
DIDO controller (PAC-YG66DCA)	None
HWHP (CAHV, CRHV) unit	None
AI/PI controller (PAC-YG60MCA/63MCA)	None

Example of units in error and the units that will stop



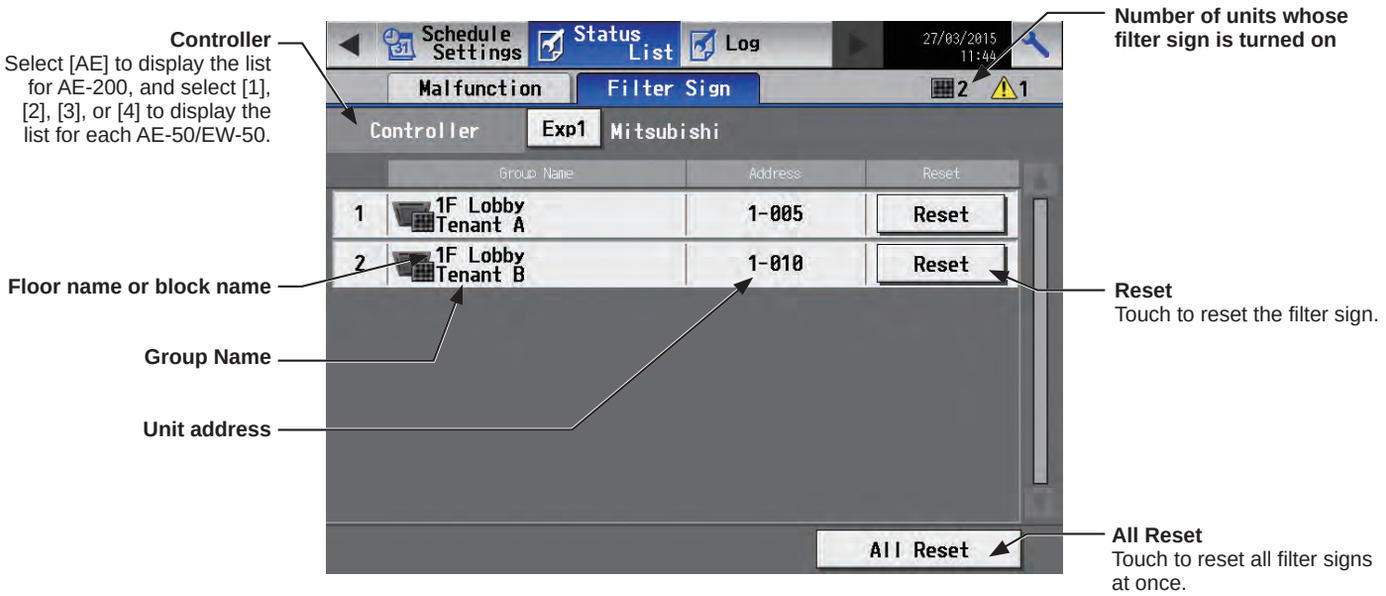
Units in error	Units that will stop
AE-200 (AE-50, EW-50)	None
Outdoor unit [51]	Indoor unit [1], Indoor unit [2]
Outdoor unit [53]	Indoor unit [3], Indoor unit [4], Indoor unit [5]
Outdoor unit [57]	Air To Water (PWFY) unit [7]
Indoor unit [1]	Indoor unit [1], Indoor unit [2]
Indoor unit [3]	Indoor unit [3]
Indoor unit [5]	Indoor unit [4], Indoor unit [5], LOSSNAY unit [6]
Interlocked LOSSNAY unit [6]	Indoor unit [5]
Air To Water (PWFY) unit [7]	Air To Water (PWFY) unit [7]
ME remote controller [101]	Indoor unit [1], Indoor unit [2]
System controller [201]	Indoor unit [1], Indoor unit [2], Indoor unit [3], Indoor unit [4], Indoor unit [5], LOSSNAY unit [6]
Advanced HVAC CONTROLLER [202]	None
DIDO controller (PAC-YG66DCA) [8]	None
HWHP (CAHV, CRHV) unit [9] [59]	None

3-4-2. Filter Sign List

A list of units whose filter sign is turned on can be displayed.

Touch [Status List] in the menu bar, and then touch [Filter Sign].

Note: The [Controller] setting will appear (only on the AE-200's LCD) when the [System Exp] setting on the [Unit Info.] screen is set to [Expand]. Switch the [Controller] setting between [AE200] and [Exp1] through [Exp4] to display the list for each AE-200, AE-50, and EW-50 individually.



Item	Description
Floor name or block name	The name of the floor or the block that the unit whose filter sign is turned on belongs to will appear. Note: This area will be blank if the unit whose filter sign is turned on does not belong to any floor or block.
Group name	The name of the group that the unit belongs to will appear.
Unit address	The address of the unit whose filter sign is turned on will appear. Note: When [1], [2], [3], or [4] is selected as [Controller], AE-50/EW-50 No. and unit address will appear. (Example: 1-012)
Number of units whose filter sign is turned on	The number of units whose filter sign is currently turned on will appear.
Reset	Touch to reset each filter sign. Note: Reset the filter sign after cleaning the filter. Note: After the filter sign is reset, it takes up to an hour to clear the filter sign display on the local remote controllers. (When the filter sign is reset from the local remote controllers, it takes up to an hour to clear the filter sign display on the AE-200/AE-50's LCD.)
All Reset	Touch to reset all filter signs at once. Note: Reset the filter signs after cleaning the filters. Note: After the filter signs are reset, it takes up to an hour to clear the filter sign display on the local remote controllers. (When the filter signs are reset from the local remote controllers, it takes up to an hour to clear the filter sign display on the AE-200/AE-50's LCD.)

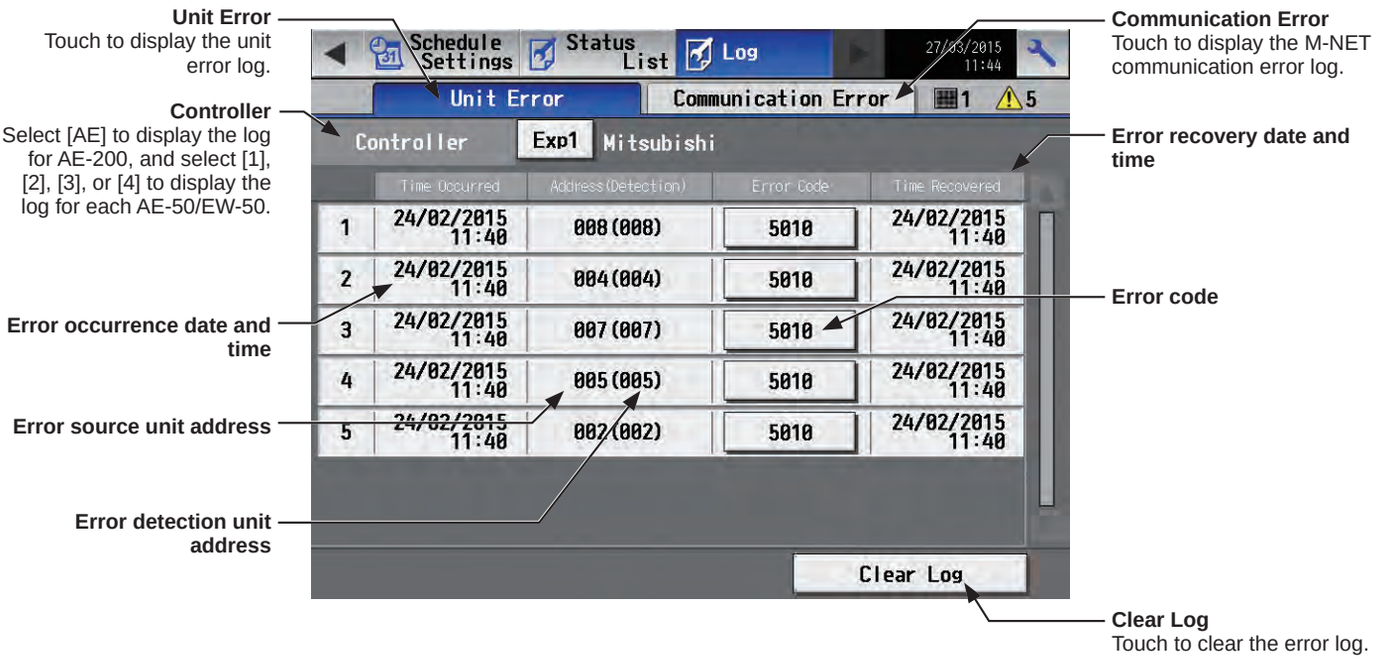
3-5. Malfunction Log

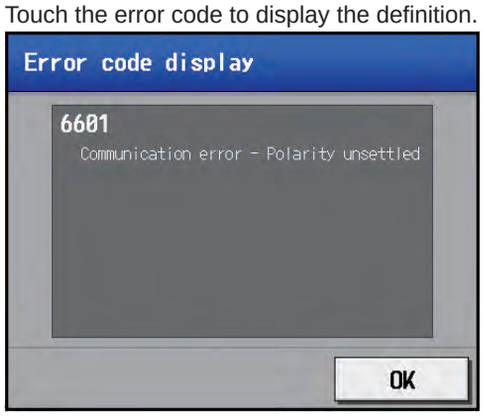
3-5-1. Unit Error/Communication Error

Touch [Log] in the menu bar, and then touch [Unit Error] to display unit errors, or touch [Communication Error] to display M-NET communication errors.

Note: The [Controller] setting will appear (only on the AE-200's LCD) when the [System Exp] setting on the [Unit Info.] screen is set to [Expand]. Switch the [Controller] setting between [AE200] and [Exp1] through [Exp4] to display the log for each AE-200, AE-50, and EW-50 individually.

Note: If there is no error occurred, no error log will appear.



Item	Description
Unit Error	Touch to display the unit error log. Note: The latest 64 unit errors will appear for each AE-200/AE-50/EW-50.
Communication Error	Touch to display the M-NET communication error log. Note: The latest 64 communication errors will appear for each AE-200/AE-50/EW-50.
Clear Log	Touch to clear the error log.
Error occurrence date and time	The date and time when the error occurred will appear.
Error source unit address	The address of the unit in error will appear. Note: When [1], [2], [3], or [4] is selected as [Controller], AE-50/EW-50 No. and unit address will appear. (Example: 1-012)
Error detection unit address	The address of the unit that detected the error will appear. Note: When [1], [2], [3], or [4] is selected as [Controller], AE-50/EW-50 No. and unit address will appear. (Example: 1-012)
Error code	The error code that corresponds to the error will appear. Touch the error code to display the definition. 

3-6. Error code list

Error codes and their definitions are shown below. If an error occurs, note the error code and consult your dealer. (A) indicates A-control units.

3-6-1. M-NET errors

0092	Version combination error
0093	System configuration change warning
0094	“Charge” license not registered
0095	Warning - possibility of damaged metering device
0096	Air conditioning charges file automatic output abnormality
0097	Apportioned calculation data collection error
0100	Equipment abnormality
01*0	Equipment abnormality (PAC-YG66DCA) in system *
01**	Equipment abnormality in system **
0200	Hydraulic abnormality
0201	Heater overheating
0202	Heater disconnected
0203	General equipment
0204	Bad defrosting
0205	COS fault
0300	Hydraulic abnormality
0301	Heater overheating
0302	Heater disconnected
0303	General equipment
0304	Bad defrosting
0310	Maintenance inspections (inclusive)
0311	Long compressor running time
0400	Controller abnormality (inclusive)
0401	Controller I/O module abnormality
0402	Controller memory abnormality
0403	Serial transmission trouble
0404	Indoor unit EEPROM error (A)
0405	Outdoor unit EEPROM error (A)
0701	Combustion circuit abnormality (A)
0702	Combustion heat exchange overheating protection (A)
0703	Accidental fire (A)
0704	Heater abnormality (A)
0705	Seismoscope malfunction (A)
0706	Flame current sensor abnormality (A)
0707	Ignition abnormality (A)
0708	Blower motor rotation abnormality (A)
0709	Oil pump circuit abnormality (A)
0900	Test run
1000	Refrigerant cycle abnormality
10*0	Refrigerant cycle abnormality in line *
1102	Discharge temperature abnormality (TH4) (A)
1108	Inner thermo (49C) operation (A)
11**	Refrigerant cycle temperature abnormality - Common operand: **
1300	Low-pressure abnormality (63L operation) (A)
13**	Refrigerant cycle pressure abnormality - Common operand: **
1500	Refrigerant cycle not operate due to overcharge
1501	Refrigerant cycle not operate due to undercharge (/compressor shell temperature abnormality)
1502	Refrigerant cycle not operate due to liquid back /Low-discharge super heat abnormality (A)
1503	Refrigerant cycle not operate due to coil frost
1504	Refrigerant cycle not operate due to overheat protection
1505	Refrigerant cycle not operate due to compressor vacuum operation protection/refrigerant low temperature abnormality
1506	Refrigerant cycle not operate due to refrigerant pump abnormality
1507	Refrigerant cycle not operate due to composition detection abnormality
1508	Refrigerant cycle not operate due to control valve fault
1509	Refrigerant cycle not operate due to high pressure abnormality (ball valve closed)
1510	Refrigerant cycle - Gas leakage
1511	Refrigerant cycle not operate due to oil slick abnormality
1512	Refrigerant cycle not operate due to a stop of freezing protection function
1513	Refrigerant cycle - Brine freezing
1514	Refrigerant cycle - Refrigerant circuit error
1559	Oil balance circuit abnormality
1600	Refrigerant overfilled
1601	Insufficient refrigerant
1602	Liquid floodback

1603	Freezing
1604	Excessive temperature rise protection
1605	Compressor vacuum operation protection
1606	Gas pump abnormality
1607	Composition detection abnormality
1608	Control valve fault delay
1610	Gas leak alarm
1615	Compressor excessive start-stop
1659	Oil equalizing circuit fault delay
2000	Water system abnormality (Pump interlock abnormality)
20*0	Water system abnormality in line *
21**	Water system temperature abnormality - Common operand: **
23**	Water system pressure abnormality - Common operand: **
2500	Water system not operate due to water leak
2501	Water system not operate due to water supply suspension
2502	Water system not operate due to drain pump abnormality
2503	Water system not operate due to drain sensor abnormality/float switch function
2504	Water system not operate due to liquid level abnormality
2505	Water system not operate due to cool water valve abnormality
2506	Water system not operate due to warm water valve abnormality
2507	Water system not operate due to dew condensation prevention control activated
2508	Water system - Air pump abnormality
2509	Water system - Brine pump abnormality
2510	Water system - Water level abnormality (heat storage tank, etc.)
2511	Water system - Brine low level abnormality
2512	Water system - Control valve fault
2515	Water system - Water pump abnormality
2550	Water system - Float switch 2
2555	Water system - Cold water solenoid valve 2
2556	Water system - Hot water solenoid valve 2
2600	Water system operation restricted due to water leak
2601	Water system operation restricted due to water supply suspension/humidifier water supply suspension
2602	Water system operation restricted due to drain pump abnormality
2603	Water system operation restricted due to drain sensor abnormality
2604	Water system operation restricted due to liquid level abnormality
2607	Water system - Condensation prevention control operation
2608	Water system - Air pump abnormality
2609	Water system - Brine pump abnormality
2610	Water system - Water level abnormality (heat storage tank, etc.)
2611	Water system - Brine low level abnormality
2613	Drop in water flow rate
2615	Water pump abnormality
3000	Air system - General air system abnormality
30*0	Air system - Air system general X system abnormality (inclusive)
31**	Air system - Temperature abnormality - Common operand: **
3152	Air system operation restricted due to inverter control box inner temperature abnormality
3182	Air system operation restricted due to housing inner temperature abnormality
33**	Air system - Pressure abnormality - Common operand: **
3600	Air system operation restricted due to filter clogging
3601	Air system operation restricted due to filter maintenance
3602	Air system operation restricted due to damper position detecting abnormality
3604	Air system - Filter cleaning position detection abnormality (slim)
3605	Air system - Filter cleaning dust box installation abnormality (slim)
3606	Air system - Filter cleaning position detection abnormality
3607	Air system - Filter cleaning dust box installation abnormality
3608	Air system - Filter cleaning position detection connector connection abnormality
3609	Air system - Ambient temperature high
3610	Air system - Heat exchanger blockage
37**	Air system operation humidity abnormality allowance - Common operand: **
38**	Air system operation humidity abnormality - Common operand: **
4000	Electric system abnormality
40*0	Electric system abnormality in line *
4100	Electric system not operate due to overcurrent shut-off
4101	Electric system not operate due to overcurrent protection
4102	Electric system not operate due to open phase /Open phase (T phase) (A)
4103	Electric system not operate due to reversed phase/open phase
4104	Electric system not operate due to electric leak
4105	Electric system not operate due to short circuit
4106	Electric system not operate due to self power supply OFF/power failure
4107	Electric system not operate due to overload
4108	Electric system not operate due to overload protection/OCR51C /Open phase (S phase),51CM connector open (A)

4109	Electric system not operate due to OCR51F
4110	Electric system not operate due to high voltage part
4111	Electric system not operate due to bus current
4112	Electric system not operate due to coil overheat 49°C
4113	Electric system not operate due to heater overheat
4114	Electric system not operate due to fan controller abnormality
4115	Electric system not operate due to power supply synchronism abnormality /Input circuit (board) failure
4116	Electric system not operate due to motor abnormality/speed abnormality
4117	Compressor self-protection function operation (A)
4118	Opposite phase detection circuit (board) failure (A)
4119	Open of 2 or more connectors (A)
4120	Electric system - Differing voltage applied
4121	Electric system not operate due to trouble in equipment to which a measure against higher harmonics is taken
4122	Electric system - Air blower fan interlock
4123	Electric system not operate due to Inverter output error
4124	Electric system not operate due to damper abnormality
4125	Electric system - Rush-proof circuit abnormality
4126	Electric system - Analog input abnormality
4127	Electric system - Deodorizing circuit abnormality
4128	Electric system - Pulse discharge circuit abnormality
4200	Inverter abnormality
420*	Inverter abnormality - Inverter No.: *
4210	Inverter overcurrent shut-off
421*	Inverter overcurrent shut-off - Inverter No.: *
4220	Inverter bus voltage insufficiency / Voltage abnormality (A)
422*	Inverter bus voltage insufficiency - Inverter No.: *
4230	Inverter radiating thermostat abnormality
423*	Inverter radiating thermostat abnormality - Inverter No.: *
4240	Inverter overcurrent (overload) protection
424*	Inverter overcurrent protection - Inverter No.: *
4250	Inverter IPM/bus voltage abnormality /Power module abnormality (A)
425*	Inverter IPM abnormality *
4260	Inverter cooling fan trouble
426*	Inverter cooling fan trouble - Inverter No.: *
5000	Sensor trouble
50*0	Sensor trouble in system *
51**	Temperature sensor trouble - Sensor No.: **
5202	Connector (63L) open (A)
52**	Pressure sensor trouble - Sensor No.: **
5300	Current sensor abnormality (A)
53**	Current sensor trouble - Sensor No.: **
54**	Humidity sensor trouble - Sensor No.: **
55**	Gas sensor trouble - Sensor No.: **
56**	Air speed sensor trouble - Sensor No.: **
57**	Limit switch trouble - Switch No.: **
58**	Sensor trouble - Sensor No.: **
59**	Other sensors trouble - Sensor No.: **
6000	System abnormality
6100	Instantaneous power interruption
6101	System not operate due to abnormality - With response frame
6102	No answer back
6103	Fire alarm emergency stop
6200	Controller H/W abnormality
6201	E2PROM abnormality
6202	RTC abnormality
6203	Timer kit abnormality
6204	External memory read/write error
6500	Communication error
6600	Communication error - Address duplicate
6601	Communication error - Polarity unsettled
6602	Communication error - Transmission processor hardware error
6603	Communication error - Transmission line busy
6604	Communication error - No ACK (06H) (communication circuit error)
6605	Communication error - No response frame
6606	Communication error - Transmission processor communication error
6607	Communication error - No ACK return
6608	Communication error - No return of response frame
6609	Communication error
6610	Communication error
6800	Communication error - Other communication errors
6801	Communication error - V-control communication error

6810 Communication error - UR communication error
6811 Communication error - UR communication synchronism not recover
6812 Communication error - UR communication hardware error
6813 Communication error - UR communication status bit detection error
6820 Other communication errors
6821 Other communication errors - Transmission line busy
6822 Other communication errors - No communication ACK
6823 Other communication errors - No response command
6824 Other communication errors - Receive data error
6830 Communication error - MA communication refrigerant address double setting error
6831 Communication error - No MA communication reception error
6832 Communication error - MA communication synchronism not recover
6833 Communication error - MA communication transmission/reception hardware trouble
6834 Communication error - MA communication start bit detection error
6840 Communication error - A control no indoor/outdoor communication/reception abnormality
6841 Communication error - A control indoor/outdoor communication synchronization recovery abnormal
6842 Communication error - A control indoor/outdoor communication - Communication H/W abnormality
6843 Communication error - A control indoor/outdoor communication - Start bit detection abnormality
6844 Communication error - A control indoor/outdoor communication incorrect indoor/outdoor wiring connection, excessive number of indoor units (more than five units)
6845 Communication error - A control indoor/outdoor communication incorrect indoor/outdoor wiring connection (telecommunication, disconnection)
6846 Communication error - A control indoor/outdoor communication startup time exceeded
7000 System abnormality
7100 System abnormality - Total capacity error
7101 System abnormality - Capacity code error
7102 System abnormality - Connecting unit number excess
7103 System abnormality - Piping length setting error
7104 System abnormality - Floor height setting error
7105 System abnormality - Address setting over 254
7106 System abnormality - Attribute setting error
7107 System abnormality - Distributor setting error
7108 System abnormality - Refrigerant system setting error
7109 System abnormality - Connection setting error
7110 System abnormality - Refrigerant system connection/connection data unsettled
7111 System abnormality - I/O connection equipment not connected/remote controller sensor abnormality
7112 System abnormality - I/O type setting error
7113 System abnormality - Equipment unsettled
7114 System abnormality - Too many VAV units
7115 System abnormality - Too many units requiring ventilation
7116 System abnormality - Replace non-wash setting error
7117 System abnormality - Model identification setting error
7130 System abnormality - Different unit model error
7131 System abnormality - Mixed cooling only H/P connection error (Facility PAC)
7132 System abnormality - Multiple entries of operation performance (Facility PAC)
7200 System abnormality - Numeric values unsettled
7201 System abnormality - Numeric values unsettled
73** System abnormality - LON system equipment abnormality

3-6-2. Errors between AE-200 and AE-50 (EW-50)

6920 Communication error - No response error
6922 Communication error - Receiving frame ID error
7901 System abnormality - Excessive number of connected units
7902 System abnormality - Connection lock error
7903 System abnormality - Unit information error
7904 System abnormality - System setting error
7905 System abnormality - Version error/Different unit model error

4. Practical operations

4-1. Maintenance

4-1-1. Energy data output

The operation data of outdoor/indoor units and measurement data can be output to a USB memory device in a CSV format.

Touch [Maintenance] in the menu bar, and then touch [Energy data output].

Refer to Table 4-1 “Energy Management Data List” and Table 4-2 “Data period” for details about the energy-control-related items that can be output in a CSV format and how many months/years worth of data each CSV file can contain.

Note: A separate license may be required to use the CSV output function. Only valid buttons can be selected on the screen.

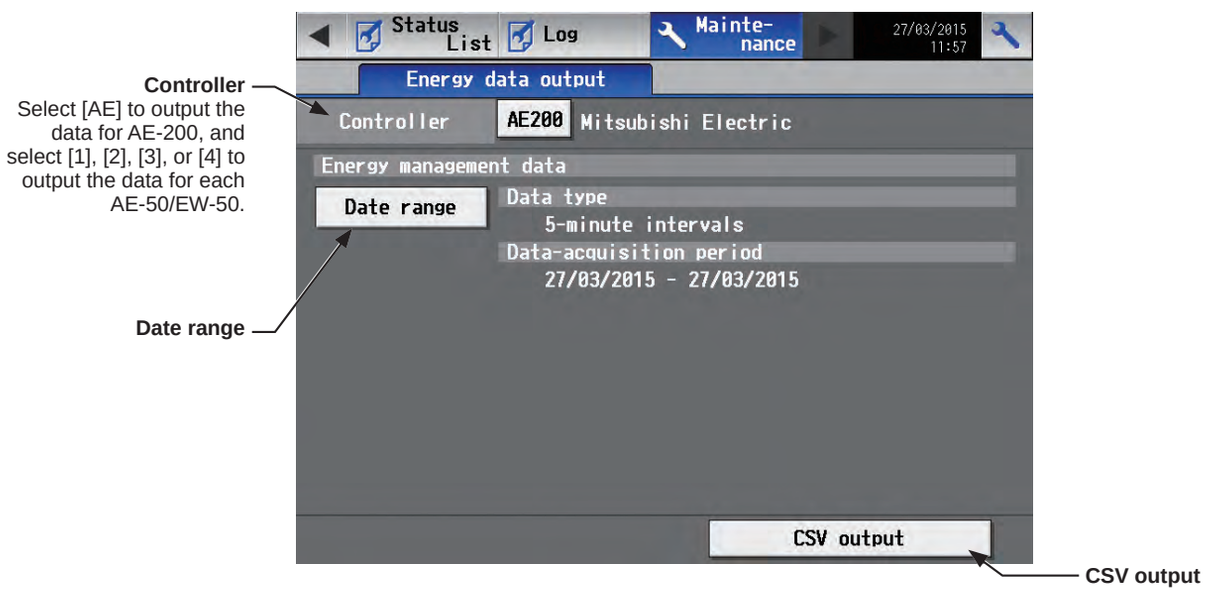
Note: Use a USB memory device that meets the following conditions.

- Supports USB 2.0
- Formatted with FAT32 or FAT (FAT16)
- Security function is not provided or not required to be set.

Note: Test the USB memory device several times before use and verify that the device functions properly. Reading data from or writing data to a USB memory device that has not been confirmed to work may cause unexpected problems. (If the data cannot be output to the USB memory device after a writing error occurs and the device is replaced, reboot the AE-200/AE-50 (turn off the power and restart). Do not use the USB memory device that has experienced writing error once.)

Note: Ensure the CSV file is read with Microsoft® Excel® 2010 or later. Some CSV file uses UTF-8 (Unicode) character codes as well as more than 256 rows, and use of Microsoft® Excel® 2007 or earlier may result in data not being read correctly.

Note: File names, as well as date formats, delimiter characters, and temperature units (°C, °F) within the files output as CSV will use formats set as initial settings. Refer to the Instruction Book (Initial Settings) for settings methods.



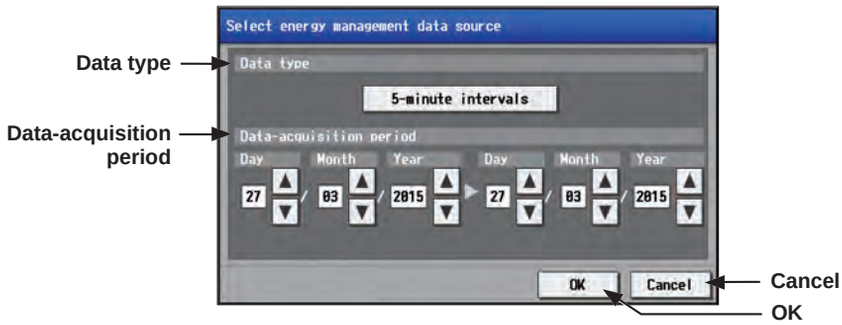
Important

- The USB memory device may not be recognized if you insert and remove it within a short time. If this happens, reset the AE-200/AE-50.

(1) Remove the controller cover, and insert a USB memory device to the USB port.

(2) Switch the [Controller] setting between [AE200] and [Exp1] through [Exp4] to output the data for each AE-200, AE-50, and EW-50 individually.

(3) Touch [Date range] to open the [Select energy management data source] window.



(4) Select a data type and specify the data-acquisition period.

Data type	Touch the [Data type] button to toggle through the following options: [5-minute intervals], [30-minute intervals], [1-day intervals], [1-month intervals], and [1-year intervals].
Data-acquisition period	Specify the date period to acquire the data. Note: The date range that can be specified will vary, depending on the item selected in the [Data type] field. Note: If [1-month intervals] or [1-year intervals] is selected in the [Data type] field, the data-acquisition period cannot be specified. Note: Only the data for the period during which the AE-200/AE-50/EW-50 was powered on will be output. The data for the period during which the AE-200/AE-50/EW-50 was powered off will not be output.

(5) Touch [OK] to go back to the [Energy data output] screen.

(6) Touch [CSV output].

Note: Do not remove the USB memory device while the data is being output.

<table>
<tr><th>Item</th><th>Description</th></tr>
<tr><td>Energy management data</td><td>
■ File name
Data type: 5-minute intervals
“EnergyManagement”_“5MIN”_[YYYY]-[MM]-[DD]_[yyyy]-[mm]-[dd].csv
Data type: 30-minute intervals
“EnergyManagement”_“30MIN”_[YYYY]-[MM]-[DD]_[yyyy]-[mm]-[dd].csv
Data type: 1-day intervals
“EnergyManagement”_“1DAY”_[YYYY]-[MM]-[DD]_[yyyy]-[mm]-[dd].csv
Data type: 1-month intervals
“EnergyManagement”_“1MONTH”_[YYYY]-[MM]_[yyyy]-[mm].csv
Data type: 1-year intervals
“EnergyManagement”_“1YEAR”_[YYYY]-[yyyy].csv
<table>
<tr><th>File-name contents</th><th>Format</th></tr>
<tr><td>[YYYY]</td><td>Start year</td></tr>
<tr><td>[MM]</td><td>Start month</td></tr>
<tr><td>[DD]</td><td>Start date</td></tr>
<tr><td>[yyyy]</td><td>End year</td></tr>
<tr><td>[mm]</td><td>End month</td></tr>
<tr><td>[dd]</td><td>End date</td></tr>
</table>
■ File output destination
<with connection to an AE-50/EW-50 controller>
[Root folder of the USB memory]\[Serial No.]\“OperationalData”\“EnergyManagement2”\“AE”\[Date]
<with connection to one or more AE-50/EW-50 controllers>
[Root folder of the USB memory]\[Serial No.]\“OperationalData”\“EnergyManagement2”\“AE”
[AE-50/EW-50 No. (1–4)*1]\[Date]
*1 AE-50/EW-50 No. will not be shown for the AE-200 data.
Note: The AE-50/EW-50 data can be output from the AE-200.
Note: Only one AE-50’s data can be output from the AE-50.
</td></tr>
</table>

<table>
<tr><th>Item</th><th>Description</th></tr>
<tr><td>Energy management data</td><td>
■ File format
[Data type: 5-minute intervals]
<table>
<tr><th>Row</th><th>Item</th><th>Format</th></tr>
<tr><td>1st</td><td>File Type</td><td>501</td></tr>
<tr><td>2nd</td><td>Data range</td><td>Start date + “–” + End date</td></tr>
<tr><td>3rd</td><td>Item *1*2</td><td>“DateTime,Data1(51),...Data1(100),Data2(51),...Data2(100),
Data3(51),...Data3(100),OutdoorTemp(51),...OutdoorTemp(100),
CoolSetTemp(1),...CoolSetTemp(50),HeatSetTemp(1),...HeatSetTemp(50),
RoomTemp(1),...RoomTemp(50),MCP1(0),...MCP1(50),
MCP2(0),...MCP2(50),MCP3(0),...MCP3(50),MCP4(0),...MCP4(50),
MCT1(1),...MCT1(50),MCT2(1),...MCT2(50),
AHC1(201),...AHC1(250),AHC2(201),...AHC2(250),
MCP1,MCP2,MCP3,MCP4*3”</td></tr>
<tr><td>4th</td><td>Measurement unit *4*5</td><td>
<table>
<tr><th>Item</th><th>Unit</th></tr>
<tr><td>Data1, Data2, Data3</td><td>-</td></tr>
<tr><td>OutdoorTemp, CoolSetTemp, HeatSetTemp, RoomTemp</td><td>ºC, ºF</td></tr>
<tr><td>MCP (PI controller/Built-in Pulse Input (PI))</td><td>kWh, m3, MJ</td></tr>
<tr><td>MCT (AI controller)</td><td>ºC, ºF, %</td></tr>
<tr><td>AHC (Advanced HVAC CONTROLLER)</td><td>ºC, ºF</td></tr>
</table>
</td></tr>
<tr><td>5th–17860th</td><td>Data *1*2*6*7</td><td>Date and time, Data 1 (51), ... (100), Data 2 (51), ... (100), Data 3 (51), ... (100),
Outdoor temperature (51), ... (100),Cooling set temperature (1), ... (50),
Heating set temperature (1) , ... (50),Room temperature (1), ... (50),
MCP 1 (1), ... (50), MCP 2 (1), ... (50), MCP 3 (1), ... (50), MCP 4 (1), ... (50),
MCT 1 (1), ... (50), MCT 2 (1), ... (50),AHC temperature 1 (201), ... (250),
AHC temperature 2 (201), ... (250), MCP 1, MCP 2, MCP 3, MCP 4</td></tr>
</table>
*1 The numbers shown after “MCP” and “MCT” indicate channel No.
*2 The numbers in the parentheses indicate M-NET addresses.
*3 The M-NET address indicated in the parentheses will not appear for the measurement data of the built-in Pulse Input (PI).
*4 The measurement unit for MCP (PI controller) will be the measurement unit that has been set on the [Measurement] screen. (Refer to the Instruction Book (Initial Settings) for details.)
*5 The measurement item for MCT (AI controller) will be temperature or humidity, which has been set on the [Measurement] screen. (Refer to the Instruction Book (Initial Settings) for details.)
*6 The value will not appear if the data does not exist.
*7 Each file contains up to 17856 data (2-month worth of data).
</td></tr>
</table>

<table>
<tr><th>Item</th><th>Description</th></tr>
<tr><td>Energy management data</td><td>
[Data type: 30-minute intervals]
<table>
<tr><th>Row</th><th>Item</th><th>Format</th></tr>
<tr><td>1st</td><td>File Type</td><td>502</td></tr>
<tr><td>2nd</td><td>Data range</td><td>Start date + “–” + End date</td></tr>
<tr><td>3rd</td><td>Item *1*2</td><td>“DateTime,Data1(51),...Data1(100),Data2(51),...Data2(100),
Data3(51),...Data3(100),OutdoorTemp(51),...OutdoorTemp(100),
CoolSetTemp(1),...CoolSetTemp(50),HeatSetTemp(1),...HeatSetTemp(50),
RoomTemp(1),...RoomTemp(50),FanTime(1),...FanTime(50),
CoolTime(1),...CoolTime(50),HeatTime(1),...HeatTime(50),
ThermoTime(1),...ThermoTime(50),CoolThermoTime(1),...CoolThermoTime(50),
HeatThermoTime(1),...HeatThermoTime(50),
ThermoCount(1),...ThermoCount(50),
SaveValue(1),...SaveValue(50),CoolSaveValue(1),...CoolSaveValue(50),
HeatSaveValue(1),...HeatSaveValue(50),
ApporionedElectricEnergy(1),...ApporionedElectricEnergy(50),
MCP1(0),...MCP1(50),MCP2(0),...MCP2(50),MCP3(0),...MCP3(50),
MCP4(0),...MCP4(50),MCT1(1),...MCT1(50),MCT2(1),...MCT2(50),
AHC1(201),...AHC1(250),AHC2(201),...AHC2(250),
MCP1,MCP2,MCP3,MCP4*3”</td></tr>
<tr><td>4th</td><td>Measurement unit *4*5</td><td>
<table>
<tr><th>Item</th><th>Unit</th></tr>
<tr><td>ApportionedElectricEnergy</td><td>kWh</td></tr>
<tr><td>ThermoCount, Data1, Data2, Data3</td><td>-</td></tr>
<tr><td>OutdoorTemp, CoolSetTemp, HeatSetTemp, RoomTemp</td><td>ºC, ºF</td></tr>
<tr><td>FanTime, CoolTime, HeatTime, ThermoTime, CoolThermoTime, HeatThermoTime, SaveValue, CoolSaveValue, HeatSaveValue</td><td>Minute</td></tr>
<tr><td>MCP (PI controller/Built-in Pulse Input (PI))</td><td>kWh, m3, MJ</td></tr>
<tr><td>MCT (AI controller)</td><td>ºC, ºF, %</td></tr>
<tr><td>AHC (Advanced HVAC CONTROLLER)</td><td>ºC, ºF</td></tr>
</table>
</td></tr>
<tr><td>5th–37204th</td><td>Data *1*2*6*7*8*9</td><td>Date and time, Data 1 (51), ... (100), Data 2 (51), ... (100), Data 3 (51), ... (100),
Outdoor temperature (51), ... (100), Cooling set temperature (1), ... (50),
Heating set temperature (1), ... (50), Room temperature (1), ... (50),
Fan operation time (1), ... (50), Cooling operation time (1),... (50),
Heating operation time (1), ... (50), Thermo-ON time (1), ... (50),
Cooling Thermo-ON time (1), ... (50), Heating Thermo-ON time (1), ... (50), Number of Thermo-ON/OFF (1), ... (50), Capacity-save value (1), ... (50),
Cooling capacity-save value (1), ... (50), Heating capacity-save value (1), ... (50),
Apporioned electric energy (1), ... (50), MCP 1 (1), ... (50), MCP 2 (1), ... (50),
MCP 3 (1), ... (50), MCP 4 (1), ... (50), MCT 1 (1), ... (50), MCT 2 (1), ... (50),
AHC temperature 1 (201), ... (250), AHC temperature 2 (201), ... (250), MCP 1, MCP 2, MCP 3, MCP 4</td></tr>
</table>
*1 The numbers shown after “MCP” and “MCT” indicate channel No.
*2 The numbers in the parentheses indicate M-NET addresses.
*3 The M-NET address indicated in the parentheses will not appear for the measurement data of the built-in Pulse Input (PI).
*4 The measurement unit for MCP (PI controller) will be the measurement unit that has been set on the [Measurement] screen. (Refer to the Instruction Book (Initial Settings) for details.)
*5 The measurement item for MCT (AI controller) will be temperature or humidity, which has been set on the [Measurement] screen. (Refer to the Instruction Book (Initial Settings) for details.)
*6 “Outdoor temperature,” “Cooling set temperature,” “Heating set temperature,” and “Room temperature” in the data are the temperature values obtained every hour and half hour.
*7 “MCT 1” and “MCT 2” in the data are the temperature or humidity values obtained every hour and half hour.
*8 The value will not appear if the data does not exist.
*9 Each file contains up to 37200 data (25-month worth of data).
</td></tr>
</table>

<table>
<tr><th>Item</th><th>Description</th></tr>
<tr><td>Energy management data</td><td>
[Data type: 1-day intervals]
<table>
<tr><th>Row</th><th>Item</th><th>Format</th></tr>
<tr><td>1st</td><td>File Type</td><td>503</td></tr>
<tr><td>2nd</td><td>Data range</td><td>Start date + “–” + End date</td></tr>
<tr><td>3rd</td><td>Item *1*2</td><td>“Date,Data1(51),...Data1(100),Data3(51),...Data3(100),
OutdoorTemp(51),...OutdoorTemp(100),CoolSetTemp(1),...CoolSetTemp(50),
HeatSetTemp(1),...HeatSetTemp(50),RoomTemp(1),...RoomTemp(50),
FanTime(1),...FanTime(50),CoolTime(1),...CoolTime(50),
HeatTime(1),...HeatTime(50),ThermoTime(1),...ThermoTime(50),
CoolThermoTime(1),...CoolThermoTime(50),
HeatThermoTime(1),...HeatThermoTime(50),
SaveValue(1),...SaveValue(50),CoolSaveValue(1),...CoolSaveValue(50),
HeatSaveValue(1),...HeatSaveValue(50),
ApporionedElectricEnergy(1),...ApporionedElectricEnergy(50),
TargetElectricEnergy(1),...TargetElectricEnergy(50),
MCP1(0),...MCP1(50),MCP2(0),...MCP2(50),MCP3(0),...MCP3(50),
MCP4(0),...MCP4(50),MCT1(1),...MCT1(50),MCT2(1),...MCT2(50),
AHC1(201),...AHC1(250),AHC2(201),...AHC2(250),
MCP1,MCP2,MCP3,MCP4*3”</td></tr>
<tr><td>4th</td><td>Measurement unit *4*5</td><td>
<table>
<tr><th>Item</th><th>Unit</th></tr>
<tr><td>ApportionedElectricEnergy, TargetElectricEnergy</td><td>kWh</td></tr>
<tr><td>Data1, Data3</td><td>-</td></tr>
<tr><td>OutdoorTemp, CoolSetTemp, HeatSetTemp, RoomTemp</td><td>ºC, ºF</td></tr>
<tr><td>FanTime, CoolTime, HeatTime, ThermoTime, CoolThermoTime, HeatThermoTime, SaveValue, CoolSaveValue, HeatSaveValue</td><td>Minute</td></tr>
<tr><td>MCP (PI controller/Built-in Pulse Input (PI))</td><td>kWh, m3, MJ</td></tr>
<tr><td>MCT (AI controller)</td><td>ºC, ºF, %</td></tr>
<tr><td>AHC (Advanced HVAC CONTROLLER)</td><td>ºC, ºF</td></tr>
</table>
</td></tr>
<tr><td>5th–779th</td><td>Data *1*2*6*7*8*9</td><td>Date, Data 1 (51), ... (100), Data 3 (51), ... (100),
Outdoor temperature (51), ... (100), Cooling set temperature (1), ... (50),
Heating set temperature (1), ... (50), Room temperature (1), ... (50),
Fan operation time (1), ... (50), Cooling operation time (1), ... (50),
Heating operation time (1), ... (50), Thermo-ON time (1), ... (50),
Cooling Thermo-ON time (1), ... (50), Heating Thermo-ON time (1), ... (50),
Capacity-save value (1), ... (50), Cooling capacity-save value (1), ... (50),
Heating capacity-save value (1), ... (50), Apporioned electric energy (1), ... (50),
Target electric energy (1), ... (50), MCP 1 (1), ... (50), MCP 2 (1), ... (50),
MCP 3 (1), ... (50), MCP 4 (1), ... (50), MCT 1 (1), ... (50), MCT 2 (1), ... (50),
AHC temperature 1 (201), ... (250), AHC temperature 2 (201), ... (250), MCP 1, MCP 2, MCP 3, MCP 4</td></tr>
</table>
*1 The numbers shown after “MCP” and “MCT” indicate channel No.
*2 The numbers in the parentheses indicate M-NET addresses.
*3 The M-NET address indicated in the parentheses will not appear for the measurement data of the built-in Pulse Input (PI).
*4 The measurement unit for MCP (PI controller) will be the measurement unit that has been set on the [Measurement] screen. (Refer to the Instruction Book (Initial Settings) for details.)
*5 The measurement item for MCT (AI controller) will be temperature or humidity, which has been set on the [Measurement] screen. (Refer to the Instruction Book (Initial Settings) for details.)
*6 “Outdoor temperature,” “Cooling set temperature,” “Heating set temperature,” and “Room temperature” in the data are the average daily values of the temperature values obtained every hour.
*7 “MCT 1” and “MCT 2” in the data are the average daily temperature or humidity values obtained every hour.
*8 The value will not appear if the data does not exist.
*9 Each file contains up to 775 data (25-month worth of data).
</td></tr>
</table>

<table>
<tr><th>Item</th><th>Description</th></tr>
<tr><td>Energy management data</td><td>
[Data type: 1-month intervals]
<table>
<tr><th>Row</th><th>Item</th><th>Format</th></tr>
<tr><td>1st</td><td>File Type</td><td>504</td></tr>
<tr><td>2nd</td><td>Data range</td><td>Start year and month + “–” + End year and month</td></tr>
<tr><td>3rd</td><td>Item *1*2</td><td>“Month,Data1(51),...Data1(100),Data3(51),...Data3(100),
OutdoorTemp(51),...OutdoorTemp(100),CoolSetTemp(1),...CoolSetTemp(50),
HeatSetTemp(1),...HeatSetTemp(50),RoomTemp(1),...RoomTemp(50),
FanTime(1),...FanTime(50),CoolTime(1),...CoolTime(50),
HeatTime(1),...HeatTime(50),ThermoTime(1),...ThermoTime(50),
CoolThermoTime(1),...CoolThermoTime(50),
HeatThermoTime(1),...HeatThermoTime(50),
SaveValue(1),...SaveValue(50),CoolSaveValue(1),...CoolSaveValue(50),
HeatSaveValue(1),...HeatSaveValue(50),
ApporionedElectricEnergy(1),...ApporionedElectricEnergy(50).
TargetElectricEnergy(1),...TargetElectricEnergy(50),
MCP1(0),...MCP1(50),MCP2(0),...MCP2(50),MCP3(0),...MCP3(50),
MCP4(0),...MCP4(50),MCT1(1),...MCT1(50),MCT2(1),...MCT2(50),
AHC1(201),...AHC1(250),AHC2(201),...AHC2(250),
MCP1,MCP2,MCP3,MCP4*3”</td></tr>
<tr><td>4th</td><td>Measurement unit *4*5</td><td>
<table>
<tr><th>Item</th><th>Unit</th></tr>
<tr><td>ApportionedElectricEnergy, TargetElectricEnergy</td><td>kWh</td></tr>
<tr><td>Data1, Data3</td><td>-</td></tr>
<tr><td>OutdoorTemp, CoolSetTemp, HeatSetTemp, RoomTemp</td><td>ºC, ºF</td></tr>
<tr><td>FanTime, CoolTime, HeatTime, ThermoTime, CoolThermoTime, HeatThermoTime, SaveValue, CoolSaveValue, HeatSaveValue</td><td>Minute</td></tr>
<tr><td>MCP (PI controller/Built-in Pulse Input (PI))</td><td>kWh, m3, MJ</td></tr>
<tr><td>MCT (AI controller)</td><td>ºC, ºF, %</td></tr>
<tr><td>AHC (Advanced HVAC CONTROLLER)</td><td>ºC, ºF</td></tr>
</table>
</td></tr>
<tr><td>5th–29th</td><td>Data *1*2*6*7*8*9</td><td>yyyy/mm, Data 1 (51), ... (100), Data 3 (51), ... (100),
Outdoor temperature (51), ... (100), Cooling set temperature (1), ... (50),
Heating set temperature (1), ... (50), Room temperature (1), ... (50),
Fan operation time (1), ... (50), Cooling operation time (1), ... (50),
Heating operation time (1), ... (50), Thermo-ON time (1), ... (50),
Cooling Thermo-ON time (1), ... (50), Heating Thermo-ON time (1), ... (50),
Capacity-save value (1), ... (50), Cooling capacity-save value (1), ... (50),
Heating capacity-save value (1), ... (50), Apporioned electric energy (1), ... (50),
Target electric energy (1), ... (50), MCP 1 (1), ... (50), MCP 2 (1), ... (50),
MCP 3 (1), ... (50), MCP 4 (1), ... (50), MCT 1 (1), ... (50), MCT 2 (1), ... (50),
AHC temperature 1 (201), ... (250), AHC temperature 2 (201), ... (250), MCP 1, MCP 2, MCP 3, MCP 4</td></tr>
</table>
*1 The numbers shown after “MCP” and “MCT” indicate channel No.
*2 The numbers in the parentheses indicate M-NET addresses.
*3 The M-NET address indicated in the parentheses will not appear for the measurement data of the built-in Pulse Input (PI).
*4 The measurement unit for MCP (PI controller) will be the measurement unit that has been set on the [Measurement] screen. (Refer to the Instruction Book (Initial Settings) for details.)
*5 The measurement item for MCT (AI controller) will be temperature or humidity, which has been set on the [Measurement] screen. (Refer to the Instruction Book (Initial Settings) for details.)
*6 “Outdoor temperature,” “Cooling set temperature,” “Heating set temperature,” and “Room temperature” in the data are the average monthly values of the average temperature values obtained every day.
*7 “MCT 1” and “MCT 2” in the data are the average monthly values of the average temperature or humidity values obtained every day.
*8 The value will not appear if the data does not exist.
*9 Each file contains up to 25 data (25-month worth of data).
</td></tr>
</table>

<table>
<tr><th>Item</th><th>Description</th></tr>
<tr><td>Energy management data</td><td>
[Data type: 1-year intervals]
<table>
<tr><th>Row</th><th>Item</th><th>Format</th></tr>
<tr><td>1st</td><td>File Type</td><td>505</td></tr>
<tr><td>2nd</td><td>Date range</td><td>Start year + “–” + End year</td></tr>
<tr><td>3rd</td><td>Item *1*2</td><td>“Year,Data1(51),...Data1(100),Data3(51),...Data3(100),
FanTime(1),...FanTime(50),CoolTime(1),...CoolTime(50),
HeatTime(1),...HeatTime(50),ThermoTime(1),...ThermoTime(50),
CoolThermoTime(1),...CoolThermoTime(50),
HeatThermoTime(1),...HeatThermoTime(50),SaveValue(1),...SaveValue(50),
CoolSaveValue(1),...CoolSaveValue(50),
HeatSaveValue(1),...HeatSaveValue(50),
ApporionedElectricEnergy(1),...ApporionedElectricEnergy(50)
TargetElectricEnergy(1),...TargetElectricEnergy(50),
MCP1(0),...MCP1(50),MCP2(0),...MCP2(50),MCP3(0),...MCP3(50),
MCP4(0),...MCP4(50),
MCP1,MCP2,MCP3,MCP4*3”</td></tr>
<tr><td>4th</td><td>Measurement unit *4</td><td>
<table>
<tr><th>Item</th><th>Unit</th></tr>
<tr><td>ApportionedElectricEnergy, TargetElectricEnergy</td><td>kWh</td></tr>
<tr><td>Data1, Data3</td><td>-</td></tr>
<tr><td>FanTime, CoolTime, HeatTime, ThermoTime,
CoolThermoTime, HeatThermoTime, SaveValue,
CoolSaveValue, HeatSaveValue</td><td>Minute</td></tr>
<tr><td>MCP (PI controller/Built-in Pulse Input (PI))</td><td>kWh, m3, MJ</td></tr>
</table>
</td></tr>
<tr><td>5th–9th</td><td>Data *1*2*5*6</td><td>yyyy, Data 1 (51), ... (100), Data 3 (51), ... (100),
Fan operation time (1), ... (50), Cooling operation time (1), ... (50),
Heating operation time (1), ... (50), Thermo-ON time (1), ... (50),
Cooling Thermo-ON time (1), ... (50), Heating Thermo-ON time (1), ... (50),
Capacity-save value (1), ... (50), Cooling capacity-save value (1), ... (50),
Heating capacity-save value (1), ... (50), Apporioned electric energy (1), ... (50),
Target electric energy (1), ... (50), MCP 1 (1), ... (50), MCP 2 (1), ... (50),
MCP 3 (1), ... (50), MCP 4 (1), ... (50), MCP 1, MCP 2, MCP 3, MCP 4</td></tr>
</table>

*1 The numbers shown after “MCP” and “MCT” indicate channel No.

*2 The numbers in the parentheses indicate M-NET addresses.

*3 The M-NET address indicated in the parentheses will not appear for the measurement data of the built-in Pulse Input (PI).

*4 The measurement unit for MCP (PI controller) will be the measurement unit that has been set on the [Measurement] screen. (Refer to the Instruction Book (Initial Settings) for details.)

*5 The value will not appear if the data does not exist.

*6 Each file contains up to 5 data (5-year worth of data).

■ File sample

Data type: 5-minute intervals

501
15/03/2010-17/05/2010
DateTime,Data1(51),...,Data1(100),Data2(51),...,Data2(100),Data3(51) ,...,Data3(100),OutdoorTemp(51), ...,OutDoorTemp(100),CoolSetTemp(1),...,CoolSetTemp(50),HeatSetTemp(1),...,HeatSetTemp(50),RoomTemp(1),...,RoomTemp(50),MCP1(1), ...,MCP1(50),MCP2(1),...,MCP2(50),MCP3(1),...,MCP3(50),MCP4(1),...,MCP4(50),MCT1(1),...,MCT1(50),MCT2(1),...,MCT2(50),AHC1(201),...,AHC1(250),AHC2(201) ,...,AHC2(250),MCP1,MCP2,MCP3,MCP4
,,...,,,...,,...,ºC,...,ºC,ºC,...,ºC,ºC,...,ºC,ºC,...,ºC, kWh,...,kWh, kWh,...,kWh, kWh,...,kWh, kWh,...,kWh, ºC,...,ºC,ºC,...,ºC,ºC,...,ºC,ºC,...,ºC,kWh,kWh,kWh,kWh
15/03/2010_00:00,100.00,...,80.00,20.50,...,24.00,3.21,...,3.54,30.0,...,31.0,25.0,...,25.0,...,20.0,...,20.0,26.0,...,27.0,100.00,...,100.00,150.00,...,150.00,200.00,...,200.00,250.00,...,250.00,25.0,...,25.0,25.0,...,25.0,25.0,...,25.0, 25.0,...,25.0,140.00,200.00,190.00,180.00
15/03/2010_00:05,120.00,...,100.00,20.70,...,25.00,3.23,...,3.40,30.0,...,31.0,25.0,...,25.0,...,20.0,...,20.0,26.0,...,27.0,120.00,...,120.00,170.00,...,170.00,220.00,...,220.00,270.00,...,270.00,25.0,...,25.0,25.0,...,25.0,25.0,...,25.0, 25.0,...,25.0,140.00,200.00,190.00,180.00
...

</td></tr>
</table>

Energy Management Data List

Table 4-1 below summarizes the energy-control-related items that can be output in a CSV format, their measurement units, and their data ranges for each data type.
Table 4-2 below summarizes how many months/years worth of data each CSV file can contain.

Table 4-1 Data items

Unit type	Item	Data type (intervals)					Measurement unit	Data range *11
		5-minute	30-minute	1-day *6	1-month *7	1-year *8		
Outdoor unit	Data 1 *1	V	V	V	V	V	–	0–999999.99
	Data 2 *1	V	V				–	0–9999.99
	Data 3 *1	V	V	V	V	V	–	0–99.99
	Outdoor temperature	V	V *2	V *3	V *4		ºC, ºF	-100.0–1000.0
Indoor unit	Cooling set temperature	V	V *2	V *3	V *4		ºC, ºF	-100.0–1000.0
	Heating set temperature	V	V *2	V *3	V *4		ºC, ºF	-100.0–1000.0
	Room temperature	V	V *2	V *3	V *4		ºC, ºF	-100.0–1000.0
	Fan operation time		V *9	V *10	V *10	V *10	Minute	0–2147483647
	Cooling operation time		V *9	V *10	V *10	V *10	Minute	0–2147483647
	Heating operation time		V *9	V *10	V *10	V *10	Minute	0–2147483647
	Thermo-ON time		V *9	V *10	V *10	V *10	Minute	0–2147483647
	Cooling Thermo-ON time		V *9	V *10	V *10	V *10	Minute	0–2147483647
	Heating Thermo-ON time		V *9	V *10	V *10	V *10	Minute	0–2147483647
	Number of Thermo-ON *5		V *9				–	0–2147483647
	Capacity-save value		V *9	V *10	V *10	V *10	Minute	0–21474836.47
	Cooling capacity-save value		V *9	V *10	V *10	V *10	Minute	0–21474836.47
	Heating capacity-save value		V *9	V *10	V *10	V *10	Minute	0–21474836.47
	Apportioned electric energy		V *9	V *10	V *10	V *10	kWh	0–999999.9999
	Target electric energy			V *10	V *10	V *10	kWh	0–922337203685477
MCP (PI controller/ Built-in Pulse Input (PI))	MCP 1	V *9	V *9	V *10	V *10	V *10	kWh, m3, MJ, Blank	0–999999.99
	MCP 2	V *9	V *9	V *10	V *10	V *10	kWh, m3, MJ, Blank	0–999999.99
	MCP 3	V *9	V *9	V *10	V *10	V *10	kWh, m3, MJ, Blank	0–999999.99
	MCP 4	V *9	V *9	V *10	V *10	V *10	kWh, m3, MJ, Blank	0–999999.99
MCT (AI controller)	MCT 1	V	V *2	V *3	V *4		ºC, ºF, %	-100.0–1000.0
	MCT 2	V	V *2	V *3	V *4		ºC, ºF, %	-100.0–1000.0
AHC	AHC temperature 1	V	V *2	V *3	V *4		ºC, ºF	-100.0–1000.0
	AHC temperature 2	V	V *2	V *3	V *4		ºC, ºF	-100.0–1000.0

*1 The values will not appear.
*2 The values are the temperature or humidity values obtained every hour and half hour.
*3 The values are the average daily values of the temperature or humidity values obtained every hour.
*4 The values are the average monthly values of the average temperature or humidity values obtained every day *3.
*5 “Number of Thermo-ON/OFF” is the number of times the unit has gone from Thermo-OFF to Thermo-ON.
*6 If the data contains the data for the current day, the data will be output that were collected up to the point of time when the CSV file was downloaded.
*7 The data for the current month will contain the data that were collected up to the point of time when the CSV file was downloaded.
*8 The data for the current year will contain the data that were collected up to the point of time when the CSV file was downloaded.
*9 Each value is a cumulative value after the start of operation. If the value exceeds the maximum value, it will wrap around to zero.
*10 Each value is a total value for each time period (1-day, 1-month, or 1-year).
*11 The number of digits that will be shown after the decimal point varies with the data item. For example, if the data range is “0–99.99,” two digits after the decimal point will be shown.

Table 4-2 Data period

Data type (intervals)	Data period
5-minute	Last 2 months
30-minute	Last 25 months
1-day	Last 25 months
1-month	Last 25 months
1-year	Last 5 years

5. Maintenance

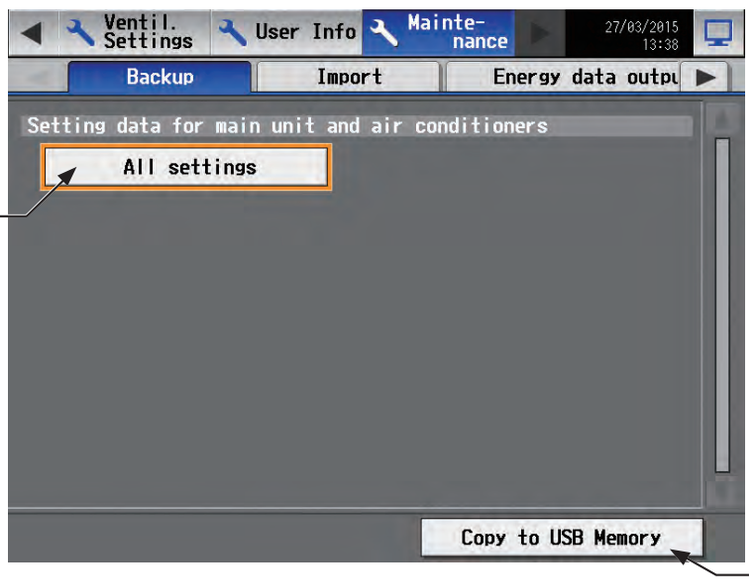
5-1. Backing up settings data

The settings data can be exported to a USB memory as a backup.

Touch [Maintenance] in the menu bar, and then touch [Backup].

Note: Use the USB memory device that meets the requirements described in section 4-1-1 “Energy data output”.

Note: IP address settings will not be backed up. Make sure to write them down.



Important

- The USB memory device may not be recognized if you insert and remove it within a short time. If this happens, reset the AE-200/AE-50.
- The AE-50/EW-50 data can be output from the AE-200.

(1) Remove the controller cover, and insert a USB memory device to the USB port.

(2) Touch [All settings], then touch [Copy to USB Memory].
The settings data file will be created in the root folder of the USB memory.

■ File output destination, folder name, and file name

[Root folder of the USB memory]\[Serial No.]\“SettingData”\“AE” *1

*1 “AE1,” “AE2,” “AE3,” or “AE4” when one or more AE-50/EW-50 controllers are connected

<Example>

Root folder of the USB memory
└── 12345-123 (AE-200 serial No.)
└── SettingData
├── AE — AE-200 settings file
├── AE1 — AE-50_1 settings file
├── AE2 — AE-50_2 settings file
├── AE3 — AE-50_3 settings file
└── AE4 — AE-50_4 settings file

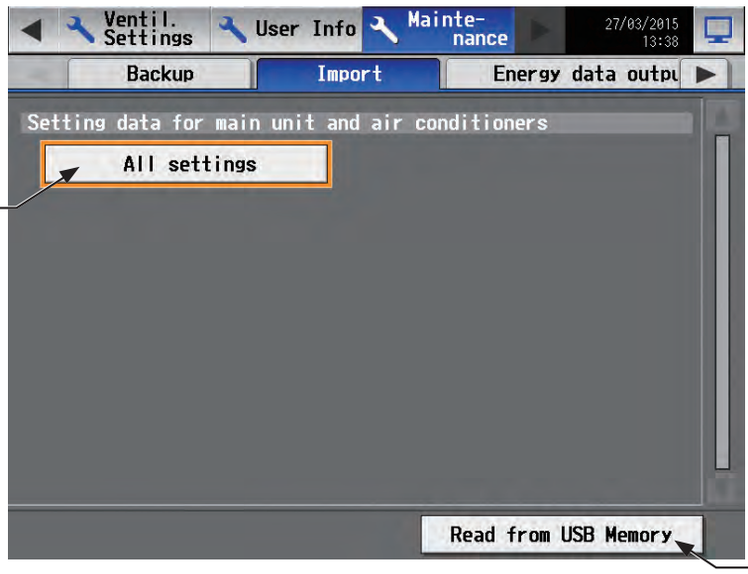
Note: It will take a few minutes to create the settings data.

Note: Do not remove the USB memory device while the data is being output.

5-2. Importing settings data

The exported data can be imported back to the AE-200/AE-50/EW-50 to restore the previous settings after the controller replacement.

Touch [Maintenance] in the menu bar, and then touch [Import].



All settings

Read from USB Memory
Touch to import the settings data.

Important

- The USB memory device may not be recognized if you insert and remove it within a short time. If this happens, reset the AE-200/AE-50/EW-50.

(1) Have the settings data to be imported ready in the root folder of the USB memory as shown below.

■ File location, folder name, and file name

[Root folder of the USB memory]\"SetupData"_[IP address]\"AE" *1

*1 "AE1," "AE2," "AE3," or "AE4" when one or more AE-50/EW-50 controllers are connected

<Example (When AE-200 LAN1 IP address is [192.168.1.1]>

Root folder of the USB memory
└── SetupData_192_168_1_1 *2
  ├── AE — AE-200 settings file
  ├── AE1 — AE-50_1 settings file
  ├── AE2 — AE-50_2 settings file
  ├── AE3 — AE-50_3 settings file
  └── AE4 — AE-50_4 settings file

*2 The folder name will not be [SetupData_192_168_001_001].

Note: Only the data that have been backed up from the AE-200 can be imported to the AE-200. The data that have been backed up from the AE-50 must be imported to the AE-50.

Note: Do not change the file name from that of when backup was performed. If the folder name or file name is different from the given name, no data can be read.

(2) Remove the controller cover, and insert a USB memory device to the USB port.

(3) Touch [All settings], then touch [Read from USB Memory].

Note: It will take a few minutes to import the settings data.

Note: Do not remove the USB memory device while the data is being imported.

Note: If the data is not read, check the folder name and the file name.

Note: If the data is not read, check if the USB memory device is inserted correctly.

5-3. CSV output

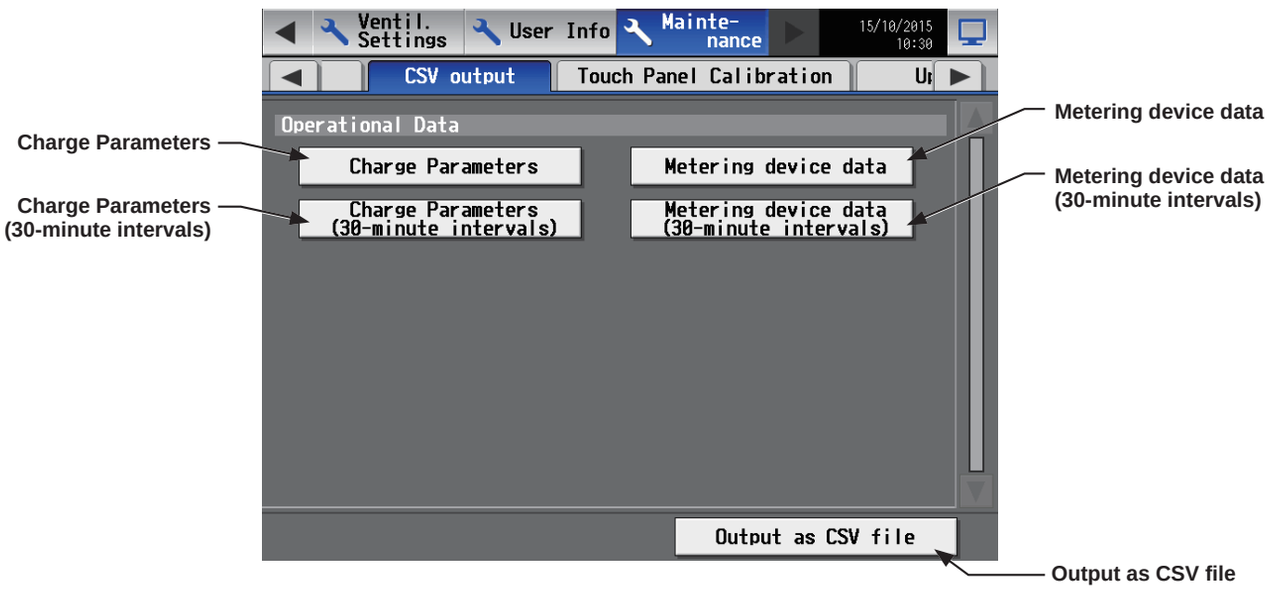
The operation data, such as charge parameters and metering device data, can be output in a CSV format.

Touch [Maintenance] in the menu bar, and then touch [CSV output].

Note: A separate license may be required to use the CSV output function. Only valid buttons can be selected on the screen.

Note: Refer to section 4-1-1 “Energy data output” for details about the USB memory device that can be used.

Note: File names, as well as date formats, delimiter characters, and temperature units (°C, °F) within the files output as CSV will use formats set as initial settings. Refer to the Instruction Book (Initial Settings) for settings methods.



Important

- The USB memory device may not be recognized if you insert and remove it within a short time. If this happens, reset the AE-200/AE-50.

(1) Remove the controller cover, and insert a USB memory device to the USB port.

(2) Touch [Charge Parameters] or [Metering device data] to output, then touch [Output as CSV file].

Note: It may take a few minutes to complete the download, depending on the data volume.

Note: Do not remove the USB memory device while the data is being output. A message will appear when the data output is complete.

Note: When one or more AE-50/EW-50 controllers are connected, the AE-50/EW-50 data will also be output from the AE-200.

<table>
<tr><th>Item</th><th>Description</th></tr>
<tr><td>Charge Parameters</td><td>
■ File name

(without connection to an AE-50/EW-50 controller)
“ChargeParameter”_[yyyy]-[mm]-[dd]“A”[Indoor unit address]-[Time period (1–5)].csv
Example: ChargeParameter_2015-03-01A01-1.csv

(with connection to one or more AE-50/EW-50 controllers)
“ChargeParameter”_[yyyy]-[mm]-[dd]“A”[AE-50/EW-50 No. (1–4)*1]-[Indoor unit address]-[Time period (1–5)].csv
Example: ChargeParameter_2015-03-01A1-01-1.csv

*1 AE-50/EW-50 No. will not be shown for the AE-200 data.

Note: Time periods 1 through 5 can only be set from TG-2000A or Initial Setting Tool. When shipped from the factory, only Time period 1 is settable.

■ File output destination

(without connection to an AE-50/EW-50 controller)
[Root folder of the USB memory]\[Serial No.]\“OperationalData”\“ChargeParameters”\“AE”\[Date]

(with connection to one or more AE-50/EW-50 controllers)
[Root folder of the USB memory]\[Serial No.]\“OperationalData”\“ChargeParameters”\“AE”[AE-50/EW-50 No. (1–4)*1]\[Date]

*1 AE-50/EW-50 No. will not be shown for the AE-200 data.

Note: The AE-50/EW-50 data can be output from the AE-200.
Note: Only one AE-50’s data can be output from the AE-50.

■ File format

<table>
<tr><th>Row</th><th>Item</th><th>Format</th></tr>
<tr><td>1st</td><td>File Type</td><td>201</td></tr>
<tr><td>2nd</td><td>Data range</td><td>Start date + “–” + End date</td></tr>
<tr><td>3rd</td><td>Indoor unit address</td><td>“Address” + M-NET address</td></tr>
<tr><td>4th</td><td>Item</td><td>“Date,SaveValue,ThermoTime,FanTime,SubHeaterTime”</td></tr>
<tr><td>5th–66th</td><td>Data *1*2*3</td><td>Date, Capacity-save value (min), Thermo-ON time (min), Fan operation time (min), Sub-heater-ON time (min) *4</td></tr>
</table>
*1 Each value is the cumulative value between the start date and the end date.
*2 The value will not appear if the data does not exist.
*3 Each file contains the data of up to 62 days.
*4 Even if the indoor unit is not equipped with a sub heater, “Sub-heater-ON time” is counted when the sub-heater-ON conditions are met, not when the sub heater actually turns on.

■ File sample

201
12/19/2014-1/10/2015
Address 31
Date,SaveValue,ThermoTime,FanTime,SubHeaterTime
12/19/2014,1258,0,465,0
12/20/2014,1260,0,468,0
12/21/2014,1262,0,472,0
12/22/2014,1264,0,477,0
12/23/2014,1266,0,490,0
:
01/10/2015,2058,0,1013,0
</td></tr>
</table>

<table>
<tr><th>Item</th><th>Description</th></tr>
<tr><td>Charge Parameters (30-minute intervals)</td><td>

■ File name

(without connection to an AE-50/EW-50 controller)
“ChargeParameter30m”_[yyyy]-[mm]-[dd]“A”[Indoor unit address]-[Time period (1–5)].csv
Example: ChargeParameter30m_2015-03-01A01-1.csv

(with connection to one or more AE-50/EW-50 controllers)
“ChargeParameter30m”_[yyyy]-[mm]-[dd]“A”[AE-50/EW-50 No. (1–4)*1]-[Indoor unit address]-[Time period (1–5)].csv
Example: ChargeParameter30m_2015-03-01A1-01-1.csv

*1 AE-50/EW-50 No. will not be shown for the AE-200 data.

Note: Time periods 1 through 5 can only be set from TG-2000A or Initial Setting Tool. When shipped from the factory, only Time period 1 is settable.

■ File output destination

(without connection to an AE-50/EW-50 controller)
[Root folder of the USB memory]\[Serial No.]\“OperationalData”\“ChargeParameters30m”\“AE”\[Date]

(with connection to one or more AE-50/EW-50 controllers)
[Root folder of the USB memory]\[Serial No.]\“OperationalData”\“ChargeParameters30m”\
“AE”[AE-50/EW-50 No. (1–4)*1]\[Date]

*1 AE-50/EW-50 No. will not be shown for the AE-200 data.

Note: The AE-50/EW-50 data can be output from the AE-200.
Note: Only one AE-50’s data can be output from the AE-50.

■ File format

Row	Item	Format
1st	File Type	621
2nd	Data range	Start date + Start time + “–” + End date + End time
3rd	Indoor unit address	“Address” + M-NET address
4th	Item	“Date,Time,SaveValue,ThermoTime,FanTime,SubHeaterTime”
5th–66th	Data *1*2*3	Date, Time, Capacity-save value (min), Thermo-ON time (min), Fan operation time (min), Sub-heater-ON time (min) *4

*1 Each value is the cumulative value between the start date/time and the end date/time.
*2 The value will not appear if the data does not exist.
*3 Each file contains the data of up to 62 days.
*4 Even if the indoor unit is not equipped with a sub heater, “Sub-heater-ON time” is counted when the sub-heater-ON conditions are met, not when the sub heater actually turns on.

■ File sample

```
621
03/10/2015 0:00-03/12/2015 23:30
Address 01
Date,Time,SaveValue,TermoTime,FanTime,SubHeaterTime
2015/03/10,0:00,57,102,150,0
2015/03/10,0:30,76,122,178,0
2015/03/10,1:00,100,122,178,0
:
2015/03/12,23:30,543,743,1340,0
```

</td></tr>
</table>

Item	Description
Metering device data	■ File name (PI controller (PAC-YG60MCA) - without connection to an AE-50/EW-50 controller) “ChargeParameter”_[yyyy]-[mm]-[dd]“MCPA”[PI controller address]-[Time period (1–5)].csv Example: ChargeParameter_2015-03-01MCPA50-1.csv (Built-in Pulse Input (PI) - without connection to an AE-50/EW-50 controller) “ChargeParameter”_[yyyy]-[mm]-[dd]“MCP”-[Time period (1–5)].csv Example: ChargeParameter_2015-03-01MCP-1.csv (PI controller (PAC-YG60MCA) - with connection to one or more AE-50/EW-50 controllers) “ChargeParameter”_[yyyy]-[mm]-[dd]“MCPA”[AE-50/EW-50 No. (1–4)*1]-[PI controller address]-[Time period (1–5)].csv Example: ChargeParameter_2015-03-01MCPA1-50-1.csv (Built-in Pulse Input (PI) - with connection to one or more AE-50/EW-50 controllers) “ChargeParameter”_[yyyy]-[mm]-[dd]“MCP”[AE-50/EW-50 No. (1–4)*1]-[Time period (1–5)].csv Example: ChargeParameter_2015-03-01MCP1-1.csv *1 AE-50/EW-50 No. will not be shown for the AE-200 data. Note: Time periods 1 through 5 can only be set from TG-2000A or Initial Setting Tool. When shipped from the factory, only Time period 1 is settable. ■ File output destination (without connection to an AE-50/EW-50 controller) [Root folder of the USB memory]\[Serial No.]\“OperationalData”\“ChargeParameters”\“AE”\[Date] (with connection to one or more AE-50/EW-50 controllers) [Root folder of the USB memory]\[Serial No.]\“OperationalData”\“ChargeParameters”\“AE”[AE-50/EW-50 No. (1–4)*1]\[Date] *1 AE-50/EW-50 No. will not be shown for the AE-200 data. Note: The AE-50/EW-50 data can be output from the AE-200. Note: Only one AE-50’s data can be output from the AE-50.

<table>
<tr><th>Item</th><th>Description</th></tr>
<tr><td>Metering device data</td><td>

■ File format

<table>
<tr><th>Row</th><th>Item</th><th>Format</th></tr>
<tr><td>1st</td><td>File Type</td><td>202</td></tr>
<tr><td>2nd</td><td>Data range</td><td>Start date + “–” + End date</td></tr>
<tr><td>3rd</td><td>MCP</td><td><When a PI controller (PAC-YG60MCA) is used>
“MCP” + M-NET address + “–” + Time period (1–5)

<When a built-in Pulse Input (PI) is used>
“MCP” + “–” + Time period (1–5)</td></tr>
<tr><td>4th</td><td>Item</td><td>“No.,Date,Count value(Ch1),Count value(Ch2),Count value(Ch3),Count value(Ch4)”</td></tr>
<tr><td>5th–66th</td><td>Data *1*2*3*4</td><td><When a PI controller (PAC-YG60MCA) is used>
MCP address + Time period, Date, MCP 1, MCP 2, MCP 3, MCP 4

<When a built-in Pulse Input (PI) is used>
Time period, Date, MCP 1, MCP 2, MCP 3, MCP 4</td></tr>
</table>

*1 Each value is the cumulative value between the start date and the end date.
*2 Each value is between 0.00 and 999999.99. If the value exceeds the maximum value, it will wrap around to zero.
*3 The value will not appear if the data does not exist.
*4 Each file contains the data of up to 62 days.

■ File sample

202
9/1/2015-11/1/2015
MCP 1
No.,Date,Count value(Ch1),Count value(Ch2),Count value(Ch3),Count value(Ch4)
1,2015/9/1,190887.43,872411.43,227424.88,55515.50
1,2015/9/2,190899.16,872420.12,227428.63,55526.70
1,2015/9/3,190905.22,872442.23,227435.74,55537.90
1,2015/9/4,190910.38,878449.77,227448.19,55549.84
:
1,2015/11/1,200014.38,87950.36,227925.19,60111.63

</td></tr>
</table>

Item	Description
Metering device data (30-minute intervals)	■ File name (PI controller (PAC-YG60MCA) - without connection to an AE-50/EW-50 controller) “ChargeParameter30m”_[yyyy]-[mm]-[dd]“MCPA”[PI controller address]-[Time period (1–5)].csv Example: ChargeParameter30m_2015-03-01MCPA50-1.csv (Built-in Pulse Input (PI) - without connection to an AE-50/EW-50 controller) “ChargeParameter30m”_[yyyy]-[mm]-[dd]“MCP”-[Time period (1–5)].csv Example: ChargeParameter30m_2015-03-01MCP-1.csv (PI controller (PAC-YG60MCA) - with connection to one or more AE-50/EW-50 controllers) “ChargeParameter30m”_[yyyy]-[mm]-[dd]“MCPA”[AE-50/EW-50 No. (1–4)*1]-[PI controller address]-[Time period (1–5)].csv Example: ChargeParameter30m_2015-03-01MCPA1-50-1.csv (Built-in Pulse Input (PI) - with connection to one or more AE-50/EW-50 controllers) “ChargeParameter30m”_[yyyy]-[mm]-[dd]“MCP”[AE-50/EW-50 No. (1–4)*1]-[Time period (1–5)].csv Example: ChargeParameter30m_2015-03-01MCP1-1.csv *1 AE-50/EW-50 No. will not be shown for the AE-200 data. Note: Time periods 1 through 5 can only be set from TG-2000A or Initial Setting Tool. When shipped from the factory, only Time period 1 is settable. ■ File output destination (without connection to an AE-50/EW-50 controller) [Root folder of the USB memory]\[Serial No.]\“OperationalData”\“ChargeParameters30m”\“AE”\[Date] (with connection to one or more AE-50/EW-50 controllers) [Root folder of the USB memory]\[Serial No.]\“OperationalData”\“ChargeParameters30m”\“AE”[AE-50/EW-50 No. (1–4)*1]\[Date] *1 AE-50/EW-50 No. will not be shown for the AE-200 data. Note: The AE-50/EW-50 data can be output from the AE-200. Note: Only one AE-50’s data can be output from the AE-50.

<table>
<tr><th>Item</th><th>Description</th></tr>
<tr><td>Metering device data (30-minute intervals)</td><td>

■ File format

<table>
<tr><th>Row</th><th>Item</th><th>Format</th></tr>
<tr><td>1st</td><td>File Type</td><td>622</td></tr>
<tr><td>2nd</td><td>Data range</td><td>Start date + “–” + End date</td></tr>
<tr><td>3rd</td><td>MCP</td><td>(PI controller (PAC-YG60MCA) - without connection to an AE-50/EW-50 controller)
“MCP” + PI controller address + “–” + Time period (1–5)

(Built-in Pulse Input (PI) - without connection to an AE-50/EW-50 controller)
“MCP” + “–” + Time period (1–5)

(PI controller (PAC-YG60MCA) - with connection to one or more AE-50/EW-50 controllers)
“MCP” + AE-50/EW-50 No.* + “–” + PI controller address + “–” + Time period (1–5)

(Built-in Pulse Input (PI) - with connection to one or more AE-50/EW-50 controllers)
“MCP” + AE-50/EW-50 No.* + “–” + Time period (1–5)

* AE-50/EW-50 No. will not be shown for the AE-200 data.</td></tr>
<tr><td>4th</td><td>Item</td><td>“No.,Date,Count value(Ch1),Count value(Ch2),Count value(Ch3),Count value(Ch4)”</td></tr>
<tr><td>5th–</td><td>Data *2*3*4</td><td>(without connection to an AE-50/EW-50 controller)
MCP address *1 + Time period, Date, Time, MCP 1, MCP 2, MCP 3, MCP 4

(with connection to one or more AE-50/EW-50 controllers)
AE-50/EW-50 No. + MCP address *1 + Time period, Date, Time, MCP 1, MCP 2, MCP 3, MCP 4</td></tr>
</table>

*1 The address will not appear for the measurement data when a built-in Pulse Input (PI) is used.
*2 Each value is the cumulative value between the start date and the end date.
*3 The value will not appear if the data does not exist.
*4 Each file contains the data of up to 62 days.

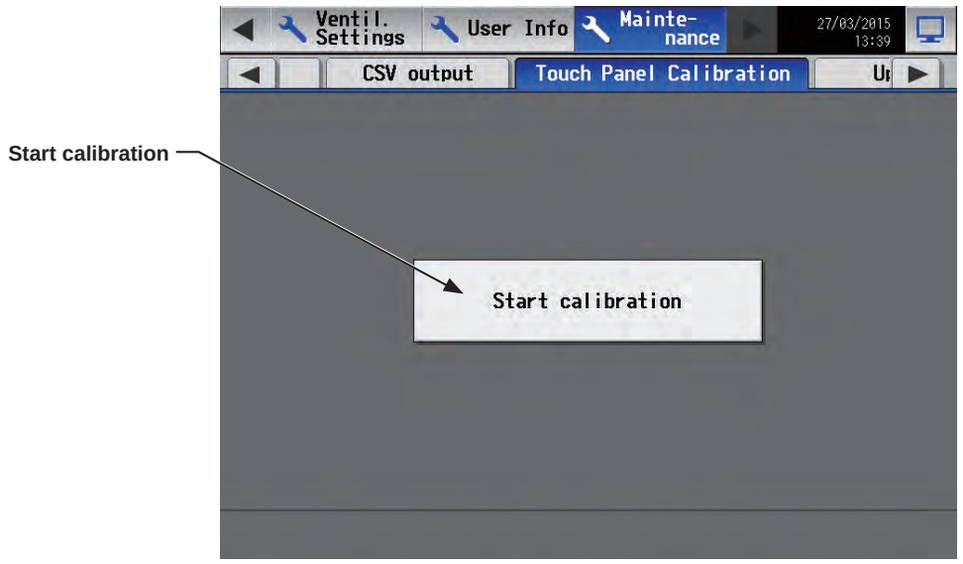
■ File sample

```
622
9/1/2015-11/1/2015
MCP 1
No.,Date,Count value(Ch1),Count value(Ch2),Count value(Ch3),Count value(Ch4)
1,2015/9/1,0:00,190887.43,872411.43,227424.88,55515.50
1,2015/9/2,0:30,190899.16,872420.12,227428.63,55526.70
1,2015/9/3,1:00,190905.22,872442.23,227435.74,55537.90
1,2015/9/4,1:30,190910.38,878449.77,227448.19,55549.84
   :
1,2015/11/1,23,30,200014.38,87950.36,227925.19,60111.63
```

</td></tr>
</table>

5-4. Touch Panel Calibration

Touch [Maintenance] in the menu bar, and then touch [Touch Panel Calibration].



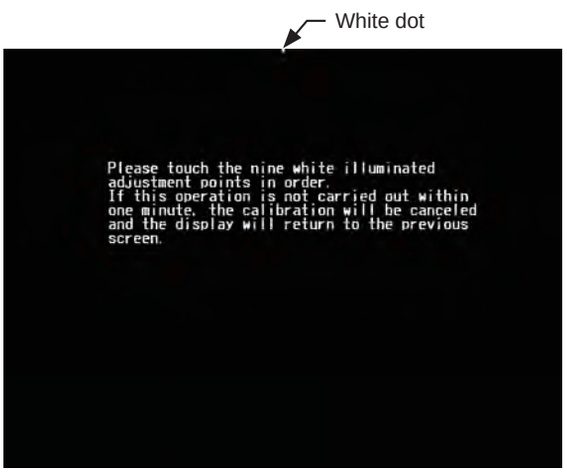
(1) Touch [Start calibration].

(2) Touch the white squares in the order they appear, starting from the top left corner. The white squares will change to gray when touched.
After all nine squares are touched, the screen will return to the previous screen.

Note: If each square is not touched within one minute after the last square is touched, calibration will be cancelled and the screen will return to the previous screen.

Note: To calibrate the screen properly, use a pointy, but not sharp object to touch the white dots. Sharp objects may scratch the touch panel.

Note: It is recommended to periodically calibrate the touch panel. (If the touch panel responds incorrectly to the touches, some buttons may not be able to be touched.)



5-5. Software information

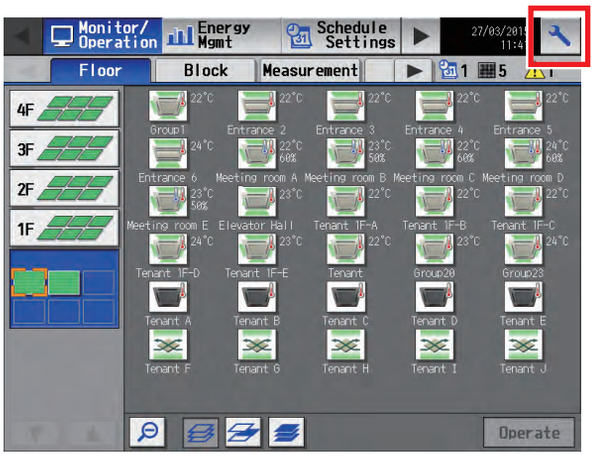
Detailed information about the open source software of the AE-200/AE-50/EW-50 can be checked by accessing the following address:

https://[IP address of each AE-200, AE-50, or EW-50]/license/

* Accessible only if logged in as a maintenance user.

5-6. Cleaning the touch panel

(1) Touch [ ] to display the login window.



(2) On the Login window, touch the “Touch-panel-cleaning” button.

(3) Clean the touch panel with a soft dry cloth, a well-wrung cloth that has been soaked in water with mild detergent, or a cloth dampened with ethanol.

Note: Do not use acidic, alkaline, or organic solvents.

(4) After cleaning, touch the squares with numbers from 1 to 4. The screen will return to the previous screen.

Note: The squares will change to gray when touched.

6. Specifications

Item			Specifications
Power supply	Rated input		100–240 VAC ± 10%; 0.3–0.2 A 50/60 Hz Single-phase
M-NET power feeding coefficient			No specifications * Only an MN converter can be connected.
Ambient conditions	Temperature	Operating temperature range	0°C – +40°C (+32°F – +104°F)
		Storage temperature range	-20°C – +60°C (-4°F – +140°F)
	Humidity		30%–90% RH (Non-condensing)
Dimensions (W × H × D)			284 × 200 × 65 mm (11-5/32 × 7-55/64 × 2-17/32 in) * When installed, AE-200/AE-50 will protrude 25.0 mm (31/32 in) from the wall or the metal control box.
Weight			2.3 kg (5-5/64 lbs)

Appendix: Added functions

The table below summarizes the newly added functions.

Version	Menu item		Added function	Reference
Ver. 7.2	Energy Management	Energy Use Status	Energy management data of the units connected to different AE-200/AE-50/EW-50 controllers can be compared.	Section 3-2-1 “Energy Use Status”
Ver. 7.3	Monitor/Operation	Blocks	Units can be monitored and operated in energy management block units.	Section 3-1-3 “Checking the operation conditions”
		–	Four fan speeds can be set for LOSSNAY units.	Section 3-1-6 “Operation setting items”
	Energy Management	Energy Use Status	Data can be displayed in energy management block units.	Section 3-2-1 “Energy Use Status”
		Ranking	• Can display covering AE-200/AE-50/EW-50. • This can update with the latest information.	Section 3-2-2 “Ranking”
		Peak Cut	The period that can be displayed by the Peak Cut control level is expanded from the previous 3 days to the previous 24 months.	Section 3-2-4 “Peak Cut”
	Schedule	–	• Temperatures can be set in 0.5°C increments. • Settings can be made in energy management block units.	Section 3-3 “Schedule”

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.

This product is designed and intended for use in the residential, commercial and light-industrial environment.

The product at hand is based on the following EU regulations:

- Low Voltage Directive 2006/95/EC
- Electromagnetic Compatibility Directive 2004/108/EC
- Restriction of Hazardous Substances 2011/65/EU

Please be sure to put the contact address/telephone number on this manual before handing it to the customer.

MITSUBISHI ELECTRIC CORPORATION

HEAD OFFICE: TOKYO BLDG., 2-7-3, MARUNOUCHI, CHIYODA-KU, TOKYO 100-8310, JAPAN

WT07992X02