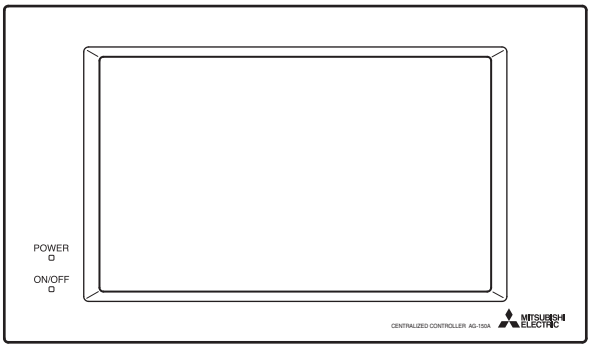
MITSUBISHI ELECTRIC

CE

Air-conditioner Control System

Centralized Controller
AG-150A
AG-150A-A

Instruction Book



1. Safety precautions 1
2. Introduction 2
3. Product features 3
4. Component names and display screen names 6
5. Initial Start up 13
   5-1 Initial start up for a system without connection to an Expansion controller (PAC-YG50ECA) 13
   5-2 Initial start up for a system with connection to an Expansion controller (PAC-YG50ECA) 15
   5-3 Connecting multiple AG-150A to a system with connection to Expansion controllers 18
6. User operation 23
   6-1 Operation condition monitoring 24
   6-2 Operation setting/Prohibition setting from local remote controller 27
   6-3 Setting Schedules 32
   6-4 Checking the List of Malfunctioning Units 43
   6-5 Checking the List of Units with a Triggered Filter Sign 45
   6-6 Checking the Malfunction Log 46
7. Initial Settings 47
   7-1 Bringing up the settings screen 47
   7-2 Locking the screen 50
   7-3 Setting the Current Date and Time 51
   7-4 Register the license 52
   7-5 Setting the Basic Information 53
   7-6 Network Setting 55
   7-7 Group Setting 59
   7-8 Interlocked Setting 63
   7-9 Block Setting 65
   7-10 Floor Layout Setting 67
   7-11 Checking the refrigerant systems 72
   7-12 Advanced settings 73
8. Function 1 74
   8-1 Outside temperature interlock function 74
   8-2 Night setback function 77
9. User Setting 80
   9-1 Setting the Maintenance User 80
   9-2 Setting the Building Manager 80
10. Maintenance screen 82
   10-1 Copying the data to a USB memory 82
   10-2 Reading setting data from USB memory 86
   10-3 Adjusting the touch panel 87
11. Cleaning the touch panel 88
12. External input/output function 89
   12-1 External input function 89
   12-2 External output function 90
13. LAN connection function 90
14. Specifications 91
15. Error code list 92
   15-1 M-NET error code 92
   15-2 EC line error code 96

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

WT05369X12
Ver. 2.70

1. Safety precautions

Before using the controller, read the Safety Precautions section carefully to ensure proper operation.
These safety precautions must be observed by anyone who operates the centralized controller.
Keep the Instruction Book and Installation Manual for future reference. Make sure both manuals are passed on to any future air condition system users.

⚠ **WARNING**	This symbol indicates that failure to follow the instructions exactly as stated poses the risk of serious injury of death.
⚠ **CAUTION**	This symbol indicates that failure to follow the instructions exactly as stated poses the risk of injury or damage to the controller.

⚠ WARNING

The unit must be installed by a dealer or technical representative.
Improper installation by an unqualified person may result in electric shock and fire.

Install in a location that is strong enough to withstand the weight of the unit.
A weak installation area may cause the unit to fall down, resulting in a personal injury.

Only use specified cables. Securely connect each cable so that the weight of the cable is not applied to the connectors.
Loose or improper connections may result in heat generation or fire.

If any abnormality is noticed (e.g., burning smell), stop the operation, turn off the power supply, and contact your dealer or technical representative immediately.
Continuing the operation may result in damage to the controller, electric shock, or fire.

Ask your dealer or an authorized technician to move or reinstall the controller.
Improper installation may result in an electric shock or fire.

Controllers must be disposed of properly.
Contact your dealer for proper disposal procedures.

Do not attempt to modify or repair the controller.
Modification or improper repair may result in electric shock or fire. Consult your dealer when repairs are necessary.

Stop the operation immediately and notify your dealer if an error code is displayed and the controller does not operate, or when any abnormality is noticed.
Continuing the operation may result in damage to the controller or fire.

⚠ CAUTION

Do not install the controller where there is a risk of leaking flammable gas.
If the leaked gas accumulates around the controller, it may ignite and cause an explosion.

Do not wash the unit with water.
Doing so may cause an electric shock or malfunction.

Do not use the controller for specialized applications.
This product is designed exclusively for use with the MITSUBISHI ELECTRIC building air conditioning control system. The use of this product with other air-conditioning management systems or for other purposes may result in malfunctions.

Do not spray insect sprays or sprays with flammable propellants to the controller.
To avoid the risk of fire or explosion, do not place flammable sprays near the controller or spray them directly on the controller.

To avoid the risk of electric shock or damage to the controller, do not touch the touch panel or USB storage device connector with wet hands.

Do not use the controller in an environment high in oil, steam, or sulfuric gas.
These substances may have adverse effects on the performance of the controller or damage its parts.

To avoid the risk of electric shock or damage to the controller, do not press the touch panel with sharp objects.

Operate the controller within the temperature range specification.
The use of controller outside of its specification may result in serious damage to the controller. Be sure to check the temperature range specification in the Instruction Book.

Use a security device such as a VPN router when connecting the AG-150A or AG-150A-A to the Internet to prevent unauthorized access.
If no security devices are installed, the operation settings may be changed by an unauthorized person without the knowledge of the user.

To reduce the risk of malfunction, do not apply impact or vibration after installation.

2. Introduction

The terms “Group,” “Block,” and “EC” 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 AG-150A and AG-150A-A can control. The maximum number of units and controllers that each group can contain is 16.
Block: Block is a group of groups. Energy-save and peak-cut settings are made for each block.
EC: EC is short for Expansion Controller (PAC-YG50ECA).

Hereinafter, AG-150A and AG-150A-A, unless otherwise specified, will be called "AG-150A".

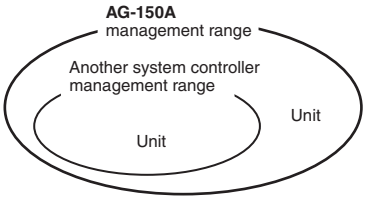
3. Product features

The controller described in this manual is a centralized controller that can be operated over the Web.
Any connected air conditioning systems can be operated or monitored directly from the controller or over the Web using browser software.
Refer to the Web browser operation manual (separate volume) for how to use this functions.

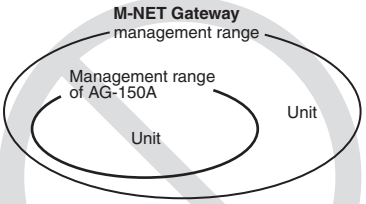
Function			Description
Number of controlled unit		Indoor unit, Ventilation unit (LOSSNAY and OA handling unit), DIDO controller, Air To Water (PWFY)	Up to 150 units are connectable (including the interlocked units) *2 By connecting three PAC-YG50ECA Expansion controllers (sold separately), a maximum of 150 units of equipments can be controlled. Each DIDO controller (PAC-YG66DCA) contact counts as one unit.*4
		Number of units in one group (indoor, independent OA processing unit, or LOSSNAY)	1-16 units (Indoor unit, independent OA processing unit, ventilation system (LOSSNAY), and DIDO controller cannot be registered to the same group.)
		Number of remote controllers in one group	1-2
		Number of system controllers in one group	0-4 (including the number of remote controller in one group)
		Number of interlocked LOSSNAY units	• Number of LOSSNAY units that can be interlocked with an indoor unit: 1 • Number of indoor units that can be interlocked with a LOSSNAY unit: 16
User Operations Function	Operation *1	ON/OFF	The ON/OFF operation can be performed as a collective, per group, or per block.
		Operation mode	The switch operation for the operation mode setting can be performed as a collective, per group, per block, per floor, or per building. (Available modes depend on the model of indoor units.) [Selectable operation mode for the indoor unit] COOL/DRY/FAN/AUTO/HEAT [Selectable operation mode for the independent ventilation] HEAT RECOVERY/BY-PASS/AUTO [Selectable operation mode for Air To Water (PWFY)] HEATING/HEATING ECO/HOT WATER/ANTI-FREEZE/COOLING
		Fan speed	Up to four fan speeds are available. Fan speed can be changed collectively, or for each group or block of indoor units. (The number of available fan speeds depends on the indoor model (2 speeds, 3 speeds, 4 speeds, and Auto). “Auto” is available only on the models that support that function.)
		Temperature setting	Temperature setting can be performed collectively, per group, or per block. [Setting temperature range for air conditioner] Cool (Dry) operation: 19 ~ 30°C / 67 ~ 87°F Heat operation: 17 ~ 28°C / 63 ~ 83°F Auto operation: 19 ~ 28°C / 67 ~ 83°F [Setting temperature range for Air To Water (PWFY)] [Booster unit]*3 Heating: 30 ~ 50°C/87 ~ 122°F Heating ECO: 30 ~ 45°C/87 ~ 113°F Hot Water: 30 ~ 70°C/87 ~ 158°F Anti-freeze: 10 ~ 45°C/50 ~ 113°F Cooling: Invalid [Water HEX unit]*3 Heating: 30 ~ 45°C/87 ~ 113°F Heating ECO: 30 ~ 45°C/87 ~ 113°F Hot Water: Invalid Anti-freeze: 10 ~ 45°C/50 ~ 113°F Cooling: 10 ~ 30°C/50 ~ 87°F
		Air direction and swing operation	Vertical air flow directions (5 directions), auto setting, and swing setting can be changed collectively, or for each group or block of indoor units. (Available air flow directions depend on the model. [5 air flow directions and AUTO] are available only on the models that support those settings.
		Operating/stopping interlocked LOSSNAY units	Interlocked LOSSNAY units (if any) can be operated (at High or Low) or stopped collectively or for each group or block of indoor units. (Ventilation mode cannot be selected for the interlocked LOSSNAY units.)
		Schedule	Group is the smallest unit to which a weekly schedule can be assigned. The same schedule can be applied collectively, or to each group, groups in a block, or groups on a floor. • Up to 24 events can be scheduled for each day. • “ON/OFF”, “Operation mode”, “Temperature Setting”, “Fan Speed Setting”, “Vane Setting”, and “Prohibition of operation from local remote controller” can be timer-controlled. If a license is registered • Two types of weekly schedule patterns (summer and winter) are available. • Five operation patterns (A-E) can be set for each year, up to 50 days can be allocated to each pattern. • When Optimized startup schedule is set, the operation starts so that the preset temperature is reached at the preset time.
		Prohibit local remote control	Operation of certain functions from the local remote controllers can be prohibited collectively or for each group or blocks of indoor units. (Applicable functions: ON/OFF, operation mode, temperature setting, filter sign, Water circuit sign (Air To Water (PWFY)))
		Filter sign reset	Filter sign can be reset for each group or block of indoor units.
		Water circuit sign reset (Air To Water (PWFY))	Water circuit sign (Air To Water (PWFY)) can be reset for each group or block of indoor units.
		Error reset	Resets the display of error.
		Error history reset	Resets the error history (unit error, communication error).
		External input	Connects to an external input/output device that stops the units in an emergency, run or stop the units, permit or prohibit the operation of units collectively. Requires an external input/output adapter (sold separately).

Function			Description
User Operations Function	Monitor *1	ON/OFF (system)	The ON/OFF indicator lamp (LED) indicates if one or more groups or all the groups in the system are stopped.
		Operation status of each group in the system	Operation status (ON/OFF), operation mode, fan speed, temperature setting, air flow direction, operation status (ON/OFF) of interlocked units is displayed.
		Filter sign	Indicates that the filters on the units in a given group is due for cleaning.
		Water circuit sign (Air To Water (PWFY))	Indicates that the circulating water circuit in a given group is due for replacement.
		Local operation prohibition	Displays the functions that the controller forbids or the functions that are forbidden by High-level equipment.
		Error	The address of the unit in error, error code, and the address of the unit that detected the error will appear.
		Error history monitor	Up to 384 errors can be stored in memory. (128 errors per AG-150A or Expansion controller (64 unit errors, 64 communication errors))
		External output	Outputs signals (run/stop, error) to an external device. Requires an external input/output adapter (sold separately).
Initial Settings	Operation *1	Date and time	This function is used to set the current date/time and daylight savings time.
		License	This function is used to register license.
		Unit Info.	This function is used to set unit name, ID number, connection or non-connection of Expansion controller, brightness of the LCD, sound volume, date format, time format, temperature unit, and display language, test run availability, screen lock and room temperature availability.
		Network	This function is used to set the IP address, subnet mask address, and gateway settings for the LAN and also to set the address, K-transmission converter address, local control prohibit settings, and external input settings for the M-NET; and the Expansion controller settings.
		Advanced	Allows the Master/Sub clock setting to be made.
		Groups	This function is used to register indoor units, LOSSNAY units , DIDO controller (PAC-YG66DCA), Air To Water (PWFY), remote controllers, and lower-level system controllers to a group.
		Blocks	This function is used to register a group to a block.
		Interlock	This function is used to interlock the operation of indoor units and LOSSNAY units.
		Floor Layout	This function is used to make the basic settings for the floor layout and display position of the groups.
	Monitor *1	Refrigerant system configuration confirmation	Allows the user to see which indoor units are connected to each outdoor unit.
	Operation *1	Ext Temp Interlock	Control level of outside temperature interlock function can be set for each group.
		Setback	Control time and upper/lower limit temperature can be set for setback function.
	User Info	Maintenance User	Allows the maintenance user name and password to be set.
		Building Manager	Allows the building manager name, password, function enable/disable settings to be made.
	Data utility	Copying data to a USB memory drive	The setting data (Initial setting and user info) and the operation data (charge parameter and electric energy data) can be copied to a USB memory drive.
		Reading data from a USB memory drive	The setting data (Initial setting and user info) can be read from a USB memory drive.
	Touch panel calibration		The touch position on the touch panel can be adjusted.
Other	Data back-up	Connection/Interlock Information	Group setting information and interlock setting information are retained, even if power is turned off.
		Error history	Retained, even if power is turned off.
		Schedule data	Schedule information of each group is retained, even if power is turned off.
		Current time	Current time is retained by the built-in capacitor for a week, even if power is turned off. (It takes approximately a day to fully charge the built-in capacitor. There is no need to replace the capacitor.)
		Saving the data on a USB drive	The initial setting data, user info, and operational data (charge parameters, power consumption) can be stored to a USB memory.
		Reading data from USB memory	Initial setting data can be read from USB memory.
	Device maintenance	Screen lock function	The screen can be locked to prevent access until a valid user name and password are entered.
		Touch panel cleaning	Touch panel is locked and can be cleaned.
		Time synchronization	Clocks on the controllers and units that are under the control of the main controller are synchronized once a day (applicable only to the ones that support this function).

*1: The item and range that can be operated or monitored depend on the function of the indoor unit.
*2: The maximum number of the controllable units varies, depending on the number of channels used by DIDO controllers.
*3: “Air To Water (PWFY)” on the AG-150A screen indicates Booster unit group and Water HEX unit group.
*4: Up to 6 general equipments can be connected to each DIDO controller (PAC-YG66DCA).
* Main and Sub system controllers
The controller described in this manual can only be used as a Main controller, not as a Sub controller.
• Main system controller (Main SC)
Main SC refers to a 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 controller.
Group settings and interlock settings can only be made from a Main controller.
• Sub system controller (Sub SC)
Sub controller refers to a system controller that is controlled (including the units it controls) by a Main system controller.



When AG-150A controls another system controller or when the system contains only AG-150A:
AG-150A is set as the main system controller.
*AG-150A performs the group setting in this configuration.

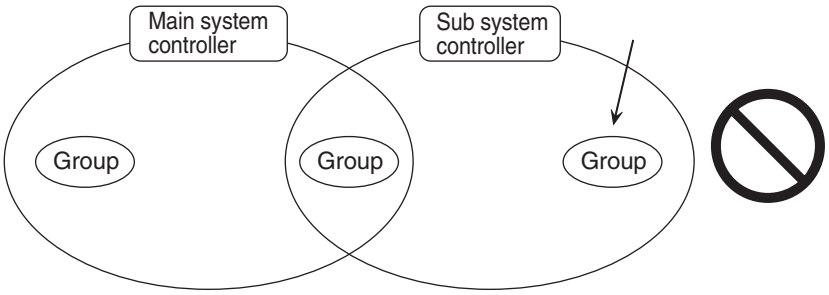


When AG-150A is controlled by another system controller:
(Example: MJ-300Gateway)
AG-150A is set as the sub system controller.
*The group setting is performed by main system controller.

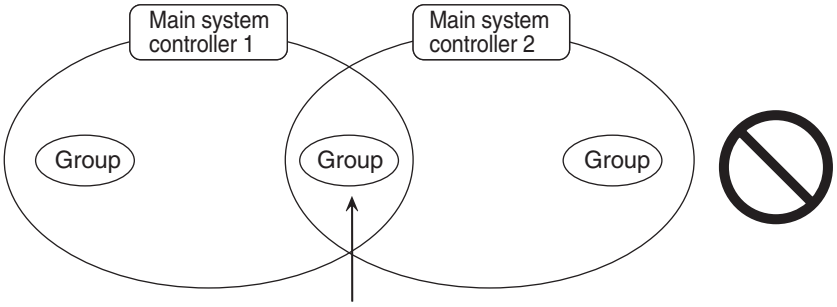
NOTE:

The following group setting cannot be performed.

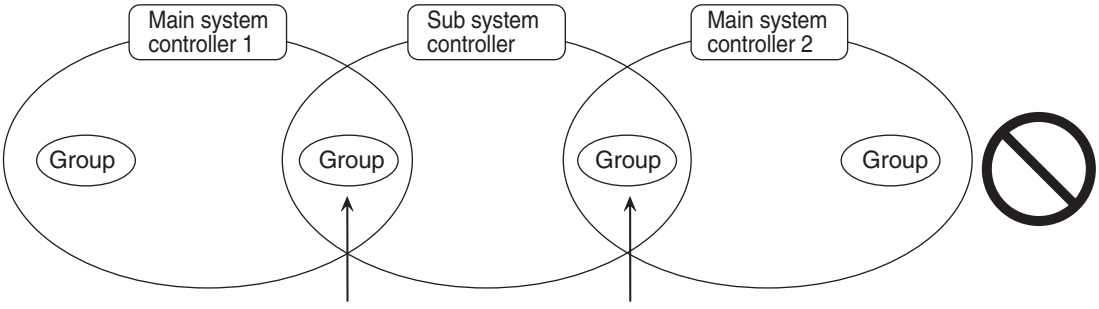
• Unit groups which are not under the management of the main controller and are managed by the sub system controller.



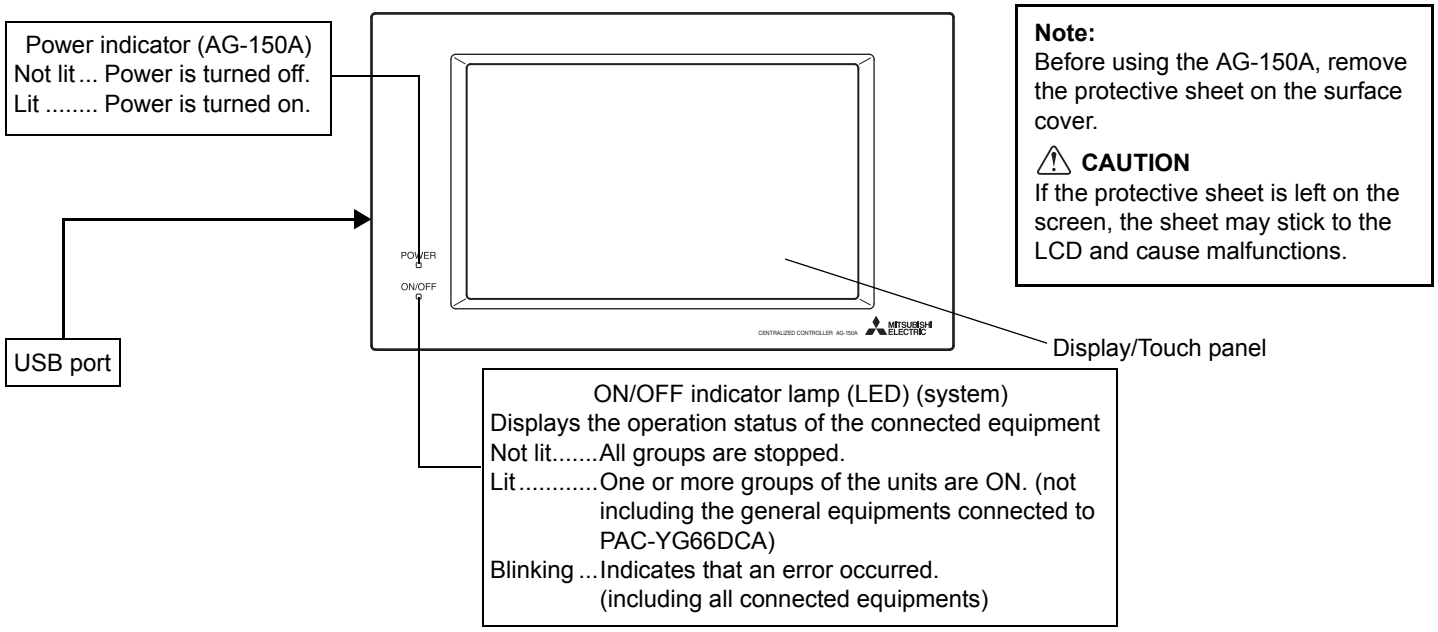
• A common group is managed by mode than two main controllers.



• A sub system controller which exceeds the management range of the main system controller of two or more.



4. Component names and display screen names

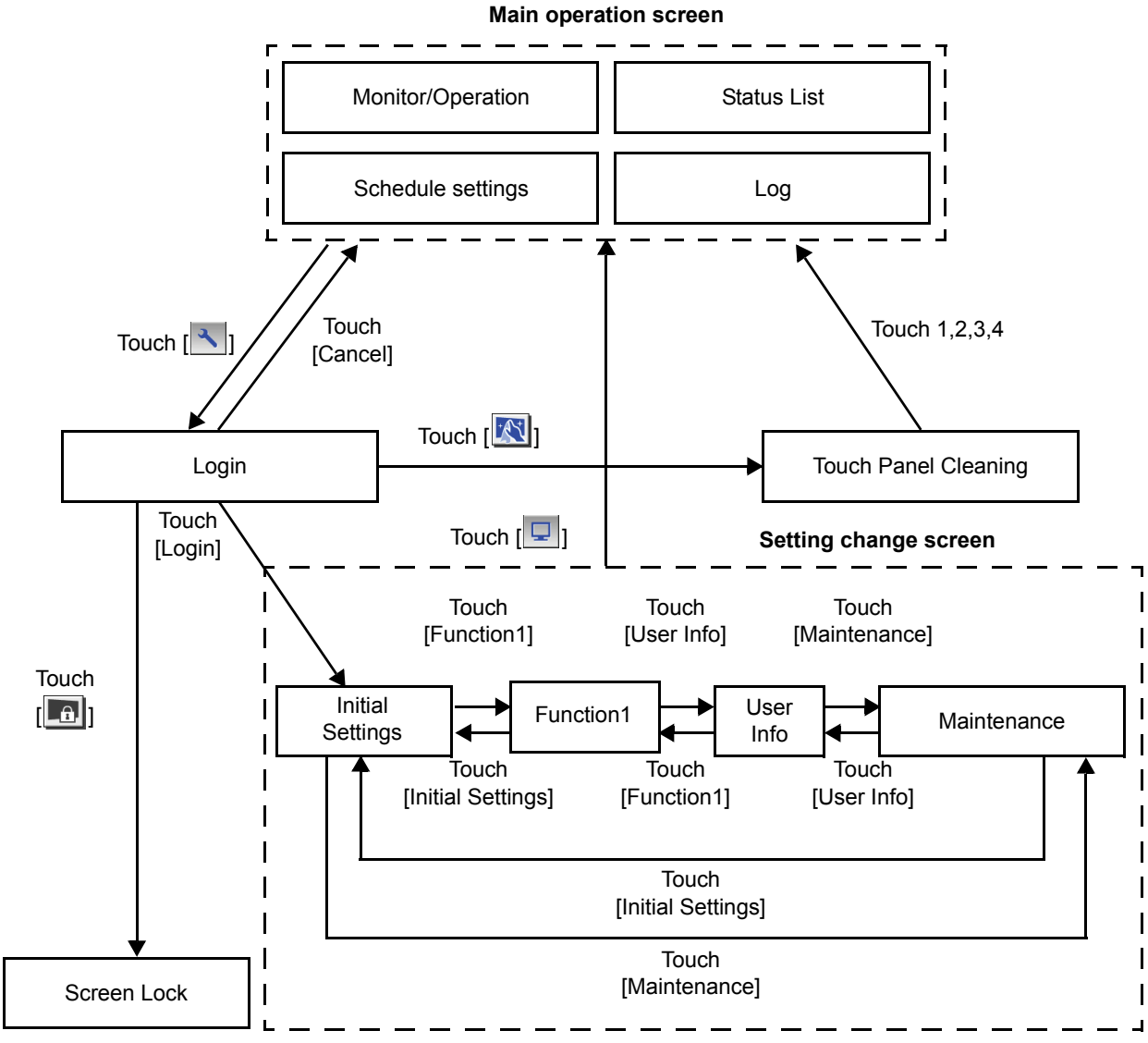


Note:
Before using the AG-150A, remove the protective sheet on the surface cover.

⚠ CAUTION
If the protective sheet is left on the screen, the sheet may stick to the LCD and cause malfunctions.

Screenshots of screen, their names, and the sequence they appear in are shown below.

- Screen that normally appears



* Normally, the screen remains black. The backlight turns on when the touch panel is touched and stays on while the user is operating the touch panel. The backlight goes off after 10 minutes of non-operation.

* When an error occurs, the backlight turns on regardless of whether the user is operating the touch panel.

Important

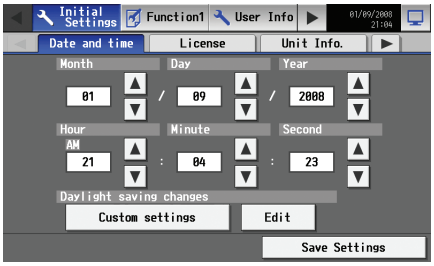
- If nothing appears on the display after touching the touch panel several times, the LCD backlight may be damaged. Since continued use may cause malfunctions, stop the operation, and contact the service center.
- Touching two points simultaneously will be interpreted as pressing a different point. To avoid malfunctions, only touch one point at a time.



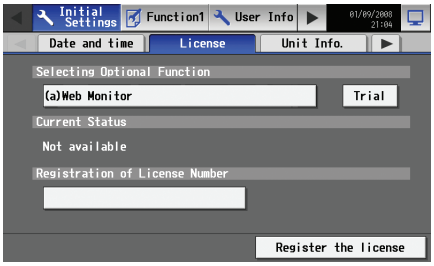
Login(P47)

Touch
[Login]

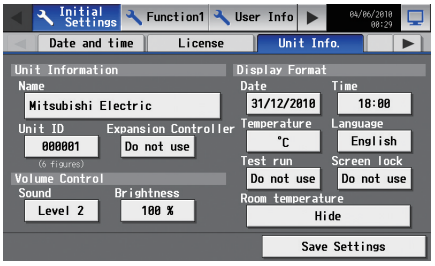
<Initial Settings>



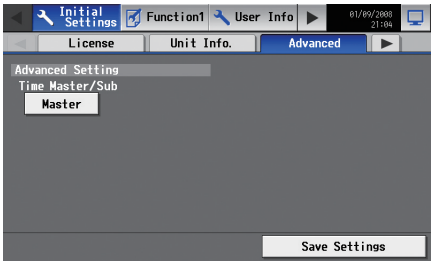
Date and time (P51)



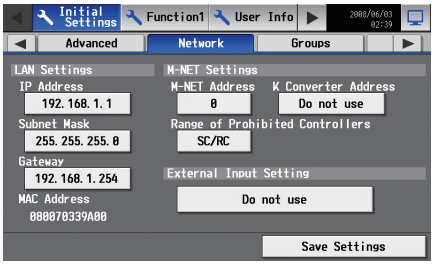
License (P52)



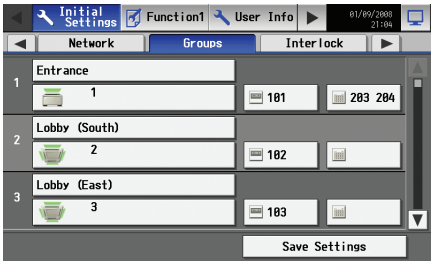
Unit Info. (P53)



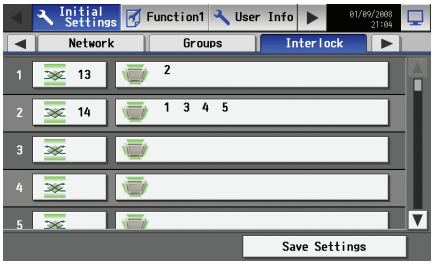
Advanced settings screen (P73)



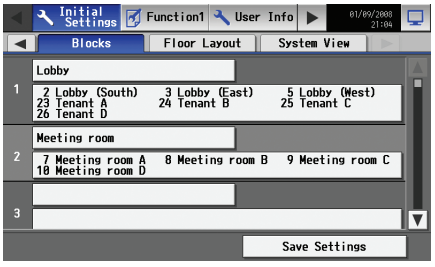
Network (P55)



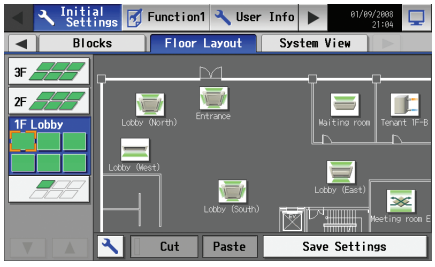
Groups (P59)



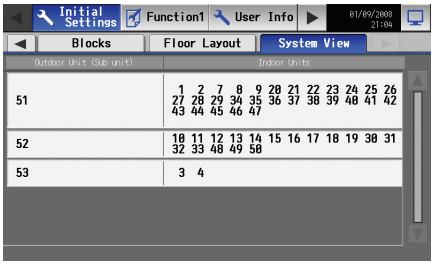
Interlock (P63)



Blocks (P65)



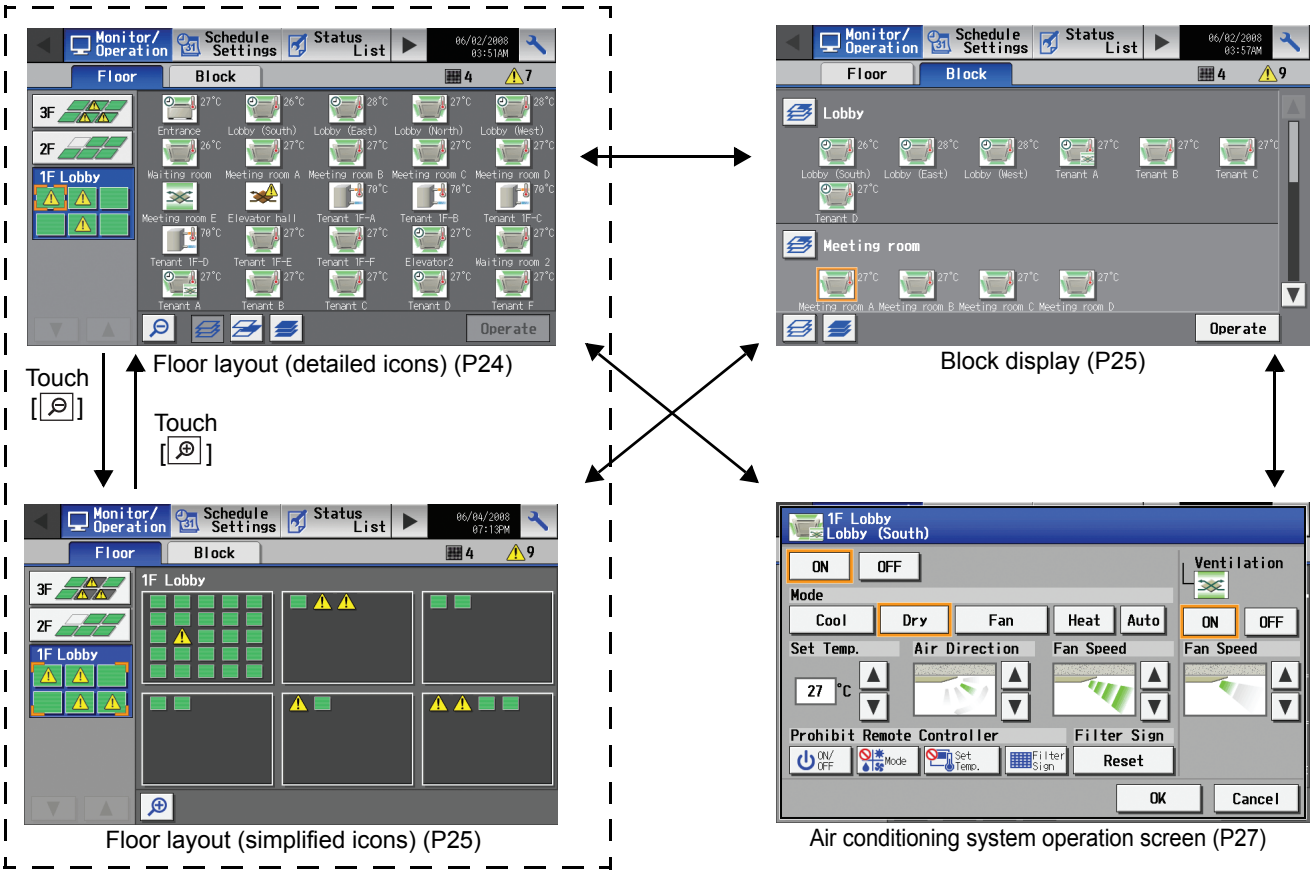
Floor Layout (P67)



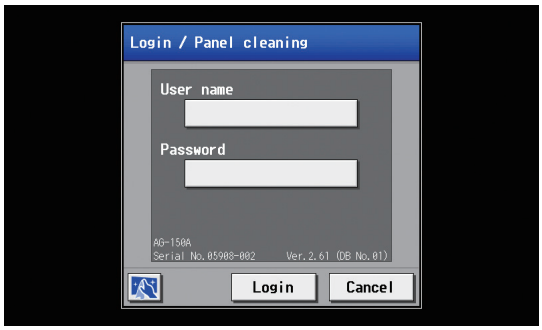
System View (P72)

The above nine initial setting screens can be accessed from the sub menu.

<Monitor/Operation>



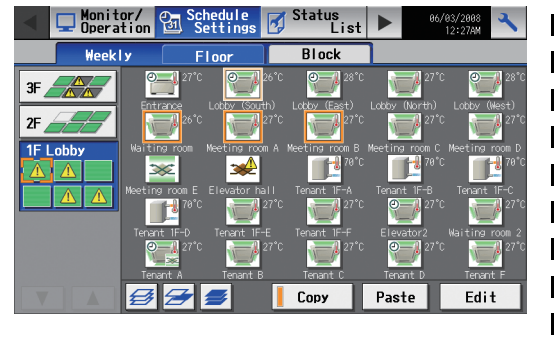
Touch



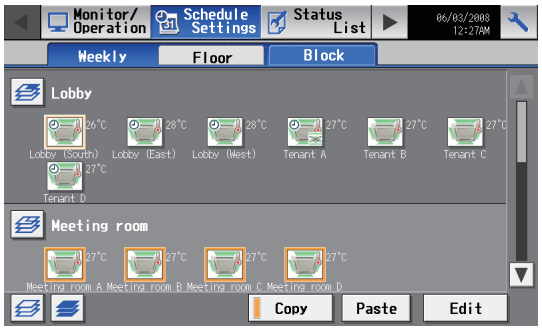
Login (P47)

<Schedule Settings>

- Setting the schedule without a license registration



Schedule setting screen (floor layout) Weekly(P32)



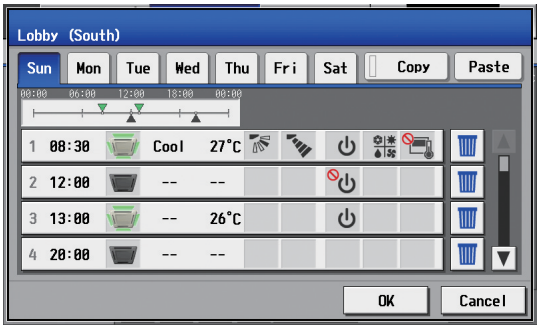
Schedule setting screen (block display) Weekly(P33)

Touch

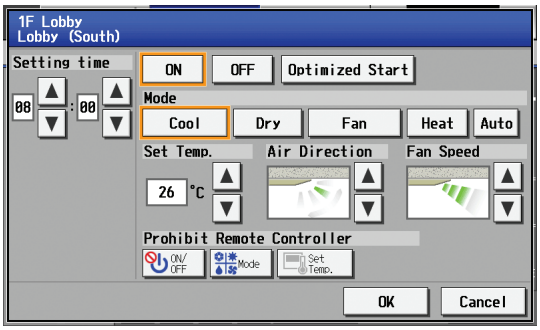
[ ]



Login(P47)



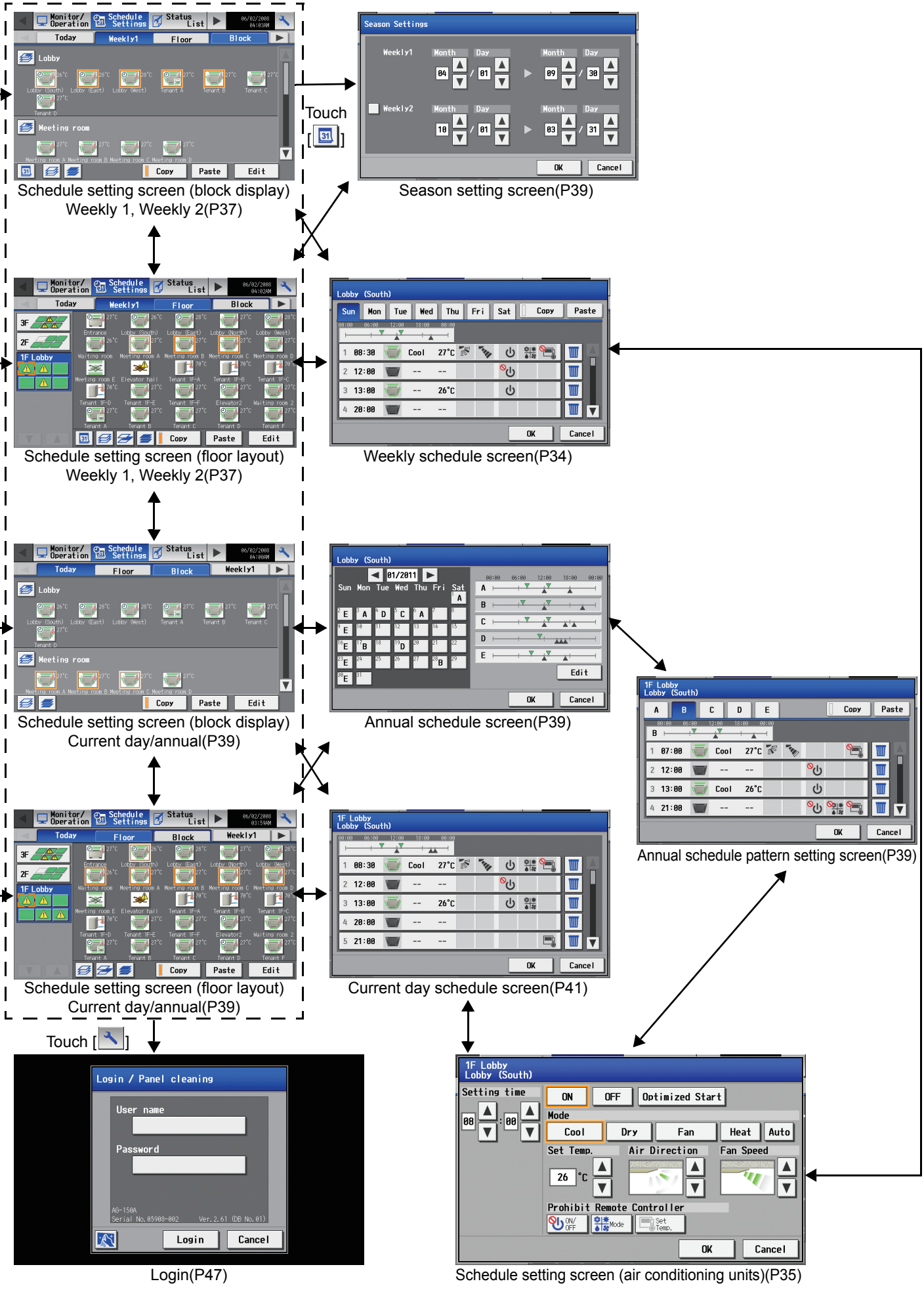
Weekly schedule screen(P34)



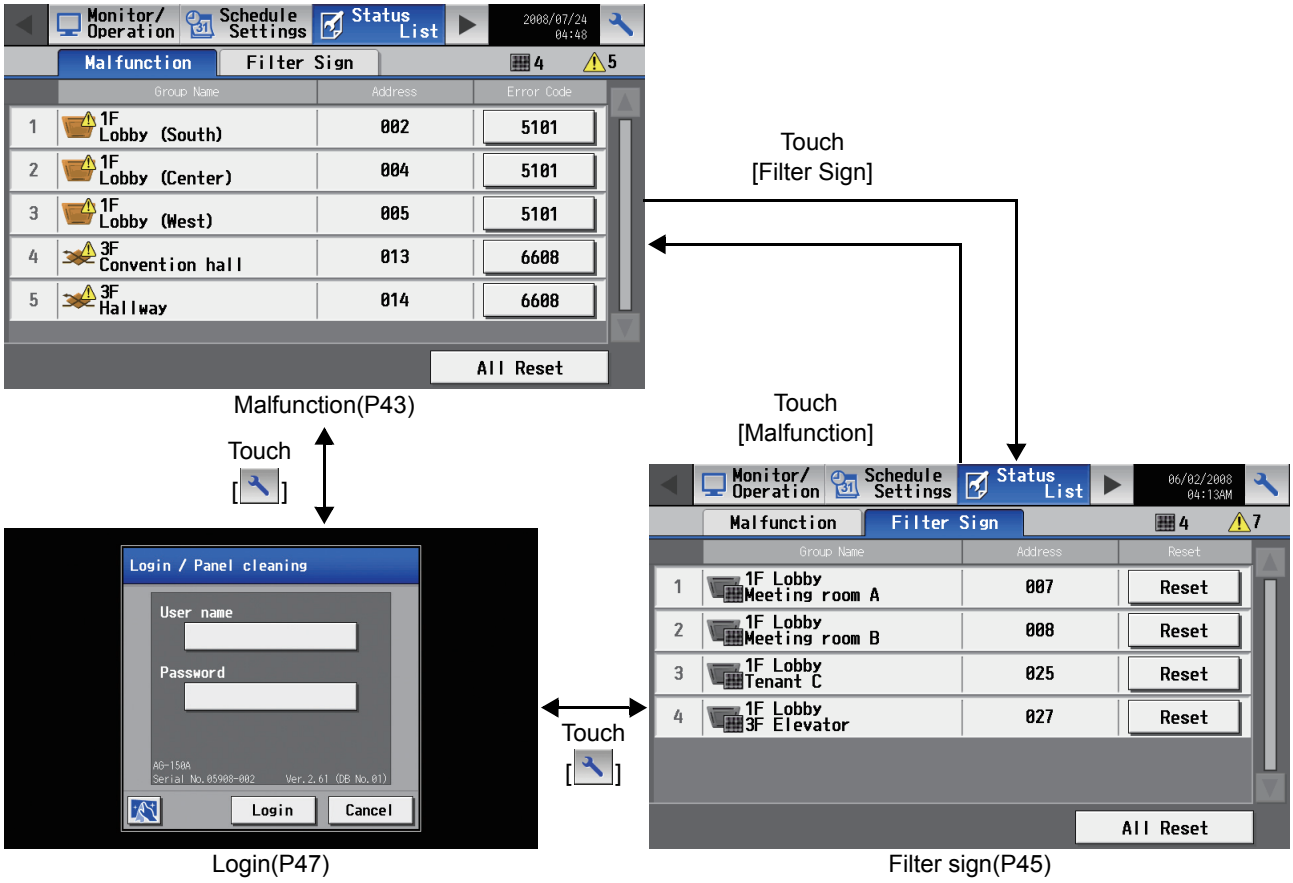
Schedule setting screen (air conditioning units)(P35)

<Schedule Settings>

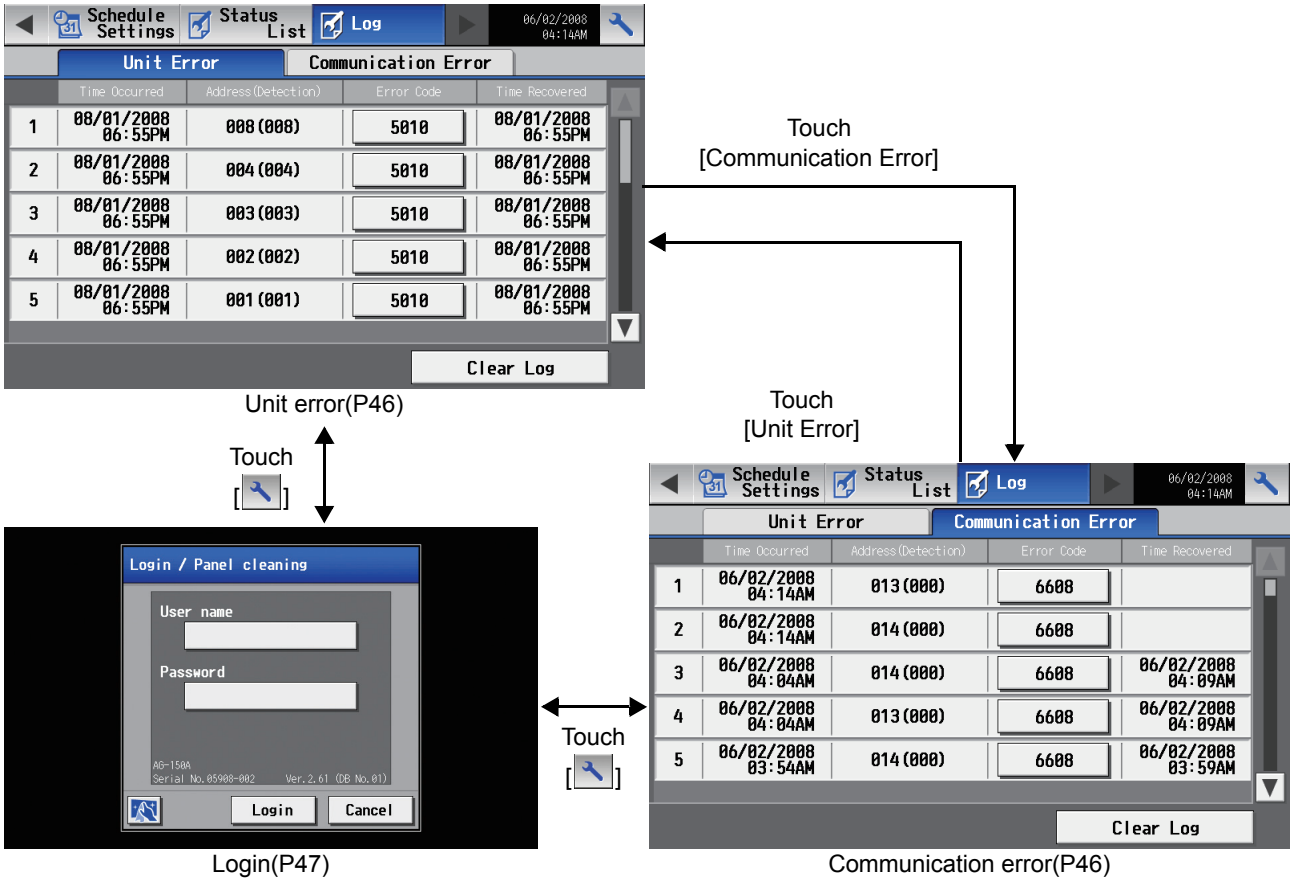
- Setting the schedule with a license registration



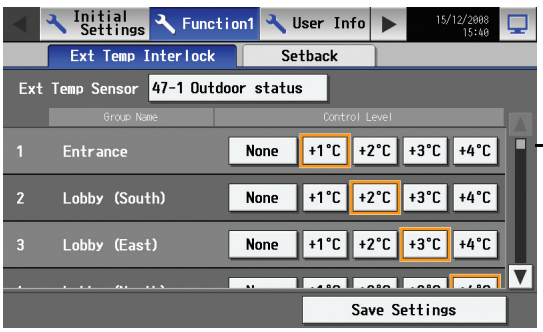
<Status List>



<Log>



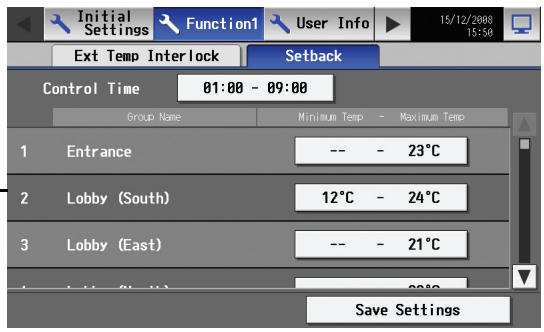
<Function 1>



Ext Temp Interlock(P74)

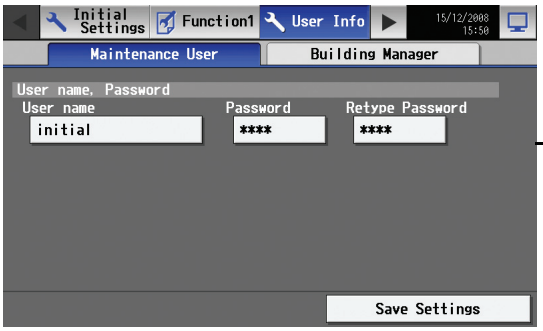
Touch
[Setback]

Touch
[Ext Temp Interlock]



Setback(P77)

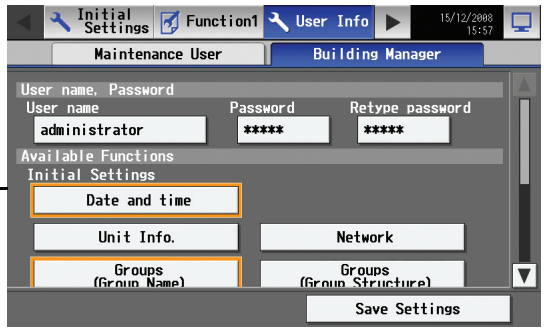
<User Info>



Maintenance User(P80)

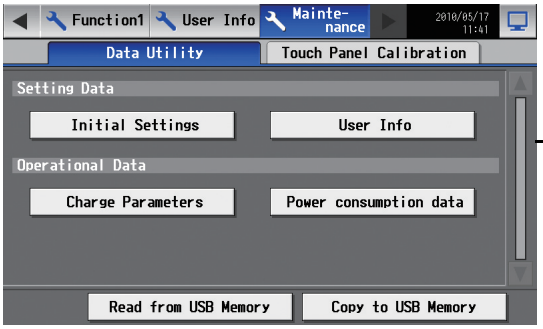
Touch
[Building Manager]

Touch
[Maintenance User]



Building Manager(P80)

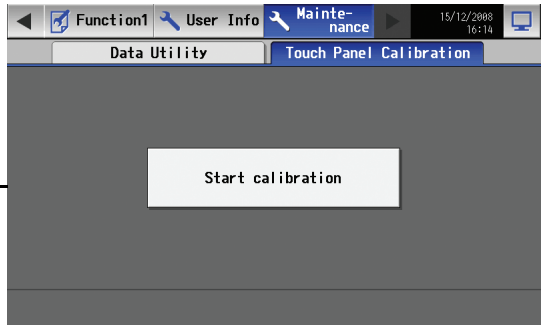
<Maintenance>



Data Utility(P82)

Touch
[Touch Panel Calibration]

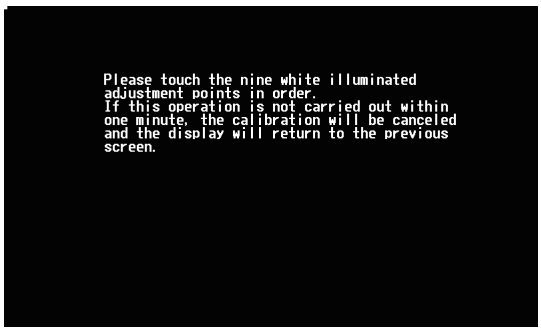
Touch
[Data Utility]



Touch Panel Calibration(P85)

Calibration completed
or
No operation for one minute.

Touch
[Start Calibration]



Calibration(P85)

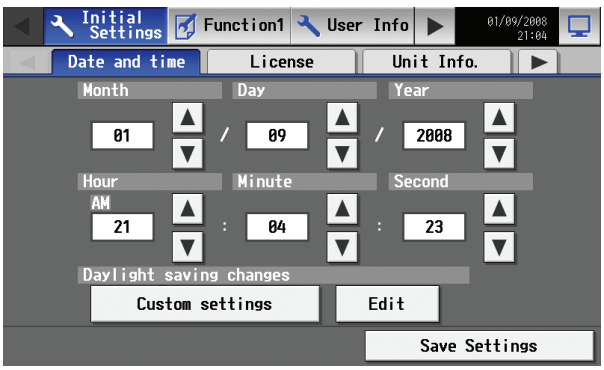
5. Initial Start up

5-1 Initial start up for a system without connection to an Expansion controller (PAC-YG50ECA)



After the power is turned on, the language selection screen will appear. Select the language to be used for display, and then touch [OK].

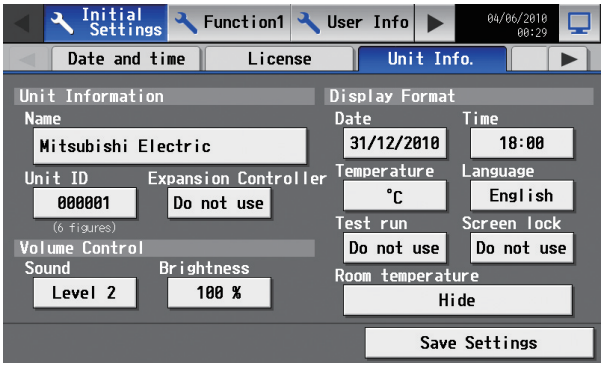
Note: It will take approximately 20 seconds for the display to appear after the power is turned on.



When the language is selected, the Date and Time setting screen will appear. Set the date and time. (Refer to Section 7-3 for the details on how to set the date and time.)

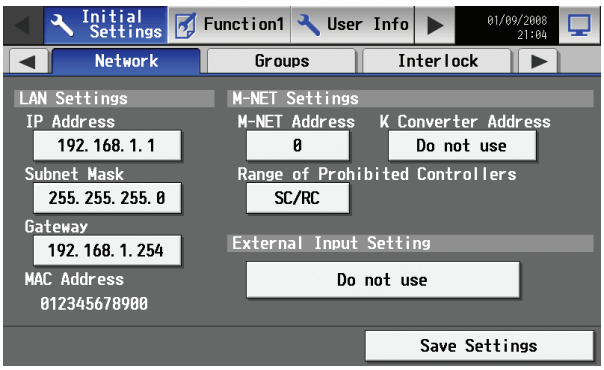
* The initial setup sequence does not set the date and time correctly. Be sure to manually set the correct date and time.
* Touch the [Save Settings] button to reflect the changes.

Touch [Unit Info]



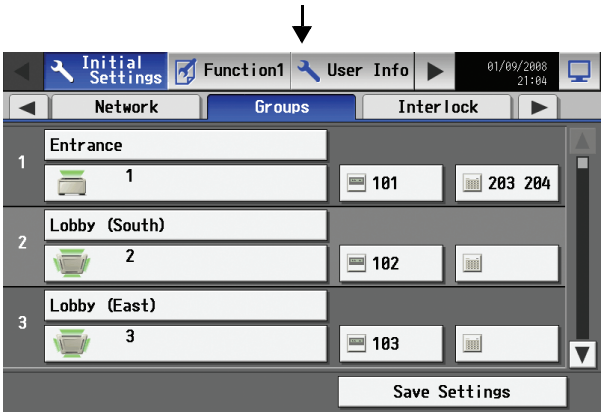
After setting the date and time, touch the [Unit Info.] tab and set the Name and Unit ID. Be sure to set the Expansion Controller setting to “Do not use.” (Refer to Section 7-5 for the details on how to set the Name and Unit ID.)

Touch [Network]

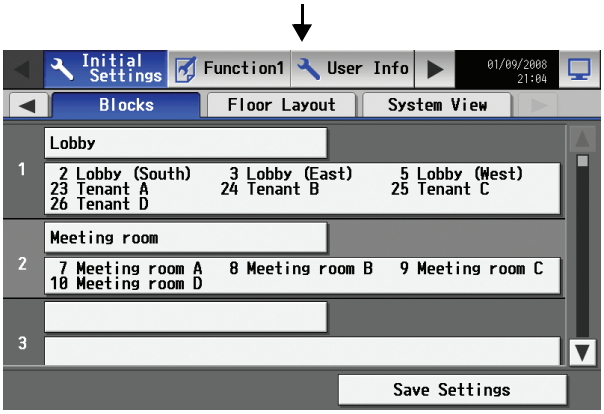


After making the unit settings, touch the right arrow to show the [Network] tab and touch it. Set the IP address and M-NET address. (Refer to Section 7-6 for the details on how to set the IP address and M-NET address.)

Touch [Groups]



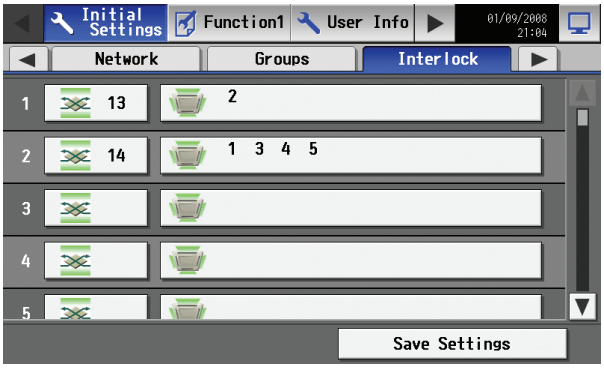
After making the network settings, touch the [Groups] tab, and make the settings. (Refer to Section 7-7 for the details on how to make the group settings.)

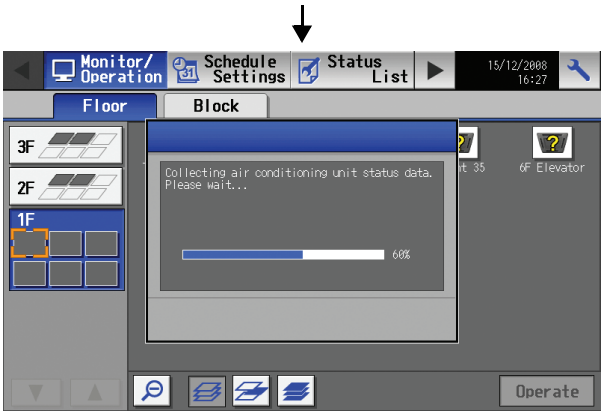


Make other settings such as block settings and interlocked LOSSNAY settings. Refer to appropriate sections in Chapter 7 on how to make the settings.

When the above settings have been made, the initial settings are completed.

Touch the  on the top right hand of the screen to go into the [Operation/Monitor] screen.
Configure the floor layout on the [Floor Layout] screen if necessary.
* When the unit is started up again, the [Operation/Monitor], instead of the Initial Settings screen, will appear. To change certain settings, refer to Section 7-1 Calling up the initial setting screen to change the settings.





After moving to the [Operation/Monitor] screen, the startup screen will appear.

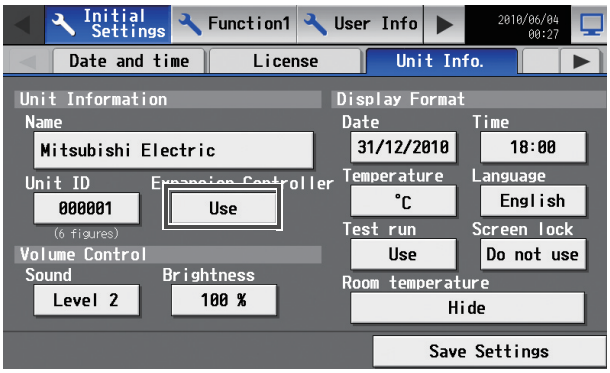
Startup takes a maximum of five minutes after the message appears. (It takes about two to three minutes when no communication errors occur.)

5-2 Initial start up for a system with connection to an Expansion controller (PAC-YG50ECA)



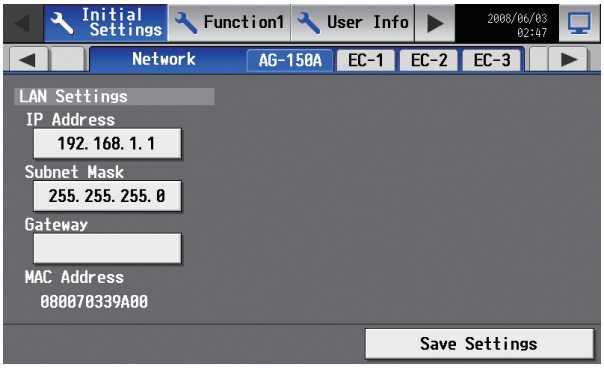
After the power is turned on, the language selection screen will appear. Select the language to be used for display, and then touch [OK].

Note: It will take approximately 20 seconds for the display to appear after the power is turned on.



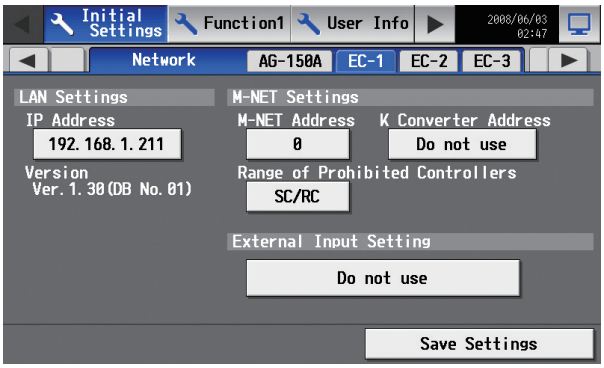
Enter the unit name and ID on the Unit Info screen. Set the Expansion Controller setting to “Use.”
(Refer to Section 7-5 for the details on how to set the Name and Unit ID.)

Touch [Network]



When the unit settings have been completed, touch the right arrow to bring up the [Network] screen, and touch [Network]. Select the [AG-150A] tab, and set the IP address for the AG-150A.
Select the Expansion controller (EC1-EC3) whose settings are to be made from the tab menu. Check that the DB No. on the AG-150A itself and the DB No. of the Expansion Controller match. (The DB No. for the AG-150A can be found on the back of the controller, on the package box, or on the LCD. Refer to Section 7-1 (P 47) for how to confirm the DB No. on the LCD. The DB No. for the Expansion controller can be found at the top of the Expansion controller or on the package box.)

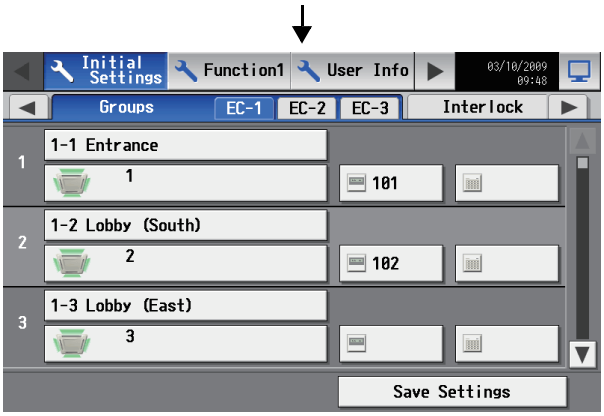
Touch [EC-1]



If the DB numbers match, make the IP address and M-NET address settings for each. (Refer to Section 7-6 (P 55) for the details of how to make the settings.)

* Consult your dealer if the DB numbers do not match.
* IP address and M-NET address cannot be set at the same time. Save the IP address setting first, and then save the M-NET address setting.

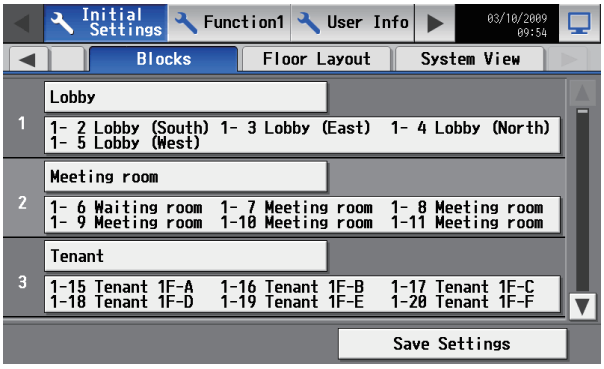
Touch [Groups]



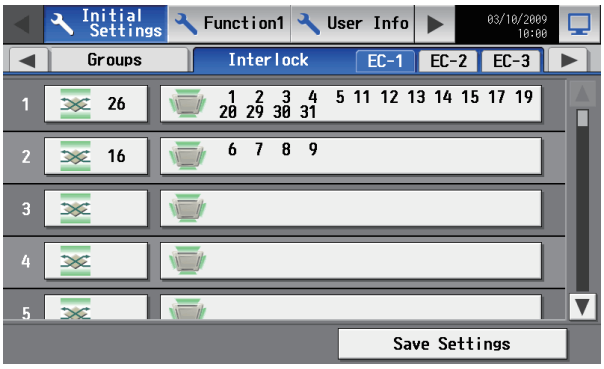
After the network settings have been made, touch [Groups], select the EC number from the tab menu, and make the group settings for each EC.

* The settings for the units that are connected to a different Expansion controller cannot be made.

(Refer to Section 7-7 for the details of how to make the settings.)

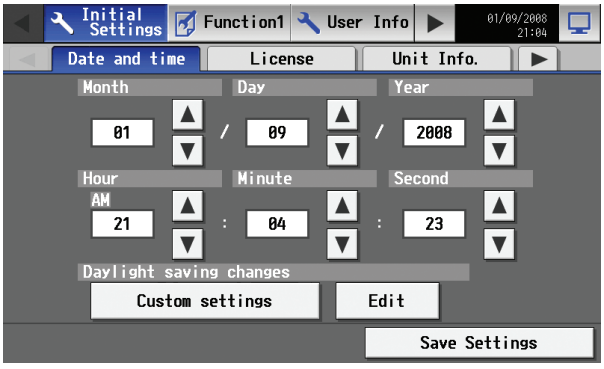


Make other settings such as block settings and interlocked LOSSNAY settings. Refer to appropriate sections in Chapter 7 on how to make the settings.



Configure the floor layout on the [Floor Layout] screen if necessary.

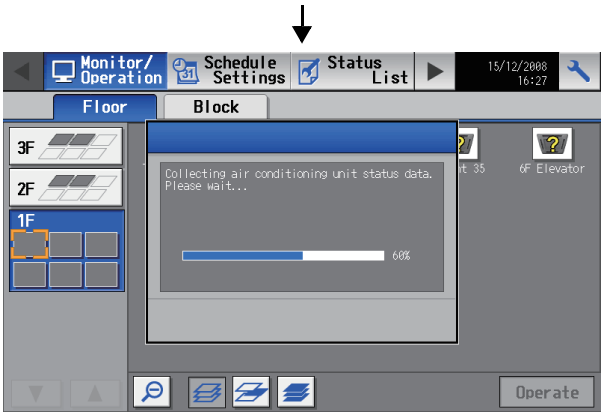
* When the unit is started up again, the [Operation/Monitor], instead of the Initial Settings screen, will appear. To change certain settings, refer to Section 7-1 Calling up the initial setting screen to change the settings.



The Date and Time setting screen will appear. Set the date and time. (Refer to Section 7-3 for the details on how to set the date and time.)

* To synchronize the time with the Expansion controllers, be sure to manually set the correct date and time.
* Touch the [Save Settings] button to reflect the changes.

When the above settings have been made, the initial settings are complete. Touch the on the top right hand of the screen to go into the [Operation/Monitor] screen.



After moving to the [Operation/Monitor] screen, the startup screen will appear.

Startup takes a maximum of five minutes after the message appears. (It takes about two to three minutes when no communication errors occur.)

5-3 Connecting multiple AG-150A to a system with connection to Expansion controllers

Multiple AG-150A or other controllers can be connected to an air conditioning system, and each controller can control and monitor the system.
Note that the number of connectable units and the software version is limited.
If the software version is unsupported, update the software version of the controllers.

(1) Restrictions on the number of connectable units

The total number of AG-150A should be three or less.

(2) Restrictions on the software version

No. of connectable units	PAC-YG50ECA	3 units or less	
	AG-150A	1 unit	2 or 3 units
Software version	PAC-YG50ECA	Ver. 1.00 or later	Ver. 1.30 or later
	AG-150A	Ver. 2.00 or later	Ver. 2.30 or later

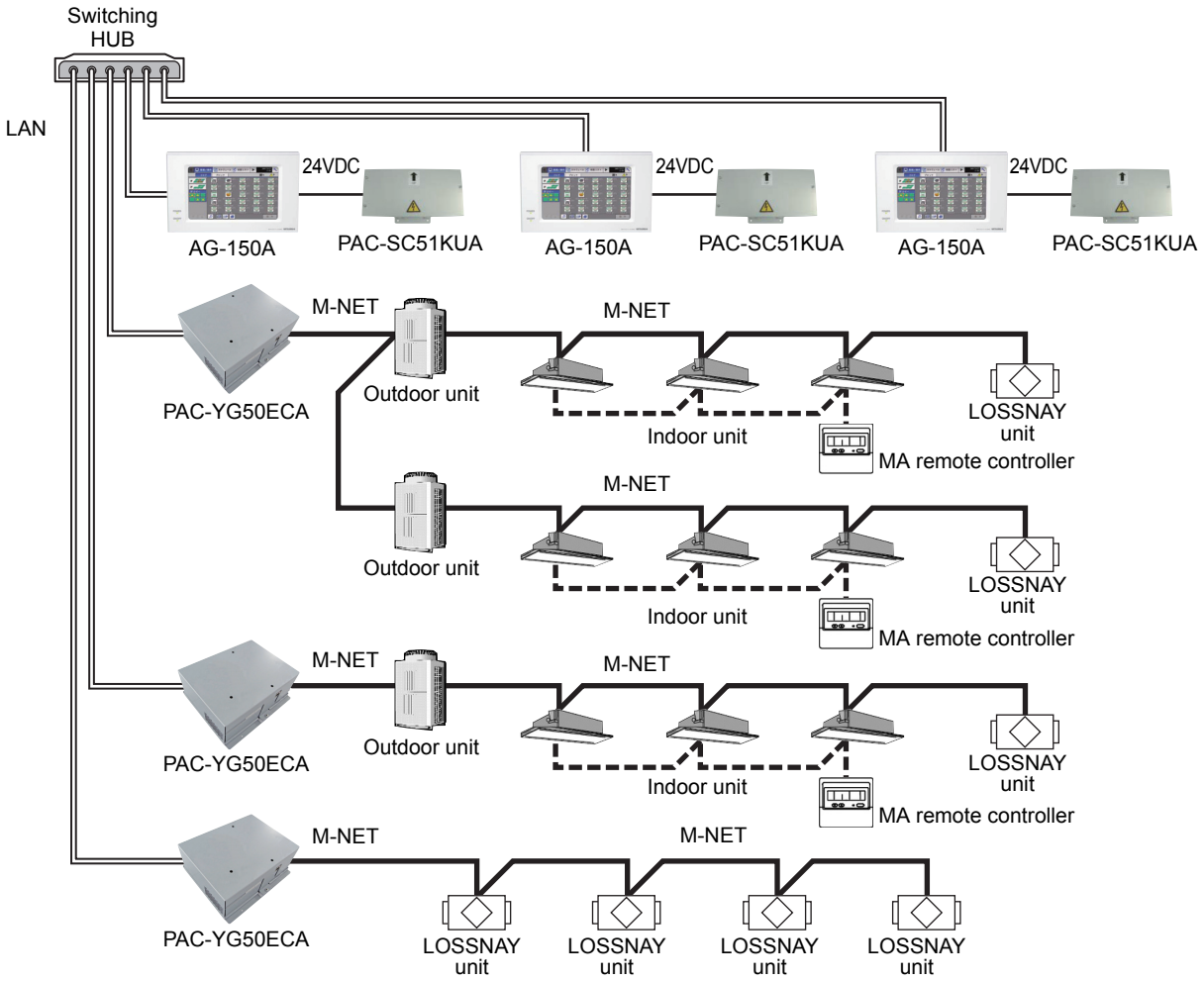
(3) Restrictions on the DB No.

Controllers with different DB No. cannot be connected to each other.

(4) Miscellaneous restrictions

- Controllers such as AG-150A connected to a system must have the same settings for the settings such as Group or Interlocked ventilation (LOSSNAY).
  Different settings for the settings such as Group or Interlocked ventilation (LOSSNAY) cannot be made in a system.
- When connecting a general equipment using a DIDO controller (PAC-YG66DCA), register a group to each AG-150A connected to a system.
  Use only one AG-150A to make group settings for other units.
- When multiple AG-150A controllers are connected to a system, the following functions should be used only on one of the AG-150A controllers : License registration, schedule settings, energy-save, peakcut, Night Setback Control, Interlock, External Temperature Interlock, Night Mode Schedule, System-changeover, and Set temperature range limit.
- Icons that indicate schedule, energy-save mode, and setback mode enabled appear only on the AG-150A that controls these modes.

System example when connecting multiple AG-150A



Shown below is how to connect two or more AG-150A controllers to a system. Refer to the respective manual for more information about how to connect other types of controllers.

(5) Make the settings (e.g., IP address) for the Expansion controller network, and switch on the power.
Refer to section 5-1 “IP address and network settings” in the Installation/Instructions Manual.

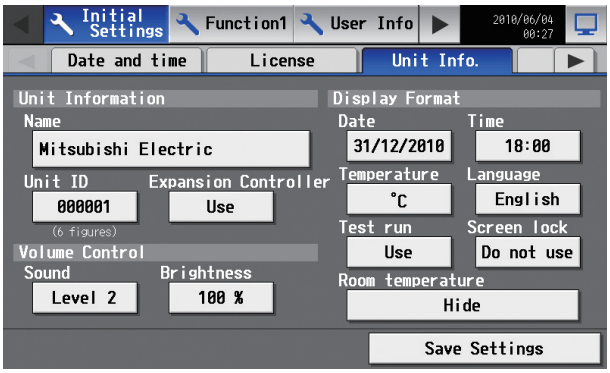
(6) Switch on the power to the AG-150A (PAC-SC51KUA), and start the initial setting process.
Make the initial settings for each AG-150A.

1st AG-150A (Master)

(7) Select the display language.

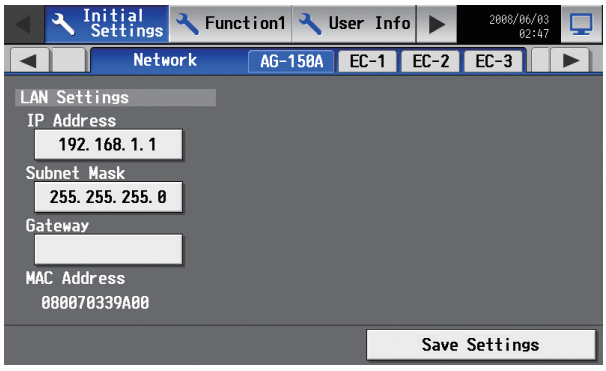


(8) Make the unit information settings.



Set the Use/Do not use setting for the Expansion controller to “Use.”

(9) Make the network settings for the AG-150A.

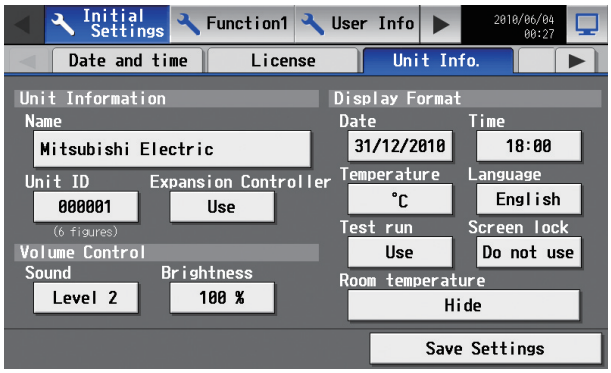


2nd and subsequent AG-150A units

(7) Select the display language.

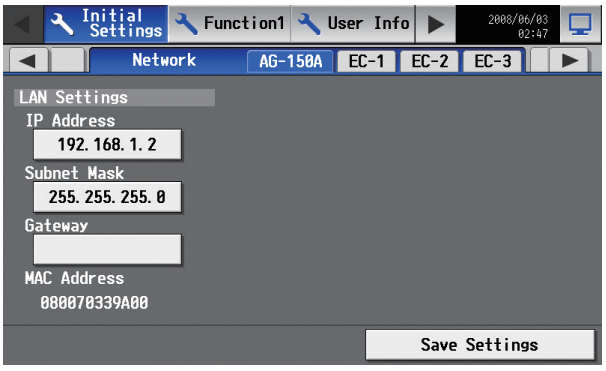


(8) Make the unit information settings.



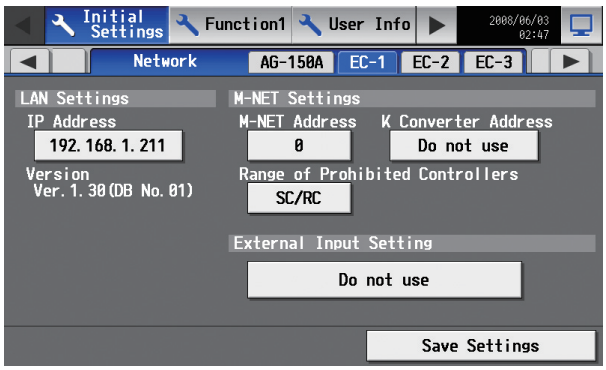
Set the Use/Do not use setting for the Expansion controller to “Use.”

(9) Make the network settings for the AG-150A.

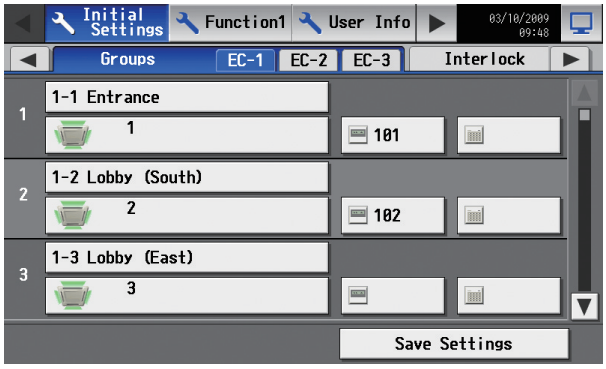


* Changing and saving the network setting will restart AG-150A, and the login screen will appear.

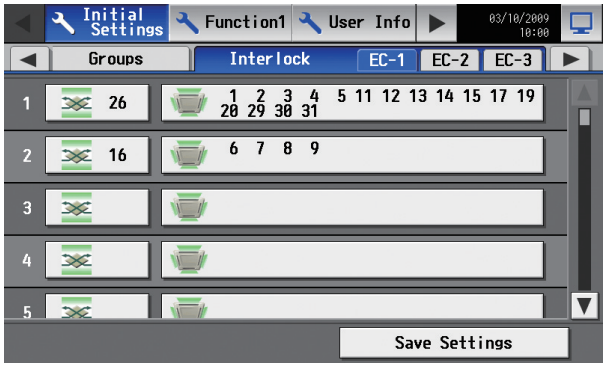
(10) Make the settings for the Expansion controller IP address, M-NET, and external input.



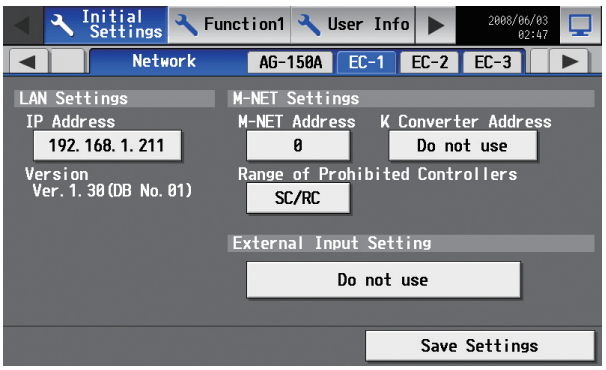
(11) Make the settings for the group names and unit addresses.



(12) Make the settings for the interlocked LOSSNAY units.



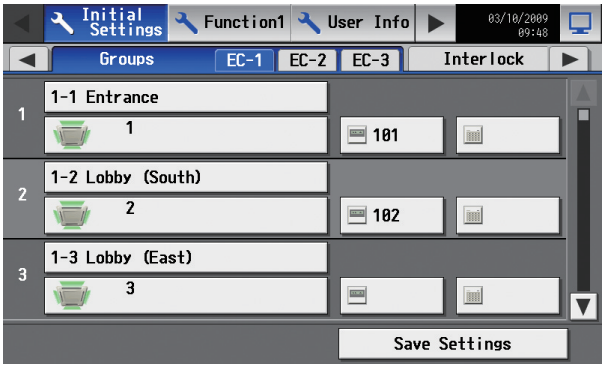
(10) Make the settings for the Expansion controller IP address.



- Touch “Save Settings” to confirm that the settings for the M-NET and external input are the same as the ones made for the first unit (master).
- After setting the IP address, a screen that indicates that the connection information of Expansion controllers is being collected will be displayed for a few minutes.

(11) Make the settings for the general equipment and group name.

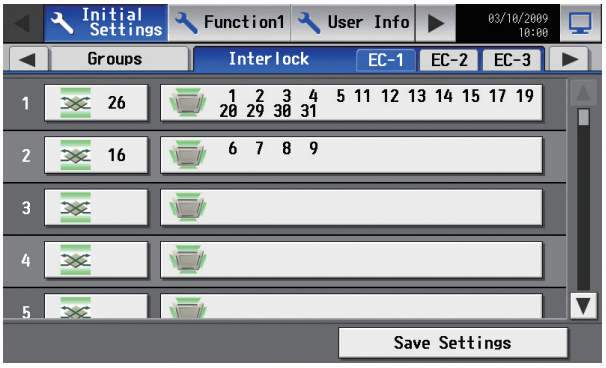
A group name different from the first unit (master) may be assigned.



Check that the group settings are the same as the ones made for the first unit (master).

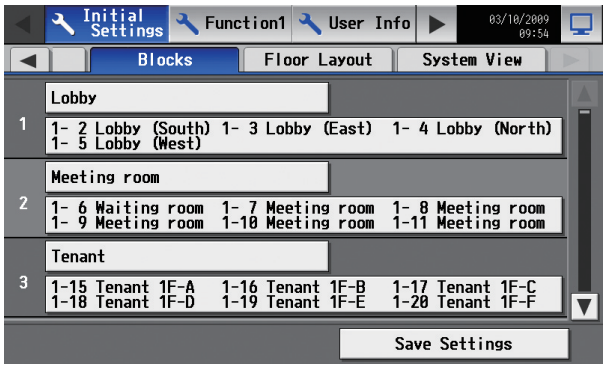
Re-enter the same settings for the general equipment as the ones for the first unit (master).

(12) Confirm the settings for the interlocked LOSSNAY units.

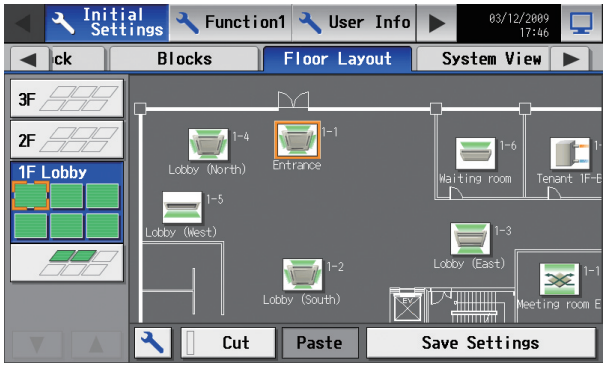


Check that the interlocked LOSSNAY settings are the same as the ones made for the first unit (master).

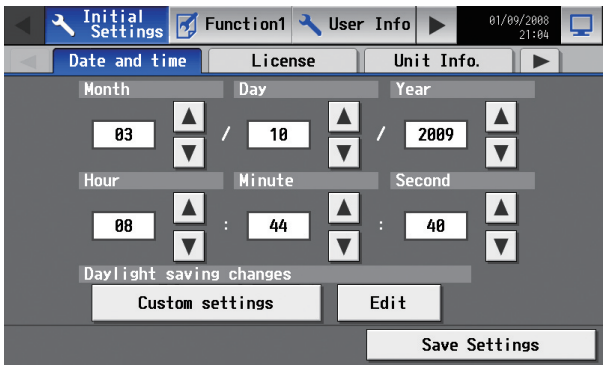
(13) Make the settings for the block and group names.



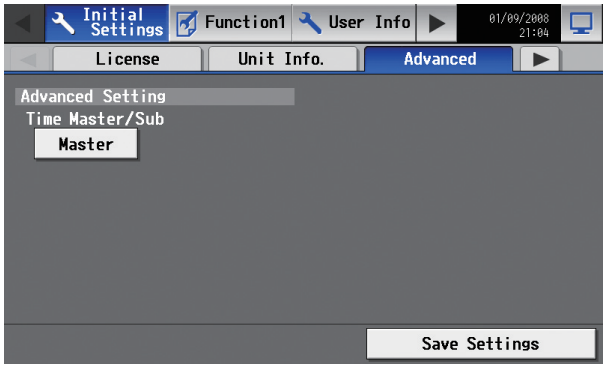
(14) Make the settings for the floor layout.



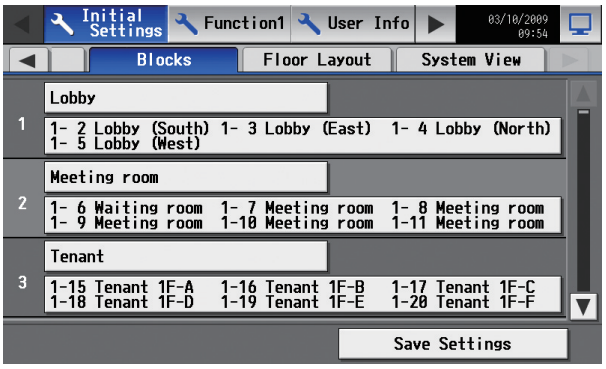
(15) Set the clock.



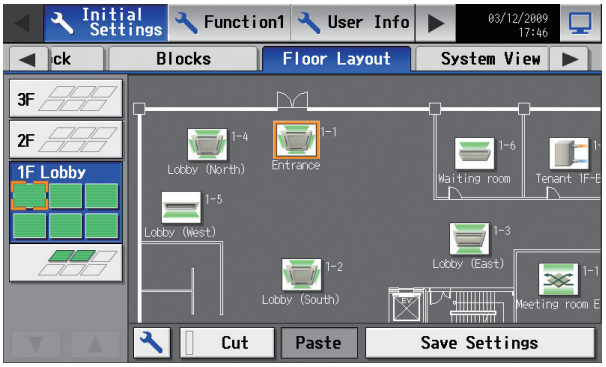
(16) Set the Master/Sub clock setting to “Master.”



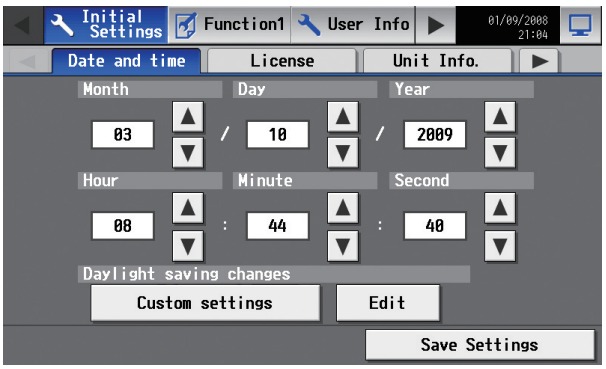
(13) Make the settings for the block and group names.
The settings for the 2nd and subsequent units do not need to be the same as the settings for the Master unit.



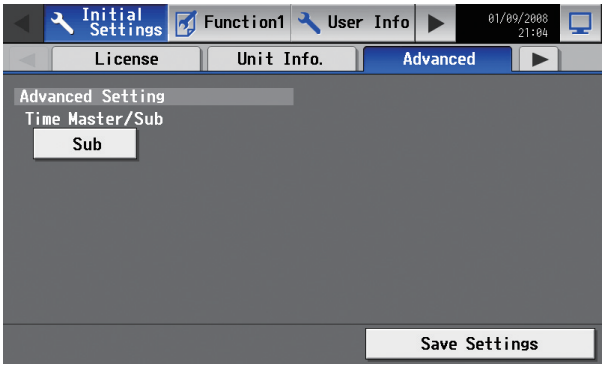
(14) Make the settings for the floor layout.
The settings for the 2nd and subsequent units do not need to be the same as the settings for the Master unit.



(15) Set the clock.

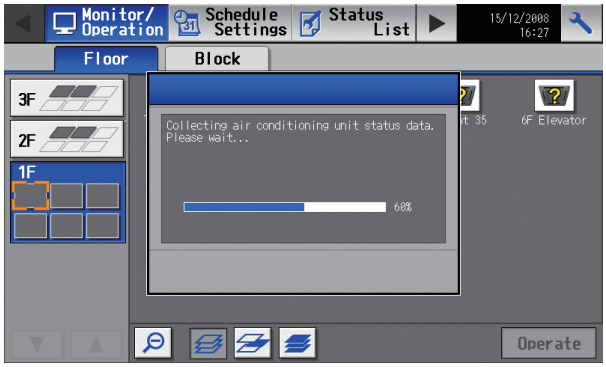


(16) Set the Master/Sub clock setting to “Sub.”



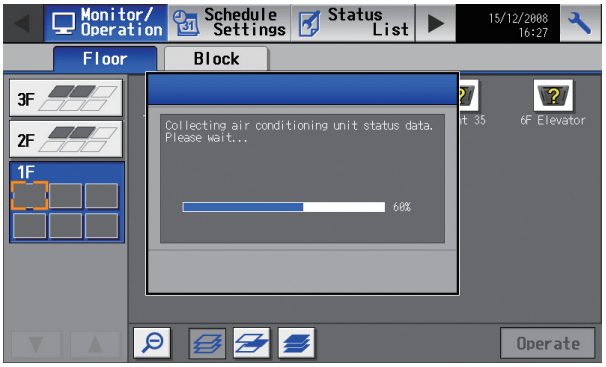
(17) Initial settings are completed.

Perform a test run to check for proper settings.



(17) Initial settings are completed.

Perform a test run to check for proper settings.

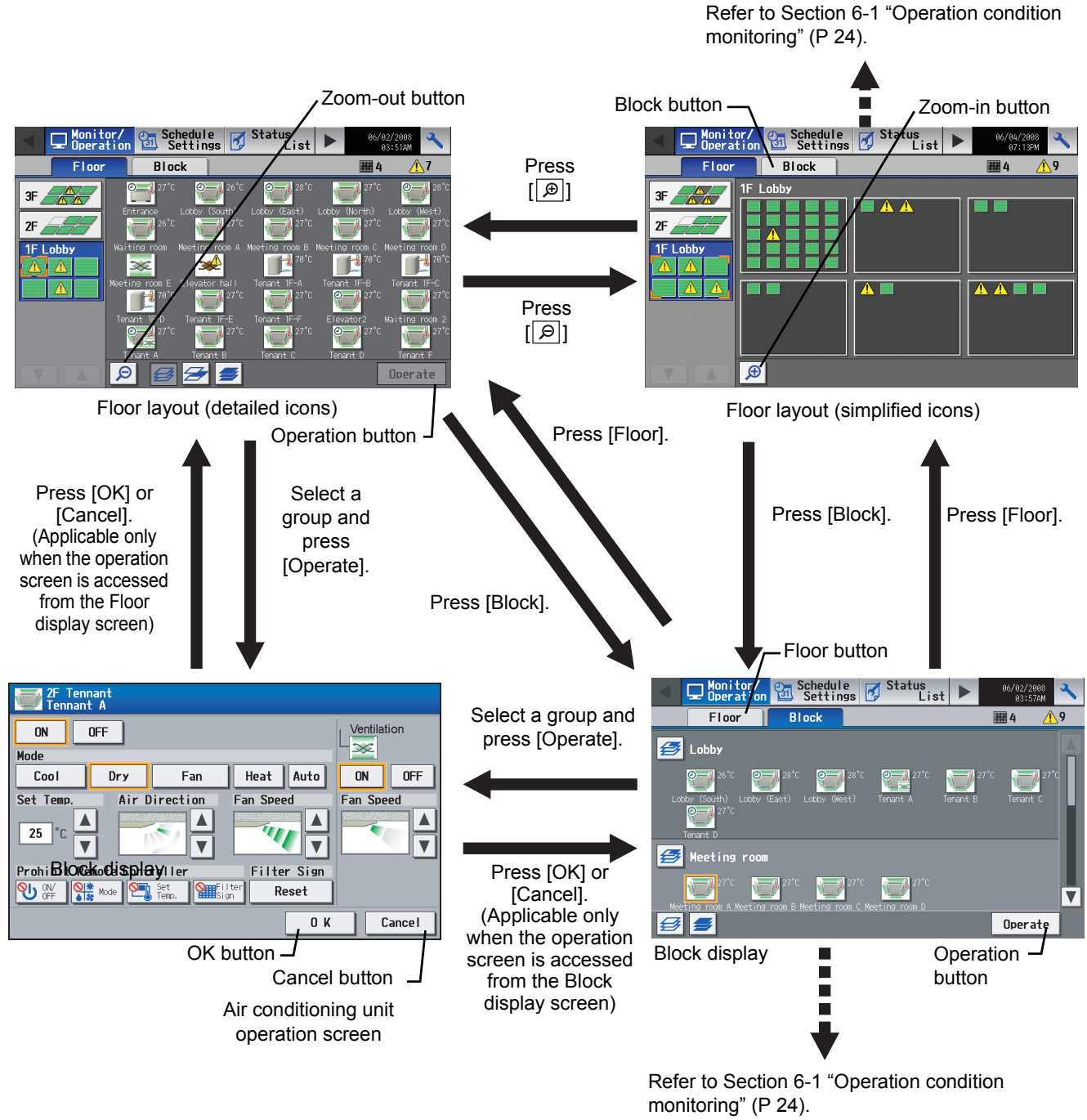


6. User operation

The following screens are used under user operation.

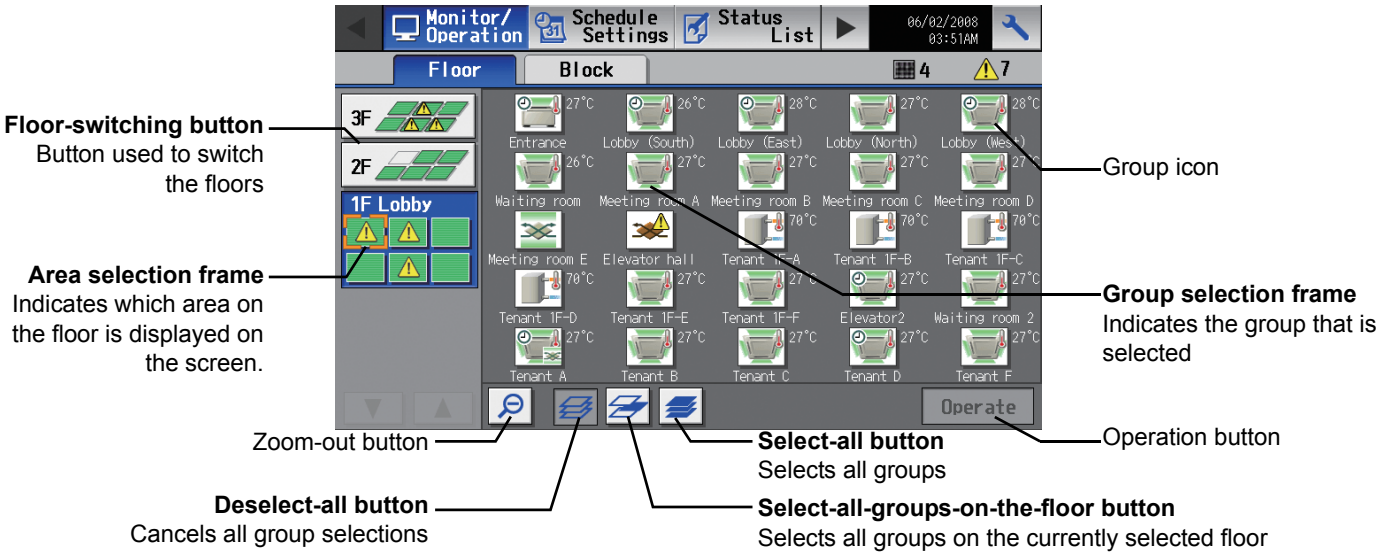
- Floor layout/block display screens ..... Displays the operation status (ON/OFF), error status of the air conditioning system, and room temperature.
  This is the screen that is normally used.
- Operation setting screen ..... Use to perform collective or individual group operation (ON/OFF, operation mode, air flow direction, fan speed, temperature setting, prohibition/permission of operation from local remote controller, filter reset, room temperature).
  Note: Different models have different functions available.

Accessing the Floor layout, Block display, and Air conditioning unit operation setting screens

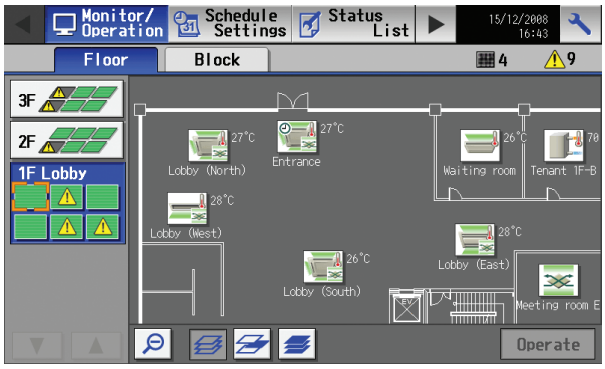


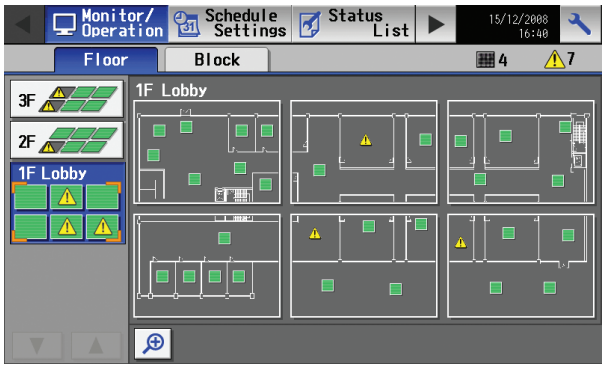
6-1 Operation condition monitoring

- This function displays the ON/OFF/Malfunction status of specific units, groups, block, or floor.



- Display image of floor layout function (P60-P64)

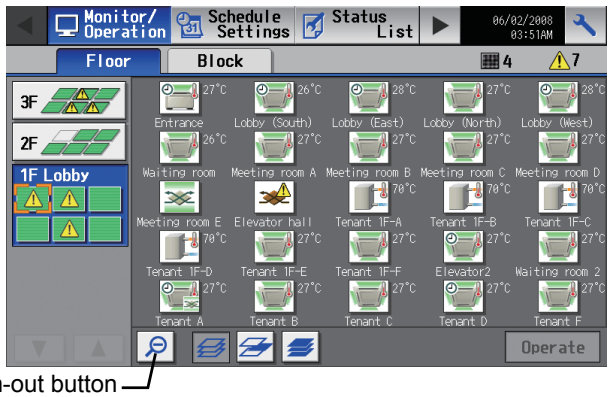


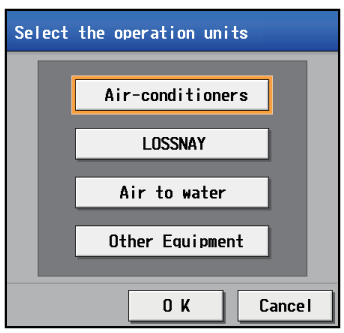


(1) Operation method

- Note that methods are different for group operation, block operation, floor operation, and batch operation for the entire building.

<Group display (detailed icons)>





Equipment type selection screen

The following icons indicate the operation status.

: On

: Off

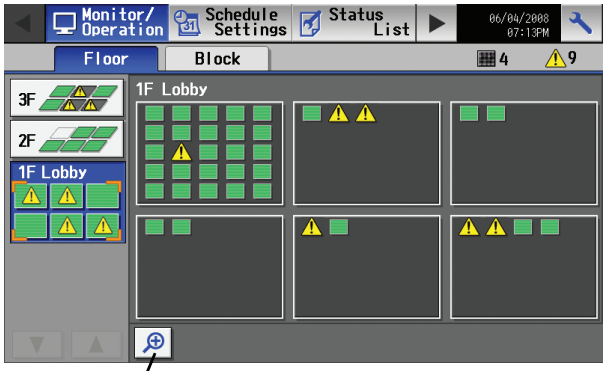
: Error

* If there is a device that cannot be identified, ? will appear over the icon of the device.

- Selecting the group icon and then pressing the operation button will take the screen to the operation screen for the selected group. (If more than one groups exist within a group, such as air conditioning unit group, ventilation unit group (LOSSNAY and OA handling units), Air To Water (PWFY) unit, and general equipment group, a screen to select a group will appear. After the models have been selected, the operation screen will appear.) On the screen, detailed information about the temperature, fan speed, air flow direction, prohibit/permit status of the remote controller, and operation mode can be checked.
- Pressing the zoom out button will take the screen to the list screen.
- By pressing the floor switching button, the settings for the air conditioning units on other floors can be checked.

* “Booster unit” and “Water HEX unit” will appear as “Air To Water (PWFY)”.

<Group display (simplified icons)>



The following icons indicate the operation status.

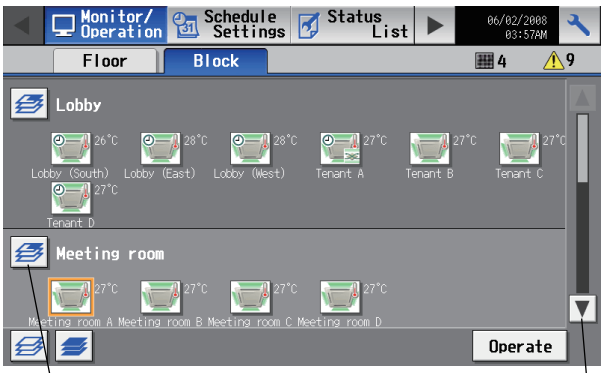
: On

: Off

: Error

- Pressing the Zoom-in button returns to the screen with detailed icon.
- By pressing the floor switching button, air conditioning systems on other floors can be checked.

<Block display>



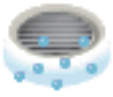
- Selecting the group icon or the block selection button and then pressing the operation button will take the screen to the operation screen for the selected group. (If more than one groups exist within a group, such as air conditioning unit group, ventilation unit group (LOSSNAY and OA handling units), and general equipment group, a screen to select a group will appear. After the models have been selected, the operation screen will appear.) On the screen, detailed information about the temperature, fan speed, air flow direction, prohibit/permit status of the remote controller, and operation mode can be checked.
- Press the scroll button to see the status of the rest of the blocks. (Several types of icons will appear.)

• Icons

The following icons are used on the screen.

* The display settings can be changed for each group.

* Those icons listed as common icons can be used to display air conditioning units, LOSSNAY units, and general equipments.

Common					
					
					
General equipments					
					
Air To Water (PWFY) (Booster and Water Hex Unit)					

Depending on the status of each group, the following icons will appear on the icons mentioned above.

During an error	Interlocked unit ON	Interlocked unit OFF	Schedule setting enabled
			
During energy-save control	Intake air temperature display	During night setback	Unknown (during initial startup)
			

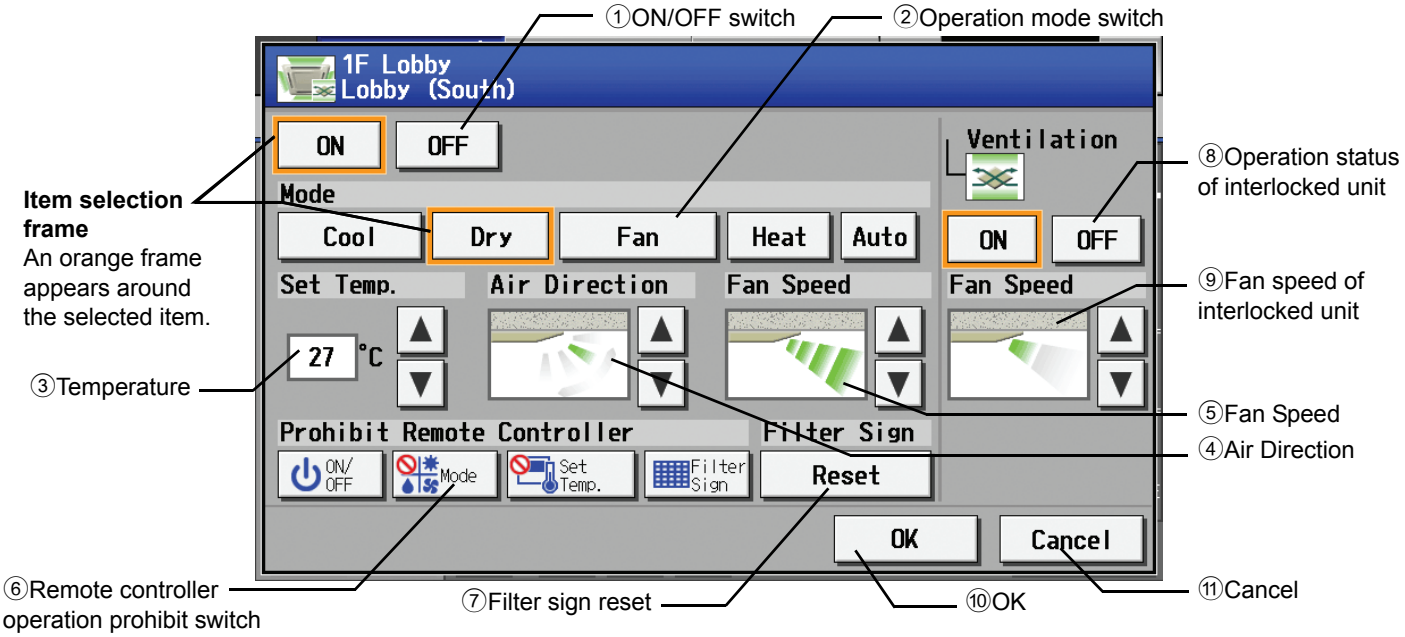
* During energy-save operation, the energy-save icon will appear over the intake air temperature.
* When setting ventilation interlock with Mr. Slim units, the air conditioning and interlocked ventilation icon will display ON even when the interlocked LOSSNAY is operating by itself.
  (This will occur when used with the following M-NET adapter: PAC-SF48/50/60/70/80/81MA-E)
* When multiple AG-150A controllers are connected by connecting an Expansion controller to the system, “Schedule setting enabled,” “Energy-save control,” and “During night setback” will be displayed only on the AG-150A controller that is executing these functions.
* The energy saving icon is displayed while the energy-saving control is performed in a group of indoor units and in the outdoor unit belonged to that group.
* If a given LOSSNAY unit is interlocked with multiple indoor unit groups, the LOSSNAY unit may be in operation even when the display shows that the unit is stopped.
* Switching between display or non-display of room temperature is possible on the LCD display and the Initial setting screen.

6-2 Operation setting/Prohibition setting from local remote controller

The setting for the control of air conditioning units (LOSSNAY, general equipments, Air To Water (PWFY)) and the permit/prohibit setting from the local remote controller are made on this screen.

* The screen will show the status of the units at the time the screen is opened, any change that may take place after the screen is opened will not be reflected.
* The changes made on the screen will not be reflected until the OK button is pressed.

(1) Air conditioning unit group



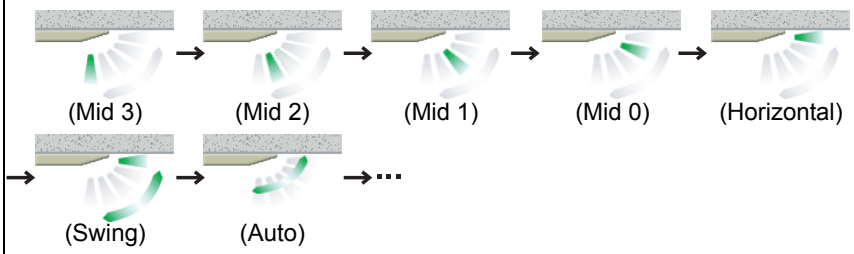
	Function	Operation method	Display
①	ON/OFF	Select the operation status (ON or OFF).	An orange frame will appear around the selected button.
②	MODE	Select the desired operation mode from one of the icons below “Mode”.	An orange frame will appear around the selected mode. * If an attempt is made to change the mode setting for the groups for which the operation prohibition setting is enabled, the changes will not be reflected and a pale orange frame will appear around the group.
③	Set Temperature	Set the temperature by using the Up/Down arrows below “Set Temp” function.	Pressing the Up/Down arrow increases/decreases the temperature by one degree respectively. The settable temperature range depends on the mode and model. If the Up arrow is pressed when the upper limit temperature is displayed. the lower limit temperature will appear, and the Down arrow vice versa.

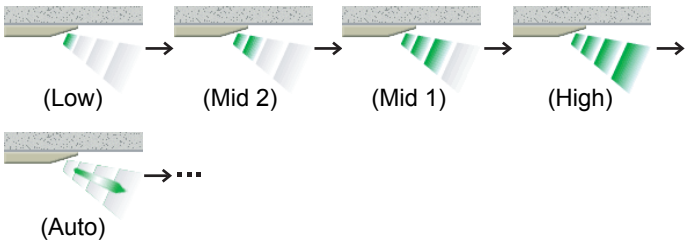
Model	Cooling/Dry	Heating	Auto
Standard temp model	19 ~ 30°C [67 ~ 87°F]	17 ~ 28°C [63 ~ 83°F]	19 ~ 28°C [67 ~ 83°F]
Mid temp model (CITY MULTI)	14 ~ 30°C [57 ~ 87°F]	17 ~ 28°C [63 ~ 83°F]	17 ~ 28°C [63 ~ 83°F]
Mid temp model (Mr. Slim)	14 ~ 30°C [57 ~ 87°F]	14 ~ 28°C [57 ~ 83°F]	14 ~ 28°C [57 ~ 83°F]
Low temp model *1	8 ~ 30°C [46 ~ 87°F]	8 ~ 28°C [46 ~ 83°F]	8 ~ 28°C [46 ~ 83°F]

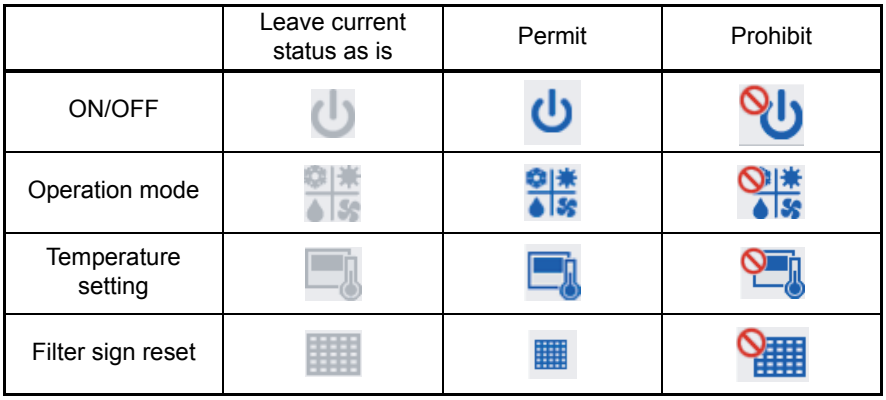
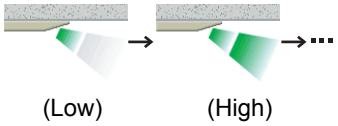
(Depending on the model details, the temperature range may change and Auto setting may not be available.)

*If operation modes and preset temperature are changed from multiple controllers (e.g., system controller and remote controller) almost simultaneously, the preset temperature that appears on the display may be outside the settable temperature range.

*1 This model includes DEDICATED OUTSIDE AIR SYSTEM (DOAS).

<table>
<tr><th></th><th>Function</th><th>Operation method</th><th>Display</th></tr>
<tr><td>④</td><td>Set Air Direction</td><td>Set the air flow direction with the Up/Down arrows below “Air Direction” function.</td><td>5-directions model


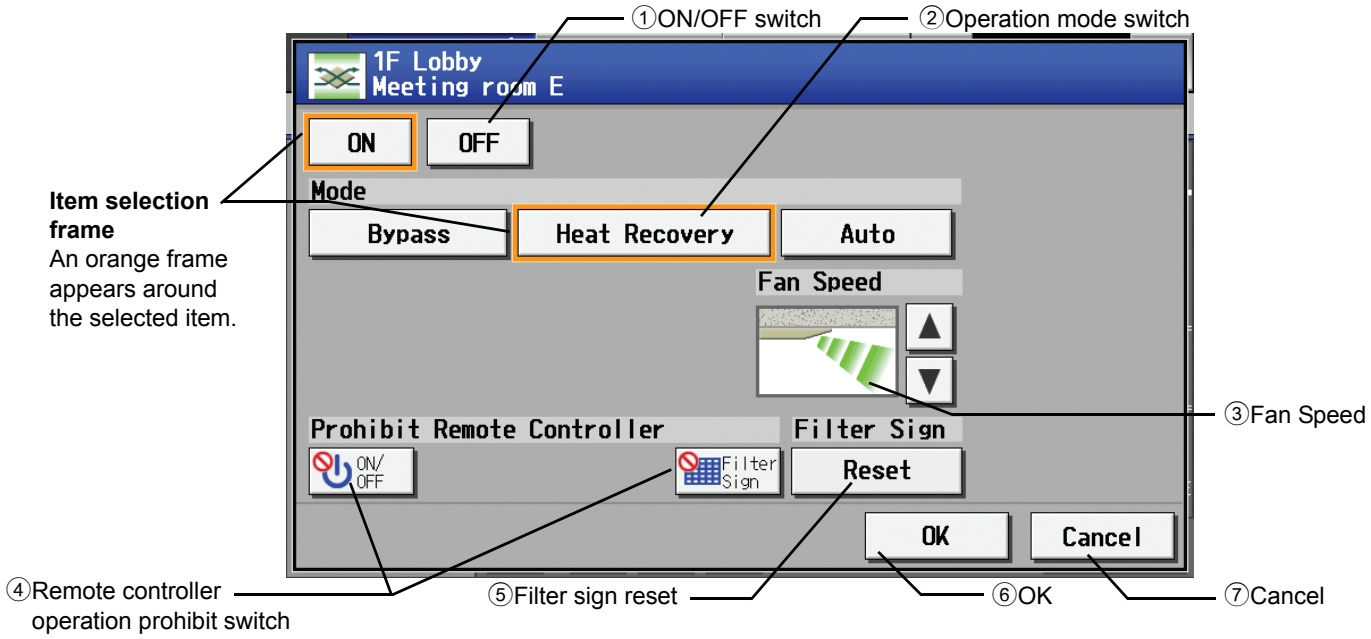
(Swing and Auto are not available on some indoor unit(s). Depending on the indoor unit four or five air flow directions are available.)</td></tr>
<tr><td>⑤</td><td>Fan speed</td><td>Use the Up/Down arrows below “Fan Speed” function to set the fan speed.</td><td>4-speed model:


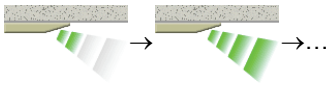
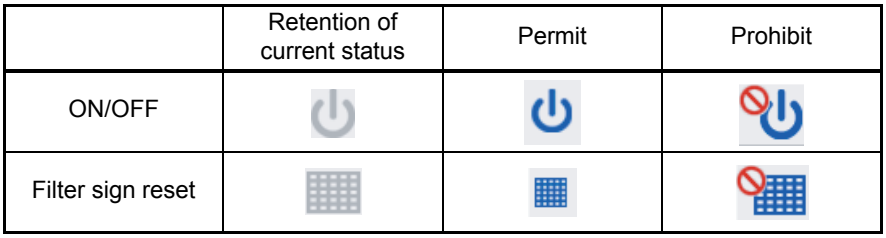
(“Auto” is not available on some indoor units. Some indoor units of units have only two or three fan speeds.)</td></tr>
<tr><td>⑥</td><td>Prohibiting local remote controller operation</td><td>Press the button that corresponds to the desired function and setting to permit or prohibit the operation from the remote controller. The functions that can be prohibited are: ON/OFF, operation mode, temperature, and filter sign reset.</td><td>Pressing of each button toggles through the following three options:
Retention of current status → Permit → Prohibit

</td></tr>
<tr><td>⑦</td><td>Filter sign reset</td><td>Press “Reset” under “Filter Sign”.</td><td>Filter cleaning warning sign will be removed. Filter cleaning schedule time is reset.</td></tr>
<tr><td>⑧</td><td>Ventilation ON/OFF</td><td>Select the ON/OFF status for the interlocked unit.</td><td>An orange frame will appear around the selected operation status.</td></tr>
<tr><td>⑨</td><td>Ventilation Fan speed</td><td>Set the fan speed with the Up/Down arrows below “Fan Speed”.</td><td>2-speed model:


(Fan speed setting is not available on some indoor units.)</td></tr>
<tr><td>⑩</td><td>OK</td><td>Press the OK button to reflect the change.</td><td>Pressing the OK button saves the setting and takes the screen back to the previous screen (Floor layout or Block display).</td></tr>
<tr><td>⑪</td><td>Cancel</td><td>Press the Cancel button to cancel the change.</td><td>Pressing the Cancel button cancels the change and takes the screen back to the previous screen (Floor layout or Block display).</td></tr>
</table>

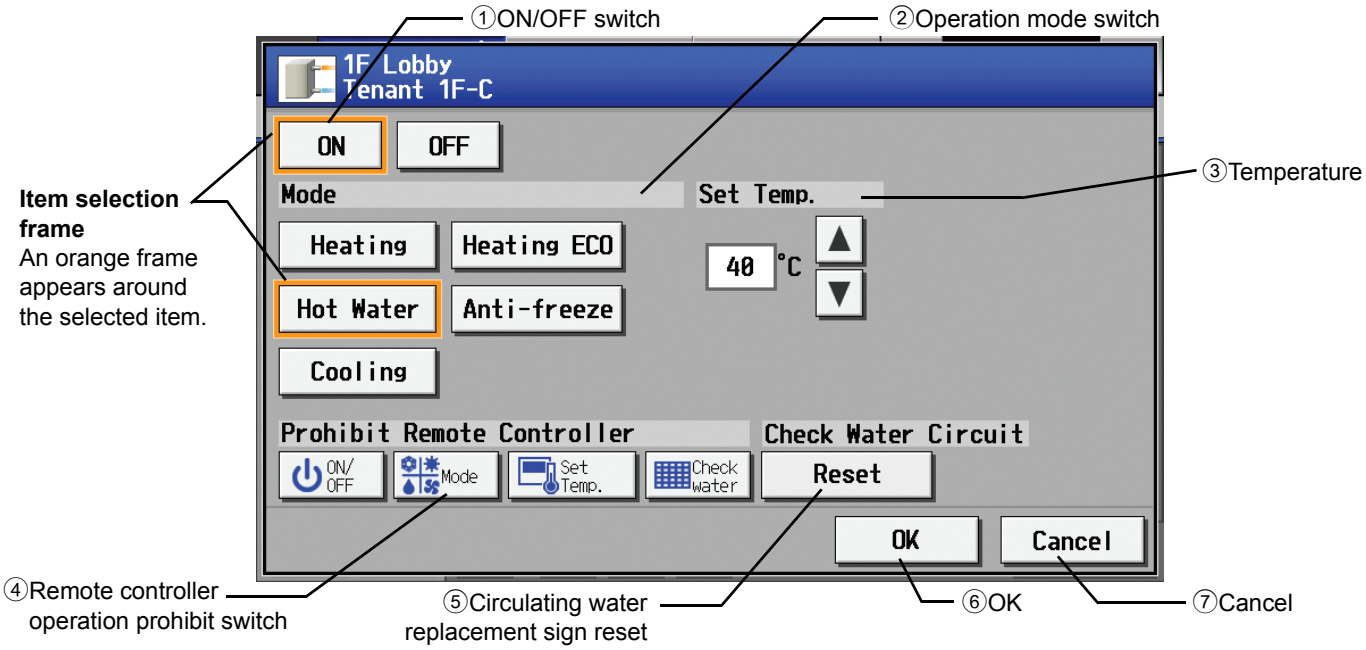
* The change on the interlock setting between the indoor and LOSSNAY units made on the indoor unit side will not be reflected on the LOSSNAY unit side on the screen until the OK is pressed and the change is saved. The actual interlock setting, however, is immediately effective, so as soon as the interlock setting on the indoor unit side is set to ON, the LOSSNAY unit will go into operation when one or more indoor units go into operation regardless of the display on the screen.

(2) Ventilation equipment (LOSSNAY) group



	Function	Operation method	Display
①	ON/OFF	Select the operation status (ON or OFF).	An orange frame will appear around the selected button.
②	MODE	Select the desired operation mode from one of the icons below “Mode”.	An orange frame will appear around the selected mode.
③	Fan speed	Use the Up/Down arrows below “Fun Speed” to set the fan speed.	2-speed model: →  →… (Low) (High) (Fan speed setting is not available on some indoor units.)
④	Prohibiting local remote controller operation	Press the button that corresponds to the desired function and setting to permit or prohibit the operation from the remote controller. The functions that can be prohibited are as follows: ON/OFF and filter sign reset.	Pressing of each button toggles through the following three options: Retention of current status → Permit → Prohibit 
⑤	Filter sign reset	Press “Reset” under “Filter Sign”.	Filter cleaning warning sign will be cleared. (Cumulative operation time is reset.)
⑥	OK	Press the OK button to reflect the change.	Pressing the OK button saves the setting and takes the screen back to the previous screen (Floor layout or Block display).
⑦	Cancel	Press the Cancel button to cancel the change.	Pressing the Cancel button cancels the change and takes the screen back to the previous screen (Floor layout or Block display).

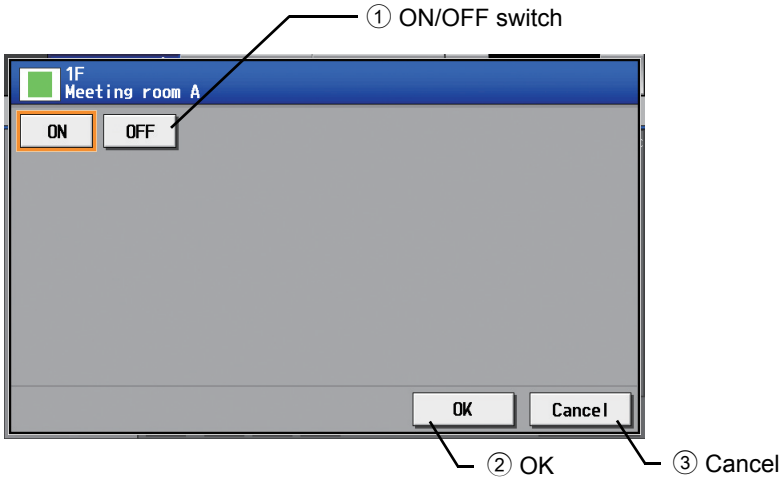
(3) Air To Water (PWFY) (Booster and Water HEX unit) group



	Function	Operation method	Display
①	ON/OFF	Select the operation status (ON or OFF).	An orange frame will appear around the selected button.
②	MODE	Select the desired operation mode from one of the icons below “Mode”.	An orange frame will appear around the selected mode.
③	Set Temperature	Set the temperature by using the Up/Down arrows below “Set Temp”.	Pressing the Up/Down arrow increases/decreases the temperature by one degree respectively. The settable temperature range depends on the mode and model. If the Up arrow is touched when the upper limit temperature is displayed. The lower limit temperature will appear, and the Down arrow vice versa. [Booster unit]* / [Water HEX unit]* Heating: 30 ~ 50°C / 87~122°F — Heating: 30 ~ 45°C / 87~113°F Heating ECO: 30 ~ 45°C / 87~113°F — Heating ECO: 30 ~ 45°C / 87~113°F Hot Water: 30 ~ 70°C / 87~158°F — Hot Water: Invalid Anti-freeze: 10 ~ 45°C / 50~113°F — Anti-freeze: 10 ~ 45°C / 50~113°F Cooling: Invalid — Cooling: 10 ~ 30°C / 50~87°F * Temperatures are displayed Fahrenheit if Fahrenheit is selected.
④	Prohibiting local remote controller operation	Press the button that corresponds to each of the following buttons to permit or prohibit access to these functions: ON/OFF, operation mode, temperature, and circulating water replacement sign reset.	Pressing of each button toggles through the following three options: Retention of current status → Permit → Prohibit ON/OFF:    Operation mode:    Temperature setting:    Circulating water replacement:   
⑤	Circulating water replacement sign reset	Press the OK button with the circulating water replacement sign reset button being touched.	The circulating water replacement sign is reset.
⑥	OK	Press the OK button to reflect the change.	Pressing the OK button saves the setting and takes the screen back to the previous screen (Floor layout or Block display).

	Function	Operation method	Display
⑦	Cancel	Press the Cancel button to cancel the change.	Pressing the Cancel button cancels the change and takes the screen back to the previous screen (Floor layout or Block display).

(4) General equipment group



	Function	Operation method	Display
①	ON/OFF	Select the operation status (ON or OFF).	An orange frame will appear around the selected button.
②	OK	Press the OK button to reflect the change.	Pressing the OK button saves the setting and takes the screen back to the previous screen (Floor layout or Block display).
③	Cancel	Press the Cancel button to cancel the change.	Pressing the Cancel button cancels the change and takes the screen back to the previous screen (Floor layout or Block display).

6-3 Setting Schedules

Weekly schedule for each group can be set. When a license is registered, it is possible to set different weekly (2 types)/annual/today's schedules for each group.

* When multiple AG-150A controllers are connected by connecting an Expansion controller to the system, schedule settings for the groups should be made only on one of the AG-150A controllers.

6-3-1 Setting the schedule without a registered license

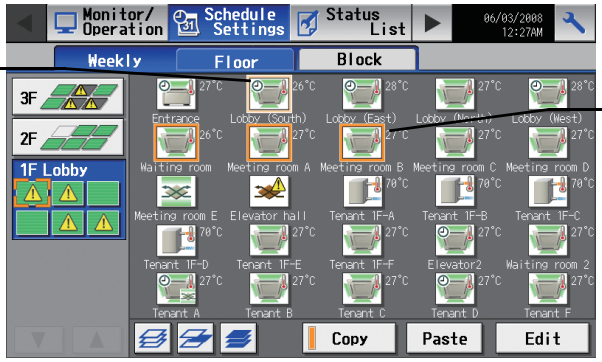
If a license has not been acquired, only the weekly schedule functions are available.

• Setting the Weekly Schedule

Touch the menu item [Schedule Settings] and touch [Weekly] in the sub menu to display the Weekly Schedule setting screen. To set a weekly schedule, firstly you must select what will be the target of this schedule and then set the schedule details from Sunday right through to Saturday.

Note: When the contents of an operation are executed as part of a schedule these contents will continue to be in effect until they are changed by a schedule or browser etc. Therefore, if you are setting a schedule that is only for a particular day, be sure to set your schedule in a way that will not impact on the next day's operation.
For example, if you wish to prohibit operations being performed from the remote controller after 17:00, set a Prohibit operation for 17:00 and set an Enable operation for 23:59.

Copy destination frame
A pale orange frame appears around the copy destination unit.



Item selection frame
An orange frame appears around the selected unit(s).

(1) Select the type of schedule settings to make.

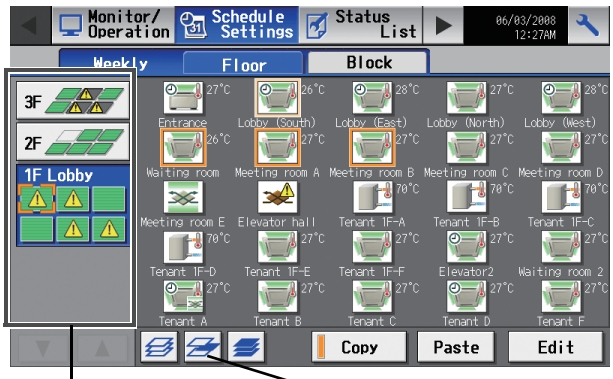
(1-1) Group



To make the settings for a group, select the group by touching the corresponding icon on the weekly schedule setting screen (floor layout or block display). Multiple groups can be selected. An orange frame appears on the group that has been selected. Selection can be cancelled by touching the icon again. Touch the Cancel button to deselect all.
After making the selection, touch the [Edit] button at the right bottom corner of the screen to bring up the weekly schedule screen.

* Each group is represented with an icon and a group name.

(1-2) Floor

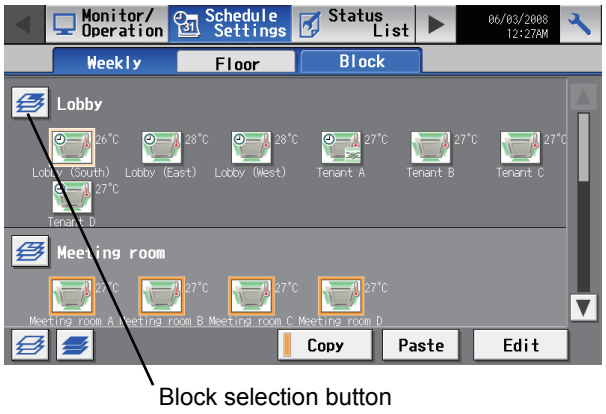


Floor selection button

Select-all-units-on-the floor button

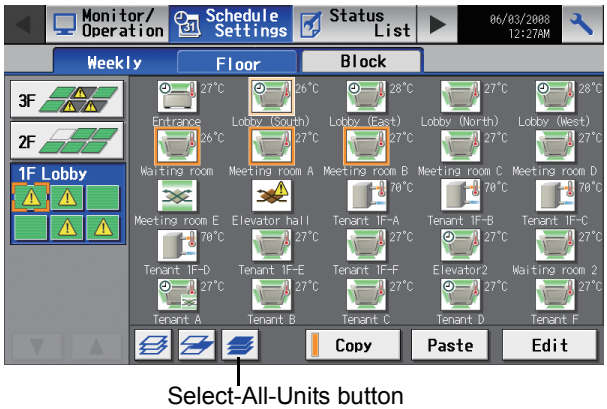
To make the settings for all groups on a given floor, select the floor on the floor layout screen under the weekly schedule setting screen menu, and touch the Select-all-units-on-the floor button. An orange frame will appear around the icons of all groups on the selected floor, and also around the floor selection button. Only a single floor can be selected at a time.
After making the selection, touch the [Edit] button at the right bottom corner of the screen to bring up the weekly schedule screen.

(1-3) Block

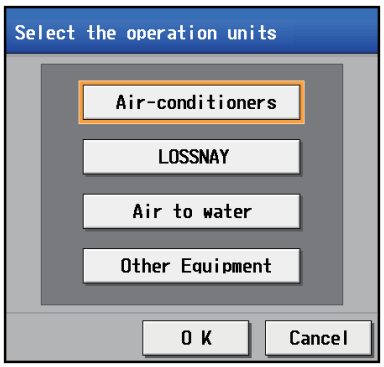


To make the settings for a block or blocks, select the block selection button on the block display screen under the weekly schedule setting screen by touching it. An orange frame will appear around the icons that correspond to the selected blocks.
After making the selection, touch the [Edit] button at the right bottom corner of the screen to bring up the weekly schedule screen.

(1-4) All groups



To make the settings for all groups, touch the Select-all-units button on the weekly schedule setting screen (floor layout or block display screen). An orange frame appears around the icons of all groups.
After making the selection, touch the [Edit] button at the right bottom corner of the screen to bring up the weekly schedule screen.



Equipment type selection screen

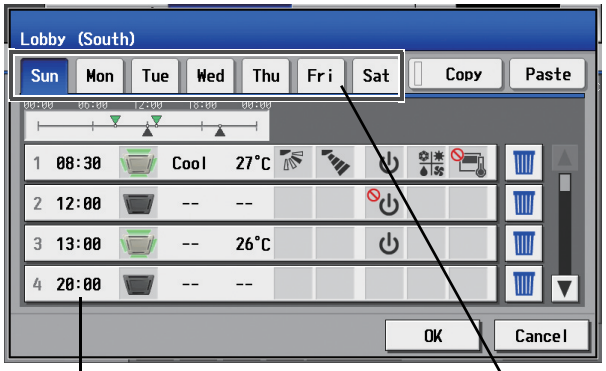
If more than one groups exist within a group, such as air conditioning unit group, ventilation unit (LOSSNAY) group, and Other Equipment group, a screen to select a group will appear when the “Set” button is touched.
* “Booster unit” and “Water HEX unit” will appear as “Air To Water (PWFY).”



Schedule setting method selection screen

After the model names have been selected, a screen will appear asking if you want to set the schedule by using a new form or by using the settings for an existing group. To use the existing group settings, select “Based on the following group settings,” select the group, and press “OK.”
Selecting “New settings” will bring up a blank form. Selecting “Based on the following group settings” will bring up the schedule of the selected group.

(2) Select the day of the week



Schedule content button

Days of the week menu

Select the days of the week from the weekly schedule setting screen and touch the schedule content button to bring up the schedule content setting screen.

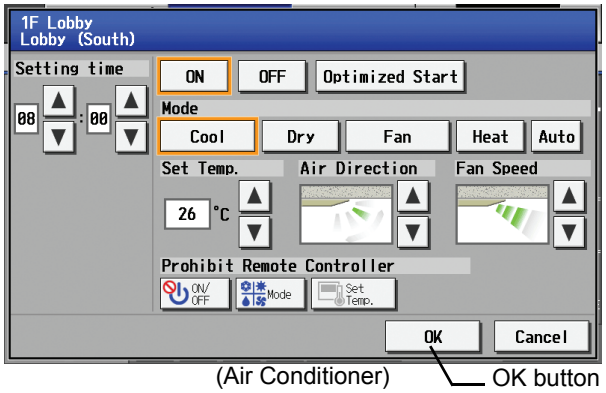


The ON/OFF events that are schedules will appear as inverted triangles and triangles (: ON; :OFF, :Other settings).

* Only the ON/OFF events are displayed. Vane settings and permit/ prohibit settings will not be displayed.

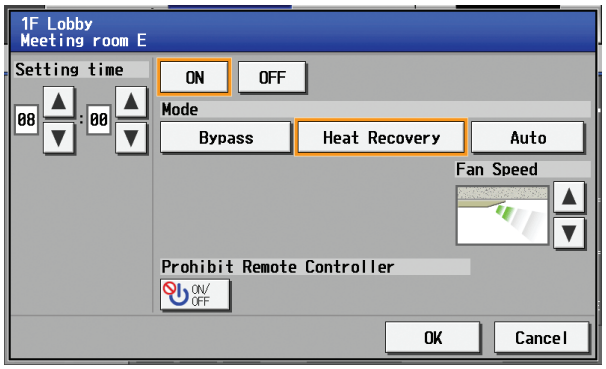
Note: When multiple groups are selected, those settings that have been made for each group will not be displayed.
Press [OK] to delete the schedule, or press [Cancel] to exit the screen without saving any changes.

(3) Set the contents of the schedule

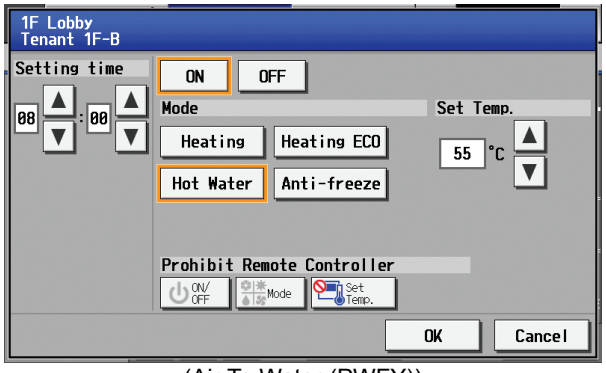


(Air Conditioner)

OK button



(LOSSNAY)



(Air To Water (PWFY))

Make the settings for the execution time, operation patterns (ON/OFF, operation mode, setting temperature, airflow direction, fan speed, remote controller operation prohibition) on the schedule content setting screen, and then touch the [OK] button. Not all settings need to be made. The settings for only the operation mode or the setting temperature, for example, can be made.

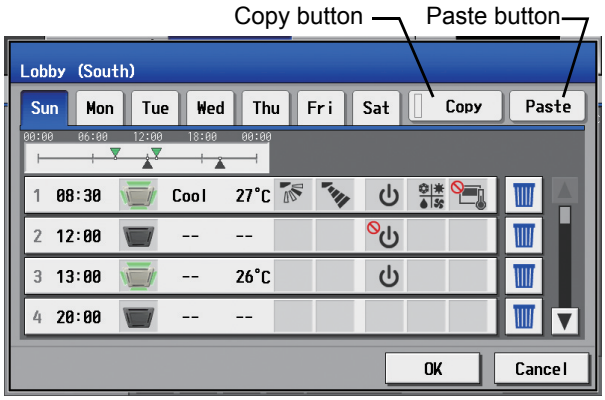
Note: When setting a schedule for all groups or for a block, it is possible to set all operation modes such as Auto mode etc, but if some targeted air conditioner units do not have such a function, then those units will not run in the specified mode. When setting the schedule, consider what functions are supported by the air conditioner units.

Note: When setting a schedule for all groups or for a block, it is possible to set prohibit remote controller items individually. When allowing remote controller operation under K control, however, all items must be set enable.

Note: When setting a schedule for ventilator units (LOSSNAY), the temperature setting is not displayed. Moreover, the prohibit remote controller operation is simply [ON/OFF].

Note: Only the ON/OFF operation is possible on the general equipment.

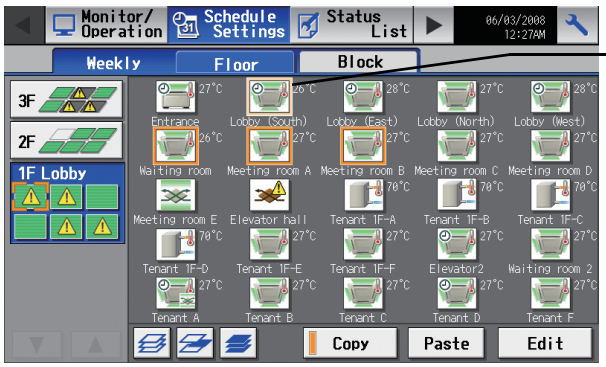
(4) Copy a schedule to another day of the week or to another group



To copy the schedule of a given day to another day, select the days of the week from the weekly schedule setting screen, touch [Copy] to select it, select a day to copy the schedule to, and touch [Paste].
To copy the weekly schedule for one group to another group, select the group from the weekly schedule setting screen (Floor layout or block display screen), touch [Copy], select a group to copy the schedule to, and touch [Paste].

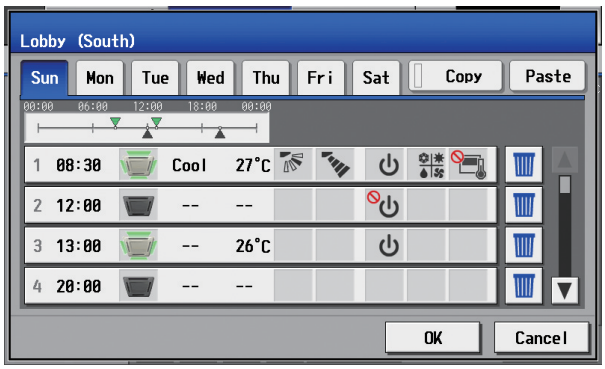
* The settings of one type of equipment cannot be copied to the settings of a different type of equipment. (i.e., The settings of air conditioning units cannot be copied to ventilation equipment (LOSSNAY) settings.)

* Available operation modes and setting temperature range varies with models.



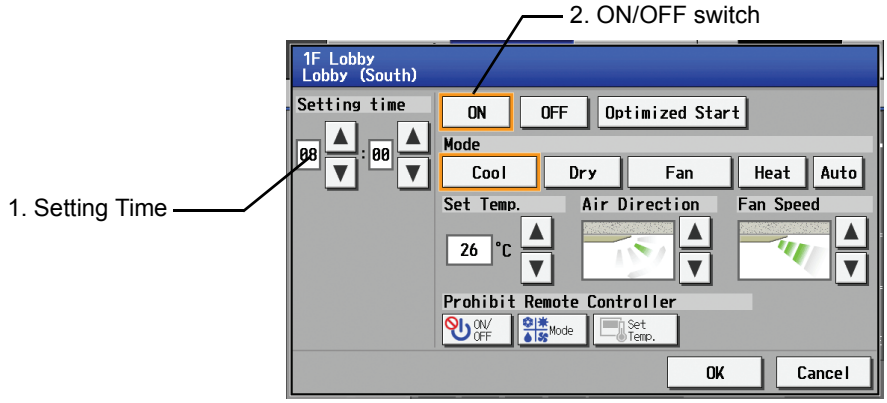
Copy destination frame
A pale orange frame appears around the copy destination unit.

(5) Save the contents of schedule



After all the settings have been made, touch the [OK] button to save the schedule settings.
Touch the [Cancel] button to go back to the previously saved settings without making any changes.

- **Schedule setting screen**



	Function	Operation method	Display
1	Setting Time	Touch the ▲▼ buttons to set the start time.	Touching the ▲ button will increase the value by one, and touching the ▼ button will decrease the value by one (settable in 1-minute increments).
2	ON/OFF/ Optimized Start	Slect the operation status (ON, OFF, Optimized start).	An orange frame will appear around the selected button. Note: When [Optimized Start] is selected, set the operation mode and preset temperature as well. If “Prohibit Remote Controller” is set at the same time, remote controller is prohibited at its setting time. Note: Air To Water (PWFY) and LOSSNAY have no Optimized Start function.

Note: When CITY MULTI S Series (PUMY) is used, set the temperature at 17°C/63°F or above in heating mode.

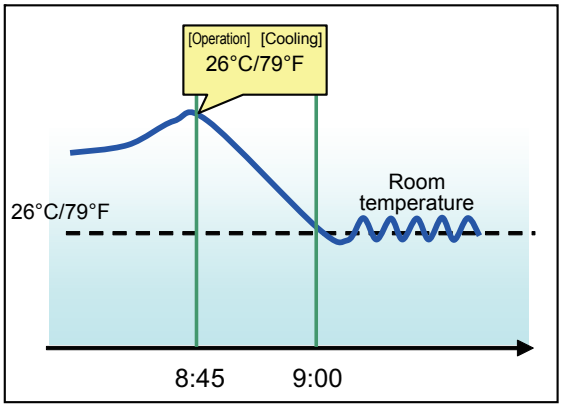
* Refer to the explanation of operation screen on page 27 for other items.

• **Optimized start-up schedule function**

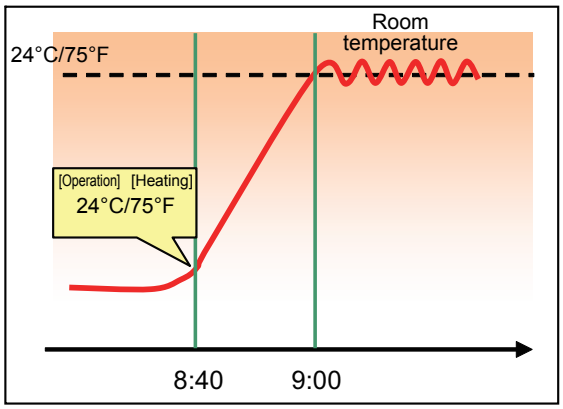
Optimized start-up schedule function is a function that starts an air conditioning unit 5 - 60 minutes prior in order to reach the scheduled temperature at the scheduled time.

Note: A unit starts 30 minutes prior at the first boot.

Note: If the room temperature is measured by the air-conditioner's suction temperature sensor, the temperature may not be correct when the air-conditioner is inactive and the air is not fresh. When the temperature is not measured correctly, switch the sensor to external temperature sensor (PAC-SE40TSA) or remote control sensor.



Ex.) Pre-cooling (Setting 9:00 26°C/79°F)



Ex.) Pre-heating (Setting 9:00 24°C/75°F)

Select the mode [Optimized Start] on the schedule setting screen when this function is required.



6-3-2 Setting the schedule with a registered license

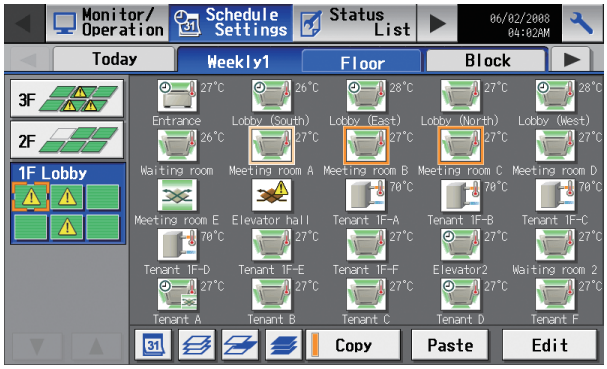
When a license (PIN CODE) is registered, it is possible to set different weekly (2 types)/annual/today's schedules for each air conditioner group. Moreover, for any weekly/annual/today's schedule run for a particular day, the priority in which it is run will be from the highest and the order will be [Today's], [Annual], [Weekly]. Two types of weekly schedule (Summer/Winter) can be set.

6-3-2-1 Setting the Weekly Schedule

Touch the menu item [Schedule Settings] and touch [Weekly1] or [weekly2] in the sub menu to display the Weekly Schedule setting screen. To set a weekly schedule, you first must select what will be the target of this schedule and then set the schedule details from Sunday right through to Saturday.

Note: When the contents of an operation are executed as part of a schedule these contents will continue to be in effect until they are changed by a schedule or browser etc. Therefore, if you are setting a schedule that is only for a particular day, be sure to set your schedule in a way that will not impact on the next day's operation.
For example, if you wish to prohibit operations being performed from the remote controller after 17:00, set a Prohibit operation for 17:00 and set an Enable operation for 23:59.

(1) Select the schedule to set.

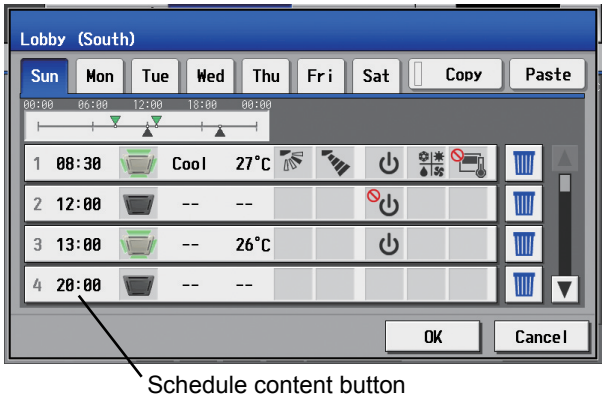


Select either [Weekly 1] or [Weekly 2] from the sub menu. (Two types of weekly schedule patterns are available if the license is registered.)

(2) Select the type of schedule settings to make.

Select the type of schedule settings to make by referring to Section 1 above under "Select the type of schedule settings to make."

(3) Select the day of the week



Select the days of a week from the weekly schedule screen and touch the schedule content button to bring up the schedule content setting screen.

Note: When multiple groups are selected, those settings that have been made for each group will not be displayed.
Press [OK] to delete the schedule, or press [Cancel] to exit the screen without saving any changes.

(4) Set the contents of the schedule



(Air Conditioner)

Refer to 6-3-1 (3) for the figure of LOSSNAY and Air To Water (PWFY).

Make the settings for the execution time and operation patterns (ON/OFF, operation mode, setting temperature, airflow direction, fan speed, remote controller operation prohibition) on the schedule content setting screen, and then touch the [OK] button. Not all settings need to be made. The settings for only the operation mode or the setting temperature, for example, can be made.

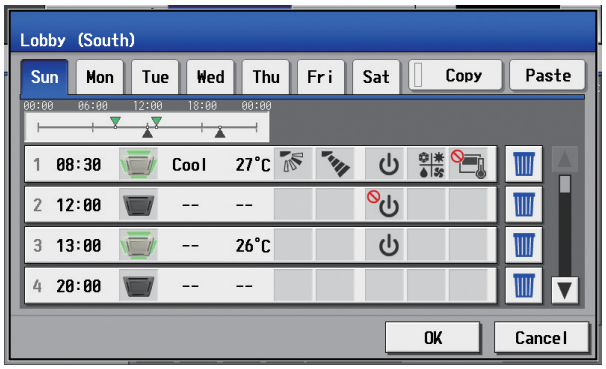
Note: When setting a schedule for all groups or for a block, it is possible to set all operation modes such as Auto mode etc, but if some targeted air conditioner units do not have such a function, then those units will not run in the specified mode. When setting the schedule, consider what functions are supported by the air conditioner units.

Note: When setting a schedule for all groups or for a block, it is possible to set prohibit remote controller items individually. When allowing remote controller operation under K control, however, all items must be set enable.

Note: When setting a schedule for ventilator units, the temperature setting is not displayed. Moreover, the prohibit remote controller operation is simply [ON/OFF].

Note: Only the ON/OFF operation is possible on the general equipment.

(5) Copy a schedule to another day of the week or to another group

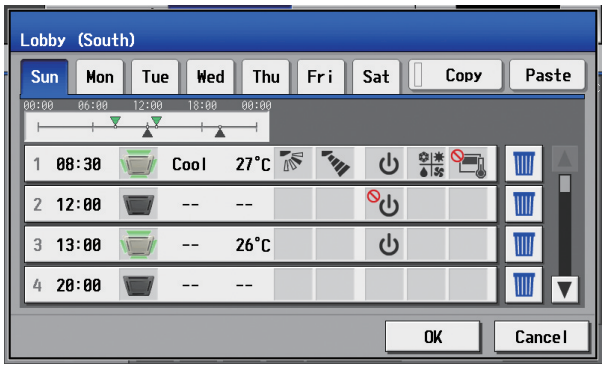


Refer to the figures under 6-3-1 (4) for how to copy the schedule of one group to another.

To copy the schedule of a given day to another day, select the days of the week from the weekly schedule setting screen, touch [Copy] to select it, select a day to copy the schedule to, and touch [Paste].
To copy the weekly schedule of one group to another group, select the group from the weekly schedule setting screen (Floor layout or block display screen), touch [Copy], select a group to copy the schedule to, and touch [Paste].

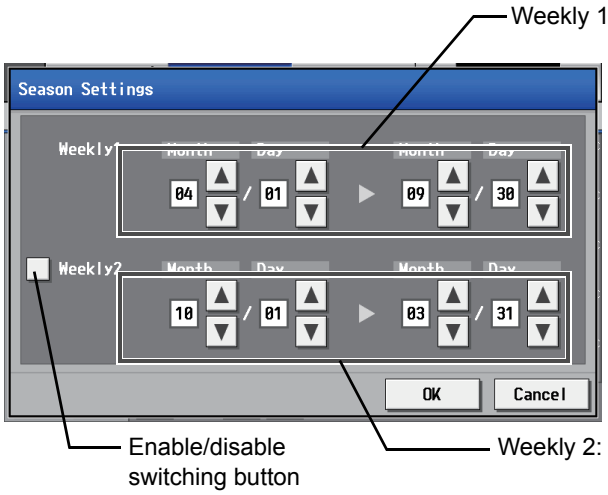
* The settings of one type of equipment cannot be copied to the settings of a different type of equipment. (i.e., The settings of air conditioning units cannot be copied to ventilation equipment (LOSSNAY) settings.)
* Available operation modes and setting temperature range varies with models.
* Schedules cannot be copied to or from between [Weekly 1] and [Weekly 2].

(6) Save the contents of schedule



After all the settings have been made, touch the [OK] button to save the schedule settings.
Touch the [Cancel] button to go back to the previously saved settings without making any changes.

(7) Define the seasons



Pressing the Season Settings button on the schedule setting screen ( ) will bring up the Season Settings screen, and the duration of each seasons can be defined, to which [Weekly 1] or [Weekly 2] schedules are applied.Touch the “Enable/disable switching button” to enable or disable the “Weekly 2” setting.

* The period setting can go past 12/31 (i.e., 11/1~3/31).

6-3-2-2 Setting the annual schedule (Applicable only when the license is registered)

Selecting [Schedule Setting] from the main menu on the [Main operation screen] will bring up the schedule setting screen. Subsequently, selecting [Annual] from the sub menu will bring up the annual schedule setting screen. You can use the annual schedule to set schedules for days such as public holidays and summer vacation that need to be scheduled differently to the weekly schedule. For each air conditioner group, it is possible to set 50 day-long settings up to 24 months into the future (including the current month).

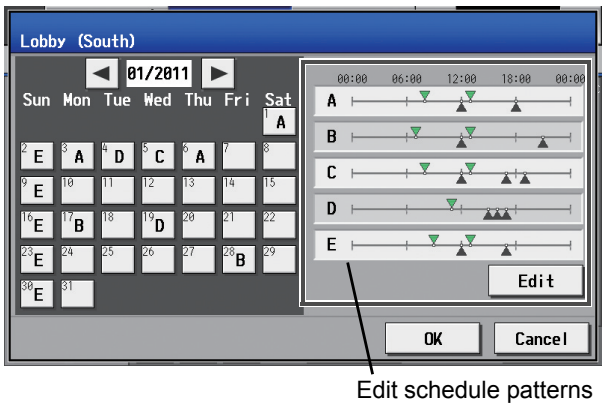
Settings for days that have passed will be deleted automatically.

To make the settings for the annual schedule, first select the item to be set, and then touch [Edit] to bring up the annual schedule screen. Make the settings for the five patterns (pattern A through E) on the weekly schedule screen, and then assign those patterns to appropriate dates (e.g., holidays, or summer break).

Note: When the contents of an operation are executed as part of a schedule these contents will continue to be in effect until they are changed by a schedule or browser etc. Therefore, if you are setting a schedule that is only for a particular day, be sure to set your schedule in a way that will not impact on the next day’s operation.
For example, if you wish to prohibit operations being performed from the remote controller after 17:00, set a Prohibit operation for 17:00 and set an Enable operation for 23:59.

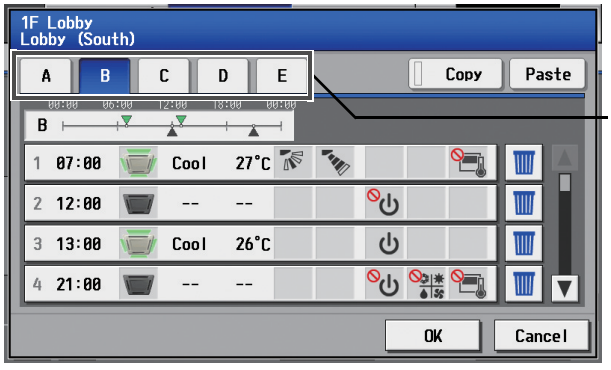
(1) Select the item to be set.
As with the weekly schedule setting, select the item to be set. (Refer to 6-3-1 (1).)

(2) Select a pattern.



Touching the alphabetic letters in the calendar or touching the Edit button in the annual schedule screen will bring up the schedule pattern setting screen. Select the pattern you want to edit.

Note: When multiple groups are selected, those settings that have been made for each group will not be displayed.
Press [OK] to delete the schedule, or press [Cancel] to exit the screen without saving any changes.



(3) Edit the patterns.



(Air Conditioner)

Refer to 6-3-1 (3) for the figure of LOSSNAY and Air To Water (PWFY).

After selecting the pattern, touch the schedule content button to bring up the schedule content setting screen. Make the settings for the execution time and operation patterns (ON/OFF, operation mode, setting temperature, airflow direction, fan speed, remote controller operation prohibition) on the schedule content setting screen, and then touch the [OK] button. Not all settings need to be made. The settings for only the operation mode or the setting temperature, for example, can be made.

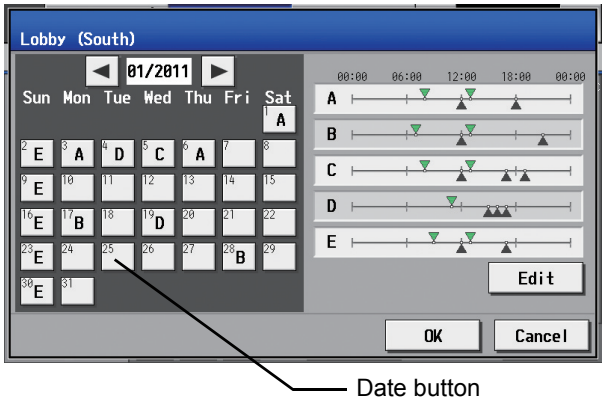
Note: When setting a schedule for all groups or for a block, it is possible to set all operation modes such as Auto mode etc, but if some targeted air conditioner units do not have such a function, then those units will not run in the specified mode. When setting the schedule, consider what functions are supported by the air conditioner units.

Note: When setting a schedule for all groups or for a block, it is possible to set prohibit remote controller items individually. When allowing remote controller operation under K control, however, all items must be set enable.

Note: When setting a schedule for ventilator units, the temperature setting is not displayed. Moreover, the prohibit remote controller operation is simply [ON/OFF].

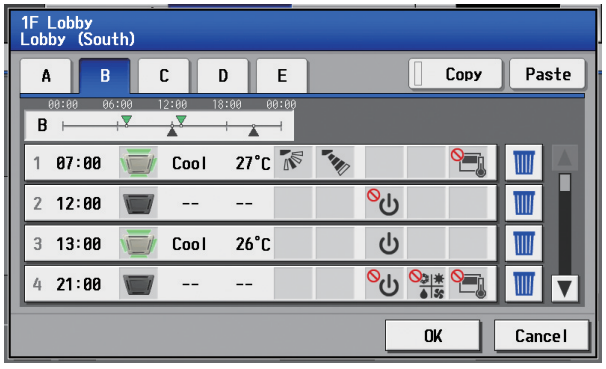
Note: Only the ON/OFF operation is possible on the general equipment.

(4) Assign schedule patterns to special dates.



Assign the schedule patterns to the dates to which regular weekly schedule does not apply, such as holidays and summer break. Touch the desired date on the calendar to see which pattern is assigned to the date. Each touching of the button will cycle through the letters ABCDE and blank, then back to A. Touch the button until you get the pattern you want. Select blank to cancel the selection.

(5) Copy a schedule to another pattern or to another group

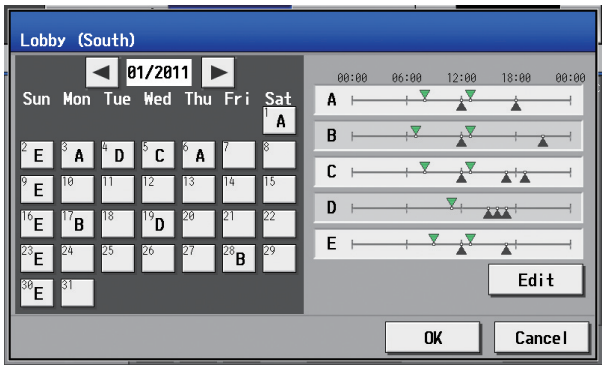


Refer to the figures under 6-3-1 (4) for how to copy the schedule of one group to another.

To copy a pattern to another, select the pattern from the pattern menu on the schedule pattern setting screen, touch [Copy] to select it, select a pattern to copy to, and touch [Paste].
To copy the annual schedule for one group to another group, select the group from the annual schedule setting screen (Floor layout or block display screen), touch [Copy], select a group to copy the schedule to, and touch [Paste].

* The settings of one type of equipment cannot be copied to the settings of a different type of equipment. (i.e., The settings of air conditioning units cannot be copied to ventilation equipment (LOSSNAY) settings.)
* Available operation modes and setting temperature range varies with models.

(6) Save the contents of schedule



After all the settings have been made, touch the [OK] button to save the schedule settings.
Touch the [Cancel] button to go back to the previously saved settings without making any changes.

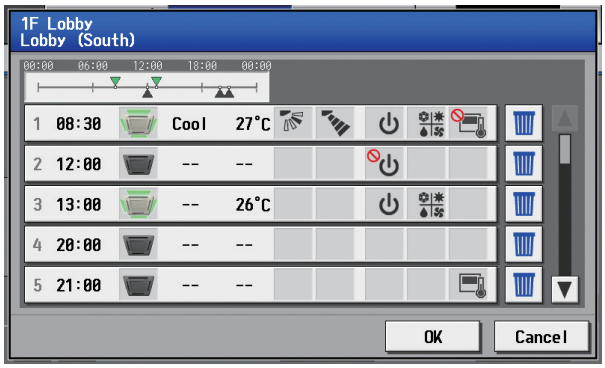
6-3-2-3 Setting the current date schedule

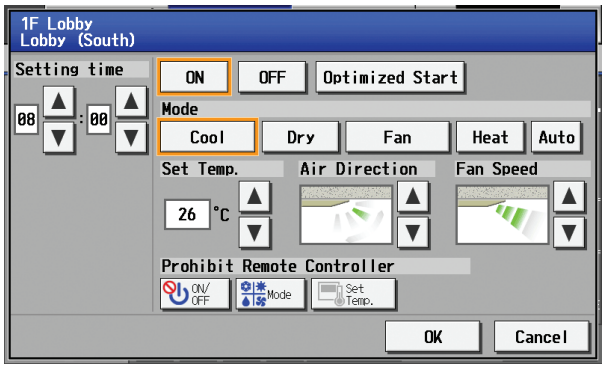
Selecting [Schedule Setting] from the main menu on the [Main operation screen] will bring up the schedule setting screen. Subsequently, selecting [Today] from the sub menu will bring up the current day schedule setting screen. By using this function, schedule for the current date can be set without having to change the weekly or annual schedule. First select the item to be set, and then set the schedule.

Note: When the contents of an operation are executed as part of a schedule these contents will continue to be in effect until they are changed by a schedule or browser etc. Therefore, if you are setting a schedule that is only for a particular day, be sure to set your schedule in a way that will not impact on the next day's operation.
For example, if you wish to prohibit operations being performed from the remote controller after 17:00, set a Prohibit operation for 17:00 and set an Enable operation for 23:59.

(1) Select the item to be set.
As with the weekly schedule setting, select the item to be set. (Refer to 6-3-1 (1).)

(2) Set the contents of the schedule





(Air Conditioner)

Refer to 6-3-1 (3) for the figure of LOSSNAY and Air To Water (PWFY).

Touch the schedule content button on the current day schedule screen to bring up the schedule content setting screen. Make the settings for the execution time and operation patterns (ON/OFF, operation mode, setting temperature, airflow direction, fan speed, remote controller operation prohibition) on the schedule content setting screen, and then touch the [OK] button. Not all settings need to be made. The settings for only the operation mode or the setting temperature, for example, can be made.

Note: When setting a schedule for all groups or for a block, it is possible to set all operation modes such as Auto mode etc, but if some targeted air conditioner units do not have such a function, then those units will not run in the specified mode. When setting the schedule, consider what functions are supported by the air conditioner units.

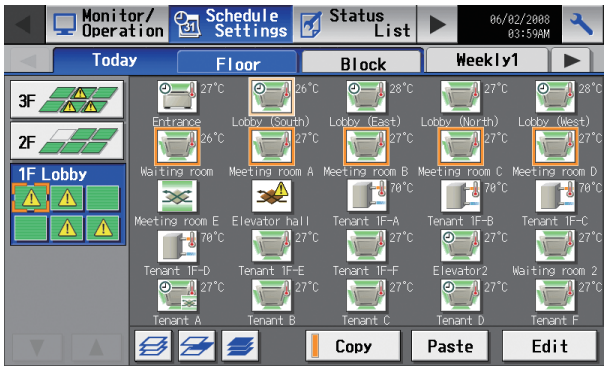
Note: When setting a schedule for all groups or for a block, it is possible to set prohibit remote controller items individually. When allowing remote controller operation under K control, however, all items must be set enable.

Note: When setting a schedule for ventilator units, the temperature setting is not displayed. Moreover, the prohibit remote controller operation is simply [ON/OFF].

Note: Only the ON/OFF operation is possible on the general equipment.

Note: When multiple groups are selected, those settings that have been made for each group will not be displayed.
Press [OK] to delete the schedule, or press [Cancel] to exit the screen without saving any changes.

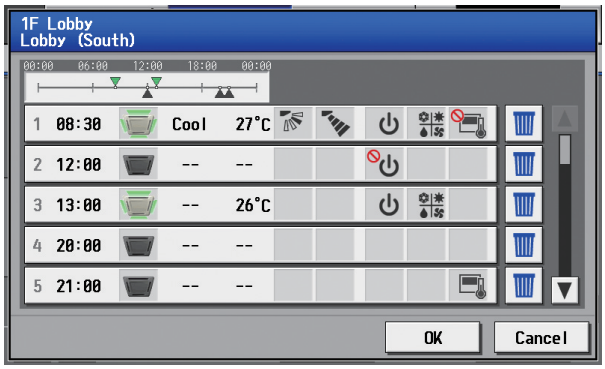
(3) Copy a schedule to another group



To copy the settings of the current day schedule in one group to another, select the group from the current day schedule setting screen (Floor layout or block display screen), touch [Copy], select a group to copy the schedule to, and touch [Paste].

* The settings of one type of equipment cannot be copied to the settings of a different type of equipment. (i.e., The settings of air conditioning units cannot be copied to ventilation equipment (LOSSNAY) settings.)
* Available operation modes and setting temperature range varies with models.

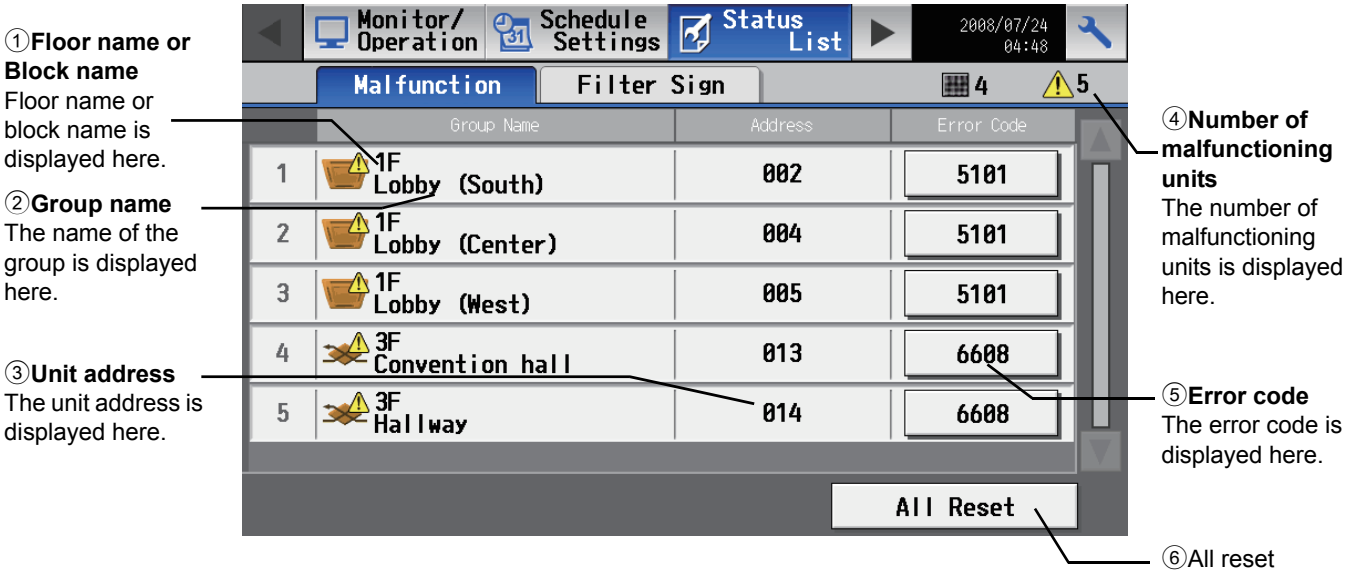
(4) Save the contents of schedule



After all the settings have been made, touch the [OK] button to save the schedule settings.
Touch the [Cancel] button to go back to the previously saved settings without making any changes.

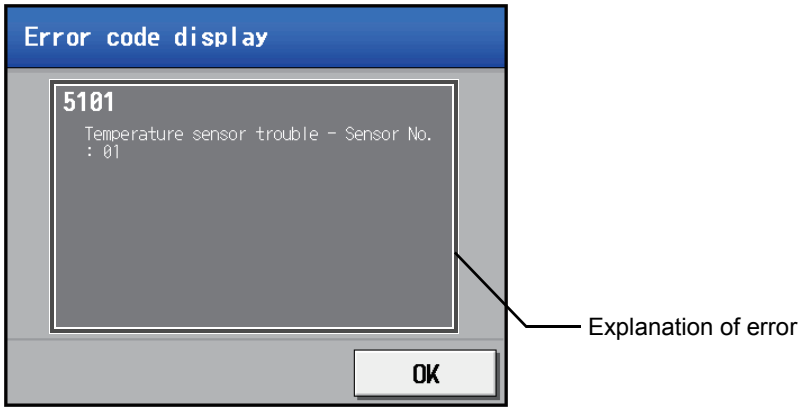
6-4 Checking the List of Malfunctioning Units

Touch the [Status list] in the main operation screen menu, and then touch [Malfunction] to see a list of units that are currently in error.
Note: If an error occurs, check the unit address, error code and error description before consulting your dealer or service center.



Item	Description
①Floor name or Block name	The name of the floor or block that the unit in error belongs to appears here. * If a unit, such as an indoor unit or system controller, has not been registered in a group that is the object of the operation, this area will be blank. * If the unit in error has not been registered in a block or floor, this area will be blank.
②Group Name	The name of the group that the unit in error belongs to appears here. Note: If a unit, such as an outdoor unit or system controller, has not been registered in a group that is the object of the operation, this area will be blank.
③Unit address	The address of the unit in error appears here. If an Expansion controller (EC) is connected, this field will appear in the “EC No.- unit address” format (e.g., : [1-012]).
④Number of malfunctioning units	The number of malfunctioning units is displayed.
⑤Error code	The error code of the error that is causing the malfunction is displayed. Touch the error code to see the explanation.
⑥All reset	Touch [All Reset] when you want to reset the errors on all the malfunctioning units at once. If “All reset” is touched, the units that are reset will stop.

Error code display



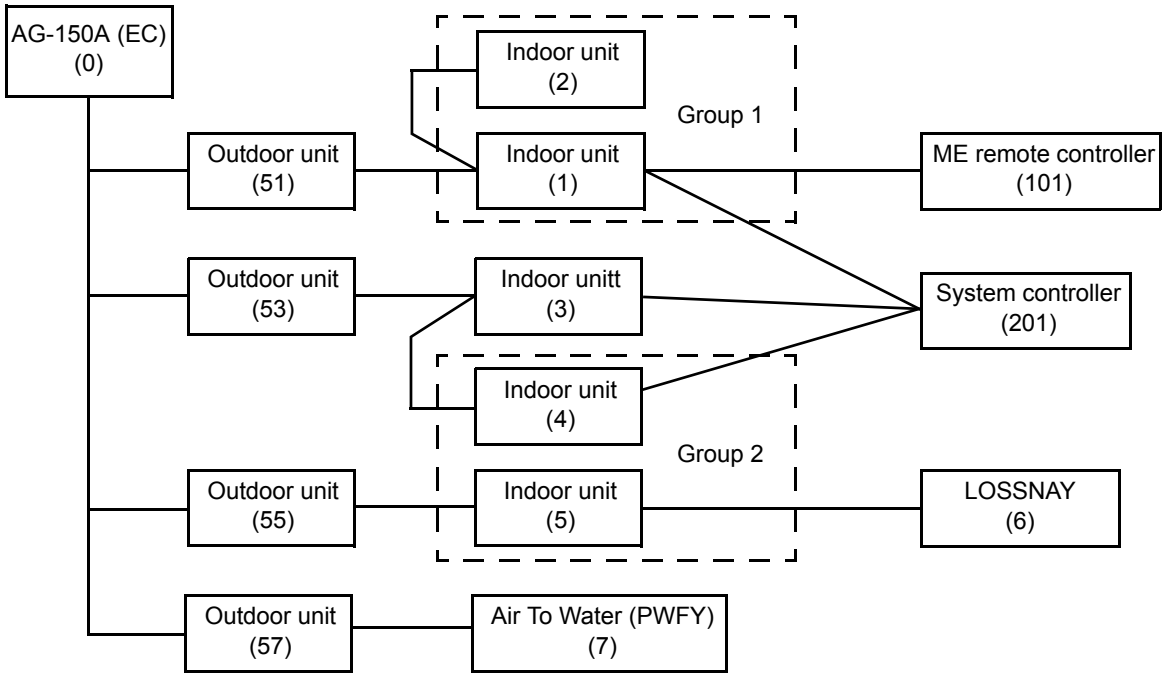
- **Extent of the error reset**

  When an error is reset, units other than the ones in error may come to a stop.

Types of units in error and the affected units that will stop

Units in error	Units that stop
AG-150A (EC)	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 (MA) 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
Interlocked LOSSNAY	Indoor units with which the LOSSNAY is interlocked that is experiencing the problem

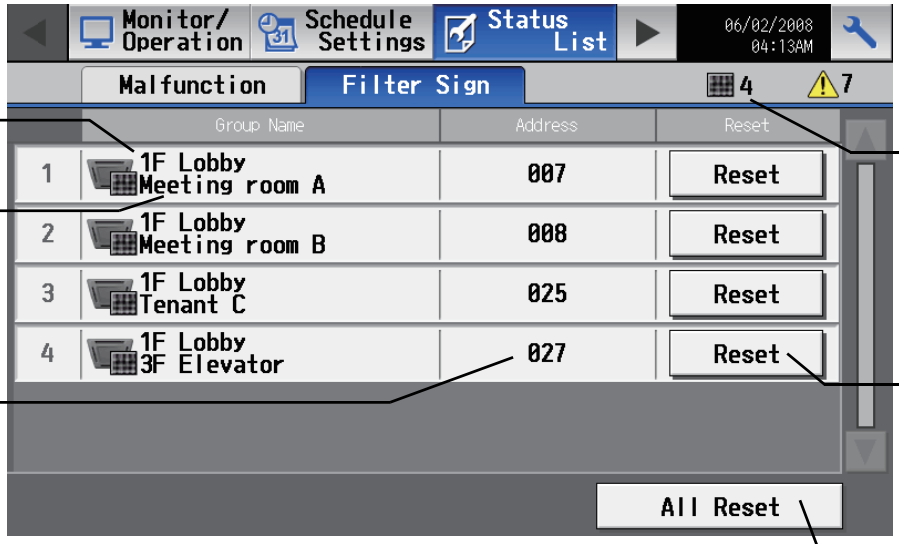
Shown below is a diagram showing the extent to which an error of a unit will affect.



Units in error	Units that stop
AG-150A (EC)	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) (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 (6)	Indoor unit (5)
Air To Water (PWFY) (7)	Air To Water (PWFY) (7)
ME remote controller (101)	Indoor unit (1)
System controller (201)	Indoor unit (1), Indoor unit (3), Indoor unit (4)

6-5 Checking the List of Units with a Triggered Filter Sign

Touching [Status List] on the Main operation screen and then touching [Filter signs] in the sub menu will bring up a list of units whose filter sign is turned on.



①**Floor name or Block name**
Floor name or block name is displayed here.

②**Group name**
The name of the group is displayed here.

③**Unit address**
The unit address is displayed here.

④**Number of units with triggered filter signs**
The number of units with currently triggered filter signs is displayed here.

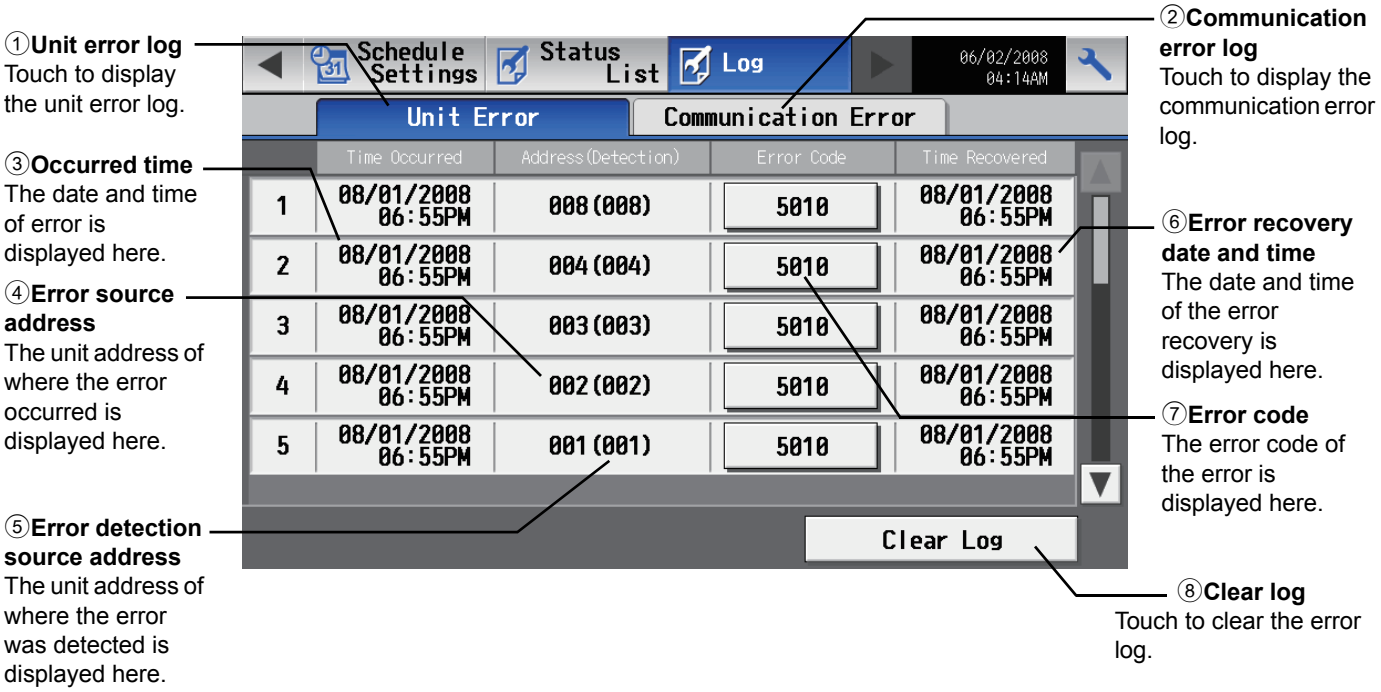
⑤**Reset units individually**
Touch to reset the filter sign for the group the units belong to.

⑥**All reset**
Touch to reset the filter sign on all units with triggered filter signs.

Item	Description
①Floor name or Block name	The name of the floor or block appears here that contains the unit whose filter sign is turned on. * If the unit in error has not been registered in a block or floor, this area will be blank.
②Group Name	The name of the group appears here that contains the unit whose filter sign is turned on.
③Unit address	The address of the units with its filter sign turned on appears here. If an Expansion controller (EC) is connected, this field will appear in the “EC No.- unit address” format (e.g., : [1-012]).
④Number of units withtriggered filter signs	The number of units with currently triggered filter signs is displayed.
⑤Reset units individually	Touch [Reset] when you want to reset the filter sign for the group the units belong to.
⑥All reset	Touch [All Reset] when you want to reset the filter sign on all units with a triggered filter sign at once.

6-6 Checking the Malfunction Log

Touch the [Unit error] in the sub menu under [Log] on the main operation screen to see the unit error history (latest 64 events). Touch [Communication error] in the sub menu to see the M-NET transmission error history (latest 64 events).



Item	Description
①Unit error log	Touch [Unit Error] to display the unit error log.
②Communication error log	Touch [Communication Error] to display the M-NET communication error log.
③Time Occurred	The date and time of when the error occurred is displayed.
④Error source address	The unit address of where the error occurred is displayed.
⑤Error detection source address	The unit address of where the error was detected is displayed.
⑥Time Recovered	The date and time of the error recovery is displayed.
⑦Error code	The error code of the error is displayed.
⑧Clear log	Touch [Clear Log] to clear the error log that is being displayed.

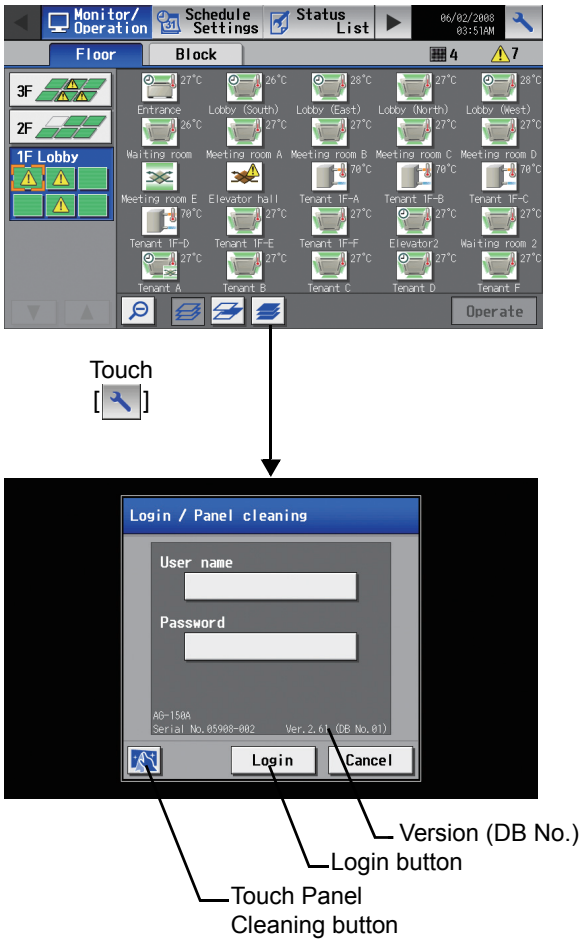
• Checking the malfunction log in the system to which an Expansion controller (PAC-YG50ECA) is connected.

An EC tab for each Expansion controller will appear in the tab area. The maximum of 128 errors (64 unit errors and 64 communication errors) can be displayed for each Expansion controller.



7. Initial Settings

7-1 Bringing up the settings screen



Touching the Setting Change button on the top right hand on the Main menu will bring up the Login screen. Touch “User Name” and “Password” on the screen, and enter them. Touch the Login button. If the user name and the password match, the Setting Change screen will appear.

* A keyboard screen will appear. Touch the keys on the keyboard to enter the user name and password.

User	Default user name	Default password	Available functions
Maintenance User	initial	init	All functions
Building Manager	administrator	admin	Out of all the functions, the items to which access rights have been given are available.

Note: Maintenance users can make available to the administrator only the information necessary for normal operations (group name setting etc.)

Note: It is recommended to change the user name and password not to allow users other than the building manager to change the settings.

• Initial settings for the system with connection to an Expansion controller (PAC-YG50ECA)

Compare the DB No. at the right bottom of the Login screen with the DB No. on the label attached on the Expansion controller. If they do not match, consult your dealer.

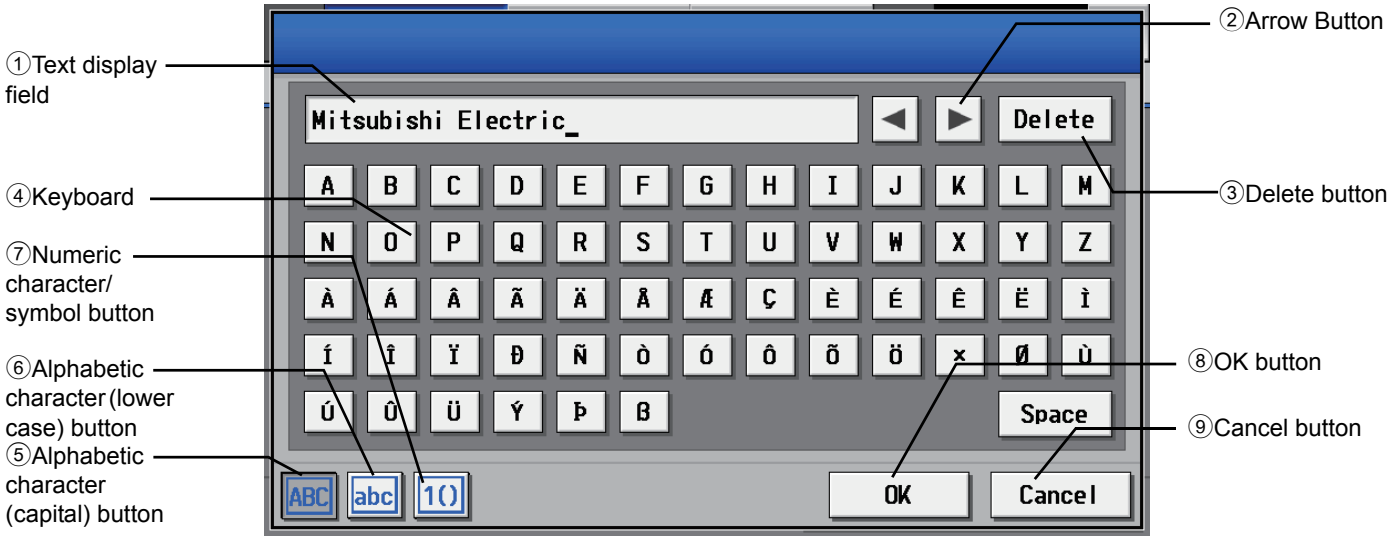




Keyboard screen

Keyboard Screen

The screen below is used to enter characters and numbers on the Initial Settings screen.

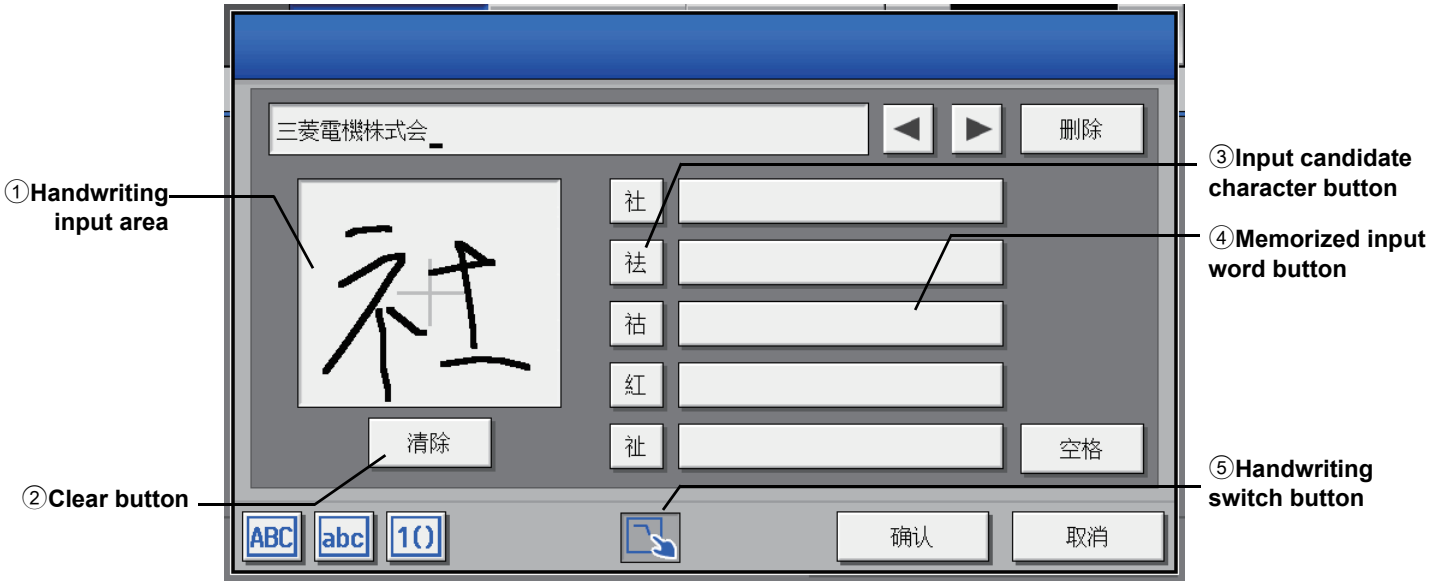


Item	Description
①Text display field	The entered string will appear here.
②Arrow Button	Touch to move the cursor.
③Delete button	Touch to delete one character to the left of the cursor.
④Keyboard	Use to input characters. Touch the desired character to enter it.
⑤Alphabetic character (capital) button	Touch to display the keyboard for entering Alphabetic characters (capital).
⑥Alphabetic character (lower case) button	Touch to display the keyboard for entering Alphabetic characters (lower case).
⑦Numeric character/symbol button	Touch to display the keyboard for entering numeric characters and symbols.
⑧OK button	Touch to save the changes and return to the previous screen.
⑨Cancel button	Touch the [Date/Time Set] button to set the current date and time.

* The type of keyboard that appears depends on the type of characters that can be entered.

Handwriting input screen

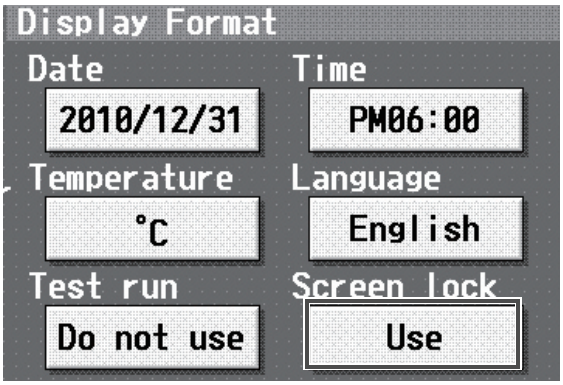
When “Japanese” or “Chinese” is selected, characters can be input by using a handwriting pad.



Item	Description
①Handwriting input area	This area is used to input characters. Handwrite a character in this area. Candidate characters will be shown on the Input candidate character buttons. Select the character you want and touch the button. Note: Handwrite slowly otherwise the character cannot be recognized correctly. Note: Handwrite characters in the correct stroke order otherwise the character cannot be recognized correctly. Note: If a pen is used, it should not be sharp.
②Clear button	Clears the handwriting input area.
③Input candidate character button	Shows five candidate characters of high similarity with the input character. Touch the button with a desired character to enter the character. Note: If a desired character is not shown, press Clear button to clear the input area and rehandwrite slowly.
④Memorized input word button	Shows words input in the past. Touch a button that shows your desired character to enter the character. Note: The words shown here are registered originally or input in the past.
⑤Handwriting switch button	Displays handwriting input screen.

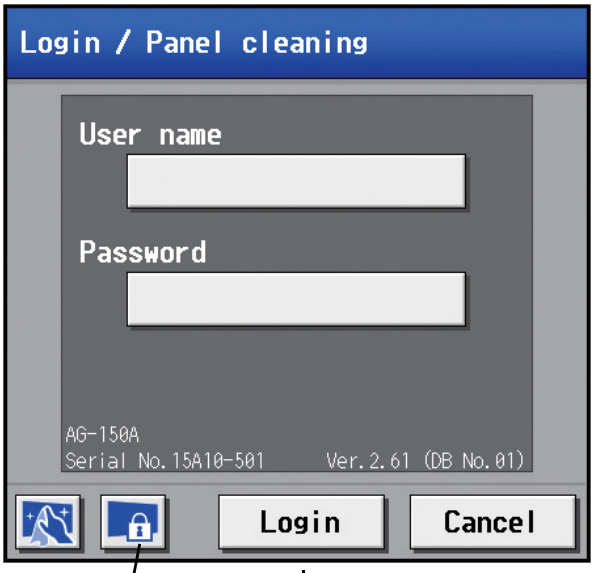
7-2 Locking the screen

Locking the screen prevents unauthorized users from accessing.



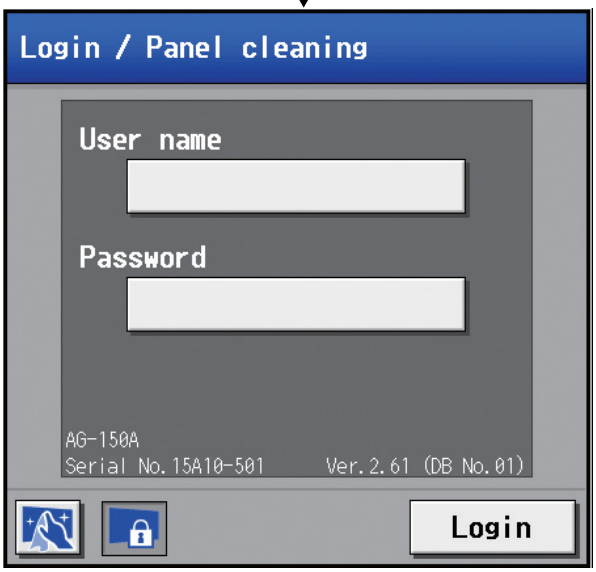
Screen lock function is available only when [Use] is selected on the [Unit information] screen of [Initial setting] screen.

Note: The initial setting is set to [Do not use].



If [Use] is selected, the screen locks when the backlight is off (after 10 minutes of not pressing anything).

* Screen lock does not function when the Initial setting screen is open. Screen lock button is shown on the Login screen. Touch the button to lock the screen immediately.



To unlock the screen, enter the same username and password used to login.

* The screen for both maintenance user and management user can be unlocked.

7-3 Setting the Current Date and Time

Touch [Initial settings] on the setting change screen, and then touch [Date and Time] on in the sub menu to bring up the date/time setting screen. Enter the date and time, and touch [Save Settings] to save the settings.

Note: If the current time is moved forward while the scheduled operation is performed, the operation that was scheduled to take place during the time that was skipped will not be performed.

Note: Changing the date and/or time when the charging function is in use can affect the calculation of the charges.

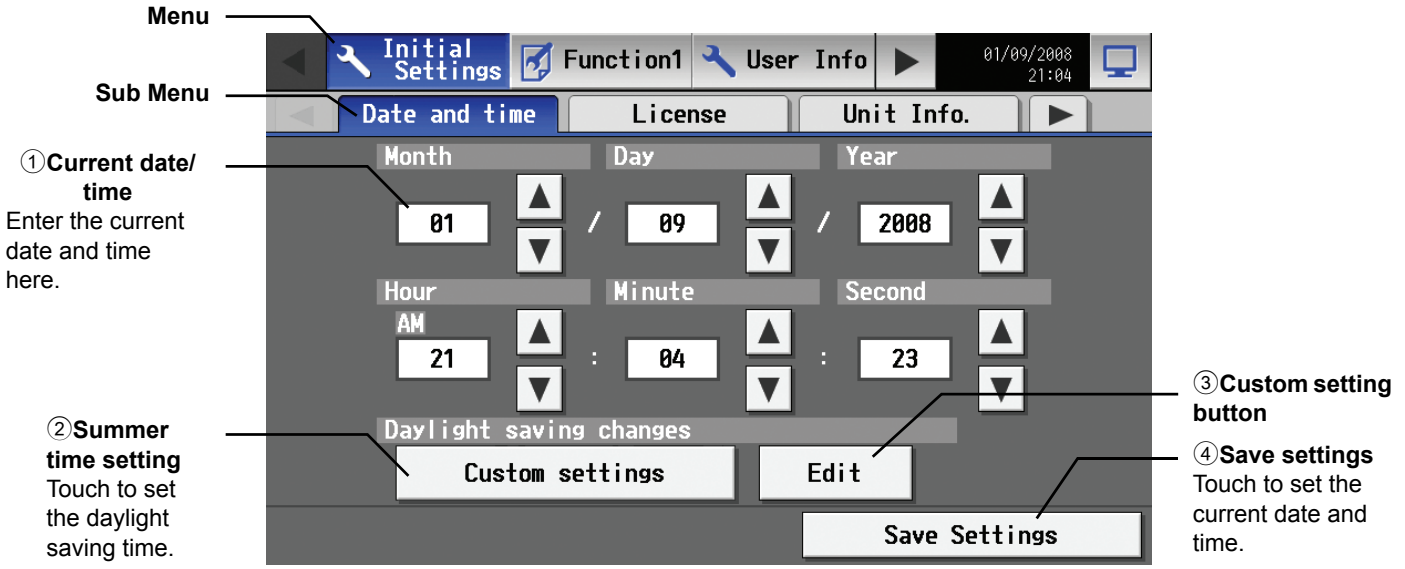
Note: If the user logs in as a building manager, some of the operations may be prohibited.

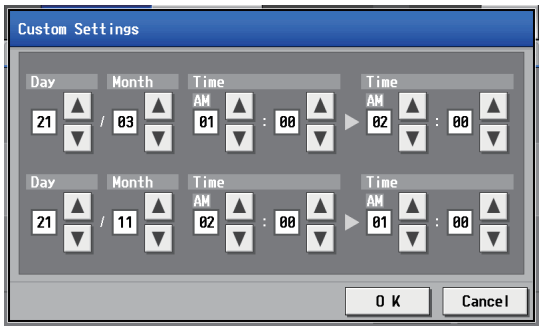
Note: The clock setting made on the screen below will be reflected on the clocks on other units that are connected to the M-NET line, on the Expansion controllers (PAC-YG50ECA), and on the AG-150A controller whose “Time master setting” is set to Sub.

Note: When an Expansion controller (PAC-YG50ECA), DIDO controller (PAC-YG66DCA), AI controller (PAC-YG63MCA), or PI controller (PAC-YG60MCA) is added to the system, set the clock on the added controller by making the clock setting on the clock setting screen.

Note: Clock setting cannot be made from the controller whose “Time master” setting is set to SUB.

> ⚠ **CAUTION**
> Date and clock settings on Expansion controllers (PAC-YG50ECA), when connected, must be made with the Expansion controller properly connected to ensure proper settings.



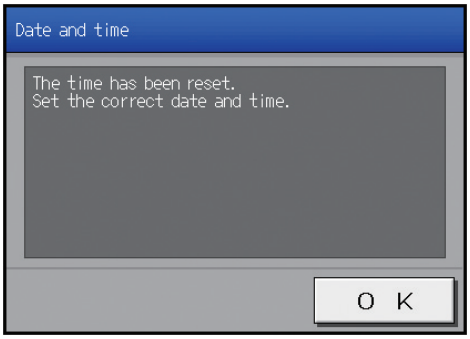
Item	Description
①Current date/time	Use the up/down buttons to set the date and time.
②Summer time setting	This button is used to set Daylight Saving Time. Select your country from the list of countries that appears when this button is touched. Select [----] when this function is not used. To enter a country name that is not on the list, select [Custom settings] and manually enter the country name.
③Custom setting	Set the beginning and the ending date/time of the daylight saving time if [Custom settings] is selected to manually enter a country name. 
④Save Settings	Touch the [Date/Time Set] button to set the current date and time.

- Message that will appear when the clock has been reset.
  If the power supply to the unit has been cut for an extended period due to power failure, the clock will be reset, and the following popup message will appear. If this message appears, set the clock from the Initial Settings screen.

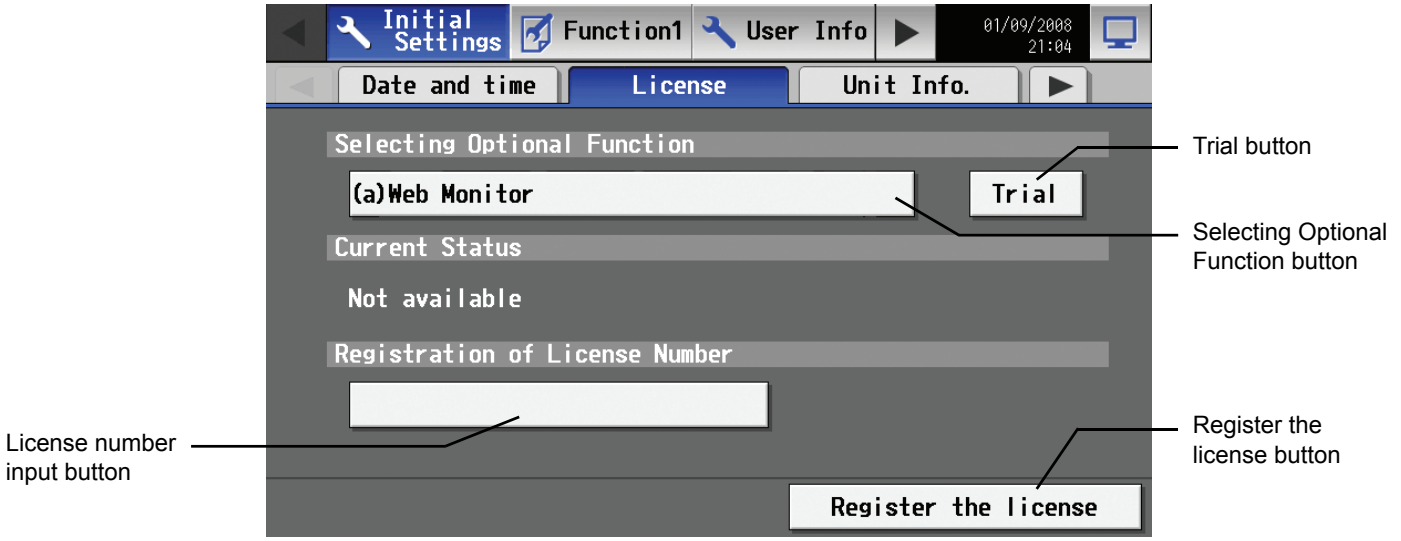
* The popup below will appear periodically until the clock setting is made.

* If the unit is used without the clock being properly set, the schedule function or the night setback function will not work properly.

* If the Master/Sub clock setting for the given unit is set to “Sub,” temporarily set the setting to “Master,” set the clock, and then set the Master/Sub setting back to “Sub.”



7-4 Register the license



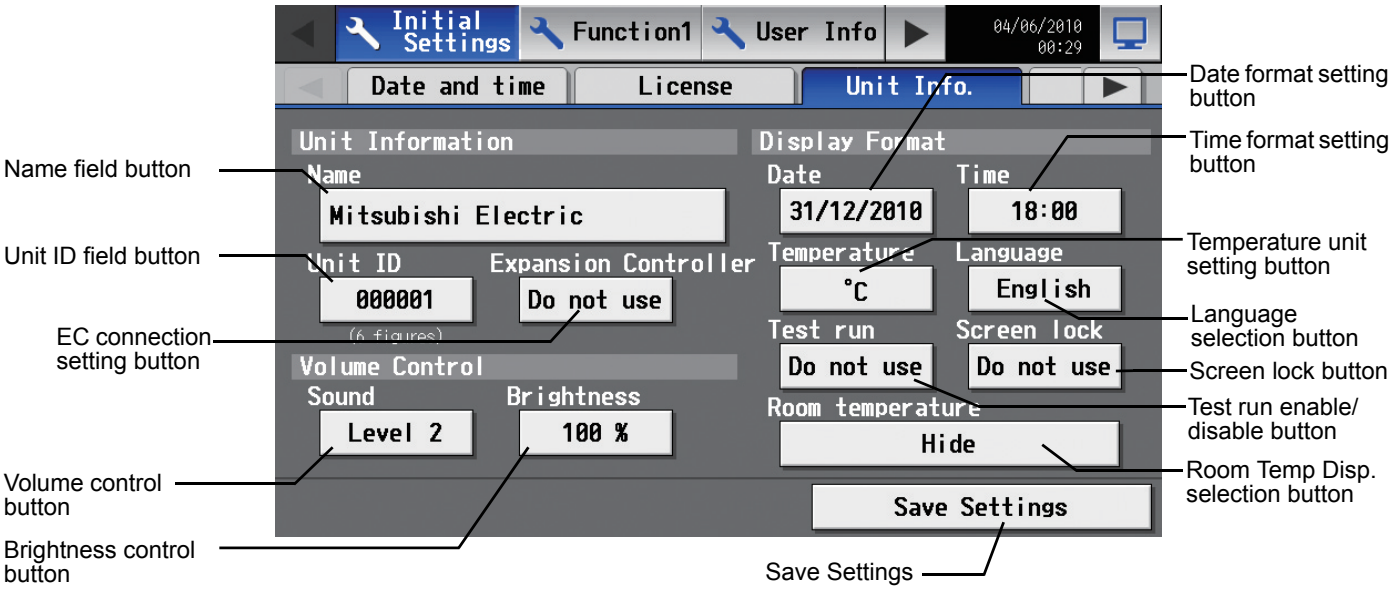
This section describes how to register the license for the optional functions. Touch [Initial Settings] on the menu bar in the setting change screen, and then touch [License] in the sub menu to bring up the license registration screen.
Select the optional functions to be used by touching the [Selecting Optional Function] button, touch the [License number input button], and enter the license number. The optional functions will be added if the entered registration number matches the registered number when [Register the license] is touched. The “Current Status” is changed to “Available”.
If this fails, check that the license number is entered correctly, that the selection of the optional functions are made properly, and that the time/date settings on AG-150A is set correctly.
Consult your dealer for the availability of optional functions and for how to purchase the license for them.
Touch the “Trial” button to register a one-day license that is valid for one day from the time the button is touched. (Web Monitor License Only)

Note: When multiple AG-150A controllers are connected by connecting an Expansion controller to the system, the license to use the optional functions is required only for the AG-150A controller on which the functions are actually used.

7-5 Setting the Basic Information

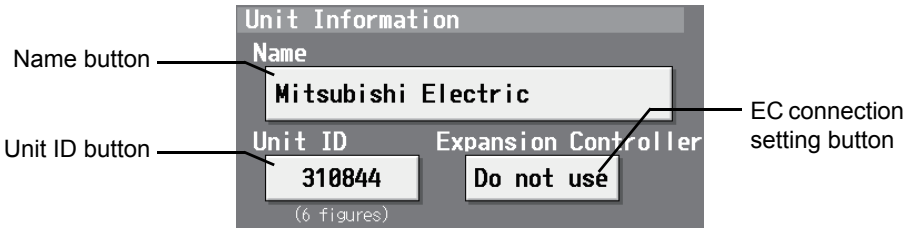
Touch the [Unit Info.] tab in the screen that appears when [Initial Settings] on the menu bar in the setting change screen is touched to open the Unit Info setting screen and make the basic settings for AG-150A such as its name and display options.

Note: If the user logs in as a building manager, the operations may be prohibited.



7-5-1 Unit Setting

Information about the unit is entered on the screen below.



(1) Pressing the [Name] button brings up the Handwriting input screen (page 49). Enter the name for AG-150A in 40 characters or less. The name set here is used on the display screen of the software that controls multiple AG-150A units and for the name of the sender in the body of error messages.

Note: The following characters cannot be used in the name: < > & " '

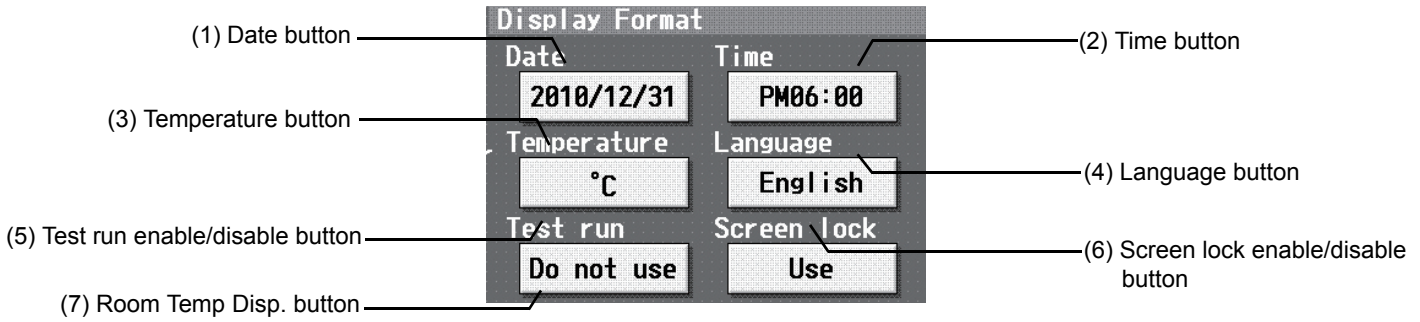
(2) Press the [Unit ID] button and enter the ID number for AG-150A in six numerical characters (single byte) or less. Use this setting when you want to control multiple AG-150A units with unit IDs. The unit ID that is entered here will be used on the display screen of the software that controls multiple AG-150A units and for the sender ID in the body of error messages.

(3) When connecting an Expansion controller, press the [EC connection setting button] and select [Use].
* When the EC connection setting is set to [Use], be sure to make the EC controller settings on the Network settings screen.

(4) Press [Save settings] on the Unit Info screen to save the settings.

7-5-2 Setting the Display Format

Data, time, temperature, language, test run, screen lock, and room temp disp. are set on the screen below.



(1) Select the date format. Each touching of the button allows you to cycle through the following options: [31/12/yyyy][12/31/yyyy][yyyy/12/31]. Current year will appear in “yyyy.” (e.g., December 31st, 2009 will appear as 31/12/2009.)
The date will be displayed in the selected order on the screen or on the mail screen.

(2) Set the time format. (24 hr [18:00] or 12 hr [06:00 PM]) Each touching of the button switches between [18:00] and [06:00 PM].

(3) In the [Temperature] section, select between [°C] and [°F] as the unit of temperature. Each touching of the button switches between [°F] and [°C].

(4) Press the language selection button to bring up the [Language selection screen], and the selected language will appear.



(5) Enables/disables the test run function. Touching the button toggles between [Do not use] and [Use].
When the test run setting is set to [Use], the test run option will be available for selection in the operation screen.

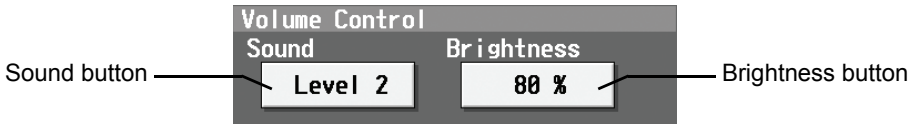
(6) Enables/disables the Screen lock function. Touching the button toggles between [Do not use] and [Use].

(7) Make the room temperature display setting. Touching the button cycles through [Hide], [Always show], and [Show during operation].
*This setting is valid only on the AG-150A's LCD screen.

(8) Press [Save setting] on the Unit info screen to save the setting.

7-5-3 Adjusting the sound volume and screen brightness

Sound volume and screen brightness are adjusted on this screen.



(1) Each touching of the sound volume control button cycles through the following: [Level 0], [Level 1], [Level 2], and [Level 3]. Although the change made in sound volume is reflected right away, it will not be saved until the [Save setting] button is touched. Even if the setting is changed, if the user exits the screen without touching the [Save setting] button, the volume setting will go back to the previous setting.

(2) Each touching of the brightness control button cycles through the following: [70 %], [80 %], [90 %], and [100 %]. Although the change made in brightness is reflected right away, it will not be saved until the [Save setting] button is touched. Even if the setting is changed, if the user exits the screen without touching the [Save setting] button, the brightness setting will go back to the previous setting.

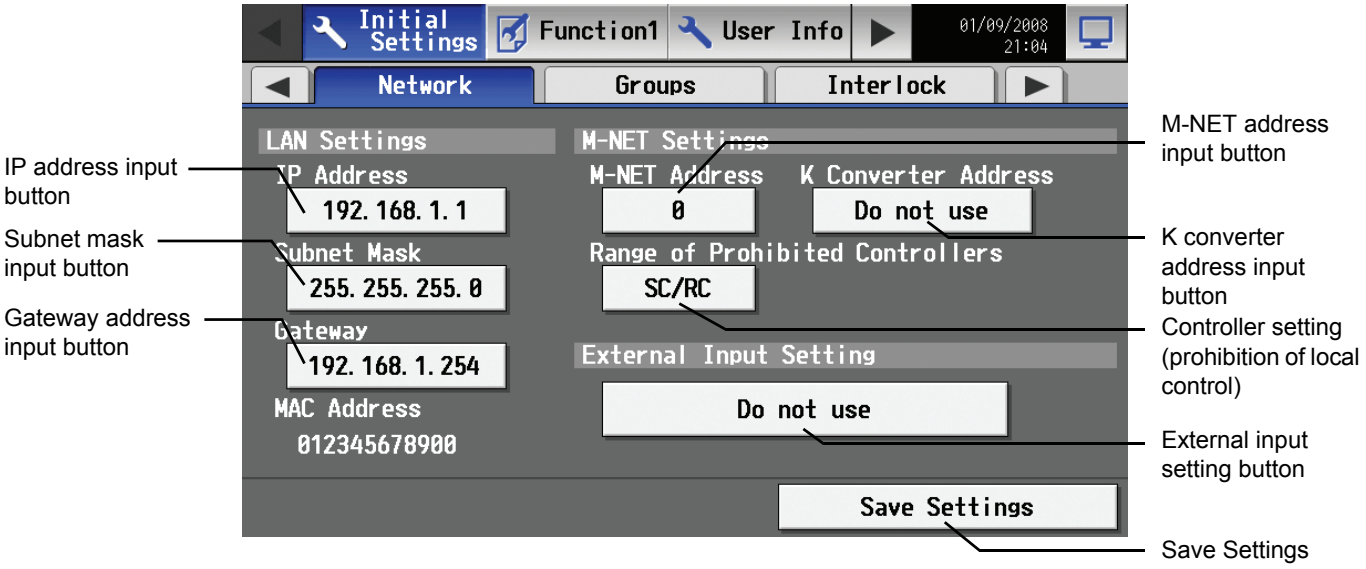
(3) Press [Save setting] on the Unit info screen to save the setting.

7-6 Network Setting

Touch the [Network] tab in the screen that appears when [Initial Settings] on the menu bar in the setting change screen is touched to open the network setting screen and make the basic settings for LAN and M-NET.

Note: If the user logs in as a building manager, some of the operations may be prohibited.

Note: When changes are made to the settings, restart the AG-150A before going back to the main menu to reflect the those changes.



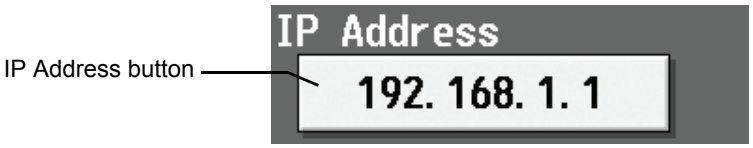
7-6-1 LAN setting

In Network Setting, set the AG-150A IP address, subnet mask and gateway address. If connecting to the AG-150A via a permanent LAN, consult with the network administrator before setting these addresses.

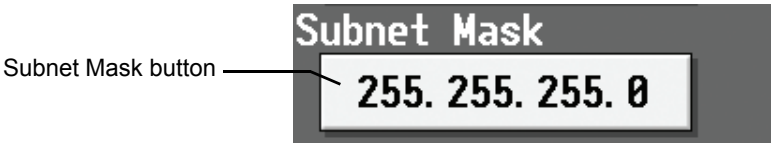
7-6-1-1 Settings for when the AG-150A is connected to a dedicated LAN

(1) Set the IP address for AG-150A. Enter the IP address on the keyboard that appears when the IP address input button is touched. If the LAN wiring has been newly set up, allocate IP addresses to the AG-150A units in a sequential order starting with [192.168.1.1]. For example the first AG-150A unit will receive an IP address of [192.168.1.1], the second AG-150A unit will receive an IP address of [192.168.1.2] and so on.
The Web Monitor PC that monitors and sets AG-150A will also require network addresses consistent with the rest of the LAN.

Note: When using a AG-150A dedicated LAN, it is recommended to set the IP address as follows.
AG-150A: Between [192.168.1.1] and [192.168.1.40] Web Monitor PC: Between [192.168.1.101] and [192.168.1.150]



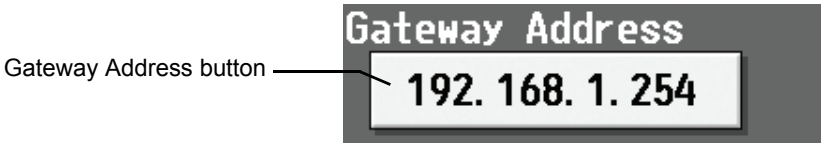
(2) Set the subnet mask. Enter the subnet mask address for the AG-150A on the keyboard that appears when the subnet mask input button is touched. Normally, you should enter [255.255.255.0].



(3) When monitoring remotely or sending error mail via a dial-up router, enter the router IP address in the [Gateway] field. Leave the gateway address blank when not connecting via a dial-up router.

Note: It is recommended to set the dial-up router IP address to [192.168.1.254]. Refer to the dial-up router instruction manual for details of how to set the IP address.

Note: It is necessary to connect a modem (analog type or ISDN type) between the dial-up router and telephone line when using a dial-up router that does not have a built-in modem.



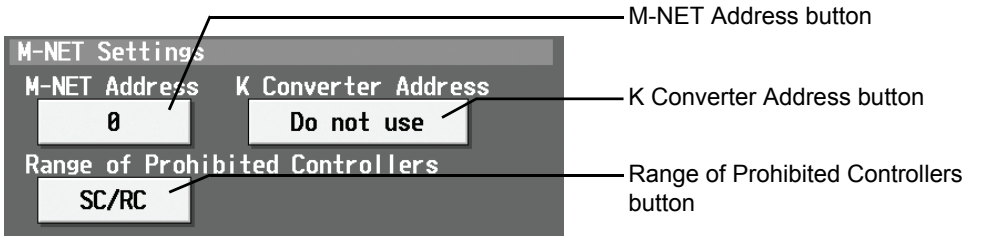
(4) Press [Save setting] on the network screen to save the setting.

7-6-1-2 Settings for when the AG-150A is connected to an existing LAN

When connecting the AG-150A to an existing LAN, consult with the network administrator who is responsible for the LAN before setting the IP address, subnet mask, or gateway address.

7-6-2 M-NET Setting

In M-NET Setting, set the AG-150A M-NET address, whether or not a K-Control unit is present and which machines send the prohibited controller command.



(1) Enter the AG-150A M-NET address in the [M-NET Address] field. Normally you should enter [0].

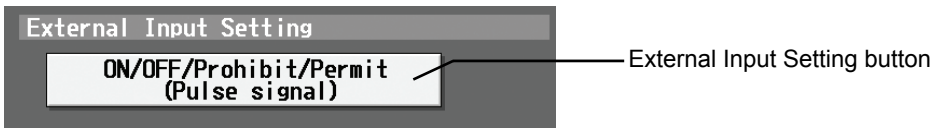
(2) When K-Control air conditioners are connected, enter the M-NET address of K transmission converter in the [K Converter Address] field.
* When K-control units are connected, set the AG-150A M-NET address to “0.”
* The addresses of the K-control indoor units should be larger than those assigned to the M-transmission indoor units.
* The group number assigned to each group of K-control unit should equal the minimum address of the indoor unit in the group.

(3) If prohibited controller (prohibiting local operation) has been set, this setting determines the scope of this setting s control, i.e. operation is prohibited for both the remote control and subordinate system controllers, or just for the remote control. Touch [SC/RC] when you want prohibited controllers to include both subordinate system controllers and the remote control, or touch [RC only] when you only want to prohibit operation on the remote control.
Note: Normally, you should select [SC/RC].

(4) Press [Save setting] on the network screen to save the setting.

7-6-3 External input Setting

The external input function allows for a batch operation (start/stop) of the air conditioning units that are connected to the AG-150A via the external input/output adaptor (PAC-YG10HA; sold separately), using contact and pulse signals.
Pressing the “External Input Setting” button toggles through the following options: Not in use, Emergency Stop (Level signal), ON/OFF (Level signal), and ON/OFF/Prohibit/Permit (Pulse signal).
* See Chapter 10 for detailed explanations on how to connect external devices.



7-6-4 External input settings for a system with connection to an Expansion controller (PAC-YG50ECA)

Touch the [Network] tab in the screen that appears when [Initial Settings] on the menu bar in the setting change screen is touched to open the network setting screen and make the basic settings for LAN and M-NET.

Note: If the user logs in as a building manager, some of the operations may be prohibited.

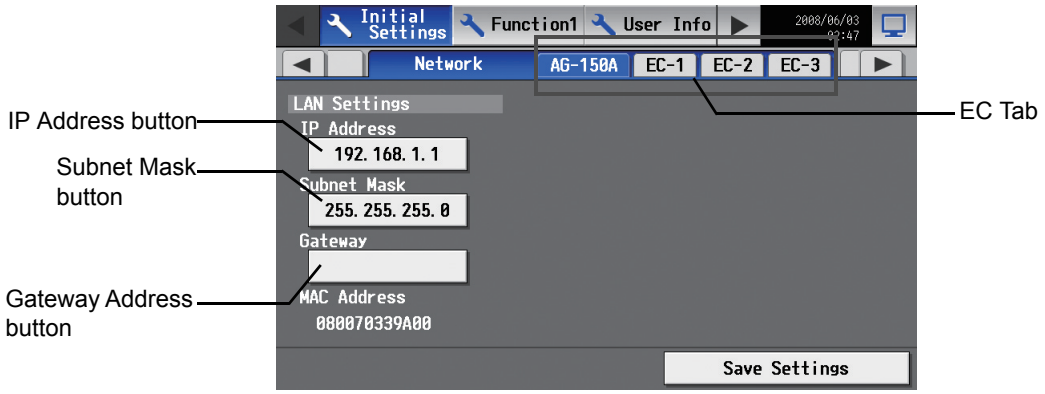
Note: When changes are made to the settings, restart the AG-150A before going back to the main menu to reflect the those changes.

* Be sure to make the settings while the Expansion controller is connected. (Those settings made without the connection of an Expansion controller will not be reflected.)

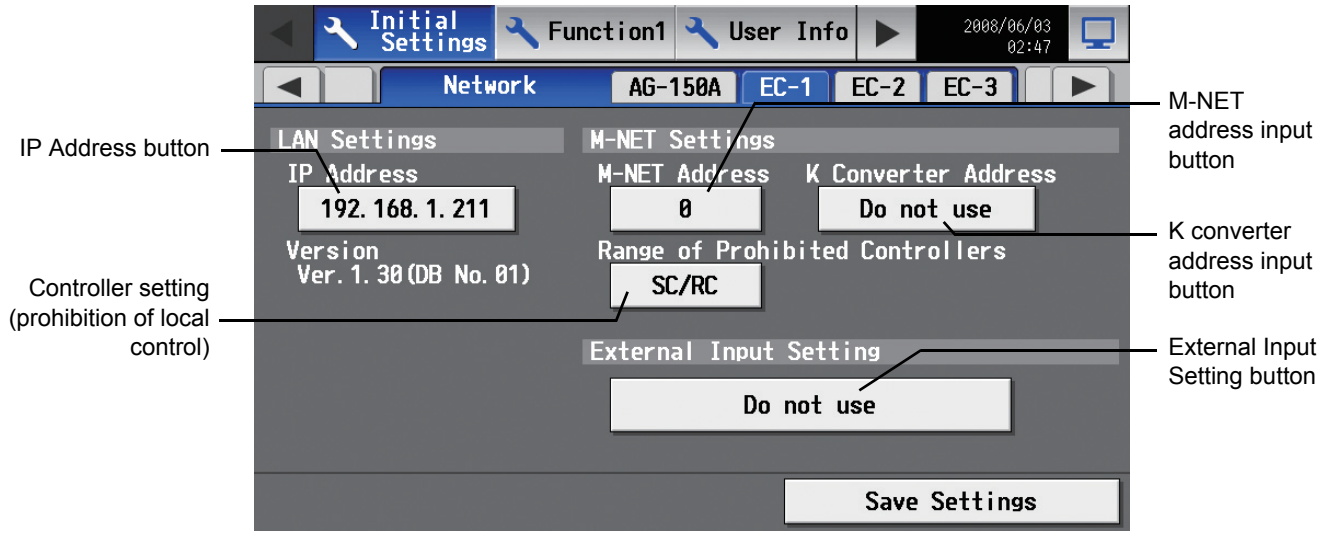
If the Expansion controller connection setting is set to [Use] (P47), the EC tabs will appear in the Network settings screen. Select an EC from the EC tab menu, and make the settings for the AG-150A and the connected ECs.

First, select [AG-150A] from the EC tab menu, and make the settings for the IP address, subnet mask, and gateway address of the AG-150A. Refer to 7-6-1 (P 55), 7-6-3 (P 56) for how to make these settings.

* When an Expansion controller is connected, the external input/output on the AG-150A will not be available.



Select the [EC-1], [EC-2], or [EC-3] tab to make the settings for each Expansion controller.



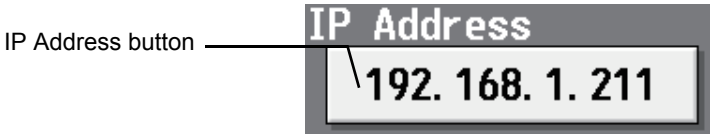
Check that the DB No. of AG-150A itself and the DB No. of the AG-150A on the Login screen match.

Note: The “Version” is displayed after the IP addresses of Expansion controllers are set and the connections between AG-150A and the Expansion controllers are established.

1. Setting up the Expansion controller IP address on the AG-150A

(1) To set up the IP address of each EC, first touch the IP address button to display the keyboard screen. Enter the IP address of the connected ECs with the keyboard. Use the IP addresses that have been set with the switches on the ECs.

* The controller will not operate properly, if the addresses that are entered here do not match the ones that have been set with the switches on the ECs.
* Refer to the PAC-YG50ECA Expansion controller Installation Manual/Instruction Book for how to set the IP address.
* If the controller does not operate properly, check the settings on the Expansion controller and the address settings on the AG-150A.



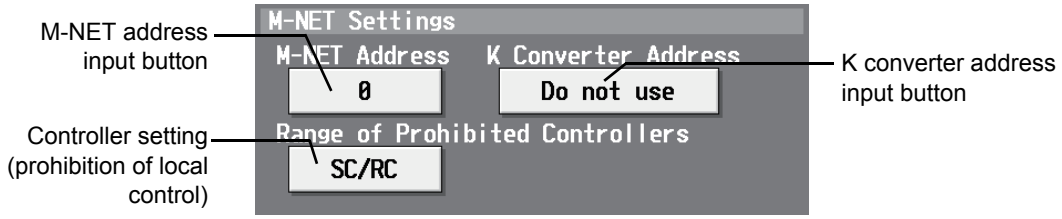
(2) Press [Save setting] on the network screen to save the setting.

(3) After the IP addresses are set, a screen that indicates that the connection information of the Expansion controllers is being collected will be displayed for a few minutes.

2. Making the M-NET settings for the Expansion controller

In M-NET Setting, set the Expansion Controller M-NET address, whether or not a K-Control unit is present and which machines send the prohibited controller command.

* Be sure to use the correct IP address, and make the M-NET address settings with the Expansion controller being connected.



(1) Enter the Expansion Controller M-NET address in the [M-NET Address] field. Normally you should enter [0].

(2) When K-Control air conditioners are connected, enter the M-NET address of K transmission converter in the [K Converter Address] field.
   * When K-control units are connected, set the AG-150A M-NET address to “0.”
   * The addresses of the K-control indoor units should be larger than those assigned to indoor units M-transmission indoor units.
   * The group number assigned to each group of K-control unit should equal the minimum address of the indoor unit in the group.

(3) If prohibited controller (prohibiting local operation) has been set, this setting determines the scope of this setting control, i.e. operation is prohibited for both the remote control and subordinate system controllers, or just for the remote control. Touch [SC/RC] when you want prohibited controllers to include both subordinate system controllers and the remote control, or touch [RC only] when you only want to prohibit operation on the remote control.
   Note: Normally, you should select [SC/RC].

(4) Press [Save setting] on the network screen to save the setting.

3. Making the external input settings for the Expansion controller

The external input function allows for a batch operation (start/stop) of the air conditioning units that are connected to the EC via the external input/output adaptor (PAC-YG10HA; sold separately), using contact and pulse signals.

Pressing the “External Input Setting” button toggles through the following options: Not in use, Emergency Stop (Level signal), ON/OFF (Level signal), and ON/OFF/Prohibit/Permit (Pulse signal).

* Refer to the PAC-YG50ECA Expansion controller Installation Manual/Instruction Book for how to connect external devices.

7-7 Group Setting

Touch the [Groups] tab in the screen that appears when [Initial Settings] on the menu bar in the setting change screen is touched to open the group setting screen and set and register the group names for the air conditioning units or general equipment to be connected to AG-150A.

Note: If the user logs in as a building manager, some of the operations may be prohibited.

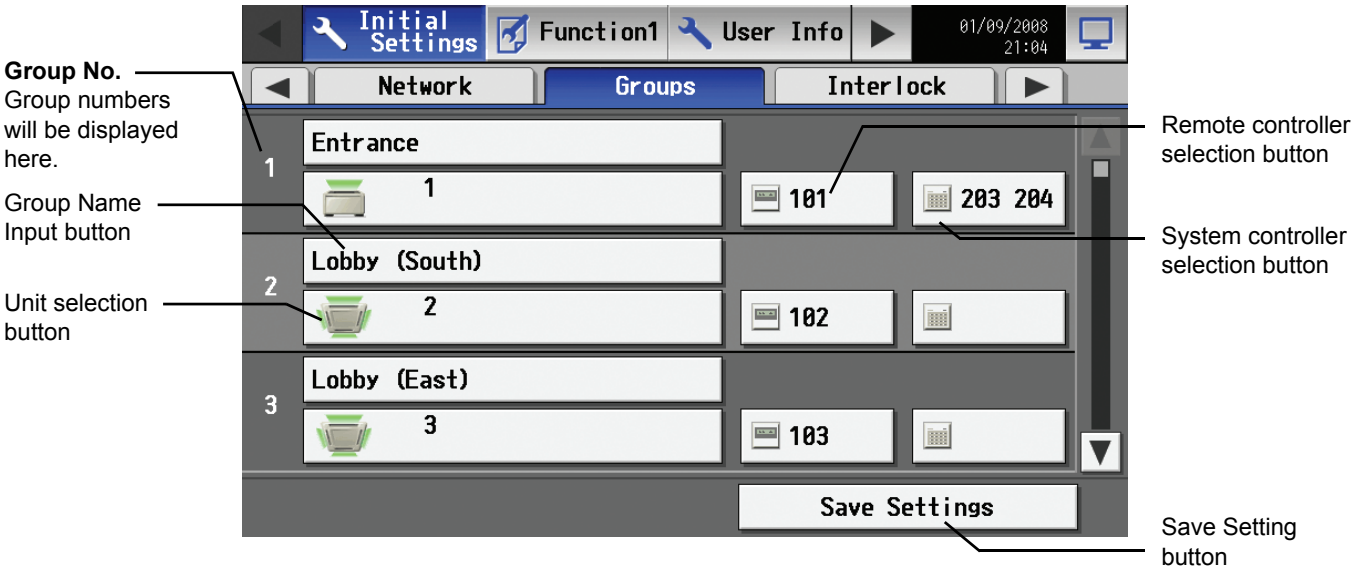
Note: If the system is connected to the TG-2000A, make all settings and changes from the TG-2000A so that the data in TG-2000A and AG-150A will match.

Note: A contact on the genera interface device is regarded as one unit. The number of units that can be connected to AG-150A is up to 50.

Note: Different models cannot be in the same group.

Note: Remote controllers or system controllers cannot be connected to general equipment.

Note: Each contact point on the general equipment is counted as one unit.



7-7-1 Setting the Group Name

Press the Group name input button, and enter the group name on the keyboard that appears in 20 characters or less.

Note: The following characters cannot be used in the group name: < > & " '

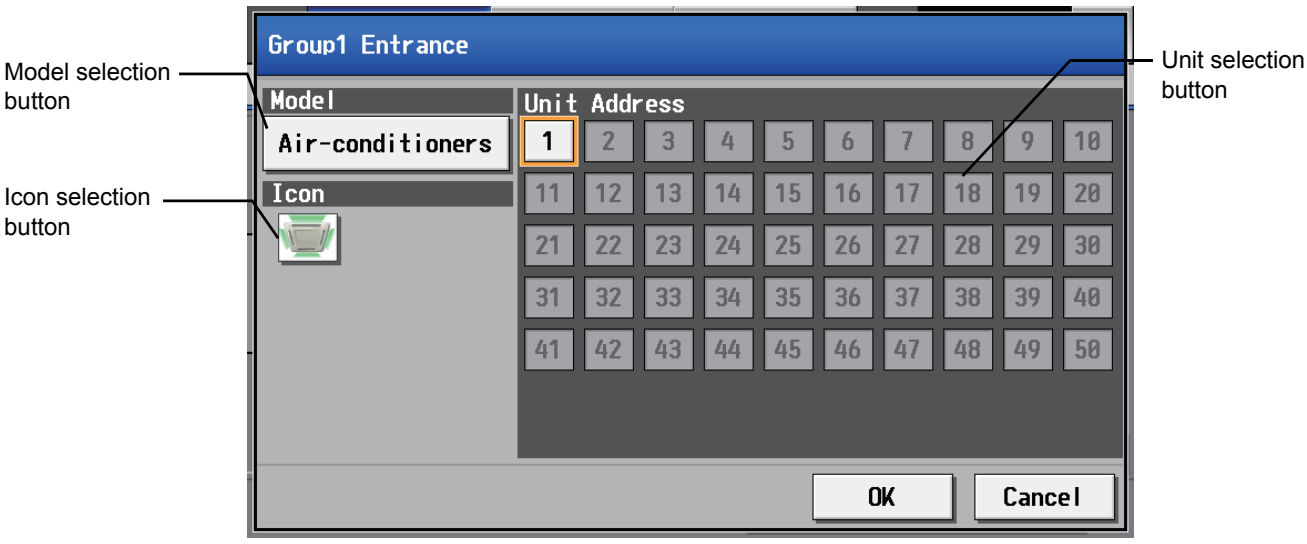
7-7-2 Registering air conditioner units in the group

(1) To register air conditioning units, select the unit selection button of the group to which the air conditioning units will be assigned.
Touch the model selection button on the screen that appears to display air conditioning units. (To register a ventilation device call up “LOSSNAY”, and to register a water heater call up “Air To Water (PWFY)” on the screen.) Then touch the numbers that are assigned to the units to register. An orange frame will appear around the units that are selected.
Touch again to deselect the selected item (no orange frame).
Press the [OK] button to save the changes, or touch the [Cancel] button to go back to the previous screen without saving any changes.

Note: A maximum of 16 air conditioner units can be registered in one group.

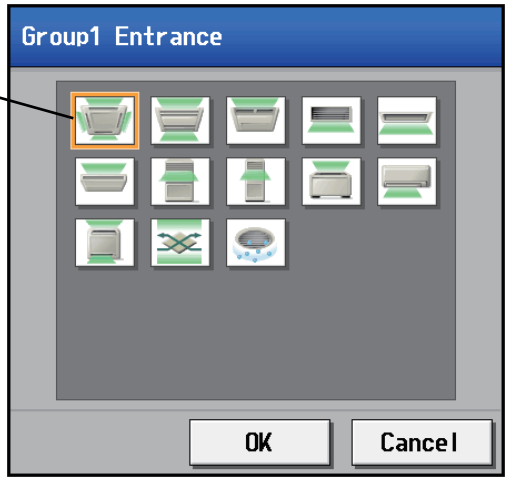
Note: To change the registered units to air-conditioners in the group in which general equipment is registered, disconnect the general equipment first.

Note: Only the same type of equipment (e.g., only the air conditioning units) can be registered to each group.



(2) To change the icons, touch the icon selection button, and select the desired icon from the ones that appear.

Item selection frame
An orange frame appears around the selected unit(s).



(3) To register a remote controller to a group, touch the remote controller selection button to bring up the remote controller selection screen, and then touch the numbers that are assigned to the units to resister. An orange frame will appear around the selected items. Touch again to deselect the selected items. Touch again to deselect the selected item (no orange frame). Press the [OK] button to save the changes, or touch the [Cancel] button to go back to the previous screen without saving any changes.

Note: A maximum of 2 remote controllers can be registered in one group.

Note: MA remote controllers do not need to be registered to a group.

* Only one remote controller can be connected to a system to which three system controllers are connected. No remote controllers can be connected to a system to which four system controllers are connected. (The maximum connectable number is four including system controllers.)

* The remote controllers that are registered to another group will be grayed out and not available for selection.



(4) To register a system controller to a group, touch the system controller selection button to bring up the system controller selection screen, and then touch the numbers that are assigned to the unit to resister. An orange frame will appear around the selected items. Touch again to deselect the selected items. Touch again to deselect the selected item (no orange frame). Press the [OK] button to save the changes, or touch the [Cancel] button to go back to the previous screen without saving any changes.

Note: The combined number of system controllers and remote controls cannot exceed four.

Note: K-transmission converters do not need to be registered.



(5) Press [Save setting] on the group setting screen to save the settings.
* When changes are made to the settings, it will take a few minutes for the screen to return to the Main menu.

7-7-3 Registering general equipment in the group

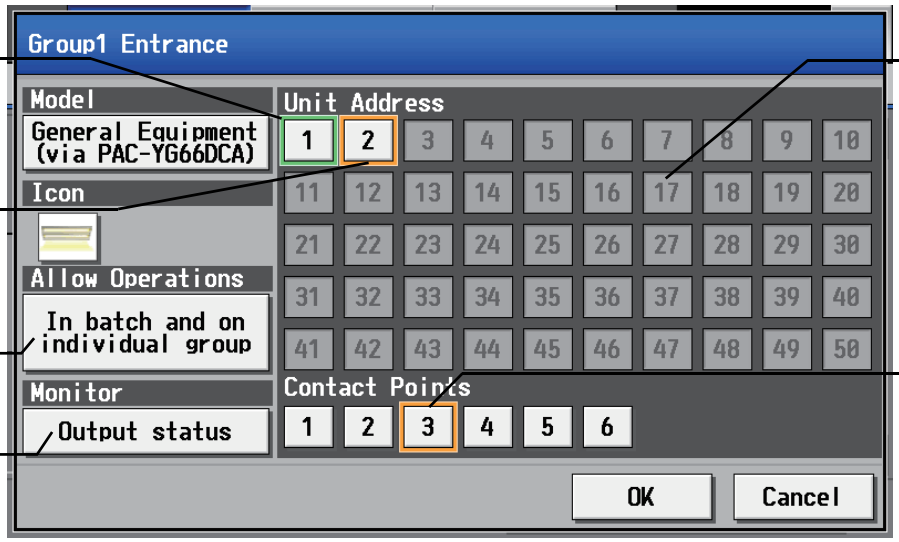
(1) To register general equipment, touch the unit selection button of the group to set. Select [General equipment (via PAC-YG66DCA)] on the screen that appears to bring up the general equipment registration screen. Next, touch the unit number of the DIDO controller (PAC-YG66DCA) that is connected to the general equipment to be registered. (A yellow green frame will appear around the selected items.) Select the contact number to which the general equipment is connected, and touch the number assigned to another unit to register the first selected item to the group (The yellow green frame will change to an orange frame.) The item with a yellow green frame is the currently selected unit, and the ones with an orange frame are the units that are already registered to a group. To cancel the connection, select the unit number and touch the selected contact number to deselect it (no orange frame). Press the [OK] button to save the changes, or touch the [Cancel] button to go back to the previous screen without saving any changes.

Note: A maximum of 16 general equipment can be registered in one group.

Note: To change the registered units to general equipment in the group in which air-conditioners are registered, disconnect the air-conditioners first.

Note: Only general equipments can be registered to the same group (no air conditioning units, LOSSNAY units, or Air To Water (PWFY)).

Note: Up to 6 general equipments can be connected to each DIDO controller (PAC-YG66DCA).



Item selection frame
A yellow-green frame will appear around the currently selected unit address(es).

An orange frame will appear around the connected unit(s).

General equipment operation setting button

General equipment display setting button

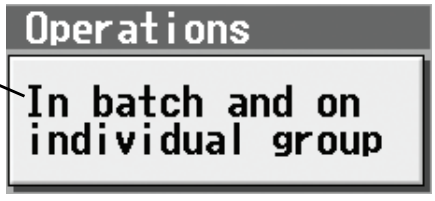
Unit selection button

Contact point selection button

(2) To change the icons, touch the icon selection button, and select the desired icon from the ones that appear.



(3) In the [Allow Operation] section, select whether to enable or disable the ON/OFF operation on the LCD on the AG-150A Web browser or on the TG-2000A operation screen. Select [In batch and on individual group] to enable only when the collective operation is performed. Select [On individual group] to enable in each group. Select [No operation (Monitor only)] to disable.



General equipment operation setting button

(4) In the [Monitor] section, select whether to display I/P to or from the general equipment on the monitor screen.



(5) Press the [Save setting] on the group setting screen to save the settings.

7-7-4 Registering general equipment in the group for a system with connection to an Expansion controller (PAC-YG50ECA)

From the menu bar on the Setting change screen, touch [Initial Settings] > [Groups] to see the group settings screen. Select the tab that corresponds to the EC whose settings are to be made, and make the settings for the air conditioning units, general equipment groups, and group names.

Note: If the user logs in as a building manager, some of the operations may be prohibited.

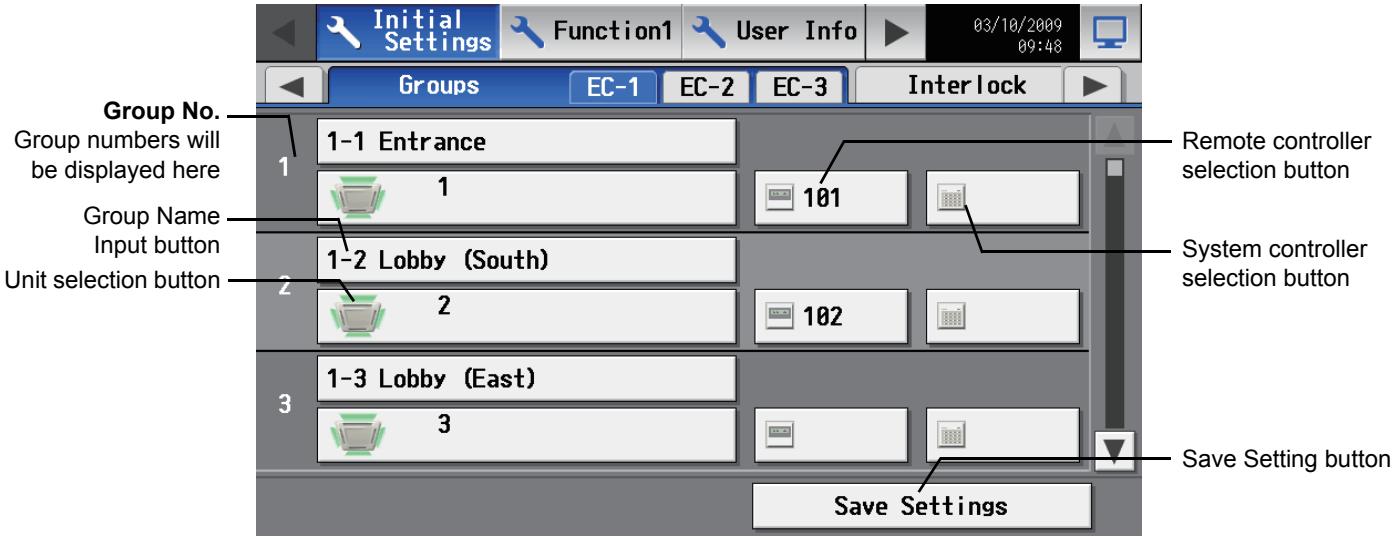
Note: Each contact point on the DIDO controller (PAC-YG66DCA) is counted as one unit. Up to 50 units can be connected the controller for each EC connected.

Note: Air-conditioners and general equipment cannot be in the same group.

Note: Remote controllers or system controllers cannot be connected to general equipment.

Note: Devices that are connected to different Expansion controllers cannot be grouped together.

> ⚠ **CAUTION**
> Be sure to make the settings while the Expansion controller is connected. (Those settings made without the connection of an Expansion controller will not be reflected.)



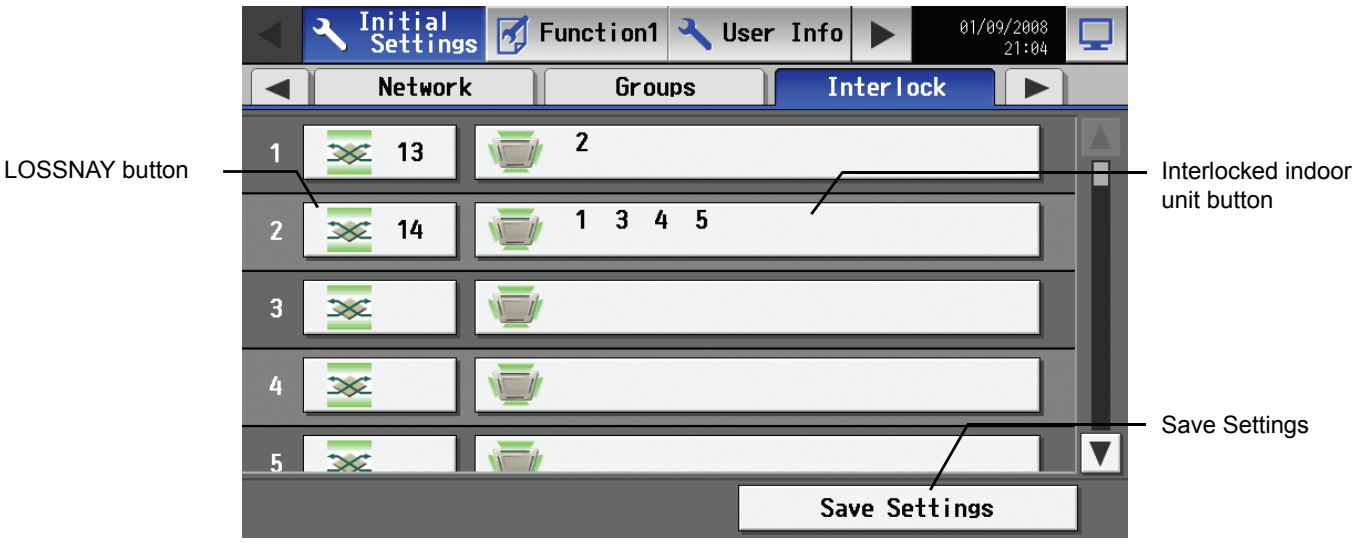
Refer to sections 7-7-1 (P 59), 7-7-2 (P 59), and 7-7-3 (P 61) for the details of how to make the settings for the group names, air conditioning groups, and general equipment groups.

7-8 Interlocked Setting

To interlock the ON/OFF operation of LOSSNAY and indoor units, touch [Interlock] on the screen that appears when [Initial Settings] on the menu bar in the setting change screen is touched, and make the interlock settings.

Note: If the user logs in as a building manager, the operations may be prohibited.

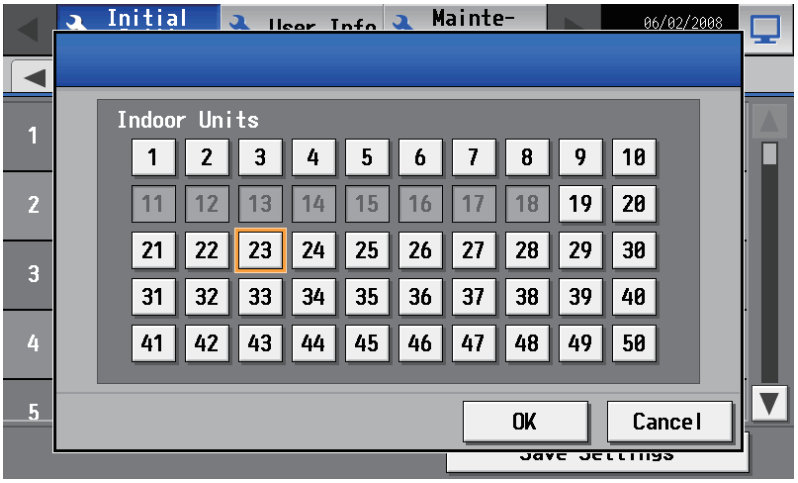
Note: If the system is connected to the TG-2000A, make all settings and changes from the TG-2000A so that the data in TG-2000A and AG-150A will match.



(1) To make the interlock setting for a LOSSNAY, first, touch the LOSSNAY button to bring up the LOSSNAY selection screen. Touch the number assigned to the unit to be registered to select it. An orange frame will appear around the selected items. Touch again to deselect the selected items. Touch again to deselect the selected item (no orange frame). Press the [OK] button to save the changes, or touch the [Cancel] button to go back to the previous screen without saving any changes.



(2) Touch the Interlocked indoor unit button to bring up the interlocked indoor unit selection screen, and touch the number assigned to the unit to register. An orange frame will appear around the selected items. Touch again to deselect the selected items. Touch again to deselect the selected item (no orange frame). Press the [OK] button to save the changes, or touch the [Cancel] button to go back to the previous screen without saving any changes.
Note: A maximum of 16 indoor units can be registered to operate with one ventilator.

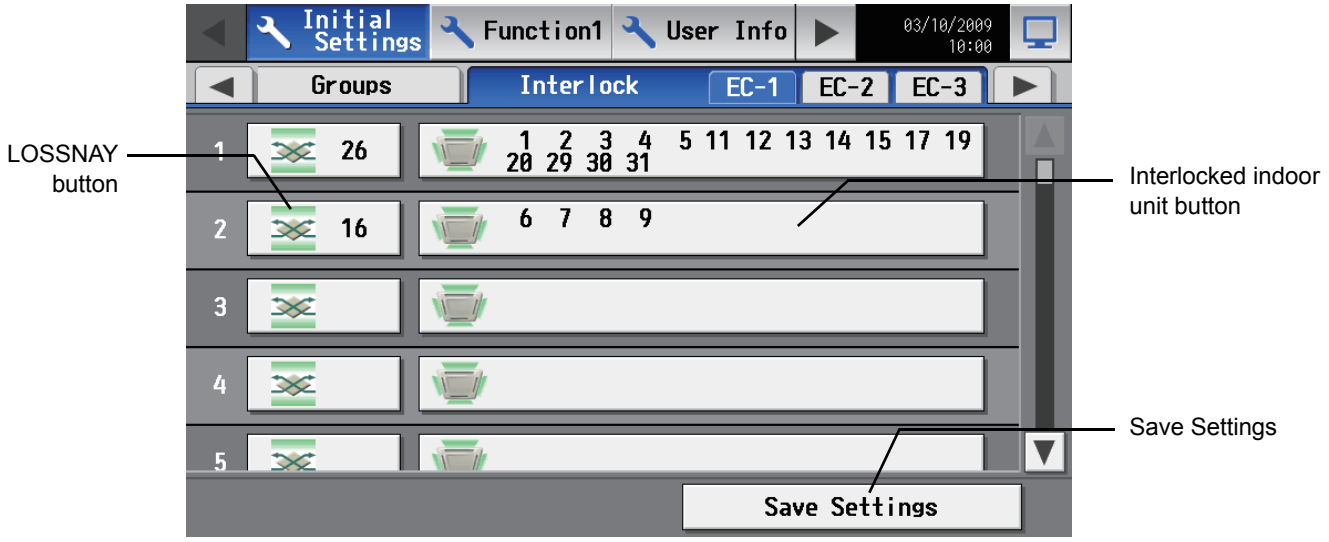


(3) Press the [Save setting] on the LOSSNAY interlock setting screen to save the settings.
* When changes are made to the settings, it will take a few minutes for the screen to return to the Main menu.

• Making the interlock settings for a system with connection to an Expansion controller (PAC-YG50ECA)

To interlock the ON/OFF operation of the LOSSNAY units with the indoor units, from the menu bar on the Setting change screen, touch [Initial Settings] > [Interlock] and open the LOSSNAY interlock settings screen. , Select the tab that corresponds to the EC controller whose settings are to be made, and enter the interlock setting conditions.
Note: If the user logs in as a building manager, the operations may be prohibited.
Note: Units that are connected to different Expansion controllers cannot be interlocked with each other.

> ⚠ **CAUTION**
> Be sure to make the settings while the Expansion controller is connected. (Those settings made without the connection of an Expansion controller will not be reflected.)



Refer to P 63 for the details of how to make the interlock settings for the LOSSNAY and indoor units.

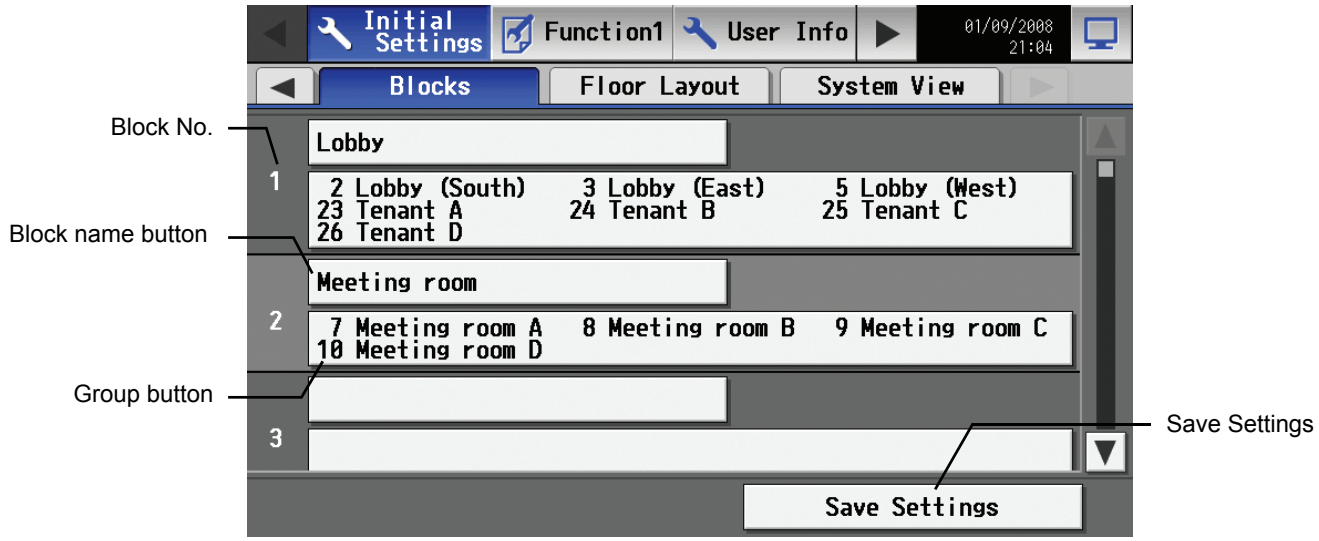
7-9 Block Setting

To perform a batch monitoring/control of multiple air conditioning unit groups, the groups need to be registered to a block. Touch [Blocks] on the screen that appears when [Initial Settings] on the menu bar in the setting change screen to register groups to a block.

* Blocks are used as a unit of control for energy-saving and peak-cut control.

Note: If the user logs in as a building manager, some of the operations may be prohibited.

Note: If the system is connected to the TG-2000A, make all settings and changes from the TG-2000A so that the data in TG-2000A and AG-150A will match.



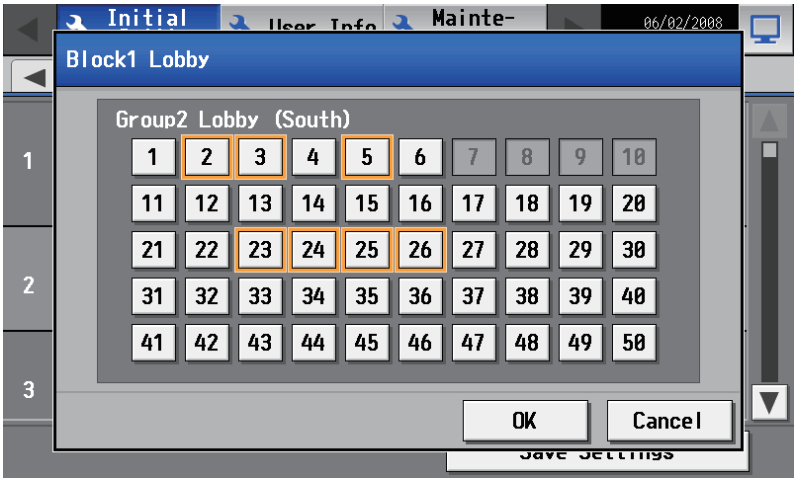
7-9-1 Setting a block name

Touch the block name button, and enter the block name on the keyboard that appears in 20 characters or less.
Press [Save setting] on the block setting screen to save the settings.

Note: The following characters cannot be used in the group name: < > & " '

7-9-2 Registering a group in a block

Touch on the number of the group to register on the group selection screen that appears when the group button is touched. An orange frame will appear around the selected item. (The name of the group that was touched last will appear.) Touch the selected item again to deselect it (no orange frame).



Press [Save setting] on the block setting screen to save the settings.

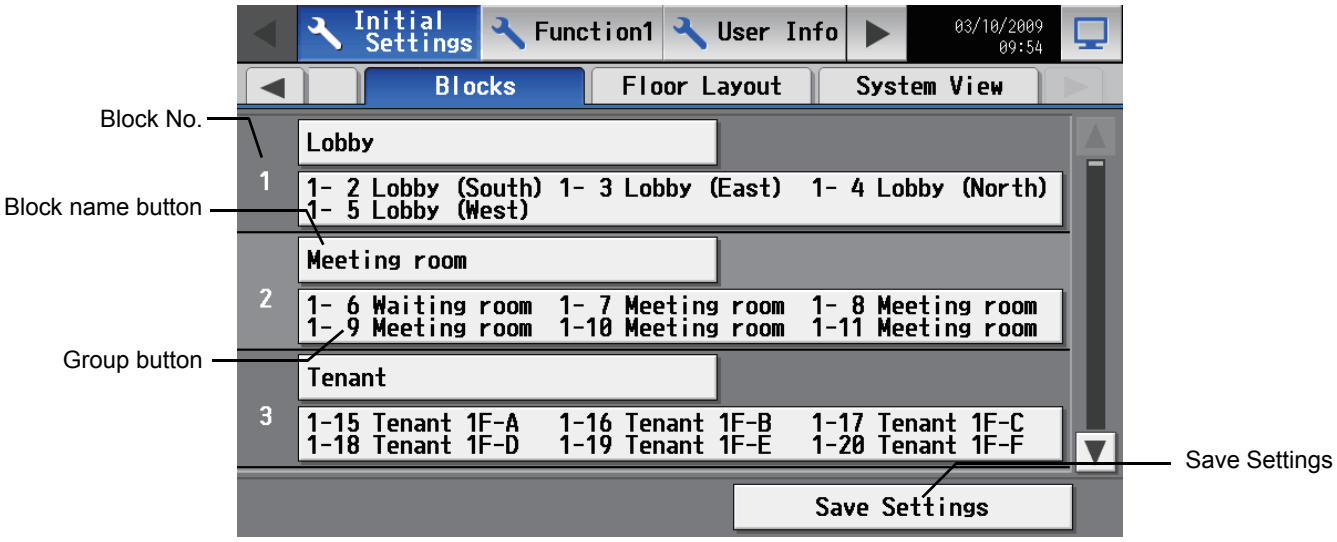
* When changes are made to the settings, it will take a few minutes for the screen to return to the Main menu.

• Making the block settings for a system with connection to an Expansion controller (PAC-YG50ECA)

To perform a batch monitoring/control of multiple air conditioning unit groups, the groups need to be registered to a block. Touch [Blocks] on the screen that appears when [Initial Settings] on the menu bar in the setting change screen to register groups to a block.

Note: Blocks are used as a unit of control for energy-saving and peak-cut control.

Note: If the user logs in as a building manager, some of the operations may be prohibited.



7-9-3 Setting a block name

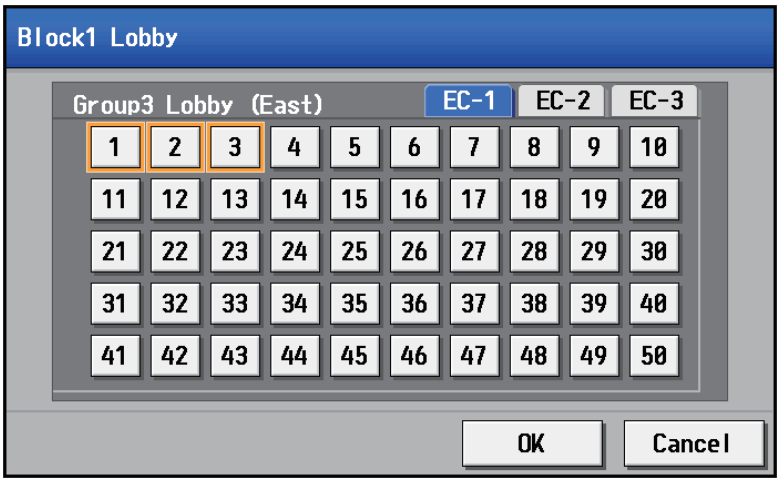
Touch the block name button, and enter the block name on the keyboard that appears in 20 characters or less. Press [Save setting] on the block setting screen to save the settings.

Note: The following characters cannot be used in the group name: < > & " '

7-9-4 Registering groups in a block

Touch the group button to display the group selection screen. Select the tab that corresponds to the EC to which the groups are to be registered to. Touch the numbers of the groups to be registered. An orange frame will appear around the group numbers that are currently selected. (The name of the group that was touched last will appear)

Touch the selected item again to deselect it (no orange frame).



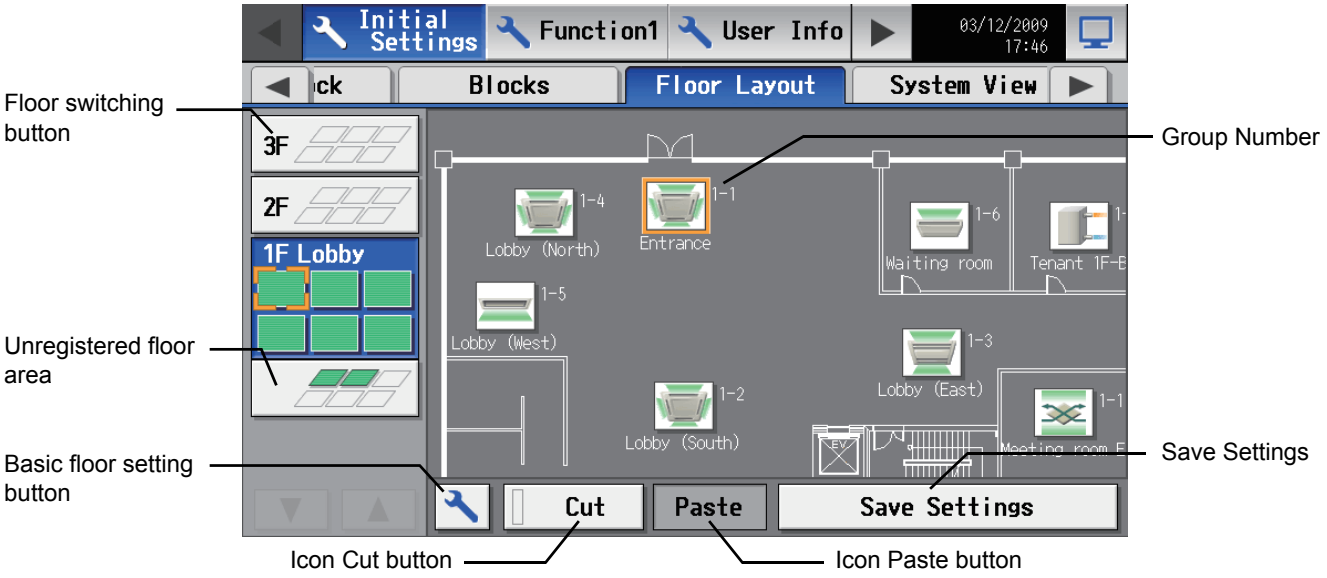
Press [Save setting] on the block setting screen to save the settings.

* The groups that are registered to each group will appear on the group button in the [EC No. + Group No.] format.

7-10 Floor Layout Setting

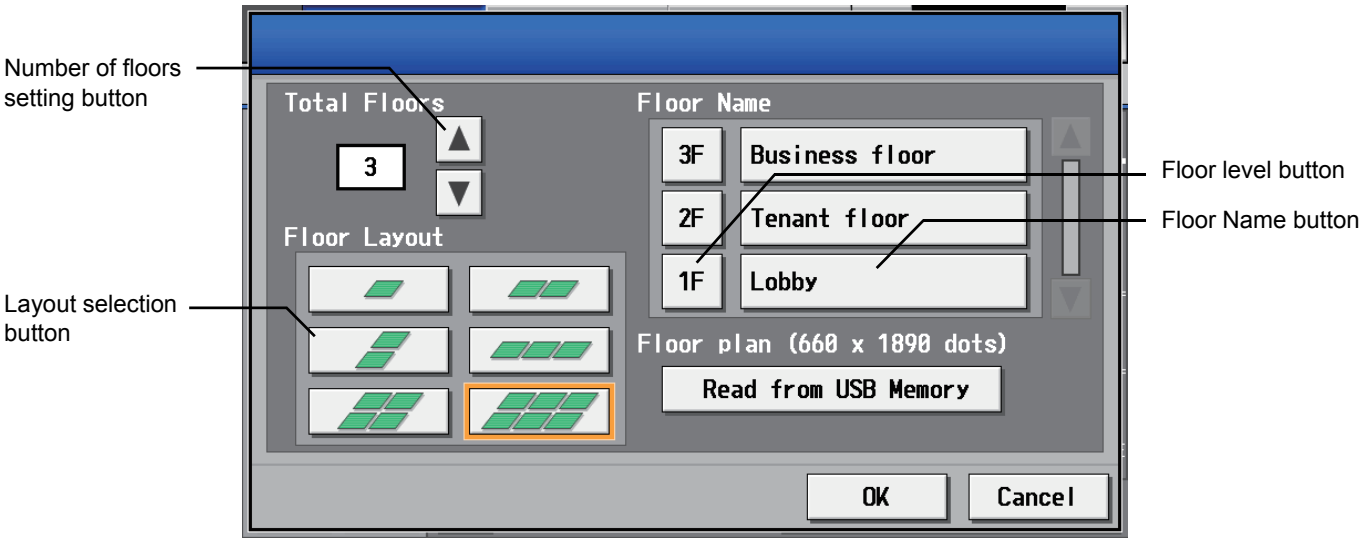
To change the floor layout on the main operation screen or to change the display position of the groups on the floor, touch the [Floor layout] tab in the setting change screen.

Note: If the user logs in as a building manager, some of the operations may be prohibited.

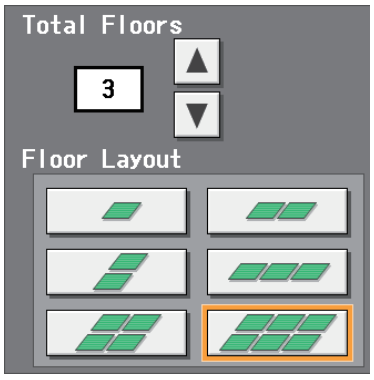


7-10-1 Making the floor settings

Touch the basic floor setting button to bring up the basic floor setting screen.



(1) Setting the floor number and layout



Select the total number of floors on the basic floor setting screen with the up/down arrow buttons, and select the desired type of floor layout. Not all types of floor layouts may not be available, depending on the number of floors.

* No. of floors = 1-3: All floor layouts are selectable.
* No. of floors = 4-5: [1 row×1 column][2×1][1×2][3×1][2×2] are selectable.
* No. of floors = 6-8: [1 row×1 column][2×1][1×2] are selectable
* No. of floors = 9-10: [1 row×1 column] are selectable
* When "--" is selected in Number of floors setting, only unregistered floor area is shown and Layout selection buttons are not available.

Note: When the floor or layout is reduced, the reduced icons move to unregistered floor area.

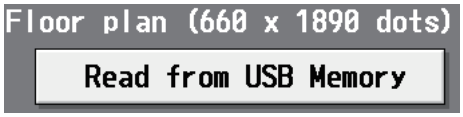
Note: The default layout consists of two rows and one column.

(2) Changing the floor level name or floor name



Press the floor name button on the basic floor setting screen, and enter the floor name in three characters or less.
Press the floor name button and enter the floor name in 20 characters or less.

(3) Loading floor layout



Layout files (256 colors in gif) is loaded from USB memory when “Read from USB Memory” button is pressed in the basic floor setting screen.

Layout files must be saved in the specific name and size in a route folder in USB memory in order to be loaded. Loadable file size is 1890 width × 660 height in gif for each floor.

The following is the file name for each floor.

Note: [Floor] shown below is not the actual floor name, but the floor number counted from the bottom on the floor layout screen.
ex. Even if the floor name is set to [15F], the file name is [floor_01.gif] when the floor is the first floor in the setting.

Floor	File name	Floor	File name
1	floor_01.gif	6	floor_06.gif
2	floor_02.gif	7	floor_07.gif
3	floor_03.gif	8	floor_08.gif
4	floor_04.gif	9	floor_09.gif
5	floor_05.gif	10	floor_10.gif

File display range varies depending on the floor layout setting.

Floor layout	Display range	Floor layout	Display range
width 1 × height 1	630 width × 330 height	width 1 × height 2	630 width × 660 height
width 2 × height 1	1260 width × 330 height	width 2 × height 2	1260 width × 660 height
width 3 × height 1	1890 width × 330 height	width 3 × height 2	1890 width × 660 height

* Create a suitable file for each floor. (File size is fixed to 1890 × 660.)
* Use more than two floors if one floor divided in six is not enough.

The followings are available colors for files. (RGB display)
* Use only colors that are shown below otherwise the color may not be displayed correctly.

R	G	B
224	71	72
221	151	152
81	66	81
105	89	105
17	16	17
51	42	52
27	23	30
165	145	185
33	37	57
2	17	85
6	35	160
6	28	122
9	40	168
12	45	176
154	162	194
211	214	227
15	49	182
17	53	188
20	57	195
24	64	205
17	46	149
21	52	163
28	70	215
32	64	178
45	80	204
44	75	190
55	90	213
69	99	205
99	122	202

R	G	B
101	112	150
126	137	176
142	149	175
175	180	199
33	77	225
37	83	234
39	86	240
41	89	245
42	92	249
46	93	246
23	47	124
63	104	238
77	116	241
99	137	255
126	146	214
149	170	235
70	79	108
179	189	222
191	202	230
192	210	241
163	170	180
236	242	250
159	185	210
144	154	162
204	228	245
112	183	219
126	139	145
214	241	251
159	240	253

R	G	B
130	150	153
105	134	135
37	96	86
204	214	211
48	64	59
250	255	253
227	255	243
241	255	248
237	249	243
67	97	79
59	78	66
61	116	80
85	128	100
154	177	162
14	45	24
59	93	70
178	187	181
46	181	88
59	157	90
90	213	129
214	255	225
224	239	228
129	155	135
178	194	182
115	255	143
99	193	117
182	201	185
59	255	88
19	255	48

R	G	B
176	255	185
238	255	240
154	255	163
198	255	203
106	255	116
137	255	144
226	252	227
124	233	125
250	255	250
167	229	166
107	145	104
182	211	180
23	95	15
149	211	141
128	140	126
95	202	74
194	231	186
147	169	142
41	177	3
166	203	154
208	224	202
219	235	211
172	187	164
203	211	197
241	244	238
199	201	195
110	114	98
127	129	119
210	211	196

R	G	B
255	253	185
193	193	150
255	255	221
121	121	106
162	162	147
142	142	129
94	94	89
212	212	203
235	235	227
213	213	207
203	203	198
137	137	134
116	116	114
245	245	242
85	85	84
121	121	120
253	253	252
119	117	23
255	253	143
253	241	7
174	173	157
208	195	0
220	210	64
156	153	113
201	199	175
151	150	136
187	175	71
195	193	175
198	197	187

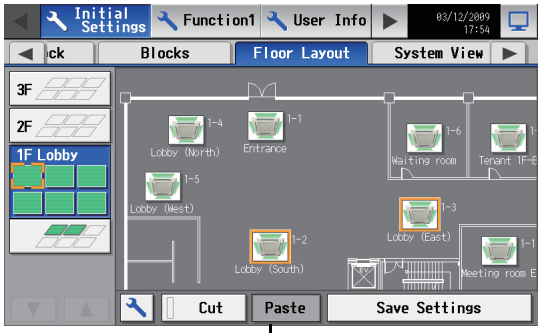
R	G	B
179	159	1
172	169	147
187	185	169
179	177	162
205	203	187
224	222	206
212	201	139
136	134	122
158	156	143
217	215	202
230	228	216
142	128	71
254	246	220
244	237	215
33	25	2
111	110	107
63	43	4
106	104	100
133	132	130
116	79	14
254	251	246
255	151	0
93	61	13
254	221	171
157	97	18
211	205	197
205	128	31
187	116	28
219	138	35

R	G	B
225	148	50
214	159	89
77	76	75
230	211	206
207	203	202
225	197	192
225	8	8
221	179	179
152	151	151
255	255	255
250	250	250
249	249	249
246	246	246
243	243	243
241	241	241
239	239	239
236	236	236
232	232	232
228	228	228
225	225	225
220	220	220
217	217	217
215	215	215
211	211	211
209	209	209
207	207	207
205	205	205
202	202	202
198	198	198

R	G	B
195	195	195
193	193	193
191	191	191
189	189	189
185	185	185
179	179	179
173	173	173
171	171	171
169	169	169
166	166	166
161	161	161
154	154	154
148	148	148
143	143	143
133	133	133
129	129	129
103	103	103
82	82	82
70	70	70
64	64	64
58	58	58
51	51	51
44	44	44
41	41	41
34	34	34
4	4	4
0	0	0
255	170	63
255	203	131

* The initial setting of background color is RGB [103, 103, 103].
* To delete the set layout, create a file that is painted with the initial background color, and read it.

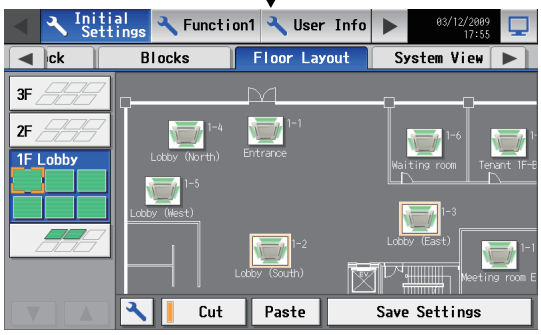
7-10-2 Changing the floor layout



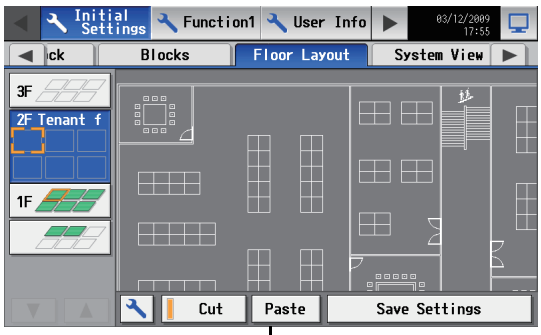
On the Floor Layout screen, select the group to be moved. (An orange frame appears around the selected group.)

* Groups that have been registered but not assigned a designated spot will appear at the top left corner of the bottom floor. (If the maximum number of displayable groups in the space described above is exceeded, the rest of the groups will be displayed in the space on the right of it.)





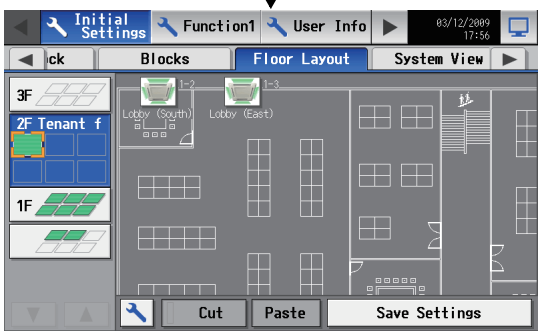
Touch the Cut button to copy the selected group. (A pale orange frame will appear around the selected group.)



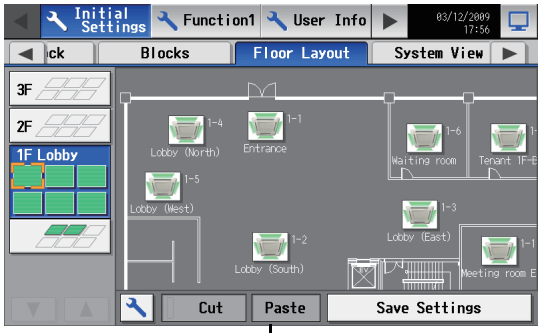
With the pale orange frame being displayed, select the floor to move the group to, and touch the Paste button to move the selected group to the selected floor.
To cancel, touch the Paste button with the cursor on the original group to deselect it, and the orange frame will disappear.
Touch the Save Settings button to save the changes.

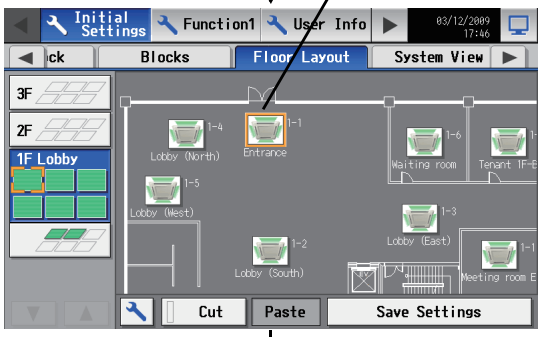
* If an attempt is made to exit the screen by touching the menu bar or the sub menus without touching the Save Settings button, a popup warning will appear. If the screen is exited without first touching the Save Settings button, the changes made will not be reflected.





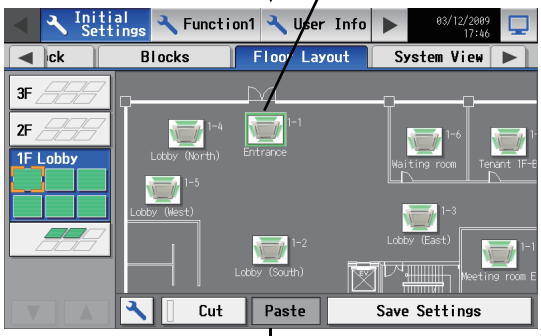
7-10-3 Moving the group in the area



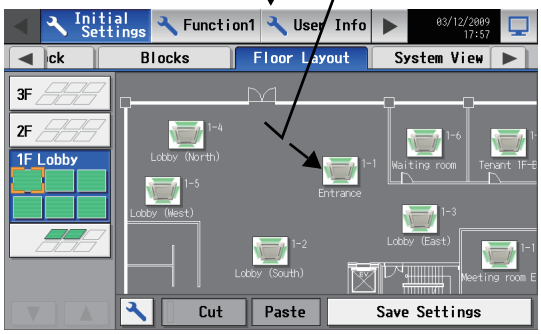


On the Floor Layout screen, select the group to be moved.

Press and hold
(for 1 second)



Press the group for one second, then the frame of the icon turns from orange to yellow-green and the icon becomes movable status.

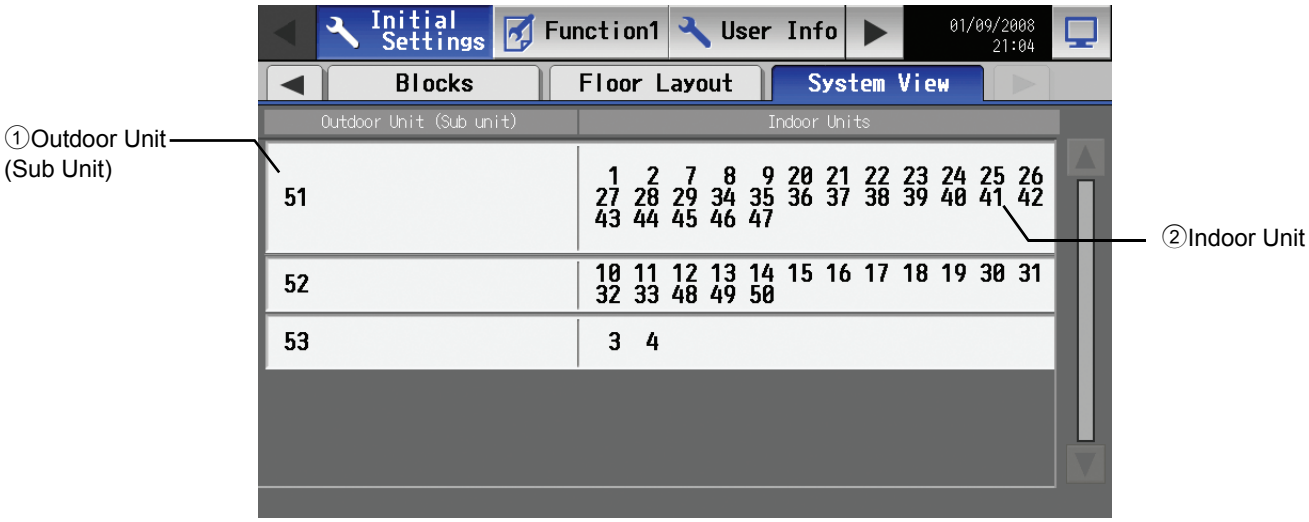


Drug & drop the icon under movable status to move anywhere within the group.

7-11 Checking the refrigerant systems

To see the list of refrigerant systems connected to AG-150A (connection information of outdoor and indoor units), touch [System view] on the screen that appears when [Initial Settings] on the setting change screen is touched and bring up the refrigerant system display screen.

* In the System View screen, the information is shown of the units in the groups that are registered on the group setting screen and the initial startup sequence for which have been successfully completed.

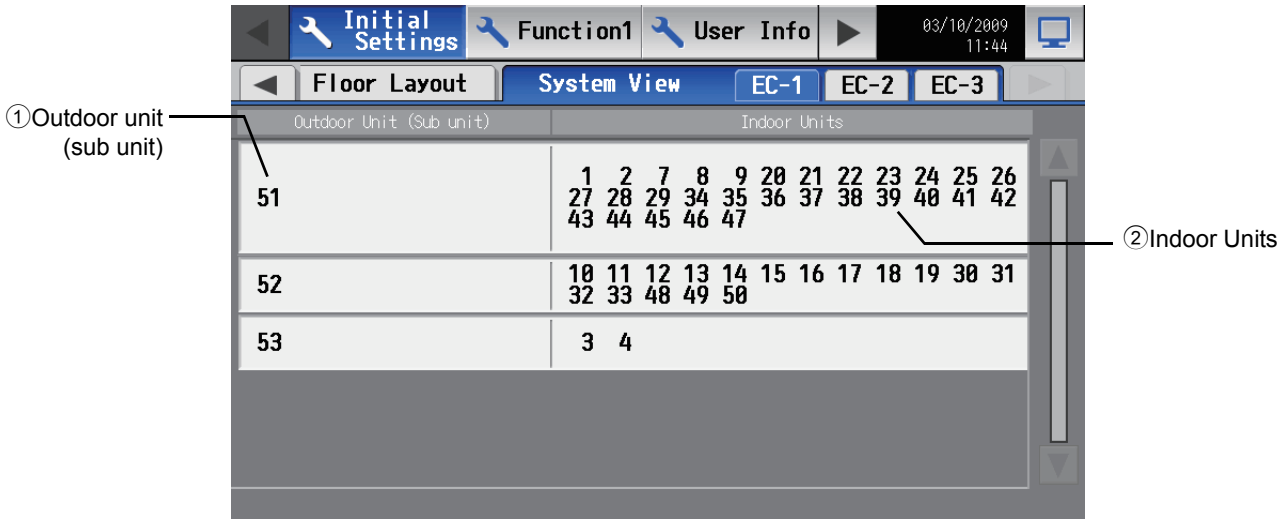


Item	Description
①Outdoor Unit	The numbers assigned to the outdoor units. (The numbers in the parentheses indicate the unit number of the connected sub units.)
②Indoor Unit	The numbers assigned to the indoor units that are connected to the outdoor unit on the same row.

• Checking the refrigerant system with connection to an Expansion controller (PAC-YG50ECA)

To verify the information about the refrigerant systems that are connected to the AG-150A (outdoor/indoor unit connection information) touch the [Initial Settings] > [System view] from the menu bar on the Setting change screen. On the System View screen, select the tab that corresponds to the Expansion control whose refrigerant system connection information is to be verified.

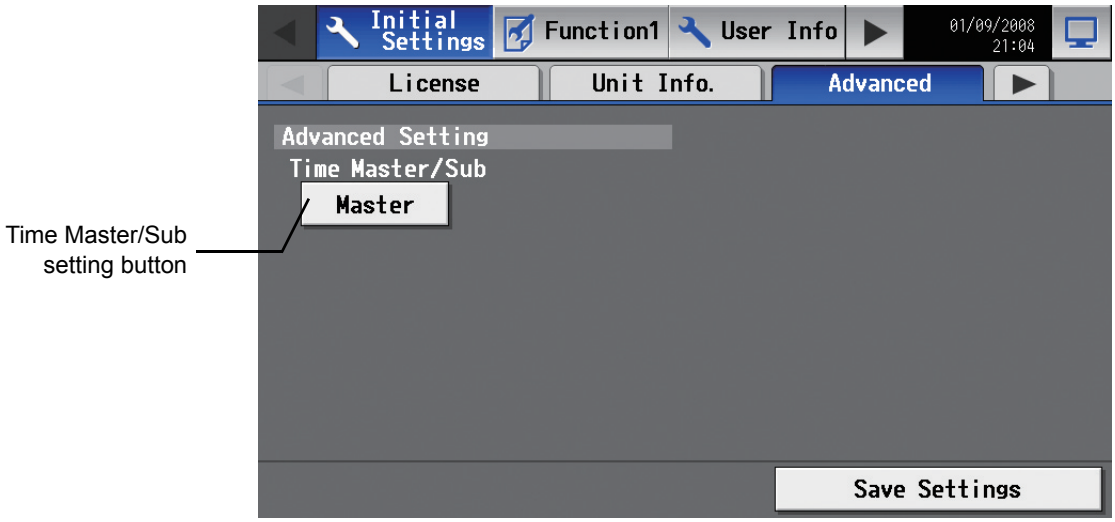
* In the System View screen, the information about the units will appear that have been grouped together on the Group settings screen and that have properly completed the startup procedure.



7-12 Advanced settings

Advanced settings are required for a system with connection to an Expansion controller to which a high-level controller in addition to AG-150A is connected. To make the advanced settings, touch [Initial settings]>[Advanced settings] from the menu bar on the setting change screen.

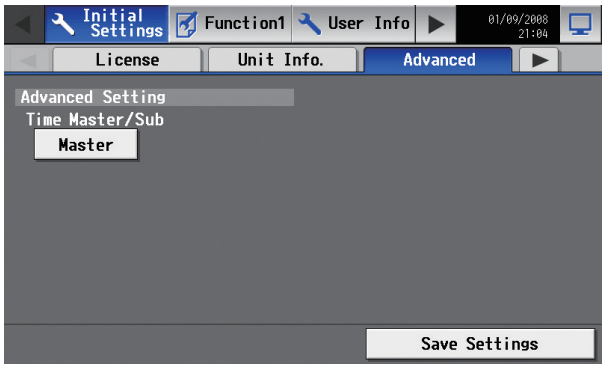
* Some settings may not be accessible is logged in as a building manager user.
* Use the initial setting (Master) if only one high-level controller is connected.



Comparison between Master and Sub

	Master setting	Sub setting
Clock setting	Allowed	Not allowed
Clock synchronization	Synchronized to the main controller	Synchronized to other controllers

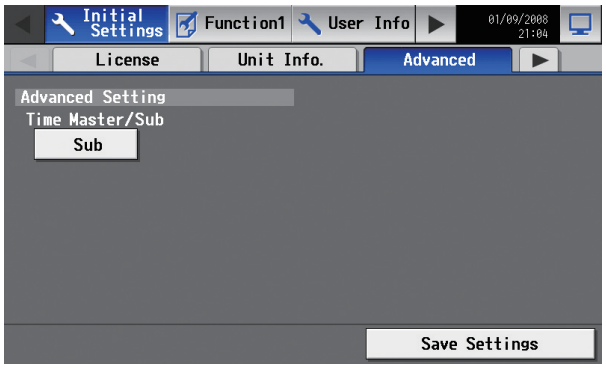
(1) To set the Master/Sub clock setting to “Master”



Press the Time Master/Sub setting to bring up “Master,” and then press Save Settings.
The initial setting is Master. Leave the setting as it is to set the unit to “Master.”

* Do not set more than one unit in a system to “Master.”

(2) Set the Master/Sub clock setting to “Sub.”



Press the Time Master/Sub setting to bring up “Sub,” and then press Save Settings.

8. Function 1

8-1 External Temperature Interlock

The purpose of this function is to avoid heat shock (physical shock caused by the extreme temperature difference when entering into a building) during cooling operation. It adjusts the setting temperature in order to lower the temperature difference between indoor and outdoor. To use this function, log in to the Web browser with the Maintenance User name and password, and then make a setting for AI controller on the “Measurement” under “Function 1”.

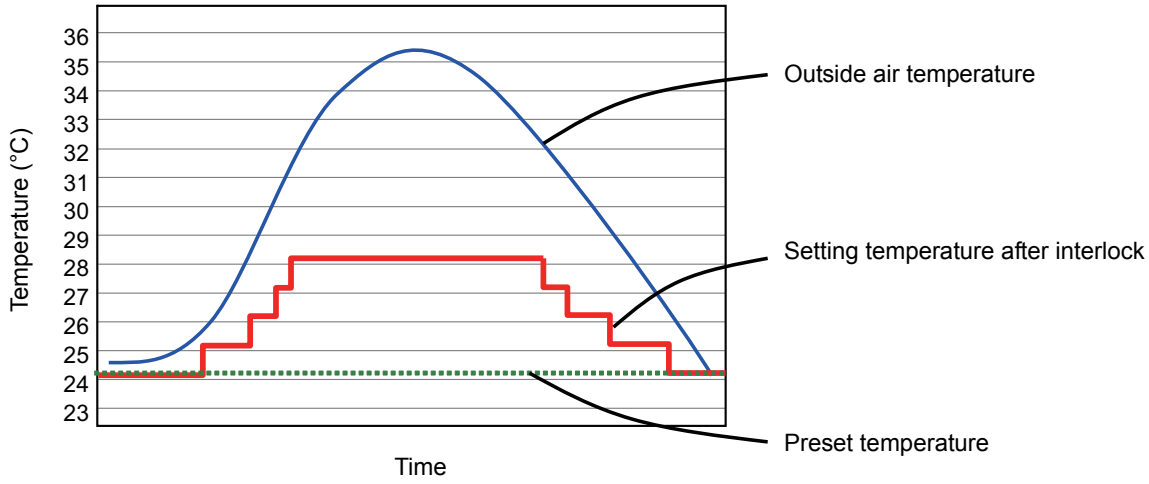
Note: Connect our AI controller (PAC-YG63MCA) to measure outside temperature.

Note: This function works when the operation mode is [cooling] or [dry].

Note: This function works for air conditioning unit group, but not for LOSSNAY, Air To Water (PWFY), or general equipment.

Note: When temperature are displayed in Fahrenheit, +2, +4, +6, +8°F may not properly be displayed because +1, +2, +3, +4°C Control is excuted and then Celsius temperature is converted into Fahrenheit temperature inside the controller.

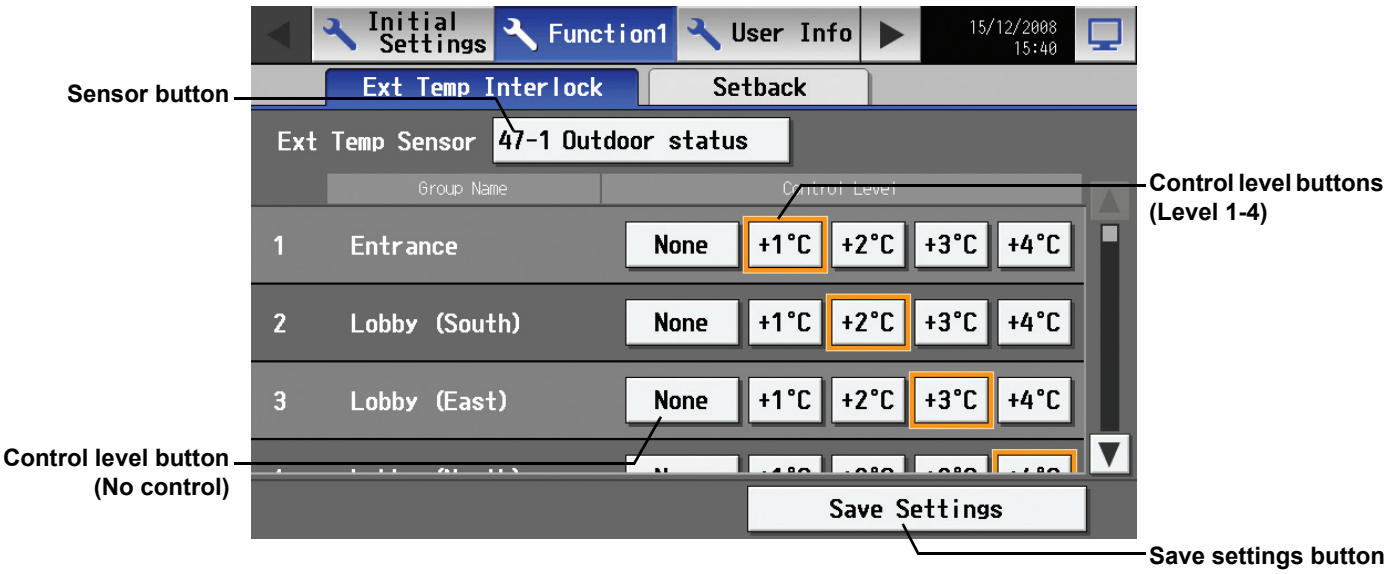
Outside air temperature	Setting temperature after interlock
[Preset temperature + 1.4°C / + 2.5°F] or below	Preset temperature
[Preset temperature + 1.5°C / + 2.7°F] - [Preset temperature + 4.4°C / + 7.9°F]	Preset temperature + 1°C / + 2°F
[Preset temperature + 4.5°C / + 8.1°F] - [Preset temperature + 6.4°C / + 11.5°F]	Preset temperature + 2°C / + 4°F
[Preset temperature + 6.5°C / + 11.7°F] - [Preset temperature + 7.4°C / + 13.3°F]	Preset temperature + 3°C / + 6°F
[Preset temperature + 7.5°C / + 13.5°F] or above	Preset temperature + 4°C / + 8°F



8-1-1 Setting of outside temperature interlock function

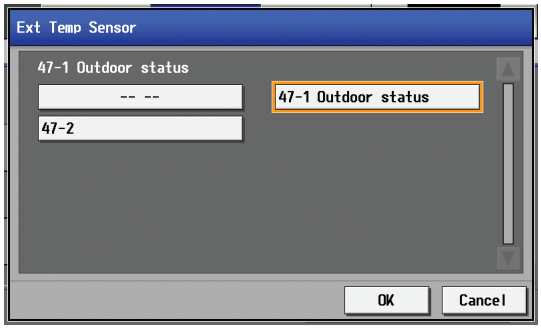
To use outside temperature interlock function, touch [Function 1] on the menu bar on the setting change screen, and then touch [Ext Temp Interlock] tab. In this screen, outside temperature measuring unit and control level for each group can be set.

Note: If the user logs in as a building manager, some of the operations may be prohibited.



8-1-2 Selecting of outside temperature measuring unit

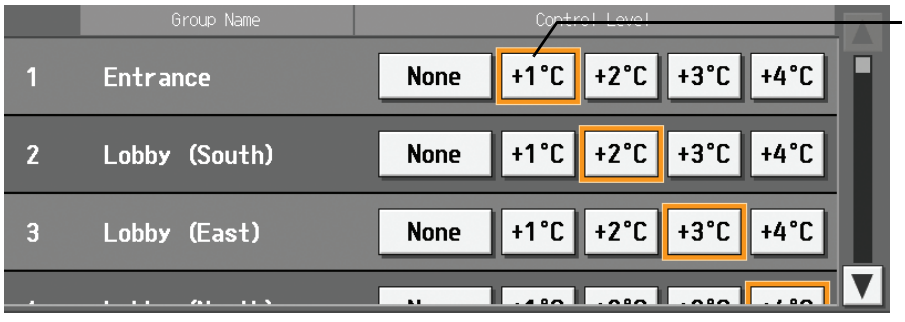
Outside temperature measuring unit must be selected to use this function. Press [Sensor] button, then Ext Temp Sensor screen appears as shown below.



Select an outside temperature measuring unit used for the interlock function, then press OK.
(An orange frame will appear around the selected button.)
The selected unit will be displayed on the Ext Temp Interlock screen.
To cancel the selected unit, select [-- --] and then touch OK.

8-1-3 Setting the control level

After selecting the outside temperature measuring unit, control level for each group can be set in the Ext Temp Interlock screen. Select a maximum additional temperature to the preset temperature for each air conditioning group. For example, when [+4°C/+8°F] is selected and the preset temperature is 24°C/75°F, the maximum set temperature will rise to 28°C/83°F along with outdoor temperature rise. When [+2°C/+4°F] is selected, the maximum set temperature will rise to 26°C/79°F.



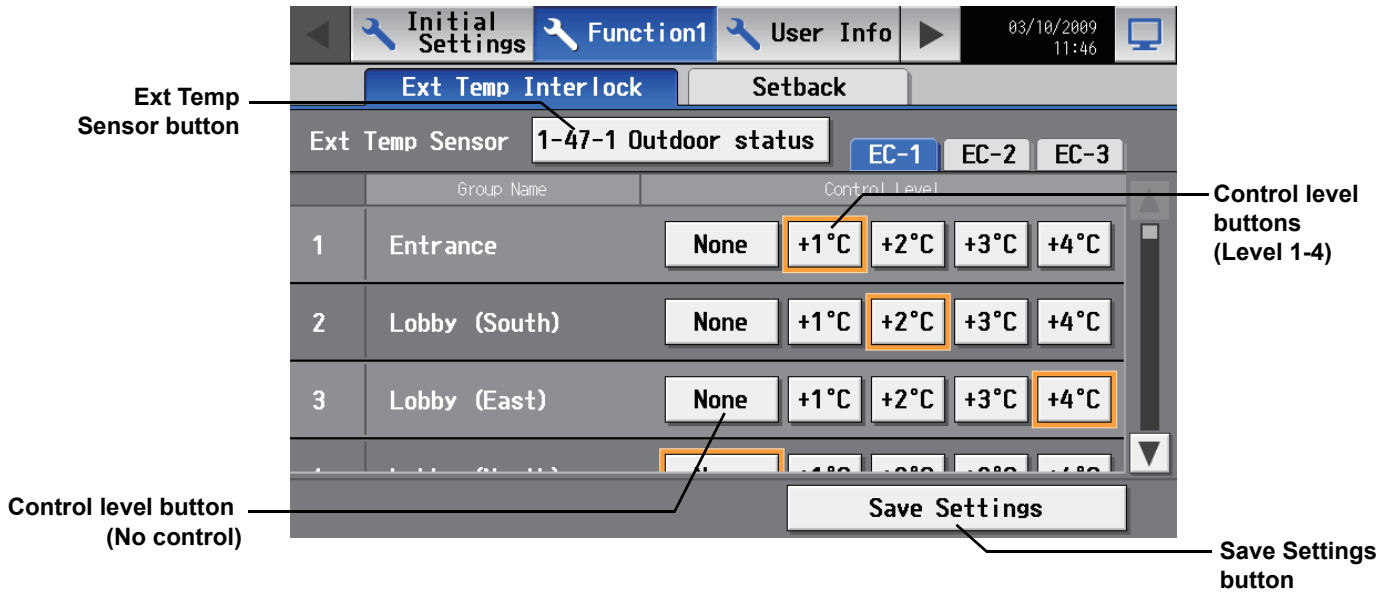
For groups that use outside temperature interlock function, select [+1°C/+2°F], [+2°C/+4°F], [+3°C/+6°F], [+4°C/+8°F] button depending on the control level. For groups that does not need this function, touch [None]. (An orange frame will appear around the selected button.)
Touch [Save settings] button to reflect the changes immediately.

• Using the outside temperature interlock function in a system with connection to an Expansion controller (PAC-YG50ECA)

To use the outside temperature interlock function, touch [Function1] > [Ext Temp Interlock] from the menu bar on the Setting change screen. Select the external temperature sensor on the Ext Temp Interlock settings screen, select the tab that corresponds to the Expansion controller that is connected to the desired group, and make the control level settings for each group.

Note: If the user logs in as a building manager, some of the operations may be prohibited.

Note: When multiple AG-150A controllers are connected by connecting an Expansion controller to the system, this function should only be used on one of the AG-150A controllers.



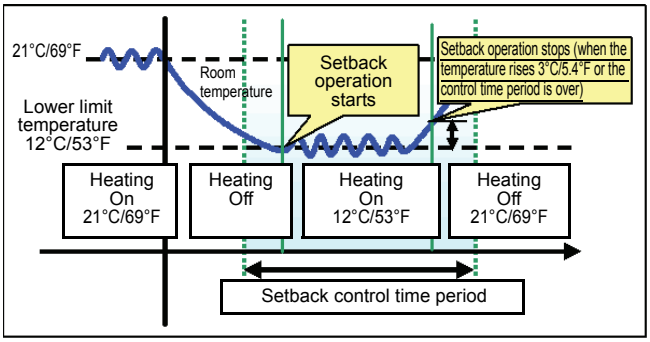
8-2 Night setback function

Night setback function is a function that prevents indoor dew or extreme temperature rise by heating/cooling automatically when the room temperature goes outside of the specific range during the set time period.

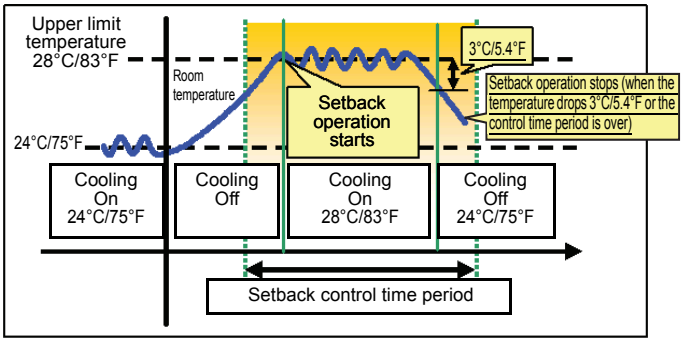
Note: When the air conditioning group with night setback function is off and when the temperature exceeds the preset temperature, heating/cooling operation starts.

Note: If the room temperature is measured by the air-conditioner's suction temperature sensor, the temperature may not be correct when the air-conditioner is inactive and the air is not fresh. When the air-conditioner is inactive, using a remote sensor or a remote control sensor is recommended to measure room temperature correctly.

When the night setback control is set, air conditioning group operates as shown below.



When the temperature drops below the lower limit temperature (heating control)

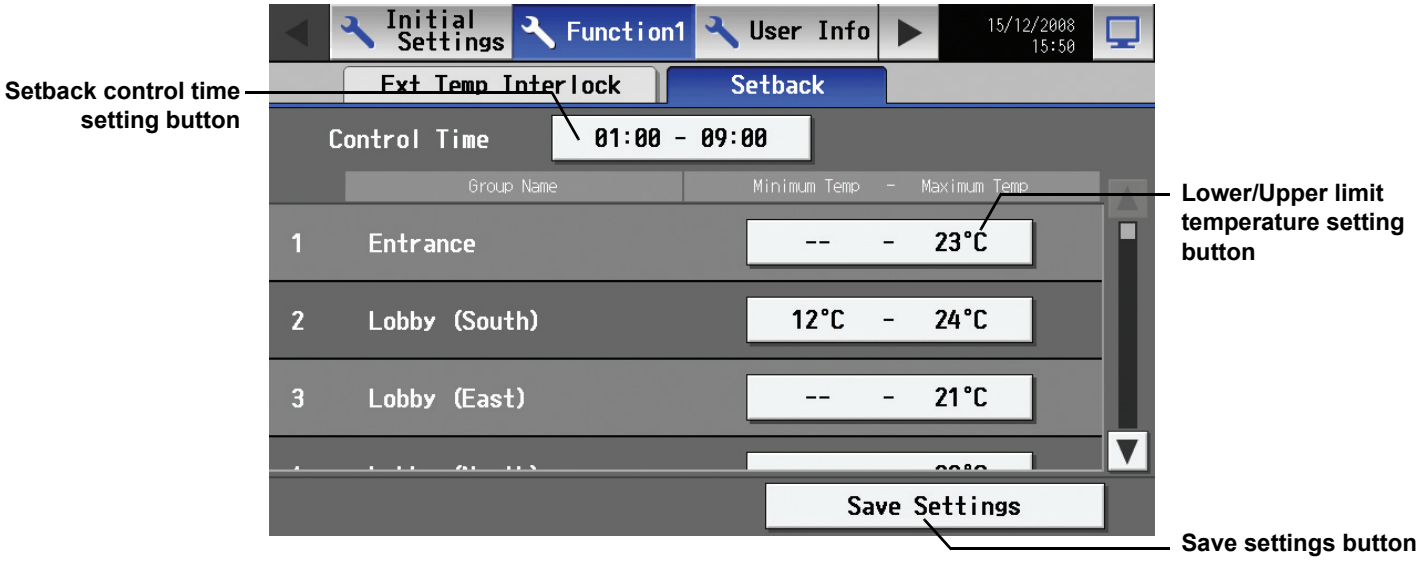


When the temperature rises above the upper limit temperature (cooling control)

8-2-1 Setting of night setback function

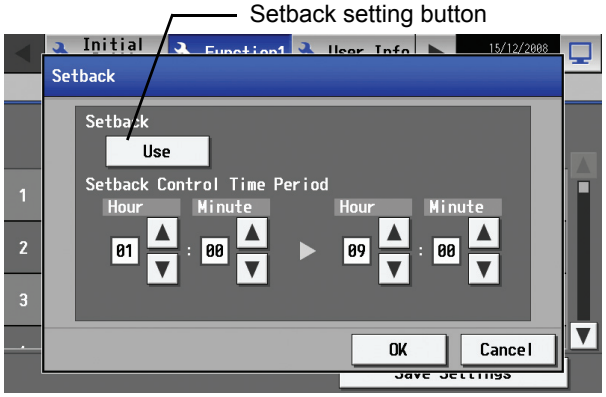
To use night setback function, touch [Function 1] on the menu bar on the Initial setting, and then touch [Setback] tab. In this setback setting screen, control time and upper/lower limit temperature for each group can be set.

Note: If the user logs in as a building manager, some of the operations may be prohibited.



8-2-2 Setting of night setback control time period

To use night setback function, the time period of this control has to be set. Touch [Setback control time period setting] button, then Setback control screen appears as shown below.

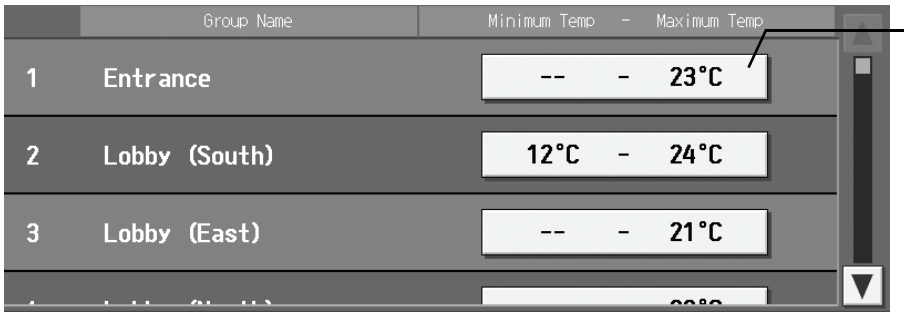


In this screen, usability of night setback function and control start/stop time can be set.

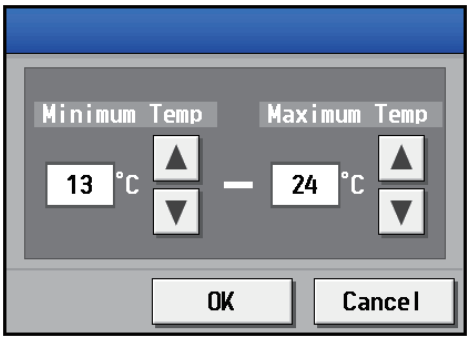
First, touch [Setback setting] button to use night setback function. Next, set the control time. Set the time by pressing ▲▼ button. After setting, press OK to reflect the settings. Setback setting screen will be shown. To cancel the setting, touch [Cancel]. Setback setting screen will be shown.

8-2-3 Setting of lower/upper limit temperature

After setting the time period, lower/upper limit temperature for each group can be set.



Touch lower/upper limit temperature setting button to show the screen below.



Set the temperature by pressing ▲▼ button. When [--] is set, setback control will not be operated. After setting, press OK to reflect the setting. Setback setting screen will be shown. If the temperature is not changed, touch [Cancel].

Note: The setting : lower limit temperature < upper limit temperature

Note: The settable temperature varies depending on the model.

Note: When CITY MULTI S Series (PUMY) is used, set the temperature at 17°C/63°F or above in heating mode.

After setback setting screen is shown, check the changed items. Touch [Save settings] button to reflect the changes immediately.

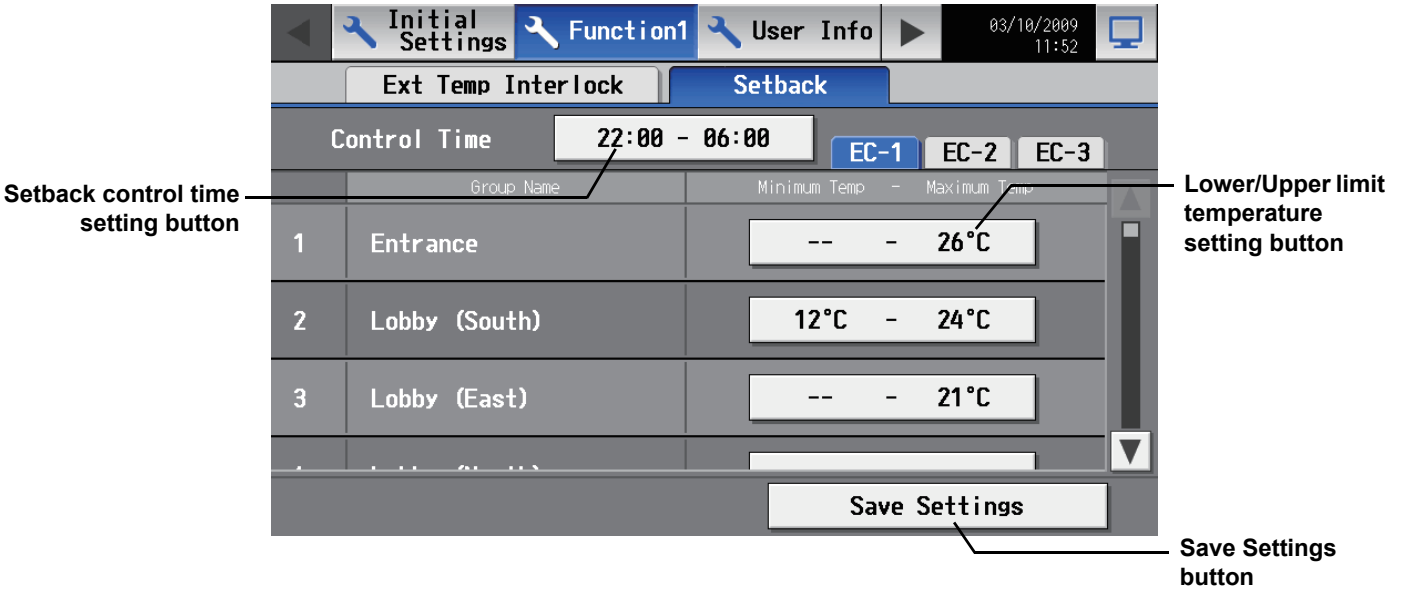
• Using the setback function in a system with connection to an Expansion controller (PAC-YG50ECA)

From the menu bar on the Initial Settings screen, touch [Function 1] >[Setback] to display the Setback setting screen. On this screen, make the settings for the setback periods. Select the EC to which the group is connected whose settings are to be changed, and then set the upper and lower temperature limits.

Note: If the user logs in as a building manager, some of the operations may be prohibited.

Note: Be sure to make the settings while the Expansion controller is connected.

Note: When multiple AG-150A controllers are connected by connecting an Expansion controller to the system, this function should only be used on one of the AG-150A controllers.



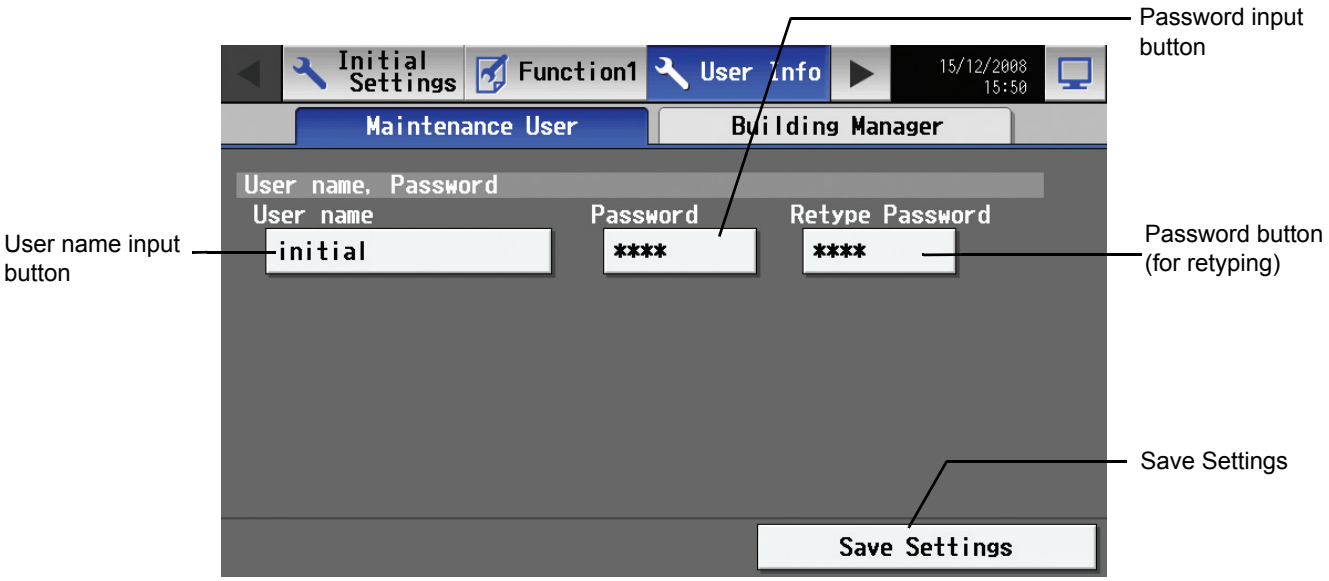
9. User Setting

Touch [User Info] on the menu bar in the setting change screen to jump to the user setting screen.

9-1 Setting the Maintenance User

To change the Maintenance User name and/or password, touch [Maintenance User] on the screen that appears when [User Info] is touched on the setting change screen.

* This screen cannot be accessed when logged in as the Maintenance User.



(1) Changing the maintenance user name

To change the maintenance user name, touch the user name input button, and enter the user name on the keyboard that appears in 20 characters or less.

(2) Changing the password

To change the maintenance user password, touch the password input button, and enter the password that is between 3 and 10 character long on the keyboard that appears. Press Retype Password, and enter the same password again.

* On the screen, password will appear as asterisks with each * representing a character.

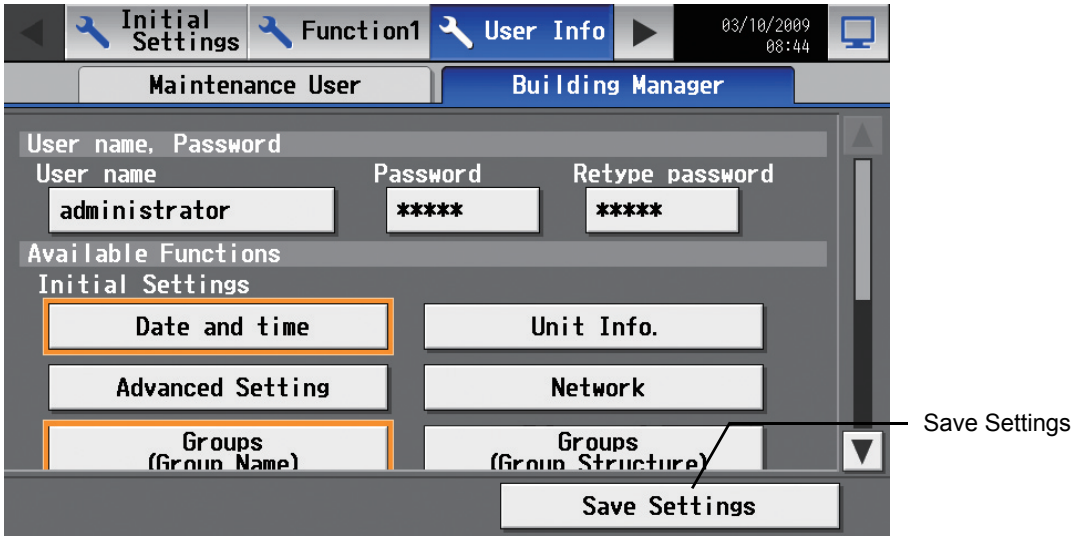
Press the [Save setting] button to reflect the new user name and password.



9-2 Setting the Building Manager

To change the Building Manager name and/or password, or enable/disable functions, touch [Building Manager User] on the screen that appears when [User Info] is touched on the setting change screen.

Note: If the user logs in as a building manager, the present status can be checked, but cannot be changed.



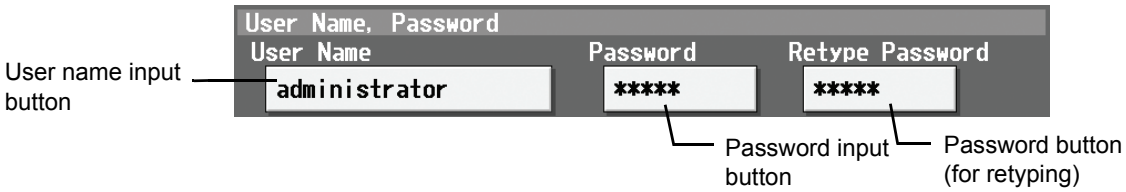
(1) Changing the building manager name

To change the building manager name, touch the user name input button, and enter the user name on the keyboard that appears in 20 characters or less.

(2) Changing the password

To change the building manager password, touch the password input button, and enter the password that is between 3 and 10 character long on the keyboard that appears. Press Retype Password, and enter the same password again.

* On the screen, password will appear as asterisks with each * representing a character.
  Press the [Save setting] button to reflect the new user name and password.
* The same user name and password are used to log in to Web browser.



(3) Making the settings for available functions

Touch the function to enable the function (An orange frame will appear around the selected item), or touch the selected item again to deselect it (no orange frame). Press the [Save setting] button to save the changes.

* This setting is valid only on the LCD screen and will not be reflected on the Web browser.

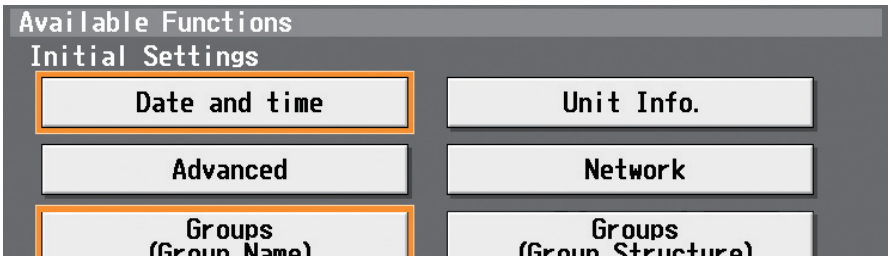


Table Available Function List

Function			Content
Initial setting	Date and time		Current date and time setting
	Unit Info*1		AG-150A unit information settings, connection or non-connection of EC
	Network*1		AG-150A network setting, external output setting
	Advanced*1		AG-150A Master/Sub clock setting
	Groups	Group name	Group name setting
		Group structure*1	Connection setting of indoor units, LOSSNAY units, DIDO controller, Air To Water (PWFY), remote controllers, and system controllers in a group
	Interlock*1		Connection setting of interlocked LOSSNAY
	Blocks	Block name	Block name setting
		Block structure*1	Registration setting of groups in a block
	Floor Layout	Floor name	Floor name setting
		Floor configuration	Floor configuration setting
Function1	Ext Temp Interlock		Setting of outside temperature interlock function
	Setback		Setting of setback function

*1: At factory shipment, the operation of the building manager is prohibited.

10. Maintenance screen

10-1 Copying the data to a USB memory

Note:

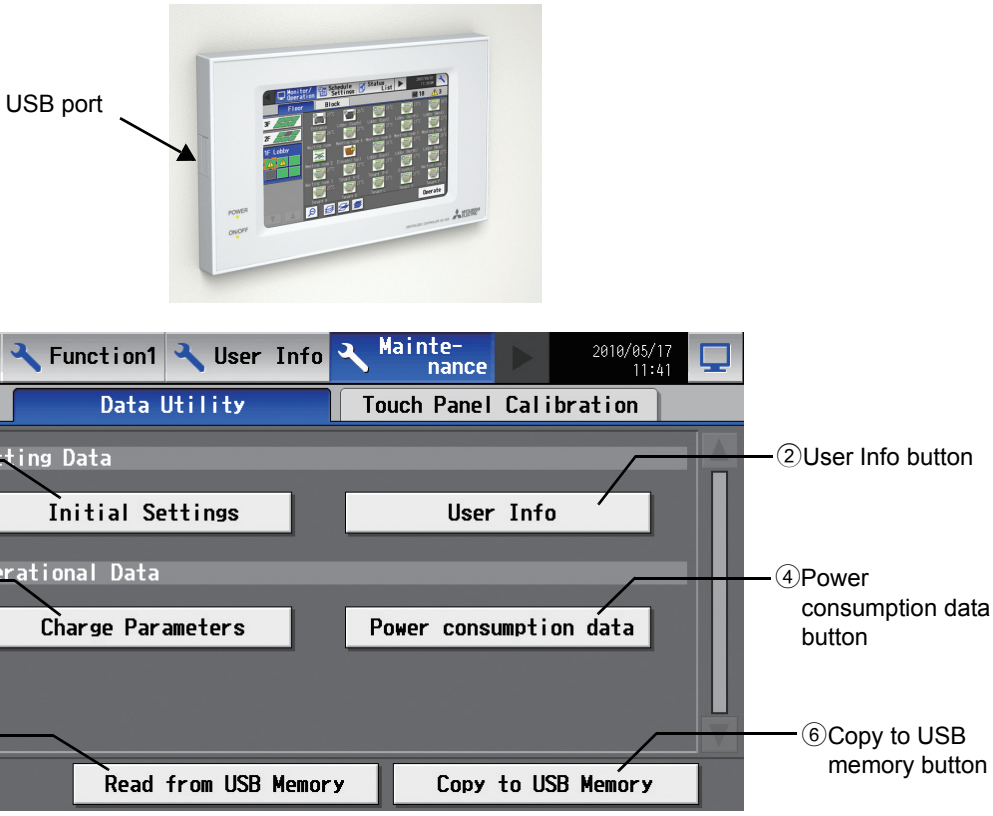
- The table below shows USB memory devices that have been confirmed to work. (As of October 2010)

No.	Manufacturer	Model	Capacity	No.	Manufacturer	Model	Capacity
1	Sandisk	SDCZ6-2048-J65RB	2G	10	Verbatim	USBM4GVWS1	4G
2	kingston	DT400/2GBFE	2G	11	SILICON POWER	SP002GBUF2M01V1*	2G
3	I/O data	TB-BH2/2G/*	2G	12	ELECOM	MF-NU2A04G**	4G
4	I/O data	TB-BH2/4G/*	4G	13	Transcend	TS2GJFV33	2G
5	BUFFALO	RUF-C2GS-**/U2	2G	14	TDK	UFD4GS-T*A	4G
6	BUFFALO	RUF2-C2GS-**/M	2G	15	BUFFALO	RUF2-K4GE-**	4G
7	BUFFALO	RUF-C4GS-**/U2	4G				
8	BUFFALO	RUF-C8GS-**/U2	8G				
9	adata	C702	2G				

* Asterisks in the Model column describe colors.
Do not make a security function setting when using No.10, 12, 13, or 14.

- If any USB memory above cannot be obtained, use a memory device that meets the following three conditions. Test the memory device several times before use and verify that the device functions properly.
  Reading data from or writing data to a memory device that has not been confirmed to work may cause unexpected problems. Make sure to test the memory device before operating the unit (during the test run). Do not use a memory device that has experienced writing error once.
  ① USB standard: Verified with USB 1.1
  ② Format type: Must be in FAT32 or FAT (FAT16) format
  ③ Security function is not provided, or not required to set.

To copy the data to a USB drive, plug the USB into a USB port, and touch [Data Utility] in the screen that appears when [Maintenance] on the setting change screen is touched.



Item		Description
Setting data	①Initial settings	Touch the button to select, and touch again to deselect. With the button selected, touch the [Copy to USB Memory] button to copy all settings data (except the AG-150A user information), to the \[Serial Number]\[SettingData] folder in the root folder of the USB memory. If the folder does not already exist, one will be created. * The type of settings that cannot be set on the LCD screen, such as the energy-save setting data, will also be copied.
	②User Info	Touch the button to select, and touch again to deselect. With the button selected, touch the [Copy to USB Memory] button to copy the AG-150A user information to the \[Serial Number]\[SettingData] folder in the root folder of the USB memory. If the folder does not already exist, one will be created. * The data can be copied only when logged in as the Maintenance User.

Operational data	③Charge parameters	Touch the button to select, and touch again to deselect. With the button selected, touch the [Copy to USB Memory] button to copy the charge parameter data to the \[Serial Number]\[OperationalData]\[ChargeParameters]\[Date] folder in the root folder of the USB memory in the CSV format. If the folder does not already exist,one will be created. Note: The date folder will be created in the format that was specified on the Unit Info screen.
	④Power consumption data	Touch the button to select, and touch again to deselect. With the button selected, touch the [Copy to USB Memory] button to copy the power consumption data to the \[Serial Number]\[OperationalData]\[ChargeParameters]\[Date] folder in the root folder of the USB memory in the CSV format. If the folder does not already exist,one will be created. Note: The date folder will be created in the format that was specified on the Unit Info screen.
⑤Read from USB memory		With the Initial Settings or User Info button selected, touch this button to read the selected setting data from USB memory. If there is no data in USB memory, nothing will be read. * Do not remove the USB drive while the file is being transferred * Do not import the data from other models. If the settings data for other models are used, the AG-150A will not function properly.
⑥Copy to USB memory		With the Setting Data, User Info, or Charge Parameter button selected, touch this button to copy the selected settings to the USB memory. * A fixed name will be automatically assigned to the file, and the file will be saved. * Any previous data file for the same equipment in the \[Serial number]\[SettingData] folder will be overwritten. To save the previous data file, move the file to a different folder before saving the new file. * Save the setting while normal communication with the Expansion controller is being established. * Saving the charge parameter settings may take several dozens of minutes.

Charge parameter data

The format of the CSV file that is output when the charge parameter is saved is as follows:
Note: Dates in the folder name, the file name,and the file contents are displayed in the format selected on the Initial Setting Web.

"March 10, 2010" would be expressed
as [10/03/2010] in the [dd/mm/yyyy] format,
as [03/10/2010] in the [mm/dd/yyyy] format, and
as [2010/03/10] in the [yyyy/mm/dd] format.

[File name]

- Without connection to an Expansion controller
  ChargeParameter_[yyyy]-[mm]-[dd]A[Indoor unit address (fixed 2 digits)]-[Time zone (1-5)*].csv
  (yyyy: year, mm: month, dd: date)
  Example) ChargeParameter_2010-03-10A01-1.csv

- With connection to an Expansion controller
  ChargeParameter_[yyyy]-[mm]-[dd]A[Expansion Controller Number(1-3)][Indoor unit address (fixed 2 digits)]-[Time zone (1-5)*].csv(yyyy: year,mm: month,dd: date)
  Example) ChargeParameter_2010-03-10A1-01-1.csv
  *Time Periods 1 through 5 can only be set from TG-2000.
  When shipped from the factory, only Time Period 1 is settable.

[File contents]

The format of each CSV file is as follows. Each file contains up to 62 days of data.
* Delimiter (“,” or “;”) and decimal point (“.” or “,”) that are used by the CSV file are selected on the Initial Setting Web.

Item		Format
1st line	File class	Charge parameter: 201
2nd line	Data range	Start date + “-” + End date
3rd line	Target trend	“Address” + M-NET address
4th line	Item	“Date, SaveValue, ThermoTime, FanTime, SubHeaterTime”
5th to 66th line (max.)	Data	date, save value, thermo time, fan time, sub heater time * The value for each data type is a cumulative value since the beginning of operation.

* Charge parameter data range is 0 through 999999. If the count value exceeds the maximum value, the count value goes back to 0.
* The file is not output until the operation starts because the data does not exist.
* When the Energy Management License Pack or Charge License has not been registered, the file is not output.
* Charge License can be registered only on AG-150A-A.

Example) Without/With connection to an Expansion controller

```
201
2010/03/10-2010/03/12
Address 01
Date,SaveValue,TermoTime,FanTime,SubHeaterTime
2010/03/10,57,150,0
2010/03/11,76,122,178,0
2010/05/12,84,134,194,0
```

Power consumption data

The format of the CSV file that is output when the power consumption data is saved is as follows:
Note: Dates in the folder name, the file name,and the file contents are displayed in the format selected on the Initial Setting Web.

"March 10, 2010" would be expressed
as [10/03/2010] in the [dd/mm/yyyy] format,
as [03/10/2010] in the [mm/dd/yyyy] format, and
as [2010/03/10] in the [yyyy/mm/dd] format.

[File name]

- Without connection to an ExpansionExpansion controller
  ChargeParameter_[yyyy]-[mm]-[dd]MCPA[PI controller*1 address (fixed 2 digits)]-[Time zone (1-5)*2].csv
  (yyyy: year, mm: month, dd: date)
  Example) ChargeParameter_2010-03-10MCPA50-3.csv

- With connection to an Expansion controller
  ChargeParameter_[yyyy]-[mm]-[dd]MCPA[Expansion Controller Number(1-3)]-[PI controller*1 address (fixed 2 digits)]-[Time zone (1-5)*2].csv (yyyy: year,mm: month,dd: date)
  Example) ChargeParameter_2010-03-10MCPA1-50-3.csv
  *1PI controller : PAC-YG60MCA
  *2Time Periods 1 through 5 can only be set from TG-2000.
  When shipped from the factory, only Time Period 1 is settable.

[File contents]

The format of each CSV file is as follows. Each file contains up to 62 days of data.
* Delimiter (“,” or “;”) and decimal point (“.” or “,”) that are used by the CSV file are selected on the Initial Setting Web.

Item		Format
1st line	File class	Power consumption: 202
2nd line	Data range	Start date + “-” + End date
3rd line	Target trend	Without connection to an Expansion controller “MCP”+[PI controller address]-[Time zone] With connection to an Expansion controller “MCP”+[Expansion Controller Number]+[PI controller address]-[Time zone]
4th line	Item	“No., Date, Count value(Ch1), Count value(Ch2), Count value(Ch3) ,Count value(Ch4)”
5th to 66th line (max.)	Data	no., date, count value(Ch1), count value(Ch2), count value(Ch3) ,count value(Ch4) * The value for each data type is a cumulative value since the beginning of operation.

* No. is consisted of three-digit or four-digit number:
  Without connection to an Expansion controller : address (two digits) and Time zone (one digit).
  With connection to an Expansion controller : number(1-3) , address (two digits) and Time zone (one digit).
* Power consumption data range is 0.00 through 999999.99. If the count value exceeds the maximum value, the count value goes back to 0.00.
* The file is not output until the operation starts because the data does not exist.
* When the Energy Management License Pack or Charge License has not been registered, the file is not output.
* Charge License can be registered only on AG-150A-A.

Example) Without connection to an Expansion controller

```
202
10/03/2010-12/03/2010
MCP 50-3
No.,Date,Count value(Ch1), Count value(Ch2), Count value(Ch3), Count value(Ch4)
503,2010/03/10,100000.00,0.00,0.00,0.00
503,2010/03/11,100100.00,0.00,0.00,0.00
503,2010/03/12,100250.00,0.00,0.00,0.00
```

Example) With connection to an Expansion controller

```
202
10/03/2010-12/03/2010
MCP 1-50-3
No.,Date,Count value(Ch1), Count value(Ch2), Count value(Ch3), Count value(Ch4)
1503,2010/03/10,100000.00,0.00,0.00,0.00
1503,2010/03/11,100100.00,0.00,0.00,0.00
1503,2010/03/12,100250.00,0.00,0.00,0.00
```

10-2 Reading setting data from USB memory

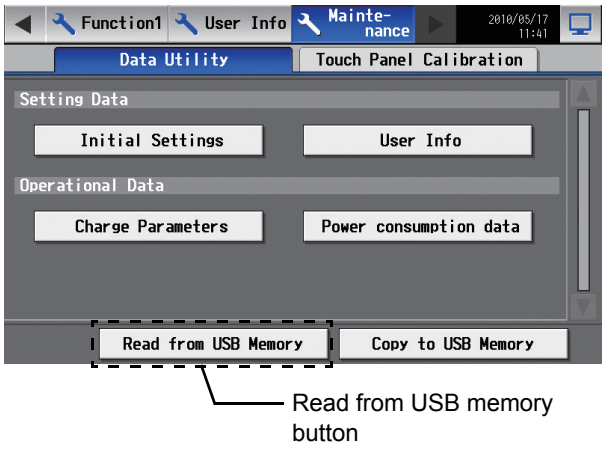
To read setting data from USB memory, insert USB to USB port. Touch [Maintenance] on setting change and then touch [Data Utility] tab to show the screen below.

First, create [SetupData] folder in the root folder of the USB memory using PC. Save the setting data in the [SetupData] folder.

Note: Do not change the file name from that of when backup was performed.

Note: If the folder name or file name is different from the given name, no data can be read.

Note: Check that normal communication between the AG-150A and Expansion controller is established before reading in data from the USB drive.



After saving the setting file in the [SetupData] folder, touch [Initial Setting] or [User Info], and then touch [Read from USB Memory] button.
Wait for a while. The message “The data has been read” will be shown when the reading is completed. Check if the selected data was read correctly.

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

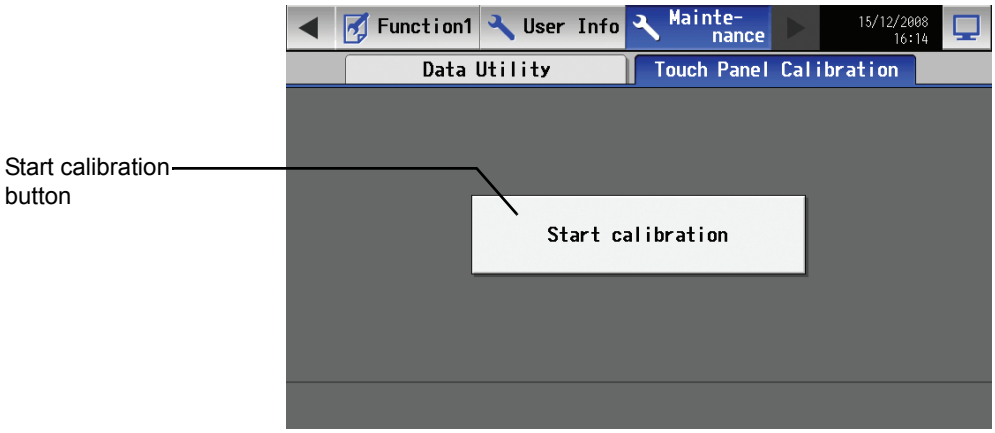
Note: If the data is not read, check if the USB memory is inserted correctly.

Note: Do not read the data that was saved from the Expansion controller (PAC-YG50ECA) or GB-50ADA-A, GB-50ADA-J.

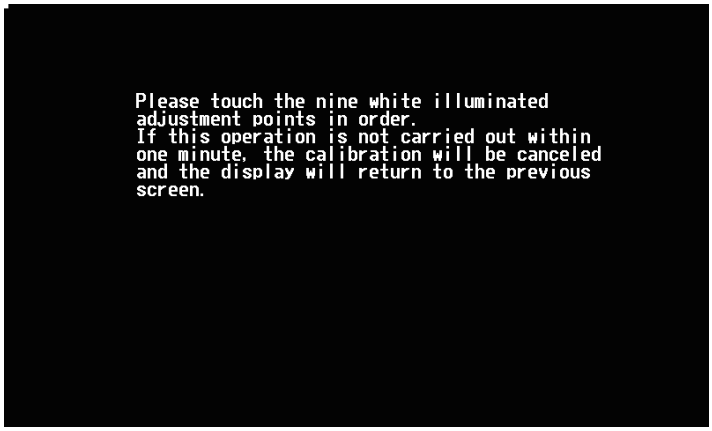
10-3 Adjusting the touch panel

To adjust the touch panel, touch [Maintenance] on the setting change screen and then [Touch Panel Calibration] to bring up the Touch Panel Calibration screen.

Note: The use of any commercially available touch pen is recommended.



The touch panel calibration screen will appear when the [Start Calibration] button is touched.



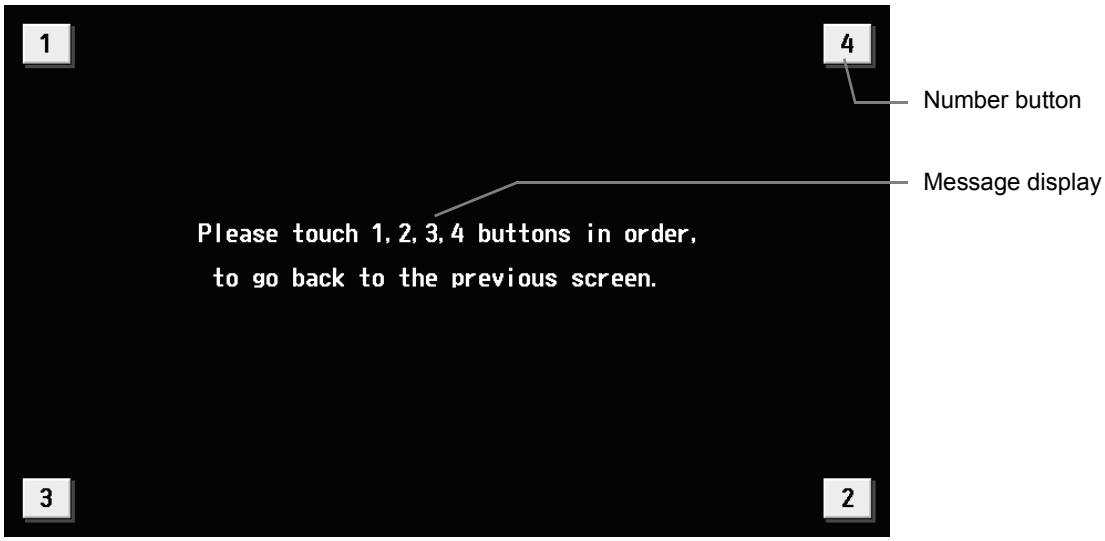
A white “5 dots × 5 dots” square will appear in the screen in the following order: left top, center top, right top, left middle, center, right middle, left bottom, center bottom, and right bottom. Every time the square is touched, the next square will appear. When all nine squares are touched, calibration is complete, and the display will return to the touch panel calibration screen. If the screen is left untouched for one minute, the display will automatically return to the calibration screen, and this step needs to be started over.

* The screen may not be calibrated properly if touched with a finger. Use a pointy but not sharp object to touch the screen.
* A sharp object may damage or scratch the screen.

11. Cleaning the touch panel

To clean the touch panel surface, first touch the [Setting Change Button] on the main operation screen and bring up the login screen, then touch the Clean touch panel button to bring up the screen below. Clean the touch panel with this screen being displayed.

* Please use dry cloth or soft cloth with neutral detergent (after wring dry) or one with Ethanol when cleaning. Do not use any organic solvent acid or alkali solution.



Item	Description
Number	Pressing the buttons 1 through 4 in the ascending order will take the screen back to the original screen (main operation screen). To go back to the previous screen, these buttons must be touched in the correct order starting with button 1. Touching the buttons in the wrong order will cancel all previous touching of buttons.
Message	“Please touch the 1, 2, 3, 4, buttons in order, to go back to the previous screen.” will be displayed.

12. External input/output function

- External signal input requires the external I/O adapter (PAC-YG10HA-E; sold separately).
- If an Expansion controller is connected, the external input/output function can be set to use only the Expansion controller.
- Refer to the Installation Manual and the Instructions Book for the unit and Expansion controller (PAC-YG50ECA) for details.
- ON/OFF batch operation of external input function cannot be used on DIDO controller (PAC-YG66DCA). However, only when "Emergency Stop (Level signal)" is selected, batch operation can be used by setting switches on DIDO controller (PAC-YG66DCA).

12-1 External input function

(1) The function of external input

Touch [Initial Settings] on the menu bar in the setting change screen, then [Network setting] to bring up the network settings screen. Touch [External Input Setting], and make the settings.

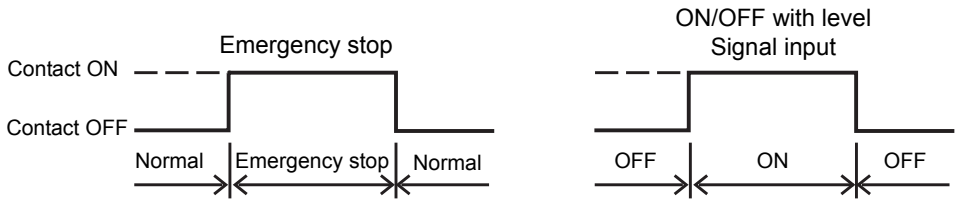


- The type of external input function can be selected by making certain settings.

Function of external input signal	Button	Remarks
External input signal not used	Do not use	-
Perform emergency stop with level signal	Emergency Stop (Level signal)	During emergency stop, only ON/OFF of the centralized controller and local remote controller operation will be prohibited. Scheduled operations cannot be performed.
Perform ON/OFF operation with level signal	ON/OFF (Level signal)	Only the ON/OFF operation of the centralized controller and the local remote controller will be prohibited. Scheduled operations cannot be performed.
Perform ON/OFF operation, prohibit/ permit operation with pulse signal	ON/OFF/Prohibit/Permit (Pulse signal)	Set the pulse width when the contact is ON between 0.5 and 1.0 seconds.

(2) Input signal

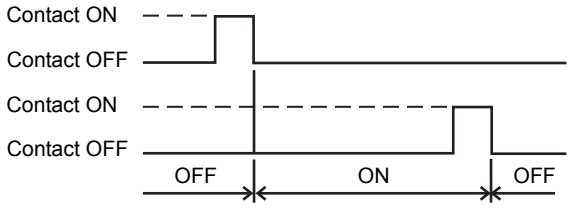
① Level signal



② Pulse signal

(Example) ON/OFF

- Signal 1 (ON)
- Signal 2 (OFF)



* Set the pulse width to a value between 0.5 and 1.0 second.
* Applicable also to the input signal that prohibits/permits operation.

(3) Specification of external input interface

CN5	Lead wire	Emergency stop/normal level signal	ON/OFF level signal	ON/OFF, prohibit/permit pulse signal
No.5	Orange	Emergency stop/normal input	ON/OFF input	ON input
No.6	Yellow	Not used	Not used	OFF input
No.7	Blue	Not used	Not used	Local remote controller prohibit input
No.8	Gray	Not used	Not used	Local remote controller permit input
No.9	Red	External DC source "+12VDC" or "+24VDC"		

Notes:
- Using level signals
  - While the Emergency stop contact is ON, centralized controller and local remote controller operation (ON/OFF only) is prohibited. After the emergency stop is cancelled, air conditioning systems will remain stopped and will require manual operation if they need to be started back up.
  - When level signals are used for ON/OFF, centralized controller and local remote controller operation (ON/OFF only) is prohibited at all times.
- Using pulse signals
  - If the operation signal is received during operation, air conditioning units will remain in operation. (The same is applicable to OFF/Prohibit/Permit.)
  - When pulse signals are used, changing the ON/OFF, operation mode, temperature setting, filter sign reset settings will be prohibited from the remote controller.

12-2 External output function

(1) The function of external output

- The “ON” signal is output when one or more air conditioning system are in the ON operation.
- The “Malfunction” signal is output when one or more connected equipment malfunctions.

(2) External Output Interface Specifications

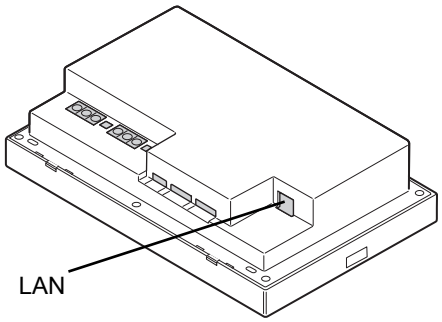
CN5	Lead wire	Description of each terminal
No. 1	Green	Common (External ground)
No. 2	Black	ON/OFF*
No. 3	Brown	Malfunction/Normal

* The On-signal will be output even during an error.
* The operation status of the general equipment will not be output.

13. LAN connection function

When using the LAN connection function, connect the LAN cable to the LAN connector of this device.
* Procure the LAN cable at the site, and use 100 BASE-TX Straight cable.
* For a description of the IP address setting method, refer to section 7-6 “Network Setting”.
* LAN is 100 BASE-TX Specification.
* Use a switching HUB.

⚠ CAUTION
Use a security device such as a VPN router when connecting to the Internet.



14. Specifications

Item	Specifications		
Power supply	M-NET	17VDC~32VDC * Not used when an Expansion controller is used.	* Power supply: PAC-SC51KUA
	Controller drive	24VDC	
Temperature	Operating	0 ~ 40°C [32~104°F]	
	Non operating	-20 ~ 60°C [-4~140°F]	
Humidity	30 ~ 90 %RH (No condensation)		
Weight	2.1kg [4.6 lb]		
Dimensions (W × H × D)	300 × 185 × 70.3 [25.6] mm 11-13/16 × 7-5/16 × 2-13/16 [1-1/16] in *[ ]: indicate the thickness from the wall.		

NOTE:

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

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

15. Error code list

Notes: • The list below contains all error codes. Some of these error codes may not be applicable to the system to which the PAC-YG50ECA is connected.

15-1 M-NET error code

The following is a list of the error codes and their meaning. (A) indicates A-control units

0100 “Blanket unit error”
01*0 “Equipment abnormality *”
0403 “Serial transmission trouble”
0404 Indoor unit EEPROM abnormality (A)
0701 Combustion circuit abnormality (A)
0702 Overheat protection for the combustion heat exchanger (A)
0703 Accidental fire (A)
0704 Heater abnormality (A)
0705 Seismoscope malfunction (A)
0706 Flame current sensor abnormality (A)
0707 Ignition problem (A)
0708 Blower motor rotational speed abnormality (A)
0709 Oil pump circuit abnormality (A)
0900 “Test run”
1000 “Ref.cycle abnormality”
10*0 “Ref.cycle abnormality in line *”
1102 Discharge temperature abnormality (TH4) (A)
1108 Inner thermo (49C) trip (A)
11** “Ref.cycle temperature abnormality - Common operand: **”
12** “Ref.cycle temperature abnormality allowance - Common operand: **”
1300 Low pressure abnormality (63L trip) (A)
13** “Ref.cycle pressure abnormality - Common operand: **”
14** “Ref.cycle pressure abnormality allowance - Common operand: **”
1500 “Ref.cycle not operate due to overcharge”
1501 “Ref.cycle not operate due to undercharge” (/compressor shell temperature abnormality)
1502 “Ref.cycle not operate due to liquid back” /Low pressure abnormality (63L trip) (A)
1503 “Ref.cycle not operate due to coil frost”
1504 “Ref.cycle not operate due to overheat protection”
1505 “Ref.cycle not operate due to compressor vacuum operation protection/refrigerant low temperature abnormality”
1506 “Ref.cycle not operate due to refrigerant pump abnormality”
1507 “Ref.cycle not operate due to composition detection abnormality”
1508 “Ref.cycle not operate due to control valve fault”
1509 “Ref.cycle not operate due to high pressure abnormality (ball valve closed) ”
1510 “Ref. cycle gas leakage”
1511 “Ref.cycle not operate due to oil slick abnormality”
1512 “Ref.cycle not operate due to a stop of freezing protection function”
1513 “Ref.cycle brine freezing”
1559 “Oil balance circuit abnormality”
1600 “Ref.cycle - Preliminary overcharge refrigerant trouble”
1601 “Ref.cycle - Preliminary lacked refrigerant trouble”
1605 “Ref.cycle - Preliminary suction operation protection”
1606 “Ref.cycle - Preliminary gas pump abnormality”
1607 “Ref.cycle - Preliminary CS circuit closed detection abnormality”
1608 “Ref.cycle - Preliminary control valve abnormality”
1659 “Ref.cycle - Preliminary oil balance circuit abnormality”
2000 “Water system abnormality” (Pump interlock abnormality)
20*0 “Water system abnormality in line *”
21** “Water system temperature abnormality - Common operand: **”
22** “Water system temperature abnormality allowance - Common operand: **”
23** “Water system pressure abnormality - Common operand: **”
24** “Water system pressure abnormality allowance - 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”
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”
3152 “Air system operation restricted due to inverter control box inner temperature abnormality”
3182 “Air system operation restricted due to housing inner temperature abnormality”
3252 “Air system operation restricted due to preliminary control box temperature abnormality”
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”
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 overlord”
4108 “Electric system not operate due to overlord protection/OCR51C” /Open phase (S phase), Open connector 51CM(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 (circuit board) defect
4116 “Electric system not operate due to motor abnormality/speed abnormality”
4117 Compressor self-protection function trip (A)
4118 Reversed phase detection circuit (circuit board) problem (A)
4119 More than 2 connectors are open.(A)
4121 “Electric system not operate due to trouble in equipment to which a measure against higher harmonics is taken”
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 - Preliminary overcurrent protection/OCR51C”
4162 “Electric system not operate due to compressor coil temperature abnormality delay”
4163 “Electric system not operate due to preliminary fan controller abnormality”
4165 “Electric system not operate due to preliminary power synchronization error”
4171 “Electric system - Preliminary trouble in equipment to which a measure against higher harmonics is taken”
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.: *”
4300 “Inverter abnormality allowance”
430* “Inverter abnormality allowance - Inverter No.: *”
4310 “Inverter overcurrent shut-off allowance”
431* “Inverter overcurrent shut-off allowance - Inverter No.: *”
4320 “Inverter bus voltage insufficiency allowance”
432* “Inverter bus voltage insufficiency - Inverter No.: *”
4330 “Inverter radiating thermostat abnormality allowance”
433* “Inverter radiating thermostat abnormality allowance - Inverter No.: *”
4340 “Inverter overcurrent protection abnormality”
434* “Inverter overcurrent protection abnormality - Inverter No.: *”
4350 “Inverter IPM abnormality allowance”
435* “Inverter IPM abnormality allowance *”
4360 “Inverter preliminary cooling fan trouble”
436* “Inverter preliminary cooling fan trouble - Inverter No.: *”
5000 “Sensor trouble”
50*0 “Sensor trouble in system *”
51** “Temperature sensor trouble - Sensor No.: **”
5202 Open connector (63L) (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”
6101 “System not operate due to abnormality - With response frame”
6102 “No answer back”
6200 “Controller H/W abnormality”
6201 “E2PROM abnormality”
6202 “RTC abnormality”
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”
6700 “Communication error - K-transmission abnormality”
6701 “Communication error - K-transmission error”
6702 “Communication error - K-address duplicate”
6750 “Communication error - K abnormality code PO”
6751 “K abnormality - Room temperature thermistor abnormality”
6752 “K abnormality - Indoor coil thermistor abnormality, Condensation temperature sensor abnormality”

6753 “K abnormality - Transmit/receive error”
6754 “K abnormality - Drain sensor abnormality, Float switch function”
6755 “K abnormality - Drain pump abnormality”
6756 “K abnormality - Coil frost/overheat protection”
6757 “K abnormality - System error”
6758 “K abnormality - Outdoor unit trouble, Indoor/outdoor communication error”
6761 “K abnormality - Room temperature thermistor abnormality”
6762 “K abnormality - Indoor coil thermistor abnormality, Condensation temperature sensor abnormality”
6763 “K abnormality - Transmit/receive error”
6764 “K abnormality - Drain sensor abnormality”
6765 “K abnormality - Drain pump abnormality”
6766 “K abnormality - Coil frost/overheat protection”
6767 “K abnormality - Outdoor unit trouble - Indoor/outdoor communication error”
6771 “K abnormality - High pressure abnormality, Low pressure abnormality”
6772 “K abnormality - Inner thermostat function, Discharge temperature abnormality, Shell thermostat function, Overcurrent protection”
6773 “K abnormality - Radiator plate thermostat function”
6774 “K abnormality - Outdoor thermistor abnormality”
6775 “K abnormality - Pressure sensor abnormality, Indoor/outdoor communication error”
6776 “K abnormality - Overcurrent shut-off”
6777 “K abnormality - System error”
6778 “K abnormality - Normal”
6779 “K abnormality - Refrigerant overcharge, Abnormal voltage, Abnormal CT sensor”
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”
6844 “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 - Ref. system setting error”
7109 “System abnormality - Connection setting error”
7110 “System abnormality - Ref. 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”
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”

15-2 EC line error code*1

[6920] No response error
[6922] Response ID error
[7901] Maximum connectable No. of units exceeded
[7902] Connection lock error
[7903] Unit information error
[7904] System setting error
[7905] Version error

*1 EC line error: Error between the AG-150A etc. and Expansion controller (PAC-YG50ECA)

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

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

WT05369X12