Mitsubishi Electric Building Air Conditioning Control System

System remote controller Type PAC-SF44SRA



6

INSTRUCTION BOOK

Carefully read this book before use. It is recommended to safe keep this book for future reference.

ANWEISUNGSHANDBUCH

Vor Benutzung der Anlage dieses Buch sorgfältig durchlesen. Es wird empfohlen, dieses Buch zum Nachschlagen an einem sicheren Ort aufzubewahren.

MANUEL D'UTILISATION

Lire attentivement le présent manuel avant toute utilisation et le conserver dans un endroit sûr pour pouvoir le consulter ultérieurement.

LIBRO DE INSTRUCCIONES

Lea cuidadosamente este libro antes de usar el temporizador. Le recomendamos que guarde el libro en lugar seguro en previsión de consultas Futuras.

LIBRETTO ISTRUZIONI

Leggere attentamente questo libretto prima dell'uso. Si raccomanda di tenerlo in un luogo sicuro per ogni futura necessitá.

INSTRUCTIEHANDLEIDING

Lees deze handleiding aandachtig door voordat u het apparaat in gebruik neemt. Het wordt aangeraden om deze handleiding zorgvuldig te bewaren om later, indien nodig, te raadplegen.



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1. Safety Precautions

- Always read these "Safety Precautions" before starting, and perform the installation work correctly.
- The dangers and degree that could occur if handling is mistaken are ranked with the following symbols.

WARNING When fatalities or serious injuries could result if handling is mistaken.

 CAUTION When personal injury, or damage to house or assets could result if handling is mistaken.

After reading this manual store it in a safe place together with the installation manual for future reference.

When changing users, always give this manual and the installation manual to the new user.

Unit must not be installed by user. Always contact your dealer or a specialist to install the unit. Improper installation by the user could result in electric shocks or fires, etc.			
Check the installation state. Always check that the unit is installed on a solid place where it will not fall off.			
Check the rated power supply. An incorrect power supply could result in fires or unit trouble.			
Stop immediately when error occurs. Continuing operation in an erroneous state could result in trouble, electric shocks or fires, etc. If any abnor- mality is sensed (burning smell, etc.), always stop the operation, turn the power switch OFF, and contact your dealer.			
Unit must not be moved and re-installed by user. Improper installation by the user could result in electric shocks or fires, etc. Always contact your dealer or a specialist when the unit must be moved.			
Unit must not be disposed by user. Contact your dealer when the unit must be disposed of.			
Never modify or repair the unit. Improper modifications or repairs could result in electric shocks or fires, etc. Always consult your dealer for repairs.			
Stop operation if operation is inhibited with an error display or if a fault occurs. Continuing operation could result in fires or faults. Contact your dealer.			
Do not place hazardous objects near unit. Do not install this unit where flammable gases could leak. If flammable gases leak and accumulate around the unit, fires or explosions could result.			
Do not wash this unit with water. Washing the unit with water could result in electric shocks or faults.			
Do not operate switches with wet hands. Touching the unit with wet hands could result in electric shocks or faults.			
Do not use for special applications. This product is intended for use with the Mitsubishi Electric building air conditioning control system. Do not use for the control of other air conditioners or for other applications. Failure to observe this could result in malfunctioning.			
Do not spray insecticide or flammable sprays onto unit. Do not place flammable sprays, etc., near the unit or spray these directly onto the unit. Doing so could result in fires or explosions.			
Do not use in special environments. Using this product in environments containing a high level of oil (including machine oil), vapors or sulfuric gases, etc., could result in a drop in performance or damage of parts.			
Do not press switches with pointed objects. Pressing with pointed objects could result in electric shocks or faults.			
Observe the working temperature range. Always observe the working temperature range. Serious faults could result if the unit is used outside the working temperature range. Refer to the specifications in the instruction manual for the working temperature range. If not indicated in the instruction manual, the range is 0°C to 40°C (32°F to 104°F).			
Do not pull or twist the transmission cables Doing so could result in fires or faults.			
Do not disassemble this unit. Touching the internal PCBs, etc., is hazardous, and could result in fires or faults.			
■ Do not wipe this unit with benzene, thinner or chemical rags. Using these matters could result in discoloration or faults. If the unit is heavily dirtied, wipe off with a cloth wetted in diluted neutral detergent, and then wipe again with a dry cloth.			

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2. Names and functions of each part

2-1. Appearance

This controller has two operation modes. One is the [Collective Setting/Monitor Screen] for making
operations and settings for all air conditioners, and the [Group Setting/Monitor Screen] for making
operations and settings for air conditioners in each group. The items that can be operated and set
from the screen differ for each mode. Refer to section 3. Operation (page 7) for details.



- 1. COLLECTIVE/GROUP DISPLAY Indicates which mode is selected: COLLECTIVE: [Collective Setting/Monitor Screen] GROUP: [Group Setting/Monitor Screen]
- 2. ON/OFF DISPLAY

[Collective Setting/Monitor Screen]

ON display: Displays when one or more groups are running.

(Does not display when only the interlocked units are running.)

OFF display: Displays when all groups are stopped.

(Displays even when the interlocked units are running.)

[Group Setting/Monitor Screen]

ON display: Displays when the selected group is running. (Does not display when only the interlocked units are running.) OFF display: Displays when the selected group is stopped.

(Displays even when the interlocked units are running.)

3. COLLECTIVE ON/OFF LAMP

ON: One or more group run (Also ON when a sequential unit is running) OFF: All groups stopped Flicker: Malfunction occurred

4. COLLECTIVE ON/OFF SWITCH

If pressed when all groups are stopped, all groups will start running. If pressed when one or more groups are running, all groups will stop. If pressed when a registered air conditioner is malfunctioning, all groups will stop.

5. CAUTION

Remote control operations are not possible if "H0" or "H1" is displayed while the power is ON. (Approx. five minutes.)

2-2. Display sections



- 1. CENTRALIZED DISPLAY This appears when operations from another system controller are prohibited.
- 2. ON/OFF DISPLAY The operation status of the displayed group or all groups is displayed.
- 3. OPERATION MODE DISPLAY The current operation mode is displayed.
- 4. GROUP NUMBER DISPLAY The group number selected on the Group Setting/Monitor Screen is displayed.
- 5. GROUP OPERATION STATUS DISPLAY ON: Run OFF: Stop Flicker: Malfunction
- 6. SET TEMPERATURE DISPLAY The selected set temperature is displayed.
- 7. AIR DIRECTION DISPLAY The blow off air direction is indicated with the "▶" mark.
- 8. FAN SPEED DISPLAY The selected fan speed is displayed.
- LOUVER DISPLAY The operation of the swing louver is displayed. This does not appear when stopped.
- 10. VENTILATION DISPLAY This appears during ventilation operation.
- 11. PROHIBIT DISPLAY This appears when operation of the local remote controller is prohibited by this controller.
- 12. MODE LOCK DISPLAY This appears when switching to a specific operation mode is limited.
- 13. FILTER SIGN DISPLAY This flickers when the filter's periodic cleaning interval is reached.
- 14. DISPLAY This appears while the power is ON.
- 15. ERROR CODE DISPLAY This flickers and displays an error code (4-digit) when an error is generated.

Examples of actual displays on each unit's Group Setting/Monitor Screen.

AMITSUBISH ELECT	RIC	ON/OFF -	0
	- 20. 	•c 🖉 🔒 🗍	

Indoor unit group



2-3. Operation section



1. ON/OFF SWITCH

When the [Collective Setting/Monitor Screen] is displayed, all groups can be collectively started and stopped.

When the [Group Setting/Monitor Screen] is displayed, the selected group can be started and stopped.

2. COL./GROUP SWITCH

Press this switch to switch between the [Collective Setting/Monitor Screen] and [Group Setting/Monitor Screen].

3. GROUP SWITCH

Press this to call the required group screen when making various settings. (This can be used only on the [Group Setting/Monitor Screen].)

4. MODE SWITCH

Use this switch to switch between cooling, dry, ventilation, automatic and heating modes. For the LOSSNAY, use this to switch between automatic ventilation, normal ventilation and heat exchanger ventilation.

5. FAN SPEED SWITCH

Use this switch to change the fan speed.

- LOUVER SWITCH Use this switch to set the air direction to left or right, or to stop.
- 7. TEMP. SWITCH

Use this switch to set the room temperature in 1(33.8)deg increments.

8. PROHIBIT SWITCH

Use this switch to prohibit operations with the local remote controller. The items that can be prohibited are on/off, operation mode, set temperature and filter reset. (This can be operated only when the controller is set to operation prohibit transmission valid.)

9. MODE LOCK SWITCH

Use this switch to limit switching of the controllers and local remote controller's operation modes according to the season.

10. FILTER SWITCH

Press this switch to reset the filter sign.

11. AIR DIRECTION SWITCH

Press this switch to adjust the air direction up and down.

12. VENTILATION SWITCH

Use this switch to change the interlocked unit's ON/OFF mode and fan speed.

3. Operation

3-1. Collective Setting/Monitor Screen, Group Setting/Monitor Screen

[Collective Setting/Monitor Screen]

- · All groups controlled by this controller can be operated collectively.
- When any of the following operation switches is pressed for more than two seconds, each default value will appear, and all air conditioners will be set with the next operation.
 - MODE, FAN SPEED, TEMP., AIR DIRECTION, LOUVER
- The operation details will turn OFF if there is no operation for ten minutes.

[Group Setting/Monitor Screen]

- · Various operations can be performed for the selected group.
- · When the COLLECTIVE ON/OFF switch is pressed, all groups will turn ON or OFF.
- If there is no operation for ten minutes, the [Collective Setting/Monitor Screen] will appear.



NOTE 1. Some functions may not be operable depending on the air conditioner model. 2. Refer to "3-2. Various setting methods" on page 8 for more details.

3-2. Various setting methods

(1) ON/OFF

[Collective Setting/Monitor Screen]

- 1. The air conditioners and LOSSNAY for all groups will either turn ON or OFF when the ON/OFF) switch is pressed.
- 2. Pressing the COLLECTIVE ON/OFF switch has the same effect as pressing the ON/OFF switch.

[Group Setting/Monitor Screen]

- 1. The air conditioner or LOSSNAY for the selected group will either turn ON or OFF when the (ON/OFF) switch is pressed.
- 2. When the COLLECTIVE ON/OFF switch is pressed, the air conditioners and LOSSNAY for all groups will turn ON or OFF.

NOTE If ON/OFF with other system controller's has been prohibited, the <u>ON/OFF</u> and COLLECTIVE ON/OFF switches will not function. [- CENTRALIZED -] will flicker if operated when prohibited.

(2) Operation mode

[Collective Setting/Monitor Screen]

1. Each time the (MODE) switch is pressed, the mode will change in the order of

If any of the above modes is not available in the registered unit, the operation mode will not display.

Even if the operation mode is set collectively, the mode will not be set in a group that does not have that operation mode.

[Group Setting/Monitor Screen]

1. Each time the (MODE) switch is pressed, the mode will change in the order shown on the right.

The modes shown in brackets are not displayed if the indoor units registered in each group are not provided with that operation mode.

(COOL)

(DRY)

In groups controlling LOSSNAY units, the mode will change in the order shown on the right each time the (MODE) switch is pressed.

- **NOTE** 1. If the operation changeover operation has been prohibited with another system controller, the <u>MODE</u> switch will not function. [- CENTRALIZED -] will appear if operated when prohibited.
 - 2. If changeover to a mode is limited by this controller and another controller, that mode will not display.

(Refer to (9) Operation mode changeover limit.)



(AUTO)

(3) Fan speed adjustment

[Collective Setting/Monitor Screen]

[Group Setting/Monitor Screen]

3-step model

When executed collectively, the fan speed will be set in "four steps" regardless of the model.

1. Each time the (FAN SPEED) switch is pressed, the display will change as shown on the right from the currently displayed fan speed state.

NOTE Changeover of the fan speed differs according to the model being controlled. The fan speed cannot be changed for models that do not have fan speed adjustment provided in the indoor unit.

(" **Set and** " will flicker if operated.)

(4) Temperature adjustment

[Collective Setting/Monitor Screen]

1. When the TEMP. △ or ▽ switch is pressed once, 19°C (66.2°F) will appear on the screen. The set temperature will change in 1 (33.8) deg increments each time the switch is pressed.

If the switch is held down, the temperature will change continuously in 1 (33.8) deg increments.

The temperature adjustment range for the collective setting is 19 to 28°C (66.2 to 82.4°F) for all operation modes.

The room temperature cannot be adjusted when controlling only the LOSSNAY.

	Air conditioner	Medium temperature air conditioner	
Cool/Dry	19 to 30°C/66.2 to 86°F	14 to 30°C/57.2 to 86°F	
Heat	17 to 28°C/62.6 to 82.4°F	14 (17) to 28°C/57.2 (62.6) to 82.4°F	
Auto (cool/heat) 19 to 28°C/66.2 to 82.4°F		F 14 (17) to 28°C/57.2 (62.6) to 82.4°	
* The temperature adjustment cannot be set for fan operation.			

[Group Setting/Monitor Screen]

If the switch is held down, the temperature will change continuously in 1(33.8)deg increments. The room temperature adjustment range differs according to the air conditioner being controlled. The room temperature cannot be changed for groups controlling only LOSSNAY. ([TEMP] and [°C] will flicker if operated.)

NOTE If adjustment of the room temperature has been prohibited with another system controller, the TEMP. △ and ▽ switches will not function. [- CENTRALIZED -] will flicker if operated when prohibited.

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(5) LOUVER [Collective Setting/Monitor Screen, Group Setting/Monitor Screen]

1. Start/stop will be repeated each time the (LOUVER) switch is pressed, and the display will change as shown below.



- **NOTE** 1. When operating the louvers collectively, "LOUVER ON" will appear regardless of the model.
 - If the indoor unit in the group setting is not provided with the louver operation, " will flicker.

(6) Air Direction

[Collective Setting/Monitor Screen]

1. The display will change as shown below each time the (AIR DIRECTION) switch is pressed.



When the wind direction is changed collectively, the vane permitted operation and swing permitted operation are used regardless of the model. The air direction cannot be changed when controlling only the LOSSNAY.

[Group Setting/Monitor Screen]

1. Each time the (AIR DIRECTION) switch is pressed, the display will change as shown on the right from the currently displayed air direction state.



 NOTE
 The air direction changeover operation will differ according to the model being controlled.

 The air direction cannot be changed for groups controlling only the LOSSNAY, and for models that do not have a vane. (➡ will flicker if operated.)

(7) Interlock unit ON/OFF

[Collective Setting/Monitor Screen]

1. The display will change as shown below each time the (VENTILATION) switch is pressed.

 $\begin{bmatrix} \mathsf{No} \ \mathsf{display} \] \to \ [\ \texttt{SS}_{\texttt{A}} \] \to \ [\ \texttt{SS}_{\texttt{A$

When starting and stopping interlocked units collectively, "INTERLOCK UNIT ON" will turn ON regardless of the presence of interlocked units.

Interlocked units cannot be started or stopped when controlling only independent indoor units or independent LOSSNAY units.

[Group Setting/Monitor Screen]

1. Each time the (VENTILATION) switch is pressed, the display will change as shown below from the currently displayed interlocked unit ON/OFF state.

```
 \begin{bmatrix} \mathsf{No} \ \mathsf{display} \ ] \to \begin{bmatrix} \mathsf{W} & \mathsf{J} \end{bmatrix} \to \begin{bmatrix} \mathsf{W} & \mathsf{J} \end{bmatrix} \to \begin{bmatrix} \mathsf{W} & \mathsf{J} \end{bmatrix} - \begin{bmatrix} \mathsf{OFF} \\ \mathsf{f} \end{bmatrix}
```

NOTE The interlocked unit cannot be started or stopped if the group does not have interlocked units. (**SCA** will flicker if operated.)

(8) Local remote controller operation prohibit setting

[Collective Setting/Monitor Screen]

1. Operations with all local remote controllers controlled with this controller can be prohibited.

[Group Setting/Monitor Screen]

1. Operations with the local remote controller for the selected group can be prohibited.

NOTE When this controller's SW3-5 operation prohibit range setting changeover has been set to "ON (including system controller)", operations of the other system controllers can be prohibited.

Setting method: Set on the [Collective Setting/Monitor Screen] or [Group Setting/Monitor Screen].

- 1. When the <u>(PROHIBIT</u>) switch is pressed, [(<u>PROHIBIT</u>), ON/OFF, MODE, TEMP., FILTER] will appear. Items that have already been prohibited will turn ON, and the permitted items will flicker. All items will flicker on the [Collective Setting/Monitor Screen]. If the group is controlling LOSSNAY, [MODE, TEMP.] will not appear.
- 2. Set the items to be prohibited or permitted with local remote controller operations.
- To prohibit or permit ON/OFF operations

Press the ON/OFF) switch. The ON/OFF display will change when pressed.

To prohibit or permit operation mode changeover

Press the (MODE) switch. The "MODE" display will change when pressed.

To prohibit or permit room temperature adjustment

Press the TEMP. (\triangle) or \bigtriangledown switch.

The "TEMP" display will change when pressed.

To prohibit or permit filter resetting operations

Press the (FILTER) switch. The "FILTER" display will change when pressed.

[Changes in display of each item] Flicker (Not set) \rightarrow ON (Prohibit) \rightarrow OFF (Permit)

When each item's switch is pressed, the related display will change as shown above from the current display state.

[Meaning of displays]

Display	ON	OFF or flickering (*1)	
ON/OFF	Local remote controller ON/OFF operation prohibited	Local remote controller ON/OFF operation permitted	
MODE	Local remote controller operation mode changeover prohibited	Local remote controller operation mode changeover permitted	
TEMP. Local remote controller room temperature adjustment prohibited		ed Local remote controller room temperature adjustment permitted	
FILTER	Local remote controller filter resetting prohibited	Local remote controller filter resetting permitted	

3. The prohibited or permitted item will be set when the (PROHIBIT) switch is pressed, and local remote controller operation of the items that are ON will be prohibited. The operation will be permitted if the item is OFF or flickering (not set).

(*1) On the [Collective Setting/Monitor Screen], if all four items are flickering in step 3 above (nothing is being operated), it does not mean that all operations are permitted. Instead this means that the previous settings will be applied.

- **NOTE** 1. This function can be set only when this controller's SW-4 operation prohibit setting changeover is set to "ON (Permit)". Settings cannot be made when set to prohibited. If the function is used when the setting is prohibited, [- CENTRALIZED -], (PROHIBIT), ON/OFF, MODE, TEMP., FILTER] will flicker.
 - 2. The operation mode changeover and room temperature adjustment operations cannot be prohibited for LOSSNAY groups.

(9) Operation mode changeover limit (season changing)

Changeover to specific operation modes with this controller or the local remote controller for all groups can be limited.

For example, the mode selection can be limited according to the season.

Cooling mode limit (winter), heating mode limit (summer), cooling + heating mode limit (between seasons)

Setting methods: Set with the [Collective Setting/Monitor screen] or [Group Setting/Monitor screen]. 1. Hold down the (MODE LOCK) switch for two or more seconds.

2. When the (MODE LOCK) switch is pressed next, the mode to be prohibited will light in the following order.



 When "NO COOL" is selected
 : The cooling, dry or automatic modes cannot be selected with the (MODE) switch.

 When "NO HEAT" is selected
 : The heating or automatic modes cannot be selected with the (MODE) switch.

 When "NO COOL HEAT" is selected
 : The cooling, dry, heating or automatic modes cannot be selected with the (MODE) switch.

 When "NO COOL HEAT" is selected
 : The cooling, dry, heating or automatic modes cannot be selected with the (MODE) switch.

When no display (no limits) is selected : The limits will be cancelled.

NOTE 1. This function can be used only when SW3-8 is set to ON.

Note that this function cannot be used with some indoor units. In this case, changeover of the operation mode cannot be limited with the local remote controller.

(10) Time setting mode

• The current time of the system controller or remote controller, having a time setting function, can be set collectively. (There are some remote controllers that cannot be set. This controller does not have a clock function.)

[Setting method and display] Set the time from the Collective Setting/Monitor Screen.

Hold down the GROUP 🔘 and (FILTER) switches simultaneously for two or more seconds.



1. Selecting the setting item

Select the setting item with the GROUP \bigcirc / \bigcirc switches or the TEMP. \bigcirc / \bigcirc switches.

- Time setting $\ : \mathsf{TEMP}. \ \bigtriangledown / \ \bigtriangleup$ switches
- Setting the day (Select day setting in step 1.) The day setting No. displayed at the group No. display section will change each time the GROUP switch is pressed.

"SU, MO, TU, WE, TH, FR, SA" will appear at the group operation status display section according to the day setting No.

01: Sunday (SU), 02: Monday (MO), 03: Tuesday (TU), 04: Wednesday (WE), 05: Thursday (TH), 06: Friday (FR), 07: Saturday (SA)

- The displays will change in reverse when the GROUP \bigcirc switch is pressed.
- 3. Setting the time (Select time setting in step 1.)
- The time setting will advance in one-minute increments on the error code display section each time the TEMP.
 Switch is pressed. If the switch is held down, the time advance method will change in the order of one-minute increments, ten-minute increments and one-hour increments.
- The set time will return in one-minute increments each time the TEMP. \bigtriangledown switch is pressed. If the switch is held down, the time return method will change in the order of one-minute increments, ten-minute increments and one-hour increments.



4. Fixing the setting

The set details will be fixed when the FAN SPEED switch is pressed.

(The day setting No. and time setting display will change to stable lights.)

When the $\overline{(FAN SPEED)}$ switch is pressed again, each remote control's time will be set. (The clock mark " \bigcirc " will disappear.)

- The seconds are reset to zero when the FAN SPEED switch is pressed.
- 5. Cancelling the time setting

Hold down the GROUP 💟 and (FILTER) switches for two or more seconds.

- The setting screen will return to the Collective Setting/Monitor Screen.
- The details set before the setting was fixed will be erased.

NOTE If no operations are made on this screen for ten minutes, the display will automatically switch to the Collective Setting/Monitor screen. (The details being set will be deleted.)

(11) Set temperature range limit mode

If the remote control has a set temperature range limit mode function, the set temperature adjustment range can be collectively set for the [COOL/DRY] and [HEAT] modes.

[Setting method and display]

Use the [Collective Setting/Monitor Screen]. (Make sure that all units are stopped before starting.)

Hold down the TEMP \bigcirc and \bigcirc switches simultaneously for two or more seconds.



©Temperature selection for cooling/dry mode



- 1. Setting the set temperature adjustment range
 - [COOL/DRY] mode

The lower limit temperature will change by 1°C each time the TEMP \bigtriangledown or \bigtriangleup switch is pressed.

[Lower limit temperature adjustment range]: 19°C to 30°C (The upper limit temperature is fixed to 30°C. Only the lower limit temperature can be changed.)

[HEAT] mode

The upper limit temperature will change by 1°C each time the TEMP \bigtriangledown or \bigtriangleup switch is pressed.

[Upper limit temperature adjustment range]: 17°C to 28°C (The lower limit temperature is fixed to 17°C. Only the upper limit temperature can be changed.)

2. Fixing the set details

The set details will be fixed when the (FAN SPEED) switch is pressed. (The mode display will change to a stable light.)

3. Cancelling the set temperature range limit mode

Hold down the TEMP \bigtriangledown and $ riangle$ switches simultaneously for two or more second
The Collective Setting/Monitor Screen will appear.

- **NOTE** 1. The operation mode will change to ventilation after the set temperature range limit is set, so the operation mode must be changed to the previous mode.
 - If no operations are made on this screen for ten minutes, the display will automatically switch to the Collective Setting/Monitor Screen. (The details being set will be deleted.)

(12) Filter sign reset

The (FILTER) flickers, when the filter needs cleaning.

[Collective Setting/Monitor Screen, Group Setting/Monitor Screen] When the FILTER switch is pressed two times successively after cleaning the filter, the display turned OFF and is reset.

NOTE If the filter sign reset operation has been prohibited with another system controller, the FILTER switch will not function. [- CENTRALIZED -] will flicker if operated when prohibited.

4. Troubleshooting

4-1. When "COLLECTIVE ON/OFF LAMP" and "ERROR CODE" are flickering

- The air conditioner is stopped because a problem has occurred and operation cannot be continued.
- Check the address of the unit where the error is occurring and the error code, and call your nearest MITSUBISHI ELECTRIC supplier or dealer.



- 1. If an error occurs while the [Collective Setting/Monitor Screen] is displayed, the details of the error for the group containing the first problem will appear.
- 2. If the error occurs while the [Group Setting/Monitor Screen] is displayed, the error will display only when the currently selected group has the error.
- 3. If an error occurs in several groups, the operation status display for each group having an error will flicker, so check the details of the error with "Checking errors in a different group".
- Checking errors in a different group Press the GROUP switch to select the group with the error, and check the details of the error.
- **NOTE** 1. If an error occurs in a group other than that displayed on the [Group Setting/Monitor Screen], the COLLECTIVE ON/OFF lamp and the group operation status of the group with the error will flicker.
 - The details of past errors can be confirmed. Refer to section "7. Error history monitor" for details.

4-2. When "group operation status display" and "error code" are flickering

- The air conditioner will continue operation, but there may be a problem.
- · Check the error code and contact your dealer or service center.



- 1. If an error occurs while the [Collective Setting/Monitor Screen] is displayed, the details of the error for the group containing the first problem will appear.
- 2. If the error occurs while the [Group Setting/Monitor Screen] is displayed, the error will display only when the currently selected group has the error.
- 3. If an error occurs in several groups, the operation status display for each group having an error will flicker, so check the details of the error with "Checking errors in a different group".

5. When an external input signal is input

5-1. Emergency stop mode

- If an emergency stop input is input in the external input interface, all air conditioners and LOSSNAY units being controlled will turn OFF.
 This controller, slave system controller and local remote control operations will be prohibited until the emergency stop input is cancelled.
- When the emergency stop is cancelled, the state before it was input will be recovered. (Excluding the ON/OFF state.)

(The external input adapter used for emergency stop input is not enclosed with this controller.)



5-2. Prohibit input mode

- When prohibit input is input to the external input interface, the on/off, operation mode, setting temperature and filter reset operations using the manual remote control being controlled will be prohibited.
- · When permit is input, the local remote control operation prohibit will be cancelled.



NOTE If the error is occurring in a group other than that displayed on the [Group Setting/Monitor Screen], only the group operation status display for the group with the error will flicker.

6. Initial settings

- When connecting multiple system controllers, designate the system controller with many functions as the "master", and set the system controllers with few functions as the "slaves". (Refer to section 8. Setting the functions, "8-1 Using with master system controller" for details on the "master/slave" settings.)
- If this controller is controlled by the master system controller, carry out the initial settings with the master system controller. In this case, this controller will use the slave settings, and does not require initial settings.

6-1. When this controller is master system

The initial settings include the following items:

Group setting
 Interlocked unit setting
 Collective deletion

Open the Initial Setting Mode Screen to make these settings.

(1) The following display will appear when the power to this controller is turned ON.



and the COLLECTIVE ON/OFF lamp will blink

(2) When group setting information is already set



(3) When there is no group setting information, or when changing the group setting information:

Hold down the (FILTER) and (LOUVER) switches simultaneously for two or more seconds while "H0" is flickering in step 1, or on the Group Setting/Monitor screen or Collective Setting/Monitor screen. (When pressing the switches simultaneously, if the (LOUVER) switch is pressed first, the Default Setting Mode screen will not open.)

NOTE When opening each screen from step 2, if there is an error in any group, the switch operation will be invalid.



OInitial Setting Mode Screen (Group Setting Screen)

This controller's own address will flicker for two seconds. Carry out steps 6-1-1 to 6-1-2 from the state shown above.

(4) Cancel the initial setting mode.

- After setting the group and the interlocked unit, hold down the (FILTER) and (LOUVER) switches simultaneously for two or more seconds.
- Save the group setting information and interlocked unit setting information, etc., with this step, and then carry out system startup communication. The Group Setting/Monitor Screen will open when completed. (Refer to step (2))
- **NOTE** Do not turn the power OFF during system startup communication (while "H1" is flickering). (The group setting information, etc., will not be saved in the memory if the power is turned OFF.)

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6-1-1. Setting the group

- Register the indoor unit, LOSSNAY, slave system controller and local remote controller for each group. (Register the LOSSNAY to be interlocked with the indoor unit using the interlocked unit setting.)
- If the group setting information has already been set and no operations are made on this screen for ten minutes, the display will automatically switch to the Collective Setting/Monitor screen. (The details being set will be deleted.)

1. Select the group

- Select the group in which the unit is to be registered.
- 2. Select the unit
 - Select the unit, etc., to be registered in the group selected in step 1.

3. Registering the unit into a group

4. Deleting a unit from a group

5. Searching for registered units

Go to step 6-1 (4) or 6-1-2.

1. Select the group

(1) The group operation status display ((■) in following example) will move in order each time the GROUP () switch is pressed, and the group No. display section will also change.

The display will move in reverse when the GROUP \bigcirc switch is pressed.



(2) After the group is selected, if a unit is registered in the group the minimum address No. unit will appear. The attributes for that group will appear after two seconds.

Displayed details

Set temperature display section ... Address No. Group No. display section Address No. attributes

Example) When groups 1 and 2 are not registered, and the address 005 indoor unit is registered in group 3



The 005 indoor unit is already registered

2. Selecting the unit

(1) Select the unit to be registered in the group selected in step 1.

 The address No. at the set temperature display section will change in order each time the TEMP. Switch is pressed. (If held down for three seconds or more, the skip function will activate when carrying over.)

	Indoor unit, LOSSNAY	:	001 to 050	
Address No. setting range	Local remote controller	:	101 to 200	
	Slave system controller	:	000, 201 to 250	

Set temperature display section : Address No. will appear

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- (2) When registered unit is selected
 - If the selected unit is already registered in any of the 50 groups controlled by this controller, the following type of display will appear.

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Example) When unit 011 is called out with group 3



Group operation status display flickers This indicates that the unit is already registered in "group 23"

3. Registering the unit into a group

(1) Register the unit selected in step 2 into a group.

- With the group No. and unit address selected in steps 1 and 2 displayed, press the (FAN SPEED) switch.
- The registration process will be completed with this step.
- When correctly registered, an attribute such as " **F** *L* **J** " will be displayed. If not correctly registered, " **F**∂∂**J** " will flicker instead of the attribute.





Registration complete screen

The address 006 indoor unit is registered in group 3

The attributes displayed for each unit when registered are as follow.

Indoor unit	: IC	LOSSNAY	: LC

Local remote controller: RC System controller: SC

(2) Registering a separate unit

- · When registering a separate unit into the same group, carry out steps 2 and 3.
- · When registering a unit into a different group, carry out steps 1 to 3.
- **NOTE** 1. Units cannot be registered into the same group with the following combination. • Indoor unit and LOSSNAY

When registration is attempted, these will not be correctly registered and "88" will flicker on the screen.

If the indoor unit, LOSSNAY and local remote controller are already registered in another group, they cannot be registered in a different group. However, the slave system controller can also be registered in a different group.

4. Deleting a unit from a group

(1) Using steps 1 and 2, call out the address No. of the unit to be deleted.

• When the (FILTER) switch is pressed twice in this state, the unit registered in the group will be deleted.



5. Searching for registered units

The address numbers of all units registered in a group can be checked.

- (1) Using step 1, select the group to be searched.
- (2) The address numbers of the registered units will appear in order of smallest number each time the (MODE LOCK) switch is pressed.



For SC, if the system controller is also registered in another group, that group operation status display will also flicker.

(3) If a single unit is not registered, "---" will display.

6-1-2. Setting the interlocked units

- Set that units interlocked with each group can be run in linked.
- · Set the interlocked units after setting the group.

The interlocked units cannot be set until the units are registered in the group in which interlocked units are to be set.

1. Calling the Interlocked Unit Setting Screen

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2. Selecting the group No.

- Select the group in which the interlocked units are to be registered.
 - This same step is used for searching and deleting.

3. Calling the registration unit

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4. Selecting the interlocked unit's address No.

- 5. Registering the interlocked unit
- 6. Cancelling the interlock setting
- 7. Searching for interlocked units

↓ Go to step 6-1. (4) or 6-1-1.

- **NOTE** When registering the interlocked unit, if an indoor unit and interlocked unit in a certain group are to be linked, always register the indoor unit with the smallest address No. in the group for interlocking. If the unit is not registered for interlocking, the interlocked unit cannot be operated (ventilation changeover) with the local remote controller.
 - If there are several indoor units to be linked with the interlocked unit, register all indoor units for interlocking.

1. Calling the Interlocked Unit Setting Screen

Interlocked Unit Setting Screen

(1) Open the Interlocked Unit Setting Screen from the Group Setting Screen. Press the (COL./GROUP) switch.



"---" or unit address is displayed.

2. Selecting the group No.

(1) Call the Group No.

- Call the group No. in which the interlocked unit is to be registered. Use the same operations as section 6-1-1. (1) Selecting the group.
- Select the group with the GROUP \bigtriangledown and \bigtriangleup switches.
- (2) When the group is selected, the corresponding group No. will appear at the group No. display section.
- (3) After the group is selected, if there are registered units, the registered unit with the smallest address No. will appear.
 - Displayed details { Set temperature display section ... Address No.

Group No. display section Address No. attributes

Example) When group 1 is not registered, and the address 003 indoor unit is registered in group 2.



3. Calling the registration unit

Call the address No. of the indoor unit to be registered as the interlocked unit by pressing the COLLECTIVE ON/OFF switch.

4. Selecting the interlocked unit's address No.

- (1) Set the address No. of the interlocked unit to be registered with the indoor unit selected in step 3.
 - With the indoor unit from step 3 selected, press the TEMP. imes switch.
 - The address No. of the interlocked unit will change in the following order each time the switch is pressed. (If held down for three seconds or more, the skip function will activate when carrying over.)



5. Registering the interlocked unit

- (1) When the (FAN SPEED) switch is pressed in the state shown in step 4, the interlocked unit will be registered as interlocked to the displayed indoor unit.
 - The following type of display will appear when the unit is correctly registered.



If not correctly registered, " IBB " will flicker instead of the attribute.

(2) Set the next interlocked unit

- Carry out steps 3 and 5 to register a different indoor unit in the same group to the interlocked unit.
- Carry out steps 2, 3 and 5 to register an indoor unit in a different group to the interlocked unit.
- · Carry out steps 2, 3, 4 and 5 to register a different indoor unit to a different interlocked unit.

6. Cancelling the interlock setting

Cancel the interlock setting of the indoor unit and interlocked unit.

(1) Call out the screen displayed after the interlocked unit is set, or the screen on which the interlocked unit was searched.





(2) The interlock setting will be cancelled when the FILTER switch is pressed twice in this state.



7. Searching for interlocked units

Search to find which indoor unit the interlocked unit is linked to.

(1) To search from interlocked unit

Carry out step 4 to display the address No. of the interlocked unit for which the setting is to be confirmed.

• Select the interlocked unit with the TEMP. \bigtriangledown and \bigtriangleup switchs.

12345678910		→ Display the address No. of the interlocked unit to be searched for. Either the indoor unit's address No. or "" can be displayed at the set temperature display section.
20 30 40	OD .	

Press the (MODE LOCK) switch in the above state.

(2) To search from indoor unit

Using steps 2 and 3, display the address No. of the indoor unit for which the interlock setting is to be confirmed.



Press the (MODE LOCK) switch in the above state.

(3) When interlocked unit is set



The address No. and attribute of the linked indoor unit will appear.



The interlocked unit's address No. and attribute will appear.

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 If the <u>MODE LOCK</u> switch is pressed again in this state, the other units linked to the interlocked unit can be confirmed.

Example) When the following units are linked to interlocked unit 030.

Indoor unit ... 001 (group 1) 002 (group 2)

The following details are searched for.



(4) When no unit is linked to the interlocked unit



6-1-3. Collective deletion

- All group setting information and interlocked unit setting information can be deleted. This function is valid only when this controller is the master.
 - (1) Display the Group Setting Screen or Interlocked Unit Setting Screen.
 - (2) All set information will be deleted when the (AIR DIRECTION) switch is held down for three or more seconds in this state.



Initial state

7. Error history monitor

• Up to 50 past errors can be saved in the memory.

If more than 50 errors occurred, the oldest errors will be deleted sequentially.

The errors described in section '4-2 When "group operation status display" and "error code" are

_flickering', are not saved in the memory.

[Display and monitor methods]

Operate from the Collective Setting/Monitor Screen or from the error display.

- The error history will appear when the (PROHIBIT) and (LOUVER) switchs are held down simultaneously for two or more seconds.
 (When pressing the switches simultaneously, if the (LOUVER) switch is pressed first, the Error History will not open.)
- 2. The last error history will appear each time the GROUP \bigtriangleup switch is pressed.
- 3. The next error history will appear each time the GROUP \bigcirc switch is pressed.



[Deleting the error history]

- 1. Display the error history to be deleted, and press the (FILTER) switch twice. The selected error history will be deleted.
- 2. All error histories will be deleted when the (AIR DIRECTION) switch is held down for three or more seconds.

[Cancelling the error history monitor]

- 1. Hold down the (PROHIBIT) and (LOUVER) switches simultaneously for two or more seconds.
- 2. The MONITOR screen will return to the Collective Setting/Monitor Screen or Error Display Screen.

NOTE If no operations are made on this screen for ten minutes, the display will automatically switch to the Collective Setting/Monitor screen.

8. Setting the functions



8-1. Using with master system controller

When connecting multiple system controllers, the system controller with many functions is designated as the "master", and the system controllers with few functions are designated as the "slaves". The "master/slave" functions of the system controller used together are as follows.

The functions have a priority in order of G50 (MJ-103MTRA) > PAC-SF44SRA > PAC-YT34STA > PAC-YT40ANRA > PAC-SC30GRA > LMAP02-E (LMAP03U).

Setting details	Switch setting	Factory setting	
Master side	SW3-1 : OFF	OFF	
Slave side	SW3-1 : ON	UFF	

8-2. Setting local remote controller operation prohibit function from this controller

When connecting several system controllers, and setting the "local remote control operation prohibit" function from this controller, set this controller's "operation prohibit setting changeover" to "ON (permit)".

(The 9-1 External signal input function cannot be used when this function is set to disable.)

Setting details	Switch setting	Factory setting
Disable	SW3-4 : OFF	OFF
Enable	SW3-4 : ON	UFF

8-3. Prohibiting operation of system controller other than this controller

To prohibit the operation of a system controller other than this controller when the local remote control operation is set to prohibit with this controller, set this controller's "operation prohibit range changeover" to "ON (including system controller)."

Setting details	Switch setting	Factory setting
Only local remote control	SW3-5 : OFF	OFF
Including system controller	SW3-5 : ON	OFF

8-4. Changing set temperature display to "Fahrenheit display"

Setting details	Switch setting	Factory setting
	SW3-6 : OFF	OFF
Fahrenheit display : °F	SW3-6 : ON	

NOTE After changing the switch 3 1,4 to 6 ON/OFF status, always turn the power OFF. The function will change only after the power is turned OFF and ON.

9. Using the external input/output

9-1. External signal input function

· In order to use external signal input, use the 5-wire cable for external input that comes with the unit.

(1) External input

By using an external no voltage contact signal, it is possible to send Emergency stop/Normal, ON/OFF or Prohibit/Permit local remote controller operation commands to all units being controlled. (This is selected by the SW3 setting. SW3 is mounted on the main unit board.)

No.	lo. External input signal functions		V3	Input state
110.			3	input state
1	Do not use external input.	OFF	OFF	—
2	Change between emergency stop/normal. During an emergency stop, all units will be stopped, and all operations using this controller, other system controllers and the local remote control will be prohibited.		ON	Level input
3	Set ON/OFF. All units will turn ON/OFF according to the input state.		OFF	Level input
4	Set ON/OFF and prohibit/permit . All units will turn ON/OFF and all local remote controller ON/OFF operations will be prohibited according to the input state. Operation with this controller will be enabled. When prohibit is input, the local remote control's ON/OFF, operation mode, set temperature and filter reset operation will be prohibited. This controller can be operated.		ON	Pulse input (0.5sec or more)

(2) Level signal and pulse signal



- NOTE 1. Only emergency stop can be used when SW3-4 "operation prohibit setting changeover" is set to "OFF (disabled)".
 - If the level input emergency stop and ON/OFF are set, operation of the other system controllers will be prohibited even if SW3-5 "operation prohibit range changeover" is set to "OFF (only local remote control)".

(3) External input specifications

CN2	Lead wires (5-wires)	Level signal for Emergency stop/Normal	Level signal for ON/OFF	Pulse signal for ON/OFF, Prohibit/Permit
No. 1	Green	Emergency stop/Normal input	ON/OFF input	ON input
No. 2	Yellow	Not used	Not used	OFF input
No. 3	Orange	Not used	Not used	Prohibit local remote controller operation input
No. 4	Red	Not used	Not used	Permit local remote controller operation input
No. 5	Brown	Common 0V		

(A) Level signal cases

External input	Operation status		
Contact operation	Emergency stop/Normal	ON/OFF	
OFF→ON	Normal \rightarrow Emergency stop	OFF→ON	
ON→OFF	Emergency stop \rightarrow Normal	ON→OFF	

(B) Pulse signal cases

- 1. Operation will start with the operation signal input, and will stop with the stop signal input. (This applies to prohibit and permit.)
- When manual remote control is set to prohibit, the on/off, operation mode, set temperature and filter reset operations using the manual remote control will be prohibited.
- 3. Set the pulse duration (contact ON period) to 0.5 sec or more.

NOTE 1. Level signal

- All operations using this controller and the local remote control are prohibited when the emergency stop contact is ON.
- 2. Pulse signal
- All units will continue running even if the ON signal is input. (This also applies to OFF, prohibit and permit.)

9-2. External signal output functions

- In order to use external signal output, use the 4 wires external output cable that comes with the unit.
 - (1) External output

In the case when one or more units are running "ON" and an error occurs in one or more units, a signal indicating that an error is occurring is output.

(2) External output specifications

CN3	Lead wires (4wires, with black tube)	Details of each terminal	
No.1	Yellow		
No.2	Orange ON/OFF		
No.3	Red		
No.4	Brown	Error/Normal	

1. "ON " is output even when there is "Error ".

10. System limits

Master system controller and slave system controller



When the system contains only this controller. This controller is set as the master system controller. In this case, the group is set with this controller. Master system controller control range This controller's control range This controller's control range Unit Unit

When this controller is controlled by another system controller.

This controller is set as the slave system controller. In this case, the group is not set with this controller.

NOTE The following types of group settings are not possible.

- Control by the slave system controller of a unit not within the control of the master system controller.
- Control of a common group with two or more master system controllers.



 Setting of a slave system controller exceeding the control range of two or more master system controllers.



11. Specifications

11-1. Product functions

This controller can control up to 50 air conditioners and LOSSNAY. This controller has the following functions.

<List of system remote controller functions>

Function		ction	Details	
		ON/OFF	ON/OFF operations can be carried out collectively or for each group.	
		Operation mode	The air conditioner can be set to cool, dry, fan, auto or heat collectively or for each group. The LOSSNAY can be set to normal ventilation, heat exchange ventilation or automatic ventilation.	
		Fan speed	The fan speed can be selected collectively or for each group. (The set fan speeds differ according to the model.)	
	Operation	Set temperature	The temperature can be set collectively or for each group. Set temperature range Cool/Dry: 19 to 30°C <66.2 to 86°F> Heat: 17 to 28°C <62.6 to 82.4°F> Automatic:19 to 28°C <66.2 to 82.4°F> $14(17)$ to 28°C $<57.2(62.6)$ to 82.4°F> $14(17)$ to 28°C <66.2 to 82.4°F> $14(17)$ to 28°C $<57.2(62.6)$ to 82.4°F> $>$ $57.2(62.6)$ to 82.4°F> $>$ $57.2(62.6)$ to 82.4°F> $>$ $57.2(62.6)$ to 82.4°F> $>$ $57.2(62.6)$ to 82.4°F> $>$ $>$ $>$ $>$ $>$ $>$ $>$ $>$ $>$ $>$	
		Louver	The louver can be started or stopped collectively or for each group.	
Normal		Air direction/swing	The Air direction can be set to four steps up and down or to swinging collectively or for each group.	
functions		Interlocked unit ON/OFF	When using an interlocked unit (LOSSNAY), ON (high/low) or OFF can be set collectively or for each group.	
		Local remote controller operation prohibit	The local remote controller's ON/OFF, operation mode, set temperature and filter reset operations can be prohibited collectively or for each group. (Only when this controller is set to operation prohibit transmission valid.)	
		Operation mode changeover limitation (season changing)(*1)	Changing of this controller's and the local remote control's operation mode can be limited collectively or for each group. Cooling mode limit (winter), heating mode limit (summer), cooling/heating mode limit (between seasons)	
		Filter reset	The filter sign can be reset after the filter is cleaned collectively or for each group.	
		External input	$\label{eq:constraint} {\sf Emergency \ stop, \ ON/OFF, \ and \ prohibit/permit \ can \ be \ set \ collectively \ from \ an \ external \ source.}$	
		Collective run	Displayed with the COLLECTIVE ON/OFF lamp.	
	Monitor	Group operation status	The ON/OFF, operation mode, wind speed, set temperature, wind direction, and interlocked unit ON/OFF status are displayed for each group.	
		Filter sign	The filter cleaning period is indicated for each group.	
		Local operation prohibit	Details prohibited by this controller or by other controllers are displayed.	
		Error	The address of the faulty unit and the error code are displayed on the LCD.	
		External output	The ON/OFF and error occurrence signals can be output collectively to an external source.	
Error history monitor Up to 50 past e			Up to 50 past errors can be saved and checked. (50 errors that have occurred last.)	

(*1) Only groups in the free plan indoor units (Type C and following models) can be limited.

<List of system remote controller functions>

Function		tion	Details
	Operation	Group setting	Set the unit (indoor unit, LOSSNAY remote controller, slave system controller) group.
	operation	Interlocked unit setting	Set interlocking with the LOSSNAY and indoor unit.
		Master system controller /slave system controller (*1)	Set the system controller as the master or slave.
la Mal		Prohibit range	Set whether to prohibit operation with the local remote controller using this controller or with another controller.
Initial setting functions	System (*3)	Prohibit transmission/reception	Set whether to prohibit operations for the remote control with this controller.
Tunctions		"Celsius/Fahrenheit" display	Set the set temperature display to a Celsius or Fahrenheit display.
		System remote controller own address	Set the system remote controller's own address (Refer to the Installation Manual.)
	0.1	Time setting (*4)	The current time can be set collectively for system controllers and remote controls provided with the time setting function.
	Others	Set temperature range limit mode	The set temperature range can be set collectively for remote controls provided with the set temperature range limit mode function.
		Indoor units, LOSSNAY	Maximum 50 units (Maximum 50 groups)
		Number of indoor units and LOSSNAY	0 to 16 units (The indoor unit and LOSSNAY cannot be registered in the same group.)
System limits	Number of registered units	Number of local remote controllers in one group	0 to 2 units
		Number of system controllers controlling one group (*2)	0 to 4 units (Includes the number of local remote controllers for one group.) 0 to 3 units in group having one local remote controller
		Number of indoor units linked with one LOSSNAY	0 to 16

(*1) Refer to page 33.

(*2) This controller (system remote controller) is one of the system controllers.

(*3) Refer to page 29.

(*4) This controller does not have a clock function.

11-2. Main specifications

Item Details	
Power source	30VDC (supplied from indoor unit or power feed unit for transmission line (type: PAC-SC34KUA).
Power consumption	1W
Working environment conditions	Temperature 0 to 40°C / 32 to 104°F, humidity 30 to 90%RH (with no dew condensation)
Weight	0.2kg
Outline dimensions	$(H \times W \times D)$ 120 x 130 x18[mm] / 4 $^{3}/_{4} \times 5$ $^{1}/_{16} \times ^{3}/_{4}$ [in]

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