MITSUBISHI ELECTRIC

Building Air Conditioning Control System

Group Remote Controller

Installation Manual

This installation manual contains only the description of how to install the Group Remote Controller PAC-SC30GRA. For information about how to wire and how to install air conditioning units, see the installation manual for them. For your safety, first be sure to read "(1 Safety Precautions)" described below thoroughly and then install the Group Remote Controller PAC-SC30GRA correctly.

1 Safety Precautions

• The following two symbols are used to denote dangers that may be caused by incorrect use and their degree:

This symbol denotes what could lead to serious injury or death if you misuse the PAC-SC30GRA.
This symbol denotes what could lead to a personal injury or damage to your property if you misuse the PAC-SC30GRA.

After reading this installation manual, keep it in a place where the final user can see it anytime he or she wants to it.
 When someone moves, repairs or uses the PAC-SC30GRA, make sure that this manual is forwarded to the final user.

MAI	RNING
Ask your dealer or technical representative to install the unit. Any deficiency caused by your own installation may result in an electric shock or fire.	Ensure that installation work is done correctly follow- ing this installation manual. Any deficiency caused by installation may result in an elec- tric shock or fire.
Install in a place which is strong enough to withstand the weight of the PAC-SC30GRA. Any lack of strength may cause the PAC-SC30GRA to fall down, resulting in personal injury.	All electrical work must be performed by a licensed tech- nician, according to local regulations and the instruc- tions given in this manual. Any lack of electric circuit or any deficiency caused by in- stallation may result in an electric shock or fire.
Firmly connect the wiring using the specified cables. Carefully check that the cables do not exert any force on the terminals. Improper wiring connections may produce heat and possi- bly a fire.	Do not move and re-install the PAC-SC30GRA yourself. Any deficiency caused by installation may result in an elec- tric shock or fire. Ask your distributor or special vendor for moving and instal- lation.
Never modify or repair the PAC-SC30GRA by yourself. Any deficiency caused by your modification or repair may result in an electric shock or fire. Consult with your dealer about repairs.	To dispose of this product, consult your dealer.
	UTION
Do not install in any place exposed to flammable gas leakage. Flammable gases accumulated around the body of PAC- SC30GRA may cause an explosion.	Do not install in any place where acidic or alkaline solu- tion or special spray are often used. Doing so may cause an electric shock or malfunction.
	Use standard wires in compliance with the current ca-

pacity.

Do not use in any special environment. Using in any place exposed to oil (including machine oil), steam and sulfuric gas may deteriorate the performance significantly or give damage to the component parts.

Wire so that it does not receive any tension. Tension may cause wire breakage, heating or fire.

Completely seal the wire lead-in port with putty etc. Any dew, moisture, insects entering the unit may cause an electric shock or a malfunction.

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

Do not install in any place at a temperature of more than 40° C or less than 0° C or exposed to direct sunlight.

Do not install in any steamy place such a bathroom or kitchen.

Avoid any place where moisture is condensed into dew. Doing so may cause an electric shock or a malfunction.

fire. Do not touch any PCB (Printed Circuit Board) with your hands or with tools. Do not allow dust to collect on the PCB.

A failure to this may result in an electric leakage, heating or

Doing so may cause fire or an electric shock.

Do not remove the insulation sheet on the PCB. Doing so may cause an electric shock.

Do not touch any control button with your wet hands. Doing so may cause an electric shock or a malfunction.

Do not press any control button using a sharp object. Doing so may cause an electric shock or a malfunction.

Never contact the power supply with the control wiring terminals.

Doing so will certainly cause the controller to catch fire.



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2 Confirming the Supplied Parts

Check that the box contains the following parts in addition to this manual:

- (6) Caution label (in 10 languages).....1



Use a maximum of 1.25mm² cable for remote controller wiring. 0.75mm² cable is recommended for ease of use.



M-NET model address setup (address duplication not possible)

	Address setup	Address
Indoor unit / Interlocked unit	Any address within the range specified at right.	1~50
Outdoor unit	The smallest address of indoor unit in same refrigerant system + 50	51~100
Remote controller	Any address within the range specified at right.	101~200
Group remote controller	The smallest group No. to be managed + 200	201~250

NOTE: The only indoor unit this device can be used to operate is an M-NET control indoor unit. It will not operate a K control indoor unit, even with a K transmission converter (PAC-SC25KAA).

be supplied with power	which may	Power supply unit model
1~5		PAC-SC34KUA
CAUTION CAUTION Capacity of Capacity of	of transmission wiring, and c sion wiring within the system. h may be supplied with pow ent in the following table (de	omits power supply wiring for clarity. er are found by multiplying the given num ecimal fractions are rounded up).
Group remote controller	Central controller	
0.5	1	
I. The eight groups are allocated -200~group remote controller setup add Examples: Group 1~8 is the managem Group 9~16 is the manager	emote controllers × capacity d automatically (group dress -200+7 is the manage ent group when the group r	coefficient remote controller setup address ement group). emote controller setup address is 201. remote controller setup address is 209
 As current consumption is twice that w outdoor transmission wiring, assume tw tions. 	vith remote controller when vo remote controllers for eac	this equipment is connected to indoor o ch of these units when calculating connec
 As current consumption is twice that would outdoor transmission wiring, assume twitions. How To Install hoose a location in which to install e following requirements: The space as shown in the diagram at rithe controller is installed on the wall or ir when used with the program timer (PAC- 	the group remote controllers for each of the group remote controllers for each of the group remote cont ght is required whether in the switch box (except -SC32PTA)).	roller (switch box) in accordance w External size of remote controller External size of remote controller

(2) Attach the lower case to the wall or the switch box.



Installation pitch

Terminal block

(3) Connect the remote controller cord to the terminal block on the lower case. Install wiring correctly in accordance with the diagram at right.



(4) Set the group remote controller address with the rotary switches.



CAUTION Addresses between 201 and 250 may be set with the group remote controller. The place of 100 is fixed to "2".

Rotary switch setting	Address
01~50	201~250

• The rotary switch is set to 01 when shipped from the factory.

- (5) When used in conjunction with the master system controller (centralized controller), set the group remote controller to "Slave" with the switch as shown in the diagram below.
 - The switch is set to "Master" when shipped from the factory.



(6) Connect this connector on the lower case to the connector CN1 on the upper case.

- - Connect firmly as shown below. The system will not operate unless these connections are made. After connecting the wiring, ensure that the upper case does not hang off the cord as shown in
 - the diagram below at the right. This may result in a break in the cord, and thus cause problems with operation.
 - Always pass the cord through the hook to hold it in place.



Remote controller upper case

(7) Fitting the upper case.

Remote controller lower case

First hook the upper case to the two upper claws and then fit it as shown at right.

- · Press the case until it snaps shut.
- A protective sheet has been affixed to the control panel. Remove it before starting.

To remove the upper case, insert a minus screwdriver into one of the open slots and move it in the direction of the arrow as shown in the diagram at right.

Do not turn the screwdriver while it is inserted into the open slot. Doing so can result in damage to the claws.

(8) Wiring hole for fitting directly onto the wall.

- · Cut out the thin-wall portion of the upper case (shaded area) using a knife or nipper.
- Take out the remote controller cord connected to the terminal block via this portion.





(9) Seal the remote controller cord lead-in with putty in order to prevent possible entry of dew, water droplets and other insects.

- When fitting directly to the wall as in (2), seal the cutout in the upper case with putty.
- · When cutting a hole in the wall for the remote controller cord (ie when the remote controller cord exits from the rear of the remote controller), seal this hole in the same way.



• When fitting to the switch box, seal the join between the switch box and the wiring conduit with putty.



When Using the Switch Box

When Fitting Directly on the Wall

(10) Affix a caution label.

A caution label in English is supplied on the back surface of the upper panel. Affix another caution label in the language of a country where you use the Group remote controller over the English one.

5 Connecting Optional parts

- When connecting a program timer connect a 5-core cable to connector CN2 (timer connector) on the upper case (a 5-core cable is supplied with the program timer).
- Cut out the thin-wall portion to take the cable.
- When fitting directly onto the wall, fit the group remote controller on the left of the program timer to facilitate wiring. If you anticipate installing more program timers, leave the appropriate space to the left of the remote controller. See the program timer installation manual for installation details.



6 Initial Settings

• Initial settings is necessary before test run. Consult the user's manual for details of initial settings.

7 Test Run

• Test run is performed individually for each group, or for all groups.



Procedure Switch layout is as shown in Diagram A.

Diagram B





- Test run may be halted as follows irrespective of the remaining time (air-conditioning units halted).
 - Press the ① [Collective ON/OFF] switch Press the ① ① ON/OFF switch Press the ⑥ [ON/OFF by Group] switch.

Test run is terminated only for the relevant group when the (© [ON/OFF by Group] switch is pressed.

Test Run for All

① Open the upper panel.

② Call out the collective operation setting screen using the ④ [GROUP] () Switch.



Collective operation setting screen

③ Begin test run.

• Test run begins when the B [TEST RUN] switch is pressed twice in succession.



- After the (B) [TEST RUN] switch has been pressed twice in succession the ON and time remaining display changes from flashing to lit continuously (The overall status lamp lights up). The TEST RUN and group select display flash during test run.
- The smallest address of indoor unit of the smallest number group is displayed on the collective operation setting screen (above).
- To check the liquid pipe temperature for the indoor units registered in each group, select the indoor unit for which the liquid pipe temperature is to be checked using the \bigcirc [External Timer] \bigcirc switch.
- TEST RUN and all select icons for the registered groups flash during test run.

④ Close the upper panel (setup complete).

* The screen continues when setting up individual groups. The collective operation monitor screen appears when setting up collectively. Ensure that the upper panel is fully closed.

(5) Test run complete.

- The test run setup in ③ is completed after two hours and operation is then halted (the test run display is extinguished).
 - Operation is halted only for the groups for which test run has been performed.
 - Operation is halted for all groups in a batch.
- Test run may be halted as follows irrespective of the remaining time (air-conditioning units halted).
 - Press the ① [Collective ON/OFF] switch Press the ① ① ON/OFF switch Press the ⑥ [ON/OFF by Group] switch.

Test run is terminated only for the relevant group when the K [ON/OFF by Group] switch is pressed.

MITSUBISHI ELECTRIC CORPORATION

Mitsubishi Electric Building Air Conditioning Control System

Group remote controller



PAC-SC30GRA

INSTRUCTION BOOK

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

MANUEL D'UTILISATION

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



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1. Safety precautions

Please take a moment to review these safety precaution. They are provided for your protection and to prevent damage to the controller.

This safety information applies to all operators and service personnel.

After you have read this manual, always observe the procedures described in the explanations and store it with the installation manual in a location that is easy to find. If the controller is going to be operated by another person, make sure that this manual is given to him or her.

Symbols and Terms

\land WARNING	Statements identify condition or practices that could result in personal injury or loss of life.
A CAUTION	Statements identify condition or practices that could result in damage to the controller or other property.

🗥 WARNING

- Ask your dealer or technical representative to install.
 - If incorrect installation is done by a customer, it may cause an electric shock, fire, etc.
- Securely install in a place which can withstand the weight of the controller.
 - If it is not enough, the controller may drop and cause an injury.
- Make sure that the controller is connected to a rated power supply.
 - If the controller is not connected to a rated power supply, it may cause a fire or damage to the controller.
- Never remove the cover during operation.
 - Touching the charging parts of the controller may cause severe burns or other personal injury.
- Stop the operation if any malfunction occurs.
 - If malfunction occures (burning smell, etc.) stop the operation and turn off the power supply. Contact the your
 dealer or technical representative immediate. If the controller continues to operate after a malfunction occurs, this
 may cause damage, electric shock or fire.
- Do not move and re-install the controller by yourself.
- If installation is incorrect, it may cause an electric shock, fire, etc. Ask your dealer or technical representative.
- Contact your dealer if the controller will not be used any more or will be scrapped.
- Do not remodel or repair by yourself.
 - If the controller is remodeled or repair is not correct, it may cause an electric shock, fire, etc. Consult your dealer if repair are necessary.
- Stop the operation immediately and notify the your dealer if an error code is displayed or malfunction occurs.
 - Fire or damage may cause it the controller is operated in this condition.

▲ CAUTION

- Do not install the controller in a place where inflammable gas could leak.
 - If gas leaks and collects around the controller, it may cause a fire or explosion.
- Do not wash the controller with water.
- It may cause an electric shock or malfunction.
- Do not touch the switch with wet hands.
 - It may cause an electric shock.
- Do not use the controller for special applications.
 - This product is designed for use with the MITSUBISHI ELECTRIC BUILDING AIR CONDITIONING CONTROL SYSTEM. Do not use the system for other air condition management operation or applications. It may cause malfunctions.
- Do not apply insecticide or flammable sprays to the controller.
 - Do not place flammable spray near the controller and make sure it does not blow directly on the controller as this
 may cause in fire.
- Do not use the controller in special environments.
 - The performance may be reduce or parts may be damaged if the controller is used in locations subject to large quantities of oil (including machine oil), steam, sulfide gas.
- Do not touch the switches with sharp objects.
- It may cause an electric shock or malfunction.
- Operate the controller within the specified temperature range.
 - Observe the specified temperature range when operating the controller. If the controller is used outside the specified temperature range, it may cause serious damage. Be sure to check the operation temperature range in the operation manual.
- Do not pull or twist the transmission line.
 - It may cause a fire or malfunction.
- Do not dismantle the unit.
- It is dangerous to touch the internal circuit board. It may cause a fire or malfunction.
- Do not clean the unit using benzene, thinner or other chemicals.
 - It may cause discoloration or other damage. If the unit should become particularly dirty, apply a mild cleaner that
 has been diluted with water to a soft cloth and wipe the unit clean. Be sure to wipe away any residual moisture
 with a dry cloth.

2. Functions

• This unit can control a maximum of 16 air conditioner units. The operation listed below are also possible.

<List of group remote controller functions>

Item		Item	Specification	
		ON/OFF	ON/OFF operations for the collective or each group.	
		Operation mode	Switches between cool/dry/fan/auto/heat for the collective or each group.	
		Fan speed	Switches between high /low for the collective or each group (switches the fan speed through four stages from 1 to 4)	
		Temperature setting	Sets the temperature for the collective or each group. Range of temperature settings Cool/Dry operations : 19 °C to 30 °C Heat operations : 17 °C to 28 °C Auto operations : 19 °C to 28 °C	
	tions	Horizontal blow	Starts and stops horizontal blow operations for the collective or each group.	
		Air direction/swing	Operates the vertical fan and swing fan for the collective or each group.	
erating function		Ventilation operation	Switches the interlocked ventilation unit between stop/high/low for the collective or each group.	
		Timer operation	Switches between activating and suspending scheduled operations that use a program timer (sold separately) for the collective or each group.	
		Filter reset	Resets the filter sign after the filter has been cleaned for the collective or each group.	
ğ		Collective operation	The overall status lamps display condition of the collective status.	
ser		Each group operation		
\supset		Operation mode		
		Fan speed		
		Temperature settings		
	Monitor	Horizontal blow		
	ina	Air direction/swing	Liquid crystal display	
		Ventilation operation		
		Timer operation		
		Filter sign		
		Prohibition		
		Malfunction	Displays the unit address of the malfunction unit and the error code on the liquid crystal display	
suo	Opera-	Group settings	Performs the group settings for the unit (indoor unit, remote controller, slave system controller)	
uncti	tions	Interlocked settings	Performs the interlocked settings for fresh masters and other ventilation unit.	
g f	Monitor	Malfunction history	Displays the history of the ten malfunctions.	
Initial settin	System	Master system controller/slave system controller (*1)	Master and slave settings for the system controller.	
		Group remote controller's address	Address setting for the group remote controller.	

Item		Item	Specification
		Indoor unit	Maximum 16 (maximum 8 groups)
-		Number of indoor units in one group	0 to 16
contro	Number	Number of remote controllers in one group	0 to 2
tem o	of control unit	Number of system controllers in one group	0 to 4 (including the number of remote controller in one group) 0 to 3 for which have one remote controller.
Sys		Number of indoor units interlocked with one ventilation unit.	0 to 16 (some type of ventilation unit can be only operate when inter- locked to a maximum of 9 units)

*1 Master system controllers and slave system controller



When using a system consisting only of PAC-SC30GRA.

PAC-SC30GRA is set as the master system controller. In this case, the group settings are performed with PAC-SC30GRA. When using a system where PAC-SC30GRA is controller by a different system controller. PAC-SC30GRA is set as the slave system controller. In this case, the group settings are not performed with PAC-SC30GRA.

NOTE: It is not possible to set the master and slave settings with more than one group remote controller and control the same groups. Also, the groups listed below cannot be set.

• Unit group which are not under the management of the master controller and are managed by the slave system controller.



3. The names of indicators and their functions



 COLLECTIVE SETTINGS/INDIVIDUAL GROUP SETTINGS DISPLAY:
 COLLECTIVE is displayed when extering the set

COLLECTIVE is displayed when entering the same settings for multiple groups.

GROUP is displayed when entering varying settings for individual groups.

- B OPERATION MODE DISPLAY: Displays the current operating mode.
- © CENTRALLY CONTROLLED DISPLAY: Indicates when operation of group remote controller is prohibited by the master controller.
- D TEMPERATURE SETTING DISPLAY: Displays the current temperature setting.
- (E) ON/OFF DISPLAY FOR INDIVIDUAL GROUPS: Displays whether a group's operations have been stopped by showing a ">" mark in the operation status display for each individual group.
- FAN SPEED DISPLAY: Displays the current fan speed.
- © AIR DIRECTION DISPLAY: Displays the current direction of airflow.
- ROOM TEMPERATURE DISPLAY: Indicates the room temperature of the group currently being displayed (will blink when the temperature is outside the range of 8°C to 39°C).
- HORIZONTAL BLOW DISPLAY: Displays the operations of the horizontal blow. Not displayed when operations are stopped.

- ① TIMER OPERATION DISPLAY: Displayed when a PROGRAM TIMER (sold separately) is installed and the TIMER MODE is set.
- (K) FILTER SIGN DISPLAY: Blinks when the filter requires cleaning. Also the GROUP SELECTION DISPLAY "> " of the specified group will blink.
- © OPERATIONAL STATUS DISPLAY BY GROUP: -ON: Run OFF: Stop BLINKING: Malfunction
- GROUP SELECTION DIPLAY: Displays the position of the selected group. All registered groups are displayed on the collective operation setting screen.
- N VENTILATION DISPLAY: Displays the operating condition of the ventilation unit (if a ventilation unit has been installed).
- O NOT AVAILABLE DISPLAY: Blinked together with the relevant function when a function switch has been pressed for a unit that is not equipped with the function.
- P OVERALL STATUS LAMP: The lamp indicates the unit operation condition. ON: One or more group(s) run. OFF: All groups stopped.
 BLINKING: Malfunction.



- OPERATION MODE SWITCH: Used to switch between Cool/Dry/Fan/Auto/Heat.
- ② TEMPERATURE SETTING SWITCH: Used for changing the temperature setting. Setting changes are possible in increments of 1°C.
- ③ ON/OFF SWITCH: Used to switch between ON/OFF for the group indicated on the group selection display.
- (4) FAN SPEED SWITCH:
- Used to switch fan speeds.
- ⑤ AIR DIRECTION SETTING SWITCH: Used to adjust the vertical direction of the blow.
- ⑥ FILTER SIGN RESET SWITCH: Used to reset the filter sign.
- ⑦ HORIZONTAL BLOW SWITCH: Used to switch between start and stop for the horizontal blow.
- ③ VENTILATION SETTING SWITCH: Used for changing the operation settings of the ventilation unit (if a ventilation unit has been installed). Possible changes to the operation settings of the ventilation unit include OFF/ON (low) or ON (high). It is possible to operate only the ventilation units by pressing this switch when the air-conditioners are not operating.

③ CHECK/TEST RUN SWITCH:

Used only during inspections and test run operations. Not to be used during normal operations.

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"Group" is abbreviated as "G".

1) EXTERNAL TIMER SWITCH:

Allows you to select the TIMER MODE when a PROGRAM TIMER (sold separately) has been installed.

COLLECTIVE ON/OFF SWITCH: Allows you to operate and turn off the air conditioners for all groups at once. All groups will commence operations when operations for all groups are stopped. Operations for all groups stopped when one or more

groups are operating.

③ ON/OFF SWITCH BY GROUP: Run and stop operations by each group.

4. Operations 4-1. Operation settings by group

(1) With the cover closed:



(2) With the cover open:



- (1) With the cover closed:
 - The start and stop functions of the air conditioners for each group can be controlled using the ON/OFF switch by group.
- (2) With the cover open:
 - Use the GROUP select switch to call the group that you want to set. (GROUP SELECTION DISPLAY: The position of the "▶" will change. Groups of air conditioners that have not been registered will be skipped.)



- ② Controlling the items that you want to adjust
 - If the selected group is not in operation, press the ON/OFF switch to start operation.
 - Press the switch that you want to adjust (OPERATION MODE, TEMPERATURE SETTING, FAN SPEED, AIR DIRECTION SETTING, HORIZONTAL BLOW, VENTILATION SETTING and EXTERNAL TIMER SETTINGS).
 - (For detailed explanations on how to adjust each feature, refer to 4-3.)
 - If the registered group contains air conditioners that are not equipped with the FAN SPEED, AIR DIRECTION SETTING, HORIZONTAL BLOW, VENTILATION SETTING and EXTERNAL TIMER SETTINGS, the message "NOT AVAILABLE" will blink to indicate that the setting is not supported.

4-2. Collective operation settings

(1) With the cover closed:



(2) With the cover open:



- (1) With the cover closed:
 - The start and stop functions of the air conditioners for all groups can be controlled using the collective ON/OFF switch. (This collective ON/OFF function can be operated when the UPPER PANEL is open as well.)
- (2) With the cover open:
 - Call the COLLECTIVE OPERATION SETTING SCREEN using the GROUP select switch (the screen in which all indicators are blinking).



- ② Controlling the items that you want to adjust
 - Press the switch that you want to adjust (OPERATION MODE, TEMPERATURE SETTING, FAN SPEED, AIR DIRECTION SETTING, HORIZONTAL BLOW, VENTILATION SETTING and EXTERNAL TIMER SETTINGS).
 - (For detailed explanations on how to adjust each feature, refer to 4-3.)
 - Indicators will stop blinking but will remain lit as the settings are entered for all groups.
 - If you do not want to adjust a particular setting for all groups, leave it as is (so that it continues to blink). The previous setting that was used will continue to be enabled.

4-3. Adjusting each function

The following section describes the operation of the switches for the OPERATION MODE, TEMPERA-TURE SETTING, FAN SPEED, AIR DIRECTION SETTING, HORIZONTAL BLOW, VENTILATION SETTING and EXTERNAL TIMER SETTINGS.

If your air conditioner is not equipped with FAN SPEED, AIR DIRECTION SETTING, HORIZONTAL BLOW, VENTILATION SETTING and EXTERNAL TIMER SETTINGS or a PROGRAM TIMER (sold separately), the "NOT AVAILABLE" indicator will blink when the switches for these functions are operated and the operation will not be performed.

However, "NOT AVAILABLE" does not appear on the COLLECTIVE OPERATION SETTING SCREEN.

If "CENTRALLY CONTROLLED" blinks when the each switch is operated, the message indicates that the operation is prohibited by the master controller.

All of the blinking items in the COLLECTIVE OPERATION SETTING SCREEN indicate items that can be adjusted. After the items are adjusted they will stop blinking but will remain lit and those adjustments will be applied to all groups.

- (1) Operation mode
 - ① Press the \Box \diamond \diamond \diamond \diamond operation mode switch.
 - The operation mode will switch between Cool (☆) → Dry (◊) → Fan (♣) → <Auto (□) > →
 <-Heat (☆) > whenever the □♣☆☆◊◊ operation mode switch is pressed. The operation modes enclosed in parenthesis (< >) will not be displayed if the indoor units registered in the various groups are not equipped with these modes.
- (2) Temperature adjustment
 - (1) Press either of the \bigtriangleup or ∇ temperature setting switch.
 - The temperature setting will be amended by 1 °C when either of the △ or ▽ temperature setting switch are pressed. The setting will change by 1 °C in a continuous stream if pressure is kept on these switches.
 - The room temperature can be set within the following ranges.

Cool/Dry operations:	19 °C to 30 °C
Heat operations:	17 °C to 28 °C
Auto operations:	19 °C to 28 °C
	_

- The room temperature cannot be set for Fan operations.
- Although the temperature range can be set between 19 to 30 °C regardless of the operation mode on the collective operation setting screen, the actual temperature setting will be based on the operation mode for each group.
- (3) Fan speed adjustment
 - 1) Press the fan speed switch.
 - The fan speed settings will differ depending on the type of indoor unit.

Ean anood	Remote controller display			
Fan speeu	Low	Medium 2	Medium 1	High
2-stage				\$nl
4-stage	- \$	- \$ <u>1</u> -	- 1 211 -	- Şul

The fan speed will change whenever the fan speed switch is pressed.

- (4) Horizontal blow
 - 1) Press the See horizontal blow switch.
 - The horizontal blow are operated and stopped whenever the second blow switch is pressed.



- (5) Air direction
 - ① Press the 🌾 air direction switch.
 - The direction of the fan will change whenever the r air direction setting switch is pressed.



- Only I IV will be displayed without V if the indoor unit is not equipped with the swing function.
- (6) Ventilation setting
 - ① Press the _____ I ventilation setting switch
 - The ventilation unit is operated whenever the _____ I ventilation setting switch is pressed.



- Once the interlocked operations between the indoor unit and the ventilation unit have been set once, the same operations can be repeated simply by pressing the ①ON/OFF switch.
- (7) External timer
 - (1) Press the \bigcirc external timer switch.

5. Filter sign reset

- The FILTER will blink to indicate that the filter requires cleaning. The group for which the filter requires cleaning will blink on the group selection display at the same time.
- (1) Filter sign reset
 - Select the appropriate group for which you want to reset the filter sign using the GROUP select switch. If you want to reset the filter sign for all groups, call the COLLECTIVE OPERATION SETTING SCREEN (the screen in which all indicators are blinking).
 - ② Press the FILTER sign reset switch two times. The FILTER display will stop blinking but will remain lit, the GROUP SELECTION DISPLAY
 - "▶" will come on and the filter sign will reset.

6. When malfunction occurred

- The following will be displayed when a malfunction occurred.
- Having confirmed the address of the unit in which the malfunction has occurred and the error code, contact your dealer or service center.



- (A) The overall status lamp will blink.
- B The unit type in which the error has occurred will blink.
- © The address number of the unit in which the malfunction has been occurred will blink.
- D The error code will blink (four characters).
- (E) The block area of the operation display by group registered for the unit in which the malfunction has been occurred will blink.
- Canceling the error: Perform procedure ① or ② to cancel an error.
 - Press the collective ON/OFF switch.
 Operations for all groups will be stopped.
 - ② Open the door to the operation area, call out the group in which the malfunction has occurred and then press the ①ON/OFF switch. Only the operations for the group in which the malfunction occurred will be stopped.

7. Initial settings 7-1. Setting the master controller

It is necessary to enter initial settings. The initial settings include the following:

7-1-1.	Group settings	7-1-3.	Canceling the initial setting mode
7-1-2.	Interlocked setting	7-1-4.	Collective deletion

In order to perform these operations, first of all display the initial settings on the remote controller's screen.

① The following will be displayed when power is supplied to the remote controller.

(i) If the group setting information has not been registered:



[H0] in the room temperature display area and the overall status lamp will blink.

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(ii) The following is displayed when group setting information already exists.



OFF

[H1] will blink in the room temperature display area during system start-up communications.

The user operation screen will be displayed when system start-up communications have been completed.

② Display the initial setting mode screen.

When 1 (i) [H0] blinks in the remote controller's screen or when the user operation screen 1 (ii) is displayed, press the FILTER sign reset and $\Huge{2}$ horizontal blow switches simultaneously (for at least two seconds). Be sure to perform this operation after first turning off the air conditioners for the entire group using the collective ON/OFF switch in the user operation screen 1 (ii).

Also, switch operations are disabled if the \bigcirc display is illuminated. Press the \bigcirc external timer switch and perform normal operations once the \bigcirc display has been extinguished.



Initial setting mode screen

Perform operations 7-1-1 to 7-1-4 once the above status has been reached.

7-1-1. Group settings

Register the indoor units into each group.

Register the remote controller and the slave system controller in the same way.

① Select the group

Select the group for which unit registration is required.

- Select the unit
 - Select the unit to be registered into the group selected in ①.
- ③ To register units in groups
- (4) To delete units from the group
- 5 To confirm registered units
- Ŭ

Refer to 7-1-2 or 7-1-3.

- **NOTE:** The range of the address number settings for the remote controller is between 201 and 250. Group allocation for the eight groups are automatically assigned a group number. (The controlled group is between group remoter controller address minus 200 and group remoter controller address minus 200+7.)
 - Example: When the group remote controller address is 201, the controlled groups are between groups 1 and 8. When the group remote controller address is 209, the controlled groups are between groups 9 and 16.

Address of PAC-SC30GRA	Controlled group number
201	1 to 8
209	9 to 16

Select the group

(1) The cursor in the group display area will move in the following sequence whenever the GROUP select switch is pressed. It will move in the opposite direction when the pressed.

Example: When the group remote controller address is 201

Cursor movement



1	2	3	4
5	6	7	8
		-	

Group display area: Group number allocation

Room temperature display area (group number displayed for two seconds.)

:∪,/"→ "U∈"→ "Ū∃"→・・・・→

• The controlled group display will change in accordance with the address number setting.

(2) Once the group has been selected, the unit with the smallest address number will be displayed if registered units exist for that particular group. The unit type will also be displayed after two seconds. Details displayed:

Temperature setting display area: Address number

Room temperature display area: Unit type

Example: When groups 1 and 2 are not registered and an indoor unit with the address 005 is registered in group 3.

Temperature setting display area: [---] will be displayed if nothing is registered. The relevant group number is displayed, and [--] will be displayed two seconds later if nothing is registered. $\overline{(--)}$ Group 1 display Press (\triangleright once. 02 [--] will be displayed two seconds later if nothing is registered. - -~ Group 2 selection Press (\triangleright once. [//_] or other unit type will be displayed two seconds later. 6 Group 3 selection. Indoor unit 005 is registered.

② Select the unit

- (1) Select the unit to be registered in the group selected with ①.
 - The address numbers will change in the sequence shown below within the temperature setting display area whenever the

'DD2"+ "DD3"+ · · · · + "25D

Indoor unit:	001 to 050
Remote controller:	101 to 200
System controller:	201 to 250

• The address numbers will change in the opposite direction when the \bigtriangledown switch is pressed.

Temperature setting display area: Address number displayed



- (2) Selecting registered units
 - The following display will be shown when the selected unit is registered in one of the eight groups controlled by this equipment.

Example: When unit 011 is called out with group 3



Cursor blinks. Indicates that the unit is registered in group 6 in this case.

③ To register units in groups

- (1) Register the selected units in groups
 - Press the TEST RUN switch with the group number and unit address selected with ① and ② displayed.
 - This operation completes the registration task.
 - [][_] or unit type will be displayed if registration was performed normally. [][-]] will blink beside the unit type if the registration was not performed normally.

Display the address number that is to be registered



[$\frac{1}{L}$] or unit type will be displayed if registration was performed normally Registration complete screen. Indoor unit with an address number of 006 is registered in group 3.

- (2) Registering other units
 - The subsequent address will be displayed when the <u>△</u> temperature setting switch is pressed after registration is complete. Repeat procedures ② and ③ to continue with registration.
- **NOTE:** Registration is required not only for indoor units but when you want to set the remote controller and slave system controller as well. Registration of multiple groups is possible only at the system controller address.

Each controller Indoor unit:		IC
Remote controller:		RC
	System controller:	SC

④ To delete units from the group

- (1) Perform the procedure explained in ① and ② to call out the unit address number that is to be deleted.
 - The unit registered in the group will be deleted if the fan speed switch is pressed twice at this time.



The unit type display will disappear and be replaced with [--] once this procedure is completed normally.

5 To confirm registered units

It is possible to confirm the address numbers of all units registered within groups.

- (1) Perform the procedure explained in ① and select the group for which a search is to be run.
- (2) Press the ①ON/OFF switch to display the registered unit address numbers sequentially from the smallest number.

Example:



(3) [---] will be displayed if no units are registered.

7-1-2. Interlocked setting

- Sets each group for Interlocked operations with Interlocked unit.
- Perform the settings for the Interlocked unit after the groups have been set. Interlocked unit cannot be set up for groups that do not have any units registered.
- ① Call out the Interlocked unit setting screen
- (2) Select the group number
 - Select the group for which interlocked unit is to be registered in the same way as for retrieval and deletion.
- ③ Call out the registered unit
- (4) Select the interlocked unit address number
- 0
- (5) To register interlocked units
- 6 To delete interlocked units
- To confirm interlocked units

 \downarrow

Refer to 7-1-1 or 7-1-3.

① Call out the interlocked unit setting screen

(1) Change the screen from the group selection screen shown in 7-1-1 (1) to the interlocked unit setting screen.

Press the 🗆 🕏 🌣 🌣 operation mode switch.



The screen will switch between the initial settings mode screen and the interlocked unit setting screen whenever the $\Box \clubsuit \diamond \diamond \diamond$ operation mode switch is proceed.

Display area for the interlocked unit address number

- Interlocked unit setting screen
- ② Select the group number
- (1) Call out the group number
- Call out the group number into which the interlocked unit is to be registered. Perform the same procedure as explained in <u>7-1-1</u>. ① group selection.
- Select the group with the () and () GROUP select switch.
- (2) The relevant group number will be displayed in the room temperature display area once the group has been selected.

(3) Once the group has been selected, the unit with the smallest address number will be displayed if registered units exist for that particular group. Details displayed:

Temperature setting display area: Address number Room temperature display area: unit type Example: When group 1 is not registered and an indoor unit with the address 003 is registered in group 2.



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③ Call out the registered unit

Call out the indoor unit's address number for which interlocked unit is to be registered by pressing the $\odot {\rm ON/OFF}$ switch.

④ Select the interlocked unit address number

Call out the interlocked unit address number to be registered in the indoor unit selection in ③.

- (1) Press the 📉 air direction setting switch with the indoor unit selected in ③ displayed.
 - The displayed interlocked unit address numbers will change in the following sequence whenever the switch is pressed.

• Press the \bigcirc external timer switch to change the display in the opposite direction.



5 To register interlocked units

- (1) Press the TEST RUN switch with the details explained in ④ displayed to register the interlocked unit into the group.
 - The following will be displayed if registration was performed normally.



The contents of the display will alternate between the information for the indoor unit's set address number and that of the interlocked unit's address number.

- $[\frac{B}{B}]$ will blink beside the unit type if the registration was not performed normally.
- (2) Registering other units
 - Select other groups with the use of the <a> and <>> GROUP select switch.
 - Select the indoor unit into which the interlocked equipment is to be registered with the □♣☆☆ operation mode switch.
 - Select the other interlocked unit with the r air direction and \oplus external timer switch.

By performing the above procedure, the interlocked unit address number selection screen shown in ④ will be displayed to allow the set-up of subsequent interlocked unit.

The range of settings for address numbers	001 to 050,
and attributes for the interlocked units are:	LC or FU

6 To delete interlocked units

Deletes the interlock settings for indoor units and interlocked unit.

(1) Display the screen following interlocked unit set-up or the retrieval screen for interlocked unit.



(2) The interlocked unit setting will be deleted if the Stati fan speed switch is pressed twice at this time.



⑦ To confirm interlocked units

It is possible to confirm which indoor unit the interlocked unit is registered against with the retrieval process.

- (1) The address number for the interlocked unit assigned with settings that you want to check is displayed using the same operation that was used in ④.
 - Select the interlocked equipment with the 📉 air direction and 🕘 external timer switch.



(2) When a interlocked unit setting exists







Display the address number of the interlocked unit to be retrieved.

Press the term ventilation setting switch with the left displayed.

The address number and unit type of the set-up unit are displayed.

Alternately

Address number of unit type of the interlocked unit are displayed.

 Press the ______ et al. ventilation setting switch with the above displayed to confirm each of the other units into which link settings have been established for the interlocked unit.

Example: When interlocked unit 020 is interlocked into the following units:

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

The contents of the retrieval will be displayed as follows:

Press the Kate ventilation setting sv	witch.	
\rightarrow Indoor unit address 001 and its type	\leftrightarrow	Interlocked unit address 020 and its type
\downarrow Press the 2 ventilation setting sv	witch.	
Indoor unit address 002 and its type	\leftrightarrow	Interlocked unit address 020 and its type
Press the I ventilation setting sv	witch.	

(3) When interlocked unit has not been set up.



7-1-3. Canceling the initial setting mode

- Press the FILTER sign reset switch and Station horizontal blow switch simultaneously (for at least two seconds) when the group settings and linked equipment settings have been completed.
- This will store the group setting information and perform system start-up communications. Once this
 has been completed, the user operation screen will be displayed. (Refer to 7-1. ① (ii))
- **NOTE:** Do not switch off the power supply during system start-up communications (when [H1] is blinking.) (The group setting information will be stored incomplete if the power supply is cut off.)

7-1-4. Collective deletion

Deletes all group setting information and interlocked unit setting information.

- (1) Display the initial setting mode screen or the interlocked unit setting screen.
- (2) Press the **Statistic** fan speed switch with this displayed for three or more consecutive seconds to delete all setting information.



Initialized status

7-2. Setting the slave controller

 Initial settings are performed with the master system controller when this equipment is controlled by the master system controller. (It is not necessary to enter initial settings.)

(It is not necessary to enter initial settings.)

NOTE: Observe the system limitations mentioned in *1 of 2. Functions when making the initial settings with the master system controller.

8. Functions during start-up and servicing 8-1. Self-diagnosis

- It is possible to check past errors (error codes) stored in the indoor units.
- Group selection
- ② Calling out the self-diagnosis screen
- ③ Selecting the indoor unit address number for which self-diagnosis is to be performed
- ④ Displaying error codes
- (5) Resetting the error history
- 6 Canceling the self-diagnosis

(1) Group selection

- **NOTE:** The group with the smallest group number from amongst all registered groups will be selected when self-diagnosis is performed from the collective operation settings screen.
- ② Calling out the self-diagnosis screen
- Switch across to the self-diagnosis screen and start the self-diagnosis process by pressing the CHECK switch twice on the group operation setting screen.





- ③ Selecting the indoor unit address number for which self-diagnosis is to be performed
- Select the indoor unit address number for which self-diagnosis is to be performed with the use of the
 <u>△</u> and <u>▽</u> temperature setting switch or the <u>○</u> external timer switch.

If the indoor unit address number was selected with the \bigtriangleup and ∇ temperature setting switch, it is possible to select address numbers of the indoor units registered outside of the group selected in 1.

> The display will change when the \bigtriangleup and \bigtriangledown temperature setting switch or the external timer switch are pressed.



Self-diagnosis screen

Displaying error codes (4)

The following will be displayed in the error code display area when the address number of the indoor unit is selected with (3).



Error code display area $[\square \square \square]$ (indoor unit address number) $[\neg \neg \neg \neg \neg \neg]$ (error code)

• Inspection codes When an error exists: 4-character numeral When no error exists: [___] In the case of non-registered indoor units: [FFF]

Resetting the malfunction history (5)

- Select the indoor unit number to be reset with the use of the \bigtriangleup and \bigtriangledown temperature setting switch.
- Press the Press

NOTE: The malfunction history stored within the group remote controller will not be reset.

Canceling the self-diagnosis 6

- Perform the following procedure to cancel the self-diagnosis and return to group operation setting ٠ screen for the group selected in (1).
 - Press the CHECK switch twice. (2) Press the \bigcirc and \bigcirc GROUP select switch. (1)
 - (4) Press the collective ON/OFF or ①ON/OFF switches.
 - (3) Close the upper panel.
- The air-conditioner will be stopped if the self-diagnosis is canceled with (4). Also. The screen will change to the collective operation setting screen if the self-diagnosis is canceled with the collective ON/OFF switch.

8-2. Malfunction history monitoring function

- It is possible to monitor up to ten of the most recent malfunction histories.
- The address of the unit in which the malfunction occurred and the error code will be displayed.
- This information is not deleted when the power supply is switched off. It can only be deleted by performing the malfunction history reset procedure.
- If the malfunction history is reset at the end of a service, it is possible to have a clear record of all ٠ malfunction that occurred up until the next service.
- Calling out the self-diagnosis screen
- ② Calling out the malfunction history monitoring screen
- ③ Retrieving malfunction histories
- Resetting the malfunction history
- (5) Canceling malfunction history monitoring

Calling out the self-diagnosis screen \bigcirc

Press the CHECK switch twice to switch across to the self-diagnosis screen.

Calling out the malfunction history monitoring screen (2)

The display will switch between the self-diagnosis screen and the malfunction history monitoring screen whenever the TEST RUN switch is pressed.



Self-diagnosis screen



Group remote controller address number



Malfunction history monitoring screen

The display will switch between the self-diagnosis screen and the malfunction history monitoring screen whenever the TEST RUN switch is pressed.

The smaller the number, the most recent the error.

[기 기구] (address number).

[25 []] (error code)

3 Retrieving malfunction histories

- The most recent error code will be displayed sequentially whenever the 🕘 external timer switch is pressed. (A maximum of 10 errors can be displayed.)
- ④ Resetting the malfunction history
- Press the □♣☆☆ô operation mode switch twice to reset all of the malfunction history information stored within the remote controller.

NOTE: The error codes stored in the indoor units will not be reset.

⑤ Canceling malfunction history monitoring

- Observe the following procedure to cancel malfunction history monitoring and switch back to group operation setting screen that was displayed prior to the self-diagnosis screen being called out.
 - (1) Press the CHECK switch twice.
 - (2) Press the \lhd and \triangleright GROUP select switch.
 - (3) Close the upper panel.
 - (4) Press the collective ON/OFF or ①ON/OFF switch.
- Operations for the air-conditioner will be stopped when malfunction history monitoring is canceled in accordance with the procedure outlined in (4). Also, if malfunction history monitoring was canceled by pressing the collective ON/OFF switch, the screen will switch across to the collective operation setting screen.

Item	Details
Power supply:	DC30V (power supplied from the outdoor unit or a power unit for transmission lines (model: PAC-SC34KUA))
Electricity consumption:	1W
Environmental conditions for usage:	Temperature 0 to 40 °C, humidity 30 to 90% RH (with no condensation)
Weight:	0.2kg
External dimensions $(H \times W \times D)$:	120 × 130 × 18 (mm)

9. Specifications Specifications for this equipment

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