

Компания Полеель - официальный
дистрибьютор **SANYO**

www.poulel.ru
www.sanyo-airservice.ru

т. (495) 101-30-99

Кондиционеры
Сплит-системы
Полупромышленные кондиционеры
Мультizonальные **VRF** системы кондиционирования
Чиллеры

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Product Information

If you have problems or questions concerning your Air Conditioner, you will need the following information. Model and serial numbers are on the nameplate on the bottom of the cabinet.

Model No. SHA-KC64TG Serial No. _____

Date of purchase _____

Dealer's address _____

Phone number _____

DECLARATION OF CONFORMITY

This product is marked «**CE**» as it satisfies EEC Directive No. 89/336/EEC, 92/31/EEC and 93/68/EEC, and conforms with following standards.

EN55014	(1993)	EN50082-1	(1992)
EN60555-2	(1987)	EN60335-1	(1988)
EN60555-3	(1987)	EN60335-2-40	(1993)

This declaration will become void in case of misuse and/or from non observance though partial of Manufacturer's installation and/or operating instructions.

Alert Symbols

The following symbols used in this manual, alert you to potentially dangerous conditions to users, service personnel or the appliance:



WARNING

This symbol refers to a hazard or unsafe practice which can result in severe personal injury or death.



CAUTION

This symbol refers to a hazard or unsafe practice which can result in personal injury or product or property damage.

Installation Location

- We recommend that this system controller be installed properly by qualified installation technicians in accordance with the Installation Instructions provided with the system controller.



WARNING

- Do not install this system controller where there are fumes or flammable gases, or in an extremely humid space such as a greenhouse.
- Do not install the system controller where excessively high heat-generating objects are placed.

Electrical Requirements

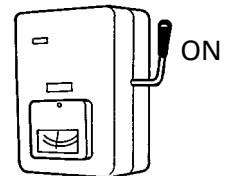
1. All wiring must conform to the local electrical codes. Consult your dealer or a qualified electrician for details.
2. Wiring must be done by a qualified electrician.



CAUTION

To warm up the system, the power mains must be turned on at least five (5) hours before operation. Leave the power mains ON unless you will not be using this appliance for an extended period.

Power mains



Safety Instructions

- Read this booklet carefully before using this system controller. If you still have any difficulties or problems, consult your dealer for help.
- The air conditioner is designed to give you comfortable room conditions. Use this only for its intended purpose as described in the Instruction Manual.



WARNING

- Never touch the unit with wet hands.
- Never use or store gasoline or other flammable vapor or liquid near the air conditioner – it is very dangerous.
- The air conditioner has no ventilator for intaking fresh air from outdoors. You must open doors or windows frequently when you use gas or oil heating appliances in the same room, which consume a lot of oxygen from the air. Otherwise there is a risk of suffocation in an extreme case.

EG



CAUTION

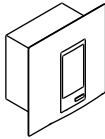



- Do not turn the air conditioner on and off from the power mains switch. Use the ON/OFF operation button.
- Do not stick anything into the air outlet of the outdoor unit. This is dangerous because the fan is rotating at high speed.
- Do not let children play with the air conditioner.
- Do not cool or heat the room too much if babies or invalids are present.

1. General

This booklet briefly outlines where and how to install the system controller. Please read over the entire set of instructions for the indoor and outdoor units and make sure all accessory parts listed are with the controller before beginning.

NOTE

Give these instructions to the customer after finishing the installation.

Part Name	Figure	Q'ty	Remarks
System controller		1	
Tapping screw	Truss-head Phillips 4 x 16 mm 	4	For securing the system controller
Rawl plug		4	For securing the system controller
Manual		1	For installation
		1	For operation

2. Installation site selection

- Install the system controller at a height of between 1 and 1,5 meters above the floor.
- Do not install the system controller in a place where it will be exposed to direct sunlight or near a window or other place where it will be exposed to the outside air.
- Be sure to install the system controller vertically, such as on a wall.

3. How to install the system controller



CAUTION

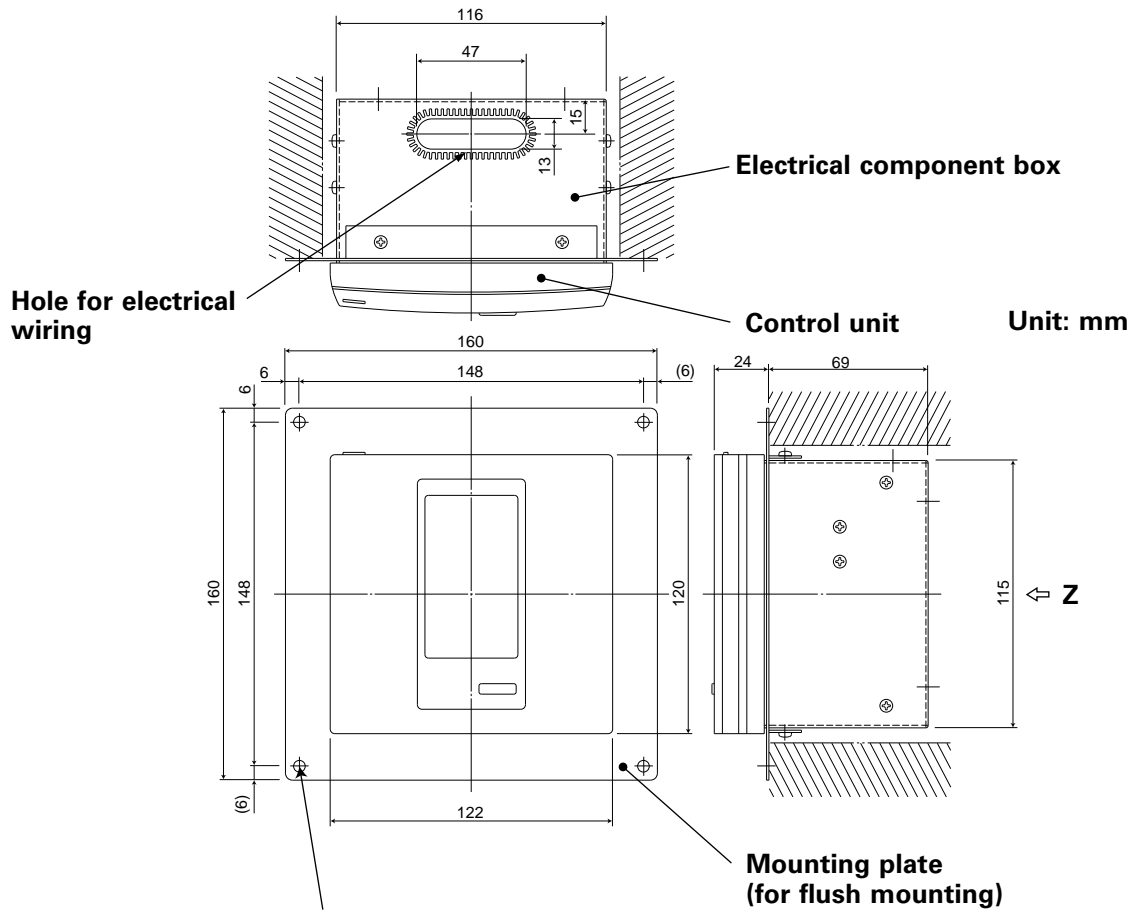
- Do not twist the control wiring together with the power wiring or run it through the same metal conduit, because this may cause a malfunction.
- Install the system controller away from sources of electrical noise.
- Install a noise filter or take other appropriate action if electrical noise affects the power supply circuit of the unit.



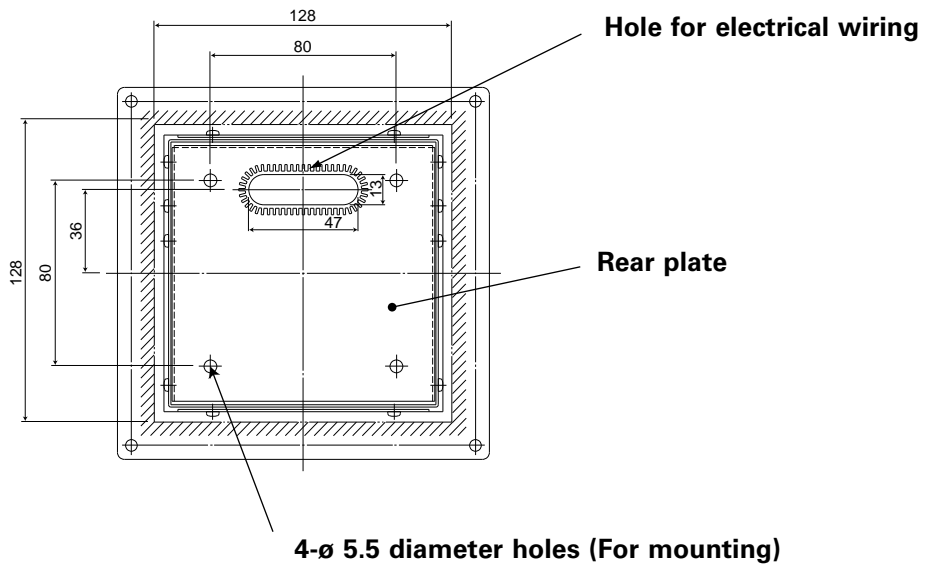
WARNING

Do not supply power to the unit or try to operate it until the tubing and wiring to the outdoor unit is completed.

■ Overview of the system controller



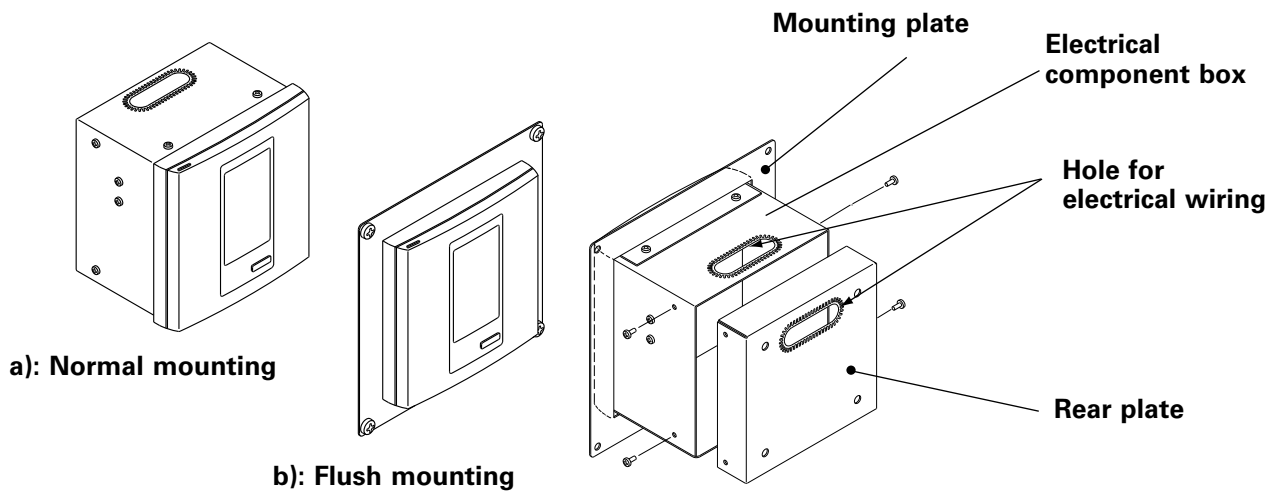
4- \varnothing 5 diameter holes (for mounting)



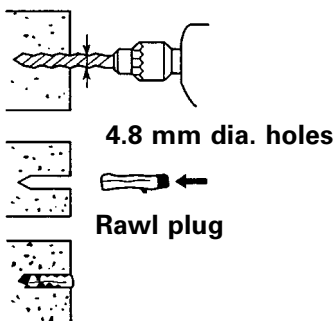
Z-view (back side)

* In order to mount the system controller flush with the wall, an opening measuring 128 mm x 128 mm is necessary.

■ Installation procedure



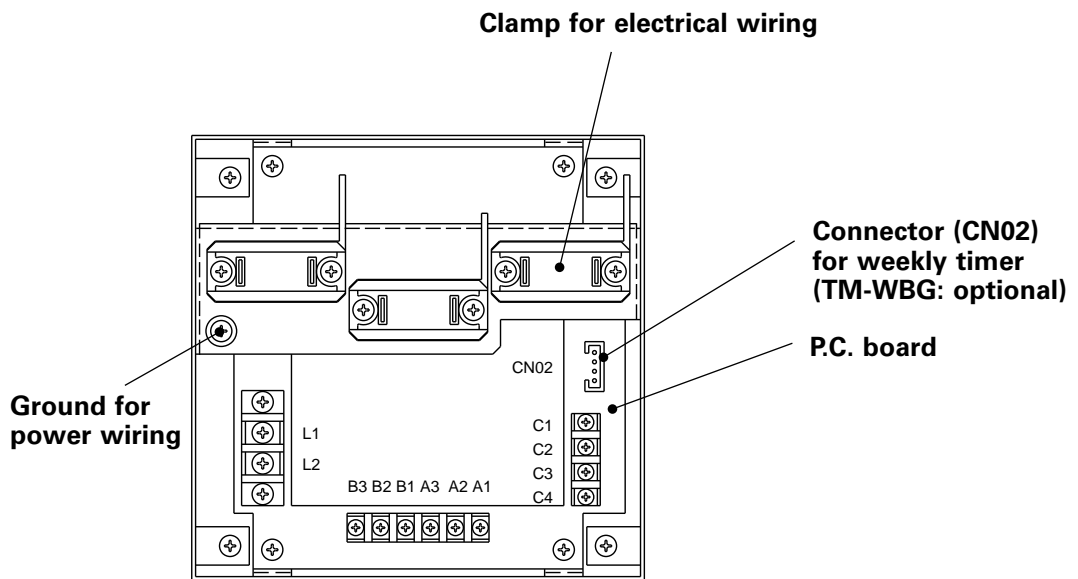
1. Decide how the system controller will be mounted: in the normal manner or flush with the wall.
 - a) To mount the system controller in the normal manner, remove the mounting plate. Then reattach the four screws to the electrical component box.
 - b) To mount the system controller flush with the wall, make an opening in the wall measuring 128 mm x 128 mm. The opening must be at least 85 mm deep as measured from the outside surface of the wall.
2. Remove the rear plate and connect the electrical wiring.
 - 1) Remove the four screws located on both sides of the rear plate.
 - 2) Either the hole in the top of the electrical component box or the hole in the rear plate may be used to feed the electrical wiring.
 - 3) If the hole on top is used, the rear plate should be turned upside down.
3. Secure the system controller in place.
 - a) If the system controller is being mounted in the normal manner, first attach the rear plate to the wall using the screws and Rawl plugs provided. Next, place the body of the system controller over the rear plate and secure it in place using four screws.
 - b) If the system controller is being mounted flush with the wall, fit it through the mounting plate on the wall and secure it in place using the screws and Rawl plugs provided.



NOTE

To mount the system controller on a wall made of cinder block, brick, concrete, or a similar material, drill 4.8 mm diameter holes in the wall and insert Rawl plugs to anchor the mounting screws.

■ Layout of electrical terminals



How to connect electrical wiring

1) Basic wiring

L1: Power supply (\sim 50 Hz/60 Hz, 220 – 240 V)

L2:

C1: Inter-unit control wiring. (Low voltage)

C2:

C3: Auxiliary

C4: Ground for inter-unit control wiring

2) Terminals for remote monitoring

A1: Input for turning on air conditioners concurrently.

A2: Input for turning off air conditioners concurrently.

A3: Common input for turning air conditioners on or off.

B1: On operation state indicator output.

B2: Alarm indicator output.

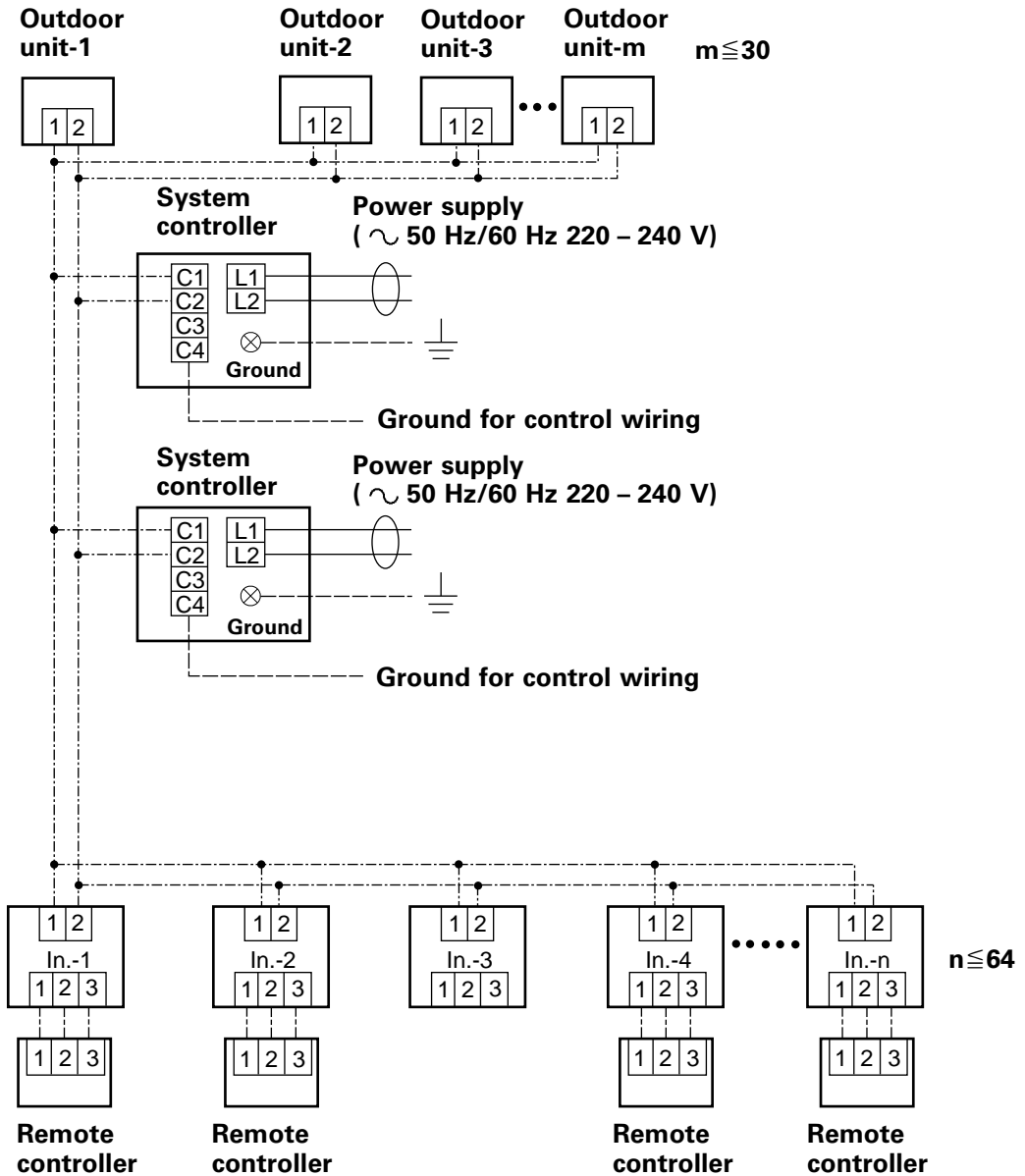
B3: Common indicator output.

■ Basic wiring diagram



CAUTION

Ensure that wiring connections are correct. (Incorrect wiring will damage the equipment.)



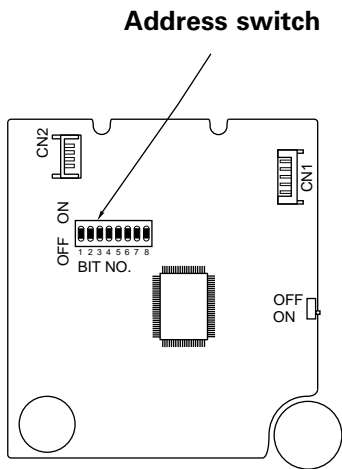
NOTE

1. Lines consisting of dots and dashes (- - - -) indicate inter-unit control wirings.
2. In. means indoor unit.
3. Up to two system controllers may be connected to one control line system.

4. Address switch setting

■ Control with multi (main/sub) system controllers

This method is used for operating the unit(s) with multiple system controllers (up to two).



P.C. board of the control unit

Bit No.	ON	OFF
1	System controller operates as sub-controller	System controller operates as main controller
2	—	Must be set to OFF position
3	—	Must be set to OFF position
4	—	Must be set to OFF position
5	—	Must be set to OFF position
6	—	Must be set to OFF position
7	No tone when operations are selected	Beep tone when operations are selected
8	—	Must be set to OFF position

NOTE

1. It is not normally necessary to change the settings.
2. All bits are set to OFF when the unit is shipped from the factory.

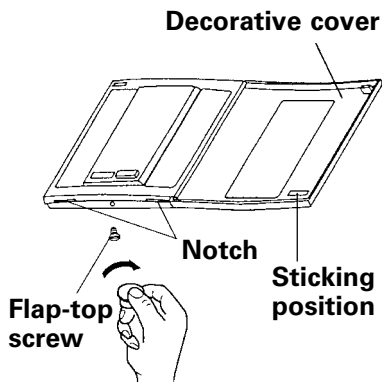
Setting method

To use this method, make settings according to the following procedure.

1. Out of the multiple installed system controllers, make one the main system controller (factory shipped state).
2. For the other system controller, turn the bit number 1 of the address switch on the P.C. board from off to on. In this state, the unit functions as the sub system controller.

How to reach the P.C. board

Remove the flat-top screw on the bottom of the back case. When you open up the decorative cover, you will see two notches under the control unit. Inset a coin or other flat object into these notches and pry off the back case. The P.C. board on the back of the control unit is now visible.



3. Stick on the "label for confirming settings" in order to be able to identify the main and sub system controllers when they are installed. Stick the label on the inside of the decorative cover of the system controller.

EG

5. How to perform zone registration

To operate the system controller properly, zone registration is required after finishing the test run (and after setting all indoor unit addresses) using one of the following methods:

- (1) Zone registration using the remote controller (RCS-SH80TG)
Refer to page 12, 13
- (2) Zone registration using the system controller (SHA-KC64TG)
Refer to page 14, 15
- (3) Automatic zone registration using the system controller (SHA-KC64TG)
Refer to page 16

For methods (1) and (2), you should make a zone registration table manually before performing the registration as shown on the next page.

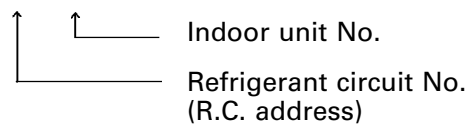
For method (3), zone registration is executed automatically, proceeding from small indoor unit address and small central addresses to larger numbers in numerical order. For example:

Central address	1	2	3	4	5	6	
Zone-group	1-1	1-2	1-3	1-4	1-5	1-6	
Indoor unit address	1-1	1-2	2-1	2-2	2-3	3-1	

NOTE

1. An indoor unit address is assigned to each indoor unit during automation address operation. Each indoor unit address combines an R.C. address and an indoor unit number as follows:

1 - 1: Indoor unit address (unit No.)



This address is displayed on remote controller for unit No. when the UNIT button is pressed.

2. The central address represents the zone and group number. These addresses are assigned in ascending numerical order.

■ Zone registration table

Zone	Group	Central address	Indoor unit address (Unit No.)	Unit location	Zone	Group	Central address	Indoor unit address (Unit No.)	Unit location
1	1	1			3	1	33		
	2	2				2	34		
	3	3				3	35		
	4	4				4	36		
	5	5				5	37		
	6	6				6	38		
	7	7				7	39		
	8	8				8	40		
	9	9				9	41		
	10	10				10	42		
	11	11				11	43		
	12	12				12	44		
	13	13				13	45		
	14	14				14	46		
	15	15				15	47		
	16	16				16	48		
2	1	17			4	1	49		
	2	18				2	50		
	3	19				3	51		
	4	20				4	52		
	5	21				5	53		
	6	22				6	54		
	7	23				7	55		
	8	24				8	56		
	9	25				9	57		
	10	26				10	58		
	11	27				11	59		
	12	28				12	60		
	13	29				13	61		
	14	30				14	62		
	15	31				15	63		
	16	32				16	64		

NOTE

1. Assign indoor unit addresses to the desired positions (central addresses) manually.
2. For group control, only the main indoor unit should be assigned. Sub indoor units cannot be assigned.

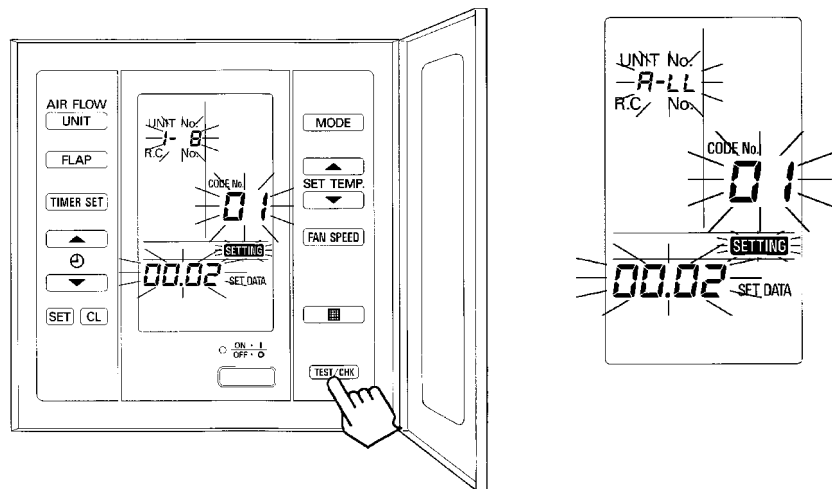
■ **Zone registration using the remote controller (RCS-SH80TG)**

- In this case, after confirming which indoor unit is connected to the remote controller and that the air conditioner in the OFF state, you set the central addresses one at a time.
- If the system has no remote controller, connect a remote controller to the system temporarily. Then follow this procedure.

NOTE

The indoor unit address must already have been set before performing zone registration. If necessary, refer to the Installation Manual supplied with the outdoor unit.

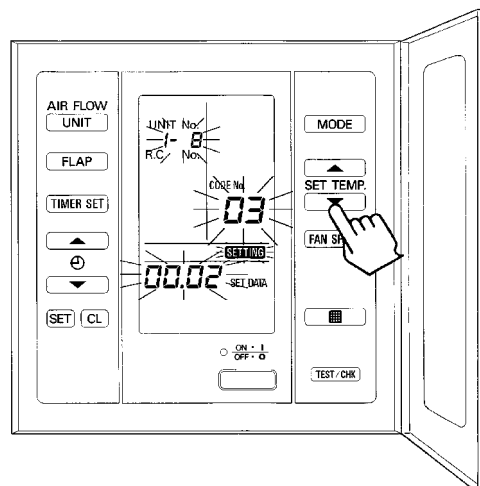
- Hold down the **TEST/CHK** button at the bottom right of the remote controller for more that four seconds.
- Once in this mode, the **UNIT No.**, **CODE No.**, **No. of SET DATA** and **SETTING** indications will flash on the display as shown below.



NOTE

In case of group control, "ALL" instead of "UNIT No." will flash on the display. Select the main indoor unit address by pressing the **UNIT** button once.

- Set **CODE No.** to 03 using the ▲ and ▼ (**SET TEMP**) buttons.



NOTE

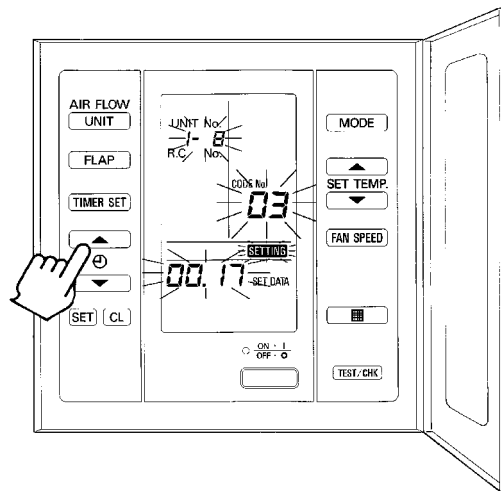
The **CODE No. 03** must be selected to perform zone registration using the remote controller.

- (d) Set the central address which you want to assign to the indoor unit address using the ▲ and ▼ (⊕) buttons according to the zone registration table.

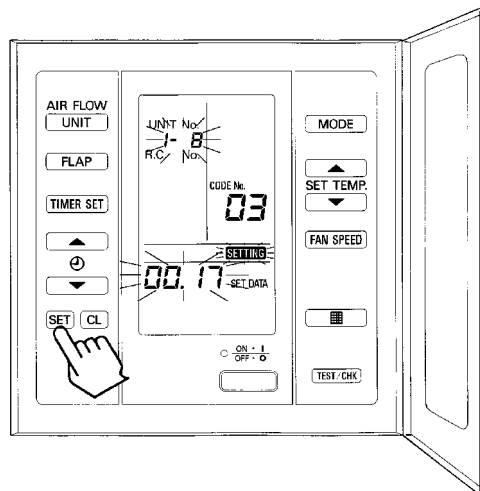
For example, in this case

Indoor unit address : 1 – 8

Central address : 17 (ZONE 2, GROUP 1)



- (e) Press the **SET** button. The CODE No. and Central address indications stop flashing and are displayed continuously. If you make a mistake, press the **CL** button and reset the central address.



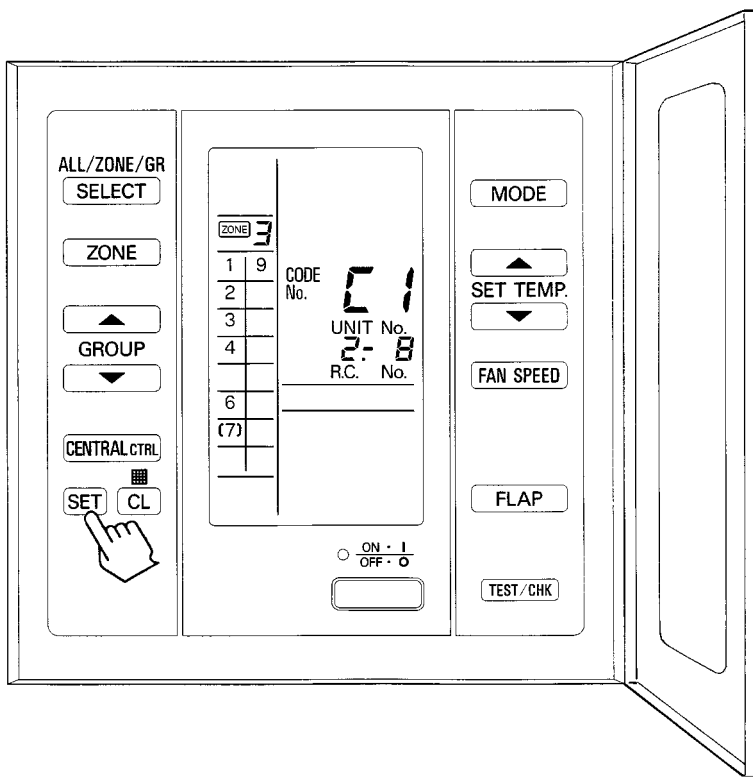
- (f) Press the **TEST/CHK** button to finish zone registration.

- (c) Select the desired zone and group No. using the **ZONE**, ▲ and ▼ (**GROUP**) buttons.
- (d) Set the unit No. (Indoor unit address) using the **FAN SPEED** and **FLAP** buttons, according to the zone registration table.

R.C. No. **FAN SPEED** button
 Indoor unit No. **FLAP** button

- (e) Press the **SET** button.
 The group No. indication turns on and the unit No. (indoor unit address) indication stops flashing and is displayed continuously.
 The unit No. is registered to selected zone No. and group No..

If you make a mistake, press the **CL** button and reselect the zone, group and unit numbers.



For example, in the case at left
 Zone 3, group No. 7
 Unit No. (indoor unit address) 2-8

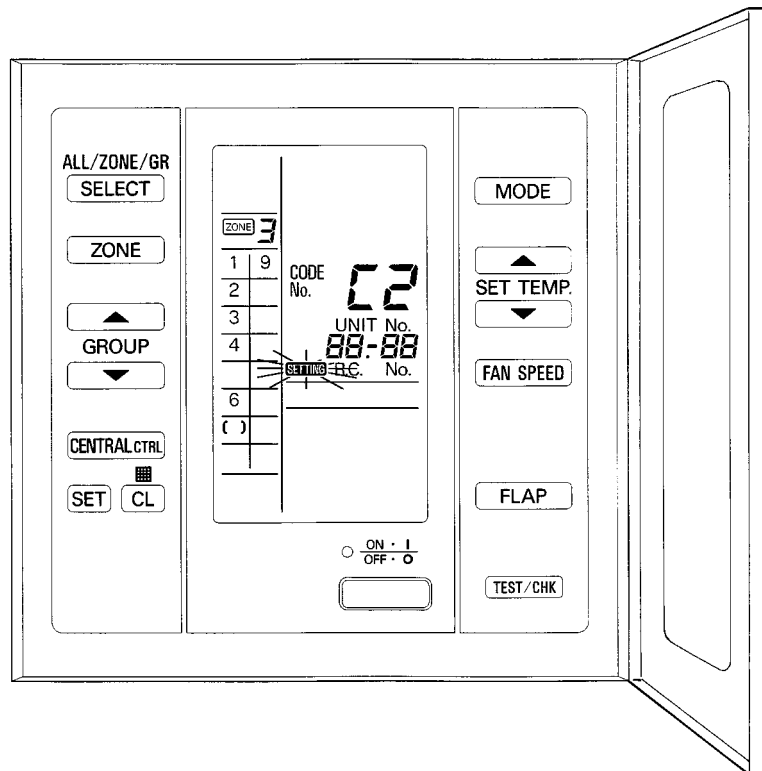
Unit No. 2-8 is registered to zone 3-group 7.

EG

- (f) Register the other unit No. in the same way by following the steps (c) to (e) above.
- (g) Finally, complete the registration by pressing the **TEST/CHK** button.

■ **Automatic zone registration using the system controller (SHA-KC64TG)**

- (a) Hold down the **TEST/CHK** and **ZONE** buttons at the same time for more than four seconds. The CODE No. C1 indication flashes.
- (b) Select CODE No. C2 by pressing the ▲ and ▼ (**SET TEMP**) buttons and press the **SET** button. C2 stops flashing and is displayed continuously and automatic zone registration begins. While this is taking place, the **SETTING** indication flashes.
- (c) All registered group numbers disappear.
- (d) Central addresses will be assigned automatically, beginning with the lowest indoor unit address and proceeding in order. When automatic zone registration is complete the **SETTING** indication stops flashing and disappears, and the CODE No.C2 indication begins flashing again.
- (e) Finally, complete automatic zone registration mode by pressing the **TEST/CHK** button.



6. How to check for and correct overlapping of central address numbers

- (a) Hold down the **TEST/CHK** and **ZONE** buttons at the same time for more than four seconds. The CODE No. C1 indication flashes.
- (b) Select CODE No. C3 by pressing the ▲ and ▼ (**SET TEMP**) buttons, then press the **SET** button. C3 stops flashing and is displayed continuously, indicating that automatic overlap checking has begun. While this is taking place, the **SETTING** indication flashes.
- (c) If C3 changes from continuous display to flashing, and **SETTING** stops flashing and disappears, checking and correction are complete. To complete the procedure, press the **TEST/CHK** button.

