Group Remote Controller (UTB-∗D∗)

INSTALLATION INSTRUCTION SHEET

(PART NO. 9374707034)

For authorized service personnel only.

CONTENTS

SAFETY PRECAUTIONS

● **Before using the appliance, read these "SAFETY PRECAUTIONS" thoroughly and operate in the correct way.**
● **The instructions in this section all relate to safety; be sure to maintain safe operating conditions.**

⚠WARNING	This mark indicates procedures which, if improperly performed, might lead to the death or serious injury of the user.

● **For the air conditioner to operate satisfactorily, install it as outlined in this installation instruction sheet.** ● **Do not turn on the power until all installation work is complete.**	● **Installation work must be performed in accordance with national wiring standards by authorized personnel only.**

Let the customer keep this installation instruction sheet because it is needed when the air conditioner or remote controller is serviced or moved.
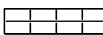
⚠CAUTION	This mark indicates procedures which, if improperly performed, might possibly result in personal harm to the user or damage to property.

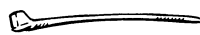|	
● **Do not wire the remote controller cord and the bus wire together with or parallel to the connection cables, transmission cords, and power supply cords of the indoor and outdoor units. It may cause erroneous operation.** ● **Do not expose the controller directly to water.** ● **Do not operate the controller with wet hands.** ● **Do not touch the switches with sharp objects.** ● **Always turn off the electrical breaker whenever cleaning the controller, the air conditioner or the air filter.**	● **Check the condition of the installation stand for damage.** ● **Ensure that any electronic equipment is at least one meter away from the controller.** ● **Avoid installing the controller near a fireplace or other heating apparatus.** ● **When installing the controller, take precautions to prevent access by infants.** ● **Do not use inflammable gases near the controller.**

STANDARD PARTS

The following installation parts are supplied. Use them as required.

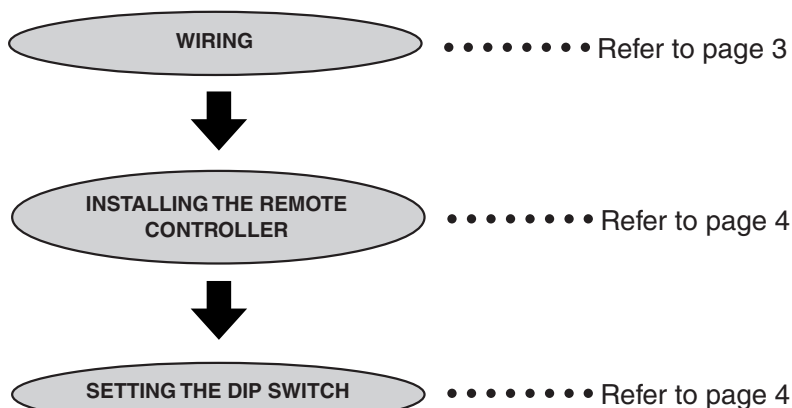| Name and Shape	Q'ty	Application
Group remote controller	1	Use for air conditioner operation
Label	4	Use this for writing the names of the indoor units that have been registered.

Name and Shape	Q'ty	Application
Tapping screw (M4 × 16 mm)	2	For installing the remote controller
Binder	1	For remote controller and remote controller cord binding

* Use of this product requires a special convertor and connection cable.
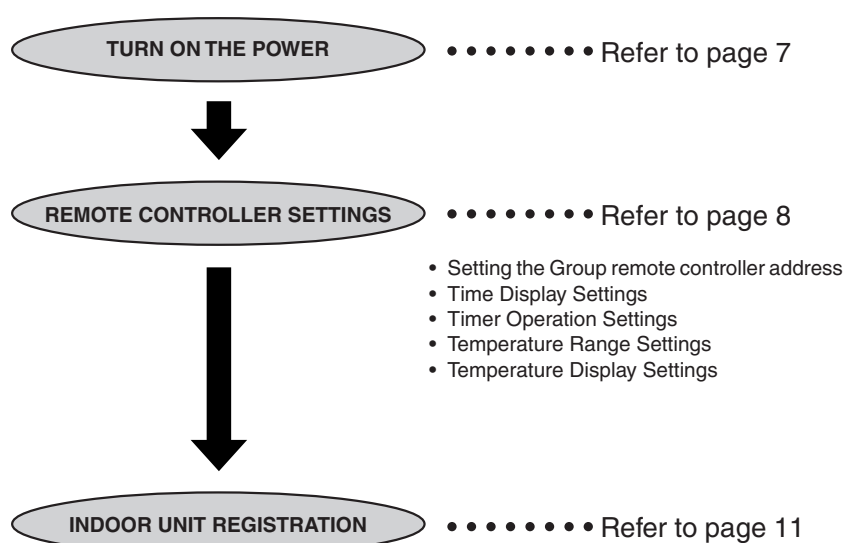   These are provided as service parts, so please contact authorized service personnel.

FLOW OF INSTALLATION

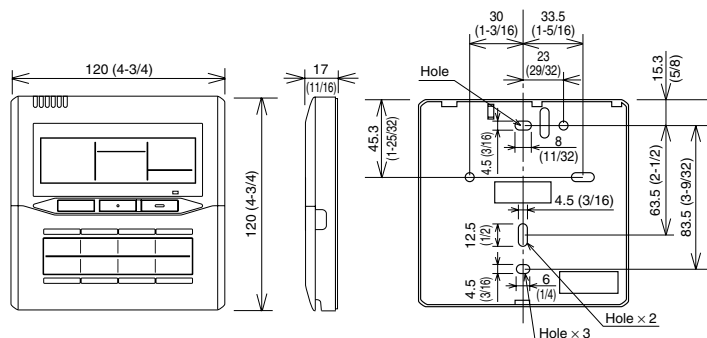The following is the flow of the installation of Group remote controller.

• INSTALLATION

> WIRING • • • • • • • • • Refer to page 3

> INSTALLING THE REMOTE CONTROLLER • • • • • • • • • Refer to page 4

> SETTING THE DIP SWITCH • • • • • • • • • Refer to page 4

• SETTING

> TURN ON THE POWER • • • • • • • • • Refer to page 7

> REMOTE CONTROLLER SETTINGS • • • • • • • • • Refer to page 8

• Setting the Group remote controller address
• Time Display Settings
• Timer Operation Settings
• Temperature Range Settings
• Temperature Display Settings

> INDOOR UNIT REGISTRATION • • • • • • • • • Refer to page 11

INSTALLATION

1. SPECIFICATION

Unit: mm (in.)

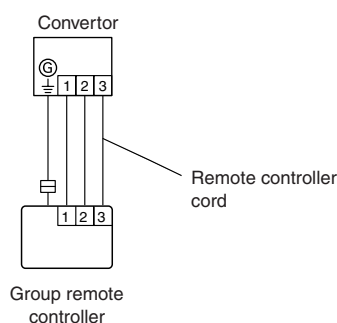When connecting the Group remote controller and Convertor, use the following wiring.

Use	Size	Wire type	Remarks
Remote controller cord	0.33 mm^2 (AWG22)	Shield cable	Polar 3-core

*   We recommend that you purchase our service parts for the remote controller cord. Contact service personnel to purchase this.

2. WIRING

• Total remote controller cord length: MAX. 100 m (328 ft.)

(1) When connecting one Group remote controller

Convertor

Remote controller cord

Group remote controller

⚠ CAUTION

• **Match the terminal number for the Group remote controller and the number on the terminal for the Convertor when the connection is made.**
   (See Fig. 2 for the location of the Group remote controller terminal number.)
• **Do not route the remote controller cord near a source of electromagnetic interference.**

(2) When multiple Group remote controllers are connected (multiple Group remote controllers cannot be connected with the J-series.*)
   • A maximum of four Group remote controllers can be connected with one Convertor.
   • Use of a terminal box is recommended when a junction is made in the wiring.

Convertor

Remote controller cord

Group remote controller

Convertor

Remote controller cord

Group remote controller
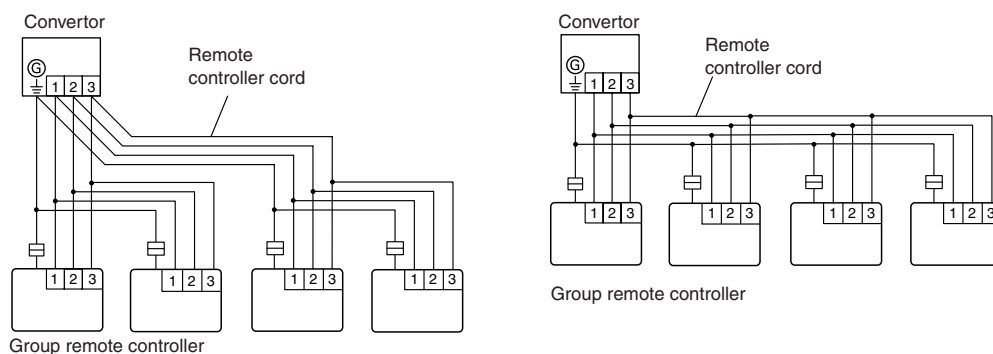
* It is a J-series model when the model name of the indoor unit ends in "R."

3. INSTALLING THE REMOTE CONTROLLER

⚠ CAUTION
• **Do not touch the group remote controller Circuit board and Circuit board parts directly with your hands.** • **When working with the wiring, be careful not to scratch or damage the wires.**

Open the operation panel on the front of the remote controller, remove the two screws indicated in the right figure and then, remove the front case of the remote controller.

> ℹ **NOTES**
>
> When installing the remote controller, remove the connector from the front case. The wires may break if the connector is not removed and the front case hangs down.
> When installing the front case, connect the connector to the front case.

● When remote controller cord exposed
1) Make two horizontal or two vertical holes in the mounting surface (wall, etc.) to install the remote controller. (Fig. 2)
2) Use a tool to cut away the thin area on the upper center of the front case (indicated by ⌂ in Fig. 1).
3) Connect the remote controller cord to the remote controller terminal board specified in Fig. 2.
4) Wrap the connector and remote controller cords with vinyl tape or some other type of insulation as shown in Fig. 2.
5) Clamp the remote controller cord with the binder as shown in Fig. 2.
6) Cut off the excess binder.
7) Install the rear case to the wall, etc., with two screws (ø4 × 16). (Fig. 3)

> ℹ **NOTES**
>
> Step 4) will be noticed by customers, so do it with particular care.

● When remote controller cord embedded
1) Embed the remote controller cord and box.
2) Pass the remote controller cord through the hole in the rear case and connect the remote controller cord to the remote controller terminal board specified in Fig. 2.
3) Wrap the connector and remote controller cords with vinyl tape or some other type of insulation as shown in Fig. 2.
4) Clamp the remote controller cord sheath with the binder as shown in Fig. 2.
5) Cut off the excess binder.
6) Install the rear case to the wall, box, etc., with two screws (ø4 × 16).
   Fix the two screws in either horizontal or vertical position. (Fig. 3)
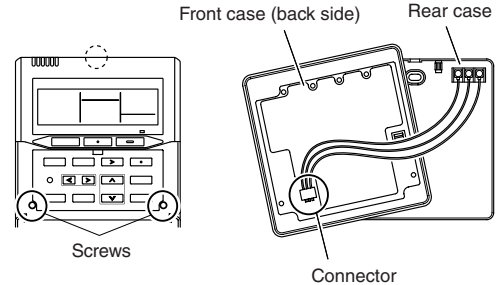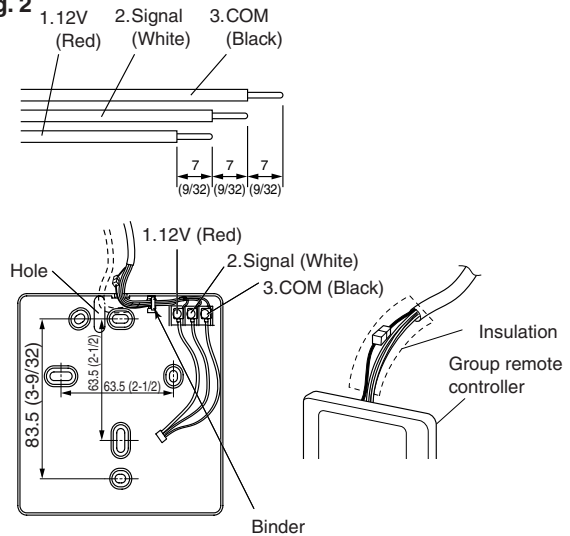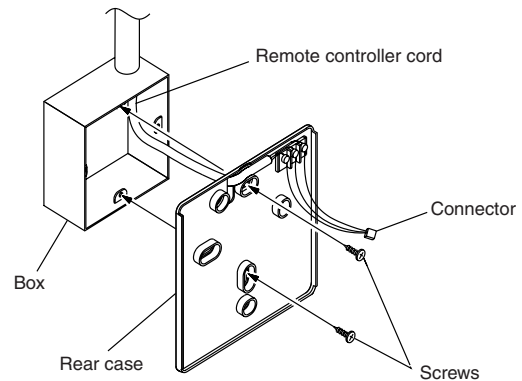
Fig. 1

Front case (back side) Rear case
Screws
Connector

Fig. 2

1.12V (Red) 2.Signal (White) 3.COM (Black)
7 (9/32) 7 (9/32) 7 (9/32)
Hole
1.12V (Red)
2.Signal (White)
3.COM (Black)
83.5 (3-9/32) 63.5 (2-1/2) 63.5 (2-1/2)
Insulation
Group remote controller
Binder

Fig. 3 [Example]

Remote controller cord
Connector
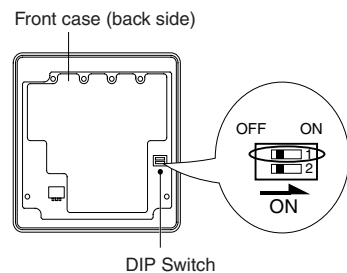Box
Rear case
Screws

4. SETTING THE DIP SWITCH

Set DIP switch 1 to ON to enable the memory backup.
• Memory backup setting
  If there is a power failure when the memory backup is enabled, the settings stored in the memory will be saved.
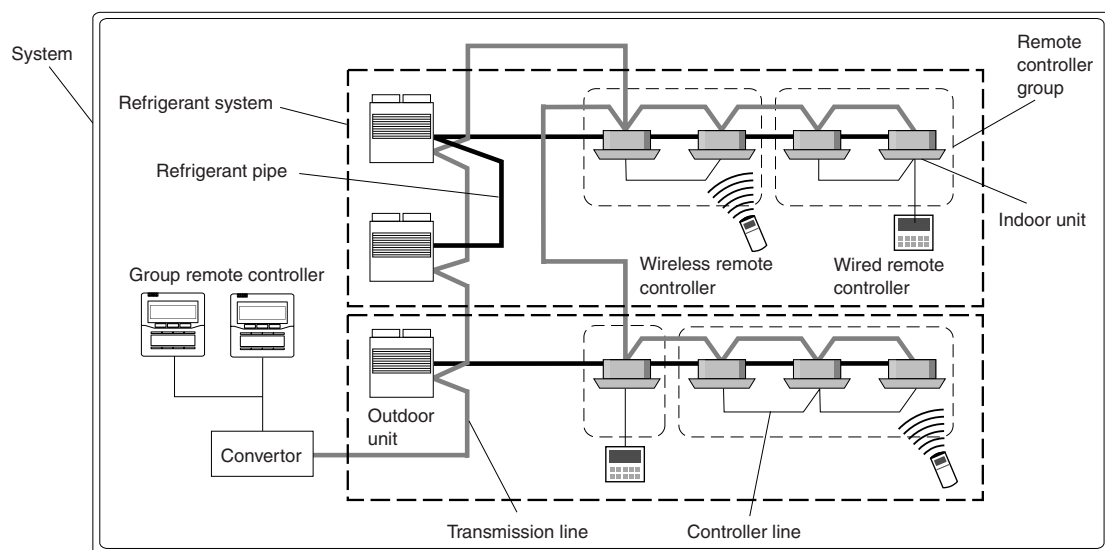
	NO.	SW state	
		OFF	**ON**
DIP-Switch	1	★ Invalidity	Validity
	2	★ Fixed at OFF	

(★ Factory setting)

Front case (back side)
OFF ON
ON
DIP Switch

SETTING

EXPLANATION OF TERMS

Controller related items

- **System:**
  This is all of the indoor units, outdoor units and controller units connected by the same transmission line.
- **Refrigerant system:** [Not for J-series*]
  This is a system composed of indoor and outdoor units connected by the same refrigerant pipe.
- **Remote Controller group:** [Not for J-series*]
  This is the smallest unit controlled by group remote controller.
  This is a group of indoor units that have been connected with one controller line.

Indoor / Outdoor unit setting (on the Circuit board)

- **Refrigerant circuit address (0~99):** [Not used for J-series*]
  This is the ID individually assigned to each refrigerant system and is used for control.
- **Indoor unit address (0~63):** [J-series* uses 0-7]
  This is the ID individually assigned to each indoor unit and is used for control.
- **Remote controller address (0~15):** [Not used for J-series*]
  This is the ID individually assigned to the indoor units forming each remote controller group and is used for control.
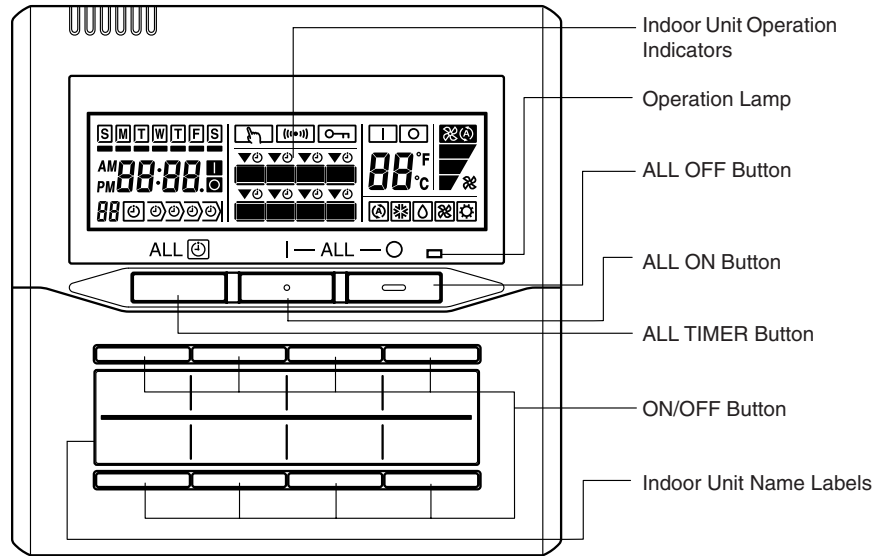
Group remote controller setting

- **Group remote controller address (0~3):** [J-series* uses "0" only]
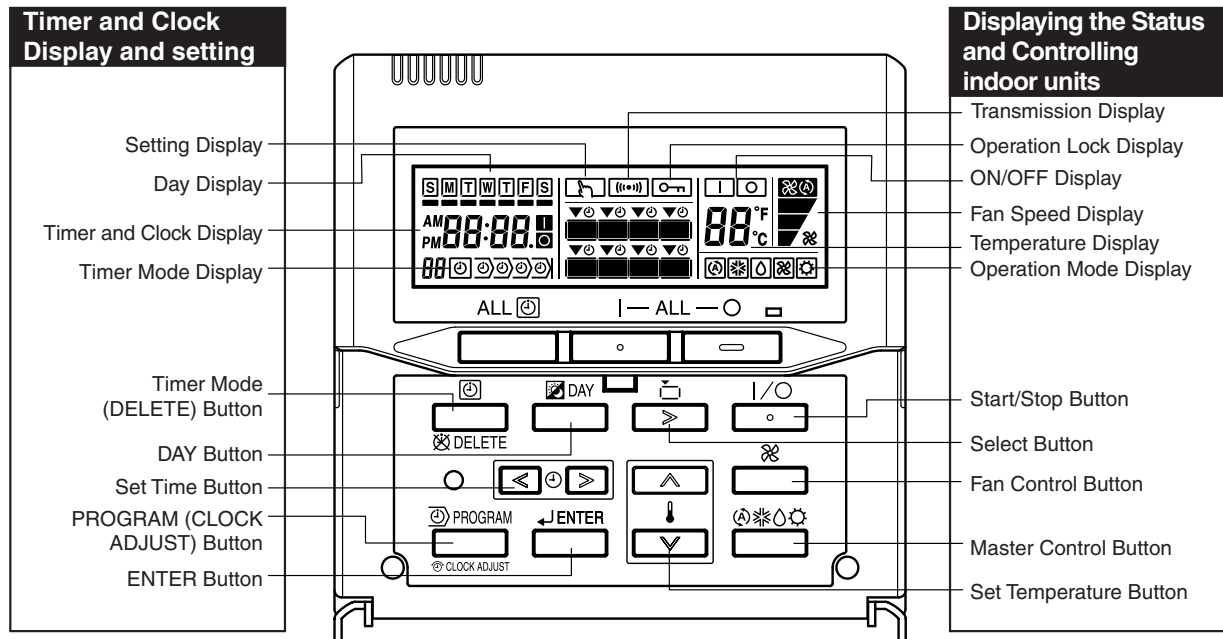 This is the ID individually assigned to each group remote controller and is used for control.

* It is a J-series model when the model name of the indoor unit ends in "R."

NAME OF PARTS

● **With cover closed**

Indoor Unit Operation Indicators

Operation Lamp

ALL OFF Button

ALL ON Button

ALL TIMER Button

ON/OFF Button

Indoor Unit Name Labels

● **With cover open**

Timer and Clock Display and setting

Displaying the Status and Controlling indoor units

Setting Display

Day Display

Timer and Clock Display

Timer Mode Display

Transmission Display

Operation Lock Display

ON/OFF Display

Fan Speed Display

Temperature Display

Operation Mode Display

Timer Mode (DELETE) Button

DAY Button

Set Time Button

PROGRAM (CLOCK ADJUST) Button

ENTER Button

Start/Stop Button

Select Button

Fan Control Button

Master Control Button

Set Temperature Button

En-6

TURN ON THE POWER

Turn on the power

Once the installation and wiring has been completed, use the following procedure to turn on the power.

1. Turn on the power for all connected indoor units.
2. Turn on the power for all connected outdoor units.
3. Turn on the power for all connected convertor of group remote controllers.

(For J-series
1. Turn on the power for all connected indoor units and outdoor units.
2. Turn on the power for all connected convertor of group remote controllers.)

Wait for one minute or more after turning on the power before performing the next section.

SETTINGS

Switching to the Settings Screen

Initial Screen

Flashing · Error code (Refer to page 14.) · Flashing

Turn on the power → [BC] → [EC:1A   BC]
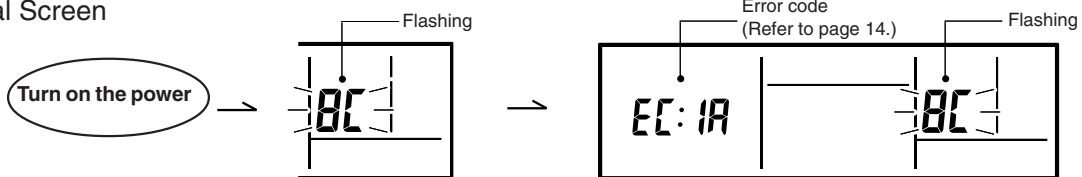
1
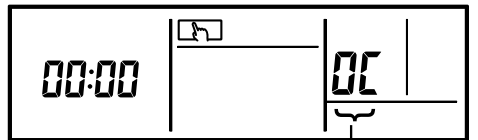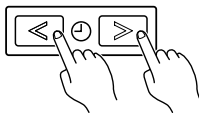
Hold down the Set Time buttons ≪ and ≫ simultaneously for two seconds or more to start the Settings.

[00:00   0C]

Settings

2
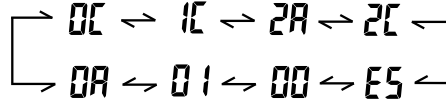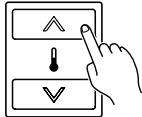
Press the Set Temperature button to select the item to be set.

0C → 1C → 2A → 2C
0A → 01 → 00 → E5

Settings 0C : REMOTE CONTROLLER SETTINGS → Page 8
1C : INDOOR UNIT REGISTRATION → Page 11
2A, 2C, E5, 00, 01, 0A : Forbidden 1-6

● **To complete Settings**
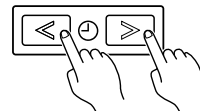
Hold down the Set Time buttons ≪ and ≫ simultaneously for two seconds or more to complete the settings.
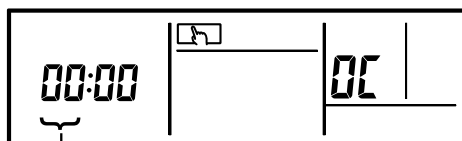

ⓘ NOTES

When there is a display other than the initial screen, it is possible that an error has occurred.
Please consult authorized service personnel in such cases.

$\boxed{OC}$ REMOTE CONTROLLER SETTINGS

Remote Controller Settings

Initial Screen

```
00:00    ⟦↧⟧         OC
```

Remote Controller Settings

● **To select the setting**

🗓 DAY

Press the DAY button to select the item to be set.

$$00 \rightarrow 01 \rightarrow 02 \rightarrow 03 \rightarrow 04 \rightarrow 05 \rightarrow 06$$

Settings	00	: Setting the Group remote controller address → Page 8
	01, 06	: Forbidden → Page 9
	02	: Time Display Settings → Page 9
	03	: Timer Operation Settings → Page 9
	04	: Temperature Range Settings → Page 10
	05	: Temperature Display Settings → Page 10

$\boxed{00}$ Setting the Group remote controller address

To set the Group remote controller address

1 Reverse Advance

⟦≪⟧ ⊕ ⟦≫⟧
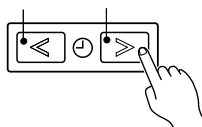
Press the Set Time buttons to set the Group remote controller address.
* For each convertor, make the settings in order starting with "0" according to the number of Group remote controllers connected.
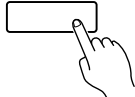* Set to "0" for the J-series.

Check that it is **00**.

```
00:00    ⟦↧⟧         OC
```
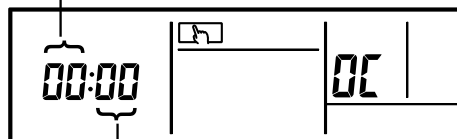
Group remote controller address

$$00 \rightleftharpoons 01 \rightleftharpoons 02 \rightleftharpoons 03$$

2 ↵ ENTER

Press the ENTER button.
Check that ⟦((•))⟧ and **OC** flash for two seconds.
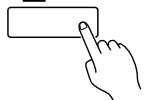
3 🗓 DAY

Press the DAY button to move to "**01** Forbidden."

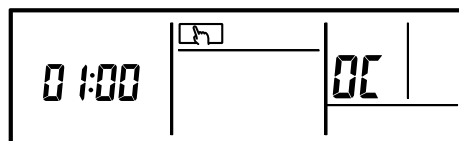# $01,06$ Forbidden

To move to the following settings

 DAY

● 01 **Forbidden**

Press the DAY button to move to "02 Time Display Settings. "

● 06 **Forbidden**

Press the DAY button to move to "00 Setting the Group remote controller address. "
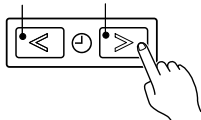
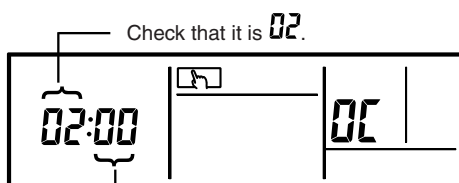# 02 Time Display Settings (This switches the time display.)
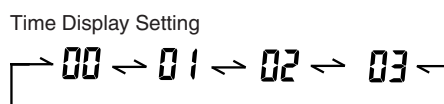
To switch the time display

1 Decrement Increment

Press the Set Time buttons to set the time display.

Check that it is 02.

Time Display Setting

$$00 \leftrightarrow 01 \leftrightarrow 02 \leftrightarrow 03$$

00 or 03 : 24 Hour Clock Display	$0:00$ ······→ $11:59$ → $12:00$ ······→ $23:59$ → $0:00$ ······
01 : 12 Hour Clock Display 1	AM $12:00$ ······→ AM $11:59$ → PM $12:00$ ······→ PM $11:59$ → AM $12:00$ ······
02 : 12 Hour Clock Display 2	AM $0:00$ ······→ AM $11:59$ → PM $0:00$ ······→ PM $11:59$ → AM $0:00$ ······

2 ↵ ENTER

Press the ENTER button.

Check that ((•)) and $0C$ flash for two seconds.
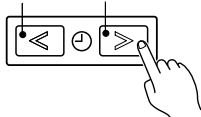
3 DAY

Press the DAY button to move to "03 Timer Operation Settings. "

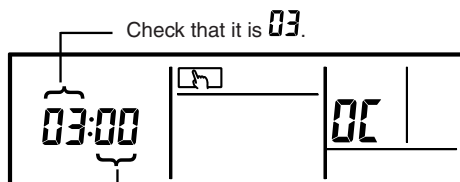# 03 Timer Operation Settings (This enables/disables the weekly timer.)
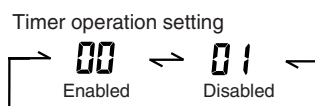
To enable/disable timer operation

1 Decrement Increment

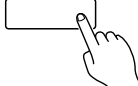Press the Set Time buttons to set the timer operation setting.

Check that it is 03.

Timer operation setting

$$00 \leftrightarrow 01$$
Enabled   Disabled

2 ↵ ENTER

Press the ENTER button.

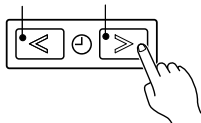Check that ((•)) and $0C$ flash for two seconds.

3 DAY

Press the DAY button to move to "04 Temperature Range Settings."

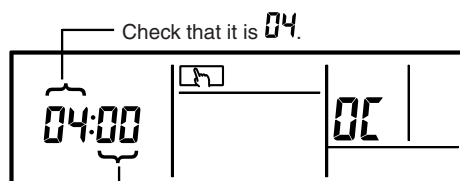# 04 Temperature Range Settings (This changes the temperature range.)
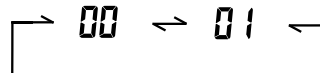
To set the temperature range

1 Decrement Increment

Press the Set Time buttons to set the temperature range.

Check that it is **04**.

Temperature range setting

$$00 \rightleftharpoons 01$$

● The temperature range set for heating operation is different.

00 : 10 °C – 30 °C (48 °F – 88 °F)

01 : 16 °C – 30 °C (60 °F – 88 °F)

2 ↵ ENTER

Press the ENTER button.
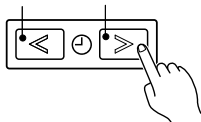Check that [(•)] and **0C** flash for two seconds.

3 DAY

Press the DAY button to move to "**05** Temperature Display Settings."

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05 Temperature Display Settings (This switches the display between Celsius and Fahrenheit.)
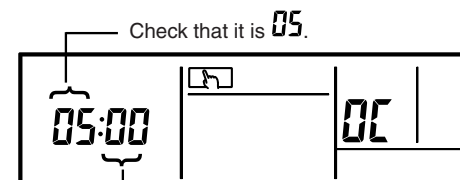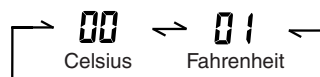
To switch the temperature display
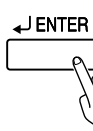
1 Decrement Increment

Press the Set Time buttons to set the temperature display.

Check that it is **05**.

Temperature display setting

$$00 \rightleftharpoons 01$$
Celsius   Fahrenheit

2 ↵ ENTER

Press the ENTER button.
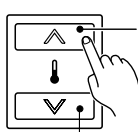Check that [(•)] and **0C** flash for two seconds.

3 DAY

Press the DAY button twice to move to "**00** Setting the Group remote controller address."

Moving to " IC Indoor Unit Registration"

To move to indoor unit registration

Pressing once moves to indoor unit registration

Pressing seven times moves to indoor unit registration

Press the Set Temperature button ∧ once or press the Set Temperature button ∨ seven times to move to indoor unit registration.

En-10

IC INDOOR UNIT REGISTRATION

● A maximum of 8 remote controller groups can be registered for a Group remote controller.
● Remote controller groups in 2 different refrigerant systems that are connected to a single convertor can be registered.
● The remote controller groups registered can be monitored and controlled.
● When registering indoor units to each of the buttons, consult the customer.

Indoor unit registration screen

Initial Screen

See EXPLANATION OF TERMS on page 5 for explanations of each address.

2 Refrigerant circuit address
(Not shown with J-series)

1 Registration position

Indoor Unit Registration Methods
● Manual registration
● Automatic registration (J-series only)

3 Indoor unit address

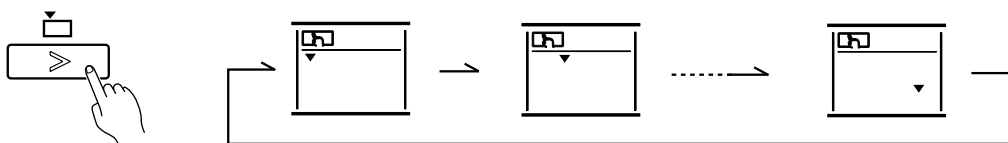*4* Remote controller address
(Not shown with J-series)
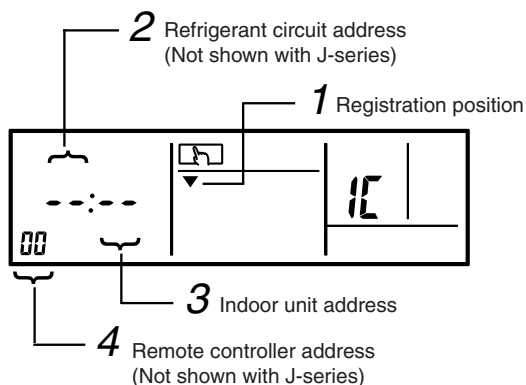
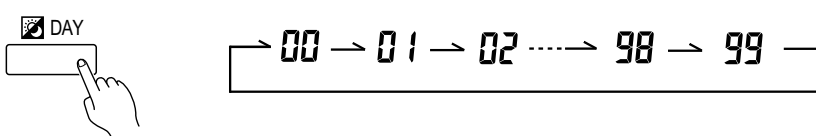## Manual Registration

To register indoor units manually

1 ● **Registration position selection**

Press the Select button to select the position for registering the indoor unit

2 ● **Refrigerant circuit address selection (Not used for J-series)**

DAY

$$00 \rightarrow 01 \rightarrow 02 \cdots \rightarrow 98 \rightarrow 99$$

Press the DAY button to select the refrigerant circuit address for the indoor unit being registered.
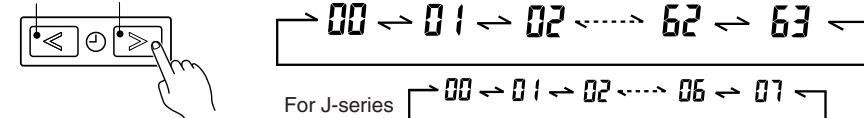• Hold down a Set Time button to scroll through the addresses quickly.

3 When a remote controller group made up of a single indoor unit is registered, select the indoor unit address.

● **Indoor unit address selection**

Decrement   Increment

$$00 \rightarrow 01 \rightarrow 02 \cdots \rightarrow 62 \rightarrow 63$$

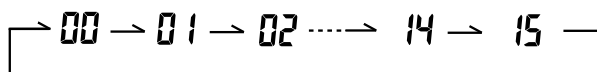For J-series $$00 \rightarrow 01 \rightarrow 02 \cdots \rightarrow 06 \rightarrow 07$$

Press the Set Time buttons to select the indoor unit address for the indoor unit being registered.
• Hold down a Set Time button to scroll through the addresses quickly.

4

When a remote controller group made up of multiple indoor units is registered, the remote controller address and the indoor unit address are selected.

● **Remote controller address selection**

⏲ PROGRAM / 🕙 CLOCK ADJUST

1

$00 \rightarrow 01 \rightarrow 02 \cdots\cdots\rightarrow 14 \rightarrow 15$

● **Indoor unit address selection**

Decrement Increment

≪ / 🕙 / ≫

2

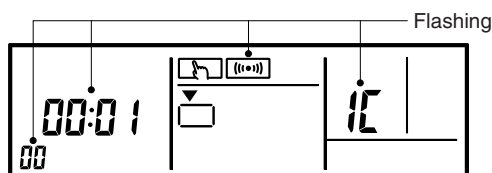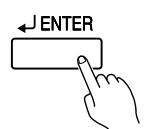——— Refrigerant circuit address

——— Indoor unit address

00:--
01
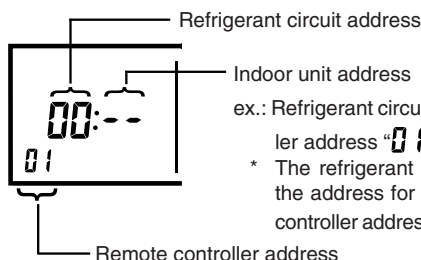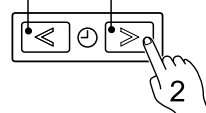
ex.: Refrigerant circuit address "*00*", remote controller address "*01*"
* The refrigerant circuit address is the same as the address for the indoor unit set first (remote controller address "*00*") and cannot be changed.

——— Remote controller address

1. Press the PROGRAM (CLOCK ADJUST) button to select the remote controller address of the indoor unit being registered.
2. Press the Set Time buttons to select the indoor unit address of the indoor units in the same remote controller group that is being registered.
3. Repeat steps 1 and 2 to register all the indoor units in this remote controller group.

5

↵ ENTER

Flashing

00:01
00

IC

Press the ENTER button to register the selected indoor unit. Check that the refrigerant circuit address, indoor unit address, [((•))], and *IC* flash (up to two minutes).
• Press the Timer Mode (DELETE) button during this time to cancel the registration.

6

Repeat steps from **1** to **5** to register other indoor units.

● **To delete the registered settings**

🕙 / ⊗ DELETE

1

↵ ENTER

2

1. Press the Timer Mode (DELETE) button during steps **2** to **4** to reset the contents of the registration. (If the currently displayed indoor unit is part of a remote controller group with multiple units, only the settings for this indoor unit are reset.)
2. Press the ENTER button to delete the contents of the registration.

Automatic registration (J-series only)

To register indoor units automatically

⏲ PROGRAM / 🕙 CLOCK ADJUST

-- ▼ *IC* → **01** ▼ *IC*
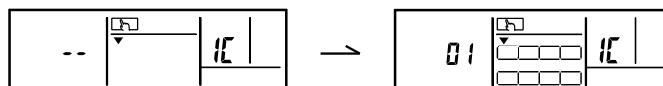
Press the PROGRAM (CLOCK ADJUST) button to start automatic registration. Automatic registration completes in approximately two minutes.

ℹ **NOTES**

(1) Be careful not to end the settings or switch the indoor unit before pressing the ENTER button. Otherwise, the changed settings will be lost.
(2) If *EC:1d* is displayed during the registration of an indoor unit, the Group remote controller address, refrigerant circuit address, or indoor unit address may incorrect. Check again.

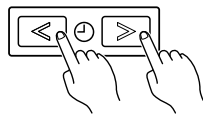# Moving to "⏣ REMOTE CONTROLLER SETTINGS"

To set the remote controller
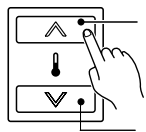
Pressing seven times moves to remote controller settings

Pressing once moves to remote controller settings

Press the Set Temperature button ⋀ seven times or press the Set Temperature button ⋁ once to move to remote controller settings.

Completing All of the Settings

To complete Settings

● **When the remote controller settings and indoor unit settings are complete**
Hold down again the Set Time buttons ≪ and ≫ simultaneously for two seconds or more to complete Settings.

FINAL STEP

To apply the label

Conference Room 1	Conference Room 2	Conference Room 3	
Office 1	Office 2	Hall	Drawing Room

Label (Standard parts)
84 × 21 (3-9/32 × 13/16)
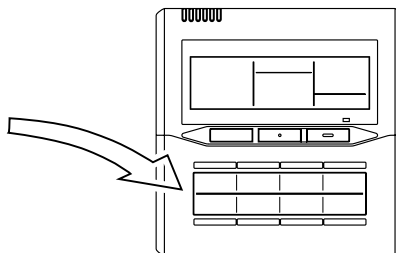
Write the name of the indoor unit or the room where it is installed on the label, and apply it to the Group remote controller.
• Consult the customer about the names to be written on the label.
• Explain to the customer about the indoor units that have been registered to each button.

ERROR CODE

The air conditioning system must be inspected if "E✽:✽✽" (error code) appears on the Timer and Clock Display, or the operation lamp is flashing.
The following explains the meaning of each of the error codes.

Model code

EC:ld

Error code

Model code
0 : Outdoor unit
1 : Indoor unit
C : Group remote controller
A : Convertor

Error Code	0 Outdoor unit error	1 Indoor unit error	C A Group remote controller error Convertor error
00	No error	No error	No error
01	–	–	–
02	Model information abnormal	Model information abnormal	–
03	Microcomputer communication error	Microcomputer communication error	Microcomputer communication error
04	Power supply frequency abnormal	Power supply frequency abnormal	–
05	–	–	Parallel communication error
06	EEPROM access error	EEPROM access error	EEPROM access error
07	EEPROM deletion error	EEPROM deletion error	–
08	–	–	–
09	Compressor 1 error	Room temperature thermistor error	–
0A	Compressor 2 error	Heat exchanger thermistor (middle) error	–
0b	Compressor 3 error	Heat exchanger thermistor (inlet) error	–
0C	–	Heat exchanger thermistor (outlet) error	–
0d	Discharge temperature thermistor 1 error	Blower temperature thermistor error	–
0E	Discharge temperature thermistor 2 error	–	–
0F	Discharge temperature thermistor 3 error	–	–
10	Outdoor temperature thermistor error	–	–
11	Heat exchanger inlet thermistor 1 error	Drain abnormal	–
12	Heat exchanger inlet thermistor 2 error	Room temperature abnormal	–
13	Heat exchanger inlet thermistor 3 error	Indoor unit fan error	–
14	Heat exchanger outlet thermistor 1 error	–	–
15	Heat exchanger outlet thermistor 2 error	–	–
16	Heat exchanger outlet thermistor 3 error	–	–
17	Suction temperature thermistor error	–	–
18	–	Standard wired remote control communication error	–
19	Discharge pressure sensor error	–	–
1A	Liquid pressure sensor error	–	Address setting error
1b	Suction pressure sensor error	–	–
1C	Oil sensor error	–	Connection error
1d	–	–	System error
1E	–	–	–
1F	Transmission error	Transmission error	Transmission error
20	–	–	–
21	Discharge temperature 1 error	–	–
22	Discharge temperature 2 error	–	–
23	Discharge temperature 3 error	–	–
24	High-pressure error	–	–
25	Low-pressure error	–	–
26	–	–	–
27	Oil recovery error	–	–
28	Pump down error	–	–