

Installation & Owner's Manual

WIRED CONTROLLER OF AIR CONDITIONER



BOSCH

Model:

KJR-120C1/BTF-E (12V)

KJR-120C1/TF-E (5V)

6720872735 (2017/04) GB

Thank you very much for purchasing our air conditioner.

Before using your air conditioner, please read this manual carefully and keep it for future reference.

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- This manual gives detailed description of the precautions that you need to be aware of during operation.
- In order to ensure correct service of the wired controller please read this manual carefully before using the unit.
- For convenience of future reference, keep this manual after reading it.

1. SAFETY PRECAUTION

- Read the safety precautions carefully before installing the unit.
- Below are important safety issues that must be obeyed.



WARNING

Means improper handling may lead to severe injury.



CAUTION

Means improper handling may lead to personal injury or property loss.



WARNING

The unit must only be installed by a competent and qualified person. Incorrect installation may lead to injury, electrical shock or Fire. Adhere to this installation manual.

Incorrect installation may lead to electric shock or fire.

Reinstallation must only be performed by professionals.

Do not uninstall the unit randomly.

Random uninstalling may lead to abnormal operation, heating or fire of the air condition.



NOTE

1. Do not install the unit in a place vulnerable to leakage of flammable gases. Once flammable gases are leaked and left around the wire controller, fire may occur.
2. Do not operate with wet hands or let water enter the wire controller. Otherwise, electric shock may occur.
3. The wiring should be rated for the controller current. Otherwise, electric leakage or heating may occur and result in fire.
4. The specified cables shall be used in the wiring. No external force may be applied to the terminal. Otherwise, damaged cables and heating may occur and result in fire.

2. INSTALLATION ACCESSORY

Select the installation location

Do not install in a place with heavy oil, vapor or sulfured gas, otherwise, this could damage the product and could lead to system malfunction.

Preparation before installation

1. Please check that all the following parts have been supplied.

| No. | Name | Qty. | Remarks |
|-----|---------------------------------|------|------------------------------------|
| 1 | Wired controller | 1 | — |
| 2 | Installation and owner's manual | 1 | — |
| 3 | Screws | 3 | M4×20 (For Mounting on the Wall) |
| 4 | Wall plugs | 3 | For Mounting on the Wall |
| 5 | Screws | 2 | M4×25 (For Mounting on switch box) |
| 6 | Plastic screw bars | 2 | For fixing on switch box |
| 7 | The connective wires group-1 | 1 | Optional |
| 8 | The connective wires group-2 | 1 | Connect to mainboard |
| 9 | Battery | 1 | |

2. Prepare the following assemblies on the site.

| No. | Name | Qty. (embedded into wall) | Specification (only for reference) | Re-remarks |
|-----|--|---------------------------|------------------------------------|------------|
| 1 | Switch box | 1 | — | — |
| 2 | Wiring Tube (Insulating Sleeve and Tightening Screw) | 1 | — | — |

Precaution of the installation of wired controller:

1. This manual provides the installation method of the wired controller. Please refer to the wiring diagram of this installation manual to wire the wired controller with indoor unit.
2. The wired controller working in low voltage loop circuit. It is not allowed to directly connect the cable of 220V commercial electricity or of 380V high voltage.
3. The Shielded wire of the wired controller must be grounded reliable.
4. The connecting cable of wired controller should not be longer than 20 meters.

3. INSTALLATION METHOD

1. Wired remote controller dimensions

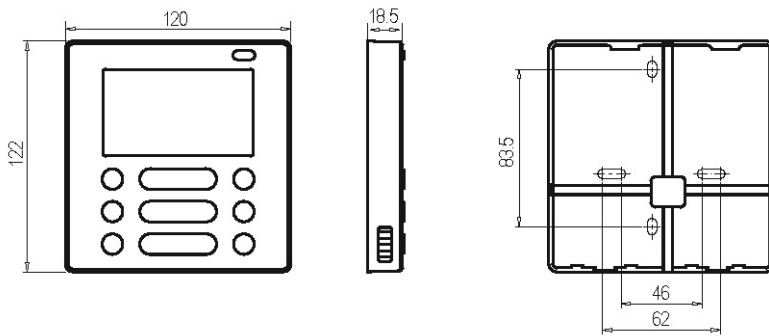


Fig. 3-1

2. Wiring diagram :

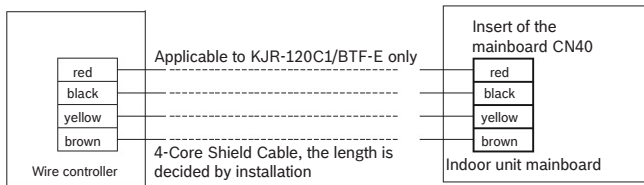


Fig. 3-2 (a)

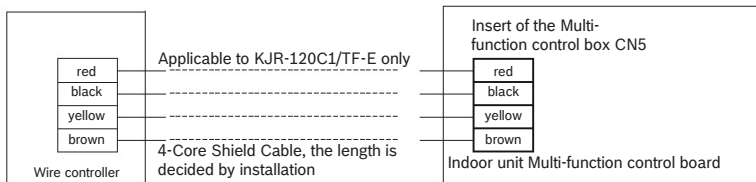


Fig. 3-2 (b)

3. Wiring diagram

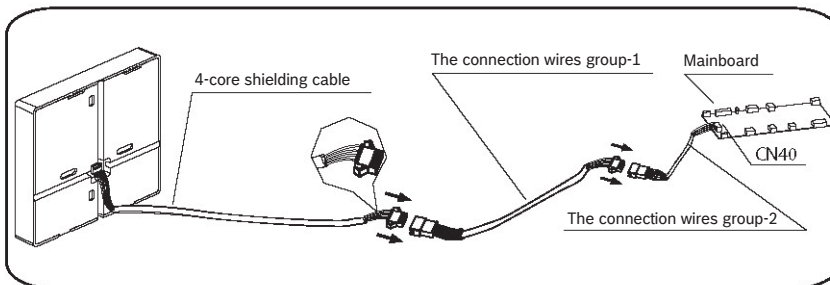


Fig. 3-3

- Connect the female joint of cable group from the mainboard with the male joint of connection cable group. (See Fig. 3-3)
- Please connect the other side of connection wire group with the male joint of cable leads from controller. (See Fig. 3-3)

4. Remove the upper part of wired controller

- Insert a slotted screwdriver into the slots in the lower part of the controller (2 places), and remove the upper part of the wire controller cover. (Fig. 3-4)



NOTICE

The PCB is mounted in the upper part of the controller. Be careful not to damage the board with the slot screwdriver.

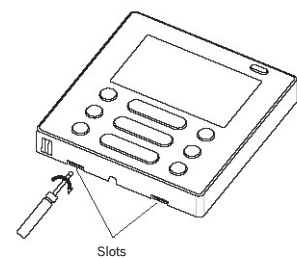


Fig. 3-4

5. Fasten the back plate of the wire controller

For exposed mounting, fasten the back plate on the wall with the 3 screws (M4×20) and plugs. (Fig. 3-5)

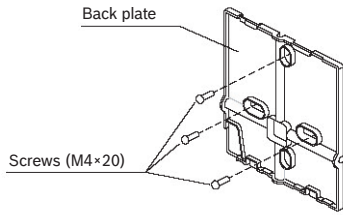


Fig. 3-5

For flush-mounting, fasten the back plate on the switch box with 2 screws (M4×25) and fasten it on the wall with 1 screw (M4×20). (Fig. 3-6)

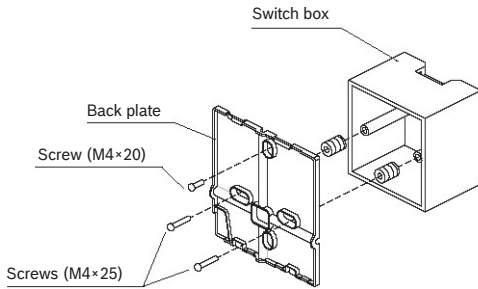


Fig. 3-6

NOTICE
Install on a flat surface. Be careful not to distort the back plate of the controller by overtightening the mounting screws.

6. Battery installation

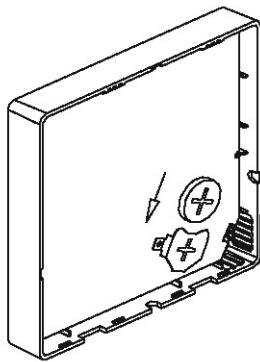
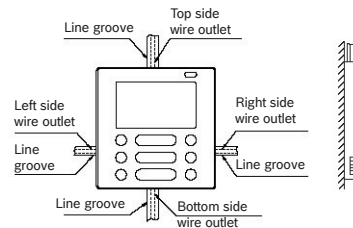


Fig. 3-7

- Put the battery into the battery compartment and make sure the positive side of the battery is in accordance with the positive side. (See Fig. 3-7)
- Please set the time when the unit is first switched on. The batteries ensure the correct time is kept during power failure. When the power restores, if the time displayed is not correct, it means the battery is dead and replace the battery.

7. Wiring



A. There are four possible wiring position, which require knocking out a blanking plate .

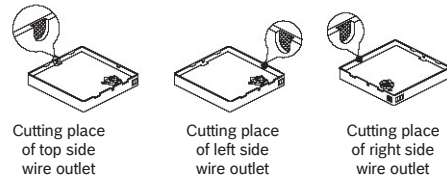


Fig. 3-8

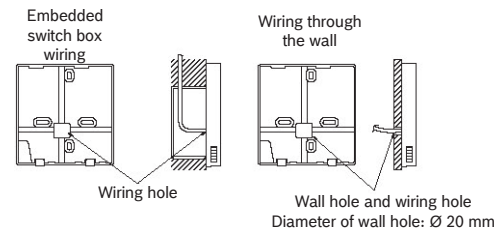


Fig. 3-9

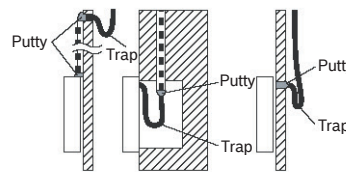


Fig. 3-10

CAUTION
Avoid water entering or touching the wired remote controller, use tape and sealant to seal the connectors of wires during wiring installation. (Fig. 3-10)
During installation, retain certain length of the connecting wire for allowing to remove the wired remote controller during maintenance.

8. Reattach the upper part of the wired controller

- After adjusting the upper case and then unclipping the upper case; avoid clamping the wiring during installation. (Fig. 3-11)

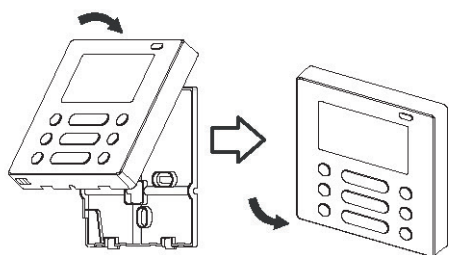


Fig. 3-11

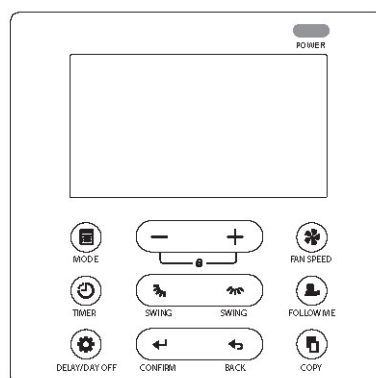
All diagrams in this manual are for explanation purpose only.

Your wired controller may be slightly different. The actual shape shall prevail.

4. SPECIFICATION

| | |
|---------------------|--------------------|
| Input voltage | DC 5V/DC 12V |
| Ambient temperature | -5~43°C (23~110°C) |
| Ambient humidity | RH40%~RH90% |

5. FEATURE AND FUNCTION OF THE WIRED CONTROLLER



Dimension:
H×W×D (mm) 122×120×18.5

Feature:

LCD display.

Malfunction code display: it can display the error code, helpful for service.

4-way wire layout design, no raised part at back-face, more convenient to place the cables and install the device.

Room temperature display.

Weekly Timer.

Function:

Mode: choose Auto-Cool-Dry-Heat-Fan

Fan speed: Auto/Low/Med/High speed

UP-DOWN swing & LEFT-RIGHT swing (on some models)

Timer ON/OFF

Temp setting

Weekly timer

Follow Me

Child Lock

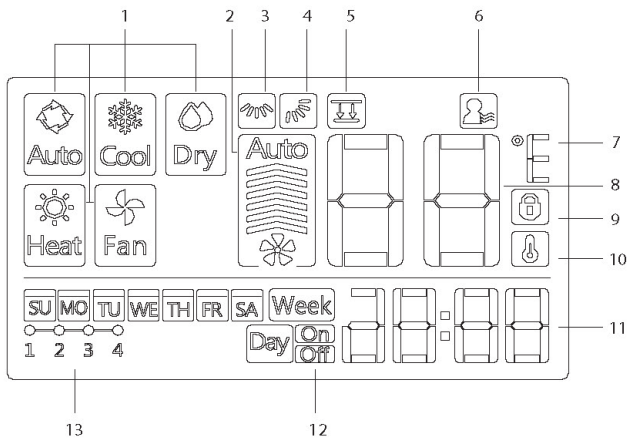
LCD display

Clock

Infrared remote receiver (on some models)

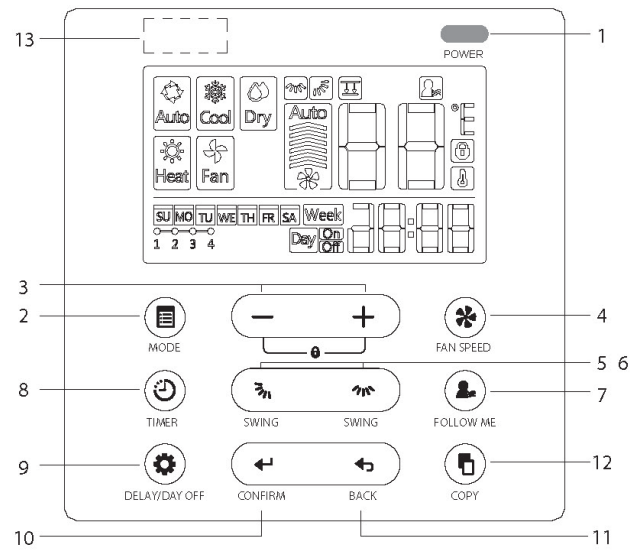
Faceplate function (on some models)

6. FUNCTIONS ON THE LCD OF THE WIRE CONTROLLER



1. Operation mode indication
2. Fan speed indication
3. Left-right swing indication
4. Up-down swing indication
5. Faceplate function indication
6. Follow me function indication
7. C° / F° indication
8. Temperature display
9. Lock indication
10. Room temperature indication
11. Clock display
12. On/Off timer
13. Timer display


7. BUTTON FUNCTIONALITY ON THE WIRE CONTROLLER




1. POWER button
2. MODE button
3. Adjust button
4. FAN SPEED button
5. UP-DOWN airflow direction and swing Button
6. LEFT-RIGHT swing Button
7. FOLLOW ME button
8. TIMER button
9. DELAY/DAY OFF button
10. CONFIRM button
11. BACK button
12. COPY button
13. Infrared remote receiver (on some models)

8. PREPARATORY OPERATION

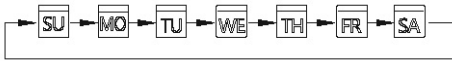
Set the current day and time


- 

Press the **TIMER** button for 3 seconds or more. The timer display will flash.


- 

Press the button “+” or “-” to set the date. The selected date will flash.



- 

The date setting is finished and the time setting is prepared after pressing **TIMER** button or without pressing within 10 seconds.


- 

Press the button “+” or “-” to set the current time. Press repeatedly to adjust the current time in 1-minute increments.

Press and hold to adjust the current time continuous.



ex. Monday AM 11:20

- 

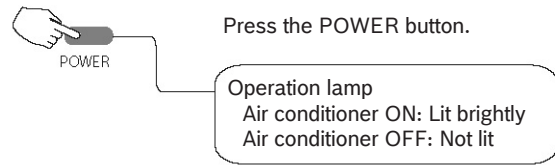
The setting is done after pressing **TIMER** button or without pressing button in 10 seconds.

9. OPERATION

Remote signal receiving function

The wired remote controller can be a remote signal receiving device, you can use the wireless remote controller to control the air conditioner through the wired remote controller when the system have been powered on.

To start/stop operation

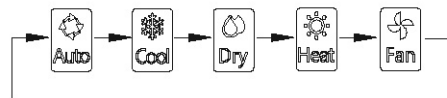


To set the operation mode

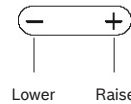
- Operation mode setting



Press the **MODE** button to set the operation mode. (Heat function is invalid for cool only type unit)



- Room temperature setting



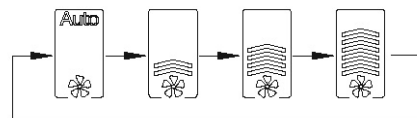
Press the button “+” or “-” to set the room temperature.

Indoor Setting Temperature Range:
17~30°C (62~86°F/62~88°F (Depending on models)).

- Fan speed setting

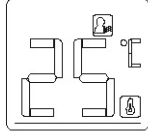


Press the **FAN SPEED** button to set the fan speed. (This button is unavailable when in the mode of Auto or Dry)

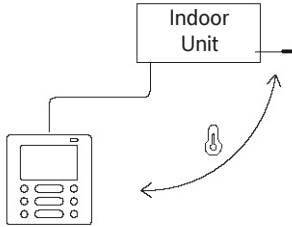



Room temperature sensor selection

Press the FOLLOW ME button to select whether the room temperature is detected at the indoor unit or the wired controller.

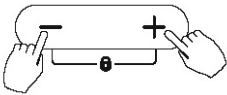


Press the FOLLOW ME button to select whether the room temperature is detected at the indoor unit or the wired controller.




When the Follow me function indication  appears, the room temperature is detected at the wired controller.

Child lock function

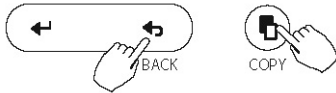


Press the button “+” and “-” simultaneously for 3 seconds to activate the child lock function and lock all buttons on the wired controller.

Press the buttons again for 3 seconds to deactivate the child lock function.

When the child lock function is activated, the  mark appears.

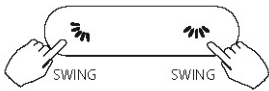
Keypad tone setting





Press the button “BACK” and “COPY” simultaneously for 3 seconds to close the keypad tone.

Press the buttons again for 3 seconds to open the keypad tone.

°C & °F scale selection (on some models)



Press and hold  and  buttons together for 3 seconds will alternate the temperature display between the °C & °F scale.

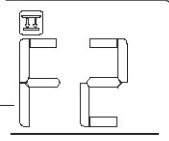
Faceplate function (on some models)



1. When the unit is off, press the MODE button long to activate the faceplate function.

The mark  will flash.

The F2 mark appears when the faceplate is adjusted.

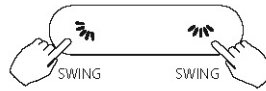


2. Press the button “+” and “-” to control the lift and drop of the faceplate.

Pressing the “+” button can stop the faceplate, while it is dropping.


Pressing the “-” button can stop the faceplate, while it is lifting.

Left-Right swing (on some models)




Press the  button to start Left-Right swing function.

Press it again to stop.

When the Left-Right swing function is activated, the  mark appears. (Not applicable to all the models)


Up-Down airflow direction and swing (on some models)



• Use  button to adjust the Up-down airflow direction.


1. Press the button every time, the louvre swings 6 degrees.


2. Press and hold the button for 2 seconds, it turns into up-down swing mode, press it again to stop.

When the Up-Down swing function is activated, the  mark appears. (Not applicable to all the models)


• The operation can refer to the following instructions for the unit with four Up-Down louvres can be operated individually.

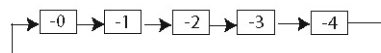



1. Press the  button to activate the Up-Down adjusting louvre function.

The  mark will flash. (Not applicable to all the models)



2. Pressing the button “+” or “-” can select the movement of four louvres. Each time you push the button, the wire controller select in a sequence that goes from: (the icon  means the four louvres move at the same time.)



3. And then use  button to adjust the Up-Down airflow direction of the selected louver.

10. TIMER FUNCTIONS

Week

WEEKLY timer

Use this timer function to set operating times for each day of the week.

Day On

On timer

Use this timer function to start air conditioner operation. The timer operates and air conditioner operation starts after the time has passed.

Day Off

Off timer

Use this timer function to stop air conditioner operation. The timer operates and air conditioner operation stops after the time has passed.

Day On/Off

On and Off timer

Use this timer function to start and stop air conditioner operation. The timer operates and air conditioner operation starts and stops after the time has passed.

To set the On or Off TIMER

1



Press the TIMER button to select the **Day On** or **Day Off**.



2



Press the CONFIRM button and the Clock display is flashing.

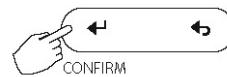
3



ex. Off timer set at PM 6:00

Press the button "+" or "-" to set the time. After the time is set, the timer will start or stop automatically.

4



Press the CONFIRM button again to finish the settings.

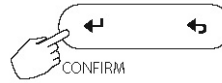
To set the On and Off TIMER

1



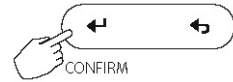
Press the TIMER button to select the **Day On/Off**.

2



Press the CONFIRM button and the Clock display is flashing.

3



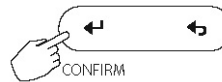
Press the button "+" or "-" to set the time of On timer, and then press the CONFIRM button to confirm the setting.

4



Press the button "+" or "-" to set the time of Off timer.

5



Press the CONFIRM button to finish the settings.

11. WEEKLY TIMER

1 Weekly timer setting

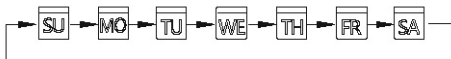


Press the TIMER button to select the **Week** and then press the CONFIRM button to confirm.

2 Day of the week setting



Press the button “+” or “-” to select the day of the week and then press the CONFIRM button to confirm the setting.



3 ON timer setting of timer setting 1



Press the button “+” or “-” to set the time of On timer and then press the CONFIRM button to confirm the setting.



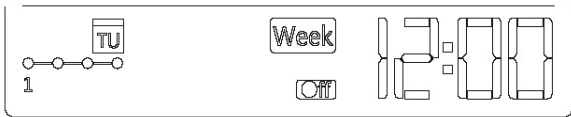
ex. Tuesday time scale 1

Up to 4 timer settings can be saved for each day of the week. It is convenient if the WEEKLY TIMER is set according to the user's life style.

4 Off timer setting of timer setting 1



Press the button “+” or “-” to set the time of Off timer and then press the Confirm button to confirm the setting.



ex. Tuesday time scale 1

5 Different timer settings can be set by repeating step 3 to 4.

6 Other days in one week can be set by repeating step 2 to 5.



NOTE

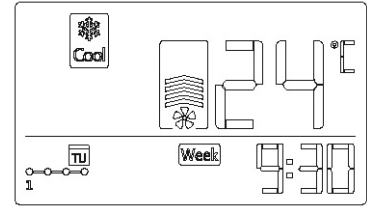
- The weekly timer setting can be returned to the previous step by pressing BACK button.
- The time of timer setting can be delete by pressing DAY OFF button
- The current setting will be restored and withdrawn the weekly timer setting automatically when there is no operation for 30 seconds.

WEEKLY timer operation

- To activate WEEKLY TIMER operation



Press the TIMER button while **Week** is displayed on the LCD.



ex.

- To deactivate WEEKLY TIMER operation

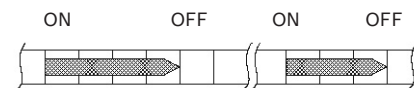


Press the TIMER button while **Week** is disappear from the LCD.

To turn off the air conditioner during the weekly timer



1. If press the POWER button once and quickly, the air conditioner will turn off temporarily. And the air conditioner will turn on automatically until the time of On timer.

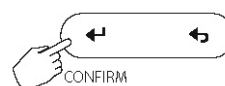


ex. If press the POWER button once and quickly at 10:00, the air conditioner will turn on at 14:00.

2. When press the POWER button for 2 seconds, the air conditioner will turn off completely.

To set the DAY OFF (for a holiday)

1



During the weekly timer, press the CONFIRM button.

2

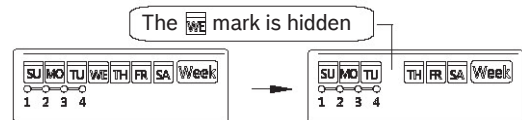


Press the button “+” or “-” to select the day in this week.

3



Press the DAY OFF button to set the DAY OFF.



ex. The DAY OFF is set for Wednesday

4

The DAY OFF can be set for other days by repeating the steps 2 and 3.

5



Press the BACK button to back to the weekly timer.

- To cancel: Follow the same procedures as those for setup.

Notes:

The DAY OFF setting is cancelled automatically after the set day has passed.

DELAY function



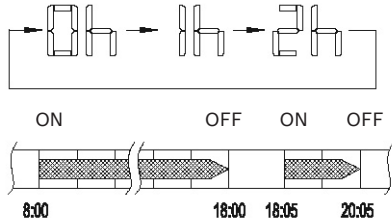
During the weekly timer, pressing the DELAY button once, display “1h”.

Press this button twice, display “1h” and wait 3 seconds to confirm.

It means the unit will override 1 hours;

Press this button three times, display “2h” and wait 3 seconds to confirm.

It means the unit will override 2 hours;



ex. If press the DELAY button to select “2h” at 18:05.

The air conditioner will delay to turn off at 20:05.

Copy out the setting in one day into the other day

- A reservation made once can be copied to another day of the week.
The whole reservation of the selected day of the week will be copied.
The effective use of the copy mode ensures ease of making reservations.

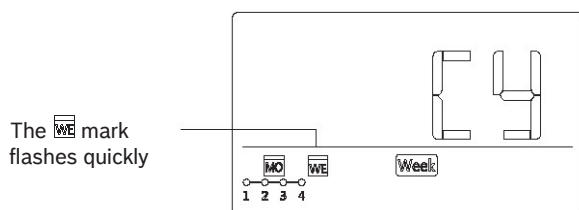
1 During the weekly timer, press the CONFIRM button.

2 Press the button “+” or “-” to select the day to copy from.

3 Press the COPY button, the letter “CY” will be shown on the LCD.

4 Press the button “+” or “-” to select the day to copy to.

5 Press the COPY button to confirm.



The mark flashes quickly

ex. Copy the setting of Monday to Wednesday

6 Other days can be copied by repeating step 4 and 5.

7 Press the Confirm button to confirm the settings.

8 Press the Back button to back to the weekly timer.

12. FAULT ALARM

If the system does not properly operate except the above mentioned cases or the above mentioned malfunctions is evident, investigate the system according to the following procedures.

| NO. | Malfunction & protection define | Display digital tube |
|-----|--|----------------------|
| 1 | Error of communication between wire controller and indoor unit | F0 |
| 2 | The faceplate is abnormal | F1 |

Please check the error display of indoor unit and read «OWNER’S MANUAL» if other error code appears.

13. TECHNICAL STANDARDS AND REQUIREMENT

EMC and EMI comply with the CE certification requirements.

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