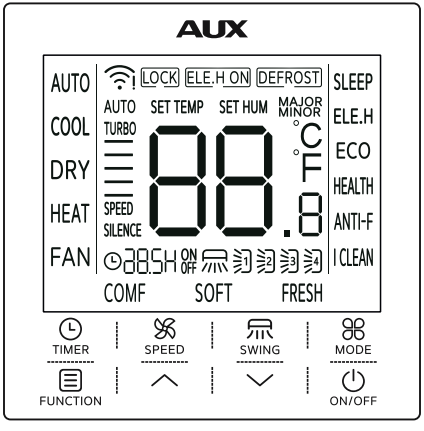
Wired controller manual



- Installation should be carried out by qualified personnel.
- To ensure proper use of the wired controller, please read this manual carefully.
- Please keep this manual for future reference.

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Notes on Use

- To ensure proper operation, these instructions must be followed carefully.
- Please read the manual thoroughly and comply with all warnings and notes contained in the documentation and displayed on the wired controller. In the case of special requirements, refer to local building regulations and the National Electrical Code.
- Installation of the device must be carried out exclusively by the distributor or authorized personnel. Installation performed by unqualified persons may result in improper installation, electric shock, or fire. Reinstallation must also be performed by authorized specialists. Failure to comply with the above recommendations may result in electric shock or fire.

Caution
This symbol indicates a risk of death or serious injury.

Warning
This symbol indicates a risk of personal injury or property damage.

Caution

- Do not install the wired controller in a location exposed to flammable gas leaks. If gas leaks near the controller, a fire may occur.
- Do not operate the device with wet hands or allow water to enter the wired controller, otherwise electric shock may occur.
- Before cleaning or maintenance, turn off the power supply; washing with water is prohibited as it may cause electric shock.
- Operation with wet hands is prohibited due to the risk of electric shock.
- Do not spray pesticides, disinfectants, or flammable spray materials directly onto the device, as this may cause fire or deformation of the equipment.
- Do not remove the display panel manually, as this may result in electric shock.
- The wired controller is a low-voltage circuit; direct contact with high-voltage wiring or installation together with high-voltage wiring in the same conduit is prohibited. The distance should be at least 500 mm (19.7 inches) or more.
- Use specified cables for wiring. Do not allow any external force to act on the wiring terminals. Route the wiring properly to prevent mechanical damage.

Warning

- Wiring should be carried out using a compatible connection cable intended for this wired controller. Otherwise, current leakage or overheating may occur, which could lead to a fire.
- Ensure that the cable insulation is suitable for the temperature it will reach during operation. Failure to use an appropriate cable may result in a fire.
- Before starting any modifications or installation of this kit, make sure the main power switch is in the OFF position. Ensure that the fan coil unit power supply is disconnected. In some systems, both the fan coil unit and the outdoor unit may be connected to the same disconnect switch. Clearly label the disconnect switch with an appropriate warning tag. It may be necessary to turn off more than one disconnect switch.

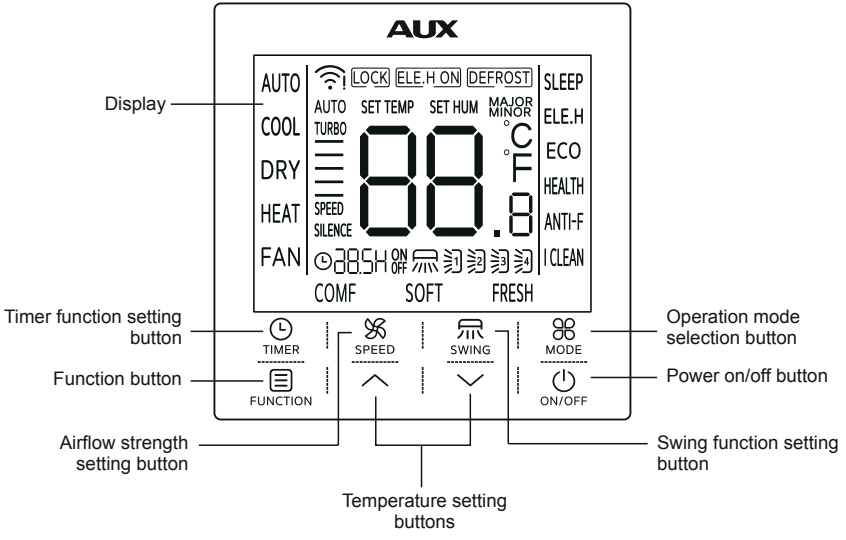
Technical Specifications

- Power supply voltage range: DC 12 V
- Maximum communication line length: 30 m
- Mounting hole spacing: 58–61 mm
- Operating ambient temperature: 0°C–50°C
- Dimensions (W × H × D): 86 × 86 mm
- Settable temperature range: 16°C–32°C
- Humidity: RH 20%–RH 90%

Main Functions

- Touch input with 8 buttons
- Display of main controller errors
- LCD with white backlight
- Sound signal function (buzzer)
- Ambient temperature detection sensor
- Connection to the indoor unit via shielded cable
- Reception of signals from the wireless remote control

Controller Description



Note: The product uses touch buttons.
For proper operation, touch the center of each icon.

Button Operation Description

1. Power (On/Off)

Press the **„On/Off"** button to turn the device on or off. When the device is operating, users can adjust the operation mode, fan speed, set temperature, special functions, and other parameters using the wired controller. When turned off, the device enters standby mode, and the wired controller displays the room's ambient temperature during this time.

2. Mode Setting

When the device is operating, press the **„MODE"** button to cycle through the operation modes in the following order:
„AUTO" → **„COOL"** → **„DAY"** → **„HEAT"** → **„FAN"** → **„AUTO"**
The initial set temperature for each mode is 24°C.
In FAN mode, the temperature cannot be set, and the displayed temperature is the ambient temperature.

3. Temperature Setting

When the device is operating, press the **"^"** or **"v"** buttons to increase or decrease the set temperature by 0.5°C or 1°C/1°F.
In COOL, DRY, and HEAT modes, the settable temperature range is 16°C–32°C.
In the DRY mode at low temperatures, the temperature range is 10°C–32°C.

4. Fan Speed Setting

When the device is operating, press the **„SPEED”** button to cycle through the fan speeds as follows:

For devices with 3/4 fan speeds:
a. Auto mode:
Low [–] → Medium [≡] → High [≡] → Auto [AUTO]
b. Cooling and Heating modes:
Low [–] → Medium [≡] → High [≡] → Turbo [TURBO] → Auto [AUTO]
c. Fan mode:
Low [–] → Medium [≡] → High [≡]
d. Dry mode: Forced low fan speed.

For devices with 7 fan speeds:
a. Auto mode:
Silence [SILENCE] → Low [–] → Medium-Low [≡] → Medium [≡] → Medium-High [≡] → High [≡] → Auto [AUTO]
b. Cooling and Heating modes:
Silence [SILENCE] → Low [–] → Medium-Low [≡] → Medium [≡] → Medium-High [≡] → High [≡] → Turbo [TURBO] → Auto [AUTO]
c. Fan mode:
Silence [SILENCE] → Low [–] → Medium-Low [≡] → Medium [≡] → Medium-High [≡] → High [≡]
d. Dry mode: Forced low fan speed.

Note:
a) The **SILENCE** and **TURBO** functions are not standard features—they require support from the appropriate device model.
b) The **SILENCE** function can only be activated by setting the fan speed. Once enabled, **„SPEED”** and **„SILENCE”** will appear on the display, but they will not be shown after exiting.
c) When the **TURBO** setting is enabled in the fan speed settings, the **„SPEED”** and **„TURBO”** icons will appear on the display. After exiting, **„TURBO”** will no longer be displayed.

5. Swing Function Setting

When the device is operating, press the **„SWING”** button to enable or cancel the up–down swing (only up–down swing is supported).
Icon Description:
Automatic Swing:
Fixed Swing:
Swing Cancel:

a. Swing Setting for Wall-Mounted Unit

Enabling the Swing Function:

When the device is operating, press the **„SWING”** button. The swing icon will blink according to the current angle setting.

While the swing mode icon is blinking, press **“^”** or **“v”** to select the air discharge angle. The angle cycles in the following sequence:

After selecting the swing angle, the chosen angle will blink for 10 seconds. The device will then automatically exit the swing angle setting mode, and the icon will remain lit continuously.

Disabling the Swing Function:

When the swing icon is continuously lit, press the **„SWING"** button, and the corresponding icon will start blinking. Press **"^"** or **"v"** to adjust the setting.

Select the air discharge angle, then press the **„SWING"** button to turn off the swing function. The angle cycles in the following sequence: Once confirmed, the swing function will be immediately disabled.

b. Swing Setting for Standard Duct/Ceiling Units

(only automatic swing is supported)

Enabling the Swing Function:

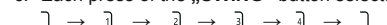
When the device is operating, press the **„SWING"** button to activate swing. The „ icon will blink.

Swing Setting for Independent Four-Way Air Outlet Panel:

Air Outlet Selection:

When the device is operating, press the **„SWING"** button to enter the air outlet selection mode.

c. Each press of the **„SWING"** button selects the next air outlet position in the following sequence:



The selected outlet will blink according to the current angle setting.

Enabling Swing Function (example for outlet 1):

Following the above procedure, when the icon of the selected air outlet is blinking, press **"^"** or **"v"** to choose the air discharge angle.

The angles cycle in the following order:

After selecting the swing angle, the setting will blink for 10 seconds. The device will then automatically exit the angle setting mode, and the icon will remain steadily lit.

Note: If you press the **„SWING"** button while the angle setting icon is blinking, the device will exit the angle setting mode and return to the air outlet selection mode. If any button other than **„SWING", „^"** or **„v"** is pressed, the swing setting will be terminated.

Disabling the Swing Function (example for outlet 1):
When the swing icon is steadily lit, press the **„SWING"** button—the corresponding icon will start blinking. Then use **"^"** or **"v"** to select the outlet angle (the angles cycle continuously).
Press the **„SWING"** button again to turn off the swing function. Once the swing cancel option is selected, it will take effect immediately, and the swing function will be disabled.

5. Timer Setting

Enabling the Timer Function:
When the device is operating, press the **„TIMER"** button to enter the automatic shut-off time setting. Press **"^"** or **"v"** to set the time, then press **„TIMER"** to confirm. The timer icon will remain steadily lit.
When the device is off, press the **„TIMER"** button to enter the automatic turn-on time setting. Press **"^"** or **"v"** to set the time, then press **„TIMER"** to confirm. The timer icon "OFF" will remain steadily lit.

Disabling the Timer Function:
When the timer is active, press **„TIMER"** or **„On/Off"** to cancel the turn-on or turn-off setting. The corresponding timer icon "ON" will disappear.

Detailed Operating Instructions

Note: The wired controller is a universal device, and the availability of certain functions depends on the capabilities of the air conditioning unit.

Press the **„FUNCTION"** button to enter the function menu. Then use the **"^"** or **"v"** buttons to scroll through the functions, and press **„FUNCTION"** again to select a function.
To disable an active function, enter the function menu, select the function (while the cursor is blinking), and then press the **„FUNCTION"** button to cancel the function.

1. Sleep Function Setting
   In COOL/DRY/HEAT mode, press the **„FUNCTION"** button to enter the function selection menu. Then press **"^"** or **"v"** to select the **„sleep"** function, and press **„FUNCTION"** to turn it on or off. When the function is enabled, the **„sleep"** icon remains steadily lit.
2. ELE.H Function Setting
   In HEAT mode, press the **„FUNCTION"** button to enter the function selection menu. Then press **"^"** or **"v"** to select the **„ELE.H"** function, and press **„FUNCTION"** to enable or disable the auxiliary heating. When enabled, the **„ELE.H ON"** icon remains steadily lit.
3. ECO Function Setting
   In COOL mode, press the **„FUNCTION"** button to enter the function selection menu. Then press **"^"** or **"v"** to select the **„ECO"** function, and press **„FUNCTION"** to turn it on or off. When enabled, the **„ECO"** icon remains steadily lit.
4. HEALTH Function Setting
   When the device is operating, press the **„FUNCTION"** button to enter the function selection menu. Then press **"^"** or **"v"** to select the **„HEALTH"** function, and press **„FUNCTION"** to turn it on or off. When enabled, the **„HEALTH ON"** icon remains steadily lit.

5. ANTI-F Function Setting
   In COOL/DRY mode, press the **„FUNCTION"** button to enter the function selection menu. Then press **"^"** or **"v"** to select the **„ANTI-F"** function, and press **„FUNCTION"** to turn it on or off. When enabled, the **„ANTI-F"** icon remains steadily lit.
6. ICLEAN Function Setting
   When the device is off, press the **„FUNCTION"** button to enter the function selection menu. Then press **"^"** or **"v"** to select the **„ICLEAN"** function, and press **„FUNCTION"** to turn it on or off. When enabled, the **„ICLEAN"** icon remains steadily lit.
7. LOCK Function Setting
   Enabling Child Lock:
8. Press and hold the **"^"** and **"v"** buttons simultaneously for more than 5 seconds to enable the lock. The **„LOCK"** icon will appear on the display. When locked, the buttons cannot be used (control via the app still works).
   Disabling Child Lock:
   Press and hold the **"^"** and **"v"** buttons simultaneously for more than 5 seconds, or turn the power off and on again; the **„LOCK"** icon will disappear.
9. Wake-Up Button Function:
   In standby mode, the first press of any button only wakes the device (turns on the backlight) and does not execute any function. The next press will perform the selected operation. If no action is taken within 10 seconds, the backlight will turn off.
10. Remote Control Function:
    The wired controller can receive commands from the remote control and update its current status. When remote control is active, the wired controller operates according to the remote settings and displays the corresponding operation mode.

11. Low Temperature Dry Mode Function (VRF)

The Low Temperature Dry function can be activated when the following conditions are met:

a. The indoor unit supports the low temperature dry function;

b. The device is turned on and operating in DRY mode.

The Low Temperature Dry function will be deactivated in the following cases:

When the device is turned off or the operating mode is changed, the low temperature dry function will be terminated.

Note:

1. In DRY mode, the **"TURBO"** icon may appear, which only indicates that the Low Temperature Dry function is active—Turbo airflow is not available in this case.

When the Low Temperature Dry function is enabled and the set temperature is < 16°C, the **"TURBO"** icon remains lit. When the set temperature is ≥ 16°C, the **"TURBO"** icon turns off.

After activating the Low Temperature Dry function, the minimum settable temperature can be lowered to 10°C.

12. Display Function (Screen)

The wired controller receives display-related data from the indoor unit, the remote controller, and the Wi-Fi module, and operates according to the following rules:

When the display is on: the power LED is lit, and the power-off indicator LED is off.

When the display is off: all LED indicators are off.

Note: The display logic applies only to the LED indicator status and is not related to the LCD backlight of the wired controller.

13. Clearing the Refrigerant Leakage Alarm (VRF)

The refrigerant leakage alarm can be cleared using one of the following methods:

a. When the wired controller is awake, press and hold the “SWING” + “FUNCTION” buttons for 5 seconds;

b. The wired controller receives 10 on/off commands from the remote controller (the interval between two consecutive presses must not exceed 2 seconds).

After performing either of the above actions, the wired controller will send a command to clear the refrigerant leakage alarm, and the buzzer will sound twice.

Display Reminder Functions

1. Wi-Fi Function Display
   The " " icon remains steadily lit when the Wi-Fi connection has been successfully established. If Wi-Fi configuration fails or the network is operating abnormally, the " " icon remains steadily lit. If the device does not support the Wi-Fi function or a Wi-Fi communication error occurs, the icon is not displayed.
2. Current Fault Display
   Fault display has the highest priority. When a malfunction occurs, the error code is displayed directly and flashes in the temperature display area. The error display format is **XXE** (where XX indicates the specific error code and E indicates fault identification). Detailed error information can be found in the relevant product manual.
3. ELE.H Display
   When auxiliary heating is enabled, the **"ELE.H ON"** icon is displayed. When auxiliary heating is disabled, the **"ELE.H ON"** icon is not displayed.
4. Defrost and Oil Return Function Display
   When the device is operating in defrost or oil return mode, the **"DEFROST"** icon is displayed. After defrosting or oil return is completed, the **"DEFROST"** icon disappears.
5. Filter Cleaning Reminder Display
   When the unit's operating time reaches the user-set filter cleaning reminder interval, the device sends a reminder signal. When the wired controller is turned off, **"CL"** will flash in the temperature display area, and after flashing five times, the ambient temperature will be displayed again.
   The reminder can be cleared by pressing and holding the **"TIMER"** button for 5 seconds. At the same time, a filter cleaning reminder reset signal will be sent to the air conditioning unit.

6. Lock (Shielding) Function Display
   When centralized control of the device is locked, the **“LOCK”** icon appears on the display.
7. Temperature Unit Display (Celsius / Fahrenheit)
   If the main unit is set to Celsius, the wired controller displays the temperature in °C. If the main unit is set to Fahrenheit, the wired controller automatically displays the temperature in °F.

Wi-Fi Module Manual

1. App Download
   On your mobile device, scan the QR code below to download the app, or search for “AC Freedom” in the App Store or Google Play.
   Note: If the current app version is lower than 2.0, please update the app to the latest version before starting the device network configuration.

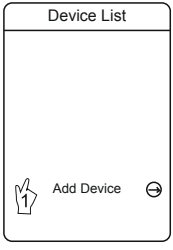
Android

IOS

2. App Configuration

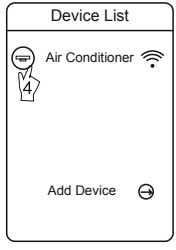
a) Press the “HEALTH” button 8 times consecutively. After two beep sounds (buzzer), the device will enter configuration mode.

b) Connect your mobile device to a Wi-Fi network, open the “AC Freedom” app, and then follow the steps below:



Select “Add device”.

The Wi-Fi network name will appear automatically—enter the network password and start the configuration (the initial configuration takes about 1 minute).



After the configuration is completed, the message “Finish” will appear at the bottom of the screen. The app will then automatically return to the device list and display the configured air conditioner.

Note:

If the message “configuration failed” appears, or if the Wi-Fi router name or password has been changed, please re-enable Wi-Fi mode according to the instructions above.

To reset the Wi-Fi communication module and perform the configuration again, with the device powered on, repeat steps two and three described above.

Accessory Installation

Please check that all components are complete.

No.	Name	Quantity	Notes
1	Wired Controller	1	
2	User and Installation Manual	1	
3	Cross-head Cylindrical Screw M4×20	2	For mounting the wired controller in an electrical box
4	Connection Cable	1	Facilitates the configuration of the cable routed through the wall

Please check that all components are complete.

No.	Name	Quantity	Notes
1	Electrical Box 86×86	1	Standard electrical box for flush-mounted installation
2	Shielded Cable	1	Connection cable routed inside the wall (connecting the indoor unit to the wired controller)
3	Insulating Tape	1	For use during wiring
4	Phillips Screwdriver	1	For mounting the electrical box
5	Flathead Screwdriver	1	For removing the rear cover of the wired controller

Installation Location Selection

a) Flat Surface
b) A location where the wired controller can accurately measure the room temperature:

The indoor temperature sensors are located both in the indoor unit and in the wired controller.

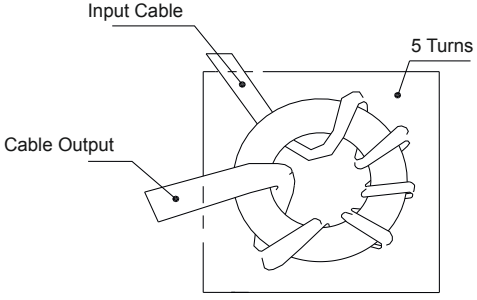
If the room temperature is measured using the sensor in the wired controller, the built-in controller sensor is responsible for the temperature measurement.

When using the sensor in the wired controller, follow these guidelines:

- To ensure accurate room temperature measurement, do not install the wired controller in places exposed to direct sunlight, near heat sources, or near air conditioner air outlets.
- Install the wired controller in a location where the sensor can measure a representative room temperature.
- Install the wired controller in a location where no cables are routed near the temperature sensor. (If cables are nearby, the sensor will not be able to accurately measure the room temperature.)

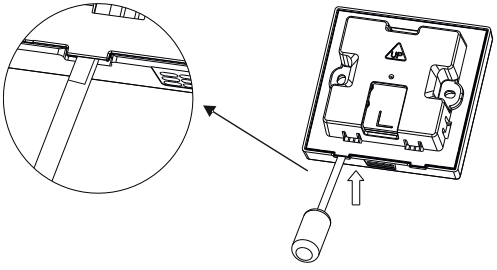
Installation Diagram — Winding on the Ferrite Ring

If a ferrite ring is included in the accessory kit, the communication cable should be wound around the ring (near the end of the cable by the wired controller).

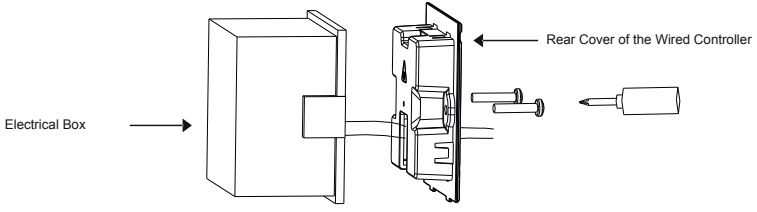


Installation Diagram

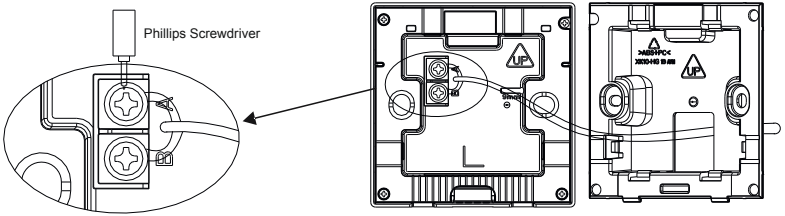
1. Use a flathead screwdriver to gently pry the groove at the bottom of the wired controller's rear cover. Lift the bottom part upward and separate the rear cover.



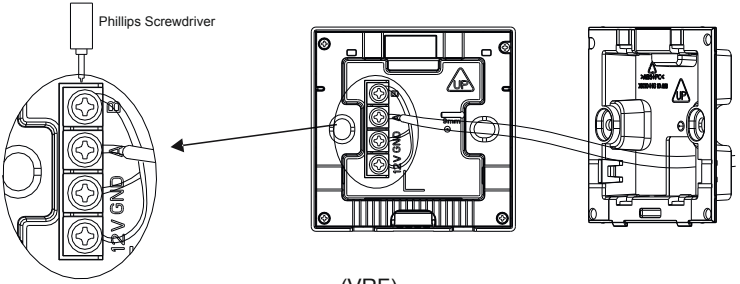
2. Route the connection cable from the wall box through the cable hole in the rear cover, then attach the wired controller's rear cover to the 86 electrical box using screws.

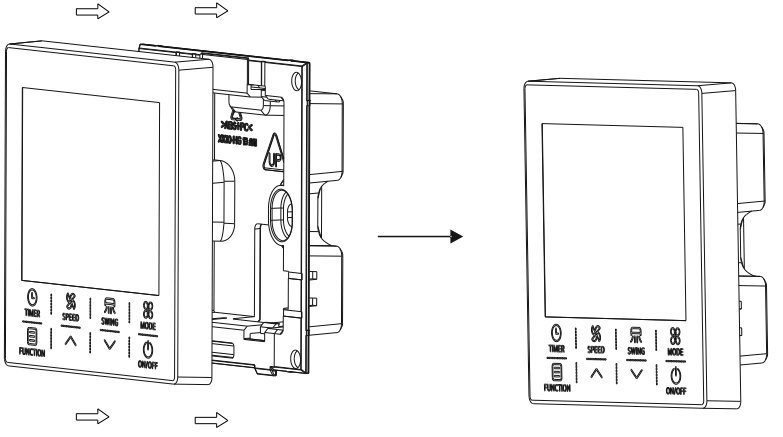


3. Connect the connection cable in the electrical box to the wired controller terminals (check connections to prevent short circuits).



or



(VRF)

4. Following the direction shown in the diagram, mount the wired controller onto the rear cover (organize the cables and ensure all controller components are properly seated in the rear cover).