

## 3.6 HW-BA101ABT



- Touch screen
- Black and tempered glass body dotting with highlight LED;
- On/Off ,Cooling, Heating, Dry, Fan, Auto
- Fan speeds Selection: High, Medium, Low, Auto
- Central/Lock, which is matched with central controller for central management,
- Especially suitable for hotel/office central management;

### Specification

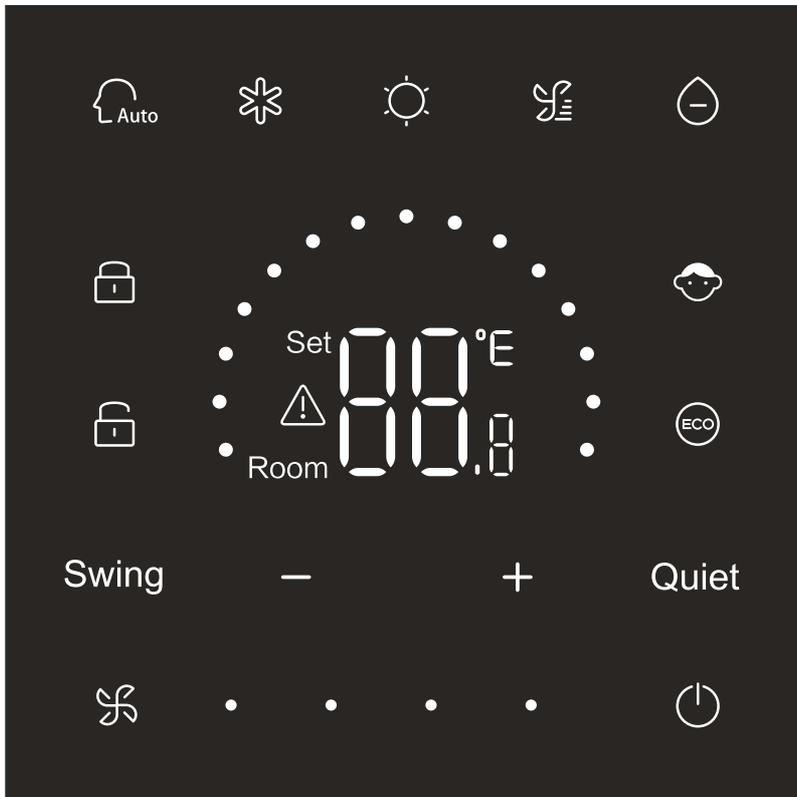
Dimension(H\*W\*D):86\*86\*12mm

Net weight:0.15kg

Gross weight:0.39kg

### Parts and funtions

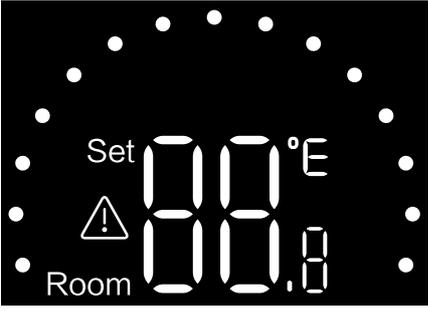
#### Interface display



## Key

	On/Off key
	Auto mode key
	Cooling mode key
	Heating mode key
	Fan mode key
	Dry mode key
	Swing key
	Increase/Decrease key
	Quiet key
	Fan speed key

## Icon

	Auto mode
	Cooling mode
	Heating mode
	Fan mode
	Dry mode
	Display temperature setpoint / ambient Temperature / parameter
	Swing function
	Quiet function
	Lock
	Control

	Child lock
	ECO
	Error icon
	Low fan speed
	Medium fan speed
	High fan speed
	Auto Fan ( Four dots on the right side of fan speed icon will display dynamically)

## Operation

### Dip switch definition

Dip Switch		On/off status	Function description	Default settings
SW3	SW3-1	ON	Slave wired controller	OFF
		OFF	Master wired controller	
	SW3-2	ON	Display ambient temperature	OFF
		OFF	Do not display ambient temperature	
	SW3-3	ON	Collect ambient temperature form the PCB of indoor unit	OFF
		OFF	Collect ambient temperature from wired controller	
	SW3-4	ON	Non-volatile memory invalid	OFF
		OFF	Non-volatile memory valid	
	SW3-5	ON	Protocol 1.0	OFF
		OFF	Self-adaption to protocol 2.0 and 3.0	
	SW3-6	ON	backlight always bright	OFF
		OFF	Backlight half bright without operation for 15s	
	SW3-7	ON	Reserved	OFF
		OFF	Reserved	
	SW3-8	ON	Eco function valid	OFF
		OFF	Eco function invalid	

Dip Switch		On/off status	Function description	Default settings
SW2	SW2-1	ON	Mode key limited	OFF
		OFF	Normal	
	SW2-2	ON	Buzzer invalid when keys are pressed	OFF
		OFF	Normal	
	SW2-3	ON	Reserved	OFF
		OFF	Reserved	
	SW2-4	ON	Reserved	OFF
		OFF	Reserved	

### Initialization

After turning the power of wired controller on or resetting the wired controller, all icons of the wired controller will display first and then the program version No. will display , then 88.8 will be displayed in order till the initialization completed.

If the wired controller can't communicate with the indoor unit PCB normally after powering on, the initialization will be finished in 4 minutes, and then the communication malfunction can be checked from the malfunction inquiry function.

## On/Off

Press  to switch on or switch off the wired controller. When the wired controller is turned on, setpoint temperature, mode and fan speed etc. will display. After the wired controller is turned off, only  will display.

## Mode selection

Press the corresponding mode key to select the mode. The mode key icon which is selected will be lit, while other mode key icons will be dimmed.

### Temperature setpoint adjustment

Press  or  or slide the semi-circle dots  in temperature display area to adjust the temperature. When the ECO function is disabled, the adjustment range of the temperature setpoint is 16°C~30°C.

## Fan speed adjustment

Press  or slide the dot  on the right of fan speed icon to adjust fan speed.  
Adjustment range: Low → Medium → High →Auto fan speed.

In fan mode, there is no auto fan speed.

## Swing on/off

Press  to switch on or switch off the swing function.  
When swing function is turned on, the swing icon will be lit.

When swing function is turned off, the swing icon will be dimmed.

## Quiet Function

Press  to switch of or switch off the quiet function.

When quiet function is turned on, the  icon will be lit.

When quiet function is turned off, the  icon will be dimmed.

## ECO function

Dial SW3-8 to ON, the ECO function will be turned on and  will display after resetting the wired controller or turning the power of wired controller on again. The setpoint temperature under mode of cooling, heating or dry will be limited.

Dial SW3-8 to OFF, the ECO function will turn off and  will disappear after resetting the wired controller or turning the power of the wired controller on again.

### (1) Setting ECO parameter of cooling.

Turn on the wired controller and select cool mode, adjust the setpoint temperature to 30°C and hold  and  keys for 5s to set ECO parameter which will appear in temperature display area and the default value is 23.

The parameter can be adjusted by  or  ranging from 16 to 30. Press  to confirm. If no keys are pressed within 10s after completing the settings, the parameter adjustment interface will exit automatically and the previous change will be invalid.

ECO parameters of cooling limits the minimum set-point temperature in cool mode and dry mode. For example, if ECO parameter of cooling is set to 23, as a result, the set-point temperature range is 23°C to 30°C in cool mode and dry mode after ECO function is activated.

### (2) Setting ECO parameter of heating

Turn on the wired controller and select heat mode, adjust the setpoint temperature to 16°C. Hold  and  for 5s to set the ECO parameter of heating which will appear in temperature display area and the default value is 26. The parameter can be adjusted by  or  ranging from 16 to 30. Press  to confirm after completing the settings. If no keys are pressed within 10s, the parameter adjustment interface will exit automatically and the previous change will be invalid.

ECO parameter of heating limits the maximum setpoint temperature in heating mode. For example, if ECO parameter of heating is set to 26, as a result, the range of the setpoint temperature in heating mode is 16°C~26°C after the ECO function is activated.

## Child lock function

When the backlight is lit up, hold  and  for 5s to activate the child lock function. After function is turned on, the icon  will display statically. As a result, all keys are invalid. If you press any of the keys, the icon  will blink 3s to indicate no keys can be pressed.

When the child lock function is turned on, lit up the backlight, then hold  and  for 5s to turn off child lock function.

## Backlight adjustment

SW3-6 ON indicates the backlight is lit consistently which is enabled after resetting or turning the power of wired controller on again.

SW3-6 OFF indicates backlight will be half bright with no key pressed for 15s which is enabled after resetting or turning the power of wired controller on again. After backlight is half bright, it can be lit by pressing any button.

## °F/°C switching (only valid for part of models)

If the current temperature unit is °C, adjust setpoint temperature to the maximum value and hold  for 15s to switch to °F.

If the current temperature unit is °F, adjust setpoint temperature to the minimum value and hold  for 15s to switch to °C.

## Temperature compensation

This function is used for calibration and compensation of displayed ambient temperature.

When wired controller is off, hold  and  5s to set ambient temperature compensation after the backlight is lit. Parameter will appear in the temperature display area and the default value is 0 which can be adjusted by  or  ranging from -4°C to +4°C (-8 to +8°F). After completing the adjustment, press  to confirm. If no buttons are pressed within 10s, current parameter setting interface will automatically exit and previous parameter settings are invalid.

## Malfunction display

If there is a malfunction, the main interface will display  icon.

1) Malfunction inquiry:

Hold  and  for 5s to enter malfunction inquiry function. Current malfunction code will appear in temperature display area and indoor unit No. will display at the bottom right of the malfunction code (Display 0 to

F in hexadecimal). Press  to switch indoor unit No. (Note: “— —” indicates no malfunction.)

In the state of viewing malfunction, press  or  key to inquiry historical malfunction code 1/2/3/4 (display a semi-circle dot to indicate query historical malfunction code 1; display two semi-circle dots to indicate query historical malfunction code 2; display three semi-circle dots to indicate query historical malfunction code 3; display four semi-circle dots to indicate query historical malfunction code 4;)

If no buttons are pressed within 10s, this function will be exited automatically.

2) Clear malfunctions:

In malfunction inquiry interface, hold  for 10s to clear current malfunction and historical malfunction.

## Setting mode range

When the wired controller is off, hold  and  for 5s to enter mode range setting interface. The default parameter value is 0 in the temperature display area which can be adjusted by  or  key from 0 to 6. After completing the adjustment, press  to confirm the change.

The definition of parameter and mode range is as follows:

0 refers to Auto, Heating, Dry, Cooling and Fan mode.

1 refers to Cooling, Heating and Dry mode

2 refers to Cooling mode

3 refers to Heating mode

4 refers to Heating, Dry, Cooling and Fan mode

5 refers to Dry, Cooling and Fan mode

6 refers to Heating and Fan mode

## Mode Button Prohibited function

Set SW2-1 to on, mode button will be prohibited after reset or power on again. As a result, mode button is disabled. If mode button is pressed, the mode icon selected will blink for 3s to indicate the mode cannot be switched.

Set SW2-1 to off, after reset or power on again, the mode prohibited function will be turned off. As a result, the mode button is available.

When mode button prohibited function is activated, the wired controller can support infrared remote control.

## Adjusting ESP grades

When the wired controller is off, hold **Swing** and **Quiet** for 5s to adjust ESP grades after the backlight is lit. The parameter value of ESP grades will appear in temperature display area which can be adjusted

by pressing **-** or **+** key and No. of the indoor units will display on the bottom right of the parameter value (Display 0 to F in in hexadecimal). Press  to switch indoor unit NO. and press **Quiet** to confirm the changes.

## Control / Lock function

If central controller is connected and central control function is activated, the icon  will display on the wired controller. As a result, only on/off button of wired controller is available and other buttons are invalid.

If central controller is connected and central controller locked the wired controller, the icon  will display on the wired controller. As a result, all buttons of the wired controller are invalid.

## Forced cooling/ heating function

When the wired controller is off , in cooling mode, hold  for 5s to turn it on and activate forced cooling function with 'LL' blinking in temperature display area. displaying cooling mode, setpoint temperature 16°C and

high fan speed. After forced cooling function is activated, only  is available while other buttons are invalid.

Press  to exit forced cooling function and turn off the wired controller.

When the wired controller is off, in heating mode, hold  for 5s to turn it on and activate forced heating function with 'HH' blinking in temperature display area, displaying heating mode, setpoint temperature 30°C and high fan speed. After forced heating function is activated, only  is available while other buttons are invalid. Press  to exit forced heating function and turn off the wired controller.

## Forced defrost

When the wired controller is turned on and select heating mode, high fan speed and adjust setpoint temperature to 30°C (Maximum setpoint temperature when ECO function is activated), press  6 times in a row within 5s to set forced defrost function. The buzzer sounds 3 times indicates forced defrost function is set successfully.

## Check Parameter

After backlight is lit, hold **Quiet** and  for 10s to check parameter. The parameter value will show in temperature display area. The indoor unit NO. will be displayed 0 to F (hexadecimal) at the bottom right of the parameter value. LED light dot quantity from 1 to 6 matches parameter category from A to F. Press  to switch indoor unit NO. and adjust parameter by  or . If untouched for 10s in parameter checking interface, it will exit automatically.

The definition of A, b, C, d, E, F is shown as the following table:

Parameter category	Definition	Counting method
A	Temperature from indoor unit sensor Tai	decimal
b	Temperature from indoor unit sensor Tc1	decimal
C	Temperature from indoor unit sensor Tc2	decimal
d	Indoor unit PMV opening/2	hexadecimal
E	indoor unit address	hexadecimal
F	Indoor unit central control address	hexadecimal

## Address searching and setting

After backlight is lit, hold  and **Quiet** for 10s to enter into address searching and setting interface. Communication address will show in temperature display area and indoor unit NO.( 0-F) will display at the bottom right of parameter. Press  to switch indoor unit NO. When communication address is blinking, press  or  to adjust. Press **Quiet** to confirm changes.

## Wireless signal receiving

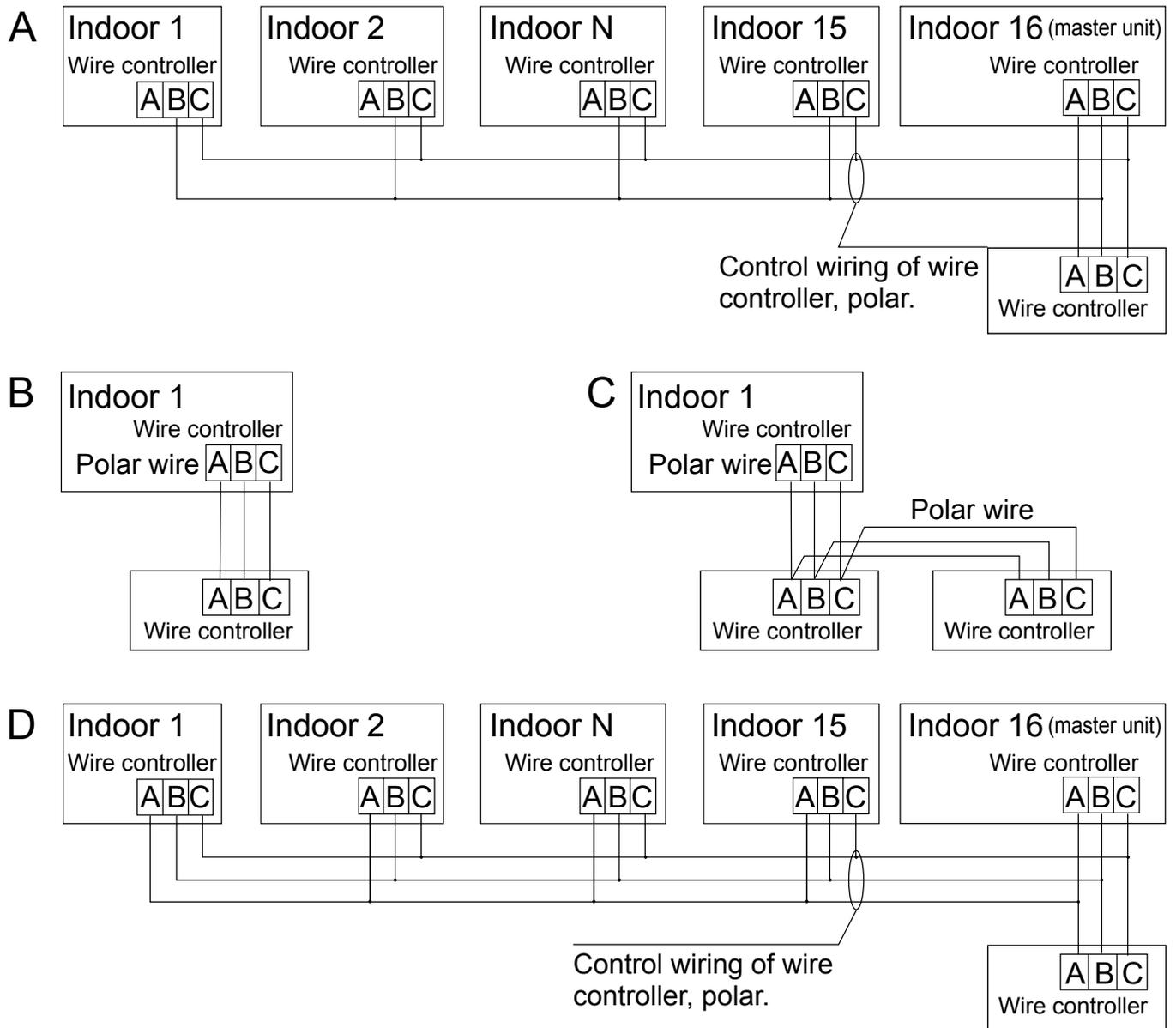
The wired controller is able to receive wireless signal. When receiving the correct command, the buzzer will sound once. When receiving an illegal command, the buzzer will sound three times.

## Reset

Click the round hole on the left side of the wired controller with small sharp objects such as pin. After the reset button is pressed, the wire controller will be reset.

## Wired controller wiring instruction

### Wiring Connections of Wire Controller



Notice:

For wired controller connection, please do follow the corresponding indoor unit installation manual's instruction.

There are four methods to connect wired controller to the indoor units:

1. Group control shown as Figure A and D: One wired controller can control up to 16 indoor units. 3 pieces of polar wire must be used to connect the wired controller and the master unit (the indoor unit connected with wire controller directly). And other units connect to the master unit through 2 pieces or 3 pieces of polar wire depending on the indoor units, please do follow the corresponding indoor unit installation manual's instruction.
2. Individual control as shown Figure B: One wired controller controls one indoor unit, and the indoor unit connects to the wired controller through 3 pieces of polar wire.
3. Two wired controllers control one indoor unit as shown Figure C. Either one of wired controllers can be set as the master wired controller and the other as the slave wired controller. The connection between Master and slave wired controllers as well as wired controllers connecting to indoor units all requires the 3 pieces of polar wire.

## Communication wiring

Communication wiring length (m/ft)	Dimensions of wiring
< 100m/328ft	0.3mm <sup>2</sup> x3-core shielded wire (22AWG,3wire)
≥100m/328ft and <200m/656ft	0.5mm <sup>2</sup> x3-core shielded wire (20AWG,3wire)
≥200m/656ft and <300m/984ft	0.75mm <sup>2</sup> x3-core shielded wire (18AWG,3wire)

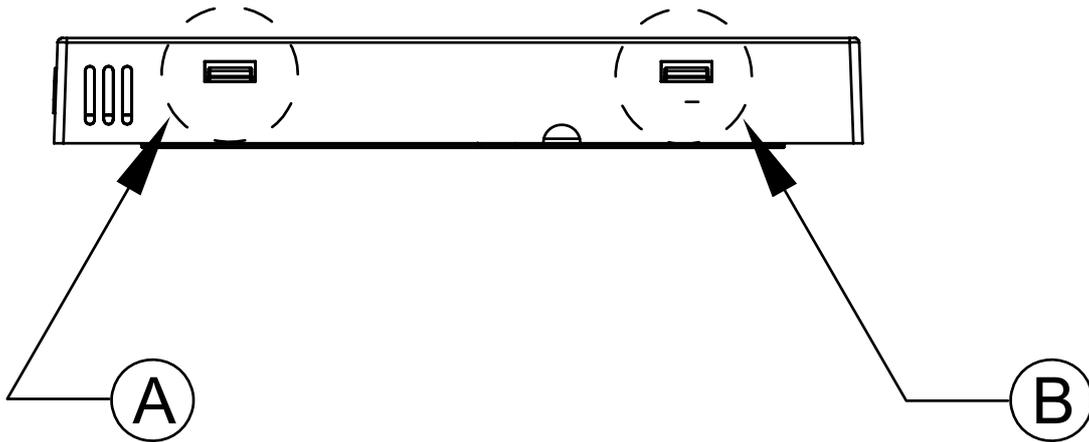
Note:

- One side of the shielded sheet of communication wire must be earthed.
- The total length of communication wire cannot exceed 300 meters.

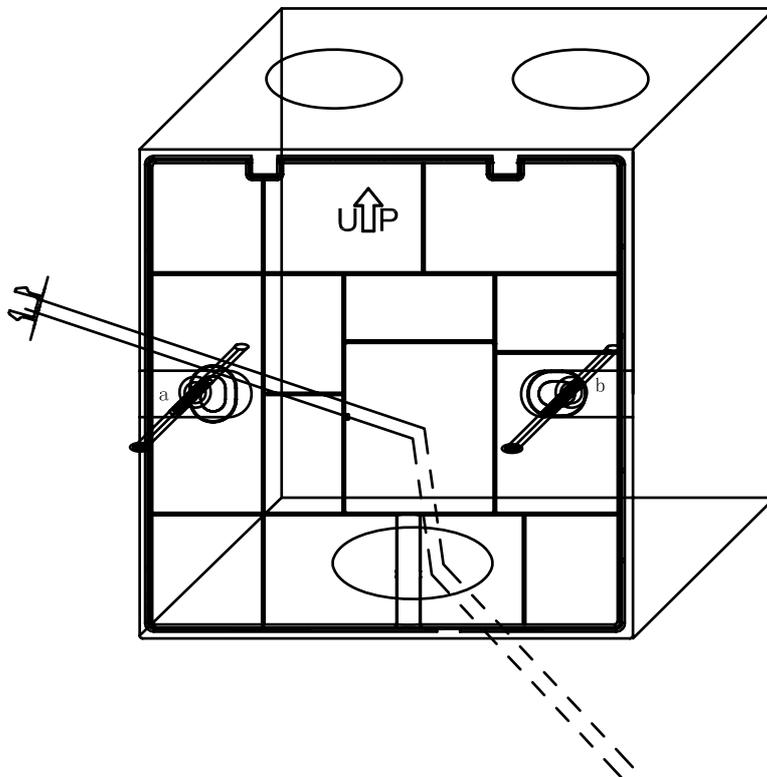
## Installation

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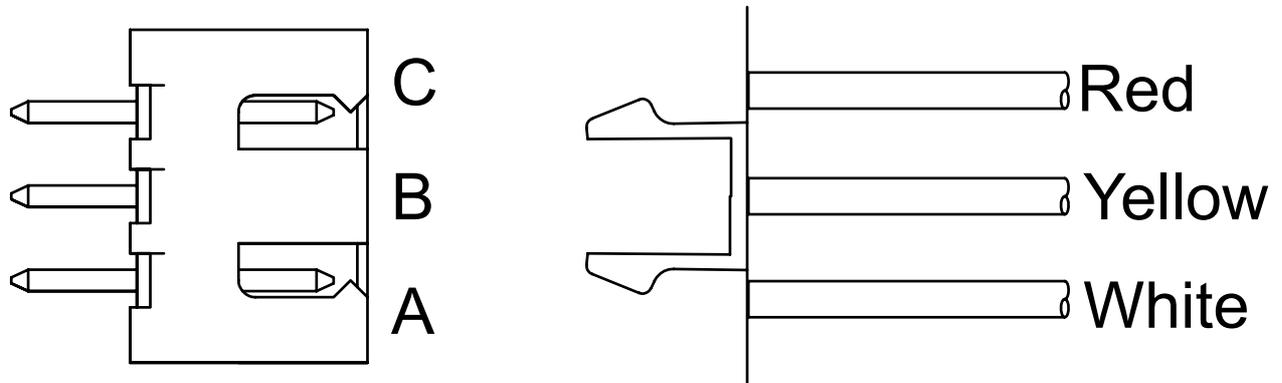
1. Use a flat-blade screwdriver to pry open the A and B positions and separate the front and rear panels of the wired controller.



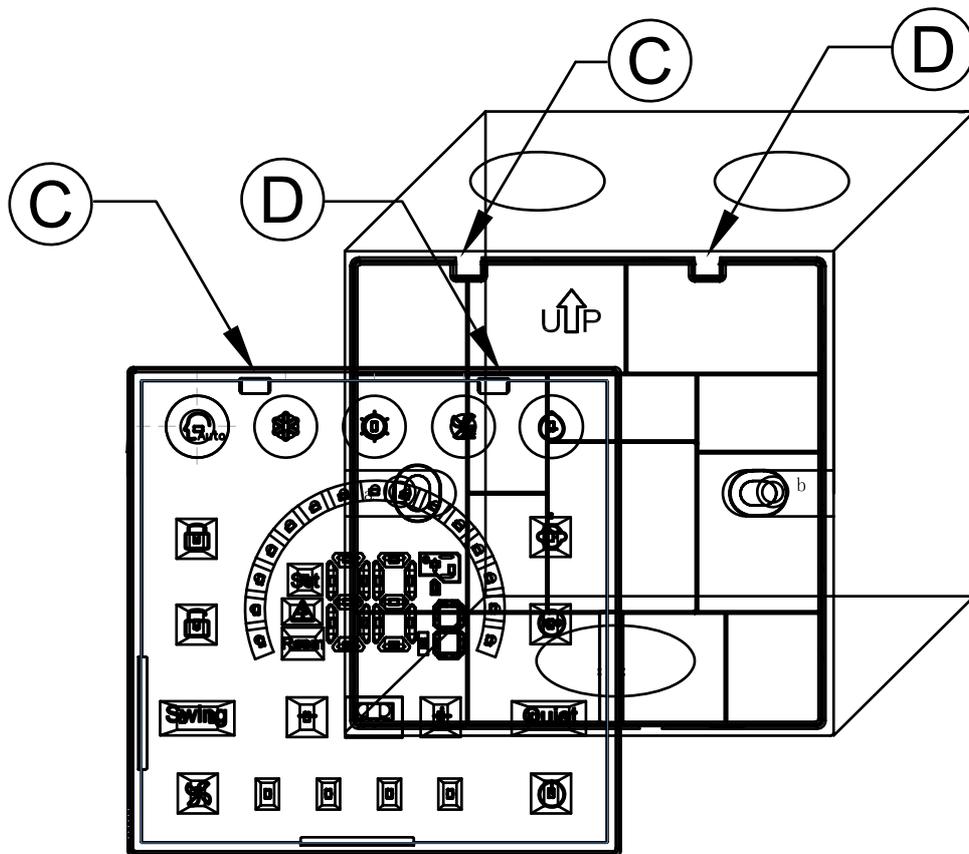
2. Use the screws to secure the wired controller back panel.



3. Connect the communication cable to the rear port of the wired controller. The connection method is as follows:



4. Clamp the buckles at the C and D of the front panel to the card slots at the C and D positions on the rear panel, press the bottom of the wired controller, and fasten the front and rear panels of the remote control.



5. Finish installation

