User Manual

-- R32 LCAC Unit

2021.06

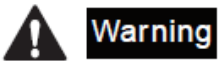
Content

Safety Precautions

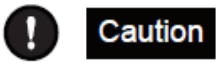
Read Safety Precautions Before Installation

Incorrect installation due to ignoring instructions can cause serious damage or injury.

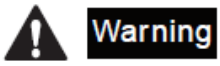
The seriousness of potential damage or injuries is classified as either a WARNING or CAUTION.



This symbol indicates that ignoring instructions may cause death or serious injury.



This symbol indicates that ignoring instructions may cause moderate injury to your or damage to your appliance or other property.



This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.

I. Installation Warnings

- Ask an authorized dealer to install this air conditioner. Inappropriate installation may cause water leakage, electric shock, or fire.
- All repairs, maintenance and relocation of the unit must be performed by an authorized service technician. Inappropriate repairs can lead to serious injury or product failure.

II. Warnings for product use

- If an abnormal situation arises (like a burning smell), immediately turn off the unit and pull the power plug.
- Call your dealer for instructions to avoid electric shock, fire or injury.
- Do not insert fingers, rods or other objects into the air inlet or outlet. This may cause injury, since the fan may be rotating at high speeds.
- Do not use flammable sprays such as hair spray, lacquer or paint near the unit. This may cause fire or combustion.
- Do not operate the air conditioner in places near or around combustible gases. Emitted gas may collect around the unit and cause explosion.
- Do not operate the air conditioner in a wet room (e.g., bath room or laundry room). This can cause electrical shock and cause the product to deteriorate.
- Do not expose your body directly to cool air for a prolonged period of time.

III. Electrical Warnings

- Only use the specified power cord. If the power cord is damaged, it must be replaced by the

manufacturer or certified service agent.

- Keep power plug clean. Remove any dust or grime that accumulates on or around the plug. Dirty plugs can cause fire or electric shock.
- Do not pull power cord to unplug unit. Hold the plug firmly and pull it from the outlet. Pulling directly on the cord can damage it, which can lead to fire or electric shock.
- Do not use an extension cord, manually extend the power cord, or connect other appliances to the same outlet as the air conditioner. Poor electrical connections, poor insulation, and insufficient voltage can cause fire.

IV. Cleaning and Maintenance Warnings

- Turn off the device and pull the plug before cleaning. Failure to do so can cause electrical shock.
- Do not clean the air conditioner with excessive amounts of water.
- Do not clean the air conditioner with combustible cleaning agents. Combustible cleaning agents can cause fire or deformation.

Caution

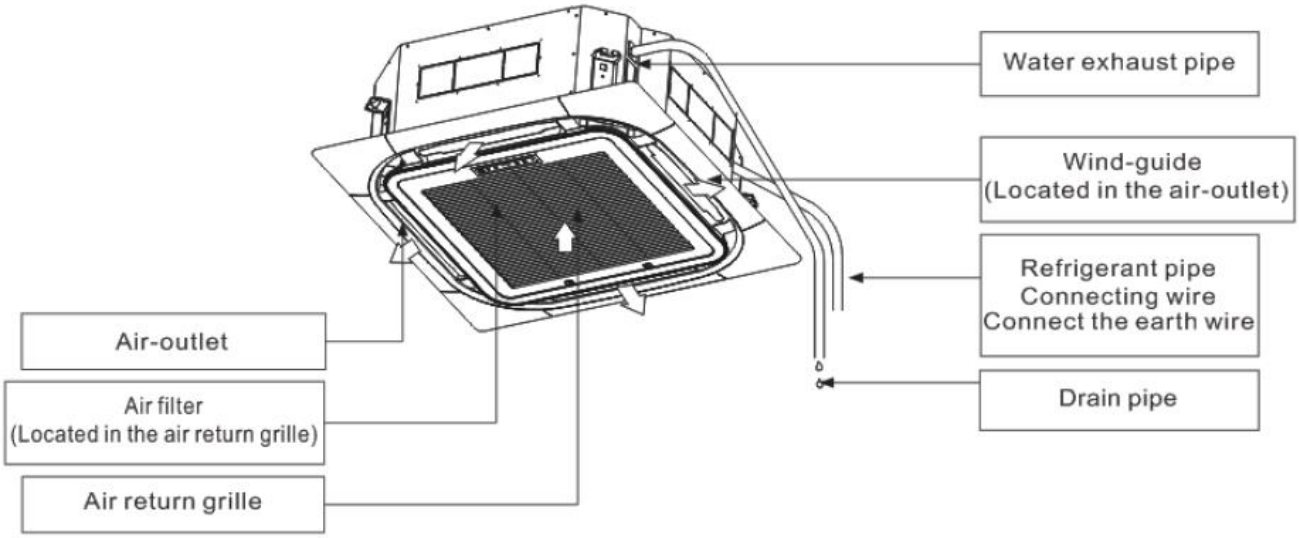
- If the air conditioner is used together with burners or other heating devices, thoroughly ventilate the room to avoid oxygen deficiency.
- Turn off the air conditioner and unplug the unit if you are not going to use if for a long time.
- Turn off and unplug the unit during storms.
- Make sure that water condensation can drain unhindered from the unit.
- Do not operate the air conditioner with wet hands. This may cause electric shock.
- Do not use device for any other purpose than its intended use.
- Do not climb onto or place objects on top of the outdoor unit.
- Do not allow the air conditioner to operate for long periods of time with doors or windows open, or if the humidity is very high.

I. Unit features

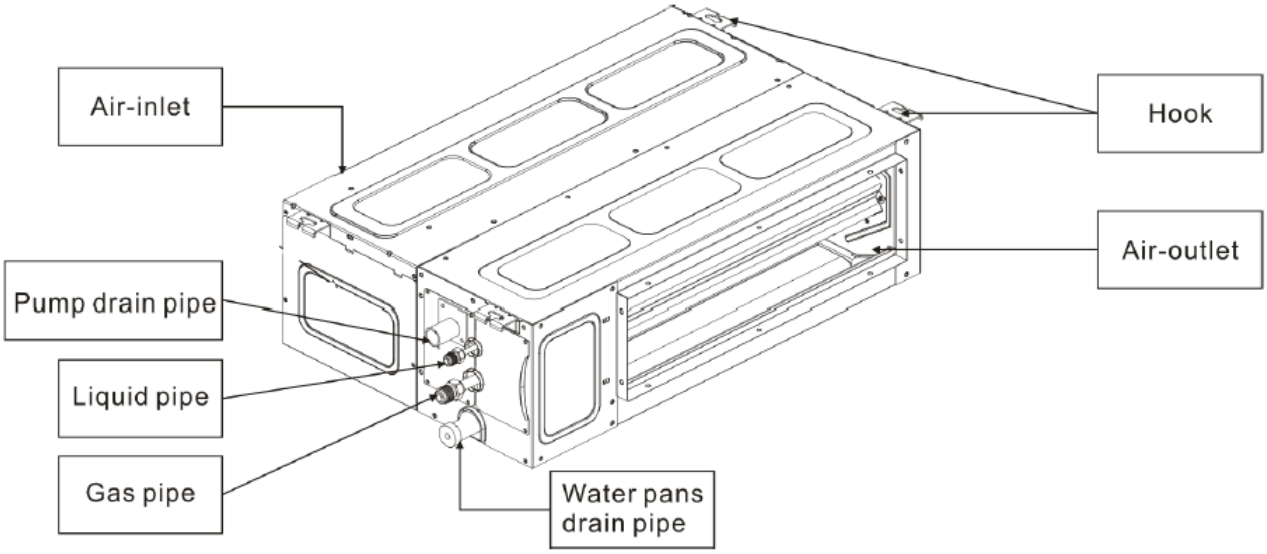
1. Unit parts

1.1 Cassette type

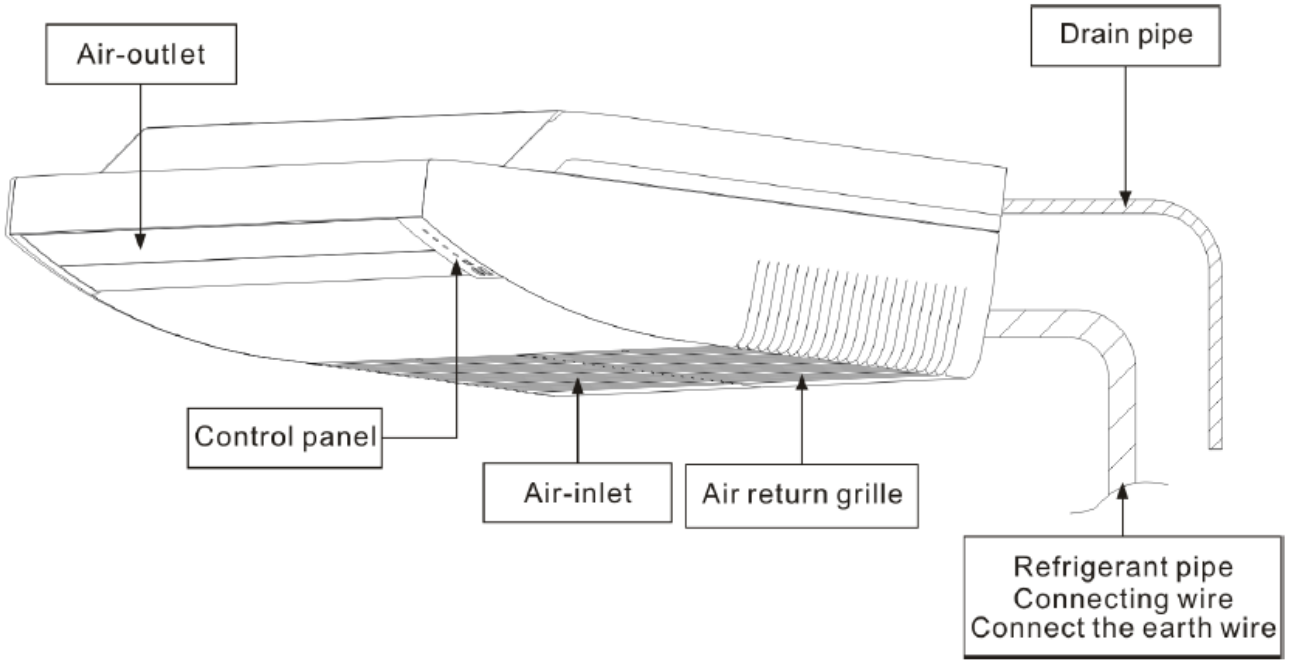
Round flow cassette unit



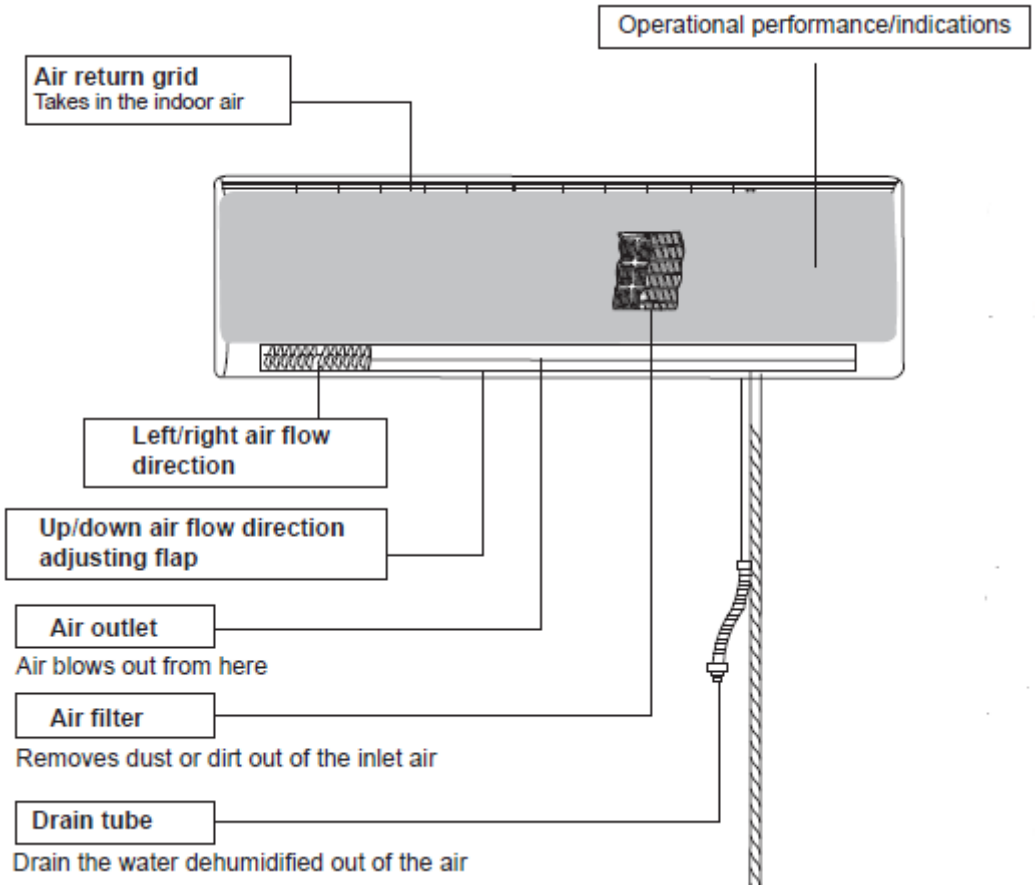
1.2 Ducted unit



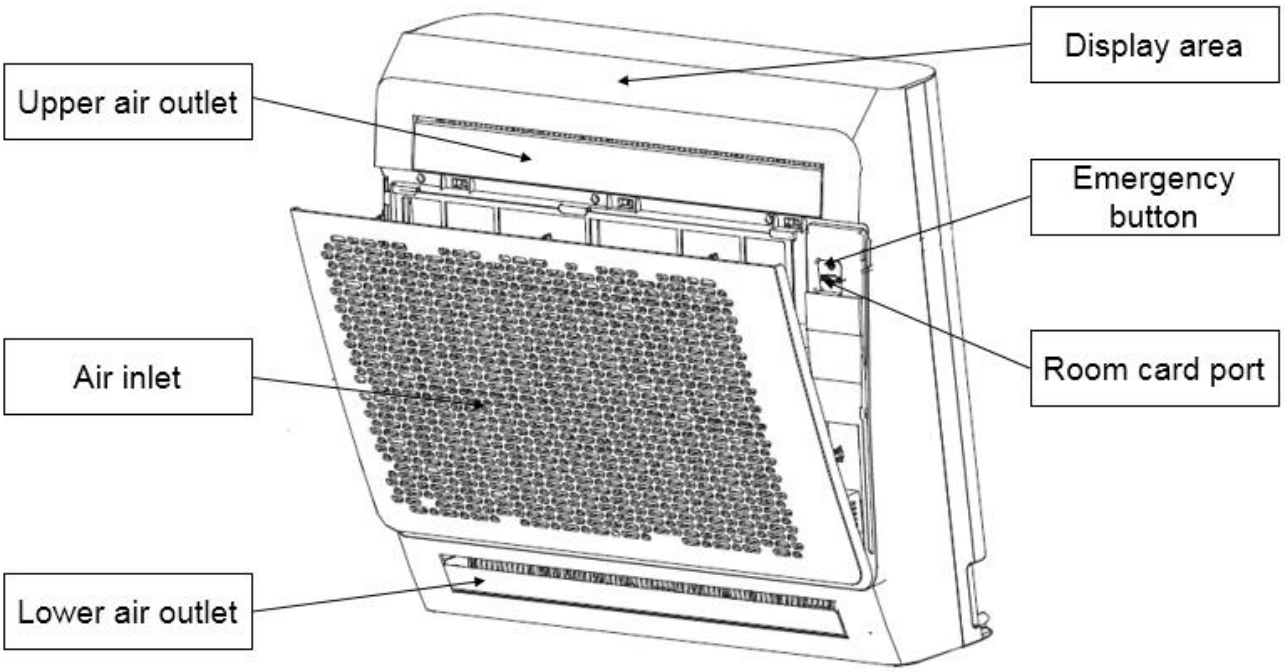
1.3 Floor ceiling unit



1.4 Wall mounted unit

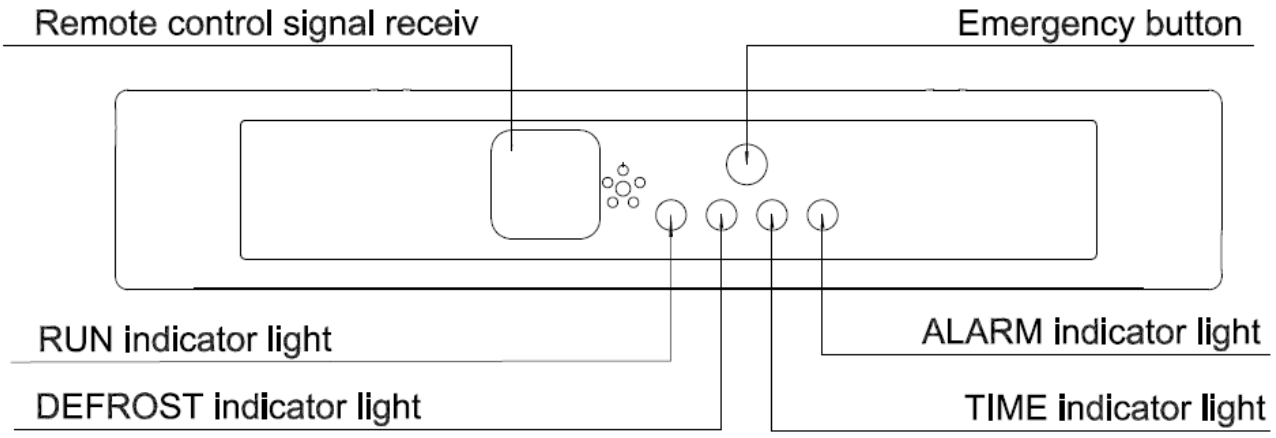


1.5 Console unit



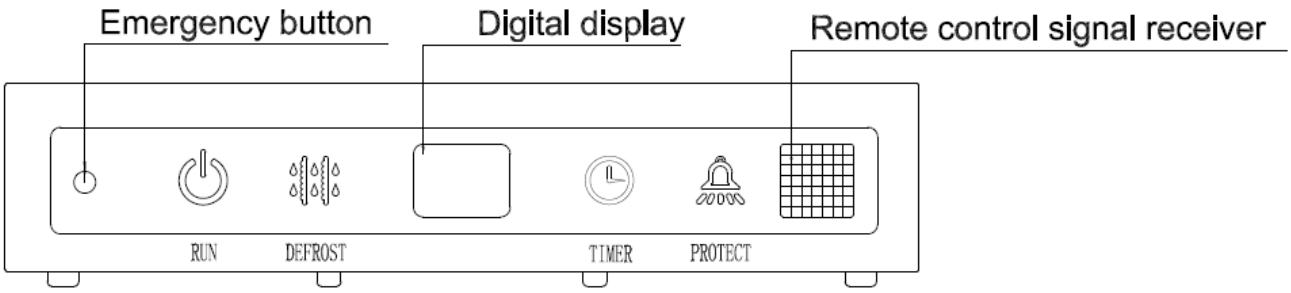
2. Display

2.1 LED display for cassette and ducted unit



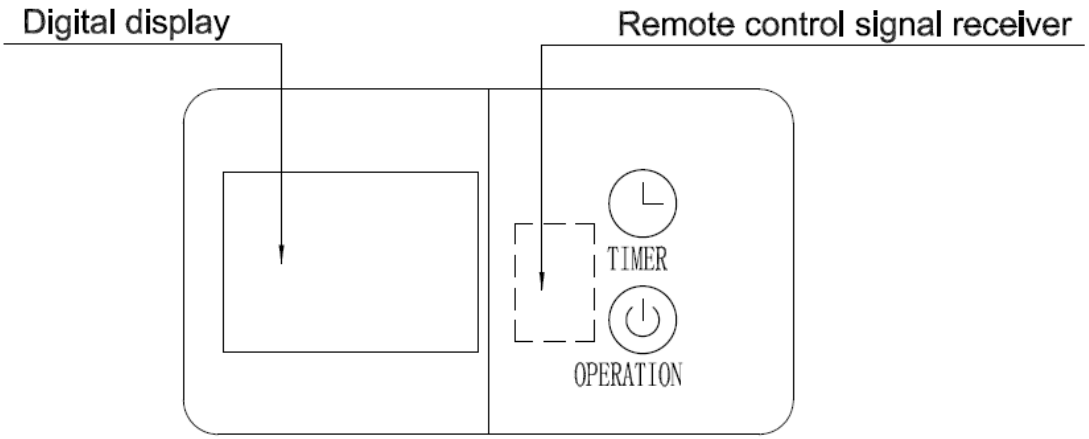
- When there is error, four LED lights will flash in different combinations. Please refer to Troubleshooting.

2.2 Digital display for cassette unit

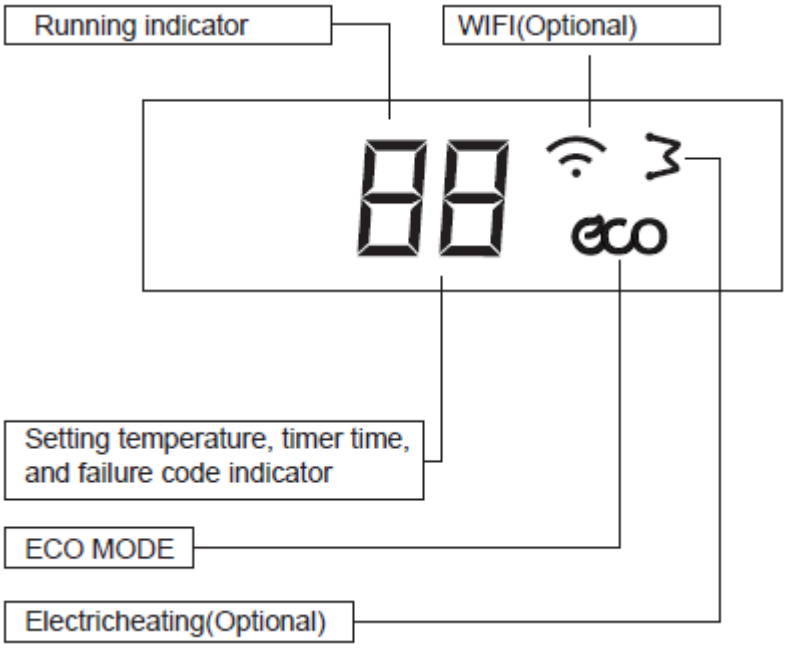


- When there is error, digital display will show error code directly.

2.3 Digital display for floor ceiling unit



2.4 Digital display for wall mounted unit



- After powering on, all icons will light 2 seconds.
- Unit will show CL when it is in self-cleaning mode.
- Unit will show HE when refrigerant leakage protection happens.
- Unit will show eco when ECO mode is activated.
- Unit will show when WIFI function is activated.
- Unit will show room temperature when it is in ventilation mode, and show setting temperature in other mode.
- Press Light button on wireless controller to turn off the display screen. Press Light button again to turn on the display screen.

2.5 Console unit display

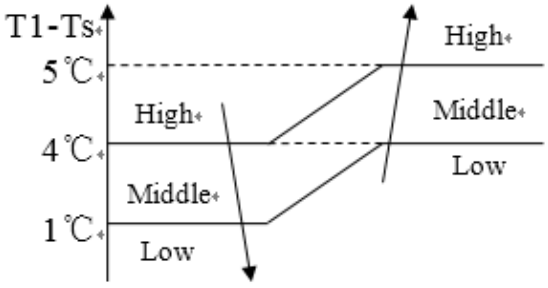
3. Functions

3.1 Abbreviation

Abbreviation	Element
T1	IDU room temperature
T2	IDU evaporator coil temperature
T3	ODU condenser coil temperature
T4	ODU ambient temperature
T5/TP	Discharge temperature
Ts	Setting temperature

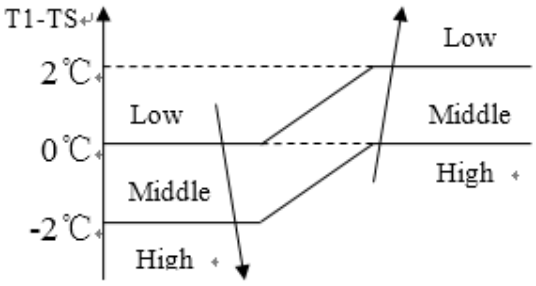
3.2 Cooling mode

- Press MODE button to switch different mode.
- In cooling mode, when turn off the indoor unit, indoor fan motor will run at the original fan speed for 30 seconds and then stop.
- Auto fan speed in cooling mode



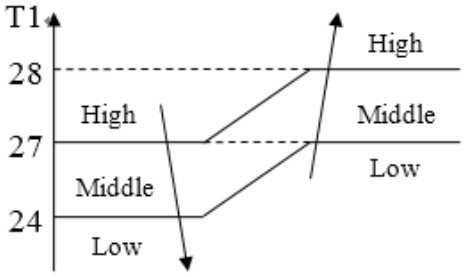
3.3 Heating mode

- Press MODE button to switch different mode.
- Anti-cold-wind protection: When turn on the unit in heating mode, only when T2 temperature is higher than a certain temperature, the fan motor runs. Otherwise, the fan motor stops and DEFROST light is ON.
- In heating mode, when turn off the indoor unit, indoor fan motor will run at the original fan speed for 45 seconds and then stop. Or when T2 temperature is lower than 30 degrees, fan motor will stop directly.
- Auto fan speed in heating mode:



3.4 Ventilation mode

- Press MODE button to switch different mode.
- Auto fan speed in ventilation mode



3.5 AUTO mode

- In AUTO mode, the default setting temperature is 25 degrees and it can be adjusted by remote controller.
- In auto mode, the running mode depends on the temperature difference between room temperature (T1) and setting temperature (Ts).
- After compressor stop working for 15min, unit will select running mode again according to room temperature and setting temperature.

3.6 TURBO mode

- For wall mounted unit, when press TURBO button on wireless controller, the fan motor will run at super high fan speed.
- For console units, when press TURBO on wireless controller, the fan motor will work at high fan speed.
- For other indoor units, this function is not available.

3.7 ECO mode

- Press ECO button to enter ECO mode. The setting temperature is 26 degrees.

3.8 Sleep mode

- Press SLEEP button to turn on or off sleep mode.
- The setting temperature will increase in cooling mode or decrease in heating mode by 1 degree per hour and will not change after two hours.
- The fan speed will set to low fan speed automatically and it can be changed.
- After 8 hours, unit will exit sleep mode directly. Or turn this mode off by remote controller.

3.9 AUTO restart function

- If unit lose power, it will restart automatically once power has been restored.
- On/off status, mode, fan speed, setting temperature, louver position, swing will be same as original state.

3.10 Timer function.

- The maximum range of the timing is 24 hours.
- Timer on function: Turn off indoor unit first, and then set the timer on time. The unit will turn on automatically after the setting time.
- Timer off function: Turn on indoor unit first, and then set the timer off time. The unit will shut down automatically after the setting time.
- The timer function is executed once.
- When timer function is activated, the timer light is ON.

3.11 IFEEL function

- For wall mounted unit, press IFEEL button on wireless controller (only some controller with this function) to activate this function. The controller will detect room temperature and send a signal to wall mounted unit every 3 minutes. If unit doesn't receive a signal from controller, or press IFEEL button again, this function will be OFF.
- For other indoor units, IFEEL button is not available. When they are connected with a wired controller, after setting DIP switch in indoor PCB, the room temperature is detected by wired controller.

3.12 Self-clean function

- Self-clean function is only available for wall mounted unit.
- Press "CLEAN" button on wireless controller to enter self-clean mode. "CL" will appear in indoor unit.
- If any one of the following conditions is satisfied, AC will exit self-clean mode.

  a. press "CLEAN" button again in self-clean mode to exit.

  b. press "ON/OFF" button to exit.

  c. after finishing the self-cleaning function, it will automatically shut down and exit the self-clean.
- In self-clean mode, the unit will run cooling mode first, and then heating mode. Finally, the indoor fan motor will still work 3 minutes and then stop.

3.13 Anti cold wind protection

- To prevent cold wind from blowing out in heating mode, when turn on the unit in heating mode, the fan motor will not start to work immediately.
- When evaporator temperature gets the preset temperature, the indoor fan motor starts to work.

3.14 Power-down memory

- It can be set in indoor unit PCB.
- The content of power-down memory: on/off status, mode, fan speed, setting temperature, louver

position, swing status.

- After the unit is powered on again, if the setting command has not been received, the memory content will take effect after 30S; if the setting command is received before this time, the memory content will not be read.

3.15 Room card function

- When the REMO_CTRL port in indoor unit PCB is connected, the indoor unit can be turned on and off normally. All functions are available.
- When this port is disconnected, the unit will automatically shut down. After the room card is plugged in, it will automatically recover.
- If room card function is not needed, please add a short circuit in this port.

3.16 Alarm output function

- Only wall mounted and cassette unit has alarm output port.
- When the AC has a fault, the remote alarm port will output a high level voltage; when the fault disappears, the remote alarm port output a low level.

4. Other features

4.1 Manual operation

In the event that your remote control fails to work, your unit can be operated manually with the MANUAL CONTROL button located on the indoor unit. Note that manual operation is not a long-term solution, and that operating the unit with your remote control is strongly recommended.

4.1.1 Cassette unit

- Press the emergency button in display panel, the unit will run in forced cooling mode. Running light and alarm light will flash.
- Press the emergency button again to exit forced cooling mode, or after running one hour, it will exit this mode automatically.

4.1.2 Wall mounted unit

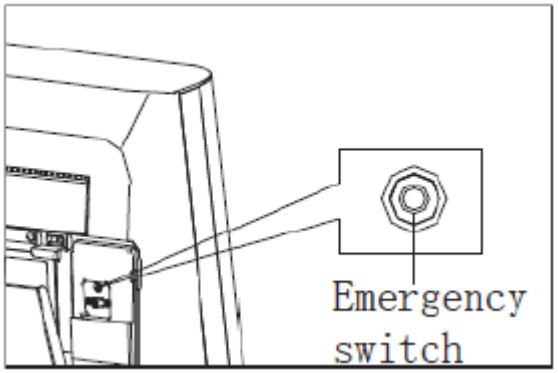
- Press the forced button in PCB, the unit switches forced mode in the following order: forced auto mode → forced cooling mode → OFF → forced auto mode.
- Forced auto mode operates the same as normal auto mode with a preset temperature of 24°C.
- Forced cooling mode

  The compressor and outdoor fan continue to run at a fixed frequency and the indoor fan runs at rated speed. After running for 30 minutes, the AC will switch to auto mode with a preset temperature of 24°C.
- When the unit receive the signal of mode setting, fan speed changing and temperature setting from remote controller, the unit will exist forced operation mode.

4.1.3 Console unit

- Open the front panel, press the emergency button in the top right corner, the unit runs in the following order:

  Cooling (24 degrees) → dehumidification (24 degrees) → heating (28 degrees) → turn off

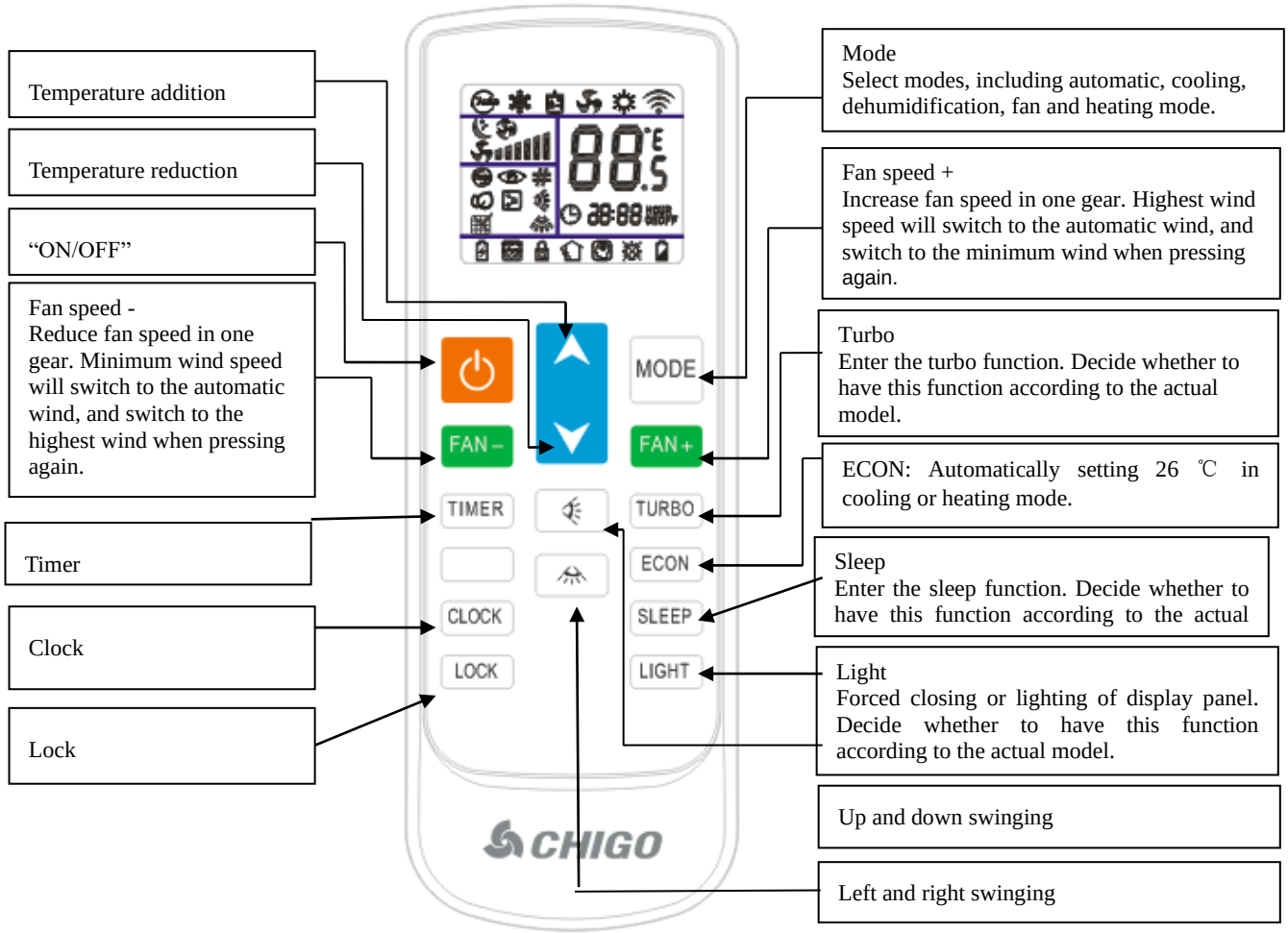


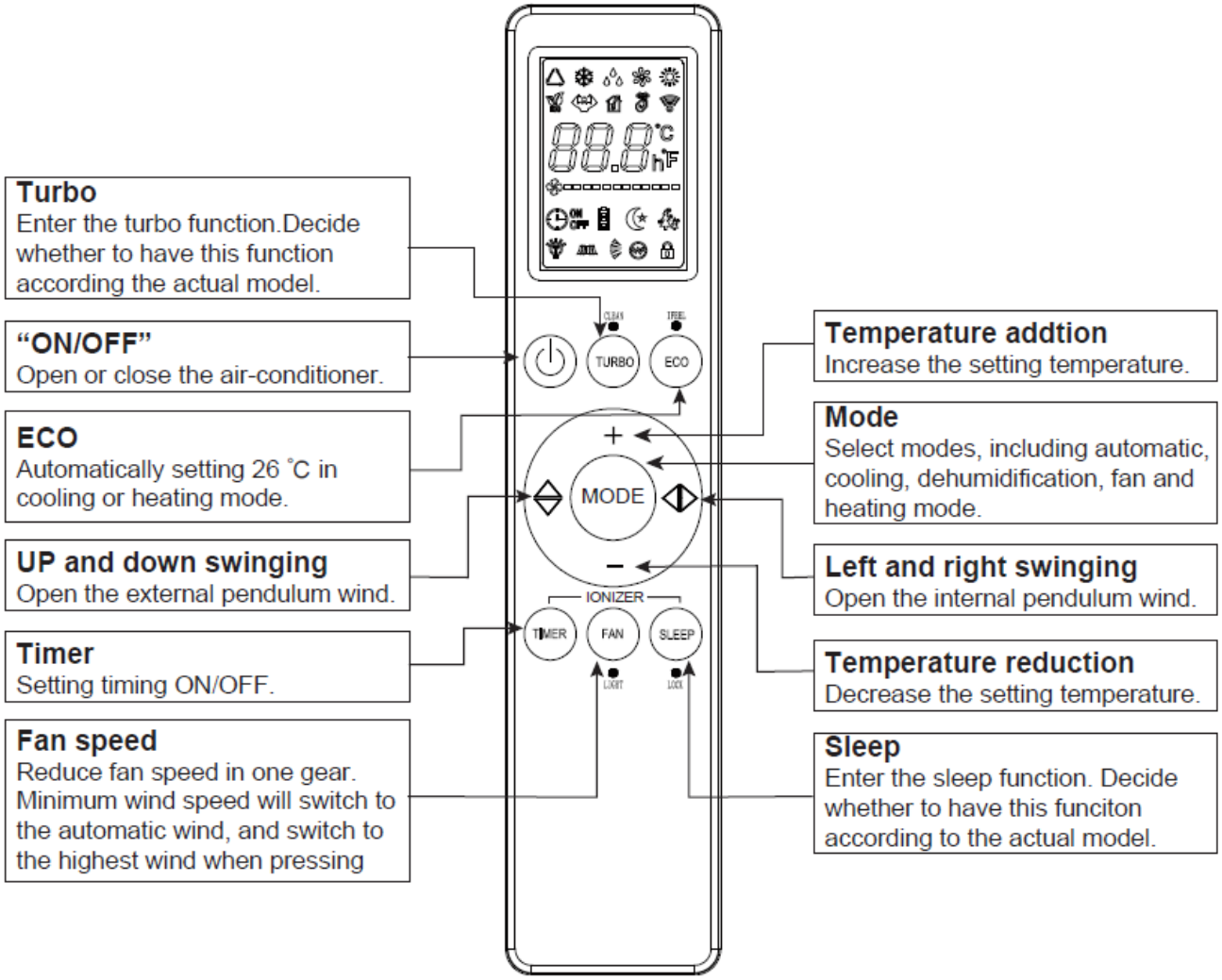
4.2 Louver setting

- When first powering on, the louver will open to maximum degree and then close.
- When turning on the unit, the louver will open to maximum degree and then to the preset degree.
- After pressing UP&DOWN swing button in remote controller, the external louver will begin to swing (upper louver for console unit). Press this button again the louver will stop to swing.
- After pressing LEFT&RIGHT swing button in remote controller, the inner louver will begin to swing (lower louver for console unit). Press this button again the louver will stop to swing. If the indoor unit is without inner step motor, this button is not available.

II. Controllers

1. Wireless controller





At the first power on, the LCD of the remote controller displays all the icons and then enters the standby state, displaying only the clock 12:00 and the light icon.

Button functions

（1） ON/OFF

- When pressing this key, the remote controller switches by "on, off, on" circularly.
- When the first power on, the working state is set by default: setting temperature 25℃（77℉), automatic mode, automatic fan speed, internal and external swing, no TURBO, no sleep, no timer, no lock).
- When the power on is not the first time, the state before shutdown is recovered. After shutdown, the sleep, TURBO, ECON and timer functions will be canceled.

（2） Mode

- When pressing this key, the remote controller switches by "automatic, cooling, dehumidification, fan, heating, automatic" circularly.

- The dehumidification mode is locked at 25℃ and the temperature can’t be adjusted. The internal swing stays unchanged according to the state before switching, but the external pendulum wind is forced to close.

（3） Temperature reduction

- Temperature setting: when pressing this key, the setting temperature will be reduced by 1. The temperature of centigrade model will be reduced progressively by "32℃, 31℃, ……, 17℃, 16℃". The temperature of Fahrenheit model will be reduced progressively by "90℉, 89℉, ……, 62℉, 61℉". When pressing this key in dehumidification and fan mode, the temperature will not change.
- In the clock setting state (the clock icon will flicker to show the prompt), this key is used to set the clock time.
- Keep pressing will continuously change the temperature.

（4） Temperature addition

- Temperature setting: when pressing this key, the setting temperature will be added by 1. The temperature of centigrade model will be added progressively by "16℃, 17℃, ……, 31℃, 32℃”. The temperature of Fahrenheit model will be added progressively by "61℉, 62 ℉, ……, 89℉, 90℉". When pressing this key in dehumidification and fan mode, the temperature will not change.
- In the clock setting state (the clock icon will flicker to show the prompt), this key is used to set the clock time.
- Keep pressing will continuously change the temperature.

（5） Up and down swinging (External louver)

- Pressing this key in the dehumidification mode, the external louver is forced to close.
- Pressing this key in the other modes, the external louver switches by "swing, fixed wind, swing" circularly.

（6） Left and right swinging (Internal louver)

- Pressing this key in the dehumidification mode, the internal louver stays unchanged according to the state before switching.
- Pressing this key in the other modes, the internal pendulum switches by "swing, stop, swing" circularly.
- This function is valid for the units with internal louvers and step motor.

（7） **“FAN -”**

- When the first power on, the remote controller is set to the automatic wind speed by default. In dehumidification mode, the wind speed is fixed to low wind and is not adjustable. By pressing the wind speed key, there is no response to the remote controller.
- Pressing this key in the other modes, the wind speed switches by "automatic wind speed, high speed, middle speed, low speed, automatic wind speed " circularly.

（8） **“FAN +”**

- When the first power on, the remote controller is set to the automatic wind speed by default. In dehumidification mode, the wind speed is fixed to low wind and is not adjustable. By pressing the wind speed key, there is no response to the remote controller.
- Pressing this key in the other modes, the wind speed switches by "automatic wind speed, low speed, middle speed, high speed, automatic wind speed " circularly.

（9） **Timer**

- Under the shutdown state, press this key to set the opening time, range from 1 hour to 24 hours.
- Under the boot state, press this key to set the shutdown time, range from 1 hour to 24 hours.
- The timing time is according to the cycle of "1h, 2h, ……, 23h, 24h, cancel, 1h".
- Exit timing adjustment after 3 seconds without key pressing.

（10） **TURBO**

- The TURBO key will not work in automatic mode, dehumidification mode and fan mode.
- Pressing this key in the cooling or heating mode, the TURBO mode switches between opening and closing. Switching mode or entering sleep function will close TURBO mode.

（11） **ECON/ECO**

- The remote controller is no ECON by default, and the ECON key will not work in automatic mode, dehumidification mode and fan mode.
- Pressing this key in the cooling or heating mode, the ECON mode switches between opening and closing. When in the ECON mode, the setting temperature is set to 26℃ (77℉) and other settings are unchanged. If closing ECON mode, the remote controller will recover to the setting before opening ECON mode. Switching mode will close ECON mode.

（12） **Sleep**

- Pressing this key in the modes except of the fan mode, the sleep function switches between opening and closing. Switching mode will cancel sleep function.
- When pressing this key, the wind speed is automatically switched to low wind. However, the wind speed can be adjusted according to the wind speed key (except of the dehumidification mode).

（13） Light

- When the first power on, there is lamplight by default. Pressing this key force to turn off or turn on the lamplight. Decide whether to have this function according to the actual model.

（14） Clock

- This key is used to set the clock. Pressing enters the hour adjustment state, and the hour digital tube on the LCD is flickering at the same time. The hour can be set by temperature addition or reduction keys, and it ranges from 0 to 23.
- When the hour is set, press this key again to enter the minute adjustment state, and the minute digital tube on the LCD is flickering at the same time. The minute can be set by temperature addition or reduction keys, and it ranges from 00 to 59.
- After adjusting, press the clock key again to confirm the setting and the adjustment state exits. If do not press the clock key again to confirm, the time adjustment state will exit after 3 seconds, and recover the clock before the adjustment.
- Only some remote controllers have this key.

（15） Lock

- There is no lock by default. Pressing this key, the lock function switches between opening and closing.
- When it is locked, the remote controller does not work except the lock key.

(16) CLEAN

- Pressing TURBO key 3S, the CLEAN function switches between opening and closing.
- Decide whether to have this function according to the actual model.
- Only some remote controllers have this key.

(17) IFEEL

- The remote controller is no IFEL by default. Pressing ECO key 3S, the IFEEL function switches between opening and closing.
- Decide whether to have this function according to the actual model.
- Only some remote controllers have this key.

2. Wired controller

5-core wired controller

5-core wired controller

3-core wired controller

- 5-core wired controller is for cassette, ducted and floor ceiling unit. 3-core wired controller is for wall mounted unit.

- 26℃/ button
  - Short press this button, the setting temperature is set to 26 degrees. This function in cooling mode and heating mode is effective.
  - Long press this button, it will enter query condition. Press UP or DOWN button to check next or last parameter.
- DIP switch
  - For 5-core and 3-core wired controller, when the fourth bit in ON position, the controller is with power-down memory function. When the fourth bit in OFF position, the controller is without power-down memory function.
  - For 3-core wired controller: the second and third bit is used to select room temperature compensation value. (only valid for room temperature detecting by wired controller)

	2 ON	2 OFF
3 ON	-4℃	-2℃
3 OFF	2℃	0℃

- button (only for 3-core wired controller)

- At any time, press this button to enter the function setting interface. Under the function setting interface, each time this button is pressed, the corresponding icon of the item to be set will enter the flickering state. Press the switch key to confirm the settings and exit the function settings interface after the settings are completed.

1) Press the function button, the pendulum icon ( ) flickers, and the middle position of the display displays setting parameters: 0-close, 1-open; press "▲ "or"▼" key to adjust on or off.

2) Press the function button to enter the next setting, the swing icon ( ) flickers, and the middle position of the display screen shows setting parameters: 0-close, 1-open; press"▲"or"▼"key to adjust on or off.

3) Press the function key to enter the next setting, when the filter screen cleaning reminder icon "", the middle position of the display screen will display setting parameter :1, press"▲"or"▼"key to adjust cancel or not cancel the warning function;If without "",the time for regular cleaning is not up; otherwise, skip to the next function setting.

4) Press the function button to enter the next setting, the electric heating setting icon"" flashes, and the setting parameters will be displayed in the middle position of the display screen: 0-manually close;1- manually open;2- auto switch, press "▲"or"▼" key to adjust parameters;

5) Press the function button to enter the next setting, the sleep setting icon "" flashes. Setting parameters will be displayed in the middle of the display screen: 0-close, 1-open;press"▲"or"▼"key to open or close;

6) Press the function button to enter the next setting, and the key lock icon "" flashes. Setting parameters will be displayed in the middle of the display screen: 0-close, 1-open; press"▲"or"▼"key to open or close;(effective after exiting the function setting interface)

7) Press the function button to enter the next setting, enter the setting of timing startup time, and the "ON" icon set at a certain time flashes, the current state is displayed at the lower left corner of the display screen;"--" means no setting open time, by pressing "▲"or"▼"key to adjust time to start up, 0.5H;"**h" means setting starting up after ** hour;

8) Press the function button to enter the next setting and enter the time setting of the timer switch. The "OFF" icon of the timer switch flashes and the current state is displayed at the lower left corner of the display screen;"--" refers to no fixed shutdown time, pressing "▲"or"▼"key to setting timing shutdown time, 0.5H;"**h" means setting shutdown after ** hour;

9) Press the function button to enter the next setting, and "--" will be displayed in the middle of the display screen. At this time, enter the function setting entry. Long press "26℃/🔍" button to enter the user parameter setting interface; In the user parameters interface. The number on the left side of the display screen displays the serial number of setting items, and the number in the middle of the display screen displays the value of setting parameters.

Following below table .In the user parameter setting interface, press "wind speed +" and "wind speed -" buttons or function buttons to select the serial number of the setting item; press "▲"and"▼" keys to regulate parameter values.

Items	Parameter	Instructions	remarks
1	Fahrenheit / centigrade setting	default ℃, ℃->℉->℃	Display setting temperature
2	Max temperature setting	Default 32℃, 24℃-32℃ can be adjusted. Default 88℉, 76℉-88℉ can be adjusted	Display settings
3	Min temperature setting	Default 16℃, 16℃-24℃ can be adjusted. Default 61℉, 61℉-76℉ can be adjusted	Display settings
4	Main interface temperature display	Display setting temperature (default) /display indoor side temperature	Display setting temp/display indoor side temperature
5	select prompt tone of press button	0:voiced (default) 1:silent	Display 0 or 1
6	Clean time setting	2000h/3000h/3500h/4000h /5000h (default:4000h)	Display 20/30/40/50
7	Wire controller master /slave setting	0:master (default) 1:slave	It can be set when two wire controller connected otherwise can't communication
8	VRF system address setting	0-63	

Ⅲ. Troubleshooting

1. Common issue

The following issues may be not a problem and it may not require repairs.

Issue	Possible reasons
Unit does not turn on when pressing ON/OFF button	The Unit has a 3-minute protection feature that prevents the unit from overloading. The unit cannot be restarted within three minutes of being turned off.
The unit changes from COOL/HEAT mode to FAN mode	The unit may change its setting to prevent frost from forming on the unit. Once the temperature increases, the unit will start operating in the previously selected mode again.
	The set temperature has been reached, at which point the unit turns off the compressor. The unit will continue operating when the temperature fluctuates again.
The indoor unit emits white mist	In humid areas, a large temperature difference between the room's air and the conditioned air will cause white mist.
Both the indoor and outdoor unit emits white mist	When the unit restarts in heating mode after defrosting, white mist may be emitted due to moisture generated from the defrosting process.
Indoor unit makes noises	A rushing air sound may occur when the louver resets its position.
	A squeaking sound may occur after running heating mode due to expansion and contraction of the unit's plastic parts.
Both the indoor unit and outdoor unit makes noises	Low hissing sound during operation: This is normal and is caused by refrigerant gas flowing through indoor and outdoor units.
	Low hissing sound when the system starts, just stops, or is defrosting: This noise is normal and is caused by the refrigerant gas stopping or changing direction.
	Squeaking sound: Normal expansion and contraction of plastic and metal parts caused by temperature changes during operation can cause squeaking noises.
The fan of outdoor unit does not operate	During operation, the fan speed is controlled to optimize product operation.

2. Error code list

2.1 Indoor unit

Digital display	LED display	Error
E2	Timer light flashes	Room temperature (T1) sensor fault
E3	Defrost, running, alarm light flashes	Evaporator temperature (T2)sensor fault
E4	Defrost light flashes	Evaporator outlet temperature (T2B) sensor fault
EE	Alarm light flashes	Water over protection
E9	Running, defrost light flashes	Communication failure between IDU and wired controller
E7	Running, timer light flashes	Indoor unit EEPROM error
E8	Defrost, timer light flashes	Indoor unit fan motor stall protection
F4	Defrost, alarm light flashes	Ambient temperature (T4) sensor fault
F5		Discharge temperature (T5) sensor fault
P9		Outdoor unit fan motor protection
E5		Other outdoor unit errors
FE		Outdoor unit EEPROM error
F6		Condenser temperature (T3) sensor fault
P5		High condenser temperature protection
PA		Anti-typhoon protection
L1		DC bus low voltage protection
PE		Secondary over-current protection
EF		Mode conflict
P6		IPM protection
H6		Three times high discharge temperature protection
H5		Three times low pressure protection
E1	Timer, alarm light flashes	Communication error between IDU and ODU
P1	Running, defrost, timer light flashes	High pressure protection
P2	Defrost, timer, alarm light flashes	Low pressure protection

P4	Running, timer, alarm light flashes	Over-high discharge temperature protection
E0	Running, defrost, timer, alarm light flashes	Three-phase power phase sequence fault
HC	/	Room card port disconnected
HE	/	Refrigerant leakage protection

2.2 Outdoor unit without display PCB

Read error codes from maintenance controller.

Error code	Description
E01	Communication fault between IDU and ODU
E02	Zero cross detection fault of IDU
E03	stall fault of indoor fan
E04	T2B (indoor coil outlet temp.) sensor fault
E08	Mode conflict
E09	ODU EEPROM error
E0E	IDU EEPROM error
E11	IDU T1 (room temperature) sensor fault
E12	IDU T2 (indoor coil middle temp.) sensor fault
E13	ODU T3 (outdoor coil outlet temp.) sensor fault
E14	ODU T4 (ambient temp.) sensor fault
E15	ODU discharge temp. sensor fault
E16	IPM temp. sensor fault
E17	Suction temp. sensor fault
E18	TZA sensor fault
E19	TZB sensor fault
E2x	Fan motor fault
P0C	Current protection
P1x	Bus voltage protection
P21	Low temperature dehumidification fault
P22	High and low temp. protection of evaporator

P23	High temp. protection of condenser
P24	High and low temp. protection of environment
P25	High discharge temperature of compressor
P28	Abnormal discharge in commodity inspection mode (compressor reversal)
P29	T3 abnormal in commodity inspection heating mode (System exception, 4-way valve disconnected)
P30	High pressure protection
P31	Low pressure protection
H1x	Compressor fault
H3x	PFC fault
L01	Lower frequency because of voltage limit
L02	Lower frequency because of high or low temp. limit of evaporator
L03	Lower frequency because of high temp. limit of condenser
L05	Lower frequency because of high discharge temp. of compressor
L06	Lower frequency because of IPM temperature limit
L0C	Lower frequency because of current limit

2.3 Outdoor unit with display PCB

Error code	Description
E2	Communication error between IDU and ODU
E4	Environment temperature (T4) sensor fault
E5	Discharge temperature sensor fault
E6	Condenser temperature sensor fault
E9	AC overcurrent/undercurrent protection
E10	EEPROM error
H0	Communication error between main chip and DSP
H4	Three times P6 protection in 30 minutes
H5	Three times P2 protection in 30 minutes
H6	Three times P4 protection in 100 minutes

H10	Three times P3 protection in 60 minutes
P1	High pressure protection
P2	Low pressure protection
P3	AC/DC over-current protection
P4	Over-high discharge temperature protection
P5	High condenser temperature protection
P6	IPM module protection

3. Spot check

3.1 Wall mounted unit

- Method 1: After powering on 5s, long press the button in indoor unit PCB for 5s, to enter spot check. And then short press this button to read more parameters.
- Method 2: After powering on, press “up & down swing” and “left & right swing” button alternately 5 times within 10 seconds to enter spot check. Press “up & down swing” and “left & right swing” button to read more parameters.
- Spot check table:

No.	Content
0-	Setting temperature
1-	Indoor temperature (T1),
2-	Indoor unit evaporator temperature (T2 or T2B)
3-	EEPROM code
4-	Software code
5-	Outdoor unit error code
6-	Outdoor unit running frequency
7-	Outdoor unit condenser temperature (T3)
8-	Outdoor ambient temperature (T4)
9-	Indoor unit fan speed (f0 means 1500rpm, a1 means 1010rpm)

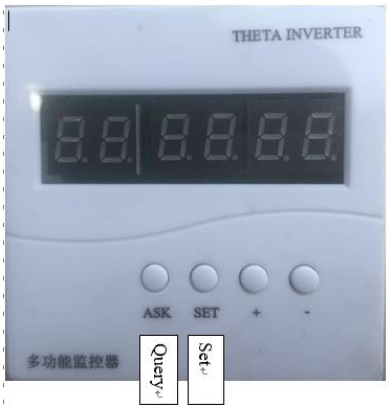
3.2 Wired controller

Long press “CHECK” button then press “UP” or “DOWN” button to check parameters.

No.	Description	Remark
1	Indoor unit capacity	Capacity= display data*10
2	Indoor unit demanded capacity	
3	Amended demanded capacity by T4	
4	Amended demanded capacity by T2	
5	T1 room temperature	
6	T2 evaporator temperature	
7	T2B evaporator outlet temperature	
8	T3 condenser temperature	
9	T4 ambient temperature	
10	T5/TP discharge temperature	
11	EXV opening degree	Opening degree= display data*4
12	Compressor running frequency	
13	AC voltage	Voltage=display data*4

3.3 Outdoor unit without display PCB

Press “Query” and “+” or “-” to turn to the page to find following information:



Code	Description	Remark
Fr	Running frequency	
FT	Target frequency	
T1	Unit A T1	
T2	Unit A T2	
Sr	IDU A fan speed	

Tb	IDUA T2B	Only multi split
AL	DU A EXV opening degree	Only multi split
An	Capacity demand of IDU A	Only multi split
Hn	Amended total capacity demand	Only multi split
b1	Unit B T1	Only multi split
b2	Unit B T2	Only multi split
bb	Unit B T2B	Only multi split
bS	Unit B fan speed	Only multi split
bL	Unit B EXV opening degree	Only multi split
bn	Capacity demand of IDU B	Only multi split
TH	Suction temperature	Only multi split
T3	Outdoor unit pipe temperature	
T4	Ambient temperature	
TP	Discharge temperature	
T6	IPM board temperature	
od	Mode	
dT	Outdoor load target state	
CC	Quantity of IDU	Only multi split
Ud	DC voltage	
dL	Current	
Pr	Outdoor unit fan speed	
Lr	Master EXV opening degree	

3.4 Outdoor unit with display PCB

No.	Description	No.	Description
1	Outdoor unit capacity	20	Indoor unit B demanded capacity
2	Running mode (0: shutdown, 1: cooling, 3: heating, 4: forced cooling)	21	T1 room temperature of indoor unit B
3	Indoor unit demanded capacity	22	EXV opening degree of indoor unit B
4	Actual operation ability	23	Indoor unit C demanded capacity

5	Target operation ability	24	T1 room temperature of indoor unit C
6	Fan speed (0~7)	25	EXV opening degree of indoor unit C
7	Average evaporator temperature	26	Indoor unit D demanded capacity
8	T3 condenser temperature	27	T1 room temperature of indoor unit D
9	T4 outdoor ambient temperature	28	EXV opening degree of indoor unit D
10	TP discharge temperature	29	Indoor unit E demanded capacity
11	AC current	30	T1 room temperature of indoor unit E
12	DC current	31	EXV opening degree of indoor unit E
13	AC voltage	32	Average temperature of T2B
14	DC voltage	33	Frequency limit (1: current limit, 2: cooling limit, 4: T5, 8: T3, 16: T2)
15	The quantity of indoor units	34	The reason of T6 protection
16	The quantity of turned on indoor units	35	Software version
17	Indoor unit A demanded capacity	36	EEPROM version
18	T1 room temperature of indoor unit A	37	Last error or protection code
19	EXV opening degree of indoor unit A		

4. Indoor unit errors troubleshooting

Error code	Description	Reasons and solutions
E1	Communication error between ODU & IDU	1. communication wires connect wrongly 2. fire and zero line of IDU and ODU should be one-to-one corresponding 3. There is interference in the lines or damage to the indoor and outdoor PCBs.
E2	T1 temp. sensor fault	1. Check whether the sensor connector is loose, if the plug is loose, reconnect the plug, otherwise proceed to the next inspection; 2. Pull out the sensor plug and measure the resistance of the sensor to see if there is a short circuit or open circuit (the sensor is a 5K temperature sensor). If the sensor is short circuited or open, replace the sensor, otherwise replace the PCB.
E3	T2 temp. sensor fault	
E4	T2B temp. sensor fault	
E7	EEPROM error	1. Observe whether the EEPROM has burnt black, weak solder, or poor

		contact; 2. Pull out the EEPROM and re-insert it; 3. Replace EEPROM or replace the PCB.
E8	Fan motor stall protection	1. Check whether the plug on the IDU PCB is loose, if it is loose, plug it in tightly, otherwise proceed to the next inspection; 2. Check whether the motor coil of the indoor unit is open or short-circuited. Turn the fan blade to see if it is stuck. If so, replace the motor, otherwise replace the PCB.
E9	Wired controller communication error	1. Check whether the connection of wired controller is correct, and whether the wired controller matches the indoor PCB; 2. Check whether the cable of the wired controller is disconnected and whether the connectors are firmly connected; 3. Try to replace the wired controller. If the replacement of the wired controller cannot solve the problem, replace the indoor PCB.
EE	Water over protection	1. Check whether the water level is normal and whether the water level switch is normal; 2. If there is no water pump, check whether the SW port in PCB is short-connected.
EF	Mode conflict	Running modes of indoor units are different.
HC	Remo port disconnected	1. Check whether the REMO port on the internal board is short-circuited, if not, short-circuit it; 2. If the fault still exists after short-circuiting, replace the PCB.
HE	Refrigerant leakage protection	1. Check whether the amount of external refrigerant is sufficient; 2. Check whether the sensor is installed in the correct position;

5. Outdoor unit errors troubleshooting

Error code	Description	Reasons and solutions
E2	Communication error between ODU & IDU	1. communication wires connect wrongly 2. fire and zero line of IDU and ODU should be one-to-one corresponding 3. There is interference in the lines or damage to the indoor and outdoor PCBs.
E4	T4 temp. sensor fault	1. Check whether the sensor connector is loose, if the plug is loose, reconnect the plug, otherwise proceed to the next inspection;

E6	T3 temp. sensor fault	2. Pull out the sensor plug and measure the resistance of the sensor to see if there is a short circuit or open circuit (the sensor is a 5k ohm temperature sensor). If the sensor is short circuited or open, replace the sensor, otherwise replace the PCB.
E5	T5 temp. sensor fault	1. Check whether the sensor connector is loose, if the plug is loose, reconnect the plug, otherwise proceed to the next inspection; 2. Pull out the sensor plug and measure the resistance of the sensor to see if there is a short circuit or open circuit (the sensor is a 50K ohm temperature sensor). If the sensor is short circuited or open, replace the sensor, otherwise replace the PCB.
E9	AC overcurrent /undercurrent protection	1. Check whether the input power supply is abnormal, whether it is lower than 140V or higher than 270V.
E10	EEPROM error	1. Observe whether the EEPROM has burnt black, weak solder, or poor contact; 2. Pull out the EEPROM and re-insert it; 3. Replace EEPROM or replace the PCB.
P1	High pressure protection	1. Check whether the high pressure short circuit wire is connected well with PCB.
P2/H5	Low pressure protection	1. Check whether the low pressure switch connector is loose, if the plug is loose, reconnect the plug 2. Check whether the low pressure switch is broken. Measure the resistance of switch, if the switch is normal, the value is 0. 3. Check whether the outdoor ambient temperature is too low. If yes, stop the unit. 4. Check whether the stop valve is opened. 5.Check whether the refrigerant is enough.
P3/H10	AC/DC over-current protection	1. Check whether the outdoor ambient temperature is too high. 2. Check whether the outdoor unit is bad ventilation or the heat exchanger is dirty. 3. Check whether the refrigerant pipe is blocked.
P4/H6	Over-high discharge temperature protection	1. Restart the outdoor unit first. 2. Check whether the connection is right between compressor discharge temp. sensor and PCB. 3. Measure the resistance of discharge temperature sensor. The normal value refers to appendix. 4. Check whether the system is blocked and whether the pressure is

		normal, whether there is refrigerant leakage.
P5	High condenser temperature protection	1. Check whether the outdoor ambient temperature is too high. 2. Check whether the outdoor unit is bad ventilation or the heat exchanger is dirty. 3. Check whether the refrigerant pipe is blocked. 4. Check whether the outdoor fan motor works normally. 5. Measure the resistance of temperature sensor. The normal value refers to appendix.
P6/H4	IPM module protection	1. Check whether the compressor connections are loose. 2. Check whether the compressor is stuck or not; 3. Check whether the system is blocked and the pressure is normal. 4. Check whether the input power supply is abnormal, whether it is lower than 140V or higher than 270V.