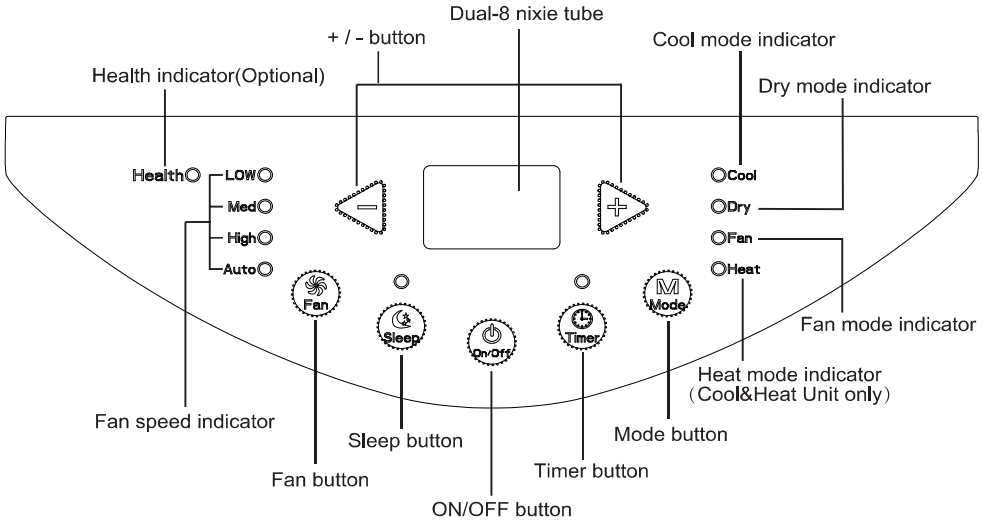
6. Function and Control

6.1 Introduction of control panel



Operation of control panel

Note:

●After putting through the power, the air conditioner will give out a sound. After that, you can operate the air conditioner by the control panel.

● Under ON status, after each pressing of the button on control panel, the air conditioner will give out a sound. Meanwhile, corresponding indicator on control panel will be bright.

● Under OFF status, dual-8 nixie tube on control panel wont display.
Under ON status, dual-8 nixie tube on control panel will display set temperature.
under cooling mode, while it wont display under other modes

1. ON/OFF button

Press this button to turn on or turn off air conditioner.

2. + / - button

Under cooling mode, press "+" or "-" button to increase or decrease set temperature by1°C(°F). Set temperature range is 16°C(61°F)~30°C(86°F). Under auto, drying or fan mode, this button is invalid.

3. Mode button

Press this button and the mode will circulate according to below sequence:

COOL→DRY→FAN

COOL: Under this mode, cooling mode indicator is bright. Dual-8 nixie tube displays set temperature. Temperature setting range is16°C~30°C.

DRY: Under this mode, drying mode indicator is bright. Dual-8 nixie tube wont display.

FAN: Under this mode, air conditioner operates at set fan speed. Fan indicator and corresponding speed indicator is ON. Dual-8 nixie tube wont display.(Note: You must connect the heat-discharge pipe before operating cooling or drying mode. No need for only fan mode.)

Heat Cool&Heat Unit only : Under this mode, heating mode indicator is bright.
Dual-8 nixie tube displays set temperature.
Temperature setting range is 16°C~30°C.

4. FAN button

Press this button and the fan speed will circulate as "low speed→medium speed →high speed→auto fan→low speed".

5. Timer button

Press timer button to enter into timer setting mode. Under this mode, press " + " or " - " button to adjust the timer setting. Timer setting will increase or decrease 0.5 hour by pressing " + " or " - " button within 10 hours, while timer setting will increase or decrease 1 hour by pressing " + " or " - " button beyond 10 hours.After timer setting is finished, the unit will display temperature if theres no operation for 5s. If timer function is started up, the upper indicator will keep the display status. Others, it wont be displayed. Under timer mode, press timer button again to cancel timer mode.

6. Sleep

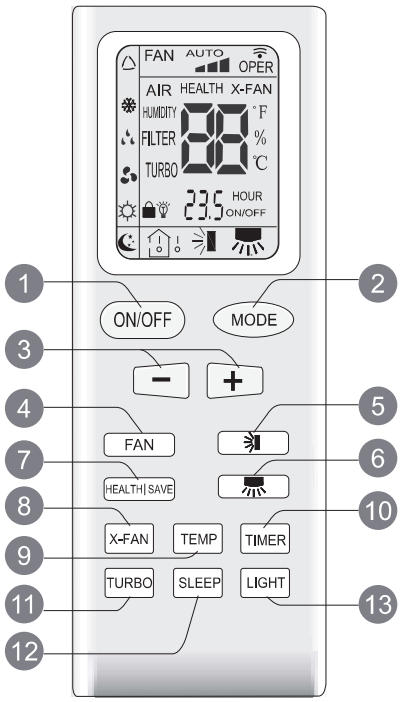
● Press sleep button to enter into sleep mode. If the controller operates at cooling mode, after sleep mode is started up, preset temperature will increase by 1°C within 1 hour ;preset temperature will increase by 2°C within 2 hours and then the unit will operate at this temperature all the time;

● Press sleep button to enter into sleep mode. If the controller operates at heating mode, after sleep mode is started up, preset temperature will decrease by 1°C within 1 hour ;preset temperature will decrease by 2°C within 2 hours and then the unit will operate at this temperature all the time;

● Sleep function is not available for fan mode, drying mode. If sleep function is started up, the upper indicator will keep the display status. Others, it wont be displayed.

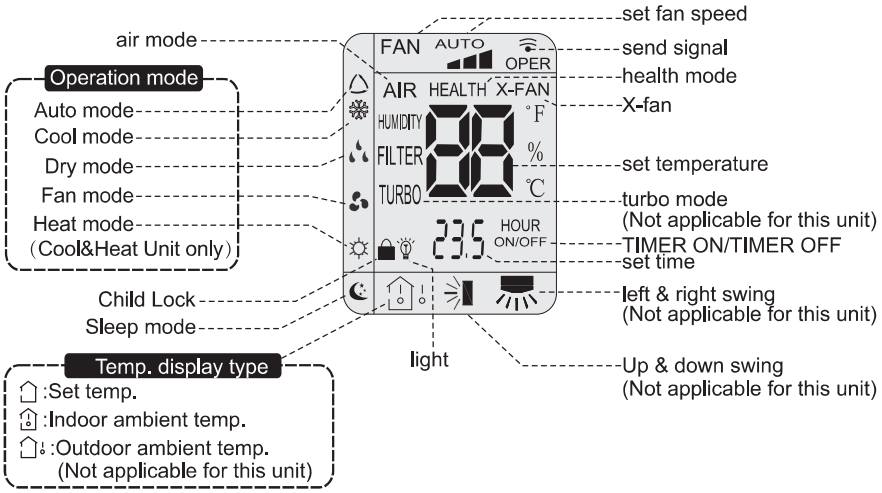
6.2 Remote Controller Introduction

Buttons on Remote Controller



1. ON/OFF button
2. MODE button
3. +/- button
4. FAN button
5. button(Not applicable for this unit)
6. button(Not applicable for this unit)
7. HEALTH|SAVE button
8. X-FAN button
   (Note: X-FAN is same with BLOW)
9. TEMP button
10. TIMER button
11. TURBO button
    (Not applicable for this unit)
12. SLEEP button
13. LIGHT button

Icon Display on Remote Controller



Note:

- This is a general use remote controller, it could be used for the air conditioners with multifunction; For some function, which the model doesn't have, if press the with multifunction; For some function, which the model doesn't have, if press the corresponding button on the remote controller that the unit will keep the original running status.
- After putting through the power, the air conditioner will give out a sound. Operation indictor "⏻" is ON (red indicator). After that, you can operate the air conditioner by using remote controller.
- Under on status, pressing the button on the remote controller, the signal icon "📶" on the display of remote controller will blink once and the air conditioner will give out a “de” sound, which means the signal has been sent to the air conditioner.
- Under off status, set temperature and clock icon will be displayed on the display of remote controller(If timer on,timer off and light functions are set, the corre-sponding icons will be displayed on the display of remote controller at the same time) Under on status, the display will show the corresponding set function icons.

1.ON/DFF button

Press this button can turn on or turn off the air conditioner. After turning on the unit,operation indicator " ⏻" on the unit is ON (green indicator. Color may be differ-ent for different models) and the unit gives out a sound.

2.MODE button

Press this button can select your required operation mode.

● After selecting auto mode, air conditioner will operate automatically according to ambient temperature. Set temperature cant be adjusted and also cant be displa- yed. Press "FAN" button can adjust fan speed.

● After selecting cool mode, air conditioner operates under cool mode. Cool indicator "❄" on the unit is ON. You can press "+" or "-" button to adjust set temperature. Press "FAN" button can adjust fan speed.

● After selecting dry mode, air conditioner operates under dry mode at low speed. Dry indicator "💧" on the unit is ON. Under dry mode, fan speed cant be ad- justed.

● After selecting fan mode, air conditioner operates only under fan mode, All mode indicators on the unit is OFF. Operation indicator is ON. Press "FAN" button can adjust fan speed.

● After selecting heat mode, air conditioner operates under heat mode. Heat indicator "☼" on the unit is ON. You can press "+" or "-" button to adjust set temperature.

Press "FAN" button to adjust fan speed.

(Cool&Heat Unit only)

Note:

For preventing cold wind, after starting up heating mode, indoor fan will blow fanafterdelaying 1-5min. (Details time is decided by indoor ambient temperature)Temperature setting range on remote controller: 16℃-30℃. Fan speed setting range: auto, low speed, medium speed and high speed.

3."+"or"-"button

● After each pressing of "+" or "-" button, it can increase or decrease set temperature 1℃. Hold "+" or "-" button, 2s later, set temperature on remote controller will change quickly. After reaching to your required time, loosen the button. Temperature indicator on the unit will also change accordingly. (Temperature cant be adjusted under auto mode)

4. FAN Button

Pressin this button can select fan s eed circularly as: AUTO, SPEED 1 (▁), SPEED 2 (▁▃), SPEED 3 (▁▃▅).

Note:

◆ Under Auto mode, air conditioner will select proper fan speed automatically according to ex-factory setting.

◆ Fan speed can't be adjusted under Dry mode.

5. button(Not applicable for this unit)

6. button(Not applicable for this unit)

7.HEALTH SAVE button

HEALTH FUNCTION:

After pressing HEALTH button, remote controller will switch circularly as below:"HEALTH"→"AIR"→"AIR HEALTH"→"no display"

● When selecting "HEALTH" by remote controller, HEALTH function will be started up.

● When selecting "AIR" by remote controller, AIR function will be started up. (Not applicable for this unit)

● When selecting "AIT HEALTH", AIR and HEALTH function will be started up.

● When theres no display on remote controller, AIR and HEALTH function will be turned off.

8.X-FAN button

After pressing this button under cooling or dry mode, remote controller displays the character of "X-FAN" and X-FAN function is started up. Press this button again to cancel X-FAN function. The character of "X-FAN" will disappear.

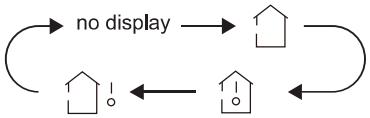
Note:

● After starting up X-FAN function, when turning off the unit, indoor fan will continue to operate for a while at low speed to dry the residual water inside the the unit.

● When the unit operates under X-FAN mode, press "X-FAN" button can turn off X-FAN function. Indoor fan stops operation immediately.

9.TEMP button

Press this button can see indoor set temperature, indoor ambient temperature or outdoor ambient temperature on the units display. Temperature is set circularly by remote controller as below:



● When selecting " " by remote controller or no display, temperature indicator on the unit displays set temperature.
● When selecting " " by remote controller, temperature indicator on the unit displays indoor ambient temperature.
● When selecting " " by remote controller, temperature indicator on the unit displays outdoor ambient temperature.

Note:

● Outdoor ambient temperature display may cant be selected for some models.
When the unit receives " " signal, it displays indoor set temperature.
● Only for the model whose the unit has dual-8 display.

10.TIMER button

● At ON status, press this button once can set TIMER OFF. The character of HOUR and OFF will flash.Press"+"or"-"button within 5s can adjust the time ofTIMER ON. After each pressing of "+" or "-" button, time will increase or decrease half an hour. When holding "+" or "-" button, 2s later, the time will change quickly until to reach to your required time.After that,press"TIMER"button to confirm it.The character of HOUR and OFF wont flash again.
Cancel TIMER OFF: Press "TIMER" button again under TIMER OFF status.● At OFF status, press this button once can set TIMER ON. Please refer to TIMER off for detailed operation.
Cancel TIMER ON: Press "TIMER" button again under TIMER ON status.

Note:

● Timer setting range: 0.5~24h

● Time interval between two operations cant exceed 5s. Otherwise, remote controller will exit the setting status automatically.

11.TURBO button (Not applicable for this unit)

When pressing this button under cooling or heating mode, air conditioner will enter into quick cooling or quick heating mode. The character of "TURBO" is displayed on remote controller. Press this button again to exit turbo function and the character of "TURBO" will be disappeared on remote controller.

12.SLEEP button

Press this button under cooling, heating mode can start up sleep function." " icon will be displayed on remote controller. Press this button again to cancel sleep function. " "icon on remote controller will be displayed.

13.LIGHT button

Press this button can turn off the light for the units display. " " icon on remotecontroller will disappear. Press this button again to turn on the light for the units display. " " icon on remote controller will be displayed.

Function introduction for combination buttons

Child lock function

Press "+" and "-" buttons simultaneously can turn on or turn off child lock function. When child lock function is started up, " " icon will be displayed on remote controller.If operate remote controller," "icon will flash three times,while remote controller wont send signal.

Switchover function for temperature display

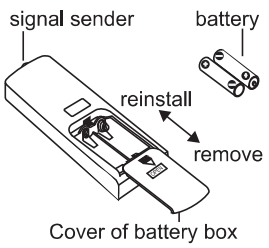
After turning off the unit by remote controller, press "-" button and "MODE" buttonsimultaneously to switch between ℃ and °F .

Operation Guide

1. After putting through the power, press "ON/OFF" button on remote controller to turn on the air conditioner.
2. Press "MODE" button to select your required mode: COOL, DRY, FAN.
3. Press "+" or "-" button to set your required temperature. (Temperature can't be adjusted under auto mode).
4. Press "FAN" button to set your required fan speed: auto, low, medium and high speed.

Replacement of Batteries in Remote Controller

1. Press the back side of remote controller on the spot marked with , and then push out the cover of battery box along the arrow direction.
2. Replace two No.7 (AAA 1.5V) dry batteries and make sure the positions of + and -- polar are correct.
3. Reinstall the cover of battery box.



NOTICE:

- During operation, point the remote control signal sender at the receiving window on the unit.
- The distance between signal sender and receiving window should be no more than 8m, and there should be no obstacles between them.
- Signal may be interfered easily in the room where there is fluorescent lamp or wireless telephone; remote controller should be close to the unit during operation.
- Replace new batteries of the same model when replacement is required.
- When you dont use remote controller for a long time, please take out the batteries.
- If the display on remote controller is fuzzy or theres no display, please replace batteries.

6.3 Introduction of Basic Mode Function

1. Temperature Parameter

◆ Indo or setting temperature (Tpreset)

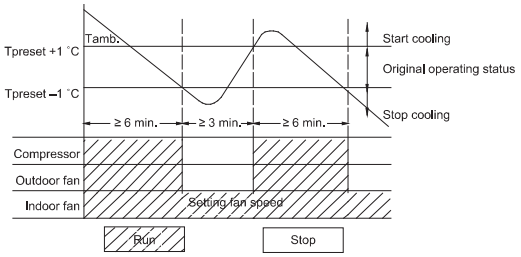
◆ Indoor ambient temperature (Tamb.)

2. Basic Functions of System

After the unit is energized, the interval of start-up time for compressor is no less than 3min under any conditions; when the compressor is started, the unit is off without the temperature change in 6min.

2.1 Cool Mode

2.1.1 Working conditions and process of cooling
a) When Tabm.≥Tpreset + 1oC (2oF), the unit will start to run in cooling mode, the compressor and kick motor start to run, and fan motor runs under preset fan speed.
b) When Tabm.≤ Tpreset - 1oC (2oF), the compressor and kick motor stop to run, and fan motor runs under preset fan speed.
c) When Tpreset - 1oC (2oF)<Tamb.<Tpreset + 1oC (2oF), the unit will keep the current running status.Under this mode, the temperature setting range is 61oF-86oF (16oC -30oC).



a) Under cooling mode, after 1h of setting sleep process, Tpreset increases 2oF(1oC); 2h later, Tpreset increases 4oF(2oC). After 2h, the setting temperature never increases, but the upper limit of increased setting temperature is 86oF(30oC)
b) Under heating mode, after 1h of setting sleep process, Tpreset decreases 2oF(1oC); 2h later, Tpreset decreases 4oF(2oC). After 2h, the setting temperature never decreases, but the upper limit of decreased setting temperature is 61oF(16oC)
c) There is no sleep function under fan and dry mode.
d) When set sleep function, shift mode will cancel sleep function.
e) The setting temperature display is the same with remote controller; it is not influenced by the setting temperature increases/ decreases.

2.2 Heating mode

When Tamb. ≤Tpreset+3°C(6°F), the unit operates in heating mode. Meanwhile, 4-way valve, compressor operates, and indoor fan operates at cold air prevention condition;
When Tpreset+3°C(6°F)<Tamb.<Tpreset+5°C(10°F), the unit keeps original operation status,
When Tamb.≥Tpreset+5°C(10°F), compressor stop operation simultaneously. 4-way valve stop operation after the compressor has stopped for 2 minutes. Indoor fan operates at blowing residual heat conditioner.
Under this mode, the temperature setting range is 16-30°C(61-86°F).

3.3 Auto Fan

a) Auto fan speed under	Cooling mode;
Tamb≥Tpreset+4oF(2oC)	High fan;
Tpreset<Tamb.< Tpreset+4oF(2oC)	Med fan;
Tamb≤Tpreset	Low fan;

b) There is 3.5min delay for auto fan shift.

3.4 TIMER Function

● General timer

a) TIMER ON: It can set timer on when the system is off, the setting time range is 0.5h-24h, when the time of setting timer on reaches, and the system runs with the previous setting mode.
b) TIMER OFF: It can set timer on when the system is on, the setting time range is 0.5h-24h, when the time of setting timer off reaches, the system stop to work.

● Clock timer

a) TIMER ON: If set timer on when the system is running, it continues to run; if set timer on when the system is off, when the time of setting timer on reaches, and the system runs with the previous setting mode.
b) TIMER OFF: If set timer off when the system is off, the system keeps the stand-by status when setting timer off; if set timer off when the system is on, when the time of timer off reaches, the system stops to run.

3.5 Memory Function

The system memories the setting running status of previous power-off, and runs automatically with the setting running status before it power-off when it is energized again. If the unit is on before power-off, the compressor will 3min delay protection when it is energized again.

3.6 Indicator Lamp, dual-8 digital pipe

a) When the unit runs, under cooling mode, cooling indicator lamp lights, dual-8 displays preset temperature.
b) When the unit runs, under fan mode, fan indicator lamp lights, dual-8 does not display.
c) When the unit runs, under dry mode, dry indicator lamp lights, dual-8 does not display.
d) When the unit runs, under heating mode, heating indicator lamp lights, dual-8 displays preset temperature.

3.7 Setting button function

a) ON/OFF button: It controls systems switch.

b) Mode button: Mode setting cycle with below sequence: Cooling only unit: cooling-> dry-> fan.

c) Temp. ▼ button: Set temperature when the unit is on, the setting temperature decreases 1°C or °F per press Temp. ▼ button; it will never setting when the setting reaches to 16°C or 61°F. The button is not valid under auto, dry and fan mode.

d) Temp. ▲ button: Set temperature when the unit is on, the setting temperature increases 1°C or °F per press Temp. ▲ button; it will never setting when the setting reaches to 30°C or 86°F. The button is not valid under auto, dry and fan mode.

3.8 Light Control

If set the light is on with remote control, the indicator lamp and dual-8 display the current setting status; if set the light is off with remote control, turn off the lamp immediately. If there is front panel button or remote control button operation when setting light off with remote control, the indicator lamp and dual-8 display current setting status, and turn off the light 5S later. Remote control light button does not controlled by failure display.

3.9 Protection Function

● Anti-freeze Protection

When the anti-freeze protection is inspected, the compressor stops, fan motor runs with setting fan speed.

When the anti-freeze protection is canceled and reaches to the 3min time-delay, it runs with the original status.

Temperature sensor failure inspection

a) Environment temperature sensor is open, short circuit: dual-8 displays F1, the cooling indicator lamp goes out 3S and blinks 1 time, and it will light up 0.5S and go out 0.5S when it is blinking.

b) Indoor pipe temperature sensor is open, short circuit: dual-8 displays F2, the cooling indicator lamp goes out 3S and blinks 2 times, and it will light up 0.5S and go out 0.5S when it is blinking.

c) Outdoor pipe temperature sensor is open, short circuit: dual-8 displays F4, the cooling indicator lamp goes out 3S and blinks 4 times, and it will light up 0.5S and go out 0.5S when it is blinking.

d) The compressor or electric heating pipe stops when the temperature sensor failure and the unit is on, The fan motor will be deal regarding compressor or electric pipe reach to the temperature point and stops.

● Over current Protection

If the system current is inspected too large for 3min continuously, the fan motor runs with setting conditions, other load stops; 3min later, the unit runs with the previously status; if over current protection occurs for 6 times continuously, display error code “E5”, the load stops this time; if block the button except ON/OFF button, it will remote control the unit to off then on, or turn off with button, or re-energized; the time of over current protection will zero clearing with remote control, press to turn on or re-energized.

● Over-flow Protection

If the over-flow is detected for 3S, it will enter into over-flow protection. Display error code H8, heating indicator lamp or over-flow indicator lamp goes out 3S and blinks 8 times.

Part Ⅱ : Installation and Maintenance

7. Notes for Installation and Maintenance

Safety Precautions:

Important!

Please read the safety precautions carefully before installation and maintenance.
The following contents are very important for installation and maintenance.
Please follow the instructions below.
●The installation or maintenance must accord with the instructions.
●Comply with all national electrical codes and local electrical codes.
●Pay attention to the warnings and cautions in this manual.
●All installation and maintenance shall be performed by distributor or qualified person.
●All electric work must be performed by a licensed technician according to local regulations and the instructions given in this manual.
●Be caution during installation and maintenance. Prohibit incorrect operation to prevent electric shock, casualty and other accidents.

Warnings

Electrical Safety Precautions:

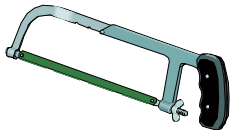
1. Cut off the power supply of air conditioner before checking and maintenance.
2. The air conditioner should be installed in suitable location and ensure the power plug is touchable.
3. Make sure each wiring terminal is connected firmly during installation and maintenance.
4. Have the unit adequately grounded. The grounding wire cant be used for other purposes.
5. Must apply protective accessories such as protective boards, cable-cross loop and wire clip.
6. The live wire, neutral wire and grounding wire of power supply must be corresponding to the live wire, neutral wire and grounding wire of the air conditioner.
7. The power cord and power connection wires cant be pressed by hard objects.
8. If power cord or connection wire is broken, it must be replaced by a qualified person.
9. For the air conditioner without plug, an air switch must be installed in the circuit. The air switch should be all-pole parting and the contact parting distance should be more than 3mm.
10. Check if there is electric leakage on the unit body. If yes, please eliminate the electric leakage.
11. Replace the fuse with a new one of the same specification if it is burnt down; dont replace it with a cooper wire or conducting wire.
12. If the unit is to be installed in a humid place, the circuit breaker must be installed.

Refrigerant Safety Precautions:

1. Avoid contact between refrigerant and fire as it generates poisonous gas. Recycle the refrigerant inside the unit completely before welding pipes.
2. Apply specified refrigerant only. Never have it mixed with any other refrigerant. Never have air remain in the refrigerant line as it may lead to rupture or other hazards.
3.If refrigerant is leaking seriously, it may cause suffocation or explosion. When using the combustible refrigerant, please put the unit at ventilated place.
4. Never touch the refrigerant piping or compressor without wearing glove to avoid scald or frostbite.

Improper installation may lead to fire hazard explosion, electric shock or injury.

Main Tools for Installation and Maintenance

1. Level meter, measuring tape	2.Screw driver	3.Scissors, saw 
4.Electroprobe	5. Universal meter	6.Torque wrench, open-end wrench, inner hexagon spanner
7. Electronic leakage detector	8. Vacuum pump	9. Pressure meter
10. Pipe pliers, pipe cutter	11. Pipe expander, pipe bender	12. Soldering appliance, refrigerant container

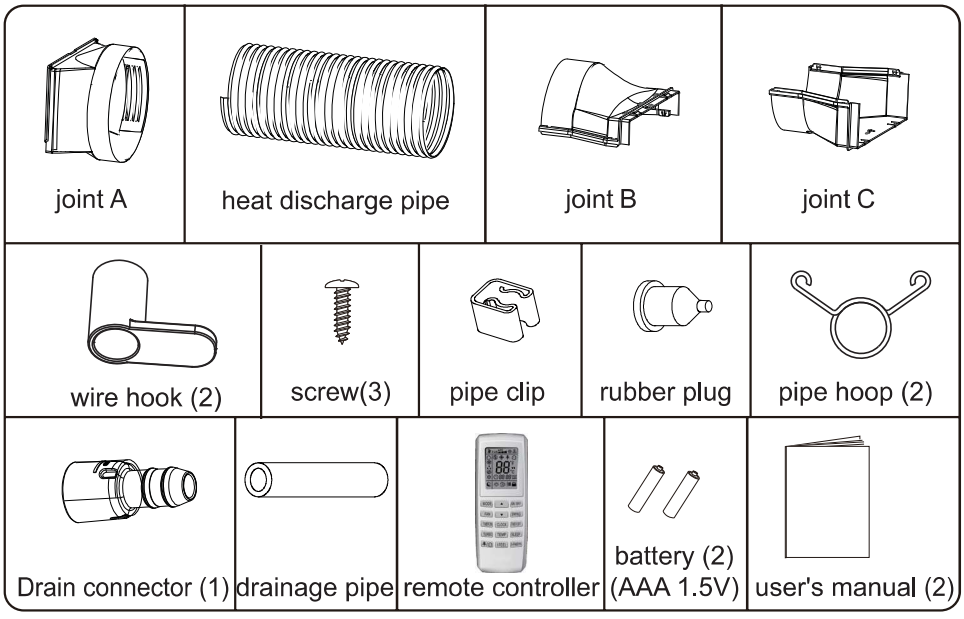
Installation procedures

Note: this flow is only for reference; please find the more detailed installation steps in this section.

Preparation before Installation

Note: check if the accessories are available before installation

Accessory list



8. Install

8.1 Install Wire Hook

● Assemble the wire hook at the back of the unit with screws.(As show in Fig.1)

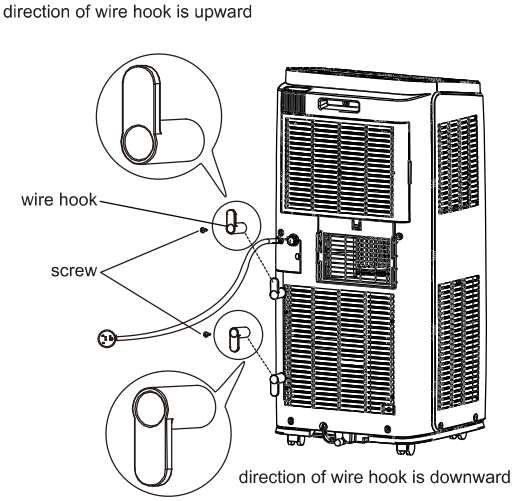


Fig.1

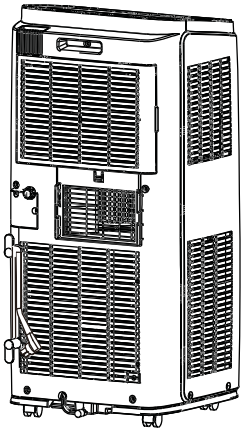


Fig.2

● Wind the power cord around the wire hook.(As show in Fig.2)

8.2 Removing Collected Water

There are 2 ways to remove collected water:

1. Use the continuous drainage option from the lower hole.

NOTICE: When using the continuous drainage option from the bottom hole, install drainage pipe as follow before using, otherwise poor drainage will affect normal operation of the unit.

● Instructions for drainage pipe installation.

(1) Fix the drainage pipe clip on the right of rear side plate near drainage port with a screw.(As show in Fig.3)
(2) Remove the rubber plug at drainage port.(As show in Fig.4)
(3) Put the drainage pipe into drainage port and screw it up, and then bind it with pipe hoop.
(4) Put the rubber plug into the other side of drainage pipe, fix it with pipe hoop and then fix it in the drainage pipe clip.(As show in Fig.5)

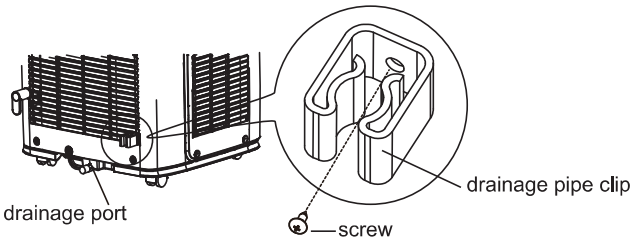


Fig.3

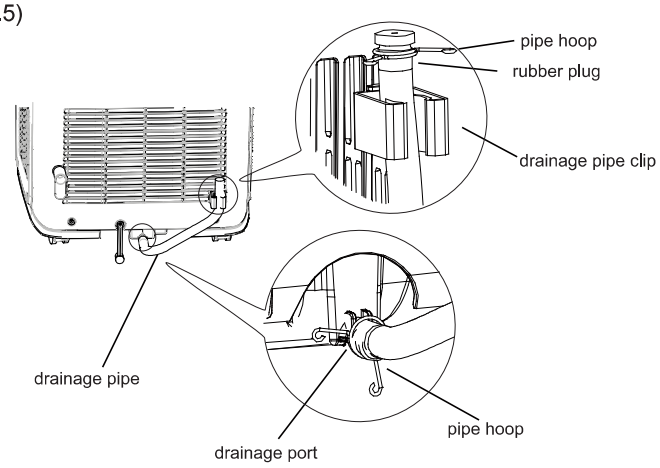


Fig.5

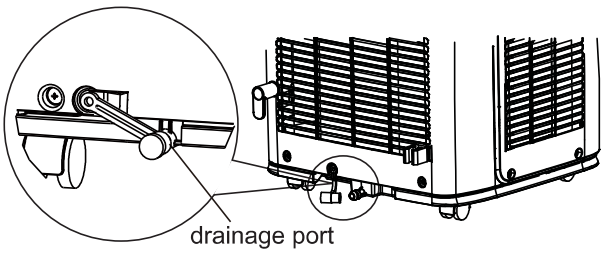


Fig.4

● Drainage way as follows.

1. In Cool, Dry or Heat mode operating, the condensation water will be drained to the chassis.(As show in Fig.6)

2. When the chassis is full with water, the buzzer will give out 8 sounds and "H8" is displayed to remind user to discharge water:

● Move the unit to a suitable place for discharging water; do not tilt the unit and keep it horizontal during moving;
● Take the drainage pipe from the clip and pull out the rubber plug on the drainage pipe to discharge water;
● Put back the rubber plug onto drainage pipe after finishing dischargeing and then fix the pipe on the clip;
● After full water protection is eliminated and the compressor has been stopped for 3 minutes, the unit will resume operation.

2.Use the continuous drainage option from the middle hole

NOTICE: Water can be automatically emptied into a floor drain by attaching 14mm inner diameter hose (not included).

(1) Remove the continuous drain cap 1 by turning it counter clockwise then remove the rubber stopper 2 from the spout. (As show in Fig.7)

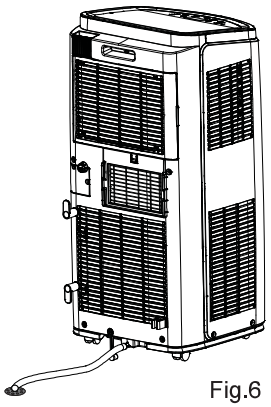


Fig.6

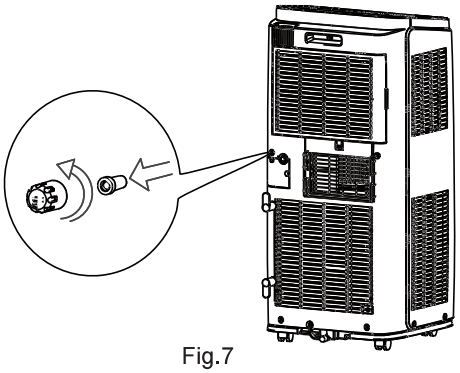


Fig.7

(2) Screw the drain connector to(included in the package) the spout by turning clockwise.(As show in Fig.8)

(3) Insert the drainage hose into drain connector.(As show in Fig.9)

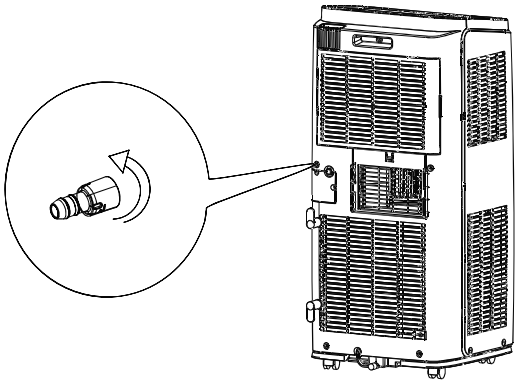


Fig.8

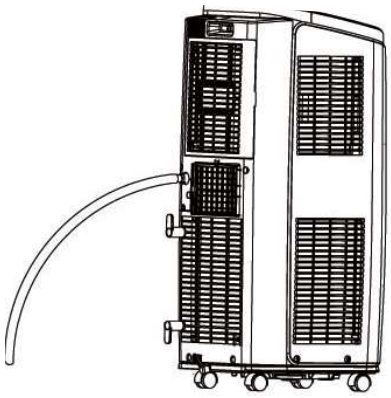
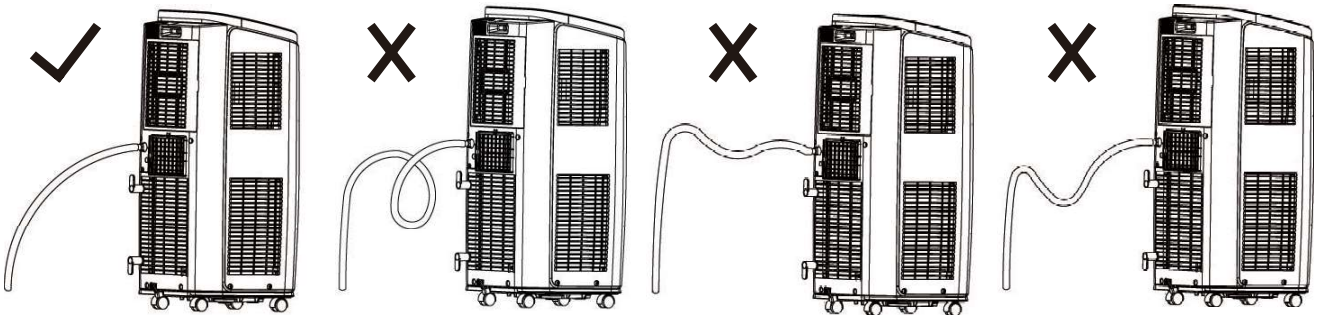


Fig.9

ATTENTION:

When using continuous drainage option from the middle hole, place portable on a level surface and make sure garden hose is clear of any obstructions and is directed downward. Placing portable on an uneven surface or improper hose installation may result in water filling up the chassis and causing the unit to shut off. Empty water in the chassis if shut off occurs, then check portable location and hose for proper setup.



8.3 Installation and Disassembly of heat Discharge Pipe

A. Install heat discharge pipe

(1) Rotate joint A and joint B clockwise into the two ends of heat discharge pipe.(As show in Fig.10)
(2) Insert joint A of heat discharge pipe (the side with "TOP" is upwards) into the groove until you hear a sound.(As shown in Fig.11)
(3) Lead the exhaust hose outdoors.(As shown in Fig.12)

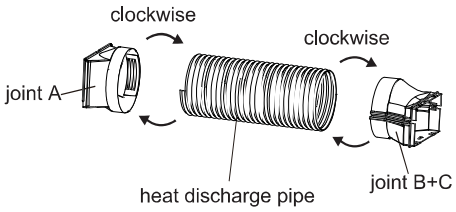


Fig.10

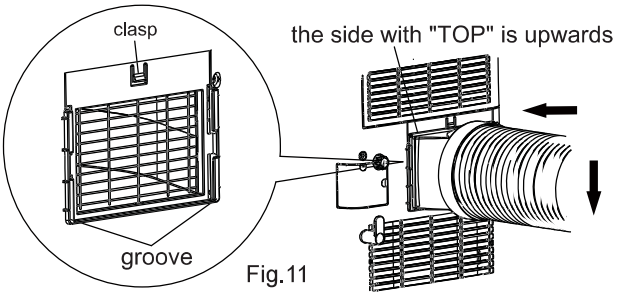


Fig.11

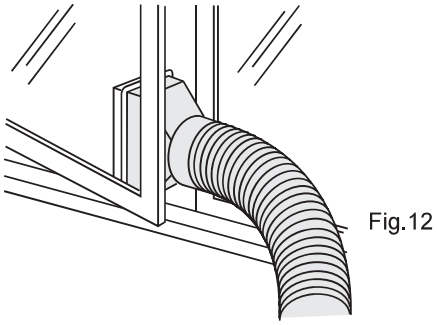


Fig.12

Note of Install heat discharge pipe

In order to improve cooling efficiency, the heat discharge pipe should be as short as possible and flat without curve to ensure smooth heat discharge.(As shown in Fig.13)
●The length of the heat discharge pipe is less than 1m. It is recommended to use it with shortest length.
●The length of the heat discharge pipe is less than 1m. It is recommended to use it with shortest length.(As shown in Fig.14)

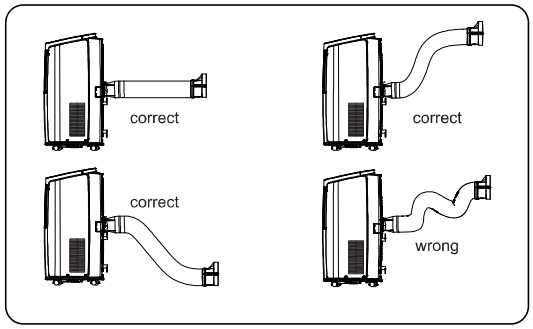


Fig.13

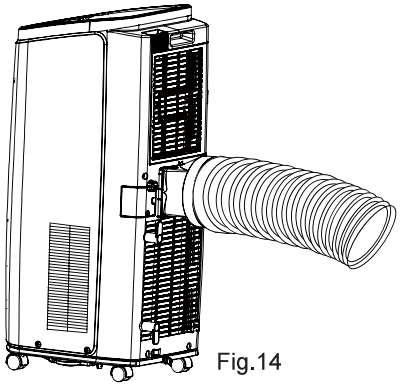


Fig.14

●Correct installation is as shown in figure (When installing it on wall, height of hall should be about 40cm-130cm from floor).(As shown in Fig.15)
●Wrong installation is shown in following figure (If the pipe is bent too much, it would easily cause malfunction.(As shown in Fig.16)

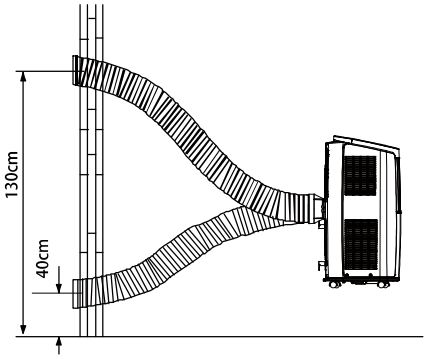


Fig.15

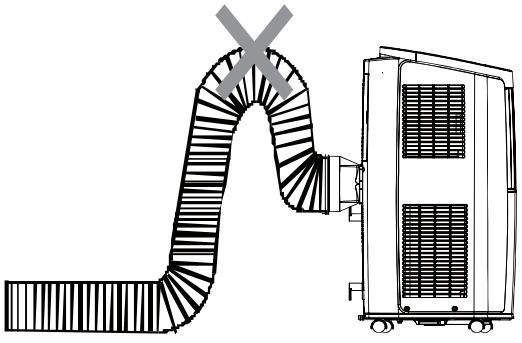


Fig.16

B. Disassemble heat discharge pipe

(1) Remove joint B
remove joint B from joint C.(As shown in Fig.17)
(2) Remove joint A: Press the clasp and lift joint A upwards to remove it.(As shown in Fig.18)

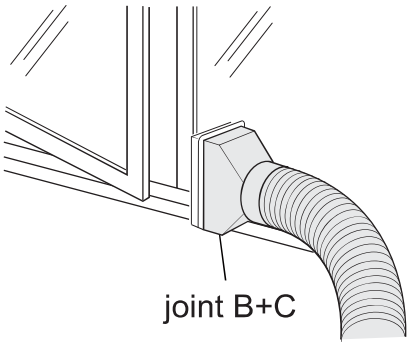


Fig.17

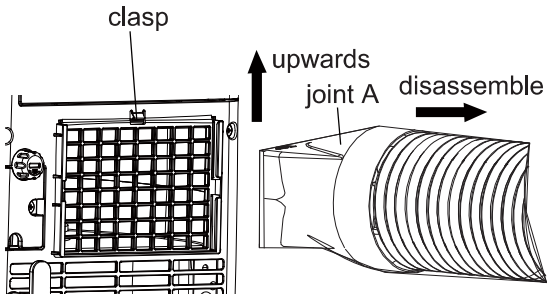


Fig.18

8.4 Operation test

●Put through the power supply and then press ON/OFF button on remote controller to start the unit.
●Press mode button to select auto, cooling, drying, fan or heating function, and then check if the unit operates normally.
●If ambient temperature is below 16°C, the unit cant operate in cooling mode.

9. Maintenance

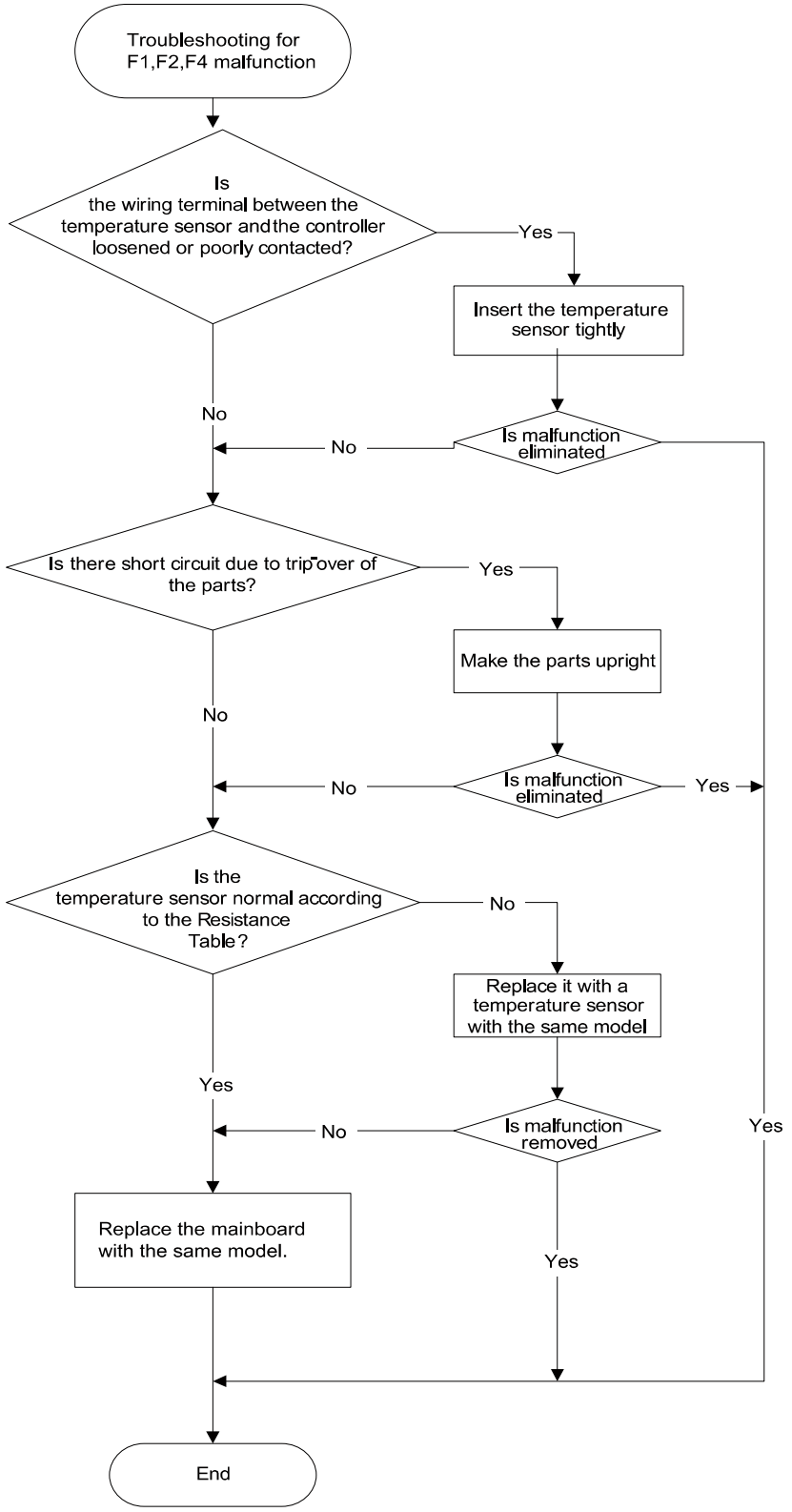
9.1 Error Code

NO.	Malfunction Name	Display Method of Indoor Unit				A/C Status	Possible Causes
		Error Code	Indicator lamp (During blinking, ON for 0.5S and OFF for 0.5 S)				
			Operation Inidicato	COOL Indicator	HEAT Indicator		
1	Indoor ambient temperature sensor is open/short-circuited	F1		OFF 3S and blinks once		Compressor and draw water motor stop operation. Fan operates at set fan speed.	1. The wiring terminal between indoor ambient temperature sensor and main board is loosened or poorly contacted. 2. Theres short circuit due to trip-over of the parts on main board. 3.Indoor ambient temperature sensor is damaged (Please check it by referring to the resistance table for temperature sensor). 4. Main board is damaged.
2	Indoor evaporator temperature sensor is open/short-circuited	F2		OFF 3S and blinks twice		Compressor and draw water motor stop operation. Fan operates at set fan speed.	1. The wiring terminal between indoor evaporator temperature sensor and main board is loosened or poorly contacted. 2. Theres short circuit due to the trip-over of the parts on main board. 3.Indoor evaporator temperature sensor is damaged (Please check it by referring to the resistance table for temperature sensor). 4. Main board is damaged.
3	Outdoor condenser temperature sensor is open/short-circuited	F4		OFF 3S and blinks 4 times		Compressor and draw water motor stop operation. Fan operates at set fan speed.	1. The wiring terminal between outdoor condenser temperature sensor and main board is loosened or poorly contacted. 2. Theres short circuit due to the trip-over of the parts on main board. 3. Outdoor condenser temperature sensor is damaged (Please check it by referring to the resistance table for temperature sensor). 4. Main board is damaged.
4	Overcurrent protection	E5					Disconnect power, and then turn on the unit again after 10min. If "E5" still exits, please contact professional person to maintain the unit.

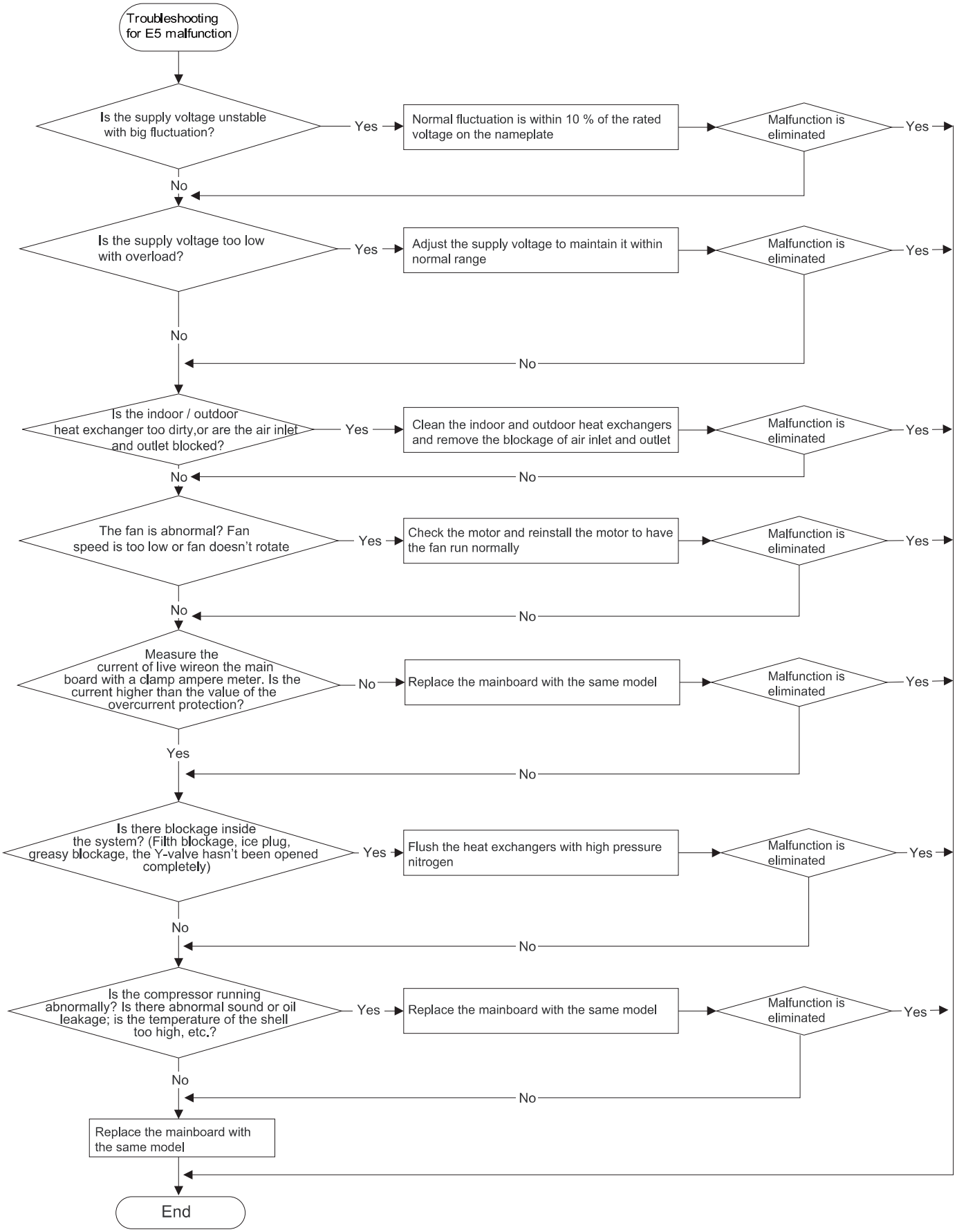
NO.	Malfunction Name	Display Method of Indoor Unit				A/C Status	Possible Causes
		Error Code	Indicator lamp (During blinking, ON for 0.5S and OFF for 0.5 S)				
			Operation Inidicato	COOL Indicator	HEAT Indicator		
5	Water over-flow protection	H8				The unit stops operation	During cooling or drying operation,condensate water will flow into chassis. If its detected that water inside water chassis is full for 3s successively, it comes into water over-flow protection. Buzzer will give out 8 sounds and dual-8 nixie tube displays error code “H8”.
6	Insufficient fluorine protection	F0				Indoor fan runs according to set fan and other loads will stop.	1. Heat exchangers are too dirty or the air inlet/outlet is blocked. 2. Compressor doesnt work normally. Strange noise or leakage occurs. Temperature of the shell is too high. 3. System is blocked inside(dirt block, ice block, oil block, Y-valve not fully open). 4. The refrigerant is leaking.
7	Overload protection for compressor	H3				Indoor fan runs according to set fan and other loads will stop.	1. Heat exchangers are too dirty or the air inlet/outlet is blocked. 2. Fan motor is not working Abnormal fan speed; fan speed is too low or the fan doesnt run. 3. Compressor doesnt work normally. Strange noise or leakage occurs. Temperature of the shell is too high. 4. System is blocked inside(dirt block, ice block, oil block, Y-valve not fully open). 5. Draw-water motor cant operate normally. 6. Water outlet hasnt been blocked well by rubber cork . 7. The refrigerant is leaking and cause overheating protection to compressor.
8	Overload malfunction	E8				During cooling or drying operation, indoor fan operates, while compressor, outdoor fan and water-striking motor stop. “E8” is displayed.	1. The environment is formidable. 2. Heat exchangers are too dirty or the air inlet/outlet is blocked. 3. Fan motor is not working Abnormal fan speed; fan speed is too low or the fan doesnt run. 4. Compressor doesnt work normally. Strange noise or leakage occurs. Temperature of the shell is too high. 5. System is blocked inside(dirt block, ice block, oil block, Y-valve not fully open). 6.Temperature sensor of main board cant detect correctly.

9.2 Malfunction Detection Flowchart

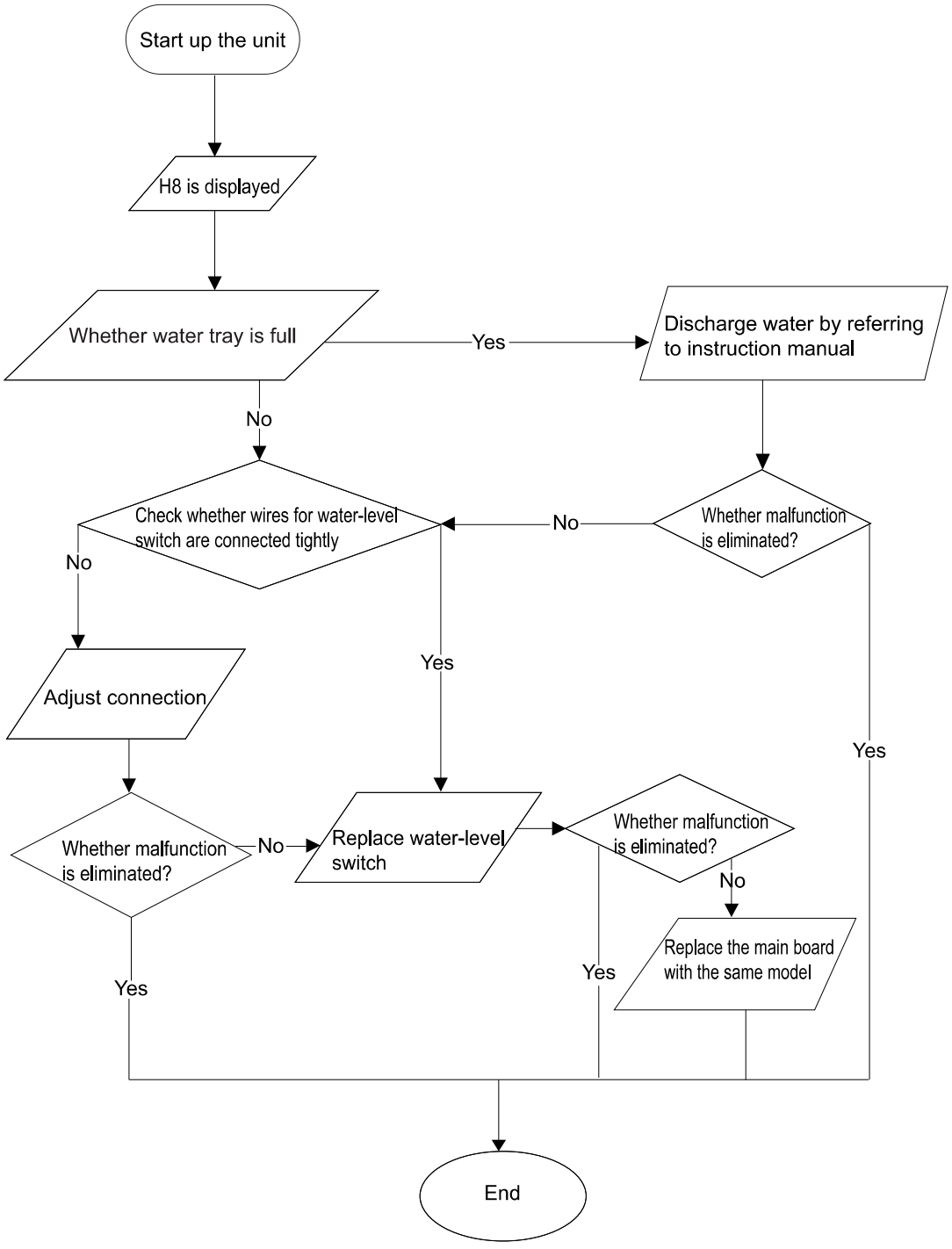
(1) Malfunction of temperature sensor F1, F2, F4



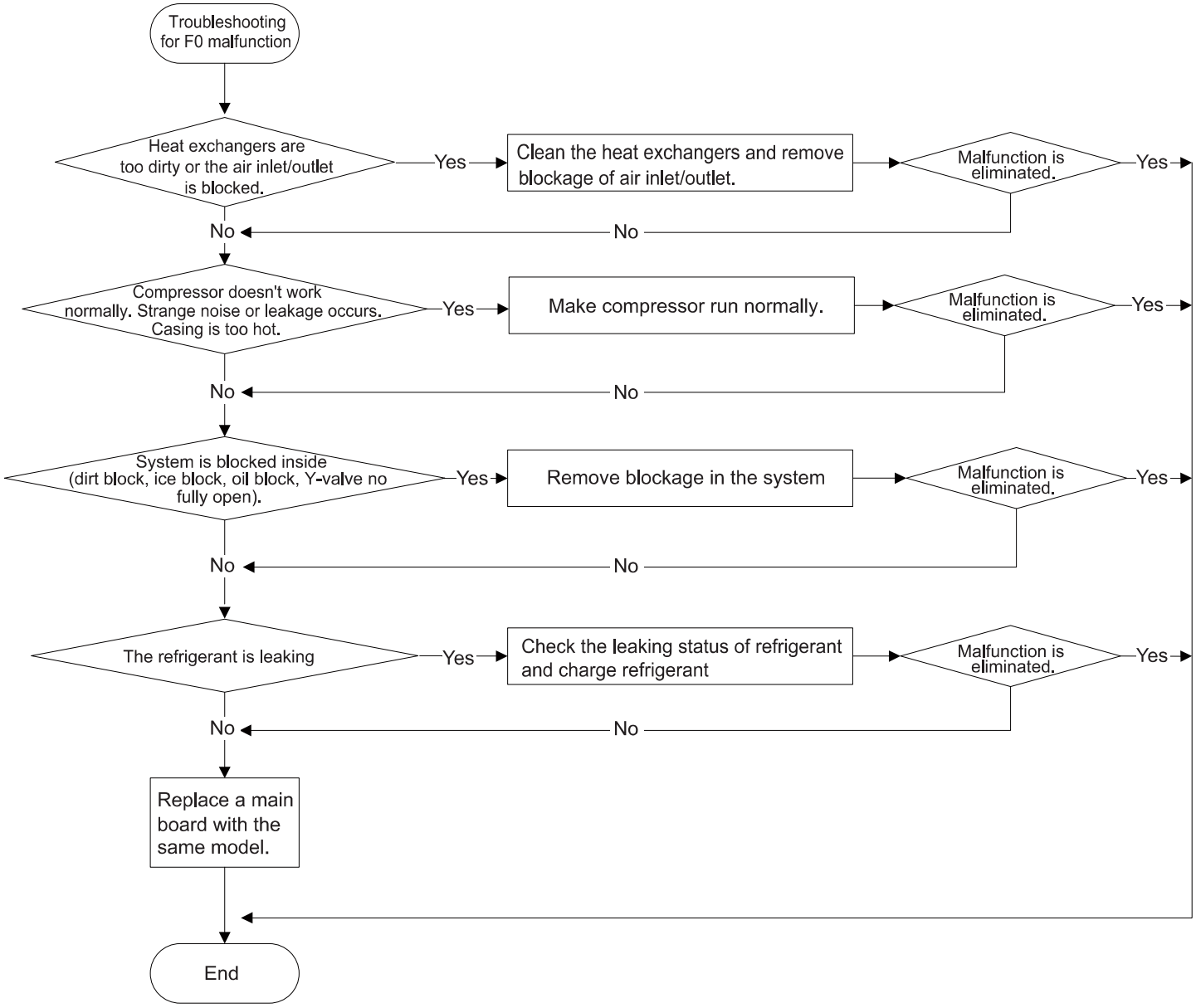
(2) Malfunction of Overcurrent Protection E5



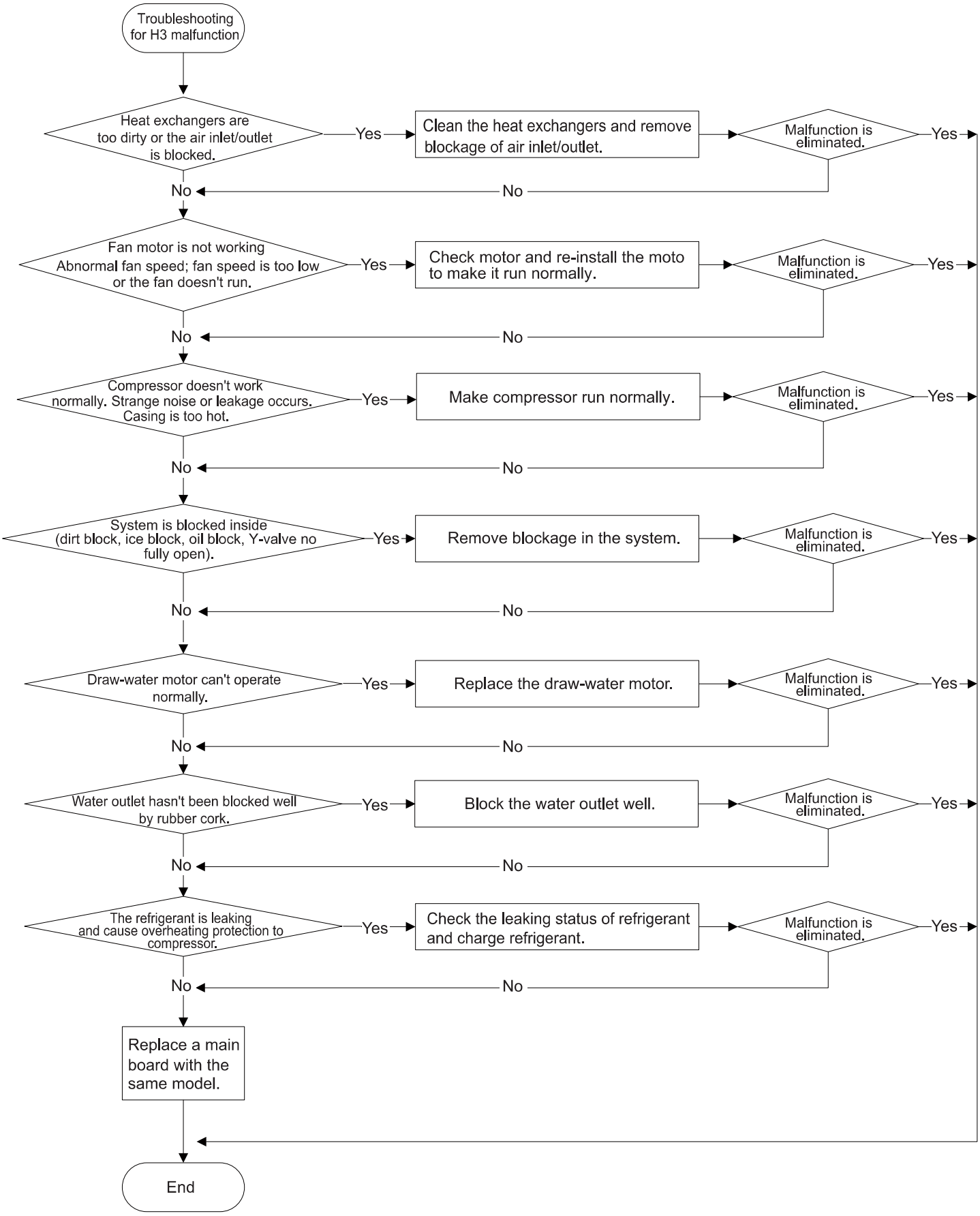
(3) Bucket full protection H8



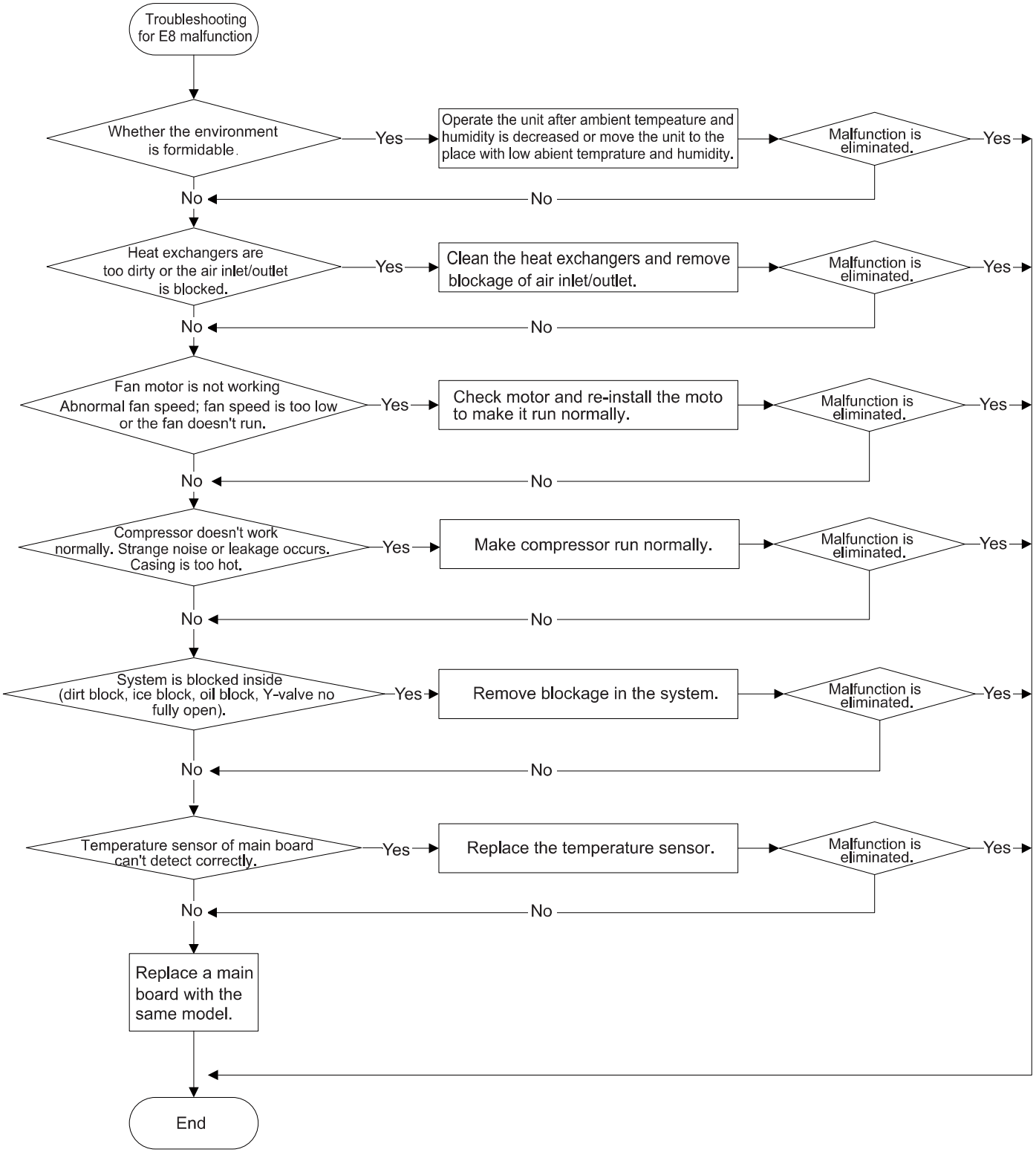
(4) Malfunction of Insufficient fluorine protection F0



(5) Malfunction of Overload protection for compressor H3



(6) Overload malfunction E8



9.3 Maintenance Method for Common Malfunction

1. Air Conditioner Cant be Started Up

Possible Causes for Malfunction	Distinguish Method (A/C status)	Maintenance Method
No power supply; power plug hasnt been inserted tightly and poorly connected; wires hasnt been connected well.	Operation indicator is OFF and buzzer wont give out sound.	Check whether theres power supply; Check power plug and wire connection.
Ambient temperature sensor is damaged (no connection, loosen, wires are damaged, resistance value for temperature sensor is abnormal).	After energization, the unit will give out a sound, while it cant be started up after pressing ON/OFF button.	Check wire connection of temperature sensor or replace temperature sensor.
Electric leakage for air conditioner	After energization, room circuit breaker trips off at once.	Make sure the air conditioner is grounded reliably. Make sure wires of air conditioner is connected correctly. Check the wiring inside air conditioner. Check whether the insulation layer of power cord is damaged; if yes, place the power cord.
Model selection for air switch is improper	After energization, air switch trips off.	Select proper air switch.
Malfunction of remote controller	After energization, operation indicator is bright, while no display on remote controller or buttons have no action.	Replace batteries for remote controller. Repair or replace remote controller.
Water inside water chassis is full	Dual8 nixie tube displays H8 and buzzer gives out 8 sounds (water over-flow protection).	Discharge condensate water.
Malfunction of water-level switch		Check water-level switch and connection (refer to detection flow chart 3).

2. Poor Cooling (Heating) for Air Conditioner

Possible Causes	Discriminating Method (Air conditioner Status)	Troubleshooting
Set temperature is improper	Observe the set temperature on remote controller	Adjust the set temperature.
Fan speed is set too slow	Small fan blow at air outlet	Set the fan speed at high or medium.
Filter unit is blocked	Check the filter to see whether its blocked by sundries	Clean the filter.
Refrigerant is leaking	Discharged air temperature during cooling is higher than normal discharged wind temperature; Discharged air temperature during heating is lower than normal discharged wind temperature; Units pressure is much lower than regulated range	Find out the leakage causes and deal with it. Add refrigerant.
Evaporator is frosted	Has set COOL (DRY) mode, but theres no cool fan	The system is defrosting. Resume operation after defrosting is finished.
Malfunction of capillary	Discharged air temperature during cooling is higher than normal discharged wind temperature; Discharged air temperature during heating is lower than normal discharged wind temperature; Unitt pressure is much lower than regulated range. If refrigerant isnt leaking, part of capillary is blocked	Replace the capillary.
Malfunction of fan	Fan cant operate	Refer to point 3 for detailed maintenance method.
Malfunction of compressor	Compressor cant operate	Refer to point 4 of maintenance method for details.