



# Service Manual

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**MODEL: GPC08AH-K3NNC3A  
GPC09AH-K3NNC3A  
GPC09AH-D1NNC3A  
GPC09AE-K3N NA7A  
GPC12AF-K3NNA7A  
GPE12AF-K3NNA7A**

**GREE ELECTRIC APPLIANCES, INC.OF ZHUHAI**

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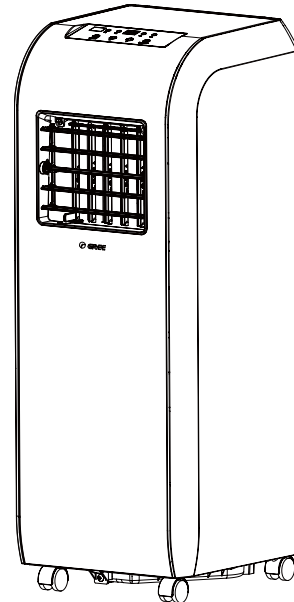
# Summary and features

**MODEL:**

**GPC08AH-K3NNC3A**  
**GPC09AH-K3NNC3A**  
**GPC09AH-D1NNC3A**

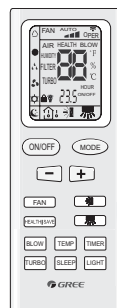


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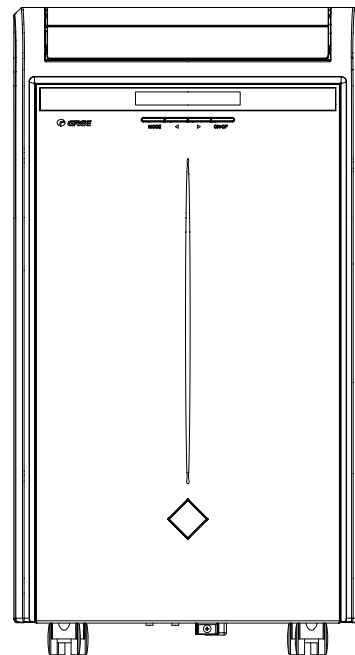


**MODEL:**

**GPC09AE-K3NNA7A**  
**GPC12AF-K3NNA7A**  
**GPE12AF-K3NNA7A**



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# 1. Safety Precautions

## Important!

### Please Read Before Starting

This air conditioning system meets strict safety and operating standards. As the installer or service person, it is an important part of your job to install or service the system so it operates safely and efficiently.

To prevent injury to the user or other people and property damage, the following instructions must be followed.

- Follow each installation or repair step exactly as shown.
- Observe all local, state, and national electrical codes.
- Pay close attention to all warning and caution notices given in this manual.

#### About the pictures:



#### Warning

Erroneous handling gives a high possibility to induce serious results such as death or heavy injury.



#### Caution

Erroneous handling may induce serious injury depending on the situation.



## Warning

All electric work must be performed by licensed technician, according to local regulations and the instructions given in this manual.

- Do not supply power to the unit until all wiring and tubing are completed or reconnected and checked.
- Highly dangerous electrical voltages are used in this system. Carefully refer to the wiring diagram and these instructions when wiring. Improper connections and inadequate grounding can cause accidental injury or death.
- Ground the unit following local electrical codes.
- Connect all wiring tightly. Loose wiring may cause overheating at connection points and a possible fire hazard.

There is risk of fire, electric shock, explosion, or injury.

Ask your dealer or specialized subcontractor for installation or repair work.

- The unit should be installed according to the instructions in order to minimize the risk of damage from earthquakes, typhoons or strong winds.
- When the refrigerant touches the fire etc., it was decomposed and a poisonous gas is generated.
- Use only the specified refrigerant to charge the refrigerant circuit.
- Do not mix it with any other refrigerant and do not allow air

to remain in the circuit.

- Air enclosed in the circuit can cause high pressure resulting in a rupture and other hazards.
- After completing installation work, make sure that refrigerant gas has not leaked.
- The limit density is made not to be exceeded even if the refrigerant leaks by any chance.
- Keep your fingers and clothing away from any moving parts.
- Clean up the site after you finish, remembering to check that no metal scraps or bits of wiring have been left inside the unit being serviced.
- The unit must be properly earth connected.



## Caution

- Never install on the place where a combustible gas might leak. The gas may ignite or explode when the gas leaks and collects in surround of the unit.
- When the unit is installed at telecommunication centers or hospitals, take a proper provision against noise.
- Do not wash the unit with water.
- Be very careful about unit transportation. The unit should not be carried by only one person if it is more than 20kg. It occasionally causes the damage of the unit and health to be impaired.
- Do not touch the heat exchanger fins with your bear finger. Doing so may cut your finger.
- Do not touch the compressor or refrigerant piping without wearing glove on your hands. Touching directly such part can cause a burn or frostbite as it becomes high or low temperature according to the refrigerant state.
- Do not operate the air conditioner without the air filter set place. Dust may accumulate, and cause a failure.
- At emergency (if you smell something burning), stop operation and turn the power source switch off.

## 2. Specifications

### Unit Specifications

Models GPC08AH-K3NNC3A, GPC09AH-K3NNC3A, GPC09AH-D1NNC3A

Model		GPC08AH-K3NNC3A	GPC09AH-K3NNC3A	GPC09AH-D1NNC3A
Product Code		CK01001361	CK01001350	CK01001460
Function		COOLING	COOLING	COOLING
Rated Voltage		220~240V	220~240V	220V
Rated Frequency		50Hz	50Hz	60Hz
Total Capacity (W/Btu/h)		2345/8000	2638/9000	2368/9000
Power Input (W)		890 W	1000 W	1000 W
Rated Input (W)		1100W	1250W	1250W
Rated Current (A)		5.5A	6.3A	6.3A
Air Flow Volume (m <sup>3</sup> /h) (H/M/L)		350/300/250	350/300/250	340/290/240
Dehumidifying Volume (l/h)		0.75	0.95	1.2
EER / C.O.P (W/W)		2.61	2.63	2.63
Energy Class		A	A	/
Indoor Side	Fan Type-Piece	Centrifugal fan- 1	Centrifugal fan- 1	Centrifugal fan- 1
	Diameter-Length (mm)	φ146 X108.5	φ146 X108.5	φ146 X108.5
	Evaporator	Aluminum fin-copper tube	Aluminum fin-copper tube	Aluminum fin-copper tube
	Pipe Diameter (mm)	φ7	φ7	φ7
	Row-Fin Gap	2-1.3	2-1.3	2-1.3
	Coil length (l) x height (H) x coil width (L)	377.5X266.7X25.4	377.5X266.7X25.4	377.5X266.7X25.4
	Swing Motor Model	/	/	/
	Output of Swing Motor (W)	/	/	/
	Fuse (A)	PCB 3.15A	PCB 3.15A	PCB 3.15A
	Sound Pressure Level dB (A) (H/M/L)	56 / 54 / 52	56 / 54 / 52	56 / 54 / 52
	Sound Power Level dB (A) (H/M/L)	64 / 62 / 60	66 / 64 / 62	66 / 64 / 62

Model		GPC08AH-K3NNC3A	GPC09AH-K3NNC3A	GPC09AH-D1NNC3A
Outdoor Side	Compressor Manufacturer/trademark	ZHUHAI LANDA COMPRESSOR co.Ltd	ZHUHAI LANDA COMPRESSOR co.Ltd	Qingan RefrigerationEquipment co. Ltd
	Compressor Model	QXA-A086R130	QXA-B102T130	YZG-24D1T1
	Compressor Type	rotary compressor	rotary compressor	rotary compressor
	L.R.A. (A)	15.5	19A	21A
	Compressor RLA(A)	3.5	3.9	3.6
	Compressor Power Input(W)	730	850	800
	Overload Protector	B155-150-241E	Built-in	MRA12111-9201
	Throttling Method	Capillary	Capillary	Capillary
	Starting Method	Capacitor	Capacitor	Capacitor
	Working Temp Range (°C)	16°C-35°C	16°C-35°C	16°C-35°C
	Condenser	Aluminum fin-copper tube	Aluminum fin-copper tube	Aluminum fin-copper tube
	Pipe Diameter (mm)	Φ7	Φ7	Φ7
	Rows-Fin Gap(mm)	2 / 1.4	2 / 1.4	2 -1.4
	Coil length (l) x height (H) x coil width (L)	343X266.7X25.4	343X266.7X25.4	343X266.7X25.4
	Fan Type-Piece	Centrifugal fan-1	Centrifugal fan-1	Centrifugal fan-1
	Fan Diameter (mm)	Φ185 X77	Φ185 X77	Φ185 X77
	Sound Pressure Level dB (A) (H/ML)	/	/	/
	Sound Power Level dB (A) (H/ML)	/	/	/
Defrosting Method	/	/	/	
Fan Motor Speed (rpm) (H/ML)	1250/1150/1050	1250/1150/1050	1250/1150/1050	
Output of Fan Motor (W)	45	45	50	
Fan Motor RLA(A)	0.6A	0.6A	0.49A	
Fan Motor Capacitor (μF)	3.5	3.5	2.5	
Climate Type	T1	T1	T1	
Isolation	I	I	I	
Moisture Protection	IP44	IP44	IP44	
Permissible Excessive Operating Pressure for the Discharge Side(MPa)	3.8	3.8	2.7	
Permissible Excessive Operating Pressure for the Suction Side(MPa)	1	1	1.6	
Dimension (W/H/D)( mm)	300x790x345	300x790x345	300x790x345	
Dimension of Package (L/W/H)(mm)	563x354x817	563x354x817	563x354x817	
Net Weight /Gross Weight (kg)	26/31	26/31	25/31	
Refrigerant Charge (kg)	R410A/0.48	R410A/0.48	R22/0.48	

The above data is subject to change without notice. Please refer to the nameplate of the unit.

Models GPC09AE-K3NNA7A, GPC12AF-K3NNA7A, GPE12AF-K3NNA7A

Model		GPC09AE-K3NNA7A	GPC12AF-K3NNA7A	GPE12AF-K3NNA7A	
Product Code		CK01001250	CK01001210	CK01001450	
Function		COOLING	COOLING	COOLING	HEATING
Rated Voltage		220-240V~	220-240V~	220-240V~	
Rated Frequency		50Hz	50Hz	50Hz	
Total Capacity (W/Btu/h)		2638/9000	3516/12000	3516/12000	2000/6800
Power Input (W)		1100	1400	1340	2100
Rated Input (W)		1300	1550	1550	2150
Rated Current (A)		5.7	7.5	7.5	11
Air Flow Volume (m <sup>3</sup> /h) (H/ML)		430/400/380	450/420/390	450/420/390	
Dehumidifying Volume (l/h)		1.3	1.5	1.5	
EER / C.O.P (W/W)		2.4	2.61	2.61	/
Energy Class		A	A	A	
Indoor Side	Fan Type-Piece	Centrifugal fan - 1	Centrifugal fan / 1an - 1	Centrifugal fan / 1an - 1	
	Diameter-Length (mm)	φ173X65	φ218 X 109	φ218 X 109	
	Evaporator	Aluminum fin-copper tube	Aluminum fin-copper tube	Aluminum fin-copper tube	
	Pipe Diameter (mm)	Φ7	Φ7	Φ7	
	Row-Fin Gap	3-1.6	3-1.6	3-1.6	
	Coil length (l) x height (H) x coil width (L)	305X304.8X38.1	363X285X38.1	363X285X38.1	
	Swing Motor Model	MP28GA	MP28GA	MP28GA	
	Output of Swing Motor (W)	28	28	28	
	Fuse (A)	PCB 3.15A	PCB 3.15A	PCB 3.15A	
	Sound Pressure Level dB (A) (H/ML)	56/53/51	58/56/52	58/56/52	



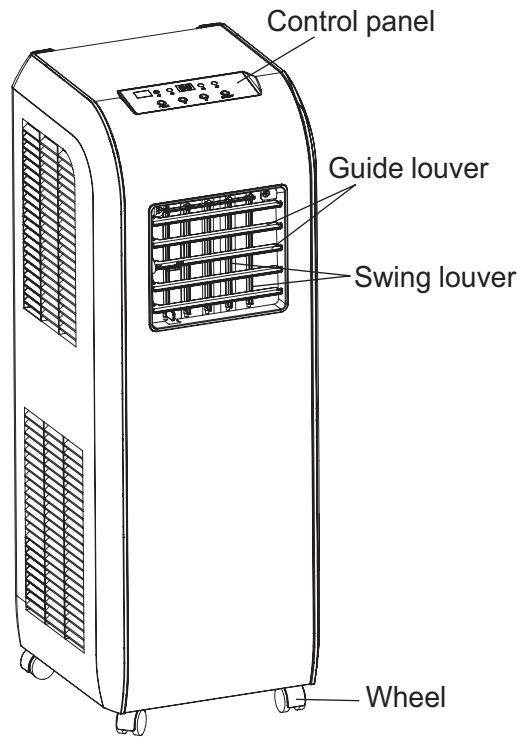
Model		GPC09AE-K3NNA7A	GPC12AF-K3NNA7A	GPE12AF-K3NNA7A
Outdoor Side	Compressor Manufacturer/trademark	Zhuhai Landa Compressor Co., Ltd	Zhuhai Landa Compressor Co., Ltd	Zhuhai Landa Compressor Co., Ltd
	Compressor Model	QXA-B102uC130	QXA-C133B030g	QXA-C133B030g
	Compressor Type	rotary compressor	rotary compressor	rotary compressor
	L.R.A (A)	18	32	32
	Compressor RLA(A)	4	5	5
	Compressor Power Input(W)	858	1130	1130
	Overload Protector	B210-150-241H	B205-150B-241E	B205-150B-241E
	Throttling Method	Capillary	Capillary	Capillary
	Starting Method	Capacitor	Capacitor	Capacitor
	Working Temp Range (°C)	16°C ~ 35°C	16°C ~ 35°C	16°C ~ 35°C
	Condenser	Aluminum fin-copper tube	Aluminum fin-copper tube	Aluminum fin-copper tube
	Pipe Diameter (mm)	φ7	φ7	φ7
	Rows-Fin Gap(mm)	3-1.6	4-1.6	4-1.6
	Coil length (l) x height (H) x coil width (L)	308X323.8X38.1	350X350X50.8	350X350X50.8
	Fan Type-Piece	Centrifugal fan / 1an - 1	Centrifugal fan / 1an - 1	Centrifugal fan / 1an - 1
	Fan Diameter (mm)	φ210 X 80	φ218 X 109	φ218 X 109
	Sound Pressure Level dB (A) (H/ML)	/	/	/
	Sound Power Level dB (A) (H/ML)	/	/	/
	Defrosting Method	/	/	/
Fan Motor Speed (rpm) (H/ML)	1400/1300/1200	800/700/600	800/700/600	
Output of Fan Motor (W)	18	65	65	
Fan Motor RLA(A)	0.3	0.3	0.3	
Fan Motor Capacitor (μF)	2	3	3	
Climate Type	T1	T1	T1	
Isolation	B	B	B	
Moisture Protection	IP24	IP24	IP24	
Permissible Excessive Operating Pressure for the Discharge Side(MPa)	5.8	5.8	5.8	
Permissible Excessive Operating Pressure for the Suction Side(MPa)	1.2	1.2	1.2	
Dimension (W/H/D)( mm)	450/835/400	550/840/460	550/840/460	
Dimension of Package (L/W/H)(mm)	530/485/870	581/531/862	581/531/862	
Net Weight /Gross Weight (kg)	31/41	46/53.5	46/53.5	
Refrigerant Charge (kg)	R410A/0.6	R410A/0.8	R410A/0.8	

The above data is subject to change without notice. Please refer to the nameplate of the unit.

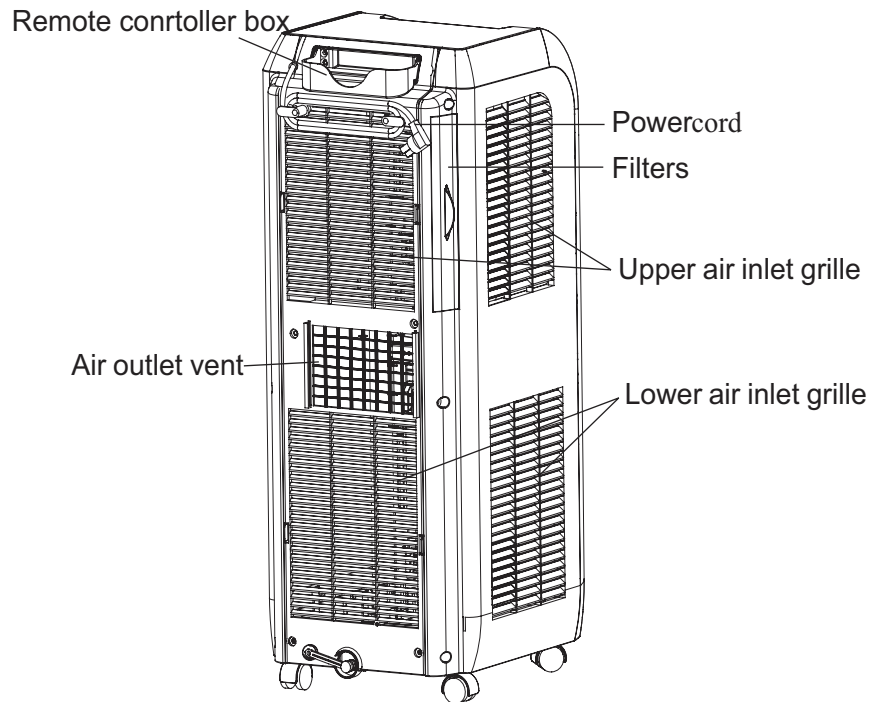
### 3. Construction Views

#### 3.1 Models GPC08AH-K3NNC3A, GPC09AH-K3NNC3A, GPC09AH-D1NNC3A

Front

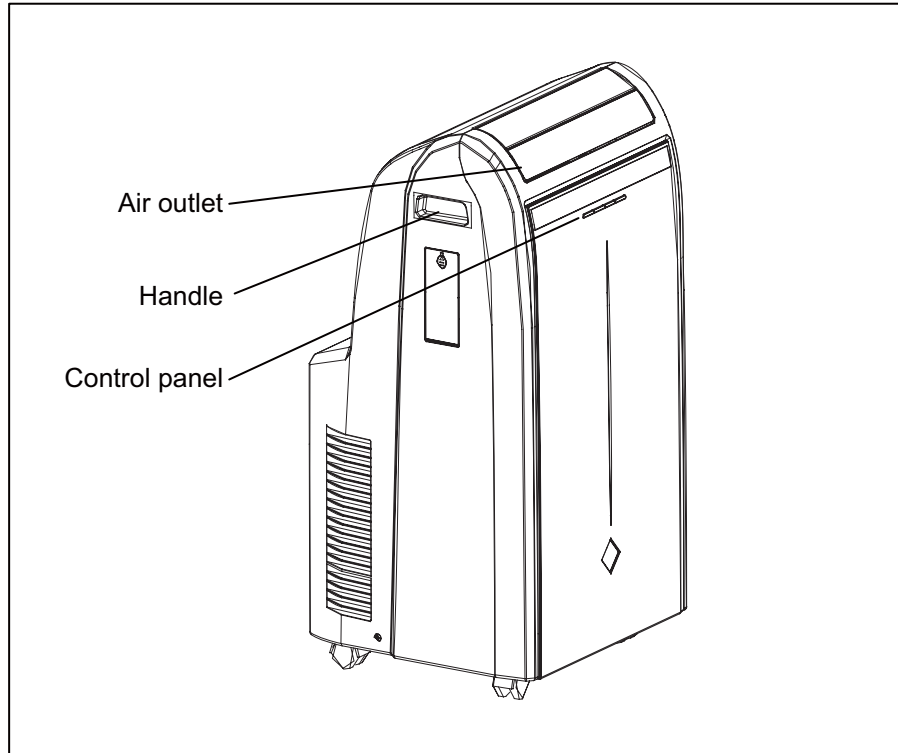


Rear

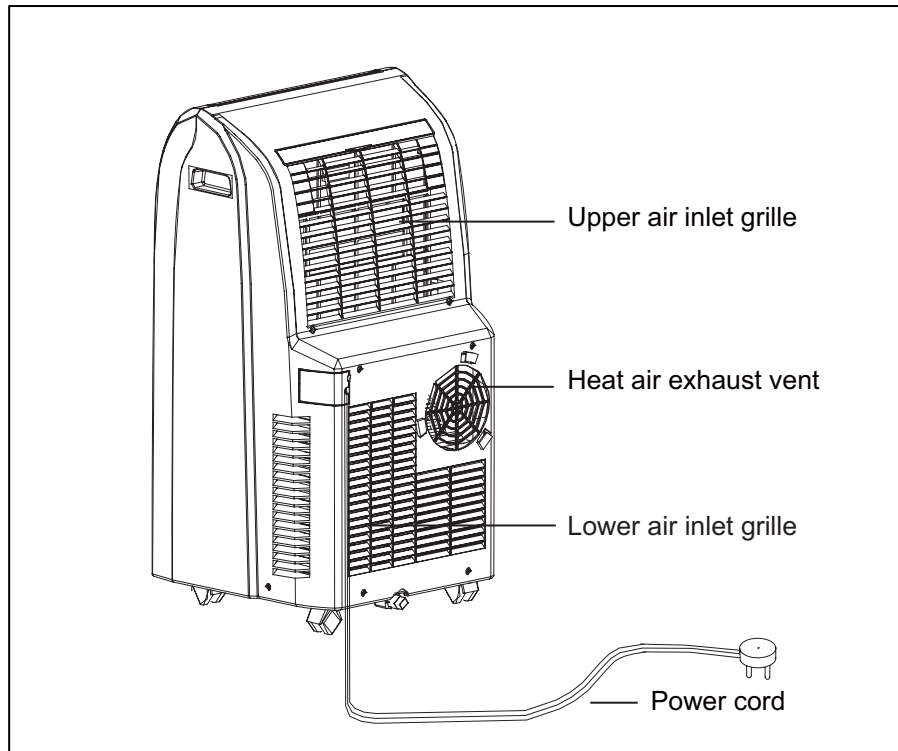


### 3.2 Model GPC09AE-K3NNA7A

Front

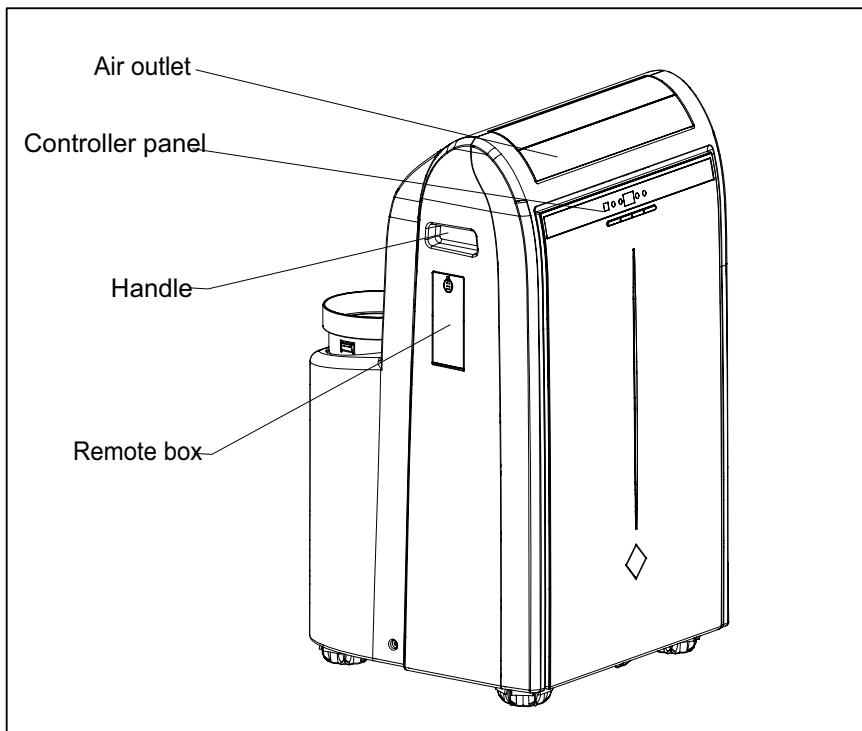


Rear

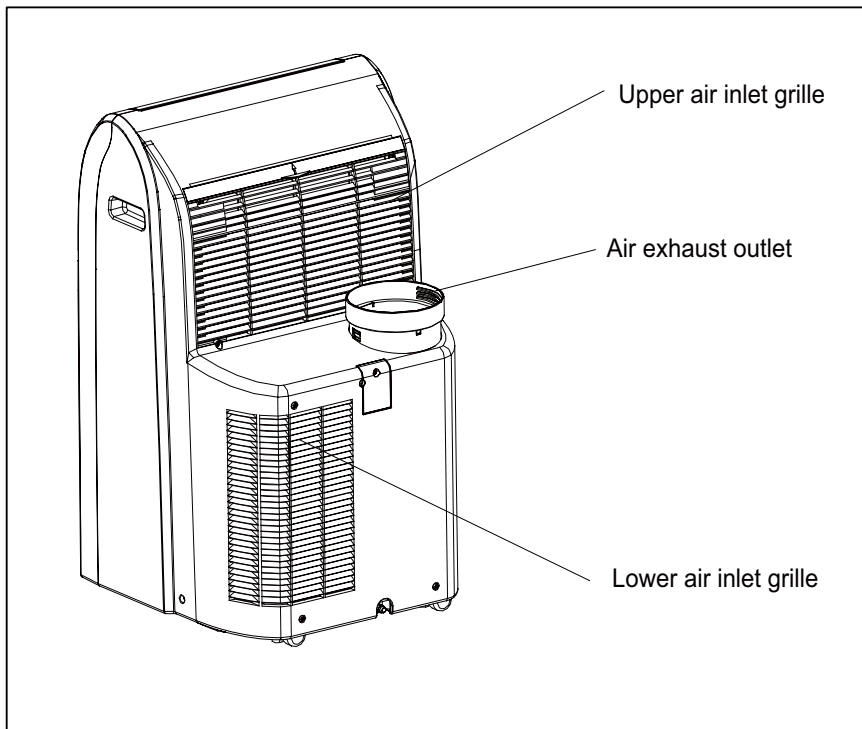


3.3 Models GPC12AF-K3NNA7A,GPE12AF-K3NNA7A

Front

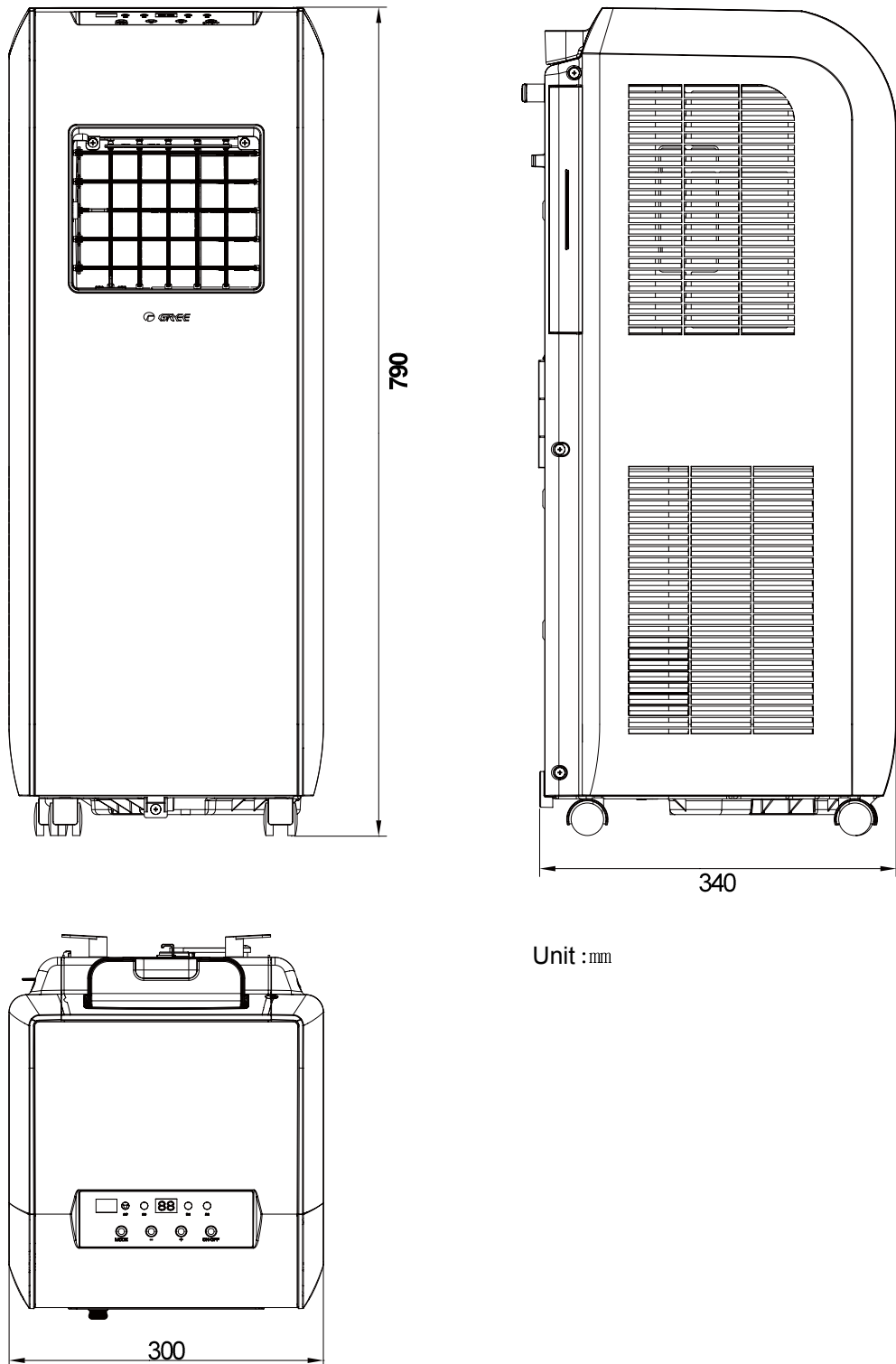


Rear

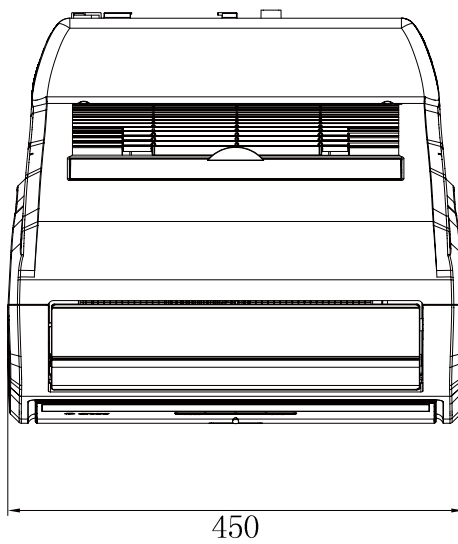
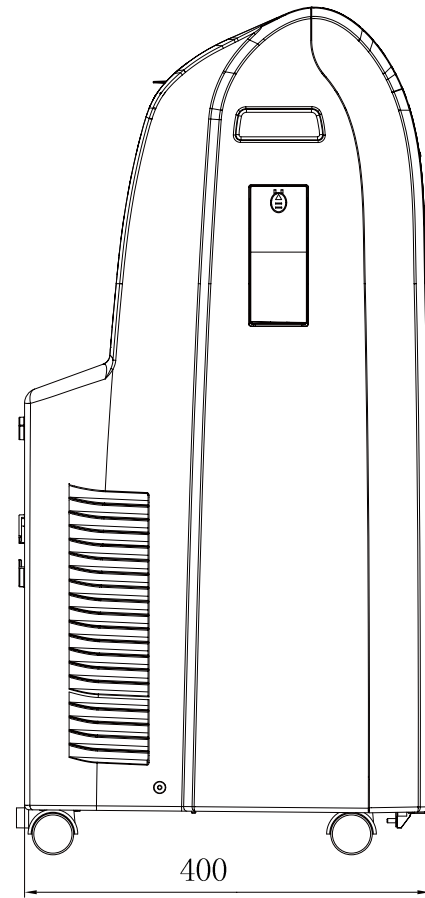
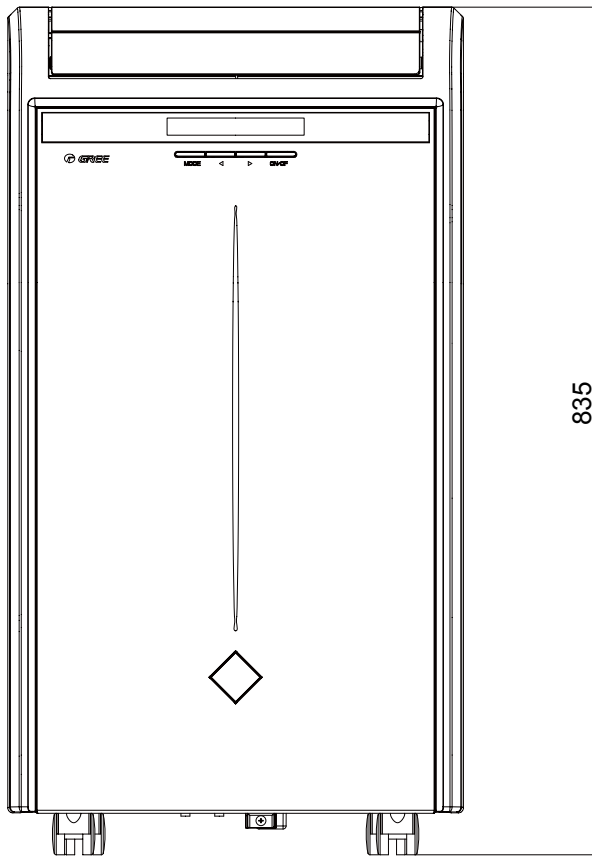


## 4. Outline and installation Dimension

### 4.1 Models GPC08AH-K3NNC3A,GPC09AH-K3NNC3A,GPC09AH-D1NNC3A

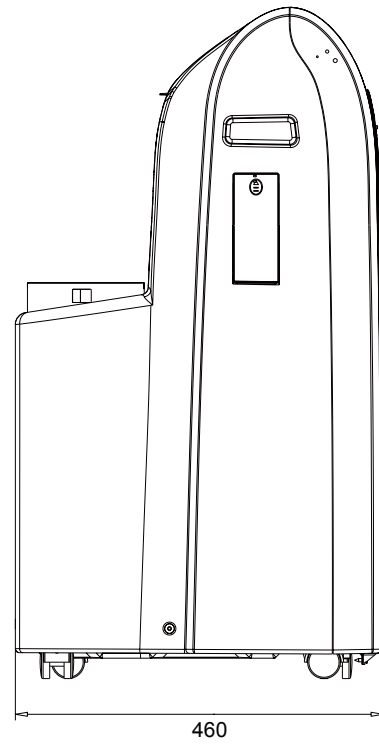
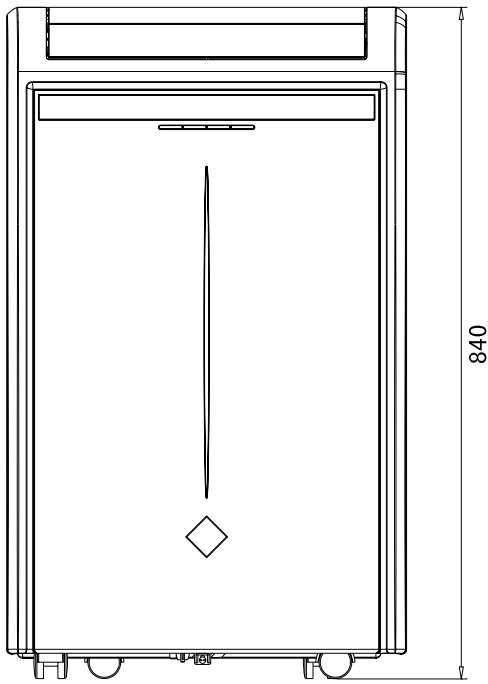


4.2 Model GPC09AE-K3NNA7A

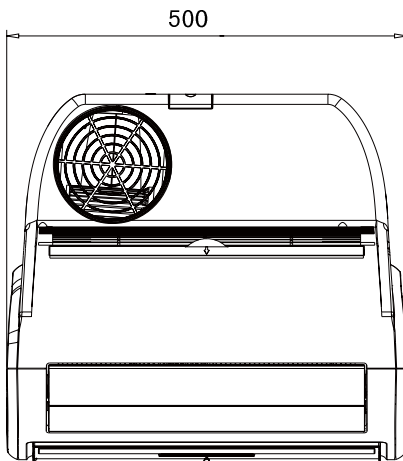


Unit:mm

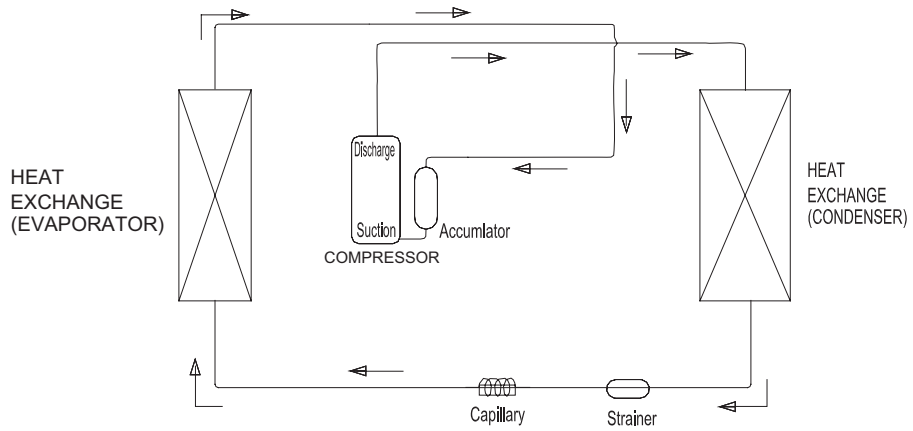
4.3 Models GPC12AF-K3NNA7A,GPE12AF-K3NNA7A



Unit:mm



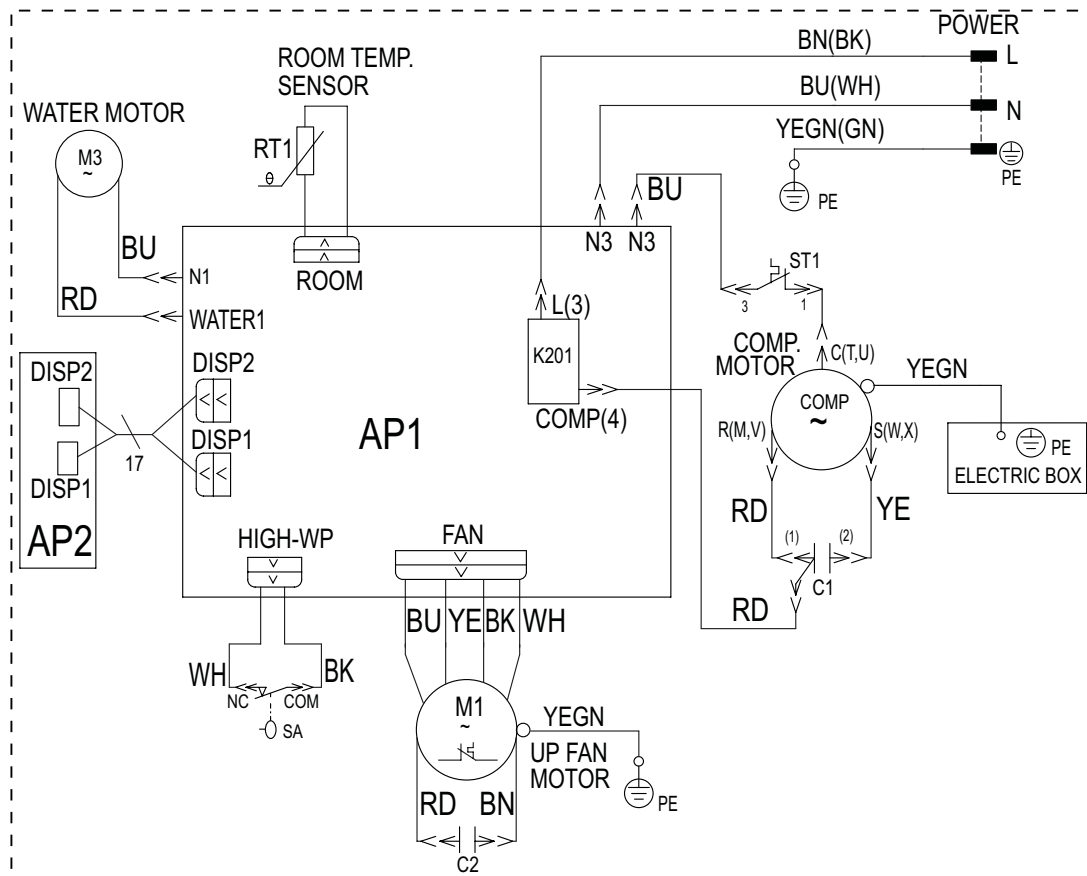
## 5. Refrigerant System Diagram



## 6. Schematic Diagram

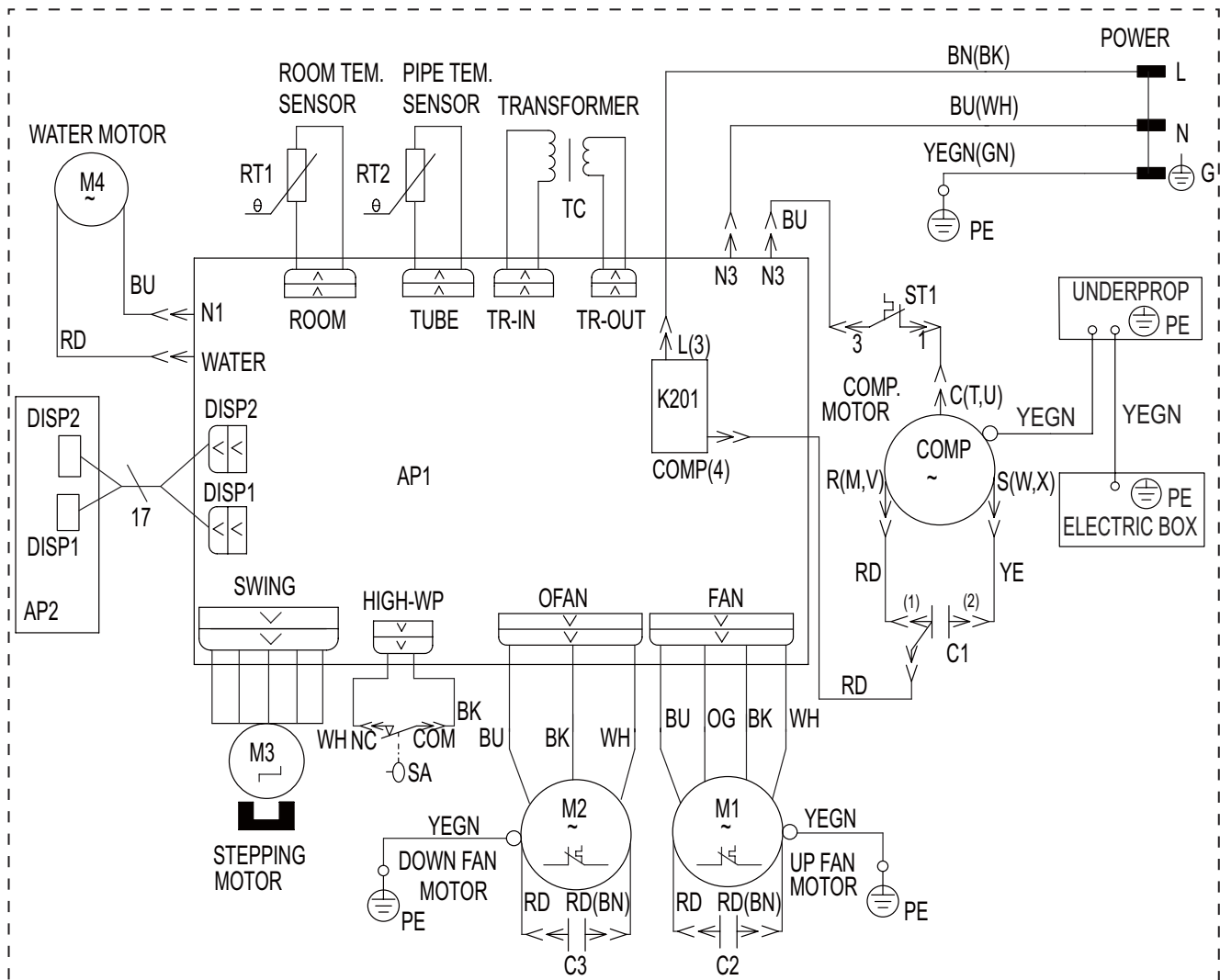
### 6.1 Electrical wiring

Models **GPC08AH-K3NNC3A, GPC09AH-K3NNC3A, GPC09AH-D1NNC3A**

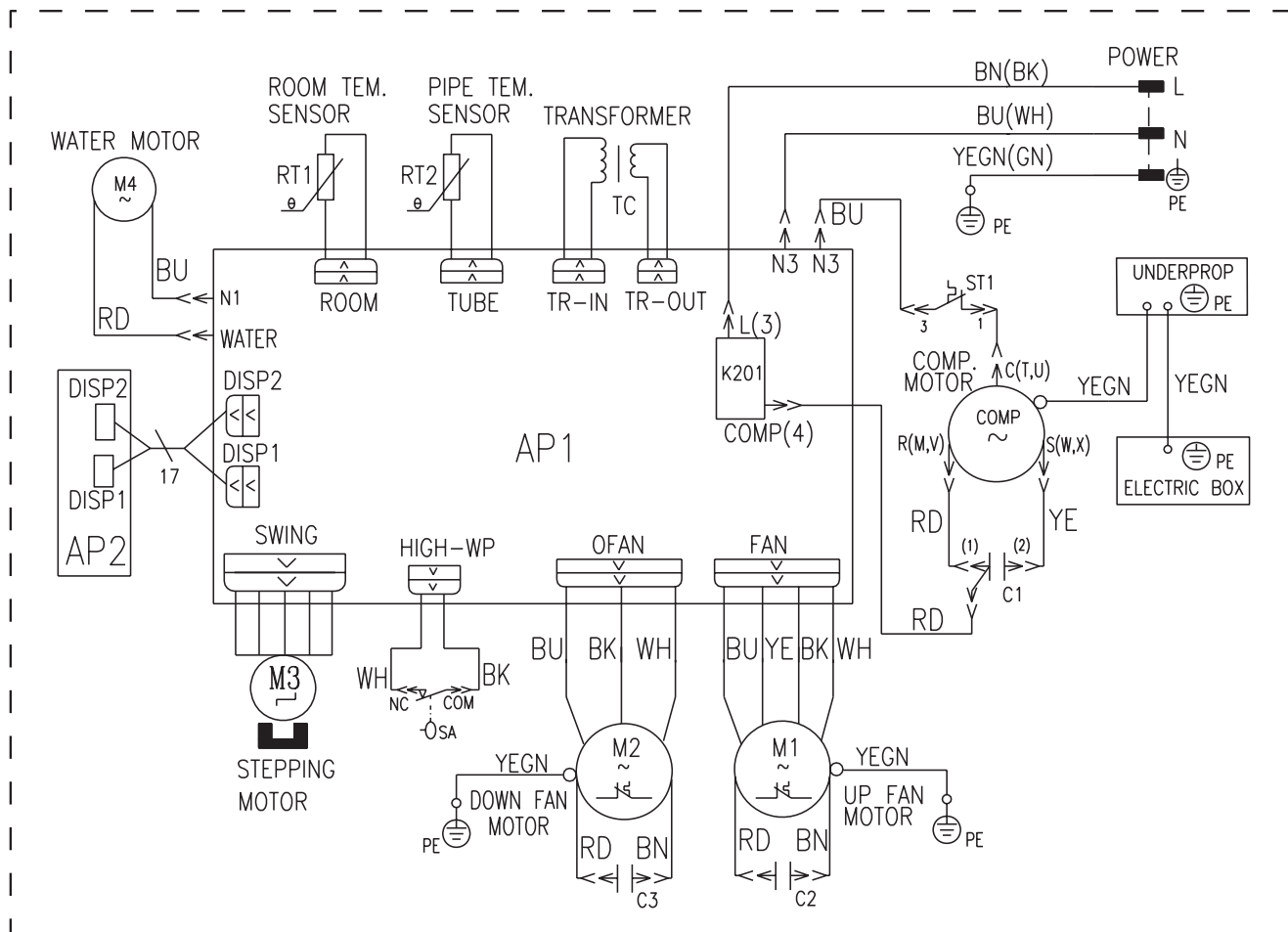




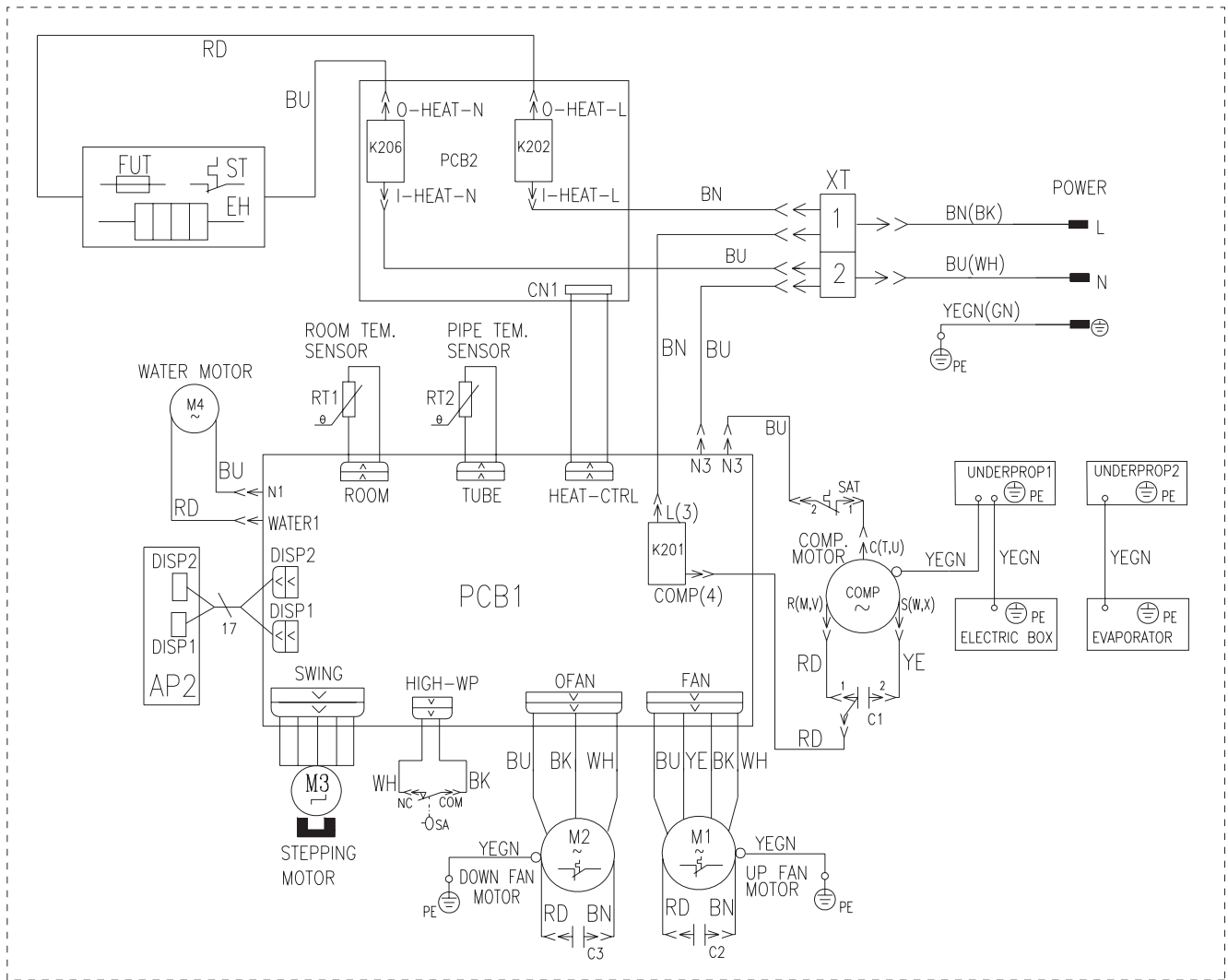
Model GPC09AE-K3NNA7A



Model GPC12AF-K3NNA7A



**Model GPE12AF-K3NNA7A**

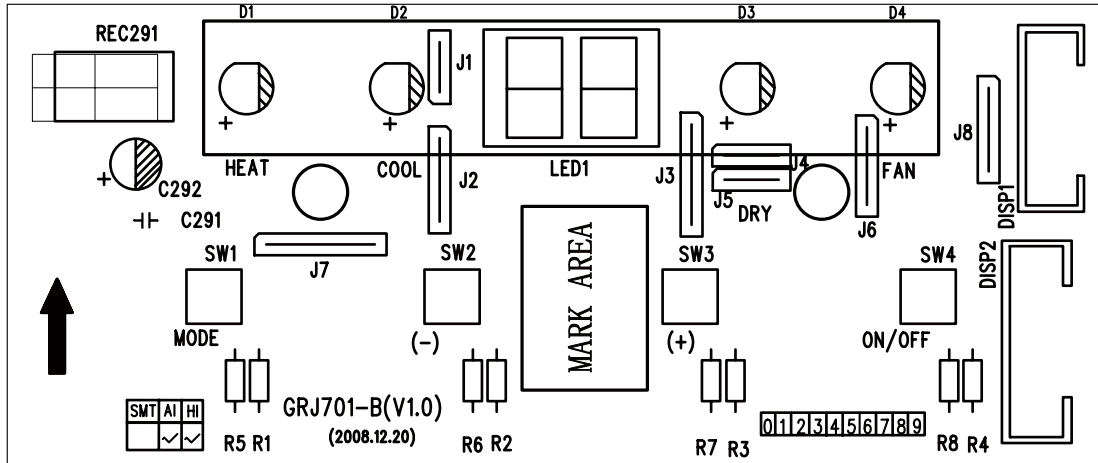


## 6.2 Printed Circuit Board

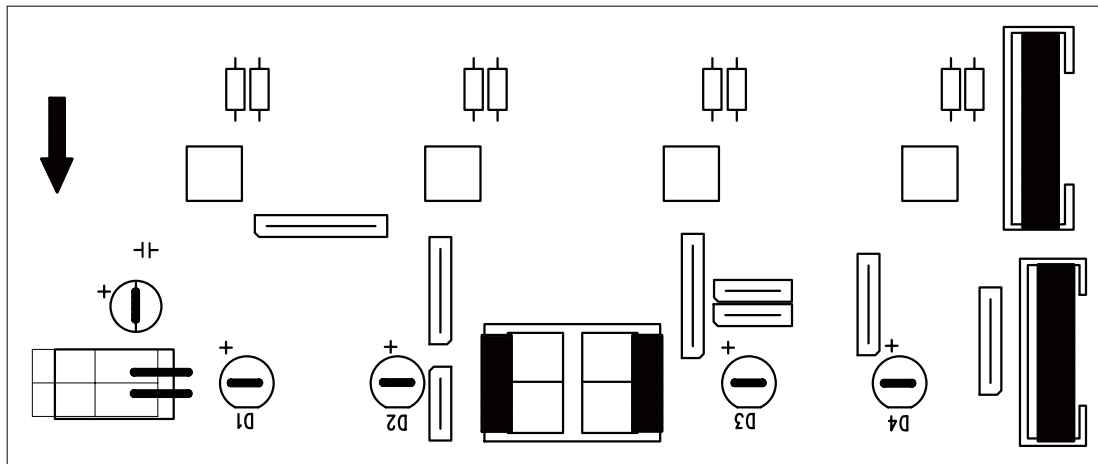
### 6.2.1 Display board

Models GPC08AH-K3NNC3A, GPC09AH-K3NNC3A, GPC09AH-D1NNC3A  
 GPC09AE-K3NNA7A, GPC12AF-K3NNA7A, GPE12AF-K3NNA7A

● TOP VIEW



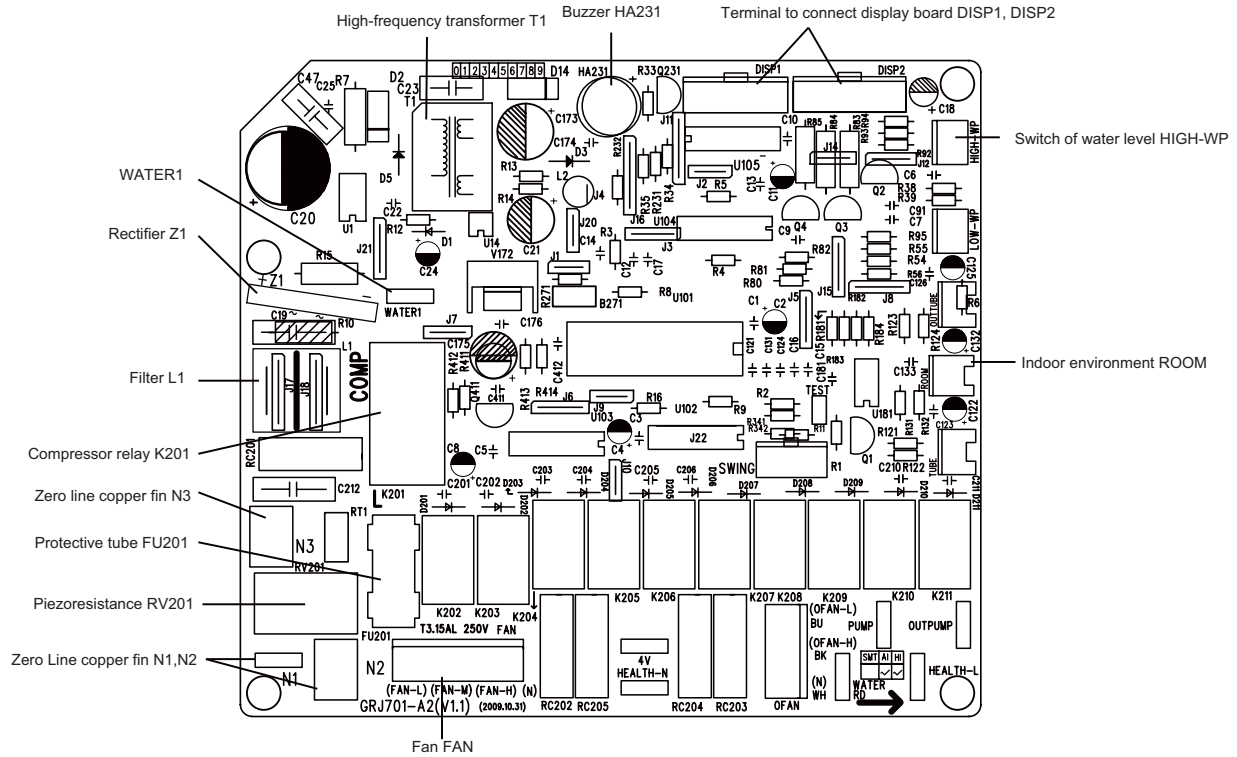
● BOTTOM VIEW



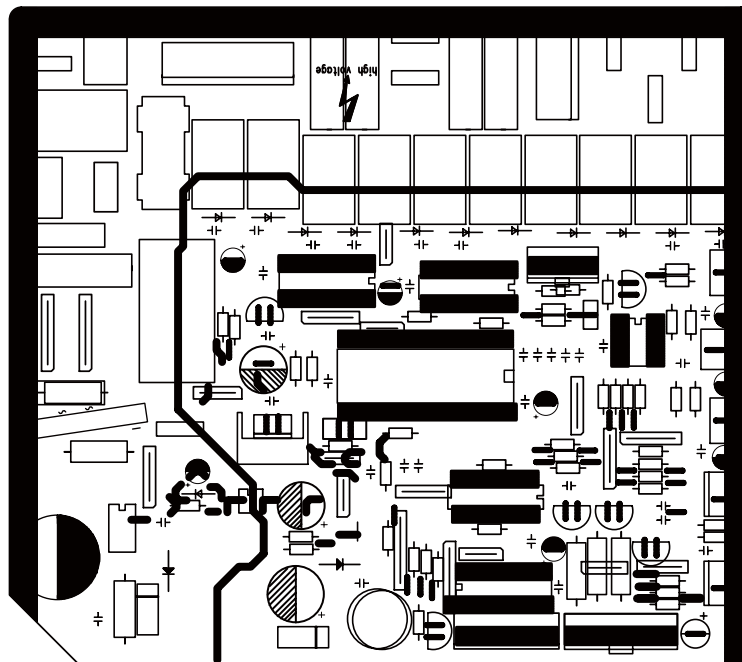
## 6.2.2 Control board

Models GPC08AH-K3NNC3A, GPC09AH-K3NNC3A, GPC09AH-D1NNC3A

### ● TOP VIEW

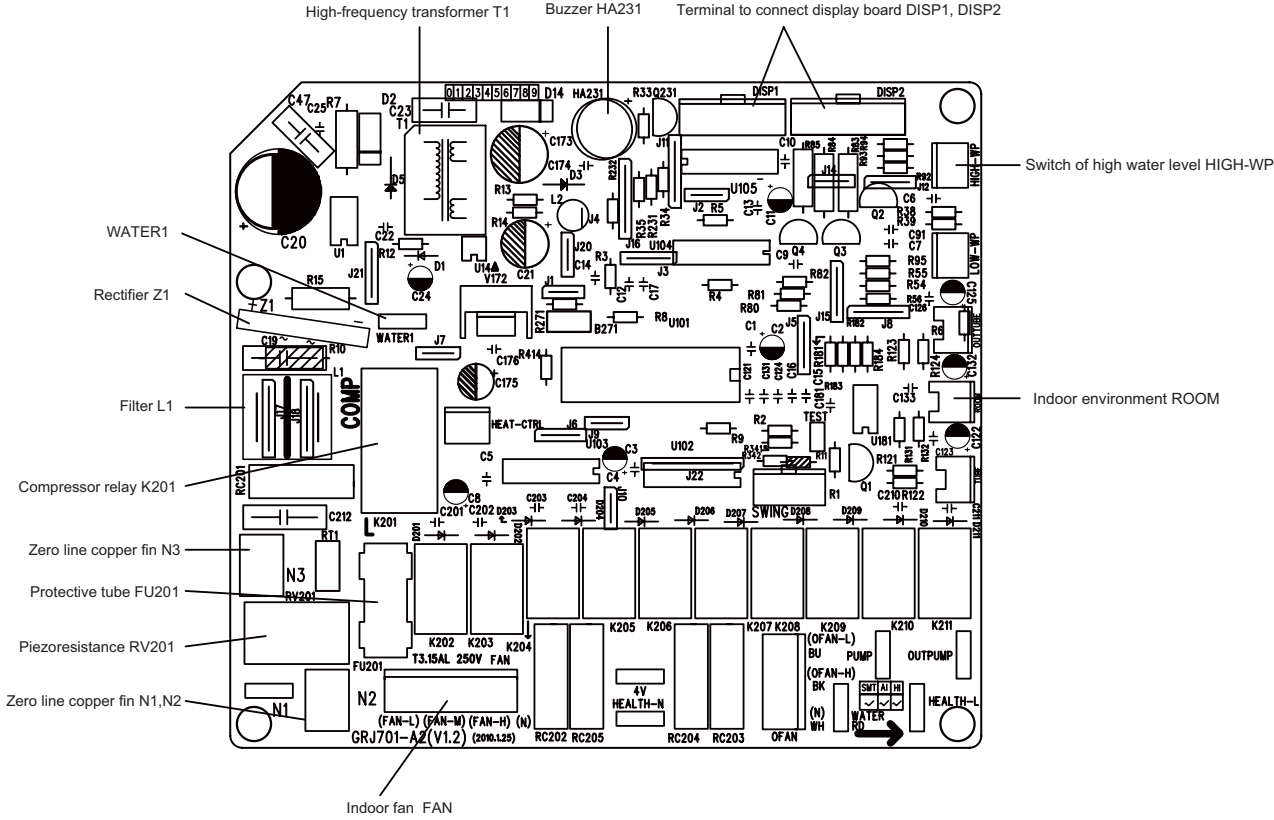


### ● BOTTOM VIEW

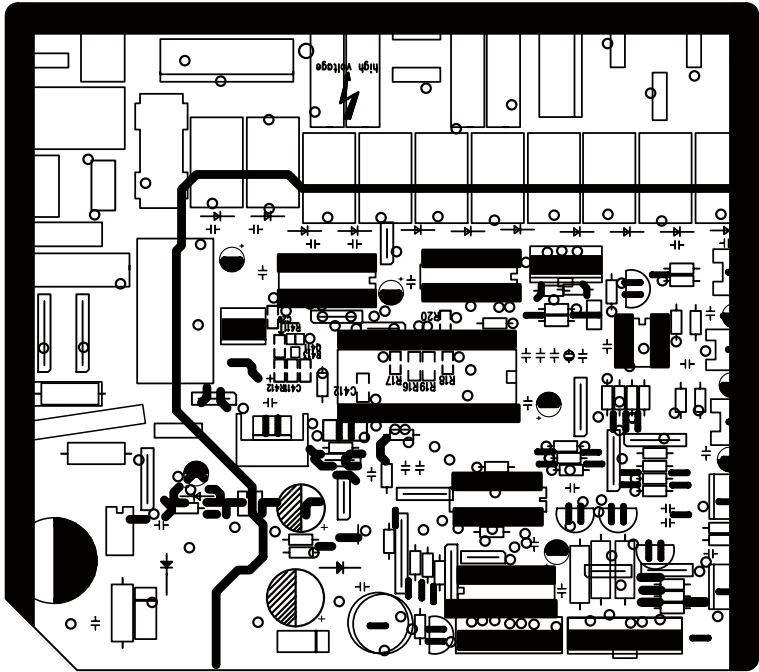


**Models GPC08AH-K3NNC3A, GPC09AH-K3NNC3A, GPC09AH-D1NNC3A (After PCB improve)**

**● TOP VIEW**

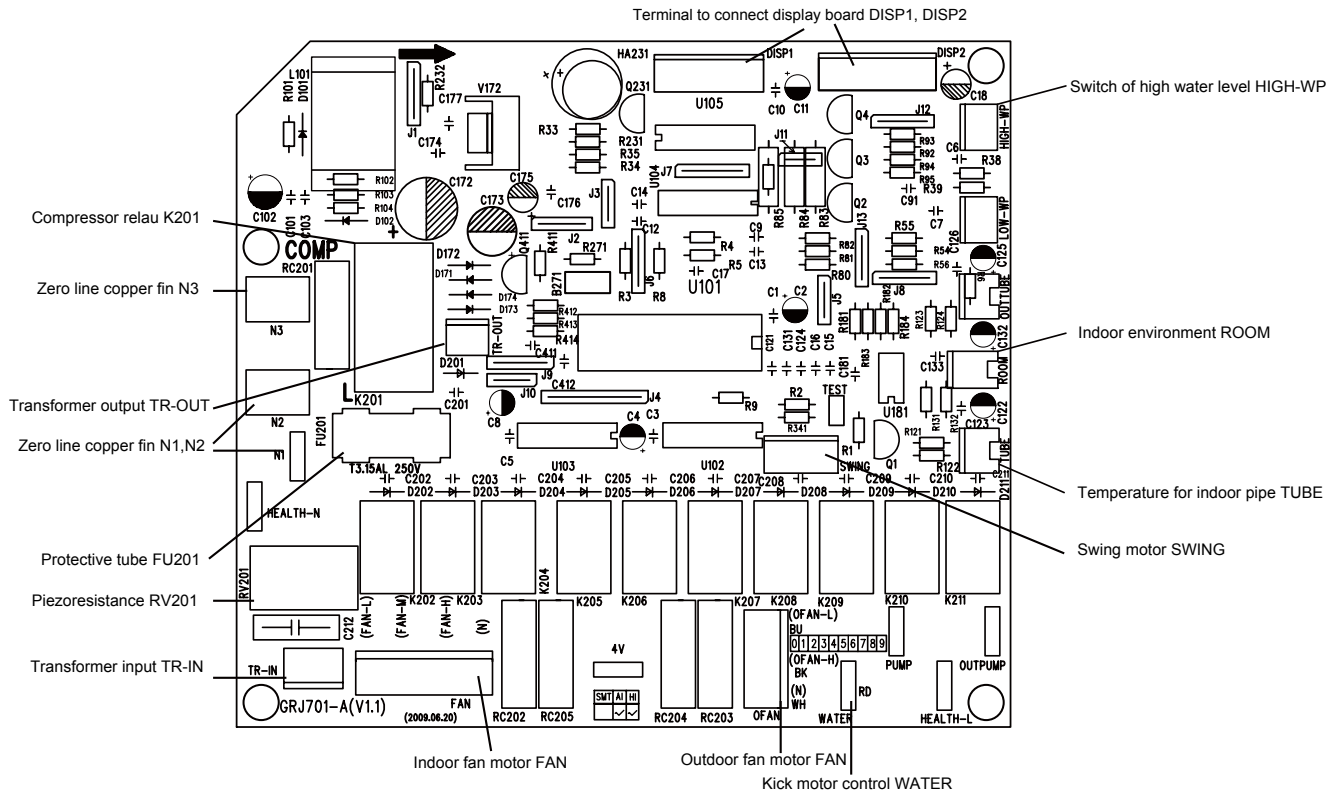


**● BOTTOM VIEW**

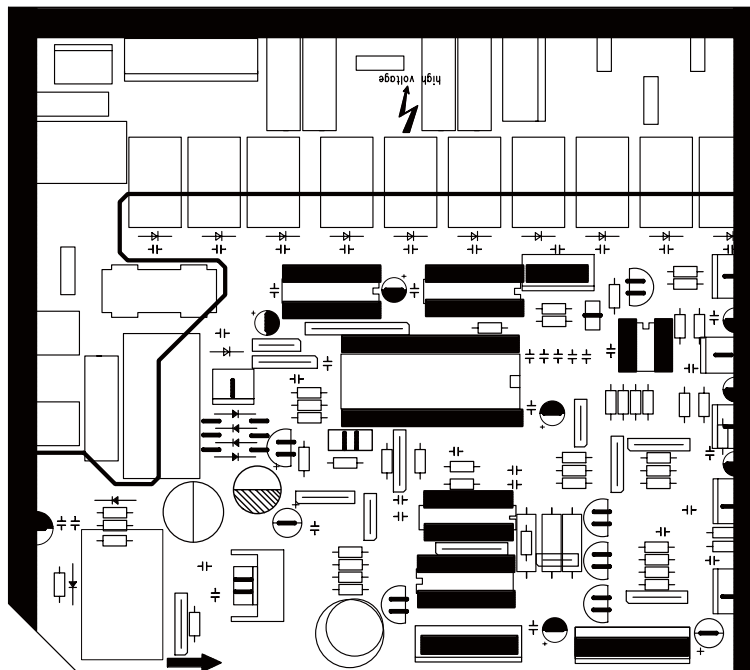


Models GPC09AE-K3NNA7A, GPC12AF-K3NNA7A

● TOP VIEW

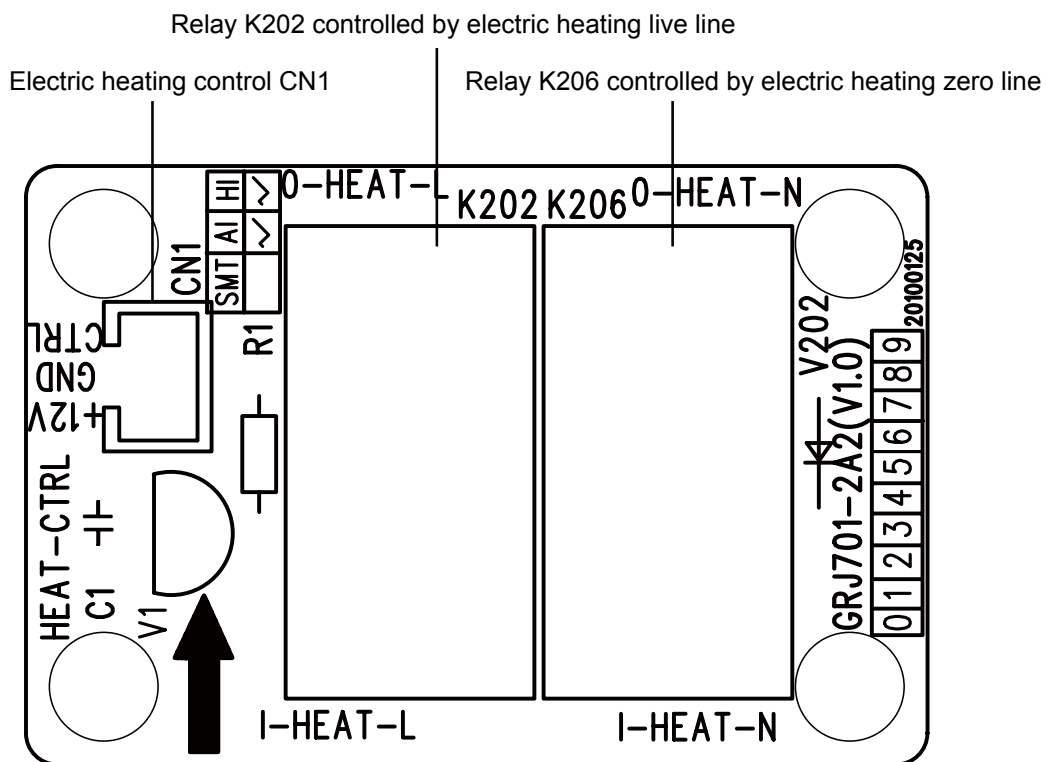


● BOTTOM VIEW

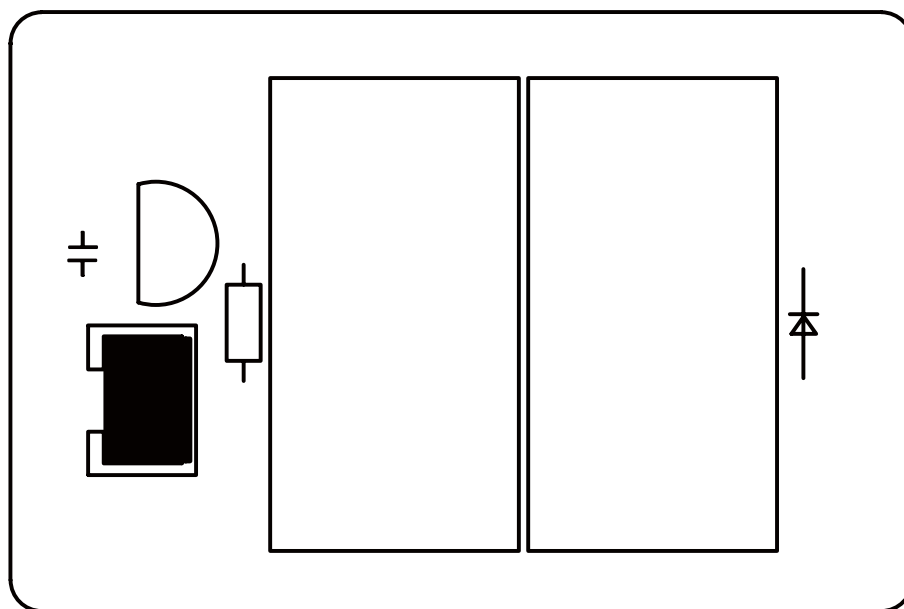


Model GPE12AF-K3NNA7A

● TOP VIEW



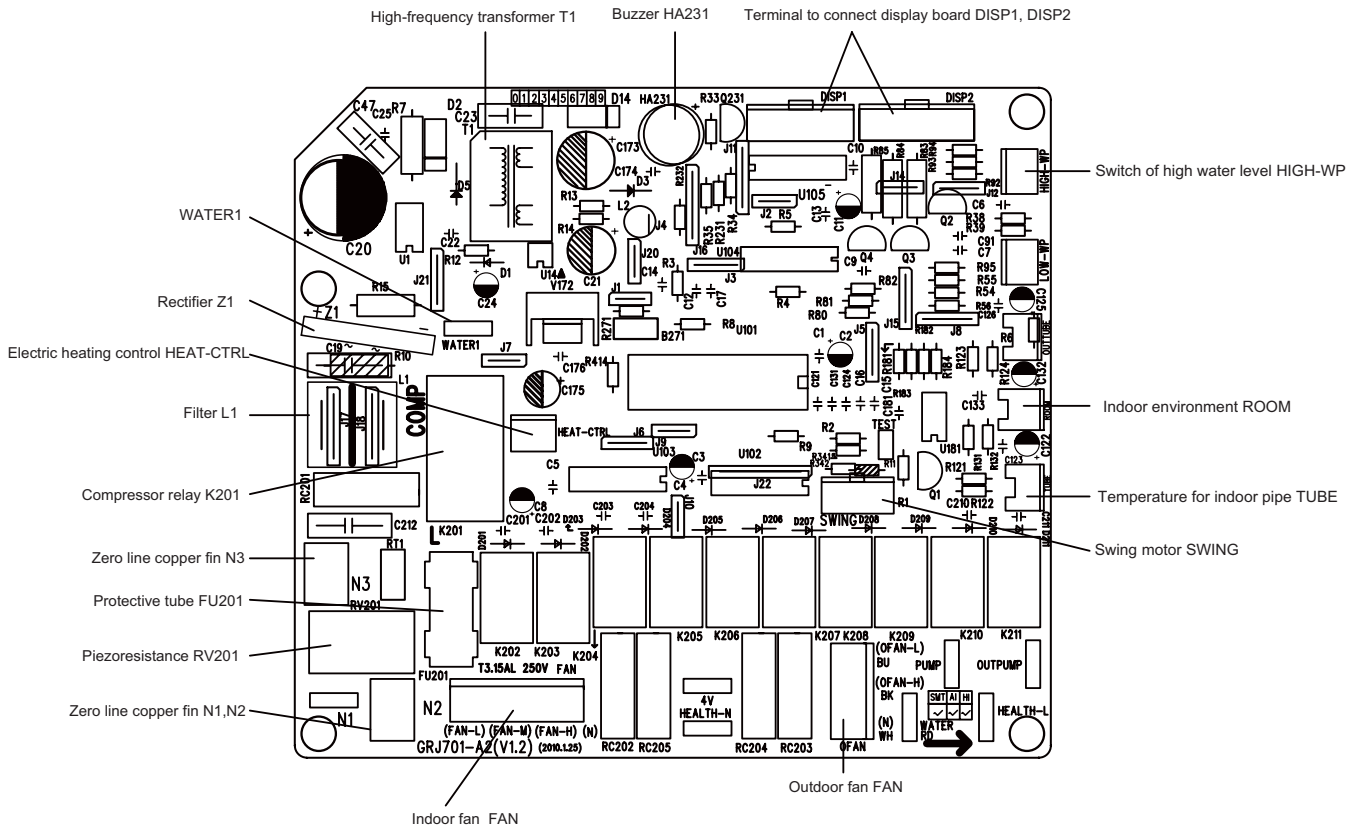
● BOTTOM VIEW



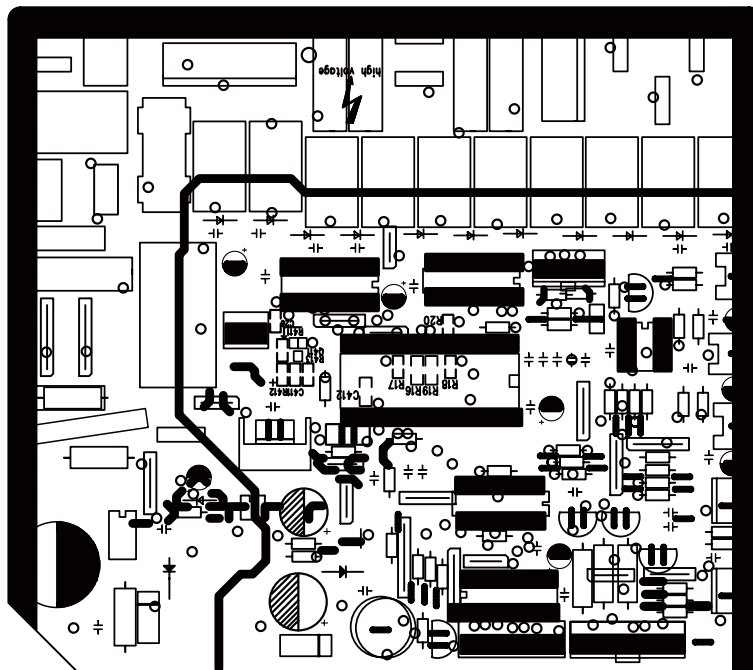


Models GPE12AF-K3NNA7A

● TOP VIEW



● BOTTOM VIEW

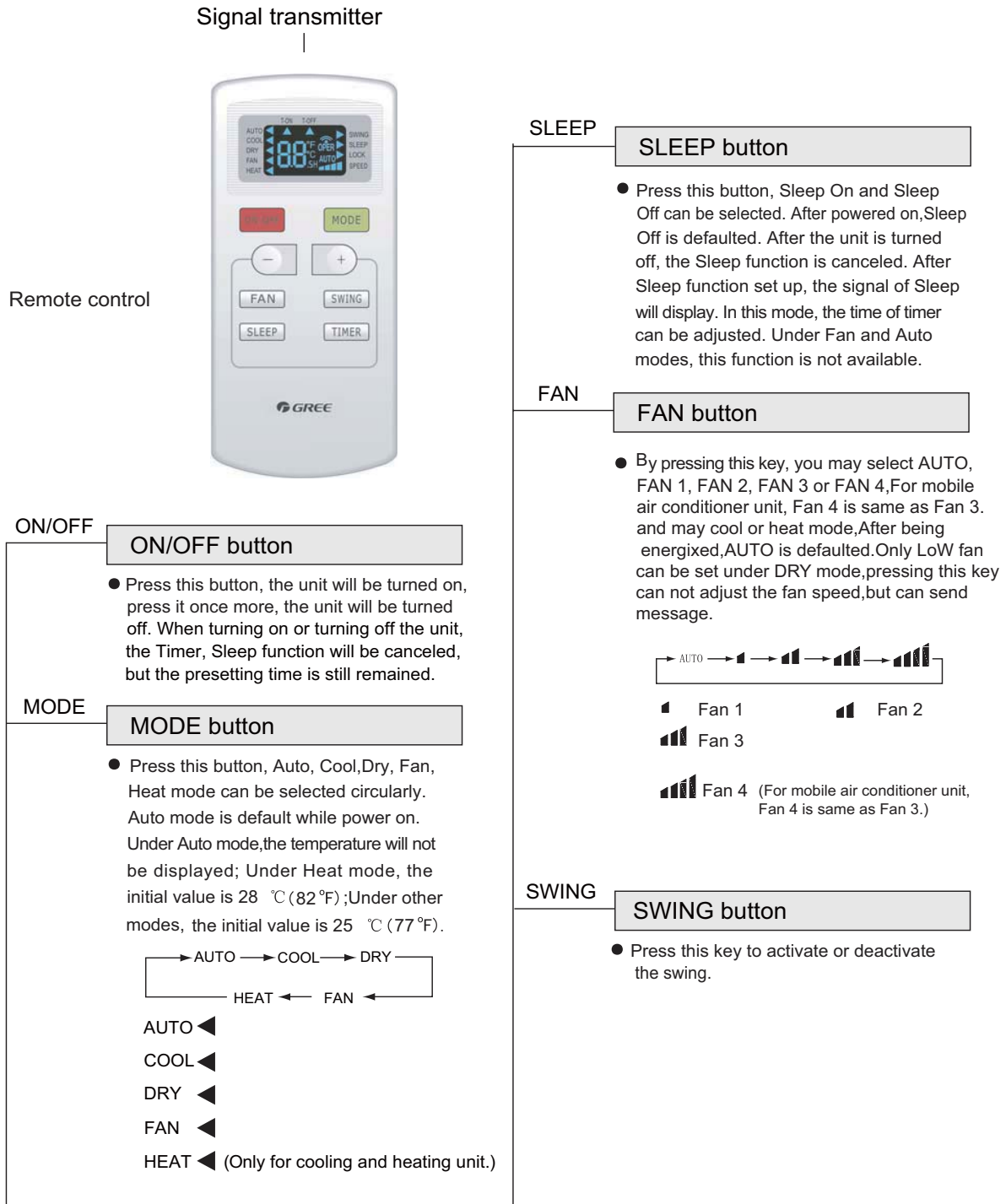


## 7 Operation of wireless remote control

### 7.1 It is applicable to GPC08AH-K3NNC3A, GPC09AH-K3NNC3A, GPC09AH-D1NNC3A

#### ● Names and functions of wireless remote control

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 corresponding button on the remote controller that the unit will keep the original running status. Be sure that there are no obstructions between receiver and remote controller; Don't drop or throw the remote control; Don't let any liquid in the remote control and put the remote control directly under the sunlight or any place where is very hot.





Remote control

+

**+ button**

- For presetting temperature increasing. Press this button, can set up the temperature, when unit is on. Continuously press and hold this button for more than 2 seconds, the corresponding contents will be changed rapidly, until unpress the button then send the information, °C (°F) is displaying all along. In Auto mode, the temperature can not be set up, but operate this button can send the signal. Centigrade setting range :16-30; Fahrenheit scale setting range 61-86.

-

**- button**

- Presetting temperature can be decreased. Press this button, the temperature can be set up, continuously press this button and hold for two seconds, the relative contents can quickly change, until unhold this button and send the order that the °C (°F) signal will be displayed all the time. The temperature adjustment is unavailable under the Auto mode, but the order can be sent by if pressing this button.

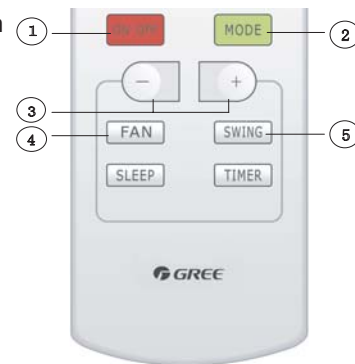
**TIMER**

**TIMER button**

- By pressing this key under switch-off state, you may set the time for auto switch-on. The range of setting is 0.5 ~ 24 hours. The characters "T-ON" and "H" will flash for 5 seconds. Within 5 seconds, you may make one press of this key to complete the setting and send the message. If the setting is valid, the set time will be displayed for 2 seconds before display of the temperature message. During flash, you may press "+" key to increase the value and press "-" key to decrease the value. The time will increase or decrease by 0.5 hours with each press of this key. If pressing "+" or "-" key continuously, the time value will change rapidly. The remote controller can increase the set time by 0.5 hours every 0.25 seconds. After being energized, the fault is no timer setting, and there is no display of "T-ON" or "H". Press ON/OFF key to switch on the unit and cancel the auto switch-on. When the temperature display becomes constant, you may press this key again to display the remaining set time. The time value, "T-On" and "H" will display constantly for 2 seconds. After 2 seconds, the preset temperature will be displayed. Within these 2 seconds, you may press this key again to cancel the auto switch-on and send the message.
- By pressing this key under switch-on state, you may set the time for auto switch-off. The method of setting as the same as for auto switch-on.

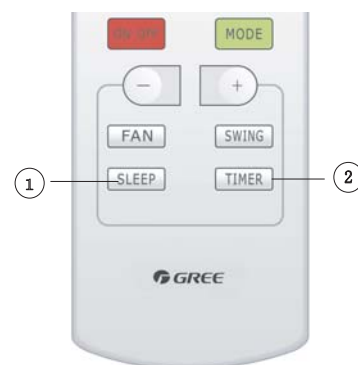
● Guide for operation- General operation

1. After powered on, press ON/OFF button, the unit will start to run.(Note: When it is powered off, the guide louver of main unit will close automatically.)
2. Press MODE button, select desired running mode.
3. Pressing + or - button, to set the desired temperature. (It is unnecessary to set the temp. at AUTO mode.)
4. Pressing FAN button, set fan speed, can select AUTO, FAN 1, FAN 2, FAN 3 or FAN 4.
5. Pressing SWING button, to select the swing.



● Guide for operation- Optional operation

1. Press SLEEP button, to set sleep.
2. Press TIMER button, can set the scheduled timer on or timer off.



● Introduction for special function

★ About AUTO RUN

When AUTO RUN mode is selected, the setting temperature will not be displayed on the LCD, the unit will be in accordance with the room temp. automatically to select the suitable running method and to make ambient comfortable.

★ About LOCK

Under switch-on or switch-off state, you may hold "+" and "-" key simultaneously to lock and unlock the keypad. When locked, the display will show the LOCK icon, in which case the lock icon will flash three times upon operation of any key. After the keypad is unlocked, the lock icon on the display will be hidden. After being energized, the default is unlock.

★ About switch between Fahrenheit and Centigrade

Under switch-off state, you may hold "-" and "MODE" keys simultaneously to switch between °F and °C.

★ About Lamp

Under switch-on or switch-off state, you may hold "+" and "FAN" key simultaneously for 3 seconds to set the lamp on or off and send the code. After being energized, the lamp is defaulted on.

★ About Blow over heat


When the unit is running in Heat mode or Auto Heat mode, compressor and indoor fan is running, to turn the unit off, the compressor, outdoor fan will stop running. The upper and lower guide board rotate to horizontal position, then the indoor fan will run at low fan speed, 10s later, the unit will turn off.

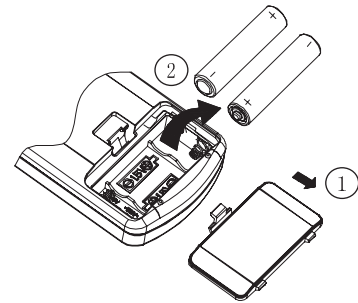
## ● Operation of wireless remote control

### ★ About new function of defrosting

Under switch-off state, hold MODE key for 2 seconds to enter or exit defrost H1 function. After being energized, the defrost H1 function is defaulted off. When entering defrost H1 function, the double-8 nixie tube will display H1 under switch-off state. When adjusting to heat mode, the double-8 nixie tube will display in flash for 5 seconds at a frequency of 1 count / sec. After the flash is ended, the remote controller will display the preset heating temperature. Within these 5 seconds, press of +, - or TIMER key will cancel the display H1, while the double-8 nixie tube will display the preset temperature. To switch the display of temperature between Celsius and Fahrenheit after entering defrost H1 function, the temperature value to be switched will be displayed firstly before display of H1 after 5 seconds.

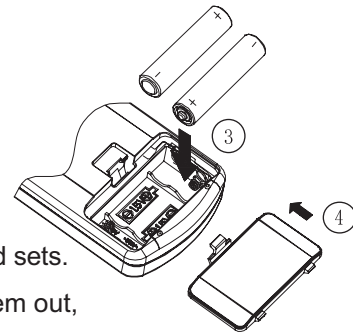
## ● Changing batteries and notices

1. Slightly to press the place  to take out the back cover of wireless remote control. (As shown in figure)
2. Take out the old batteries. (As show in figure)
3. Insert two new AAA1.5V dry batteries, and pay attention to the polarity. (As show in figure)
4. Attach the back cover of wireless remote control. (As show in figure)



### ★ NOTE:

- When changing the batteries, do not use the old or different batteries, otherwise, it can cause the malfunction of the wireless remote control.
- If the wireless remote control will not be used for a long time, please take them out, and don't let the leakage liquid damage the wireless remote control.
- The operation should be in its receiving range.
- It should be placed at where is 1m away from the TV set or stereo sound sets.
- If the wireless remote control can not operate normally, please take them out, after 30s later and reinsert, if they cannot normally run, please change them.




7.2 It is applicable to GPC09AE-K3NNA7A,GPC12AF-K3NNA7A, GPE12AF-K3NNA7A

Note: Be sure that there are no obstructions between receiver and remote control; Don't drop or throw the remote control; Don't let any liquid in the remote control and put the remote control directly under the sunlight or any place where is very hot.

This Remote control is universal,it could be used formany units,some buttons of this control which are not available to this unit will not be described below.

Signal transmitter




Remote control

**ON/OFF button**

- Press this button, the unit will be started or stopped, which can clear the timer or sleeping function of last time.

**Mode button**

- Press this button, the running mode will change as below.




- AUTO
- COOL
- DRY
- FAN
- HEAT (Note:no for cooling only unit)

**(+/-)button**

- When press +button , the setting temp. will be increased by 1°C(1°F),When press -button,the setting temp. will be decreased by 1°C(1°F) The temp. will be changed quickly by pressing the button continuously and setting temp. range is 16°C(61°F)~30°C(86°F).

**FAN speed button**

- Press this button once, fan speed will change as below:




- Low speed
- Middle speed
- High speed

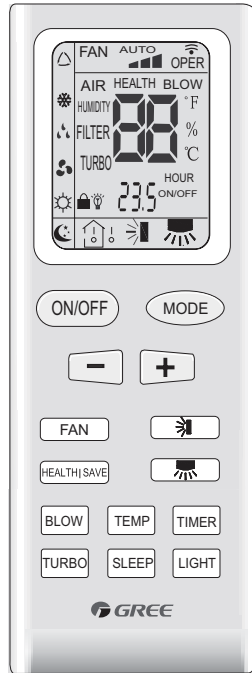
Note:Under the Dry mode, the fan speed isn't adjustable, low fan speed is imperative, but when operating this button, the wireless remote control will send this signal.

**Swing up and down button**

- Simpleness swing mode is defaulted for wireless remote control, in this mode, press this button, could turn on or turn off the Up and down swing function.
- When unit is turned off, synchronously press "+" and Up and down swing buttons, it could be switched between the simpleness swing mode and stationary swing mode, at this time, the button blinks 2 seconds.
- In Stationary swing mode, press this button,the angle for Up and down swing as show in below:



- When up and down swing louver is working, when turn off the unit, the swing louver will immediately stop at current position. The button shows up and down swing louver swings back and forth as show in the above figure.



Remote control

HEALTH| SAVE

HEALTH| SAVE button

- HEALTH function:there is no this function for this unit. If press this key, the main unit will click, but it also runs under original status.
- Save energy function: this unit has no this function, press this button, the main unit will click, "SE" will be displayed on the LCD of wireless remote control, fan speed automatically rotates, when repress this button, the fan speed will run at previous setting fan speed.

TURBO

Turbo button

- Set turbo on or off(the characters of turbo will appear or disappear ) by pressing this key under cooling or heating mode.Once energized, the unit will be defaulted to be turbo off. This function can not be set under auto, dehumidify or fan mode, and characters of turbo won't appear.

TIMER

Timer button

- On the status of the unit on, press this button to set timer off. On the status of the unit off, press this button to set timer off. Press this key once, words Hour on(off) will appear and flicker. In which case, press +/- button to adjust time (press +/- button continuously to change timing value quickly), the setting time range is from 0.5 to 24 hr.; press this key once again to fix the time, then remote controller will send out the signal immediately and hour on/off will stop flickering. If the time of that no press timer button under flickering status is above 5s,the timer setting will quit. If the timer has been set, press this button once again to quit it.



Left and right swing button

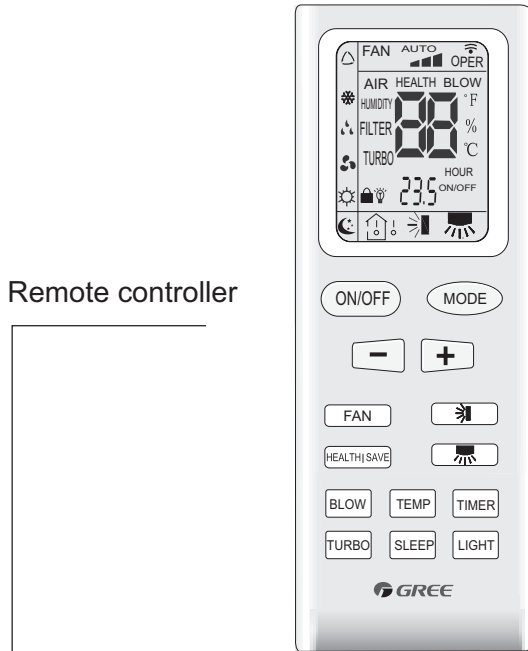
- There is no this function for this unit. If press this key, the main unit will click, but it also runs under original status.

TEMP

Temp. display button

- There is no this function for this unit. If press this key, the main unit will click, but it also runs under original status.

NOTE: This remote controller is universal, it could be used for many units, some buttons of this controller which are not available to this unit will not be described below.



Remote controller

SLEEP

Sleep button

- Press this button, enter into SLEEP state, when repressed, it will quit. The sleep function will be canceled with the stop of the unit. There is no SLEEP function under AUTO and FAN mode. ☾ is the icon for sleep function.
- At COOL, BLOW mode: the SLEEP mode runs after 1 hour, the setting temp. will be increased by 1°C (1°F), 2 hour later, setting temp. will be increased by 2°C (2°F) and then will run at this setting temperature.
- At HEAT mode: the SLEEP mode runs after 1 hour, the setting temp will be decreased by 1°C (1°F), 2 hours later setting will be decreased by 2°C (2°F), then it will run at setting temperature.



BLOW

Blow button

- Set Blow on (the character of Blow will appear) or off (the character of Blow disappear) by pressing this key under cool or dehumidify mode. Once energized, the unit will be defaulted to be Blow off. This function can not be set under auto, fan or heat mode, and the character of Blow won't appear.


LIGHT

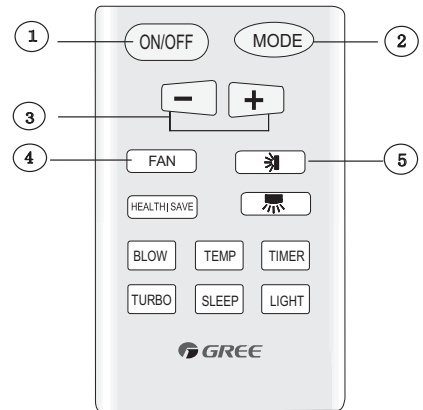
Light button

- Press this button to select LIGHT on or off in the displayer. When the LIGHT is on, the icon  will be displayed and the indicators' light in the displayer will be on. When the LIGHT is off, the icon  will be disappeared and all the indicators' light in the displayer will be off.



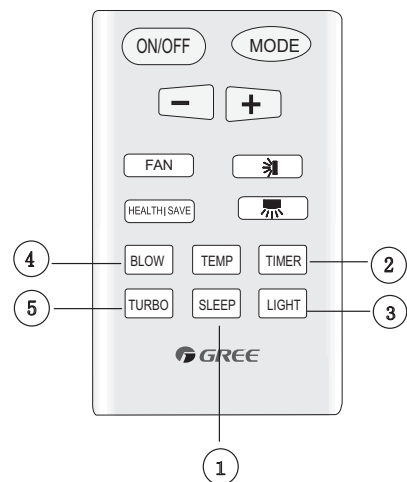
● Guide for operation-general operation

1. Press ON/OFF button to start the unit after powering the main unit on. (Note: Power the unit on every time, the big -guide louver and small-guide louver will be closed firstly.)
2. Press MODE button to select desired running mode.
3. Press +/- button to set the desired temperature. (It is unable to set the temperature at AUTO mode)
4. Press FAN button to set fan speed, the AUTO FAN, LOW, MID or HIGH could be selected.
5. Press  button to set swing mode.



● Guide for operation-optional operation

1. Press SLEEP button, set the sleep mode.
2. Press TIMER button, then press +/- button, to set the scheduled timer on or timer off.
3. Press LIGHT button to control displayer light on or off.
4. Press BLOW button to set Blow function on or off.
5. Press TURBO button to set this function on or off.



● Introduction for special function

★ About blow function

This function indicates that moisture on evaporator of indoor unit will be blown after the unit is stopped to avoid mould.

1. Having set blow function on: After turning off the unit by pressing ON/OFF button indoor fan will continue running for about 10 min. at low speed. In this period, press blow button to stop indoor fan directly.
2. Having set blow function off: After turning off the unit by pressing ON/OFF button, the complete unit will be off directly.


★ About AUTO RUN

When AUTO RUN mode is selected, the setting temperature will not be displayed on the LCD, the unit will be in accordance with the room temp. automatically to select the suitable running method and to make ambient comfortable.

★ About turbo function

If start this function, the unit will run at super-high fan speed to cool or heat quickly so that the ambient temp. approaches the preset temp. as soon as possible.

★ About lock

Press + and - buttons simultaneously to lock or unlock the keyboard. If the remote controller is locked, the icon  will be displayed on it, in which case, press any button, the mark will flicker for three times. If the keyboard is unlocked, the mark will disappear.

★ About switch between Fahrenheit and Centigrade

Under status of unit off, press MODE and - buttons simultaneously to switch °C and °F.


★ About new function of defrosting (The appliance of the defrosting function is unavailable.)

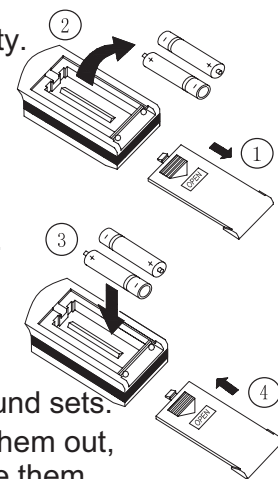
It indicates: after starting this function by remote controller and the unit has been under defrost status, If turn off the unit by remote controller, the unit will not stop defrosting until it is finished; if change setting mode by remote controller, the function, which is set last time, won't be carried out until defrosting finished.

Operation of this function on or off: If remote controller is under off status, press mode button and blow button simultaneously in order to enter or cancel this new function. If the unit is under defrost mode, dual eight position on remote controller will display H1. If switch to heat mode, the position will display H1, which flickers for 5s, in which case, press +/- button, H1 will disappear and setting temp. be displayed.

After remote controller is powered on, the new defrost function will be defaulted to be closed.

● Changing batteries and notices

1. Slightly to press the placetwih,  along the arrowhead direction to push the back cover of wireless remote control. (As show in figure)
2. Take out the old batteries. (As show in figure)
3. Insert two new AAA1.5V dry batteries, and pay attention to the polarity. (As show in figure)
4. Attach the back cover of wireless remote control. (As show in figure)



Sketch map for changing batteries

★ NOTE:

- When changing the batteries, do not use the old or different batteries, otherwise, it can cause the malfunction of the wireless remote control.
- If the wireless remote control will not be used for a long time, please take them out, and don't let the leakage liquid damage the wireless remote control.
- The operation should be in its receiving range.
- It should be placed at where is 1m away from the TV set or stereo sound sets.
- If the wireless remote control can not operate normally, please take them out, after 30s later and reinsert, if they cannot normally run, please change them.

## 8. Function and Control

This function manual is applicable to export mobile AC: GPC08AH-K3NNC3A, GPC09AH-K3NNC3A, GPC09AH-D1NNC3A. There are two units for temperature display of mobile AC: Centigrade and Fahrenheit. The unit for temperature is centigrade in this function manual. If there is Fahrenheit, the transition relation is  $T_{\text{Fahrenheit}} = T_{\text{Centigrade}} \times 1.8 + 32$ .

### 8.1.1 Temperature Parameter

- ◆ Indoor setting temperature ( $T_{\text{preset}}$ )
- ◆ Indoor ambient temperature ( $T_{\text{amb}}$ )

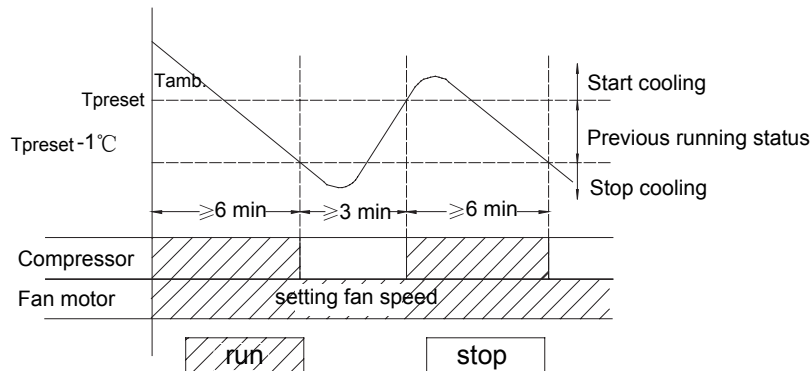
### 8.1.2 Basic Functions of System

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.

#### ■ Working conditions and process of cooling

- a) When  $T_{\text{amb}} \geq T_{\text{preset}} + 1^\circ\text{C}$  ( $2^\circ\text{F}$ ), 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  $T_{\text{amb}} \leq T_{\text{preset}} - 1^\circ\text{C}$  ( $2^\circ\text{F}$ ), the compressor and kick motor stop to run, and fan motor runs under preset fan speed.
- c) When  $T_{\text{preset}} - 1^\circ\text{C}$  ( $2^\circ\text{F}$ )  $< T_{\text{amb}} < T_{\text{preset}} + 1^\circ\text{C}$  ( $2^\circ\text{F}$ ), the unit will keep the current running status.

Under this mode, the temperature setting range is  $61^\circ\text{F}$ - $86^\circ\text{F}$  ( $16^\circ\text{C}$ - $30^\circ\text{C}$ ).



#### ■ DRY Mode

##### ● Working conditions and process of dry

Under this mode, the unit will not display setting temperature and ambient temperature; the fan motor runs under low fan speed; the compressor, fan motor and kick motor continue to run.

#### ■ FAN Mode

● Under this mode, the unit will not display setting temperature and ambient temperature; the fan motor runs under setting fan speed; the compressor, fan motor and kick motor stop to run.

● Under this mode, the centigrade temperature setting range is  $16^\circ\text{C}$ - $30^\circ\text{C}$ , the fahrenheit temperature setting range is  $61^\circ\text{F}$ - $86^\circ\text{F}$ .

#### ■ AUTO Mode

● Under AUTO mode, the standard cooling  $T_{\text{preset}} = 25^\circ\text{C}$  ( $77^\circ\text{F}$ ), standard heating  $T_{\text{preset}} = 20^\circ\text{C}$  ( $68^\circ\text{F}$ )

● It will go to auto cooling mode when  $T_{\text{amb}} > 26^\circ\text{C}$  ( $79^\circ\text{F}$ ); and goes to auto fan mode when  $T_{\text{amb}} < 20^\circ\text{C}$  ( $68^\circ\text{F}$ );  $20^\circ\text{C}$  ( $68^\circ\text{F}$ )  $\leq T_{\text{amb}} \leq 23^\circ\text{C}$  ( $73^\circ\text{F}$ ), if the previous running is fan (including general fan and auto fan), it will keep the running status of auto fan mode, if the previous running is not fan, it will go to auto dry mode;  $26^\circ\text{C}$  ( $79^\circ\text{F}$ )  $\geq T_{\text{amb}} \geq 24^\circ\text{C}$  ( $74^\circ\text{F}$ ), it goes to auto dry mode; when the unit is first energized,  $26^\circ\text{C}$  ( $79^\circ\text{F}$ )  $\geq T_{\text{amb}} \geq 20^\circ\text{C}$  ( $68^\circ\text{F}$ ), it runs under dry mode.

### 8.1.3 Other Functions

#### ■ Buzzer

When the controller is energized, receiving a signal from remote controller or button, the buzzer will give out a beep.

#### ■ Sleep

a) Under cooling mode, after 1h of setting sleep process,  $T_{\text{preset}}$  increases  $2^{\circ}\text{F}$  ( $1^{\circ}\text{C}$ ); 2h later,  $T_{\text{preset}}$  increases  $4^{\circ}\text{F}$  ( $2^{\circ}\text{C}$ ). After 2h, the setting temperature never increases, but the upper limit of increased setting temperature is  $86^{\circ}\text{F}$  ( $30^{\circ}\text{C}$ )

b) Under heating mode, after 1h of setting sleep process,  $T_{\text{preset}}$  decreases  $2^{\circ}\text{F}$  ( $1^{\circ}\text{C}$ ); 2h later,  $T_{\text{preset}}$  decreases  $4^{\circ}\text{F}$  ( $2^{\circ}\text{C}$ ). After 2h, the setting temperature never decreases, but the upper limit of decreased setting temperature is  $61^{\circ}\text{F}$  ( $16^{\circ}\text{C}$ )

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.

#### ■ Auto Fan

a) Auto fan speed under cooling mode

$T_{\text{amb}} \geq T_{\text{preset}} + 4^{\circ}\text{F}$  ( $2^{\circ}\text{C}$ )                      High fan;

$T_{\text{preset}} < T_{\text{amb}} < T_{\text{preset}} + 4^{\circ}\text{F}$  ( $2^{\circ}\text{C}$ )                      Med fan;

$T_{\text{amb}} \leq T_{\text{preset}}$     Low fan

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

#### ■ 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.

#### ■ 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.

#### ■ 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.

#### ■ Setting button function

a) ON/OFF button: It controls system's 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  $1^{\circ}\text{C}$  or  $^{\circ}\text{F}$  per press Temp. ▼ button; it will never setting when the setting reaches to  $16^{\circ}\text{C}$  or  $61^{\circ}\text{F}$ . 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  $1^{\circ}\text{C}$  or  $^{\circ}\text{F}$  per press Temp. ▲ button; it will never setting when the setting reaches to  $30^{\circ}\text{C}$  or  $86^{\circ}\text{F}$ . The button is not valid under auto, dry and fan mode.

#### ■ 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.

■ 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 2 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.

8.2 This function manual is applicable to export mobile AC: GPC09AE-K3NNA7A, GPC12AF- K3NNA7A. There are two units for temperature display of mobile AC: Centigrade and Fahrenheit. The unit for temperature is centigrade in this function manual. If there is Fahrenheit, the transition relation is  $T_{\text{Fahrenheit}} = T_{\text{Centigrade}} \times 1.8 + 32$ .

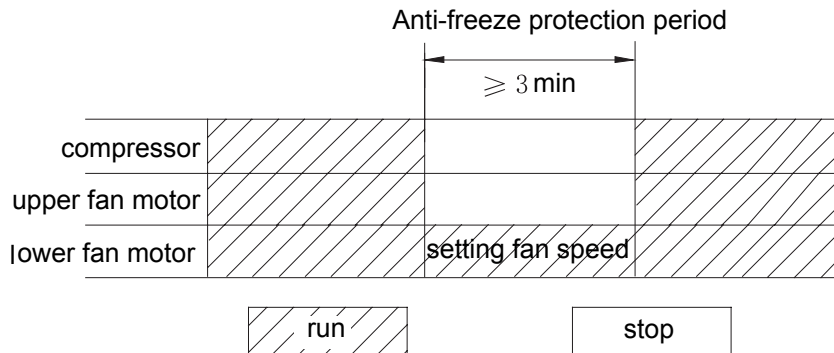
8.2.1 Basic Functions of System

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.

■ Working conditions and process of cooling

- a) When  $T_{\text{amb}} \geq T_{\text{preset}} + 1^\circ\text{C}$  ( $2^\circ\text{F}$ ), 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  $T_{\text{amb}} \leq T_{\text{preset}} - 1^\circ\text{C}$  ( $2^\circ\text{F}$ ), the compressor and kick motor stop to run, and fan motor runs under preset fan speed.
- c) When  $T_{\text{preset}} - 1^\circ\text{C}$  ( $2^\circ\text{F}$ )  $< T_{\text{amb}} < T_{\text{preset}} + 1^\circ\text{C}$  ( $2^\circ\text{F}$ ), the unit will keep the current running status.

Under this mode, the temperature setting range is  $61^\circ\text{F}$ - $86^\circ\text{F}$  ( $16^\circ\text{C}$ - $30^\circ\text{C}$ ).



#### ■ DRY Mode

##### ● Working conditions and process of dry

Under this mode, the unit will not display setting temperature and ambient temperature; the fan motor runs under low fan speed; the compressor, fan motor and kick motor continue to run.

#### ■ FAN Mode

● Under this mode, the unit will not display setting temperature and ambient temperature; the fan motor runs under setting fan speed; the compressor, fan motor and kick motor stop to run.

● Under this mode, the centigrade temperature setting range is 16°C-30°C, the fahrenheit temperature setting range is 61°F-86°F.

#### ■ AUTO Mode

● Under AUTO mode, the standard cooling  $T_{\text{preset}}=25^{\circ}\text{C}(77^{\circ}\text{F})$ , standard heating  $T_{\text{preset}}=20^{\circ}\text{C}(68^{\circ}\text{F})$

● It will go to auto cooling mode when  $T_{\text{amb}} > 26^{\circ}\text{C}(79^{\circ}\text{F})$ ; and goes to auto fan mode when  $T_{\text{amb}} < 20^{\circ}\text{C}(68^{\circ}\text{F})$ ;  $20^{\circ}\text{C}(68^{\circ}\text{F}) \leq T_{\text{amb}} \leq 23^{\circ}\text{C}(73^{\circ}\text{F})$ , if the previous running is fan (including general fan and auto fan), it will keep the running status of auto fan mode, if the previous running is not fan, it will go to auto dry mode;  $26^{\circ}\text{C}(79^{\circ}\text{F}) \geq T_{\text{amb}} \geq 24^{\circ}\text{C}(74^{\circ}\text{F})$ , it goes to auto dry mode; when the unit is first energized,  $26^{\circ}\text{C}(79^{\circ}\text{F}) \geq T_{\text{amb}} \geq 20^{\circ}\text{C}(68^{\circ}\text{F})$ , it runs under dry mode.

### 8.2.3 Other Functions

#### ■ Buzzer

When the controller is energized, receiving a signal from remote controller or button, the buzzer will give out a beep.

#### ■ Sleep

a) Under cooling mode, after 1h of setting sleep process,  $T_{\text{preset}}$  increases 2°F (1°C); 2h later,  $T_{\text{preset}}$  increases 4°F (2°C). After 2h, the setting temperature never increases, but the upper limit of increased setting temperature is 86°F (30°C)

b) Under heating mode, after 1h of setting sleep process,  $T_{\text{preset}}$  decreases 2°F (1°C); 2h later,  $T_{\text{preset}}$  decreases 4°F (2°C). After 2h, the setting temperature never decreases, but the upper limit of decreased setting temperature is 61°F (16°C)

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.

#### ■ Auto Fan

a) Auto fan speed under cooling mode

$T_{\text{amb}} \geq T_{\text{preset}} + 4^{\circ}\text{F}(2^{\circ}\text{C})$  High fan;

$T_{\text{preset}} < T_{\text{amb}} < T_{\text{preset}} + 4^{\circ}\text{F}(2^{\circ}\text{C})$  Med fan;

$T_{\text{amb}} \leq T_{\text{preset}}$  Low fan

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

#### ■ 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.

#### ■ 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.

#### ■ 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.

#### ■ Setting button function

a) ON/OFF button: It controls system's 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.

### ■ Light Control

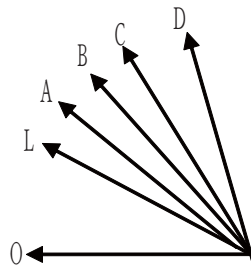
If set the light is on with remote control, the indicator lamp and dual-8 display the current setting status; if set the light is off with remote control, turn off the lamp immediately. If there is front panel button or remote control button operation when setting light off with remote control, the indicator 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.

### ■ SWING Motor Control

After the unit is energized, the swing (up and down) motor will make the guide louver circumvolve to position 0; close the outlet port. After the unit is on, if it does not set swing function, guide louver (up and down) will circumvolve to position D. Setting swing function when the unit is on, the guide louver swings between L and D. There are 7 swing statuses for guide louver: position L, position A, position B, position C, position D, swing between position L and D, stop between any position L and D.

When the unit is off, the guide louver will chose to position 0. The swing action is valid when setting swing order and indoor fan is running.

Note: When the remote control setting is on position L to B, position A to C, position B to D, the guide louver swings between position L and D. The angle of energized reset swing off is: 80°; when the unit is off, add 5°to the current angle then close guide louver. The corresponding angle of position L to D is: 39°-48°-57°-66°-75°.



### ■ 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

- e) 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.
- f) 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.
- g) Outdoor pipe temperature sensor is open, short circuit: dual-8 displays F4, 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.
- h) 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.

8.3 This function manual is applicable to export mobile AC: GPE12AF- K3NNA7A. There are two units for temperature display of mobile AC: Centigrade and Fahrenheit. The unit for temperature is centigrade in this function manual. If there is Fahrenheit, the transition relation is  $T_{\text{Fahrenheit}} = T_{\text{Centigrade}} \times 1.8 + 32$ .

### 8.3.1 Temperature Parameter

- ◆ Indoor setting temperature (T<sub>preset</sub>)
- ◆ Indoor ambient temperature (T<sub>amb.</sub>)

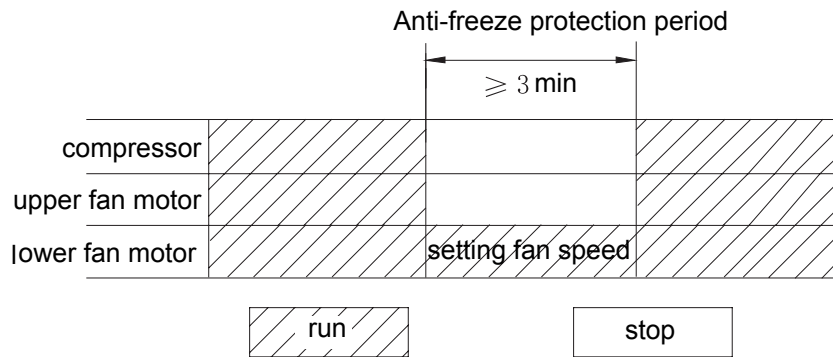
### 8.3.2 Basic Functions of System

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.

### ■ COOLING Mode

#### ● Working conditions and process of cooling

- When  $T_{amb} \geq T_{preset} + 1^\circ\text{C}$  ( $2^\circ\text{F}$ ), 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.
  - When  $T_{amb} \leq T_{preset} - 1^\circ\text{C}$  ( $2^\circ\text{F}$ ), the compressor and kick motor stop to run, and fan motor runs under preset fan speed.
  - When  $T_{preset} - 1^\circ\text{C}$  ( $2^\circ\text{F}$ )  $< T_{amb} < T_{preset} + 1^\circ\text{C}$  ( $2^\circ\text{F}$ ), the unit will keep the current running status.
- Under this mode, the temperature setting range is  $61^\circ\text{F}$ - $86^\circ\text{F}$  ( $16^\circ\text{C}$ - $30^\circ\text{C}$ ).



### ■ DRY Mode

#### ● Working conditions and process of dry

Under this mode, the unit will not display setting temperature and ambient temperature; the fan motor runs under low fan speed; the compressor, fan motor and kick motor continue to run.

### ■ FAN Mode

● Under this mode, the unit will not display setting temperature and ambient temperature; the fan motor runs under setting fan speed; the compressor, fan motor and kick motor stop to run.

● Under this mode, the centigrade temperature setting range is  $16^\circ\text{C}$ - $30^\circ\text{C}$ , the fahrenheit temperature setting range is  $61^\circ\text{F}$ - $86^\circ\text{F}$ .

### ■ HEATING MODE

#### ● Working conditions and process of electric heating model

a) When  $T_{amb} \leq T_{preset} + 3^\circ\text{C}$  ( $6^\circ\text{F}$ ), it runs under heating, electric heater is on, and fan motor runs under preset fan speed.

b) When  $T_{preset} + 3^\circ\text{C}$  ( $6^\circ\text{F}$ )  $< T_{amb} < T_{preset} + 5^\circ\text{C}$  ( $10^\circ\text{F}$ ), it keeps the previous running status.

c) When  $T_{amb} \geq T_{preset} + 5^\circ\text{C}$  ( $10^\circ\text{F}$ ), the electric heater is off, fan motor runs with blowing residual heat.

● Under this mode, the temperature setting range is  $61^\circ\text{F}$ - $86^\circ\text{F}$  ( $16^\circ\text{C}$ - $30^\circ\text{C}$ ).

### ■ AUTO Mode

● Under AUTO mode, the standard cooling  $T_{preset} = 25^\circ\text{C}$  ( $77^\circ\text{F}$ ), standard heating  $T_{preset} = 20^\circ\text{C}$  ( $68^\circ\text{F}$ )

● Heat-pump Unit: It will go to auto cooling mode when  $T_{amb} > 26^\circ\text{C}$  ( $79^\circ\text{F}$ ); and goes to auto heating mode when  $T_{amb} < 20^\circ\text{C}$  ( $68^\circ\text{F}$ );  $23^\circ\text{C}$  ( $73^\circ\text{F}$ )  $\geq T_{amb} \geq 20^\circ\text{C}$  ( $68^\circ\text{F}$ ), if the previous running is heating (including general heating and auto heating), it will keep the running status of heating mode, if the previous running is not heating, it will go to auto dry mode;  $26^\circ\text{C}$  ( $79^\circ\text{F}$ )  $\geq T_{amb} \geq 24^\circ\text{C}$  ( $74^\circ\text{F}$ ), it goes to auto dry mode; when the unit is first energized,  $26^\circ\text{C}$  ( $79^\circ\text{F}$ )  $\geq T_{amb} \geq 20^\circ\text{C}$  ( $68^\circ\text{F}$ ), it runs under dry mode.

● Cooling Unit: It will go to auto cooling mode when  $T_{amb} > 26^\circ\text{C}$  ( $79^\circ\text{F}$ ); and goes to auto fan mode when  $T_{amb} < 20^\circ\text{C}$  ( $68^\circ\text{F}$ );  $20^\circ\text{C}$  ( $68^\circ\text{F}$ )  $\leq T_{amb} \leq 23^\circ\text{C}$  ( $73^\circ\text{F}$ ), if the previous running is fan (including general fan and auto fan), it will keep the running status of auto fan mode, if the previous running is not fan, it will go to auto dry mode;  $26^\circ\text{C}$  ( $79^\circ\text{F}$ )  $\geq T_{amb} \geq 24^\circ\text{C}$  ( $74^\circ\text{F}$ ), it goes to auto dry mode; when the unit is first energized,  $26^\circ\text{C}$  ( $79^\circ\text{F}$ )  $\geq T_{amb} \geq 20^\circ\text{C}$  ( $68^\circ\text{F}$ ), it runs under dry mode.

## 8.3.3 Other Functions

### ■ Buzzer

When the controller is energized, receiving a signal from remote controller or button, the buzzer will give out a beep.

### ■ Sleep

a) Under cooling mode, after 1h of setting sleep process,  $T_{preset}$  increases  $2^\circ\text{F}$  ( $1^\circ\text{C}$ ); 2h later,  $T_{preset}$  increases  $4^\circ\text{F}$  ( $2^\circ\text{C}$ ). After 2h, the setting temperature never increases, but the upper limit of increased setting temperature is  $86^\circ\text{F}$  ( $30^\circ\text{C}$ )

b) Under heating mode, after 1h of setting sleep process,  $T_{preset}$  decreases  $2^\circ\text{F}$  ( $1^\circ\text{C}$ ); 2h later,  $T_{preset}$  decreases  $4^\circ\text{F}$  ( $2^\circ\text{C}$ ). After 2h, the setting temperature never decreases, but the upper limit of decreased setting temperature is  $61^\circ\text{F}$  ( $16^\circ\text{C}$ )

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.

■ Auto Fan

- a) Auto fan speed under heating mode

$T_{amb} \leq T_{preset} - 4^{\circ}F (2^{\circ}C)$	High fan
$T_{preset} - 4^{\circ}F (2^{\circ}C) < T_{amb} < T_{preset}$	Med fan
$T_{amb} \geq T_{preset}$	Low fan

- b) Auto fan speed under cooling mode

$T_{amb} \geq T_{preset} + 4^{\circ}F (2^{\circ}C)$	High fan
$T_{amb} < T_{preset} < T_{preset} + 4^{\circ}F (2^{\circ}C)$	Med fan
$T_{amb} \leq T_{preset}$	Low fan

- c) There is 3.5min delay for auto fan shifting.

■ Timer Function

◆ General Timer

- a) Timer on: It can be set timer on when is unit is off, the setting time range is 0.5h-24h, when the time of setting timer on reaches, the unit start to run with the previous setting mode.

- b) Timer off: It can be set timer off when is unit is on, the setting time range is 0.5h-24h, when the time of setting timer off reaches, the unit stops.

◆ Clock Timer

- a) Timer on: If setting timer on when the unit runs, the unit continues to run; if setting timer on when the unit is off, and the time of setting timer on reaches, the unit starts to run with the previous mode.

- b) Timer off: If setting timer off when the unit is off and setting timer off, the system keeps the stand-by status; if setting timer off when the unit is on and the time of setting timer off reaches, the unit stops.

Memory Function

The setting running status will be memorized before the system is power-fail, and run with the previous setting running status when it is energized again. If it is power-off under the unit is on, there is 3min delay protection for compressor when it is energized again.

■ 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.

■ Fan motor denoise Control

- a) Under any situation (except anti-cool air and runs with dry low speed), when the fan motor is on, after it runs for 10S with med fan, then change to run with preset fan speed.

■ Setting button function

- a) ON/OFF button: It controls system's switch.

- b) Mode button: Mode setting cycle with below sequence: Heat-pump: cooling->dry->fan->heating;  
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.

- Health Function: The indoor fan motor is running, if set health function with remote control, turn on cold plasma or anion generator.

■ 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.

■ Dry and Mould proofing

After set this function, turn off the unit under cooling or dry mode, the indoor fan motor goes to blow 10min then turn off.

■ SWING Motor Control

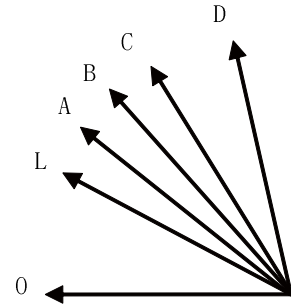
After the unit is energized, the swing (up and down) motor will make the guide louver circumsolve to position 0;

close the outlet port. After the unit is on, if it does not set swing function, guide louver (up and down) will circumsolve to position D. Setting swing function when the unit is on, the guide louver swings between L and D. There are 7 swing statuses for guide louver: position L, position A, position B, position C, position D, swing between position L and D, stop between any position L and D.

When the unit is off, the guide louver will chose to position 0. The swing action is valid when setting swing order and indoor fan is running.

Note: When the remote control setting is on position L to B, position A to C, position B to D, the guide louver swings between position L and D.

The angle of energized reset swing off is: 80°; when the unit is off, add 5°to the current angle then close guide louver. The corresponding angle of position L to D is: 39°-48°-57°-66°-75°.



- 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) When the muti-failure occurs together, the failure protection code is cycle displayed by turn.
- 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-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.

#### 8.3.4 Troubleshooting Analysis

- Failure 1: There is no action when the AC is energized and buzzer does not give out beep.

Solution: Check power or replace controller

- Failure 2: Display board and dual-8 digital pipe displays “F1”, the cooling indicator lamp goes out 3S and blink 1 time.

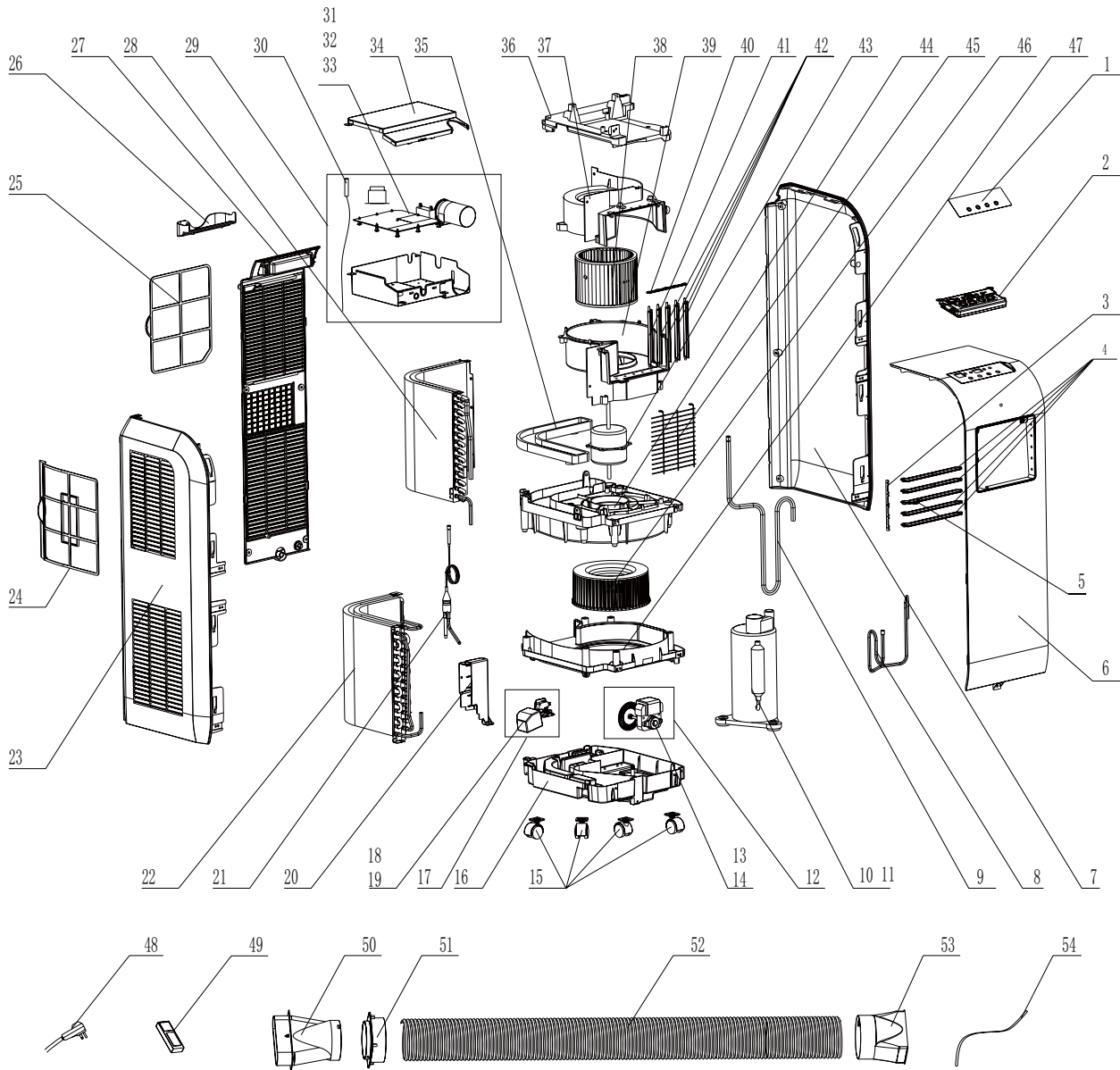
Solution: The environment temperature sensor does not connect to the controller tightly, rearrange or replace a new environment temperature sensor.

- Failure 3: Display board and dual-8 digital pipe displays “F2”, the cooling indicator lamp goes out 3S and blink 2 times.

Solution: The temperature sensor for indoor pipe temperature does not connect to the controller tightly, rearrange or replace a new environment temperature sensor.

# 9. Exploded Views and Parts List

## 9.1 Exploded View (Models:GPC08AHK3NNC3A,GPC09AH-K3NNC3A,GPC09AH-D1NNC3A)



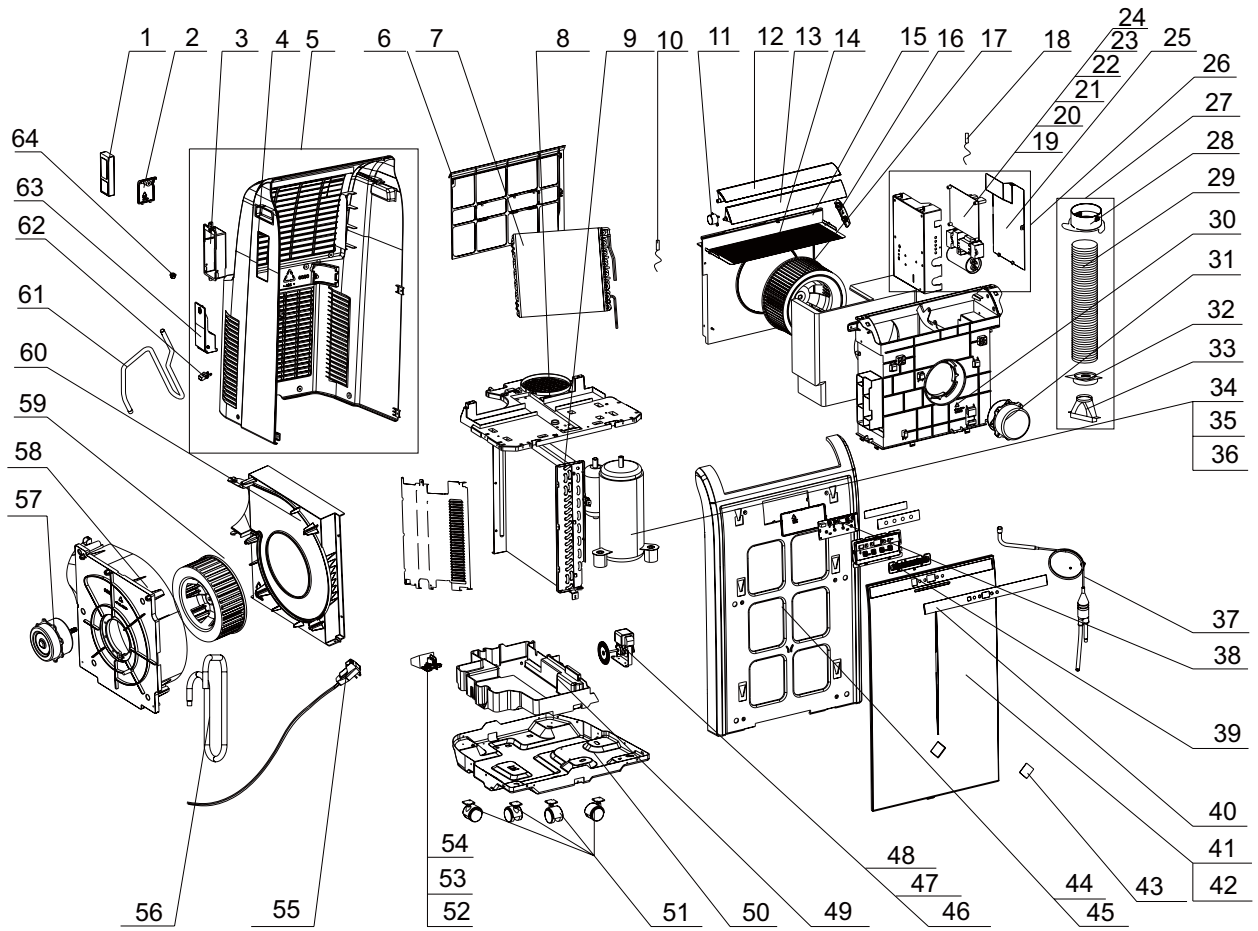
## 9.2 Parts List (Models:GPC08AHK3NNC3A,GPC09AH-K3NNC3A,GPC09AH-D1NNC3A)

No	Description	Part Code			Qty
		GPC08AHK3NNC3A/I	GPC09AH-K3NNC3A/I	GPC09AH-D1NNC3A	
1	Membrane	63066036	63066036	63066036	1
2	DisplayBoard	30567017	30567017	30567017	1
3	Guidebladelever 2	10586015	10586015	10586015	1
4	Guide blade 1	10516059	10516059	10516059	1
5	Guide blade 2	10516062	10516062	10516062	1
6	Front Panel	20006078S	20006078S	20006078S	1
7	Right side plate	20056112	20056112	20056112	4
8	Discharge Tube	03616287	03616113	3616116	1
9	Inhalation Tube	03626513	03636142	3626235	1
10	Compressor and fittings	00106035	00106048	00100239	1
11	Overload Protector	00180295	00180240	00180065	1
12	Motor sub-assy(flutter)	15006006	15006006	15006006	1
13	Splash Water Flywheel	10336003	10336003	10336003	1
14	FanMotor 2	15016212	15016212	15016212	1
15	Castor	24236009	24236009	24236009	1
16	Chassis	22226062	22226062	22226062	1
17	Water level switch sub-assy	26156045	26156045	26156045	1
18	water level switch base	26156041	26156041	26156041	4
19	Water Level Switch	45010211	45010211	45010211	1
20	Water retaining box	20186093	20186093	20186093	1
21	Capillary Sub-Assy	03006513	03006121	03006121	1
22	Condenser Assy	01106106	01106032	01106106	1
23	Left side plate	20056111	20056111	20056111	1
24	Filter sub-assy2	11126071	11126071	11126071	1
25	Filter sub-assy1	11126070	11126070	11126070	1
26	Remote control box	20186094	20186094	20186094	1
27	Rear Plate	20056113	20056113	20056113	1
28	Evaporator Assy	01006065	01006068	01006065	1
29	Electric Box Assy	01406225	01406217	01406232	1
30	Ambient Temperature Sensor	390000451	390000451	390000451	1

No	Description	Part Code			Qty
31	MainBoard	30137010	30137010	30137010	1
32	CapacitorCBB65	33000018	33000017	33010044	1
33	CapacitorCBB61	33010010	33010010	33010026	1
34	ElectricBoxCover	01416013	01416013	01416013	1
35	WaterTray	12416009	12416009	12416009	1
36	CoverofPropellerHousing	22246086	22246086	22246086	1
37	PropellerHousing(upper)	22206044	22206044	22206044	4
38	Centrifugalfan 1	10316060	10316060	10316060	1
39	PropellerHousing(lower)	22206045	22206045	22206045	1
40	Guidebladelever 1	10586015	10586015	10586015	38
41	AirLouver2	10516061	10516061	10516061	1
42	AirLouver1	10516060	10516060	10516060	1
43	FanMotor 1	15016044	15016044	1501604402	1
44	MotorHolder	26156049	26156049	26156049	1
45	RearGrill	01476020	01476020	01476020	1
46	Centrifugalfan 2	10316061	10316061	10316061	1
47	DiversionCircle	10376038	10376038	10376038	1
48	PowerCord	400220114	400220114	400206244	4
49	RemoteController	30510065	30510065	30510065	1
50	RearClip	2611601001	2611601001	261160185、261160185	1
51	PlasticPipeEnd	06646017	06646017	06646017	1
52	PPhose	0523602203	0523602203	0523602203	1
53	Joint	26116087	26116087	26116087	1
54	Drainagehose	5230013	5230013	05230013	1

The above data are subject to be changed without notice.

### 9.3 Exploded View (Model:GPC09AE-K3NNA7A)



**9.4 Parts List (Model:GPC09AE-K3NNA7A)**

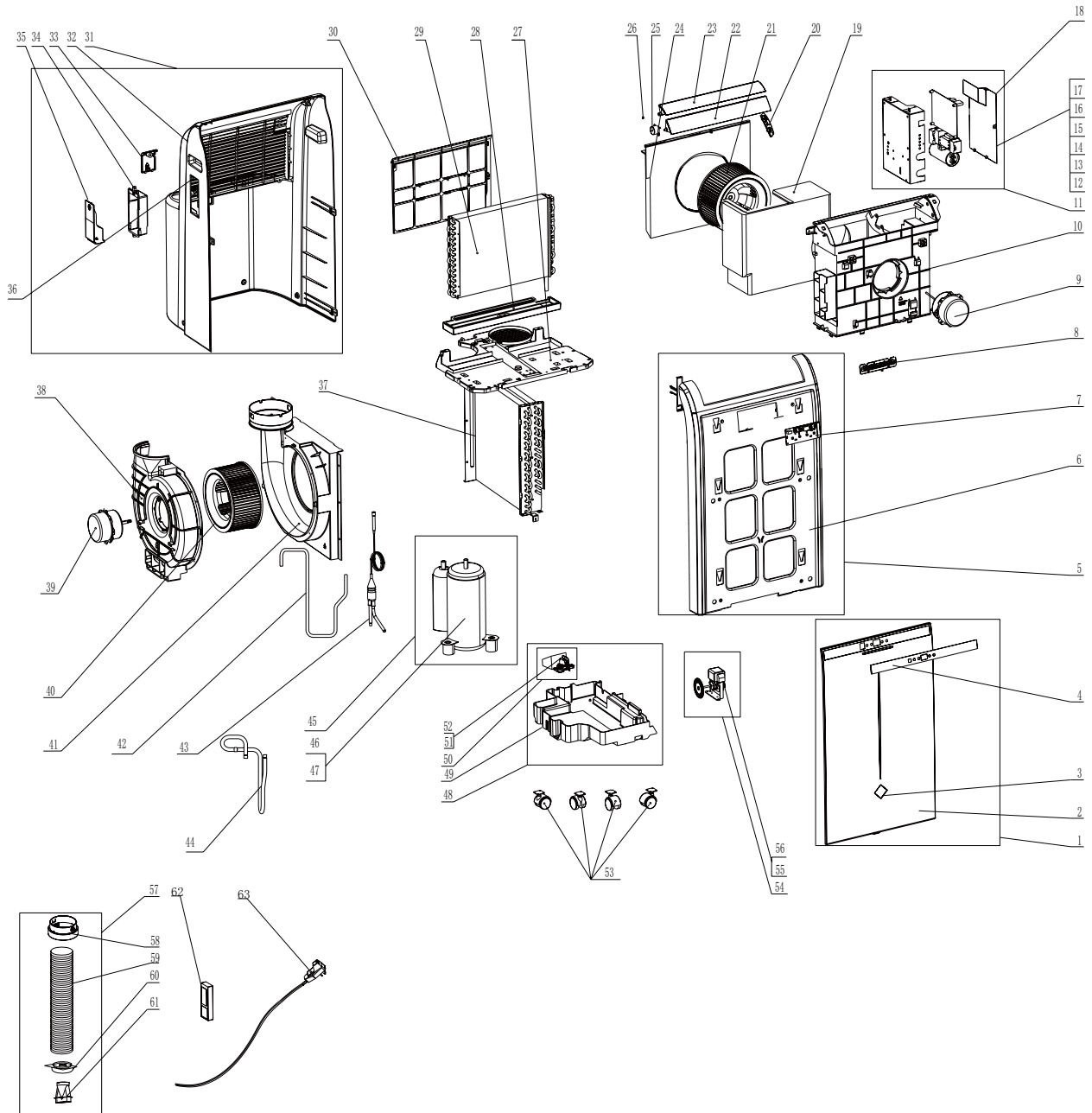
No	Description	Part Code	Qty
		GPC09AE-K3NNA7A	
1	Remote Controller	30510061	1
2	Cable Cross Plate	26116059	4
3	Remote control box	20116012	1
4	Rear Plate Assy	20006512	1
5	backboard 1	20056093	1
6	Filter Sub-Assy	11126063	1
7	Evaporator Assy	01006047	1
8	Mid-Clapboard	20056094	1
9	Condenser Assy	01106104	1
10	Ambient Temperature Sensor	390000451	1
11	Step Motor	1521210301	1
12	Upper Guide Louver	10516053	1
13	Lower guide louver	10516054	1
14	Rear grill	01476014	1
15	Diversion Circle (upper)	10376032	1
16	Gear Sub-Assy	10546005	1
17	Centrifugal fan	10316057	1
18	Tube Sensor	390000594	1
19	Main Board	30137001	1
20	Fuse	46010014	1
21	Relay	44020331、44020345	1
22	Transformer	43110250	1
23	Capacitor CBB65	33010724	1
24	Capacitor CBB61	33010027	1
25	Electric Box Cover	01416010	3
26	Electric Box Assy	01406022	1
27	Exhaust Pipe Assy	05236037	1
28	Front Plastic Pipe End	06646015	1
29	PP hose	0523602201	1
30	Motor holder (upper)	26156013	1
31	Fan Motor	15316002	1
32	Plastic Pipe End	06646017	1
33	Rear Clip(b)	2611601001、261160185	1
34	Compressor and fittings	00106025	6

No	Description	Part Code	Qty
		GPC09AE-K3NNA7A	
35	Overload Protector	00180279	1
36	Compressor Gasket	76711004	1
37	Capillary Sub-Assy	03006091	1
38	Display Board	30567012	1
39	Button	45036021	1
40	Decorative Strip	20196010	5
41	Decorative Board sub-assy	20196014	1
42	Decorative Board	20196007S	1
43	Decorative Block	20196013	1
44	Front Panel Assy	20006513	1
45	Front Panel	20006058	1
46	Motor	15006001	1
47	Fan Motor	15016027	1
48	Splash Water Flywheel	10336003	1
49	Water Tray	20186071	1
50	Chassis Sub-assy	01206044P	1
51	Castor	24236051	1
52	Water level switch sub-assy	26156008	1
53	water level switch base	26156001	1
54	Water Level Switch	45010211	1
55	Power Cord	4002087902	1
56	Discharge tube 1	03616080	1
57	Fan Motor	1501620805	1
58	Motor holder (lower)	26156014	1
59	Lower Centrifugal Fan Sub-Assy	10316021	1
60	Diversioin Circle (lower)	10376033	1
61	Inhalation Tube 1(2)	03626092(03626093)	1
62	Latch	70810302	1
63	Cover of Remote control box	20126072	1
64	Left Axile Bush	10512037	1

The above data are subject to be changed without notice.



### 9.5 Exploded View (Model:GPC12AF-K3NNA7A)



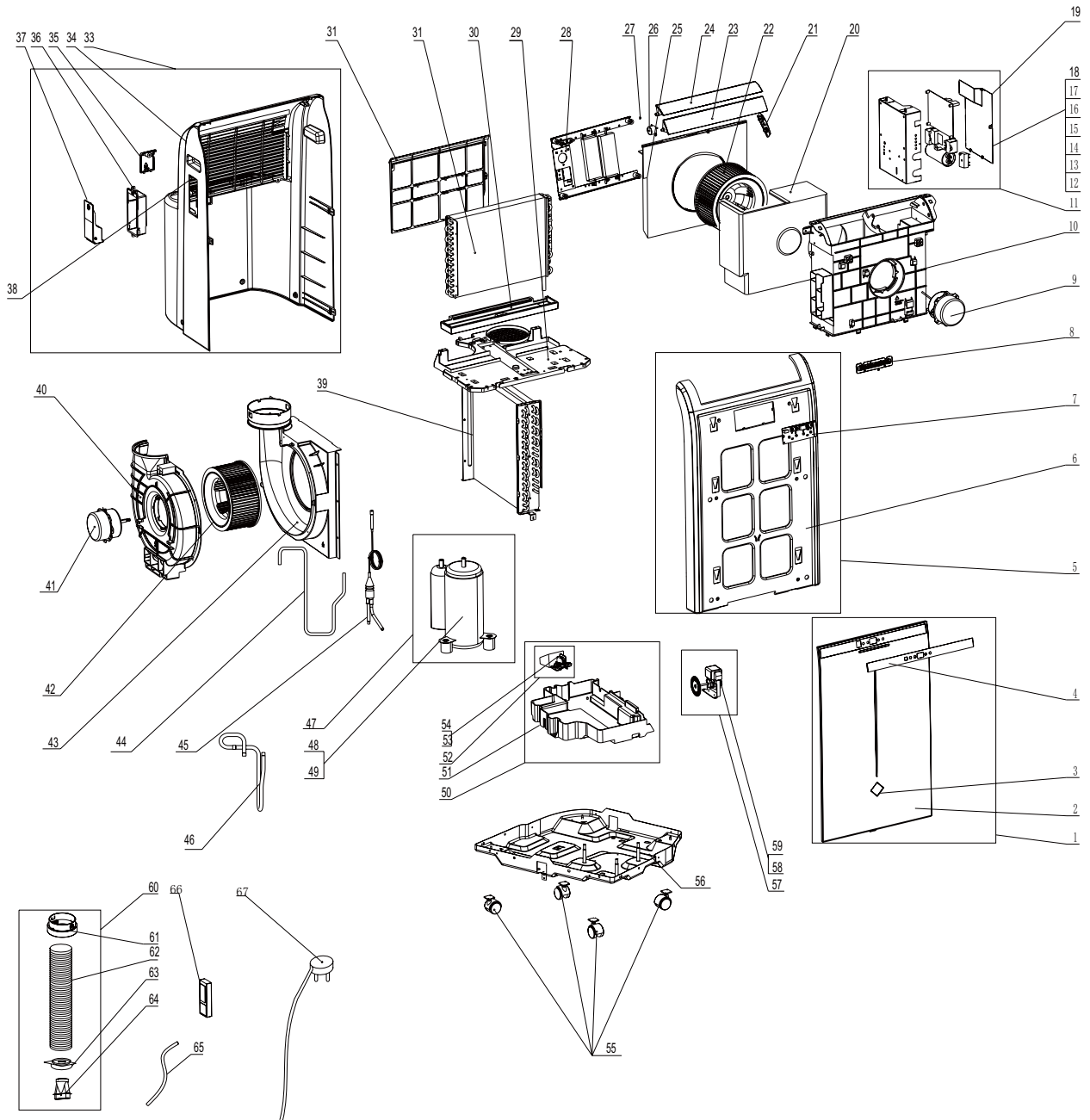
## 9.6 Parts List (Model:GPC12AF-K3NNA7A)

No	Description	Part Code	Qty
		GPC12AF-K3NNA7A	
1	Decorative Board sub-assy	20196011	1
2	Decorative Board	20196006S	1
3	Decorative Block	20196013	1
4	Decorative Strip	20196012	1
5	Front Panel Sub-Assy	20006061	1
6	Front Panel	20006059	1
7	Display Board	30567012	1
8	Button	45036021	1
9	Fan Motor	1501603903	1
10	Motor holder (upper)	26156043	1
11	Electric Box Assy	01406016	1
12	Main Board	30137003	1
13	Ambient Temperature Sensor	390000451	1
14	Tube Sensor	390000594	1
15	Transformer	43110295	1
16	Capacitor CBB65	33010743	1
17	Capacitor CBB61	33010025、33010027	1
18	Electric Box Cover	01416010	1
19	Propeller Housing	12316036	1
20	Gear Sub-Assy	10546005	1
21	Centrifugal fan	10316058	1
22	Guide Louver 1	10516051	1
23	Guide Louver 2	10516052	1
24	Diversion Circle (upper)	10376035	1
25	Step Motor	1521210301	1
26	Left Axle Bush	10512037	1
27	Mid-Clapboard	20056095	1
28	Water Tray	12416008	1
29	Evaporator Assy	01006050	1
30	Filter Sub-Assy	11126011	1
31	Rear Plate Sub-Assy	20056105	1
32	backboard 1	20056096	1
33	Remote control box	20116012	1

No	Description	Part Code	Qty
		GPC12AF-K3NNA7A	
34	Cover of Remote control box	20126072	1
35	Cable Cross Plate	26116060	1
36	Latch	70810302	1
37	Condenser Assy	0110610301	1
38	Motor holder b (lower)	26156046	1
39	Fan Motor	1501603902	1
40	Centrifugal fan	10316058	1
41	Diversion Circle (lower)	10376034	1
42	Discharge Tube	03616079	1
43	Capillary Sub-Assy	03006095	1
44	InhalationTube	03626095	1
45	Compressor and fittings	00103136	1
46	Overload Protector	00180085	1
47	Compressor Gasket	76710253	1
48	Water Tray Sub-Assy	20186074	1
49	Water Tray	20186072	1
50	Water level switch sub-assy	26156045	1
51	water level switch base	26156041	1
52	Water Level Switch	45010211	1
53	Castor	24236051	1
54	Motor sub-assy(flutter)	15006006	1
55	Fan Motor	15016212	1
56	Splash Water Flywheel	10336003	1
57	Exhaust Pipe Sub-Assy	05236034	1
58	Tie-in 1	06646021	1
59	Pipe	05236058	1
60	Joint 3	26116064	1
61	RearClip	2611601001	1
62	Remote Controller	30510061	1
63	Power Cord	400204648	1

The above data are subject to be changed without notice.

### 9.7 Exploded View (Model:GPE12AF-K3NNA7A)



**9.8 Parts List (Model:GPE12AF-K3NNA7A)**

No	Description	Part Code	Qty
		GPE12AF-K3NNA7A	
1	Decorative Board sub-assy	20196011	1
2	Decorative Board	20196006S	1
3	Decorative Block	20196013	1
4	Decorative Strip	20196012	1
5	Front Panel Sub-Assy	20006061	1
6	Front Panel	20006059	1
7	Display Board	30567012	1
8	Button	45036021	1
9	Fan Motor	1501603903	1
10	Motor holder (upper)	26156043	1
11	Electric Box Assy	01406231	1
12	Main Board	30137011	1
13	Main Board 2	30137012	1
14	Ambient Temperature Sensor	390000451	1
15	Tube Sensor	390000594	1
16	Capacitor CBB65	33010743	1
17	Capacitor CBB61	33010025、	1
18	Terminal Board 2	42011103	1
19	Electric Box Cover	01416010	1
20	Propeller Housing	12316036	1
21	Gear Sub-Assy	10546005	1
22	Centrifugal fan	10316058	1
23	Guide Louver 1	10516051	1
24	Guide Louver 2	10516052	1
25	Diversion Circle (upper)	10376035	1
26	Step Motor	1521210301	1
27	Left Axile Bush	10512037	1
28	Electric heater	32006023	1
29	Mid-Clapboard	20056095	1
30	Water Tray	12416008	1
31	Evaporator Assy	01006050	1
32	Filter Sub-Assy	11126011	1
33	Rear Plate Sub-Assy	20056105	1

No	Description	Part Code	Qty
		GPE12AF-K3NNA7A	
34	backboard 1	20056096	1
35	Remote control box	20116012	1
36	Cover of Remote control box	20126072	1
37	Cable Cross Plate	26116060	1
38	Latch	70810302	1
39	Condenser Assy	0110610301	1
40	Motor holder b (lower)	26156046	1
41	Fan Motor	1501603902	1
42	Centrifugal fan	10316058	1
43	Diversion Circle (lower)	10376034	1
44	Discharge Tube	03616079	1
45	Capillary Sub-Assy	03006095	1
46	InhalationTube	03626095	1
47	Compressor and fittings	00103136	1
48	Overload Protector	00180085	1
49	Compressor Gasket	76710253	1
50	Water Tray Sub-Assy	20186074	1
51	Water Tray	20186072	1
52	Water level switch sub-assy	26156045	1
53	water level switch base	26156041	1
54	Water Level Switch	45010211	1
55	Castor	24236051	4
56	Chassis Sub-assy	012060389	1
57	Motor sub-assy(flutter)	15006006	1
58	Fan Motor	1501603902	1
59	Splash Water Flywheel	10336003	1
60	Exhaust Pipe Sub-Assy	10376034	1
61	Tie-in 1	06646021	1
62	Pipe	05236058	1
63	Joint3	26116064	1
64	RearClip	2611601001	1
65	Drainage hose	05230013	1
66	Remote Controller	30510061	1
67	Power Cord	400204648	1

The above data are subject to be changed without notice.

# 10. Troubleshooting

## 10.1 Confirm below 2 points before any failures occurred

(1) Confirm power supply is OK

Check the plug of power line is normal energized and work.

(2) Confirm power voltage

Make sure the voltage is between normal range, if exceed the range, the unit may abnormally runs.

AC 220-240+/-10%(GPC08AH-K3NNC3A, GPC09AH-K4NNC3A, GPC09AE-K3NNA7A, GPC12AF-K3NNA7A, GPE12AF-K3NNA7A)

AC 220+/-10%(GPC09AH-D1NNC3A)

## 10.2 Error Code

Please see the blow failure contents and repair methods when the unit is energized or the error code occurred during the unit runs.

Code	Failure Name	Failure Display		Repair Method
		Dual-8 Display	Indicator Lamp	
1	Environment temperature sensor is open, short circuit.	F1	Cooling indicator lamp goes out 3S blinks 1 time, and lights up 0.5S goes out 0.5S	If loose, text resistance value if normal by universal meter
2	Temperature sensor for indoor pipe temperature is open, short circuit.	F2	Cooling indicator lamp goes out 3S blinks 2 times, and lights up 0.5S goes out 0.5S	If loose, text resistance value if normal by universal meter
3	Over-blow protection	H8	Over-blow indicator lamp goes out 3S blinks 8 times	Refer to the indication of instruction to discharge the water of chassis.

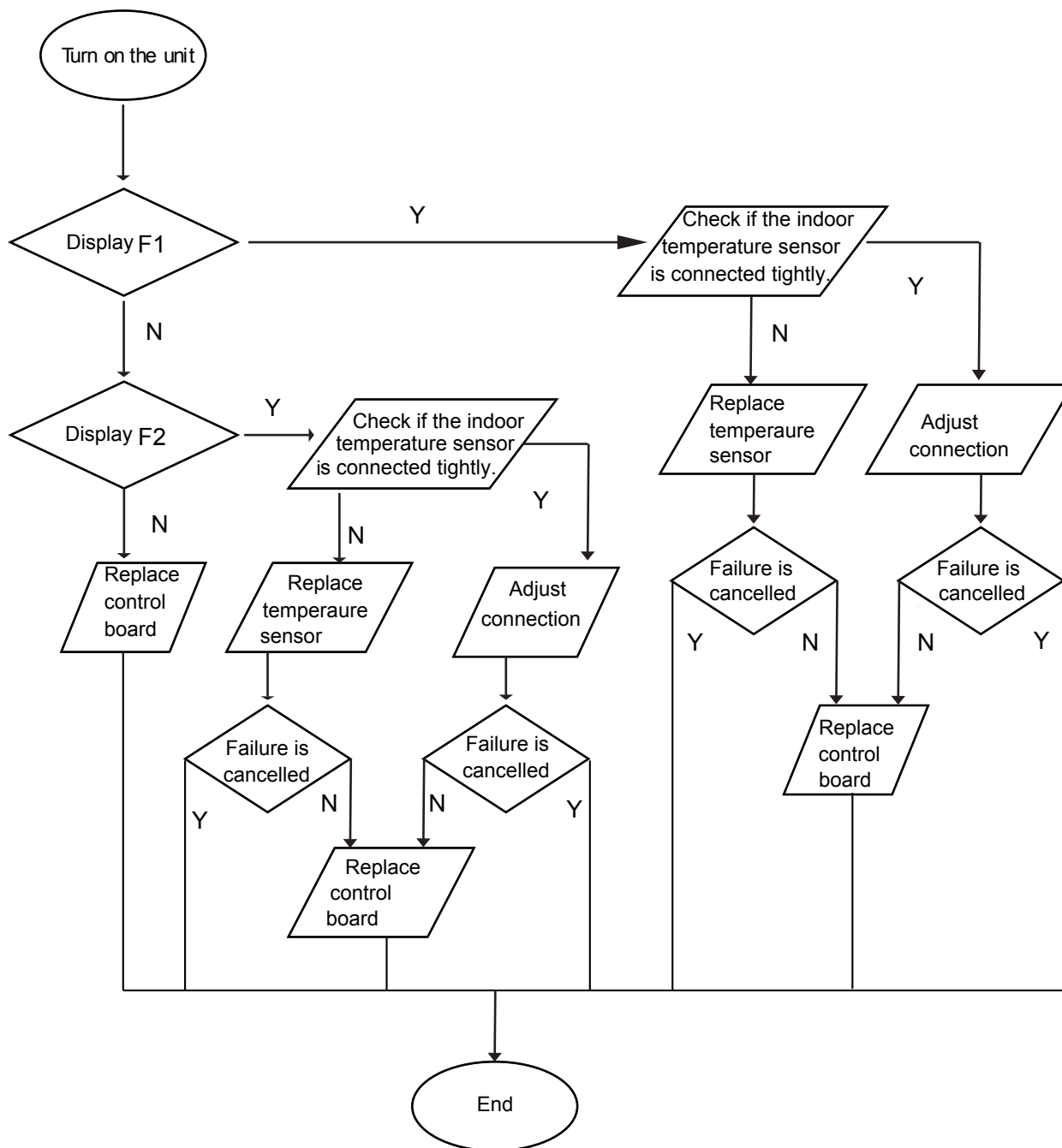
### 10.3 Failure Repair

#### 10.3.1 Failure for temperature sensor

Main test point:

- If the outdoor environment temperature is in normal range
- If fan motor normally runs.
- If the radiating environment of indoor and outdoor unit is good

Check the flow process of failure is:



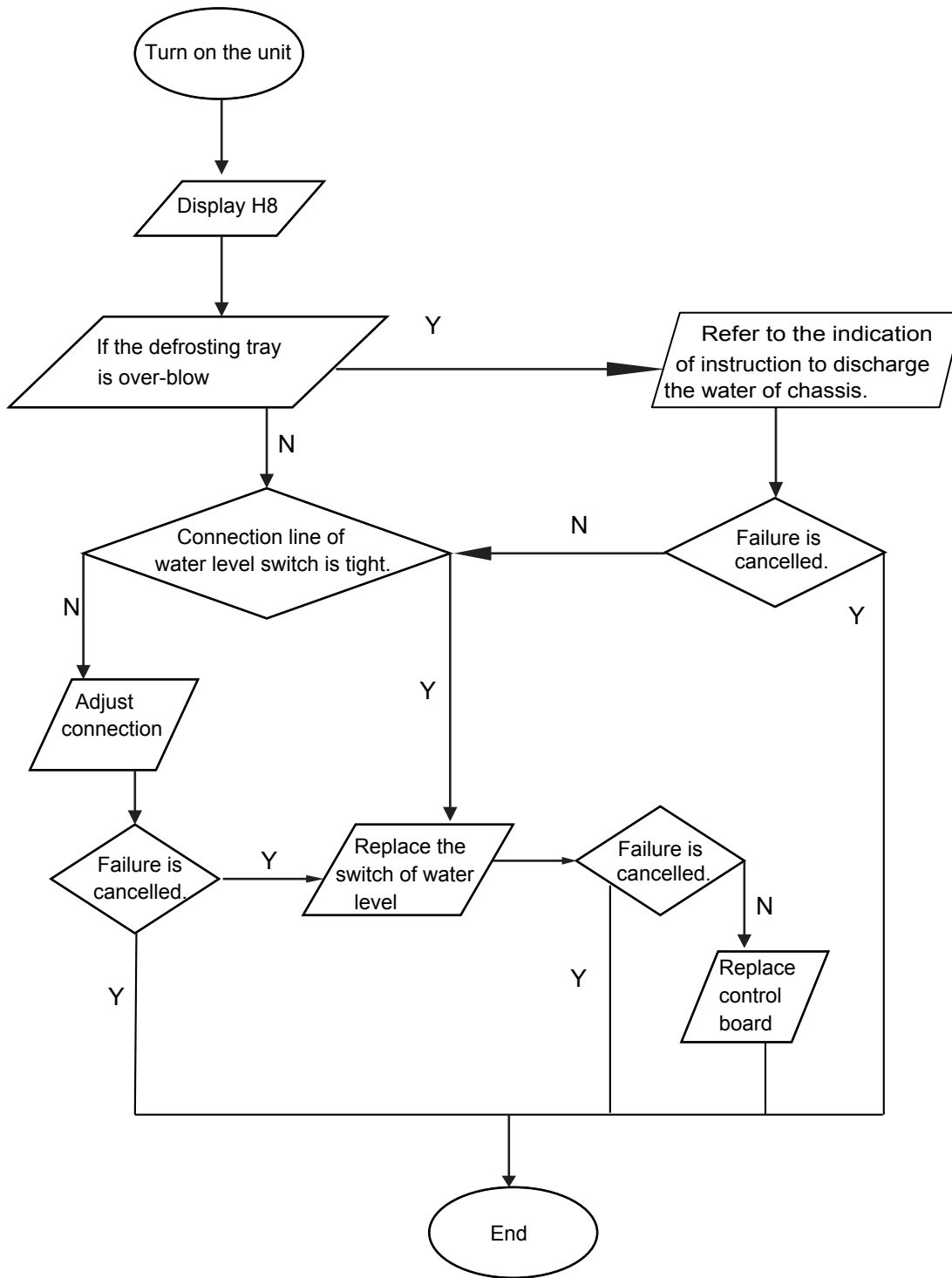


### 10.3.2 Failure for switch of water level

Main test point:

- If the defrosting tray is over-blow
- If the connection line of water level switch is good.
- If the water level switch is damaged.

Check the flow process of failure is:

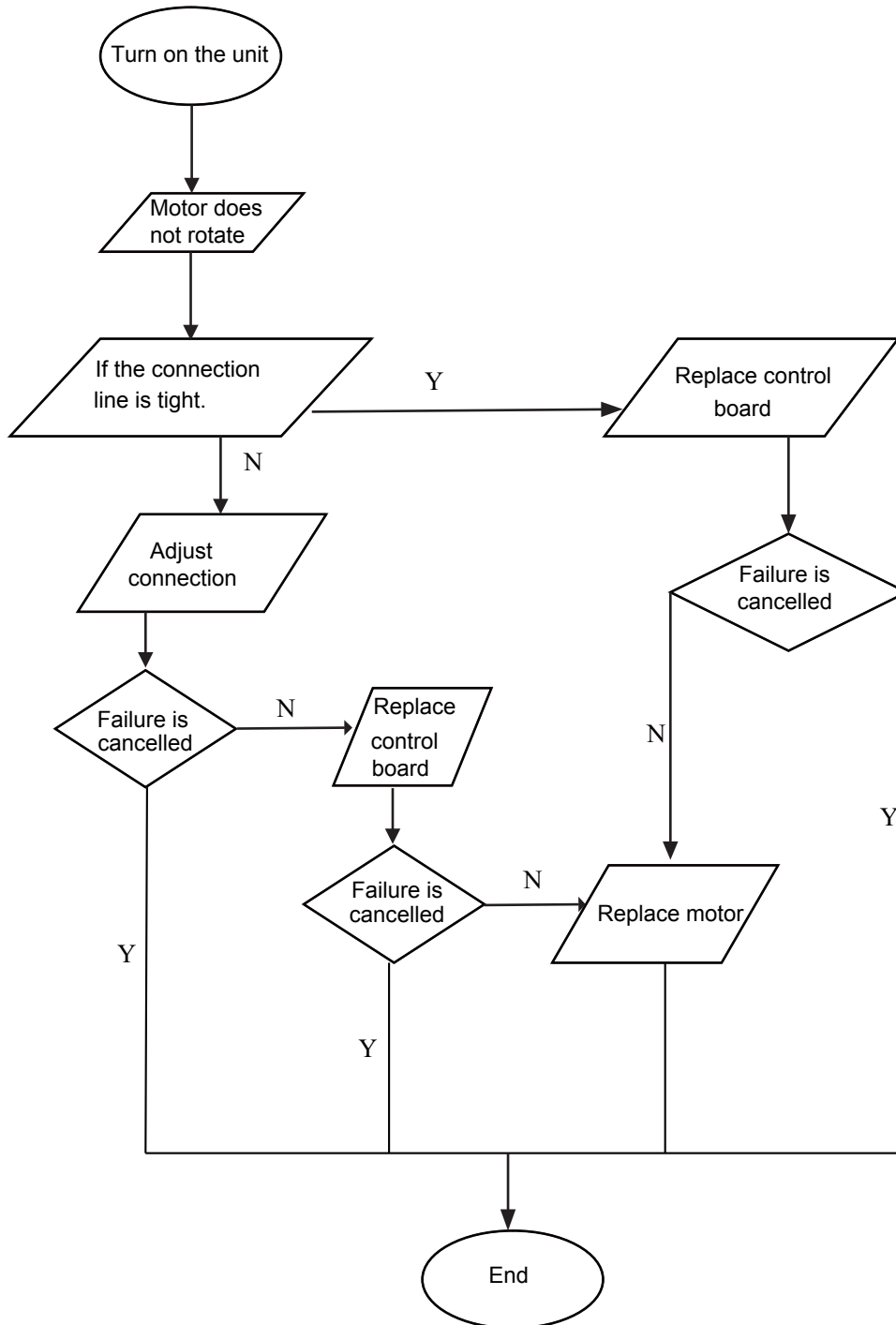


### 10.3.3 Motor failure (including upper motor and lower motor)

Main test point:

- If the motor does not rotate.

Check the flow process of failure is:



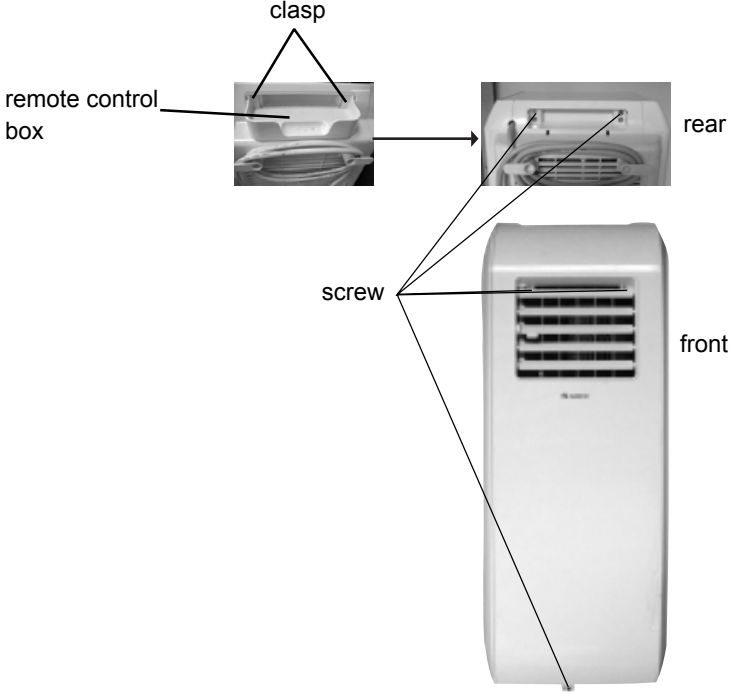
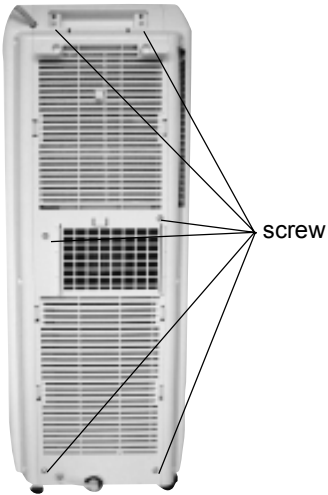
### 10. 4 Failure Phenomenon and Solution

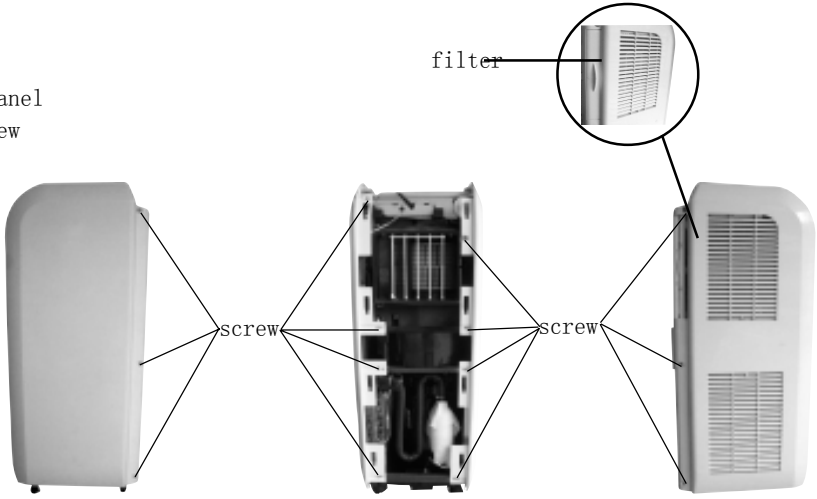
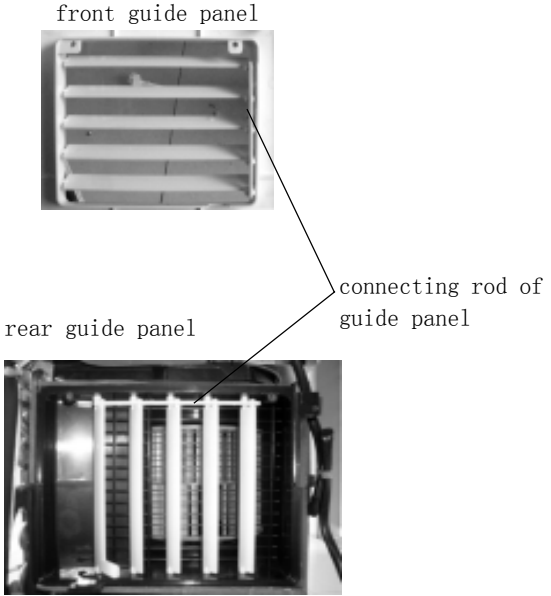
Phenomenon		Possible results	Solution
The unit does not start-up	There is no action after the unit is energized.	No power supply	Check the power circuit
		The power plug is not well insert or bad connection.	Check the plug is well insert, and make sure the connection is good.
		The fuse is damaged.	Replace the fuse
		The connection line of indoor unit is loose.	Re-insert it refer to the circuit diagram.
		Controller (power circuit, slug, crystal vibration) is damaged.	Replace controller
	The buzzer give out a beep when the unit is energized. But does not start-up if press ON/OFF.	indoor environment temperature sensor is damaged (bad contact, loose, leading-out wire is damaged, the resistance of temperature's terminal is abnormal and so on).	Temperature sensor is well connected or replace temperature sensor.
	LCD displays "H8", buzzer alarms 8 times (over-blow protection)	The water on the chassis is over-blow.	Drainage the wate
Switch circuit of water level is damaged.		Check the switch of water level and circuit.	
Turn on the fan, and the compressor does not start-up.	Turn on or turn off compressor frequently under cooling or dry mode. (abnormal anti-freeze protection)	Filter is dirty.	Clean the filter.
		The inlet and outlet port are blocked.	Move the barrier or move the unit ro empty place.
		The rotational speed of fan is slow, or fan does not rotate.	Check if the fan motor's supply circuit of controller is normal, if the connection wire of motor is loosen, and failure for capacity or motor.
		The refrigerant is leakage.	Detect the leakage or charge refrigerant.
		The cooling system is blocked.	Clean pipe system and recharge.
		Compressor (or its capacity) is failure.	Replace compressor (capacity)
		Failure for tube temp. sensor (bad contact, loose,leading-out wire is damaged, the resistance of temperature's terminalis abnormal )	Temperature sensor is well connected or replace temperature sensor.
		Controller is damaged.	Replace the controller.
	Display "E5"	The power is low.	Insure the power is under normal range and use voltage regulator.
		Load is large (the system or port is blocked or dirty; or failure for fan and compressor)	Solve failure or replace failure component

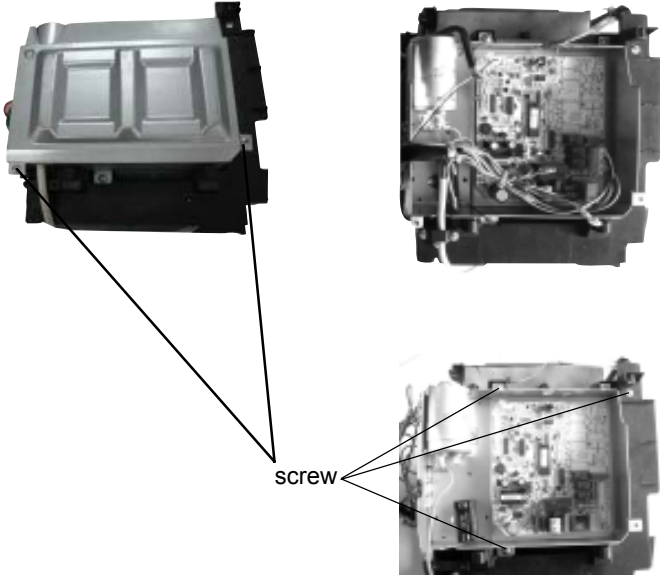
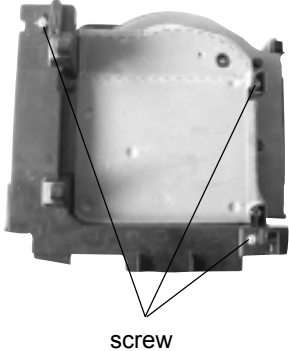
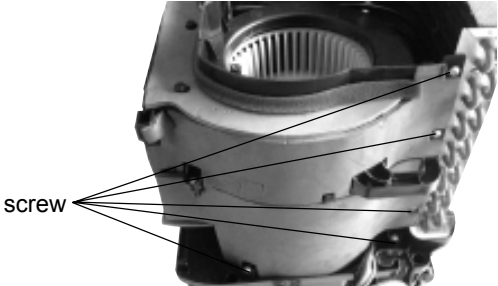
Phenomena	Possible results	Solution
Poor cool operation	Filter is dirty.	Clean the filter.
	The inlet and outlet port are blocked.	Move the barrier or move the unit to empty place.
	The refrigerant is leakage.	Detect the leakage or charge refrigerant.
	The cooling system is blocked.	Clean pipe system and recharge.
	The rotational speed of fan is slow, or fan does not rotate.	Check if the fan motor's supply circuit of controller is normal, if the connection wire of motor is loosen, and failure for capacity or motor.
Set cooling (dry) mode, but no cool air blow out.	Indoor temperature is less than preset temperature (under cooling)	Normal phenomena (adjust lower preset temperature)
	Evaporator is frosting.	The system is defrost, and abnormally runs after defrost.
Abnormal noise	Sparepart is loose.	Bind the spareparts.
	The fan is decentred.	Replace the fan.
	Compressor is damaged.	Replace the compressor.
Not stop after over-blow	The switch of water level is open circuit.	Check and repair switch loop of water level.
Over-blow protection frequent	Kick motor is damaged.	Replace the kick motor.

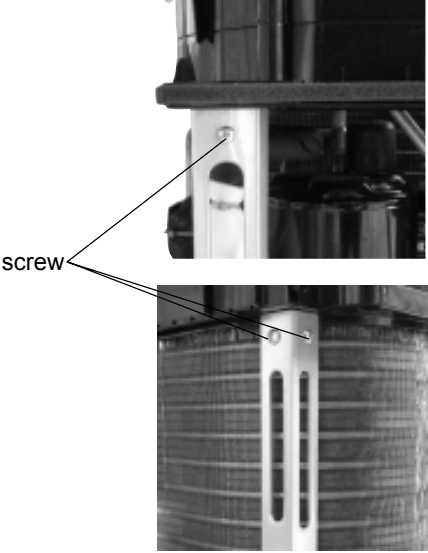
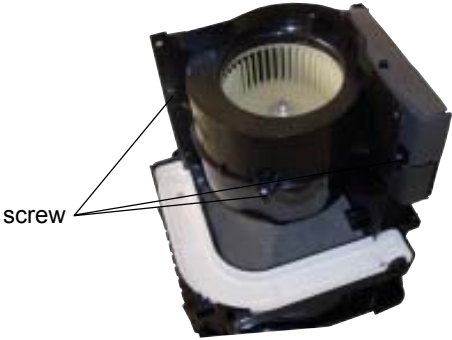
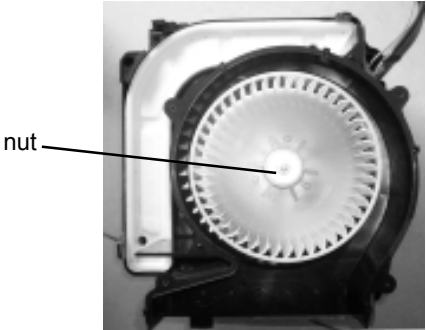
# 11. Removal Procedure

## 11.1 Models: GPC08AHK3NNC3A, GPC09AH-K3NNC3A, GPC09AH-D1NNC3A

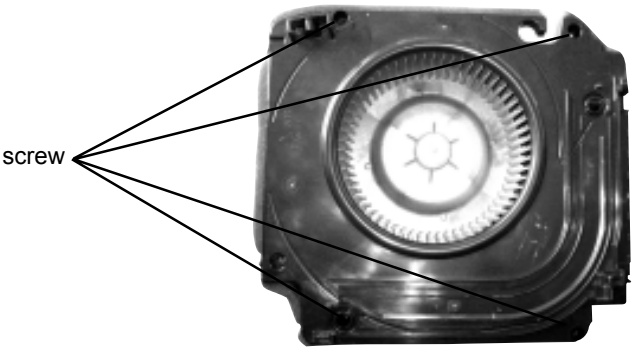
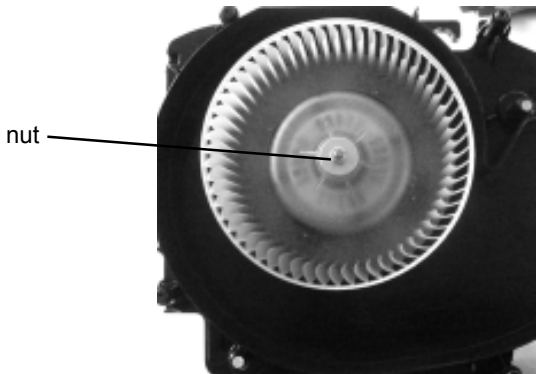
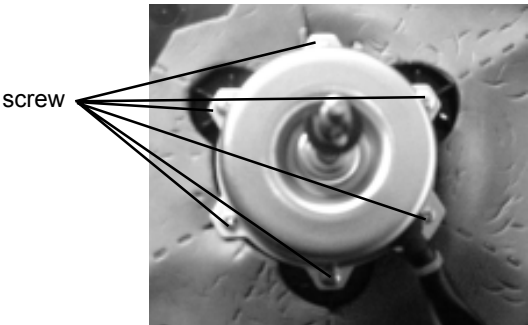
Step	Procedure
<p>1</p> <p>Disassemble front panel</p> <p>(1) Disassemble remote control box: press both sides of remote control box to the middle to remove the clasp from remote control box.</p> <p>(2) Disassemble front panel: screw a screw on the front panel bottom and two screws on the top of guide louver, after screw the two screws of the rear, lift the front panel upwards to remove it.</p>	
<p>2</p> <p>Disassemble rear panel</p> <p>Unscrew the 6 screws of rear panel to remove the panel, refer to the right diagram.</p>	


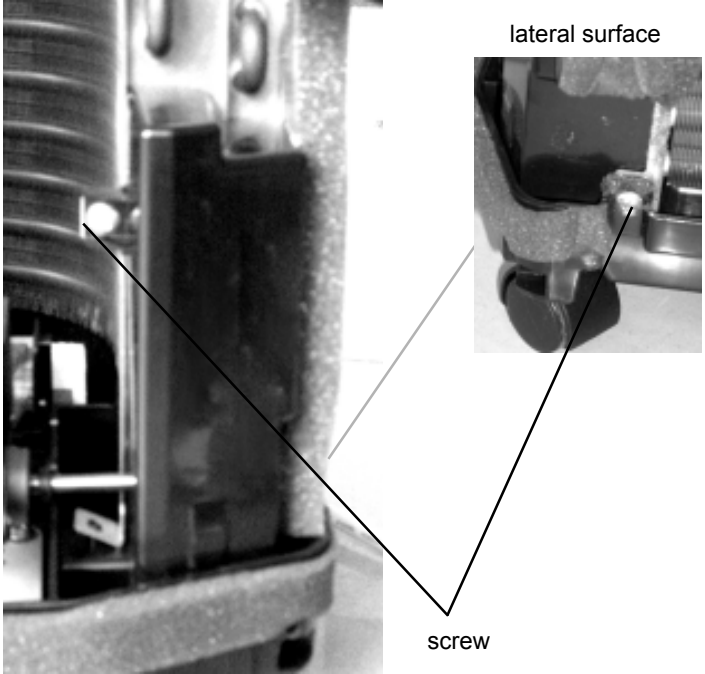
Step	Procedure	
<p>3</p>	<p>Disassemble left and right panel</p> <p>Disassemble left panel: after disassemble rear panel, pull out the filter of left panel refer to the indicator of terminal. Unscrew the 7 screws of left panel to remove the left panel.</p> <p>Disassemble right panel: Unscrew the 7 screws of left panel to remove the right panel.</p>	
<p>4</p>	<p>Disassemble guide panel</p> <p>Disassemble guide panel: pull out the connecting rod of guide panel to remove the guide panel, front guide panel and rear guide panel shown in the right diagram.</p>	

Step	Procedure
<p>5</p> <p>Disassemble electric box</p> <p>(1) Disassemble electric box cover: unscrew the 2 screws of electric box cover to remove the electric box cover.</p> <p>(2) Disassemble electric box: first pull out the relating electric line in the motor, cut the wire clip, then uncrew the 3 screws of electric box to remove it.</p>	
<p>6</p> <p>Disassemble propeller housing cover</p> <p>Unscrew the 3 screws of propeller housing cover to remove it.</p>	
<p>7</p> <p>Disassemble duct subassembly</p> <p>Unscrew the 3 screws of supporting rod, then unscrew the 9 screws of duct subassembly to remove it.</p>	


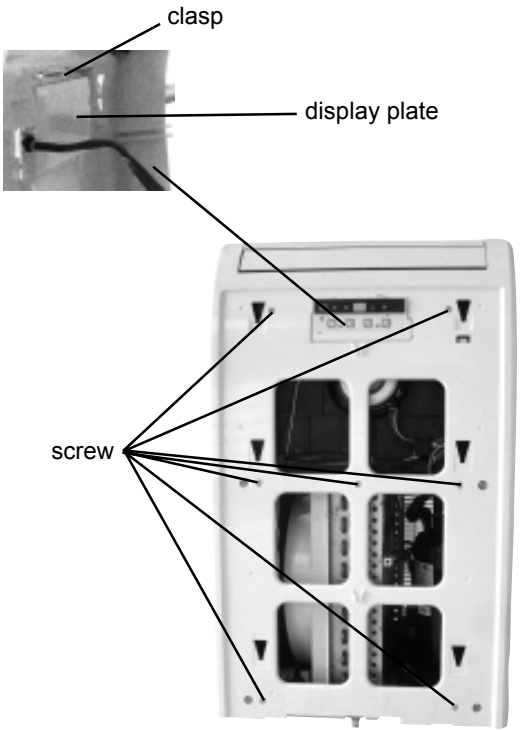
Step	Procedure	
		
8	<p>Disassemble top propeller housing Unscrew the 3 screws of propeller housing to remove it.</p>	
9	<p>Disassemble centrifugal louver (top) Unscrew the nut of louver clockwise, remove the gasket to remove the centrifugal louver (top).</p>	

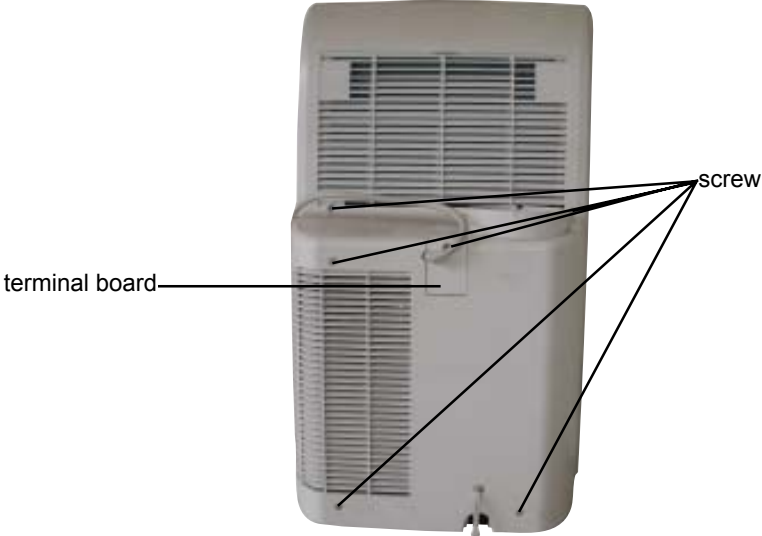
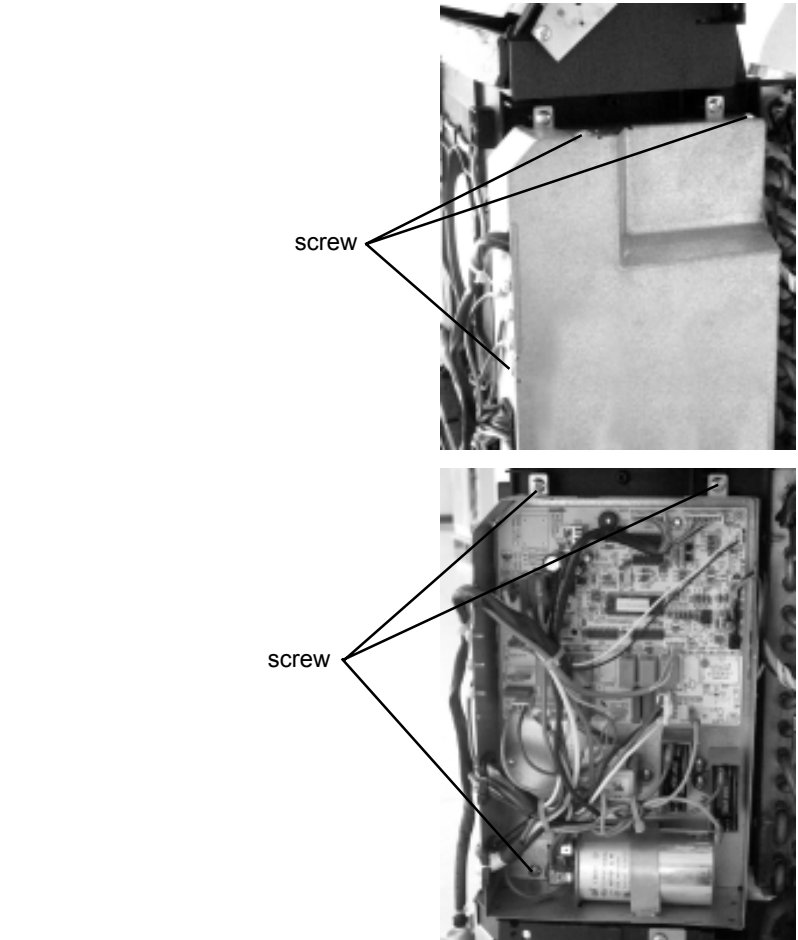


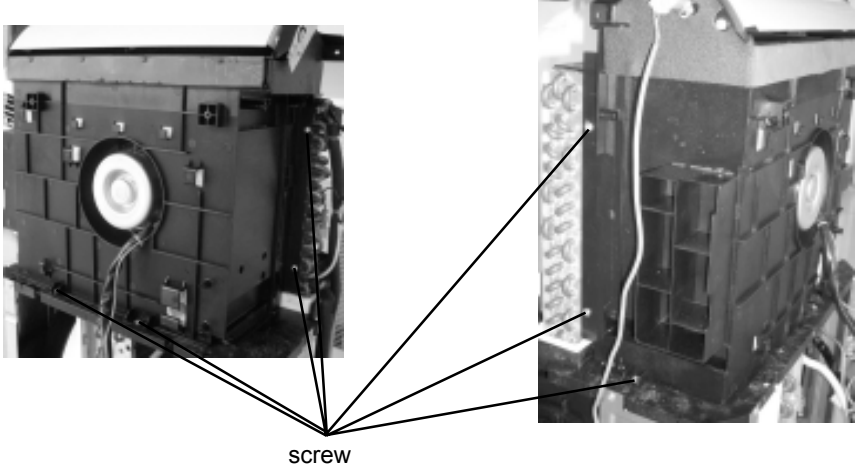
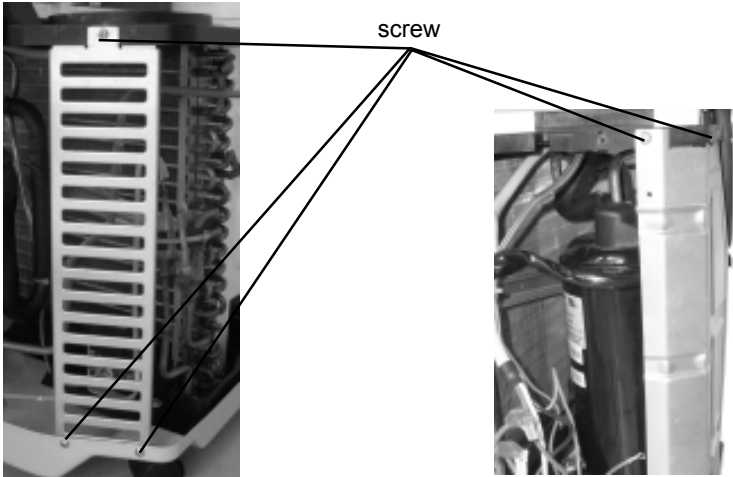
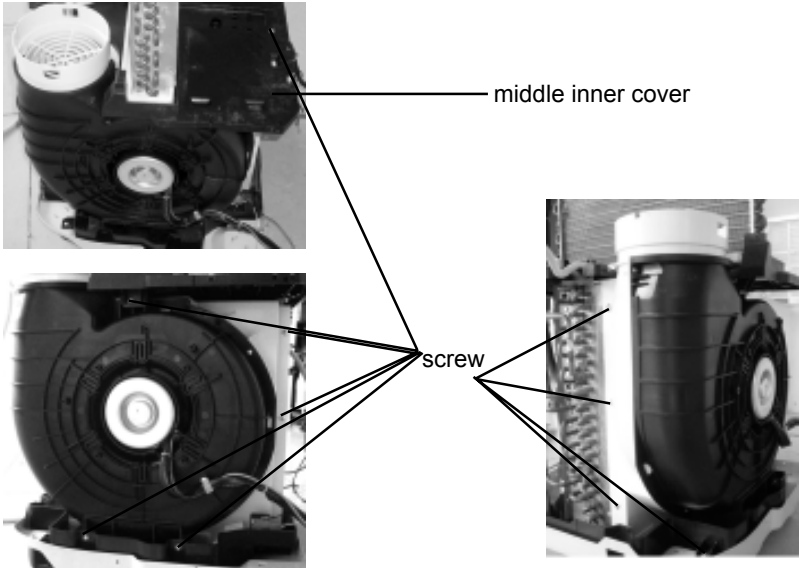
Step	Procedure	
<p>10</p>	<p>Disassemble motor chassis                      Unscrew the 4 screws on the bottom of motor chassis (including the bottom centrifugal louver and the related subassembly).</p>	
<p>11</p>	<p>Disassemble centrifugal louver (bottom)                      Unscrew the nut of louver anti-clockwise, remove the gasket to remove the centrifugal louver (bottom).</p>	
<p>12</p>	<p>Disassemble motor                      Remove the fan and see the right diagram.                      Unscrew the screw of motor to remove it.</p>	

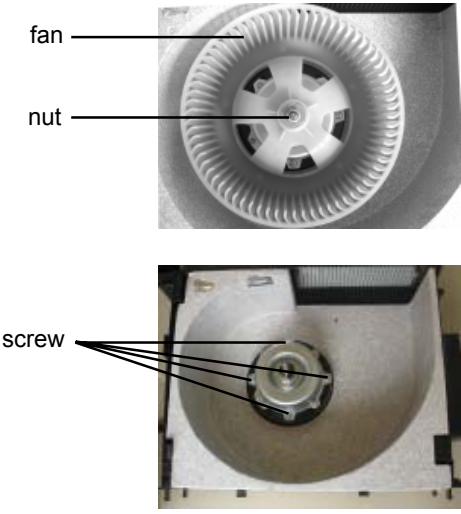
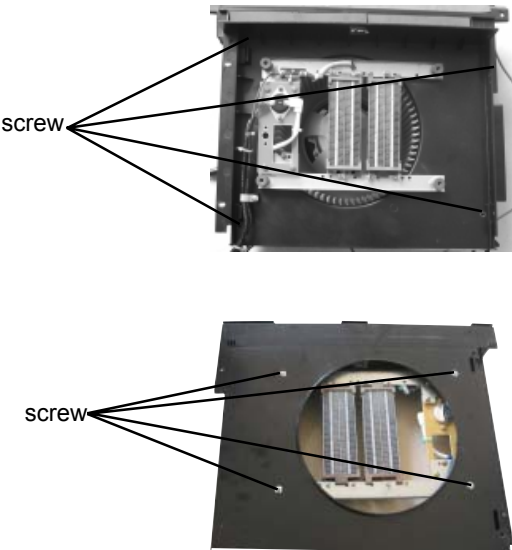
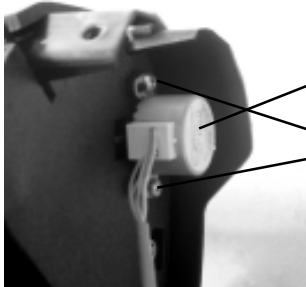
Step	Procedure	
<p>13</p> <p><b>Disassemble compressor</b></p> <p>Unscrew the 3 screws of compressor and remove the related hot-strip to remove compressor.</p>	 <p style="text-align: right;">nut</p>	
<p>14</p> <p><b>Disassemble water retaining box</b></p> <p>Unscrew the 2 screws of front and side to remove the water retaining box.</p>	 <p style="text-align: right;">lateral surface</p> <p style="text-align: center;">screw</p>	


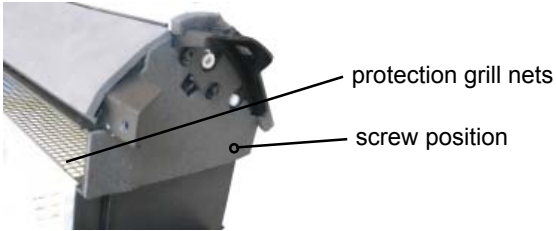
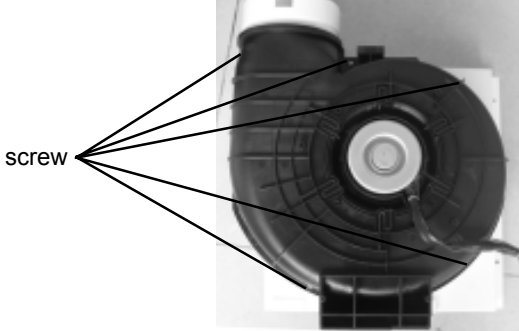
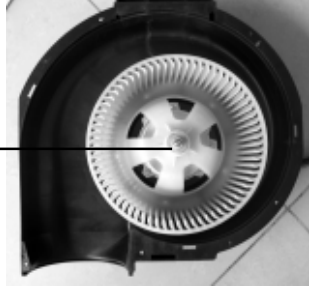
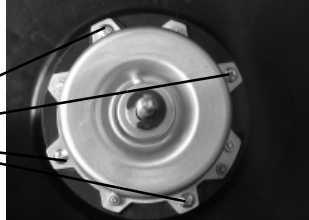
## 11.2 Models:GPC12AF-K3NNA7A,GPE12AF-K3NNA7A


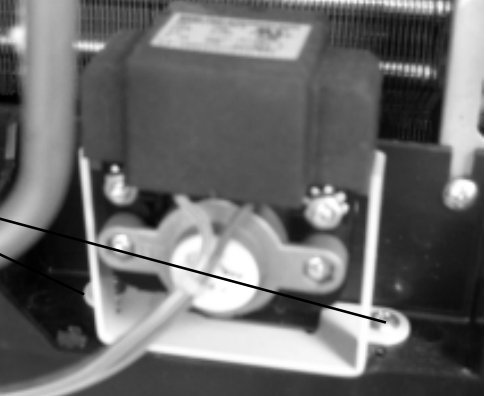
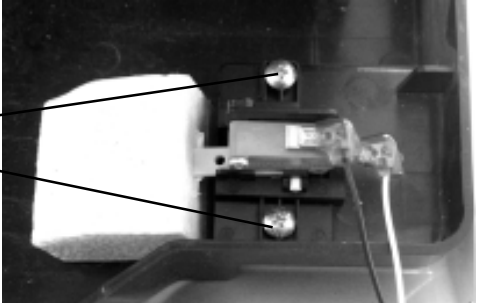
Step	Procedure	
1	<p>Disassemble decoration plate</p> <p>Unscrew the screw on the decoration plate bottom, lift the decoration plate upwards to remove it. (note: need lift at full tilt because of clasps on both sides)</p>	
2	<p>Disassemble front panel</p> <p>(1)Disassemble front panel: unscrew the 7 screws of front panel, lift the panel upwards to remove it.</p> <p>(2)Separate panel: after lift front panel, remove the display of panel from clasp, then the front panel can be separated.</p>	

Step	Procedure	
<p>3</p>	<p><b>Disassemble rear panel</b></p> <p>Unscrew the screw of terminal board first to remove the terminal board, then unscrew the 14 screws of rear panel (there are 6 screws on the front, 5 screws on the rear, and both sides per 1 screw), break the clasps of both sides outwards to remove the rear panel.</p>	 <p>The diagram shows the rear view of a white rectangular device. A label 'terminal board' points to a small rectangular component on the left side. A label 'screw' has four lines pointing to screws located at the top, bottom, and on both sides of the rear panel.</p>
<p>4</p>	<p><b>Disassemble electric box</b></p> <p>(1)Disassemble electric box: unscrew the 3 screws of electric box cover to remove the electric box cover.</p> <p>(2)After remove the electric box cover, pull out the related electric wire, cut the wire clip, and unscrew the 3 screws of the electric box to remove the electric box.</p>	 <p>The top photograph shows the exterior of a metal electric box with three screws being removed from the top cover. A label 'screw' points to these three screws. The bottom photograph shows the interior of the box with various wires and components. A label 'screw' points to three screws that hold the internal components in place.</p>

Step	Procedure
<p>5</p> <p>Disassemble top duct subassembly</p> <p>After unscrew the 7 screws of top duct subassembly, lift the top duct subassembly upwards and onwards to remove the whole subassembly.</p>	 <p>screw</p>
<p>6</p> <p>Disassemble supporting plate</p> <p>Unscrew the related screws of supporting plate to remove the supporting plate.</p>	 <p>screw</p>
<p>6</p> <p>Disassemble bottom duct subassembly</p> <p>Unscrew the screw of middle inner cover first, then unscrew the 9 screws of bottom duct subassembly, after unscrew the screw lift a little middle inner cover to remove the bottom duct subassembly.</p>	 <p>middle inner cover</p> <p>screw</p>

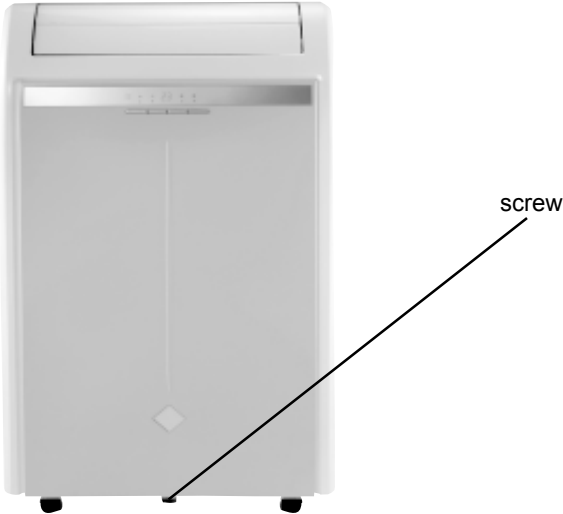
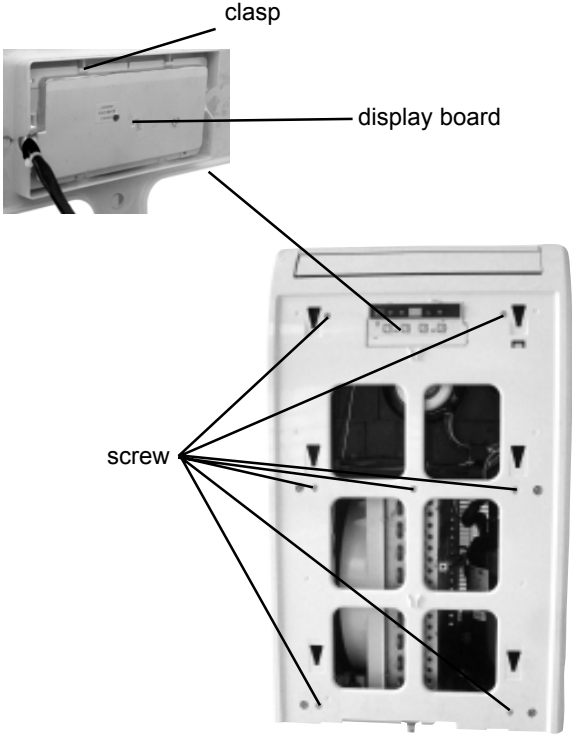
Step	Procedure	
<p>7</p> <p>Disassemble top duct motor</p> <p>(1)Disassemble fan (top); unscrew the nut of fan and remove the gasket to remove the fan.</p> <p>(2)Disassemble motor: after disassemble fan as the diagram shown, unscrew the 4 screws of motor to remove the motor.</p>		
<p>8</p> <p>Disassemble electric heating subassembly (not valid for cooling unit)</p> <p>(1)Disassemble electric heating shell: unscrew the 4 screws of electric heating shell, then it can be separated from top duct subassembly.</p> <p>(2)Disassemble: unscrew the 4 screws of electric heating subassembly to remove the electric heating subassembly</p>		
<p>9</p> <p>Disassemble protection grill nets</p> <p>(1)Disassemble step motor: unscrew the 2 screws of step motor to remove the step motor.</p>		

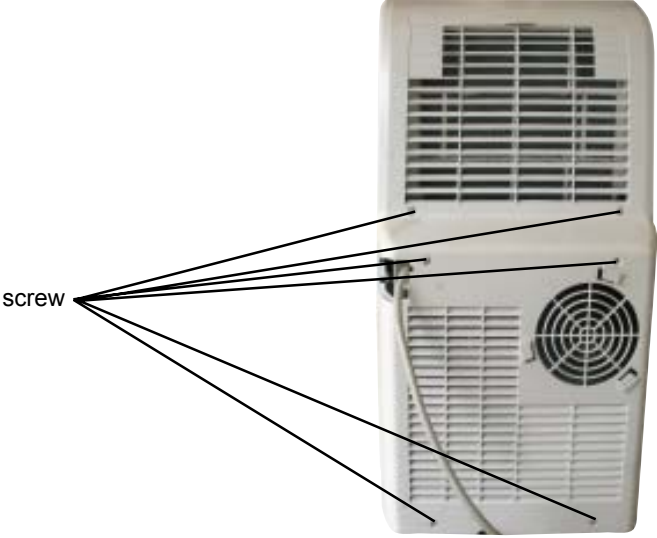
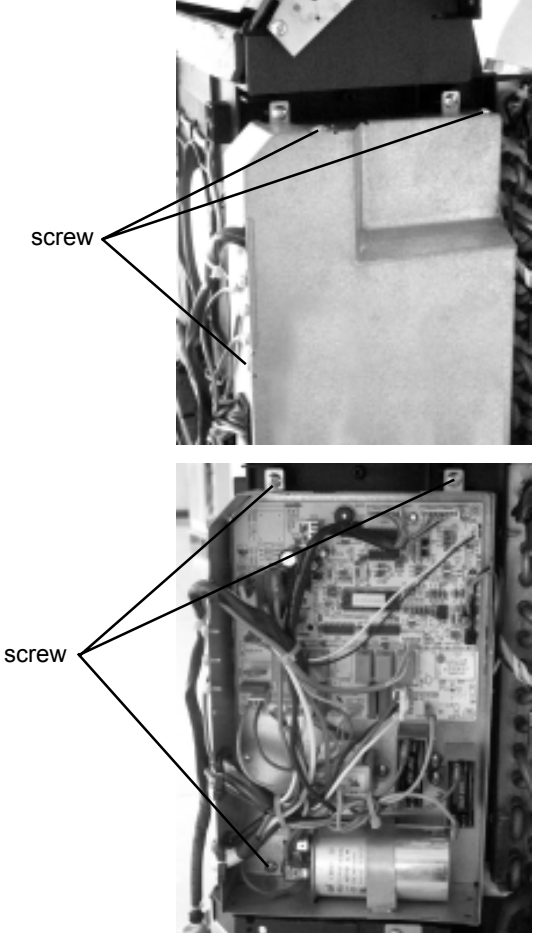
Step	Procedure	
	<p>(2)Disassemble guide plate: after remove the step motor, the clasp can be removed from guide plate.</p> <p>(3)Disassemble protection grill nets: after remove the step motor, tear the sponge on the right bottom corner and there is a screw, unscrew the screw to remove the protection grill nets. (refer to the right diagram to see the screw position)</p>	 <p>guide plate</p> <p>clasp</p>  <p>protection grill nets</p> <p>screw position</p>
<p>10</p>	<p><b>Disassemble bottom duct motor</b></p> <p>(1)Disassemble propeller housing: unscrew the 4 screws of propeller housing to remove the propeller housing.</p> <p>(2)Disassemble fan(bottom): unscrew the nut of a fan, and remove the two gaskets to remove the fan.</p> <p>(3)Disassemble motor:after remove the fan, the motor can be seen, unscrew the 4 screws of motor to remove the motor.</p>	 <p>screw</p>  <p>nut</p>  <p>screw</p>

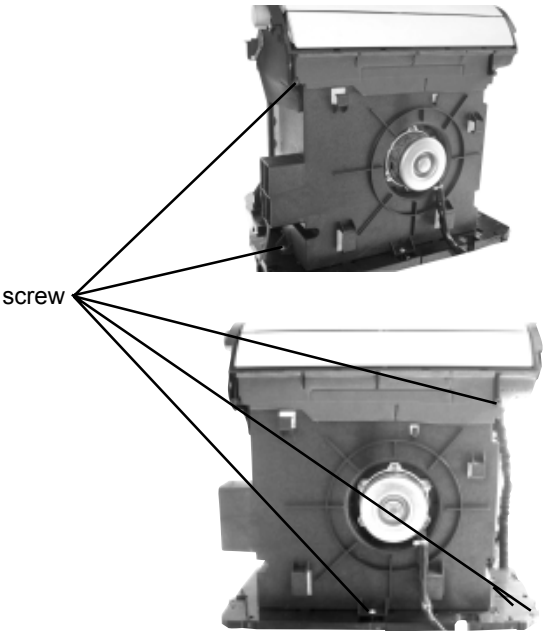
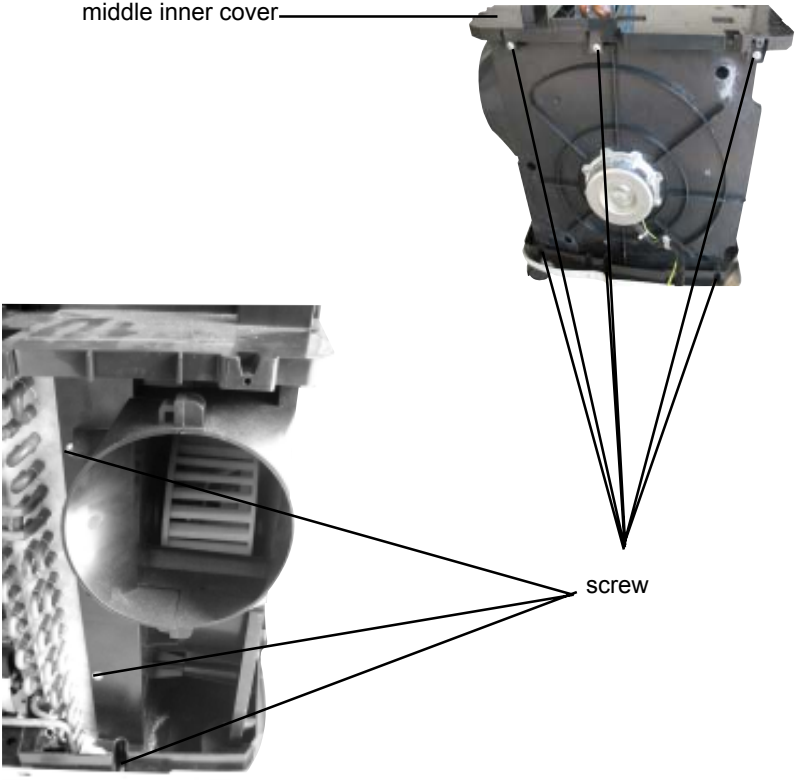
Step	Procedure	
<p>11</p>	<p><b>Disassemble compressor</b></p> <p>Unscrew the 3 nuts on the bottom of compressor and remove the related gasket to remove the compressor.</p>	
<p>12</p>	<p><b>Disassemble kick motor subassembly</b></p> <p>Unscrew the 2 screws on the outside bottom of subassembly to remove the kick motor subassembly.</p>	
<p>13</p>	<p><b>Disassemble liquid level switch</b></p> <p>Unscrew the 2 screws of subassembly to remove the liquid level switch.</p>	

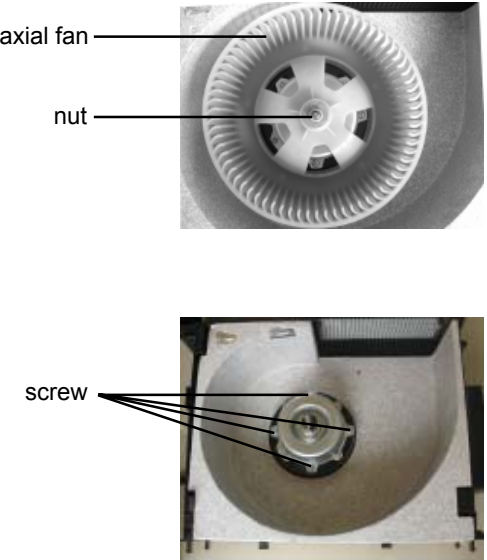
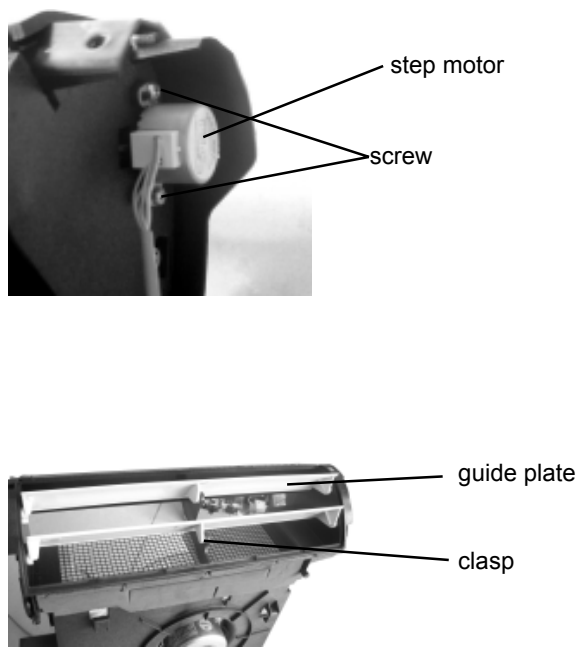


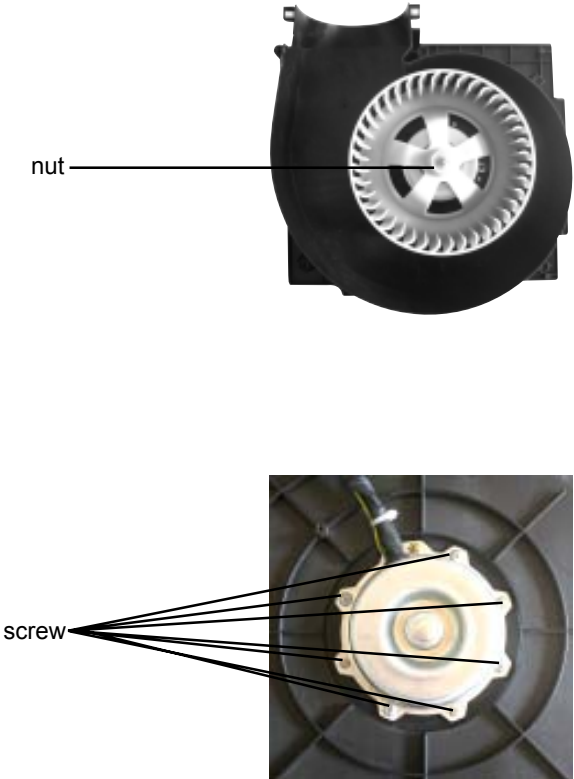
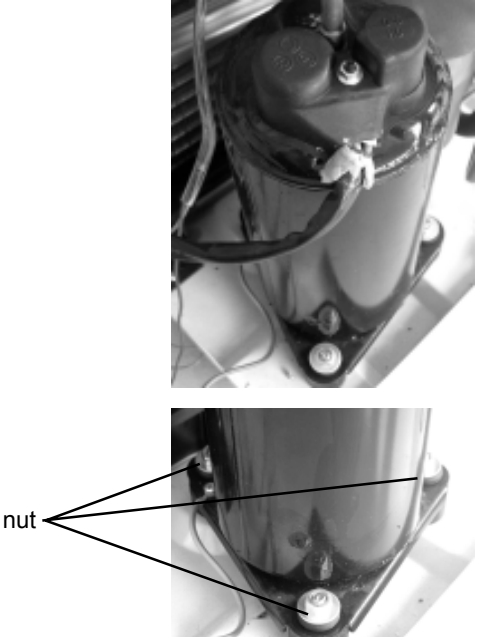
## 11.3 Models:GPC09AE-K3NNA7A

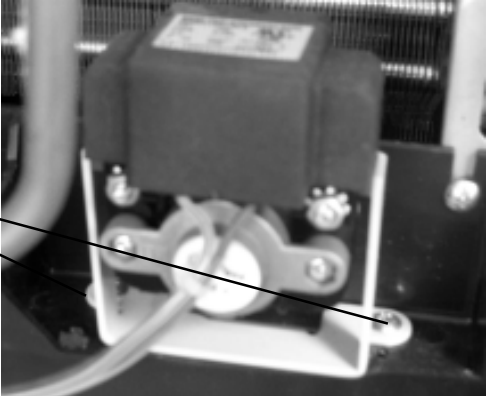
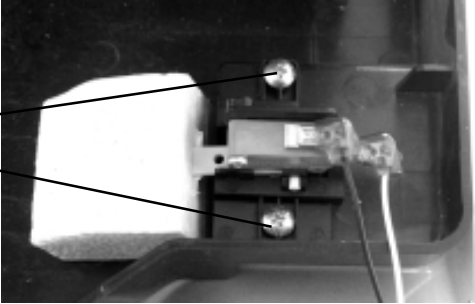
Step	Procedure	
1	<p>Disassemble decoration plate</p> <p>Unscrew the screw on the bottom of decoration plate, lift the decoration plate upwards and onwards to remove it. (note: need lift it at full tilt because of clasps fasten the both sides)</p>	
2	<p>Disassemble front panel</p> <p>(1)Disassemble front panel: unscrew the 7 screws of front panel, lift the front panel upwards and onwards to remove the front panel.</p> <p>(2)Separate panel: after take out the front panel, remove the display of panel from clasp to separate the front panel.</p>	

Step	Procedure	
<p>3</p>	<p><b>Disassemble rear panel</b></p> <p>Unscrew a screw of the terminal board first to remove the terminal board, then unscrew the 14 screws of rear panel (there are 6 screws on the front, 5 screws on the rear, and both sides per 1 screw), break the clasps of both sides outwards to remove the rear panel.</p>	
<p>4</p>	<p><b>Disassemble electric box</b></p> <p>(1) Disassemble electric box: unscrew the 3 screws of electric box cover to remove the electric box cover.</p> <p>(2) After remove the electric box cover, pull out the related electric wire, cut the wire clip, and unscrew the 3 screws of the electric box to remove the electric box.</p>	

Step	Procedure	
<p>5</p>	<p><b>Disassemble top duct subassembly</b>                      After unscrew the 7 screws of top duct subassembly, lift the top duct subassembly upwards and onwards to remove the whole subassembly.</p>	 <p>The image shows two views of the top duct subassembly. The top view shows a circular fan-like component. The bottom view shows the subassembly from a different angle. Lines from the label 'screw' point to seven locations on both views where screws are used to secure the subassembly.</p>
<p>6</p>	<p><b>Disassemble bottom duct subassembly</b>                      Unscrew the screw of middle inner cover first, then unscrew the 9 screws of bottom duct subassembly, after unscrew the screw lift a little middle inner cover to remove the bottom duct subassembly.</p>	 <p>The image shows two views of the bottom duct subassembly. The top view shows a circular fan-like component with a 'middle inner cover' indicated by a line. The bottom view shows the subassembly from a different angle, with lines from the label 'screw' pointing to nine locations where screws are used to secure the subassembly.</p>

Step	Procedure	
<p>7</p>	<p><b>Disassemble top duct motor</b></p> <p>(1)Disassemble axial fan (top); unscrew the nut of fan and remove the gasket to remove the fan.</p> <p>(2)Disassemble motor: after disassemble axial fan as the diagram shown, unscrew the 4 screws of motor to remove the motor.</p>	
<p>8</p>	<p><b>Disassemble guide plate</b></p> <p>(1)Disassemble stop motor: unscrew the 2 screws of step motor to remove the step motor.</p> <p>(2)Disassemble guide plate: after remove the step motor, then can remove the clasp from guide plate.</p>	

Step	Procedure	
<p>9</p>	<p>Disassemble bottom duct motor</p> <p>(1)Disassemble axial fan(bottom): unscrew the nut of axial fan, and remove the two gaskets to remove the fan.</p> <p>(2)Disassemble motor:after remove the axial fan, unscrew the 7 screws of motor to remove the motor.</p>	
<p>10</p>	<p>Disassemble compressor</p> <p>Unscrew the 3 nuts on the bottom of compressor and remove the related gasket to remove the compressor.</p>	

Step	Procedure	
<p>11</p>	<p>Disassemble kick motor subassembly                      Unscrew the 2 screws on the outside bottom of subassembly to remove the kick motor subassembly.</p>	 <p>screw</p>
<p>12</p>	<p>Disassemble liquid level switch                      Unscrew the 2 screws of subassembly to remove the liquid level switch.</p>	 <p>screw</p>



**GREE ELECTRIC APPLIANCES,INC.OF ZHUHAI**

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