Service Manual

MODEL: GWH(07)AA-K3DNA1B/I (CB115N0680)
(CB115N0682)
GWH(09)AA-K3DNA1B/I (CB115N0650)
(CB115N0651)
(CB115N0652)
GWH(12)AB-K3DNA1B/I (CB115N0660)
(CB115N0661)
(CB115N0662)
GWH(18)AC-K3DNA1A/I (CB115N0670)
(CB115N0671)
(CB115N0672)

GREE ELECTRIC APPLIANCES INC.OF ZHUHAI

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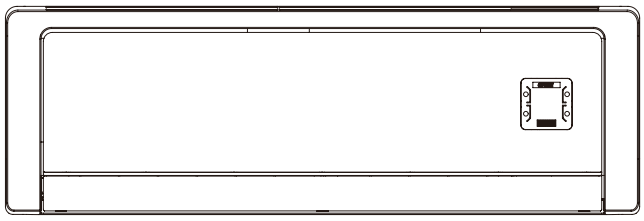
Summary and Features

Indoor Unit:

GWH(07)AA-K3DNA1B/I(CB115N0680)
GWH(09)AA-K3DNA1B/I(CB115N0650)
GWH(12)AB-K3DNA1B/I(CB115N0660)
GWH(18)AC-K3DNA1A/I(CB115N0670)



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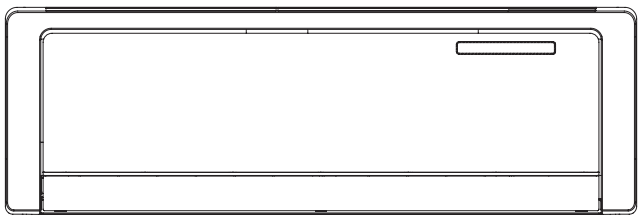

GWH(09)AA-K3DNA1B/I(CB115N0652)
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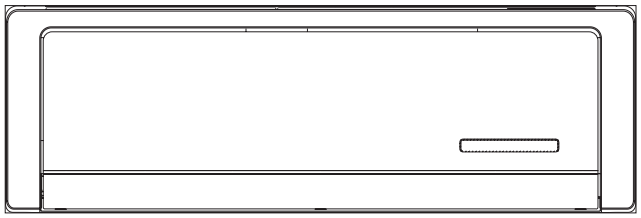


Remote Controller:

YT1F:

1. Safety Precautions

Installing, starting up, and servicing air conditioner can be hazardous due to system pressure, electrical components, and equipment location, etc.
Only trained, qualified installers and service personnel are allowed to install, start-up, and service this equipment.
Untrained personnel can perform basic maintenance functions such as cleaning coils. All other operations should be performed by trained service personnel.
When handling the equipment, observe precautions in the manual and on tags, stickers, and labels attached to the equipment. Follow all safety codes. Wear safety glasses and work gloves. Keep quenching cloth and fire extinguisher nearby when brazing.
Read the instructions thoroughly and follow all warnings or cautions in literature and attached to the unit. Consult local building codes and current editions of national as well as local electrical codes.
Recognize the following safety information:

Warning Incorrect handling could result in personal injury or death.

Caution Incorrect handling may result in minor injury, or damage to product or property.

Warning

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

●Before installing, modifying, or servicing system, main electrical disconnect switch must be in the OFF position. There may be more than 1 disconnect switch. Lock out and tag switch with a suitable warning label.
●Never supply power to the unit unless all wiring and tubing are completed, reconnected and checked.
●This system adopts highly dangerous electrical voltage. Incorrect connection or inadequate grounding can cause personal injury or death. Stick to the wiring diagram and all the instructions when wiring.
●Have the unit adequately grounded in accordance with local electrical codes.
●Have all wiring connected tightly. Loose connection may lead to overheating and a possible fire hazard.

All installation or repair work shall be performed by your dealer or a specialized subcontractor as there is the risk of fire, electric shock, explosion or injury.

●Make sure the outdoor unit is installed on a stable, level surface with no accumulation of snow, leaves, or trash beside.
●Make sure the ceiling/wall is strong enough to bear the weight of the unit.
●Make sure the noise of the outdoor unit does not disturb neighbors.
●Follow all the installation instructions to minimize the risk of damage from earthquakes, typhoons or strong winds.
●Avoid contact between refrigerant and fire as it generates poisonous gas.
●Apply specified refrigerant only. Never have it mixed with any other refrigerant. Never have air remain in the refrigerant line as it may lead to rupture and other hazards.
●Make sure no refrigerant gas is leaking out when installation is completed.
●Should there be refrigerant leakage, the density of refrigerant in the air shall in no way exceed its limited value, or it may lead to explosion.
●Keep your fingers and clothing away from any moving parts.
●Clear the site after installation. Make sure no foreign objects are left in the unit.
●Always ensure effective grounding for the unit.

Caution

●Never install the unit in a place where a combustible gas might leak, or it may lead to fire or explosion.
●Make a proper provision against noise when the unit is installed at a telecommunication center or hospital.
●Provide an electric leak breaker when it is installed in a watery place.
●Never wash the unit with water.
●Handle unit transportation with care. The unit should not be carried by only one person if it is more than 20kg.
●Never touch the heat exchanger fins with bare hands.
●Never touch the compressor or refrigerant piping without wearing glove.
●Do not have the unit operate without air filter.
●Should any emergency occur, stop the unit and disconnect the power immediately.
●Properly insulate any tubing running inside the room to prevent the water from damaging the wall.

2. Specifications

2.1 Unit Specifications

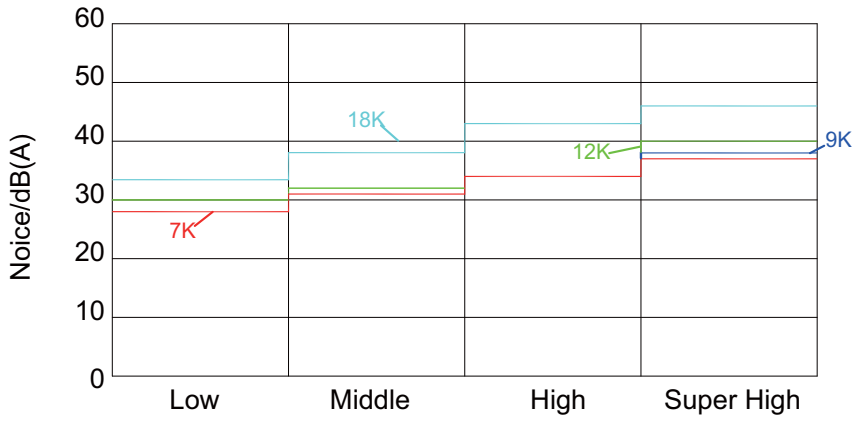
Model	GWH(07)AA-K3DNA1B/I	GWH(09)AA-K3DNA1B/I
Product Code	CB115N0680 CB115N0682	CB115N0650 CB115N0651 CB115N0652
Capacity(Cooling)(W)	2100	2600
Capacity(Heating)(W)	2600	2800
Fan Motor Speed (r/min)	420	450
Airflow(m^3/h)(SH/H/M/L/SL)	1200/1150/1000/850/-	1250/1150/1000/850/-
Output of Fan Motor (W)	10	10
Input Power of Heater (W)	/	/
Fan Motor Capacitor (μF)	1	1
Fan Motor RLA(A)	0.23	0.23
Fan Type	Cross flow fan	Cross flow fan
Diameter-Length (mm)	Φ85X615	Φ85X615
Evaporator	Aluminum fin-copper tube	Aluminum fin-copper tube
Pipe Diameter (mm)	Φ7	Φ7
Row-Fin Gap(mm)	2-1.6	2-1.6
Coil length (l) x height (H) x coil width (L)	603X25.4X266.7	603X25.4X264
Swing Motor Model	MP28VB	MP28VB
Output of Swing Motor (W)	2	2
Fuse (A)	3.15	3.15
Sound Pressure Level dB (A) (SH/H/M/L/SL)	37/35/32/29/-	38/35/32/29/-
Sound Power Level dB (A)(SH/H/M/L/SL)	47/45/42/39/-	48/45/42/39/-
Dimension (W/H/D) (mm)	815X267X165	815X267X165
Dimension of Package (L/W/H)(mm)	890X344X260	890X344X260
Liquid connections Diameter	Φ6	Φ6
Gas connections Diameter	Φ9.52	Φ9.52
Net Weight /Gross Weight (kg)	10/13	10/13

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

Model	GWH(12)AB-K3DNA1B/I	GWH(18)AC-K3DNA1A/I
Product Code	CB115N0660 CB115N0661 CB115N0662	CB115N0670 CB115N0671 CB115N0672
Capacity(Cooling)(W)	3500	5300
Capacity(Heating)(W)	3800	5800
Fan Motor Speed (r/min) (SH/H/M/L)	550	840
Airflow(m^3/h)	1350/1150/1050/900	1380/1150/1050/950
Output of Fan Motor (W)	10	20
Input Power of Heater (W)	/	/
Fan Motor Capacitor (μF)	1	1.5
Fan Motor RLA(A)	0.23	0.41
Fan Type	Cross flow fan	Cross flow fan
Diameter-Length (mm)	Φ85X668	Φ98X733
Evaporator	Aluminum fin-copper tube	Aluminum fin-copper tube
Pipe Diameter (mm)	Φ7	Φ7
Row-Fin Gap(mm)	2-1.4	2-1.5
Coil length (l) x height (H) x coil width (L)	657X25.4X285	740X25.4X301
Swing Motor Model	MP28VB	MP28VB
Output of Swing Motor (W)	2	2
Fuse (A)	3.15	3.15
Sound Pressure Level dB (A) (SH/H/M/L/SL)	40/35/33/30/-	46/43/38/34/-
Sound Power Level dB (A)(SH/H/M/L/SL)	50/45/43/40/-	56/53/48/44/-
Dimension (W/H/D) (mm)	872X283X178	960X300X195
Dimension of Package (L/W/H)(mm)	935X374X260	1035X390X280
Liquid connections Diameter	Φ6	Φ6
Gas connections Diameter	Φ9.52	Φ12
Net Weight /Gross Weight (kg)	11/15	13/18

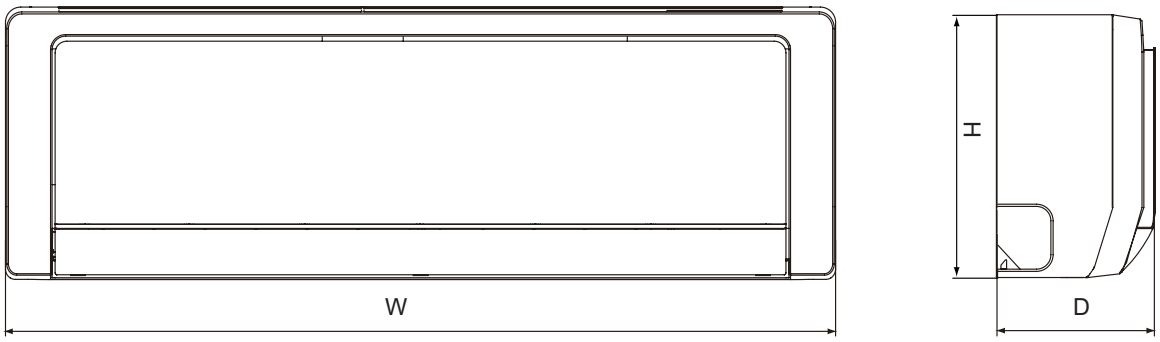
The above data is subject to change without notice. Please refer to the nameplate of the unit.

2.2 Noise Criteria Curve Tables for Both Models

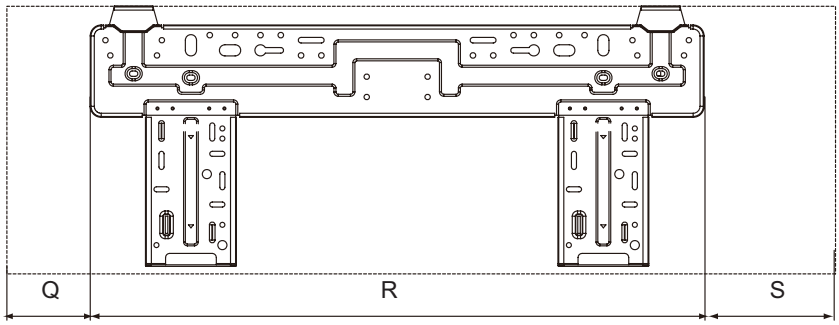


Indoor Fan Motor Rotating Speed

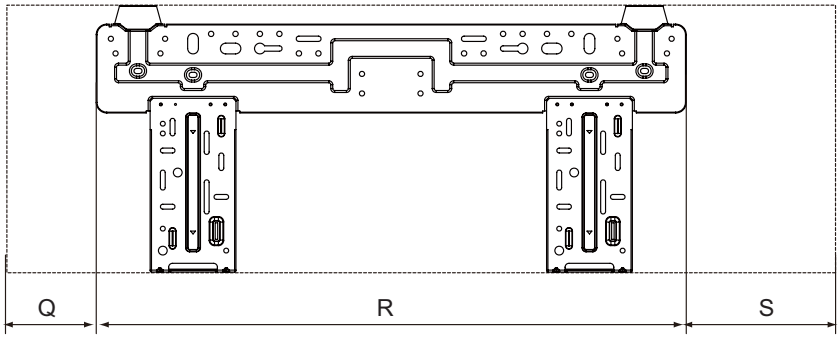
3. Construction Views



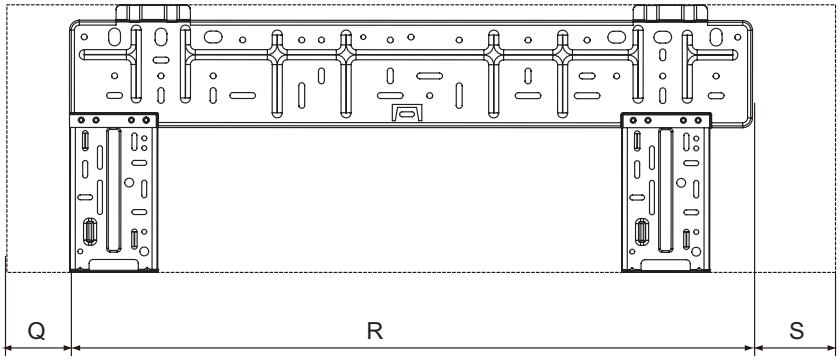
07&09K Unit:



12K Unit:



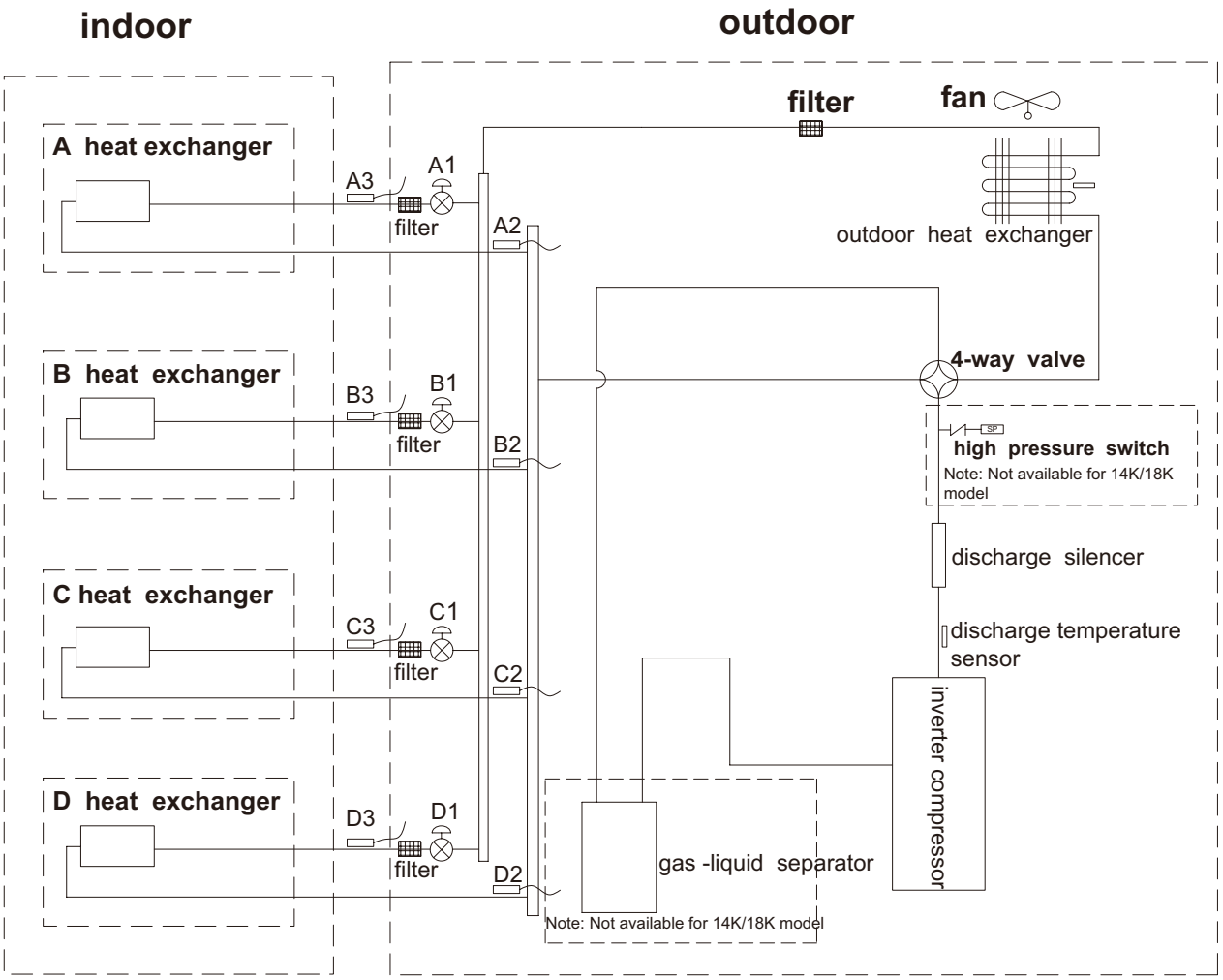
18K Unit:



Unit:mm

Model	W	H	D	Q	R	S
07&09K	815	267	165	51	605	159
12K	872	283	178	101	605	166
18K	960	300	195	118	694	148

4. Refrigerant System Diagram



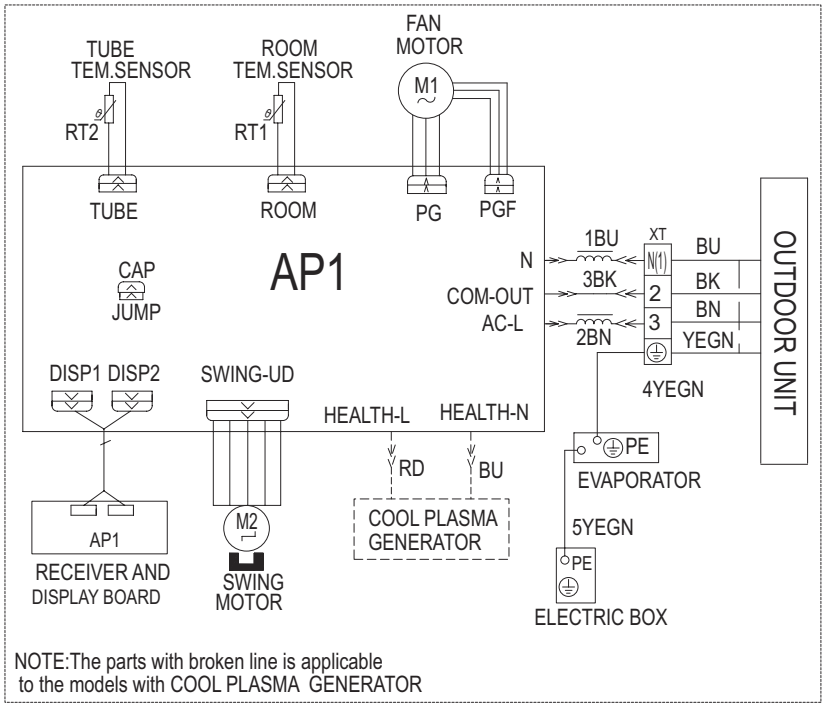
A1:A-unit electronic expansion valve B1:B-unit electronic expansion valve
C1:C-unit electronic expansion valve D1:D-unit electronic expansion valve
A2:A-unit gas pipe temperature sensor B2:B-unit gas pipe temperature sensor
C2:C-unit gas pipe temperature sensor D2:D-unit gas pipe temperature sensor
A3:A-unit liquid pipe temperature sensor B3:B-unit liquid pipe temperature sensor
C3:C-unit liquid pipe temperature sensor D3:D-unit liquid pipe temperature sensor

5. Schematic Diagram

5.1 Electrical Wiring

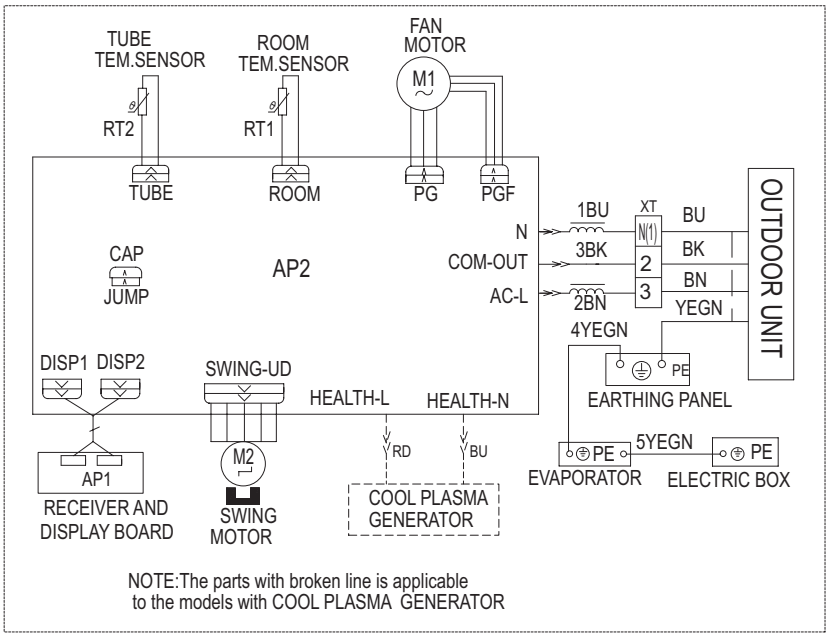
●Indoor Unit

GWH(07)AA-K3DNA1B/I GWH(09)AA-K3DNA1B/I
GWH(12)AB-K3DNA1B/I



Symbol	Color symbol
OG	ORANGE
VT	VIOLET
WH	WHITE
YE	YELLOW
RD	RED
YEGN	YELLOW GREEN
SAT	OVERLOAD
BN	BROWN
BU	BLUE
BK	BLACK
Symbol	Parts name
⏚	PROTECTIVE EARTH
COMP	COMPRESSOR

GWH(18)AC-K3DNA1A/I

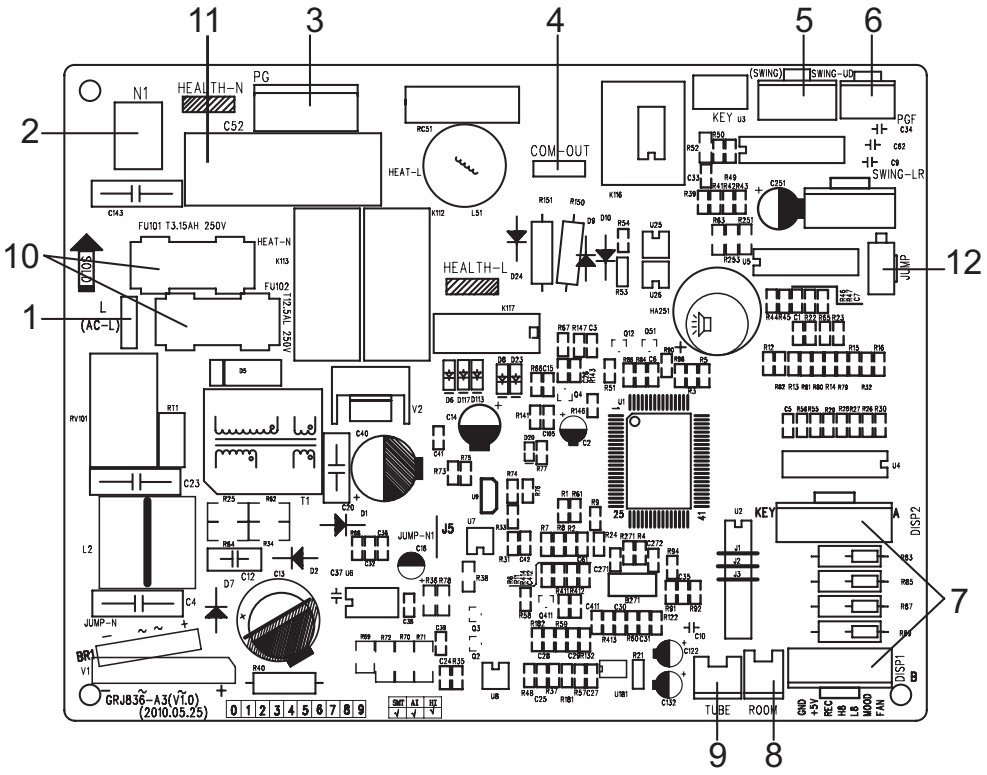


These circuit diagrams are subject to change without notice, please refer to the one supplied with the unit.

5.2 Printed Circuit Board

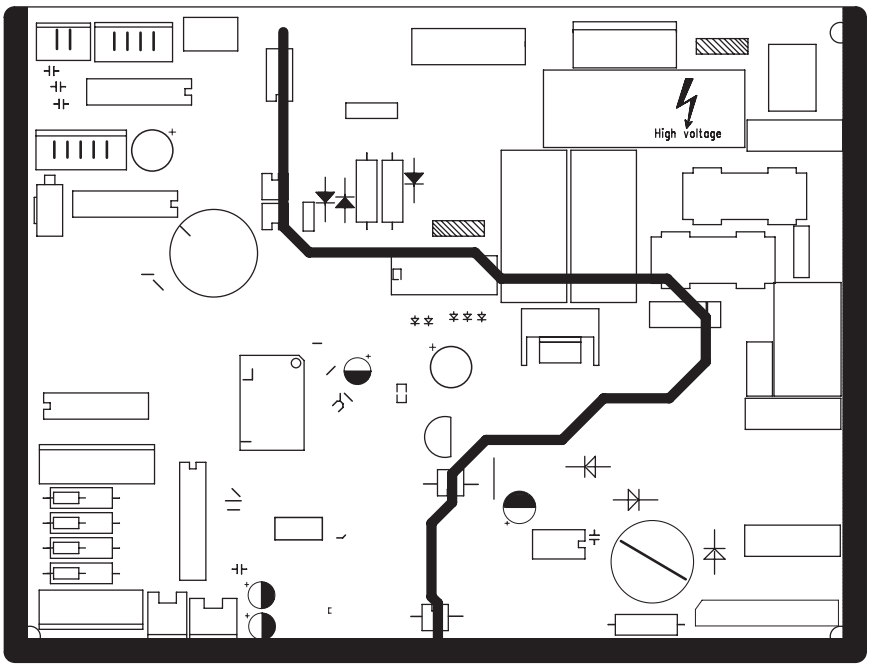
GWH(07)AA-K3DNA1B/I GWH(09)AA-K3DNA1B/I
GWH(12)AB-K3DNA1B/I

●TOP VIEW



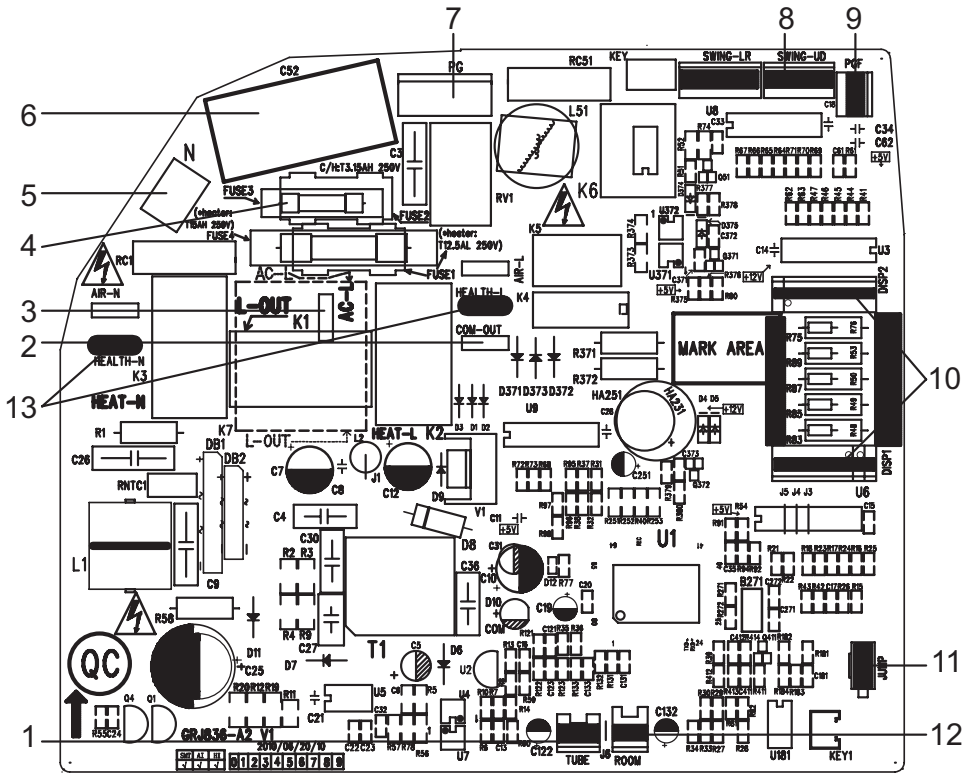
1	Live wire terminal of power supply
2	Neutral wire terminal of power supply
3	Wire terminal of indoor fan
4	Terminal of communication wire between indoor and outdoor units
5	Terminal of up & down swing control
6	Feedback wire terminal of indoor fan
7	Terminal of display panel
8	Indoor ambient temp sensor
9	Indoor pipe temp sensor
10	Protective tube
11	Capacitor of fan
12	Terminal of jumper cap

●BOTTOM VIEW



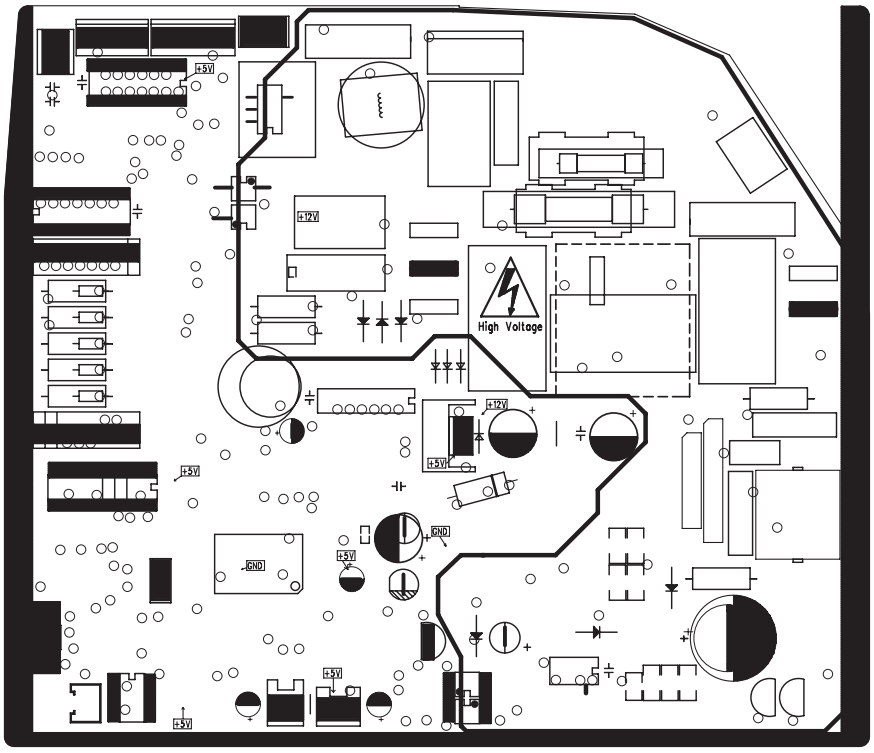
GWH(18)AC-K3DNA1A/I

●TOP VIEW



1	Indoor pipe temp sensor
2	Terminal of communication wire between indoor and outdoor units
3	Live wire terminal of power supply
4	Protective tube
5	Neutral wire terminal of power supply
6	Capacitor of fan
7	Terminal of PG motor
8	Terminal of up & down swing
9	Feedback wire terminal of PG motor
10	Terminal of display panel
11	Terminal of jumper cap
12	Indoor ambient temp sensor
13	Health function terminal(optional)

●BOTTOM VIEW



6. Function and Control

6.1 Remote Control Operations

1 ON/OFF
Press it to start or stop operation.

2 - :
Press it to decrease temperature setting.

3 +:
Press it to increase temperature setting.

4 FAN
Press it to set fan speed.

5 MODE
Press it to select operation mode (AUTO/COOL/DRY/FAN/HEAT).

6 I FEEL

7
Press it to set HE ALTH function

8
Press it to set AIR function.

9 CLOCK
Press it set clock.

10 TIMER ON
Press it to set auto-on timer.

11
Press it set swing angle.

12 X-FAN(X-FAN is the alternative expression of BLOW for the purpose of understanding.)

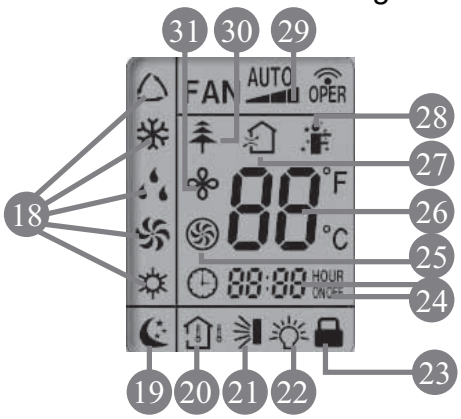
13 TEMP

14 TIMER OFF
Press it to set auto-off timer

15 TURBO

16 SLEEP

17 LIGHT
Press it to turn on/off the light.



18 MODE icon:

If MODE button is pressed, current operation mode icon (AUTO), (COOL), (DRY), (FAN) or (HEAT only for heat pump models) will show.

19 SLEEP icon :

is displayed by pressing the SLEEP button. Press this button again to clear the display.

20 TEMP icon:

Pressing TEMP button, (set temperature), (ambient temperature), (outdoor ambient temperature) and blank is displayed circularly.

21 Up & down swing icon:

is displayed when pressing the up & down swing button. Press this button again to clear the display.

22 LIGHT icon:

is displayed by pressing the LIGHT button. Press LIGHT button again to clear the display.

23 LOCK icon:

is displayed by pressing "+" and "-" buttons simultaneously. Press them again to clear the display.

24 SET TIME display:

After pressing TIMER button, ON or OFF will blink.This area will show the set time.

25 TURBO icon:

is displayed when pressing the TURBO button.Press this button again to clear the display.

26 DIGITAL display:

This area will show the set temperature. In SAVE mode,"SE" will be displayed. During defrosting operation, "H1" will be displayed.

27 AIR icon:

is displayed when pressing the AIR button.Press this button again to clear the display.

28 I FEEL icon:

is displayed when pressing the I FEEL button. Press this button again to clear the display.

29 FAN SPEED display:

Press FAN button to select the desired fan speed setting (AUTO Low-Med-High).Your selection will be displayed in the LCD windows, except the AUTO fan speed.

30 HEALTH icon:

is displayed when pressing the HEALTH button. Press this button again to clear the display.

31 X-FAN icon:

is displayed when pressing the X-FAN button. Press this button again to clear the display.

1 ON/OFF:

Press this button to turn on the unit .Press this button again to turn off the unit.

2 -:

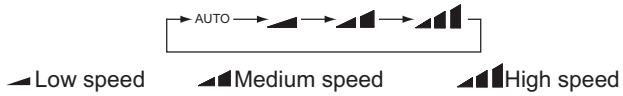
Press this button to decrease set temperature. Hold it down for above 2 seconds to rapidly decrease set temperature. In AUTO mode, set temperature is not adjustable.

3 +:

Press this button to increase set temperature. Hold it down for above 2 seconds to rapidly increase set temperature. In AUTO mode, set temperature is not adjustable.

4 FAN :

This button is used for setting Fan Speed in the sequence that goes from AUTO, , , to then back to Auto.



5 MODE :

Each time you press this button, a mode is selected in a sequence that goes from AUTO,COOL,DRY, FAN,and HEAT *, as the following:

*Note: Only for models with heating function.

After energization, AUTO mode is defaulted. In AUTO mode, the set temperature will not be displayed on the LCD, and the unit will automatically select the suitable operation mode in accordance with the room temperature to make indoor room comfortable.

6 I FEEL:

Press this button to turn on I FEEL function. The unit automatically adjust temperature according to the sensed temperature. Press this button again to cancel I FEEL function.

7

Press this button to set HEALTH function ON or OFF. After the unit is turned on, it defaults to HEALTH function ON.

8

Press this button to select AIR function ON or OFF.

9 CLOCK :

Pressing CLOCK button, blinks. Within 5 seconds, pressing + or - button adjusts the present time. Holding down either button above 2 seconds increases or decreases the time by 1 minute every 0.5 second and then by 10 minutes every 0.5 second. During blinking after setting, press CLOCK button again to confirm the setting, and then will be constantly displayed.

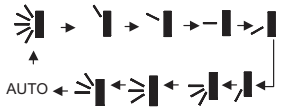
10 TIMER ON :

Press this button to initiate the auto-ON timer. To cancel the auto-timer program, simply press this button again.

After pressing this button, disappear sand " ON " blink s . 00:00 is displayed for ON time setting. Within 5 seconds, press + or - button to adjust the time value. Every press of either button changes the time setting by 1 minute. Holding down either button rapidly changes the time setting by 1 minute and then 10 minutes. Within 5 seconds after setting, press TIMER ON button to confirm.

11

Press this button to set up & down swing angle, which circularly changes as below:



This remote controller is universal. If any command , or is sent out, , , the unit will carry out the command as indicates the guide louver swings as:

12 X-FAN:

Pressing X -FAN button in COOL or DRY mode, the icon is displayed and the indoor fan will continue operation for 10 min utes in order to dry the indoor unit even though you have turned off the unit. After energization, X-FAN OFF is defaulted. X-FAN is not available in AUTO, FAN or HEAT mode.

13 TEMP:

Press this button, could select displaying the indoor setting temperature or indoor ambient temperature.When the indoor unit firstly power on it will display the setting temperature, if the temperature's displaying status is changed from other status to" ",displays the ambient temperature, 5s later or within 5s, it receives other remote control signal that will return to display the setting temperature. if the users haven't set up the temperature displaying status,that will display the setting temperature.

14 TIMER OFF :

Press this button to initiate the auto-off timer. To cancel the auto-timer program, simply press the button again.TIMER OFF setting is the same as TIMER ON.

15 TURBO:

Press this button to activate / deactivate the Turbo function which enables the unit to reach the preset temperature in the shortest time. In COOL mode, the unit will blow strong cooling air at super high fan speed. In HEAT mode, the unit will blow strong heating air at super high fan speed.

16 SLEEP:

Press this button to go into the SLEEP operation mode. Press it again to cancel this function. This function is available in COOL, HEAT (Only for models with heating function) or DRY mode to maintain the most comfortable temperature for you.

17 LIGHT:

Press LIGHT button to turn on the display's light and press this button again to turn off the display's light. If the light is turned on, is displayed. If the light is tunrned off , disappears.

18 Combination of "+" and "-" buttons: About lock

Press "+ " and "-" buttons simultaneously to lock or unlock the keypad. If the remote controller is locked, is displayed. In this case, pressing any button, blinks three times.

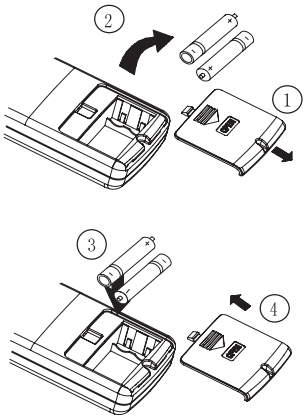
19 Combination of "MODE" and "-" buttons: About switch between Fahrenheit and Centigrade At unit OFF, press "MODE" and "- " buttons simultaneously to switch between ℃ and ℉

Replacement of Batteries

1.Remove the battery cover plate from the rear of the remote controller.
(As shown in the figure)
2.Take out the old batteries.
3.Insert two new AAA1.5V dry batteries, and pay attention to the polarity.
4. Reinstall the battery cover plate.

★Notes:

●When replacing the batteries, do not use old or different types of batteries, otherwise, it may cause malfunction.
●If the remote controller will not be used for a long time, please remove batteries to prevent batteries from leaking.
●The operation should be performed in its receiving range.
●It should be kept 1m away from the TV set or stereo sound sets.
●If the remote controller does not operate normally, please take the batteries out and reinsert them after 30 seconds. If it still can't operate properly, replace the batteries.



Sketch map for replacing batteries

6.2 Description of Each Control Operation

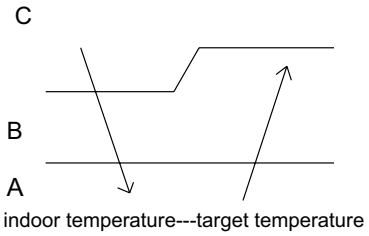
I. Basic Operation Mode

1. Cool; 2.Dry; 3.Heat; 4.Auto; 5.Fan

II. Basic Functions

1.Cooling Only

(1) Under this mode, fan and swing run at preset status, the temperature setting range is 16-30℃ .



(2) Under malfunction for outdoor unit and protection stop, the indoor unit runs with the original status, and display malfunction.

(3) The indoor fan stops when the modes conflict with each other.

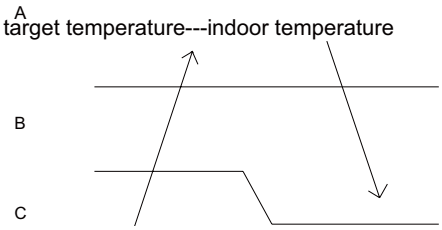
2. Dry Mode

(1) Under this mode, the indoor fan runs with low speed, and swing runs at preset status, the temperature setting range is 16-30℃ .

(2) Under malfunction for outdoor unit and protection stop, the indoor unit runs with the original status, and display malfunction.

3. Heating Mode

(1) Under this mode, the temperature setting range is 16-30℃ .



(2) Working condition and Process of Heating

When the unit is ON and in heating mode, indoor fan starts cold air prevention operation; when the unit is off and the indoor fan stopped before, it blows residual heat.

(3) Protection Function. The compressor stops as the malfunction (including any temperature sensor malfunction) in heating mode, the indoor fan runs with blowing residual heat.

(4) Defrosting and Oil Return

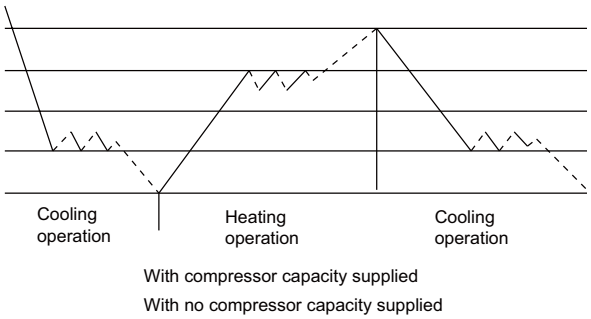
Once defrosting signal of outdoor unit is received, H1 will be displayed.

4. Working Methods of Auto Mode

1) When Tamb.≥26℃ (79 ℉), it operates in Cool mode.

2) For heat pump unit, when Tamb.≤22℃ , it operates in Heat mode.

3) When 22℃ < Tamb.< 26℃ , it operates in auto fan mode upon initial startup of the unit. When changing to auto mode from other modes, it will keep the previous operation mode (when it enter Dry mode, it operates in auto fan mode.).



5. Fan Mode

Only indoor fan operates in Fan mode. Under auto fan speed, it runs in cooling auto fan mode.

III. Other Control

1. Buzzer

The buzzer will give out a beep when the controller is energized, receiving signal from remote controller and auto button.

2. Auto Button

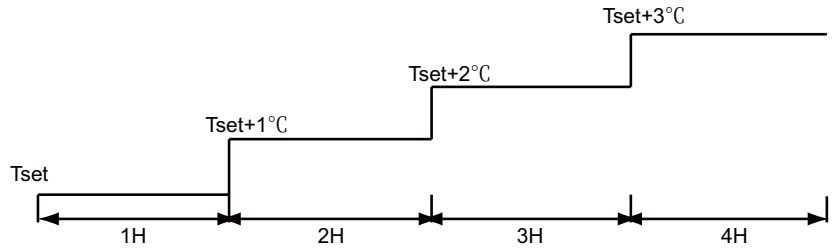
Press this button once, it will operate in Auto mode, and indoor fan operates in Auto fan mode and swing. When the unit is on, pressing this button will turn off the unit.

3. Auto Fan

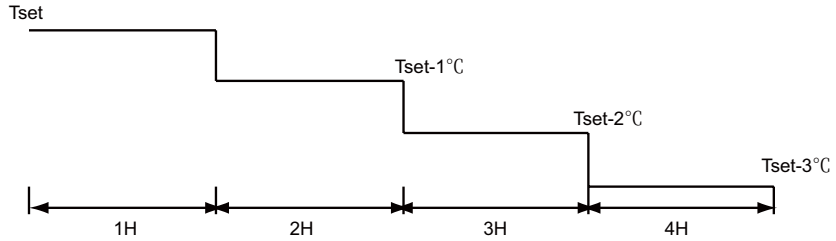
a. Auto fan speed in Heat mode When Tamb.≤Tpreset, the indoor fan operates at high speed;
When Tpreset<Tamb.<Tpreset+2℃ , the indoor fan operates at middle speed; When Tamb≥Tpreset+2℃， the indoor fan operates at low speed.
b. Auto fan speed in CooL and Fan mode
When Tamb≥Tpreset+3℃， the indoor fan operates at high speed;
When Tpreset<Tamb.<Tpreset+3℃ , the indoor fan operates at middle speed; When Tamb.≤Tpreset+1 , the indoor fan operates at low speed.
c. The auto fan speed is at low speed in Dry mode.
Note: Under auto fan speed, it will shift between high speed and middle speed, middle speed and low speed, high speed and low speed, the operation time must be 3.5min at least.

4. Sleep

4.1 The unit will select suitable sleep curve according to set temperature.
4.2 Sleep curve in Heat mode



4.3 Sleep curve in Cool mode



5. Timer Function

(1) General Timer:

1.1 Time On: if Timer On is set when the system is,the controller will operate in the original setting mode after reaching the timer on time. The timer interval is 0.5h, and the setting range is 0.5-24h.
1.2 Timer Off: Timer Off can be set when the unit is on. The unit will be off when timer off time is reahced. The timer interval is 0.5h, and the setting range is 0.5-24h.

(2) Clock Timer:

2.1 Timer On: If Timer On is set when the system runs, it will continue to run; if Timer On is set when the system is off, the system will start to run in the original setting mode when timer on time is reached.
2.2 Timer Off: If timer off is set when the system is off, the system keeps stand-by status; if timer off is set when the system is on, the system stops when reaching timer off time.
2.3 Timer Change:Timer On and Timer OFF can be set via remote ON/OFF button. Timer time can be reset and the system will operate according to the latest setting.
When the unit is on and Timer On and Timer Off are both set, the system will operate according to the set state. When the timer off time is reached, the system will stop.
When the system stops, and Timer On and Timer Off are both set, the system will remain stop until timer on time is reached. After that, the unit will operate according to the set mode everyday when the timer on time is reached. When the timer off time is reached, the system will stop. If timer on time is the same as timer off time, the system will stop.

6. Memory Function

Memory contents: mode, up& down swing, light, set temperature, set fan speed, general timer (but clock timer). After power failure, if the unit is reenergized, it will operate according to memory contents. If Timer function is not set in the last remote control, the system will operate according to the last remote control.
If general timer function is set in the last remote control and power failure occurs before timer time is reached, the unit will operate

according to the timer function set in the last remote control. Timer time is calculated after the unit is re-energized.
If general timer function is set in the last remote control and power failure occurs after timer time is reached, the system will operate according to the memory content before power failure. Timer operation is not memorized.

7. Health Function

When the unit is on and the indoor fan operates, press Health button to start this function (if there is no Health button, health operation is defaulted). When indoor fan stops or turning of health function by remote controller, health function will be off.

8. I Feel Function

When the controller receives I Feel order, the controller will operate according to the ambient temperature. The remote controller will send ambient temperature to the controller every 10min. If the controller does not receive the ambient temperature sent by remote controller for 11min, the air conditioner will operate according the ambient temperature around it. If I Feel function is not set, the air conditioner will operate according the ambient temperature around it. This function is not memorized upon power r failure.

9. Reserved Fahrenheit Temperature

The nixie tube will display the set temperature in Celsius temperature or Fahrenheit Temperature according to the order. Setting range is 16~30℃ (61~86 ℉). In Auto mode, it will display 25℃ (77 ℉) during cooling and fan operation, and display 20℃ (68 ℉) during heating operation. For cooling only unit, it displays 25℃ (77 ℉).
The indoor temperature displayed is sent by remote controller, ranging from 0~60 ℃ (32~99 ℉). If outdoor ambient temperature is received, the display remains the same. If valid control signal is received, it will display set temperature for 5s and then resume displaying ambient temperature.
For units with memory function, set temperature will be displayed after re-energizing the unit.

10. Cold Plasma Function

Turning on the cold plasma function with remote controller when the fan operates, this function will act.
Turning off the cold plasma function with remote controller or turning off the fan, this function will end.

11. Turbo Function

When Turbo command is received by controller, indoor fan will operate at high speed while outdoor unit will operate at high frequency in cooling or heating mode.

12. Defrosting Mode Switch

If there is no H1 displayed, turn on the unit with remote controller and enter “Defrosting mode 1”. When the indoor unit receives remote control signal, it will send the signal to the outdoor unit.
If there is H1 displayed, turn on the unit with remote controller and enter “Defrosting mode 2”. When the indoor unit receives remote control signal, it will send the signal to the outdoor unit.
Press mode and auxiliary heating button to switch between “Defrosting mode 1” and “Defrosting mode 2”.

13. Forcible Defrosting Function

When the unit is in Heat mode and set temperature is 16℃ , press “+, -, +, -, +, -,” successively for 5s, and the indoor unit will enter forcible defrosting setting and send the signal to the outdoor unit.
When the indoor unit receives forcible defrosting signal from the outdoor unit, it will exit forcible defrosting setting.

14. Refrigerant Recovery Function

Enter refrigerant recovery mode: turn on the unit within 5 min after energization and at 16℃ cooling mode. Press remote controller light off button successively for 3 times within 3s and the unit will enter refrigerant recovery mode, displaying Fo. The signal will be sent to the outdoor unit.
Exit refrigerant recovery mode: during refrigerant recovery, if any signal from remote controller is received or refrigerant recovery lasts for 25min, it will exit this mode.
Action of entering refrigerant recovery mode: the indoor fan will operate in Cool mode. The fan speed is high and set temperature is 16℃ . The horizontal louver will be at the smallest angle.
Action of exit refrigerant recovery mode: the indoor fan will operate according to the last remote control setting.

15. Pre-operation Function

When Cool mode at 30℃ is set, press “-, +, -, +, -, +” successively for 3s, it will enter pre-operation mode. The signal will be sent to the outdoor unit.
Pre-operation mode: it performs cooling operation (indoor fan does not operate) and display “dd”.
After exiting pre-operation mode, the indoor unit will stop displaying “dd”. If the signal of “wrong wire connection or expansion valve malfunction” is received, “dn” will be displayed.

16. Mode Conflict

When the mode of started unit is different from that of operating unit, the indoor unit will display mode conflict code “E7”. The mode sent to the outdoor unit remains the one received by the remote controller.

7. Installation Manual

7.1 Notices for Installation

Caution

1.The unit should be installed only by authorized service center according to local or government regulations and in compliance with this manual.

2.Before installing, please contact with local authorized maintenance center. If the unit is not installed by the authorized service center, the malfunction may not be solved due to incovenient contact between the user and the service personnel.

3.When removing the unit to the other place, please firstly contact with the local authorized service center.

4.Warning: Before obtaining access to terminals, all supply circuits must be disconnected.

5.For appliances with type Y attachment, the instructions shall contain the substance of the following. If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.

6.The appliance must be positioned so that the plug is accessible.

7.The temperature of refrigerant line will be high; please keep the interconnection cable away from the copper tube.

8.The instructions shall state the substance of the following:

This appliance is not intended for use by persons(including children)with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.

Children should be supervised to ensure that they do not play with the appliance.

7.1.1 Installation Site Instructions

Proper installation site is vital for correct and efficient operation of the unit. Avoid the following sites where:

●strong heat sources, vapours, flammable gas or volatile liquids are emitted.

●high-frequency electro-magnetic waves are generated by radio equipment, welders and medical equipment.

●salt-laden air prevails (such as close to coastal areas).

●the air is contaminated with industrial vapours and oils.

●the air contains sulphures gas such as in hot spring zones.

●corrosion or poor air quality exists.

7.1.2 Installation Site of Indoor Unit

1.The air inlet and outlet should be away from the obstructions. Ensure the air can be blown through the whole room.

2.Select a site where the condensate can be easily drained out, and where it is easily connected to outdoor unit.

3.Select a place where it is out of reach of children.

4.Select a place where the wall is strong enough to withstand the full weight and vibration of the unit.

5.Be sure to leave enough space to allow access for routine maintenance. The installation site should be 250cm or more above the floor.

6.Select a place about 1m or more away from TV set or any other electric appliance.

7.Select a place where the filter can be easily taken out.

8.Make sure that the indoor unit is installed in accordance with installation dimension instructions.

9.Do not use the unit in the laundry or by swimming pool etc.

7.1.3 Safety Precautions for Electric Appliances

1.A dedicated power supply circuit should be used in accordance with local electrical safety regulations.

2.Don't drag the power cord with excessive force.

3.The unit should be reliably earthed and connected to an exclusive earth device by the professionals.

4.The air switch must have the functions of magnetic tripping and heat tripping to prevent short circuit and overload.

5.The minimum distance between the unit and combustive surface is 1.5m.

6.The appliance shall be installed in accordance with national wiring regulations.

7.An all-pole disconnection switch with a contact separation of at least 3mm in all poles should be connected in fixed wiring.

Note:

●Make sure the live wire, neutral wire and earth wire in the family power socket are properly connected. There should be reliable circuit in the diagram.

●Inadequate or incorrect electrical connections may cause electric shock or fire.

7.1.4 Earthing Requirements

1.Air conditioner is type I electric appliance. Please ensure that the unit is reliably earthed.

2.The yellow-green wire in air conditioner is the earthing wire which can not be used for other purposes. Improper earthing may cause electric shock.

3.The earth resistance should accord to the national criterion.

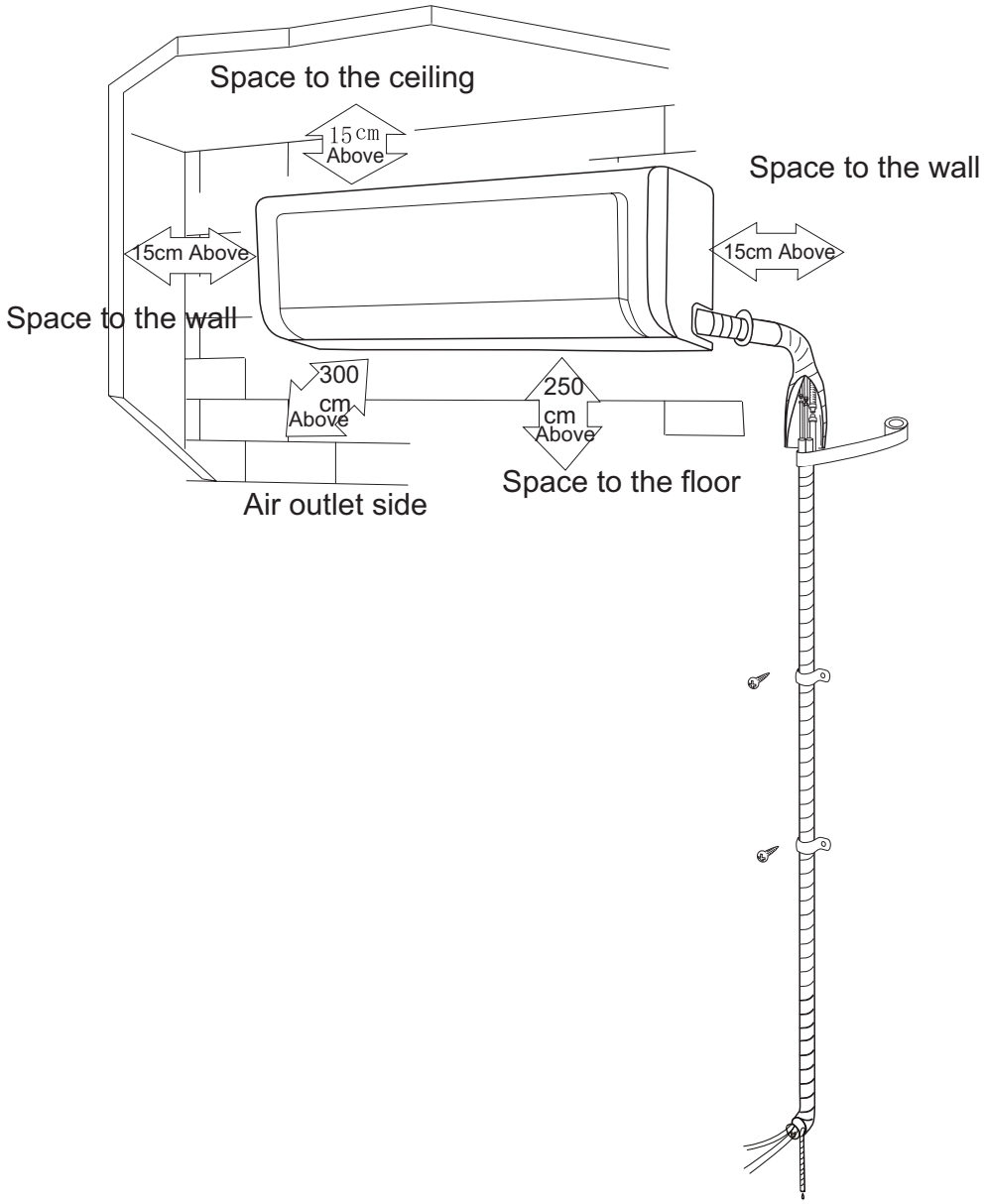
4.The power must have reliable earthing terminal. Please do not connect the earthing wire with the following:

① Water pipe ② Gas pipe ③ Contamination pipe

④ Other place that professional personnel consider is unreliable

5. The model and rated values of fuses should accord with the silk print on fuse cover or related PCB.

7.2 Installation Drawing



7.3 Install Indoor Unit

7.3.1 Installation of Mounting Plate

1. Mounting plate should be installed horizontally. As the water tray's outlet for the indoor unit is two-way type, during installation, the indoor unit should slightly slant to water tray's outlet for smooth drainage of condensate.
2.Fix the mounting plate on the wall with screws.
3.Be sure that the mounting plate has been fixed firmly enough to withstand about 60 kg. Meanwhile, the weight should be evenly shared by each screw.
(Note: the wall hole for 18K unit is Φ65mm.)

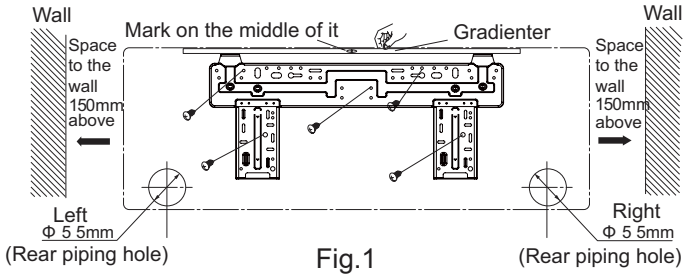
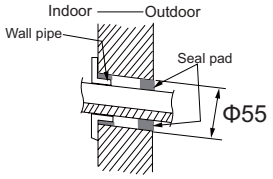


Fig.1

7.3.2 Drill Piping Hole

1.Slant the piping hole (Φ55) on the wall slightly downward to the outdoor side.
(Note: the wall hole for 18K unit is Φ65mm.)
2.Insert the piping-hole sleeve into the hole to prevent the connection piping and wiring from being damaged when passing through the hole.

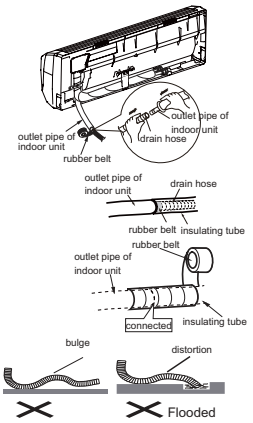


7.3.3 Installation of Drain Hose

1.Connect the drain hose to the outlet pipe of the indoor unit.Bind the joint with rubber belt.

2.Put the drain hose into insulating tube.

3.Wrap the insulating tube with wide rubber belt to prevent the shift of insulating tube. Slant the drain hose downward slightly for smooth drainage of condensate.



Note: The insulating tube should be connected reliably with the sleeve outside the outlet pipe. The drain hose should be slanted downward slightly, without distortion, bulge or fluctuation. Do not put the outlet in the water.

7.3.4 Connecting Indoor and Outdoor Electric Wires

1.Open the front panel.
2.Remove the wiring cover .Connect and fix the power connection cord to the terminal board.as shown in Fig 2.
3.Make the power connection cord pass through the hole at the back of indoor unit.
4.Reinstall the cord anchorage and wiring cover.
5.Reinstall the front panel.

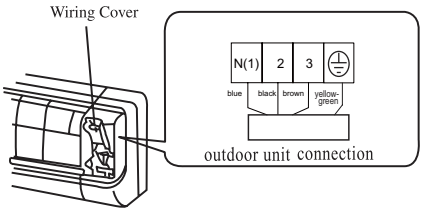


Fig.2

NOTE:

All wires between indoor and outdoor units must be connected by the qualified electric contractor.

● Electric wires must be connected correctly. Improper connection may cause malfunction.

● Tighten the terminal screws securely.

● After tightening the screws, pull the wire slightly to confirm whether it's firm or not.

●Make sure that the electric connections are earthed properly to prevent electric shock.

●Make sure that all wiring connections are secure and the cover plates are reinstalled properly. Poor installation may cause fire or electric shock.

7.3.5 Installation of Indoor Unit

●The piping can be output from right, right rear, left or left rear.

1.When routing the piping and wiring from the left or right side of indoor unit, cut off the tailings from the chassis when necessary(As shown in Fig.3)

(1) Cut off tailing 1 when routing the wiring only;

(2) Cut off tailing 1 and tailing 2 when routing both the wiring and piping.

2.Take out the piping from body case; wrap the piping, power cords, drain hose with the tape and then make them pass through the piping hole. (As shown in Fig.4)

3.Hang the mounting slots of the indoor unit on the upper hooks of the mounting plate and check if it is firm enough. (As shown in Fig.5)

4.The installation site should be 250cm or more above the floor.

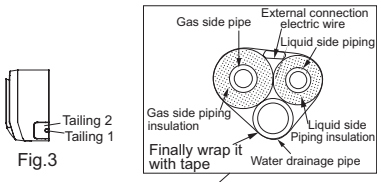


Fig.3

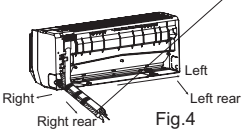


Fig.4

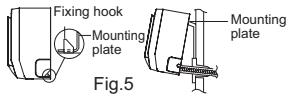


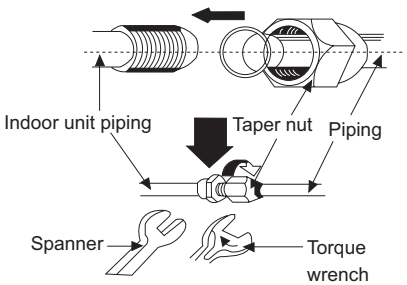
Fig.5

7.3.6 Installation of Connection Pipe

1.Align the center of the pipe flare with the related valve.

2.Screw in the flare nut by hand and then tighten the nut with spanner and torque wrench by referring to the following:

Tube diameter	Tightening torque,approximate(N·m)
Φ6.35(1/4")	14～18N·m(140-180kgf.cm)
Φ9.52(3/8")	34～42N·m(340-420kgf.cm)
Φ12.7(1/2")	49～61N·m(490-610kgf.cm)
Φ15.88(5/8")	68～82N·m(680-820kgf.cm)



NOTE: Connect the connection pipe to indoor unit at first and then to outdoor unit. Handle piping bending with care. Do not damage the connection pipe. Ensure that the joint nut is tightened firmly, otherwise, it may cause leakage.

7.4 Check after Installation and Operation Test

7.4.1 Check after Installation

Items to be checked	Possible malfunction
Has it been fixed firmly?	The unit may drop, shake or emit noise.
Have you done the refrigerant leakage test?	It may cause insufficient cooling(heating) capacity
Is heat insulation sufficient?	It may cause condensation and dripping.
Is water drainage satisfactory?	It may cause condensation and dripping.
Is the voltage in accordance with the rated voltage marked on the nameplate?	It may cause electric malfunctionor damage the product.
Is the electric wiring and piping connection installed correctly and securely?	It may cause electric malfunction or damage the part.
Has the unit been connected to a secure earth connection?	It may cause electrical leakage.
Is the power cord specified?	It may cause electric malfunctionor damage the part.
Are the inlet and outlet openings blocked?	It may cause insufficient cooling(heating) capacity.
Is the length of connection pipes and refrigerant capacity been recorded?	The refrigerant capacity is not accurate.

7.4.2 Operation Test

1.Before Operation Test
(1)Do not switch on power before installation is finished completely.
(2)Electric wiring must be connected correctly and securely.
(3)Cut-off valves of the connection pipes should be opened.
(4)All the impurities such as scraps and thrums must be cleared from the unit.
2.Operation Test Method
(1)Switch on power and press "ON/OFF"?button on the remote controller to start operation.
(2)Press MODE button to select the COOL, HEAT (Not available for cooling only unit), FAN to check whether the operation is normal or not.

7.5 Installation and Maintenance of Healthy Filter

7.5.1 Installation of Healthy Filter

1.Lift up the front panel from its two ends, as shown by the arrow direction, and then remove the air filter.(as shown in Fig.a)

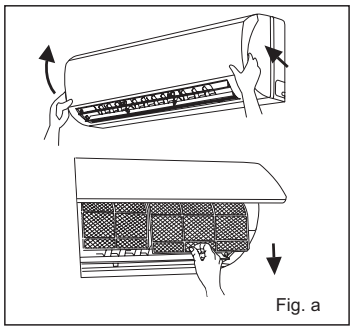


Fig. a

2.Attach the healthy filter onto the air filter,(as shown in Fig.b).

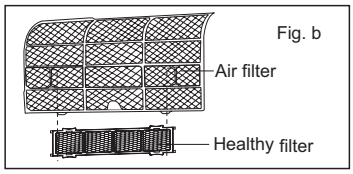


Fig. b

3.Install the air filter properly along the arrow direction in Fig.c, and then close the panel .

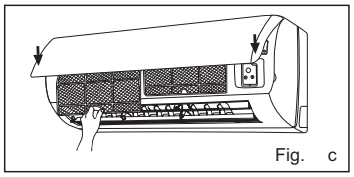


Fig. c

7.5.2 Cleaning and Maintenance

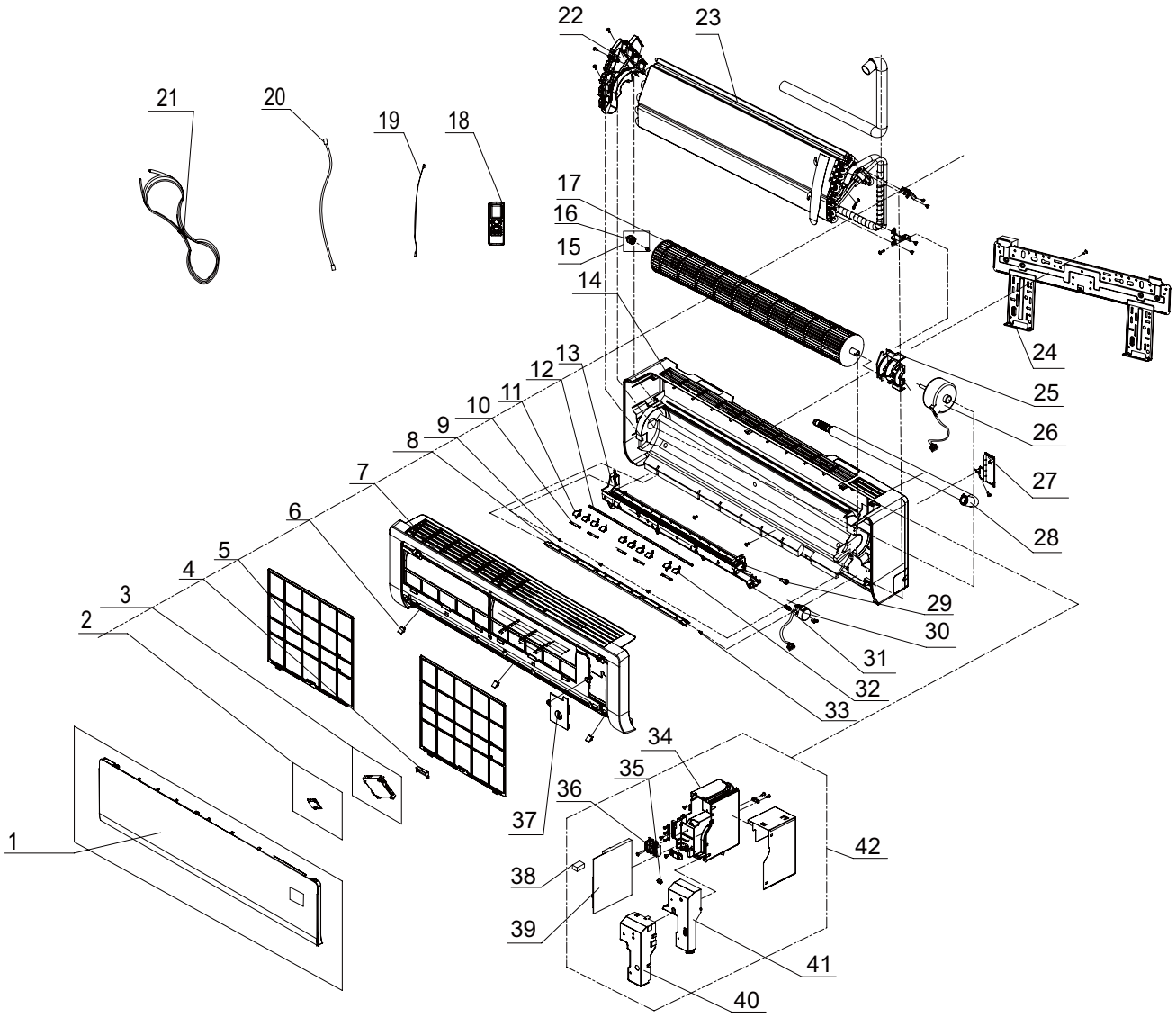
Remove the healthy filter and reinstall it after cleaning according to the installation instruction. Don't use brush or hard things to clean the filter. After cleaning, be sure to dry it in the shade.

7.5.3 Service Life

The general serive life for the healthy filter is about one year under normal condition. As for silver ion filter, it is invalid when its surface becomes black (green).
●This supplementary instruction is provided for reference to the unit with healthy filter. If the graphics provided herein is different from the actual product, please refer to the atual product. The quantity of healthy filters is based on the actual delivery.

8. Exploded Views and Parts List

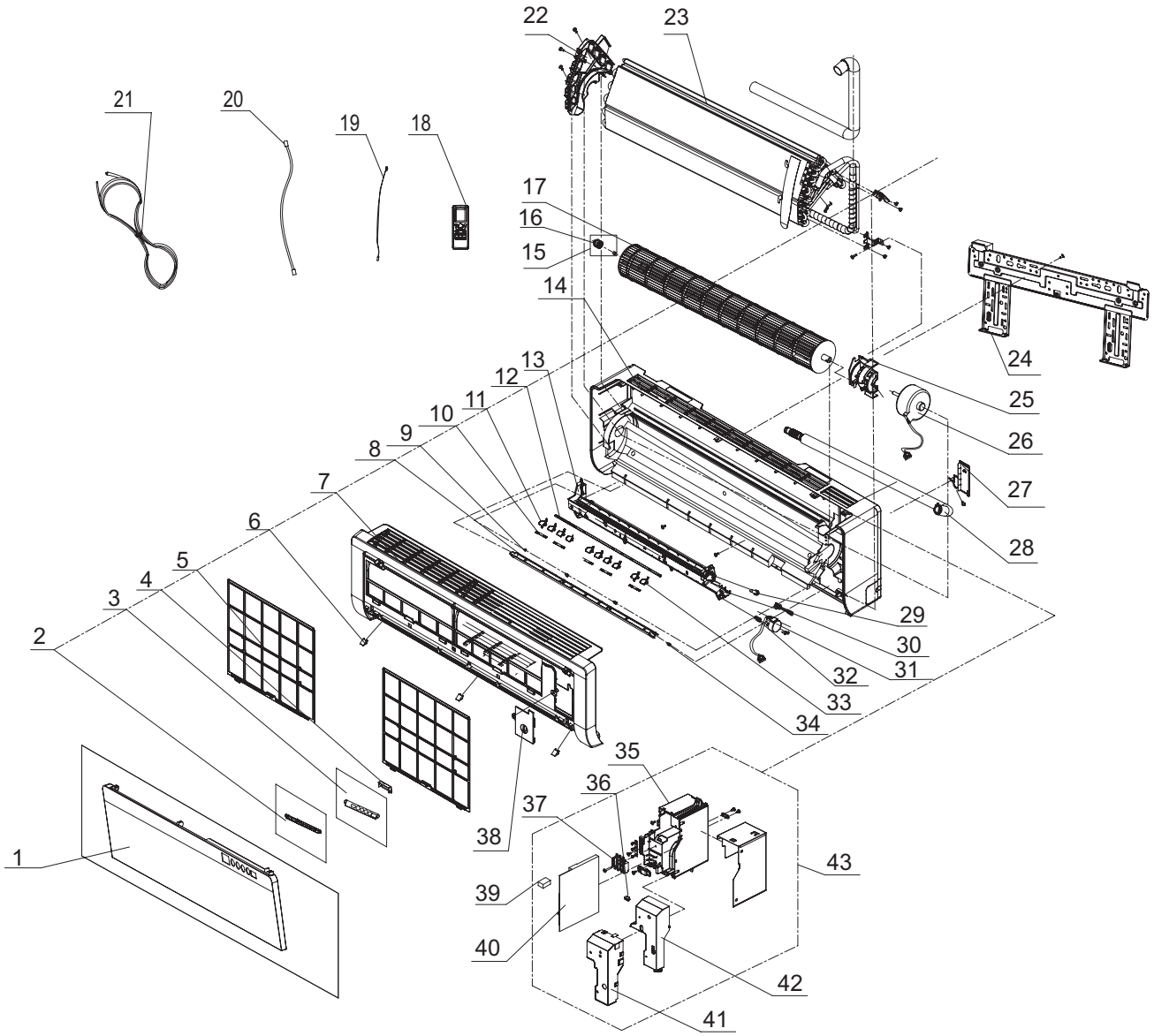
GWH(07)AA-K3DNA1B/I(CB115N0680) GWH(09)AA-K3DNA1B/I(CB115N0650)



NO.	Description	Part Code		Qty
		GWH(07)AA-K3DNA1B/I	GWH(09)AA-K3DNA1B/I	
	Product Code	CB115N0680	CB115N0650	
1	Front Panel Assy	2000274705	2000274705	1
2	Display Board	30565002	30565002	1
3	Display Box	20122041	20122041	1
4	Display Cover	20122042	20122042	1
5	Filter Sub-Assy	11122056	11122056	2
6	Screw Cover	24252017	24252016	3
7	Front Case Assy	20002746	20002746	1
8	Guide Louver	10512095	10512095	1
9	Axile Bush	10542704	10542008	1
10	Swing Louver Clamp	2611212201	2611212201	5
11	Air Louver(manual)	10512097	10512097	2
12	Swing lever 1 (manual)	10582071	10582071	1
13	Water Tray Assy	20182455	20182455	1
14	Rear Case assy	2220208302	2220208302	1
15	O-Gasket sub-assy of Bearing	76512051	76512051	1
16	O-Gasket of Cross Fan Bearing	76512203	76512203	1
17	Cross Flow Fan	10352422	10352422	1
18	Remote Controller	30510049	30510049	1
19	Tube Sensor	390000591	390000591	1
20	Ambient Temperature Sensor	390000453	390000453	1
21	Connecting Cable	400204056	400204056	1
22	Evaporator Support	24212075	24212075	1
23	Evaporator Assy	0100254801	0100254801	1
24	Wall Mounting Frame	01252006	01252006	1
25	Motor Press Plate	26112116	26112116	1
26	Fan Motor	15012078	15012078	1
27	Pipe Clamp	26112117	26112117	1
28	Drainage hose	0523001401	0523001401	1
29	Rubber Plug (Water Tray)	76712012	76712012	1
30	Step Motor	15012086	15012086	1
31	Crank	10582070	10582070	1
32	Swing blade (Round hole)	10512099	10512099	8
33	Axile Bush	10542008	10542704	1
34	Electric Box	2011208201	2011208201	1
35	Jumper	4202300115	4202300115	1
36	Terminal Board	42011233	42011233	1
37	Electric Box Cover2	20122075P	20122075	1
38	Capacitor CBB61	33010002	33010002	1
39	Main Board	30138652	30138652	1
40	Shield cover of Electric Box sub-assy	01592073	01592073	1
41	Electric Box Cover1	20122103	20122103	1
42	Electric Box Assy	2010284309	2010284309	1

The data above are subject to change without notice.

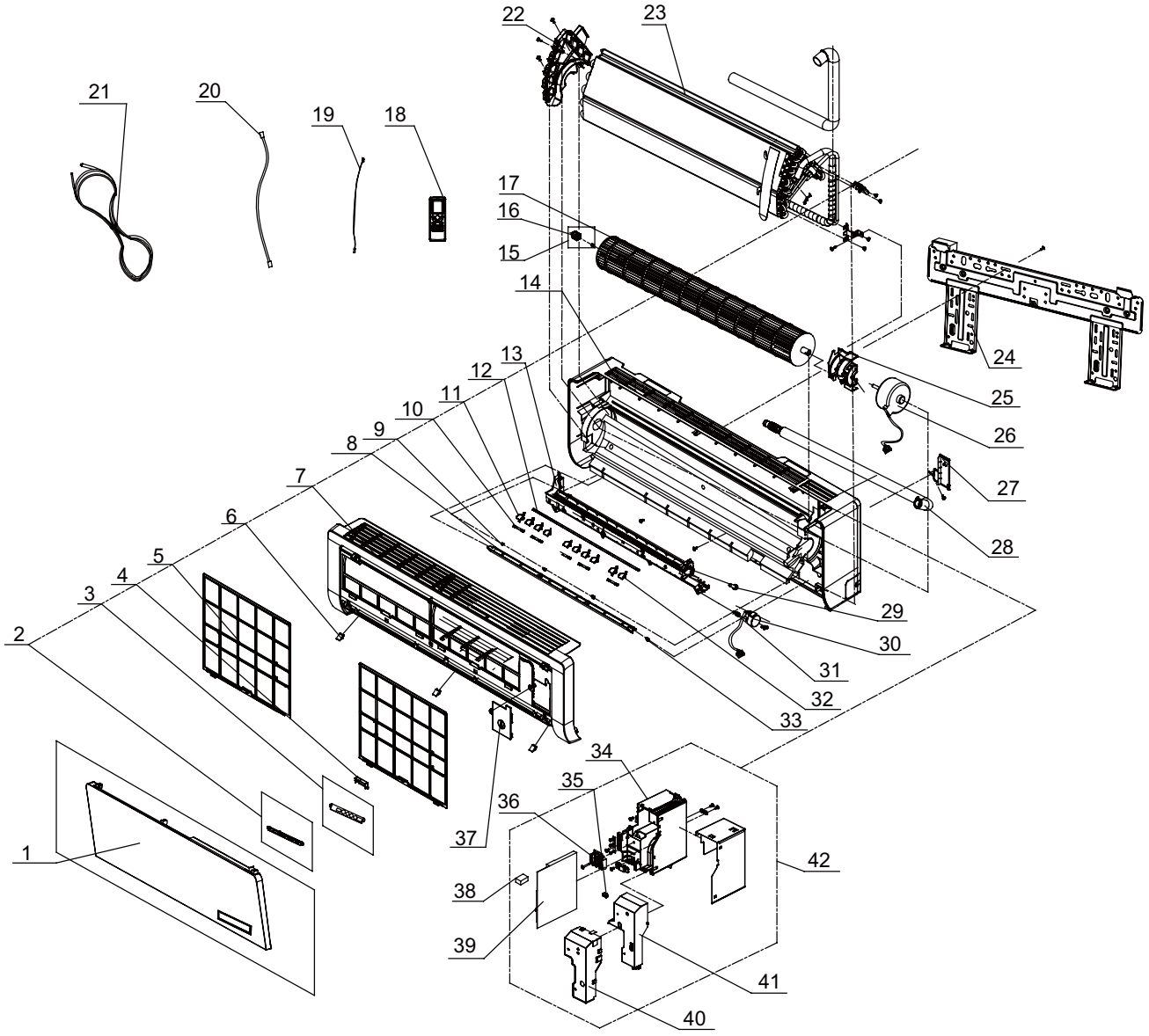
GWH(07)AA-K3DNA1B/I(CB115N0682) GWH(09)AA-K3DNA1B/I(CB115N0651)



NO.	Description	Part Code		Qty
		GWH(07)AA-K3DNA1B/I	GWH(09)AA-K3DNA1B/I	
	Product Code	CB115N0682	CB115N0651	
1	Front Panel Assy	2000297319	2000297319	1
2	Display Board	30545053	30545053	1
3	Display Box	20122058	20122058	1
4	Display Cover	20122042	20122042	1
5	Filter Sub-Assy	11122056	11122056	2
6	Screw Cover	24252016	24252016	3
7	Front Case Assy	20002746	20002746	1
8	Guide Louver	10512095	10512095	1
9	Axile Bush	10542008	10542008	1
10	Swing Louver Clamp	2611212201	2611212201	5
11	Air Louver(manual)	10512097	10512097	2
12	Swing lever 1 (manual)	10582071	10582071	1
13	Water Tray Assy	20182455	20182455	1
14	Rear Case assy	2220208302	2220208302	1
15	O-Gasket sub-assy of Bearing	76512051	76512051	1
16	O-Gasket of Cross Fan Bearing	76512203	76512203	1
17	Cross Flow Fan	10352422	10352422	1
18	Remote Controller	305100492	305100492	1
19	Tube Sensor	390000591	390000591	1
20	Ambient Temperature Sensor	390000453	390000453	1
21	Connecting Cable	400204056	400204056	0
22	Evaporator Support	24212075	24212075	1
23	Evaporator Assy	0100254801	0100254801	1
24	Wall Mounting Frame	01252006	01252006	1
25	Motor Press Plate	26112116	26112116	1
26	Fan Motor	15012078	15012078	1
27	Pipe Clamp	26112117	26112117	1
28	Drainage hose	0523001401	0523001401	1
29	Rubber Plug (Water Tray)	76712012	76712012	1
30	Cold Plasma Generator Sub-assy	11140009	11140009	1
31	Step Motor	15012086	15012086	1
32	Crank	10582070	10582070	1
33	Swing blade (Round hole)	10512099	10512099	8
34	Axile Bush	10542704	10542704	1
35	Electric Box	2011208201	2011208201	1
36	Jumper	4202300115	4202300115	1
37	Terminal Board	42011233	42011233	1
38	Electric Box Cover2	20122075P	20122075P	1
39	Capacitor CBB61	33010002	33010002	1
40	Main Board	30138653	30138653	1
41	Shield cover of Electric Box sub-assy	01592073	01592073	1
42	Electric Box Cover1	20122103	20122103	1
43	Electric Box Assy	20202918	20202918	1

The data above are subject to change without notice.

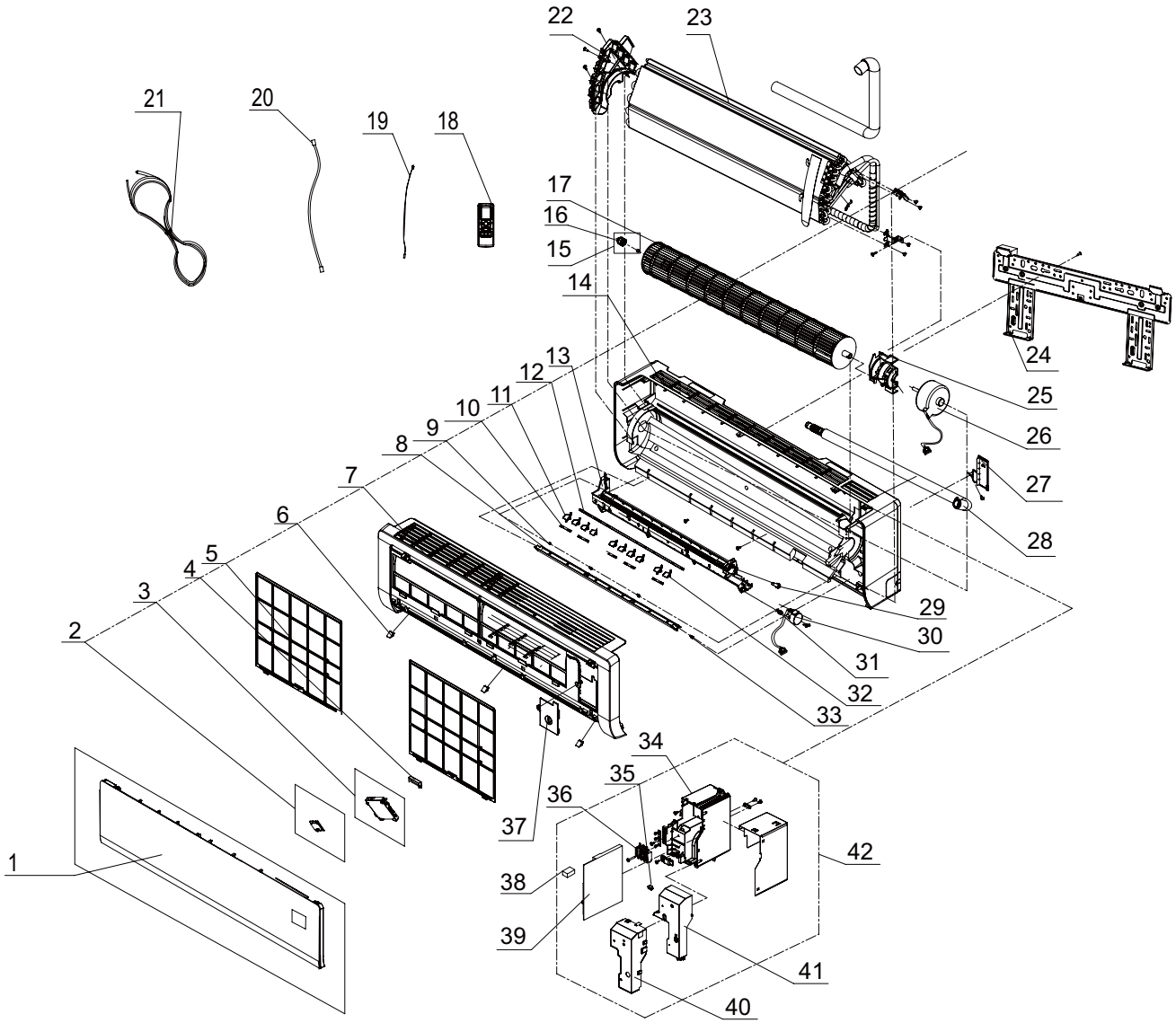
GWH(09)AA-K3DNA1B/I(CB115N0652)



NO.	Description	Part Code	Qty
		GWH(09)AA-K3DNA1B/I	
	Product Code	CB115N0652	
1	Front Panel Assy	2001206803	1
2	Display Board	30545052	1
3	Display Box	20122041	1
4	Display Cover 2	20122058	1
5	Filter Sub-Assy	11122056	2
6	Screw Cover	24252016	1
7	Front Case Assy	20002746	1
8	Guide Louver	105120956P	1
9	Axile Bush	10542008	1
10	Swing Louver Clamp	2611212201	5
11	Air Louver(manual)	10512097	2
12	Swing lever 1 (manual)	10582071	1
13	Water Tray Assy	20182455	1
14	Rear Case assy	2220208302	1
15	O-Gasket sub-assy of Bearing	76512051	1
16	O-Gasket of Cross Fan Bearing	76512203	1
17	Cross Flow Fan	10352422	1
18	Remote Controller	305100492	1
19	Tube Sensor	390000591	1
20	Ambient Temperature Sensor	390000453	1
21	Connecting Cable	400204056	0
22	Evaporator Support	24212075	1
23	Evaporator Assy	0100254801	1
24	Wall Mounting Frame	01252006	1
25	Motor Press Plate	26112116	1
26	Fan Motor	15012078	
27	Pipe Clamp	26112117	1
28	Drainage hose	0523001401	1
29	Rubber Plug (Water Tray)	76712012	1
30	Step Motor	15012086	1
31	Crank	10582070	1
32	Swing blade (Round hole)	10512099	8
33	Axile Bush	10542704	1
34	Electric Box	2011208201	1
35	Jumper	4202300115	1
36	Terminal Board	42011233	1
37	Electric Box Cover2	20122075	1
38	Capacitor CBB61	33010002	1
39	Main Board	30138652	1
40	Shield cover of Electric Box sub-assy	01592073	1
41	Electric Box Cover1	20122103	1
42	Electric Box Assy	20302053	1

The data above are subject to change without notice.

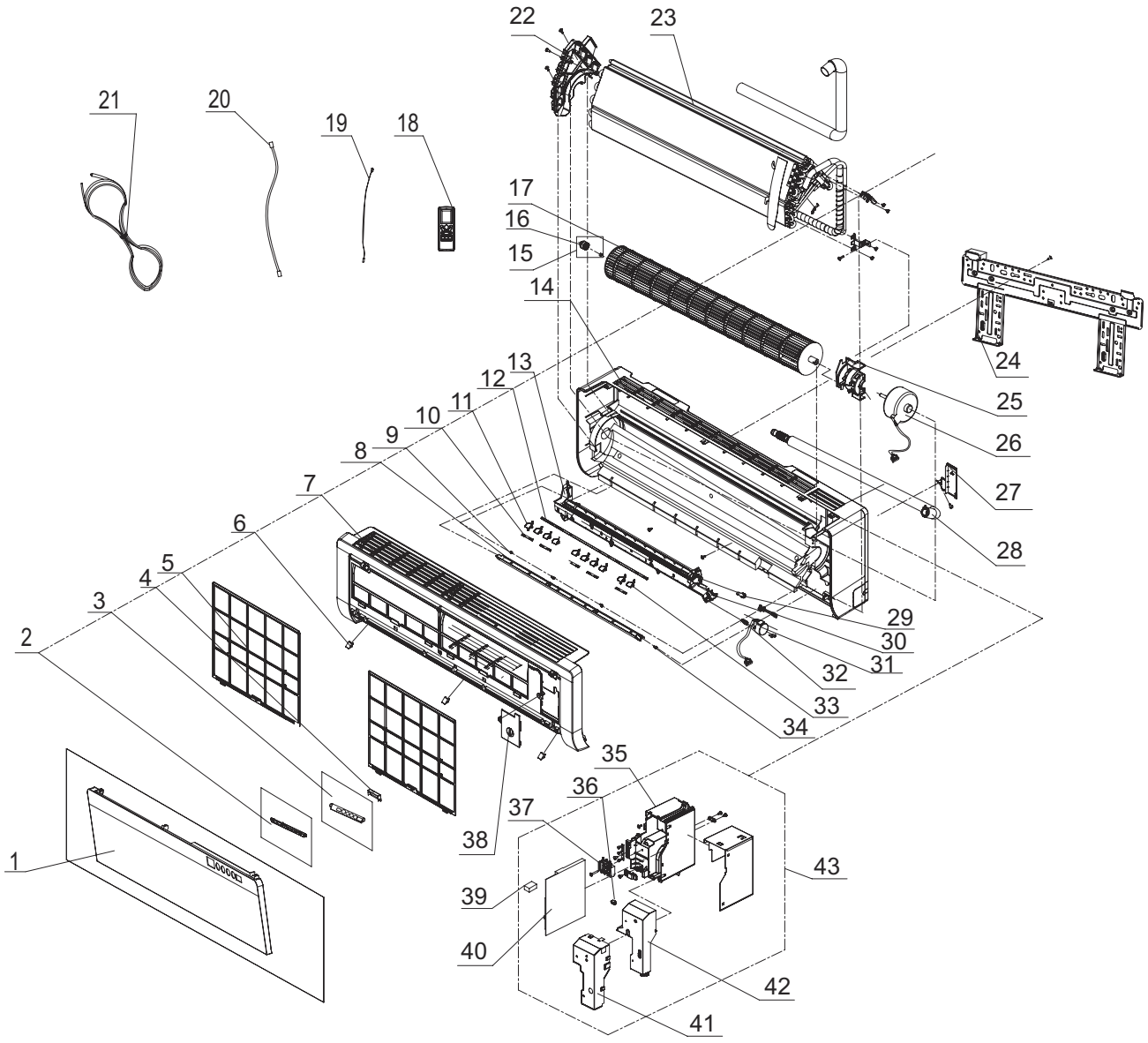
GWH(12)AB-K3DNA1B/I(CB115N0660)



NO.	Description	Part Code	Qty
		GWH(12)AB-K3DNA1B/I	
	Product Code	CB115N0660	
1	Front Panel Assy	20002760	1
2	Display Board	30565002	1
3	Display Box	20122041	1
4	Display Cover	20122042	1
5	Filter Sub-Assy	1112205903	2
6	Screw Cover	24252019	3
7	Front Case Assy	20002760	1
8	Guide Louver	10512102	1
9	Axile Bush	10542704	1
10	Louver Clamp	26112127	5
11	Air Louver(manual)	10512097	2
12	Swing lever	10582450	1
13	Water Tray Assy	20182083	1
14	Rear Case assy	2220208403	1
15	O-Gasket sub-assy of Bearing	76512051	1
16	O-Gasket of Cross Fan Bearing	76512203	1
17	Cross Flow Fan	10352023	1
18	Remote Controller	30510049	1
19	Tube Sensor	390000591	1
20	Ambient Temperature Sensor	390000453	1
21	Connecting Cable	400204056	1
22	Evaporator Support	24212076	1
23	Evaporator Assy	0100254901	1
24	Wall Mounting Frame	01252008	1
25	Motor Press Plate	26112123	1
26	Fan Motor	15012078	1
27	Pipe Clamp	26112124	1
28	Drainage hose	0523001401	1
29	Rubber Plug (Water Tray)	76712012	1
30	Step Motor	15012086	1
31	Crank	10582070	1
32	Swing blade (Round hole)	10512099	8
33	Axile Bush	10542704	1
34	Electric Box	2011210501	1
35	Jumper	4202300117	1
36	Terminal Board	42011233	1
37	Electric Box Cover2	20122074P	1
38	Capacitor CBB61	33010002	1
39	Main Board	30138652	1
40	Shield cover of Electric Box sub-assy	01592073	1
41	Electric Box Cover1	20122103	1
42	Electric Box Assy	2010284409	1

The data above are subject to change without notice.

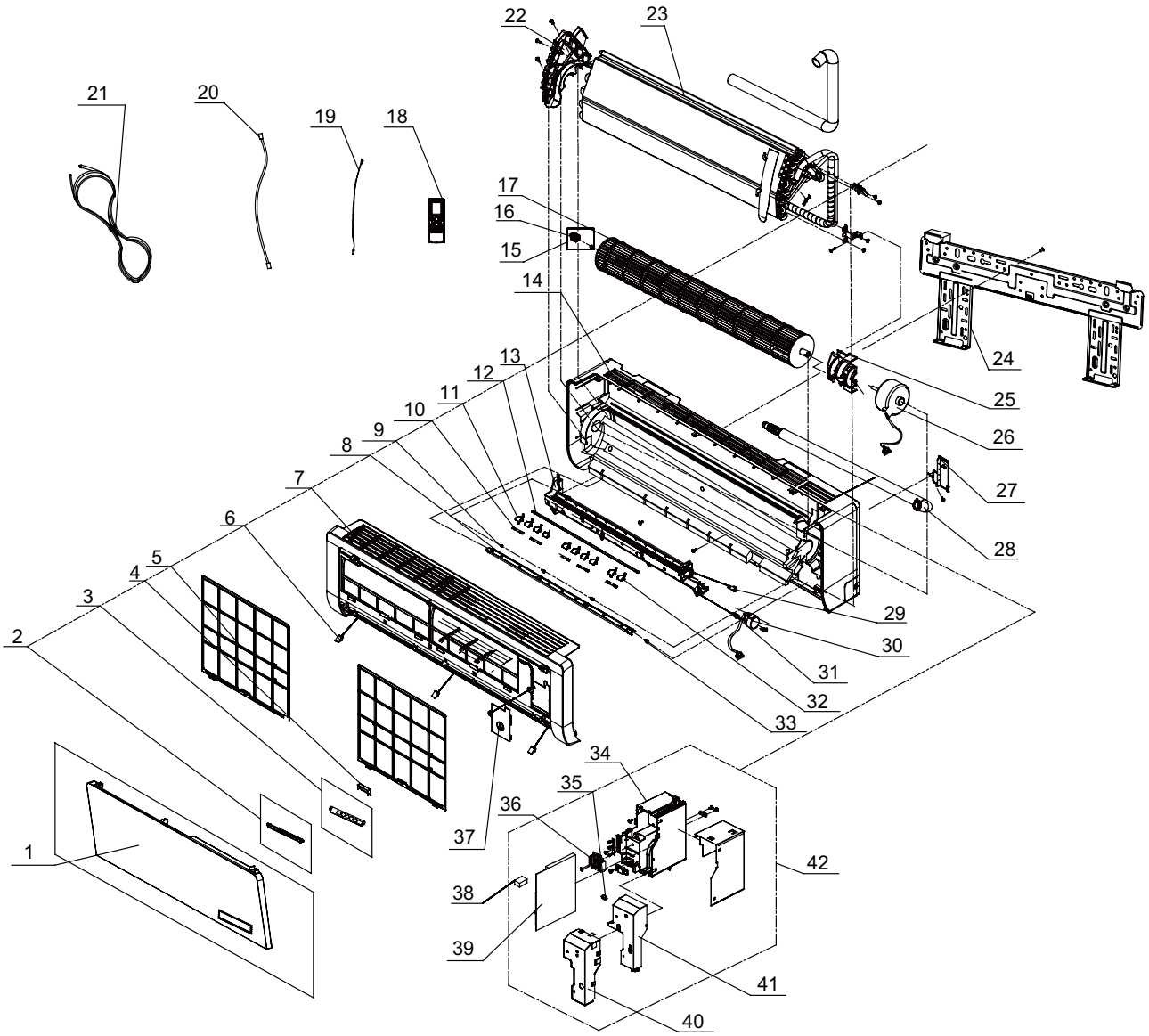
GWH(12)AB-K3DNA1B/I(CB115N0661)



NO.	Description	Part Code	Qty
		GWH(12)AB-K3DNA1B/I	
	Product Code	CB115N0661	
1	Front Panel Assy	2000297219	1
2	Display Board	30565002	1
3	Display Box	20122041	1
4	Display Cover	20122058	1
5	Filter Sub-Assy	1112205903	2
6	Screw Cover	24252019	3
7	Front Case Assy	20002760	1
8	Guide Louver	10512102	1
9	Axile Bush	10542704	1
10	Louver Clamp	26112127	5
11	Air Louver(manual)	10512097	2
12	Swing lever	10582450	1
13	Water Tray Assy	20182083	1
14	Rear Case assy	2220208403	1
15	O-Gasket sub-assy of Bearing	76512051	1
16	O-Gasket of Cross Fan Bearing	76512203	1
17	Cross Flow Fan	10352023	1
18	Remote Controller	30510049	1
19	Tube Sensor	390000591	1
20	Ambient Temperature Sensor	390000453	1
21	Connecting Cable	400204056	0
22	Evaporator Support	24212076	1
23	Evaporator Assy	0100254901	1
24	Wall Mounting Frame	01252008	1
25	Motor Press Plate	26112123	1
26	Fan Motor	15012078	1
27	Pipe Clamp	26112124	1
28	Drainage hose	0523001401	1
29	Rubber Plug (Water Tray)	76712012	1
30	Cold Plasma Generator Sub-assy	111400072	1
31	Step Motor	15012086	1
32	Crank	10582070	1
33	Swing blade (Round hole)	10512099	8
34	Axile Bush	10542704	1
35	Electric Box	2011210501	1
36	Jumper	4202300117	1
37	Terminal Board	42011233	1
38	Electric Box Cover2	20122074P	1
39	Capacitor CBB61	33010002	1
40	Main Board	30138653	1
41	Shield cover of Electric Box sub-assy	01592073	1
42	Electric Box Cover1	20122103	1
43	Electric Box Assy	20202920	1

The data above are subject to change without notice.

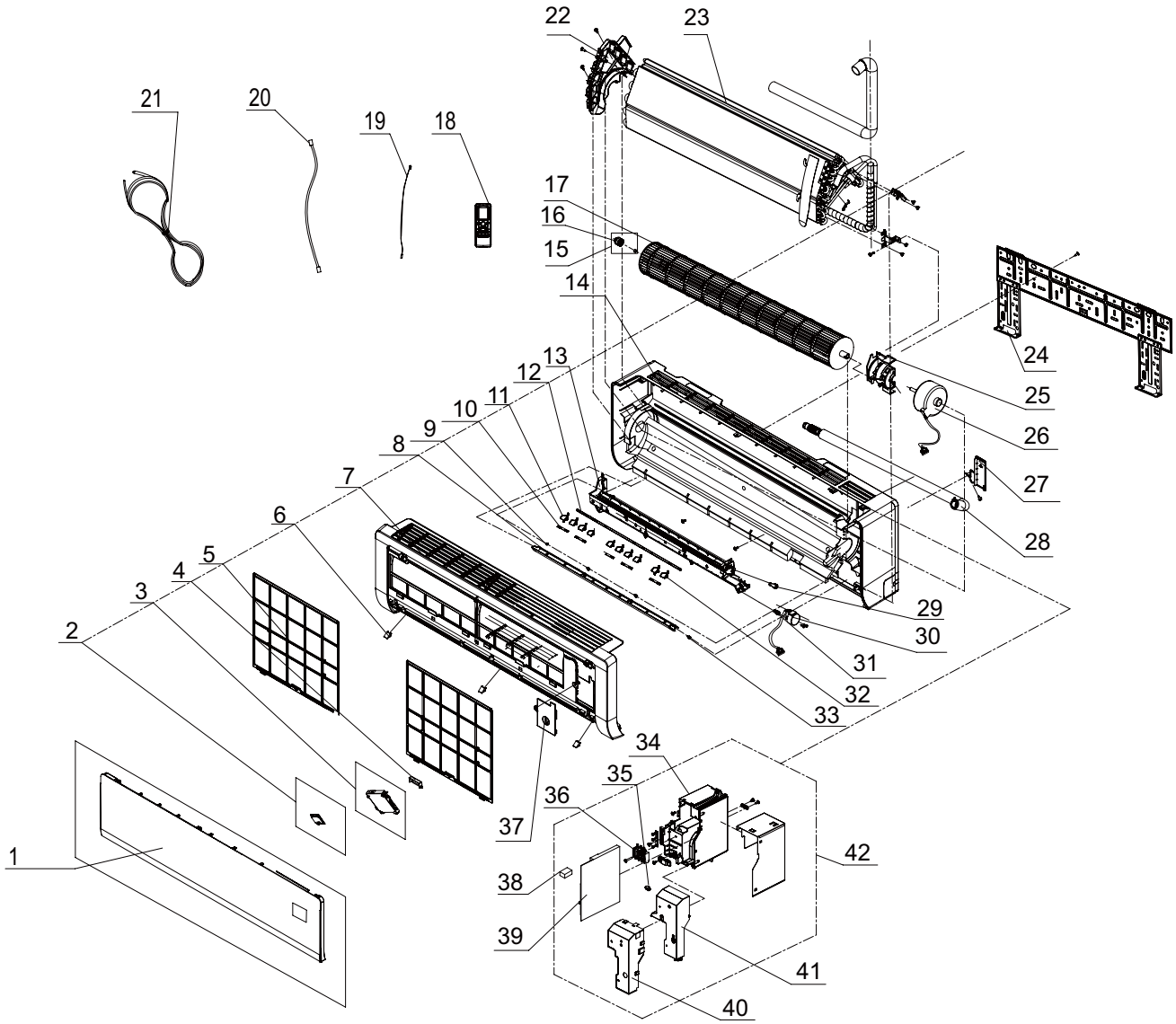
GWH(12)AB-K3DNA1B/I(CB115N0662)



NO.	Description	Part Code	Qty
		GWH(12)AB-K3DNA1B/I	
	Product Code	CB115N0662	
1	Front Panel Assy	2001206703	1
2	Display Board	30545052	1
3	Display Box	20122041	1
4	Display Cover 2	20122058	1
5	Filter Sub-Assy	1112205903	2
6	Screw Cover	24252019	1
7	Front Case Assy	20002760	1
8	Guide Louver	1051210205P	1
9	Axile Bush	10542704	1
10	Louver Clamp	26112127	5
11	Air Louver(manual)	10512097	2
12	Swing lever	10582450	1
13	Water Tray Assy	20182083	1
14	Rear Case assy	2220208403	1
15	O-Gasket sub-assy of Bearing	76512051	1
16	O-Gasket of Cross Fan Bearing	76512203	1
17	Cross Flow Fan	10352023	1
18	Remote Controller	305100492	1
19	Tube Sensor	390000591	1
20	Ambient Temperature Sensor	390000453	1
21	Connecting Cable	400204056	0
22	Evaporator Support	24212076	1
23	Evaporator Assy	0100254901	1
24	Wall Mounting Frame	01252008	1
25	Motor Press Plate	26112123	1
26	Fan Motor	15012078	1
27	Pipe Clamp	26112124	1
28	Drainage hose	0523001401	1
29	Rubber Plug (Water Tray)	76712012	1
30	Step Motor	15012086	1
31	Crank	10582070	1
32	Swing blade (Round hole)	10512099	8
33	Axile Bush	10542704	1
34	Electric Box	2011210501	1
35	Jumper	4202300117	1
36	Terminal Board	42011233	1
37	Electric Box Cover2	20122074P	1
38	Capacitor CBB61	33010002	1
39	Main Board	30138652	1
40	Shield cover of Electric Box sub-assy	01592073	1
41	Electric Box Cover1	20122103	1
42	Electric Box Assy	20302054	1

The data above are subject to change without notice.

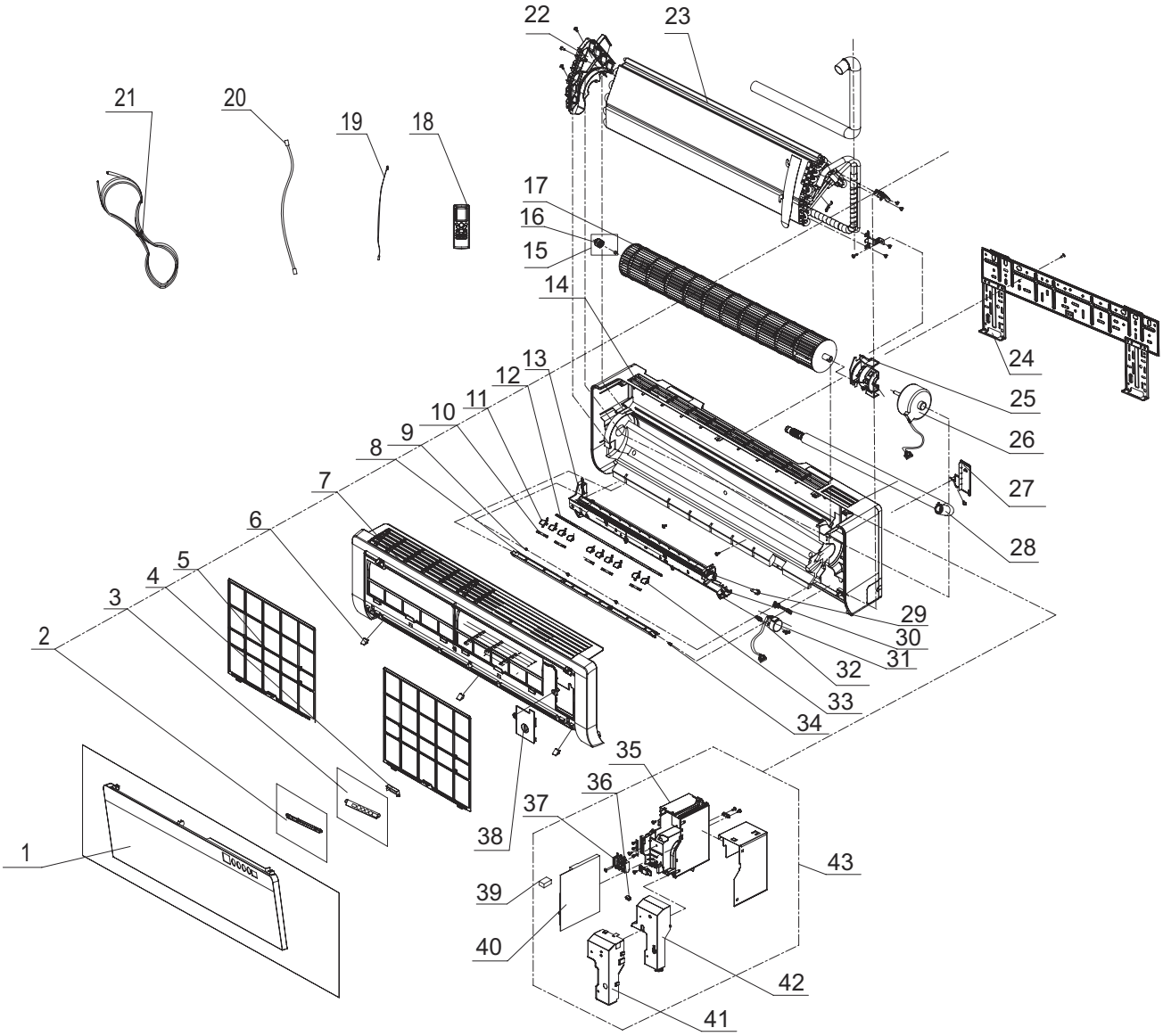
GWH(18)AC-K3DNA1A/I(CB115N0670)



NO.	Description	Part Code	Qty
		GWH(18)AC-K3DNA1A/I	
	Product Code	CB115N0670	
1	Front Panel Assy	2001201213	1
2	Display Board	30565002	1
3	Display Box	20122041	1
4	Display Cover	20122042	1
5	Filter Sub-Assy	11124096	2
6	Screw Cover	24252017	3
7	Front Case Assy	20012011	1
8	Guide Louver	10514096	1
9	Axile Bush	10542704	1
10	Louver Clamp	26112127	5
11	Air Louver(manual)	10512097	2
12	Swing lever	10584085	1
13	Water Tray Assy	20182105	1
14	Rear Case assy	2220209506	1
15	O-Gasket sub-assy of Bearing	76512051	1
16	O-Gasket of Cross Fan Bearing	76512203	1
17	Cross Flow Fan	10352016	1
18	Remote Controller	30510049	1
19	Tube Sensor	390000591	1
20	Ambient Temperature Sensor	390000453	1
21	Connecting Cable	400204056	1
22	Evaporator Support	24212109	1
23	Evaporator Assy	0100258401	1
24	Wall Mounting Frame	01252218	1
25	Motor Press Plate	26114094	1
26	Fan Motor	15012077	1
27	Pipe Clamp	26114095	1
28	Drainage hose	0523001406	1
29	Rubber Plug (Water Tray)	76712012	1
30	Step Motor	15012086	1
31	Crank	10582070	1
32	Swing blade (Round hole)	10512099	8
33	Axile Bush	10542704	1
34	Electric Box	20114016	1
35	Jumper	4202300118	1
36	Terminal Board	4201026601	1
37	Electric Box Cover2	20114009P	1
38	Capacitor CBB61	33010043	1
39	Main Board	30138646	1
40	Shield cover of Electric Box sub-assy	01412010	1
41	Electric Box Cover1	20114008	1
42	Electric Box Assy	2010291809	1

The data above are subject to change without notice.

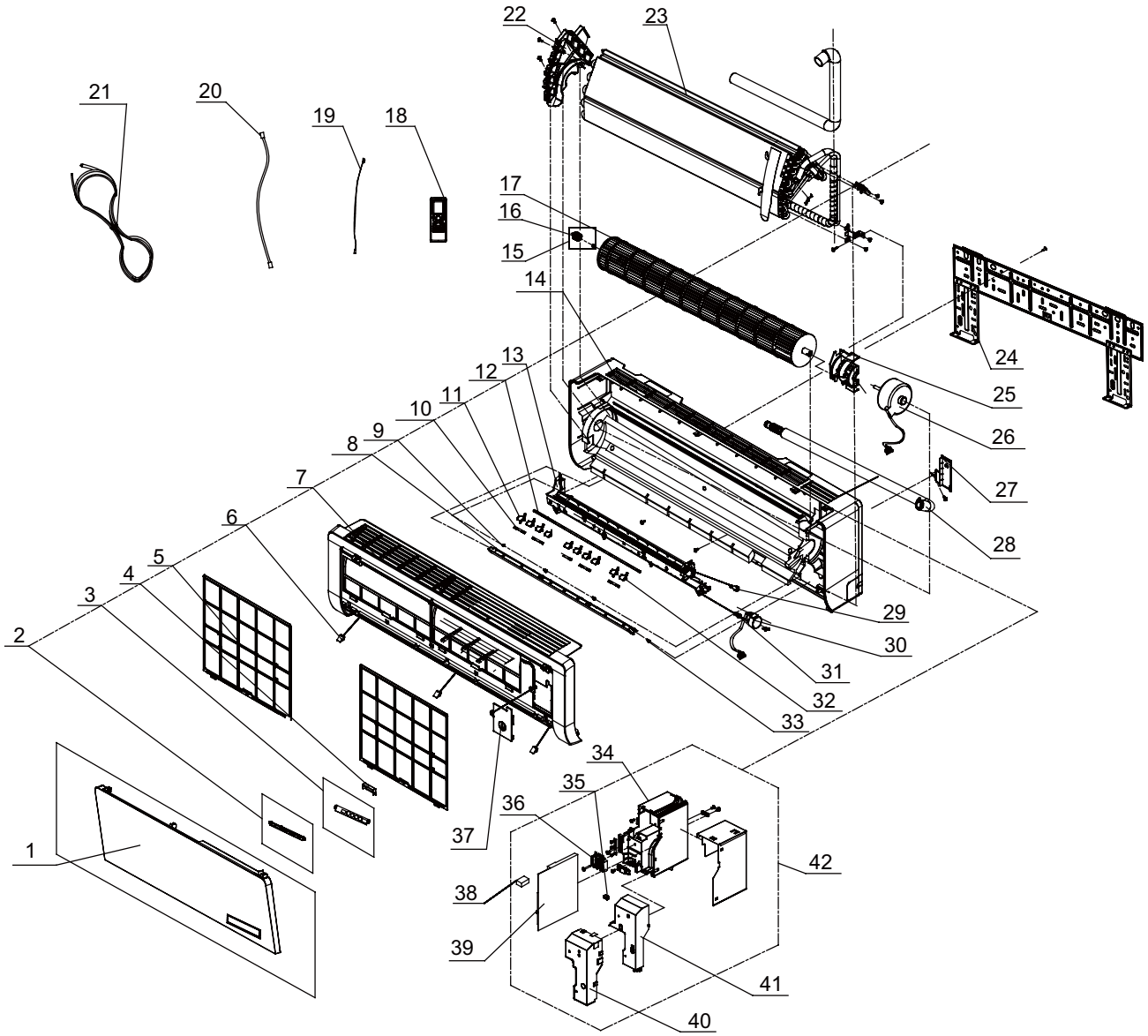
GWH(18)AC-K3DNA1A/I(CB115N0671)



NO.	Description	Part Code	Qty
		GWH(18)AC-K3DNA1A/I	
	Product Code	CB115N0671	
1	Front Panel Assy	2001209803	1
2	Display Board	30545053	1
3	Display Box	20122041	1
4	Display Cover	20122058	1
5	Filter Sub-Assy	11124096	2
6	Screw Cover	24252017	3
7	Front Case Assy	20012011	1
8	Guide Louver	10514096	1
9	Axile Bush	10542704	1
10	Louver Clamp	26112127	5
11	Air Louver(manual)	10512097	2
12	Swing lever	10584085	1
13	Water Tray Assy	20182105	1
14	Rear Case assy	2220209506	1
15	O-Gasket sub-assy of Bearing	76512051	1
16	O-Gasket of Cross Fan Bearing	76512203	1
17	Cross Flow Fan	10352016	1
18	Remote Controller	305100492	1
19	Tube Sensor	390000591	1
20	Ambient Temperature Sensor	390000453	1
21	Connecting Cable	400204056	0
22	Evaporator Support	24212109	1
23	Evaporator Assy	0100258401	1
24	Wall Mounting Frame	01252218	1
25	Motor Press Plate	26114094	1
26	Fan Motor	15012077	1
27	Pipe Clamp	26114095	1
28	Drainage hose	0523001406	1
29	Rubber Plug (Water Tray)	76712012	1
30	Cold Plasma Generator Sub-assy	11142002	1
31	Step Motor	15012086	1
32	Crank	10582070	1
33	Swing blade (Round hole)	10512099	8
34	Axile Bush	10542704	2
35	Electric Box	20114016	1
36	Jumper	4202300118	1
37	Terminal Board	4201026601	1
38	Electric Box Cover2	20114009P	1
39	Capacitor CBB61	33010043	1
40	Main Board	30138647	1
41	Shield cover of Electric Box	01412010	1
42	Electric Box Cover1	20114008	1
43	Electric Box Assy	20202921	1

The data above are subject to change without notice.

GWH(18)AC-K3DNA1A/I(CB115N0672)



NO.	Description	Part Code	Qty
		GWH(18)AC-K3DNA1A/I	
	Product Code	CB115N0672	
1	Front Panel Assy	2001209702	1
2	Display Board	30545052	1
3	Display Box	20122041	1
4	Display Cover 2	20122058	1
5	Filter Sub-Assy	11124096	2
6	Screw Cover	24252017	3
7	Front Case Assy	20012011	1
8	Guide Louver	1051409605P	1
9	Axile Bush	10542704	1
10	Louver Clamp	26112127	5
11	Air Louver(manual)	10512097	2
12	Swing lever	10584085	1
13	Water Tray Assy	20182105	1
14	Rear Case assy	2220209506	1
15	O-Gasket sub-assy of Bearing	76512051	1
16	O-Gasket of Cross Fan Bearing	76512203	1
17	Cross Flow Fan	10352016	1
18	Remote Controller	305100492	1
19	Tube Sensor	390000591	1
20	Ambient Temperature Sensor	390000453	1
21	Connecting Cable	400204056	0
22	Evaporator Support	24212109	1
23	Evaporator Assy	0100258401	1
24	Wall Mounting Frame	01252218	1
25	Motor Press Plate	26114094	1
26	Fan Motor	15012077	1
27	Pipe Clamp	26114095	1
28	Drainage hose	0523001406	1
29	Rubber Plug (Water Tray)	76712012	1
30	Step Motor	15012086	1
31	Crank	10582070	1
32	Swing blade (Round hole)	10512099	8
33	Axile Bush	10542704	1
34	Electric Box	20114016	1
35	Jumper	4202300118	1
36	Terminal Board	4201026601	1
37	Electric Box Cover2	20114009P	1
38	Capacitor CBB61	33010043	1
39	Main Board	30138646	1
40	Shield cover of Electric Box	01412010	1
41	Electric Box Cover1	20114008	1
42	Electric Box Assy	20302052	1

The data above are subject to change without notice.

9. Troubleshooting

9.1 Malfunction Display of Indoor Unit

1. Malfunction display requirement

When there are several malfunctions, they will be displayed circularly.

2. Malfunction display method

(1) Hardware malfunction: immediate display; refer to “malfunction display table”;

(2) Operation state: immediate display; refer to “malfunction display table”;

(3) Other malfunctions: it is displayed after the compressor stops for 200s; refer to “malfunction display table”.

Note: when the compressor is restarted, the malfunction display delay time (200s) is cleared.

(4) When the unit is under limit frequency or frequency drop state, the display can be controlled via remote controller.

3. Malfunction display control

The indicator lamp and dual 8 nixie tube displays shall be synchronized. That is when the indicator lamp blinks, the dual 8 nixie tube displays the corresponding malfunction code.

4. Display control via remote controller

Enter display control: press light button successively for 4 times within 3s to display the corresponding malfunction code;

Exit display control: pressing light button successively for 4 times within 3s or after display is shown for 5min, the display will terminate.

Malfunction	Definition of malfunction	Dual 8 nixie tube	Indicator display		
			Operation indicator	Cooling indicator	Heating indicator
Cross zero detection circuit malfunction (indoor)	Hardware malfunction	U8	Blink 17 times		
Jumper cap malfunction protection (indoor)	Hardware malfunction	C5	Blink 15 times		
No indoor motor feedback	Hardware malfunction	H6	Blink 11 times		
Short & open circuit of indoor ambient temperature sensor	Hardware malfunction	F1		Blink 1 times	
Short & open circuit of indoor evaporator temperature sensor	Hardware malfunction	F2		Blink 2 times	
Communication malfunction	Hardware malfunction	E6	Blink 6 times		

Display under test state

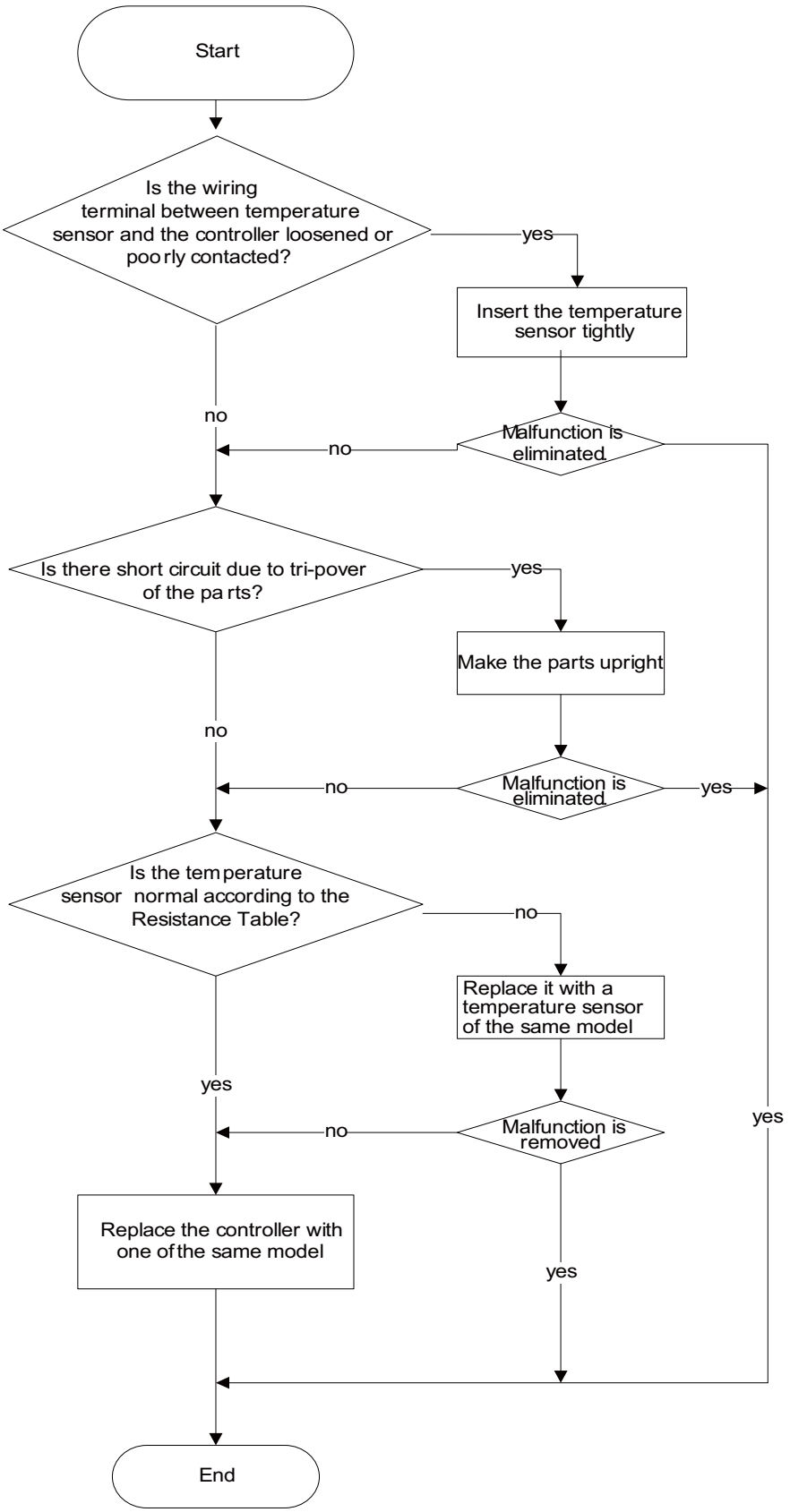
Dual 8 nixie tube display: minimum cooling (heating)-P0; middle cooling (heating)-P3

Nominal cooling (heating) –P1; maximum cooling (heating) –P2;

Corresponding indicator lamp will be on for 0.3s and off for 0.3s

9.2 How to Check Simply The Main Part

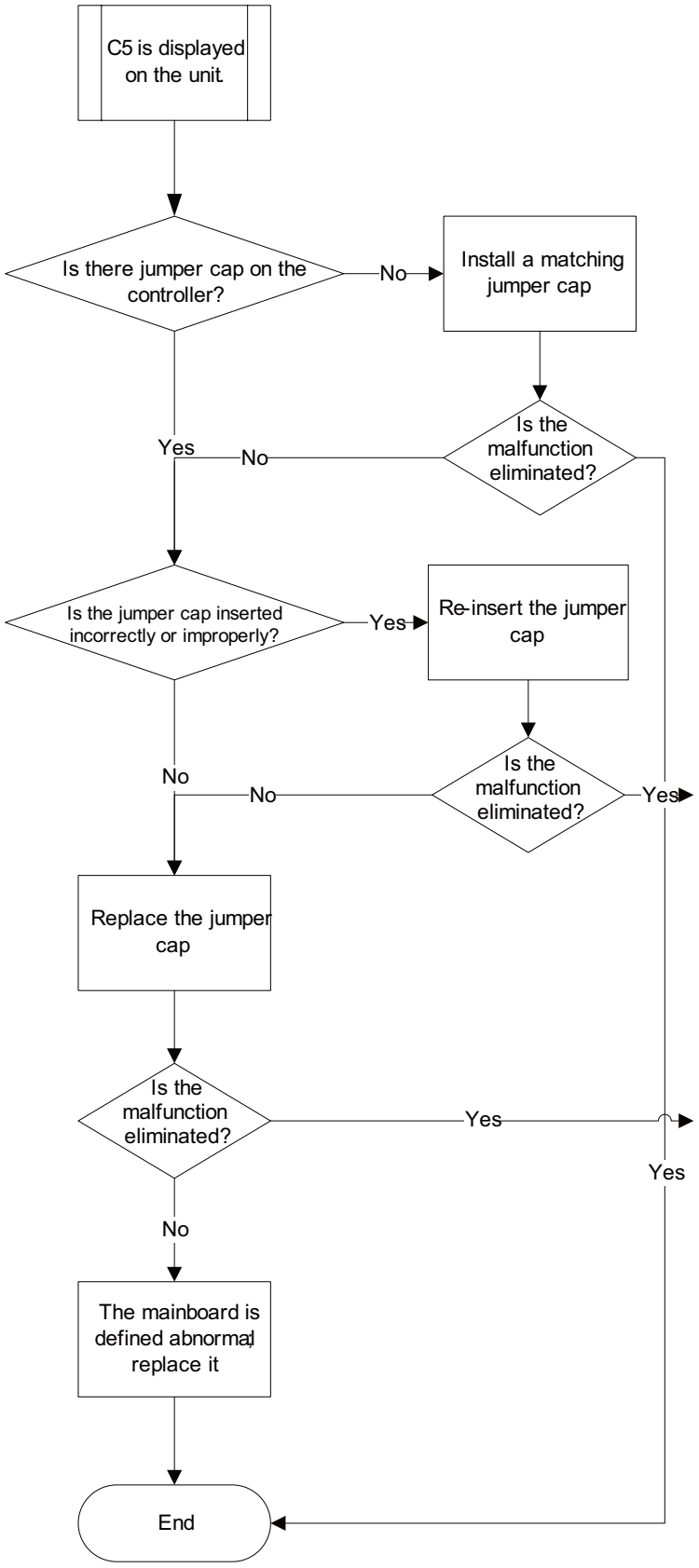
9.2.1 F1/F2 Malfunction



9.2.2 C5 Malfunction

Possible causes:
1. There is no jumper cap on the controller;
2. Jumper cap is not inserted properly and tightly;
3. Jumper cap is damaged;
4. Controller is damaged.

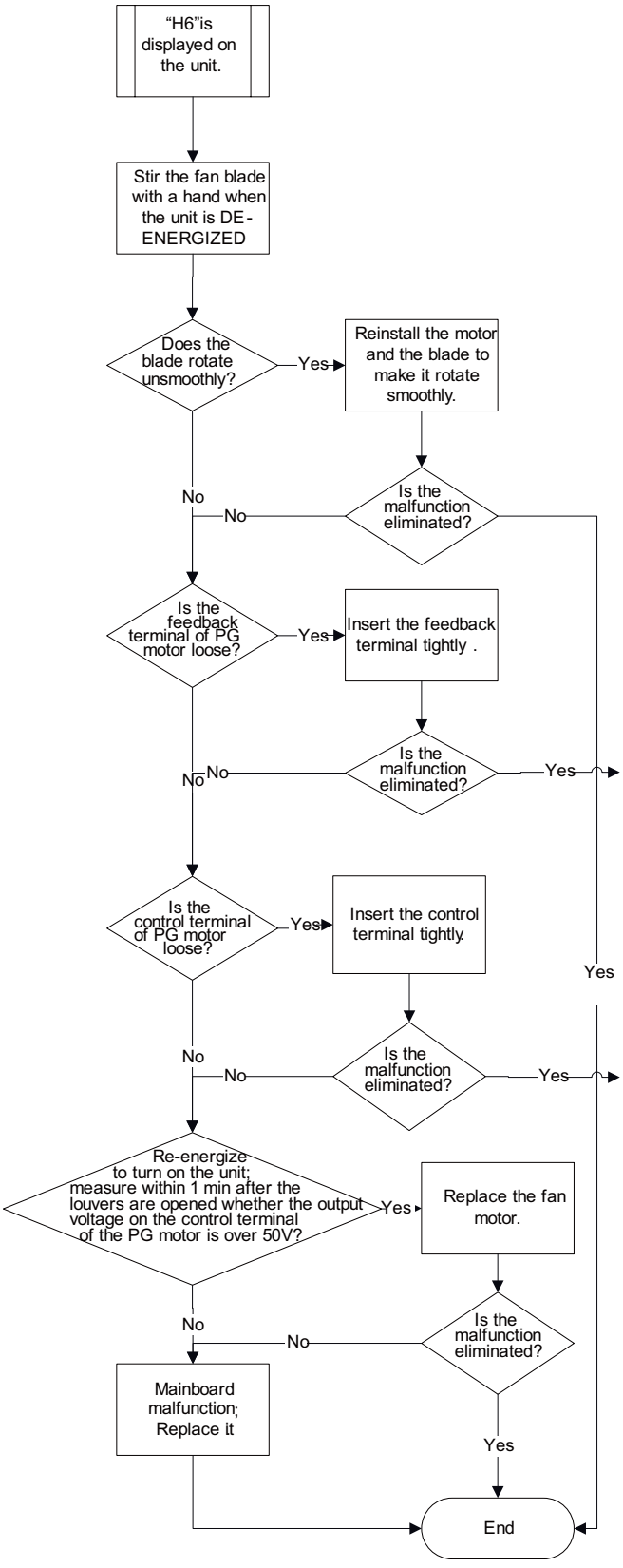
See the flow chart below:



9.2.3 H6 Malfunction

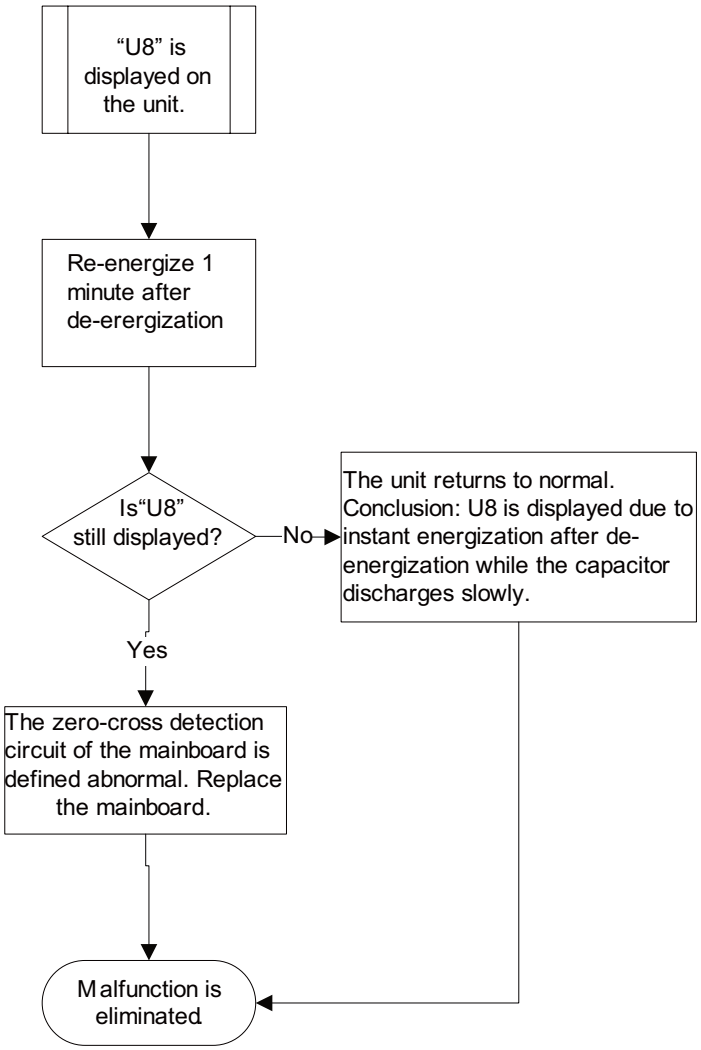
Possible causes:
1. Fan motor is locked;
2. The feedback terminal of PG motor is not connected tightly;
3. The control terminal of PG motor is not connected tightly;
4. Motor is damaged;
5. Malfunction of the rotation speed detection circuit of the mainboard.

See the flow chart below:



9.2.4 U8 Malfunction

Possible causes:
1.The controller diagnoses incorrectly due to instant energization after de-energized while the capacitor discharges slowly;
2.Malfunction of the zero-cross detection circuit of the mainboard.
See the flow chart below:



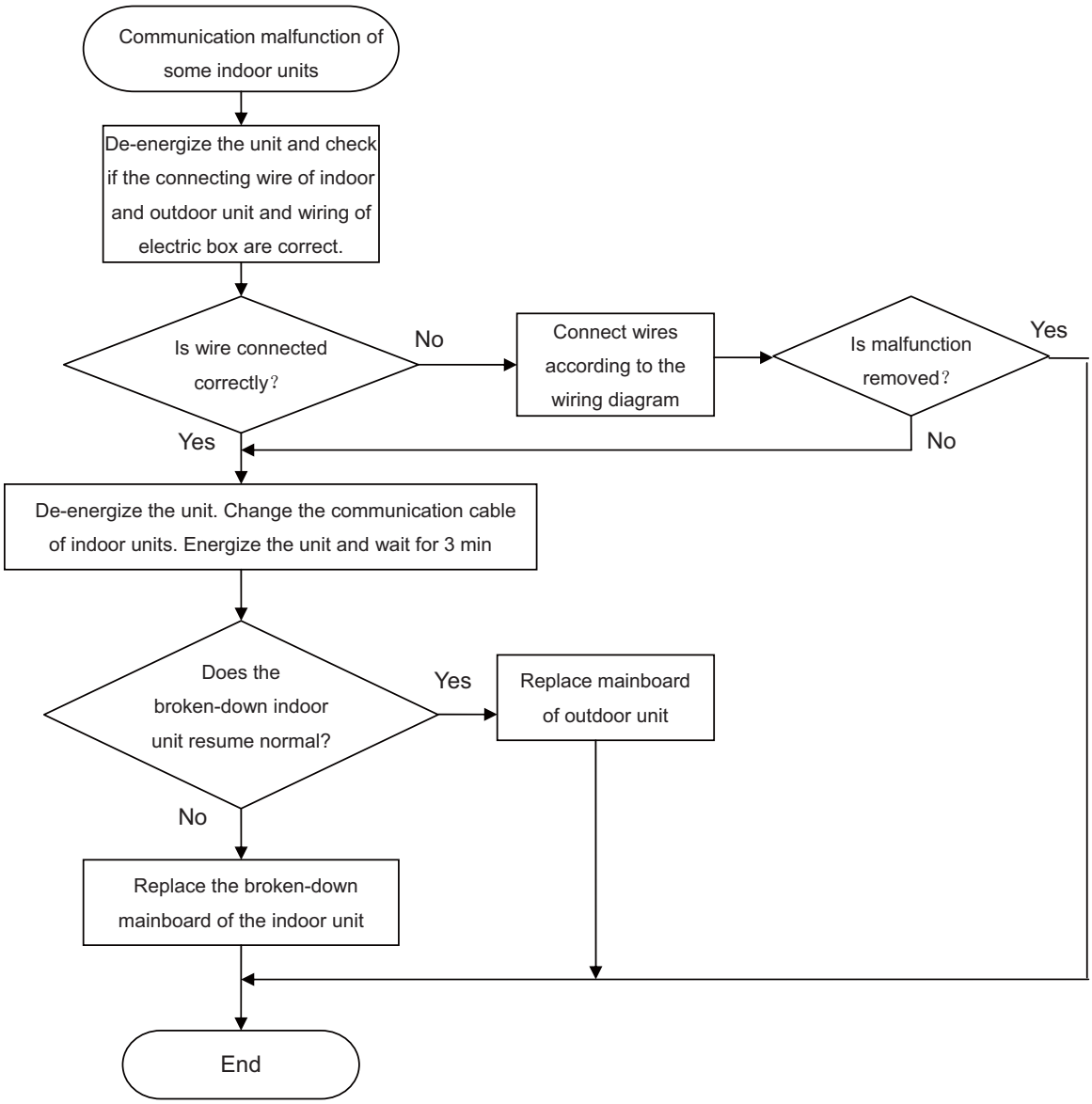
9.2.5 E6 Malfunction

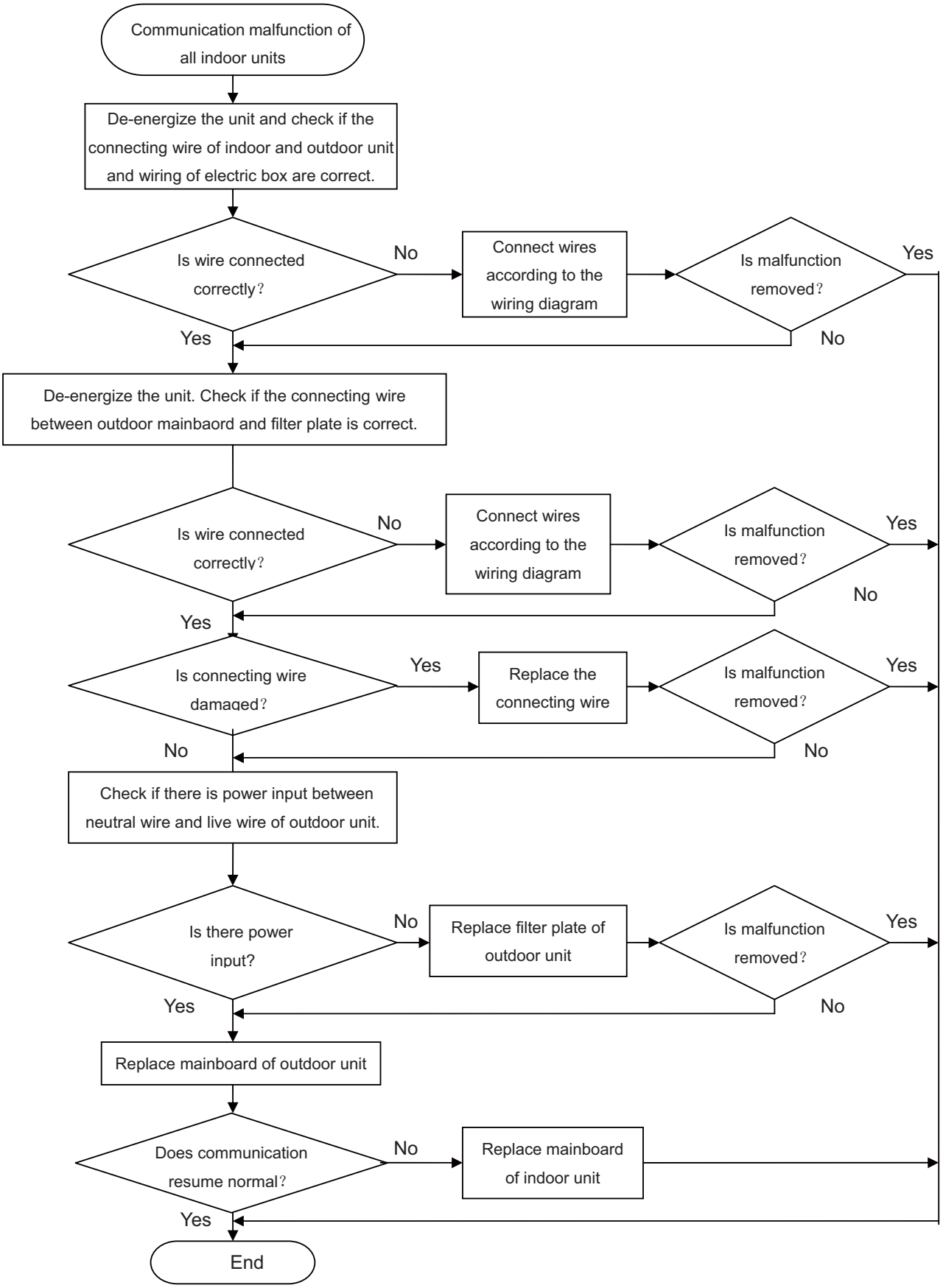
Inspection

1.Check if connection wire between indoor and outdoor units and wire inside the unit are connected well.

2.Check if mainboard of indoor or outdoor unit is damaged.

Flowchart




Communication malfunction of all indoor units
De-energize the unit and check if the connecting wire of indoor and outdoor unit and wiring of electric box are correct.
Is wire connected correctly?
No
Connect wires according to the wiring diagram
Is malfunction removed?
Yes
No
Yes
De-energize the unit. Check if the connecting wire between outdoor mainbaord and filter plate is correct.
Is wire connected correctly?
No
Connect wires according to the wiring diagram
Is malfunction removed?
Yes
No
Yes
Is connecting wire damaged?
Yes
Replace the connecting wire
Is malfunction removed?
Yes
No
No
Check if there is power input between neutral wire and live wire of outdoor unit.
Is there power input?
No
Replace filter plate of outdoor unit
Is malfunction removed?
Yes
No
Yes
Replace mainboard of outdoor unit
Does communication resume normal?
No
Replace mainboard of indoor unit
Yes
End

Appendix 1: Resistance Table of Ambient Temperature Sensor for Indoor and Outdoor Units(15K)

Temp.（℃）	Resistance（kΩ）	Temp.（℃）	Resistance（kΩ）	Temp.（℃）	Resistance（kΩ）	Temp.（℃）	Resistance（kΩ）
-19	138.1	20	18.75	59	3.848	98	1.071
-18	128.6	21	17.93	60	3.711	99	1.039
-17	121.6	22	17.14	61	3.579	100	1.009
-16	115	23	16.39	62	3.454	101	0.98
-15	108.7	24	15.68	63	3.333	102	0.952
-14	102.9	25	15	64	3.217	103	0.925
-13	97.4	26	14.36	65	3.105	104	0.898
-12	92.22	27	13.74	66	2.998	105	0.873
-11	87.35	28	13.16	67	2.896	106	0.848
-10	82.75	29	12.6	68	2.797	107	0.825
-9	78.43	30	12.07	69	2.702	108	0.802
-8	74.35	31	11.57	70	2.611	109	0.779
-7	70.5	32	11.09	71	2.523	110	0.758
-6	66.88	33	10.63	72	2.439	111	0.737
-5	63.46	34	10.2	73	2.358	112	0.717
-4	60.23	35	9.779	74	2.28	113	0.697
-3	57.18	36	9.382	75	2.206	114	0.678
-2	54.31	37	9.003	76	2.133	115	0.66
-1	51.59	38	8.642	77	2.064	116	0.642
0	49.02	39	8.297	78	1.997	117	0.625
1	46.6	40	7.967	79	1.933	118	0.608
2	44.31	41	7.653	80	1.871	119	0.592
3	42.14	42	7.352	81	1.811	120	0.577
4	40.09	43	7.065	82	1.754	121	0.561
5	38.15	44	6.791	83	1.699	122	0.547
6	36.32	45	6.529	84	1.645	123	0.532
7	34.58	46	6.278	85	1.594	124	0.519
8	32.94	47	6.038	86	1.544	125	0.505
9	31.38	48	5.809	87	1.497	126	0.492
10	29.9	49	5.589	88	1.451	127	0.48
11	28.51	50	5.379	89	1.408	128	0.467
12	27.18	51	5.197	90	1.363	129	0.456
13	25.92	52	4.986	91	1.322	130	0.444
14	24.73	53	4.802	92	1.282	131	0.433
15	23.6	54	4.625	93	1.244	132	0.422
16	22.53	55	4.456	94	1.207	133	0.412
17	21.51	56	4.294	95	1.171	134	0.401
18	20.54	57	4.139	96	1.136	135	0.391
19	19.63	58	3.99	97	1.103	136	0.382

Appendix 2: Resistance Table of Outdoor and Indoor Tube Temperature Sensors(20K)

Temp.（℃）	Resistance（kΩ）	Temp.（℃）	Resistance（kΩ）	Temp.（℃）	Resistance（kΩ）	Temp.（℃）	Resistance（kΩ）
-19	181.4	20	25.01	59	5.13	98	1.427
-18	171.4	21	23.9	60	4.948	99	1.386
-17	162.1	22	22.85	61	4.773	100	1.346
-16	153.3	23	21.85	62	4.605	101	1.307
-15	145	24	20.9	63	4.443	102	1.269
-14	137.2	25	20	64	4.289	103	1.233
-13	129.9	26	19.14	65	4.14	104	1.198
-12	123	27	18.13	66	3.998	105	1.164
-11	116.5	28	17.55	67	3.861	106	1.131
-10	110.3	29	16.8	68	3.729	107	1.099
-9	104.6	30	16.1	69	3.603	108	1.069
-8	99.13	31	15.43	70	3.481	109	1.039
-7	94	32	14.79	71	3.364	110	1.01
-6	89.17	33	14.18	72	3.252	111	0.983
-5	84.61	34	13.59	73	3.144	112	0.956
-4	80.31	35	13.04	74	3.04	113	0.93
-3	76.24	36	12.51	75	2.94	114	0.904
-2	72.41	37	12	76	2.844	115	0.88
-1	68.79	38	11.52	77	2.752	116	0.856
0	65.37	39	11.06	78	2.663	117	0.833
1	62.13	40	10.62	79	2.577	118	0.811
2	59.08	41	10.2	80	2.495	119	0.77
3	56.19	42	9.803	81	2.415	120	0.769
4	53.46	43	9.42	82	2.339	121	0.746
5	50.87	44	9.054	83	2.265	122	0.729
6	48.42	45	8.705	84	2.194	123	0.71
7	46.11	46	8.37	85	2.125	124	0.692
8	43.92	47	8.051	86	2.059	125	0.674
9	41.84	48	7.745	87	1.996	126	0.658
10	39.87	49	7.453	88	1.934	127	0.64
11	38.01	50	7.173	89	1.875	128	0.623
12	36.24	51	6.905	90	1.818	129	0.607
13	34.57	52	6.648	91	1.736	130	0.592
14	32.98	53	6.403	92	1.71	131	0.577
15	31.47	54	6.167	93	1.658	132	0.563
16	30.04	55	5.942	94	1.609	133	0.549
17	28.68	56	5.726	95	1.561	134	0.535
18	27.39	57	5.519	96	1.515	135	0.521
19	26.17	58	5.32	97	1.47	136	0.509

Appendix 3: Resistance Table of Outdoor Discharge Temperature Sensor(50K)

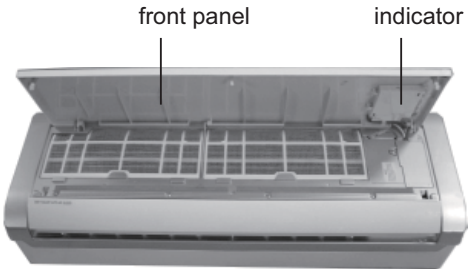
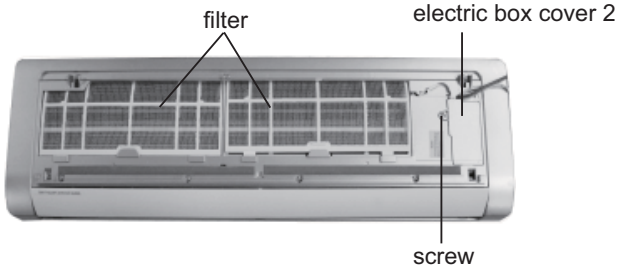
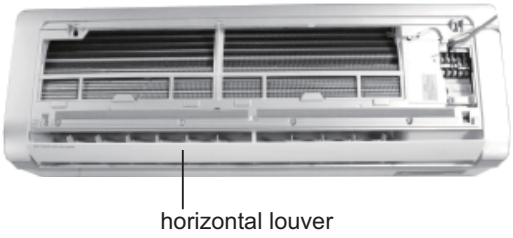
Temp.（℃）	Resistance（kΩ）	Temp.（℃）	Resistance（kΩ）	Temp.（℃）	Resistance（kΩ）	Temp.（℃）	Resistance（kΩ）
-29	853.5	10	98	49	18.34	88	4.754
-28	799.8	11	93.42	50	17.65	89	4.609
-27	750	12	89.07	51	16.99	90	4.469
-26	703.8	13	84.95	52	16.36	91	4.334
-25	660.8	14	81.05	53	15.75	92	4.204
-24	620.8	15	77.35	54	15.17	93	4.079
-23	580.6	16	73.83	55	14.62	94	3.958
-22	548.9	17	70.5	56	14.09	95	3.841
-21	516.6	18	67.34	57	13.58	96	3.728
-20	486.5	19	64.33	58	13.09	97	3.619
-19	458.3	20	61.48	59	12.62	98	3.514
-18	432	21	58.77	60	12.17	99	3.413
-17	407.4	22	56.19	61	11.74	100	3.315
-16	384.5	23	53.74	62	11.32	101	3.22
-15	362.9	24	51.41	63	10.93	102	3.129
-14	342.8	25	49.19	64	10.54	103	3.04
-13	323.9	26	47.08	65	10.18	104	2.955
-12	306.2	27	45.07	66	9.827	105	2.872
-11	289.6	28	43.16	67	9.489	106	2.792
-10	274	29	41.34	68	9.165	107	2.715
-9	259.3	30	39.61	69	8.854	108	2.64
-8	245.6	31	37.96	70	8.555	109	2.568
-7	232.6	32	36.38	71	8.268	110	2.498
-6	220.5	33	34.88	72	7.991	111	2.431
-5	209	34	33.45	73	7.726	112	2.365
-4	198.3	35	32.09	74	7.47	113	2.302
-3	199.1	36	30.79	75	7.224	114	2.241
-2	178.5	37	29.54	76	6.998	115	2.182
-1	169.5	38	28.36	77	6.761	116	2.124
0	161	39	27.23	78	6.542	117	2.069
1	153	40	26.15	79	6.331	118	2.015
2	145.4	41	25.11	80	6.129	119	1.963
3	138.3	42	24.13	81	5.933	120	1.912
4	131.5	43	23.19	82	5.746	121	1.863
5	125.1	44	22.29	83	5.565	122	1.816
6	119.1	45	21.43	84	5.39	123	1.77
7	113.4	46	20.6	85	5.222	124	1.725
8	108	47	19.81	86	5.06	125	1.682
9	102.8	48	19.06	87	4.904	126	1.64

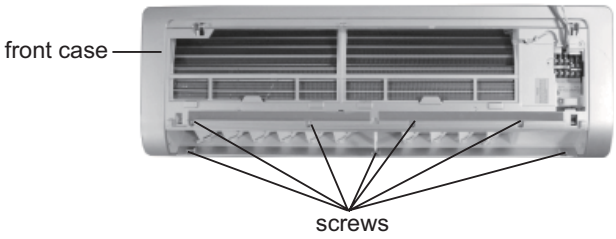
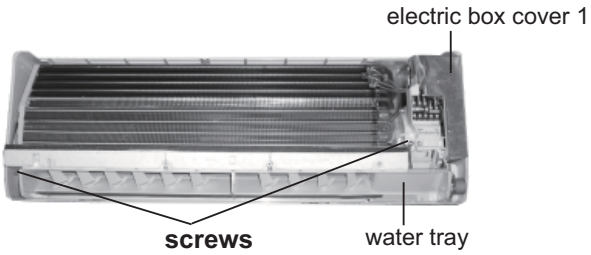
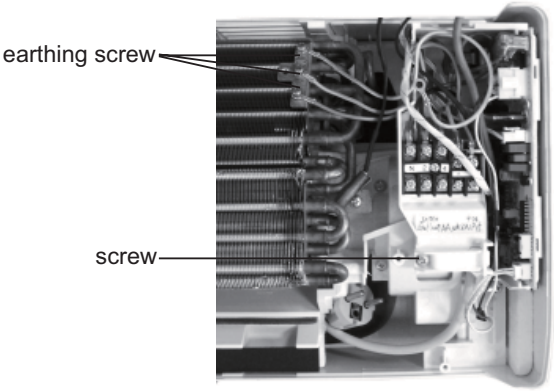
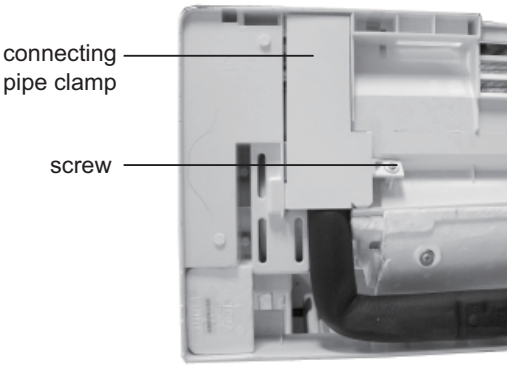
Note: The information above is for reference only.

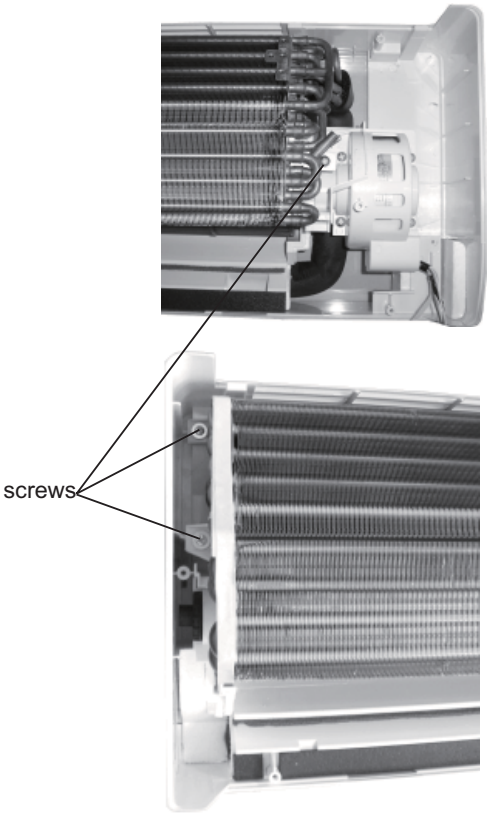
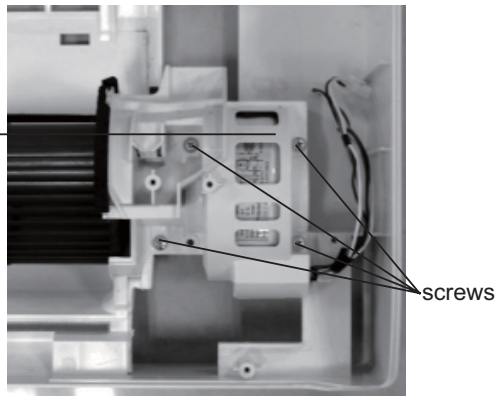
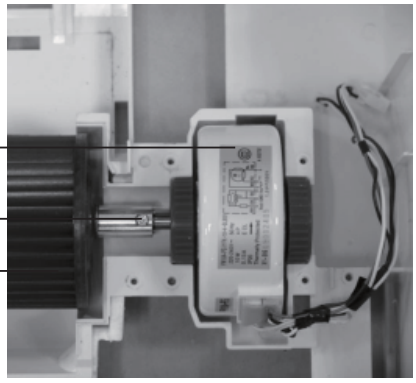
10. Removal Procedure

Warning **Be sure to wait for a minimum of 10 minutes after turning off all power supplies before disassembly.**

NOTE:Take GWH(07)AA-K3DNA1B/I(CB115N0680) for example.

Step	Procedure	
1.Remove front panel		
	Open front panel, and remove screws fixing indicator. Then remove the indicator. Push the rotor shaft on both sides of the panel to make it separate from the groove .Remove the panel.	
2.Remove filter and electric box cover 2		
	Push the filter inward and then pull it upward to remove the filter. Remove screws on electric box cover 2 and then remove the cover.	
3.Remove horizontal louver		
	Remove middle axle sleeve of horizontal louver and then slightly bend the horizontal louver to remove it.	

Step	Procedure
4.Remove front case	
Remove screws fixing front case. Loosen clasps in middle of front case and then turn over the front case to remove it.	
5.Remove water tray	
Remove screws of electric box cover 1 and loosen clasps of electric box cover 1. Unplug wiring terminal of swing motor and remove screws fixing water tray to remove water tray.	
6.Remove electric box	
Remove earthing screw of evaporator and screws of electric box. Unplug connecting wire of indoor motor. Loosen clasps of electric box and then remove the electric box.	
7.Remove evaporator	
Remove screws of connecting pipe clamp and then remove the clamp.	

Step	Procedure	
	Remove connection screws between evaporator and rear case. Slightly adjust pipe of evaporator and then remove the evaporator.	
8.Remove motor and cross flow blade		
	Remove screws fixing motor clamp and then remove the clamp. Remove connection screws between motor and cross flow blade subsequently to remove them.	 

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