Super Match

3U19FS2ERA

3U24GS2ERA

4U30HS2ERA

5U34HS2ERA

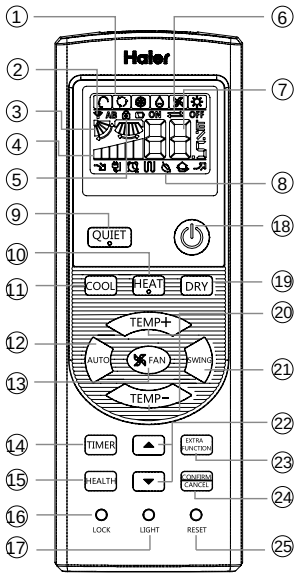
SYJS-11-2015REV.D

Edition:2015-11

6.Controller

YR-HD

Remote controller



1. Mode displ

Operation mode	AUTO	COOL	DRY	HEAT	FAN
Remote controller					

2. Signal sending displ
3. SWING display
4. FAN SPEED display

5. LOCK displ
6. TIMER OFF display
   TIMER ON display

7.TEMP display

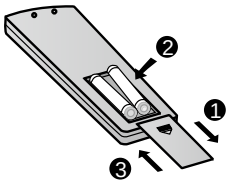
8.Additional functions display

Operation mode	QUITE	SLEEP	Supplemented electrical heating	HEALTH	POWER
Remote controller					

9. QUIET but
10. HEAT but
11. COOL but
12. AUTO but
13. FAN but
14. TIMER but
15. HEALTH but
16. LOCK but
    Used to lock buttons and LCD display.
17. LIGHT but
    Control the lightening and extinguishing of the indoor LED display board.
18. POWER ON/OFF but
19. DRY but
20. TEMP but
21. SWING but
22. HOUR but
23. EXTRA FUNCTION but
    Function: Auto, health airflow upwards and downwards sending function,sleep function, air-refresh(reserved function) Fahrenheit Celsius conversion Power setting function
24. CANCEL/CONFIRM button
    Function: Setting and cancel to the timer and other additional functions.
25. RESET but
    When the remote controller appears abnormal, use a sharp pointed article to press this button to reset the remote

On the remote control do not have the functions of HEALTH.

Loading of the battery



1 Remove the battery cover;

2 Load the batteries as illustrated. 2 R-03 batteries, resetting key (cylinder);

3 Be sure that the loading is in line with the" + "/"-";

4 Load the battery,then put on the cover again.

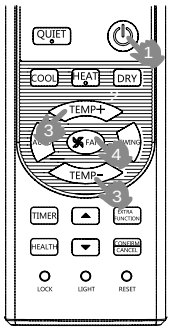
Note:

- The distance between the signal transmission head and the receiver hole should be within 7m without any obstacle as well.
- When electronic-started type fluorescent lamp or change-over type fluorescent lamp or wireless telephone is installed in the room, the receiver is apt to be disturbed in receiving the signals, so the distance to the indoor unit should be shorter.
- Full display or unclear display during operation indicates the batteries have been used up. Please change batteries.
- If the remote controller can't run normally during operation, please remove the batteries and reload several minutes later.

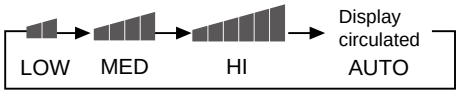
Hint:
Remove the batteries in case won't be in use for a long period. If there is any display after taking-out, just press reset key.

Base Operation

Remote controller



1. Unit start
   Press ON/OFF on the remote controller, unit starts.
2. Select operation mode
   COOL button:Cooling mode
   HEAT button: Heating mode
   DRY button: Dehumidify mode
3. Select temp.setting
   Press TEMP+ / TEMP− button
   TEMP+ Every time the button is pressed, temp.setting increase 1℃,if kept depressed, it will increase rapidly
   TEMP− Every time the button is pressed, temp.setting decrease 1℃,if kept depressed, it will decrease rapidly
   Select a desired temperature.
4. Fan speed selection
   Press FAN button. For each press, fan speed changes as follows:
   Remote controller:



Air conditioner is running under displayed fan speed. When FAN is set to AUTO, the air conditioner automatically adjusts the fan speed according to room temperature.

Operation Mode	Remote Controller	Note
AUTO		Under the mode of auto operation, air conditioner will automatically select Cool or Heat operation according to room temperature. When FAN is set to AUTO the air conditioner automatically adjusts the fan speed according to room temperature.
COOL		
DRY		In DRY mode, when room temperature becomes lower than temp.setting+2°C, unit will run intermittently at LOW speed regardless of FAN setting.
HEAT		In HEAT mode, warm air will blow out after a short period of the time due to cold-draft prevention function. When FAN is set to AUTO, the air conditioner automatically adjusts the fan speed according to room temperature.
FAN		In FAN operation mode, the unit will not operate in COOL or HEAT mode but only in FAN mode, AUTO is not available in FAN mode. And temp. setting is disabled. In FAN mode, sleep operation is not available.

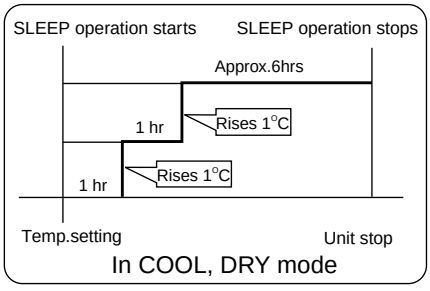
Sleep Operation

Press EXTRA FUNCTION button to enter additional options, when cycle display to , will flash. And then press CONFIRM CANCEL enter to sleep function.

Operation Mode

1. In COOL,DRY mode

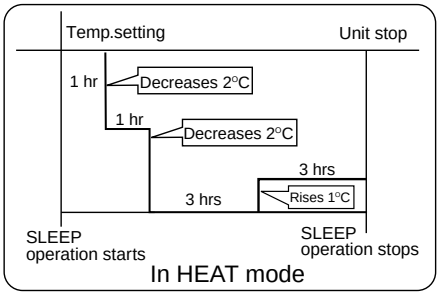
1 hours after SLEEP mode starts,temp.will become 1°C higher than temp.setting.After another 1 hours,temp.rises by 1°C futher.The unit will run for further 6 hours then stops Temp. is higher than temp.setting so that room temperature won't be too low for your sleep.



In COOL, DRY mode

2. In HEAT mode

1 hours after SLEEP mode starts,temp will become 2°C lower than temp.setting.After another 1 hours,temp decrease by 2°C futher.After more another 3 hours,temp. rises by 1°C futher.The unit will run for further 3 hours then stops.Temp.is lower than temp. setting so that room temperature won't be too high for your sleep.



In HEAT mode

3. In AUTO mode

The unit operaters in corresponding sleep mode adapted to the automatically selected operation mode.

4. In FAN mode

It has no SLEEP function.

5.Set the wind speed change when sleeping

If the wind speed is high or middle before setting for the sleep, set for lowing the wind speed after sleeping.
If it is low wind, no change.

Note

When TIMER function is set, the sleeping function can't be set up .After the sleeping function is set up, if user resets TIMER function, the sleeping function will be cancelled; the machine will be in the state of timing-on.

POWER/QUIET Operation

(1) POWER Operation

When you need rapid heating or cooling, you can use this function.

Press EXTRA FUNCTION button to enter additional options, when cycle display to , will flash, and then press CONFIRM CANCEL ,enter to power function. When cancel the function, please enter additional options again and to cancel power function.

(2) QUIET Operation

You can use this function when silence is needed for rest or readin

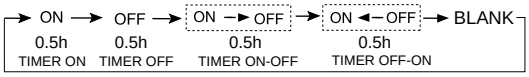
Press QUIET button, the remote controller will show , and then achieve to the quiet function. Press again this QUIET button , the quiet function will be cancelled.

Note：

During POWER operation, in rapid HEAT or COOL mode , the room will show inhomogeneous temperature distribution. Long period QUIET operation will cause effect of not too cool or not too warm.

Timer On/Off On-Off Operation

1.After unit starts, select your desired operation mode.
2.Press TIMER button to change TIMER mode. Every time the button is pressed, display changes as follows:
Remote controller:



Then select your desired TIMER mode (TIMER ON or TIMER OFF or TIMER ON-OFF). " ON "or " OFF "will flash.

3.Press ▼ ▲ button to set time.

▲ Press the button for each time, setting time in the first 12 hours increased by 0.5 hour every time, after 12 hours,increased by 1 hour every time.

▼ Press the button for each time, settiing time in the first 12 hours decreased by 0.5 hour every time, after 12 hours,decreased by 1 hour every time.
It can be adjusted within 24 hours.

4.Confirm timer setting
After adjust the time,press CONFIRM CANCEL button and confirm the time ON or OFF button will not flash any more.

5.Cancel timer setting
Press the timer button by times until the time display eliminated.

Hints:
After replacing batteries or a power failure happens, time setting should be reset.
According to the Time setting sequence of TIMER ON or TIMER OFF, either Start-Stop or Stop-Start can be achieved.

Healthy airflow Operation

1.Press ⏻ to s
Setting the comfort work conditions.
2.The setting of healthy airflow function
Press EXTRA FUNCTION button to enter additional options,Press this button continuously, the louvers location will cycle between in the following three locations, to choose the swing location what you needed,and then press CONFIRM CANCEL button to confirm.

3.The cancel of the healthy airflow function
Press EXTRA FUNCTION button to enter additional options,Press this button continuously, the louvers location will cycle between in the following three locations again,and then press CONFIRM CANCEL button to cancel.

Notice: Do not direct the flap by hand. Otherwise, the grille will run incorrectly. If the grille is not run correctly, stop for a minute and then start, adjusting by remote controller.

Note:
1.After setting the healthy airflow function, the positi grill is fixed.
2.In heating, it is better to select the mode.
3.In cooling, it is better to select t mode.
4.In cooling and dry, using the air conditioner for a long

All the products are in conformity with the following European provision:
- Low Voltage Directive 73/23/EEC
- Low Voltage Directive 2006/95/EC
-Electomagnetic CompatibilitY 89/336/EEC
-Electomagnetic CompatibilitY 2004/108/EC

ROHS

The products are fulfilled with the requirements in the directive 2002/95/EEC of the European parliament and of council on the Restriction of the use of Certain Hazardous Substances in Electrical and Electronic Equipment (EU RoHS Directive)

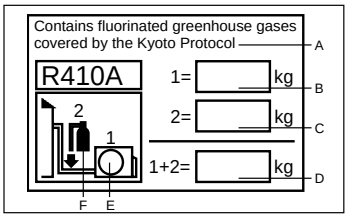
WEEE

In accordance with the directive 2002/96/CE of the European parliament, herewith we inform the consumer about the disposal requirements of the electrical and electronic products.

DISPOSAL REQUIREMENTS:

Your air conditioning product is marked with this symbol.This means that electrical and electronic products shall not be mixed with unsorted household waste. Do not try to dismantle the system yourself : the dismantling of the air conditioning system,treatment of the refrigerant, of oil and of other part must be done by a qualified installer in accordance with relevant local and national legislation. Air conditioners must be treated at a specialized treatment facility for reuse, recycling and recovery. By ensuring this product is disposed of correctly, you will help to prevent potential negative consequences for the environment and humen health. Please contact the installer or local authority for more information. Battery must be removed from the remote controller and disposed of separately in accordance with relevant local and nationl legislation.

IMPORTANT INFORMATION REGARDING THE REFRIGERANT USED

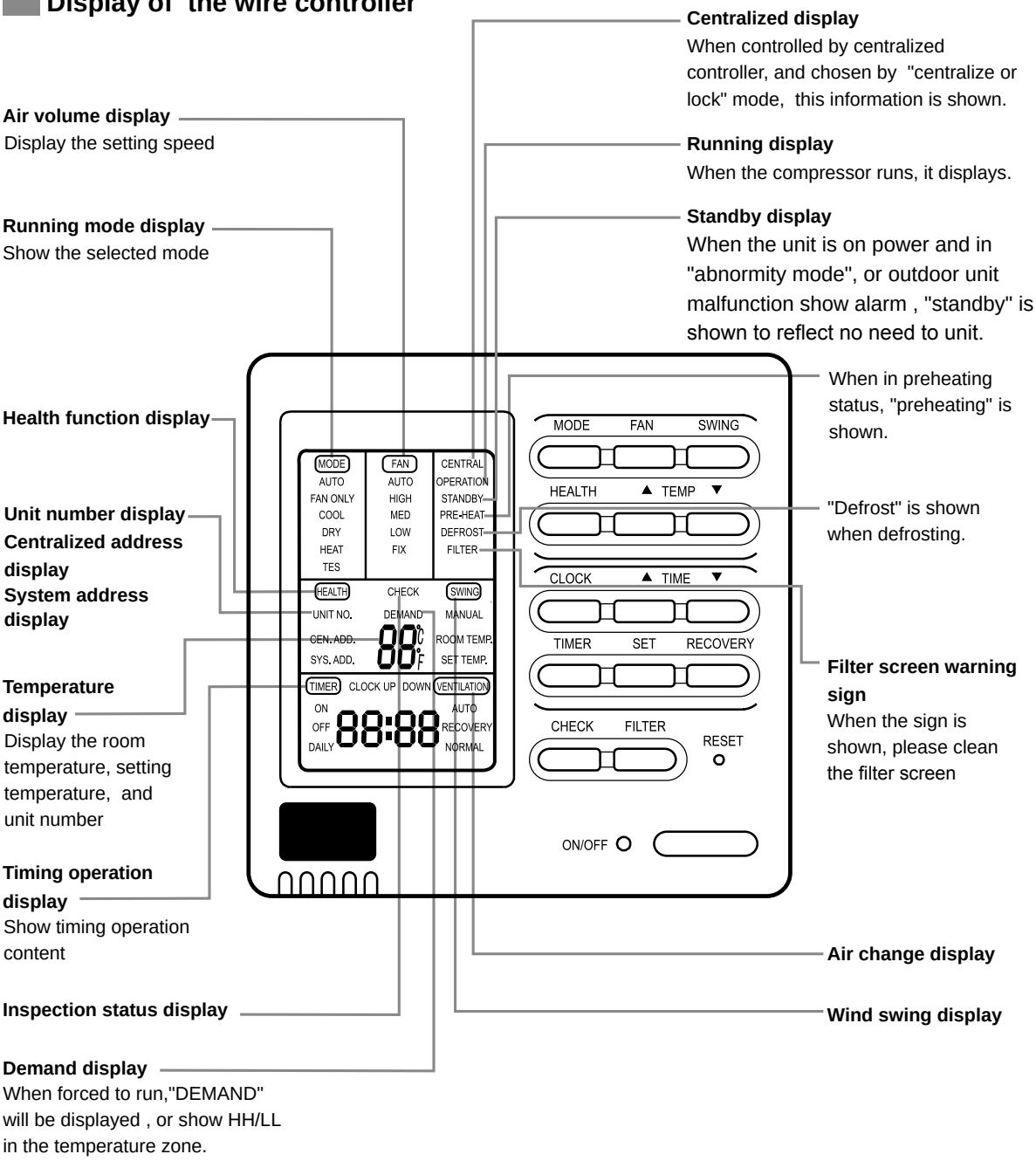


This product contains fluorinated greenhouse gases covered by the Kyoto Protocol. Do not vent into the atmosphere.
Refrigerant type:R410A
GWP* value:1975
GWP=global warming potential
Please fill in with indelible ink,
• 1 the factory refrigerant charge of the produc
• 2 the additional refrigerant amount charged in the fiel and
• 1+2 the total refrigerant charg
on the refrigerant charge label supplied with the product.
The filled out label must be adhered in the proximity of the product charging port (e.g. onto the inside of the stop value cover).
A contains fluorinated greenhouse gases covered by the Kyoto Protocol
B factory refrigerant charge of the product: see unit name plate
C additional refrigerant amount charged in the field
D total refrigerant charge
E outdoor unit
F refrigerant cylinder and manifold for charging

YR-E14

Parts and Functions

Display of the wire controller



Centralized display
When controlled by centralized controller, and chosen by "centralize or lock" mode, this information is shown.

Air volume display
Display the setting speed

Running display
When the compressor runs, it displays.

Running mode display
Show the selected mode

Standby display
When the unit is on power and in "abnormity mode", or outdoor unit malfunction show alarm , "standby" is shown to reflect no need to unit.

Health function display

When in preheating status, "preheating" is shown.

Unit number display
Centralized address display
System address display

"Defrost" is shown when defrosting.

Temperature display
Display the room temperature, setting temperature, and unit number

Filter screen warning sign
When the sign is shown, please clean the filter screen

Timing operation display
Show timing operation content

Air change display

Inspection status display

Wind swing display

Demand display
When forced to run,"DEMAND" will be displayed , or show HH/LL in the temperature zone.

Remarks

- The models in the manual don't have health, filter reset and Air change function.

Parts and Functions

Buttons of the wire controller

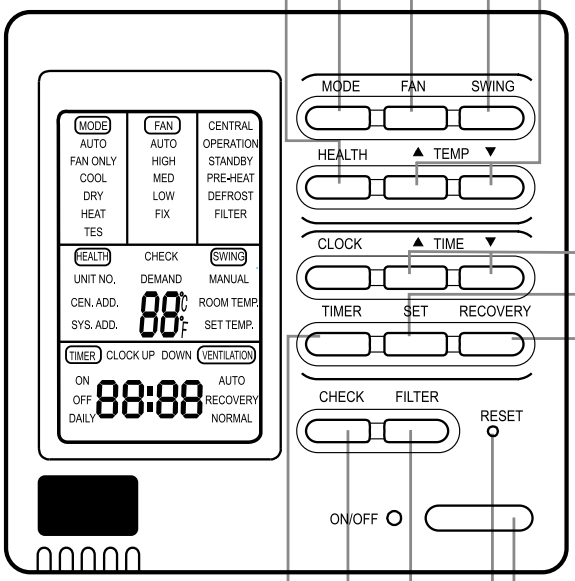
Mode switch
Choose running mode

Health switch
Used to control oxygen function and negative ion

Timing switch
It is used for choosing timing running

Self-inspection switch
It is used for inspection service

Filter reset
After cleaning air inlet and filter, press this switch. The unit begins to run



Fan speed switch
Change wind speed

Swing switch
Open and close air flap

TEMP switch
Used for changing set temperature

Time switch
It is used to regulate setting time.

Clock, timing and address setting

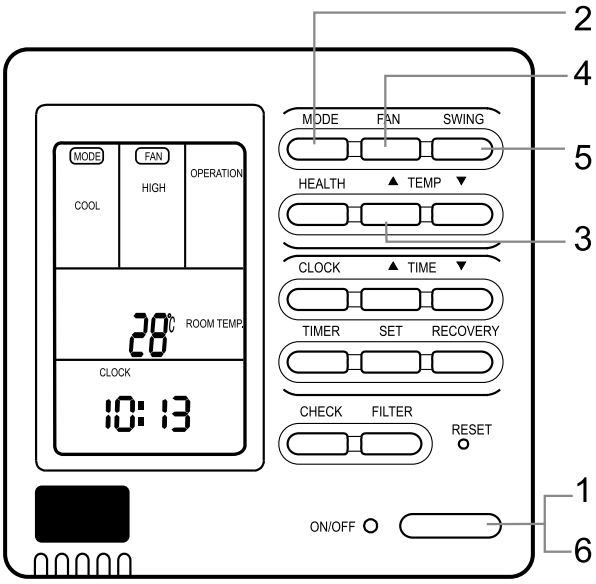
Air change switch
It is used to open and close air change function. The mode is as follows:
No display-air change (automatic)-air change (RECOVERY)-air change (NORMAL)

ON/OFF switch
Do on and off function. The unit is on when pressing it; and is off when pressing it again.

Reset key
When in abnormal state, push the reset key with a spike, which may return the unit to normal

Operation

ON/OFF operation



Press ON/OFF switch on line controller directly
The line controller displays the running state in the latest time (timing and swing state may not be displayed).

1. Press "ON/OFF" switch.
The air conditioner starts operating, and the light on the wired controller is on.

2.Choose operation mode.
Press "mode"switch to change to "AUTO"---"FAN ONLY"---"COOL"---"DRY"---"HEAT".

3.Press "TEMP" switch
Change set temperature:press TEMP ▲or TEMP ▼ every time, [SET] will display,and set temperature will increase/reduce 1℃

4.Press "FAN SPEED" switch
FAN ONLY Operation:
Press "FAN SPEED" switch to change to "HIGH"--"MED"--"LOW"--"HIGH"

In AUTO,COOL,DRY,HEAT Operation:
Press "FAN SPEED" switch to change to "AUTO"--"HIGH"--"MED"--"LOW"--"AUTO"

5.Press "SWING" switch on the line controller to swing the wind screen.

6.Press "ON/OFF"switch, off.
The light on the line controller is off.

Note

Several seconds after the operation of the line controller, the setting of the unit will change.

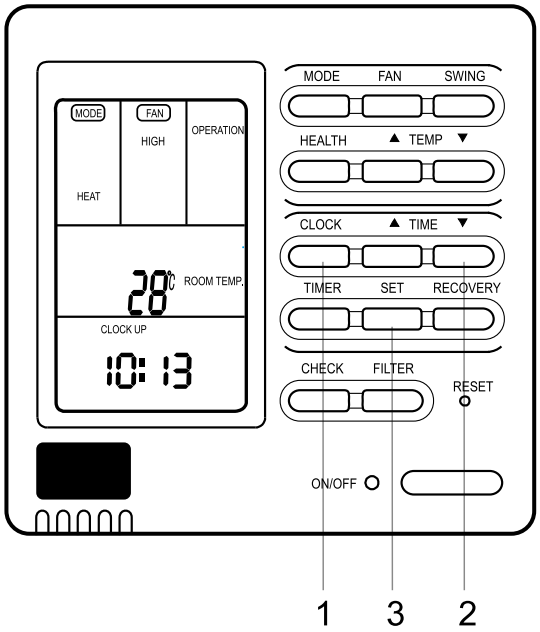
Remarks

- Avoid pressing "ON/OFF" switch frequently.
- Do not press line controller or switches by sharp objects.
- The temperature is on the basis of the setting value. The wind temperature may not reach the setting value because of the outer air conditioner and system protection.
- When the wired controller is power on, the screen fully displays it for two seconds. and clock zone "8888"-"888"-"88"-"8" flicker for 30 seconds. All the switches are invalid at the time.

Operation

Present time setting

- The timing is based on the real time. Thus, the real time should be regulated in advance.
- The clock regulation steps are as follows:



1.Press "CLOCK" switch

"CLOCK" flickers, and the time displayed is the real time.

2.Press "▲" and "▼" to regulate the time.

The time increases a minute each time you press "▲" switch.
The time decreases a minute each time you press "▼" switch.

3.Press "SET" switch. The setting is achieved.

Notes

- If not in timing, the screen displays the real time.
- If in timing, the screen displays the timing time.
- If you want to know the real time, go to the first step.

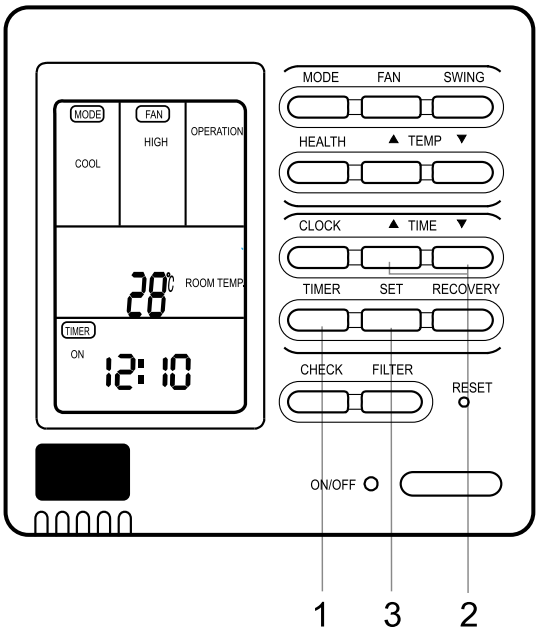
Setting of power failure compensation function

When SW1-6 on PCB of wire controller is OFF, it will be in power failure compensation. If the SW1-6 is ON, it has no compensation function.
When the power is on after blackout, the unit will return to the former state if compensation function is set. Otherwise, it will stop. When restarting the unit, press "ON/OFF" switch on wired controller.

Operation

Timing setting

- OFF timing: when a set time has elapsed, the unit stops running.
- ON timing: when a set time has elapsed, the unit starts.

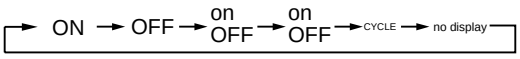


Press "ON/OFF" switch firstly, and set up operation mode. Please regulate the clock in advance before using the timing function.

1.Press "TIMER" switch.

1.Press "TIMER" switch.

The display changes with the following sequence:



2.Set up "TIMER"

When timing ON or timing OFF flickers, press "▲" or "▼" to regulate the time

Press" ▲"or " ▼"set up ON/OFF time.

The setting time increases ten minutes each time you press "▲" switch.

The setting time decreases ten minutes each time you press"▼" switch.

When setting timing ON and timing OFF at the same time, press "timing" switch to change the setting item.

3.Time setting is achieved. Press"setting"switch.

Cancel timing

If you want to change the timing mode to normal operation, press "timing" until there is no timing display. When the timing is invalid, the mode is in normal operation.

parts of wired controller explanation :

1.The unit starts or stops at the setting time. Meanwhile, it displays the timing time.

2."ON Timing, OFF timing and circulation"means that the unit is on and off at the setting time everyday.

Note

- The shorter setting time will be carried out firstly.
- If the ON timing and OFF timing are the same, the setting is invalid.
- Even in timing condition, you may start or close the unit through pressing "ON/OFF" switch.

Operation

Query indoor malfunction history:

In the state of power on or power off, press [CHECK] button, enter the malfunction-querying mode of all indoor units in the group. Then [CHECK] and [UNIT NO.] will display, and the actual indoor numbers will be displayed in some sequence (unit number is in decimals). At the same time, in the time region, there will be the current malfunction and the latest time malfunction, the displaying format is [XX:YY], in which XX stands for the current malfunction, if normal, it will display "--"; YY stands for the latest time malfunction. The failure code of every unit will display for 3 seconds. After the failure codes of all indoor units in the whole group are displayed, the mode will quit automatically.

How to change the function switches?

No.	Type	State of switch	Function description
SW1-1	Select the master or the slave controller	ON	Set as the slave controller
		OFF	Set as the master controller
SW1-2	Select the controller mode	ON	Standard controller
		OFF	Air handler controller
SW1-3	Room temperature display option	ON	Visible room temperature
		OFF	Invisible room temperature
SW1-4	26° lock	ON	Unavailable 26° lock
		OFF	Available 26° lock
SW1-5	Temperature sensor position option	ON	Sensor of the controller
		OFF	Sensor in the unit
SW1-6	Auto restart	ON	Unavailable
		OFF	Available
SW1-7	Factory Setting	ON	Default setting
SW1-8	Factory Setting	OFF	Default setting

Note

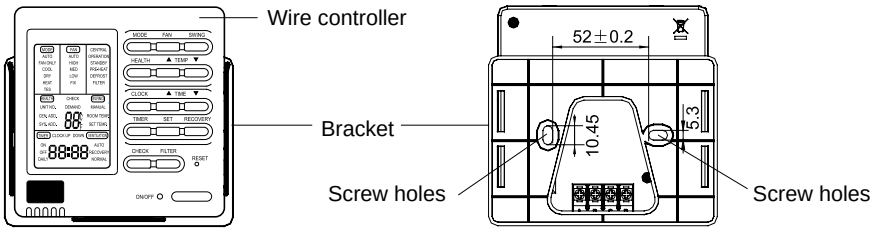
1. Switches or jumper wire must be adjusted when the wire controller is powered off. If the wire controller is powered on, the above operations will be invalid.

2. Function difference between master wire controller and slave one:

Contrastive items	Master wire controller	Slave wire controller
Function	All of functions	Only with below functions: ON/OFF, MODE, FAN SPEED, SET TEMP., SWING

Installation Manual For Wire Controller

1. Take down wire controller from the holder



2. Install the controller holder

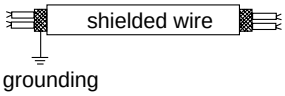
According to the position of 2 screw holes on the holder, drill 2 holes on the wall, and strike the wood stopper to the holes respectively.

Then align the 2 screw holes of wired controller holder to the wood stopper, fix the holder on the wall with wood screw.

> **Note:**
> Try a wall as flat as possible for installation. Don't use excessive force to tighten screws, otherwise, the holder will be damaged.

3.Wiring instruction

Use shielded wire between indoor and wire controller. And be earthed on one side, or the unit will not work normally because of interference.

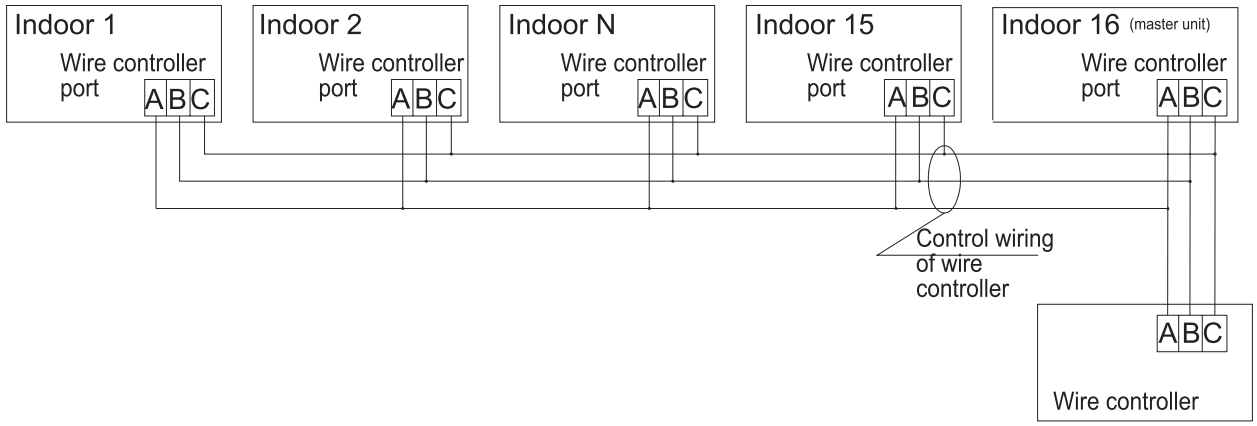


> **Note:**
> Confirm the terminal connection firmly, and do not get in tough with shielded wire.
> Don't touch the PC panel with your hands.

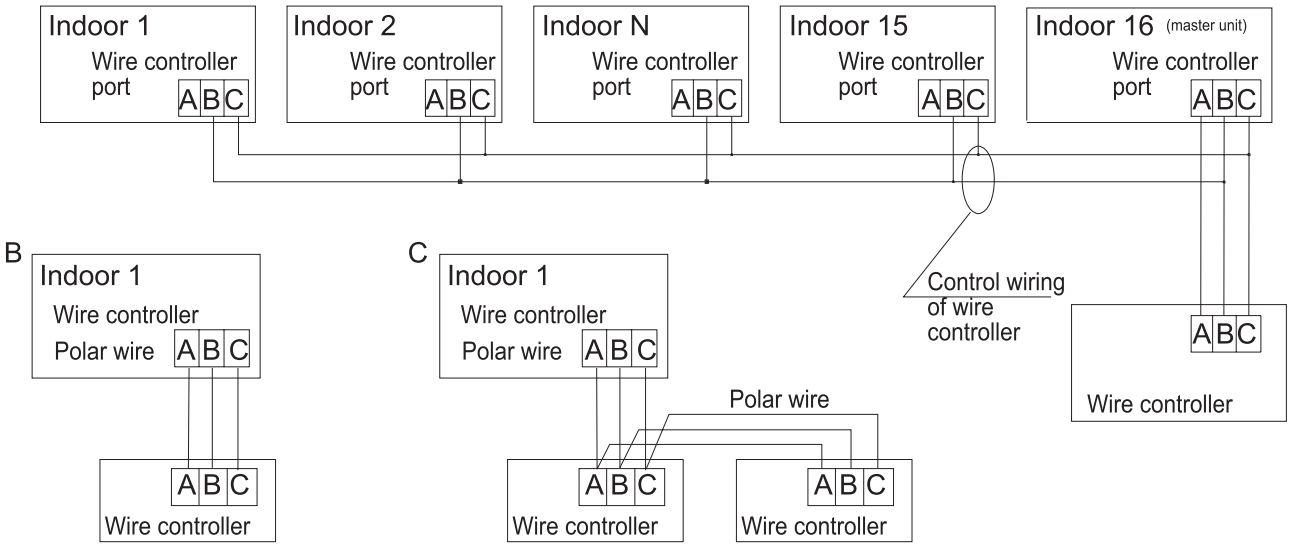
4.Place wire controller on the holder, and pay attention not to pressing any wires.

5. Wiring connections of wire controller:

A TYPE1: For AD09~24SS1ERA(N)(P) AD09~24SS1ERA(N) AD12/18MS1ERA AD12/18MS1ERA(D) AD24MS2ERA AD24MS2ERA(D)



TYPE 2: For other indoor units.



Installation Manual For Wire Controller

There are three methods to connection wire controller and the indoor units:
A.One wired controller can control max. up to 16 sets of indoor units, and 3 pieces of polar wire must connect the wire controller and the master unit (the indoor unit connected with wire controller directly), the others connect with the master unit through 2 pieces of polar wire.
B. One wire controller controls one indoor unit, and the indoor unit connects with the wire controller through 3 pieces of polar wire.
C. Two wired controllers control one indoor unit. The wire controller connected with indoor unit is called master one, the other is called slave one. Master wire controller and indoor unit; master and slave wire controllers are all connected through 3 pieces of polar wire.

6. Communication wiring:

The wire controller is equipped with special communication wiring in the accessories. 3-core terminal (1-white 2-yellow 3-red) is connected with the terminal A, B, C of wire controller respectively.

The communication wiring is 5 meter long; if the actual length is more than it, please distribute wiring according to below table:

Communication wiring length(m)	Dimensions of wiring
⩽ 100	0.3mm^{2}x3-core shielded wire
⩾ 100 and <200	0.5mm^{2}x3-core shielded wire
⩾ 200 and <300	0.75mm^{2}x3-core shielded wire
⩾ 300 and <400	1.25mm^{2}x3-core shielded wire
⩾ 400 and <600	2mm^{2}x3-core shielded wire

*One side of the shielded sheet of communication wire must be earthed.

Haier

Super Match

USER'S MANUAL

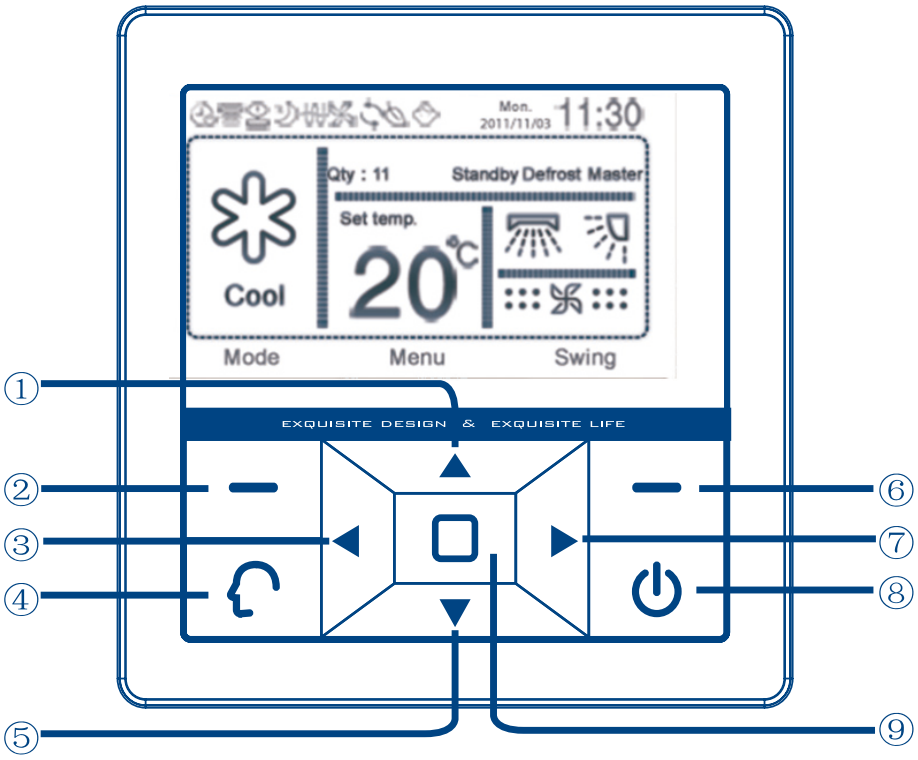
Wired Controller

YR-E16

Read this manual before installation and operation
Make sure that it is well kept for later reference

Parts and Functions

•Key instructions for the wired controller

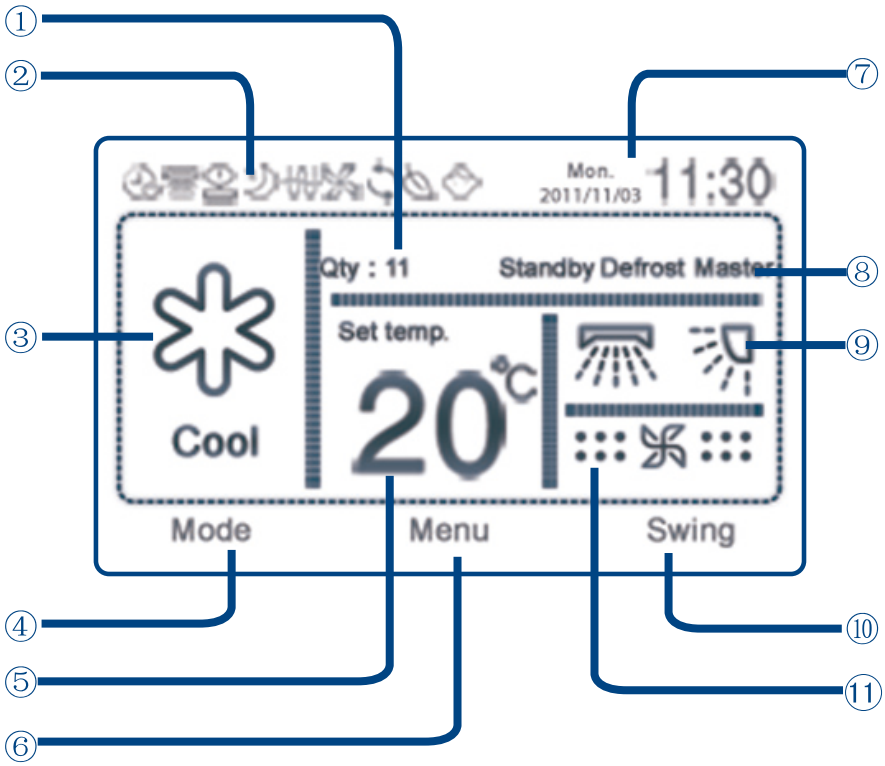


① **Up direction key:**
It provides temperature rise function in the mode switching interface; if this key is pressed in the menu interface, the cursor moves upward; It raises the numerical value when adjusting value.
② **Left function key:**
According to the function prompt above the key, it provides mode switching function in the mode interface and return function in the menu interface.
③ **Left direction key:**
It provides air speed switching function (when the right key is the swing key); it provides cursor leftward movement function in other interfaces.
④ **Intelligent key:**
In the main menu interface, press this key to initiate the intelligent work mode (excluding single cold mode and single heat mode and when there is no intelligent mode for indoor DIP switch setting.).
⑤ **Down direction key:**
It provides temperature drop function in the mode switching interface; if this key is pressed in the menu interface, the cursor moves downward; It reduces the numerical value when adjusting value.
⑥ **Right function key:**
According to the function prompt above the key, it provides swing on/off function or air speed (when both the left-right and up-down options are not selected in the air direction setting interface) switching in the mode interface; it provides the confirmation function in the menu interface and it provides the "Next step" fuction in the interface of "service Set -Password-Original password".

Parts and Functions

⑦ **Right direction key:**
It provides air speed switching function (when the right key is the swing key); it provides cursor rightward movement function in other interfaces.
⑧ **Startup & Shutdown key:**
It provides startup and shutdown function. When in shutdown state, press this key to start it up; press the key again to shut it down**.**
⑨ **Menu/main interface/input key:**
It provides menu function in the mode interface; in the menu interface, it will enter the main interface; in the password interface, it functions as the characters input key refering to the prompting character above the key.

•Main interface display



① **Online units display area:**
It displays the number of the units controlled by one wired controller.
② **Special function/fault icon display area:**
Such as weekly timer, Swing, sleep, children lock, force, air exchange and energy conservation; each icon corresponds to a function; if a fault appears, the fault icon is displayed.
③ **Mode display area:**
Intelligent, heating, cooling, dehumidification and fan modes (the single cold mode has only cooling, dehumidification and fan modes; the single heat mode has only heating and fan modes;except when DIP switch of indoor unit has mode limit.)
④ **Left function key function prompt area**

Parts and Functions

⑤ **Set temperature display area:**
The range of adjustment is 16°to 30°(except when in the setting of energy conservation function).
⑥ **"Menu/main interface/input"key function prompt area:**
if any function is prompted here, press the menu/main interface/input to execute the prompted function
⑦ **Date and time display area.**
⑧ **Status indication area:**
Indication of the master/slave unit of the wired controller, filter screen cleaning prompt/defrosting status indication/forced defrosting issuance prompt, operation/standby status indication.
⑨ **Swing:**
Dynamic display during setting of swing (single swing, or both swings or no swing, depending on the set air direction)
⑩ **Right function key function prompt area**
⑪**Air speed display area:**
Automatic, weak air, moderate air, strong air; the fan mode has no automatic air

Parts and Functions

•Explanation of the icons of the wired controller

	Intelligent mode		Time setting
	Heating mode		Weekly timer
	Cooling mode		Sleep
	Dehumidification mode		Left-right swing
	Fan only mode		Up-down swing
	Energy conservation function		Swing function
	Fault		Air change
	Force		Children lock
	Mute		Health

•Display and adjustment of air speed

1. Default air speed upon initial energization

Mode	Cooling	Heating	Intelligent	Dehumidification	Fan
Air speed	Strong air	Weak air	Automatic air	Automatic air	Weak air

2. Press the "left-right"key to set air speed

Strong air: Moderate air: Weak air:

Automatic: i.e. automatic cyclic display in weak→moderate→strong→weak air.

3. In the fan mode, automatic air is unavailable. The other displays are the same with the above.

4. For some models, the right function key is the "air speed?key (i.e. the bottom right corner of the interface displays "speed", so air speed is adjusted using the right function key, instead of left-right direction key.

Operation

3.Time setting of timing switch

A. After the timing items for week have been set, each group of set timing information displays 5 seconds cyclically; when it is displayed in the timing information group, press the "Downward"key to initiate the time setting of the timing switch of the current group;

B. The cursor is flickering where it stays; when the right function key, as an "Enter"key, is pressed, the cursor becomes static, which indicates that it is in the adjustment state; press the upward-downward key to adjust the time and temperature. After adjustment of time and temperature, move the cursor leftward and rightward to confirm the time and temperature.

C. For adjustment of time, keep the "Upward"key or "Downward"pressed down for 5s, the clock change will accelerate, with acceleration frequency of 10times/s.

D. During flicker of the cursor, move upward, downward, leftward or rightward to select the circle below; use the right function key, as an "Enter"key, to confirm or cancel the setting; ◉represents setting valid and ○ represents setting invalid.

E. If ◉is present in a timing item containing week, this means the corresponding timing information is valid.

4. Deletion of timing information

If, in a "Weekly timer"interface, the cursor is at" ⊕ "press the leftward-rightward key to select ⊖; then press "Enter"key to pop out the window as shown in Figure 4. Then press the left key or right key to delete or retain the timing information.

Figure 4

5. Timing switch on/off conflict prompt: if the timing has been set in such a way that timing on/off setting conflicts occur at the same time on the same day, those shown in Figure 5 will pop out.

Note: In the time setting state of week timing(cursor still), if no order input for 1 minute, screen saver will be activated and it will automatically return to main interface; In which state, non-conflicting orders are effective and otherwise no interface popping out; Latter input conflicting orders are ineffective with NON-SET state displaying

Operation

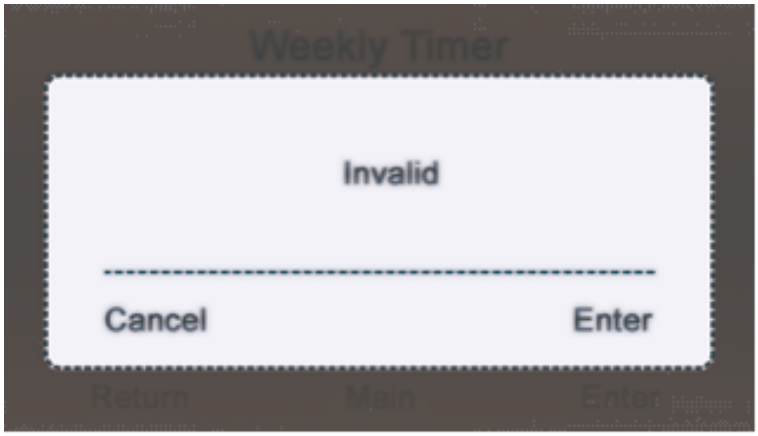


Figure 5

6. Prior to setting of weekly timer, please make time setting through main interface→ Menu→ Time interface.

7. The slave unit of the wired controller has no setting of weekly timer.

8. Weekly timer setting done, it needs to exit the weekly timer interface to execute the order.

•Current clock setting

1. Proceed through main interface→Menu→Time→"Enter" key to enter, which is shown in Figure 6,

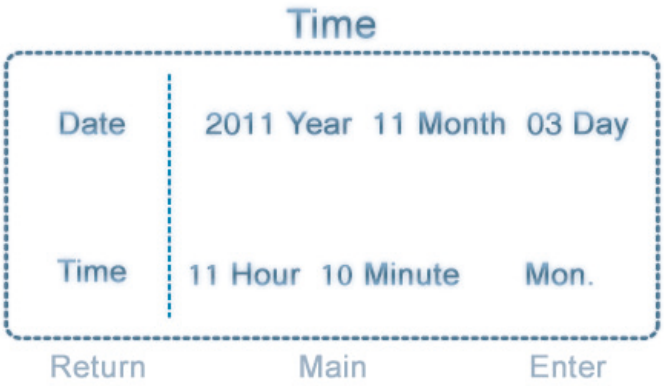


Figure 6

2. Default setting starts with the "Year"value, press the "Rightward key:to select "Year"-Month"→"Day"→"Hour"→"Minute"→"Week";or press the "Leftward key"to select "Week"→"Minute"→"Hour"→"Day"→"Month"→"Year"

3. When the time to be changed has been selected, press the "Upward key"or "Downward key"to adjust the time;

4. After all the times have been adjusted, press "Enter"key to complete the setting.

Operation

•Service setting

1. Proceed through main interface→Menu→Other→enter password→press "Enter"key→Service Set→press "Enter"key to initiate the setting, which is shown in Figure 7.

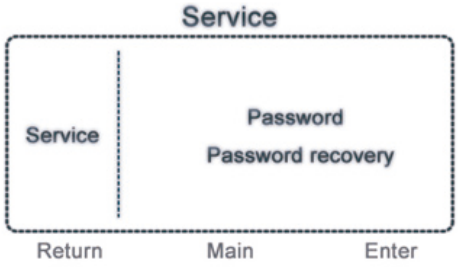


Figure 7

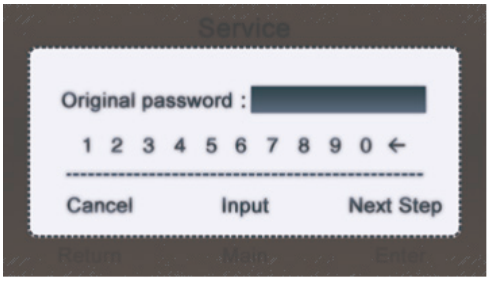


Figure 8

2. Password setting

A.Common users are provided with a four-digit password which is initially 1234; high-class users are provided with a six-digit password 841226 which can be operated by the technical personnel only.

B. Press the "Upward"key or "Downward"key to select "Password"and press "Enter"key to initiate password setting, which is shown in Figure8. Password setting is intended for changing only the password of a common user.

C.Press the "Leftward"key and "Rightward"key to select in the line of numbers; press the "Input"key to fix the selected numbers in the password box. When password entry is completed, press the right key to proceed with "Next step" If the original password is input incorrectly, a window prompting "Wrong password"will pop out as shown in Figure 9. Press "Enter"or "Cancel"in this window to return to the figure 8.

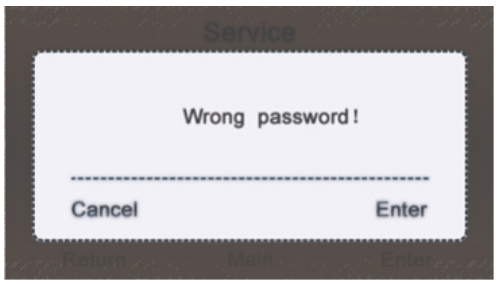


Figure 9

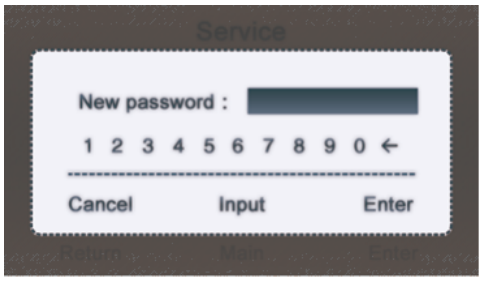


Figure 10

D.If the "Original password"is entered successfully, a window will pop out as shown in Figure 10 prompting "New password? enter the password in the same way as described above and then press "Enter"key again to confirm successful setting of new password or press "Cancel" key to cancel the password setting.

Operation

E. If the new password has been set successfully, a window prompting "New password set Successfully!", as shown in Figure 11 will appear; press "Enter"or "Cancel"to return to the previous menu

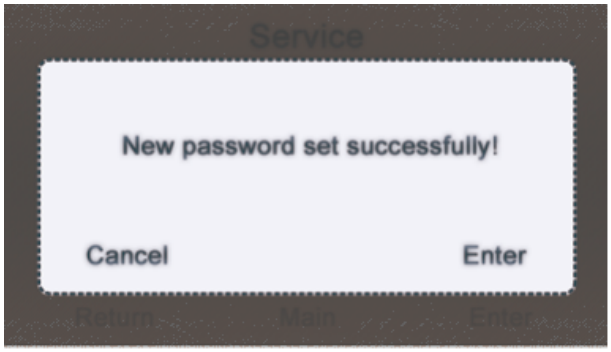


Figure 11

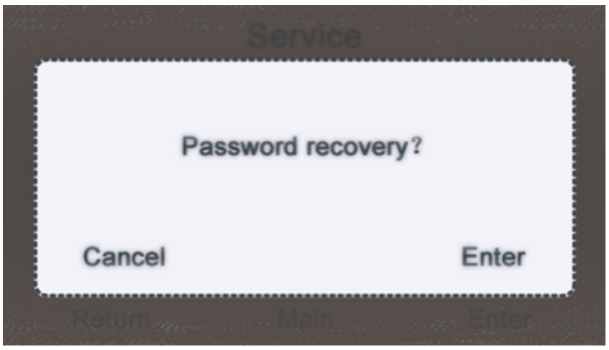


Figure 12

3. Restore the initial password

A. Select "Password recovery" as shown in Figure 7 and then press "Enter" key to enter the interface as shown in Figure 12; press the left key "Cancel" or the right key "Enter" to cancel this operation or confirm restoration of the initial password.

B. This operation here is used for restoring only the password of a common user

•Fault code query:

Proceed through main interface→Menu→Other→enter password→press "Enter" key→Error code→enter 14. The password entry interface is shown in Figure 13 and the entry method is the same as password setting.

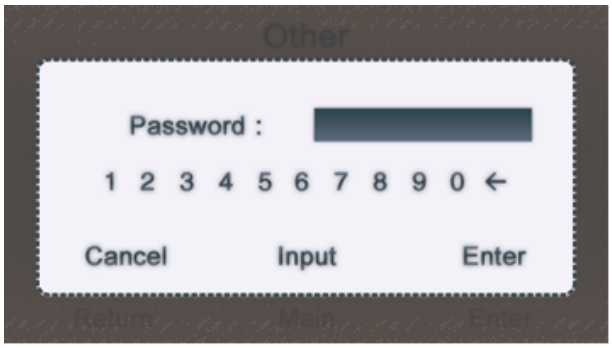


Figure 13

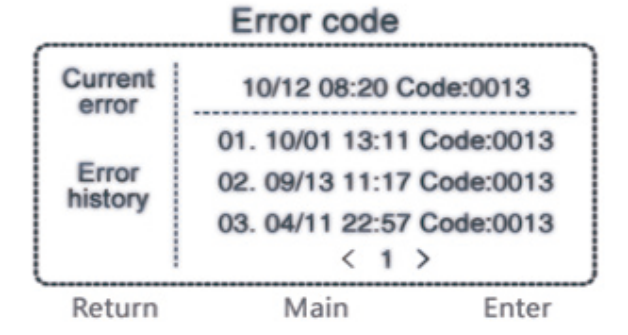


Figure 14

1. Use the "Leftward"key and "Rightward"key to check the fault codes inside the unit; where <1> can be 1 to 16, which is the address code within the wired controller group.

2. In the current interface, keep both the "Left"key and "Right"key pressed down for 5 seconds to clear the historic faults record.

Operation

3. A common user can view the current faults and historic faults; a high-class user can view 10 historic faults, using the "Downward" key and "Upftward" key. If a common user presses the "Downward" key, a window as shown in Figure 15; a high-class user can enter his/her password to view ten historic faults.

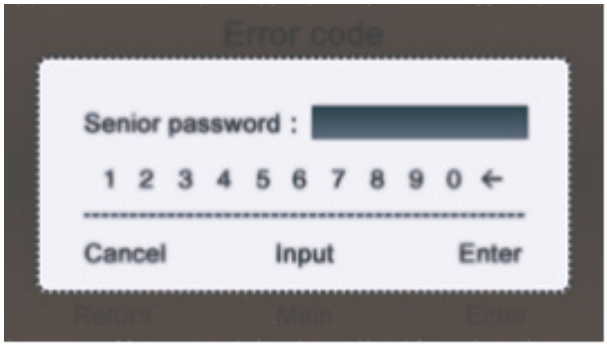


Figure 15

•Air direction setting

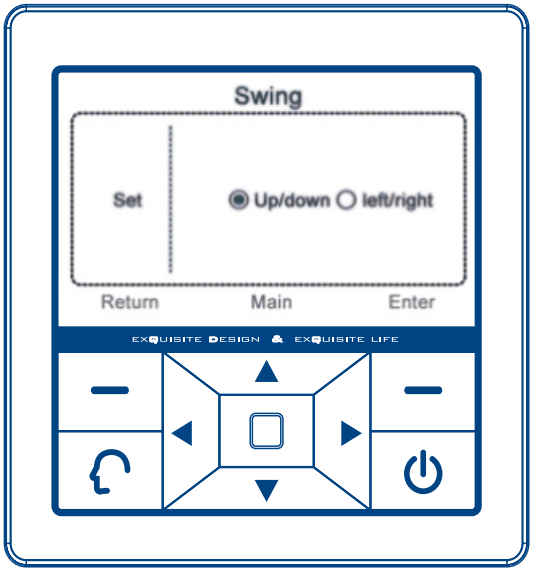


Figure 16

1. Proceed through main interface→Menu→Swing→press "Enter" key; the default air direction is up/down. If a left/right air deflector is being controlled, the "Left/right?option can be selected.
2. If only the left/right direction is selected when setting the swing function, only the left/right air deflector will swing; if only the up/down direction is selected when setting the swing function, only the up/down air deflector will swing; if both the left/right direction and up/down direction are selected, both the left/right air deflector and up/down air deflector will swing (for different models, some units have only the left/right air deflector or up/down air deflector; the setting needs to be made consistent with the specific model).
3. ◉ Indicates "Selected" ○ indicates "Unselected?
4. If both the up/down direction and left/right direction are not selected, the bottom right corner of the main interface will display the air speed; Use the right key to switch the air speeds.

Operation

•Sleep setting

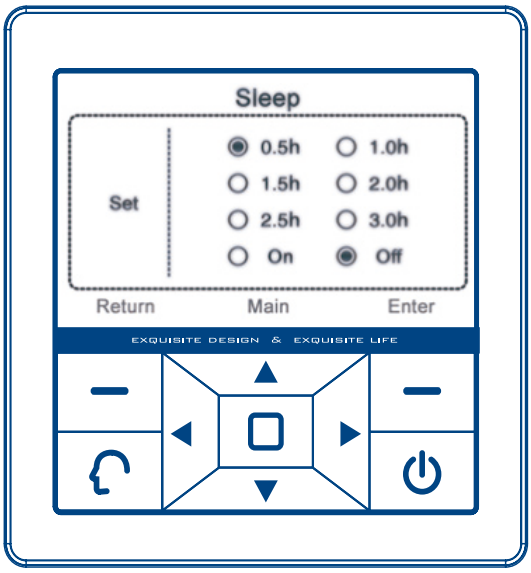


Figure 17

1. Proceed through main interface→Menu→Sleep→press "Enter" key to initiate this mode; The default state is shutdown.
2. Use the up ,down, left and right keys to adjust the cursor; The location where the cursor stays has the circle flickering; press the "Enter" key to select the time and switch between on/off.
3. The selected time 0.5, 1, 1.5, 2, 2.5 and 3 mean that the wired controller will shut down in 0.5/1/1.5/2/2.5/3 hours from time setting.
4. If the sleep mode has been set, the main interface will have the sleep icon.
5. Prior to setting of sleep mode, please make the time setting, so that the time can be consistent with the current actual time.
6. The slave unit of the wired controller has no setting of sleep setting.
7. If wired controller is powered off, sleeping function is "OFF"; Reset the function if needed.

Operation

• Unit number setting

(This function is intended for debugging by technical personnel. The wired controller No. with no permission of address setting by indoor DIP switch setting displays grey, with access to checking and no access to changing the communication No.)

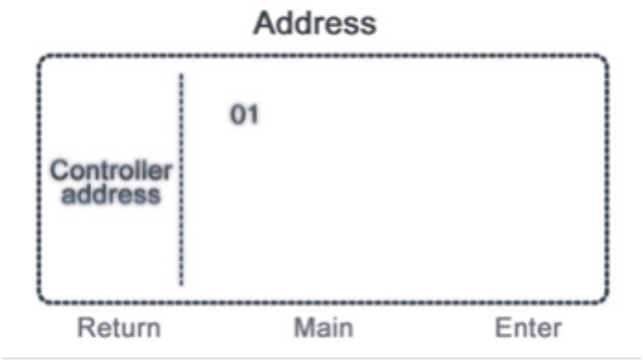


Figure 18

Figure 19

1. Proceed through main interface→Menu→Other →enter the password of the technical personnel→press "Enter" key→Addressing→press "Enter" to enter the interface as shown in Figure 18.
2. Wired controller number, as shown in Figure 18, is set by DIP switch of indoor unit. If one wired controller controls one unit, there is only 01; it displays the unit numbers corresponding to the indoor units in operation.
3. When in the interface as shown in Figure 18, if there are more than one wired controller numbers, use the "Upward" "Downward" "Leftward"and "Rightward" keys to select a unit number and press "Enter" key; Then the POP window as shown in Figure 19 will appear.
4. When the window in Figure 19 has popped out, the communication unit number of this controller can be set (communication addresses between the outdoor unit and indoor unit) 1-64; use the leftward and rightward keys to adjust the unit digits and tens digits and use the upward and downward keys to adjust the values on the corresponding digits; then press "Enter" or "Cancel?to return to the interface as shown in Figure 18.
5.The controller address equals the corresponding value of indoor unit's group address dial code plus 1.

• Mode lock setting

1. Proceed through main interface→Menu→Other →enter password→Mode→press "Enter" key. The default state is "Normal".
2. In single cold mode, only cooling, dehumidification and fan modes can be executed and the intelligent key is ineffective. In single heating mode, only heat and fan modes can be executed and the intelligent key is ineffective. In normal mode, the heating, cooling, dehumidification, fan and intelligent modes can be executed.
3.The location where the cursor stays has the circle flickering; use the leftward and rightward keys to adjust the cursor; press the cursor where it stays to select◉; ◉ indicates "Selected" and ○ indicates "Unselected"

Operation

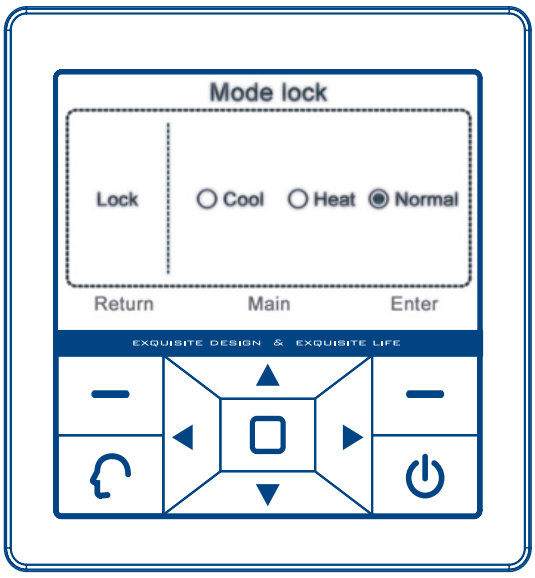


Figure 20

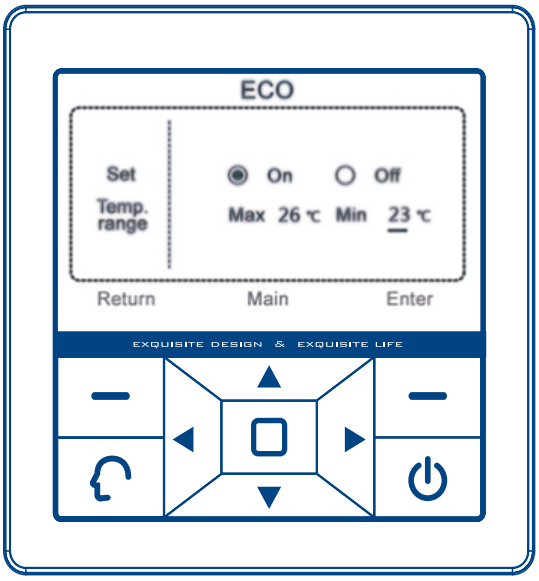


Figure 21

• Mode lock setting

1.Proceed through main interface→Menu→ECO→press the "Enter" key to initiate. The default state is shutdown.
2. Upper temperature limit---the maximum temperature value that can be set for heating mode;
Lower temperature limit ---the minimum temperature value that can be set for cooling/dehumidification mode.
3. Use the leftward and rightward keys to adjust the cursor;the circle flickers where the cursor stays; indicates "Unselected" press "Enter" and it will change to which indicates "selected".
4. When "Off" is selected, temperature setting is not constrained by energy conservation setting; The range of temperature adjustment is 16* to 30*; if "On" is selected, temperature setting is constrained with energy conservation setting.
5. When it has been adjusted to the values corresponding to "Upper limit" or "Lower limit" using leftward and rightward keys, an underline will appear below the temperature value and now the "Upward" and "Downward"keys can be used to adjust the temperature; the maximum and minimum temperature values are 16^{O}Cand 30^{O}C.
6. If energy conservation is on, the main interface will display the icon for energy conservation.

Operation

• Additional functions

Figure 22

1. Proceed through main interface→Menu→Addition→press "Enter" key to initiate. The default state is shutdown.
2. Ventilation: Some models have the air ventilation and some models do not. For those models that do not have this function, the ventilation setting will not be usable.
3. Health: Some models have the health function and some models do not. For those models that do not have this function, the health setting will not be usable.
4. Quiet: Some models have the quiet function and some models do not. For those models that do not have this function, the quiet setting will not be usable.
5. Turbo: Some models have the turbo function and some models do not. For those models that do not have this function, the turbo setting will not be usable.
6. When the children lock is on, it automatically returns to the main interface and all the keys are unusable. The main interface displays the icon for children lock; keep both the leftward and rightward keys pressed down for 5 seconds and the children lock icon will disappear, and now the children lock is disengaged and all the keys are usable.
7. O/D defrost is effective in the heating mode; The O/D defrost command is sent to indoor unit.

Note: for some models, the turbo and quiet functions are reserved functions and are in grey color.

• Special parameters

This function is a reserved function and is temporarily in color grey

• Filter screen cleaning

1. If the state indication area of the main interface displays "filter " filter cleaning shall be performed.
2. When "filter" is being displayed, keep both the upward and downward keys pressed down for 5 seconds to cancel the "filter"icon.

• Temperature compensation

(this function is intended for debugging by technical personnel and can only be entered by high-class users)

Operation

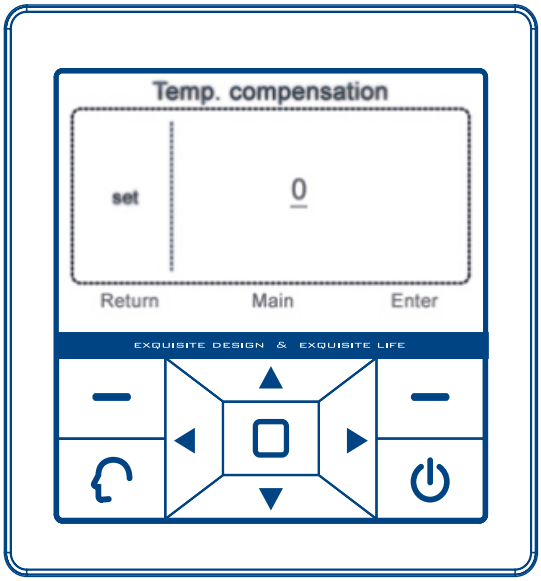


Figure 23

1. Proceed through main interface→Menu→Other→enter the high-class user password→Temp. Compensation→press "Enter" to initiate.
2. When in this interface, use the upward and downward keys to set the temperature value; the range of Celsius degrees is -4^{O}C to 4^{O}C; the default value is 0; the range of Fahrenheit degrees is -7 to +7.Pressing "Enter" value change is done;If pressing "Return" original value is retained.

• Additional functions

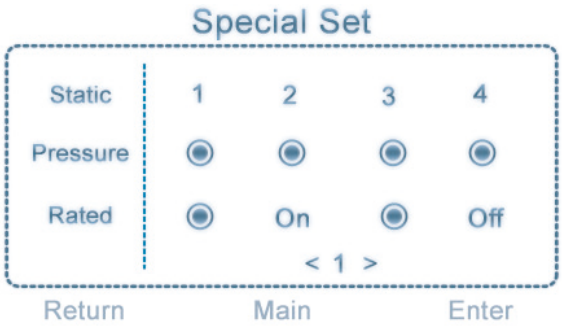


Figure 24

1.Special set is only effective to some types, with order ineffective if no such function equipped in the corresponding indoor units.
2.When powered on, the default static pressure grade is 1 and no rated value displayed; when communication stabilized (about 3 minutes later), static pressure and rated state can be checked.
3.Press up/down key to switch among Static pressure, rated value, wired controller group No.; press left/right key to move the cursor in every line and then press OK key to confirm the setting.

Operation

4.The circle flashes where the cursor locates when choosing static pressure and rated value; if the cursor moves to wired controller group No. location, the No. will be underlined and the range of No. is 1-16.

• Detailed information

(the common user password is required for access)
1. Proceed through main interface→Menu→other→enter the password→Details→press "Enter" to initiate.
2. 063 is the address of the wired controller inside the group; if one unit is controlled by one wired controller, the default address is 01; the range of this value is 01 to 16; the Indoor address is the communication address of both indoor unit and outdoor unit, ranging from 1 to 64.
3.The wired controller address equals the corresponding value of indoor unit's group address dial code plus 1.

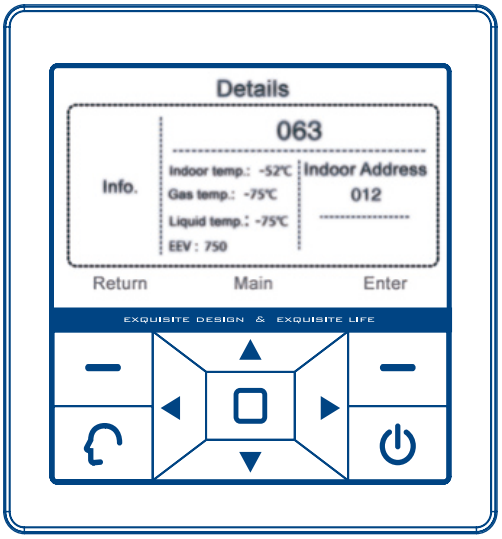


Figure 25

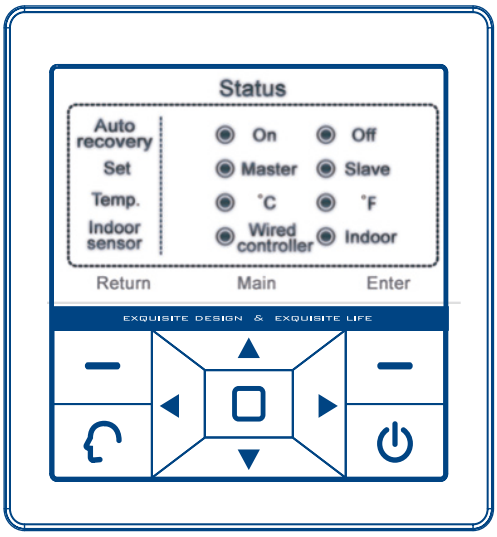


Figure 26

• State setting

(this function is intended for debugging by technical personnel and can be entered by high-class users only)
1. Proceed through main interface→Menu→Other→enter the high-class user password→Status set→press "Enter" to initiate.
2. Use the upward, downward, leftward and rightward keys to adjust the cursor; the location where the cursor stays has the circle flickering; press "Enter" key to change it to◉, and the setting is completed. ◉ indicates "Selected" and ○ indicates "Unselected"
3. Auto recovery: if this function is on, the state before power failure will be in the memory; after restoration of power failure, the unit will continue operating in the state as before the power failure. If this function is off, the state will not be memorized; if the unit is energized after power failure, it is in shutdown state; after startup, the default mode is in automatic mode as automatic air 24*. If the auto recovery is set to be on and the sleep function is also set, in case of accidental power failure, the unit is in shutdown state when the power supply is resumed.
4. Master/slave setting: This setting is used for master/slave control of the wired controller and the master controller and slave controller are set separately.
5. Unit of temperature: Temperature is set in the units of Celsius degree and Fahrenheit degree.

Operation

6. Indoor sensor: Set the temperature source collection for ambient temperature sensor.

Differences between the function of the master wired controller and slave wired controller:

Comparison item	Master wired controller	Slave wired controller
Function	All functions	1.Air direction setting,time setting,mode lock,indoor sensor,auto recovery and ECO shall be consistent with the master wired controller. 2.Weekly timer, sleep setting, addressing, special set and temp. compensation are in grey color and are not operable.

Screen saver:

If there is no operation for one continuous minute, the luminance of the wired controller will be reduced to protect the screen and save energy. Press any key to terminate the function of screen saver and recover the pre-existing luminance.

The handling of Centralization/Lock mode:

If central controller is connected in the AC system,

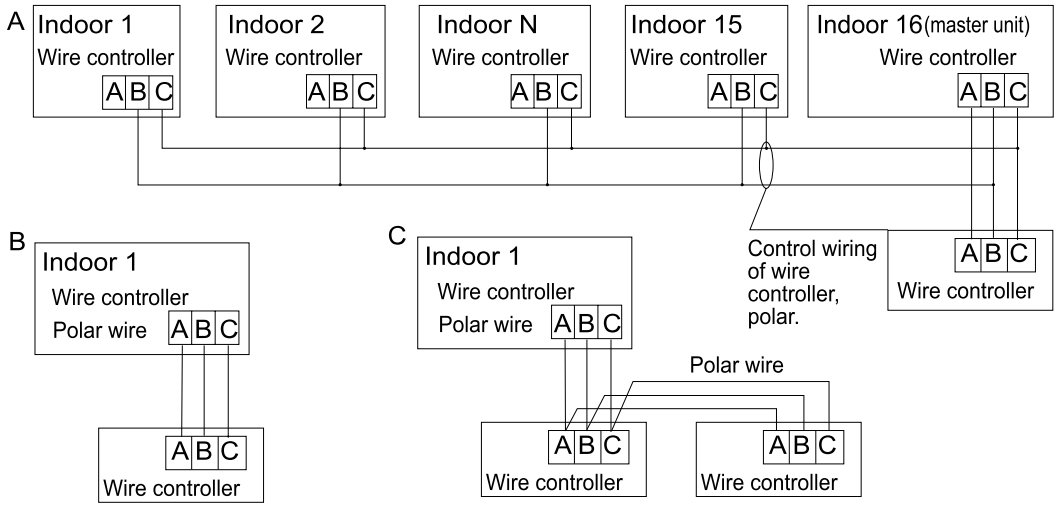
1. If there displays the icon of in the main interface, the centralization mode is activated in the central controller in which only startup/shutdown keys can be operated and other keys are inoperable. If there is no operation for one continuous minute, the screen saver function will be initiated with the luminance of the wired controller reduced. Press any key to recover the pre-existing luminance.

2. If there displays the icon of in the main interface, the lock mode is set in the central controller with no keys operable. If there is no operation for one continuous minute, the screen saver function will be initiated with the luminance of the wired controller reduced. Press any key to recover the pre-existing luminance.

If or , weekly timer and sleep setting is invalid.

Operation

• Wiring connections of wire controller:



There are three methods to connection wire controller and the indoor units:
A.One wired controller can control max. up to 16 sets of indoor units, and 3 pieces of polar wire must connect the wire controller and the master unit (the indoor unit connected with wire controller directly), the others connect with the master unit through 2 pieces of polar wire.
B. One wire controller controls one indoor unit, and the indoor unit connects with the wire controller through 3 pieces of polar wire.
C. Two wired controllers control one indoor unit. The wire controller connected with indoor unit is called master one, the other is called slave one. Master wire controller and indoor unit; master and slave wire controllers are all.
Note:For some slim duct type and middle ESP duct type (The PCB spare part number of which is 0151800175 or 0151800173), there will be a different wiring method, please refer to the service manul to get the wiring details.

• Communication wiring:

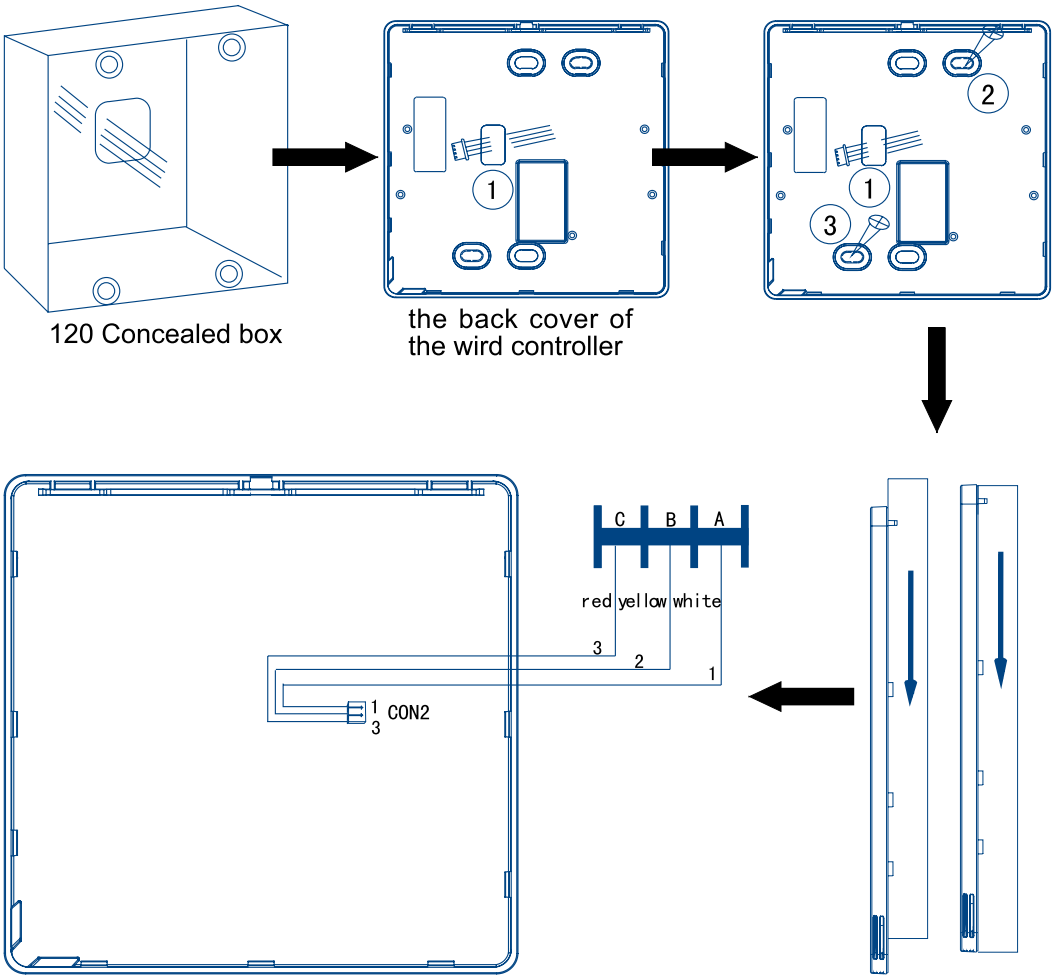
Communication wiring length(m)	Dimensions of wiring
< 100	0.3mm^{2}x3-core shielded wire
⩾ 100 and <200	0.5mm^{2}x3-core shielded wire
⩾ 200 and <300	0.75mm^{2}x3-core shielded wire
⩾ 300 and <400	1.25mm^{2}x3-core shielded wire
⩾ 400 and <500	2mm^{2}x3-core shielded wire

* One side of the shielded sheet of communication wire must be earthed.

Installation Of Wire Controller

• Installation of wire controller:

1. Pass the communication cable through the hole of the concealed box.
2. Pass the cable through the back cover of the wired controller at the place No.1.
3. Mounted the back cover on the concealed box by screws.
4. Plug the terminals of the communication cables on the corresponding connectors, and slide the front cover of the wirde controller from up to down,then fixed。
5. White wire, connected to indoor A, Yellow wire,connected to indoor B,
   Red wire,connected to indoor C



Haier SERVICE MANAUL

Wall Mounted Type

DC Inverter SUPER MATCH

Model No. AF09AB1HRA

AF09AS1ERA

⚠WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public.
It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or Repair the product or products dealt with in this service information by anyone else could result in serious injury or death

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Haier Group **Version：V1** **Date：2013-11-25**

2.Features

DRY function: Make dehumidifying in the room when the unit is working in the "DRY" mode

24 Hour timer: Use the timer function to set on,or off,or from on to off,or from off to on

Auto restart: The function permits automatic return to previous peration conditions

Easy clean design: The panel is easy to wash and the airflow vents can be detached without any special tools for quick cleaning of the inside of the air conditioner

Anti-mold filter: Catches most small particles and remove unpleasant odors effectively

Sleep mode: The setting temprature and the indoor noise can be adjusted to a more comfortable level when you set the "sleep mode"during night sleep

4 Fan setting: Slect the fan speed LO,MED,HI,AUTO

Semi auto mode: adjust the operation automatically according to surrounding temprerature

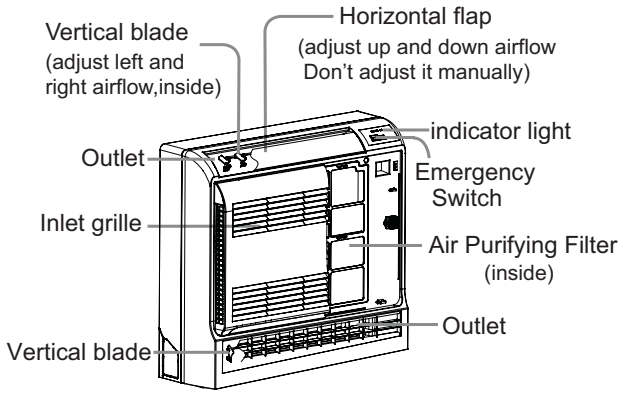
Child lock: Avoid the child's wrong operation on the remote controller

Power mode: Quick cooling or heating

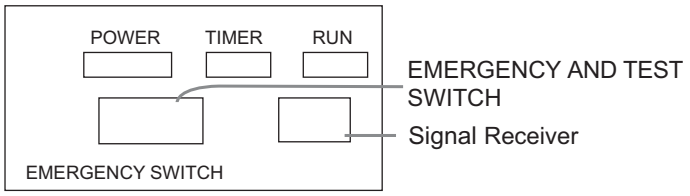
Soft mode: Lower noise operation condition

Parts and Functions

Indoor Unit



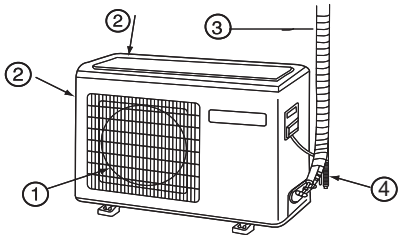
Please be subject to the actual produce purchased the above picture is just from your reference



EMERGENCY SWITCH
- ON/OFF button
- Push once to start operation,push once again to stop it.
- Operation is set to AUTO,air flow is set to AUTO fan.
- Use when remote controller is not available.

Signal Receiver
- Upon receiving a signal, there is a receiving sound.

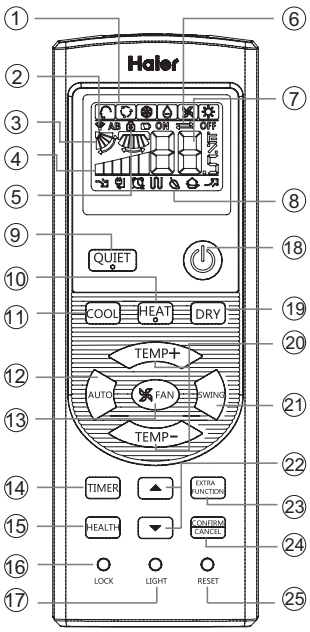
Outdoor Unit



① OUTLET ③ CONNECTING PIPING AND ELECTRICAL WIRING
② INLET ④ DRAIN HOSE

Please be subject to the actual produce purchased the above picture is just from your reference

Remote controller



1. Mode display

Operation mode	AUTO	COOL	DRY	HEAT	FAN
Remote controller					

2. Signal sending display
3. SWING display
4. FAN SPEED display

5. LOCK display
6. TIMER OFF display
   TIMER ON display
7. TEMP display

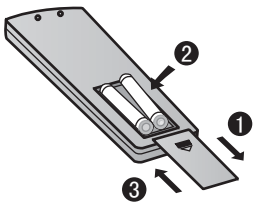
8.Additional functions display

Operation mode	QUITE	SLEEP	Supplemented electrical heating	HEALTH	POWER
Remote controller					

9. QUIET button
10. HEAT button
11. COOL button
12. AUTO button
13. FAN button
14. TIMER button
15. HEALTH button
16. LOCK button
Used to lock buttons and LCD display.
17. LIGHT button
Control the lightening and extinguishing of the indoor LED display board.
18. POWER ON/OFF button
19. DRY button
20. TEMP button
21. SWING button
22. HOUR button
23. EXTRA FUNCTION button
Function: Air sending-->Healthy airflow position1-->Healthy airflow position 2 -->Restore the original flap position -->Right & left air airflow-->A-B yard-->10 and heating symbol displayed simultaneously-->Sleeping-->Electrical heating-->Refresh air(reserved function) -->Power-->Fahrenheit/Celsius mode conversion
24.CANCEL/CONFIRM button
Function: Setting and cancel to the timer and other additional functions.
25. RESET button
When the remote controller appears abnormal, use a sharp pointed article to press this button to reset the remote

Healthy function is not available for some units.

Loading of the battery



1 Remove the battery cover;
2 Load the batteries as illustrated. 2 R-03 batteries, resetting key (cylinder);
3 Be sure that the loading is in line with the" + "/"-";
4 Load the battery,then put on the cover again.

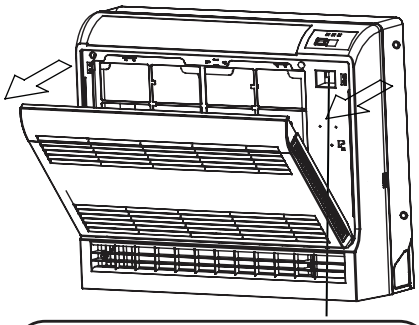
Note:
- The distance between the signal transmission head and the receiver hole should be within 7m without any obstacle as well.
- When electronic-started type fluorescent lamp or change-over type fluorescent lamp or wireless telephone is installed in the room, the receiver is apt to be disturbed in receiving the signals, so the distance to the indoor unit should be shorter.
- Full display or unclear display during operation indicates the batteries have been used up. Please change batteries.
- If the remote controller can't run normally during operation,please remove the batteries and reload several minutes later.

Hint:
Remove the batteries in case won't be in use for a long period. If there is any display after taking-out, just press reset key.

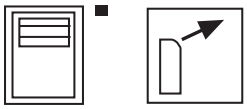
Parts and Functions

CAUTION

Before opening the front grille, be sure to stop the operation and turn the breaker OFF.
Do not touch the metal parts on the inside of the indoor unit, as it may result in injury.



Air outlet selection switch



- Regardless of the operating mode or situation, air blows from the upper air outlet.
- Use this switch when you do not want air coming out of the lower air outlet. (While sleeping etc..)

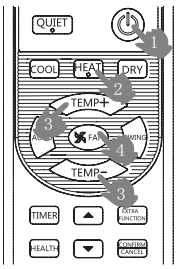
- Air conditioner automatically decides the appropriate blowing pattern depending on the operating mode and situation.
- During Dry and Fan mode, so that cold air does not come into direct contact with people, air is blown upper air outlet.

Operating mode	Situation	Blowing pattern
Cool mode	When the room has become fully cool.	So that air does not come into direct contact with people, air is blown upper air outlet, room temperature is equalised
	At start of operation or other times when the room is not fully cooled.	Air is blown from the upper and lower air outlets for high speed cooling during Cool mode, and for filling the room with warm air during Heat mode.
Heat mode	At times other than below. (Normal time.)	
	At start or when air temperature is low.	So that air does not come into direct contact with people.Air is blown upper air outlet.

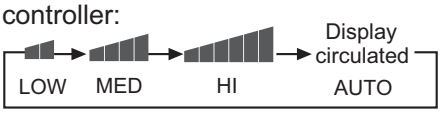
Operation

Base Operation

Remote controller



1. Unit start
   Press ON/OFF on the remote controller, unit starts.
2. Select operation mode
   COOL button:Cooling mode
   HEAT button: Heating mode
   DRY button: Dehumidify mode
3. Select temp.setting
   Press TEMP+ / TEMP− button
   TEMP+ Every time the button is pressed, temp.setting increase 1℃,if kept depressed, it will increase rapidly
   TEMP− Every time the button is pressed, temp.setting decrease 1℃,if kept depressed, it will decrease rapidly
   Select a desired temperature.
4. Fan speed selection
   Press FAN button. For each press, fan speed changes as follows:
   Remote controller:



Air conditioner is running under displayed fan speed. When FAN is set to AUTO, the air conditioner automatically adjusts the fan speed according to room temperature.

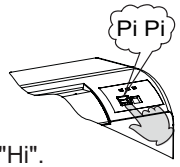
Operation Mode	Remote Controller	Note
AUTO		Under the mode of auto operation, air conditioner will automatically select Cool or Heat operation according to room temperature. When FAN is set to AUTO the air conditioner automatically adjusts the fan speed according to room temperature.
COOL		
DRY		In DRY mode, when room temperature becomes lower than temp.setting+2°C, unit will run intermittently at LOW speed regardless of FAN setting.
FAN		In FAN operation mode,the unit will not operate in COOL or HEAT mode but only in FAN mode, AUTO is not available in FAN mode. And temp. setting is disabled In FAN mode, sleep operation is not available.
HEAT		In HEAT mode, warm air will blow out after a short period of the time due to cold-draft prevention function.When FAN is set to AUTO, the air conditioner automatically adjusts the fan speed according to room temperature.

Emergency operation and test operation

Test operation:

Test operation switch is the same as emergency switch.

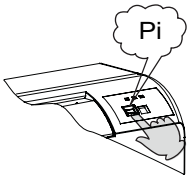
- Use this switch in the test operation when the room temperature is below 16°C, do not use it in the normal operation.
- Continue to press the test operation switch for more than 5 seconds. After you hear the "Pi" sound twice, release your finger from the switch: the cooling operation starts with the air flow speed "Hi".



Operation

Emergency Operation:

- Use this operation only when the remote controller is defective or lost.
- When the emergency operation switch is pressed, the" Pi "sound is heard once, which means the start of this operation.



- In this operation, the system automatically selects the operation modes, cooling or fan or heat, according to the room temperature.
- When machine is running in emergency, the set value of temperature and wind speed couldn't be altered; meanwhile, it can't operate for dehumidifying or under timing mode.

Air Flow Direction Adjustment

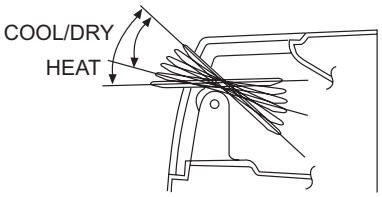
1.Adjusting the flap

Status display of air flow:

Pos.1 Pos.2 Pos.3

Pos.4 Pos.5 Pos.6 (Auto swing)

- When SWING is selected, the flap swinging range depends on the operation mode.(See the figure.)



2.Left and right air flow adjustment (manual)

Move the vertical blade by a knob on air conditioner to adjust left and right direction.

Cautions:

- Do not try to adjust the flap by hand. When adjusting by hand, the mechanism may not operate properly or condensation may drip from air outlets. When adjusting the flap by hand, turn off the unit, and use the remote controller to restart the unit.
- When adjusting the flap by hand,turn off the unit.
- When humidity is high,condensate water might occur at air outlet if all vertical louvers are adjusted to left or right.
- It is advisable not to keep horizontal flap at downward position for a long time in COOLor DRY mode , otherwise, condensate water might occur.

Note:

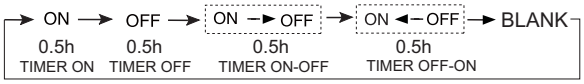
When restart after remote turning off, the remote controller will automatically memorize the previous set swing position.

Timer On/Off On-Off Operation

1.After unit starts, select your desired operation mode.

2.Press TIMER button to change TIMER mode. Every time the button is pressed, display changes as follows:

Remote controller:



Then select your desired TIMER mode (TIMER ON or TIMER OFF or TIMER ON-OFF). " ON "or " OFF "will flash.

3.Press ▼ / ▲ button to set time.

▲ Press the button for each time, setting time in the first 12 hours increased by 0.5 hour every time, after 12 hours,increased by 1 hour every time.

▼ Press the button for each time, settiing time in the first 12 hours decreased by 0.5 hour every time, after 12 hours,decreased by 1 hour every time.
It can be adjusted within 24 hours.

4.Confirm timer setting

After adjust the time,press CONFIRM CANCEL button and confirm the time ON or OFF button will not flash any more.

5.Cancel timer setting

Press the timer button by times until the time display eliminated.

Hints:

After replacing batteries or a power failure happens, time setting should be reset.

According to the Time setting sequence of TIMER ON or TIMER OFF, either Start-Stop or Stop-Start can be achieved.

TIMER On/Off Operation

- Confirming your setting

After setting correct time, press CONFIRM CANCEL button to confirm " ON "or" OFF "on the remote controller stops flashing.

Time displayed: Unit starts or stops at x hour.

Hints:

After replacing batteries or a power failure happens, time setting should be reset. Remote controller possesses memory function, when use TIMER mode next time, just press CONFIRM CANCEL button after mode selecting if time setting is the same as previous one.

Operation

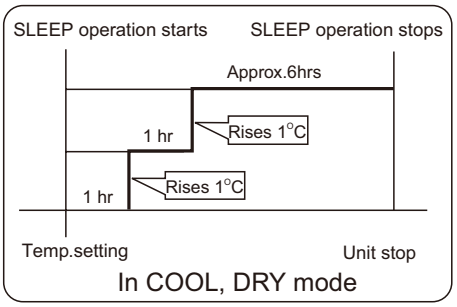
Sleep Operation

Press EXTRA FUNCTION button to enter additional options, when cycle display to , will flash. And then press CONFIRM CANCEL enter to sleep function.

Operation Mode

1. In COOL,DRY mode

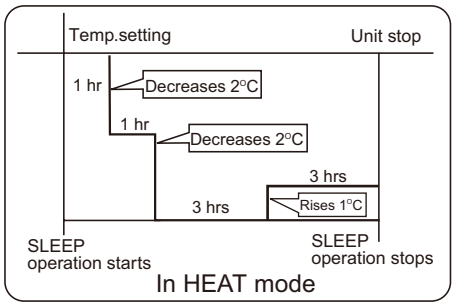
1 hours after SLEEP mode starts,temp.will become 1°C higher than temp.setting.After another 1 hours,temp.rises by 1°C futher.The unit will run for further 6 hours then stops Temp. is higher than temp.setting so that room temperature won't be too low for your sleep.



In COOL, DRY mode

2. In HEAT mode

1 hours after SLEEP mode starts,temp will become 2°C lower than temp.setting.After another 1 hours,temp decrease by 2°C futher.After more another 3 hours,temp. rises by 1°C futher.The unit will run for further 3 hours then stops.Temp.is lower than temp. setting so that room temperature won't be too high for your sleep.



In HEAT mode

3. In AUTO mode

The unit operaters in corresponding sleep mode adapted to the automatically selected operation mode.

4. In FAN mode

It has no SLEEP function.

5.Set the wind speed change when sleeping

If the wind speed is high or middle before setting for the sleep, set for lowing the wind speed after sleeping. If it is low wind, no change.

Note

When TIMER function is set, the sleeping function can't be set up .After the sleeping function is set up, if user resets TIMER function, the sleeping function will be cancelled; the machine will be in the state of timing-on.

POWER/QUIET Operation

(1) POWER Operation

When you need rapid heating or cooling, you can use this function. Press EXTRA FUNCTION button to enter additional options, when cycle display to , will flash, and then press CONFIRM CANCEL ,enter to power function. When cancel the function, please enter additional options again and to cancel power function.

(2) QUIET Operation

You can use this function when silence is needed for rest or reading. Press QUIET button, the remote controller will show , and then achieve to the quiet function. Press again this QUIET button , the quiet function will be cancelled.

Note :

During POWER operation, in rapid HEAT or COOL mode , the room will show inhomogeneous temperature distribution. Long period QUIET operation will cause effect of not too cool or not too warm.

EUROPEAN REGULATIONS CONFORMITY FOR THE MODELS

CE

All the products are in conformity with the following European provision:

- Low Voltage Directive 73/23/EEC
- Low Voltage Directive 2006/95/EC
-Electomagnetic CompatibilitY 89/336/EEC
-Electomagnetic CompatibilitY 2004/108/EC

ROHS

The products are fulfilled with the requirements in the directive 2002/95/EEC of the European parliament and of council on the Restriction of the use of Certain Hazardous Substances in Electrical and Electronic Equipment (EU RoHS Directive)

WEEE

In accordance with the directive 2002/96/CE of the European parliament, herewith we inform the consumer about the disposal requirements of the electrical and electronic products.

DISPOSAL REQUIREMENTS:

Your air conditioning product is marked with this symbol.This means that electrical and electronic products shall not be mixed with unsorted household waste. Do not try to dismantle the system yourself : the dismantling of the air conditioning system,treatment of the refrigerant, of oil and of other part must be done by a qualified installer in accordance with relevant local and national legislation. Air conditioners must be treated at a specialized treatment facility for reuse, recycling and recovery. By ensuring this product is disposed of correctly, you will help to prevent potential negative consequences for the environment and humen health. Please contact the installer or local authority for more information. Battery must be removed from the remote controller and disposed of separately in accordance with relevant local and nationl legislation.

Indoor Unit Installaion

Necessary Tools for Installation

- Driver
- Nipper
- Hacksaw
- Hole core drill
- Spanner(17,19 and 26mm)
- Gas leakage detector or soap-and-water solution
- Torque wrench (17mm,22mm,26mm)
- Pipe cutter
- Flaring tool
- Knife
- Measuring tape
- Reamer

Power Source

- Before inserting power into receptacle, check the voltage without fail.
- The power supply is the same as the corresponding nameplate.
- Install an exclusive branch circuit of the power.
- A receptacle shall be set up in a distance where the power cable can be reached. Do not extend the cable by cutting it.

Selection of Installation Place

- Place, robust not causing vibration, where the body can be supported sufficiently.
- Place, not affected by heat or steam generated in the vicinity, where inlet and outlet of the unit are not disturbed.
- Place, possible to drain easily, where piping can be connected with the outdoor unit.
- Place, where cold air can be spread in a room entirely.
- Place, nearby a power receptacle, with enough space around.
- Place where the distance of more than lm from televisions, radios, wireless apparatuses and fluorescent lamps can be left.
- In the case of fixing the remote controller on a wall, place where the indoor unit can receive signals when the fluorescent lamps in the room are lightened.

Accessory Parts

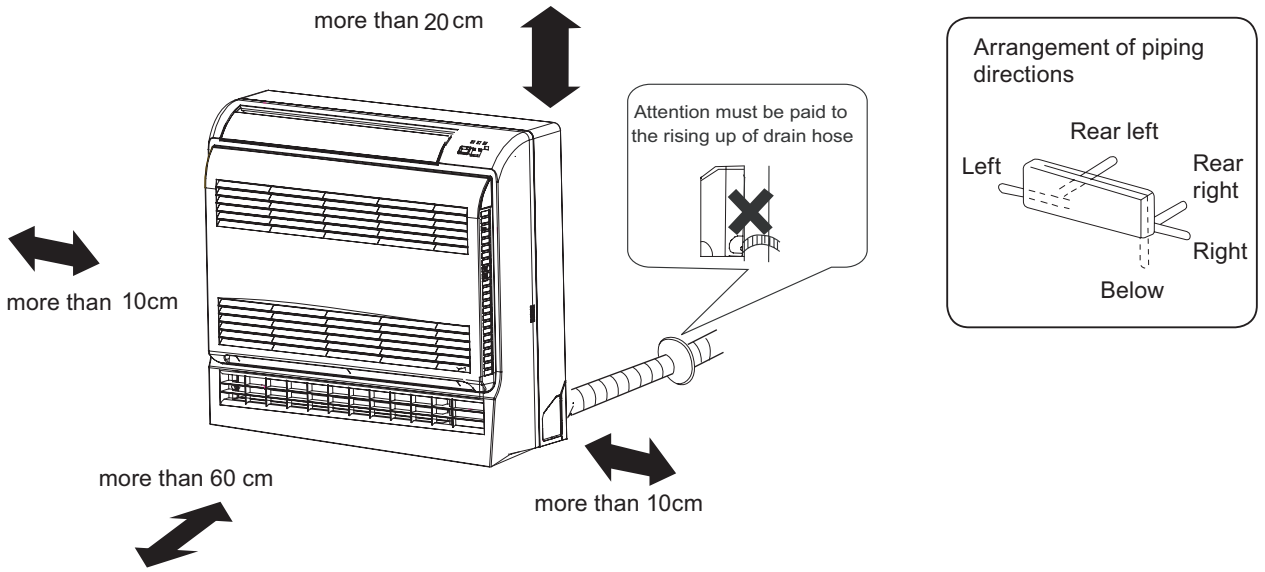
Remote controller (1)	Drain hose (1)
R-03 dry battery (2)	Plastic cap (4) Ø4X25 Screw (4)
Mounting plate (1)	Air purifying filter(Optional) (1)

Selection of Pipe

FOR 09K 12K	Liquid pipe	Φ 6.35x0.8mm
	Gas pipe	Φ 9.52x0.8mm
FOR 18K	Liquid pipe	Φ 6.35x0.8mm
	Gas pipe	Φ 12.7x0.8mm

Drawing for the installation of indoor units

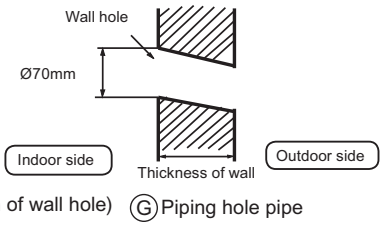
The models adopt HFC free refrigerant R410A



Indoor Unit Installation

1 Making a Hole on the Wall and Fitting the Piping Hole Cover

- Make a hole of 70 mm in diameter, slightly descending to outside the wall
- Install piping hole cover and seal it off with putty after installation

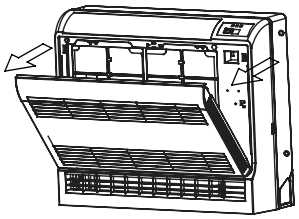


(Section of wall hole) Ⓖ Piping hole pipe

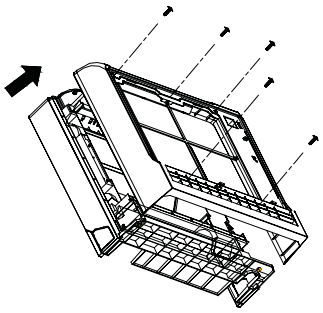
2 Installation of the Indoor Unit

Removal of Front Grille

- Hold the front panel by the tabs on the both sides and lift it until it stops with a click.



- Loosen the marked five screws and open the grille



Drawing of pipe

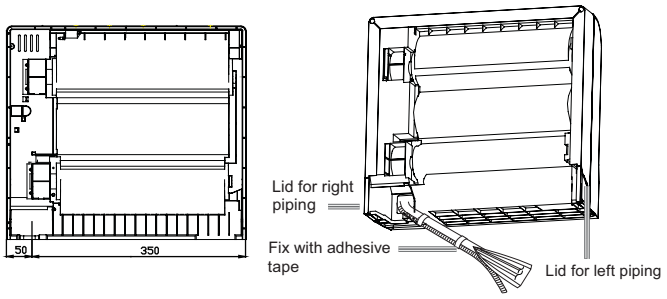
[Rear piping]

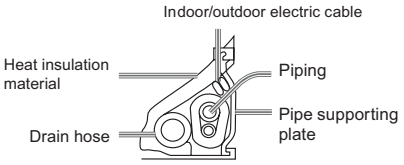
- Draw pipes and the drain hose, then fasten them with the adhesive tape

[Left · Left-rear piping]

- In case of left side piping, cut away, with a nipper, the lid for left piping.
- In case of left-rear piping, bend the pipes according to the piping direction to the mark of hole for left-rear piping which is marked on heat insulation materials.

1. Insert the drain hose into the dent of heat insulation materials of indoor unit.
2. Insert the indoor/outdoor electric cable from backside of indoor unit, and pull it out on the front side, then connect them.
3. Coat the flaring seal face with refrigerant oil and connect pipes. Cover the connection part with heat insulation materials closely, and make sure fixing with adhesive tape





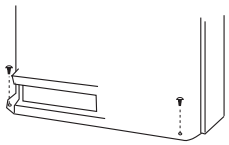
- Indoor/outdoor electric cable and drain hose must be bound with efrigerant piping by protecting tape.

[Other direction piping]

- Cut away, with a nipper, the lid for piping according to the piping direction and then bend the pipe according to theposition of wall hole. When bending, be careful not to crash pipes.
- Connect beforehand the indoor/outdoor electric cable, and then pull out the connected to the heat insulation of connecting part specially.

Fixing the indoor unit body

- Remove the front panel,then use two fastening screws to fix the unit on the floor. As the figure shown.
- Once refrigerant piping and drain piping connections are complete,fill the gap of the through hole with putty.Attach the front panel and front grille in their orginal positions once all connections are complete.



3 Connecting the indoor/outdoor Electric Cable

Removing the wiring cover

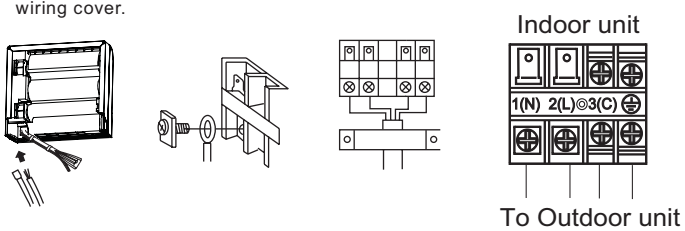
- Remove terminal cover at top right corner of indoor unit,and then take off wiring cover by removing its screws.

When connecting the cable after installing the indoor unit

1. Insert from outside the room cable into left side of the wall hole, in which the pipe has already existed.
2. Pull out the cable on the front side, and connect the cable making a loop.

When connecting the cable before installing the indoor unit

- Insert the cable from the back side of the unit, then pull it out on the front side.
- Loosen the screws and insert the cable ends fully into terminal block, then tighten the screws.
- Pull the cable slightly to make sure the cables have been properly inserted and tightened.
- After the cable connection, never fail to fasten the connected cable with the wiring cover.



Note:

When connecting the cable, confirm the terminal number of indoor and outdoor units carefully. If wiring is not correct, proper operation can not be carried out and will cause defect.

Model	AF09AS1ERA AF12AS1ERA	AF18AS1ERA
Connecting wiring	⩾4G0.75mm^2	⩾4G0.75mm^2

1. If the supply cord is damaged, it must be replaced by the manufacturer or its service agent or a similar qualified person. The type of connecting wire is H05RN-F or H07RN-F.
2. If the fuse on PC board is broken please change it with the type of T.3.15A/250VAC (Indoor).
3. The wiring method should be in line with the local wiring standard.
4. After installation, the power plug should be easily reached.
5. A breaker should be incorporated into fixed wiring. The breaker should be all-pole switch and the distance between its two contacts should be not less than 3mm.

4 Power Source Installation

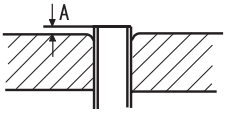
- The power source must be exclusively used for air conditioner.
- In the case of installing an air conditioner in a moist place, please install an earth leakage breaker.
- For installation in other places, use a circuit breaker as far as possible.

5 Cutting and Flaring Work of Piping

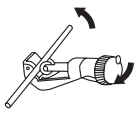
- Pipe cutting is carried out with a pipe cutter and burs must be removed.
- After inserting the flare nut, flaring work is carried out.

	Flare tool for R410A	Conventional flare tool	
	Clutch-type	clutch-type(Rigid-type)	Wing-nut type (Imperial-type)
A	0~0.5mm	1.0~1.5mm	1.5~2.0mm

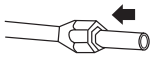
Flare tooling die



1.Cut pipe

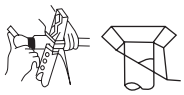


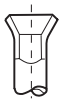
3.Insert the flare nut



2.Remove burs

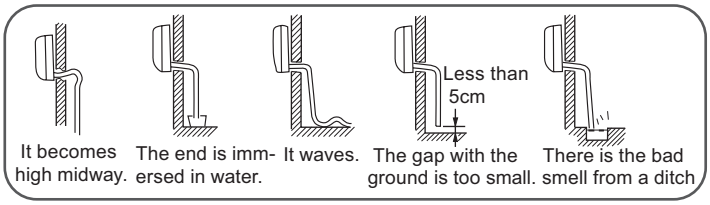
4.Flare pipe



Correct	Incorrect				
	Lean	Damage of flare	Crack	Partial	Too outside

6 On Drainage

- Please install the drain hose so as to be downward slope without fail.
- Please don't do the drainage as shown below.



- Please pour water in the drain pan of the indoor unit, and confirm that drainage is carried out surely to outdoor.
- In case that the attached drain hose is in a room, please apply heat insulation to it without fail.

7 On Drainage

Code indication	Trouble description	Analyze and diagnose
E1	Room temperature sensor failure	Faulty connector connection; Faulty thermistor; Faulty PCB;
E2	Heat-exchange sensor failure	
E4	Indoor EEPROM error	Faulty EEPROM data; Faulty EEPROM; Faulty PCB;
E7	Communication fault between indoor and outdoor units	Indoor unit- outdoor unit signal transmission error due to wiring error; Faulty PCB;
E14	Indoor fan motor malfunction	Operation halt due to breaking of wire inside the fan motor; Operation halt due to breaking of the fan motor lead wires; Detection error due to faulty indoor unit PCB;

8 Check for Installation and Test Run

■ Please kindly explain to our customers how to operate through the instruction manual.

Check Items for Test Run

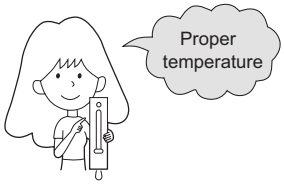
□ Put check mark ✓ in boxes

- □Gas leak from pipe connecting?
- □Heat insulation of pipe connecting?
- □Are the connecting wirings of indoor and outdoor firmly inserted to the terminal block?
- □Is the connecting wiring of indoor and outdoor firmly fixed?
- □Is drainage securely carried out?
- □Is the earth line securely connected?
- □Is the indoor unit securely fixed?
- □Is power source voltage abided by the code?
- □Is there any noise?
- □Is the lamp normally lighting?
- □Are cooling and heating (when in heat pump) performed normally?
- □Is the operation of room temperature regulator normal?

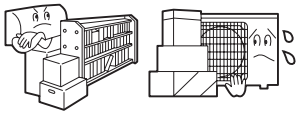
Maintenance

For Smart Use of The Air Conditioner

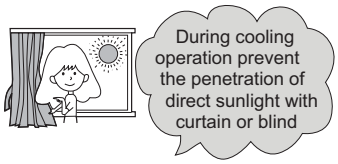
Setting of proper room temperature



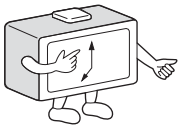
Do not block the air inlet or outlet



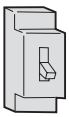
Close doors and windows during operation



Use the timer effectively



If the unit is not to be used for a long time, turn off the power supply main switch.

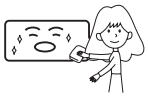


Use the louvers effectively

Remote Controller

Do not usewater, wipe the controller with a dry cloth.Do not use glass cleaner or chemical cloth.

Indoor Body



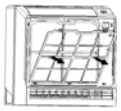
wipe the air conditioner by using a soft and dry cloth.For serious stains, use a neutral detergent diluted with water. Wring the water out of the cloth before wiping,then wipe off the detergent completely.

Do not use the following for cleaning

Gasoline,benzine,thinner or cleanser may damage the coating of the unit.

Hot water over 40℃(104℉) may cause discoloring or deformation.

Air Filter cleaning



1 Open the inlet grille by pulling it upward.

2 Remove the filter.
Push up the filter's center tab slightly until it is released from the stopper, and remove the filter downward.

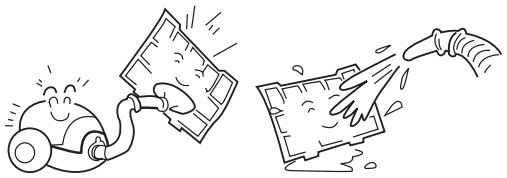
3 Clean the filter.
Use a vacuum cleaner to remove dust, or wash the filter with water. After washing, dry the filter completely in the shade.

4 Attach the filter.
Attach the filter correctly so that the “FRONT” indication is facing to the front. Make sure that the filter is completely fixed behind the stopper. If the right and left filters are not attached correctly, that may cause defects.

5 Close the inlet grille.

Clean the filter

Use water or vacuum cleaner to remove dust. If it is too dirt, clean with detergent or neutral soap water.
Rinsing with fresh water, dry the filter and re-assemble.

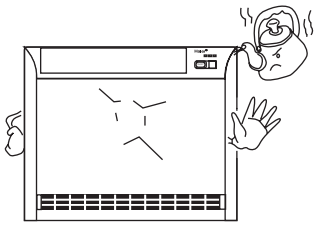


Caution

Do not wash filter in hot water above 40 °C,which will damage the filter.
Do carefully wipe the filter.

Clean the indoor(outdoor) unit

Clean with warm cloth or neutral detergent, then wipe away moisture with dry cloth. Do not use too hot water(above 40 °C), which will cause discoloration or deformation. Do not use pesticide or other chemical detergents.



Cautions

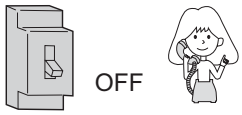
⚠ WARNING

Please call Sales/Service Shop for the Installation.

Do not attempt to install the air conditioner by yourself because improper works may cause electric shock, fire, water leakage.

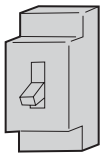
⚠ WARNING

When abnormality such as burnt-small found, immediately stop the operation button and contact sales shop.



STRICT ENFORCEMENT

Use an exclusive power source with a circuit breaker



Check proper installation of the drainage securely

STRICT ENFORCEMENT

Connect power supply cord to the outlet completely

STRICT ENFORCEMENT

Use the proper voltage

STRICT ENFORCEMENT

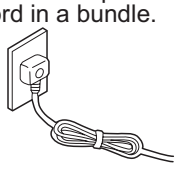
1.Do not use power supply cord extended or connected in halfway

2.Do not install in the place where there is any possibility of inflammable gas leakage around the unit.

3.Do not get the unit exposed to vapor or oil steam.

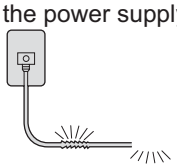
PROHIBITION

Do not use power supply cord in a bundle.



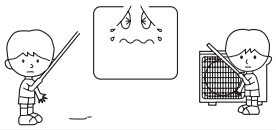
PROHIBITION

Take care not to damage the power supply cord.



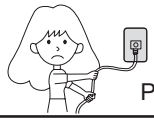
PROHIBITION

Do not insert objects into the air inlet or outlet.



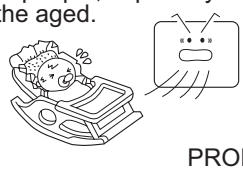
PROHIBITION

Do not start or stop the operation by disconnecting the power supply cord and so on.



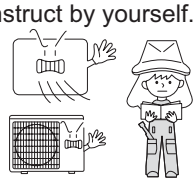
PROHIBITION

Do not channel the air flow directly at people, especially at infants or the aged.

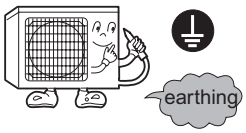


PROHIBITION

Do not try to repair or reconstruct by yourself.



Connect the earth cable.

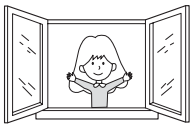


⚠ CAUTION

Do not use for the purpose of storage of food, art work, precise equipment, breeding, or cultivation.

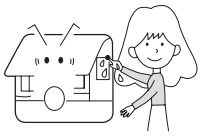
PROHIBITION

Take fresh air occasionally especially when gas appliance is running at the same time.



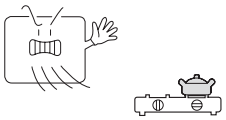
STRICT ENFORCEMENT

Do not operate the switch with wet hand.



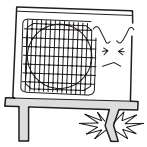
PROHIBITION

Do not install the unit near a fireplace or other heating apparatus.



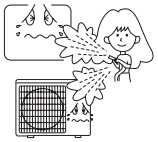
PROHIBITION

Check good condition of the installation stand



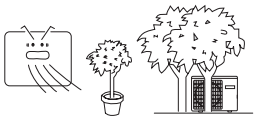
PROHIBITION

Do not pour water onto the unit for cleaning



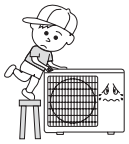
PROHIBITION

Do not place animals or plants in the direct path of the air flow



PROHIBITION

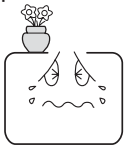
Do not place any objects on or climb on the unit.



PROHIBITION

Do not place flower vase or water containers on the top of the unit.

PROHIBITION



Trouble shooting

Before asking for service, check the following first.

	Phenomenon	Cause or check points
Normal Performance inspection	The system does not restart immediately.	• When unit is stopped, it won't restart immediately until 3 minutes have elapsed to protect the system. • When the electric plug is pulled out and reinserted, the protection circuit will work for 3 minutes to protect the air conditioner.
	Noise is heard	• During unit operation or at stop, a swishing or gurgling noise may be heard.At first 2-3 minutes after unit start, this noise is more noticeable. (This noise is generated by refrigerant flowing in the system.) • During unit operation, a cracking noise may be heard.This noise is generated by the casing expanding or shrinking because of temperature changes. • Should there be a big noise from air flow in unit operation, air filter may be too dirty.
	Smells are generated.	• This is because the system circulates smells from the interior air such as the smell of furniture, paint, cigarettes.
	Mist or steam are blown out.	• During COOL or DRY operation, indoor unit may blow out mist. This is due to the sudden cooling of indoor air.
	In dry mode,fan speed can't be changed.	• In DRY mode, when room temperature becomes lower than temp. setting+2 °C,unit will run intermittently at LOW speed regardless of FAN setting.
Multiple check		• Is power plug inserted? • Is there a power failure? • Is fuse blownout?
	Poor cooling	• Is the air filter dirty? Normally it should be cleaned every 15 days. • Are there any obstacles before inlet and outlet? • Is temperature set correctly? • Are there some doors or windows left open? • Is there any direct sunlight through the window during the cooling operation?(Use curtain) • Are there too much heat sources or too many people in the room during cooling operation?

Cautions

- Do not obstruct or cover the ventilation grille of the air conditoner.Do not put fingers or any other things into the inlet/outlet and swing louver.

This appliance is not intended for use by persons (including children) with reduced physiced, sensory or mental capabilities or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of appliance by person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.

Specifications

- The refrigerating circuit is leak-proof.

The machine is adaptive in following situation

1.Applicable ambient temperature range:

Cooling	Indoor	Maximum:D.B/W.B	32°C/23°C
		Minimum:D.B/W.B	21°C/15°C
	Outdoor	Maximum:D.B/W.B	43°C/26°C
		Minimum: D.B	18°C
Heating	Indoor	Maximum:D.B	27°C
		Minimum: D.B	0°C
	Outdoor	Maximum:D.B/W.B	24°C/18°C
		Minimum:D.B/W.B	-7°C/-8°C
	Outdoor (INVERTER)	Maximum:D.B/W.B	24°C/18°C
		Minimum:D.B	-15°C

2. If the power supply cord is damaged, it must be replaced by the manufacturer or its service agent or a similar qualified person.

3.If the fuse of indoor unit on PC board is broken,please change it with the type of T. 3.15A/ 250V. If the fuse of outdoor unit is broken,change it with the type of T.25A/250V

4. The wiring method should be in line with the local wiring standard.

5. After installation, the power plug should be easily reached.

6. The waste battery should be disposed properly.

7. The appliance is not intended for use by young children or infirm persons without supervision.

8. Young children should be supervised to ensure that they do not play with the appliance.

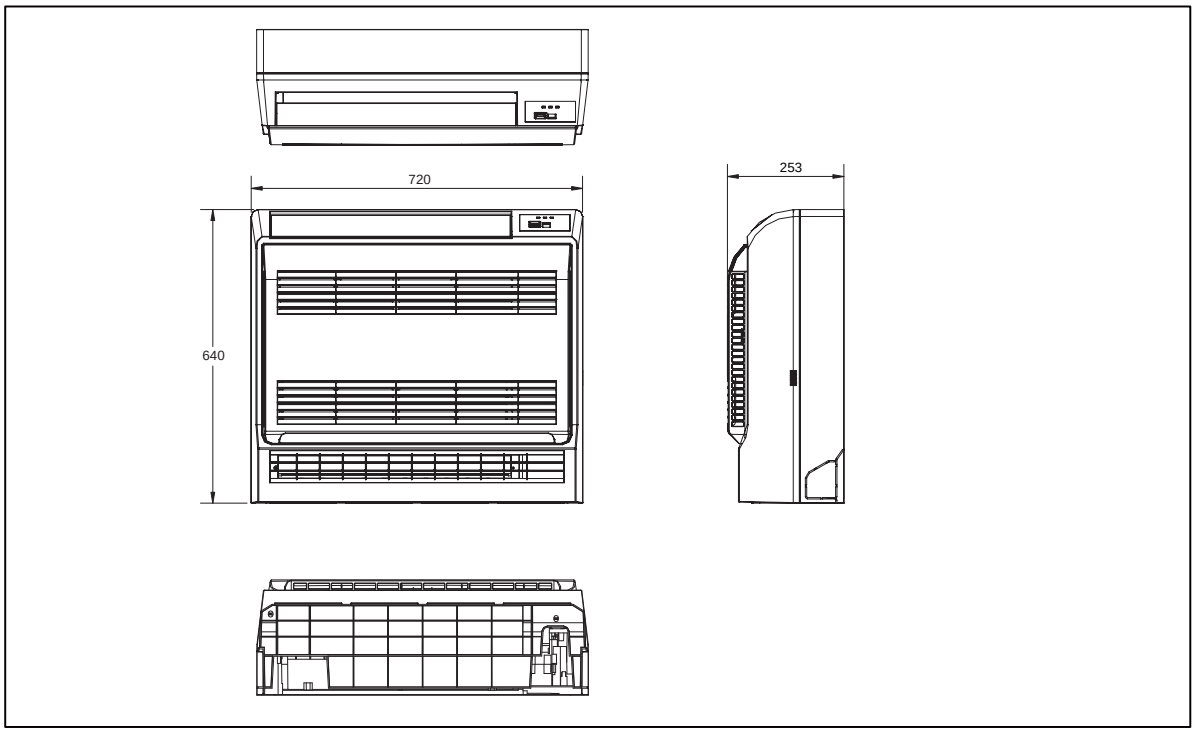
9. Please employ the proper power plug,which fit into the power supply cord.

10. A breaker should be incorporated into fixed wiring. The breaker should be all-pole switch and the distance between its two contacts should be not less than 3mm.

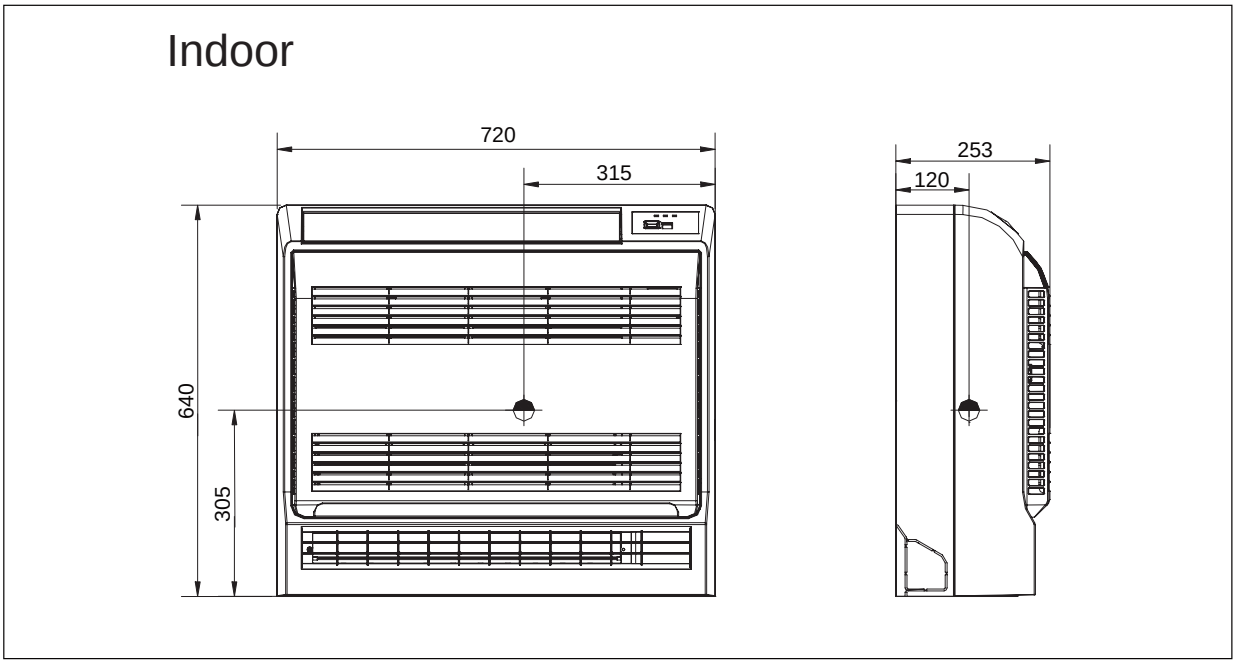
11 .The power plug and connecting cable must have acquired the local attestation.

12.In order to protect the units, please turn off the A/C first, and at least 30 seconds later, cutting off the power.

9.Dimensional drawings



10.Center of gravity



11 Service Diagnosis

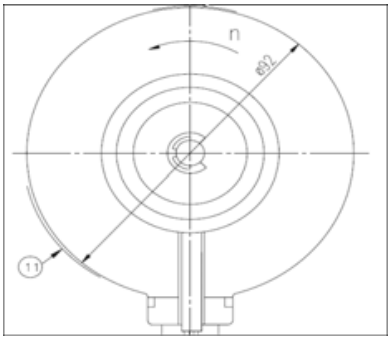
11.1 Caution for Diagnosis

The operation lamp flashes when any of the following errors is detected.

1. When a protection device of the indoor or outdoor unit is activated or when the thermistor malfunctions, disabling equipment operation.

2. When a signal transmission error occurs between the indoor and outdoor units. In either case, conduct the diagnostic procedure described in the following pages.

11.2 Parameter of primary electronic appliance

NO	Name	Parameter	Picture
1	Fan motor (match cross flow fan 0010201184 ----φ97*510*7)	Rated voltage:220-230V Rated current:0.25A Rated frequency:50Hz Rated power:11W	
2	Fan motor (match cross flow fan 0010201175 ----φ97*490*7)	Rated voltage:220-230V Rated current:0.4A Rated frequency:50Hz Rated power:20W	

11.3 Problem Symptoms and Measures

Symptom	**Check Item**	**Details of Measure**
None of the units operates	Check the power supply.	Check to make sure that the rated voltage is supplied.
	Check the indoor PCB	Check to make sure that the indoor PCB is broken
Operation sometimes stops.	Check the power supply.	A power failure of 2 to 10 cycles can stop air conditioner operation.
Equipment operates but does not cool, or does not heat (only for heat pump)	Check for faulty operation of the electronic expansion valve.	Set the units to cooling operation, and compare the temperatures of the liquid side connection pipes of the connection section among rooms to check the opening and closing operation of the electronic expansion valves of the individual units.
	Diagnosis by service port pressure and operating current.	Check for insufficient gas.
Large operating noise and vibrations	Check the installation condition.	Check to make sure that the required spaces for installation (specified in the Technical Guide, etc.) are provided.

11.4 Error codes and description

	Code indication		fault description	Reference Page
	Indoor displaying panel code indication	Outdoor (LED1 flash times)		
Indoor and Outdoor	E7	15	Communication fault between indoor and outdoor units	Page49.
Indoor Malfunction	E1	--	Room temperature sensor failure	Page39.
	E2	--	Heat-exchange sensor failure	Page39.
	E4	--	Indoor EEPROM error	Page40.
	E14	--	Indoor fan motor malfunction	Page41.
Outdoor Malfunction	F12	1	Outdoor EEPROM error	Page40.
	F1	2	The protection of IPM	Page44.
	F22	3	Overcurrent protection of AC electricity for the outdoor model	Page45.
	F3	4	Communication fault between the IPM and outdoor PCB	Page46.
	F19	6	Power voltage is too high or low	Page47.
	F27	7	Compressor is lock-rotor or stopped momentary	Page51.
	F4	8	Overheat protection for Discharge temperature	Page48.
	F8	9	Outdoor DC fan motor fault	Page42.
	F21	10	Defrost temperature sensor failure	Page39 .
	F7	11	Suction temperature sensor failure	Page39.
	F6	12	Ambient temperature sensor failure	Page39.
	F25	13	Discharge temperature sensor failure	Page39.
	F13	16	Short of refrigerant	Page44.
	F11	18	deviate from the normal for the compressor	Page51.
	F28	19	Loop of the station detect error	Page51.
	/	21	Over load protection of indoor system	Page47 .
	F2	24	Overcurrent of the compressor	Page45.
	F23	25	Overcurrent protection for single-phase of the compressor	Page45.
	E9	21	High work-intense protection	Page52.

Haier SERVICE MANAUL

Wall Mounted Type

DC Inverter SUPER MATCH

Model No. AF12AB1HRA

AF12AS1ERA

⚠WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public.
It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or Repair the product or products dealt with in this service information by anyone else could result in serious injury or death

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Haier Group **Version：V1** **Date：2013-11-25**

7.Funcitions and Control

7.1 Main functions and control specification of indoor unit

7.1.1 Automatic operation

When the running mode is turned to automation after starting the system, the system will first determine the running mode according to the current room temperature and then will run according to the determined mode. Tr in the following selection conditions means room temperature, Ts means setting temperature, Tp means temperature of indoor coil pipe

Tr≥23℃ Choose Cooling Mode

Tr＜23℃ Choose Heating Mode

After turning to the automation mode, the running mode can be switched between cooling mode, fan mode and heating mode according to the change of the indoor ambient temperature. But the automatic conversion between cooling mode and heating mode must be conducted after 15 minutes.

7.1.2 Cooling operation mode

Temperature control range: 16℃---30℃

Temperature difference: ±1℃

* Control features: When Tr（input airflow）>Ts（set temperature）℃, the compressor will be opened, the indoor fan will operate at the set speed and the mode signal will be sent to the outdoor system. When Tr（input airflow）＜Ts（set temperature）℃, the compressor will be opened, the indoor fan will operate at the set speed and the mode signal will be sent to the outdoor system. The system will keep the original status if Tr= Ts.

Airflow speed control: (temperature difference 1℃)

Automatic: When Tr≤Ts+3℃, high speed.

When Ts+1℃≤Tr<Ts+3℃, medium speed

When Tr<Ts+1℃, low speed

When the sensor is off, low speed

When the airflow speed has no delay from the high to low switching, the speed should be delayed for 3 minutes (remain at high speed for 3 minutes.) before the next switch.

Manus: When the system is operating, you can set the high, medium or low speed manually. (When the sensor is on or off, the system will change the speed 2 seconds after receiving the signal.)

*Airgate location control: the location for the airgate can be set according to your needs.

*Defrosting function: preventing the frosting on the indoor heat exchanger (when cooling or dehumidifying). When the compressor works continuously for 1/6 minutes (adaptable in EEPROM) and the temperature of the indoor coils has been below zero centigrade for 10 seconds, the compressor will be stopped and the malfunction will be recorded in the malfunction list. The indoor system will continue to run. When the temperature of the indoor coil is raised to 7℃, the compressor will be restarted again (the requirement of 3 minutes' delay should be satisfied.)

* timing system on/off function.

* Dormant control function.

7.1.3 Dehumidifying mode.

* temperature control range: 16---30℃
* temperature difference: ±1℃

Control feature: send the dehumidifying signal to the outdoor system.

When Tr>Ts+2℃, the compressor will be turned on, the indoor fan will operate at the set speed.

When Tr is between the Ts and Ts+2℃, the outdoor system will operate at the high dehumidifying frequency for 10 minutes and then at the low dehumidifying mode for six minutes. The indoor fan will operate at low speed.

When Tr< Ts, the outsystem will be stopped, the indoor fan will be stopped for 3 minutes and then turned to the low speed option.

All the frequency converses have a ±1℃ difference.

* Wind speed control: Automatic:

When Tr≥ Ts+ 5℃, high speed.

When Ts+3℃≤Tr< Ts+5℃, medium speed.

When Ts+2℃≤Tr< Ts+3℃, low speed.

When Tr<Ts+2℃, light speed.

If the outdoor fan stopped, the indoor fan will be paused for 3 minutes.

If the outdoor fan stopped for more than 3 minutes and the outdoor system still operates, the system will be changed into light speed mode.

When the airflow speed has no delay from the high to low switching, the speed should be delayed for 3 minutes (remain at high speed for 3 minutes.) before the next switch.

Manual: When the sensor is off or Tr< Ts+3℃, the manual operation can not be made. (obligatory automatic operation.)

*Airgate location control: the location for the airgate can be set according to your needs.

*Defrosting function: preventing the frosting on the indoor heat exchanger (when cooling or dehumidifying). When the compressor works continuously for 1/6 minutes (adaptable in EEPROM) and the temperature of the indoor coils has been below zero centigrade for 10 seconds, the compressor will be stopped and the malfunction will be recorded in the malfunction list. The indoor system will continue to run. When the temperature of the indoor coil is raised to 7℃, the compressor will be restarted again (the requirement of 3 minutes' delay should be satisfied.)

* coil protection (synchronic overheating protection) are installed for the four directions latch malfunctions when dehumidifying .
* timing system on/off function.
* Dormant control function.

7.1.4 Heating operation mode.

* temperature control range: 16---30℃
* temperature difference: ±1℃
* control feature: the temperature compensation is automatically added and the system will send the heating signals to the outdoor system.

If Tr≤Ts, the outdoor compressor is turned on, the indoor fan will be at the cold air proof mode.

If Tr>Ts+3℃ , the outdoor system is turned off, the indoor fan will be at the heat residue sending mode.

If Tr<Ts+3℃ , the outdoor system will be turned on again, the indoor fan will be at the cold air proof mode.

*Indoor fan control

manual control: You can choose high, medium, low and automatic speed control.

Automatic: When Tr<Ts, high speed.

When Ts≤Tr≤Ts+2℃, medium speed.

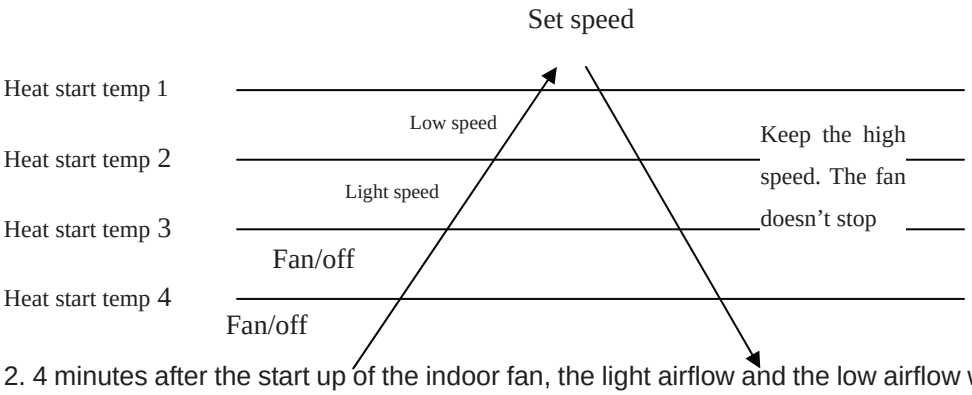
When Tr> Ts+2℃, low speed.

When the airflow speed has no delay from the high to low switching, the speed should be delayed for 3 minutes (remain at high speed for 3 minutes.) before the next switch.

*Airgate location control: the location for the airgate can be set according to your needs.

Coldair proof operation

1. The indoor operation within 4 minutes after the start up is as the following diagram, the air speed can be raised only after the speed has reached a certain level.



2. 4 minutes after the start up of the indoor fan, the light airflow and the low airflow will be turned to the set speed airflow.

3. In the cold air proof operation, the fan won't stop after the start up.

4. During the cold air proof operation, the indoor system will continuously send 'indoor high speed' signals to the outdoor system.

* Residue heat sending. The indoor fan will send the residue heat at a low speed for 12 seconds.

If other conditions are satisfied, when the compressor stops, the indoor system will operate at a light speed. The indoor fan will stop when the coil temperature is below the 'heat start temp 4'.

* Defrosting. When the system receives the defrosting signal from outdoors, the indoor fan will stop and the indoor temperature display won't change. At the time, any indoor coil malfunctions will be neglected. When the outdoor defrosting finishes, the coil malfunction will still be neglected until the compressor has been started up for 30 seconds. The indoor temperature display will not change and the system operates at the cold air proof mode.

* Automatic heating temperature compensation: when the system enters the heating mode, the temperature compensation (4) will be added. When the status is switched off, the compensation will be erased.

7.1.5 strength operation

a. the system enters the mode after receiving the 'strength signal'.

Send strength operation signal to the outdoor system.

The mode change finishes the strength operation.

Entering 'mute', you can have normal operation or signal control such as timing to finish the strength operation.

When the system is at the automatic option with the strength/ mute function, if the system enters the cooling mode, the cooling strength/ mute function will be offered; if the system enters the heating mode, then the heating strength/ mute function will be offered; if the system enters the airflow mode, there will be no strength/ mute function.

7.1.6 Mute operation

the system enters the mode after receiving the 'mute signal'.
a. Mute heating: the airflow speed is slight, the system sends the mute signal to the outdoor system.
b. mute cooling: the airflow speed is slight, the system sends the mute signal to the outdoor system.
When the compressor operates, the airflow speed is mute speed. EEPROM is adaptable.
Mute operation can not work under the dehumidifying and airflow-sending operation.

7.1.7 Air refreshing

After receiving the signal from the remote control,(HV series: the background light of the 'health' logo is green. HS series: the 'health' indicator will be lighted). If the fan operates, the negative ion generator operates to realize the negative sending function.
If the indoor fan stops, the negative ion generator is turned off.
When the negative ion generator is turned off, if the air refreshing system is turned on, the negative ion generator will be turned on when the fan operates.

7.1.8 Timing.

You can set 24 hours' on/off timing accordingly. After the setting, the timing indicator will be lightened. Also, the light will be turning off after the timing is finished. The followings are several timing methods.
1. system /on timing: The timing indicator will be lightened and the indoor system is under the waiting mode. The light will be turned off when the timing is finished and the rest of the system will operate under a normal condition. The timing starts since the last reception of the timing singal. You can have the dormancy setting under the timing mode, the order of your settings will be operated according to the timing settings.
2. system /off timing: When the system is turned on, the timing indicator is lightened, the rest of the system will operated under a normal condition. When set time comes, the indicator light will be turned off and the system will be turned off. If you have set the dormant functions, the order of your settings will be operated according to the timing settings.
3 . system / on and off timing: The settings will be completed according to the orders.

7.1.9 Dormant operation

The dormant timing is an eight hours unadaptable one. The timing signs are shown on the V series board. (RC series show the dormant signal, the timing light is lighted on the 6 lights board).
2.1 Under the cooling/ dehumidifying operation, after the setting of the dormant operation, the set temperature will be raised for 1 centigrade after 1 hour's operation and will be raised for 1 centigrade 1 hour later. The system will keep this status for 6 hours and then close.

2.2 Under the heating mode, after the setting of the dormant operation, the et temperature will fall 2 centigrades after 1 hour's operation and will fall 2 centigrades 1 hours later. 3 hours after the preceding operations, the set temperature will be raised for 1 centigrade and the system will keep this status for 3 hours and then close down.

2.3 During the dormant time, except the change of the system mode or a new press on the dormant setting keys, the timing of the 8 hours dormancy will take the first timing as the start time, any presses on other keys will not affect the original timing.

2.4 Indoor fan control under the dormant operation.

If the indoor fan is at the high speed before the dormant operation setting, the speed will be turned to medium after the setting. If the fan is at the medium speed before the dormant setting, the speed will be turned to low after the setting. If the fan is at the low speed before the dormant setting, the speed will not change.

7.1.10 Urgent on/off input

Press the urgency button the buzzer will ring. The system will enter the automatic mode if you don't press the button for more than 5 seconds.

Under the system off mode, if you press the urgency key for 5 to 10 seconds, the system will start the test operation.

Under the system off mode, If you press the urgency key for 10 to 15 seconds, the display screen will show the resume of the last malfunction.

If the system is under operation, the press on the urgency key will stop it.

Under the system off mode, the display screen will show automatic running sign.

Under the system off mode, the system will not receive the remote control signal if the press on the urgency key doesn't last for 15 seconds or if the key is loosened.

Urgency operation: If you press the urgency key for less than 5 seconds, the buzzer will ring when you press the on/off key. The system will enter the urgency operation when the urgency key is loosened. The urgency operation is fully automatic.

Test operation.

The inlet temperature sensor doesn't work, the indoor fan and the indoor air direction board motor works synchronically. High speed airflow, cooling, outdoor system on, etc, will send the ambient temperature 30 centigrade and coil temperature 16 centigrade information to the outdoor system.

Test operation

The defrost protection of the evaporator doesn't work.

The temperature control doesn't work.

The test operation will be finished in 30 minutes.

The test operation can be stopped by the relative commands from the remote control.

7.1.11 Low load protection control

In order to prevent the frosting of the indoor heat interaction device, the outdoor system will be stopped if the indoor heat interaction temperature is below zero centigrade for 5 minutes, but the fan will continue to operate. The outdoor system will be started again when the heat interaction temperature is above 7 centigrade and the system has been stopped for 3 minutes. The malfunction will be stored in the malfunction resume and will not be revealed.

7.1.12 High load protection control

The outdoor system will be stopped if the coil temperature is above 65℃ for 2 minutes. The indoor fan will be controlled by the thermostat. The outdoor system can be restarted when the coil temperature is below 42℃ and the system has been stopped for 3 minutes. The malfunction will be stored in the malfunction resume and will not be revealed.

7.1.13 abnormal operation of indoor system

When the outdoor system operates, if the indoor system operation differs from the outdoor system, the abnormal operation malfunction will be reported. 10s after the report, the indoor system will be closed.

Outdoor system mode	Indoor system mode	conflicts
cooling	heating	yes
cooling	cooling	no
cooling	airflow	no
heating	heating	no
heating	airflow	yes
heating	cooling	yes

7.1.14 Malfunction list resume.

Nothing is presented if there is no code list.

The malfunction display will automatically finish in 10 seconds.

The remote control only receives the signals for stop. According to the signals, the malfunction resume presentation finishes.

The resume restores after the power supply restores.

7.1.15 abnormality confirmation approaches.

1. indoor temperature sensor abnormality:

under the operation, the normal temperature ranges from 120 degree to -30 degree. When the temperature goes beyond this range, the abnormality can be confirmed. If the temperature goes back into the range, the system will automatically resume.

2 .indoor heat interaction sensor abnormality:

under the operation, the normal temperature ranges from 120 degree to -30 degree. When the temperature goes beyond this range, the abnormality can be confirmed. If the temperature goes back into the range, the system will automatically resume.

3 .indoor malfunction:

Out door malfunction: When the indoor system receives the outdoor malfunction codes, it will store the code into E2 for the malfunction list resume. The indoor system will continue to operate according to the original status, the malfunction code will not be revealed or processed.

4.transmission abnormality:

If the indoor system can't receive the outdoor system for 8 minutes, the communication abnormality can be confirmed and reported and the outdoor system will be stopped.

7.1.16 Single indoor system operation

* Enter condition: First, set the high speed airflow and 30 centigrade set temperature, then press the dormant keys for 6 times within 7 seconds, the system will feedback with 6 rings.

* After the system enters the separate indoor system operation mode, the indoor system will operate according to the set mode and neglect the communication signals of the outdoor system. However, it has to send signals to the outdoor system.

* Quitting condition: This mode can be quitted after receiving the quitting signal from the remote control or urgency system. The indoor system thus can quit the single operation mode.

7.1.17 Power cut compensation.

* Entering condition: Press dormant button 10 times within 7 second, the buzzer will ring 4 times and the present system status will be stored into the EEPROM of the indoor system.

* After entering the power cut compensation mode, the processing of the indoor system should be as the followings:

Remote control urgency singal: operate according to the remote control and the urgent conditions, the present status will be stored into the EEPROM of the indoor system.

* Quitting conditions: Press dormant button 10 times within 7 seconds and the buzzer will ring twice.

7.1.18 Fixed frequency operation.

1. Fixed cooling: a. under G code condition: high speed cooling, set 16℃, press temperature '-' key and the set key at the same time. The system will enter the fixed frequency operation after the buzzer rings twice.

b. The proceeding programs are as the follows:

Entering the fixed frequency operation, you can set the fixed strength location 1 and send the cooling signal to the outdoor system. Meanwhile, you can fix the indoor system at high speed mode, the location of the airflow direction board can be switched to the maximal position.

c. Quitting condition: The fixed frequency cooling can be quitted after receiving the remote signal, and the system will enter the remote setting status.

2. Fixed heating: a. under G code condition: high speed heating, set 30℃, press temperature '+' key and the set key at the same time. The system will enter the fixed frequency operation after the buzzer rings twice.

b. The proceeding programs are as the follows:

Entering the fixed frequency operation, you can set the fixed strength location 1 and send the heating signal to the outdoor system. Meanwhile, you can fix the indoor system at high speed mode, the location of the airflow direction board can be switched to the maximal position.

c. Quitting condition: The fixed frequency heating can be quitted after receiving the remote signal, and

the system will enter the remote setting status.

7.1.19 Test program

First, connect the test program terminal on the mainboard, then connect the system to the power circuit. The test program will operate as follows.

HV series display: The buzzer rings for one time—the signal will be sent to outdoor system for 0.5 second— the violet is sent for 0.5-- the background light turns to white—the back ground light turns to white—the background light turns to white—the background light is fully lighted for 0.5 second—LED screen lights for 0.5 second— the step-in motor fully output for 0.5 second—then the motor doesn't output for 0.5 second—the motor fully output again for 0.5 second. The test program finishes.

7.1.20 Time cutting function:

connect the test program terminal on the mainboard after connecting the system to the power circuit. The CPU of the main control will be 60 times faster.

7.2 The control system of outdoor unit

7.2.1：The operation frequency of outdoor unit and its control

7.2.1.1：The operation frequency control of compressor

The operation frequency scope of compressor：

Mode	Minimun operation frequency	Maximun operation frequency
Heating	34Hz	96Hz
Refrigeration	34Hz	72Hz

7.2.1.2：The starting of compressor

When the compressor is started for the first time, it must be kept under the conditions of 58Hz,88Hz for one minute (the overheating protection of the outdoor unit air-blowing temperature, immediately decrease the frequency when the compressor is overflowing and releasing the pressure)，then it can be operated towards the target frequency. When the machine runs normally, there's no such process. After starting the compressor for operation, the compressor should run according to the calculated frequency, and every determined frequency for protection should be prior to the calculated frequency.

7.2.1.3：The speeds of increasing or decreasing the frequency of the compressor

The speed of increasing or decreasing the frequency rapidly 1 ----------1HZ/second

The speed of increasing or decreasing the frequency slowly 2 ----------1HZ/10seconds

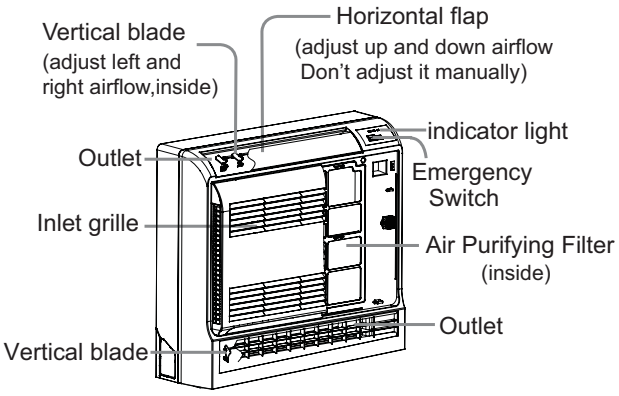
7.2.1.4：The calculation of the compressor's frequency

1)、The minimum/maximum frequency limitation

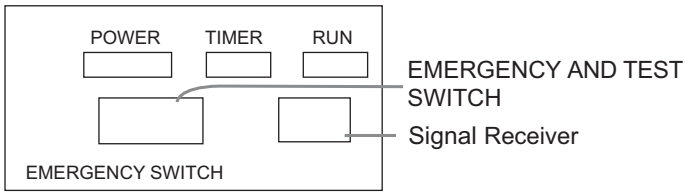
A. While refrigerating: F－MAX－r is the maximum operation frequency of the compressor;

Parts and Functions

Indoor Unit



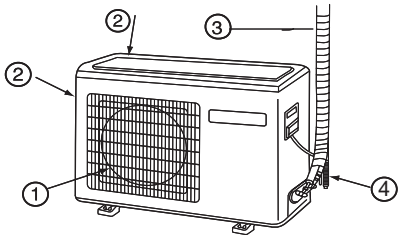
Please be subject to the actual produce purchased the above picture is just from your reference



EMERGENCY SWITCH
- ON/OFF button
- Push once to start operation,push once again to stop it.
- Operation is set to AUTO,air flow is set to AUTO fan.
- Use when remote controller is not available.

Signal Receiver
- Upon receiving a signal, there is a receiving sound.

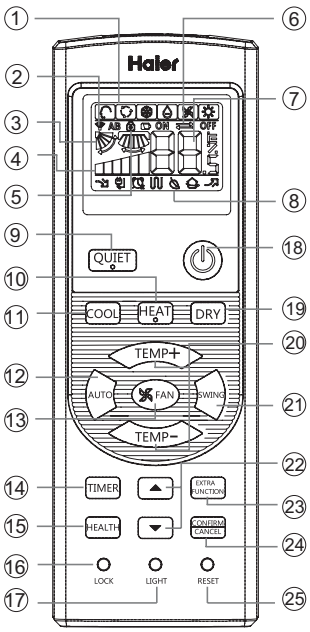
Outdoor Unit



① OUTLET ③ CONNECTING PIPING AND ELECTRICAL WIRING
② INLET ④ DRAIN HOSE

Please be subject to the actual produce purchased the above picture is just from your reference

Remote controller



1. Mode display

Operation mode	AUTO	COOL	DRY	HEAT	FAN
Remote controller					

2. Signal sending display
3. SWING display
4. FAN SPEED display

5. LOCK display
6. TIMER OFF display
   TIMER ON display
7. TEMP display

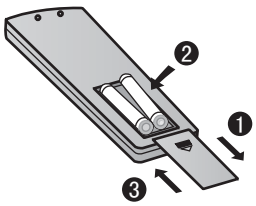
8.Additional functions display

Operation mode	QUITE	SLEEP	Supplemented electrical heating	HEALTH	POWER
Remote controller					

9. QUIET button
10. HEAT button
11. COOL button
12. AUTO button
13. FAN button
14. TIMER button
15. HEALTH button
16. LOCK button
Used to lock buttons and LCD display.
17. LIGHT button
Control the lightening and extinguishing of the indoor LED display board.
18. POWER ON/OFF button
19. DRY button
20. TEMP button
21. SWING button
22. HOUR button
23. EXTRA FUNCTION button
Function: Air sending-->Healthy airflow position1-->Healthy airflow position 2 -->Restore the original flap position -->Right & left air airflow-->A-B yard-->10 and heating symbol displayed simultaneously-->Sleeping-->Electrical heating-->Refresh air(reserved function) -->Power-->Fahrenheit/Celsius mode conversion
24.CANCEL/CONFIRM button
Function: Setting and cancel to the timer and other additional functions.
25. RESET button
When the remote controller appears abnormal, use a sharp pointed article to press this button to reset the remote

Healthy function is not available for some units.

Loading of the battery



1 Remove the battery cover;
2 Load the batteries as illustrated. 2 R-03 batteries, resetting key (cylinder);
3 Be sure that the loading is in line with the" + "/"-";
4 Load the battery,then put on the cover again.

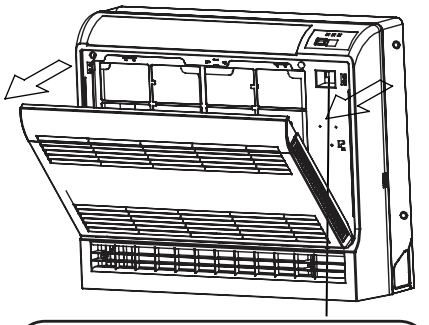
Note:
- The distance between the signal transmission head and the receiver hole should be within 7m without any obstacle as well.
- When electronic-started type fluorescent lamp or change-over type fluorescent lamp or wireless telephone is installed in the room, the receiver is apt to be disturbed in receiving the signals, so the distance to the indoor unit should be shorter.
- Full display or unclear display during operation indicates the batteries have been used up. Please change batteries.
- If the remote controller can't run normally during operation,please remove the batteries and reload several minutes later.

Hint:
Remove the batteries in case won't be in use for a long period. If there is any display after taking-out, just press reset key.

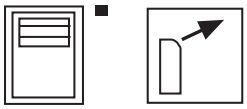
Parts and Functions

CAUTION

Before opening the front grille, be sure to stop the operation and turn the breaker OFF.
Do not touch the metal parts on the inside of the indoor unit, as it may result in injury.



Air outlet selection switch



- Regardless of the operating mode or situation, air blows from the upper air outlet.
- Use this switch when you do not want air coming out of the lower air outlet. (While sleeping etc..)

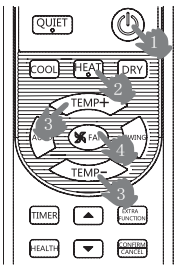
- Air conditioner automatically decides the appropriate blowing pattern depending on the operating mode and situation.
- During Dry and Fan mode, so that cold air does not come into direct contact with people, air is blown upper air outlet.

Operating mode	Situation	Blowing pattern
Cool mode	When the room has become fully cool.	So that air does not come into direct contact with people, air is blown upper air outlet, room temperature is equalised
	At start of operation or other times when the room is not fully cooled.	Air is blown from the upper and lower air outlets for high speed cooling during Cool mode, and for filling the room with warm air during Heat mode.
Heat mode	At times other than below. (Normal time.)	
	At start or when air temperature is low.	So that air does not come into direct contact with people.Air is blown upper air outlet.

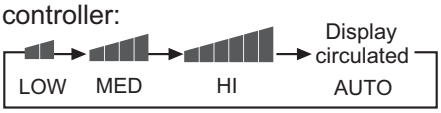
Operation

Base Operation

Remote controller



1. Unit start
   Press ON/OFF on the remote controller, unit starts.
2. Select operation mode
   COOL button:Cooling mode
   HEAT button: Heating mode
   DRY button: Dehumidify mode
3. Select temp.setting
   Press TEMP+ / TEMP− button
   TEMP+ Every time the button is pressed, temp.setting increase 1℃,if kept depressed, it will increase rapidly
   TEMP− Every time the button is pressed, temp.setting decrease 1℃,if kept depressed, it will decrease rapidly
   Select a desired temperature.
4. Fan speed selection
   Press FAN button. For each press, fan speed changes as follows:
   Remote controller:



Air conditioner is running under displayed fan speed. When FAN is set to AUTO, the air conditioner automatically adjusts the fan speed according to room temperature.

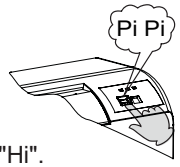
Operation Mode	Remote Controller	Note
AUTO		Under the mode of auto operation, air conditioner will automatically select Cool or Heat operation according to room temperature. When FAN is set to AUTO the air conditioner automatically adjusts the fan speed according to room temperature.
COOL		
DRY		In DRY mode, when room temperature becomes lower than temp.setting+2°C, unit will run intermittently at LOW speed regardless of FAN setting.
FAN		In FAN operation mode,the unit will not operate in COOL or HEAT mode but only in FAN mode, AUTO is not available in FAN mode. And temp. setting is disabled In FAN mode, sleep operation is not available.
HEAT		In HEAT mode, warm air will blow out after a short period of the time due to cold-draft prevention function.When FAN is set to AUTO, the air conditioner automatically adjusts the fan speed according to room temperature.

Emergency operation and test operation

Test operation:

Test operation switch is the same as emergency switch.

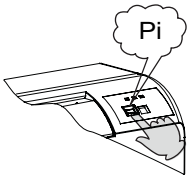
- Use this switch in the test operation when the room temperature is below 16°C, do not use it in the normal operation.
- Continue to press the test operation switch for more than 5 seconds. After you hear the "Pi" sound twice, release your finger from the switch: the cooling operation starts with the air flow speed "Hi".



Operation

Emergency Operation:

- Use this operation only when the remote controller is defective or lost.
- When the emergency operation switch is pressed, the" Pi "sound is heard once, which means the start of this operation.



- In this operation, the system automatically selects the operation modes, cooling or fan or heat, according to the room temperature.
- When machine is running in emergency, the set value of temperature and wind speed couldn't be altered; meanwhile, it can't operate for dehumidifying or under timing mode.

Air Flow Direction Adjustment

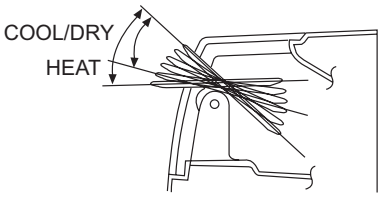
1.Adjusting the flap

Status display of air flow:

Pos.1 Pos.2 Pos.3

Pos.4 Pos.5 Pos.6 (Auto swing)

- When SWING is selected, the flap swinging range depends on the operation mode.(See the figure.)



2.Left and right air flow adjustment (manual)

Move the vertical blade by a knob on air conditioner to adjust left and right direction.

Cautions:

- Do not try to adjust the flap by hand. When adjusting by hand, the mechanism may not operate properly or condensation may drip from air outlets. When adjusting the flap by hand, turn off the unit, and use the remote controller to restart the unit.
- When adjusting the flap by hand,turn off the unit.
- When humidity is high,condensate water might occur at air outlet if all vertical louvers are adjusted to left or right.
- It is advisable not to keep horizontal flap at downward position for a long time in COOLor DRY mode , otherwise, condensate water might occur.

Note:

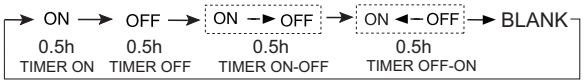
When restart after remote turning off, the remote controller will automatically memorize the previous set swing position.

Timer On/Off On-Off Operation

1.After unit starts, select your desired operation mode.

2.Press TIMER button to change TIMER mode. Every time the button is pressed, display changes as follows:

Remote controller:



Then select your desired TIMER mode (TIMER ON or TIMER OFF or TIMER ON-OFF). " ON "or " OFF "will flash.

3.Press ▼ / ▲ button to set time.

▲ Press the button for each time, setting time in the first 12 hours increased by 0.5 hour every time, after 12 hours,increased by 1 hour every time.

▼ Press the button for each time, settiing time in the first 12 hours decreased by 0.5 hour every time, after 12 hours,decreased by 1 hour every time.
It can be adjusted within 24 hours.

4.Confirm timer setting

After adjust the time,press CONFIRM CANCEL button and confirm the time ON or OFF button will not flash any more.

5.Cancel timer setting

Press the timer button by times until the time display eliminated.

Hints:

After replacing batteries or a power failure happens, time setting should be reset.

According to the Time setting sequence of TIMER ON or TIMER OFF, either Start-Stop or Stop-Start can be achieved.

TIMER On/Off Operation

- Confirming your setting

After setting correct time, press CONFIRM CANCEL button to confirm " ON "or" OFF "on the remote controller stops flashing.

Time displayed: Unit starts or stops at x hour.

Hints:

After replacing batteries or a power failure happens, time setting should be reset. Remote controller possesses memory function, when use TIMER mode next time, just press CONFIRM CANCEL button after mode selecting if time setting is the same as previous one.

Operation

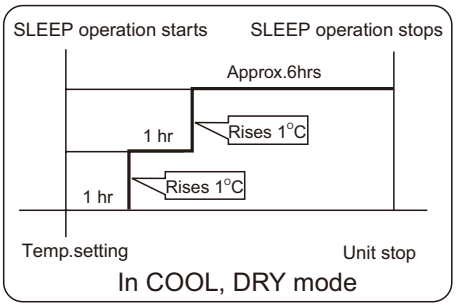
Sleep Operation

Press EXTRA FUNCTION button to enter additional options, when cycle display to , will flash. And then press CONFIRM CANCEL enter to sleep function.

Operation Mode

1. In COOL,DRY mode

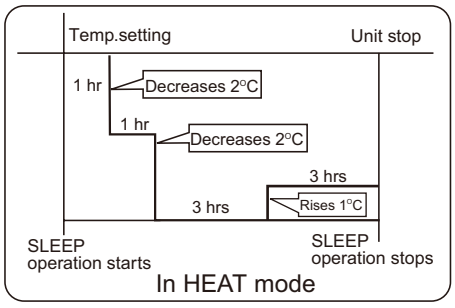
1 hours after SLEEP mode starts,temp.will become 1°C higher than temp.setting.After another 1 hours,temp.rises by 1°C futher.The unit will run for further 6 hours then stops Temp. is higher than temp.setting so that room temperature won't be too low for your sleep.



In COOL, DRY mode

2. In HEAT mode

1 hours after SLEEP mode starts,temp will become 2°C lower than temp.setting.After another 1 hours,temp decrease by 2°C futher.After more another 3 hours,temp. rises by 1°C futher.The unit will run for further 3 hours then stops.Temp.is lower than temp. setting so that room temperature won't be too high for your sleep.



In HEAT mode

3. In AUTO mode

The unit operaters in corresponding sleep mode adapted to the automatically selected operation mode.

4. In FAN mode

It has no SLEEP function.

5.Set the wind speed change when sleeping

If the wind speed is high or middle before setting for the sleep, set for lowing the wind speed after sleeping. If it is low wind, no change.

Note

When TIMER function is set, the sleeping function can't be set up .After the sleeping function is set up, if user resets TIMER function, the sleeping function will be cancelled; the machine will be in the state of timing-on.

POWER/QUIET Operation

(1) POWER Operation

When you need rapid heating or cooling, you can use this function. Press EXTRA FUNCTION button to enter additional options, when cycle display to , will flash, and then press CONFIRM CANCEL ,enter to power function. When cancel the function, please enter additional options again and to cancel power function.

(2) QUIET Operation

You can use this function when silence is needed for rest or reading. Press QUIET button, the remote controller will show , and then achieve to the quiet function. Press again this QUIET button , the quiet function will be cancelled.

Note :

During POWER operation, in rapid HEAT or COOL mode , the room will show inhomogeneous temperature distribution. Long period QUIET operation will cause effect of not too cool or not too warm.

EUROPEAN REGULATIONS CONFORMITY FOR THE MODELS

CE

All the products are in conformity with the following European provision:

- Low Voltage Directive 73/23/EEC
- Low Voltage Directive 2006/95/EC
-Electomagnetic CompatibilitY 89/336/EEC
-Electomagnetic CompatibilitY 2004/108/EC

ROHS

The products are fulfilled with the requirements in the directive 2002/95/EEC of the European parliament and of council on the Restriction of the use of Certain Hazardous Substances in Electrical and Electronic Equipment (EU RoHS Directive)

WEEE

In accordance with the directive 2002/96/CE of the European parliament, herewith we inform the consumer about the disposal requirements of the electrical and electronic products.

DISPOSAL REQUIREMENTS:

Your air conditioning product is marked with this symbol.This means that electrical and electronic products shall not be mixed with unsorted household waste. Do not try to dismantle the system yourself : the dismantling of the air conditioning system,treatment of the refrigerant, of oil and of other part must be done by a qualified installer in accordance with relevant local and national legislation. Air conditioners must be treated at a specialized treatment facility for reuse, recycling and recovery. By ensuring this product is disposed of correctly, you will help to prevent potential negative consequences for the environment and humen health. Please contact the installer or local authority for more information. Battery must be removed from the remote controller and disposed of separately in accordance with relevant local and nationl legislation.

Indoor Unit Installaion

Necessary Tools for Installation

- Driver
- Nipper
- Hacksaw
- Hole core drill
- Spanner(17,19 and 26mm)
- Gas leakage detector or soap-and-water solution
- Torque wrench (17mm,22mm,26mm)
- Pipe cutter
- Flaring tool
- Knife
- Measuring tape
- Reamer

Power Source

- Before inserting power into receptacle, check the voltage without fail.
- The power supply is the same as the corresponding nameplate.
- Install an exclusive branch circuit of the power.
- A receptacle shall be set up in a distance where the power cable can be reached. Do not extend the cable by cutting it.

Selection of Installation Place

- Place, robust not causing vibration, where the body can be supported sufficiently.
- Place, not affected by heat or steam generated in the vicinity, where inlet and outlet of the unit are not disturbed.
- Place, possible to drain easily, where piping can be connected with the outdoor unit.
- Place, where cold air can be spread in a room entirely.
- Place, nearby a power receptacle, with enough space around.
- Place where the distance of more than lm from televisions, radios, wireless apparatuses and fluorescent lamps can be left.
- In the case of fixing the remote controller on a wall, place where the indoor unit can receive signals when the fluorescent lamps in the room are lightened.

Accessory Parts

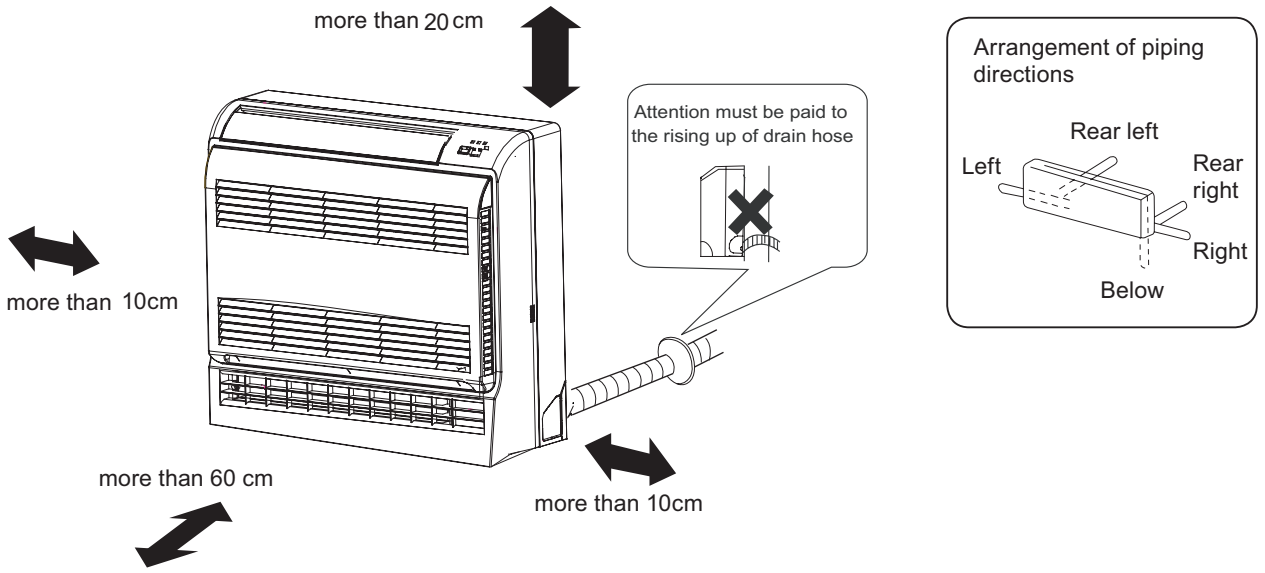
Remote controller (1)	Drain hose (1)
R-03 dry battery (2)	Plastic cap (4) Ø4X25 Screw (4)
Mounting plate (1)	Air purifying filter(Optional) (1)

Selection of Pipe

FOR 09K 12K	Liquid pipe	Φ 6.35x0.8mm
	Gas pipe	Φ 9.52x0.8mm
FOR 18K	Liquid pipe	Φ 6.35x0.8mm
	Gas pipe	Φ 12.7x0.8mm

Drawing for the installation of indoor units

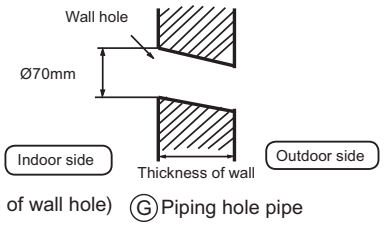
The models adopt HFC free refrigerant R410A



Indoor Unit Installation

1 Making a Hole on the Wall and Fitting the Piping Hole Cover

- Make a hole of 70 mm in diameter, slightly descending to outside the wall
- Install piping hole cover and seal it off with putty after installation

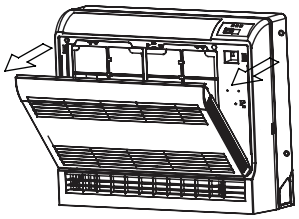


(Section of wall hole) Ⓖ Piping hole pipe

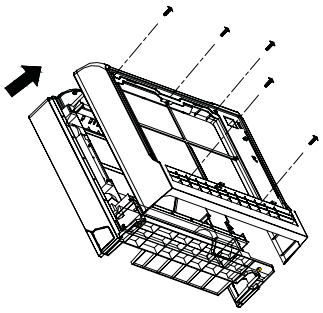
2 Installation of the Indoor Unit

Removal of Front Grille

- Hold the front panel by the tabs on the both sides and lift it until it stops with a click.



- Loosen the marked five screws and open the grille



Drawing of pipe

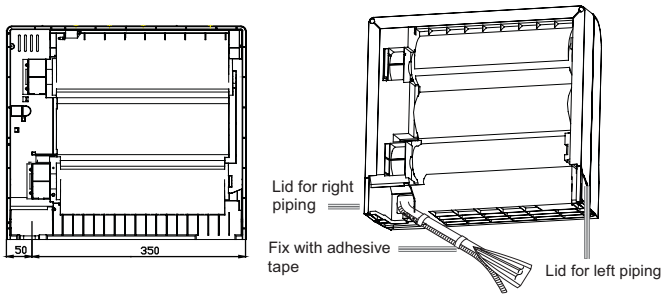
[Rear piping]

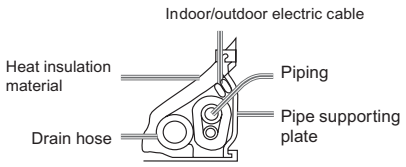
- Draw pipes and the drain hose, then fasten them with the adhesive tape

[Left · Left-rear piping]

- In case of left side piping, cut away, with a nipper, the lid for left piping.
- In case of left-rear piping, bend the pipes according to the piping direction to the mark of hole for left-rear piping which is marked on heat insulation materials.

1. Insert the drain hose into the dent of heat insulation materials of indoor unit.
2. Insert the indoor/outdoor electric cable from backside of indoor unit, and pull it out on the front side, then connect them.
3. Coat the flaring seal face with refrigerant oil and connect pipes. Cover the connection part with heat insulation materials closely, and make sure fixing with adhesive tape





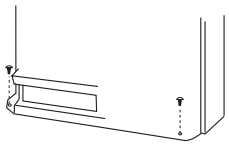
- Indoor/outdoor electric cable and drain hose must be bound with efrigerant piping by protecting tape.

[Other direction piping]

- Cut away, with a nipper, the lid for piping according to the piping direction and then bend the pipe according to theposition of wall hole. When bending, be careful not to crash pipes.
- Connect beforehand the indoor/outdoor electric cable, and then pull out the connected to the heat insulation of connecting part specially.

Fixing the indoor unit body

- Remove the front panel,then use two fastening screws to fix the unit on the floor. As the figure shown.
- Once refrigerant piping and drain piping connections are complete,fill the gap of the through hole with putty.Attach the front panel and front grille in their orginal positions once all connections are complete.



3 Connecting the indoor/outdoor Electric Cable

Removing the wiring cover

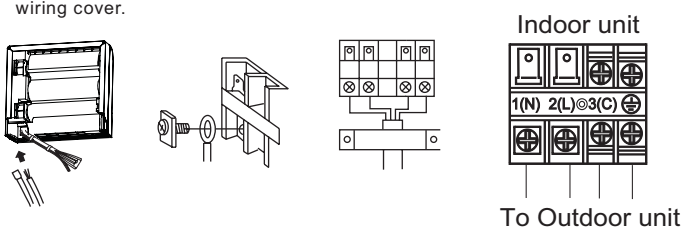
- Remove terminal cover at top right corner of indoor unit,and then take off wiring cover by removing its screws.

When connecting the cable after installing the indoor unit

1. Insert from outside the room cable into left side of the wall hole, in which the pipe has already existed.
2. Pull out the cable on the front side, and connect the cable making a loop.

When connecting the cable before installing the indoor unit

- Insert the cable from the back side of the unit, then pull it out on the front side.
- Loosen the screws and insert the cable ends fully into terminal block, then tighten the screws.
- Pull the cable slightly to make sure the cables have been properly inserted and tightened.
- After the cable connection, never fail to fasten the connected cable with the wiring cover.



Note:

When connecting the cable, confirm the terminal number of indoor and outdoor units carefully. If wiring is not correct, proper operation can not be carried out and will cause defect.

Model	AF09AS1ERA AF12AS1ERA	AF18AS1ERA
Connecting wiring	⩾4G0.75mm^2	⩾4G0.75mm^2

1. If the supply cord is damaged, it must be replaced by the manufacturer or its service agent or a similar qualified person. The type of connecting wire is H05RN-F or H07RN-F.
2. If the fuse on PC board is broken please change it with the type of T.3.15A/250VAC (Indoor).
3. The wiring method should be in line with the local wiring standard.
4. After installation, the power plug should be easily reached.
5. A breaker should be incorporated into fixed wiring. The breaker should be all-pole switch and the distance between its two contacts should be not less than 3mm.

4 Power Source Installation

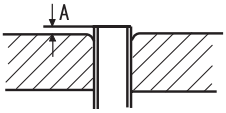
- The power source must be exclusively used for air conditioner.
- In the case of installing an air conditioner in a moist place, please install an earth leakage breaker.
- For installation in other places, use a circuit breaker as far as possible.

5 Cutting and Flaring Work of Piping

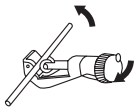
- Pipe cutting is carried out with a pipe cutter and burs must be removed.
- After inserting the flare nut, flaring work is carried out.

	Flare tool for R410A	Conventional flare tool	
	Clutch-type	clutch-type(Rigid-type)	Wing-nut type (Imperial-type)
A	0~0.5mm	1.0~1.5mm	1.5~2.0mm

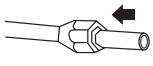
Flare tooling die



1.Cut pipe

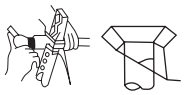


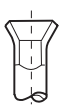
3.Insert the flare nut



2.Remove burs

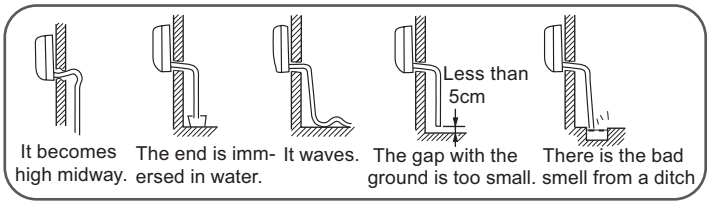
4.Flare pipe



Correct	Incorrect				
	Lean	Damage of flare	Crack	Partial	Too outside

6 On Drainage

- Please install the drain hose so as to be downward slope without fail.
- Please don't do the drainage as shown below.



- Please pour water in the drain pan of the indoor unit, and confirm that drainage is carried out surely to outdoor.
- In case that the attached drain hose is in a room, please apply heat insulation to it without fail.

7 On Drainage

Code indication	Trouble description	Analyze and diagnose
E1	Room temperature sensor failure	Faulty connector connection; Faulty thermistor; Faulty PCB;
E2	Heat-exchange sensor failure	
E4	Indoor EEPROM error	Faulty EEPROM data; Faulty EEPROM; Faulty PCB;
E7	Communication fault between indoor and outdoor units	Indoor unit- outdoor unit signal transmission error due to wiring error; Faulty PCB;
E14	Indoor fan motor malfunction	Operation halt due to breaking of wire inside the fan motor; Operation halt due to breaking of the fan motor lead wires; Detection error due to faulty indoor unit PCB;

8 Check for Installation and Test Run

■ Please kindly explain to our customers how to operate through the instruction manual.

Check Items for Test Run

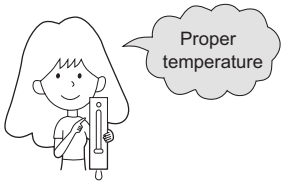
□ Put check mark ✓ in boxes

- □Gas leak from pipe connecting?
- □Heat insulation of pipe connecting?
- □Are the connecting wirings of indoor and outdoor firmly inserted to the terminal block?
- □Is the connecting wiring of indoor and outdoor firmly fixed?
- □Is drainage securely carried out?
- □Is the earth line securely connected?
- □Is the indoor unit securely fixed?
- □Is power source voltage abided by the code?
- □Is there any noise?
- □Is the lamp normally lighting?
- □Are cooling and heating (when in heat pump) performed normally?
- □Is the operation of room temperature regulator normal?

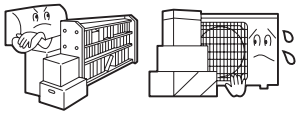
Maintenance

For Smart Use of The Air Conditioner

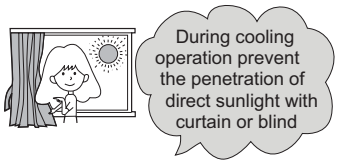
Setting of proper room temperature



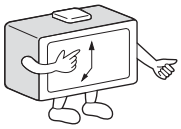
Do not block the air inlet or outlet



Close doors and windows during operation



Use the timer effectively



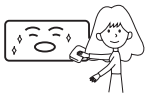
If the unit is not to be used for a long time, turn off the power supply main switch.

Use the louvers effectively

Remote Controller

Do not usewater, wipe the controller with a dry cloth.Do not use glass cleaner or chemical cloth.

Indoor Body



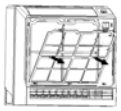
wipe the air conditioner by using a soft and dry cloth.For serious stains, use a neutral detergent diluted with water. Wring the water out of the cloth before wiping,then wipe off the detergent completely.

Do not use the following for cleaning

Gasoline,benzine,thinner or cleanser may damage the coating of the unit.

Hot water over 40℃(104℉) may cause discoloring or deformation.

Air Filter cleaning

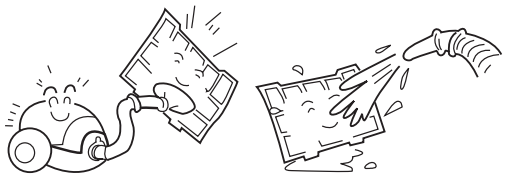


1. Open the inlet grille by pulling it upward.
2. Remove the filter.
   Push up the filter's center tab slightly until it is released from the stopper, and remove the filter downward.
3. Clean the filter.
   Use a vacuum cleaner to remove dust, or wash the filter with water. After washing, dry the filter completely in the shade.
4. Attach the filter.
   Attach the filter correctly so that the “FRONT” indication is facing to the front. Make sure that the filter is completely fixed behind the stopper. If the right and left filters are not attached correctly, that may cause defects.

5. Close the inlet grille.

Clean the filter

Use water or vacuum cleaner to remove dust. If it is too dirt, clean with detergent or neutral soap water.
Rinsing with fresh water, dry the filter and re-assemble.

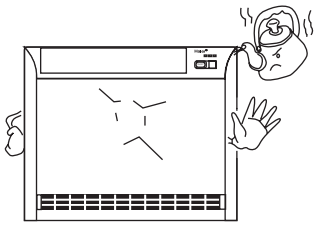


Caution

Do not wash filter in hot water above 40 °C,which will damage the filter.
Do carefully wipe the filter.

Clean the indoor(outdoor) unit

Clean with warm cloth or neutral detergent, then wipe away moisture with dry cloth. Do not use too hot water(above 40 °C), which will cause discoloration or deformation. Do not use pesticide or other chemical detergents.



Cautions

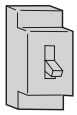
⚠ WARNING

Please call Sales/Service Shop for the Installation.

Do not attempt to install the air conditioner by yourself because improper works may cause electric shock, fire, water leakage.

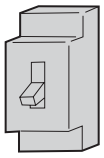
⚠ WARNING

When abnormality such as burnt-small found, immediately stop the operation button and contact sales shop.


OFF

STRICT ENFORCEMENT

Use an exclusive power source with a circuit breaker



Check proper installation of the drainage securely

STRICT ENFORCEMENT

Connect power supply cord to the outlet completely

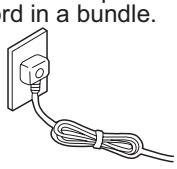
STRICT ENFORCEMENT

Use the proper voltage

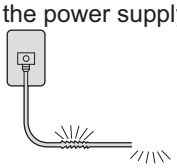
STRICT ENFORCEMENT

1.Do not use power supply cord extended or connected in halfway
2.Do not install in the place where there is any possibility of inflammable gas leakage around the unit.
3.Do not get the unit exposed to vapor or oil steam.
PROHIBITION

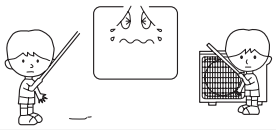
Do not use power supply cord in a bundle.


PROHIBITION

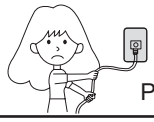
Take care not to damage the power supply cord.


PROHIBITION

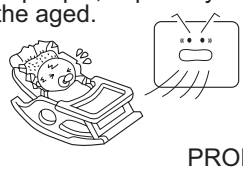
Do not insert objects into the air inlet or outlet.


PROHIBITION

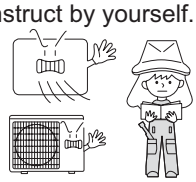
Do not start or stop the operation by disconnecting the power supply cord and so on.


PROHIBITION

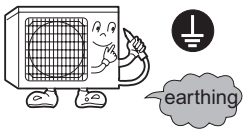
Do not channel the air flow directly at people, especially at infants or the aged.


PROHIBITION

Do not try to repair or reconstruct by yourself.



Connect the earth cable.

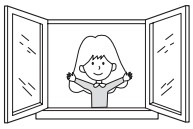


⚠ CAUTION

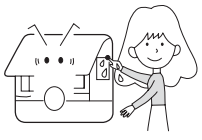
Do not use for the purpose of storage of food, art work, precise equipment, breeding, or cultivation.

PROHIBITION

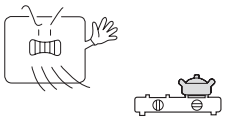
Take fresh air occasionally especially when gas appliance is running at the same time.


STRICT ENFORCEMENT

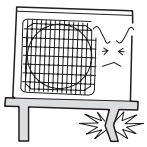
Do not operate the switch with wet hand.


PROHIBITION

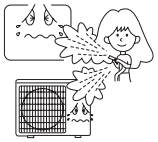
Do not install the unit near a fireplace or other heating apparatus.


PROHIBITION

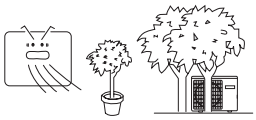
Check good condition of the installation stand


PROHIBITION

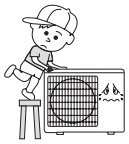
Do not pour water onto the unit for cleaning


PROHIBITION

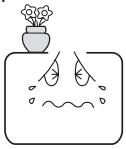
Do not place animals or plants in the direct path of the air flow


PROHIBITION

Do not place any objects on or climb on the unit.


PROHIBITION

Do not place flower vase or water containers on the top of the unit.

PROHIBITION


Trouble shooting

Before asking for service, check the following first.

	Phenomenon	Cause or check points
Normal Performance inspection	The system does not restart immediately.	• When unit is stopped, it won't restart immediately until 3 minutes have elapsed to protect the system. • When the electric plug is pulled out and reinserted, the protection circuit will work for 3 minutes to protect the air conditioner.
	Noise is heard	• During unit operation or at stop, a swishing or gurgling noise may be heard.At first 2-3 minutes after unit start, this noise is more noticeable. (This noise is generated by refrigerant flowing in the system.) • During unit operation, a cracking noise may be heard.This noise is generated by the casing expanding or shrinking because of temperature changes. • Should there be a big noise from air flow in unit operation, air filter may be too dirty.
	Smells are generated.	• This is because the system circulates smells from the interior air such as the smell of furniture, paint, cigarettes.
	Mist or steam are blown out.	• During COOL or DRY operation, indoor unit may blow out mist. This is due to the sudden cooling of indoor air.
	In dry mode,fan speed can't be changed.	• In DRY mode, when room temperature becomes lower than temp. setting+2 °C,unit will run intermittently at LOW speed regardless of FAN setting.
Multiple check		• Is power plug inserted? • Is there a power failure? • Is fuse blownout?
	Poor cooling	• Is the air filter dirty? Normally it should be cleaned every 15 days. • Are there any obstacles before inlet and outlet? • Is temperature set correctly? • Are there some doors or windows left open? • Is there any direct sunlight through the window during the cooling operation?(Use curtain) • Are there too much heat sources or too many people in the room during cooling operation?

Cautions

- Do not obstruct or cover the ventilation grille of the air conditoner.Do not put fingers or any other things into the inlet/outlet and swing louver.

This appliance is not intended for use by persons (including children) with reduced physiced, sensory or mental capabilities or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of appliance by person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.

Specifications

- The refrigerating circuit is leak-proof.

The machine is adaptive in following situation

1.Applicable ambient temperature range:

Cooling	Indoor	Maximum:D.B/W.B	32°C/23°C
		Minimum:D.B/W.B	21°C/15°C
	Outdoor	Maximum:D.B/W.B	43°C/26°C
		Minimum: D.B	18°C
Heating	Indoor	Maximum:D.B	27°C
		Minimum: D.B	0°C
	Outdoor	Maximum:D.B/W.B	24°C/18°C
		Minimum:D.B/W.B	-7°C/-8°C
	Outdoor (INVERTER)	Maximum:D.B/W.B	24°C/18°C
		Minimum:D.B	-15°C

2. If the power supply cord is damaged, it must be replaced by the manufacturer or its service agent or a similar qualified person.

3.If the fuse of indoor unit on PC board is broken,please change it with the type of T. 3.15A/ 250V. If the fuse of outdoor unit is broken,change it with the type of T.25A/250V

4. The wiring method should be in line with the local wiring standard.

5. After installation, the power plug should be easily reached.

6. The waste battery should be disposed properly.

7. The appliance is not intended for use by young children or infirm persons without supervision.

8. Young children should be supervised to ensure that they do not play with the appliance.

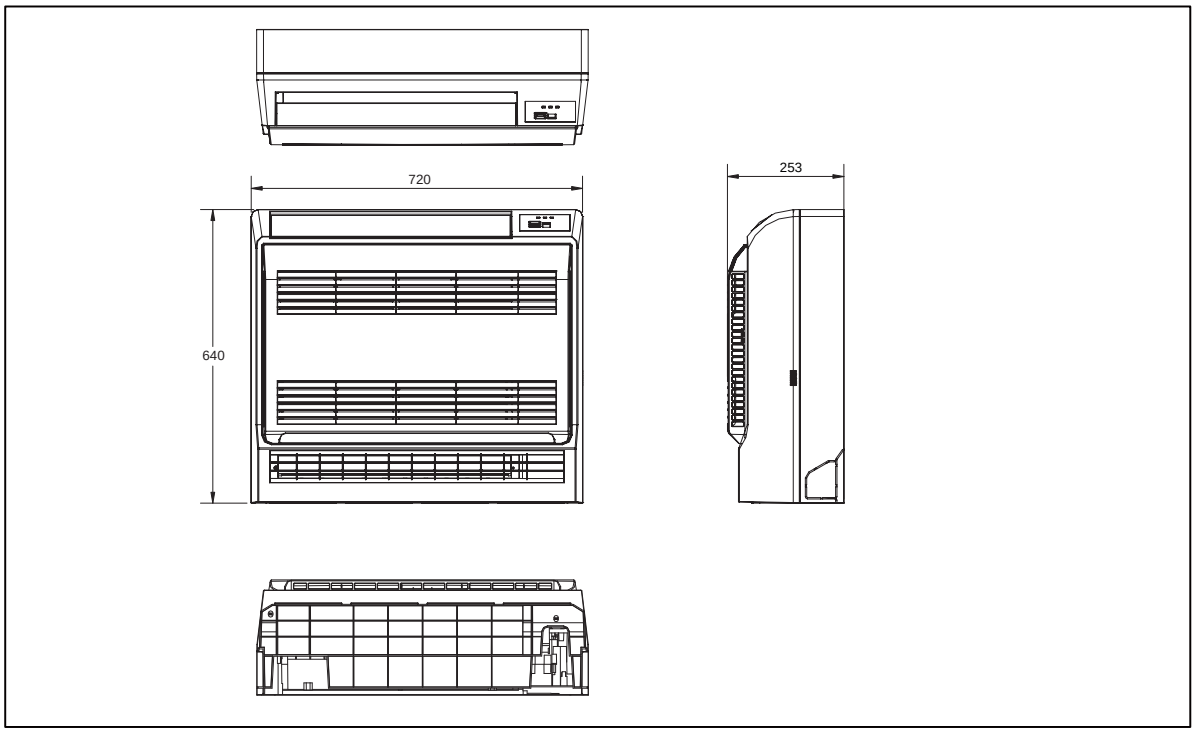
9. Please employ the proper power plug,which fit into the power supply cord.

10. A breaker should be incorporated into fixed wiring. The breaker should be all-pole switch and the distance between its two contacts should be not less than 3mm.

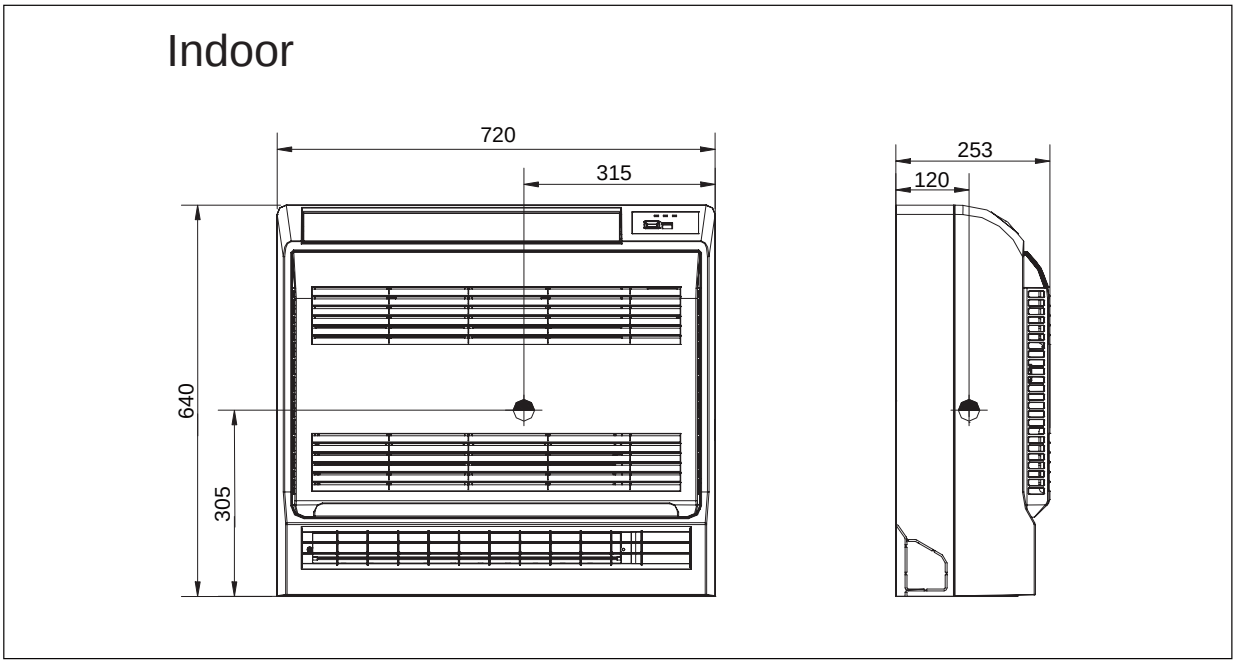
11 .The power plug and connecting cable must have acquired the local attestation.

12.In order to protect the units, please turn off the A/C first, and at least 30 seconds later, cutting off the power.

9.Dimensional drawings



10.Center of gravity



11 Service Diagnosis

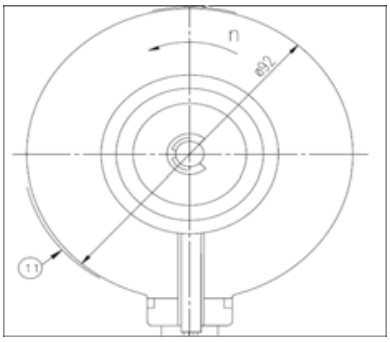
11.1 Caution for Diagnosis

The operation lamp flashes when any of the following errors is detected.

1. When a protection device of the indoor or outdoor unit is activated or when the thermistor malfunctions, disabling equipment operation.

2. When a signal transmission error occurs between the indoor and outdoor units. In either case, conduct the diagnostic procedure described in the following pages.

11.2 Parameter of primary electronic appliance

NO	Name	Parameter	Picture
1	Fan motor (match cross flow fan 0010201184 ----φ97*510*7)	Rated voltage:220-230V Rated current:0.25A Rated frequency:50Hz Rated power:11W	
2	Fan motor (match cross flow fan 0010201175 ----φ97*490*7)	Rated voltage:220-230V Rated current:0.4A Rated frequency:50Hz Rated power:20W	

11.3 Problem Symptoms and Measures

Symptom	**Check Item**	**Details of Measure**
None of the units operates	Check the power supply.	Check to make sure that the rated voltage is supplied.
	Check the indoor PCB	Check to make sure that the indoor PCB is broken
Operation sometimes stops.	Check the power supply.	A power failure of 2 to 10 cycles can stop air conditioner operation.
Equipment operates but does not cool, or does not heat (only for heat pump)	Check for faulty operation of the electronic expansion valve.	Set the units to cooling operation, and compare the temperatures of the liquid side connection pipes of the connection section among rooms to check the opening and closing operation of the electronic expansion valves of the individual units.
	Diagnosis by service port pressure and operating current.	Check for insufficient gas.
Large operating noise and vibrations	Check the installation condition.	Check to make sure that the required spaces for installation (specified in the Technical Guide, etc.) are provided.

11.4 Error codes and description

	Code indication		fault description	Reference Page
	Indoor displaying panel code indication	Outdoor (LED1 flash times)		
Indoor and Outdoor	E7	15	Communication fault between indoor and outdoor units	Page49.
Indoor Malfunction	E1	--	Room temperature sensor failure	Page39.
	E2	--	Heat-exchange sensor failure	Page39.
	E4	--	Indoor EEPROM error	Page40.
	E14	--	Indoor fan motor malfunction	Page41.
Outdoor Malfunction	F12	1	Outdoor EEPROM error	Page40.
	F1	2	The protection of IPM	Page44.
	F22	3	Overcurrent protection of AC electricity for the outdoor model	Page45.
	F3	4	Communication fault between the IPM and outdoor PCB	Page46.
	F19	6	Power voltage is too high or low	Page47.
	F27	7	Compressor is lock-rotor or stopped momentary	Page51.
	F4	8	Overheat protection for Discharge temperature	Page48.
	F8	9	Outdoor DC fan motor fault	Page42.
	F21	10	Defrost temperature sensor failure	Page39 .
	F7	11	Suction temperature sensor failure	Page39.
	F6	12	Ambient temperature sensor failure	Page39.
	F25	13	Discharge temperature sensor failure	Page39.
	F13	16	Short of refrigerant	Page44.
	F11	18	deviate from the normal for the compressor	Page51.
	F28	19	Loop of the station detect error	Page51.
	/	21	Over load protection of indoor system	Page47 .
	F2	24	Overcurrent of the compressor	Page45.
	F23	25	Overcurrent protection for single-phase of the compressor	Page45.
	E9	21	High work-intense protection	Page52.

Haier SERVICE MANAUL

Wall Mounted Type

DC Inverter SUPER MATCH

Model No. AS07NS3HRA
AS09NS3HRA

⚠WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public.
It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or Repair the product or products dealt with in this service information by anyone else could result in serious injury or death

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Haier Group **Version：V1** **Date：2013-11-25**

2.Features

Super quiet: Lower noise operation condition

A-PAM DC inverter:With adoption of S-TYPE,S-PAM and PHASE control technology to works more stably at low-frequency,and is more energy-saving,mor powerful at high frequency.

Long distance air supplying:

-15℃ Heating: When -15℃ can still heating natural

10℃ heating maintenance:Heating Holding 10℃ temperature

Confortable sleep：The setting temperature and the indoor noise can be adjusted to a more comfortable level when you set the “sleep mode” during night sleep.

Super match:One outdoor unit can match two or more indoor unit.

DIY auto mode: Adjust the last fixed operation mode automatically.

Turbo mode: Quick cooling or heating

Auto restart: Automatic return to previous operation conditions after sudden power blackout

24 hours timer: Use the timer function to set on,or off,or from on to off,or from off to on.

Intergrative valve cover:The valve cover is Intergrative.

2-way piping design: The pipe can shoot out both from left or right side.

Easy clean design: The panel is easy to wash and the airflow vents can be detached easily

Double 8 display:The display is Double 8 mode.

7.Funcitions and Control

7.1 Main functions and control specification

7.1.1 Automatic operation

When the running mode is turned to automation after starting the system, the system will first determine the running mode according to the current room temperature and then will run according to the determined mode. Tr in the following selection conditions means room temperature, Ts means setting temperature, Tp means temperature of indoor coil pipe

Tr≥23℃ Choose Cooling Mode

Tr＜23℃ Choose Heating Mode

After turning to the automation mode, the running mode can be switched between cooling mode, fan mode and heating mode according to the change of the indoor ambient temperature. But the automatic conversion between cooling mode and heating mode must be conducted after 15 minutes.

7.1.2 Cooling operation mode

Temperature control range: 16℃---30℃

Temperature difference: ±1℃

* Control features: When Tr（input airflow）>Ts（set temperature）℃, the compressor will be opened, the indoor fan will operate at the set speed and the mode signal will be sent to the outdoor system. When Tr （input airflow）< Ts（set temperature）℃, the compressor will be opened, the indoor fan will operate at the set speed and the mode signal will be sent to the outdoor system. The system will keep the original status if Tr= Ts.

Airflow speed control: (temperature difference 1℃)

Automatic: When Tr≤Ts+3℃, high speed.

When Ts+1℃≤Tr<Ts+3℃, medium speed

When Tr<Ts+1℃, low speed

When the sensor is off, low speed

When the airflow speed has no delay from the high to low switching, the speed should be delayed for 3 minutes (remain at high speed for 3 minutes.) before the next switch.

Manus: When the system is operating, you can set the high, medium or low speed manually. (When the sensor is on or off, the system will change the speed 2 seconds after receiving the signal.)

*Airgate location control: the location for the airgate can be set according to your needs.

*Defrosting function: preventing the frosting on the indoor heat exchanger (when cooling or dehumidifying). When the compressor works continuously for 1/6 minutes (adaptable in EEPROM) and the temperature of the indoor coils has been below zero centigrade for 10 seconds, the compressor will be stopped and the malfunction will be recorded in the malfunction list. The indoor system will continue to run. When the temperature of the indoor coil is raised to 7℃, the compressor will be restarted again (the requirement of 3 minutes' delay should be satisfied.)

* timing system on/off function.

* Dormant control function.

7.1.3 Dehumidifying mode.

* temperature control range: 16---30℃
* temperature difference: ±1℃

Control feature: send the dehumidifying signal to the outdoor system.

When Tr>Ts+2℃, the compressor will be turned on, the indoor fan will operate at the set speed.

When Tr is between the Ts and Ts+2℃, the outdoor system will operate at the high dehumidifying frequency for 10 minutes and then at the low dehumidifying mode for six minutes. The indoor fan will operate at low speed.

When Tr< Ts, the outsystem will be stopped, the indoor fan will be stopped for 3 minutes and then turned to the low speed option.

All the frequency converses have a ±1℃ difference.

* Wind speed control: Automatic:

When Tr≥ Ts+ 5℃, high speed.

When Ts+3℃≤Tr< Ts+5℃, medium speed.

When Ts+2℃≤Tr< Ts+3℃, low speed.

When Tr<Ts+2℃, light speed.

If the outdoor fan stopped, the indoor fan will be paused for 3 minutes.

If the outdoor fan stopped for more than 3 minutes and the outdoor system still operates, the system will be changed into light speed mode.

When the airflow speed has no delay from the high to low switching, the speed should be delayed for 3 minutes (remain at high speed for 3 minutes.) before the next switch.

Manual: When the sensor is off or Tr< Ts+3℃, the manual operation can not be made. (obligatory automatic operation.)

*Airgate location control: the location for the airgate can be set according to your needs.

*Defrosting function: preventing the frosting on the indoor heat exchanger (when cooling or dehumidifying). When the compressor works continuously for 1/6 minutes (adaptable in EEPROM) and the temperature of the indoor coils has been below zero centigrade for 10 seconds, the compressor will be stopped and the malfunction will be recorded in the malfunction list. The indoor system will continue to run. When the temperature of the indoor coil is raised to 7℃, the compressor will be restarted again (the requirement of 3 minutes' delay should be satisfied.)

* Coil protection (synchronic overheating protection) are installed for the four directions latch malfunctions when dehumidifying.
* Timing system on/off function.
* Dormant control function.

7.1.4 Heating operation mode.

* temperature control range: 16---30℃
* temperature difference: ±1℃
* control feature: the temperature compensation is automatically added and the system will send the heating signals to the outdoor system.

If Tr≤Ts, the outdoor compressor is turned on, the indoor fan will be at the cold air proof mode.

If Tr>Ts+, the outdoor system is turned off, the indoor fan will be at the heat residue sending mode.

If Tr<Ts+, the outdoor system will be turned on again, the indoor fan will be at the cold air proof mode.

*Indoor fan control

manual control: You can choose high, medium, low and automatic speed control.

Automatic: When Tr<Ts, high speed.

When Ts≤Tr≤Ts+2℃, medium speed.

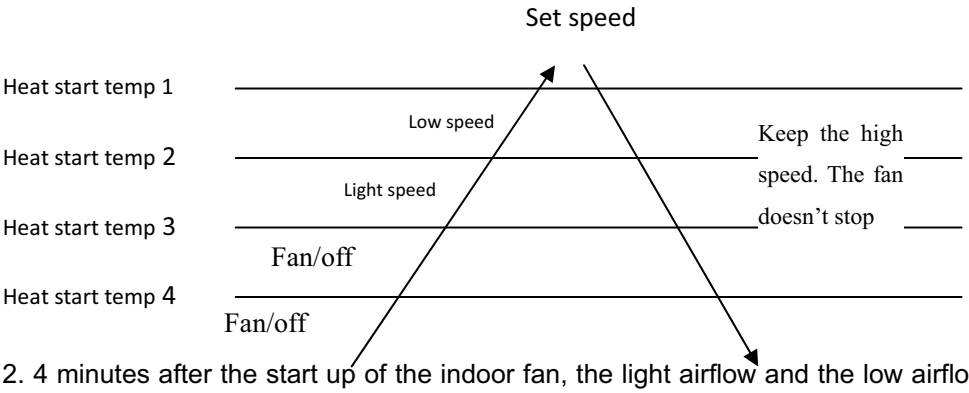
When Tr> Ts+2℃, low speed.

When the airflow speed has no delay from the high to low switching, the speed should be delayed for 3 minutes (remain at high speed for 3 minutes.) before the next switch.

*Airgate location control: the location for the airgate can be set according to your needs.

Coldair proof operation

1. The indoor operation within 4 minutes after the start up is as the following diagram, the air speed can be raised only after the speed has reached a certain level.



2. 4 minutes after the start up of the indoor fan, the light airflow and the low airflow will be turned to the set speed airflow.

3. In the cold air proof operation, the fan won't stop after the start up.

4. During the cold air proof operation, the indoor system will continuously send 'indoor high speed' signals to the outdoor system.

* Residue heat sending. The indoor fan will send the residue heat at a low speed for 12 seconds.

If other conditions are satisfied, when the compressor stops, the indoor system will operate at a light speed. The indoor fan will stop when the coil temperature is below the 'heat start temp 4'.

* Defrosting. When the system receives the defrosting signal from outdoors, the indoor fan will stop and the indoor temperature display won't change. At the time, any indoor coil malfunctions will be neglected. When the outdoor defrosting finishes, the coil malfunction will still be neglected until the compressor has been started up for 30 seconds. The indoor temperature display will not change and the system operates at the cold air proof mode.

* Automatic heating temperature compensation: when the system enters the heating mode, the temperature compensation (4) will be added. When the status is switched off, the compensation will be erased.

7.1.5 Strength operation

The system enters the mode after receiving the 'strength signal'.

Send strength operation signal to the outdoor system.

The mode change finishes the strength operation.

Entering 'mute', you can have normal operation or signal control such as timing to finish the strength operation.

When the system is at the automatic option with the strength/ mute function, if the system enters the cooling

mode, the cooling strength/ mute function will be offered; if the system enters the heating mode, then the heating strength/ mute function will be offered; if the system enters the airflow mode, there will be no strength/ mute function.

7.1.6 Mute operation

The system enters the mode after receiving the 'mute signal'.
a. Mute heating: the airflow speed is slight, the system sends the mute signal to the outdoor system.
b. mute cooling: the airflow speed is slight, the system sends the mute signal to the outdoor system.
When the compressor operates, the airflow speed is mute speed. EEPROM is adaptable.
Mute operation can not work under the dehumidifying and airflow-sending operation.

7.1.7 Air refreshing

After receiving the signal from the remote control, (HV series: the background light of the 'health' logo is green. HS series: the 'health' indicator will be lighted). If the fan operates, the Nano-Aqua operates to realize the ions sending function.
If the indoor fan stops, the Nano-Aqua is turned off.
When the Nano-Aqua is turned off, if the air refreshing system is turned on, the Nano-Aqua will be turned on when the fan operates.

7.1.8 Timing

You can set 24 hours' on/off timing accordingly. After the setting, the timing indicator will be lightened. Also, the light will be turning off after the timing is finished. The followings are several timing methods.
1.system /on timing: The timing indicator will be lightened and the indoor system is under the waiting mode. The light will be turned off when the timing is finished and the rest of the system will operate under a normal condition. The timing starts since the last reception of the timing signal.
2.system /off timing: When the system is turned on, the timing indicator is lightened, the rest of the system will operated under a normal condition. When set time comes, the indicator light will be turned off and the system will be turned off. If you have set the dormant functions, the order of your settings will be operated according to the timing settings.
3 .system /on and off timing: The settings will be completed according to the orders..

7.1.9 Dormant operation

The dormant timing is an eight hours unadaptable one. The timing signs are shown on the V series board. (RC series show the dormant signal, the timing light is lighted on the 6 lights board).
2.1 Under the cooling/ dehumidifying operation, after the setting of the dormant operation, the set temperature will be raised for 1 centigrade after 1 hour's operation and will be raised for 1 centigrade 1 hour later. The system will keep this status for 6 hours and then close.
2.2 Under the heating mode, after the setting of the dormant operation, the setting temperature will fall 2 centigrade after 1 hour's operation and will fall 2 centigrade 1 hour later. 3 hours after the preceding operations, the set temperature will be raised for 1 centigrade and the system will keep this status for 3 hours and then close down.
2.3 During the dormant time, except the change of the system mode or a new press on the dormant setting

keys, the timing of the 8 hours dormancy will take the first timing as the start time, any presses on other keys will not affect the original timing.

2.4 Indoor fan control under the dormant operation.

If the indoor fan is at the high speed before the dormant operation setting, the speed will be turned to medium after the setting. If the fan is at the medium speed before the dormant setting, the speed will be turned to low after the setting. If the fan is at the low speed before the dormant setting, the speed will not change.

7.1.10 Urgent on/off input

Press the urgency button the buzzer will ring. The system will enter the automatic mode if you don't press the button for more than 5 seconds.

Under the system off mode, if you press the urgency key for 5 to 10 seconds, the system will start the test operation.

Under the system off mode, if you press the urgency key for 10 to 15 seconds, the display screen will show the resume of the last malfunction.

If the system is under operation, the press on the urgency key will stop it.

Under the system off mode, the display screen will show automatic running sign.

Under the system off mode, the system will not receive the remote control signal if the press on the urgency key doesn't last for 15 seconds or if the key is loosened.

Urgency operation: If you press the urgency key for less than 5 seconds, the buzzer will ring when you press the on/off key. The system will enter the urgency operation when the urgency key is loosened. The urgency operation is fully automatic.

Test operation.

The inlet temperature sensor doesn't work, the indoor fan and the indoor air direction board motor works synchronically. High speed airflow, cooling, outdoor system on, etc, will send the ambient temperature 30 centigrade and coil temperature 16 centigrade information to the outdoor system.

Test operation

The defrost protection of the evaporator doesn't work.

The temperature control doesn't work.

The test operation will be finished in 30 minutes.

The test operation can be stopped by the relative commands from the remote control.

7.1.11 Low load protection control

In order to prevent the frosting of the indoor heat interaction device, the outdoor system will be stopped if the indoor heat interaction temperature is below zero centigrade for 5 minutes, but the fan will continue to operate. The outdoor system will be started again when the heat interaction temperature is above 7 centigrade and the system has been stopped for 3 minutes. The malfunction will be stored in the malfunction resume and will not be revealed.

7.1.12 High load protection control

The outdoor system will be stopped if the coil temperature is above 65℃ for 2 minutes. The indoor fan will be controlled by the thermostat. The outdoor system can be restarted when the coil temperature is below 42℃ and the system has been stopped for 3 minutes. The malfunction will be stored in the malfunction resume

and will not be revealed.

7.1.13 Abnormal operation of indoor system

When the outdoor system operates, if the indoor system operation differs from the outdoor system, the abnormal operation malfunction will be reported. 10s after the report, the indoor system will be closed.

Outdoor system mode	Indoor system mode	conflicts
cooling	heating	yes
cooling	cooling	no
cooling	airflow	no
heating	heating	no
heating	airflow	yes
heating	cooling	yes

7.1.14 Malfunction list resume.

Nothing is presented if there is no code list.

The malfunction display will automatically finish in 10 seconds.

The remote control only receives the signals for stop. According to the signals, the malfunction resume presentation finishes.

The resume restores after the power supply restores.

7.1.15 Abnormality confirmation approaches

1. indoor temperature sensor abnormality:

Under the operation, the normal temperature ranges from 120 degree to -30 degree. When the temperature goes beyond this range, the abnormality can be confirmed. If the temperature goes back into the range, the system will automatically resume.

2 .indoor heat interaction sensor abnormality:

Under the operation, the normal temperature ranges from 120 degree to -30 degree. When the temperature goes beyond this range, the abnormality can be confirmed. If the temperature goes back into the range, the system will automatically resume.

3 .indoor malfunction:

Out door malfunction: When the indoor system receives the outdoor malfunction codes, it will store the code into E2 for the malfunction list resume. The indoor system will continue to operate according to the original status, the malfunction code will not be revealed or processed.

4. transmission abnormality:

If the indoor system can't receive the outdoor system for 8 minutes, the communication abnormality can be confirmed and reported and the outdoor system will be stopped.

7.1.16 Single indoor system operation

* Enter condition: First, set the high speed airflow and 30 centigrade set temperature, then press the dormant keys for 6 times within 7 seconds, the system will feedback with 6 rings.

* After the system enters the separate indoor system operation mode, the indoor system will operate

according to the set mode and neglect the communication signals of the outdoor system. However, it has to send signals to the outdoor system.

* Quitting condition: This mode can be quitted after receiving the quitting signal from the remote control or urgency system. The indoor system thus can quit the single operation mode.

7.1.17 Power cut compensation

* Entering condition: Press dormant button 10 times within 7 second, the buzzer will ring 4 times and the present system status will be stored into the EEPROM of the indoor system.

* After entering the power cut compensation mode, the processing of the indoor system should be as the followings:

Remote control urgency signal: operate according to the remote control and the urgent conditions, the present status will be stored into the EEPROM of the indoor system.

* Quitting conditions: Press dormant button 10 times within 7 seconds and the buzzer will ring twice.

7.1.18 Fixed frequency operation

1. Fixed cooling: a. under G code condition: high speed cooling, set 16℃, press temperature '-' key and the set key at the same time. The system will enter the fixed frequency operation after the buzzer rings twice.

b. The proceeding programs are as the follows:

Entering the fixed frequency operation, you can set the fixed strength location 1 and send the cooling signal to the outdoor system. Meanwhile, you can fix the indoor system at high speed mode, the location of the airflow direction board can be switched to the maximal position.

c. Quitting condition: The fixed frequency cooling can be quitted after receiving the remote signal, and the system will enter the remote setting status.

2. Fixed heating: a. under G code condition: high speed heating, set 30℃, press temperature '+' key and the set key at the same time. The system will enter the fixed frequency operation after the buzzer rings twice.

b. The proceeding programs are as the follows:

Entering the fixed frequency operation, you can set the fixed strength location 1 and send the heating signal to the outdoor system. Meanwhile, you can fix the indoor system at high speed mode, the location of the airflow direction board can be switched to the maximal position.

c. Quitting condition: The fixed frequency heating can be quitted after receiving the remote signal, and the system will enter the remote setting status.

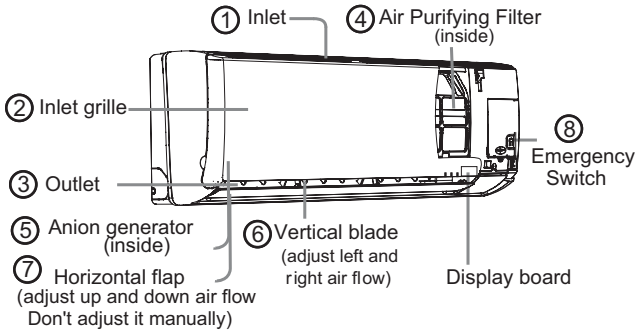
7.1.19 Test program

First, connect the test program terminal on the mainboard. Then connect the system to the power circuit. The test program will operate as follows.

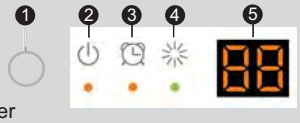
HV series display: The buzzer rings for one time—the signal will be sent to outdoor system for 0.5 second—the violet is sent for 0.5-- the background light turns to white—the back ground light turns to white—the background light turns to white—the background light is fully lighted for 0.5 second—LED screen lights for 0.5 second— the step-in motor fully output for 0.5 second—then the motor doesn't output for 0.5 second—the motor fully output again for 0.5 second. The test program finishes.

Parts and Functions

Indoor Unit



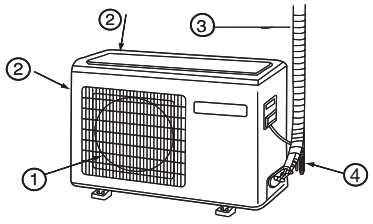
Display board



1. Remote signal receiver
   (A beeping sound is generated when a signal from remote controller isreceived.)
2. Power indicator (Lights up when unit starts.)
3. Timer mode indicator
   (Lights up whenTimer operation is selected.)
4. Operation mode indicator (lights up when the compressor is on.)
5. Ambient temp display
   When receiving the remote control signal, display the set temperature.

Actual inlet grille may vary from the one shown in the manual according to the product purchased

Outdoor Unit

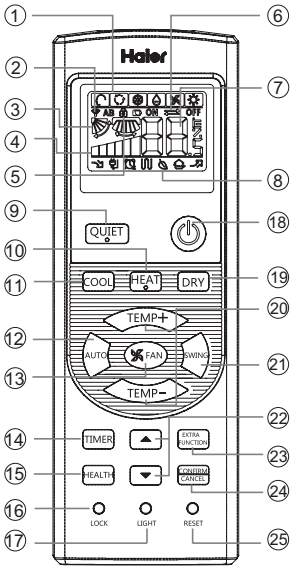


① OUTLET ③ CONNECTING PIPING AND ELECTRICAL WIRING

② INLET ④ DRAIN HOSE

Please be subject to the actual produce purchased the above picture is just from your reference

Remote controller



1. Mode display

Operation mode	AUTO	COOL	DRY	HEAT	FAN
Remote controller					

2. Signal sending display
3. SWING display
4. FAN SPEED display

5. LOCK display
6. TIMER OFF display
   TIMER ON display
7. TEMP display

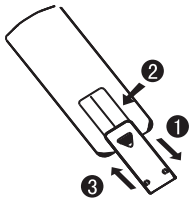
8.Additional functions display

Operation mode	QUITE	SLEEP	Supplemented electrical heating	HEALTH	POWER
Remote controller					

9. QUIET button
10. HEAT button
11. COOL button
12. AUTO button
13. FAN button
14. TIMER button
15. HEALTH button
16. LOCK button
    Used to lock buttons and LCD display.
17. LIGHT button
    Control the lightening and extinguishing of the indoor LED display board.
18. POWER ON/OFF button
19. DRY button
20. TEMP button
21. SWING button
22. HOUR button
23. EXTRA FUNCTION button
    Function: Air sending-->Healthy airflow position1-->Healthy airflow position 2 -->Restore the original flap position --> Right & left air airflow -->A-B yard-->10 and heating symbol displayed simultaneously-->Sleeping -->Electrical heating-->Refresh air (reserved function) --> Power --> Fahrenheit/Celsius mode conversion
24. CANCEL/CONFIRM button
    Function: Setting and cancel to the timer and other additional functions.
25. RESET button
    When the remote controller appears abnormal, use a sharp pointed article to press this button to reset the remote

Healthy function is not available for some units.

Loading of the battery



1 Remove the battery cover;
2 Load the batteries as illustrated. 2 R-03 batteries, resetting key (cylinder);
3 Be sure that the loading is in line with the" + "/"-";

Load the battery,then put on the cover again.

Note:

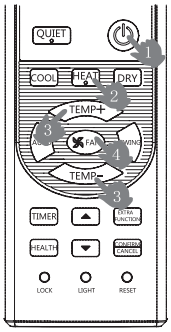
- The distance between the signal transmission head and the receiver hole should be within 7m without any obstacle as well.
- When electronic-started type fluorescent lamp or change-over type fluorescent lamp or wireless telephone is installed in the room, the receiver is apt to be disturbed in receiving the signals, so the distance to the indoor unit should be shorter.
- Full display or unclear display during operation indicates the batteries have been used up. Please change batteries.
- If the remote controller can't run normally during operation, please remove the batteries and reload several minutes later.

Hint:
Remove the batteries in case won't be in use for a long period. If there is any display after taking-out, just press reset key.

Operation

Unit start / stop

Remote controller



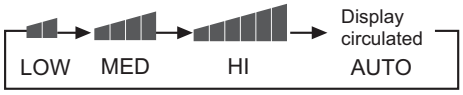
1. Unit start
Press ON/OFF on the remote controller, unit starts.

2.Select temp.setting
Press TEMP+ / TEMP− button
TEMP+ Every time the button is pressed, temp.setting increase 1℃,if kept depressed, it will increase rapidly
TEMP− Every time the button is pressed, temp.setting decrease 1℃,if kept depressed, it will decrease rapidly
Select a desired temperature.

3.Fan function

Press EXTRA FUNCTION button to enter additional options, when cycle display to , will flash. And then press CONFIRM CANCEL enter to FAN function.

For each press button fan speed changes as follows:
Remote controller:



Air conditioner is running under displayed fan speed. When FAN is set to AUTO, the air conditioner automatically adjusts the fan speed according to room temperature.

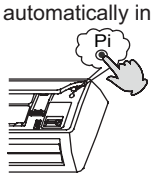
Operation Mode	Remote Controller	Note
AUTO		Under the mode of auto operation, air conditioner will automatically select Cool or Heat operation according to room temperature. When FAN is set to AUTO, the air conditioner automatically adjusts the fan speed according to room temperature.
COOL		Cooling only unit do not have displays and functions related with heating
DRY		In DRY mode, when room temperature becomes lower than temp.setting+2℃,unit will run intermittently at LOW speed regardless of FAN setting.
HEAT		In HEAT mode,warm air will blow out after a short periodof the time due to cold-draft prevention function.
FAN		In FAN operation mode, the unit will not operate in COOL or HEAT mode but only in FAN mode ,AUTO is not available in FAN mode.And temp.setting is disabled. When FAN is set to AUTO, the air conditioner automatically adjusts the fan speed according to room temperature. In FAN mode,SLEEP operation is not available.

Emergency operation and test operation

Emergency Operation:

- Use this operation only when the remote controller is defective or lost, and with function of emergency running, air conditoner can run automatically for a while.
- When the emergency operation switch is pressed, the " Pi " sound is heard once, which means the start of this operation.
- When power switch is turning on for the first time and emergency operation starts, the unit will run automatically in the following modes:

Room temperature	Designated temperature	Timer mode	Fan speed	Operation mode
Above 23°C	26°C	No	AUTO	COOL
Below 23°C	23°C	No	AUTO	HEAT

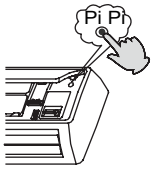


- It is impossible to change the settings of temp. and fan speed,It is also not possible to operate in timer or dry mode.

Test operation:

Test operation switch is the same as emergency switch.

- Use this switch in the test operation when the room temperature is below 16°C, do not use it in the normal operation.
- Continue to press the test operation switch for more than 5 seconds. After you hear the "Pi" sound twice, release your finger from the switch: the cooling operation starts with the air flow speed "Hi".
- Under this operation mode,the fan motor of indoor unit will run in high speed.



Air Flow Direction Adjustment

1.Status display of air flow

Press EXTRA FUNCTION button to enter additional options, when cycle display to , will flash. And then press CONFIRM CANCEL enter to up and down air flow function.

Press SWING button. For each press,changes as follows:
Remote controller:
COOL/DRY:
HEAT: Initial state

2.Left and right air flow adjustment

(This function is unavailable on some models.)

Press EXTRA FUNCTION button to enter additional options, when cycle display to , will flash. And then press CONFIRM CANCEL enter to Left and right air flow function.

Press SWING button. For each press,changes as follows:
Remote controller:
COOL/DRY/HEAT:

Cautions:

- When adjusting the flap by hand,turn off the unit.
- When humidity is high,condensate water might occur at air outlet if all vertical louvers are adjusted to left or right.
- It is advisable not to keep horizontal flap at downward position for a long time in COOLor DRY mode ,other wise, condensate water might occur.

Note:When restart after remote turning off, the remote controller will automatically memorize the previous set swing position.

Operation

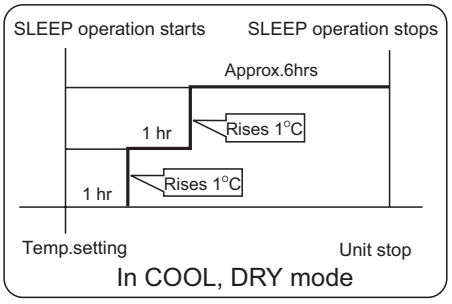
Sleep Operation

Press EXTRA FUNCTION button to enter additional options, when cycle display to , will flash. And then press CONFIRM CANCEL enter to sleep function.

Operation Mode

1. In COOL,DRY mode

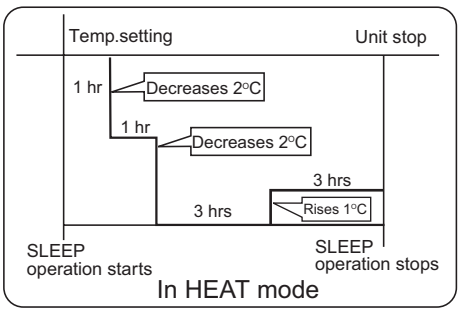
1 hours after SLEEP mode starts,temp.will become 1°C higher than temp.setting.After another 1 hours,temp.rises by 1°C futher.The unit will run for further 6 hours then stops Temp. is higher than temp.setting so that room temperature won't be too low for your sleep.



In COOL, DRY mode

2. In HEAT mode

1 hours after SLEEP mode starts,temp will become 2°C lower than temp.setting.After another 1 hours,temp decrease by 2°C futher.After more another 3 hours,temp. rises by 1°C futher.The unit will run for further 3 hours then stops.Temp.is lower than temp. setting so that room temperature won't be too high for your sleep.



In HEAT mode

3. In AUTO mode

The unit operaters in corresponding sleep mode adapted to the automatically selected operation mode.

4. In FAN mode

It has no SLEEP function.

5.Set the wind speed change when sleeping

If the wind speed is high or middle before setting for the sleep, set for lowing the wind speed after sleeping.
If it is low wind, no change.

Note

When TIMER function is set, the sleeping function can't be set up .After the sleeping function is set up, if user resets TIMER function, the sleeping function will be cancelled; the machine will be in the state of timing-on.

TURBO/QUIET Operation

(This function is unavailable on some models.)

(1) TURBO Operation

When you need rapid heating or cooling, you can use this function.

Press EXTRA FUNCTION button to enter additional options, when cycle display to , will flash and then press CONFIRM CANCEL ,enter to turbo function. When cancel the function, please enter additional options again and to cancel turbo function.

(2) QUIET Operation

Press QUIET button, the remote controller will show , and then achieve to the quiet function. Press again this QUIET button , the quiet function will be cancelled.

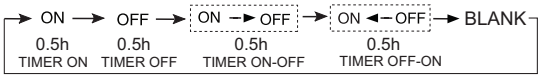
Note：

During TURBO operation, in rapid COOL mode , the room will show inhomogeneous temperature distribution.
Long period QUIET operation will cause effect of not too cool or not too warm.

Operation

Timer On/Off On-Off Operation

1.After unit starts, select your desired operation mode.
2.Press TIMER button to change TIMER mode. Every time the button is pressed, display changes as follows:
Remote controller:



Then select your desired TIMER mode (TIMER ON or TIMER OFF or TIMER ON-OFF). " ON "or " OFF "will flash.

3.Press ▼ / ▲ button to set time.

▲ Press the button for each time, setting time in the first 12 hours increased by 0.5 hour every time, after 12 hours,increased by 1 hour every time.

▼ Press the button for each time, settiing time in the first 12 hours decreased by 0.5 hour every time, after 12 hours,decreased by 1 hour every time.
It can be adjusted within 24 hours.

4.Confirm timer setting
After adjust the time,press CONFIRM/CANCEL button and confirm the time ON or OFF button will not flash any more.

5.Cancel timer setting
Press the timer button by times until the time display eliminated.

Hints:
After replacing batteries or a power failure happens, time setting should be reset.
According to the Time setting sequence of TIMER ON or TIMER OFF, either Start-Stop or Stop-Start can be achieved.

Healthy airflow Operation

1.Press ⏻ to starting
Setting the comfort work conditions.
2.The setting of healthy airflow function
Press EXTRA FUNCTION button to enter additional options,Press this button continuously, the louvers location will cycle between in the following three locations, to choose the swing location what you needed,and then press CONFIRM/CANCEL button to confirm.

3.The cancel of the healthy airflow function
Press EXTRA FUNCTION button to enter additional options,Press this button continuously, the louvers location will cycle between in the following three locations again,and then press CONFIRM/CANCEL button to cancel.

Notice: Do not direct the flap by hand. Otherwise, the grille will run incorrectly. If the grille is not run correctly, stop for a minute and then start, adjusting by remote controller.

Note:
1.After setting the healthy airflow function, the position grill is fixed.
2.In heating, it is better to select the mode.
3.In cooling, it is better to select the mode.
4.In cooling and dry, using the air conditioner for a long time under the high air humidity, condensate water may occur at the grille .

EUROPEAN REGULATIONS CONFORMITY FOR THE MODELS

CE

All the products are in conformity with the following European provision:

- Low Voltage Directive 2006/95/EC
-Electomagnetic CompatibilitY 2004/108/EC

ROHS

The products are fulfilled with the requirements in the directive 2011/65/EU of the European parliament and of council on the Restriction of the use of Certain Hazardous Substances in Electrical and Electronic Equipment (EU RoHS Directive)

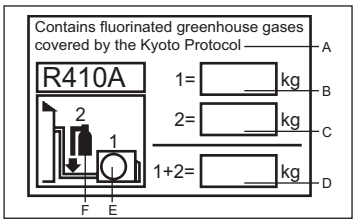
WEEE

In accordance with the directive 2012/19/EU of the European parliament, herewith we inform the consumer about the disposal requirements of the electrical and electronic products.

DISPOSAL REQUIREMENTS:

Your air conditioning product is marked with this symbol.This means that electrical and electronic products shall not be mixed with unsorted household waste. Do not try to dismantle the system yourself : the dismantling of the air conditioning system,treatment of the refrigerant, of oil and of other part must be done by a qualified installer in accordance with relevant local and national legislation. Air conditioners must be treated at a specialized treatment facility for reuse, recycling and recovery. By ensuring this product is disposed of correctly, you will help to prevent potential negative consequences for the environment and humen health. Please contact the installer or local authority for more information. Battery must be removed from the remote controller and disposed of separately in accordance with relevant local and nationl legislation.

IMPORTANT INFORMATION REGARDING THE REFRIGERANT USED

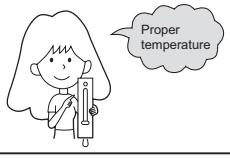


This product contains fluorinated greenhouse gases covered by the Kyoto Protocol. Do not vent into the atmosphere.
Refrigerant type:R410A
GWP* value:1975
GWP=global warming potential
Please fill in with indelible ink,
• 1 the factory refrigerant charge of the product
• 2 the additional refrigerant amount charged in the field and
• 1+2 the total refrigerant charge
on the refrigerant charge label supplied with the product.
The filled out label must be adhered in the proximity of the product charging port (e.g. onto the inside of the stop value cover).
A contains fluorinated greenhouse gases covered by the Kyoto Protocol
B factory refrigerant charge of the product: see unit name plate
C additional refrigerant amount charged in the field
D total refrigerant charge
E outdoor unit
F refrigerant cylinder and manifold for charging

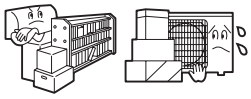
Maintenance

For Smart Use of The Air Conditioner

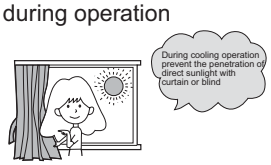
Setting of proper room temperature



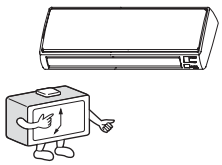
Do not block the air inlet or outlet



Close doors and windows during operation



Use the timer effectively



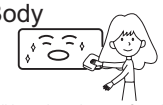
If the unit is not to be used for a long time, turn off the power supply main switch.

Use the louvers effectively

Remote Controller

Do not use water , wipe the controller with a dry cloth.Do not use glass cleaner or chemical cloth.

Indoor Body



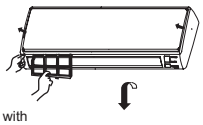
Wipe the air conditioner by using a soft and dry cloth.For serious stains,use a neutral detergent diluted with water.Wring the water out of the cloth before wiping.then wipe off the detergent completely.

Do not use the following for cleaning

Gasoline,benzine, thinner or cleanser may damage the coating of the unit.

Hot water over 40°C(104°F) may cause discoloring or deformation.

Air Filter cleaning



1 Open the inlet grille by pulling it upward.

2 Remove the filter.
Push up the filter's center tab slightly until it is released from the stopper, and remove the filter downward.

3 Clean the filter.
Use a vacuum cleaner to remove dust, or wash the filter with water.After washing, dry the filter completely in the shade.

4 Attach the filter.
Attach the filter correctly so that the "FRONT" indication is facing to the front.Make sure that the filter is completely fixed behind the stopper.If the right and left filters are not attached correctly, that may cause defects.

5 Close the inlet grille.

Replacement of Air Purifying Filter

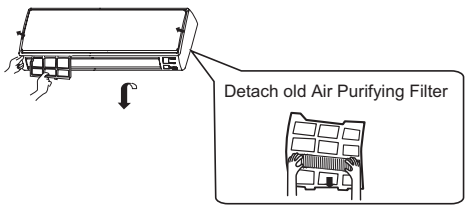
(NOTE: Air purifying filter is optional part)

1.Open the Inlet Grille

Prop up the inlet grille by using a small device named grille-support which located in the right side of the indoor unit.

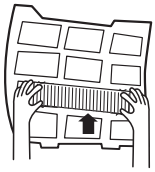
2.Detach the standard air filter

Slide the knob slightly upward to release the filter, then withdraw it.



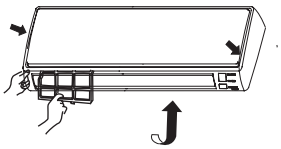
3.Attach Air Purifying Filter

Put air purifying filter appliances into the right and left filter frames.



4.Attach the standard air filter

(Necessary installation)



ATTENTION:

The white side of the photocatalyst air purifying filter face outside,and the black side face the unit.

The green side of the bacteria-killing medium air purifying filter face outside,and the white side face the unit.

5.Close the Inlet Grille

Close the Grille surely

NOTE:

- The photocatalyst air purifying filter will be solarized in fixed time. In normal family, it will be solarized every 6 months.
- The bacteria-killing medium air purifying filter will be used for a long time,no need for replacement. But in the period of using them ,you should remove the dust frequently by using vacuum cleaner or flaping them lightly,otherwise , its performance will be affected.
- Please keep the bacteria-killing medium air purifying filter in the cool and dry conditions avoid long time directly sunshine when you stop using it,or its ability of sterilization will be reduced.

English

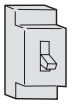
Cautions

⚠WARNING

Please call Sales/Service Shop for the Installation.
Do not attempt to install the air conditioner by yourself because improper works may cause electric shock, fire, water leakage.

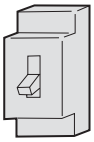
⚠ WARNING

When abnormality such as burnt-small found, immediately stop the operation button and contact sales shop.

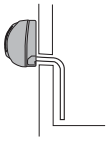

OFF

STRICT ENFORCEMENT

Use an exclusive power source with a circuit breaker



Check proper installation of the drainage securely

STRICT ENFORCEMENT


Connect power supply cord to the outlet completely

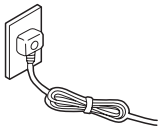
STRICT ENFORCEMENT

Use the proper voltage

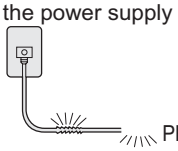
STRICT ENFORCEMENT

1.Do not use power supply cord extended or connected in halfway
2.Do not install in the place where there is any possibility of inflammable gas leakage around the unit.
3.Do not get the unit exposed to vapor or oil steam.
PROHIBITION

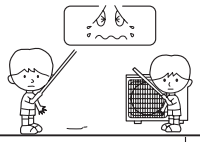
Do not use power supply cord in a bundle.


PROHIBITION

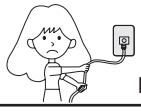
Take care not to damage the power supply cord.


PROHIBITION

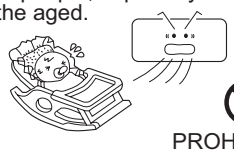
Do not insert objects into the air inlet or outlet.


PROHIBITION

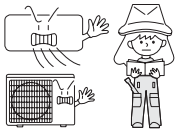
Do not start or stop the operation by disconnecting the power supply cord and so on.


PROHIBITION

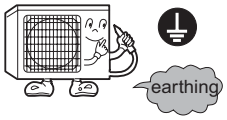
Do not channel the air flow directly at people, especially at infants or the aged.


PROHIBITION

Do not try to repair or reconstruct by yourself.

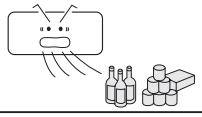


Connect the earth cable.

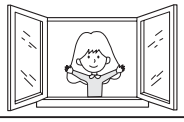


⚠ CAUTION

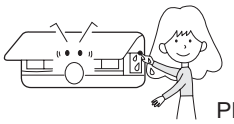
Do not use for the purpose of storage of food, art work, precise equipment, breeding, or cultivation.


PROHIBITION

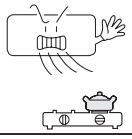
Take fresh air occasionally especially when gas appliance is running at the same time.


STRICT ENFORCEMENT

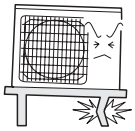
Do not operate the switch with wet hand.


PROHIBITION

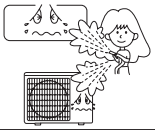
Do not install the unit near a fireplace or other heating apparatus.


PROHIBITION

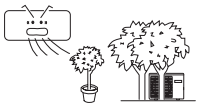
Check good condition of the installation stand


PROHIBITION

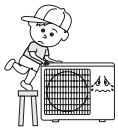
Do not pour water onto the unit for cleaning


PROHIBITION

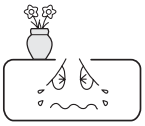
Do not place animals or plants in the direct path of the air flow


PROHIBITION

Do not place any objects on or climb on the unit.


PROHIBITION

Do not place flower vase or water containers on the top of the unit.

PROHIBITION


Trouble shooting

Before asking for service, check the following first.

	Phenomenon	Cause or check points
Normal Performance inspection	The system does not restart immediately.	• When unit is stopped, it won't restart immediately until 3 minutes have elapsed to protect the system. • When the electric plug is pulled out and reinserted, the protection circuit will work for 3 minutes to protect the air conditioner.
	Noise is heard	• During unit operation or at stop, a swishing or gurgling noise may be heard.At first 2-3 minutes after unit start, this noise is more noticeable. (This noise is generated by refrigerant flowing in the system.) • During unit operation, a cracking noise may be heard.This noise is generated by the casing expanding or shrinking because of temperature changes. • Should there be a big noise from air flow in unit operation, air filter may be too dirty.
	Smells are generated.	• This is because the system circulates smells from the interior air such as the smell of furniture, paint, cigarettes.
	Mist or steam are blown out.	• During COOL or DRY operation, indoor unit may blow out mist. This is due to the sudden cooling of indoor air.
	In dry mode,fan speed can't be changed.	• In DRY mode, when room temperature becomes lower than temp. setting+2 °C,unit will run intermittently at LOW speed regardless of FAN setting.
Multiple check		• Is power plug inserted? • Is there a power failure? • Is fuse blownout?
	Poor cooling	• Is the air filter dirty? Normally it should be cleaned every 15 days. • Are there any obstacles before inlet and outlet? • Is temperature set correctly? • Are there some doors or windows left open? • Is there any direct sunlight through the window during the cooling operation?(Use curtain) • Are there too much heat sources or too many people in the room during cooling operation?

Cautions

- Do not obstruct or cover the ventilation grille of the air conditoner.Do not put fingers or any other things into the inlet/outlet and swing louver.
- This appliance is not intended for use by persons (including children) with reduced physiced, sensory or mental capabilities or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of appliance by person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.

Specifications

- The refrigerating circuit is leak-proof.

The machine is adaptive in following situation

1.Applicable ambient temperature range:

Cooling	Indoor	Maximum:D.B/W.B	32°C/23°C
		Minimum:D.B/W.B	21°C/15°C
	Outdoor	Maximum:D.B/W.B	46°C/26°C
		Minimum: D.B	18°C
Heating	Indoor	Maximum:D.B	27°C
		Minimum: D.B	15°C
	Outdoor	Maximum:D.B/W.B	24°C/18°C
		Minimum:D.B/W.B	-7°C/-8°C
	Outdoor (INVERTER)	Maximum:D.B/W.B	24°C/18°C
		Minimum:D.B	-15°C

2. If the power supply cord is damaged, it must be replaced by the manufacturer or its service agent or a similar qualified person.

3.If the fuse of indoor unit on PC board is broken,please change it with the type of T. 3.15A/ 250V. If the fuse of outdoor unit is broken,change it with the type of T.25A/250V

4. The wiring method should be in line with the local wiring standard.

5. After installation, the power plug should be easily reached.

6. The waste battery should be disposed properly.

7. The appliance is not intended for use by young children or infirm persons without supervision.

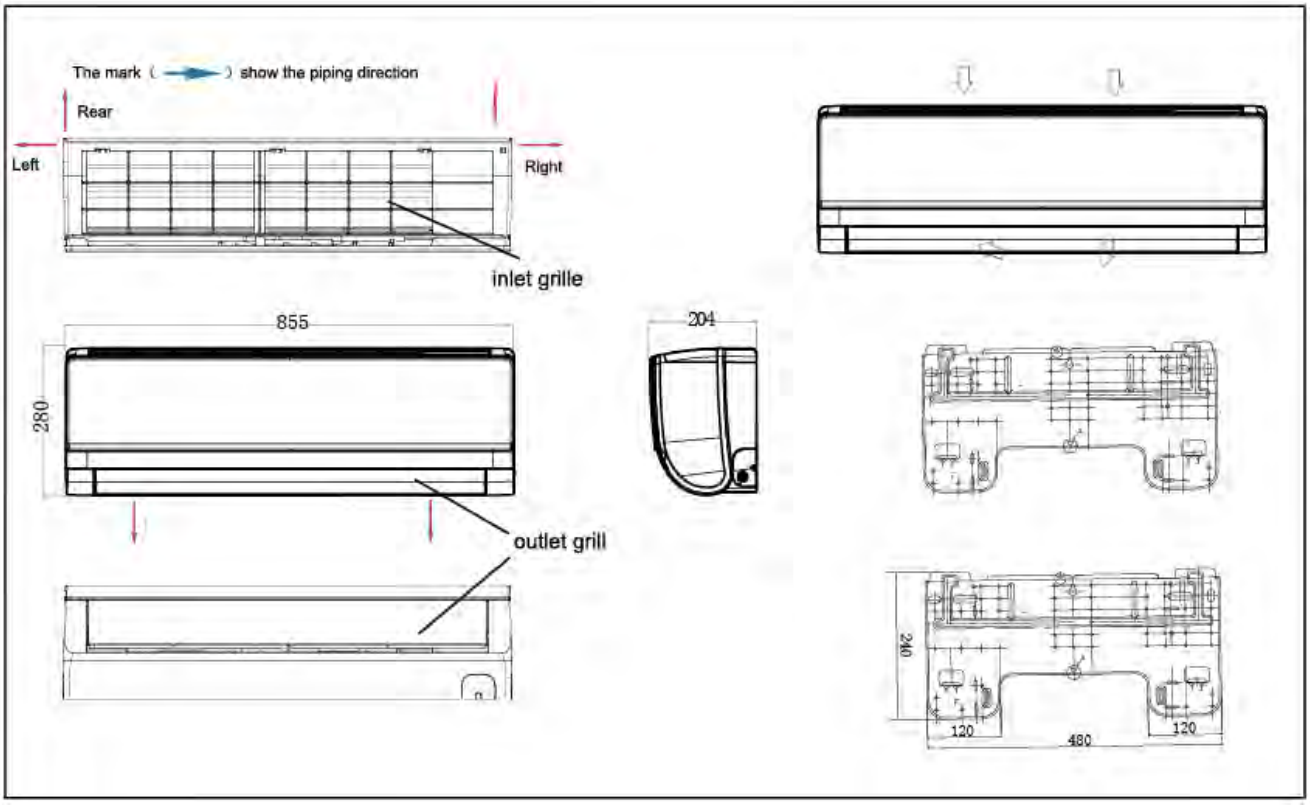
8. Young children should be supervised to ensure that they do not play with the appliance.

9. Please employ the proper power plug,which fit into the power supply cord.

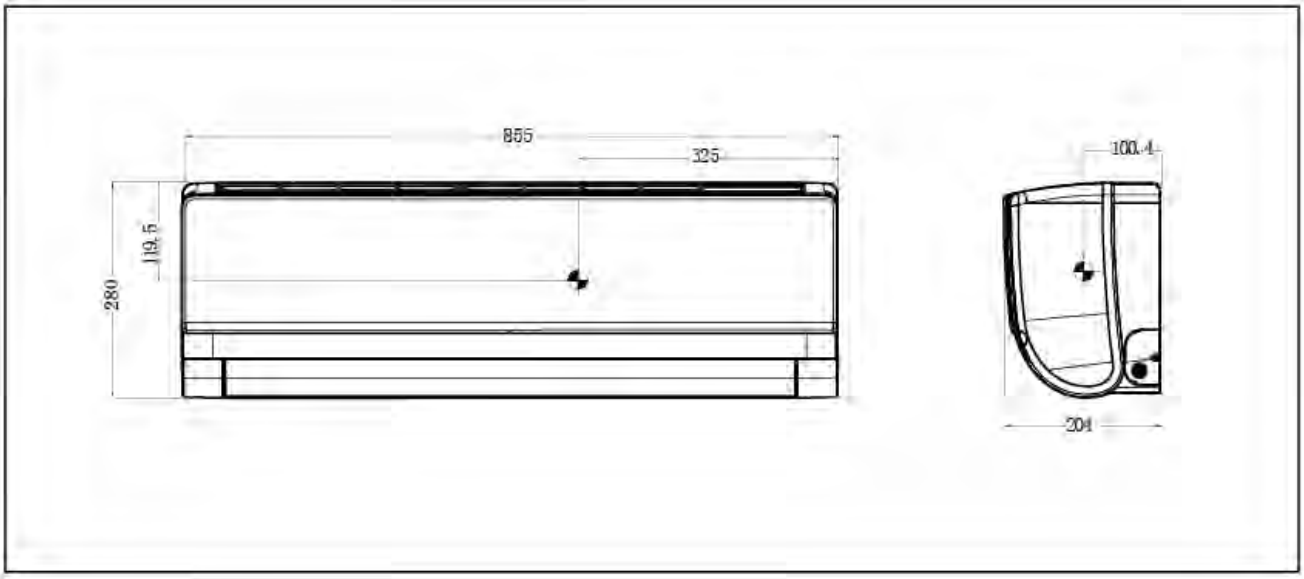
10. The power plug and connecting cable must have acquired the local attestation.

11.In order to protect the units,please turn off the A/C first,and at least 30 seconds later, cutting off the power.

9.Dimensional drawings



10.Center of gravity



11 Service Diagnosis

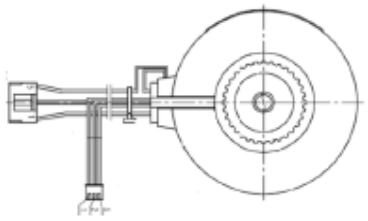
11.1 Caution for Diagnosis

The operation lamp flashes when any of the following errors is detected.

1. When a protection device of the indoor or outdoor unit is activated or when the thermistor malfunctions, disabling equipment operation.

2. When a signal transmission error occurs between the indoor and outdoor units. In either case, conduct the diagnostic procedure described in the following pages.

11.2 Parameter of primary electronic appliance

name	parameter	picture
Fan motor	Rated voltage:220-230V Rated current:0.38A Rated frequency: 50/60HZ	

11.3 Problem Symptoms and Measures

Symptom	**Check Item**	**Details of Measure**
None of the units operates	Check the power supply.	Check to make sure that the rated voltage is supplied.
	Check the indoor PCB	Check to make sure that the indoor PCB is broken
Operation sometimes stops.	Check the power supply.	A power failure of 2 to 10 cycles can stop air conditioner operation.
Equipment operates but does not cool, or does not heat (only for heat pump)	Check for faulty operation of the electronic expansion valve.	Set the units to cooling operation, and compare the temperatures of the liquid side connection pipes of the connection section among rooms to check the opening and closing operation of the electronic expansion valves of the individual units.
	Diagnosis by service port pressure and operating current.	Check for insufficient gas.
Large operating noise and vibrations	Check the installation condition.	Check to make sure that the required spaces for installation (specified in the Technical Guide, etc.) are provided.

11.4 Error codes and description

	Code indication		fault description	Reference Page
	Indoor displaying panel code indication	Outdoor (LED1 flash times)		
Indoor and Outdoor	E7	15	Communication fault between indoor and outdoor units	Page46 .
Indoor Malfunction	E1	--	Room temperature sensor failure	Page36 .
	E2	--	Heat-exchange sensor failure	Page36 .
	E4	--	Indoor EEPROM error	Page45 .
	E14	--	Indoor fan motor malfunction	Page37 .
Outdoor Malfunction	F12	1	Outdoor EEPROM error	Page45 .
	F1	2	The protection of IPM	Page41 .
	F22	3	Overcurrent protection of AC electricity for the outdoor model	Page50 .
	F3	4	Communication fault between the IPM and outdoor PCB	Page43.
	F19	6	Power voltage is too high or low	Page48 .
	F27	7	Compressor is lock-rotor or stopped momentary	Page49
	F4	8	Overheat protection for Discharge temperature	Page44 .
	F8	9	Outdoor DC fan motor fault	Page40
	F21	10	Defrost temperature sensor failure	Page36 .
	F7	11	Suction temperature sensor failure	Page36 .
	F6	12	Ambient temperature sensor failure	Page36 .
	F25	13	Discharge temperature sensor failure	Page36
	F13	16	Short of refrigerant	Page52
	F11	18	deviate from the normal for the compressor	Page49 .
	F28	19	Loop of the station detect error	Page49 .
	/	21	Over load protection of indoor system	Page49 .
	F2	24	Overcurrent of the compressor	Page50.
	F23	25	Overcurrent protection for single-phase of the compressor	Page50.
	E9	21	High work-intense protection	Page52 .

Haier SERVICE MANAUL

Wall Mounted Type

DC Inverter FREE MATCH N-Series

Model No. AS15NS3HRA

⚠WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public.
It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or Repair the product or products dealt with in this service information by anyone else could result in serious injury or death

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Haier Group **Version：V1** **Date：2014-12-26**

2.Features

Super quiet: Lower noise operation condition

A-PAM DC inverter:With adoption of S-TYPE,S-PAM and PHASE control technology to works more stably at low-frequency,and is more energy-saving,mor powerful at high frequency.

Long distance air supplying:

-15℃ Heating: When -15℃ can still heating natural

10℃ heating maintenance:Heating Holding 10℃ temperature

Confortable sleep：The setting temperature and the indoor noise can be adjusted to a more comfortable level when you set the “sleep mode” during night sleep.

Super match:One outdoor unit can match two or more indoor unit.

DIY auto mode: Adjust the last fixed operation mode automatically.

Turbo mode: Quick cooling or heating

Auto restart: Automatic return to previous operation conditions after sudden power blackout

24 hours timer: Use the timer function to set on,or off,or from on to off,or from off to on.

Intergrative valve cover:The valve cover is Intergrative.

2-way piping design: The pipe can shoot out both from left or right side.

Easy clean design: The panel is easy to wash and the airflow vents can be detached easily

Double 8 display:The display is Double 8 mode.

7.Funcitions and Control

7.1 Main functions and control specification

7.1.1 Automatic operation

When the running mode is turned to automation after starting the system, the system will first determine the running mode according to the current room temperature and then will run according to the determined mode. Tr in the following selection conditions means room temperature, Ts means setting temperature, Tp means temperature of indoor coil pipe

Tr≥23℃ Choose Cooling Mode

Tr＜23℃ Choose Heating Mode

After turning to the automation mode, the running mode can be switched between cooling mode, fan mode and heating mode according to the change of the indoor ambient temperature. But the automatic conversion between cooling mode and heating mode must be conducted after 15 minutes.

7.1.2 Cooling operation mode

Temperature control range: 16℃---30℃

Temperature difference: ±1℃

* Control features: When Tr（input airflow）>Ts（set temperature）℃, the compressor will be opened, the indoor fan will operate at the set speed and the mode signal will be sent to the outdoor system. When Tr （input airflow）＜Ts（set temperature）℃, the compressor will be opened, the indoor fan will operate at the set speed and the mode signal will be sent to the outdoor system. The system will keep the original status if Tr= Ts.

Airflow speed control: (temperature difference 1℃)

Automatic: When Tr>=Ts+3℃, high speed.

When Ts+1℃≤Tr<Ts+3℃, medium speed

When Tr<Ts+1℃, low speed

When the sensor is off, low speed

When the airflow speed has no delay from the high to low switching, the speed should be delayed for 3 minutes (remain at high speed for 3 minutes.) before the next switch.

Manus: When the system is operating, you can set the high, medium or low speed manually. (When the sensor is on or off, the system will change the speed 2 seconds after receiving the signal.)

*Airgate location control: the location for the airgate can be set according to your needs.

*Defrosting function: preventing the frosting on the indoor heat exchanger (when cooling or dehumidifying). When the compressor works continuously for 1/6 minutes (adaptable in EEPROM) and the temperature of the indoor coils has been below zero centigrade for 10 seconds, the compressor will be stopped and the malfunction will be recorded in the malfunction list. The indoor system will continue to run. When the temperature of the indoor coil is raised to 7℃, the compressor will be restarted again (the requirement of 3 minutes' delay should be satisfied.)

* timing system on/off function.

* Dormant control function.

7.1.3 Demoisture mode.

* temperature control range: 16---30℃
* temperature difference: ±1℃

Control feature: send the demoisture signal to the outdoor system.

When Tr>Ts+2℃, the compressor will be turned on, the indoor fan will operate at the set speed.

When Tr is between the Ts and Ts+2℃, the outdoor system will operate at the high demoisture frequency for 10 minutes and then at the low demoisture mode for six minutes. The indoor fan will operate at low speed.

When Tr< Ts, the outsystem will be stopped, the indoor fan will be stopped for 3 minutes and then turned to the low speed option.

All the frequency converses have a ±1℃ difference.

* Wind speed control: Automatic:

When Tr >= Ts+ 5℃, high speed.

When Ts+3℃≤Tr< Ts+5℃, medium speed.

When Ts+2℃≤Tr< Ts+3℃, low speed.

When Tr<Ts+2℃, light speed.

If the outdoor fan stopped, the indoor fan will be paused for 3 minutes.

If the outdoor fan stopped for more than 3 minutes and the outdoor system still operates, the system will be changed into light speed mode.

When the airflow speed has no delay from the high to low switching, the speed should be delayed for 3 minutes (remain at high speed for 3 minutes.) before the next switch.

Manual: When the sensor is off or Tr< Ts+3℃, the manual operation can not be made. (obligatory automatic operation.)

*Airgate location control: the location for the airgate can be set according to your needs.

*Defrosting function: preventing the frosting on the indoor heat exchanger (when cooling or demoisture). When the compressor works continuously for 1/6 minutes (adaptable in EEPROM) and the temperature of the indoor coils has been below zero centigrade for 10 seconds, the compressor will be stopped and the malfunction will be recorded in the malfunction list. The indoor system will continue to run. When the temperature of the indoor coil is raised to 7℃, the compressor will be restarted again (the prerequirement of 3 minutes' delay should be satisfied.)

* coil protection (synchronic overheating protection) are installed for the four directions latch malfunctions when demoisturing.
* timing system on/off function.
* Dormant control function.

7.1.4 Heating operation mode.

* temperature control range: 16---30℃
* temperature difference: ±1℃
* control feature: the temperature compensation is automatically added and the system will send the heating signals to the outdoor system.

If Tr≤Ts, the outdoor compressor is turned on, the indoor fan will be at the cold air proof mode.

If Tr>Ts, the outdoor system is turned off, the indoor fan will be at the heat residue sending mode.

If Tr<Ts, the outdoor system will be turned on again, the indoor fan will be at the cold air proof mode.

*Indoor fan control

manual control: You can choose high, medium, low and automatic speed control.

Automatic: When Tr<Ts, high speed.

When Ts≤Tr≤Ts+2℃, medium speed.

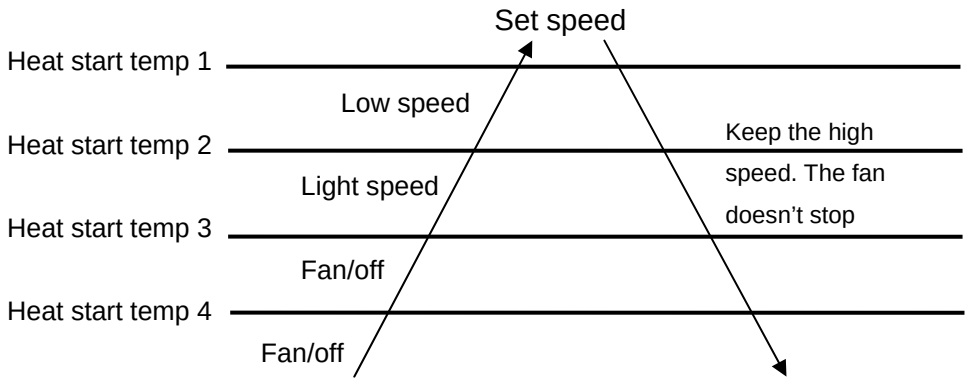
When Tr> Ts+2℃, low speed.

When the airflow speed has no delay from the high to low switching, the speed should be delayed for 3 minutes (remain at high speed for 3 minutes.) before the next switch.

*Airgate location control: the location for the airgate can be set according to your needs.

Coldair proof operation

1. The indoor operation within 4 minutes after the start up is as the following diagram, the air speed can be raised only after the speed has reached a certain level.



2. 4 minutes after the start up of the indoor fan, the light airflow and the low airflow will be turned to the set speed airflow.

3. In the cold air proof operation, the fan won't stop after the start up.

4. During the cold air proof operation, the indoor system will continuously send 'indoor high speed' signals to the outdoor system.

* Residue heat sending. The indoor fan will send the residue heat at a low speed for 12 seconds.

If other conditions are satisfied, when the compressor stops, the indoor system will operate at a light speed. The indoor fan will stop when the coil temperature is below the 'heat start temp 4'.

* Defrosting. When the system receives the defrosting signal from outdoors, the indoor fan will stop and the indoor temperature display won't change. At the time, any indoor coil malfunctions will be neglected. When the outdoor defrosting finishes, the coil malfunction will still be neglected until the compressor has been started up for 30 seconds. The indoor temperature display will not change and the system operates at the cold air proof mode.

* Automatic heating temperature compensation: when the system enters the heating mode, the temperature compensation (4) will be added. When the status is switched off, the compensation will be erased.

7.1.5 Strength operation

The system enters the mode after receiving the 'strength signal'.

Send strength operation signal to the outdoor system.

The mode change finishes the strength operation.

Entering 'mute', you can have normal operation or signal control such as timing to finish the strength operation.

When the system is at the automatic option with the strength/ mute function, if the system enters the cooling mode, the cooling strength/ mute function will be offered; if the system enters the heating mode, then the heating strength/ mute function will be offered; if the system enters the airflow mode, there will be no strength/ mute function.

7.1.6 Mute operation

The system enters the mode after receiving the 'mute signal'.
a. Mute heating: the airflow speed is slight, the system sends the mute signal to the outdoor system.
b. mute cooling: the airflow speed is slight, the system sends the mute signal to the outdoor system.
When the compressor operates, the airflow speed is mute speed. EEPROM is adaptable.
Mute operation can not work under the dehumidifying and airflow-sending operation.

7.1.7 Air refreshing

After receiving the signal from the remote control, (HV series: the background light of the 'health' logo is green. HS series: the 'health' indicator will be lighted). If the fan operates, the Nano-Aqua operates to realize the ions sending function.
If the indoor fan stops, the Nano-Aqua is turned off.
When the Nano-Aqua is turned off, if the air refreshing system is turned on, the Nano-Aqua will be turned on when the fan operates.

7.1.8 Timing

You can set 24 hours' on/off timing accordingly. After the setting, the timing indicator will be lightened. Also, the light will be turning off after the timing is finished. The followings are several timing methods.
1.system /on timing: The timing indicator will be lightened and the indoor system is under the waiting mode. The light will be turned off when the timing is finished and the rest of the system will operate under a normal condition. The timing starts since the last reception of the timing signal.
2.system /off timing: When the system is turned on, the timing indicator is lightened, the rest of the system will operated under a normal condition. When set time comes, the indicator light will be turned off and the system will be turned off. If you have set the dormant functions, the order of your settings will be operated according to the timing settings.
3 .system /on and off timing: The settings will be completed according to the orders..

7.1.9 Dormant operation

The dormant timing is an eight hours unadaptable one. The timing signs are shown on the V series board. (RC series show the dormant signal, the timing light is lighted on the 6 lights board).
2.1 Under the cooling/ dehumidifying operation, after the setting of the dormant operation, the set temperature will be raised for 1 centigrade after 1 hour's operation and will be raised for 1 centigrade 1 hour later. The system will keep this status for 6 hours and then close.
2.2 Under the heating mode, after the setting of the dormant operation, the setting temperature will fall 2 centigrade after 1 hour's operation and will fall 2 centigrade 1 hour later. 3 hours after the preceding operations, the set temperature will be raised for 1 centigrade and the system will keep this status for 3 hours

and then close down.

2.3 During the dormant time, except the change of the system mode or a new press on the dormant setting keys, the timing of the 8 hours dormancy will take the first timing as the start time, any presses on other keys will not affect the original timing.

2.4 Indoor fan control under the dormant operation.

If the indoor fan is at the high speed before the dormant operation setting, the speed will be turned to medium after the setting. If the fan is at the medium speed before the dormant setting, the speed will be turned to low after the setting. If the fan is at the low speed before the dormant setting, the speed will not change.

7.1.10 Urgent on/off input

Press the urgency button the buzzer will ring. The system will enter the automatic mode if you don't press the button for more than 5 seconds.

Under the system off mode, if you press the urgency key for 5 to 10 seconds, the system will start the test operation.

Under the system off mode, if you press the urgency key for 10 to 15 seconds, the display screen will show the resume of the last malfunction.

If the system is under operation, the press on the urgency key will stop it.

Under the system off mode, the display screen will show automatic running sign.

Under the system off mode, the system will not receive the remote control signal if the press on the urgency key doesn't last for 15 seconds or if the key is loosened.

Urgency operation: If you press the urgency key for less than 5 seconds, the buzzer will ring when you press the on/off key. The system will enter the urgency operation when the urgency key is loosened. The urgency operation is fully automatic.

Test operation.

The inlet temperature sensor doesn't work, the indoor fan and the indoor air direction board motor works synchronically. High speed airflow, cooling, outdoor system on, etc, will send the ambient temperature 30 centigrade and coil temperature 16 centigrade information to the outdoor system.

Test operation

The defrost protection of the evaporator doesn't work.

The temperature control doesn't work.

The test operation will be finished in 30 minutes.

The test operation can be stopped by the relative commands from the remote control.

7.1.11 Low load protection control

In order to prevent the frosting of the indoor heat interaction device, the outdoor system will be stopped if the indoor heat interaction temperature is below zero centigrade for 5 minutes, but the fan will continue to operate. The outdoor system will be started again when the heat interaction temperature is above 7 centigrade and the system has been stopped for 3 minutes. The malfunction will be stored in the malfunction resume and will not be revealed.

7.1.12 High load protection control

The outdoor system will be stopped if the coil temperature is above 65℃ for 2 minutes. The indoor fan will be

controlled by the thermostat. The outdoor system can be restarted when the coil temperature is below 42℃ and the system has been stopped for 3 minutes. The malfunction will be stored in the malfunction resume and will not be revealed.

7.1.13 Abnormal operation of indoor system

When the outdoor system operates, if the indoor system operation differs from the outdoor system, the abnormal operation malfunction will be reported. 10s after the report, the indoor system will be closed.

Outdoor system mode	Indoor system mode	conflicts
cooling	heating	yes
cooling	cooling	no
cooling	airflow	no
heating	heating	no
heating	airflow	yes
heating	cooling	yes

7.1.14 Malfunction list resume.

Nothing is presented if there is no code list.

The malfunction display will automatically finish in 10 seconds.

The remote control only receives the signals for stop. According to the signals, the malfunction resume presentation finishes.

The resume restores after the power supply restores.

7.1.15 Abnormality confirmation approaches

1. indoor temperature sensor abnormality:

Under the operation, the normal temperature ranges from 120 degree to -30 degree. When the temperature goes beyond this range, the abnormality can be confirmed. If the temperature goes back into the range, the system will automatically resume.

2 .indoor heat interaction sensor abnormality:

Under the operation, the normal temperature ranges from 120 degree to -30 degree. When the temperature goes beyond this range, the abnormality can be confirmed. If the temperature goes back into the range, the system will automatically resume.

3 .indoor malfunction:

Outdoor malfunction: When the indoor system receives the outdoor malfunction codes, it will store the code into E2 for the malfunction list resume. The indoor system will continue to operate according to the original status, the malfunction code will not be revealed or processed.

4. transmission abnormality:

If the indoor system can't receive the outdoor system for 8 minutes, the communication abnormality can be confirmed and reported and the outdoor system will be stopped.

7.1.16 Single indoor system operation

* Enter condition: First, set the high speed airflow and 30 centigrade set temperature, then press the dormant

keys for 6 times within 7 seconds, the system will feedback with 6 rings.

* After the system enters the separate indoor system operation mode, the indoor system will operate according to the set mode and neglect the communication signals of the outdoor system. However, it has to send signals to the outdoor system.

* Quitting condition: This mode can be quitted after receiving the quitting signal from the remote control or urgency system. The indoor system thus can quit the single operation mode.

7.1.17 Power cut compensation

* Entering condition: Press dormant button 10 times within 7 second, the buzzer will ring 4 times and the present system status will be stored into the EEPROM of the indoor system.

* After entering the power cut compensation mode, the processing of the indoor system should be as the followings:

Remote control urgency signal: operate according to the remote control and the urgent conditions, the present status will be stored into the EEPROM of the indoor system.

* Quitting conditions: Press dormant button 10 times within 7 seconds and the buzzer will ring twice.

7.1.18 Fixed frequency operation

1. Fixed cooling: a. under G code condition: high speed cooling, set 16℃, press temperature '-' key and the set key at the same time. The system will enter the fixed frequency operation after the buzzer rings twice.

b. The proceeding programs are as the follows:

Entering the fixed frequency operation, you can set the fixed strength location 1 and send the cooling signal to the outdoor system. Meanwhile, you can fix the indoor system at high speed mode, the location of the airflow direction board can be switched to the maximal position.

c. Quitting condition: The fixed frequency cooling can be quitted after receiving the remote signal, and the system will enter the remote setting status.

2. Fixed heating: a. under G code condition: high speed heating, set 30℃, press temperature '+' key and the set key at the same time. The system will enter the fixed frequency operation after the buzzer rings twice.

b. The proceeding programs are as the follows:

Entering the fixed frequency operation, you can set the fixed strength location 1 and send the heating signal to the outdoor system. Meanwhile, you can fix the indoor system at high speed mode, the location of the airflow direction board can be switched to the maximal position.

c. Quitting condition: The fixed frequency heating can be quitted after receiving the remote signal, and the system will enter the remote setting status.

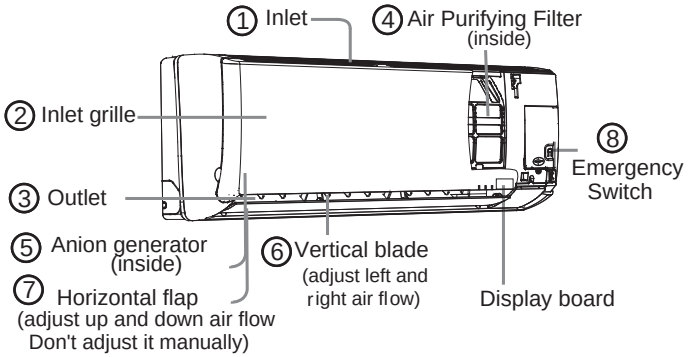
7.1.19 Test program

First, connect the test program terminal on the mainboard. Then connect the system to the power circuit. The test program will operate as follows.

HV series display: The buzzer rings for one time—the signal will be sent to outdoor system for 0.5 second—the violet is sent for 0.5-- the background light turns to white—the back ground light turns to white—the background light turns to white—the background light is fully lighted for 0.5 second—LED screen lights for 0.5 second— the step-in motor fully output for 0.5 second—then the motor doesn't output for 0.5 second—the motor fully output again for 0.5 second. The test program finishes.

Parts and Functions

Indoor Unit

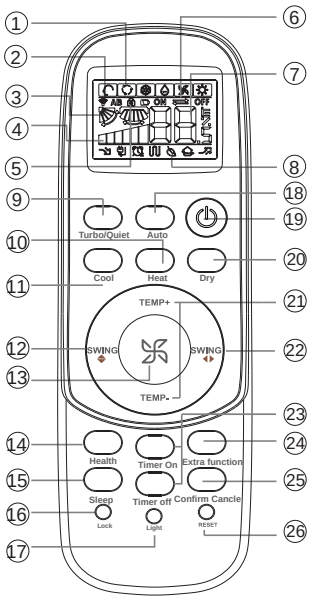


Display board

1. Remote signal receiver
   (A beeping sound is generated when a signal from remote controller isreceived.)
2. Power indicator (Lights up when unit starts.)
3. Timer mode indicator
   (Lights up whenTimer operation is selected.)
4. Operation mode indicator (lights up when the compressor is on.)
5. Ambient temp display
   When receiving the remote control signal, display the set temperature.

Actual inlet grille may vary from the one shown in the manual according to the product purchased

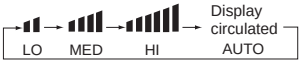
Remote controller



1. Mode display

Operation mode	AUTO	COOL	DRY	FAN
Remote controller				

2. Signal sending display
3. SWING display
4. FAN SPEED display



5. LOCK display

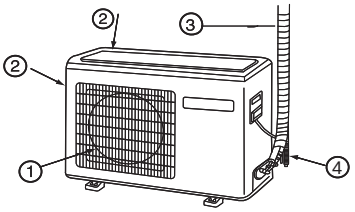
6. TIMER OFF display
   TIMER ON display
7. TEMP display
8. Additional functions display

Operation mode	QUIET	SLEEP	Supplemented electrical heating	HEALTH	TURBO
Remote controller					

9. TURBO/Quiet button
10. HEAT button
11. COOL button
12. SWING UP/DOWN button
13. FAN SPEED button
14. HEALTH button
15. SLEEP button
16. LOCK button
17. LIGHT button
    Control the lightening and extinguishing of the indoor LED display board.
18. Auto button
19. POWER ON/OFF button
20. DRY button
21. TEMP button
22. SWING LEFT/RIGHT button
23. TIMER OFF/ON button
24. EXTRA FUNCTION button
    Function: FAN → Healthy airflow → Fahrenheit/Celsius mode conversion → Low-Temperature Heating Operation Down to 10℃ → Fresh air → A-B yard
25. CANCEL/CONFIRM button
    Function: Setting and cancel to the timer and other additional functions.
26. RESET button
    When the remote controller appears abnormal, use a sharp pointed article to press this button to reset the remote.

Healthy function is not available for some units.

Outdoor Unit

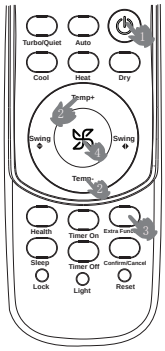


① OUTLET
② INLET
③ CONNECTING PIPING AND ELECTRICAL WIRING
④ DRAIN HOSE

Operation

Base Operation

Remote controller



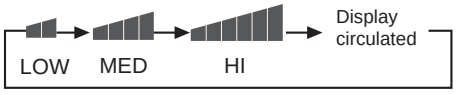
1. Unit start
   Press ON/OFF on the remote controller, unit starts.

2.Select temp.setting
   Press TEMP+ / TEMP− button
   TEMP+ Every time the button is pressed, temp.setting increase 1°C,if kept depressed, it will increase rapidly
   TEMP− Every time the button is pressed, temp.setting decrease 1°C,if kept depressed, it will decrease rapidly
   Select a desired temperature.

3.Fan function

Press EXTRA FUNCTION button to enter additional options, when cycle display to , will flash. And then press CONFIRM CANCEL enter to FAN function.

For each press button fan speed changes as follows:
Remote controller:



Air conditioner is running under displayed fan speed. When FAN is set to AUTO, the air conditioner automatically adjusts the fan speed according to room temperature.

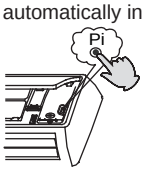
Operation Mode	Remote Controller	Note
AUTO		Under the mode of auto operation, air conditioner will automatically select Cool or Heat operation according to room temperature. When FAN is set to AUTO, the air conditioner automatically adjusts the fan speed according to room temperature.
COOL		Cooling only unit do not have displays and functions related with heating
DRY		In DRY mode, when room temperature becomes lower than temp.setting+2°C,unit will run intermittently at LOW speed regardless of FAN setting.
HEAT		In HEAT mode,warm air will blow out after a short periodof the time due to cold-draft prevention function.
FAN		In FAN operation mode, the unit will not operate in COOL or HEAT mode but only in FAN mode ,AUTO is not available in FAN mode.And temp.setting is disabled. When FAN is set to AUTO, the air conditioner automatically adjusts the fan speed according to room temperature. In FAN mode,SLEEP operation is not available.

Emergency operation and test operation

Emergency Operation:

- Use this operation only when the remote controller is defective or lost, and with function of emergency running, air conditoner can run automatically for a while.
- When the emergency operation switch is pressed, the " Pi " sound is heard once, which means the start of this operation.
- When power switch is turning on for the first time and emergency operation starts, the unit will run automatically in the following modes:

Room temperature	Designated temperature	Timer mode	Fan speed	Operation mode
Above 23°C	26°C	No	AUTO	COOL

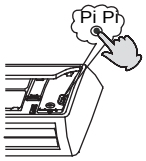


- It is impossible to change the settings of temp. and fan speed,It is also not possible to operate in timer or dry mode.

Test operation:

Test operation switch is the same as emergency switch.

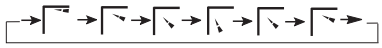
- Use this switch in the test operation when the room temperature is below 16°C, do not use it in the normal operation.
- Continue to press the test operation switch for more than 5 seconds. After you hear the "Pi" sound twice, release your finger from the switch: the cooling operation starts with the air flow speed "Hi".
- Under this operation mode,the fan motor of indoor unit will run in high speed.



Air Flow Direction Adjustment

1.Status display of air flow Vertical flap

For each press of SWING button, remote controller displays as follows :
remote controller:

Pos.1 

Initial state

Pos.2 No initial state disaplayed on remote controller, the vertical flap will be fixed on the current position

2.Left and right air flow adjustment

For each press of SWING button, remote controller displays as follows :
remote controller:

Pos.1 Pos.2 Pos.3 Pos.4
Pos.5 Pos.6

Cautions:

- When adjusting the flap by hand,turn off the unit.
- When humidity is high,condensate water might occur adjusted to left or at air outlet if all vertical louvers are right.
- It is advisable not to keep horizontal flap at downward position for a long time in COOLor DRY mode , otherwise, condensate water might occur.

Note:
When restart after remote turning off, the remote controller controller will automatically memorize the previous set swing position.

Operation

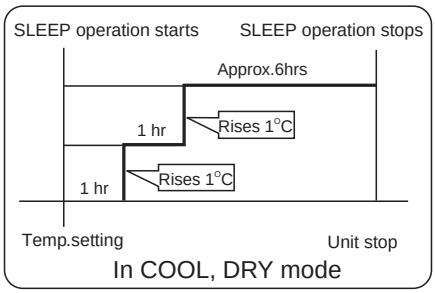
Comfortable SLEEP

Press SLEEP button , the remote controller will show , and then achieve to the sleep function. Press again this SLEEP button , the sleep function will be cancelled.

Operation Mode

1. In COOL,DRY mode

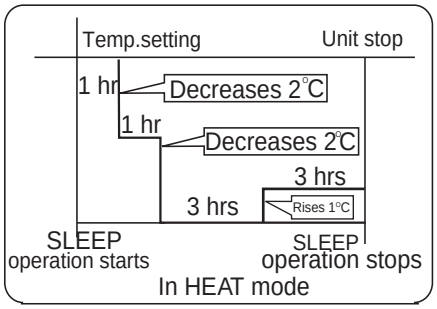
1 hours after SLEEP mode starts,temp.will become 1°C higher than temp.setting.After another 1 hours, temp.risesby 1°C futher .The unit will run for further 6 hours then stops Temp. is higher than temp.setting so that room temperature won't be too low for your sleep.



In COOL, DRY mode

2.In HEAT mode

1 hours after SLEEP mode starts, temp will become 2°C lower than temp.setting. After another 1 hours, temp decrease by 2°C further. After more another 3 hours, temp.risesby 1°C further.The unit will run for further 3 hours then stops.Temp. is lower than temp. setting so that room temperature won't be too high for your sleep.



In HEAT mode

3.In AUTO mode

The unit operates in corresponding sleep mode corresponding sleep mode adapted to the automatically selected operation mode.

4. In FAN mode

It has no SLEEP function.

5. When quiet sleeping function is set to 8 hours the quiet sleeping time can not be adjusted.When TIMER function is set,the quiet sleeping function can't be set up.After the sleeping function is set up,if user resets TIMER function, the sleeping function will be cancelled; the machine will be in the state of timing-on,if the two modes are set up at the same time,either of their operation time is ended first,the unit will stop automatically,and the other mode will be cancelled.

Note

When TIMER function is set, the sleeping function can't be set up .After the sleeping function is set up,if user resets TIMER function, the sleeping function will be cancelled; the machine will be in the state of timing-on.

Note to the power failure resume:

Press the sleep button ten times in five seconds and enter function after hearing four sounds.And press the sleep button ten times within five seconds and leave this function after hearing two sounds.

Power Failure Resume Function

If the unit is started for the first time, the compressor will not start running unless 3 minutes have elapsed. When the power resumes after power failure, the unit will run automatically, and 3 minutes later the compressor starts running.

Healthy airflow Operation

1.Press to starting
Setting the comfort work conditions.

2.The setting of healthy airflow function

Press EXTRA FUNCTION button to enter additional options,Press this button continuously, the louvers location will cycle between in the following three locations, to choose the swing location what you needed,and then press CONFIRM CANCEL button to confirm.

3.The cancel of the healthy airflow function

Press EXTRA FUNCTION button to enter additional options,Press this button continuously, the louvers location will cycle between in the following three locations again,and then press CONFIRM CANCEL button to cancel.

Notice: Do not direct the flap by hand. Otherwise, the grille will run incorrectly. If the grille is not run correctly, stop for a minute and then start, adjusting by remote controller.

Note:

1.After setting the healthy airflow function, the position grill is fixed.

2.In cooling, it is better to select the mode.

3.In cooling and dry, using the air conditioner for a long time under the high air humidity, condensate water may occur at the grille .

Operation

Timer On/Off On-Off Operation

1.After unit starts, select your desired operation mode.

2.Press TIME ON / TIME OFF button to change TIMER mode.

Press TIME ON button "ON 0.5 " will appear ,after 10 seconds the time display will be blank.

Press TIME OFF button "OFF 0.5 " will appear ,after 10 seconds the time display will be blank.

Then select your desired TIMER mode (TIMER ON or TIMER OFF). " ON "or " OFF "will flash.

3.Press TIME ON / TIME OFF button to set time.

Press the button for each time, setting time in the first 12 hours increased by 0.5 hour every time, after 12 hours,increased by 1 hour every time.

4.Confirm timer setting

After adjust the time,press CONFIRM CANCEL button and confirm the time ON or OFF button will not flash any more.

5.Cancel timer setting

Press the CONFIRM CANCEL button the time display eliminated.

Hints:

After replacing batteries or a power failure happens, time setting should be reset.

According to the Time setting sequence of TIMER ON or TIMER OFF, either Start-Stop or Stop-Start can be achieved.

HEALTH Operation

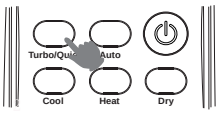
(This function is unavailable on some models.)

Press HEALTH button , the remote controller will show and then achieve to the health function.
Press again this HEALTH button , the health function will be cancelled.

The anion generator in the airconditioner can generate a lot of anion effectively balance the quantity of position and anion in the air and also to kill bacteria and speed up the dust sediment in the room and finally clean the air in the room.

TURBO Operation

(This function is unavailable on some models.)

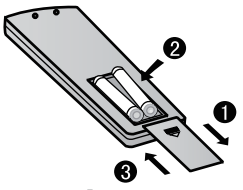


When you need fast cool or fast dehumidification,you can choose the Turob function; when you sleep, read, you can choose Quiet function

Press the Turbo/Quiet button, you can switch the “Turbo” and “Quiet” function easily. Eevery press,the remote controller will swith as below

When running in Turbo， the fan speed is the highest, when running in Quiet, the fan speed is super slow

Loading of the battery



1 Remove the battery cover;
2 Load the batteries as illustrated. 2 R-03 batteries, resetting key (cylinder);
3 Be sure that the loading is in line with the" + "/"-";
4 Load the battery,then put on the cover again.

Note:

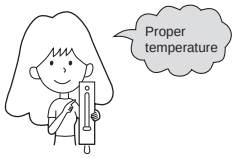
- The distance between the signal transmission head and the receiver hole should be within 7m without any obstacle as well.
- When electronic-started type fluorescent lamp or change-over type fluorescent lamp or wireless telephone is installed in the room, the receiver is apt to be disturbed in receiving the signals, so the distance to the indoor unit should be shorter.
- Full display or unclear display during operation indicates the batteries have been used up. Please change batteries.
- If the remote controller can't run normally during operation, please remove the batteries and reload several minutes later.

English

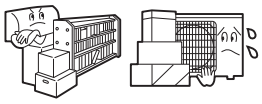
Maintenance

For Smart Use of The Air Conditioner

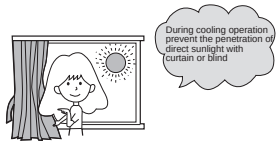
Setting of proper room temperature



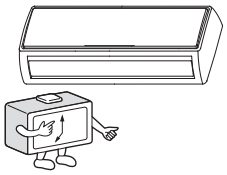
Do not block the air inlet or outlet



Close doors and windows during operation



Use the timer effectively



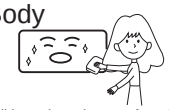
If the unit is not to be used for a long time, turn off the power supply main switch.

Use the louvers effectively

Remote Controller

Do not use water , wipe the controller with a dry cloth.Do not use glass cleaner or chemical cloth.

Indoor Body



Wipe the air conditioner by using a soft and dry cloth.For serious stains,use a neutral detergent diluted with water.Wring the water out of the cloth before wiping.then wipe off the detergent completely.

Do not use the following for cleaning

Gasoline,benzine, thinner or cleanser may damage the coating of the unit.

Hot water over 40°C(104°F) may cause discoloring or deformation.

Air Filter cleaning

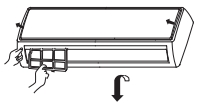
1 Open the inlet grille by pulling it upward.

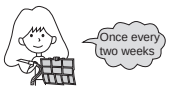
2 Remove the filter.
Push up the filter's center tab slightly until it is released from the stopper, and remove the filter downward.

3 Clean the filter.
Use a vacuum cleaner to remove dust, or wash the filter with water.After washing, dry the filter completely in the shade.

4 Attach the filter.
Attach the filter correctly so that the "FRONT" indication is facing to the front.Make sure that the filter is completely fixed behind the stopper.If the right and left filters are not attached correctly, that may cause defects.

5 Close the inlet grille.



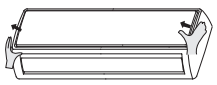


Replacement of Air Purifying Filter

(NOTE: Air purifying filter is optional part)

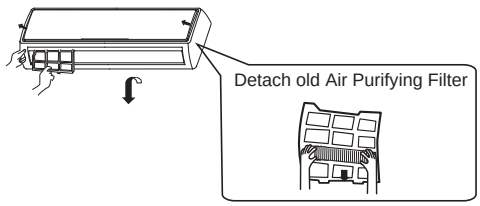
1.Open the Inlet Grille

Prop up the inlet grille by using a small device named grille-support which located in the right side of the indoor unit.



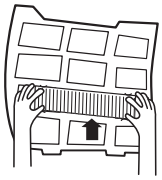
2.Detach the standard air filter

Slide the knob slightly upward to release the filter, then withdraw it.



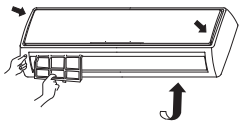
3.Attach Air Purifying Filter

Put air purifying filter appliances into the right and left filter frames.



4.Attach the standard air filter

(Necessary installation)



ATTENTION:

The white side of the photocatalyst air purifying filter face outside,and the black side face the unit.

The green side of the bacteria-killing medium air purifying filter face outside,and the white side face the unit.

5.Close the Inlet Grille

Close the Grille surely

NOTE:

- The photocatalyst air purifying filter will be solarized in fixed time. In normal family, it will be solarized every 6 months.
- The bacteria-killing medium air purifying filter will be used for a long time,no need for replacement. But in the period of using them ,you should remove the dust frequently by using vacuum cleaner or flaping them lightly,otherwise , its performance will be affected.
- Please keep the bacteria-killing medium air purifying filter in the cool and dry conditions avoid long time directly sunshine when you stop using it,or its ability of sterilization will be reduced.

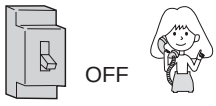
Cautions

⚠ WARNING

Please call Sales/Service Shop for the Installation.
Do not attempt to install the air conditioner by yourself because improper works may cause electric shock, fire, water leakage.

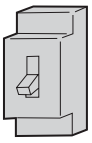
⚠ WARNING

When abnormality such as burnt-small found, immediately stop the operation button and contact sales shop.



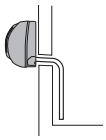
STRICT ENFORCEMENT

Use an exclusive power source with a circuit breaker



Check proper installation of the drainage securely

STRICT ENFORCEMENT



Connect power supply cord to the outlet completely

STRICT ENFORCEMENT

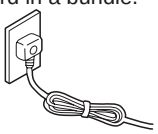
Use the proper voltage

STRICT ENFORCEMENT

1.Do not use power supply cord extended or connected in halfway
2.Do not install in the place where there is any possibility of inflammable gas leakage around the unit.
3.Do not get the unit exposed to vapor or oil steam.

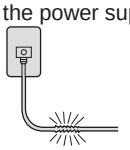
PROHIBITION

Do not use power supply cord in a bundle.



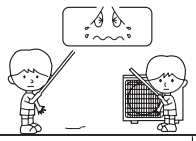
PROHIBITION

Take care not to damage the power supply cord.



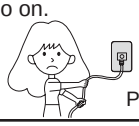
PROHIBITION

Do not insert objects into the air inlet or outlet.



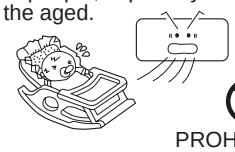
PROHIBITION

Do not start or stop the operation by disconnecting the power supply cord and so on.



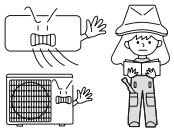
PROHIBITION

Do not channel the air flow directly at people, especially at infants or the aged.

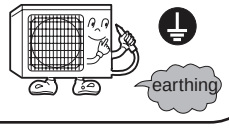


PROHIBITION

Do not try to repair or reconstruct by yourself.

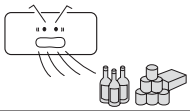


Connect the earth cable.



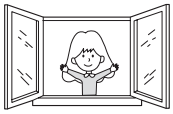
⚠ CAUTION

Do not use for the purpose of storage of food, art work, precise equipment, breeding, or cultivation.



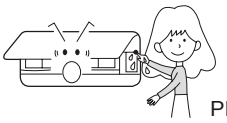
PROHIBITION

Take fresh air occasionally especially when gas appliance is running at the same time.



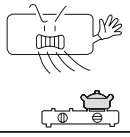
STRICT ENFORCEMENT

Do not operate the switch with wet hand.



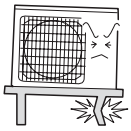
PROHIBITION

Do not install the unit near a fireplace or other heating apparatus.



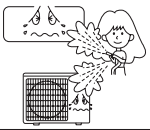
PROHIBITION

Check good condition of the installation stand



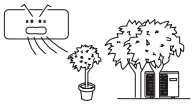
PROHIBITION

Do not pour water onto the unit for cleaning



PROHIBITION

Do not place animals or plants in the direct path of the air flow



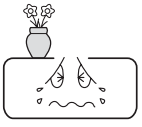
PROHIBITION

Do not place any objects on or climb on the unit.

PROHIBITION

Do not place flower vase or water containers on the top of the unit.

PROHIBITION



Trouble shooting

Before asking for service, check the following first.

	Phenomenon	Cause or check points
Normal Performance inspection	The system does not restart immediately.	• When unit is stopped, it won't restart immediately until 3 minutes have elapsed to protect the system. • When the electric plug is pulled out and reinserted, the protection circuit will work for 3 minutes to protect the air conditioner.
	Noise is heard	• During unit operation or at stop, a swishing or gurgling noise may be heard.At first 2-3 minutes after unit start, this noise is more noticeable. (This noise is generated by refrigerant flowing in the system.) • During unit operation, a cracking noise may be heard.This noise is generated by the casing expanding or shrinking because of temperature changes. • Should there be a big noise from air flow in unit operation, air filter may be too dirty.
	Smells are generated.	• This is because the system circulates smells from the interior air such as the smell of furniture, paint, cigarettes.
	Mist or steam are blown out.	• During COOL or DRY operation, indoor unit may blow out mist. This is due to the sudden cooling of indoor air.
	In dry mode,fan speed can't be changed.	• In DRY mode, when room temperature becomes lower than temp. setting+2 °C,unit will run intermittently at LOW speed regardless of FAN setting.
Multiple check		• Is power plug inserted? • Is there a power failure? • Is fuse blownout?
	Poor cooling	• Is the air filter dirty? Normally it should be cleaned every 15 days. • Are there any obstacles before inlet and outlet? • Is temperature set correctly? • Are there some doors or windows left open? • Is there any direct sunlight through the window during the cooling operation?(Use curtain) • Are there too much heat sources or too many people in the room during cooling operation?

Cautions

- Do not obstruct or cover the ventilation grille of the air conditoner.Do not put fingers or any other things into the inlet/outlet and swing louver.
- This appliance is not intended for use by persons (including children) with reduced physiced, sensory or mental capabilities or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of appliance by person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.

Specifications

- The refrigerating circuit is leak-proof.

The machine is adaptive in following situation

1.Applicable ambient temperature range:

Cooling	Indoor	Maximum:D.B/W.B	32°C/23°C
		Minimum:D.B/W.B	21°C/15°C
	Outdoor	Maximum:D.B/W.B	43°C/26°C
		Minimum: D.B	18°C
Heating	Indoor	Maximum:D.B	27°C
		Minimum: D.B	15°C
	Outdoor	Maximum:D.B/W.B	24°C/18°C
		Minimum:D.B/W.B	-7°C/-8°C
	Outdoor (INVERTER)	Maximum:D.B/W.B	24°C/18°C
		Minimum:D.B	-15°C

2. If the power supply cord is damaged, it must be replaced by the manufacturer or its service agent or a similar qualified person.

3.If the fuse of indoor unit on PC board is broken,please change it with the type of T. 3.15A/ 250V. If the fuse of outdoor unit is broken,change it with the type of T.25A/250V

4. The wiring method should be in line with the local wiring standard.

5. After installation, the power plug should be easily reached.

6. The waste battery should be disposed properly.

7. Please employ the proper power plug,which fit into the power supply cord.

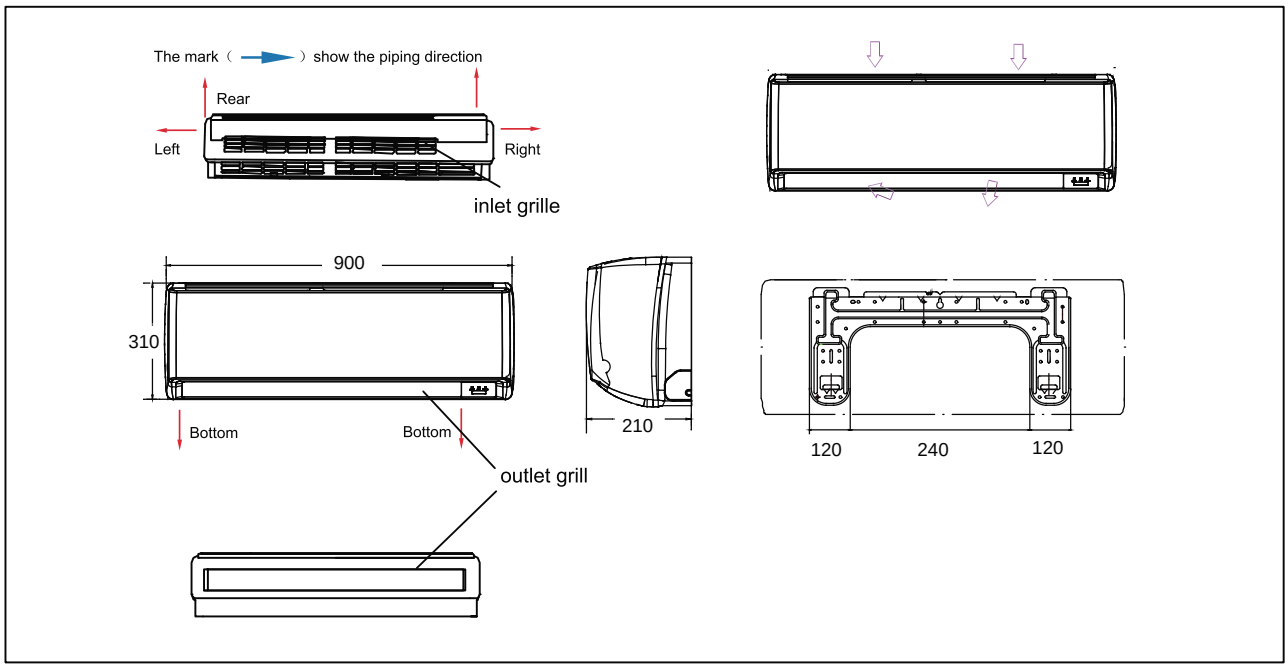
8. The power plug and connecting cable must have acquired the local attestation.

9.In order to protect the units,please turn off the A/C first,and at least 30 seconds later, cutting off the power.

10.Please check the installation instruction of WiFi in the WiFi module

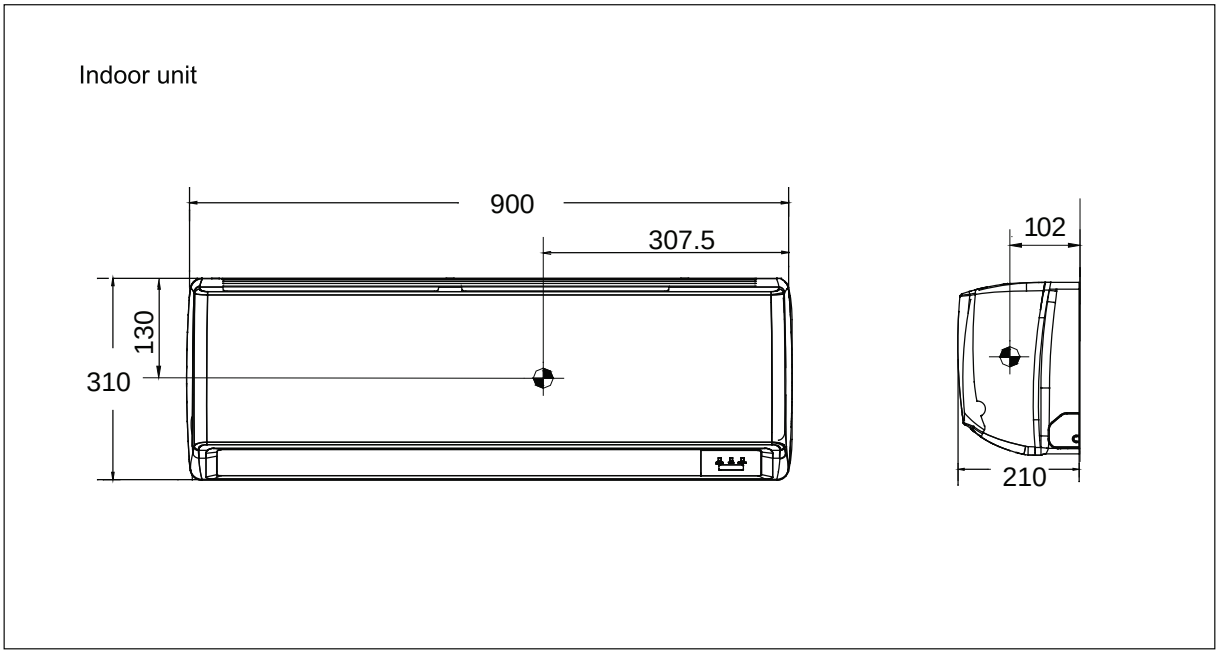
9.Dimensional drawings

unit:mm



10.Center of gravity

unit:mm



11 Service Diagnosis

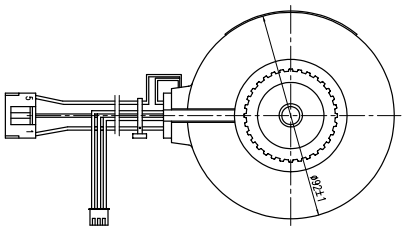
11.1 Caution for Diagnosis

The operation lamp flashes when any of the following errors is detected.

1. When a protection device of the indoor or outdoor unit is activated or when the thermistor malfunctions, disabling equipment operation.

2. When a signal transmission error occurs between the indoor and outdoor units. In either case, conduct the diagnostic procedure described in the following pages.

11.2 Parameter of primary electronic appliance

NO	Name	Parameter	Picture
1	Fan motor	Rated voltage: DC310V Rated current:0.38A Rated frequency: –	

11.3 Problem Symptoms and Measures

Symptom	Check Item	Details of Measure
None of the units operates	Check the power supply.	Check to make sure that the rated voltage is supplied.
	Check the indoor PCB.	Check to make sure that the indoor PCB is broken.
Operation sometimes stops	Check the power supply.	A power failure of 2 to 10 cycles can stop air conditioner operation.
Equipment operates but does not cool, or does not heat (only for heat pump)	Check for faulty operation of the electronic expansion valve.	Set the units to cooling operation, and compare the temperatures of the liquid side connection pipes of the connection section among rooms to check the opening and closing operation of the electronic expansion valves of the individual units.
	Diagnosis by service port pressure and operating current.	Check for insufficient gas.
Large operating noise and vibrations	Check the installation condition.	Check to make sure that the required spaces for installation (specified in the Technical Guide, etc.) are provided.

11.4 Error Codes and Description indoor display

	Code indication		fault description	Reference Page
	Indoor displaying panel code indication	Outdoor (LED1 flash times)		
Indoor and Outdoor	E7	15	Communication fault between indoor and outdoor units	Page . 45
Indoor Malfunction	E1	--	Room temperature sensor failure	Page .36
	E2	--	Heat-exchange sensor failure	Page .36
	E4	--	Indoor EEPROM error	Page .37
	E14	--	Indoor fan motor malfunction	Page .38
Outdoor Malfunction	F12	1	Outdoor EEPROM error	Page .37
	F1	2	The protection of IPM	Page .41
	F22	3	Overcurrent protection of AC electricity for the outdoor model	Page .42
	F3	4	Communication fault between the IPM and outdoor PCB	Page. 43
	F19	6	Power voltage is too high or low	Page .44
	F4	8	Overheat protection for Discharge temperature	Page .45
	F8	9	Outdoor DC fan motor fault	Page .40
	F21	10	Defrost temperature sensor failure	Page .36
	F7	11	Suction temperature sensor failure	Page .36
	F6	12	Ambient temperature sensor failure	Page .36
	F25	13	Discharge temperature sensor failure	Page .36
	F11	18	deviate from the normal for the compressor	Page .48
	F28	19	Loop of the station detect error	Page .48
	F2	24	Overcurrent of the compressor	Page .42
	F23	25	Overcurrent protection for single-phase of the compressor	Page .42
	E9	21	High work-intense protection	Page .49

Haier SERVICE MANAUL

Wall Mounted Type

DC Inverter FREE MATCH N-Series

Model No. AS18NS3HRA

⚠WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public.
It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or Repair the product or products dealt with in this service information by anyone else could result in serious injury or death

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Haier Group **Version：V1** **Date：2014-11-25**

7.Funcitions and Control

7.1 Main functions and control specification

7.1.1 Automatic operation

When the running mode is turned to automation after starting the system, the system will first determine the running mode according to the current room temperature and then will run according to the determined mode. Tr in the following selection conditions means room temperature, Ts means setting temperature, Tp means temperature of indoor coil pipe

Tr≥23℃ Choose Cooling Mode

Tr＜23℃ Choose Heating Mode

After turning to the automation mode, the running mode can be switched between cooling mode, fan mode and heating mode according to the change of the indoor ambient temperature. But the automatic conversion between cooling mode and heating mode must be conducted after 15 minutes.

7.1.2 Cooling operation mode

Temperature control range: 16℃---30℃

Temperature difference: ±1℃

* Control features: When Tr（input airflow）>Ts（set temperature）℃, the compressor will be opened, the indoor fan will operate at the set speed and the mode signal will be sent to the outdoor system. When Tr （input airflow）＜Ts（set temperature）℃, the compressor will be opened, the indoor fan will operate at the set speed and the mode signal will be sent to the outdoor system. The system will keep the original status if Tr= Ts.

Airflow speed control: (temperature difference 1℃)

Automatic: When Tr>=Ts+3℃, high speed.

When Ts+1℃≤Tr<Ts+3℃, medium speed

When Tr<Ts+1℃, low speed

When the sensor is off, low speed

When the airflow speed has no delay from the high to low switching, the speed should be delayed for 3 minutes (remain at high speed for 3 minutes.) before the next switch.

Manus: When the system is operating, you can set the high, medium or low speed manually. (When the sensor is on or off, the system will change the speed 2 seconds after receiving the signal.)

*Airgate location control: the location for the airgate can be set according to your needs.

*Defrosting function: preventing the frosting on the indoor heat exchanger (when cooling or dehumidifying). When the compressor works continuously for 1/6 minutes (adaptable in EEPROM) and the temperature of the indoor coils has been below zero centigrade for 10 seconds, the compressor will be stopped and the malfunction will be recorded in the malfunction list. The indoor system will continue to run. When the temperature of the indoor coil is raised to 7℃, the compressor will be restarted again (the requirement of 3 minutes' delay should be satisfied.)

* timing system on/off function.

* Dormant control function.

7.1.3 Demoisture mode.

* temperature control range: 16---30℃
* temperature difference: ±1℃

Control feature: send the demoisture signal to the outdoor system.

When Tr>Ts+2℃, the compressor will be turned on, the indoor fan will operate at the set speed.

When Tr is between the Ts and Ts+2℃, the outdoor system will operate at the high demoisture frequency for 10 minutes and then at the low demoisture mode for six minutes. The indoor fan will operate at low speed.

When Tr< Ts, the outsystem will be stopped, the indoor fan will be stopped for 3 minutes and then turned to the low speed option.

All the frequency converses have a ±1℃ difference.

* Wind speed control: Automatic:

When Tr >= Ts+ 5℃, high speed.

When Ts+3℃≤Tr< Ts+5℃, medium speed.

When Ts+2℃≤Tr< Ts+3℃, low speed.

When Tr<Ts+2℃, light speed.

If the outdoor fan stopped, the indoor fan will be paused for 3 minutes.

If the outdoor fan stopped for more than 3 minutes and the outdoor system still operates, the system will be changed into light speed mode.

When the airflow speed has no delay from the high to low switching, the speed should be delayed for 3 minutes (remain at high speed for 3 minutes.) before the next switch.

Manual: When the sensor is off or Tr< Ts+3℃, the manual operation can not be made. (obligatory automatic operation.)

*Airgate location control: the location for the airgate can be set according to your needs.

*Defrosting function: preventing the frosting on the indoor heat exchanger (when cooling or demoisture). When the compressor works continuously for 1/6 minutes (adaptable in EEPROM) and the temperature of the indoor coils has been below zero centigrade for 10 seconds, the compressor will be stopped and the malfunction will be recorded in the malfunction list. The indoor system will continue to run. When the temperature of the indoor coil is raised to 7℃, the compressor will be restarted again (the prerequirement of 3 minutes' delay should be satisfied.)

* coil protection (synchronic overheating protection) are installed for the four directions latch malfunctions when demoisturing.
* timing system on/off function.
* Dormant control function.

7.1.4 Heating operation mode.

* temperature control range: 16---30℃
* temperature difference: ±1℃
* control feature: the temperature compensation is automatically added and the system will send the heating signals to the outdoor system.

If Tr≤Ts, the outdoor compressor is turned on, the indoor fan will be at the cold air proof mode.

If Tr>Ts, the outdoor system is turned off, the indoor fan will be at the heat residue sending mode.

If Tr<Ts, the outdoor system will be turned on again, the indoor fan will be at the cold air proof mode.

*Indoor fan control

manual control: You can choose high, medium, low and automatic speed control.

Automatic: When Tr<Ts, high speed.

When Ts≤Tr≤Ts+2℃, medium speed.

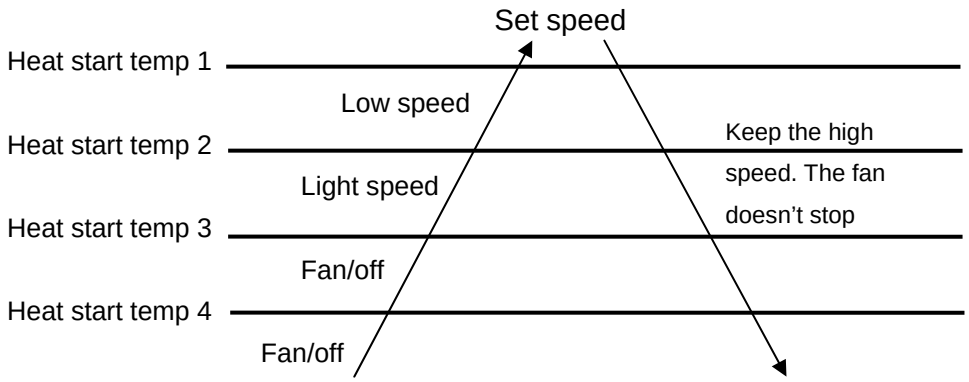
When Tr> Ts+2℃, low speed.

When the airflow speed has no delay from the high to low switching, the speed should be delayed for 3 minutes (remain at high speed for 3 minutes.) before the next switch.

*Airgate location control: the location for the airgate can be set according to your needs.

Coldair proof operation

1. The indoor operation within 4 minutes after the start up is as the following diagram, the air speed can be raised only after the speed has reached a certain level.



2. 4 minutes after the start up of the indoor fan, the light airflow and the low airflow will be turned to the set speed airflow.

3. In the cold air proof operation, the fan won't stop after the start up.

4. During the cold air proof operation, the indoor system will continuously send 'indoor high speed' signals to the outdoor system.

* Residue heat sending. The indoor fan will send the residue heat at a low speed for 12 seconds.

If other conditions are satisfied, when the compressor stops, the indoor system will operate at a light speed. The indoor fan will stop when the coil temperature is below the 'heat start temp 4'.

* Defrosting. When the system receives the defrosting signal from outdoors, the indoor fan will stop and the indoor temperature display won't change. At the time, any indoor coil malfunctions will be neglected. When the outdoor defrosting finishes, the coil malfunction will still be neglected until the compressor has been started up for 30 seconds. The indoor temperature display will not change and the system operates at the cold air proof mode.

* Automatic heating temperature compensation: when the system enters the heating mode, the temperature compensation (4) will be added. When the status is switched off, the compensation will be erased.

7.1.5 Strength operation

The system enters the mode after receiving the 'strength signal'.

Send strength operation signal to the outdoor system.

The mode change finishes the strength operation.

Entering 'mute', you can have normal operation or signal control such as timing to finish the strength operation.

When the system is at the automatic option with the strength/ mute function, if the system enters the cooling mode, the cooling strength/ mute function will be offered; if the system enters the heating mode, then the heating strength/ mute function will be offered; if the system enters the airflow mode, there will be no strength/ mute function.

7.1.6 Mute operation

The system enters the mode after receiving the 'mute signal'.
a. Mute heating: the airflow speed is slight, the system sends the mute signal to the outdoor system.
b. mute cooling: the airflow speed is slight, the system sends the mute signal to the outdoor system.
When the compressor operates, the airflow speed is mute speed. EEPROM is adaptable.
Mute operation can not work under the dehumidifying and airflow-sending operation.

7.1.7 Air refreshing

After receiving the signal from the remote control, (HV series: the background light of the 'health' logo is green. HS series: the 'health' indicator will be lighted). If the fan operates, the Nano-Aqua operates to realize the ions sending function.
If the indoor fan stops, the Nano-Aqua is turned off.
When the Nano-Aqua is turned off, if the air refreshing system is turned on, the Nano-Aqua will be turned on when the fan operates.

7.1.8 Timing

You can set 24 hours' on/off timing accordingly. After the setting, the timing indicator will be lightened. Also, the light will be turning off after the timing is finished. The followings are several timing methods.
1.system /on timing: The timing indicator will be lightened and the indoor system is under the waiting mode. The light will be turned off when the timing is finished and the rest of the system will operate under a normal condition. The timing starts since the last reception of the timing signal.
2.system /off timing: When the system is turned on, the timing indicator is lightened, the rest of the system will operated under a normal condition. When set time comes, the indicator light will be turned off and the system will be turned off. If you have set the dormant functions, the order of your settings will be operated according to the timing settings.
3 .system /on and off timing: The settings will be completed according to the orders..

7.1.9 Dormant operation

The dormant timing is an eight hours unadaptable one. The timing signs are shown on the V series board. (RC series show the dormant signal, the timing light is lighted on the 6 lights board).
2.1 Under the cooling/ dehumidifying operation, after the setting of the dormant operation, the set temperature will be raised for 1 centigrade after 1 hour's operation and will be raised for 1 centigrade 1 hour later. The system will keep this status for 6 hours and then close.
2.2 Under the heating mode, after the setting of the dormant operation, the setting temperature will fall 2 centigrade after 1 hour's operation and will fall 2 centigrade 1 hour later. 3 hours after the preceding operations, the set temperature will be raised for 1 centigrade and the system will keep this status for 3 hours

and then close down.

2.3 During the dormant time, except the change of the system mode or a new press on the dormant setting keys, the timing of the 8 hours dormancy will take the first timing as the start time, any presses on other keys will not affect the original timing.

2.4 Indoor fan control under the dormant operation.

If the indoor fan is at the high speed before the dormant operation setting, the speed will be turned to medium after the setting. If the fan is at the medium speed before the dormant setting, the speed will be turned to low after the setting. If the fan is at the low speed before the dormant setting, the speed will not change.

7.1.10 Urgent on/off input

Press the urgency button the buzzer will ring. The system will enter the automatic mode if you don't press the button for more than 5 seconds.

Under the system off mode, if you press the urgency key for 5 to 10 seconds, the system will start the test operation.

Under the system off mode, if you press the urgency key for 10 to 15 seconds, the display screen will show the resume of the last malfunction.

If the system is under operation, the press on the urgency key will stop it.

Under the system off mode, the display screen will show automatic running sign.

Under the system off mode, the system will not receive the remote control signal if the press on the urgency key doesn't last for 15 seconds or if the key is loosened.

Urgency operation: If you press the urgency key for less than 5 seconds, the buzzer will ring when you press the on/off key. The system will enter the urgency operation when the urgency key is loosened. The urgency operation is fully automatic.

Test operation.

The inlet temperature sensor doesn't work, the indoor fan and the indoor air direction board motor works synchronically. High speed airflow, cooling, outdoor system on, etc, will send the ambient temperature 30 centigrade and coil temperature 16 centigrade information to the outdoor system.

Test operation

The defrost protection of the evaporator doesn't work.

The temperature control doesn't work.

The test operation will be finished in 30 minutes.

The test operation can be stopped by the relative commands from the remote control.

7.1.11 Low load protection control

In order to prevent the frosting of the indoor heat interaction device, the outdoor system will be stopped if the indoor heat interaction temperature is below zero centigrade for 5 minutes, but the fan will continue to operate. The outdoor system will be started again when the heat interaction temperature is above 7 centigrade and the system has been stopped for 3 minutes. The malfunction will be stored in the malfunction resume and will not be revealed.

7.1.12 High load protection control

The outdoor system will be stopped if the coil temperature is above 65℃ for 2 minutes. The indoor fan will be

controlled by the thermostat. The outdoor system can be restarted when the coil temperature is below 42℃ and the system has been stopped for 3 minutes. The malfunction will be stored in the malfunction resume and will not be revealed.

7.1.13 Abnormal operation of indoor system

When the outdoor system operates, if the indoor system operation differs from the outdoor system, the abnormal operation malfunction will be reported. 10s after the report, the indoor system will be closed.

Outdoor system mode	Indoor system mode	conflicts
cooling	heating	yes
cooling	cooling	no
cooling	airflow	no
heating	heating	no
heating	airflow	yes
heating	cooling	yes

7.1.14 Malfunction list resume.

Nothing is presented if there is no code list.

The malfunction display will automatically finish in 10 seconds.

The remote control only receives the signals for stop. According to the signals, the malfunction resume presentation finishes.

The resume restores after the power supply restores.

7.1.15 Abnormality confirmation approaches

1. indoor temperature sensor abnormality:

Under the operation, the normal temperature ranges from 120 degree to -30 degree. When the temperature goes beyond this range, the abnormality can be confirmed. If the temperature goes back into the range, the system will automatically resume.

2 .indoor heat interaction sensor abnormality:

Under the operation, the normal temperature ranges from 120 degree to -30 degree. When the temperature goes beyond this range, the abnormality can be confirmed. If the temperature goes back into the range, the system will automatically resume.

3 .indoor malfunction:

Outdoor malfunction: When the indoor system receives the outdoor malfunction codes, it will store the code into E2 for the malfunction list resume. The indoor system will continue to operate according to the original status, the malfunction code will not be revealed or processed.

4. transmission abnormality:

If the indoor system can't receive the outdoor system for 8 minutes, the communication abnormality can be confirmed and reported and the outdoor system will be stopped.

7.1.16 Single indoor system operation

* Enter condition: First, set the high speed airflow and 30 centigrade set temperature, then press the dormant

keys for 6 times within 7 seconds, the system will feedback with 6 rings.

* After the system enters the separate indoor system operation mode, the indoor system will operate according to the set mode and neglect the communication signals of the outdoor system. However, it has to send signals to the outdoor system.

* Quitting condition: This mode can be quitted after receiving the quitting signal from the remote control or urgency system. The indoor system thus can quit the single operation mode.

7.1.17 Power cut compensation

* Entering condition: Press dormant button 10 times within 7 second, the buzzer will ring 4 times and the present system status will be stored into the EEPROM of the indoor system.

* After entering the power cut compensation mode, the processing of the indoor system should be as the followings:

Remote control urgency signal: operate according to the remote control and the urgent conditions, the present status will be stored into the EEPROM of the indoor system.

* Quitting conditions: Press dormant button 10 times within 7 seconds and the buzzer will ring twice.

7.1.18 Fixed frequency operation

1. Fixed cooling: a. under G code condition: high speed cooling, set 16℃, press temperature '-' key and the set key at the same time. The system will enter the fixed frequency operation after the buzzer rings twice.

b. The proceeding programs are as the follows:

Entering the fixed frequency operation, you can set the fixed strength location 1 and send the cooling signal to the outdoor system. Meanwhile, you can fix the indoor system at high speed mode, the location of the airflow direction board can be switched to the maximal position.

c. Quitting condition: The fixed frequency cooling can be quitted after receiving the remote signal, and the system will enter the remote setting status.

2. Fixed heating: a. under G code condition: high speed heating, set 30℃, press temperature '+' key and the set key at the same time. The system will enter the fixed frequency operation after the buzzer rings twice.

b. The proceeding programs are as the follows:

Entering the fixed frequency operation, you can set the fixed strength location 1 and send the heating signal to the outdoor system. Meanwhile, you can fix the indoor system at high speed mode, the location of the airflow direction board can be switched to the maximal position.

c. Quitting condition: The fixed frequency heating can be quitted after receiving the remote signal, and the system will enter the remote setting status.

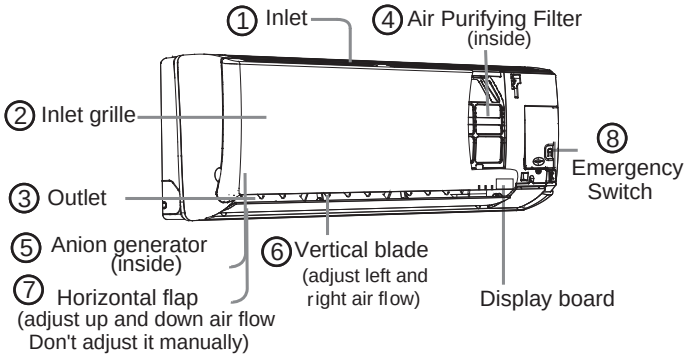
7.1.19 Test program

First, connect the test program terminal on the mainboard. Then connect the system to the power circuit. The test program will operate as follows.

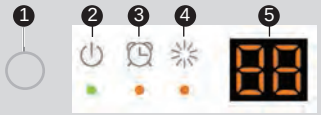
HV series display: The buzzer rings for one time—the signal will be sent to outdoor system for 0.5 second—the violet is sent for 0.5-- the background light turns to white—the back ground light turns to white—the background light turns to white—the background light is fully lighted for 0.5 second—LED screen lights for 0.5 second— the step-in motor fully output for 0.5 second—then the motor doesn't output for 0.5 second—the motor fully output again for 0.5 second. The test program finishes.

Parts and Functions

Indoor Unit



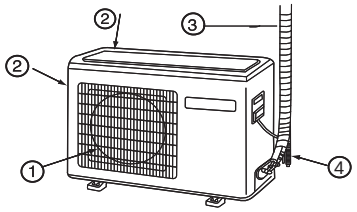
Display board



1. Remote signal receiver
   (A beeping sound is generated when a signal from remote controller isreceived.)
2. Power indicator (Lights up when unit starts.)
3. Timer mode indicator
   (Lights up whenTimer operation is selected.)
4. Operation mode indicator (lights up when the compressor is on.)
5. Ambient temp display
   When receiving the remote control signal, display the set temperature.

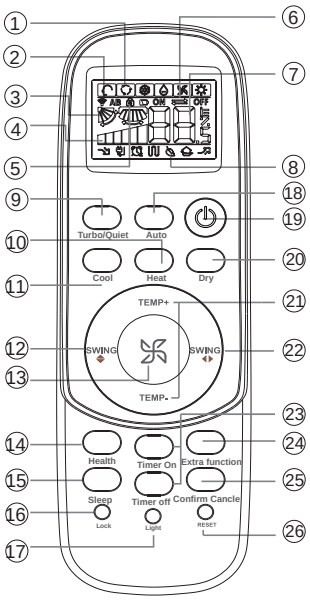
Actual inlet grille may vary from the one shown in the manual according to the product purchased

Outdoor Unit



① OUTLET
② INLET
③ CONNECTING PIPING AND ELECTRICAL WIRING
④ DRAIN HOSE

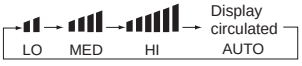
Remote controller



1. Mode display

Operation mode	AUTO	COOL	DRY	FAN
Remote controller				

2. Signal sending display
3. SWING display
4. FAN SPEED display



5. LOCK display

6. TIMER OFF display
   TIMER ON display
7. TEMP display
8. Additional functions display

Operation mode	QUIET	SLEEP	Supplemented electrical heating	HEALTH	TURBO
Remote controller					

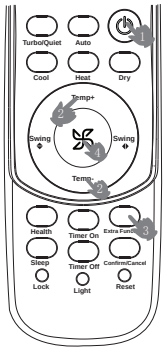
9. TURBO/Quiet button
10. HEAT button
11. COOL button
12. SWING UP/DOWN button
13. FAN SPEED button
14. HEALTH button
15. SLEEP button
16. LOCK button
17. LIGHT button
    Control the lightening and extinguishing of the indoor LED display board.
18. Auto button
19. POWER ON/OFF button
20. DRY button
21. TEMP button
22. SWING LEFT/RIGHT button
23. TIMER OFF/ON button
24. EXTRA FUNCTION button
    Function: FAN → Healthy airflow → Fahrenheit/Celsius mode conversion → Low-Temperature Heating Operation Down to 10℃ → Fresh air → A-B yard
25. CANCEL/CONFIRM button
    Function: Setting and cancel to the timer and other additional functions.
26. RESET button
    When the remote controller appears abnormal, use a sharp pointed article to press this button to reset the remote.

Healthy function is not available for some units.

Operation

Base Operation

Remote controller



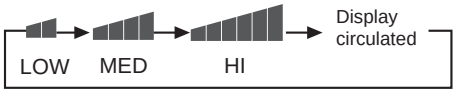
1. Unit start
   Press ON/OFF on the remote controller, unit starts.

2.Select temp.setting
   Press TEMP+ / TEMP− button
   TEMP+ Every time the button is pressed, temp.setting increase 1°C,if kept depressed, it will increase rapidly
   TEMP− Every time the button is pressed, temp.setting decrease 1°C,if kept depressed, it will decrease rapidly
   Select a desired temperature.

3.Fan function

Press EXTRA FUNCTION button to enter additional options, when cycle display to , will flash. And then press CONFIRM CANCEL enter to FAN function.

For each press button fan speed changes as follows:
Remote controller:



Air conditioner is running under displayed fan speed. When FAN is set to AUTO, the air conditioner automatically adjusts the fan speed according to room temperature.

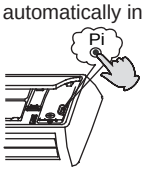
Operation Mode	Remote Controller	Note
AUTO		Under the mode of auto operation, air conditioner will automatically select Cool or Heat operation according to room temperature. When FAN is set to AUTO, the air conditioner automatically adjusts the fan speed according to room temperature.
COOL		Cooling only unit do not have displays and functions related with heating
DRY		In DRY mode, when room temperature becomes lower than temp.setting+2°C,unit will run intermittently at LOW speed regardless of FAN setting.
HEAT		In HEAT mode,warm air will blow out after a short periodof the time due to cold-draft prevention function.
FAN		In FAN operation mode, the unit will not operate in COOL or HEAT mode but only in FAN mode ,AUTO is not available in FAN mode.And temp.setting is disabled. When FAN is set to AUTO, the air conditioner automatically adjusts the fan speed according to room temperature. In FAN mode,SLEEP operation is not available.

Emergency operation and test operation

Emergency Operation:

- Use this operation only when the remote controller is defective or lost, and with function of emergency running, air conditoner can run automatically for a while.
- When the emergency operation switch is pressed, the " Pi " sound is heard once, which means the start of this operation.
- When power switch is turning on for the first time and emergency operation starts, the unit will run automatically in the following modes:

Room temperature	Designated temperature	Timer mode	Fan speed	Operation mode
Above 23°C	26°C	No	AUTO	COOL

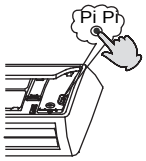


- It is impossible to change the settings of temp. and fan speed,It is also not possible to operate in timer or dry mode.

Test operation:

Test operation switch is the same as emergency switch.

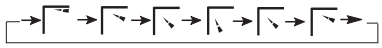
- Use this switch in the test operation when the room temperature is below 16°C, do not use it in the normal operation.
- Continue to press the test operation switch for more than 5 seconds. After you hear the "Pi" sound twice, release your finger from the switch: the cooling operation starts with the air flow speed "Hi".
- Under this operation mode,the fan motor of indoor unit will run in high speed.



Air Flow Direction Adjustment

1.Status display of air flow Vertical flap

For each press of SWING button, remote controller displays as follows :
remote controller:

Pos.1 

Initial state

Pos.2 No initial state disaplayed on remote controller, the vertical flap will be fixed on the current position

2.Left and right air flow adjustment

For each press of SWING button, remote controller displays as follows :
remote controller:

Pos.1 Pos.2 Pos.3 Pos.4
Pos.5 Pos.6

Cautions:

- When adjusting the flap by hand,turn off the unit.
- When humidity is high,condensate water might occur adjusted to left or at air outlet if all vertical louvers are right.
- It is advisable not to keep horizontal flap at downward position for a long time in COOLor DRY mode , otherwise, condensate water might occur.

Note:
When restart after remote turning off, the remote controller controller will automatically memorize the previous set swing position.

Operation

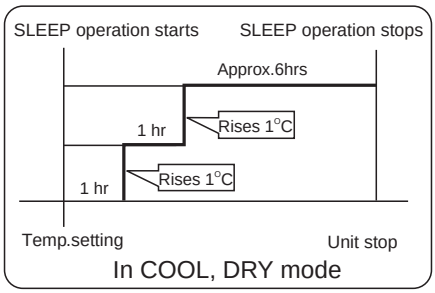
Comfortable SLEEP

Press SLEEP button , the remote controller will show , and then achieve to the sleep function. Press again this SLEEP button , the sleep function will be cancelled.

Operation Mode

1. In COOL,DRY mode

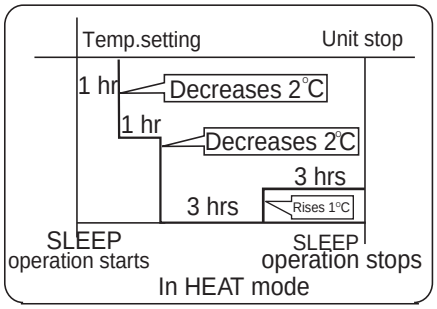
1 hours after SLEEP mode starts,temp.will become 1°C higher than temp.setting.After another 1 hours, temp.risesby 1°C futher .The unit will run for further 6 hours then stops Temp. is higher than temp.setting so that room temperature won't be too low for your sleep.



In COOL, DRY mode

2.In HEAT mode

1 hours after SLEEP mode starts, temp will become 2°C lower than temp.setting. After another 1 hours, temp decrease by 2°C further. After more another 3 hours, temp.risesby 1°C further.The unit will run for further 3 hours then stops.Temp. is lower than temp. setting so that room temperature won't be too high for your sleep.



In HEAT mode

3.In AUTO mode

The unit operates in corresponding sleep mode corresponding sleep mode adapted to the automatically selected operation mode.

4. In FAN mode

It has no SLEEP function.

5. When quiet sleeping function is set to 8 hours the quiet sleeping time can not be adjusted.When TIMER function is set,the quiet sleeping function can't be set up.After the sleeping function is set up,if user resets TIMER function, the sleeping function will be cancelled; the machine will be in the state of timing-on,if the two modes are set up at the same time,either of their operation time is ended first,the unit will stop automatically,and the other mode will be cancelled.

Note

When TIMER function is set, the sleeping function can't be set up .After the sleeping function is set up,if user resets TIMER function, the sleeping function will be cancelled; the machine will be in the state of timing-on.

Note to the power failure resume:

Press the sleep button ten times in five seconds and enter function after hearing four sounds.And press the sleep button ten times within five seconds and leave this function after hearing two sounds.

Power Failure Resume Function

If the unit is started for the first time, the compressor will not start running unless 3 minutes have elapsed. When the power resumes after power failure, the unit will run automatically, and 3 minutes later the compressor starts running.

Healthy airflow Operation

1.Press to starting
Setting the comfort work conditions.

2.The setting of healthy airflow function

Press EXTRA FUNCTION button to enter additional options,Press this button continuously, the louvers location will cycle between in the following three locations, to choose the swing location what you needed,and then press CONFIRM CANCEL button to confirm.

3.The cancel of the healthy airflow function

Press EXTRA FUNCTION button to enter additional options,Press this button continuously, the louvers location will cycle between in the following three locations again,and then press CONFIRM CANCEL button to cancel.

Notice: Do not direct the flap by hand. Otherwise, the grille will run incorrectly. If the grille is not run correctly, stop for a minute and then start, adjusting by remote controller.

Note:

1.After setting the healthy airflow function, the position grill is fixed.

2.In cooling, it is better to select the mode.

3.In cooling and dry, using the air conditioner for a long time under the high air humidity, condensate water may occur at the grille .

Operation

Timer On/Off On-Off Operation

1.After unit starts, select your desired operation mode.

2.Press TIME ON / TIME OFF button to change TIMER mode.

Press TIME ON button "ON 0.5 " will appear ,after 10 seconds the time display will be blank.

Press TIME OFF button "OFF 0.5 " will appear ,after 10 seconds the time display will be blank.

Then select your desired TIMER mode (TIMER ON or TIMER OFF). " ON "or " OFF "will flash.

3.Press TIME ON / TIME OFF button to set time.

Press the button for each time, setting time in the first 12 hours increased by 0.5 hour every time, after 12 hours,increased by 1 hour every time.

4.Confirm timer setting

After adjust the time,press CONFIRM CANCEL button and confirm the time ON or OFF button will not flash any more.

5.Cancel timer setting

Press the CONFIRM CANCEL button the time display eliminated.

Hints:

After replacing batteries or a power failure happens, time setting should be reset.

According to the Time setting sequence of TIMER ON or TIMER OFF, either Start-Stop or Stop-Start can be achieved.

HEALTH Operation

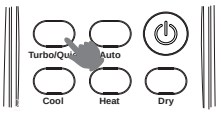
(This function is unavailable on some models.)

Press HEALTH button , the remote controller will show and then achieve to the health function.
Press again this HEALTH button , the health function will be cancelled.

The anion generator in the airconditioner can generate a lot of anion effectively balance the quantity of position and anion in the air and also to kill bacteria and speed up the dust sediment in the room and finally clean the air in the room.

TURBO Operation

(This function is unavailable on some models.)

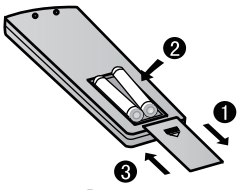


When you need fast cool or fast dehumidification,you can choose the Turob function; when you sleep, read, you can choose Quiet function

Press the Turbo/Quiet button, you can switch the “Turbo” and “Quiet” function easily. Eevery press,the remote controller will swith as below

When running in Turbo， the fan speed is the highest, when running in Quiet, the fan speed is super slow

Loading of the battery



1 Remove the battery cover;
2 Load the batteries as illustrated. 2 R-03 batteries, resetting key (cylinder);
3 Be sure that the loading is in line with the" + "/"-";
4 Load the battery,then put on the cover again.

Note:

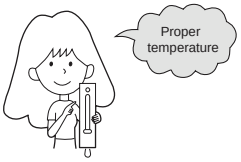
- The distance between the signal transmission head and the receiver hole should be within 7m without any obstacle as well.
- When electronic-started type fluorescent lamp or change-over type fluorescent lamp or wireless telephone is installed in the room, the receiver is apt to be disturbed in receiving the signals, so the distance to the indoor unit should be shorter.
- Full display or unclear display during operation indicates the batteries have been used up. Please change batteries.
- If the remote controller can't run normally during operation, please remove the batteries and reload several minutes later.

English

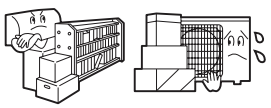
Maintenance

For Smart Use of The Air Conditioner

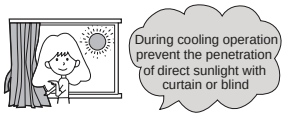
Setting of proper room temperature



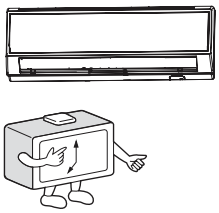
Do not block the air inlet or outlet



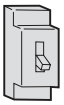
Close doors and windows during operation



Use the timer effectively



If the unit is not to be used for a long time, turn off the power supply main switch.



Use the louvers effectively

Remote Controller

Do not usewater,wipe the controller with a dry cloth.Do not use glass cleaner or chemical cloth.

Indoor Body

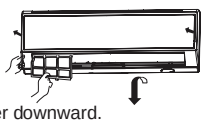
wipe the air conditioner by using a soft and dry cloth.For serious stains, use a neutral detergent diluted with water.Wring the water out of the cloth before wiping,then wipe off the detergent completely.

Do not use the following for cleaning

Gasoline,benzine, thinner or cleanser may damage the coating of the unit.

Hot water over 40°C(104°F) may cause discoloring or deformation.

Air Filter cleaning



1. Open the inlet grille by pulling it upward.
2. Remove the filter.
   Push up the filter's center tab slightly until it is released from the stopper, and remove the filter downward.
3. Clean the filter.
   Use a vacuum cleaner to remove dust, or wash the filter with water.After washing, dry the filter completely in the shade.
4. Attach the filter.
   Attach the filter correctly so that the "FRONT" indication is facing to the front.Make sure that the filter is completely fixed behind the stopper.If the right and left filters are not attached correctly, that may cause defects.

5. Close the inlet grille.

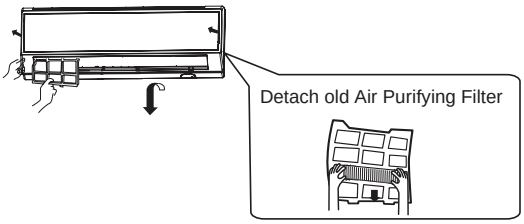
Replacement of Air Purifying Filter

1.Open the Inlet Grille

Prop up the inlet grille by using a small device named grille-support which located in the right side of the indoor unit.

2.Detach the standard air filter

Slide the knob slightly upward to release the filter, then withdraw it.

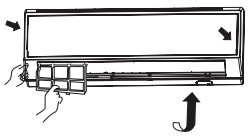


3.Attach Air Purifying Filter

Put air purifying filter appliances into the right and left filter frames.

4.Attach the standard air filter

(Necessary installation)



ATTENTION:

The white side of the photocatalyst air purifying filter face outside,and the black side face the unit The green side of the bacteria-killing medium air purifying filter face outside,and the white side face the unit.

5.Close the Inlet Grille

Close the Grille surely

NOTE:

- The photocatalyst air purifying filter will be solarized in fixed time. In normal family, it will be solarized every 6 months.
- The bacteria-killing medium air purifying filter will be used for a long time,no need for replacement. But in the period of using them ,you should remove the dust frequently by using vacuum cleaner or flaping them lightly,otherwise , its performance will be affected.
- Please keep the bacteria-killing medium air purifying filter in the cool and dry conditions avoid long time directly sunshine when you stop using it,or its ability of sterilization will be reduced.

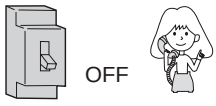
Cautions

⚠ WARNING

Please call Sales/Service Shop for the Installation.
Do not attempt to install the air conditioner by yourself because improper works may cause electric shock, fire, water leakage.

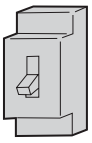
⚠ WARNING

When abnormality such as burnt-small found, immediately stop the operation button and contact sales shop.



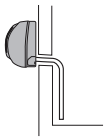
STRICT ENFORCEMENT

Use an exclusive power source with a circuit breaker



Check proper installation of the drainage securely

STRICT ENFORCEMENT



Connect power supply cord to the outlet completely

STRICT ENFORCEMENT

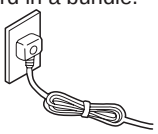
Use the proper voltage

STRICT ENFORCEMENT

1.Do not use power supply cord extended or connected in halfway
2.Do not install in the place where there is any possibility of inflammable gas leakage around the unit.
3.Do not get the unit exposed to vapor or oil steam.

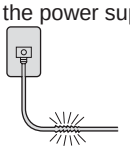
PROHIBITION

Do not use power supply cord in a bundle.



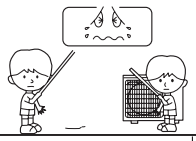
PROHIBITION

Take care not to damage the power supply cord.



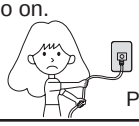
PROHIBITION

Do not insert objects into the air inlet or outlet.



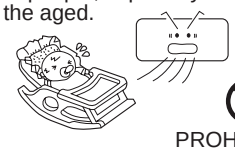
PROHIBITION

Do not start or stop the operation by disconnecting the power supply cord and so on.



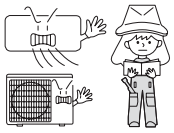
PROHIBITION

Do not channel the air flow directly at people, especially at infants or the aged.

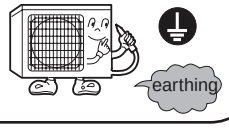


PROHIBITION

Do not try to repair or reconstruct by yourself.

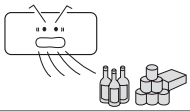


Connect the earth cable.



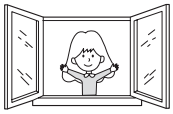
⚠ CAUTION

Do not use for the purpose of storage of food, art work, precise equipment, breeding, or cultivation.



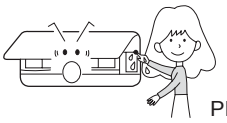
PROHIBITION

Take fresh air occasionally especially when gas appliance is running at the same time.



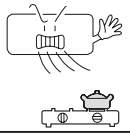
STRICT ENFORCEMENT

Do not operate the switch with wet hand.



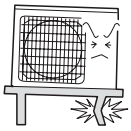
PROHIBITION

Do not install the unit near a fireplace or other heating apparatus.



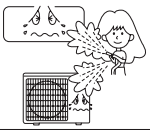
PROHIBITION

Check good condition of the installation stand



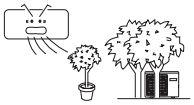
PROHIBITION

Do not pour water onto the unit for cleaning



PROHIBITION

Do not place animals or plants in the direct path of the air flow



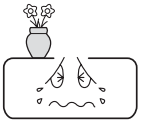
PROHIBITION

Do not place any objects on or climb on the unit.

PROHIBITION

Do not place flower vase or water containers on the top of the unit.

PROHIBITION



Trouble shooting

Before asking for service, check the following first.

	Phenomenon	Cause or check points
Normal Performance inspection	The system does not restart immediately.	• When unit is stopped, it won't restart immediately until 3 minutes have elapsed to protect the system. • When the electric plug is pulled out and reinserted, the protection circuit will work for 3 minutes to protect the air conditioner.
	Noise is heard	• During unit operation or at stop, a swishing or gurgling noise may be heard.At first 2-3 minutes after unit start, this noise is more noticeable. (This noise is generated by refrigerant flowing in the system.) • During unit operation, a cracking noise may be heard.This noise is generated by the casing expanding or shrinking because of temperature changes. • Should there be a big noise from air flow in unit operation, air filter may be too dirty.
	Smells are generated.	• This is because the system circulates smells from the interior air such as the smell of furniture, paint, cigarettes.
	Mist or steam are blown out.	• During COOL or DRY operation, indoor unit may blow out mist. This is due to the sudden cooling of indoor air.
	In dry mode,fan speed can't be changed.	• In DRY mode, when room temperature becomes lower than temp. setting+2 °C,unit will run intermittently at LOW speed regardless of FAN setting.
Multiple check		• Is power plug inserted? • Is there a power failure? • Is fuse blownout?
	Poor cooling	• Is the air filter dirty? Normally it should be cleaned every 15 days. • Are there any obstacles before inlet and outlet? • Is temperature set correctly? • Are there some doors or windows left open? • Is there any direct sunlight through the window during the cooling operation?(Use curtain) • Are there too much heat sources or too many people in the room during cooling operation?

Cautions

- Do not obstruct or cover the ventilation grille of the air conditoner.Do not put fingers or any other things into the inlet/outlet and swing louver.
- This appliance is not intended for use by persons (including children) with reduced physiced, sensory or mental capabilities or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of appliance by person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.

Specifications

- The refrigerating circuit is leak-proof.

The machine is adaptive in following situation

1.Applicable ambient temperature range:

Cooling	Indoor	Maximum:D.B/W.B	32°C/23°C
		Minimum:D.B/W.B	21°C/15°C
	Outdoor	Maximum:D.B/W.B	46°C/26°C
		Minimum: D.B	18°C
Heating	Indoor	Maximum:D.B	27°C
		Minimum: D.B	15°C
	Outdoor	Maximum:D.B/W.B	24°C/18°C
		Minimum:D.B/W.B	-7°C/-8°C
	Outdoor (INVERTER)	Maximum:D.B/W.B	24°C/18°C
		Minimum:D.B	-15°C

2. If the power supply cord is damaged, it must be replaced by the manufacturer or its service agent or a similar qualified person.

3.If the fuse of indoor unit on PC board is broken,please change it with the type of T. 3.15A/ 250V. If the fuse of outdoor unit is broken,change it with the type of T.25A/250V

4. The wiring method should be in line with the local wiring standard.

5. After installation, the power plug should be easily reached.

6. The waste battery should be disposed properly.

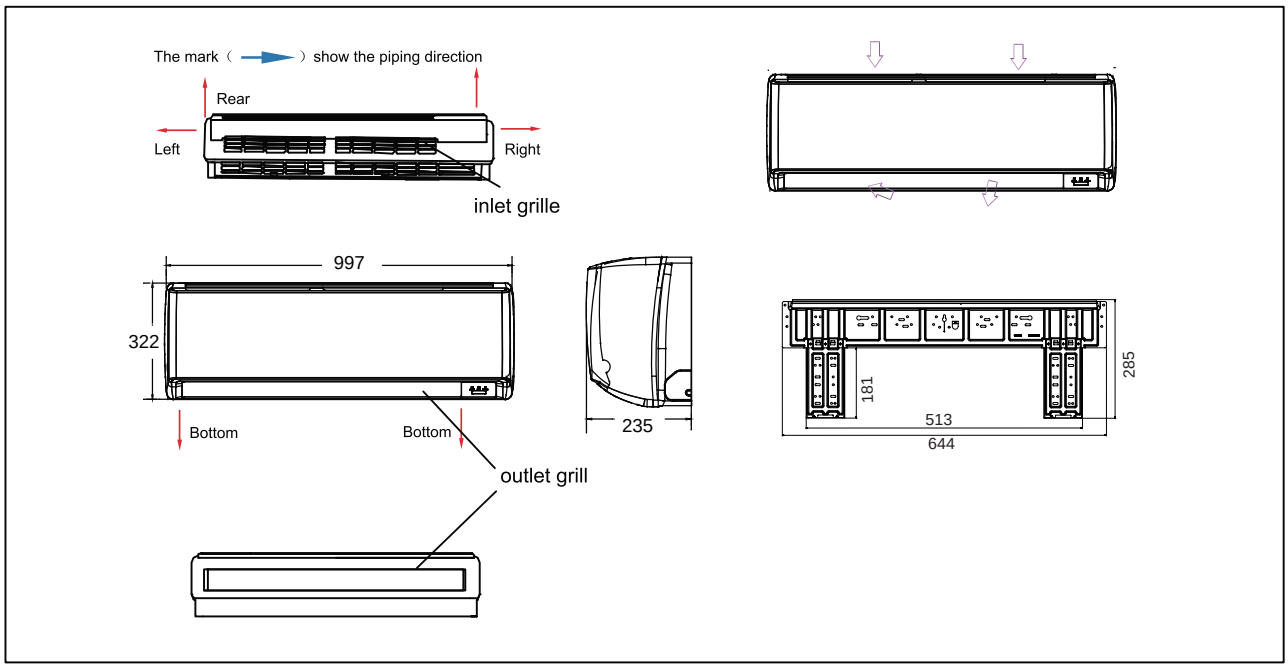
7. Please employ the proper power plug,which fit into the power supply cord.

8. The power plug and connecting cable must have acquired the local attestation.

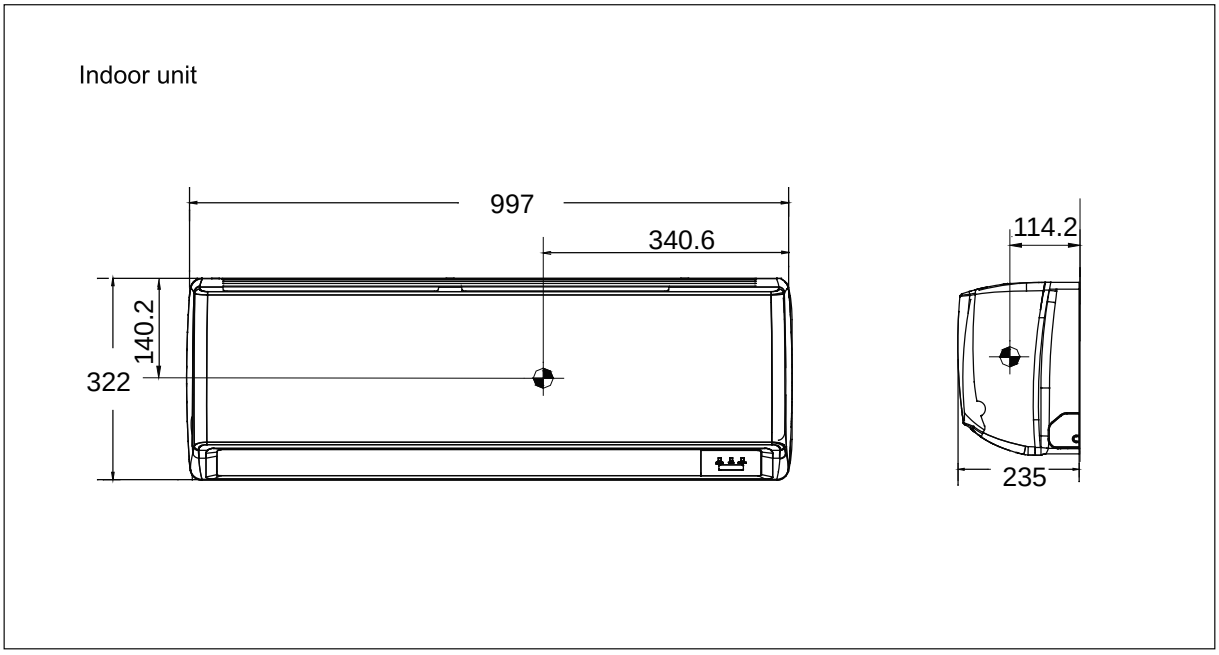
9.In order to protect the units,please turn off the A/C first,and at least 30 seconds later, cutting off the power.

10.Please check the installation instruction of WiFi in the WiFi module

9.Dimensional drawings



10.Center of gravity



11 Service Diagnosis

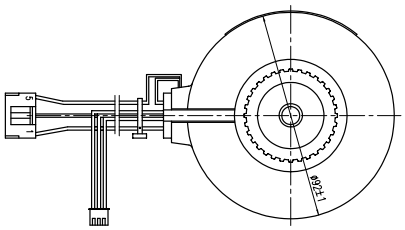
11.1 Caution for Diagnosis

The operation lamp flashes when any of the following errors is detected.

1. When a protection device of the indoor or outdoor unit is activated or when the thermistor malfunctions, disabling equipment operation.

2. When a signal transmission error occurs between the indoor and outdoor units. In either case, conduct the diagnostic procedure described in the following pages.

11.2 Parameter of primary electronic appliance

NO	Name	Parameter	Picture
1	Fan motor	Rated voltage: DC310V Rated current:0.17A Rated frequency: – Resistance:548Ω	

11.3 Problem Symptoms and Measures

Symptom	Check Item	Details of Measure
None of the units operates	Check the power supply.	Check to make sure that the rated voltage is supplied.
	Check the indoor PCB.	Check to make sure that the indoor PCB is broken.
Operation sometimes stops	Check the power supply.	A power failure of 2 to 10 cycles can stop air conditioner operation.
Equipment operates but does not cool, or does not heat (only for heat pump)	Check for faulty operation of the electronic expansion valve.	Set the units to cooling operation, and compare the temperatures of the liquid side connection pipes of the connection section among rooms to check the opening and closing operation of the electronic expansion valves of the individual units.
	Diagnosis by service port pressure and operating current.	Check for insufficient gas.
Large operating noise and vibrations	Check the installation condition.	Check to make sure that the required spaces for installation (specified in the Technical Guide, etc.) are provided.

11.4 Error Codes and Description indoor display

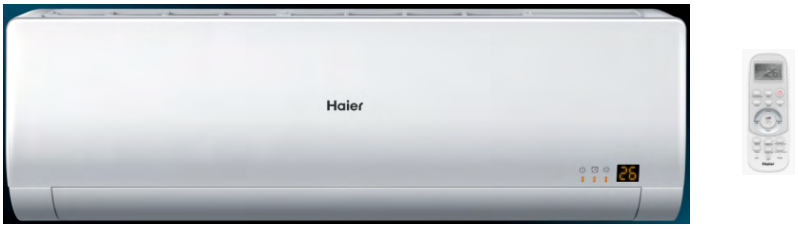
	Code indication		fault description	Reference Page
	Indoor displaying panel code indication	Outdoor (LED1 flash times)		
Indoor and Outdoor	E7	15	Communication fault between indoor and outdoor units	Page . 45
Indoor Malfunction	E1	--	Room temperature sensor failure	Page .36
	E2	--	Heat-exchange sensor failure	Page .36
	E4	--	Indoor EEPROM error	Page .37
	E14	--	Indoor fan motor malfunction	Page .38
Outdoor Malfunction	F12	1	Outdoor EEPROM error	Page .37
	F1	2	The protection of IPM	Page .41
	F22	3	Overcurrent protection of AC electricity for the outdoor model	Page .42
	F3	4	Communication fault between the IPM and outdoor PCB	Page. 43
	F19	6	Power voltage is too high or low	Page .44
	F4	8	Overheat protection for Discharge temperature	Page .45
	F8	9	Outdoor DC fan motor fault	Page .40
	F21	10	Defrost temperature sensor failure	Page .36
	F7	11	Suction temperature sensor failure	Page .36
	F6	12	Ambient temperature sensor failure	Page .36
	F25	13	Discharge temperature sensor failure	Page .36
	F11	18	deviate from the normal for the compressor	Page .48
	F28	19	Loop of the station detect error	Page .48
	F2	24	Overcurrent of the compressor	Page .42
	F23	25	Overcurrent protection for single-phase of the compressor	Page .42
	E9	21	High work-intense protection	Page .49

Haier SERVICE MANAUL

Wall Mounted Type

DC Inverter FREE MATCH N-Series

Model No. AS24NS3HRA



⚠WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public.
It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or Repair the product or products dealt with in this service information by anyone else could result in serious injury or death

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Haier Group **Version：V1** **Date：2014-11-25**

2.Features

Super quiet: Lower noise operation condition

A-PAM DC inverter:With adoption of S-TYPE,S-PAM and PHASE control technology to works more stably at low-frequency,and is more energy-saving,mor powerful at high frequency.

Long distance air supplying:

-15℃ Heating: When -15℃ can still heating natural

10℃ heating maintenance:Heating Holding 10℃ temperature

Confortable sleep：The setting temperature and the indoor noise can be adjusted to a more comfortable level when you set the “sleep mode” during night sleep.

Super match:One outdoor unit can match two or more indoor unit.

DIY auto mode: Adjust the last fixed operation mode automatically.

Turbo mode: Quick cooling or heating

Auto restart: Automatic return to previous operation conditions after sudden power blackout

24 hours timer: Use the timer function to set on,or off,or from on to off,or from off to on.

Intergrative valve cover:The valve cover is Intergrative.

2-way piping design: The pipe can shoot out both from left or right side.

Easy clean design: The panel is easy to wash and the airflow vents can be detached easily

Double 8 display:The display is Double 8 mode.

7.Funcitions and Control

7.1 Main functions and control specification

7.1.1 Automatic operation

When the running mode is turned to automation after starting the system, the system will first determine the running mode according to the current room temperature and then will run according to the determined mode. Tr in the following selection conditions means room temperature, Ts means setting temperature, Tp means temperature of indoor coil pipe

Tr≥23℃ Choose Cooling Mode

Tr＜23℃ Choose Heating Mode

After turning to the automation mode, the running mode can be switched between cooling mode, fan mode and heating mode according to the change of the indoor ambient temperature. But the automatic conversion between cooling mode and heating mode must be conducted after 15 minutes.

7.1.2 Cooling operation mode

Temperature control range: 16℃---30℃

Temperature difference: ±1℃

* Control features: When Tr（input airflow）>Ts（set temperature）℃, the compressor will be opened, the indoor fan will operate at the set speed and the mode signal will be sent to the outdoor system. When Tr （input airflow）＜Ts（set temperature）℃, the compressor will be opened, the indoor fan will operate at the set speed and the mode signal will be sent to the outdoor system. The system will keep the original status if Tr= Ts.

Airflow speed control: (temperature difference 1℃)

Automatic: When Tr>=Ts+3℃, high speed.

When Ts+1℃≤Tr<Ts+3℃, medium speed

When Tr<Ts+1℃, low speed

When the sensor is off, low speed

When the airflow speed has no delay from the high to low switching, the speed should be delayed for 3 minutes (remain at high speed for 3 minutes.) before the next switch.

Manus: When the system is operating, you can set the high, medium or low speed manually. (When the sensor is on or off, the system will change the speed 2 seconds after receiving the signal.)

*Airgate location control: the location for the airgate can be set according to your needs.

*Defrosting function: preventing the frosting on the indoor heat exchanger (when cooling or dehumidifying). When the compressor works continuously for 1/6 minutes (adaptable in EEPROM) and the temperature of the indoor coils has been below zero centigrade for 10 seconds, the compressor will be stopped and the malfunction will be recorded in the malfunction list. The indoor system will continue to run. When the temperature of the indoor coil is raised to 7℃, the compressor will be restarted again (the requirement of 3 minutes' delay should be satisfied.)

* timing system on/off function.

* Dormant control function.

7.1.3 Demoisture mode.

* temperature control range: 16---30℃
* temperature difference: ±1℃

Control feature: send the demoisture signal to the outdoor system.

When Tr>Ts+2℃, the compressor will be turned on, the indoor fan will operate at the set speed.

When Tr is between the Ts and Ts+2℃, the outdoor system will operate at the high demoisture frequency for 10 minutes and then at the low demoisture mode for six minutes. The indoor fan will operate at low speed.

When Tr< Ts, the outsystem will be stopped, the indoor fan will be stopped for 3 minutes and then turned to the low speed option.

All the frequency converses have a ±1℃ difference.

* Wind speed control: Automatic:

When Tr >= Ts+ 5℃, high speed.

When Ts+3℃≤Tr< Ts+5℃, medium speed.

When Ts+2℃≤Tr< Ts+3℃, low speed.

When Tr<Ts+2℃, light speed.

If the outdoor fan stopped, the indoor fan will be paused for 3 minutes.

If the outdoor fan stopped for more than 3 minutes and the outdoor system still operates, the system will be changed into light speed mode.

When the airflow speed has no delay from the high to low switching, the speed should be delayed for 3 minutes (remain at high speed for 3 minutes.) before the next switch.

Manual: When the sensor is off or Tr< Ts+3℃, the manual operation can not be made. (obligatory automatic operation.)

*Airgate location control: the location for the airgate can be set according to your needs.

*Defrosting function: preventing the frosting on the indoor heat exchanger (when cooling or demoisture). When the compressor works continuously for 1/6 minutes (adaptable in EEPROM) and the temperature of the indoor coils has been below zero centigrade for 10 seconds, the compressor will be stopped and the malfunction will be recorded in the malfunction list. The indoor system will continue to run. When the temperature of the indoor coil is raised to 7℃, the compressor will be restarted again (the prerequirement of 3 minutes' delay should be satisfied.)

* coil protection (synchronic overheating protection) are installed for the four directions latch malfunctions when demoisturing.
* timing system on/off function.
* Dormant control function.

7.1.4 Heating operation mode.

* temperature control range: 16---30℃
* temperature difference: ±1℃
* control feature: the temperature compensation is automatically added and the system will send the heating signals to the outdoor system.

If Tr≤Ts, the outdoor compressor is turned on, the indoor fan will be at the cold air proof mode.

If Tr>Ts, the outdoor system is turned off, the indoor fan will be at the heat residue sending mode.

If Tr<Ts, the outdoor system will be turned on again, the indoor fan will be at the cold air proof mode.

*Indoor fan control

manual control: You can choose high, medium, low and automatic speed control.

Automatic: When Tr<Ts, high speed.

When Ts≤Tr≤Ts+2℃, medium speed.

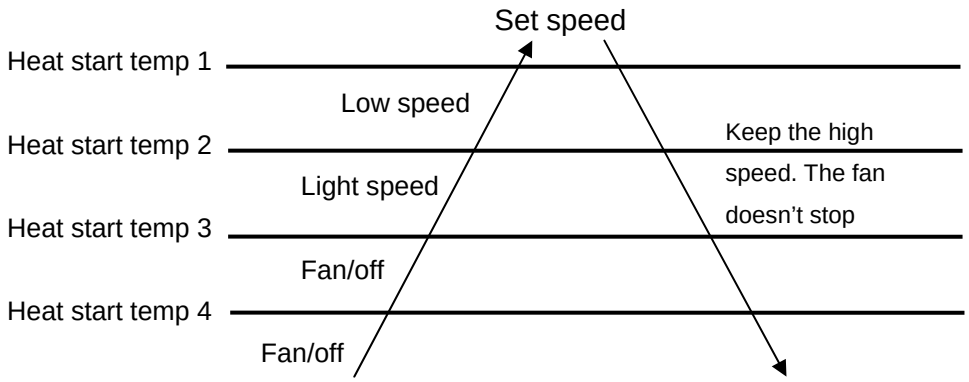
When Tr> Ts+2℃, low speed.

When the airflow speed has no delay from the high to low switching, the speed should be delayed for 3 minutes (remain at high speed for 3 minutes.) before the next switch.

*Airgate location control: the location for the airgate can be set according to your needs.

Coldair proof operation

1. The indoor operation within 4 minutes after the start up is as the following diagram, the air speed can be raised only after the speed has reached a certain level.



2. 4 minutes after the start up of the indoor fan, the light airflow and the low airflow will be turned to the set speed airflow.

3. In the cold air proof operation, the fan won't stop after the start up.

4. During the cold air proof operation, the indoor system will continuously send 'indoor high speed' signals to the outdoor system.

* Residue heat sending. The indoor fan will send the residue heat at a low speed for 12 seconds.

If other conditions are satisfied, when the compressor stops, the indoor system will operate at a light speed. The indoor fan will stop when the coil temperature is below the 'heat start temp 4'.

* Defrosting. When the system receives the defrosting signal from outdoors, the indoor fan will stop and the indoor temperature display won't change. At the time, any indoor coil malfunctions will be neglected. When the outdoor defrosting finishes, the coil malfunction will still be neglected until the compressor has been started up for 30 seconds. The indoor temperature display will not change and the system operates at the cold air proof mode.

* Automatic heating temperature compensation: when the system enters the heating mode, the temperature compensation (4) will be added. When the status is switched off, the compensation will be erased.

7.1.5 Strength operation

The system enters the mode after receiving the 'strength signal'.

Send strength operation signal to the outdoor system.

The mode change finishes the strength operation.

Entering 'mute', you can have normal operation or signal control such as timing to finish the strength operation.

When the system is at the automatic option with the strength/ mute function, if the system enters the cooling mode, the cooling strength/ mute function will be offered; if the system enters the heating mode, then the heating strength/ mute function will be offered; if the system enters the airflow mode, there will be no strength/ mute function.

7.1.6 Mute operation

The system enters the mode after receiving the 'mute signal'.
a. Mute heating: the airflow speed is slight, the system sends the mute signal to the outdoor system.
b. mute cooling: the airflow speed is slight, the system sends the mute signal to the outdoor system.
When the compressor operates, the airflow speed is mute speed. EEPROM is adaptable.
Mute operation can not work under the dehumidifying and airflow-sending operation.

7.1.7 Air refreshing

After receiving the signal from the remote control, (HV series: the background light of the 'health' logo is green. HS series: the 'health' indicator will be lighted). If the fan operates, the Nano-Aqua operates to realize the ions sending function.
If the indoor fan stops, the Nano-Aqua is turned off.
When the Nano-Aqua is turned off, if the air refreshing system is turned on, the Nano-Aqua will be turned on when the fan operates.

7.1.8 Timing

You can set 24 hours' on/off timing accordingly. After the setting, the timing indicator will be lightened. Also, the light will be turning off after the timing is finished. The followings are several timing methods.
1.system /on timing: The timing indicator will be lightened and the indoor system is under the waiting mode. The light will be turned off when the timing is finished and the rest of the system will operate under a normal condition. The timing starts since the last reception of the timing signal.
2.system /off timing: When the system is turned on, the timing indicator is lightened, the rest of the system will operated under a normal condition. When set time comes, the indicator light will be turned off and the system will be turned off. If you have set the dormant functions, the order of your settings will be operated according to the timing settings.
3 .system /on and off timing: The settings will be completed according to the orders..

7.1.9 Dormant operation

The dormant timing is an eight hours unadaptable one. The timing signs are shown on the V series board. (RC series show the dormant signal, the timing light is lighted on the 6 lights board).
2.1 Under the cooling/ dehumidifying operation, after the setting of the dormant operation, the set temperature will be raised for 1 centigrade after 1 hour's operation and will be raised for 1 centigrade 1 hour later. The system will keep this status for 6 hours and then close.
2.2 Under the heating mode, after the setting of the dormant operation, the setting temperature will fall 2 centigrade after 1 hour's operation and will fall 2 centigrade 1 hour later. 3 hours after the preceding operations, the set temperature will be raised for 1 centigrade and the system will keep this status for 3 hours

and then close down.

2.3 During the dormant time, except the change of the system mode or a new press on the dormant setting keys, the timing of the 8 hours dormancy will take the first timing as the start time, any presses on other keys will not affect the original timing.

2.4 Indoor fan control under the dormant operation.

If the indoor fan is at the high speed before the dormant operation setting, the speed will be turned to medium after the setting. If the fan is at the medium speed before the dormant setting, the speed will be turned to low after the setting. If the fan is at the low speed before the dormant setting, the speed will not change.

7.1.10 Urgent on/off input

Press the urgency button the buzzer will ring. The system will enter the automatic mode if you don't press the button for more than 5 seconds.

Under the system off mode, if you press the urgency key for 5 to 10 seconds, the system will start the test operation.

Under the system off mode, if you press the urgency key for 10 to 15 seconds, the display screen will show the resume of the last malfunction.

If the system is under operation, the press on the urgency key will stop it.

Under the system off mode, the display screen will show automatic running sign.

Under the system off mode, the system will not receive the remote control signal if the press on the urgency key doesn't last for 15 seconds or if the key is loosened.

Urgency operation: If you press the urgency key for less than 5 seconds, the buzzer will ring when you press the on/off key. The system will enter the urgency operation when the urgency key is loosened. The urgency operation is fully automatic.

Test operation.

The inlet temperature sensor doesn't work, the indoor fan and the indoor air direction board motor works synchronically. High speed airflow, cooling, outdoor system on, etc, will send the ambient temperature 30 centigrade and coil temperature 16 centigrade information to the outdoor system.

Test operation

The defrost protection of the evaporator doesn't work.

The temperature control doesn't work.

The test operation will be finished in 30 minutes.

The test operation can be stopped by the relative commands from the remote control.

7.1.11 Low load protection control

In order to prevent the frosting of the indoor heat interaction device, the outdoor system will be stopped if the indoor heat interaction temperature is below zero centigrade for 5 minutes, but the fan will continue to operate. The outdoor system will be started again when the heat interaction temperature is above 7 centigrade and the system has been stopped for 3 minutes. The malfunction will be stored in the malfunction resume and will not be revealed.

7.1.12 High load protection control

The outdoor system will be stopped if the coil temperature is above 65℃ for 2 minutes. The indoor fan will be

controlled by the thermostat. The outdoor system can be restarted when the coil temperature is below 42℃ and the system has been stopped for 3 minutes. The malfunction will be stored in the malfunction resume and will not be revealed.

7.1.13 Abnormal operation of indoor system

When the outdoor system operates, if the indoor system operation differs from the outdoor system, the abnormal operation malfunction will be reported. 10s after the report, the indoor system will be closed.

Outdoor system mode	Indoor system mode	conflicts
cooling	heating	yes
cooling	cooling	no
cooling	airflow	no
heating	heating	no
heating	airflow	yes
heating	cooling	yes

7.1.14 Malfunction list resume.

Nothing is presented if there is no code list.

The malfunction display will automatically finish in 10 seconds.

The remote control only receives the signals for stop. According to the signals, the malfunction resume presentation finishes.

The resume restores after the power supply restores.

7.1.15 Abnormality confirmation approaches

1. indoor temperature sensor abnormality:

Under the operation, the normal temperature ranges from 120 degree to -30 degree. When the temperature goes beyond this range, the abnormality can be confirmed. If the temperature goes back into the range, the system will automatically resume.

2 .indoor heat interaction sensor abnormality:

Under the operation, the normal temperature ranges from 120 degree to -30 degree. When the temperature goes beyond this range, the abnormality can be confirmed. If the temperature goes back into the range, the system will automatically resume.

3 .indoor malfunction:

Outdoor malfunction: When the indoor system receives the outdoor malfunction codes, it will store the code into E2 for the malfunction list resume. The indoor system will continue to operate according to the original status, the malfunction code will not be revealed or processed.

4. transmission abnormality:

If the indoor system can't receive the outdoor system for 8 minutes, the communication abnormality can be confirmed and reported and the outdoor system will be stopped.

7.1.16 Single indoor system operation

* Enter condition: First, set the high speed airflow and 30 centigrade set temperature, then press the dormant

keys for 6 times within 7 seconds, the system will feedback with 6 rings.

* After the system enters the separate indoor system operation mode, the indoor system will operate according to the set mode and neglect the communication signals of the outdoor system. However, it has to send signals to the outdoor system.

* Quitting condition: This mode can be quitted after receiving the quitting signal from the remote control or urgency system. The indoor system thus can quit the single operation mode.

7.1.17 Power cut compensation

* Entering condition: Press dormant button 10 times within 7 second, the buzzer will ring 4 times and the present system status will be stored into the EEPROM of the indoor system.

* After entering the power cut compensation mode, the processing of the indoor system should be as the followings:

Remote control urgency signal: operate according to the remote control and the urgent conditions, the present status will be stored into the EEPROM of the indoor system.

* Quitting conditions: Press dormant button 10 times within 7 seconds and the buzzer will ring twice.

7.1.18 Fixed frequency operation

1. Fixed cooling: a. under G code condition: high speed cooling, set 16℃, press temperature '-' key and the set key at the same time. The system will enter the fixed frequency operation after the buzzer rings twice.

b. The proceeding programs are as the follows:

Entering the fixed frequency operation, you can set the fixed strength location 1 and send the cooling signal to the outdoor system. Meanwhile, you can fix the indoor system at high speed mode, the location of the airflow direction board can be switched to the maximal position.

c. Quitting condition: The fixed frequency cooling can be quitted after receiving the remote signal, and the system will enter the remote setting status.

2. Fixed heating: a. under G code condition: high speed heating, set 30℃, press temperature '+' key and the set key at the same time. The system will enter the fixed frequency operation after the buzzer rings twice.

b. The proceeding programs are as the follows:

Entering the fixed frequency operation, you can set the fixed strength location 1 and send the heating signal to the outdoor system. Meanwhile, you can fix the indoor system at high speed mode, the location of the airflow direction board can be switched to the maximal position.

c. Quitting condition: The fixed frequency heating can be quitted after receiving the remote signal, and the system will enter the remote setting status.

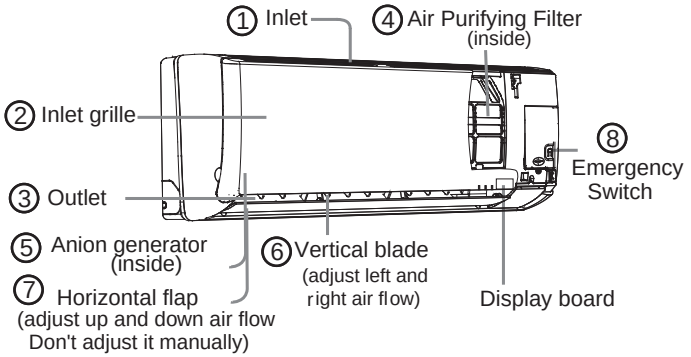
7.1.19 Test program

First, connect the test program terminal on the mainboard. Then connect the system to the power circuit. The test program will operate as follows.

HV series display: The buzzer rings for one time—the signal will be sent to outdoor system for 0.5 second—the violet is sent for 0.5-- the background light turns to white—the back ground light turns to white—the background light turns to white—the background light is fully lighted for 0.5 second—LED screen lights for 0.5 second— the step-in motor fully output for 0.5 second—then the motor doesn't output for 0.5 second—the motor fully output again for 0.5 second. The test program finishes.

Parts and Functions

Indoor Unit

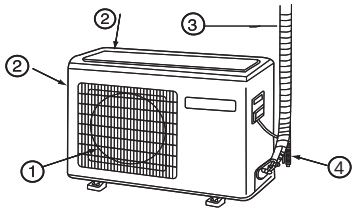


Display board

1. Remote signal receiver
   (A beeping sound is generated when a signal from remote controller isreceived.)
2. Power indicator (Lights up when unit starts.)
3. Timer mode indicator
   (Lights up whenTimer operation is selected.)
4. Operation mode indicator (lights up when the compressor is on.)
5. Ambient temp display
   When receiving the remote control signal, display the set temperature.

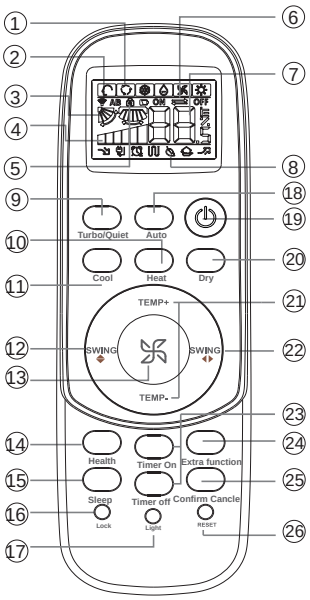
Actual inlet grille may vary from the one shown in the manual according to the product purchased

Outdoor Unit



① OUTLET
② INLET
③ CONNECTING PIPING AND ELECTRICAL WIRING
④ DRAIN HOSE

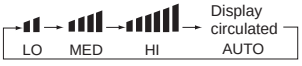
Remote controller



1. Mode display

Operation mode	AUTO	COOL	DRY	FAN
Remote controller				

2. Signal sending display
3. SWING display
4. FAN SPEED display



5. LOCK display

6. TIMER OFF display
   TIMER ON display
7. TEMP display
8. Additional functions display

Operation mode	QUIET	SLEEP	Supplemented electrical heating	HEALTH	TURBO
Remote controller					

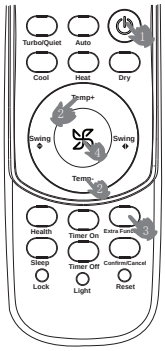
9. TURBO/Quiet button
10. HEAT button
11. COOL button
12. SWING UP/DOWN button
13. FAN SPEED button
14. HEALTH button
15. SLEEP button
16. LOCK button
17. LIGHT button
    Control the lightening and extinguishing of the indoor LED display board.
18. Auto button
19. POWER ON/OFF button
20. DRY button
21. TEMP button
22. SWING LEFT/RIGHT button
23. TIMER OFF/ON button
24. EXTRA FUNCTION button
    Function: FAN → Healthy airflow → Fahrenheit/Celsius mode conversion → Low-Temperature Heating Operation Down to 10℃ → Fresh air → A-B yard
25. CANCEL/CONFIRM button
    Function: Setting and cancel to the timer and other additional functions.
26. RESET button
    When the remote controller appears abnormal, use a sharp pointed article to press this button to reset the remote.

Healthy function is not available for some units.

Operation

Base Operation

Remote controller



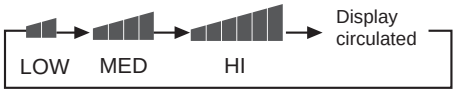
1. Unit start
   Press ON/OFF on the remote controller, unit starts.

2.Select temp.setting
   Press TEMP+ / TEMP− button
   TEMP+ Every time the button is pressed, temp.setting increase 1°C,if kept depressed, it will increase rapidly
   TEMP− Every time the button is pressed, temp.setting decrease 1°C,if kept depressed, it will decrease rapidly
   Select a desired temperature.

3.Fan function

Press EXTRA FUNCTION button to enter additional options, when cycle display to , will flash. And then press CONFIRM CANCEL enter to FAN function.

For each press button fan speed changes as follows:
Remote controller:



Air conditioner is running under displayed fan speed. When FAN is set to AUTO, the air conditioner automatically adjusts the fan speed according to room temperature.

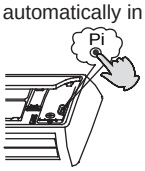
Operation Mode	Remote Controller	Note
AUTO		Under the mode of auto operation, air conditioner will automatically select Cool or Heat operation according to room temperature. When FAN is set to AUTO, the air conditioner automatically adjusts the fan speed according to room temperature.
COOL		Cooling only unit do not have displays and functions related with heating
DRY		In DRY mode, when room temperature becomes lower than temp.setting+2°C,unit will run intermittently at LOW speed regardless of FAN setting.
HEAT		In HEAT mode,warm air will blow out after a short periodof the time due to cold-draft prevention function.
FAN		In FAN operation mode, the unit will not operate in COOL or HEAT mode but only in FAN mode ,AUTO is not available in FAN mode.And temp.setting is disabled. When FAN is set to AUTO, the air conditioner automatically adjusts the fan speed according to room temperature. In FAN mode,SLEEP operation is not available.

Emergency operation and test operation

Emergency Operation:

- Use this operation only when the remote controller is defective or lost, and with function of emergency running, air conditoner can run automatically for a while.
- When the emergency operation switch is pressed, the " Pi " sound is heard once, which means the start of this operation.
- When power switch is turning on for the first time and emergency operation starts, the unit will run automatically in the following modes:

Room temperature	Designated temperature	Timer mode	Fan speed	Operation mode
Above 23°C	26°C	No	AUTO	COOL

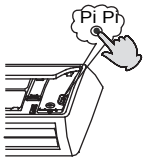


- It is impossible to change the settings of temp. and fan speed,It is also not possible to operate in timer or dry mode.

Test operation:

Test operation switch is the same as emergency switch.

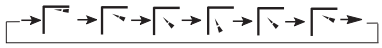
- Use this switch in the test operation when the room temperature is below 16°C, do not use it in the normal operation.
- Continue to press the test operation switch for more than 5 seconds. After you hear the "Pi" sound twice, release your finger from the switch: the cooling operation starts with the air flow speed "Hi".
- Under this operation mode,the fan motor of indoor unit will run in high speed.



Air Flow Direction Adjustment

1.Status display of air flow Vertical flap

For each press of SWING button, remote controller displays as follows :
remote controller:

Pos.1 

Initial state

Pos.2 No initial state disaplayed on remote controller, the vertical flap will be fixed on the current position

2.Left and right air flow adjustment

For each press of SWING button, remote controller displays as follows :
remote controller:

Pos.1 Pos.2 Pos.3 Pos.4
Pos.5 Pos.6

Cautions:

- When adjusting the flap by hand,turn off the unit.
- When humidity is high,condensate water might occur adjusted to left or at air outlet if all vertical louvers are right.
- It is advisable not to keep horizontal flap at downward position for a long time in COOLor DRY mode , otherwise, condensate water might occur.

Note:
When restart after remote turning off, the remote controller controller will automatically memorize the previous set swing position.

Operation

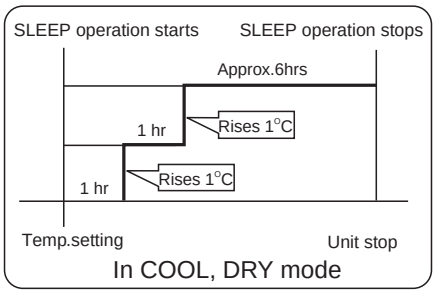
Comfortable SLEEP

Press SLEEP button , the remote controller will show , and then achieve to the sleep function. Press again this SLEEP button , the sleep function will be cancelled.

Operation Mode

1. In COOL,DRY mode

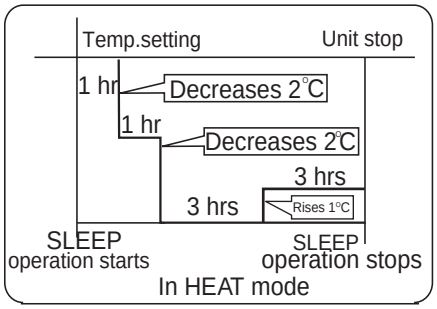
1 hours after SLEEP mode starts,temp.will become 1°C higher than temp.setting.After another 1 hours, temp.risesby 1°C futher .The unit will run for further 6 hours then stops Temp. is higher than temp.setting so that room temperature won't be too low for your sleep.



In COOL, DRY mode

2.In HEAT mode

1 hours after SLEEP mode starts, temp will become 2°C lower than temp.setting. After another 1 hours, temp decrease by 2°C further. After more another 3 hours, temp.risesby 1°C further.The unit will run for further 3 hours then stops.Temp. is lower than temp. setting so that room temperature won't be too high for your sleep.



In HEAT mode

3.In AUTO mode

The unit operates in corresponding sleep mode corresponding sleep mode adapted to the automatically selected operation mode.

4. In FAN mode

It has no SLEEP function.

5. When quiet sleeping function is set to 8 hours the quiet sleeping time can not be adjusted.When TIMER function is set,the quiet sleeping function can't be set up.After the sleeping function is set up,if user resets TIMER function, the sleeping function will be cancelled; the machine will be in the state of timing-on,if the two modes are set up at the same time,either of their operation time is ended first,the unit will stop automatically,and the other mode will be cancelled.

Note

When TIMER function is set, the sleeping function can't be set up .After the sleeping function is set up,if user resets TIMER function, the sleeping function will be cancelled; the machine will be in the state of timing-on.

Note to the power failure resume:

Press the sleep button ten times in five seconds and enter function after hearing four sounds.And press the sleep button ten times within five seconds and leave this function after hearing two sounds.

Power Failure Resume Function

If the unit is started for the first time, the compressor will not start running unless 3 minutes have elapsed. When the power resumes after power failure, the unit will run automatically, and 3 minutes later the compressor starts running.

Healthy airflow Operation

1.Press to starting
Setting the comfort work conditions.

2.The setting of healthy airflow function

Press EXTRA FUNCTION button to enter additional options,Press this button continuously, the louvers location will cycle between in the following three locations, to choose the swing location what you needed,and then press CONFIRM CANCEL button to confirm.

3.The cancel of the healthy airflow function

Press EXTRA FUNCTION button to enter additional options,Press this button continuously, the louvers location will cycle between in the following three locations again,and then press CONFIRM CANCEL button to cancel.

Notice: Do not direct the flap by hand. Otherwise, the grille will run incorrectly. If the grille is not run correctly, stop for a minute and then start, adjusting by remote controller.

Note:

1.After setting the healthy airflow function, the position grill is fixed.

2.In cooling, it is better to select the mode.

3.In cooling and dry, using the air conditioner for a long time under the high air humidity, condensate water may occur at the grille .

Operation

Timer On/Off On-Off Operation

1.After unit starts, select your desired operation mode.

2.Press TIME ON / TIME OFF button to change TIMER mode.

Press TIME ON button "ON 0.5 " will appear ,after 10 seconds the time display will be blank.

Press TIME OFF button "OFF 0.5 " will appear ,after 10 seconds the time display will be blank.

Then select your desired TIMER mode (TIMER ON or TIMER OFF). " ON "or " OFF "will flash.

3.Press TIME ON / TIME OFF button to set time.

Press the button for each time, setting time in the first 12 hours increased by 0.5 hour every time, after 12 hours,increased by 1 hour every time.

4.Confirm timer setting

After adjust the time,press CONFIRM CANCEL button and confirm the time ON or OFF button will not flash any more.

5.Cancel timer setting

Press the CONFIRM CANCEL button the time display eliminated.

Hints:

After replacing batteries or a power failure happens, time setting should be reset.

According to the Time setting sequence of TIMER ON or TIMER OFF, either Start-Stop or Stop-Start can be achieved.

HEALTH Operation

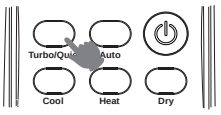
(This function is unavailable on some models.)

Press HEALTH button , the remote controller will show and then achieve to the health function.
Press again this HEALTH button , the health function will be cancelled.

The anion generator in the airconditioner can generate a lot of anion effectively balance the quantity of position and anion in the air and also to kill bacteria and speed up the dust sediment in the room and finally clean the air in the room.

TURBO Operation

(This function is unavailable on some models.)

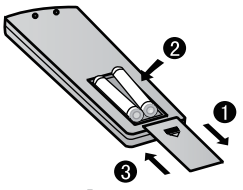


When you need fast cool or fast dehumidification,you can choose the Turob function; when you sleep, read, you can choose Quiet function

Press the Turbo/Quiet button, you can switch the “Turbo” and “Quiet” function easily. Eevery press,the remote controller will swith as below

When running in Turbo， the fan speed is the highest, when running in Quiet, the fan speed is super slow

Loading of the battery



1 Remove the battery cover;
2 Load the batteries as illustrated. 2 R-03 batteries, resetting key (cylinder);
3 Be sure that the loading is in line with the" + "/"-";
4 Load the battery,then put on the cover again.

Note:

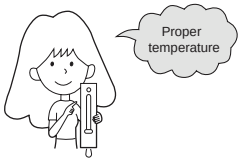
- The distance between the signal transmission head and the receiver hole should be within 7m without any obstacle as well.
- When electronic-started type fluorescent lamp or change-over type fluorescent lamp or wireless telephone is installed in the room, the receiver is apt to be disturbed in receiving the signals, so the distance to the indoor unit should be shorter.
- Full display or unclear display during operation indicates the batteries have been used up. Please change batteries.
- If the remote controller can't run normally during operation, please remove the batteries and reload several minutes later.

English

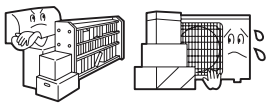
Maintenance

For Smart Use of The Air Conditioner

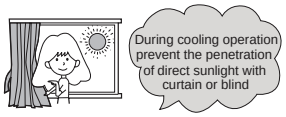
Setting of proper room temperature



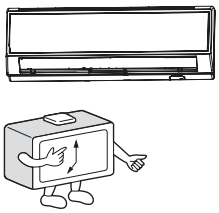
Do not block the air inlet or outlet



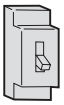
Close doors and windows during operation



Use the timer effectively



If the unit is not to be used for a long time, turn off the power supply main switch.



Use the louvers effectively

Remote Controller

Do not usewater,wipe the controller with a dry cloth.Do not use glass cleaner or chemical cloth.

Indoor Body

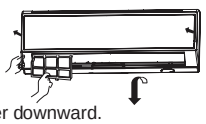
wipe the air conditioner by using a soft and dry cloth.For serious stains, use a neutral detergent diluted with water.Wring the water out of the cloth before wiping,then wipe off the detergent completely.

Do not use the following for cleaning

Gasoline,benzine, thinner or cleanser may damage the coating of the unit.

Hot water over 40°C(104°F) may cause discoloring or deformation.

Air Filter cleaning



1 Open the inlet grille by pulling it upward.

2 Remove the filter.
Push up the filter's center tab slightly until it is released from the stopper, and remove the filter downward.

3 Clean the filter.
Use a vacuum cleaner to remove dust, or wash the filter with water.After washing, dry the filter completely in the shade.

4 Attach the filter.
Attach the filter correctly so that the "FRONT" indication is facing to the front.Make sure that the filter is completely fixed behind the stopper.If the right and left filters are not attached correctly, that may cause defects.

5 Close the inlet grille.

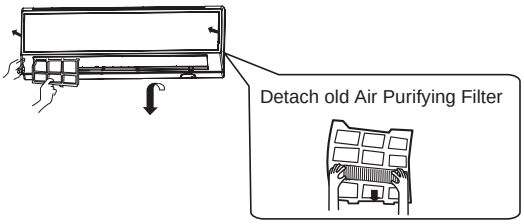
Replacement of Air Purifying Filter

1.Open the Inlet Grille

Prop up the inlet grille by using a small device named grille-support which located in the right side of the indoor unit.

2.Detach the standard air filter

Slide the knob slightly upward to release the filter, then withdraw it.

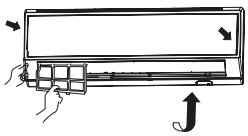


3.Attach Air Purifying Filter

Put air purifying filter appliances into the right and left filter frames.

4.Attach the standard air filter

(Necessary installation)



ATTENTION:

The white side of the photocatalyst air purifying filter face outside,and the black side face the unit The green side of the bacteria-killing medium air purifying filter face outside,and the white side face the unit.

5.Close the Inlet Grille

Close the Grille surely

NOTE:

- The photocatalyst air purifying filter will be solarized in fixed time. In normal family, it will be solarized every 6 months.
- The bacteria-killing medium air purifying filter will be used for a long time,no need for replacement. But in the period of using them ,you should remove the dust frequently by using vacuum cleaner or flaping them lightly,otherwise , its performance will be affected.
- Please keep the bacteria-killing medium air purifying filter in the cool and dry conditions avoid long time directly sunshine when you stop using it,or its ability of sterilization will be reduced.

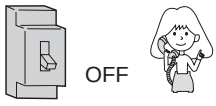
Cautions

⚠ WARNING

Please call Sales/Service Shop for the Installation.
Do not attempt to install the air conditioner by yourself because improper works may cause electric shock, fire, water leakage.

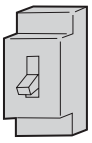
⚠ WARNING

When abnormality such as burnt-small found, immediately stop the operation button and contact sales shop.



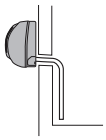
STRICT ENFORCEMENT

Use an exclusive power source with a circuit breaker



Check proper installation of the drainage securely

STRICT ENFORCEMENT



Connect power supply cord to the outlet completely

STRICT ENFORCEMENT

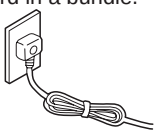
Use the proper voltage

STRICT ENFORCEMENT

1.Do not use power supply cord extended or connected in halfway
2.Do not install in the place where there is any possibility of inflammable gas leakage around the unit.
3.Do not get the unit exposed to vapor or oil steam.

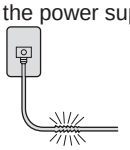
PROHIBITION

Do not use power supply cord in a bundle.



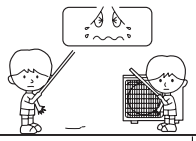
PROHIBITION

Take care not to damage the power supply cord.



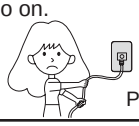
PROHIBITION

Do not insert objects into the air inlet or outlet.



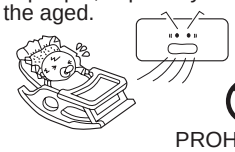
PROHIBITION

Do not start or stop the operation by disconnecting the power supply cord and so on.



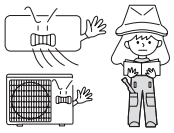
PROHIBITION

Do not channel the air flow directly at people, especially at infants or the aged.

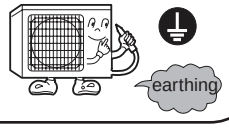


PROHIBITION

Do not try to repair or reconstruct by yourself.

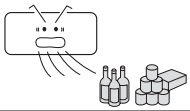


Connect the earth cable.



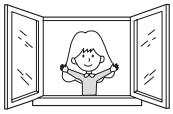
⚠ CAUTION

Do not use for the purpose of storage of food, art work, precise equipment, breeding, or cultivation.



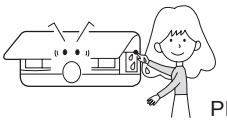
PROHIBITION

Take fresh air occasionally especially when gas appliance is running at the same time.



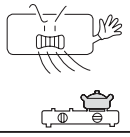
STRICT ENFORCEMENT

Do not operate the switch with wet hand.



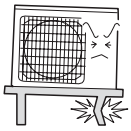
PROHIBITION

Do not install the unit near a fireplace or other heating apparatus.



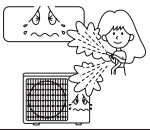
PROHIBITION

Check good condition of the installation stand



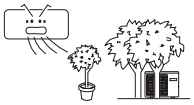
PROHIBITION

Do not pour water onto the unit for cleaning



PROHIBITION

Do not place animals or plants in the direct path of the air flow



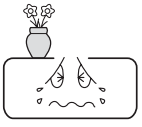
PROHIBITION

Do not place any objects on or climb on the unit.

PROHIBITION

Do not place flower vase or water containers on the top of the unit.

PROHIBITION



Trouble shooting

Before asking for service, check the following first.

	Phenomenon	Cause or check points
Normal Performance inspection	The system does not restart immediately.	• When unit is stopped, it won't restart immediately until 3 minutes have elapsed to protect the system. • When the electric plug is pulled out and reinserted, the protection circuit will work for 3 minutes to protect the air conditioner.
	Noise is heard	• During unit operation or at stop, a swishing or gurgling noise may be heard.At first 2-3 minutes after unit start, this noise is more noticeable. (This noise is generated by refrigerant flowing in the system.) • During unit operation, a cracking noise may be heard.This noise is generated by the casing expanding or shrinking because of temperature changes. • Should there be a big noise from air flow in unit operation, air filter may be too dirty.
	Smells are generated.	• This is because the system circulates smells from the interior air such as the smell of furniture, paint, cigarettes.
	Mist or steam are blown out.	• During COOL or DRY operation, indoor unit may blow out mist. This is due to the sudden cooling of indoor air.
	In dry mode,fan speed can't be changed.	• In DRY mode, when room temperature becomes lower than temp. setting+2 °C,unit will run intermittently at LOW speed regardless of FAN setting.
Multiple check		• Is power plug inserted? • Is there a power failure? • Is fuse blownout?
	Poor cooling	• Is the air filter dirty? Normally it should be cleaned every 15 days. • Are there any obstacles before inlet and outlet? • Is temperature set correctly? • Are there some doors or windows left open? • Is there any direct sunlight through the window during the cooling operation?(Use curtain) • Are there too much heat sources or too many people in the room during cooling operation?

Cautions

- Do not obstruct or cover the ventilation grille of the air conditoner.Do not put fingers or any other things into the inlet/outlet and swing louver.
- This appliance is not intended for use by persons (including children) with reduced physiced, sensory or mental capabilities or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of appliance by person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.

Specifications

- The refrigerating circuit is leak-proof.

The machine is adaptive in following situation

1.Applicable ambient temperature range:

Cooling	Indoor	Maximum:D.B/W.B	32°C/23°C
		Minimum:D.B/W.B	21°C/15°C
	Outdoor	Maximum:D.B/W.B	46°C/26°C
		Minimum: D.B	18°C
Heating	Indoor	Maximum:D.B	27°C
		Minimum: D.B	15°C
	Outdoor	Maximum:D.B/W.B	24°C/18°C
		Minimum:D.B/W.B	-7°C/-8°C
	Outdoor (INVERTER)	Maximum:D.B/W.B	24°C/18°C
		Minimum:D.B	-15°C

2. If the power supply cord is damaged, it must be replaced by the manufacturer or its service agent or a similar qualified person.

3.If the fuse of indoor unit on PC board is broken,please change it with the type of T. 3.15A/ 250V. If the fuse of outdoor unit is broken,change it with the type of T.25A/250V

4. The wiring method should be in line with the local wiring standard.

5. After installation, the power plug should be easily reached.

6. The waste battery should be disposed properly.

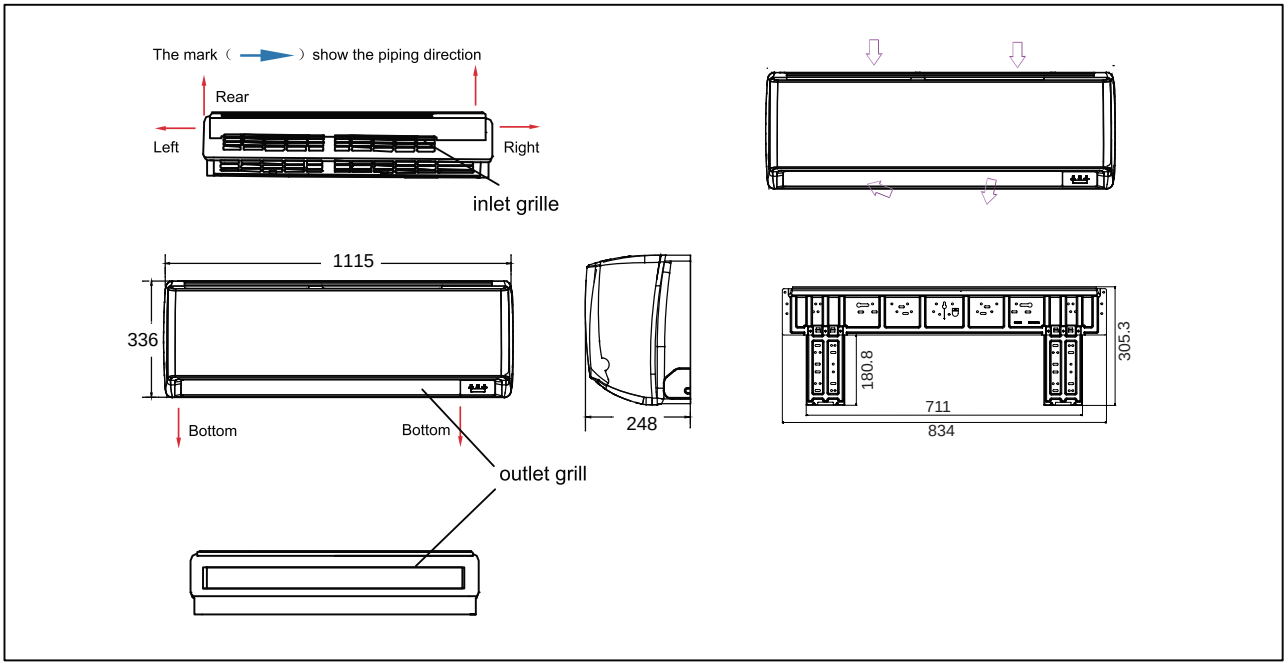
7. Please employ the proper power plug,which fit into the power supply cord.

8. The power plug and connecting cable must have acquired the local attestation.

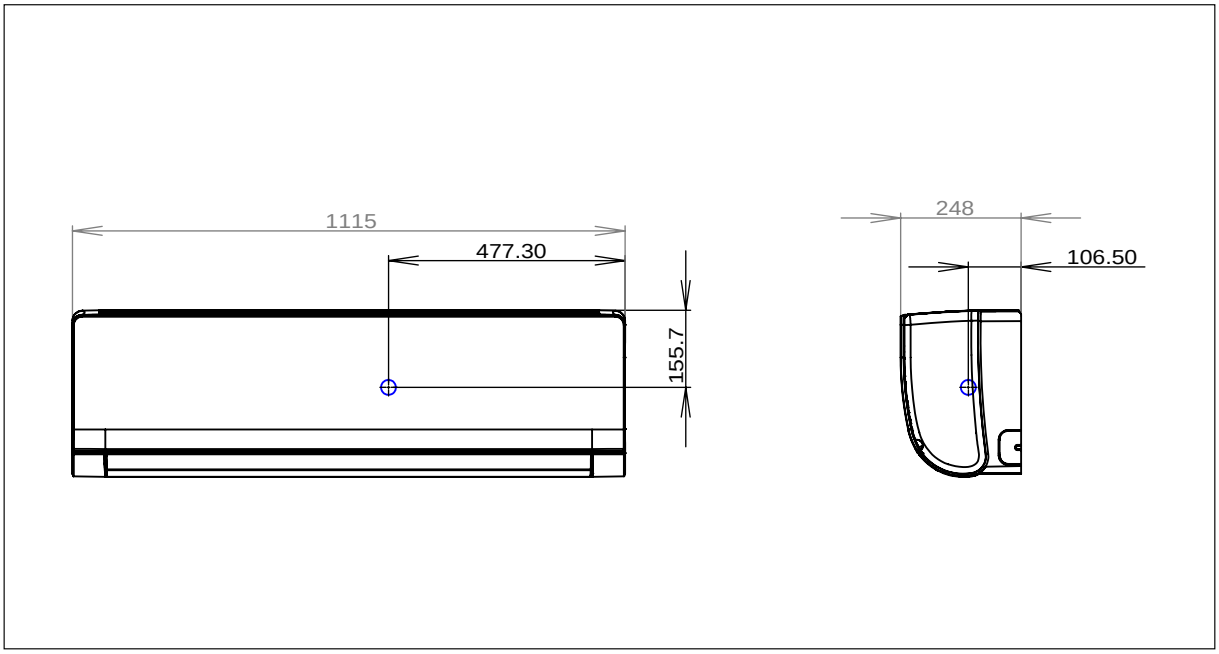
9.In order to protect the units,please turn off the A/C first,and at least 30 seconds later, cutting off the power.

10.Please check the installation instruction of WiFi in the WiFi module

9.Dimensional drawings



10.Center of gravity



11 Service Diagnosis

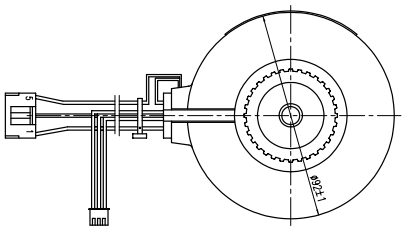
11.1 Caution for Diagnosis

The operation lamp flashes when any of the following errors is detected.

1. When a protection device of the indoor or outdoor unit is activated or when the thermistor malfunctions, disabling equipment operation.

2. When a signal transmission error occurs between the indoor and outdoor units. In either case, conduct the diagnostic procedure described in the following pages.

11.2 Parameter of primary electronic appliance

NO	Name	Parameter	Picture
1	Fan motor	Rated voltage: DC310V Rated current:0.17A Rated frequency: – Resistance:548Ω	

11.3 Problem Symptoms and Measures

Symptom	Check Item	Details of Measure
None of the units operates	Check the power supply.	Check to make sure that the rated voltage is supplied.
	Check the indoor PCB.	Check to make sure that the indoor PCB is broken.
Operation sometimes stops	Check the power supply.	A power failure of 2 to 10 cycles can stop air conditioner operation.
Equipment operates but does not cool, or does not heat (only for heat pump)	Check for faulty operation of the electronic expansion valve.	Set the units to cooling operation, and compare the temperatures of the liquid side connection pipes of the connection section among rooms to check the opening and closing operation of the electronic expansion valves of the individual units.
	Diagnosis by service port pressure and operating current.	Check for insufficient gas.
Large operating noise and vibrations	Check the installation condition.	Check to make sure that the required spaces for installation (specified in the Technical Guide, etc.) are provided.

11.4 Error Codes and Description indoor display

	Code indication		fault description	Reference Page
	Indoor displaying panel code indication	Outdoor (LED1 flash times)		
Indoor and Outdoor	E7	15	Communication fault between indoor and outdoor units	Page . 45
Indoor Malfunction	E1	--	Room temperature sensor failure	Page .36
	E2	--	Heat-exchange sensor failure	Page .36
	E4	--	Indoor EEPROM error	Page .37
	E14	--	Indoor fan motor malfunction	Page .38
Outdoor Malfunction	F12	1	Outdoor EEPROM error	Page .37
	F1	2	The protection of IPM	Page .41
	F22	3	Overcurrent protection of AC electricity for the outdoor model	Page .42
	F3	4	Communication fault between the IPM and outdoor PCB	Page. 43
	F19	6	Power voltage is too high or low	Page .44
	F4	8	Overheat protection for Discharge temperature	Page .45
	F8	9	Outdoor DC fan motor fault	Page .40
	F21	10	Defrost temperature sensor failure	Page .36
	F7	11	Suction temperature sensor failure	Page .36
	F6	12	Ambient temperature sensor failure	Page .36
	F25	13	Discharge temperature sensor failure	Page .36
	F11	18	deviate from the normal for the compressor	Page .48
	F28	19	Loop of the station detect error	Page .48
	F2	24	Overcurrent of the compressor	Page .42
	F23	25	Overcurrent protection for single-phase of the compressor	Page .42
	E9	21	High work-intense protection	Page .49