C&H AIR CONDITIONERS

Split Air Conditioner

DUCT SERIES

MODELS:

GFH18K3BI
GFH24K3BI
GFH36K3BI
GFH48K3BI
GFH60K3BI

Thanks for your selection of this Ducted Air-Conditioning Unit. Before use, please read this instruction manual carefully and keep it properly to ensure correct use of this machine.

Safety Considerations

Please read this manual carefully before use and operate correctly as instructed in the manual.

1   You are specially warned to note the two symbols below.:

⚠ **WARNING!** A symbol indicating that improper operation might cause human death or severe injury

⚠ **WARNING!** A symbol indicating that improper operation might cause human property damage.

⚠ WARNING!

- This unit shall be used in offices, restaurants, residences or similar places.
- Please seek an authorized repair station for installation work. Improper installation might cause water leakage, electric shock or fire.
- Please install at a place strong enough to support the weight of air conditioner unit. If not, the air conditioner unit might fall down and cause human injury or death.
- To ensure proper drainage, the drainage pipe shall be correctly installed according to installation instructions. Take proper measures for heat preservation to prevent condensing. Improper installation of pipes might cause leakage and wet the articles in the room.
- Do not use or store flammable, explosive, poisonous or other dangerous substances beside the air conditioner.
- In case of trouble (e.g. burnt smell), please immediately cut off the main power of air conditioner unit.
- Keep air flow to avoid shortage of oxygen in the room.
- Never insert your finger or any objects into air outlet and inlet grill.
- Never plug or unplug the power cable directly to start or stop the air-conditioning unit.
- Please take constant care to check if the mounting rack is damaged after long use.
- Never modify the air conditioner. Please contact the dealer or professional installation workers for repair or relocation of the air conditioner.
- The appliance shall not be installed in the laundry.
- Before installation, please check the power supply for compliance with the ratings on nameplate. Check the power safety as well.(Operating by professinal)
- Before use, please check and confirm if the cables, drainage pipes and pipelines are correctly connected, hence to eliminate the risk of water leakage, refrigerant leakage, electric shock or fire.
- Main power must be securely earthed to ensure effective grounding of air conditioner unit and avoid the risk of electric shock. Please do not connect the earthing cable to coal gas pipe, water pipe, lightning rod or telephone line.
- Once started, the air conditioner shall not be stopped at least after 5 minutes or longer; otherwise the oil return to compressor may be affected.
- Do not let the child to operate the air conditioner unit.
- Do not operate the air conditioner unit with wet hands.
- Please disconnect the main power before cleaning the air conditioner or replacing the air filter.(Operating by professinal)
- Please disconnect the main power if to put the air conditioner unit out of use for a long period.
- Please do not expose the air conditioner unit directly under corrosive environment with water or moisture.
- Please do not foot on or place any goods on air conditioner unit.
- After electrical installation, the air conditioner unit shall be energized for electrical leakage test.(Operating by professinal)
- If the supply cord is damaged, it must be replaced by the manufacturer or its service agent or a similarly qualified person in order to avoid a hazard .
- An all-pole disconnection switch having a contact separation of at least 3mm in all poles should be connected in fixed wiring.
- The appliance shall be installed in accordance with national wiring regulations.
- The temperature of refrigerant circuit will be high, please keep the interconnection cable away from the copper tube.

Wire controller (standard fitting)
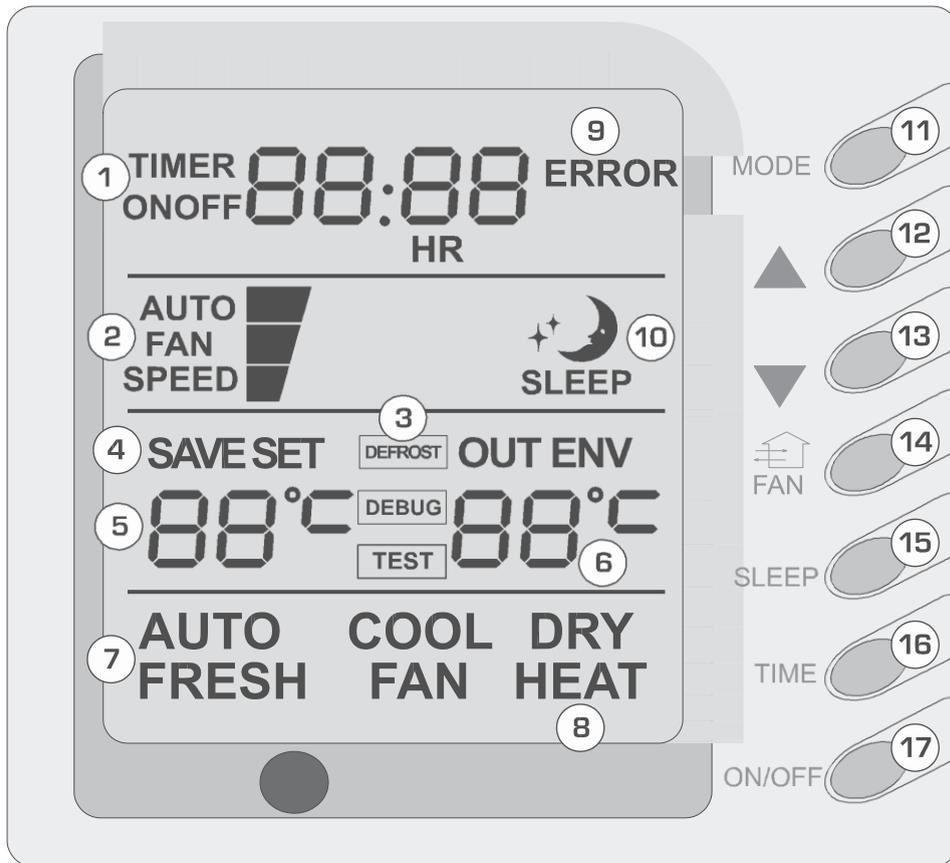
Composition of wire controller

|	
1	Timing display
2	Fan speed display (Auto, High speed, Medium speed, Low speed)
3	Defrosting status display
4	Energy savings status display
5	Set temperature display
6	Ambient temperature display
7	Fresh air status display (not supplied)
8	Mode (cooling, dehumidifying, fan, heating, auto)

9	Failure status display
10	Sleep status display
11	Mode key
12	Set temperature increase key
13	Set temperature decrease key
14	Fan speed key (fresh air setting)
15	Sleep key (outdoor environment temperature check)
16	Timing key
17	ON/OFF key

⚠ • Never install the wire controller in a place where is water leakage.
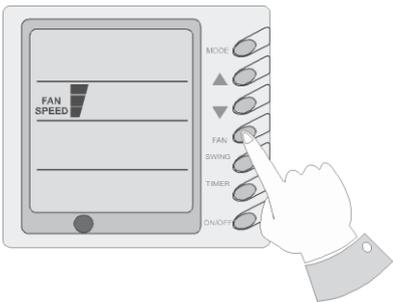• Avoid bunping, throwing, tossing or frequently opening the wire controller.

Turning ON/OFF unit
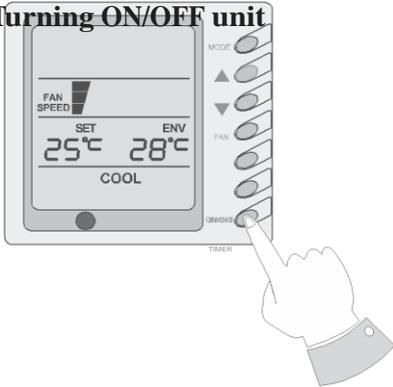
Press t he ON/OFF key, then the unit shall start up. Press t he ON/OFF key again, then the unit shall shut off.

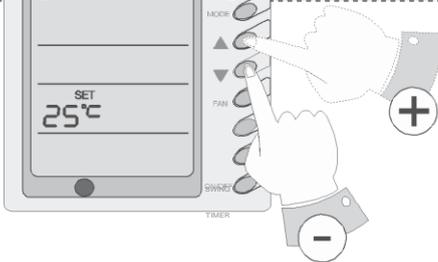## Fan control (the figures show the relevant display areas)

If the fan control key is pressed consecutively, the fan speed shall changes as per t he following sequence:

Low speed → Medium speed → High speed → Auto

In the dehumidifying mode: The fan speed shall be automatically se t as low.

Temperature setting

Press the temperature setting key ▲ to increase the set temperature; press the temperature setting key ▼ to decrease the set temperature (when pressing the keys once, the temperature shall increase or decrease by 1 ℃). NOTE: key lock function: when the ▲ and ▼ key are pressed simultaneously for 5 second, the se t temperature indicating are a shall display "EE" and all keys response shall be shut off; press the two keys simultaneously for 5 second again, the key lock function shall be relea- sed. When the wire controller is locked by remote monitor or centralized controller, the keys of the wire controller and the signal of the remote controller are all locked and invalidated, and then the se t temperature indicating are a shall display "CC". Range of temperature setting under various modes:

Heating: 16 ℃~30 ℃ Cooling: 16 ℃~30 ℃
Dehumidifying: 16 ℃~30 ℃
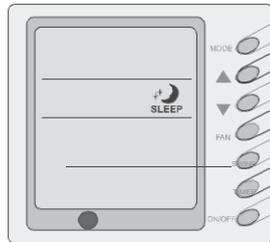
Fan: No temperature setting function.

Swing function setting
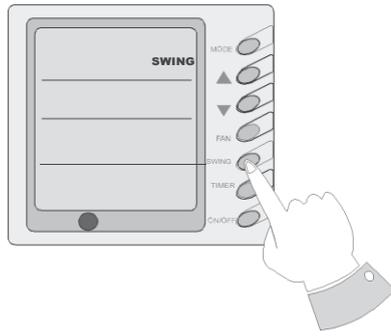
Press Swing button then the swing mode will be operated by the air conditioner.

Repress Swing button once to stop swing mode.

Note: There is no swing mode for duct type indoor unit

Sleep function setting

When under the cooling or dehumidifying mode, after receiving the

SLEEP order for 1 hour, the previous set temp. Set will be risen for

$1°C$, and another $1°C$ will be risen after 2 hours that means that the temperature been risen $2°C$ within 2 hours. Then the unit will run according to this set temp.

When under the heating mode, after receiving the SLEEP order for 1 hour, the previous set temp. Set will be lower for $1°C$, and another $1°C$ will be lower after 2 hours that means that the temperature been lowered $2°C$ within 2 hours. Then the unit will run according to this set temp.

There is no SLEEP mode under fan mode.

Note: The wired remote controller has no SLEEP mode button; if

SLEEP mode is needed to be set, complete the procedure by wireless remote controller.

Operating Mode Setting
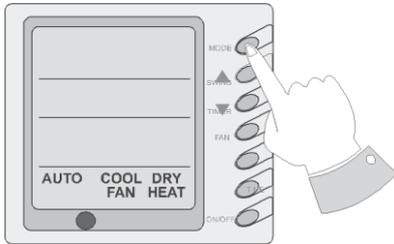
This key is pressed consecutively, the operating mode shall change as per the following sequence:

→ **Cooling** → **Dehumidifying** → **Fan** → **Heating** → **Auto**

When the unit operates under "Cooling" mode, "COOL" shall be displayed. Now the set temperature must be lower than the ambient temperature. Now if the set temperature is higher than the ambient temperature, the unit shall not produce cooling effect but shall only operate under Fan mode.

When the unit operates under "Dehumidifying" mode, "DRY" shall be displayed. Now the interior fan shall operate in the manner of low speed air supply within a certain range of temperatures. The dehumidifying effect of this mode is better than that of the Cooling mode and saves more energy.

When the unit operates under "Heating" mode, "HEAT" shall be displayed. Now the set temperature must be higher than the ambient temperature; Now if the set temperature is lower than the ambient temperature, the heating function shall not be started.

When the unit operates under "Fan" mode, "FAN" shall be displayed. When the unit operates under "Auto" mode, "AUTO" shall be displayed and the unit shall adjust its operating mode automatically according to the ambient temperature.

When the unit operates under Heating mode and the outdoor temperature is low and the humidity is high, frost shall produce at the outdoor unit. Now the heating efficiency shall be decreased. When frosting hap- pens, the controller shall automatically start to defrost, and "DEFROST" shall be displayed.

Note: Cooling only type unit does not have heating mode and when energy saving is set the Auto mode shall be invalidated.

Timer Setting
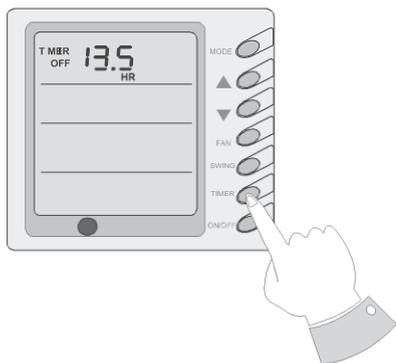
When the unit is shut off, timing start can be set; After the unit is started up, timing shutoff can be set. After the "TIMER" key is pressed, the unit enters the timing set status and the word "TIMER" flashes on the display. Now user can press (▼) or (▲) key to increase or decrease the set time. Press the "TIMER" key again and then the timing shall go into effect. Now the unit starts to count the time passed. When the unit is under timing status, you can cannel timing set by pressing the "TIMER" key. The range of set time is between 0.5 to 24 hours.

Energy Saving Setting
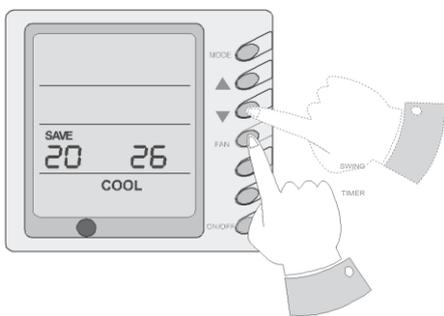
When the unit is shut off, press the "FAN" key and the (▼) simultaneously for 5 consecutive seconds to activate the energy saving setting menu. Now "SAVE" and "COOL" are displayed (In case it is the first time to set energy saving, the initial value shall be displayed: 26. The lower limit of temperature shall be displayed on the set temperature and the temperature value under setting shall flash. Set the lower limit of cooling temperature using the (▲) key or the (▼) key (the lower limit temperature can be selected from the range between 16-30). Press the "ON/OFF" key to confirm the setting; Also use the (▲) key or the (▼) key to set the upper limit of temperature and the temperature value shall flash on the ambient temperature area (OUT ENV area) (the upper limit temperature can be selected from the range between 16-30). Press the "ON/OFF" key to confirm the setting. Please pay attention that the upper limit temperature must be higher than the set lower limit temperature; Otherwise the system shall regard the higher temperature as the upper limit temperature and the lower one as the lower limit temperature. Press the "MODE" key to complete the energy saving setting for the modes of cooling and dehumidifying and turn to the energy saving setting for the heating mode (Cooling only unit does not have this function). Now the LCD displays "SAVE" and "HEAT". After setting is completed, press the "FAN" key and the (▼) key simultaneously for 5 consecutive seconds to exit the setting of energy saving. After the energy saving setting interface is activated, the system shall exit the interface if there is no any operation within 20 seconds after the last key input, and the normal shutoff status interface shall be displayed. After the above settings are completed, the system shall display "SAVE". Now the set temperature shall not exceed the temperature range of the energy saving setting before. For example, the lower cooling limit is set as 23°C and the upper cooling limit is set as 27°C for the energy saving temperature setting in left so the cooling temperature can only be selected from the range of 23 °C to 27°C by using the remote controller or the wire controller later. If the upper limit temperature is the same as the lower limit temperature, the system can only operate at such temperature under relevant modes. Remove of energy saving setting: To remove the energy saving setting after it takes into effect, you can press the "FAN" and the (▼) key simultaneously for 5 consecutive seconds when the unit is shut off. But the value set before will not be cleared but as the initial set temperature for the next energy saving setting. After the unit is disconnected to power supply, the energy saving setting shall be stored. The setting still functions when the unit is connected to power supply again. If the energy saving mode is set, the sleep mode and the auto mode shall be invalidated.

Display outdoor temperature
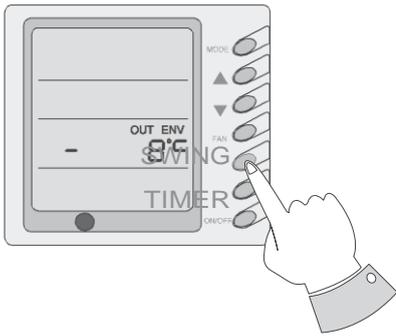
Under normal conditions, the "OUT ENV" column shall only display the indoor temperature. Press the "SLEEP" key for 5 consecutive seconds when the unit is shut off or start up, the LCD shall display "OUT ENV". After the outdoor temperature is displayed for 10 seconds, the system shall return to the display interface of indoor temperature. Note: If not equipped with an outdoor ambient sensor, the unit shall not have this function.

Power-fail Memory Function Setting
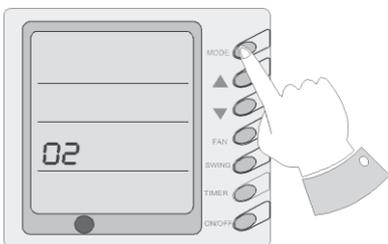
Press and hold the "MODE" key for 10 seconds when the unit is shut off to switch set values so as to decide if the unit operating status or shutoff status shall be memorized after a power fail. If the set temperature area displays 01, it means the unit operating status or shutoff status shall be memorized after a power fail; 02 means the operating status or shutoff status shall not be memorized. Press the "ON/OFF" key to store the set value and exit the setting.

Debug Function Setting
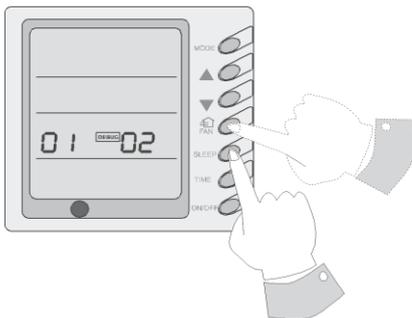
When the unit is shut off, press the "FAN" key and the "SWING" key Simultaneously to activate the debug menu. Now the LCD displays "DEBUG". Press the "MODE" key to select setting item and use the (▲) key or the (▼) key to set actual value.

Setting of Ambient Temp. Sensor

Under the debug mode , press the "MODE" key so as to display "01" On the set temperature area (at the left of "DEBUG"). The OUT ENV area (at the right of "DEBUG") displays setting status. Now use the (▲) key or the (▼) key to select from the following two settings:

The indoor room temperature is measured at the air intake(Now the OUT ENV area displays 01).

The indoor room temperature is measured at the wire controller (Now the OUT ENV area displays 02).

The indoor room temperature is measured at the wire controller when the mode is 'heating' or 'auto'. At other modes, it is measured at the air intake (Now the OUT ENV area displays 03). The default is 03.
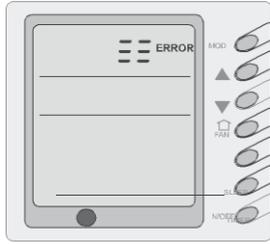
Failure Display	
	When there is failure in the unit operation, "ERROR" will flash on the LCD of the wire controller and the code of failure will also be displayed. When there are multiple failures at the same time, the codes of failures will be displayed one after one on the wire controller. The first digit of the code denotes the system number. When there is only one system, the system number is not displayed. The last two digits denote the detailed failure code. For example, the code in left means low pressure protection of compressor.

The Codes of Failure Definitions are as Follows:			
Fault code	Fault	Fault code	Fault
E0	Pump Failure	F0	Failure of Indoor Room Sensor at Air Intake
E1	Compressor High Pressure Protection	F1	Failure of Evaporator Temp. Sensor
E2	Indoor Frost-Proof Protection	F2	Failure of Condenser Temp. Sensor
E3	Compressor Low Pressure Protection	F3	Failure of Outdoor Ambient Sensor
E4	Compressor Exhaust High Temperature Protection	F4	Failure of Exhaust Temp. Sensor
E5	Compressor Overheat	F5	Failure of Indoor Room Sensor at Wire Controller
E6	Communications Failure	FF	All of the terminal air valve closed
E8	Indoor Fan Protection		
E9	Full Water Protection		

E5 Material Malfunction Will Be Showed By The Indicator Light On The Mother Board Of Outside Unit

Wire controller (with week timer functions)

⚠️ **WARNING!**

● Never install the wired controller where there is water leakage.

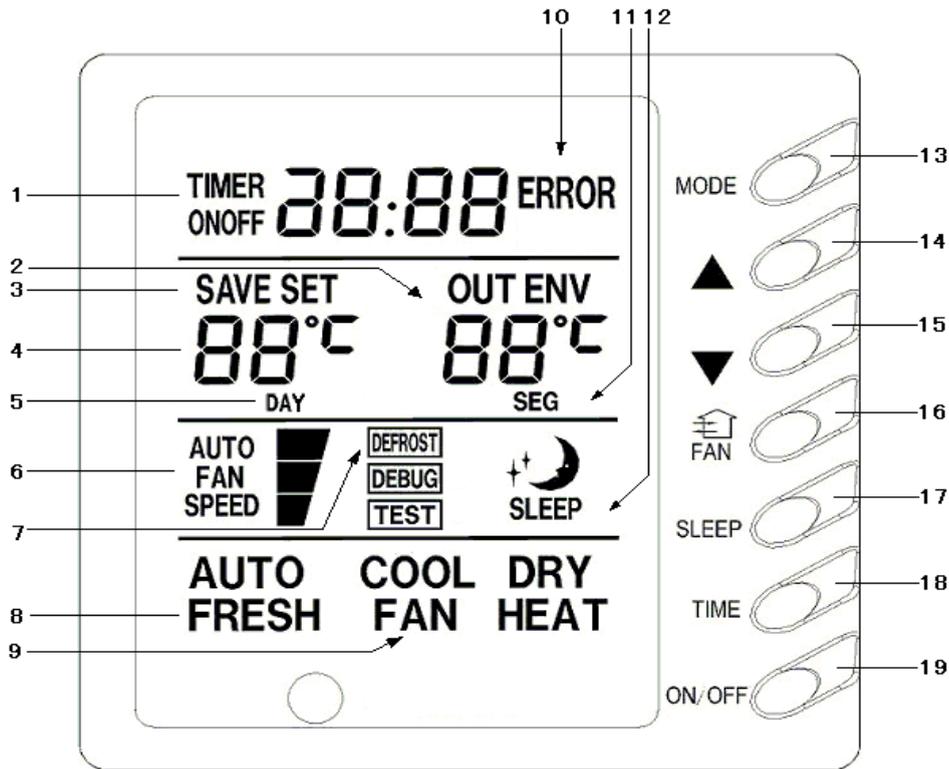● Never knock, throw or frequently open the wired controller.

Fig.1

| Each part of wired controller			
1	Timing Display	11	Timer interval Display
2	Ambient Temperature Display	12	Sleeping Status Display
3	Energy Saving Status Display	13	Mode Button
4	Set Temperature Display	14	Set Temperature Increase Button
5	Week Display	15	Set Temperature Decrease Button
6	Fan Speed Display (Auto, High Speed, Medium Speed, Low Speed)	16	Fan Speed Button
7	Defrosting Status Display	17	Sleep Button
8	Fresh Air Status Display	18	Timing Button
9	Mode (Cooling, Dehumidifying, Fan, Heating, Auto)	19	ON/OFF Button
10	Malfunction Display		

1) **ON/OFF** (**Fig.2**)

Press the "**ON/OFF**" button, the unit will start running.

Press the "**ON/OFF**" button again, the unit will stop

running.
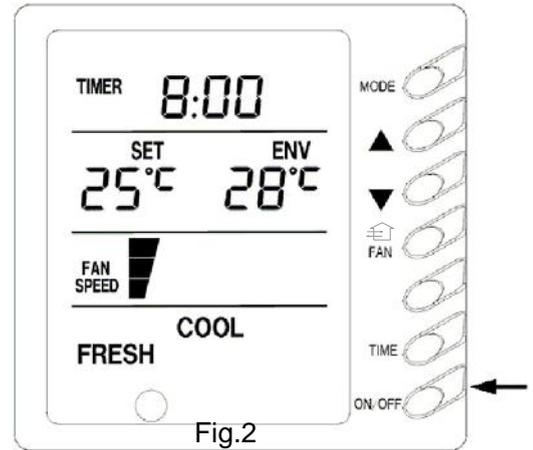
2) **Fan Control** (Fig.3 is about display region and the

same as following figures.)

When press FAN button once, the fan speed will be changed
as follow:

```
 ┌──► LOW──►MID──►HIGH──►AUTO──┐
 └──────────────────────────────┘
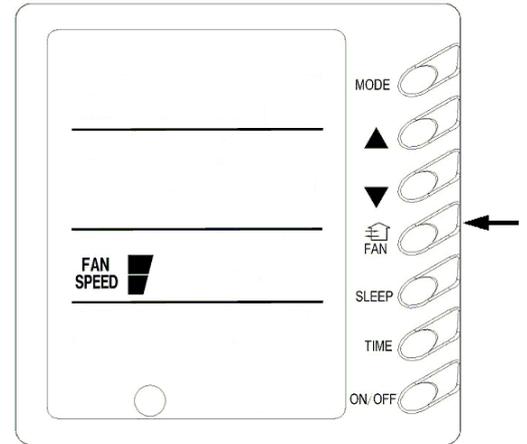```
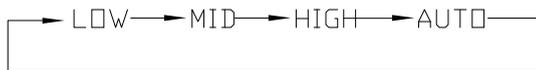
In DRY mode: the fan speed will be set at low automatically.

3 ) **Setting Temperature (Fig.4)**

Press the setting temperature button:

▲ : For temperature increase

▼ : For temperature decrease

( Press this button once, the temperature will be increased or
decreased by 1℃. )

**Note:** Press ▲+ ▼button for 5 seconds, "EE" will appear

where SET TEMP is displayed and all buttons are shielded.

Press ▲+▼button again for 5 seconds to cancel locked

function.

If long-distance monitoring controller or central controller

shield displayer, all buttons and signals from remote

controller will be shielded too, and CC will be displayed

where SET TEMP is displayed.

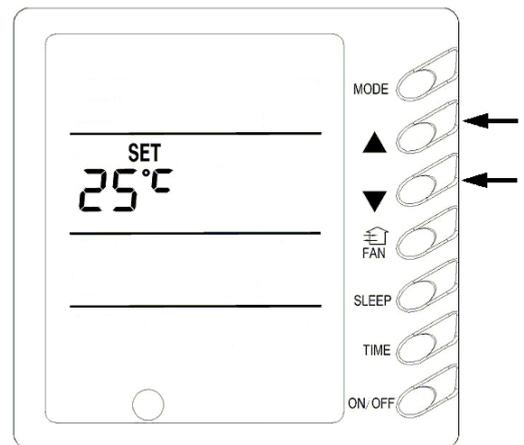Setting temperature range under each mode:

Fig.2

Fig.3

Fig.4

HEAT  --------      16℃～30℃

COOL  --------      16℃～30℃

DRY  --------      16℃～30℃

FAN -------- can not be set

## 4）**Sleep Function Setting(Fig.5)**

If the unit has been running for 1 hour after pressing SLEEP button in cooling or dry mode, set temp will increase by 1℃, and then by 1℃in another two hours, then the unit runs at this temp.

If the unit has been running for 1 hour after pressing SLEEP button in heating mode, set temp will decrease by 1℃, and then by 1℃ in another two hours, then the unit runs at this temp.
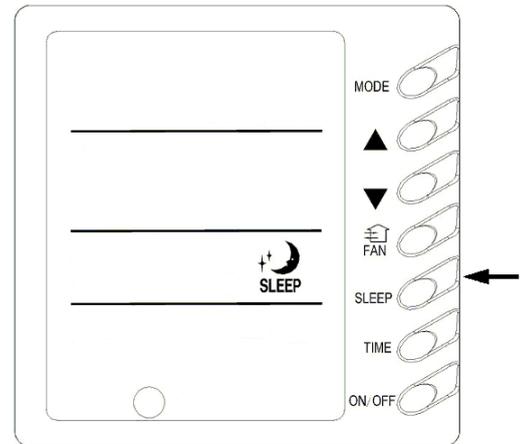
No this function in fan mode.



Fig.5

## 5）**Running Mode Setting (Fig.6)**

Every press of mode button, the operation mode will change as follow:

┌→ COOL→ DRY → FAN → HEAT→ AUTO─┐

In cool mode, COOL will light, in which case, setting temperature should be set to be lower than present ambient temperature; If not, the unit will not operate in cool mode and only the fan is active.

In dry mode, DRY will light .Indoor fan will run at low speed in certain temp. range. Dry efficiency as well as energy saving efficiency in this mode is much better than that in cool mode

In heat mode, HEAT will light. The setting temperature

should be set to be higher than present ambient

temperature; if not, the unit can not operate in heat mode.

In fan mode, FAN will light.

In auto mode, AUTO will light and the unit will run at the mode automatically adjusted according to ambient temp.

In heating mode, if outdoor temp is low with high

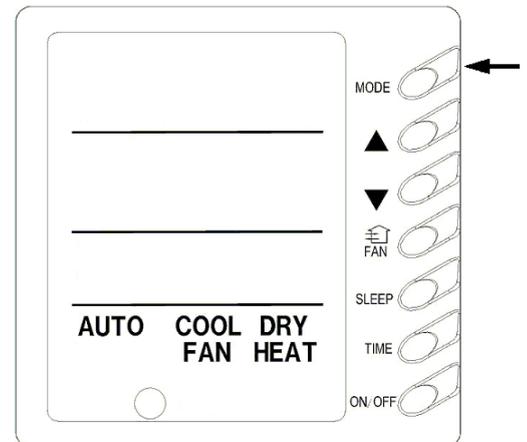humidity, the outdoor unit will be frosted resulting in low



Fig.6

efficiency of heating, in which case, the controller will automatically start to defrost with DEFROST displayed.

Note: No heating for cooling-only unit and auto mode will be shielded after setting energy saving.

6)**Setting Timer (Fig.7, 8, 9)**

⚠ Timer function in this wired controller conneted with weekly timer is invalid and wired controller will be controlled by weekly timer.

Either in ON status or OFF status of the unit press TIMER button into timing setting, and then press▲ or ▼ button to set timing(Fig.7),set time(Fig.8) and delete timing (Fig.9). At last, press TIMER to set it.
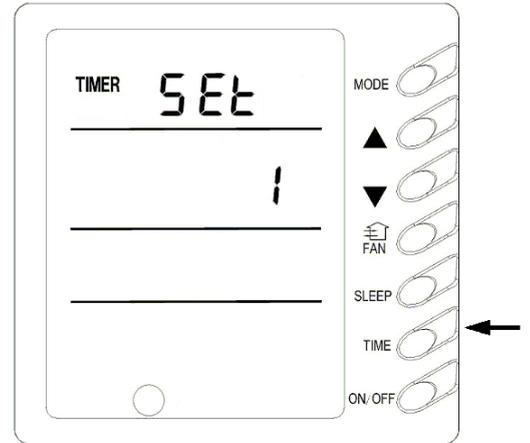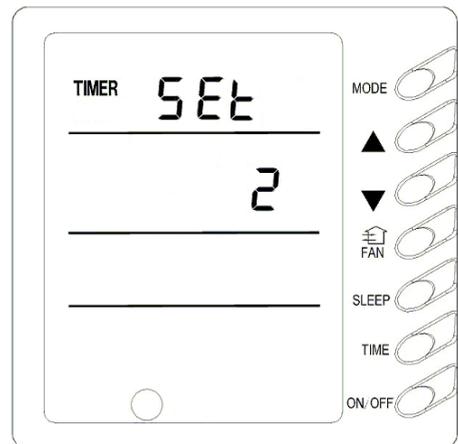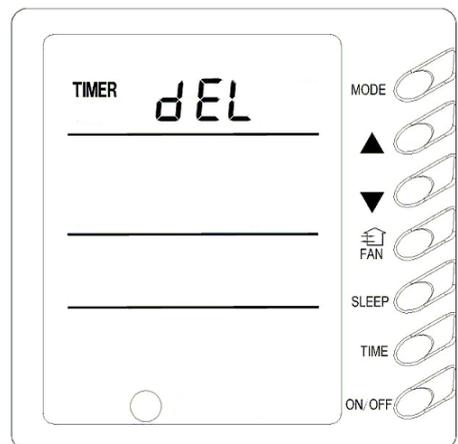
Fig.7

Fig.8

Fig.9

In timing setting mode, press MODE button to select any desired setting object: Week (1-7), timer interval (1-4), timing (Timer on or Timer off time), min. part or hour part of time, and then press▲ or ▼ button to adjust this object, which is fixed by pressing TIMER button or can be canceled by pressing Timer again. During fixing setting there must be blinking characters. During canceling setting, if there are also blinking characters, setting can be continuous till quit It by pressing ON/OFF button; meanwhile, timing data are memorized. (Fig.10, 11)
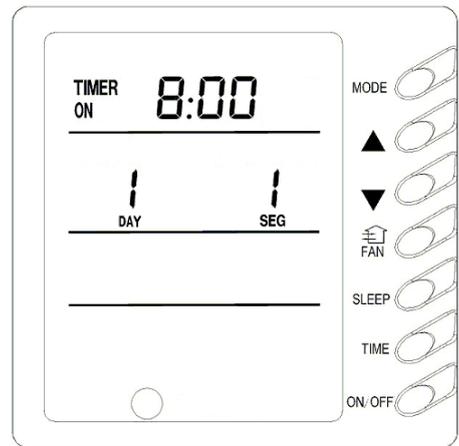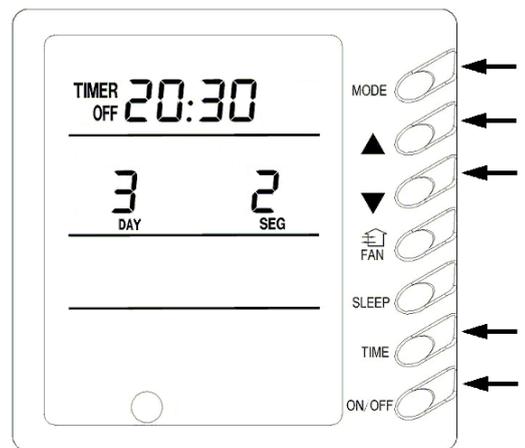


Fig.10



Fig.11

In time setting mode press MODE button to select any desired setting object: Week (1-7), min. part (0-59) or hour part (0-23), and then press▲ or ▼ button to adjust this object, which is fixed by pressing TIMER button or can be canceled by pressing Timer again. During fixing setting there must be blinking characters. During canceling setting, if there are also blinking characters, setting can be continuous till quit It by pressing ON/OFF button.(Fig.12)
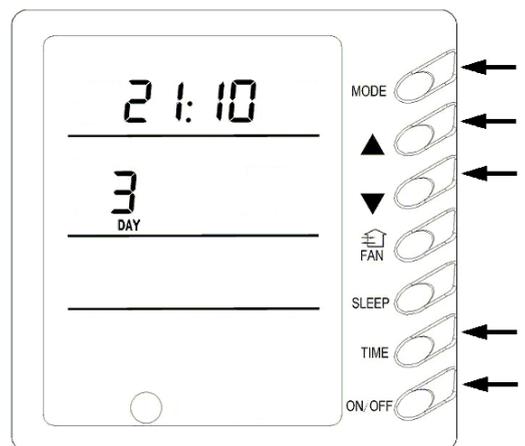


Fig.12

In deleting timing status, press ▲ or ▼ button to select one day of a week, and then press TIMER button to confirm ,in which case, "dd" is displayed .The day also can be canceled by pressing TIMER button without "dd" displayed. At last, press ON/OFF button to quit the setting after finish.(Fig.13)
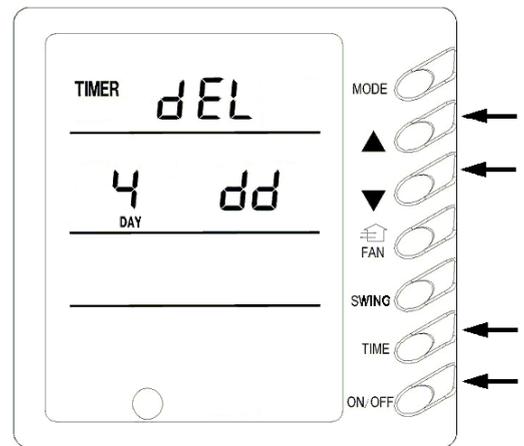
Fig.13

**7）Energy saving setting (Fig.14)**

Press FAN+▼ for 5 seconds into energy saving menu, in which case, SAVE and COOL is displayed ( If it's the first time

for setting, initial value 26℃ will be displayed.) ,lower-limit

temp is displayed where set temp is displayed and set temp during setting is displayed and blinking. Press▲ and ▼ to set

lower-limit cooling temp (setting range is16 - 30) and then press ON/OFF to fix .Press ▲ and ▼ to set upper-limit cooling temp, which will be displayed where ambient temp is displayed (setting range is 16-30), and then press ON/OFF to fix.

**Note:** Upper- limit temp can not be set to be lower than lower-limit temp, or else the higher temp will be defaulted to be upper limit and the lower one to be lower- limit. Press MODE button to set energy saving in cooling or dry mode and then switch to energy saving setting in heating mode, in which case, SAVE and HEAT will be displayed, which is quitted by
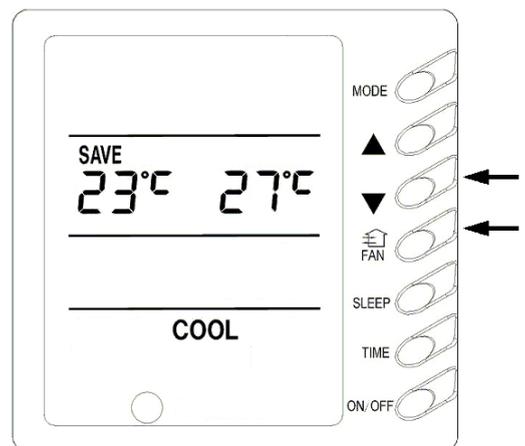
Fig.14

pressing FAN and ▼ for 5 seconds. If there is no operation after the energy saving interface appears in 20s when the system responds the last press of one button, the system will trip off the menu and display normal interface of unit off.

SAVE will be displayed in LCD at next startup of the unit if above setting has been finished. Either by pressing buttons of the displayer or remote controller, the setting temp can never be set to be higher than temp range set under energy saving mode before. For example, lower-limit cooling temp under energy saving mode is 23℃ and upper limit is 28℃,so the user can only set cooling temperature in the range of 23-28℃.

If the same limit temperature is set, the unit will only run under corresponding mode at this setting temp. Press Fan+▼ simultaneously for 5s to quit this function if it has been effective, but former setting value can not be cleared, which will be as the original value of next setting. If the power is off, energy saving setting will be memorized, which continues effectively after the power is on next time. If energy-saving mode and sleeping mode is setting, auto mode will be shielded.

**9）Outdoor ambient temp display ( Fig.15)**

In normal condition, only indoor ambient temp is displayed where "ENVIROMENT" is displayed. Either at unit on or off press SWING button for 5 seconds, outdoor ambient temp (OUT ENV) will be displayed.

① If outdoor temp is tested to be above zero, there will be no display where setting temp is displayed and outdoor ambient temp tested by inner system will be displayed where ambient temp is displayed.

② If outdoor temp is tested to be below zero, " - " will be displayed where set temp is displayed and absolute value of outdoor ambient temp tested by inner system will be displayed where ambient temp is displayed.

After 10- second display, the system will return to display interface of indoor ambient temp.

**Note:** This unit function is invalid without connecting with outdoor ambient temp sensor.

**10) Power –off Memory setting (Fig.16)**

Press MODE button continuously for 10s and select if memorize start or stop status of the unit at unit off.01 where set temp is displayed indicates memorizing start and stop status of the unit   after power off .02, which quit by pressing ON/OFF button ,indicates not memorizing. If after the interface of memorizing start and stop status of the unit appears, there is no operation in 20s when the system responds the last press of one button, the system will trip off the menu and display normal interface of unit off, but it also memorizes present information.
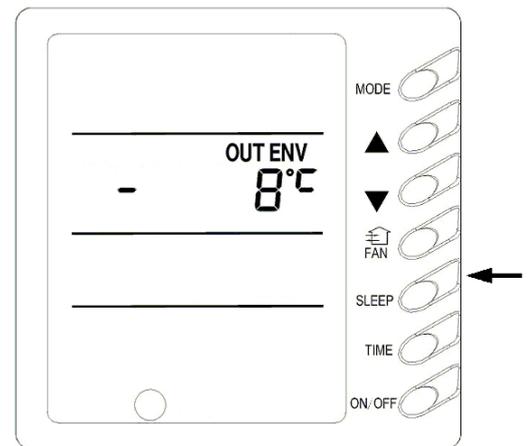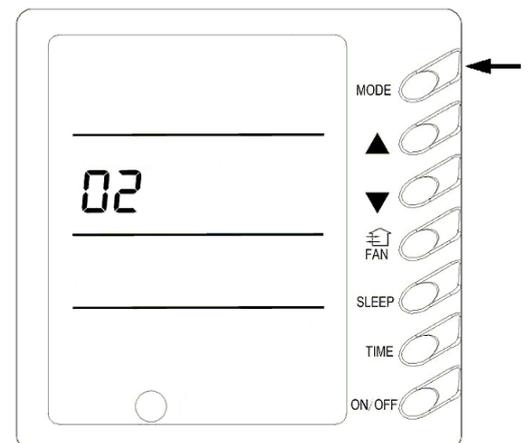


Fig.15



Fig. 16

**11) Malfunction Display (Fig.17)**

If malfunction happens during operating of the unit, ERROR will blink with error code displayed. If some malfunctions occur simultaneously, the codes will be displayed in cycle. The first number indicates system number, which won't appear if only one system. The last two numbers indicate detailed malfunction codes. For example, the right figure indicates compressor low-pressure protection of system 1.
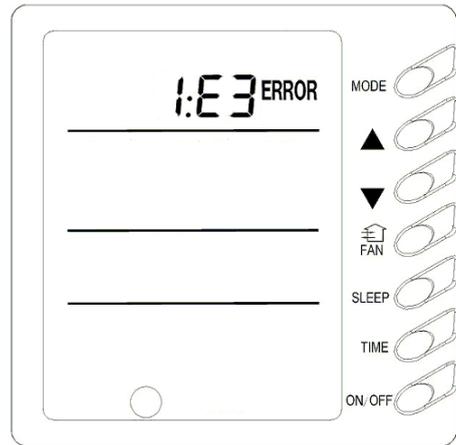


Fig.17

| Codes | Malfunction |
|-------|-------------|
| E0 | Water pump malfunction |
| E1 | Compressor high-pressure protection |
| E2 | Indoor anti-freezing protection |
| E3 | Compressor low-pressure protection |
| E4 | Compressor high-temp. exhaust protection |
| E5 | Compressor overload protection |
| E6 | Communication malfunction |
| E8 | Indoor fan protection |
| E9 | Water-full protection |
| F0 | Air inlet indoor ambient temp. sensor malfunction |
| F1 | Evaporator temp. sensor malfunction |
| F2 | Condenser temp. sensor malfunction |
| F3 | Outdoor ambient temp. sensor malfunction |
| F4 | Exhaust ambient temp. sensor malfunction |
| F5 | Ambient temp. sensor malfunction in displayer |
| EH | Auxiliary electric heat malfunction |

⚠ Note!

**If EH malfunction happens, please power the unit off immediately and ask professionals for help.**

Position and Method of Installing Wire Controller

1.  One end of the control wire of the wire controller is connected with main board of electric box of indoor unit inside, it should be tightened by wire clamp, the other end should be connected with the wire controller (installation sketch map as shown in below). The control wire be used for the indoor unit and wire controller, which is special, the length is 8 meters,

the material be adopted for the control wire should be metallic substance. The wire controller could not be disassembled and the control wire be used for the wire controller should not

be changed by users optionally, the installation and maintenance should be carried out by the professional personnel.

2.  First select an installation position. According to the size of the control wire of the wire controller, leave a recess or a embedded wire hole to bury the control wire.

3.  If the control wire between the wire controller and the indoor unit is surface-mounted, use 1# metallic pipe and make matching recess in the wall (refer to Figure 41); If concealed installation is adopted, 1# metallic pipe can be used (Refer to Figure 42).

4.  No matter if surface mounting or concealed mounting is selected, it is required to drill 2 holes (in the same level) which distance shall be the same as the distance (60mm) of installation holes in the bottom plate of the wire controller. Then insert a wood plug into each hole. Fix the bottom plate of the wire controller to the wall by using the two holes. Plug the control wire onto the control panel.

Lastly install the panel of the wire controller.

Caution:

During the installation of the bottom plate of the wire controller, pay attention to the direction of the bottom plate. The plate's side with two notches must be at the lower position, and otherwise the panel of the wire controller cannot be correctly installed.

Electric box cover

PCB

sketch map for indoor unit
communication wire

Wire clamp
Control wire
Communication wire
Cable-cross loop

metallic pipe
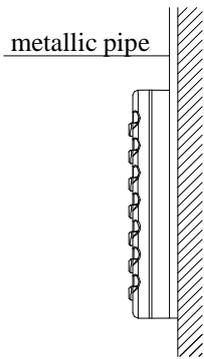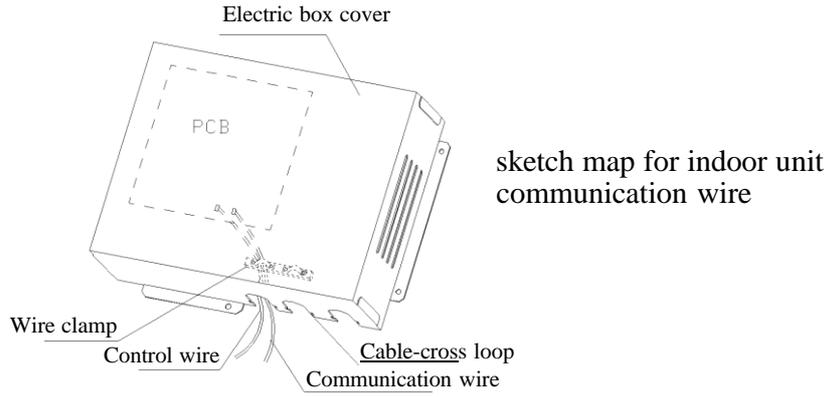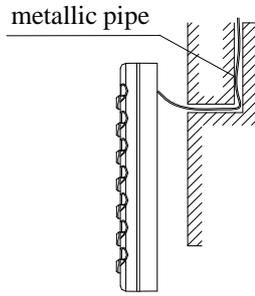
metallic pipe

1

2   3      4

Figure  43  Surface
Mounting of Cable

Figure 44 Concealed
mounting of Cable
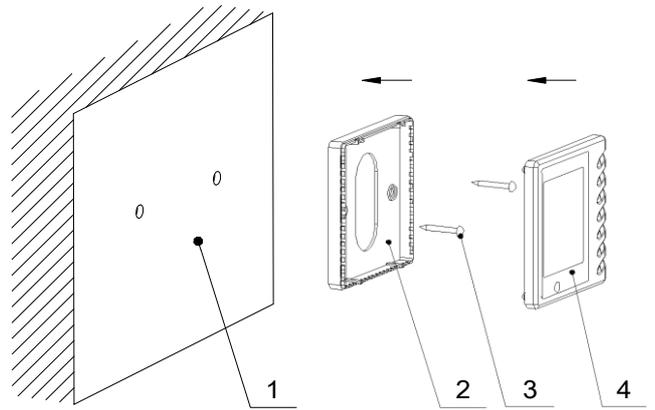
Figure 45 Schematic Diagram of Installation

| No. | Name |
|-----|------|
| 1 | Wall Surface |
| 2 | Bottom Plate of Wire Controller |
| 3 | Screw M4XIO |
| 4 | Panel of Wire Controller |

⚠ Caution:

1．The communication distance between the main board and the wire controller is 8 meters.

2.The wire controller shall not be installed in a place where there is water drop or large amount

of water vapor.

# Instructions of Unit Installation

## Electrical Installation

⚠ Caution: Before installing the electrical equipment, please pay attention to the following matters which have been specially pointed out by our designers:

(1) Check to see if the power supply used conforms to the rated power supply specified on the nameplate.

(2) The capacity of the power supply must be large enough.

(3) The lines must be installed by professional personnel.

An electricity leakage protection switch and an air switch with gap between electrode heads larger than

3mm shall be installed in the fixed line.

1. Connection of signal wire

(1) Use wire stripper to strip the insulation layer (25mm long) from the end of the signal wire.

(2) Remove the screw at the terminal board of the air-conditioning unit.

(3) Use pliers to bend the end of the signal wire so that a loop matching the screw size is formed.

(4) Put the screw through the loop of the signal wire and fix the loop at the terminal board.

2. Connection of multiple twisted wires

(1) Use wire stripper to strip the insulation layer (10mm long) from the end of the multiple twisted wires.

(2) Remove the screw at the terminal board of the air-conditioning unit.

(3) Use crimping pliers to connect a terminal (matching the size of the screw) at the end of the multiple twisted wires.

(4) Put the screw through the terminal of the multiple twisted wires and fix the terminal at the terminal board.

⚠ Warning:

If the power supply flexible line or the signal line of the equipment is damaged, only use special flexible line to replace it.

1. Before connecting lines, read the voltages of the relevant parts on the nameplate. Then carry out line connection according to the schematic diagram.

2. The air-conditioning unit shall have special power supply line which shall be equipped with electricity leakage switch and air switch, so as to deal with overload conditions.

3. The air-conditioning unit must have grounding to avoid hazard owing to insulation failure.

4. All fitting lines must use crimp terminals or single wire. If multiple twisted wires are connected to terminal board, arc may arise.

5. All line connections must conform to the schematic diagram of lines. Wrong connection may cause abnormal operation or damage of the air-conditioning unit.

6. Do not let any cable contact the refrigerant pipe, the compressor and moving parts such as fan.

7. Do not change the internal line connections inside the air-conditioning unit. The manufacturer shall not be liable for any loss or abnormal operation arising from wrong line connections.

Power Cable Connection:

1. Air-conditioning unit with single-phase power supply

(1) Remove the front-side panel of the outdoor unit.

(2) Pass the cable though rubber ring.

(3) Connect the power supply cable to the "L, N" terminals and the grounding screw on the metal electric box.

(4) Use cable fastener to bundle and fix the cable.

# Troubleshooting and Maintenance

If your air-conditioning unit suffers from abnormal operation or failure, please first check the following points before repair:

| Failure | Possible Reasons |
|---|---|
| The unit cannot be started. | 1. The power supply is not connected. <br> 2. Electrical leakage of air-conditioning unit causes tripping of leakage switch. <br> 3. The operating keys are locked. <br> 4. The control loop has failure. |
| The unit operates for a while and then stops. | 1. There is obstacle in front of the condenser. <br> 2. The control loop is abnormal. <br> 3. Cooling operation is selected when the outdoor ambient temperature is above 43 . |
| Poor cooling effect. | 1. The air filter is dirty or blocked. <br> 2. There is heat source or too many people inside the room. <br> 3. The door or window is open. <br> 4. There is obstacle at the air intake or outlet. <br> 5. The set temperature is too high thus cooling is hindered. <br> 6. There is refrigerant leakage. <br> 7. The performance of room temperature sensor becomes worse |
| Poor heating effect | 1. The air filter is dirty or blocked. <br> 2. The door or window is not firmly closed. <br> 3. The set room temperature is too low thus heating is hindered. <br> 4. There is refrigerant leakage. <br> 5. The outdoor ambient temperature is lower than -5 . <br> 6. Control line is abnormal. |

⚠ # WARNING!

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

This product must not be disposed together with the domestic waste. This product has to be disposed at an authorized place for recycling of electrical and electronic appliances.

**66129904714**