Flex Series
Outdoor Unit

Owner's Manual

Commercial Air Conditioners

Model: ISMO-4221

Thank you for choosing our air conditioner, please read this Owner's manual carefully before operation and retain it for future reference.

v. 1.1

Preface

Impecca Flex System adopts the cutting-edge manufacturing technology and takes global acknowledged, environmental-friendly R410A as refrigerant, which is a green product in the 21st century. Please carefully read this manual before installation and operation. Instructions before reading this manual:

(1) This unit measures on the base of UL1995.

(2) Flex System conforms to design standard: ARI 210240-2008.

(3) For guaranteeing personal safety when operating this system, please strictly follow the instructions listed in the manual.

(4) The total capacity of the indoor units which runs at the same time can not exceed that of the outdoor units; otherwise, the cooling (heating) effect of each indoor unit would be poor.

Minimum number of connectible indoor units	2
Maximum number of connectible indoor units	5
Minimum capacity of connectible indoor units	18KBtu
Maximum capacity of connectible indoor units	51KBtu

(5) Switch the main power on 8 hours before starting the unit, helpful for a successful startup.

(6) It is a normal phenomenon that the indoor unit fan will still run for 20~70 seconds after the indoor unit receives the "stop" signal so as to make full use of after-heat for the next operation.

(7) When the running modes of the indoor and outdoor units conflict, it will be indicated on the display of the wired controller in five seconds and then the indoor unit will stop. In this case, they can back to the normal condition by harmonizing their running modes: the cooling mode is compatible with the dehumidifying mode and the fan mode can go with any other mode. If the supply power fails when the unit is running, then the indoor unit will send the "start" signal to the outdoor unit three minutes later after power recovery.

(8) Cautions for the Debugging and Maintenance Personnel:

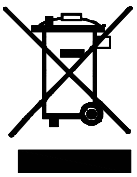
During debugging and maintenance, prior to the startup of the compressor make sure the heating belt of the compressor has been energized for at least eight hours! Once the compressor is started, it must be guaranteed that it works continuously for at least 30 minutes, otherwise it would be damaged!

User Notice

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

This appliance is intended to be used by expert or trained users in shops, in light industry and on farms, or for commercial use by lay persons.

DISPOSAL: Do not dispose this product as unsorted municipal waste. Collection of such waste separately for special treatment is necessary.



Contents

1 Safety Precautions

⚠	This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.
⚠WARNING	This mark indicates procedures which, if improperly performed, might lead to the death or serious injury of the user.
⚠CAUTION	This mark indicates procedures which, if improperly performed, might possibly result in personal harm to the user, or damage to property.
NOTICE	NOTICE is used to address practices not related to personal injury.

⚠ WARNING
1) Instructions for installation and use of this product are provided by the manufacturer and accompany each unit. The instruction of installation, maintenance and operating and safety instructions shall be included.
2) Installation must be performed in accordance with the requirements of NEC and CEC by authorized personnel only.
3) Before installation, please check if the power supply is in accordance with the requirements specified on the nameplate. And also take care of the power safety.
4) Make sure the unit can be earthed properly and soundly after plugging into the socket so as to avoid electric shock. Please do not connect the ground wire to gas pipe, water pipe, lightning rod or telephone line.
5) Be sure to use the exclusive accessory and part to prevent the water leakage, electric shock and fire accidents.
6) If refrigerant leakage happens during installation, please ventilate immediately. Poisonous gas will emerge if the refrigerant gas meets fire.
7) Wire size of power cord should be large enough. The damaged power cord and connection wire should be replaced by exclusive cable.
8) After connecting the power cord, please fix the electric box cover properly in order to avoid accident.
9) Never fail to comply with the nitrogen charge requirements. Charge nitrogen when welding pipes.
10) Never short-circuit or cancel the pressure switch to prevent unit damage.
11) Please firstly connect the wired controller before energization, otherwise wired controller can not be used.
12) Before using the unit, please check if the piping and wiring are correct to avoid water leakage, refrigerant leakage, electric shock, or fire etc.
13) Do not insert fingers or objects into air outlet/inlet grille.
14) Open the door and window and keep good ventilation in the room to avoid oxygen deficit when the gas/oil supplied heating equipment is used.
15) Never start up or shut off the air conditioner by means of directly plug or unplug the power cord.
16) Turn off the unit after it runs at least five minutes; otherwise it will influence oil return of the compressor.
17) Do not allow children operate this unit.
18) Do not operate this unit with wet hands.
19) Turn off the unit or cut off the power supply before cleaning the unit, otherwise electric shock or injury may happen.
20) Never spray or flush water towards unit, otherwise malfunction or electric shock may happen.
21) Do not expose the unit to the moist or corrosive circumstances.
22) Electrify the unit 8 hours before operation. Please switch on for 8 hours before operation. Do not cut off the power when 24 hours short-time halting (to protect the compressor).
23) Volatile liquid, such as diluent or gas will damage the unit appearance. Only use soft cloth with a little neutral detergent to clean the outer casing of unit.
24) Under cooling mode, please don't set the room temperature too low and keep the temperature difference between indoor and outdoor unit within 41℉
25) If anything abnormal happens (such as burning smell), please power off the unit and cut off the main power supply, and then immediately contact Impecca appointed service center. If abnormality keeps going, the unit might be damaged and lead to electric shock or fire.
26) User is not allowed to repair the unit. Fault service may cause electric shock or fire accidents. Please contact Impecca appointed service center for help.

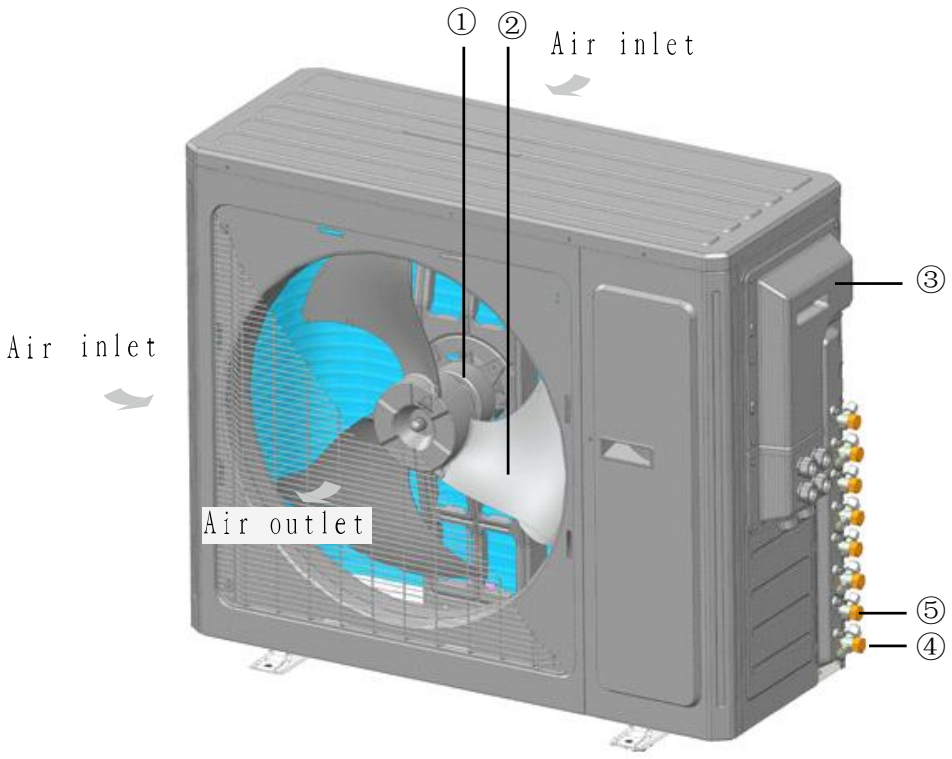
Impecca is not responsible of personal injury or equipment damage caused by improper installation and commission, unnecessary service and incapable of following the rules and instructions listed in this manual.

Flex Series

2 Product Introduction

Impecca Flex Series adopts inverter compressor technology. According to change displacement of compressor, stepless capacity regulation within range of 15%~120% can be realized. Various product lineup is provided with capacity range from 30KBtu to 42KBtu, which can be widely used in boarding house and working area and especially applicable to the place with variable load change. Impecca commercial air conditioner is absolutely your best choice.

2.1 Name of Main Parts



NO.	①	②	③	④	⑤
Name	Motor	Fan	Electric Box	Gas valve assembly	Liquid valve assembly

Fig1

2.2 Combinations for outdoor and indoor units

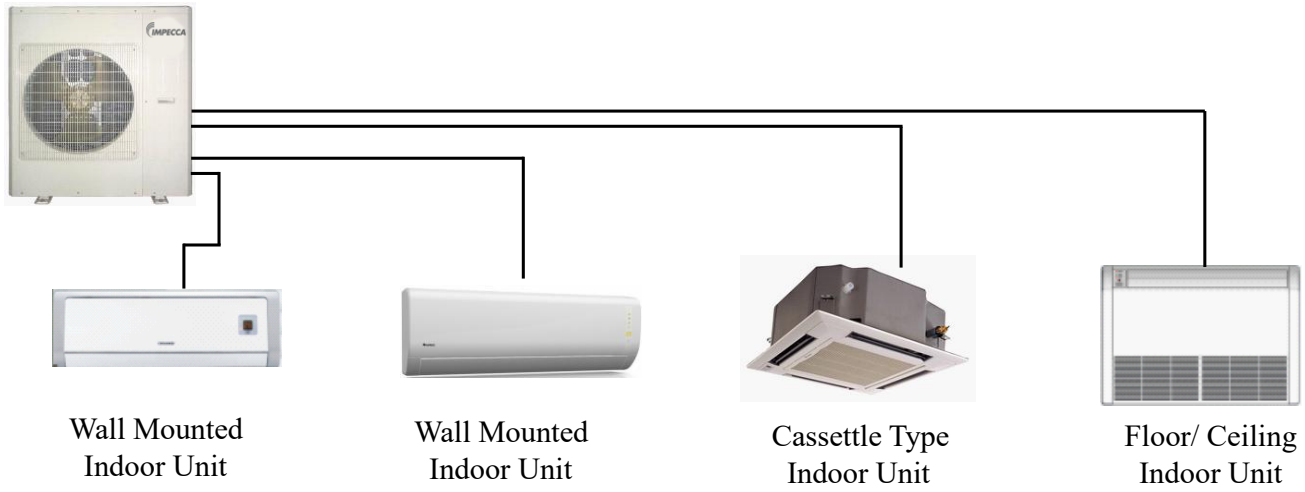


Fig 2

See Fig.2 for Combinations for Outdoor and Indoor Units. For the Flex Series air conditioning system, one outdoor unit is able to drive up to five indoor units which can be cassette type, duct type, wall-mounted or floor ceiling type. The outdoor unit will run as long as any one indoor unit receives the running command, and all indoor units stop once the outdoor unit is turned off.

Table 1 Energy Level and Capacity Code of the Indoor

Indoor unit	Model	Capacity Code	Outdoor unit
Wall Unit	ISMI-W092	09	ISMO-4221
	ISMI-W122	12	
	ISMI-W182	18	
Floor/Ceiling Type	ISMI-W242	24	
	ISMI-FC18	18	
	ISMI-FC24	24	
Cassettle type	ISMI-C15	15	
	ISMI-C24	24	

2.3 Rated working condition

Table 2

	Indoor side state		Outdoor side state	
	Dry buib temp.℉	Wet buib temp.℉	Dry buib temp.℉	Wet buib temp.℉
Rating cooling	80.06	66.92	95	75.02
Rating Heating	69.98	60.08	47	43.00

NOTICE
1) The following listed cooling /heating capacity and noise is tested before outgoing.
2) The parameters below are tested under rated working condition. If there is any change to them, please refer to the nameplate.
3) The parameters of heating capacity of indoor unit for heat pump excluded that of auxiliary electric heating power.
4) The performance parameters below are tested according to standard ANSI/AHRI 1230-2010.

2.4 The range of production working temperature

Table 3

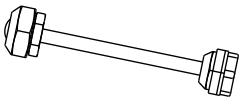
Cooling Working range	Outdoor temperature 0~118℉
Heating Working range	Outdoor temperature -4~86℉

3 Preparation before Installation

3.1 Standard parts

(Please use only Impecca supplied parts)

Table 4

Parts of Outdoor Unit				
Number	name	picture	Quantity	Remark
1	Owner's manual		1	
2	Tube connector subassy		8	

3.2 Selecting installation site

⚠ WARNING
1) Install the unit at a place where is adequate to withstand the weight of the unit and make sure the unit would not shake or fall off.
2) Never expose the unit under direct sunshine and rainfall. Install the unit at a place where is against dust, typhoon and earthquake.
3) Try to keep the unit away from combustible, inflammable and corrosive gas or exhaust gas.
4) Leave some space for heat exchanging and servicing so as to guarantee unit normal operation.
5) Keep the indoor and outdoor units close to each other as much units close to each other as much the pipe length and bends.
6) Never allow children to approach to the unit and take measures to prevent children touching the unit.

When the outdoor unit is totally surrounded by walls, the installation space of the unit should be as required in Fig.3.

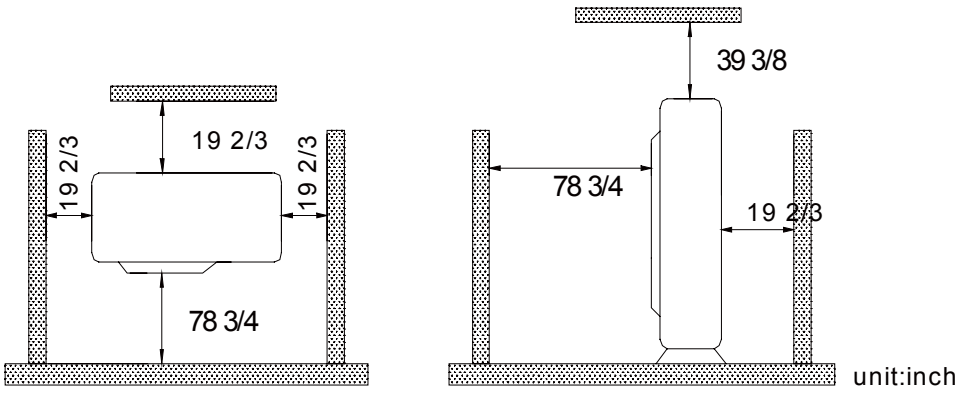


Fig 3

3.3 Piping Connection

The maximum pipe length is shown in the following table. When the distance between units (piping length) is out of the range listed below, normal run of the unit can not be guaranteed.

Table 5

Model	Connecting Pipe (inch)		Max. Pipe length(ft)	Max. Height Difference between Indoor Unit and Outdoor Unit (ft)
	Liquid	Gas		
ISMO-4221	Φ1/4	Φ3/8	246.1	When the outdoor unit is above, maximum height difference between indoor and outdoor units is up to 49.2ft; When the indoor unit is above, maximum height difference between indoor and outdoor units is up to 49.2ft;

NOTICE
1) Use water-proof insulating pipe.
2) Wall thickness of pipe: 0.019-0.039 inch; bearing pressure: 3.0MPa
3) The longer the connection pipe is, the more cooling and heating capacity will decrease.

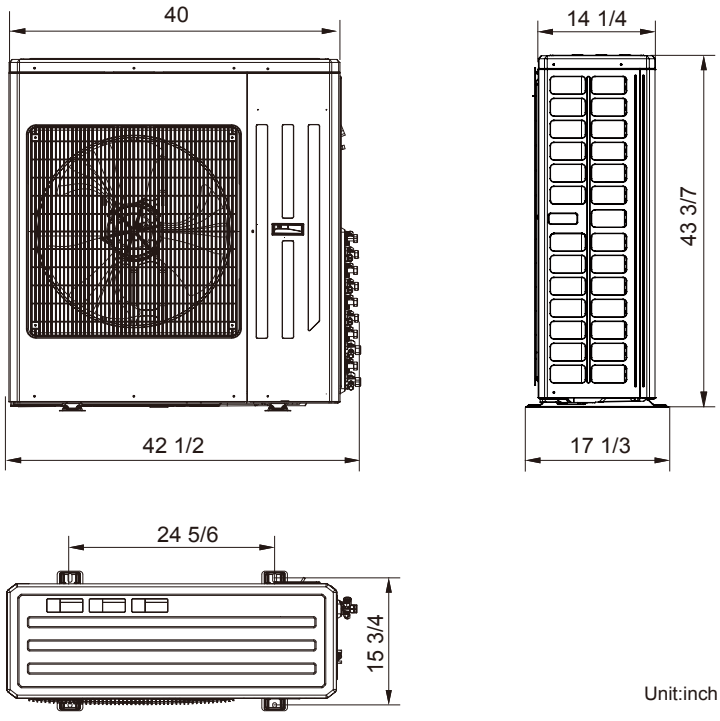
4 Installation Instruction

4.1 Outline and dimension of the outdoor unit

Unit:inch

Fig 4

Outline dimension and Mounting holes



Unit:inch

4.2 Installation of the Connection Pipe

Connecting piping for indoor unit and outdoor unit are in manifold mode. (As shown below).

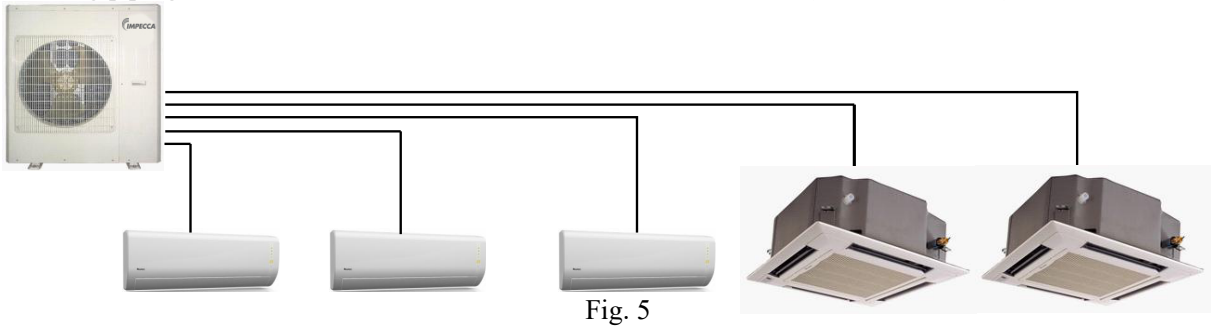


Fig. 5

4.2.1 Piping between the Indoor and Outdoor Units

(1) If the liquid and gas stop valves which have the sign of A , B, C, D or E have not been connected to the indoor units, please turn off the screw cap with the spanner airproof.

(2) Refer to Fig.6 for the moments of torque for tightening screws.

(3) Let the flare end of the copper pipe point at the screw and then tighten the screw by hand.

(4) After that, tighten the screw by the torque wrench unit it clatters (as shown in Fig.6).

(5) The bending degree of the pipe can not be too small; otherwise it will crack. And please use a pipe tube bender to bend the pipe.

(6) Wrap the exposed refrigerant pipe and the joints by sponge and then tighten them with the plastic tape.

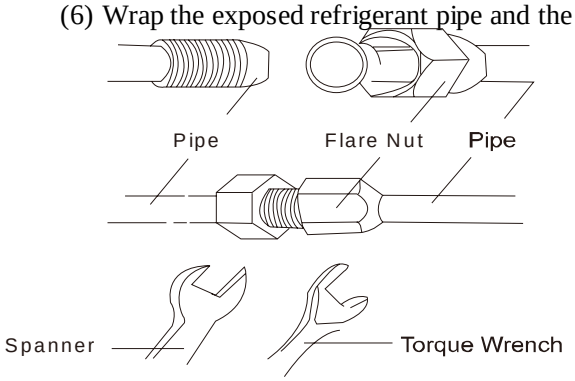


Fig6

Pipe diameter	Thickness of copper tube	Tightening torque
Φ1/4 inch	≥0.0315 inch	11～22 ft·lbf
Φ3/8 inch	≥0.0315 inch	26～29 ft·lbf
Φ1/2 inch	≥0.0315 inch	33～37 ft·lbf
Φ5/8 inch	≥0.0394 inch	44～48 ft·lbf

⚠ CAUTION	
1)	During the connection of the indoor unit and the refrigerant pipe, never pull any joints of the indoor unit by force; otherwise the capillary pipe or other pipe may crack, which then would result in leakage.
2)	The refrigerant pipe should be supported by brackets, that is, don't let the unit withstand the weight of it.
3)	If the piping connection size of outdoor unit does not match the piping connection size of indoor unit, use the piping connection dimension of indoor unit. And use different-diameter joints which is installing on the place of the piping connection to connect the indoor unit.
4)	For the Flex Series, each pipe should be labeled to tell which system it belongs to avoid mistaken inaccurate piping.

4.2.2 Allowable pipe length and drop height among indoor and outdoor units

If the total refrigerant pipe length (liquid pipe) is smaller than that listed in the table below, no additional refrigerant will be charged.

Table 6

Total Liquid Pipe Lenght (a+b+c+d+e)	131.2 ft

Allowable Length and Height Fall of the Refrigerant Pipe

Table 7

		Allowable Value	Fitting Pipe
Total length (actual length) of fitting pipe		246.1ft	$L_1+L_2+\cdots+L_M$ (M ≤5)
Length of farthest fitting pipe (ft)		82ft	L_X (X=1，2，3，4,5)
Height difference between outdoor unit and indoor unit	Outdoor unit at upper	49.2ft	H1
	Outdoor unit at lower	49.2ft	H3
Height difference between indoor units (m)		24.6ft	H2

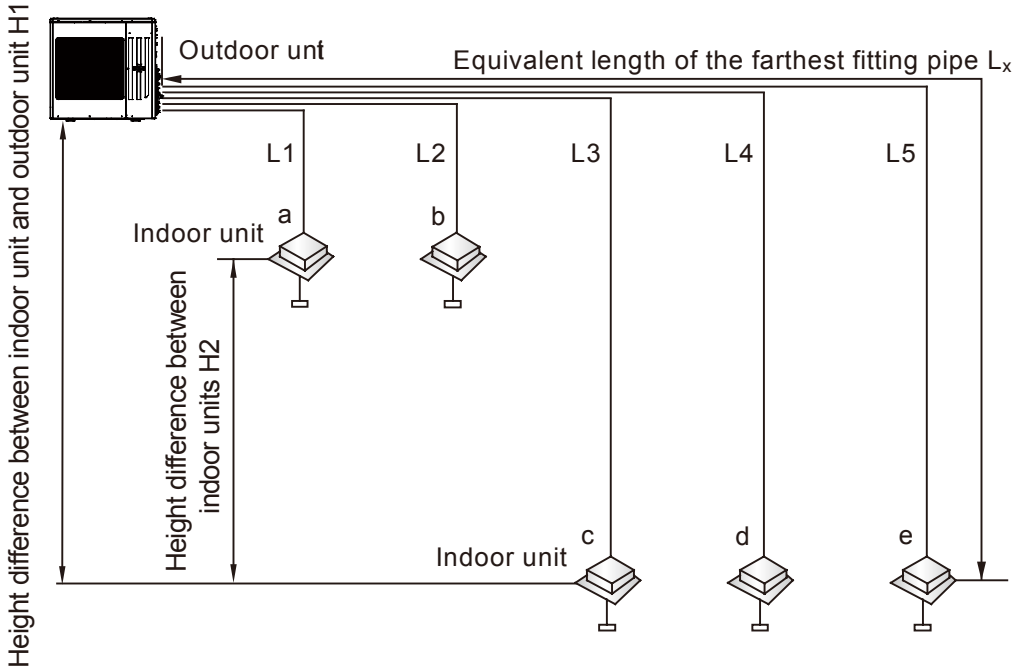


Fig 7

4.2.3 Installation of the Protection Layer of the Refrigerant Pipe

(1)The refrigerant pipe should be insulated by the insulating material and plastic tape in order to prevent condensation and water leakage.

(2)The joints of the indoor unit should be wrapped with the insulating material and no gap is allowed on the joint of the indoor unit, as shown in Fig.8.

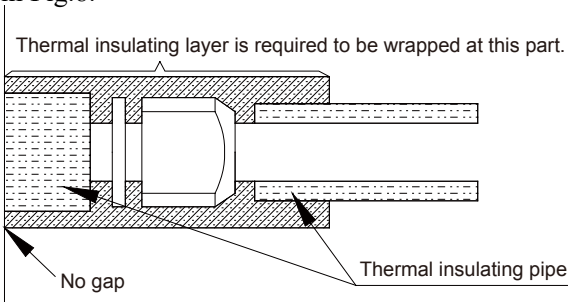


Fig 8

⚠CAUTION

After the pipe is protected well enough, never bend it to form a small angle; otherwise it would crack or break.

(3)Wrap the Pipe with Tape：

a. Bundle the refrigerant pipe and electric wire together with tape, and separate them from the drain pipe to prevent the condensate water overflowing.

b. Wrap the pipe from the bottom of the outdoor unit to the top of the pipe where it enters the wall. During the wrapping, the later circle should cover half of the former one.

c. Fix the wrapped pipe on the wall with clamps.

⚠CAUTION
1) Do not wrap the pipe too tightly; otherwise the insulation effect would be weakened. Additionally, make sure the drain hose is separated from the pipe.
2) After that, fill the hole on the wall with sealing material to prevent wind and rain coming into the room.

4.2.4 Support and protection for pipeline

Support should be made for hanging connection pipe. Distance between each support can not be over 1m.

4.3 Air Purging and Refrigerant Charge

4.3.1 Air purging

(1) The refrigerant has been charged into the outdoor unit before shipment, while additional refrigerant still need be charged into the refrigerant pipe during the field installation.

(2) Check if the liquid valve and the gas valve of the outdoor unit are closed fully.

(3) As shown in the following figure (Fig.9), expel the gas inside the indoor unit and refrigerant pipe out by the vacuum pump.

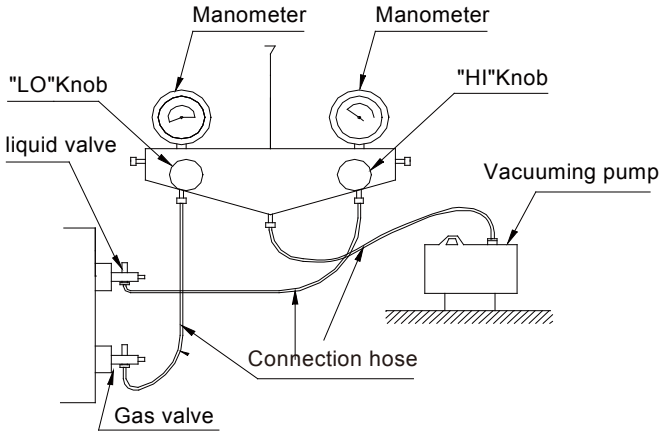


Fig 9

(4) When the compressor is not running, charge the R410A refrigerant into the refrigerant pipe from the liquid valve of the outdoor unit (do not do it from the gas valve).

4.3.2 Additional refrigerant charging

(1) Refrigerant Charge in the Outdoor Unit before Shipment

NOTICE
1) Outdoor unit has been charged refrigerant before delivery. The refrigerant charge is not included those charged additionally in the indoor unit and the refrigerant pipe.
2) The amount of the additional refrigerant charge is dependent on the diameter and length of the liquid refrigerant pipe which is decided by the actual yield installation requirement.
3) Record the additional refrigerant charge for future maintenance.

(2) Calculation of the Additional Refrigerant Charge

Additional Refrigerant Charge=

(Σ Length of Liquid Pipe φ0.375×54+Σ Length of Liquid Pipe φ0.25×22)-880

The biggest additional refrigerant charge value is 800g. It means that if the calculated value exceed 800g, the additional refrigerant charge takes 800g, while the calculated value less than 800g, the additional refrigerant charge takes the calculated value.

4.4 Electric Wiring

4.4.1 Wiring precautions

(1) The installation must be done in accordance with the national wiring regulations.

(2) Only the power cord with the rated voltage and exclusive circuit for the air conditioning can be used.

(3) Do not pull the power cord by force.

(4) The electric installation should be carried out by the technician as instructed by the local laws, regulations and also this manual.

(5) The diameter of the power cord should be large enough and once it is damaged it must be replaced by the dedicated one.

(6) The earthing should be reliable and the earth wire should be connected to the dedicated device of the building by the technician. Besides, the air switch coupled with the leakage current protection switch must be equipped, which is of enough capacity and of both magnetic and thermal tripping functions in case of the short circuit and overload.

Table 8

Power Supply	Capacity of the air Switch（A）	Recommended Cord（pieces× sectional area）
208/230V~60Hz	32	3×0.0062 sq in

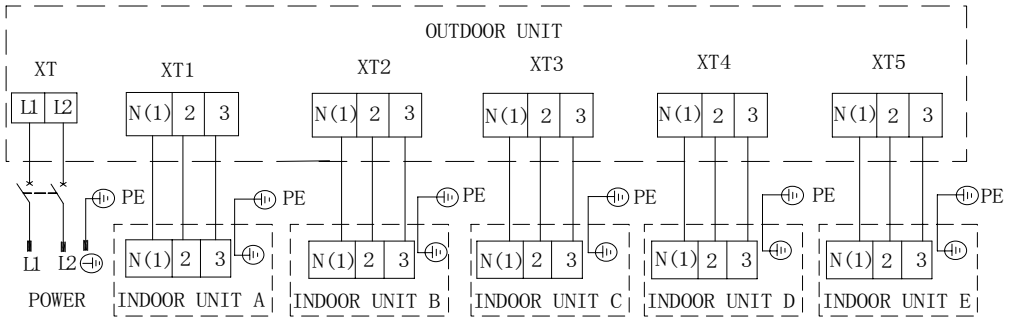


Fig 11

4.4.2 Earthing Requirements

(1) The air conditioner is classified into the Class I appliances, so its earthing must be reliable.

(2) The yellow-green line of the air conditioner is the earth line and can not be used for other purpose, cut off or fixed by the tapping screw; otherwise it would cause the hazard of electric shock.

(3) The reliable earth terminal should be provided and the earth wire can not be connected to any of the following places.

①Running water pipe;; ②Coal gas pipe; ③Sewage pipe; ④Other places where the professional personnel think unreliable.

4.4.3 Electrical Cable Connection

⚠ CAUTION	
1)	The mistake connecting line will result in malfunction. After the electrical wiring working, ensure the wire between the connection place and the fixed place has a certain freedom degree.
2)	The connection piping and connection line of each indoor unit should connect well according to the instruction.
3)	The electric installation should be carried out by the technician as instructed by the local laws, regulations and also this manual.
4)	The installation location should be dry, and can't be expose in direct sunlight or strong breeze.
5)	Have to install a breaker in the circuit that can shut off the main power supply of the system. Besides, the air switch coupled with the leakage current protection switch must be equipped.

4.4.4 Wiring of the Power Cord

(1). Open the side plate.

(2). Connect the power cord to the terminals “L1”, “L2” and also the earthing screw, and then connect the wiring terminals “N(1),2,3” of the indoor unit to those of the outdoor unit correspondingly. Please use the green bonding screw to connect the earthing cord. The location is showing in the figure 12.

(3). Fix the power cord with wire clips.

(4). Let the power cord go through the rubber ring.

⚠ CAUTION

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.

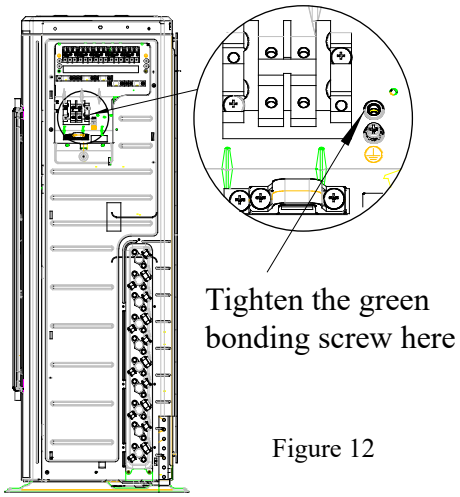


Figure 12

5 Troubleshooting

⚠ WARNING
1) In the event of abnormal conditions (like, stinky smell), please shut off the main power supply immediately and then contact the Impecca appointed service center; otherwise the continuous abnormal running would damage the air conditioning unit and also would cause electric shock or fire hazard etc.
2) Do not repair the air conditioning personally but instead contact the professionally skilled personnel at the Impecca appointed service center, as the incorrect repair would cause electric shock or fire hazard etc.

Check before Contacting Service Center.

Table 9

Check Items	Conditions Might Happen	Check
Has the unit been fixed firmly?	The unit may drop, shake or emit noise.	
Have you done the gas leakage test?	It may cause insufficient cooling/heating capacity.	
Is the unit get proper thermal insulation?	It may cause condensation and dripping.	
Does the unit drain well?	It may cause condensation and dripping.	
Is the voltage in accordance with the rated voltage specified on the nameplate?	It may cause malfunction or damage the part.	
Is the electric wiring and piping connection installed correctly and securely?	It may cause malfunction or damage the part.	
Has the unit been earthed securely?	It may cause electrical leakage.	
Is the power cord specified?	It may cause malfunction or damage the part.	
Has the inlet and outlet been blocked?	It may cause insufficient cooling/heating capacity.	

NOTICE!

If the air conditioner still runs abnormally after the above check and handling, please contact the maintenance serviceman at the local appointed service center and also give a description of the error occurred as well as the model of the unit.

6 The conditions listed below are not classified into errors.

Table 10

Conditions		Causes
The unit does not run	When restart the unit soon after it is stopped.	The overload protection switch of the unit let the startup delayed for three minutes.
	As soon as power is on.	The unit will stand by for approximate one minute.
The unit blows out mist	When the cooling operation starts.	The hi-humidity air indoor is cooled quickly.
The unit generates noise	The unit "clatters" as soon as it starts running.	It is the sound generated during the initialization of the electronic expansion valve.
	The unit "swishes" during the cooling operation.	It is the sound when the refrigerant gas runs inside the unit.
	The unit "swishes" when it is started or stopped.	It is the sound when the refrigerant gas stops running.
	The unit "swishes" when it is in and after the running.	It is the sound when the draining system is operating.
	The unit "squeaks" when it is in and after the running.	It is the sound of frication generated by the skin plate etc which swells due to the temperature change.
The unit blows out dust.	When the unit restarts after it is not used for a long time.	The dust inside the unit is blown out again.
The unit emits odors.	When the unit is running.	The odors absorbed in are blown out again.

NOTICE!

If problem can not be solved after checking the above items, please contact Impecca service center and show phenomena and models.

Following circumstance are not malfunction

Table 11

Malfunction		Reason
Unit doesn't run	When unit is started immediately after it is just turned off	Overload protection switch makes it run after 3 minutes delay
	When power is turned on	Standby operating for about 1 minute
Mist comes from the unit	Under cooling	Indoor high humidity air is cooled rapidly
Noise is emitted	Slight cracking sound is heard when just turned on	It is noise when electronic expansion valve initialization
	There is consecutive sound when cooling	That's sound for gas refrigerant flowing in unit
	There is sound when unit starts or stops	That's sound for gas refrigerant stops to flow
	There is slight and consecutive sound when unit is running or after running	That's sound for operation of drainage system
	Cracking sound is heard when unit is operating and after operating	That's sound caused by expansion of panel and other parts due to temperature change
The unit blows out duct	When unit runs after no operation for a long period	Dust in indoor unit is blew out
The unit emits odor	Operating	The room odor absorbed by the unit is blew out again
Indoor unit still runs after switch off	After every indoor unit receive "stop" signal, fan will keep	Indoor fan motor will keep running 20-70s so as to take good use of excess cooling and heating and prepare for

	running	next operation
Mode conflict	COOL or HEAT mode can not be operated	When the indoor operating mode conflicts with that of outdoor unit, indoor fault indicator will flash and conflict will be shown on the wired controller after 5 minutes. Indoor unit stops to run and meanwhile change outdoor operating mode as the same as that of indoor unit, then the unit will go back to normal. COOL mode doesn't conflict with DRY mode. FAN mode doesn't conflict with any mode.

7 Troubleshooting

The error code will be displayed on the wired controller and the main board of the outdoor unit
The meaning of each error, as shown in table 13.

Table 12

Name of malfunction	The indicator display		
	Yellow light	Red light	Green light
Compressor runs	Flash once		
Defrost	Flash twice		
Anti-freezing protection	Flash 3 times		
IPM protection	Flash 4 times		
AC over-current protection	Flash 5 times		
Over-burden protection	Flash 6 times		
Compressor exhaust high temperature protection	Flash 7 times		
Compressor overload protection	Flash 8 times		
Power protection	Flash 9 times		
EEPROM reads and write protection	Flash 11 times		
Low PN voltage protection	Flash 12 times		
Over voltage protection for PN	Flash 13 times		
PFC protection	Flash 14 times		
PFC module temperature protection	Flash 15 times		
Low pressure protection	Flash 17 times		
High pressure protection	Flash 18 times		
Limit/decline frequency(electric current)		Flash 1 times	
Frequency limit（exhaust）		Flash 2 times	
Frequency limit（Over-burden）		Flash 3 times	
Outdoor ambient sensor malfunction		Flash 6 times	
Outdoor tube sensor malfunction		Flash 5 times	
Exhaust sensor malfunction		Flash 7 times	
Attain the temperature of switch on		Flash 8 times	
Frequency limit(power)		Flash 13 times	
Outdoor fan malfunction		Flash 14 times	
Frequency limit(PFC module temperature)		Flash 15 times	
PFC module sensor malfunction		Flash 16 times	
Liquid pipe temperature sensor malfunction of A		Flash 17 times	
Gas pipe temperature sensor malfunction of A		Flash 18 times	
Liquid pipe temperature sensor malfunction of B		Flash 19 times	
Gas pipe temperature sensor malfunction of B		Flash 20 times	
Liquid pipe temperature sensor malfunction of C		Flash 21 times	
Gas pipe temperature sensor malfunction of C		Flash 22 times	
Liquid pipe temperature sensor malfunction of D		Flash 23 times	
Gas pipe temperature sensor malfunction of D		Flash 24 times	
Liquid pipe temperature sensor malfunction of E		Flash 25 times	
Gas pipe temperature sensor malfunction of E		Flash 26 times	
Exit of the condenser tube sensor malfunction		Flash 27 times	
Correspondence is normal			Flash n times（n=indoor unit number）
Communication failure between indoor unit and outdoor unit			Often bright（indoor unit all Communication failure）

8 Maintenance

Regular check, Maintenance and care should be performed by professional personnel, which will prolong the unit life span.

8.1 Outdoor heat exchanger

Outdoor heat exchanger is required to be cleaned once every two months. Use vacuum cleaner with nylon brush to clean up dust and sundries on the surface of heat exchanger. Blow away dust by compressed air if it is available. Never use water to wash the heat exchanger.

8.2 Drain Pipe

Regularly check if the drain pipe is clogged in order to drain condensate smoothly.

8.3 Notice before Seasonal Use

(1) Check if the inlet/outlet of the indoor/outdoor unit is clogged.
(2) Check if the ground wire is earthed reliably.
(3) Check if battery of remote wireless controller has been replaced.
(4) Check if the filter screen has been set soundly.
(5) After long period of shutdown, open the main power switch 8 hours before re-operating the unit so as to preheat the compressor crankcase.
(6) Check if the outdoor unit is installed firmly. If there is something abnormal, please contact the Impecca appointed service center.

8.4 Maintenance after Seasonal Use

(1) Cut off main power supply of the unit.
(2) Clean filter screen and indoor and outdoor units.
(3) Clean the dust and sundries on the indoor and outdoor units.
(4) In the event of rusting, use the anti-rust paint to stop spreading of rust.

8.5 Parts Replacement

Purchase parts from Impecca appointed service center or dealer if necessary.

NOTICE!

During airtight and leakage test, never mix oxygen, ethyne and other dangerous gas into refrigeration circuit. In case of hazard, it's better to use nitrogen or refrigerant to accomplish such test.

9 CUSTOMER SUPPORT

Before contacting customer support, please see the troubleshooting guide above.

Visit our website to contact us, find answers to Frequently Asked Questions, and for other resources which may include an updated version of this user's guide.

WWW.IMPECCA.COM

If you wish to contact us by phone, please be sure to have your model number and serial number ready and call us between 9:00am and 6:00pm ET, at +1 866-954-4440.

Keep tabs on Impecca's newest innovations & enter contests via our social network feeds:

www.facebook.com/Impecca/

www.instagram.com/impecca/

IMPECCA™

Split Air Conditioner

INVERTER

Models:
ISMI-W182
ISMI-W242

Thank you for choosing our product.
For proper operation, please read and keep this manual carefully.
If you have lost the Owner's Manual, please contact the local agent or visit www.impecca.com for electronic version.

v. 1.1

Content

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

Explanation of Symbols

DANGER	Indicates a hazardous situation that, if not avoided, will result in death or serious injury.
WARNING	Indicates a hazardous situation that, if not avoided, could result in death or serious injury.
CAUTION	Indicates a hazardous situation that, if not avoided, may result in minor or moderate injury.
NOTICE	Indicates important but not hazard-related information, used to indicate risk of property damage.
	Indicates a hazard that would be assigned a signal word WARNING or CAUTION.

Precautions

WARNING

Operation and Maintenance

- This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved.
- Children shall not play with the appliance.
- Cleaning and user maintenance shall not be made by children without supervision.
- Do not connect air conditioner to multi-purpose socket. Otherwise, it may cause fire hazard.
- Do disconnect power supply when cleaning air conditioner. Otherwise, it may cause electric shock.
- If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.
- Do not wash the air conditioner with water to avoid electric shock.
- Do not spray water on indoor unit. It may cause electric shock or malfunction.
- After removing the filter, do not touch fins to avoid injury.
- Do not use fire or hair dryer to dry the filter to avoid deformation or fire hazard.

Precautions

WARNING

- Maintenance must be performed by qualified professionals. Otherwise, it may cause personal injury or damage.
- Do not repair air conditioner by yourself. It may cause electric shock or damage. Please contact dealer when you need to repair air conditioner.
- Do not extend fingers or objects into air inlet or air outlet. It may cause personal injury or damage.
- Do not block air outlet or air inlet. It may cause malfunction.
- Do not spill water on the remote controller, otherwise the remote controller may be broken.
- When below phenomenon occurs, please turn off air conditioner and disconnect power immediately, and then contact the dealer or qualified professionals for service.
  - Power cord is overheating or damaged.
  - There's abnormal sound during operation.
  - Circuit break trips off frequently.
  - Air conditioner gives off burning smell.
  - Indoor unit is leaking.
- If the air conditioner operates under abnormal conditions, it may cause malfunction, electric shock or fire hazard.
- When turning on or turning off the unit by emergency operation switch, please press this switch with an insulating object other than metal.
- Do not step on top panel of outdoor unit, or put heavy objects. It may cause damage or personal injury.

Precautions

WARNING

Attachment

- Installation must be performed by qualified professionals. Otherwise, it may cause personal injury or damage.
- Must follow the electric safety regulations when installing the unit.
- According to the local safety regulations, use qualified power supply circuit and circuit break.
- Do install the circuit break. If not, it may cause malfunction.
- An all-pole disconnection switch having a contact separation of at least 3mm in all poles should be connected in fixed wiring.
- Including an circuit break with suitable capacity, please note the following table.Air switch should be included magnet buckle and heating buckle function, it can protect the circuit-short and overload.
- Air Conditioner should be properly grounded. Incorrect grounding may cause electric shock.
- Don't use unqualified power cord.
- Make sure the power supply matches with the requirement of air conditioner.Unstable power supply or incorrect wiring or malfunction. Please install proper power supply cables before using the air conditioner.
- Properly connect the live wire, neutral wire and grounding wire of power socket.
- Be sure to cut off the power supply before proceeding any work related to electricity and safety.

Precautions

WARNING

- Do not put through the power before finishing installation.
- If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.
- The temperature of refrigerant circuit will be high, please keep the interconnection cable away from the copper tube.
- The appliance shall be installed in accordance with national wiring regulations.
- Installation must be performed in accordance with the requirement of NEC and CEC by authorized personnel only.
- The air conditioner is the first class electric appliance. It must be properly grounding with specialized grounding device by a professional. Please make sure it is always grounded effectively, otherwise it may cause electric shock.
- The yellow-green wire in air conditioner is grounding wire, which can't be used for other purposes.
- The grounding resistance should comply with national electric safety regulations.
- The appliance must be positioned so that the plug is accessible.
- All wires of indoor unit and outdoor unit should be connected by a professional.
- If the length of power connection wire is insufficient, please contact the supplier for a new one. Avoid extending the wire by yourself.

Precautions

WARNING

- For the air conditioner with plug, the plug should be reachable after finishing installation.
- For the air conditioner without plug, an circuit break must be installed in the line.
- If you need to relocate the air conditioner to another place, only the qualified person can perform the work. Otherwise, it may cause personal injury or damage.
- Select a location which is out of reach for children and far away from animals or plants. If it is unavoidable, please add the fence for safety purpose.
- The indoor unit should be installed close to the wall.
- Instructions for installation and use of this product are provided by the manufacturer.

Working temperature range

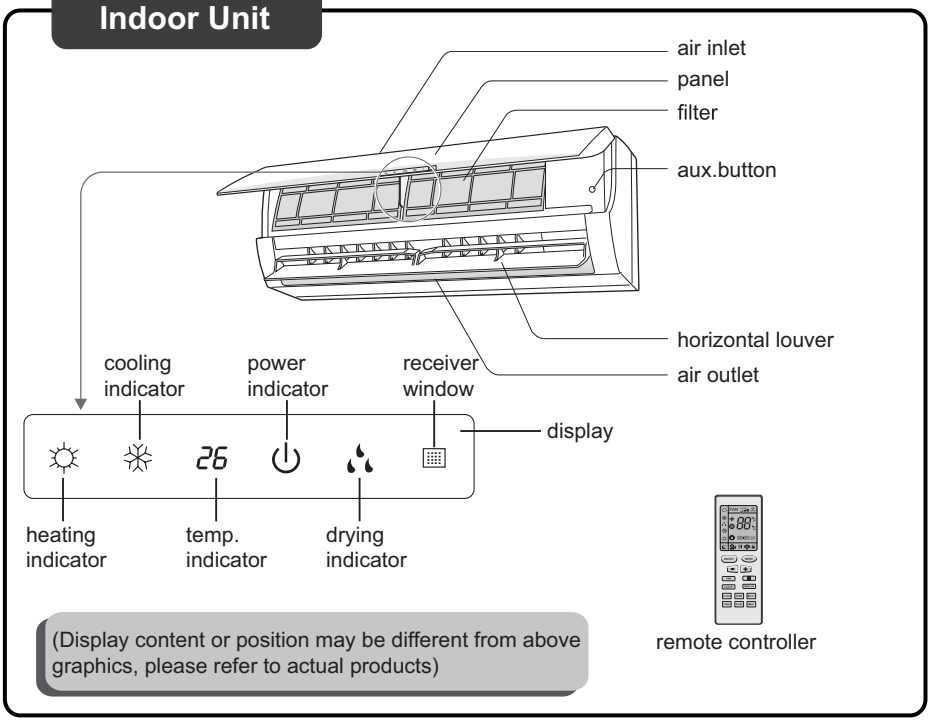
	Indoor side DB/WB(℃)	Outdoor side DB/WB(℃)
Maximum cooling	26.7/19.4	46.1/23.9
Maximum heating	26.7/-	23.9/18.3

NOTICE:

- The operating temperature range (outdoor temperature) for cooling only unit is 18.3℃ ~46.1℃ ; for heat pump unit is -7℃ ~ 46.1℃ .

Parts Name

Indoor Unit

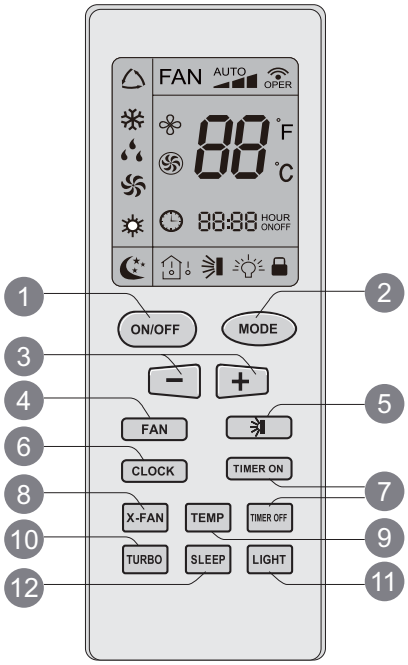


(Display content or position may be different from above graphics, please refer to actual products)

NOTICE:

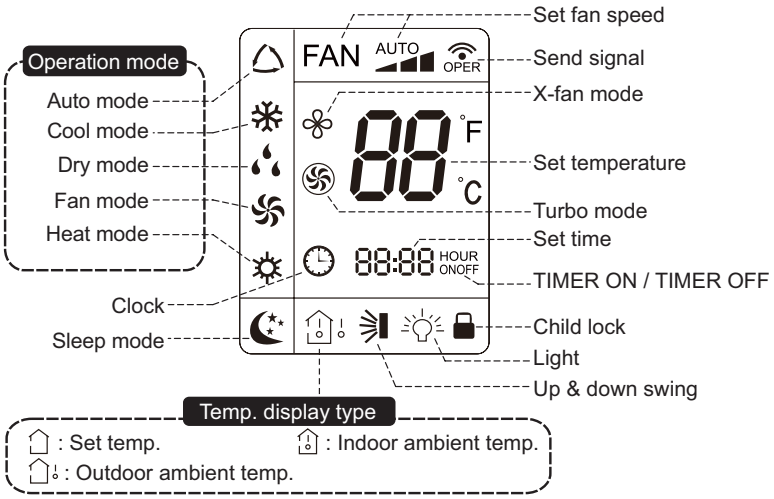
Actual product may be different from above graphics, please refer to actual products.

Buttons on remote controller



1. ON/OFF button
2. MODE button
3. +/- button
4. FAN button
5. button
6. CLOCK button
7. TIMER ON/TIMER OFF button
8. X-FAN button
   Note: X-FAN is the same with BLOW
9. TEMP button
10. TURBO button
11. LIGHT button
12. SLEEP button

Introduction for icons on display screen



Introduction for buttons on remote controller

Note:

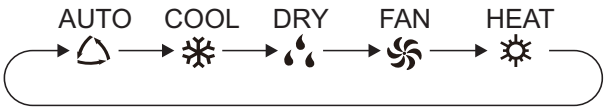
● After putting through the power, the air conditioner will give out a sound. Operation indictor "⏻" is ON (red indicator). After that, you can operate the air conditioner by using remote controller.

1 ON/OFF button

Press this button can turn on or turn off the air conditioner. After turning on the air conditioner, operation indicator "⏻" on indoor unit's display is ON (green indicator. The colour is different for different models), and indoor unit will give out a sound.

2 MODE button

Press this button to select your required operation mode.



● When selecting auto mode, air conditioner will operate automatically according to ex-factory setting. Set temperature can't be adjusted and will not be displayed as well. Press "FAN" button can adjust fan speed. Press " " button can adjust fan blowing angle.

● After selecting cool mode, air conditioner will operate under cool mode. Cool indicator " " on indoor unit is ON. Press "+" or "-" button to adjust set temperature. Press "FAN" button to adjust fan speed. Press " " button to adjust fan blowing angle.

● When selecting dry mode, the air conditioner operates at low speed under dry mode. Dry indicator " " on indoor unit is ON. Under dry mode, fan speed can't be adjusted. Press " " button to adjust fan blowing angle.

● When selecting fan mode, the air conditioner will only blow fan, no cooling and no heating. All indicators are OFF. Press "FAN" button to adjust fan speed. Press " " button to adjust fan blowing angle.

● When selecting heating mode, the air conditioner operates under heat mode. Heat indicator " " on indoor unit is ON. Press "+" or "-" button to adjust set temperature. Press "FAN" button to adjust fan speed. Press " " button to adjust fan blowing angle. (Cooling only unit won't receive heating mode signal. If setting heat mode with remote controller, press ON/OFF button can't start up the unit).

Note:

● For preventing cold air, after starting up heating mode, indoor unit will delay 1~5 minutes to blow air (actual delay time is depend on indoor ambient temperature).

● Set temperature range from remote controller: 16~30℃ ; Fan speed: auto, low speed, medium speed, high speed.

Introduction for buttons on remote controller

3 +/- button

- Press "+" or "-" button once increase or decrease set temperature 1℃ . Holding "+" or "-" button, 2s later, set temperature on remote controller will change quickly. On releasing button after setting is finished, temperature indicator on indoor unit will change accordingly. (Temperature can't be adjusted under auto mode)
- When setting TIMER ON, TIMER OFF or CLOCK, press "+" or "-" button to adjust time. (Refer to CLOCK, TIMER ON, TIMER OFF buttons) When setting TIMER ON, TIMER OFF or CLOCK, press "+" or "-" button to adjust time. (Refer to CLOCK, TIMER ON, TIMER OFF buttons)

4 FAN button

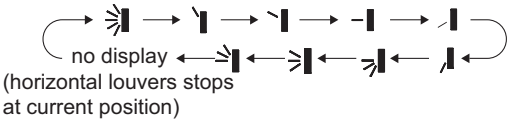
Pressing this button can set fan speed circularly as: auto (AUTO), low( ), medium ( ), high( ).

Note:

- Under AUTO speed, air conditioner will select proper fan speed automatically according to ex-factory setting.
- Fan speed under dry mode is low speed.

5 button

Press this button can select up&down swing angle. Fan blow angle can be selected circularly as below:



- When selecting " ", air conditioner is blowing fan automatically. Horizontal louver will automatically swing up & down at maximum angle.
- When selecting " ", air conditioner is blowing fan at fixed position. Horizontal louver will stop at the fixed position.
- When selecting " ", air conditioner is blowing fan at fixed angle. Horizontal louver will send air at the fixed angle.
- Hold " " button above 2s to set your required swing angle. When reaching your required angle, release the button.

Note:

- " " may not be available. When air conditioner receives this signal, the air conditioner will blow fan automatically.

Introduction for buttons on remote controller

6 CLOCK button

Press this button to set clock time. "🕒" icon on remote controller will blink. Press "+" or "-" button within 5s to set clock time. Each pressing of "+" or "-" button, clock time will increase or decrease 1 minute. If hold "+" or "-" button, 2s later, time will change quickly. Release this button when reaching your required time. Press "CLOCK" button to confirm the time. "🕒" icon stops blinking.

Note:

- Clock time adopts 24-hour mode.
- The interval between two operation can't exceeds 5s. Otherwise, remote controller will quit setting status. Operation for TIMER ON/TIMER OFF is the same.

7 TIMER ON / TIMER OFF button

- TIMER ON button
  "TIMER ON" button can set the time for timer on. After pressing this button, "🕒" icon disappears and the word "ON" on remote controller blinks. Press "+" or "-" button to adjust TIMER ON setting. After each pressing "+" or "-" button, TIMER ON setting will increase or decrease 1min. Hold "+" or "-" button, 2s later, the time will change quickly until reaching your required time.
  Press "TIMER ON" to confirm it. The word "ON" will stop blinking. "🕒" icon resumes displaying. Cancel TIMER ON: Under the condition that TIMER ON is started up, press "TIMER ON" button to cancel it.
- TIMER OFF button
  "TIMER OFF" button can set the time for timer off. After pressing this button,"🕒" icon disappears and the word "OFF" on remote controller blinks. Press "+" or "-" button to adjust TIMER OFF setting. After each pressing "+" or "-" button, TIMER OFF setting will increase or decrease 1min. Hold "+" or "-" button, 2s later, the time will change quickly until reaching your required time.
  Press "TIMER OFF" word "OFF" will stop blinking. "🕒" icon resumes displaying. Cancel TIMER OFF. Under the condition that TIMER OFF is started up, press "TIMER OFF" button to cancel it.

Note:

- Under on and off status, you can set TIMER OFF or TIMER ON simultaneously.
- Before setting TIMER ON or TIMER OFF, please adjust the clock time.
- After starting up TIMER ON or TIMER OFF, set the constant circulating valid. After that, air conditioner will be turned on or turned off according to setting time. ON/OFF button has no effect on setting. If you don't need this function, please use remote controller to cancel it.

Introduction for buttons on remote controller

8 X-FAN button

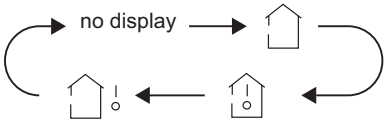
Press this button under cool and dry mode to start up x-fan function, and " " icon on remote controller will be displayed. Press this button again to cancel x-fan function, and " " icon will disappear.

Note:

- When x-fan function is on, if the air conditioner is turned off, indoor fan will still operate at low speed for a while to blow the residual water inside the air duct.
- During x-fan operation, press X-FAN button to turn off x-fan function. Indoor fan will stop operation immediately.

9 TEMP button

By pressing this button, you can see indoor set temperature, indoor ambient temperature or outdoor ambient temperature on indoor unit's display. The setting on remote controlleris selected circularly as below:



- When selecting " " or no display with remote controller, temperature indicator on indoor unit displays set temperature.
- When selecting " " with remote controller, temperature indicator on indoor unit displays indoor ambient temperature.
- When selecting " " with remote controller, temperature indicator on indoor unit displays outdoor ambient temperature.

Note:

- Outdoor temperature display is not available for some models. At that time, indoor unit receives " " signal, while it displays indoor set temperature.
- It's defaulted to display set temperature when turning on the unit.There is no display in the remote controller.
- Only for the models whose indoor unit has dual-8 display.
- When selecting displaying of indoor or outdoor ambient temperature, indoor temperature indicator displays corresponding temperature and automatically turn to display set temperature after three or five seconds.

10 TURBO button

Under COOL or HEAT mode, press this button to turn to quick COOL or quick HEAT mode. " " icon is displayed on remote controller. Press this button again to exit turbo function and " " icon will disappear.

Introduction for buttons on remote controller

11 SLEEP button

Under COOL, HEAT or DRY mode, press this button to start up sleep function. "☾" icon is displayed on remote controller. Press this button again to cancel sleep function and "☾" icon will disappear.

12 LIGHT button

Press this button to turn off display light on indoor unit. "☼" icon on remote controller disappears. Press this button again to turn on display light. "☼" icon is displayed.

Function introduction for combination buttons

Child lock function

Press "+" and "-" simultaneously to turn on or turn off child lock function. When child lock function is on, "🔒" icon is displayed on remote controller. If you operate the remote controller, the "🔒" icon will blink three times without sending signal to the unit.

Temperature display switchover function

Under OFF status, press "-" and "MODE" buttons simultaneously to switch temperature display between ℃ and ℉ .

Operation guide

1. After putting through the power, press "ON/OFF" button on remote controller to turn on the air conditioner.

2. Press "MODE" button to select your required mode: AUTO, COOL, DRY, FAN, HEAT.

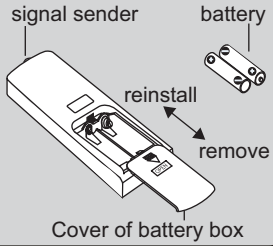
3. Press "+" or "-" button to set your required temperature. (Temperature can't be adjusted under auto mode).

4. Press "FAN" button to set your required fan speed: auto, low, medium and high speed.

5. Press " " button to select fan blowing angle.

Replacement of batteries in remote controller

1. Press the back side of remote controller marked with " OPEN ", as shown in the fig, and then push out the cover of battery box along the arrow direction.
2. Replace two 7# (AAA 1.5V) dry batteries, and make sure the position of "+" polar and "-" polar are correct.
3. Reinstall the cover of battery box.

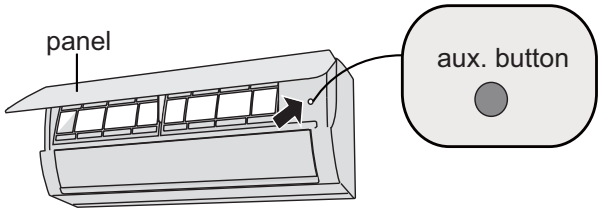


NOTICE

- During operation, point the remote control signal sender at the receiving window on indoor unit.
- The distance between signal sender and receiving window should be no more than 8m, and there should be no obstacles between them.
- Signal may be interfered easily in the room where there is fluorescent lamp or wireless telephone; remote controller should be close to indoor unit during operation.
- Replace new batteries of the same model when replacement is required.
- When you don't use remote controller for a long time, please take out the batteries.
- If the display on remote controller is fuzzy or there's no display, please replace batteries.

Emergency operation

If remote controller is lost or damaged, please use auxiliary button to turn on or turn off the air conditioner. The operation in details are as below:
As shown in the fig. Open panel, press aux. button to turn on or turn off the air conditioner. When the air conditioner is turned on, it will operate under auto mode.



⚠WARNING:

Use insulated object to press the auto button

Clean and Maintenance

⚠ WARNING

- Turn off the air conditioner and disconnect the power before cleaning the air conditioner to avoid electric shock.
- Do not wash the air conditioner with water to avoid electric shock.
- Do not use volatile liquid to clean the air conditioner.

Clean surface of indoor unit

When the surface of indoor unit is dirty, it is recommended to use a soft dry cloth or wet cloth to wipe it.

NOTICE:

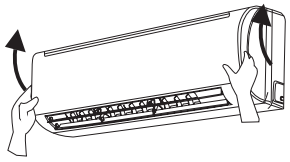
● Do not remove the panel when cleaning it.

Clean and Maintenance

Clean filter

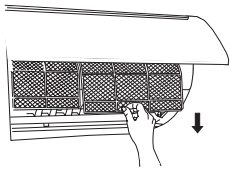
1 Open panel

Pull out the panel to a certain angle as shown in the fig.



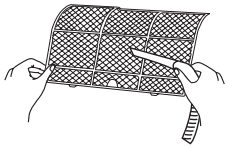
2 Remove filter

Remove the filter as indicated in the fig.



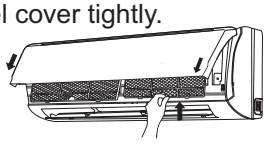
3 Clean filter

- Use dust catcher or water to clean the filter.
- When the filter is very dirty, use the water (below 45℃) to clean it, and then put it in a shady and cool place to dry.



4 Install filter

Install the filter and then close the panel cover tightly.



⚠ WARNING

- The filter should be cleaned every three months. If there is much dust in the operation environment, clean frequency can be increased.
- After removing the filter, do not touch fins to avoid injury.
- Do not use fire or hair dryer to dry the filter to avoid deformation or fire hazard.

Clean and maintenance

NOTICE: Checking before use-season

1. Check whether air inlets and air outlets are blocked.
2. Check whether circuit break, plug and socket are in good condition.
3. Check whether filter is clean.
4. Check whether mounting bracket for outdoor unit is damaged or corroded. If yes, please contact dealer.
5. Check whether drainage pipe is damaged.

NOTICE: Checking after use-season

1. Disconnect power supply.
2. Clean filter and indoor unit's panel.
3. Check whether mounting bracket for outdoor unit is damaged or corroded. If yes, please contact dealer.

Notice for recovery

1. Many packing materials are recyclable materials. Please dispose them in appropriate recycling unit.
2. If you want to dispose the air conditioner, please contact local dealer or consultant service center for the correct disposal method.

Malfunction analysis

General phenomenon analysis

Please check below items before asking for maintenance. If the malfunction still can't be eliminated, please contact local dealer or qualified professionals.

Phenomenon	Check items	Solution
Indoor unit can't receive remote controller's signal or remote controller has no action.	• Whether it's interfered severely (such as static electricity, stable voltage)?	• Pull out the plug. Reinsert the plug after about 3min, and then turn on the unit again.
	• Whether remote controller is within the signal receiving range?	• Signal receiving range is 8m.
	• Whether there are obstacles?	• Remove obstacles.
	• Whether remote controller is pointing at the receiving window?	• Select proper angle and point the remote controller at the receiving window on indoor unit.
	• Is sensitivity of remote controller low; fuzzy display and no display?	• Check the batteries. If the power of batteries is too low, please replace them.
	• No display when operating remote controller?	• Check whether remote controller appears to be damaged. If yes, replace it.
	• Fluorescent lamp in room?	• Take the remote controller close to indoor unit. • Turn off the fluoresent lamp and then try it again.
No air emitted from indoor unit	• Air inlet or air outlet of indoor unit is blocked?	• Eliminate obstacles.
	• Under heating mode, indoor temperature is reached to set temperature?	• After reaching to set temperature, indoor unit will stop blowing out air.
	• Heating mode is turned on just now?	• In order to prevent blowing out cold air, indoor unit will be started after delaying for several minutes, which is a normal phenomenon.

Malfunction analysis

Phenomenon	Check items	Solution
Air conditioner can't operate	● Power failure?	● Wait until power recovery.
	● Is plug loose?	● Reinsert the plug.
	● Circuit break trips off or fuse is burnt out?	● Ask professional to replace circuit break or fuse.
	● Wiring has malfunction?	● Ask professional to replace it.
	● Unit has restarted immediately after stopping operation?	● Wait for 3min, and then turn on the unit again.
	● Whether the function setting for remote controller is correct?	● Reset the function.
Mist is emitted from indoor unit's air outlet	● Indoor temperature and humidity is high?	● Because indoor air is cooled rapidly. After a while, indoor temperature and humidity will be decrease and mist will disappear.
Set temperature can't be adjusted	● Unit is operating under auto mode?	● Temperature can't be adjusted under auto mode. Please switch the operation mode if you need to adjust temperature.
	● Your required temperature exceeds the set temperature range?	● Set temperature range: 16℃ ~30℃ .
Cooling (heating) effect is not good.	● Voltage is too low?	● Wait until the voltage resumes normal.
	● Filter is dirty?	● Clean the filter.
	● Set temperature is in proper range?	● Adjust temperature to proper range.
	● Door and window are open?	● Close door and window.

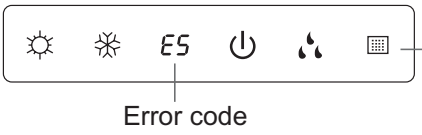
Malfunction analysis

Phenomenon	Check items	Solution
Odours are emitted	● Whether there's odour source, such as furniture and cigarette, etc.	● Eliminate the odour source. ● Clean the filter.
Air conditioner operates abnormally	● Whether there's interference, such as thunder, wireless devices, etc.	● Disconnect power, put back power, and then turn on the unit again.
"Water flowing" noise	● Air conditioner is turned on or turned off just now?	● The noise is the sound of refrigerant flowing inside the unit, which is a normal phenomenon.
Cracking noise	● Air conditioner is turned on or turned off just now?	● This is the sound of friction caused by expansion and/or contraction of panel or other parts due to the change of temperature.

Malfunction analysis

Error Code

- When air conditioner status is abnormal, temperature indictor on indoor unit will blink to display corresponding error code. Please refer to below list for identification of error code.



Above indicator diagram is only for reference. Please refer to actual product for the actual indicator and position.

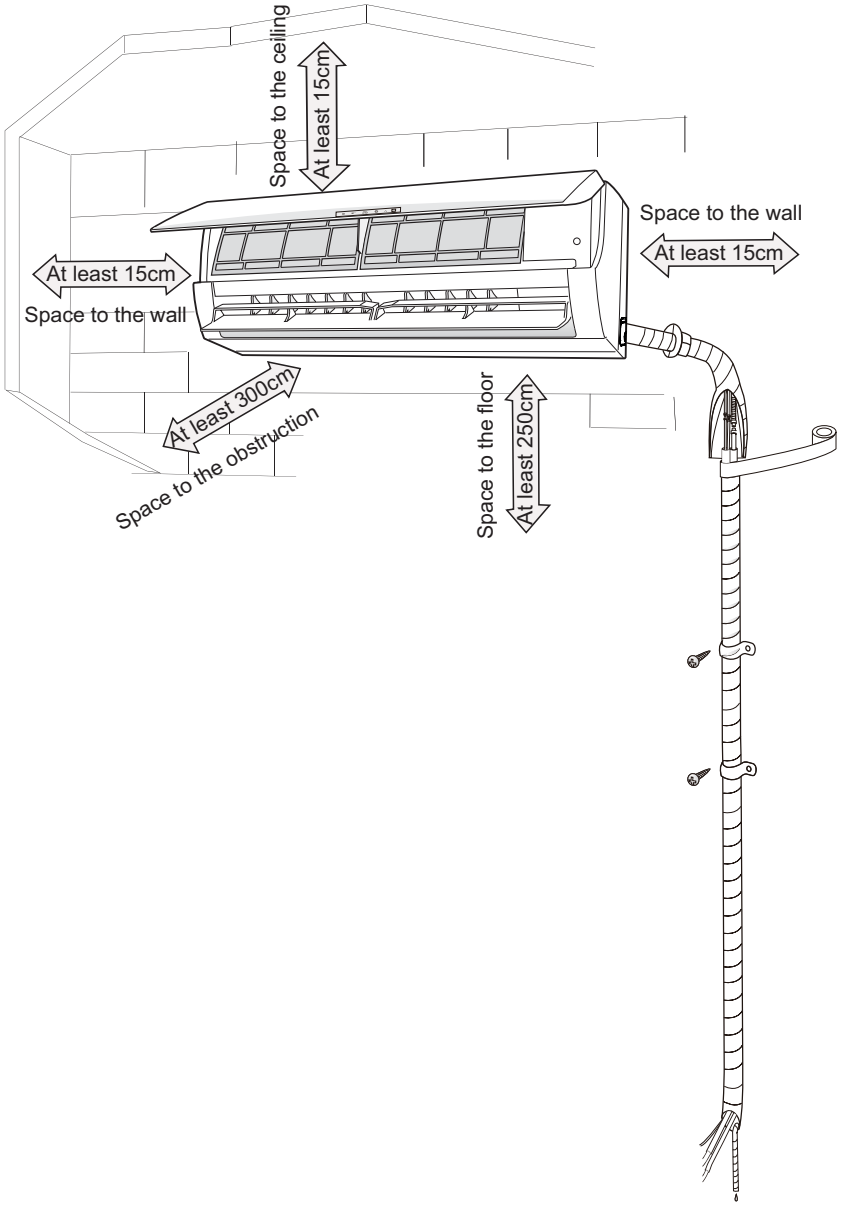
Error code	Troubleshooting
Heating indicator ON 10s OFF 0.5s	Means defrosting status. It's the normal phenomenon.
E5	It can be eliminated after restarting the unit. If not, please contact qualified professionals for service.
U8	It can be eliminated after restarting the unit. If not, please contact qualified professionals for service.
H6	It can be eliminated after restarting the unit. If not, please contact qualified professionals for service.
C5	Please contact qualified professionals for service.
F1	Please contact qualified professionals for service.
F2	Please contact qualified professionals for service.

Note: If there're other error codes, please contact qualified professionals for service.

WARNING

- When below phenomenon occurs, please turn off air conditioner and disconnect power immediately, and then contact the dealer or qualified professionals for service.
  - Power cord is overheating or damaged.
  - There's abnormal sound during operation.
  - Circuit break trips off frequently.
  - Air conditioner gives off burning smell.
  - Indoor unit is leaking.
- Do not repair or refit the air conditioner by yourself.
- If the air conditioner operates under abnormal conditions, it may cause malfunction, electric shock or fire hazard.

Installation dimension diagram



Tools for installation

1 Level meter	2 Screw driver	3 Impact drill
4 Drill head	5 Pipe expander	6 Torque wrench
7 Open-end wrench	8 Pipe cutter	9 Leakage detector
10 Vacuum pump	11 Pressure meter	12 Universal meter
13 Inner hexagon spanner		14 Measuring tape

Note:

- Please contact the local agent for installation.
- Don't use unqualified power cord.

Selection of installation location

Basic requirement

Installing the unit in the following places maycause malfunction. If it is unavoidable, please consult the local dealer:

1. The place with strong heat sources, vapors, flammable or explosive gas, or volatile objects spread in the air.
2. The place with high-frequency devices (such as welding machine, medical equipment).
3. The place near coast area.
4. The place with oil or fumes in the air.
5. The place with sulfureted gas.
6. Other places with special circumstances.
7. The appliance shall not be installed in the laundry

Indoor unit

1. There should be no obstruction near air inlet and air outlet.
2. Select a location where the condensation water can be dispersed easily and won't affect other people.
3. Select a location which is convenient to connect the outdoor unit and near the power socket.
4. Select a location which is out of reach for children.
5. The location should be able to withstand the weight of indoor unit and won't increase noise and vibration.
6. The appliance must be installed 2.5m above floor.
7. Don't install the indoor unit right above the electric appliance.
8. Please try your best to keep way from fluorescent lamp.

Requirements for electric connection

Safety precaution

1. Must follow the electric safety regulations when installing the unit.
2. According to the local safety regulations, use qualified power supply circuit and circuit break.
3. Make sure the power supply matches with the requirement of air conditioner. Unstable power supply or incorrect wiring or malfunction. Please install proper power supply cables before using the air conditioner.
4. Properly connect the live wire, neutral wire and grounding wire of power socket.
5. Be sure to cut off the power supply before proceeding any work related to electricity and safety.
6. Do not put through the power before finishing installation.
7. If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.
8. The temperature of refrigerant circuit will be high, please keep the interconnection cable away from the copper tube.
9. The appliance shall be installed in accordance with national wiring regulations.
10. Installation must be performed in accordance with the requirement of NEC and CEC by authorized personnel only.

Grounding requirement

1. The air conditioner is the first class electric appliance. It must be properly grounding with specialized grounding device by a professional. Please make sure it is always grounded effectively, otherwise it may cause electric shock.
2. The yellow-green wire in air conditioner is grounding wire, which can't be used for other purposes.
3. The grounding resistance should comply with national electric safety regulations.
4. The appliance must be positioned so that the plug is accessible.
5. An all-pole disconnection switch having a contact separation of at least 3mm in all poles should be connected in fixed wiring.
6. Including an circuit break with suitable capacity, please note the following table. Circuit break should be included magnet buckle and heating buckle function, it can protect the circuit-short and overload. (Caution: please do not use the fuse only for protect the circuit)

Air-conditioner	Air switch capacity
18K	20A
24K	25A

Installation of indoor unit

Step one: choosing installation location

Recommend the installation location to the client and then confirm it with the client.

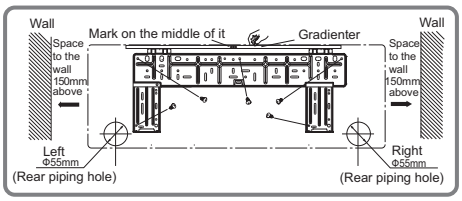
Step two: install wall-mounting frame

1. Hang the wall-mounting frame on the wall; adjust it in horizontal position with the level meter and then point out the screw fixing holes on the wall.
2. Drill the screw fixing holes on the wall with impact drill (the specification of drill head should be the same as the plastic expansion particle) and then fill the plastic expansion particles in the holes.
3. Fix the wall-mounting frame on the wall with tapping screws (ST4.2X25TA) and then check if the frame is firmly installed by pulling the frame. If the plastic expansion particle is loose, please drill another fixing hole nearby.

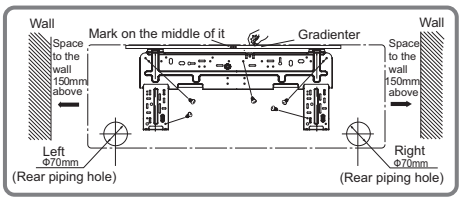
Step three: open piping hole

1. Choose the position of piping hole according to the direction of outlet pipe. The position of piping hole should be a little lower than the wall-mounted frame, shown as below.

18K



24K

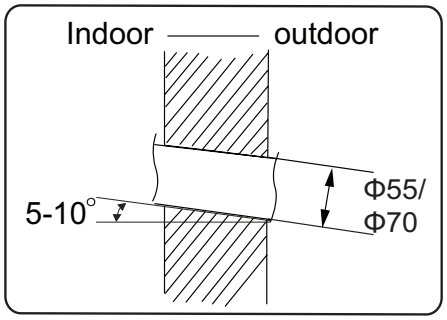


2. Open a piping hole with the diameter of Φ55 or Φ70 on the selected outlet pipe position. In order to drain smoothly, slant the piping hole on the wall slightly downward to the outdoor side with the gradient of 5-10°.

Installation of indoor unit

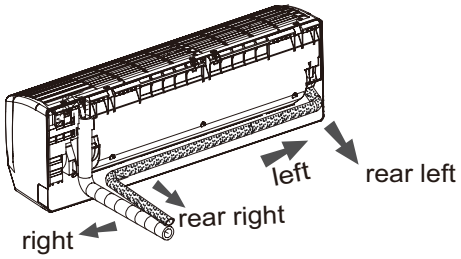
Note:

- Pay attention to dust prevention and take relevant safety measures when opening the hole.
- The plastic expansion particles are not provided and should be bought locally.

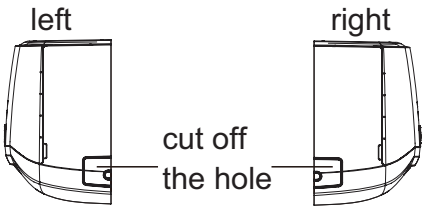


Step four: outlet pipe

1. The pipe can be led out in the direction of right, rear right, left or rear left.



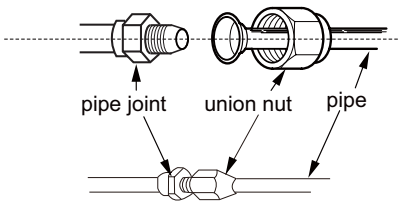
2. When select leading out the pipe from left or right, please cut off the corresponding hole on the bottom case.



Step five: connect the pipe of indoor unit

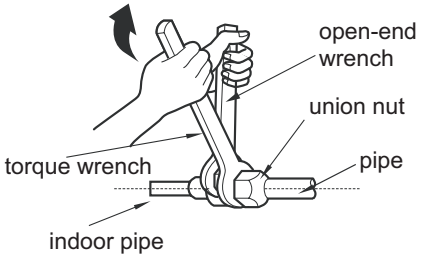
1. Aim the pipe joint at the corresponding bellmouth.

2. Pretightening the union nut with hand.



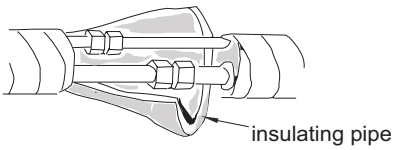
3. Adjust the torque force by referring to the following sheet. Place the open-end wrench on the pipe joint and place the torque wrench on the union nut. Tighten the union nut with torque wrench.

Installation of indoor unit



Hex nut diameter	Tightening torque (N·m)
Φ 6	15~20
Φ 9.52	30~40
Φ 12	45~55
Φ 16	60~65
Φ 19	70~75

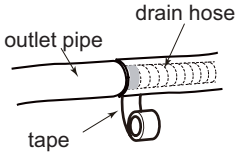
4. Wrap the indoor pipe and joint of connection pipe with insulating pipe, and then wrap it with tape.

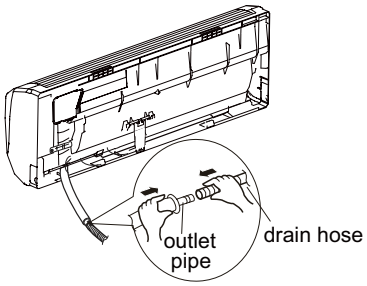


Step six: install drain hose

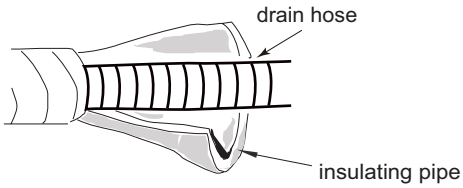
1. Connect the drain hose to the outlet pipe of indoor unit.

2. Bind the joint with tape.



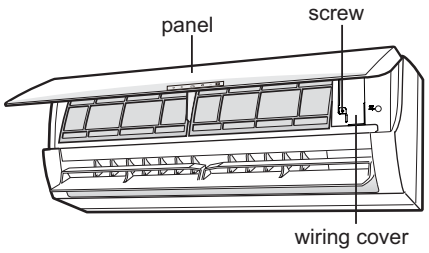


Note:
- Add insulating pipe in the indoor drain hose in order to prevent condensation.
- The plastic expansion particles are not provided.



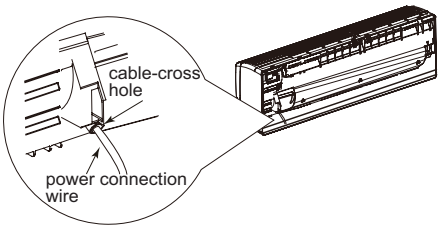
Step seven: connect wire of indoor unit

1. Open the panel, remove the screw on the wiring cover and then take down the cover.

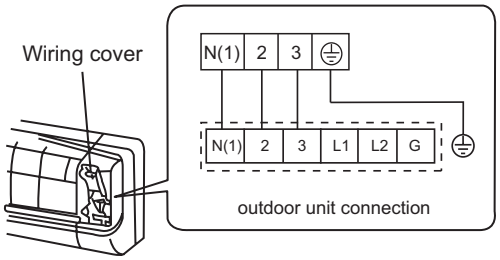


Installation of indoor unit

2. Make the power connection wire go through the cable-cross hole at the back of indoor unit and then pull it out from the front side.



3. Remove the wire clip; connect the power connection wire to the wiring terminal according to the color; tighten the screw and then fix the power connection wire with wire clip.



4. Put wiring cover back and then tighten the screw.
5. Close the panel.

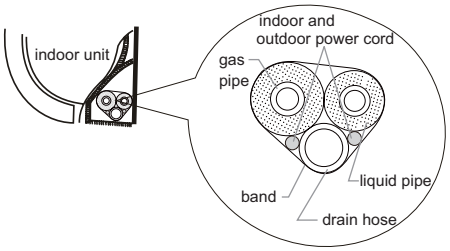
Note:

- All wires of indoor unit and outdoor unit should be connected by a professional.
- If the length of power connection wire is insufficient, please contact the supplier for a new one. Avoid extending the wire by yourself.
- For the air conditioner with plug, the plug should be reachable after finishing installation.
- For the air conditioner without plug, an circuit break must be installed in the line. The air switch should be all-pole parting and the contact parting distance should be more than 3mm.

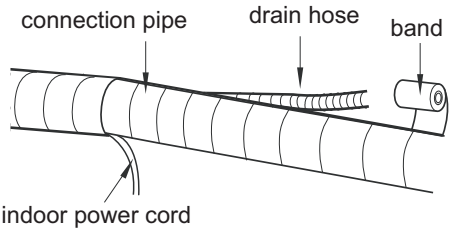
Installation of indoor unit

Step eight: bind up pipe

1. Bind up the connection pipe, power cord and drain hose with the band.



2. Reserve a certain length of drain hose and power cord for installation when binding them. When binding to a certain degree, separate the indoor power and then separate the drain hose.

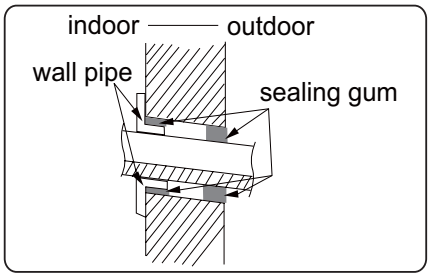


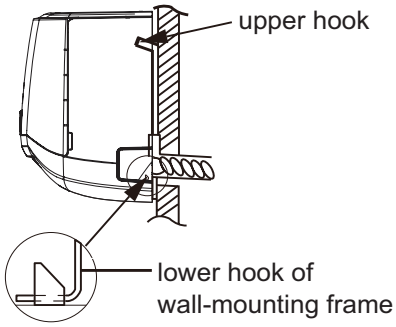
3. Bind them evenly.
4. The liquid pipe and gas pipe should be bound separately at the end.

Note:
- The power cord and control wire can't be crossed or winding.
- The drain hose should be bound at the bottom.

Step nine: hang the indoor unit

1. Put the bound pipes in the wall pipe and then make them pass through the wall hole.
2. Hang the indoor unit on the wall-mounting frame.
3. Stuff the gap between pipes and wall hole with sealing gum.
4. Fix the wall pipe.
5. Check if the indoor unit is installed firmly and closed to the wall.





Note:
- Do not bend the drain hose too excessively in order to prevent blocking.

Check after installation

● Check according to the following requirement after finishing installation.

Items to be checked	Possible malfunction
Has the unit been installed firmly?	The unit may drop, shake or emit noise.
Have you done the refrigerant leakage test?	It may cause insufficient cooling (heating) capacity.
Is heat insulation of pipeline sufficient?	It may cause condensation and water dripping.
Is water drained well?	It may cause condensation and water dripping.
Is the voltage of power supply according to the voltage marked on the nameplate?	It may cause malfunction or damaging the parts.
Is electric wiring and pipeline installed correctly?	It may cause malfunction or damaging the parts.
Is the unit grounded securely?	It may cause electric leakage.
Does the power cord follow the specification?	It may cause malfunction or damaging the parts.
Is there any obstruction in the air inlet and outlet?	It may cause insufficient cooling (heating) capacity.
The dust and sundries caused during installation are removed?	It may cause malfunction or damaging the parts.
The gas valve and liquid valve of connection pipe are open completely?	It may cause insufficient cooling (heating) capacity.

Test operation

1. Preparation of test operation

- The client approves the air conditioner.
- Specify the important notes for air conditioner to the client.

2. Method of test operation

- Put through the power, press ON/OFF button on the remote controller to start operation.
- Press MODE button to select AUTO, COOL, DRY, FAN and HEAT to check whether the operation is normal or not.
- If the ambient temperature is lower than 16℃ , the air conditioner can't start cooling.

Configuration of connection pipe

1. Standard length of connection pipe
   - 5m, 7.5m, 8m.
2. Min. length of connection pipe is 3m.
3. Max. length of connection pipe and max. high difference.

Cooling capacity	Max length of connection pipe	Max height difference
5000Btu/h (1465W)	15	5
7000Btu/h (2051W)	15	5
9000Btu/h (2637W)	15	5
12000Btu/h (3516W)	20	10
18000Btu/h (5274W)	25	10

Cooling capacity	Max length of connection pipe	Max height difference
24000Btu/h (7032W)	25	10
28000Btu/h (8204W)	30	10
36000Btu/h (10548W)	30	20
42000Btu/h (12306W)	30	20
48000Btu/h (14064W)	30	20

4. The additional refrigerant oil and refrigerant charging required after prolonging connection pipe
   - After the length of connection pipe is prolonged for 10m at the basis of standard length, you should add 5ml of refrigerant oil for each additional 5m of connection pipe.
   - The calculation method of additional refrigerant charging amount (on the basis of liquid pipe):

     Additional refrigerant charging amount = prolonged length of liquid pipe × additional refrigerant charging amount per meter
   - Basing on the length of standard pipe, add refrigerant according to the requirement as shown in the table. The additional refrigerant charging amount per meter is different according to the diameter of liquid pipe. See the following sheet.

Configuration of connection pipe

Additional refrigerant charging amount for R22, R407C, R410A and R134a

Diameter of connection pipe		Outdoor unit throttle	
Liquid pipe(mm)	Gas pipe(mm)	Cooling only(g/m)	Cooling and heating(g/m)
Φ6	Φ9.52 or Φ12	15	20
Φ6 or Φ9.52	Φ16 or Φ19	15	50
Φ12	Φ19 or Φ22.2	30	120
Φ16	Φ25.4 or Φ31.8	60	120
Φ19	_	250	250
Φ22.2	_	350	350

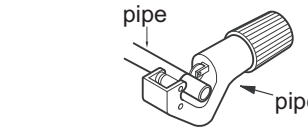
Pipe expanding method

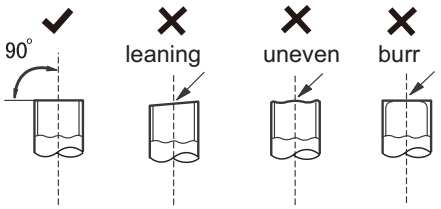
Note:

Improper pipe expanding is the main cause of refrigerant leakage. Please expand the pipe according to the following steps:

A: Cut the pipe

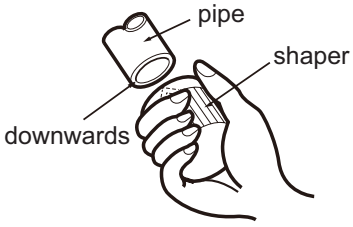
- Confirm the pipe length according to the distance of indoor unit and outdoor unit.
- Cut the required pipe with pipe cutter.





B: Remove the burrs

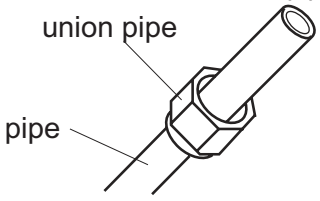
- Remove the burrs with shaper and prevent the burrs from getting into the pipe.



C: Put on suitable insulating pipe

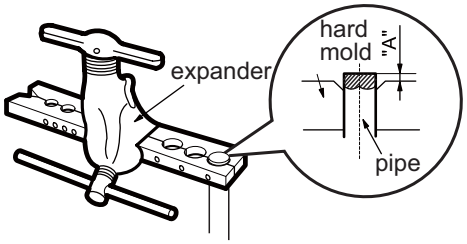
D: Put on the union nut

- Remove the union nut on the indoor connection pipe and outdoor valve; install the union nut on the pipe.



E: Expand the port

- Expand the port with expander.



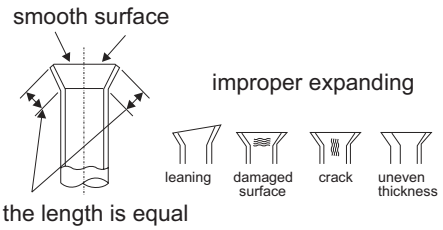
Note:

- "A" is different according to the diameter, please refer to the sheet below:

Outer diameter (mm)	A(mm)	
	Max	Min
Φ6 - 6.35(1/4")	1.3	0.7
Φ9.52(3/8")	1.6	1.0
Φ12-12.7(1/2")	1.8	1.0
Φ15.8-16(5/8")	2.4	2.2

F: Inspection

- Check the quality of expanding port. If there is any blemish, expand the port again according to the steps above.



Wired Controller

If the product you bought is equipped with wired controller, please refer to the following introductions of wired controller.

1 Displaying Part

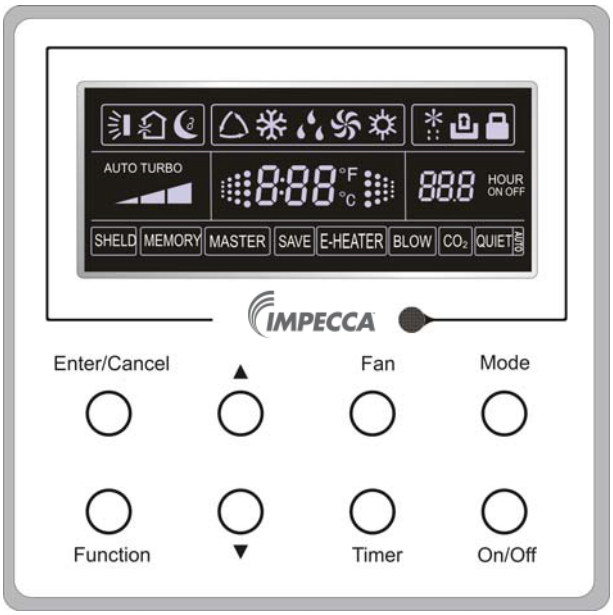


Fig1.1.1 Outline of wired controller

1.1 LCD Display of Wired Controller

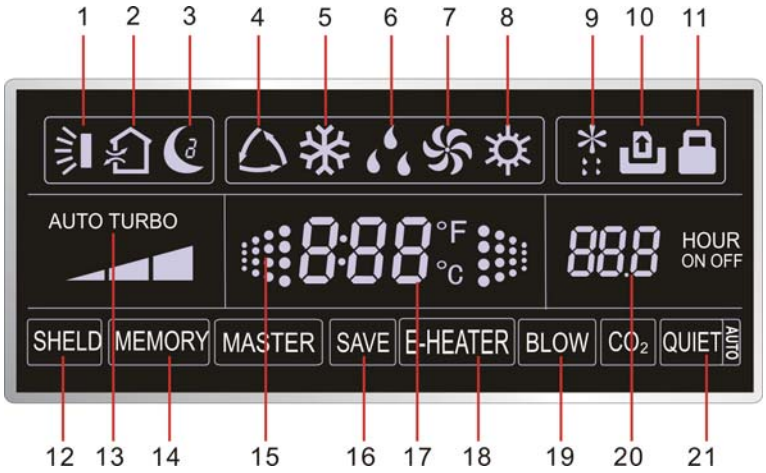


Fig.1.1.2 LCD display

1.2 Instruction to LCD Display

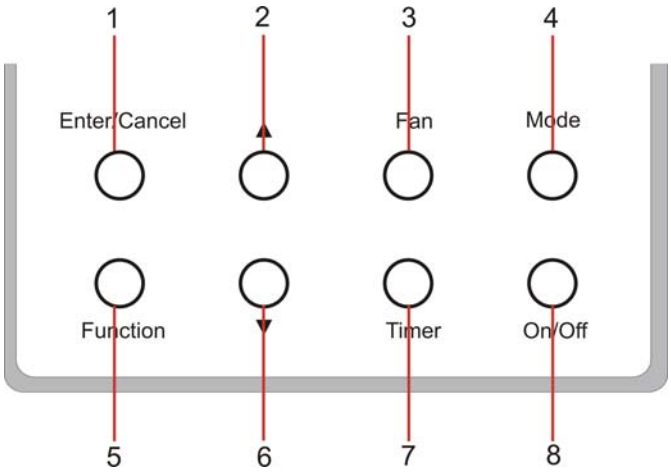
Table 1.1

No.	Symbols	Description
1		Swing function
2		Air exchange function (this function is yet unavailable for this unit).
3		Sleep function (Only sleep 1).
4		Each kind of running mode of indoor unit (auto mode)
5		Cooling mode
6		Dry mode
7		Fan mode
8		Heating mode
9		Defrosting function for the outdoor unit.
10		Gate-control function (this function is yet unavailable for this unit).
11		Lock function.
12	SHIELD	Shield functions (Button operation, temperature setting, On/Off operation, Mode setting are disabled by the remote monitoring system.)
13	Turbo	Turbo function state
14	MEMORY	Memory function (The indoor unit resumes the original setting state after power failure and then power recovery).
15		It blinks under on state of the unit without operation of any button.
16	SAVE	Energy-saving function (this function is yet unavailable for this unit).
17		Ambient/setting temperature value
18	E-HEATER	Electric auxiliary heating function.
19	BLOW	Blow function.
20		Timing value.
21	QUIET	Quiet function (two types: quiet and auto quiet) (this function is yet unavailable for this unit).

Wired Controller

2 Buttons

2.1 Layout of Buttons



2.2 Functions of Buttons

Table 2.1

No.	Name	Function
1	Enter/Cancel	Function selection and cancellation.
2	▲	①. Running temperature setting of the indoor unit, range:16~30°C. ②. Timer setting, range:0.5-24 hr.
6	▼	
3	Fan	Setting of the high/middle/low/auto fan speed.
4	Mode	Setting of the Cooling/Heating/Fan/Dry/Auto mode of the indoor unit.
5	Function	Switchover among the functions of Turbo/Save/E-heater/Blow etc..
7	Timer	Timer setting.
8	On/Off	Turn on/off the indoor unit
4+2	▲+Mode	Press them for 5s under off state of the unit to enter/cancel the Memory function(If memory is set, indoor unit after power failure and then power recovery will resume the original setting state. If not, the indoor unit is defaulted to be off after power recovery. Memory off is default before delivery.).
3+6	Fan+▼	By pressing them at the same time under off state of the unit, ❄ will be displayed on the wired controller for the cooling only unit, while ☀ will be displayed on the wired controller for the cooling and heating unit.
2+6	▲+▼	Upon startup of the unit without malfunction or under off state of the unit,press them at the same time for 5s to enter the lock state, in which case,any other buttons won't respond the press. Repress them for 5s to quit this state.

3 Operation Instructions

3.1 On/Off

Press On/Off to turn on the unit and turn it off by another press.

Note: The state shown in Fig.3.1.1 indicates the “Off” state of the unit after power on. The state shown in Fig.3.1.2 indicates the “On” state of the unit after power on.

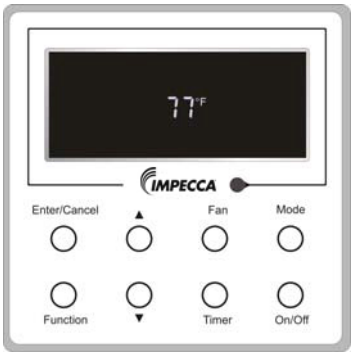


Fig.3.1.1 “Off” State

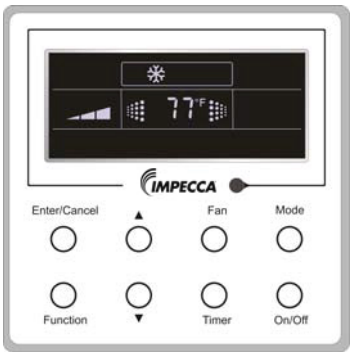
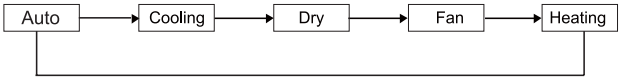


Fig.3.1.2 “On” State

3.2 Mode Setting

Under ON state of the unit, press the Mode to switch the operation modes as the following sequence: Auto–Cooling–Dry–Fan–Heating.



3.3 Temperature Setting

Press ▲or ▼ to increase/decrease the preset temperature. If pressing either of them continuously, the temperature will be increased or decreased by 1°C every 0.5s,as shown in Fig.3.3.1.

In the Cooling, Dry, Fan or Heating mode, the temperature setting range is 16°C~30°C.

In the Auto mode, the setting temperature is unadjustable.

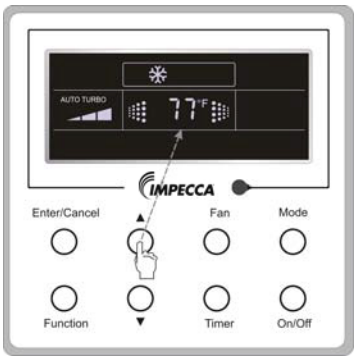


Fig.3.3.1

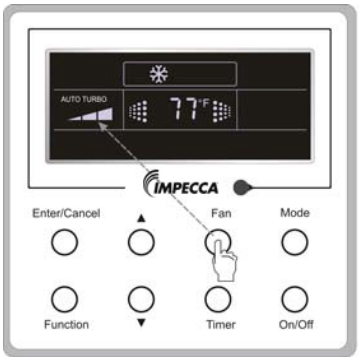
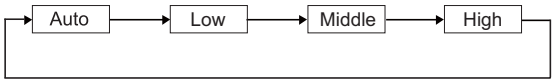


Fig.3.4.1

3.4 Fan Setting

Under the “On” state of the unit, press Fan and then fan speed of the indoor unit will change circularly as shown in Fig.3.4.1.



3.5 Timer Setting

Under on-state of the unit, Press Timer button to set timer off of the unit. Under off-state of the unit, press Timer button to set timer on of the unit in the same way.

• Timer on setting:

Under off-state of the unit without timer setting, if Timer button is pressed, LCD will display xx. Hour,with ON blinking. In this case, press▲ or ▼ button to adjust timer on and then press Timer to confirm.

• Timer off setting:

Under on-state of the unit without timer setting, if Timer button is pressed, LCD will display xx. Hour,with OFF blinking. In this case, press▲ or ▼ button to adjust timer on and then press Timer to confirm.

• Cancel timer:

After setting of timer, if Timer button is pressed, LCD won’t display xx. Hour so that timer setting is canceled.

Timer off setting under the “On” state of the unit is shown as Fig.3.5.1.

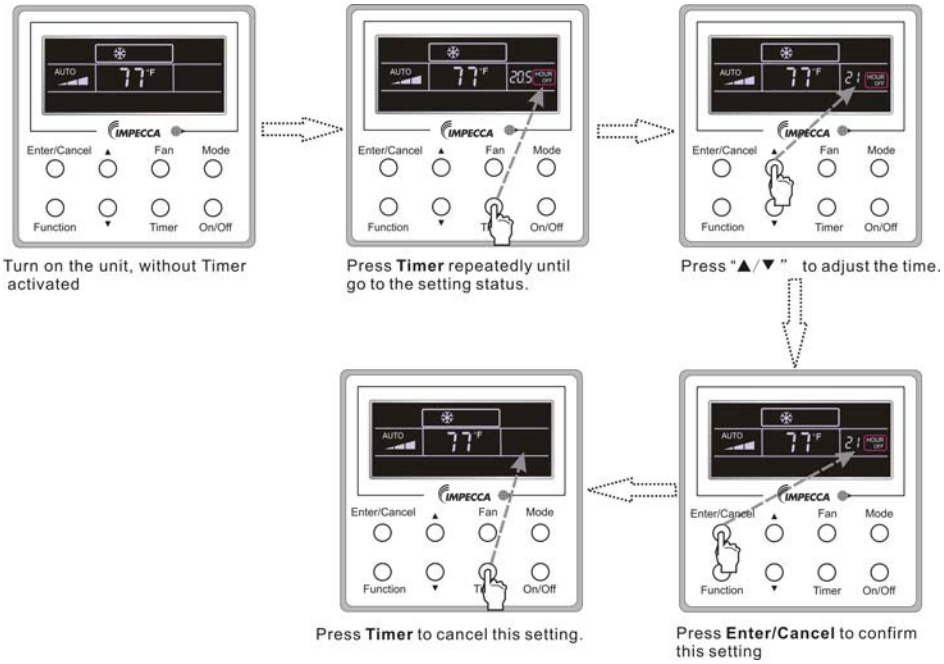


Fig.3.5.1 Timer off Setting under the “On” State of the Unit

Timer on setting under the “Off” state of the unit is shown as Fig.3.5.2.

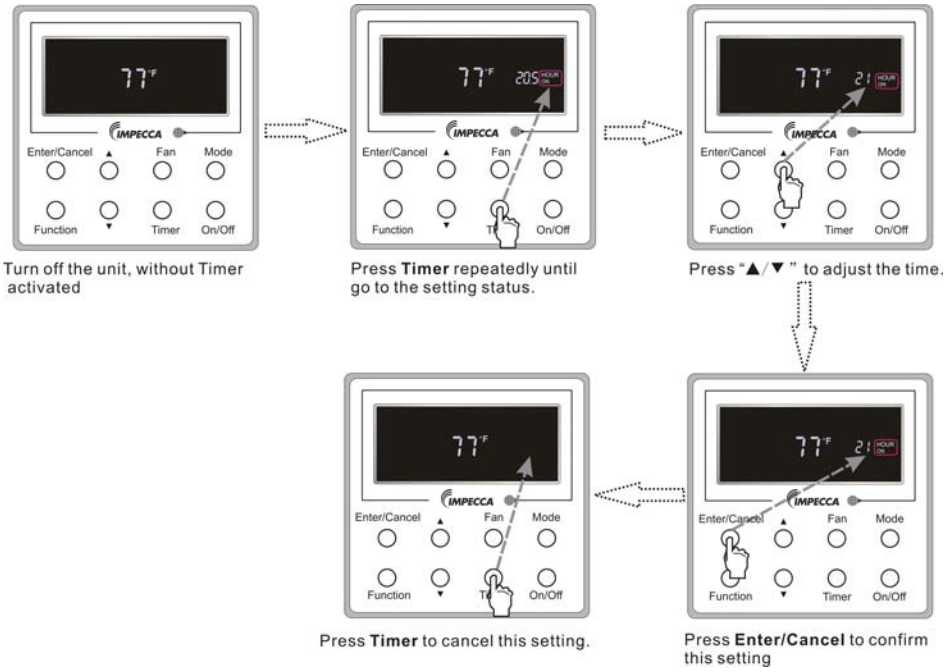


Fig.3.5.2 Timer on Setting under the “Off” State of the Unit

Timer range: 0.5-24hr. Every press of ▲or ▼ will make the set time increased or decreased by 0.5hr. If either of them is pressed continuously, the set time will increase/ decrease by 0.5hr every 0.5s.

3.6 Swing Setting

Swing On: Press Function under on state of the unit to activate the swing function. In this case, will blink. After that, press Enter/Cancel to make a confirmation.

Swing Off: When the Swing function is on, press Function to enter the Swing setting interface,with blinking. After that, press Enter/Cancel to cancel this function. Swing setting is shown as Fig.3.6.1.

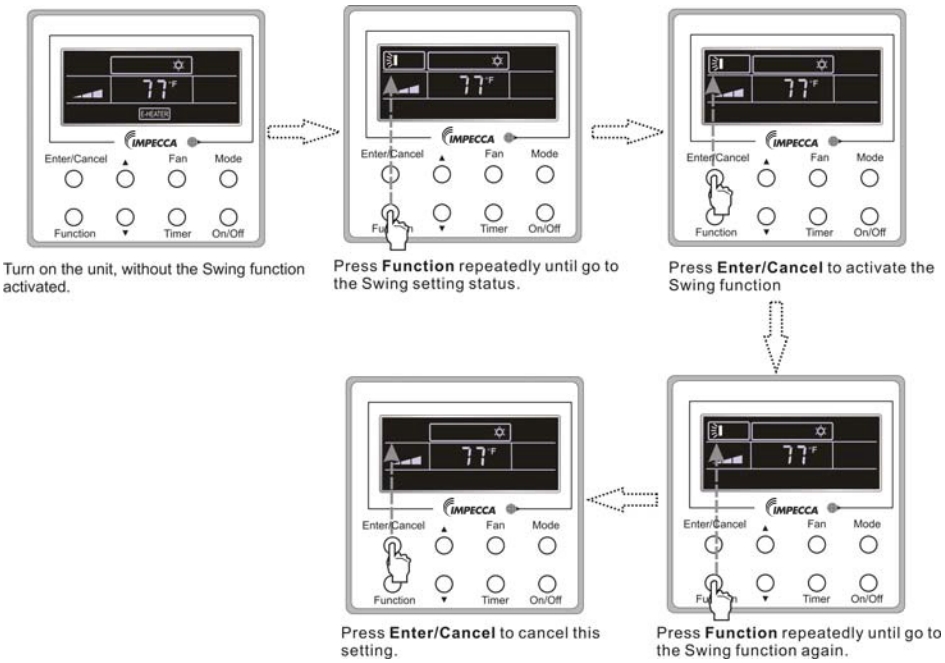


Fig.3.6.1 Swing Setting

Notes:

①. Sleep, Turbo or Blow setting is the same as the Swing setting.

②. After the setting has been done, it has to press the key “Enter/Cancel” to back to the setting status or quit automatically five seconds later.

3.7 Sleep Setting

Sleep on: Press Function under the On state of the unit till the unit enters the Sleep setting state. After that, press Enter/Cancel to confirm this setting.

Sleep off: When the Sleep function is activated, press Function to enter the Sleep setting status. After that, press Enter/Cancel to cancel this function.

In the Cooling or Dry mode, the temperature will increase by 1°C after the unit runs under Sleep1 for 1hr and 1°C after another 1hr.After that, the unit will run at this temperature.

In the Heating mode, the temperature will decrease by 1°C after the unit runs under Sleep 1 for 1hr and 1°C after another 1hr. After that, the unit will run at this temperature.

Sleep setting is shown as Fig.3.7.1.

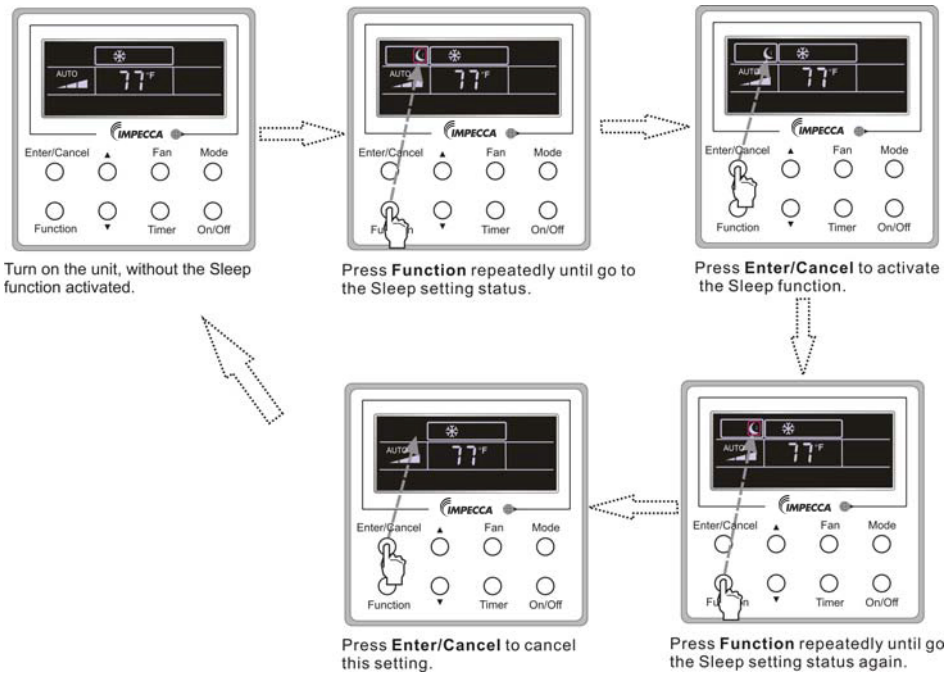


Fig.3.7.1. Sleep Setting

3.8 Turbo Setting

Turbo function: The unit at the high fan speed can realize quick cooling or heating so that the room temperature can quickly approach the setting value.

In the Cooling or Heating mode, press Function till the unit enters the Turbo setting status and then press Enter/Cancel to confirm the setting.

When the Turbo function is activated, press Function to enter the Turbo setting status and then press Enter/Cancel to cancel this function.

Turbo function setting is as shown in Fig.3.8.1.

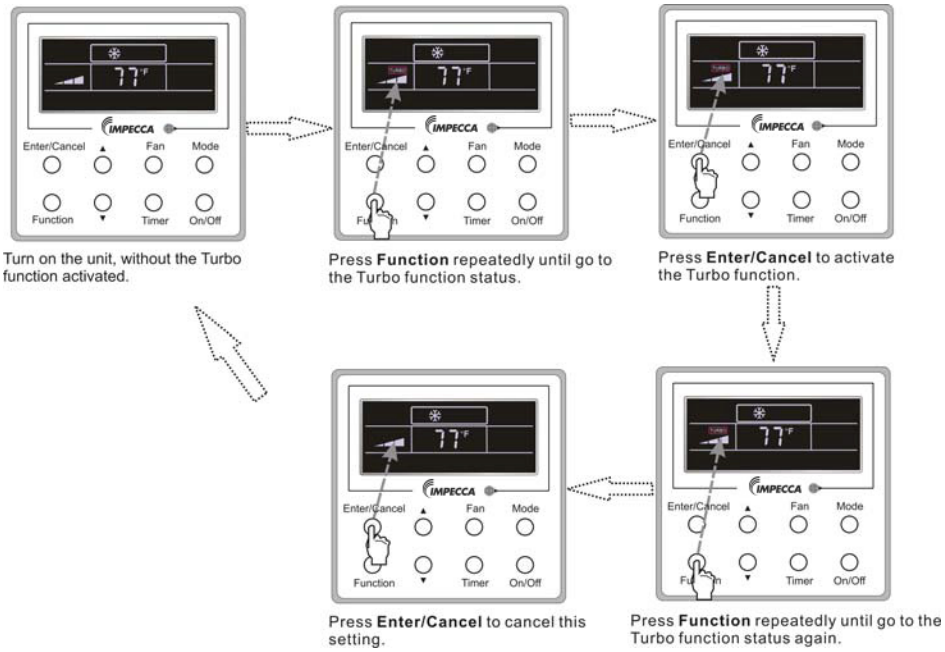


Fig.3.8.1 Turbo Setting

3.9 E-heater Setting

E-heater (auxiliary electric heating function): In the Heating mode, E-heater is allowed to be turned on for improvement of efficiency.

Once the wired controller or the remote controller enters the Heating mode, this function will be turned on automatically.

Press Function in the Heating mode to enter the E-heater setting interface and then press Enter/Cancel to cancel this function.

Press Function to enter the E-heater setting status, if the E-heater function is not activated, and then press Enter/Cancel to activate it.

The setting of this function is shown as Fig.3.9.1 below:

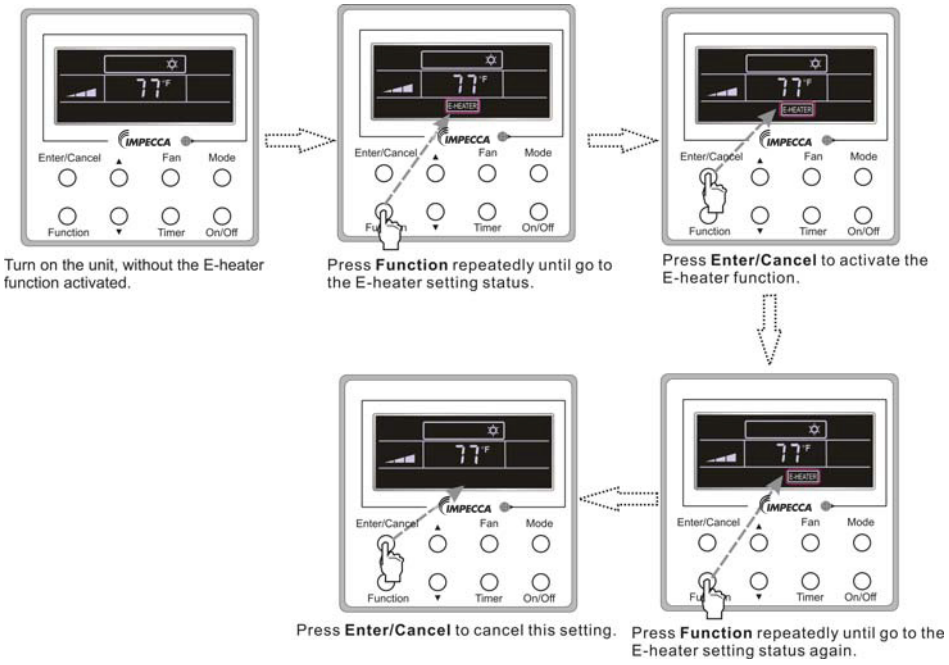


Fig.3.9.1 E-heater Setting

3.10 Blow Setting

Blow function: After the unit is turned off, the water in evaporator of indoor unit will be automatically evaporated to avoid mildew.

In the Cooling or Dry mode, press Function till the unit enters the Blow setting status and then press Enter/Cancel to active this function.

When the Blow function is activated, press Function to the Blow setting status and then press Enter/Cancel to cancel this function.

Blow function setting is as shown in Fig.3.10.1

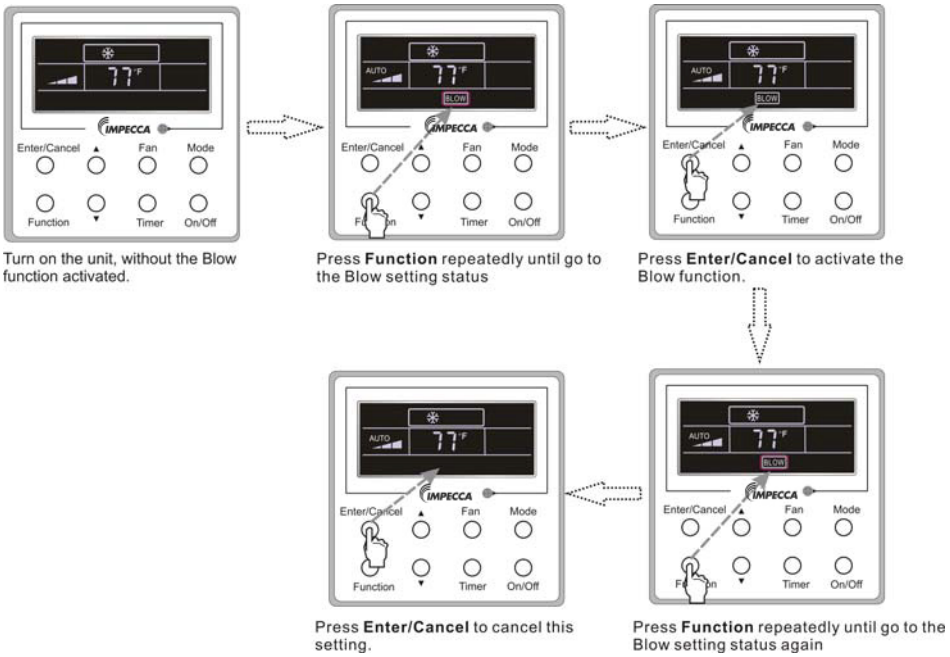


Fig.3.10.1 Blow Setting

Notes:

①. When the Blow function is activated, if turning off the unit by pressing On/Off or by the remote controller, the indoor fan will run at the low fan speed for 2 min, with “BLOW” displayed on the LCD. While, if the Blow function is deactivated, the indoor fan will be turned off directly.

②. Blow function is unavailable in the Fan or Heating mode.

3.11 Other Functions

a. Lock

Upon startup of the unit without malfunction or under the “Off” state of the unit, press ▲ and ▼ at the same time for 5s till the wired controller enters the Lock function. In this case, LCD displays .

After that, repress these two buttons at the same time for 5s to quit this function.

Under the Lock state, any other button press won’t get any response.

b. Memory

Memory switchover: Under the “Off” state of the unit, press Mode and ▲ at the same time for 5s to switch memory states between memory on and memory off. When this function is activated, Memory will be displayed. If this function is not set, the unit will be under the “Off” state after power failure and then power recovery.

Memory recovery: If this function has been set for the wired controller, the wired controller after power failure will resume its original running state upon power recovery. Memory contents: On/Off, Mode, set temperature, set fan speed and Lock function.

4 Installation and Dismantlement

4.1 Connection of the Signal Line of the Wired Controller

- Open the cover of the electric control box of the indoor unit.
- Let the single line of the wired controller through the rubber ring.
- Connect the signal line of the wired control to the 4-pin socket of the indoor unit PCB.
- Tighten the signal wire with ties.
- The communication distance between the main board and the wired controller can be up to 20 meters (the standard distance is 8 meters)

4.2 Installation of the Wired Controller

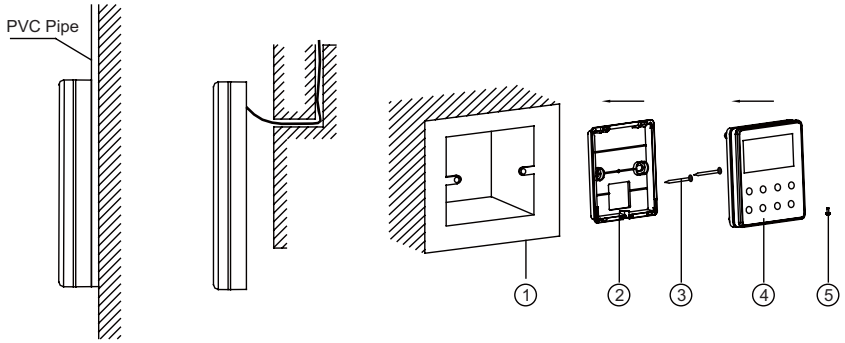


Fig.4.1 Accessories for the Installation of the Wired Controller

Table 4.1

No.	1	2	3	4	5
Name	Socket box embedded in the wall	Soleplate of the Wired Controller	Screw M4X25	Front Panel of the Wired Controller	Screw ST 2.9X6

Wired Controller

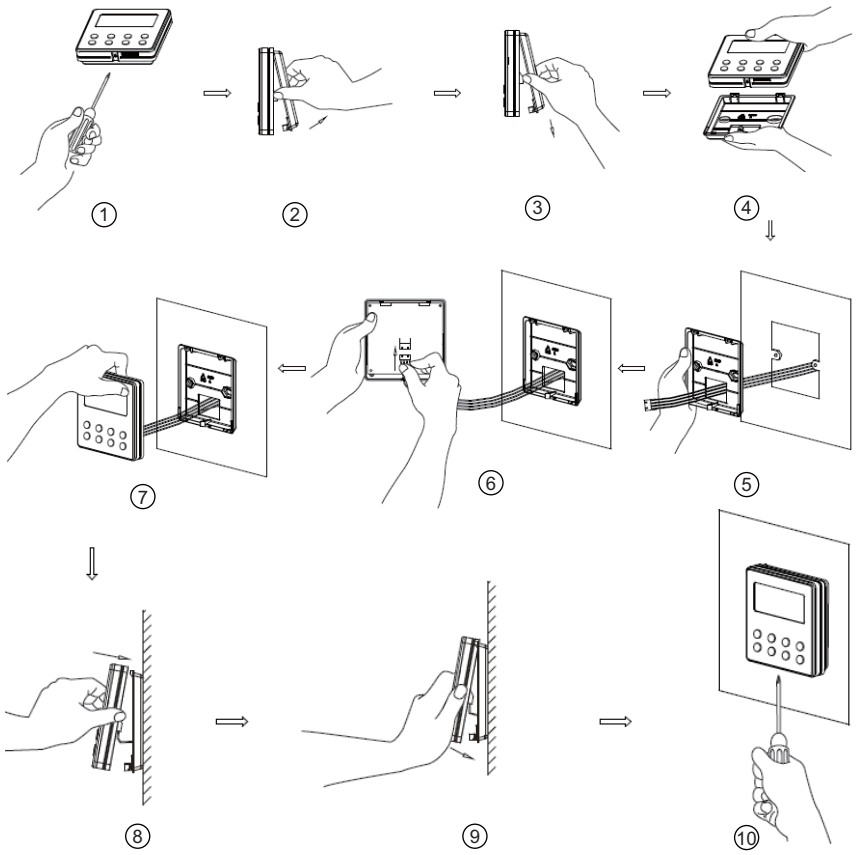


Fig.4.2

Fig.4.2 shows the installation steps of the wired controller, but there are some issues that need your attention.

1) Prior to the installation, please firstly cut off the power supply of the wire buried in the installation hole, that is, no operation is allowed with electricity during the whole installation.

2) Pull out the four-core twisted pair line from the installation holes and then let it go through the rectangular hole behind the soleplate of the wired controller.

3) Stick the soleplate of the wired controller to the wall over the installation hole and then fix it with screws M4X25.

4) Insert the four-core twisted pair line into the slot of the wired controller and then buckle the front panel and the soleplate of the wired controller together.

5) Finally, fix the front panel and the soleplate of the wired controller tightly by screws ST2.9X6.

⚠CAUTION!

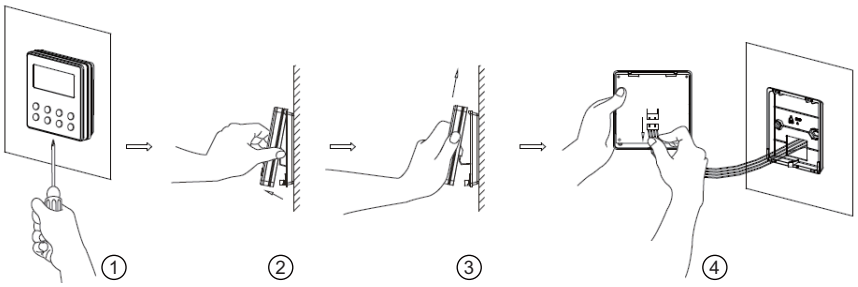
Please pay special attention to the followings during the connection to avoid the malfunction of the air conditioning unit due to electromagnetic interference.

①. Separate the signal and communication lines of the wired controller from the power cord

and connection lines between the indoor and outdoor unit, with a minimum interval of 20cm, otherwise the communication of the unit will probably work abnormally.

②. If the air conditioning unit is installed where is vulnerable to electromagnetic interference,then the signal and communication lines of the wired controller must be the shielding twisted pair lines.

4.3 Dismantlement of the Wired Controller



5 Errors Display

If there is an error occurring during the operation of the system, the error code will be displayed on the LCD, as show in Fig.5.1. If multi errors occur at the same time, their codes will be displayed circularly.

Note: In event of any error, please turn off the unit and contact the professionally skilled personnel.

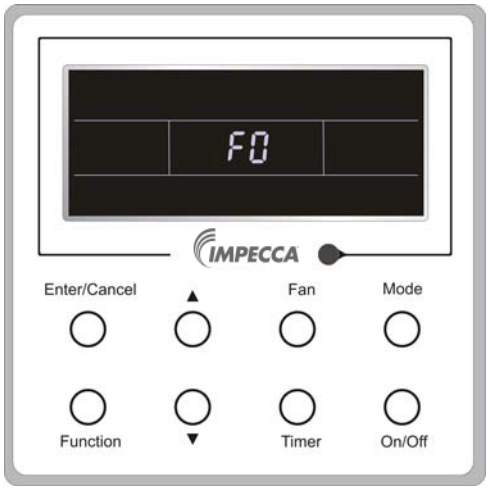


Fig.5.1

Wired Controller

Table 5.1 Meaning of Each Error

Error	Error Code	Error	Error Code
Return air temperature sensor open/ short circuited	F1	Drive board communication error	P6
evaporator temperature sensor open/ short circuited	F2	Compressor overheating protection	H3
Indoor unit liquid valve temperature sensor open/short circuited	b5	Indoor and outdoor units unmatched	LP
Indoor gas valve temperature sensor open/ short circuited	b7	Communication line misconnected or expansion valve error	dn
IPM temperature sensor open/short circuited	P7	Running mode conflict	E7
Outdoor ambient temperature sensor open/ short circuited	F3	Pump-down	Fo
Outdoor unit condenser mid-tube temperature sensor open/short circuited	F4	Jumper error	C5
Discharge temperature sensor open/ short circuited	F5	Forced defrosting	H1
Indoor and outdoor communication error	E6	Compressor startup failure	Lc
DC bus under-voltage protection	PL	High discharge temperature protection	E4
DC bus over-voltage protection	PH	Overload protection	E8
Compressor phase current sensing circuit error	U1	Whole unit over-current protection	E5
Compressor demagnetization protection	HE	Over phase current protection	P5
PFC protection	Hc	Compressor desynchronizing	H7
IPM Temperature Protection	P8	IPM Current protection	H5
Over-power protection	L9	Compressor phase loss/reversal protection	Ld
System charge shortage or blockage protection	F0	Frequency restricted/reduced with whole unit current protection	F8
Capacitor charging error	PU	Frequency restricted/reduced with IPM current protection	En
High pressure protection	E1	Frequency restricted/reduced with high discharge temperature	F9
Low pressure protection	E3	Frequency restricted/reduced with anti-freezing protection	FH
Compressor stalling	LE	Frequency restricted/reduced with overload protection	F6
Over-speeding	LF	Frequency restricted/reduced with IPM temperature protection	EU
Drive board temperature sensor error	PF	Indoor unit full water error	E9
AC contactor protection	P9	Anti-freezing protection	E2
Temperature drift protection	PE	AC input voltage abnormal	PP
Sensor connection protection	Pd	Whole unit current sensing circuit error	U5
DC bus voltage drop error	U3	4-way valve reversing error	U7
Outdoor fan 1 error protection	L3	Motor stalling	H6
Outdoor fan 2 error protection	LA	PG motor zero-crossing protection	U8

CUSTOMER SUPPORT

Before contacting customer support, please see the troubleshooting guide above.

Visit our website to contact us, find answers to Frequently Asked Questions, and for other resources which may include an updated version of this user's guide.

WWW.IMPECCA.COM

If you wish to contact us by phone, please be sure to have your model number and serial number ready and call us between 9:00am and 6:00pm ET, at +1 866-954-4440.

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