Installation, Operation & Maintenance Manual

FREE STANDING SPLITS
Series MUCO R410A

Mod. MUCO-36-HG - Cod. CL 20 756
Mod. MUCO-48-HG - Cod. CL 20 757
Mod. MUCO-70-HG - Cod. CL 20 758

MUNDOCLIMA®

Contents

Safety Awareness

Important!

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

For safe installation and trouble-free operation, you must:
- Carefully read this instruction booklet before beginning.
- Follow each instruction or repair step exactly as shown
- Observe all local, state, and national electrical codes.
- Pay close attention to all danger, warning and caution notices given in this manual.

Symbols alert


Electrical


Safety / Alert

If necessary, Get help
These instructions are all you need for most installation sites and maintenance conditions. If you require help for a special problem, contact our sales/service outline or your certified dealer for additional instructions.

In case of improper installation
The manufacturer shall in no way be responsible for improper installation or maintenance service, including failure to follow the instructions in the document.

SPECIAL PRECAUTIONS
When wiring

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

General installation Guideline

No.	Installation works	Descriptions
1	Preparation of tools and installation parts	Preparation of installation
2	Flaring the pipes	To insert the flare nuts, mounted on the connection parts of both indoor and outdoor unit, onto the copper pipes.
3	Pipe bending	
4	Connection of installation parts (elbows, socket etc)	Connection of long piping
5	Tighten the flare nut (outdoor)	Connecting the pipings of the outdoor unit.
6	Blowing the pipings	To remove dust and scale in working.
7	Tighten the flare nut (indoor)	Connecting the pipings of the indoor unit.
8	Check a gas-leakage of the connecting part of the pipings.	
9	Air purging of the piping and indoor unit	The air which contains moisture and which remains in the refrigeration cycle may cause a malfunction on the compressor
10	Open the 3-way (liquid side) and 3-way (gas side) valves.	
11	Form the pipings	To prevent heat loss and sweat
12	Checking the drainage (indoor unit)	To ensure if water flow drain hose of indoor unit.
13	Connecting the cable between outdoor and indoor unit	Preparation for operation
14	Connecting the main cable to outdoor unit	
15	Supply the power to the crankcase heater (Before operating the unit) Select model	To prevent the liquid back to the compressor. (Heat pump only)
16	Cooling operation, Heating operation (Use the remote control or display of the indoor unit)	

Preparation of Installation Parts and Tools

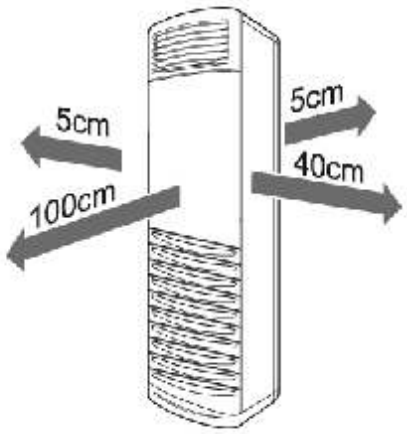
No.	Installation Parts, Tools	Use
1	Flaring tool (Ø6,35 - Ø 19,05)	Flaring the pipes
2	Remear	Remove burrs from cut edges of pipes.
3	Pipe cutter (MAX 35mm Copper pipe)	Cutting the pipings
4	Allen Key (H5 - 1/4", 1/2",5/8" & H8 - 3/4")	To open the service valve
5	Pipe bender	Bending the pipings
6	Leak detector	Check a gas-leakage of connecting part of the pipings
7	Manifold gauge	To measure the pressure, to charge the refrigerant
8	Charge-nipple	To connect the Refrigerant Vessel
9	Vacuum pump	To remove the air in the pipe.
10	Charge cylinder balance	To measure the refrigerant amount
11	Refrigerant Vessel (Refrigerant R-22)	Gas charge Air purge Cleaning the pipe
12	Spanner	To tighten the connecting parts of the pipings
13	Monkey spanner	
14	Driver(⊕, ⊖)	
15	Pliers (150mm)	Cutting the wires
16	Tapeline	To measure the length
17	Core drill	To make holes through the concrete wall and blocks
18	Voltmeter, Amperemeter, Clampmeter	To measure the current and voltage
19	Insulation resistance tester	To measure the insulation resistance
20	Glass thermometer	To measure the intake and outlet air temperature of the indoor unit
21	Copper tubes	To use the connecting pipings
22	Insulation material	To cover the connecting pipings
23	Tape	To finish the connecting pipings
24	Electrical Leakage Breaker	To shut off the main power
25	Cable	To connect the cable from outdoor unit to indoor unit
26	Drain hose sockets, elbows	To remove the condensing water

Location of Indoor, Outdoor Unit Installation

1. Selection of the best location

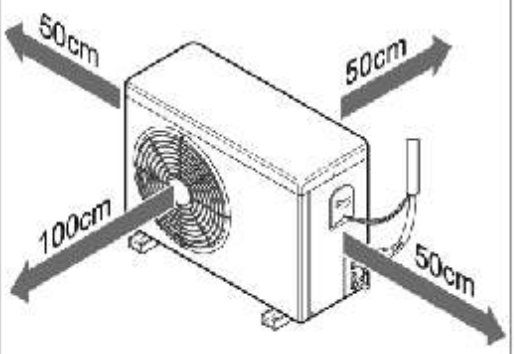
1) Indoor unit

- There should not be any heat source or steam near the unit.
- There should not be any obstacles to prevent the air circulation.
- A place where air circulation in the room will be good.
- A place where drainage can be easily obtained.
- A place where noise prevention is taken into consideration.
- Do not install the unit near the door way.
- Ensure the spaces indicated by arrows from the wall, ceiling, fence, or other obstacles.



2) Outdoor unit

- If an awning is built over the unit to prevent direct sunlight or rain exposure, be careful that heat radiation from the condenser is not restricted.
- There should not be any animals or plants which could be affected by discharged hot air.
- Ensure the space indicated by arrows from the wall, ceiling, fence, or other obstacles.



Indoor Unit installation

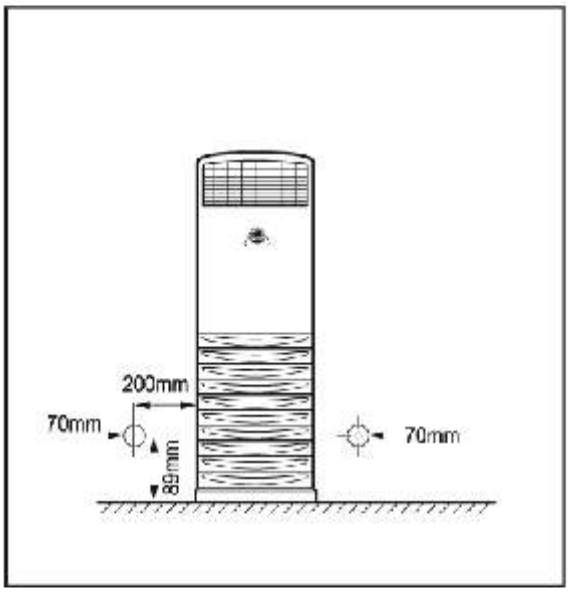
① The mounting floor should be strong and solid enough to prevent it from vibration.

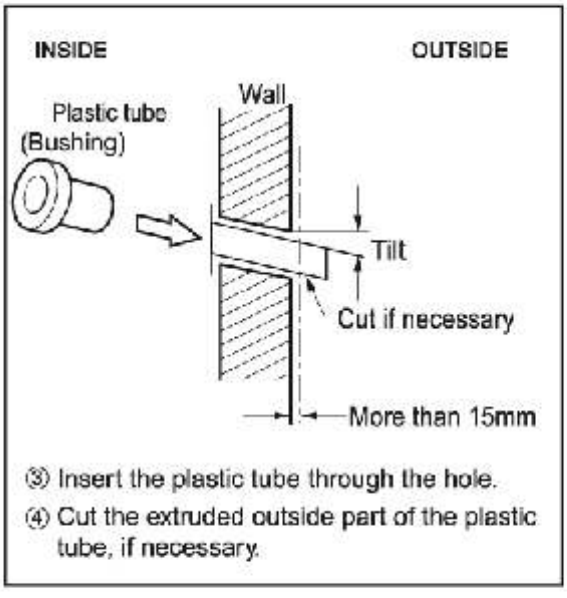
② Drill the piping hole with 70mm diameter hole-core drill at either the right or the left of indoor unit. The hole should be sightly slant to the out-door side.

Outdoor unit Installation

① Install the outdoor unit on the concrete or any solid base securely and horizontally by securing it with bolts (Ø12mm) and nuts.

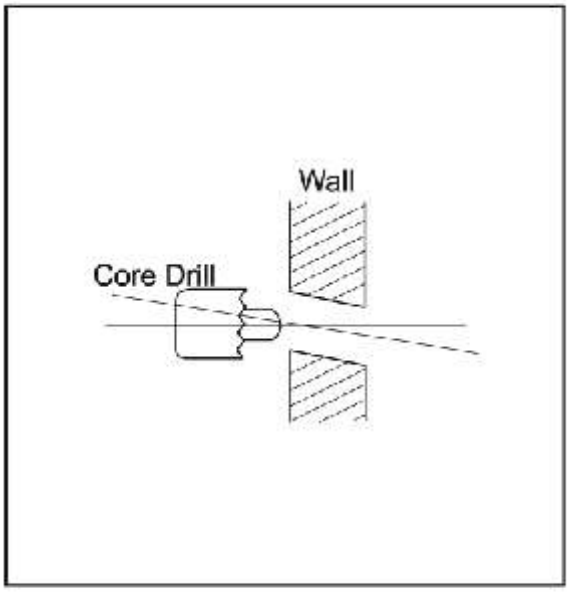
② If there is any vibration transmitted to the build-ing, mount the rubber underneath the outdoor unit.





③ Insert the plastic tube through the hole.

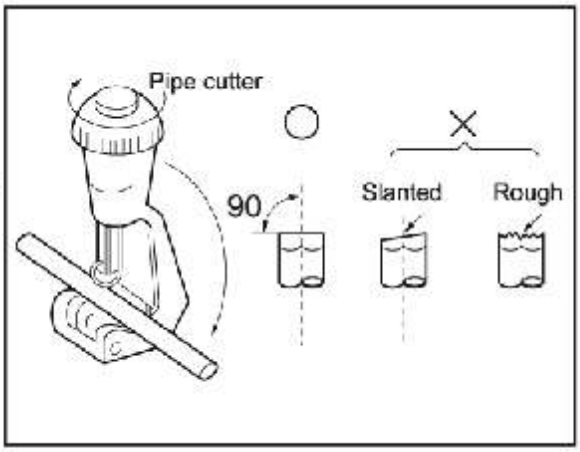
④ Cut the extruded outside part of the plastic tube, if necessary.



1. Preparation of piping

① **Cut the pipes and the cable**

- Use the accessory piping kit or the pipes purchased locally, confirming to refrigeration grade
- Measure the distance between the indoor and the outdoor unit.
- Cut the pipes a little longer than measured distance.
- Cut the cable 1.5m longer than the pipe length.

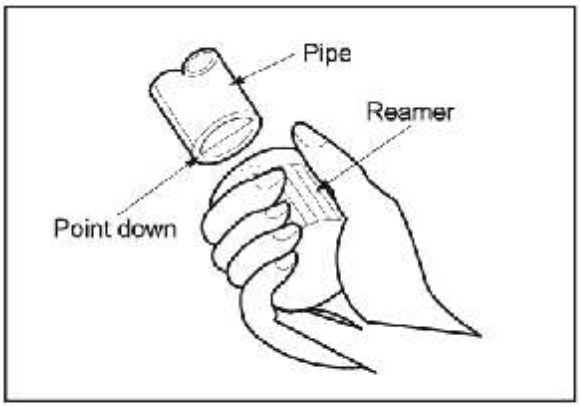


② **Remove burrs.**

- Remove burrs from cut edges of pipes.
- Turn the pipe end down to avoid the metal powder entering the pipe.

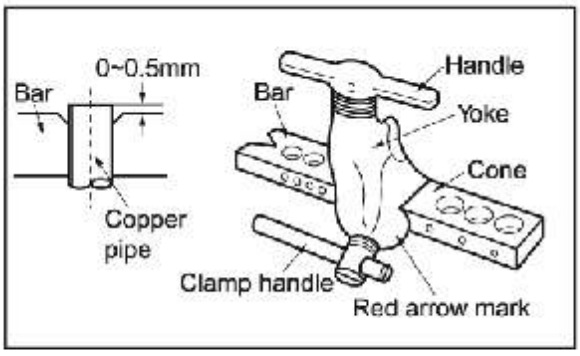
Caution:

If burrs are not removed, they may cause a gas leakage.

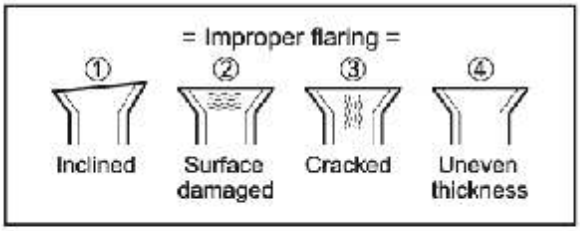


③ **Flaring the pipes.**

- Insert the flare nuts, mounted on the connection ports of both indoor and outdoor unit, onto the copper pipes. Some refrigerant gas may leak, when the flare nuts are removed from the indoor unit, as some gas is charged to prevent the inside of the pipe from rusting.
- Fit the copper pipe end into the Bar of flare tool about 0~0.5mm higher. (See illustration)
- Flare the pipe ends.



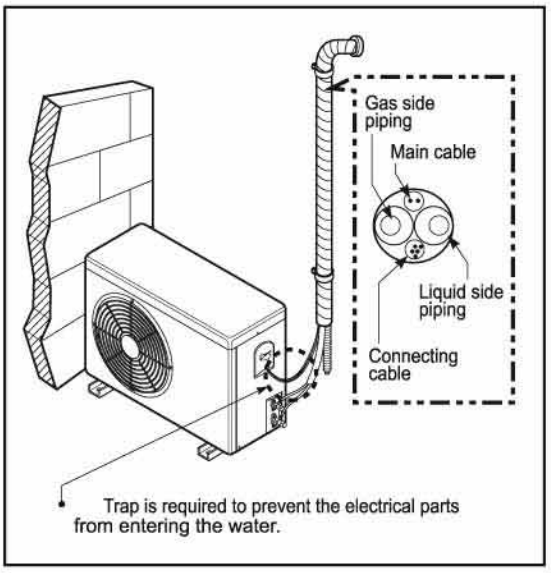
④ **Tape the flaring part to protect it from dust or damages.**



2. Form the Piping

① **Wrap the connecting port of indoor unit with the insulation material and secure it with two Plastic Bands (for the right Piping).**

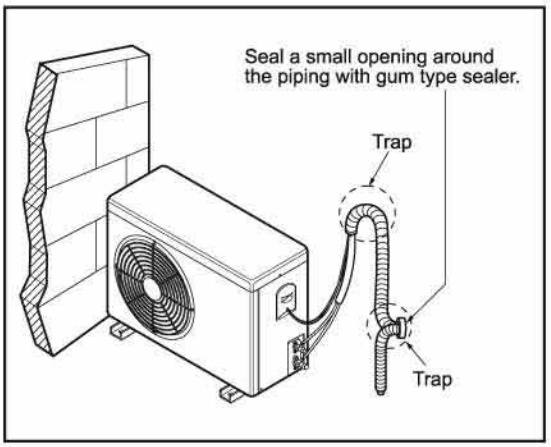
• If you connect an additional drain hose, the end of the drain-outlet should be water, and fix it on the wall to avoid swinging in the wind.)



In case the outdoor unit is installed below position of the indoor unit.

② **Tape the Piping, and Connecting Cable from down to up.**

③ **From the piping gathered by taping along the exterior wall fix it on the wall by saddle or equivalent.**

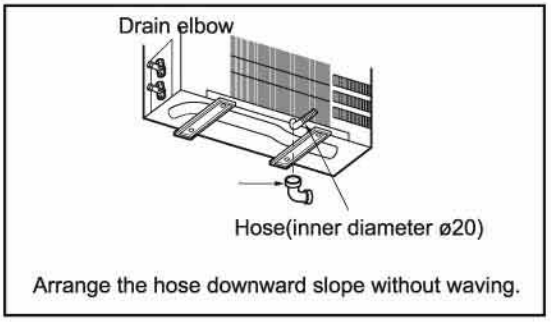


In case the outdoor unit is installed upper position of the indoor unit.

① **Tape the piping and connecting cable from down to up.**

② **In order to prevent water from entering the room, tape the piping from a trap.**

③ **Fix the piping onto the wall with saddle or bracket.**



Drain water treatment of outdoor Unit(Heat Pump Only)

① **When using the drain elbow hose, use a mount of 3cm or higher.**

Note:

Minimum 0.8 mm wall thickness interconnecting pipe to be used for R410A refrigerant type units as this unit operates 1.6 times higher pressure than R22 refrigerant charged unit's pressure.

Piping length:

The total length of pipe is not more than 10 meters for Rotary and 25 meters for reciprocating compressor models

The maximum vertical distance is not more 5 meter for Rotary and 18 meters for reciprocating compressor models.

The maximum vertical distance is not more than 5 meters for Rotary and 20 meters for reciprocating compressor models

3. Connection of piping

① **Move the indoor tubing and drain hose to the hole**

- Remove tubing holder and pull the tubing out of the chassis.

② **Replace the tubing holder into original position**

③ **Route the tubing and the drain hose straight backwards.**

④ **Insert the connecting cable into the indoor unit through the hole.**

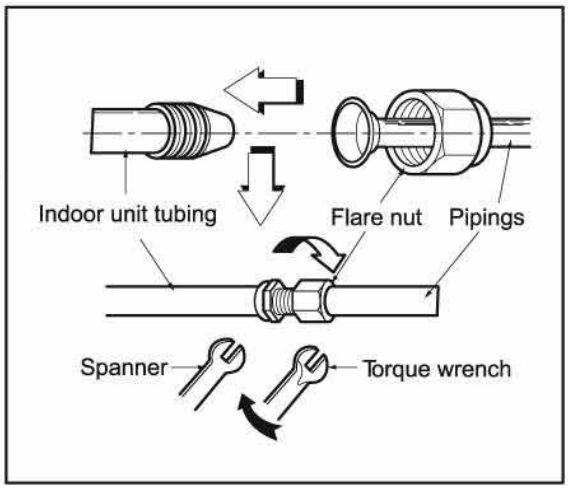
- Do not connect the cable to the indoor unit
- Make a small loop with the cable for easy connection later.

⑤ **Tape the tubing and the connecting cable.**

⑥ **Indoor unit installation.**

⑦ **Connecting the pipings to the indoor unit.**

- Align the center of the pipings and suffciently tighten the flare nut with fingers.
- Finally, tighten the flare nut with torque wrench until the wrench clicks.
  When tightening the flare nut with torque wrench, ensure the direction for tightening follows the arrow on the wrench.



PIPE SIZE	TORQUE
3/8"	4.2 Kg·m
1/2"	5.5 Kg·m
5/8"	5.5 Kg·m
3/4"	6.5 Kg·m
1/4"	2.0 Kg.m

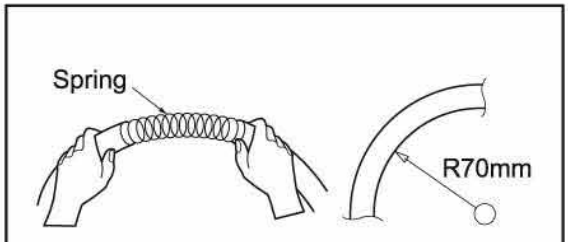
4. Precautions in bending

① **If it is necessary (locally purchased) to bend or stretch the tubing, use the spring which is attached to the tubing in stead of pipe bender.**

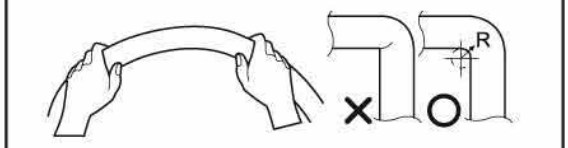
- Please make a careful notice to make a smooth line.
- Hold the tubing with your two hands closely and then bend or stretch it slowly not to make any crack.
- Remember that the radius (R) should not exceed 70mm (Refer to Fig. 1)

② **Do not repeat the bending process to prevent the tubing from cracking or crushing.**

③ **Keep in mind that the bending part should not be cracked and make the radius (R) as long as possible (Refer to Fig. 2)`**



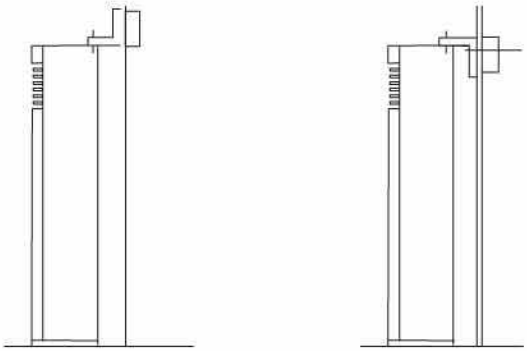
(Fig. 1)

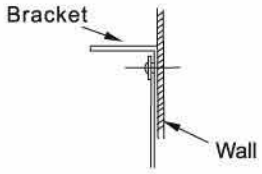


(Fig. 2)

Indoor Units

The machine can be directly fixed on the wall that must be solid enough.
Keep the machine on a proper foundation. Fix the factory supplied bracket to the wall and the unit as shown below.

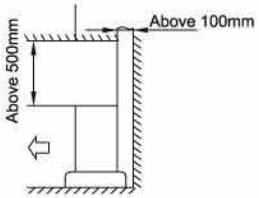




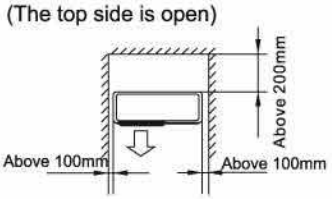
Outdoor Unit

Single unit mounting

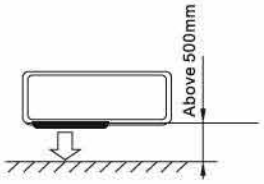
1 When there is obstruction above the unit, if we can keep the space as shown in the figure, this position is still feasible.



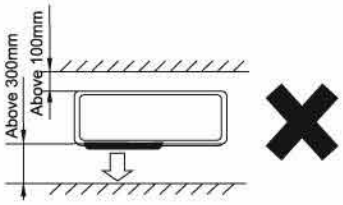
2 When the front side (air outlet) is open, if we can keep the space as shown in the figure, this position is still feasible even if there is obstruction in other three sides. (The top side is open)



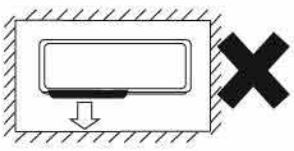
3 If there is obstruction at front side, the backside, top side and flank sides shall be kept open.



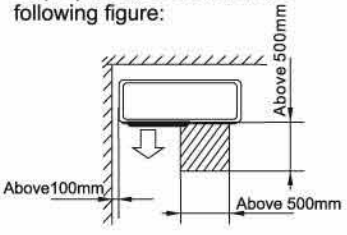
4 When there is obstruction at both front side and backside, please don't choose the following location.



5 When there is obstruction in all four directions. Even if the top side is open, the unit can not be installed there.



6 While installing the outdoor unit, enough maintenance space shall be prepared, as shown in the following figure:



1) Connecting pipings to outdoor unit

① **Align the center of the pipings and sufficiently tighten the flare nut with fingers.**

② **Finally tighten the flare nut with torque wrench until the wrench clicks.**

- When tightening the flare nut with torque wrench, ensure the direction for tightening follows the arrow on the wrench.

PIPE SIZE	TORQUE
3/8"	4.2 Kg·m
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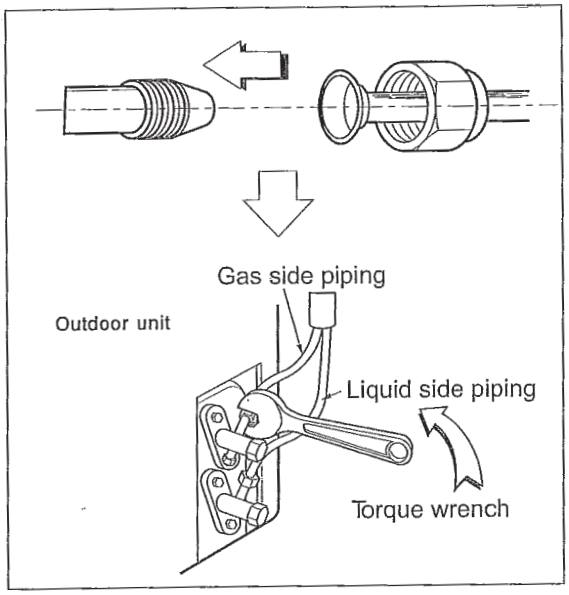
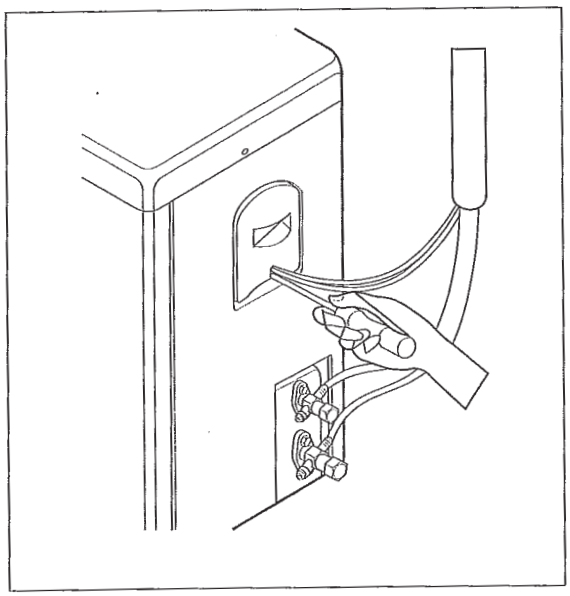


2) Connecting cable to outdoor unit

① **Open the control board cover from the outdoor unit by removing the screws.**

② **Connect wires to the terminals on the control board individually and secure the cables onto the control board with clamp.**



⚠ CAUTION

Perform grounding

- This product should be grounded.
- Defective grounding could cause an electric shock.

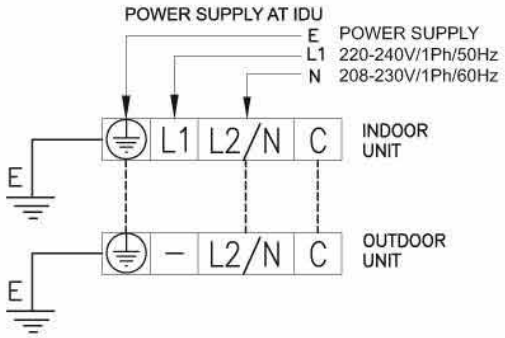
Electrical Wiring

Important Notes:

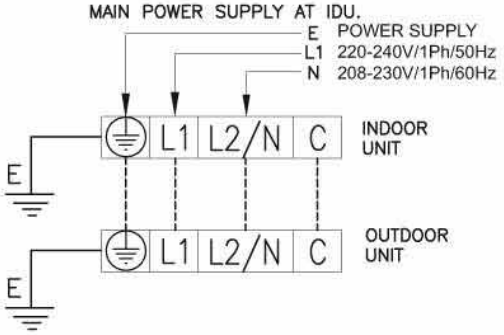
1. The air conditioner should use separate power supply with rated voltage
2. The external power supply to the air conditioner should have grounded wiring, which is linked to the ground wiring of the indoor and outdoor unit.
3. Qualified persons should do the wiring work according to circuit drawing.
4. Do not turn on the power until a proper check is made after wiring
5. The integrity of all electrical connections should be verified at least twice during the first year of operation.
6. When replacing any components such as fuses, contactors, cables or relays, use only the exact type, size, voltage and current rating of the component as furnished from the factory.
7. While removing/fixing supply cord, loosen the top clamp of cord anchorage,route the cord and fix the top clamp again. Length of the earth conductor should be more than supply conductor for safety incase of cord slippage.

Field Wiring Diagrams

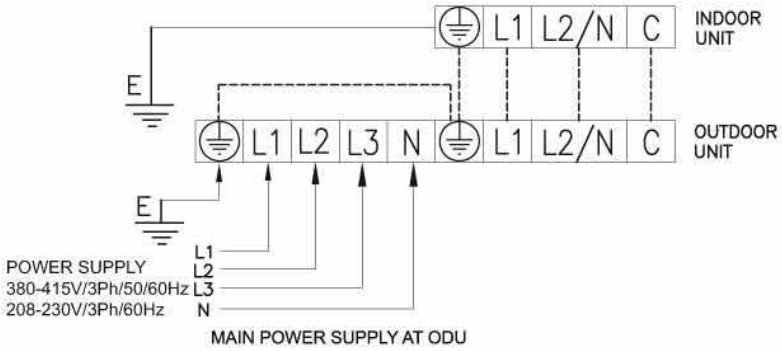
Single phase cool only



Single phase cool only with contactor



Three phase cool only

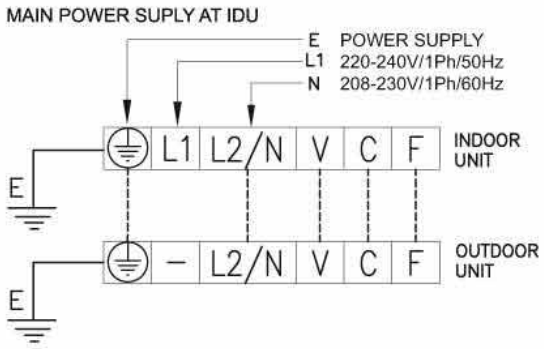


LEGEND

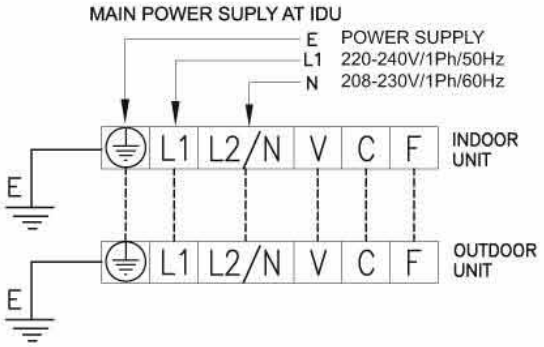
C	-------	Compressor
N	-------	Neutral
L1	-------	Phase 1 / Line 1
L2	-------	Phase 2 / Line 2
L3	-------	Phase 3 / Line 3
⏚	-------	Earth

Field Wiring Diagrams

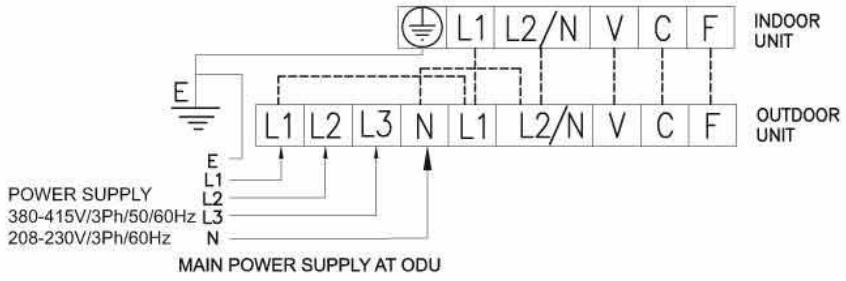
Single Phase Heat Pump



Single Phase Heat Pump with contactor



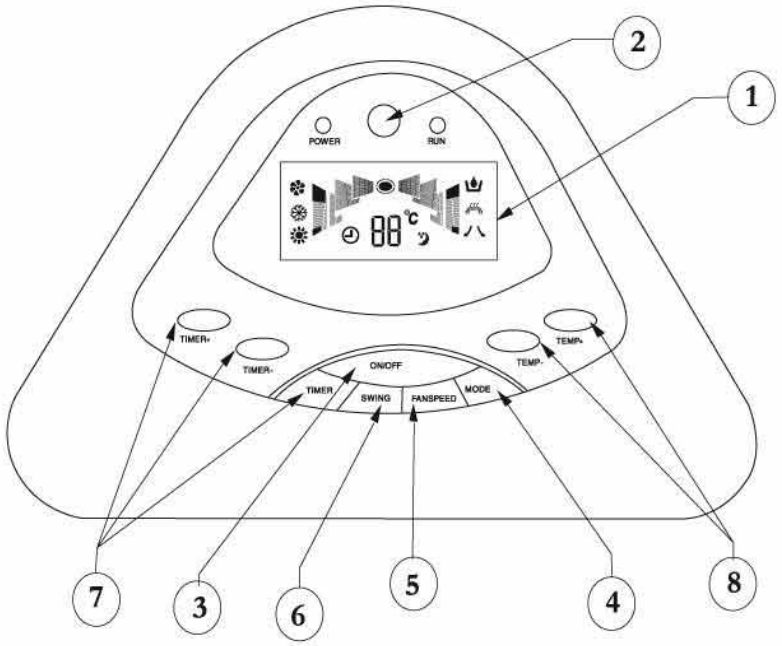
Three Phase Heat Pump



LEGEND

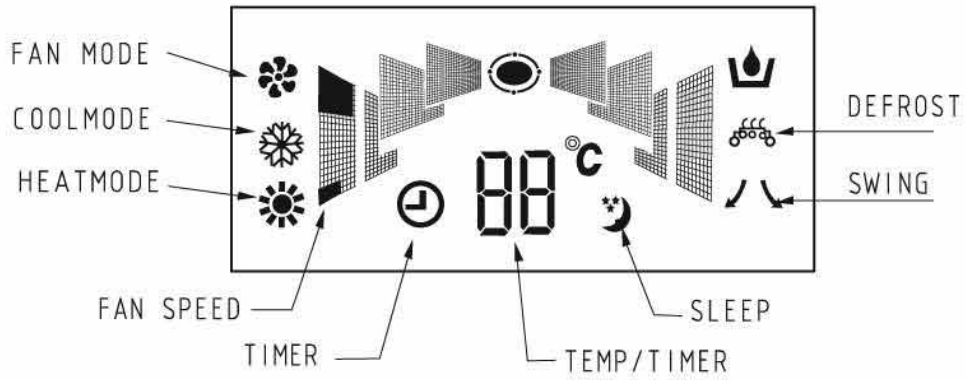
C	-------	Compressor
N	-------	Neutral
L1	-------	Phase 1 / Line 1
L2	-------	Phase 2 / Line 2
L3	-------	Phase 3 / Line 3
⏚	-------	Earth
V	-------	4 Way Valve
F	-------	Outdoor Fan

Control Panel:



1. Display Module and Icons:

Different Icons are provided for mode, fan speed, swing, timer and Defrost.



2. IR Receiver:

This is the sensing area for receiving signals from remote handset.
This area should not be covered by any materials.

3. ON/OFF Button:

Pressing this button will turn ON or OFF the unit.
RUN LED will be ON if the unit is ON.
RUN LED will be OFF if the unit is OFF.
Power LED will be ON whenever the main power is ON

*** Position of these LEDs may be different for different models**

4. Mode Selection:

Pressing the MODE button will select the Cool Mode operation, Fan Mode operation and the Heat mode operation. Sequence will be as follows:

COOL → FAN → HEAT

Respective Mode Icon will glow to indicate the operation mode selected.

5. Fan Speed selection:

Pressing this button will advance the fan speed in the following sequence:

LOW → MEDIUM → HIGH → AUTO

In FAN mode Auto Speed is not available and will works in following sequence

LOW → MEDIUM → HIGH

In auto speed all speed icons will blink one by one
Respective speed icons will glow as shown

6. Swing Button

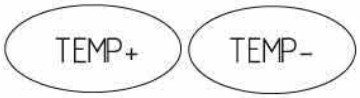
Pressing the SWING button will activate or deactivate the air swing operation. Swing Icon will glow when it is ON

7. Timer setting:

TIMER function is to turn the unit ON or OFF automatically after a certain number of hours.
Pressing on TIMER button will show the time left for the unit to turn ON or OFF. Next press will cancel the timer set.
To set the timer press on the TIMER button and press TIMER+ button to increase the timer setting in 1 hour steps from 1 to 24 Hours. Press TIMER- button to decrease the timer setting. If TIMER key is not pressed for 5s continuously, the display will returns to temperature display.

* When the Timer is setting from Hand set, timer can increase/ decrease by 1 minute and it will work according the set on handset. But it will not display on control panel display, (Timer display will be in hours only) Timer Icon will be ON

8. Temperature Setting:



UP and DOWN buttons are used to set the temperature.
Press TEMP+ button to increase the set temperature by 1°C.
Press TEMP- button to decrease the set temperature by 1°C.
Set temperature available from 16°C to 30°C.
Temperature setting will be disabled in FAN mode.

9. Error Indications.

Normally, this display will show the room temperature.
Display will show the set temperature when TEMP+/- button is pressed.
Display will blink with “E1" when room sensor is failed.
Display will blink with “E2" when indoor coil sensor is failed.
Display will blink with "E3" when outdoor coil sensor is failed.
Display will blink with "E4" for Compressor/4way valve failure.
Display will blink with "E5" for communication failure (Power board to display board)

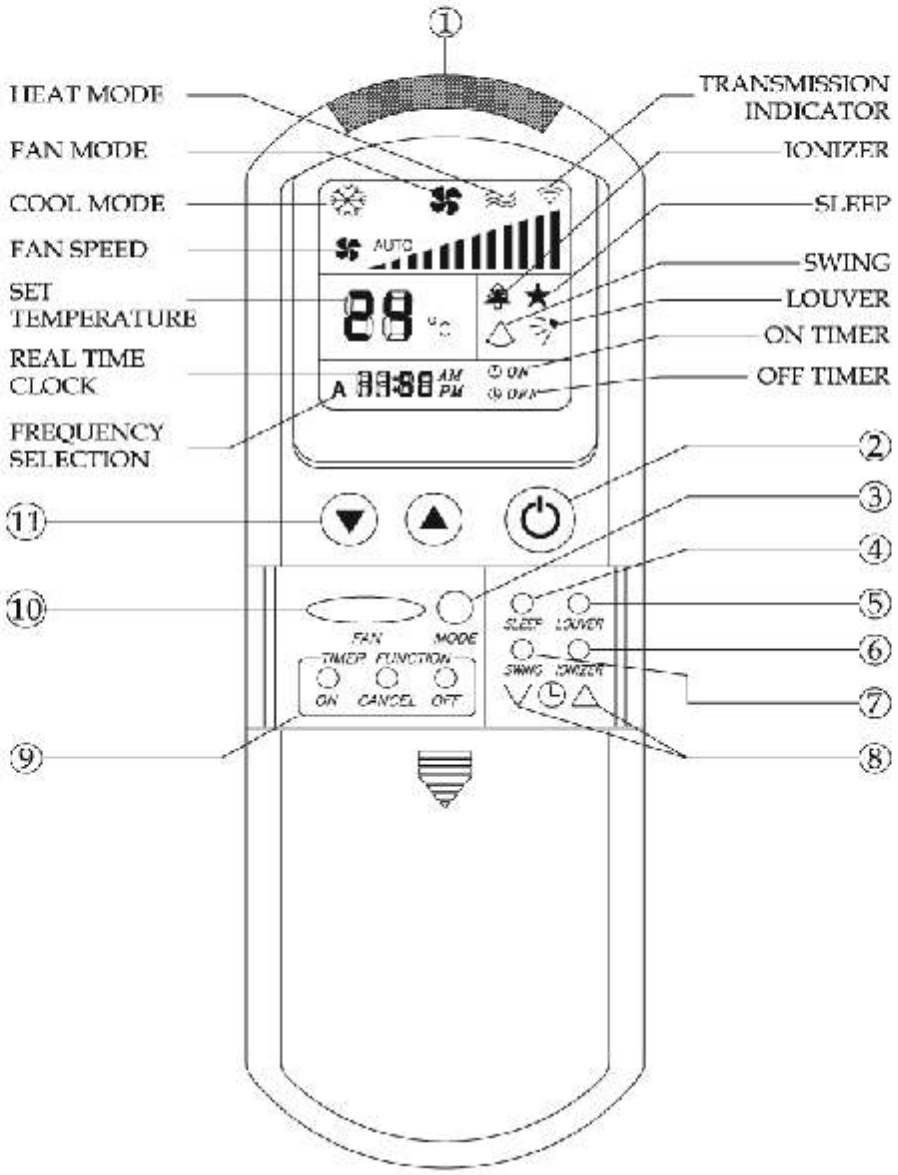
10. Sleep Function:

SLEEP button not is provided on the control panel, it should be selected from handset .
SLEEP function is not available in FAN mode.

In cool or heat mode, SLEEP function can be selected and it will automatically adjust the set temperature to provide a comfortable sleeping condition. **This function is suggested to use at night.**

5. DEFROST Icon:

This icon is an Indication for Defrosting on ODU (In Heating model only)



FOR COOL/HEAT MODELS

PRECAUTIONS

- Curtain, door or the like objects will prevent the remote signal from being received by air conditioner.
- Do not get the interior of remote controller wet. It is forbidden to expose to direct sunlight or locate it in the place with high temp.
- Malfunction may occur if infrared signal receiver on air conditioner is exposed to sunlight. Please shelter the signal receiver from sunlight with curtain.
- Please remove the nearby electronic device for they may affect the performance of remote controller. If necessary, contact the local authorized service centre or technical support centre.
- Do not put the used or different batteries into the remote controller, otherwise remote controller will fail to send signal.
- Please remove the batteries before long period unused, otherwise the remote controller may be damaged.
- If display disappeared while pressing the button of remote controller, which indicates low battery, please replace the batteries.
- If no receiving sound is heard from indoor unit or on remote controller does not flash, please replace the batteries.
- Effective transmitting distance of remote controller is 7m, please aim the signal sending part to the receiver on air conditioner.

1. Signal transmission area.

Aim this side to the unit while pressing the button.

Do not obstruct this area while using.

2. ON/ OFF Function:

Press this button to turn ON the Air Conditioner from OFF to ON and vice versa.

3. Mode Selection:

To select a desired operation mode press this button.
Mode changes from one to another as shown.

FAN : Fan only mode
COOL : Cooling operation.
HEAT : Heating operation (Cool + Heat model only).

NOTE: In cool only unit, heat function will not be available.

4. Sleep Button:

Each press will toggle the SLEEP mode from ON to OFF and vice versa.

SLEEP mode is not available with FAN mode.
The set temperature is automatically adjusted in COOL/HEAT mode to provide more comfort in sleep condition. It is suggested to use at sleeping time.

5. Louver Button (Optional):

Four different angles can be selected for louver opening and hence the air flow directions can be changed.
Press '***LOUVER***' button to select the different angle/air flow direction as shown.

If the Louver is set to Auto ( ), louver will swing automatically between all the angles to provide better air circulation inside the conditioning room.

6. Ionizer (optional):

Press Ionizer button to activate and de-activate the Ionizer function.
If Ionizer function is activated, it releases streams of negative Ions into your room to recharge the air with freshness that you can really feel. The ions magnetize any dust, pollen or smoke from the air so it's much cleaner and healthier to breathe.

NOTE: This is an optional feature and may not be available in all models.

7. Swing Button:

Each press will toggle the SWING from ON to OFF and vice versa.
Swing will stop when the indoor fan turned off.

8. Real Time clock setting:

To change the RTC setting, press  for 2 seconds. 

Subsequent press of  or  will increase or decrease the current setting by 1 minute.
Holding the key for 4 seconds will change the current setting with a faster speed.
Holding the key for 6 seconds will change the setting with high speed.

9. Timer setting:

ON timer:

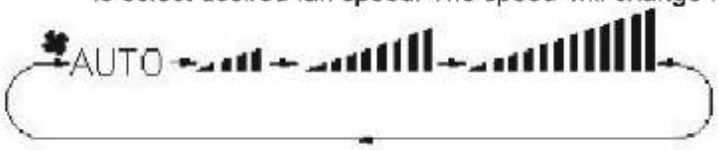
Press 'ON' button to activate ON TIMER.
Press 'ON' button again to advance timer setting in step of 1minute. Air Conditioner unit will turn ON when the Real Time Clock matches with ON TIMER (provide it is activated).
Press 'CANCEL' button to cancel the TIMER.

OFF timer:

Press 'OFF' button to activate OFF TIMER. Press 'OFF' button again to advance timer setting in step of 1minute. Air Conditioner unit will turn OFF when the Real Time Clock matches with OFF TIMER (provide it is activated). Press 'CANCEL' button to cancel the TIMER.

10. Fan speed selection:

To select desired fan speed. The speed will change from one to another as shown.



AUTO fan is not available in fan mode.
Low fan speed will be selected when switch to FAN mode. Upon return to COOL/HEAT mode, AUTO fan will be selected.
For LOW, MED & HIGH fan speeds setting, the fan will run as per set speed.
For AUTO FAN, the fan will run either at LOW, MED or HIGH speed, depending on the room & set temperature.

11. Temperature setting:

Press ▲ to increase the set temperature by 1°C.

Press ▼ to decrease the set temperature by 1°C.

Press ▲ & ▼ simultaneously to toggle between °C & °F display mode.

TEMPERATURE RANGE can be set is:

16 °C to 30 °C in °C display mode.
60°F to 86°F in °F display mode.

12. Frequency Change (Optional)

When air conditioners are installed side by side on the same wall & you want to make sure the signals from remote control do not operate the next unit, and then you need to change frequency.

Follow the steps given below to change the frequency:

Press (TEMP UP) & (ON) buttons simultaneously for 5seconds to select second frequency or frequency named 'A'.
If the frequency selected is 'A', LCD display will show 'A' as shown in fig. (c).

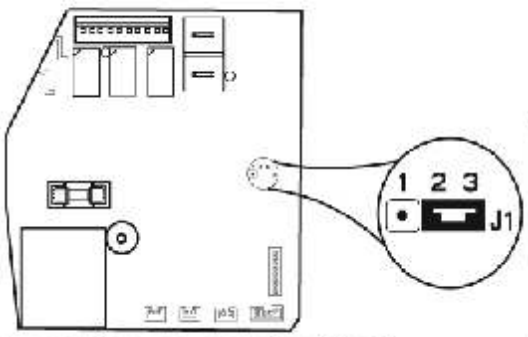
Handset display will not show any indication, as shown in fig. (a)., if normal frequency is selected.

Fig. (1) for Frequency

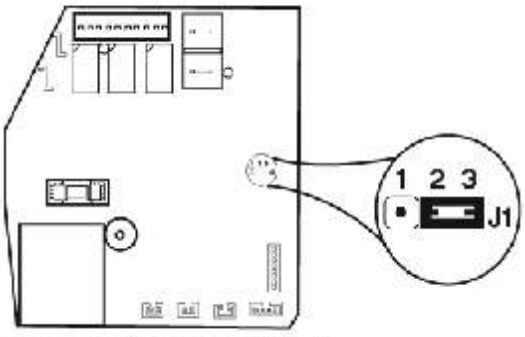
Figure of display with Frequency B

Similarly, change the frequency selection of the main board as mentioned in fig. (b) and (d).
Short the pins 2 & 3 of jumper 'J1' to select normal frequency of operation.
See fig. (b) for the details of normal frequency selection of main board.

Short the pins 1 & 2 of jumper 'J1' to select frequency 'A'.
See the Fig. (d) above for the details of frequency 'A' selection in the main board.



Normal Frequency selection (Fig b)



Frequency A selection (Fig d)

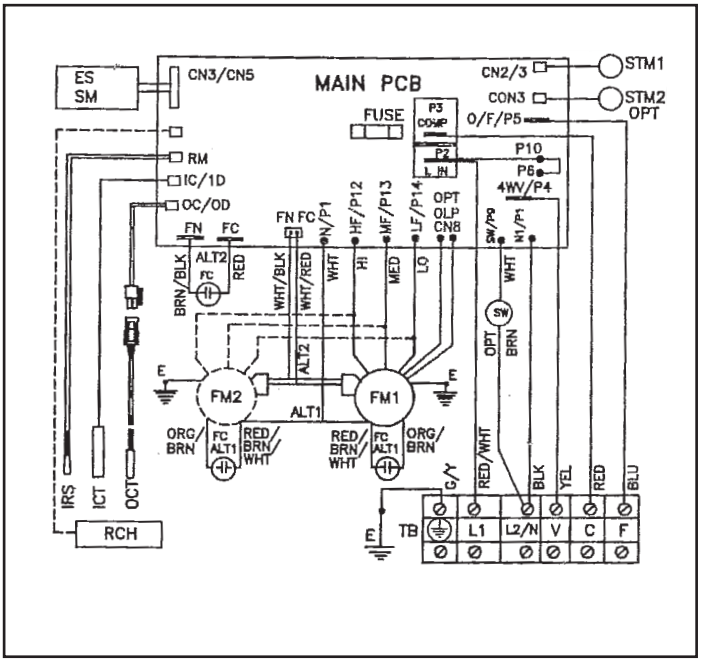
NOTE: This is an optional feature and may not be available in all models.

Notes:
1) Frequency setting of the handset will be cancelled when the battery is removed. Handset will works with the normal frequency after the battery is replaced. Hence, frequency of the LCD handset should set every time after the battery is replaced.
2) Actual shape of main PCB & the location of frequency change jumper on the PCB will differ from model to model.
3) After changing the frequency of main board, the power supply should be restarted in order to select the new frequency.

Trouble Shooting

PROBLEM	CAUSE	REMEDY
Unit does not run	□ Blown Fuse □ Circuit breaker tripped □ No electrical supply □ Main power switched off	□ Replace proper fuse □ Reset the breaker □ Switch ON the power supply
Compressor and condenser fan not working.	□ Power failure. □ Fuse blown or circuit breaker tripped. □ Defective thermostat, contactor, transformer or control relay. □ Insufficient line voltage. □ Incorrect or fault wiring. □ Thermostat setting is not correct.	□ Call power distributor. □ Replace fuse or reset circuit breaker. □ Replace component. □ Call power distributor. □ Rewire as per wiring diagram. □ Do the correct setting.
Compressor not working but condenser fan working.	□ Fault wiring or loose connections in □ Compressor circuit. □ Compressor fault. □ Defective Compressor run/start capacitor, overload relay fault. □ Three phase supply failure.	□ Check wiring and do repair or replace. □ Replace compressor. □ Replace fault component. □ Call power distributor.
Compressor ON/OFF cycle is too short (other than normal thermostat cut off).	□ Refrigerant over charge or under charge. □ Defective compressor. □ Insufficient line voltage. □ Blocked condenser. □ Defective run/start capacitor, overload, start relay, Defective thermostat, Fault condenser fan motor or capacitor. □ Obstructions in refrigerant system.	□ Reclaim refrigerant, evacuate and recharge as on nameplate. □ Replace compressor. □ Call power distributor. □ Determine cause and correct. □ Replace fault component. □ Locate obstructions and remove.
Compressor operates continuously.	□ Dirty air filter. □ Unit undersized for load. □ Thermostat set too low. □ Low refrigerant charge. □ Condenser coil dirty or blocked.	□ Replace filter. □ Decrease load or increase unit size. □ Reset thermostat. □ Locate leak and repair and recharge. □ Clean coil or remove obstructions.
Excessive head pressure.	□ Dirty air filter. □ Dirty condenser coil. □ Refrigerant over charged. □ Air in system. □ Condenser air obstructed or air short cycling.	□ Replace air filter. □ Clean coil. □ Reclaim excess refrigerant. □ Reclaim gas, evacuate & recharge. □ Determine cause and correct.
Headpressure too low.	□ Low refrigerant charge. □ Compressor valve leaking. □ Restriction in liquid tube.	□ Check for leaks, repair and recharge. □ Replace compressor.
Excessive suction pressure.	□ High head load. □ Compressor valves leaking. □ Refrigerant over charged.	□ Check for cause and eliminate. □ Replace compressor. □ Reclaim excess refrigerant.

WIRING DIAGRAM - INDOOR UNIT (HEAT PUMP)



4WV = 4 Way reversing valve
ALT1 = Standard Capacitor Wring
ALT2 = Cap, wires thougn PCB
ES = Emergency Switch
FC = Fan capacitor
FM = Fan motor
HI = High
ICT = Indoor coil thermister
IRS = Indoor room sensor
LO = Low
MED = Medium
N = Neutral
OCT = Outdoor coil thermister
OPT = Optional feature
OLP = over load protection
O/F = outer fan
RCH = remote control handset
SM = sensor module
STM = stepping motor
SW = Air swing motor
TB = Terminal Block
= Optional
= Field wiring
= Earthing

WHT = White
BLK = Black
BLU = Blue
RED = Red
G/Y = Green with yel stripes
YEL = Yellow
ORG = Orange
GRN = Green
BRN = Brown

UNIT MODEL NO & CAPACITY BTU HRS	MOTOR SPD & WRES COLORS				
	HI SPEED	MD SPEED	LO SPEED	CAP. OPTION	AIR SWING
EX/EN/EIA/EIA/EIC/EID 18/24	GRN/BRN	YEL	BLU	ALT1	STM1
EX/EN/EID 09/12/30/38/42k	BLK	GRN/BRN	YEL	ALT1	STM1
EF/EB08/12K & EB/EP18/24K	WHT	YEL	BLU	ALT2	STM1
ED/ES 12/18/24/30/38/42/48/56/60k	BLK	BLU	YEL/RED	ALT1	-----
EB/EIA/EIB 30k	WHT	YEL	BLU	ALT2	STM2
EA/ER 12/18/24/30/38/42/48/58	BLK	BLU	YEL/RED	ALT1	sw

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