

Please read this manual carefully before installation and keep it for future reference.
If used as MULTI unit, please refer to the Installation & operation manuals packed with outdoor unit.

User Manual



MRCOOL[®]

COMFORT MADE SIMPLE

Olympus Series Cassette Air Handlers

Please keep this manual where the operator can easily find it. Inside, you will find helpful hints on how to use and maintain your unit properly.

!	Safety Precautions	2
1	Hints for Economical Operation	3
2	Part Names	
	Cassette Type	4
	High-static Pressure Parvis Split Type	5
	Duct and Ceiling Type	6
	For Slim Duct Type	7
	For Slim Duct (with air inlet box) Type	8
	Four-way Cassette (slim) Type	9
	One-way Cassette Type	10
	Ceiling & Floor Type (Vertical Discharge Air Conditioner)	11
	Ceiling & Floor Type	12
	Ceiling & Floor Type	13
	Ceiling & Floor Type	14
	Ceiling & Floor Type	15
3	Manual Operation	16
4	Adjusting Air Flow Direction	17
5	Maintenance	18
6	Air Conditioner Operations and Performance	20
7	Special Functions	21
8	Installation	22
9	Troubleshooting	23
10	Remote Control Troubleshooting	24

Safety Precautions



Read Before Using

Incorrect usage may cause serious damage or injury.

The seriousness of potential damage or injuries is classified as either a **WARNING** or **CAUTION**.



WARNING

This symbol indicates ignoring instructions may cause death or serious injury.

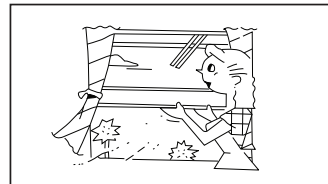
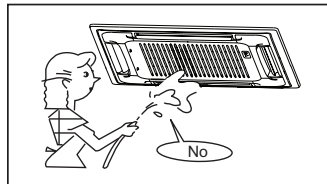
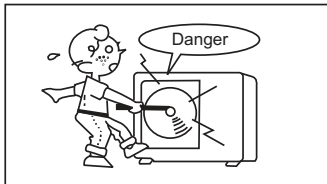


CAUTION

This symbol indicates that ignoring instructions may cause moderate injury to your person, damage to your unit, or other property.



This symbol indicates that you should **NEVER** perform the indicated action.



WARNING

- ⊘ **DO NOT** attempt to service the unit yourself. This unit has no user serviceable components. Opening or removing the cover will expose you to dangerous voltage. Turning off the power supply will not prevent potential electric shock.
- ⊘ **DO NOT** use liquid cleaners or aerosol cleaners, use a soft and dry cloth for cleaning the unit. To avoid electric shock, never attempt to clean the units by sprinkling water.
- ⊘ **DO NOT** put hands or objects into the Air Outlet of indoor or outdoor units. These units are installed with a fan running at high speed. To touch the moving fan will cause serious injury.
 - To avoid the risk of serious electrical shock, never sprinkle or spill water or liquids on unit.
 - Ventilate the room regularly while the air conditioner is in use, especially if there is also a gas appliance in use in this room, failure to follow these directions may result in a loss of oxygen in the room.
 - To prevent electric shock, turn off the power or disconnect the power supply plug before beginning any cleaning or other routine maintenance. Follow the directions for cleaning in the Owner's Manual.



CAUTION

- ⊘ **DO NOT** use caustic household drain cleaners in the unit. Drain cleaners can quickly destroy the unit components (drain pan and heat exchanger coil etc).
- ⊘ **DO NOT** attempt to install this unit by yourself. This unit requires installation by qualified persons.

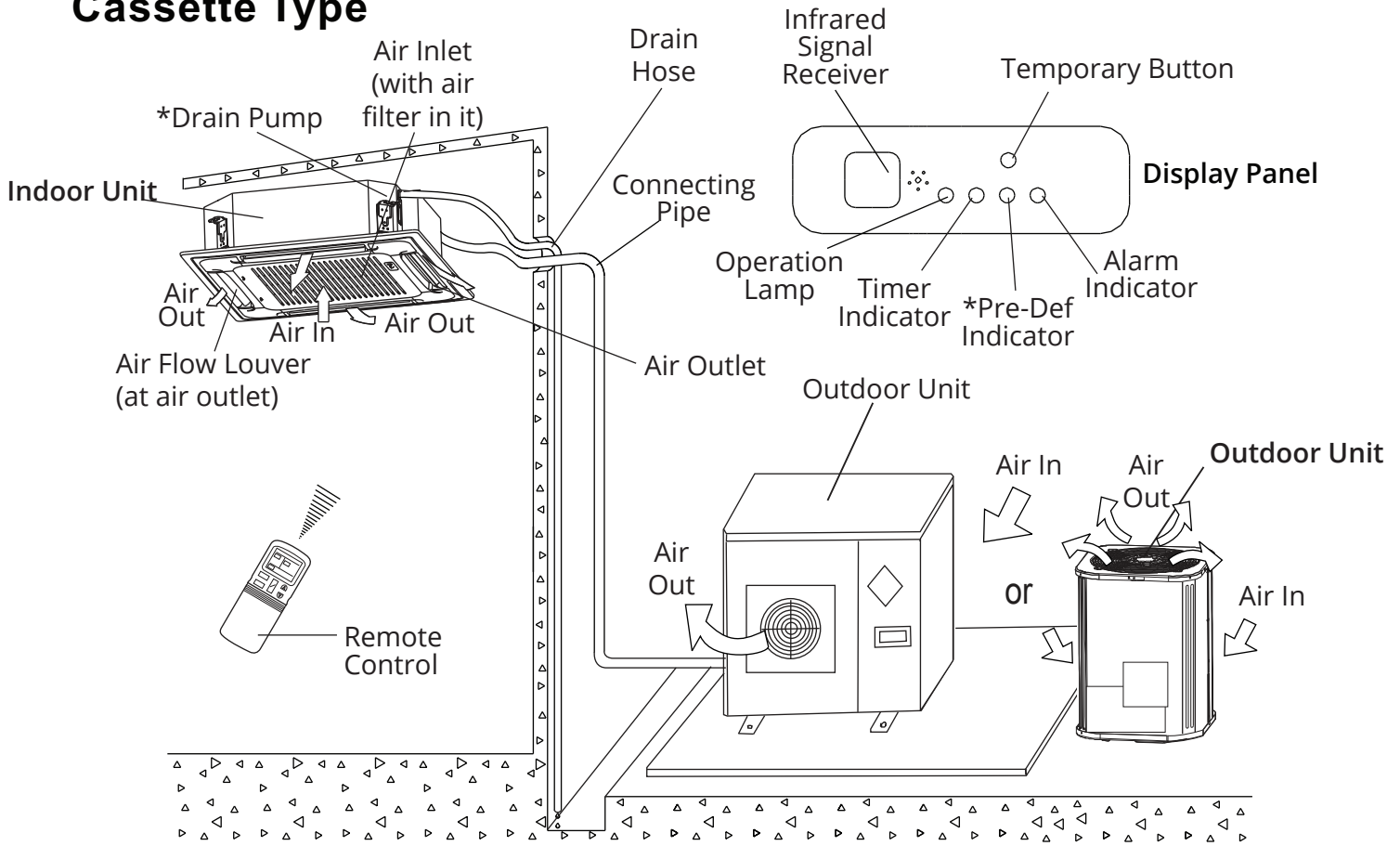
For proper performance, operate the unit in temperature and humidity ranges indicated in this owner's manual. If the unit is operated beyond these conditions, it may cause malfunctions of the unit or dew dripping from the unit.

The following should be noticed to ensure optimal economical operation.
(Refer to corresponding chapter for more details)

- Adjust the air flow direction properly to avoid winding toward your body.
- Adjust the room temperature properly to maintain a comfortable temperature and to avoid supercooling or superheating.
- While cooling, close the curtains to avoid direct sunlight.
- To keep cool or warm air in the room, refrain from opening and closing doors or windows more often than necessary. Set the timer for the desired operating time.
- Clear any obstructions from the vicinity of the air outlet or the air inlet. Obstructions will cause lower efficiency, or sudden stop in operation.
- If you do not plan to use the unit for a long time, disconnect the power and remove the batteries from the remote control. When the power switch is connected, some energy will be consumed, even if the air conditioner isn't in operation. Once you plan to use the unit again, switch the power on 12 hours before you restart the unit to ensure a smooth operation.
- Clean the air filter bi-weekly. A clogged air filter will reduce cooling or heating efficiency.

The air conditioner consists of the indoor unit, the outdoor unit, the connecting pipe and the remote controller.

Cassette Type

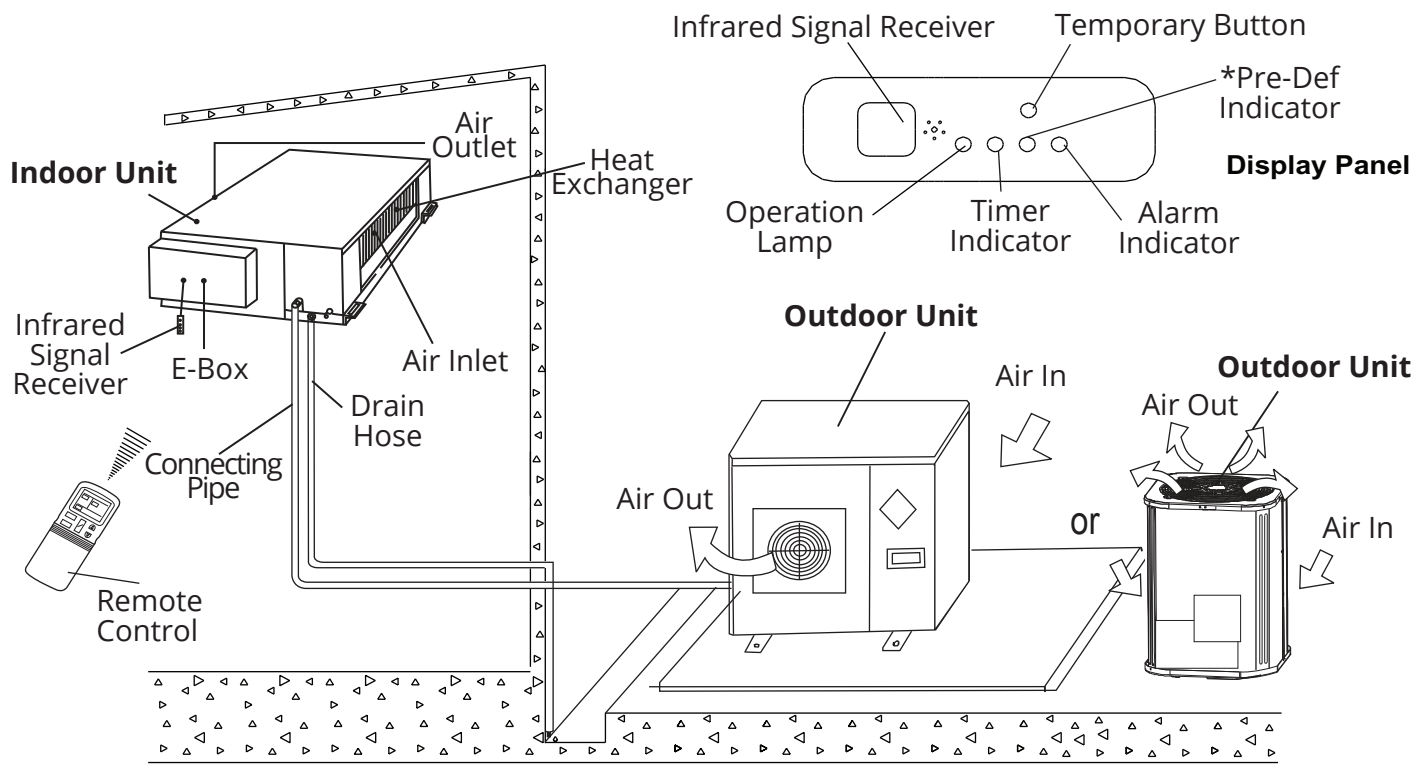


*PRE-DEF indicator (cooling and heating type) or fan only indicator (cooling only type)
 *Drain Pump - Drains water from the indoor unit

NOTE

This diagram is based on 24K Btu/h type. Minor differences may exist for the appearance and functionality for your specific model.

High-Static Pressure Parvis Split Type

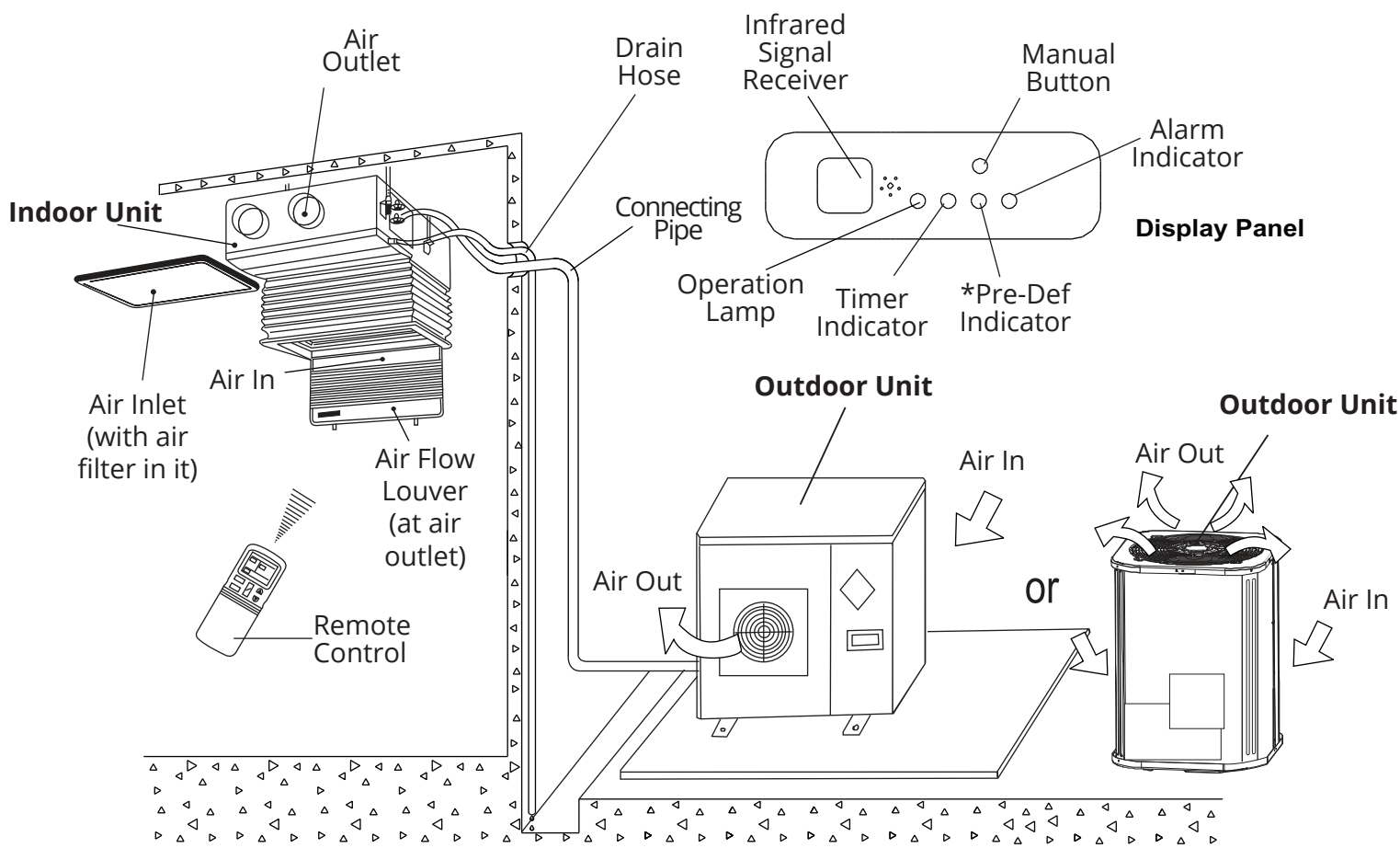


**PRE-DEF indicator (cooling and heating type) or fan only indicator (cooling only type)*

NOTE

This diagram is based on 24K Btu/h type. Minor differences may exist for the appearance and functionality for your specific model.

Duct and Ceiling Type



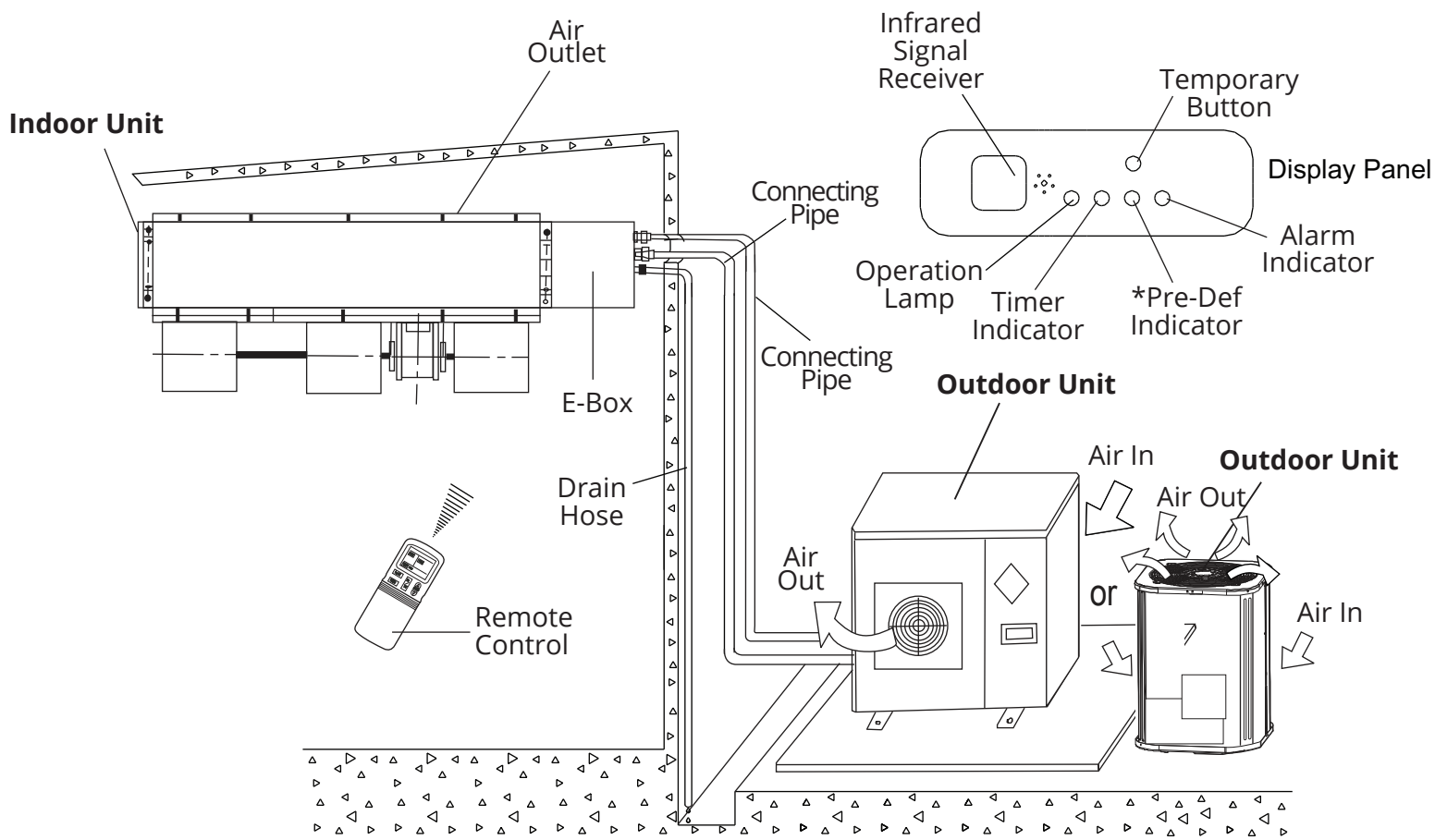
NOTE

In the case of "cooling only type", it is the "FAN ONLY" indicator.

This diagram is based on 24K Btu/h type. Minor differences may exist for the appearance and functionality for your specific model.

The illustrations in this manual are for explanation purpose only. The unit may vary depending on model.

For Slim Duct Type

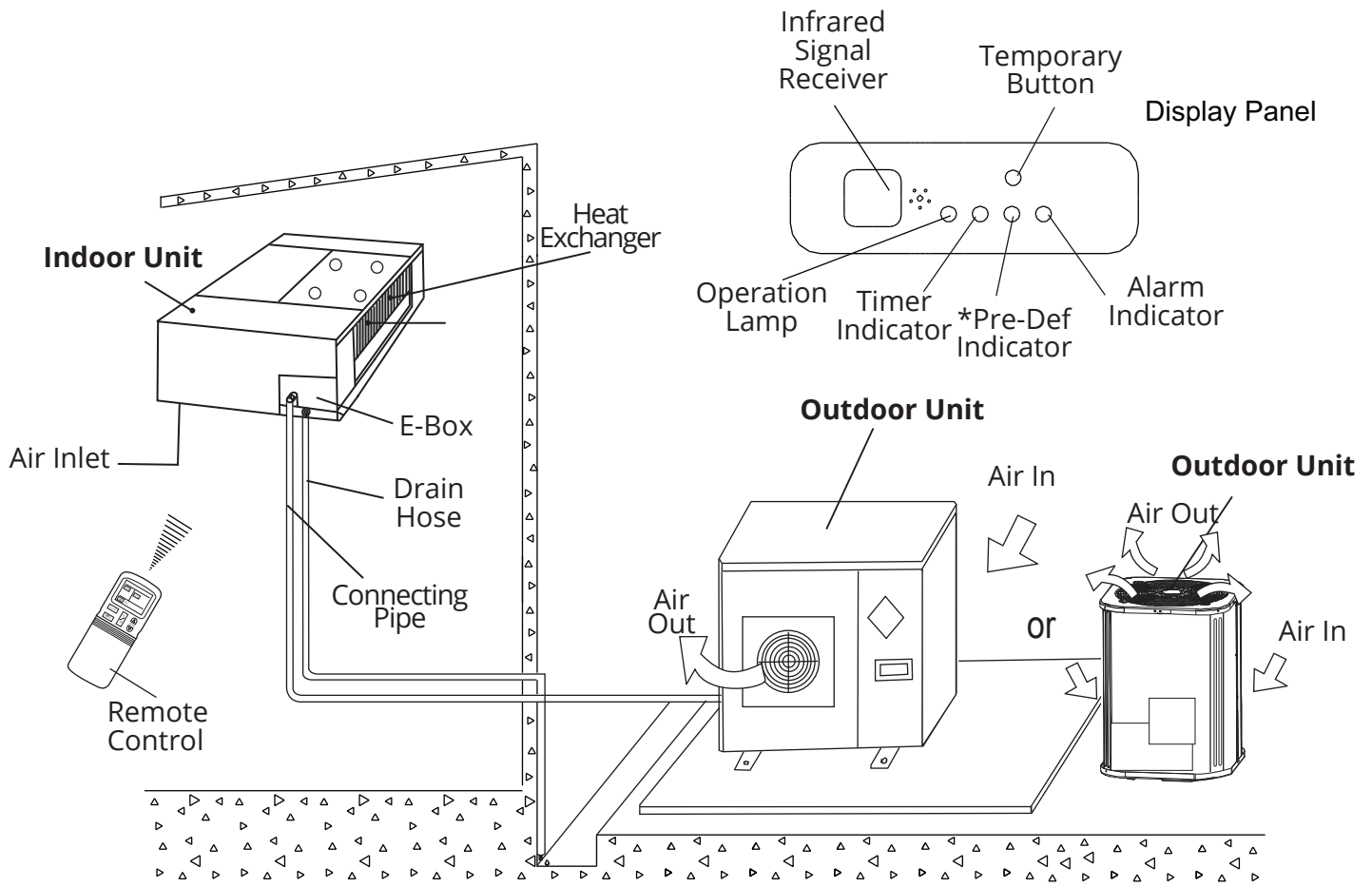


**PRE-DEF indicator (cooling and heating type) or fan only indicator (cooling only type)*

NOTE

This diagram is based on 24K Btu/h type. Minor differences may exist for the appearance and functionality for your specific model.

For Slim Duct (with air inlet box) Type

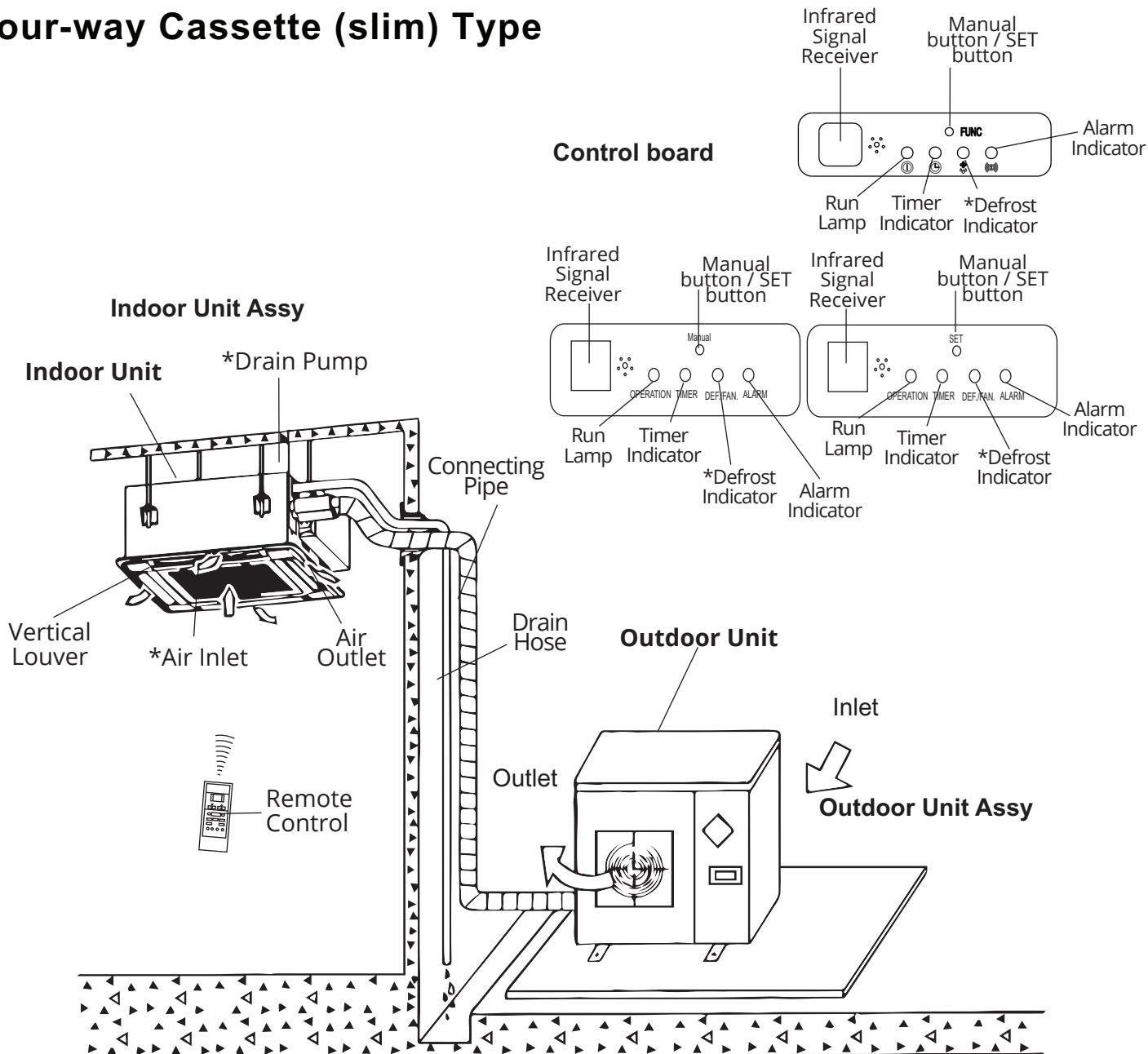


**PRE-DEF indicator (cooling and heating type) or fan only indicator (cooling only type)*

NOTE

All the pictures in this manual are for explanation purpose only. There may be slight differences from the air conditioner you purchased (depending on model). The actual shape may vary.

Four-way Cassette (slim) Type



*Air Inlet (Air filter installed inside to prevent the dust)
 *Drain Pump (Internal installed), water drain from indoor unit.
 *Defrost indicator heating/cooling type or fan indicator (cooling only type)

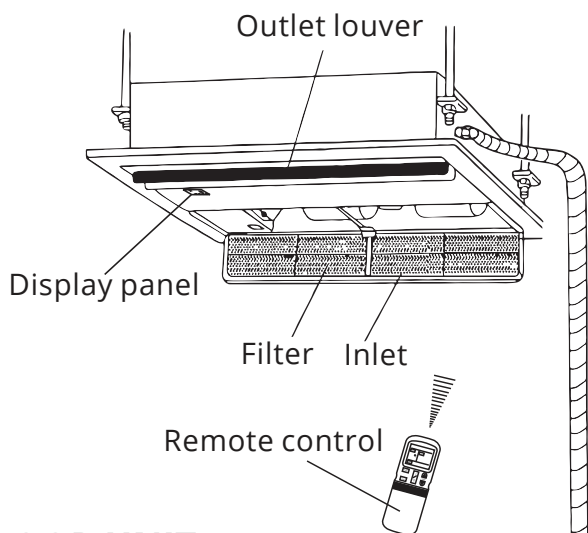
NOTE

The Run Lamp, Timer Indicator, and Defrost Indicator flash in cycles when solar PV ECO function is activated. (Applicable to the unit adopts solar photovoltaic system only.)

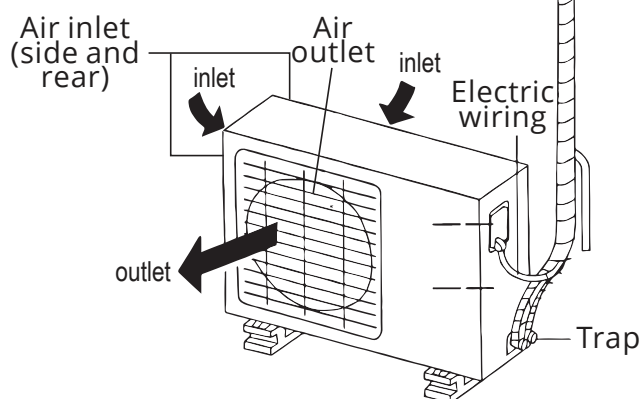
This picture is based on the type of 18K Btu/h. The appearance and functionality may be slightly different from the unit you purchased.

One-way Cassette Type

INDOOR UNIT

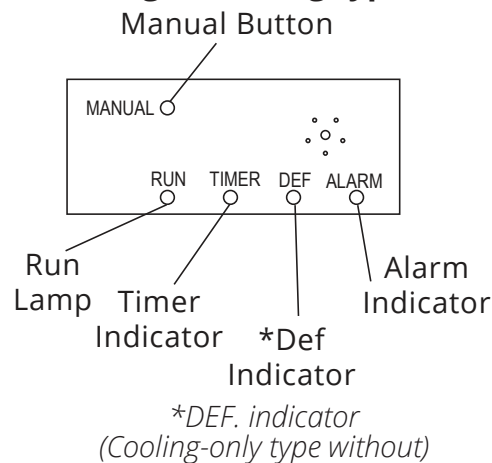


OUTDOOR UNIT

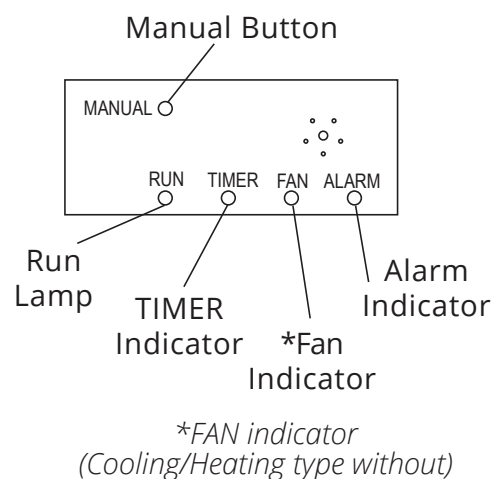


DISPLAY PANEL

Cooling & Heating type



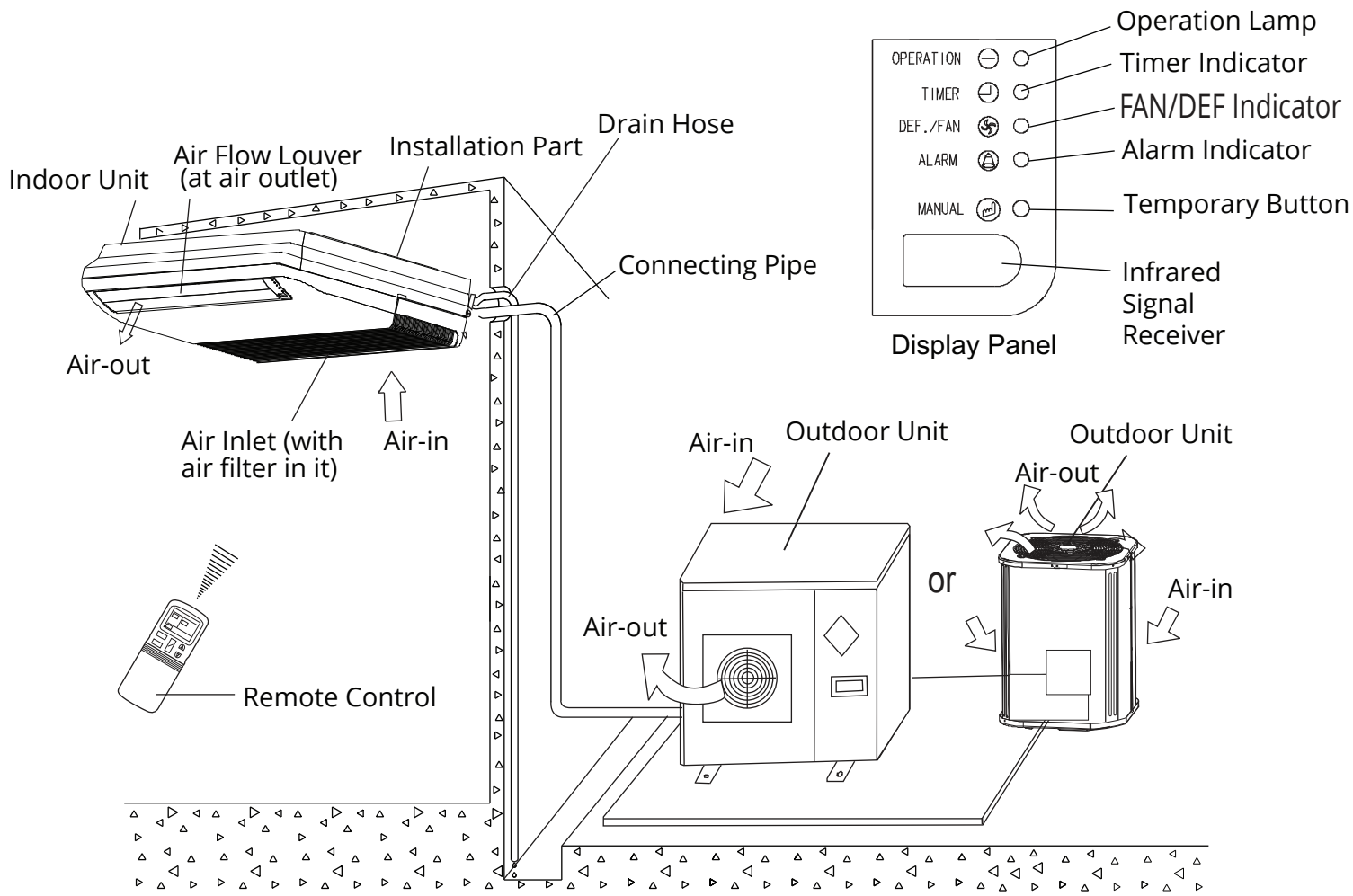
Cooling-only type



NOTE

All the pictures in this manual are for explanation purpose only. There may be slight differences from the air conditioner you purchased (depending on model). The actual shape may vary.

Ceiling & Floor Type (Vertical Discharge Air Conditioner)

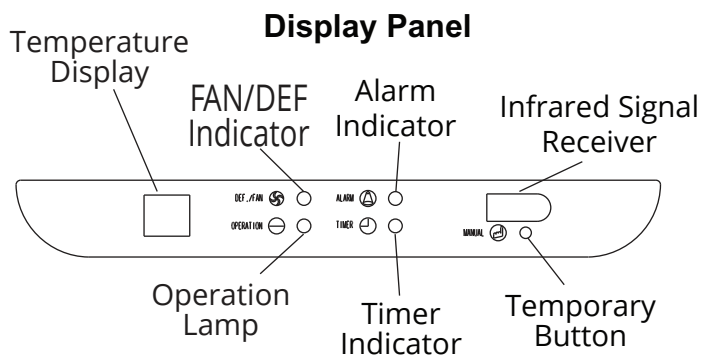
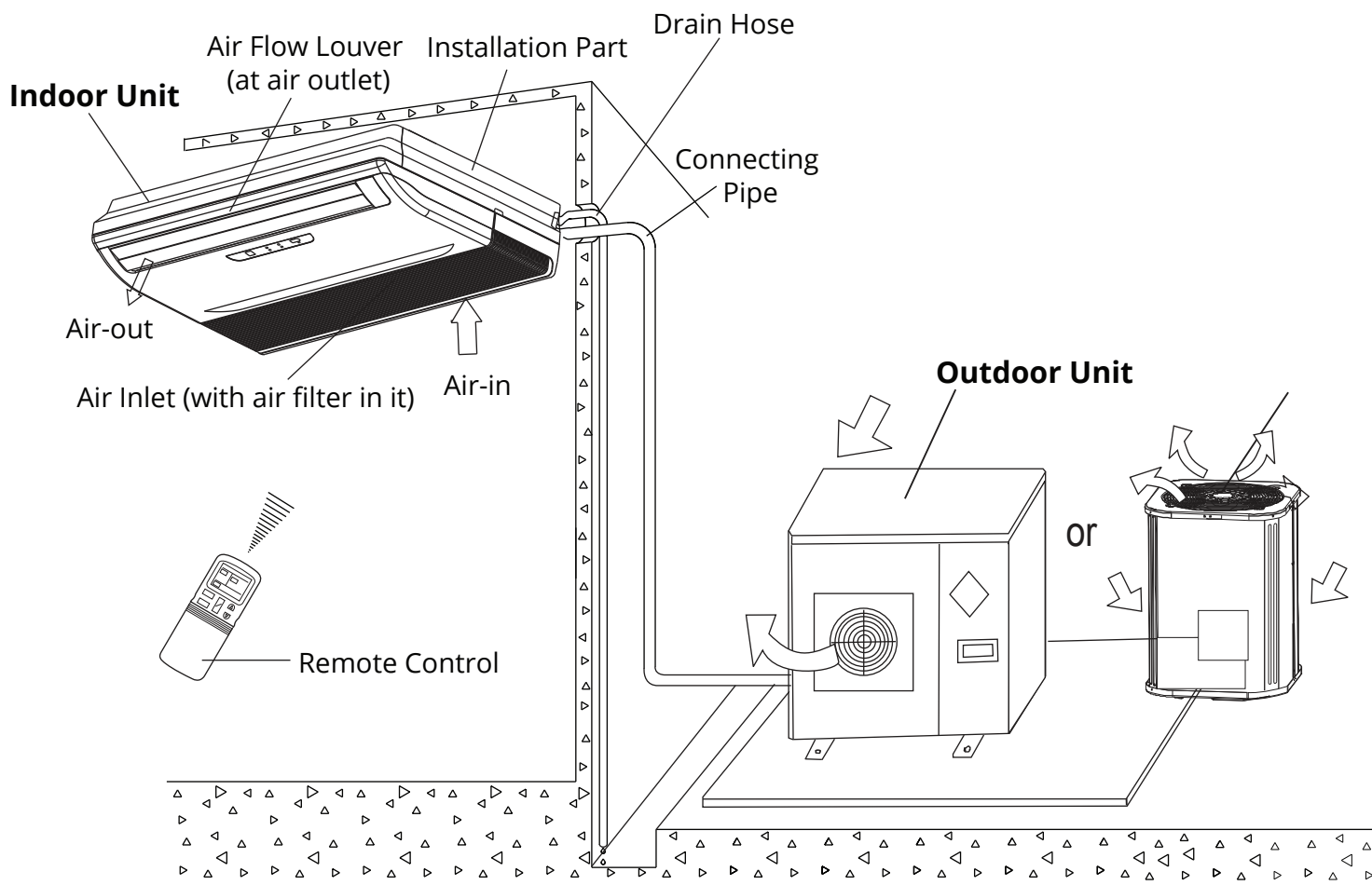


*FAN/DEF indicator (For cooling and heating type, it's DEF. For cooling only, it's FAN.)

NOTE

All the pictures in this manual are for explanation purpose only. There may be slight differences from the air conditioner you purchased (depending on model). The actual shape may vary.

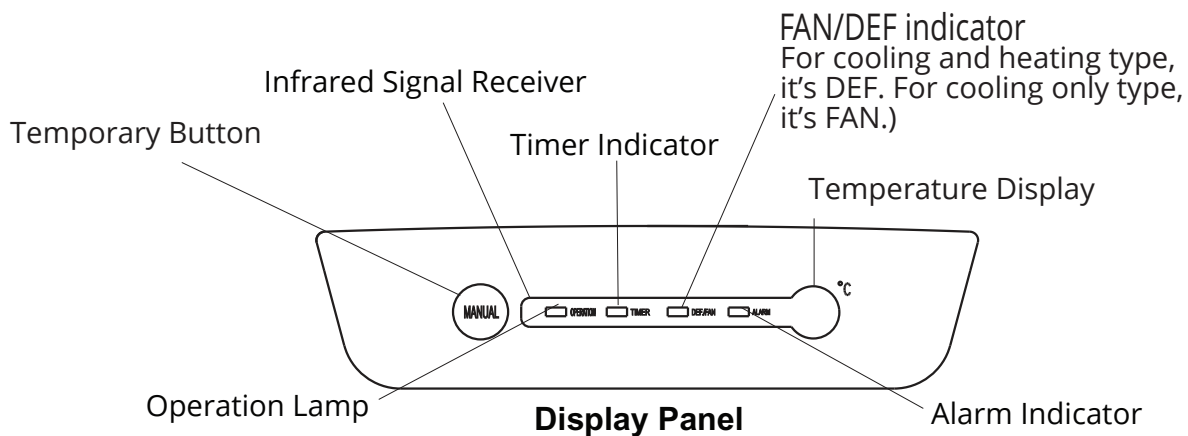
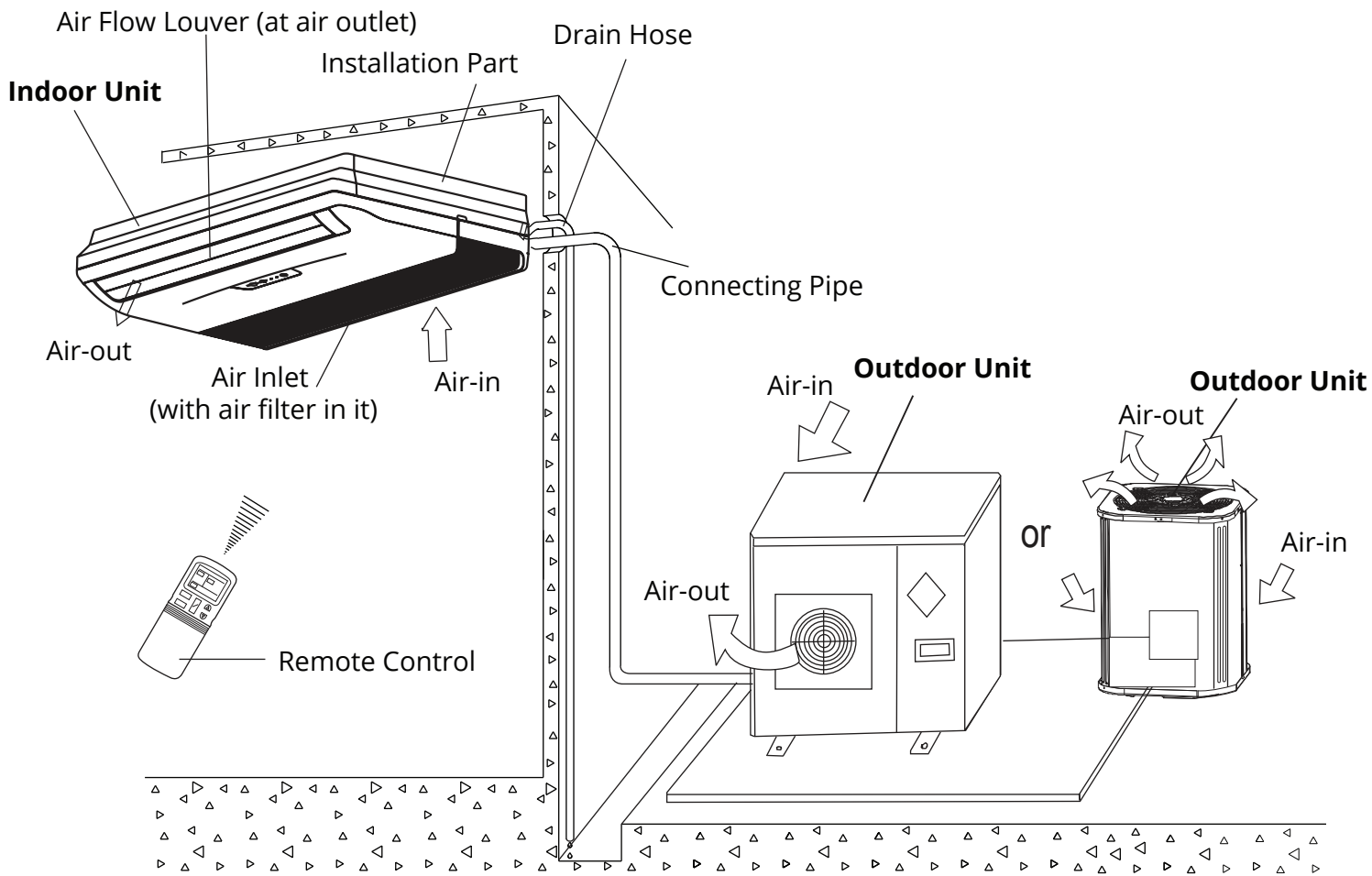
Ceiling & Floor Type



NOTE

The illustration is based on one model of our product for reference only. It may be different from the unit you purchased.

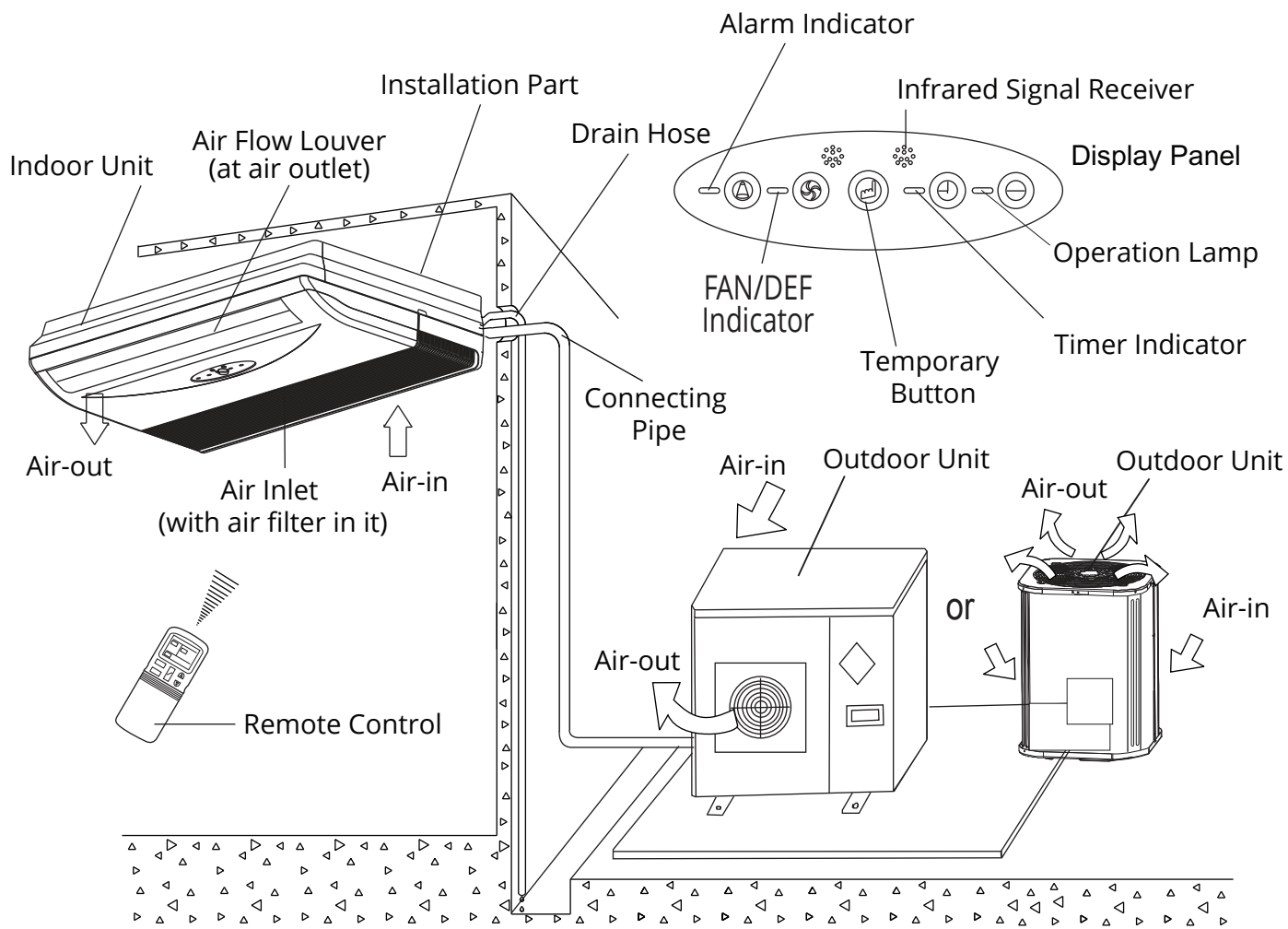
Ceiling & Floor Type



NOTE

All the pictures in this manual are for explanation purpose only. There may be slight differences from the unit you purchased (depending on model). The actual shape may vary.

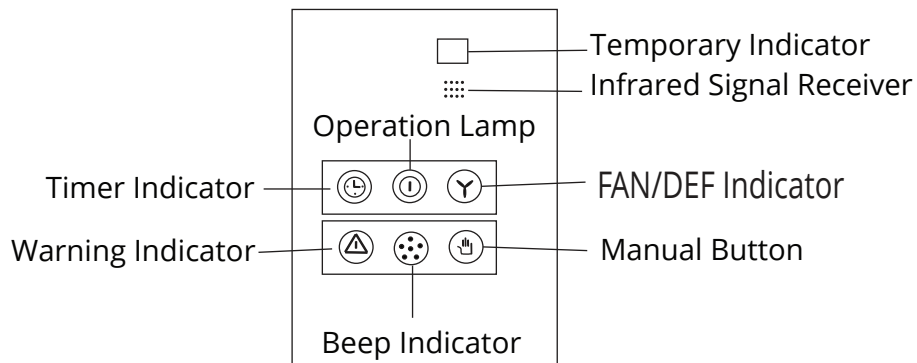
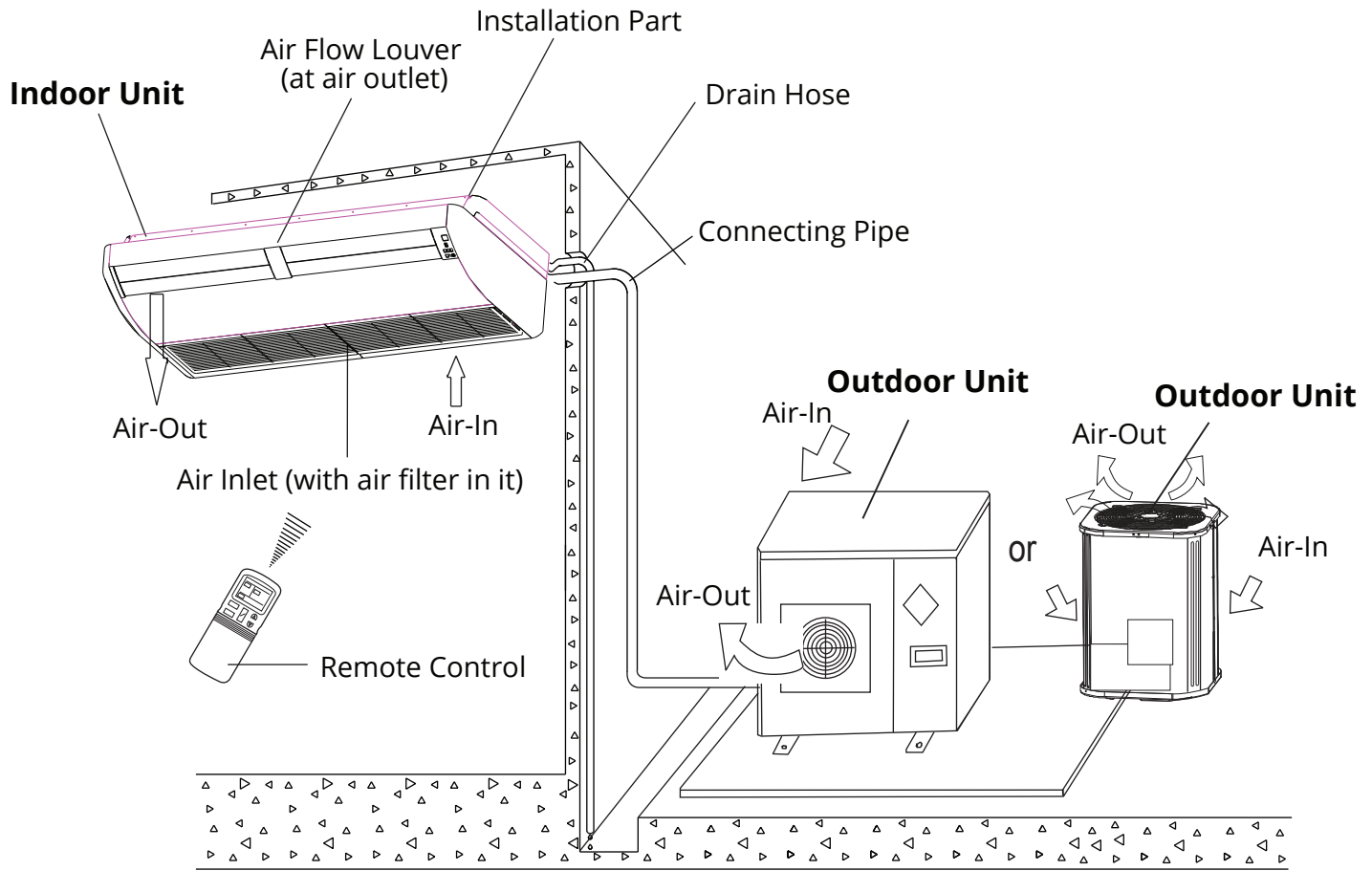
Ceiling & Floor Type



NOTE

All the pictures in this manual are for explanation purpose only. There may be slight differences from the unit you purchased (depending on model). The actual shape may vary.

Ceiling & Floor Type



Display Panel

NOTE

All the pictures in this manual are for explanation purpose only. There may be slightly different from the air conditioner you purchased (depend on model). The actual shape may vary.

Ceiling & Floor

This function is used to operate the unit temporarily in case you misplace the remote control or its batteries are exhausted. Two modes including **AUTO** and **FORCED COOL** can be selected through the **TEMPORARY BUTTON** on the air-in grill control box of the indoor unit. Once you push this button, the air conditioner will run in such order: **AUTO, FORCED COOL, OFF**, and back to **AUTO**.

1) AUTO

The **OPERATION** lamp is lit, and the air conditioner will run under **AUTO** mode. The remote control operation is enabled to operate according to the received signal.

2) FORCED COOL

The **OPERATION** lamp flashes, the air conditioner will turn to **AUTO** after it is enforced to cool with a wind speed of **HIGH** for 30 minutes. The remote control operation is disabled.

3) OFF

The **OPERATION** lamp goes off. The air conditioner is **OFF** while the remote control operation is enabled.

Four-way Cassette

This function is used to operate the unit temporarily in case you misplace the remote control or its batteries are exhausted. Two modes including **AUTO** and mandatory **COOL** can be selected through the **TEMPORARY BUTTON** on the air inlet grill control box of the indoor unit. Once you push this button, the air conditioner will run in such order: **AUTO, mandatory COOL, OFF**, and back to **AUTO**.

1) AUTO

The **OPERATION** lamp is lit, and the air conditioner will run under **AUTO** mode. The remote control operation is enabled to operate according to the received signal.

2) MANDATORY COOL

The **OPERATION** lamp flashes, the air conditioner will turn to **AUTO** after it is enforced to cool with a wind speed of **HIGH** for 30 minutes. The remote control operation is disabled.

3) OFF

The **OPERATION** lamp goes off. The air conditioner is **OFF** while the remote control operation is enabled.

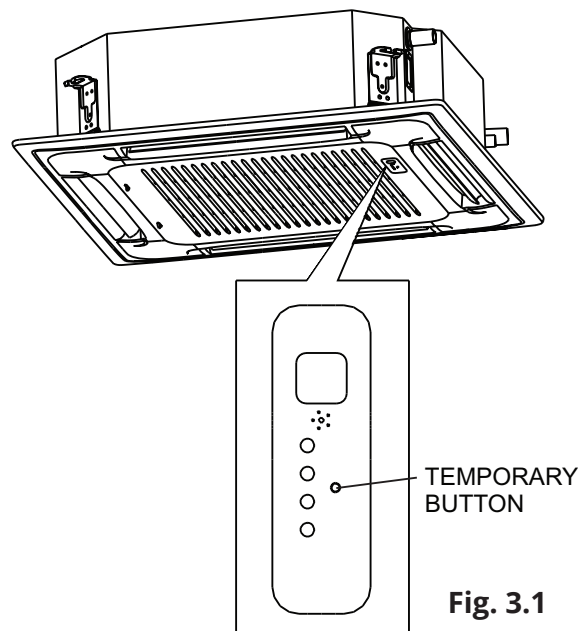


Fig. 3.1

Cassette Type

While the unit is in operation, you can adjust the air flow louver to change the air flow direction and distribute the room temperature evenly. This allows you to enjoy a comfortable room temperature.

1. Set the desired air flow direction.
Push the **SWING** button to adjust the louver to the desired position and push this button again to maintain the louver at this position.
2. Adjust the air flow direction automatically.
Push the **SWING** button, the louver will swing automatically.

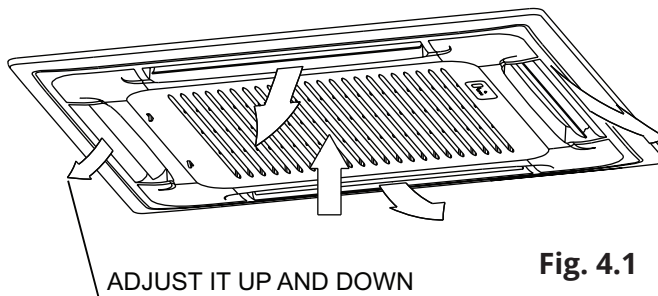


Fig. 4.1

While this function is set, the swing fan of indoor unit runs; otherwise, the swing fan doesn't run. The swing scale of every side is 30°. When the air conditioner isn't in operation (including when "TIMER ON" is set), the **SWING** button will be disabled.

Duct and Ceiling Type

The following is how to adjust air flow direction when air outlet part (separately sold) is used with the indoor unit.

Cooling

To effectively cool the whole room, please set the louver so that the air can come out horizontally.

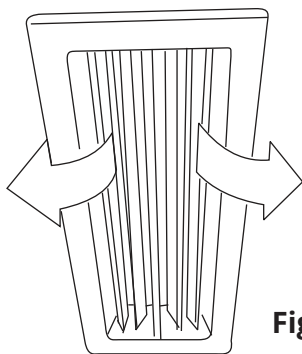


Fig. 4.2

Heating

To effectively heat the bottom of the room, please set the louver so that the air can come out downwards.

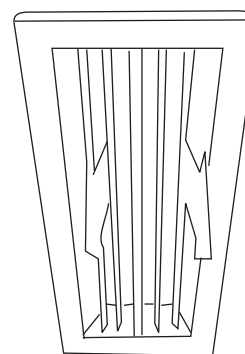




Fig. 4.3

Cleaning the indoor unit and remote

WARNING

Before you clean the air conditioner, be sure to disconnect the power supply plug.

CAUTION

- Use a dry cloth to wipe the indoor unit and remote control.
- A cloth dampened with cold water may be used on the indoor unit if it is very dirty.
- Never use a damp cloth on the remote control.
-  Do not use a chemically-treated duster for wiping or leave such material on the unit for long, because it may damage or fade the surface of the unit.
-  Do not use benzine, thinner, polishing powder, or similar solvents for cleaning. These may cause the plastic surface to crack or deform.

If you do not plan to use the unit for at least 1 month:

1. Operate the fan for about half a day to dry the inside of the unit.
2. Stop the air conditioner and disconnect power.
3. Remove the batteries from the remote controller.

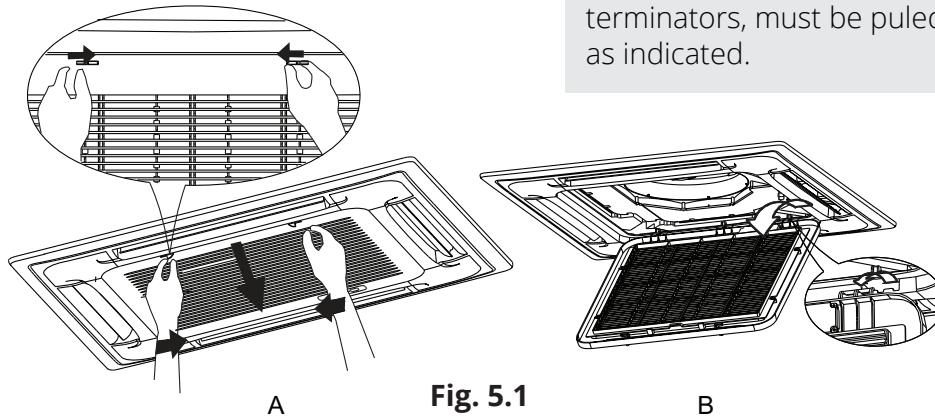
Checks before operation

CAUTION

- Check that the wiring is not broken off or disconnected.
- Check that the air filter is installed. (Some air-conditioners do not have air filters.)
- Check that the outdoor unit air outlet or inlet is not blocked.
- The air filter can prevent the dust or other particulate from going inside. In case of blockage of the filter, the working efficiency of the air conditioner may greatly decrease. Therefore, the filter must be cleaned once every two weeks during long time usage.
- If the air conditioner is positioned in a dusty place, the cleaning frequency of the air filter must be increased. If the accumulated dust is too heavy to be cleaned, please replace the filter with a new one (replaceable air filter is an optional fitting).
- The filter cleaning should be performed by a suitable service provider.

Cassette Type

1. Open the air-in grill. Push the grill switches towards the middle simultaneously as indicated in **Fig. 5.1A**. Then pull down the air-in grill.



! CAUTION

The control box cables, which are originally connected with the main body electrical terminators, must be pulled off before doing as indicated.

2. Take out the air-in grill (together with the air filter shown in **Fig 5.1B**). Pull the air-in grill down at 45° and lift it up to take out the grill.
3. Dismantle the air filter.
4. Clean the air filter (Vacuum cleaner or pure water may be used to clean the air filter. If the dust accumulation is too heavy, please use soft brush and mild detergent to clean it and dry out in cool place).

Duct and Ceiling Type

1. Open the air-in grill. Push the grill switches towards the middle simultaneously as indicated in **Fig. 5.2**. Then pull down the air-in grill.
2. Take out the air-in grill.
3. Dismantle the air filter.
4. Clean the air filter (Vacuum cleaner or pure water may be used to clean the air filter. If the dust accumulation is too heavy, please use soft brush and mild detergent to clean it and dry out in cool place).
 - The air-in side should face up when using vacuum cleaner. **(See Fig. 5.3)**
 - The air-in side should face down when using water. **(See Fig. 5.4)**
5. Re-install the air filter.
6. Install and close the air-in grill in the reverse order of step 1 and 2 and connect the control box cables to the corresponding terminators of the main body.

! CAUTION

The control box cables, which are originally connected with the main body electrical terminators, must be pulled off before doing as indicated.

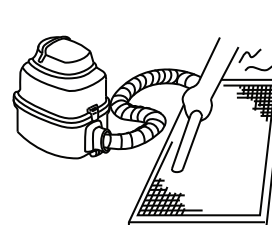
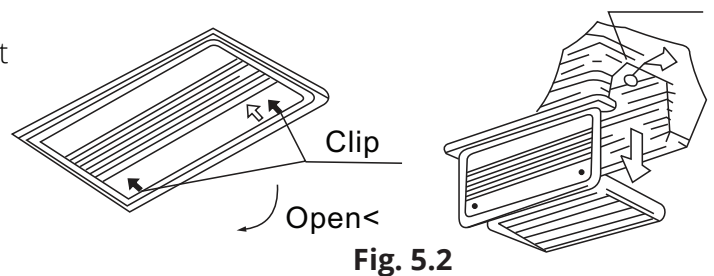


Fig. 5.3

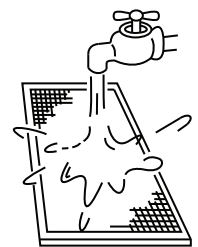


Fig. 5.4

Note: High-Static Pressure Parvis Split Type has no air filter.

Three-minute protection feature

A protection feature prevents the air conditioner from being activated for approximately 3 minutes when it restarts immediately after operation.

Power failure

Power failure during operation will stop the unit completely.

- The **OPERATION** lamp on the indoor unit will start flashing when power is restored.
- To restart operation, push the **ON/OFF** button on the remote control.
- Lightning or wireless telephone interference may cause the unit to malfunction.

Disconnect the unit with the power and then connect the unit to the power again. Push the **ON/OFF** button on the remote control to restart operation.

Air conditioner operating conditions

For proper performance, run the air conditioner under the following temperature conditions:

Temperature / Mode	Cooling operation	Heating operation	Drying operation
Room temperature	62°F~90°F (17°C~32°C)	32°F~86°F (0°C~30°C)	62°F~90°F (17°C~32°C)
Outdoor temperature	64°F~109°F (18°C~43°C)	20°F~76°F (-7°C~24°C)	64°F~109°F (18°C~43°C)
	20°F~109°F/-7°C~43°C (For models with low temp cooling systems)		
	64°F~126°F/18°C~52°C (For tropical models)		
			64°F~126°F/18°C~52°C (For tropical models)

NOTE

1. If air conditioner is used outside of the above conditions, certain safety protection features may come into operation and cause the unit to function abnormally.
2. Room relative humidity less than 80% - If the air conditioner operates in excess of this figure, the surface of the air conditioner may attract condensation. Adjust the vertical air flow louver to its maximum angle (vertically to the floor), and set **HIGH** fan mode.
3. Optimum performance will be achieved within these operating temperatures.

Refrigerant Leakage Detection:

With this new technology, the display area will appear EC and the LED indication lamps continue flashing when the outdoor unit detects refrigerant leakage.

Louver Angle Memory Function (optional):

For some models, the machine is special designed with louver angle memory function. Power failure during operation or pressing the **ON/OFF** button on the remote control will stop the unit completely. When the power restores or pressing the **ON/OFF** button on the remote control again, the unit restarts automatically with the previous open angle of the horizontal louver by the memory function. We strongly recommend that the open angle of the horizontal louver should not be set too small, in order to prevent the condensation of water from forming and dropping from the horizontal louver. Press the Manual control button and the open angle of the horizontal louver will be restored to the standard angle.

Location:

- During cooling operation, the air conditioner will dry the room air, so please fix a pipe to drain all the water away from the air conditioner.
- Locate the indoor unit more than one meter away from any TV or Radio to avoid the picture and noise interference.
- Powerful radio transmitters or any other devices radiating high frequency radio waves can cause the air conditioner to malfunction. Please consult the dealer where you purchased the air conditioner before installing it.
- Do not locate the unit in an area with combustible gas or volatile matter.
- If the air conditioner operates in an atmosphere containing oils (machine oil), salt (near a coastal area), sulfide gas (near a hot spring), etc., such substances may lead to failure of the air conditioner.

Be careful of noise or vibrations

- Please fix the unit in a stable place to avoid noise or vibrations.
- The noise near the air outlet of the outdoor unit could enter the air exit.
- Locate the outdoor unit where noise emitted by it or hot air from its air outlet will cause no nuisance to your neighbors.
- If the air conditioner sounds abnormal during operation, contact the dealer where you purchased the air conditioner.

Wire

- To avoid electric shock, please link the air conditioner with the ground. Since the plug in the air conditioner has joined the ground wiring, do not change it freely.
- The power socket must be dedicated for use with the air conditioner only.
- Do not use excessive force when pulling the power wiring.
- When linking the air conditioner with the ground, observe all local, state, and national electrical codes.
- If necessary, use the power fuse or the circuit, breaker or the corresponding scale ampere.
- If you want to change the power wiring, please contact the service center of the local MD electric appliance.

Relocation

If you move out or if it is desired to relocate the air conditioner, consult your dealer, because special skills to withdraw Freon, purge air and perform other operations are required.

Before you ask for servicing or repairs, check the following:

Symptom	Cause
Inoperative	<ul style="list-style-type: none"> • The power fuse is blown or the circuit breaker has been tripped. • The batteries in the remote control are exhausted. • The timer is set.
Does not cool or heat well.	<ul style="list-style-type: none"> • The air inlet or outlet of the outdoor unit is blocked. Doors or windows are open. • The air filter is clogged with dust. • The louver is not at the correct position. • The fan speed is set to low. • The temperature setting is too high or too low.
Room air is smelly.	Smells impregnated in the wall, carpet, furniture, clothing, or furs, are coming out. A white mist of chilled air or water is generated from the outdoor unit.

 **CAUTION**

If any of the following conditions occur, stop the air conditioner immediately, set the power switch to off, and contact the dealer:

- The indicator lamps flash rapidly (five times per second), you disconnect the unit with the power and then connect the unit with the power again after two or three minutes but the lamps still flash.
- Switch operations are erratic.
- The fuse is blown frequently or the circuit breaker is tripped frequently.
- Foreign matter or water has fallen inside the air conditioner.
- Any other unusual condition is observed.

Before you ask for service or repairs, check the following:

Setting Change Is Impossible		
Symptoms	Causes	Reason and Disposal
The fan speed can not be changed.	Check whether the MODE indicated on the display is " AUTO "	When the automatic mode is selected, the air conditioner automatically selects the fan speed.
	Check whether the MODE indicated on the display is " DRY "	When dry operation is selected, the air conditioner automatically selects the fan speed. The fan speed can be selected during " COOL " and " FAN ONLY ", and " HEAT "
The Transmission Indicator "▲" Never Comes On		
Symptoms	Causes	Reason and Disposal
The remote control signal is not transmitted even when the ON/OFF button is pushed.	Check whether the batteries in the remote control are exhausted.	The remote control signal is not transmitted, because the power supply is off.
The Display Never Comes On		
Symptoms	Causes	Reason
The TEMP indicator does not come on.	Check whether the MODE indicated on the display is " FAN ONLY ".	The temperature cannot be set during fan only operation.
The Display Goes Off		
Symptoms	Causes	Reason
The indication on the display disappears after a lapse of time.	Check whether the timer operation has come to an end when the OFF TIMER is indicated on the display.	The air conditioner operation stops since the set time elapsed.
The ON TIMER indicators go off after a lapse of certain time.	Check whether the timer operation is started when the ON TIMER is indicated on the display.	When the time set to start the air conditioner is reached, the air conditioner will automatically start and the appropriate indicator will go off.
The Signal Receiving Tone Does Not Sound		
Symptoms	Causes	Disposal
No receiving tone sounds from the indoor unit even when the ON/OFF button is pushed.	Check whether the signal transmitter of the remote control is properly directed to the receiver of the indoor unit when the ON/OFF button is pushed.	Direct the signal transmitter of the remote control to the receiver of the indoor unit, and then repeatedly push the ON/OFF button twice.
Buttons on the remote control don't work.		Press Reset button.

Remote Control Troubleshooting

The following displays indicate an error or problem:

NO	Malfunction	Display (Nixie Tube)	Timer Lamp	Running Lamp (Flashes Per Second)
1	Indoor EEPROM error	E0.	OFF	1
2	Communication malfunction between indoor and outdoor units	E1.	OFF	2
3	Indoor fan speed malfunction	E3.	OFF	4
4	Indoor room temperature sensor open circuit or short circuit	E4.	OFF	5
5	Evaporator coil temperature sensor open circuit or short circuit	E5.	OFF	6
6	Refrigerant leakage detection malfunction	EC.	OFF	7
7	Water-level alarm malfunction	EE.	OFF	8
8	Communication malfunction between two indoor units (for twins model)	E8.	OFF	9
9	Other malfunction of twins model	E9.	OFF	10
10	Current overload protection	F0.	ON.	1
11	Outdoor room temperature sensor open circuit or short circuit	F1.	ON.	2
12	Outdoor condenser pipe temperature sensor error	F2.	ON.	3
13	Discharging air temperature sensor error	F3.	ON.	4
14	Outdoor EEPROM error	F4.	ON.	5
15	Outdoor fan speed malfunction (Only for DC fan motor)	F5.	ON.	6
16	T2b sensor error	F6.	ON.	7
17	Lifting panel communication checking channel is abnormal	F7.	ON.	8
18	Lifting panel malfunction	F8.	ON.	9
19	Lifting panel is not closed	F9.	ON.	10
20	Inverter module IPM protection	P0.	Flash.	1
21	High/Low voltage protection	P1.	Flash.	2
22	High temperature protection of compressor top	P2.	Flash.	3
23	Outdoor low temp. protection	P3.	Flash.	4
24	Compressor drive error	P4.	Flash.	5
25	Mode conflict	P5.	Flash.	6

The displayed error code may differ from appliance to appliance.



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Olympus Series Cassette Air Handlers

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