

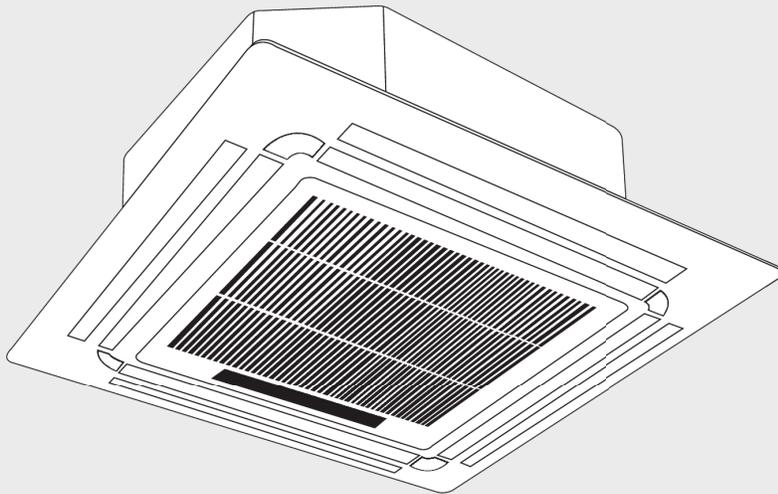


# BOSCH

User Manual

## Four Way Cassette Ductless Split Air Conditioner / Heat Pump

### Climate 5000 Series



**⚠ WARNING:**

- ▶ In North America, installation must be performed in accordance with the requirement of NEC (National Electric Code) and CEC (Canadian Electric Code) by licensed and qualified personnel only.
- ▶ Only contact a licensed contractor for repair or maintenance of this unit.



## Table of Contents

<b>1</b>	<b>Key to Symbols and Safety Instructions</b>	<b>4</b>
1.1	Key to Symbols	4
1.2	Safety	4
<b>2</b>	<b>Unit Specifications and Features</b>	<b>6</b>
2.1	Unit Parts	6
2.2	Achieving Optimal Performance	7
2.3	Other Features	8
2.4	Setting Angle of Air Flow	8
<b>3</b>	<b>Manual Operation (Without Remote)</b>	<b>9</b>
3.1	How to Operate Your Unit Without the Remote Control	9
<b>4</b>	<b>Care and Maintenance</b>	<b>10</b>
4.1	Cleaning Precautions	10
4.2	Cleaning Your Air Filter	10
4.3	Maintenance – Long Periods of Non-Use	11
4.4	Maintenance – Pre-Season Inspection	11
<b>5</b>	<b>Troubleshooting</b>	<b>12</b>
5.1	Common Issues	12
5.2	Troubleshooting Tips	13
5.3	Error Codes	14
5.3.1	9k~18k models	14
5.3.2	24k~48k models	15
<b>6</b>	<b>Disposal Guidelines</b>	<b>15</b>

## 1 Key to Symbols and Safety Instructions

### 1.1 Key to Symbols

#### Warnings



Warnings in this document are identified by a warning triangle printed against a grey background. Keywords at the start of a warning indicate the type and seriousness of the ensuing risk if measures to prevent the risk are not taken.

The following keywords are defined and can be used in this document:

- ▶ **DANGER** indicates a hazardous situation which, if not avoided, will result in death or serious injury.
- ▶ **WARNING** indicates a hazardous situation which, if not avoided, could result in death or serious injury.
- ▶ **CAUTION** indicates a hazardous situation which, if not avoided, could result in minor to moderate injury.
- ▶ **NOTICE** is used to address practices not related to personal injury.

#### Important information



This symbol indicates important information where there is no risk to people or property.

## 1.2 Safety

### Please read safety precautions before installation

Incorrect installation due to ignoring instructions can cause serious damage or injury.

For Multi Zone System, please refer to Multi Zone System installation manual.



#### WARNING: ELECTRICAL HAZARD

- ▶ Do not modify the length of the power supply cord or use an extension cord to power the unit.
- ▶ Only use the specified power cord. If the power 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 share the electrical outlet with other appliances. Improper or insufficient power supply can cause fire or electrical shock.
- ▶ Do not operate the air conditioner with wet hands. This may cause electric shock



#### WARNING: INSTALLATION REQUIREMENTS

- ▶ Installation must be performed by a licensed contractor, and per the instructions in the installation manual. Improper installation can cause water leakage, electrical shock, or fire.
- ▶ In North America, installation must be performed in accordance with the requirement of NEC (National Electric Code) and CEC (Canadian Electric Code) by licensed and qualified personnel only.
- ▶ Only contact an licensed contractor for repair or maintenance of this unit.
- ▶ Only use the included accessories, parts, and specified parts for installation. Using non-standard parts can cause water leakage, electrical shock, fire, and can cause the unit to fail.
- ▶ Install the unit in a solid location that can support the unit's weight. If the chosen location cannot support the unit's weight, or the installation is not done properly, the unit may drop and cause serious injury and/or damage.
- ▶ When moving or relocating the air conditioner, consult experienced service technicians for disconnection and re-installation of the unit.
- ▶ For units that have an auxiliary electric heater, do not install the unit within 1 meter (3 feet) of any combustible materials.


**WARNING: ELECTRICAL HAZARD**

- ▶ For all electrical work, follow all local and national wiring standards, regulations, and the Installation Manual. The power supply to the outdoor unit requires a service disconnect at the unit. Only use a dedicated circuit. Never share a power source connected to this system. Insufficient electrical capacity or defects in electrical work can cause electrical shock or fire.
- ▶ For all electrical work, use the specified cables. Connect cables tightly, and clamp them securely to prevent external forces from damaging the terminal. Improper electrical connections can overheat and cause fire, and may also cause shock.
- ▶ All wiring must be properly arranged to ensure that the control board cover can close properly. If the control board cover is not closed properly, it can lead to corrosion and cause the connection points on the terminal to heat up, catch fire, or cause electrical shock.
- ▶ In certain functional environments, such as kitchens, server rooms, etc., the use of specially designed air-conditioning units is highly recommended.
- ▶ If the power supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons such as a licensed electrician in order to avoid a hazard.
- ▶ The product must be properly grounded at the time of installation, or electrical shock may occur.
- ▶ If connecting power to fixed wiring, an all-pole disconnection device which has at least 3mm clearances in all poles, and have a leakage current that may exceed 10mA, the residual current device(RCD) having a rated residual operating current not exceeding 30mA, and disconnection must be incorporated in the fixed wiring in accordance with the wiring rules.

**NOTICE: PROPERTY DAMAGE**

- ▶ Install condensate drainage piping according to the instructions in this manual. Improper condensate drainage may cause water damage to your home and property.


**CAUTION: CONTAINS REFRIGERANT**

- ▶ This air-conditioning unit contains fluorinated gasses. For specific information on the type of gas and the amount, please refer to the relevant label on the outdoor unit itself.
- ▶ Installation, service, maintenance and repair of this unit must be performed by a certified technician.
- ▶ Product removal and recycling must be performed by a certified technician.
- ▶ If the system has a leak-detection system installed, it must be checked for leaks at least every 12 months.
- ▶ When the unit is checked for leaks, proper record-keeping of all checks is strongly recommended.


**WARNING:**

- ▶ This product can expose you to chemicals including Lead and Lead components, which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).


**CAUTION: BURN HAZARD**

- ▶ Do not install the unit in a location that may be exposed to combustible gas leaks. If combustible gas accumulates around the unit, it may cause fire.
- ▶ Do not operate your air conditioner in a wet room such as a bathroom or laundry room. Too much exposure to water can cause electrical components to short circuit.

## 2 Unit Specifications and Features

### 2.1 Unit Parts

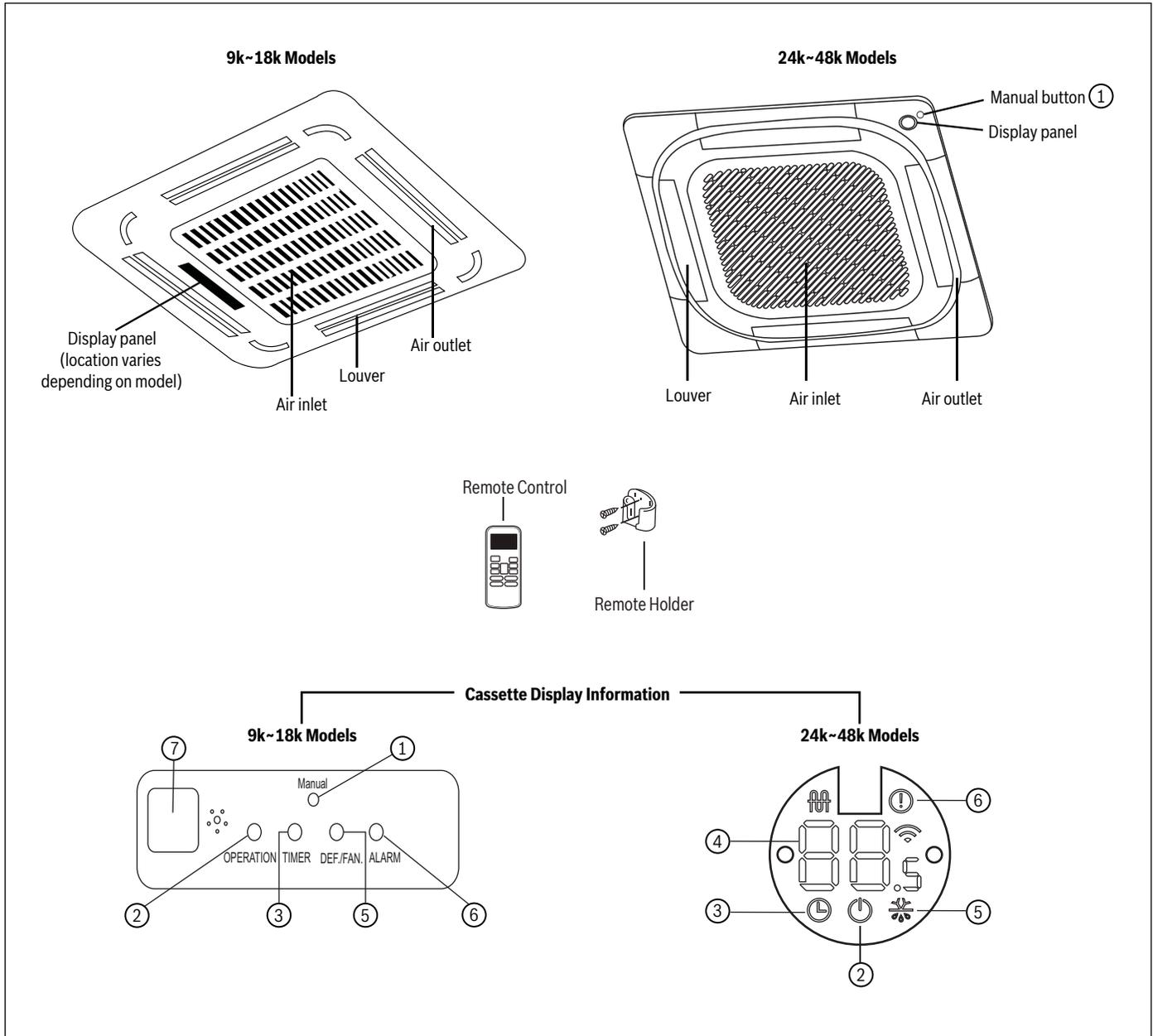


Figure 1

Item #	9k~18k Models	24k~48k Models
1	Manual operation button	Manual operation button
2	Operation indicator	Operation indicator
3	Timer	Timer
4	—	LED display
5	Pre-heating/defrost	Pre-heating/defrost
6	Alarm	Alarm
7	Infrared receiver	Infrared receiver (Built-in)

Table 1 Display Information

## 2.2 Achieving Optimal Performance

Optimal performance for the COOL, HEAT, and DRY modes can be achieved in the following temperature ranges. When your air conditioner is used outside of these ranges, certain safety protection features will activate and cause the unit to perform less than optimally.

### Optimal performance temperature ranges

		COOL mode	HEAT mode	DRY mode
Room Temperature		17°C - 32°C 63°F - 90°F	0°C - 30°C 32°F - 86°F	10°C - 32°C 50°F - 90°F
Outdoor Temperature	Regular (9K ~ 24K)	-25°C - 50°C -13°F - 122°F	-25°C - 30°C -13°F - 86°F	0°C - 50°C 32°F - 122°F
		Max Performance (9K ~ 24K)	-30°C - 50°C -22°F - 122°F	-30°C - 30°C -22°F - 86°F
	LCAC (36K ~ 48K)	-15°C - 50°C 5°F - 122°F	-15°C - 30°C 5°F - 86°F	0°C - 50°C 32°F - 122°F

Table 2



When the outside temperature is below 0°C (32°F), we strongly recommend keeping the unit plugged in at all times to ensure smooth ongoing performance. A base pan heater is used in the outdoor unit to prevent ice build-up. Ice may build up if the unit is unplugged.

### Energy Saving Tips

- ▶ DO NOT expose the unit to excessive temperature levels.
- ▶ Keep curtains closed during heating and cooling operation.
- ▶ Doors and windows should be kept closed to keep cool or warm air in the room.
- ▶ DO NOT place objects near the air inlet and outlet of the unit. This will reduce the efficiency of the unit.
- ▶ Set a timer and use the built-in SLEEP/ECONOMY mode if applicable.
- ▶ If you don't plan to use the unit for a long time, remove the batteries from the remote control.
- ▶ Clean the air filter every two weeks. A dirty filter can reduce cooling or heating efficiency.
- ▶ Adjust louvers properly and avoid direct airflow.

## 2.3 Other Features

- ▶ **Auto-Restart**  
If the unit loses power, it will automatically restart with the prior settings once power has been restored.
- ▶ **Louver Angle Memory**  
When turning on your unit, the louver will automatically resume its former angle.
- ▶ **Refrigerant Leakage Detection**  
The indoor unit will automatically display "EC" when it detects refrigerant leakage.
- ▶ **Three-Minute Protection Feature**  
A protection feature that prevents the air conditioner from being activated for approximately 3 minutes when it restarts immediately after operation.



For a detailed explanation of your unit's advanced functionality, refer to the Remote Control Manual.

## 2.4 Setting Angle of Air Flow

### Setting vertical angle of air flow

While the unit is on, use the SWING /DIRECT button on the remote controller to set the direction (vertical angle) of airflow.

1. Press the SWING /DIRECT button once to activate the louver. Each time you press the button, it will adjust the louver. Press the button until the direction you prefer is reached.
2. To make the louver swing up and down continuously, press and hold the SWING/DIRECT button for 3 seconds. Press it again to stop the automatic function.



When Timer On is set, the SWING function will be disabled.

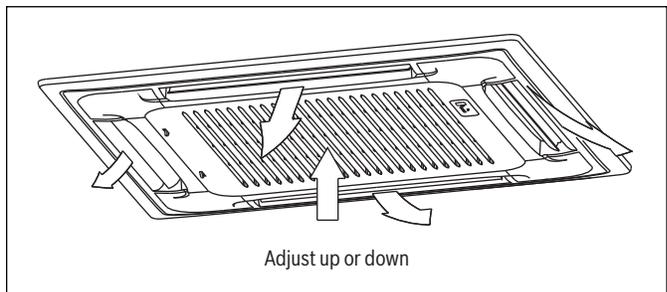


Figure 2

### Setting horizontal angle of air flow



#### CAUTION: PERSONAL INJURY

- ▶ Do not put your fingers in or near the blower and suction side of the unit. The high-speed fan inside the unit may cause injury.

### 3 Manual Operation (Without Remote)

#### 3.1 How to Operate Your Unit Without the Remote Control

In the event that your remote control fails to work, your unit can be operated manually with the MANUAL CONTROL button located on the indoor unit. Note that manual operation is not a long-term solution, and that operating the unit with your remote control is strongly recommended.



Unit must be turned off before manual operation.

To operate your unit manually:

1. Press the MANUAL CONTROL button one time to activate FORCED AUTO mode. In this mode, the unit will keep running with the temperature set point fixed at 75°F (24°C).
2. Press the MANUAL CONTROL button again to activate FORCED COOLING mode. In this mode, the unit will stay at the forced cooling mode for 30 minutes and change to the force auto mode.
3. Press the MANUAL CONTROL button a third time to turn the unit off.

**NOTICE:**

- ▶ The manual button is intended for testing purposes and emergency operation only. Please do not use this function unless the remote is lost and it is absolutely necessary. To restore regular operation, use the remote control to activate the unit.

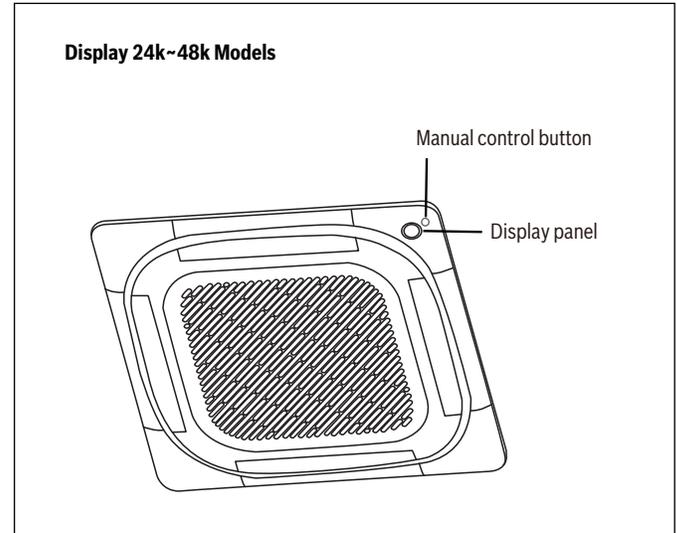


Figure 4

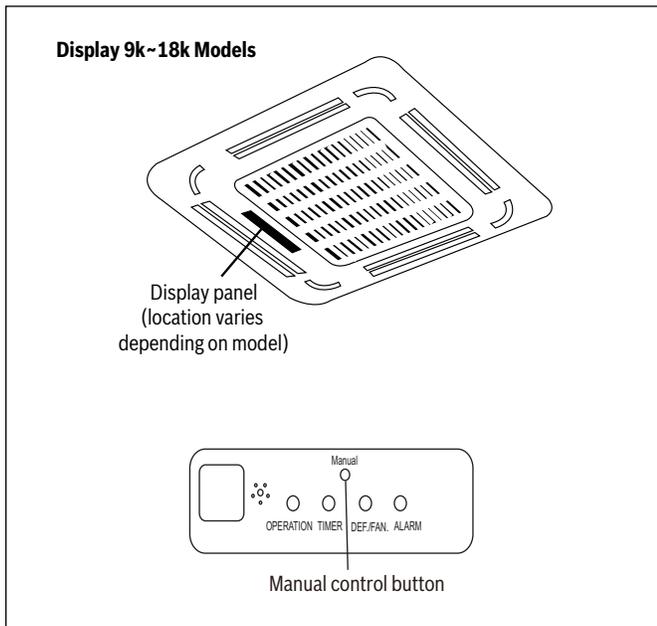


Figure 3

## 4 Care and Maintenance

### 4.1 Cleaning Precautions



**CAUTION:**

- ▶ Any maintenance and cleaning of outdoor unit must be performed by qualified service personnel only.
- ▶ Any unit repairs must be performed by qualified service personnel only.



**CAUTION: ELECTRICAL HAZARD**

Always turn off your air conditioner system and disconnect its power supply before cleaning or maintenance.

- ▶ Do not use chemicals or chemically treated cloths to clean the unit.
- ▶ Do not use benzene, paint thinner, polishing powder or other solvents to clean the unit. They can cause the plastic surface to crack or deform.
- ▶ Do not use water hotter than 40°C (104°F) to clean the front panel. This can cause the panel to deform or become discolored.

### 4.2 Cleaning Your Air Filter



**CAUTION: ELECTRICAL HAZARD**

- ▶ Before changing the filter or cleaning, turn off the unit and disconnect its power supply.
- ▶ When removing filter, do not touch metal parts in the unit. The sharp metal edges can cut you.
- ▶ Do not use water to clean the inside of the indoor or outdoor unit. This can destroy insulation and cause electrical shock.
- ▶ Do not expose filter to direct sunlight when drying. This can shrink the filter.

A clogged air conditioner can reduce the cooling efficiency of your unit, and can also be bad for your health. Make sure to clean the filter once every two weeks.

1. Open decorative grille by pushing the two tabs toward center simultaneously.
2. Unplug the display panel cable from the control box on the main unit.

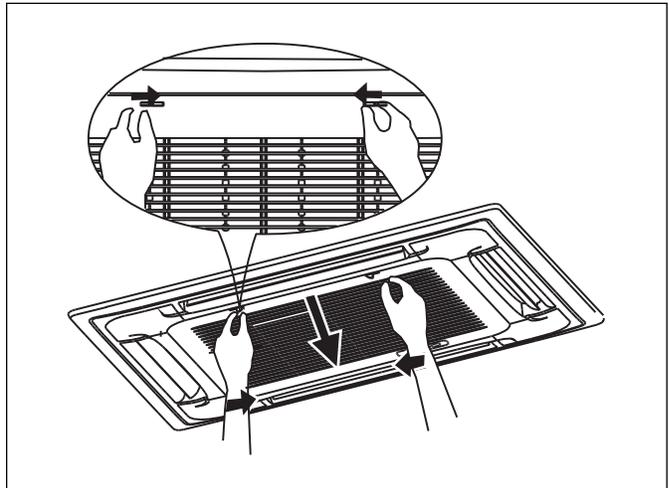


Figure 5

3. Unplug the display panel cable from the control box on the main unit.

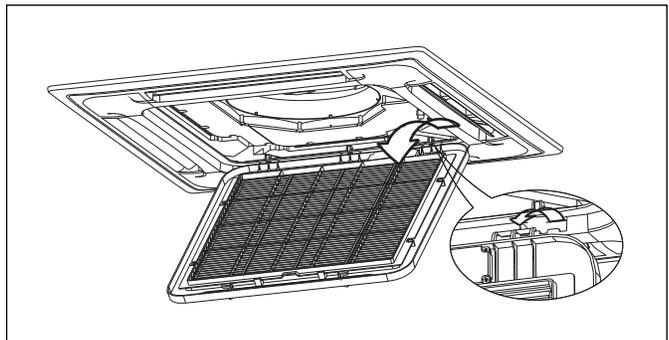


Figure 6

4. Remove the air filter.
5. Clean dirt from the air filter using a vacuum cleaner or washing with water.
  - If dirt is conspicuous, wash with a neutral detergent in lukewarm water.
  - If hot water (40°C/104°F or more) is used, it may be deformed.

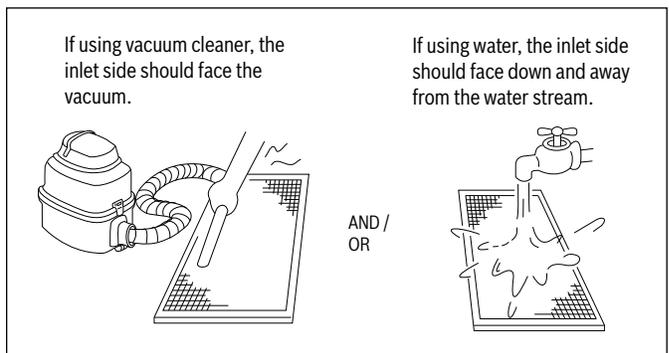


Figure 7

6. Rinse the filter with clean water and allow it to air-dry. DO NOT let the filter dry in direct sunlight.
7. Reinstall the filter.
8. Connect display panel cable to the main unit.
9. Re-install decorative grille.

### 4.3 Maintenance - Long Periods of Non-Use

If you plan not to use your air conditioner for an extended period of time, do the following:

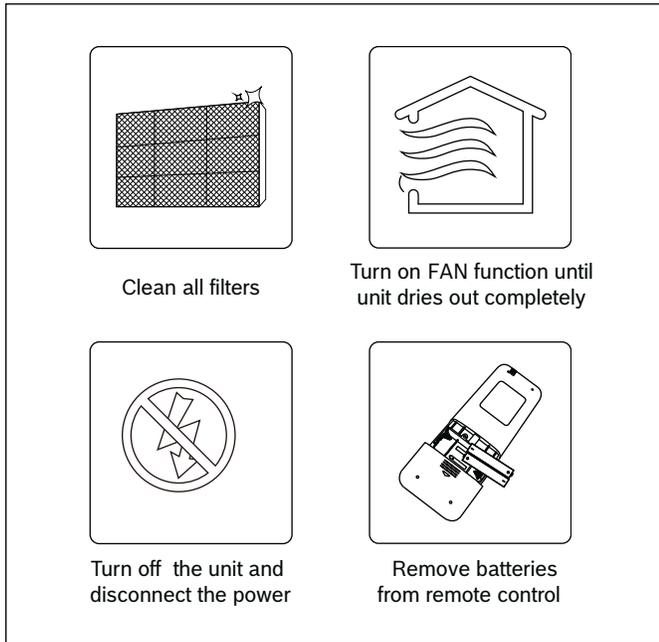


Figure 8

### 4.4 Maintenance - Pre-Season Inspection

After long periods of non-use, or before periods of frequent use, do the following:

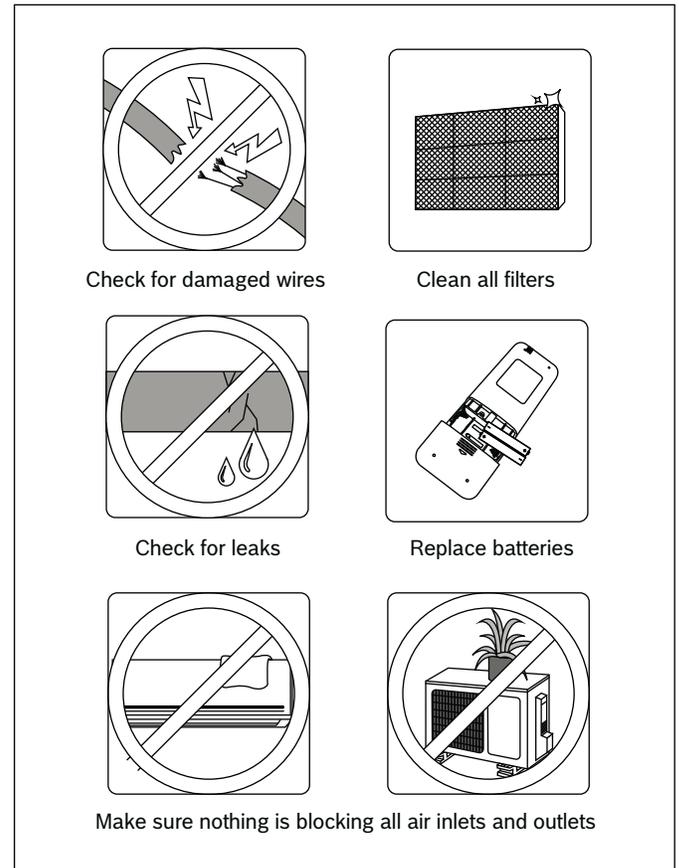


Figure 9

## 5 Troubleshooting



### CAUTION: SYSTEM MALFUNCTION

If ANY of the following conditions occurs, turn off unit immediately!

- ▶ The power cord is damaged or abnormally warm
- ▶ You smell a burning odor
- ▶ The unit emits loud or abnormal sounds
- ▶ A power fuse blows or the circuit breaker frequently trips
- ▶ Water or other objects fall into or out of the unit

DO NOT ATTEMPT TO FIX THESE YOURSELF! CONTACT A QUALIFIED SERVICE PERSON IMMEDIATELY.

### 5.1 Common Issues

The following problems are not a malfunction and in most situations will not require repairs.

Issue	Possible Causes
Unit does not turn on when pressing ON/OFF button	The Unit has a 3-minute protection feature that prevents the unit from overloading. The unit cannot be restarted within three minutes of being turned off.
The indoor unit emits white mist	In humid regions, a large temperature difference between the room's air and the conditioned air can cause white mist.
The unit changes from COOL/HEAT mode to FAN mode	The unit may change its setting to prevent frost from forming on the unit. Once the temperature increases, the unit will start operating in the previously selected mode again. The set temperature has been reached, at which point the unit turns off the compressor. The unit will continue operating when the temperature fluctuates again.
The indoor unit makes noises	A rushing air sound may occur when the louver resets its position. A squeaking sound may occur after running the unit in HEAT mode due to expansion & contraction of the unit's plastic parts.
Both the indoor and outdoor units emit white mist	When the unit restarts in HEAT mode after defrosting, white mist may be emitted due to moisture generated from the defrosting process.
Both the indoor unit and outdoor unit make noises	Low hissing sound during operation: This is normal and is caused by refrigerant gas flowing through both indoor and outdoor units. Low hissing sound when the system starts, has just stopped running, or is defrosting: This noise is normal and is caused by the refrigerant gas stopping or changing direction. Squeaking sound: Normal expansion and contraction of plastic and metal parts caused by temperature changes during operation can cause squeaking noises.
The outdoor unit makes noises	The unit will make different sounds based on its current operating mode.
Dust is emitted from either the indoor or outdoor unit	The unit may accumulate dust during extended periods of non-use, which will be emitted when the unit is turned on. This can be mitigated by covering the unit during long periods of inactivity.
The fan of the outdoor unit does not operate	During operation, the fan speed is controlled to optimize product operation.
Operation is erratic, unpredictable, or unit is unresponsive	Interference from cell phone towers and remote boosters may cause the unit to malfunction. In this case, try the following: <ul style="list-style-type: none"> <li>▶ Disconnect the power, then reconnect.</li> <li>▶ Press ON/OFF button on remote control to restart operation.</li> </ul>
The unit emits a bad odor	The unit may absorb odors from the environment (such as furniture, cooking, cigarettes, etc.) which will be emitted during operations. The unit's filters have become moldy and should be cleaned.

Table 3



If a problem persists, contact a local dealer or a qualified service provider. Provide them with a detailed description of the unit malfunction as well as your model number and unit serial number.

## 5.2 Troubleshooting Tips

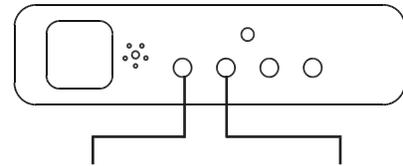
When trouble occurs, please check the following points before contacting a contractor.

Issue	Possible Causes	Solution
The unit is not working	Power failure	Wait for the power to be restored
	The power switch is off	Turn on the power
	The fuse is burned out	Replace the fuse
	Remote control batteries are dead	Replace the remote control batteries
	The unit's 3-minute protection has been activated	Wait three minutes after restarting the unit
The unit starts and stops frequently	There's too much or too little refrigerant in the system	Check for leaks and recharge the system with refrigerant.
	Incompressible gas or moisture has entered the system.	Evacuate and recharge the system with refrigerant
	System circuit is blocked	Determine which circuit is blocked and replace the malfunctioning piece of equipment
	The compressor is broken	Replace the compressor
	The voltage is too high or too low	Install a voltage regulator
Poor cooling performance	Temperature setting may be higher than the ambient room temperature	Lower the temperature setting
	The heat exchanger on the indoor or outdoor unit is dirty	Clean the affected heat exchanger
	The air filter is dirty	Clean filter according to instructions
	The air inlet or outlet of either unit is blocked	Turn the unit off, remove the obstruction and turn back on
	Doors and windows are open	Make sure that all doors and windows are closed while operating the unit
Poor heating performance	Excessive heat is generated by sunlight	Close blinds and curtains
	Cold air is entering through doors and windows	Make sure that all doors and windows are closed during use
Indicator lamps continue flashing	The unit may stop operation or continue to run safely. If the indicator lamps continue to flash or error codes appear, wait for about 10 minutes. The problem may resolve itself. If not, disconnect the power, then connect it again. Turn the unit on. If the problem persists, disconnect the power and contact your nearest customer service center.	
Error code appears and begins with the letters as the following in the window display of indoor unit: E(x), P(x), F(x) EH(xx), EL(xx), EC(xx) PH(xx), PL(xx), PC(xx)		

Table 4

## 5.3 Error Codes

### 5.3.1 9k-18k models



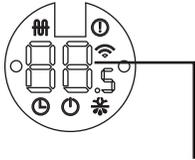
Number	Cause	Operation indicator flashes	Timer indicator
1	Indoor EEPROM (Electrically Erasable Programmable Read-Only Memory) error	1	Off
2	Indoor and outdoor unit communication malfunction	2	Off
3	Indoor fan speed malfunction	4	Off
4	Indoor room temperature sensor error	5	Off
5	Evaporator coil temperature sensor error	6	Off
6	Refrigerant leak detection system malfunction	7	Off
7	Water level alarm malfunction	8	Off
8	Overload protection	1	On
9	Outdoor temperature sensor error	2	On
10	Outdoor condenser pipe sensor error	3	On
11	Discharge air temperature sensor error	4	On
12	Outdoor EEPROM (Electrically Erasable Programmable Read-Only Memory) error	5	On
13	Outdoor fan speed (DC fan motor only) malfunction	6	On
14	Inverter module IPM protection	1	Flash
15	High/Low voltage protection	2	Flash
16	Compressor top overheating protection	3	Flash
17	Outdoor low temperature protection	4	Flash
18	Compressor drive error	5	Flash
19	Mode conflict	6	Flash
20	Compressor low-pressure protection	7	Flash
21	Outdoor IGBT sensor error	8	Flash

Table 5



9k-18k models do not have display to show error codes and Operation and Timer Indicator will turn on / off and or flash according to above table to show system malfunction.

**5.3.2 24k~48k models**



Number	Display*	Error Information
1	EH 00/EH 0A	Indoor unit EEPROM parameter error
2	EL 01	Indoor / outdoor unit communication error
3	EH 03	The indoor fan speed is operating outside of the normal range(for some models)
4	EH 60	Indoor room temperature sensor T1 is in open circuit or has short circuited
5	EH 61	Evaporator coil temperature sensor T2 is in open circuit or has short circuited
6	EL 0C	Refrigerant Leakage Detection(for some models)
7	EH 0E	Water-level alarm malfunction
8	EC 53	Outdoor room temperature sensor T4 is in open circuit or has short circuited
9	EC 52	Condenser coil temperature sensor T3 is in open circuit or has short circuited
10	EC 54	Compressor discharge temperature sensor TP is in open circuit or has short circuited
11	EC 56	Evaporator coil outlet temperature sensor T2B is in open circuit or has short circuited(for free-match indoor units)
12	EC 51	Outdoor unit EEPROM parameter error
13	EC 07	The outdoor fan speed is operating outside of the normal range(for some models)
14	PC 00	IPM malfunction or IGBT over-strong current protection
15	PC 01	Over voltage or over low voltage protection
16	PC 02	Top temperature protection of compressor or High temperature protection of IPM module
17	PC 04	Inverter compressor drive error
18	PC 03	High pressure protection or low pressure protection (for some models)
19	EC 0d	Outdoor unit malfunction
20	--	Indoor units mode conflict(match with multi outdoor unit)

Table 6

\* The error codes are four digits, displayed two at a time on the LED.

**6 Disposal Guidelines**

**Components**

Many parts in the Air Conditioner can be fully recycled in the end of the product life. Contact your city authorities for information about the disposal of recyclable products.

**Refrigerant**

At the end of the service life of this appliance and prior to it's environmental disposal, a person qualified to work with refrigerant circuits must recover the refrigerant from within the sealed system.



**CAUTION: CONTAINS REFRIGERANT**

- ▶ Improper disposal of this appliance endangers your health and is bad for the environment. Hazardous substances may leak into the ground water and enter the food chain.
- ▶ Disposing of this product correctly will help ensure that the waste undergoes the necessary treatment, recovery and recycling.

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