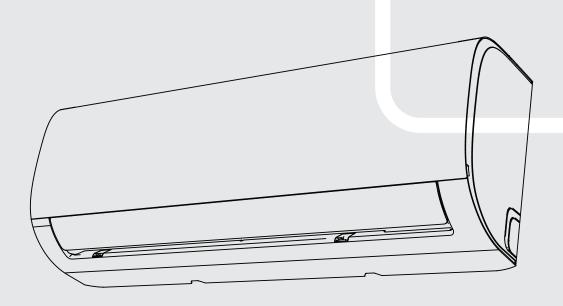


# SPLIT AIR CONDITIONER WITH HEAT PUMP

## **USER'S MANUAL**



### Read this manual



Keep this manual where the operator can easily find it. Inside you will find many helpful hints on how to use and maintain your air conditioner properly. Just a little preventative care on your part can save you a great deal of time and money over the life of your air conditioner. You'll find many answers to common problems in the chart of troubleshooting tips. If you review the chart of troubleshooting tips first, you may not need to call for service.

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## **Safety Precautions**

#### **Read Safety Precautions Before Operation and Installation**

Incorrect installation due to ignoring instructions can cause serious damage or injury. The seriousness of potential damage or injuries is classified as either a **WARNING** or **CAUTION**.



#### **WARNING**

This symbol indicates the possibility of personnel injury or loss of life.



#### CAUTION

This symbol indicates the possibility of property damage or serious consequences.



#### **WARNING**

This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision (EN Standard requirements).

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



#### WARNINGS FOR PRODUCT USE

- If an abnormal situation arises (like a burning smell), immediately turn off the unit and disconnect the power. Call your dealer for instructions to avoid electric shock, fire or injury.
- **Do not** insert fingers, rods or other objects into the air inlet or outlet. This may cause injury, since the fan may be rotating at high speeds.
- **<u>Do not</u>** use flammable sprays such as hair spray, lacquer or paint near the unit. This may cause fire or combustion.
- **<u>Do not</u>** operate the air conditioner in places near or around combustible gases. Emitted gas may collect around the unit and cause explosion.
- **<u>Do not</u>** 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.
- **Do not** expose your body directly to cool air for a prolonged period of time.
- **Do not** allow children to play with the air conditioner. Children must be supervised around the unit at all times.
- If the air conditioner is used together with burners or other heating devices, thoroughly ventilate the room to avoid oxygen deficiency.
- In certain functional environments, such as kitchens, server rooms, etc., the use of specially designed air-conditioning units is highly recommended.

#### **CLEANING AND MAINTENANCE WARNINGS**

- Turn off the device and disconnect the power before cleaning. Failure to do so can cause electrical shock.
- **Do not** clean the air conditioner with excessive amounts of water.
- **Do not** clean the air conditioner with combustible cleaning agents. Combustible cleaning agents can cause fire or deformation.



#### <sup>'!</sup>\ CAUTION

- Turn off the air conditioner and disconnect the power if you are not going to use it for a long time.
- Turn off and unplug the unit during storms.
- Make sure that water condensation can drain unhindered from the unit.
- **Do not** operate the air conditioner with wet hands. This may cause electric shock.
- **Do not** use device for any other purpose than its intended use.
- **Do not** climb onto or place objects on top of the outdoor unit.
- **Do not** allow the air conditioner to operate for long periods of time with doors or windows open, or if the humidity is very high.



#### **ELECTRICAL WARNINGS**

- 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.
- Keep power plug clean. Remove any dust or grime that accumulates on or around the plug. Dirty plugs can cause fire or electric shock.
- **Do not** pull power cord to unplug unit. Hold the plug firmly and pull it from the outlet. Pulling directly on the cord can damage it, which can lead to fire or electric shock.
- **Do not** modify the length of the power supply cord or use an extension cord to power the unit.
- **<u>Do not</u>** share the electrical outlet with other appliances. Improper or insufficient power supply can cause fire or electrical shock.
- The product must be properly grounded at the time of installation, or electrical shock may occur.
- For all electrical work, follow all local and national wiring standards, regulations, and the Installation Manual. 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 electrical connections must be made according to the Electrical Connection Diagram located on the panels of the indoor and outdoor units.
- 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.
- If connecting power to fixed wiring, an all-pole disconnection device which has at least 0.12in 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.

#### TAKE NOTE OF FUSE SPECIFICATIONS

The air conditioner's circuit board (PCB) is designed with a fuse to provide overcurrent protection. The specifications of the fuse are printed on the circuit board, such as:

**Indoor unit:** T3.15AL/250VAC, T5AL/250VAC, T3.15A/250VAC, T5A/250VAC, etc.

**Outdoor unit**: T20A/250VAC (<=18000Btu/h units), T30A/250VAC (>18000Btu/h units)

**NOTE:** For the units with R32 or R290 refrigerant, only the blast-proof ceramic fuse can be used.



#### WARNINGS FOR PRODUCT INSTALLATION

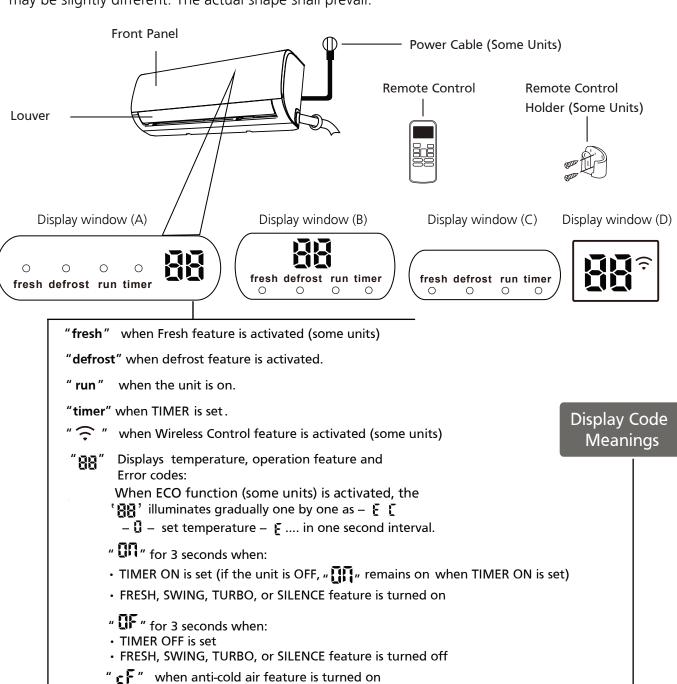
- 1. Installation must be performed by an authorized dealer or specialist. Defective installation can cause water leakage, electrical shock, or fire.
- Installation must be performed according to the installation instructions. Improper installation can cause water leakage, electrical shock, or fire.
   (In North America, installation must be performed in accordance with the requirement of NEC and CEC by authorized personnel only.)
- 3. Contact an authorized service technician for repair or maintenance of this unit. This appliance shall be installed in accordance with national wiring regulations.
- 4. 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.
- 5. Install the unit in a firm 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 damage.
- 6. Install drainage piping according to the instructions in this manual. Improper drainage may cause water damage to your home and property.
- 7. For units that have an auxiliary electric heater, **do not** install the unit within 1 meter (3 feet) of any combustible materials.
- 8. **<u>Do not</u>** 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.
- 9. Do not turn on the power until all work has been completed.
- 10. When moving or relocating the air conditioner, consult experienced service technicians for disconnection and reinstallation of the unit.
- 11. How to install the appliance to its support, please read the information for details in "indoor unit installation" and "outdoor unit installation" sections.

## **Unit Specifications and Features**

#### **Indoor unit display**

**NOTE:** Different models have different front panels and displays window. Not all the indicators described below are available for the air conditioner you purchased. Please check the indoor display window of the unit you purchased.

Illustrations in this manual are for explanatory purposes. The actual shape of your indoor unit may be slightly different. The actual shape shall prevail.



" dr" when defrosting (cooling & heating units)

"FP" when 46°F (8°C) heating feature is turned on (some units)

" \sqrt{"} when unit is self-cleaning (some units)

#### **Operating temperature**

When your air conditioner is used outside of the following temperature ranges, certain safety protection features may activate and cause the unit to disable.

#### **Inverter Split Type**

	COOL mode	HEAT mode	DRY mode	FOR OUTDOOR UNITS
Room Temperature	62°F - 90°F (17°C - 32°C)	32°F - 86°F (0°C - 30°C)	50°F - 90°F (10°C - 32°C)	WITH AUXILIARY ELECTRIC HEATER When the outside
Outdoor Temperature	32°F - 122°F (0°C - 50°C)	5°F - 86°F (-15°C - 30°C)		temperature is below 32°F (0°C), we strongly recommend keeping the
	5°F - 122°F (-15°C - 50°C) (For models with low temp. cooling systems.)		32°F - 122°F (0°C - 50°C)	unit plugged in at all times to ensure smooth ongoing performance.
	32°F - 126°F (0°C - 52°C) (For special tropical models)		32°F - 126°F (0°C - 52°C) (For special tropical models)	

### **Fixed-speed Type**

	COOL mode	HEAT mode	DRY mode
Room Temperature	62°F-90°F (17°C-32°C)	32°F-86°F (0°C-30°C)	50°F-90°F (10°C-32°C)
Outdoor Temperature	64°F-109°F (18°C-43°C)		52°F-109°F (11°C-43°C)
	19°F-109°F (-7°C-43°C) (For models with low-temp cooling systems)	19°F-75°F (-7°C-24°C)	64°F-109°F (18°C-43°C)
	64°F-126°F (18°C-52°C) (For special tropical models)	(-/ C-24 C)	64°F-126°F (18°C-52°C) (For special tropical models)

**NOTE:** Room relative humidity should be less than 80%. If the air conditioner operates in excess of this figure, the surface of the air conditioner may attract condensation. Please set the vertical air flow louver to its maximum angle (vertically to the floor), and set HIGH fan mode.

### To further optimize the performance of your unit, do the following:

- Keep doors and windows closed.
- Limit energy usage by using TIMER ON and TIMER OFF functions.
- Do not block air inlets or outlets.
- Regularly inspect and clean air filters.

A guide on using the infrared remote is not included in this literature package. Not all the functions are available for the air conditioner, please check the indoor display and remote control of the unit you purchased.

#### **Other Features**

#### Auto-Restart (some units)

If the unit loses power, it will automatically restart with the prior settings once power has been restored.

#### Anti-mildew (some units)

When turning off the unit from COOL, AUTO (COOL), or DRY modes, the air conditioner will continue operate at very low power to dry up condensed water and prevent mildew growth.

#### • Wireless Control (some units)

Wireless control allows you to control your air conditioner using your mobile phone and a wireless connection.

For the USB device access, replacement, maintenance operations must be carried out by professional staff.

#### • Louver Angle Memory (some units)

When turning on your unit, the louver will automatically resume its former angle.

#### Refrigerant Leakage Detection (some units)

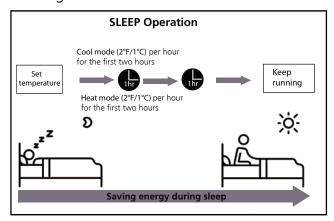
The indoor unit will automatically display "EC" or "ELOC" or flash LEDS (model dependent) when it detects refrigerant leakage.

#### Sleep Operation

The SLEEP function is used to decrease energy use while you sleep (and don't need the same temperature settings to stay comfortable). This function can only be activated via remote control. And the Sleep function is not available in FAN or DRY mode.

Press the **SLEEP** button when you are ready to go to sleep. When in COOL mode, the unit will increase the temperature by 2°F (1°C) after 1 hour, and will increase an additional 2°F (1°C) after another hour. When in HEAT mode, the unit will decrease the temperature by 2°F (1°C) after 1 hour, and will decrease an additional 2°F (1°C) after another hour.

The sleep feature will stop after 8 hours and the system will keep running with final setting.



#### • Setting Angle of Air Flow

#### Setting vertical angle of air flow

While the unit is on, use the **SWING/DIRECT** button on remote control to set the direction (vertical angle) of airflow. Please refer to the Remote Control Manual for details.

#### **NOTE ON LOUVER ANGLES**

When using COOL or DRY mode, do not set louver at too vertical an angle for long periods of time. This can cause water to condense on the louver blade, which will drop on your floor or furnishings.

When using COOL or HEAT mode, setting the louver at too vertical an angle can reduce the performance of the unit due to restricted air flow.

#### **Setting horizontal angle of air flow**

The horizontal angle of the airflow must be set manually. Grip the deflector rod (See **Fig.B**) and manually adjust it to your preferred direction. **For some units,** the horizontal angle of the airflow can be set by remote control. Please refer to the Remote Control Manual.

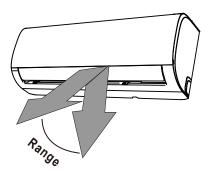
#### **Manual Operation (without remote)**

### **A** CAUTION

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

To operate your unit manually:

- 1. Open the front panel of the indoor unit.
- 2. Locate the **MANUAL CONTROL button** on the right-hand side of the unit.
- 3. Press the **MANUAL CONTROL button** one time to activate FORCED AUTO mode.
- 4. Press the **MANUAL CONTROL button** again to activate FORCED COOLING mode.
- 5. Press the **MANUAL CONTROL button** a third time to turn the unit off.
- 6. Close the front panel.



**NOTE:** Do not move louver by hand. This will cause the louver to become out of sync. If this occurs, turn off the unit and unplug it for a few seconds, then restart the unit. This will reset the louver.

Fig. A



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.

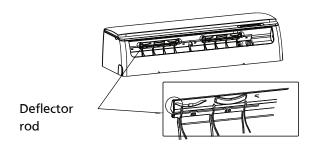
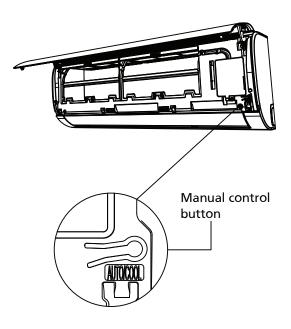


Fig. B



### **Care and Maintenance**

#### **Cleaning Your Indoor Unit**



## BEFORE CLEANING OR MAINTENANCE

ALWAYS TURN OFF YOUR AIR CONDITIONER AND DISCONNECT ITS POWER SUPPLY BEFORE CLEANING OR MAINTENANCE.



#### **CAUTION**

Only use a soft, dry cloth to wipe the unit clean. If the unit is especially dirty, you can use a cloth soaked in warm water to wipe it clean.

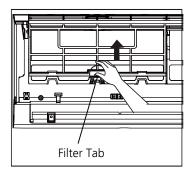
- **Do not** use chemicals or chemically treated cloths to clean the unit
- **Do not** use benzene, paint thinner, polishing powder or other solvents to clean the unit. They can cause the plastic surface to crack or deform.
- **<u>Do not</u>** use water hotter than 104°F (40°C) to clean the front panel.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

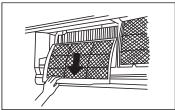
### **Cleaning Your Air Filter**

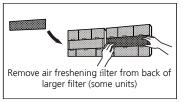
A clogged air conditioner can reduce the cooling efficiency of your unit, and can also be bad for your health. Make sure to clean the filter once every two weeks.

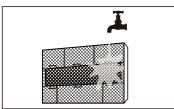
- 1. Lift the front panel of the indoor unit.
- 2. First press the tab on the end of filter to loosen the buckle, lift it up, then pull it towards yourself.
- 3. Now pull the filter out.
- 4. If your filter has a small air freshening filter, unclip it from the larger filter. Clean this air freshening filter with a hand-held vacuum.
- 5. Clean the large air filter with warm, soapy water. Be sure to use a mild detergent.

- 6. Rinse the filter with fresh water, then shake off excess water.
- 7. Dry it in a cool, dry place, and refrain from exposing it to direct sunlight.
- 8. When dry, re-clip the air freshening filter to the larger filter, then slide it back into the indoor unit.
- 9. Close the front panel of the indoor unit.











#### **CAUTION**

Do not touch air freshening (Plasma) filter for at least 10 minutes after turning off the unit.



#### **CAUTION**

- 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 unit. This can destroy insulation and cause electrical shock.
- Do not expose filter to direct sunlight when drying. This can shrink the filter.

#### **Air Filter Reminders (Optional)**

#### **Air Filter Cleaning Reminder**

After 240 hours of use, the display window on the indoor unit will flash "CL." This is a reminder to clean your filter. After 15 seconds, the unit will revert to its previous display.

To reset the reminder, press the **LED** button on your remote control 4 times, or press the **MANUAL CONTROL** button 3 times. If you don't reset the reminder, the "CL" indicator will flash again when you restart the unit.

#### **Air Filter Replacement Reminder**

After 2,880 hours of use, the display window on the indoor unit will flash "nF." This is a reminder to replace your filter. After 15 seconds, the unit will revert to its previous display.

To reset the reminder, press the **LED** button on your remote control 4 times, or press the **MANUAL CONTROL** button 3 times. If you don't reset the reminder, the "nF" indicator will flash again when you restart the unit.

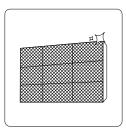
## $\Lambda$

#### **CAUTION**

- Any maintenance and cleaning of outdoor unit should be performed by an authorized dealer or a licensed service provider.
- Any unit repairs should be performed by an authorized dealer or a licensed service provider.

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

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



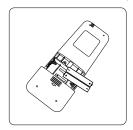
Clean all filters



Turn on FAN function until unit dries out completely



Turn off the unit and disconnect the power



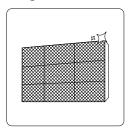
Remove batteries from remote control

## Maintenance – Pre-Season Inspection

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



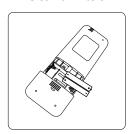
Check for damaged wires



Clean all filters



Check for leaks



Replace batteries





Make sure nothing is blocking all air inlets and outlets

## **Troubleshooting**

## **!** SAFETY PRECAUTIONS

If ANY of the following conditions occurs, turn off your 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 AN AUTHORIZED **SERVICE PROVIDER IMMEDIATELY!**

#### **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 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 emits white mist	In humid regions, a large temperature difference between the room's air and the conditioned air can cause white mist.	
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.	
The indoor unit makes	A rushing air sound may occur when the louver resets its position.	
noises	A squeaking sound may occur after running the unit in HEAT mode due to expansion and contraction of the unit's plastic parts.	
Both the indoor unit and outdoor unit make	Low hissing sound during operation: This is normal and is caused by refrigerant gas flowing through both indoor and outdoor units.	
noises	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.	

Issue	Possible Causes
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 unit emits a bad odor	The unit may absorb odors from the environment (such as furniture, cooking, cigarettes, etc.) which can be emitted during operation.
	The unit's filters have become moldy and should be cleaned.
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> <li>Disconnect the power, then reconnect.</li> <li>Press ON/OFF button on remote control to restart operation.</li> </ul>

**NOTE:** If problem persists, contact a local dealer or your nearest customer service center. Provide them with a detailed description of the unit malfunction as well as your model number.

### **Troubleshooting**

When troubles occur, please check the following points before contacting a repair company.

Problem	Possible Causes	Solution
	Temperature setting may be higher than 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	Remove the filter and clean it according to instructions
Poor Cooling Performance	The air inlet or outlet of either unit is blocked	Turn the unit off, remove the obstruction and turn it back on
	Doors and windows are open	Make sure that all doors and windows are closed while operating the unit
	Excessive heat is generated by sunlight	Close windows and curtains during periods of high heat or bright sunshine
	Too many sources of heat in the room (people, computers, electronics, etc.)	Reduce amount of heat sources
	Low refrigerant due to leak or long-term use	Check for leaks, re-seal if necessary and top off refrigerant
	SILENCE function is activated (optional function)	SILENCE function can lower product performance by reducing operating frequency. Turn off SILENCE function.

Problem	Possible Causes	Solution	
	Power failure	Wait for the power to be restored	
	The power is turned off	Turn on the power	
The unit is not working	The fuse is burned out	Replace the fuse	
Working	Remote control batteries are dead	Replace batteries	
	The Unit's 3-minute protection has been activated	Wait three minutes after restarting the unit	
	Timer is activated	Turn timer off	
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	
	The compressor is broken	Replace the compressor	
	The voltage is too high or too low	Install a manostat to regulate the voltage	
Poor heating performance	The outdoor temperature is extremely low	Use auxiliary heating device	
	Cold air is entering through doors and windows	Make sure that all doors and windows are closed during use	
	Low refrigerant due to leak or long-term use	Check for leaks, re-seal if necessary and top off refrigerant	
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		
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)	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.		

**NOTE:** If your problem persists after performing the checks and diagnostics above, turn off your unit immediately and contact an authorized service center.

