



COMFORT... **BUILT TO LAST**

SINGLE ZONE

DUCTLESS MINI-SPLIT SYSTEM

17 SEER, HEAT PUMP

USER MANUAL

115V SYSTEMS:

2PAMSH09A-17

2PAMSH12A-17.2

208/230V SYSTEMS:

2PAMSH09B-17

2PAMSH12B-17.5

2PAMSH18B-17.7

2PAMSH24B-16

2PAMSH30B-18

2PAMSH36B-16

Before using your air conditioner please read this manual carefully and keep it for future reference, along with your receipt.

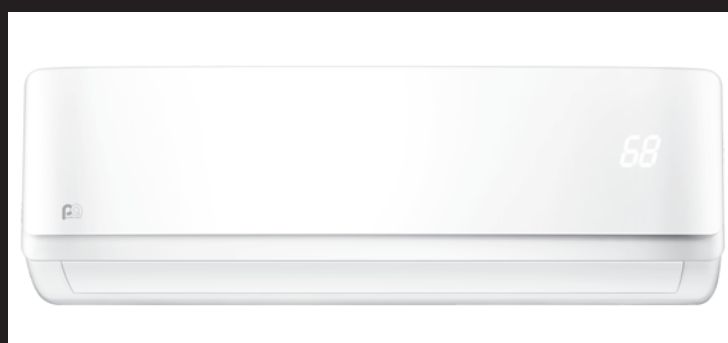


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CAUTION



- Contact an authorized service technician or certified HVAC contractor for installation of this unit.
- Contact an authorized service technician or certified HVAC contractor for repair or maintenance of this unit.
- 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 persons responsible for their safety.
- Young children should be supervised to ensure that they do not play with the air conditioner.
- Installation work must be performed in accordance with national or local wiring standards by authorized personnel only.

Safety Precautions

To prevent injury to the user or other people and property damage, the following instructions must be followed. Incorrect operation due to ignoring or not following installation and usage instructions may cause harm or damage. The seriousness is classified by the following indications:

 WARNING	This symbol indicates the possibility of death or serious injury.
 CAUTION	This symbol indicates the possibility of injury or damage to property.

■ Meanings of symbols used in this manual are as shown below.

	Strictly prohibited.
	Be sure to follow these instructions.

WARNING



- NEVER splice any electrical connection. A poor electrical connection, poor insulation or voltage which is higher than permitted can cause fire.
- Do not expose your body directly to the cool air for prolonged periods of time.
- Never poke fingers, sticks or other objects in the air inlet and outlet vents.
- Never attempt to repair, relocate, or modify the air conditioner yourself. Always contact your qualified service provider if required.
- Do not operate your air conditioner in a wet environment such as a bathroom or laundry room.



- In the event of any abnormality such as a burning smell, completely power off the device. Contact your qualified service provider.
- Completely power off the system before attempting to clean it.
- Use specified wiring.
- Contact an authorized service technician or certified HVAC contractor for installation of this unit.
- Contact an authorized service technician or certified HVAC contractor for repair or maintenance of this unit.
- This air conditioner 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 air conditioner by a person responsible for their safety.
- Children should be supervised to ensure that they do not play with the air conditioner.

Safety Precautions

CAUTION



- Never operate any controls with a wet hand. Doing so may cause an electric shock.
- Never use the device for any other purpose than the intended use.
- Never place food, precision instruments, plants, animals, paint, etc. on the unit.
- Do not expose plants or animals directly to the air flow.
- Never clean the air conditioner with water.
- Never use combustible cleaning agents as these could cause a fire or deformation.
- Never place any burning objects close to the device if they could be directly affected by the emitted air.
- Never step onto the outdoor unit and never place anything on it.
- Never use an unsteady or rusty base.
- Never install the air conditioner in places where combustible gas can be emitted. Emitted gas may collect and cause an explosion.
- Never allow the air conditioner to run for too long with the doors or windows open, or if the humidity is very high.



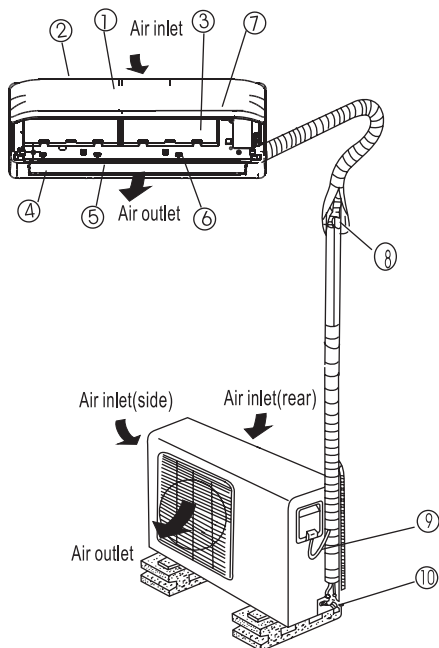
- If the air conditioner is to be used in conjunction with other heaters, the air should be refreshed periodically; otherwise there is a risk of lack of oxygen.
- Always completely power off the unit if it is not going to be used for an extended period of time. Collecting dust can cause fire.
- Always completely power off the air conditioner during a storm. Otherwise, electrical parts may get damaged.
- Check that the drainage line is correctly connected. If not, water will escape.
- Check that the condensate water can run off unhindered. It may cause water damage if the condensate water cannot drain away properly.
- The air conditioner must be electrically grounded in accordance with the local codes.
- For electrical safety purposes we recommend that you install a circuit-breaker.

NOTE:

A guide to using the remote control is included in this literature package.

Part Names

1



Indoor Unit

1. Front panel
2. Air inlet
3. Air filter
4. Air outlet
5. Horizontal air flow grille
6. Vertical air flow louver (inside)
7. Display window

Outdoor Unit

8. Connecting pipe
9. Connecting cable
10. Stop valve

NOTE:

All of the illustrations in this manual are for explanation purposes only. Unit purchased may be slightly different.

Display Window



NOTE:

A guide to using the remote control is included in this literature package.

88 Digital Display:

- Displays the temperature settings when the air conditioner is operational.
- Displays the room temperature in FAN mode.
- Displays the self-diagnostic codes.
- Displays “**00**” for three seconds when any of the following features are activated: Timer ON, Fresh, Swing, Turbo, Silence
- Displays “**0F**” for three seconds when Timer OFF is set.
- Displays “**0F**” for three seconds when Fresh, Swing, Turbo or Silence feature is canceled.
- Displays “**df**” under defrosting operation.
- Displays “**cF**” when anti-cold air feature is activated under heating mode.
- Displays “**SC**” during self clean operation (if applicable).
- Displays “**FP**” under 46°F (8°C) heating operation (if applicable).

Operating Instructions

2

Operating Temperature

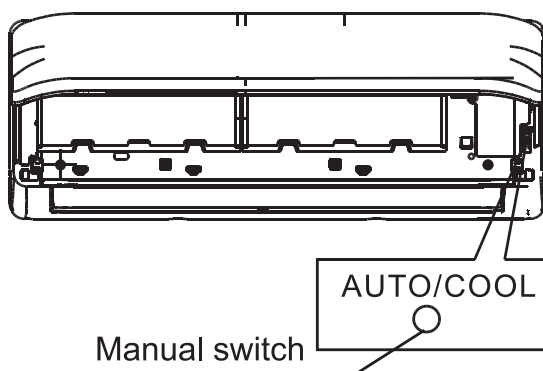
Mode Temperature	Cooling Operation	Heating Operation	Drying Operation
Room Temperature	62°F~90°F (17°C~32°C)	32°F~86°F (32°C~86°C)	50°F~90°F (10°C~32°C)
Outdoor temperature	32°F~122°F (0°C~50°C) <small>5°F~122°F/-15°C~50°C for models with low temperature cooling system</small>	5°F~86°F (-15°C~30°C)	32°F~122°F (0°C~50°C)

NOTE:

1. Optimum performance will be achieved within these operating temperatures. If air conditioner is used outside of the above conditions, certain safety protection features might come into operation and cause the unit to function abnormally.
2. If the air conditioner runs for a long time in cooling mode and the humidity is high (over 80%), condensed water may drip out of the unit. Please set the vertical air flow louver to its maximum angle (vertically to the floor), and set HIGH fan mode.

Manual Operation:

Units are equipped with a switch to run emergency operation mode. It can be accessed by opening the front panel. This switch is used for manual operation in case the remote control fails to work or maintenance is necessary.



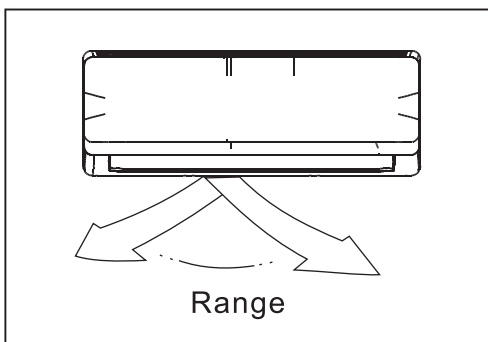
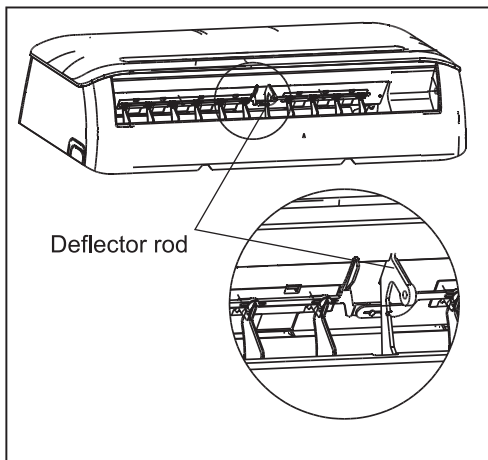
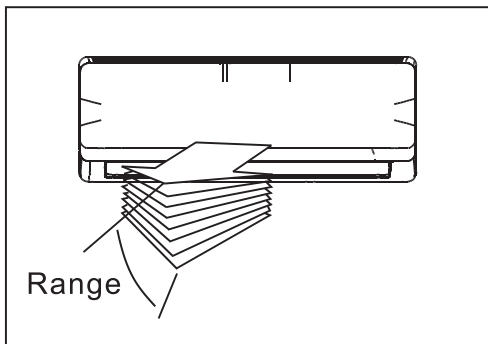
NOTE: The unit must be turned off before operating the manual control button. If the unit is operational, continue pressing the manual control button until the unit is off.

1. Open and lift the front panel up to an angle until it remains fixed with a clicking sound.
2. One press of the manual control switch will lead to the forced AUTO operation. If the switch is pressed twice within five seconds, the unit will operate under forced COOL operation.
3. Close the panel firmly to its original position.

CAUTION:

- This switch is used for testing purposes only. Please do not use it unless necessary.
- To restore the remote control operation, use the remote control directly.

Airflow Direction Control



- Adjust the air flow direction properly. Failure to do so may cause discomfort or uneven room temperatures.
- Adjust the horizontal louver using the remote control.
- Adjust the vertical louver manually.

Adjusting vertical air flow (Up/Down)

Perform this function while the unit is in operation. Use the remote control to adjust the vertical air flow direction. The horizontal louver can move slightly for each press or continuously swing up and down automatically. Please refer to the Remote Control Operation Manual for details.

Adjusting vertical air flow (Left/Right)

- Move the deflector rod manually to adjust the air flow in the direction you prefer.

IMPORTANT: Do not put your fingers into the panel of the blower and suction side. The high-speed fan inside may cause injury.

⚠ CAUTION

- Do not operate the air conditioner for long periods with the air flow direction set downward in cooling or dehumidifying mode. Doing so may cause condensation to occur on the surface of the horizontal louver, resulting in moisture dropping onto the floor and/or furnishings.
- After a quick restart, the horizontal louver may remain static for approximately 10 seconds.
- Open angle of the horizontal louver should not be set too small as Cooling or Heating performance may be reduced due to an air flow area that is too restricted.
- Do not move the horizontal louver manually. Doing so will result in the horizontal louver being out of sync. Should this happen, please cease operating the unit, power down the unit for a few seconds, then power the unit back up to restart the air conditioner.

How the Air Conditioner Works

Basic Operation Modes:

AUTO / COOL / DRY / HEAT*

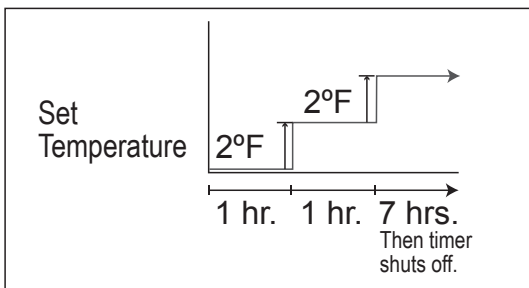
(*Model dependent)

AUTO operation

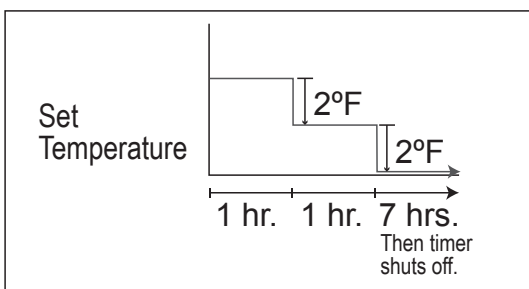
- When you set the air conditioner in AUTO mode, it will automatically select cooling, heating (models with heating function only), or fan only operation depending on set temperature and the room temperature.
- The air conditioner will control room temperature automatically to the temperature point you set.
- If you feel uncomfortable in the AUTO mode, you can set your desired temperature at any time in any mode.

SLEEP operation

- When selected, the set temperature will increase (cooling) or decrease (models with heating function only) by 2°F (1°C) per hour for the first 2 hours. Thereafter, the new temperature will be maintained for 5 hours before switching off.
- This operation saves energy and improves night-time comfort by synchronizing with the body's metabolism.



Sleep Operation - COOLING



Sleep Operation - HEATING

DRYING operation

- The temperature is regulated while dehumidifying by cycling on and off of the cooling operation or fan only. The fan speed in DRYING mode is LOW.

HEATING operation - units with Heat Pump

- The air conditioning units with heat pump operate on the heat pump principle, absorbing heat from air outdoors and transferring that heat to the indoor unit. As a result, the operating performance is reduced as outdoor air temperature drops. IF you feel that the heating performance is insufficient, we recommend that you use this air conditioner in conjunction with other kinds of heating appliances.

Optimal operation

To achieve optimal performance, please note the following:

- Adjust the air flow direction correctly so that it is not directly blowing toward people.
- Adjust the temperature to achieve moderate comfort levels. Excessively low or high temperature settings waste energy.
- Improve performance by keeping windows and doors closed.
- Limit energy usage (run time) by using the timer function.
- Do not put any object near air inlet or air outlet as the efficiency of the air conditioner may be reduced and may cause the air conditioner to stop running.
- Inspect the air filters periodically and clean them when needed.

Special Functions

Refrigerant Leakage Detection

When refrigerant leakage is detected, the indoor unit will display “EC” code or flash LEDs (depending on model).

Louver Angle Memory Function

The minimum and maximum angle of the horizontal louver is fixed. The unit has a memory function and will return to the last position selected. Never adjust the horizontal louver angle manually. The louver angle memory function does not apply when TURBO function or manual control is selected.

Additionally, it is strongly suggested that the opening of the horizontal louver not be set too small in case condensation forms and drops from the horizontal louver.

Auto-restart Function

In the event of a power interruption such as a blackout, once power is restored, the unit will restart automatically with all the previous settings preserved by the memory function.

Self Clean Function

- Airborne bacteria uses the moisture on the indoor heat exchanger to grow. Regular drying of the exchanger prevents this growth. By simply pressing the SELF CLEAN button, the system will automatically manage the process. This cleaning action may be done as frequently as desired.
- For cooling models, only the indoor fan is active in low speed for 30 minutes and the unit turns off automatically once self clean session is complete.
- For cooling and heating models, the unit will operate in the following sequence:
Fan mode at Low fan speed → Heating operation with Low fan speed → Fan operation → Stop operation → Turn Off.

NOTE:

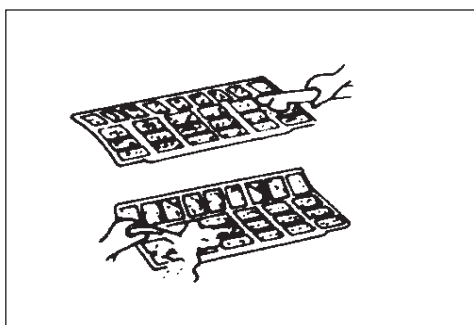
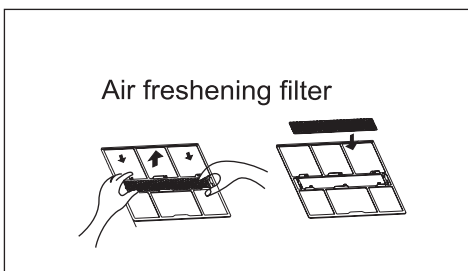
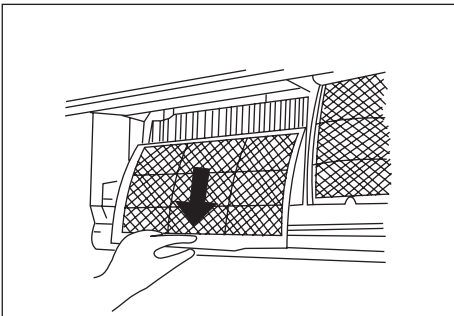
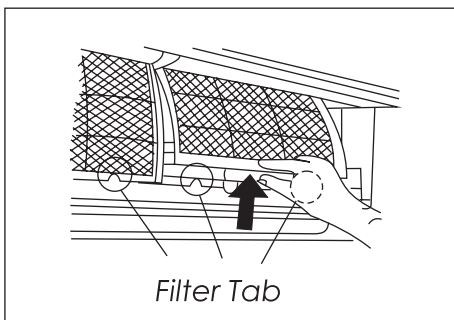
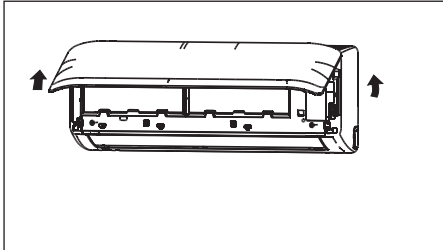
- This function can only be activated in COOLING or DRY mode.
- It is recommended that the air conditioner be run in the cooling operation for approximately 30 minutes before activating SELF CLEAN function.
- Pressing the SELF CLEAN or ON/OFF button again during the cleaning cycle will cancel the operation and turn the unit off.

Mute Operation

Pressing the LED button on the remote control can turn off the indoor screen display and also turn off the Air Conditioner buzzer to create a quieter environment.

Care and Maintenance

Care and Maintenance



Before Maintenance

Turn the system off before cleaning. To clean, wipe with a soft, dry cloth. Do not use bleach or abrasives.

NOTE: Power supply must be disconnected before attempting to clean or service.

⚠ CAUTIONS

- Do not use a chemically treated cloth or duster to clean the unit.
- Do not use benzine, thinner, polishing powder, or similar solvents for cleaning. These may cause the plastic surface to crack or deform.
- Never use water hotter than 104°F (40°C) to clean the front panel. Doing so could cause deformation or discoloration of the unit.

Cleaning the Unit

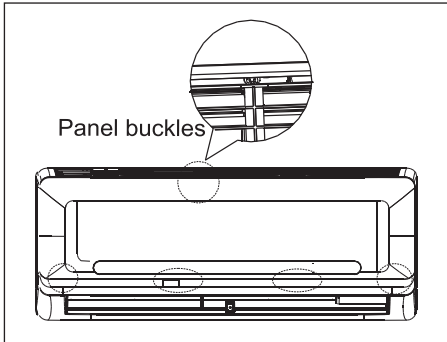
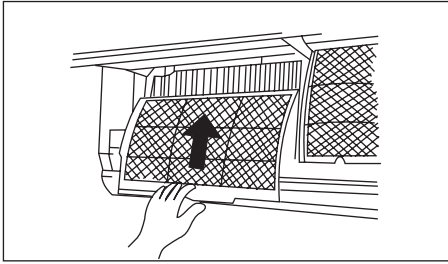
Wipe the unit with a soft, dry cloth only. If the unit is very dirty, wipe it with a cloth soaked in warm water.

Cleaning the Air Filter

A clogged air filter reduces the cooling efficiency of this unit. Please clean the filter once every 2 weeks:

1. Open the front panel by carefully lifting both ends at the same time. At a certain angle, a clicking sound is heard and it becomes self-supporting. For some models, please use the suspension bars to prop up the panel.
2. Use the tab provided to move the filter first up a little, then slightly towards you. Now extract the filter by gently drawing it downwards.
3. Clean the large air filter with soapy water. Rinse with fresh water. Shake off excess water and let it dry **COMPLETELY** in a cool, dry place.

Care and Maintenance (cont.)



Preparation for Extended Non-Operation

If you plan to idle the unit for a long time, perform the following:

1. Clean the indoor unit and filters.
2. Operate the fan for about half a day to dry the inside of the unit..
3. Stop the air conditioner and disconnect power.
4. Remove the batteries from the remote control.
5. The outdoor unit requires periodic maintenance and cleaning. Do not attempt to do this yourself. Contact your dealer or service provider.

Pre-season Inspection

- Damaged or disconnected wires.
- Clean the indoor unit and filters.
- Check for water or oil leaks.
- Check the air outlet and inlets for any blockages after the air conditioner has not been used for a long time. Address any blockages to aid in proper functioning of the unit.

⚠ CAUTION

- Do not touch the metal parts of the unit when removing the filter. Injuries can occur when handling sharp metal edges.
- Do not use water to clean inside the air conditioner. Exposure to water can destroy the insulation, leading to possible electric shock.
- When cleaning the unit, first make sure that the power and circuit breaker are turned off.
- Do not wash air filter with hot water at a temperature greater than 104°F (40°C). Shake off moisture and allow it to dry completely. Do not expose the filter to direct sunlight. Doing so may result in shrinking of the filter.

Troubleshooting

4

Troubleshooting Tips

The following events may occur during normal operation and may not indicate malfunction.

Before calling for service, please review the chart below.

Symptom	Cause
Operation is delayed after restart	To prevent blowout of the fuse, the compressor will not operate while the protection circuit is working for about 3 minutes after sudden OFF--ON operation of the power supply.
Fan speed changes-off, very slow and then normal	Automatically happens in heating mode : --prevents cold air blowing onto occupants when the heating operation is started, --perform automatic defrosting operation, --perform low temperature heating operation
Heating operation stops suddenly and defrost-light blinks	In HEAT mode, the indoor unit temporarily stops for maximum of 10 minutes to perform the automatic defrosting operation.
Mist coming out of the indoor unit	In COOL mode, a mist generated by condensation formed with sudden cooling process may be emitted.
	Mist may generate due to moisture generated from defrosting process when the air conditioner restarts in HEAT mode operation after defrosting.
Low volume sounds are emitted by the air conditioner	Hissing sound-- during operation or immediately after stopping the air conditioner, refrigerant flowing sound may be heard.
	Squeaking sound-- normal expansion and contraction of plastic and metal parts caused by temperature change during the operation.
	Rushing air-- when louver resets its position.
Dust discharges from the unit	May occur when air conditioner is used for the first time or has not been used for a long time.
Emits a peculiar odour	Various smells generated from interior textile, furniture, or cigarette smoke absorbed into the air conditioner may be emitted. If not the case call a certified HVAC contractor.
Changes to fan only while cooling or heating mode	Room temperature reaches the temperature setting of the remote control. If not the case call a certified HVAC contractor.
Operation is erratic, unpredictable or unresponsive	Interference from cell phone towers and remote boosters may cause the unit to malfunction
	Disconnect the power and then re-connect.
	Press the ON/OFF button on the remote control to restart operation.

NOTE: A highly recommended troubleshoot for any issue in general consists of turning off unit and powering the system off at disconnect or circuit breaker for 5 minutes.

Troubleshooting Guide

Before calling for service, please review the chart below.

Symptom	Diagnostic
Unit will not operate	-- Is there a power failure?
	-- Has a switch been turned off, a circuit breaker tripped or a fuse blown?
	-- Is the timer operating?
	-- Are the batteries used in the remote control exhausted?
	-- Are the batteries used in the remote control loaded properly?
Poor cooling or heating performance	-- Are the air filters dirty?
	-- Is air flow unrestricted in & out of indoor & outdoor units?
	-- Are the temperature and mode settings correct?
	-- Are the windows or doors left opened?
	-- Is fan speed on high and louvers allowing maximum flow?
	-- Is direct or strong sunlight shinning into the room in cooling operation?
	-- Are there other heating apparatus or computers operating, or too many people in the room in cooling operation?
-- Is the "SILENCE" function is activated? Under "SILENCE" operation, noise reduction is prioritized and the air-conditioning performance may become lower.	
Indicator lamps continue flashing	– The unit may stop operation or continue to run in a safety condition (depending on models). Waiting for about 10 minutes, the fault may be recovered automatically, if not, disconnect the power and then connect it in again. If the problem still exists, disconnect the power and contact a certified HVAC contractor.
Error code appears in the indoor unit, such as: E0,E1,E2.... P1,P2,P3.....or F1, F2, F3.....	

If the problem persist even after performing these checks or diagnostics, immediately stop operation and contact a certified HVAC contractor. Be sure to inform them of the detailed malfunctions and unit model number.

CAUTION

In the case of ANY of the following, turn off the unit immediately!

- Power cord is damaged or abnormally warm.
- Burning odors are smelled.
- Loud or abnormal sounds are heard.
- A power fuse blows or a circuit breaker trips frequently.
- Water or other objects fall into or out of the unit.

 **DO NOT ATTEMPT TO CORRECT THESE ITEMS YOURSELF!
CONTACT AN AUTHORIZED SERVICE PROVIDER!**



COMFORT... **BUILT TO LAST**

Distributed by:

Perfect Aire, LLC
5151 Belt Line Rd.
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Printed in China