506789-01
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MS7

Single-Zone Mini-Split System Air Conditioners and Heat Pumps

This manual is the property of the homeowner and must be left with the user.

Warnings

⚠ WARNING

ELECTRICAL SHOCK, FIRE, OR EXPLOSION HAZARD.

Failure to follow safety warnings exactly could result in dangerous operation, serious injury, death or property damage.

Improper installation, adjustment, alteration, service or maintenance can cause property damage, personal injury or loss of life. Installation and service must be performed by a licensed professional installer (or equivalent), or a service agency.

Any additions, changes, or conversions required in order for the appliance to satisfactorily meet the application needs must be made by a licensed professional installer (or equivalent) using factory-specified parts.

If you do not follow these instructions exactly, a fire or explosion may result causing property damage, personal injury or death.

For your safety and to fulfill the terms of the limited warranty, a licensed professional service technician (or equivalent) must annually inspect this system.

This unit must be properly grounded.

Do not use this system if any part has been underwater. A flood-damaged appliance is extremely dangerous. Immediately call a licensed professional service technician (or equivalent) to inspect the system and to replace all controls and electrical parts that have been wet or to replace the system, if deemed necessary.

Keep combustible materials at least 3 feet away from either the indoor or outdoor unit.

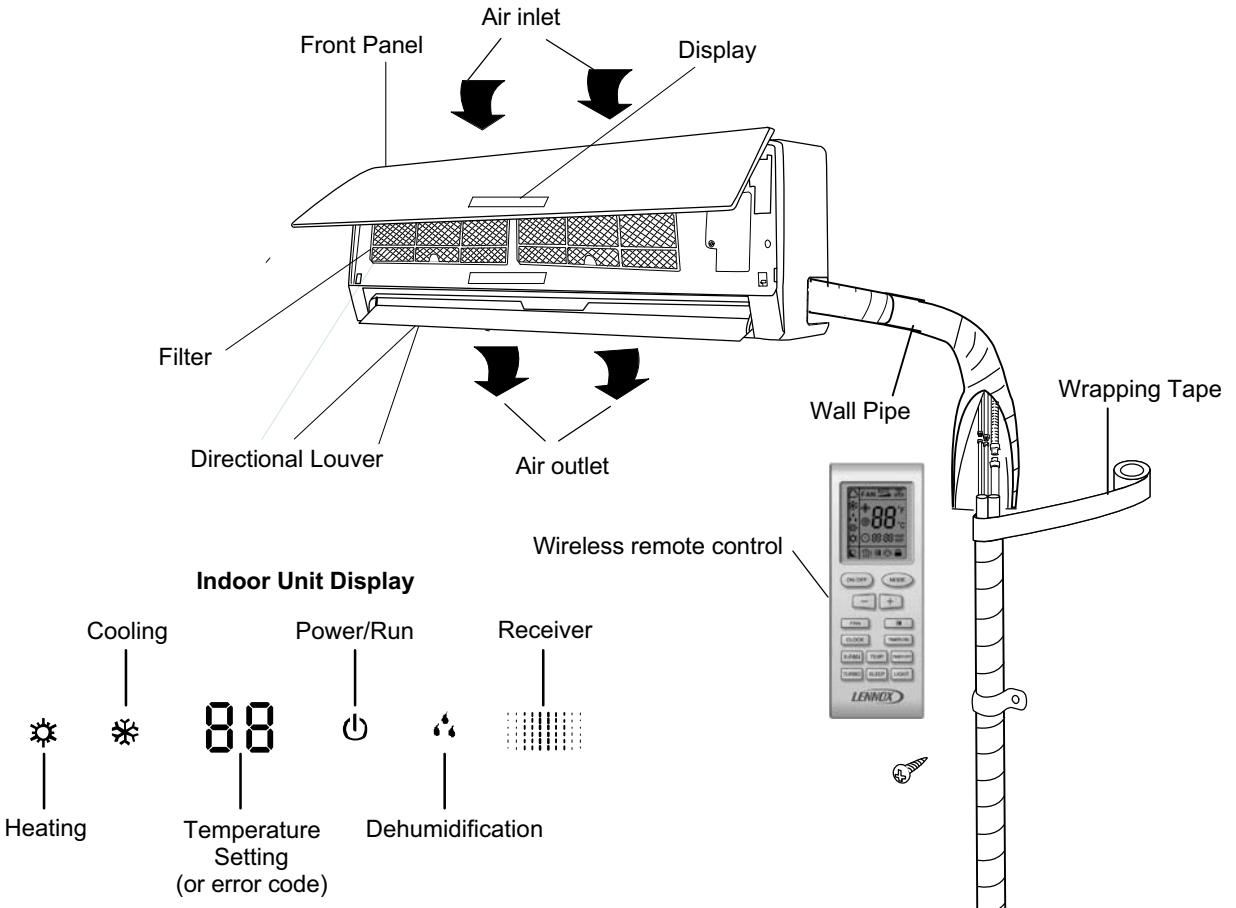
Do not insert your hands, tools or any other item into the air intake or air outlet at either the indoor or outdoor unit.

If outdoor unit is installed on a raised stand, check condition of stand occasionally to ensure that it remains stable.

DO NOT spray water on the indoor unit for any reason.

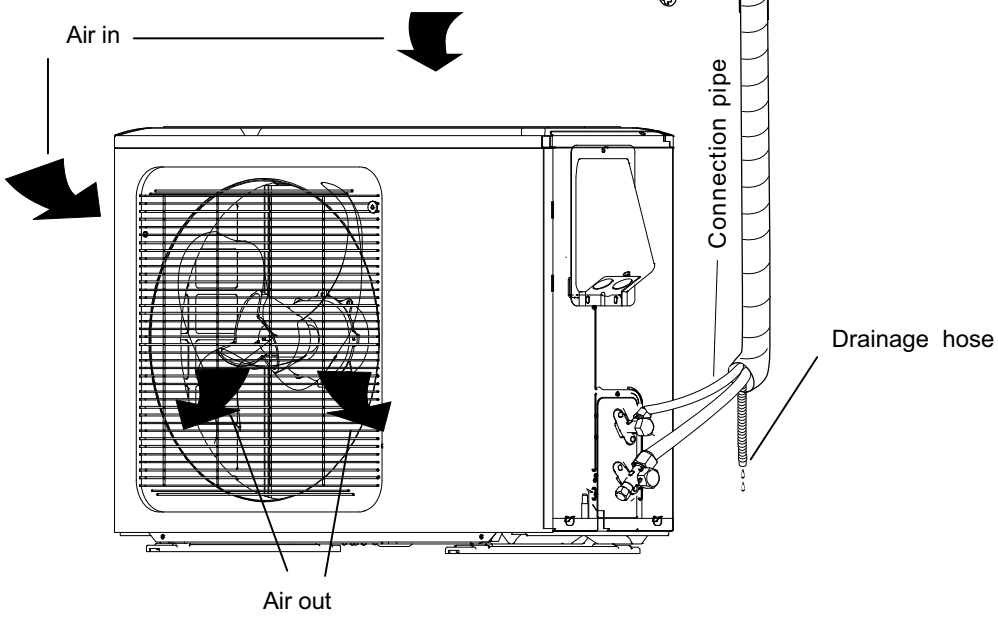
Parts Arrangement

Indoor unit (Typical indoor unit shown. Actual unit may be slightly different.)



Indoor Unit Display

Outdoor unit



Important Operating Instructions

⚠ IMPORTANT

To ensure comfort, make sure that temperature selection has been properly set at the remote control.

To ensure efficient operation, do not block air intake or outlet at either the indoor or outdoor unit.

Do not stand on outdoor unit or store items on top of unit.

Make sure that indoor unit directional louver is properly adjusted.

System Operation

Cooling Operation

In the cooling mode, the indoor coil absorbs the heat from the room and transfers it to the outdoor coil where it is discharged. The system cooling capacity is affected by the outdoor ambient temperature. The indoor fan operates continuously in the COOL mode. The indoor unit directional louver is fixed in an upward position.

If the unit is in the cooling mode, frost will form on the indoor coil when the outdoor ambient temperature reaches approximately 32°F (0°C). Typically, when the outdoor ambient temperature falls below 32°F (0°C), the indoor unit control locks out operation to protect the system.

In cooling mode, the operating range of the outdoor unit is typically from 41°F (5°C) to 115°F (46°C).

Heating Operation

The refrigerant flow is reversed during the heating cycle. In this case, the outdoor coil absorbs the heat from outside and transfers it to the indoor coil where it is discharged into the room. The system heating capacity is also limited by the available heat in the outdoor ambient air.

In the HEAT mode, the indoor fan will remain OFF for two minutes in the following instances:

- at the beginning of each heating cycle,
- after a defrost cycle has ended,

In the heating mode, the indoor blower will continue to operate for 60 seconds after the outdoor unit has shut off. The indoor unit directional louver is fixed in a downward position.

In climates with very low winter temperatures, it may be necessary to supplement heating by additional means (space heater, fireplace, etc.).

In heating mode, the operating range of the outdoor unit is typically from 05°F (-15°C) to 86°F (30°C).

AUTO Mode Operation

When the system is set to operate in AUTO mode, the indoor and outdoor units work together to meet a series of preset demands. The remote control temperature setpoint and fan operation functions are not adjustable in the AUTO mode.

In AUTO mode, if the indoor ambient temperature is greater than 77°F (25°C), the unit will operate in the cooling mode. The outdoor unit will run until the indoor ambient temperature reaches 75°F (24°C). At this point, the outdoor unit compressor and outdoor fan will operate for another 60 seconds, then they will both turn off. The indoor fan will run continuously at a speed determined by the indoor ambient temperature. During AUTO cooling operation, the indoor unit directional louver is fixed in an upward position.

Heat Pump Systems Only -- In AUTO mode, if the indoor ambient temperature is less than 68°F (20°C), the unit will run in heating mode. The outdoor unit will run until the indoor ambient temperature reaches 69°F (21°C). At this point, the outdoor unit compressor and fan will operate for another 60 seconds, then they will both turn off. The indoor fan will run continuously at a speed determined by the indoor ambient temperature. During AUTO heating operation, the indoor unit directional louver is fixed in a downward position.

FAN Mode Operation

When the system is set to operate in FAN mode, the indoor fan runs continuously in AUTO, low, medium or high speed. The outdoor unit is off. In AUTO fan mode, the fan speed is determined by the indoor ambient air temperature.

DEHUMIDIFICATION Mode Operation

When the system is set to operate in DEHUMIDIFICATION mode, the indoor fan runs continuously in low speed.

Wireless Remote Functions

The wireless remote control provides system control to the homeowner at the touch of a button. The indoor unit and remote control send information back and forth continuously. The remote control must be placed on a table or other surface in direct line of sight with the indoor unit infrared receiver. The remote control should not be placed in a drawer. Make sure that there are no obstructions between the indoor unit receiver and the remote control. Do not drop the control or spill liquid on the remote control.

ON/OFF button

Press this button once to turn system on. Press again to turn the system off. When the ON/OFF button is used to turn the system OFF, it overrides the Sleep Timer function (when it is in use).

+/- buttons

Use plus (+) and minus (-) buttons to adjust the temperature setting up and down.

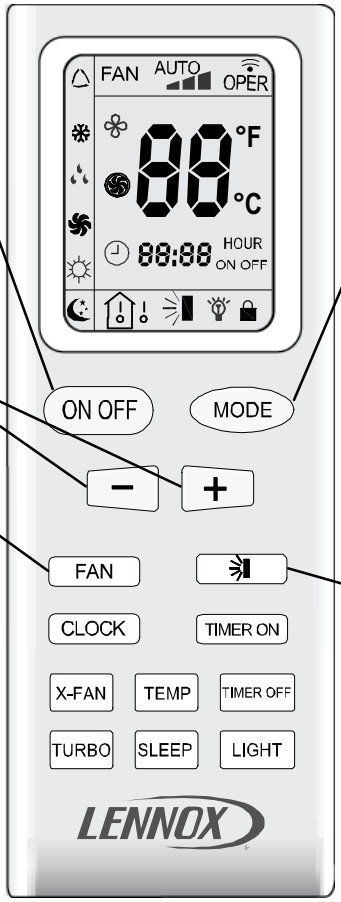
NOTE - The temperature cannot be adjusted when the system is in AUTO mode.

FAN button

Press this button to select fan speed. AUTO fan is the default setting. In AUTO fan mode, the indoor fan speed is determined by the indoor ambient temperature. Press FAN button to step through FAN setting selections: AUTO, low speed, medium speed and high speed.
Selected fan speed is shown at the top of the remote control display.

AUTO Low Medium High

NOTE - The fan speed is not adjustable during DEHUMIDIFICATION mode operation. ***The low fan speed is necessary to ensure optimal humidity control.***



MODE button

Press this button to select system operating modes. AUTO mode is the default setting. Press MODE button again to select COOL mode, again for DEHUMIDIFICATION mode, again for FAN mode and again for HEAT mode (heat pumps only).

Selected mode is displayed on both remote and indoor unit cover panel.

AUTO
COOL
DEHUMIDIFICATION
FAN
HEAT

LOUVER SETTING button

Press this button to set the position of the indoor unit directional louver.

When feature is turned on, icon appears and louver oscillates through five positions from up to down and back again. Continue to press button to select one of five fixed positions or one of three other oscillating settings.

OFF

Wireless Remote Functions (Continued)

CLOCK button

Use the CLOCK button to adjust the time displayed on the remote control. Press the CLOCK button once. The clock icon will flash. Within 2 seconds, use the - and + buttons to adjust the time down or up in one-minute increments. Press the button continuously to adjust the time in 10-minute increments. Press the CLOCK button again when correct time is displayed.

X-FAN button

Use the X-FAN button to extend low speed blower operation for 10 minutes at the end of a cooling demand.

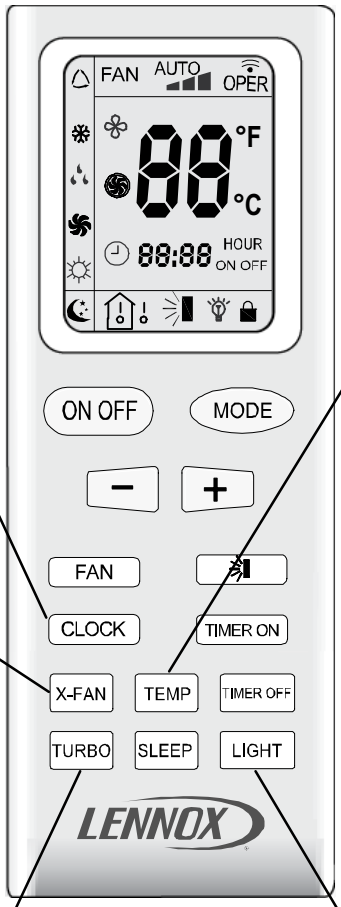
The extended fan operation ensures that excess moisture is removed from the indoor coil before the blower shuts off.

Press the X-FAN button once to initiate extended blower operation. Fan operation ends after 10 minutes. The extended fan operation icon is displayed when the feature is turned on.

X-FAN operation is available in cooling or dehumidification modes; X-FAN is not available in AUTO, heating or fan mode.

TURBO button

Use the TURBO button to initiate or cancel high-speed fan operation to accelerate cooling or heating of the ambient room temperature. The turbo icon is displayed when the function is turned on.



TEMP button

Use the TEMP button to change the temperature display shown on the remote control. When initially powered on, the current temperature setting is displayed, along with the icon.

Press the TEMP button once to alter the display to show the current indoor ambient temperature, along with the icon. The indoor temperature sensor is in the indoor unit.

Press the TEMP button again to display the outdoor ambient temperature icon . The outdoor ambient temperature display is not available on this system.

On occasion, the remote control will display the temperature that was not selected (indoor ambient temperature or setting temperature). The selected temperature will return to the display screen after 5 seconds.

NOTE - The TEMP button can also be used to temporarily display the indoor ambient temperature on the indoor unit display panel.

LIGHT button

Use the LIGHT button to turn the indoor unit display light on and off. When the light is on, the icon appears on the remote control.

Wireless Remote Functions (Continued)

SWITCH FROM °C TO °F

With system OFF, press MODE and - buttons simultaneously to switch from Centigrade to Fahrenheit. Current selection is displayed to the right of the temperature display.

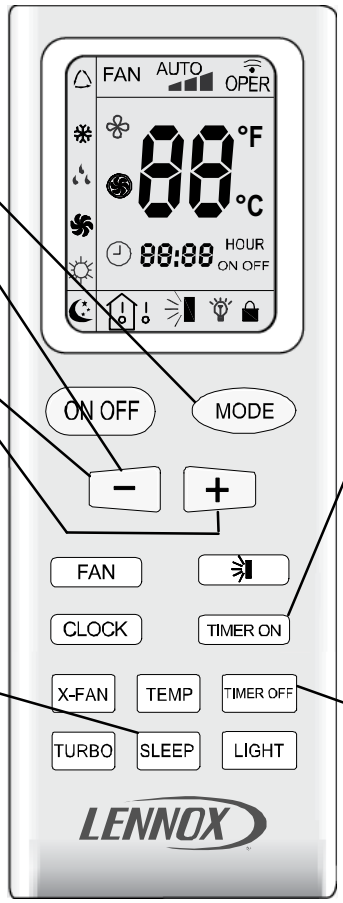
REMOTE LOCK

Press - and + buttons simultaneously to either lock or unlock the remote control buttons. When locked, the icon is displayed.

SLEEP button

Use the SLEEP button to initiate or cancel the sleep function. Press SLEEP button. When sleep icon appears, press TIMER OFF button and use - and + buttons to set time for system shutdown. When desired time is displayed, press TIMER OFF button again. Press SLEEP button to cancel sleep function. In cooling mode, SLEEP function increases temperature (+1.8°F per hour) over a two-hour period after the selected sleep time. In heating mode, SLEEP function decreases temperature (-1.8°F per hour) over a two-hour period after the selected sleep time.

NOTE - The sleep function is not available in AUTO or FAN modes.



TIMER ON button

Use the TIMER ON button to initiate or cancel a single timed-on event. Use this feature to bring the system on just before you return home or just before you wake in the morning.

Press the TIMER ON button once. The clock icon disappears and a time setting appears with the word ON flashing at the right. Use the - and + keys to adjust the time setting to the desired time for the system to begin operation. Press the TIMER ON button again to accept the setting. When successfully set, the word ON will appear to the right of the current time display. Press the TIMER ON button again if you want to cancel the timed-on event.

TIMER OFF button

Use the TIMER OFF button to initiate or cancel a single timed-off event. Use this feature to turn the system off just after you leave the house or just after you go to bed at night.

Use the same method described above to set the desired time for the system to stop operation. When successfully set, the word OFF will appear to the right of the current time display. Press the TIMER OFF button again if you want to cancel the timed-off event.

System Start Up Using Wireless Remote

General Operation

1 - Press ON/OFF button once to turn system on.

2 - Press MODE button until desired operating mode icon is displayed.

NOTE - When AUTO mode is selected, the temperature setting is not displayed on the remote control. The - and + buttons cannot be used to make temperature setting selections.

3 - Press - or + buttons until desired temperature setting is displayed.

NOTE - Skip this step in AUTO mode.

4 - Press FAN button until desired fan speed icon is displayed.

NOTE - Fan speed will be set to low if DEHUMIDIFICATION mode has been selected.

5 - Press OSCILLATE button. Indoor unit directional louver will open and begin to oscillate. If a single setting is preferred, press button again when louver is in the desired position. Louver will remain in desired position until system is powered off.

Special Functions

6 - Press SLEEP button initiate sleep function. Then press TIMER OFF button to set timed off.

7 - Use TIMER ON and TIMER OFF buttons to schedule desired timed on and off settings.

8 - Use LIGHT button to set display light on or off.

9 - Use X-FAN button to turn on and off extended fan operation feature.

10-Use TURBO button to turn accelerated fan speed on or off.

Remote Control Batteries

The wireless remote control requires two AAA, 1.5V batteries. DO NOT attempt to use any other type of battery.

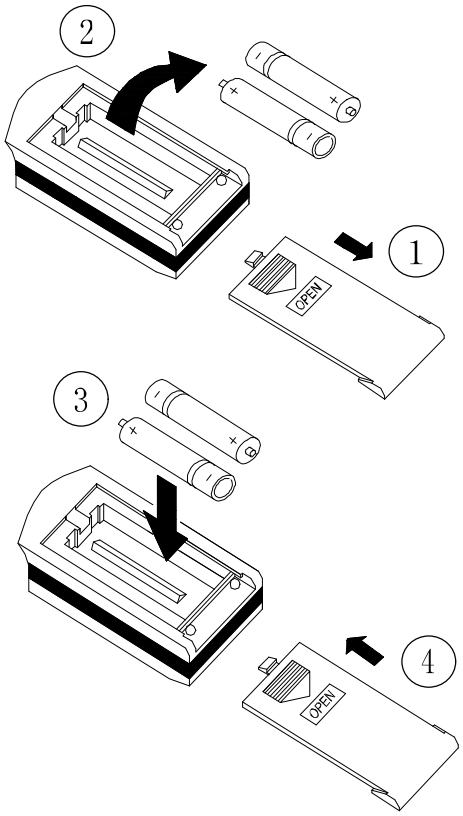
Follow the steps below and in the illustrations to replace the batteries when necessary.

1 - Place thumb on OPEN at the top of the battery access panel on the back of the remote control. Slide the panel in the direction of the arrow.

2 - Remove the existing AAA, 1.5V batteries.

3 - Replace batteries with fully charged AAA, 1.5V batteries. NOTE - Pay attention to proper polarity of batteries. Remote control will not operate if batteries are improperly installed.

4 - Reposition battery access panel and slide forward until panel snaps into locked position.



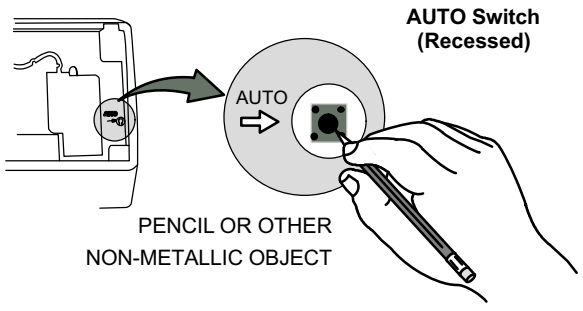
IMPORTANT !

- If wireless remote will not be used for a long period of time, remove batteries to avoid damage to the control.
- The remote control must be placed on a table or other surface in direct line of sight with the indoor unit infrared receiver. The control should not be placed in a drawer. Make sure that there are no obstructions between the indoor unit receiver and the remote control.
- Remote should remain within its receiving range to ensure proper system control. Control should be kept at least 3 feet (914mm) away from other electrical appliances (televisions, stereos, etc.) to prevent signal interference.
- If remote control operation becomes erratic, remove batteries. Wait 30 seconds and reinsert batteries. If proper remote operation is not restored, replace batteries.

Auto ON Switch

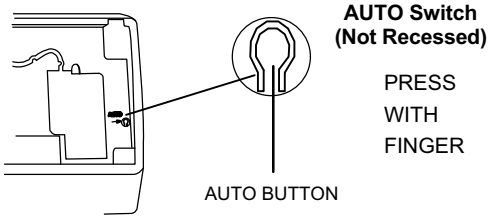
If the remote control is lost or damaged, or if charged AAA, 1.5V batteries are not available, the Auto ON switch can be used to turn the system on or off.

The Auto ON switch is located behind the cover panel on the indoor unit. Lift the front panel and press the ON button once briefly to start the system. To stop emergency operation, push the ON button again.



IMPORTANT !

The Auto ON button initiates operation in the AUTO mode. The temperature and fan speed are not adjustable in the AUTO mode.

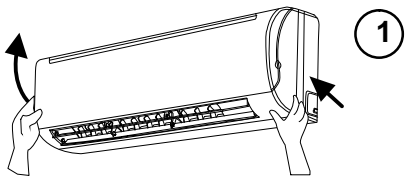


Maintenance

WARNING!

Turn off all power to unit at unit disconnect switch or circuit breaker before performing any maintenance procedures! Failure to follow this warning could lead to personal injury or death.

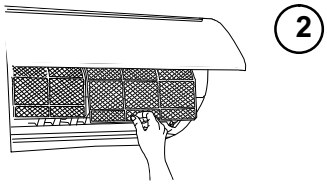
Coil fins are very sharp! Take care not to touch the fins in order to avoid injury.



Indoor Unit Filters

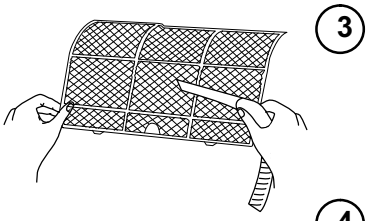
The indoor unit filter should be cleaned every three months, or more frequently, if necessary.

Follow the steps below and in the illustrations to clean the filters.



1 - Pivot indoor unit front panel out and up to access filters.

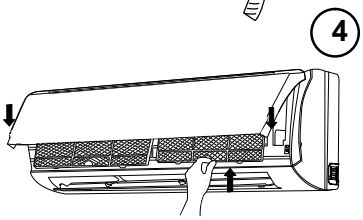
2 - Gently pull each filter outward, then down to remove the filters from the unit



3 - Use a vacuum cleaner to remove dust and dirt from each filter or wash the filters with warm water and a mild detergent. Rinse filters thoroughly with clean water and set aside to air dry.

CAUTION!

Do not use hot water to clean the filters. Exposure to water temperatures above 113°F (45°C) will damage filter media and frame.



4 - Reinsert clean, dry filters and close unit front panel. Restore power to unit.

Indoor Unit

Check to make sure that there are no objects on top of unit or around unit that may be obstructing air flow. Check to make sure that indoor unit and wall bracket are secure and have not been damaged. Use a clean, dry cloth to gently remove dust from the outer surface of the indoor unit. The cloth may be slightly dampened with warm water, if necessary. Do not use soap or other cleaners.

CAUTION!

Hot water, soaps or other cleaning agents may damage indoor unit cabinet or display panel. Do not use hot water (above 113°F [45°C]). Cloth must be damp only -- NEVER WET to avoid damage to display. Do not use soap or other cleaning agents (window cleaner, abrasive cleansers, etc.) to clean the indoor unit cabinet.

Outdoor Unit

Check to make sure that there are no objects on top of unit or around unit that may be obstructing air flow. If the outdoor unit is installed on a wall bracket, make sure that bracket is secure and has not been damaged. Use a clean, slightly dampened cloth to gently remove dust from the outer surface of the outdoor unit. Do not use soap or other cleaners and DO NOT spray water into unit.

WARNING!

SHOCK HAZARD! DO NOT SPRAY water into outdoor unit. Failure to follow this warning could lead to electrical shock, resulting in personal injury or death.

Troubleshooting

WARNING!

ELECTRICAL SHOCK HAZARD! Never attempt to repair the indoor or outdoor unit yourself. System repairs must be performed by a licensed, professional technician, or equivalent.

If any of the following conditions exist, immediately turn the system (indoor and outdoor units) off at the unit disconnect switch and call a licensed professional technician, or equivalent, for repairs

- **There is a very loud sound during unit operation.**
- **There is a terrible odor coming from the indoor unit during operation.**
- **Water is leaking into the room.**
- **The circuit breaker trips frequently.**
- **Water or some other liquid has been splashed into the indoor unit.**

If none of the above conditions exist, check the following items before calling for repairs. This can save you both time and money.

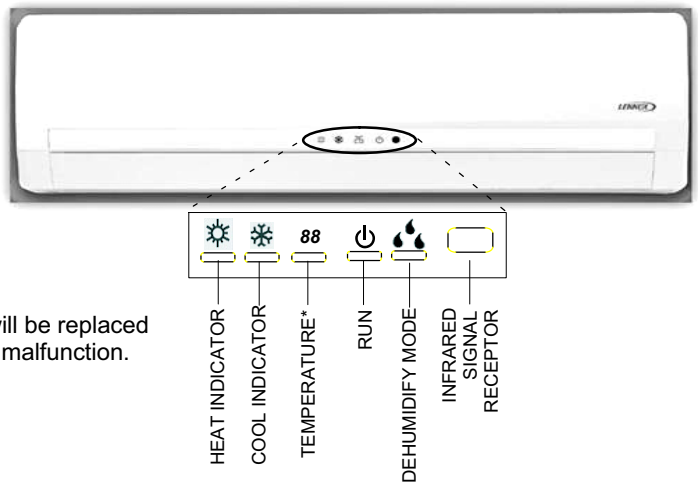
Problem	Possible Cause
Unit does not operate immediately when restarted.	Unit control initiates a 3-minute delay at the end of each cycle to protect the compressor from damage.
A whoosh or gurgling noise can be heard at the indoor unit.	Sometimes, the refrigerant can be heard in the indoor coil when the outdoor unit starts or stops operation. This is not a malfunction.
Mist is coming out of the indoor unit during cooling operation.	This sometimes happens when the indoor temperature and humidity are very high and the air is being cooled quickly. The mist will disappear as the indoor temperature and humidity are lowered.
A creaking or popping noise can be heard when the unit starts or stops.	The plastic components of the indoor units sometimes expand and contract when they are heated and cooled.
Unit is not operating.	Are the TIMER ON and TIMER OFF features being used incorrectly?
	Is power disconnected or has circuit breaker tripped.
	Is power shut down?
System is not cooling (or heating) efficiently.	Is temperature setting correct?
	Are either the air inlet or air outlet blocked on the outdoor or indoor unit?
	Is filter dirty?
	Is fan at low speed?
	Are windows and doors properly shut?
Wireless remote is not working.	Is remote in direct line of sight with indoor unit infrared receiver? Has the remote been damaged?
	Remove remote control batteries for 30 seconds, then reinsert them. Replace batteries, if necessary.
Water is leaking from indoor unit.	Indoor humidity level is very high and water is being blown from indoor coil. This will stop as humidity level is reduced.

Troubleshooting (Continued)

Problem	Possible Cause
Water is leaking from condensate line at indoor unit.	Check condensate line outside to make sure it is not obstructed.
	Check condensate line to make sure it has not been disconnected from indoor unit.
Water is leaking from the outdoor unit.	During operation in high-humidity areas, condensate will form on cold outdoor refrigerant pipes.
	When heat pump is operating in defrost mode, ice will thaw from around outdoor coil and water will flow from the unit.
Clicking noise heard inside.	Sometimes, the sound of the outdoor unit fan or compressor relay can be transmitted in a way that makes it seem to be coming from the indoor unit.
Indoor fan is not working.	Heat pump units -- In HEAT mode, a timed delay keeps indoor fan off for two minutes to prevent unheated air from being circulated by the indoor fan.
	Heat pump units -- In HEAT mode, cold outdoor temperatures and high humidity cause frost to accumulate on the outdoor unit. When this happens, the unit will enter a defrost cycle. The indoor fan is off during the 3 - 12 minute cycle.
	In DEHUMIDIFICATION mode, indoor fan operation may be stopped to avoid delivery of moist air to the room. Do not adjust temperature setting.

Error Codes

If a problem occurs with the system, an error code will replace the temperature setting displayed on the front cover of the indoor unit. If more than one error has occurred, the codes will alternate so that all codes are shown. Make note of the code (E4, F6, H4, etc.), then reset the display by pressing the ON/OFF button on the wireless remote. Press the ON/OFF button a second time to reapply power to system. If code is still displayed, disconnect and restore power at the unit disconnect switch or circuit breaker. If the problem was temporary, the code will not reappear. If the error code re-appears after power has been broken and restored at the disconnect switch or circuit breaker, call a licensed professional service technician.



* The temperature readout will be replaced by an error code if there is a malfunction.