USER GUIDE

MHA Series Units

THIS MANUAL MUST BE LEFT WITH THE OWNER FOR FUTURE REFERENCE

Optimal Performance

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

Table 1. Cool, Heat and Dry Mode Optimal Performance Ranges

Temp Location	Cool or Dry Modes	Heat Mode
Room	62°F - 90°F (17°C - 32°C)	62°F - 90°F (17°C - 32°C)
Outdoor	5°F - 86°F (-15°C to 30°C)	5°F - 86°F (-15°C to 30°C)

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.

⚠ CAUTION

As with any mechanical equipment, contact with sharp sheet metal edges can result in personal injury. Take care while handling this equipment and wear gloves and protective clothing.

Table of Contents

⚠ WARNING

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 HVAC installer (or equivalent) or a service agency.

General

This wall-mounted indoor unit is matched with an outdoor heat pump unit to create a mini-split system that uses HFC-410A refrigerant.

Unit Parts

Front Panel

Louver

Return Air Filters (2)

Wireless Remote Control

Wireless Remote Control Holder

Display window

" **ON** " for 3 seconds when:
• TIMER ON is set
• FRESH, SWING, TURBO or SILENCE or feature is turned on

" **OF** " for 3 seconds when:
• TIMER OFF is set
• FRESH, SWING, TURBO or SILENCE feature is turned off

In Fan mode, the unit will display the room temperature.

In other modes, the unit will display your temperature setting.

For a complete list of all codes, see the troubleshooting section at the end of this guide.
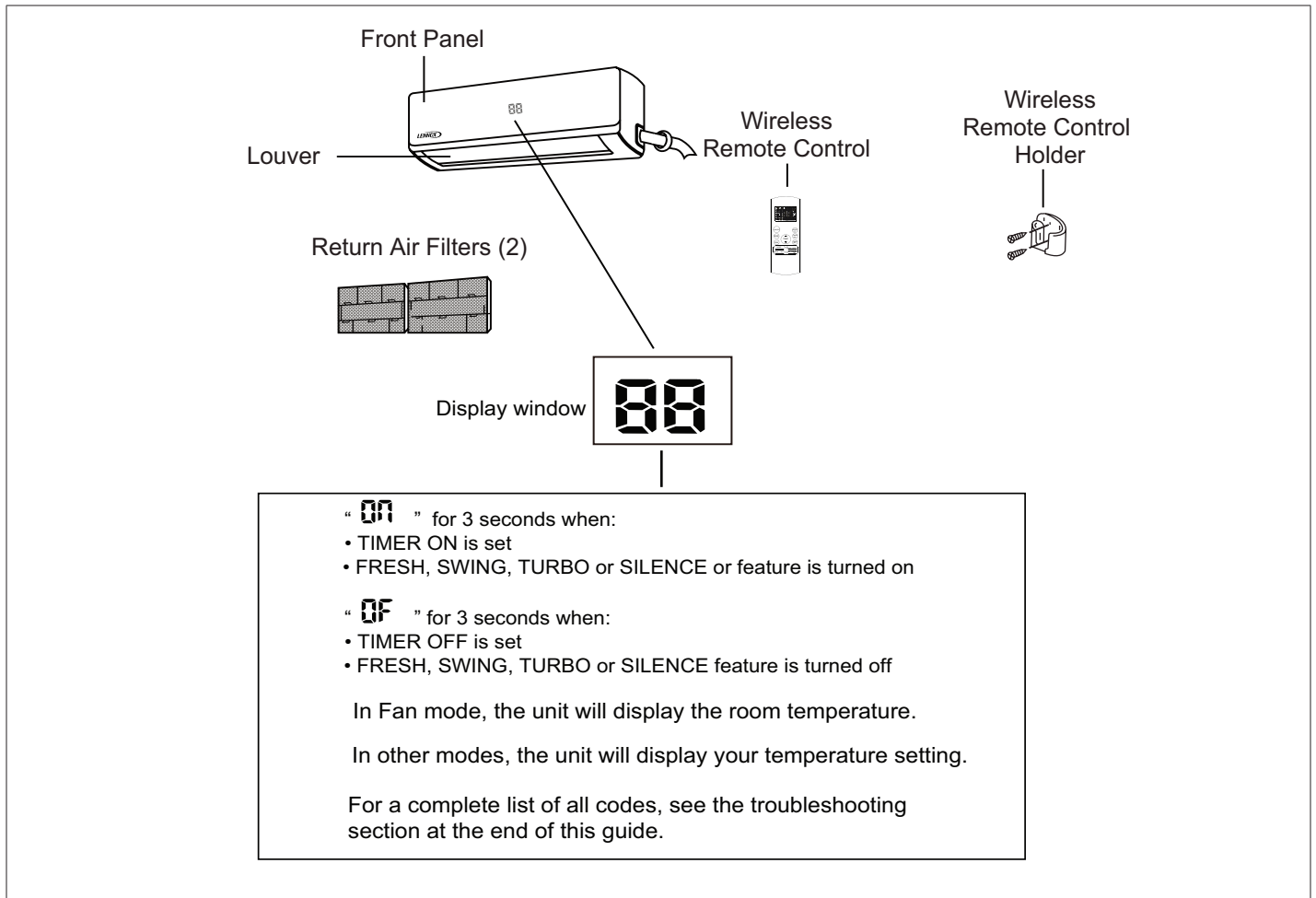
Figure 1. Components

⚠WARNING

ELECTRICAL SHOCK, FIRE, OR EXPLOSION HAZARD.

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

Do not touch the unit or the controller if your hands are wet.

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

Do not remove the outdoor unit fan guard for any reason.

⚠CAUTION

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

Do NOT install sprinklers or soaker hoses where they can expose the outdoor unit to treated water. Prolonged exposure to treated water will corrode the surface of the steel and aluminum parts and will diminish the performance of the unit.

IMPORTANT

System operation is controlled by either the provided wireless or optional wired remote control. Refer to the manual provided with the control for system operation.

To ensure comfort, make sure that temperature selection has been properly set at the unit controller or wireless 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 louvers are properly adjusted.

Features

Auto Restart

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

Anti-Mildew

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

Louver Angle Memory

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

Refrigerant Leakage Detection

The indoor unit will automatically display "EC" if it detects refrigerant leakage. For a detailed explanation of your unit's advanced functionality (such as TURBO mode and its self-cleaning functions), refer to "Operation (Wireless Remote Controller)" on page 4.

Louver Adjustment

IMPORTANT

DO NOT adjust the louvers by hand. Louvers are adjustable only by using the furnished wireless remote controller or optional wired controller.

Use the furnished wireless remote control or optional wired controller to set the position of the discharge air louvers. The louvers may be set to automatically swing between the outward and downward positions, OR you may set the louvers so that they are stationary in a single position. It is always recommended to direct the horizontal discharge air louvers outward while cooling.
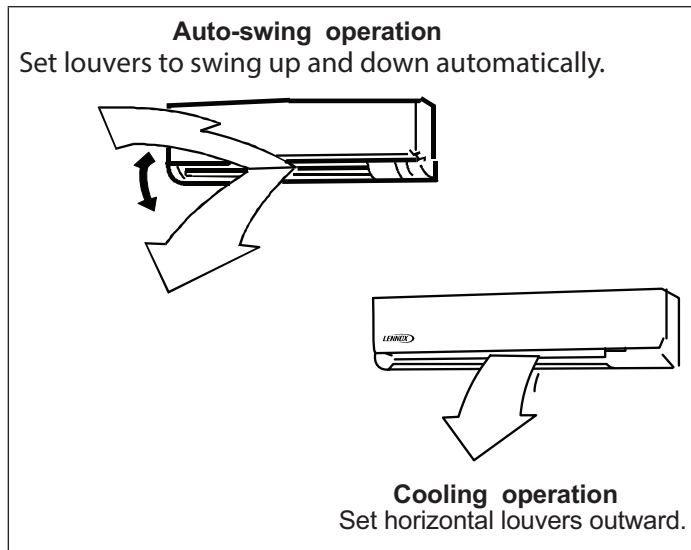
Auto-swing operation
Set louvers to swing up and down automatically.

Cooling operation
Set horizontal louvers outward.

Figure 2.   Louver Operation

Refer to "Function Buttons" on page 5 for using the swing and direct buttons.

Return Air Filters

Blocked or dirty return air filters affect system operation and efficiency. Air filters should be checked monthly in order to ensure proper air flow to the indoor unit. It may be necessary to check the filter more frequently if the unit is installed in an area with a large amount of dust.

The filter may be removed and cleaned, or it should be replaced with a filter of like kind and size if it is impossible to clean the filter.

Cleaning Return Air Filters

Check return air filters every two weeks and clean as necessary. Lift the front panel of the indoor unit.

1. Grip the tab on the end of the filter, lift it up, then pull it towards yourself.

2. Pull the filter out.

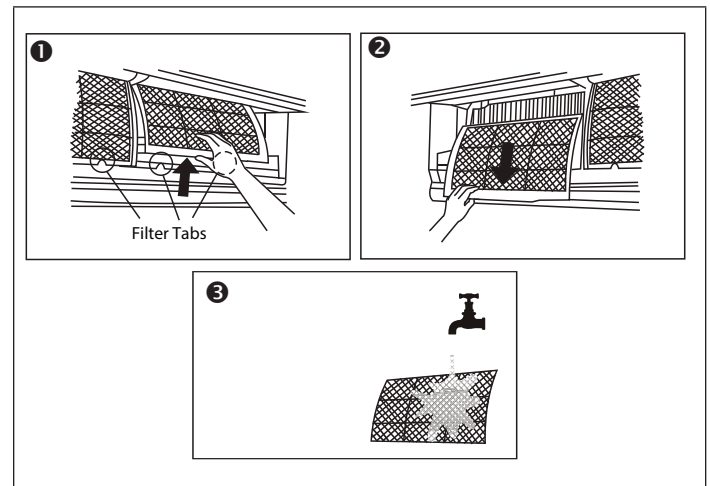3. Clean the return air filters with warm soapy water. Use only mild detergent.

❶ Filter Tabs
❷
❸

Figure 3.   Filter Removal and Service

4. Rinse the return air filter with fresh water and then shake off excess water.

5. Dry filter in a cool and dry place. Refrain from exposing filter to direct sunlight.

6. Slid return air filters back into the indoor unit.

7. Close the front panel.

Air Filter Reminders

Table 2. Air Filter Reminders

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 ill 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.

Operation (Manual) - Forced Cooling Mode

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.
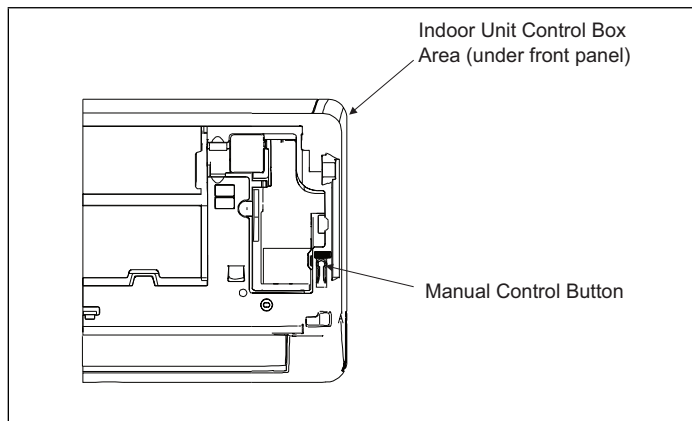

Indoor Unit Control Box Area (under front panel)

Manual Control Button

Figure 4. Manual Control Button

IMPORTANT

Unit must be turned off before using manual operation procedures.

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 to activate FORCED AUTO mode. Both FORCE HEATING and COOLING is preset to 75ºF (24ºC) and cannot be manually adjusted.
4. Press the MANUAL CONTROL button second time to activate FORCED COOLING mode. Force cooling mode is preset to 75ºF (24ºC) and cannot be manually adjusted.
5. Press the MANUAL CONTROL button a third time to activate FORCE HEATING mode. Force heating mode is preset to 75ºF (24ºC) and cannot be manually adjusted.
6. Press the MANUAL CONTROL button again to turn the unit off.
7. Close the front panel.

Operation (Wireless Remote Controller)

IMPORTANT!

Frequent changes to operating mode may cause system malfunction. Allow at least one minute between mode changes for the system to stabilize.

Requirements

Using the remote controller

- Point the remote controller directly at the indoor unit.
- Stand within 26 feet (8 meters) of the indoor unit.
- Do not block the signal between the remote controller and indoor unit.

NOTE: The remote controller will not function without a clear line of sight to the indoor unit.

- Do not submerge the remote controller in liquid.
- Do not expose to direct sunlight.
- Do not drop or step on remote controller.

Remote Control Holder

Use field-provided fasteners to attach the remote controller holder to any suitable vertical surface such as a wall.

Remote Control Specifications

Table 3. Specifications

Rated voltage	3.0 VDC (2 AAA batteries)
Min voltage for sending signal to CPU	2.4 VDC
Effective transmitting distance	26 feet (8 meters)
Operation conditions	23°F to 140°F (-5 to 60°C)

Function Buttons

- **Up arrow button**. Press to increase the temperature setpoint or to scroll through settings options.

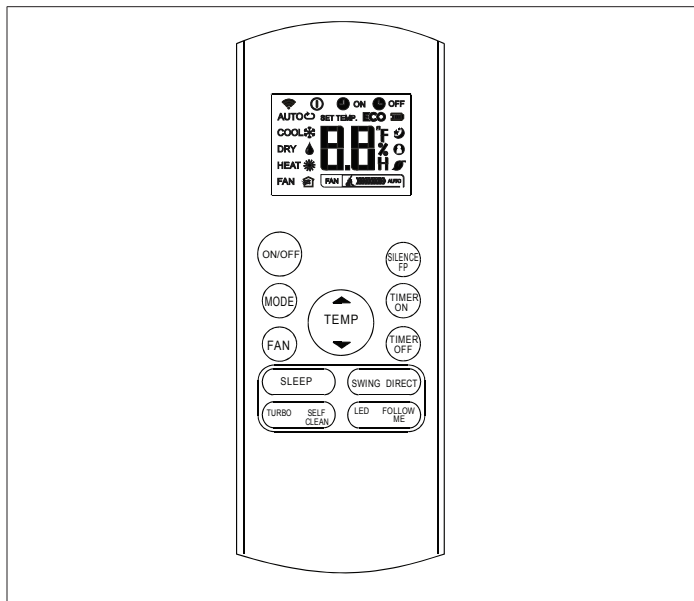- **On/Off button**. Press to turn the system on or off.

Figure 5.   Remote Control Buttons

- **Mode button**. Press to scroll through the operation modes:
  Auto → Cool → Dry → Heat → Fan.

- **Fan speed**. Press to scroll through the fan speeds:
  Auto → Low → Med   → High.

- **Sleep button**. Press to activate "night-mode". This will automatically increase (cooling) or decrease (heating) the setpoint 2°F (1°C) increment per hour for the first two hours. The modified setpoint will be set for five hours. After seven total hours the indoor unit will turn off.

NOTE: SLEEP mode is only available when the unit is in COOL, HEAT or AUTO mode.

- **Turbo button**. Press to active turbo mode. In both heating and cooling modes only, the indoor unit will ramp up to reach the setpoint more quickly. After reaching the setpoint or after 30 minutes, the indoor unit will resume the previous operating conditions.

- **Self Clean button**. Press to activate self cleaning mode. In cooling or dry mode only, the indoor unit will temporarily change operation to allow condensate on the indoor unit coil to evaporate, and then will return to the previous operating conditions.

- **Down arrow button**. Press to decrease the temperature setpoint or scroll through settings options.

- **Silence button.** Press and release to activate quiet mode operation. The indoor unit will change operation to provide the quietest sound possible.

NOTE: Quiet mode operation may result in insufficient cooling or heating capacity. Press and release the Silence button again to stop quiet mode operation.

Frost Prevention Mode
• **FP button**. Press and hold for two seconds to activate frost prevention mode. In heating mode only, the indoor unit will operate at a 46°F set point and the indoor unit display will show "FP". To cancel, push the "ON/OFF", "SLEEP", "FP", "MODE", "FAN SPEED" or "UP/DOWN" buttons.

- **Timer ON button**. Press to set the number of hours of delay before the indoor unit begins operation.

- **Timer OFF button**. Press to set the number of hours of delay before the indoor unit stops operation.

- **Swing button**. Press once to initiate louver up and down oscillation. Press again to stop louver oscillation. Louvers remain in place where stopped. Not available in all indoor unit models.

- **Direct** (Direction) **button**. Press to move louvers up and down in 6 degree increments. Louvers remain in place where stopped.

- **LED button**. Press the **LED** button to turn on the indoor unit display (on units with display). Press the button again to turn off the display.

Follow Me
• **Follow Me button**. Press to activate the wireless remote air temperature sensor. This will also transfer the temperature sensing function from the indoor unit to the remote. The indoor unit's air temperature sensor will be disabled. The indoor unit will regulate the room temperature based on the temperature sensor in the remote controller, rather than the sensor in the indoor unit.

- The remote controller will send the indoor unit a signal every three minutes. If the indoor unit doesn't receive the signal for seven minutes, or if the button is pressed again, the Follow Me function will terminate.

- The remote controller must remain pointed toward the indoor unit and must be within 26 feet (8 meters) of the unit. Do not remove the controller from the room or obstruct the signal of the remote controller during Follow Me operation.
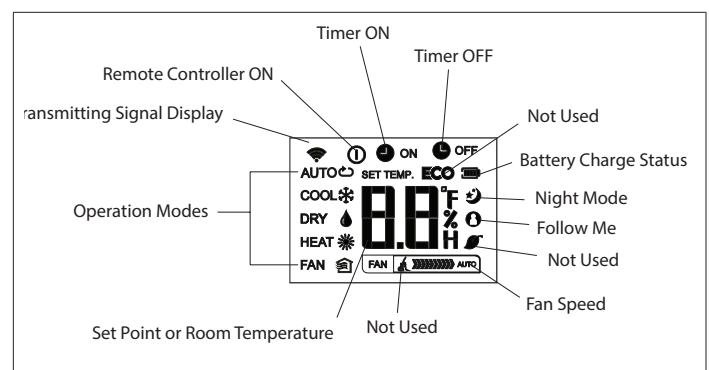
Display

Figure 6.   Remote Display

- **Remote controller On.** Icon displays to indicate that the remote controller is on**.**

- **Transmitting display**. Icon blinks once when a signal is sent from the wireless remote controller.

- **Operation mode**. These icons show the current mode of operation. Press the mode button to scroll through the operation modes:
  Auto → Cool → Dry → Heat → Fan.

- **Setpoint or Room Temperature**. Displays the set-point temperature during normal operation. Displays the room temperature when in Follow me mode. Adjust the setpoint with up & down arrow buttons. No display when unit is in Fan mode.

- **Remote controller On**. Icon displays to indicate that the remote controller is on.
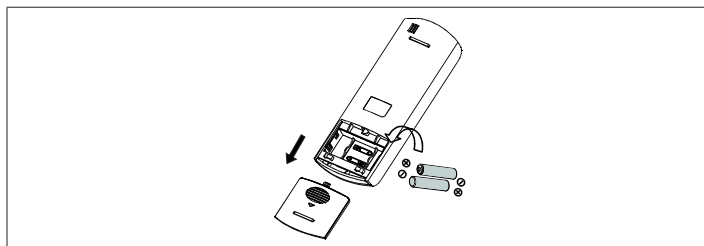
- **Transmitting display**. Icon blinks once when a signal is sent from the wireless remote controller.

- **Operation mode**. These icons show the current mode of operation. Press the mode button to scroll through the operation modes:
  Auto → Cool → Dry → Heat → Fan.

- **Setpoint or Room Temperature**. Displays the set-point temperature during normal operation. While in follow me mode the wireless remote will display the room temperature and the wall unit will display the target set point temperature to be reached. Adjust the setpoint with up and down arrow buttons. No display when unit is in Fan mode.

- **Timer ON/OFF**. These icons light up to indicate that the indoor unit has a timed auto-start or auto-stop set up. **Battery charge status**. Icon displays charge status of wireless remote controller batteries.

- **Sleep mode.** Icon displays to indicate that sleep mode operation is on.

- **Follow me.** This icon displays when the air temperature sensor in the wireless remote controller is the sensor being used by the indoor unit. When this function is off, the indoor unit uses a built-in sensor.

- **Fan speed**. Displays the current fan speed.

Operating Instruction

Batteries

1. Remove battery cover from back of remote.
2. Insert batteries into battery compartment.
3. Replace cover on controller.

NOTE: ON/OFF Timer, setpoint, fan speed and all other functions will have to be reset whenever the batteries are completely discharged or are replaced.

⚠ WARNING

Do not mix old and new batteries or batteries of different types.

Do not leave the batteries in the remote controller if the controller will not be used for an extended amount of time.

Dispose of used batteries following local and state waste management standards.

Select Fahrenheit or Celsius

Press and hold the **Up** and **Down** buttons at the same time for three seconds to toggle between Fahrenheit and Celsius.

NOTE: To Set the Operation Mode

Press the **Mode** button to scroll through the mode selections.

- **Auto** – System operates in cooling or heating mode as determined by the setpoint and the room temperature.

- **Cool** – System operates in cooling mode.

- **Dry** – System removes humidity according to preset conditions (fan speed and setpoint temperature, not a humidistat sensor). Cannot adjust fan speed.

- **Heat** – System operates in heating mode.

- **Fan** – This is for Fan only, no heating or cooling.

To set (or change) the room temperature setting (setpoint)

Press the **up** and **down** arrow buttons to adjust the setpoint.

Auto Mode

1. Press the **Power** button, an LED light on the indoor unit displays.
2. Press the **Mode** button until the display shows AUTO.
3. Adjust temperature setpoint using up and down arrow buttons (range 62°F – 86°F).

NOTE: Fan speed is auto and is not adjustable.

Cool/Heat/Fan mode

1. Press the **Mode** button to select **Cool**, **Heat**, or **Fan**.
2. Adjust the temperature setpoint using up and down arrow buttons (range 62°F – 86°F).
3. Press the **Fan Speed** button to select **Auto**, **Low**, **Med**, or **High** fan speed.

NOTE: Temperature set point is not displayed in Fan mode.

Dry Mode

1. Press the **Power** button. An LED light on the indoor unit displays.
2. Press the **Mode** button to select Dry.
3. Adjust the temperature set point using up and down arrow buttons.

NOTE: Fan speed is not adjustable in dry mode. Using dry mode will over shoot the set point by 6 - 8 degrees. There is no humidity sensor.

Timer Operation

Timer ON and Timer OFF are used to turn on and turn off the indoor unit at selected intervals.

Timer ON Operation

1. Press the **Timer ON** button. The Timer ON icon, the last auto-on time, and "**h**" will display.
2. Press the **Timer ON** button again to set the amount of time before the indoor unit begins operation. Each press will increase the time in half hour increments until 10 hours, then the increment becomes 1 hour.

Timer OFF Operation

1. Press the **Timer OFF** button. The Timer OFF icon, the last auto-off time, and "**h**" will display.
2. Press the **Timer OFF** button again to set the amount of time before the indoor unit stops operation. Each press will increase the time in half hour increments until 10 hours, then the increment becomes 1 hour.

Modify Timer ON/OFF settings

1. Press either the Timer ON button or the Timer OFF button to modify that setting.
2. Use the up arrow and down arrow buttons to change the timed operation intervals.
3. Set the timer to 0.0 to turn off timed operation.

Troubleshooting

If any of the following faults codes appear on your indoor unit, please contact your licensed professional HVAC installer (or equivalent) or a service agency.

Table 4. Faults Codes Displayed on Indoor Unit	
Code	**Description**
E0	Indoor unit EEPROM error
E1	Communication error between indoor unit and outdoor unit
E3	Indoor fan speed error
E4	Indoor return air temperature sensor error
E5	Indoor coil temperature sensor error
EC	Low refrigerant
EE	High water level alarm
F0	Outdoor current overload sensed
F1	Outdoor ambient temperature sensor error
F2	Outdoor coil temperature sensor error
F3	Compressor discharge temperature sensor error
F4	Outdoor unit EEPROM error
F5	Outdoor unit fan speed error
P0	Inverter module IPM error
P1	High or low voltage protection
P3	Outdoor unit low temperature lockout
P4	Compressor drive error
P6	Compressor high-pressure or low-pressure switch open

FCC Compliance Statement — PART 15.19

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and

2. This device must accept any interference received, including interference that may cause undesired operation.