EARTHNET ENERGY®

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Solar Heating & Cooling
Mini-Split Heat Pump System

User and Remote Control Manual

Please read this manual carefully and keep it for future reference.

Inside you will find many helpful hints on how to use and maintain your heat pump mini-split properly. Just a little preventative care on your part can save you a great deal of time and money over the life of your system. 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.

The design and specifications are subject to change without prior notice for product improvement. Consult with the sales agency or manufacturer for details.

Model: ENE ACDC12

Outdoor Condenser Unit (ODU) **Model #** ACDC12ODU, **SN**_____

Indoor Air Handler Unit (IDU) **Model #** ACDC12IDU, **SN**_____

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SAFETY PRECAUTIONS

⚠ Warning

- Contact an authorized service technician for repair or maintenance of this heat pump mini-split.
- Contact the authorized installer for installation of this heat pump mini-split.
- This heat pump mini-split 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.
- Young children should be supervised to ensure that they do not play with the heat pump mini-split.
- If the power cord is to be replaced, replacement work shall be performed by authorized personnel only.
- Installation work must be performed in accordance with the national wiring standards by authorized personnel only.

When using this heat pump mini-split in the European countries, the following information must be followed:

DISPOSAL: DO NOT dispose this product as unsorted municipal waste. Collection of such waste separately for special treatment is necessary.

It is prohibited to dispose of this heat pump mini-split in domestic household waste.

For disposal, there are several possibilities:

- The municipality has established collection systems, where electronic waste can be disposed of without charge to the user.
- When buying a new product, the retailer may take back the old product free of charge.
- The manufacture may take back the old appliance for disposal free of charge to the user.
- As old products contain valuable resources, they can be sold to scrap metal dealers.

Disposal of waste in forests and landscapes endangers everyone's health when hazardous substances leak into the groundwater and find their way into the food chain. Don't be evil.

To prevent injury to the user or other people and property damage, the following instructions must be followed. Incorrect operation due to ignoring these 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.

⚠ Warning

- Connect to the proper power source, 240 VAC, otherwise it may cause electric shock or fire due to excess heat generation.
- Do not operate or stop the heat pump mini-split by turning off the power. It may cause electric shock or fire due to heat generation.
- Do not damage or use an unspecified power cord. It may cause electric shock or fire.
- Do not modify the power cord or share the power source with other devices. It may cause electric shock or fire due to heat generation.
- Do not operate with wet hands or in a damp environment as it may cause electric shock.
- Do not direct the airflow at room occupants as this may cause health problems.
- Ensure proper grounding as improper grounding may cause electric shock.
- Do not allow water to drain into the indoor air handler as it may cause electrical shock or equipment failure.
- Always install with a disconnect on a dedicated circuit as failure to do so may cause fire or electric shock.
- Disconnect the power source if abnormal sounds or odors are noticed.
- Do not drink the water drained from the unit as it may be contaminated and cause illness.
- Do not open the heat pump mini-split during operation as it could cause electrical shock.
- Always use the correctly rated fuse or circuit breaker as failure to do so may cause a fire.
- Do not install the power cord close to heating appliances as it may cause a fire or electrical shock.
- Do not disassemble or modify heat pump mini-split as it may cause a fire or electrical shock.
- Ventilate room before operating heat pump mini-split if there is a gas leak from another appliance. It may cause an explosion or fire.
- Do not expose the power cord to flammable gas or combustibles such as gasoline, benzene, paint thinner, etc. It may cause an explosion or fire.

⚠ Caution

- When cleaning the air filter, do not touch any components inside the interior air handler as

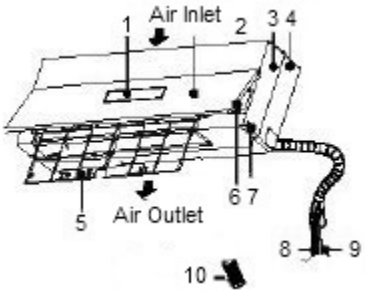
it may cause injury.

- Do not clean the heat pump mini-split with water as water may enter the heat pump mini-split and degrade the insulation. It may cause an electric shock.
- Ventilate the room when used together with a stove, etc., as an oxygen shortage may occur.
- Before cleaning the heat pump mini-split, power it off and turn off the breaker as it may cause fire and electric shock, or may cause an injury.
- Do not expose pets or house plants to direct air flow as this could injure the pet or plant.
- Do not use this heat pump mini-split for special purposes such as (but not limited to) food preservation as it may cause deterioration of quality, etc.
- Do not operate the heat pump mini-split with open windows.
- Do not place obstacles around air inlets or inside of air inlets. It may cause failure of the heat pump mini-split.
- Turn off the main breaker when storing the heat pump mini-split for extended periods of time.
- Do not use strong detergents to clean the heat pump mini-split as appearance may be deteriorated due to change of product color or scratching of its surface.
- Ensure that the proper bracket is used to support the outdoor condenser as a weak or damaged bracket could cause the heat pump mini-split to fall causing damage or injury.
- Inspect filters monthly and clean as needed as operation without filters or with dirty filters will affect system performance and may cause heat pump mini-split failure.
- Do not place heavy objects on the power cord or compress the cord to avoid electrical shock or fire.
- Use caution when unpacking the heat pump mini-split as sharp edges could cause injury.
- If water enters the heat pump mini-split, turn off the breaker and call a qualified service person.

OPERATING INSTRUCTIONS

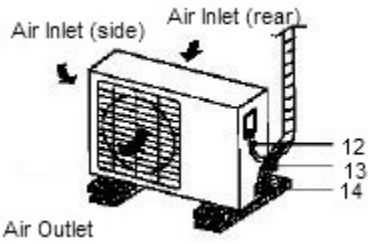
Part Identification

Indoor Air Handler



Display Window

Outdoor Condenser



Special Functions

Defrost Operation Display
Displayed when the heat pump mini-split starts defrosting automatically or when the warm air control feature is activated in heating operation.

Operation Frequency Display
This display is separated into five zones. The zones illuminate based on the compressor current frequency. For example, higher frequency will illuminate more zones.

Indoor Air Handler

1. Display Window
2. Front Panel
3. Panel Frame
4. Chassis
5. Air Filter
6. Panel Brace
7. Manual Control Button
8. Connecting Pipe
9. Drain Hose
10. Remote Controller

Outdoor Condenser

12. Connecting Cable
13. Line Set
14. Service Valve

Digital Display
Displays the current setting temperature and malfunction code when the heat pump mini-split is in operation.

AUTO Operation Display
Displayed during Auto operation.

Timer Display
Displayed during timer operation.

Operating Temperatures

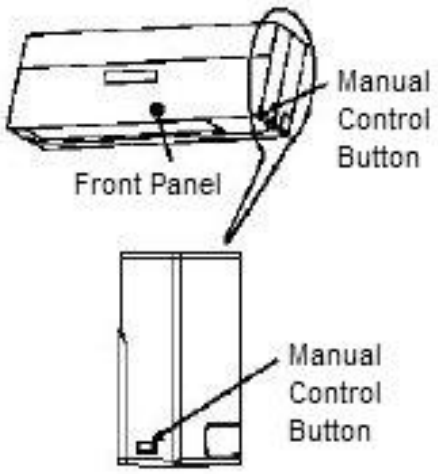
Mode	Cooling Temperature	Heating Operation	Drying Operation
Room Temperature	≥ 62º F or 17º C	≤ 88º F or 31º C	> 50º F or 10º C
Outdoor Temperature	32º F – 122º F 0º C – 50º C	5º F - 86º F -15º C - 31º C	32º F - 122º F 0º C - 50º C

Note:

1. Optimum performance will be achieved within these operating temperatures. If heat pump mini-split is used outside of the above conditions, certain safety protection features might come into operation and cause the heat pump mini-split to function abnormally.
2. Room relative humidity less than 80%. If the heat pump mini-split operates in excess of this figure, the surface of the heat pump mini-split may attract condensation. Please set the vertical air flow louver to its maximum angle (vertically to the floor) and set HIGH fan mode.

Manual Operation

Manual operation can be used temporarily in case the remote controller is disabled or when maintenance is necessary.



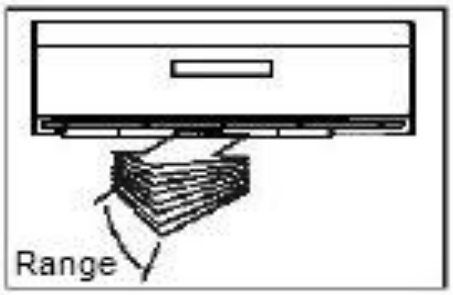
NOTE: The heat pump mini-split must be turned off before operating the "manual control" button. If the heat pump mini-split is operational, continue pressing the manual control button until the unit is off.

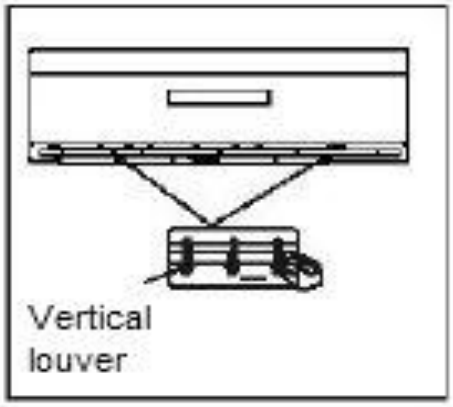
1. For the convenience of operation, the manual control button is located on the right side of the panel frame.

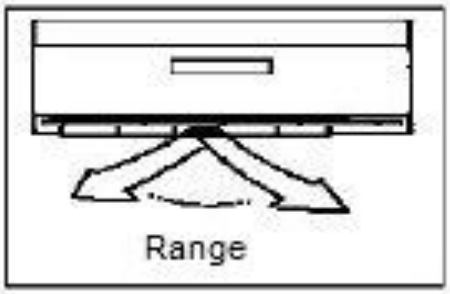
2. One press of the manual control button will lead to the forced AUTO operation at a fixed temperature of 76° F. The temperature cannot be adjusted manually. Pressing the button a second time will put the heat pump mini-split into the "cool" operation. Pressing the button a third time will turn the heat pump mini-split off.

⚠ **CAUTION:** This button is used for testing purposes and to be used by service personnel only.

Airflow Direction Control







- Adjust the air flow direction properly; otherwise, it might cause discomfort or uneven room temperatures.
- Adjust the horizontal louver using the remote controller.

- Adjust the vertical louver manually.

  To set the vertical air flow (Up-Down) direction, perform this function while the heat pump mini-split is in operation by using the remote controller to adjust the air flow direction. The horizontal louver can be

  moved at a range of 6º for each press, or swing up and down automatically. Please refer to the REMOTE CONTROLLER section.

- To set the horizontal air flow direction (left - right) move the vertical louver manually to adjust the air flow in the direction you prefer.

- **IMPORTANT:** Before adjusting the vertical louvers, the supply power must be disconnected.

CAUTION

Do not operate the heat pump mini-split for long periods with the air flow direction set downward in cooling or dehumidifying mode; otherwise, condensation may occur on the surface of the horizontal louver causing moisture to drop on to the floor or on furnishings.

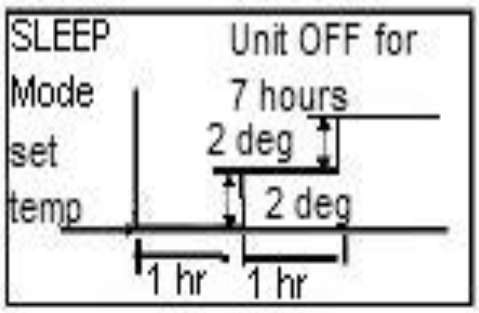
Do not move the horizontal louver manually unless it is necessary (always use the remote controller). When the heat pump mini-split is started immediately after it was stopped, the horizontal louver might not move for approximately 10 seconds.

Open angle of the horizontal louver should not be set too small, as COOLING or HEATING performance may be impaired due to overly restricted air flow area.

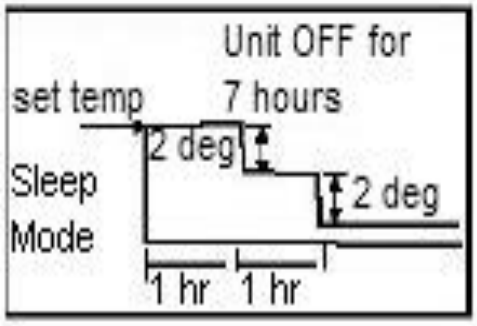
Do not operate heat pump mini-split with horizontal louver in closed position.

When the heat pump mini-split is connected to power (initial power), the horizontal louver may generate a sound for 10 seconds, this is a normal operation.

AUTO and Economy Operation



Cooling



Heating

AUTO Operation

- When you set the heat pump mini-split in AUTO mode, it will automatically select cooling or fan only operation depending on what temperature you have selected and the room temperature.
- The heat pump mini-split will control room temperature automatically based on the temperature point set by you.
- If the AUTO mode is uncomfortable, you can manually select.

Economy Operation

When you push the ECONOMY button on the remote controller during cooling, heating or AUTO operation, the heat pump mini-split will automatically increase (cooling) or decrease (heating) the set temperature by 2 degrees F per hour for 2 hours, hold steady for the next 5 hours, and then turn off. This characteristic maintains both energy saving and comfort in night operation.

Dehumidification

The fan speed will be automatically controlled under this operation. During this operation, if the room temperature is lower than 50ºF (10º C) the compressor stops operation and restarts when the room temperature is above 54º F (12ºC).

Optimal Operation

To achieve optimal performance, please note the following:

- Adjust the temperature to achieve the highest comfort level. Do not adjust the heat pump mini-split to excessive temperature levels.
- Close doors and windows on COOL or HEAT modes; otherwise, performance will be reduced.
- Use TIMER ON button on the remote controller to select a time you want to start your heat pump mini-split.
- Do not put any object near air inlet or air outlet, as the efficiency of the heat pump mini-split will be reduced and the heat pump mini-split may stop running.

CARE AND MAINTENANCE

Cleaning the Filter, Grille, Case and Remote Controller

NOTE: Power must be disconnected before cleaning the indoor air handler.

IMPORTANT: Never use volatile substances (such as gasoline or alcohol) to clean the panel.

⚠ CAUTION

- ⚠ A cloth dampened with cold water may be used on the indoor air handler if needed. Then wipe it with a dry cloth.
- ⚠ Do not use a chemically treated cloth or duster to clean the indoor air handler.
- ⚠ Do not use benzene, thinner, polishing powder, or similar solvents for cleaning. These may cause the plastic surface to crack or deform.
- ⚠ Never use water hotter than 104ºF (40º C) to clean the front panel, it could cause deformation or discoloration.

Removing and Cleaning the Indoor Air Handler Filters:

A clogged air filter reduces the cooling efficiency of this heat pump mini-split. Please inspect filters monthly and clean as needed as operation without filters or with dirty filters may cause heat pump mini-split failure.

TURN HEAT PUMP MINI-SPLIT OFF BEFORE STARTING THIS PROCESS!!!

1. Looking directly at the indoor air handler, firmly grasp both bottom corners of the front panel and firmly push the panel straight upwards approximately 2 inches until panel stops moving.

2. While still grasping both bottom corners, firmly pull panel outwards (toward you) at a slight angle (do not exceed 20 degrees) unhinging the panel from the two plastic crank hinges.

3. Use the plastic panel brace (1” wide by 2” long located 2” to the left of the right-side plastic crank) to support the front panel.

4. Remove the left-side air filter by firmly grasping the bottom edge of the filter and lifting upwards thereby releasing the two tabs from the filter support frame. Pull filter downwards to remove from indoor air handler. Remove the right-side filter using the same process.

5. Gently clean the filters with a vacuum cleaner or by water (do not use dishwasher) and dry prior to installation back into the indoor air handler.
6. Insert the left-side air filter (filter with the smaller filter attached to it) back into the indoor air handler by inserting the upper end of the filter (end without the two tabs) onto the

air filter support brace (making sure the left and right filter edges are positioned properly on the rails) and firmly slide filter back into position until both tabs are secured into the front frame. Insert the right-side air filter using the same process.

7. Release plastic panel brace by pulling the front panel slightly outward (toward you) and push the panel brace back down to its original position.

8. To re-attach the front panel to the indoor air handler, lift the left plastic crank (located on the unit) up (using the index and middle fingers from under the panel) and align the fixing hole on the back of the front panel to the plastic crank on the indoor air handler. Then, firmly press the panel inwards to make the crank link with the panel. Repeat the same process for the right side.

9. The panel will completely close automatically once the heat pump mini-split is turned on.

OPERATION

Maintenance Tips

Check before operating

If you plan to idle the heat pump mini-split for a long time, perform the following:

(1) Operate the fan for about half a day to dry the inside of the heat pump mini-split.

(2) Stop the air heat pump mini-split and disconnect power. Remove the batteries from the remote controller.

(3) The outdoor condenser requires periodic maintenance and cleaning. Do not attempt to do this yourself. Contact your dealer or service provider:

- Check that the wiring is not broken or disconnected.
- Check that the air filter is installed.
- Check if the air outlet or inlet is blocked after the air heat pump mini-split has not been used for a long time.

CAUTION

- Do not touch the metal parts of the heat pump mini-split when removing the filter. Injuries can occur when handling sharp metal edges.
- Do not use water to clean inside the heat pump mini-split. Exposure to water can destroy the insulation, leading to possible electric shock.
- When cleaning the heat pump mini-split, first make sure that the power and circuit breaker are turned off.

Operating Tips

The following events may occur during normal operation:

1. Compressor protection.
The compressor can't restart for 3 minutes after it stops. The heat pump mini-split is designed not to blow cold air on HEAT mode when the indoor heat exchanger is in one of the following three situations and the set temperature has not been reached.
A) When heating has just starting.
B) Defrosting.
C) Low temperature heating.
The indoor or outdoor fan will stop running when defrosting. Frost may be generated on the outdoor condenser during heat cycle when outdoor temperature is low and humidity is high resulting in lower heating efficiency of the heat pump mini-split.
During this condition heat pump mini-split will stop heating operation and start defrosting automatically. The time to defrost may vary from 4 to 10 minutes according to the outdoor temperature and the amount of frost build-up on the outdoor condenser.

2. A white mist coming out from the indoor air handler. A white mist may generate due to a large temperature difference between air inlet and air outlet on COOL mode in an indoor environment that has a high relative humidity. A white mist may generate due to moisture generated from defrosting process

when the heat pump mini-split restarts in HEAT mode operation after defrosting.

3. Hissing sound from the heat pump mini-split.

You may hear a low hissing sound when the compressor is running or has just stopped running. This sound is from the refrigerant flowing through the system or coming to a stop.

You may also hear a low "squeak" sound when the compressor is running or has just stopped running. This is caused by heat expansion and cold contraction of the plastic parts in the heat pump mini-split when the temperature is changing.

When power is first turned on, a noise may be heard due to louver restoring to its original position. This is normal operation.

4. Dust is blown out from the indoor air handler.

This is a normal condition when the heat pump mini-split has not been used for a long time or during first use of the heat pump mini-split.

5. A peculiar smell comes out from the indoor air handler.

This is caused by the indoor air handler giving off smells permeated from building material, from furniture, or smoke.

6. Compressor functionality

When the indoor temperature reaches the set temperature, the compressor will stop automatically and the heat pump mini-split turns to FAN only mode. The compressor will start again when the indoor temperature rises on COOL mode or falls on HEAT mode to reach the set point.

7. Dripping water may form on the surface of the indoor air handler when cooling in a high relative humidity (relative humidity higher than 80%). This is due to the angle of the horizontal louver being set too small. Adjust the horizontal louver to the maximum air outlet position and select HIGH fan speed.

8. Heating Mode

The air heat pump mini-split draws in heat from the outdoor condenser and releases it via the indoor air handler during heating operation. When the outdoor temperature falls, heat drawn in by the heat pump mini-split decreases accordingly. At the same time, heat loading of the heat pump mini-split increases due to larger difference between indoor and outdoor temperature. If a comfortable temperature can't be achieved by the air heat pump mini-split, we suggest you use a supplementary heating device.

9. Auto-restart function.

Power failure during operation will stop the heat pump mini-split completely. When the power restores, the heat pump mini-split restarts automatically with all the previous settings preserved by the memory function.

10. Lightning

Lightning nearby may cause the heat pump mini-split to malfunction. Disconnect the power to the heat pump mini-split and then re-connect the power to the heat pump mini-split. Push the ON/OFF button on the remote controller to restart operation.

TROUBLESHOOTING

Troubleshooting Tips

If one of the following codes displays on the indoor air handler, stop the heat pump mini-split immediately, disconnect the power and then connect it again. If the problem still exists, disconnect the power and contact the nearest customer service center.

Display	LED STATUS
E0	Indoor EEPROM parameter error
E1	Indoor unit and outdoor unit communication protection
E3	Indoor fan speed has been out of control
E5	Open circuit or short circuit of outdoor temperature sensor or outdoor EEPROM parameter error
E6	Open circuit or short circuit of room or evaporator coil temperature sensor
E7	Outdoor fan speed has been out of control
P0	IPM malfunction or IGBT over-strong current protection
P1	Over voltage or too low voltage protection
P2	Temperature protection of compressor top.
P4	Inverter compressor drive error

Malfunction	Cause	Solution
Heat pump mini-split does not start	Fuse or breaker may be blown or tripped.	Check fuse or breaker
	Battery in remote controller may be dead.	Replace the battery.
	The time you have set with timer is incorrect.	Wait or cancel timer setting.
Heat pump mini-split not cooling	Temperature setting not set correctly	Set temp correctly. Refer to "Using remote control" section.
Cold air blowing from indoor air handler but room is not heating or cooling.	Air filter is blocked	Clean air filter
	Doors or windows are open	Close doors and windows and check for drafts
	The 3 minute delay protection has been activated	Wait 3-5 minutes and try again
If the trouble has not been corrected, please contact your local dealer. Be sure to inform them of the detailed malfunction and unit model.		

 Notes: Do not attempt to “repair” the unit yourself. Always consult an authorized service provider.

REMOTE CONTROL

Distance limitations of the remote:
Use the remote within 30 feet of indoor air handler for proper reception. Reception is confirmed by a beep from the heat pump mini-split.

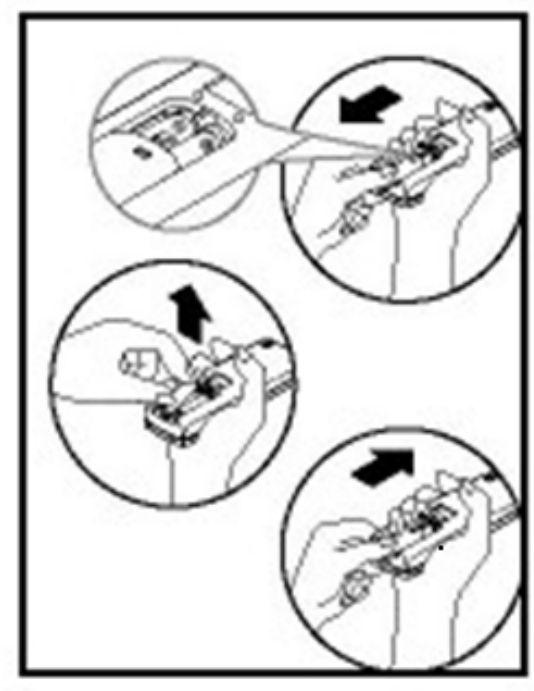
CAUTION
The heat pump mini-split will not operate if curtains, doors or other materials block the signals from the remote controller to the indoor air handler.

Prevent any liquid from falling into the remote controller. Do not expose the remote controller to direct sunlight or heat.

If the infrared signal receiver on the indoor air handler is exposed to direct sunlight, the heat pump mini-split may not function properly. Use curtains to prevent the sunlight from falling on the receiver.

If other electrical appliances react to the remote controller, either move these appliances or consult your dealer.

Replacing the batteries



The remote controller is powered by two batteries (AAA Energizer or equivalent) housed in the rear part and protected by a cover.

(1) Remove the cover by pressing and sliding off.

(2) Remove the old batteries and insert the new batteries, placing the (+) and (-) ends correctly.

(3) Reattach the cover by sliding it back into position.

NOTE: When the batteries are removed, the remote controller erases all programming. After inserting new batteries, the remote controller must be reprogrammed.

CAUTION
Do not mix old and new batteries. Do not store batteries in the remote for long periods of time. Properly dispose of batteries (consult your city code).

Remote Control Specifications

Model	**R51L10/BGE**
Rated Voltage	3.0V(AAA Dry batteries)
Lowest voltage needed to transmit signal	2.0V
Signal Receiving Range	30 ft. (when using new batteries at 3.0 DC voltage)
Operating Environment	-41 F~140 F or 5 C~ 60 C

Performance Features

1. Operating Mode: AUTO, COOL, DRY, HEAT, and FAN.

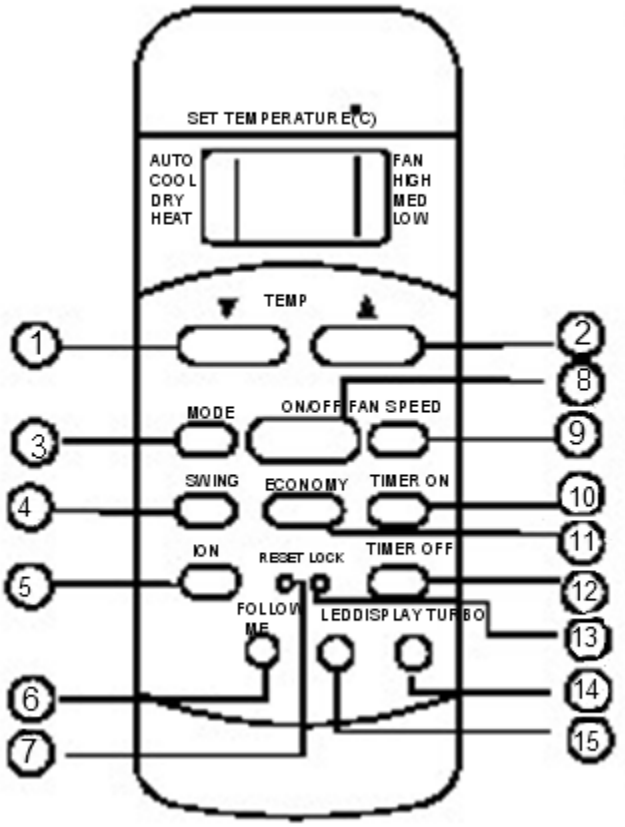
2. Timer Setting Function in 24 hours.

3. Indoor Setting Temperature Range: 62 F~88 F. (17 C~31 C)

4. Full functional LCD (Liquid Crystal Display)

5. Back light

Function buttons



1. **Temp UP button**
   Push this button to increase the indoor temperature setting in 2 degree increments.

2. **Temp DOWN button**
   Push this button to decrease the indoor temperature setting in 2 degree increments.

3. **MODE button**
   Each time the button is pressed, the operation mode is selected in the following sequence. **Auto**, **Cool**, **Dry**, **Heat**, and **Fan**.

4. **SWING button**
   Used to start or stop the louver movement and set the up/down airflow direction.

5. **ION button**
   Push this button to turn the ion generator on and off. This device is used for air purification.

6. FOLLOW ME button

Push this button to initiate the “Follow Me” function and the remote controller begins to detect the actual temperature at its location. The remote controller will send this signal to the indoor unit every 3 minutes until you press the “Follow Me” button again. The heat pump mini-split will beep to indicate the “Follow Me” feature has ended if it does not receive the signal during any 7 minute interval. Please insure that the signal from the remote controller is not blocked.

7. Reset button

Once the recessed RESET button is pressed, all of the current settings will be cancelled, and the controller will return to the original settings.

8. ON/OFF button

Operation starts when this button is pressed and stops when the button is pressed again.

9. FAN SPEED button

Used to select the fan speed in the following four steps, AUTO, LOW, MEDIUM, and HIGH.

10. TIMER ON button

Press this button to activate the Auto-on time setting. Each press will increase the time setting in 30 minute increments, up to 10 hours, then at 1 hour increments up to 24 hours. To cancel the Auto-on time setting, just press the button until the time setting is 0.0.

11. ECONOMY Button

Select this button before going to bed. It will maintain a comfortable temperature and save energy. This function is available in COOL, HEAT, or AUTO modes only.

Note: While the unit is running under Energy-Saving Mode, it would be cancelled if MODE, FAN SPEED, or ON/OFF is pressed.

12. TIMER OFF Button

Press this button to activate the Auto-off time setting. Each press will increase the time setting in 30 minute increments, up to 10 hours, then at 1 hour increments up to 24 hours. To cancel the Auto-off time setting, just press the button until the time setting is 0.0.

13. LOCK Button

Press this “recessed” button to lock all current settings and the remote will not accept any operation except that of LOCK. Use the LOCK mode to prevent settings from being accidently changed. Press the LOCK button again to

cancel the LOCK function. A LOCK ICON, FOLLOW ME, and TURBO symbol will appear on the remote controller display.

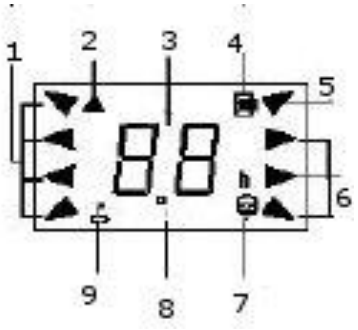
14. TURBO Button

Used to start or stop the speed cooling/heating.

15. LED DISPLAY Button

Press this button to clear the display on the indoor unit, press it again to light the display.

LCD DISPLAY INDICATORS ON REMOTE CONTROLLER



1. MODE Display

Displays the current selected mode: AUTO, COOL, DRY, HEAT and FAN.

2. TRANSMISSION Indicator

This transmission indicator will light when remote controller transmits signals to the indoor air handler.

3. TEMP/TIMER Display

The temperature setting (from 62F to 88F) or timer setting (0-24hr) will be displayed. If FAN mode is selected, there will be no display.

4. ON/OFF Display

This indicator will be displayed when the heat pump mini-split is operating.

5. MODE Display (FAN mode)

6. FAN SPEED Display

Displays the selected fan speed: AUTO, HIGH, MED and LOW. Nothing displays when the fan speed is selected in AUTO speed. When AUTO or DRY Mode is selected, there will be no signals displayed.

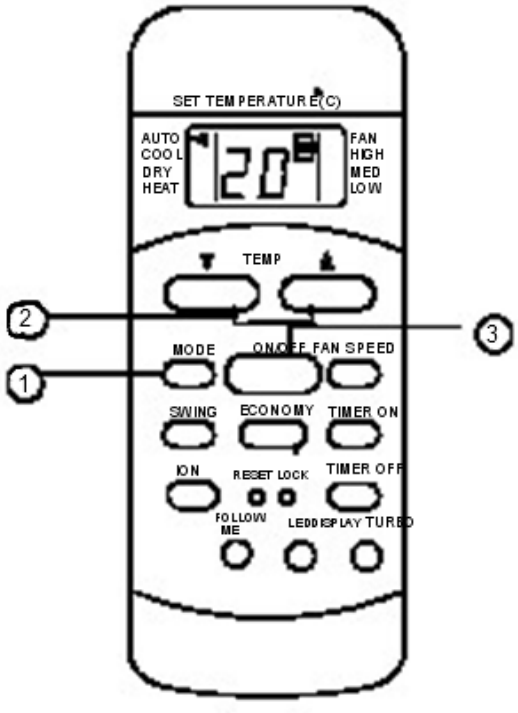
7. FOLLOW ME Display
When pressing the FOLLOW ME button in COOL or HEAT mode, the remote sensing function is activated and this indicator is displayed.

8. TIMER Display
This display area shows the settings of the TIMER. That is, if only the Auto-on time function is set, it will display TIMER ON. If only the Auto-off time function is set, it will display TIMER OFF. If both functions are set, it will display TIMER ON/OFF which indicates you have chosen both the Auto-on time and Auto-off time.

9. LOCK Indicator
LOCK is displayed when pushing the LOCK button. Push again to clear the display.

How to use the buttons on the remote controller:

Auto Operation



Ensure the heat pump mini-split is plugged in and power is available. The OPERATION indicator on the display panel of the indoor unit illuminates.

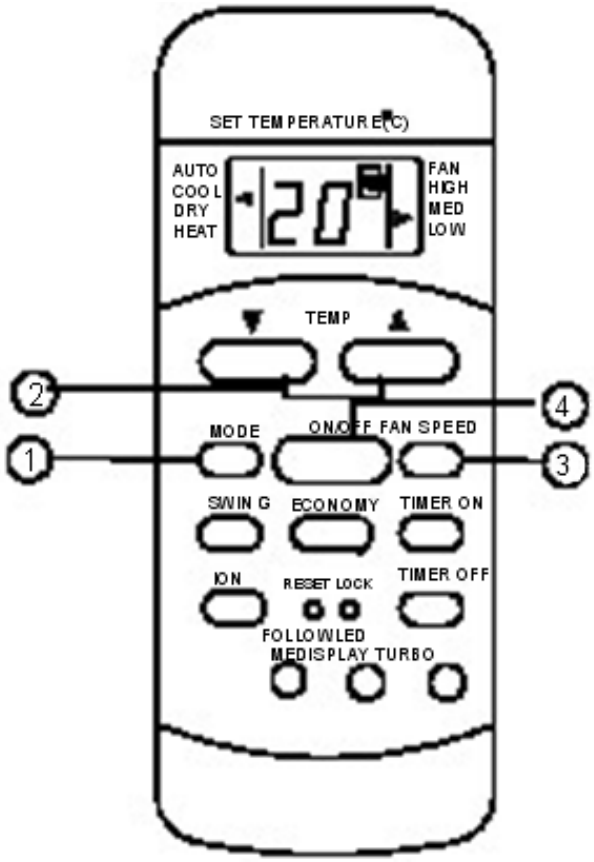
1. Press the MODE button to select Auto.
2. Press the TEMP button to set the desired temperature. The temperature can be set within a range of 62 F in 2 degree F increments.
3. Press the ON/OFF button to start the air conditioner.

NOTE:
1. In the “Auto” mode, the system can logically choose the mode of Cooling, Fan, Heating and Dehumidifying by sensing the difference between the actual ambient room temperature and the set temperature on the remote controller.

2. In the “Auto” mode, you cannot switch the fan speed. It has already been automatically controlled.

3. If the “Auto” mode is not comfortable for you, the desired mode can be selected manually.

Cooling /Heating/Fan Operation



Ensure the heat pump mini-split is plugged in and power is available.

1. Press the MODE button to select COOL, HEAT, or FAN mode.

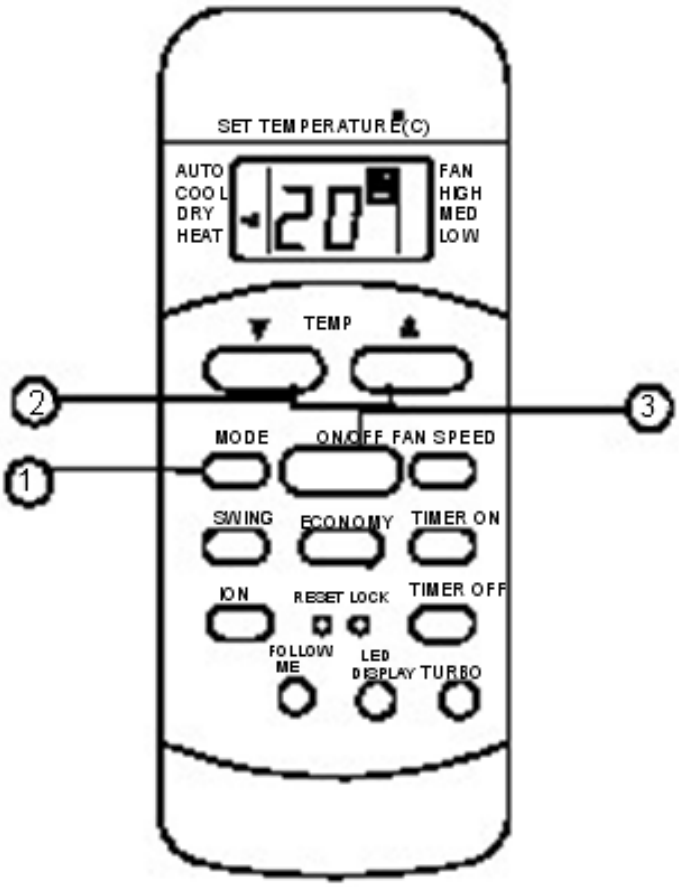
2. Press the TEMP button to set the desired temperature. The temperature can be set within a range of 62 F in 2 degree F increments to 88 degrees F.

3. Press the FAN SPEED button to select the fan speed in four steps- Auto, Low, Medium, or High.

4. Press the ON/OFF button to start the heat pump mini-split.

NOTE:
In the FAN mode, the setting temperature is not displayed in the remote controller and you are not able to control the room temperature either. In this case, only step 1, 3 and 4 may be performed.

Dehumidifying Operation



Ensure the heat pump mini-split is plugged in and power is available. The OPERATION indicator on the display panel of the indoor air handler illuminates.

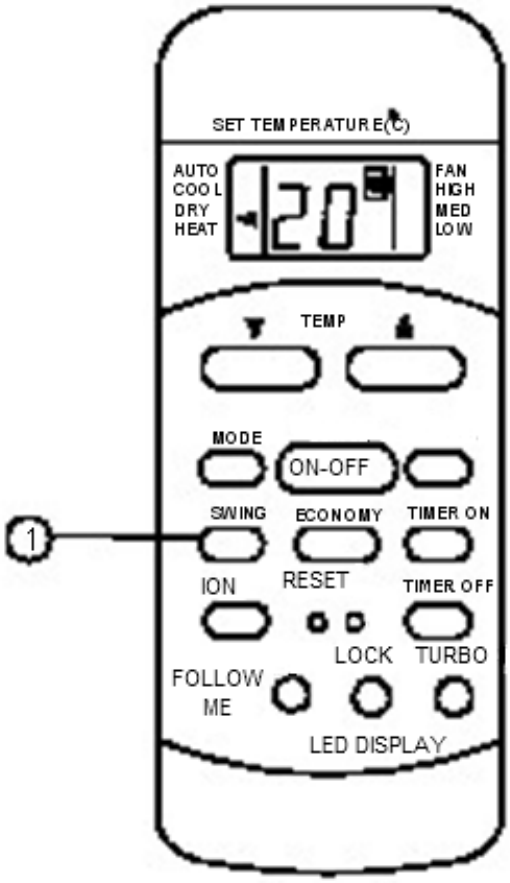
1. Press the MODE button to select DRY mode.

2. Press the TEMP button to set the desired temperature.

3. Press the ON/OFF button to start the heat pump mini-split.

NOTE:
In the Dehumidifying mode, you can not switch the fan speed as it is automatically controlled.

Swing Operation



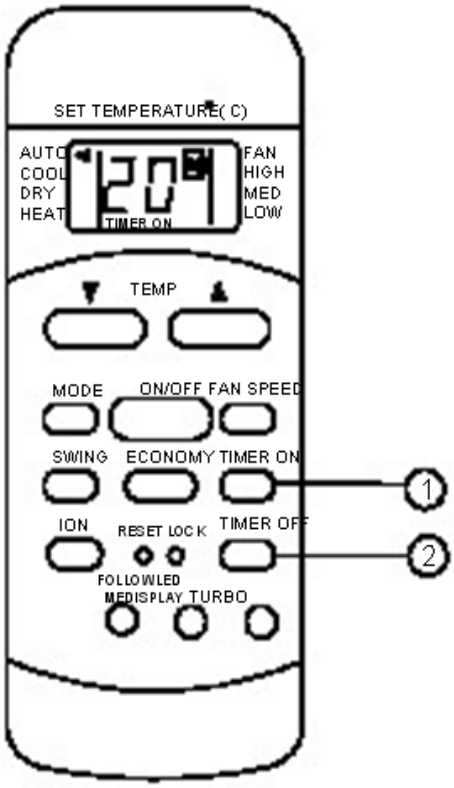
Use the SWING button to adjust the Up/Down airflow direction.

1. When you press the button once and quickly, the air flow direction setting feature of the louver is activated. The moving angle of the louver is 6º for each time you press. Keep pressing the button to move the louver to the desired position.

2. If you keep pressing the SWING button without releasing for 2 more seconds, the auto swing feature of the louver is activated. The horizontal louver would swing up/down automatically. Press it again to stop.

NOTE:
When the louver swings or moves to a position which would affect the cooling and heating effect of the heat pump mini-split, it will automatically change the swing/moving direction.

Timer Operation



Pressing the TIMER ON button can set the auto-on time of the heat pump mini-split. And pressing the TIMER OFF button can set the auto-off time of the heat pump mini-split.

Setting the Auto-on time.
1. Press the TIMER ON button. The remote controller shows TIMER ON, the last Auto-on setting time and the signal "h" will be shown on the LCD display area. Now it is ready to reset the Auto-on time to START the operation.

2. Push the TIMER ON button again to set desired Auto-on time. Each time you press the button, the time increases in 30 minute increments, up to 10 hours, then at 1 hour increments up to 24 hours.

3. After setting the TIMER ON there will be a one half second delay before the remote controller transmits the signal to the heat pump mini-split. Then, after approximately another 2 seconds, the signal "h" will disappear and the set temperature will re-appear on the LCD display window.

Setting the Auto-off time.
1. Press the TIMER OFF button. The remote controller shows TIMER OFF, the last Auto-off setting time and the signal "h" will be shown on the LCD display area. Now it is ready to reset the Auto-off time to START the operation.

2. Push the TIMER OFF button again to set desired Auto-off time. Each time you press the button, the time increases in 30 minute increments, up to 10 hours, then at 1 hour increments up to 24 hours.

3. After setting the TIMER OFF there will be a one half second delay before the remote controller transmits the signal to the heat pump mini-split. Then, after approximately another 2 seconds, the signal "h" will disappear and the set temperature will re-appear on the LCD display window.

IMPORTANT
The effective operation time set by the remote controller for the timer function is limited to the following settings: 0.5, 1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0, 4.5, 5.0, 5.5, 6.0, 6.5, 7.0, 7.5, 8.0, 8.5, 9.0, 9.5, 10, 11, 12, 13, 14, 15,16,17,18, 19, 20, 21, 22, 23 and 24.

Example of Timer Setting

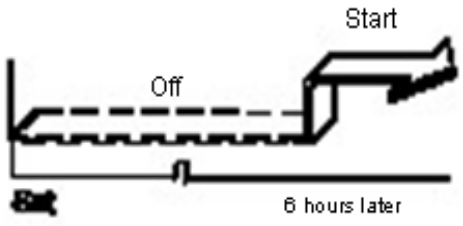
TIMER ON
(Auto-on Operation)
The TIMER ON feature is useful when you want the heat pump mini-split to turn on automatically before you return home. The heat pump mini-split will automatically start operating at the set time.

Example:
To start the heat pump mini-split in 6 hours:

1. Press the TIMER ON button, the last setting of starting operation time and the signal "h" will show on the display area.

2. Press the TIMER ON button to display "6:0h" on the TIMER ON display of the remote controller.

3. Wait for about 3 seconds and the digital display area will show the temperature again. Now this function is activated.



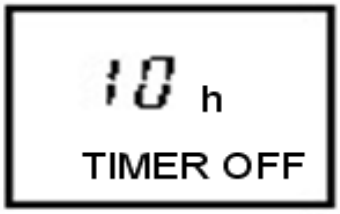
TIMER OFF
(Auto-off Operation)
The TIMER OFF feature is useful when you want the heat pump mini-split to turn off automatically after you go to bed. The heat pump mini-split will stop automatically at the set time.

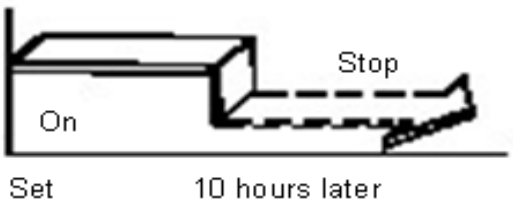
Example:
To stop the heat pump mini-split in 10 hours:

1. Press the TIMER OFF button, the last setting of stopping operation time and the signal "h" will show on the display area.

2. Press the TIMER OFF button to display "10h" on the TIMER OFF display of the remote controller.

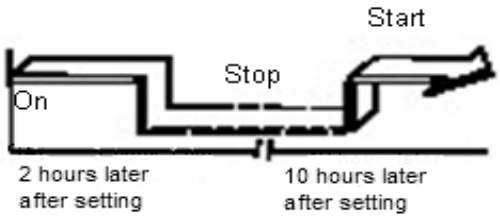
3. Wait for about 3 seconds and the digital display area will show the temperature again. Now this function is activated.





COMBINED TIMER

(Setting both ON and OFF timers simultaneously)



TIMER OFF → TIMER ON

(On → Stop → Start operation)

This feature is useful when you want to stop the heat pump mini-split after you go to bed, and start it again in the morning when you wake up or when you return home.
Example:

To stop the heat pump mini-split 2 hours after setting and start it again 10 hours after setting:

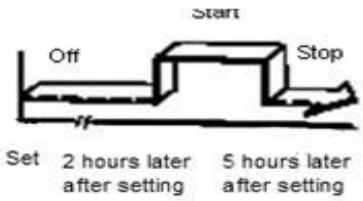
1. Press the TIMER OFF button.

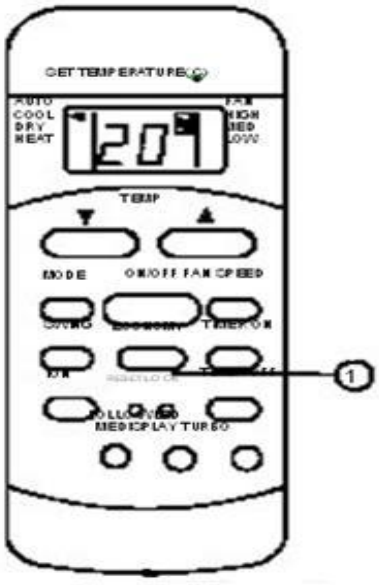
2. Press the TIMER OFF button again to display 2.0h on the TIMER OFF display.

3. Press the TIMER ON button.

4. Press the TIMER ON button again to display 10h on the TIMER ON display.

5. Wait for the remote control to display the setting temperature.





TIMER ON → TIMER OFF

(Off → Start → Stop operation)

This feature is useful when you want to start the heat pump mini-split before you wake up and stop it after you leave the house.

Example:
To start the heat pump mini-split 2 hours after setting, and stop it 5 hours after setting:

1. Press the TIMER ON button.

2. Press the TIMER ON button again to display 2.0h on the TIMER ON display.

3. Press the TIMER OFF button.

4. Press the TIMER OFF button again to display 5.0h on the TIMER OFF display.

5. Wait for the remote control to display the setting temperature.

CAUTION
The timer setting (TIMER ON or TIMER OFF) that in sequence occurs directly after the set time will be activated first.

ECONOMY (SLEEP) Operation

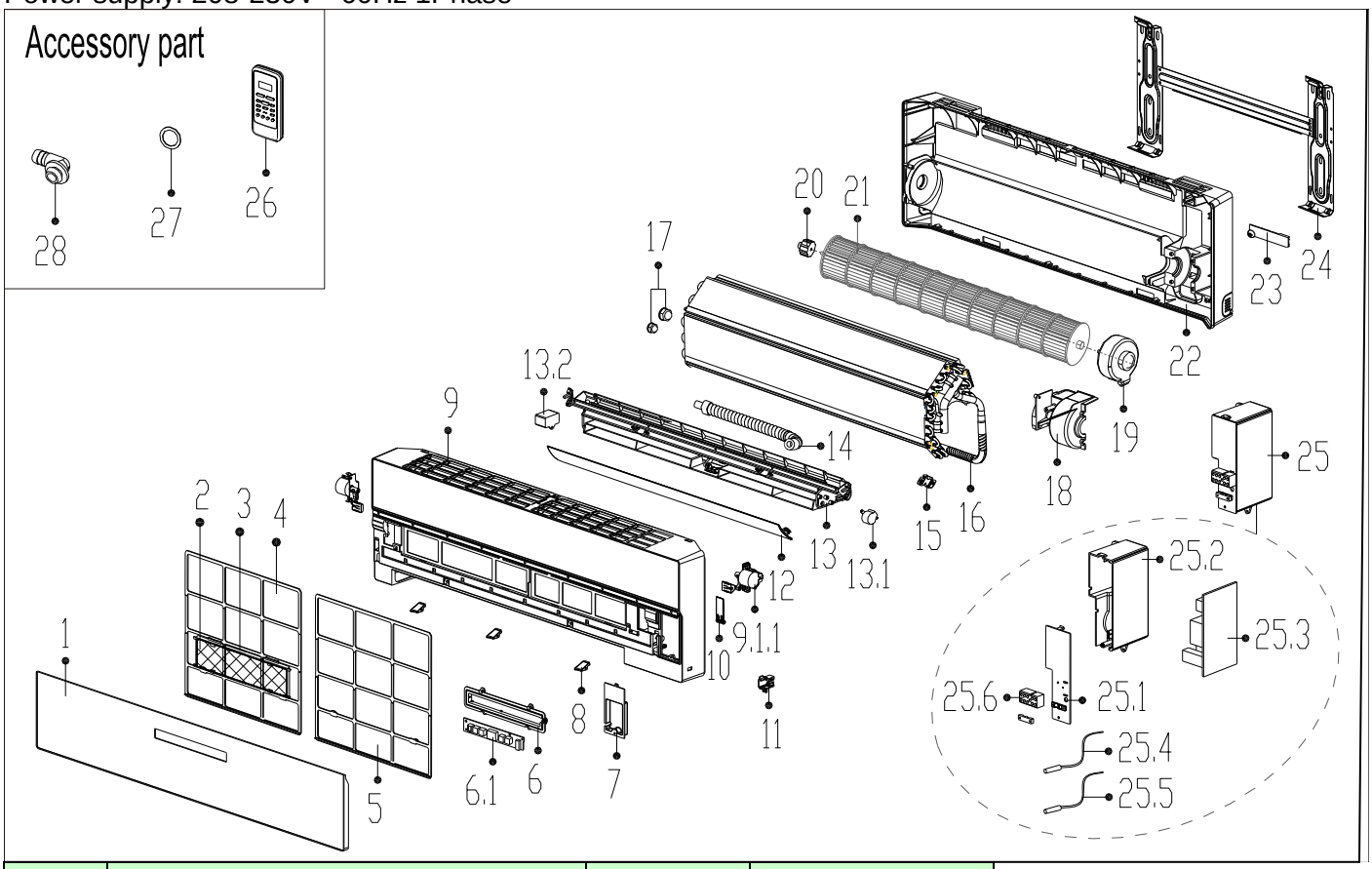
When you push the ECONOMY button on the remote controller during cooling, heating or AUTO operation, the heat pump mini-split will automatically increase (cooling) or decrease (heating) the set temperature by 2 degrees F per hour for 2 hours, hold steady for the next 5 hours, and then turn off. This characteristic maintains both energy saving and comfort in night operation.

NOTE: The ECONOMY/SLEEP function is only available under Cooling, Heating and AUTO operation.

Parts List

Indoor Air Handler Parts List

Model: ACDC12IDU
Power supply: 208-230V~ 60Hz 1Phase



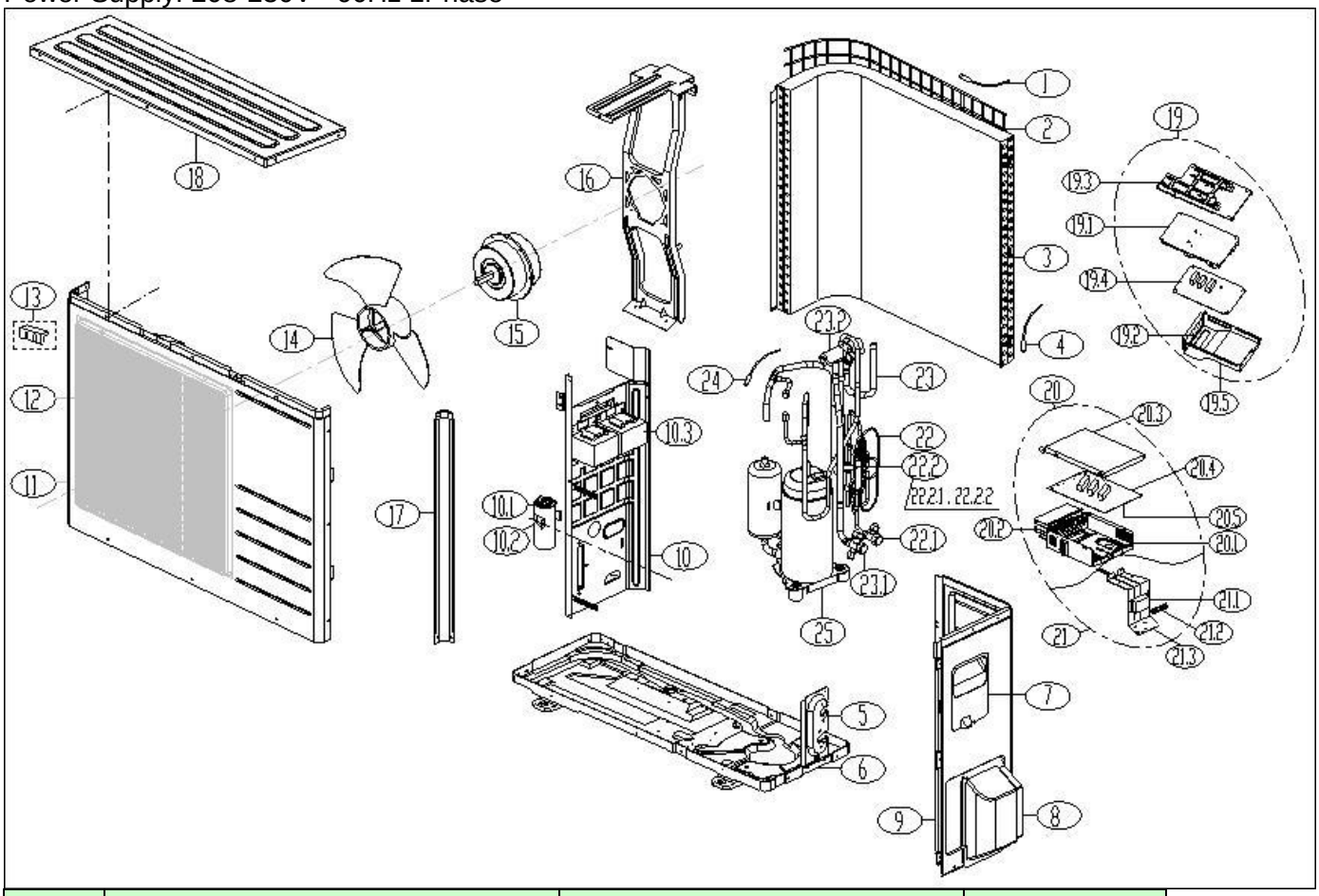
No.	Part Name	Quantity	Part #
1	Panel assembly	1	201132590304
2	Air cleaner	1	201131410703
3	Bracket of air filter	1	201132200713
4	Air filter(left)	1	201132590297
5	Air filter(right)	1	201132590296
6	Display box assembly	1	203332390506
6.1	Display board assembly	1	201319900578
7	Cover of indoor electronic control box	1	201132590298
8	Screw cap	3	201132590303
9	Panel frame assembly	1	201132590301

9.1	Panel frame assembly	1	201132590455
9.1.1	Louver motor	1	202400200054
10	Mandril of Panel	1	201132590292
11	Lash-up switch cover	1	201132590293
12	Horizontal louver	1	201132590295
13	Air outlet assembly	1	201132590327
13.1	Louver motor	1	202400200006
13.2	Ionizer+ generator	1	202403000031
14	Drain hose	1	201101020038
15	Fix clamp of temperature sensor	1	201102000305
16	Evaporator assembly	1	201532590045
17	Pipe nut	1	201600330003
17	Pipe nut	1	201600330001
18	Fan motor cover	1	201132590299
19	Asynchronous motor	1	202400370022

No.	Part Name	Quantity	Part #
20	Bearing base	1	202730100201
22	Chassis assembly	1	201132391041
23	Pipe clamp board	1	201232500001
24	Installation plate	1	201232390008
25	Electronic control box assembly	1	203332590860
25.1	Cover of electronic control box	1	201132390371
25.2	Electronic control box	1	201132390370
25.3	Main control board assembly	1	201332590686
25.4	Ambient temperature sensor assembly	1	202433190000
25.5	Pipe temperature sensor assembly	1	202301300080
25.6	Wire joint	1	202301400064
26	Remote Controller	1	203355091200
27	Seal ring	1	202720090001
28	Drain connecter	1	201101020011

Outdoor Condenser Parts List

Model: ACDC12ODU
Power Supply: 208-230V~ 60Hz 1Phase



No.	Part Name	Quantity	Part #
1	Ambient temperature sensor assembly	1	202301310063
2	Rear net	1	2011374G0003
3	Condenser assembly	1	201537590110
4	Pipe temperature sensor assembly	1	202440500004
5	Valve plate	1	201237200282
6	Chassis assembly	1	201237590093
7	Big handle	1	201257190112
8	Water collector	1	201137400000
9	Right clapboard assembly	1	201237400376
10	Partition board assembly	1	201237500225

10.1	Capacitor of compressor	1	202401000612
10.2	Capacitor clip	1	201200100002
10.3	Reactance	1	202301000820
10.3	Reactance	1	202301000819
11	Front panel	1	201237400392
12	Air outlet grille	1	201237390106
13	Clamp of front net	6	201135110801
14	Axial flow fan	1	201100390002
15	Asynchronous motor	1	202400370023
16	Supporter assembly of fan motor	1	201237390026
17	Left supporter	1	201237400400
18	Top cover assembly	1	201237900028
19	Electronic control box assembly	1	203337590106
19.1	Electronic control box	1	201137590008
19.2	Radiator	1	202301900129
19.3	Cover of electronic control box	1	201237590055

No.	Part Name	Quantity	Part #
19.4	Main control board assembly	1	201337590074
19.5	Electronic control box	1	201237590056
20	Electronic control box assembly	1	203337590064
20.1	Electronic control box	1	201237300033
20.2	Radiator	1	202301990008
20.3	Cover of electronic control box	1	201237300162
20.4	Main control board assembly	1	201337590042
20.5	Supporter of electronic control box	1	201137300162
21	Terminal board assembly	1	203337590062
21.1	Wire joint	1	202301400256
21.2	Insulation plate	2	201137300185
21.3	Terminal board	1	201237590057
22	Liquid valve assembly	1	201637590974
22.1	Liquid valve	1	201600740523

22.2	Electronic expansion valve assembly	1	201601300554
22.2.1	Electronic expansion valve	1	P0001663644
22.2.2	Electronic expansion valve Solenoid	1	P0001663645
23	4-way valve assembly	1	201637590950
23.1	Gas valve	1	201600720193
23.2	4-Ways valve	1	201600690010
24	Discharge temperature sensor assembly	1	202301310068
25	Compressor	1	201400620600

LIMITED WARRANTY STATEMENT
January 1, 2013

ACDC12 Solar Heating & Cooling Heat Pump Mini-Split System

EarthNet Energy {ENE} warrants to the original owner of this product (that when purchased from and installed by a contractor licensed for HVAC installation under applicable local and state laws within the continental United States, Alaska and Hawaii) should it prove defective due to defects in materials or workmanship. This Limited Warranty applies only while the System remains at the site of the original installation and only to locations within the continental United States, Alaska and Hawaii.

A. THREE YEAR PARTS WARRANTY
The parts are warranted for a period of three (3) years to the original purchaser of this System. If a part proves defective due to defects in materials and/or workmanship for a period of three (3) years from the date of installation, ENE will replace the defective part(s) at no cost for the part. Replacement parts are then warranted for the remainder of the original 3-year warranty period. Parts used for replacement may be of like kind and quality and may be new or remanufactured. Defective parts must be returned to ENE for exchange, and the defective part becomes the property of ENE.

B. FIVE YEAR COMPRESSOR WARRANTY
The compressor is warranted for a period of five (5) years to the original purchaser of this System. If the compressor proves defective due to defects in materials and/or workmanship for a period of five (5) years from the date of installation, ENE will replace the defective compressor without charge for the compressor. ENE also reserves the right to replace the outdoor unit completely without charge for the outdoor unit. Replacement compressors/outdoor units are then warranted for the remainder of the original warranty period. Compressors/outdoor units used for replacement may be of like kind and quality and may be new or remanufactured. Defective compressors/outdoor units must be returned to ENE for exchange, and the defective part becomes the property of ENE.

C. TWENTY-FIVE YEAR PHOTOVOLTAIC MODULE WARRANTY
The solar module(s) are warranted by the module manufacturer for a period of ten (10) years to the original purchaser of this System. If a solar module proves defective due to defects in materials and/or workmanship for a period of ten (10) years from the date of installation, the solar module manufacturer will replace the module at no cost for the module. The module manufacturer also provides a linear power warranty guaranteeing 80% power output for each module for a period of twenty-five (25) years.

D. ONE YEAR RACKING & PHOTOVOLTAIC WIRING WARRANTY
The solar module racking, wiring and connectors are warranted for a period of one (1) year to the original purchaser of this System. If any of these components prove defective due to defects in materials and/or workmanship for a period of one (1) year from the date of installation, ENE will replace the defective

component (does not include cosmetic defects) without charge for the component. The replacement component is then warranted for the remainder of the original warranty period. Components used for replacement may be of like kind and quality and may be new or remanufactured. Defective components must be returned to ENE for exchange and the defective components become the property of ENE.

E. LABOR.
These Limited warranties do not include labor or any other costs incurred for service, maintenance, repair, removing, replacing, installing, complying with local building and electric codes, shipping or handling, or replacement of the System, compressors or any other parts. For items that are designed to be maintained or replaced by the owner, the owner is solely responsible for all labor and other costs of maintaining, installing, replacing, disconnecting or dismantling the System and parts (such as filters) in connection with owner-required maintenance. Air filter cleaning and/or replacement for each applicable indoor unit are owner-required maintenance and labor for this procedure is not covered under warranty.

F. PROPER INSTALLATION
This Limited warranty applies only to Systems that are installed by contractors who are licensed for HVAC installation under applicable local and state law, and who install the Systems in accordance with all applicable building codes and permits, ENE's installation manuals and operation instructions, and acceptable trade practices.

G. BEFORE REQUESTING SERVICE
Please review the applicable technical documentation to insure proper installation and correct customer control adjustment for the System. If the problem persists, please arrange for warranty service.

H. TO OBTAIN WARRANTY PARTS SERVICE
1. Contact the licensed contractor who installed the System or the nearest licensed contractor, dealer or distributor of any defect within the applicable warranty period.

2. Proof of the installation date by a licensed contractor is required when requesting warranty service. Present the sales receipt or other document which establishes proof and date of installation; otherwise, this Limited Warranty shall be deemed to have begun one hundred eighty (180) days from the date of produce noted on the unit barcode. Please complete the Warranty Registration online at www.earthnetenergy.net immediately after system installation so that ENE can contact you regarding any safety-related issues or product recalls.

I. THIS LIMITED WARRANTY DOES NOT COVER:
Property damages, malfunction or failure of the System, or personal injury caused by or resulting from: (a) accident, abuse, negligence or misuse; (b) operating the System in a corrosive or wet environment containing chlorine, fluorine or any other hazardous chemicals; (c) installation, alteration, repair or service by anyone other than a licensed contractor or other than pursuant to the manufacturer's instructions; (d) improper matching of System components; (e) improper sizing of the System; (f) improper or deferred maintenance contrary to the manufacturer's instructions; (g) physical abuse to or misuse of the System (including failure to perform any maintenance as described in the User Manual such as air filter cleaning, or any System damaged by excessive physical or electrical stress); (h) Systems that have had a serial number or any part thereof altered, defaced or removed; (i) System used in any manner contrary to the User Manual; (j) freight damage; or (k) damage caused by force majeure or other factors such as power surge damage caused by lightning and/or fluctuations in or interruptions of electrical power.

J. THIS LIMITED WARRANTY ALSO EXCLUDES:
Service calls where no defect in the system covered under this warranty was found; faulty installation or set-ups; adjustments of user controls; Systems purchased or installed outside the continental United States, Alaska and Hawaii. Consult the operating instructions for information regarding user controls.

Except as otherwise provided in this limited warranty, ENE makes no other warranties of any kind whatsoever regarding the system. ENE disclaims and excludes all warranties not expressly provided herein and all remedies which for this provision might arise by implication or operation of law, including without limitation, the implied warranties of merchantability and of fitness for any particular purpose. No one is authorized to change this limited warranty in any respect or to create any other obligation or liability for ENE in connection with the system. ENE disclaims all liability for the acts, omissions and conduct of all third parties (including without limitation the installing contractor) in connection with or related to the system.

Under no circumstances shall ENE be liable for any incidental, special or consequential damages, including without limitation, lost goodwill, lost revenues or profits, work stoppage, system failure, impairment of other goods, costs of removal and reinstallation of the system, loss of use, injury to persons or property arising out or related to the system whether based on breach of warranty, breach of contract, tort or otherwise, even if ENE has been advised of the possibility of such damager. In no event shall ENE's liability exceed the actual purchase price of the system with respect to any claims made.

Some states do not allow limitations on warranties or exclusions or limitation of damages, so the above limitations or exclusions may not apply. This Limited Warranty gives the owner specific legal rights and the owner may also have other rights that vary from state to state. This Limited Warranty is valid only in the continental United States, Alaska and Hawaii, and it is not transferable.

EarthNet Energy
95 Brim Boulevard
Chambersburg, PA 17201