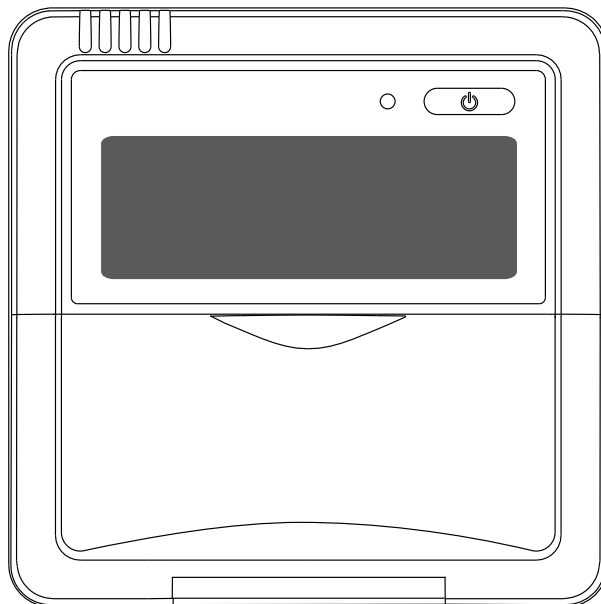




Owner and Installation Manual

DURASTAR 12B Wired Thermostat

FOR DURASTAR SPLIT-STYLE INDOOR UNITS



Model Number:

Serial Number:

Purchase Date:

Installing Contractor Company Name:

TIP

Capture relevant information about your Durastar mini-split equipment before it is installed and write it above for future reference.

Introduction

To better serve you, please do the following before contacting customer service:

- If you received a damaged product, immediately contact the retailer or dealer that sold you the product.
- Read and follow this owner's manual carefully to help you use and maintain your air conditioner.
- Read the troubleshooting section of this manual as it will help you diagnose and solve common issues.
- Visit us on the web at www.durastar.com to download product guides and up-to-date information.
- If you need warranty service, our friendly customer service representatives are available via email at questions@durastar.com or by telephone at 1-888-320-0706.

Safety Warnings

- Only use the wire supplied with the thermostat to wire the thermostat.
- The shielded wire must be grounded.
- The connecting cable should not be longer than 20m (65.5').
- The remote control operates on a low voltage circuit loop. DO NOT connect a 220V or 380V cable to the circuit loop.
- DO NOT use an ohmmeter to detect the insulation after wiring the remote control.
- DO NOT install the remote control near flammable liquids or gases such as gasoline or hydrogen sulfide. Doing so creates a fire hazard.
- DO NOT operate the unit with wet hands, as this could lead to electrical shock.
- DO NOT remove the cover or touch the interior parts of the remote control.
- DO NOT use sharp or pointed objects to press the remote control buttons.

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Compatability Chart

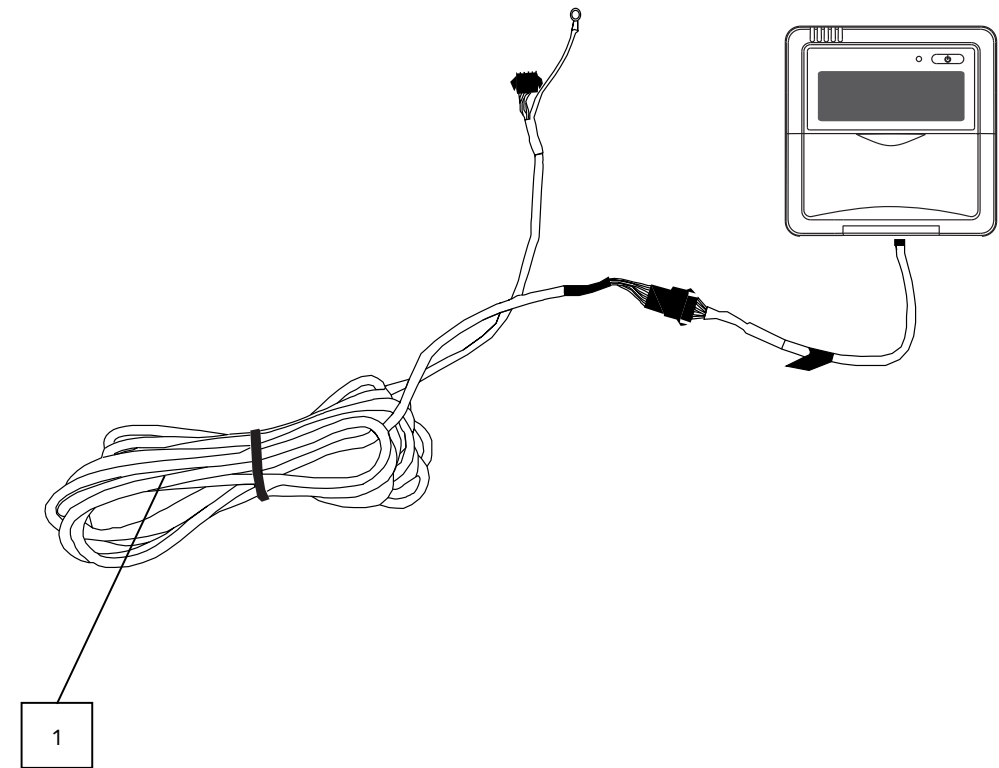
This chart shows mini-split compatability with the the 12B wired thermostat.

| COMPATABILITY | | |
|---------------|---------------|---|
| INDOOR | Wall Mounted | DRAW06F1B, DRAW09F1B, DRAW12F1B, DRAW18F1B, DRAW24F1B DRAW09F1A, DRAW12F1A, DRAW18F1A, DRAW24F1A |
| | Cassette | DRAL06F1A, DRAL09F1A, DRAL12F1A, DRAL18F1A, DRAC09F1A, DRAC12F1A, DRAC18F1A, DRAC24F1A |
| | Slim Ducted | DRAD09F1A, DRAD12F1A, DRAD18F1A, DRAD24F1A |
| | Floor/Ceiling | DRAF18F1A, DRAF24F1A |
| | Floor Mounted | DRAS12F1B |

Included Parts And Accessories

The following items are included in the kit:

| Number | Name | Quantity |
|--------|---------------------------------------|----------|
| 1 | DRPDRAD09F1A17 12B Controller | 1 |
| | 20' Lead Wire | 1 |
| | M4 Screws | 3 |
| | 3/4" Coarse Thread Pan Head Screws | 3 |
| | 1/2" Coarse Thread Pan Head Screws | 2 |



Field Supplied Installation Accessories

The following installation accessories are required and must be purchased separately.

- Anchors

Optional Accessories

The following installation accessories are optional and can be purchased separately.

- putty
- DRPDRAD09F1A16 display control panel
- DRPDRAD09F1A17B male to male adaptor from the display control panel to the IDU

Tools Needed

The following tools are required for installation.

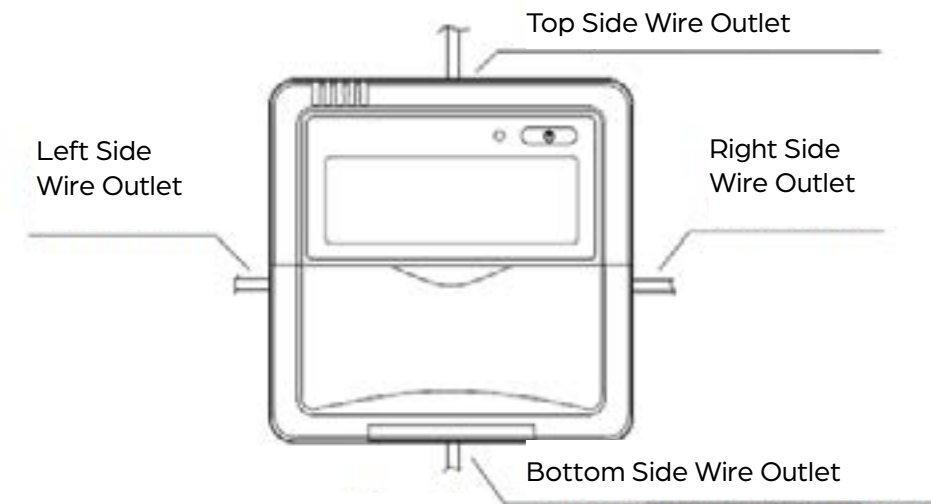
- Phillips screwdriver
- Flat head thermostat screwdriver

Mounting The Thermostat

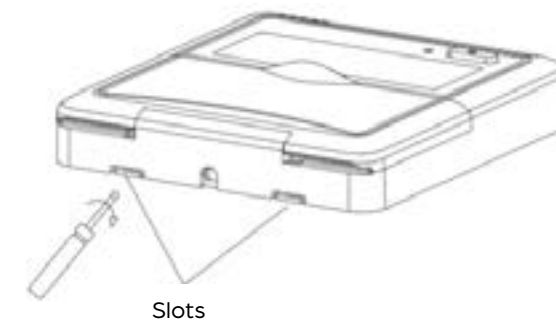
Before you connect the thermostat, chose a location for the thermostat and decide which mounting type you will use, exposed or embedded. The thermostat can be no farther than 20' from the indoor unit. Consider looking at the steps to connect the thermostat, to help determine where to place the thermostat.

Exposed Wire Mounting

1. For exposed mounting, break out a tab hole on one of the four sides of the thermostat for the wire.



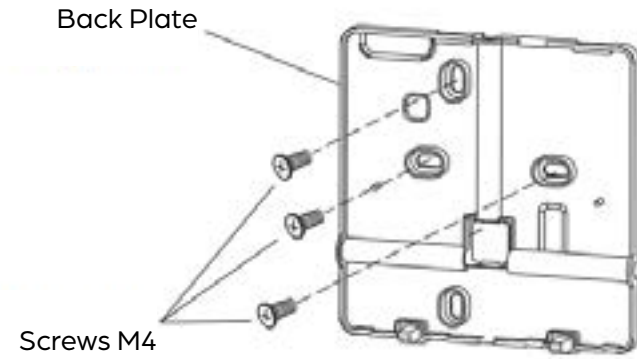
2. Remove the top panel of the thermostat by inserting a screwdriver into the two slots on the bottom.



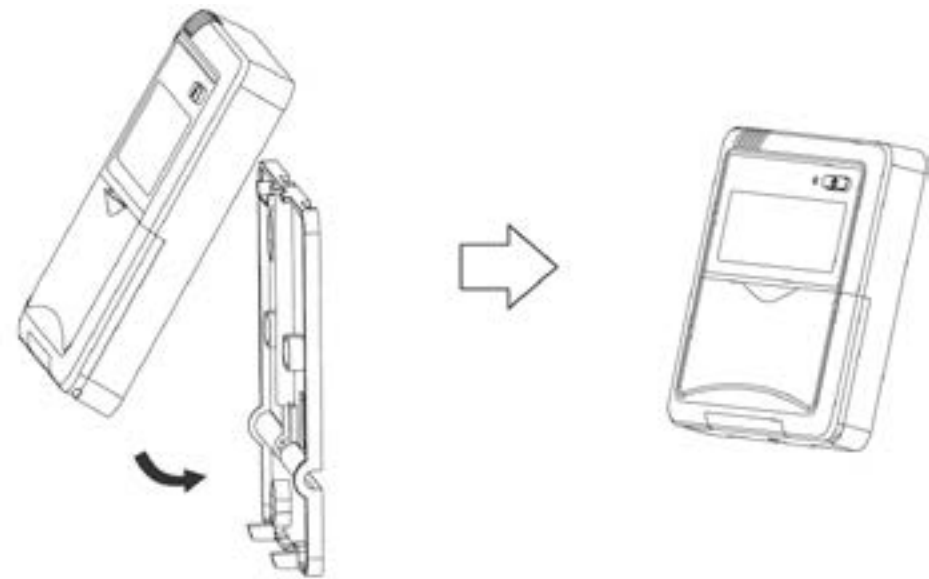
⚠ WARNING

- The Printed Circuit Board (PCB) is mounted in the upper panel of the thermostat. Be careful not to damage the board with the screwdriver.

3. Mount the back plate of the thermostat on the wall, with three M4 screws and anchors.

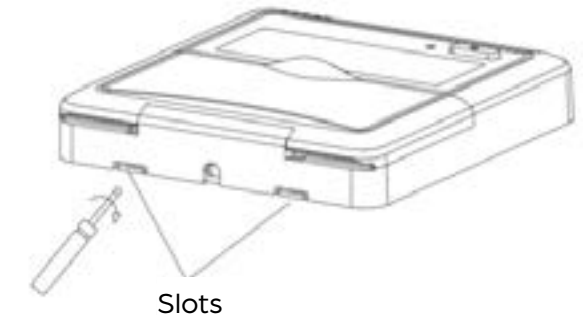


4. Reattach the top panel of the thermostat.
 5. Mount the back plate of the thermostat on the wall, with three M4 screws and anchors.



Embedded Wire Mounting

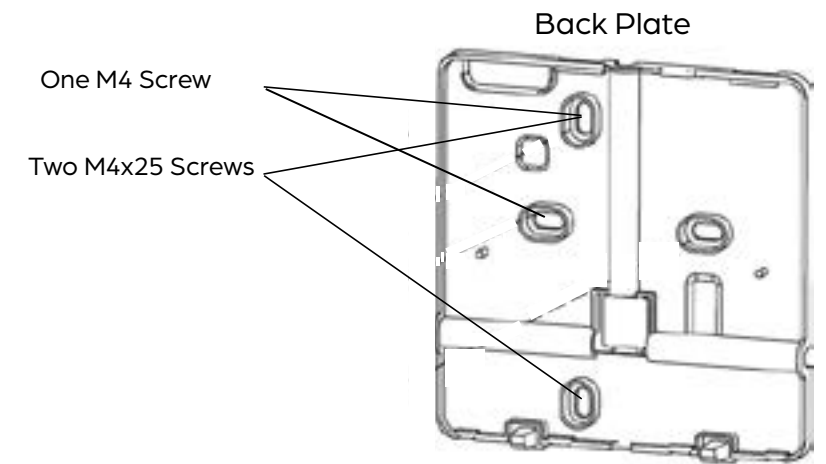
1. For embedded mounting, remove the top panel of the thermostat by inserting a screwdriver into the two slots on the bottom.



⚠ WARNING

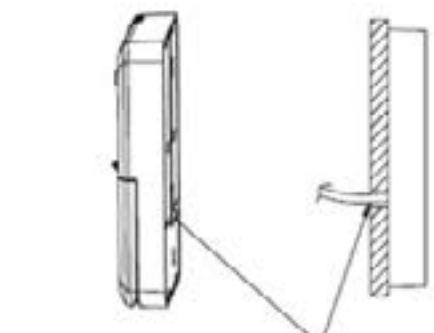
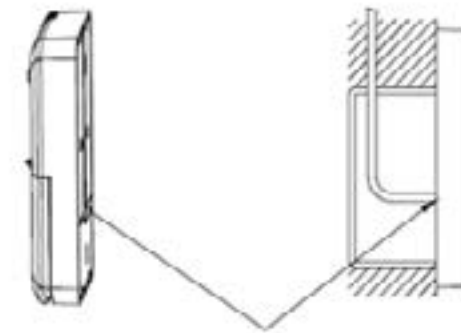
- The Printed Circuit Board (PCB) is mounted in the upper panel of the thermostat. Be careful not to damage the board with the screwdriver.

2. Fasten the back plate to a switchbox with two M4x25 screws.
 OR
 Fasten the back plate to a wall with two M4 screw.



Embedded Switch Box Wiring

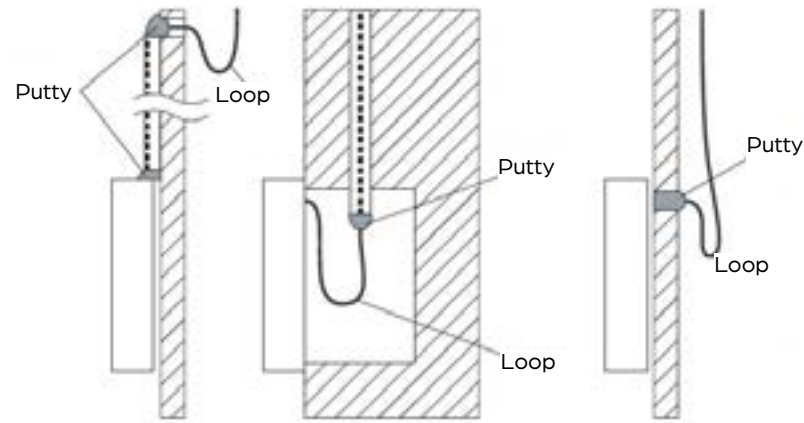
Wiring through Wall



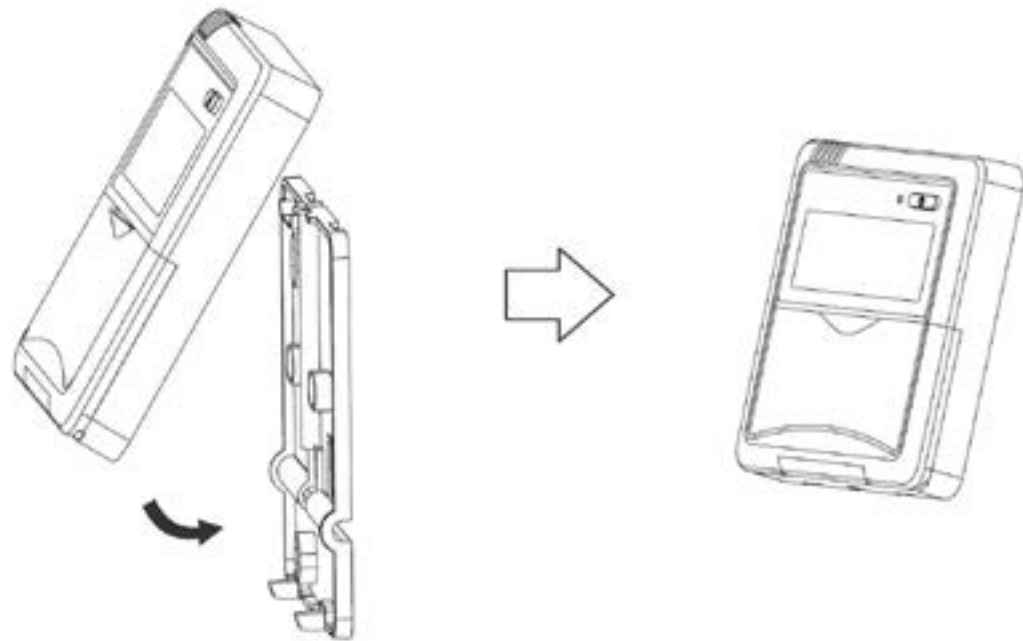
Wiring Hole

Wall hole and wiring hole
 Diameter of wall hole Φ 2 cm

- In order to prevent water or condensation getting into the thermostat, make a loop with the wire or use putty.



- Reattach the top panel of the thermostat.



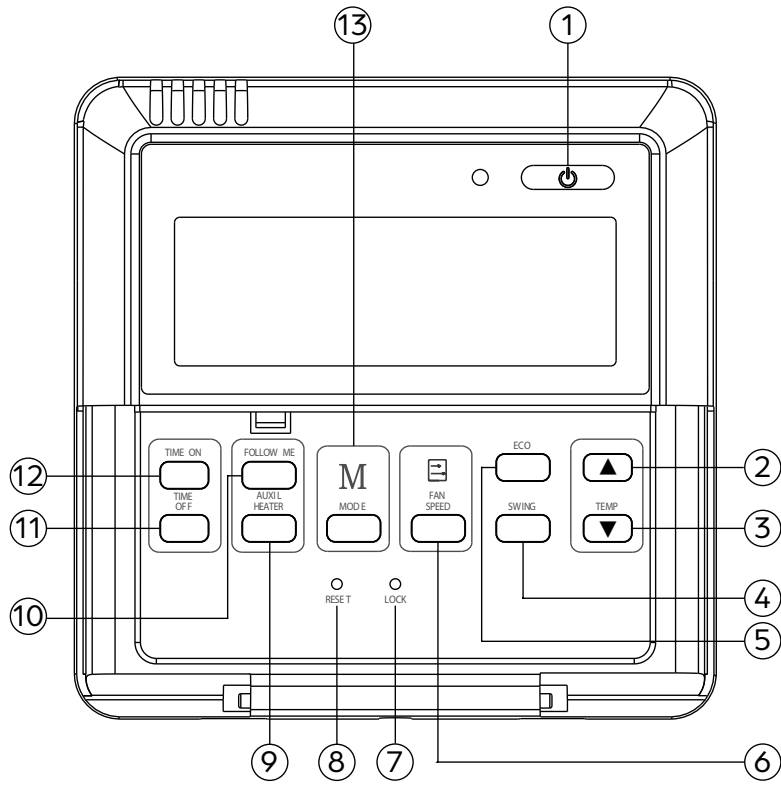
Connecting The Thermostat

| Indoor Unit | Connection |
|-------------|---|
| DRAW | Run the 20' lead into the main control box and plug it into the 5-pin wire (labeled with blue tape) coming from port CN2 on the display board. Zip-tie the wire to a secure location. |
| DRAD | We recommend using the display panel (DRPDRAD09F1A16), so the unit can be controlled during service in an attic or crawl space. If using this setup, connect the 20' lead to the 5-pin connector leading to the display panel. Then connect the 10-pin wire from the display panel to port CN10A on the board. The provided plug adaptor DRPDRAD09F1A17B may need to be used, depending on the plug size. |
| DRAS | Run the 20' lead into the main control box and plug it into the 5-pin wire coming from port CN202 on the display board. Zip-tie the wire to a secure location. |
| DRAF | Run the 20' lead into the main control box and plug it into the 5-pin wire coming from port CN2 on the display board. Zip-tie the wire to a secure location. |
| DRAC | Run the 20' lead from the thermostat between the panel and the cassette unit. Connect the lead to the female 5-pin wire (labeled with blue tape) that is coming from the unit's panel. Secure the wire with a zip-tie. This thermostat is not compatible with the DRAC24F1B. |

NOTE

- If there is a connection lug at the end of the shielded wire, the connection lug should be properly grounded.
- Make sure to reserve a length of the lead wire for periodic maintenance.

Wired Thermostat



1. ON/OFF Button
Press to turn the air conditioner ON and OFF.

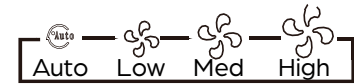
2. UP Button ▲
Press to increase the set temperature in 1°F / 1°C increments.

3. DOWN Button ▼
Press to decrease the set temperature in 1°F / 1°C increments.

4. SWING Button
Function is not available for this model.

5. ECO Button
For details on ECO mode, see the ECO feature section of this manual.

6. FAN SPEED Button
Press to select the following fan speeds:



7. LOCK Button
Used to lock/unlock the thermostat settings.

8. RESET Button
Used to restore the system to its default settings.

9. AUXILIARY ELECTRICAL HEATER BUTTON
For use with third party electrical heaters. Not included with this unit.

10. FOLLOW ME Button
For details, see the FOLLOW ME feature section of this manual.

11. TIME OFF Button
Press to initiate the TIMER OFF feature. For details, see the TIMER feature section of this manual.

12. TIME ON Button
Press to initiate the TIMER ON feature. For details, see the TIMER feature section of this manual.

13. MODE Button
Press to select the operating mode. AUTO → COOL → DRY → HEAT → FAN

NOTE

- Press the Temp Up and Down buttons (#2 & #3) simultaneously to switch between Fahrenheit and Celsius (some models).
- The FAN speed cannot be adjusted in AUTO or DRY Mode.
- Press and hold the UP and DOWN buttons simultaneously for 3 seconds to switch between F and C..

Operating Modes

Setting Temperature

This unit can be set at any temperature between 62 and 86°F (17–30°C) in cool, heat, and dry modes. You can increase or decrease the set temperature in 1°F (1°C) increments using the TEMP up (▲) or TEMP down (▼) button.

Auto

In AUTO mode, the unit will automatically select the COOL, FAN, HEAT, or DRY modes to maintain the set temperature.

- Press the MODE button and select AUTO.
- Set your desired temperature using the TEMP down or TEMP up button.
- Press the ON/OFF button to start the unit.

Cool

- Press the MODE button and select COOL.
- Set your desired temperature using the TEMP down or TEMP up button.
- Press the FAN SPEED button to select the fan speed: AUTO, LOW, MED or HIGH.
- Press the ON/OFF button to start the unit.

Fan

- Press the MODE button and select FAN.
- Press the FAN SPEED button to select the fan speed: AUTO, LOW, MED or HIGH.
- Press the ON/OFF button to start the unit.

NOTE

- You cannot adjust the temperature in FAN mode. As a result, your thermostat's LCD display will not display a temperature.

Dry (Dehumidify)

- Press the MODE button and select DRY.
- Set your desired temperature using the TEMP down or TEMP up button.
- Press the ON/OFF button to start the unit.

HEAT

- Press the MODE button and select HEAT.
- Set your desired temperature using the TEMP down or TEMP up button.
- Press FAN button to select the fan speed: AUTO, LOW, MED or HIGH.
- Press the ON/OFF button to start the unit.

NOTE

- As outdoor temperature drops, the performance of your unit's HEAT function may be affected.
- Two or more indoor units can be operated by one outdoor unit. When several indoor units are operated simultaneously, cooling/dry/fan and heating operations cannot be done at the same time. When COOL/DRY/FAN is selected with one unit and HEAT with another or vice versa, the unit selected last goes into standby mode.

Advanced Features

Timer

The TIMER feature establishes the amount of time that will elapse before the unit will automatically turn on/off.

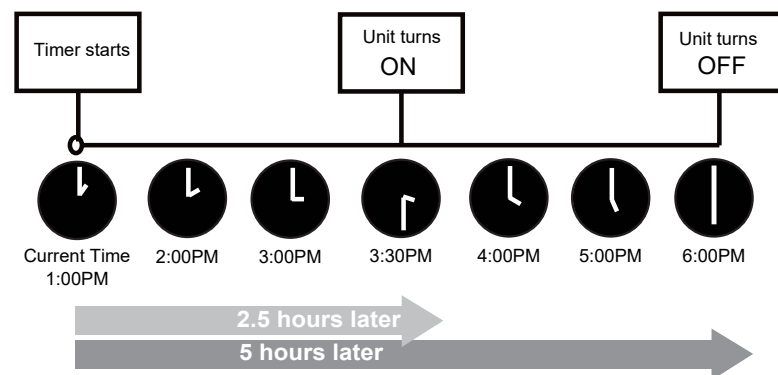
Press the TIMER ON button to initiate the auto-on time sequence. Each subsequent press of this button will increase the setting in 30 minute increments up to 10 hours. Once the setting time displays 10.0, each additional press will increase the setting in 60 minute increments. To cancel the auto-timed program, simply adjust the timer to 0.0.

Press the TIMER OFF button to initiate the auto-off time sequence. Each subsequent press of this button will increase the setting in 30 minute increments up to 10 hours. When the setting time displays 10.0, each additional press will increase the setting in 60 minute increments. To cancel the auto-timed program, simply adjust the timer to 0.0.

TIMER ON and OFF setting example.

Keep in mind that the time periods you set for both the on and off feature refers to hours after the current time.

If the current time is 1:00 PM and the TIMER ON setting is adjusted to 2.5 hours, the auto-on time sequence will turn the air conditioner on 2.5 hours later at 3:30 PM. Setting the TIMER OFF auto-off sequence to 5.0 hours will turn off the air conditioner 5 hours later at 6:00 PM.

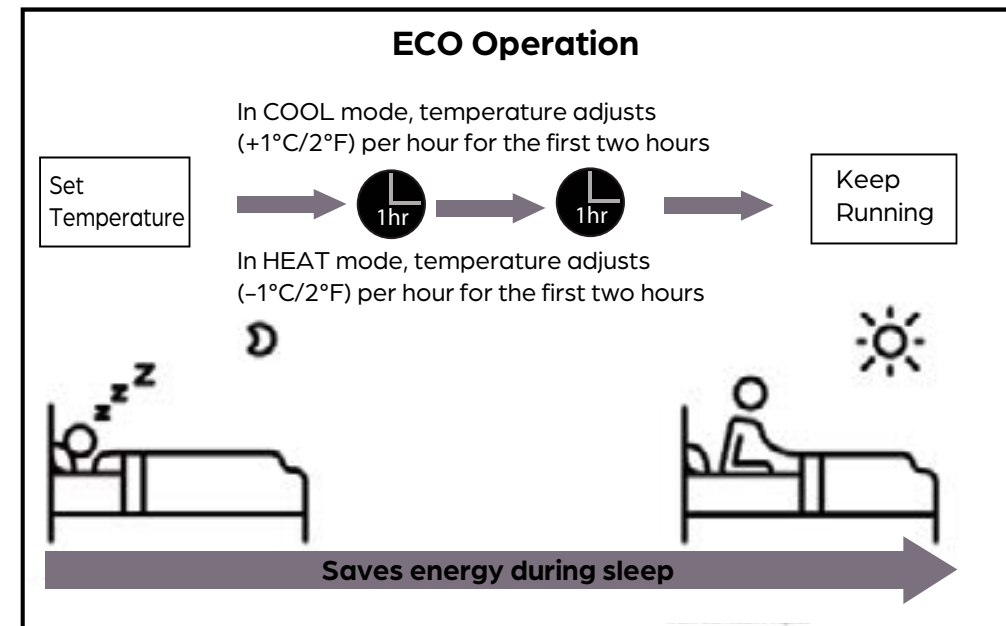


Eco

The ECO feature is designed to decrease energy use while you sleep. This feature can only be activated by the wired thermostat. The ECO feature is not available in FAN or DRY mode.

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

The ECO feature will turn off after 8 hours and the system will return to normal functioning.



Follow Me

This feature uses the temperature at the thermostat's location, instead of the indoor unit's location, to optimize the temperature around you and ensure maximum comfort. Press the FOLLOW ME button to turn on this feature and the thermostat will display the temperature at its location. When using AUTO, COOL, and HEAT modes the air conditioner will continue running until the temperature at the thermostat's location is satisfied. Press the FOLLOW ME button again to turn off this feature.

Auto-Restart

The auto-restart feature is enabled when power is interrupted to the unit. After power is restored, the unit will automatically return to its prior settings before power was lost. No buttons need to be pressed to set this feature - it is automatic.

Led Display Indicators

The following is a list of possible indicators that may appear on the indoor unit's display panel. Not all the display indicators may be available on the unit purchased.

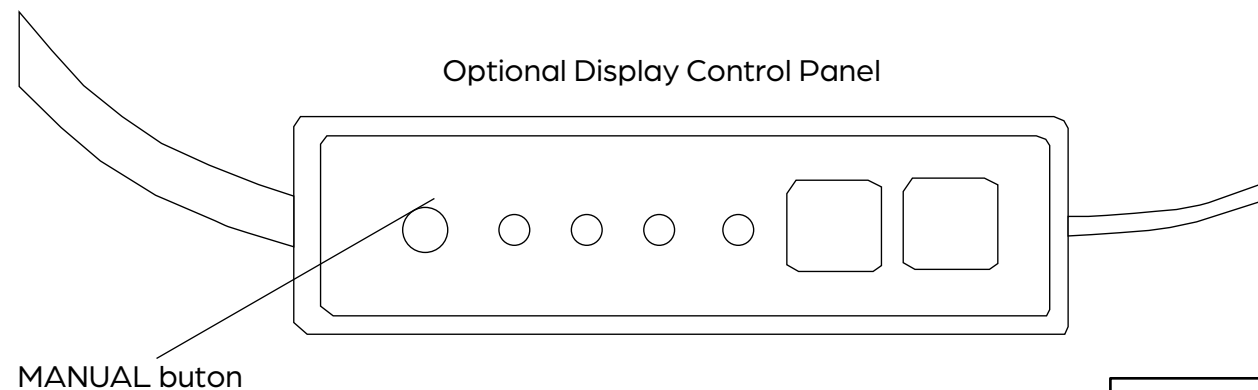
| Feature | Indicator | Notes |
|----------------------------------|-----------|--|
| TIMER ON, SWING, TURBO, SILENCE | ON | Displays for 3 seconds when the TIMER ON feature is set or the SWING, TURBO, or SILENCE feature is turned on. If the unit is off, ON will continue to be shown if the TIMER ON feature is set. |
| TIMER OFF, SWING, TURBO, SILENCE | OF | Displays for 3 seconds when the TIMER OFF feature is set or the SWING, TURBO, or SILENCE feature is turned off. |
| SELF CLEAN | SC | Displays when the SELF CLEANING feature is on. |
| FP | FP | Displays when the FP feature is on. |
| FORCED COOLING | FC | Displays when the FORCED COOLING mode is selected with the manual control button. See Manual Operation section. |
| ANTI-COLD AIR FLOW | cF | The unit is designed not to blow cold air in HEAT mode. When HEAT mode is selected the unit will display "cF" until the set temperature is reached and the unit can blow warm air. |
| DEFROST | dF | Displays when unit is defrosting. This may last 5-10 minutes depending on the outdoor temperature and the amount of frost buildup on the outside unit. |

Manual Operation (Use Without Thermostat)

The optional plug-in display control panel DRPDRAD09F1A16 is intended for testing purposes and emergency operation in cases such as the DRAD units, where the indoor unit does not have its own manual operation. Please do not use the optional control panel, unless the wired thermostat is unresponsive and it is absolutely necessary. The unit must be turned off before manual operation.

To operate your unit manually:

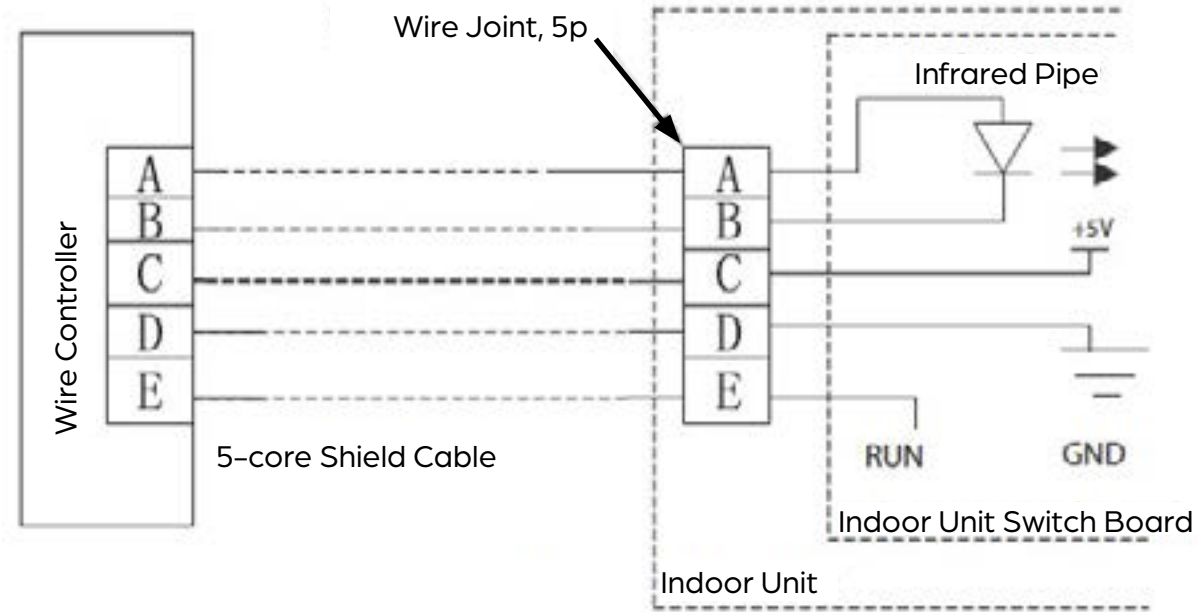
1. Locate the MANUAL button on the optional display panel.
2. Press the MANUAL button one time to activate FORCED AUTO mode.
3. Press the MANUAL button again to activate FORCED COOLING mode.



Troubleshooting

| ISSUE | POSSIBLE CAUSES | |
|---|---|---|
| The fan speed cannot be changed | Check whether Auto mode is selected. | In AUTO mode, the fan speed is set automatically and cannot be changed. |
| | Check whether DRY mode is selected. | In DRY mode, the FAN SPEED button is ineffective. The fan speed can only be changed in COOL, FAN and HEAT mode. |
| The temperature display is off. | Check whether FAN mode is selected. | In FAN mode, the temperature cannot be adjusted. |
| The TIMER OFF disappears after a period of time. | If the TIMER OFF function was activated, the operation may have finished. | The air conditioner will automatically stop at the set time and the indicator light will turn off. |
| The TIMER ON indicator disappears after a period of time. | If the TIMER ON function was activated, the operation may have finished. | The air conditioner will automatically start at the set time and the indicator light will turn off. |
| Unit does not turn on when pressing ON/OFF button | The unit has a 3-minute protection feature that prevents the unit from overloading. The unit cannot be restarted within three minutes of being turned off. | |
| The unit changes from COOL/ HEAT mode to FAN mode | The unit may change its setting to prevent frost from forming on the unit. Once the temperature increases, the unit will start operating in the previously selected mode again. | |
| | The set temperature has been reached, at which point the unit turns off the compressor. The unit will continue operating when the temperature fluctuates again. | |

Wiring Diagram



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Dimensions

