AC INFINITY

THROUGH-WALL FAN

WITH TEMPERATURE CONTROLS

USER MANUAL

WELCOME

Thank you for choosing AC Infinity. We are committed to product quality and friendly customer service. If you have any questions or suggestions, please don't hesitate to contact us. Visit www.acinfinity.com and click contact for our contact information.

EMAIL
support@acinfinity.com

WEB
www.acinfinity.com

LOCATION
Los Angeles, CA

MANUAL CODE TWT2201X1

PRODUCT	MODEL	UPC-A
Through-Wall Fan	AC-TWT8	819137023338

MANUAL INDEX

PRODUCT WARNING

TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS, OBSERVE THE FOLLOWING:

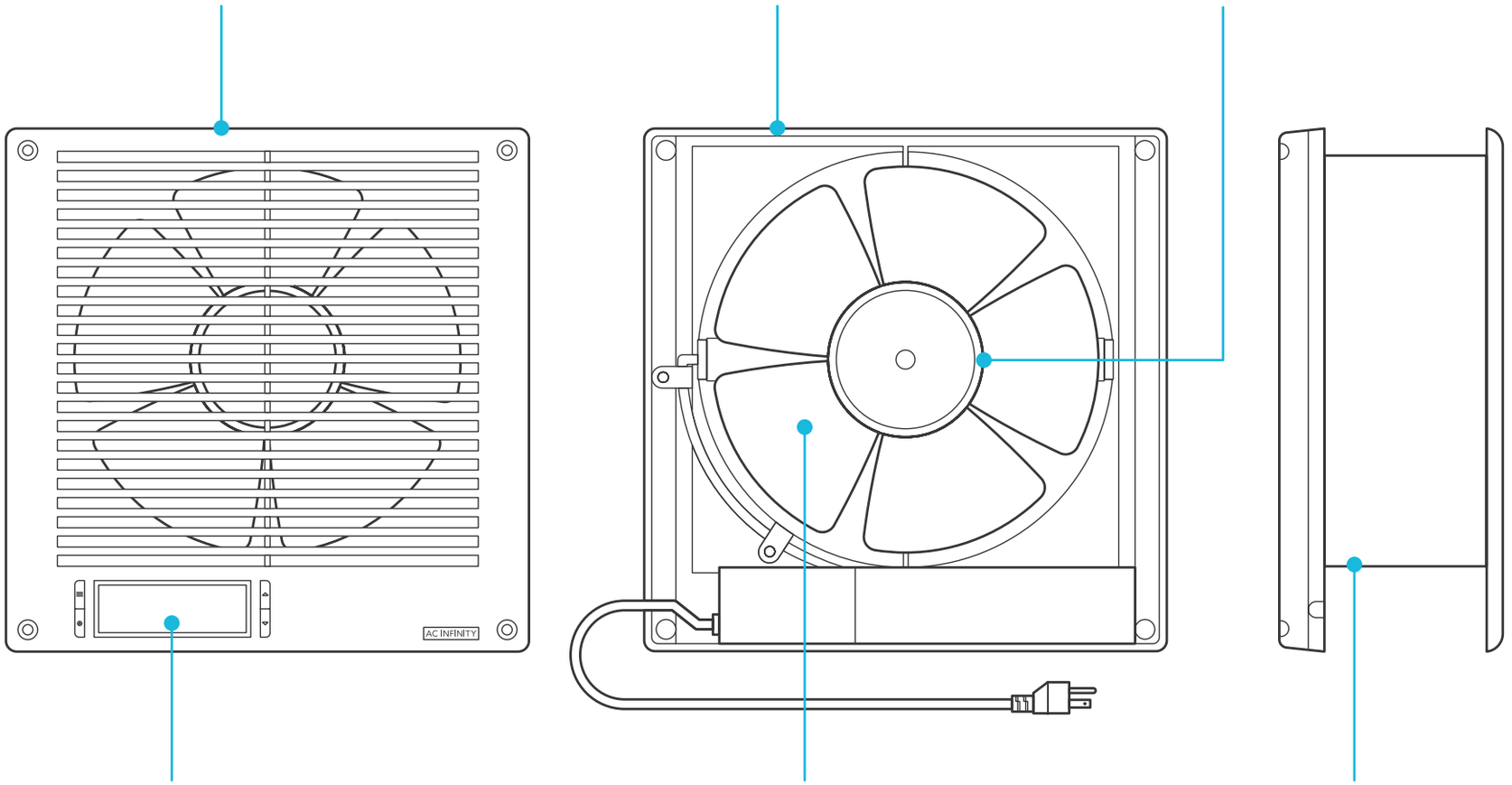
1. Ensure your power source conforms to the electrical requirements of this product.
2. Check your local code restrictions for additional safety measures that may be needed for a proper code compliant installation.
3. Read all instructions before installing and using this product.
4. If you are unfamiliar or have doubts about performing this product's installation, seek the services of a qualified, trained, and licensed professional. Inappropriate installation will void this product's warranty.
5. This product must not be used in potentially hazardous locations such as flammable, explosive, chemical-laden or wet atmospheres.
6. This product is not recommended for use in bathrooms.
7. Do not cover power cords with rugs or other fabric materials.
8. This product has rotating parts. Safety precautions should be exercised during the installation, operation, and maintenance of this product.
9. Do not insert or allow fingers or foreign objects to enter any ventilation or exhaust openings as it may cause electric shock, fire, or damage to this product. Do not block or tamper with this product in any manner while it is in operation.
10. Do not depend on the on/off programming as the sole means of shutting power from this product. Unplug the power cord before installing, servicing, or moving this product.
11. Do not operate this product while its cord is damaged, or if it malfunctions, has been dropped, or is damaged in any manner.

KEY FEATURES

HEAVY-DUTY BUILD
Durable, fire-resistant ABS faceplate with internal steel structure shields the fan blades and motor from foreign objects.

NEXT-GEN MOTOR
Features an innovative EC motor that uses pulsing to control its speed. Has a longer lifespan and is quieter than AC motors.

DUAL-BALL BEARINGS
Enables unit to be mounted in any direction. Motor contains dual-ball bearings with a 67,000 hours lifespan.

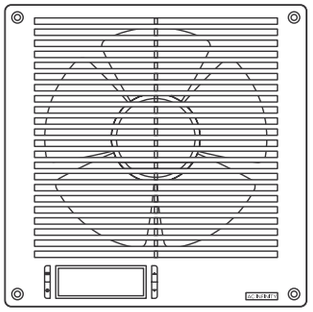


SMART CONTROLLER
Automated programs include ten adjustable levels, temperature triggers, timers, cycles, and custom transitions.

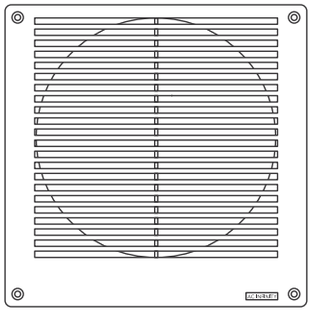
TWO-WAY AIRFLOW
Cutting-edge rotor design enables the fan to reverse its rotation electronically to deliver airflow as intake or exhaust.

ADJUSTABLE FIT
Telescopic cylinder design enables the fan unit to expand and contract to fit in walls 3.5" to 6" thick.

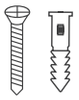
PRODUCT CONTENTS



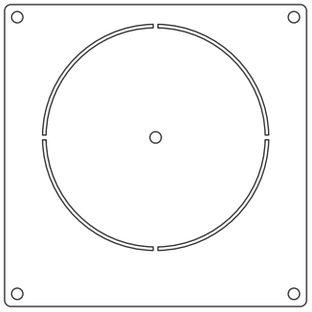
THROUGH-WALL
FAN
(x1)



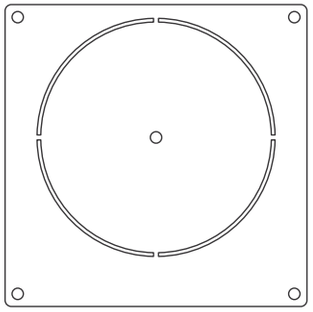
REAR
FACEPLATE
(x1)



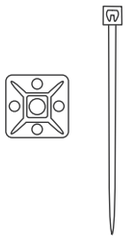
WOOD SCREWS
(WALL HANG)
(x8)



FRONT FACEPLATE
STENCIL
(x1)



REAR FACEPLATE
STENCIL
(x1)



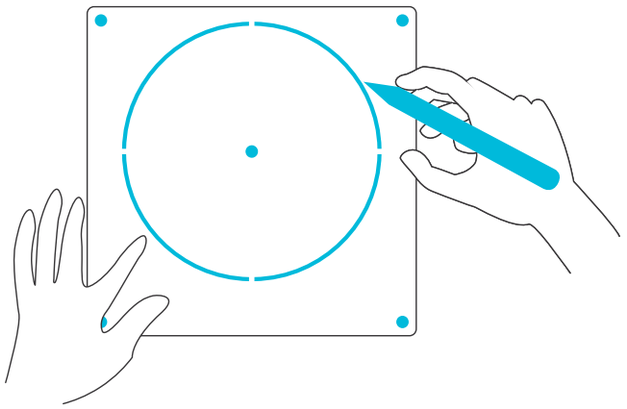
WIRE
MOUNT
(x1)

INSTALLATION

STEP 1

Determine your desired mounting location free of obstruction (studs, waterlines, electrical cords, etc.). Make sure this mounting location is 3.5 to 6 inches thick.

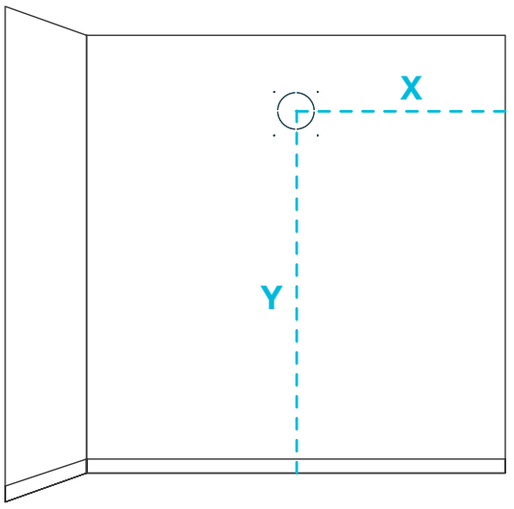
Mark the center point, mounting points, and cylinder outline using the rear faceplate stencil.



STEP 2

From the center point, measure the length to the end of your wall (X) and the height to the floor (Y).

Keep these measurements for step 7.

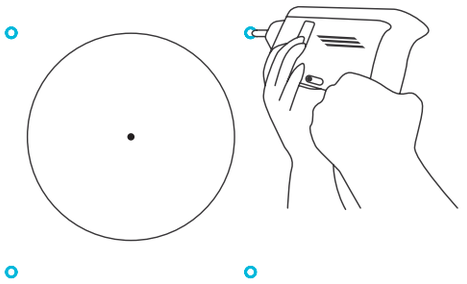


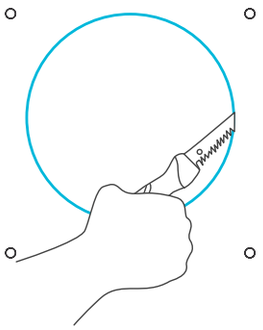
INSTALLATION

STEP 3

Drill the mounting holes into your wall.

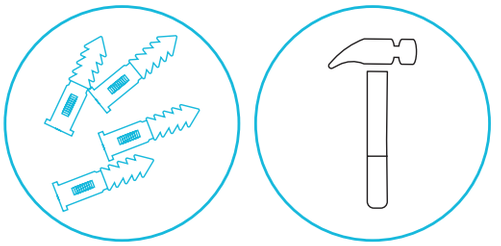
Cut the circular outline to create the opening.
Use of a saw is recommended.

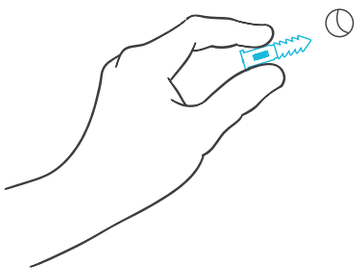




STEP 4

Secure the included anchors into the mounting holes.

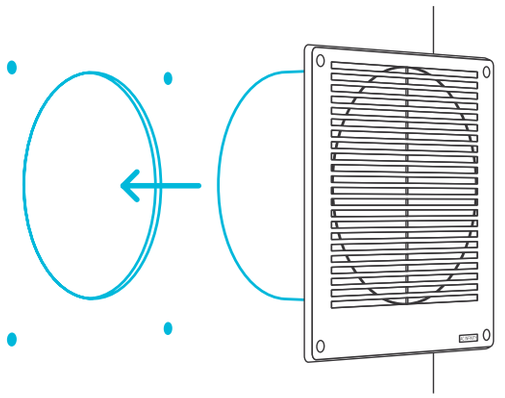




INSTALLATION

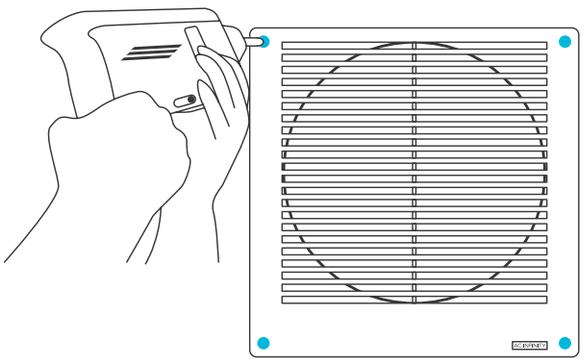
STEP 5

Insert the rear faceplate into the circular cutout, making sure the mounting holes line up.



STEP 6

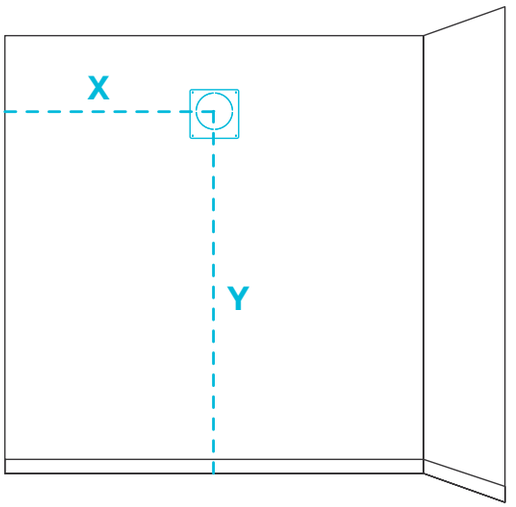
Drill the wood screws into the anchors to secure the rear faceplate.



INSTALLATION

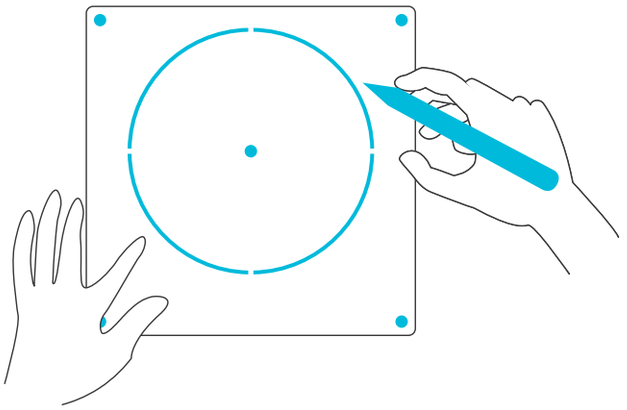
STEP 7

Mark the center point of the front faceplate stencil on the other side of your wall using the length (X) and height (Y) measurements from step 2.



STEP 8

Place the stencil over the center point and mark the mounting points and cylinder outline.

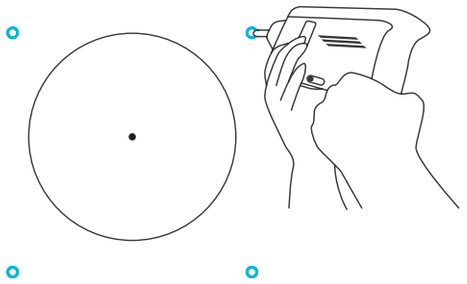


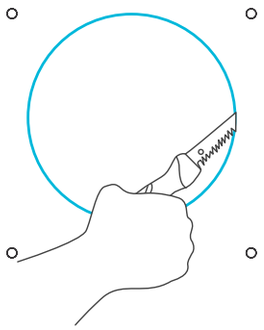
INSTALLATION

STEP 9

Drill the mounting holes into your wall.

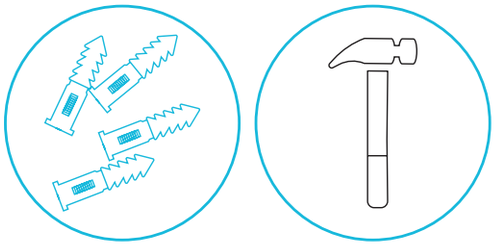
Cut the circular outline to create the opening.
Use of a saw is recommended.

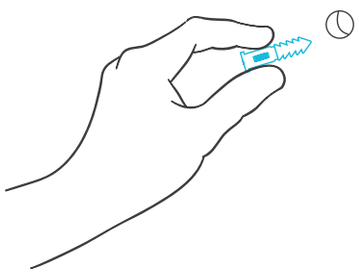




STEP 10

Secure the included anchors into the mounting holes.



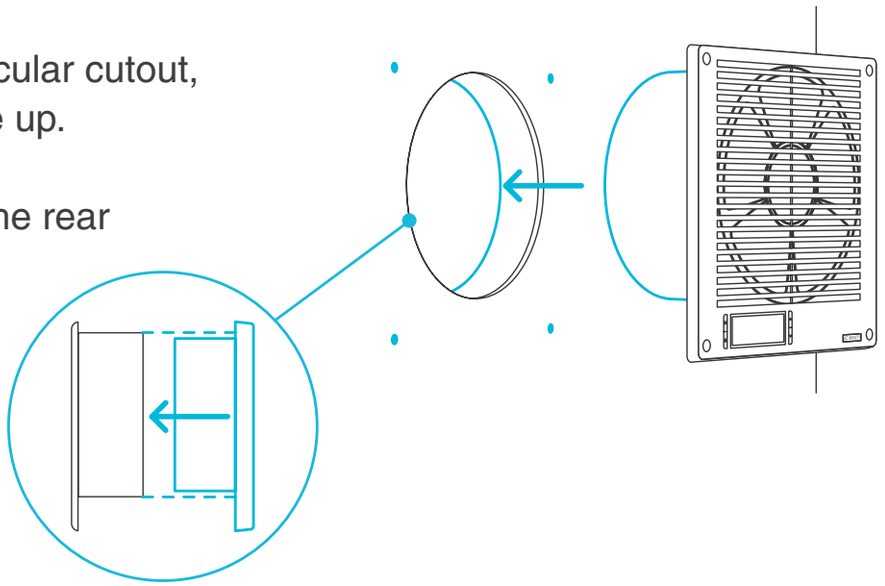


INSTALLATION

STEP 9

Insert the front faceplate into the circular cutout, making sure the mounting holes line up.

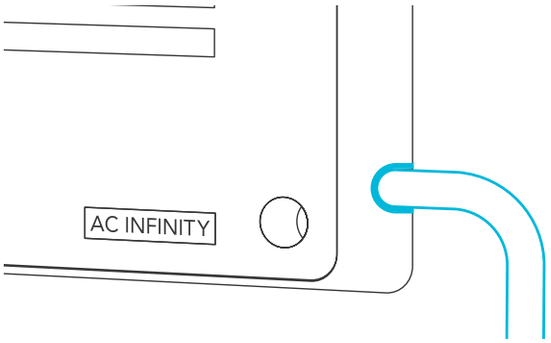
Its cylinder should easily slide into the rear faceplate's cylinder.



STEP 10

Route the power cord through the opening on the lower right corner so the front faceplate is flush against the wall.

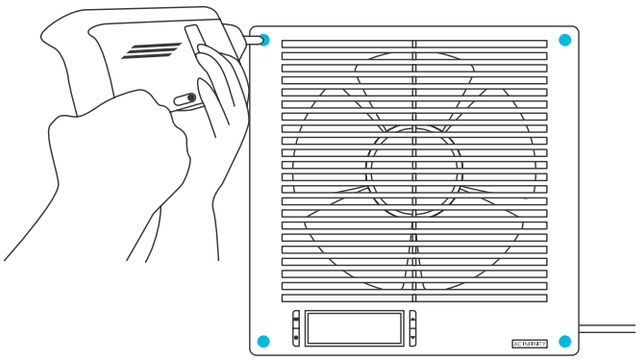
You may instead hardwire your fan for a cordless appearance. See page 16 for hardwiring instructions.



INSTALLATION

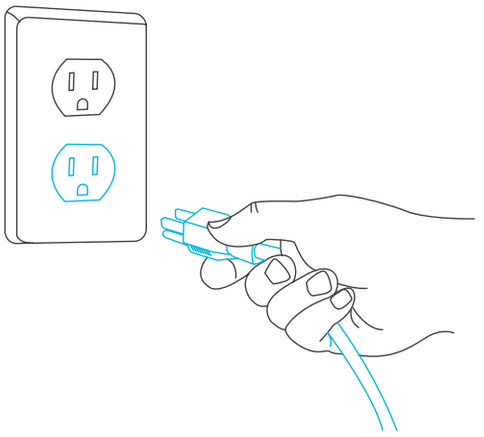
STEP 11

Drill the wood screws into the anchors to secure the front faceplate.



STEP 12

Plug the AC power cord into a wall outlet to power the fan.



INSTALLATION

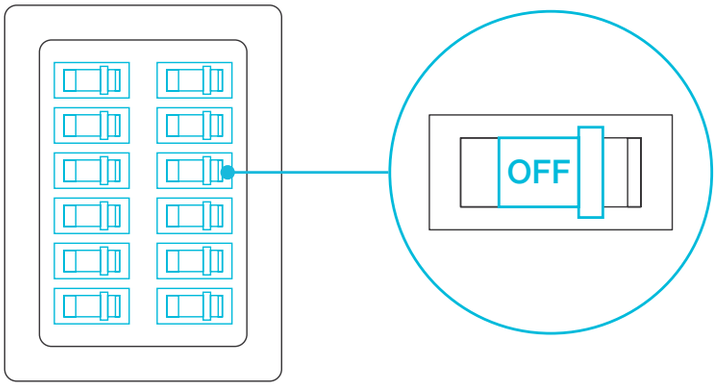
HARDWIRING

Power from all sources involved in this step must be completely shut before proceeding.

STEP 1

If your fan is plugged in, make sure to unplug it from its power socket.

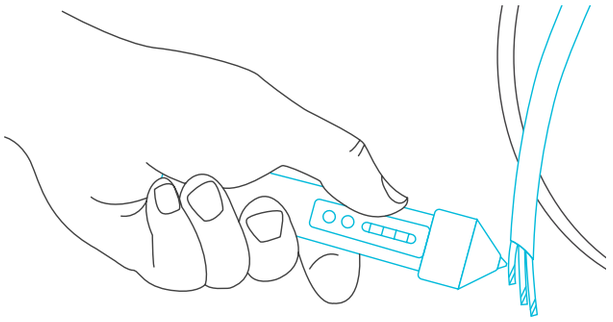
Locate your home's main electrical panel and flip the your room's circuit breaker to OFF.



STEP 2

Use a non-contact voltage tester (not included) to confirm that electricity is fully depleted from your wires.

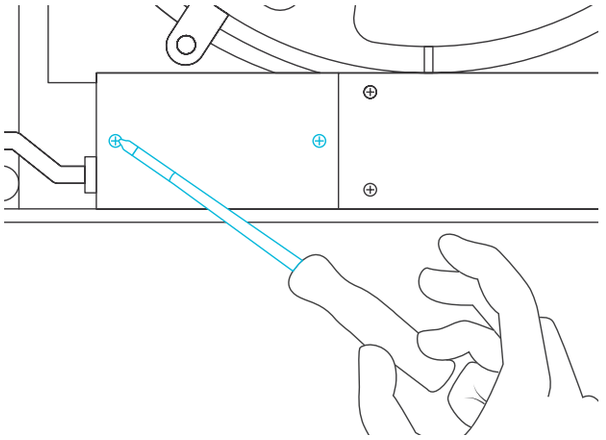
Proceed only if the tester shows no current.



If you are unfamiliar or have doubts about performing this step, seek the services of a qualified, trained, and licensed professional. See page 6 for additional product warnings and safety guidelines.

INSTALLATION
HARDWIRING

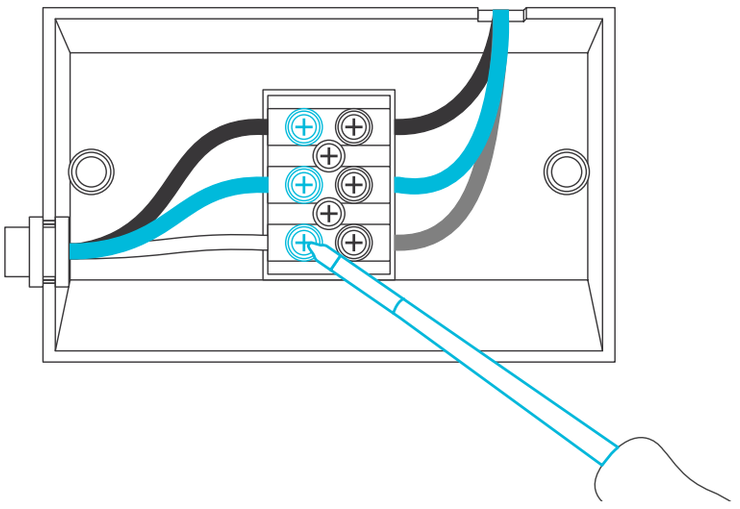
STEP 1
Unscrew the leftmost panel to access the power cord wires.



STEP 2
Unscrew the left three bolts to release the power cord wires.

Use the following as a reference:

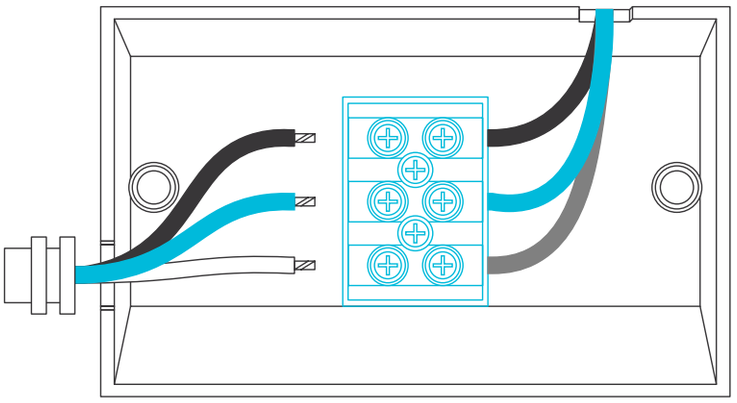
Black: Live Wire
Green: Ground Wire
White: Neutral Wire



INSTALLATION

STEP 3

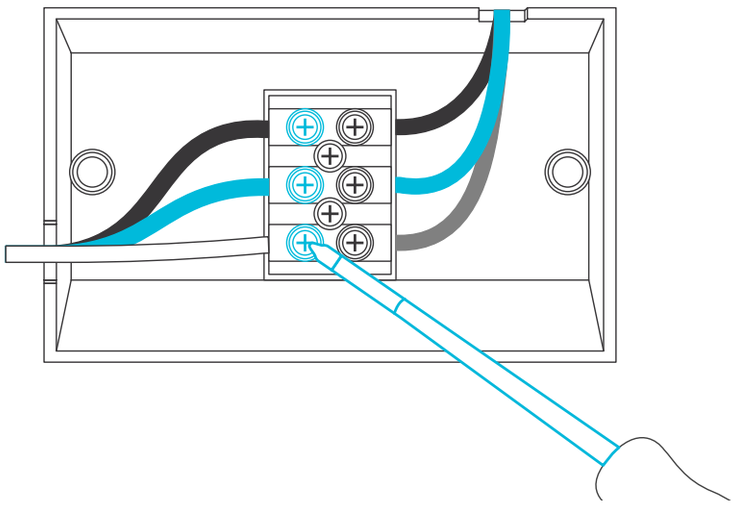
Remove the power cord and its wires from the fan's junction box.



STEP 4

Route your house's wires into the fan's junction box, making sure the correct colored wires are inserted into each rail.

Screw in the bolts to secure the wires and the panel over the junction box.

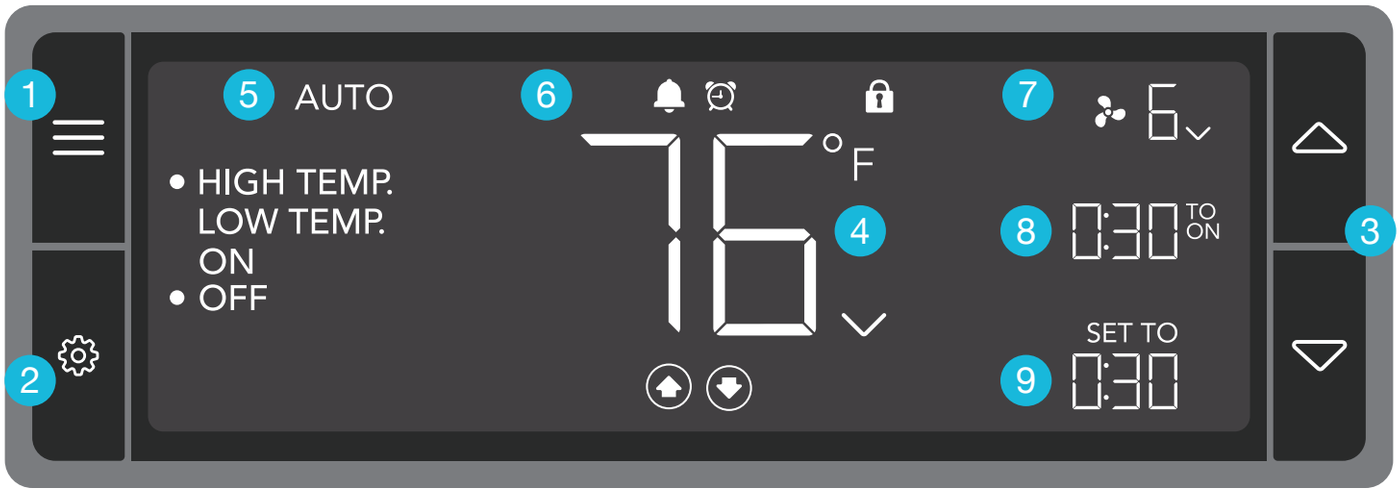


PROGRAMMING

1. MODE BUTTON
Cycles through the controller's modes: OFF, ON, AUTO (High Temperature and Low Temperature), TIMER to ON, TIMER to OFF, CYCLE (ON and OFF).

2. SETTING BUTTON
Cycles through the controller's settings: DISPLAY, °F/°C, CALIB. T°, and TRANS. T°.

3. UP/DOWN BUTTONS
Adjusts the value of your current mode. The up button increases and down the button decreases the setting. Hold both to reset values to OFF or 0.



4. PROBE TEMPERATURE
Displays the current temperature. Includes a trend indicator that signals a rise, steady, or fall in temperature within the last hour.

5. CONTROLLER MODE
Displays the controller's current mode. Pressing the mode button cycles through the available modes.

6. ALERT ICONS
Displays alerts and statuses of the controller including the controller lock, alarm, TEMPERATURE, and TIMER alert.

7. CURRENT LEVEL
Displays the device's current level. Include a trending indicator that signals if the setting is currently rising, falling, or holding steady.

8. COUNTDOWN
Displays the countdown of the TIMER modes to activate or deactivate. TO ON shows the time left before the device turns on. TO OFF shows the time left before the device turns off.

9. USER SETTING
Displays the value of your current mode. Use the up or down buttons to adjust the value.

PROGRAMMING

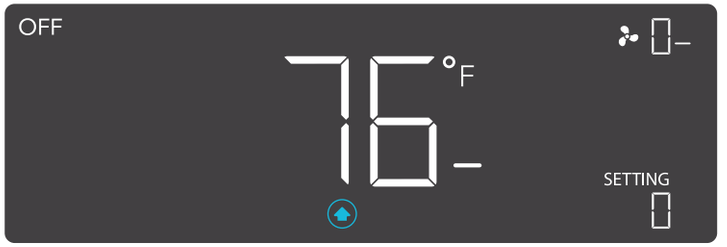
SWITCHING AIRFLOW DIRECTION

The through-wall fan is capable of producing either intake or exhaust airflow. Holding the setting and up/down buttons together will switch the airflow direction between INTAKE and EXHAUST, respectively.

INTAKE

Holding the setting and up buttons together for 3 seconds will switch the airflow direction to the intake configuration.

A 10-second countdown will appear as the fan deactivates and reactivates to switch the directional airflow.

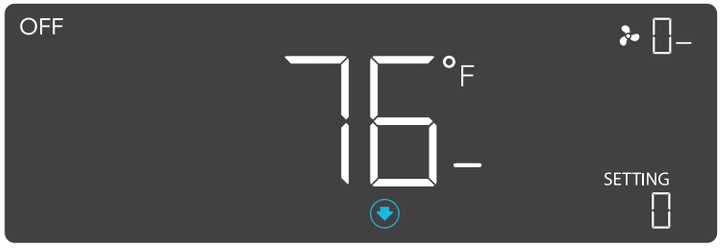


HOLD +

EXHAUST

Holding the setting and down buttons together for 3 seconds will switch the airflow direction to the exhaust configuration.

A 10-second countdown will appear as the fan deactivates and reactivates to switch the directional airflow.



HOLD +

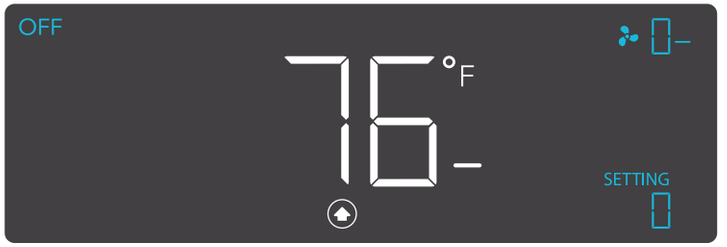
PROGRAMMING

CONTROLLER MODES

Pressing the mode button will cycle through the controller's available programming modes: OFF, ON, AUTO (High Temperature and Low Temperature), TIMER TO ON, TIMER TO OFF, and CYCLE (On and Off).

OFF MODE (MINIMUM LEVEL)

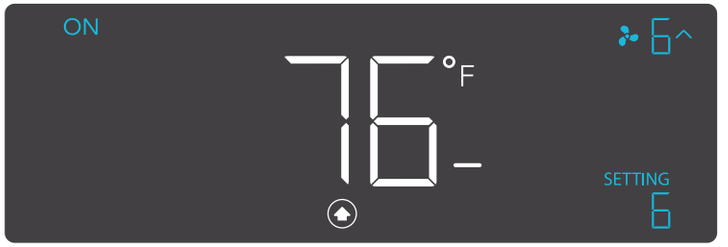
Your fan will not run while in this mode. The fan speed set while in this mode establishes the minimum speed in other modes. When the fan is triggered to turn OFF in all other modes, it will instead run at the speed set here.



ON MODE (MAXIMUM LEVEL)

Your fan will actively run at the speed set here, regardless of the probe's reading. The fan speed set while in this mode also establishes the maximum speed in other modes.

Do not set this level to zero, as this will result in the fan not activating when triggered ON.



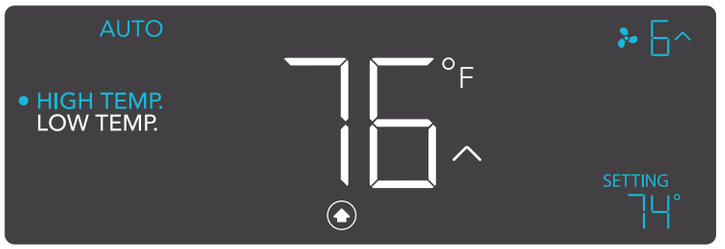
PROGRAMMING

AUTO MODE (HIGH TEMPERATURE TRIGGER)

Pressing the up or down button sets the high temperature trigger. The fans will activate if the probe's reading meets or exceeds this threshold.

Once triggered, the fan will gradually ramp up to the speed set in ON mode. If the probe's reading falls below this trigger point, the fans will gradually slow down to a stop or at the speed set in OFF mode.

You may set this trigger below the low temperature trigger to create a specific range in which the fan is active.



Note that this trigger can activate as long as you are in AUTO Mode, even if you are viewing a different trigger within AUTO Mode.

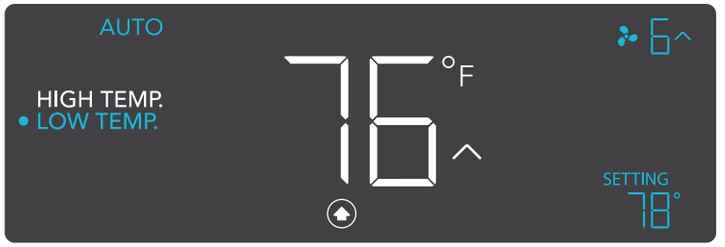
If there is a speed set in OFF Mode other than zero, the fans will run at that speed when triggered to turn off.

AUTO MODE (LOW TEMPERATURE TRIGGER)

Pressing the up or down button sets the low temperature trigger. The fans will activate if the probe's reading meets or falls below this threshold.

Once triggered, the fan will gradually ramp up to the speed set in ON mode. If the probe's reading rises above this trigger point, the fans will gradually slow down to a stop or at the speed set in OFF mode.

You may set this trigger above the high temperature trigger to create a specific range in which the fan is active.



Note that this trigger can activate as long as you are in AUTO Mode, even if you are viewing a different trigger within AUTO Mode.

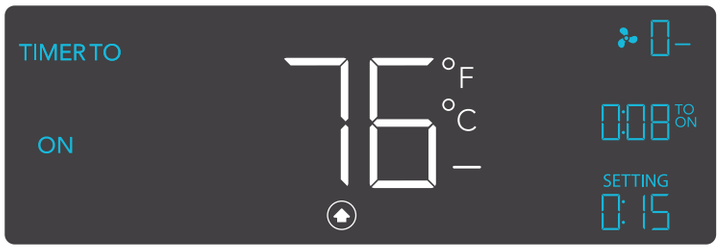
If there is a speed set in OFF Mode other than zero, the fans will run at that speed when triggered to turn off.

PROGRAMMING

TIMER TO ON MODE

Pressing the up or down button sets a countdown time. Once the timer ends, the fans will trigger to run at the speed set in ON Mode. If there is a speed set in OFF Mode, the fans will run at that speed during the countdown.

The countdown will begin if no buttons are pressed for 5 seconds. The time left on the countdown is displayed below the current fan speed. Leaving the timer mode while the countdown is running will pause it until you return to this mode.

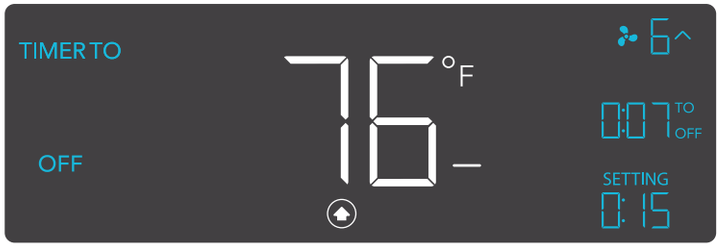


If there is a speed set in OFF Mode other than zero, the fans will run at that speed when triggered to turn off.

TIMER TO OFF MODE

Pressing the up or down button sets a countdown time. The fans will run at the speed set in ON Mode until the countdown ends. If there is a speed set in OFF Mode, the fans will run at that speed after the end of the countdown.

The countdown will begin if no buttons are pressed for 5 seconds. The time left on the countdown is displayed below the current fan speed. Leaving the timer mode while the countdown is running will pause it until you return to this mode.



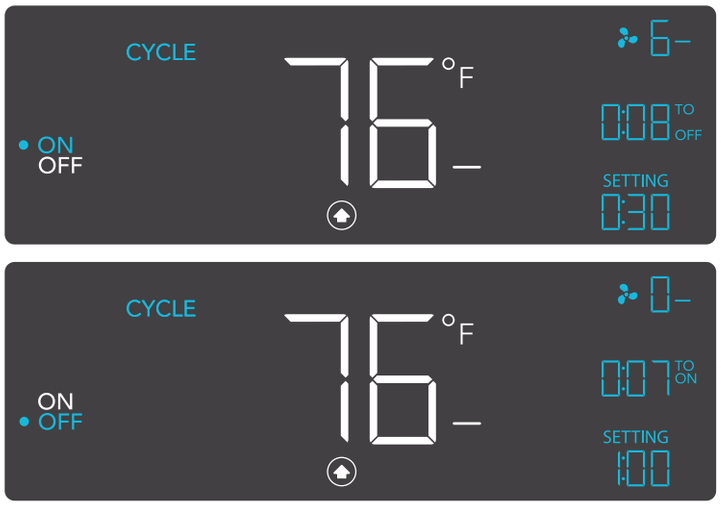
If there is a speed set in OFF Mode other than zero, the fans will run at that speed when triggered to turn off.

PROGRAMMING

CYCLE MODE (ON AND OFF)

Set an on duration and an off duration for the fan to cycle through continuously. Press the up or down button to first set a duration for the fan to activate. Then press the mode button again and set a duration for the fan to deactivate. When the fan is activated, it will run at the speed set in ON Mode. When the fan is deactivated, it will run at the speed set in OFF Mode.

The countdown will begin if no buttons are pressed for 5 seconds. The time left on the countdown before the next on or off phase is displayed below the current fan speed. Leaving the cycle mode while the countdown is running will pause it until you return to this mode.



If there is a speed set in OFF Mode other than zero, the fans will run at that speed when triggered to turn off.

PROGRAMMING

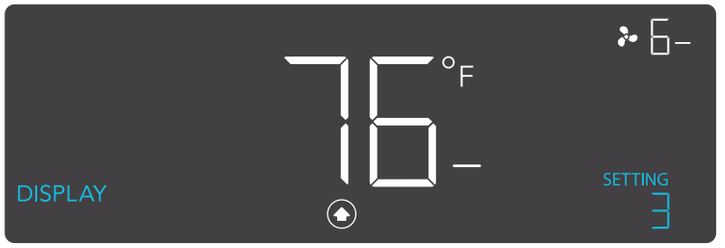
CONTROLLER SETTINGS

Pressing the setting button will cycle through the controller's available settings: DISPLAY, °F/ °C, CALIB. T°, and TRANS. T.

DISPLAY SETTING

Adjusts the display brightness and auto-dimming. Press the up or down button to cycle through levels 1, 2, 3, A2 and A3; 3 being the highest brightness setting, while 1 is the lowest. In settings 1, 2 and 3, the display will stay at that brightness level and will not automatically dim the display.

A2 and A3 will set the brightness level at 2 and 3, respectively, and will dim down the brightness level 1 when the controller is not being used after 15 seconds.

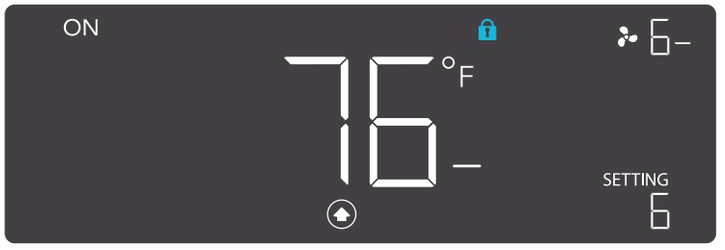


TOGGLING THE DISPLAY

Lock the controller by holding the setting button.

Press the setting button to turn the display off. Pressing the setting button again will turn the display back on.

Programs will still run in the background while the LCD screen is off.



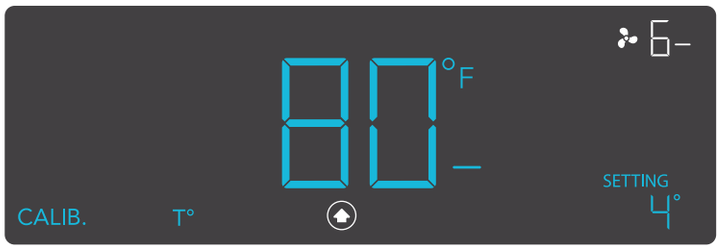
PROGRAMMING

°F/°C SETTING

Changes the displayed units to Fahrenheit or Celsius. Press the up or down button to cycle through F and C. All displayed units will automatically convert when adjusting this setting.

CALIBRATION TEMPERATURE SETTING

Adjusts the temperature reading the sensor probe is measuring. Press the up or down button to increase or decrease the data figure in 2°F (or 1°C) increments. The calibration cycle ranges from -20°F to 20°F (or -10°C to 10°C) and will be applied to the sensor probe's measurements.



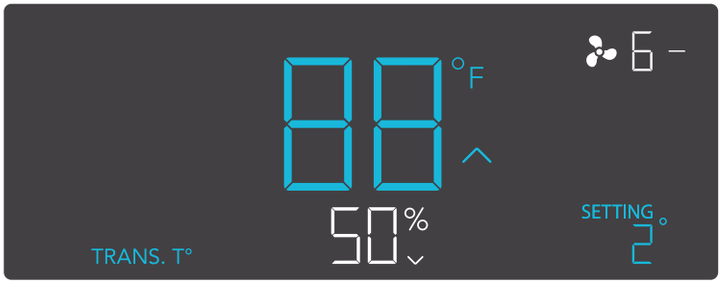
PROGRAMMING

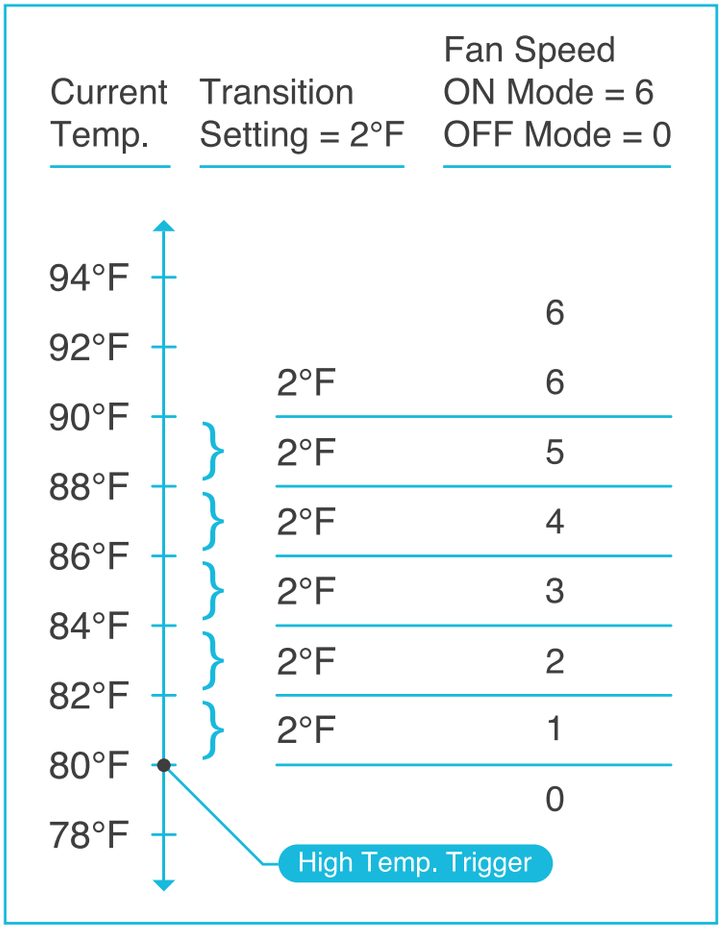
TRANSITION TEMPERATURE SETTING

Adjusts the transition threshold between the fan speeds in the AUTO Mode temperature triggers.

Press the up or down button to cycle through 0°F to 8°F (0°C to 4°C) and set a transition threshold. The fan speed will be set one level above the OFF Mode speed when the sensor temperature first meets or exceeds the high temperature trigger. For every transition threshold crossed, the fan speed will ramp up by one speed level, up until it reaches the speed set in ON Mode.

In this example, your high temperature trigger is set at 80°F, the OFF Mode speed is 0, and the ON Mode speed is 6. If the transition threshold is set to 0°F, then the fan will trigger to run at speed 6 when the sensor temperature meets or exceeds 80°F. However, if the transition threshold is set to 2°F, then the fan will trigger to run at speed 1 when it meets or exceeds 80°F. It will then step up to speed 2 when meeting or exceeding 82°F, speed 3 at 84°F, speed 4 at 86°F, and speed 5 at 88°F. From 90°F on, it will run at speed 6, the speed set in ON Mode.

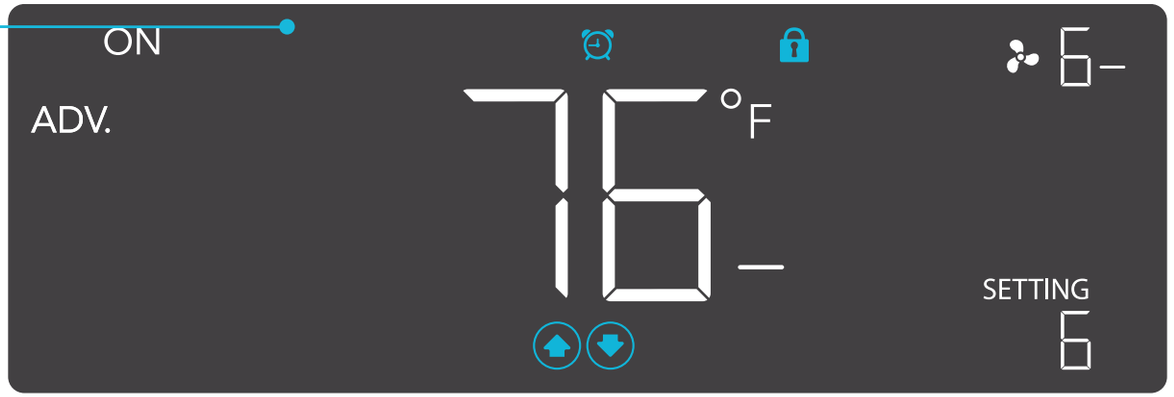




PROGRAMMING

ALERT ICONS

The alert icons are displayed at the top of the screen. Icons may flash when the controller signals an alert to notify you of any triggered function.



TIMER ALERT

Flashes when a countdown has completed for TIMER TO ON, TIMER TO OFF, or CYCLE Mode.

DISPLAY LOCK ALERT

Displays when you lock the controller. The icon will flash and beep if you attempt to adjust the controller while it is still locked.

INTAKE AIRFLOW STATUS

Displays the intake airflow direction status. Flashes with a countdown when the fan switches airflow direction.

EXHAUST AIRFLOW STATUS

Displays the exhaust airflow direction status. Flashes with a countdown when the fan switches airflow direction.

OTHER SETTINGS

FACTORY RESET

Holding the mode, up, and down buttons together for 5 seconds will reset your controller and restore factory settings. This clears all user parameters in each controller mode and setting.

HOLD + 

CONTROLLER LOCK

Holding the setting button will lock the controller in your current mode. While your controller is locked, no parameters may be adjusted, nor will you be able to switch modes. Holding the setting button again will unlock the controller.

HOLD + 

HIDE SCREEN

Lock the controller so no settings can be adjusted. See above. Then press the setting button to turn the display off. Pressing it again will turn the display back on. Programs will still run in the background while the LCD screen is off.

PRESS + 

JUMP TO OFF MODE

Holding the mode button for 3 seconds while in any mode or setting will automatically jump to OFF Mode. This function is disabled if the controller is locked.

HOLD + 

RESET TO OFF OR ZERO (0)

Holding the up and down buttons together for 2 seconds will reset the value of your current mode to OFF or 0. Pressing either the up or down button will return the value to the mode's last setting.

HOLD + 

AUTO INCREASING OR DECREASING

Holding the up or down button will increase or decrease the user setting automatically until you release them.

HOLD + 

HOLD + 

THROUGH-WALL FAN FAQ

Q: How do I find any studs, drains, and other obstructions in my wall?
A: Use a portable sensor such as a stud finder to find any obstructions before installing this fan.

Q: What other tools do I need to install this fan?
A: We recommend using the following tools to install the through-wall fan: pencil, ruler, tape measure, screwdriver, drill, drywall saw, and stud finder.

Q: Do I have to hardwire to supply power?
A: Hardwiring this fan is not required to supply power to it. You may still plug the three-pronged plug into an electrical socket.

Q: Will I be able to use this fan in my (selected location)?
A: Please note the through-wall fan is not made for bathroom use, as it cannot withstand wet or damp locations. In addition, installation is not recommended in windows, fire-rated walls, and in outside walls.

Q: How do I perform maintenance on this fan?
A: First disconnect the electric power supply before servicing this fan. Unscrew the bolts and pull the faceplates to remove the grilles and fan blades.

Wipe clean the grilles and fan blades in warm, soapy water using mild detergent. Do not use abrasive material such as wire sponges and steel wool pads. Dust may be removed from exterior surfaces using a dry cloth or a light vacuum.

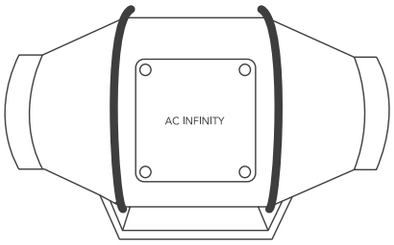
AC INFINITY PRODUCTS

RACK FANS

The CLOUDPLATE series rack fan system is designed for quietly cooling a wide range of audio, video, home theater, network, and IT equipments racks. The model features a thermal controller with intelligent programming that will automatically adjust the fan speeds in response to changing temperatures.

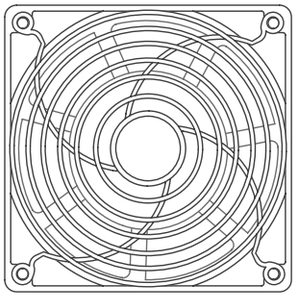
DUCT FANS

The CLOUDLINE series is a line of duct fans designed to quietly ventilate AV rooms and closets, as well as various DIY air circulation and exhaust projects. Features a thermal controller with intelligent programming that will automatically adjust duct fan speeds in response to changing temperatures.



PROJECT MUFFIN FANS

The AXIAL series fan kit is designed for various DIY projects that requires cooling or ventilation; or as a replacement fan for many products on the market. Each fan kit includes fan guards and everything needed to mount the unit onto a wall and power it through a wall outlet. S-series models include a speed controller.



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WARRANTY

This warranty program is our commitment to you, the product sold by AC Infinity will be free from defects in manufacturing for a period of two years from the date of purchase. If a product is found to have a defect in material or workmanship, we will take the appropriate actions defined in this warranty to resolve any issues.

The warranty program applies to any order, purchase, receipt, or use of any products sold by AC Infinity or our authorized dealerships. The program covers products that have become defective, malfunctioned, or expressively if the product becomes unusable. The warranty program goes into effect on the date of purchase. The program will expire two years from the date of purchase. If your product becomes defective during that period, AC Infinity will replace your product with a new one or issue you a full refund.

The warranty program does not cover abuse or misuse. This includes physical damage, submersion of the product in water, incorrect Installation such as wrong voltage input, and misuse for any reason other than intended purposes. AC Infinity is not responsible for consequential loss or incidental damages of any nature caused by the product. We will not warrant damage from normal wear such as scratches and dings.

To initiate a product warranty claim, please contact our customer service team at support@acinfinity.com

If you have any issues with this product, contact us and we'll happily resolve your problem or issue a full refund!

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