AC INFINITY

CLOUDPLATE SERIES

RACK MOUNT COOLING SYSTEM

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 CP1902X1

PRODUCT	MODEL	UPC-A
CONTROLLER 12	AI-CTB12	819137020047
CLOUDPLATE T1	AI-CPT1	854759004976
CLOUDPLATE T1-N	AI-CPT1-N	854759004983
CLOUDPLATE T2	AI-CPT2	854759004990
CLOUDPLATE T5	AI-CPT5	819137020009
CLOUDPLATE T6	AI-CPT6	819137020016
CLOUDPLATE T7	AI-CP2L	854759004501
CLOUDPLATE T7-N	AI-CP2H	854759004518
CLOUDPLATE T9	AI-CPT9	819137020023
CLOUDPLATE T9-N	AI-CPT9-N	819137020030
CLOUDPLATE T12	AI-CPT12	819137020054
RACK ROOF FANS	AC-RRF7	819137020061

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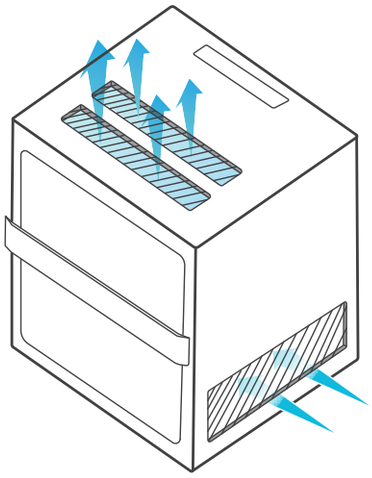
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RACK COOLING GUIDE

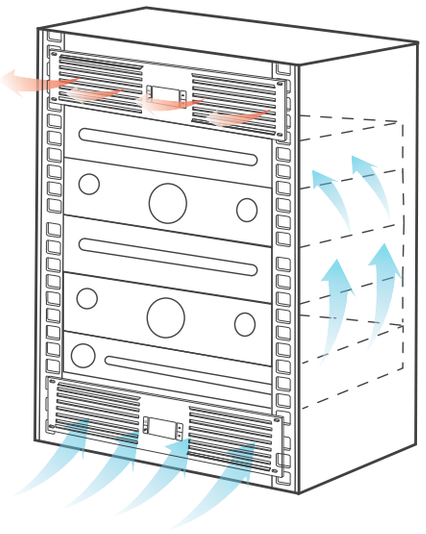
ACCESS TO OUTSIDE AIRFLOW

For the fan system to work properly, the rack fan must have access to outside air. It can be ventilation holes on the rack or on the cabinet if it's holding an open frame rack. The holes allow the rack fan to exhaust warm air and intake cool air.



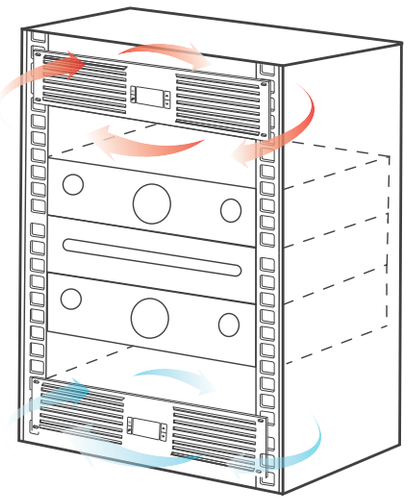
INTAKE AND EXHAUST

All rack fan systems should contain an intake and exhaust variable. To assist with natural convection, position fans near the top of the rack configured to exhaust out the warm air and fans near the bottom to push in cool air.



OPTIMIZING AIRFLOW

To optimize airflow circulation, we recommend using blank panels to fill the empty spaces on the rack. This increases the efficiency of the fan systems by preventing warm air from escaping midway and being recycled back into the rack.

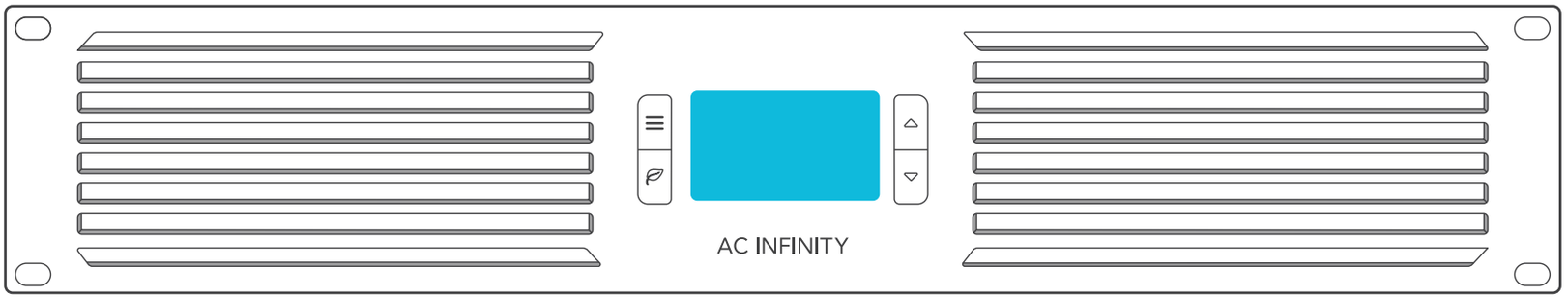


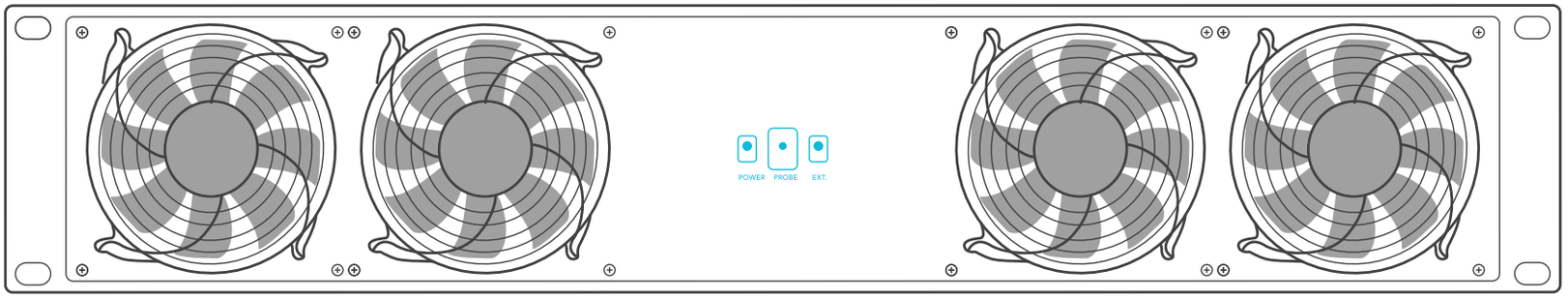
KEY FEATURES

ALUMINIUM FRAME
Features an aluminium frame with a brushed black finish and CNC machined corners give cabinets a clean look.

QUIET PWM MOTOR
PWM-controlled motor features precise speed control, reduced rotor noise, and runs on energy efficient DC voltage.

SMART CONTROLLER
LCD display enables temp monitoring, thermal control, speed control, alarms, and SMART energy mode.





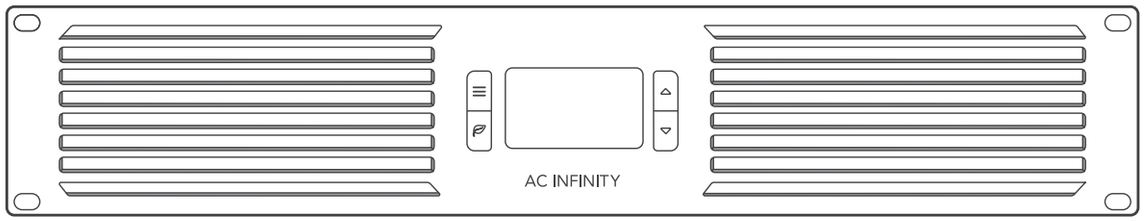
DUAL BALL BEARINGS
Fans contain long-life ball bearings rated at 67,000 hours. Also enables fans to be mounted in any direction.

THERMAL PROBE
The corded precision sensor probe constructed of stainless steel ensures an accurate temperature reading.

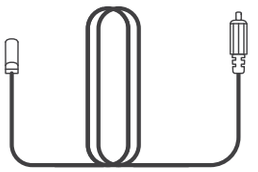
EXPANSION PORTS
Each unit contains a DC connector port which can be used to control another rack fan unit or rack roof fan kit.

PRODUCT CONTENTS

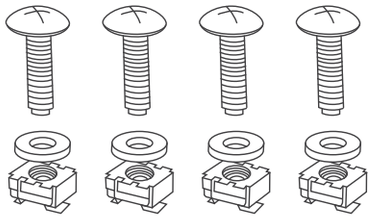
CLOUDPLATE T1	AI-CPT1
CLOUDPLATE T1-N	AI-CPT1-N
CLOUDPLATE T2	AI-CPT2
CLOUDPLATE T5	AI-CPT5
CLOUDPLATE T6	AI-CPT6
CLOUDPLATE T7	AI-CP2L
CLOUDPLATE T7-N	AI-CP2H
CLOUDPLATE T9	AI-CPT9
CLOUDPLATE T9-N	AI-CPT9-N



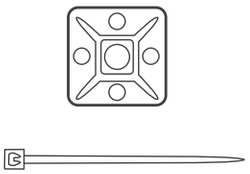
Cooling Fan System (1)



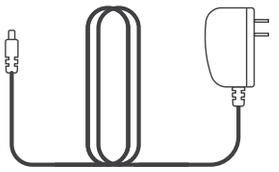
THERMAL PROBE (1)



MOUNTING SCREWS (4)



ZIP TIES (1)



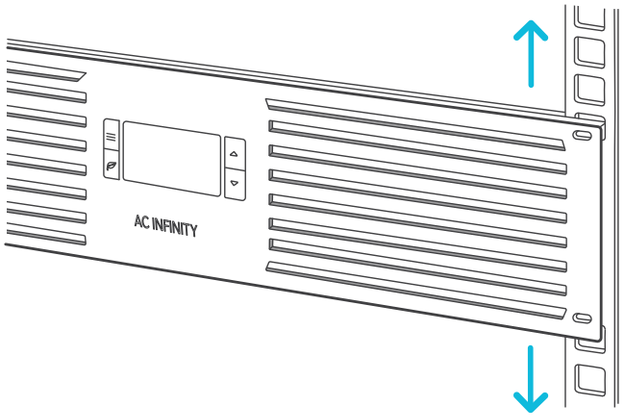
POWER ADAPTER (1)

RACK ROOF FANS	AC-RRF7	Roof Fans + Screws + Power Adapter + Speed Controller
CONTROLLER 12	AI-CTB12	Controller + Probe + Screws + Power Adapter
CLOUDPLATE T12	AI-CPT12	Controller + Probe + Roof Fans + Screws + Adapter

INSTALLATION

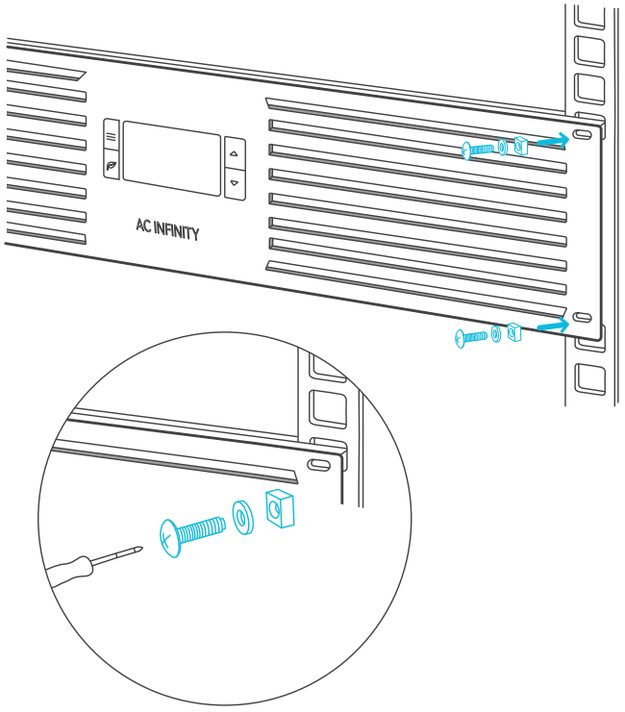
STEP 1

Determine the position you wish to mount the rack fan unit onto your rack. Please refer to page 6 for a guide on the best fan placement to optimize cooling.



STEP 2

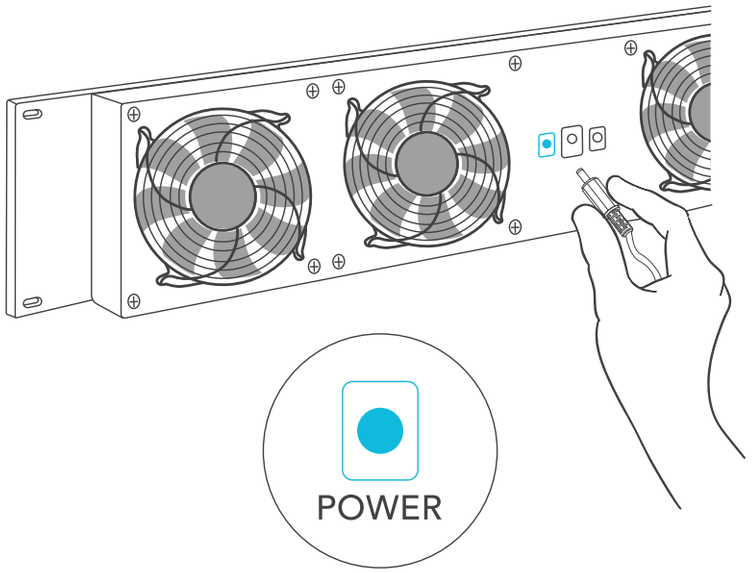
Use a screwdriver and the included screws to secure the fan unit onto your rack. Depending on the rack rail type, you may need to install cage nuts first. Please note that some rack rails may come pre-threaded with another screw size.



INSTALLATION

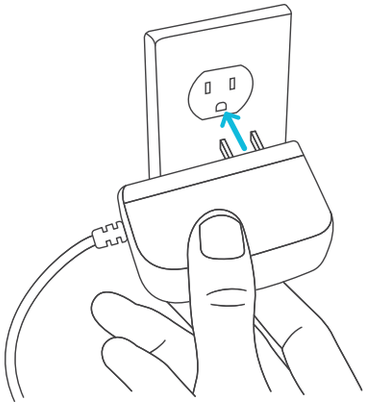
STEP 3

Check the included AC power adapter to make sure the power rating is compatible with your outlet. Plug the DC connector of the AC power adapter into the port labeled “POWER” on the backside of the rack fan unit.



STEP 4

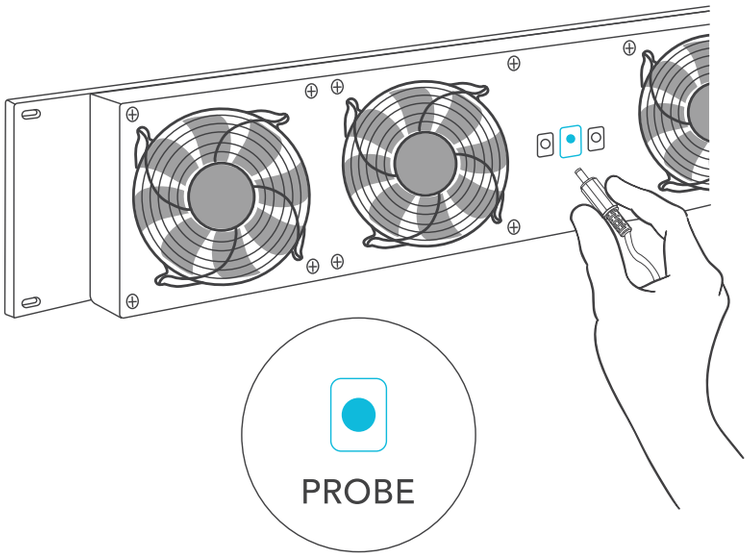
Plug the AC power adapter into a standard power outlet. Please check that the LCD screen is now displaying all contents and that the settings can be changed. The probe’s temperature readings will not yet be visible.



INSTALLATION

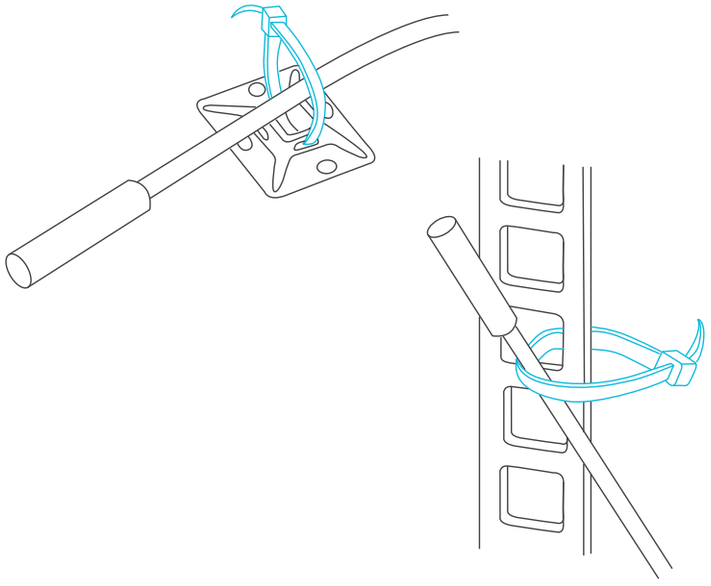
STEP 5

Plug the male connector of the thermal probe into the port labeled “PROBE” on the backside of the rack fan unit. Please check that the LCD screen now displays the probe’s temperature readings.



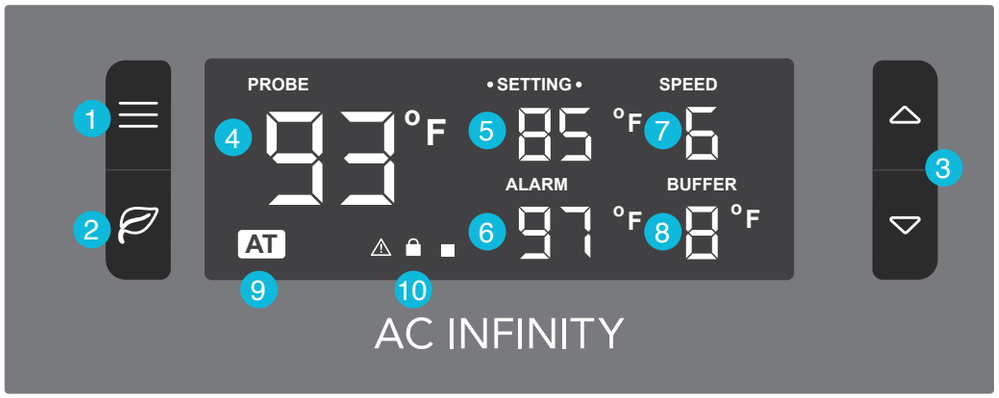
STEP 6

Secure the head of the probe onto the rack using the included cable ties. We recommend positioning the probe near your hottest equipment and away from any fans that can distort the probe’s temperature readings.

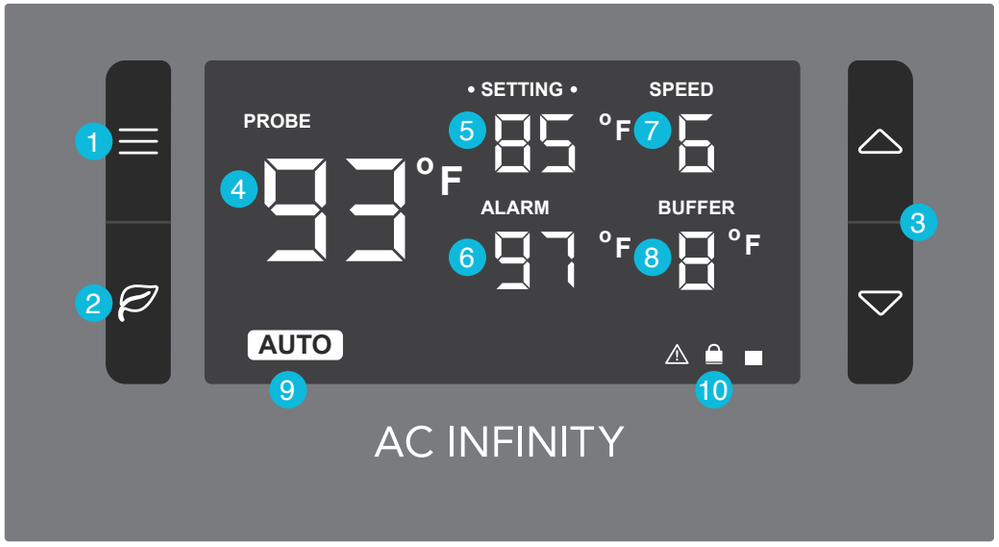


PROGRAMMING

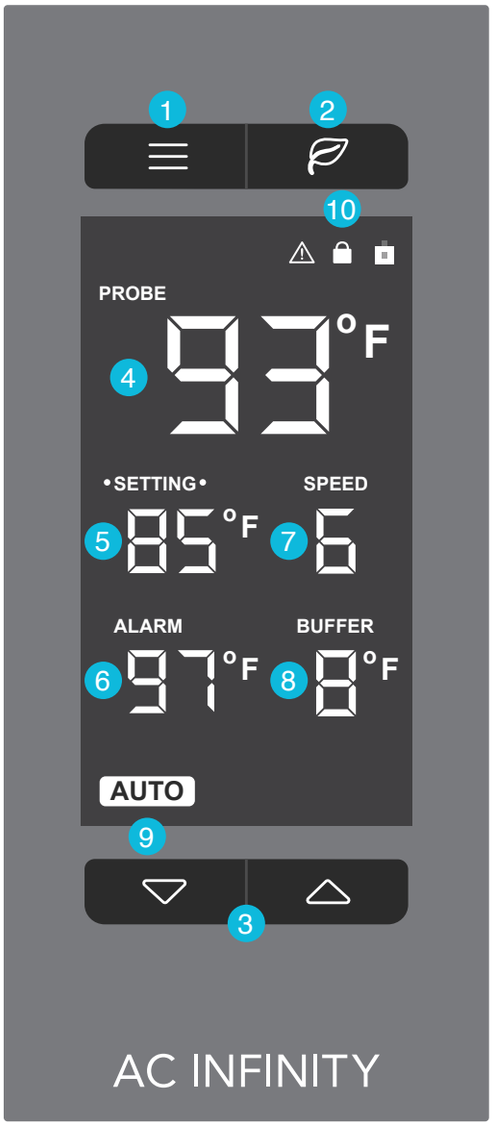
CONTROLLER 12, CLOUDPLATE T1, CLOUDPLATE T1-N
CLOUDPLATE T2, CLOUDPLATE T5, CLOUDPLATE T6
CLOUDPLATE T12



CLOUDPLATE T7, CLOUDPLATE T7-N



CLOUDPLATE T9, CLOUDPLATE T9-N



PROGRAMMING

1. MODE BUTTON
Cycles through the modes: AUTO, SMART, SPEED, ALARM, BUFFER. Holding for three seconds will lock or unlock the display.

2. LEAF BUTTON
This turns the display off while programs run in the background. Holding will change degrees to Fahrenheit or Celsius.

3. UP / DOWN BUTTON
The up and down buttons adjusts the settings of the mode that you are in. Up button increases and down button decreases.

4. PROBE TEMP.
Actively shows the current temperature that the corded thermal probe is measuring. Will show “- -” if no probe is plugged in.

5. SETTING TEMP.
Shows the temperature you have set for the fan system to trigger in AUTO and SMART Mode, which share the same set temp.

6. ALARM TEMP.
Shows the temperature that you set the fan’s alarm system to trigger. Please see page 16 for more information.

7. FAN SPEED
The settings for the max speed the fans can reach. Shows what speed the fans are currently running at. Six speeds are available.

8. BUFFER
The buffer range settings of AUTO and SMART Mode programming. Please see pages 15 for more information.

9. MODE
Shows what Mode the controller is in: AUTO, SMART, SPEED, ALARM, or BUFFER. Please see pages 14 -16 for more info.

10. ALERT ICONS
The icons on the display represents check fan alert, alarm, and display lock. The icons will flash and may emit an audible beep when triggered.

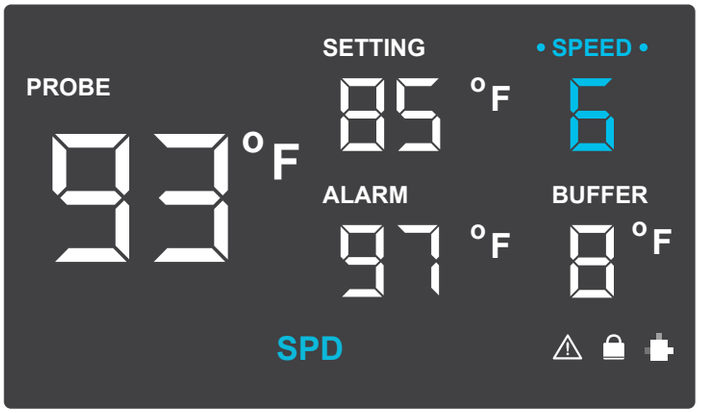
PROGRAMMING

QUICK START

Press the MODE button until you are on AUTO mode. This mode works like a thermostat. Press the up and down triangle buttons to change the SETTING temperature on the screen. The PROBE temperature is what the thermal probe is measuring. When the PROBE temperature exceeds the SETTING temperature, the fans will start running.

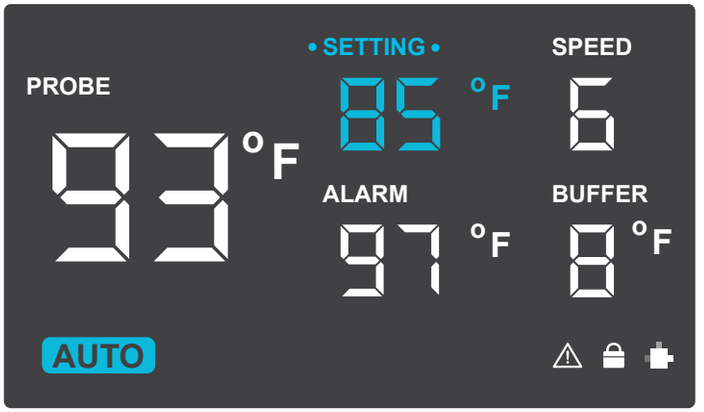
SPEED SETTING

In this mode, the fans will run non-stop regardless of temperature. Pressing the up and down buttons in this mode will change the speed of the fan. Which ever speed is designated in this mode will also be the speed used in AUTO Mode and the max speed of the fans in SMART Mode.



AUTO MODE

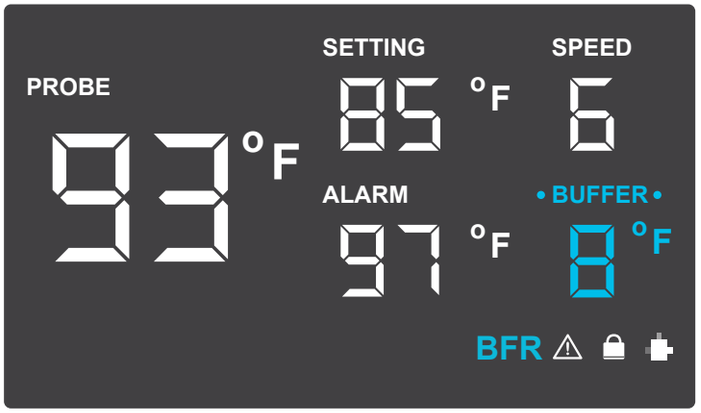
This is the thermostat setting where the fans will start running when the PROBE temperature reaches or surpasses the SETTING temperature. The SETTING temperature can be designated by pressing the up and down buttons while in this mode. Once the fans start running, the PROBE temperature will need to fall at least 2° F below the SETTING temp for the fans to stop running. This variation buffer can be changed. Please see page 15 for more information.



PROGRAMMING

BUFFER SETTING

In AUTO mode, a buffer is built in to prevent your fan from turning on and off too quickly due to small variations in the environment. In SMART mode, there is a range of temperatures between each speed. You can increase or decrease this buffer or range by pressing the up and down buttons.

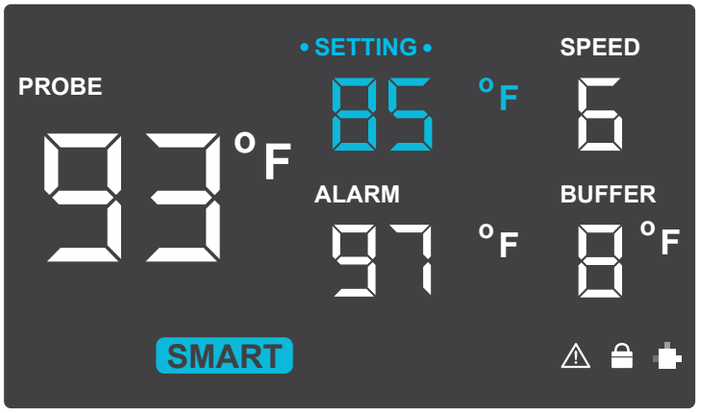


SMART MODE

This is the energy saving mode where the fans will change speed depending on the temperature. The SETTING temperature can be designated by pressing the up and down triangle buttons while in this mode.

For every 2° F increment that the PROBE temperature is below the SETTING temperature, the speed of the fans will decrease by one level. This increment can be changed to 4° F, 6° F, or 8° F by adjusting the Buffer Setting instructed above.

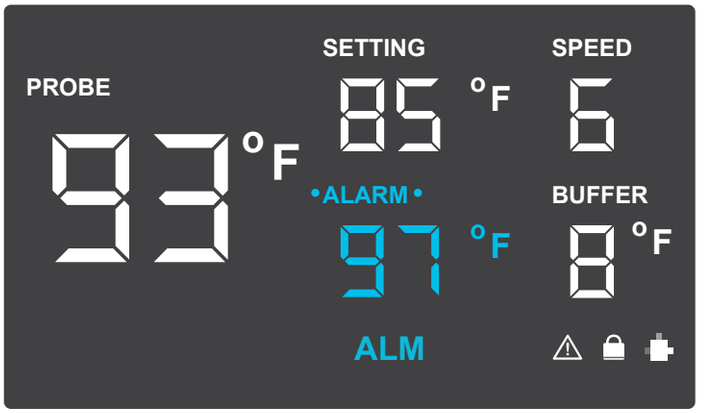
The fan speed you designated in ON Mode will also be the max speed the fan's can reach. This occurs when the PROBE temperature reaches or exceeds the SETTING temperature.



PROGRAMMING

ALARM SETTING

In this mode, you can set what temperature the system's alarm will trigger by pressing the up and down triangle buttons. When the PROBE temperature reaches or exceeds the ALARM temperature, the alarm will activate. The alarm will only activate while the controller is in ON, AUTO, or SMART Mode so please remember to exit ALARM Mode once the alarm has been set. When the alarm is triggered, the fan's will run at max speed regardless of the setting and will make an audible beep every three seconds.This will keep occurring until the temperature drops below the ALARM temp. or if any buttons are pressed.The alarm can be disabled by pressing the up triangle button until the temperature is at 140° F, then pressing the up button once more to show "OF".



PROGRAMMING

FAHRENHEIT OR CELSIUS

The temperatures displayed can be set to Fahrenheit or Celsius scale by holding the LEAF button until °F or °C is shown after the digits. All digits displayed will be automatically converted to the designated scale.

DISPLAY BRIGHTNESS

To adjust the brightness of the display, hold down the MODE button while pressing the up button repeatedly to increase the brightness. Hold down the MODE button while pressing the down button repeatedly to decrease the brightness. There are three brightness settings available.

CONTROLLER LOCK

Holding the MODE button for three or more seconds will lock the controller. The controller will still work as programmed; however, pressing any buttons will not have an effect and will cause the screen lock icon to flash and will make an audible beep three times a second. This option was designed to prevent your controller settings from being changed by accident. Holding the MODE button again for three or more seconds will unlock the controller.

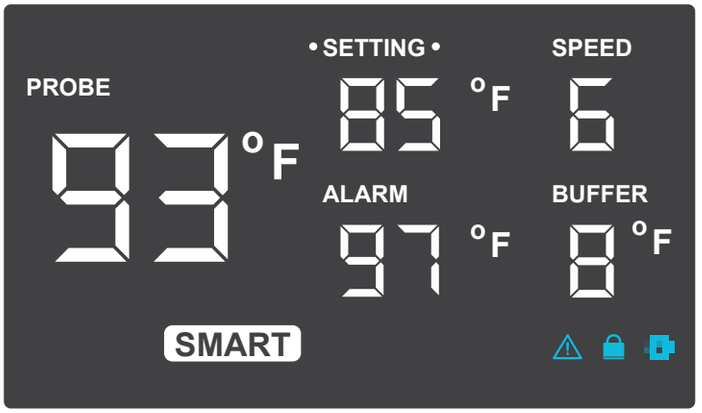
ECO-DISPLAY

To conserve energy, you can choose to set the display into Eco Mode by pressing the button with a leaf on it to turn the display off. All programs will be operating in the background and fans will still be triggered to run according to the settings. Press any button will turn the display back on.

PROGRAMMING

ALERT ICONS

On the bottom right of the display there are three alert icons. They are visible to show that the system's functions are being monitored. They will flash when the controller wishes to alert you that a particular function is being triggered.



CHECK FAN ALERT

This icon will flash when the fan's sensor detects interference to its operation. Please check the fan for possible issues. If the fan is rotating, it may just be static pressure resistance and operating as intended. If the fan is not rotating, please see the warranty page for replacement information. (This feature is only available on certain model.)

DISPLAY LOCK ALERT

This icon is not visible when the controller is unlocked. The icon will flash when any buttons are pressed while the controller is locked. Please see page 17 for more information.

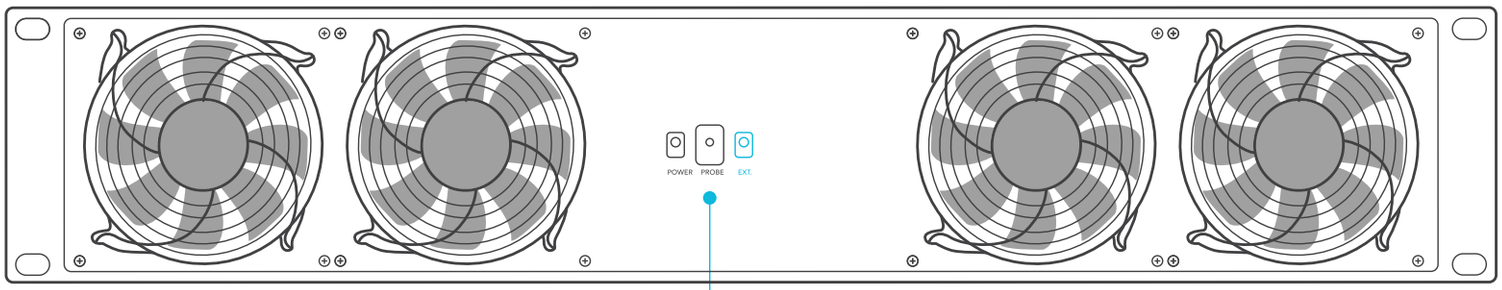
ALARM ALERT

The alarm alert icon will flash when the probe temperature reaches or exceeds the alarm temperature you have set. Please see page 16 for more information on setting up the alarm.

EXTENSION FAN UNITS

CLOUDPLATE SERIES

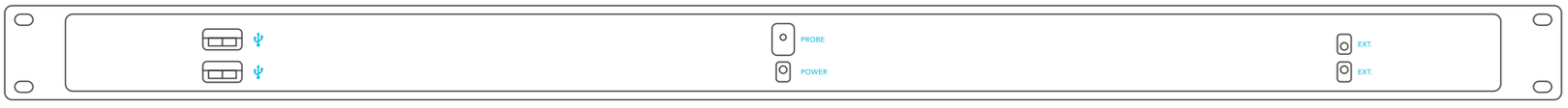
To add more cooling and ventilation to your rack, you can plug in additional fans such as the RACK ROOF FAN into a CLOUDPLATE Series unit. There is a port on the backside marked “EXT.” which allows the unit to support additional fans. You can also connect one CLOUD-PLATE unit to another to share the same settings; a daisy chain cord is required. The conn-cted CLOUDPLATE unit must be set to SPEED Settings Mode, it’s speed set to max, and the alarm turned off. Connected fans will share the same temperature control settings.



EXT. Ports

CONTROLLER 12

The Controller 12 can also control CLOUDPLATE Series fan units and RACK ROOF FANS in the exact same way as described above. In addition, it can also control AIRPLATE Series cabinet fans and MULTIFAN Series component USB fans. On the backside, plug USB fans into ports marked “5V DC” to share the same temperature settings. Connected USB fans must have their speed set to max if they feature an inline speed controller.



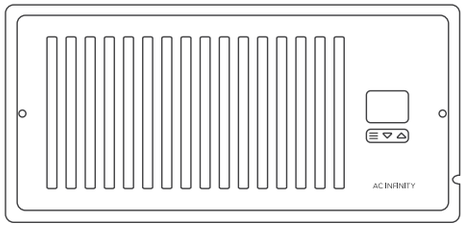
“5V DC” USB Ports

“12V DC” EXT. Ports

AC INFINITY PRODUCTS

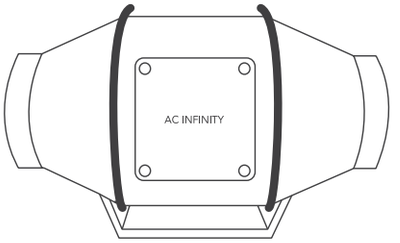
Register Booster Fans

The AIRTAP series is a line of register booster fans designed to quietly increase airflow coming from your central heat and air conditioning systems, increasing comfort for your home. Features a thermal controller with intelligent programming that will automatically adjust airflow strength in response to heating and cooling temperatures you have set.



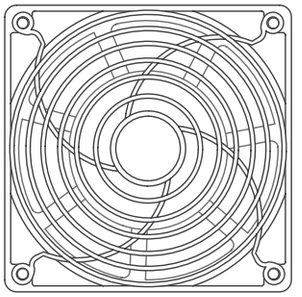
Duct Fans

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.



Discover the latest innovations in cooling and ventilation at acinfinity.com

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.

For more information about our dealers and distributors, please contact our customer service at support@acinfinity.com or (626) 923-6399 Monday to Friday (9:00 am to 5:00 pm PST).



If you are not 100% satisfied with this product, we will be happy to replace it or issue you a full refund. Please contact us!

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