

AC INFINITY

# **AIRFRAME SERIES**

## **CLOSET 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](http://www.acinfinity.com) and click contact for our contact information.

### EMAIL

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### WEB

[www.acinfinity.com](http://www.acinfinity.com)

### LOCATION

Los Angeles, CA

## MANUAL CODE AF2305X1

### PRODUCT

AIRFRAME T7  
AIRFRAME T7  
AIRFRAME T7-N  
AIRFRAME T7-N  
AIRFRAME T9  
AIRFRAME T9  
AIRFRAME T9-N  
AIRFRAME T9-N

### MODEL

AC-AFT7-BE  
AC-AFT7-WE  
AC-AFT7-BN  
AC-AFT7-WN  
AC-AFT9-BE  
AC-AFT9-WE  
AC-AFT9-BN  
AC-AFT9-WN

### UPC-A

819137020153  
819137020160  
819137020177  
819137020184  
819137020214  
819137020221  
819137020207  
819137020191

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# PRODUCT WARNING



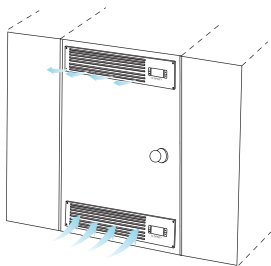
TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS, OBSERVE THE FOLLOWING:

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. Do not attempt to hardwire this product. Performing any retrofitting actions may result in personal injury and/or electrical damage, and will void this product's warranty.
6. This product must not be used in potentially hazardous locations such as flammable, explosive, chemical-laden, or wet atmospheres.
7. Ducted products must always be vented to outdoor areas.
8. Do not cover power cords with rugs or other fabric materials.
9. This product has rotating parts. Safety precautions should be exercised during the installation, operation, and maintenance of this product.
10. 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.
11. 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.
12. Do not operate this product while its cord is damaged, or if it malfunctions, has been dropped, or is damaged in any manner.

# CABINET COOLING GUIDE

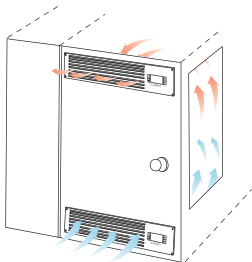
## INTAKE AND EXHAUST

All cabinet fan systems should contain an intake and an exhaust variable which can either be fans or ventilation holes. This is required to balance the static pressures between the inside and outside room.



## FAN POSITIONING

Due to natural convection, warmer air, which is less dense than colder air, will rise on its own. It is ideal to position fans near the top of the room configured to exhaust out the warmer air and position fans near the lower part of the room to push in colder air.



## CFM REQUIREMENTS

A fan or set of fan's CFM rating measures the rate at which air flows in of a space. To obtain the required CFM rating, divide the dimensions of a cabinet by 1728 to get the cubic feet area then multiply by three to account for various real world variables.

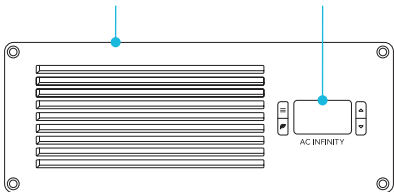
$$\frac{\text{SIZE OF ROOM}}{1728} \times 3$$

L x W x H (inches)

# KEY FEATURES

## ALUMINUM FRAME

Features an aluminum frame with CNC machined corners and edges to give rooms a professional appearance.

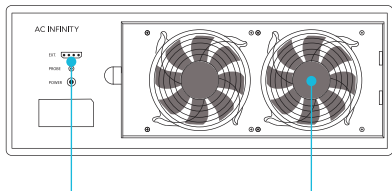
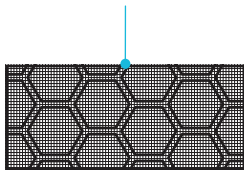


## SMART CONTROLLER

Controller enables temp. monitoring, thermal control, speed control, alarms, and SMART energy mode.

## DETACHABLE FILTER

A high density filter helps remove dust from entering or exiting the room. Can be easily detached for cleaning.



## FAN EXPANSION PORT

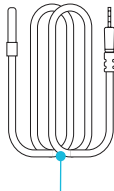
Each closet fan unit is equipped a port to connect an additional fan unit to share the same power source.

## 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 sensor probe constructed of stainless steel ensures an accurate temperature reading.





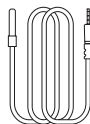
# PRODUCT CONTENTS



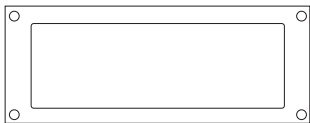
COOLING  
FAN UNIT  
(x1)



DETACHABLE  
FILTER  
(x1)



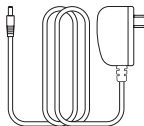
SENSOR  
PROBE  
(x1)



PLASTIC  
STENCIL  
(x1)



EXT  
CABLE  
(x1)



POWER  
ADAPTER  
(x1)

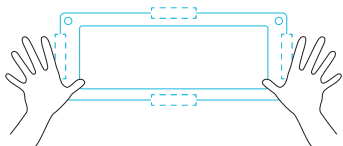


WOOD MOUNTING  
SCREW SET  
(x1)

# INSTALLATION

## STEP 1

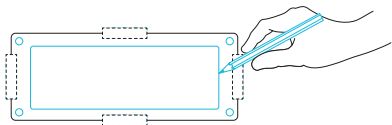
Determine where you wish to mount the cooling fan unit onto your door or wall. Position the stencil and apply tape to the outer edges.



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## STEP 2

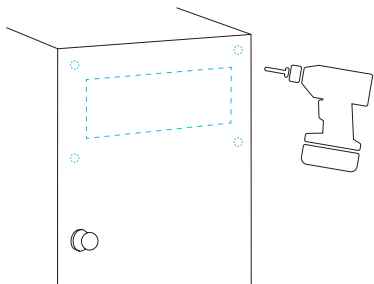
Use a pencil to outline the center square and four outer screw holes on the one stencil. Check for accuracy before proceeding to the next step.



# INSTALLATION

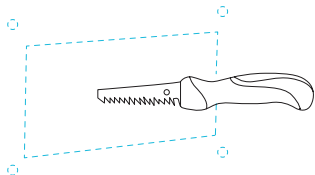
## STEP 3

Remove the plastic stencil and tape. If you prefer machine screws instead of wood screws to mount the fan and controller, use a power drill to create four screw holes. Recommended drill bit size around 16/64".



## STEP 4

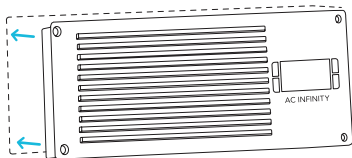
Using a saw, cut out the center piece as outlined by your markings from step one. You may need to first drill a hole at each of the corners to fit your saw through. A power jigsaw may be preferred for thicker wood.



# INSTALLATION

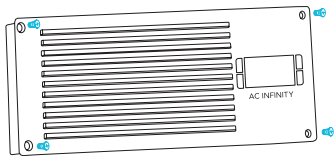
## STEP 5

Place the fan unit into the newly cut square so that each screw hole is properly aligned. Make sure that the cut center hole is large enough that the plastic backside of the fan does not come into contact with the cabinet. This is to minimize vibrations which will can cause noise.



## STEP 6

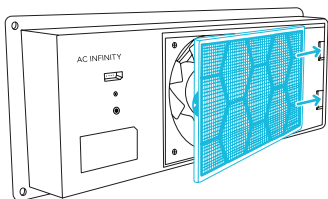
Using the four machine screws, secure the fan unit's frame onto the cabinet or wall. Push each screw through their corresponding hole located on the frame and wall. The included wood screws can also be used instead. Tighten the nuts on the other side.



# INSTALLATION

## STEP 7

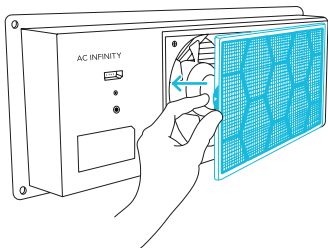
After mounting the fan unit onto a door or wall, locate the filter piece. If it has not yet been installed, align and insert the filter piece into the docking holes located on the backside of the fan unit.



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## STEP 8

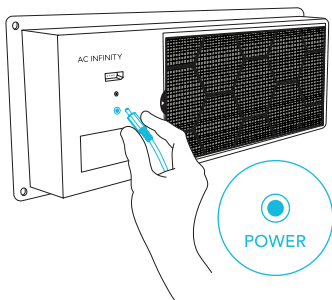
Push the filter piece against the back of the fan unit to click it into position. Note that using the detachable filter will reduce air performance of the cooling fan unit.



# POWERING AND SETUP

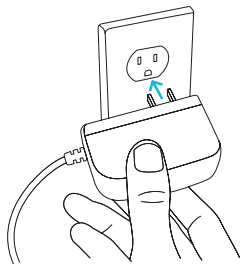
## STEP 1

To power the fan unit, locate the corded wall adapter. Plug the adapter's connector into the port marked "POWER" located on the backside of the fan unit.



## STEP 2

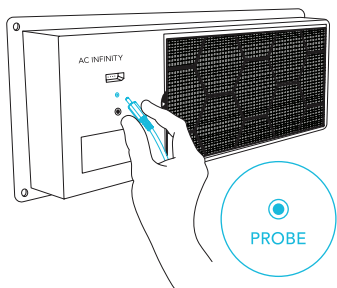
Plug the adapter head into a standard outlet and check to see if the fan's unit screen is on. You may need to press the leaf button if the unit was previously set to ECO Mode.



# POWERING AND SETUP

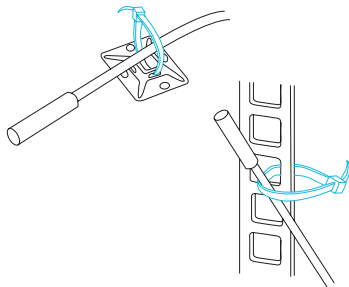
## STEP 3

To set up temperature readings, locate the corded thermal probe. Plug the probe's connector into the port marked "PROBE" located on the backside of the fan unit.



## STEP 4

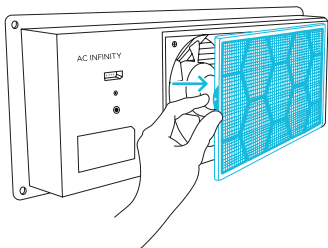
After plugging in the probe, check the fan unit's screen to see that there is now a temperature reading. Position the thermal probe near your devices with the highest temperatures.



# FILTER MAINTENANCE

## STEP 1

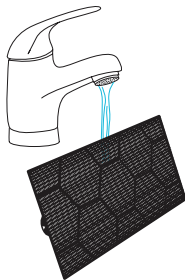
To detach the filter piece, pull on its lever to release it from the backside of the fan unit. The filter should be cleaned periodically to avoid decreasing the fan's airflow performance.



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## STEP 2

Rinse the filter piece with running water or wipe it down with a damp cloth to remove dust and other particles.

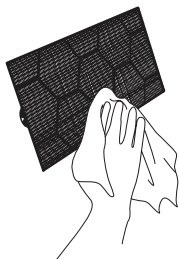




# FILTER MAINTENANCE

## STEP 3

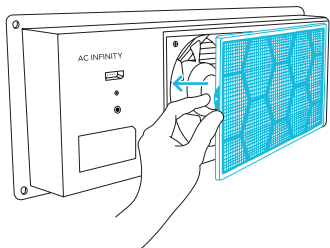
Wipe down the filter piece thoroughly with a cloth and leave it out to dry. The filter piece should be completely dry before reattaching it to the fan unit.



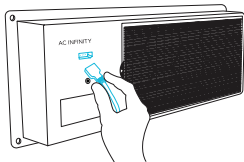
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## STEP 4

Lastly, push the filter piece against the back of the fan unit to put it back into position.



# ADDING MORE FANS

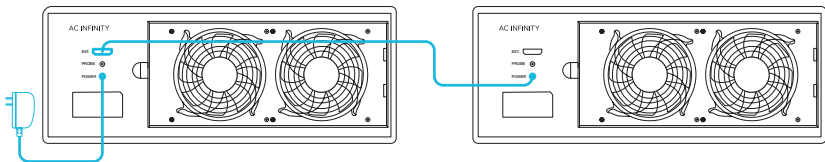


You may connect an additional fan to this fan to create an intake/exhaust system. Your fan will power this additional fan and eliminate the need to connect it to its own power source.

## CREATING A CHAIN

Connect the EXT cable's Molex connector to the EXT port of your primary fan, and its DC connector to the DC port of your secondary fan.

The secondary fan will be powered by the primary fan, which will provide programming for the connected system.



# PROGRAMMING

## 1. MODE BUTTON

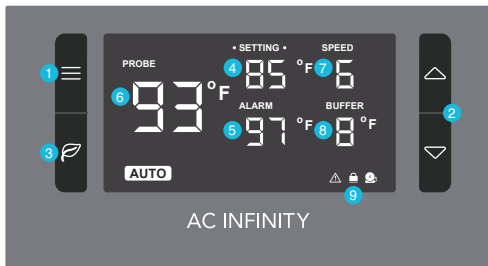
Cycles through the modes: AUTO, SMART, SPEED, ALARM, BUFFER. Holding for three seconds will lock or unlock the display.

## 2. UP/DOWN BUTTONS

Changes the setting temperature, alarm temperature, display brightness, or the speed of the fan.

## 3. LEAF BUTTON

Turns the display off while programs run in the background. Holding will change degrees to Fahrenheit or Celsius.



## 4. SETTING TEMP.

Shows the temperature you set the fans to trigger in AUTO and SMART Mode.

## 5. ALARM TEMP.

Shows the temperature that you set the fan's alarm system to trigger. See page 22 for more information.

## 6. PROBE TEMP.

Actively shows the current temperature that the probe is measuring.

## 7. FAN SPEED

Shows what speed the fans are currently running at. Six speeds are available.

## 8. BUFFER

Shows the buffer settings of AUTO and SMART Mode programming. See page 21 for more information.

## 9. ALERT ICONS

Flashes to indicate if check fan alert, alarm, or display lock is being triggered.

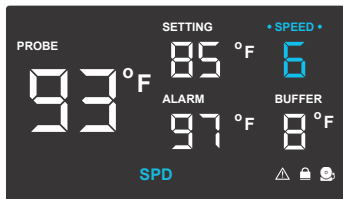
# PROGRAMMING

## 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.

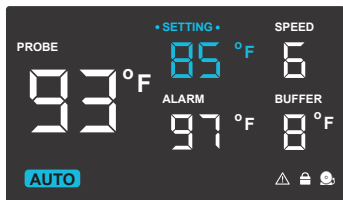
## SPEED SETTING

In this mode, the fans will run non-stop regardless of temperature. Pressing the up and down buttons while in this mode will change the speed of the fan. Whichever 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

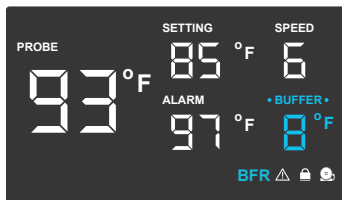
This is the thermostat setting where the fans will start running when the PROBE temperature reaches or surpasses the SETTING temperature. The SETTING temperature can be designated by pressing the up and down buttons while in this mode. Once the fans start running, the PROBE temperature will need to fall at least 4° F below the SETTING temp for the fans to stop running. This variation buffer can be changed. See page 21 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.

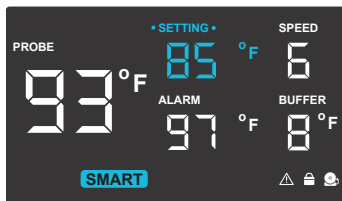


## SMART MODE

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 4° 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 2° 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 can reach. This occurs when the PROBE temperature reaches or exceeds the SETTING temperature.



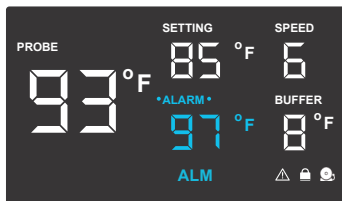
# PROGRAMMING

## 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 remember to exit ALARM Mode once the alarm has been set.

When the alarm is triggered, the fans 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.

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## 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.

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## 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 per 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.

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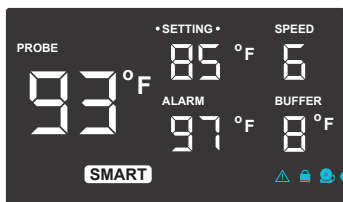
## ECO-DISPLAY

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. 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, see the warranty page for replacement information.

### 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. See page 23 for more information.

### ALARM ALERT

The alarm alert icon will flash when the probe temperature reaches or exceeds the alarm temperature you have set. See page 22 for more information on setting up the alarm.





# AC INFINITY PRODUCTS

## Component Fan Systems

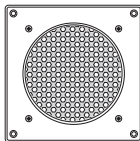
The AIRCOM component fan system cools receivers, amplifiers, and other AV components. S-Series models feature a thermal trigger and speed control. T-Series models feature an LCD digital display with thermal and speed controls, alarm alerts, failure triggers, and backup memory.



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## Cabinet Fan Systems

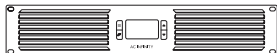
The AIRPLATE series is designed to cool home theater and audio/video cabinets. The fans are powered by USB ports or power outlets. Includes an inline speed controller and boost speed adapter. The fans can also be temperature-controlled with an advanced thermal controller (sold separately).



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## Rack Fans

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



Discover the latest innovations in environmental controls at [acinfinity.com](http://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.

Contact our dealers department at [dealers@acinfinity.com](mailto:dealers@acinfinity.com) or (626) 838-4656 for more information about our dealers and distributors program. Contact our customer service department at [support@acinfinity.com](mailto:support@acinfinity.com) or 626-923-6399 for product and warranty assistance. Our business hours are Monday through Friday, 9:00 am to 5:00 pm PST.



**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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