

## **CONTROLLER 67**

**USER MANUAL** 

#### WELCOME

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#### **WEB**

www.acinfinity.com

LOCATION Los Angeles, CA

#### MANUAL CODE CTR6720061X2

PRODUCT CONTROLLER 67 MODEL CTR67A UPC-A 819137021426

#### **COMPATIBILITY**

This controller is compatible with AC Infinity fan models that contain an EC-motor. Typically, EC-motor fans will have a separate cord coming out of it for the power and the controller. Note that certain models that used to have a DC-motor now contain an EC-motor in newer versions.



Please visit www.acinfinity.com to check for the latest models compatible with this controller.

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## **KEY FEATURES**

#### SMART CONTROLLER

Features automation controls that activate the fan according to temperature, humidity, timer, and schedules.

#### **STEEL FRAME**

Steel backplate with a black powder coated finish. Includes screws to securely mount the controller to the wall.

#### **SENSOR PROBE**

The corded probe is constructed of stainless steel to ensure precise temperature and humidity readings.





#### **ACTIVE MONITORING**

LCD display shows key data including fan speed, temperature, humidity, trends, clock, countdowns, and more.

#### **ADVANCE SETTINGS**

Includes more setting options such as Fahrenheit / Celsius Toggle, Clock, Calibration, and Transition.

#### **EXTRA CORD LENGTH**

Extended cord length of 144 inches (12 feet) for ease of management and flexible mounting options.

## **PRODUCT CONTENTS**



## **POWERING AND SETUP**

#### **STEP 1**

Locate the molex connector of your fan and plug it into the fan port at the bottom side of the controller.



#### **STEP 2**

Locate the connector plug of the sensor probe and plug it into the sensor port at the bottom side of the controller.



## **POWERING AND SETUP**

#### **STEP 3**

Position the corded sensor probe and secure it by using the included zip ties and tie mounts.



#### **STEP 4**

Lastly, to power the fan, plug the fan's power cord into a wall outlet. The controller will receive power from the fan to operate.



## **DAISY CHAIN AND SETUP**

The fan controller can power up to two compatible fans to share the same programming. The compatible fans do not need to be the same model or part of the same product series. Please see page 4 for compatibility details.



Note that the controller receives power to operate from the fans. The controller only supplies programming and not power. Each linked fan will still require its own power source.





#### **1. MODE BUTTON**

This button cycles through each of the controller's mode: OFF, ON, AUTO (4 triggers), TIMER TO ON, TIMER TO OFF, CYCLE (On and Off), and SCHEDULE (On and Off).

#### 2. UP / DOWN BUTTON

Adjusts the parameters of the mode that you are in. In most modes, the up button increases and down button decreases the setting. Holding both buttons simultaneously sets the parameters to off.

#### **3. SETTING BUTTON**

This button cycles through each of the controller's settings: DISPLAY BRIGHTNESS, F/C, CLOCK, CALIBRATION (Temperature and Humidity), and TRANSITION (Temperature and Humidity).

#### 4. PROBE TEMPERATURE

Current temperature that the probe is detecting. Displays "--" if no probe is plugged in. Includes a trend indicator that signals a rise, steady, or fall in temperature within the last hour.

#### **5. PROBE HUMIDITY**

Current humidity that the probe is detecting. Displays "--" if no probe is plugged in. Includes a trend indicator that signals a rise, steady, or fall in humidity within the last hour.

#### 6. CONTROLLER MODE

Displays the mode that the controller is currently in. Pressing the mode button cycles through the available modes.

#### 7. STATUS ICONS

Flashes or displays the alert icons from the controller. Icons include TIMER ALERT and DISPLAY LOCK.

#### 8. CURRENT TIME

Displays the current time. The internal battery sustains the clock so it does not default to 00:00 if power is cut off. Please see page 18 for instructions on how to set up the clock time.

#### 9. FAN SPEED

Displays the current speed in which the fan is running. Includes a trend indicator that signals if the fan is currently rising, falling or holding steady.

#### **10. COUNTDOWN**

Displays TO ON or TO OFF countdown to show the amount of time before the timer to on, timer to off, cycle, or schedule modes activates or deactivates the fan. TO ON represents the amount of time that is left before the fan turns on. TO OFF represents the amount of time that is left before the fan turns off.

#### **11. USER SETTING**

Displays the value you have set for the current mode that you are in. Press the up or down button to adjust the value.

#### **CONTROLLER MODES**

Pressing the mode button will cycle through the controller's available programming modes: OFF, ON, AUTO (4 triggers), TIMER TO ON, TIMER TO OFF, CYCLE (On and Off), and SCHEDULE (On and Off).

#### **OFF MODE**

Your fan will not run while in this mode. However, the fan speed set while in this mode establishes the minimum speed in the 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**

Your fan will actively run at the speed set, regardless of the probe's reading. The ON mode also serves as the maximum speed setting the other modes will run in.

#### 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.

#### AUTO MODE (HIGH HUMIDITY TRIGGER)

Pressing the up or down button sets the high humidity 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 humidity 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 HUMIDITY TRIGGER)

Pressing the up or down button sets the low humidity 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 below the low humidity trigger to create a 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.

#### TIMER TO ON MODE

In this mode, press the up or down button to set a countdown time. Once the timer ends, the fans will trigger to run at the speed set in ON Mode. If there was a speed set in OFF Mode other than zero, then 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 shown on the display, in the section 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

In this mode, press the up or down button to set a countdown time. The fans will run at the speed set in ON Mode until the countdown ends. If there was a speed set in OFF Mode other than zero, then 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 shown on the display, in the section below the current fan speed. Leaving the timer mode while the countdown is running will pause it until you return to this mode. 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.

#### CYCLE MODE (ON AND OFF)

In this mode, 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 be on and then press the mode button again, to set a duration for the fan to be off. When the fan is triggered to be on, it will run at the speed set in ON Mode. When the fan is triggered to be off, 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 shown on the display, in the section 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.

#### SCHEDULE MODE (ON AND OFF)

In this mode, set an on clock-time and an off clock-time schedule for the fan to follow through daily. Press the up or down button to first set up an on clock-time for when the fan will be on and then press the mode button again, to set an off clock-time for when the fan will be off. When the fan is triggered to be on, it will run at the speed set in ON Mode. When the fan is triggered to be off, it will run at the speed set in OFF Mode. Please be sure to set the current clock time under settings.

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 shown on the display, in the section below the current fan speed. The fan will not follow this schedule if you leave this mode. If you reenter the schedule mode, it will continue to follow the latest schedule you have set.

#### ADV. MODE

Advanced programs are automation, alarm, and/or notification settings created in the AC Infinity controller app. Its icon will display when an advanced program is set. "ADV" will appear when an automation advanced program is activated.



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



#### **CONTROLLER SETTINGS**

Pressing the setting button will cycle through the controller's available settings: DISPLAY, F/C, CLOCK, CALIBRATION TEMPERATURE, CALIBRATION HUMIDITY, TRANSITION TEMPERATURE, and TRANSITION HUMIDITY.

#### **DISPLAY SETTING**

In this setting, adjust the brightness of the display and auto-dimming. Press the up or down button to cycle through 1, 2, 3, A2 and A3. The highest brightness is 3 while the lowest brightness is 1. The settings 1, 2, and 3 are not auto-dimming, and the display will continuously be shown at that brightness level. In A2, the display will be shown at brightness 2 but fall to brightness 1 whenever the controller is not being adjusted after 15 seconds. In A3, the display will be shown at brightness 3 but fall to brightness 1 whenever the controller is not being adjusted after 15 seconds.



#### **F/C SETTING**

In this setting, change the displayed units to Fahrenheit or Celsius. Press the up or down button to cycle through F and C. All displayed units on the controller will change automatically with your setting.



#### **CLOCK SETTING**

In this setting, adjust the current clock time. Press the up or down button to increase or decrease the time. Once you cycle through 12:00 each time, the units will automatically change to AM or PM. The current clock time will be shown at the top right corner of display.

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#### **CALIBRATION TEMPERATURE SETTING**

In this setting, adjust the temperature reading that the sensor probe is measuring. Press the up or down button to increase or decrease the data figure by  $2^{\circ}F$  (or  $1^{\circ}C$ ) increments. The calibration cycle ranges from  $-8^{\circ}F$  to  $8^{\circ}F$  (or  $-4^{\circ}C$  to  $4^{\circ}C$ ) and will be applied to the sensor probe's measurements.



#### **CALIBRATION HUMIDITY SETTING**

In this setting, adjust the real humidity reading that the sensor probe is measuring. Press the up or down button to increase or decrease the data figure by 1% increments. The calibration cycle ranges from -8% to 8% and will be applied to the sensor probe's measurements.



#### TRANSITION TEMPERATURE SETTING

In this setting, adjust the incremental rules in which the fan speed ramps up or down for temperature triggers in AUTO Mode. Press the up or down button to cycle through 0°F to 8°F (or 0°C to 4°C) to set a differential increment. Once setup, when the sensor temperature first meets or exceeds the high temperature trigger, the speed will start at one speed above the speed set in OFF Mode. Then for every differential increment that the sensor temperature is different from the set temperature, the speed of the fan will ramp up by one additional speed level. This continues until the fan reaches the speed set in ON Mode.

For example, let's assume your high temperature trigger is set at 80°F, the speed set in OFF Mode is 0, and the speed set in ON Mode is 6. If the differential increment was set to 0°F, then the fan would have just triggered to run at speed 6 when the sensor temperature meets or exceeds 80°F. However, if the differential increment was set to 2°F. Then the fan would start running at speed 1 when it meets or exceeds 80°F. Then at speed 2 when it meets or exceeds 80°F. Then at speed 3 when it meets or exceeds 86°F. Then at speed 3 when it meets or exceeds 86°F. Then at speed 4 when it meets or exceed 86°F. Then at speed 5 when it meets or exceed 88°F. Then from 90°F or higher, it will run at speed 6 which was the speed set in ON Mode.





#### TRANSITION HUMIDITY SETTING

In this setting, adjust the incremental rules in which the fan speed ramps up or down for humidity triggers in AUTO Mode. Press the up or down button to cycle through 0% to 8% to set a differential increment. Once setup, when the sensor humidity first meets or exceeds the high humidity trigger, the speed will start at one speed above the speed set in OFF Mode. Then for every differential increment that the sensor humidity is different from the set humidity, the speed of the fan will ramp up by one additional speed level. This continues until the fan reaches the speed set in ON Mode.

For example, let's assume your high humidity trigger is set at 67%, the speed set in OFF Mode is 2, and the speed set in ON Mode is 7. If the differential increment was set to 0%, then the fan would have just triggered to run at speed 7 when the sensor temperature meets or exceeds 67%. However, if the differential increment was set to 5%. Then the fan would start running at speed 3 when it meets or exceeds 67%. Then at speed 4 when it meets or exceed 72%. Then at speed 5 when it meets or exceeds 77%. Then at speed 6 when it meets or exceed 82%. Then from 87% or higher, it will run at speed 7 which was the speed set in ON Mode.





#### **ALERT ICONS**

On the top left of the display is the alert icon section. Icons may flash when the controller wishes to alert you that a particular function or alarm is being triggered.





#### LOW HUMIDITY ALARM

This icon will flash and beep with an alert if humidity falls below the trigger point set in the app.

#### TIMER ALERT

This icon will flash when a countdown has completed for TIMER TO ON, TIMER TO OFF, CYCLE, or SCHEDULE Mode.



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#### BLUETOOTH

This icon will appear when the physical controller is connected to the APP via Bluetooth.

#### **CHECK FAN ALERT**

This icon will flash when the fan's probe senses interference to its functioning. Check the fan for possible issues. If the fan is not working, please see the warranty page for replacement information.

#### **DISPLAY LOCK ALERT**

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

## **OTHER SETTINGS**

#### **FACTORY RESET**

To reset the controller back to factory settings, hold the mode button, the up button, and the down button simultaneously for four or more seconds. Resetting the controller will clear all user set parameters in every controller mode and settings.

#### **BLUETOOTH RESET**

Hold the Mode and Settings buttons simultaneously for four or more seconds to clear advanced programming in the controller. The app will disconnect from the controller and will have to be paired again to reestablish the Bluetooth connection. All sensor data, controller programming, and settings will be retained.

#### **CONTROLLER LOCK**

To lock the controller to prevent settings to be changed accidentally, hold the settings button for two or more seconds. While the display locked, you will not be able to switch modes or change any settings. You will be able to hide the screen by pressing the settings button while the controller is locked. Holding the settings button for two or more seconds will unlock the controller.

#### **HIDE SCREEN**

The screen on the display can be hidden but all programs and settings will continue to run in the background. This can be done by first holding the settings button to lock the controller. Once locked, pressing the mode button will hide and unhide the screen.

#### JUMP TO OFF MODE

Holding the mode button for two or more seconds while in any mode or settings will automatically jump to OFF Mode. This will not work if the controller is locked.

#### SET MODE PARAMETERS TO OFF

Holding the up and down button simultaneously will automatically set the parameter for the mode you are in to OFF or 0. For trigger modes, the OFF parameter is usually located between the highest and lowest settings point. This shortcut allows the user to quickly jump to OFF without cycling.

## **OTHER SETTINGS**

#### **MINIMUM SPEED**

In OFF Mode, you can set the minimum speed in which the fan will run at in other modes. If a speed is higher than 0, then the fan will run at that speed when it is triggered to be off.

#### AUTO INCREASING OR DECREASING

Holding the up or down button will increase or decrease user parameters automatically until the user releases the up or down button.

## **DOWNLOAD THE APP**

#### **QUICK START**

Download the AC Infinity app to remotely program and control your fan using your smart phone or tablet.

Connect the fan and probe into CONTROLLER 67A. Plug the fan into a wall outlet.



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Scan the QR code below or visit our website at www.acinfinity.com for more information on the AC Infinity app.



Download and run the app to pair your mobile device with CONTROLLER 67A.



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Find the AC INFINITY app in the App Store or on Google play for all mobile devices.



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## **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.

#### **Rack Fans**

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

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



If you run into any issues with this product, contact us and we'll happily issue a replacement or a full refund!

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