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AC Infinity CTR89A

AC Infinity Controller AI+ with CO2 Sensor Bundle User Manual

Model: CTR89A

PRODUCT OVERVIEW

The AC Infinity Controller AI+ with CO2 Sensor Bundle is an advanced environmental control system designed for gardens and grow tents. This AI-powered controller actively learns and adapts to its environment, automating equipment to precisely regulate carbon dioxide levels, temperature, humidity, and VPD (Vapor Pressure Deficit). It features Bluetooth and WiFi connectivity, allowing for remote control and monitoring via a dedicated mobile application.



The AC Infinity Controller AI+ with its CO2 sensor and the accompanying mobile application for comprehensive environmental management.



The Controller AI+ and CO2 Sensor Bundle provide precise AI measurements for optimal environmental control.

SETUP GUIDE

Follow these steps to set up your AC Infinity Controller AI+ and CO2 Sensor Bundle:

- 1. Unpack Components:** Carefully remove the controller, CO2 sensor, and any included cables from the

packaging.

- 2. Mount the Controller:** Choose a suitable location for the controller, ensuring it is easily accessible and away from direct heat or moisture. The unit can be mounted using the keyhole slots on the back.
- 3. Connect the CO2 Sensor:** Plug the CO2 sensor cable into the designated sensor port on the controller. Ensure a secure connection.
- 4. Connect Devices:** Connect your compatible AC Infinity devices (fans, lights, humidifiers, heaters, etc.) to the device ports on the controller using UIS cables. The controller supports up to 8 devices directly, or up to 32 with splitters.
- 5. Power On:** Connect the power cable to the controller and plug it into a standard electrical outlet. The display should illuminate.
- 6. Download the App:** Download the AC Infinity app from your device's app store (available for iOS and Android).
- 7. Pair with App:** Open the app and follow the on-screen instructions to pair your controller via Bluetooth or WiFi. Ensure your phone is connected to a 2.4GHz WiFi network during initial setup if using WiFi.

GROW WITH AI

This AI-powered controller and CO₂ sensor bundle adapts to its environment to automate equipment for precise carbon dioxide regulation.



The Controller AI+ and CO2 sensor bundle integrates seamlessly into a grow environment, connecting wirelessly to the mobile app for smart control.

OPERATING INSTRUCTIONS

The Controller AI+ offers both on-device control and comprehensive app-based management. The AI-powered system learns and adapts to maintain optimal conditions.

On-Device Control

The controller's large backlit LCD display provides real-time data and allows for direct adjustments. Use the physical buttons to navigate menus, set parameters, and control connected devices. The display shows temperature, humidity, VPD, and CO₂ levels, along with current time and device status.



The controller's interface is designed for clear visibility and easy interaction, even in low-light conditions.

Mobile App Control (AI App Assistant)

The AC Infinity app provides advanced control and monitoring capabilities:

- Real-time Monitoring:** View live data for temperature, humidity, VPD, and CO₂ levels from anywhere via WiFi.
- AI Insights & Learning:** The AI analyzes climate patterns, anticipates spikes, and dynamically adjusts equipment to maintain optimal conditions. It can self-teach to preemptively manage environmental factors.

- **Dynamic CO2 Programming:** Adjust carbon dioxide levels based on PPM (Parts Per Million) to optimize fresh air exchange (FAE) and set minimum intake speeds for maximum efficiency.
- **Automated Cycles:** Set up fully automated light cycles and other device operations optimized for plant growth stages.
- **Alerts & Notifications:** Receive alerts for critical environmental changes or system issues.
- **Data Tracking & Charts:** Access historical data and graphical representations of environmental conditions.
- **AI Bot Assistant:** Chat with the integrated AI bot for guidance and answers to your grow-related questions.

AI APP ASSISTANT

Control your grow from anywhere with our Wi-Fi app. Features real-time AI insights, guides, and an AI bot that will answer questions about your grow.



The AI App Assistant provides comprehensive control, real-time insights, and an interactive AI bot for user support.

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ADAPTIVE AI



CLIMATE PREDICTIONS

Anticipates climate spikes and adjusts equipment early to the exact percentages needed to counteract them.



PATTERN RECOGNITION

Analyzes climate patterns to create a daily light cycle that would minimize overall temperature increases.



ENERGY-SAVING

Factors equipment efficiency and indoor/outdoor climates to determine how to reach targets with minimal power.



DEEP LEARNING

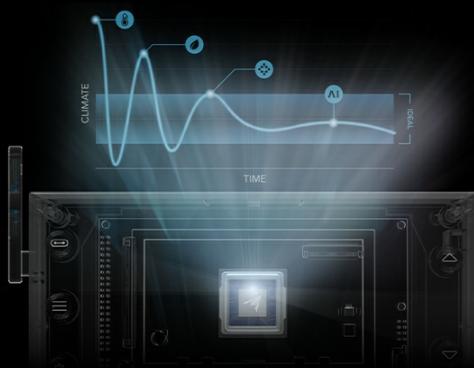
Self-teaches the need to preemptively turn on humidifiers to offset the unintended drying effects from heaters.



The Adaptive AI system uses climate predictions, pattern recognition, and deep learning to optimize environmental control and save energy.

Data-Driven AI

AI-powered controller with CO₂ sensor actively learns and adapts to its environment to automate equipment that will precisely regulate carbon dioxide levels.



The data-driven AI controller actively learns and adapts to its environment to precisely regulate carbon dioxide levels and other parameters.

Intelligent Ecosystem

When paired with the Controller AI+, the CO₂ Sensor enables programming to dynamically adjust carbon dioxide levels and optimize FAE based on PPM.



The intelligent ecosystem, when paired with the Controller AI+, enables dynamic CO₂ level adjustments and optimized fresh air exchange.

MAINTENANCE

Proper maintenance ensures the longevity and optimal performance of your Controller AI+ and CO₂ Sensor Bundle:

- Cleaning:** Regularly wipe the controller and sensor surfaces with a soft, dry cloth to remove dust and debris. Avoid using abrasive cleaners or solvents.
- Sensor Care:** Keep the CO₂ sensor clean and free from obstructions. Do not expose it to direct water spray or extreme temperatures.
- Cable Management:** Ensure all cables are neatly organized and not under tension to prevent damage to the ports or cables themselves.
- Software Updates:** Periodically check the AC Infinity app for firmware updates for your controller. Updates often include performance improvements and new features.
- Environmental Conditions:** Operate the controller within its specified environmental limits to prevent damage.

TROUBLESHOOTING

If you encounter issues with your Controller AI+, refer to the following common troubleshooting steps:

- **Controller Not Powering On:**

- Check if the power cable is securely connected to both the controller and the power outlet.
- Ensure the power outlet is functional by testing it with another device.

- **App Connectivity Issues (Bluetooth/WiFi):**

- Ensure Bluetooth is enabled on your mobile device.
- For WiFi, confirm your router is broadcasting a 2.4GHz signal and your phone is connected to it during setup.
- Restart both the controller and your mobile device.
- Check for app updates in your app store.
- Ensure the controller is within range of your WiFi router.

- **Inaccurate Sensor Readings:**

- Ensure the sensor is clean and free from dust or debris.
- Verify the sensor is properly connected to the controller.
- Avoid placing the sensor in direct airflow from fans or near heat sources that could skew readings.

- **Connected Devices Not Responding:**

- Check that the UIS cables are securely plugged into both the controller and the devices.
- Verify that the device settings within the controller or app are correctly configured for automation or manual control.
- Ensure the connected devices are compatible with the AC Infinity UIS system.

- **AI Not Adapting/Learning:**

- Ensure the controller has been running for a sufficient period (at least 24-48 hours) to gather enough data for learning.
- Check that all sensors are providing consistent data.
- Review your AI settings in the app to ensure they are enabled and configured as desired.

For further assistance, consult the AC Infinity app's AI bot or contact AC Infinity customer support.

SPECIFICATIONS

Feature	Detail
Model	CONTROLLER AI+ with CO2 Sensor Kit
Item Model Number	CTR89A
Manufacturer	AC Infinity
Product Dimensions	3.42" L x 0.94" W x 5.8" H (8.7 x 2.4 x 14.9 cm)
Item Weight	2.68 pounds
Display Type	Large 4.5" Backlit LCD
App Control	Wi-Fi + Bluetooth
Devices Supported	8 (up to 32 with Splitters)
Sensors Supported	3 (1 Built-In)
Voltage	100-240V AC

Included Components	CONTROLLER AI+ with CO2 Sensor
Color	Black
UPC	819137024960

SPECIFICATIONS

MODEL | CONTROLLER AI+ CO₂ Sensor Kit

APP CONTROL | Wi-Fi + Bluetooth

DEVICES SUPPORTED | 8 (32 with Splitters)

DISPLAY | Large 4.5" Backlit LCD

SENSORS SUPPORTED | 3 (1 Built In)

VOLTAGE | 100-240V AC



3.42"
(8.7 cm)



Power
Port: 1

Device Ports: 8

Sensor Ports: 2

UIS Cord
Length:

12'
(144")

Probe
Length:

12 FT
(144")

Corded
Sensor:

Temperature
& Humidity



Onboard
Sensor:
Temperature
& Humidity

0.94" (2.4 cm)

1.41" (3.6 cm)



CO₂+Light
Sensor:

2.83"
(7.2 cm)

0.55" (1.4 cm)

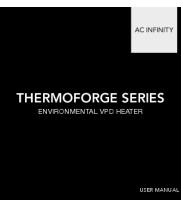
Detailed specifications and physical dimensions of the Controller AI+ and its components.

WARRANTY AND SUPPORT

AC Infinity products are designed for reliability and performance. For warranty information, product support, or to purchase protection plans, please refer to the official AC Infinity website or contact their customer service directly.

- **Manufacturer:** AC Infinity
- **Protection Plans:** Optional 3-Year and 4-Year protection plans are available for purchase.
- **Online Support:** Visit the [AC Infinity Store on Amazon](#) or their official website for FAQs, guides, and contact information.

Related Documents - CTR89A

	<p><u>AC Infinity Controller 69 PRO+ Quick Start Guide</u> A concise guide to setting up and operating the AC Infinity Controller 69 PRO+, an 8-port environmental controller for grow tents.</p>
	<p><u>AC Infinity VPD Thermometer User Manual - Model AC-TRV3</u> Comprehensive user manual for the AC Infinity VPD Thermometer (Model AC-TRV3), covering features, setup, operation, programming, and warranty information. Learn to measure air and leaf VPD, temperature, and humidity for optimal environmental control.</p>
	<p><u>AC Infinity CO2 Controller Environmental Monitor User Manual</u> Comprehensive user manual for the AC Infinity CO2 Controller Environmental Monitor (Model AC-CTC7), detailing setup, programming, features, settings, and warranty information.</p>
	<p><u>AC Infinity Hydrene Series Dehumidifier Quick Start Guide - DHT2411X1</u> Quick start guide for the AC Infinity Hydrene Series dehumidifier (model DHT2411X1). Learn how to set up, power, drain, clean, and program your dehumidifier for optimal environmental control in grow tents.</p>
	<p><u>AC Infinity ThermoForge Series Environmental VPD Heater User Manual</u> Comprehensive user manual for the AC Infinity ThermoForge Series Environmental VPD Heater (models T3 and T7), covering installation, setup, programming, features, safety guidelines, troubleshooting, and warranty information.</p>
	<p><u>AC Infinity CLOUDLINE Mixed Flow Inline Fan Systems User Manual</u> Comprehensive user manual for AC Infinity CLOUDLINE mixed flow inline fan systems, detailing installation, setup, operation, and features for S-Series and T-Series models. Learn about smart controls, quiet motors, and IP-44 protection.</p>