



VPD THERMOMETER

AC INFINITY

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 TRV2404X1

PRODUCT

VPD Thermometer

MODEL

AC-TRV3

UPC-A

819137024496

MANUAL INDEX

| | |
|----------------------------------|---------|
| Manual Index | Page 5 |
| Product Warning | Page 6 |
| Key Features | Page 7 |
| Product Contents | Page 8 |
| Powering and Setup | Page 9 |
| Using Your Thermometer | Page 11 |
| Use With UIS™ Devices | Page 13 |
| Programming | Page 14 |
| Other Settings | Page 17 |
| Other AC Infinity Products | Page 18 |
| Warranty | Page 19 |

PRODUCT WARNING



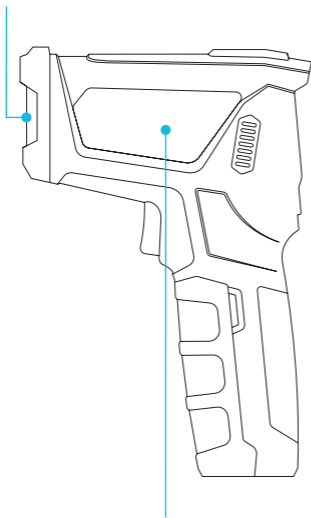
TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS, OBSERVE THE FOLLOWING:

1. **THIS PRODUCT EMITS A CLASS 2 LASER.** DO NOT stare at this product's infrared light or view it directly with optical instruments. DO NOT point the infrared light at other individuals. These actions may result in damage to eyesight.
2. Use caution when pointing the infrared light at reflective surfaces.
3. This product is not intended for users who lack experience with and knowledge of this product, or those with reduced physical, sensory, or mental capabilities, unless they have been given supervision or instruction about the use of this product by a person responsible for their safety.
4. Read all instructions before using this product.
5. This product must not be used in potentially hazardous locations such as hot, flammable, explosive, chemical-laden, or wet atmospheres.
6. Do not operate this product while it malfunctions, has been dropped, or is damaged in any manner.

KEY FEATURES

PINPOINT ACCURACY

Utilizes infrared technology to precisely deliver climate measurements over a versatile range of distances.

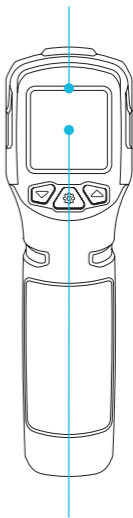


MEMORY RETENTION

Automatically saves data from previous 5 readings to support the comparison of past climate conditions.

GROW-FOCUSED

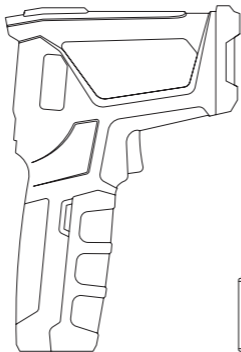
Specially designed to provide both air and leaf VPD readings to better help growers maintain their ideal environment.



ACTIVE MONITORING

Captures your space's ambient temperature, humidity, VPD readings, and leaf temperature with a pull of the trigger.

PRODUCT CONTENTS



VPD
THERMOMETER
(x1)

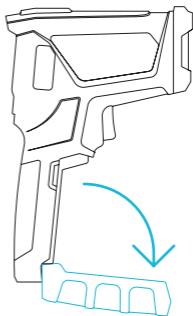


AAA
BATTERIES
(x2)

POWERING AND SETUP

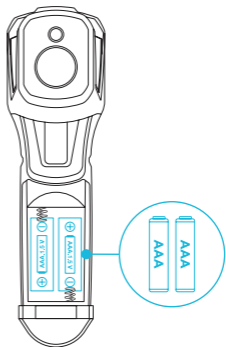
STEP 1

Open the battery cap in the grip.



STEP 2

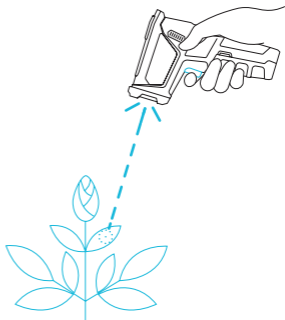
Put the batteries into the grip and close the cap.



POWERING AND SETUP

STEP 3

Point your thermometer at a target and pull the trigger to generate a reading.



USING YOUR THERMOMETER

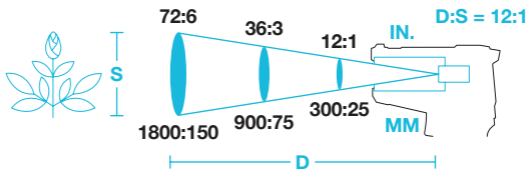
TARGET DISTANCE GUIDE

DISTANCE TO SPOT RATIO (D:S)

Distance to spot is a ratio that determines the size of your target area based on your distance from the object you are measuring. This is used to help confirm your thermometer's accuracy.

Your target object must fill the visual field in order to ensure an accurate reading. Larger objects require farther measurement distances, while smaller objects must be closer.

The D:S ratio of your thermometer is 12:1, which means it is capable of measuring a 1-inch diameter target area from 12 inches away. This target area scales up as you move further away from your target object.



USING YOUR THERMOMETER

EMISSIVITY GUIDE

EMISSIVITY (EMS)

EMS measures an object's efficiency in emitting thermal radiation and must be accounted for to ensure an accurate reading. Your thermometer's default EMS setting is 0.98.

ACCURATE READINGS

Set your thermometer's EMS to closely match the material you are targeting (see page 15 for instructions). The EMS of some common surfaces are listed below.

| MEASURED SURFACE | EMISSIVITY |
|--------------------------|-------------|
| STEEL | 0.1 |
| ALUMINUM | 0.3 |
| GLASS | 0.85 |
| WATER | 0.93 |
| CERAMICS | 0.95 |
| CLAY | 0.95 |
| CONCRETE | 0.95 |
| CLOTH | 0.95 |
| PAPER | 0.95 |
| PLASTICS | 0.95 |
| HEMP/LEAFY PLANTS | 0.98 |
| ICE | 0.98 |
| LIMESTONE | 0.98 |
| SOIL | 0.9–0.98 |
| WOOD | 0.9–0.95 |

USE WITH UIS™ DEVICES

MEASURING LEAF OFFSET

Use the climate readings generated by your thermometer to determine your leaf offset. This figure will help ensure that you get the most accurate VPD readings from your UIS devices.

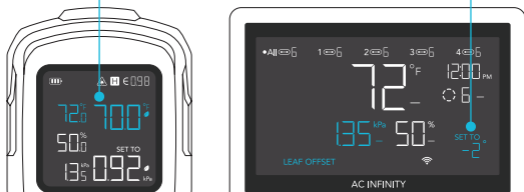
Determine the leaf offset by taking your leaf temperature reading and subtracting your room temperature reading from it. Note that this can result in a negative number. Round the leaf offset to the nearest whole number and enter this figure into your VPD-enabled device under its settings.

LEAF OFFSET FORMULA

LEAF TEMP - ROOM TEMP = LEAF OFFSET

EXAMPLE

$$[70.0 - 72.0] = -2.0$$



PROGRAMMING



1. UP/DOWN BUTTONS

Cycles through your previous 5 readings and adjusts the value of your current setting. The up button increases and down button decreases the setting. Hold both to reset values to OFF/Default.

3. ALERT ICONS

Displays statuses of the battery, laser, and HOLD statuses, and the emissivity rating.

6. AIR VPD

Displays the current air VPD that your thermometer is detecting.

4. AMBIENT TEMP.

Displays the current ambient temperature that your thermometer is detecting.

7. LEAF TEMP.

Displays the current leaf temperature that your thermometer is detecting.

2. SETTING BUTTON

Cycles through your thermometer's settings: Emissivity (EMS), °F / °C, CALIB. T° / H% / LEAF T°.

5. AMBIENT HUMID.

Displays the current ambient humidity that your thermometer is detecting.

8. LEAF VPD

Displays the current leaf VPD that your thermometer is detecting.

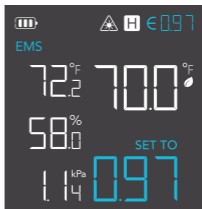
PROGRAMMING

CONTROLLER SETTINGS

Pressing the setting button will cycle through your thermometer's available settings: Emissivity (EMS), °F / °C, and CALIB. T° / H% / LEAF T°.

EMISSIVITY (EMS)

Adjusts your thermometer's EMS level. Press the up or down button to increase or decrease the EMS level.



°F/°C SETTING

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



PROGRAMMING

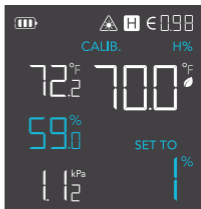
CALIB. TEMP. SETTING

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



CALIB. HUMIDITY SETTING

Adjusts the relative humidity reading your thermometer is measuring. Press the up or down button to increase or decrease the data figure in 1% increments. The calibration cycle ranges from -10% to 10% and will be applied to the measurements.



CALIB. LEAF TEMP. SETTING

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



OTHER SETTINGS

FACTORY RESET

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

HOLD +   

LASER TOGGLING

Holding the setting button for 3 seconds will toggle the infrared light off and hide the laser icon from the display.

Your thermometer will still be able to measure the object you're pointing at.

HOLD + 

Holding the setting button again for 3 seconds will toggle the infrared light on and the laser icon will reappear on the display.

RESET TO DEFAULT

Holding the up and down buttons together for 2 seconds will reset your current setting to its default value.

HOLD +  

HISTORY DATA

Pressing the up or down buttons will cycle through the previous 5 readings.

PRESS + 
PRESS + 

AUTO OFF

Your thermometer will automatically turn off when it is not in use for 20 seconds.

AC INFINITY PRODUCTS

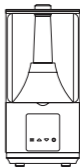
CONTROLLER 69 PRO

The CONTROLLER 69 PRO is the centerpiece of the UIS platform, able to connect with our smart devices including fans and LED grow lights to create the optimal growing environment. Connects with up to four devices to provide independent programming while capable of dynamically adjusting fan speed and brightness intensity levels in response to temperature, humidity, and VPD levels.



Humidifiers

The CLOUDFORGE series is a line of humidifiers designed to produce optimal humidity levels for successful plant growth. Features 10 intensity levels, humidity and VPD triggers, timer programming, and more. Includes a corded sensor probe for up-to-the-minute readings and tubing for targeted vapor distribution.



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.



Discover the latest innovations in environmental controls
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.

Contact our dealers department at 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 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!

COPYRIGHT © 2024 AC INFINITY INC. ALL RIGHTS RESERVED

No part of the materials including graphics or logos available in this booklet may be copied, photocopied, reproduced, translated or reduced to any electronic medium or machine readable form, in whole or in part, without specific permission from AC Infinity Inc.

www.acinfinity.com