ARCAN ATHERM9V

ARCAN ATHERM9V Infrared Thermometer User Manual

Model: ATHERM9V

1. Introduction

This manual provides comprehensive instructions for the safe and effective use of the ARCAN ATHERM9V 9-Volt Battery Powered Infrared Thermometer. Please read this manual thoroughly before operating the device and retain it for future reference. Understanding the proper operation and safety guidelines will ensure accurate measurements and prolong the life of your thermometer.

2. Safety Information

Always observe the following safety precautions to prevent injury to yourself or others, and to avoid damage to the device.

- **Laser Safety:** Do not point the laser directly at eyes or indirectly off highly reflective surfaces. The laser is for targeting purposes only.
- **Environmental Conditions:** Do not use the thermometer near explosive gas, vapor, or dust. Operate in a well-ventilated area.
- **Intended Use:** This device is designed for non-contact surface temperature measurement. It is not intended for medical use or measuring body temperature.
- **Children:** Keep the device out of reach of children.
- **Battery Disposal:** Dispose of used batteries properly according to local regulations. Do not incinerate batteries.
- **Material Warning:** This product may contain phthalates, as indicated by Proposition 65 warnings. Avoid prolonged skin contact with the device's plastic housing.

3. Product Overview

The ARCAN ATHERM9V is a portable, 9-volt battery-powered infrared thermometer designed for non-contact surface temperature measurement. It features a clear digital display and a laser pointer for precise targeting.

3.1 Components

- Infrared Sensor: Detects thermal radiation from surfaces.
- Laser Pointer: Assists in aiming at the target measurement area.
- Digital LCD Display: Shows temperature readings and other indicators.

- Measurement Trigger: Activates the device and initiates temperature measurement.
- Function Buttons: Control unit selection (°C/°F), display backlight, and laser on/off.
- Battery Compartment: Houses the 9V battery.



A full view of the ARCAN ATHERM9V infrared thermometer, showcasing its ergonomic design with a black body and lime green accents on

the handle and sensor head.

4. Setup

4.1 Battery Installation

The ARCAN ATHERM9V requires one 9V battery for operation, which is included with the device.

1. Locate the battery compartment on the handle of the thermometer.
2. Gently slide or open the battery compartment cover.
3. Insert one 9V battery, ensuring that the positive (+) and negative (-) terminals align correctly with the markings inside the compartment.
4. Close the battery compartment cover securely until it clicks into place.

5. Operating Instructions

5.1 Powering On and Off

The thermometer powers on automatically when the measurement trigger is pressed. To conserve battery life, the device will power off automatically after a period of inactivity (typically 15-20 seconds).

5.2 Taking a Measurement

1. Point the infrared sensor towards the target surface you wish to measure.
2. Press and hold the measurement trigger. The laser pointer will activate (if enabled) to assist with targeting the exact spot.
3. The temperature reading will appear on the digital display instantly.
4. Release the trigger to hold the last measured temperature on the display for approximately 15 seconds before automatic shutdown.



A hand holding the ARCAN ATHERM9V infrared thermometer, pointing its sensor towards a car's air vent to demonstrate non-contact temperature measurement.

5.3 Unit Selection (Celsius/Fahrenheit)

To switch between Celsius (°C) and Fahrenheit (°F) temperature units, press the dedicated "°C/°F" button located below the display.



A close-up view of the ARCAN ATHERM9V thermometer's digital display showing a temperature reading, and the three control buttons below it, including the °C/°F button.

5.4 Backlight Control

Press the backlight button (often indicated by a light bulb icon) to toggle the display backlight on or off. This feature improves visibility of the display in low-light conditions.

5.5 Laser Pointer Control

Press the laser button (often indicated by a triangle icon) to turn the laser pointer on or off. Use the laser for precise targeting, but always adhere to laser safety guidelines.



The ARCAN ATHERM9V infrared thermometer held by a hand, with its digital screen clearly showing a temperature reading of 82 degrees. The control buttons are visible below the screen.

5.6 Emissivity

The ARCAN ATHERM9V has a fixed emissivity setting of 0.95. This setting is suitable for measuring the temperature of most organic materials, painted surfaces, and many non-metallic objects. For highly reflective surfaces (e.g., polished metals), readings may be less accurate. To obtain more accurate readings on such surfaces, apply a piece of non-reflective tape (e.g., masking tape) to the surface and measure the temperature of the tape.



A detailed view of the ARCAN ATHERM9V thermometer's infrared sensor opening, highlighting the component responsible for non-contact temperature detection.

5.7 Distance to Spot Ratio (D:S)

The device has a 12:1 distance to spot ratio. This means that at a distance of 12 inches from the target, the measurement area (spot) will be approximately 1 inch in diameter. To ensure accurate readings, make sure the target area you are measuring is larger than the spot size. As you move further away from the target, the measurement spot size increases.

6. Maintenance

6.1 Cleaning

To clean the thermometer, wipe the exterior with a soft, damp cloth. Do not use abrasive cleaners, solvents, or immerse the device in water. Keep the infrared lens clean and free of dust or debris, as a dirty lens can affect measurement accuracy.

6.2 Storage

Store the ARCAN ATHERM9V in a dry, cool place away from direct sunlight, extreme temperatures, and high humidity. If the device will not be used for an extended period, it is recommended to remove the 9V battery to prevent leakage and potential damage.

7. Troubleshooting

If you encounter issues with your ARCAN ATHERM9V thermometer, refer to the following troubleshooting guide:

7.1 No Display / Device Not Turning On

- Check battery installation: Ensure the 9V battery is inserted correctly with the proper polarity.
- Replace battery: If the battery is old or depleted, replace it with a fresh 9V battery.

7.2 Inaccurate Readings

- **Temperature Range:** Verify that the target surface temperature is within the device's specified operating range (-50°C to 380°C / -58°F to 716°F).
- **Distance to Spot Ratio:** Ensure the target area is larger than the measurement spot size for the given distance.
- **Clean Lens:** Clean the infrared lens if it appears dirty or smudged.
- **Emissivity:** Remember the fixed emissivity of 0.95. Highly reflective surfaces may require a piece of non-reflective tape for more accurate measurements.
- **Temperature Stabilization:** If the thermometer has been moved from a significantly different temperature environment, allow it to stabilize to the ambient temperature for approximately 30 minutes before taking critical measurements.

7.3 Laser Not Working

- **Laser Enabled:** Check if the laser function is enabled by pressing the laser button.
- **Battery Power:** Ensure the 9V battery has sufficient power. Replace if necessary.

8. Specifications

Feature	Specification
Model	ATHERM9V
Temperature Range	-50°C to 380°C (-58°F to 716°F)
Accuracy	±2% or 2°C (±3.6°F)
Response Time	0.5 seconds
Emissivity	Fixed 0.95
Distance to Spot Ratio (D:S)	12:1
Power Source	1 x 9V Battery (included)
Display Type	Digital LCD with Backlight
Special Feature	High Accuracy, Laser Pointer
Dimensions (Length)	Approximately 6 Inches

Feature	Specification
Weight	Approximately 8.4 ounces
Outer Material	Plastic
Connectivity Technology	Infrared
UPC	613364229279

9. Warranty Information

The ARCAN ATHERM9V Infrared Thermometer comes with a 1-year limited warranty from the date of purchase. This warranty covers defects in materials and workmanship under normal use. It does not cover damage resulting from misuse, abuse, accidents, unauthorized repairs, or normal wear and tear.
For warranty claims or service, please retain your proof of purchase and contact ARCAN customer support.

10. Customer Support

For technical assistance, troubleshooting, or general inquiries regarding your ARCAN ATHERM9V Infrared Thermometer, please visit the official ARCAN website or contact their customer service department.
You can also find more information and support by visiting the ARCAN Store on Amazon:
Visit the ARCAN Store on Amazon

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Example: How do I reset this device or fix this error?

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