INSTRUCTION MANUAL

"TruTemp" Infrared Thermometer

INTRODUCTION

Thank you for purchasing the ProTek R/C TruTemp Infrared Thermometer. This is a non-contact infrared thermometer specifically designed for use with R/C engines, motors, battery packs, battery chargers, electronic speed controllers and hundreds of other applications.

To use, simply aim the infrared thermometer at the target and press the measurement button to quickly and easily display the surface temperature.

FEATURES

- High-speed and high-accuracy infrared sensor
- Four modes: Quick Mode / Scan Mode / Max. Value / Min. Value
- Fahrenheit and Celsius scale selectable
- Test temperatures from -40°F – 716°F (-40°C – 380°C)
- Adjustable infrared emissivity coefficient
- Large easy-to-read LCD display, with backlight
- Minimal battery consumption with 2 × "AAA" batteries
- 1 minute auto-off timer conserves battery life

MEASURING TEMPERATURES

Your ProTek R/C TruTemp Infrared Thermometer is equipped with four modes of measurement. Select the appropriate mode for your application and follow the instructions below.

1) QUICK MODE

Press the "MEASURE" button once for an instantaneous temperature reading to be shown on the screen.

2) SCAN MODE

Move the aluminum cup as close to the target as possible. Now press and hold the "MEASURE" button to read temperatures continually. The temperature on screen will be updated continually. Releasing the "MEASURE" button will cause the last reading to remain locked on the screen.

MINIMUM & MAXIMUM TEMPERATURE MODE

This thermometer can temporarily store maximum or minimum temperatures. Turn the unit on by pressing the "MEASURE" button. Then, press the "MODE" button once for the maximum function or twice for the minimum. The appropriate MAX or MIN icon will display on the screen.

3) MAXIMUM TEMPERATURE MODE

Point the aluminum cup to the object being measured and press and hold the "MEASURE" button. The thermometer will lock onto and display the hottest (i.e., MAX) temperature measured while pressing the "MEASURE" button.

4) MINIMUM TEMPERATURE MODE

Point the aluminum cup to the object being measured and press and hold the "MEASURE" button. The thermometer will lock onto and display the coolest (i.e., MIN) temperature measured while pressing the "MEASURE" button.

GENERAL OPERATION

1) BATTERY INSTALLATION

This thermometer is powered by two "AAA" batteries. Batteries are not included. To install the batteries, place your thumbs on the battery compartment cover, push down and slide to remove.

2) BATTERY REPLACEMENT

When the battery power indicator displays a low reading, you should replace the batteries immediately; low battery power can affect the accuracy of measurement.

3) TARGET PROXIMITY

Best temperature measurements are made when the aluminum cup is in direct contact with the target. In this case, the field-of-view from the infrared sensors becomes fully focused on the target. The further away the aluminum cup is from the target, the less focused the sensors become.

4) CHANGING UNIT MEASUREMENT

Turn on the device by pressing the "MEASURE" button. Then simply press the "°F/°C" button, and the unit of measure shown on the screen will change from Fahrenheit to Celsius and vice versa.

5) CHANGING EMISSIVITY COEFFICIENT VALUE

The emissivity of a material (usually written "ε") is the relative ability of its surface to emit energy by radiation. It is the ratio of energy radiated by a particular material to energy radiated by a black body at the same temperature. Different types of materials have different emissivity values.

EMISSIVITY COEFFICIENTS OF COMMON R/C MATERIALS

Surface Material	Emissivity Coefficient
Aluminum Anodized	0.77
Plastics	0.91
Rubber, Hard Glossy Plate	0.94
Carbon Pressed Filled Surface	0.98

In general, if you are not comfortable changing the emissivity value, it is best NOT to change it. The default emissivity value is 0.95, which will provide accurate temperature measurements for most materials.

To change the emissivity setting, first turn on the thermometer by pressing the "MEASURE" button, and hold "MODE" + "°F/°C" buttons simultaneously. The emissivity value on the screen will blink. Push the "MODE" button to increase emissivity value and push "°F/°C" button to decrease emissivity value.

SPECIFICATIONS

POWER SOURCE: 2 × "AAA" Batteries (not included)
OPERATING CURRENT: ≤ 40mA @ 2.0V
OPERATING TEMPERATURE: 32°F - 104°F (0°C - 40°C)
CURRENT DRAIN: ≤ 25ua @ 3V
TEMPERATURE RANGE TOLERANCE:
-40°F–32°F = ±1.8°F (-40°C–0°C = ±1°C)
32°F–140°F = ±0.9°F (0°C–60°C = ±0.5°C)
140°F–248°F = ±1.8°F (60°C–120°C = ±1°C)
248°F–356°F = ±3.6°F (120°C–180°C = ±2°C)
356°F–464°F = ±5.4°F (180°C–240°C = ±3°C)
464°F–680°F = ±7.2°F (240°C–360°C = ±4°C)

ADJUSTABLE RANGE FOR INFRARED EMISSIVITY COEFFICIENT: 0.01–1
DIMENSIONS: 121 × 40 × 39.6mm (4.8 × 1.6 × 1.6in)
Weight: 75g (2.6oz)

WARRANTY & SERVICE

ProTek R/C guarantees this item to be free of defects in materials and workmanship for 90 days after original purchase date. Warranty will not cover items that have been modified, disassembled, or otherwise misused according to the item's instructions. Proof of purchase is required to submit a warranty claim. ProTek R/C is not responsible for bodily injury and/or property damage that may occur from the use of, or caused by, this item.