

# OPERATING INSTRUCTIONS



**DT40**  
DIGITAL  
THERMOMETER



**Universal Enterprises, Inc.**

## Special Functions

- F/C:** This button switches the readings between °F and °C.
- 1°/0.1°:** This button switches the displayed resolution between 1° and 0.1° increments.
- MIN/MAX:** When depressed, the display will read the minimum reading recorded for the probe displayed. When pressed again, the display will read the maximum reading recorded for the probe displayed. To return the DT40 to normal operation, press the "MIN/MAX" button until the MIN and MAX enunciators turn off.
- REC:** When depressed, "REC" will appear on the display and the meter will begin to record temperatures for the probe displayed. To return the DT40 to normal operation, press the "REC" button until the REC enunciator turns off.
- D-H:** This button holds the measurement on the display until pressed again.

*NOTE: This function does not work while in "MIN/MAX" function.*

### DISPLAY ENUNCIATORS

The left and right sides of the display indicate the operational modes of the instrument (°F, °C, T1-T4, T1-T2, BAT, D-H, MIN/MAX, REC).

- LLLL:** This indicates that the temperature being measured is lower than the capability of the DT40.

**HHHH:** This indicates that the temperature being measured is higher than the capability of the DT40.

**OPEN:** This indicates that either there is no probe fitted in the temperature jack being measured, or the probe is damaged and needs to be replaced.

**BAT:** This indicates that the batteries are low and need to be replaced.

## Battery Replacement

The battery compartment is located on the backside of the instrument and is secured by two screws.

1. Remove the two screws from the battery cover and remove the cover.
2. Replace the old batteries with new 1.5V "AA" batteries observing polarity. (Refer to the polarity markings inside the battery compartment.)

## Cleaning Instructions

**NOTE:** This unit is not water proof. Do not immerse while cleaning. Clean with damp cloth. If the DT40 becomes wet inside during cleaning, rain, or condensation, high or unstable readings may result.

## Returning for Repair

Before returning your instrument for repair, please make a quick check to insure the failure is not due to a low or dead battery or a defective probe.

## Features

- Monitors temperatures in up to 4 zones.
- Calculates temperature differential between probes 1 and 2.
- Minimum/maximum temperature recording.
- Dual range °C/°F switchable.
- Resolution switchable between 0.1° and 1.0° increments.
- Temperature range: -40° to 300°F (-40° to 150°C)
- Includes two 15 foot fast response probes and two pipe straps.
- Rubberized push button keypad.
- Self-contained ABS plastic casing with carrying handle and neck strap.
- Large probe storage compartment.
- Removable lid.
- Out of range indication.
- Open probe indication.
- Operates on six 1.5V AA batteries.
- Low battery indication.
- Auto power off after 30 minutes.

## Specifications

**Temp. Ranges:** -40° to 300°F / -40° to 150°C

**Accuracy:** From 32° to 160°F (0° to 70°C):  
±1.0°F (0.5°C), ±1 LSD

Outside 32° to 160°F:  
2.0°F (±1.0°C), ±1 LSD

**Resolution:** 0.1° or 1.0° selectable

# Measuring Temperature

## A. Single probe temperature measurement

1. Insert probe into temperature jack T1 on the front of the instrument.
2. Turn power on by pressing the "ON/OFF" button. (At this time the DT40 will go through a self test routine to ensure that all segments of the LCD are operating.)
3. The DT40 will now show the temperature of T1 on the display. If readings from probe T2 to T4 are desired, insert the probe(s) into the desired jacks and press the "T1-T4" button until desired probe is displayed on the LCD.
4. To turn the DT40 off, press the "ON/OFF" button again.

## B. Differential temperature measurement

1. Insert probes into jacks T1 and T2
2. Turn power on by pressing the "ON/OFF" button.
3. Press the "T1-T2" button. The DT40 will now show the difference of temperature between input jacks T1 and T2.
4. To turn the DT40 off, press the "ON/OFF" button again.

## C. MIN/MAX temperature measurement

1. Insert probe(s) into test jacks.
2. Turn power on by pressing the "ON/OFF" button.
3. Press the "REC" button to start recording minimum and maximum temperatures.

Reading minimum and maximum temperatures:

1. Select the probe to be measured with the "T1-T4" button.
2. Press the "MIN/MAX" button once for the minimum temperature measured and press the button again for the maximum temperature measured.
3. To return to normal temperature measurement, press the "MIN/MAX" and "REC" buttons until the MIN, MAX and REC enunciators turn off.
4. To clear the MIN/MAX memory, turn the instrument off and then back on.

- NOTE : If recording for periods longer than 30 minutes hold down the D-H key while turning the instrument on.

This will disable the autpower off feature.



# Five Year Limited Warranty

This product is warranted to the purchaser against defects in material and workmanship for five years from the date of purchase.

**WHAT IS COVERED:** Repair parts and labor or replacement of parts or meter at the company's option. Transportation charges to the purchaser.

**WHAT IS NOT COVERED:** Transportation charges to the company. Damages from abuse or improper maintenance, see operating instructions. Any other expense, consequential damages, incidental damages, or incidental expenses, including damages to property. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

**HOW TO OBTAIN WARRANTY PERFORMANCE:** Attach your name, address, description of problem, phone number, and proof of date of purchase to the product. Package and return to:

Service Center, Universal Enterprises, Inc.  
8030 SW Nimbus • Beaverton, OR 97008  
(503) 644-8723 • Fax: (503) 643-6322

**IMPLIED WARRANTIES:** Any implied warranties, including implied warranties of merchantability and fitness for a particular purpose, are limited in duration to five years from date of purchase. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

To the extent any provision of this warranty is prohibited by federal and state law and cannot be preempted, it shall not be applicable. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.