



INSIDE-OUTSIDE THERMOMETER WITH MIN/MAX MEMORY

USER'S MANUAL



DTR900

*Please read this manual carefully
and thoroughly before using this product.*

TABLE OF CONTENTS

Introduction	3 – 4
Key Features	4
What's In the Box	5
Product Overview	5 – 7
Setup Instructions	7 – 13
Activate the Unit	7 – 8
Choose Your Temperature Unit & Time and Date Format	9 – 10
Set the Time and Date	11 – 12
Extend and Secure the External Sensor Cable	13
Operating Instructions	14 – 16
Specifications	17
Maintenance Tips	18
Warranty Information	18 – 19
Return for Repair Policy	19 – 20

INTRODUCTION

Thank you for purchasing General Tools & Instruments' DTR900 Inside-Outside Thermometer with MIN/MAX Memory. Please read this user's manual carefully and thoroughly before using the product.

The DTR900 is an affordable instrument that is accurate enough ($\pm 1.8^{\circ}\text{F}$) for residential or office monitoring of indoor and remote temperatures. Its ability to store and recall two sets of maximum and minimum temperatures—one sensed by the display unit (installed indoors) and the other sensed by a probe at the end of a 6.5 ft. (2m) long cable—makes the DTR900 suitable for household use or for monitoring the temperature of a greenhouse or a food market's walk-in and reach-in refrigeration cases. In a food market, for example, the display unit could be mounted outside a refrigeration case and the external sensor could be placed inside the case. In such an installation, recalled time- and date-stamped minimum and maximum temperature readings

could help the market operator determine the impact of a power failure on the temperature of stored food.

The DTR comes in a box along with a non-detachable external sensor-tipped probe, one “AAA” battery and this user’s manual.

KEY FEATURES

- Simultaneously displays the time and inside and remote probe temperatures, or the time and date and the remote probe (outside) temperature
- Stores and recalls minimum and maximum inside and outside temperatures with time and date stamps
- Fast response
- Waterproof exterior probe cable is thin enough to fit under a window
- One switch selects °F or °C temperature unit and time and date format
- Mounts on a wall or a flat surface

WHAT'S IN THE BOX

The DTR900, including its non-detachable external temperature probe, is packaged in a box along with this user's manual. A single "AAA" battery with an activation tab is pre-installed in a compartment accessible from the rear of the unit.

PRODUCT OVERVIEW

Figure 1 shows the front of the DTR900. Note the three separate liquid-crystal displays within one window (callout 1), the bundled external cable and probe (callout 2) and the **MIN/MAX** (callout 3) and **IN/DATE** (callout 4) buttons.

Fig. 1. The DTR900 with its display window in "normal" configuration (showing the time and IN and OUT temperatures)

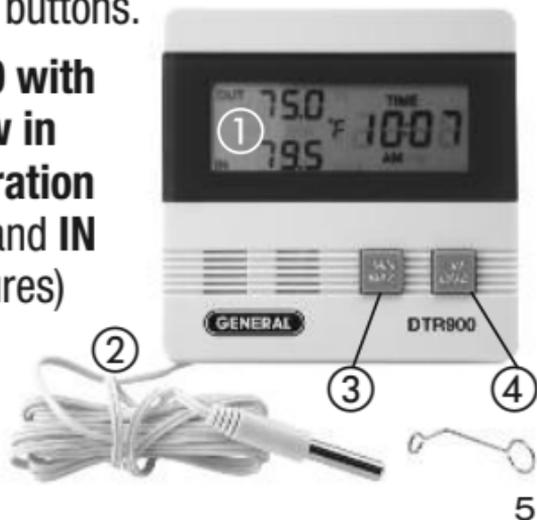


Fig. 2.
The back of
the DTR900
with the battery
compartment
closed

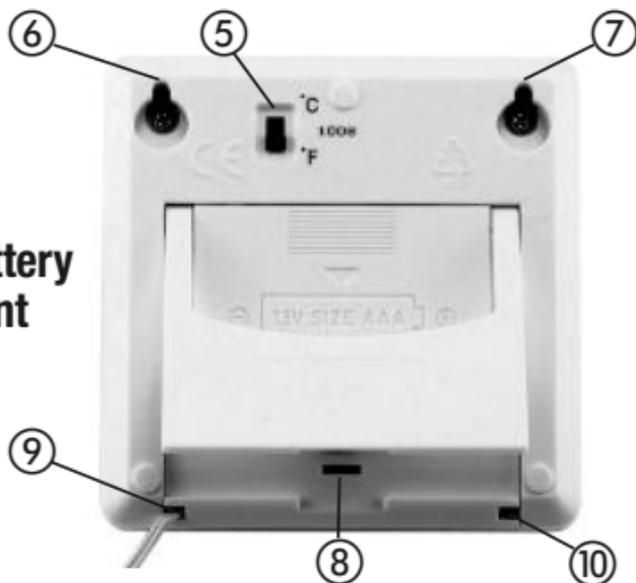


Figure 2 shows the back of the unit with the battery compartment closed. Note:

- The **°F/°C** switch (callout 5) at the top of the case.
- The two hanger holes (callouts 6 and 7) at the top corners of the case. Use these to wall-mount the unit.
- The rectangular recess (callout 8) near the bottom of the case. Use this recess to raise the unit's kickstand for mounting on a horizontal surface.

- The cutouts (callouts 9 and 10) on the bottom corners of the case, with the external probe cable threaded through the left cutout.

SETUP INSTRUCTIONS

ACTIVATE THE UNIT

To begin, remove the plastic film protecting the display. Holding the unit in your hand with the back facing you, open the battery compartment by pushing its cover down (in the direction of the arrow on it) and away from the unit. Remove the external sensor cable from the large well of the compartment so it hangs loosely below the unit, but do not remove the twist tie keeping the cable in a bundle.

Note from Fig. 3 that an “AAA” battery (callout 11) is already installed in the battery compartment. To extend the battery’s life and to protect the unit from possible battery leakage during storage, the unit ships with a plastic tab (callout 12) between the battery’s anode and the metal plate it connects

to on the right side of the unit (marked by a + sign). **This tab must be removed by the end user to activate the unit.**

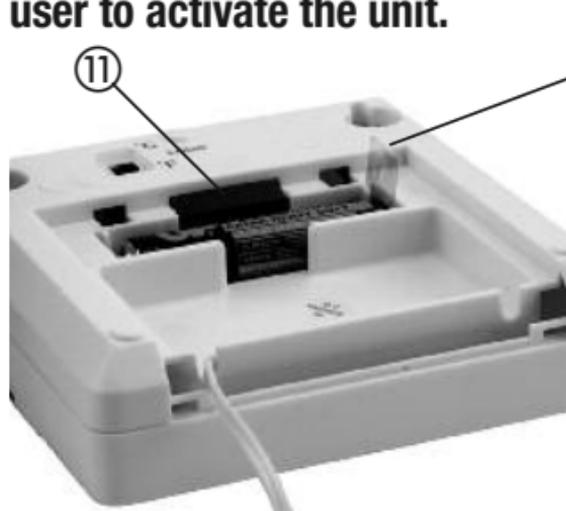


Fig. 3.
The back of the DTR900 with the battery compartment open

Before removing the activation tab, make sure you know the current date and have access to an accurate clock. Once you remove the tab (applying battery power to the unit), the **TIME** display at right will start flashing, indicating that it is waiting for an input. You will then have 15 seconds to begin setting the minutes field. You also will have 15 seconds to finish setting each of the three remaining fields (hour, month and day) in order. **If you allow any field to flash for more than**

15 seconds, the unit's software assumes that the displayed time and date are correct as shown, so it will stop the display from flashing and begin operating the unit in dual temperature display mode. Once the display has stopped flashing, you cannot set or adjust an individual time or date field. You must remove and reinstall the battery and reset all four fields in order.

CHOOSE YOUR TEMPERATURE UNIT & TIME AND DATE FORMAT

The position of the °F/°C switch on the back of the DTR900 (callout 5 of Fig. 2) determines more than just whether the unit displays temperatures in Fahrenheit (°F) or Celsius (°C) units. It also determines the format of displayed times and dates.

If the switch is in the °F position:

- The DTR900 uses a 12-hour clock and the **TIME** display indicates whether the reading is **AM** or **PM**. For example, pressing the **MIN/MAX** button

when the display is flashing “**11:XX AM**” advances the display to “**12:XX PM**”.

- The DTR900 will show the date in a “Month-Day” format (as in the U.S., China and Japan).

If the switch is in the **°C** position:

- The DTR900 uses a 24-hour clock (also called military or railway time). For example, pressing the **MIN/MAX** button when the **TIME** display is flashing “**12:XX**” advances the display to “**13:XX**”.
- The DTR900 will show the date in a “Day-Month” format (as in South America and most of Europe).

Move the **°F/°C** switch to the position you prefer. Then—if you are prepared to enter the time and date quickly—remove the tab between the battery’s + terminal and its connector. This activates the unit. You must then begin within 15 seconds to...

SET THE TIME AND DATE

Flip the unit over in your hand so its front faces you and note that the minutes field of the **TIME** display at right is flashing. Press the **MIN/MAX** button as many times as necessary to advance the minutes reading to the correct value. Then press the **IN/DATE** button to store the setting.

Note that storing the minutes setting causes the hour field of the **TIME** display to begin flashing. Without delay, press the **MIN/MAX** button as many times as necessary to advance the hour reading to the correct value (including **AM** or **PM** if you have chosen **°F** units). Then press the **IN/DATE** button to store the setting.

Immediately after the hour setting is stored, the month field of the **DATE** display at lower left will begin flashing. (If you have chosen **°F** units, the month field will be on the left; if you have chosen **°C** units, the month field will be on the right).

Without delay, press the **MIN/MAX** button as many times as necessary to advance the month to the correct value. Then press the **IN/DATE** button to store the setting.

Immediately after the month setting is stored, the day field of the **DATE** display will begin flashing. (The field will be on the right if you have chosen the °F setting, and on the left if you have chosen °C.) Without delay, press the **MIN/MAX** button as many times as necessary to advance the day to the correct value. Then press the **IN/DATE** button to store the setting. Once you have stored the day setting, the **OUT** display at upper left will automatically begin tracking temperature. Until you extend the external sensor cable (see the next section), the **OUT** display will track the inside temperature, as sensed by the DTR900 display unit's internal sensor.

Once you have set the time and date, flip the DTR900 over in your hand and carefully thread the external sensor cable first through the cutout on either side of the battery compartment cover, and then through the slot in the bottom of the well on the same side. Then snap the battery compartment cover back into place, first at the top and then at the bottom, squeezing the bottom of the unit's case to make the cover fit.

EXTEND AND SECURE THE EXTERNAL SENSOR CABLE

To complete setup, the metal tip of the external sensor cable must be placed in a different environment than the display if you wish to simultaneously monitor two different temperatures.

To install the sensor, remove the twist tie keeping the external sensor cable in a bundle. Then extend the cable under a window or through a hole in a wall or frame. Attached to the cable is an L-shaped piece of metal with loops at both ends. Detach this component from the cable and slip the larger loop over the white plastic cylinder that serves as a socket for the metal sensor. Secure the tip of the cable by placing a nail or screw through the smaller loop of the metal piece and attaching it to the frame or apron of a window or door or to an outside wall.

OPERATING INSTRUCTIONS

Once you have installed the external sensor cable, the DTR900 will monitor both inside (**IN**) and outside (**OUT**) temperatures. This display configuration—with **IN** and **OUT** temperatures shown on the left and the **TIME** shown at right—is the “normal” configuration, as shown in Fig. 1. To switch the **IN** display at lower left to display the current date (see Fig. 4), press the **IN/DATE** button. Use the **IN/DATE** button to toggle the display on the lower left between the inside temperature and the date.

Fig. 4. The DTR900 displaying the time, date and outside temperature



To recall time- and date-stamped maximum and minimum inside and outside temperatures, use the **MIN/MAX button as follows:**

- Press the **MIN/MAX** button once and the upper left display will show the maximum remote temperature measured since the battery was installed or the unit was reset (see below), indicated by the words **MAX** and **OUT**. The lower left and right displays will indicate the date and time when this maximum temperature occurred.

The three display readings will remain on-screen for



15 seconds. After 15 seconds, the three displays will return to the “normal” configuration.

- Press the **MIN/MAX** twice (within 15 seconds) and the upper left display will show the minimum remote temperature measured since the battery was installed or the unit was reset, indicated by the words **MIN** and **OUT**. The lower left and right displays will indicate the date and time when this minimum temperature occurred.



- Press the **MIN/MAX** button three times and the upper left display will show the maximum inside temperature measured since the battery was installed or the unit was reset, indicated by the words **MAX** and **IN**. The lower left and right display will indicate the date and time when this maximum temperature occurred.



- Press the **MIN/MAX** button four times and the upper left display will show the maximum inside temperature measured since the battery was installed or the unit was reset, indicated by the words **MIN** and **IN**. The lower left and right display will indicate the date and time when this minimum temperature occurred.



To reset (erase) stored maximum and minimum readings, press the **MIN/MAX** button and hold it for at least three seconds.

SPECIFICATIONS

Inside temperature range: 14° to 176°F
(-10° to 80°C)

Probe temperature range: -40° to 176°F
(-40° to 80°C)

Accuracy: ±1.8°F (±1°C)

Resolution: 0.9°F (0.5°C)

Probe length: 6.5 ft. (2m)

Display window size: 2.53(W) x 0.91(H) in.
(64.3 x 23.1mm)

Unit size: 3.5 x 3.5 x 1 in.
(88.9 x 88.9 x 25.4mm)

Unit weight: 3.76 oz. (106g)

Power source: 1 "AAA" battery

MAINTENANCE TIPS

Although the external sensor cable is waterproof, the display unit is NOT waterproof. Do not install the display unit outdoors.

To clean the display unit, wipe it gently with a dry or damp cloth. Avoid using chemical cleaners.

To replace the battery, refer to the Setup Instructions on page 7.

WARRANTY INFORMATION

General Tools & Instruments' (General's) DTR900 Inside-Outside Thermometer with MIN/MAX Memory is warranted to the original purchaser to be free from defects in material and workmanship for a period of one year. Subject to certain restrictions, General will repair or replace this instrument if, after examination, the company determines it to be defective in material or workmanship.

This warranty does not apply to damages that General determines to be from an attempted repair

by non-authorized personnel or misuse, alterations, normal wear and tear, or accidental damage. The defective unit must be returned to General Tools & Instruments or to a General-authorized service center, freight prepaid and insured.

Acceptance of the exclusive repair and replacement remedies described herein is a condition of the contract for purchase of this product. In no event shall General be liable for any incidental, special, consequential or punitive damages, or for any cost, attorneys' fees, expenses, or losses alleged to be a consequence of any damage due to failure of, or defect in any product including, but not limited to, any claims for loss of profits.

RETURN FOR REPAIR POLICY

Every effort has been made to provide you with a reliable product of superior quality. However, in the event your instrument requires repair, please contact our Customer Service to obtain an RGA (Return Goods Authorization) number before forwarding the unit via prepaid freight to the attention of our Service Center at this address:

General Tools & Instruments
80 White Street • New York, NY 10013
212-431-6100

Remember to include a copy of your proof of purchase, your return address, and your phone number and/or e-mail address.



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