



ThermoProbe, Inc.

Model TL-1A USER MAINTENANCE

Recommended Operation:

The latest TL-1A is a newly designed version of our successful original TL-1. The TL-1A thermometer is intended to be used anywhere a precision glass stem thermometer or other type thermometer may be used.

Arrows:

The Arrows on the left side of the screen will show you at a glance as to whether the reading is increasing, decreasing or has stabilized. Intuitively the *Up Arrow* symbolizes an increasing temperature, *Down Arrow* a decreasing temperature and no arrows a stabilized status.

Low Battery:

The instrument will display a warning "Lo BAAtt" if the battery needs to be changed.

Battery Replacement Procedure:

Ensure that the instrument is off. With a small flat object move the plastic tab that is over the edge of the battery. Once the tab is moved back the battery will lift upward for removal. Avoid bending the battery terminal. Note battery polarity before inserting a new battery into the holder. (+ Positive side faces top clip)

Auto-Off:

The unit will turn off automatically in 20 minutes if no buttons are pressed.

Disable Auto-off:

Holding the "On/Off" button for four seconds will disable the Auto-Off feature, "Conn" will flash on momentarily then the up and down arrows will be constantly lit, but all other functions (Min /Max/Average) will remain operational. Holding the "On/Off" button again for four seconds will return the unit to normal operation.

Calibration:

Calibration service is available from ThermoProbe Inc. and authorized distributors. Call ThermoProbe for requirements if you wish to do onsite calibration.

Serial Link (optional):

On models equipped with a serial link, 3 momentary presses of the On/Off button within 2 seconds will turn on the serial link. "Conn" will momentarily flash on the screen when this feature is chosen. It is assumed that the instrument will be logging data to a PC or Palm PDA and the Auto-Off feature will be disabled. Manually turning off the TL-1A will disconnect the link.

Authorized Repair:

It is recommended that service beyond the scope of this article be presented to ThermoProbe, Inc. or one of its authorized distributors.

On/Off button used to access the following operations:



- Single press turns instrument On or Off
- Hold for 4 seconds to disable Auto-Off feature

Function button used to access the following operations:



- **Lowest Reading (min),**
- **Highest Reading (max)**
- **Average Reading**
- °F <-> °C
- **Change display resolution**

Operation	Function (f)	Annunciator
One quick push	Lowest Reading (min)	"L"
	Average Reading	"A"
	Highest Reading (max)	"H"
Hold and Release when display reads "C-F"	°F <-> °C	"C-F"
Hold and Release when display reads "dEC"	0.X <-> 0.XX	"dEC"

Note: As soon as the TL-1A is turned on, the minimum, maximum and average data is continuously updated.

Error Codes:

Two error codes have been established to provide the user information concerning the temperature sensor.

- *Err Lo - Short Circuit or Under Range*
- *Err Hi - Open Circuit or Over Range*

"Err Lo" - When this happens, one of two situations exists. In normal operation this represents a below range reading. The temperature being read is below the measurable specified range. If the sensor is not exposed to temperatures below the specified operating range it is possible that the sensor or the connection to the circuit board is short-circuited. Moisture on the circuit board may cause this condition.

"Err Hi" - Represents an over range reading, meaning the temperature at the sensor has risen above the measurable specified limit of the unit. Another possibility for this reading is a discontinuity in the sensor circuit. This may occur as a result of a broken sensor wire at the circuit board or damaged sensor.



ThermoProbe, Inc.

112-A Jetport Drive
Pearl, MS 39208 USA
Voice: +1 601-939-1831
Fax: +1 601-355-1831
www.thermoprobe.net