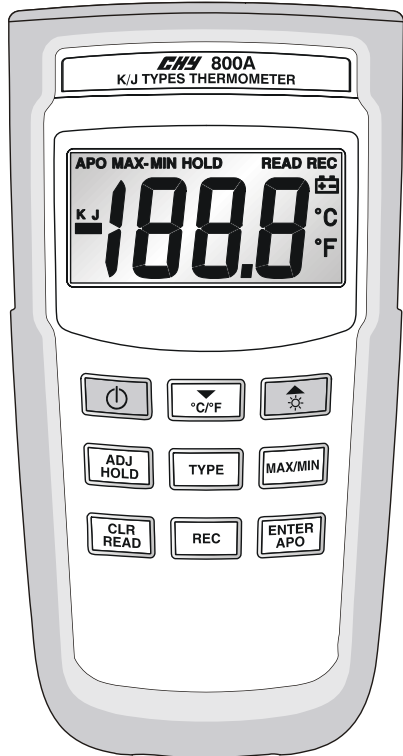


# OPERATING INSTRUCTIONS

## MODEL 800A

### K/J TYPES THERMOMETER



**WARNING**  
To avoid damage or burns, do not make temperature measurement in microwave ovens.

**CAUTION**  
Repeated sharp flexing can break the thermocouple leads. To prolong lead life, avoid sharp bends in the leads, especially near the connector.

## SPECIFICATIONS

### ELECTRICAL

**Temperature Scale:** Celsius or Fahrenheit user-selectable.

#### Measurement Range:

K-Type -100°C to 1372°C, -150°F to 1999°F

J-Type -100°C to 1200°C, -150°F to 1999°F

**Resolution:** 1 degree or 0.1 degree from -59.9 to 199.9 degree °C or °F (auto ranging).

**Accuracy:** Accuracy is specified for operating temperatures over the range of 18°C to 28°C (64°F to 82°F), for 1 year, not including thermocouple error.

±(0.1%rdg + 1°C) on °C

±(0.1%rdg + 2°F) on °F

**Temperature Coefficient:** 0.1 times the applicable accuracy specification per °C from 0°C to 18°C and 28°C to 50°C (32°F to 64°F and 82°F to 122°F).

**Input Protection:** 24V dc or 24V ac rms maximum input voltage on any combination of input pins.

**Input Connector:** Accepts standard miniature thermocouple connectors (flat blades spaced 7.9mm, center to center).

### ENVIRONMENTAL

#### Ambient Operating Ranges:

0°C to 50°C (32°F to 122°F) <80% R.H.

#### Storage Temperature:

-20°C to 60°C (-4°F to 140°F) <70% R.H.

### GENERAL

**Display:** 3½ digit liquid crystal display (LCD) with maximum reading of 1999.

**Overload:** “-OL” is displayed.

**Auto Power Off:** Approximately 20 minutes.

**Battery:** 1.5V x 4 PCS (SIZE AAA) UM-4 R03.

**Battery Life:** 150 hours typical with carbon zinc battery.

**Reading Rate:** 2.5 times per second.


**Dimensions:** 160mm(H) x 83mm(W) x 38mm(D).

**Weight:** Approx. 230g including batteries.

**Supplied Wire:** 4 feet type “K” thermocouple bead wire (Teflon tape insulated). Maximum insulation temperature 200°C (392°F). Wire accuracy ±2.2°C or 0.75% of reading (whichever is greater) from 0°C to 800°C.

## OPERATING INSTRUCTIONS




### 1. “” Power Button

Press the “” key to turn on or off thermometer.

### 2. “/°C/°F” Button

Reading are displayed in either degrees Celsius(°C) or degrees Fahrenheit(°F). When the thermometer is turned on, it is set to the temperature scale that was in use when the thermometer was last turned off. To change the temperature scale, press the “°C/°F” button.

### 3. “/” Button

Press the “” key to turn on the Back-Light. Press the “” key again to make the Back-Light lighter and press “” key once more to cancel the Back-Light function.

Back-Light on → lighter → Back-Light off.

### 4. “ADJ/HOLD” Button

Press the “HOLD” key to enter the Data Hold mode, the “HOLD” annunciator is displayed at the higher center of display. When HOLD mode is selected, the thermometer held the present readings and stops all further measurements. Press the “HOLD” key again cancels HOLD mode, causing thermometer to resume taking measurements.


### 5. “TYPE” Button

Press “TYPE” key to select the type of sensor “K” or “J”.

### 6. “MAX/MIN” Button

Press “MAX/MIN” key to enter the MAX MIN recording mode. (Displays the Maximum reading, Minimum reading, “MAX-MIN” reading stored in recording mode).



Press “MAX/MIN” key to cycle through the MAX, MIN, MAX-MIN readings. In this mode, press “HOLD” key to stop recording, all values are frozen, press again to restart recording.

In this mode, the APO function and other keys is disabled, excluding “HOLD” and “” keys.

To prevent accidental loss of MAX, MIN and MAX-MIN, in this mode can only be cancelled by pressing and holding down the “MAX/MIN” key for 2 seconds to exit and erased recorded reading.

### 7. “CLR/READ” Button

Press “READ” key to enter READ Mode, the “READ” annunciator is displayed at upper-right corner.

Press “” or “” key to review the data you recorded. The LCD automatically scrolls data and index. Press “CLR” key and hold down for 2 seconds to clear the memory data.

### 8. “REC” Button



There are 125 data could be recorded into memory. Press “REC” key to record the data, press once to record another one till the memory is full. When the data is recorded, “REC” mark is displayed at the Upper-Right corner.

If the memory is full, data will not be recorded into the memory and “REC” mark will not be displayed. Data can be recorded after it is cleared.

### 9. “ENTER/APO” Button

Press “APO” key to trigger on or off APO (Automatic Power Off) mode and “APO” annunciator or will appear or disappear on the LCD. Power is automatically turned off, if no operation for a period of time, and “APO” annunciator is displayed at upper-left corner when APO function is enabled.

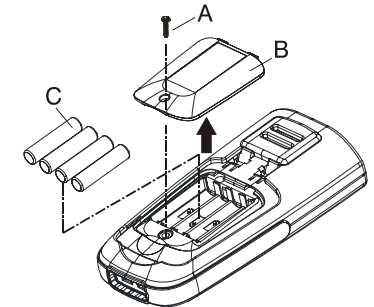
## ADJUST THERMOCOUPLE OFFSET

1. Insert the thermocouple into a known temperature (T) until the display equal to known temperature (T).  
exp: ice point at 0°C  
boiling water at 100°C
2. Press “” or “” to add or subtract the value.
3. It can be adjusted ±6°F(±3°C) of default. If you can't adjust your T/C, please check your T/C or send the 6meter to be calibrated.
4. Press “ENTER” key to confirm.


## MAINTENANCE

**WARNING**  
To avoid possible electrical shock, disconnect the thermocouple connectors from the thermometer before removing the cover.

### Installing and Replacing Battery



- A. Screw
- B. Battery Cover
- C. Battery

1. Power is supplied by 4pcs 1.5V (SIZE AAA) UM-4 R03.
2. The “” appears on the LCD display when replacement is needed. To replace battery remove screw from back of meter and lift off the battery cover.
3. Remove the battery from battery contacts and replace.
4. When not use for long time remove battery.
5. Don't keep in place with high Temp, or high humidity.

### Cleaning

Periodically wipe the case with a damp cloth and detergent, do not use abrasives or solvents.

## INTRODUCTION

This instrument is a portable 3½ digit, compact-sized digital thermometer designed to use external K-type and J-type thermocouple as temperature sensor. It also has the feature that sensor offset can be adjusted for in the field.

## SAFETY INFORMATION

It is recommended that you read the safety and operation instructions before using the thermometer.

**WARNING**  
To avoid electrical shock, do not use this instrument when working voltages at the measurement surface over 24V AC or DC.