Landtek MILA37300

Landtek 4-Channel K/J/T Type Thermocouple Thermometer Temperature Data Logger - Model MILA37300 User Manual

Your comprehensive guide to operating and maintaining your Landtek data logger.

1. Overview

The Landtek 4-Channel K/J/T Type Thermocouple Thermometer is a versatile temperature data logger designed for precise multi-point temperature monitoring. It features four input channels compatible with K, J, and T-type thermocouples, allowing simultaneous measurement. Key functionalities include data logging for up to 5000 groups internally, unlimited PC data logging via USB, selectable temperature units (°C/°F), Max/Min/Average value tracking, data hold, and an adjustable temperature compensation (ADJ) function. It also incorporates audible and visual alarms for critical temperature thresholds and an automatic power-off feature to conserve battery life.

2. Safety Information

- Always handle the device and probes with care.
- Do not expose the device to extreme temperatures, humidity, or direct sunlight.
- Ensure proper connection of thermocouples to avoid inaccurate readings or damage.
- Avoid using the device in environments with strong electromagnetic interference.
- Keep the device away from water or other liquids unless the probes are specifically designed for immersion.
- Replace batteries promptly when the low battery indicator appears to ensure continuous operation and data integrity.

3. Package Contents

Verify that all items are present in your package:

- 1 x Landtek 4-Channel Thermocouple Thermometer
- 4 x Type K Thermocouples
- 3 x AA Batteries
- 1 x USB Cable
- 1 x Carrying Case
- 1 x User Manual

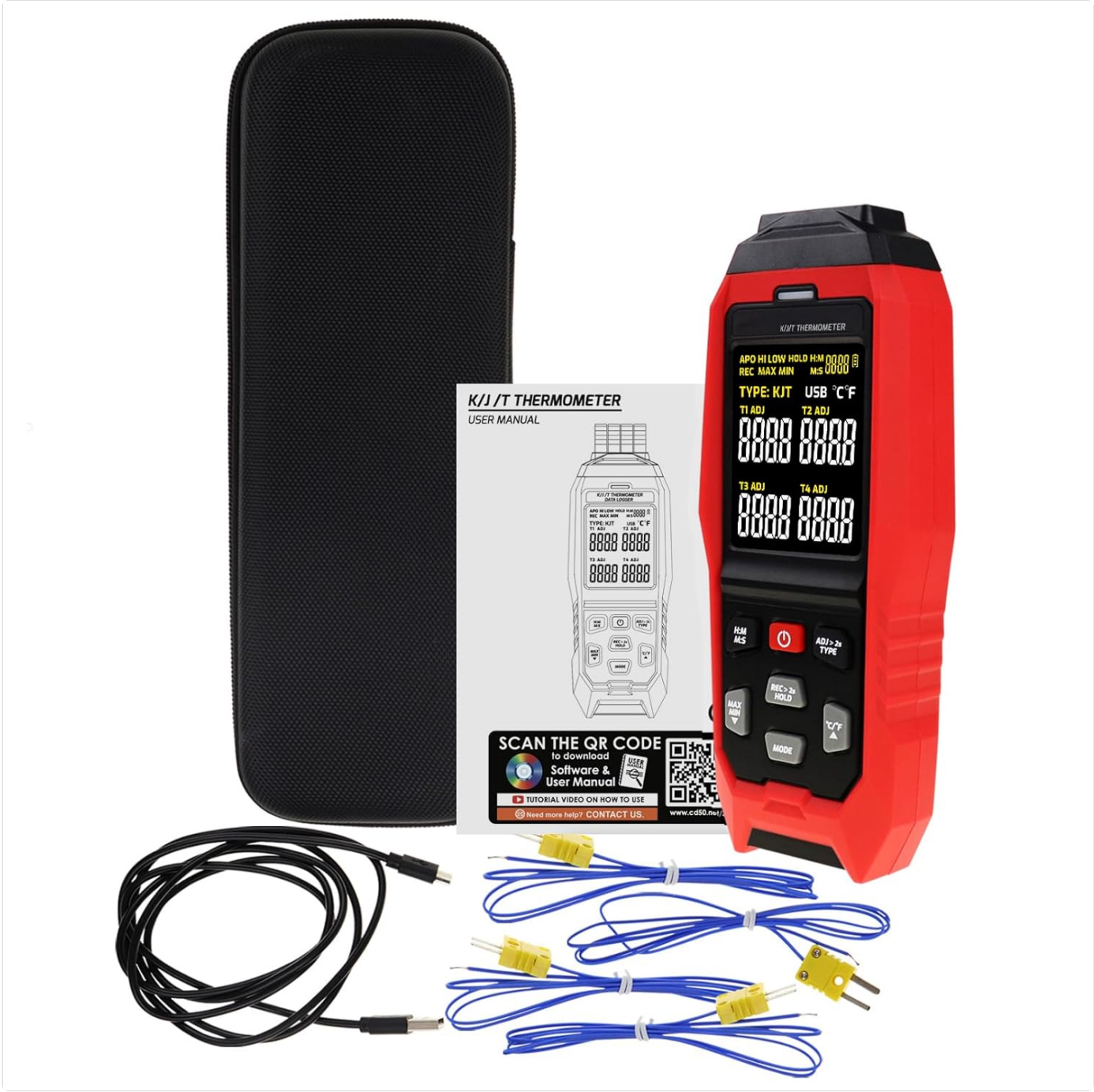

Figure 3.1: The complete package contents, including the thermometer, thermocouples, USB cable, and carrying case.

This image displays the complete package contents: the main thermometer unit, four K-type thermocouples, a USB cable for data transfer, and a protective carrying case. A user manual is also included.

4. Device Layout and Components

Familiarize yourself with the main components and controls of your thermometer.

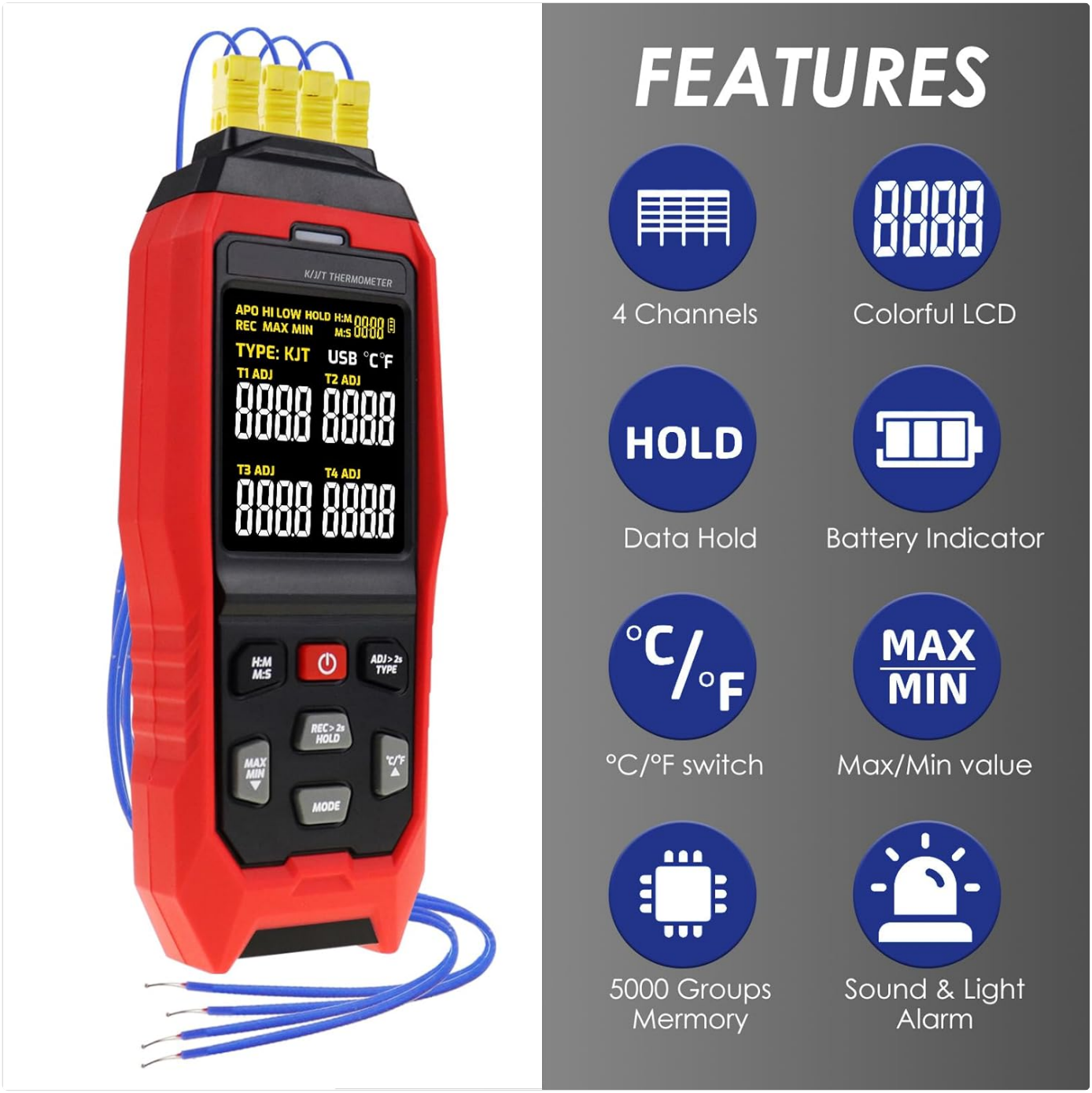

Figure 4.1: Front view highlighting key features and controls.

A visual representation of the thermometer's main features, such as its 4-channel capability, vibrant LCD, data hold function, battery level display, Celsius/Fahrenheit unit switching, maximum/minimum value tracking, 5000 data group memory, and integrated sound and light alarm indicators.

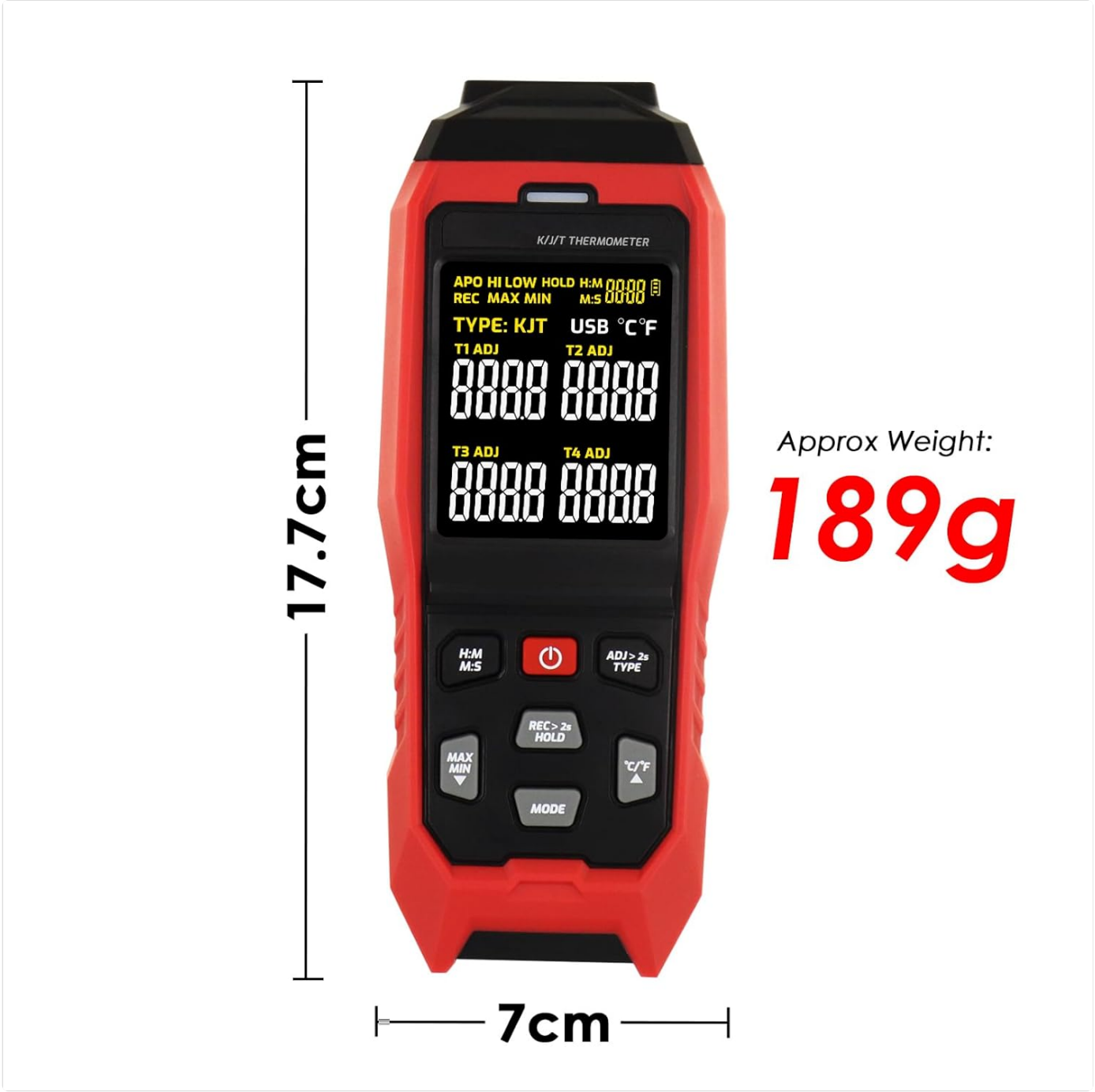

Figure 4.2: Device dimensions.

The physical dimensions of the thermometer are displayed, indicating a height of 17.7 cm and a width of 7 cm. Its approximate weight is 189 grams, making it a portable device.

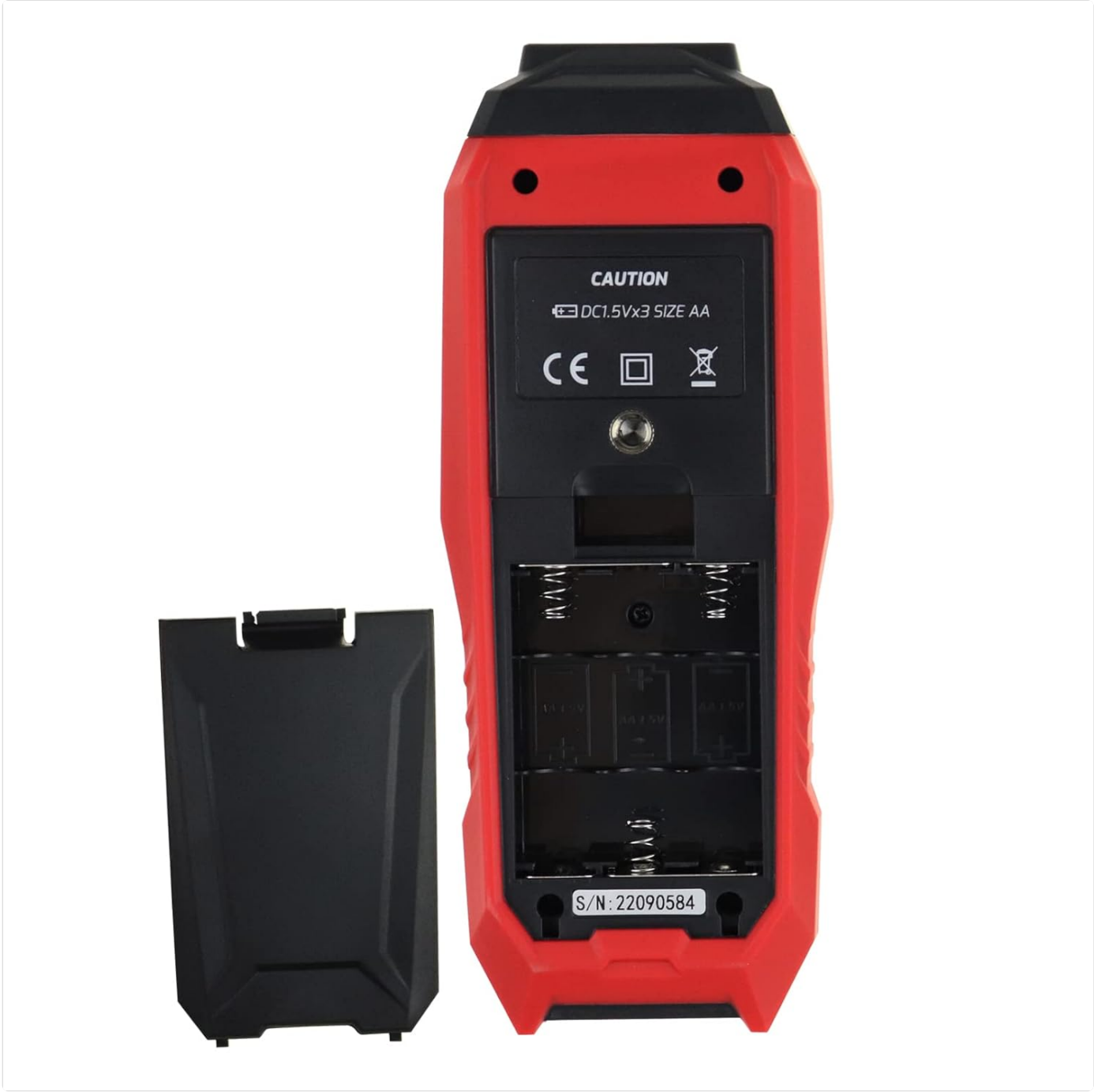

Figure 4.3: Rear view with battery compartment.

The back of the thermometer is shown with the battery cover removed, revealing the compartment designed for three AA batteries (DC 1.5V x 3).

5. Setup

5.1 Battery Installation

1. Open the battery compartment cover on the back of the device (refer to Figure 4.3).
2. Insert 3 AA batteries, ensuring correct polarity (+/-).
3. Close the battery compartment cover securely.

5.2 Connecting Thermocouples

1. Identify the four thermocouple input ports at the top of the device.
2. Plug the K-type, J-type, or T-type thermocouples into the desired channels (T1, T2, T3, T4). Ensure the plugs are inserted

firmly and with correct polarity.

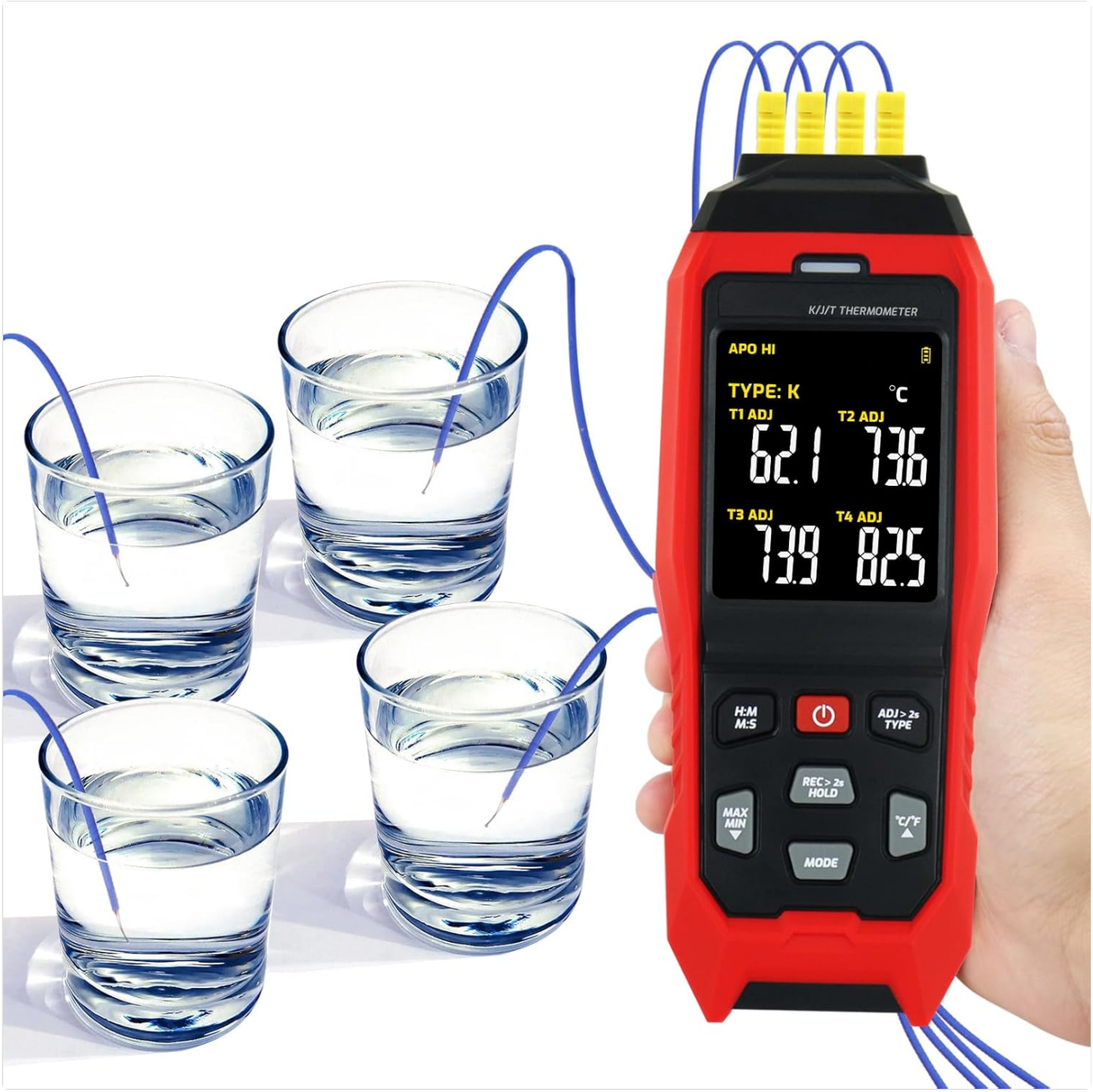

Figure 5.1: Thermocouples connected and measuring.

The Landtek 4-Channel Thermocouple Thermometer is shown in use, with four K-type thermocouples immersed in separate glasses of water, displaying individual temperature readings on its screen.

6. Basic Operation

6.1 Power On/Off

- Press the **Power** button to turn the device on.
- Press and hold the **Power** button to turn the device off.
- The device features an automatic power-off function to save battery. This can typically be disabled via the settings menu if continuous operation is required.

6.2 Temperature Unit Selection (°C/°F)

- Press the **°C/°F** button to toggle between Celsius and Fahrenheit temperature units.

6.3 Thermocouple Type Selection (K/J/T)

- Press the **ADJ > 2s TYPE** button to cycle through K, J, and T thermocouple types. Ensure the selected type matches the connected probes for accurate readings.

6.4 Max/Min/Average Functions

- Press the **MAX/MIN** button to display the maximum, minimum, and average temperature readings recorded during the current measurement session.

6.5 Data Hold

- Press the **REC > 2s HOLD** button briefly to freeze the current readings on the display. Press again to release and resume live readings.

7. Advanced Features

7.1 ADJ Temperature Compensation

The ADJ compensation function allows for fine-tuning temperature readings to minimize errors caused by thermocouple wire variations or environmental factors. The compensation range is from -9 to 9 °C (-16 to 48 °F).

- Access the ADJ compensation setting through the device's menu.
- Adjust the compensation value as needed to match a known reference temperature.

7.2 Alarm Settings

The thermometer features audible and visual alarms that activate when measured temperatures exceed user-defined high or low limits.

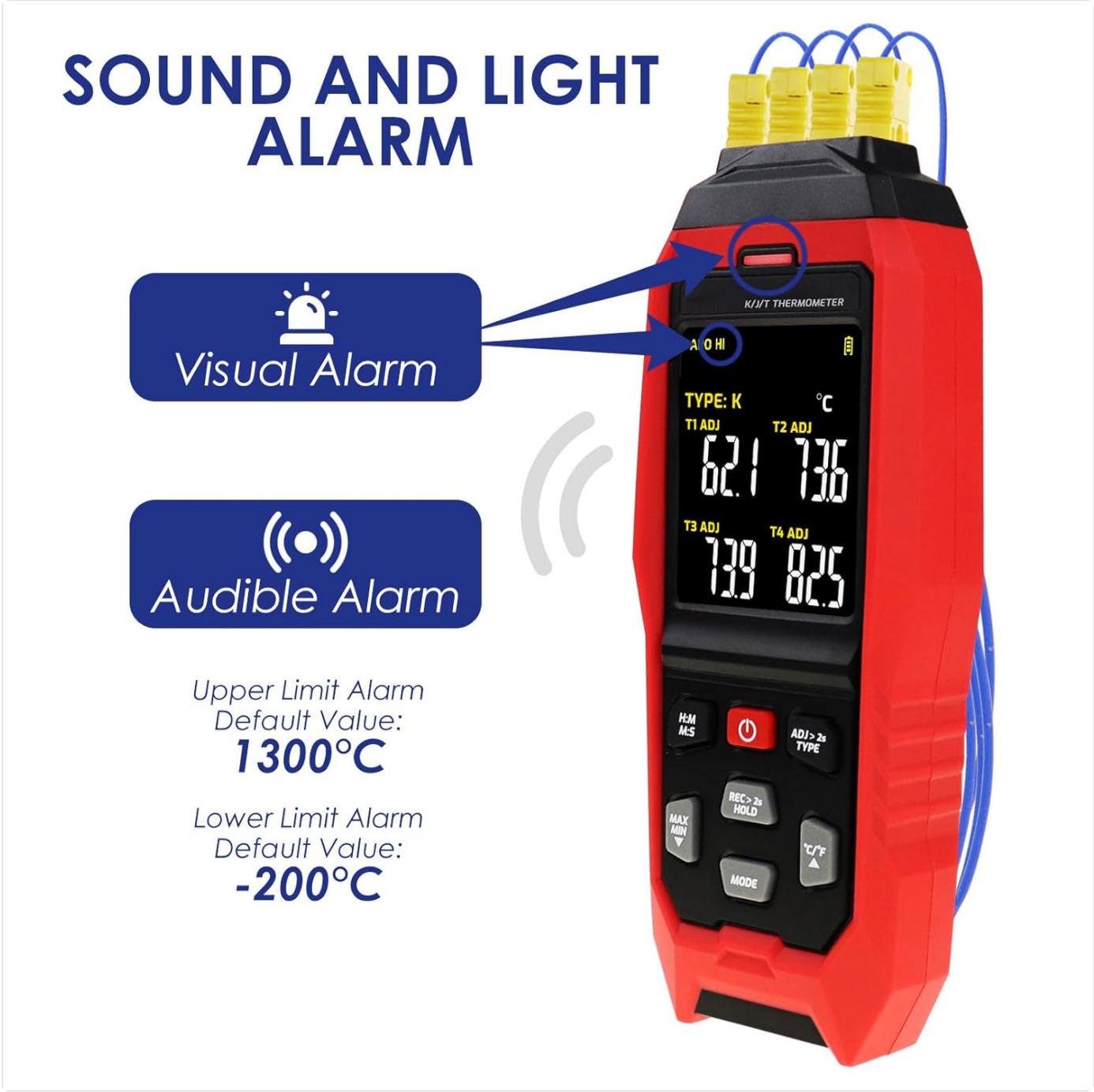

Figure 7.1: Visual and audible alarm indicators.

The thermometer's display highlights its visual and audible alarm features. The visual alarm is indicated by a flashing light, and the audible alarm provides a sound notification when temperature thresholds are exceeded. Default upper limit is 1300°C, lower limit is -200°C.

- Navigate to the alarm settings in the menu.
- Set the desired upper and lower temperature limits for each channel.
- When a limit is breached, the device will trigger a sound and/or a flashing light on the display.

8. Software and Data Export

The Landtek thermometer supports data logging and export to a PC for detailed analysis.

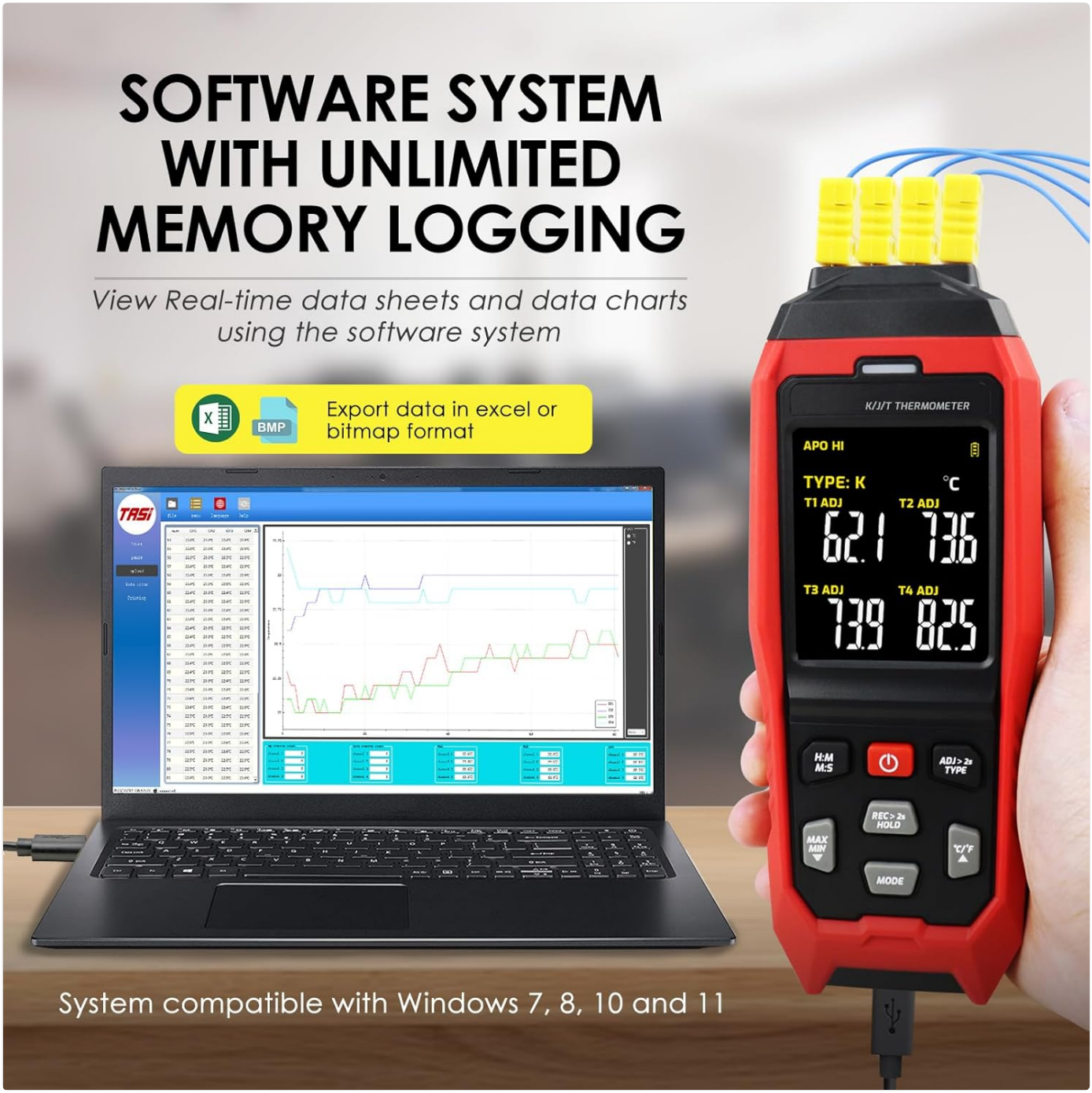

Figure 8.1: Real-time data logging via PC software.

This image illustrates the thermometer connected via USB to a laptop, showcasing the accompanying PC software for real-time data logging, analysis, and export in Excel or bitmap format. The software is compatible with Windows 7, 8, 10, and 11.

8.1 Internal Data Logging

- The device can record up to 5000 groups of programmable temperature data directly on the meter.
- Set the desired sampling rate (e.g., 1s, 2s, 5s, 10s, 30s, 60s, 1h) through the device's menu for internal logging.

8.2 PC Software and USB Export

- Connect the thermometer to a PC using the provided USB cable.
- Install the dedicated PC software (compatible with Windows 7, 8, 10, and 11 systems).
- The software allows for unlimited data logging, real-time display of data sheets and charts, and export of data in formats such as Excel or bitmap.

9. Applications

This thermometer is suitable for a wide range of temperature measurement tasks in various environments:

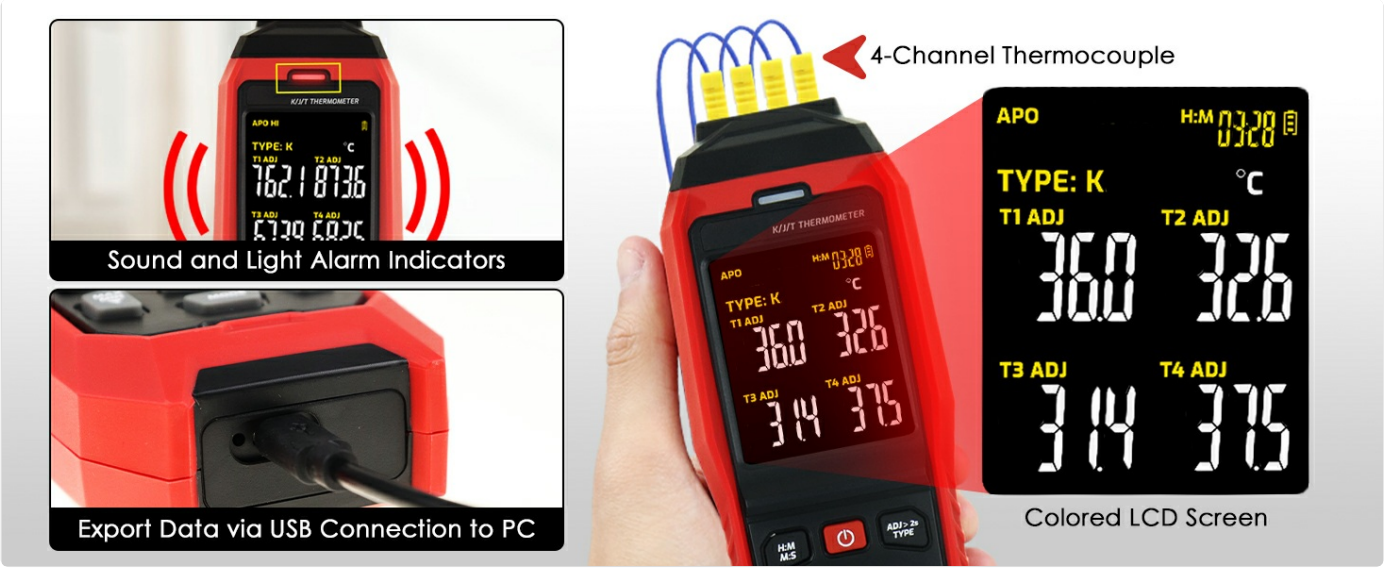

Figure 9.1: Diverse applications of the thermometer.

A collage illustrating the wide range of applications for this thermometer, such as temperature monitoring in industrial environments, furnaces, laboratories, pottery kilns, for drinking water, and in aquariums.

- **HVAC Systems:** For testing superheat or subcooling.
- **Industrial Processes:** Monitoring temperatures in manufacturing, furnaces, and other industrial settings.
- **Laboratories:** Precise temperature measurement for experiments and research.
- **Food & Beverage:** Checking temperatures in microwave ovens, refrigeration equipment, and for liquids like drinking water.
- **Aquariums:** Maintaining optimal water temperatures.

10. Maintenance

- **Cleaning:** Wipe the device exterior with a clean, damp cloth. Do not use abrasive cleaners or solvents.
- **Storage:** Store the thermometer in its carrying case in a cool, dry place when not in use. Remove batteries if storing for extended periods to prevent leakage.
- **Probe Care:** Inspect thermocouples regularly for damage. Replace worn or damaged probes to ensure accuracy.

11. Troubleshooting

If you encounter issues with your device, refer to the following common solutions:

- **No Power:** Check battery installation and ensure batteries are not depleted. Replace if necessary.
- **Inaccurate Readings:** Verify that the correct thermocouple type is selected in the device settings. Check probe connections and ensure probes are not damaged. Consider applying ADJ compensation if a known offset exists.
- **Data Logging Issues:** Ensure the device has sufficient internal memory or that the PC software is correctly installed and connected for unlimited logging. Check USB cable connection.
- **Software Connection Problems:** Confirm USB cable is securely connected to both the device and the PC. Ensure the correct drivers are installed for the PC software.

12. Specifications

Feature	Specification
Manufacturer	Landtek
Model Number	MILA37300
Item Weight	558 g
Parcel Dimensions	29.79 x 10.31 x 6.2 cm
Colour	Red
Style	4-Channels Portable Thermocouple Thermometer Type K J T
Power Source Type	Dual Power sources (3 x AA Battery, USB)
Measurement Accuracy (K-type)	-200~1372°C (-328~2501°F)
Measurement Accuracy (J-type)	-200~1200°C (-328~2192°F)
Measurement Accuracy (T-type)	-200~400°C (-328~752°F)
Included K-type Thermocouples Range	-50~300°C (-58~572°F)
Display Style	Digital LCD with Backlit
Data Logging Capacity	5000 groups (internal), Unlimited (PC software)
ADJ Compensation Range	-9~9°C (-16~48°F)
Special Features	High Accuracy, Dual Probe, Data Logger, Audible and Visible Alarm, Auto Power Off
Connectivity Technology	USB
Product Care Instructions	Wipe Clean
Certifications	CE, FCC, FDA

13. Instructional Videos

Thermocouple Thermometer Display Video

This video demonstrates the display and basic functions of the Landtek 4-Channel Thermocouple Thermometer, including K/J measurement with 4 channels, selectable temperature units (°C/°F), thermocouple type selection (K/J), real-time data logging via PC, and automatic power off. It also highlights the product's specifications.

Thermocouple Thermometer Data Logger 4 Channel

This video provides an overview of the Landtek 4-Channel Thermocouple Data Logger, showcasing its ability to log temperatures from four channels simultaneously. It emphasizes the device's wide measuring range, USB-C connectivity for data export without additional software, and the buzzer and LED alarm features. The video also details the specifications and

various applications like HVAC, microwave ovens, and refrigeration equipment.

4-Channel K-type Thermocouple Thermometer

This video demonstrates the Danoplus 4-Channel K-Type Thermocouple Thermometer, highlighting its clear LCD for easy readings, easy datalogging with an SD card (8GB included), and multiple channels for simultaneous measurements. It also shows the Max/Min/Hold functions and various applications such as HVAC, microwave ovens, laboratories, and aquariums. Detailed specifications are provided.

4 Channel K Type Thermometer Operation

This video demonstrates the operation of the TC602 4-Channel K-Type Thermocouple Thermometer. It shows how to plug in K-type thermocouples, navigate the menu display, set sensor types, adjust sound switch settings, configure logging parameters (start logging, sample rate, file format), and set alert limits for high and low temperatures. The video concludes by showing the device starting to log data with an alarm sound.

14. Warranty and Support

For warranty information, technical support, or service inquiries, please refer to the contact details provided with your purchase documentation or visit the official Landtek website. Keep your purchase receipt as proof of purchase for warranty claims.
For additional resources and software downloads, please visit: https://cd50.net/37/