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> UTi85A Digital Industry Infrared Thermal Imager User Manual

WnewTools UTi85A

UTi85A Digital Industry Infrared Thermal Imager User Manual

Model: UTi85A (CHU1879526) | Brand: WnewTools

1. INTRODUCTION

This user manual provides comprehensive instructions for the safe and effective operation, maintenance, and troubleshooting of your WnewTools UTi85A Digital Industry Infrared Thermal Imager. This device is designed for precise temperature measurement and real-time thermal imaging, suitable for various industrial and scientific applications. Please read this manual thoroughly before using the product.

2. SAFETY INFORMATION

Always observe the following safety precautions to prevent injury or damage to the device:

- Do not point the imager directly at the sun or other strong energy sources.
- Avoid exposing the device to extreme temperatures, humidity, or corrosive environments.
- Do not disassemble or modify the device. Refer all servicing to qualified personnel.
- Ensure the device is fully charged before use to avoid unexpected power loss during critical measurements.
- Keep the lens clean and free from dust or debris to ensure accurate readings.
- This device is rated IP65 for protection against dust and low-pressure water jets. However, avoid submerging it in water.

3. PRODUCT OVERVIEW

3.1 Components and Controls

The UTi85A thermal imager features a robust design with intuitive controls and a clear display for efficient operation.



Figure 3.1: Front view of the UTi85A Digital Industry Infrared Thermal Imager, showing the display screen and control buttons.



Figure 3.2: Close-up of the UTi85A's 2.8-inch TFT LCD display and navigation buttons, including Power, Set, and directional controls.



Figure 3.3: Top view of the UTi85A, highlighting the infrared lens and visible light camera (if applicable).



Figure 3.4: Side view of the UTi85A, showing the UNI-T PRO branding, model number UTi85A, and IP65 rating.



Figure 3.5: The UTi85A thermal imager shown with its retail packaging, user manual, Type-C charging cable, and micro TF storage card.

3.2 Package Contents

- UTi85A Digital Industry Infrared Thermal Imager
- Type-C USB Cable
- 16GB Micro TF Storage Card
- User Manual (this document)

4. SETUP

4.1 Charging the Battery

The UTi85A is equipped with a built-in 3.6V 5000mAh Li-ion rechargeable battery.

1. Connect the provided Type-C USB cable to the device's Type-C port.
2. Connect the other end of the USB cable to a standard USB power adapter (not included) or a computer's USB port.
3. The charging indicator on the device will show the charging status. A full charge provides up to 6 hours of battery life.

4.2 Inserting the Micro TF Card

The device comes with a 16GB micro TF storage card for saving captured images.

1. Locate the micro TF card slot on the device (refer to Product Overview for location).
2. Gently insert the micro TF card into the slot until it clicks into place. Ensure the card is oriented correctly.
3. To remove, gently push the card in until it springs out.

4.3 Tripod Mounting

For stable measurements, especially during prolonged use or when precise positioning is required, the UTi85A can be mounted on a tripod.

- Locate the 1/4" tripod mounting hole at the bottom of the handle.
- Screw the device onto a compatible tripod.

5. OPERATING INSTRUCTIONS

5.1 Powering On/Off

- To power on: Press and hold the Power button until the screen illuminates.
- To power off: Press and hold the Power button until the device shuts down.
- The device features an auto power-off function (selectable: 5min, 10min, 30min (default)).

5.2 Temperature Measurement Display

The 2.8-inch TFT screen displays real-time thermal images and temperature data.

- The display shows the Region of Interest (ROI), center point temperature, and tracks high/low temperatures (default setting).
- High/low temperature alerts can be configured to notify you when temperatures exceed or fall below set thresholds.

UTi85A

Thermal Imager

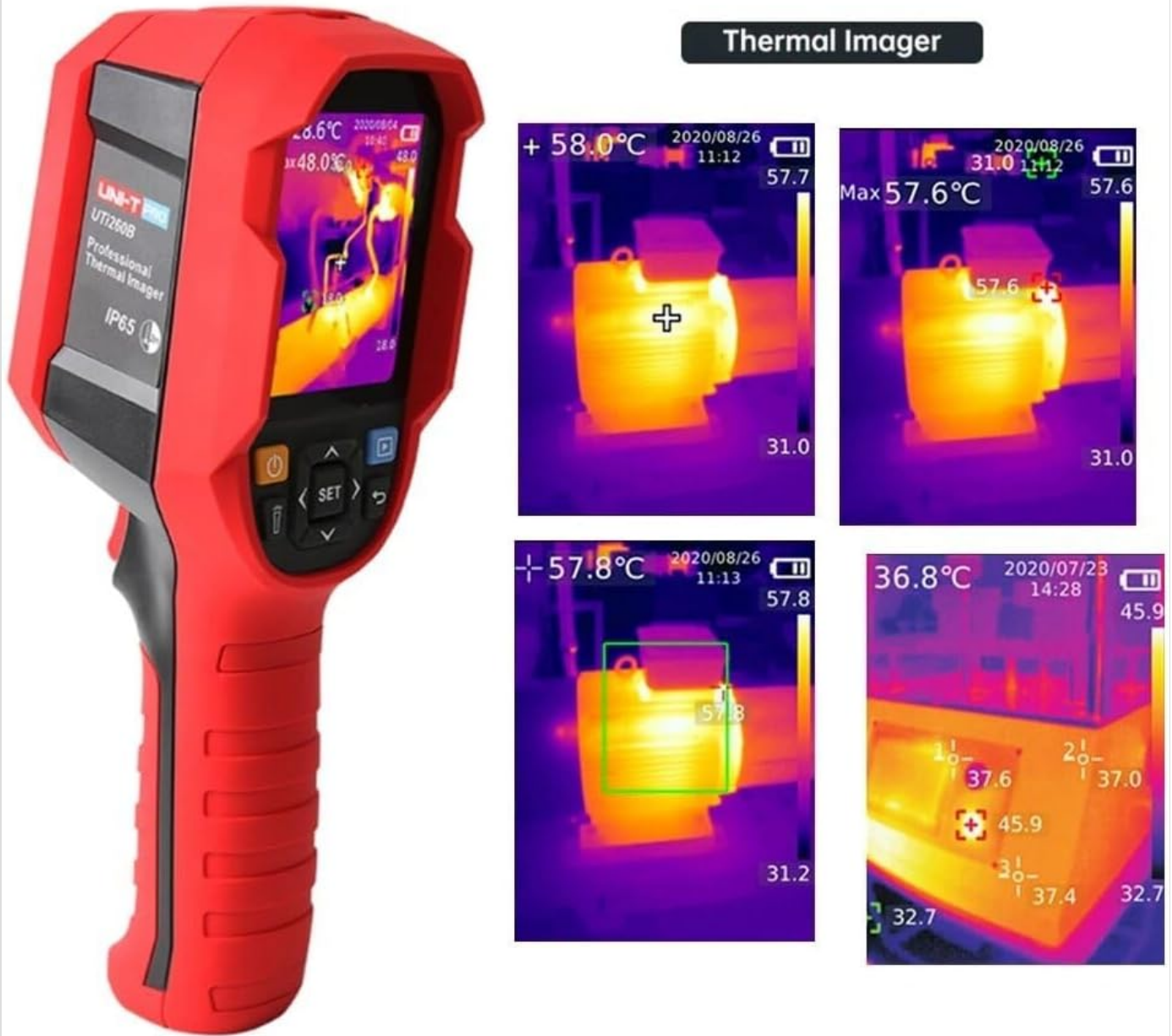


Figure 5.1: Example thermal images captured by the UTi85A, demonstrating temperature readings and high/low temperature tracking.

5.3 Color Palettes

The UTi85A offers 5 selectable color palettes to visualize thermal data.

- Iron red
- Rainbow
- White hot
- Red hot
- Ice blue

Navigate through the menu using the directional buttons and the 'SET' button to select your preferred palette.

5.4 USB Communication and Image Projection

The device supports USB communication for data transfer and real-time image projection.

1. Connect the device to a PC using the Type-C USB cable.

2. The device will prompt you to select a mode:

- **USB Mode:** Allows you to browse saved images and analyze data using the provided PC software.
- **USB Camera Mode:** Enables real-time image projection on your PC screen.

5.5 Image Storage and Capture

Images are saved in BMP format on the micro TF card.

- To capture an image: Press the dedicated capture button (refer to Product Overview for button layout).
- Images are automatically saved to the 16GB micro TF card.

5.6 Settings and Customization

Access the device's menu to adjust various settings:

- **Temperature Unit:** Switch between Celsius (°C) and Fahrenheit (°F).
- **Buzzer Alarm:** Enable or disable the audible alarm for high/low temperature alerts.
- **Auto Capture:** Configure automatic capture of high/low temperatures.
- **Display Brightness:** Adjust screen brightness for optimal viewing in different lighting conditions.
- **Auto Power-off:** Set the inactivity duration before the device automatically shuts down (5min, 10min, 30min).

6. MAINTENANCE

6.1 Cleaning

- Wipe the device body with a soft, damp cloth. Do not use abrasive cleaners or solvents.
- For the lens, use a lens cleaning cloth and specialized lens cleaning solution. Avoid touching the lens surface with bare hands.

6.2 Storage

- Store the device in a cool, dry place, away from direct sunlight and extreme temperatures.
- If storing for extended periods, ensure the battery is partially charged (around 50%) to prolong its lifespan. Recharge every few months.

7. TROUBLESHOOTING

Problem	Possible Cause	Solution
Device does not power on.	Battery is depleted.	Charge the device using the Type-C USB cable.
Image is blurry or unclear.	Lens is dirty or damaged.	Clean the lens with a soft, lint-free cloth. If damaged, contact support.
Cannot save images.	Micro TF card is full or not inserted correctly.	Check TF card insertion. Delete unnecessary files or replace the card.
Inaccurate temperature readings.	Lens obstruction, incorrect emissivity setting (if adjustable), or device malfunction.	Ensure lens is clear. Refer to advanced settings for emissivity. If problem persists, contact support.

8. SPECIFICATIONS

Feature	Detail
Model	UTi85A (CHU1879526)
Sensor	UFPA
Display	2.8" TFT LCD, 320 x 240 pixels
Temperature Range	-10°C to 400°C / 14°F to 752°F
Measurement Accuracy	±2°C or ±2%
Resolution	0.1°C / 0.2°F
Response Time	≤500ms
Thermal Resolution	4,800 pixels (80 x 60)
Pixel Size	17μm
Color Palettes	Iron red, rainbow, white hot, red hot, ice blue
Infrared Spectral Bandwidth	8~14μm
Field of View (FOV)	51°(H) x 38°(V)
Spatial Resolution (IFOV)	11.1mrad
Thermal Sensitivity (NETD)	≤150mK
Frame Rate	≤9Hz
Image Format	BMP
Buzzer Alarm	Yes
PC Software	Yes
Real-time Image Transmission	Yes
Data Transmission	Type-C USB interface
Auto Power-off	5min, 10min, 30min (default)
Battery	3.6V 5000mAh Li-ion
Battery Life	Up to 6 hours
Protection Rating	IP65
Drop Proof	2m
Item Weight	2.36 pounds

Feature	Detail
Product Dimensions	10 x 2 x 2.7 inches

9. WARRANTY AND SUPPORT

For specific warranty information regarding your UTi85A Digital Industry Infrared Thermal Imager, please refer to the warranty card included in your product packaging or visit the official WnewTools website.

If you encounter any issues not covered in the troubleshooting section or require further assistance, please contact WnewTools customer support through their official channels.

Please note that extended protection plans may be available from third-party providers, which are separate from the manufacturer's warranty.

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Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

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