

## YWYLL HT-18+

# YWYLL HT-18+ Thermal Imaging Camera User Manual

Model: HT-18+

## 1. INTRODUCTION

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This manual provides essential instructions for the safe and effective operation of your YWYLL HT-18+ Thermal Imaging Camera. Please read this manual thoroughly before using the device to ensure proper functionality and to prevent damage. This non-contact infrared imager features a 256x192 IR resolution, a large 3.5-inch TFT display, and a wide temperature measurement range of -20°C to 550°C (-4°F to 1022°F).

## 2. PRODUCT OVERVIEW

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The YWYLL HT-18+ Thermal Imaging Camera is designed for various applications, including home inspection, HVAC diagnostics, electrical work, and scientific research. It offers high image quality and accurate measurements to quickly identify problem areas.

### Key Features:

- **High Resolution:** 256x192 IR resolution for detailed thermal images.
- **Wide Temperature Range:** Measures from -20°C to 550°C (-4°F to 1022°F).
- **Large Display:** 3.5-inch TFT screen for clear viewing.
- **WiFi Connectivity:** Transmit real-time images to mobile devices or computers.
- **Analysis Software:** Includes PC software "IRImageTools" for detailed image interpretation.
- **Image & Video Recording:** Built-in 8GB SD card for storage.
- **Rechargeable Battery:** Lithium-ion battery provides up to 4 hours of continuous use.
- **Multiple Color Palettes:** Five selectable color palettes for diverse imaging needs.



Figure 2.1: The YWYLL HT-18+ Thermal Imaging Camera, showcasing its ergonomic design and display.

### **Components and Controls:**

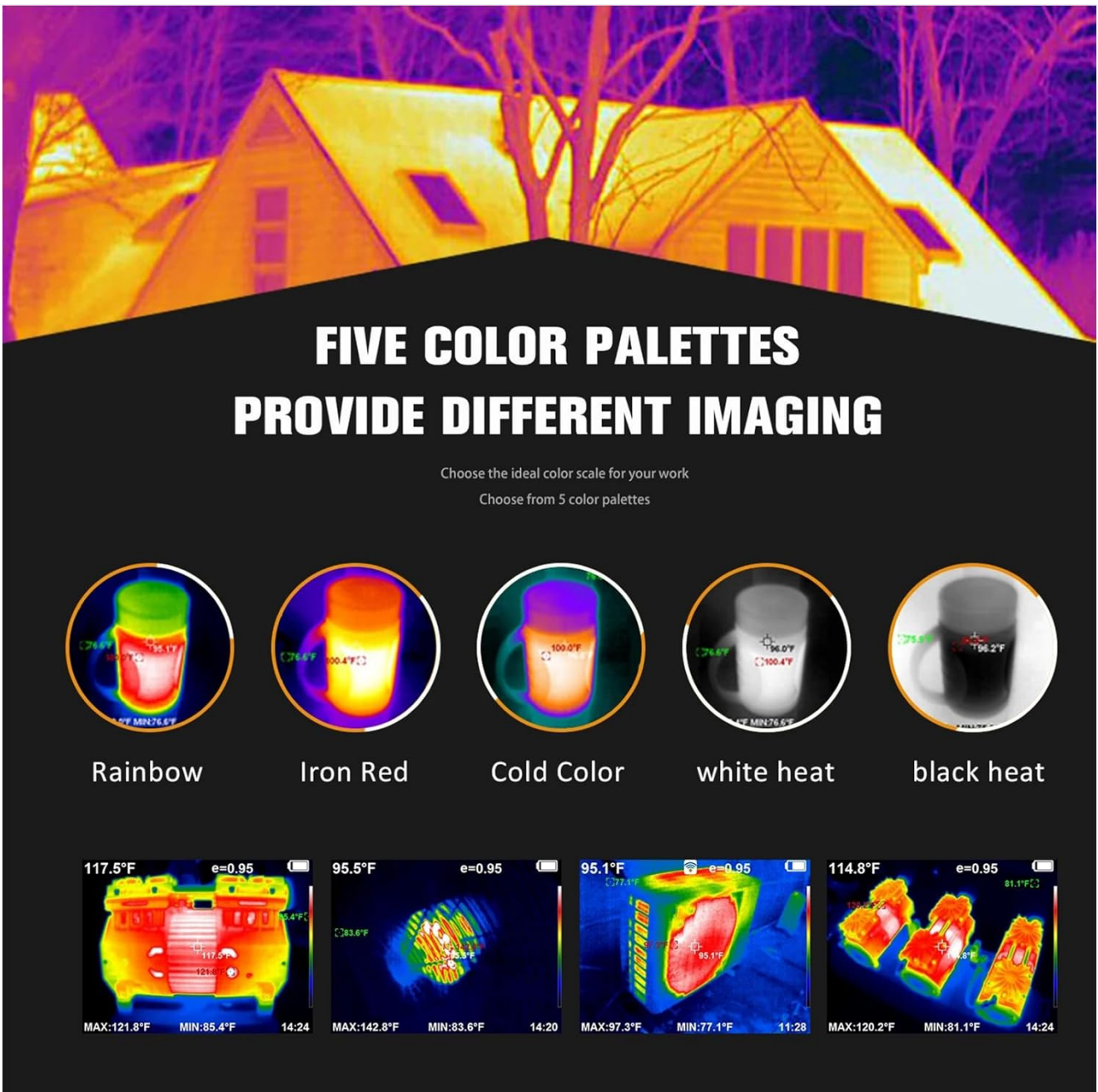


Figure 2.2: Labeled diagram of the YWYLL HT-18+ Thermal Imaging Camera, indicating key components and controls.

1. **USB Type-C Port:** For charging and data transfer.
2. **Lens Protective Cap:** Protects the camera lens. Open before use.
3. **Visible Light Camera:** Captures visual images.
4. **Infrared Thermal Image Sensor:** Detects infrared radiation.
5. **Power ON/OFF Key / Menu Key:** Press to power on/off or access the menu.
6. **Navigation Keys (UP, DOWN, LEFT, RIGHT):** For menu navigation.
7. **Selection/Enter Key:** Confirms selections.
8. **Short Press:** Image capture.
9. **Long Press:** Video recording.

### 3. SETUP

#### 3.1 Unboxing

Upon opening the package, verify that all components are present:

- 1x YWYLL HT-18+ Thermal Imaging Camera
- 1x Type-C USB Cable
- 1x User Manual

### **3.2 Charging the Battery**

The camera is equipped with a rechargeable Lithium-ion battery. Before first use, or if the battery level is low, charge the device using the provided Type-C USB cable. Connect the cable to the camera's USB port and plug the other end into a compatible USB power adapter (not included) or a computer's USB port. The charging indicator will show the charging status.

## **4. OPERATING INSTRUCTIONS**

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### **4.1 Power On/Off**

To power on the camera, press and hold the **Power ON/OFF Key** until the screen illuminates. To power off, press and hold the same key until the device shuts down.

### **4.2 Basic Measurement**

Once powered on, the camera will display a real-time thermal image. Point the camera at the object or area you wish to inspect. The screen will show temperature readings, including maximum, minimum, and center point temperatures. Ensure the lens protective cap is open for accurate readings.

### **4.3 WiFi Connection for Real-time Imaging**

The camera can transmit real-time images to a mobile phone or computer via WiFi. No dedicated application is required; simply use a web browser.



Figure 4.1: Step-by-step guide on connecting the camera to a mobile device via WiFi.

1. Press the **Menu Key** to access the camera's menu.
2. Navigate to the WiFi settings and select 'On' to enable WiFi.
3. On your mobile device or computer, connect to the WiFi network named 'ThermalCamera-xxxxxx' (where 'xxxxxx' are the last six digits of the camera's MAC address).
4. Open a web browser on your connected device and enter the IP address **192.168.230.1**.
5. The camera's real-time thermal image will be displayed in your browser. You can also control camera settings from this interface.

#### 4.4 Image Analysis Software (IRImageTools)

The camera supports advanced image analysis using the "IRImageTools" PC software. This software allows for detailed interpretation of captured thermal images, aiding in faster and more accurate problem detection.

# Thermal Imaging Image Analysis Software



Connect the thermal imaging camera with the USB cable and then connect it to the computer.

Find the "Installation Package" in folder and install it.

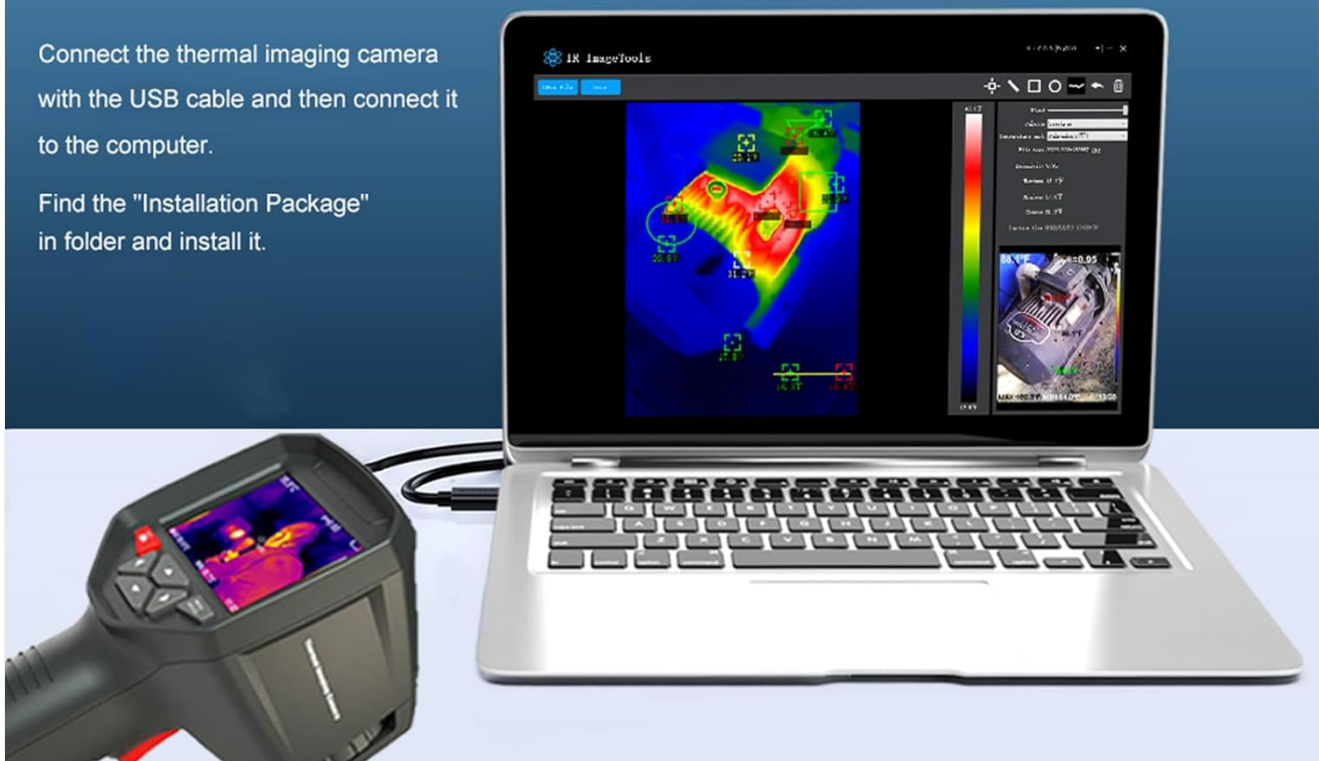


Figure 4.2: The camera connected to a laptop running the IRIImageTools analysis software.

To use the software:

- Download "IRImageTools" directly from the Microsoft Store.
- Connect the thermal imaging camera to your computer using the Type-C USB cable.
- Follow the software's instructions to import and analyze images.

## 4.5 Image Capture and Video Recording

The camera allows for capturing still images and recording videos, which are stored on the built-in 8GB SD card.

- **Image Capture:** Briefly press the dedicated capture button (refer to Figure 2.2) to take a still thermal image.
- **Video Recording:** Press and hold the dedicated capture button to start video recording. Press and hold again to stop.

Saved images and videos can be transferred to a computer by connecting the camera via the Type-C USB cable.

## 4.6 Color Palettes

The camera offers five color palettes to visualize thermal data, allowing users to choose the most suitable display

for their specific application.

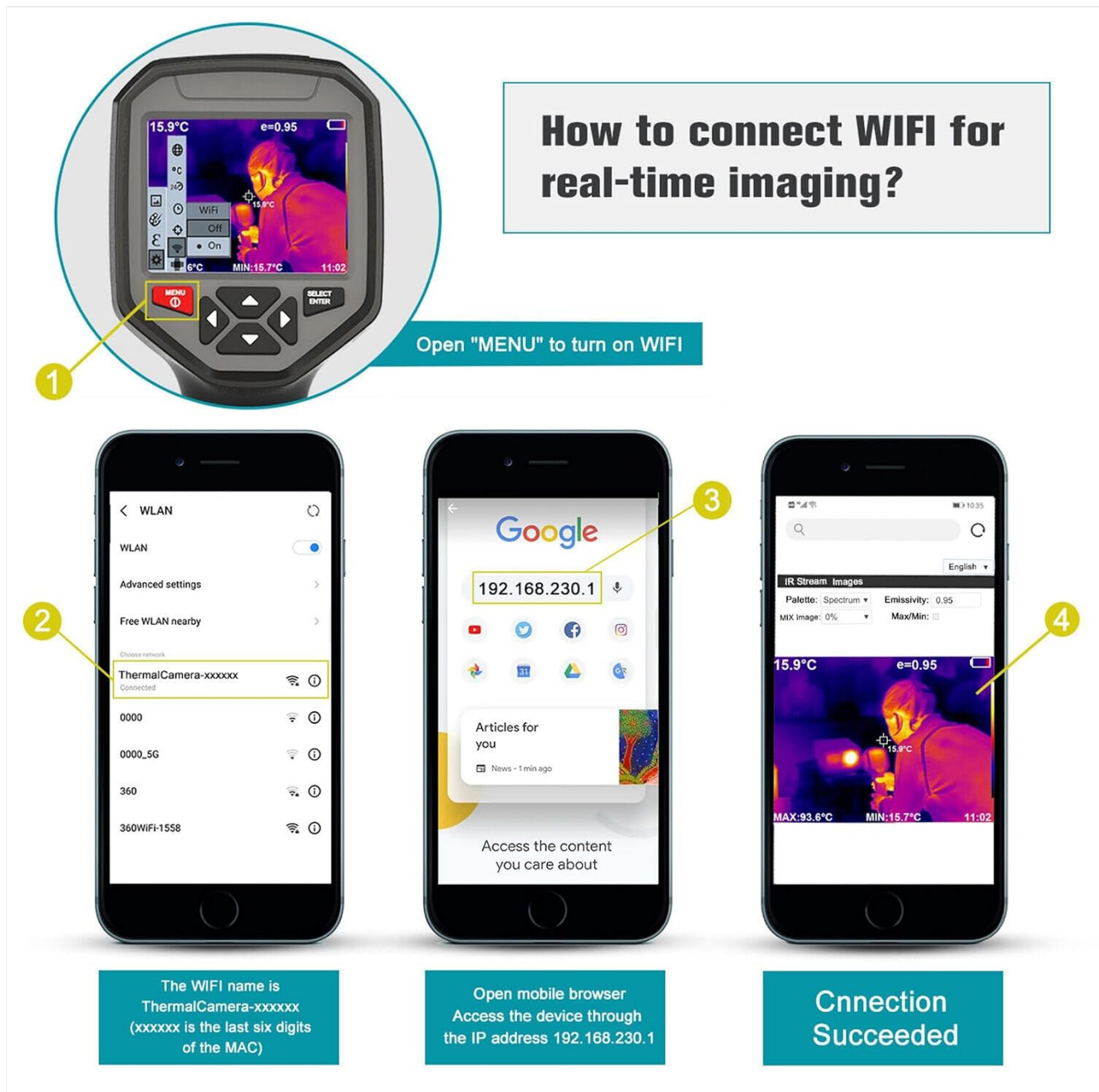


Figure 4.3: Visual representation of the five available color palettes: Rainbow, Iron Red, Cold Color, White Heat, and Black Heat. The available palettes are:

- **Rainbow:** Displays a full spectrum of colors, often used for general purpose.
- **Iron Red:** Highlights hotter areas in red and cooler areas in blue/purple.
- **Cold Color:** Emphasizes cooler temperatures with distinct colors.
- **White Heat:** Hotter objects appear white, cooler objects appear black.
- **Black Heat:** Hotter objects appear black, cooler objects appear white.

## 5. MAINTENANCE

### 5.1 Cleaning

To maintain the camera's performance and appearance, wipe it clean with a soft, dry cloth. Avoid using abrasive cleaners or solvents that could damage the device or its screen.

## 5.2 Storage

When not in use, store the camera in a cool, dry place, away from direct sunlight and extreme temperatures. Ensure the lens protective cap is closed to prevent dust and scratches.

## 6. TROUBLESHOOTING

If you encounter issues with your YWYLL HT-18+ Thermal Imaging Camera, refer to the following common solutions:

- **Device does not power on:** Ensure the battery is sufficiently charged. Connect the camera to a power source using the Type-C USB cable.
- **Screen is blank or frozen:** Try restarting the device by holding the Power ON/OFF key. If unresponsive, allow the battery to fully discharge and then recharge.
- **Inaccurate temperature readings:** Verify that the lens protective cap is fully open and that there are no obstructions between the camera and the target. Ensure the emissivity setting is appropriate for the material being measured (if adjustable).
- **WiFi connection issues:** Double-check that WiFi is enabled on the camera and that your mobile device/computer is connected to the correct 'ThermalCamera-xxxxxx' network. Ensure the IP address 192.168.230.1 is entered correctly in the browser.
- **Cannot transfer files:** Ensure the camera is properly connected to the computer via the Type-C USB cable and recognized as a storage device.

If problems persist, contact customer support for further assistance.

## 7. SPECIFICATIONS

Feature	Specification
Product Dimensions	10.06 x 4.81 x 3.83 inches; 1.3 Pounds
Item Model Number	HT-18+
Batteries	1 Lithium Ion battery required (included)
Manufacturer	YWYLL
Special Feature	Large Display, High Accuracy, Non-Contact, Wi-Fi Support, Rechargeable
Color	Black
Included Components	1x thermal imaging camera, 1x type-C cable, 1x user manual
Outer Material	Plastic
Specification Met	FCC
Display Type	Digital
Connectivity Technology	Wi-Fi
Product Care Instructions	Wipe Clean

## **8. WARRANTY AND SUPPORT**

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For warranty information or technical support, please contact the manufacturer, YWYLL, directly. Refer to the product packaging or the official YWYLL website for contact details and specific warranty terms applicable to your region.