

Zealtron T45

Zealtron T45 Industrial Endoscope Camera User Manual

Model: T45

1. INTRODUCTION

Thank you for choosing the Zealtron T45 Industrial Endoscope Camera. This device is designed for visual inspection in hard-to-reach areas, such as engine compartments, pipes, walls, and other confined spaces. It features a 5-inch IPS display, a flexible probe with a 6.2mm diameter, and adjustable LED lighting to provide clear 1080p images and videos. Please read this manual thoroughly before operating the device to ensure safe and effective use.

2. SAFETY INFORMATION

- **General Safety:** Always operate the device in a well-lit and safe environment. Keep the device away from children.
- **Electrical Safety:** Do not use the device if the cable or probe is damaged. Avoid exposing the device to extreme temperatures or direct sunlight. Use only the provided charging cable.
- **Water Resistance: Note:** The Zealtron T45 endoscope camera is **not waterproof**. Avoid immersing the probe or main unit in liquids. Exposure to water or other liquids may cause damage and void the warranty.
- **Probe Handling:** Do not bend the probe excessively or apply excessive force, as this may damage the internal components.
- **Temperature Warning:** The device is equipped with a safety sensor. If the probe temperature exceeds 85°C, the camera sensor may automatically shut down to prevent damage. Allow the device to cool down before resuming operation.

3. PRODUCT OVERVIEW

Familiarize yourself with the components and controls of your Zealtron T45 endoscope camera.



Figure 3.1: Main unit with labeled controls and ports. This diagram shows the TF Card Slot, RST button, USB Port, Zoom buttons, Menu button, Light adjustment buttons, ON/OFF button, and Enter button.

3.1 Key Features

- **5-inch IPS HD Display:** Provides a wide viewing angle and clear, true-color images with high resolution.



Figure 3.2: The 5-inch IPS HD screen offers a 70-degree viewing angle, true color reproduction, high resolutions, and triple brightness settings for optimal visibility.

- **One-Handed Operation Design:** Ergonomically designed for comfortable single-hand use, allowing precise control of the probe and easy photo capture.

One Handed Operation Design

Thumb controls the push-pull rods
Index finger controls photo capture button



Figure 3.3: The device features a one-handed operation design, where the thumb controls the push-pull rods for probe articulation, and the index finger operates the photo capture button.

- **1.5M Highly Resilient Flexible Snake Tube:** The probe cable is designed for exceptional toughness and resilience, automatically straightening when not under tension.

1.5M Highly Resilient Flexible Snake Tube

Exceptional Toughness Automatically Straightens

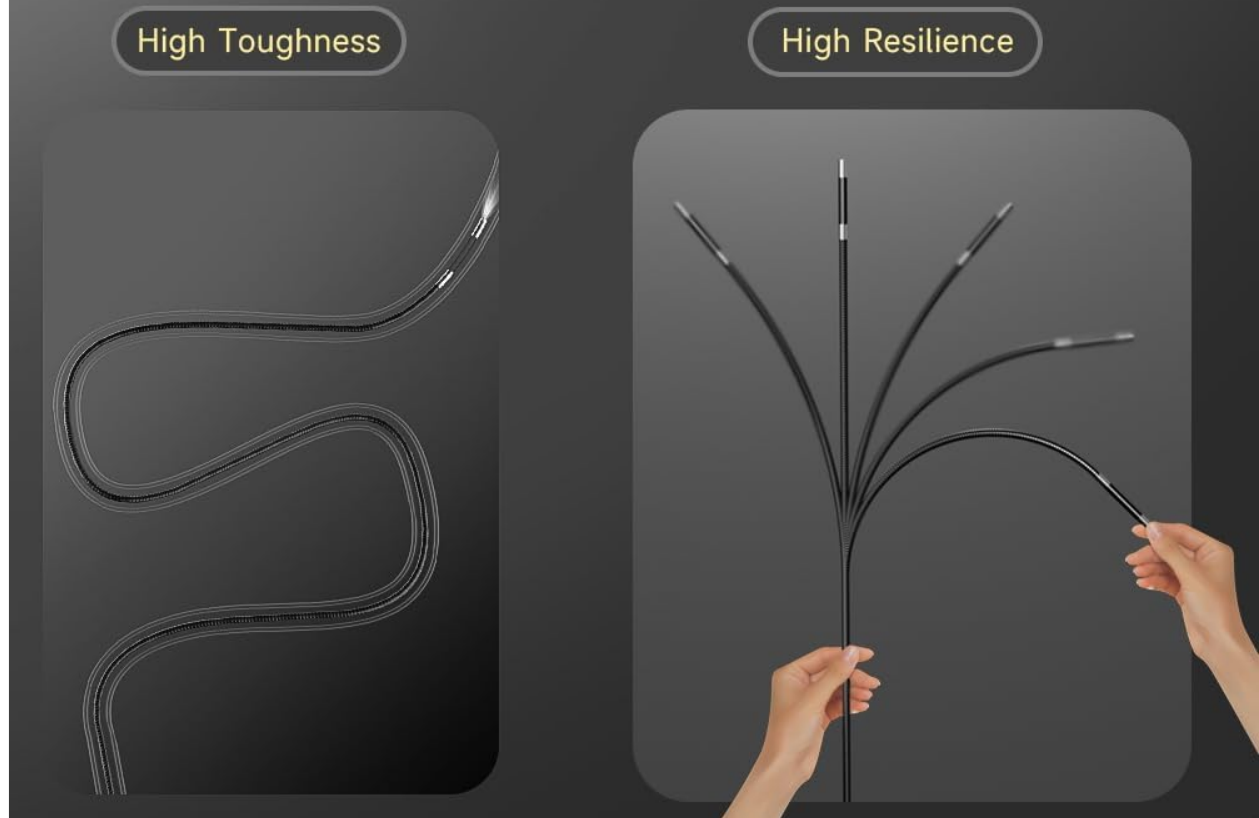


Figure 3.4: Illustration of the 1.5-meter highly resilient flexible snake tube, demonstrating its high toughness and ability to automatically straighten.

- **1080P HD Image Sensor:** Captures high-definition images and videos for detailed inspections.



Figure 3.5: A detailed view of the 1080P HD image sensor and its components within the probe tip, designed for clear visual capture.

- **Durable Probe Tip with LED Lights:** The 6.2mm diameter probe tip is equipped with adjustable LED lights to illuminate dark inspection areas.

Rugged IP67 Waterproof Probe



Figure 3.6: Close-up of the durable probe tip, showing the integrated LED lights for illumination during inspections.

- **3000mAh Battery:** Provides 3-4 hours of continuous working time on a full charge.



Figure 3.7: The back of the main unit, highlighting the 3000mAh battery and indicating a working time of 3-4 hours. The USB charging port is also visible.

4. SETUP

4.1 Charging the Device

1. Connect the provided USB charging cable to the USB port on the main unit (refer to Figure 3.1).
2. Connect the other end of the USB cable to a compatible USB power adapter (not included) or a computer USB port.
3. The charging indicator will illuminate. A full charge typically takes 3-4 hours.
4. Once fully charged, disconnect the charging cable.

4.2 Inserting an SD Card

The device supports SD cards for storing images and videos.

1. Locate the TF Card Slot on the side of the main unit (refer to Figure 3.1).
2. Gently insert a compatible SD card into the slot until it clicks into place. Ensure the card is inserted in the correct orientation.
3. To remove the SD card, push it gently inward until it springs out.

4.3 Connecting the Probe

The flexible probe is pre-attached to the main unit and is not designed for user removal.

5. OPERATING INSTRUCTIONS

5.1 Powering On/Off

- **Power On:** Press and hold the **ON/OFF** button (refer to Figure 3.1) for a few seconds until the display turns on.
- **Power Off:** Press and hold the **ON/OFF** button again until the display turns off.

5.2 Adjusting LED Brightness

The probe tip has adjustable LED lights to illuminate the inspection area.

- Press the **Light +/-** buttons (refer to Figure 3.1) to increase or decrease the brightness of the LED lights.

5.3 Capturing Photos and Videos

- **Photo Capture:** In live view mode, press the dedicated photo capture button (operated by the index finger, refer to Figure 3.3) to take a still image. The image will be saved to the inserted SD card.
- **Video Recording:** To start video recording, press the **OK/Enter** button (refer to Figure 3.1). Press it again to stop recording. Videos will be saved to the SD card.

5.4 Zoom Function

- Use the **Zoom +/-** buttons (refer to Figure 3.1) to digitally zoom in or out on the live image.

5.5 Menu Navigation

- Press the **Menu** button (refer to Figure 3.1) to access the device settings.
- Use the directional buttons (often combined with Zoom or Light buttons) to navigate through menu options.
- Press **OK/Enter** to confirm a selection.
- Press **Menu** again to exit the menu.

5.6 Articulated Probe Control

The probe features an articulated tip for enhanced maneuverability.

- Use the thumb-controlled push-pull rods (refer to Figure 3.3) to articulate the probe tip, allowing you to change the viewing angle within confined spaces.
- Move the rods gently to achieve the desired angle.

6. MAINTENANCE

6.1 Cleaning

- **Main Unit:** Wipe the main unit with a soft, dry cloth. Do not use abrasive cleaners or solvents.
- **Probe and Camera Lens:** Gently clean the probe and camera lens with a soft, lint-free cloth. If necessary, slightly dampen the cloth with isopropyl alcohol for stubborn dirt, then wipe dry immediately. Ensure no liquid enters the probe tip.

6.2 Storage

- Store the device in a cool, dry place, away from direct sunlight and extreme temperatures.
- Ensure the probe cable is coiled loosely and not kinked or bent sharply during storage.

- If storing for an extended period, charge the battery to approximately 50% every few months to maintain battery health.

7. TROUBLESHOOTING

Problem	Possible Cause	Solution
Device does not power on	Low battery; Device malfunction	Charge the device fully; If problem persists, contact support.
No image on display	Probe not connected properly; Camera lens obstructed; Software issue	Restart the device; Clean the camera lens; Ensure probe is securely connected (if detachable, though this model is integrated); If problem persists, contact support.
Cannot save photos/videos	No SD card inserted; SD card full; SD card corrupted	Insert a compatible SD card; Delete unnecessary files or use a new SD card; Format the SD card (refer to menu settings).
Poor image quality	Insufficient lighting; Dirty camera lens; Incorrect focus distance	Adjust LED brightness; Clean the camera lens; Ensure object is within macro focus range (2-20 cm).
Probe tip articulation not working	Mechanical obstruction; Damaged control rods	Check for any obstructions; Do not force the articulation; Contact support if damaged.

8. SPECIFICATIONS

Feature	Specification
Brand	Zealtron
Model	T45
Display	5-inch IPS LCD
Probe Diameter	6.2 mm
Probe Length	1.5 meters
Video Resolution	1080p
Focal Length	6.2 mm
Focus Type	Fixed Focus
Macro Focus Range	2-20 cm
Battery	3000mAh Lithium-polymer (included)
Working Time	3-4 hours (approx.)
Storage	SD Card (supported)
Water Resistance Level	Not waterproof

Feature	Specification
Package Dimensions	43.1 x 24.7 x 5.7 cm
Package Weight	660 grams

9. WARRANTY AND SUPPORT

For warranty information, technical support, or service inquiries, please refer to the official Zealtron website or contact your retailer. Keep your purchase receipt as proof of purchase.