About This Manual
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The Manual includes instructions for using and managing the product. Pictures, charts, images and all other information herein after are for description and explanation only. The information contained in the Manual is subject to change, without notice, due to firmware updates or other reasons. Please find the latest version in the company website (http://overseas.hikvision.com/en/).

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Regulatory Information
FCC Information
Please pay attention to the changes in the FCC regulation continuously approved by the FCC. In order for compliance to be valid, the user must follow the installation instructions in this manual. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. It is the user’s responsibility to use the equipment in a manner that does not cause harmful interference. The user is also expected to take measures to avoid harmful interference caused by other nearby equipment. If this equipment causes harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try and correct the interference by one or more of the following measures: (1) Reorient or relocate the receiving antenna; (2) Increase the separation between the equipment and receiver; (3) Connect the equipment into an outlet on a circuit different from that to which the receiver is connected; (4) Consult the dealer or an experienced radio/TV technician for help.
In reference to radio or television reception, which can be determined by turning the equipment off and on to see if symptoms follow, the user is encouraged to try to correct interference by one or more of the following measures:

— Reorient or relocate the receiving antenna.
— Increase the separation between the equipment and receiver.
— Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
— Consult the dealer or an experienced radio/TV technician for help.

This equipment should be installed and operated with minimum distance 20cm between radiator and your body.

FCC Conditions

These devices comply with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

EU Conformity Statement

This product and, if applicable, the supplied accessories are marked with "CE" and comply therewith with the applicable harmonized European standards listed under the Radio Equipment Directive 2014/53/EU, the EMC Directive 2014/30/EU, the RoHS Directive 2011/65/EU.

2012/19/EU (WEEE Directive): Products marked with this symbol cannot be disposed of as unsorted municipal waste in the European Union. For proper recycling, return this product to your local supplier upon the purchase of equivalent new equipment, or dispose of it at designated collection points. For more information see: www.recyclethis.info.

2006/66/EC (Battery Directive): This product contains a battery that cannot be disposed of as unsorted municipal waste in the European Union. See the product documentation for specific battery information. The battery is marked with this symbol, which may include lettering to indicate cadmium (Cd), lead (Pb), or mercury (Hg). For proper recycling, return the battery to your supplier or to a designated collection point. For more information see: www.recyclethis.info.

Industry Canada ICES-003 Compliance

This device complies with Industry Canada licence-exempt RSS standard(s).

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions:

1. This device may not cause harmful interference and
2. This device must accept any interference, including interference that may cause undesired operation of the device.

Under Industry Canada regulations, this radio transmitter may only operate in an area (not to exceed 200 square miles) where radio interference is unlikely to be a problem and where operation of this transmitter will not cause interference to any other radio communications. Under Industry Canada regulations, this radio transmitter may only operate in an area (not to exceed 200 square miles) where radio interference is unlikely to be a problem and where operation of this transmitter will not cause interference to any other radio communications.
This equipment should be installed and operated with a minimum distance of 20cm between the radiator and your body.

**WARNINGS AND CAUTIONS**

- All electronic operations should strictly comply with the electrical safety regulations, fire prevention regulations and other related regulations in your local region.
- Please use the power adapter, which is provided by normal company. The power consumption cannot be lower than the equipment value.
- Do not connect several devices to one power adapter as adapter overload may cause overheating or fire hazard.
- Do not drop the device or subject it to physical shock, and do not expose it to high electromagnetic radiation. Avoid installing the device on vibrations surface or places subject to shock (ignorance can cause equipment damage).
- Do not place the device in extremely hot (refer to the specification of the device for the detailed operating temperature), cold, dusty or damp locations, and do not expose it to high electromagnetic radiation.
- The device cover for indoor use should be kept from rain and moisture.
- Exposing the device to direct sunlight or ventilation at least once such as heat source is forbidden (ignorance can cause damage).
- Do not aim the device at sun or other bright places. A blooming or smear may occur otherwise (which is not a malfunction however), and affecting the endurance of sensor at the same time.
- For long-term storage of the battery, make sure you fully charge it every half year to ensure the battery quality. Otherwise, you may damage the battery.

**LASER LIGHT SUPPLEMENT**

Warning: The laser radiation emitted from the device can cause permanent human eye injury. Before enabling the Light Supplement function, make sure no human or inflammable substances are in front of laser beam.

Do not place the device where children can reach it.
1 Introduction

1.1 Box Content

- Non-dust Cloth (× 1)
- USB Cable (× 1)
- Manual (× 1)
- Protective Bag (× 1)
- Handheld Thermal Monocular (× 1)
- Neck Belt (× 1)

1.2 Overview

The handheld thermal monocular is a handheld thermal camera with functions of observation, hot spot mark, distance measurement, Wi-Fi hot spot, and so on. The high-sensitivity built-in IR detector provides you with clear view even in total darkness.

1.3 Features

- High performance chip, and DDE (Digital Detail Enhancement) technique
- 1024 × 768 Resolution OLED display
- Built-in rechargeable Li-ion battery
- Up to five hours continuous running (Wi-Fi hot spot function off)
- USB Cable
- Small in size and light in weight

1.4 Functions

Distance Measurement:
The device realizes distance measurement function after marking the top and bottom of target, and input the target height.

Hot Spot Mark:
The device detects and marks the hot spot of highest temperature.
Wi-Fi & Hot Spot:
Device can capture snapshots, record videos, and set parameters via APP after being connected to your phone.

Mode Switch:
Device supports pallet switch and distance measurement.

Storage:
Built-in memory module supports video recording/snapshot capturing.

Digital Zoom:
Device supports 1x and 2x digital zoom.

2 Appearance

2.1 Dimensions
Take the figure below for the dimensions of the handheld thermal monocular.

Note: the dimension varies according to different camera modes.

2.2 Buttons and Interfaces
Take the figure below for the buttons and interfaces description of handheld thermal monocular.
**Power**
- Hold: Power On/Off

**MODE**
- Press: Switch/Pallet
- Hold: Distance Measure On/Off

**Capture**
- Press: Capture Snapshot
- Hold: Switch/Pallet Record Video

**Menu**
- Press: Shutter Release
- Hold: Menu Operation

**Zoom ±**
- Press: Digital Zoom
- Hold: Reserved

**LED Indicator**
- When the LED indicator is on: the device is activating.

**Sight Adjust Knob**
- Slide the sight adjust knob to adjust the view according to your degree of myopia.

**USB Interface**
- Charge the battery and export videos/snapshots with the USB.
3 Basic Operations

3.1 Charging the Monocular

**Note:** Please charge the monocular with the delivered USB cable and power adapter. The charging temperature should be 0 °C to 45 °C (32 °F to 113 °F).

**Steps:**

1. Lift the USB cover.

2. Plug in the USB cable and connect the other terminal into the power adapter.

3. Plug the power adapter to the power source.

When the monocular is turned on, the OSD (on-screen display) shows the battery status. When you see the Low Battery status, charge the monocular and ensure it’s working properly.

**Battery LED Indicator Status**

- **Red Flash:** Error occurred.
- **Solid Red:** Battery is properly charged.
- **Solid Green:** Battery is fully charged.
- **Off:** Battery is not charged.

3.2 Power On and Off

**Power On:**

Hold the POWER button for four seconds and the LED indicator in the front turns green. After the device is powered on, the indicator keeps green.
Power LED Indicator

Refer to the figure below for the main view of the monocular.

Wi-Fi Hot Spot Digital Zoom
Storage
Battery

When the monocular is turned on, hold the POWER button for four seconds to power off the device.

3.3 Thermal View Observation

Steps:
1. Power on the monocular.
2. Hold the monocular and make sure the eyepiece covers your eye.
3. Slide the sight adjust knob to adjust the distance until the OSD text or image is clear.
4. Point the monocular towards the target of the view.

Note: You must perform the sight adjustment before any further use of the monocular.

3.4 Basic Operation

Connect the thermal monocular to your PC with USB cable, you can export the recorded videos and captured snapshots.

Steps:
1. Hold the button to enter the menu and select the icon \[button\] and the Wi-Fi hot spot function is disabled.

2. Press \[button\] and the icon turns to \[icon\] and the Wi-Fi hot spot function is disabled.

3. Connect the thermal monocular to your PC with USB cable, you can see a detected removable disk.

   - When you connect the device to PC for the first time, it installs the drive program automatically.
   - When you connect the device to PC, the device displays images, but functions such as recording, capturing and Wi-Fi hot spot are disabled.

File Export Steps:

1. Connect the thermal monocular to your PC with USB cable and open the detected disk.

2. Enter DCIM>100EZVIZ to view the videos and snapshots.
   - Select and copy the videos to PC and play the file with the player.
   - Select and copy the snapshot to PC and view the files.

3. Disconnect the device from your PC.

Upgrade Steps:

1. Connect the thermal monocular to your PC with USB cable and open the detected disk.

2. Copy the upgrade file and paste it to the root directory of the device.

3. Disconnect the device from your PC.

4. Reboot the monocular and the device upgrades automatically. The upgrading process will be displayed in the main interface.

4 Main Function

4.1 Menu Operation

When the monocular is turned on, hold the button \[button\] for three seconds to display the OSD menu.
Press the button \( \uparrow \) to move the cursor up, and press the button \( \downarrow \) to move the cursor down. Press the button \( \text{OK} \) to confirm.

Press \( \text{OK} \) to display or hide the OSD information.

Press \( \text{OK} \) to enable/disable hotspot mark (marking the spot of highest temperature).

Press \( \text{OK} \) to enable/disable the Wi-Fi and hotspot. Connect your phone to the monocular via the Wi-Fi or hot-spot and record/capture with App.

Press \( \text{OK} \) to store distance measurement info. For details, refer to Section 4.2 Distance Measurement.

Press \( \text{OK} \) to adjust the brightness. The arrows on the left indicate high brightness, medium brightness, and low brightness.

Press \( \text{OK} \) to view the version number and serial number.

Press \( \text{OK} \) to restore all parameters to default settings.

Press \( \text{OK} \) to adjust the contrast. The arrows on the left indicate high contrast, medium contrast, and low contrast.

Press \( \text{OK} \) to switch between the summer mode and winter mode.

Palette Settings
Under the same scene, you can select different palettes to see the scene in different effects.

**White Hot:**
The hot part is light-colored in view.

**Black Hot:**
The hot part is black-colored in view.

[Image of a monocular with buttons and icons]
Fusion:
The hot part is yellow-colored and cold part is purple-colored in view.

Red Hot:
The hot part is red-colored in view.

Brightness Adjusting
In white hot mode, you can adjust the brightness as $\times$ to adjust the image darker and darker.
In black hot mode, the brightness of the image turns in the opposite way.

4.2 Distance Measurement

Before you start:
In the view mode, you can hold the \( \text{button} \) to enter the distance measurement mode.
Or, you can hold the \( \text{button} \) to enter the menu and select \( \text{button} \) to enter the distance measurement mode.

Purpose:
You can mark the top and bottom of the target in the distance to calculate the distance in between.

Steps:
1. Enter the distance measurement mode.
   You can refer to the above part above.
2. Define the target height.
   a) Press \( \text{button} \) to enter the height setting interface.
   b) Press \( \text{button} \) to select the target from Deer, Wolf, Bear, and Custom.
   c) Press \( \text{button} \) to confirm.
   d) Press \( \text{button} \) and \( \text{button} \) to select the target height.
   e) Press \( \text{button} \) to confirm.
3. Set the top of the target.
   a) Move the monocular slightly to place the \( \text{button} \) mark above the target top.
   b) Press \( \text{button} \) to confirm.
4. Set the bottom of the target.
   
   a) Move the monocular slightly to place the mark below the target bottom.
   
   b) Press \textcircled{1} to confirm.

   The distance between you and the target will display on the upper left corner of the live view interface.

4.3 Hot Spot Mark

In the menu, select \textcircled{2} and press \textcircled{1} to enable/disable hot spot mark (marking the spot of highest temperature).

When the hot spot mark is enabled, the \textcircled{2} mark displays in the spot of the highest temperature. When the scene changes, the mark moves.

4.4 Record/Capture

Video Recording

In the view mode, hold the \textcircled{3} button for three seconds, and the monocular starts to record. In the upper left corner, the recording time displays.
After recording the video, hold the button for three seconds again, and the monocular stops recording.

**Snapshot Capturing**
In the view mode, press the button, the live view freezes for one second, and the snapshot is captured.

### 4.5 Digital Zoom
Press the button in the view mode, the live view will switch between 1× digital zoom and 2× digital zoom.

### 4.6 Shutter Release
In the view mode, press the button once to release the shutter once.

### 4.7 Network Configuration
Connect your phone to the Wi-Fi or hot spot of the monocular, you can configure the parameters and realize functions of the device.

#### Wi-Fi Steps:
1. Hold the button to show the menu of monocular.
2. Press the key to enable Wi-Fi function.
3. Setting the Wi-Fi name and password of your phone or the router as follow:
   - Wi-Fi Name: WLAN-IPTP
   - Wi-Fi Password: abcd1234.
4. Search the "IVMS-4500" on App Store (iOS System) or Google Play (Android System) to download and install the app.
5. Open the APP and connect your phone with the device. You can view the interface of monocular on your phone.

#### Hot Spot Steps:
1. Hold the button to show the menu of monocular.
2. Press the key to enable hot spot function.

3. Turn on the WLAN and connect to the hot spot.
   - Hot Spot Name: HIK-IPTS Serial No.
   - Hot Spot Password: Serial No.

4. Search the “IVMS-4500” app on App Store (iOS System) or Google Play™ (Android System) to download and install the app.

5. Open the APP and connect your phone with the device. You can view the interface of monocular on your phone.

Note: when the power is less than 15%, the Wi-Fi or hotspot function will be turned off automatically.
5 FAQ

Q: The charge indicator flashes improperly.
A: Examine whether the device is charged with standard power adapter and the charging temperature is 0 °C to 45 °C (32 °F to 113 °F).

Q: The device power indicator is off.
A: Examine whether the device is off-battery.

Q: The image of the monocular is not clear.
A: Perform the sight adjustment referring to section 3.3.

Q: Wi-Fi is not found.
A: Examine whether the Wi-Fi function is turned on. If not, go to OSD menu and turn on Wi-Fi.

Q: Capturing or recording fails.
A: Examine the items below:
1. Whether the device is connected to your PC and disabled the capturing and recording.
2. Whether the storage space is full.
3. Whether the device is low-battery.

Q: The PC cannot identify the monocular.
A: Examine the items below:
1. Whether the device is connected to your PC with standard USB cable.
2. If you use other USB cables, make sure the cable length is no longer than 1m.
3. Whether the Wi-Fi function is turned on. If so, go to OSD menu and turn off Wi-Fi.