



Cyclone

Thermal Monocular Cyclone Series User Manual

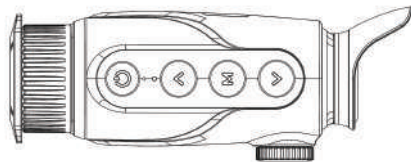
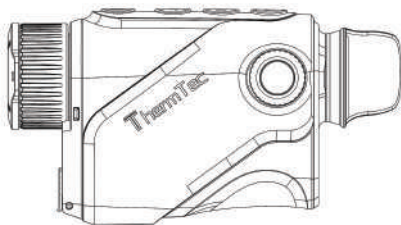


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About this Manual

The Manual includes instructions for using and managing the product, pictures, charts, images and all other information hereinafter are for explanation and description 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 of this Manual at the ThermTec website (<https://www.thermeyertec.com>).

Please use this Manual with the guidance and assistance of professionals trained in supporting the product.

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REGULATORY INFORMATION

This product and - if applicable - the supplied accessories too are marked with "CE" and comply therefore with the applicable harmonized European standards listed under the Directive 2014/53/EU(RED), Directive 2014/30/EU(EMC), Directive 2014/35/EU(LVD), Directive 2011/65/EU(RoHS).



The full text of the EU declaration of conformity is available at the following internet address:
<https://www.thermeyertec.com/declaration-of-conformity/>

Frequency Bands and Power (for CE). The frequency bands and transmitting power (radiated and/or conducted) nominal limits applicable to the following radio equipment are as follows:
Wi-Fi 2.4 GHz, 17 dBm

For the device without a supplied power adapter, use the power adapter provided by a qualified manufacturer. Refer to the product specification for detailed power requirements. For the device without a supplied battery, use the battery provided by a qualified manufacturer. Refer to the product specification for detailed battery requirements.



This product contains a battery and it is in conformity with the Regulation (EU) 2023/1542. The battery 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), or lead (Pb). For proper recycling, return the battery to your supplier or to a designated collection point. For more information see: www.recyclethis.info.



This product and - if applicable - the supplied accessories too are marked with “UKCA” and comply therefore with the following directives: Radio Equipment Regulations 2017, Electromagnetic Compatibility Regulations 2016, Electrical Equipment (Safety) Regulations 2016, the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012.



This product and - if applicable - the supplied accessories too are marked with “RoHS” and comply therefore the requirements of Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment (“RoHS recast” or “RoHS 2”).



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.



Directive 2006/66/EC and its amendment 2013/56/EU (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.

SAFETY INTRODUCTION

These instructions are intended to ensure that user can use the product correctly to avoid danger or property loss. Please read all the safety information carefully before using.

Transportation

- Keep the device in original or similar packaging while transporting it.
- Keep all wrappers after unpacking them for future use. In case of any failure occurred, you need to return the device to the factory with the original wrapper. Transportation without the original wrapper may result in damage on the device and the company shall not take any responsibilities.
- Do not drop the product or subject it to physical shock. Keep the device away from magnetic interference.

Power Supply

- If a power adapter is provided in the device package, use the provided adapter only. If no power adapter is provided, ensure the power adapter or other power supply complies with Limited Power Source. Refer to the product label for the power supply output parameters.
- Make sure the plug is properly connected to the power socket.
- DO NOT connect multiple devices to one power adapter, to avoid over heating or fire hazards caused by overload.
- The power delivered by the charger must be between min. 10 Watts required by the radio equipment, and max. 10.4 Watts in order to achieve the maximum charging speed.

Battery

- The device supports removable li-ion battery. The battery rated voltage and capacity is 3.6 V/3300 mAh.
- CAUTION: Risk of explosion if the battery is replaced by an incorrect type. Replace with the same or equivalent type only.
- Batteries of improper size cannot be installed, and may cause abnormal shutdown.
- Improper replacement of the battery with an incorrect type may defeat a safeguard (for example, in the case of some lithium battery types).

- Please purchase the batteries recommended by the manufacturer if necessary.
- The purchased batteries by users need to comply with the relevant international standards about battery safety (e.g. EN/IEC standards).
- Use the battery provided by qualified manufacturer. Refer to the product specification for detailed battery requirements.
- Dispose of used batteries according to the instructions.
- CAUTION: Risks of short circuit, fire, or explosion if the battery is damaged. Frequent use, dropping, impact, corrosion, or compression of the battery may cause damages including cracked casing, detached plates, or leakage of internal liquid or gas, etc.
- If the battery is damaged, stop using it immediately and dispose of it according to the instructions.
- Remove the battery if you do not use the device for a long time.
- For long-term storage of the battery, make sure it is fully charged every 2 months to ensure the battery quality. Otherwise, damage may occur.
- The built-in battery cannot be dismantled. Please contact the manufacture for repair if necessary.
- Make sure the battery temperature is between 0°C to 50°C (32°F to 122°F) when charging.
- Do not dispose of the battery into fire or a hot oven, or mechanically crush or cut the battery, which may result in an explosion.
- Do not leave the battery in an extremely high temperature or low air pressure environment, which may result in an explosion or the leakage of flammable liquid or gas.
- Confirm there is no flammable material within 2 m of the charger during charging.
- DO NOT place the device with battery or the battery alone near heating or fire source. Avoid direct sunlight.
- DO NOT place the battery in the reach of children.
- DO NOT swallow the battery to avoid chemical burns.
- This product contains a coin/button cell battery. If the coin/button cell battery is swallowed, it can cause severe internal burns in just 2 hours and can lead to death.
- If the battery compartment does not close securely, stop using the product and keep it away from children.
- If you think batteries might have been swallowed or placed inside any part of the body, seek immediate medical attention.

Maintenance

- If the product does not work properly, please contact your dealer or the nearest service center. We shall not assume any responsibility for problems caused by unauthorized repair or maintenance.
- Make sure that the power has been disconnected before device teardown and repair by professionals.
- Check the optical surfaces of objective lens, eyepiece, rangefinder, etc. If necessary, remove dust and sand from the optics using tools and solvent designed especially for this purpose (it is preferable to use a non-contact method).
- If the equipment is used in a manner not specified by the manufacturer, the protection provided by the device may be impaired.
- Wipe the exterior surfaces of metal, plastic, and silicone parts with a clean and soft cloth. Do not use chemically active substances, solvents, etc. as these may damage the paint.

Using Environment

- Make sure the running environment meets the requirement of the device. The operating temperature shall be -20 °C to 50 °C , and the operating humidity shall be from 5% to 95%.
- DO NOT expose the device to high electromagnetic radiation or dusty environments.
- DO NOT aim the lens at the sun or any other bright light.
- Place the device in a dry and well-ventilated environment.
- When any laser equipment is in use, make sure that the device lens is not exposed to the laser beam, or it may burn out.
- Avoid equipment installation on vibratory surface or places subject to shock (neglect may cause equipment damage).
- This equipment is not suitable for use in locations where children are likely to be present.

Emergency

- If smoke, odor, or noise arises from the device, immediately turn off the power, unplug the power cable, and contact the service center.

1.DESRIPTION

Cyclone thermal monocular series featuring high thermal sensitivity ensures perfect detail recognition even in the hardest weather conditions when the object and background are with minimal temperature difference. Moreover, using Cyclone series thermal monocular includes several benefits over night observation with traditional optics or even night vision devices. The device avails its prominent features dominating various applying occasions, like rescuing, night hunting, hiking, and exploration.

2.FEATURES



Cyclone 625

- 640×512 thermal resolution, NETD<20mK;
- Excellent handheld ergonomic design for a perfect operating experience;
- Silent button with no noise;
- Various colour palettes for customized use;
- Advanced AI algorithm suitable for diverse distance measurements simultaneously;
- Incomparably simple UI interface;
- Up to 32GB storage capacity;
- 1024×768, 0.39-inch OLED display;
- Three types of digital zoom available;
- Fast boot within 3 seconds;
- Replaceable lithium batteries provide up to 8 hours of continuous work;
- A variety of imaging modes including forest, target, and outline.

3.SPECIFICATIONS

Model	Cyclone315	Cyclone325	Cyclone625
Thermal Module			
Resolution	384×288	384×288	640×512
Pixel pitch	12μm		
NETD	20mK@300K		
Spectral range	8-14μm		
Frame rate	50Hz		
Detection range	750m	1300m	1300m
Optics			
Objective lens	15mm/F1.0	25mm/F1.0	25mm/F1.0
Field of view	17.5° x 13.1°	10.5° x 7.9°	17.5° x 14°
/ m @100m	30.7m x 23.0m	18.4m×13.8m	30.8m x 24.6m
Magnification	1.4X	2.4X	1.4X
Digital zoom	1X,2X,4X		
Eye relief	20mm		
Exit pupil	6mm		
Diopter	±5D		
Display			
Type	AMOLED		
Resolution	1024×768		
Display size	0.39 inch		
Color palette	6		
Image mode	Forest/Target/Outline		

Function			
Photo/Video playback	Yes		
Language	Multiple-language		
Inbuilt memory	32GB		
Audio	Yes		
Calibration	Auto/Manual		
PIP	Yes		
AI distance measurement	Yes		
Heat track	Yes		
Real-time notification	Yes		
OSD recording	Yes		
Battery			
Internal battery	Replaceable and rechargeable Li-ion battery (18650x1)		
Battery life	10h	10h	8h
Interface			
Type-C	Battery charge, Data transfer		
Hotspot	Yes, App remote control		
Environment			
Working temperature	-20°C--+50°C		
Protection level	IP67		
Weight, g	255 (w/o battery)	261 (w/o battery)	261 (w/o battery)
Dimension, mm	136×76×54		
Accessories			
External cable	USB cable		
Other accessories	Protective bag/ Non-dust cloth and etc.		

Notes:

1. The actual operating time depends on the intensity of using Wi-Fi, video recorder, and AI rangefinder.
2. Improvements may be made to the design and software of this product to enhance its useful features. The specifications of the device may be improved without prior notice.

4.PACKING LIST



Lens cloth (x1)



Service and support card (x1)



User manual (x1)



Monocular (x1)



Charger (x1)



Lithium battery (x2)



USB cable (x1)

5. COMPONENTS AND CONTROLS

5.1 Appearance of Cyclone



5.2 Description of Controls

Before entering the main menu				After entering the main menu			
	Short press	Long Press	Double click		Short press	Long Press	Double click
	Standby Mode	Turn On/Off	Calibration		Standby Mode	Turn On/Off	Calibration
	Zoom In/Out	AI Rangefinder	N/A		Cursor Up	N/A	N/A
	Capture	Record	Main Menu		Confirm	Withdraw	N/A
	Pseudo Colors	Outline Mode	N/A		Cursor Down	N/A	N/A

6. OPERATION GUIDE

WARNINGS

Cyclone series has been designed for long-term use. To ensure sustainable performance, please adhere to the following:

- Due to it the thermal monocular, no aiming behaviour to the hot resources is allowed.
- Store with the lens cap on in the carrying case.
- Switch off the device after use.

Attempts to disassemble or repair the device will void the warranty!

- The device is designed for use in various operating temperatures. However, if it has been brought indoors from cold temperatures, do not turn it on for 2 to 3 hours. This will prevent external optical surfaces from condensation.
- To ensure reliable performance, it is recommended to carry out regular technical inspections of the device.

6.1 Power On/Off

Long press the power button  for 3s to power on/off the Cyclone.

6.2 Image Correction

Double-click the power button  for image correction. Please refer to the “Correction” section for detailed guidance of image correction.

6.3 Standby Mode

Short press the power button  to enable standby mode, and press the power button  again to wake it up.



6.4 Lens Focus Adjustment

Open the lens cover, rotate the lens focus knob to focus on the object being observed.



6.5 Pseudo Color Switch

Short press  to change the pseudo colors. There are totally six pseudo colors (white hot, black hot, red hot, green, golden, violet) for user choice.



White



Black



Golden



Red



Green



Violet



6.6 Target Outline Mode

Long press  to turn on/off the Target Outline Mode.



6.7 AI Rangefinder

AI rangefinder function is used to check the distance of the target. Double click  to turn on/off the AI rangefinder function. You will see distance information on the display after activating this function.

6.8 Zooming Adjustment

Short press  to adjust the zooming rate of the monocular. There zooming ranges from 1x to 4x.

6.9 Diopter Adjustment

Adjusting the diopter knob to achieve clear view towards the OLED screen. The adjustable range is $\pm 5D$.



6.10 Device Charging

There are two means to charge the device, no matter charge the device from a type-c cable directly or take out the battery and charge the battery with the given charger.

Charge through the device

Connect the given type-c cable with the device and connect the other side the the power source can charge the device directly.



Charge the battery

The battery can be easily taken off and charge the battery with the battery charger is also possible.



7.MAIN MENU

- On the home screen, double-click the menu button “M” to enter the main menu interface.
- In the main menu, short-press the “ $\wedge/\vee$ ” button to switch the menu options.
- Short press the menu button “M” to adjust the parameters of the present option.
- Press and hold the down menu button “M” for 3 seconds to exit to the home screen.
- Short press the Menu button “M” to save.

Main Menu function descriptions



PIP

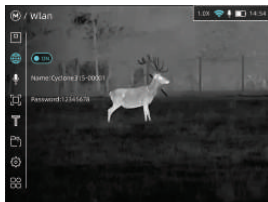


Turn PIP on/off

- Double click the menu button “M” to enter the main menu.
 - Select the PIP option with the “^/√” button.
 - The icon will be turned into blue when PIP is selected.
-
- Short press the menu button “M” to turn on the PIP feature.



WLAN



Turn WLAN function on/off

- Double click the menu button “M” to enter the main menu.
- Select the Wlan option with the “^/√” button.
- The icon will be turned into blue when Wlan is selected.
- Short press menu button “M” to switch the status of Hotspot.
- When the Hotspot is turned on, it can be connected with “ThermTec Outdoor” APP. The default hotspot password is 12345678.



Turn MIC function on/off

- Double click the menu button “M” to enter the main menu.
- Select the MIC option with the “^/√” button. Short press menu button “M” to shift its status.
- Voices info will be recorded in recordings if the MIC feature has been turned on.



Turn on Tracking feature on/off

- Double click the menu button M to enter the main menu.
- Select the Tracking option with the ^/√ button. Short press menu button M to turn it on/off
- When you turn on this feature, it will label the highest temperature point in the field of view.



Turn the Logo on/off

- Double click the menu button “M” to enter the main menu.
- Select the Logo option with the “^/√” button.
- Short press menu button “M” to enter turn on/off the Logo.
- Depend on ones using preference, you can decide whether the logo should be displayed in the right corner or not.



View Images/Videos in Files

- Double click the menu button “M” to enter the main menu.
- Select the Files option with the “^/√” button.
- The icon will be turned into blue when Files is selected.
- Short press menu button “M” to enter Images file or Record file.
- Then we can check the captured images and recorded videos.



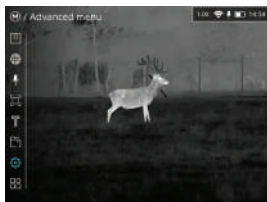
- Of course, the images/videos can be processed at you willing, delete the selected one, delete all the footage, or you can skim them one by one.



**Advanced
Menu**



Image



Access Further Sets in Advanced Menu

- Double click the Menu button “M” to enter the main menu.
- Select the Advanced Menu option with the “^/v” button.



- Short press menu button “M” to enter Advanced Menu.



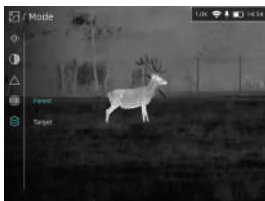
Advanced Menu



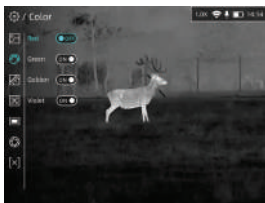
Color



- We can set various parameters here, such as images parameters, color, ranging, Blind Pixel, OLED, Correction, Shutdown.
- Select Image and enter the image set. We can set various image parameters here, such as brightness, contrast, sharpness, denoise and image mode here. The adjusting level ranges from 1-10, the default value is 5.



- Two image modes meet the need of various scenarios.



- The users can customize the colors they like and decide if they are put in the color palettes.

Advanced Menu	Ranging	● Also, we can set the model size in the AI rangefinder under the advanced menu.
	Blind Pixel	● Some small dead pixels can be erased by the function of Blind Pixel. Keep pressing the Replace until the dead pixels are removed, attention: The whole dead pixel removing process is not a one-time thing, the operation may carry multiple times sometimes.
	OLED	● OLED color can be set in the OLED setting.

 Advanced Menu	 Correction	 ● Here are 4 choices of OLED colors for us under the OLED settings. Also the OLED brightness can be set here too, the adjustable ranges from 1-5.  ● The image correction can be set by Auto and Manual.
	 Shutdown	 ● Shutdown function can save battery power for you, if you don't use your device for long time. The device can be set to turn off after 30 mins, 60 mins and you can turn off the shutdown feature.


System


M-YD



System setting

- Double click the menu button “M” to enter the main menu.
- Select the System option with the “^/√” button.



- Short press menu button “M” to enter System. And press one more time to set the system unit. Here we can select M/YD.

 System	 Time		● The device time can be set in the Time setting.
	 Date		● The device date can be set in Date setting
	 Language		● The supported language can be set in the language setting.

 System	 Version	 ● We can check the device SN(serial number) and Version in the Version setting.
	 Reset	 ● Reset function is available in Reset setting.
	 Update	 ● The upgrading operation is required to be carried manually after copying the upgrading package to the file of storage via PC.

8.CAPTURING AND RECORDING

A built-in 32GB storage space set for image capturing and video recording. The files of images and videos will be named by the device time, so it is recommended to set the time in the main menu before using the image capturing and video recording function.

Image Capturing

- Press the camera button “M” to take a photo and a capture icon appears on the screen.



- Images are saved in the built-in storage space.

Video Recording

- Press and hold down the camera button “M” to start a video recording.
- A recording timer displays on the top of the screen. The time format is HH:MM:SS (Hour:Minute:Second).



- You may enter the menu and enable other functions during video recording.
- Press and hold down the camera button “M” to stop and save the recording.
- The videos are saved in the built-in storage space.

Caution:

- The number of the recorded files is limited by the capacity of the internal memory.
- Check the available space of the built-in storage space regularly and move the footage to other storage media to free up the memory space.

9.MEMORY ACCESS

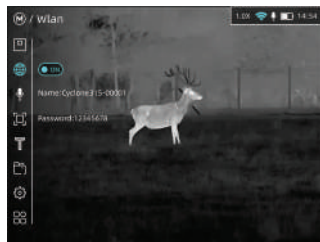
When the device is turned on and connected to a computer, it is recognized by the computer as a flash memory card, which is used to access the device's memory and make copies of pictures and videos.

- Turn on the Cyclone and connect it with the computer via Type-C cable.
- There is an extra disk in the disk zone, enter the disk.
- Images and videos are saved separately in the folders of "Image" and "Record".
- There are different images and videos named by time in the storage.
- Select desired files or folders to copy or delete.

10.HOTSPOT FUNCTION

A built-in hotspot module is integrated in the Cyclone, which enables the device to connect wirelessly to external devices such as smart phones.

- Double click Menu button "M" to enter the main menu.
- Turn Hotspot function on /off with a short press of menu button "M".



- Turn on “ThermTec Outdoor” APP, select Wi-Fi, and type in the password on the mobile device to finish the connection. The initial password is 12345678.
- When Wi-Fi is successfully connected, you can control the device via “ThermTec Outdoor” APP.

11.DOWNLOAD “ThermTec Outdoor” APP

You may search "ThermTec Outdoor" in Apple Store or Google Play to download the “ThermTec Outdoor” APP, or download it through the QR code shown on the packing box, user manual or below.



12. TECHNICAL INSPECTION

A technical inspection of the device is recommended before use.

- Check the external appearance of the device (there should be no cracks in the casing).
- Check the condition of the lens and eyepiece (there should be no cracks, greasy spots, dirt or other deposits).

13. MAINTENANCE

Maintenance should be carried out at least twice a year and consist of the following actions.

- Wipe the external surfaces of metal and plastic parts free of dust and dirt with a cotton cloth. Silicone grease maybe used for this.
- Check the glass surfaces of the eyepiece and the lens. If necessary, remove dust and sand from the lenses (preferably using a non-contact method). Cleaning of the external surfaces of the optics should be done with substances designed especially for this purpose.

14. FIRMWARE UPGRADE

Cyclone series thermal monocular is supported by the “ThermTec Outdoor” APP, which allows you to transmit the images and videos from the device to the smartphone or tablet via Hotspot in real time.

The electronic version of this User Manual and the latest firmware can be downloaded from the ThermTec website: www.thermetytec.com. Firmware upgrade can also be finished via the “ThermTec Outdoor” APP.

Upgrading via APP

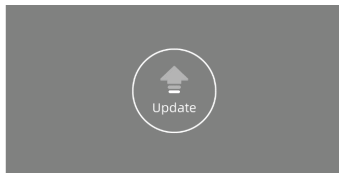
- Enter ThermTec Outdoor APP and turn on the GPS function and cellular network of your phone manually.

- Select the corresponding package and download.
- Enter the upgrade module and press upgrade, attention: In order to obtain a stable upgradation, it's advised to turn off your cellular network during upgradation.
- After finishing the update, the device will reboot automatically.
- Instructions for detailed upgradation can also be downloaded from the official website or you can access our social media for firmware upgradation on ThermTec Outdoor.

Upgrading via PC



- Please download corresponding upgrading package from official website. www.thermeyeretec.com.
- Unzip the package just downloaded.
- Connect the device to PC via Type-c data cable.



- Copy the related updating firmware to the file folder named storage of Cyclone. Press “M” to select Update icon, and the system will prompt “Update”.

- Enter Version setting to check firmware version.



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