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Monocular outdoor thermal image telescope User Manual

Model: HT-C18

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Monocular outdoor thermal image telescope

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NEED HELP? CONTACT US!

Have product questions? Need technical support? Please feel free to contact us:

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www.vevor.com/support

This is the original instruction, please read all manual instructions carefully before operating. VEVOR reserves a clear interpretation of our user manual. The appearance of the product shall be subject to the product you received. Please forgive us that we won't inform you again if there are any technology or software updates on our product.

SAFETY



Note / Remark.



Caution / Warning.



Read this material before using this product. Failure to do so can result in serious injury. Save This Manual.



Assembly precautions

Please observe the following guide in order not to damage the product:

Don't assemble or dismantle the product without permission.

The product is a type of super precise equipment. Don't try to dismantle, assemble or remodel any part of the product. Repair of

the product should be made by technical personnel designated by VEVOR Company.

Avoid damage to probe of the product

Note: don't put the product close to strong heat source directly (such as electric iron). Otherwise, it may damage the probe of the product.

Product hum

When the product works, there is light sound of clicking every several seconds. This is normal phenomenon that the lens captures images.



Use precautions

The warning describes the acts that may cause harm to users.

Please observe the following operation in order to avoid electric shock or personal injury.

● **If the product case is damaged, don't use it continuously.**

Please contact the local distributors or agents of Share Link under such condition.

● **During the process of use, if the product is found with smoke, spark and the burnt smell, please stop using at once.**

In case of such condition, the product power supply should be powered off first. After the smoke and peculiar smell disappears completely, please contact the local distributors or agents of Share Link.

● **Don't remodel the adapter and the data line.**

Otherwise such remodeling may cause short circuit or fire.

● **Don't weld the battery without permission.**

Such operation may damage the battery and result in leakage and explosion of the battery.

- **Avoid that the battery is impacted (such as collusion and falling ,etc)**

Such condition may damage the battery case or result in that the battery leaks or explode.

- **Please pull off the adapter on the power socket when charging is not made.**

The adapter may get overheated if it is connected with power supply for a long time, This may cause overheating deformation and fire.

- **Please ensure that the plug of the adapter is inserted into the specified power socket.**

The adapter plug may be different due to the regions. Please make confirmation whether the specification of the adapter is consist with the specification of electric appliances in your region. Otherwise, this may cause overheating of the equipment, electric shock, fire. chemical leakage inside the battery, explosion and other serious consequences.

- **When the plug of the adapter or wire is damaged, stop using immediately.**

Don't change the battery unless the plug of the charger is inserted into the socket completely.

- **Do not touch the electric wire with wet hands**

It is possible to cause electric shock when touching the electric wire with wet hands. When pulling out the electric wire, hold the electric wire head rightly to pull out the wire. Don't pull off the electric wire directly Otherwise the electric wire may be broken,causing electric shock and fire.

- **Forbid dip the product into water caught in rain.**

if the case contact with any liquid please wipe it dry immediately. If water or other liquid enters the inside of the instrument, please power of the power supply at once . Continuous use may result In product damage.

- **Clean the dust on the adapter plug and the data line**

When it is exposed to dusty and dump environment for a long time, the dirt surrounding the electric equipment will accumulate moisture. This may cause short circuit and fire;

- **Please use the original adapter of the company to charge the product.**

The use of non-original power supply accessories may cause equipment overheating, electric shot fire; and leakage of chemicals inside the battery, explosion and other serious consequences.

- **Don't use abradant, isopropanol or solvent to clean the enclosure of the device.**

Such operation may cause the product case to be damaged.

- **The product temperature may increase after a long time of charging.**

You may feel scorching heat when the hands touch the sensors.

• **Problem caused by water condensation**

Don't bring the instrument into low temperature environment from high temperature environment in a short time or from low temperature environment to high temperature environment. This may result in that the inside of the instrument and appearance produce water condensation. In such condition, the instrument should be placed into portable box or plastic bag. Before use, make it restore to the environmental temperature and take it out to use. If the product has water condensation inside, please power it off immediately. Otherwise, the instrument may be damaged. Operation is not allowed unless the water condensation disappears.

• **Avoid that the product is impacted (such as collision and falling, etc).**

Such operation may cause the product to be damaged. Please avoid such operation

Long-time storage and regular charging

The product should be placed at a cool and dry environment if it not used for a long time. If the product installed with battery is stored for a long time, charging should be made regularly. Otherwise, the battery will run out and the service life will be shortened.

FCC Information

CAUTION: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment!

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- 1) This product may cause harmful interference.
- 2) This product must accept any interference received, including interference that may cause undesired operation.

WARNING: Changes or modifications to this product not expressly approved by the party responsible for compliance could void the user's authority to operate the product.

Note: This product has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of the FCC Rules, These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This product 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. However, there is no guarantee that interference will not occur in a particular installation. If this product does cause harmful interference to radio or television reception, which can be determined by turning the product off and on, the user is encouraged to try to correct the interference by one or more of the following measures.

- Reorient or relocate the receiving antenna.
- Increase the distance between the product and receiver.

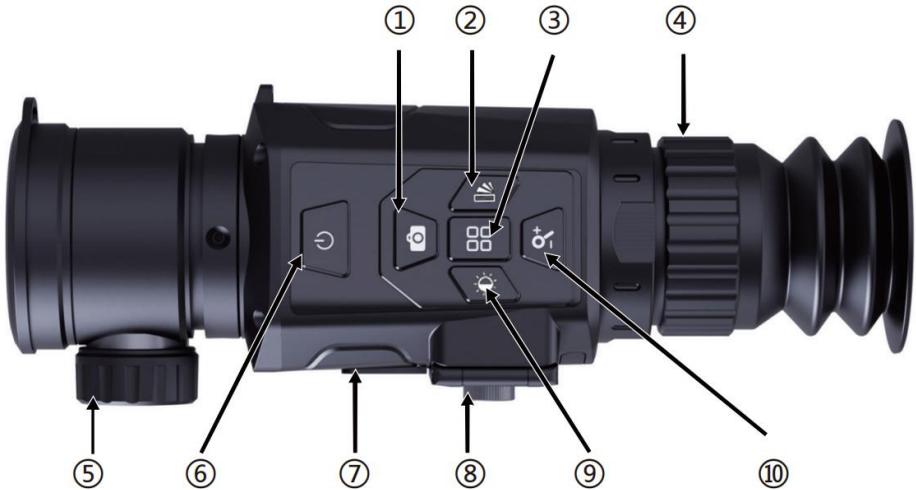
- Connect the product to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for assistance.

Technical Specifications

Product model	HT-C18			
Infrared				
Detector type	Vanadium oxide uncooled infrared focal plane			
Resolution ratio	384x288			
Pixel size	12μm			
Focus length	35mm			
Field angle	7.5°×5.7°			
Work band	8~14μm			
NETD	≤ 40mk@25°C,@F/1.0			
Frame rate	≤50Hz			
Focusing mode	Manual			
Detection range				
Character 1.7mx0.5mx0.3m	2361m	3306m	5100m	7083m
Vehicle 4.5mx2.0mx1.5m	6250m	8750m	13500m	18750m
Perception distance				
Character 1.7mx0.5mx0.3m	590m	826m	1275m	1771m
Vehicle 4.5mx2.0mx1.5m	1563m	2188m	3375m	4688m
Display				
Display screen type	OLED			
Resolution ratio	1440×1080			
Display size	0.39inches			

Electronic zoom	1×/2×/4×/8×	
Diopter regulation	±5SD	
Palette	White hot, Black hot, Fire hot, Rainbow, Iron red, Cold color	
Hot point track	Supported	
Picture in picture	Supported	
Language	Simplified Chinese, Traditional Chinese, English, Russian and German	
Storage		
Capacity	Built-in 16G EMMC(The system takes up some space and it is 13.8G actually)	
Photographing	Supported	
recording	Supported	
Image/video format	JPG/MP4	
Interface		
USB interface	Charging/export image and video	
Power		
Detachable rechargeable lithium battery	1400mAh×2(battery model 18350)	
General technical index		
Overall power consumption		≤1.8W
Time of endurance	≥5 hours	
Work temperature	-20C ~ +60C	
Storage temperature	-30C ~ +70C	
Impact	≤1000G	
Protection grade	IP66	
Size/weight		
Product size	198x57.5x64.3mm	
Product weight	580g	

Introduction to Product Structure



①	Photographing/ recording/up	②	Pseudo color/picture in picture / right key
③	Menu/Close UI/enter	④	Diopter adjustment
⑤	Focal length adjustment	⑥	Power/return
⑦	Type-C interface	⑧	Battery compartment
⑨	Brightness/Hot point/ Track/Left key	⑩	Zoom In/Refresh/ Shutter/Down key

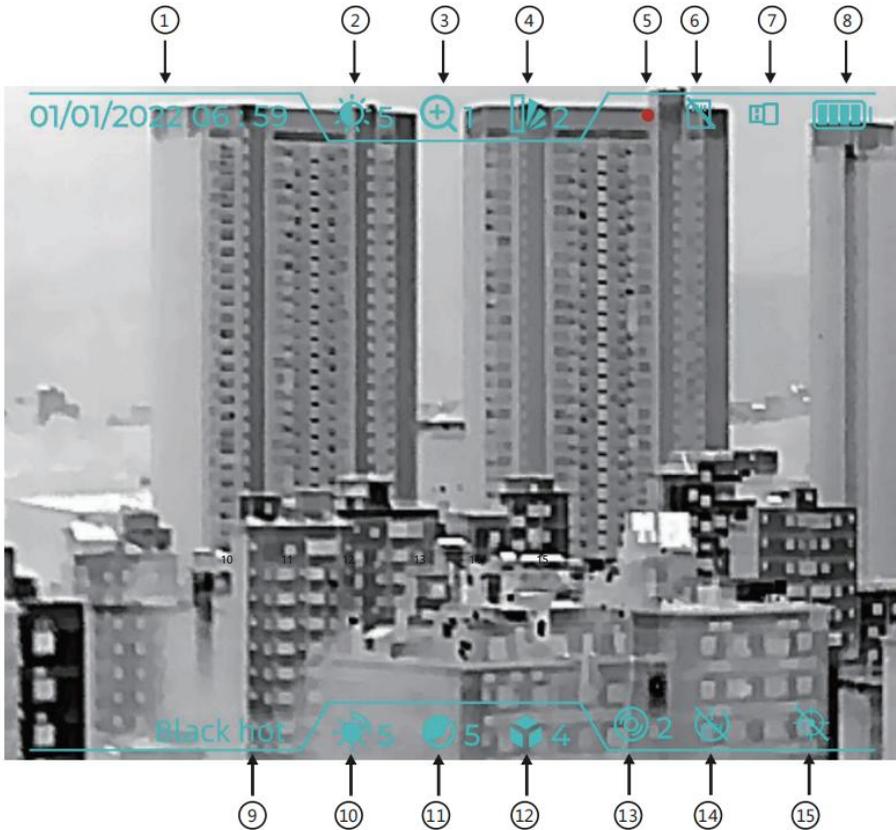
Focal length adjustment: Adjust the focus to make the image clearer. Type-C interface: used for battery charging and connecting the computer to view device photos and video files. Battery compartment: two detachable 18350 lithium batteries.

Diopter adjustment: Adjust your own vision.

Key Description

Key/state		Press	Hold down
Power key	Main interface	It can be configure as screen off or freeze frame of picture through the menu.	Pop out the shutdown prompt box to carry out shutdown.
	Menu interface	Return	_____
Photo key	Main interface	Photographing	Start recording/ stop recording
	Menu interface	Upward direction	_____
Brightn ess key	Main interface	Brightness adjustment	Hot point tracking
	Menu interface	Leftward direction	_____
Zoom in key	Main interface	Zoom in(1x/2x/4x/8x)	Refresh shutter
	Menu interface	Downward direction	_____
Pseudo color key	Main interface	Pseudo color switching	Open picture in picture /close picture in picture
	Menu interface	Rightward direction	_____
Menu key	Main interface	Enter the menu	Open UI display/ close UI display
	Menu interface	Enter	Return

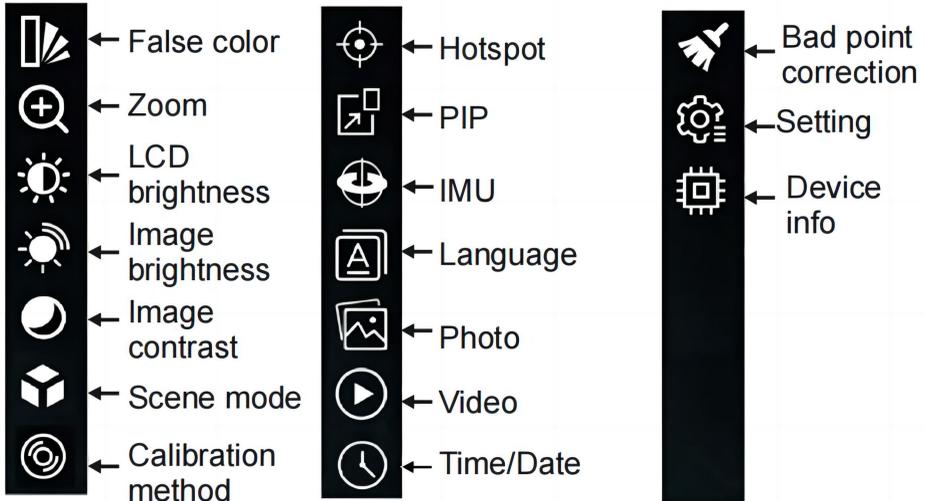
Introduction to Icon of Main Interface



①	Date/Time	②	Screen brightness
③	Zoom in	④	Pseudocolor
⑤	Record	⑥	SD card full
⑦	USB connection	⑧	Battery level
⑨	Pseudo color name	⑩	Image brightness
⑪	Image contrast	⑫	Scene mode
⑬	Correction method	⑭	Automatic shutdown
⑮	Hot point tracking		

The icons will be displayed in the interface at the following conditions recording icon: hold down the recording key to video USB connection icon: when the data cable is connected to the computer; SD card full icon: when the storage space is less than 100M.

Menu Description



False color: White hot, black hot, fire hot, rainbow, iron red, cold color.

Zoom : Electronic amplification 1X, 2X, 4X, 8X
LCD brightness: The display brightness can be adjusted to 1~10levels.

Image brightness: The brightness of the infrared image can be adjusted to 1~10 levels

Image contrast: The contrast of infrared image can be adjusted to1~10 levels.

Scene mode: The application scene can be set as standard, city or jungle.

Calibration method: The infrared image correction method can beset as manual calibration, automatic calibration and scene calibration.

Hot spot: The hot point tracking of infrared images can be set as on or off.

PIP: The picture in picture function is set as on or off in infrared image mode.

IMU: Pitch angle and roll angle display, set on or off.

Language: Set the language of the device, including simplified Chinese, traditional Chinese, English, Russian and German.

Photo: Photo list, view photos

Video: Video list, view video.

Time/Date: Set the date (year, month, day) and time (hour, minute)time format (12 hours, 24 hours), and date format (year/month/day/month/year, month/day/year).

Bad point correction:HT-C17 refers to automatic Bad point correction (operate according to prompts), HT-C18 and HT-C19refer to manual Bad point correction (left, right, up and down navigation keys adjusts the cursor position. The menu

key determines to remove bad points and press the power key to return)

Settings: Short press the power button, video interface, automatic shutdown time, recording duration, and picture-in-picture position.

Short press the power button: can set the power. Press it for display off or freeze-frame of picture.

Video interface: set whether to bring UI display information when recording;

Automatic shutdown time: may set no shutdown, 5 minutes, 10minutes, 20 minutes, 30 minutes.

Recording duration: set the duration of each video file, including 5 minutes, 10 minutes, 20 minutes and 30 minutes;

Position of picture in picture: Set the position of picture in picture in the center, which can be set as upper right, lower right, lower left and upper left.

Device info: View the model of the device, detector pixel, detector type, screen size, screen pixel, battery capacity, hardware version, firmware version, application version, storage space, etc, and also carry out application update, parameter resetting and formation, etc of the device.

Photos and videos

View photos: In the photos of the menu, open the photo list and press the menu key to view photos. When viewing a photo, press the brightness key to view the previous photo, and press the pseudo color key to view the next photo.

Photo deletion: In the photo list, press the brightness key to pop up a prompt for deleting photos, and press the menu key to confirm deletion.

View video: In the menu video, open the video list and press the menu key to view the video.

Delete video: In the video list, press the brightness key to pop up a video deletion prompt, and press the menu key to confirm the deletion.

Introduction to Palette

The color palette can be used to change the pseudo color display of infrared images on the display screen. Some palettes are more suitable for specific applications and can be set as needed.

The palette is divided into six colors: white hot, black hot, fire hot, rainbow, iron red and cold color.

These palettes work best under condition with high thermal contrast, allowing for additional color contrast between high and low temperatures

Choose the right color palette to display the details of the target object. For palette colors of rainbow, iron red and cold colors, the coloration outweighs the display colors, which are very suitable for high thermal contrast, and are used to improve the color contrast between high temperature and low temperature. However,

white heat and black heat provide uniform linear color. The following pictures are taken from the same object, but with different palettes selected:



White hot



Black hot



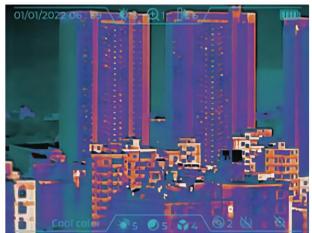
Fire hot



Rainbow



Iron red



Cold color

Charging of the Battery and Description

Use USB data line to charge:

- This product has a built-in rechargeable battery.
- When the battery level is low, the top right of the screen will display “  Please charge in time through TEPY-C USB interface .
- Pull off the USB line after fully charging

Use recharge stand to charge:

1. Unscrew the battery cover and take out the batteries
2. Used the charger from the original manufacturer to charge the batteries. Install the batteries properly according to the polarity as shown on the charger.
3. After it is fully charged, disconnect power supply for the charger and remove the batteries.

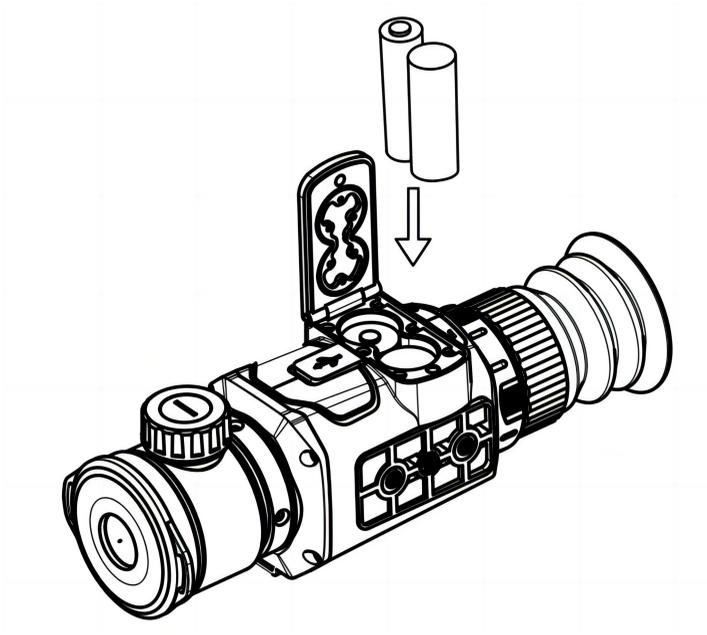


Prompt: When this product lies idle for long, it shall be charged at least every three months to prevent irreversible loss of capacity due to too low battery power arising from its own discharge as it is kept too long .

Installing the Battery

- (1) Turn the battery compartment knob counterclockwise to open the battery compartment cover.
- (2) Install the battery in strict accordance with the positive and negative pole directions of the battery on the battery compartment cover.
- (3) Close the battery compartment cover, and turn the battery compartment knob clockwise until it is locked up.

Note: 1. Please do not use the battery whose insulating layer is damaged;
2. If the battery's positive and negative poles are wrongly connected, the device will be unable to work, and that will damage the battery.



MAINTENANCE/ Service

Please use damp cloth or weak soap to clean the enclosure of the device. Don't use abrasant, isopropanol or solvent to clean. The lens and screen should be cleaned with use of cleaning agents for professional optical glasses. Please note that: Lack of maintenance may result in warranty cancellation. The guarantee of this tool will be void if the machine has been modified, or you attempt to take apart the machine or open the factory-made sealing of the machine without the consent of an authorized representative of the manufacturer.

Lens Maintenance

Prevent damage of the infrared lens:

- Clean the infrared lens carefully. The lens is provided with refined anti-reflection coating.
- Don't clean with force to prevent damage of the anti-reflection coating. The select able color palette.
- Use a cleaning solution for lens maintenance, such as alcohol-based commercial lens cleaners, alcohol, and a lint-free cloth or paper towel. Compressed air tanks can be used to remove loose particles.

Clean the lens:

The compressed air tank or dry nitrogen ion gun (if applicable) may be used to

blow the loose particles on the lens surface. Dip the lint free cloth in alcohol. Squeeze the excessive alcohol in the cloth or apply the lint free cloth on dry cloth lightly. Wipe the lens surface by making circular motion. Then discard the cloth. If it is necessary to repeat above step, please use new cloth to dip with the cleaning solution to wipe.

Disposal



This product is subject to the provision of European Directive 2012/19/EU. The symbol showing a wheeled bin crossed through indicates that the product requires separate refuse collection in the European Union. This applies to the product and all accessories marked with this symbol. Products marked as such may not be discarded with normal domestic waste, but must be taken to a collection point for recycling electrical and electronic devices..

Only qualified technicians are authorized to undertake the repair of Monocular outdoor thermal image telescope.

For your safety, please observe all safety notes, precautions, and details in this manual.

Warranty

1. This warranty shall only cover claims for damage due to a fault in the product's manufacture
2. If a warranty claim is made, the party entitled to warranty cover must present the proof of purchase, including the purchase date.
3. Customers' satisfaction is always the motivation of our brand growth. We promise to help you solve any issues. Please just let us know if you need help.

OUR SERVICE TEAM PROMISES TO REPLY TO YOUR MESSAGE WITHIN 24H.

Scope of Warranty

1. We guarantee that VEVOR products are produced in accordance with ISO 9001 Quality Management procedures and are free of manufacturing defects for the period of warranty.
2. This warranty covers faults in the products due to manufacturing defects within 1 year from date of purchase. After inspection by sales representative,

defective products will be replaced or repaired with equivalent goods free of charge.

3. Any warranty claim made during warranty period shall not extend the overall period of warranty coverage.

4. Warranty periods:Warranty claim date

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