

HT Series USER MANUAL

Night Vision Scope



HT-99LRF

CONTENTS

1 . Product Overview	01
2 . Product Components	02
3 . Package Contents	03
4 . Operating Instructions	03
5 . Button Functions	05
6 . Menu Functions	06
7 . Device Connection	09
8 . Specifications	10
9 . Maintenance and care	12



1. Product Overview

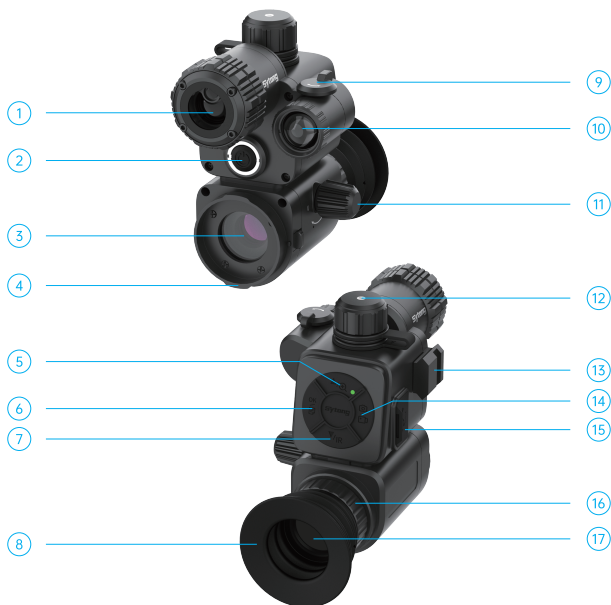
1.1.The HT-99LRF Night-Vision Monocular is a dual-use device designed for day and night observation. It features a high-resolution 5MP image sensor that delivers vivid color images during the day and clear black-and-white images at night using near-infrared illumination. The eyepiece focus can be adjusted for sharp viewing from 0.1 meters to infinity.

1.2.The device captures images via the optical module and transmits them to an OLED display after processing. You can view these images through the eyepiece and also connect to the mobile app for real-time viewing, monitoring, and settings adjustment.

1.3.The HT-99LRF supports both 850nm and 940nm night-vision IR lights, allowing you to balance sensor efficiency with covert, eye-invisible operation. This enables adaptation to diverse day or night observation needs.

1.4.The device is equipped with a laser rangefinder, enabling accurate distance measurements of up to 1000 meters.

2. Product Components



1. Laser Rangefinder Module	2. Power Button	3. Objective Lens
4. 1/4-inch Threaded Mount	5. Up Navigation Button	6. Menu Button
7. Down Navigation Button	8. Eyeshade	9. Light Source Selector Knob
10. IR Illuminator Lens Assembly	11. Objective Focus Knob	12. Battery Compartment Cover
13. Picatinny Rail	14. Video Record Button	15. Data Transfer Port
16. Eyepiece Focus Ring	17. Eyepiece	

3. Package Contents

- ▶ HT-99LRF Night Vision Monocular
- ▶ 18650 Rechargeable Battery
- ▶ Carrying Case
- ▶ Type-C Data Cable
- ▶ User Manual
- ▶ 5V 2A Power Adapter
- ▶ Hex Wrench
- ▶ Electrical Tape
- ▶ Socket Wrench

4. Operating Instructions

4.1. Warnings

- (1) Do not look directly into the infrared illuminator at close range, as it may cause eye injury.
- (2) Wait at least 20 seconds between each power-on cycle.
- (3) Handle the device carefully during use. Avoid dropping, striking, or shaking to prevent damage to optical, electronic, or structural components.
- (4) Do not disassemble the device yourself. If it malfunctions, contact the manufacturer immediately. Unauthorized disassembly will void the warranty.
- (5) When not in use or during transport, remove the battery and store the scope in its protective case.
- (6) If the battery runs low, replace it promptly to avoid damage caused by over-discharge.
- (7) Using the device outside the specified environmental conditions may result in damage.

4.2. How to Use

- (1) Unpack the night vision monocular, install the battery following the polarity marks on the battery cover, tighten the cover, then press and hold the power button for 3 seconds to turn it on .
- (2) Look through the eyecup at the display and adjust the eyepiece focus ring until the symbols and numbers appear sharp.
- (3) View the screen through the eyepiece, align the monocular with your target, and use the objective focus knob to bring the object into clear focus.
- (4) Under night vision conditions, press and hold the Down Navigation Button to switch to black-and-white or green night vision mode. Briefly press the same button to turn on the IR illuminator, remove the IR lens cap, aim at the target, and adjust the focus knob until the image is clear.
- (5) Short-press the Down Navigation Button to activate the illuminator. Use the light source selector knob to switch between 850nm and 940nm IR lights.

4.3. Notes

- (1) Only clean the optical components(objective lens, eyepiece, IR illuminator lens, laser rangefinder lens) when dirt affects image quality. Use a lens cloth with a small amount of alcohol to gently wipe the lens surface, avoiding damage to coatings.
- (2) To avoid potential eye injury, do not stare directly into the infrared (IR) illuminator or the laser rangefinder beam.
- (3) After use or when not observing for extended periods, turn off the device to prolong its service life.

5. Button Functions



Power Button

- (1) To power on/off, press and hold the power button for 3 seconds.
- (2) For sleep mode, press and hold the power button for 1-3 seconds until the sleep icon appears. Briefly press to wake.
- (3) In the menu, briefly press the power button to return to the main interface.

Up Navigation Button

- (1) Press and hold to turn the rangefinder on or off.
- (2) Short-press to switch magnification levels.
- (3) In menu mode, short-press to move the cursor up.

Menu Button

- (1) Press and hold the Menu button to open the menu. Navigate through options using the Up/Down keys. Press the Menu button briefly to access submenus. When in the menu system, press and hold the Menu button to return to the previous level.
- (2) Press the menu button briefly to adjust screen brightness.

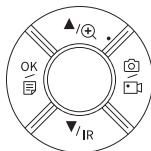


Photo & Video Button

- (1) Press and hold to start recording, and long-press again to stop.
- (2) Short-press to take a photo.

Down Navigation Button

- (1) Press and hold to switch between color, black-and-white, and green display modes.
- (2) Short-press to adjust the brightness of the IR light source.
- (3) In menu mode, short-press to move the cursor down.

6. Menu Functions

Icons	Main Menu	Function Descriptions
	Crosshair center Adjustment	Press and hold the Menu key to access the main menu. Navigate to "Reticule Center Adjustment" using the Down navigation key, then press the Menu key briefly to enter adjustment mode. Press the Photo/Video key briefly to toggle between the X and Y axes. Adjust the X or Y value using the Up/Down navigation keys until the crosshair aligns with the center of the image. Press the Photo/Video key briefly to select "Save", then short-press the Menu key to confirm (Default: X:0/Y:0).
	WiFi	1.Turn on WiFi from the device menu on your phone, open WiFi settings and the app. Find the device's WiFi name "***** - ** and connect using password"12345678". 2.Once connected, you can view real-time images captured by the device on your phone.
	Gyroscope Display	Short-press the menu key to enter the sub menu. Select ON or OFF using the Up/Down navigation keys, then press the menu key briefly to confirm the setting.
	Gyroscope Calibration	Enter the calibration screen by pressing the menu button briefly. Place the device on a stable horizontal surface. Short-press the menu button to start calibration. Press and hold the menu button to exit.
	Picture-in-Picture (PiP)	With the cursor selecting PiP, briefly press the Menu key to enter the sub menu. Move the cursor position using the Up/Down navigation keys to select zoom magnification (2X/3X/4X/OFF). Press the Menu key to save your selection and exit the sub menu.
	PiP Position Adjustment	7.Briefly press the Menu key to enter the submenu. PiP must be enabled before its position can be adjusted. Use the Up/Down navigation keys to change the X/Y coordinates. After making adjustments, press the Video Record Button to highlight the 'Save' option, then press the Menu key to confirm and save the settings.
	Default Boot Magnification	Short-press the menu key to enter the sub menu. Select the default startup magnification using the Up/Down navigation keys. Available six options: 1.0X/1.5X/2.0X/2.5X/3.0X/3.5X (Factory default: 1.0X).
	Default Boot color Mode	Short-press the menu key to enter the sub menu. Use the navigation buttons to select from Color, Black-and-White, or Green display modes. Press the menu button to confirm. The selected mode will be saved for the next startup.Default mode is color.

	Default Boot IR Brightness	Press the menu key briefly to enter the submenu. Select the default startup IR brightness level using the Up/Down navigation keys (Factory default: OFF).
	Screen Brightness	Press the menu key briefly to enter the submenu. Select display brightness mode: "Blackout"/"Low"/"Standard"/"High"/"Maximum". Default setting: Standard brightness.
	Auto Recording	Press the menu key briefly to enter the submenu. Navigate options using the Up/ Down navigation keys, then press the Menu key briefly to confirm selection.
	Loop Recording	With the cursor positioned on "Cyclic Recording", press the Menu key to enter the submenu. Select "OFF", "3 min", "5 min", or "10 min", then Press the menu key briefly to configure post-startup recording behavior. Factory default: OFF.
	Date Stamp	With the cursor positioned on "Date Label", press the Menu key to access the submenu. Select "ON" or "OFF" to configure date stamp display during recording, then briefly press the Menu key to confirm. Factory default: OFF.
	Audio Recording	With the cursor positioned on "Audio Recording", press the Menu key to access the submenu. Select "ON" or "OFF" to configure voice audio recording during video capture.
	Playback	Press and hold the photo/video button to start recording, or short-press to take a photo. Enter the submenu and select playback to view previously recorded videos and photos.
	Exposure Compensation	Select "Exposure compensation" and press the menu button to enter the submenu. Choose from the following values: -2, -5/3, -4/3, -1, -2/3, -1/3, +0, +1/3, +2/3, +1, +4/3, +5/3, or +2. The default value is +0.
	Ranging Unit Selection	Select the measurement unit for distance—either meters or yards.
	Date/Time	Position the cursor on "Date/Time" and press the Menu key to enter the submenu. Press the Photo key briefly to navigate through parameters: Year, Month, Day, Hour, Minute, Second. With the cursor on the target parameter, use the Up/Down navigation keys to adjust its value. At the bottom menu, select date format: "Year-Month-Day", "Month-Day-Year", or "Day-Month-Year". Save settings and press the Menu key briefly to exit the submenu.
	Multilingualism	Press the menu button briefly to enter the submenu. use the navigation buttons to select your language, then press the menu button to confirm.

	Format Storage Card	Press the menu button briefly to enter the submenu. Select yes or no to format the storage card. Press the menu button again to confirm. Warning: formatting will delete all data permanently.
	Restore Default Settings	Press the menu button briefly to enter the submenu. Select confirm or cancel to restore factory default settings. Confirm carefully as this will reset all settings.
	Version Information	Select "version" and press the menu button to view the device's software version information.

7. Device Connection

Download the dedicated app to connect the device to your mobile device via WiFi.

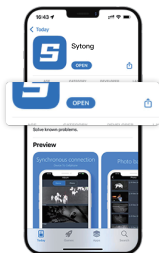


Android/iOS: Scan to download

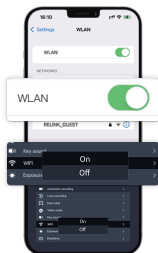


XVision

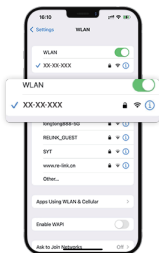
Search "XVision" on Google Play to Download.



Download and install the app



Turn on the device and enable WIFI

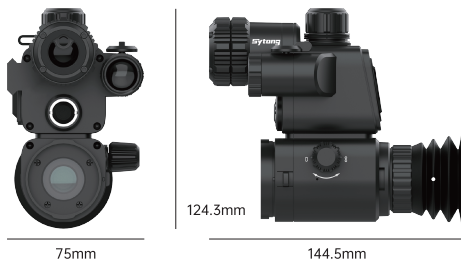


Select WiFi "xx." and connect
(Default WiFi password: **12345678**)



Open the App

8. Specifications



HT-99LRF

Sensor	
Type	CMOS
Resolution/Pixels	2592x1944
Optical Characteristics	
objective Focal Length	12mm/16mm
Magnification	1-3.5X
F-number, D/f'	1X
Eye Relief	30mm
Field of View	24.4°X18.4°/16°X12.5°
Eyepiece Diopter Adjustment	+5/-5 D
Minimum Focusing Distance	0.1m
IR Illuminator	
Wavelength	850nm/940nm
Display	
Type/Resolution	0.39 inch / AMOLED / 1024x768

Product Features	
3D Gyroscope	Yes
Power Supply	3-4.2 V
Battery	18650 Lithium Battery / 2900mAh
External Power Supply	5V (USB)
Operating Time (at 22°C)	6 hours
Maximum Recoil Resistance	6000 Joules
Protection Level	IP67
Operating Temperature	-20°C~+50°C
Dimensions	144.5x75x124.3mm
Weight	375g $\pm$ 5g
Recorder	
Video/Photo Resolution	2304x1728
Video/Photo Format	.mp4 / .jpg
Storage Type	TF Card (FAT32), supports up to 128GB
Wireless Channel	
Frequency	2.4GHz
Standard	802.11 b/g
WiFi Reception Range	15m
Rangefinder	
Wavelength	905nm
Maximum Measuring Distance	1000m
Measuring Accuracy	+ /-1m

9. Maintenance and Care

9.1. The objective lens, laser rangefinder lens, and illuminator lens are key optical components. Avoid oil stains or chemical exposure during use to prevent damage. Always cover the lens and retract the illuminator after use.

9.2. Remove the battery when the device is not in use or during transport, and store the monocular in its protective case.

9.3. For long-term storage or periods of inactivity, keep the device in a cool, dry place.

9.4. Do not use chemical solvents or thinners to clean the device housing. Wipe it with a clean, soft, dry, lint-free cloth.

9.5. If not used for an extended time, power on and calibrate the device every six months.

FCC Caution:

This device complies 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.

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

Note: This equipment 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 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. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment 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 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.

The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.

Sytong



Sytong



Sytongnightvision



Sytong Night Vision



NSytong



support@sytong2013.com



<https://www.sytongoptics.com>