



# THERMAL IMAGING SIGHTS



## QUICK START GUIDE

Predator Thermal Optics



1. Objective Lens	2. Lens Focusing Ring	3. Record Button (REC)
4. Navigation UP Button	5. MENU Button	6. Navigation DOWN Button
7. Dioptre Adjustment Ring	8. Eyeshade	9. Red Laser Pointer
10. Laser Rangefinder	11. Power (ON/OFF) Button	12. Data Compartment
13. Lens Cover	14. Device LED Indicator	15. Battery Cap (Make sure to tighten the battery cover before using the device)

# | In The Box

- Thermal Imaging Sight
- Manual
- Mount (with screws and hex-nut wrenches)
- Type-C Cable
- 5V 2A Adapter
- Handbag
- Battery

# | Quick Start

## Power On and Image Settings

- Hold the power (ON/OFF) button (11) for 3 seconds to power on.
- Rotate the dioptre adjustment ring (7) to get a clear image of the icons on the display.
- Rotate the lens focusing ring (2) to get a clear image of the observed object.
- Press the navigation UP button (4) to select the operating modes (White Hot, Sky Mode, Black Hot, Red Hot, Fusion).
- Press the navigation DOWN button (6) to select digital magnification (1x, 2x, 4x, 8x).
- Press the MENU button (5) to enter the menu to select the appropriate parameter.
- Hold the power (ON/OFF) button (11) for 3 seconds to power off. The LED indicator will be turned off after the device is powered off.

# Buttons

## Button Legend



### Power (ON/OFF) Button

Hold the power (ON/OFF) button (11) for 3 seconds to power off. The LED indicator will be turned off after power off.

Hold the power (ON/OFF) button (11) for 1-2 seconds to go into sleep mode. The LED indicator will be green when the device is in sleep mode. Wake the device by pressing the power (ON/OFF) button.

\*Press the power button to refresh the device.



### Record Button (REC)

When not in menu Mode:

Press to switch the reticle profiles.

Hold for 1.5-3 seconds to take a picture. Hold for 3 seconds to record a video or stop recording.



### ↑ Navigation UP Button

In menu Mode: Press to switch menu items upwards.

When not in menu Mode: Press to change operating mode. Hold to turn on or off the Picture in Picture.



### MENU Button

In menu Mode: Press to confirm selection. Hold to exit main menu or submenu.

When not in menu Mode: Press to enter menu Mode. Hold to turn on or off the red laser pointer.

When LRF is on: Press to lock or unlock rangefinding values.




### ↓ Navigation DOWN Button

In menu Mode: Press to switch menu items downwards.

When not in menu Mode: Press to change set-up zoom 1x, 2x, 4x, 8x. Hold to turn on or off laser rangefinder.

# Menu Functions

Number	Main Menu Description	Sub Menu Description
1	Operating Modes	<p>Options: "White Hot"/"Sky Mode"/"Black Hot"/"Red Hot"/"Fusion" Default mode is "White Hot"</p> 
2	Video Output	<p>Options: "On"/"Off" The video output function CVBS will be on/off accordingly.</p>
3	WiFi	<p>Options: "On"/"Off" Turn on WiFi on both the device's Menu and user's phone. On user's phone, find and connect to "APPshow-XXX" WiFi network with password 12345678. Live image will be displayed on the App after the phone is connected to the device's WiFi.</p>
4	Picture In Picture	<p>Options: "On"/"Off"</p>
5	Reticle Type	<p>Options: Off/Select the preferred reticle type from 8 choices</p>
6	Reticle Color	<p>Options: Black, White, Gray, Red, Green</p>
7	Reticle Profiles	<p>Select one of the saved profiles (Max. 10 profiles).</p>

8	<b>Reticle Adjustment (Zeroing)</b>	Freeze the image by pressing the MENU button. Move the reticle horizontally or vertically with the UP/DOWN buttons. Switch between horizontal and vertical adjustments by pressing REC button. After the reticle matches the point of impact, press the MENU button to save the position. Input the target distance and select the unit (Meter/Yard). The reticle profile will be saved with the distance as it's name.
9	<b>Gyro</b>	Options: On/Off
10	<b>Laser Rangefinder Unit</b>	Options: Meter/Yard
11	<b>Laser Rangefinder Mode</b>	1.Single distance measurement 2.Continuous distance measurement
12	<b>OLED Brightness</b>	Options: 1-10
13	<b>Target Brightness</b>	Options: 1-10
14	<b>Contrast Ratio</b>	Options: 1-10
15	<b>Image Detail Boost</b>	Options: 1-5
16	<b>Date/Time</b>	Move the options by pressing the MENU button. Change the value using the UP/DOWN button. Confirm the values by pressing the MENU button. Quit by holding the MENU button.
17	<b>Language</b>	Options: English/Chinese/Other Languages
18	<b>Record Audio</b>	Options: On/Off Default is off
19	<b>Format</b>	Options: Confirm/Cancel
20	<b>Auto Power Off</b>	Options: 3 Min/5 Min/Off Default : Off

21	Default	Options: Confirm/Cancel
22	Pixel Cure	Select "Pixel Cure" and press MENU button to get to the submenu. The lens should be covered with lens cover before performing the pixel cure. Press the MENU button and follow the prompts to fix the bad pixels. After repair, please remember to save it. Hold the UP/DOWN button to move X/Y position. Press the Power button to switch between X/Y/Save.
23	Image Adjustment	Options: "Cancel"/"Confirm" Select "Image Adjustment" in the main menu. Press MENU button to select "Confirm" and cover the lens if the image adjustment is required.
24	Auto Ballistic Calculator (BC)	Select BC and press the MENU button to get to the sub menu: On/Off/Setting. Press <b>【Record Button】</b> to move to set parameters. Press <b>【Up/Down Button】</b> to set values.
25	Version	Select "Version" to view the device's software version.

## | Installing The Battery

- Please use NightSnipe lithium re-chargeable 3.7V flat top 18650 batteries. Remove battery compartment cap and insert the battery with the positive end in the device first. Put the battery cover cap back on, and screw until fully tight. (Fail to do so may result in restarting!).

## | Using The Integrated Laser Rangefinder

- Hold the power (ON/OFF) button (11) for 3 seconds to power on the device.
- Hold the navigation DOWN button (6) for 3 seconds to activate the laser rangefinder.
- The rangefinder indicator (a small box) will appear at the center of the display.
- Point the rangefinding indicator at an object to measure the distance (the distance will be displayed at the top right corner of the display).



# Installation Of Mount

- Attach the mount to the base of the scope using a hex-nut torque wrench and provided screws. It is critical that the correct torque / inch- pounds are applied to avoid damage to your thermal device. If the correct inch -pounds application is not used, this may void your warranty at the manufacturers discretion / decision / findings.
- Step 1. Install the mount to the device with the 4x provided mounting screws tightening only finger tight.  
Step 2. With an inch/lbs torque wrench, set the wrench to 5 inch/lbs and tighten each of the 4x screws until the wrench clicks.  
Step 3. Set the torque wrench to 10 inch/lbs and tighten all 4x screws until the wrench clicks.  
Step 4. Set the torque wrench to 15 inch/lbs and tighten all 4x screws until the wrench clicks.  
Step 5. Continue tightening all 4x screws in 5 inch /lbs increments until the maximum torque setting is reached at 30 inch/lbs.
- The mounting holes in the base of the scope enable the mount to be installed in one of the multiple positions. The choice of the mounting position helps the user to ensure the correct eye relief depending on the device type.
- The scope is ready to be installed on a device and to be zeroed.
- Before using the device, please follow instructions in the section "Reticle Adjustment (Zeroing)".

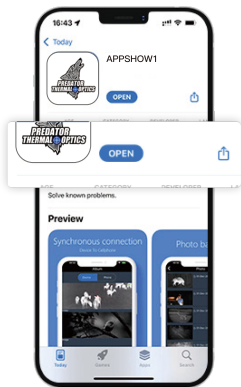
# | Installing the Scope on a Weapon

- Attach the scope to the appropriate mounting location / rail on your desired weapon.
- With the scope setting on the mounting rail of your weapon and in the desired eye relief location, firmly press the scope towards the muzzle / barrel end while tightening the 2x mounting nuts finger tight. This will ensure your scope is seated properly on the mounting rail of your weapon.
- Step 1. With an inch/lbs torque wrench, set the wrench to 5 inch/lbs and tighten each of the 2x nuts until the wrench clicks.  
Step 2. Set the torque wrench to 10 inch/lbs and tighten both nuts.  
Step 3. Set the torque wrench to 15 inch/lbs and tighten both nuts.  
Step 4. Continue tightening both mounting nuts in 5 inch/lbs increments until the maximum torque setting is reached at 30 inch/lbs.
- You are now ready to sight in your scope.

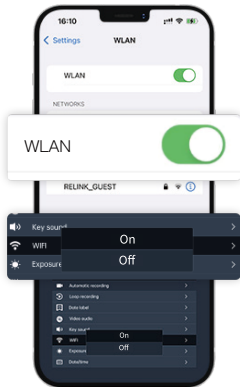
# APP Connection



Download APP by Scanning the QR code according to the mobile phone system.



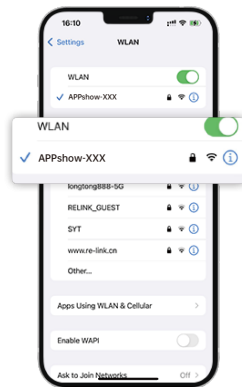
Download the APP



Turn on WiFi on device and phone



Enter APP



Choose WiFi "APPshow..."  
to connect WiFi  
(Password:12345678)

# 35-LRF

## Sensor

Type	Uncooled	Resolution	384x288 Super Sensitive
Frame Rate	50 Hz	Pixel Size	12μm
NETD	<25mk		

## Optical Characteristics

Objective Lens	F35mm/50mm	Magnification	2.8X/4X
Digital Zoom	1 x/ 2x / 4x / 8x	Eye Relief	50 mm
Dioptrre Adjustment	+5/-5 D	Focus Scope Range	5m-∞
FOV	7.5°X5.7° / 5.3°X4.0°		

## Display

Operating Mode	White Hot, Sky Mode, Black Hot, Red Hot, Fusion	Type / Resolution	0.39 inch / OLED / 1024X768
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## Operational Characteristics

3D Gyroscope	Yes	Waterproof Rating	IP67
Power Supply	3-4.2 V	Battery	18650 /3500mAh

External Power Supply	5V (USB)	Operating Time (At Temperature =22°C)	8 hours
Max. Recoil Power, Joules	10,000	Operating Temperature	- 20°C to +50°C
Dimensions	224X92X69mm	Weight (Without Battery/ Mount)	668g

## Video Recorder

Video / Photo Resolution	1024x768	Video / Photo Format	.mp4 / .jpg
Supported Memory Type	Built-in 32G Memory Card		

## Wifi Channel

Frequency	2.4GHz	Standard	802.11 b/g
WiFi Signal Range	15m		

## Rangefinder

Wavelength	905nm	Max. Measuring Range	1200m
Measuring Accuracy	+ /-1m	Detection Distance (Target Size : 1.7m x 0.5m)	1750m/2500m

# 50-LRF

## Sensor

Type	Uncooled	Resolution	640x512 Super Sensitive
Frame Rate	50 Hz	Pixel Size	12μm
NETD	<25mk		

## Optical Characteristics

Objective Lens	F35mm/50mm	Magnification	1.7X/2.5X
Digital Zoom	1 x/ 2x / 4x / 8x	Eye Relief	50 mm
Dioptrre Adjustment	+5/-5 D	Focus Scope Range	5m-∞
FOV	12.5°X9.4° / 8.8°X6.6°		

## Display

Operating Mode	White Hot, Sky Mode, Black Hot, Red Hot, Fusion	Type / Resolution	0.39 inch / OLED / 1024X768
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# | Notice!

## Operating Instructions For Accessories

### Power Adapter

Used only to charge batteries equal to or below 5V/2A.

### Red Laser Pointer Adjustment

Hold the MENU button to turn on/off the red laser pointer. Adjust the position of the red laser pointer by using an inner hexagon wrench. The adjustment screw can be found directly besides the red laser pointer on the thermal device.

### Connect to a Computer

Turn off the device and connect to the computer with a Type-C cable. Hold the power button to turn on the device. The computer will read the memory card of the device.

# | SAFETY SUMMARY

- Read and follow all instructions.
- Read all warnings.
- Only use the attachments/accessories specified by the manufacturer.
- All service must be provided by the manufacturer.

**18650 batteries MUST be removed when not in use! Not removing the 18650 batteries may void your warranty.**

### LEGAL NOTICE:

Before attaching to weapons, check the regional legal regulations in the area of application. The attachment to a weapon is always the sole responsibility of the user.



# 18650 Rechargeable Battery Safety

The 18650 cell contains flammable chemicals such as organic solvents. If the battery is mishandled, it may cause fire, smoke, or an explosion and the battery's functionality will be seriously damaged. 18650 batteries are the most popular type of lithium-ion batteries. Even though there are many safety precautions, they are surprisingly hardy and safe to use. Each authentic cell is rigorously tested for safety, including one meter drop test before they reach you. Nonetheless, you must treat your 18650 batteries with respect.

1. **IMMERSION**- Do not immerse the battery in ANY liquid such as water, ocean water, soda, or beer.
  2. **HIGH TEMPERATURE**- Do not use or place the battery near fire or high temperatures (over 70 degree C).
  3. **WRONG CHARGER**- Do not use unauthorized chargers. Max charge should be 4.2 V for most 18650s.
  4. **REVERSE POLARITY**- Make sure the + and - poles are oriented correctly. Do not force into the mount.
  5. **DIRECT CONNECTION**- Do not connect the battery with AC plug (outlet) or car plugs.
  6. **SHORT -CIRCUIT**- Do not connect the + and - terminals with conductive materials. Keep out of pockets.
  7. **IMPACT**- Avoid unnecessary impact to the battery. Keep in a hard case during transport.
  8. **PENETRATION** - Be careful not to penetrate the battery in any way.
  9. **SOLDERING** - Do not directly solder on to the battery: the insulator could melt or damage the vent.
  10. **DISASSEMBLY & RECONSTRUCTION**- Do not disassemble the battery. You may damage the protection circuit or worse.
  11. **DEFORMATION**- Do not use a battery with conspicuous damage or deformation.
  12. **INGESTION**- The batter should be kept away from infants and children.
  13. **STORING**- Do not put the battery in the microwave or other cooking appliances.
  14. **MIXED USE**- Do not use the battery with other batteries unless they will always be used together.
  15. **RUST, COLOR CHANGE**- Stop using battery if there is abnormal smell, heat, deformities, or discoloration.
  16. **CHARGING TIME**- Stop charging if the battery cannot finish charging within the specified time.
  17. **LEAKAGE**- Do not touch leaking batteries. Battery liquid exposed to your skin or eyes could cause significant damage.
  18. **TRANSPORT**- To prevent short-circuits or damage, tightly pack the battery in a case or box.
  19. **DIRECT SUNLIGHT**- Do not use or leave the battery in excessive heat such as in a car or in direct sunlight.
  20. **STATIC ELECTRICITY** - Do not use batteries where it generates more than 100v of static electricity.
  21. **CHARGING TEMPERATURE**- The charging temperature range is regulated between 10 and 45 Celsius.
  22. **MANUAL**- You should read both the manual for your device and the battery charger before use.
  23. **FIRST TIME USE**- If battery has unusual color, heat generation, or rust, contact vendor.
  24. **FLAMMABLE MATERIALS**- Do not charge or discharge near flammable materials.
  25. **LEAKAGE ON SKIN**- If leakage gets on skin or clothing, flush with water to help prevent irritation.
  26. **INSULATION**- If wires or metal objects come out from the battery, please dispose of the battery properly.
  27. **RECYCLE**- Recycle battery at local battery drop-off point or contact vendor you bought from.
- The 18650 cell contains flammable chemicals such as organic solvents. If the battery is mishandled, it may cause fire, smoke, or an explosion and the battery's functionality will be seriously damaged. 18650 batteries are the most popular type of lithium-ion batteries. Even though there are many safety precautions, they are surprisingly hardy and safe to use. Each authentic cell is rigorously tested for safety, including one meter drop test before they reach you. Nonetheless, you must treat your 18650 battery with respect.

## WARRANTY INFORMATION AND REGISTRATION

This product is guaranteed to be free from manufacturing defects in material and workmanship under normal use for a period of five (5) years from the date of purchase. In the event that a defect covered by the warranty below occurs during the applicable period stated above, Predator Thermal Optics, at its discretion, will either repair or replace the product; such action on the part of Predator Thermal Optics shall be the full extent of Predator Thermal Optics liability, and the customer's sole and exclusive repairation. This warranty does not cover a product if it has been; (a) used in ways other than its normal and customary manner; (b) subjected to misuse; (c) subjected to alterations, modifications or repairs by the customer or by any party other than Predator Thermal Optics without prior written consent of Predator Thermal Optics; (d) is the result of a special order or categorized as "close-out" merchandise or merchandise sold "as-is" by either Predator Thermal Optics or the Predator Thermal Optics dealer; or (e) merchandise that has been discontinued by the manufacturer and either parts or replacement

units are not available due to reasons beyond the control of Predator Thermal Optics shall not be responsible for any defects or damage that in Predator Thermal Optics view are a result from the mishandling, abuse, misuse, improper storage or improper operation of the device, including use in conjunction with equipment that is electrically or mechanically incompatible with, or of inferior quality to, the product, as well as failure to maintain the environmental conditions specified by the manufacturer. This warranty is extended only to the original purchaser. Any breach of this warranty shall be enforced unless the customer notifies Predator Thermal Optics at the address noted below within the applicable warranty period. The customer understands and agrees that except for the foregoing warranty, no other warranties written or oral, statutory, expressed, or implied, including any implied warranty of merchantability or fitness for a particular purpose, shall apply to the product. All such implied warranties are hereby and expressly disclaimed.

#### LIMITATION OF LIABILITY

Predator Thermal Optics will not be liable for any claims, actions, suits, proceedings, costs, expenses, damages, or liabilities arising out of the use of this product. Operation and use of the product are the sole responsibility of the customer. Predator Thermal Optics' sole undertaking is limited to providing the products and services outlined herein in accordance with the terms and conditions of this agreement. The provision of products sold, and services performed by Predator Thermal Optics Inc. to the customer shall not be interpreted, construed, or regarded, either expressly or implied, as being for the benefit of or creating any obligation toward any third party of legal entity outside Predator Thermal Optics and the customer; Predator Thermal Optics obligations under this agreement extend solely to the customer. Predator Thermal Optics liability hereunder for damages, regardless of the form or action, shall not exceed the fees or other charges paid to Predator Thermal Optics, by the customer or customer's dealer. Predator Thermal Optics shall not, in any event, be liable for special, indirect, incidental, or consequential damages, including, but not limited to, lost income, lost revenue, or lost profit, whether such damages were foreseeable or not at the time of purchase, and whether or not such damages arise out of a breach of warranty, a breach of agreement, negligence, strict liability, or any other theory of liability.

#### PRODUCT REGISTRATION

In order to validate the warranty on your product, the customer must complete and submit the Predator Thermal Optics PRODUCT REGISTRATION FORM on our website within 30 days from the date of purchase. Hard copies will not be accepted. <https://PredatorThermalOptics.com/product-warranty-registration>

#### OBTAINING WARRANTY SERVICE

To obtain warranty service on your unit, the End-user (Customer) must notify the Predator Thermal Optics service department via e-mail. Send any requests to [Info@PredatorThermalOptics.com](mailto:Info@PredatorThermalOptics.com) to receive a Return Merchandise Authorization number (RMA). When returning any device, please take the product to your retailer, or send the product, postage paid and with a copy of your sales receipt, to Predator Thermal Optics service center at the address listed at the bottom of this page. All merchandise must be fully insured with the correct postage; Predator Thermal Optics will not be responsible for improper postage or merchandise that becomes lost or damaged during shipment. When sending product back, please clearly write the RMA# on the outside of the shipping box. Please include a letter that indicates your RMA#, the customer's name, a return address, reason for the return, contact information (valid telephone numbers and/or an e-mail address), and proof of purchase that will help us to establish the valid start date of the warranty. Product merchandise returns that do not have an RMA# listed may be refused, or a significant delay in processing may occur. Estimated Warranty service time is 10-20 business days and also dependent on if the item is currently in stock. The end-user/customer is responsible for postage to Predator Thermal Optics for warranty service. Predator Thermal Optics will cover return postage/shipping after warranty repair to the end-user/customer only if the product is covered by the aforementioned warranty. Predator Thermal Optics will return the product after warranty service by domestic UPS Ground service and/or domestic mail. Should any other requested, required, or international shipping methods be necessary, the postage/shipping fee will be the responsibility of the end-user/customer. For service, repair, or replacement, please contact Predator Thermal Optics at address.

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