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Pulsar Trail 3 LRF XR50 Thermal Riflescope User Manual

Model: Trail 3 LRF XR50 (PL76588K)

INTRODUCTION

The Pulsar Trail 3 LRF XR50 is a thermal imaging riflescope designed for advanced observation and targeting. It integrates a high-resolution 640x480 12µm thermal sensor with a fast F50/1.0 lens, providing clear thermal imagery even in challenging conditions. The device features a built-in laser rangefinder for precise distance measurements up to 1,312 yards. With a versatile 3-24x magnification range and a robust IP67-rated housing, the XR50 is engineered for reliable performance in various environments.



Figure 1: Pulsar Trail 3 LRF XR50 Thermal Riflescope. This image shows the overall design of the thermal riflescope from an angled perspective, highlighting its compact form factor and control layout.

WHAT'S IN THE BOX

Upon unboxing, verify that all components are present:

- Pulsar Trail 3 LRF XR50 Thermal Riflescope
- Carrying Case
- LPS7i Rechargeable Battery Pack
- User Manual (this document)
- USB-C Cable
- Lens Cleaning Cloth

SETUP

1. Battery Installation and Charging

1. Locate the battery compartment on the side of the riflescope.
2. Open the battery compartment cover.
3. Insert the LPS7i rechargeable battery pack, ensuring correct polarity.
4. Close the battery compartment cover securely.
5. To charge, connect the USB-C cable to the riflescope's USB-C port and to a power source. The battery indicator will show charging status.



Figure 2: Side view of the riflescope, illustrating the battery compartment. The image highlights the location for battery insertion and the USB-C charging port.

2. Mounting the Riflescope

The Trail 3 LRF XR50 is designed to be mounted on a rifle using compatible mounting systems (not included). Ensure the mount is securely attached to the rifle's rail and the riflescope is firmly fastened to the mount. Refer to your specific mount's instructions for detailed installation procedures.

3. Diopter Adjustment

Adjust the diopter ring (located near the eyepiece) until the reticle and on-screen information appear sharp and clear to your eye. This adjustment is personal and should be performed before initial use.

OPERATING INSTRUCTIONS

1. Power On/Off

- To power on, press and hold the power button (typically located on the top of the unit) for a few seconds until the display activates.
- To power off, press and hold the power button again until the unit shuts down.



Figure 3: Top view of the riflescope, highlighting the main control buttons, including the power button. This image provides a clear view of the user interface for operation.

2. Magnification Adjustment

The Trail 3 LRF XR50 offers a 3-24x magnification range. Use the dedicated magnification control buttons or rotary encoder (refer to your specific model's interface) to adjust the digital zoom level. Lower magnification provides a wider field of view for scanning, while higher magnification allows for detailed observation.



Figure 4: Front view of the riflescope, showing the objective lens and the integrated laser rangefinder area. This perspective is relevant for understanding optical adjustments and rangefinding.

3. Laser Rangefinder Operation

Activate the built-in laser rangefinder via its dedicated button or menu option. Aim the reticle at the target and press the rangefinder button. The distance to the target (up to 1,312 yards) will be displayed on the screen. Ensure a clear line of sight to the target for accurate readings.

4. Thermal Palettes and Display Modes

The riflescope offers various thermal color palettes (e.g., White Hot, Black Hot, Red Hot) to optimize target detection based on environmental conditions and user preference. Cycle through these palettes using the menu or a dedicated button. The high-resolution 1920x1080 AMOLED display ensures sharp contrast.

5. Reticle Selection and Zeroing

The Trail 3 LRF XR50 features multiple reticle options, including a Chevron type. Select your preferred reticle from the menu. For accurate shooting, the riflescope must be zeroed to your specific rifle and ammunition. Refer to the on-screen menu for the zeroing procedure, which typically involves firing at a target and adjusting the reticle's position to match the point of impact.

MAINTENANCE

1. Cleaning

- **Lenses:** Use the provided lens cleaning cloth or a soft, lint-free cloth specifically designed for optics. Gently wipe the lens surfaces. For stubborn dirt, use a small amount of optical cleaning solution. Avoid abrasive materials.
- **Body:** Wipe the riflescope body with a soft, damp cloth. Do not use harsh chemicals or solvents. The IP67 rating ensures protection against dust and temporary immersion in water, but proper cleaning after exposure is recommended.

2. Battery Care

- Charge the LPS7i battery fully before extended storage.
- Store the battery in a cool, dry place.
- Avoid fully discharging the battery for prolonged periods.

3. Storage

When not in use, store the riflescope in its protective carrying case in a dry environment, away from direct sunlight and extreme temperatures. Ensure the lens caps are in place.

TROUBLESHOOTING

Problem	Possible Cause	Solution
Device does not power on.	Battery discharged or incorrectly installed.	Charge the battery. Ensure the battery is inserted with correct polarity and the compartment cover is closed.
Image is blurry or out of focus.	Diopter not adjusted, objective lens dirty, or focus ring not adjusted.	Adjust the diopter. Clean the objective lens. Adjust the objective focus ring.
Laser rangefinder not providing readings.	Obstruction in front of rangefinder, target too far, or adverse weather conditions.	Ensure a clear line of sight. Verify target is within range (1,312 yards). Rangefinder performance may be affected by fog or heavy rain.
Short battery life.	Battery not fully charged, extreme cold temperatures, or high display brightness.	Ensure battery is fully charged. Reduce display brightness. Battery performance decreases in cold weather.

SPECIFICATIONS

Feature	Detail
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Feature	Detail
Model Name	Trail 3 LRF XR50
Model Number	PL76588K
Thermal Sensor	640x480 12µm
NETD Sensitivity	Sub-18mK
Objective Lens	F50/1.0
Magnification	3-24x
Detection Range (Deer-sized target)	Up to 2,300 meters
Laser Rangefinder Range	Up to 1,312 yards
Display Type	AMOLED
Display Resolution	1920x1080
Battery Type	LPS7i Rechargeable Pack
Operating Time (on single charge)	Up to 10 hours
External Power	USB-C
Environmental Protection	IP67 (Dustproof, waterproof up to 1 m for 30 min)
Recoil Resistance	6,000 Joules
Operating Temperature	-13°F to 122°F (-25°C to 50°C)
Material	Magnesium Alloy
Dimensions (L x W x H)	10.7" x 3.4" x 2.8"
Weight	30.7 Ounces (approx. 1.9 lbs)
Reticle Type	Chevron (multiple options available)

WARRANTY INFORMATION

The Pulsar Trail 3 LRF XR50 Thermal Riflescope is covered by a **5 Year Limited Warranty**. This warranty covers defects in materials and workmanship under normal use. For specific terms, conditions, and to initiate a warranty claim, please refer to the official Pulsar website or contact their customer support.

SUPPORT

For further assistance, technical support, or service inquiries regarding your Pulsar Trail 3 LRF XR50, please visit the official Pulsar website or contact their authorized service centers. Always provide your model number (PL76588K) and serial number when seeking support.

Important Notice: This product is controlled for export and in-country transfers under the authority of the International Traffic in Arms Regulations (ITAR). Diversion contrary to U.S. law is prohibited.

