⚠ CAUTION

THIS PRODUCT IS A CLASS 3R LASER PRODUCT

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

IRAY USA
IRAY-AC80

800 Railhead Rd STE #316
Fort Worth, TX 76106
SN:XXXXXX
FCC ID: 2AYGT-40-ILR

Complies with FDA performance standards for laser products except for conformance with IEC 60825-1 Ed. 3., as described in Laser Notice No. 56, dated May 8, 2019.

VISIBLE AND INVISIBLE LASER RADIATION
AVOID DIRECT EYE EXPOSURE
CLASS 3R LASER PRODUCT
640nm: 4.5mW CW
905nm 1.8μJ 33nSec 48hz
EN/IEC 60825-1 2014
LASER APERTURE

- Laser Indicator
- Laser Receive Port
- Laser Launch Port
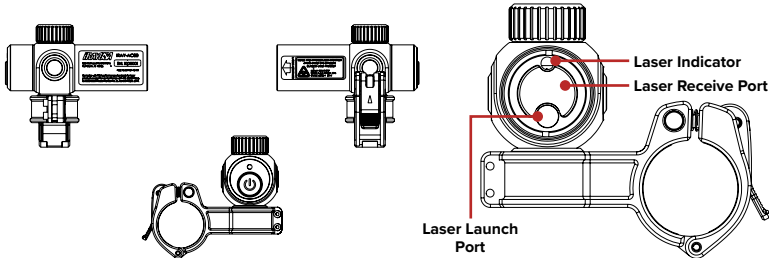
This Laser Product is designated as Class 3R during all procedures of operation.

Wavelength 650 nm (CW), 905 nm (Pulsed)
Laser Power for Classification <5 mW (4.5 mW typical)
Emission Type CW and Pulsed
Pulse Width 33 nSec
Pulse Repetition Frequency 48 Hz
Beam Diameter <7 mm
Divergence 5.25 mRad

VISIBLE AND INVISIBLE LASER RADIATION
AVOID DIRECT EYE EXPOSURE
CLASS 3R LASER PRODUCT

⚠ NOTES

- There is no scheduled maintenance or service necessary to keep this product in compliance and no user service or maintenance is required.
- There is no service required or allowed of this product by the end user.
- This product is to be serviced or repaired only by factory-authorized technicians.
- This product is not to be opened or modified by the user, nor is it allowed to attempt to cheat or defeat safety interlocks.
- The user is not to modify the unit or remove protective covers or housing. Service is only to be handled by authorized factory-trained technicians.
- This product has no user-serviceable parts.
- Do not point the laser or allow the laser indicator to be directed or reflected toward people or reflective objects.
- Operators should be trained to not target the eyes of people or animals or to aim at reflective objects.
- There is a potential hazard of eye or skin exposure to laser radiation if the included instructions are not followed.
- This laser is never to be operated if the unit is defective or the cover or seal is damaged.
- Always install the LRF module with the aperture pointed downrange.

Overview

The BOLT TH50CV2, BOLT TL35V2, and BOLT SE series rifle scopes support the use of the InfiRay Outdoor ILR-1200-1 Bluetooth Laser Rangefinder, allowing users to measure distances to objects up to 1200 yards away.

To ensure the safe and proper operation of the laser rangefinder, do not attempt to install or use the LRF until you have read and understand all warnings, directions, and guidance in this manual. Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

Tech Specs

MODEL	ILR-1200-1
Measuring Range	1200 yd Max
Accuracy	±1yd
Laser Wavelength	900–908 nm (Eye-safe)
Laser Pointer	650 nm
Ranging Modes	Continuous, Single

Replaceable Battery	RCR123 3.7V Battery (3+ Hours)
Mounting System	30mm Quick-Release Ring Mount
IP Rating	IP67
Dimensions	3.74" × 3.62" × 3.35"
Weight	6.0 Oz

Kit Contents

- ILR-1200-1 Bluetooth LRF Module
- 30mm Quick-release Ring Mount
- RCR123 3.7V Battery
- Micro-USB Charging Cable
- ×3 Socket-Head Screws
- Hex Key

Components and Controls

A. Laser Rangefinder Module
B. Laser Indicator
C. Laser Receive Port
D. Laser Launch Port
E. Quick-Release Mount
F. Ring Clamp
G. Release Latch
H. Adjustment Screw
I. LED Indicator
J. Power Button
K. Battery Cover

LRF Battery Information

BATTERY INSTALLATION

1. Remove the battery cover **(K)** by twisting it counterclockwise.
2. Insert a RCR123 3.7V battery into the battery compartment following the polarity markings inside the compartment. The positive **[+]** battery terminal faces in and the negative **[-]** terminal faces out.
3. Replace the battery cover by twisting it clockwise.
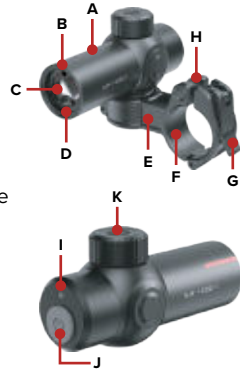
INDICATOR LED

The LED indicator shows the current connection and power status:

COLOR	INDICATOR		DEVICE STATUS
	STATUS		
🟢	Flashes.		Automatically searching for a connection.
	Stays lit for 3 seconds then turns off.		Rangefinder successfully connected via Bluetooth.
🔴	Flashes slowly.		Connection failed.
	Flashes quickly.		Low power level.
	Stays lit for 2 seconds, then turns off.		Rangefinder has powered off successfully.

BATTERY NOTES

- The recommended operating temperature range is -4°F to 122°F. Avoid using the LRF beyond the recommended range as this may decrease the battery capacity or service life.
- The battery capacity drops when the device is used below 32 °F. This is normal and does not indicate a defect.
- The LRF has low-power shutdown protection. When the battery voltage is lower than 2.8V, the device will automatically shut down.

Mounting the LRF

1. Use the three socket-head screws included in the package to attach the bottom of the ILR-1200-1 LRF **(A)** to the mount **(E)**.
2. Place the ring clamp **(F)** around the body of the BOLT and close the release latch **(G)**.
3. Loosen or tighten the adjustment screw **(H)** at the top of the ring clamp, as needed, to securely attach the mount to the BOLT.

Connecting the LRF Via Bluetooth

1. Turn on the BOLT rifle scope.
2. Turn on the BOLT's Bluetooth function:
    a. Long press the **Control Turret** to enter the main menu.
    b. Rotate the **Control Turret** to select the Bluetooth menu item.
    c. Short press the **Control Turret** to turn the Bluetooth toggle on or off.
    d. The Bluetooth icon in the status bar changes according to its status (see below).
3. Long press the **LRF Power button (J)** for 2 seconds to turn on the LRF. Release the button when the LED indicator **(I)** begins flashing green which indicates that the LRF is searching for the rifle scope. The LRF will automatically connect to the BOLT.
4. The LED indicator **(I)** on the rangefinder will turn solid green for 3 seconds and then turn off to indicate that the connection was successful. A battery icon will appear to the right of the Bluetooth icon in the status bar ⚡▌ when the BOLT is successfully connected to the LRF.

NOTE: Manual connection to the BOLT rifle scope is supported as needed. In the main menu, select Bluetooth, select the search icon, then select the rangefinder ID which can be found on the label on the body of the LRF.

BLUETOOTH STATUS ICONS
The Bluetooth icon in the status bar changes according to its status:

- ⚡: Bluetooth is off. Bluetooth is off by default.
- ⚡▌: Bluetooth is on and successfully connected to the ILR-1200-1 LRF.
- ⚡: Bluetooth is on but not connected to the LRF.
- ▌: Indicates the current battery level of the LRF module.

Using the Laser Rangefinder

The ILR-1200-1 Bluetooth Laser Rangefinder allows the user to measure the distance to objects up to 1200 yd away, with ±1 yd accuracy. The LRF has two ranging modes, continuous ranging (CONT) and single ranging (SGL). With continuous ranging, the measurement is updated automatically in real-time to allow the user to adjust quickly to changing distances for better shot placement.

WARNING: Do not point the laser directly at human eyes or faces.

To use the laser rangefinder:

1. Turn on the LRF and the BOLT, and connect them via Bluetooth following the instructions in the previous section.
2. The laser rangefinder interface will automatically open on the BOLT's screen.
    a. The blue rangefinder cursor appears in the center of the screen.
    b. The ranging mode and ranging value are displayed in the upper-right corner of the screen.
    c. The default ranging mode is continuous ranging mode.
3. Double-click the **LRF Power Button (J)** to turn on the laser indicator **(B)**.
4. If the laser indicator (visible red dot) does not match the center of the reticle on the BOLT you will need to adjust the angle of the beam. See the **Laser Calibration** section.
5. To switch the ranging mode:
    a. Short press the **Palette Button (6)** and **Brightness Button (4)** at the same time on the TL35 V2 and TH50C V2.
    b. Short press the **Control Turret** and **Power Button (5)** at the same time on the BOLT SE.
6. In the single ranging mode, short press the **Power Button (5)** on the BOLT to update the ranging value.
7. After use, turn off Bluetooth in the main menu and long press the **LRF Power Button (J)** to power off the rangefinder.

NOTES:
- When the target is more than 1200 yards away, "MAX" will appear instead of the ranging value.
- To switch the units of measurement to meters or yards, go to **Main Menu > Settings > Units of Measure** on your BOLT rifle scope.
- When continuous ranging is selected, other functions such as photographing and video recording are not affected.
- When the LRF is connected to the BOLT via Bluetooth, the stadiametric rangefinder will be unavailable.
- For detailed instructions on using your rifle scope, please refer to the user manual of the BOLT.

RANGEFINDING ACCURACY
- The measurement accuracy and maximum range depend on the reflection ratio on the target surface, the angle at which the laser indicator falls on the target surface, and environmental conditions. Reflectivity depends on the surface texture, color, size, and shape of the object. Typically, a glossy, bright surface will have higher reflectivity than a dark surface.
- Ranging performance can degrade in bright conditions or when ranging towards the sun.
- The measurement accuracy can be affected by fog, smog, heavy rain, snow, and other weather conditions. It can also be affected by a low battery or a dirty or smudged objective lens.
- Measuring the range to a small target is more difficult than measuring the range to a large target.

Laser Calibration

After installation, if the position of the laser indicator is inconsistent with the reticle center on the BOLT, the laser may need to be calibrated with one of the following options.

PHYSICAL CALIBRATION
1. Select a target in common with your zero distance.
2. Double-click the **LRF Power Button (J)** to turn on the red laser indicator **(B)**.
3. Slightly loosen the two screws **(L)** on the mount **(E)**.
4. Adjust the angle of the LRF in the mount until the laser indicator and the center of the rangefinder cursor are aligned.
    a. The adapter ring **(M)** between the laser rangefinder and the mount allows the LRF to tilt within the mount.

5. Tighten the two screws to secure the LRF in the mount.
6. Long press the **LRF Power Button (J)** to power off the rangefinder.

DIGITAL CALIBRATION IN THE BOLT MENU
1. Select a target in common with your zero distance.
2. Double-click the **LRF Power Button (J)** to turn on the red laser indicator **(B)**.
3. Enter the laser calibration interface on the BOLT:
    a. Long press the **Control Turret** to enter the main menu.
    b. Rotate the **Control Turret** to select the Laser Calibration menu item.
    c. Short press the **Control Turret** to enter the laser calibration interface.
4. The laser rangefinder cursor appears on the screen, and the following information appears in the upper-left corner:
    a. **X:** Select to move the cursor horizontally.
    b. **Y:** Select to move the cursor vertically.
    c. **Center:** Select to return the cursor to the center of the screen.
5. Short press the **Control Turret** to move through the three options, X, Y, and Center.
    a. **Center** to return the cursor to the center.
    b. **X** or **Y** to move the cursor manually.
    c. The selection is indicated by a blue arrow and blue font.
6. When X or Y is selected, rotate the **Control Turret** to move the cursor until its center is aligned with the position of the visible laser beam downrange.
    a. Rotate counterclockwise to move in the positive direction: X= Right and Y= Up.
    b. Rotate clockwise to move in the negative direction: X= Left and Y= Down.
    c. Rotate one click to move the cursor in the corresponding direction by 1 pixel.
7. When X or Y is selected, short press the **Power Button (5)** to exit the laser calibration interface without saving.
8. When Center is selected, short press the **Power Button (5)** to center the laser cursor on the screen.
9. Long press the **Control Turret** to save the calibration and return to the home screen.
10. Long press the **LRF Power Button (J)** to power off the rangefinder.