



**MAZTECH
INDUSTRIES**



X4 LASER RANGEFINDER

X4-LRF

WITH



USER MANUAL

March 2025

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CONGRATULATIONS ON YOUR PURCHASE!

The X4-LRF™ is a high performance ranging laser with co-aligned visible and infrared aiming lasers as well as an integrated Applied Ballistics® calculator with on-board environmental and motion sensors, giving you a complete ranging and ballistics solution all in one compact, rugged package.

This User Manual will give you “the basics” on how to install and configure your X4-LRF™.

For instructional videos and a fully-detailed online user manual, it is recommended you visit our website at www.MaztechIndustries.com. You can also get there by scanning this QR code with your smartphone or tablet:



PACKAGE CONTENTS

The following are included with the X4-LRF™:



**CR123 Rechargeable
Battery**



**Bluetooth®
USB Dongle**



USB-C Cable



**X4 Low-Profile
Remote**



**Adhesive-Backed
Hook and Loop**



5/64 Allen Key



**Mini Flathead
Screwdriver**



Cloth Drawstring Bag



Stickers



Lens Cleaning
Cloth



Keychain



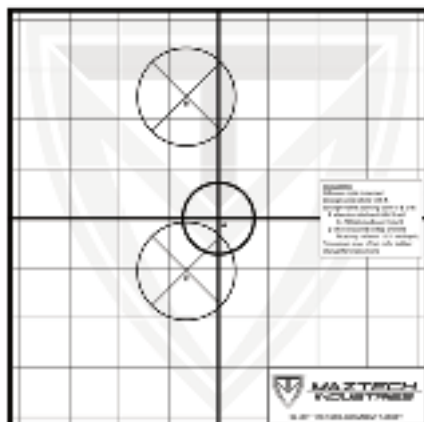
Patch



Quick Start Guide



This Manual

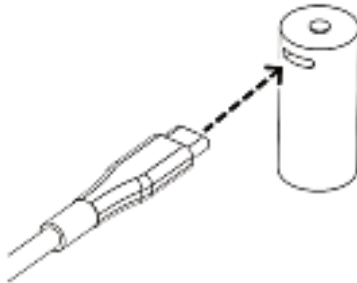


X4-LRF™
Alignment Target

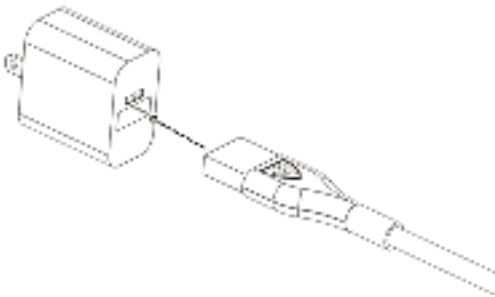
CHARGE YOUR BATTERY

It is recommended to charge the Maztech CR123 battery before first use by utilizing the provided USB-C cable:

Plug the USB-C cable into the battery charging port:



Plug the other end into a PC or any standard USB wall-charger (not provided):

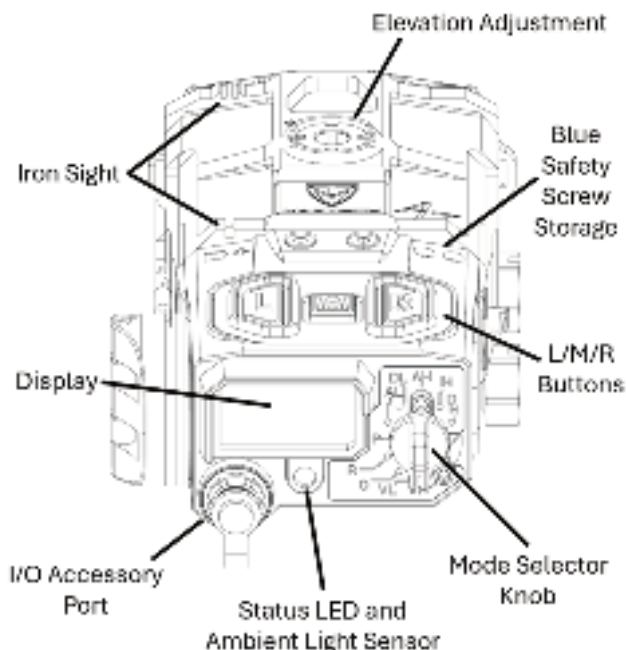


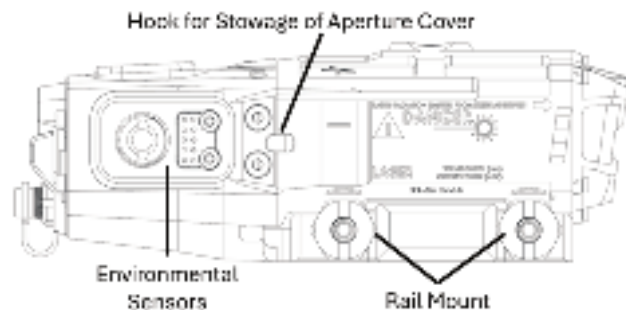
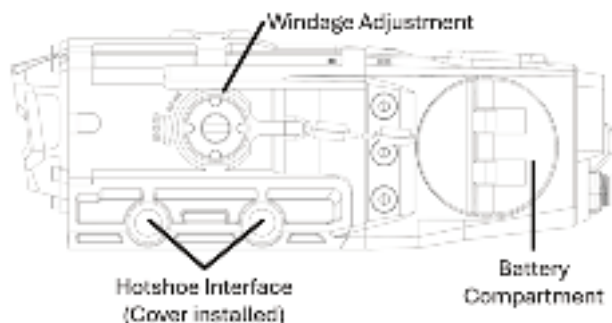
When properly charging, the top of the battery near the charging port will **glow red**. It will become **solid green** when charging is complete.



Tip: If you don't see top of the battery glowing, cover it with your hand or dim the lights in the room.

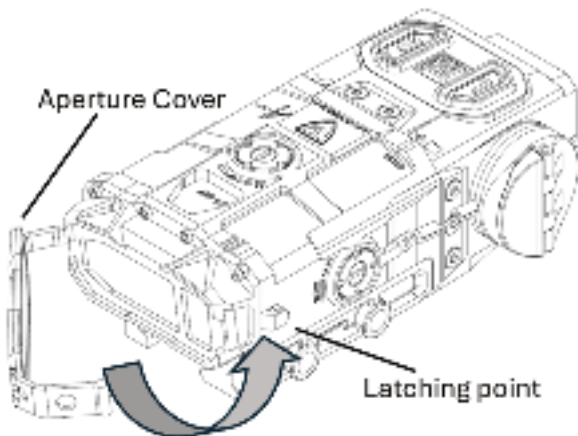
- **Note:** The supplied battery is provided for user training purposes only. For longer battery life use a Lithium CR123.

GETTING TO KNOW YOUR X4-LRF™



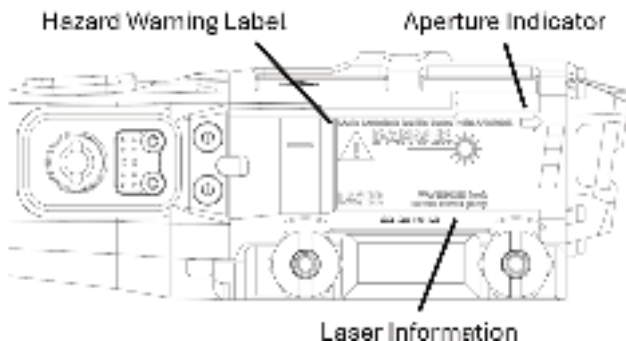
IMPORTANT LASER SAFETY

Warning: The X4-LRF™ contains multiple class 3R lasers, which emit radiation in **both** visible and invisible spectrums from the exit aperture. The lasers can be hazardous if not handled properly.



For best eye safety practices, it is recommended that the X4-LRF™ aperture cover **remain closed and latched** until the product is ready to use.

Laser warning information is also printed directly on the side of the X4-LRF™:

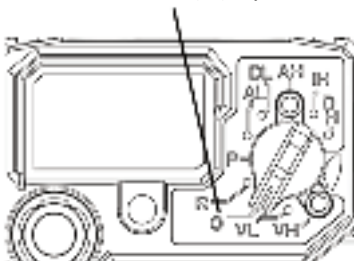


Important: Visible and infrared laser light can be hazardous if not used properly. Direct exposure to the eyes may result in permanent damage, including blindness. Laser light reflected or refracted from mirrored surfaces can also pose similar risks.

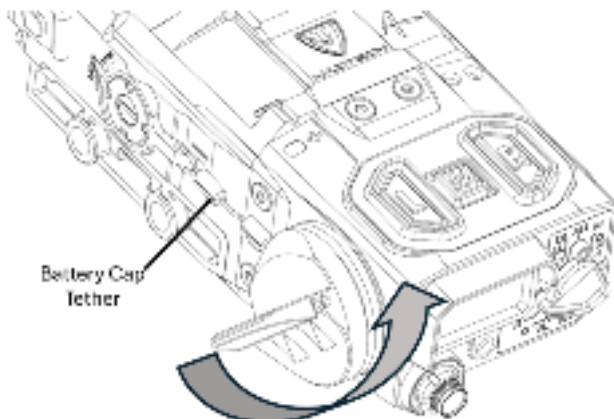
Please review ALL laser warnings and safety measures in the Laser Safety Appendix prior to using the X4-LRF™.

INSTALLING BATTERY

Turn the mode knob to the (O)ff position:

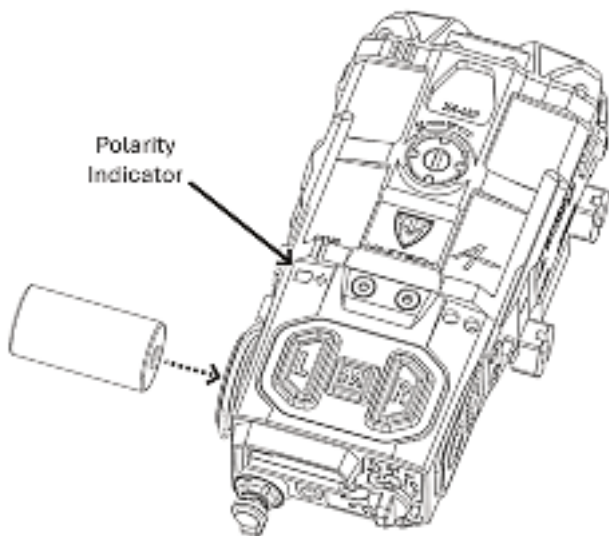


Unscrew the battery cap by hand:



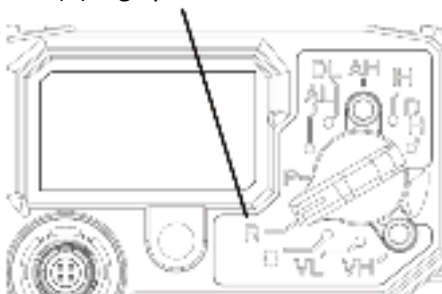
- **Tip:** Hold the tether while unscrewing the battery cap in order to prevent the tether from interfering with removal of the cap

Insert CR123 battery with +/- polarity as shown on the X4-LRF™ housing:

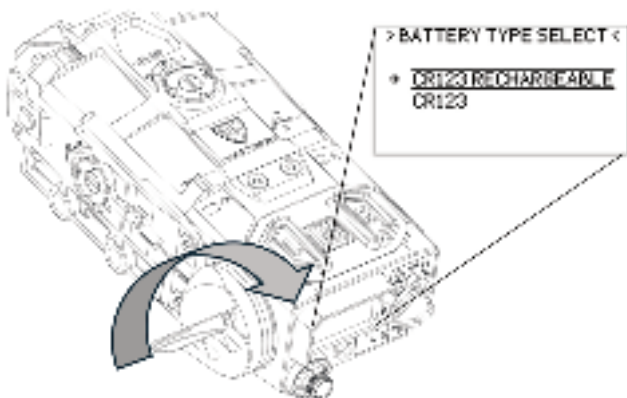


- **Tip:** The supplied battery is provided for user training purposes only. For longer battery life use a Lithium CR123.

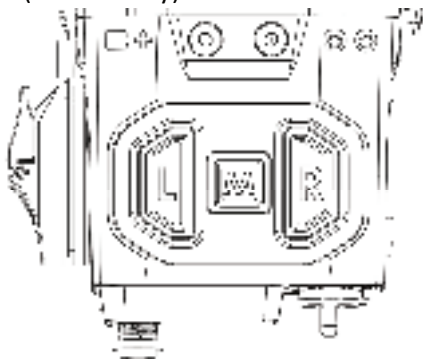
Hand tighten the battery cap, then turn the mode knob to the (R)ange position:



Look on the X4-LRF™ display. Confirm **CR123 Rechargeable** is shown as the battery type:



Use the L and R buttons to change the battery-type selection (if necessary):



Press the M button to confirm battery-type selection.

Note on Alternate Batteries:

- If using a different rechargeable battery, only use a **protected cell** CR123. Note this might result in inaccurate battery indicator readings.
OR
- A non-rechargeable CR123 battery can also be utilized.

For additional Battery Safety Information, see the Battery Safety section at the end of this manual.

X4-LRF™ MODES, BUTTONS AND DISPLAY: SUMMARY

WARNING: If you have not already done so, please review ALL laser warnings and safety measures in the Laser Safety Appendix.

Mode Selector Knob**Aim Low (AL)**

IR Pointer READY

Rangefinder READY

Dual Low (DL)

IR Pointer READY

Rangefinder READY

X4 Illuminator READY
(sold separately)**Aim High (AH)***

IR Pointer READY

Rangefinder READY

(P)rogramIdentical to (R)ange
See Online Manual for
other features**Illuminator High (IH)***

Rangefinder READY

X4 Illuminator READY

(sold separately)

(R)ange

Vis/IR Pointers disabled

Rangefinder READY

**Dual High (DH)***

IR Pointer READY

Rangefinder READY

X4 Illuminator READY

(sold separately)

(O)ffTurn OFF
your X4-LRF**Vis Low (VL)**

Visible Pointer READY

Rangefinder READY

Vis High (VH)*

Visible Pointer READY

Rangefinder READY

**Requires removal of blue safety screws. Note that higher-power pointing lasers are not available in this model due to FDA regulations. X4-LRF models with higher-power pointing lasers are available for military and law enforcement purchase at MaztechIndustries.com.*

Buttons

(L)ase:

Visible and/or IR Pointers ON
(based on mode knob)

Pointer(s) are only ON
when button is depressed
OR
Double-click to keep ON
(for 5 minutes)



(M)enu:

Single-click to cycle between
screens on the display

Long-click to display menu

Once menu is active:

- Use L/R buttons to navigate
 - Use M button to select
- Double-click to go BACK
Long-click to EXIT

(R)ange:

Single-click to
Perform Range Measurement

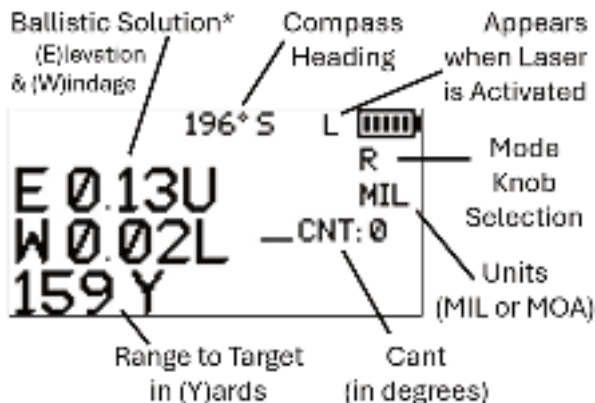
Double-click to activate
continuous ranging (for 5 minutes)

LED Status Indicator

Red: Visible Laser ON
Green: IR Laser ON
Blue: Ranging Laser ON



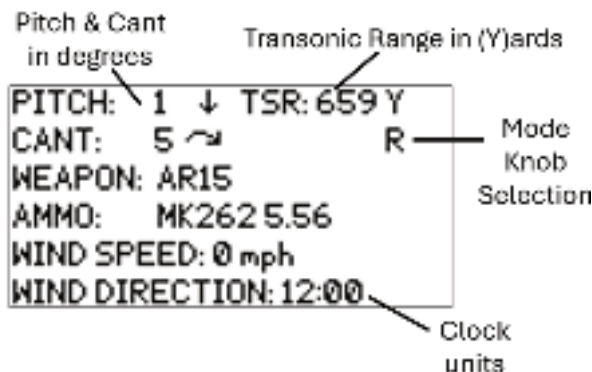
Display



**A new ballistic solution is calculated:*

- (1) After a new Range-to-Target is determined*
- (2) Every 10 seconds (based on new environmental sensor readings)*

Click the **M button** to scroll to the ballistic information page:



Power Savings

The display will sleep after 5 minutes* of inactivity. Click the M or R button to wake it up.

- **Important:** While the display is asleep, the L and R buttons will still activate the lasers.

The X4-LRF™ will turn off after 6 hours* of inactivity.

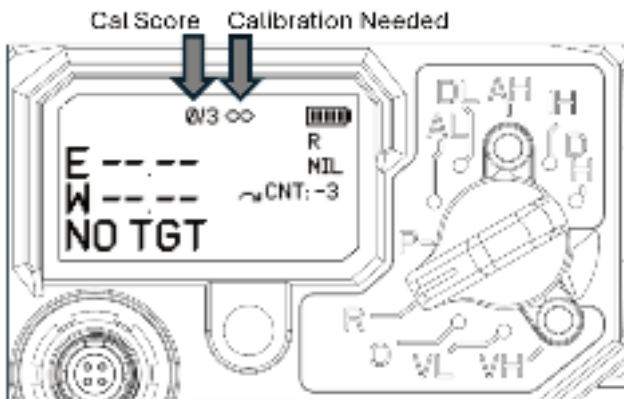
- **Shake-to-wake:** When motion is detected, the X4-LRF™ will power-up and turn on the display*.

** See online manual to adjust these settings*

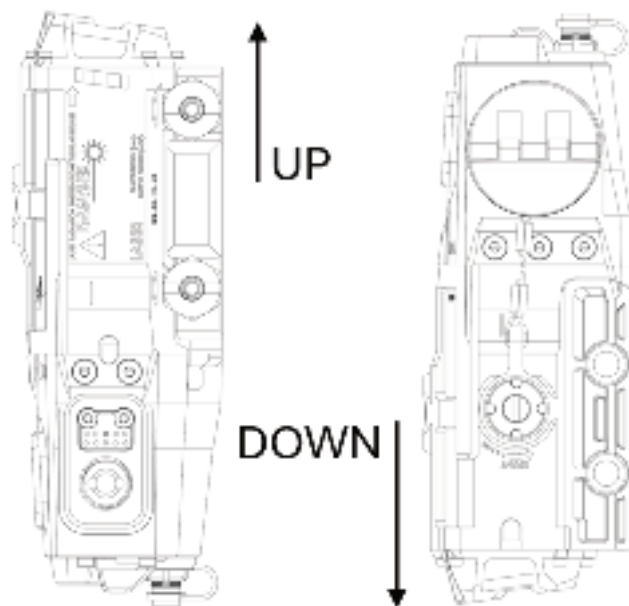
X4-LRF™ COMPASS CALIBRATION

After the battery is installed, a simple calibration routine needs to be performed in order for the X4-LRF™ to display an accurate compass heading.

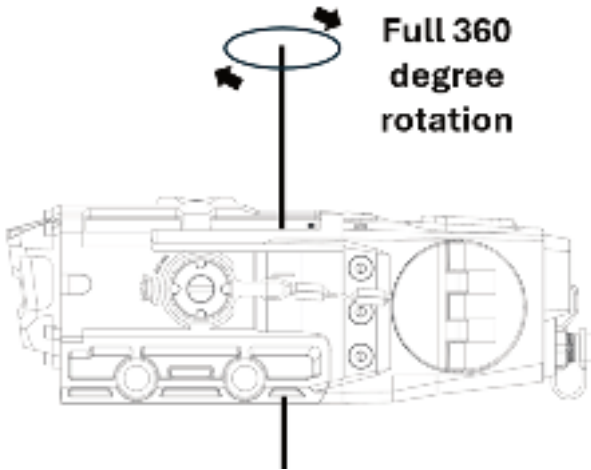
On the X4-LRF™ display, you should see the following two indicators:



- **Tip:** If a compass heading is already shown on the display, then compass calibration is not needed.

Compass Calibration **Step 1 of 2:**

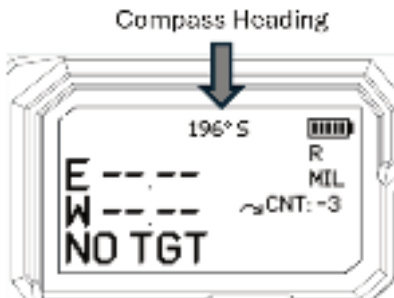
Point the X4-LRF™ up and down, holding it in each position for approximately 2 seconds.

Compass Calibration **Step 2 of 2:**

While holding the X4-LRF™ **horizontal** to the ground, spin it around a full 360 degrees.

- **Tip:** For an online video demonstrating compass calibration, go to www.MaztechIndustries.com

After a successful calibration, you will see a proper compass heading in the X4-LRF™ display:



- **Tip:** If the compass fails to calibrate, remove and replace the battery cap, then repeat the compass calibration process.

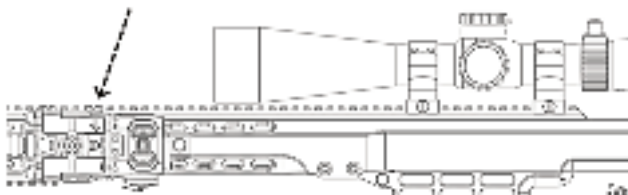
The X4-LRF™ compass will continuously auto-calibrate as you change locations. The only time the compass calibration will need to be re-performed is after the battery is changed.

- **Hint:** After installation of the X4-LRF™ on a weapon, field-strip your firearm in order to safely and easily perform compass calibration without having to remove the X4-LRF™ from your weapon.

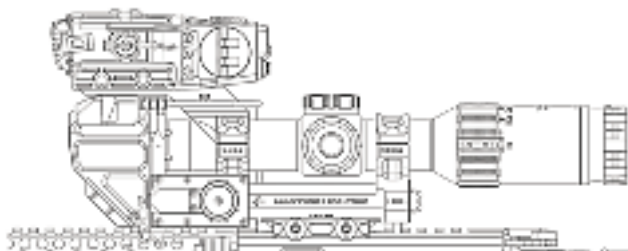
DETERMINING YOUR PREFERRED CONFIGURATION

The X4-LRF™ can be utilized in multiple configurations. Use these pictorials to determine your preferred configuration:

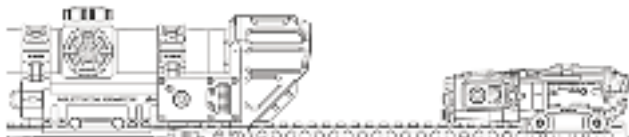
Configuration A: X4-LRF™ mounted perpendicular to your scope.



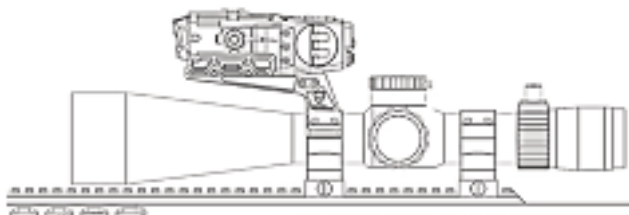
Configuration B: X4-LRF™ above the X4-FCS™ using the X4 Diving Board Mount.



Configuration C: X4-LRF™ on rail in front of X4-FCS™
(or 1.93" Height Above Rail scope)



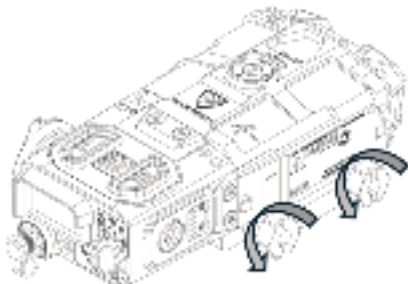
Configuration D: X4-LRF™ above your scope



INSTALLING X4-LRF™ ON PICATINNY RAIL

Tip: Perform compass calibration (page 19) before installing the X4-LRF™ on your Picatinny Rail.

Loosen both rail bolts on your X4-LRF™:



Place onto rail:



Tighten both rail bolts using a 1/2-inch wrench

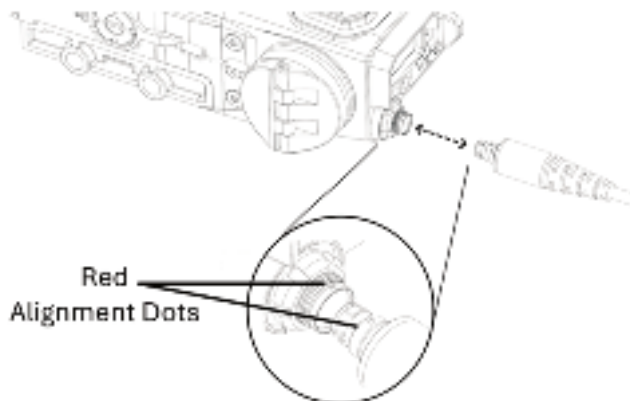
- **Important:** Do not torque more than **60 in-lb.**
If you do not have a torque wrench, turn to
1/4 turn past hand-tight.

INSTALLING X4 LOW PROFILE WIRED REMOTE

Before installing your X4 Low Profile Remote, first determine its mounting location in your configuration.

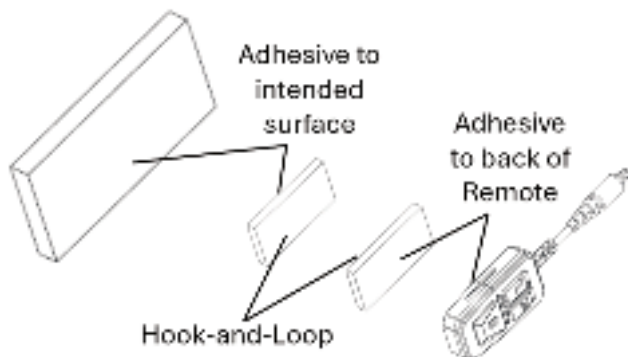


Next, plug it into the X4-LRF™ and ensure the cable is long enough to reach the mounting location.



Using an alcohol wipe (provided), clean the back of the X4 Low-Profile Remote and its intended mounting surface on your configuration.

Then remove the adhesive backing and firmly adhere each hook-and-loop onto your X4 Low-Profile Remote and its intended mounting surface:



Tip: For best adhesion, let the adhesive cure for 48 hours at room temperature.

ALIGNING THE X4-LRF™ WITH YOUR SCOPE

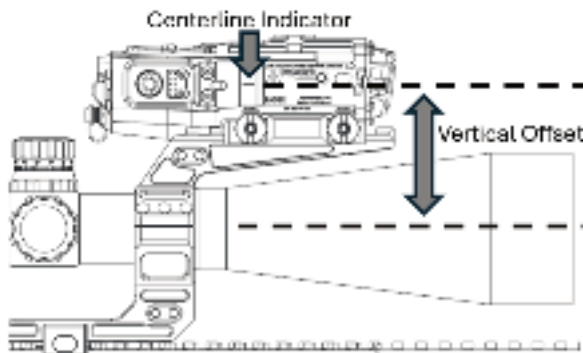
Before starting the alignment process, verify the X4-LRF™ and your scope are securely rail-mounted. Then refer to page 23 to determine if you are utilizing scope configuration A, B, C or D:

Configuration A: Refer to the online manual for proper alignment steps.

Configurations B and C: **Skip** to step 4 on page 31.

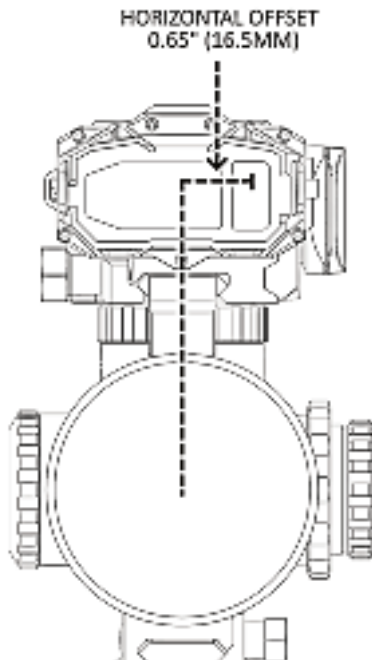
Configuration D:

- 1) Use a ruler to measure the distance from your optical centerline to the centerline indicator etched on the X4-LRF™:

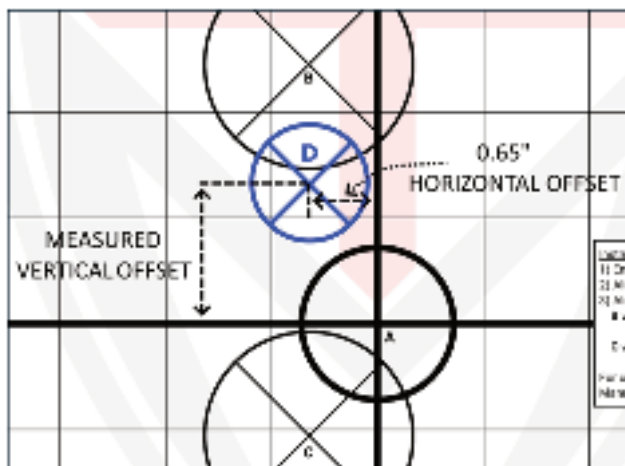


- **Tip:** Optical centerline is typically equivalent to the top of the lower-half of the scope ring.

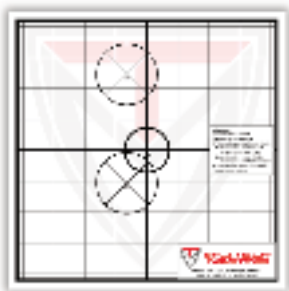
- 2) The X4-LRF™ visible pointer has a horizontal offset of 0.65" (16.5mm). This information will be utilized in step 3.



- 3) Use a marker to create **aimpoint D** on the Maztech Alignment Target using the vertical and horizontal offsets from steps 1 and 2, respectively:

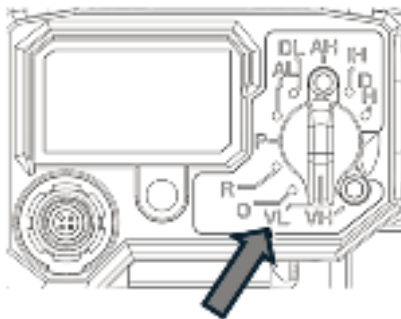


- 4) If not performed already: Zero your optic per manufacturer's instructions (100-yard OR 100-meter ranging distance recommended).
- 5) Place the Maztech Laser Alignment Card downrange (100 yards or 100 meters).



Note: The alignment card has adhesive backing
OR
Use tape to hold it in place

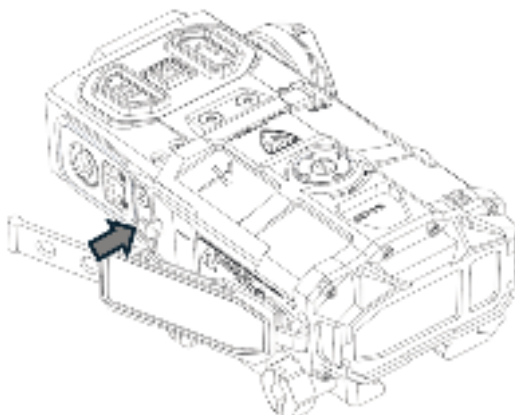
- 6) On your X4-LRF™, select VL (Vis-Low) mode:



- 7) Align the reticle on your optic to **aimpoint A** on the alignment target:



- 8) Move the X4-LRF™ aperture cover into the open (stowed) position:

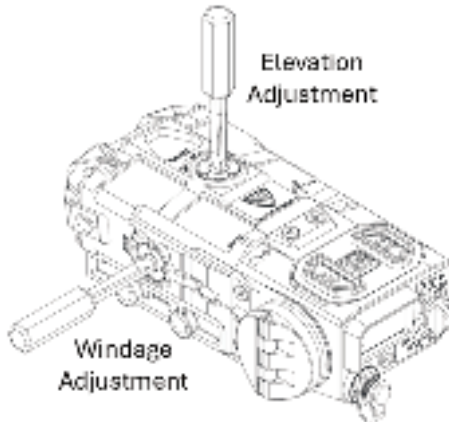


Warning: The next step will activate the Visible Laser. If you have not already done so, please review ALL laser warnings and safety measures in the Laser Safety Appendix.

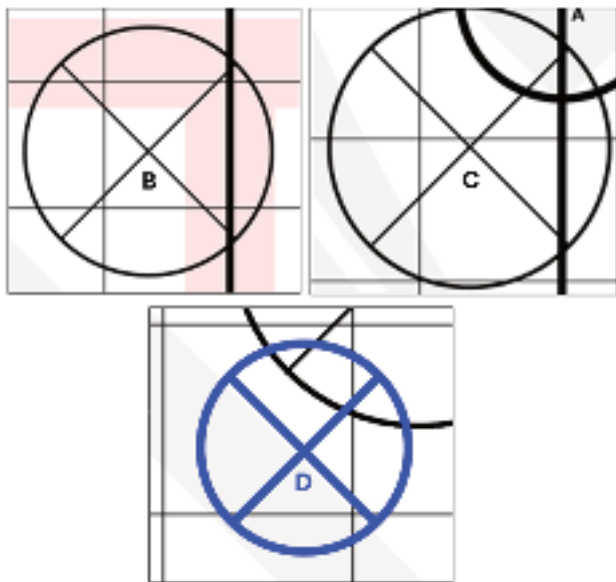
- 9) **Double-click the L button** on your X4-LRF™ to turn on the visible pointer for 5 minutes:



- 10) Use the small screwdriver provided to adjust laser windage and elevation:



- 11) While keeping your optic's reticle centered on aimpoint A, steer the laser beam so that it centers on the aimpoint (B, C or D) named after your configuration:



12) **If Weapon Mounted:** Aim away from the Laser Alignment Card and discharge 2 or 3 rounds from your weapon.

➤ Then repeat steps 10 and 11 to verify the two aimpoints are still aligned.

13) Turn **OFF** the X4-LRF™ visible laser by single-clicking the L button.

Congratulations! The X4-LRF™ is now co-aligned with your optic, and the system is ready for operation.

➤ **Hint:** While still at the range, setup your ballistic profile using the Maztech Companion App (see next section). This will allow the X4-LRF™ to capture environmental data for the WEAPON ZERO parameters in your weapon's ballistic settings.

INSTALLING THE MAZTECH COMPANION APP

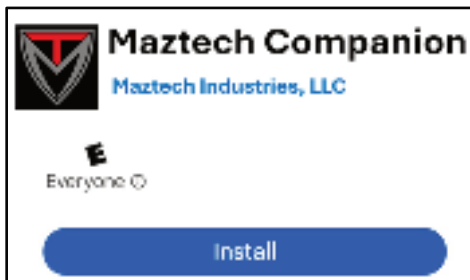
Maztech recommends connecting your X4-LRF™ to your smartphone via Bluetooth® Wireless Technology for the most efficient setup of your ballistic profiles.

- **Note:** If you do not want to connect your X4-LRF™ to your smartphone, reference the online manual at www.MaztechIndustries.com for instructions on setting up ballistics profiles without a smartphone.

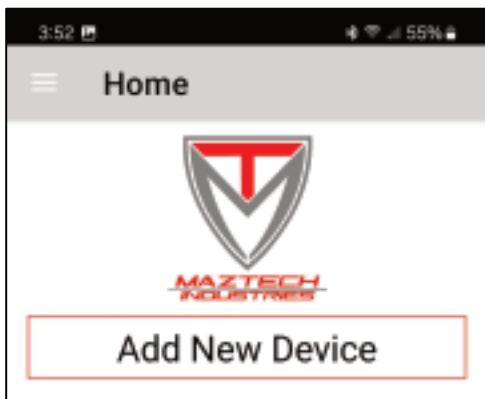
Use your smartphone to connect to the App Store or Google Play:



Search for **Maztech** or **Maztech Companion** and install the app on your phone:



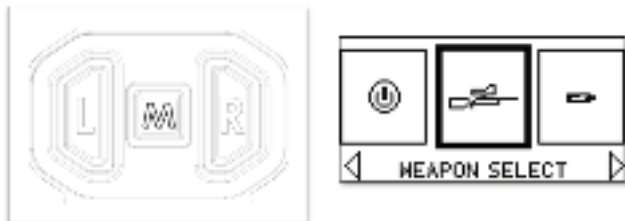
Launch the Maztech Companion App and you should see a screen that looks like this:



Note: Before attempting to initiate a wireless connection to the X4-LRF™, verify you have Bluetooth® enabled on your smartphone.

CONNECTING X4-LRF™ TO MAZTECH COMPANION APP

Long click (for 1 second) the **(M)enu button**. This will display the X4-LRF™ menu:

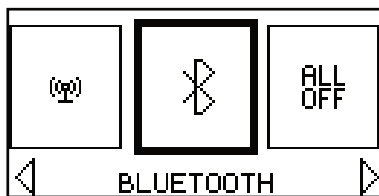


Then use the **L/R buttons** to navigate to the **RADIO SETTINGS** menu:

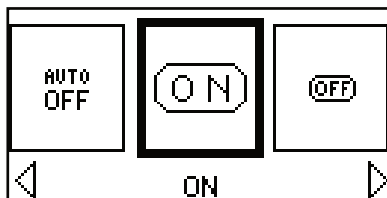


Click the **(M)enu button** to select RADIO SETTINGS.

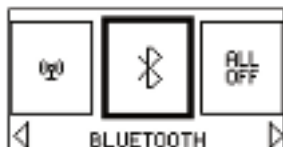
Navigate to BLUETOOTH®. Then click the **(M)enu** button to select:



Navigate to ON and click **(M)enu** to turn on Bluetooth® Wireless Technology:



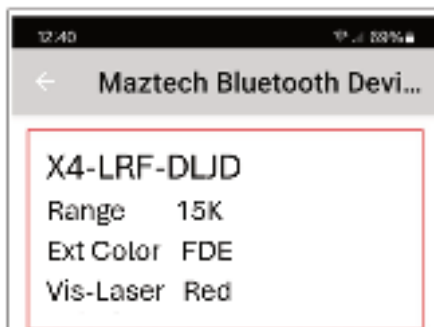
Select BLUETOOTH® again, then navigate and select PAIR SMARTPHONE:



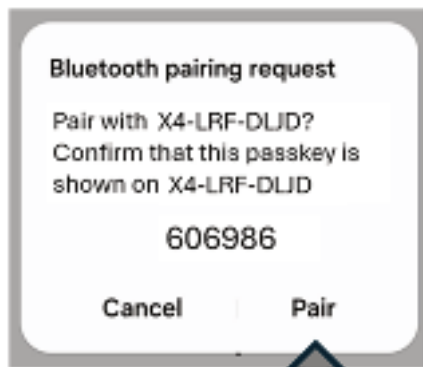
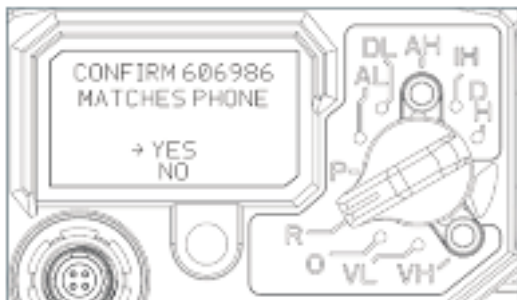
On the Maztech Companion App, touch the **Add New Device** button:



Your X4-LRF™ will show up as an available device.
Touch the box with the red outline:

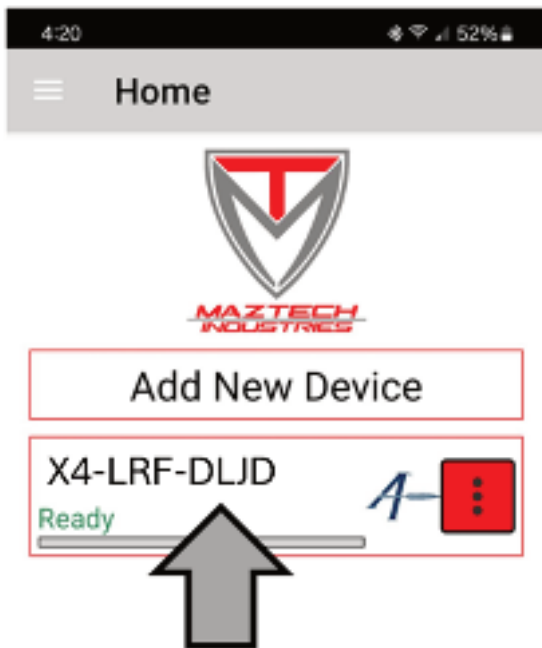


After pairing starts, for security reasons you will need to respond to confirmations on **both** devices:



Touch **Pair** on your phone and click the X4-LRF™
(M)enu button to confirm pairing operation

When pairing is complete, the X4-LRF™ will show up as a device in the Maztech Companion App:



Touch here to connect to the X4-LRF™ via Bluetooth® Wireless Technology.

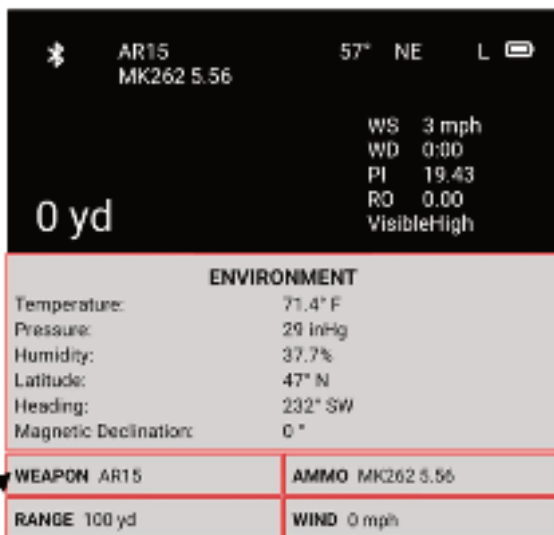
Note: It will take **approximately 10 seconds** to create an encrypted connection:



SETTING UP BALLISTIC PROFILES

You can now use your Maztech Companion App to setup ballistic profiles on your X4-LRF™.

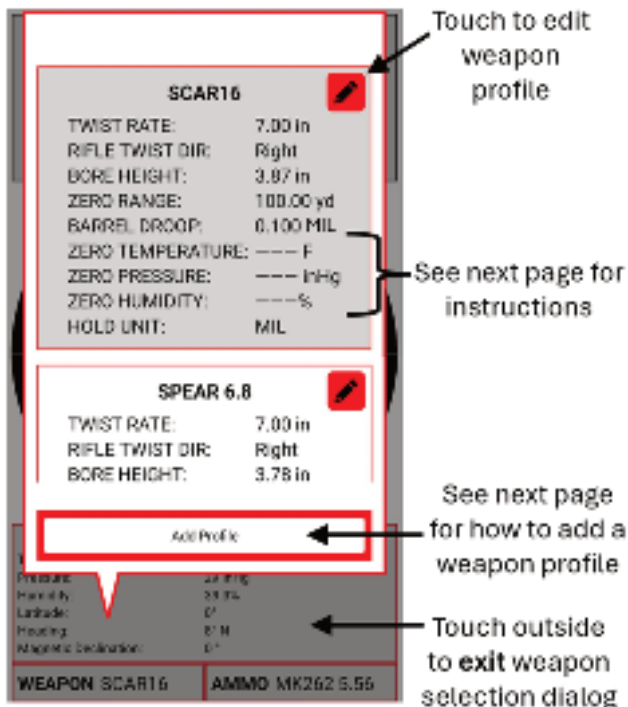
- **Note:** If you do not want to connect your X4-LRF™ to your smartphone, reference the online manual at www.MaztechIndustries.com for instructions on setting up ballistics profiles without a smartphone.



Touch here to select your weapon

- **Hint:** Anything in the app with a red box around it is something you can touch to adjust

Scroll through and select one of the 5 common weapon profiles already available, or touch **Add Profile** to create a profile for your weapon:



Instructions for adding or editing a weapon profile:

The screenshot shows a 'Profile Name' field at the top with the text 'NEWWEAPON'. Below this are several input fields for weapon specifications, each with a unit and a green checkmark icon to its right. The fields are: 'RIFLE TWIST RATE' (1: 1 in), 'RIFLE TWIST DIR:' (Right), 'BORE HEIGHT:' (0 in), 'ZERO RANGE:' (100 yd), 'BARREL DROOP:' (0.1 in), 'ZERO TEMPERATURE:' (F), 'ZERO PRESSURE:' (inHg), and 'ZERO HUMIDITY:' (%). At the bottom are three buttons: 'Capture Device Data', 'Ok', and 'Cancel'. Annotations with arrows point to these elements: 'Name your weapon' points to the profile name field; 'Set as appropriate for your weapon' points to the twist rate, direction, and bore height fields; 'Leave at default*' points to the barrel droop field; 'Set these values during your weapon zero operation by touching this button' points to the temperature, pressure, and humidity fields; and another arrow points to the 'Capture Device Data' button.

Field	Value	Unit	Checkmark
RIFLE TWIST RATE	1	in	✓
RIFLE TWIST DIR:	Right		
BORE HEIGHT:	0	in	✓
ZERO RANGE:	100	yd	✓
BARREL DROOP:	0.1	in	✓
ZERO TEMPERATURE:		F	✓
ZERO PRESSURE:		inHg	✓
ZERO HUMIDITY:		%	✓

Buttons: Capture Device Data, Ok, Cancel

*Barrel Droop is an advanced Applied Ballistics® setting. Most users can use the default value. If desired, see X4-LRF™ Online User Manual for instructions on setting Barrel Droop.

Example of a successful **new** weapon profile:

The screenshot shows a 'JOHNS WEAPON' profile screen. A red box highlights the top section containing weapon specifications. Below this, a red rectangle highlights the 'Add Profile' button. At the bottom, a red arrow points to the left side of the screen, indicating the exit path.

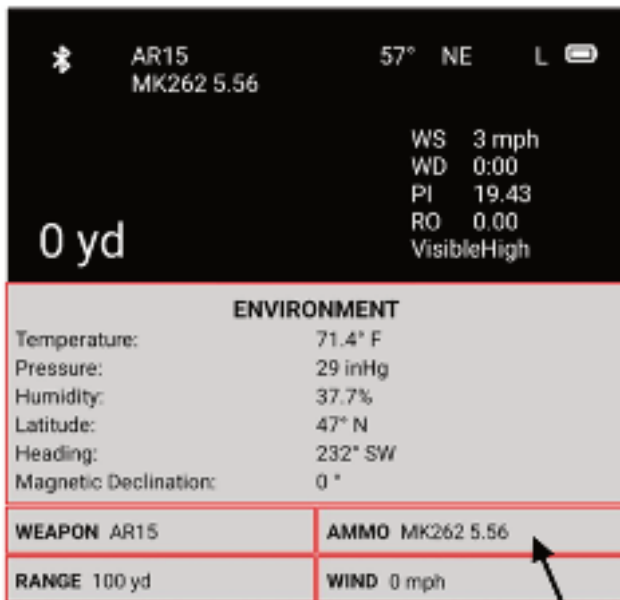
JOHNS WEAPON	
TWIST RATE:	6.50 in
RIFLE TWIST DIR:	Left
BORE HEIGHT:	3.48 in
ZERO RANGE:	100.00 yd
BARREL DROOP:	0.100 MIL
ZERO TEMPERATURE:	--- °F
ZERO PRESSURE:	--- inHg
ZERO HUMIDITY:	--- %
HOLD UNIT:	MOA

Add Profile

Pressure: 29.99 inHg
Humidity: 36.1%
Latitude: 0°
Longitude: 87°N
Magnetic Declination: 0°

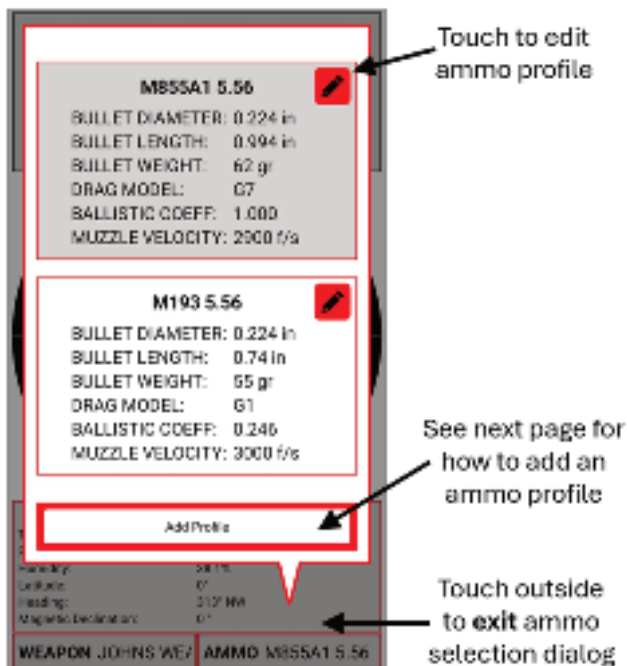
WEAPON: JOHNS WEAPON AMMO: MK262 5.56

Touch outside
to exit weapon
selection dialog



Touch here to select your ammunition

You can scroll through and select one of the 5 common ammunition profiles already available, or touch **Add Profile** to create a profile for your ammo:



Instructions for adding a new ammo profile:

The screenshot shows a form titled "Profile Name: JOHNS AMMO". It contains several input fields, each with a green checkmark icon to its right, indicating they are required or validated. The fields are: BULLET DIAMETER (0.224 in), BULLET LENGTH (0.85 in), BULLET WEIGHT (57 gr), DRAG CURVE (07), BALLISTIC COEFFICIENT (0.267), and MUZZLE VELOCITY (2050 f/s). A bracket on the right side of the form groups the first five fields with the text "Set as appropriate for your ammo". Below the fields is a red button labeled "Choose new Bullet". An arrow points from the text "Touch to choose from Applied Ballistics® database" to this button. The word "OR" is displayed in large, bold letters between the bracketed fields and the button.

Profile Name: **JOHNS AMMO**

BULLET DIAMETER: 0.224 in ✓

BULLET LENGTH: 0.85 in ✓

BULLET WEIGHT: 57 gr ✓

DRAG CURVE: 07

BALLISTIC COEFFICIENT: 0.267 ✓

MUZZLE VELOCITY: 2050 f/s ✓

Set as appropriate for your ammo

OR


Touch to choose from Applied Ballistics® database

Choose new Bullet

Okay Cancel

Hint: Try finding your ammunition in the Applied Ballistics® database before manually entering any information.

Muzzle Velocity: For best results, use a chronograph to measure your muzzle velocity. Otherwise, use your ammunition manufacturer's box or online references.



Profile Name:

HORNADY FLAT

BULLET DIAMETER: 0.308 in ✓

BULLET LENGTH: 0.995 in ✓

BULLET WEIGHT: 170 gr ✓

DRAG CURVE: Custom

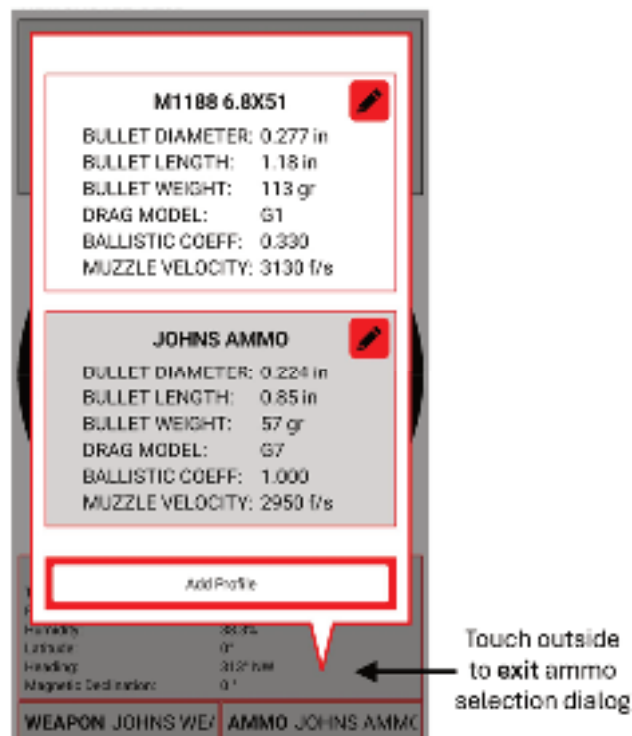
BALLISTIC COEFFICIENT: 1 ✓

MUZZLE VELOCITY: 0 f/s ✗

Choose new Bullet

Okay Cancel

Example of a successful new ammunition profile:



MAINTENANCE AND CARE

- Always follow standard firearm safety handling practices.
- Refrain from applying any bake-on finishes to the X4-LRF™, as this may damage the lenses, sensors or electronics.
- The X4-LRF™ does not contain user-serviceable internal components
- Clean your X4-LRF™ lenses with a microfiber cloth (included) and refrain from using abrasive cleaners.
- Operate between -40°F and +140°F (-40°C and +60°C).
- Store between -51°F and 160°F (-46°C and +71°C).

TROUBLESHOOTING

Problem: The X4-LRF™ is displaying NO TGT after clicking the (R)ange button.

Solution: Remove and stow the aperture cover.

- If this does not solve the problem:
Be certain you are aiming at a target within the range of the X4-LRF™ (2km or 15km depending on your model).
- If this does not solve the problem:
Turn off, then turn on the X4-LRF™.
- If this does not solve the problem:
Install a new CR123 battery.

Problem: The X4-LRF™ is resetting during weapon fire.

Solution: Tighten the battery cap.

- If this does not solve the problem:
Install a new CR123 battery.

For further troubleshooting tips, reference the X4-LRF™ Online User Manual at www.MaztechIndustries.com.



BATTERY SAFETY

Batteries must be handled with care to ensure safe and reliable operation. To prevent potential hazards and maximize battery performance, please observe the following guidelines:

- Use only batteries specified in this manual. Incorrect battery types or sizes can lead to malfunction or damage.
- Store batteries in a cool, dry place, away from direct sunlight and extreme temperatures. Do not store batteries loose in pockets or bags where they might come into contact with metal objects.
- Follow the instructions in this manual for proper battery installation. Ensure that batteries are inserted with the correct polarity (+ / -) as indicated by the device markings.
- Dispose of batteries in accordance with local regulations. Do not dispose of batteries in fire as they may explode or leak hazardous materials.
- If a battery appears damaged, deformed, or leaks, do not use it. Safely remove the battery and replace it with a new one.
- Keep batteries out of reach of children and pets. Swallowing or mishandling batteries can result in serious injury.

TERMS OF USE, WARRANTY, LICENSE & LIABILITY WAIVER

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The X4-LRF™ does not contain user-serviceable internal components. Any modifications or repair attempts on the X4-LRF™ beyond those explicitly outlined in this manual or the online manual may nullify the warranty.

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FCC COMPLIANCE NOTICES

The X4-LRF™ complies with FCC radio frequency (RF) exposure limits for an uncontrolled environment. Users must follow the specific operating instructions included in this User Manual to ensure RF exposure compliance. With respect to the potential for human exposure to RF radiation, calculations prepared in accordance with FCC Bulletin OET-65 (Edition 97-01) indicate that the calculated safe distance for Maximum Permissible Exposure is 0.2 inches (5 mm).

The X4-LRF™ complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. **Changes or modifications to the X4-LRF™ not expressly outlined in this manual or in the online manual could void the user's authority to operate the equipment.** Operating the Ultra-wideband (UWB) radio onboard an aircraft, ship or satellite is prohibited.

The X4-LRF™ 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: (a) Reorient or relocate the receiving antenna, (b) increase the separation between the equipment and receiver, (c) connect the equipment into an outlet on a circuit different from that to which the receiver is connected, (d) consult the dealer or an experienced radio/TV technician for help.

FDA AND OSHA COMPLIANCE NOTICES

OSHA

The X4-LRF™ complies with OSHA safety standards for laser products. To ensure safe operation, users must follow all guidelines provided in this manual, including wearing appropriate eye protection and avoiding direct or reflective laser exposure to the eyes and skin. Use of this product must align with OSHA's regulations to minimize risk in occupational settings.

FDA

The X4-LRF™ 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. This manual includes all required safety information and operational guidelines to ensure compliance. Modifications to the X4-LRF™ products are prohibited by federal regulations and may result in serious injury, as well as legal consequences.

Organizations that Procure X4-LRF™ for Employees

The purchasing organization is required to maintain a detailed property log that documents the type and quantity of each device owned, along with the responsible parties in control of these devices. Additionally, organizations must implement and maintain an active training program for employees on the safe use of the laser system. Also, the purchasing organization is to maintain an active program of training for its employees in the safe use of the laser system.

LASER SAFETY APPENDIX

Warning: The X4-LRF™ contains Class 3R lasers, which can be hazardous if not handled properly. Class 3R lasers in this product emit radiation in the visible and invisible spectrum from the exit aperture of the product which poses risks to the eyes if viewed directly. Proper usage and adherence to safety guidelines are essential to ensure safe operation and avoid potential harm to the user and others.

Radiation Hazards and Safe Use

- The X4-LRF™ emits visible laser radiation at Class 3R levels which may be momentarily hazardous to eyes if exposed directly. The risk of injury increases when viewed with optical aids.
- The Nominal Ocular Hazard Distance (NOHD) is the range within which exposure to the laser beam may cause eye injury. Avoid using the device in situations where there is a risk of direct eye exposure within this distance. The worst-case NOHD for the X4-LRF™ is 72.4 meters.

Avoid Direct Eye Exposure

- Do not look into the laser or point the laser at someone's eyes.
- When operating the device, ensure the laser is directed only at intended targets.

Optical Aids

- Do not look at a laser through telescopes, binoculars, scopes, or other image intensifiers.
- Immediately terminate laser emissions if optical aids (e.g. monocular, binoculars, weapon mounted optics, telescopes, etc.) are in use near the laser termination or its beam path.

Avoid Reflective Surfaces

- Never aim the laser at people, or animals, or reflective surfaces that could redirect the beam. Unintentional exposure to the eyes could result in serious injury.
- Avoid using the near infrared (NIR) laser with reflective targets during alignment. Use only the visible low-power mode to prevent potential eyesight damage.

Avoid Pointing at Other People, Vehicles, or Aircraft

- Do not aim laser at other people as lasers may cause eye injury or skin irritation.
- Do not aim or shine laser on aircraft or vehicles at any distance.

Laser Visibility in Certain Conditions

- Visible and infrared laser beams are more easily seen in environments with smoke, fog, or rain. This can increase visibility to others. Avoid prolonged activation of lasers in these conditions.

Secure the Device When Not in Use

- Store the X4-LRF™ in a safe, secure location to prevent unauthorized use or accidental exposure.

Do Not Attempt to Open or Disassemble

- There are no user-serviceable parts inside the X4-LRF™. Under no circumstances should the X4-LRF™ be disassembled or attempted to be disassembled. The X4-LRF™ is permanently assembled and sealed, and any attempt to open or disassemble the unit can create safety issues and will void the warranty.

Device Malfunction

- If a laser remains on or cannot be turned off, do not attempt repairs. Remove the battery and contact cs@maztechindustries.com for further assistance.

In Case of Accidental Eye Exposure

- Immediately discontinue use and seek medical evaluation if necessary.

Secure Disposal

- In compliance with FDA guidelines, ensure the device is properly disposed of or returned to the manufacturer at the end of its life cycle.

Certification Label

Laser Emission Warning Label

- The LRF is equipped with an FDA-required warning indicating it contains a Class 3R laser as shown below.
- This warning is permanently engraved into the housing. Ensure that this warning remains legible, as it informs users of the potential hazard.
- The aperture notification depicts the exit aperture where the lasers exit the system. This serves as a reminder to not look directly into the laser source.



Use Protective Eyewear if Necessary

- Use laser safety glasses designed to filter the wavelength of these lasers when operating near others or in environments with potential exposure. The wavelength of operation and recommended Optical Density is provided in the NOHD table on the next page.

Laser Radiation Output Parameters

Nominal laser specifications:

	Visible Pointer	Near IR Pointer	Ranging Laser	
			2K	15K
Wavelength	660nm	842nm	905nm	1534nm
Max Output Power	4.9mW	0.7mW	Class 1	
Divergence (1/e ²)	0.6mrad			
Beam Diameter	4.5mm			

Estimated worst-case Nominal Ocular Hazard Distance (NOHD):

	Visible Pointer	Near IR Pointer	Ranging Laser	
			2K	15K
Wavelength	660nm	842nm	905nm	1534nm
Max Output Power	4.9mW	0.7mW	Class 1	
Divergence (1/e ²)	0.3mrad			
Beam Diameter	3mm			
NOHD	72.4m	28.8m		
Optical Density*	0.7	0		

*for Laser Safety Eyewear

EXPORT CONTROL NOTICEInternational Traffic in Arms Regulations (ITAR) Controlled

The X4-LRF™ is controlled for export by the International Traffic in Arms Regulations (ITAR). These controls take the form of export regulations and license requirements. As part of the express consideration provided for receipt of Maztech's goods, technical data and/or services, you, our customer, acknowledge that the export, re-export or other transfer, directly or indirectly, of the goods, technical data and/or services provided by Maztech in violation of U.S. law is prohibited. Customers acquiring ITAR goods, technical data and/or services from Maztech shall be responsible for obtaining any necessary U.S. or other government authorization required to ensure compliance with applicable export laws.

