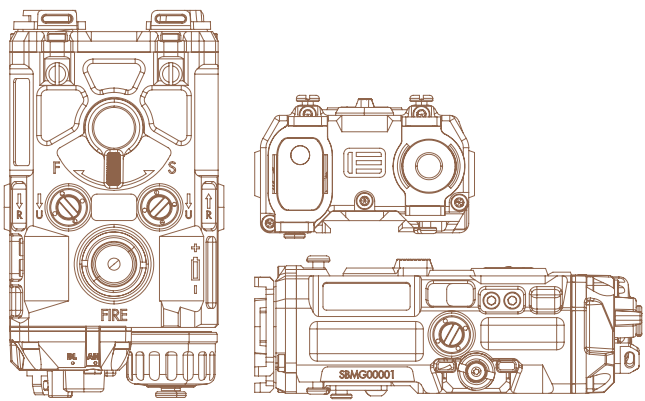
EOTECH®



OGL™

ON GUN LASER

NOTE

The sale of this product is restricted to Federal, State, or local government law enforcement agencies only, through a direct purchase order and shall not be sold to individual personnel of these agencies or organizations.

The purchasing organization is to maintain an active program of training for its employees in the safe use of the laser system.

The purchasing organization is to maintain a property log that lists the type and number of each device owned and the responsible party having control of these devices.

NOTE

It is necessary and intended that the invisible beam emitted by these devices be viewed by the user through night vision equipment.

CAUTION

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

CAUTION

The battery shall be removed when the product is not intended to operate in order to prevent unauthorized use. The battery should also be removed before installation or removal from a firearm, when transferring the OGL, and before shipping.

CAUTION

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

General Info

This manual contains operating instructions and maintenance procedures which may cause injury or death to personnel and damage to equipment if not properly followed. Prior to performing any task, the WARNING, CAUTION, and NOTE statements must be reviewed and fully understood.

Definitions

WARNING

Emphasizes an essential operating or maintenance procedure, practice, condition, or statement which, if not strictly observed could result in injury, long-term health hazards, or death.

CAUTION

Emphasizes an essential operating or maintenance procedure, practice, condition, or statement which, if not strictly observed could result in damage, destruction, or loss of operational effectiveness of the On Gun Laser device.

NOTE

Emphasizes an essential operating or maintenance procedure, condition, or statement.

CONTENTS

1/ INTRODUCTION

2 / BASICS

3 / START

4 / MAINTAIN

5 / HELP

Distribution Statement

Approved for public release; distribution is unlimited.

This manual contains technical data whose export is governed by the U.S. International Traffic in Arms Regulations (ITAR).

This information must not be transferred to a foreign person without the proper authorization of the U.S. Government. Please contact EOTECH Inc. for additional information.

Weapon Safety

Prior to mounting the OGL, be sure your weapon is clear. If you are not sure how to clear your weapon, please see the operator's manual that accompanies the weapon platform you are mounting the device on. If you are still unsure contact a gunsmith and/or attend a reputable firearms safety training course.

Laser Safety

The OGL is a Class 3B laser product.

FIGURE 1.1 Warning Label

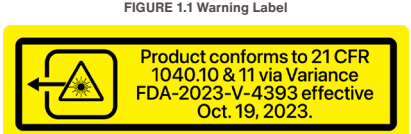


FIGURE 1.2 Compliance Label

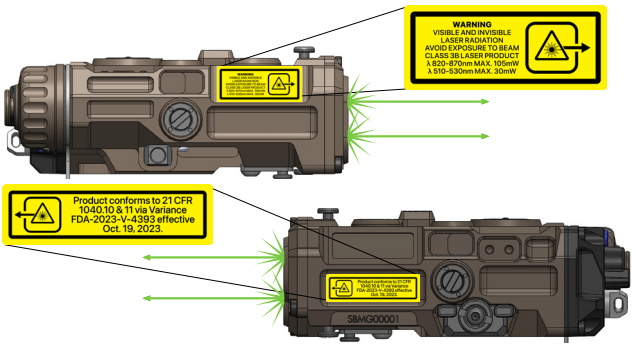


FIGURE 1.3 Label Placement

⚠ Do not stare (or even glance) into the laser beams.

⚠ Do not expose people's eyes to the laser beams.

⚠ Do not view the lasers with ANY optical instruments.

⚠ Do not direct the lasers at mirrors, mirror-like surfaces, or reflective surfaces.

WARNING

Laser eye protection appropriate for the Optical Densities (OD) specified in Table 1.1 should be provided to all personnel at risk from laser radiation. Formal laser safety training should be provided to all operators by the issuing organization prior to use.

⚠ Visible and infrared lasers are visible to enemy eyes and night vision devices, especially in smoke, fog, and rain. Be careful not to compromise your location.

⚠ Open the laser cover only for use and close it for storage.

⚠ When storing or not actively using the OGL (e.g., mounting on a weapon, removing, replacing the battery, maintenance, etc.), be sure to place the Mode Switch in the OFF position and replace the Blue Safety Screws.

TABLE 1.1 Laser Safety Parameters

	VISIBLE		NEAR INFRARED (NIR)				
	AL	AH	AL	DL	AH	IH	DH
Class[1]	3R	3B	1	3R	3B	3B	3B
NOHD[2] (m)	45.9	126	0	48.1	175	3.8	341
NOHDe[3] (m)	314	840	0	284	1020	22.3	2000
Optical Density (OD)	0.68	1.5	0.02	0.71	1.75	2.2	2.33
NSHD[4] (m)	0	0	0	0	0	0.12	18.3
MPE[5] (mW/cm^2)	2.6	2.6	1.74	1.74	1.74	1.74	1.74

[1] Laser Hazard Classification per ANSI Z136.1, 2022
[2] Nominal Ocular Hazard Distance, unaided (no optical device)
[3] Extended Nominal Ocular Hazard Distance with 7x50 magnifying optics
[4] Nominal Skin Hazard Distance
[5] Maximum Permissible Exposure, for viewing durations of 0.25 seconds in Visible radiation and 10 seconds for Near Infrared (NIR) radiation

WARNING

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.

TABLE 1.2 Additional Laser Safety Information for Eye Protection Resistance Level Determination

Laser	Peak Irradiance at 10cm from the exit aperture	Total power transmitted through the 7mm aperture at 10cm from the exit aperture	Minimum beam divergence for laser safety calculations	Minimum beam diameter for laser safety calculations	Beam diameter measurement type
Visible Aim	251 mW/cm^2	28.8 mW	0.3 MRAD	5.29 mm	$1/e^2$
IR Aim	307 mW/cm^2	36.3 mW	0.3 MRAD	5.38 mm	$1/e^2$
IR Illuminator	440 mW/cm^2	84.1 mW	23.0 MRAD	4.00 mm	FWHM

WARNING

Laser modes designated as Laser Class 1 or Laser Class 3R may be used for force-on-force training ONLY when the Blue Safety Screws are properly installed in the Mode Switch lock-out positions and personnel (OPFOR) are beyond the Nominal Ocular Hazard Distance (NOHD) listed in Table 1.1. Laser modes designated as Laser Class 3B must NOT be used for force-on-force training and should NOT be used in permissive environments to minimize risk to non-combatants.

⚠ Attach the Blue Safety Screw to the mode selection switch for force-on-force training and storage.

⚠ When operating in high power mode, store the Blue Safety Screws on the left side of the OGL.

⚠ Do not disassemble the device, there are no user serviceable components inside.

Battery Safety

⚠ Lithium batteries can explode or cause burns if punctured, recharged, immersed in water, incinerated, or punctured.

⚠ Only use quality batteries from a reputable manufacturer, low quality batteries may not incorporate fault and heat protection features leading to hazardous conditions.

⚠ The use of rechargeable or non-lithium cells may cause reduced run-time and cause the low battery notification to not perform properly.

⚠ Ensure the Mode Switch is in the OFF position and the Protective Covers are in place before installing, removing, or replacing the battery.

⚠ Inspect the battery for any damage or leakage, never install a damaged or defective battery in the OGL.

WARNING

Attach the Blue Safety Screw to the mode selection switch for force- on-force training and storage. When operating in High-Power mode, store the Blue Safety Screws on the left side of the OGL. Do not disassemble the device, there are no user serviceable components inside.

FCC Compliance

The OGL complies with Part 15 of the FCC Rules. Operation is subject to the following 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. Complies with 21 CFR Chapter I, Subchapter J.

General Information

The On-Gun Laser or OGL is a ruggedized, weapon-mounted precision aiming, and illumination device designed for the needs of Military and Law enforcement professionals in training, tactical, combat, and other austere environments. The OGL provides both Visible and IR precision Aiming Lasers that are coaligned providing an IR Laser for use with night vision devices and a visible laser for use when night vision devices are not practical or unavailable. The IR Illuminator is on a separate optical bench for user preferred alignment or offset with Aiming Lasers for target and/or area illumination in low to no light conditions with night vision devices.

Key Attributes

- All aluminum housing for extreme durability
- Compact design, similar in size to a deck of cards
- Enhanced ergonomics
- Shared optical bench for Visible Green and IR Aiming Lasers
- VCSEL Illuminator with variable beam divergence
- ~0.2 MRAD windage and elevation adjustments, 50 MRAD total
- Crane-type laser port
- Modlite ModButton Lite switch included
- Tethered Battery Cap and protective caps/pattern generators
- Visible Laser override feature
- 50% power mode
- Water resistant (33ft/10m)

Specifications

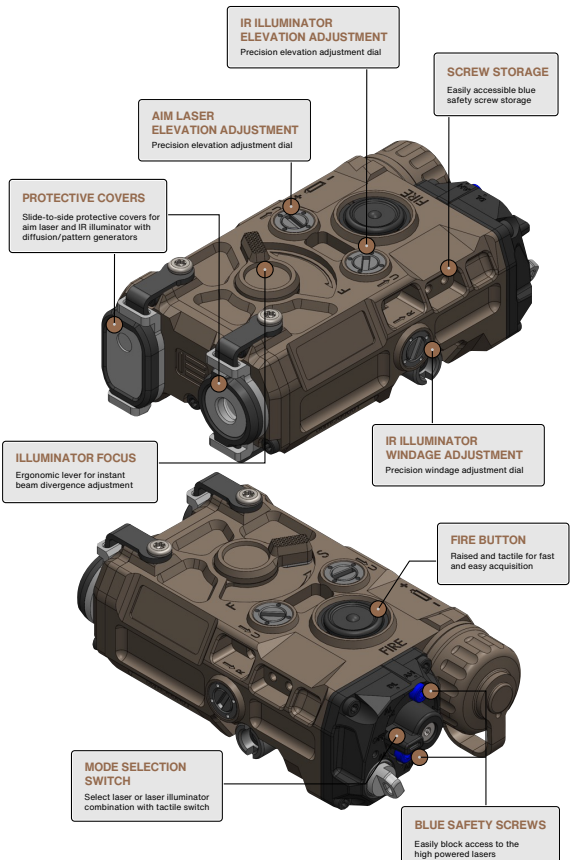
TABLE 2.1 Technical Specifications

MECHANICAL			
L × W × H	4.1" × 2.3" × 1.5" (102.9 mm × 58.2 mm × 37.8 mm)		
Weight	8 oz (227 grams) with pattern generators, diffuser, and battery		
Material	AL6061-T6		
Finish / Color	MIL-A-8625 Type III, Class 2 / Gray or Flat Dark Earth (Tan)		
Adjustment (per click)	Approx. 0.2 MRAD		
Adjustment Range	± 25 MRAD (50 MRAD total)		
OPTICAL			
	VIS Aim Laser	IR Aim Laser	IR Illuminator
Wavelength	520(±10) nm	850(±10) nm	860(+10/−30) nm
High Output Power	≤ 30 mW	≤ 35 mW	≤ 105 mW
Low Output Power	≤ 4.7 mW	≤ 0.7 mW	≤ 2.7 mW
Divergence (FWHM)	≤ 0.5 MRAD	≤ 0.5 MRAD	SPOT ≥ 23 MRAD FLOOD ≥ 105 MRAD
ELECTRICAL			
Power Source	1 × CR123 battery		
ENVIRONMENTAL			
Temperature	-4°F to 140°F (-20°C to 60°C) / Operation -40°F to 159.8°F (-40°C to 71°C) / Storage		
Water Resistance	33 feet (10m) depth		

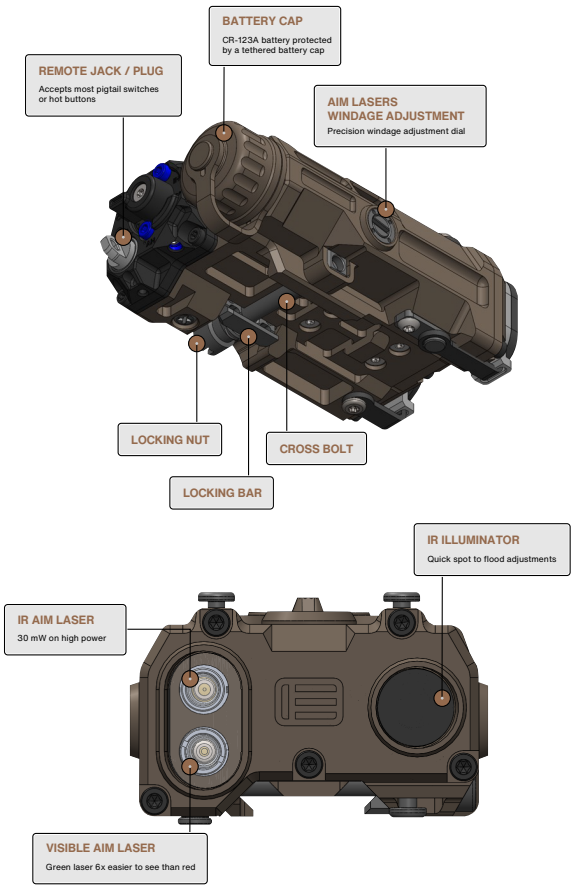
Beam diameter and divergence values are measured at the front window of each laser output.

Optical performance is measured at ~23°C (73°F).

Anatomy


IR ILLUMINATOR ELEVATION ADJUSTMENT
Precision elevation adjustment dial
SCREW STORAGE
Easily accessible blue safety screw storage
AIM LASER ELEVATION ADJUSTMENT
Precision elevation adjustment dial
PROTECTIVE COVERS
Slide-to-side protective covers for aim laser and IR illuminator with diffusion/pattern generators
ILLUMINATOR FOCUS
Ergonomic lever for instant beam divergence adjustment
IR ILLUMINATOR WINDAGE ADJUSTMENT
Precision windage adjustment dial
FIRE BUTTON
Raised and tactile for fast and easy acquisition
MODE SELECTION SWITCH
Select laser or laser illuminator combination with tactile switch
BLUE SAFETY SCREWS
Easily block access to the high powered lasers

Anatomy


BATTERY CAP
CR-123A battery protected by a tethered battery cap
REMOTE JACK / PLUG
Accepts most pigtail switches or hot buttons
AIM LASERS WINDAGE ADJUSTMENT
Precision windage adjustment dial
LOCKING NUT
CROSS BOLT
LOCKING BAR
IR ILLUMINATOR
Quick spot to flood adjustments
IR AIM LASER
30 mW on high power
VISIBLE AIM LASER
Green laser 6x easier to see than red

Operating Instruction

This section describes the features and operating instructions of the OGL. Please read the instructions carefully before mounting and using the device, and always practice proper firearm safety.

Components

- OGL
- Carrying Pouch
- Operator's Manual
- Product Registration / Warranty Card
- Multi-Tool
- Remote Cable Switch
- Pattern Generators
- CR123 Battery

OGL

Carrying Pouch

Operators Manual

Product Registration

Multi-Tool

Pattern Generators

Remote Cable Switch

CR123 Battery

FIGURE 3.1

Function Indicator

- The Function Indicator is located between the “OFF” and Visible “AL” positions of the Mode Selection Switch.
- Function Indicator illuminates during operation.
- Indicators are displayed in the following situations.
  1. Green LED is illuminated when a laser is in use.
  2. Red LED will flash when the Battery Capacity drops below ~10%
  3. Red LED will illuminate for 2 seconds whenever the Mode Selector is switched if there is an internal error.

TABLE 3.1 Indicator Status

Indicator	System Status
Steady Green	• Laser activated • Battery power good
Steady Green + Red (2 flashes every 4 seconds)	• Laser activated • Battery power low
Flashing Green	• Laser activated • Set to IR Aim Laser Pulse mode activated - Flashes according to the selected pulse rate • Battery power good
Flashing Green + Red (2 flashes every 4 seconds)	• Laser activated • Set to Aim Laser Pulse mode activated - Green flashes according to the selected pulse rate • Battery power low
Red (2 flashes every 4 seconds)	• Laser selected, not activated • Battery power low
Steady Red for 2 seconds whenever switching Modes	• Laser performance has been limited to factory default power levels. Contact EOTECH Customer Service for repair as soon as practical

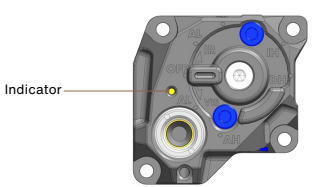


FIGURE 3.2 Function Indicator

Battery

One (1) CR123 Lithium battery powers the OGL.

WARNING

Do not use deteriorated or corroded batteries.

Inspect the battery for rips, bulging, tears, or cuts in the battery housing. If there is any exposed, internal content of the battery, it could potentially affect the operation of the OGL. When using rechargeable or non-lithium batteries, the operating time will vary, and the low battery indicator may be inaccurate or not function.

Before mounting or removing, make sure the weapon is clear and safe. Before mounting or removing, make sure that the OGL Mode Switch is in the OFF position.

CAUTION

Before installation, inspect the battery O-ring for damage, remove any debris, and ensure the O-ring is in the proper position. Remove the battery for long-term storage. Before a mission, it is good practice to replace the battery with a new one.

Battery

Replacing the Battery

1. Remove the Battery Cap by turning counterclockwise until it pulls away from the Battery Compartment.
2. After the Battery Cap is removed, slide the battery out and replace it with a new CR123 type battery. An orientation laser engraving can be found on the top of the housing ensuring correct battery orientation.
3. To reinstall the Battery Cap, align the cap with the Battery Compartment and carefully begin to thread the cap, turning it clockwise. Before you begin tightening the cap, make sure the threads are aligned correctly to avoid cross threading.
4. Verify correct battery installation immediately by rotating the Mode Switch to a use position and pressing the Fire Button. Look for the indicator to illuminate.

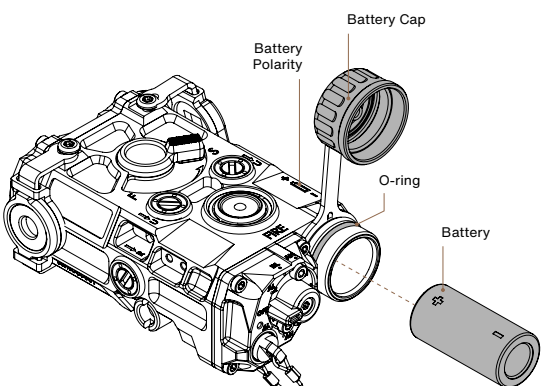


FIGURE 3.3 Battery Installation

Mounting the OGL

The OGL is equipped with mounting hardware to attach to a MIL-STD-1913 Picatinny type rail.

OGL can be mounted on the top or side of the weapon rail.

To achieve the best results and accuracy, the OGL must be mounted properly, and the rail needs to be parallel to the bore.

WARNING

As the owner and/or operator of the firearm, you must undertake the full-time responsibility of safe firearms handling for your own safety and the safety of those around you. Improper use of the OGL can result in injury or death. Safe firearms handling must always be practiced. Be sure the weapon is CLEAR AND SAFE before proceeding.

- Clear and make safe the host weapon system.
- Ensure the Mode Switch is in the OFF position.
- Close the protective covers (Aim Laser, Illuminator) and remove the battery.
- After mounting, ensure the OGL is securely attached to the rail. A loose or improperly seated OGL may cause problems with zero-point adjustment and maintenance.

CAUTION

DO NOT tighten the Blue Safety Screws with excessive force. Be aware of product damage (scratches, dents, etc.) when using tools.

Mounting the OGL

1. Turn the locking nut counterclockwise.
2. Slide the locking bar outward towards the locking nut to create space for the rail. With the OGL's front facing towards the direction of the muzzle, place it where you want to mount it.
3. The device contains a small cross bolt that rests in the groove of the Picatinny rail. Move the device to the position desired on the rail and allow the post to rest fully in the closest groove.
4. Push the device as far forward as possible and turn the locking nut clockwise using the included Multi-Tool or screwdriver. When using a torque wrench, we recommend the following range: 5±0.5 Nm (44±4.5 inch-lbs).

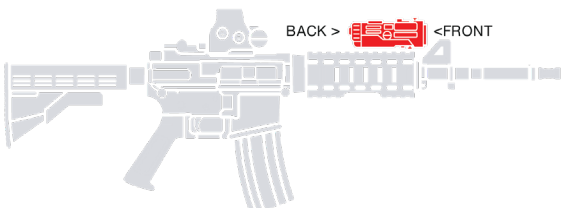


FIGURE 3.4 Mounted OGL

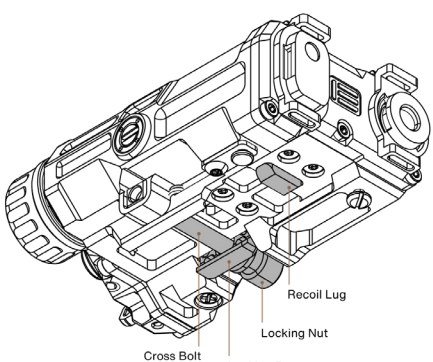


FIGURE 3.5 Rail Grabber Bracket

Mode Selection

Mode Selection Switch is located at the back of the OGL.

Visible Modes enable laser identification with the naked eye.

In IR Modes, lasers are only visible with the use of night vision devices.

The Blue Safety Screws can be attached and detached using the 2 mm hex wrench in the enclosed Multi-Tool.

WARNING

When storing or not using the OGL (e.g., mounting on a weapon, removing, replacing the battery, maintenance), be sure to leave the Mode Switch in the OFF position. Attach the Blue Safety Screws to the mode selection switch for force-on-force training and storage.

When not using the Blue Safety Screws for high power lock-out, store them in the Blue Safety Screw storage on the left side of the OGL.

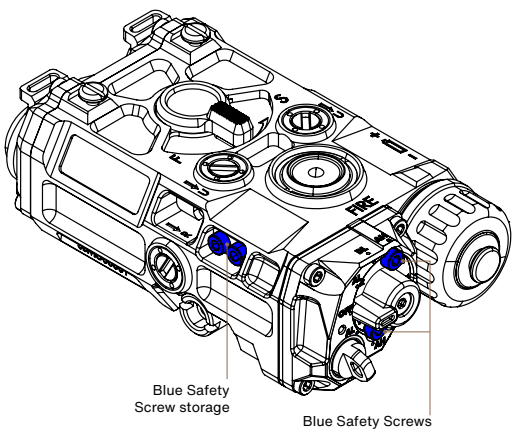


FIGURE 3.6 Blue Safety Screws

Mode Selection

OGL has a total of 8 modes.

Operate the Switch Knob to select the desired mode.

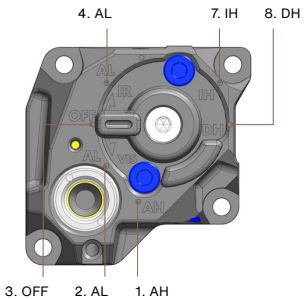


FIGURE 3.7 Modes of Operation (Rear View)

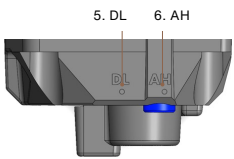


FIGURE 3.8 Modes of Operation (Top View)

TABLE 3.2 Mode Status

VISIBLE MODES	1. AH	Select visible Aim Laser High-Power
	2. AL	Select visible Aim Laser Low-Power
	3. OFF	OGL does not power any laser
IR MODES	4. AL	Select IR Aim Laser Low-Power
	5. DL	Select dual Low-Power (IR Aim Laser and IR Illuminator Laser)
	6. AH	Select IR Aim Laser High-Power
	7. IH	Select IR Illuminator Laser High-Power
	8. DH	Select dual High-Power (IR Aim Laser and IR Illuminator Laser)

Mode Selection

Users can check the location of 3. OFF, 1. AH (Visible Aim Laser high power), 6. AH (IR Aim Laser High-Power) and 8. DH (IR Aim Laser High-Power and IR Illuminator High-Power) modes by touch in a dark environment.

- OFF can be checked in the direction of the Switch Knob (9 o'clock direction based on OGL).
- There is a LUG to identify the location of 1. AH, 6. AH, and 8. DH

The Blue Safety Screws can be attached and detached using the 2mm hex wrench in the enclosed Multi-Tool.

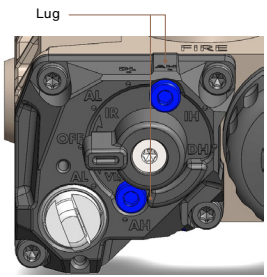


FIGURE 3.7 Mode Selection

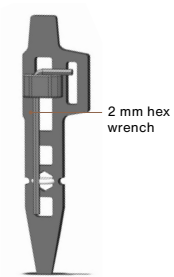


FIGURE 3.8 Multi-Tool

Half-Power Mode

When set to Half-Power Mode the output power of the lasers is reduced by ~50% compared to output on High. Half-Power Mode applies ONLY to the High-Power Modes.

WARNING

Half-Power Mode Will NOT make the High-Power setting eye safe and can not be used for force-on-force training. All settings requiring the removal of the Blue Safety Screws are not safe for force-on-force training and are considered an ocular hazard even at Half-Power, please see your organizations Laser Safety Officer (LSO) for additional guidance.

Programming Half-Power Mode

1. Set the Mode Switch to the OFF position.
2. Press and hold the Fire Button while rotating the Mode Switch to DH (IR Mode). The Half-Power Mode is maintained until reprogrammed to Full-Power Mode, even when the unit is powered off or the battery is replaced.
3. Release the Fire Button, the green indicator will flash 3 times to confirm successful programming.
4. Half-Power Mode is maintained until programming is reset by the user.
   - To reprogram for Full-Power follow steps 1 – 3.
   - The green indicator will flash 3 times to confirm successful programming.

TABLE 3.3 Half-Power Modes

VISIBLE MODES	AH
IR MODES	AH
	IH
	DH

Mode Activation (Fire Button)

Fire Button is located at the Top of the OGL and has three operating functions.

Momentary Operation

The selected mode operates only when the Fire Button is pressed. Release the button to deactivate the laser.

Continuous Operation

When the user double taps the Fire Button (two presses in rapid succession and release), the selected mode is fixed as continuous operation until the user presses the Fire Button again, or automatically shuts off after 5 minutes of operation.

If the mode is changed by manipulating the Mode Switch while the continuous operation is fixed, the continuous operation is maintained, and the shut off time is also reset.

Visible Laser Override Operation

When the Fire Button is tapped twice in rapid succession and held on the second tap, the Visible Aim Laser Low-Power (VIS-AL) mode operates with priority in all modes except OFF. It is deactivated by releasing the Fire Button.

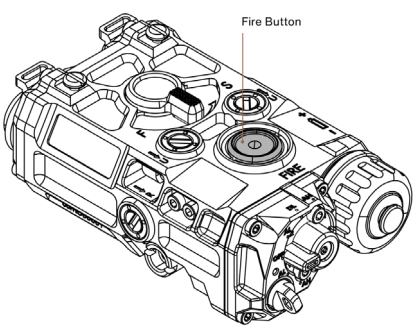


FIGURE 3.9 Fire Button

Mode Activation (Remote Switch)

A Remote Switch allows the user to activate the laser from a position of choice based on shooting style and OGL positioning.

The receptacle for the Remote Switch is located at the bottom of the Mode Switch.

The receptacle uses a Crane standard connector.

WARNING

When installing or removing the Remote Switch, set the Mode Selector switch to OFF.

- When not using the Remote Switch, insert the Jack Plug to prevent foreign substances from entering the receptacle.
- When disconnecting the Remote Switch, pull from the plug, not the wire, to prevent damage to the Remote Switch cable.

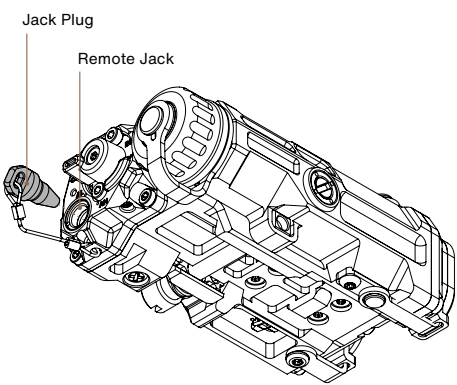


FIGURE 3.10 Jack Plug

Mode Activation (Remote Switch)

Connecting the Remote Switch

1. To use the Remote Switch, remove the Jack Plug at the bottom of the Mode Switch.
2. Insert the plug of the Remote Switch into the Jack and press firmly until fully seated.
3. Attach the Remote Switch to the weapon rail using the included Multi-Tool T10 Wrench. (Tighten rail grabber bolts to 5 inch-lbs)
4. Organize the cable so that it is not caught by hands, equipment, or external factors.

Using the Remote Switch

The Fire Button on the Remote Cable Switch performs the same operation as the Fire Button on the OGL housing (Momentary Operation, Continuous Operation, Overriding Operation).

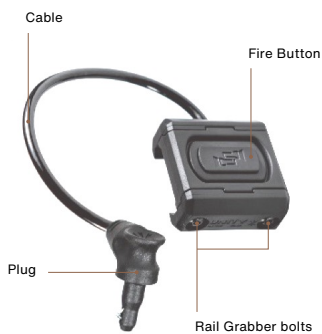


FIGURE 3.11 Remote Switch

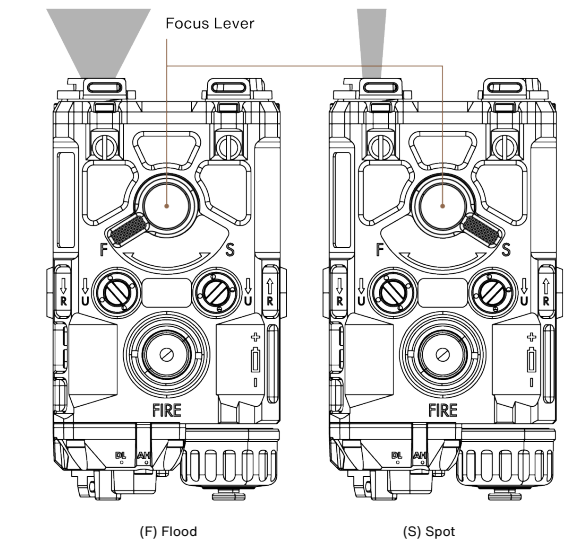
IR Illuminator

The exit port of the IR Illuminator is located on the front left of the OGL. For Mode Selection of the IR Illuminator, see Table 3.2 Mode Status.

Beam Divergence Adjustment

Adjust the IR Illuminator beam divergence to the desired angle by manipulating the Focus Lever located at the top of the OGL.

- The S (Spot) position is the setting with the narrowest beam divergence.
- The F (Flood) position is the setting with the widest beam divergence.



(F) Flood (S) Spot

FIGURE 3.12 Beam Divergence

IR Aim Laser

IR Aim Laser Pulse Rate

The IR Aim Laser operates as either a Continuous Wave (CW) or Pulse. The default setting is CW. The pulse rate can be selected from 2, 4, or 8 pulses per second.

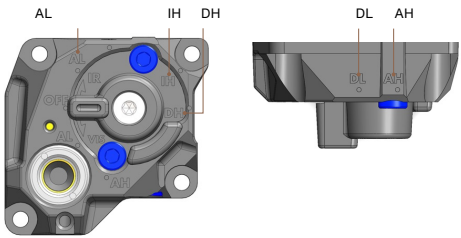


FIGURE 3.13 Mode Indicator

TABLE 3.4 Pulse Rates

Pulse Rate	Position
CW	AL
2 times per second	DL
4 times per second	AH
8 times per second	IH

Follow the steps below to program the IR Aim Laser Pulse Rate.

1. Set the Mode Switch to the OFF position then press and hold the Fire Button.
2. While holding the Fire Button rotate the Mode Switch to the position correlating to the desired Pulse Rate based on Table 3.4 Pulse Rates.
3. The Green LED indicator flashes in a cycle corresponding to the Mode Switch position.
4. When you release the Fire Button, the program is completed, and the Green LED indicator flashes 3 times after 1 second.

The programmed IR Aim Laser Pulse Rate is maintained until a new setting is programmed, even when the unit is powered off or the battery is replaced.

Laser Protective Cover

Aim Laser Protective Cover

- Aim Laser Protective Cover is tethered in front of the Aim Laser exit ports.
- Aim Laser Protective Cover protects the lens from dust, scratches, foreign substances, or damage.
- The Aim Laser Protective Cover blocks the laser beam from being emitted when unintentionally activated.
- When operating the Aim Laser, flip the Aim Laser Protective Cover over the side of the OGL to keep it open.

WARNING

When the OGL is not in use (storage, battery replacement, mounting on or removing from a weapon, maintenance, etc.), be sure to close the Aim Laser Protective Cover to prevent unintentional laser beam emission. If the Aim Laser Protective Cover is damaged, be sure to replace it with a new one. See page 47 for these instructions.

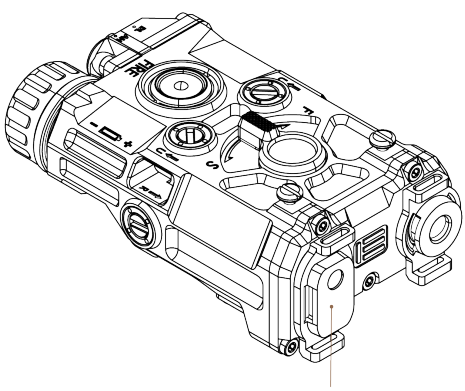


FIGURE 3.14 Aim Laser Protective Cover

Laser Protective Cover

Pattern Generators

- Pattern Generators are included with the OGL and are used in conjunction with the IR Aim Laser to change the shape of the laser.
- Four patterns are provided and the pattern type is embossed on the cover for easy identification.
- Pattern Generators block the Visible Aim Laser from being emitted.
- To install a Pattern Generator, you must first remove the Aim Laser protective cover. See Page 47 for details.

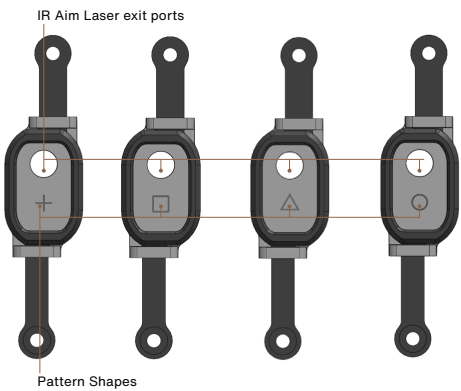


FIGURE 3.15 Pattern Generators

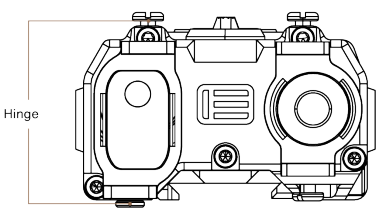


FIGURE 3.16 Hinges

Laser Protective Cover

Illuminator Protective Cover

- The Illuminator Protective Cover is in front of the IR Illuminator exit ports.
- The Illuminator Protective Cover protects the lens from dust, scratches, foreign substances, or damage.
- The Illuminator Protective Cover includes a diffuser that spreads the IR Illuminator beam to illuminate a wide area and is most effective when used in conjunction with the IR Illuminator beam in Flood setting.
- When not using the diffuser function, flip the Illuminator Protective Cover to the side of the OGL to keep the port open.

WARNING

When the OGL is not in use (storage, battery replacement, mounting on or removing from a weapon, maintenance, etc.), be sure to close the Illuminator Protective Cover to prevent unintentional laser beam emission. If the Illuminator Protective cover is damaged, be sure to replace it with a new one. See page 47 for these instructions.

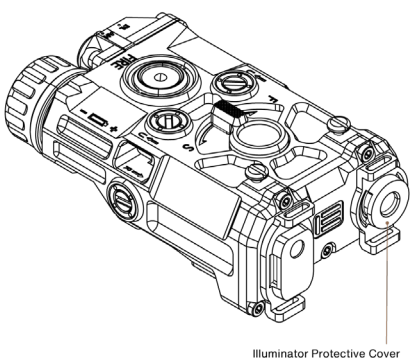


FIGURE 3.17 Illuminator Protective Cover

Windage and Elevation

- The OGL features positive click mechanisms for elevation and windage adjustments.
- These adjustment mechanisms are grooved with a slotted screw head and require the use of the OGL Multi-Tool, screwdriver, or spent brass to turn.
- The OGL elevation and windage adjustments are factory collimated with the bore of the rifle parallel to the mounting rail. The device should be close to mechanical zero when mounted on a properly installed rail.
- Be sure to check that the mount and device are securely mounted after initial firing.

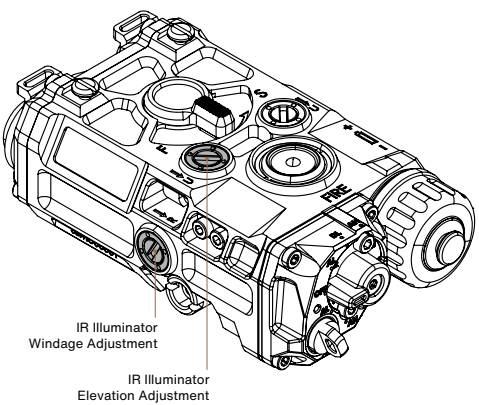


FIGURE 3.18 IR Illuminator Windage and Elevation

Windage and Elevation

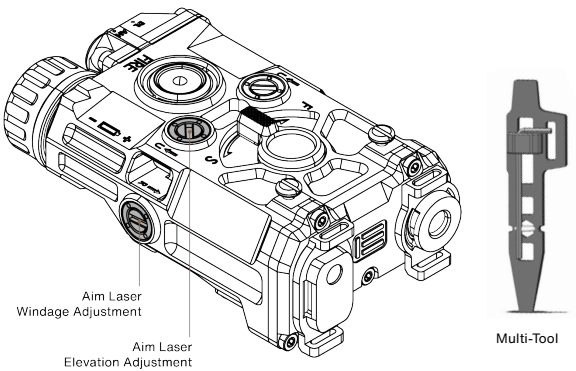


FIGURE 3.19 Aim Laser Windage and Elevation

Windage and Elevation (Aim Lasers Adjustment)

Aim Lasers Adjustment Top Mounted

Depending on where the OGL is mounted on the weapon (top, left, or right), the adjustment direction of the Aim Laser's beam will be different.

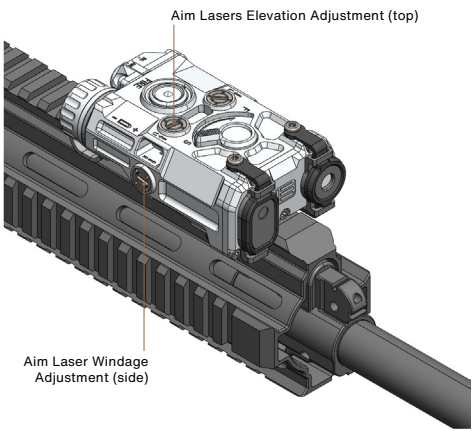


FIGURE 3.20 Aim Laser Adjusters (top mounted)

TABLE 3.5 Shot Group Movement for Aim Laser (top mounted)

Adjustment	Rotation	Shot Group Movement
Elevation Adjustment (top)	CW CCW	Up Down
Windage Adjustment (side)	CW CCW	Right Left

Windage and Elevation (Aim Lasers Adjustment)

Aim Lasers Adjustment Left Side Mounted

Depending on where the OGL is mounted on the weapon (top, left, or right), the adjustment direction of the Aim Laser's beam will be different.

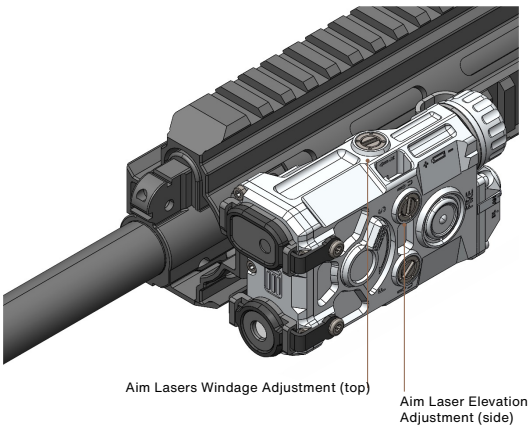


FIGURE 3.21 Aim Laser Adjusters (left side mounted)

TABLE 3.6 Shot Group Movement for Aim Laser (left side mounted)

Adjustment	Rotation	Shot Group Movement
Windage Adjustment (top)	CW CCW	Up Down
Elevation Adjustment (side)	CW CCW	Left Right

Windage and Elevation (Aim Lasers Adjustment)

Aim Lasers Adjustment Right Side Mounted

Depending on where the OGL is mounted on the weapon (top, left, or right), the adjustment direction of the Aim Laser's beam will be different.

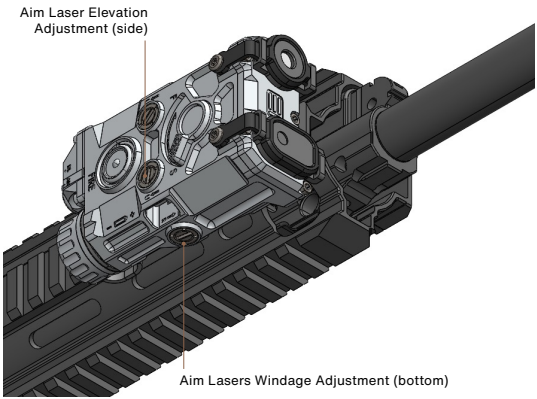


FIGURE 3.22 Aim Laser Adjusters (right side mounted)

TABLE 3.7 Shot Group Movement for Aim Laser (right side mounted)

Adjustment	Rotation	Shot Group Movement
Windage Adjustment (top)	CW CCW	Down Up
Elevation Adjustment (side)	CW CCW	Right Left

Windage and Elevation (IR Illuminator Adjustment)

IR Illuminator Adjustment Top Mounted

Depending on where the OGL is mounted on the weapon (top, left, or right), the adjustment direction of the IR Illuminator's beam will be different.

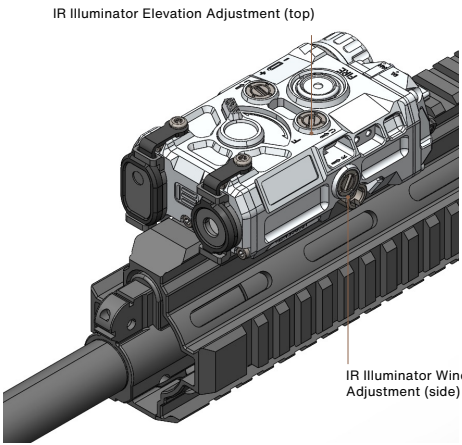


FIGURE 3.23 IR Illuminator Adjusters (top mounted)

TABLE 3.8 Shot Group Movement for IR Illuminator (top mounted)

Adjustment	Rotation	IR Illuminator Beam Movement
Elevation Adjustment (top)	CW CCW	Down Up
Windage Adjustment (side)	CW CCW	Right Left

Windage and Elevation (IR Illuminator Adjustment)

IR Illuminator Adjustment Left Side Mounted

Depending on where the OGL is mounted on the weapon (top, left, or right), the adjustment direction of the IR Illuminator's beam will be different.

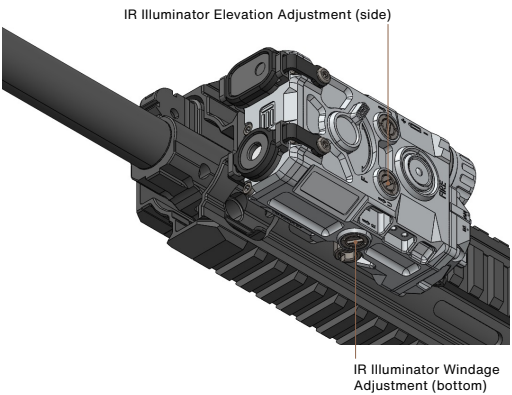


FIGURE 3.24 IR Illuminator Adjusters (left side mounted)

TABLE 3.9 Shot Group Movement for IR Illuminator (left side mounted)

Adjustment	Rotation	IR Illuminator Beam Movement
Windage Adjustment (top)	CW CCW	Up Down
Elevation Adjustment (side)	CW CCW	Right Left

Windage and Elevation (IR Illuminator Adjustment)

IR Illuminator Adjustment Right Side Mounted

Depending on where the OGL is mounted on the weapon (top, left, or right), the adjustment direction of the IR Illuminator's beam will be different.

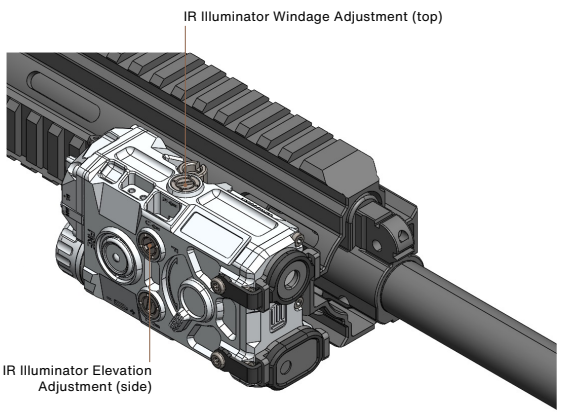


FIGURE 3.25 IR Illuminator Adjusters (right side mounted)

TABLE 3.10 Shot Group Movement for IR Illuminator (right side mounted)

Adjustment	Rotation	IR Illuminator Beam Movement
Windage Adjustment (top)	CW CCW	Down Up
Elevation Adjustment (side)	CW CCW	Left Right

Boresighting Procedures

Boresighting the OGL saves time and ammunition at the range. You can quickly adjust the Aim Laser to a neutral position so that the weapon's barrel and the Aim Laser beam are nearly parallel.

1. Boresighting of the Aim Laser can be accomplished in daylight with the use of the Visible Aim Laser or with a night vision device using the IR Aim Laser.
2. Using the Low Power setting select the appropriate Aim Laser with the Mode Selector.
3. Using the weapon's zeroed optic or sights, aim at a 25 meter zeroing target.
4. While aiming at the target, double tap the Fire Button to turn the laser on, and adjust the Aim Laser to co-witness with the weapon's sight. A partner assist may be helpful or necessary.
5. Tap the Fire Button to turn off the laser and return the Mode Selector to OFF.
6. Your OGL is now properly boresighted and ready for live-fire zero confirmation.

CAUTION

If the resistance increases during adjustments, it indicates that the adjustment range has reached its limit. DO NOT turn the adjustments any farther as serious damage may occur to the device.

Zeroing Procedures

For both Aim Laser's elevation and windage, each click will change the device's point of aim by approximately 0.2 MRAD.

TABLE 3.11 Point of Aim Metrics

1 Click	0.2 MRAD
25M	0.5 cm (.20")
50M	1 cm (.39")
100M	2 cm (.79")

Adjustments for zeroing move both the IR and Visible Lasers simultaneously.

A night vision device is required to observe the IR Aim Laser and IR Illuminator.

In direct sunlight, the Visible Aim Laser may be difficult to detect at some distances and target backgrounds.

CAUTION

If the resistance increases during adjustments, it indicates that the adjustment range has reached its limit. DO NOT turn the adjustments any farther as serious damage may occur to the device.

Zeroing Procedures

Zeroing the Aim Lasers

1. Position the OGL's Mode Switch to (VIS-AL) Visible Aim Laser Low-Power or (IR-AL) IR Aim Laser Low-Power position.
2. Double-tap the OGL's Fire Button to select Continuous Mode.
3. Using the same ammunition that you plan to shoot or legally hunt with, fire a 3-shot group at your preferred zero distance.
4. Keeping the gun barrel steady on your aiming target, adjust your Windage and elevation so that the Aim Laser beam aligns with the approximate center of the 3-shot group.
5. Fire another 3-shot group to see if it now groups on the center of the bullseye.
6. Repeat this process as necessary to achieve an accurate zero.

Zeroing the IR Illuminator

1. With the Aim Laser beams now zeroed, set the Mode Switch to the (IR-DL) Dual Low-Power position.
2. Dial the Windage and Elevation adjustments of the Illuminator to position the IR Aim Laser beam in the center of the IR Illuminator beam, or to a preferred offset.
3. Change the Mode Switch to the OFF position.

Offset Method

The data below provides dimensions for the OGL to be used to acquire the zero point by the offset method. This allows the user to understand where the lasers are pointing at distances other than where zeroed.

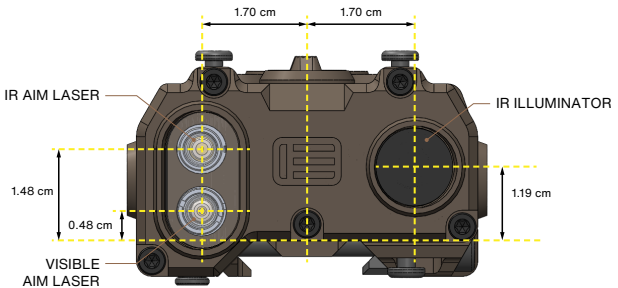


FIGURE 3.26 Physical Offsets

Cleaning Instructions

CAUTION

NEVER DISASSEMBLE THE OGL'S OPTICAL ASSEMBLY!

Disassembly will void the warranty and damage the device.

Laser Ports and Laser Cover

- The Laser Ports and Laser cover are coated with anti-reflection material. When cleaning the glass surfaces, first blow away any dirt and dust.
- Fingerprints and lubricants can be wiped off with lens tissue or a soft cotton cloth, moistened with lens cleaning fluid, or glass cleaner sold in any camera store. Always dampen the glass surfaces prior to cleaning.

CAUTION

To avoid damaging the lenses, never clean the glass surface with a dry cloth. It must be moistened with cleaning fluid, glass cleaner, or an EOTECH Lens Pen **eotechinc.com/gear/cleaning-supplies**.

OGL Housing

- No maintenance is needed on the device's surface, except to occasionally wipe off with a damp, soft cloth.
- Use only a water-based cleaner such as glass cleaner, ammonia, or soap and water.
- Never use any solvent-type cleaner such as alcohol or acetone to clean the device's surface.
- Do not use gun cleaner to clean or lubricate the OGL.

Cleaning Instructions

Battery Compartment and Battery Cap

- Inspect the Battery Compartment and Battery Cap for dirt, dust, and corrosion.
- Check the O-ring for dirt and dust and remove using a clean cloth or cotton swab.

Remote Switch Receptacle

- Inspect the Remote Jack for dirt, dust, and corrosion.
- Check the O-ring for dirt and dust and remove using a clean cloth or cotton swab.

Operator Level Maintenance

The operator is limited to replacing only a few external parts. Refer to Table 4.1 List of Parts for replaceable parts.

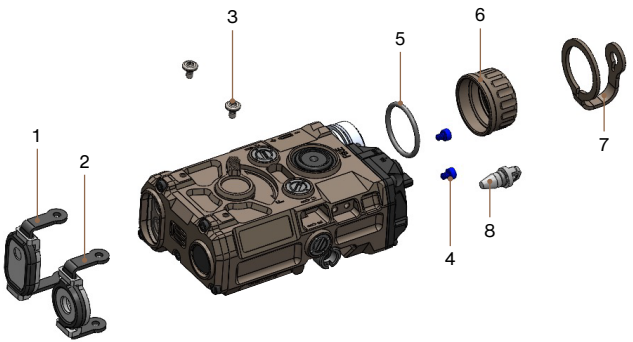


FIGURE 4.1 OGL Assembly

TABLE 4.1 List of Parts

Item No.	Part Number	Description	Qty
1	LD-0103A-S24	Aim Laser Protective Cover	1
2	LD-0103A-S25	IR Illuminator Protective Cover	1
3	LD-0103A-154	Hinge, Protective Cover	3
4	LD-0103A-160	Blue Safety Screw	2
5	LD-0103A-58	O-ring, Battery Compartment	1
6	LD-0103A-S35-G / T	Battery Cap, Gray / Tan	1
7	LD-0103A-60	Battery Cap Lanyard	1
8	LD-0103A-S26	Jack Plug	1

Operator Level Maintenance

Replacing the Aim Laser / IR Illuminator Protective Covers

It is not necessary to remove the screws, the covers are designed to be carefully stretched over the screw heads.

1. Remove the Aim Laser / IR Illuminator Protective Cover from the Hinge.
2. Insert the Aim Laser / IR Illuminator Protective Cover to be replaced in the same position.
3. When replacing, pay attention to the up and down direction of the Protective Cover.

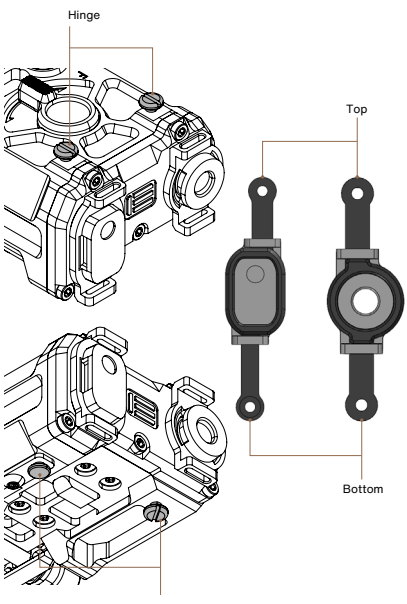


FIGURE 4.2 OGL Assembly

Operator Level Maintenance

Replacing the Hinge, Protective Cover

1. Remove the Aim Laser / IR Illuminator Protective Cover from the Hinge.
2. Remove the Hinge Screw using the included Multi-Tool T10 Torx Wrench from the OGL housing.
3. Attach the cover to be replaced in the same position. The recommended install torque is 0.4±0.5 Nm (3.5±0.4 Inch lbs).
4. Insert the Aim Laser / IR Illuminator Protective Cover in the same position.

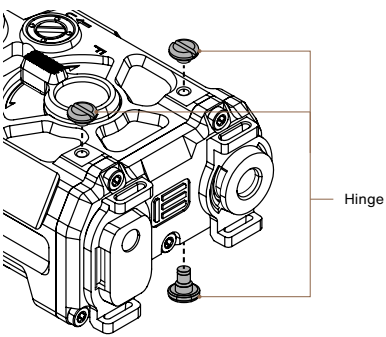


FIGURE 4.3 Hinge Attachment Points

Operator Level Maintenance

Replacing the Blue Safety Screw

1. Remove the Blue Safety Screw using the using the included Multi-Tool 2mm hex wrench from the OGL housing.
2. Attach the Blue Safety Screw to be replaced in the same position using the included Multi-Tool 2mm hex wrench.

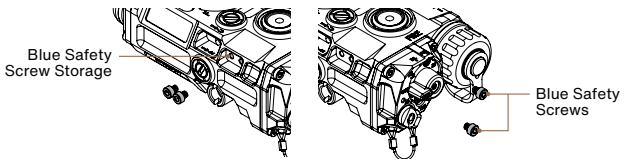


FIGURE 4.4 Blue Safety Screws

Replacing the Jack Plug

1. Remove the Jack Plug's lanyard from the OGL Housing.
2. After inserting the lanyard of the Jack Plug to be replaced into the same position, fix the sleeve using a tool (contact crimper).
3. Put the Jack Plug back into the Remote Jack.

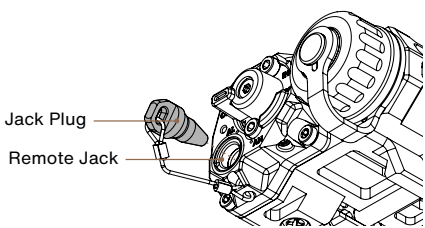


FIGURE 4.5 Jack Plug

Operator Level Maintenance

Replacing the Battery Compartment / O-ring

1. Remove the Battery Cap by turning counterclockwise until it pulls away from the Battery Compartment.
2. After the Battery Cap is removed, use your fingers to pull the O-ring out of the O-ring groove.
3. Clean the O-ring groove of dust and debris with a cotton swab dipped in Isopropyl Alcohol.
4. Hold the O-ring to be replaced with your fingers, stretch it, and insert it into the O-ring groove.

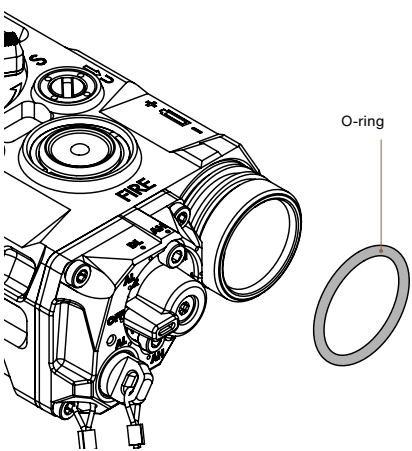


FIGURE 4.6 O-ring Placement

Operator Level Maintenance

Replacing the Battery Cap / Battery Cap Lanyard

1. Remove the Battery Cap by turning counterclockwise until it pulls away from the Battery Compartment
2. Position finger and thumb where the Lanyard Strap and Lanyard Ring meet. Gently pull to widen the Lanyard Ring and remove it from the battery housing.
3. To install, reverse step 2. Anchor the tip of the Lanyard Ring around the battery housing and gently pull to widen the ring and slide back into position.
4. Reinstall the Battery Cap.

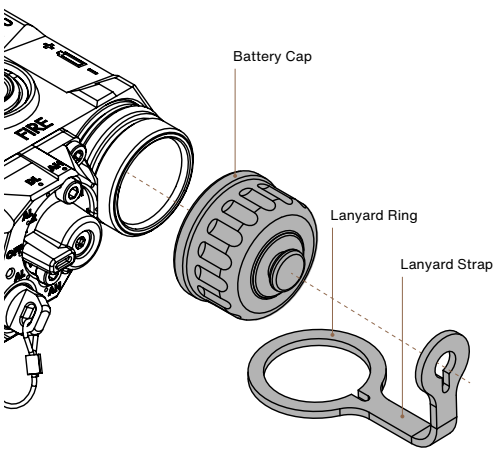


FIGURE 4.7 Battery Cap Placement

Troubleshooting

Measures the operator can take in the event of a named failure:

TABLE 4.2 Trouble Shooting Procedures

Malfunction	Probable Cause	Corrective Action
Laser will not power up or Laser appears weak	Mode Switch is OFF.	Change the Mode
	Battery is inserted improperly.	Ensure the battery is inserted properly. The positive (+) end should be positioned on the inside of the Battery Compartment.
	Battery power is low.	Replace the battery with a new, unused battery that contains a full charge.
	Battery contact points / debris or corrosion.	Clean the contacts.
OGL does not retain zero	Locking Bar not properly secured to weapon rail.	Verify Locking Bar is properly secured to weapon rail.
	Broken Cross Bolt/ Locking Bar/ Missing Locking Nut.	Turn the device in for maintenance.
Red LED illuminates for 2 seconds after switching from OFF to any Mode	Internal system issue causing device to default to factory power levels.	Contact EOTECH Customer Service for service as soon as practical.

Service and Repair

Contact EOTECH's Customer Service Department
eotechinc.com/help-center.

Be sure to leave a name, contact number, return shipping address, and failure description in the email or on a voicemail. This will allow EOTECH Customer Service to generate a Return Authorization Number (RA#) to include with the device(s).

If required, fill out a DD Form 1149 to include with the device(s) you will return. Include a reference to the RA# and a signature line for EOTECH's Service Department to sign indicating the receipt of materials. The signed copy will be mailed, faxed, or emailed back to you upon receipt of the device(s) for the purposes of accountability.

If the manufacturing date is more than five years old, or the damage is not covered under warranty a fee will be assessed for repair to include the cost of both parts and labor. A purchase order or credit card will be required to process the repair. Please contact EOTECH for an estimate.

Please send the device postage prepaid. Please include your name, address, telephone number, and a written description of the problem you are encountering, and also include the RA #. Whenever possible, ship the device in its original box.

NOTE

Do not ship the device(s) without a return authorization number - this will severely delay the turnaround time on repair or replacement.

- Do not ship the device with the battery, installed or in the package.
- Install Blue Safety Screws into the Mode Selector switch.
- Ensure the protective covers are installed and covering the lasers.

Replacement Items

To obtain replacement parts that are authorized to be field-installed for your OGL, please visit our web page support link at **eotechinc.com/gear/replacement-parts**

Contact Information

Customer Service / Repair

888-368-4656
eotechinc.com/help-center

RA# Request Web Address

eotechinc.com/help-center

Shipping Address

EOTECH Inc.
46900 Port Street
Plymouth, MI 48170 USA

SCAN FOR PRODUCT REGISTRATION

SCAN FOR WARRANTY INFORMATION

Thank you for purchasing an EOTECH OGL

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