

Model TMF-1 Dot Sight

USER'S MANUAL



D.I. OPTICAL

CHAPTER I

INTRODUCTION

The Reflex Sight is a rugged precision Red Dot Sight developed for military and law enforcement. TMF-1 is designed for the “both eyes open” method of sighting, which greatly enhances situational awareness and target acquisition speed. The red dot follows the movement of the user’s eye while remaining fixed on the target, no need for centering or iron sighting. Moreover, the Sight allows unlimited eye-relief and is compatible with every generation of night vision devices. The sight is provided with digital push button switches.

SPECIFICATION

System	Reflex, Collimator System
Magnification	No Magnification (1X)
Eye Relief	Unlimited
Red Dot Size	2MOA*
Field of View (FOV)	23.3m @ 100m
Objective Lens	30mm
Optical Coating	Anti-Reflex Coating All Surfaces. Multi-layer Coating for Reflection of Red Light
Battery	Alkaline or Lithium V1.5AA 1EA
Battery Life	25,000 hours at Mid Brightness (Level 3)
Dot Brightness Settings	14steps = 7steps (DL&TWL) / 7steps (NVD**)
Housing Material	Extruded High Strength Aluminum
Surface Finish	Hard Anodized
Mounting Solution	Screw-In Mount for MIL STD 1913 Picatinny Rail
Click Adjustment	20mm @ 100m (1Click)
Length/Width/Height	129 x 59 x 81 mm
Weight	345 g (with mount, battery)
Temperature Range	-40°C ~ +71°C
Water resistance	Submersible to 1m

* **MOA (Minute of Angle): 1MOA-> 1inch at 100yards (28mm at 100m)**

** **NVD: Night Vision Device**

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS



[Figure A]

- | | |
|-----------------------------------------|--------------------------------------|
| 1. TMF-1 Body | 2. Screw-In Mount |
| 3. Cap for Elevation adjustment | 4. Cap for Windage adjustment |
| 5. Windage/Elevation – Cap Strap | 6. Battery Cap |
| 7. Battery Cap Strap | 8. Lens cover (Object Lens) |
| 9. Lens Cover (Ocular Lens) | 10. Battery (AA size) |
| 11. Zeroing Key | 12. User's Manual |
| 13. Lens Cloth | |

CHAPTER II

ASSEMBLY AND PREPARATION FOR USE

WARNING: Ensure the weapon is unloaded and the safety selector is at the “safe” position before attempting to install, remove or perform maintenance on the sight.

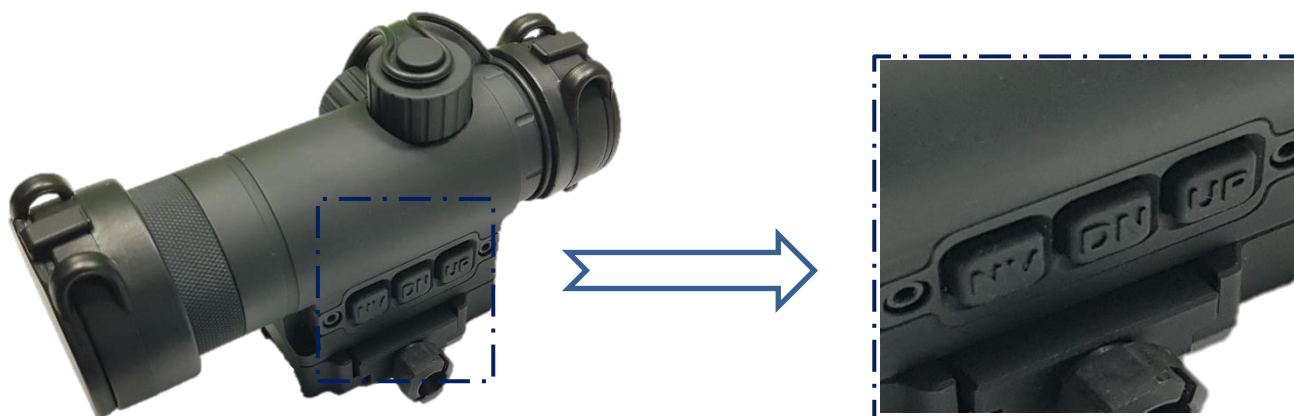
1. Battery Installation

- TMF - 1 Collimator Sight is powered by an AA battery.
- Remove the battery cap (Figure A - ⑥) by turning it counter clockwise and then insert an AA battery with anode (+) end toward cap.

Caution while replacing battery (not necessary with the new sight)

- Before installing the battery cap, you should ensure the O-ring is present and not damaged.
- Failure to do so, it could result in water leakage into the battery compartment.
- Install the battery cap by turning clockwise until snug (hand tightening only). Using a tool could damage this sight. Verify that red dot is present by pushing the brightness switch.

2. Power On & Off / NVG Mode / Day Time Mode



[Figure B]

a) Power On /Off: Pushing either "UP" or "DN" button will turn on the power.
Pushing both of "UP/DN" buttons simultaneously will turn the sight off.

b) Brightness Adjustment:

- "DN" Switch => gradually dimming
- "UP" Switch => gradually brightening
- There are seven levels of reticle brightness.

✘ When you initially turn on the power, the brightness level will be on 7th level in daylight mode. You will have to adjust the appropriate brightness at your preference.

c) Day Time / NVG Mode Shifting

By pushing "NV" button, you can shift the mode from day to night and night to day.

3. Mounting the TMF-1 Collimator Dot Sight

- Standard Mounting Interface MIL-STD 1913 Rail

TMF-1 is equipped with a removable mounting hardware to attach onto the MIL-STD 1913 rail.

Cross Bolt
For Rail Slot



[Figure C]



[Figure D]



[Figure E]

- Select the desired location on MIL-STD 1913 rail. Please remember the Optic position from the rail after zero and put the optic back onto the exact same location for minimizing the amount of zeroing error to as low as 1 MOA. Weapon system should be re-zeroed each time when the optic has been removed and placed back onto the firearm.
- Before mounting on the MIL-STD 1913 rail slot, rotate counter clockwise the mounting knob to loosen the clamp. **[Figure D]**
- Place the optic on a desired slot of MIL-STD 1913 rail. And then rotate clockwise to tighten it completely. **[Figure E]**

4. Lens Covers

TMF-1 package includes ocular and objective lens covers protecting the lenses from the debris and potential scratches. Be sure to keep the lenses covered when the optic is not in operation.

OPERATING PROCEDURE

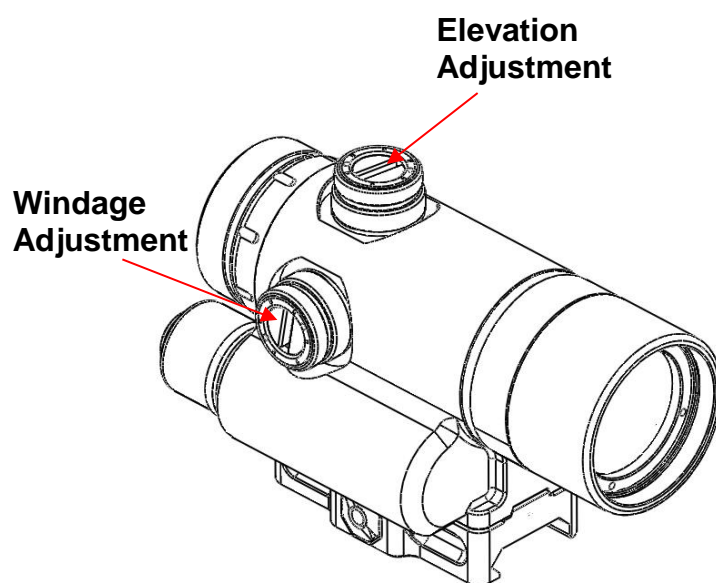
1. Windage and Elevation Adjustments

TMF-1 features a click mechanism for elevation and windage adjustments. Each click moves 20 mm at 100 meter of bullet's point of impact.

- How to Adjust?

Zeroing key provided with the sight, screw-driver, or a coin can be used to rotate the Windage and Elevation adjustment dials.

1. Remove windage adjustment cap and / or the elevation adjustment cap (**See Figure F**)
2. Recognize left/right, up/down on the dial and use zeroing key to turn the dial. Direction on the dial means the movement of point of impact



[Figure F]

- **Example**

At 50 meters, it takes **TWO** clicks to move the point of impact 20 mm.

2. ZEROING

The sight is manufactured and delivered with the centered dot. This allows the users to zero the optic to a firearm with minimal movement.

a) Pushing the brightness UP/DN buttons (Figure B) until you see the sufficient intensity level of reticle brightness to contrast against the target.

b) Remove windage adjustment cap and / or the elevation adjustment cap

NOTE: Each click of adjustment => 20 mm @ 100 meter

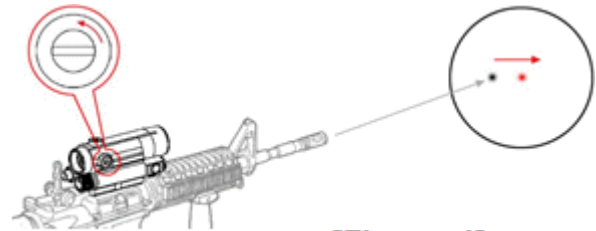
c) Confirm zeroing by firing at least three rounds at the zeroing target at the distance of 25m. Move the point of impact as following directions by rotating the Windage / Elevation knobs.

* To move the point of impact to the left ► Turn windage knob clockwise. (Figure H)

* To move the point of impact to the right ► Turn windage knob counter clockwise (Figure I)



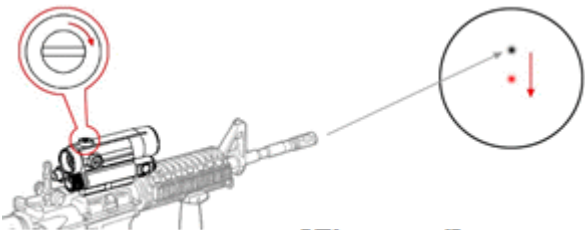
[Figure H]



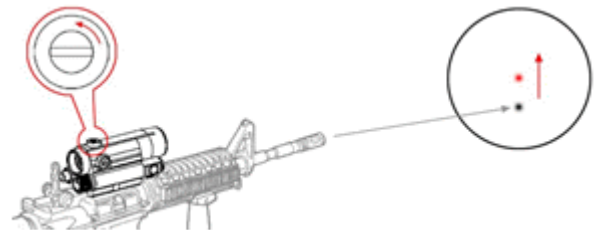
[Figure I]

* To move the point of impact down ► Turn the elevation dial clockwise (Figure J)

* To move the point of impact up ► Turn the elevation dial counter clockwise (Figure K)



[Figure J]



[Figure K]

d) After the initial Zeroing, fire another THREE rounds (at least) to verify the movement of the impact points on the zeroing target and to confirm zeroing. Repeat step C until you move the point of impact to the point of aim you desire.

e) Zeroing is achieved if point of impact is grouped at where you desire.

WARNING: DO NOT force to turn Windage / Elevation dials when it reaches to the limit of rotation. You may have to check if the sight is mounted stably and firmly.

CHAPTER III

TROUBLE SHOOTING

Please check following procedures for product trouble shooting

1. Cannot see the red dot on the objective lens

- A. Please check if the power is NOT in OFF position or if the sight is in Night Vision mode. Push control button and check if red dot is visible.
- B. Check if the battery is in place.
- C. Check if the battery is placed in the right direction (+ / - electrode). Also check if the O-ring of battery cap is properly closed. Clean contact surfaces and reinstall the battery.
- D. Please make sure the battery is not out dated. Replace with the new battery (Lithium Preferred) if it is out dated.

2. Cannot zero the sight

- A. Check if the sight and the mount are properly and firmly mounted on the firearm platform.
- B. Use the Loctite to firmly attach sight onto the mount.

3. Zeroing dials reached to their maximum limits but still cannot zero the sight

- A. Check if the sight is mounted on the rail stably and evenly without tilt.
- B. Check if the rail is aligned with the barrel correctly.

4. Impact points on the target are moving around (Bad grouping)

- A. Check if the mounting rail is not damaged.
- B. Check if there is any obstruction between the rail and the mount.
- C. Check if the sight is mounted on the rail stably and firmly.

CHAPTER IV

MAINTENANCE

TMF-1 Collimator Dot Sight needs periodic maintenance to ensure long lasting use of the sight. The optical system and the lenses are coated with anti-reflective material. When cleaning the lens surfaces, wipe it off with a soft cotton cloth or a lens cleaning brush. Following the instruction below will help you to enjoy the sight longer and better.

- A. Keep the lens covers closed as much as you can when the sight is not in use
- B. Please avoid direct sun light reflection on the lens when the sight is not in use.
- C. Warehouse Storage: Remove battery and keep the lens surfaces completely dry (if wet) before closing the lens covers.
- D. The lenses should never be cleaned with fingers but with lens cleaning cloth only.
- E. Please make sure the optic is free from any debris or foreign materials.

STORAGE

Before storing the sight, please clean the debris out of the sight and keep the lens covers closed to protect the lens.

LUBRICATION

TMF-1 Collimator Dot Sight parts are lubricated from the factory. DO NOT apply additional lubricants to any part of the sight. It may cause damage on the coating and anodized housing.

MANUFACTURER'S ONE (1) YEAR LIMITED WARRANTY

These Limited Warranty obligations are limited to the terms set forth below: D I Optical Co., Ltd. warrants this hardware product against defects in materials and workmanship for a period of ONE (1) YEAR from the date of original retail purchase. If a defect exists, at its option Dong In will repair the product at no charge, using new replacement parts; exchange the product with a product that is new. Any defects arise after the one (1) years warranty period, they could be after-serviced with prime cost of repair charge for the products used within the period of five (5) years. This Limited Warranty does not apply to damage caused by accident, abuse, misuse, misapplication, or improper handling, installation or maintenance of the product by unauthorized persons. If service should be necessary, your sight should be well packed in a sturdy outside shipping carton to prevent damage in transit. Any return made under this warranty must be accompanied with your name and address and explanation of the defect in the furnished form below. The warranty paper shall not be reissued. Therefore keep it valued.

■ A/S REQUEST ■

MODEL		MANUFACTURED NUMBER.	
PURCHASED DATE	D M Y	DEFECT DATE	D M Y
ADDRESS (RETURNEE)			
NAME		TEL.	
DEFECTS			



D.I. OPTICAL