

NORTHROP GRUMMAN*Electronic Systems*

*Target Location
During Day or Night
Operations*



Photo courtesy of U.S. Army, Sergeant Tim Fischer

The compact and lightweight Mark VII Eyesafe Laser Target Locator was developed for day/night use by artillery forward observers, forward air controllers, and long range reconnaissance patrols.

The Mark VII incorporates advanced laser technology and a unique switchable day/night vision optical design, plus an imbedded digital magnetic compass, to provide range, azimuth, and elevation digital data output for accurate target location determination.

With the Mark VII RS-232 output connected to a PLGR (Precision Light Weight GPS Receiver), accurate target coordinates are automatically computed for battlefield use.

In addition to serial data output in the PLGR protocol, output in the FED (Forward Entry Device) data format and a NMEA protocol are also available.

All three interface protocols are selectable in the Mark VII unit and growth has been provided for implementation of additional interface protocols. The Mark VII laser resonator utilizes KTP OPO technology to produce the 1.57μ output that is Class I eyesafe, making it usable under all operational and training conditions.

Features:

- **Weight 4.2 lbs (1.9kg)**
- **Ranges in Excess of 10 km**
- **Minimum Range of 20 meters**
- **Integrated Image Intensifier**
- **Day and Night Switchable**
- **Range, Azimuth, and Elevation Provided for Target Location**
- **Class I Eyesafe Laser**
- **RS-232 Data Interface**

MARK VII Handheld Eysafe Laser Target Locator



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General

- Size: 3.24 x 7.40 x 6.34 inches (8.2 x 18.8 x 16.1 centimeters)
- Weight: 4.2 lbs (1.91 kg) with battery
- Operating Temperature: -20° C (-4° F) to +50° C (+122° F)
- Storage Temperature: -30° C (-22° F) to +77° C (+170.6° F)

Eyesafe Laser Transmitter

- Type: Nd:YAG with KTP OPO Converter
- Wavelength: 1.57 microns
- Pulse Rate: 6 per minute
- Minimum Range: 20 meters
- Maximum Range: 19,995 meters
- Range Increments: 3 meters
- Accuracy: +/- 3 meters
- Range Computation: Selectable First/Last Pulse Logic with Multiple Target Indicator

Night Sighting Optics

- Type: Image Intensifier (Gen II, III or IV)
- Magnification: 4 x 50
- Field of View: 8.3 degrees (147 mils)
- Reticle: Projected, Open Center Crosshair with center dot

Day Sighting Optics

- Magnification: 7.3 x 18
- Field of View: 4.5 degrees (80 mils)
- Reticle: Projected, Open Center Crosshair with center dot

Electronic Compass

- Type: Magneto-resistive
- Accuracy: 9 mil (2 sigma)

Electronic Inclinometer

- Type: Gravity Sensor
- Accuracy: 4 mil (2 sigma)

Data Display

- Type: Projected in Eyepiece (Range, Azimuth, Elevation, Plus other Operational Data)

Data Interface

- Type: RS-232 Port to Precision Lightweight Global Position System Receiver (PLGR), also FED & NMEA

Prime Power

- Battery Type: Disposable 3.9V Lithium
- Vehicle Power
- Night Range Operations per Battery: > 1000



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