MS Instruments

LARGE AREA OPTICAL TARGET (LAOT) TYPE 340

Intelligent and Versatile Virtual Target

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The MSI Optical Target Type 546 target provides developers, testers, and manufacturers with a highly accurate and cost-effective method of checking the performance of weapons and ammunition by measuring the coordinates of shots fired under test.

MSI's Optical Targets have been designed for the rapid testing of a wide range of calibre weapons, both new and repaired. The LAOT is a high precision instrument that provides a virtual target plane with a large detection area, which is ideal for weapons with higher dispersion patterns, with the Optical Target Type 546 being preferable for smaller dispersions.

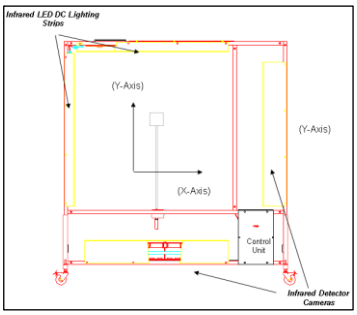
This precision electronic target replaces traditional methods of measurement, and removes all the associated problems, thus saving time, reducing error, and increasing safety.

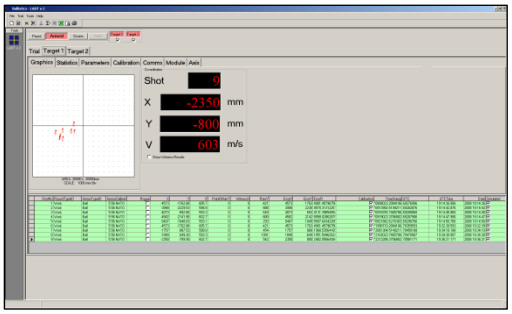
The MSI Large Area Optical Target is an easy piece of equipment with which to work, and makes weapons testing faster and better.

SAVING TIME, REDUCING ERROR, AND INCREASING SAFETY

Simple and Versatile Equipment:

- Accommodates a variety of ammunition
- Designed primarily for indoor use
- Provides a range of possible calculations



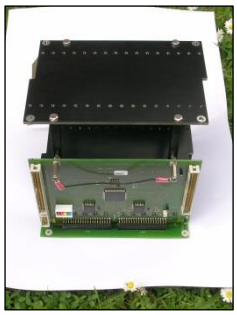


Accurate and Easy Data Recording:

- Instant graphical representation of data
- Results can be stored and graphically printed
- Comprehensive, user-friendly software

Time and Effort Saving:

- Simple calibration
- Requires little maintenance
- Fast Installation



HARDWARE

- Camera consists of a linear metal housing of a length a few centimetres more than the detection area; the width and height is approximately 320mm and 250mm.
- A number of detector modules are located side by side and form a continuous line of photodetectors in the camera.
- Line of detectors is set up to view a linear light source, which is located on the opposite side of the target plane.
- Sensing area of each detector is restricted to an accurately defined fan. The fans overlap so that a projectile will be detected by a number of adjacent sensors.
- Circuit associated with each sensor is designed to detect only fast moving objects (rapid changes in light level) so that slow variations in the light level e.g. voltage variations or insect movement, will have no effect on the operation of the target.
- Separate connector provides power to the camera from the Control Unit.
- Light source s provide by a solid-state light source comprising a number of LEDs.
- Control unit has the X and Y cameras connected to it by two pairs of cables; one cable supplies the power to the camera, and the other is a 26-way cable, which provides the link for the digital signals controlling each camera. The control unit is an intelligent device that allows configuration of various target parameters e.g. lockout time and shot calculation algorithm.
- X-Y coordinates are obtained from camera signals, which can then be transmitted to the remote computer.
- Mounting either on a framework or to the walls, floor and ceiling in the case of larger units.

SOFTWARE

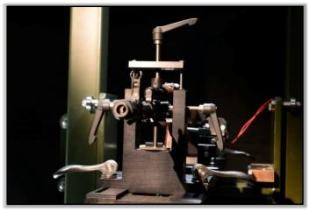
- Target interfaces with a modern PC with our software, Ballistics DB, installed.
- Ballistics DB offers configuration of set-up parameters, and a wide range of diagnostic testing. The software also displays the shots on screen during firing and may provide printouts and store data to disk. In addition, a series of data analyses may be performed on all shot data.
- Communication to the computer is via a serial link, which may be an RS232, RS485, or MSI serial interface (compatible with other targets and the MSI Line Receiver Interface.).

SPECIFICATION

POWER/COMMS	
Power	230 V ±10% (50/60Hz, 200VA per m, 5m x 5m approx. 2000VA)
HIT SENSORING	
Projectile Velocity	10 – 2 000 ms^{-1}
Hit Frequency	Up to 10 000 rpm
Active Target Area	From 1m x 1m to 5m x 5m as standard
Calibre Type	4mm – 150mm

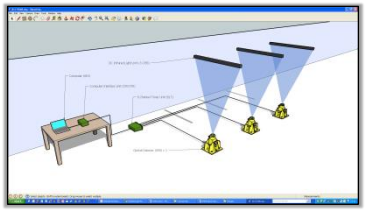
Measurement Accuracy	±2.5mm
ENVIRONMENT	
Operating Temperature	0°C - +50°C [*+32 °F - +122 °F*]
Humidity	95% non-condensing

USED WITH



Universal Weapon Rest Type 681-600

Universal Receiver Type 681-700



Projectile Velocity Measurement System (PVMS)

MS Instruments Ltd.
Unit 4, Ravensquay Business Centre, Cray Avenue
Orpington, Kent, BR5 4BQ, United Kingdom
Tel: +44 (0)1689 883 020
Fax: +44 (0)1689 871 392
contact@msinstruments.co.uk
www.msinstruments.co.uk

ISO 9001 SCS cert. No. 980010
340-largeareaopticaltarget - Jul-17