RUGGED SCORING STATION TOR

The TOR scoring station is a computerized scoring station for collection, calculation and presentation of real time firing results from the universal 12-sector Miss Distance Indicators. The rugged TOR scoring station is easily portable in a case resistant to harsh environments which makes it suitable for field training and deployment.

The TOR scoring station presents the scoring results, i.e. the miss distance and sector of each round graphically in three zones and up to 12 sectors. Salvo centre, mean miss distance and number of projectiles of each salvo are all part of the presentation. The firing results are also presented in a tabulated form. The complete scoring results can also be printed in full detail on a printer. All salvos are organized and stored on the local hard disc, available for later analysis with possibility to recalculate parameters for a more accurate result. As an option TOR can handle scoring data from up to four targets simultaneously.

The TOR Windows 10 based software gives the user an excellent tool for quick and easy operation out in the field. The rugged TOR scoring station case consists of a TDU-1 or TDU-2, a rugged computer with the TOR software, antenna, cables, and a battery pack with indication of battery level. For the station to be powered through 12V, 24V or EU standard 230V there will be optional converters included.

The scoring results are compensated for target speed, distance, and altitude as well as firing situation angles are taken into account when scoring results are being calculated. Ballistics and calibration data for the most common calibers are included.

When the Scoring Stations is equipped with up-link capability this functionality is **directly** available from the scoring software.

As an option the TOR scoring station can be connected to multi muzzle microphones to easier locate the shooter in cases there are more than one. Furthermore, it is upgradeable to incorporate GPS data in the calculations to minimize the manual input data to the TOR SW.

TECHNICAL DATA

GENERAL

Operating temperature	-20 °C to + 50°C
Storage temperature	-30 °C to + 70°C
Water and dust	IP64 or better
Uplink capability • turn on/off MDI • sensitivity setting • setting of downlink channel • lamp control	Optional
Simultaneous scoring	TDU-1: 1 target TDU-2: 2, 3 or 4 targets
Case size	524x429x206mm
Battery time	Computer: 19h TDU: approx. 8h (in temp. 5-20 deg C)
Battery recharge time	<12h
Printing	Printer and/or receipt printer optional

COMPUTER

Computer	Panasonic Toughbook or similar
GPS	Yes
Operation System	Windows 10
Processor	Core i5 7300U or similar
Memory	8 GB RAM / 256 GB SSD
Standards	MIL-STD-810G, IEC 60529 (Panasonic Toughbook)

TELEMETRY DATA UNIT (TDU)

Connection to computer	USB (Ethernet or Bluetooth available upon request)
Power supply	100/240 VAC or 12 – 32 VDC
Antenna connector	TNC – type, female
Number of receivers	TDU-1: 1 TDU-2: 2 - 4
Weight	TDU-1: 1.7 kg TDU-2: 2.1 kg
Muzzle microphone input	Optional
Standards	Designed for MIL-STD-810G, IEC 60529

TELEMETRY

Frequency (down-link)	330 - 473 MHz (one channel per target, max. 4)
Frequency (up-link, optional)	330 - 473 MHz (one per system)
Modulation type	4-level FSK
Transmission Power	1 W
Baud rate	9600 baud
Sensitivity	-116 dBm
Standards	EN 300 113-2 EN 301 489-1, -5 EN 60950-1 FCC CFR47 PART 90

SOFTWARE

Present scoring results: • miss distance and sector of each round • salvo centre • mean distance • number of rounds
Can handle Ground to Air and Air to Air shooting situations
Can handle different firing angles, target speed, altitude and shooting distances
Recalculation of data with updated information of shooting situation
Creating, storing and retrieving of standard shooting scenarios
Ballistic and calibration data for most common calibers included
Efficient data storage and organisation. Possibility to import and export data for offline storage and analysis
Results can be printed as listings or graphically
Option to have the sleeve as graphical representation of the target in the TOR software
Handling of uplink functionality (optional)
Handling of muzzle microphone (optional)
Upgradeable to incorporate GPS data in calculation of firing situation

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