MDS Acoustic Miss Distance Indicator (AMDI) System

Key features

- Sensor electronics available to fit all target types.
- Portable base station allows simple installation in vehicle, vessel or aircraft.
- High resolution miss distance and 12 sector scoring
- Rugged system with waterproof sensors
- Simultaneous Dual Target Capability

Operational benefits:

- **For Training,**
  - Users get immediate feedback of firing performance
  - Objective measurement of weapon system operator skills.
- **For Weapon Assessment**
  - High resolution measurement of weapon accuracy.

Description

The Meggitt Defence Systems Acoustic Miss Distance Indicator (AMDI) is a multi-role scoring system for gunnery training and weapons assessment for surface and airborne dynamic targets.

AMDI may be fitted to tow targets, remotely piloted vehicles or drones, sleeve targets, marine (boat or platform) and ground targets. When shots or projectiles are fired at a target, AMDI transmits the direction and distance of the near misses to the base station which displays the results of the shooting in real time. AMDI is in service with land, naval and air forces around the world for training and/or weapon system assessment.

Principle of operation

AMDI works by detecting the conical shock wave generated by all supersonic projectiles. The shock wave of a passing projectile or supersonic missile is measured by an array of sensors and a processor unit mounted on the target. The data from these is then telemetered to the base station, in a high integrity digital form, where it is automatically analysed and the location of the projectile is displayed.

Target equipment

The AMDI system uses rugged, solid state, high frequency sensors which are resistant to water immersion. A digital electronics and telemetry system is incorporated for the highest performance and stability. The target processor unit is small, light and consumes little electrical power. The target equipment may be provided in a variety of configurations to allow user installation into a variety of target types.

Base station

The base station, which is capable of simultaneous dual target operation, is a compact all-in-one receiving and data presentation unit which is easy to use with menus and prompts to aid the operator. It calculates the miss distances and sectors using data from the target. Target configuration and projectile calibre information data (entered by the user) is saved on an internal data storage device. Results are printed graphically on the ground station display together with running totals, status and session information of scoring results. The optional, blue-tooth printer provides almost instantaneous hard copy evidence of scoring results for shooter performance analysis by a Director of Practice. Scoring data may also be transferred to a personal computer for a more detailed analysis.

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MDS AMDI
Acoustic Miss Distance Indicator System

SPECIFICATION

- Detection method: Ultrasound, supersonic projectile/missiles only
- Telemetry link: > 1 watt FSK digital data link; 400 - 470 MHz
- Base station power: 110/240 V ac
- Base station display: 1024 x 768 LCD
- Base station printer: Optional, battery powered (rechargeable) thermal printer with blue-tooth connectivity
- Base station size: 361 x 289 x 165mm; Weight 9.7Kg
- Calibre/Diameter: 7.62 mm upwards
- Rate of fire: Greater than 6,000 rounds per minute
- Scoring resolution: 30° sectors, miss distance in metres and tenths
- Scoring accuracy: +/- 1/2 sector*
  +/- 1/2 zone*

Typical Detection Range:

<table>
<thead>
<tr>
<th>CALIBRE (mm unless indicated)</th>
<th>MAXIMUM DETECTION RANGE* (Metres)</th>
<th>ON SCREEN HIT BOUNDARY (Metres)</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.62</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>12.7 (1/2&quot;, 0.5&quot;)</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td>20</td>
<td>16</td>
<td>4</td>
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<tr>
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<td>8</td>
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<tr>
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<td>57</td>
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<tr>
<td>5&quot; (127mm)</td>
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<tr>
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<td>8</td>
</tr>
<tr>
<td>RBS 70</td>
<td>49</td>
<td>8</td>
</tr>
</tbody>
</table>

* These figures represent the maximum that may be achieved and are dependent upon correct set-up data being installed by the user at the commencement of each trial/mission.

Type 543 Towed MDI

Type 544 MDI Sensor Pack

This data may be changed without notice and is not binding.

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