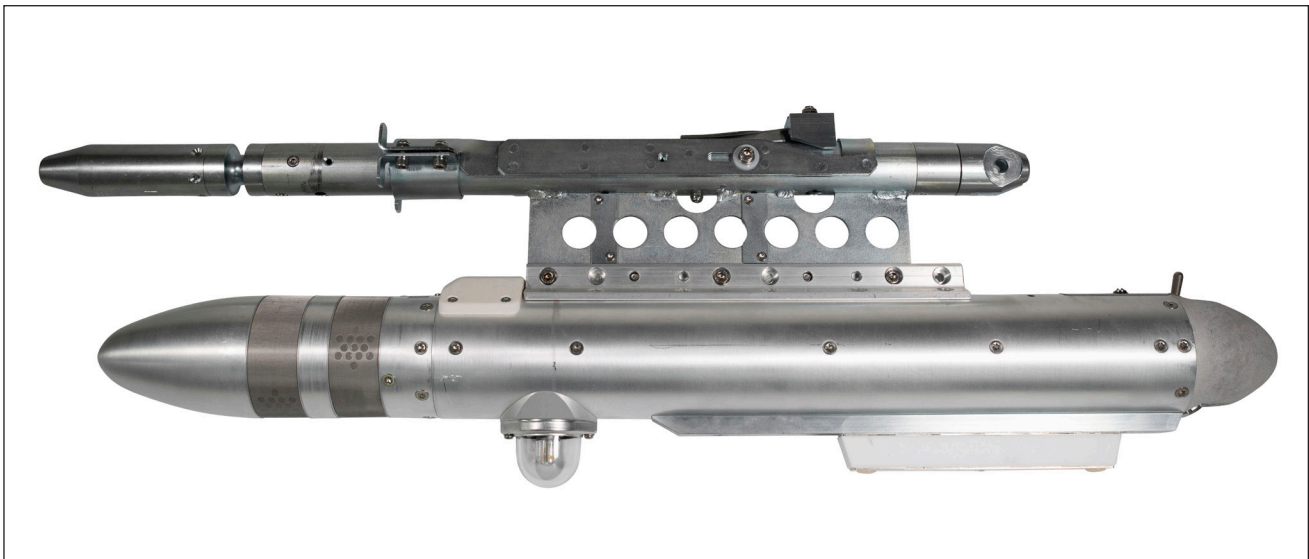


MISS DISTANCE INDICATOR AS-131/12U/UL/TB/LT/GPS



The AS-131/12U/UL/TB/LT/GPS is an universal 12-sector miss distance indicator (MDI) equipped with an uplink command receiver, GPS receiver and with a LED lamp equivalent to 20W halogen. The MDI is intended to be used with sleeve or banner targets.

The MDI is designed for simultaneous indication of miss distance and the angular position in 12 sectors of a passing supersonic projectile.

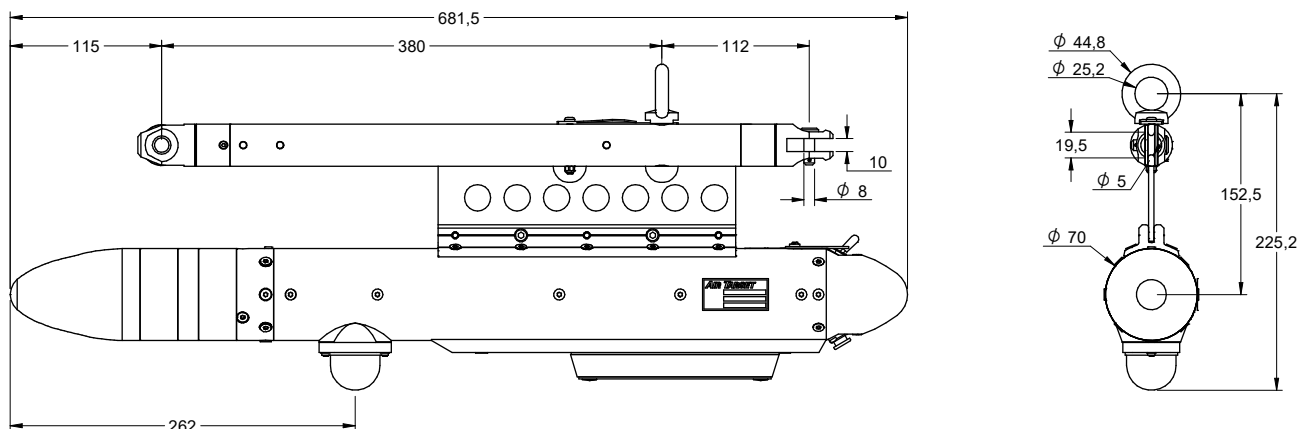
The MDI is a universal type, i.e. it handles all target courses relative the firing gun or missile, i.e. all types of attacking and passing courses. The GPS coordinates, i.e. the MDI position, is linked into the MDI telemetry link and is transmitted every second to the scoring station. The GPS data coming from the MDI is extracted from the scoring station. The MDI position, altitude, speed and gun position coordinate are used in the scoring station when calculating the real* miss distance. *(mathematical solution for projectile trajectory relative to target trajectory).

The uplink command receiver is used for changing the MDI identity, down link frequency, MDI measuring sensitivity and to switch ON and OFF the lamp. It is also possible to get the lamp to flash. The commands are transmitted from the uplink command unit UCU. The UCU is normally operated from ground. The possibility to communicate with the MDI is important in the multi target situation and when different calibers are used during the same mission.

The MDI consists of a microphone nose containing six pressure sensors, and a cylindrical body containing the electronics, i.e transmitter, uplink receiver, LED lamp, and a rechargeable NIMH accumulator.

The MDI can be equipped with a range of tow line connections in order to facilitate connection to most target towing systems.

- 12U = 12 sector universal
- UL = Uplink receiver
- TB = Towbar
- LT = Light
- GPS = Global Positioning System



MEASURING PRINCIPLES

The miss distance indicator AS-131 detects acoustically the shock wave generated by the passing supersonic projectile. The miss distance is determined by the amplitude of the shock wave while the angular position is determined from the hit order between the different pressure sensors in the MDI nose.

The miss distance and the angular position of the projectiles are measured in real time and the data is transmitted as raw data

signals via the special designed transmitter to the scoring station. Since raw data is used, all calculations are made in the scoring station.

A recalculation of the scoring result, with later more accurate parameters, can easily be made in the scoring station for further improved accuracy.

TECHNICAL DATA

GENERAL

Power supply	Rechargeable NIMH battery pack
Battery operation time	min. 4 h at +25°C
Supply voltage	+12 VDC
Operation temperature	-30°C to +55°C
Storage temperature	-40°C to +70°C
Weight	Approximately 5,6 kg incl. tow rod

TRANSCEIVER

Carrier frequency	Fixed frequency within 330-473 MHz
Channel separation	12.5 kHz
Radiated power	typ. 1.0 W
Link type	Half-Duplex
Data transfer rate	Radio 9600 bps
GPS	The GPS data is transmitted every second via the MDI transmitter to the Scoring Station
Optional	Encryption AES128

DATA

Scoring capacity	6000 rounds per minute, momentarily more
Scoring Resolution	12 sectors (1 sector = 30°)
Scoring calibers	5.56 mm to 5"+ and missiles
Distance accuracy	±1 m or max ±15 % of the actual miss distance, whichever is the greatest
Angular accuracy	±15°

UPLINK

Frequency	Fixed frequency within 330-473 MHz
Capability	<ul style="list-style-type: none"> • Turn on/off MDI • Sensitivity setting, 6 steps • Setting of downlink channel • Lamp control on/off