

MISS DISTANCE INDICATOR AS-131 / 12U



The AS-131/12U is an universal 12-sector miss distance indicator (MDI) intended to be used with sleeve/banner targets, or to be installed in the nose of a hard/stiff target.

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 MDI consists of a microphone nose containing six pressure sensors, and a cylindrical body containing the electronics, the transmitter, and a rechargeable NIMH accumulator.

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.

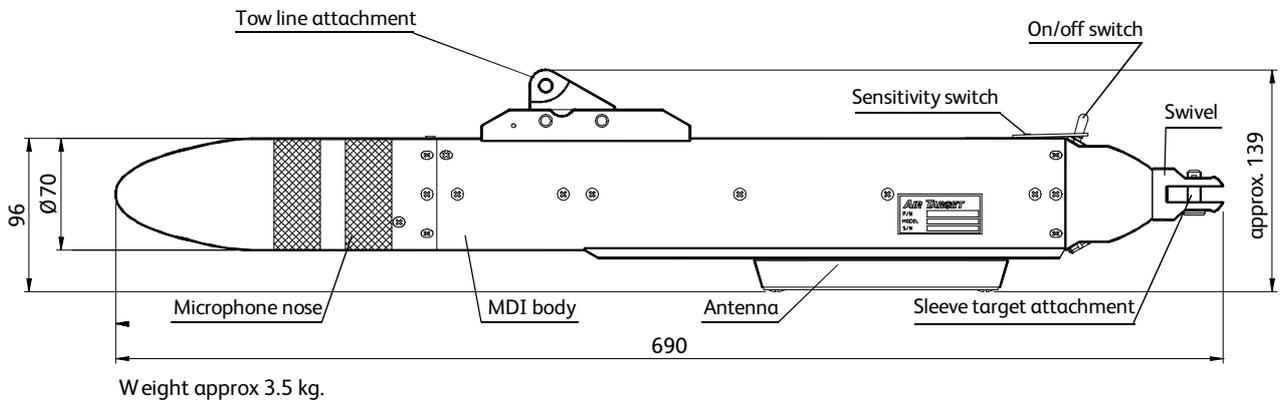
The miss distance and the angular position of the projectiles are measured in real time and

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



All dimensions in millimeters

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	Approx. 3.5 kg

DATA

Scoring capacity	6000 rounds per minute, momentarily more
Scoring calibers	5.56 mm to 5"+ and missiles
Distance accuracy	± 1 m or max $\pm 15\%$ (on the average) of the actual miss distance, whichever is the greatest
Angular accuracy	$\pm 15^\circ$

TRANSMITTER

Carrier frequency	Fixed frequency within 400-470 MHz
Channel separation	50 kHz
Radiated power	Min. 0,8 W
Carrier frequency deviation	2.5 kHz ± 0.5 kHz
Modulation	2-level FSK 4800 baud
CRC	Cyclic Redundancy Checksum, a method for ensuring data quality