

DATA SHEET

Vector Scoring System

Projectile tracking



01 Description

The Vector Scoring System (VSS), is a noncooperative missile-scoring radar that is optimized for use with the QF-16 full scale aerial targets.

Integration of the radar unit with any target vehicle is made via a customized installation kit that contains the required installation hardware (cables, antennas, and mounting hardware). The VSS target set, along with a compatible ground station, provides a complete vector score with missile attitude for all missile types, and includes a reconstruction of the missile trajectory throughout the entire scoring volume. Both color-graphical and standard-text displays are presented to the operator by either computer monitor or hardcopy.

VSS is particularly well adapted for installation into full scale aerial targets where long RF cables and severe EMI environments would normally present an issue for a radar scoring solution.

02 Key features and benefits

- Scoring range 30.5m (100 ft) maximum
- 3D trajectory and weapon attitude measurements
- Operating frequency 2433.5 MHz
- Closing velocity measurement range 200 to 6,000 ft/s
- L band telemetry
- Standard installation kits QF-16

03 Applications

- Projectile tracking for training and evaluation missions
- Full scale aerial targets

04 Contact

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05 Specifications

Scoring range	0 to 30.49m (0 to 100 ft)
Type	RF, non-cooperative, vector, 6 channel
Vector score accuracy (rms)	
0 to 7.62 m (0 to 25 ft)	0.76 m (2.5 ft)
7.62 to 30.49 m (25 to 100 ft)	10% of range
Attitude accuracy (rms)	
0 to 15.24 m (0 to 50 ft)	≤ 5°
15.24 to 30.48 m (50 to 100 ft)	≤ 10°
Scalar miss distance accuracy (rms)	
0 to 25 ft	± 2.5 feet
25 to 100 ft	10% of range
Scoring coverage	Spherical coverage provided via six separate antenna locations on target platform
Telemetry	
Power	5 watts
Frequency	S-band (2210.5 to 2290.5 Mhz)
Bandwidth	IRIG 106-93
Bit rate	2.5 Mb/s
Target formations	200-ft separation
2 targets	
Power requirements	22 - 32 V dc @ 5.0 A (max)
Mechanical (radar unit only)	
Weight	11.4 lbs
Dimensions (maximum)	(Excluding telemetry transmitter and encryption support package)
Length	9.7 inches
Width	7.3 inches
Height	5.1 inches