

AN/GSQ-228A Scoring Station



Features

- Editing features allow the operator to tailor the raw data from the sensor.
- Scoring data can be captured from the telemetry data stream or from prerecorded tape.
- Parameters include miss distance, time of the closest approach and closing velocity for scalar scores.
- Operates in conjunction with test range telemetry site equipment and target platform sensors to acquire scoring data.

Description

The AN/GSQ-228A operates in conjunction with the Meggitt Defense Systems, Inc. (MDSI) AN/DSQ-50A scalar scoring sensor to produce scalar scores. It also operates with other MDSI sensors such as the VDOPS vector scoring sensor to produce vector scores with weapon attitude information. It is the standard US Navy score processor and is deployed on all US Navy test and evaluation ranges.

The AN/GSQ-228A is designed for ease of use and flexibility in processing MDSI scalar and vector scoring data received from target platforms of all types. The AN/GSQ-228A operates in conjunction with test range telemetry site equipment and target based MDSI sensors to acquire scoring data in real-time from weapon intercepts. Intercept data is transmitted from the target platform, in PCM format, via a telemetry downlink to the AN/GSQ-228A where it is processed for event detection and recorded in real-time. IRIG data provided by the range is combined with the input data stream to provide time synchronization to other range instrumentation systems. The data is then processed by the AN/GSQ-228A to produce score results.

The AN/GSQ-228A operates in two modes. In the first mode, acquisition mode, the AN/GSQ-228A automatically records the sensor scoring data and identifies at what points in the data stream score events occurred. This permits the operator to quickly locate intercept events within the large amount of data that is often recorded during a field exercise. The system displays the number of projectiles that penetrated the sensor's scoring volume and the IRIG time at which they occurred. Scoring data can be captured directly from the telemetry data stream or from prerecorded tape if desired. In the second mode, score processing mode, the AN/GSQ-228A processes weapon/target intercept data selected by the operator to produce actual score parameters. These parameters include miss distance, time of closest approach, and closing velocity for scalar scores, as well as weapon attitude for vector scores. The system is equipped with editing features that allow the operator to produce optimized scores in the presence of various interference sources such as ground clutter, weapon detonation, and target generated Doppler noise.

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Specifications

SCORING

Scoring projectile type	Missiles and projectiles (> 76 mm)
Scoring range	0 to 75 ft (0 to 22.86 m)
Acquisition range	90 ft
Closing velocity range	200 to 8,000 ft/s
Miss Distance accuracy	± 1.5 ft for 0 to 5 ft scoring range (±0.46 m) ± 1.0 ft for >5 to 75 ft scoring range (±0.31 m)
Velocity accuracy	25 ft/s or 1% (rms) (7.62 m/s)
Telemetry bit rate	700 kb/s

ELECTRICAL

Input power	115 to 230 VAC
Power consumption	300 watts

ENVIRONMENTAL

Temperature:	
Operating	0 to +50°C (+32 to +122°F)
Non-operating	-40 to +60° C (-40 to +140°F)
Relative humidity:	
Operating	20 to 90% non-condensing
Non-operating	10 to 90% non-condensing

EMC	FCC Class A
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PHYSICAL

Weight	60 lbs (all assemblies)
Installation	Configured for 19-inch rack operation Consists of processor, keyboard, monitor, stereo monitor/speakers and printer Interface cables provided Telemetry receiver, pcm bit synchronizer, decryptor (optional), and tape recorder (optional) provided by range facility

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