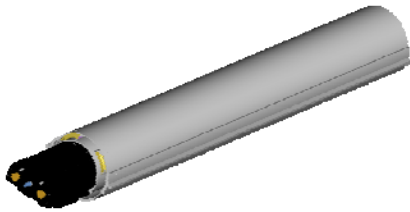


### AN/ASQ-233A Digital Magnetic Anomaly Detecting Set



DT-704A/ASQ-233  
Sensor



C-12687A/ASQ-233  
Control/Display

#### Overview

The AN/ASQ-233A Digital Magnetic Anomaly Detection (DMAD) Set is an advanced laser-pumped Helium magnetometer system designed to detect sub-surface magnetic anomalies caused by submarines. The AN/ASQ-233A is suitable for fixed wing or helicopter applications.

The DMAD system consists of two Weapon Replaceable Assemblies (WRAs) (Replaces 16 AN/ASQ-81 associated WRAs):

**Sensor** – Houses Multi-axial Scalar and Gradiometer Magnetometers with Electronics and Laser Subassemblies. The Sensor performs automated compensation of magnetic signals caused by aircraft maneuvers using compensation data prepared by the Control/Display.

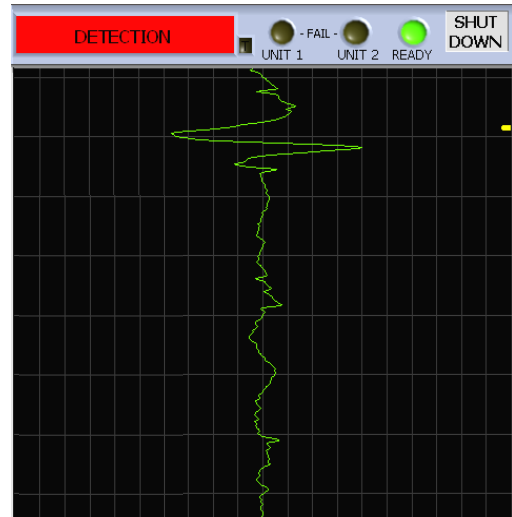
**Control/Display** – Controls the DMAD Modes and Sub-Functions. The Control/Display receives raw and compensated magnetometer data, processes it for detections of magnetic anomalies, and formats it for display, storage, and post-mission data extraction. This unit processes and displays multiple band-pass signals. This unit also processes the magnetometer data for display of Extremely Low Frequency signals.

#### Features

- High Sensitivity Laser Pumped Helium Sensor
- Proven High Reliability
- No Mechanical Servos
- Integrated Vector Magnetometer
- Integrated Accelerometer
- Automatic Aircraft Motion Magnetic Compensation
- Automatic Detection With Range & Confidence Estimate
- Detection Tone to Operator
- Digital Single, Multi-Band, Multi-scale Display
- Multiple Frequency Range Processing and Display
- Integrated Digital Data Recording, Playback, and Download
- Built-In-Test: Power-Up, Periodic, Continuous, & Operator Initiated

#### Magnetometer Variants

DMAD variants include compact form factors suitable for installation into Helicopters, UAVs, UUVs for sea-buried mine detection, underwater sensor arrays, and space craft for Earth and planetary magnetic field studies (Cassini Saturn Mission).



Sample Anomaly Detection

#### Characteristics

Dimensions	H	W	Depth	Diam.	Weight
Sensor	-	-	60"	7.125"	30-lbs.
Control/Display	9.75"	5.75"	8.75"	-	11.5-lbs.

#### Interfaces

**Sensor WRA:** Ethernet 10/100

#### Control/Display WRA:

Ethernet 10/100 & 10/100/1000, USB  
Optional Interfaces: ARINC-429, MIL-STD-1553

#### Input Power Requirements

Sensor 28 VDC, 35 Watts Max.  
Control/Display 28 VDC, 100 Watts Max.

#### Company Overview

Founded in 1982, Polatomic is a high technology company that develops and manufactures advanced magnetic sensors and systems for surveillance and measurement of magnetic fields on land, sea, and in space.

Polatomic's innovations in laser-pumped magnetometer technology has resulted in world leadership in magnetic systems for airborne Anti-Submarine Warfare, Buried Sea-Mine Detection, Undersea Surveillance, and Investigation of planetary magnetism.

Polatomic's customers include: Office of Naval Research, DARPA, NAVSEA, NAVAIR, NASA, Jet Propulsion Laboratories, and National Science Foundation.