G-882 Marine Magnetometer

The model G-882 cesium-vapor marine magnetometer provides the same high performance as our airborne instruments delivering high resolution results in all types of survey applications. The G-882 is a low cost, compact system designed for professional surveys in shallow or deep water.

The G-882 magnetometer’s digital output can be recorded with any serial data logger but its full potential is obtained when used with our MagLog Lite™ software to log, display and print GPS positioned measurement results. The price, performance, and reliability of the G–882 make it the best value of any marine magnetometer available today.

The G-882 is designed for operation from small vessels for shallow water surveys as well as for large survey vessels for deep tow applications (4,000 psi rating, telemetry over steel coax available to 10Km). Being small and lightweight (40 lbs net, no extra weights) it is easily deployed and operated by one person. Power may be supplied from a 24 to 30 VDC battery power or the included 110/220 VAC power supply. The standard G-882 tow cable includes a Vectran strength member and can be built to up to 700m (no telemetry required). The shipboard end of the tow cable is attached to an included junction box or optional on-board cable for quick and simple hookup to power. Output data can be recorded on any Windows 98, ME, NT, 2000 or XP computer equipped with RS-232 serial ports. Best of all, the rugged G-882 has been used successfully everywhere in the world for all types of applications.

The G-882 Cesium magnetometer provides the same operating sensitivity and sample rates as the larger deep tow model G-880. MagLogLite™ Logging Software is offered with each
magnetometer and allows recording and display of data and position with Automatic Anomaly Detection! Additional options include: MagMap2000 plotting and contouring software and post acquisition processing software MagPick™ (free from our website.)

Shown is a unique application for multiple mag G-882 array for UXO detection. Photos courtesy of Sky Research.

The G-882 system is particularly well suited for the detection and mapping of all sizes of ferrous objects. This includes anchors, chains, cables, pipelines, ballast stone and other scattered shipwreck debris, munitions of all sizes (UXO), aircraft, engines and any other object with magnetic expression. Objects as small as a 5 inch screwdriver are readily detected provided that the sensor is close to the seafloor and within practical detection range.

**Specifications**

- **Operating Principle:** Self-oscillating split-beam Cesium Vapor (non-radioactive)
- **Operating Range:** 20,000 to 100,000 nT
- **Operating Zones:** The earth's field vector should be at an angle greater than 6° from the sensor's equator and greater than 6° away from the sensor's long axis. Automatic hemisphere switching.
- **CM-221 Counter Sensitivity:** <0.004 nT/ pHz rms. Typically 0.02 nT P-P at a 0.1 second sample rate or 0.002 nT at 1 second sample rate. Up to 10 samples per second
- **Heading Error:** <1 nT over entire 360° spin and tumble
- **Absolute Accuracy:** <3 nT throughout range
- **Output:** RS-232 at 1,200 to 19,200 Baud

**Mechanical**

- **Sensor Fish:** Body 2.75 in. (7 cm) diameter, 4.5 ft (1.37 m) long with fin assembly (11 in. cross width), 40 lbs. (18 kg) Includes Sensor and Electronics and 1 main weight. Additional collar weights are 14lbs (6.4kg) each, total of 5 capable
- **Tow Cable:** Kevlar Reinforced multiconductor tow cable. Breaking strength 3,600 lbs, 0.48 in OD, 200 ft maximum. Weighs 17 lbs (7.7 kg) with terminations.
- **Operating Temperature:** -30°F to +122°F (-35°C to +50°C)
- **Storage Temperature:** -48°F to +158°F (-45°C to +70°C)
- **Altitude:** Up to 30,000 ft (9,000 m)
- **Water Tight:** O-Ring sealed for up to 9000 ft (2750 m) depth operation
- **Power:** 24 to 32 VDC, 1.0 amp at turn-on and 0.5 amp thereafter