



ARTEMISPRO-M (M-CODE GPS) MILITARY UNDERWATER NAVIGATION SYSTEM

ACCURATE, PORTABLE AND SECURE

Comprehensive handheld solution for military divers

Dangerous and complex underwater navigation objectives require precise positioning and secure anti-jamming capabilities for mission success. Collins ArtemisPRO-M (M-Code GPS) military underwater navigation system is specifically designed to perform in demanding environments, meeting the needs of the military diver community.

Collins, in collaboration with Blueprint Subsea, has developed the first military underwater navigation system with M-Code GPS under contract with the U.S. Department of Defense.

With proven diver-based dead reckoning sensors such as Diver Velocity Log, Attitude and Heading Reference System, and sonar, combined with dual modernized GPS receivers, ArtemisPRO-M provides PNT Assurance in challenging underwater environments. It provides increased mission effectiveness and safety through operation with the M-code signal.

KEY FEATURES

- Self-contained system
- Easy-to-use graphical interface
- Multibeam imaging sonar
- Geolocation and precise positioning capabilities
- Embedded M-Code GPS receivers
- Bottom tracking range to 200 meters
- Depth and temperature sensors
- Charting and navigation
- Acoustic data modem for diver-diver-surface messaging
- Video and still image capture
- Mission planning software to:
 - Preload mission data
 - Post mission analysis
- Interchangeable batteries

CAPABILITIES

- **Sonar imaging** - provides real time updates of the entire 130° field of view
- **Navigation & bottom tracking** - multiple GPS sensors for when the diver is at the surface and when the diver remains submerged
- **Mission planning & dive-log review** - create pre-dive mission planning files and post-dive data collection files
- **Swim guide** - status bar is always available, providing "heading to swim" directions
- **Messaging & positioning** - text communication made available through SeaTrac technology
- **Displays** - quickly change between several different display options

SPECIFICATIONS

Mechanical

Dimensions	365 mm long x 340 mm wide x 215 mm high
Weight	-10.6 kg in air, -0.25 kg max in water (sensor dependant)
Operating temp.	-10° C to 45° C
Operating depth	80 m sea water

Electrical

Screen	Tilted 7 in., 1024 x 600 pixel, 16-bit color LCD with adjustable back-light brightness
Data logging	Data logging to internal SSD 256 GB, 512 GB or 1 TB options available
Integrated sensors	Pressure, water temp, attitude/heading (pitch & roll, compass, rotational rate gyros) and battery voltage
User interface	10 x solid-state piezo button interface for menu navigation and parameter control
Communications	USB 2.0, 480 Mbps port for connection to a PC

Battery pack

Operating time	6-8 hours typical use from charged battery pack
Charging time	Approx. 4 hours from fully discharged state
Charger supply	90-264 VAC mains at 50-60 Hz

Sonar

Frequency	750 kHz/1.2 MHz dual-frequency multi-beam
Beam geometry	20° vertical, 130°/70° horizontal
Range settings	1 m up to 120 m/40 m (sonar frequency dependant)

YMCA GPS navigation

YMCA GPS receiver	24-channel Y, M, and C/A Code GPS L1 & L2 receiver M-Code security & performance with DAGR hot start
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Doppler Velocity Log (DVL)

Beam geometry	4 beams, 2.4° conical, Janus configuration
Frequency	500 KHz
Range	200 m bottom tracking
Velocity resolution	1 mm/second

Diver tracking & communication

Acoustic range	1 km radius horizontal, 1 km vertical (hemispherical)
USBL	Tracks diver from the surface*
Communications	Text messaging, broadband spread spectrum encoding, 24-32 kHz, 100 baud, Multi-tiered Acoustic Protocol Stack
Targets	15 unique beacon identifiers, broadcast-to-all capability, allows up to 14 targets to be tracked from a single X150 USBL beacon

*USBL receiver beacon ordered separately

Specifications subject to change without notice.



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