

DNC-250®

Diver navigation console



Ordering information

DNC-250®

T.99.03644

The DNC-250 Diver Navigation Platform is a small and rugged platform which allows a diver to navigate underwater autonomously like a surface based GPS receiver. Ideal for recreational, commercial or scientific diving, the DNC-250 weighs only 5.0kg (14lbs.) and is very easy to operate. Using five switches, the operator can access all functions of the operational firmware to depth of 30M (99ft). Designed for the harsh marine environment, the sealed housing provides protection for all internal components while rechargeable batteries allow the DNC-250 to be continuously operated for up to 8 hours.

Completely self-contained, the DNC-250 arrives at a navigation solution using internal sensors which supply geodetic position, depth, velocity and heading. The DNC-250 takes this sensor information, plots and updates the diver's position and displays it on a LCD display in real time.

Intuitive firmware and simple-to-read screens make using the DNC-250 effortless. Once activated, the internal GPS receiver immediately provides accurate geodetic positioning to the unit's processor. The diver then

recalls, from the DNC-250 menu, a dive plan created and uploaded from the DiveNav 2.0 Planning Software. This dive plan can include waypoint and routes to navigate to. Once underwater, bearing and distance to the selected waypoint is displayed on the DNC-250 easy-to-read screen along with diver's depth, dive time and other important navigation information. If position updates are needed, a retractable antenna is deployed.

All navigation position fixes, water column depth, and event marks are saved in the DNC-250 memory for later access and analysis for generating contour maps. Ideal for support scientific and environmental diving.

Finally underwater navigation with all the functionality of a GPS receiver for the diving community. UNDERWATER GPS!

Specifications

Navigation Sensors

Heading Sensor

- Accuracy <math>< 0.5^\circ</math> to 1.5° RMS
- Pitch and Roll
- Range $\pm 40^\circ$
 - Accuracy $\pm 0.4^\circ$ @Tilt<math>< 20^\circ</math>
 $\pm 0.6^\circ$ @Tilt $\geq 20^\circ$

GPS

- Channel L1, C/A Code, 14ch
- Accuracy 2.5 Meters CPE
- Cold Start <math>< 30</math> seconds (90%)
- Reacquisition <math>< 2</math> sec (90%)

Doppler Velocity Log

- Frequency 600 kHz
- Accuracy 1% +/- 1mm/s
- Maximum Altitude 110 m (330ft)
- Minimum Altitude 0.3 m (1ft)
- Maximum Velocity 20 knots

Navigation Accuracy

**Along Track Error 500m square ± 1 to 2m

*Cross Track Error 500m square ± 1 to 3m

* based on compass error

** based on Doppler Velocity log

Power

- Battery Rechargeable Lithium Polymer
- Operational Life 8 hours

Single Board Computer and Display

- Processor 16-bit Primary Processor
32-bit Primary Processor
- Inputs USB
- Dive Data ACSCII Format
- LCD Display 5.7 " TFT LAD

Mechanical

- Size 231mm x 272mm x 33mm
(DVL 273mm)
9.0" x 10.50" x 1.3"
(DVL 10.65")
- Weight 5.0kg (14.00 lbs)
- Housing Material Anodized Aluminum
- Switches Sealed Mechanical

Environmental

- Depth Rated 30m (99 ft.)
- Operating Temperature -20°C to 55°C
(-4°F to 131°F)
- Storage Temperature -40°C to 65°C
(-40°F to 149°F)
- Vibration To Mil-Std-810E



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