

# DNC-250<sup>®</sup> DIVER NAVIGATION CONSOLE



- **AUTONOMOUS NAVIGATION**
- **SMALL AND LIGHTWEIGHT**
- **RUGGED AND WATERPROOF TO 30 METERS**
- **SUPPORTED BY DIVE PLANNING SOFTWARE**



The DNC-250 Diver Navigation Platform is a small and rugged platform which allows a diver to navigate underwater autonomously without the need for acoustic baselines or floating GPS antennas. Completely self-contained, the DNC-250 arrives at a navigation solution using internal sensors which supply geodetic position, depth and heading while velocity information is provided Doppler Velocity Log. Built-in firmware takes this sensor information and plots the diver's position with the support of a preloaded dive plan. Distance and bearing to target waypoint, depth, and other navigation information is displayed, in real time, to the diver via a full color LCD display with backlighting. Navigation updates during a dive can be achieved by using a retractable GPS antenna.

Weighting only 5.1kg (14lbs.), the DNC-250 is easy to operate. Using six sealed switches the operator can access all functions of the operational firmware to depth of 30M (99ft). Designed for the harsh marine environment, the sealed plastic/aluminum housing provides protection for all internal components while rechargeable batteries allow the DNC-200 to be continuously operated for up to 8 hours.

Intuitive firmware and simple-to-read screens makes using the DNC-250 effortless. Once activated, the built-in GPS receiver immediately provides accurate geodetic position to the on-board computer. The diver then recalls, from the DNC-250 menu, a dive plan created and uploaded from the DiveNav 2.0 Planning Software. Once underwater, bearing and distance to the targeted waypoint is displayed on the DNC-250 easy-to-read screen along with divers depth, dive time and other important navigation information. All navigation position fixes and event marks are saved in the on-board computer's memory for later access and analysis.

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## SPECIFICATIONS

### Navigation Sensors

Heading Sensor	
Accuracy	<0.5° to 1.5° RMS
Pitch and Roll	
Range	± 40°
Accuracy	± 0.4° @Tilt< 20° ± 0.6° @Tilt≥ 20°
GPS	
Channel	L1, C/A Code, 14ch
Accuracy	2.5 Meters CPE
Cold Start	< 30 seconds (90%)
Reacquisition	< 2 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 LAC (Backlit)
LCD Backlight	Firmware Controlled

### 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	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)

## ACCESSORIES

### MMDC100 Planning Console

The MMDC100 incorporates a Amrel Ruggedized Notebook with the DiveNav 2.0 planning software and Surfer 9.0 Mapping software into on compete package. A turnkey solution to supporting the DNC-200 with pre-dive planning and post dive analysis.



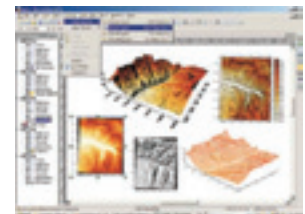
### DiveNav 2.0® Planning Software

Supporting the DNC-200 is a comprehensive dive planning software suite called DiveNav 2.0, which can be easily loaded on to any PC. DiveNav 2.0 Planning Software allows an operator to create missions profiles that include dive routes, multiple waypoints, and electronic charts and images. These mission plans can then be uploaded into the DNC-250. Once the dive is completed, the data that is stored in the DNC-250 can be downloaded. Once retrieve this can be analysis by DiveNav or other third party software.



### Surfer 9.0® Mapping Software

Surfer is a contouring and 3D surface mapping program that runs under Microsoft Windows. It quickly and easily converts your data into outstanding contour, 3D surface, 3D wireframe, vector, image, shaded relief, and post maps. Virtually all aspects of your maps can be customized to produce exactly the presentation you want. Producing publication quality maps has never been quicker or easier



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