

New Orders for Marine Electronics AUV Obstacle Avoidance Sonar

A US company and a Chinese company have ordered new titanium and aluminium versions of the successful Dolphin 6201 Obstacle Avoidance Sonar from Marine Electronics Ltd of Guernsey, UK. The lightweight metals can now be specified for the sonar's "nose cone" housing and offer useful weight reductions over the existing stainless steel version. This is expected to increase the range of applications open to the Dolphin 6201 which has been specifically designed to meet the navigation and pilotage needs of AUV and ROV users.

The new versions of the Dolphin 6201 will retain the performance characteristics of the previous model which is designed for installation within the nose cone of an AUV. Depth rated to 3,000 metres, the Dolphin 6201 is a compact unit that incorporates a switchable dual beamwidth transmitter, a forward looking echo sounder angled at 33 degrees to the horizontal with a 8 degree beam spread, and a 60 element phased receiver array. This makes the sonar uniquely capable of continuously scanning a 90 degree sector up to 200 metres ahead of the vehicle plus keep track of the seabed rising in front.

The Dolphin 6201 has the capacity to identify up to 250 individual sonar targets ahead of the vehicle, all of which are monitored for range and bearing. If, when used on an AUV, a target is recognised as a threat to the vehicle, the unit will send a collision avoidance message in RS 232 format to the navigation computer. This message is generated by the compact Dolphin PC104 processor that is usually housed in the vehicle's pressure hull. When used on an ROV the computer can also provide the pilot with an imaging output over Windows software via an Ethernet link. This permits real-time navigation in zero visibility or, when used on an AUV, provides images that can be stored for post mission analysis.

The new titanium and aluminium versions of the sonar also retain the "inverse" mode capability of the original model. In addition to obstacle avoidance, this mode enables the Dolphin to automatically track and provide guidance to a designated target such as a wellhead. The facility employs a combination of the sector scanning sonar and the forward looking echo sounder to provide homing guidance while an optional in-built altimeter provides additional accurate height-above-seabed data even in sediment-laden water.

<https://www.hydro-international.com/content/news/new-orders-for-marine-electronics-auv-obstacle-avoidance-sonar>
