

Datasheet

ROV-Homer Target Relocation System



Description

Part of Sonardyne's Coastal Acoustic product range, ROV-Homer is a miniature range and direction guidance system for small or large ROVs. Based on proven acoustic principles, it is specifically designed for fast, efficient relocation of underwater targets such as lost diving bells, divers, seabed equipment or small objects.

It enables points of interest to be marked with an acoustic transponder so that an ROV pilot can be guided straight back to the target even in zero visibility. The system substantially reduces search time and therefore operating costs.

The system consists of an ROV mounted range and direction unit, PC control software and small, lightweight marker transponders. Once the pilot has selected the target he wishes to 'home' into, the ROV unit begins interrogating the designated transponder to determine its range and direction. The

information is communicated back to the surface, via the ROV's umbilical, and is displayed on the user's PC. It indicates the range to the target and in which direction to turn in order to fly the ROV directly towards the selected transponder.

The ROV mounted unit is accurately aligned with the ROV's heading sensor and is connected to spare cores either on the ROV's umbilical or to the ROV's communications multiplexer. The electronics inside the unit incorporate power regulation, an RS232 interface and a microprocessor all of which are galvanically isolated from the ROV's electrical system. 12V to 24V DC power supply is connected via the same connector. On smaller ROVs which do not have communications multiplexers and therefore cannot support RS232, a RS485 interface can be provided.

The transponders are compact so that they can be easily fitted to divers or equipment and have a long life

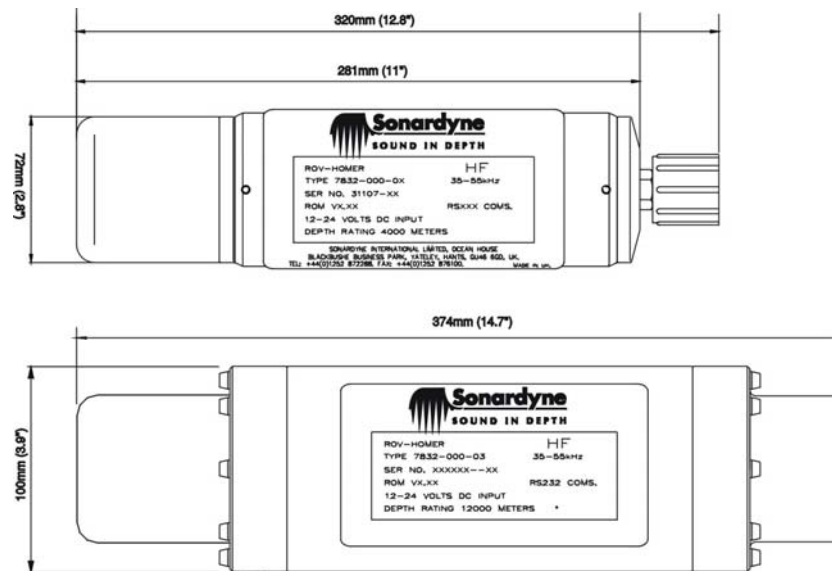
battery pack making them ideal for use as permanent markers. Each transponder is individually encoded enabling many transponders to be used on the same site to unambiguously mark many targets.

Key Features

- Simple, low cost acoustic guidance system for ROVs
- 4,000 metre or 12,000 metre versions available
- Reduces search time and ROV operating costs
- Critical point marking - tools, valve heads, field joints...
- Emergency relocation - divers, diving bells, ROVs...
- Accurately measures distances of up to 750 metres
- Allows operation in zero visibility
- System operates with up to 256 small, low cost transponders
- Works with AODC Emergency Transponders

Specifications

ROV-Homer Target Relocation System



ROV Range and Direction Unit	Type 7832-000-01	Type 7832-000-03
Depth rating	4,000 Metres	12,000 Metres
Operating Frequency	HF (35–55kHz)	HF (35–55kHz)
Transmit Source Level	90dB re 1µPa @1m	90dB re 1µPa @1m
Directional Indication (10° Wide Receive)	Left, Right or Ahead	Left, Right or Ahead
Range Resolution	0.1 Metre	0.1 Metre
Maximum Operating Range	750 Metres (Dependent on conditions)	750 Metres (Dependent on conditions)
Power Supply	12V – 24V DC	12V – 24V DC
Quiescent Life	Continuous when powered from ROV	Continuous when powered from ROV
Position Update Interval	1.5 seconds	1.5 seconds
Mechanical Construction	Anodised Aluminium Alloys and Plastics	Titanium grade 5
Diameter (LxDia)	272mm (10.7") X 72mm (2.85")	370mm (14.57") X 100mm (39.4")
Weight in Air	2.1kg	8.0kg
Weight in Water	1.3kg	5.8kg

Transponder Options	Type 7815-000-7	Type 7835-000-01	Type 7835-000-05
Depth Rating	500 Metres	4,000 Metres	12,000 Metres
Operating Frequency	HF (33–35kHz)	HF (33–35kHz)	HF (33–35kHz)
Battery Life (Listening)	2 years (Alkaline) 4.5 years (Long-Life Lithium)	2 years (Alkaline) 4.5 years (Long-Life Lithium)	2 years (Alkaline) 4.5 years (Long-Life Lithium)
Mechanical Construction	Aluminium Alloys and plastics	Aluminium Alloys and S/steel	Titanium grade 5, Anodised
Dimensions (LxDia)	441mm (17.3") x 64mm (2.5")	353mm (13.8") x 64mm (2.5")	267mm (10.5") x 80mm (3.1")
Weight in Air	1.1kg	1.9kg	5.5kg
Weight in Water	0.75kg	1.2kg	3.8kg