

## Preliminary Datasheet

### Modem 6 Sub-Mini



#### Description

The Modem 6 range, based on existing 6G equipment, provides a reliable and cost-effective method of wirelessly transferring underwater sensor data in real-time.

The Modem 6 Sub-Mini is a compact and easy-to-mount instrument, suitable for transmission of data from a wide range of sensors including: current profilers, temperatures, depth and custom instrumentation.

Type 8377-1111 is depth rated to 1,000 m and has an omni-directional transducer designed for excellent horizontal and shallow water communication.

Modem 6 variants can be fully charged in five hours giving 35 days standby time.

For safety, a pressure relief valve is incorporated and an external on/off switch saves the rechargeable battery when not in use.

The Modem 6 is a flexible range of instruments, supporting specific communication settings for a variety of link types such as low latency data, fire and forget, question & answer and large data uploads. A 512 kB modem buffer stores data when a modem link is not active.

All Modem 6 products utilise Sonardyne Wideband® signal processing and standard 6G control language. They can be programmed using the supplied software and a serial link.

This technology is field proven and provides unprecedented levels of robustness and flexibility in challenging acoustic environments. Advanced communication protocols and intelligent data packet stitching ensure latency is minimised and data is delivered error free.

Data transfer rates range from 9,000 bps down to 200 bps depending on the environment.

#### Key Features

- Sonardyne Wideband® telemetry provides up to 9,000 bps true user data rate
- Compatible with all Modem 6 instruments
- Full two-way Sonardyne Wideband 2 interrogation and reply – mitigates interference and multi-path issues
- Incorporates field proven communication technology used within critical subsea applications
- More than 500 unique Sonardyne addresses
- Robust performance in noisy and reverberant environments
- Rechargeable NiMH battery
- External on/off switch for saving battery when not in use
- Rugged, easy to mount housing
- Upgradeable to full WSM6+ functionality

# Preliminary Specifications

## Modem 6 Sub-Mini



Feature	Type 8377-1111
Depth Rating	1,000 metres
Operating Frequency	MF (21–32.5 kHz)
Transceiver Beam shape	Omni-directional
Maximum Data Rate	9000 bps
Serial Port (RS232)	2400 –115200 baud
Data Buffer/Storage	512 kB
Range*	1–2 km
Transmit Source Level (19–34 kHz) (External Power)	187 dB
(re. 1 µPa @ 1 m) (Battery)	184 dB
Receive Sensitivity (dB re 1 µPa)	<85 dB
Power Supply	Rechargeable NiMH battery or external 24 V
Battery charge 0-100 %	5 hours
Quiescent Life (Battery)	>35 Days
Connector 5-Way (Standard)	Subconn MCBH5M
Mechanical Construction	Aluminium alloy, anodised
Operating Temperature	-5 to 40°C
Storage Temperature	-20 to 55°C
Dimensions (Length x Diameter)	426 x 79 mm
Weight in Air/Water	3.2 kg/1.3 kg
Battery Charger	8370-011-01

\*Depends on ambient noise level and ray bending due to SVP.

Pin	Description
1	RS232 comms In (RX)
2	0 V
3	RS232 comms Out (TX)
4	External power 24 V
5	N/A