

SUBSEA SELECTION

Benthos subsea acoustic modems serve as the underwater component of the bi-directional acoustic communication link. The subsea modems are interfaced with a host instrument or AUV, and acoustically transmit/receive data from the host to the topside acoustic modem. Each subsea modem is available in a wide variety of configurations including customer selected frequency range and integral or remote transducer. Standard models include:

ATM-885 ACOUSTIC TELEMETRY MODEM—Shallow Water

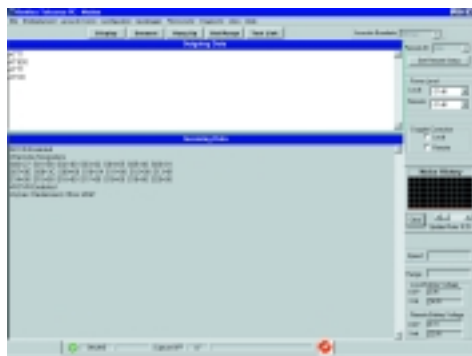
Self contained, internally (or externally) powered modem, with integral transducer, capable of bi-directional 2400 baud communication at depths up to **2000 meters**. (ATM-885R available for applications requiring a remote transducer.)



ATM-885 Acoustic Modem configured with integral transducer

ATM-887 ACOUSTIC TELEMETRY MODEM—Deep Water

Self contained, internally (or externally) powered modem, with integral transducer, capable of bi-directional 2400 baud communication at depths up to **6000 meters**. (ATM-887R available for applications requiring a remote transducer.)



Telesonar PC software screen

FEATURES

- ▶ Bi-directional acoustic communication at data rates up to 2400 baud.
- ▶ Ultra reliable data transmission in either a vertical or horizontal channel.
- ▶ MFSK modulation schemes, as well as data redundancy, convolutional coding, and multipath guard period ensure robust data transmission.
- ▶ Choice of remote or integral transducer configuration.
- ▶ Choice of directional, omnidirectional, or line array transducer radiation pattern.
- ▶ Choice of three standard frequency bands: 9-14 kHz (LF), 16-21 kHz (MF), or 25-30 kHz (HF), depending on application requirements.
- ▶ User friendly *Telesonar PC* graphic user interface (GUI) for ease of operation.
- ▶ Doppler correction capability at data rates up to 2400 baud.
- ▶ Networking capability permits data hopping for extended range application.
- ▶ Up to 3 megabyte on board data storage available, allowing for increased data capacity and extended deployment periods.

▶ ACOUSTICS

▶ FLOTATION

▶ GEOPHYSICAL

▶ HYDROPHONES

▶ IMAGING

▶ MODEMS

▶ RELOCATION

▶ ROBOTICS



SPECIFICATIONS

General

Frequency Band:	Customer specified: 9-14 kHz (LF), 16-21 kHz (MF), or 25-30 kHz (HF)
Baud Rate:	100 –2400 bits per second
Bit Error Rate:	Better than 10^{-7} with high SNR
Data Modulation:	MFSK
Data Storage:	896 K datalogger standard (additional 1 Meg or 3 Meg available)
Processing Features:	Data redundancy, 1/2 or 1/3 rate convolutional coding, multipath guard period selection
Data Frame Period:	25 ms
Serial Interface:	RS-232/422 at 9600, 4800 or 2400 baud, customer selectable (parity: none; data bits: 8; stop bits: 1)
Housing Construction:	Hard coat anodized aluminum
Mounting:	Stainless steel side bar
Operator Controls:	Plunger type on/off switch

Specifications unique to ATM-885/ATM-885R (shallow water, internally powered)

Dimensions:	
ATM-885:	3.5 in. dia. x 30.5 in. long
ATM-885R:	3.5 in. dia. x 29.75 in. long
Weight:	
In Air:	24 lbs.
In Water:	11 lbs.
Operating Depth:	2000 meters

Specifications unique to ATM-887/ATM-887R (deep water, internally powered)

Dimensions:	
ATM-887:	5 in. dia. x 33.5 in. long
ATM-887R:	5 in. dia. x 28.25 in. long
Weight:	
In Air:	36 lbs.
In Water:	17 lbs.
Operating Depth:	6000 meters

Power

External Input Power:	14-28 VDC
Receive Current:	.025 amps
Transmit Current:	2 amps max at full power
Standby Current:	.001 amps
Batteries:	21 V alkaline – 18 Amp-Hr 21V Lithium – 30 Amp-Hr (optional)



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