

ACOUSTIC TELEMETRY

ACOUSTIC MODEM SYSTEM PAM



- **Delightfully easy to operate – Subsea remote control and data gathering made easy**
- **Ranges to 6000 metres**
- **SECURE 600 and 1200 BPS baud rates available dependent upon data type**
- **Proprietary ‘Frequency Hopping’ protocol for optimal reduction of multipath interference**
- **Transparent communications through the water from serial port to serial port**
- **Reliable acoustic data link using latest DSP technology**
- **Reassuringly cost effective**
- **Also compatible with AAE Acoustic Release Transponders**
- **Standard and custom made systems available**

Our design engineers were given a brief to develop an equipment package which would provide reliable data communications whilst simultaneously offering flexibility and ease of use. The surface control unit is either a portable battery / mains powered unit as shown below or a packaged ‘modem.’ for direct connection to a PC and power supply. Both are easy to operate. By using advanced error correction and predictive envelope detection techniques, along with the latest DSP devices, excellent data security is assured. Proprietary FSK and MFSK protocols are catered for with adaptive baud rate reduction when acoustic conditions become noisy.

SUGGESTED APPLICATIONS

- REMOTE DATA GATHERING
- AUTONOMOUS VEHICLE CONTROL
- WELLHEAD MONITORING
- WIRELESS EMERGENCY SHUTDOWN
- PIPELINE MONITORING
- ENVIRONMENTAL MONITORING
- ADCP DATA TRANSMISSION
- REMOTE CONTROL
- SUBSEA CONSTRUCTION



Both the subsea and the surface modem can utilise a simple FSK receiver for slow data reception whilst being able to transmit at high baud rates. Alternatively they can be fitted with the DSP circuitry for fast data reception. This allows the flexibility of lower cost or higher speed, as the situation demands.

- LF and MHF systems available
- RS-232 control of surface modem from PC serial port or keypad / display options
- Standard command set used for easy integration
- Compact system electronics

Low frequency	:10 – 14 kHz, to 6000 metres range
Medium high frequency	:33 – 50 kHz, for up to 1000 metres range
Data rate:	:to 1200 b /s dependent on acoustic conditions
Standard I/O	:4 digital lines (configurable) inc. interrupt for wake up. :RS-232 Bi-directional
Current drain, standby/active/DSP	:2 mA / 20 mA / 40 mA
Transmitter current	:Typically 1 A with a 15 volt battery, :Battery current is dependent on output power, please consult factory for more information).
Size	:70 mm diameter x 400 mm long for 1000 m MF unit with transducer :125 mm diameter x 400 mm long for 3000 m LF unit with transducer
Transducers	:size is dependent on battery requirements and other parameters : Omni directional (typ 184 dB) : Directional transducers are available in both frequency ranges : High power variants are available for some applications

July 2001



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Due to continual product improvement these specifications may be subject to change without notice.