

Single Frequency CHIRP Sub-bottom Profiler

Sub-bottom profiling applications in diverse sediments in shallow water environments require compact tools as well as multiple frequency bands to support a variety of survey requirements. The HMS-621 CHIRPceiver Litt™ and transducer arrays fill this wide range of survey needs. The user selectable frequency bands supported by the HMS-621 include standard LF (1KHz-10KHz), or HF (8KHz-23KHz). It can be easily configured for pipeliner detection with a standard single channel user configurable transceiver. CW frequencies can also be programmed within the respective band. The transducer and hydrophone arrays are configured to perform both the transmit and the receive functions of the system.



Chirpceiver Litt Transceiver

The HMS-621 CHIRPceiver Litt uses a flexible Graphical User Interface connected via Ethernet that allows the user to set CHIRP or CW modes of operation, Start and Stop frequencies, and Pulse Lengths and Power Level for the output pulses. The receiver controls allow for Gain and Attenuation as well as Diagnostic modes. All sonar data is logged in SEG Y format using industry standard acquisition software.



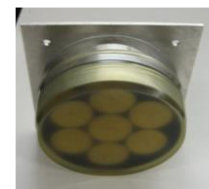
Over the Side Mount

FEATURES/BENEFITS

- CHIRP acoustic pulses in standard LF band (1KHz-10KHz), and HF (8KHz-23KHz) bands provide bottom penetration through many sediment types
- Flexible transducer array options for a variety of vessel configurations
- Industry Standard Ethernet Interface for Data and Control
- Universal input power supply operates from 85 to 240 VAC
- Single-Channel True 24-bit A/D Range
- Seabed Classification
- Industry standard SEG Y output



LF 3.5kHz Tonpilz



HF Conical Array



HF Pipe Liner Side Mount

SPECIFICATIONS

HMS-621 CHIRPceiver Litt™ System

Single Channel Frequency User Selectable

Low Frequency Band

Transmitter and transducer:

Array sizes from 1 to 4 Low Frequency 3.5 KHz Transducers

Power output:

1.5 kw, 15% duty cycle at 3.5 kHz for
212 dB re 1 μ Pa @ 1 m nominal,
2.5 kw maximum at reduced duty cycle

Penetration

5m or greater sand 75m or greater in clay

Frequency range:

Sweeps in the 1kHz to 10kHz band

Resolution

<10cm

Transducer radiation:

45° Conical (for a 2x2 4-element array)

High Frequency Band

Transmitter transducer:

One 7-element high frequency transducer

Power output:

1 kw, 15% duty cycle at 15 kHz for
214 dB re 1 μ Pa @ 1 m nominal,

Penetration:

5m sand 50m or more in clay

Frequency range:

Sweeps in the 8kHz to 23kHz band

Resolution:

<5cm

Transducer radiation:

Conical Array: 20°

Pipeliner Array: 120 ° along track, 9° across track

HMS-621 Software Controls

Control:

Trigger:

Frequency:

Pulse Length:

Transmit Power:

Preamplifier gain:

Preamplifier attenuation:

A/D Input:

Software control through system Ethernet port

Internal or External

LF (1KHz-10KHz), HF (8KHz-23KHz) CHIRP and CW

User Programmable for CHIRP and CW modes (15% duty cycle)

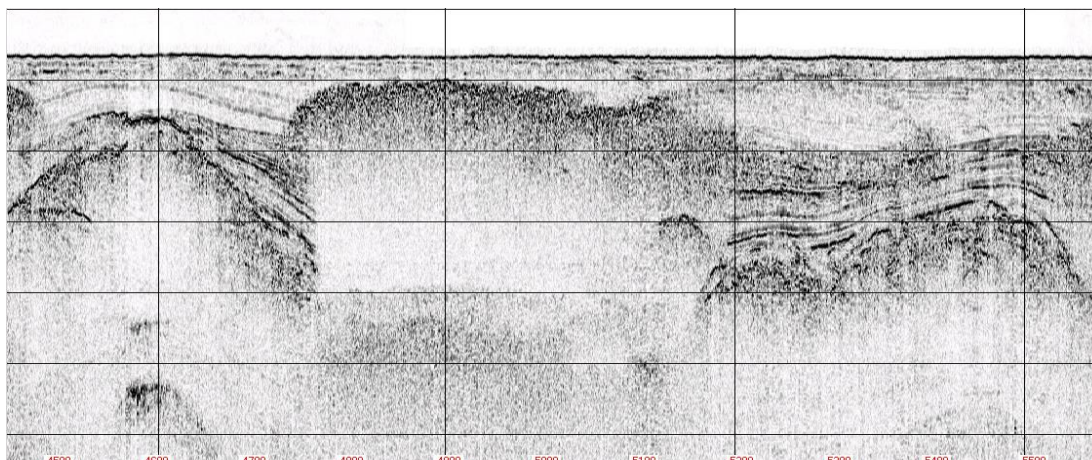
0-42 dB in 3 dB minimum increments

42 dB in 3 dB increments

-42 dB in 3 dB increments

24bit up to 192KHz

*Specifications Subject to Change Without Notice
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Falmouth Scientific, Inc.

33 Jonathan Bourne Dr., PO Box 326, Pocasset MA 02599-0326

Email: sales@falmouth.com • Tel: 508-564-7640 • Fax: 508-564-7643 • www.falmouth.com