

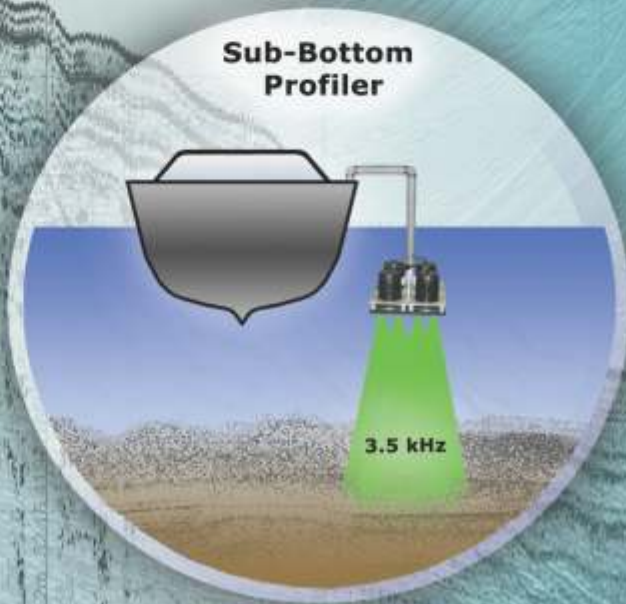
K **KNUDSEN**

**Another Reason
To Be SINGLE beam.....**



CHIRP SERIES

**Sub-Bottom
Profiler**



Proudly Made
In CANADA



Sub-Bottom Profiling With the Chirp Series

The Chirp series of scientific echosounders sets a new standard in high performance sub-bottom profilers. Based on the latest generation of 16-bit digital signal processors from industry leader Texas Instruments, the Chirp systems provide leading edge solutions for today and into the future.

The system illustrated on the reverse is optimized for operation in shallow depths from a small boat. Four low-frequency transducers are deployed in a lightweight aluminum over-the-side mounting bracket, eliminating the expense and complexity of a towfish system. A second channel operating at a higher frequency is often used to provide precision bathymetry data to supplement the sub-bottom information.

The basic Chirp system can accommodate one or two 2 kW frequency channels. As in all Knudsen echosounder systems, digital signal processing software plays a key role. All channels are designed for frequency agility as well as full-spectrum chirp and correlation processing to take maximum advantage of the bandwidth offered by modern transducers.

Other frequency combinations are also available, including 12 kHz and 200 kHz in a single dual-frequency transducer.

A new feature for KEL scientific sounders is a built-in precision signal generator. This facilitates comprehensive self-test and diagnostics of the entire system from the analog inputs to the output of the digital signal processing.

With one or two 2 kW channels in a 3U rackmount case, the Chirp Rack System provides a high performance solution for survey vessels where splashproof packaging is not a requirement. The Chirp Portable System offers similar performance in a waterproof plastic case, making it ideal for portable applications and small boats. For applications where very high transmit power is a requirement the Chirp 3260's 5U rackmount case can be fitted with up to six 2 kW transmitter modules. This model is suitable for full-ocean depths.

Multiple Chirp or Sounder units can be connected to the same PC to provide a total of up to four simultaneous channels. Common to all of these systems is full-speed (12 Mbps) USB 2.0 connectivity.

SounderSuite

All Chirp systems come with Knudsen SounderSuite software, which provides a flexible and highly functional graphical user interface for the sounder on any Windows PC. In addition to the user interface, SounderSuite provides a high-resolution echogram display, sensor interface (heave, GPS, etc.) and datalogging functions.

Features:

- One or two independently configurable frequency-agile channels optimized for sub-bottom profiling in shallow to medium depths, with simultaneous operation of both channels.
- Four selectable transmit power levels to 2 kW on each channel.
- Both channels frequency-agile from 3.5 kHz to 210 kHz, with operator selectable frequency sweep endpoints with bandwidths to more than 20 kHz.
- Transmit pulse lengths from 1/16 ms to 64 ms, for bandwidth-time products well in excess of 100.
- Industry standard SEG-Y records in operator-selectable raw, correlation processed or detected envelope format.
- Multiple pings in the water column for faster data acquisition.
- Wide bandwidth chirp and correlation processing on both Channels.
- Built-in test signal generator for comprehensive receiver self-test.

**Comprehensive technical specifications
can be found in the Chirp series datasheet.**