

ADVANCE INFORMATION

Research needs capable tools.....

CHIRP

3200 SERIES



CHIRP 3200



CHIRP 3260



CHIRP 3210

Advance Information

The Chirp 3200 family of scientific echosounders sets a new standard in high performance deep water sub-bottom profilers. Based on the latest generation of 32-bit floating point digital signal processors from industry leader Texas Instruments, the Chirp 3200 systems provide leading edge solutions for today and into the future.

The basic Chirp 3200 system can accommodate one or two low frequency channels and a single high frequency channel.* The low frequency channels feature 24-bit digitization with exceptional instantaneous dynamic range of 118 dB and overall dynamic range exceeding 160 dB. A 16-bit digitizer is provided for an optional high frequency channel.

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.

A new feature for KEL scientific sounders is a built-in precision test 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. It also provides built-in transducer testing and impedance characterization.

The first three members of this new echosounder family are the Chirp 3200, 3210 and 3260. Common to all of the new systems is hi-speed (480 Mbps) USB 2.0 connectivity. Multiple Chirp 3200 or Sounder 1600 units can be connected to the same PC to provide a total of up to four simultaneous channels.

SounderSuite

All Chirp 3200 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.

Chirp 3200

With one or two 2-KW channels in a single 3U rackmount case, the Chirp 3200 provides a high performance solution for survey vessels where splashproof packaging is not a requirement.

Chirp 3210

A waterproof plastic case makes this model ideal for portable applications and small boats. It is available in single or dual-channel versions.

Chirp 3260

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. The most common arrangement is a 3.5 kHz channel configured for 10 KW together with a 2 KW, 12 kHz channel, but other options are available.

*Packaging constraints may limit the number of channels in specific models.

Technical Specifications (subject to change without notice):

Units: Metres, Feet or Fathoms

Main Ranges: 10
20
50
100
200
500
1000
2000
5000

Phased Ranges: Multiple 50% overlapped phases of each range (20% overlap optional), manual or automatic selection.

Frequencies: One or two low frequency channels: 3.5kHz to 24kHz, 24-bit A/D
Optional high frequency channel: 24kHz to 210kHz, 16-bit A/D

Power: 4 user-selectable power levels up to 1kW per channel

Resolution: 1 cm (0-99.99), 1 dm (100-999.9), 1 m (>1000)
1/100 ft (0-99.99), 1/10 ft (100-999.9), 1 ft (>1000)
1/100 fm (0-99.99), 1/10 fm (100-999.9), 1 fm (>1000)

Sound Velocity: 1300 - 1700 m/s Resolution: 1 m/s
4265 - 5577 ft/s Resolution: 1 ft/s
710 - 929 fm/s Resolution: 1 fm/s

Draft: 0 - 100 m Resolution: 1 cm
0 - 328.08 ft Resolution: 0.01 ft
0 - 54.68 fm Resolution: 0.01 fm

Pulse Length: To 64ms, automatically selected, with operator override.

Gain Controls: AGC, TVG and manual receive gain for each frequency

Interface: USB 2.0 hi-speed (480Mbps)

Knudsen SounderSuite Software:

Windows 2000, and Windows XP compatible
Post-Processing Software, for any Windows PC
Control: Easy to use graphical user interface (GUI)
Display: Scrolling echogram with depth overlay, plus digital depth
Heave: Supports all popular heave sensors
Position: Supports all popular GPS receivers
Printers: Standard Windows printers plus all popular thermal printers
Simultaneous operation with other Survey software such as HYPACK

Output Data:

Full resolution envelope data in XTF (sidescan) and KEL format
Industry standard SEG-Y in 16-bit fixed point or 32-bit floating point format in user-selected raw, filtered, or envelope detected form
User-configurable ASCII digital depth strings

Additional Features:

Convenient USB interface to Windows PC and SounderSuite
Frequency Agility
Dynamic Range: instantaneous 118dB, overall 160+ dB
Pulselengths to 64ms
Multiple pings in the water column
Full-spectrum chirp and correlation processing on all channels
Heave-corrected echograms
Pinger Mode
Network Operation: Supports multiple instances on networked PCs
All Digital: No calibration or analog alignment required - ever!
All new design
Latest DSP technology
Built-in signal generator for comprehensive end-to-end self test
Transducer impedance measurement.

Options:

Transducers (many are available)
Transducer 'over the side' mounting brackets
On-site training/installation