



# ADVANCE INFORMATION

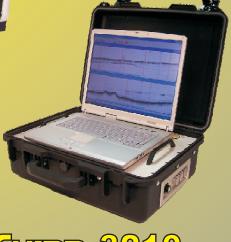
Research needs capable tools.....

CHEP 3200 SERIES



CHIEF 3200





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 fullspectrum 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:

1000 2000 5000

Phased Ranges: Multiple 50% overlapped phases of each range (20% overlap

optional), manual or automatic selection.

One or two low frequency channels: 3.5kHz to 24kHz, 24-bit A/D Frequencies:

Optional high frequency channel: 24kHz to 210kHz, 16-bit A/D

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

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

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

Resolution: 1 cm Draft:

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

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