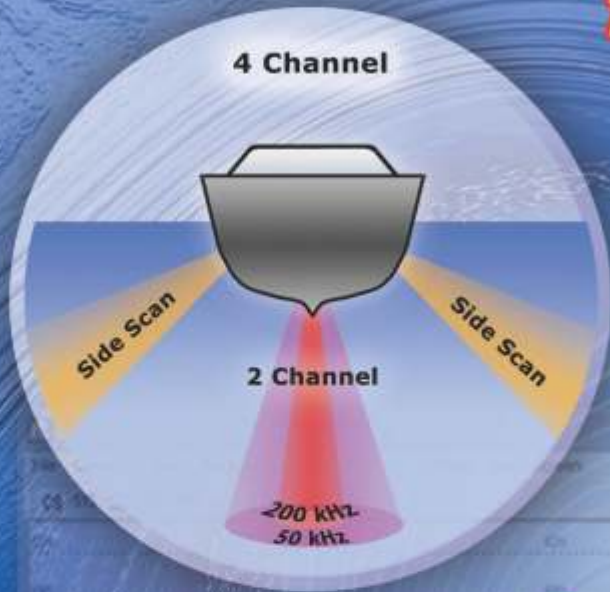
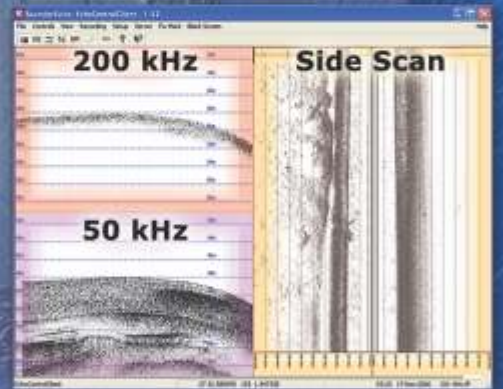


# KNUDSEN

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



## SOUNDER SERIES



Proudly Made  
In CANADA



## Sounder 1604 Sidescan/Bathymetry Survey System

A particularly useful feature of the Sounder product family is the ability to assign individual frequency channels to either sidescan or bathymetry. This is used very effectively in the Sounder 1604 four-channel survey system illustrated. Two of the four channels are configured for a pair of 200 kHz sidescan transducers, one looking to port and one to starboard. The other two channels are assigned to a standard dual-frequency downward-looking transducer (50/200kHz, 33/200kHz, 28/200kHz or 24/200kHz). Additionally all four channels are frequency agile to all matched Knudsen transducers—a trait shared with all Sounder products.

All four channels are managed by KEL's EchoControl Windows software. A waterfall presentation of the sidescan image data is shown simultaneously with traditional scrolling echogram displays of the two vertical channels. All of EchoControl's normal Sounder features and capabilities are available in this 4-channel configuration, including a seamless interface to HYPACK software.

One additional feature is available in multiple-channel Sounder systems - the ability to specify the sidescan range independently of the depth range. For example, in shallow water the operator might choose to set the sidescan range to 200m and the depth range to 10m.

The Sounder 1604 is a particularly capable member of the Sounder extended family with four 1 kW channels in a single 3U rackmount case. When configured with both sidescan and vertical channels the 1604 offers an efficient and cost-effective solution for shallow water survey. The sidescan channels provide broad area coverage while simultaneously the depth channels obtain precision bathymetry.

### Features:

- Four independently configurable frequency-agile Sounder channels with simultaneous operation of all four channels
- Two sidescan channels
- Two independent depth channels
- 1 kW transmitters on all four channels
- Independent range setting for sidescan and depth channels
- KEL SounderSuite Windows Application Software
- Two 1/2 degree, 200 kHz sidescan transducers, One dual frequency transducer (choice of 50/200kHz, 33/200kHz, 28/200kHz or 24/200kHz)
- Lightweight aluminum over-the-side mounting bracket accommodates both sidescan transducers and dual-frequency transducer.
- 3U rackmount electronic enclosure (19" deep) containing all four channels

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