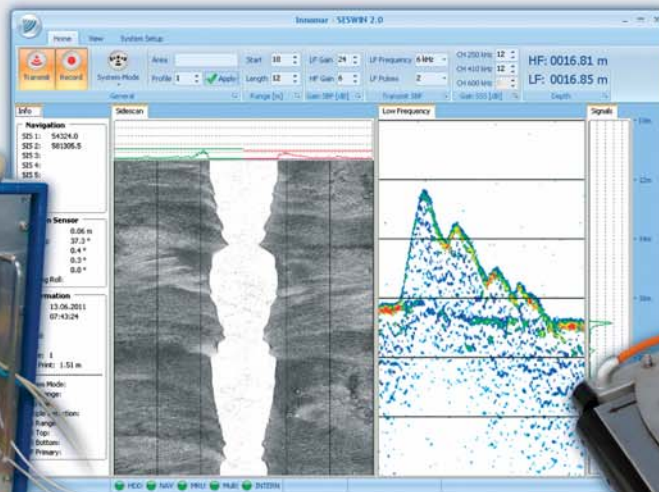




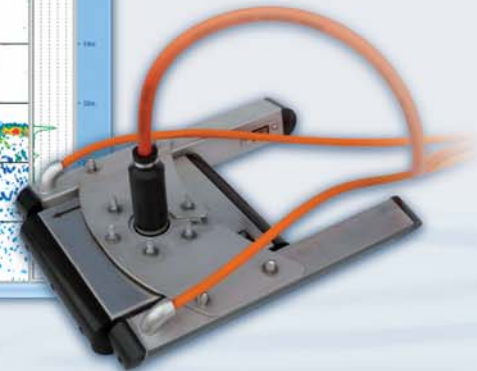
Screenshot of the operating software ▶



Transducer ▼



▲ Top-side unit



#### ► Acquisition

- primary frequency (echo sounder, bottom track)
- secondary low frequency (sub-bottom data, multi-frequency mode)
- two side scan frequencies
- sample rate 96 kHz @ 24 bit

#### ► Sub-bottom Profiler

- water depth range: 0.5 – 500 m
- sediment penetration: up to 50 m, depending on sediments
- layer resolution: up to 5 cm
- motion compensation: heave, roll
- beam width @ 3dB:  $\pm 2^\circ$  / footprint < 7% of water depth
- primary frequencies: approx. 100 kHz (band 85 – 115 kHz)
- secondary low frequencies: 4, 5, 6, 8, 10, 12, 15 kHz (band 2 – 22 kHz)
- primary source level: > 240 dB //  $\mu\text{Pa}$  re 1 m
- pulse width: 0.07 – 1.3 ms
- pulse rate: up to 60/s
- multi-ping mode
- pulse type: CW, Ricker, LFM (chirp)

#### ► Side Scan Sonar

- water depth range: 0.5 – 30 m
- beam width @ 3dB:  $0.8^\circ \times 58^\circ$
- depression angle:  $30^\circ / 40^\circ$
- frequencies: 250, 410, 600 kHz
- source level: > 210 dB //  $\mu\text{Pa}$  re 1 m
- pulse width: 0.04 – 0.5 ms
- pulse type: CW, LFM (chirp)

## SES-2000 standard plus Parametric Sub-bottom Profiler and dual-frequency Side Scan Sonar

#### ► System Components

- transceiver unit 19 inch / 9 U (WHD: 0.52 m x 0.44 m x 0.40 m; 42 kg)
- SBP transducer incl. 30 m cable (WHD: 0.34 m x 0.08 m x 0.26 m; 30 kg)
- side scan transducer incl. 30 m cable (2 x WHD: 0.50 m x 0.06 m x 0.06 m; 2 x 12 kg)
- system control: internal PC

#### ► Software

- SESWIN data acquisition software
- SES Convert SEG-Y/XTF data export
- SES NetView remote display
- ISE post-processing software

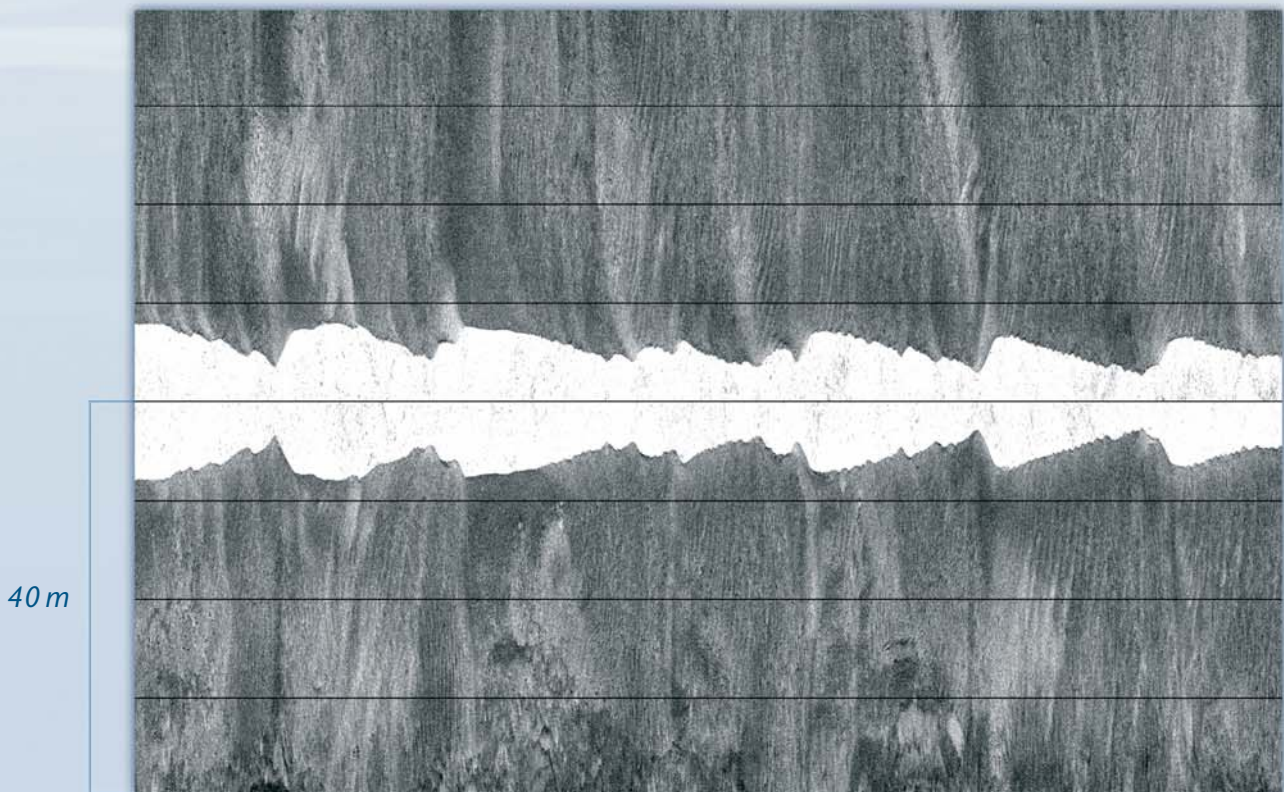
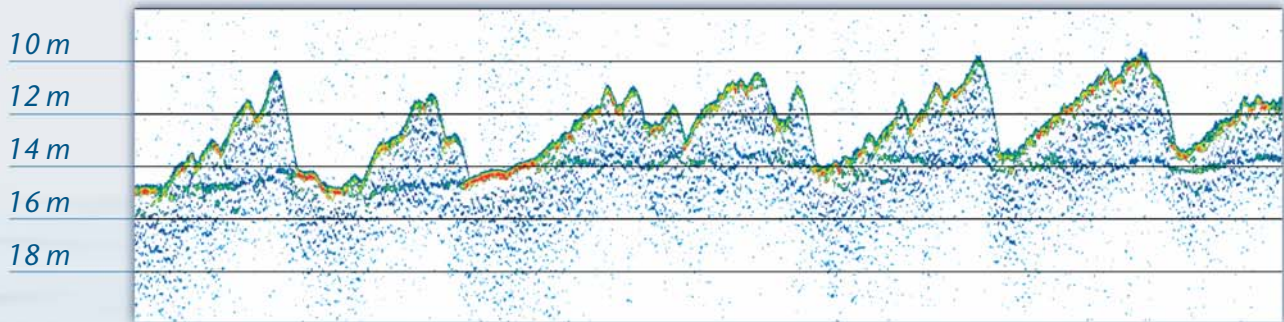
#### ► Power Supply Requirements

- 100–240 V AC / 50–60 Hz
- power consumption: < 400 W



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## Survey example of SES-2000 standard plus



*River Weser data example with simultaneously acquired SBP and SSS*

*Frequency 6 kHz (SBP), 250 kHz (SSS), pulse length 333  $\mu$ s (SBP), 40  $\mu$ s (SSS), profile length 700 m*

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