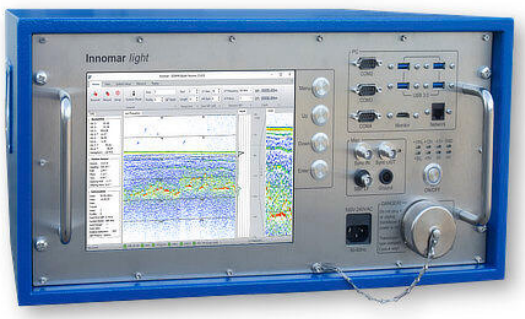
Innomar "light" Sub-Bottom Profiler

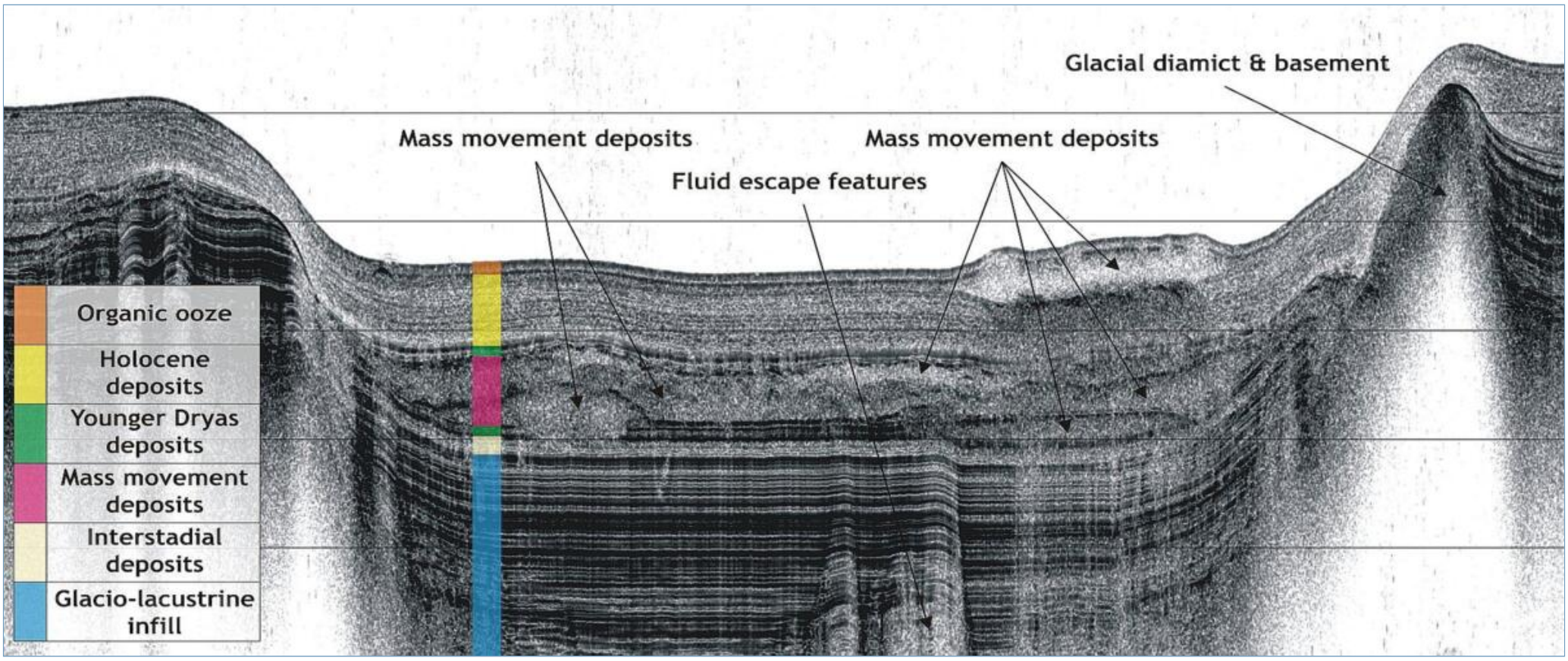


Innomar "light" SBP

The **Innomar "light"** sub-bottom profiler is designed for shallow-water applications inshore and near-shore at water depths down to 400 meters.

This model acquires full-waveform data that can be processed with any seismic software (SEG-Y format). **Innomar** also provides the ISE post-processing software specialized on the **Innomar SBP** data.

The first generation of this model has been launched in 2000 as "SES-96 light". Later this model were named "SES-2000 light". **The latest generation has been introduced in 2021**.



Innomer "light" SBP data example from Lake Windermere / UK (pulse 12kHz / 166µs; depth range 18–42m)

Technical Specification

Water Depth Range	0.5 – 400 m below transducer
Sediment Penetration	up to 40 m (depending on sediment type and noise)
Sample / Range Resolution	<1 cm / up to 5 cm (depending on pulse settings)
Transmit Beam Width (-3dB)	c. ±2° for all frequencies / footprint c. 7% of water depth
Ping Rate	up to 50 Hz (pings/s)
Heave / Roll / Pitch Compensation	heave (depending on external sensor data)
Primary Frequencies (PHF)	c. 100 kHz (frequency band 85 – 115 kHz)
PHF Source Level / Acoustic Power	>238 dB//µPa re 1m / c. 2.3 kW
Secondary Low Frequency (SLF)	centre frequency user selectable: 4, 5, 6, 8, 10, 12, 15 kHz
SLF Total Frequency Band	2 – 22 kHz
SLF Pulse Type	Ricker, CW
Pulse Width	user selectable 0.07 – 1.0 ms (CW)
Data Acquisition and Recording	digital 16 bit / 96 kHz (SLF full waveform, PHF envelope)
Data File Format	Innomar "RAW" (16 bit), "SEGY" (via SESconvert)
External Sensor Interfaces	HRP (motion), GNSS position, depth (all RS232 / UDP), trigger (BNC)
Bottom Detection	internal (PHF and SLF data) or external depth
Depth Accuracy	(2 cm @ 100 kHz / 4 cm @ 10 kHz) + 0.06% of water depth
Remote Control / Survey Integration	KVM / basic functions via COM or Ethernet (UDP), NMEA
Topside Unit (Transceiver)	W 52 cm × D 40 cm × H 26 cm (19'' / 5U) / weight c. 25 kg
Transducer	W 34 cm × D 26 cm × H 8 cm / weight c. 22 kg (incl. 20 m cable)
Transducer Depth Rating	Surface
Power Supply	100–240 V AC; optional external DC power inverter (12 /24 V)
Power Consumption	<250W
Control / Data Storage PC	integrated PC (MS Windows 10/11 OS) with 10'' TFT display

First / Latest Product Generation	2000 / 2021

Included Features

- SLF full waveform data acquisition (sub-bottom data) / Innomar "RAW" data format
- 24 bit SLF full waveform data acquisition / Innomar "SES3" data format
- Multi-ping mode for maintaining a high pulse rate in deep waters
- Multi-frequency signals
- SESWIN basic remote-control via COM / UDP (e.g. line start/stop, line name)

Optional Features

- SESWIN extended remote-control via Ethernet (all survey settings)
- KVM extender for remote control
- external DC power adapter (12 V or 24 V)
- Rugged housing with shock absorbers (MIL standard, IP65)
- Transducer bracket for over-side-mounting
- Transducer frame with integrated shock absorbers for hull-mounting

Software

- **SESWIN** data acquisition software
- **SES Convert** data converter software (RAW to SEG-Y, XTF, ASCII)
- **SES NetView** for online data and system information display on remote computers
- **ISE** post-processing software (optional)

Technical specifications are subject of change without notice.

Product overview

"smart" SBP	"compact" SBP
"light" SBP	"standard" SBP
"sidescan-100"	

Shallow Water	High Power
Remotely Operated	Multi-Transducer
Innomar Software	

Innomar 1997 - 2024

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