



[Home](#) > [Products](#) > [Shallow Water](#) > "standard" SBP

Innomar "standard" Sub-Bottom Profiler



Innomar "standard" SBP

From the wide range of **Innomar** parametric sub-bottom profilers the **Innomar "standard"** model is the most versatile one: it is small enough to be used on small boats for inshore surveys but also powerful enough to be applicable for offshore surveys down to 500 meters water depth.

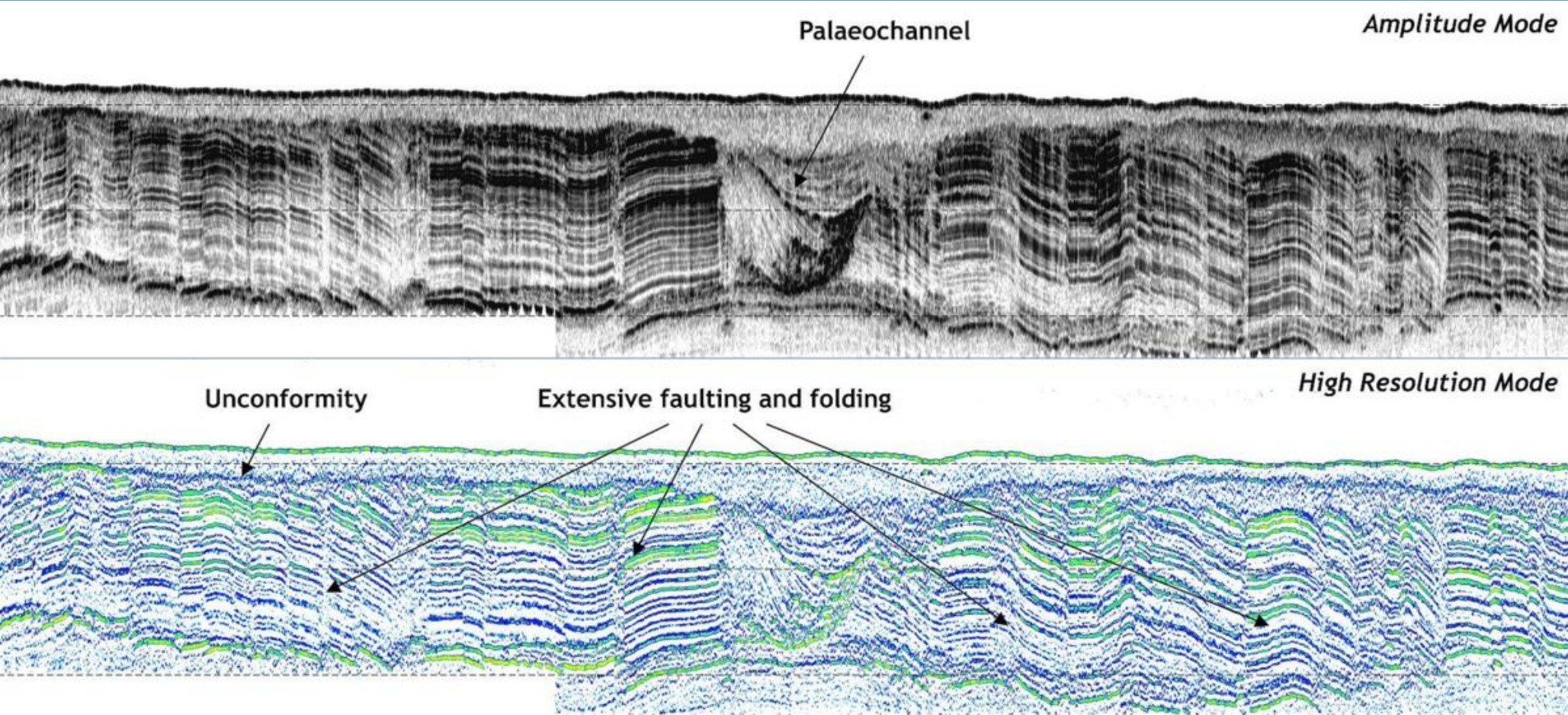
The high ping rate, small footprint and the possibility of transmitting sound pulses over a wide frequency range ensure sub-seafloor data with excellent resolution and very good sediment penetration. Electronic **beam stabilization** will give good results under bad weather conditions, too.

A user-friendly data acquisition and system control software (SESWIN) provides the possibility for network remote operation as well as remote data visualization.

The **Innomar "standard"** 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.

This model was the first Innomar SBP model ("SES-96 standard") at all, introduced to the international market in 1997. Later this model was called "SES-2000 standard". **The latest generation has been launched 2020.**



Innomar "standard" SBP data example (Indonesia; pulse 8kHz / 250µs; depth range 47–63m)

Technical Specification

Water Depth Range	0.5 – 500 m below transducer
Sediment Penetration	up to 50 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 + roll (depending on external sensor data)
Primary Frequencies (PHF)	c. 100 kHz (frequency band 85 – 115 kHz)
PHF Source Level / Acoustic Power	>240 dB/µPa re 1m / c. 3.5 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, LFM Chirp
Pulse Width	user selectable 0.07 – 1.0 ms (CW); 1.5 ms (chirp)
Data Acquisition and Recording	digital 24 bit / 96 kHz (SLF full waveform, PHF envelope)
Data File Format	Innomar "SES3" (24 bit) and "RAW" (16 bit), "SEG Y" (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 34 cm (19" / 7U) / weight c. 35 kg
Transducer	W 34 cm × D 26 cm × H 8 cm / weight c. 30 kg (incl. 30 m cable)
Transducer Depth Rating	Surface
Power Supply	100–240 V AC; optional external DC power inverter (12 /24 V)
Power Consumption	<300W

Control / Data Storage PC	integrated PC (MS Windows 10/11 OS) with 10" TFT display
First / Latest Product Generation	1997 / 2020

Included Features

- Roll beam stabilization
- 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
- LFM chirp (5 – 15 kHz)
- 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 when closed)
- 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

<u>"smart" SBP</u>	<u>"compact" SBP</u>
<u>"light" SBP</u>	<u>"standard" SBP</u>
<u>"sidescan-100"</u>	
Shallow Water	High Power
Remotely Operated	Multi-Transducer
Innomar Software	

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