Innomar “Standard” Sub-Bottom Profiler

The Innomar "standard" model is very versatile. 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 also give good results under bad weather conditions. 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.

Key Features

Roll beam stabilization
16-bit 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
LFM chirp (5 – 15 kHz)
SESWIN basic remote-control via COM / UDP (e.g. line start/stop, line name)

Norwegian Offshore Rental AS | PO Box 2143, 5504 Haugesund | Eikeskogveien 54, 5570 Aksdal, Norway | +47 47 47 52 30 | post@offshorerental.no | **offshorerental.no**

Specifications	
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), "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 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)

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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

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