Echoes 3 500 T7

High-resolution sub-bottom profiler for full ocean depths

Echoes 3 500 T7 is a high-performance sub-bottom profiler offering high-resolution seismic reflection data. Its 7 transducers provide unique quality data from shallow to deep sea environments regardless of the seabed topography.

HIGH QUALITY SEISMIC DATA

- True flat bandwidth ultimate resolution capacity and power efficiency
- Chirp spectrum coverage of 1.7 to 6kHz
- Vertical resolution 20 cm
- Penetration up to 150 m in clays (@ 1,000m water depth)
- Penetration up to 40 m in sand (@ 1,000m water depth)

FULLY OPERATIONAL

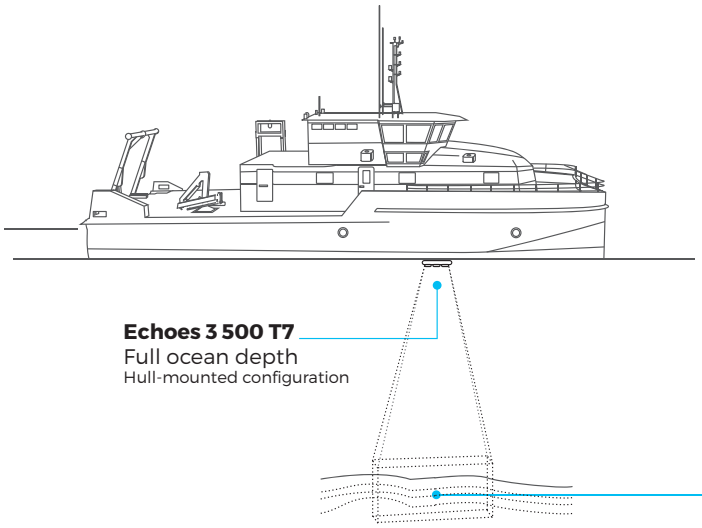
- Perfect positioning and heave compensation
- Compatible with any bathymetric echosounder
- Hull-mounted systems
- Modular configuration

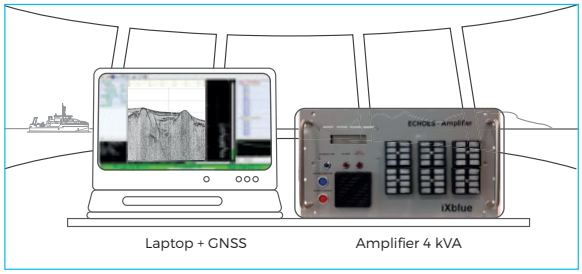
DELPH SEISMIC SOFTWARE

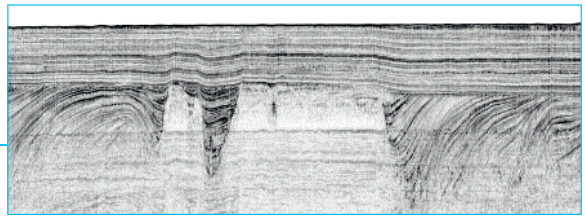
- All-in-one optimized geophysical processing and interpretation
- Easy access to all data collected for geologists and geophysicists
- Compatible with leading industry sensors and formats
- Best possible 2D/3D QC
- Visualization and reporting capabilities

APPLICATIONS

- Deep water oceanography
- Sedimentology and paleoseismology
- Marine platforms implantation
- Route/boulder clearance
- Pockmark detection
- Seabed roughness
- Bedrock depth







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Technical specifications

Acoustic technology

Array configuration	7 Tonpilz transducers mounted on a plate
Operational frequency range (Hz)	1,700 - 6,000
Mean acoustic level	208 dB (ref 1µPa@1m) @ 4 kVA
RVS (Receiving Voltage Sensitivity) (ref. 1iPa)	Chirp processing gain (100ms pulse) +22dB
Beam aperture @ 3.5 kHz	20°
Vertical resolution (c = 1,500 m/s)	20 cm

Echoes 3 500 T7 Array

Recommendation for water depth below transducers (m)	1 to 6,000
Height (mm)	384
Diameter (mm)	980
Weight in air / water (kg)	325 / 237

Echoes 3 500 T7 Topside Unit

Signal emission power / Echoes mean power	4 kVA / 850 W
Length / width / height (mm)	598 (incl. back panel socket) / 483 (19") / 266 (6U)
Weight (kg)	30
Mounting	Rack-mounted
Deck cable length (m)	50

Case Study

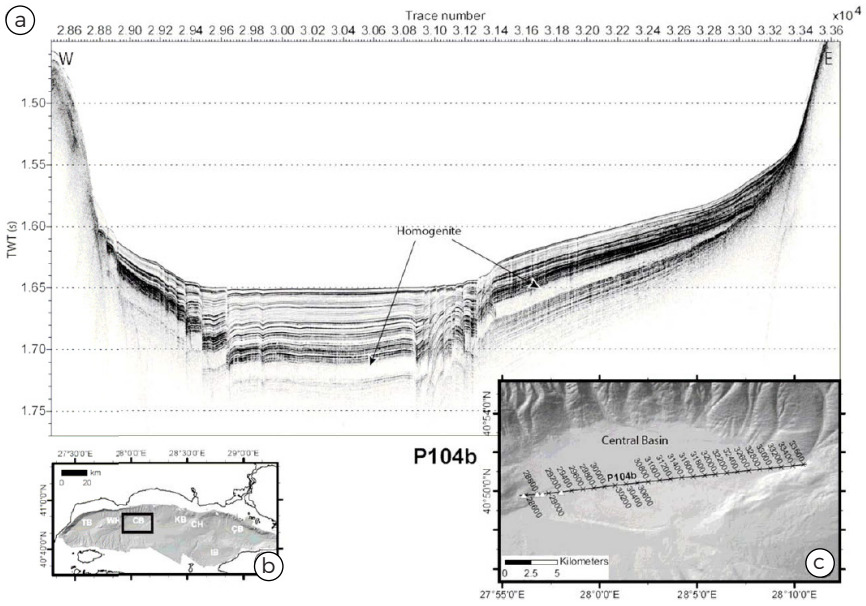
Reconstructing millennial-scale Anatolian earthquakes history from Marmara deep sea sediments

This high-resolution seismic profile was acquired at about 2500m water depth in the Marmara Central Basin with an Echoes 3500 T7 onboard of the R/V Le Suroit Ifremer/Genavir in 2009.

a) Earthquake-derived deposit (homogenite) is indicated by black arrows.

b) Map of the Sea of Marmara showing the location of the area given in c).

Tary Jean-Baptiste (2011). Case studies on fluids and seismicity in submarine environments based on Ocean Bottom Seismometers (OBS) recordings from the Sea of Marmara and application to the Niger Delta. PhD Thesis, Université de Bretagne Occidentale. https://archimer.ifremer.fr/doc/00034/14557/



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