

GEOFORCE

GROUP LIMITED



GEOFORCE STS

SURFACE TOW SUB BOTTOM PROFILER

The Geoforce STS is a high-resolution, surface-tow sub-bottom profiler - An ideal system for shallow water sub-surface geological surveys.

FEATURES

- 1000 J capable Boomer Plate
- Specially designed buoyancy elements to increase offshore stability
- Suitable for fresh water and saltwater environments
- Onboard sensors to provide GPS position and nine-axis motion data
- Shielded High Voltage Power Cable reduces EMI
- Fully differential & Shielded Low Voltage signal transmission prevents electrical interference
- Onboard Streamer and Internal Hydrophone
- Cerebella Digitizer System allows for 3 analog channels and log trigger

TOW BODY

DIMENSIONS	226 x 76.2 x 61 cm
WEIGHT	113 kg
SURVEY TOW SPEED	3 – 4.5 kn

TRANSMITTER SPECS

SURVEY WATER DEPTH	1 – 200+ meters
SEDIMENT LAYER RESOLUTION	6 – 20 cm, depending on substrate
FREQUENCY SPECTRUM	500 Hz – 10 kHz
SOUND OUTPUT	120J = 192.6 dB/1μPa @ 1m 480J = 212.7 dB/1μPa @ 1m
INPUT ENERGY	30 – 1000 J
FIRING RATE	250 – 3000 ms

60 Thornhill Drive - Unit 10 | Dartmouth | Nova Scotia | B3B 1S1 | Canada | 902.463.0932



HIGH VOLTAGE POWER SUPPLY SPECS

MAINS INPUT	230VAC (180-254), 50-60Hz 1Ø, 10.1 A
HIGH VOLTAGE OUTPUT	0.5 – 5.77 kV
ENERGY OUTPUT	7.5 – 1000 J
REMOTE TRIGGER	5V TTL BNC Input
DATA OUTPUT	Ethernet - TCP/IP
DIMENSIONS	56cm x 37cm x83cm
WEIGHT	45kg

LOW VOLTAGE SPECS

10 ELEMENT ONBOARD STREAMER ELECTRICAL	10 Parallel Elements // -202.5 dBV re 1µPa ±1dB Each Element
10 ELEMENT ONBOARD STREAMER MECHANICAL	30 cm Element Spacing // 4.5m Total length // 4.5m Tow Cable
INTERNAL ONBOARD HYDROPHONE	-201 dBV re 1µPa ±1dB
ELECTRICAL OUTPUT FROM TOW BODY	2x Fully Differential Hydrophone Signals
ELECTRICAL OUTPUT FROM RECEIVER BOX	2x Single Ended Signals
ONBOARD ELECTRONICS SENSORS	9 Axis Motion sensors GPS Receiver
SENSORS ELECTRICAL OUTPUT FROM TOW BODY	RS485 Fully differential
SENSORS ELECTRICAL OUTPUT FROM RECEIVER BOX	Ethernet
GPS OUTPUT FORMAT	\$GPGGA, \$GPGLL, \$GPRMC

POWER/CABLE SPECS

STRENGTH MEMBER	3/8" Hollow Braid Polypropylene Rope
HIGH VOLTAGE CABLE	6 AWG Core // 6 AWG equivalent shield
LOW VOLTAGE CABLE	4x Twisted Shielded Pairs
LENGTH	30 Meters (longer lengths available upon request)
TENSILE STRENGTH	1111 kg

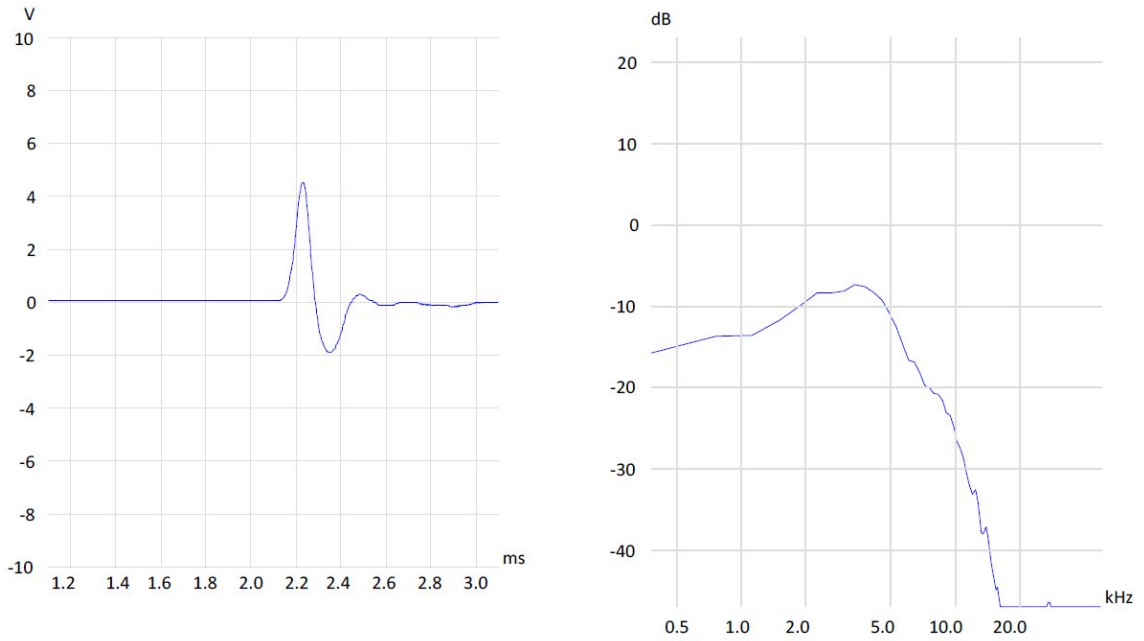
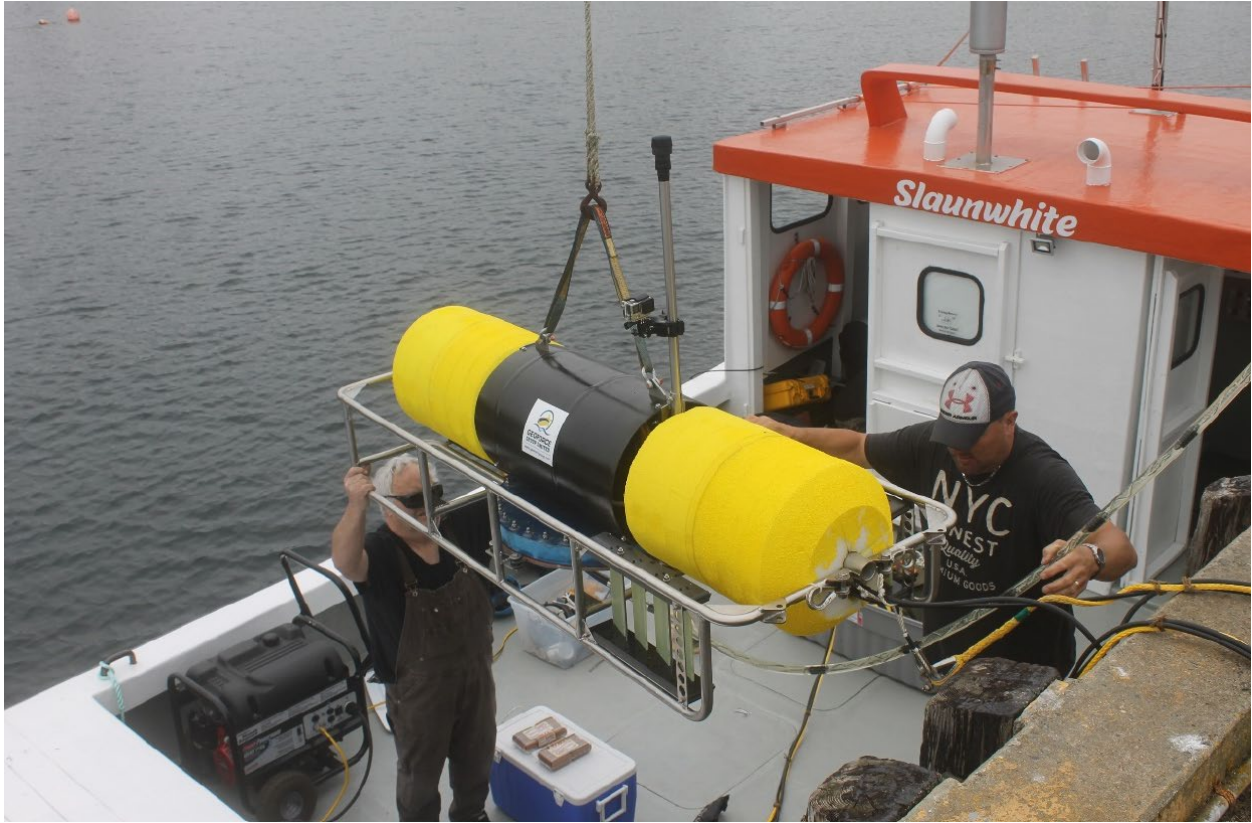


Figure 1 - Boomer Pulse and Frequency Spectrum, 3m, 480J, -189.25 dBV re 1 μ Pa sensitivity



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