



APPLIED ACOUSTICS

Underwater Technology



# S-Boom Geophysical Systems

## UHR Seismic Surveys

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**The S-Boom sub bottom profiling system is an alliance of existing and new technologies, packaged to provide a unique and powerful method of carrying out deep penetration seismic surveys with ultra-high resolution data quality.**

By harnessing the combined power of three proven AA252 Boomer Plates to provide one single pulse, the S-Boom System redefines the boundaries of shallow seismic surveying. The transmitted energy is focused by the array geometry to improve the directivity and beam pattern, giving a marked improvement over traditional seismic sound sources. Already recognised for producing high resolution seabed profiles, the fusion of these three transducers delivers a source level high enough to significantly increase sub-bottom penetration while maintaining a vertical resolution of better than 0.25 metres.

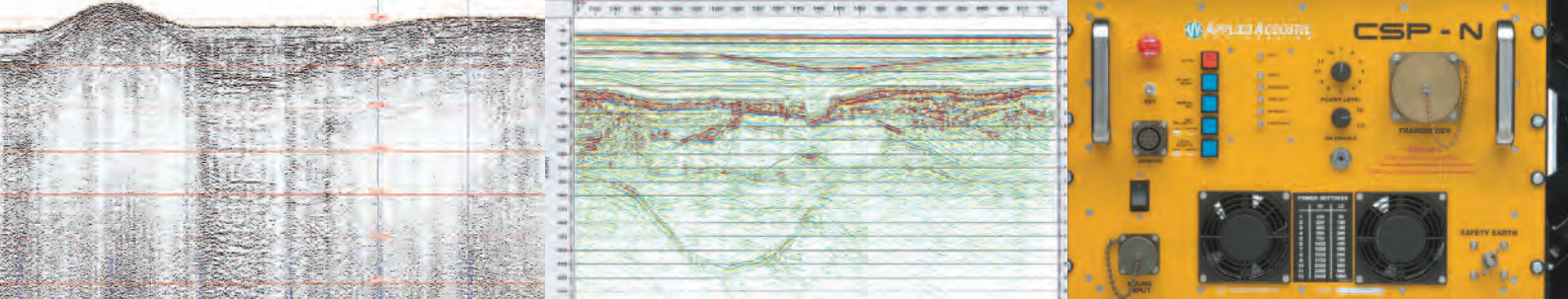
Innovation within the energy source sees the S-Boom capable of operating at a maximum energy output of 1000 Joules per pulse, and firing

at three pulses per second. At this setting, the S-Boom has achieved penetration results of over 200ms through sand and limestone whilst delivering the high resolution records expected of boomer systems with all the quality and reliability expected of Applied Acoustics.

As with all AAE sub bottom systems, the S-Boom forms part of a modular package able to operate from a number of energy sources from the renowned CSP range. For optimum results, the fast charging CSP-N1200 power supply has been designed as the energy source of choice for this system, although the system can operate just as well with a source from the larger CSP-S range. Furthermore, some existing variants of the CSP-D range can also be used at lower settings and longer pulse intervals.

Given the frequency of operation and the transmitted power levels, the S-Boom system is suitable for use with both single and multi-channel hydrophone arrays and acquisition packages, adding to the overall system versatility and creating the perfect UHR package for many applications including research, mapping and construction geological surveys.





## ■ Technical Specification

### S-BOOM SYSTEM COMPONENTS

1 x CAT303  
 3 x AA252 Boomer Plates  
 1 x HVC3000 Cable and Junction Box

Powered from a CSP-N1200 Seismic Source

### S-BOOM PHYSICAL SPECIFICATION

#### CAT303 Catamaran

Length	1700mm
Height	490mm
Width	660mm frame 876mm including floats
Weight	60kg

#### AA252 Boomer Plate x 3

Length	380mm
Width	380mm
Weight	18kg (air) 10kg (water)
Connector type	RMK with locking collar

#### HVC3000 Cable

Outside diameter	26mm
Breaking strain	2000kg
Standard length	75m

### ELECTRICAL INPUT

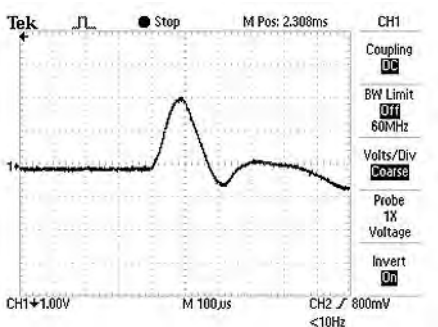
Recommended power	700-1000J per shot
Maximum energy input	1000J
Maximum power input	3000J/second
Thermal interlock protection interfaced to energy source	

### SOUND OUTPUT

Source level	Typically 222 dB re 1 $\mu$ Pa at 2 metres with 1000J
Pulse length	300 to 500 $\mu$ s depending on energy applied
Reverberation	<10% of initial pulse

### COMPATABILITY

Energy source	CSP-N1200 (Other CSP series of power supplies can be used)
Catamaran	CAT303
Cable	HVC3000



Sample Pulse at 1000J



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With on-going research and development in cutting edge technology and acute awareness of current and future industry needs, our commitment to our customers is second to none. We are equally determined to aid and assist our customers worldwide with a network of partners, suppliers and overseas Support Centres. Together, we offer engineering excellence, trusted products and a first class professional service on a global scale.



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