



KEY FEATURES

- Manifolded Bandpass Subwoofer
- Dual 18" woofers with 3" voice coils
- Very high output and compact size
- High efficiency and punchy sound
- Class D amplifier module with SMPS and variable switching frequency
- 96kHz / 40 bit floating point CORE processing
- Optimized presets for use in combination with AX800A compact line arrays
- Fully networkable with PRONET remote control software
- High strength water repellent cones
- 15mm birch plywood enclosure
- Heavy duty castors

APPLICATIONS

- Live sound reinforcement
- Theatre
- Corporate & A/V
- Live music venues
- House of Worship
- Leisure and Fitness
- Nightclubs and Bars

TECHNICAL SPECIFICATIONS

SYSTEM

System's Acoustic Principle	Manifolded Bandpass
Frequency Response (± 3 dB)	36 Hz – 100 Hz (Processed)
Maximum Peak SPL @ 1m	139 dB

TRANSDUCERS

LF	Two 18" (460mm), 3" (75mm) voice coil
Cone	High stiffness, water repellent

ELECTRICAL

Input Impedance	20 k Ω balanced, 10 k Ω unbalanced
Input Sensitivity	+4dBu / 1.25 V
Signal Processing	CORE processing, 96kHz / 40bit floating point SHARC DSP, 24 bit AD/DA converters
Direct access Controls	4 Presets (Standard/InfraSub/Cardioid, User), Network Termination, GND Link
Remote Controls	PRONET control software
Network Protocol	CANBUS
Amplifier Type	Class D with SMPS, variable switching frequency
Output Power	1000W + 1000W
Mains Voltage Range (Vac)	230V $\pm 15\%$ - 115 $\pm 15\%$ 50/60Hz (internally selectable)
IN / OUT Connectors	Neutrik XLR-M / XLR-F
IN / OUT Network Connectors	ETHERCON® (NE8FAV)
Mains Connectors	PowerCon® TRUE1 (NAC3PX), IN + LINK
Cooling	Variable speed DC fan

ENCLOSURE & CONSTRUCTION

Dimensions (W x H x D)	570 mm (22.4") x 960 mm (137.8") x 880 mm (34.6")
Depth Including Wheels	1008 mm (39.7")
Enclosure Material	15mm reinforced phenolic birch plywood
Enclosure Finish	High resistance water based black textured paint
Transport	4 x heavy duty 100mm (4") castors, 6 handles
Net Weight	70 Kg (154 lbs.)

DESCRIPTION

The SW1800A is a compact powered manifolded subwoofer designed to provide sub-bass support for the compact AX800A compact line array, and features some of the most advanced technologies for low frequency reproduction. The manifolded bandpass design uses manifold loading of the front side of the speaker cones to maximize the mutual coupling between the two drivers. This innovative configuration does not use any large resonant cavity to load the speakers, but very compact cavities in order to obtain advantages in terms of definition, both at the lowest end and the upper bass.

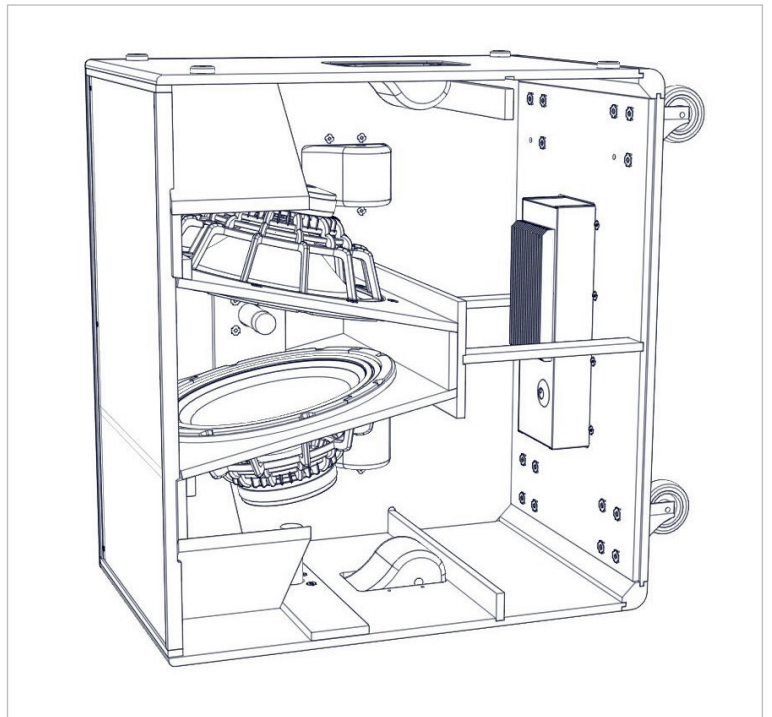
TRANSDUCERS

The SW1800A subwoofer system is equipped with two high power 18" (460mm) transducers with 3" voice coils wound on aluminium formers for good heat dissipation.

The speaker cones feature a humidity resistant treatment which makes the SW1800A very suitable for outdoor concert touring applications.

SONIC PERFORMANCE

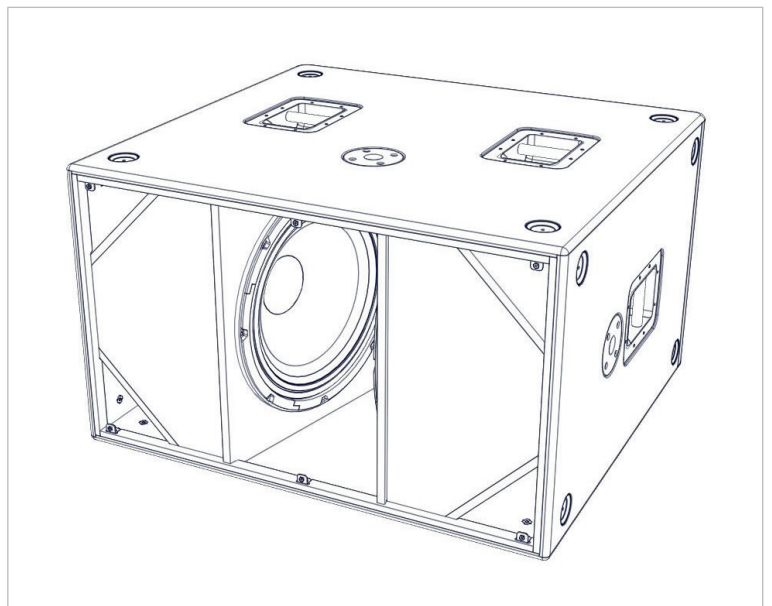
The SW1800A represents an innovative subwoofer design that features solid low frequency definition and a "punchy" feeling in the upper bass range. The combination of accuracy in acoustic transient response together with the use of the latest technology in transducer linearity, signal processing, and power amplifiers allows the SW1800A to deliver unprecedented low frequency reproduction quality with solid deep end, together with very fast and accurate bass response. It is designed to complement the AX800A line array in an approximate 4:1 ratio.



HARDWARE

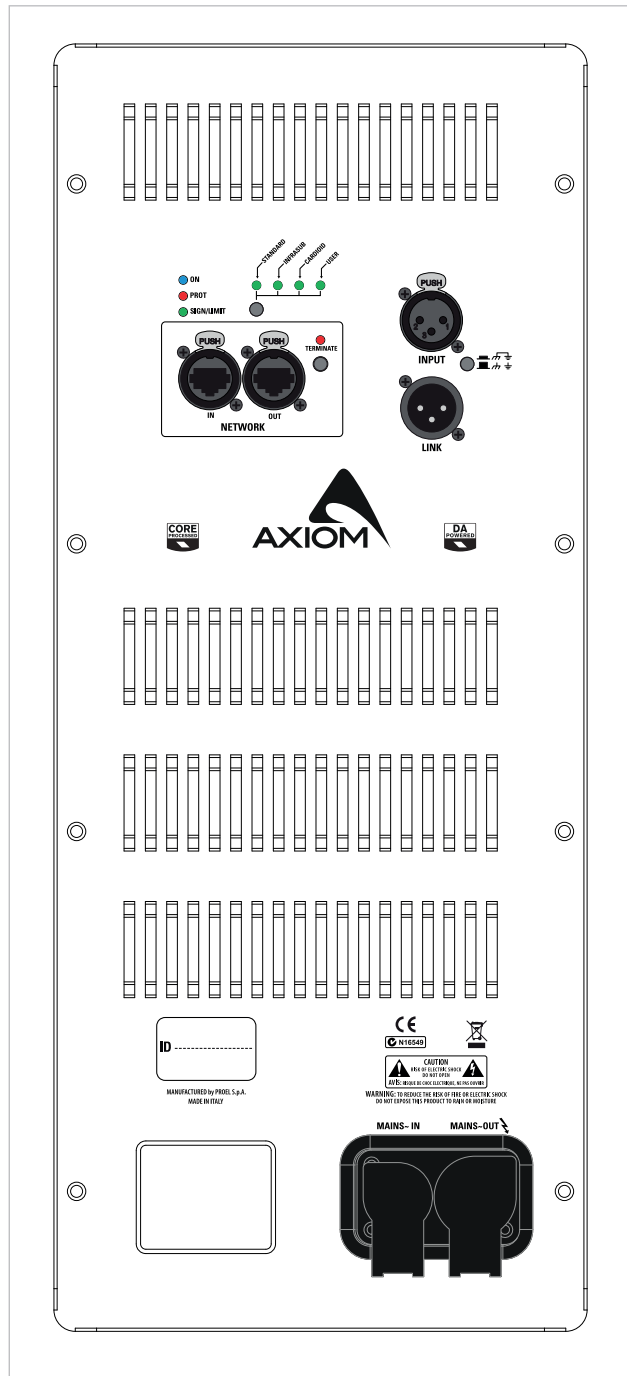
The 15mm birch plywood enclosure features two 35mm pole mount sockets, one on the top and one on the side, allowing satellite speakers such as AX800A compact line array elements or any ED series point source loudspeakers to be securely pole mounted on top of the subwoofer at an optimum height for best audience coverage.

Heavy duty wheels and flush handles are provided for easy transportation and handling, while matching stacking recesses and feet enable stable ground stacks to be assembled.



SIGNAL PROCESSING

The system processing is based on the CORE DSP platform designed by the PROEL R&D Laboratories using one of the most advanced SHARC DSP devices available for audio applications. It features 40bit, 96kHz floating point resolution and top-quality 24-bit AD/DA converters for perfect signal integrity, dynamic range in excess of 110dB, and superior sonic performance. Thanks to its massive processing power, the CORE platform is capable of providing the most sophisticated algorithms for speaker processing, together with comprehensive remote control and networking capabilities.



The PRONET control software, working on a solid and reliable CANBUS based network protocol, provides an intuitive interface for the remote control of the whole audio system via the rear panel etherCON RJ45 connectors, with the possibility to equalise and delay individual devices, as well as setting driver protection parameters, and monitoring the status of the amplifier.

Four factory DSP presets are provided for when the SW1800A subwoofer is not connected to a network, and allow for rapid and simple setup: Standard, for general purpose use; Infra Sub, as an additional very low frequency band or for sub-bass effects; Cardioid, for use in directional bass arrays; and User, allowing custom parameters to be designed in PRONET and recalled for specific situations when off-line.

POWER AMPLIFIER

The SW1800A is powered by a DA SERIES digital power module, a new generation of CLASS D power amplifier with digitally-controlled SMPS. The innovative technology used for these amplifiers (including also the use of a variable switching frequency) offers performance at the top of the range, such as superior sound definition at any audio frequency, very high dynamics for low level signals, and very low distortion even at maximum power. The amplifier's superior sound quality can be compared with top-of-the-range AB-class analog systems, while the DA modules feature higher dynamic range, very compact size, light weight, and efficiency above 90%.

The amplifier delivers 1000 watts into each driver individually. Input and link connections are via balanced 3-pin XLR connectors, and a ground lift switch is provided for hum-free operation.

ENGINEERING DRAWING

