



## KEY FEATURES

- Very High Output
- Compact size for a very good output-to-weight ratio
- Manifolded Transmission Line configuration for very fast transient response
- High-strength, water repellent, glass fiber reinforced cones
- Long-excursion split coil for extended linear response
- 96KHz / 40 bit floating point CORE processing with PRONET remote control
- Digitally controlled Class D amplifier module with SMPS

## APPLICATIONS

The SW218A subwoofer is designed to deliver high quality low frequency reproduction where very high output is a key requirement, together with well defined deep bass response and fast transient response. Its compact size and light weight make it suitable for several different uses, ranging from touring applications to fixed installations and high-level dance clubs.

## TECHNICAL SPECIFICATIONS

### SYSTEM

System's Acoustic Principle	Manifolded Transmission Line
Frequency Response ( $\pm 3$ dB)	30 Hz – 92 Hz (Processed)
Maximum Peak SPL @ 1m	141 dB

### TRANSDUCERS

Type	Two 18" (460mm), 4" (100mm) VC
Cone	High stiffness, water repellent, glass fiber reinforced
Voice Coil Type	Flux Demodulating Ring
Suspension	Double Centering Spider

### ELECTRICAL

Input Impedance	20 k $\Omega$ balanced, 10 k $\Omega$ 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	2000W + 2000W
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 Connector	PowerCon® (NAC3MPA)
Cooling	Variable speed DC fan

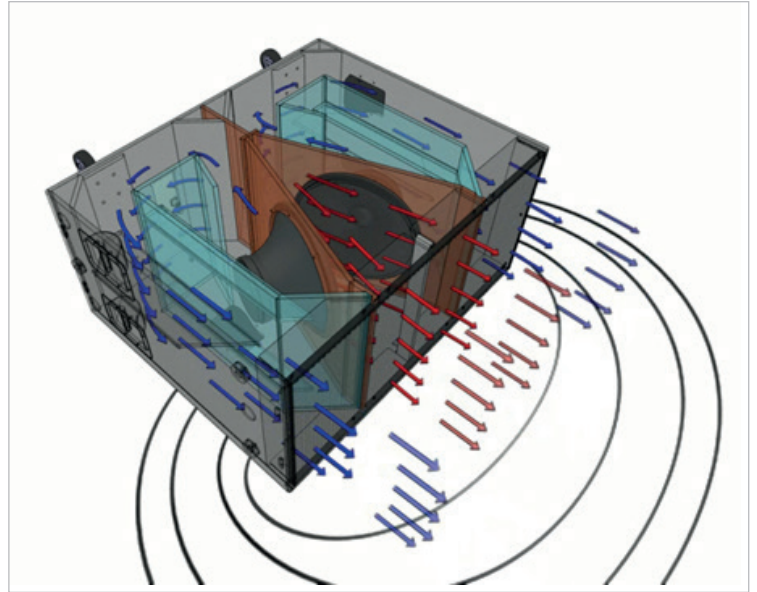
### ENCLOSURE & CONSTRUCTION

Physical Dimensions	
W x H x D	1215 mm (47.87") x 590 mm (23.24") x 950 mm (37.43")
Depth Including Wheels	1050 mm (41.37")
Enclosure Material	15mm, reinforced phenolic birch
Paint	High resistance, water based paint
Wheels	4 heavy-load 100 mm $\varnothing$
Net Weight	101.7 Kg (223.7 lbs.)

## DESCRIPTION

The SW218A is a very high quality powered subwoofer system featuring some of the most advanced technologies for low frequency reproduction. Its unique and innovative design is based on a configuration that can be defined as Manifolded Transmission Line.

It uses manifolding of the front side of the cones to maximize the mutual coupling between the two drivers, while loading the back of the cone with a large-size transmission line that has the function to create a transmission path from the back of the transducers to the front. This innovative configuration does not use any large resonant cavity to load the speaker in order to get the lower octave and this reduces significantly pressure decay time inside the enclosure, with large advantages in terms of definition both at the lowest end and the upper bass. At the same time, it doesn't use very long transmission line paths as well. Its working principle is an hybrid combination between a short transmission line and an over-damped reflex load. Moreover, the maximization of the mutual coupling between the drivers increase the fastness of the transient response while maximizing the overall energy efficiency as well.



## TRANSDUCERS

The SW218A subwoofer system is equipped with two high power 18" (460mm) transducers capable of long excursion (up to 30mm peak-to-peak), controlled by high stiffness Double Silicon Spider as centering suspension and by heavy duty surround.

The motor structure features high strength ( $BL^2/Re$ ) with optimized symmetry and excursion controlled by Inner Flux Demodulating Ring.

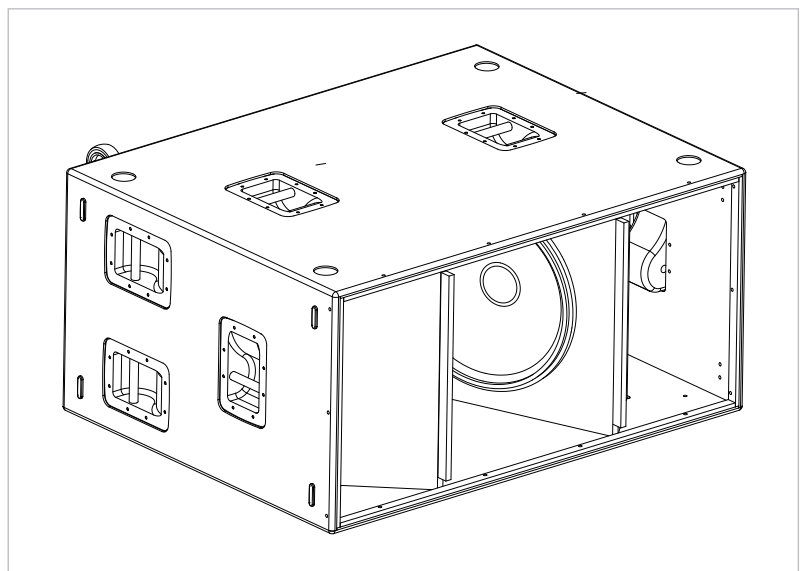
The robust copper 100mm (4") voice coil is wound in two different layers both outside and inside the coil support, then doubling the coil surface exposed to air cooling and consequently improving the long term thermal capacity of the loudspeaker.

Cones are made of very high-stiffness glass fiber reinforced paper, featuring also invisible water repellent treatment.

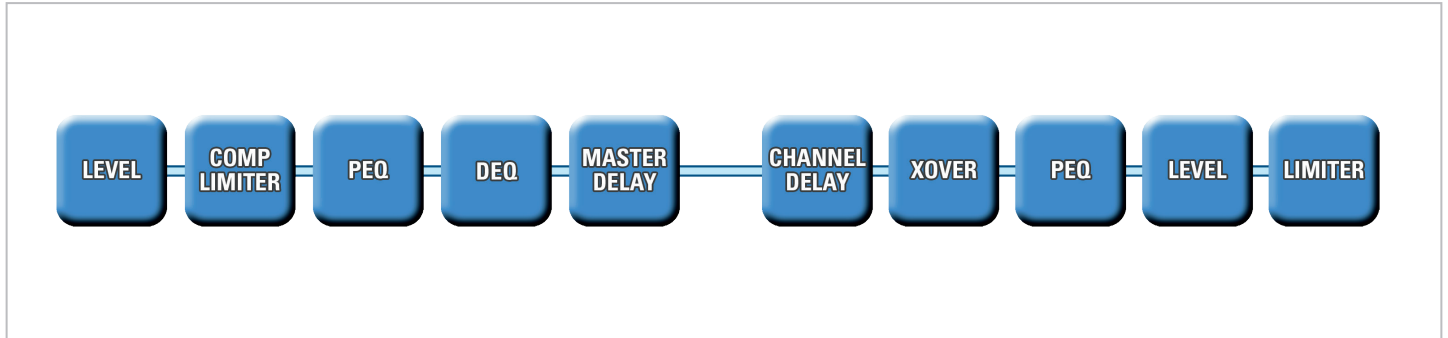
## PERFORMANCES

The SW218A represents an innovative subwoofer design that features unprecedented performances in terms of low frequency definition and "punchy" feeling in the upper bass range.

The combination of accuracy in acoustic transient response together with the use of latest technology in transducers linearity, signal processing and power amplifiers allows the SW218A to deliver unprecedented low frequency reproduction quality with solid deep end, together with very fast and accurate bass response.



## SIGNAL PROCESSING and POWER AMPLIFIERS

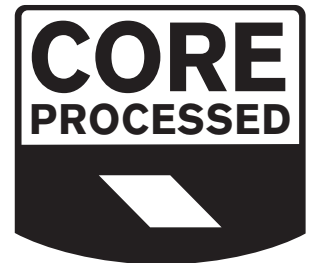


The system processing is based on the **CORE DSP platform** designed by the PROEL R&D Laboratories using one of the most advanced SHARC DSP for audio application. It features 40bit, 96kHz floating point resolution and top-quality 24bit AD/DA converters, for a perfect signal integrity, a dynamic range in excess of 110dB and a 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 remote control and networking capability.

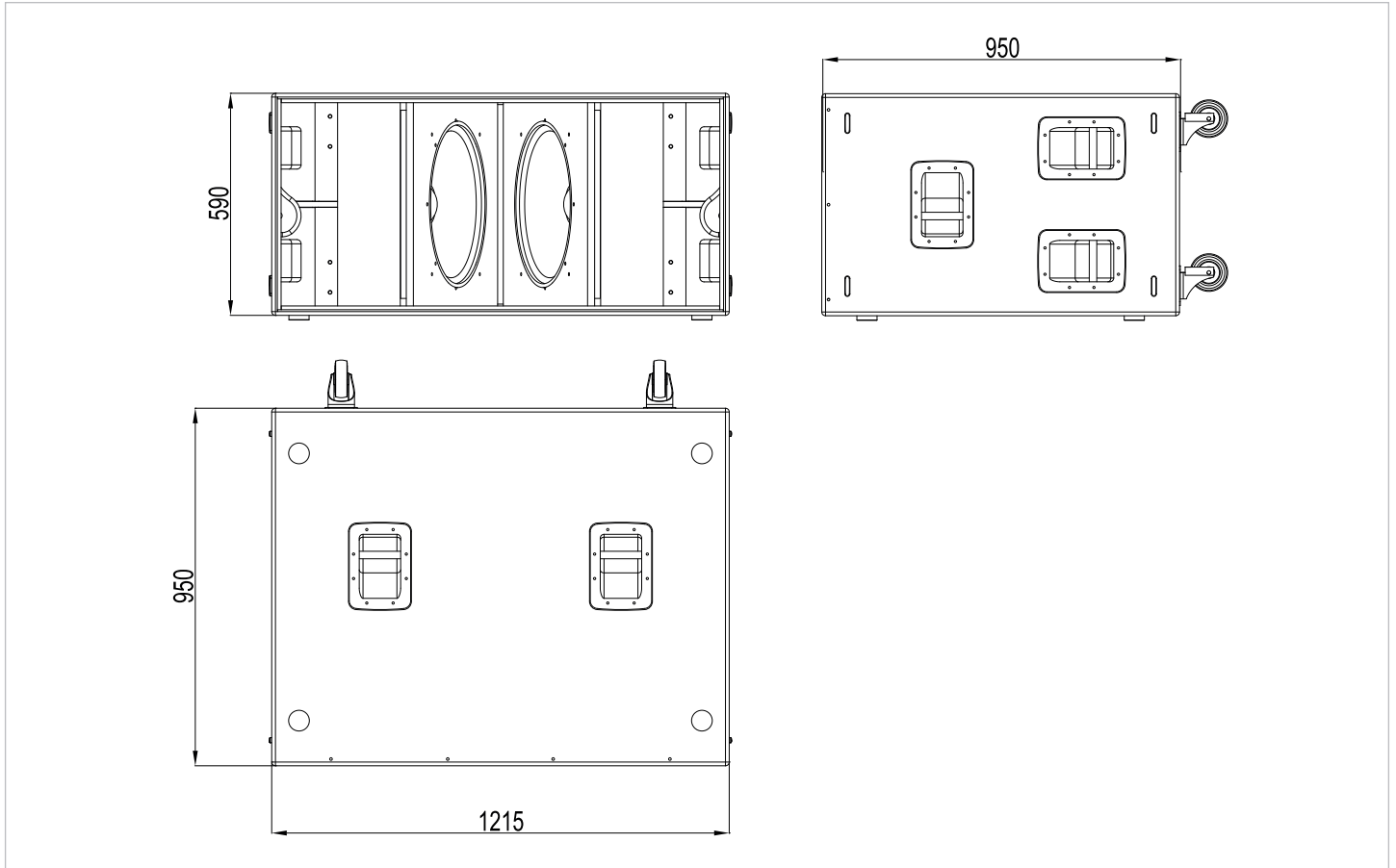
The PRONET control software, working on a solid and reliable CANBUS based network protocol, provides an intuitive interface for the remote control of the whole system, with the possibility of eqing, delaying, increasing the protections and monitoring the status of the amplifier.

The SW218A is powered by **DA SERIES** digital power modules, 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 performances at the top of the range, such as a superior sound definition at any audio frequency, very high dynamics also for low level signals and very low distortion even at the maximum power. The superior sound quality can be compared with top-of-the-range AB-class analog systems, while the DA modules feature a higher dynamics, very compact size and light weight and efficiency above 90%.

The DA module employed for powering the SW218A delivers in an ultra-compact package a maximum power of 4000W.



## PHYSICAL DIMENSIONS



## POWER MODULE CONTROL & CONNECTION PANEL

