

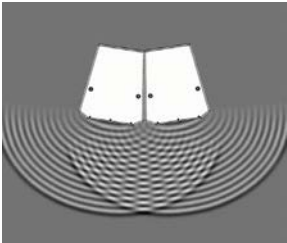


AX1012
Constant Curvature Array Element



AX1012 is a versatile constant curvature full-range element that can be used to create both **vertical and horizontal line source arrays** and also as a high-directivity point-source loudspeaker.

The 1.4" high frequency compression driver is coupled to **STW - Seamless Transition Waveguide**, which ensures a precise control of mid-high frequencies both on horizontal and vertical axis, for a perfect acoustic coupling between the enclosures that form the array. The unique waveguide design produces vertical line source directivity with a horizontal pattern that is maintained down to approximately 950Hz. This allows to project clean music and vocals evenly around the audience without hot-spots and dead-spots. The sharp SPL off-axis rejection is used to avoid reflecting surfaces in the enclosure coupling plane and perfectly adjusts the acoustic coverage to the audience geometry.

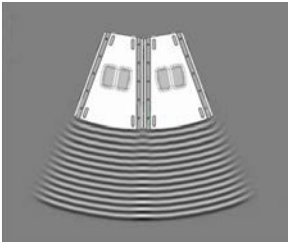


Traditional HF horns

Phase interactions between traditional stand-alone Point Source loudspeakers, featuring poor directionality, make it difficult to achieve consistent and lobe-free dispersion. These phenomena produce destructive interferences that affect the tonal balance, clarity and intelligibility at many listening positions.

STW - Seamless Transition Waveguide

Thank to the Seamless Transition Waveguide the system designer or sound engineer can build true line source horizontal or vertical arrays in 20° building blocks with seamless integration between cabinets.



STW
Seamless Transition Waveguide

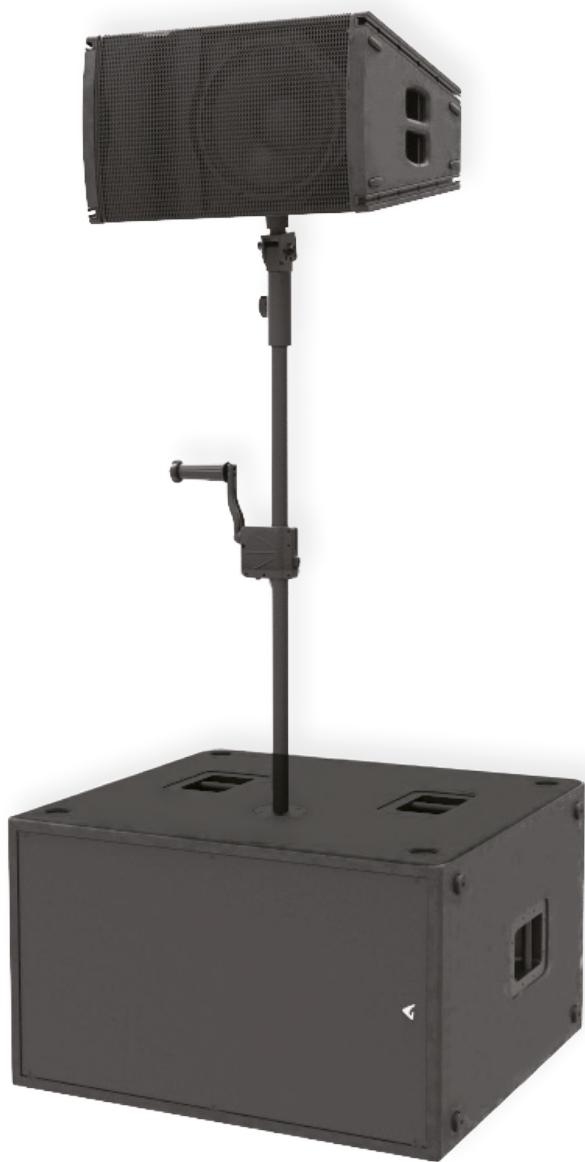
The **AX1012** tour-grade 15mm phenolic birch plywood cabinet is fitted with four integrated steel rails, to be used for coupling the cabinets with the provided aluminium Coupling Bars (2pcs included with each cabinet).

A comprehensive set of accessories is available for creating horizontal or vertical arrays, for ground-stacking the systems and also for pole mounting one or two units.

The **KPTAX1012H** is a coupling bar to be used to fly the AX1012 in an horizontal array. The **KPTAX1012T** suspension bar allows an array of up to 6 units to be installed using a single suspension point.

The **KPAX1012V** is a flying bar than be used to create a vertical array of up to 6 units. It can be used also for down-firing arrays.

The **KPAX265** pole adapter and the **KP010** tilt adapter allows the AX1012 to be installed on a pole, with the possibility to tilt the cabinet in order to aim the sound to the audience.



1-unit pole mounted (100°x20°)

4-unit horizontal array (80°x100°)



4-unit down firing array (80°x100°)



3-unit vertical array (100°x60°)



3-unit ground stack array (100°x60°)



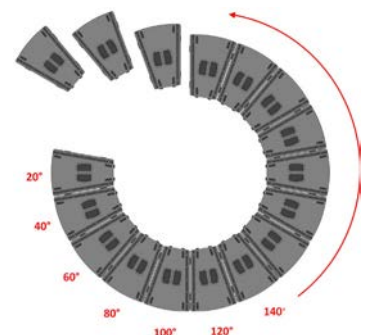


KEY FEATURES

- Powered Constant Curvature Array Element
- 12" woofer, 1.4" HF neodymium compression driver
- Constant curvature Seamless Transition Waveguide (SWT) with 100° H x 20° V dispersion
- Class D amplifier module with SMPS
- 96KHz / 40 bit floating point CORE processing with PRONET remote control
- Integral suspension hardware for horizontal or vertical array installation
- Pole mounting available for free-standing applications
- Passive version available (AX1012P)

AX1012 arrays deliver seamless coverage only to desired areas minimizing unwanted reflections of walls and surfaces or avoiding interactions with other sound systems, with the stage or with other areas. Multiple units in a horizontal array, for example, allow to shape the radiation pattern in slices of 20°, providing exceptional flexibility in the construction of the desired coverage angle. In this way, even a center array with 360° coverage angle can be assembled very easily.

To extend the system's low frequency response the AX1012 can be complemented by sub-woofers from the **Axiom SW** series such as SW18A, SW1800A or SW218XA.



AX1012 is recommended for the use as indoor FOH (Left – Centre - Right systems) or outdoor FOH in small to medium-sized events. It can be used also as a complement to large systems as Out-fill, In-fill or distributed fill applications in a wide range of venue, providing clear sound to areas not fully reached by the main system, while minimizing unwanted interactions and room reflections.

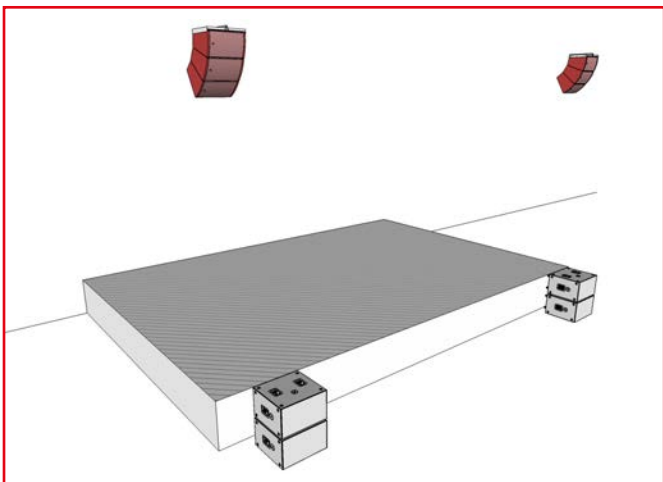
APPLICATIONS

- Sound reinforcement in small-to-medium-size live venues
- Side-fill, Out-fill or In-fill applications
- Down-firing array systems
- Delay systems in stadia and arenas

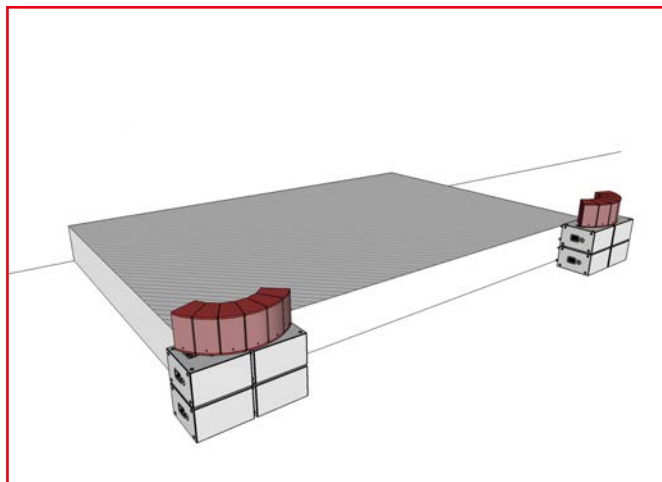
- Corporate & A / V
- Theme parks
- Houses of Worship and Theatres
- Leisure and Fitness

EXAMPLES

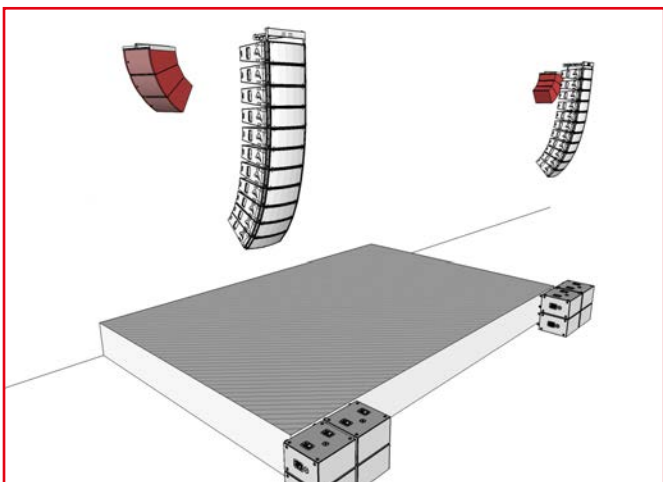
Main PA System - Flown Vertical Array



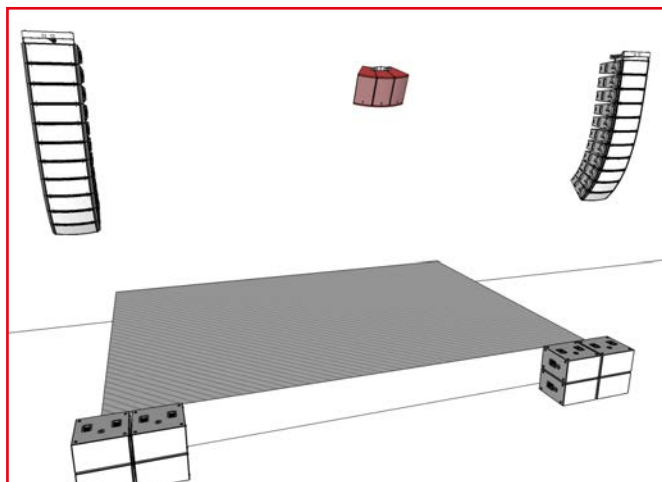
Main PA System - Stacked Horizontal Array



Complement to large PA Systems - Flown Out-fill



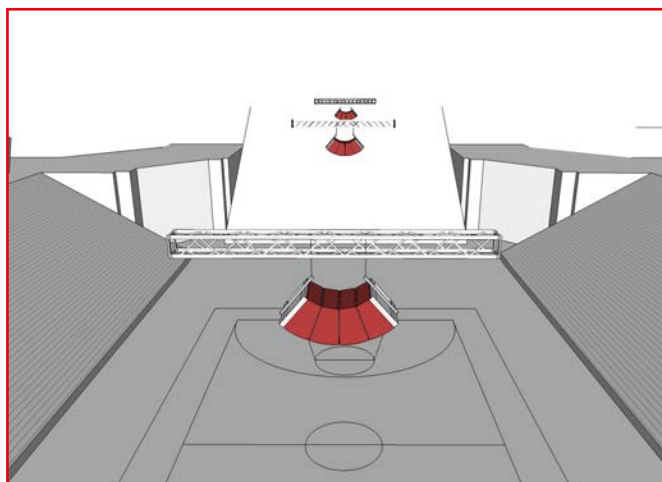
Complement to large PA Systems - Flown Center-fill



Complement to large PA Systems - Flown Side-fill



PA System - Down-firing array system



SYSTEM 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 for audio application. It features 40bit, 96kHz floating point resolution and top quality 24bit 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 remote control and networking capability.

PRONET

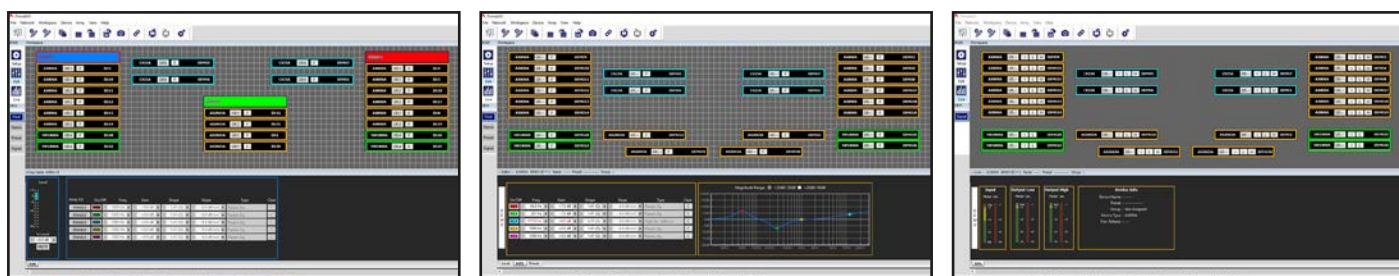
LOUDSPEAKER CONTROL SOFTWARE

The **PRONET AX 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, managing the protection functions, and monitoring the status of the amplifier.

Three different operating modes are provided: SETUP, EDIT, and LIVE; these can be chosen depending on whether systems are to be set up for the first time, units are to be edited individually, or operated under live conditions.

The interface allows different choices of information or features to be displayed or selected on the unit's control panels and provides a method of fast Group assignment. The software allows the easy creation of arrays of AXIOM loudspeakers and global control of volume, mute and EQ functions for each array.

Snapshots of the system can be loaded or saved, including a specific unit's position on the desktop and all the parameters of the whole system.



POWER AMPLIFIER

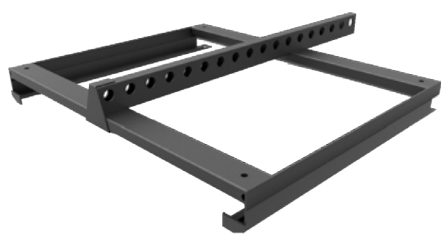
The AX1012A is powered by a **DA SERIES power module**, a new generation of CLASS D power amplifier with SMPS. The innovative technology used for these amplifiers offers top-of-the-range performances, such as a superior sound definition at any audio frequency, very high dynamics even for low level signals, and very low distortion even at maximum power.

Output power is optimised specifically to the drive units for efficient power transfer, with the low frequency section producing 900 watts while 300 watts is available for the high frequency compression driver.

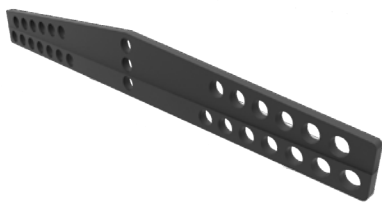
Input and link connections are via balanced 3-pin XLR connectors, and a ground lift switch is provided for hum-free operation. Mains power is connected through a locking Neutrik PowerCON, and a Power Out connector allows mains power to be linked to additional AX1012A cabinets.



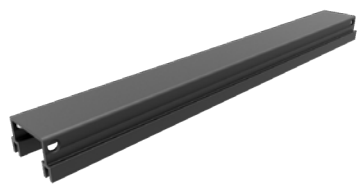
RIGGING HARDWARE



KPTAX1012V
Vertical array flying bar



KPTAX1012T
Suspension Bar



KPTAX1012
Coupling Bar



KPTAX1012H
Horizontal array flying bar



KP010
Tilt Adapter



KPAX265
Pole Adapter

TECHNICAL SPECIFICATIONS

	AX1012A	AX1012P
System Acoustic Principle	Constant Curvature Array Element	
LF transducer	One 12" (305mm) LF driver, 3" (76mm) aluminium voice coil	
HF transducer	One 1.4" (35.5mm) HF compression driver, 2.4" (61mm) aluminium voice coil	
Frequency Response (-6dB)	65 Hz – 17 kHz (processed)	
Nominal Impedance		8 + 8 ohm
Sensitivity 2.83V (AX1012P)		97 dB SPL @ 1m
Maximum (peak) Output	134 dB SPL @ 1m	134 dB SPL @ 1m
Input Power Rating (AES)		680 W
Input Power Handling (Program)		1360 W
Amplifier Output Power	900W + 300W	
Horizontal/ Vertical Coverage Angle	100°/20° 1kHz to 20kHz (-6dB)	
Dimensions (W x H x D)	246 mm (9.7") x 611 mm (24.0") x 500 mm (19.7")	
Net Weight	32.5 kg (71.6 lbs)	30.5 kg (67.3 lbs)
Enclosure	15mm, reinforced phenolic birch	
Finish	High resistance, black water based paint	
Rigging System	Captive suspension system	
Connectors	Neutrik XLR-M / XLR-F ETHERCON®(NE8FAV) PowerCon® (NAC3MPA) PowerCon® (NAC3MPB)	Neutrik® speakON™ NL4MP x 2

The essence
of Sound



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