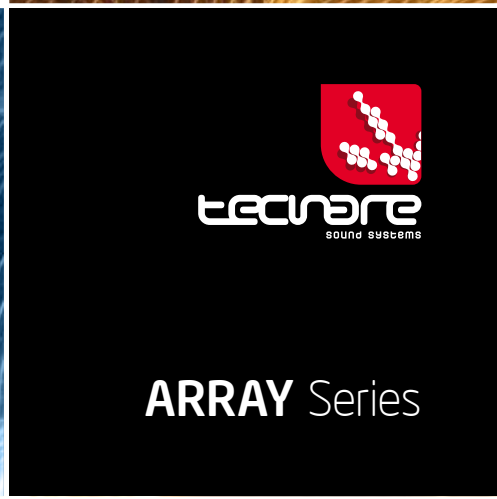
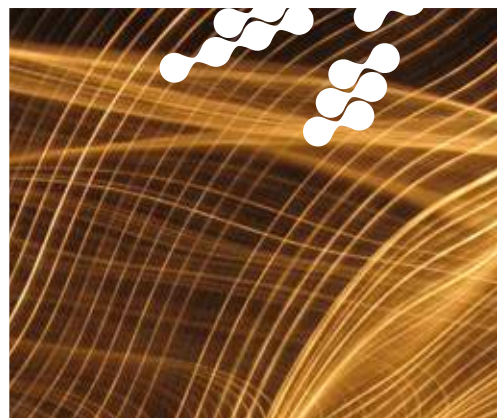
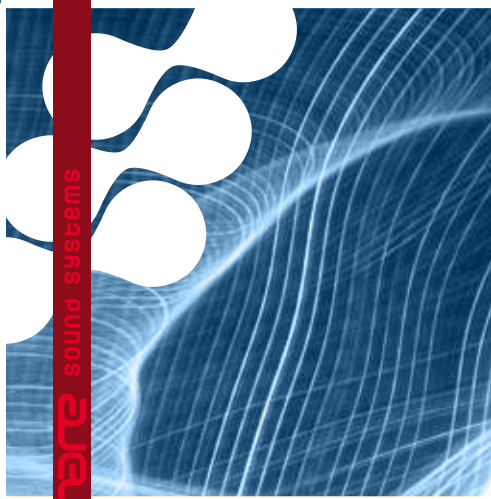




LA312



The **Tecnare Array Series** is a fully integrated line of self-powered DSP controlled loudspeakers that merge the singular advantages of array technology, with the application of computer digital management benefits to professional audio reinforcements. With this revolutionary technique the entire concept of an array box is completely replaced by the idea that each array element changes to be an active device, namely a PCC speaker, controlled with a small laptop via software. A standard PCC speaker houses one or more module amps and a DSP processor. All these PCC speakers are linked by a network through a USB interface to the laptop.

Once connected, we can control in real time the parameters of each speaker such as volume, graphic equalisation, parametric equalisation, crossover, internal delays, compressor-limiters, check test, save and recall of presets, mute, transfer spectrum analysis, r.t.a. spectrum control, phase check, and more!

Array Series are designed both for permanent installation and touring applications where even coverage, intelligibility, and high SPL levels are required.

Array Series are engineered to offer sound reinforcement professionals solutions to meet almost any challenge.

Self-powered DSP controlled arrays ensure the consistency required to obtain the benefits of line array technology and provide the best flexibility, which is a very important factor when multiple zones within the array are required.



MINIArray / LA208 / LA122
LA312 / SW118M / SW218V

ARRAY Series



Photo Model / LA122



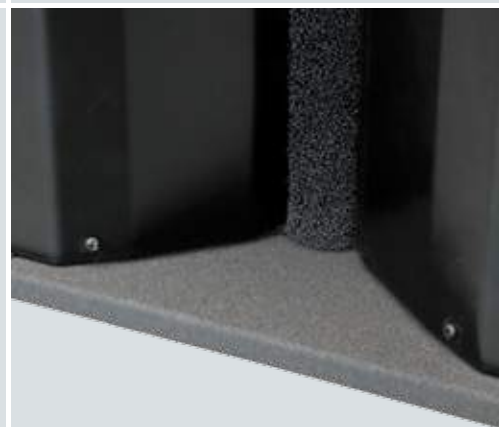
Photo Model / SW118M



Photo Model / LA312



Photo Model / LA208



APPLICATIONS

*Live music venues.
Dance clubs.
Theatre and corporate events.
Houses of Worship.
Touring.*

Since the beginning, the goal of most line array manufacturers has been to build a one cabinet model that could cope with all kind of events. Very big and heavy designs have been unable to avoid the use of extra subs. So why rig those huge systems housed with 15" and 18" units if in the end, extra subs, usually not hung, are required? Moreover, the technology employed brings extra on-stage problems with undesirable bass excess headroom.

Another complication, not well-solved, is the need for specially developed loudspeakers to cover the front fill situations. More loudspeakers have to be used, with different signal processing, so in the end we find that systems become more complex and less flexible.

To bring forward a total solution to fix all these in a simple way is not easy, but the **LA312** has enough new solutions to clear up things and make the job of sound engineers easier.

First of all we have established a design criterion in which the size of the cabinet is extremely compact.

The bass section consists of two 12" drivers coupled to a low flare folded horn. A horn always has the benefit of better control the pattern in which the sound is projected, avoiding the headroom bass problems on stage. The coherent sum of the mouths' outputs of all the enclosures of the array extends the low frequency response (i.e. 46Hz-3dB for an 8 array element). Nowadays for events in which very low frequency performance is needed, the use of extra subwoofers will be required.

For the mid frequencies reproduction, the **LA312** uses one very high output 12" neodium loudspeaker, coupled to a phase corrector device that evenly spreads its response all over the mouth of the horn. That is fundamental for every well designed line array to avoid combing situations.

LA312

High frequency is handled by two 1.4" exit compression drivers attached to a pattern controlled (85° horizontal x 8° vertical) symmetrical curved wave guide, coupled to a non resonant horn.

The system's shape is trapezoidal, so we can better angle and focus its elements. This feature could partially solve front fill applications, if the front fill focused elements could be managed independently apart from the other elements of the array. That can be done with the **LA312**, as each loudspeaker is individually DSP controlled by its own digital processor.

Every **LA312** has built into it the amplifiers and digital control required to vary each of the features of the enclosure. This performance give us the possibility to program air absorption correction, modified eq's and gain for front fill situations, directivity control... and all the parameters we need to optimize the overall performance.

The **LA312** has built in proprietary hardware for simple, fast and safe rigging.

The enclosure has been made with the latest techniques assuring a perfect and rigid construction.

Weatherized finish is provided, as the cabinet is covered with rugged Durawound texture finish and protected with epoxy powder coating grills.

With the mouse of a small laptop, the sound engineer can vary in real time, any of the parameters on each of the speakers.

After starting **TECNARE** software, the system will identify the speakers connected to the net, showing them in the network window of the program. You only have to choose the speaker to be managed, and six different windows will be available for the sound engineer to control everything.

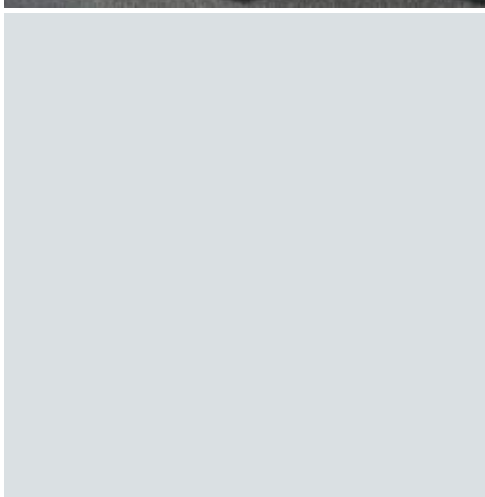


The program allows the storage of as much presets as desired, which can be loaded any time, four of them without using the software, but only clicking on the rear panel.

With this way of operation, sound systems become far more flexible. A lot of patching can be avoided, reducing rack controls drastically. At the same time, equalization, crossovers, limiting, delay of each box no longer have to be the same, without the hieroglyphic needed to do that in a conventional way for a complex installation.

LA312 PCC is self-powered with three-way amplification and controlled with a DSP built inside, (**PCC Original** or **PCC Advanced Series**), with ten fully parametric eqs, delay, crossover points, compressors, gain controls, 30 band eq, phase response alignment circuitry, etc.

The system incorporates as standard a very powerful audio analyzer. The sound engineer can check the system's response, on spectrum or transfer mode, while modifying any of the various audio controls available on the system. It also incorporates a set-up screen, with an audio generator, markers for a delay measurement, and vu-meters.



LA312 ENGINEERING SPECIFICATIONS

Frequency Response:

58 Hz – 19 kHz ± 4 dB, measured on axys.
42 Hz – 19 kHz ± 4 dB (6 element array).

Nominal Dispersion: 90°H x 8°V@-6dB points.

Impedance: 4 Ohm low, 8 Ohm mid, 8 Ohm high.

Sensitivity: 105 dB (1w/1m).

Calculated Max Spl: 138 dB continuous/
144 dB Peak.

Power Handling:

#2400 W nominal.

* 4800 W continuous.

Dimensions (HxWxD):

440 (front height) - 310 (rear height) x
1245x740 mm.

Net Weight: 89 kg selfpowered PCC version.

Components:

Low: 2x12" LF driver band pass horn loaded.

Mid: 1x2" HF phase corrected.

High: 2x1.4" compression driver attached to proprietary waveguide device.

Construction:

16mm birch plywood. Finished in black semi-matt textured Durawound weatherized coating. One recessed carrying handle.

Grille:

Powder coated perforated steel with acoustically transparent reticulated foam.

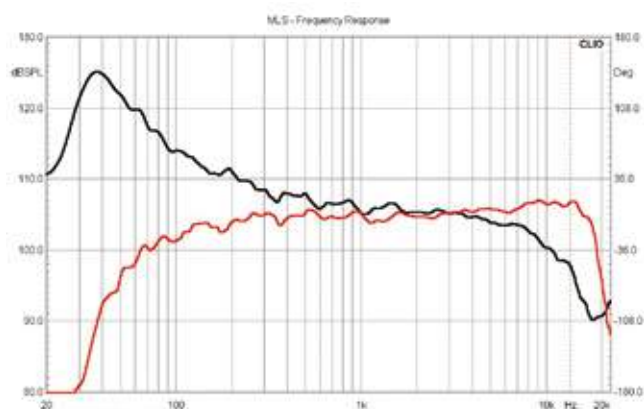
2 hours test made with continuous pink. noise signal (6 dB crest factor).

* Power calculated on rated minimum impedance.

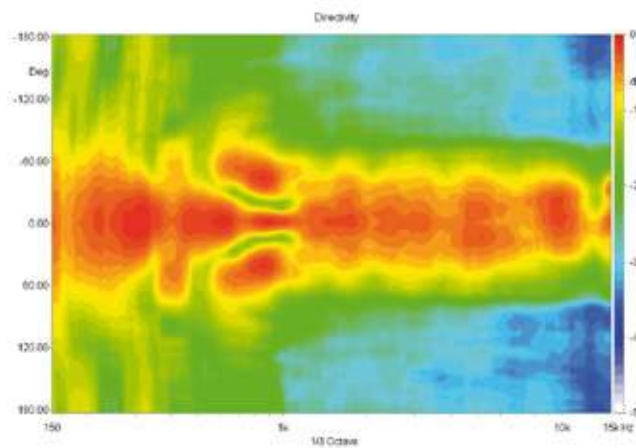
* Power on Continuous Program is defined as 3 dB greater than the nominal rating.

LA312 DATASHEET

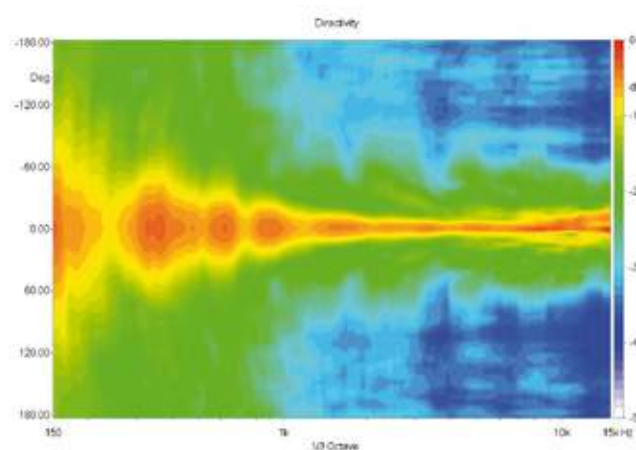
FREQUENCY
**RESPONSE &
MINIMUM
PHASE**

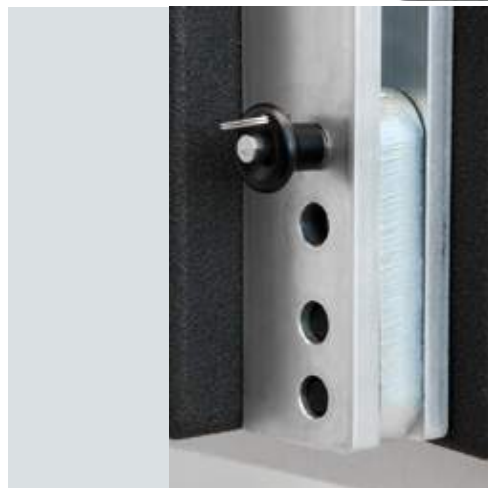
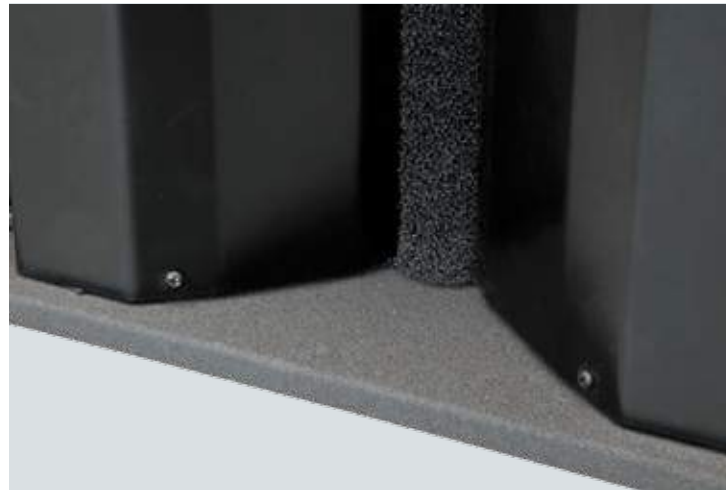
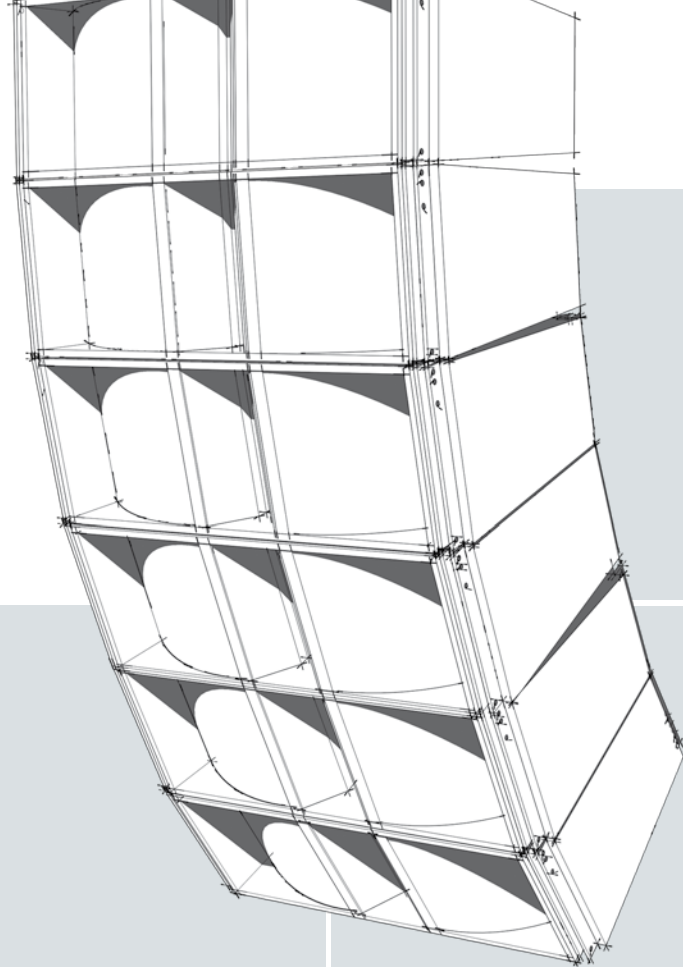


**HORIZONTAL
COVERAGE**



**VERTICAL
COVERAGE**





LA312

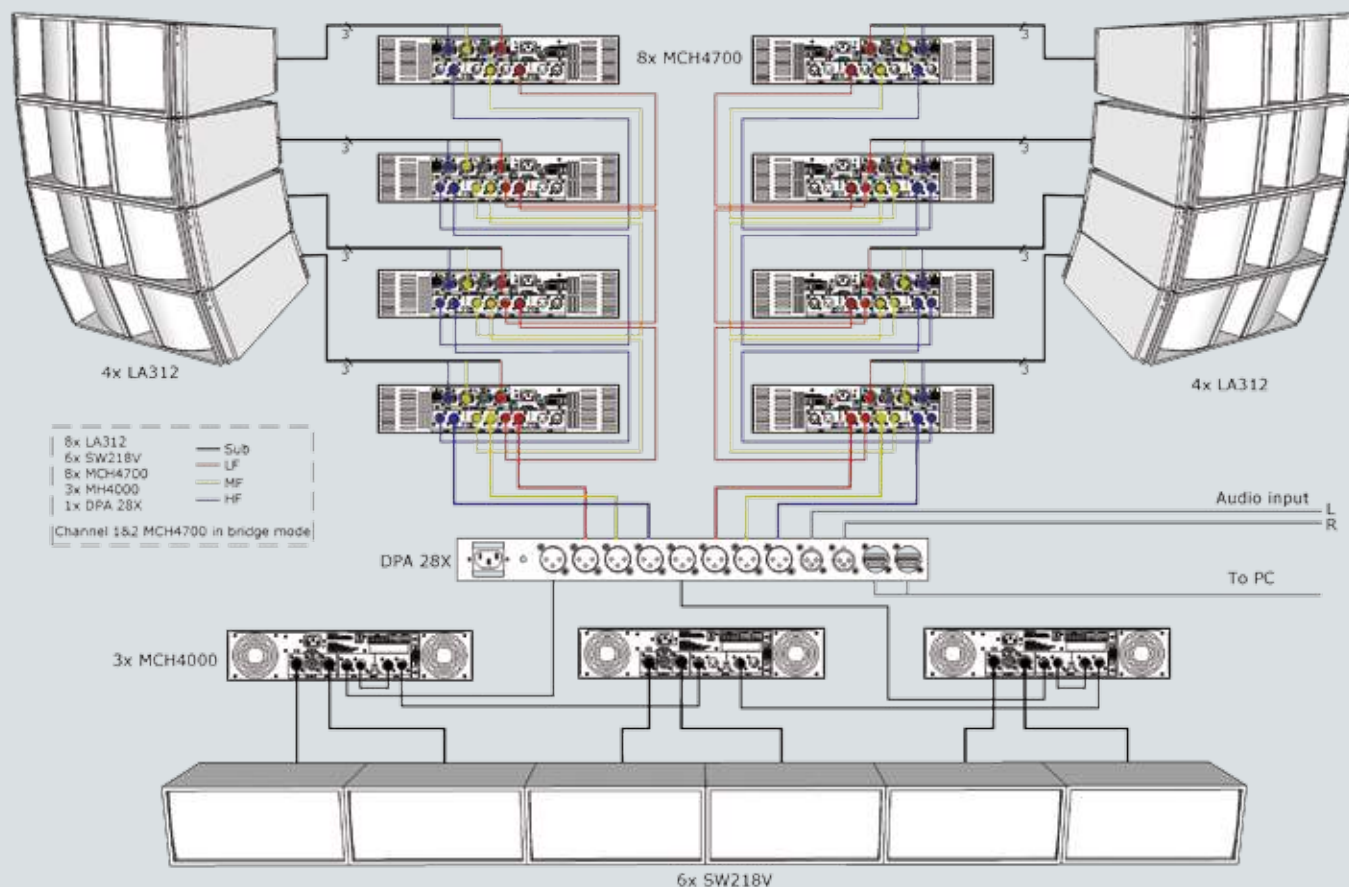


LA312

INSTALLATION DIAGRAMS

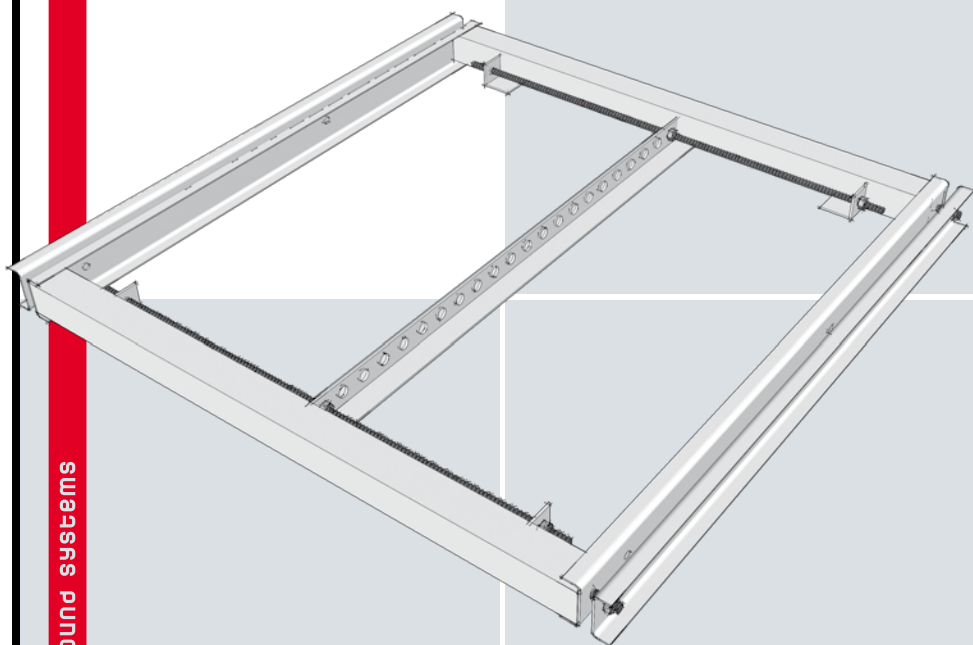


tecnare sound systems

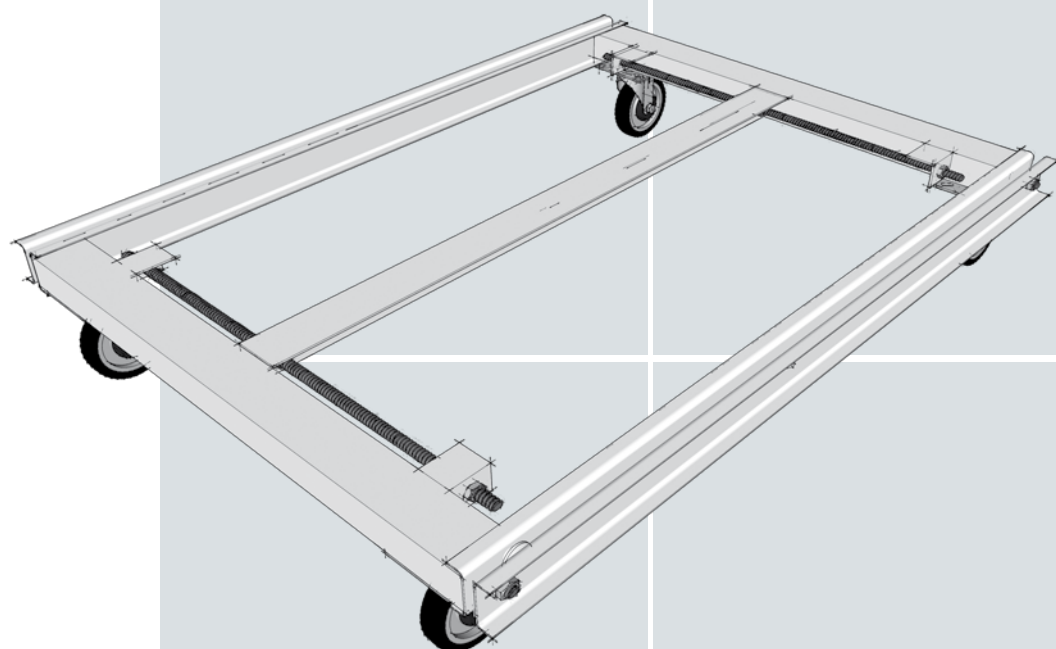


8x LA312 + 6x SW218V

Accessories LA312



HV-312



HS-312



LA312 PCC

SOFTWARECONTROL

PCC Technology is the future in the evolution of the concept of sound reinforcement, based on the application of computer digital management advantages to professional audio reinforcements.

With this revolutionary technique the entire concept of the speaker box is completely replaced by the idea that each loudspeaker, from a line array to a small monitor, changes to be an active device, namely a PCC speaker, controlled with a small laptop via software.

A standard PCC speaker houses one or more module amps and a DSP processor. All these PCC speakers are linked by a network through a USB interface to the laptop, or wireless via Bluetooth.

Once connected, we can control in real time the parameters of each speaker individually or grouped as we decide, factors such as volume, graphic equalisation, parametric equalisation, crossover, box delay, clock settings, internal delays, compressor-limiters, check test, save and recall of presets, mute, transfer spectrum analysis, r.t.a. spectrum control, phase check, and more!

Can't you imagine, when working with a line array system, adjusting differently the array elements used for downfill to the ones used on top of the line, ONLY with the help of a small laptop?

And what about also controlling your monitors using ONLY a small laptop... while on the same screen a very powerful audio tool is monitoring the audio response? Using this technology, you can forget about racks, eqs, crossovers, patches, etc.. That is all in the past!

ORIGINAL Series

- Input graphic eq.
- Input parametric eq (10 bands).
- 4 band crossover.
- Gain control.
- Mute control.
- Check test.
- Built in Analyzer (impulse, transfer, rta, etc).
- Real time control.
- Presets storage in the PC.
- Grouping.
- Acoustic center control, between bands.
- Compressor / limiter in each band.

COBRANET Series

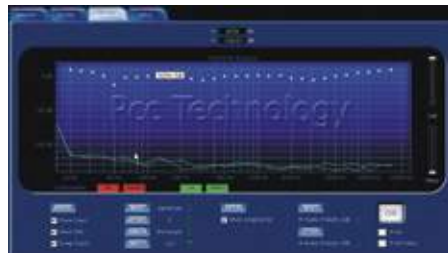
- Cobranet protocol.
- Input graphic eq.
- Parametric eq on each band (4 x 6 bands).
- General Delay.
- 4 band crossover.
- Gain control.
- Mute control.
- Check test.
- Built in Analyzer.
- Real time control.
- Presets storage in the PC.
- Grouping.
- Acoustic center control, between bands.
- Compressor / limiter in each band.

ADVANCED Series

- Ethernet control.
- 10 built in presets without the use of the software.
- Unlimited presets storage in the PC.
- Input graphic eq.
- Parametric eq on each band (4 x 8 bands).
- General Delay.
- 4 band crossover.
- Gain control.
- Mute control.
- Check test.
- Built in Analyzer.
- Real time control.
- Presets storage in the PC.
- Grouping.
- Acoustic center control, between bands.
- Compressor / limiter in each output band.
- Input compressor / limiter.
- Clock set.

Matrix, Parametric Equalizer, Graphic Equalizer, Crossover, Network, Response & Analyzer Screens.

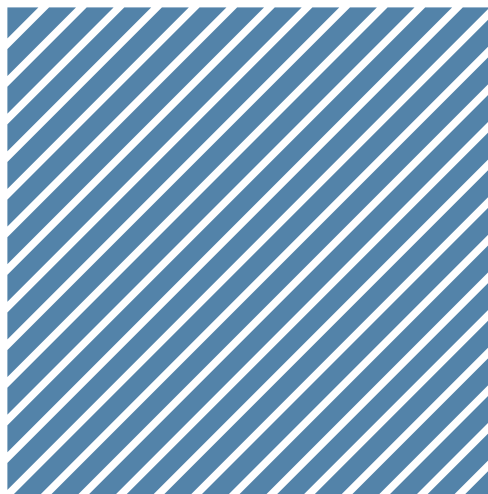
tecnaRE sound systems



tecnaRE sound systems

LA312

by
ARRAY Series



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