LA4 & LA8

AMPLIFIED CONTROLLERS

At the heart of the L-ACOUSTICS® integrated system approach, the LA4 and LA8 amplified controllers offer cutting edge loudspeaker amplification, DSP, network control, and comprehensive system protection in a single ergonomic package.

Based on similar platforms, the LA4 and LA8 units deliver high performance and dynamic range for live applications, combined with the best possible transducer protection.
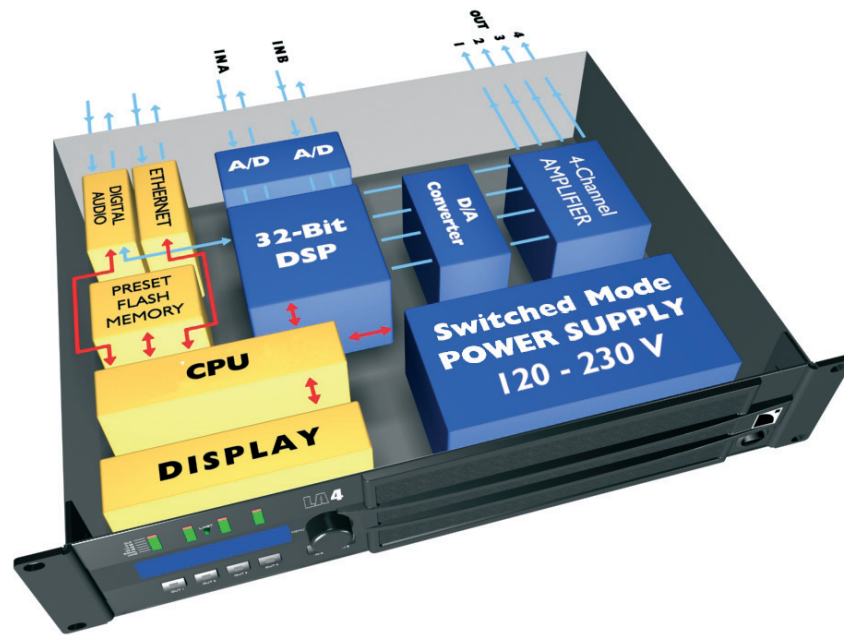
The LA4 and LA8 share the following characteristics:

- A 2U lightweight format for high amplifier density.

- A four-channel high efficiency amplifier section fed by two inputs.

- A DSP section featuring advanced filter algorithms and an exclusive L-DRIVE protection system for the transducers allowing optimum system performance.

- An on-board preset library to cover the L-ACOUSTICS® loudspeaker systems.

- An intuitive and ergonomic user interface, fully accessible from the front panel for standalone operation.

- Two I/O Ethernet ports for networking up to 253 LA4 and LA8 units, remote-monitored by PC-based LA NETWORK MANAGER software (Windows® compatible).

The specific features of each unit are the following:

- The LA4 delivers up to 4 x 1000 watts into 4 ohms.

- The LA8 delivers up to 4 x 1800 watts into 4 or 2.7 ohms.

- An AES/EBU input card is integrated to the LA8 for full digital signal chain. This feature is available as an option on the LA4.

- Each unit carries dedicated on-board preset library, relative to hardware requirements.

- The output connectors are SpeakON® for the LA4 and CA-COM®/SpeakON® for the LA8.

The unique ensemble of on-board features and the addition of peripherals are all offered in a secured and standardized environment. This approach simplifies system setting and operation with the benefit of superior and predictable audio results across the entire product range.
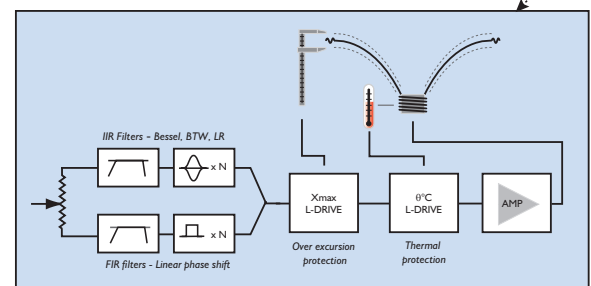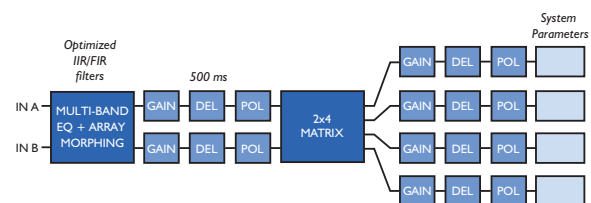
DSP

Proprietary algorithms are processed in a 32-bit floating point DSP engine at a 96 kHz sampling rate. A dedicated engineering approach combining IIR and FIR filters allows generating perfectly linearized phase curves and significantly improved impulse responses for an even more natural, transparent, and realistic sound experience. Two cascaded 24-bit A/D converters at the front-end yield a ground-breaking encoding dynamic of 130 dB.

The L-DRIVE protection system carries out a dual analysis of signal level in real-time and RMS. Under extreme conditions when component membranes reach the over-excursion zone or if the coil ensemble temperature reaches a critical point, L-DRIVE acts as a power regulator. As a result the amount of power delivered at any channel is adjusted to the dynamic and thermal capacity of each individual transducer. This optimizes the power resources while preserving the highest dynamic range.

With a complete preset library and the possibility of creating additional user presets, the engineer is offered fingertip access to all the usual L-ACOUSTICS® loudspeaker system configurations.

■ Accessible via "LA NETWORK MANAGER" only

■ Accessible via "LA NETWORK MANAGER" and front-panel user interface depending on preset type

□ L-ACOUSTICS parameters

AMPLIFICATION

The four amplifier channels driven by two inputs provide optimum system flexibility. The LA4 and LA8 offer two specific power ranges (4 x 1000 watts into 4 ohms, and 4 x 1800 watts into 4 or 2.7 ohms, respectively) yielding perfect power matching to each individual L-ACOUSTICS® loudspeaker system.

The built-in technologies allow control of the very wide dynamic range found in live audio productions while the high-efficiency components offer superior reliability, all from a sleek ergonomic package with exceptional weight/size ratio.

USER INTERFACE

The front panel user interface features extremely fast access to edit the 2 input and 4 output settings. The encoder wheel gives instant access to the user menus and the LCD screen offers real time visualization of the system parameters.
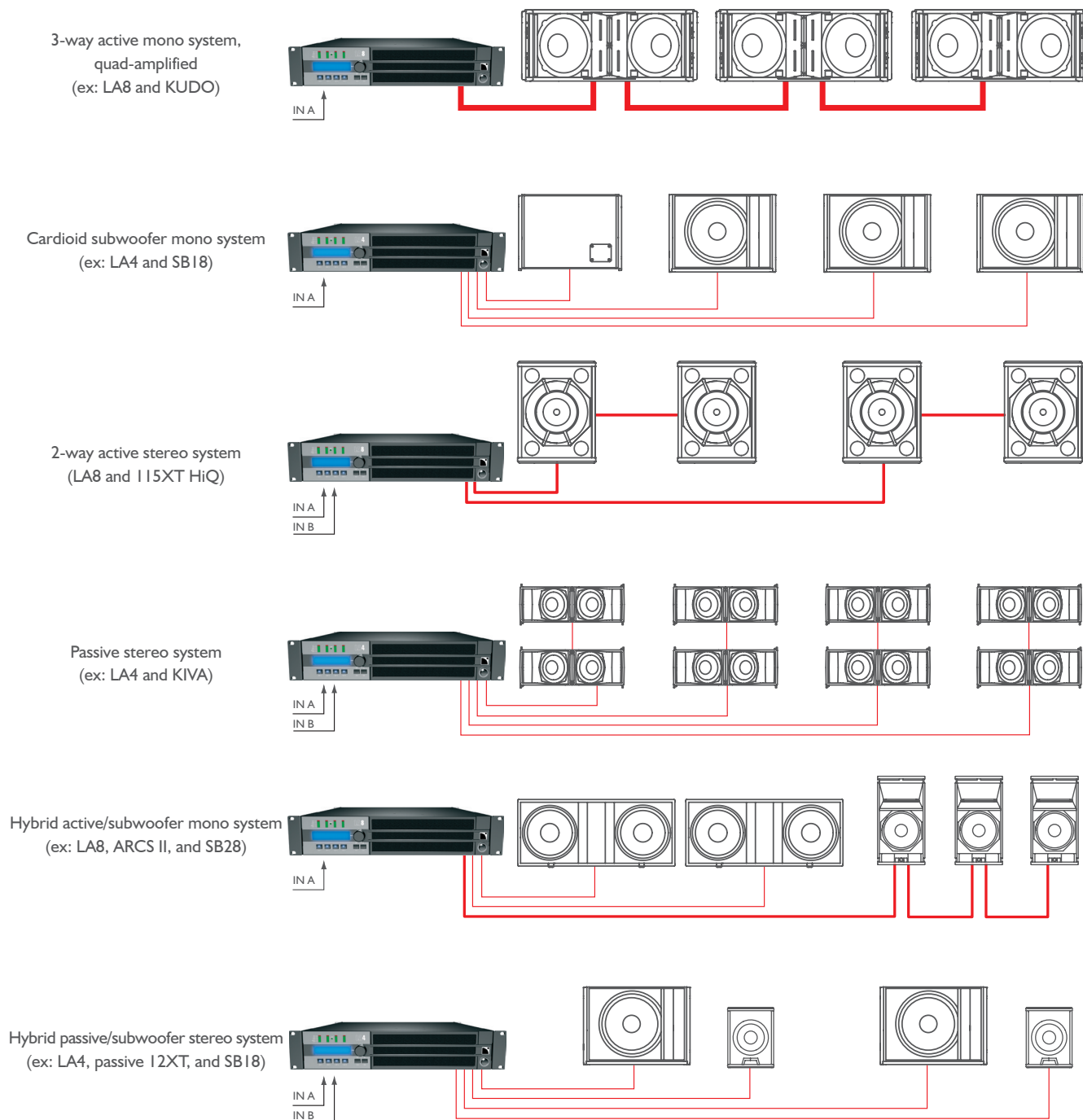
Command access includes mute, gain, preset selection, plus delay and polarity settings. Navigation through the menu pages is fast and intuitive. Beside the standard on-board preset library, the engineer can design and store his own settings (initialized from a standard preset template) in one of the 10 available user locations.

SYSTEM CONFIGURATIONS

Driving four amplifier output channels through a DSP offers a wide range of options when it comes to system configuration. The LA4 and LA8 on-board preset libraries allow the sound engineer a high degree of flexibility in choosing the enclosure models and the system configuration for a specified application.

The LA4 factory preset library covers L-ACOUSTICS® loudspeaker systems that require up to 800 watts into 8 ohms and 1000 watts into 4 ohms. The LA8 factory preset library covers L-ACOUSTICS® loudspeaker systems that require up to 1100 watts into 8 ohms and 1800 watts into 4 or 2.7 ohms.

The factory preset libraries are derived from 6 basic system templates:

3-way active mono system, quad-amplified (ex: LA8 and KUDO)

IN A

Cardioid subwoofer mono system (ex: LA4 and SB18)

IN A

2-way active stereo system (LA8 and 115XT HiQ)

IN A
IN B

Passive stereo system (ex: LA4 and KIVA)

IN A
IN B

Hybrid active/subwoofer mono system (ex: LA8, ARCS II, and SB28)

IN A

Hybrid passive/subwoofer stereo system (ex: LA4, passive 12XT, and SB18)

IN A
IN B

The illustrations above are connection templates and do not represent actual system configurations.
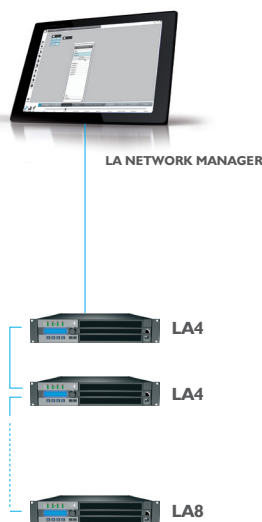**Refer to user manuals for product implementation.**

NETWORK ARCHITECTURE AND REMOTE CONTROL

The design of complex systems is made possible by the integration of the L-NET Ethernet-based network. Thanks to its high speed data transfer protocol of 100 Mbit/s, up to 253 units can be controlled and monitored in real-time by LA NETWORK MANAGER software.
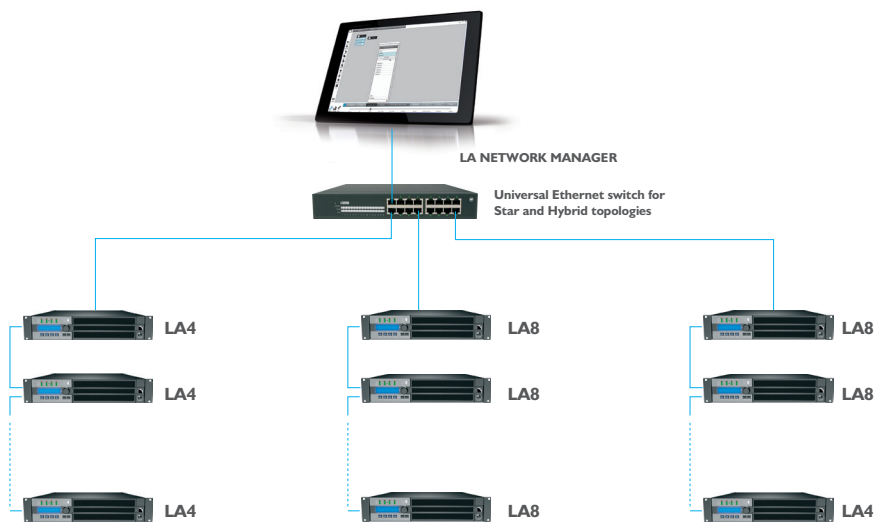
Multiple network topologies such as daisy-chain, star, and hybrid are quickly and easily configurable for full flexibility in the required system architecture. The PC running LA NETWORK MANAGER and the units are connected to each other by using industry standard CAT5e U/FTP cables fitted with RJ45 connectors.

Optimized for tablet PC use, LA NETWORK MANAGER relies on a purely graphical approach and allows placing units and groups in a workspace in a way that reflects their location in the field. It is designed to quickly take the user through the workflow steps of Setup, Tuning, and Live by implementing the tools required for each task into their dedicated page. An advanced network engine allows automatic discovery of connected units. Multiple-group assignation capability, comprehensive real-time monitoring of events with log file, as well as numerous productivity tools complete the characteristics of a remarkably practical and application-oriented network management software.

As a certified member of the CRESTRON® and AMX® partner programs, L-ACOUSTICS® provides software modules allowing control integration into their automation systems, for the convenience of ultimate technology lifestyle in cultural and event centers, universities, houses of worship, sport facilities…

LA NETWORK MANAGER

LA4

LA4

LA8

Daisy chain topology

LA NETWORK MANAGER

Universal Ethernet switch for Star and Hybrid topologies

LA4

LA4

LA4

LA8

LA8

LA8

LA8

LA8

LA4

Hybrid topology