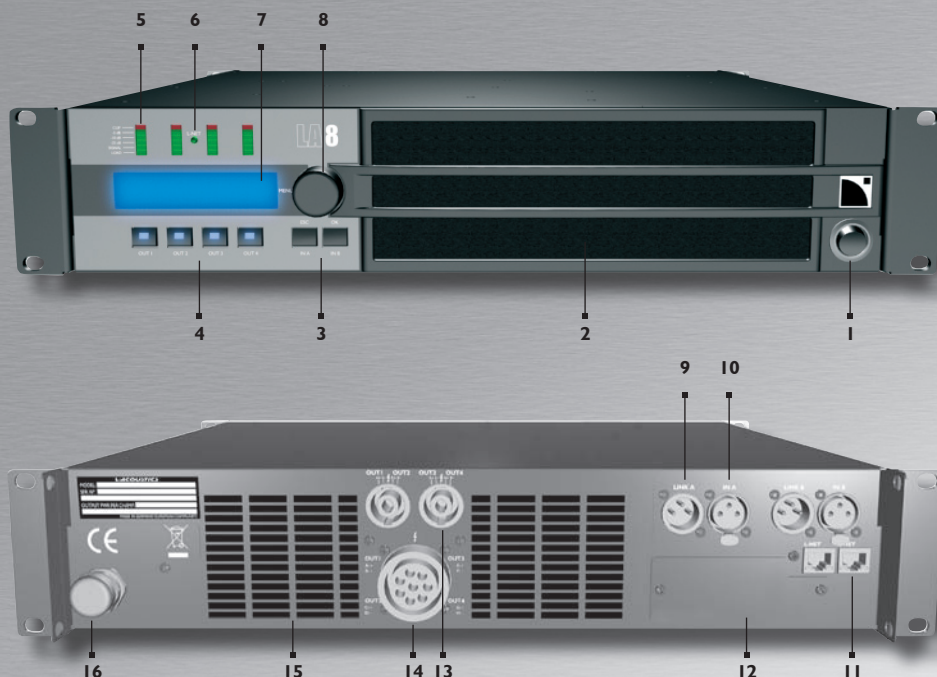




# LA8 AMPLIFIED CONTROLLER



## LA8 Amplified Controller main feature identifications:

- 1 On/Off Switch
- 2 Anti-Dust Cover
- 3 Input selection + Menu keys
- 4 Output selection keys
- 5 LED clip and level Bargraph  
LED Signal presence  
LED load
- 6 LED Control L-NET Network
- 7 LCD Screen
- 8 Nav/Edit Rotary Encoder
- 9 XLR Send Input Link connector
- 10 XLR Input connector
- 11 RJ45 L-NET Network socket
- 12 Digital Audio Network slot
- 13 SPEAKON output connectors
- 14 CA-COM output connectors
- 15 Fan Grill
- 16 A/C connector

## SPECIFICATIONS

The LA8 amplified controller belongs to the new generation of high-end integrated controllers entirely dedicated to the comprehensive operation of L-ACOUSTICS® loudspeaker systems. The LA8 combines in a 2U lightweight chassis the resources of a 2 x 4 DSP engine driving four channels of amplification delivering up to 1800 W each, a storage capacity of 99 presets, a user-friendly front panel interface, two I/O Ethernet® connection ports for network remote control, a connection panel for audio inputs and speaker outputs, and a digital I/O audio network optional slot.

### The LA8 is supplied with the following L-ACOUSTICS® preset library drivers

- V-DOSC - dV-DOSC - KUDO
- SB118 - SB28 - SB218
- I15XT HiQ

### The LA8 allows full system drive capability via the following features

- 89 factory presets including mono 4 way active systems, stereo 2 x 2 way and hybrid 3 way + sub extension
- A flexible I/O matrix routing between the two inputs and the four amplified outputs

### DSP SHARC 32 bit/floating point, 96 kHz sampling rate

- 24 bit A/D converters, 130 dB dynamic range of encoding
- Combined IIR/FIR Algorithms
- Input delay adjustable from 0 to 500 ms
- Output delay adjustable from 0 to 35ms
- Section dedicated to system equalization using LA NETWORK MANAGER
- L-DRIVE excursion and temperature real-time control
- Fixed Latency = 3.9 ms

### 4 channel amplifier

- Switch mode power supply, 120 V or 230 V
- 4 x 1100 W/8 ohms at 1% THD, all channels driven simultaneously (4 x 1300 W peak)
- 4 x 1800 W/4 ohms at 1% THD, all channels drive simultaneously (4 x 2500 W peak)
- Gain structure: 32 dB

### Audio specifications

- Frequency response: 10 - 30k Hz, -1.5/+0 dB at 8 ohms
- Output noise: -67 dBV (20 - 20k Hz, A-weighted)
- Output dynamic range: 107 dB (20 - 20k Hz A-weighted)
- Max input level: 22 dBu (balanced, THD 1%)
- Input impedance: 22 kOhms, balanced

### Dimensions

- H x W x D: 88.1 (2U) x 483 x 420 mm  
3.5 (2U) x 19 x 16.5 in
- Weight (net): 12.2 kg 26.9 lbs
- Finish: black and anthracite grey



# LA4 & LA8

## AMPLIFIED CONTROLLERS



At the heart of the new 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 upon similar platforms the exceptional and ground breaking performance level delivered by both the LA4 and LA8 allow for full optimization of all L-ACOUSTICS® system resources and deliver outstanding audio quality combined with the best possible transducer protection.

Both units offer an integrated approach by combining the most advanced amplification, signal processing, network remote control and monitoring technologies currently available, and are pre-configured for digital multi-channel audio networking. In addition, a powerful and upgradable operating system with an intuitive user interface provides a high level of "hands on" system control without sacrificing accurate and fast operation under real world conditions.

Packaged in a compact 2U lightweight format chassis, both the LA4 and LA8 platforms are derivative of the same basic design and share the following characteristics:

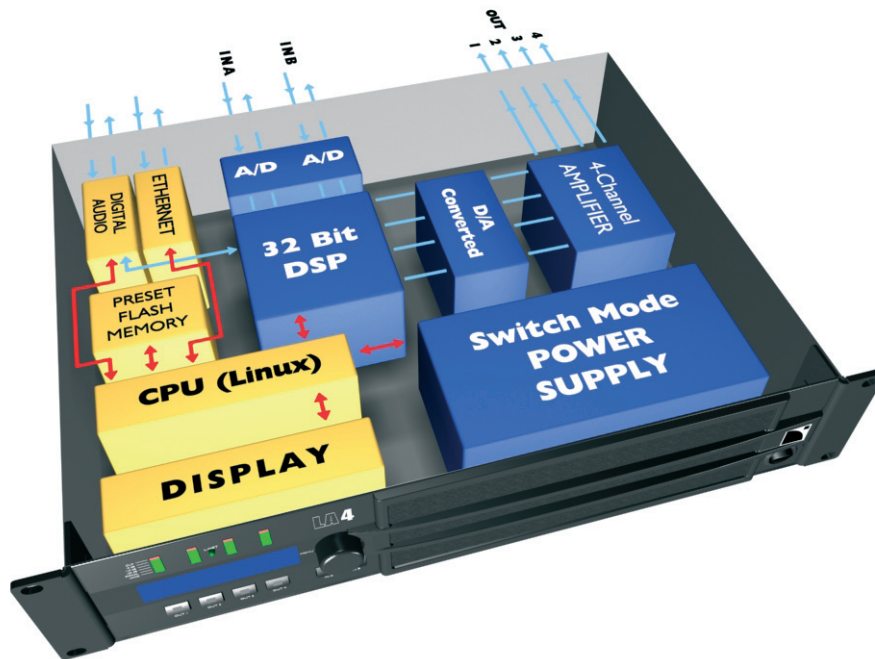
- A four-channel high efficiency amplifier section fed by two inputs, offering a power level matching for all L-ACOUSTICS® loudspeaker systems.
- A DSP section featuring advanced filter algorithms and an exclusive L-DRIVE protection system for the transducers allowing for optimum system performance.
- A complete onboard preset library stored in 99 memory locations to cover all the principal L-ACOUSTICS® loudspeaker system configurations.

- 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 units.
- The complementary PC-based LA NETWORK MANAGER software (Windows® compatible) with remote network monitoring and control of the LA4 and LA8 units.
- A rear-panel plug-in card slot for future multi-channel digital audio networking implementation.

Specific features of the LA4 and LA8 include:

- The LA4 delivers up to 4 x 1000 Watts into 4 ohms.
- The LA8 delivers up to 4 x 1800 Watts into 4 ohms.
- Speaker output connectors are specific to each platform.
- Each unit carries its own on board preset library specific to the power requirements of L-ACOUSTICS® loudspeaker systems.

All L-ACOUSTICS® loudspeaker systems now benefit from the advanced and exclusive properties of the LA4 and LA8 control platforms. As a result of the integrated approach all L-ACOUSTICS® loudspeaker systems have been enhanced by the superior performance of high end electronic platforms, allowing for perfect power matching combinations across the entire product range. The unique ensemble of on board features such as local or remote control, system status visualization, driver protection, system connection, and the addition of external peripherals are all offered in a secured and standardized environment. This rationalized approach allows for simple system operation with the benefit of superior and predictable audio results.

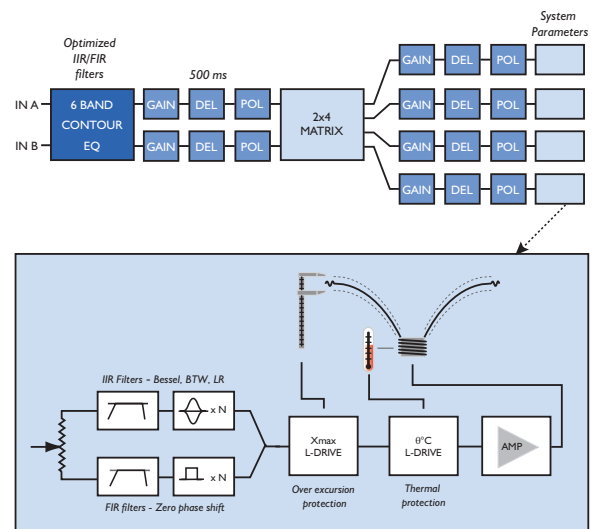


## DSP

New proprietary algorithms are processed in a SHARC 32 bit floating point DSP engine at a 96 kHz sampling rate. A specialised engineering approach combining IIR and FIR filters generates a perfect linearization of phase curves and a significant improvement of the system impulse response for an even more natural, transparent, and realistic sound experience. Two cascaded 24 bit A/D converters on the front-end yield a ground-breaking encoding dynamic of 130 dB.

The new L-DRIVE protection feature offers a dual analysis of both signal intensity and voltage 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 opens and acts as a power regulator. As a result the amount of power delivered to any channel is adjusted to the power handling capacity of each individual transducer on the relevant channel. This optimizes the power resources of the system in use while preserving the highest dynamic range.

With a complete preset library accessible in 89 banks and 10 additional user presets, the engineer is offered fingertip access to all the usual L-ACOUSTICS® speaker 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 per channel, and 4 x 1800 Watts into 4 ohms per channel, respectively) yielding perfect power matching for each individual L-ACOUSTICS® loudspeaker system. The built-in technologies allow for 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 editing the 2 input and 4 output settings. The rotary encoder gives instant access to the user menus and the LCD display 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.

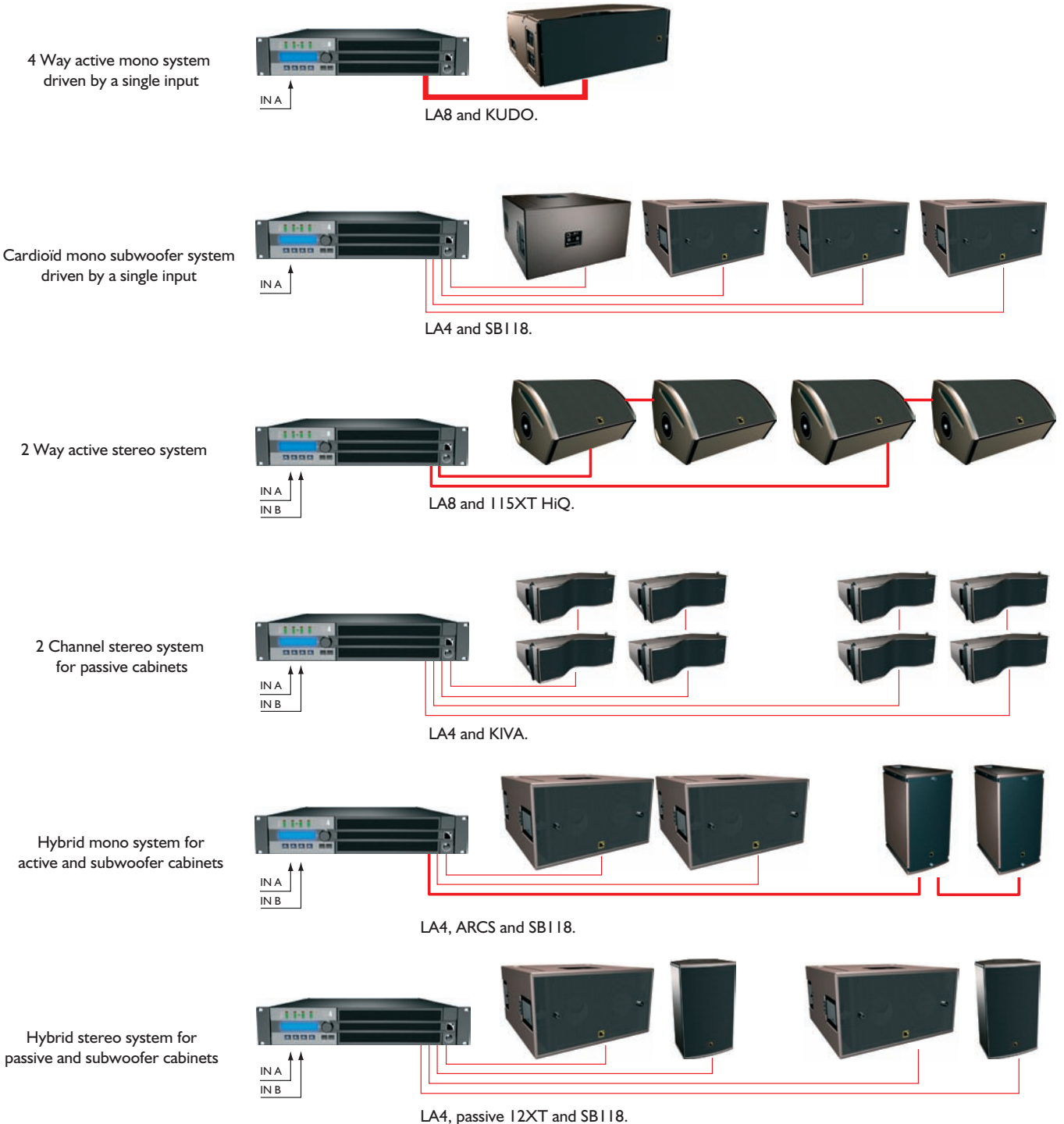


Driving four amplifier output channels through a DSP offers a wide range of options when it comes to system configuration possibilities. The LA4 and LA8 onboard DSP preset libraries allow the sound engineer a high degree of flexibility.

The factory preset library is derived from 6 basic system templates.

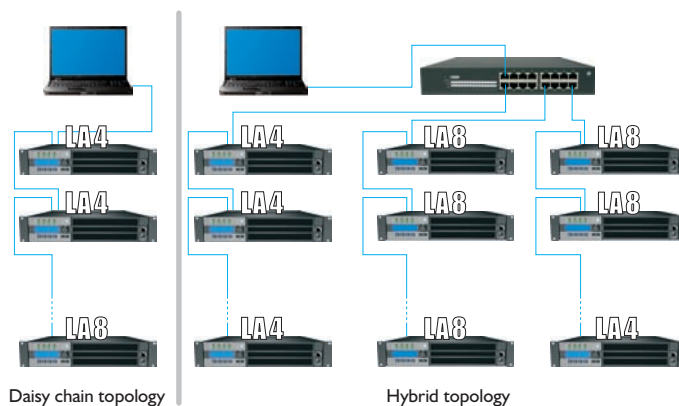
The L-ACOUSTICS® loudspeaker preset library is managed between the two LA4 and LA8 platforms and the preset allocation for both determined by model, configuration, and application choice.

For example, the LA4 factory preset library covers L-ACOUSTICS® loudspeaker systems that require up to 800 Watts into 8 ohm load or 1000 Watts into 4 ohms in twin parallel transducer configurations. The LA8 factory preset library covers L-ACOUSTICS® loudspeaker systems with power requirements typically up to 1100 Watts into 8 ohms or 1800 Watts into 4 ohms in twin parallel transducer configurations.



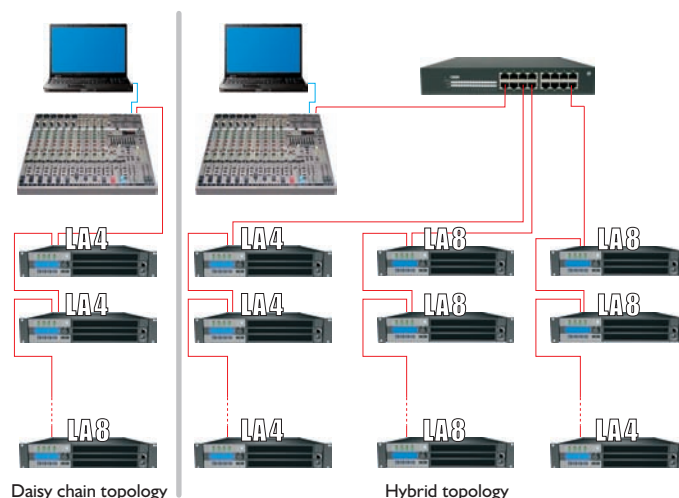
All illustrations above do not represent actual physical arrangement of systems. Refer to user manuals for product implementation.

The proprietary L-NET network utilizes a high speed data transfer of 100 Mbit/sec for real time monitoring and control of each individual LA4/8 in a network of up to 253 units. Multiple network topologies such as daisy-chain, star, and hybrid are quickly and easily configurable allowing for total flexibility in achieving the required system architecture. The physical connection between the mainframe PC and the controllers is managed with CAT5e U/FTP cables and the I/O Ethernet sockets located on the rear panel of each controller require industry standard RJ45 connectors. The use of a universal Ethernet switcher is recommended for specific network topologies.



## DIGITAL AUDIO NETWORK

Both the LA4 and LA8 are provided with a slot located on the rear panel designed to accept an optional L-DGA network digital audio card. The slot allows for the provision of an additional digital input module consisting of a 64 audio channel bus plus one extra channel dedicated to control and monitoring. The extremely low and predictable latency of this technology combined with proven real world reliability delivers stable and predictable results in all sound reinforcement applications. The L-DGA card also allows cascading several LA4 and LA8 using the same type of cable as for the L-NET remote control network. The L-DGA option will be available as a future development.



— L-NET Network  
— Digital Audio Network

## LA NETWORK MANAGER PC SOFTWARE

The software provides network control and monitoring of both LA4 and LA8 units from a PC Windows®-operating system. The multiple window display gives an overall visualization of the network status, number and groups of controllers, and all the information related to the control and monitoring of the networked units.

Real-time control for parameters such as gain, mute, delay, polarity, presets, either on individual units or at network level are managed on a "tree layout" screen interface with standard drop down menus and multiple visualizations of all user parameters. An exclusive contour EQ optimization tool is also available allowing quick and easy tonal balance of the loudspeaker system.

LA NETWORK MANAGER provides system stand-by and initialization control in addition to comprehensive visual monitoring of the audio signal paths and quick detection of any faults in the attached network.

