

# LA-RAK II TOURING RACK



- Signal/Network/Power distribution
- Usable worldwide (90V-265V, 50/60 Hz)
- Three LA12X for maximum flexibility and power
- Flyable with engineered 9U frame
- Electric/mechanic compatibility with LA-RAK
- AES/EBU and AVB/TSN ready

## INTRODUCTION



The LA-RAK II is built upon the LA12X amplified controller and offers an advanced drive rack solution for all L-Acoustics systems. It features signal and power distribution in a comprehensive plug-and-play touring package.

Usable worldwide, the LA-RAK II facilitates the tour logistics and cross-rental between L-Acoustics rental network agents. LA-RAK II is also both mechanically and electrically compatible with the LA-RAK legacy standard.

The LA-RAK II working principle is entirely modular and the user can physically assemble and interconnect multiple units. It is based on a multiple of three LA12X to yield the maximum flexibility and power resources for any L-Acoustics system.

The LA-RAK II comprises:

- One 9U rack with LEXAN® front and rear doors
- Three LA12X amplified controllers
- One I/O panel for signal and L-NET distribution
- One I/O power distribution panel
- 2U space available.



## SYSTEM COMPONENTS



**RK 9U:** The 9U rack is a dual structure consisting of a rubber shock inner steel frame braced by an external aluminum frame sided with highly resistant polyethylene panels. This ensures structural integrity while offering decoupling and maximum protection of the electronics inside the rack. Two retractable LEXAN® doors protect the internal components during transport. On the front face, two extra U space can receive additional equipment. On the rear face, two hinge-mounted panels cover and protect the analog, digital, and network connectors of the amplified controllers and create a neat and tangle-free cable environment.

The rear central part of the amplified controllers remains accessible with its PA-COM® and SpeakON® connectors, thus offering the same functionality as a speaker output patch panel (see last page for cabling connections). The RK 9U is equipped in standard with a detachable transport dolly board and two coupling bars. These last also allow arraying several LA-RAK II in flown or stacked configurations.

**LA12X:** The LA12X amplified controller covers the comprehensive operation of L-Acoustics loudspeaker systems. It combines in a 2U lightweight chassis the resources of a 4 x 4 DSP engine with boosted resources driving four channels of amplification delivering up to 3300 watts each at 2.7 ohms with record hold times.

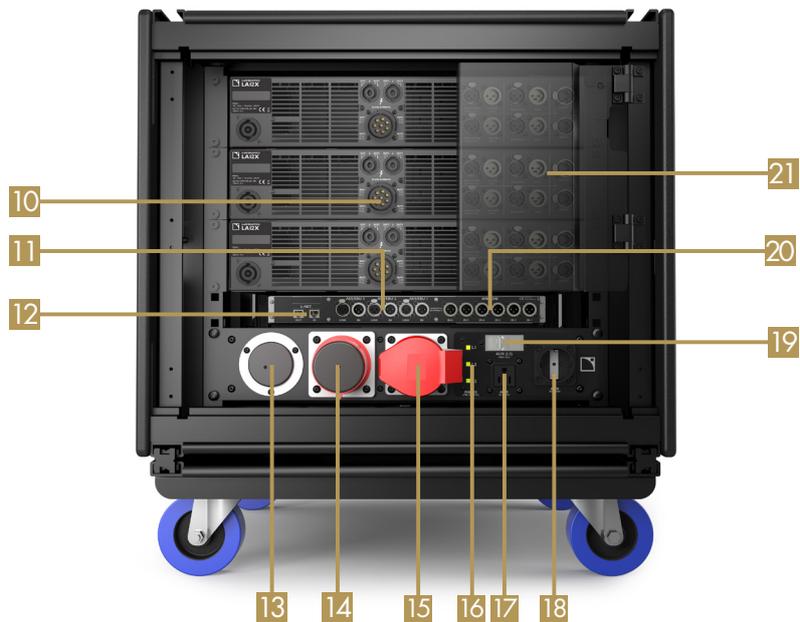
LA12X features a front panel interface, two I/O Ethernet connection ports for network remote control (AVB/TSN ready), a connection panel for analog and digital audio inputs (AES/EBU), and speaker outputs. Featuring a universal SMPS (90-265V) with Power Factor Correction LA12X offers a high tolerance to unstable mains.

**LA-PANEL II:** A 19" front patch panel for the distribution of analog and digital audio signals allows feeding the three amplified controllers with 6 discrete analog and 3 stereo AES/EBU signals with link-out capability to other racks. The analog connectors are compatible with the L-Acoustics 19 points CA-COM standard. The digital audio signals use XLR connectors. The panel also features 2 Ethercon® I/O connectors for connection to L-NET and AVB/TSN networks allowing to receive multichannel AVB streams to feed all 12 available amplified controller inputs.

**LA-POWER II:** A 2U/19" I/O power distribution panel located on the rear and allows the power to be automatically balanced with an equal number of LA12X per phase. It features a three-phase NEMA L21-30P input (US mode) and a CEE FORM 400V with a LINK OUT socket to power a secondary rack (EU mode). A mains switch allows to operate in either US or EU mode. A NEMA 5-15 (US mode) and an F "Schuko" socket (EU mode) are also available for powering auxiliary accessories. The auxiliary circuit features a 10 A breaker. Three LEDs help monitor the presence of each phase on the front end of the mains circuit regardless of the position of the mains switch.

**LA-RAK BUMP:** The LA-RAK BUMP is engineered to fly up to 4 LA-RAK II for a drive capacity of up to 24 K1 enclosures. It can be flown with a single pick-point and secured to an additional safety point. Its structure features a bolted assembly for better visual safety verification and is protected by a weather resistant coating.

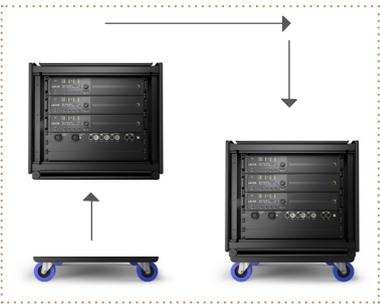
# USER INTERFACE



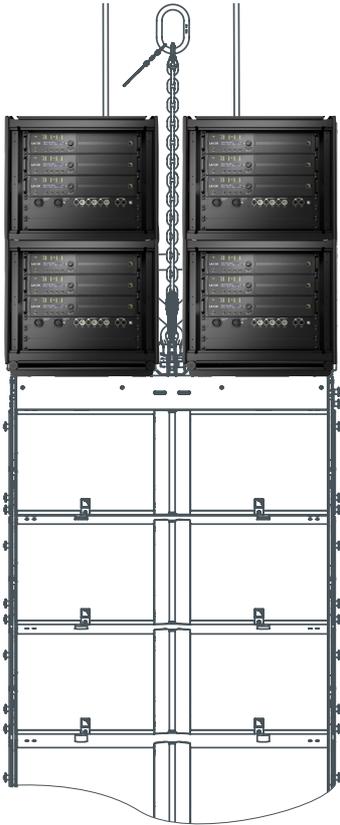
- |   |                                           |    |                                                                          |
|---|-------------------------------------------|----|--------------------------------------------------------------------------|
| 1 | LA12X amplified controllers               | 10 | LA12X speaker output panel<br>(total: 3 PA-COM® + 6 SpeakON® connectors) |
| 2 | Analog input/link (2 PA-COM® connectors)  | 11 | Digital internal input/link (6 XLR connectors)                           |
| 3 | 1U blank panel (2 panels)                 | 12 | L-NET internal panel (2 Ethernet cables)                                 |
| 4 | Removable dolly board                     | 13 | 3P+N+E input (NEMA L21-30P, US mode)                                     |
| 5 | Coupling bars                             | 14 | 3P+N+E input (CEE FORM 400V, EU mode)                                    |
| 6 | Digital input/link (6 XLR connectors)     | 15 | 3P+N+E link (CEE FORM 400V, EU mode)                                     |
| 7 | L-NET input/link (2 Ethernet® connectors) | 16 | Phase presence LEDs (L1, L2, L3)                                         |
| 8 | Storage slots for front and rear doors    | 17 | Auxiliary output (10 A NEMA 5-15 socket, US mode)                        |
| 9 | Assembly rails (flying and stacking)      | 18 | Auxiliary output (10 A type F "Shuko" socket, EU mode)                   |
|   |                                           | 19 | Circuit breaker (AUX L3)                                                 |
|   |                                           | 20 | Analog internal inputs (6 XLR connectors)                                |
|   |                                           | 21 | Hinge-mounted panels for connector protection                            |

# ASSEMBLY PRINCIPLES

LA-RAK II stacking (max. 3 LA-RAK II)



Stacking onto K1-BUMP (max. 4 LA-RAK II + 24 K1)



Flying under LA-RAK BUMP (max. 4 LA-RAK II)



# CABLING SCHEMES\*

Power



Analog audio



Digital audio



Network/AVB



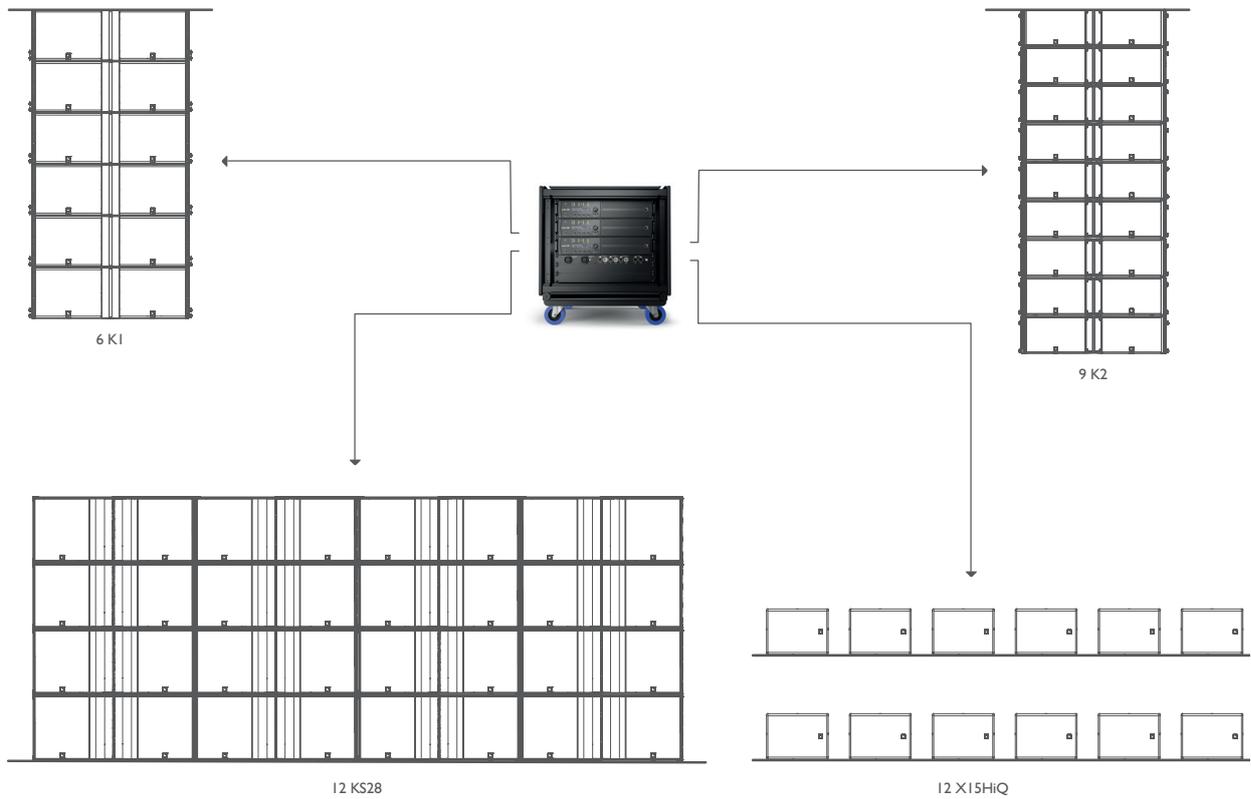
External  
Internal



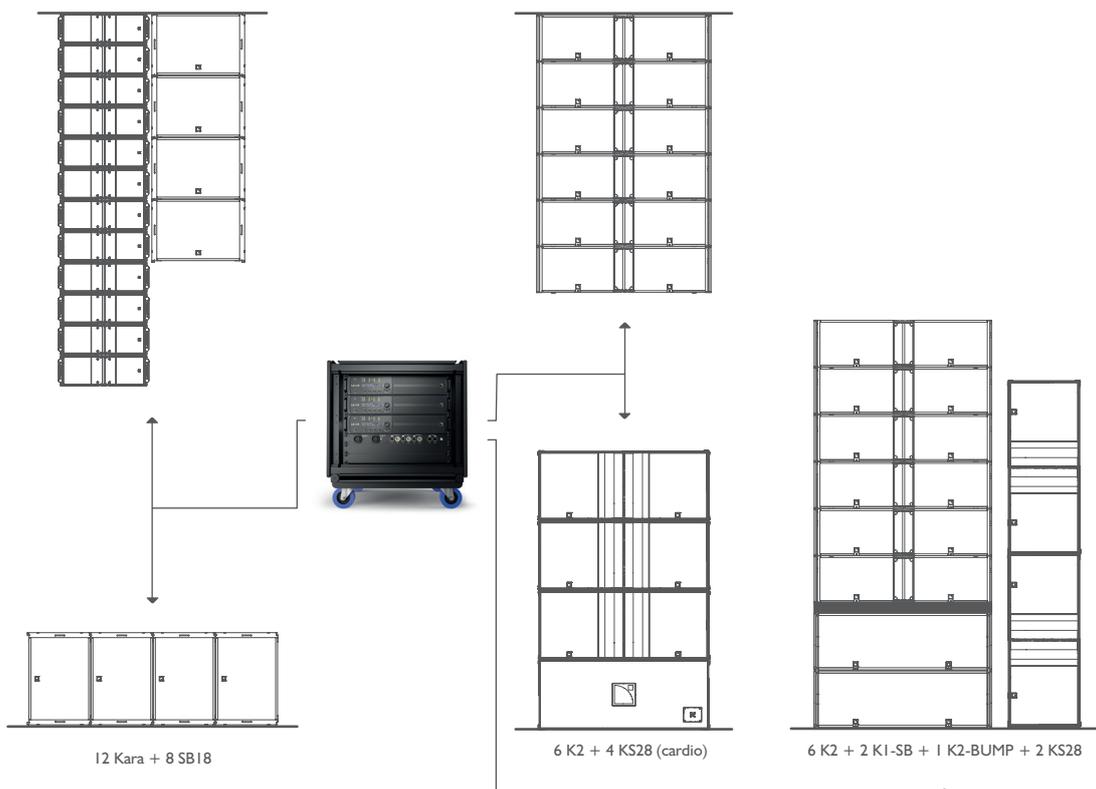
LA-POWER II rear view

\* Factory cabling scheme

## ASSOCIATED ENCLOSURES (SINGLE)



## ASSOCIATED ENCLOSURES (HYBRID)



# SPECIFICATIONS

## LA-RAK II

Weight (net)	111.5 kg (with doors, 2 x coupling bars, LA-PANEL II, cables, 3 x LA12X and LA-POWER II)
Material	Polyethylene, aluminium and steel external structure, LEXAN® polycarbonate doors
Rigging and handling	2 x coupling bars, dolly board

## LA-PANEL II

### Front connectors

Analog input/link	2 x 19-point CA-COM
AES/EBU input/link	3 x female Neutrik® XLR3 (IN) 3 x male Neutrik® XLR3 (LINK)
Network	2 x etherCON® (L-NET IN/OUT)

### Rear connectors

Network	2 x RJ45 (L-NET)
AES/EBU input/link	3 x female Neutrik® XLR3 (IN) 3 x male Neutrik® XLR3 (LINK)
Analog input	6 x male Neutrik® XLR3 (IN 1 to IN 6)

## LA-POWER II

### Front

AC input (US)	30 A - NEMA L21-30P (3P+N+E) male outlet
AC input (EU)	32 A - IEC 60309 (3P+N+E) male outlet
AC link out (EU)	32 A - IEC 60309 (3P+N+E) female outlet DANGER: Do not use with a 120 - 208 V power supply.
AC presence	3 x dual LEDs (L1, L2, L3) Left: US AC input / right: EU AC input
AC auxiliary output (US)	NEMA 5-15 female outlet (AUX US MODE)
AC auxiliary output (EU)	Type F «Schuko» female outlet (AUX EU MODE)
Protection	10 A type C circuit breaker (AUX L3)

### Rear

AC output for LA12X	3 x power cords fitted with 32 A Neutrik powerCON® connectors (AMP 1 L1, AMP 2 L2, AMP 3 L3)
AC input selector switch	Switch between EU MODE and US MODE Important: Do not switch between modes when connected to power supply.
AC auxiliary output	2 x IEC 60320-1 type C13 female outlets (AUX L3)

## LA-RAK BUMP

Weight (net)	13.5 kg / 29.7 lb
Material	High grade steel with anti-corrosion coating

# DIMENSIONS

