



# CONCERT SOUND

New for PLASA 2009  
Preliminary  
Product Information



## ICON LTS

THE MODERN APPROACH TO  
GROUND STACKED SOUND REINFORCEMENT

*Icon LTS*



***POWERFUL,  
INTELLIGENT,  
NETWORKED***

***THE MODERN APPROACH TO  
GROUND STACKED SOUND  
REINFORCEMENT***

*Application areas: as the main full-range sound reinforcement system in festival tents, larger clubs, small-to-medium open-air stages, and as side-fill monitors.*

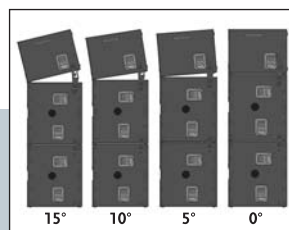
## INTRODUCTION

With more than 25 years experience researching, developing and producing sound reinforcement systems, as well as a workforce numbering over 200 in the main German facility, HK AUDIO is one of Europe's leading enterprises in the professional audio industry. From compact active systems for the roving entertainer to specialty solutions for fixed installations and touring systems for large indoor and open-air venues, HK AUDIO offers the perfect solution for every sound reinforcement challenge. The worldwide distribution network with partners in over 60 countries affords customers the availability and service they expect and deserve.

ICON LTS is a thoroughly modern, processor-controlled active stacking P.A. for use in festival tents, clubs and at open-air events requiring high Sound Pressure Levels. For situations where line array systems may be overkill in terms of cost and complexity, this system presents itself as a perfect alternative, offering easier set up, less cabling, and simpler operation. At the same time, ICON LTS achieves a high level of operational reliability and sonic quality thanks to its internal electronics and high quality components.

## ***THE MODERN APPROACH TO GROUND STACKED SOUND REINFORCEMENT***

ICON LTS combines the latest DSP technology, outstanding acoustic design and excellent headroom in a sound reinforcement system that sets new standards for efficiency with regard to performance and sound as well as operation and cost. These virtues recommend it especially well to rental firms, touring Top-40 bands or gala orchestras.



*The Tilt Unit offers three different angles (5°, 10°, 15°) for directing the mid/high cabinet optimally at the audience area.*

## THE SYSTEM

The system's professional components, its precise coverage pattern, the sonic accuracy of the intelligent high-frequency system, and the high-powered system subwoofers all work together to provide extraordinary dynamic range. With the PodWare controller software managing the on-board electronics, it is possible

to fine-tune all the components to the venue's acoustics, thereby ensuring peak performance and maximum reliability. In addition to serving as a convenient remote control, it also monitors critical system parameters such as power amp temperatures, protection modes and power-up cycles of the last 72 hours of system operation.



*The removable dollies, with four 100-mm blue wheels, are included.*

## ICON IC 112 LA

The active, processor-controlled 2-way mid/high unit is entirely horn-loaded. With its 24-bit/96-kHz DSP and two power amps, this unit is the heart of the system. The 12"/8-Ohm neodymium loudspeaker is driven by a 1000-watt/4 Ohm Class D power amp, whereas the 1.4"/8-Ohm high frequency driver is powered by a 600-watt/4 Ohms Class D amp. The DSP unit controls the entire system, including Gain, EQ and two limiters (RMS/Peak). With the IC 112 LA, the coaxial arrangement of the CD horn and the 12" speaker (also horn-loaded) creates a precise coverage pattern of 60° x 40° over a frequency range from 400 Hz–17 kHz.

The audio reproduction of mids and highs is guaranteed to be high-resolution all the way up to 131 dB SPL (in half space). The Tilt Unit (available as an option) permits the upper cabinet to be angled in 5° increments up to a maximum of 15°; as a result, the upper cabinet can be aimed directly at the audience area even when the system is ground stacked. The upper cabinet is equipped with four multi-function handles and a removable dolly. Integral Aeroquip tracks enable the cabinet to be flown.



*Optional protective covers help prevent incidental damage during transport and offer an additional measure of security.*

## THE COMPONENTS

### ICON IC 118 BA

The IC 118 BA makes use of a bandpass design to achieve high maximum sound pressure while producing deep low bass well below 40 Hz. Even under maximum load the impulse response accuracy is striking. When used as the system subwoofer of the ICON LTS, the IC 118 BA is controlled entirely by the IC 112 LA mid/high unit. The subwoofer cabinet houses integral electronics that include a latest-generation 2000-watt/4-Ohm Class D power amp which drives the 18"/4-Ohm neodymium subwoofer with ample headroom. With 136 dB maximum SPL (139 dB maximum SPL calculated) over a frequency range from 33 Hz to the cutoff frequency, the

subwoofer creates muscular, dynamic bass even under high SPL loads. With a weight of 54 kg, eight multi-function handles and the included dolly, the subwoofer is easy to handle and load in and out. Via an RJ45 connection with the Internal System Guard, performance data are sent to the upper unit and can then be displayed quickly and easily with the PodWare software on a Windows PC.



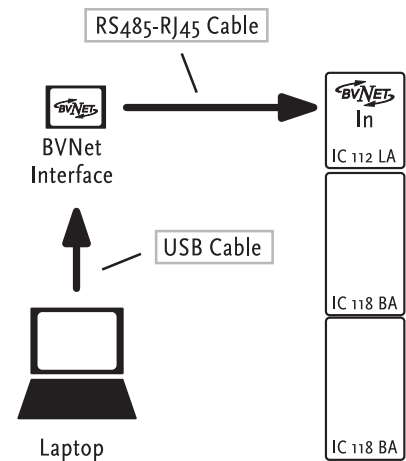
ICON Series Tilt Unit  
with carry bag

## PODWARE SOFTWARE

For remotely controlling and monitoring your system

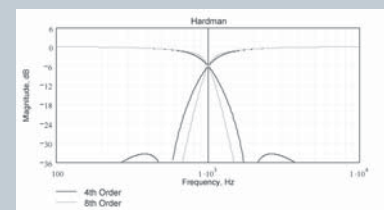
ICON LTS incorporates a latest-generation, network-capable, integrated control design. Each mid/high cabinet contains a digital controller that manages the signal flow and all its settings for the entire system. In addition to operating with the factory settings, the ICON LTS System can be operated with User settings by remote control using a PC over a network connection. An internal data line enables the operator to monitor the functioning of the entire system. Live data about the operating temperature and conditions of the power amplifiers, as well as a history of their power-up cycles, are stored for the latest 72 hours of operation, providing a clear record of how the system is working.

With the included PC software called PodWare and the BVNet Interface that connects the laptop to the sound system, the operator can manually access the sound settings with all their important parameters and thereby adapt the system to the specific conditions at each venue.



System set-up: cabling diagram

- 96 kHz audio processing
- Hardman filter technology
- Monitoring amp temperature
- Monitoring driver impedance
- PC software, networkable

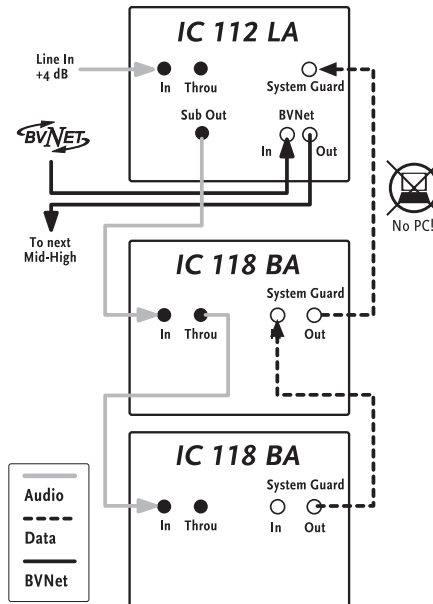


Hardman Filter

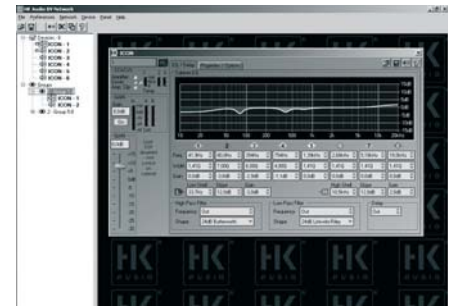
THE ELECTRONICS



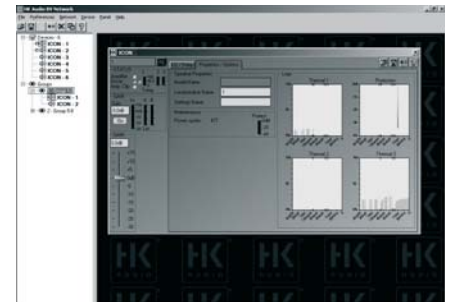
The included software is easy to install and intuitive to operate. By means of the BVNet Interface and CAT5 cabling, the system can be integrated into a network and remotely controlled with a PC—even wirelessly, if necessary.



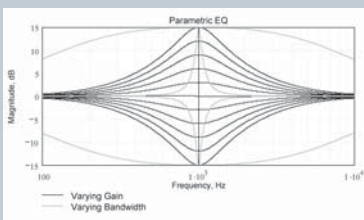
Cabling diagram ICON LTS System/ Stack



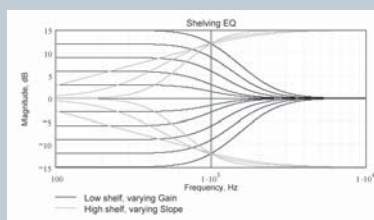
DSP Loudspeaker system as seen in the PodWare



DSP Loudspeaker system in groups



Parametric EQ



Shelving Filter



BVNet USB Interface

## TECHNICAL DATA

### ICON IC 112 LA

#### Connections

1x XLR Line In, 1x XLR Line Through, 1x XLR Sub Out,  
2x BVNet RJ45 IN/OUT, 1x Ethernet RJ45 Internal System Guard

#### Input impedance

20 kOhm

#### Input sensitivity

+16 dBu, +4 dBu, 0 dBu, -10 dBu, variable

#### Max. Input level

+22 dBu

#### Frequency response +/- 3 dB

134 Hz – 17 kHz (LTS System Filter)

#### Untere Grenzfrequenz -10 dB

108 Hz

#### Sensitivity 1W/1m<sup>1</sup>

109 dB (120 Hz – 16 kHz)

#### Max SPL calculated<sup>1</sup>

139 dB, based on peak power handling capacity

#### Max SPL peak<sup>1</sup>

136 dB SPL

#### Max SPL<sup>1</sup>

131 dB SPL @ 10% THD, 120 Hz – 12 kHz

134 dB SPL @ 10% THD, 120 Hz – 5 kHz

#### Amplifier Mid

1x 1000 W / 4 Ohm Class D

#### Amplifier Hi

1x 600 W / 4 Ohm Class D

#### Limiters

RMS Limiter, Peak Limiter, Subsonic Filter

#### MF Speaker

12"/8 Ohm Neodymium

#### HF Speaker

1,4"/8 Ohm

#### Directivity

60° x 40° CD horn (400 Hz – 17 kHz)

#### Crossover Frequency

900 Hz, 24 dB/ Oct.

#### Rigging points

Aeroquip

#### Handles

4, integrated

#### Grille

Metal Grille with black acoustic foam

#### Castors

Dolly with four 100 mm castors

#### Accessories

ICON Tilt-Unit, 5°, 10°, 15°, dust cover

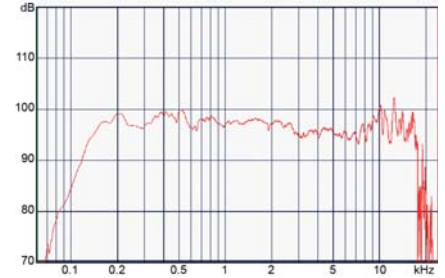
BVNet USB Interface, Cable Kit BVNet

#### Dimensions (WxHxD)

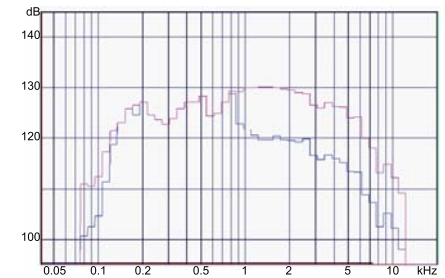
50 x 60 x 81 cm / 19-11/16 x 23-5/8 x 31-7/8"

#### Weight

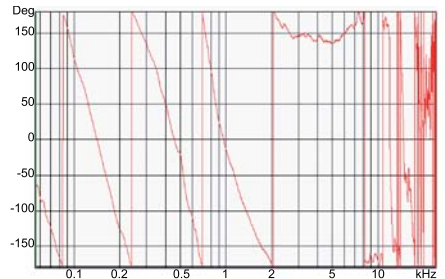
49,9 kg / 110 lbs. (without dolly)



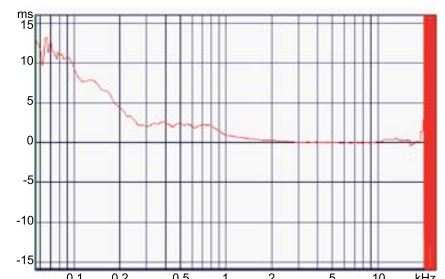
Frequency Response



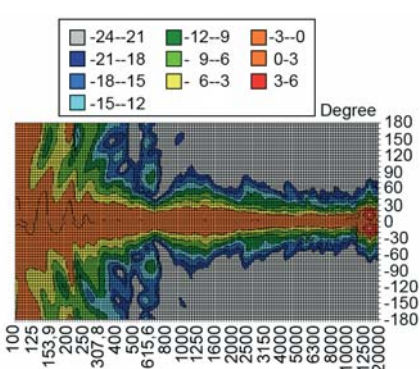
Max SPL



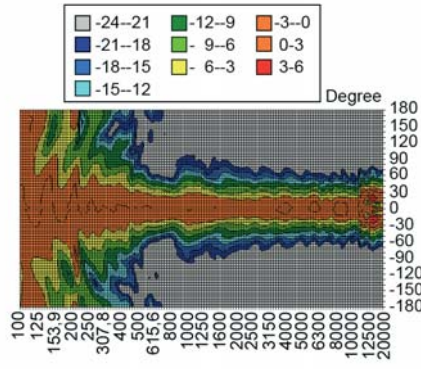
Phase Response



Group Delay



Directivity vertical 2D



Directivity horizontal 2D

## ICON IC 118 BA

### Connections

1x XLR Input, 1x XLR Through,  
2x Ethernet RJ45 Internal System Guard

### Input impedance

20 kOhm

### Input Sensitivity

depends on IC 112 LA settings

### Max. Input Level

+22 dBu

### Frequency response +/-3 dB

41 Hz – fx

### Untere Grenzfrequenz -10 dB

33 Hz

### Sensitivity 1W@1m<sup>1</sup>

105 dB

### Max SPL calculated<sup>1</sup>

138 dB, based on peak power handling capacity

### Max SPL peak<sup>1</sup>

138 dB SPL, 90 Hz – 100 Hz

### Max SPL<sup>1</sup>

136 dB SPL @ 10% THD

### Amplifier Sub

1x 2000 W / 4 Ohm Class D

### Limiters

Subsonic Filter, System Controller with Peak Limiter

### Woofers

18" / 4 Ohm Neodymium

### Pole mount

Two M20 threaded base plates

### Handles

8, integrated

### Grille

Metal Grille with black acoustic foam

### Castors

Dolly with four 100 mm castors

### Accessories

dust cover

### Dimensions (WxHxD)

50 x 90 x 81 cm / 20-1/2 x 28-1/2 x 28-1/8"

### Weight

54,1 / 119,2 lbs (without dolly)

## GENERAL TECHNICAL DATA

### Max. Power Consumption

1050 Watt (IC 112 LA), 1880 Watt (IC 118 BA)

### Max. Current Consumption

4,5 A (IC 112 LA), 8,1 A (IC 118 BA)

### Internal fuse

4 AT / 10 AT (IC 112 LA), 10 AT (IC 118 BA)

### Mains voltage range

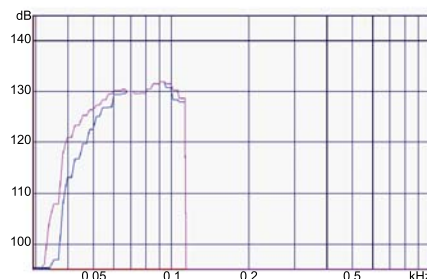
220 V - 240 V

### Mains connector

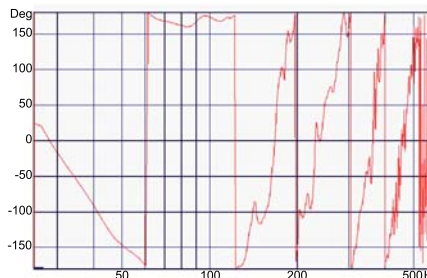
Neutrik Powercon



Frequency Response



Max SPL



Phase Response



Group Delay

1) Measurements taken under half-space conditions



HK AUDIO® • Postfach 1509 • 66595 St. Wendel  
Germany • [info@hkaudio.de](mailto:info@hkaudio.de) • [www.hkaudio.com](http://www.hkaudio.com)  
International Inquiries: fax +49-68 51-905 215  
[international@hkaudio.com](mailto:international@hkaudio.com)

Technical specifications subject to change without notice.  
Copyright 2009 Music & Sales GmbH • 09/2009