**DATA SHEET**

**Community L SERIES**

**LVH-909/AS**

90° HORIZONTAL DISPERSION, ACTIVE STANDARD, 20°, 40°, 60° VERTICAL DISPERSION, ARRAYABLE, HIGH OUTPUT LOUDSPEAKER

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### FEATURES

- Designed for extraordinary performance in large venues
- Large format, horn-loaded triaxial array maintains pattern control to 400Hz
- Co-linear manifold for HF and MF beamforming
- Indoor or Outdoor weather-resistant models

### TECHNICAL SPECIFICATIONS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Operating Mode</strong></td>
<td>Multi-Amplifier with FIR DSP Beamforming</td>
</tr>
<tr>
<td><strong>Operating Environment</strong></td>
<td>Indoor or Outdoor Direct Exposure</td>
</tr>
<tr>
<td><strong>Operating Range (-10dB)</strong></td>
<td>60 Hz to 18 kHz</td>
</tr>
<tr>
<td><strong>Nominal Beamwidth</strong></td>
<td>Horizontal: 90°, Vertical: 60°, 40°, 20° Traditional symmetrical (FIR DSP user selectable presets)</td>
</tr>
<tr>
<td><strong>Transducers</strong></td>
<td>LF - 4 x 12&quot; (305mm) with 3&quot; (76mm) CCAW voice coil, inherently weather-resistant cone in cast aluminum chassis</td>
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<tr>
<td></td>
<td>MF - 3 x M200, 2&quot; (51mm) exit, ketone polymer diaphragm, compression driver</td>
</tr>
<tr>
<td></td>
<td>HF - 4 x 1.5&quot; (38mm) CCAW voice coil, 1&quot; (25mm) exit, ketone polymer diaphragm, compact neodymium compression driver</td>
</tr>
<tr>
<td><strong>Continuous Signal Voltage @ Nominal Impedance</strong></td>
<td>LF1, LF2 (each) 89V, 8 ohms (178V peak)</td>
</tr>
<tr>
<td></td>
<td>MF 1 &amp; 3 26V, 5 ohms (52V peak)</td>
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<tr>
<td></td>
<td>MF 2 26V, 10 ohms (52V peak)</td>
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<tr>
<td></td>
<td>HF 1 &amp; 4 23V, 8 ohms (46V peak)</td>
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<tr>
<td></td>
<td>HF 2 &amp; 3 23V, 8 ohms (46V peak)</td>
</tr>
<tr>
<td><strong>Crossover Frequencies</strong></td>
<td>550 Hz, 2.5kHz</td>
</tr>
<tr>
<td><strong>Equalized Maximum SPL @ 1m</strong></td>
<td>20° pattern 141 dB, Continuous 135 dB</td>
</tr>
<tr>
<td></td>
<td>40° pattern 140 dB, 134 dB</td>
</tr>
<tr>
<td></td>
<td>60° pattern 139 dB, 133 dB</td>
</tr>
<tr>
<td><strong>Recommended Amplifiers</strong></td>
<td>DSP with Linear Phase FIR processing included in all Community Amplified Loudspeaker Controllers (ALC models)</td>
</tr>
<tr>
<td></td>
<td>LF1, LF2 (2 Ch.) ALC-1604D (Bridged)</td>
</tr>
<tr>
<td></td>
<td>All MF &amp; HF (4 Ch.) ALC-404D</td>
</tr>
</tbody>
</table>

### PHYSICAL

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Input Connection</strong></td>
<td>Lever-actuated wire clamping 4 and 8-position terminal blocks</td>
</tr>
<tr>
<td><strong>Mounting Points</strong></td>
<td>(24) M10 rigging inserts</td>
</tr>
<tr>
<td><strong>Operation Environment</strong></td>
<td>Indoor and Outdoor</td>
</tr>
<tr>
<td></td>
<td>Outdoor: IP56 per IEC 60529 when used with the input panel and seal cup cover plates; Weather resistant to IEC 60068-2-1 Cold, IEC 60068-2-2 Dry Heat, IEC 60068-2-6 Vibration, IEC 60068-2-30 Damp Heat, cyclic, IEC 60068-2-42 SO2, and IEC 60068-2-78 Damp Heat, steady state</td>
</tr>
<tr>
<td><strong>Dimensions H x W x D</strong></td>
<td>37.3&quot; x 31.4&quot; x 30.5&quot; (948 x 797 x 775 mm)</td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td>250 lbs (113.4 kg) Indoor model</td>
</tr>
<tr>
<td></td>
<td>210 lbs (95.3 kg) Outdoor weather-resistant model</td>
</tr>
<tr>
<td><strong>Finish</strong></td>
<td>Refer to the Technical Drawing (page 5)</td>
</tr>
</tbody>
</table>

### OPTIONS

<table>
<thead>
<tr>
<th>Accessory</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Splay Bracket</td>
<td>LVH-900SPT1 Type 1; LVH-900SPT2 Type 2</td>
</tr>
<tr>
<td>Indoor Frames</td>
<td>LVH-900AF Array frame; LVH-900PB Pull-back; LVH-900UB U-Bracket (single cabinet only)</td>
</tr>
<tr>
<td>LVH-900ASPTP</td>
<td>MF/HF Pass-Thru Panel</td>
</tr>
<tr>
<td>3rd party rigging</td>
<td>Indoor &amp; Outdoor</td>
</tr>
</tbody>
</table>

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Biamp strives to improve its products on a continual basis. Specifications are therefore subject to change without notice.

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**APPLICATIONS**

Stadiums · Houses of Worship · Arenas
Theaters · Ice Rinks · Auditoriums
Large multipurpose outdoor and indoor venues

**DESCRIPTION**

Biamp’s Community L SERIES LVH-900/AS Beamforming Venue Horn™, combined with the Community Amplified Loudspeakers Controllers (ALCs), precisely tailors the directivity of each loudspeaker, or array of loudspeakers, to meet the sound requirements in any application.

Designed for exceptional performance in large venues, each LVH-900/AS (Active Standard) model consists of four 12-inch LF drivers, three Community M200 midrange compression drivers and four 1.5-inch HF compression drivers. Using patent-pending techniques, all drivers integrate into a single triaxial waveguide that fills the entire 36 x 31-inch face of the enclosure, providing pattern control to below 400 Hz. The LVH-909 offers 90° of fixed horizontal dispersion, and has presets for vertical dispersion beamforming in 60°, 40°, 20° configurations. The LVH-900 Active Standard (AS) models allow DSP settings and control of individual driver pairs to provide uniform sound to the audience areas.

Typical applications include music and speech reinforcement for large houses of worship, stadiums, theatres, and much more. Possessing advanced features, highly-focused dispersion patterns, weather-resistant construction, and most importantly sonic excellence, LVH-900 loudspeakers make installations not only fast and simple, but as functionally effective as possible.
**Community L SERIES**  
**LVH-909/AS**  
**Beamforming Venue Horn**

**90° HORIZONTAL DISPERSION,**  
**ACTIVE STANDARD, 20°, 40°, 60° VERTICAL DISPERSION,**  
**ARRAYABLE, HIGH OUTPUT LOUDSPEAKER**  
**20° VERT PATTERN**

**AXIAL PROCESSED SENSITIVITY (dB)**

- **System**

**HORIZONTAL OFF-AXIS RESPONSE (dB)**

- **0°**  
- **15°**  
- **30°**  
- **45°**  
- **60°**

**IMPEDANCE (Ohms)**

- **LF**  
- **MF 1 & 3**  
- **MF 2**  
- **HF 1 & 4**  
- **HF 2 & 3**

**VERTICAL OFF-AXIS RESPONSE (dB)**

- **0°**  
- **5°**  
- **10°**  
- **15°**

**DIRECTIVITY INDEX (dB)**

- **System**

**BEAMWIDTH (Degrees)**

- **Horizontal**  
- **Vertical**

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**Min Impedance:**  
- **(LF)** 6.66 ohms @ 250Hz  
- **(HF 1 & 3)** 4.5 ohms @ 2240 Hz, **(MF 2)** 8.57 ohms @ 2000 Hz,  
- **(HF 2 & 3)** 7.05 ohms @ 5600 Hz
Community L SERIES  Beamforming Venue Horn
LVH-909/AS  90° HORIZONTAL DISPERSION,
ACTIVE STANDARD, 20°, 40°, 60° VERTICAL DISPERSION,
ARRAYABLE, HIGH OUTPUT LOUDSPEAKER  40° VERT PATTERN

AXIAL PROCESSED SENSITIVITY (dB)⁵

HORIZONTAL OFF-AXIS RESPONSE (dB)⁶

IMPEDANCE (Ohms)

VERTICAL OFF-AXIS RESPONSE (dB)⁶

DIRECTIVITY INDEX (dB)⁷

BEAMWIDTH (Degrees)⁸
Community L SERIES  Beamforming Venue Horn
LVH-909/AS  90° HORIZONTAL DISPERSION,
ACTIVE STANDARD, 20°, 40°, 60° VERTICAL DISPERSION,
ARRAYABLE, HIGH OUTPUT LOUDSPEAKER
60° VERT PATTERN

**AXIAL PROCESSED SENSITIVITY (dB)**

**HORIZONTAL OFF-AXIS RESPONSE (dB)**

**IMPEDANCE (Ohms)**

**VERTICAL OFF-AXIS RESPONSE (dB)**

**DIRECTIVITY INDEX (dB)**

**BEAMWIDTH (Degrees)**

Min Impedance: (LF) 6.66 ohms @ 250Hz
(MF 1&3) 4.5 ohms @ 2240 Hz, (MF 2) 8.57 ohms @ 2000 Hz,
(HF 1&4) 7.16 ohms @ 5600 Hz, (HF 2&3) 7.05 ohms @ 5600 Hz

100° HORIZONTAL DISPERSION,
ACTIVE STANDARD, 20°, 40°, 60° VERTICAL DISPERSION,
ARRAYABLE, HIGH OUTPUT LOUDSPEAKER

biamp.
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Community L SERIES  Beamforming Venue Horn
LVH-909/AS

90° HORIZONTAL DISPERSION,
ACTIVE STANDARD, 20°, 40°, 60° VERTICAL DISPERSION,
ARRAYABLE, HIGH OUTPUT LOUDSPEAKER

Enclosure Finish
Indoor: Powder-coated perforated steel (indoor) grille backed with acoustically transparent woven fabric and coated with Biamp's robust PolyCoat finish on 15mm Baltic Birch plywood enclosure
Outdoor (WR): Powder-coated marine grade aluminum grille featuring hydrophobically treated acoustically transparent woven black fabric backing on a 15mm PolyGlas™ enclosure coated with Biamp's durable PolyCoat finish, rated for both indoor and outdoor use

Unit Weight
250 lbs (113.4 kg) (Indoor)
210 lbs (95.3 kg) (Outdoor Weather-resistant)

Shipping Weight (on a pallet)
307 lbs (139.3 kg) (Indoor)
267 lbs (121 kg) (Outdoor Weather-resistant)

LVH-909 COG 427
16.8 M8 THREADED HOLE

LVH 906 COG

INPUT CUPS

325 x 325 mm

MATERIAL
FINISH
COLOR

LVH900 OVERALL DIMENSIONS AND MOUNTING DETAIL

REV

*Note: Outdoor (WR) versions - There are covers on the seal cups (4) and input panels (2)
Community L SERIES  Beamforming Venue Horn

LVH-909/AS

90° HORIZONTAL DISPERSION,
ACTIVE STANDARD, 20°, 40°, 60° VERTICAL DISPERSION,
ARRAYABLE, HIGH OUTPUT LOUDSPEAKER

SPLAY BRACKETS / CABINET CONNECTIONS

Type 1 Splay Bracket

MODELS and ACCESSORIES

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<tr>
<th>Models</th>
<th>Description</th>
<th>Accessories</th>
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<tbody>
<tr>
<td>LVH-906/ASB</td>
<td>LVH-900 60DEG ACTIVE-STD BLK</td>
<td>LVH-900AFB</td>
<td>LVH-900 ARRAY FRAME BLK</td>
</tr>
<tr>
<td>LVH-906/ASW</td>
<td>LVH-900 60DEG ACTIVE-STD WHT</td>
<td>LVH-900AFW</td>
<td>LVH-900 ARRAY FRAME WHT</td>
</tr>
<tr>
<td>LVH-906WR/ASG</td>
<td>LVH-900WR 60DEG ACTIVE-STD GRY</td>
<td>LVH-900PBB</td>
<td>LVH-900 PULL BACK BAR BLK</td>
</tr>
<tr>
<td>LVH-906WR/ASB</td>
<td>LVH-900WR 60DEG ACTIVE-STD BLK</td>
<td>LVH-900PBW</td>
<td>LVH-900 PULL BACK BAR WHT</td>
</tr>
<tr>
<td>LVH-906WR/ASW</td>
<td>LVH-900WR 60DEG ACTIVE-STD WHT</td>
<td>LVH-900UBB</td>
<td>LVH-900 U-BRACKET BLK</td>
</tr>
<tr>
<td>LVH-906C/AS</td>
<td>LVH-900 60DEG ACTIVE-STD CTO</td>
<td>LVH-900UBW</td>
<td>LVH-900 U-BRACKET WHT</td>
</tr>
<tr>
<td>LVH-906WRC/AS</td>
<td>LVH-900WR 60DEG ACTIVE-STD CTO</td>
<td>LVH-900SP1B</td>
<td>LVH SPLAY PLATE PAIR TYPE1 BLK</td>
</tr>
<tr>
<td>LVH-909/ASB</td>
<td>LVH-900 90DEG ACTIVE-STD BLK</td>
<td>LVH-900SP1W</td>
<td>LVH SPLAY PLATE PAIR TYPE1 WHT</td>
</tr>
<tr>
<td>LVH-909/ASW</td>
<td>LVH-900 90DEG ACTIVE-STD WHT</td>
<td>LVH-900SP1G</td>
<td>LVH SPLAY PLATE PAIR TYPE1 GRY</td>
</tr>
<tr>
<td>LVH-909WR/ASG</td>
<td>LVH-900WR 90DEG ACTIVE-STD GRY</td>
<td>LVH-900SP2B</td>
<td>LVH SPLAY PLATE PAIR TYPE2 BLK</td>
</tr>
<tr>
<td>LVH-909WR/ASB</td>
<td>LVH-900WR 90DEG ACTIVE-STD BLK</td>
<td>LVH-900SP2W</td>
<td>LVH SPLAY PLATE PAIR TYPE2 WHT</td>
</tr>
<tr>
<td>LVH-909WR/ASW</td>
<td>LVH-900WR 90DEG ACTIVE-STD WHT</td>
<td>LVH-900SP2G</td>
<td>LVH SPLAY PLATE PAIR TYPE2 GRY</td>
</tr>
<tr>
<td>LVH-909C/AS</td>
<td>LVH-900 90DEG ACTIVE-STD CTO</td>
<td>LVH-900ASPTP</td>
<td>LVH MF/HF PASS THRU PANEL</td>
</tr>
<tr>
<td>LVH-909WRC/AS</td>
<td>LVH-900WR 90DEG ACTIVE-STD CTO</td>
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</table>
CAUTION: Installation of loudspeakers should only be performed by trained and qualified personnel. It is strongly recommended that a licensed and certified professional structural engineer approve the mounting design.

Notes:

1. Performance Specifications: All measurements are taken indoors using a time-windowed and processed signal to eliminate room effects, approximating an anechoic environment, a distance of 6.0 m. All acoustic specifications are rounded to the nearest whole number. An external DSP using settings provided by Biamp is required to achieve the specified performance; further performance gains can be realized using the FIR loudspeaker optimization presets available in Biamp’s Community Amplified Loudspeaker Controllers (ALC SERIES).

2. Operating Range: The frequency range in which the on-axis processed response remains within 10 dB of the average SPL.

3. Continuous Power Handling: Maximum continuous input voltage at the stated nominal impedance that the system can withstand, without damage, for a period of 2 hours using an EIA-426-B defined spectrum, with recommended signal processing and protection filters.

4. Equalized Maximum SPL: The SPL produced when an EIA-426-B signal is applied to the equalized loudspeaker system, at a level which drives at least one subsection to its rated continuous input voltage limit, referenced to a distance of 1 meter. The peak SPL represents the 2:1 (6 dB) crest factor of the EIA-426-B test signal.

5. Axial Processed Sensitivity: The on-axis variation in acoustic output level with frequency for a 1 Watt swept sine wave, referenced to 1 meter with recommended signal processing applied.

6. Horizontal / Vertical Off-Axis Responses: The loudspeaker’s magnitude response at various angles off-axis, with recommended signal processing applied in the operating mode which utilizes the largest number of individually amplified pass bands.

7. Directivity Index: The ratio of the on-axis SPL squared to the mean squared SPL at the same distance for all points within the measurement sphere for each given frequency; expressed in dB.

8. Beamwidth: The angle between the -6 dB points in the polar response of the loudspeaker when driven in the operating mode which utilizes the largest number of individually amplified pass bands.

Data presented on this spec sheet represents a selection of the basic performance specifications for the model. These specifications are intended to allow the user to perform a fair, straightforward evaluation and comparison with other loudspeaker spec sheets. For a detailed analysis of this loudspeaker’s performance, please download the GLL file and/or the CLF file from our website: LVH-900/AS data here.

Refer to the LVH Installation and Operation Guide for detailed wiring instructions.