TECHNICAL DATA

ArenaMatch AM40
DeltaQ array loudspeaker

Product Overview
Bose Professional ArenaMatch loudspeakers bring proven DeltaQ sound quality and flexibility to outdoor installations — sports stadiums, arenas, outdoor entertainment centers, and more. Featuring an IP55 weather rating, ArenaMatch DeltaQ modules make it easy to create outdoor loudspeaker arrays that bring consistent, intelligible sound to every listener. Nine coverage patterns are available. Choose from modules with 10°, 20°, or 40° vertical coverage and easily swap between 60°, 80°, or 100° horizontal waveguides to build arrays that are lighter, require less installation time, and can lower overall system costs by delivering full coverage with fewer modules.

Key Features

- Improve sound quality, consistency, and vocal clarity with DeltaQ array technology, which allows directivity, or “Q,” to vary in each module to more precisely match coverage to the audience area
- Easily customize horizontal coverage with replaceable waveguides that allow you to further customize coverage and even form asymmetrical patterns for improved acoustic performance in left/right arrays
- Deliver high-SPL, long-throw music reproduction and vocal intelligibility with a 14-inch neodymium woofer and six Bose EMB2S titanium-diaphragm neodymium compression drivers
- Install outdoors with an IP55 weather rating, three-layer stainless steel grille, water-resistant woofer cone coating, industrial polyurethane exterior coating, and molded input cover
- Provide full coverage with fewer modules — 10°, 20°, and 40° modules allow you to create arrays that improve sight lines, reduce weight, and lower system costs by requiring fewer modules compared to conventional arrays
- Reduce commissioning time by using 40° modules for point-source applications and 10°, 20° and 40° modules for line arrays — all with the same transducers for consistent tonal balance
- Adapt to a variety of configurations — all models ship standard with bi-amp capability, passive crossover, and 70/100V transformer inputs
- Streamline the design process by combining with complementary Bose Professional products, such as ArenaMatch Utility zone-fill loudspeakers, PowerMatch amplifiers, and ControlSpace DSPs
- Save time during installation using Bose accessory mounting hardware or use the standard M12 threaded inserts to interface with custom array frames
## Technical Specifications

### Single Module Performance

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency Response (-3 dB)</td>
<td>65 Hz to 16 kHz</td>
</tr>
<tr>
<td>Frequency Range (-10 dB)</td>
<td>55 Hz to 18 kHz</td>
</tr>
<tr>
<td>Nominal Coverage Pattern (H × V)</td>
<td>60° × 40° (AM40/60) or 80° × 40° (AM40/80) or 100° × 40° (AM40/100)</td>
</tr>
<tr>
<td>Recommended High-pass Filter</td>
<td>60 Hz with minimum 12 dB / octave</td>
</tr>
<tr>
<td>Crossover</td>
<td>950 Hz internal passive or external bi-amp (Bose ControlSpace presets)</td>
</tr>
<tr>
<td>70/100V transformer tap settings</td>
<td>70V: 100, 200, 400 W; 100V: 200, 400 W</td>
</tr>
</tbody>
</table>

### Bose Extended Lifecycle Test 1

<table>
<thead>
<tr>
<th>Power Handling, long-term continuous</th>
<th>LF (bi-amp)</th>
<th>HF (bi-amp)</th>
<th>Passive</th>
</tr>
</thead>
<tbody>
<tr>
<td>AM40/60</td>
<td>600 W</td>
<td>150 W</td>
<td>750 W</td>
</tr>
<tr>
<td>AM40/80</td>
<td>1000 W</td>
<td>250 W</td>
<td>1250 W</td>
</tr>
<tr>
<td>AM40/100</td>
<td>2400 W</td>
<td>600 W</td>
<td>3000 W</td>
</tr>
<tr>
<td></td>
<td>4000 W</td>
<td>1000 W</td>
<td>5000 W</td>
</tr>
</tbody>
</table>

### AES Transducer Test 1

<table>
<thead>
<tr>
<th>Power Handling, peak</th>
<th>LF (bi-amp)</th>
<th>HF (bi-amp)</th>
<th>Passive</th>
</tr>
</thead>
<tbody>
<tr>
<td>AM40/60</td>
<td>2400 W</td>
<td>600 W</td>
<td>3000 W</td>
</tr>
<tr>
<td>AM40/80</td>
<td>4000 W</td>
<td>1000 W</td>
<td>5000 W</td>
</tr>
<tr>
<td>AM40/100</td>
<td>7000 W</td>
<td>2000 W</td>
<td>4000 W</td>
</tr>
</tbody>
</table>

### Transducers

- **Low Frequency**: 1 × Bose LF14 neodymium 14-inch woofer (4-inch voice coil)
- **High Frequency**: 6 × Bose EMB2S titanium-diaphragm, neodymium compression drivers (2-inch voice coil)
- **Nominal Impedance**: Passive: 8 Ω / Bi-amp: 8 Ω + 8 Ω

### Physical

- **Enclosure Material**: Exterior-grade birch plywood
- **Finish**: Two-part polyurea coating, black
- **Grille**: Powder-coated perforated stainless steel, acoustic foam, stainless steel mesh
- **Environmental**: Rated for direct-exposure outdoor installations (IEC 60529: IP55)
- **Connectors**: Barrier strips: passive in/through, bi-amp, and 70/100V, with cover
- **Suspension/Mounting**: 8 × M12 threaded inserts (4 per side); 4 × M8 threaded inserts (2 per side)
- **Dimensions (H × W × D) – millimeters**: 489 × 783 × 400 mm (19.3 × 30.8 × 15.8 in)
- **Net Weight**: 34.9 kg (77 lbs)
- **Shipping Weight**: 42.2 kg (93 lbs)
- **Accessories**: U-bracket, array suspension kits, waveguide kits

### Product codes

- **794042-6680**: ARENAMATCH AM40/80 OUTDOOR LDSPKR 80x40
- **794042-3380**: ARENAMATCH AM40/60 OUTDOOR LDSPKR 60x40
- **794042-8880**: ARENAMATCH AM40/100 OUTDOOR LDSPKR 100x40

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**Footnotes**

1. Frequency response and range measured on-axis in anechoic environment with recommended bandpass and EQ, single module.
2. Bose extended-lifecycle test using pink noise filtered to meet IEC268-5, 6-dB crest factor, 500-hour duration.
3. AES standard 2-hour duration with IEC system noise.
4. Sensitivity measured in anechoic environment with recommended bandpass and EQ.
5. Maximum SPL calculated using sensitivity and power ratings, exclusive of power compression.
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**Frequency response** (60° waveguide)

**Beamwidth** (60° waveguide)

**Frequency response** (80° waveguide)

**Beamwidth** (80° waveguide)
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**Frequency response (100° waveguide)**

**Beamwidth (100° waveguide)**
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Top View

Front View
GRILLE NOT SHOWN

Right View
DIMENSIONS APPLY TO BOTH SIDES

Rear View
CORD GRIP

NOTES:
1. SYMBOL INDICATES CENTER OF GRAVITY
2. WEIGHT APPROX. 34.9kg/76.9lbs
3. DIMENSIONS ARE IN MILLIMETERS OVER INCHES
4. SYMBOL INDICATES M12 THREAD FOR AM60CLAT
5. SYMBOL INDICATES M10 THREAD FOR AM60BKT
6.  SYMBOL INDICATES M8 THREAD FOR ARMING STABILIZATION

For additional specifications and application information, please visit PRO.BOSE.COM.