EV's unwavering commitment to customer needs has led to a résumé few professional audio companies possess:

• 1934 — EV invents the hum-bucking coil for microphones (still a standard almost 70 years later).
• 1940s — EV introduces noise cancellation to microphones; revolutionizes tank and aircraft communications.
• 1954 — EV introduces Variable-D® microphone technology, a means of eliminating the up-close bass boost of conventional, single-D directional microphones — for high vocal intelligibility under the typical varying conditions of use in churches and meeting rooms.
• 1963 — EV receives an Academy of Motion Picture Award from the Academy of Motion Picture Arts and Sciences for the development of a shotgun microphone — the 642 Cardiline® — which significantly advances the quality of sound on film.
• 1974 — EV develops constant-directivity (CD) horns. For the first time, a loudspeaker maintains its rated coverage angles over a wide frequency range, for significantly more uniform sound quality and higher intelligibility throughout the audience.
It’s late afternoon, and a few men in fedoras are examining blueprints in the basement of an Indiana tire company. It’s hot. It’s dusty. The year is 1927, and these are the humble beginnings of Electro-Voice. While the history of EV may read like classic “rags-to-riches” pulp fiction, it is nonetheless a real tale of American success.

Over the course of time, EV has grown into one of today’s dominant, worldwide forces in the design and manufacturing of top-quality products for broadcast, studio recording, touring sound, permanently installed sound reinforcement and music playback systems. Recognized the world over as a leader in audio technology, EV is ubiquitous in performing arts centers, sports facilities, houses of worship, cinemas, live music and dance clubs, transportation centers and theatres.

EV’s reputation for providing superior audio product and dedication to innovation continues today. EV, now a product brand of Telex Communications, Inc., shares technology with other Telex product brands: Dynacord, Klark-Teknik, Midas and University Sound.

- 1985 — EV develops and is the first to market N/DYM® (neodymium-based) dynamic microphones, with the high output and extended high-frequency response of a condenser.
- 1986 — EV revolutionizes concert sound reinforcement by introducing Manifold Technology®. In each of four bandpasses covering the entire frequency range, the output of four loudspeakers is flawlessly combined — or “manifolded” — into a single horn or low-frequency enclosure. The result is — in a physical package a fraction of the size of conventional concert rigs — four times the acoustic output without the drastically uneven coverage of multiple acoustic sources “stacked” for more output.
- 1990s — EV invents RMD™ technology (Ring-Mode Decoupling), a revolutionary anodyne to sonic distortion and coloration. Speaker system resolution and clarity increases by minimizing fundamental resonant frequencies.
- 2000 — EV invents VOB™ technology (Vocal-Optimized Bass), an innovative mechanical design that significantly reduces proximity effect, allowing for greater vocal intelligibility and instrumental clarity. EV also invents ClearScan™, a revolutionary innovation in wireless technologies that enables automatic, frequency-agile selection of the best of ten UHF channels.

• FUTURE — LOOK FOR EV INNOVATIONS EVERYWHERE SONIC EXCELLENCE IS FOUND.
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Ring-Mode Decoupling (RMD™) for the best vocals you have ever heard!

**RMD™ and vocal quality:** typical loudspeaker sound is colored by many acoustical and mechanical delayed resonances. Occurring in speaker cones and compression-driver diaphragms, horn and enclosure walls, mechanical resonances ring on after the desired signal has stopped. Acoustic resonances typically take place in horns when sound is reflected back toward the driver at the horn mouth, compression-driver loading cavities and phase plugs.

EV engineers have systematically exposed these resonances and suppressed them one by one. We call this process Ring-Mode Decoupling (RMD™). Typically many dB below the desired signal, these resonances may be immeasurable by conventional means. However, the human ear/brain combination is extremely sensitive to such signals. **RMD™ suppresses these signals and gives a quality of sound and degree of clarity that critical listeners find breathtaking.**

**RMD™ and level-independent fidelity:** in typical speaker systems, as the overall sound pressure level is increased — such as during a musical performance — the delayed resonances increase proportionally more than the primary signal. This sends the sound operator to the equalizers in an attempt to “fix” the sound — ultimately an ill-fated attempt because changing the frequency response of the system cannot eliminate the unpleasant resonances. **RMD™ suppresses resonances at their source. Sound quality is consistent at all sound levels.**

**The proliferation of RMD™:** our ultrahigh-performance X-Array™ systems embody EV’s most extreme application of RMD™. Yet EV engineers have also applied RMD™ technology to our most affordable loudspeakers systems. In this catalog, the sight of the RMD™ logo is your guarantee of the best sound quality that money can buy!
**X-Array™ Xi-Series™ Systems**

Premium touring-quality sound. Install it anywhere.

Dual L-track suspension hardware and ferrite magnetics are optimized for permanent installation and portable applications of small-to-medium size. Inspired by the most demanded features of EV’s acclaimed X-Array™ X-Series™ touring systems, the Xi-Series™ incorporates a potent combination of very-high-output short-, medium- and long-throw “cells,” in two- and three-way configurations, all with EV’s unique RMD™ (Ring-Mode Decoupling).

The Xi-Series™ three-way systems may be “tripole” or “dipole” configured to extend the vertical coverage-angle control to as low as 125 Hz — well below that permitted by the mid-bass horn alone (about 800 Hz) and unprecedented performance in a one-box system. Tripole configuration of the dual-woofer three-way systems provides the best directivity improvement, achieved by the vertically spaced low-frequency sources which flank the mid-bass horn operating alone at low frequencies and by appropriately overlapping the LF and MB sources in the mid bass, e.g., 125 to 540 Hz. The required signal processing is available in EV Dx38, Klark Teknik DN9848 and Merlin® ISP-100 digital processors, which contain dual all-pass filters required for proper configuration (see pages 34–35).

The single-woofer three-way systems may be dipole configured, achieved by overlapping the woofer and mid-bass sources in the appropriate frequency ranges.

**Xi-1122/85F ultracompact two-way 12-inch short-throw full-range system**
- Perfect for high-SPL limited-space applications or down-fill in larger arrays
- The Merlin® ISP-100 processor provides “excursion-smart” protection for maximum acoustic output and very high resistance to component damage, by incorporating limiting and compression that is a function of the safe excursion ability of the woofer and compression driver
- Integral carrying handles and stand-mount adapter for 100BK stand

**Xi-1152/64F and Xi-1152/94F compact two-way 15-inch medium- and short-throw full-range systems**
- For high-SPL limited-space applications and down-fill in larger arrays
- EVX-155 woofer with four-inch voice coil for prodigious output to 50 Hz
- “Excursion-smart” protection with Merlin® ISP-100 processor (see Xi-1122/85F)
- Integral carrying handles and stand-mount adapter for 100BK stand

**Xi-1123/106F compact three-way 12-inch short-throw full-range system**
- Horn-loaded mid-bass section
- Wide, 60° vertical angle helps provide uniform coverage when ceilings are low or seating is highly raked
- Dipole configurable for vertical directivity control to 250 Hz
Xi-2123/106F compact three-way dual-12-inch short-throw full-range system
• Dual-woofer Xi-1123/106F provides additional bass output and additional vertical directivity control when tripole configured
• Spaced woofers flank the mid-bass horn, forming a three-element line array when tripole configured — for vertical directivity control to 160 Hz

Xi-1153/64F three-way 15-inch medium-throw full-range system
• Horn-loaded mid-bass section
• Coaxial HF section asymmetrically placed (RMD™ technique)
• Dipole configurable for vertical directivity control to 200 Hz

Xi-1183/64F three-way 18-inch medium-throw full-range system
• 18-inch version of Xi-1153/64F for over twice the low-frequency acoustic output

Xi-2153/64F three-way dual-15-inch medium-throw full-range system
• Dual-woofer Xi-1153/64F provides increased bass output and additional vertical directivity control when tripole configured
• Spaced woofers flank the mid-bass horn, forming a three-element line array when tripole configured — for vertical directivity control to 125 Hz

Xi-2183/64F
• 18-inch version of Xi-2153/64F provides over two times more bass output
Xi-1191/Xi-1191F large-volume 18-inch true subwoofer
- By housing only a single woofer in the basic Xi shell, performance is optimized for very-low-frequency theatrical effects
- 37-Hz 3-dB-down point (f3) without EQ boost
- Extreme lows reached (28-Hz f3) in step-down mode with EQ
- Xi-1191 omits flyware for ground stacks

Xi-2181/Xi-2181F Manifold Technology®
dual-18-inch low-frequency system
- Two woofers in the basic Xi shell optimize performance for low-frequency enhancement of contemporary music (37-Hz f3 with EQ)
- Four times the acoustic output of the Xi-1191 above 50 Hz
- Use Xi-2181 when flyware is not required

Xi-2122/42F two-way dual-12-inch horn-loaded MB/HF system
- Adds long-throw “punch” to the capabilities of the medium- and short-throw Xi-Series™ systems
- Operates above 125 Hz, with low-frequency augmentation provided by full-range or low-frequency systems
- Dual, vertically stacked HF drivers mount on a “twin format” 40° X 26° horn

Xi-1082 ultracompact two-way underbalcony/low-profile full-range system
- Single eight-inch woofer avoids the midrange lobing of the typical dual-woofer underbalcony system
- U-bracket mounting hardware optional (Mb-1082)
- Rear-mounted threaded inserts mate with OmniMount® Systems 100 hardware (OmniMount is a registered trademark of OmniMount Systems, Inc.)
### SPECIFICATIONS

<table>
<thead>
<tr>
<th>Xi-1191/ Xi-1191F</th>
<th>Xi-2181/ Xi-2181F</th>
<th>Xi-2122/42F</th>
<th>Xi-1082</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Basic Configuration</strong></td>
<td>18-inch subwoofer</td>
<td>Dual 18-inch low-frequency</td>
<td>Dual 12-inch MB/HF biamp only</td>
</tr>
<tr>
<td><strong>Frequency Range (-3 dB)</strong></td>
<td>37-160 Hz</td>
<td>37-200 Hz</td>
<td>125-20,000 Hz</td>
</tr>
<tr>
<td><strong>Step-Down Mode</strong></td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Crossover Frequencies</strong></td>
<td>80-125 Hz recommended</td>
<td>80-125 Hz recommended</td>
<td>125/1,760 Hz</td>
</tr>
<tr>
<td><strong>Sensitivity (1 W/1 m)</strong></td>
<td>94 dB/ N/A / N/A dB</td>
<td>98.5 dB/ N/A / N/A dB</td>
<td>N/A/100/116 dB</td>
</tr>
<tr>
<td><strong>Power Handling</strong></td>
<td>600/ N/A / N/A W</td>
<td>1,200/ N/A / N/A W</td>
<td>N/A/800/150 W</td>
</tr>
<tr>
<td><strong>Coverage (nominal)</strong></td>
<td>300° H x 270° V</td>
<td>240° H x 300° V</td>
<td>40° H x 26° V</td>
</tr>
<tr>
<td><strong>Excursion-Smart Protection with Merlin® ISP-100</strong></td>
<td>Yes (with two-way Xi systems)</td>
<td>Yes (with two-way Xi systems)</td>
<td>No</td>
</tr>
<tr>
<td><strong>Transducers</strong></td>
<td>EVX-180B 18-inch woofer</td>
<td>Two EVX-180B 18-inch woofers</td>
<td>N/A Two 12-inch mid-bass</td>
</tr>
<tr>
<td><strong>Re-Adjustable Horn</strong></td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Impedance (nominal)</strong></td>
<td>8/ N/A / N/A ohms</td>
<td>Dual 8/ N/A / N/A ohms</td>
<td>N/A/8/8 ohms</td>
</tr>
<tr>
<td><strong>Input Connections</strong></td>
<td>Two Neutrik NL8MPR</td>
<td>Two Neutrik NL8MPR</td>
<td>Two Neutrik NL8MPR</td>
</tr>
<tr>
<td><strong>Height</strong></td>
<td>914 mm (36 in.)</td>
<td>914 mm (36 in.)</td>
<td>914 mm (36 in.)</td>
</tr>
<tr>
<td><strong>Width: Front</strong></td>
<td>586 mm (23.07 in.)</td>
<td>586 mm (23.07 in.)</td>
<td>586 mm (23.07 in.)</td>
</tr>
<tr>
<td><strong>Back</strong></td>
<td>354 mm (13.93 in.)</td>
<td>354 mm (13.93 in.)</td>
<td>354 mm (13.93 in.)</td>
</tr>
<tr>
<td><strong>Depth</strong></td>
<td>759 mm (29.98 in.)</td>
<td>759 mm (29.98 in.)</td>
<td>759 mm (29.98 in.)</td>
</tr>
<tr>
<td><strong>Net Weight</strong></td>
<td>68 kg (150 lb)</td>
<td>83.5 kg (184 lb)</td>
<td>101.2 kg (223 lb)</td>
</tr>
</tbody>
</table>

- Construction Materials: 18-mm, 13-ply birch
- Finish: Black textured paint
X-Array™ X-Series™ Systems

X-Array™ X-Series™ speaker systems provide world class performance and flexibility for the ultimate in concert touring systems. Special rigging and neodymium magnetics for very large arrays.

The X-Array™ X-Series™ represents important advancements in concert-sound reinforcement technology. The design goals called for the highest acoustic output capability with the highest fidelity in relatively lightweight, compact enclosures that were easy to array. The individual systems, drivers, horns, enclosures, rigging hardware and system configurations were designed from the ground up specifically for this high-performance application.

Rigging for big hangs: unique rear-hinge rigging for fast, easy and secure rigging. A 64-box hang goes up or down in 30 minutes. Front rigging straps control vertical aiming. Mating positioning recesses on cabinet tops and bottoms help to assemble and disassemble an array on the ground, a layer at a time.

Neodymium magnetics: for lighter weight and maximum acoustic output. All 12-inch mid-bass transducers are the ND12A, for a 3-dB average increase in output. Neodymium in the ND5A-16 compression driver increases output in the upper octaves. The “A” version incorporates new time-domain refinements that further enhance the level-independent performance of the original.

Xn three-way 18-inch medium-throw full-range system
• Horn-loaded mid-bass section
• Coaxial HF section asymmetrically placed (RMD™ technique)

Xf two-way dual-12-inch horn-loaded MB/HF system
• Adds long-throw “punch” to the capabilities of the medium- and short-throw X-Series™ systems
• Operates above 125 Hz, with low-frequency augmentation provided by full-range or low-frequency systems
• Dual, vertically stacked HF drivers mount on a “twin format” 40° x 20° horn

Xcn compact two-way 12-inch medium-throw MB/HF system
• The MB/HF section of the Xn
• Use for down fill at the bottom of the hang, or when smaller load ins/load outs are desired
• Two-thirds-height enclosure shell

Xb Manifold Technology® dual-18-inch low-frequency system
• Loading two woofers in the basic X shell optimizes performance for low-frequency enhancement of contemporary music (response 3 dB down at 37 Hz with EQ)

Xcb 18-inch low-frequency system
• Use for more modest LF requirements or for smaller load ins/load outs
• Two-thirds-height enclosure shell

Xds Manifold Technology® double-volume dual-18-inch true subwoofer
• Enclosure shell identical to two side-by-side full-size X-Array™ cabinets
• Double box volume optimizes very-low-frequency performance

Xw12 two-way 12-inch floor monitor
• Rugged low-profile enclosure of 12-ply birch, uniquely curved for friendly handling
• Symmetrical design allows two monitors to be placed side by side so that the HF horns are coupled for high-level, large-stage applications
• 80° x 55° constant-directivity horn is oriented to provide narrower coverage side to side and wider coverage up and down — helping to isolate adjacent monitor mixes and provide extended front-to-back stage coverage

Xw15 two-way 15-inch floor monitor
• The unique characteristics of the Xw12 plus EVX-155 woofer for increased bass output and lower distortion
## X-Array™ Specifications

### Basic Configuration
- **Xf**: Two-way dual-12-inch Full-range, biamp only
- **Xn**: Three-way 18-inch Full-range, triamp only
- **Xcn**: Two-way 12-inch Full-range, biamp only
- **Xb**: Two-way 12-inch Low-frequency
- **Xwb**: 18-inch Subwoofer
- **Xds**: Dual 18-inch Full-range, biamp only
- **Xw12**: Two-way 12-inch Full-range, biamp only
- **Xw15**: Two-way 15-inch Full-range, biamp only

### Frequency Range (-3 dB)
- **Xf**: 125-20,000 Hz
- **Xn**: 45-20,000 Hz
- **Xcn**: 125-20,000 Hz
- **Xb**: 37-200 Hz
- **Xwb**: 32-200 Hz
- **Xds**: 60-20,000 Hz
- **Xw12**: 60-20,000 Hz
- **Xw15**: 50-20,000 Hz

### Crossover Frequencies
- **Xf**: 125/1,760 Hz
- **Xn**: 125/1,760 Hz
- **Xcn**: 125/1,760 Hz
- **Xb**: 80-125 Hz recommended
- **Xwb**: 80-125 Hz recommended
- **Xds**: 80-125 Hz recommended
- **Xw12**: 1,250 Hz
- **Xw15**: 1,250 Hz

### Sensitivity (SPL 1 W/1 m)
- **Xf**: N/A/112/116 dB
- **Xn**: 95/110/112 dB
- **Xcn**: 98.5/ N/A / N/A dB
- **Xb**: 96/ N/A / N/A dB
- **Xwb**: 100/ N/A / N/A dB
- **Xds**: 99/ N/A / N/A dB
- **Xw12**: 99/ N/A / N/A dB
- **Xw15**: 99/ N/A / N/A dB

### Power Handling
- **Xf**: N/A/600/150 watts
- **Xn**: 600/300/75 watts
- **Xcn**: 600/300/75 watts
- **Xb**: 1,200/ N/A / N/A watts
- **Xwb**: 1,200/ N/A / N/A watts
- **Xds**: 1,200/ N/A / N/A watts
- **Xw12**: 1,200/ N/A / N/A watts
- **Xw15**: 1,200/ N/A / N/A watts

### Coverage (nominal)
- **Xf**: 40º H x 20º V
- **Xn**: 60º H x 40º V
- **Xcn**: 60º H x 40º V
- **Xb**: Omnidirectional
- **Xwb**: Omnidirectional
- **Xds**: Omnidirectional
- **Xw12**: Omnidirectional
- **Xw15**: Omnidirectional

### Transducers

<table>
<thead>
<tr>
<th>LF</th>
<th>MB</th>
<th>HF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xf</td>
<td>N/A</td>
<td>One EV-18B 18-in. woofer</td>
</tr>
<tr>
<td>Xn</td>
<td>Two ND12A 12-in. mid-bass</td>
<td></td>
</tr>
<tr>
<td>Xcn</td>
<td>Two ND5-16 (1.4-in. extd)</td>
<td></td>
</tr>
<tr>
<td>Xb</td>
<td>N/A</td>
<td>One EV-18B 18-in. woofer</td>
</tr>
<tr>
<td>Xwb</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Xds</td>
<td>Two EV-18B 18-in. woofer</td>
<td></td>
</tr>
<tr>
<td>Xw12</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Xw15</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

### Rotatable Horn
- **Xf**: No
- **Xn**: No
- **Xcn**: No
- **Xb**: No
- **Xwb**: Yes
- **Xds**: Yes
- **Xw12**: Yes
- **Xw15**: Yes

### Impedance (nominal)
- **Xf**: N/A/8/8 ohms
- **Xn**: 8/16/16 ohms
- **Xcn**: 8/16/16 ohms
- **Xb**: Dual 8/ N/A / N/A ohms
- **Xwb**: Dual 8/ N/A / N/A ohms
- **Xds**: Dual 8/ N/A / N/A ohms
- **Xw12**: Dual 8/ N/A / N/A ohms
- **Xw15**: Dual 8/ N/A / N/A ohms

### Input Connections
- **Xf**: Two Neutrik NL8MPR
- **Xn**: Two Neutrik NL8MPR
- **Xcn**: Two Neutrik NL8MPR
- **Xb**: Two Neutrik NL8MPR
- **Xwb**: Two Neutrik NL8MPR
- **Xds**: Two Neutrik NL8MPR
- **Xw12**: Two Neutrik NL8MPR
- **Xw15**: Two Neutrik NL8MPR

### Height
- **Xf**: 1,067 mm (36.00 in.)
- **Xn**: 1,067 mm (36.00 in.)
- **Xcn**: 596 mm (23.46 in.)
- **Xb**: 914 mm (36.00 in.)
- **Xwb**: 914 mm (36.00 in.)
- **Xds**: 914 mm (36.00 in.)
- **Xw12**: 1,166 mm (45.92 in.)
- **Xw15**: 443.1 mm (17.44 in.)

### Width: Front
- **Xf**: 584 mm (23.00 in.)
- **Xn**: 584 mm (23.00 in.)
- **Xcn**: 584 mm (23.00 in.)
- **Xb**: 584 mm (23.00 in.)
- **Xwb**: 584 mm (23.00 in.)
- **Xds**: 584 mm (23.00 in.)
- **Xw12**: 583 mm (23.00 in.)
- **Xw15**: 583 mm (23.00 in.)

### Width: Back
- **Xf**: 354 mm (13.93 in.)
- **Xn**: 354 mm (13.93 in.)
- **Xcn**: 354 mm (13.93 in.)
- **Xb**: 354 mm (13.93 in.)
- **Xwb**: 354 mm (13.93 in.)
- **Xds**: 354 mm (13.93 in.)
- **Xw12**: 736 mm (28.98 in.)
- **Xw15**: 408.6 mm (16.10 in.)

### Depth
- **Xf**: 759 mm (29.88 in.)
- **Xn**: 759 mm (29.88 in.)
- **Xcn**: 759 mm (29.88 in.)
- **Xb**: 759 mm (29.88 in.)
- **Xwb**: 759 mm (29.88 in.)
- **Xds**: 759 mm (29.88 in.)
- **Xw12**: 759 mm (29.88 in.)
- **Xw15**: 759 mm (29.88 in.)

### Net Weight
- **Xf**: 87.1 kg (192 lb)
- **Xn**: 87.1 kg (192 lb)
- **Xcn**: 60.8 kg (134 lb)
- **Xb**: 83.5 kg (184 lb)
- **Xwb**: 55.8 kg (123 lb)
- **Xds**: 121 kg (267 lb)
- **Xw12**: 28.2 kg (62 lb)
- **Xw15**: 31.8 kg (70 lb)

**Construction Materials**: 18-mm, 13-ply birch (Xw12 and Xw15 use both 12- and 13-ply birch)

**Finish**: Black textured paint
What do you get when you cross the **Power** and **Vocal Clarity** of the EV **XArray** with the **Uniform Coverage** of a Line Array?

*Introducing The New*

**X-Line**

*BOOK YOUR TOUR TODAY!*
Preliminary Information*

**X-Line™ Line-Array Touring System**

**The Optimal Line-Array Concept.**

The development of the EV X-Line™ systems was driven by the need for a high-level concert touring system that combines the sonic impact and vocal intelligibility of the renowned X-Array™ systems with the unique coverage pattern of an optimally configured vertical line array.

The X-Line™ horizontal pattern is defined in the conventional sense — being the two points on the polar response where output is 6 dB down from the on-axis maximum — and is quite wide, 90° or 120° depending on model. The array’s vertical pattern, on the other hand, is nominally very narrow in the conventional sense — as little as 2° to 3°, with output dropping rapidly as the angle off-axis is further increased. In a line array, the audience is not situated within the very narrow nominal vertical coverage angle just noted, but instead occupies nearly the entire quadrant below the vertical axis, to almost underneath the array. The array is suspended so that the farthest listener is on its vertical axis. Closer listeners fall increasingly below this axis. With optimal configuration and location of the array, the higher sound levels expected from the decreasing listener-to-array distances are precisely counteracted by the controlled, reduced output of the array below its vertical axis.

The EV engineering team set out to develop the next-generation line-array system, combining their years of experience in the development of X-Array™ with the absolute latest state-of-the-art technologies. All X-Line™ systems utilize EV’s exclusive RMD™ (Ring-Mode Decoupling), a process that significantly reduces the individual mechanical and acoustical resonant modes that color the sound of loudspeakers (see page 1).

**The Line-Array Challenge**

Achieving the unique directional characteristics described above over a broad frequency range is not a trivial exercise. In developing X-Line™, EV engineers dealt with this significant challenge being fully aware of the physical laws involved and producing a number of effective solutions to problems, only the most significant of which are described here.

**Product Line Overview**

X-Line™ includes the Xvls and Xvlt full-range line-array systems, Xfil full-range down-fill system and Xsub and XsubF (with rigging) low-frequency systems. These are described in more detail below.

Two full-range devices covering 40-16,000 Hz form the foundation of X-Line™, both with frontal dimensions of 495 mm (19.5 in.) high x 1245 mm (49.5 in.) wide. Transducer complements are identical. The Xvls is a full rectangular cabinet designed for the upper, very-long-throw portions of the line array where box axes are essentially parallel (straight section of the array when viewed from the side). Xvls horizontal coverage is 90°. The Xvlt has a trapezoidal shape with a 5° included angle when viewed from either end. This allows the lower portion of an array to have vertically diverging box axes to form a curved array section—while keeping the front enclosure edges very close together for coherent high-frequency summation. Xvlt horizontal coverage is 120°.

All three full-range systems employ newly developed components and a time-synchronized waveguide. ND5A large-format compression drivers cover frequencies above 1,200 Hz, and incorporate elements that substantially improve time-domain response to provide even clearer, less colored upper-vocal-range performance than the ND5 predecessor. Each full-range system utilizes three vertically stacked ND5A drivers coupled to the Hydra™, EV’s unique vertical plane-wave generator. The Hydra™ extends over the full vertical height of the enclosure, combining two acoustical alignment techniques that ensure uniform phase over the entire vertical plane of the waveguide — producing superb summing in the vertical plane, free of lobes and nulls. Dual, vertically stacked ND8 8-inch transducers load into the mid-bass horn, flanked horizontally by two EVX-155p 15-inch low-frequency transducers. The ND8’s feature neodymium magnetics for extremely high efficiency. The EVX-155p is a version of the highly regarded EVX-155, optimized for location on the most “inboard” portion of the mid-bass horn. This unique LF/MB configuration is free from the polar lobing of other line arrays.

While the Xfil is primarily intended for down fill, its very broad, 120° horizontal coverage angle and line-array configuration also allow it to be used as the main array element to cover fan-shaped rooms. X-Line™ low-frequency systems feature two EVX-180B 18-inch drivers. They have footprints identical to other X-Line™ enclosures and are available with rigging (XsubF) or without (Xsub). The rigging option allows XsubFs to be flown next to a main Xvls/Xvlt hang.

X-Line™ rigging is an enhanced version of the tour-proven X-Array™ X-Series™ front-strap/back-hinge concept. This facilitates rapid load-in/load-out with a high degree of safety and ease of use. Unlike other line-array systems, the X-Line™ provides flexible transportation options.

The X-Line™ system has been proven on the road with major live acts, and tour-inspired enhancements have brought new levels of imaging, uniformity of coverage and level-independent sonic accuracy.

*Subject to change without notice.
The FRX Series is designed for applications where directivity control down to 500 Hz is critical.

The small components of the typical compact, aesthetically pleasing speaker system are not large enough to control the system’s rated coverage angle below about 2,500 Hz. Unfortunately, this sprays the bulk of the vocal range on highly reflective room surfaces, markedly decreasing intelligibility and clarity. EV’s FRX systems are different. In a trapezoidal enclosure no taller than the typical compact system and only a bit wider, they maintain control of coverage angles down to 500 Hz! This is achieved by loading the 15-inch woofer with a horn whose mouth is large enough — basically as large as the enclosure itself — to provide the control.

Rotatable high-frequency horns are coaxially mounted within the mouth of the LF horn. Biamp FRX systems, or select the integral passive network with internal jumpers. FRX systems are available in black (-BLK), white (-WH) or unfinished (-UN), ready for painting or staining. All but the compact FRX-122 feature dual L-tracks on top and bottom for two-point suspension and aiming, mating with the supplied Ancra fittings.

FRX-640 coaxial two-way horn-loaded 15-inch medium-throw full-range system
• 60° x 40° coverage pattern

FRX-660 coaxial two-way horn-loaded 15-inch medium-throw full-range system
• Wide, 60° vertical angle promotes uniform coverage for low ceilings and steeply raked seating

FRX-940 coaxial two-way horn-loaded 15-inch short-throw full-range system
• 90° x 40° coverage pattern

FRX-181 18-inch low-frequency system
• Use with full-range FRX systems to extend response to a solid 37 Hz
• Trapezoidal cabinet matches the footprint of the FRX-640/660/940

FRX-122 ultracompact two-way 12-inch short-throw full-range system
• Asymmetric 110° x 60° horn aims 15° down — permits vertical wall mounting while providing even floor coverage
• Optional WCB-1 wall mounting bracket
<table>
<thead>
<tr>
<th>FRX-940</th>
<th>FRX-660</th>
<th>FRX-640</th>
<th>FRX-181</th>
<th>FRX-122</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic Configuration</td>
<td>Two-way 15-in. full-range, biampable</td>
<td>Two-way 15-in. full-range, biampable</td>
<td>Two-way 15-in. full-range, biampable</td>
<td>18-in. low-frequency system</td>
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<tr>
<td>Frequency Range (-3 dB)</td>
<td>50-20,000 Hz</td>
<td>50-20,000 Hz</td>
<td>50-20,000 Hz</td>
<td>37-1,000 Hz</td>
</tr>
<tr>
<td>Crossover Frequencies</td>
<td>1,800 Hz (800 Hz biamped)</td>
<td>1,800 Hz</td>
<td>1,800 Hz (1,200 Hz biamped)</td>
<td>80-125 Hz recommended</td>
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<tr>
<td>Sensitivity (SPL 1 W/1 m)</td>
<td>101 dB passive 105/109 dB HF/LF</td>
<td>101 dB passive 105/109 dB HF/LF</td>
<td>101 dB passive 105/109 dB LF/HF</td>
<td>96 dB</td>
</tr>
<tr>
<td>Power Handling</td>
<td>400 watts</td>
<td>400 watts</td>
<td>400 watts</td>
<td>400 watts</td>
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<tr>
<td>Long-Term Average Short-Term Peak</td>
<td>1,600 watts</td>
<td>1,600 watts</td>
<td>1,600 watts</td>
<td>1,600 watts</td>
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<tr>
<td>Coverage (nominal)</td>
<td>90° H x 40° V</td>
<td>60° H x 60° V</td>
<td>60° H x 40° V</td>
<td>N/A</td>
</tr>
<tr>
<td>HF</td>
<td>DH2T driver</td>
<td>DH2T driver</td>
<td>DH2T driver</td>
<td>DH2T driver</td>
</tr>
<tr>
<td>Impedance (nominal)</td>
<td>8 ohms</td>
<td>8 ohms</td>
<td>8 ohms</td>
<td>8 ohms</td>
</tr>
<tr>
<td>Input Connections</td>
<td>Dual barrier strip with screw terminals</td>
<td>Dual barrier strip with screw terminals</td>
<td>Dual barrier strip with screw terminals</td>
<td>Dual barrier strip with screw terminals</td>
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<tr>
<td>Height</td>
<td>787 mm (31.0 in.)</td>
<td>787 mm (31.0 in.)</td>
<td>787 mm (31.0 in.)</td>
<td>787 mm (31.0 in.)</td>
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<tr>
<td>Width</td>
<td>719 mm (28.3 in.)</td>
<td>719 mm (28.3 in.)</td>
<td>719 mm (28.3 in.)</td>
<td>719 mm (28.3 in.)</td>
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<tr>
<td>Depth</td>
<td>660 mm (26.0 in.)</td>
<td>660 mm (26.0 in.)</td>
<td>660 mm (26.0 in.)</td>
<td>660 mm (26.0 in.)</td>
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<td>Net Weight</td>
<td>68.95 kg (152 lb)</td>
<td>68.95 kg (152 lb)</td>
<td>68.95 kg (152 lb)</td>
<td>47.75 kg (105 lb)</td>
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</tbody>
</table>

Construction Materials: 7-ply plywood
FRi Series

The FRi series provides an exceptional value where flexibility and performance is required in permanent installations.

The FRi series brings premium EV components, including the DH2T compression driver and DL-type woofers, to a new level of affordability. FRi’s fit in a wide range of venues—houses of worship, live music clubs and discos, and sports facilities. Designed from the ground up for safe, attractive installations, all main modules have the same 28-inch height for uniform array appearance. Deep box draft angles allow horizontal arrays with large enough angles between box axes to significantly reduce multiple-source interference—yet provide a near-continuous frontal appearance. Cloth-coverable grilles with no visible fasteners complement the environment. Suspension is by many 3/8-16 threaded mounting points, 12 on full-range systems, 16 on sub. High-frequency horns are rotatable; thus, coverage patterns can be independent of box orientation. Bypass the internal passive crossover networks for biamp operation. Available in black (-BLK), white (-WH) and unfinished (-UN).

### Specifications

<table>
<thead>
<tr>
<th></th>
<th>FRi-122/64</th>
<th>FRi-152/64</th>
<th>FRi-181S</th>
<th>FRi-2082</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Basic Configuration</strong></td>
<td>2-way 12-inch full-range, biampable</td>
<td>2-way 15-inch full-range, biampable</td>
<td>18-inch low-frequency</td>
<td>Dual 6-inch two-way</td>
</tr>
<tr>
<td><strong>Frequency Range (-10 dB)</strong></td>
<td>50-16,000 Hz</td>
<td>42-16,000 Hz</td>
<td>36-250 Hz</td>
<td>55-20,000 Hz</td>
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<tr>
<td><strong>Crossover Frequencies</strong></td>
<td>1,600 Hz</td>
<td>1,600 Hz</td>
<td>80 Hz</td>
<td>2,800 Hz</td>
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<tr>
<td><strong>Sensitivity (SPL 1 W/1 m)</strong></td>
<td>97 dB</td>
<td>98 dB</td>
<td>97 dB</td>
<td>93 dB</td>
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<tr>
<td><strong>Power Handling</strong></td>
<td>300 watts</td>
<td>350 watts</td>
<td>400 watts</td>
<td>200 watts</td>
</tr>
<tr>
<td><strong>Coverage (nominal)</strong></td>
<td>60° H x 40° V (122/64)</td>
<td>60° H x 60° V (122/96)</td>
<td>300° H x 270° V</td>
<td>100° H x 100° V</td>
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<tr>
<td><strong>Transducers</strong></td>
<td>DL12BFH 12-inch woofer</td>
<td>DL15BFH 15-inch woofer</td>
<td>DL18BFH 18-inch woofer</td>
<td>Dual 6-inch woofers</td>
</tr>
<tr>
<td><strong>Input Connections</strong></td>
<td>Barrier strip</td>
<td>Barrier strip</td>
<td>Barrier strip</td>
<td>Barrier strip</td>
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<tr>
<td><strong>Height</strong></td>
<td>711 mm (28.0 in.)</td>
<td>711 mm (28.0 in.)</td>
<td>711 mm (28.0 in.)</td>
<td>222 mm (8.75 in.)</td>
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<tr>
<td><strong>Width:</strong> Front</td>
<td>404 mm (15.9 in.)</td>
<td>483 mm (19.0 in.)</td>
<td>597 mm (23.5 in.)</td>
<td>622 mm (24.5 in.)</td>
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<tr>
<td><strong>Back</strong></td>
<td>178 mm (7.1 in.)</td>
<td>185 mm (7.3 in.)</td>
<td>569 mm (22.3 in.)</td>
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<td><strong>Depth</strong></td>
<td>447 mm (17.6 in.)</td>
<td>589 mm (23.2 in.)</td>
<td>762 mm (30.0 in.)</td>
<td>356 mm (14.0 in.)</td>
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<td><strong>Net Weight</strong></td>
<td>27.3 kg (60 lb)</td>
<td>31.8 kg (70 lb)</td>
<td>45.5 kg (100 lb)</td>
<td>18.2 kg (40 lb)</td>
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</tbody>
</table>

Construction Materials: 18-mm, 13-ply birch

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FRi-152/64 and FRi-152/96* compact two-way 15-inch medium- and short-throw full-range systems
- Solid, 42-Hz low end means that supplementary bass is not required in many applications

FRi-122/64 and FRi-122/96* compact two-way 12-inch medium- and short-throw full-range systems
- Bass to 50 Hz (-10 dB) perfect for voice-only systems or add FRi-181S sub for great bass

FRi-181S 18-inch low-frequency system
- Extends FRi bass to 36 Hz
- Built-in low-pass filter — may be traditionally biamped or simply connected in parallel with full-range systems

FRi-2082 ultracompact two-way dual-8-inch, low-ceiling/low-profile full-range system*
- 100° x 100° horn for wide coverage in both planes
- Dual-8-inch woofers are frequency shaded to avoid mid-band lobing
- Unique asymmetrical cross section facilitates both ceiling and wall mounting
- Mounting bracket included

*Denotes product availability in Spring of 2001
The EVI Vari Intense® series provides an economical solution for permanent installations requiring coverage over a rectangular area.

EVI EVI Vari Intense® (VI) speakers are unique in the world, engineered to eliminate the need for a second long-throw horn or delayed source in many rooms. In a typical room, the distance from the loudspeaker to the last row is two or more times that to the front row, resulting in a substantial loss in level and intelligibility at the rear. The VI horn delivers 6 to 8 dB more level to the back of the room, overcoming the level loss without resorting to the expense and complexity of additional speaker systems or components.

EVI systems are available in black (-BLK), white (-WH), or unfinished (-UN), ready for painting or staining.

### EVI-12 compact two-way 12-inch Vari Intense® full-range system
- Simple application — throws a rectangular pattern three times the mounting height deep and two times the height wide.
- Adjust vertical aim angle up and down, to extend or reduce the front-to-back coverage distance.
- Five hanging points accept the optional EBK-1 eyebolt suspension kit or EVI-15MBB (black) and EVI-12MBW (white) U-brackets.

### EVI-15 compact two-way 15-inch Vari Intense® full-range system
- Apply as EVI-12
- 15-inch SG15 cast-frame woofer

### EVI-28 compact low-profile two-way dual-8-inch Vari Intense® full-range system
- For low ceiling applications — horn is angled to throw to the rear five times the mounting height.
- Stacked, frequency-shaded woofers maintain the vertical coverage angle down to 500 Hz for increased clarity and throw in reverberant environments.
- Two hanging points accommodate optional EVI-28MBB (black) or EVI-28MBW (white) U-brackets.

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### SPECIFICATIONS

<table>
<thead>
<tr>
<th></th>
<th>EVI-12</th>
<th>EVI-15</th>
<th>EVI-28</th>
</tr>
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<tbody>
<tr>
<td><strong>Basic Configuration</strong></td>
<td>Two-way 12-in. full-range</td>
<td>Two-way 15-in. full-range</td>
<td>Two-way dual 8-in. full-range</td>
</tr>
<tr>
<td><strong>Frequency Range (-3 dB)</strong></td>
<td>45-25,000 Hz</td>
<td>45-25,000 Hz</td>
<td>62-25,000 Hz</td>
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<tr>
<td><strong>Crossover Frequencies</strong></td>
<td>2,000 Hz</td>
<td>2,000 Hz</td>
<td>2,000 Hz</td>
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<tr>
<td><strong>Sensitivity (SPL 1 W/1 m)</strong></td>
<td>99.5 dB</td>
<td>100 dB</td>
<td>93 dB</td>
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<tr>
<td><strong>Power Handling</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Long-Term Average</td>
<td>250 watts</td>
<td>250 watts</td>
<td>250 watts</td>
</tr>
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<td>Short-Term Peak</td>
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<td>1,000 watts</td>
<td>1,000 watts</td>
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<td><strong>Coverage (nominal)</strong></td>
<td>60° H x 65° V</td>
<td>60° H x 65° V</td>
<td>65° H x 65° V</td>
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<td><strong>Transducers</strong></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>LF</td>
<td>SG12 12-inch woofer</td>
<td>SG15 15-inch woofer</td>
<td>Dual 8-inch woofers</td>
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<td>HF</td>
<td>DH2010A</td>
<td>DH2010A</td>
<td>DH2010A</td>
</tr>
<tr>
<td><strong>Impedance (nominal)</strong></td>
<td>8 ohms</td>
<td>8 ohms</td>
<td>8 ohms</td>
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<tr>
<td><strong>Input Connections</strong></td>
<td>Screw terminals</td>
<td>Screw terminals</td>
<td>Screw terminals</td>
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<tr>
<td><strong>Height</strong></td>
<td>554 mm (21.8 in.)</td>
<td>584 mm (23.0 in.)</td>
<td>353 mm (13.9 in.)</td>
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<tr>
<td><strong>Width</strong></td>
<td>356 mm (14.0 in.)</td>
<td>429 mm (16.9 in.)</td>
<td>496 mm (19.5 in.)</td>
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<td><strong>Depth</strong></td>
<td>619 mm (24.3 in.)</td>
<td>766 mm (30.2 in.)</td>
<td>523 mm (20.6 in.)</td>
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<tr>
<td><strong>Net Weight</strong></td>
<td>21.8 kg (48 lb)</td>
<td>24.0 kg (53 lb)</td>
<td>16.3 kg (36 lb)</td>
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</table>

Construction materials: 13-ply birch plywood
T-Series™ systems provide traditional EV high performance, packaged for portable application.

The T251+ and T252+ feature EV’s exclusive RMD™ (Ring-Mode Decoupling), which virtually eliminates the mechanical and acoustic resonances that significantly reduce clarity and intelligibility. The full-range systems are all biampable and use the DH2T compression driver, with 2-inch titanium diaphragm. PRO™ circuit HF driver protection employs a solid-state, self-resetting relay that drops power input by 6 dB when required.

Note: see page 19 for details on the T221M floor monitor that can also be stand mounted for mains application. For description of the high-value Force® and Eliminator® portable series, see the EV Professional Music Products catalog (form number 536864).

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**T18 18-inch low-frequency system**
- (not shown) DL18MT 18-inch woofer adds more bass impact to other T-Series™ systems
- Unique SubScoop™ enclosure combines the low-frequency extension of a vented box with the punch and “throw” of horn loading
- Includes mounting socket and 30-inch steel pole for full-range satellite systems

**T221 two-way 12-inch medium-throw full-range system**
- High-performance 12-inch woofer
- Integral stand-mount adapter accommodates the optional 100BK stand
- Optional HST1 hanging kit

**T251+ two-way 15-inch medium-throw full-range system**
- DL15RMD 15-inch woofer with RMD™, for both great bass and a high-degree of midrange clarity
- Integral stand-mount adapter accommodates the optional 100BK stand
- Optional HST3 hanging kit

**T251i two-way 15-inch medium-throw full-range system**
- White, install version of T251+, with integral HS-style suspension system including forged eyebolts
- DL15ST 15-inch woofer

**T252+ two-way dual-15-inch medium-throw full-range system**
- Dual DH15RMD woofers combine for powerful bass output and high sensitivity
- Frequency shading (roll-off) of the lower woofer above 400 Hz keeps midrange output clean and free of interference lobes
- Optional HST5 hanging kit

---

### Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>Frequency Range (-10 dB)</th>
<th>Sensitivity (LF-FR/HF)</th>
<th>Power Handling (LF-FR/HF)</th>
<th>Impedance (nominal)</th>
<th>Coverage (nominal)</th>
<th>Rotatable Horn</th>
<th>Height</th>
<th>Width</th>
<th>Depth</th>
<th>Net Weight</th>
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<tbody>
<tr>
<td>T18</td>
<td>33-250 Hz</td>
<td>99 dB</td>
<td>400 watts</td>
<td>8 ohms</td>
<td>Essentially omnidirectional</td>
<td>N/A</td>
<td>833 mm (32.8 in.)</td>
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<td>T221</td>
<td>62-16,000 Hz</td>
<td>*190/112 dB</td>
<td>*400/60 watts</td>
<td>*8 ohms</td>
<td>60 H° x 40° V</td>
<td>Yes</td>
<td>714 mm (28.1 in.)</td>
<td>417 mm (16.4 in.)</td>
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<td>T251+</td>
<td>45-16,000 Hz</td>
<td>*98/112 dB</td>
<td>*400/60 watts</td>
<td>*8 ohms</td>
<td>60 H° x 40° V</td>
<td>Yes</td>
<td>818 mm (32.2 in.)</td>
<td>488 mm (18.2 in.)</td>
<td>599 mm (23.6 in.)</td>
<td>14.5 kg (32 lb)</td>
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<td>T251i</td>
<td>45-16,000 Hz</td>
<td>*98/112 dB</td>
<td>*400/60 watts</td>
<td>*8 ohms</td>
<td>60 H° x 40° V</td>
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<td>822 mm (32.35 in.)</td>
<td>476 mm (18.75 in.)</td>
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<td>*400/60 watts</td>
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<td>60 H° x 40° V</td>
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<td>1245 mm (49 in.)</td>
<td>488 mm (19.2 in.)</td>
<td>599 mm (23.6 in.)</td>
<td>2.6 kg (5.7 lb)</td>
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</table>

*Construction Materials: 18-mm 7-ply void-free plywood (T251i is 18-mm 14-ply void-free plywood)
*Finish: Black carpet (T251i is white textured paint)
The Sx-Series™ and S-40’s provide outstanding performance and flexibility in cabinets designed for portable and permanent installation applications.

EV popularized the concept of lightweight high-performance speakers of compact size, using injection-molded structural-foam enclosures with rounded, user-friendly contours and featuring molded-in horns, integral carrying handles and stand mounts. Sx-Series™ weights are as low as 18 lb (Sx80), with power capacities and sensitivities as high as 400 watts (Sx500+) and 100 dB 1 watt/1 meter (Sx300, Sx500+). The Sx-Series™ features PRO™ circuit protection of all high-frequency elements and the S-40 woofer. With molded-in attachment points and optional mounting and arraying brackets, the Sx-Series™ and companion Sb180 subwoofer and S-40 ultracompact systems are ideal for a wide variety of small- to mid-size portable or fixed applications. Most systems are available in black or white.

**Sx300E compact two-way 12-inch medium-throw full-range system**
- Molded-in 65° x 65° constant-directivity high-frequency horn
- Black polypropylene enclosure
- Dual Neutrik Speakon® high-current connectors
- Sx300P has 1/4-inch connectors
- Available in white as the Sx300WE and Sx300WP
- Suspension points accommodate optional Mb100 set of three forged eyebolts
- Mb300 and Mb300W horizontal array kits available for side-by-side arraying of two systems (requires one Mb200 or Mb200W wall/ceiling bracket per speaker)
- F200 monitor feet available

**Sx100+ compact two-way 12-inch medium-throw full-range system**
- All the physical characteristics of the Sx300, made more affordable by slightly lower power handling and sensitivity
- Available in white as Sx100+W

**Sx300PI compact two-way 12-inch medium-throw full-range system**
- Full-face, black powder-coated stainless steel grille, backed by a foam water shield, gives smooth appearance and a high degree of weather resistance
- 70.7-V/100-volt 100-watt transformer option with selectable taps (Sx300PIX)

**Sb121 compact 12-inch low-frequency system**
- Add bass impact and range to the Sx100+ or Sx300
- Accommodates Mb200/Mb300 mounting brackets
Sx500+ two-way 15-inch medium-throw full-range system
- DL15SX 15-inch woofer and larger enclosure extend and increase bass output
- Asymmetric 75° x 60° constant-directivity high-frequency horn aims down 10° — helps direct sound at the audience when vertically stand mounted
- Horn loading of the woofer controls the coverage pattern down to nearly 500 Hz — an unheard of characteristic in a product of this size and price — for higher vocal intelligibility and musical clarity
- Biampable
- Suspension points accommodate optional Mb700 set of three forged eyebolts
- Mb600 horizontal array kit available for side-by-side arraying of two systems (requires one Mb500 wall/ceiling bracket per speaker)

Sx500PI+ two-way 15-inch medium-throw full-range system
- Full-grille, weather-resistant version of Sx500+
- Black powder-coated full-face stainless steel grille, with foam backing and a polyester mesh water shield

Sb180 18-inch low-frequency system
- Add bass impact and range to the Sx100+, Sx300 and Sx500+
- Stand mount in top allows a standard 1-3/8-inch tube (not supplied) to support satellite systems such as the Sx300 and Sx500+
- EVX-180B woofer with four-inch voice coil and peak-to-peak excursion ability of nearly two inches — as used in the ultrahigh-performance X-Array™ systems
- Rugged, road-ready cabinet with metal grille and black paint finish
- Dual Neutrik Speakon® inputs

Sx80BE ultracompact two-way 8-inch short-throw system
- DH2005 compression driver for great sound and reliable performance
- 90° x 65° constant-directivity high-frequency horn
- Paintable, black polystyrene enclosure
- Single Neutrik® connector
- Dual 1/4-inch connectors (Sx80BP) and push-terminal connectors available (Sx80B)
- Available in paintable white (Sx80W, Sx80WE and Sx80WP)
- Suspension points accommodate Sx80MBB and Sx80MBW wall/ceiling brackets and OmniMount® Series 75 mounting hardware (OmniMount is a registered trademark of OmniMount Systems, Inc.)
- Optional Sx80SM stand-mount adapter accepts 100BK stand
Sx80PI ultracompact two-way 8-inch short-throw system
- Black powder-coated full-face stainless steel grille, with foam backing and a polyester mesh water shield
- Paintable, black polystyrene enclosure
- 70.7/100-volt 60-watt transformer option with selectable taps (Sx80PIX)

Sx80TB ultracompact two-way 8-inch short-throw system
- Adds 70.7/100-volt 60-watt transformer to Sx80B
- Black enclosure, also available in white (Sx80TW)

S-40B ultracompact two-way 5¼-inch short-throw system
- Perfect for background/foreground music applications, indoors or out
- Low-flux-leakage design enables use in close proximity to video monitors
- 1-inch direct-radiating soft dome tweeter HF section
- Paintable black polystyrene enclosure also available in white (S-40W)
- Push-terminal connectors
- Accepts optional S-40MBB and S-40MBW U-brackets for wall, ceiling and stand mounting

S-40TB ultracompact two-way 5¼-inch short-throw system
- S-40B with 70.7/100-volt 30-watt transformer with selectable taps
- Paintable black polystyrene enclosure also available in white (S-40TW)

---

### SPECIFICATIONS

<table>
<thead>
<tr>
<th></th>
<th>Sx500+</th>
<th>Sx300</th>
<th>Sx100+</th>
<th>Sx80</th>
<th>S-40</th>
<th>Sb121</th>
<th>Sb180</th>
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<tbody>
<tr>
<td>Frequency Range (-10 dB)</td>
<td>43-18,000 Hz</td>
<td>55-25,000 Hz</td>
<td>55-25,000 Hz</td>
<td>50-20,000 Hz</td>
<td>65-20,000 Hz</td>
<td>43-500 Hz</td>
<td>40-250 Hz</td>
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<tr>
<td>Sensitivity (1 W/1 m)</td>
<td>100 dB</td>
<td>100 dB</td>
<td>98 dB</td>
<td>92 dB</td>
<td>85 dB</td>
<td>95 dB</td>
<td>99 dB</td>
</tr>
</tbody>
</table>
| Power Handling  
  Long-Term Average | 400 watts | 300 watts | 200 watts | 175 watts | 160 watts | 300 watts | 600 watts |
| Short-Term Peak | 1,600 watts | 1,200 watts | 800 watts | 700 watts | 640 watts | 1,200 watts | 2,400 watts |
| Impedance (nominal) | 8 ohms | 8 ohms | 8 ohms | 8 ohms | 4 ohms | 8 ohms | 8 ohms |
| Coverage (nominal) | 75° x 60° | 65° x 65° | 65° x 65° | 90° x 65° | 100° x 100° | Omnidirectional | Omnidirectional |
| Height/Width/Depth | 838 mm (33.0 in.) / 673 mm (26.5 in.) / 448 mm (17.63 in.) | 586 mm (23.1 in.) / 429 mm (16.9 in.) / 312 mm (12.3 in.) | 586 mm (23.1 in.) / 429 mm (16.9 in.) / 312 mm (12.3 in.) | 400 mm (15.75 in.) / 292 mm (11.5 in.) / 222 mm (8.75 in.) | 249 mm (9.8 in.) / 178 mm (7.0 in.) / 150 mm (5.9 in.) | 586 mm (23.1 in.) / 429 mm (16.9 in.) / 312 mm (12.33 in.) | 603.3 mm (23.75 in.) / 571.5 mm (22.5 in.) / 806.5 mm (31.75 in.) |
| Net Weight | 31.3 kg (69 lb) | 17.7 kg (39 lb) | 14.5 kg (32 lb) | 8.2 kg (18 lb) | 2.6 kg (5.7 lb) | 14.6 kg (32.2 lb) | 46.3 kg (102 lb) |
Powered Mixer/Speaker Systems

Matched for performance and function, EV’s PSX powered mixer and Sx speaker systems deliver outstanding sound reinforcement in a multitude of applications.

The PSX/Sx systems are perfect for house of worship sanctuaries and pageants, business A/V conferences and seminars, school rallies and events, festivals and music venues. Keeping with EV’s legendary reliability, quality and performance, the PSX/Sx systems provide a versatile sound system solution!

PSX600 powered mixing console with Sx100 speakers
- 2 X 340-watt console features 6 mic and 2 stereo line inputs
- Two separate 32-bit algorithmic digital effects processors (over 100 presets)
- 7-band stereo graphic EQ
- Locking metal cover
- 200 watts of steady power handling; 800 watts of short-term power handling
- Perfect for mixing a small club or house of worship
- Rack mount option

PSX1000 powered mixing console with Sx300 speakers
- 2 X 570-watt console features 10 mic inputs and 4 stereo inputs
- 12-inch, two-way system with RMD™ technology and EV components
- Two separate 32-bit algorithmic digital effects processors (over 100 presets)
- 7-band graphic EQ per channel
- Vocal Voicing filter
- Switchable 80-Hz low-cut filter
- Locking metal cover
- Rack mount option

PSX1600 powered mixing console with Sx300 speakers (not shown)
- 2 X 570-watt console features 16 mic inputs and 4 stereo inputs
- 12-inch, two-way system with RMD™ technology and EV components
- Two separate 32-bit algorithmic digital effects processors (over 100 presets)
- 7-band graphic EQ per channel
- Vocal Voicing filter
- Switchable 80-Hz low-cut filter
- Locking metal cover

PSX2200 powered mixing console with Sx500 speakers (not shown)
- 2 X 760-watt console features 22 mic inputs and 4 stereo inputs
- 15-inch, two-way system with RMD™ technology and EV components
- Two separate 32-bit algorithmic digital effects processors (over 100 presets)
- 7-band graphic EQ per channel
- Vocal Voicing filter
- Switchable 80-Hz low-cut filter
- Locking metal cover
EV offers a broad line to meet a wide variety of monitoring needs.

EV performance monitors employ many of the same high-quality components found in our large stage speaker systems. From compact, easy-to-carry models to concert-level systems, you will find EV monitors used by top-named professionals.

**Floor Monitors**

Xw12 and Xw15 X-Array™ X-Series™

- Two-way 12- and 15-inch floor monitors
- EV’s finest, maximum-output monitors, with high-output, large-format components
- Rugged low-profile enclosures of 12-ply birch, uniquely curved for friendly handling
- Symmetrical design allows two monitors to be placed side by side so that the HF horns are coupled for high-level, large-stage applications
- 80° x 55° constant-directivity horn is oriented to provide narrower coverage side to side and wider coverage up and down — helping to isolate adjacent monitor mixes and provide extended front-to-back stage coverage
- Xw15 incorporates EVX-155 woofer with four-inch voice coil, for increased bass output and lower distortion
- Biamp only

T221M two-way 12-inch floor monitor

- More affordable version of the Xw12 X-Array™ monitor, for use in those many applications where its slightly less acoustic output is appropriate
- PRO™ circuit provides HF driver protection
- Biampable

CM12-2 compact two-way 12-inch floor monitor (not shown)

- Oak-grain vinyl finish and beige grille perfect for semifixed application in many meeting halls, auditoriums and houses of worship
- Moderately high output ability
- Coaxial design for exceptionally small size
**Force® Monitor two-way 12-inch floor monitor**

- EV’s most affordable monitor — use the Force® Monitor when the budget is tightest and less acoustic output is needed
- In addition to excellent floor utility, built-in 1-3/8-inch stand mount for 100BK stand allows Force® Monitor to function as a main system or side-fill monitor
- Asymmetrical cabinet geometry provides 50° and 80° aim angles
- 1/4-inch input connectors; E version includes Speakon® connector

**Eliminator® Monitor two-way 15-inch floor monitor**

- In addition to excellent floor utility, built-in 1-3/8-inch stand mount for 100BK stand allows Eliminator® Monitor to function as a main system or side-fill monitor
- Asymmetrical cabinet geometry provides 50° and 80° aim angles
- Features EV’s high performance 15-inch low-frequency transducer, DL15BFH
- 1/4-inch input connectors; E version includes Speakon® connector

<table>
<thead>
<tr>
<th>Model</th>
<th>T221M</th>
<th>Xw12</th>
<th>Xw15</th>
<th>CM12-2</th>
<th>Force® Monitor</th>
<th>Eliminator® Monitor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency Range (-3 dB)</td>
<td>100-16,000 Hz</td>
<td>60-20,000 Hz</td>
<td>50-20,000 Hz</td>
<td>90-18,000 Hz</td>
<td>90-17,000 Hz</td>
<td>77-20,000 Hz</td>
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<tr>
<td>Crossover Frequencies</td>
<td>2,600 Hz</td>
<td>1,250 Hz</td>
<td>1,250 Hz</td>
<td>1,500 Hz</td>
<td>3,800 Hz</td>
<td>2,000 Hz</td>
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<tr>
<td>Sensitivity (SPL 1 W/1 m) (LF/HF)</td>
<td>101 dB</td>
<td>*99/110 dB</td>
<td>*99/110 dB</td>
<td>97 dB</td>
<td>96 dB</td>
<td>99 dB</td>
</tr>
<tr>
<td>Power Handling (LF/HF)</td>
<td>400 watts</td>
<td>*300/75 watts</td>
<td>*600/75 watts</td>
<td>60 watts</td>
<td>150 watts</td>
<td>350 watts</td>
</tr>
<tr>
<td>Coverage (nominal)</td>
<td>55° H x 80° V</td>
<td>55° H x 80° V</td>
<td>55° H x 80° V</td>
<td>70° H x 20° V</td>
<td>55° H x 80° V</td>
<td>55° H x 80° V</td>
</tr>
<tr>
<td>Impedance (nominal) (LF/HF)</td>
<td>8 ohms</td>
<td>*8/16 ohms</td>
<td>*8/16 ohms</td>
<td>8 ohms</td>
<td>8 ohms</td>
<td>8 ohms</td>
</tr>
<tr>
<td>Input Connections</td>
<td>2 Neutrik NL4MPR</td>
<td>2 Neutrik NL4MPR</td>
<td>2 Neutrik NL4MPR</td>
<td>Parallel 1/4-in. phone jack</td>
<td>2 Neutrik NL4MPR</td>
<td>2 Neutrik NL4MPR</td>
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<tr>
<td>Height</td>
<td>371 mm (14.62 in.)</td>
<td>443.1 mm (17.44 in.)</td>
<td>443.1 mm (17.44 in.)</td>
<td>457.2 mm (18.0 in.)</td>
<td>328 mm (12.9 in.)</td>
<td>546 mm (21.5 in.)</td>
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<tr>
<td>Width</td>
<td>594 mm (23.4 in.)</td>
<td>584.2 mm (23.00 in.)</td>
<td>584.2 mm (23.00 in.)</td>
<td>644.1 mm (25.36 in.)</td>
<td>406 mm (16.0 in.)</td>
<td>406 mm (15.98 in.)</td>
</tr>
<tr>
<td>Depth</td>
<td>406 mm (16.0 in.)</td>
<td>408.8 mm (16.1 in.)</td>
<td>408.8 mm (16.1 in.)</td>
<td>460.5 mm (18.3 in.)</td>
<td>368 mm (14.5 in.)</td>
<td>246 mm (9.7 in.)</td>
</tr>
<tr>
<td>Net Weight</td>
<td>25.5 kg (56 lb)</td>
<td>28.2 kg (62 lb)</td>
<td>31.8 kg (70 lb)</td>
<td>11.1 kg (24.5 lb)</td>
<td>12.7 kg (28.0 lb)</td>
<td>19.5 kg (43.0 lb)</td>
</tr>
</tbody>
</table>
The Manifold Technology® series contains low- and mid-bass/high-frequency systems that bridge the gap between EV’s portable stage speaker systems and the ultrapowerful X-Array™ concert touring systems. In addition, the low-frequency systems are often used for bass enhancement in large-venue fixed installation systems.

**MTH-1 two-way 10-inch horn-loaded MB/HF system (not shown)**
- DH2T compression driver with 2-inch titanium diaphragm
- Horn-loaded DL10X midrange driver
- Biampable
- Optional HSMT-1 suspension kit

**MTL-1 and MTL-1X Manifold Technology® dual-18-inch low-frequency systems**
- Unique SubScoop™ enclosure combines the punch and directionality of a horn with the extended response of a vented box
- MTL-1 uses DL18MT 400-watt woofers

**MTL-4BP Manifold Technology® quad-18-inch low-frequency system**
- Four DL18MT woofers in a box only 36 inches square at the front and 30 inches deep make the MTL-4B pack more bass per cubic foot than any other low-frequency system — over 133 dB SPL at 1 meter with full power in
- Popular for low-frequency enhancement in the largest venues such as arenas and stadiums

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**SPECIFICATIONS**

<table>
<thead>
<tr>
<th></th>
<th>MTH-1</th>
<th>MTL-1</th>
<th>MTL-1X</th>
<th>MTL-4BP</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Basic Configuration</strong></td>
<td>Two-way 10-inch MB/HF, biampable</td>
<td>Dual-18-inch low-frequency</td>
<td>Dual-18-inch low-frequency</td>
<td>Quad-18-inch low-frequency</td>
</tr>
<tr>
<td><strong>Frequency Range (-3 dB) (-10 dB)</strong></td>
<td>160-16,000 Hz</td>
<td>50-160 Hz</td>
<td>50-160 Hz</td>
<td>42-200 Hz</td>
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<tr>
<td><strong>Sensitivity (1 W/1 m) (FR only) 105 dB</strong></td>
<td>100 dB</td>
<td>101 dB</td>
<td>101.5 dB</td>
<td></td>
</tr>
<tr>
<td><strong>Power Handling (FR/MB/HF)</strong></td>
<td>*350/300/60 watts</td>
<td>800 watts</td>
<td>1,200 watts</td>
<td>1,600 watts</td>
</tr>
<tr>
<td><strong>Long-Term Average Short-Term Peak</strong></td>
<td>*1,400/1,200/240 watts</td>
<td>3,200 watts</td>
<td>4,800 watts</td>
<td>6,400 watts</td>
</tr>
<tr>
<td><strong>Impedance (nominal) (MB-FR/HF)</strong></td>
<td>*8 ohms</td>
<td>4 ohms</td>
<td>4 ohms</td>
<td>Dual 4 ohms</td>
</tr>
<tr>
<td><strong>Coverage (nominal)</strong></td>
<td>60° H x 40° V</td>
<td>Essentially omnidirectional</td>
<td>Essentially omnidirectional</td>
<td>177° H x 177° V</td>
</tr>
<tr>
<td><strong>Rotatable Horn MB HF</strong></td>
<td>Yes</td>
<td>Yes</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Height</strong></td>
<td>591 mm (23.3 in.)</td>
<td>1160 mm (45.8 in.)</td>
<td>1160 mm (45.8 in.)</td>
<td>914 mm (36.0 in.)</td>
</tr>
<tr>
<td><strong>Width</strong></td>
<td>572 mm (22.5 in.)</td>
<td>572 mm (22.5 in.)</td>
<td>572 mm (22.5 in.)</td>
<td>914 mm (36.0 in.)</td>
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<tr>
<td><strong>Depth</strong></td>
<td>758 mm (29.9 in.)</td>
<td>758 mm (29.9 in.)</td>
<td>758 mm (29.9 in.)</td>
<td>759 mm (29.88 in.)</td>
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<tr>
<td><strong>Net Weight</strong></td>
<td>43.1 kg (95 lb)</td>
<td>70.3 kg (155 lb)</td>
<td>75.0 kg (165 lb)</td>
<td>119 kg (263 lb)</td>
</tr>
</tbody>
</table>

Construction Materials: 18-mm void-free plywood (MTL-4B is 18-mm, 14-ply birch) (14-ply is what EDS says; ask DC)
Finish: Black carpet (MTL-4B is black textured paint)
Low-Frequency and Subwoofer Utility Systems

Electro-Voice offers a wide variety of low-frequency and subwoofer systems for general fixed installation.

Low-frequency systems have $f_3$'s (the point at which response is 3 dB down) as low as 40 Hz. Subwoofers extend this response to as low as 23 Hz in the “step down” mode, which requires low-frequency EQ boost. In general, response below 40 Hz is required for theatrical effects, full reproduction of pipe organ, and a few special effects in contemporary music such as synthesizers and down-tuned bass guitars.

All TL systems except the TL880D and TL880P feature humidity-resistant ProWood™ cabinets covered in paintable black wood-grain vinyl. (TL880’s are constructed of plywood finished in textured black paint.) For all but the TL880’s, HS series flying kits are available, containing through-the-box steel tubes for vertical suspension of up to three cabinets (see engineering data sheets for details).

Note: many EV speaker system lines include their own LF and subwoofer systems, including X-Array™ X-Series™ and Xi-Series™ FRX series, FRi series and Sx-Series™. See pages 2 to 12 and 15 to 18.
TL12-1 12-inch low-frequency system
• Very small size and 65-Hz f3 ideal for high-quality voice systems where space is at a premium

TL15-1 15-inch and TL15-2 dual-15-inch low-frequency systems
• Extended bass response for voice and music applications
• The TL15-2’s stacked woofers provide a restricted, 55° vertical coverage angle at 500 Hz, matching that of large-format constant-directivity HF horns (see page 22) and increasing intelligibility and clarity in reverberant spaces

TL606DW dual-15-inch low-frequency system
• Designed for cinema stage use (behind the screen), THX® approved (THX is a registered trademark of Lucasfilm Ltd.)
• Extends response to 40 Hz (3 dB down)

TL550D high-output dual-15-inch low-frequency system
• 40-Hz performance with additional output from EVX-155 high-power, high-excursion woofers
• Designed for cinema stage use (behind the screen), THX® approved

TL3512 18-inch subwoofer
• Basic subwoofer — THX® approved

TL440 high-output 18-inch subwoofer
• TL3512 enclosure with the additional bass-pumping ability of the EVX-180B woofer
• THX approved for cinema use

TL880D high-output dual 18-inch subwoofer and TL880P dual-18-inch powered subwoofer
• Designed expressly to meet the dynamic and low-frequency potential of digital sound on film, THX® approved
• Two EVX-180B woofers provide very high low-frequency pumping ability to 23 Hz
• In TL880P, integral P1250 power amp delivers 1,200 watts of continuous power to the loudspeakers and provides limiting to prevent amp clipping under high output conditions, “step down” EQ for a 23-Hz f3 and infrasonic speaker protection
EV component woofers are high-efficiency designs, highly refined from years of development and field experience. They employ extended-length voice coils for high-impact reproduction of dynamic low-frequency program. All models feature proprietary heat-transfer systems for unmatched power capacity and reliability. A Flux Demodulation Device (FDD™) encircles both voice coil and pole piece, providing an additional heat-transfer path and reducing distortion across the band. Voice coils are electrically insulated from adjacent metal parts to reduce damage from any rubbing contact during violent power peaks.

**Woofers**

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DL10X</td>
<td>10-inch low/mid-frequency reproducer&lt;br&gt;Smooth, extended response across vocal range&lt;br&gt;Suitable for horn loading</td>
</tr>
<tr>
<td>DL12X</td>
<td>12-inch low/mid-frequency reproducer&lt;br&gt;For compact two-way speech systems&lt;br&gt;Mid-bass element in three- and four-way systems&lt;br&gt;Suitable for horn loading</td>
</tr>
<tr>
<td>DL15X</td>
<td>15-inch low-frequency reproducer&lt;br&gt;For two-way speech and music systems</td>
</tr>
</tbody>
</table>
**EVX-155 high-output 15-inch low-frequency reproducer**
- Curvilinear cone smoothes response to 2,000 Hz, for both very high bass output and outstanding performance in the critical vocal range
- Featured in EV’s highly acclaimed X-Array™ systems
- Design utilizes findings about mechanical failure modes not revealed in normal high-power testing— for exceptional resistance to long-term failure in real-world applications
- Extremely high peak-to-peak excursion ability of nearly two inches
- Advanced, HeatWick™ design "wicks" heat away from the voice coil
- 1,000 watts continuous program

- Long, 4-inch voice coil has nearly twice the surface area of any other woofer, virtually eliminating power compression
- Ribbed Kevlar® fiber composite cone resists collapse (Kevlar is a registered trademark of Dupont)

**EVX-180B high-output 18-inch very-low-frequency reproducer**
- Features of the EVX-155 plus additional low-bass
- Arguably the most highly regarded 18-inch low-bass reproducer in the world, used in EV’s ultrahigh-performance X-Array™ systems
- Straight, ribbed Kevlar® fiber composite cone resists collapse

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<table>
<thead>
<tr>
<th></th>
<th>DL10X</th>
<th>DL12X</th>
<th>DL15X</th>
<th>EVX-155</th>
<th>EVX-180B</th>
</tr>
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<tbody>
<tr>
<td>Frequency Response</td>
<td>100–5,000 Hz</td>
<td>58–5,200 Hz</td>
<td>45–3,000 Hz</td>
<td>40–2,000 Hz</td>
<td>37–1,500 Hz</td>
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<tr>
<td>Power Handling</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Long-Term Average</td>
<td>300 watts</td>
<td>300 watts</td>
<td>400 watts</td>
<td>600 watts</td>
<td>600 watts</td>
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<tr>
<td>Short-Term Peak</td>
<td>1,200 watts</td>
<td>1,200 watts</td>
<td>1,600 watts</td>
<td>2,400 watts</td>
<td>2,400 watts</td>
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<tr>
<td>Sensitivity</td>
<td>98 dB</td>
<td>98 dB</td>
<td>98 dB</td>
<td>98 dB</td>
<td>98 dB</td>
</tr>
<tr>
<td>Impedance (nominal)</td>
<td>8 ohms</td>
<td>8 ohms</td>
<td>8 ohms</td>
<td>8 ohms</td>
<td>8 ohms</td>
</tr>
</tbody>
</table>
The HP horn series is a refinement of the concept of “constant directivity,” which in 1974 EV was the first to introduce.

For the first time, horn coverage angles were truly uniform over a wide frequency range. In the HP series, unique beamwidth-control vanes within the horn throat form a waveguide that eliminates the narrowing of coverage angle — beaming — that occurs in other 2-inch-throat horns. EV's patented Transplanat™ design provides exceptionally smooth frequency response. HP horns or variants thereof are used throughout the EV speaker system lines.

Each HP horn features an integral die-cast metal throat encapsulated in the fiberglass sidewalls. This unitized construction provides very high strength and low weight. The charcoal gray gel-coat finish will provide years of service in a variety of environments.

### HP High-Frequency Horns

#### HP4020, HP6040 and HP9040 large-format two-inch horns
- The ultimate in dispersion control, with control of rated dispersion angle down to 500 Hz, both horizontally and vertically
- Directivity control to 500 Hz maximizes vocal intelligibility and musical clarity in difficult acoustic environments
- Proper driver loading down to 500 Hz (200 Hz for HP4020)

#### HP420, HP640, HP940 and HP1240 medium-format two-inch horns
- Vertical dimensions have been reduced, for use when space constraints preclude the use of large-format horns
- Horizontal directional control maintained to ~500 Hz
- Vertical control to ~1,500 Hz
- Proper driver loading to 400 Hz

#### HP64, HP66 and HP94 small-format two-inch horns
- Use as primary HP horns in compact sound systems
- Beamwidth control to ~2,000 Hz
- Driver loading to 650 Hz (800 Hz for HP94)

#### HPT64 and HPT94 very-small-format one-inch horns
- Use in three- and four-way systems with DH3 driver for tweeter and supertweeter applications
- Directional control to 3,000 Hz
- Driver loading to 1,600 Hz

### HP4020, HP6040 and HP9040 Specifications

<table>
<thead>
<tr>
<th>Coverage (nominal)</th>
<th>40º x 20º V</th>
<th>60º x 40º V</th>
<th>90º x 40º V</th>
<th>40º x 20º V</th>
<th>60º x 40º V</th>
<th>90º x 40º V</th>
<th>120º x 40º V</th>
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</thead>
<tbody>
<tr>
<td>Directivity Factor (average)</td>
<td>45.1 (+12.7, -18.9)</td>
<td>25.1 (+17.6, -5.9)</td>
<td>12.1 (+4.6, -3.7)</td>
<td>47.7 (+25.9, -33.5)</td>
<td>20.6 (+11.3, -3.3)</td>
<td>11.9 (+3.8, -3.0)</td>
<td>8.6 (+2.5, -2.1)</td>
</tr>
<tr>
<td>Directivity Index (average)</td>
<td>16.4 dB</td>
<td>14.1 dB</td>
<td>10.8 dB</td>
<td>18.8 dB</td>
<td>13.1 dB</td>
<td>10.7 dB</td>
<td>9.34 dB</td>
</tr>
<tr>
<td>Usable Low-Frequency Limit</td>
<td>200 Hz</td>
<td>500 Hz</td>
<td>500 Hz</td>
<td>400 Hz</td>
<td>400 Hz</td>
<td>400 Hz</td>
<td>400 Hz</td>
</tr>
<tr>
<td>Sensitivity (SPL 1 W/1 m)*</td>
<td>115 dB</td>
<td>113 dB</td>
<td>111 dB</td>
<td>114 dB</td>
<td>112 dB</td>
<td>110 dB</td>
<td>108 dB</td>
</tr>
<tr>
<td>Height</td>
<td>838 mm (33.0 in.)</td>
<td>813 mm (32.0 in.)</td>
<td>813 mm (32.0 in.)</td>
<td>367 mm (14.4 in.)</td>
<td>330 mm (13.0 in.)</td>
<td>330 mm (13.0 in.)</td>
<td>330 mm (13.0 in.)</td>
</tr>
<tr>
<td>Width</td>
<td>813 mm (32.0 in.)</td>
<td>711 mm (28.0 in.)</td>
<td>679 mm (26.7 in.)</td>
<td>610 mm (24.0 in.)</td>
<td>711 mm (28.0 in.)</td>
<td>533 mm (21.0 in.)</td>
<td>533 mm (21.0 in.)</td>
</tr>
<tr>
<td>Depth</td>
<td>1292 mm (49.3 in.)</td>
<td>908 mm (35.8 in.)</td>
<td>908 mm (35.8 in.)</td>
<td>740 mm (29.5 in.)</td>
<td>437 mm (17.2 in.)</td>
<td>265 mm (10.4 in.)</td>
<td>265 mm (10.4 in.)</td>
</tr>
<tr>
<td>Net Weight</td>
<td>12.3 kg (27.0 lb)</td>
<td>9.1 kg (20.0 lb)</td>
<td>9.1 kg (20.0 lb)</td>
<td>5.9 kg (13.0 lb)</td>
<td>4.3 kg (9.5 lb)</td>
<td>3.2 kg (7.0 lb)</td>
<td>3.2 kg (7.0 lb)</td>
</tr>
</tbody>
</table>

*With DH1A, N/DYM™ or DH2A compression driver (DH3 for HP7 horns).
### SPECIFICATIONS

<table>
<thead>
<tr>
<th></th>
<th>HP64</th>
<th>HP66</th>
<th>HP94</th>
<th>HPT64</th>
<th>HPT94</th>
</tr>
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<tbody>
<tr>
<td><strong>Coverage (nominal)</strong></td>
<td>60° H x 40° V</td>
<td>60° H x 60° V</td>
<td>90° H x 40° V</td>
<td>60° H x 40° V</td>
<td>90° H x 40° V</td>
</tr>
<tr>
<td><strong>Directivity Factor (average)</strong></td>
<td>15.1 (+1.1,-3.8) (1,600-20,000 Hz)</td>
<td>17.9 (+10.5,-9.3) (1,600-16,000 Hz)</td>
<td>10.1 (+5.6,-1.8) (1,600-20,000 Hz)</td>
<td>15.8 (+5.2,-4.8) (3,150-30,000 Hz)</td>
<td>11.6 (+5.0,-2.5) (3,150-20,000 Hz)</td>
</tr>
<tr>
<td><strong>Directivity Index (average)</strong></td>
<td>12.6 dB (-0.3,-2.9 dB) (1,600-20,000 Hz)</td>
<td>12.5 dB (+2.0,-3.0 dB) (1,600-16,000 Hz)</td>
<td>10.0 dB (+2.0,-0.8 dB) (1,600-20,000 Hz)</td>
<td>12.0 dB (+1.2,-1.6 dB) (3,150-20,000 Hz)</td>
<td>10.6 dB (+1.6,-1.0 dB) (3,150-20,000 Hz)</td>
</tr>
<tr>
<td><strong>Usable Low-Frequency Limit</strong></td>
<td>650 Hz</td>
<td>650 Hz</td>
<td>800 Hz</td>
<td>1,600 Hz</td>
<td>1,600 Hz</td>
</tr>
<tr>
<td><strong>Sensitivity (SPL 1 W/1 m)</strong>*</td>
<td>112 dB</td>
<td>112 dB</td>
<td>110 dB</td>
<td>108 dB</td>
<td>107 dB</td>
</tr>
<tr>
<td><strong>Height</strong></td>
<td>279 mm (11.0 in.)</td>
<td>279 mm (11.0 in.)</td>
<td>279 mm (11.0 in.)</td>
<td>133 mm (5.25 in.)</td>
<td>133 mm (5.25 in.)</td>
</tr>
<tr>
<td><strong>Width</strong></td>
<td>224 mm (8.8 in.)</td>
<td>224 mm (8.8 in.)</td>
<td>222 mm (8.75 in.)</td>
<td>133 mm (5.25 in.)</td>
<td>133 mm (5.25 in.)</td>
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<tr>
<td><strong>Depth</strong></td>
<td>220 mm (8.7 in.)</td>
<td>165 mm (6.5 in.)</td>
<td>220 mm (8.7 in.)</td>
<td>104 mm (4.1 in.)</td>
<td>101 mm (4.0 in.)</td>
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<tr>
<td><strong>Net Weight</strong></td>
<td>2.5 kg (4.5 lb)</td>
<td>2.2 kg (4.8 lb)</td>
<td>2.5 kg (4.5 lb)</td>
<td>0.4 kg (0.8 lb)</td>
<td>0.4 kg (0.8 lb)</td>
</tr>
</tbody>
</table>

*With DH1A, NDYM™ or DH2A compression driver (DH3 for HPT horns).
The MH Series is designed for large-scale venues (e.g., stadiums and arenas) where high-fidelity sound is required.

EV revolutionized the industry by pioneering the concepts of constant directivity—horn coverage angles that are constant with frequency—and Manifold Technology®—combining the outputs of multiple transducers into one horn. The four-digit MH series embodies both, in a set of horn/driver systems ideal for stadiums and other large-scale venues. Because of their large mouth size, MH horns maintain their beamwidth to very low frequencies, in the range of 250-350 Hz, reducing bass "spillover" and increasing intelligibility. No other commercially available systems achieve this degree of control. The large horn size also provides frequency response to 100 Hz, typically eliminating the need for supplemental low-frequency systems.

High frequencies extend to 4,000 Hz, but most system designs are based on the coaxial “C” versions, which include an appropriate medium-format HP horn that accepts EV two-inch-exit drivers of the designer’s choice, extending response to 20,000 Hz. (HF drivers must be ordered separately.) Use single drivers DH1A or N/DYM*1 or dual, manifolded drivers DH1A/2MT or N/DYM*1/2MT. The dual drivers double HF output, important for very long throws. The N/DYM® drivers offer the ultimate output in the upper octaves, important when contemporary music is to be heard over long distances. The large MH horns now incorporate EV’s exclusive RMD™, for even better vocal intelligibility and musical clarity.

MH4020AC two-way quad-ten-inch long-throw full-range system
- Four DL10-SH 10-inch drivers manifolded on a single 40° x 20° horn
- Use MH4020A when HF horn is not required

MH4020NC two-way quad-ten-inch long-throw full-range system
- The MH horn system for the longest throws and highest levels
- Four ND10A 10-inch drivers with N/DYM® neodymium magnets double acoustic output
- Choose N/DYM*1/2MT dual manifolded drivers for maximum HF output and throw
- Use MH4020N when HF horn is not required

MH6040AC and MH9040AC two-way dual-ten-inch medium- and short-throw full-range systems
- Two DL10-SH 10-inch drivers manifolded on a single 60° x 40° or 90° x 40° horn
- Use MH6040A or MH9040A when HF horn is not required

MH640C and MH940C two-way 10-inch medium- and short-throw MB/HF systems
- Ideal supplement to the large MH horns, for shorter throws and fill
- With good output to 150 Hz, use alone for a dramatic quality upgrade from “PA projectors” or HF horns alone in small- to medium-sized venues
- 30-inch horn mouth provides directivity control to 500 Hz, for increased intelligibility under difficult acoustic situations
- Both MB and HF drivers included
- MH640P and MH940P include a passive crossover network

MH660C two-way 10-inch medium-throw MB/HF system
- Wide, 60° vertical angle for uniform coverage of highly raked seating
- MH660P includes passive crossover network
### SPECIFICATIONS

<table>
<thead>
<tr>
<th>Model</th>
<th>Frequency Response</th>
<th>Coverage (nominal)</th>
<th>Directivity Factor (average)</th>
<th>Directivity Index (average)</th>
<th>Power Handling</th>
<th>Sensitivity (SPL 1 W/1 m)</th>
<th>Height</th>
<th>Width</th>
<th>Depth</th>
<th>Net Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>MH4020AC</td>
<td>100-20,000 Hz</td>
<td>40° H x 20° V</td>
<td>52 (median) (500-20,000 Hz)</td>
<td>17.1 dB (500-20,000 Hz)</td>
<td>1,200 watts</td>
<td>100 dB (LF)</td>
<td>1500 mm</td>
<td>991 mm</td>
<td>1880 mm</td>
<td>108 kg (237 lb)</td>
</tr>
<tr>
<td>MH4020NC</td>
<td>100-20,000 Hz</td>
<td>40° H x 20° V</td>
<td>52 (median) (500-20,000 Hz)</td>
<td>17.1 dB (500-20,000 Hz)</td>
<td>1,200 watts</td>
<td>112 dB (LF)</td>
<td>1500 mm</td>
<td>991 mm</td>
<td>1880 mm</td>
<td>95.4 kg (209 lb)</td>
</tr>
<tr>
<td>MH6040AC</td>
<td>100-20,000 Hz</td>
<td>60° H x 40° V</td>
<td>24 (median) (500-20,000 Hz)</td>
<td>13.8 dB (500-20,000 Hz)</td>
<td>600 watts</td>
<td>107 dB (LF)</td>
<td>1500 mm</td>
<td>991 mm</td>
<td>1880 mm</td>
<td>75 kg (165 lb)</td>
</tr>
<tr>
<td>MH9040AC</td>
<td>100-20,000 Hz</td>
<td>90° H x 40° V</td>
<td>10.5 (median) (500-20,000 Hz)</td>
<td>10.2 dB (500-20,000 Hz)</td>
<td>600 watts</td>
<td>105 dB (LF)</td>
<td>1499 mm</td>
<td>991 mm</td>
<td>1873 mm</td>
<td>75 kg (165 lb)</td>
</tr>
<tr>
<td>MH640C</td>
<td>150-20,000 Hz</td>
<td>60° H x 60° V</td>
<td>23.4 (median) (500-20,000 Hz)</td>
<td>13.7 dB (500-20,000 Hz)</td>
<td>300 watts</td>
<td>107/111 dB (LF-FR/HF)</td>
<td>1499 mm</td>
<td>991 mm</td>
<td>1534 mm</td>
<td>27.2 kg (60 lb)</td>
</tr>
<tr>
<td>MH660C</td>
<td>150-20,000 Hz</td>
<td>90° H x 60° V</td>
<td>18.2 (median) (500-20,000 Hz)</td>
<td>12.6 dB (500-20,000 Hz)</td>
<td>300 watts</td>
<td>107/111 dB (LF-FR/HF)</td>
<td>1499 mm</td>
<td>991 mm</td>
<td>1534 mm</td>
<td>27.2 kg (60 lb)</td>
</tr>
<tr>
<td>MH940C</td>
<td>150-20,000 Hz</td>
<td>90° H x 60° V</td>
<td>18.6 (median) (500-20,000 Hz)</td>
<td>12.7 dB (500-20,000 Hz)</td>
<td>300 watts</td>
<td>107/111 dB (LF-FR/HF)</td>
<td>1499 mm</td>
<td>991 mm</td>
<td>1534 mm</td>
<td>27.2 kg (60 lb)</td>
</tr>
</tbody>
</table>

- **Frequency Response**: 100-20,000 Hz for all models except MH660C and MH940C, which have a wider range of 150-20,000 Hz.
- **Coverage (nominal)**: Angles vary across models, with MH4020AC and MH9040AC having the same coverage as MH6040AC and MH940C, respectively.
- **Directivity Factor (average)**: Values range from 52 to 24, with MH4020AC and MH9040AC having the lowest value.
- **Directivity Index (average)**: Index values range from 17.1 dB to 10.2 dB, with MH4020AC and MH9040AC having the highest value.
- **Power Handling**: MH4020AC and MH6040AC have a power handling capacity of 1,200 watts, while MH640C and MH660C have 300 watts.
- **Sensitivity (SPL 1 W/1 m)**: MH4020AC and MH6040AC have a sensitivity of 109 dB (LF), while MH9040AC has 105 dB (LF).
- **Height**: Variations from 1500 mm to 1880 mm across models.
- **Width**: Same as height, with variations from 991 mm to 1880 mm.
- **Depth**: Variations from 1873 mm to 711 mm.
- **Net Weight**: MH4020AC has the highest weight at 108 kg (237 lb), while MH640C and MH660C have the lowest at 27.2 kg (60 lb).
Unlike most producers of speaker systems, EV designs and manufactures its own compression drivers. Compression-driver manufacture is one of the basic audio activities — a unique combination of exacting science, art and experience. EV forms its own one-piece, geometrically optimized titanium diaphragms to precise tolerances on proprietary machinery, loaded into phase plugs of unique design. Lightweight edge-wound aluminum comprises our voice coils. All contribute to extended frequency response (to 20 kHz), high efficiency and outstanding reliability. The separate components described below and specialized variations are used throughout the EV speaker system lines.

**DH1A large-format two-inch-exit compression driver**
- Industry-standard compression driver, perhaps the most widely produced large-format driver in the world
- 3-inch diaphragm handles full power down to 500 Hz, yet is small enough to raise breakup modes well above those of 4-inch-diaphragm designs, for truly detailed and transparent high frequencies

**DH1A-WP and DH1A-WPX large-format two-inch-exit compression drivers**
- Weather-resistant DH1A's
- Extended rear cover houses a 70.7-volt/100-watt transformer with selectable taps and a gland nut for cable entry
- The DH1A-WPX omits the transformer

**DH1A/2MT Manifold Technology**
- The output of two drivers is flawlessly combined by a specially designed reflective summation path for in-phase, coherent summation
- Twice the acoustic output from a single horn
- Use with the coaxial four-digit MH stadium horns for increased HF output

**N/DYM¹ large-format two-inch-exit compression driver**
- Version of DH1A with powerful, lightweight N/DYM neodymium magnetic structure
- Reduces weight from 24 lb to 7 lb!
- Increases flux density to 2.25 tesla, for enhanced output in the highest octaves
- N/DYM¹/2MT is manifolding version

**DH2A medium-format two-inch-exit compression driver**
- 2-inch diaphragm handles full power down to 800 Hz

**DH3 small-format 1-inch-exit compression driver**
- Optimized for use as a supertweeter in professional three- and four-way sound systems
- 1.25-inch diaphragm handles full power down to 5,000 Hz
- May be used as low as 1,500 Hz when midband output is attenuated to match the lower sensitivity of the typical direct-radiating woofer employed in compact two-way speaker systems

### Specifications

<table>
<thead>
<tr>
<th></th>
<th>DH1A</th>
<th>DH1A-WP</th>
<th>DH1A/2MT</th>
<th>DH2A</th>
<th>DH3</th>
<th>N/DYM¹</th>
<th>N/DYM¹/2MT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Frequency Response</strong></td>
<td>500-20,000 Hz</td>
<td>500-20,000 Hz</td>
<td>500-20,000 Hz</td>
<td>500-20,000 Hz</td>
<td>5,000-20,000 Hz</td>
<td>500-20,000 Hz</td>
<td>500-20,000 Hz</td>
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<tr>
<td><strong>Mid-Band Sensitivity</strong></td>
<td>113 dB</td>
<td>113 dB</td>
<td>113 dB</td>
<td>113 dB</td>
<td>111 dB</td>
<td>113 dB</td>
<td>113 dB</td>
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<tr>
<td><strong>Power Capacity</strong></td>
<td>50 watts</td>
<td>50 watts</td>
<td>100 watts</td>
<td>30 watts</td>
<td>20 watts</td>
<td>50 watts</td>
<td>100 watts</td>
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<td>24 Hours (bandwidth)</td>
<td>(500-20,000 Hz)</td>
<td>(500-20,000 Hz)</td>
<td>(500-20,000 Hz)</td>
<td>(500-20,000 Hz)</td>
<td>(800-20,000 Hz)</td>
<td>(500-20,000 Hz)</td>
<td>(500-20,000 Hz)</td>
</tr>
<tr>
<td><strong>Power Capacity</strong></td>
<td>75 watts</td>
<td>75 watts</td>
<td>150 watts</td>
<td>40 watts</td>
<td>30 watts</td>
<td>75 watts</td>
<td>150 watts</td>
</tr>
<tr>
<td>Two Hours (bandwidth)</td>
<td>(1,000-10,000 Hz)</td>
<td>(1,000-10,000 Hz)</td>
<td>(1,000-10,000 Hz)</td>
<td>(800-9,000 Hz)</td>
<td>(500-20,000 Hz)</td>
<td>(1,000-10,000 Hz)</td>
<td>(1,000-10,000 Hz)</td>
</tr>
<tr>
<td><strong>Throat Diameter</strong></td>
<td>49.3 mm (1.94 in.)</td>
<td>49.3 mm (1.94 in.)</td>
<td>49.3 mm (1.94 in.)</td>
<td>49.3 mm (1.94 in.)</td>
<td>49.3 mm (1.94 in.)</td>
<td>49.3 mm (1.94 in.)</td>
<td>49.3 mm (1.94 in.)</td>
</tr>
<tr>
<td><strong>Dimensions, Diameter</strong></td>
<td>225 mm (8.88 in.)</td>
<td>225 mm (8.88 in.)</td>
<td>N/A</td>
<td>122 mm (4.88 in.)</td>
<td>89 mm (3.5 in.)</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Depth</strong></td>
<td>140 mm (5.5 in.)</td>
<td>225 mm (8.88 in.)</td>
<td>N/A</td>
<td>167 mm (6.57 in.)</td>
<td>89 mm (3.5 in.)</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Net Weight</strong></td>
<td>10.7 kg (23.5 lb)</td>
<td>12.5 kg (27.4 lb)</td>
<td>21.4 kg (47.0 lb)</td>
<td>6.4 kg (14.0 lb)</td>
<td>1.9 kg (4.2 lb)</td>
<td>3.3 kg (7.2 lb)</td>
<td>8.5 kg (18.6 lb)</td>
</tr>
</tbody>
</table>
German Engineering

Much of EV’s reputation in the audio community stems from EV’s reliability and performance through time-tested rigors of the road, fixed-installation environments, studio use, and numerous other applications. EV products are designed and manufactured from this standpoint — high-quality products should be dependable, rugged and acoustically exceptional.

The caliber of EV design and engineering is second to none. Why? For one, many of our electronics products are conceived, designed and built in Germany — a country renowned for excellence in automobile engineering, manufacturing design and world-leading audio, among other notables. Ultimately, this translates to increased reliability.

**Absolute Reliability.** EV amplifiers and electronics contain world-leading, built-in protection systems. German design is responsible for unique thermal protection (temperature-sensing on transformers — not only the product cooling systems) and an extraordinary low product failure rate. In addition, proprietary EV products are tested eight times before shipping — to ensure that if there is a problem with a product, it will not be your problem.

**Exemplary Audio Performance.** EV amplifiers and electronics are tested and rated according to musical signal — not the misleading, theoretical lab signal commonly used by competitors. There is a big difference between continuous signal and the kind of maximum bursts inherent to musical performance — and we recognize these real-world situations, having built 30% headroom into all of our amplifier power supplies. In addition, German-engineered dynamic limiters handle these spontaneous musical peaks like no other, managing the signal peaks and allowing at any given time no greater than 1% distortion. This ensures greater acoustic quality and disturbance-free performance.
EV's PSX mixers put tour-grade power, studio-quality effects and heavy-duty durability together into one unit. PSX is a professional quality system that is easy to operate and has the added benefit of portability. Digital signal processing, dynamic limiters, Neutrik in/out connectors and ALPs faders are a few features of the PSX. For added protection and safety, PSX mixers feature rugged metal locking lids and handles.

**PSX600**
- 6 microphone and 2 stereo line input channels
- 3-band EQ on each channel
- Two separate, 32-bit algorithm digital effects processors with 100 programs; each provides studio-quality reverbs, delays and multi-effects
- Easily rack mounted with optional kit

**PSX1000**
- 10 microphone and 4 stereo line input channels
- 3-band EQ with sweepable mids on mono inputs, fixed 3-band EQ on stereo inputs
- Two separate, 32-bit algorithm digital effects processors with 100 programs; each provides studio-quality reverbs, delays and multi-effects
- Vocal voicing filter for increased vocal intelligibility
- Switchable, 80-Hz low-cut filter reduces microphone handling and stage noise
- Easily rack mounted with optional kit

**PSX1600**
- Same as the PSX1000 with additional inputs (16 mic and 4 stereo line inputs)

**PSX2200**
- 760 watts per channel at 4 ohms; 350 watts per channel at 8 ohms
- 22 microphone and 4 stereo line inputs
- All features of other PSX models

For the ultimate in a professional-grade, portable sound system, add EV's Sx-Series™ speakers. The Sx-Series™ speakers are lightweight and deliver deep bass and superior clarity in the higher frequencies. EV designed these compatible systems with portability and high performance in mind — all in one package.
<table>
<thead>
<tr>
<th></th>
<th>PSX2200</th>
<th>PSX1600</th>
<th>PSX1000</th>
<th>PSX600</th>
</tr>
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<tbody>
<tr>
<td><strong>Maximum Power</strong></td>
<td>760 watts</td>
<td>570 watts</td>
<td>570 watts</td>
<td>340 watts</td>
</tr>
<tr>
<td>(at &lt;1% THD, midband, both channels driven)</td>
<td>430 watts</td>
<td>380 watts</td>
<td>380 watts</td>
<td>200 watts</td>
</tr>
<tr>
<td>4-ohm load per channel</td>
<td>700 watts</td>
<td>500 watts</td>
<td>500 watts</td>
<td>300 watts</td>
</tr>
<tr>
<td>8-ohm load per channel</td>
<td>350 watts</td>
<td>250 watts</td>
<td>250 watts</td>
<td>150 watts</td>
</tr>
<tr>
<td><strong>Rated Power</strong></td>
<td>&lt;0.006%</td>
<td>&lt;0.006%</td>
<td>&lt;0.006%</td>
<td>&lt;0.006%</td>
</tr>
<tr>
<td>(at &lt;0.2% THD, 20 to 20,000 Hz, both channels driven)</td>
<td>&lt;0.05%</td>
<td>&lt;0.05%</td>
<td>&lt;0.05%</td>
<td>&lt;0.05%</td>
</tr>
<tr>
<td>4-ohm load per channel</td>
<td>700 watts</td>
<td>500 watts</td>
<td>500 watts</td>
<td>300 watts</td>
</tr>
<tr>
<td>8-ohm load per channel</td>
<td>350 watts</td>
<td>250 watts</td>
<td>250 watts</td>
<td>150 watts</td>
</tr>
<tr>
<td><strong>Total Harmonic Distortion</strong></td>
<td>&lt;0.006%</td>
<td>&lt;0.006%</td>
<td>&lt;0.006%</td>
<td>&lt;0.006%</td>
</tr>
<tr>
<td>Mic Input to Mains Output (+16 dBu)</td>
<td>&lt;0.05%</td>
<td>&lt;0.05%</td>
<td>&lt;0.05%</td>
<td>&lt;0.05%</td>
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<tr>
<td>Power Amplifier Input to Speaker Output</td>
<td>&gt;70 dB</td>
<td>&gt;70 dB</td>
<td>&gt;70 dB</td>
<td>&gt;70 dB</td>
</tr>
<tr>
<td>Frequency Response (3 dB referenced to 1 kHz)</td>
<td>&gt;70 dB</td>
<td>&gt;70 dB</td>
<td>&gt;70 dB</td>
<td>&gt;70 dB</td>
</tr>
<tr>
<td>Any Input to Speaker Output</td>
<td>&gt;80 dB</td>
<td>&gt;80 dB</td>
<td>&gt;80 dB</td>
<td>&gt;80 dB</td>
</tr>
<tr>
<td>Crosstalk (at 1,000 Hz)</td>
<td>&gt;106 dB</td>
<td>&gt;104 dB</td>
<td>&gt;104 dB</td>
<td>&gt;105 dB</td>
</tr>
<tr>
<td>Channel-to-Channel Common-Mode Rejection Ratio (mic input)</td>
<td>60 Hz</td>
<td>60 Hz</td>
<td>60 Hz</td>
<td>60 Hz</td>
</tr>
<tr>
<td>Mono Channel Input EQ</td>
<td>100-8,000 Hz</td>
<td>100-8,000 Hz</td>
<td>100-8,000 Hz</td>
<td>100-8,000 Hz</td>
</tr>
<tr>
<td>Low (±15 dB)</td>
<td>12,000 Hz</td>
<td>12,000 Hz</td>
<td>12,000 Hz</td>
<td>12,000 Hz</td>
</tr>
<tr>
<td>Mid (±15 dB)</td>
<td>210 mm (8.3 in.)</td>
<td>210 mm (8.3 in.)</td>
<td>210 mm (8.3 in.)</td>
<td>176 mm (6.9 in.)</td>
</tr>
<tr>
<td>High (±15 dB)</td>
<td>827 mm (32.5 in.)</td>
<td>688 mm (26.3 in.)</td>
<td>509 mm (20.0 in.)</td>
<td>456 mm (17.9 in.)</td>
</tr>
<tr>
<td>Master Left/Right Outputs EQ</td>
<td>479 mm (18.8 in.)</td>
<td>479 mm (18.8 in.)</td>
<td>479 mm (18.8 in.)</td>
<td>341 mm (13.4 in.)</td>
</tr>
<tr>
<td>Weight (including cover)</td>
<td>29.05 kg (63.9 lb)</td>
<td>24.05 kg (52.9 lb)</td>
<td>20.05 kg (44.1 lb)</td>
<td>13.05 kg (28.7 lb)</td>
</tr>
</tbody>
</table>
The Precision Series™ is EV’s top line of power amplifiers. Their extreme reliability, high-quality sound and durable design made them the amp of choice for the Rolling Stones’ world concert tour. Whether these amps follow you around the country or around the world, you can count on legendary EV reliability. The P1250, P2000 and P3000 are THX® approved for cinema applications (THX is a registered trademark of Lucasfilm Ltd.).

### P1200
- 650 watts per channel at 2 ohms
- Compact, two-rack-space chassis
- Neutrik Speakon® output connectors allow use of heavy-gauge speaker wire for low-loss connections

### P1250
- 650 watts per channel at 2 ohms
- Built-in processor ensures optimum sound quality and amplifier/speaker matching
- Compact, two-rack-space chassis
- Neutrik Speakon® output connectors allow use of heavy-gauge speaker wire for low-loss connections

### P2000
- 1,200 watts per channel at 2 ohms
- Neutrik Speakon® output connectors allow use of heavy-gauge speaker wire for low-loss connections
- Extremely low dynamic distortion ensures excellent sound quality
- Three rack spaces

### P3000
- 1,800 watts per channel at 2 ohms
- Neutrik Speakon® output connectors allow use of heavy-gauge speaker wire for low-loss connections
- Extremely low dynamic distortion ensures excellent sound quality
- Three rack spaces

### 7100
- Two-channel power amplifier
- Space-saving, single-rack-space chassis (1.75-in. chassis height)
- Convection cooled for zero fan noise
- Front-mounted gain controls and headphone jack for easy access
- Octal sockets accept EV crossover and equalizer modules for easy system expansion

---

<table>
<thead>
<tr>
<th></th>
<th>P1200</th>
<th>P1250</th>
<th>P2000</th>
<th>P3000</th>
<th>7100</th>
</tr>
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<tbody>
<tr>
<td><strong>Max Power</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 ohms</td>
<td>650 watts</td>
<td>650 watts</td>
<td>1,200 watts</td>
<td>1,800 watts</td>
<td>N/A</td>
</tr>
<tr>
<td>4 ohms</td>
<td>550 watts</td>
<td>550 watts</td>
<td>900 watts</td>
<td>1,400 watts</td>
<td>130 watts</td>
</tr>
<tr>
<td>8 ohms</td>
<td>370 watts</td>
<td>370 watts</td>
<td>600 watts</td>
<td>850 watts</td>
<td>95 watts</td>
</tr>
<tr>
<td><strong>Rated Power</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 ohms</td>
<td>600 watts</td>
<td>600 watts</td>
<td>1,000 watts</td>
<td>1,500 watts</td>
<td>N/A</td>
</tr>
<tr>
<td>4 ohms</td>
<td>500 watts</td>
<td>500 watts</td>
<td>800 watts</td>
<td>1,200 watts</td>
<td>100 watts</td>
</tr>
<tr>
<td>8 ohms</td>
<td>350 watts</td>
<td>350 watts</td>
<td>500 watts</td>
<td>750 watts</td>
<td>95 watts</td>
</tr>
<tr>
<td><strong>Max Bridged Output</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 ohms</td>
<td>1,300 watts</td>
<td>1,300 watts</td>
<td>2,400 watts</td>
<td>3,600 watts</td>
<td>N/A</td>
</tr>
<tr>
<td>8 ohms</td>
<td>1,100 watts</td>
<td>1,100 watts</td>
<td>1,800 watts</td>
<td>2,600 watts</td>
<td>180 watts</td>
</tr>
<tr>
<td></td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>260 watts</td>
</tr>
<tr>
<td><strong>Slew Rate</strong></td>
<td>&gt;30V/µs</td>
<td>&gt;30V/µs</td>
<td>&gt;35V/µs</td>
<td>&gt;40V/µs</td>
<td>&gt;10V/µs, dual mode</td>
</tr>
<tr>
<td><strong>Total Harmonic Distortion</strong></td>
<td>&lt;0.05%</td>
<td>&lt;0.05%</td>
<td>&lt;0.05%</td>
<td>&lt;0.05%</td>
<td>&lt;0.1%</td>
</tr>
<tr>
<td><strong>Intermodulation Distortion</strong></td>
<td>&lt;0.01%</td>
<td>&lt;0.01%</td>
<td>&lt;0.01%</td>
<td>&lt;0.01%</td>
<td>&lt;0.1%</td>
</tr>
<tr>
<td><strong>Crosstalk (at 1kHz)</strong></td>
<td>&lt;70 dB</td>
<td>&lt;70 dB</td>
<td>&lt;70 dB</td>
<td>&lt;70 dB</td>
<td>&lt;100 dB</td>
</tr>
<tr>
<td><strong>Input Impedance (balanced)</strong></td>
<td>20 k ohms</td>
<td>20 k ohms</td>
<td>20 k ohms</td>
<td>20 k ohms</td>
<td>20 k ohms</td>
</tr>
<tr>
<td><strong>Signal-to-Noise Ratio (dBA-weighted)</strong></td>
<td>&gt;105 dB</td>
<td>&gt;105 dB</td>
<td>&gt;105 dB</td>
<td>&gt;105 dB</td>
<td>&gt;100 dB</td>
</tr>
<tr>
<td><strong>Height</strong></td>
<td>88.1 mm (3.5 in.)</td>
<td>88.1 mm (3.5 in.)</td>
<td>132.5 mm (5.2 in.)</td>
<td>132.5 mm (5.2 in.)</td>
<td>44.4 mm (1.75 in.)</td>
</tr>
<tr>
<td><strong>Width</strong></td>
<td>483 mm (19.0 in.)</td>
<td>483 mm (19.0 in.)</td>
<td>483 mm (19.0 in.)</td>
<td>483 mm (19.0 in.)</td>
<td>483 mm (19.0 in.)</td>
</tr>
<tr>
<td><strong>Depth</strong></td>
<td>426 mm (16.8 in.)</td>
<td>426 mm (16.8 in.)</td>
<td>426 mm (16.8 in.)</td>
<td>426 mm (16.8 in.)</td>
<td>325.1 mm (12.8 in.)</td>
</tr>
<tr>
<td><strong>Net Weight</strong></td>
<td>16 kg (36.0 lb)</td>
<td>17 kg (37.5 lb)</td>
<td>26 kg (57.3 lb)</td>
<td>26 kg (61.7 lb)</td>
<td>8.16 kg (18.2 lb)</td>
</tr>
</tbody>
</table>
The CPS series is a high-performance line of amplifiers with innovative protection/safety features and an unmatched dynamic range capability that exceeds the unique usage demands for fixed-installation applications. In addition, all CPS amplifiers perform at the extraordinary low rate of <0.05% total harmonic distortion. With its 5-way protection/safety system, the CPS series ensures the most reliable operation required by sound contractors in all sound reinforcement applications. Each is a 3-rack-space unit and is THX® approved for professional cinema application (THX is a registered trademark of Lucasfilm Ltd.).

**CPS1**
- 650 watts per channel at 2 ohms at 1 kHz
- 1,300 watts per channel bridged at 4 ohms
- High-current Neutrik Speakon® output connectors for channels A, B and bridged operation for loss-free connections
- Active-balanced XLR-type input and paralleled XLR-type output connectors provide easy signal routing
- Rear-mounted dB-scaled detented level controls

**CPS2**
- 850 watts per channel at 2 ohms at 1 kHz
- 1,700 watts per channel bridged at 4 ohms
- High-current Neutrik Speakon® output connectors for channels A, B and bridged operation for loss-free connections
- Active-balanced XLR-type input and paralleled XLR-type output connectors provide easy signal routing
- Rear-mounted dB-scaled detented level controls

**CPS3**
- 1,200 watts per channel at 2 ohms
- Neutrik Speakon® output connectors allow use of heavy-gauge speaker wire for low-loss connections

**CPS4**
- 1,800 watts per channel at 2 ohms
- Neutrik Speakon® output connectors allow use of heavy-gauge speaker wire for low-loss connections

<table>
<thead>
<tr>
<th>CPS1</th>
<th>CPS2</th>
<th>CPS3</th>
<th>CPS4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Maximum Power</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 ohms</td>
<td>650 watts</td>
<td>850 watts</td>
<td>1,200 watts</td>
</tr>
<tr>
<td>4 ohms</td>
<td>450 watts</td>
<td>650 watts</td>
<td>1,000 watts</td>
</tr>
<tr>
<td>8 ohms</td>
<td>260 watts</td>
<td>380 watts</td>
<td>600 watts</td>
</tr>
<tr>
<td><strong>Rated Power</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 ohms</td>
<td>450 watts</td>
<td>650 watts</td>
<td>1,000 watts</td>
</tr>
<tr>
<td>4 ohms</td>
<td>350 watts</td>
<td>500 watts</td>
<td>800 watts</td>
</tr>
<tr>
<td>8 ohms</td>
<td>230 watts</td>
<td>300 watts</td>
<td>600 watts</td>
</tr>
<tr>
<td><strong>Maximum Bridged Output</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 ohms</td>
<td>1,300 watts</td>
<td>1,300 watts</td>
<td>2,400 watts</td>
</tr>
<tr>
<td>8 ohms</td>
<td>1,100 watts</td>
<td>1,100 watts</td>
<td>1,600 watts</td>
</tr>
<tr>
<td>16 ohms</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Slew Rate</strong></td>
<td>&gt;250 V/µs</td>
<td>&gt;300 V/µs</td>
<td>&gt;350 V/µs</td>
</tr>
<tr>
<td><strong>Total Harmonic Distortion</strong></td>
<td>&lt;0.05%</td>
<td>&lt;0.05%</td>
<td>&lt;0.05%</td>
</tr>
<tr>
<td><strong>Intermodulation Distortion</strong></td>
<td>&lt;0.08%</td>
<td>&lt;0.08%</td>
<td>&lt;0.01%</td>
</tr>
<tr>
<td><strong>Crosstalk (at 1kHz)</strong></td>
<td>&lt;80 dB</td>
<td>&lt;80 dB</td>
<td>&lt;70 dB</td>
</tr>
<tr>
<td><strong>Input Impedance (balanced)</strong></td>
<td>20 k ohms</td>
<td>20 k ohms</td>
<td>20 k ohms</td>
</tr>
<tr>
<td><strong>Signal-to-Noise Ratio</strong> (dB A-weighted)</td>
<td>&gt;105 dB</td>
<td>&gt;105 dB</td>
<td>&gt;105 dB</td>
</tr>
<tr>
<td><strong>Height</strong></td>
<td>132.5 mm (5.2 in.)</td>
<td>132.5 mm (5.2 in.)</td>
<td>132.5 mm (5.2 in.)</td>
</tr>
<tr>
<td><strong>Width</strong></td>
<td>483 mm (19.0 in.)</td>
<td>483 mm (19.0 in.)</td>
<td>483 mm (19.0 in.)</td>
</tr>
<tr>
<td><strong>Depth</strong></td>
<td>386 mm (15.2 in.)</td>
<td>386 mm (15.2 in.)</td>
<td>390 mm (15.4 in.)</td>
</tr>
<tr>
<td><strong>Net Weight</strong></td>
<td>15 kg (33.1 lb)</td>
<td>16 kg (35.3 lb)</td>
<td>27 kg (59.5 lb)</td>
</tr>
</tbody>
</table>

Power requirements: 120 V, 50–60 Hz, factory configured
Protection: Audio limiters, dc, high frequency, back EMF, peak current limiters, inrush current limiters, turn-on delay
Cooling: Front-to-rear, three-stage (CPS1 and CPS2) or four-stage (CPS3 and CPS4) fans
EV supplies the full spectrum of equipment for complete sound reinforcement reliability and performance. To ensure the best sound possible in your application, consider EV’s innovative signal processing.

**Signal Processors**

EQ-131
- Boost and cut 1/3-octave graphic EQ
- Variable-Q active filter sets allow effective equalization
- Each of the 31 1/3-octave filters provides 12 dB of boost or cut at ISO frequencies 20-20,000 Hz
- Excellent signal-to-noise ratio
- IEC connector allows compatibility with ac connections anywhere
- Integral fuseholder doubles as the voltage selector for use anywhere

EQ-215
- Boost and cut 1/3-octave graphic EQ
- Variable-Q active filter sets allow effective equalization
- Each of the 15 2/3-octave filters provides 12 dB of boost or cut at ISO frequencies 25-16,000 Hz
- Excellent signal-to-noise ratio
- IEC connector allows compatibility with ac connections anywhere
- Integral fuseholder doubles as the voltage selector for use anywhere

EQ-231
- Boost and cut 1/3-octave graphic EQ
- Variable-Q active filter sets allow effective equalization
- Each of the 31 1/3-octave filters provides 12 dB of boost or cut at ISO frequencies 20-20,000 Hz
- Excellent signal-to-noise ratio
- IEC connector allows compatibility with ac connections anywhere
- Integral fuseholder doubles as the voltage selector for use anywhere

XEQ-2 mono two-way crossover/equalizer
- Third-order, 18-dB-per-octave Butterworth filters
- Combines an active, two-way frequency dividing network and a variable high-frequency horn-driver equalizer
- Two series of miniature, plug-in modules provide for the selection of crossover frequency and custom HF equalization (500 Hz, 800 Hz and “flat” modules supplied)
- Built-in infrasonic speaker protection plus switchable LF EQ for step-down operation of TL low-frequency systems (pages 18–19)
**EX23 stereo two-way, mono three-way crossover**

- Fourth-order, 24-dB-per-octave Linkwitz-Riley filters
- Functions as stereo three-way if a mono LF is acceptable
- Unique mono subwoofer output has sweepable frequencies from 60 to 250 Hz
- Infraconic filtering at 30 Hz economizes amplifier power and prevents over-excursion at low frequencies
- Each channel features input level controls, separate output level controls for lows and highs and mutes on each output for simple setup

**Klark Teknik DN2360 two-channel digital graphic equalizer**

- 24-bit, 96-kHz sampling, high-performance A/D and D/A converters
- 30 constant-Q equalizer filter bands per channel
- Six user-definable notch, PEQ, high-pass and low-pass filters
- 1/3- or 2/3-octave graphic equalizer bands on ISO center frequencies
- Free configuration software, SoundHost® Windows 95/98/NT/2000 compatible
- RS-232 and RS-485 networking features
- Field-upgradeable firmware utilizing flash memory technology — no battery backup
- Third-party control available through AMX, Crestron, Palm Pilot and Smart-Pro
- Easy-to-use Phoenix/Euroblock connectors
- Preset changes from front panel buttons and rear panel contact-closure inputs
- Space-saving half-rack configuration with half and full rack mounting kits available
- Built-in universal power supply
- UL, CSA, C-Tick, CE and FCC approved

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<table>
<thead>
<tr>
<th>Functions</th>
<th>EQ-131</th>
<th>EQ-215</th>
<th>EQ-231</th>
<th>XEQ-2</th>
<th>EX23</th>
<th>DN2360</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input/Outputs</td>
<td>1 in/1 out</td>
<td>2 in/2 out</td>
<td>2 in/2 out</td>
<td>1 in/2 out</td>
<td>2 in/5 out plus mono sub</td>
<td>2 in/2 out</td>
</tr>
<tr>
<td>Signal-to-Noise</td>
<td>&gt;97 dB</td>
<td>&gt;97 dB</td>
<td>&gt;97 dB</td>
<td>&gt;108 dB</td>
<td>96 dB</td>
<td>110 dB</td>
</tr>
<tr>
<td>Filter Slope</td>
<td>Variable Q</td>
<td>Variable Q</td>
<td>Variable Q</td>
<td>Third-order Butterworth</td>
<td>Fourth-order Linkwitz-Riley</td>
<td>Constant Q, selectable bandwidth</td>
</tr>
<tr>
<td>Connectors</td>
<td>Balanced XLR &amp; 1/4-inch</td>
<td>Balanced XLR &amp; 1/4-inch</td>
<td>Balanced XLR &amp; 1/4-inch</td>
<td>Balanced XLR &amp; 1/4-inch</td>
<td>Balanced XLR &amp; Euroblock, Phoenix Connectors</td>
<td></td>
</tr>
<tr>
<td>Features</td>
<td>Low-cut filter</td>
<td>Low-cut filter</td>
<td>Low-cut filter</td>
<td>Alignment delay</td>
<td>Input level control</td>
<td>30-band graphic plus 3 selectable filters</td>
</tr>
<tr>
<td>Height</td>
<td>44 mm (1.73 in)</td>
<td>44 mm (1.73 in)</td>
<td>68 mm (2.68 in)</td>
<td>44 mm (1.73 in)</td>
<td>44 mm (1.73 in)</td>
<td>44.5 mm (1.75 in)</td>
</tr>
<tr>
<td>Width</td>
<td>483 mm (19.0 in)</td>
<td>483 mm (19.0 in)</td>
<td>483 mm (19.0 in)</td>
<td>483 mm (19.0 in)</td>
<td>483 mm (19.0 in)</td>
<td>216 mm (8.5 in)</td>
</tr>
<tr>
<td>Depth</td>
<td>235 mm (9.24 in)</td>
<td>235 mm (9.24 in)</td>
<td>235 mm (9.24 in)</td>
<td>124 mm (4.88 in)</td>
<td>280 mm (11 in)</td>
<td>205 mm (8 in)</td>
</tr>
<tr>
<td>Net Weight</td>
<td>3.4 kg (7.48 lb)</td>
<td>2.7 kg (6.0 lb)</td>
<td>4.0 kg (8.8 lb)</td>
<td>2.15 kg (4.74 lb)</td>
<td>4 kg (8.8 lb)</td>
<td>1.4 kg (3.1 lb)</td>
</tr>
</tbody>
</table>
Windows user interface for the EV Dx38
The EV Dx38 and Merlin® ISP-100 digital loudspeaker/sound-system controllers complement a wide variety of EV loudspeaker systems, with parameter presets that provide parametric and shelving equalization, crossover, level adjustment, signal delay and compressor/limiter functions to provide both uniform on-axis frequency response and component protection. This provides an excellent starting point in the commissioning of various system configurations and arrays.

The Dx38 is a fixed two-in/four-out processor, with the ability to assign any output to any input or sum of the inputs. The ISP-100 provides the additional flexibility of inputs and outputs that are purchased modular in pairs, offering configurations ranging from 2 in/2 out through 2 in/8 out and 4 in/6 out. This flexibility not only complements more complex loudspeaker setups but also offers the opportunity for improved signal routing and control. Both processors contain presets for many EV multiway speaker systems. Customized EV parameter sets are also available.

Both the Dx38 and ISP-100 incorporate 48-bit algorithms with 24-bit A/D and D/A conversion. Both offer the dual all-pass filters for dipole and tripole configuration of X-Array™ X-Series™ speaker systems (see pages 2-5), a facility also available in the Klark Teknik DN9848 processor (not described in this catalog).

### Dx38 2-in/4-out processor
- Communication via front panel or PC interface with software supplied (Windows 95 compatible)
- 48-bit filter algorithms with 24-bit A/D and D/A conversion
- 115-dB dynamic range, for an analog-like noise floor
- Contact-closure interface optional

### ISP-100 integrated signal processor
- Communication via PC interface with supplied VUE-IT™ software (Windows 95 compatible)
- 48-bit filter algorithms with 24-bit A/D and D/A conversion
- Ability to construct custom signal paths with the QuickBUILD™ software supplied
- Up to eight different system configurations selectable by rear-panel contact closures.
- AES/EBU and SPDIF digital I/O options with clock synchronization
- Field-upgradeable firmware utilizing flash memory technology

<table>
<thead>
<tr>
<th>Dx38</th>
<th>ISP-100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Functions</td>
<td>Signal processor</td>
</tr>
<tr>
<td>Input/Outputs</td>
<td>2 in/4 out</td>
</tr>
<tr>
<td>Dynamic Range</td>
<td>115 dB</td>
</tr>
<tr>
<td>Filter Slope</td>
<td>User Determined</td>
</tr>
<tr>
<td>Connectors</td>
<td>Balanced XLR</td>
</tr>
<tr>
<td>Height</td>
<td>43.6 mm (1.72 in.)</td>
</tr>
<tr>
<td>Width</td>
<td>483 mm (19.0 in.)</td>
</tr>
<tr>
<td>Depth</td>
<td>375 mm (14.8 in.)</td>
</tr>
<tr>
<td>Net Weight</td>
<td>5.0 kg (11.0 kg)</td>
</tr>
</tbody>
</table>
EV’s M series mixers will provide an added level of performance to your fixed-installation sound system. The M2 and M4 mixing consoles come in two different configurations, depending on your input and subgroup needs. EV’s “soft-touch” controls and faders provide the look and feel of any top-line mixer at a value-conscious price. The M series is rugged and reliable, which guarantees years of trouble-free operation.

### M4/16
- Four-subgroup mixing console
- High-performance, high-value stereo mixing console with 16 mono and 4 stereo input channels
- Each input channel has 3-band EQ with sweepable mids from 250 Hz to 5 kHz, 80-Hz high-pass filters, direct outputs and 100-mm faders
- Six aux sends on mono channels, two aux sends on stereo channels with four stereo aux returns
- 4 subgroups, stereo masters and mono outputs all have balanced, fader-controlled outputs
- Talkback section with extensive signal-routing capabilities

### M4/24
- 24-channel version of M4/16

### M2/12
- High-performance, high-value stereo mixing console with 12 channels
- Each input channel has 3-band EQ with sweepable mids from 250 Hz to 5 kHz, PFL, mute switches and 60-mm faders
- Each input channel has 4 aux sends (2 pre, 2 post) with afterfade listen (AFL)
- Fader-controlled, low-impedance balanced outputs for left, right and mono
- “Soft-touch” controls and faders
- Very quiet internal power supply

### M2/16
- 16-channel version of the M2/12
The N/DYM® Wireless Series

The N/DYM® Series UHF Wireless is a 10-channel frequency-agile system that provides professional-quality performance and features at an affordable price. N/DYM® wireless features the latest in wireless technical innovations — ClearScan™ auto channel select. ClearScan™ greatly simplifies system setup by automatically scanning and selecting a clear channel for trouble-free operation. The N/DYM® series UHF wireless from EV sets the new standard for wireless system performance and value.

Features:
- 10-channel UHF frequency agility
- ClearScan™ auto channel select quickly scans the airwaves to find the best of the 10 UHF channels
- Rugged, metal receiver housing
- Secure-Phase™ diversity for clear, drop-out-free audio

The N/DYM® wireless series is available with either the SCU or NRU receiver:

The N/DYM® SCU receiver features...
- Detachable rear-panel antennas for effective remote antenna locating and easy rack installations
- 4-segment audio and RF signal-level displays
- Rack-mount hardware included

The N/DYM® NRU (not shown) receiver features...
- Fixed, front-panel antennas for quick and easy system setup
- Balanced XLR and unbalanced, level-adjustable 1/4-inch audio outputs
- Ships as a full system (including transmitters and mics) or as an individual component

Both receivers work with a choice of handheld transmitters that feature N/DYM® wired mic elements: the N/D767a, N/D267a, N/D167, and the rugged bodypack transmitter which features an efficient external 1/4-wave antenna with a TA4F connector for use with a variety of lavalier and headworn mics.
EV Wireless

EV wireless systems were conceived to meet the needs of professional users who want EV quality and reliability in an affordable wireless product. Building upon its standard of excellence for superior audio performance, EV wireless also leads the way in wireless system innovations which ensure a trouble-free performance, every time. EV wireless — the new standard for quality, features and performance.

MS3000

The MS3000 UHF wireless system offers incredible sound quality, uncompromising reliability and long useful life — everything professionals in the audio business have come to expect from EV products. By combining UHF frequencies with EV’s advanced technology and solid construction, the MS3000 is a wireless system you can count on.

Features:

- Secure-Phase™ diversity circuitry and a 104-dB signal-to-noise ratio for superior sound quality
- 30 available UHF frequencies to accommodate the most demanding multiple system requirements
- Balanced 3-pin XLR-type and unbalanced 1/4-inch audio outputs
- Choice of transmitters includes rugged bodpack with TA4M connector for lavalier and headworn microphones and professional handheld transmitters with choice of EV N/DYM® N/D767a or N/D267a dynamic transducers

EV Wireless

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R-SERIES™

EV’s R-Series™ wireless systems were conceived to meet the needs of professional users who want EV quality and reliability on a budget. There is an R-Series™ wireless system to meet every need — handheld, lapel or headworn mic and guitar — and a choice of UHF (R200) or VHF (R100) operating frequencies.

R100

• Entry into the world of wireless
• Rock-solid RF performance in VHF format
• Superior design and state-of-the-art manufacturing features Secure-Phase™ diversity

R200

• Operates in the less crowded UHF frequency band
• Available in N/D167 and N/267a transmitters
• Includes receivers with 1/4-inch and XLR audio outputs
• Superior design and state-of-the-art manufacturing features Secure-Phase™ diversity

>>> SPECIFICATIONS

<table>
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<tr>
<th></th>
<th>N/DYM®</th>
<th>MS3000</th>
<th>R200</th>
<th>R100</th>
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AVAILABLE TRANSMITTERS

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<th>Handheld Mic</th>
<th>N/D167</th>
<th>N/D267a</th>
<th>N/O267a</th>
<th>N/O167</th>
<th>N/D167</th>
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<td>Lavalier Mic</td>
<td>OLM-10</td>
<td>ELM-22</td>
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<td>OLM-10</td>
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<td>Omni Cardioid</td>
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<td>ULM-20</td>
<td>ULM-20</td>
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<td>Headworn</td>
<td>HM-2</td>
<td>CS-311</td>
<td>HM-2</td>
<td>HM-2</td>
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<td>Yes</td>
<td>No</td>
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</table>
For 20 years, the name Telex has been synonymous with high-performance wireless microphone systems. Designed and built in Lincoln, Nebraska, Telex wireless systems have repeatedly led the industry in innovation and design excellence. The current Telex wireless product line represents that consistent high level of achievement. From the UHF to VHF, from single-channel crystal-controlled systems to PLL frequency-agile systems, from handheld to bodypack, from ENG to wireless guitar systems, from rock and roll to the NFL, Telex sets the standard for performance, quality and reliability.

### Telex Wireless Mics

For 20 years, the name Telex has been synonymous with high-performance wireless microphone systems. Designed and built in Lincoln, Nebraska, Telex wireless systems have repeatedly led the industry in innovation and design excellence. The current Telex wireless product line represents that consistent high level of achievement. From the UHF to VHF, from single-channel crystal-controlled systems to PLL frequency-agile systems, from handheld to bodypack, from ENG to wireless guitar systems, from rock and roll to the NFL, Telex sets the standard for performance, quality and reliability.

**USR-100 professional 100-channel UHF frequency-agile wireless microphone system**
- Posi-Phase™ II smart diversity
- Posi-Squelch™ III Auto Suppression assures that only RF signals enter the receiver, not noise
- Audio level, RF signal strength, diversity-phase-relationship and channel-selection displays
- Available in either the LT-100 beltpack transmitter or the SH-100 handheld transmitter

**UR-700 UHF wireless microphone system**
- Operates in the less crowded UHF frequency band of 690-725 MHz
- Posi-Phase™ auto diversity circuit for a stronger signal, cleaner audio and greater range
- Back-lit front panel provides an easily distinguishable display of RF, diversity, and audio level status
- Front-mounted squelch adjustment provides for fine-tuning of precise squelch levels
- HT-700 handheld transmitter available with EV N/DYM® dynamic transducers
- WT-700 beltpack transmitter features a TA4-style mic connector

**FMR-450 professional-quality UHF wireless system**
- Superior RF design with Posi-Phase™ auto diversity and Posi-Squelch™ II auto suppression yield unmatched performance and signal integrity
- Premium audio quality with ultraquiet, 104-dB signal-to-noise ratio (110 dB A-weighted)
- Up to 24 systems in a single installation
- 5-segment RF and audio level indicators and a diversity-phase indicator

**FMR-70 VHF wireless microphone system**
- Outstanding audio quality with a quiet, 100-dB signal-to-noise ratio (104 dB A-weighted)
- Ideal for multiple systems operation
- Computer-matched IF filters for maximum filtering and audio quality
- Posi-Phase™ II smart diversity
- Balanced mic-level audio output with variable level control, professional XLR-3M connector

**ENG-100 portable 100 channel UHF receiver**
- Rugged and compact portable receiver for demanding news-gathering applications
- 100-channel UHF frequency agility in the 668- to 746-MHz frequency band
- Two integral antennas and a built-in Posi-Phase™ diversity system ensure high-quality signal reception
- Internal headphone amplifier and an adjustable audio output control

**S.A.F.E.™ secure encrypted wireless microphone system**
- Secure Audio Frequency Encryption (S.A.F.E.™) assures security for the wireless transmission of restricted or confidential information
- Offers flexibility with 100-channel UHF frequency agility
- Based on technology adapted from Telex’s intercom used by the National Football League
- Available with RS-1 encrypted receiver; LS-1 beltpack transmitter; HS-1 handheld microphone
SoundMate® Personal Listening Systems

Telex SoundMate® personal listening systems help overcome background noise and poor building acoustics that can make listening difficult for the hearing impaired. With a Telex SoundMate® fixed or portable transmitter, your choice of receivers and a wide assortment of accessories, you’ll be able to meet the needs of individuals needing hearing assistance in any situation.

SoundMate® ST-200 16-channel base transmitter
• 16 user-selectable frequencies controlled by a front-mounted selector switch
• Headphone jack with adjustable level for input signal monitoring
• Peak-reading LED display for visual input monitoring
• Balanced XLR-3F with selectable mic, line, unbalanced 1/4-inch and 70-volt input options

SoundMate PST-16 16-channel beltpack transmitter
• Operates on 16 user-selected channels in the 72- to 76-MHz band, controlled by a top-mounted rotary switch
• Lightweight, battery operated and includes a small electret lapel microphone for convenient portable use

SoundMate® SR-100 16-channel receiver
• Features an advanced digital PLL synthesizer to tune all 16 narrow-band frequencies in the 72- to 76-MHz band
• Provides clear reception and the simplicity of a fixed channel
• Includes a special high-frequency contour filter and boost switch

SoundMate® SR-50 single-channel receiver
• Operates on one of 16 fixed narrow-band frequencies in the 72- to 76-MHz band
• Provides clear reception and the simplicity of a fixed channel

• Two audio input jacks
Telex Communications offers the widest range of hardwired and wireless intercommunications products in the world. Telex intercoms can be found in virtually every television station and production truck in the United States, behind the scenes at Broadway plays, on the sidelines of professional football games, at the Chicago Board of Trade, in nuclear power plants and countless other mission-critical applications throughout the world. Telex AudioCom™ is the only professional intercom system to utilize an ultralow-noise balanced audio transmission system for the ultimate in clean, crisp noise-free communications under the harshest conditions. Telex RadioCom™ wireless intercom systems offer the most robust RF link while maintaining the simplicity of use that the industry demands. Utilizing unique RF filtering and audio shaping circuitry, the RadioCom™ BTR-300 wireless intercom operates in hostile RF environments where other wireless intercom simply can’t function. From broadcast television to aerospace to live performance, Telex intercoms are the systems of choice among communications professionals everywhere. Why not make it yours?

**Telex AudioCom® Hardwired Intercom Systems**

**MS2000**
- Complete 2-channel master station and system power supply in one unit
- Add a microphone or headset, connect intercom stations to the back panel, and you’re ready to communicate
- Program input for each channel; connect line-level audio source for monitoring in the speaker or headset, or for routing to the intercom channel; the program audio to the channel can be set to interrupt while the MS2000 operator is talking on the channel

**Telex RadioCom™ Wireless Intercom Systems**

**BTR300**
- Full duplex operation: Say goodbye to “walkie-talkie” technology — the BTR300 allows wireless users the luxury of being able to listen and speak simultaneously
- Quality audio: unique audio shaping circuitry and superior RF design combine to give the BTR300 superior quality sound
- Utilizes sophisticated “high-Q” front-end technology to filter out potentially harmful RF signals

**BP1000/2000**
- Portable, 1- and 2-channel beltpack headset stations for mobile users
- High-quality audio system with mic limiter circuit
- Rugged, low-profile metal case with sturdy belt clip

**Telex Headsets**

**PH44**
- Super lightweight, dual-sided headsets for day-long comfort
- High-quality monaural dynamic earphones with dynamic noise-canceling microphone on adjustable boom with flexibility in all directions
- Straight cord with XLR-4 type plug

**PH88**
- Super lightweight, single-sided headset for the ultimate in day-long comfort
- High-quality monaural dynamic earphone with dynamic noise-canceling microphone on adjustable boom with flexibility in all directions
- Straight cord with XLR-4 type plug

**HR1/ HR2**
- Medium-weight noise-reduction headsets with dynamic noise-canceling microphones (21-dB rating)
- Feature a unique headband design that distributes ear cushion pressure evenly
- Fold into an extremely compact shape for storage
- Straight cord with XLR-4 type plug
VOB™

EV’s unique VOB™ technology (Vocal-Optimized Bass) provides the performer with reduced low-frequency distortion. Critical damping of the low-frequency resonant peak has resulted in a microphone that replaces the “muddiness” found in competitive models with greater warmth and increased vocal intelligibility. With a wider range of working distances than other microphones, this intelligibility ensures a clean, clear, consistent sound that “cuts through the mix.”
**N/DYM® Wired Mics**

EV was the first to use a neodymium-based magnet structure in a microphone and is the only manufacturer to offer VOB™ (Vocal-Optimized Bass) technology. These technologies counteract proximity effect, sibilance and P-popping, thus assuring maximum vocal intelligibility and musical clarity. Whether used in theatrical performances, worship ceremonies, live concerts, or high-profile speaking engagements, EV N/DYM® microphones offer clear, sparkling sound.

As part of a fixed installation, in the studio, or on the road, EV N/DYM® microphones outperform any microphone in their class.

**N/D767a**
- N/DYM® dynamic supercardioid lead microphone
- First choice among singers and engineers
- Extremely low handling noise
- Features VOB™ technology for reduced boominess, sibilance and P-popping

**N/D267a/as**
- N/DYM® dynamic cardioid vocal microphone
- Clear, consistent sound without low-end distortion
- Features VOB™ technology for increased vocal intelligibility
- Available in a switchable version

**N/D167**
- N/DYM® dynamic cardioid vocal microphone
- Entry into the world of high-performance mics
N/D468
- Supercardioid pickup pattern
- Designed specifically for instruments
- Pivoting head ensures perfect placement to mic horns, drums, acoustic and electric guitar
- Smooth and accurate response in the highest SPL situations

N/D478
- Ideal to mic drums, percussion or guitar amplifiers
- Integrated VOB™ technology
- Doubles as an excellent vocal microphone

N/D868
- Specifically designed to mic kick drums
- Durable, steel construction
- Extended low-frequency response to tighten live and studio mixes

>>> SPECIFICATIONS

<table>
<thead>
<tr>
<th>Type</th>
<th>N/D767a</th>
<th>N/D267a</th>
<th>N/D167</th>
<th>N/D468</th>
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<td>-51.5 dB</td>
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<td>(0 dB = 1 mW/pascal)</td>
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<td></td>
<td></td>
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<td>181 mm (7.12 in.)</td>
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<td>52 mm (2.05 in.)</td>
<td>52 mm (2.05 in.)</td>
<td>52 mm (2.05 in.)</td>
<td>52 mm (2.05 in.)</td>
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<td>238 g (8.4 oz)</td>
<td>190 g (6.7 oz)</td>
<td>247 g (8.7 oz)</td>
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<td>Applications</td>
<td>Premium vocal</td>
<td>Lead/backing vocal</td>
<td>Most affordable N/DYM® vocal</td>
<td>Brass, drums percussion, guitars</td>
<td>Percussion vocals</td>
<td>Kick drum bass amp</td>
</tr>
</tbody>
</table>
**Architectural Mics**

**Functionality meets aesthetics in fixed installations.**

EV’s architectural microphones are the most natural-sounding microphones on the market for public speaking, teleconferencing, worship applications and theatrical productions. Compact, yet austere, EV architectural microphones are inconspicuous — an important consideration in fixed installations.

Ergonomically and architecturally designed, EV has married functionality with aesthetics.

**PolarChoice™ multipolar podium microphone**
- Architecturally designed for high style and function
- Four polar pattern choices: omni, cardioid, supercardioid and hypercardioid, all in one unit
- Offers maximum protection against feedback and background noise
- Triple-layer windscreen and advanced circuitry
- Ultralow P-popping and high headroom
- Available in either 12- or 18-inch gooseneck

**RE90L omnidirectional lapel microphone**
- One of the world’s most compact, lightweight microphones
- Inconspicuous
- Perfect for television, worship and business applications

**RE90P-12/RE90P-18 unidirectional podium microphone**
- Acoustically designed for public address applications
- Ultraslim profile
- Reproduces sound naturally for either distant or close-up delivery
- Mounts quickly to any lectern, pulpit or podium
- Available in either 12- or 18-inch gooseneck
- Quick-connect to female XLR-type, 3-pin receptacle
RE90B/BW boundary microphone
• Built-in equalization eliminates rising high end of typical boundary mics
• Picks up and delivers every word fully and naturally
• Ultracompact size and low profile
• Ideal for video- and teleconferencing systems, classrooms or houses of worship
• Unique isolation system to limit unwanted vibration noise

RE90H/HW hanging microphone
• Ultrasensitive and compact
• Ideal for choir, instrumental and vocal groups, and live theater
• Controlled polar response for distant sound pickup
• 3-pin male XLR-type output connector
• Suppresses feedback but leaves the sound uncolored and natural
• 25-ft braided, shielded cable maintains microphone’s position without rotation

RE16 Variable-D® dynamic podium or handheld microphone
• Tight, supercardioid pattern is unusually uniform over a wide frequency range for uniform sound quality at all pickup angles
• Variable-D® design virtually eliminates the up-close bass boost (proximity effect) that can make vocals sound “muddy”
• Excellent for podium use where high intelligibility is important

<table>
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<tr>
<th>POLARCHOICE™ 12</th>
<th>RE90L</th>
<th>RE90P-12</th>
<th>RE90B</th>
<th>RE90BW</th>
<th>RE90H</th>
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<th>RE16</th>
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<td>Condenser</td>
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<td>Semi-cardioid</td>
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<td>Supercardioid</td>
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<td>Teleconferencing</td>
<td>Choir, concert halls</td>
<td>Podium, house of worship</td>
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**Broadcast/Video Production Mics**

Designed for exemplary performance in the most demanding professional applications, EV broadcast/video production microphones have become “industry standard” in radio, television, video and film applications worldwide. From the news interviewer’s favorite, the 635 family, to EV’s RE20 “broadcast standard,” EV’s reputation as an industry leader has become firmly ensconced through demonstrated performance in rugged, real-world applications by discerning radio, TV, video and film professionals.

**ENG 618**

**Integrated boom pole/shotgun microphone**
- Industry’s finest newsworthy, integrated shotgun microphone
- Ideal for applications in multisound environments
- Easy boom extension from 18 inches to 6 feet
- Balanced, lightweight design
- Can be either phantom or battery powered

**RE50/B shock-mounted microphone**
- Industry’s favorite news interview microphone
- Features EV DynaDamp™ shock mount
- Extremely low handling noise for superior sound
- “Mic-within-a-mic” concept reduces wind and P-popping noise

**RE50N/D-B shock mounted N/DYM® handheld interview microphone**
- Same rugged design of the RE50/B with neodymium magnet structure
- Features EV DynaDamp™ shock mount
- Extremely low handling noise for superior sound
- “Mic-within-a-mic” concept reduces wind and P-popping noise

**635A and 635A/B**
- Most popular news gathering microphone in the world
- Durable and road-worthy
- Referred to as “The Hammer” for its resilience

**635N/D-B**
- Same “hammer-like” toughness of the 635A
- Added output and sensitivity with neodymium magnet structure
- Available in camera black finish

---

**Specifications**

<table>
<thead>
<tr>
<th>ENG 618</th>
<th>RE50/B</th>
<th>RE50N/D-B</th>
<th>635A and 635A/B</th>
<th>635N/D-B</th>
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<tr>
<td>Polar Pattern</td>
<td>Hypercardioid</td>
<td>Omni</td>
<td>Omni</td>
<td>Omni</td>
</tr>
<tr>
<td>Power Level (0 dB = 1 mV/pascal)</td>
<td>-55 dB</td>
<td>-55 dB</td>
<td>-51 dB</td>
<td>-51 dB</td>
</tr>
<tr>
<td>Length</td>
<td>46 cm (18 in.) collapsed 197 cm (6 ft) extended</td>
<td>197 mm (7.75 in.)</td>
<td>197 mm (7.75 in.)</td>
<td>151 mm (5.94 in.)</td>
</tr>
<tr>
<td>Max Diameter</td>
<td>N/A</td>
<td>49.3 mm (1.94 in.)</td>
<td>49.3 mm (1.94 in.)</td>
<td>35.8 mm (1.41 in.)</td>
</tr>
<tr>
<td>Net Weight</td>
<td>910 g (2.0 lb)</td>
<td>269 g (9.5 oz)</td>
<td>269 g (9.5 oz)</td>
<td>170 g (6.0 oz)</td>
</tr>
<tr>
<td>Application</td>
<td>News gathering</td>
<td>News gathering</td>
<td>News gathering</td>
<td>News gathering</td>
</tr>
</tbody>
</table>
Smooth and accurate reproduction.

EV’s Variable-D® design used in the RE20 and RE27N/D broadcast studio products was developed to ensure true and accurate response across all frequencies without the up-close boominess associated with “proximity effect.” As a result, these microphones have become the industry standard for radio studios worldwide. And when it comes to studio recording, the RE20 series and our condenser models, RE200 and RE1000, provide you with the tools you need to get the sound you’re after when recording vocals, guitars, drums or brass.

**RE20 Variable-D® dynamic cardioid**
- Favorite among broadcasters and engineers worldwide
- Variable-D® design and heavy-duty, internal P-pop filter reduces proximity effect
- Bass roll-off switch
- Internal element shock mount reduces vibration-induced noise

**RE27N/D Variable-D® N/DYM® dynamic cardioid**
- Reduces proximity effect to maintain uniform LF response at any distance
- N/DYM® technology provides wider frequency-response and higher output
- Three switchable filters: one high frequency, two low frequencies, and an internal blast/wind filter cover
- Internal blast/wind filter cover reduces P-popping, breath sounds and excessive sibilance

**RE200**
- Cardioid, true condenser instrument microphone
- Continuous presence rise enhances sound quality
- True condenser design
- Transformer-less design
- Small, unobtrusive profile
- Includes stand clamp, windscreen and zippered vinyl pouch

**RE1000 studio condenser microphone**
- True condenser – high-voltage, externally biased transducer
- Exceptionally flat response
- Detailed, accurate transients

<table>
<thead>
<tr>
<th>Specifications</th>
<th>RE20</th>
<th>RE27N/D</th>
<th>RE200</th>
<th>RE1000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>Variable-D® dynamic</td>
<td>Variable-D® N/DYM® dynamic</td>
<td>True condenser</td>
<td>True condenser</td>
</tr>
<tr>
<td>Color</td>
<td>Gray</td>
<td>Silver</td>
<td>Black</td>
<td>Black</td>
</tr>
<tr>
<td>Frequency Range</td>
<td>45-18,000 Hz</td>
<td>45-20,000 Hz</td>
<td>50-18,000 Hz</td>
<td>70-18,000 Hz</td>
</tr>
<tr>
<td>Polar Pattern</td>
<td>Cardioid</td>
<td>Cardioid</td>
<td>Cardioid</td>
<td>Supercardioid</td>
</tr>
<tr>
<td>Power Level (0 dB = 1 mV/pascal)</td>
<td>-57 dB</td>
<td>-51 dB</td>
<td>-39 dB</td>
<td>-39 dB</td>
</tr>
<tr>
<td>Power Requirement</td>
<td>N/A</td>
<td>N/A</td>
<td>12-52 V dc</td>
<td>12-48 V dc</td>
</tr>
<tr>
<td>Length</td>
<td>217 mm (8.53 in.)</td>
<td>217 mm (8.53 in.)</td>
<td>137.2 mm (5.4 in.)</td>
<td>205 mm (8.07 in.)</td>
</tr>
<tr>
<td>Max Diameter</td>
<td>54.4 mm (2.14 in.)</td>
<td>54.4 mm (2.14 in.)</td>
<td>27.9 mm (1.1)</td>
<td>62 mm (2.44 in.)</td>
</tr>
<tr>
<td>Net Weight</td>
<td>737 g (26.0 oz)</td>
<td>709 g (25.0 oz)</td>
<td>185 g (6.5 oz)</td>
<td>400 g (14.1 oz)</td>
</tr>
<tr>
<td>Application</td>
<td>Studio vocals, kick drum, brass</td>
<td>Studio vocals, kick drum, brass</td>
<td>Strings, overhead choir, percussion</td>
<td>Studio vocals, overhead drums, overhead choir</td>
</tr>
</tbody>
</table>
## Accessories

<table>
<thead>
<tr>
<th><strong>Accessory</strong></th>
<th><strong>Description</strong></th>
<th><strong>Available for:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Speakers</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100BK</td>
<td>Speaker stand</td>
<td>Sb and Sx systems (Sx80 needs Sx80SM)</td>
</tr>
<tr>
<td>Sx80MBB</td>
<td>Wall/ceiling bracket</td>
<td>Sx80</td>
</tr>
<tr>
<td>Sx80SM</td>
<td>Stand-mount adapter</td>
<td>Sx80</td>
</tr>
<tr>
<td>F200</td>
<td>Monitor feet</td>
<td>Sx100+, Sx300</td>
</tr>
<tr>
<td>Mb100</td>
<td>Eyebolt attachment kit</td>
<td>Sx100+, Sx300</td>
</tr>
<tr>
<td>Mb200</td>
<td>Wall/ceiling bracket</td>
<td>Sx100+, Sx300</td>
</tr>
<tr>
<td>Mb300</td>
<td>Horizontal array kit</td>
<td>Sx100+, Sx300</td>
</tr>
<tr>
<td>Mb500</td>
<td>Wall/ceiling bracket</td>
<td>Sx500+</td>
</tr>
<tr>
<td>Mb600</td>
<td>Horizontal array kit</td>
<td>Sx500+</td>
</tr>
<tr>
<td>Mb700</td>
<td>Eyebolt attachment kit</td>
<td>Sx500+</td>
</tr>
<tr>
<td>VPC500</td>
<td>Vinyl cover</td>
<td>Sx500+</td>
</tr>
<tr>
<td>PD500</td>
<td>Padded case</td>
<td>Sx500+</td>
</tr>
<tr>
<td>PDSx</td>
<td>Padded case</td>
<td>Sx100+, Sx300, Sb121</td>
</tr>
<tr>
<td>VPC5Sx</td>
<td>Vinyl cover</td>
<td>Sx100+, Sx300, Sb121</td>
</tr>
<tr>
<td>G500</td>
<td>Full-face steel grille</td>
<td>Sx500+</td>
</tr>
<tr>
<td>HSMT-1</td>
<td>Hanging kit</td>
<td>MTH/MTL</td>
</tr>
<tr>
<td>HSMT-3</td>
<td>Hanging kit</td>
<td>MTH/MTL</td>
</tr>
<tr>
<td>HSMT-5</td>
<td>Hanging kit</td>
<td>MTH/MTL</td>
</tr>
<tr>
<td>HST series</td>
<td>Hanging kits</td>
<td>T-Series™</td>
</tr>
<tr>
<td>S-40MBB</td>
<td>Wall/ceiling bracket</td>
<td>S-40</td>
</tr>
<tr>
<td>SRB-7</td>
<td>Rack/wall bracket</td>
<td>Sentry® 100A and Sentry® 100EL</td>
</tr>
<tr>
<td><strong>Microphones</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>309A</td>
<td>Suspension shock mount</td>
<td>RE20, RE27</td>
</tr>
<tr>
<td>311</td>
<td>Stand clamp</td>
<td>RE16, RE200, N/D468</td>
</tr>
<tr>
<td>320</td>
<td>Stand clamp</td>
<td>RE20, RE27N/D</td>
</tr>
<tr>
<td>323</td>
<td>“Stuff” stand clamp</td>
<td>N/D167, N/D267, N/D767a</td>
</tr>
<tr>
<td>325</td>
<td>Boom and stand suspension shock mount</td>
<td>RE1000</td>
</tr>
<tr>
<td>422a</td>
<td>Desk stand with rubber shock mount that accepts microphone stand clamps, black</td>
<td>RE90P-12, RE90-18, PolarChoice™12, PolarChoice™18</td>
</tr>
<tr>
<td>CPSM</td>
<td>Shock mount</td>
<td>RE90P-12, RE90-18, PolarChoice™12, PolarChoice™18</td>
</tr>
<tr>
<td>FMK</td>
<td>Flange mount</td>
<td>RE90P-12, RE90-18, PolarChoice™12, PolarChoice™18</td>
</tr>
</tbody>
</table>
## Wireless Microphones

<table>
<thead>
<tr>
<th>Accessory</th>
<th>Description</th>
<th>Available for:</th>
</tr>
</thead>
<tbody>
<tr>
<td>APD4</td>
<td>Antenna/power distribution system</td>
<td>All but NRU receiver</td>
</tr>
<tr>
<td>LPA500</td>
<td>Log-periodic antenna with hardware</td>
<td>All but NRU receiver</td>
</tr>
<tr>
<td>CLA-5</td>
<td>1/4-wave antenna (690-725 MHz)</td>
<td>All but NRU receiver</td>
</tr>
<tr>
<td>CXU-25</td>
<td>25-foot volt-loss cable with TNC connector</td>
<td>All but NRU receiver</td>
</tr>
<tr>
<td>CXU-50</td>
<td>50-foot volt-loss cable with TNC connector</td>
<td>All but NRU receiver</td>
</tr>
<tr>
<td>CXU-75</td>
<td>75-foot volt-loss cable with TNC connector</td>
<td>All but NRU receiver</td>
</tr>
<tr>
<td>CXU-100</td>
<td>100-foot volt-loss cable with TNC connector</td>
<td>All but NRU receiver</td>
</tr>
<tr>
<td>Cs200TX</td>
<td>Cardioid lavalier with TA4F</td>
<td>All bodypack transmitters except FMR–450</td>
</tr>
<tr>
<td>HM1TX</td>
<td>Headset microphone with TA4F</td>
<td>All bodypack transmitters</td>
</tr>
<tr>
<td>HM2</td>
<td>Headset condenser cardioid microphone</td>
<td>All bodypack transmitters</td>
</tr>
<tr>
<td>OLM–10</td>
<td>Omnidirectional condenser lavalier microphone</td>
<td>All bodypack transmitters except FMR–450</td>
</tr>
<tr>
<td>MSSA</td>
<td>Deluxe stand adapter for handheld transmitters</td>
<td>All handheld transmitters</td>
</tr>
</tbody>
</table>

## Software

**EASE 3.0**
- Advanced room modeling and loudspeaker aiming program for engineers
- Shows loudspeaker coverage within a given environment
- Optional stereo auralization module available (EARS 3.0)

Windows-based operation allows expeditious, sophisticated production of graphics for presentation, print media and Web application.

**ArraySHOW™**
A powerful loudspeaker arraying software package for use by system designers to optimize loudspeaker clusters and arrays early in the planning stages. Explicitly reveals the lobes and nulls from multiple loudspeaker sources that compromise coverage uniformity and intelligibility. Guidelines are included to optimize array configurations and directivity control.

- Build an array by selecting one or more loudspeakers and aim them to produce an array diagram
- Select a frequency and microphone distance for viewing directivity results in a colorful “directivity globe” and horizontal and vertical polars
- Edit the array to optimize results
- Save arrays and quickly compare different results
WHATEVER THE APPLICATION — CLUBS, HOUSES OF WORSHIP, STADIUMS AND EVERYWHERE IN BETWEEN — EV SPEAKERS, MICROPHONES AND ELECTRONICS SET THE STANDARD FOR INNOVATION, PERFORMANCE, VERSATILITY AND VALUE. BELIEVE IT TODAY BY PUTTING EV TO WORK FOR YOU.

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