



INNOVATION • PERFORMANCE • VERSATILITY • VALUE










# dynamics

## SONIC REVOLUTION

**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-1122/85F



Xi-1152/94F  
Xi-1152/64F



Xi-1123/106F

Xi-2123/106F



Xi-1153/64F



Xi-1183/64F



Xi-2153/64F



Xi-2183/64F  
shown without grille



### 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 ( $f_3$ ) without EQ boost
- Extreme lows reached (28-Hz  $f_3$ ) 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  $f_3$  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 20° 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® Series 100 hardware (OmniMount is a registered trademark of OmniMount Systems, Inc.)

	Xi-1122/85F	Xi-1152/64F Xi-1152/94F	Xi-1123/106F Xi-2123/106F	Xi-1153/64F Xi-1183/64F	Xi-2153/64F Xi-2183/64F
Basic Configuration	Two-way 12-inch full-range, biamp only	Two-way 15-inch full-range, biamp only	Three-way 12-inch full-range, biamp or triamp	Three-way 15- and 18-inch full-range, triamp only	Three-way dual-15- and dual-18-inch full-range, triamp only
Frequency Range (-3 dB)	60-20,000 Hz	50-20,000 Hz	80-20,000 Hz	48-20,000 Hz (1153) 45-20,000 Hz (1183)	48-20,000 Hz (2153) 45-20,000 Hz (2183)
Step-Down Mode	N/A	N/A	N/A	N/A	N/A
Crossover Frequencies	1,500 Hz	1,500 Hz	250-550/1,760 Hz (1123) 250-550/1,760 Hz (2123)	125-540/1,760 Hz (1153) 125/1,760 Hz (1183)	125-540/1,760 Hz (2153) 125/1,760 Hz (2183)
Sensitivity (1 W/1 m) (LF/MB/HF/MB-HF)	99/ N/A /110/ N/A dB	98/ N/A /113/ N/A (64) 98/ N/A /112/ N/A (94)	98/109/111.7/106.7 dB (1123) 101.4/109/111.7/106.7 dB (2123)	91.5/107/112/ N/A dB (1153) 93.5/107/112/ N/A dB (1183)	96/107/112/ N/A dB (2153) 98/107/112/ N/A dB (2183)
Power Handling Long-Term Average	300/ N/A /75/ N/A W	600/ N/A /75/ N/A W	300/300/75/300 W (1123) 600/300/75/300 W (2123)	600/300/75/ N/A W	1,200/300/75/ N/A W
Short-Term Peak (LF/MB/HF/MB-HF)	1,200/ N/A /300/ N/A W	2,400/ N/A /300/ N/A W	1,200/1,200/300/1,200 W (1123) 2,400/1,200/300/1,200 W (2123)	2,400/1,200/300 N/A W	4,800/1,200/300 N/A W
Coverage (nominal)	80° H x 55° V	60° H x 40° V (64) 90° H x 40° V (94)	100° H x 60° V	60° H x 40° V	60° H x 40° V
Dipole/Tripole Configurable with Dx38, K-T DN9848 or Merlin® ISP-100	N/A	N/A	Yes	Yes (1153)	Yes (2153)
Excursion-Smart Protection with Merlin® ISP-100	Yes	Yes	No	No	No
Transducers LF	DL-type 12-inch woofer	EVX-155 woofer	DL-type 12-inch woofer (1123) Two DL-type 12-inch woofers (2123)	EVX-155 15-inch woofer (1153) EVX-180B 18-inch woofer (1183)	Two EVX-155 15-inch woofer (1153) Two EVX-180B 18-inch woofer (1183)
MB	N/A	N/A	DL-type 10-in mid-bass	12-inch mid-bass	12-inch mid-bass
HF	One DH6-16 (1.4-in. exit)	One DH6-16/2 (2-in. exit)	One DH6-16 (1.4-in. exit)	DH6-16 (1.4-in. exit)	DH6-16 (1.4-in. exit)
Rotatable Horn MB	N/A	N/A	Yes	No	No
HF	No	Yes	Yes	Yes	Yes
Impedance (nominal) (LF/MB/HF/MB-HF)	8/ N/A /16/ N/A ohms	8/ N/A /16/ N/A ohms	12/16/16/16 ohms (1123) 6/16/16/16 ohms (2123)	8/16/16/ N/A ohms	4/16/16/ N/A ohms
Input Connections	Two Neutrik NL4MPR	Two Neutrik NL4MPR	Two Neutrik NL8MPR	Two Neutrik NL8MPR	Two Neutrik NL8MPR
Height	584 mm (23.0 in.)	759 mm (29.88 in.)	801 mm (31.54 in.) (1123) 1007 mm (39.65 in.) (2123)	914 mm (36 in.)	1233 mm (48.54 in.)
Width: Front	375 mm (14.75 in.)	450 mm (17.73 in.)	456 mm (17.95 in.)	586 mm (23.07 in.)	586 mm (23.07 in.)
Back	199 mm (7.84 in.)	248 mm (9.75 in.)	317 mm (12.48 in.)	354 mm (13.93 in.)	354 mm (13.93 in.)
Depth	356 mm (14.0 in.)	413 mm (16.28 in.)	473 mm (18.64 in.)	759 mm (29.88 in.)	759 mm (29.88 in.)
Net Weight	31.3 kg (69 lb)	40.8 kg (90 lb)	56.8 kg (125 lb) (1123) 70.3 kg (155 lb) (2123)	93 kg (205 lb)	113.4 kg (250 lb)

Construction Materials: 18-mm, 13-ply birch  
Finish: Black textured paint



Xi-1191/Xi-1191F



Xi-2181/Xi-2181F



Xi-1082



# Xi-Series™

## >>> SPECIFICATIONS

	<b>Xi-1191 Xi-1191F</b>	<b>Xi-2181 Xi-2181F</b>	<b>Xi-2122/42F</b>	<b>Xi-1082</b>
Basic Configuration	18-inch subwoofer	Dual 18-inch low-frequency	Dual 12-inch MB/HF, biamp only	8-inch two-way full-range
Frequency Range (-3 dB) Step-Down Mode	37-160 Hz 28-160 Hz	37-200 Hz N/A	125-20,000 Hz N/A	50-20,000 Hz N/A
Crossover Frequencies	80-125 Hz recommended	80-125 Hz recommended	125/1,760 Hz	3,500 Hz
Sensitivity (1 W/1 m) (FR/MB/HF)	94 dB/ N/A / N/A dB	98.5 dB/ N/A / N/A dB	N/A /109/116 dB	90 dB/ N/A / N/A dB
Power Handling Long-Term Average Short-Term Peak (FR/MB/HF)	600/ N/A / N/A W 2,400/ N/A / N/A W	1,200/ N/A / N/A W 4,800/ N/A / N/A W	N/A /600/150 W N/A /2,400/600 W	175/ N/A / N/A W 700/ N/A / N/A W
Coverage (nominal)	300° H x 270° V	240° H x 300° V	40° H x 20° V	90° H x 40° V (long axis horizontal)
Excursion-Smart Protection with Merlin® ISP-100	Yes (with two-way Xi systems)	Yes (with two-way Xi systems)	No	No
Transducers LF MB HF	EVX-180B 18-inch woofer N/A N/A	Two EVX-180B 18-inch woofers N/A N/A	N/A Two 12-inch mid-bass Two ND5-16 (1.4-in. exit)	8-inch woofer N/A DH3
Rotatable Horn MB HF	N/A N/A	N/A N/A	No No	N/A No
Impedance (nominal) (FR/MB/HF)	8/ N/A / N/A ohms	Dual 8/ N/A / N/A ohms	N/A /8/8 ohms	8/ N/A / N/A ohms
Input Connections	Two Neutrik NL8MPR	Two Neutrik NL8MPR	Two Neutrik NL8MPR	Barrier strip
Height Width: Front Back Depth	914 mm (36 in.) 586 mm (23.07 in.) 354 mm (13.93 in.) 759 mm (29.88 in.)	914 mm (36 in.) 586 mm (23.07 in.) 354 mm (13.93 in.) 759 mm (29.88 in.)	914 mm (36 in.) 586 mm (23.07 in.) 354 mm (13.93 in.) 759 mm (29.88 in.)	488 mm (19.23 in.) 235 mm (9.25 in.) 150 mm (5.9 in.) 285 mm (11.23 in.)
Net Weight	68 kg (150 lb)	83.5 kg (184 lb)	101.2 kg (223 lb)	13.3 kg (28 lb)



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



Xn



Xf



Xcn



Xb



Xds



Xw12



Xw12 shown without grille



Xcb



Xw15



Xw15 shown without grille

	Xf	Xn	Xcn	Xb	Xcb	Xds	Xw12	Xw15
Basic Configuration	Two-way dual-12-inch MB/HF, biamp only	Three-way 18-inch full-range, triamp only	Two-way 12-inch MB/HF, biamp only	Dual 18-inch low-frequency	18-inch low-frequency	Dual 18-inch subwoofer	Two-way 12-inch full-range, biamp only	Two-way 15-inch full-range, biamp only
Frequency Range (-3 dB)	125-20,000 Hz	45-20,000 Hz	125-20,000 Hz	37-200 Hz	37-200 Hz	32-200 Hz	60-20,000 Hz	50-20,000 Hz
Crossover Frequencies	125/1,760 Hz	125/1,760 Hz	125/1,760 Hz	80-125 Hz recommended	80-125 Hz recommended	80-125 Hz recommended	1,250 Hz	1,250 Hz
Sensitivity (SPL 1 W/1 m) (LF/MB/HF)	N/A /112/116 dB	95/110/112 dB	N/A /110/112 dB	98.5/ N/A / N/A dB	95/ N/A / N/A dB	100/ N/A / N/A dB	99/ N/A /110 dB	99/ N/A /110 dB
Power Handling Long-Term Average Short-Term Peak (LF/MB/HF)	N/A /600/150 watts N/A /2,400/600 watts	600/300/75 watts 2,400/1,200/300 watts	N/A /300/75 watts N/A /1,200/300 watts	1,200/ N/A / N/A watts 4,800/ N/A / N/A watts	600/ N/A / N/A watts 2,400/ N/A / N/A watts	1,200/ N/A / N/A watts 4,800/ N/A / N/A watts	300/ N/A /75 watts 1,200/ N/A /300 watts	600/ N/A /75 watts 2,400/ N/A /300 watts
Coverage (nominal)	40° H x 20° V	60° H x 40° V	60° H x 40° V	Omnidirectional	Omnidirectional	Omnidirectional	55° H x 80° V	55° H x 80° V
Transducers LF MB HF	N/A Two ND12A 12-in. mid-bass Two ND5-16 (1.4-in. exit)	One EVX-180B 18-in. woofer One ND12A 12-in. mid-bass ND5-16 (1.4-in. exit)	N/A One ND12A 12-in. mid-bass ND5-16 (1.4-in. exit)	Two EVX-180B 18-in. woofers N/A	One EVX-180B 18-in. woofer N/A	Two EVX-180B 18-in. woofers N/A	DL12X 12-in. woofer N/A DH6-16 (1.4-in. exit)	EVX155 15-in. woofer N/A DH6-16 (1.4-in. exit)
Rotatable Horn MB HF	No No	No Yes	No Yes	N/A N/A	N/A N/A	N/A N/A	N/A No	N/A No
Impedance (nominal) (LF/MB/HF)	NA/8/8 ohms	8/16/16 ohms	N/A /16/16 ohms	Dual 8/ N/A / N/A ohms	8/ N/A / N/A ohms	Dual 8/ N/A / N/A ohms	8/ N/A /16 ohms	8/ N/A /16 ohms
Input Connections	Two Neutrik NL8MPR	Two Neutrik NL8MPR	Two Neutrik NL8MPR	Two Neutrik NL8MPR	Two Neutrik NL8MPR	Two Neutrik NL8MPR	Two Neutrik NL4MPR	Two Neutrik NL8MPR
Height Width: Front Back Depth	1,067 mm (36.00 in.) 584 mm (23.00 in.) 354 mm (13.93 in.) 759 mm (29.88 in.)	1,067 mm (36.00 in.) 584 mm (23.00 in.) 354 mm (13.93 in.) 759 mm (29.88 in.)	596 mm (23.46 in.) 584 mm (23.00 in.) 354 mm (13.93 in.) 759 mm (29.88 in.)	914.4 mm (36.00 in.) 584.2 mm (23.00 in.) 353.8 mm (13.93 in.) 758 mm (29.8 in.)	596 mm (23.46 in.) 584 mm (23.00 in.) 354 mm (13.93 in.) 759 mm (29.88 in.)	914 mm (36.00 in.) 1166 mm (45.92 in.) 736 mm (28.98 in.) 759 mm (29.88 in.)	443.1 mm (17.44 in.) 583 mm (23.0 in.) 583 mm (23.0 in.) 408.8 mm (16.10 in.)	457.2 mm (18.00 in.) 644.1 mm (25.36 in.) 644.1 mm (25.36 in.) 460.5 mm (18.13 in.)
Net Weight	87.1 kg (192 lb)	87.1 kg (192 lb)	60.8 kg (134 lb)	83.5kg (184 lb)	55.8 kg (123 lb)	121 kg (267 lb)	28.2 kg (62 lb)	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

>>> SPECIFICATIONS



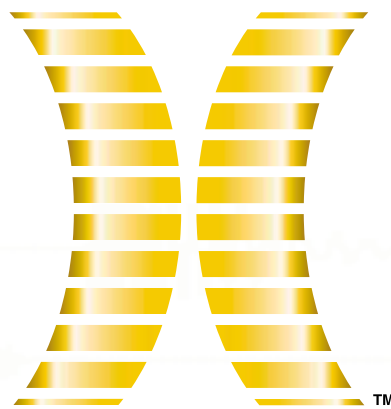
What do you get  
when you cross the

**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!

X-LINE™ >>>

<<< EV®

## 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 (19.5 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 summing. 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 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 XsubF's 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.

X-LINE™ >>>

<<< EV®



X-Line™



# FRX Series

**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 SERIES >>>

<<< EV



FRX-181

## 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



FRX-122





FRX-640



FRX-940



FRX-660

# high output

	FRX-940	FRX-660	FRX-640	FRX-181	FRX-122
Basic Configuration	Two-way 15-in. full-range, biampable	Two-way 15-in. full-range, biampable	Two-way 15-in. full-range, biampable	18-in. low-frequency system	Two-way 12-in. full-range, biampable
Frequency Range (-3 dB)	50-20,000 Hz	50-20,000 Hz	50-20,000 Hz	37-1,000 Hz	75-20,000 Hz
Crossover Frequencies	1,800 Hz (800 Hz biamped)	1,800 Hz	1,800 Hz (1,200 Hz biamped)	80-125 Hz recommended	1,800 Hz
Sensitivity (SPL 1 W/1 m)	101 dB passive 105/109 dB HF/LF	101 dB passive 105/109 dB HF/LF	101 dB passive 105/109 dB LF/HF	96 dB	99 dB passive
Power Handling Long-Term Average Short-Term Peak	400 watts 1,600 watts	400 watts 1,600 watts	400 watts 1,600 watts	400 watts 1,600 watts	300 watts 1,200 watts
Coverage (nominal)	90° H x 40° V	60° H x 60° V	60° H x 40° V	N/A	100° H x 60° V
Transducers LF HF	DL15-FRX 15-inch woofer DH2T driver	DL15-FRX 15-inch woofer DH2T driver	DL15-FRX 15-inch woofer DH2T driver	DL18MT 18-inch woofer N/A	DL12SX 12-inch woofer DH2T driver
Impedance (nominal)	8 ohms	8 ohms	8 ohms	8 ohms	8 ohms
Input Connections	Dual barrier strip with screw terminals	Dual barrier strip with screw terminals	Dual barrier strip with screw terminals	Dual barrier strip with screw terminals	Neutrik NL4MPR
Height Width Depth	787 mm (31.0 in.) 719 mm (28.3 in.) 660 mm (26.0 in.)	787 mm (31.0 in.) 719 mm (28.3 in.) 660 mm (26.0 in.)	787 mm (31.0 in.) 719 mm (28.3 in.) 660 mm (26.0 in.)	787 mm (31.0 in.) 719 mm (28.3 in.) 660 mm (26.0 in.)	584 mm (23.0 in.) 451 mm (17.8 in.) 229 mm (9.0 in.)
Net Weight	68.95 kg (152 lb)	68.95 kg (152 lb)	68.95 kg (152 lb)	47.75 kg (105 lb)	22.3 kg (49 lb)

SPECIFICATIONS >>>

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).



FRi SERIES >>>

<<< EV



FRi-122/64  
shown without grille



FRi-152/64



FRi-181S



FRi-2082

	FRi-122/64 FRi-122/96	FRi-152/64 FRi-152/96	FRi-181S	FRi-2082
Basic Configuration	Two-way 12-inch full-range, biampable	Two-way 15-inch full-range, biampable	18-inch low-frequency	Dual 8-inch two-way
Frequency Range (-10 dB)	50-16,000 Hz	42-16,000 Hz	36-250 Hz	55-20,000 Hz
Crossover Frequencies	1,600 Hz	1,600 Hz	80 Hz	2,800 Hz
Sensitivity (SPL 1 W/1 m)	97 dB	98 dB	97 dB	93 dB
Power Handling Long-Term Average Short-Term Peak	300 watts 1200 watts	350 watts 1400 watts	400 watts 1600 watts	200 watts 800 watts
Coverage (nominal)	60° H x 40° V (122/64) 90° H x 60° V (122/96)	60° H x 40° V (152/64) 90° H x 60° V (152/96)	300° H x 270° V	100° H x 100° V
Transducers LF: HF:	DL12BFH 12-inch woofer DH2T	DL15BFH 15-inch woofer DH2T	DL18BFH 18-inch woofer N/A	Dual 8-inch woofers Compression driver
Rotatable Horn	Yes	Yes	N/A	N/A
Impedance (nominal) LF/HF	8/8 ohms	8/8 ohms	8 ohms	8 ohms
Input Connections	Barrier strip	Barrier strip	Barrier strip	Barrier strip
Height	711 mm (28.0 in.)	711 mm (28.0 in.)	711 mm (28.0 in.)	222 mm (8.75 in.)
Width: Front	404 mm (15.9 in.)	483 mm (19.0 in.)	597 mm (23.5 in.)	622 mm (24.5 in.)
Back	178 mm (7.0 in.)	185 mm (7.3 in.)	406 mm (16.0 in.)	N/A
Depth	447 mm (17.6 in.)	589 mm (23.2 in.)	762 mm (30.0 in.)	356 mm (14.0 in.)
Net Weight	27.3 kg (60 lb)	31.8 kg (70 lb)	45.5 kg (100 lb)	18.2 kg (40 lb)

Construction Materials: 18-mm, 13-ply birch

## 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





# EVI Vari Intense® Series

The EVI Vari Intense® series provides an economical solution for permanent installations requiring coverage over a rectangular area.

EV 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



EVI-12

EVI-15



EVI-28

## >>> SPECIFICATIONS

	EVI-12	EVI-15	EVI-28
Basic Configuration	Two-way 12-in. full-range	Two-way 15-in. full-range	Two-way dual 8-in. full-range
Frequency Range (-3 dB)	45-25,000 Hz	45-25,000 Hz	62-25,000 Hz
Crossover Frequencies	2,000 Hz	2,000 Hz	2,000 Hz
Sensitivity (SPL 1 W/1 m)	99.5 dB	100 dB	93 dB
Power Handling Long-Term Average Short-Term Peak	250 watts 1,000 watts	250 watts 1,000 watts	250 watts 1,000 watts
Coverage (nominal)	60° H x 65° V	60° H x 65° V	65° H x 65° V
Transducers LF HF	SG12 12-inch woofer DH2010A	SG15 15-inch woofer DH2010A	Dual 8-inch woofers DH2010A
Impedance (nominal)	8 ohms	8 ohms	8 ohms
Input Connections	Screw terminals	Screw terminals	Screw terminals
Height Width Depth	554 mm (21.8 in.) 356 mm (14.0 in.) 699 mm (27.5 in.)	584 mm (23.0 in.) 429 mm (16.9 in.) 766 mm (30.2 in.)	353 mm (13.9 in.) 496 mm (19.5 in.) 523 mm (20.6 in.)
Net Weight	21.8 kg (48 lb)	24.0 kg (53 lb)	16.3 kg (36 lb)

Construction materials: 13-ply birch plywood



# T-Series™

**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).



## 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



T221

T251+



T252+



T221M

	T18	T221	T251+	T251i	T252+
Frequency Range (-10 dB)	33-250 Hz	62-16,000 Hz	45-16,000 Hz	45-16,000 Hz	44-16,000 Hz
Sensitivity (1 W/1 m) (*LF-FR/HF)	99 dB	*100/112 dB	*98/112 dB	*98/112 dB	*101/112 dB
Power Handling (*LF-FR/HF)					
Long-Term Average	400 watts	*400/60 watts	*400/60 watts	*400/60 watts	*800/60 watts
Short-Term Peak	1,600 watts	*1,600/240 watts	*1,600/240 watts	*1,600/240 watts	*3,200/240 watts
Impedance (nominal) (*LF-FR/HF)	8 ohms	*8/8 ohms	*8/8 ohms	*8/8 ohms	*4/8 ohms
Coverage (nominal)	Essentially omnidirectional	60 H° x 40° V	60 H° x 40° V	60 H° x 40° V	60 H° x 40° V
Rotatable Horn	N/A	Yes	Yes	Yes	Yes
Height	833 mm (32.8 in.)	714 mm (28.1 in.)	818 mm (32.2 in.)	822 mm (32.35 in.)	1245 mm (49 in.)
Width	630 mm (24.8 in.)	417 mm (16.4 in.)	488 mm (19.2 in.)	476 mm (18.75 in.)	488 mm (19.2 in.)
Depth	609 mm (24.0 in.)	480 mm (18.9 in.)	599 mm (23.6 in.)	591 mm (23.25 in.)	599 mm (23.6 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)

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)



# Sx-Series™ and S-40 Series

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.



COMMERCIAL >>>

<<< EV®



Sx300E



Sx100+



Sx300PI



Sb121

## 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

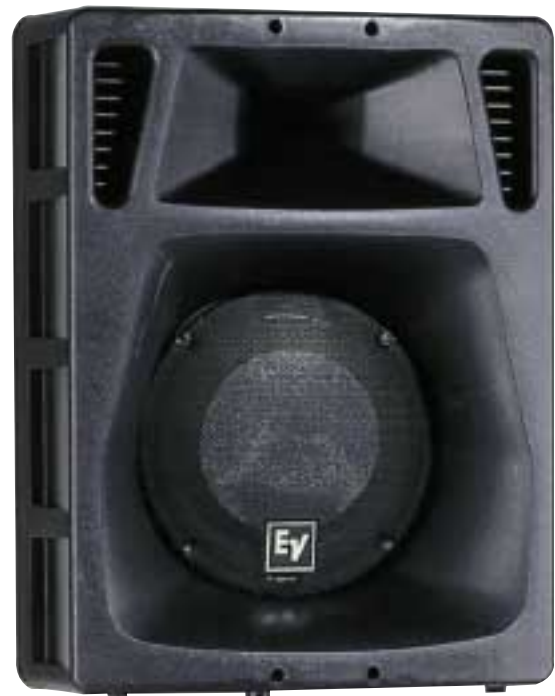
- Full-grille, weather-resistant version of Sx500+
- Black powder-coated full-face stainless steel grille, with foam backing and a polyester mesh water shield

### 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



Sx500+



Sb180





Sx500PI+



Sx80BE



Sx80PI



S-40B/W



### 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

	Sx500+	Sx300	Sx100+	Sx80	S-40	Sb121	Sb180
Frequency Range (-10 dB)	43-18,000 Hz	55-25,000 Hz	55-25,000 Hz	50-20,000 Hz	65-20,000 Hz	43-500 Hz	40-250 Hz
Sensitivity (1 W/1 m)	100 dB	100 dB	98 dB	92 dB	85 dB	95 dB	99 dB
Power Handling Long-Term Average Short-Term Peak	400 watts 1,600 watts	300 watts 1,200 watts	200 watts 800 watts	175 watts 700 watts	160 watts 640 watts	300 watts 1,200 watts	600 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



PSX600  
with Sx100



PSX1000  
with Sx300



# Floor Monitors

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.



Xw12

## 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



Xw15

## 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



T221M



**Force® Monitor**

### 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**

### 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 complement, DL15BFH
- 1/4-inch input connectors; E version includes Speakon® connector

performance

	<b>T221M</b>	<b>Xw12</b>	<b>Xw15</b>	<b>CM12-2</b>	<b>Force® Monitor</b>	<b>Eliminator® Monitor</b>
Frequency Range (-3 dB)	100-16,000 Hz	60-20,000 Hz	50-20,000 Hz	90-18,000 Hz	90-17,000 Hz	77-20,000 Hz
Crossover Frequencies	2,600 Hz	1,250 Hz	1,250 Hz	1,500 Hz	3,800 Hz	2,000 Hz
Sensitivity (SPL 1 W/1 m) (*LF/HF)	101 dB	*99/110 dB	*99/110 dB	97 dB	96 dB	99 dB
Power Handling (*LF/HF) Long-Term Average Short-Term Peak	400 watts 1,600 watts	*300/75 watts *1,200/300 watts	*600/75 watts *2,400/300 watts	60 watts 240 watts	150 watts 450 watts	350 watts 1,400 watts
Coverage (nominal)	55° H x 80° V	55° H x 80° V	55° H x 80° V	70° H x 20° V	55° H x 80° V	55° H x 80° V
Impedance (nominal) (*LF/HF)	8 ohms	*8/16 ohms	*8/16 ohms	8 ohms	8 ohms	8 ohms
Input Connections	2 Neutrik NL4MPR	2 Neutrik NL4MPR	2 Neutrik NL4MPR	Parallel 1/4 in. phone jack	2 Neutrik NL4MPR (E) 1/4-in. phone	2 Neutrik NL4MPR (E) 1/4-in. phone
Height Width Depth	371 mm (14.62 in.) 594 mm (23.4 in.) 406 mm (16.0 in.)	443.1 mm (17.44 in.) 584.2 mm (23.00 in.) 408.8.8 mm (16.1 in.)	457.2 mm (18.0 in.) 644.1 mm (25.36 in.) 460.5 mm (18.3 in.)	328 mm (12.9 in.) 406 mm (16.0 in.) 368 mm (14.5 in.)	546 mm (21.5 in.) 361 mm (14.2 in.) 246 mm (9.7 in.)	640 mm (25.39 in.) 406 mm (15.98 in.) 471 mm (18.53 in.)
Net Weight	25.5 kg (56 lb)	28.2 kg (62 lb)	31.8 kg (70 lb)	11.1 kg (24.5 lb)	12.7 kg (28.0 lb)	19.5 kg (43.0 lb)





# Manifold Technology<sup>®</sup> Series



The Manifold Technology<sup>®</sup> 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<sup>™</sup> 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<sup>®</sup> dual-18-inch low-frequency systems

- Unique SubScoop<sup>™</sup> 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-1X substitutes EVX-180B ultrahigh-performance 600-watt woofers for maximum output
- Combine the MTL-1 with the MTH-1 to form the high-value/high-output MT-1 two-box three-way system
- Optional HSMT-1 suspension kit
- Popular for low-frequency enhancement in variety of large fixed-installation applications

## MTL-4BP Manifold Technology<sup>®</sup> 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 arenas and stadiums



## SPECIFICATIONS

	MTH-1	MTL-1	MTL-1X	MTL-4BP
Basic Configuration	Two-way 10-inch MB/HF, biampable	Dual-18-inch low-frequency	Dual-18-inch low-frequency	Quad-18-inch low-frequency
Frequency Range (-3 dB) (-10 dB)	160-16,000 Hz 125-16,000 Hz	50-160 Hz 45-160 Hz	50-160 Hz 45-160 Hz	42-200 Hz 34-200 Hz
Sensitivity (1 W/1 m) (*FR only)	*105 dB	100 dB	101 dB	101.5 dB
Power Handling (*FR/MB/HF) Long-Term Average Short-Term Peak	*350/300/60 watts *1,400/1,200/240 watts	800 watts 3,200 watts	1,200 watts 4,800 watts	1,600 watts 6,400 watts
Impedance (nominal) (*MB-FR/HF)	*X/8 ohms	4 ohms	4 ohms	Dual 4 ohms
Coverage (nominal)	60° H x 40° V	Essentially omnidirectional	Essentially omnidirectional	177° H x 177° V
Rotatable Horn MB HF	Yes Yes	N/A N/A	N/A N/A	N/A N/A
Height Width Depth	591 mm (23.3 in.) 572 mm (22.5 in.) 758 mm (29.9 in.)	1160 mm (45.8 in.) 572 mm (22.5 in.) 758 mm (29.9 in.)	1160 mm (45.8 in.) 572 mm (22.5 in.) 758 mm (29.9 in.)	914 mm (36.0 in.) 914 mm (36.0 in.) 759 mm (29.88 in.)
Net Weight	43.1 kg (95 lb)	70.3 kg (155 lb)	75.0 kg (165 lb)	119 kg (263 lb)

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

TL15-1

TL15-2

TL606DW



TL550D

TL3512

TL440

TL880D

### TL12-1 12-inch low-frequency system

- Very small size and 65-Hz  $f_3$  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  $f_3$  and infrasonic speaker protection

# low-frequency

	TL12-1	TL15-1	TL15-2	TL3512	TL440	TL550D	TL606DW	TL880D
Basic Configuration	12-inch low-frequency	15-inch low-frequency	Dual 15-inch low-frequency	18-inch subwoofer	18-inch subwoofer	Dual 15-inch low-frequency	Dual 15-inch low-frequency	Dual 18-inch subwoofer
Frequency Range (-3 dB Step Down Mode)	65-3,200 Hz 46-3,200 Hz	50-3,500 Hz 36-3,500 Hz	46-3,500 Hz 33-3,500 Hz	38-3,200 Hz 28-3,200 Hz	33-3,200 Hz 24-3,200 Hz	40-2,000 Hz 28-2,000 Hz	40-3,500 Hz 31-3,500 Hz	30-1,800 Hz 23-1,800 Hz
Sensitivity (SPL 1 W/1 m)	97 dB (100-800 Hz)	99 dB (100-800 Hz)	101 dB (100-800 Hz)	99 dB (36-125 Hz)	95 dB (33-125 Hz)	100 dB (100-800 Hz)	100 dB (100-800 Hz)	96 dB (50-125 Hz)
Power Handling Long-Term Average Short-Term Peak	300 watts 1,200 watts	400 watts 1,600 watts	800 watts 3,200 watts	400 watts 1,600 watts	600 watts 2,400 watts	1,200 watts 4,800 watts	800 watts 3,200 watts	1,200 watts 4,800 watts
Coverage (nominal)	360°	360°	360°	360°	360°	360°	360°	360°
Transducers	One DL12X-WP	One DL15X-WP	Two DL15X-WP's	One DL18W	One EVX-180B	Two EVX-150A's	Two DL15W's	Two EVX-180B's
Impedance (nominal)	8 ohms	8 ohms	4 ohms	8 ohms	8 ohms	4 ohms	4 ohms	4 ohms
Input Connections	Screw terminals on barrier strip	Screw terminals on barrier strip	Screw terminals on barrier strip	Screw terminals on barrier strip	Screw terminals on barrier strip	Screw terminals on barrier strip	Screw terminals on barrier strip	Screw terminals on barrier strip
Height	432 mm (17.0 in.)	559 mm (22.0 in.)	863 mm (34.0 in.)	1003 mm (39.5 in.)	1003 mm (39.5 in.)	1003 mm (39.5 in.)	1003 mm (39.5 in.)	1210 mm (47.5 in.)
Width	368 mm (14.5 in.)	610 mm (24.0 in.)	610 mm (24.0 in.)	572 mm (22.5 in.)	572 mm (22.5 in.)	572 mm (22.5 in.)	572 mm (22.5 in.)	762 mm (30.0 in.)
Depth	318 mm (12.5 in.)	521 mm (20.5 in.)	521 mm (20.5 in.)	559 mm (22.0 in.)	559 mm (22.0 in.)	554 mm (21.8 in.)	447 mm (17.6 in.)	605 mm (23.8 in.)
Net Weight	18.0 kg (40 lb)	31.0 kg (68 lb)	49.0 kg (108 lb)	49.0 kg (108 lb)	49.0 kg (108 lb)	59.1 kg (130 lb)	49.0 kg (108 lb)	80.0 kg (176 lb)

Construction Materials: 18-mm ProWood™ (TL880D and TL880P are poplar plywood)  
Finish: Paintable black vinyl (TL880D and TL880P are black textured paint)



# Woofers

**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.



## **DL10X 10-inch low/mid-frequency reproducer**

- Smooth, extended response across vocal range
- Suitable for horn loading

## **DL12X 12-inch low/mid-frequency reproducer**

- For compact two-way speech systems
- Mid-bass element in three- and four-way systems
- Suitable for horn loading

## **DL15X 15-inch low-frequency reproducer**

- For two-way speech and music systems





**EVX-155**

**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



**EVX-180B**

- 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

>>> SPECIFICATIONS

	<b>DL10X</b>	<b>DL12X</b>	<b>DL15X</b>	<b>EVX-155</b>	<b>EVX-180B</b>
Frequency Response	100-5,000 Hz	58-5,200 Hz	45-3,000 Hz	40-2,000 Hz	37-1,500 Hz
Power Handling Long-Term Average Short-Term Peak	300 watts 1,200 watts	300 watts 1,200 watts	400 watts 1,600 watts	600 watts 2,400watts	600 watts 2,400 watts
Sensitivity (1 W/1 m, 100-800 Hz)	98 dB	98 dB	98 dB	98 dB	98 dB
Impedance (nominal)	8 ohms	8 ohms	8 ohms	8 ohms	8 ohms



# HP High-Frequency Horns

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 Transplanar™ 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.

## 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 HF 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	HP9040	HP420	HP640	HP940	HP1240
Coverage (nominal)	40° H x 20° V	60° H x 40° V	90° H x 40° V	40° H x 20° V	60° H x 40° V	90° H x 40° V	120° H x 40° V
Directivity Factor (average)	45.1 (+12.7,-18.9) (500-20,000 Hz)	25.8 (+17.9,-5.9) (500-20,000 Hz)	12.1 (+4.6,-3.7) (500-20,000 Hz)	47.7 (+25.9,-23.5) (1,250-20,000 Hz)	20.6 (+11.3,-3.3) (1,250-20,000 Hz)	11.9 (+3.6,-3.0) (1,250-20,000 Hz)	8.6 (+2.5,-2.1) (1,250-20,000 Hz)
Directivity Index (average)	16.4 dB (+1.2,-2.2 dB) (500-20,000 Hz)	14.1 dB (+2.3,-1.1 dB) (500-20,000 Hz)	10.8 dB (+1.4,-1.6 dB) (500-20,000 Hz)	16.8 dB (+1.9,-3.0 dB) (1,250-20,000 Hz)	13.1 dB (+1.9,-0.7 dB) (1,250-20,000 Hz)	10.7 dB (+1.2,-1.2 dB) (1,250-20,000 Hz)	9.34 dB (+1.1,-1.2 dB) (1,250-20,000 Hz)
Usable Low-Frequency Limit	200 Hz	500 Hz	500 Hz	400 Hz	400 Hz	400 Hz	400 Hz
Sensitivity (SPL 1 W/1 m)*	115 dB	113 dB	111 dB	114 dB	112 dB	110 dB	108 dB
Height	838 mm (33.0 in.)	813 mm (32.0 in.)	813 mm (32.0 in.)	367 mm (14.4 in.)	330 mm (13.0 in.)	330 mm (13.0 in.)	330 mm (13.0 in.)
Width	813 mm (32.0 in.)	711 mm (28.0 in.)	679 mm (26.75 in.)	610 mm (24.0 in.)	711 mm (28.0 in.)	533 mm (21.0 in.)	533 mm (21.0 in.)
Depth	1252 mm (49.3 in.)	808 mm (31.8 in.)	808 mm (31.8 in.)	749 mm (29.5 in.)	437 mm (17.2 in.)	285 mm (11.2 in.)	265 mm (10.4 in.)
Net Weight	12.3 kg (27.0 lb)	9.1 kg (20.0 lb)	9.1 kg (20.0 lb)	5.9 kg (13.0 lb)	4.3 kg (9.5 lb)	3.2 kg (7.0 lb)	3.2 kg (7.0 lb)

\*With DH1A, N/DYM\*1 or DH2A compression driver (DH3 for HPT horns).



HP6040

HP640

HP64

HPT64

>>> SPECIFICATIONS

	HP64	HP66	HP94	HPT64	HPT94
Coverage (nominal)	60° H x 40° V	60° H x 60° V	90° H x 40° V	60° H x 40° V	90° H x 40° V
Directivity Factor (average)	18.1 (+4.1,-8.8) (1,600-20,000 Hz)	17.9 (+10.5,-9.3) (1,600-16,000 Hz)	10.1 (+5.8,-1.8) (1,600-20,000 Hz)	15.8 (+5.2,-4.9) (3,150-20,000 Hz)	11.6 (+5.0,-2.5) (3,150-20,000 Hz)
Directivity Index (average)	12.6 dB (+0.9,-2.9 dB) (1,600-20,000 Hz)	12.5 dB (+2.0,-3.0 dB) (1,600-16,000 Hz)	10.0 dB (+2.0,-0.8 dB) (1,600-20,000 Hz)	12.0 dB (+1.2,-1.6 dB) (3,150-20,000 Hz)	10.6 dB (+1.6,-1.0 dB) (3,150-20,000 Hz)
Usable Low-Frequency Limit	650 Hz	650 Hz	800 Hz	1,600 Hz	1,600 Hz
Sensitivity (SPL 1 W/1 m)*	112 dB	112 dB	110 dB	108 dB	107 dB
Height	279 mm (11.0 in.)	279 mm (11.0 in.)	279 mm (11.0 in.)	133 mm (5.25 in.)	133 mm (5.25 in.)
Width	224 mm (8.8 in.)	224 mm (8.8 in.)	222 mm (8.75 in.)	133 mm (5.25 in.)	133 mm (5.25 in.)
Depth	220 mm (8.7 in.)	165 mm (6.5 in.)	220 mm (8.7 in.)	104 mm (4.1 in.)	101 mm (4.0 in.)
Net Weight	2.5 kg (4.5 lb)	2.2 kg (4.8 lb)	2.5 kg (4.5 lb)	0.4 kg (0.8 lb)	0.4 kg (0.8 lb)

\*With DH1A, N/DYM\*1 or DH2A compression driver (DH3 for HPT horns).



# Stadium 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







**MH4020AC**



**MH640C**



**MH660C**



**MH940C**

>>> SPECIFICATIONS

	<b>MH4020AC</b>	<b>MH4020NC</b>	<b>MH6040AC</b>	<b>MH9040AC</b>	<b>MH640C &amp; MH640P</b>	<b>MH660C &amp; MH660P</b>	<b>MH940C &amp; MH940P</b>
Frequency Response	100-20,000 Hz	100-20,000 Hz	100-20,000 Hz	100-20,000 Hz	150-20,000 Hz	150-20,000 Hz	150-20,000 Hz
Coverage (nominal)	40° H x 20° V	40° H x 20° V	60° H x 40° V	90° H x 40° V	60° H x 40° V	60° H x 60° V	90° H x 40° V
Directivity Factor (average)	52 (median) (500-20,000 Hz)	52 (median) (500-20,000 Hz)	24 (median) (500-20,000 Hz)	10.5 (median) (500-20,000 Hz)	23.4 (median) (500-20,000 Hz)	18.2 (median) (500-20,000 Hz)	18.6 (median) (500-20,000 Hz)
Directivity Index (average)	17.1 dB (500-20,000 Hz) (500-20,000 Hz)	17.1 dB (500-20,000 Hz) (500-20,000 Hz)	13.8 dB (+0.9, -1.1 dB) (500-20,000 Hz)	10.2 dB (+0.9, -1.1 dB) (500-20,000 Hz)	13.7 dB (+1.6, -2.8 dB) (500-20,000 Hz)	12.6 dB (+3.8, -4.0 dB) (500-20,000 Hz)	12.7 dB (+1.1, -3.5 dB) (500-20,000 Hz)
Power Handling Long-Term Average	1,200 watts	1,200 watts	600 watts	600 watts	300 watts	300 watts	300 watts
Sensitivity (SPL 1 W/1 m)	109 dB (LF)	112 dB (LF)	107 dB (LF)	105 dB (LF)	107/111 dB (LF-FR/HF)	107/111 dB (LF-FR/HF)	107/111 dB (LF-FR/HF)
Height	1500 mm (59.0 in.)	1500 mm (59.0 in.)	1499 mm (59.0 in.)	1499 mm (59.0 in.)	686 mm (27.0 in.)	686 mm (27.0 in.)	686 mm (27.0 in.)
Width	991 mm (39.0 in.)	991 mm (39.0 in.)	991 mm (39.0 in.)	991 mm (39.0 in.)	68.6 mm (27.0 in.)	686 mm (27.0 in.)	686 mm (27.0 in.)
Depth	1880 mm (73.9 in.)	1880 mm (73.9 in.)	1873 mm (73.9 in.)	1534 mm (60.4 in.)	711 mm (28.0 in.)	711 mm (28.0 in.)	711 mm (28.0 in.)
Net Weight	108 kg (237 lb)	95.4 kg (205 lb)	75 kg (165 lb)	75 kg (165 lb)	27.2 kg (60 lb)	27.2 kg (60 lb)	27.2 kg (60 lb)



# Compression Drivers

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® large-format dual-compression-driver summation system

- 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/DYM®1 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/DYM®1/2MT is manifolded 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



DH1A



DH1A-WP



DH1A/2MT



N/DYM®1



N/DYM® 1/2 MT



DH2A



DH3

	DH1A	DH1A-WP	DH1A/2MT	DH2A	DH3	N/DYM®1	N/DYM®1/2MT
Frequency Response	500-20,000 Hz	500-20,000 Hz	500-20,000 Hz	500-20,000 Hz	5,000-20,000 Hz	500-20,000 Hz	500-20,000 Hz
Mid-Band Sensitivity (1 W/1 m)*	113 dB	113 dB	113 dB	113 dB	111 dB	113 dB	113 dB
Power Capacity, 24 Hours (bandwidth)	50 watts (500-20,000 Hz)	50 watts (500-20,000 Hz)	100 watts (500-20,000 Hz)	30 watts (800-8,000 Hz)	20 watts (5,000-20,000 Hz)	50 watts (500-20,000 Hz)	100 watts (500-20,000 Hz)
Power Capacity, Two Hours (bandwidth)	75 watts (1,000-10,000 Hz)	75 watts (1,000-10,000 Hz)	150 watts (1,000-10,000 Hz)	40 watts (800-8,000 Hz) 60 watts (1,500-15,000 Hz)	30 watts (5,000-20,000 Hz)	75 watts (1,000-10,000 Hz)	150 watts (1,000-10,000 Hz)
Throat Diameter	49.3 mm (1.94 in.)	49.3 mm (1.94 in.)	49.3 mm (1.94 in.)	49.3 mm (1.94 in.)	24.1 mm (0.95 in.)	49.3 mm (1.94 in.)	49.3 mm (1.94 in.)
Dimensions, Diameter	225 mm (8.88 in.)	225 mm (8.88 in.)	N/A	171 mm (6.67 in.)	122 mm (4.88 in.)	145 mm (5.7 in.)	N/A
Depth	140 mm (5.5 in.)	225 mm (8.88 in.)	N/A	187 mm (7.38 in.)	89 mm (3.5 in.)	127 mm (5.0 in.)	N/A
Net Weight	10.7 kg (23.5 lb)	12.5 kg (27.4 lb)	21.4 kg (47.0 lb)	6.4 kg (14.0 lb)	1.9 kg (4.2 lb)	3.3 kg (7.2 lb)	8.5 kg (18.6 lb)

\*Average from 500-5,000 Hz on HP6040 horn (DH3 average from 1,500-5,000 Hz on HPT64 horn).

# Electronics



## 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.





# Powered Mixers

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.



POWERED MIXERS >>>

<<< EV



PSX600

## 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

## 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.



PSX1600



PSX1600 Rear Panel



PSX2200



PSX2200-Channel Strip

SPECIFICATIONS

	PSX2200	PSX1600	PSX1000	PSX600
Maximum Power (at <1% THD, midband, both channels driven) 4-ohm load per channel 8-ohm load per channel	760 watts 430 watts	570 watts 380 watts	570 watts 380 watts	340 watts 200 watts
Rated Power (at <0.2% THD, 20 to 20,000 Hz, both channels driven) 4-ohm load per channel 8-ohm load per channel	700 watts 350 watts	500 watts 250 watts	500 watts 250 watts	300 watts 150 watts
Total Harmonic Distortion Mic Input to Mains Output (+16 dBu) Power Amplifier Input to Speaker Output	<0.006% <0.05%	<0.006% <0.05%	<0.006% <0.05%	<0.006% <0.05%
Frequency Response (-3 dB referenced to 1 kHz) Any Input to Speaker Output	30-40,000 Hz	30-40,000 Hz	30-40,000 Hz	30-40,000 Hz
Crosstalk (at 1,000 Hz) Channel-to-Channel Common-Mode Rejection Ratio (mic input)	>70 dB >80 dB	>70 dB >80 dB	>70 dB >80 dB	>70 dB >80 dB
Noise (channel input to main output, dB A-weighted) Master Faders Down Master Faders at 0 dB, Channel Faders Down Master Faders at 0 dB, Channel Faders at 0 dB	-92 dBu -85 dBu -79 dBu	-92 dBu -87 dBu -81 dBu	-92 dBu -89 dBu -83 dBu	-90 dBu -89 dBu -83 dBu
Power Amp Signal-to-Noise Ratio (dB A-weighted)	>106 dB	>104 dB	>104 dB	>105 dB
Mono Channel Input EQ Low (±15 dB) Mid (±15 dB) High (±15 dB)	60 Hz 100-8,000 Hz 12,000 Hz	60 Hz 100-8,000 Hz 12,000 Hz	60 Hz 100-8,000 Hz 12,000 Hz	60 Hz 100-8,000 Hz 12,000 Hz
Master Left/Right Outputs EQ	7-band graphic per channel	7-band graphic per channel	7-band graphic per channel	7-band stereo graphic
Height Width Depth	210 mm (8.3 in.) 827 mm (32.5 in.) 479 mm (18.8 in.)	210 mm (8.3 in.) 668 mm (26.3 in.) 479 mm (18.8 in.)	210 mm (8.3 in.) 509 mm (20.0 in.) 479 mm (18.8 in.)	176 mm (6.9 in.) 456 mm (17.9 in.) 341 mm (13.4 in.)
Weight (including cover)	29.05 kg (63.9 lb)	24.05kg (52.9 lb)	20.05 kg (44.1 lb)	13.05 kg (28.7 lb)



# Power Amps

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



P1250



P2000



P3000



7100

## 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

	P1200	P1250	P2000	P3000	7100
Maximum Power 2 ohms 4 ohms 8 ohms	650 watts 550 watts 370 watts	650 watts 550 watts 370 watts	1,200 watts 900 watts 560 watts	1,800 watts 1,400 watts 850 watts	N/A 130 watts 95 watts
Rated Power 2 ohms 4 ohms 8 ohms	600 watts 500 watts 350 watts	600 watts 500 watts 350 watts	1,000 watts 800 watts 500 watts	1,500 watts 1,200 watts 750 watts	N/A 100 watts 95 watts
Maximum Bridged Output 4 ohms 8 ohms 16 ohms	1,300 watts 1,100 watts N/A	1,300 watts 1,100 watts N/A	2,400 watts 1,800 watts N/A	3,600 watts 2,800 watts N/A	N/A 260 watts 180 watts
Slew Rate	>30V/ $\mu$ s	>30V/ $\mu$ s	>35V/ $\mu$ s	>40V/ $\mu$ s	>19V/ $\mu$ s, dual mode
Total Harmonic Distortion	<0.05%	<0.05%	<0.05%	<0.05%	<0.1%
Intermodulation Distortion	<0.01%	<0.01%	<0.01%	<0.01%	<0.1%
Crosstalk (at 1kHz)	<70 dB	<70 dB	<70 dB	<70 dB	<100 dB
Input Impedance (balanced)	20 k ohms	20 k ohms	20 k ohms	20 k ohms	20 k ohms
Signal-to-Noise Ratio (dB A-weighted)	>105 dB	>105 dB	>105 dB	>105 dB	>100 dB
Height	88.1 mm (3.5 in.)	88.1 mm (3.5 in.)	132.5 mm (5.2 in.)	132.5 mm (5.2 in.)	44.4 mm (1.75 in.)
Width	483 mm (19.0 in.)	483 mm (19.0 in.)	483 mm (19.0 in.)	483 mm (19.0 in.)	483 mm (19.0 in.)
Depth	426 mm (16.8 in.)	426 mm (16.8 in.)	426 mm (16.8 in.)	426 mm (16.8 in.)	325.1 mm (12.8 in.)
Net Weight	16 kg (36.0 lb)	17 kg (37.5 lb)	26 kg (57.3 lb)	28 kg (61.7 lb)	8.16 kg (18.2 lb)

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

SPECIFICATIONS

	CPS1	CPS2	CPS3	CPS4
Maximum Power 2 ohms 4 ohms 8 ohms	650 watts 450 watts 260 watts	850 watts 600 watts 380 watts	1,200 watts 900 watts 560 watts	1,800 watts 1,400 watts 850 watts
Rated Power 2 ohms 4 ohms 8 ohms	450 watts 350 watts 230 watts	650 watts 500 watts 300 watts	1,000 watts 800 watts 500 watts	1,500 watts 1,200 watts 750 watts
Maximum Bridged Output 4 ohms 8 ohms 16 ohms	1,300 watts 1,100 watts N/A	1,300 watts 1,100 watts N/A	2,400 watts 1,800 watts N/A	3,600 watts 2,800watts N/A
Slew Rate	>25V/µs	>30V/µs	>35V/µs	>40V/µs
Total Harmonic Distortion	<0.05%	<0.05%	<0.05%	<0.05%
Intermodulation Distortion	<0.08%	<0.08%	<0.01%	<0.01%
Crosstalk (at 1kHz)	<80 dB	<80 dB	<70 dB	<80 dB
Input Impedance (balanced)	20 k ohms	20 k ohms	20 k ohms	20 k ohms
Signal-to-Noise Ratio (dB A-weighted)	>105 dB	>105 dB	>105 dB	>105 dB
Height	132.5 mm (5.2 in.)	132.5 mm (5.2 in.)	132.5 mm (5.2 in.)	132.5 mm (5.2 in.)
Width	483 mm (19.0 in.)	483 mm (19.0 in.)	483 mm (19.0 in.)	483 mm (19.0 in.)
Depth	386 mm (15.2 in.)	386 mm (15.2 in.)	390 mm (15.4 in.)	390 mm (15.4 in.)
Net Weight	15 kg (33.1 lb)	16 kg (35.3 lb)	27 kg (59.5 lb)	29 kg (63.9 lb)

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



# Signal Processors

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.



PROCESSORS >>>

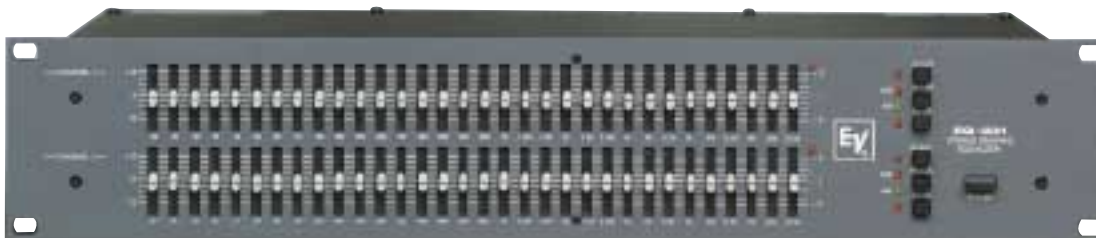
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EQ-131



EQ-215



EQ-231



XEQ-2

## 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 to 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

**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
- Infrasonic 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



DN2360

**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



DN2360 includes SoundHost™ software

>>> SPECIFICATIONS

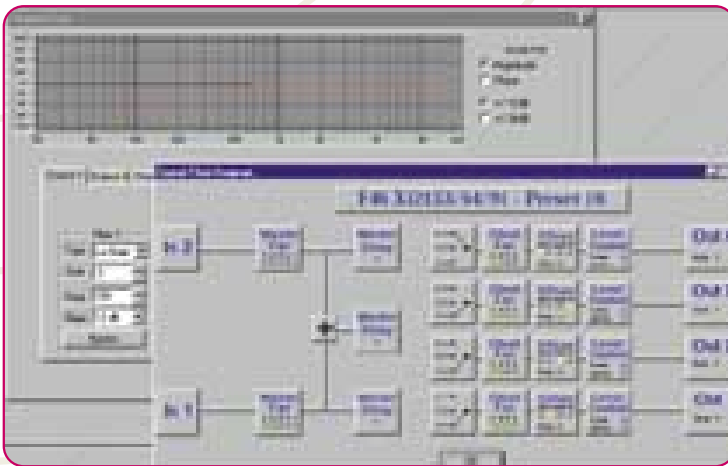
	EQ-131	EQ-215	EQ-231	XEQ-2	EX23	DN2360
Functions	Graphic EQ	Graphic EQ	Graphic EQ	Crossover/EQ	Crossover	Digital EQ
Input/Outputs	1 in/1 out	2 in/2 out	2 in/2 out	1 in/2 out	2 in/5 out plus mono sub	2 in/2 out
Signal-to-Noise	>97 dB	>97 dB	>97 dB	>108 dB	96 dB	110 dB
Filter Slope	Variable Q	Variable Q	Variable Q	Third-order Butterworth	Fourth-order Linkwitz-Riley	Constant Q, selectable bandwidth
Connectors	Balanced XLR & 1/4-inch	Balanced XLR & 1/4-inch	Balanced XLR & 1/4-inch	Balanced XLR & 1/4-inch	Balanced XLR & 1/4-inch	Balanced XLR & Euroblock/Phoenix CombiCon
Features	Low-cut filter	Low-cut filter	Low-cut filter	Alignment delay	Input level control	30-band graphic plus 3 selectable filters
Height	44 mm (1.73 in.)	44 mm (1.73 in.)	88 mm (3.46 in.)	44 mm (1.73 in.)	44 mm (1.73 in.)	44.5 mm (1.75 in.)
Width	483 mm (19.0 in.)	483 mm (19.0 in.)	483 mm (19.0 in.)	483 mm (19.0 in.)	483 mm (19.0 in.)	216 mm (8.5 in.)
Depth	235 mm (9.24 in.)	235 mm (9.24 in.)	235 mm (9.24 in.)	124 mm (4.88 in.)	280 mm (11 in.)	205 mm (8 in.)
Net Weight	3.4 kg (7.48 lb)	2.7 kg (6.0 lb)	4.0 kg (8.8 lb)	2.15 kg (4.74 lb)	4 kg (8.8 lb)	1.4 kg (3.1 lb)



**Dx38**



**Dx38  
Rear Panel**



Windows user interface for the EV Dx38





ISP-100



ISP-100  
Rear Panel

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™ Xi-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

## >>> SPECIFICATIONS

	Dx38	ISP-100
Functions	Signal processor	Signal processor
Input/Outputs	2 in/4 out	I/O configurable modular in pairs (five slots)
Dynamic Range	115 dB	105 dB
Filter Slope	User Determined	User Determined
Connectors	Balanced XLR	Balanced XLR
Height	43.6 mm (1.72 in.)	44 mm (1.73 in.)
Width	483 mm (19.0 in.)	483 mm (19.0 in.)
Depth	375 mm (14.8 in.)	235 mm (9.24 in.)
Net Weight	5.0 kg (11.0 kg)	3.4 kg (7.48 kg)

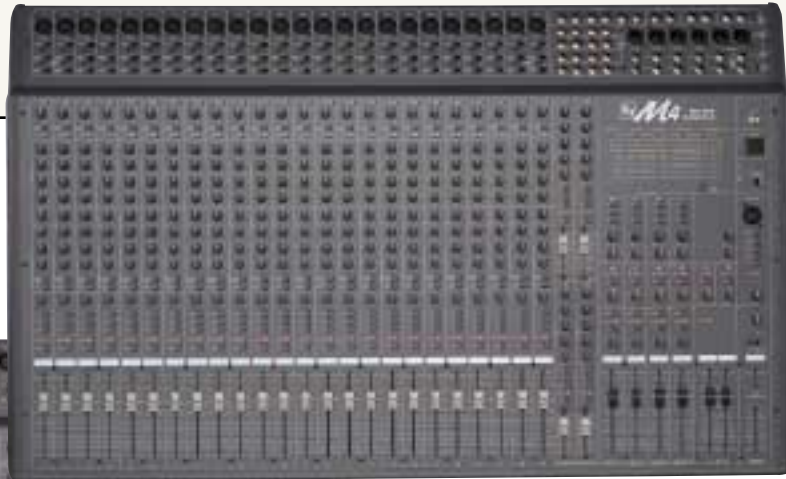


# Mixing Consoles

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



M2



## 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

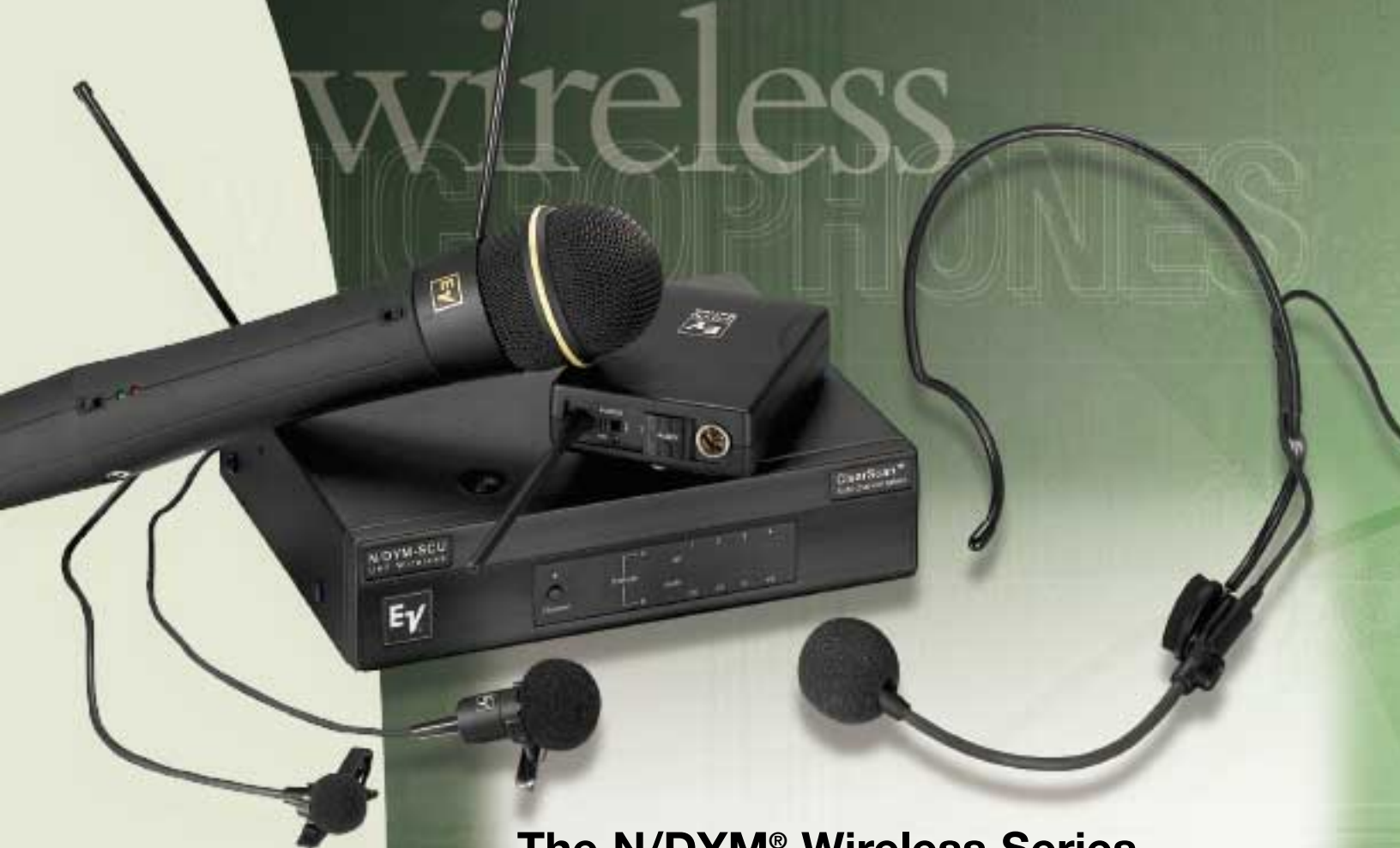
- 16-channel version of the M2/12

M2 (12 or 16) M4 (16 or 24)

	M2 (12 or 16)	M4 (16 or 24)
Frequency Response, Mic Input Mic Input to Master Output (EQ flat)	20-20,000 Hz (+1/-2 dB)	20-20,000 Hz (+1/-3 dB)
Total Harmonic Distortion, 20-20,000 Hz at +14dBu Output into 600 ohms	<0.1%	<0.1%
Crosstalk (at 1,000 Hz)	<70 dB	<70 dB
Mono Input Channel Equalization Low ( $\pm 15$ dB) Mid ( $\pm 15$ dB) High ( $\pm 15$ dB)	80 Hz 250 Hz-5,000 Hz 12,000 Hz	80 Hz 250 Hz-5,000 Hz 12,000 Hz
Stereo Input/Channel Equalization Low ( $\pm 15$ dB) High ( $\pm 15$ dB)	N/A N/A	80 Hz 12,000 Hz
Height Width	109 mm (4.29 in.)	128 mm (5.049 in.)
M2/12 - M4/16 M2/16 - M4/24 Depth	520 mm (20.47 in.) 632 mm (24.88 in.) 509 mm (20.03 in.)	796 mm (31.3 in.) 1020 mm (41.15 in.) 623 mm (24.52 in.)
Weight M2/12 - M4/16 M2/16 - M4/24	12 kg (26.45 lb) 14 kg (30.80 lb)	21 kg (46.3 lb) 26 kg (57.3 lb)
Shipping Weight M2/12 - M4/16 M2/16 - M4/24	15 kg (32 lb) 16 kg (36 lb)	24 kg (53 lb) 29 kg (64 lb)



M4- CHANNEL STRIP



## 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.



ClearScan™



# 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.

WIRELESS>>>

<<< EV



MS3000

## 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 bodypack 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



**R200 Series**



**R100 Series**

**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

	N/DYM® <small>(shown on page 37)</small>	MS3000	R200	R100
Frequency Band	UHF	UHF	UHF	VHF
Number of Channels	10	1	1	1
ClearScan™	Yes	No	No	No
Number of Systems Which Will Play Together	7	10	5	5
AVAILABLE TRANSMITTERS				
Handheld Mic	N/D167 N/D267a N/D767a	N/D767a N/D267a	N/D167 N/D 267a XTU plug-on	N/D167
Lavalier Mic Omni Cardioid	OLM-10 ULM-20	ELM-22 ULM-20	N/A ULM-20	OLM-10 N/A
Headworn	HM-2	CS-311	HM-2	HM-2
Guitar System	Yes	No	Yes	Yes



# 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 belt-pack 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 belt-pack 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 (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 belt-pack transmitter; HS-1 handheld microphone



USR-100



UR-700



FMR-450



S.A.F.E.™



ENG-100





# 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.

WIRELESS >>>

<<< TELEX



## 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 belt-pack 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

- Two audio input jacks

## 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



# Intercom

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 belt-pack 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



MS2000



BP1000/2000



BTR300



PH44



PH88



HR1



HR2

# wired MICROPHONES



## **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<sup>®</sup> Wired Mics

EV was the first to use a neodymium-based magnet structure in a microphone and is the only manufacturer to offer VOB<sup>™</sup> (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<sup>®</sup> microphones offer clear, sparkling sound.

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



## N/D767a

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

## N/D267a/as

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



N/D767a



N/D267as

## N/D167

- N/DYM<sup>®</sup> dynamic cardioid vocal microphone
- Entry into the world of high-performance mics



N/D167

### 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/D468

### N/D478

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



N/D478

### N/D868

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



N/D868



performance

## >>> SPECIFICATIONS

	N/D767a	N/D267a N/D267as	N/D167	N/D468	N/D478	N/D868
Type	N/DYM® Dynamic	N/DYM® Dynamic	N/DYM® Dynamic	N/DYM® Dynamic	N/DYM® Dynamic	N/DYM® Dynamic
Color	Black	Black	Black	Black	Black	Black
Frequency Response	35-22,000 Hz	45-15,000 Hz	50-12,000 Hz	30-22,000 Hz	45-15,000 Hz	20-10,000 Hz
Polar Pattern	Supercardioid	Cardioid	Cardioid	Supercardioid	Cardioid	Cardioid variant
Power Level (0 dB = 1 mW/pascal)	-51.5 dB	-51.5 dB	-56.6 dB	-51.0 dB	-51.5 dB	-51.7 dB
Length	181 mm (7.12 in.)	181 mm (7.12 in.)	181 mm (7.12 in.)	115 mm (4.5 in.)	181 mm (7.12 in.)	132.6 mm (5.22 in.)
Max Diameter	52 mm (2.05 in.)	52 mm (2.05 in.)	52 mm (2.05 in.)	52 mm (2.05 in.)	52 mm (2.05 in.)	60 mm (2.36 in.)
Net Weight	260 g (9.2 oz)	238 g (8.4 oz)	238 g (8.4 oz)	190 g (6.7 oz)	247 g (8.7 oz)	10.4 g (10.4 oz)
Applications	Premium vocal	Lead/backing vocal	Most affordable N/DYM® vocal	Brass, drums percussion, guitars	Percussion vocals	Kick drum bass amp



# 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™

RE90P-12



RE90L

## 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

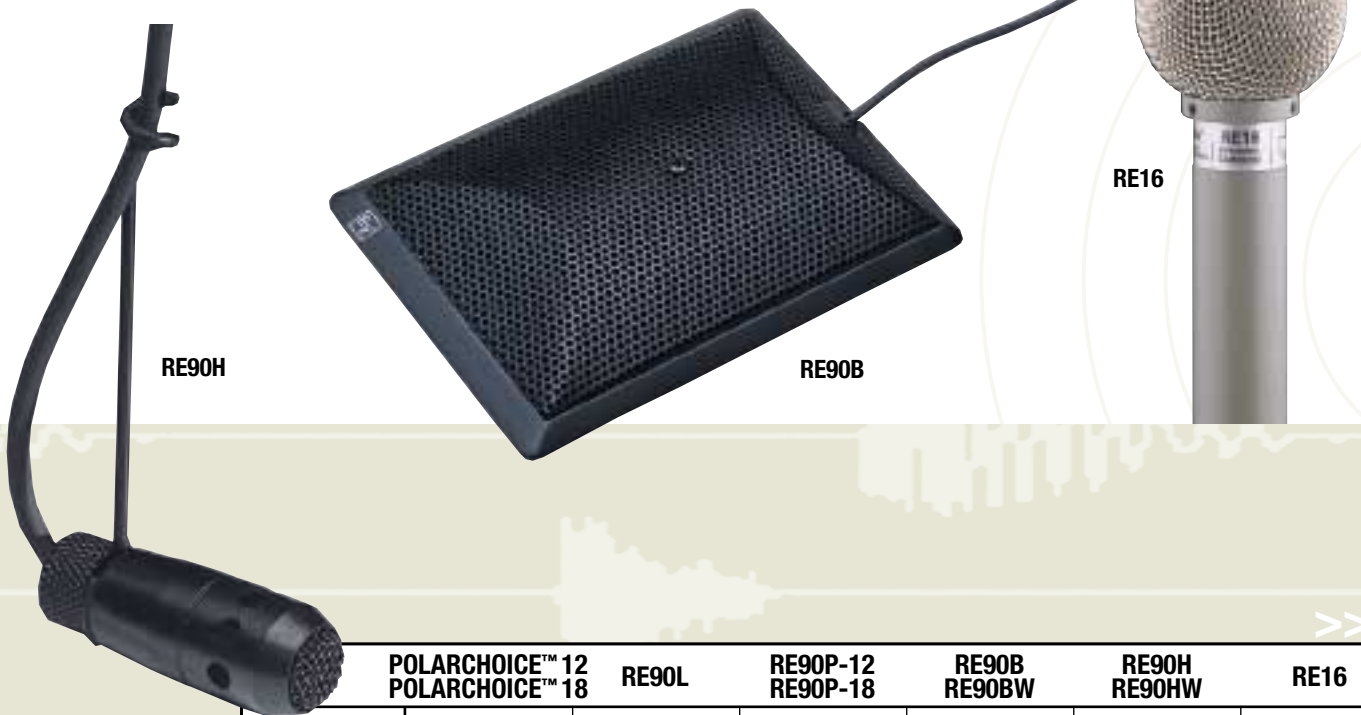
- Built-in equalization eliminates rising high end of typical boundary mics
- Picks up and delivers every word fully and naturally
- Ultracompact size and low profile
- Ideal for video- and teleconferencing systems, classrooms or houses of worship
- Unique isolation system to limit unwanted vibration 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



RE90H

RE90B

RE16

	<b>POLARCHOICE™ 12 POLARCHOICE™ 18</b>	<b>RE90L</b>	<b>RE90P-12 RE90P-18</b>	<b>RE90B RE90BW</b>	<b>RE90H RE90HW</b>	<b>RE16</b>
Type	Condenser	Condenser	Condenser	Condenser	Condenser	Variable-D® Dynamic
Color	Black	Black	Black	Black/white	Black/white	Fawn beige
Frequency Response	75-15,000 Hz	50-18,000 Hz	70-15,000 Hz	80-15,000 Hz	75-15,000 Hz	80-15,000 Hz
Polar Pattern	Omni, cardioid, supercardioid, hypercardioid (switchable)	Omni	Cardioid	Semi-cardioid	Cardioid	Supercardioid
Power Level (0 dB = 1 mW/passed)	-44 dB	-34 dB	-43 dB	-33 dB	-30.4 dB	-56 dB
Power Requirement	9-52 V dc phantom power	9-52 V dc phantom power	9-52 V dc phantom power	9-52 V dc phantom power	9-52 V dc phantom power	N/A
Dimensions						
Length	299 mm (11.8 in.) (12) 461 mm (18.2 in.) (18)	8.1 mm (0.32 in.)	281 mm (11.1 in.) (12) 443 mm (17.5 in.) (18)	128mm (5.1 in.)	36.8 mm (1.45 in.)	187 mm (7.38 in.)
Max Diameter	6.4 mm (0.25 in.)	4.9 mm (0.19 in.)	12.7 mm (0.5 in.)	N/A	12.7 mm (0.4 in.)	45.2mm (1.78in.)
Height	N/A	N/A	N/A	16.0 mm (0.63 in.)	N/A	N/A
Width	N/A	N/A	N/A	94.1 mm (3.7 in.)	N/A	N/A
Net Weight	193 g (6.8 oz) (12) 255 g (9.0 oz) (18)	33.5 g (1.2 oz)	182 g (6.4 oz) (12) 244 g (8.6 oz) (18)	358 g (6.1 oz)	157 g (5.5 oz)	227 g (8 oz)
Application	Lectern/podium, multipurpose facilities, meeting rooms, hotels	House of worship	Lectern/podium	Teleconferencing	Choir, concert halls	Podium, house of worship



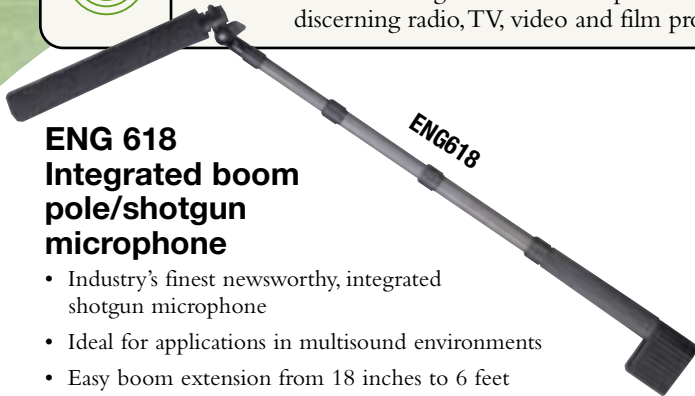
# Broadcast/Video Production Mics

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.



BROADCAST MICS >>>

<<< EV



## 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 handheld interview 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

	ENG 618	RE50/B	RE50N/D-B	635A and 635A/B	635N/D-B
Type	Condenser	Dynamic	N/DYM® dynamic	Dynamic	N/DYM® dynamic
Color	Black	Black	Black	Fawn beige or black (635A/B)	Black
Frequency Response	50-8,000 Hz	80-13,000 Hz	80-13,000 Hz	80-13,000 Hz	80-13,000 Hz
Polar Pattern	Hypercardioid	Omni	Omni	Omni	Omni
Power Level (0 dB = 1 mW/pascal)	-55 dB	-55 dB	-51 dB	-55 dB	-51 dB
Length	46 cm (18 in.) collapsed 180 cm (6 ft) extended	197 mm (7.75 in.)	197 mm (7.75 in.)	151 mm (5.94 in.)	148 mm (5.84 in.)
Max Diameter	N/A	49.3 mm (1.94 in.)	49.3 mm (1.94 in.)	35.8 mm (1.41 in.)	135.8 mm (1.41 in.)
Net Weight	910 g (2.0 lb)	269 g (9.5 oz)	269 g (9.5 oz)	170 g (6.0 oz)	170 g (6.0 oz)
Application	News gathering	News gathering	News gathering	News gathering	News gathering





# Studio Mics

## 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 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



SPECIFICATIONS

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



# Accessories



**Accessory**

**Description**

**Available for:**

## Speakers

100BK	Speaker stand	Sb and Sx systems (Sx80 needs Sx80SM)
Sx80MBB	Wall/ceiling bracket	Sx80
Sx80SM	Stand-mount adapter	Sx80
F200	Monitor feet	Sx100+, Sx300
Mb100	Eyebolt attachment kit	Sx100+, Sx300
Mb200	Wall/ceiling bracket	Sx100+, Sx300
Mb300	Horizontal array kit	Sx100+, Sx300
Mb500	Wall/ceiling bracket	Sx500+
Mb600	Horizontal array kit	Sx500+
Mb700	Eyebolt attachment kit	Sx500+
VPC500	Vinyl cover	Sx500+
PD500	Padded case	Sx500+
PDSx	Padded case	Sx100+, Sx300, Sb121
VPCSx	Vinyl cover	Sx100+, Sx300, Sb121
G500	Full-face steel grille	Sx500+
HSMT-1	Hanging kit	MTH/MTL
HSMT-3	Hanging kit	MTH/MTL
HSMT-5	Hanging kit	MTH/MTL
HST series	Hanging kits	T-Series™
S-40MBB	Wall/ceiling bracket	S-40
SRB-7	Rack/wall bracket	Sentry® 100A and Sentry® 100EL

## Microphones

309A	Suspension shock mount	RE20, RE27
311	Stand clamp	RE16, RE200, N/D468
320	Stand clamp	RE20, RE27N/D
323	“Stiff” stand clamp	N/D167, N/D267, N/D767a
325	Boom and stand suspension shock mount	RE1000
422a	Desk stand with rubber shock mount that accepts microphone stand clamps, black	
CPSM	Shock mount	RE90P-12, RE90-18, PolarChoice™12, PolarChoice™18
FMK	Flange mount	RE90P-12, RE90-18, PolarChoice™12, PolarChoice™18

## Wireless Microphones

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

## 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)

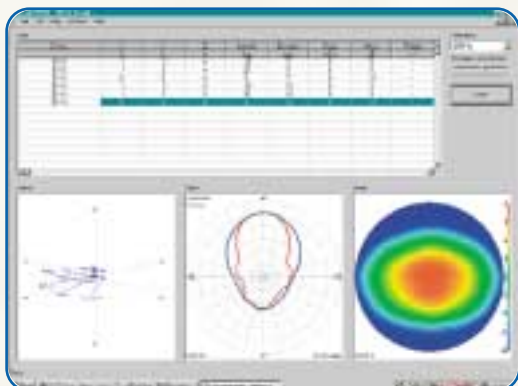
Windows-based operation allows expeditious, sophisticated production of graphics for presentation, print media and Web application.



### ArraySHOW™

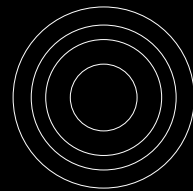
A powerful loudspeaker arraying software package for use by system designers to optimize loudspeaker clusters and arrays early in the planning stages. Explicitly reveals the lobes and nulls from multiple loudspeaker sources that compromise coverage uniformity and intelligibility. Guidelines are included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



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Specifications subject to change without notice.