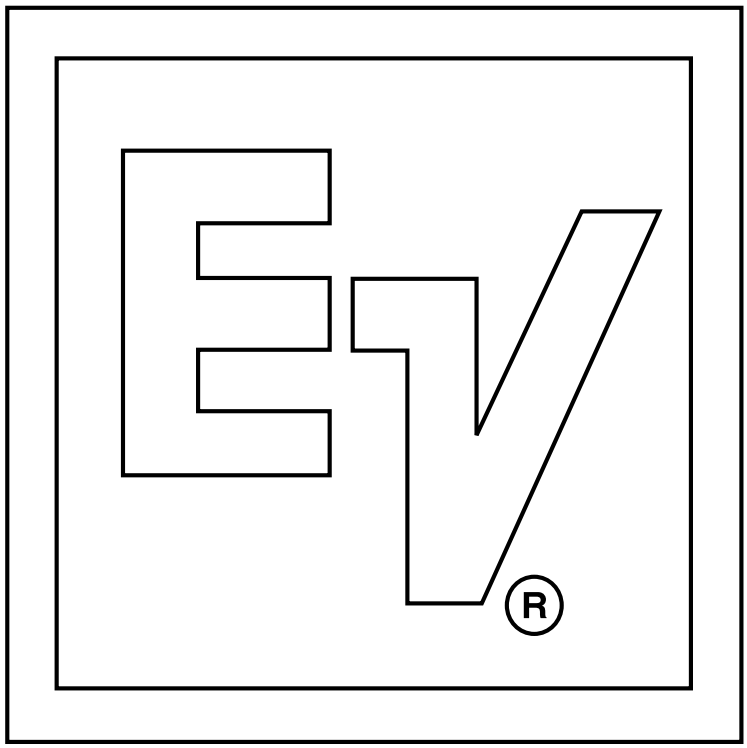


EV's unwavering commitment to customer needs has earned a technological resumé few professional audio companies can match:

1934—EV invents the humbucking 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 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 still 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.

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, allow-ing 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!

Welcome

TELEX

Dear Valued Customers,

Welcome to the latest Electro-Voice® catalog! The past year has been an incredibly exciting time for all of us who bring you EV products. We have taken to unprecedented heights our philosophy of developing new products by listening to the needs of our customers. In every one of our major product catagories, we're bringing you innovative new systems that make your EV® experience even more satisfying, exciting, and profitable.

Our new speakers include the EVID™ Series, the SxA Series™ of powered loudspeakers, the Eliminator i® Series, and the incredible new QRx™ Series. We've updated our venerable FRi™ line to the FRi+™ Series, and our concert line with the state-of-the-art X-Line™ linear array system. We've added new components to our Electronics and Microphone offerings as well. We think you'll agree that these are some of the most exciting new professional audio products hitting the streets today!

Best wishes for a profitable future.

Sincerely,

Ned Jackson
President and CEO
Telex Communications, Inc.

12000 Portland Avenue South Burnsville, MN 55337
Telephone (952) 884-4051 Fax (952) 887-5588

Contents

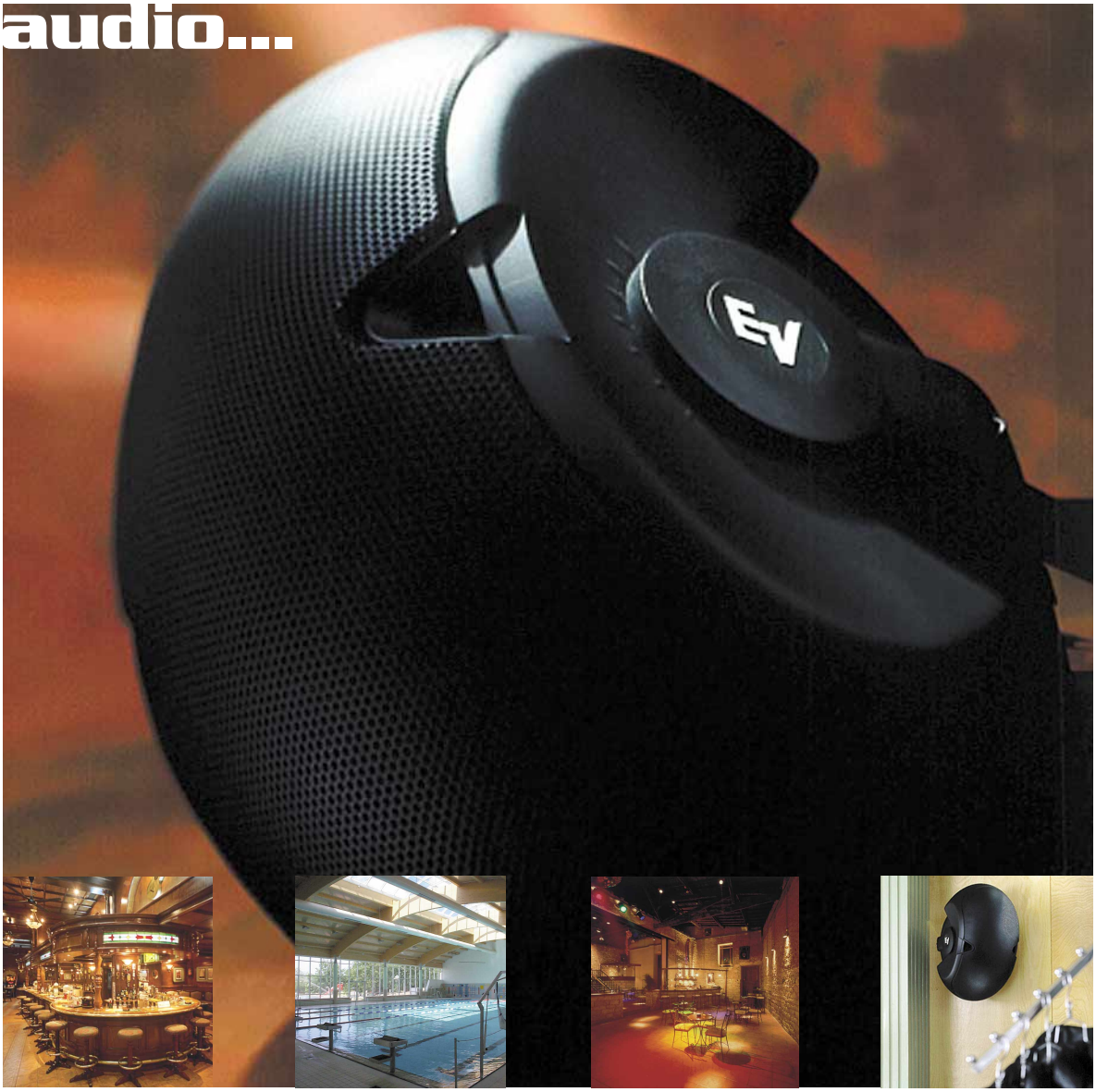
EVID

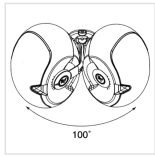
EV Innovative Design

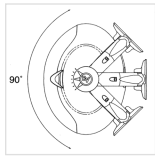
New product

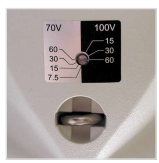
- ***Dual Woofers*** *for extended bass, greater power handling and output.*
- ***Coherent Coverage Waveguide Horn*** *design on models 4.2 and 6.2.*
- ***Dual Low-Frequency Ports*** *provide extended bass output.*
- ***Treated Woofer Cones*** *for added weather resistance and increased reliability.*
- ***Durable Zinc-Plated Steel Grille.***
- ***Cast Aluminum Strong-Arm-Mount***™ *(SAM™) system provides excellent strength and reliability.*
- ***Over 100 degrees of swing and 90 degrees of rotation*** *for incredible installation flexibility.*
- ***Simple Keyed Hex Head Adjustments*** *make installations quick and easy.*
- ***Titanium Dome Tweeters with Neodymium Magnet*** *structures provide clean highs and added weather resistance.*
- ***One-piece ABS Cabinet*** *provides outstanding strength and acoustic rigidity.*
- ***Smooth Lines and Innovative Cosmetic Design*** *complement any décor or environment.*
- ***Magnetically Shielded Transducers*** *allow placement close to sensitive equipment.*

Design goes audio...









EVID 3.2

- Two-way full range
- Vented LF enclosure
- 0.75" voice coil (titanium diaphragm) with Neodymium magnetic structure
- Full-bandwidth overload protection for HF and LF
- Three-dimensional ellipse (for compact look)
- Magnetically shielded for video applications
- Comes with Strong Arm Mount (SAM™) and a hex key
- Suspension insert for SAM™; safety point on rear side
- S.O.S. version's volume control, 1/4" connector, and stand-mount adaptors enable use as mic-stand monitor.

EVID 4.2

- Two-way full range
- Vented LF enclosure
- 1" voice coil (titanium diaphragm) with Neodymium magnetic structure
- HF section features Coherent Coverage Waveguide™ to minimize interference
- Full bandwidth overload protection for HF and LF
- Three-dimensional ellipse (for compact look)
- Magnetically shielded for video applications
- Comes with Strong Arm Mount (SAM™) and a hex-key
- Suspension insert for SAM™, safety point on rear side

EVID 6.2

- Two-way, high-output full range
- Vented LF enclosure
- High sensitivity
- 1" voice coil (titanium diaphragm) with Neodymium magnetic structure
- HF section features Coherent Coverage Waveguide™ to minimize interference
- Full bandwidth overload protection for HF and LF
- Three-dimensional ellipse (for compact look)
- Magnetically shielded for video applications
- Comes with Strong Arm Mount (SAM™) and a hex key
- Suspension insert for SAM™; safety point on rear side

EVID 12.1

- Subwoofer
- Slot-loaded port design
- Dual-voice-coil, high-excursion transducer
- High sensitivity
- Built-in stereo crossover with high-pass output
- Trapezoidal
- Comes with mounting bracket (passed EIA 636 at a safety factor of 8:1) for on-wall or corner mounting
- One safety 3/8"-16 eyebolt included
- Suspension inserts and 2 x 3/8" hanging inserts

Specifications	EVID 3.2	EVID 4.2	EVID 6.2	EVID 12.1
Frequency response (-10 dB)	85 Hz–20 kHz	65 Hz–20 kHz	62 Hz–20 kHz	40 Hz–140 Hz
Sensitivity (SPL 1 W/1 m)	87 dB	89 dB	94 dB	100 dB
Max. SPL/1m (calc.)	108 dB	113 dB	118 dB	122 dB
Long-term power handling	150 W	200 W	300 W	180/180 W
Short-term power handling	600 W	800 W	1,200 W	720/720 W
Transformer taps	70V: 5 W	70V: 3.75 W	70V: 7.5 W	—
(transformer version)	100V: 10 W	70V/100V: 7.5 W, 15 W, 30 W	70V/100V:15 W, 30 W, 60 W	—
Coverage (H° x V°)	140° x 100°	120° x 80°	100° x 80°	—
LF driver	2 x 3.5" (90 mm)	2 x 4" (100 mm)	2 x 6" (100 mm)	12" (300 mm)
HF driver	0.75" (20 mm)	1" (25 mm)	1" (25 mm)	—
Nominal impedance	8 Ω	8 Ω	8 Ω	8 Ω
Minimum impedance	6 Ω	6 Ω	6 Ω	6 Ω
Input connections	spring terminal	spring terminal	spring terminal	spring terminal
Dimensions (H x W at front x D)	9.2" x 5.1" x 6.5"	12.2" x 6.9" x 8.5"	16.5" x 9" x 11.75"	16.25" x 23" x 12"
	(234 x 127 x 165 mm)	(310 x 175 x 216 mm)	(419 x 228 x 298 mm)	(412 x 584 (at front) x 305 mm)
Net weight (incl. mounting bracket)	3.3 lbs (1.5 kg)	8.5 lbs (3.9 kg)	12 lbs (5.3 kg)	40 lbs (18.1 kg)
Shipping weight (pair)	8.6 lbs (3.9 kg)	19 lbs (8.6 kg)	27 lbs (12.3 kg)	48 lbs (20 kg)

EVID™ ACCESSORIES

PREMIUM SURFACE-MOUNT SPEAKERS

MOUNTING BRACKETS

AB-34 AND AB-64 360-DEGREE KITS

The AB-34 and 64 series kits feature a 4-sided powder-coated steel mounting assembly allowing 4 EVID speakers to be mounted in an array to cover a 360-degree pattern. The mount offers additional flexibility in EVID system designs. The AB-34 works with the EVID 3.2 series and can be used with a threaded rod for suspension from the ceiling. The AB-64 is used with the EVID 4.2 or 6.2 series speakers and can be used with a speaker stand tripod or hung from the ceiling using a threaded rod as shown. All necessary accessories and parts needed for use are included.

AB-32 AND AB-62 180-DEGREE KITS

The AB-32 and AB-62 series kits feature a 2 sided powder coated steel mounting assembly allowing for 2 EVID speakers to be mounted in an array to cover a 180-degree pattern. The AB-32 works with the EVID 3.2 series and can be used with a threaded rod for suspension from the ceiling. The speakers can then be positioned on the bracket to cover a variety of patterns to best serve the installation requirements. The AB-62 allows the EVID 4.2 or 6.2 series speakers to be used with a speaker stand tripod or hung from the ceiling using a threaded rod as shown. All necessary accessories and parts needed for use are included.

TABLETOP STANDS

HS-3 HORIZONTAL TABLETOP STAND

The HS-3 horizontal tabletop stand allows the EVID 3.2 or 4.2 orientation on a table, meter bridge, desk, bookshelf or other flat surface. Ideal for portable applications, the stands are made of steel for strength and durability and include rubber feet to protect surfaces. Sold in pairs.

VS SERIES VERTICAL TABLETOP STANDS

The VS series vertical tabletop stands are available for any EVID full-range model. The stands allow the EVID speakers to be easily used on a table, desk, bookshelf or other flat surface in a vertical configuration. Ideal for portable applications, the stands are made of plastic-coated steel for strength and durability. Sold in pairs.

OTHER ACCESSORIES

TC SERIES TERMINAL COVERS

The TC-4 and TC-6 terminal covers protect the input connections on the EVID speakers from the long-term effects of moisture. The covers are available for the EVID 4.2 and 6.2 series models. The covers easily attach to the rear input panel of the speaker and include a weatherproof cable connector.

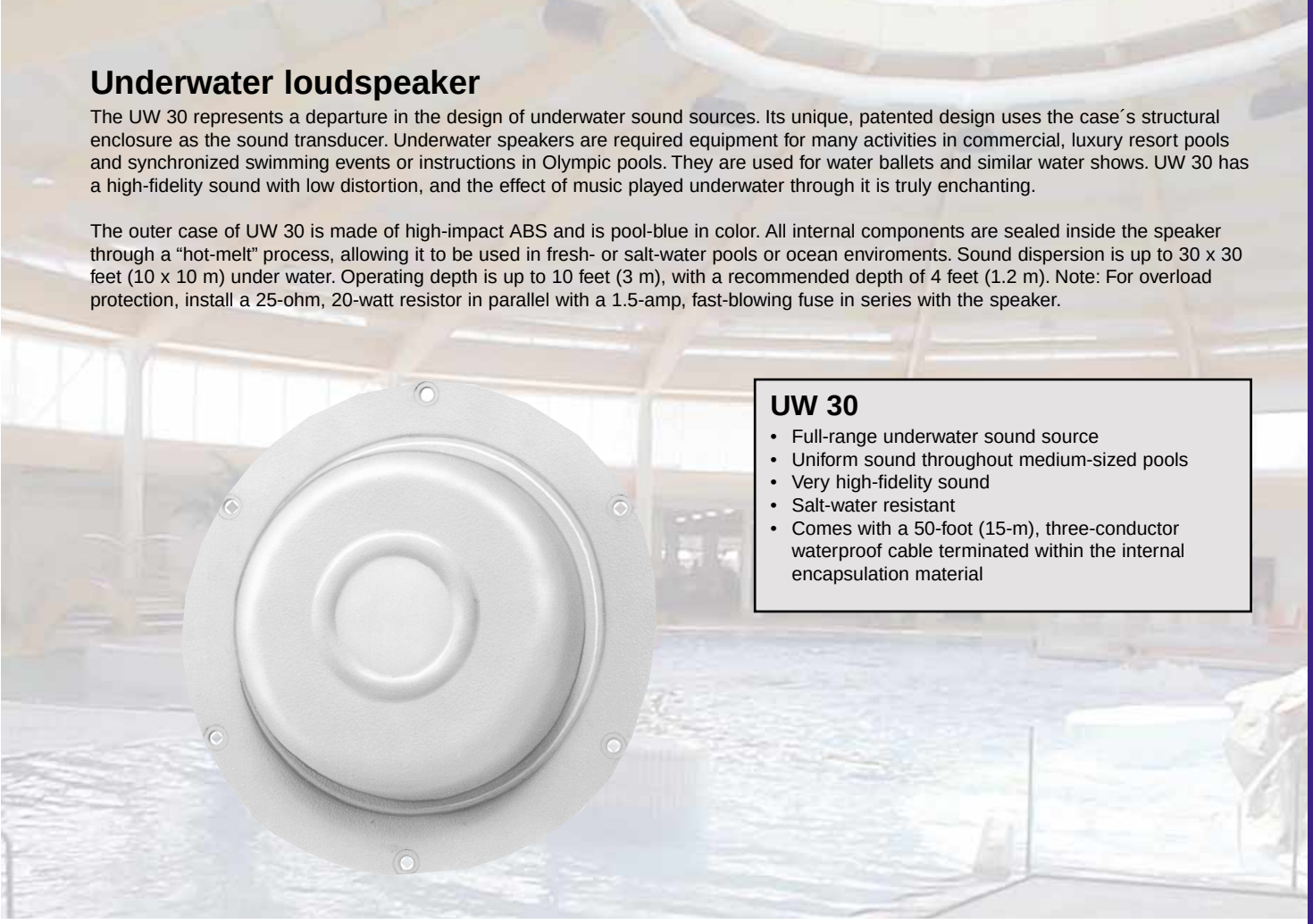
MA-3 MIC STAND ADAPTER

The MA-3 is a microphone stand adapter that allows use of the EVID 3.2 with a standard boom mount microphone stand. Two adapter pieces allow a solid and secure junction between the microphone boom on one side and the microphone stand side on the other.

Underwater loudspeaker

The UW 30 represents a departure in the design of underwater sound sources. Its unique, patented design uses the case´s structural enclosure as the sound transducer. Underwater speakers are required equipment for many activities in commercial, luxury resort pools and synchronized swimming events or instructions in Olympic pools. They are used for water ballets and similar water shows. UW 30 has a high-fidelity sound with low distortion, and the effect of music played underwater through it is truly enchanting.

The outer case of UW 30 is made of high-impact ABS and is pool-blue in color. All internal components are sealed inside the speaker through a “hot-melt” process, allowing it to be used in fresh- or salt-water pools or ocean enviroments. Sound dispersion is up to 30 x 30 feet (10 x 10 m) under water. Operating depth is up to 10 feet (3 m), with a recommended depth of 4 feet (1.2 m). Note: For overload protection, install a 25-ohm, 20-watt resistor in parallel with a 1.5-amp, fast-blowing fuse in series with the speaker.



UW 30

- Full-range underwater sound source
- Uniform sound throughout medium-sized pools
- Very high-fidelity sound
- Salt-water resistant
- Comes with a 50-foot (15-m), three-conductor waterproof cable terminated within the internal encapsulation material

Ultracompact monitor system

EV®'s S-40 produces maximum frequency response with an extended bass response. The sensitivity, therefore, is slightly less than with a regularly tuned box. The S-40 is made of black or white high-impact polystyrene structural foam protected with a full-size, matching front grille. The transformer taps of the T-Version are selected externally with a switch, as shown below.

S-40 B
S-40T/B

- Two-way, full-range ultracompact
- Ultra-linear frequency response
- Vented LF enclosure
- Full bandwidth protection circuit for woofer and tweeter
- Ferrofluid-cooled soft-dome tweeter
- Trapezoidal
- 2 x 1/4"–20 suspension points

External tap selector

Specifications	UW 30	S-40
Frequency range	100 Hz–10 kHz	85 Hz–20 kHz (+/- 3dB)
Sensitivity (SPL 1W/1m)	—	85 dB (T-version: 84 dB)
Max. SPL/1m (calc.)	—	113 dB (T-version: 99 dB)
Long-term power handling	30 W	160 W (T-version: 30 W)
Short-term power handling	—	640 W
Transformer taps (transformer version)	—	30/15/7.5/3.7/1.9 W (100V)
Coverage (H° x V°)	omni (underwater)	100° x 100°
Directivity Index	—	9.8 dB (+3.8/-3.6 dB) 2 kHz–20 kHz
LF driver	special type	5.25"
HF driver	—	1" Softdome
Crossover frequencies	—	3,500 Hz
Nominal impedance (low Z version)	8 Ω	4 Ω
Minimum impedance (low Z version)	—	3.7 Ω
Input connections	waterproof cable	spring terminal
Dimensions (H x W at front x D)	7.19" (diameter) x 2.61" (D) (183 mm [diameter] x 66 mm [D])	9.8" x 7" x 5.9" (249 x 178 x 150 mm)
Net weight (including mounting bracket)	1.8 kg	2.6 kg (T-version: 3.3 kg)

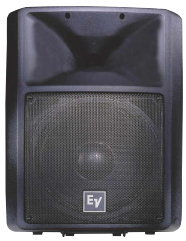
Sx-Series™

Sx-Series™

Outstanding performance and flexibility for portable and permanent installations.
Electro-Voice pioneered the concept and use of injection-molded structural foam enclosures to make compact speaker systems lighter and stronger. No other company in the industry has such a wide range of models—from 8-inch two-way to 15-inch two-way systems—to meet your specific requirements. Flexibility, portability, excellent performance, and high-output capability are the hallmarks of all EV Sx models. All Sx systems feature PRO™ driver protection circuitry and RMD™ for level-independent fidelity and incredible vocal reproduction. Thanks to a wide range of hanging hardware and array brackets, Sx enclosures are also perfect for fixed installations.

Sx80B

- Two-way; full-range
- Vented LF enclosure
- DH2005 pure titanium compression driver
- PRO™ Driver protection
- Varipath™ HF horn
- Trapezoidal cabinet
- Compact dimensions
- 7 x M6 and 4 x M5 attachment inserts

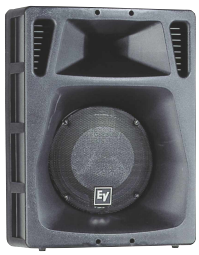


Sx100+

- Two-way; full-range
- Vented LF enclosure
- DH2010A titanium compression driver
- PRO™ Driver protection circuit
- Varipath™ HF horn
- Trapezoidal cabinet (25° per side)
- Physical characteristics of Sx300 but slightly lower sensitivity/output
- 4 x M8 x 1.25 attachment inserts

Sx300E

- Two-way; full-range
- High sensitivity
- Ultra-linear frequency response
- Vented LF enclosure
- DH2010A titanium compression driver
- PRO™ Driver protection circuit
- Varipath™ HF horn
- Trapezoidal cabinet (25° per side)
- 4 x M8 x 1.25 attachment inserts



Sx500+

- Two-way, high-output, full-range, biampable
- High sensitivity
- Horn-loaded, vented LF enclosure
- Asymmetric CD horn aimed downward 10°
- DH2T pure titanium compression driver
- PRO™ Driver protection circuit
- Varipath™ HF horn
- Operation mode by pin arrangement
- Multi-angled array housing
- 8 x M8 x 1.25 attachment points

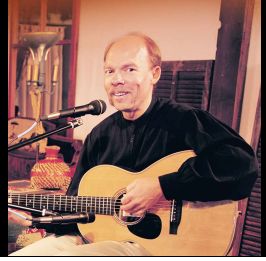
Sb121

- Compact 12" subwoofer
- Direct radiating vented design
- Trapezoidal (25°/side)
- 4 x M8 x 1.25 attachment points

Sb180

- 18" subwoofer
- EVX-180B woofer: same as X-Array, with 4" voice coil and 2" peak excursion
- 31 Hz useable bass response
- Futura™ finish
- Stand mount (top)
- 34" pole included

Specifications	Sx80B	Sx100+	Sx300E	Sx500+	Sb121	Sb180
Frequency range (-10 dB)	51 Hz–20 kHz	55 Hz–20 kHz	55 Hz–20 kHz	43 Hz–16 kHz	43 Hz–500 Hz	31-250 Hz
Recommended high-pass frequency	51 Hz (12 dB/Oct.)	55 Hz (12 dB/Oct.)	55 Hz (12 dB/Oct.)	43 Hz (12 dB/Oct.)	43 Hz (12 dB/Oct.)	31 Hz (12 dB/Oct.)
Sensitivity (SPL 1 W/1 m) (biamp mode)	92 dB	98 dB	100 dB	100 dB (100/107 dB)	95 dB	99 dB
Max. SPL/1m (calc.)	121 dB (100V: 110 dB)	127 dB	131 dB (100V: 123 dB)	132 dB	126 dB	
Long-term power handling	175 W	200 W	300 W	400 W	300 W	600 W
Short-term power handling	700 W	800 W	1.200 W	1.600 W	1.200 W	2,400 W
Coverage (H° x V°)	90° x 65° (CD horn)	65° x 65° (CD horn)	65° x 65° (CD horn)	75° x 60° (asymmetrical CD horn)	essentially omni	essentially omni
LF driver	8"	12"	12" (DL12Sx)	15" (DL15Sx)	12" (DL12Sx)	18"
HF driver	1.25" (DH2005)	1" (DH2010A)	1" (DH2010A)	2" (DH2T)	—	—
Crossover frequencies	2,200 Hz	1,500 Hz	1,500 Hz	1,600 Hz (24 dB/Oct.)	—	—
Nominal impedance	8 Ω	8 Ω	8 Ω	8 Ω (8 Ω/8 Ω)	8 Ω	8 Ω
Input connections	Spring terminal, 1/4", or Neutrik® NL4	1/4" or Neutrik® NL4	2 Neutrik® NL4	2 Neutrik® NL4	2 Neutrik® NL4	2 Neutrik® NL4
Dimensions (H x W at front x D)	15.75" x 11.5" x 8.75" 400 x 292 x 222 mm	23.1" x 16.9" x 12.3" 586 x 429 x 312 mm	23.1" x 16.9" x 12.3" 586 x 429 x 312 mm	33" x 26.5" x 17.63" 838 x 673 x 448 mm	23.1" x 16.9" x 12.3" 586 x 429 x 312 mm	23.75" x 22.5" x 31.75" 603 x 576 x 807 mm
Net weight	18 lbs (8.2 kg [T/PIX: 9.3 kg])	32 lbs (14.5 kg)	39 lbs (17.7 kg [PIX: 21.7 kg])	69 lbs (31.3 kg [PI: 32.9 kg])	32.2 lbs (14.6 kg)	102 lbs (46.3 kg)



SxA-Series™

Focus on Performance

If you need solid, clean powerful audio in the lightest package possible, direct your ears to Electro-Voice SxA-Series. These self-powered speakers work well in a wide range of sound reinforcement applications, from a simple vocal reinforcement PA to a large, multi-box, high-SPL sound system.

New product

SxA100 and SxA250 full-range systems set new performance standards for powered speakers. They provide the user multiple inputs with full mix capability, a flexible EQ section and plenty of power in compact, easy-to-move enclosures. They make setting up a high-performance sound system quick and easy.

The SxA180 powered subwoofer is ideal for adding hard-hitting bass to the SxA or other full-range systems. Its removable dolly board with casters makes moving the sub and full-range systems easy.

When you need big sound and want to travel light, leave your amp rack at home and take EV SxA loudspeakers instead.

SxA100/SxA250 features

- Lightweight, compact and easy to carry
- Perfect as front-of-house speakers or floor monitors
- Built-in stand mounts and inserts allow safe suspension with optional hardware
- Separate mic and line inputs with mix capability plus 2-band EQ
- 350 W dynamic LF power and 80 W dynamic HF power
- Dynamic filters provide complete overload protection
- Line output
- **SxA100:** 12-inch two-way with 65° x 65° horn and 124 dB output capability; rugged structural foam enclosure
- **SxA250:** 15-inch two-way with 80° x 55° horn and 126 dB output capability; plywood enclosure with Futura™ polyurethane finish

SxA180 features

- Compact direct-radiating 18-inch woofer with extended bass response
- Includes storage compartment with removable dolly board and casters to make transportation easy
- 650 W dynamic power amp delivers 126 dB maximum output capability
- Built-in crossover with variable frequency
- Separate line and high-pass outputs for filtering output to full-range systems and easy signal routing
- Includes 34-inch pole for elevating EV full-range speakers without separate stands
- Rugged plywood enclosure with Futura™ polyurethane finish

SxA100 and SxA250 feature mic and line level inputs for easy mixing, 2-band EQ, and line-level out

Specifications	SxA100	SxA250	SxA180
Frequency range (-10 dB)	50 Hz–20 kHz	55 Hz–20 kHz	38 Hz–120 Hz
Max. SPL/1m (calc.)	124 dB	126 dB	126 dB
Coverage (H° x V°)	65° x 65°	80° x 55°	—
LF amplifier power (burst/continuous)	350 W/150 W	350 W/150 W	650 W/300 W
HF amplifier power (burst/continuous)	80 W/50 W	80 W/50 W	—
Mic input sensitivity	-35 dBu to 0 dBu for full output	-35 dBu to 0 dBu for full output	—
Line input sensitivity	-12 dBu to 0 dBu for full output	-12 dBu to 0 dBu for full output	-12 dBu to 0 dBu for full output
LF transducer	12" (300 mm)	15" (381 mm)	18" (450 mm)
HF transducer	DH2010A compression driver	DH2010A compression driver	—
Balanced mic, line inputs	XLR, XLR, and 1/4" phone combo	XLR, XLR, and 1/4" phone combo	XLR
Balanced line output	XLR	XLR	XLR
Variable active crossover	—	—	80 Hz–120 Hz
Equalization (shelving)	LF: ±6 dB@140 Hz/HF: ±4 dB@5 kHz	LF: ±6 dB@140 Hz/HF: ±4 dB@5 kHz	—
Power requirement	110–130 VAC, 50–60 Hz, or 220–240 VAC, 50–60 Hz 600 W	110–130 VAC, 50–60 Hz, or 220–240 VAC, 50–60 Hz 600 W	110–130 VAC, 50–60 Hz, or 220–240 VAC, 50–60 Hz 700 W
Enclosure material/finish	Copolymer	7-ply plywood/Futura™	Plywood/Futura™
Grille	Powder-coated steel with fiber backing	Powder-coated steel with fiber backing	Powder-coated steel with fiber backing
Dimensions (H x W x D)	23.1" x 16.9" x 12.3" (586 mm x 429 mm x 312 mm)	24.6" x 17.9" x 13.1" (625 mm x 473 mm x 333 mm)	31.5" x 21" x 23.5" (800 x 533 x 596 mm)
Net weight	43 lbs (19.5 kg)	49 lbs (22.2 kg)	98 lbs (44.5 kg)

T-Series™

T-Series™ systems provide traditional EV high performance, packaged for portable applications.

T-Series loudspeakers use EV components that have toured the world, including DL and EVX woofers and the DH2T high-frequency driver. All two-way systems use EV's High-Q 60° x 40° that has tremendous pattern control and projection, and that can be biamped for additional control. The famous MTL-1X and T18 subs use EV's patented SubScoop™, which combines the throw of horn-loading with the low end of a vented box. All systems are built from plywood and have metal corner protectors for rugged roadworthiness.

T221

- Two-way, 12", medium-throw, full-range system
- High-performance 12" woofer
- Integral stand-mount adapter accommodates the optional 100BK stand
- Biampable

T251+

- Two-way, 15" medium-throw, full-range system
- DL15RMD 15" woofer for great bass and a high degree of midrange clarity
- Integral stand-mount adapter fits the optional 100BK stand
- RMD™
- Biampable

T252+

- Two-way, dual-15", medium-throw, full-range system
- Dual DL15RMD 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
- Biampable

MTL-1X

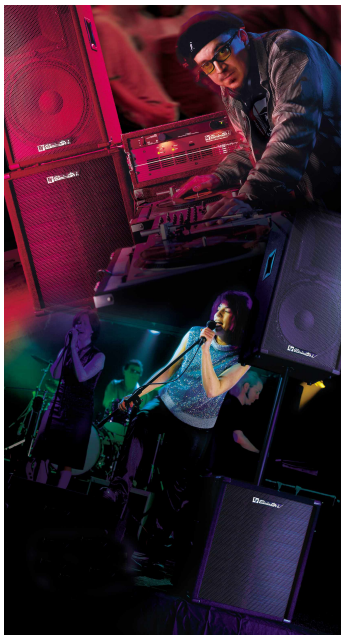
- Dual-18" low-frequency system
- Unique SubScoop™ enclosure combines the punch and directionality of a horn with the extended response of a vented box
- EVX-180B ultrahigh-performance 600-watt woofers for maximum output
- Optional HSMT-1 suspension kit

T18

- 18" LF system
- DL18MT 18" 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" steel pole for full-range satellite systems

Specifications	T221	T251+	T252+	MTL-1X	T18
Frequency range (-10 dB)	70 Hz–16 kHz	45 Hz–16 kHz	44 Hz–16 kHz	38–160 Hz	33–250 Hz
Recommended high-pass frequency	80 Hz (12 dB/Oct.)	45 Hz (12 dB/Oct.)	44 Hz (12 dB/Oct.)	38 Hz (12 dB/Oct.)	33 Hz (12 dB/Oct.)
Sensitivity (SPL 1 W/1 m)	100 dB (100/112 dB)	98 dB (98/112 dB)	101 dB (101/112 dB)	101 dB	99 dB
Max. SPL/1m (calc.)	133 dB	130 dB	136 dB	137 dB	132 dB
Long-term power handling	400 W (400 W/60 W)	400 W (400 W/60 W)	800 W (800 W/60 W)	1,200 W	400 W
Short-term power handling	1,600 W	1,600 W	3,200 W	4,800 W	1,600 W
Coverage (H° x V°)	60° x 40° (CD Horn)	60° x 40° (CD Horn)	60° x 40° (CD Horn)	omnidirectional	omnidirectional
LF driver	12" (—)	15" (DL15ST)	2 x 15" (DL15ST)	2 x 18" (EVX-180B)	18" (DL18MT)
HF driver	1" (DH2T)	1" (DH2T)	1" (DH2T)	—	—
Crossover frequency (passive)	2,600 Hz	1,200 Hz	1,200 Hz	160 Hz or below	250 Hz or below
Nominal impedance (biamp mode)	8 Ω (8 Ω/8 Ω)	8 Ω (8 Ω/8 Ω)	4 Ω (4 Ω/8 Ω)	4 Ω	8 Ω
Minimum impedance (biamp mode)	7 Ω (7 Ω/6.3 Ω)	6 Ω (6 Ω/6.3 Ω)	3.2 Ω (3.2 Ω/6 Ω)	3 Ω	6.6 Ω
Input connections	2 Neutrik® NL4	2 Neutrik® NL4	2 Neutrik® NL4	2 Neutrik® NL4	2 Neutrik® NL4; 1/4" phone jacks
Dimensions (H x W at front x D)	28.1" x 16.4" x 18.9" 714 x 417 x 480 mm	32.2" x 19.2" x 23.6" 818 x 488 x 599 mm	49" x 19.2" x 23.6" 1,245 x 488 x 599 mm	45.8" x 22.5" x 29.9" 1,160 x 572 x 758 mm	32.8" x 24.8" x 24.0" 833 x 630 x 609 mm
Net weight	55 lbs (25 kg)	78.1 lbs (35.5 kg)	114 lbs (52.0 kg)	165 lbs (75 kg)	109 lbs (49.4 kg)

Eliminator® i



*i*mpressive. *i*nnovative. *i*ntegrated. *i*ntense.

New product

Electro-Voice® Eliminator® i is a family of pro-grade sound reinforcement components—full-range loudspeakers, subs, and amp—engineered to play together as an integrated system. Eliminator® i is ideal for bands and mobile DJs who want incredible sound without burning all their gig money on equipment, or endlessly tweaking a complicated setup. Just cable up the matched Eliminator® i components and play your music.

Stolen technology

Eliminator® i systems sound great because EV® engineers lifted some advanced technology from our touring concert sound systems and applied them to Eliminator® i components. For example, every Eliminator® i loudspeaker employs our unique RMD® (Ring-Mode Decoupling) technology which controls the sound-mangling mechanical resonances in a speaker. You get clean, accurate reproduction of voice and instruments. We also took the Low Pass Notch (LPN) module from the Electro-Voice AC One Audio Controller and put it into the Eliminator® i amplifier. This innovative circuitry is specifically tuned for the Eliminator® i loudspeaker system. Performance takes a quantum leap. Low-end output is stunning! We've given you more of what you want without adding more gear to lug around.

Rock-solid core

Eliminator® i amps and loudspeakers give you a professional-level core around which you can build a really awesome, yet affordable, sound system. Add Electro-Voice N/DYM® and Cobalt™ wired and wireless mics. Add a Venice mixer, the new powerhouse console from Midas. When music is your life and livelihood, don't wreck it with an amateur sound system. Step up to the intense, incredible performance of Electro-Voice Eliminator® i.

Eliminator® i full-range loudspeaker

Two-way, high-output, 350 watt stage system. Features a 15-inch, low-frequency driver and constant-directivity high-frequency horn for clear, up-front sound that cuts through difficult acoustic environments. Black carpeted enclosure presents minimal front cross section. Easy to transport. Rugged, tour-grade construction, heavy metal grille, and corner protection.

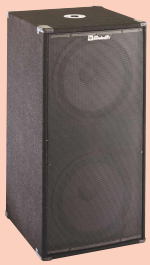
Eliminator® ii dual full-range loudspeaker

Two-way, high-output, 600 watt stage system. Dual 15-inch drivers provide very smooth output at lower frequencies with low distortion. Constant-directivity high-frequency horn. Black carpeted enclosure presents minimal front cross section. Easy to transport. Rugged, tour-grade construction, heavy metal grille, and corner protection.

Eliminator® i subwoofer

Single 18-inch high-output woofer designed to complement Eliminator® i and ii full-range cabinets. Integral low-pass crossover filter, combined with unique acoustic design, allows parallel operation with full-range systems for nice, punchy bass.

Eliminator® kW high-output subwoofer



Dual 18-inch high-output drivers. Designed for mobile DJs and bands who demand high-output/SPL and titanic bass. Features oversized vent for greater output with less cone excursion. Sealed pocket wheels and rear-mounted handles make transportation easy.

Eliminator® i amplifier

The Eliminator® i amplifier has the same circuit topology as the Precision Series amplifiers that have powered the largest tours. The German-built Eliminator® i amp has a built-in LPN processor that supplies additional bass punch to the sound of Eliminator® i, Eliminator® i Sub, or Eliminator® ii loudspeakers. The Eliminator® i amp has substantial power headroom to handle transient peaks, as well as EV's dynamic limiter circuit which prevents distortion from exceeding 1%. The Eliminator® i amp has substantial protection circuits to prevent overload, overheating, RF interference, shorted loads, excessive back EMF, inrush current, and DC faults. For full specifications, see page 44.

Specifications	Eliminator® i	Eliminator® ii	Eliminator® i sub	Eliminator® kW sub
Frequency range (-10 dB)	45 Hz–20 kHz	45 Hz–20 kHz	38–100 Hz	35–160 Hz
Long-term power handling	350 W	600 W	400 W	1,000 W
Maximum SPL	99 dB	100 dB	98 dB	101 dB
Dispersion angles (H° x V°)	60° x 40°	60° x 40°	omnidirectional	omnidirectional
Nominal impedance	8 Ω	4 Ω	8 Ω	4 Ω
Input connections	Parallel 1/4" phone jacks	Parallel Neutrik® NL4MP	1/4" phone input; 1/4" phone output to Eliminator® i	Parallel Neutrik® NL4MP
Dimensions (H x W x D)	30.25" x 16.9" x 24" 768 x 429 x 609 mm	46" x 17.4" x 24.25" 406 x 640 x 471 mm	33.8" x 17.25" x 24.13" 854 x 429 x 609 mm	45.7" x 22.5" x 23.7" 1,162 x 429 x 609 mm
Net weight	66 lbs (30 kg)	106 lbs (48.1 kg)	74 lbs (33.6 kg)	145 lbs (65.8 kg)
Standard equipment	Includes 1 3/8" stand adapter mounted in enclosure bottom	—	Includes 1 3/8" stand adapter mounted in enclosure top, and 18" steel pole for elevating Eliminator® i full-range cabinet above subwoofer	Includes 1 3/8" stand adapter mounted in enclosure top, and 18" steel pole fo elevating Eliminator® i full-range cabinet above subwoofer

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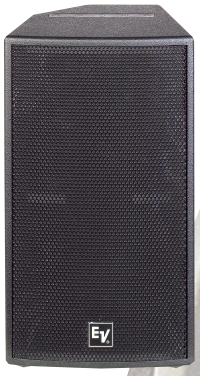
QRx Series™

The QRx family of four full-range systems and two subwoofers fill performance spaces with EV concert-quality sound. QRx is designed as a modular sound system when combined with EV's new Modular Precision Series amplifiers and customized signal processing. Simply put together the speakers and amps you need, pop in the modules, and you're ready to go. QRx speakers use top-line EV drivers such as EVX woofers and the new DH7 large-format compression driver. Another QRx innovation is the new 75° x 60° horn that can be rotated to direct the highs where you want the sound to go. All full-range systems also have RMD™ for incredible sound quality, and they come equipped with L-track flying hardware and single-stud Ancra fittings, ready to hang. All QRx systems are built of 13-ply birch plywood finished in Futura™, a weather-resistant polyurethane finish that resists dings that come with portable audio. When you hear QRx and the new Modular Precision Series amps together, you'll hear a magic you won't find on competitive systems.

New product



Easy operation mode selection

QRx 112/75

- Two-way, high-output, full-range loudspeaker
- Ultralinear frequency response
- Solid bass to 50 Hz (-10 dB)
- Vented LF enclosure
- Asymmetric CD horn aimed downward 10°
- 3" voice coil (titanium diaphragm)
- Protection circuit for HF driver
- Easy external switch for biamp or passive operation
- Trapezoidal cabinet (9° per side) with monitor slant
- Comes with L-track hardware and single-stud Ancra fittings

QRx as monitor

QRx 115/75

- Two-way, high-output, full-range loudspeaker
- Ultralinear frequency response
- Solid bass to 45 Hz (-10 dB)
- Vented LF enclosure
- Asymmetric CD horn aimed downward 10°
- 3" voice coil (titanium diaphragm)
- Protection circuit for HF driver
- Easy external switch for biamp or passive operation
- Trapezoidal cabinet (9° per side) with monitor slant
- Same front width as QRx 118S
- Comes with L-track hardware and single-stud Ancra fittings

QRx 212/75

- Two-way, high-output, full-range loudspeaker
- Ultralinear frequency response
- Extended bass response to 50 Hz (-10 dB)
- Vented LF enclosure
- Asymmetric CD horn aimed downward 10°
- 3" voice coil (titanium diaphragm)
- Protection circuit for HF driver
- Easy external switch for biamp or passive operation
- Trapezoidal cabinet (9° per side)
- Comes with L-track hardware and single-stud Ancra fittings

Some models shown without grilles

35° down / 15° up

QRx 153

- Three-way, high-output, full-range loudspeaker
- Biamp only
- Solid bass to 42 Hz (-10 dB)
- Vented LF enclosure
- Asymmetric CD horn aimed downward by 10°
- 3" HF voice coil (titanium diaphragm)
- Protection circuit for HF driver
- Trapezoidal cabinet (15° per side) for tight-pack situations
- Comes with L-track hardware and single-stud Ancra fittings

QRx 118S

- Subwoofer
- Direct radiating vented design
- High-sensitivity system features the EVX180B
- Solid bass to 36 Hz (-10 dB)
- Very compact rectangular cabinet
- Slim-line profile makes it perfect for under stage
- Same width as QRx 115 for easy stacking and transportation

QRx 218S

- Subwoofer
- Direct radiating vented design
- High-sensitivity system features dual EVX180Bs
- Solid bass to 40 Hz (-10 dB): the QRx powerhouse
- Solid and compact rectangular cabinet is stackable
- L-Track rigging optional

Specifications	QRx 112/75	QRx 115/75	QRx 118S	QRx 153	QRx 212/75	QRx 218S
Frequency range (-10 dB)	50 Hz–16 kHz	45 Hz–16 kHz	36–250 Hz	45 Hz–16 kHz	50 Hz–16 kHz	35 Hz–250 Hz
Recommended controller module	M-112	M-115	M-118S	M-153	M-212	M-218S
Sensitivity (SPL 1 W/1 m)	98 dB	98 dB	99 dB	99 dB	102 dB	102 dB
(biamp operation)	(100/112 dB)	(98/110 dB)	(—)	(98/105 dB)	(102/110 dB)	(—)
Max. SPL/1m (calc.)	129 dB	130 dB	133 dB	130 dB	136 dB	139 dB
Long-term power handling	300 W (300/75 W)	400 W (400/75 W)	600 W	(400/150 W)	600 W (600/75 W)	1,200 W
Short-term power handling (biamp)	1,200 W (1,200/300 W)	1,600 W (1,600/300 W)	2,400 W	(1,600/600 W)	2,400 W (2,400/300 W)	4,800 W
Coverage (H° x V°)	75° x 50° (asym. CD horn)	75° x 50° (asym. CD horn)	300° x 270°	75° x 50° (asym. CD horn)	75° x 50° (asym. CD horn)	300° x 270°
LF driver	12" (DL12BFH)	15" (DL15ST)	18" (EVX-180B)	15" (DL15ST)	2 x 12" (DL12BFH)	2 x 18" (EVX-180B)
HF driver	3" (DH7)	3" (DH7)	—	3" (DH7)/MF: 8"	3" (DH7)	—
Crossover frequencies (biamp mode)	1,500 Hz (24 dB/Oct.)	1,500 Hz (24 dB/Oct.)	100 Hz (24 dB/Oct.)	500 Hz (24 dB/Oct.)	1,500 Hz (24 dB/Oct.)	100 Hz (24 dB/Oct.)
Nominal impedance (biamp mode)	8 Ω (8 Ω/8 Ω)	8 Ω (8 Ω/8 Ω)	8 Ω	(8 Ω/12 Ω)	4 Ω (4 Ω/8 Ω)	4/8 Ω
Input connections	2 Neutrik® NL4	2 Neutrik® NL4	2 Neutrik® NL4	2 Neutrik® NL4	2 Neutrik® NL4	2 Neutrik® NL4
Dimensions (H x W at front x D)	26.6" x 15.36" x 14.77"	29.9" x 17.72" x 16.02"	29.9" x 17.74" x 26.63"	41.5" x 18.4" x 19.125"	38.98" x 15.47" x 14.77"	40" x 22.05" x 23.6"
	675 x 390 x 372 mm	759 x 450 x 407 mm	760 x 450 x 677 mm	1241 x 467 x 486 mm	990 x 393 x 375 mm	1015 x 560 x 599 mm
Net weight	58 lbs (26 kg)	71 lbs (32 kg)	100 lbs (45 kg)	97 lbs (47 kg)	80 lbs (36 kg)	150 lbs (68 kg)

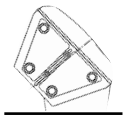
Modular Precision Series Amps

The new EV Precision Series Modular amplifiers use the same circuitry as the legendary P-Series amps as well as special plug-in signal processing modules that optimize the performance of each QRx speaker. No additional processors are needed, saving rack space and cost. These amps have the same incredible headroom, dynamic limiters, and full protection circuits as the P-Series.

Precision Series™ modules for optimized processing for QRx loudspeakers.

Floor Monitors

This is an overview about of EV®´s professional floor monitors. All cabinet angles have been optimized and exhibit excellent pattern control. For specifications and recommended crossover frequencies, see page 18.



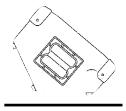
90° x 90 °

SxA100 (shown with F200)

RMD

New product

- Sets a new standard for compact powered loudspeakers
- 350 W LF/80 W HF (dynamic)
- Max. SPL: 124 dB/1 m (calc.)
- 50° monitor angles
- Uses F200 monitor feet
- For full specs, see page 18.



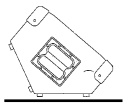
55° x 80°

SxA250

RMD

New product

- Features tough polyurethane Futura® finish and electronics similar to SxA100 powered loudspeaker
- 350 W LF/80 W HF (dynamic)
- Max. SPL: 126 dB/1 m (calc.)
- 50° and 65° monitor angles
- For full specs, see page 18.

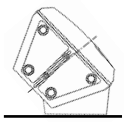


55° x 80°

Eliminator® Monitor E

RMD

- Excellent price performance ratio is ideal for starters or low-budget production
- 350 W (long-term)
- Max. SPL: 130 dB/1 m (calc.)
- 50° and 65° monitor angles
- For full specs, see page 18.



65° x 65°

Sx100+ or Sx300 (shown with F200)

wh White

RMD

- Symmetrical horn allows flexible usage with tripod or as floor monitor
- Sx 300: 300 W (long-term); Sx100+: 200 W (long-term)
- Sx 300: Max. SPL 131 dB/1 m (calc.)
- 50° (approx.) monitor angle
- Uses F200 monitor feet
- For full specs, see page 18.

55° x 80°

T221M

- Perfect for high performance monitoring in space-limited productions
- 400 W (long-term)
- Max. SPL: 133 dB/1 m (calc.)
- Biampable
- Two 55° angles allows symmetrical monitor set-ups
- For full specs, see page 18.

75° x 50°

QRx 112/75

- High-performance monitoring in concert sound applications
- 300 W (long-term)
- Max. SPL: 129 dB/1 m (calc.)
- Biampable
- 55° (approx.) monitor angle
- Integrated stand mount and L-Track rigging allow flexible usage
- For full specs, see page 18

New product

75° x 50°

QRx 115/75

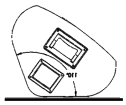
- High-performance monitoring in concert sound applications
- 400 W (long-term)
- Max. SPL: 130 dB/1 m (calc.)
- Biampable
- 55° (approx.) monitor angle
- Integrated stand mount and L-Track rigging allow flexible usage
- For full specs, see page 18.

New product

100° x 100°

FRi-28LPM

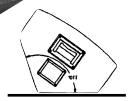
- Low profile ideal for theater, stage, or house-of-worship use
- 200 W (long-term)
- Max. SPL: 122 dB/1 m (calc.)
- 45° monitor angle
- Comes with mounting bracket
- For full specs, see page 18.



55° x 80°

Xw12

- Highest-performance monitoring in concert sound applications
- 12" LF/1.4" HF
- 300/75 W (long-term)
- Max. SPL: 130 dB/1 m (calc.)
- Two 55° angles allow symmetrical monitor set-ups
- Dedicated digital controller: Dx38
- For full specs, see below.



55° x 80°

Xw15

- Highest-performance monitoring in concert sound applications
- 15" LF/1.4" HF
- 600/75 W (long-term)
- Max. SPL: 133 dB/1 m (calc.)
- Two 55° angles allow symmetrical monitor set-ups
- Dedicated digital controller: Dx38
- For full specs, see below.

Specifications	SxA100	SxA250	Eliminator® Mntr E	Sx100+/Sx300	T221M
Frequency range (-3 dB)	50 Hz–20 kHz	80 Hz–20 kHz	77 Hz–25 kHz	80 Hz–25 kHz	100–16 kHz
Recommended high-pass frequency	—	—	45–80 Hz (12 dB/Oct.)	55 Hz	80 Hz (12 dB/Oct.)
Sensitivity (SPL 1 W/1 m)	—	—	99 dB	98/100 dB	101 dB
Max. SPL/1m (calc.)	124 dB	125 dB	130 dB	127/131 dB	133 dB
Long-term power handling	150 W	150 W/50 W	350 W	300/400 W	400 W
Short-term power handling	350 W	350 W/80W	1,200 W	800/1,200 W	1,600 W
Coverage (H° x V°)	65° x 65°	55° x 80°	55° x 80°	65° x 65°/65° x 65°	55° x 80°
LF driver	12" (300 mm)	15" (DL15BFH)	15" (DL15BFH)	12"/12" (DL12Sx)	12" (300 mm)
HF driver	1" (DH2010A)	1" (DH2010A)	1" (DH2010A)	1" (DH2010A)	1" (DH2T)
Crossover frequency	1,400 Hz	1,400 Hz	2,000 Hz	1,500 Hz	2,600 Hz
Nominal impedance	—	—	8 Ω	8 Ω	8 Ω
Minimum impedance	—	—	5.1 Ω	5.6/6 Ω	6.7 Ω
Input connections	mic, line	mic, line	2 Neutrik® NL4	1/2 Neutrik® NL4	2 Neutrik® NL4
Dimensions (H x W at front x D)	23.1" x 16.9" x 12.3"	17.25" x 24.6" x 12.6"	25.39" x 15.98" x 18.53"	23.1" x 16.9" x 12.3"	14.62" x 23.4" x 16"
	586 x 429 x 312 mm	586 x 429 x 312 mm	406 x 640 x 471 mm	586 x 429 x 759 mm	371 x 594 x 406 mm
Net weight	43 lbs (19.5 kg)	49 lbs (22.2 kg)	43 lbs (19.5 kg)	32 lbs (14.5 kg)	56 lbs (25.5 kg)

Specifications	QRx-112/75	QRx-115/75	FRi-28LPM	Xw12	Xw15
Frequency range (-3 dB)	60 Hz–16 kHz	55 Hz–16 kHz	55 Hz–20 kHz	60 Hz–16 kHz	50 Hz–16 kHz
Recommended high-pass frequency	50 Hz (12 dB/Oct.)	45 Hz (12 dB/Oct.)		60 Hz	50 Hz
Sensitivity (SPL 1W/1m)	98 dB	98 dB	93 dB	99/110 dB	99/110 dB
Max. SPL/1m (calc.)	131 dB	130 dB		130/135 dB	133/135 dB
Long-term power handling	300 W	400 W	200 W	300/75 W	600/75 W
Short-term power handling	1,200 W	1,600 W	800 W	1.200/300 W	2.400/300 W
Coverage (H° x V°)	75° x 50°	75° x 50°	100° x 100°	55° x 80°	55° x 80°
LF driver	12" (DL12BFH)	15" (DL15ST)	Dual 8"	12" (DL12ST)	15" (EVX-155)
HF driver	3" (DH7)	3" (DH7)	Compression driver	1.4" (DH6)	1.4" (DH6)
Crossover frequency	1,800 Hz	1,800 Hz	2,800 Hz	1,250 Hz	1,250 Hz
Nominal impedance	8 Ω	8 Ω	8 Ω	8 Ω/16 Ω	8 Ω/16 Ω
Minimum impedance	—	—	—	8.2 Ω/10.5 Ω	7.2 Ω/14.3 Ω
Input connections	2 Neutrik® NL4	2 Neutrik® NL4	Barrier strip	4 Neutrik® NL4	4 Neutrik® NL4
Dimensions (H x W at front x D)	26.6" x 15.36" x 14.77"	29.9" x 17.75" x 16"	8.75" x 24.5" x 14"	14.11" x 23.00" x 16.10"	18.00" x 25.36" x 18.13"
	675 x 390 x 372 mm	759 x 450 x 407 mm	222 x 622 x 356 mm	358 x 584 x 409 mm	457 x 644 x 461 mm
Net weight	58 lbs (26 kg)	71 lbs (32 kg)	40 lbs (18.2 kg)	62 lbs (28.1 kg)	70 lbs (31.8 kg)

Outdoor Speakers

EV®'s assortment of outdoor loudspeakers boast incredible fidelity.

From the EVID™ 3.2 to the Sx300PI/PIX, EV offers excellent solutions for outdoor speaker needs. EV®'s Sx-Series (PI and PIX) bring the sound of indoor speakers out into the fresh air, and can be used for portable and fixed installations such as major theme parks. The new EVID line provides visual style and audio substance not only indoors, but also in any outdoor environment and in humid indoor environments such as pools and saunas. Both families include transformer options.

Sx80PI/PIX

- 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)

Sx300PI/PIX

- 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)

Sx500PI+

- Two-way, 15-inch, medium-throw, full-range system
- A baseball-stadium favorite
- Black powder-coated full-face stainless steel grille, with foam backing and a polyester mesh water shield
- 500 Hz directional control from vented LF horn

EVID 3.2

- Two-way full range
- 0.75" voice coil (titanium diaphragm) with Neodymium magnetic structure
- Full-bandwidth overload protection for HF and LF
- Three-dimensional ellipse (for compact look)
- Comes with Strong Arm Mount (SAM™) and a hex key
- Suspension insert for SAM™; safety point on rear side

New product

EVID 4.2

- Two-way full range
- 1" voice coil (titanium diaphragm) with Neodymium magnetic structure
- Full bandwidth overload protection for HF and LF
- Three-dimensional elliptic (for compact look)
- Comes with Strong Arm Mount (SAM™) and a hex-key
- Suspension insert for SAM™, safety point on rear side

New product

EVID 6.2

- Two-way, high-output full range
- High sensitivity
- 1" voice coil (titanium diaphragm) with Neodymium magnetic structure
- Full bandwidth overload protection for HF and LF
- Three-dimensional ellipse (for compact look)
- Comes with Strong Arm Mount (SAM™) and a hex key
- Suspension insert for SAM™; safety point on rear side

New product

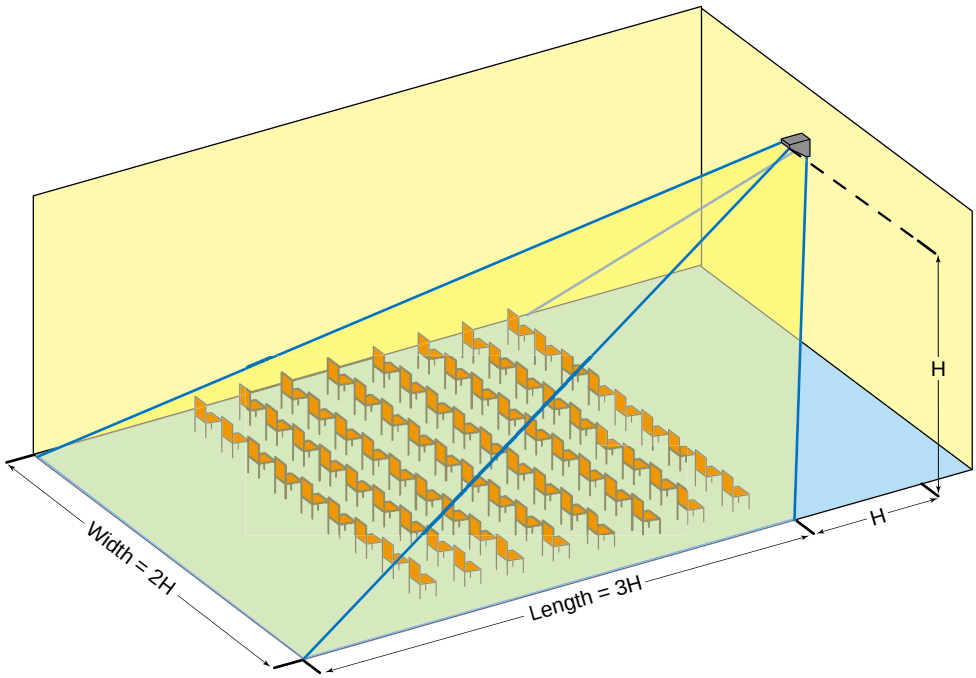
EVI Vari Intense®

Electro-Voice®'s unique EVI Vari Intense® (VI) speakers are engineered to obviate the need for additional long-throw horns or delayed sources in many rooms. The EVI Vari Intense® series provides an economical solution for permanent installations that require coverage over a rectangular area. 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 SPL to the back of the room, overcoming the level loss without resorting to the expense and complexity of additional speaker systems or components. The problem is old; EV®'s solution is new. EVI is perfect for conference centers, houses of worship, halls, and other venues where evenly distributed SPL is essential. EVI systems are made of 18 mm 13-ply birch plywood (EVI 28: 12 mm 9-ply), texture-painted with a powder-coated metal grille.

A simple 3-2-1 rule-of-thumb applies for determining EVI coverage patters: The pattern's width will equal twice the height of the room, and the pattern's length will equal three times the height. See the illustration below.

EVI Vari Intense® coverage pattern (3-2-1 Rule):

If speaker height = H, then coverage length = 3H, coverage width = 2H, and first row coverage = 1H



LBB Conference Centre, Feuchtwangen/Germany

EVI-28

- Two-way, full-range loudspeaker
- Vented LF enclosure
- 1.3" voice coil (titanium diaphragm)
- PRO™ Driver protection circuit
- Time Path™ phasing plug
- Multi-angled housing
- Stacked, frequency-shaded woofers maintain vertical coverage angle down to 500 Hz with 120° (typical 180°); ideal for reverberant rooms
- Five 3/8"-16 hanging points

EVI-12

- Two-way, full-range loudspeaker
- High sensitivity
- Vented LF enclosure
- 1" voice coil (titanium diaphragm)
- PRO™ Driver protection circuit
- Time Path™ phasing plug
- Multi-angled housing
- Five 3/8"-16 hanging points

EVI-15

- Two-way, full-range loudspeaker
- High sensitivity
- Vented LF enclosure
- 1" voice coil (titanium diaphragm)
- PRO™ Driver protection circuit
- Time Path™ phasing plug
- Multi-angled housing
- Five 3/8"-16 hanging points

Railwaystation, Hannover-Laatzen/Germany

Specifications	EVI-12	EVI-15	EVI-28
Frequency range (-3 dB)	45 Hz–25 kHz	45 Hz–25 kHz	62 Hz–25 kHz
Recommended high-pass frequency	—	—	—
Sensitivity (SPL 1 W/1 m)	99.5 dB	100 dB	93 dB
Max. SPL/1m (calc.)	129 dB	129.5 dB	123.5 dB
Long-term power handling	250 W	250 W	250 W
Short-term power handling	1,000 W	1,000 W	1,000 W
Coverage (H° x V°)	60° x 65°	60° x 65°	65° x 65°
LF driver	12" (SG12)	15" (SG15)	2 x 8"
HF driver	1" (DL12BFH)	1" (DL15BFH)	1" (DH2010A)
Crossover frequency	2,000 Hz	2,000 Hz	2,000 Hz
Nominal impedance (minimum)	8 Ω	8 Ω	8 Ω
Input connections	screw terminal	screw terminal	srew terminal
Dimensions (H x W at front x D)	21.8" x 14" x 27.5" 554 x 356 x 699 mm	23" x 16.9" x 30.2" 584 x 429 x 766 mm	13.9" x 19.5" x 20.6" 353 x 496 x 523 mm
Net weight	48 lbs (21.8 kg)	53 lbs (24.0 kg)	36 lbs (16.3 kg)

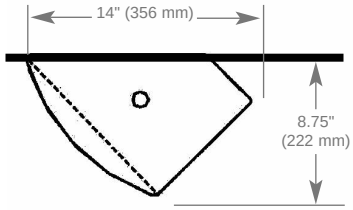
VI Horn

FRi+/FRi Series

FRi+/FRi Series brings premium EV® components, including the DH7 compression driver and DL-type woofers, to a new level of affordability. The FRi+/FRi Series provides exceptional value where flexibility and performance is required in permanent installations. 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. Suspension is achieved by using the numerous threaded mounting points. These allow a high flexible installation in any needed situation.

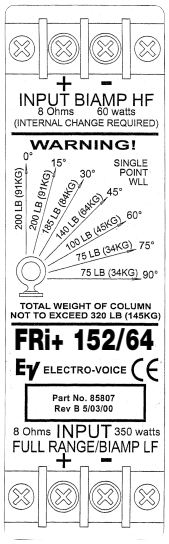
New product

FRi+ systems are finished in tough black Futura™ polyurethane with 7-ply cross-laminated plywood and have a black powder-coated metal grille. Designed from the ground up for safe, attractive installations, FRi+ 122/64 and FRi+ 152/64 have the same 28" (711 mm) height as FRi+ 181S for uniform array appearance. A FRi+ System Manual is shipped with each FRi+-loudspeaker with plenty of information about installation, applications and hanging. The unique FRi 2082 can be used as an ultra-flat monitor as well (FRi 28LPM). For more information about monitors, see pages 16-18.



FRi 2082

- Two-way, full-range loudspeaker
- Vented LF enclosure
- 1" voice coil (titanium diaphragm)
- Low-profile slant design
- 45° angle perfect for under-balcony applications
- Comes with mounting bracket
- Two 3/8"-16 suspension points
- Monitor version: FRi 28LPM (see page 17)



Input panel for FRi+-122/64 and FRi+-152/64

FRi+ 122/64/66/94

- Two-way, full-range loudspeaker
- Switchable between full range and biamp
- Vented LF enclosure
- 3" voice coil (titanium diaphragm)
- Trapezoidal cabinet (15° per side)
- Comes with four eyebolts
- Twelve 3/8"-16 suspension points

FRi 122/64/85

- Two-way, full-range economy version
- Switchable between full range and biamp
- Vented LF enclosure
- 2" voice coil (titanium diaphragm)
- Trapezoidal cabinet (15° per side)
- Comes with four eyebolts
- Twelve 3/8"-16 suspension points

FRi+ 152/64/66/94

- Available in 90° x 40°, 60° x 40°, or 60° x 60° patterns
- Two-way, full-range loudspeaker
- Solid bass to 42 Hz (-10 dB) allows pure full-range performance
- Switchable between full range and biamp
- Vented LF enclosure
- 3" voice coil (titanium diaphragm)
- Trapezoidal cabinet (15° per side)
- Comes with four eyebolts
- Twelve 3/8"-16 suspension points

FRi 152/64/85

- Available in 60° x 40° or 80°x 50° patterns
- Two-way, full-range loudspeaker
- Switchable between full range and biamp
- Vented LF enclosure
- 2" voice coil (titanium diaphragm)
- Trapezoidal cabinet (15° per side)
- Comes with four eyebolts
- Twelve 3/8"-16 suspension points

FRi+ 181S

- Subwoofer
- Vented slot-load design
- Built-in low-pass filter (switchable for biamp operation)
- Trapezoidal cabinet (7.5° per side)
- Comes with four eyebolts
- Sixteen 3/8"-16 suspension points

Specifications	FRi+ 2082	FRi+ 122/64/66/94	FRi+ 152/64/66/94	FRi+ 181S
Frequency range (-10 dB)	55 Hz–20 kHz	50 Hz–15 kHz	42 Hz–15 kHz	36 Hz–160 Hz
Recommended high-pass frequency	50 Hz (12 dB/Oct.)	50 Hz (12 dB/Oct.)	40 Hz (12 dB/Oct.)	36 Hz (12 dB/Oct.)
Sensitivity (SPL 1 W/1 m)	93 dB	99 dB	101 dB	97 dB
(Biamp mode)		(97/112 dB)	(98/112 dB)	
Max. SPL/1m (calc.)	122 dB	128 dB	129.5 dB	129 dB
Long-term power handling (biamped)	200 W	300 W (300 W/75 W)	350 W (350 W/75 W)	400 W
Short-term power handling	800 W	1,200 W	1,400 W	1,600 W
Coverage (H° x V°)	100° x 100°	60° x 40°/ 60° x 60°/ 90° x 40°	60° x 40°/ 60° x 60°/ 90° x 40°	300° x 270°
LF driver	2 x 8" (—)	12" (DL12BFH)	15" (DL15BFH)	18" (DL18MT)
HF driver	1" (compression driver)	3" (DH7)	3" (DH7)	—
Crossover frequencies	2,800 Hz	1,600 Hz	1,600 Hz	130 Hz
Nominal impedance (biamped)	8 Ω	8 Ω (8 Ω/8 Ω)	8 Ω (8 Ω/8 Ω)	8 Ω
Input connections	barrier strips	Dual barrier strips	Dual barrier strips	Dual barrier strips
Dimensions (H x W at front x D)	8.75" x 24.5" x 14"	28" x 15.9" x 17.6"	28" x 19" x 23.2"	28" x 23.5" x 30"
	222 x 620 x 356 mm	711 x 401 x 445 mm	711 x 483 x 589 mm	711 x 597 x 762 mm
Net weight	40 lbs (18.2 kg)	60 lbs (27.3 kg)	70 lbs (31.8 kg)	100 lbs (45.5 kg)

FRX Systems

FRX Series loudspeakers are designed for applications in highly reverberant spaces where excellent directivity control down to 500 Hz is critical. The small components of a typical compact, aesthetically pleasing speaker system are not large enough to control the system´s rated coverage angle below about 2,500 Hz. This sprays most of the information in the vocal range off room surfaces, markedly decreasing intelligibility and clarity. EV´s FRX systems are different. In a trapezoidal enclosure not 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. FRX horn-systems are truly coaxially structured. Thus FRXs reduce aberrations in time alignment found in standard coaxial horns. By this means, they also achieve excellent coverage and directivity control.

FRX cabinets are texture-painted 7-ply plywood with a powder-coated steel grille backed with foam. FRX-122 has a cloth-covered grille.

FRX-640 (60° x 40°)
FRX-660 (60° x 60°)
FRX-940 (90° x 40°)

- Two-way, high-output, full-range loudspeaker
- High sensitivity: 101 dB/ 1 W/1 m (passive); 109 HF/105 LF
- Coaxial horn-loaded
- Vented LF horn enclosure
- 2" voice coil (titanium diaphragm)
- Trapezoidal cabinet (15° per side)
- L-Track hardware (top/bottom)
- Two single-stud Ancra® fittings included
- 3/8"-16 suspension point (rear)
- Same dimensions as FRX-181 for uniform array appearance
- PRO™ Driver protection circuit
- Time Path™ phasing plug
- Rated control to 500 Hz
- DX38 presets for excellent directivity control

Volkswagen Autostadt, Wolfsburg/Germany

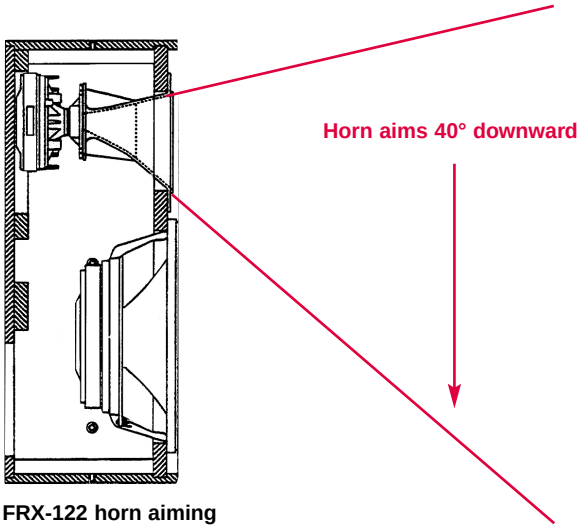
FRX-181

- Subwoofer
- Direct-radiating vented design
- Trapezoidal cabinet (15° per side)
- L-Track hardware (top/bottom)
- Two single-stud Ancra® fittings included
- 3/8"-16 suspension point (rear)
- Same dimensions as FRX-640/660/940 for uniform array appearance
- Solid response to 35 Hz (-10 dB)
- Maximum crossover point of 800 Hz allows combinations with HP horns.
- Coverage angles are greater than 100° x 100° at 800 Hz

FRX Systems

FRX-122

- Two-way, full-range loudspeaker
- Vented LF enclosure
- 2" voice coil (titanium diaphragm)
- PRO™ Driver protection circuit
- Time Path™ phasing plug
- Asymmetric horn aims 40° downward relative to front baffle
- Rectangular cabinet
- Extra-flat profile design useful also for cinema surround applications
- Twelve 1/4"-20 suspension points



FRX-122 horn aiming

Specifications	FRX-122	FRX-640	FRX-660	FRX-940	FRX-181
Frequency range (-3 dB)	75 Hz—20 kHz	50 Hz—20 kHz	50 Hz—20 kHz	50 Hz—20 kHz	43 Hz—1,000 Hz
Recommended high-pass frequency	—	—	—	—	35 Hz (12 dB/Oct.)
Sensitivity (SPL 1 W/1 m)	99 dB	101 dB	101 dB	101 dB	96 dB
(Biamped)		(105/109 dB)	(105/109 dB)	(105/109 dB)	
Max. SPL/1m (calc.)	130 dB	133 dB	133 dB	133 dB	128 dB
Long-term power handling (biamped)	300 W (300 W/60 W)	400 W (400 W/60 W)	400 W (400 W/60 W)	400 W (400 W/60 W)	400 W
Short-term power handling	1,200 W	1,600 W	1,600 W	1,600 W	1,600 W
Coverage (H° x V°)	110° x 55°	60° x 40°	60° x 60°	90° x 40°	omni
	(asym. CD Horn)				
Directivity Index	10.4 dB (+2.3/-1.6 dB)	14.1 dB (+1.9/-3.5 dB)	13.7 dB (+2.5/3.3 dB)	13.4 dB (+2.9/-3.2 dB)	3.8 dB
	800 Hz–16 kHz	500 Hz–16 kHz	500 Hz–16 kHz	500 Hz–16 kHz	50 Hz–200 Hz
LF driver	12" (DL12BFH)	15" (DL15XT)	15" (DL15XT)	15" (DL15XT)	18" (DL18MT)
HF driver	1" (DH2T)	1" (DH2T)	1" (DH2T)	1" (DH2T)	—
Crossover frequencies (passive mode)	1,800 Hz	1,800 Hz	1,800 Hz	1,800 Hz	—
Nominal impedance (biamped)	8 Ω (8 Ω/8 Ω)	8 Ω (8 Ω/8 Ω)	8 Ω (8 Ω/8 Ω)	8 Ω (8 Ω/8 Ω)	8 Ω
Input connections	Neutrik®/barrier strips	Dual barrier strips	Dual barrier strips	Dual barrier strips	Dual barrier strips
Dimensions (H x W at front x D)	23" x 17.8" x 9"	31" x 28.3" 26"	31" x 28.3" 26"	31" x 28.3" 26"	31" x 28.3" 26"
	584 x 451x 229 mm	787 x 719 x 660 mm	787 x 719 x 660 mm	787 x 719 x 660 mm	787 x 719 x 660 mm
Net weight	49 lbs (20.9 kg)	152 lbs (68.95 kg)	152 lbs (68.95 kg)	152 lbs (68.95 kg)	105 lbs (45.5 kg)

Xi-Series™

Premium touring-quality sound. Install it anywhere.

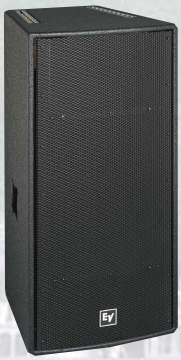
Inspired by the most demanded features of EV's acclaimed X-Array™ X-Series™ touring systems, the Xi-Series™ incorporates a potent combination of very-high-output short-, medium- and long-throw "cells," in two- and three-way configurations, all with EV's unique RMD™ (Ring-Mode Decoupling). Dual L-track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

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 and Klark Teknik DN9848 digital processors, which contain dual all-pass filters required for proper configuration.

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

Xi-1082

- Two-way, full-range loudspeaker
- Vented LF enclosure
- 1" voice coil (titanium diaphragm)
- Typical under-balcony slant also perfect for front-stage and near-field use
- Two 3/8"-16 mounting bracket inserts



Xi-1123/106F

- Three-way, high-output, full-range loudspeaker
- Vented slot-load LF enclosure
- Horn-loaded MB/HF section fully rotatable
- 3" voice coil (titanium diaphragm)
- Bypassable MB/HF passive crossover
- Dipole mode brings vertical directivity control to 250 Hz
- Excellent directivity from 500 Hz to 16 kHz
- Trapezoidal cabinet (9° per side)

Conference Hall, Luzern/Switzerland

Xi-1152/64F (60° x 40°)
Xi-1152/94F (90° x 40°)

- Two-way, full-range loudspeaker
- Solid bass to 50 Hz (-3 dB)
- Vented LF enclosure
- 3" voice coil (titanium diaphragm)
- Integrated stand mount
- Trapezoidal cabinet (15° per side)

Xi-Series™

Xi-1183/64F (18" LF section)

- Three-way, high-output, full-range loudspeaker
- Vented slot-load LF enclosure
- Coaxial horn-loaded MB/HF section is fully rotatable
- 3" voice coil (titanium diaphragm)
- Dipole mode brings vertical directivity control to 200 Hz (Xi-1153/64)
- Excellent directivity control
- Trapezoidal cabinet (9° per side)

Xi-2153/64F (15" LF section)

- Three-way, high-output, full-range loudspeaker
- Vented slot-load LF enclosure
- Coaxial horn-loaded MB/HF section is fully rotatable
- 3" voice coil (titanium diaphragm)
- Tripole™ mode brings vertical directivity control to 150 Hz
- Excellent directivity control
- Trapezoidal cabinet (9° per side)

Xi-1191

- Subwoofer
- Vented design
- Step-down tuning brings low end to 28 Hz (-3 dB)
- Superior linear excursion capability
- Accurate transient detail
- Trapezoidal cabinet (9° per side)

Xi-2181

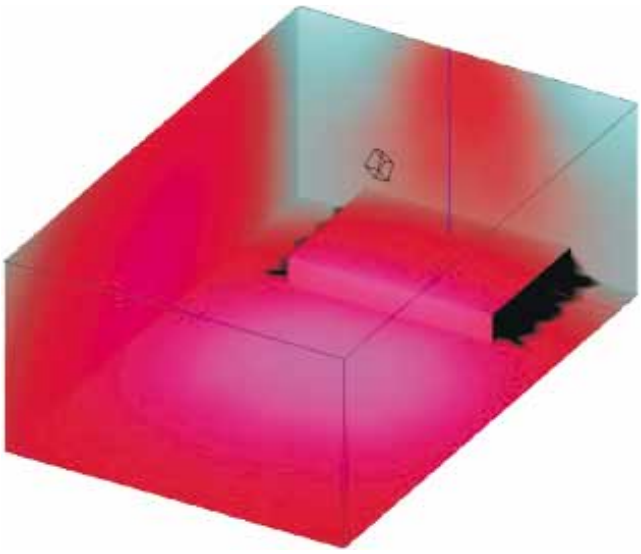
- Subwoofer
- Manifolded, vented design
- Superior linear excursion capability
- Accurate transient detail
- Trapezoidal cabinet (9° per side)

Xi-Series™

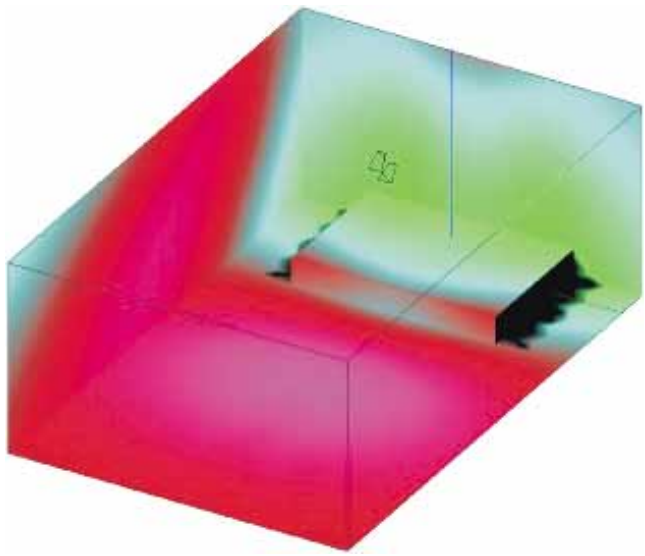
The Tripole™ advantage: Better radiation and distribution of SPL

The EASE™ drawings below illustrate the important advantages to tripole configuration of X-Array Xi speakers. The drawing on the left represents an Xi-2153 loudspeaker hung roughly 17 feet above the stage and 5 feet in front of it. SPL mapping is at 250 Hz and is indicated in red. Notice the significant spillover in the mid-bass, extending over and even to the back of the stage. This is troublesome at best for performers wearing personal microphones.

The illustration on the right represents an Xi-2153 in the same configuration, but controlled by a Dx38 digital controller (see page 46) in tripole mode. When all transducers in the cabinet are arranged as a mini line array, pattern control is greatly enhanced. Excessive SPLs in previously troublesome areas are reduced by an incredible 20 dB or more, thereby greatly enhancing microphone gain before feedback.



SPL radiation at 250 Hz without tripole configuration



SPL radiation at 250 Hz with tripole configuration

Specifications	Xi-1082	Xi-1152/64F	Xi-1152/94F	Xi-1123/106F
Frequency range (-3 dB)	50 Hz–20 kHz	50 Hz–16 kHz	50 Hz–16 kHz	80 Hz–16 kHz
Recommended high-pass frequency	60 Hz–80 Hz (12 dB/Oct.)	Dx38 preset	Dx38 preset	Dx38 preset
Sensitivity (SPL 1 W/1 m)	90 dB	98/113 dB	98/112 dB	98/109/112 dB
Max. SPL/1m	118 dB	132 dB	132 dB	129/140/137 dB
Long-term power handling	175 W	600/75 W	600/75 W	300/300/75 W
Short-term power handling	700 W	2,400/300 W	2,400/300 W	1,200/1,200/300 W
Coverage (H° x V°)	90° x 40° (CD horn)	60° x 40° (CD horn)	90° x 40° (CD horn)	100° x 60° (CD horn)
Directivity Index	11.2 dB (+1.8/-2.7 dB) 2,000 Hz–20 kHz	13.4 dB (+1.3/-2.3 dB) 1,200 Hz–16 kHz	12.3 dB (+0.7/-1.5 dB) 1,200 Hz–16 kHz	10.3 dB (+1.4/-1.2 dB) 500 Hz–16 kHz
LF driver	8" (—)	15" (EVX-155)	15" (EVX-155)	12" (DL12ST)
MB driver	—	—	—	10" (DL-type)
HF driver	1" (DH2010A)	3" (DH7)	3" (DH7)	3" (DH7)
Crossover frequencies	3,500 Hz (passive)	Dx38 preset	Dx38 preset	Dx38 preset
Nominal impedance	8 Ω	8 Ω/16 Ω	8 Ω/16 Ω	12 Ω/16 Ω/16 Ω
Input connections	barrier strip	2 Neutrik® NL4	2 Neutrik® NL4	2 Neutrik® NL8
Dimensions (H x W at front x D)	19.23" x 9.25" x 11.23" 235 x 488 x 285 mm	29.88" x 17.73" x 16.28" 759 x 450 x 413 mm	29.88" x 17.73" x 16.28" 759 x 450 x 413 mm	31.54" x 17.95" x 18.64" 801 x 456 x 473 mm
Net weight	28 lbs (13.3 kg)	90 lbs (40.8 kg)	90 lbs (40.8 kg)	125 lbs (56.8 kg)

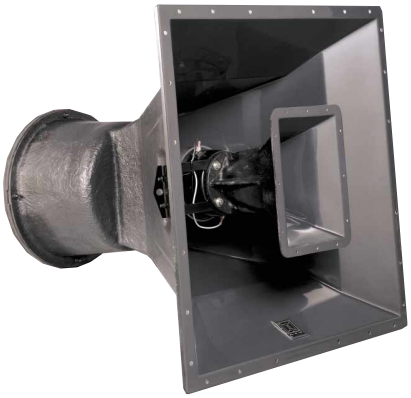
Specifications	Xi-1183/64F	Xi-2153/64F	Xi-1191	Xi-2181
Frequency range (-3 dB)	48 Hz–16 kHz	45 Hz–16 kHz	37 Hz–160 Hz	37 Hz–200 Hz
Recommended high-pass frequency	Dx38 preset	Dx38 preset	Dx38 preset	Dx38 preset
Sensitivity (SPL 1 W/1 m)	94/107/112 dB	96/107/112 dB	94 dB	99 dB
Max. SPL/1m (calc.)	128/138/137 dB	133/138/137 dB	128 dB	136 dB
Long-term power handling	600/300/75 W	1,200/300/75 W	600 W	1,200 W
Short-term power handling	2,400/1,200/300 W	4,800/1,200/300 W	2,400 W	4,800 W
Coverage (H° x V°)	60° x 40° (CD horn)	60° x 40° (CD horn)	essentially omni	essentially omni
Directivity Index	13.3 dB (+1.4/-1.1dB) 800 Hz–16 kHz	13.4 dB (+1.4/-1.2 dB) 800 Hz–16 kHz	2.7 dB (+1.0/-0.6 dB) 63 Hz–100 Hz	3.4 dB (+1.4/-0.9dB) 63 Hz–200 Hz
LF driver	18" (EVX-180B)	2 x 15" (EVX-155)	18" (EVX-180B)	2 x 18" (EVX-180B)
MB driver	12" (DL12ST)	12" (DL12ST)	—	—
HF driver	3" (DH7)	3" (DH7)	—	—
Crossover frequencies	Dx38 preset	Dx38 preset	Dx38 preset	Dx38 preset
Nominal impedance	8 Ω/16 Ω/16 Ω	4 Ω/16 Ω/16 Ω	8 Ω	2 x 8 Ω
Input connections	2 Neutrik® NL8	2 Neutrik® NL8	2 Neutrik® NL8	2 Neutrik® NL8
Dimensions (H x W at front x D)	36" x 23.07" x 29.88" 914 x 586 x 759 mm	48.54" x 23.07" 29.88" 1.233 x 586 x 759 mm	36" x 23.07" x 29.88" 914 x 586 x 759 mm	36" x 23.07" x 29.88" 914 x 586 x 759 mm
Net weight	205 lbs (93.0 kg)	250 lbs (113.4 kg)	150 lbs (68.0 kg)	184 lbs (83.5 kg)

MH-Series Stadium Horns

MH-Series stadium horns are designed for large-scale stadiums and arenas where high-fidelity sound and directivity control from low mid-bass frequencies and below are absolutely essential. In 1974, EV pioneered the concepts of constant directivity (horn angles that are constant with frequency) and Manifold® technology (which combines the outputs of multiple transducers into one source). Large-format MH horns incorporate both in several horn/driver systems. Medium-format MH horns are excellent for short/medium throw applications or as infills for large-format MH-horns.

Medium-format MH-Series horns

MH medium-format horns have a high Q and uniform directivity control down to 500 Hz. The mid-bass section features an Aperiodic Enhancer™ phase plug which extends the high-end output to blend seamlessly into the coaxial high-frequency section. The HF section contains a small-format HP horn with EV´s patented Transplanar™ design to provide exceptionally smooth frequency response. The one-piece main horn bell is a black polyester/fiberglass laminate with composite reinforcement. Up to three pieces can be paralleled in active or passive mode without a minimum impedance load at the amplifier.



MH640C/MH640P (60° x 40°)
MH660C/MH660P (60° x 60°)
MH940C/MH940P (90° x 40°)

- Two-way, extraordinary output mid/high CD horn system
- High sensitivity: 107 dB/1 W/1 m
- Coaxial horn-loaded
- P version has passive crossover
- Water-resistant Kevlar® epoxy cone
- MB horn features Aperiodic Enhancer™ phase plug
- 2" voice coil (titanium diaphragm)
- HF driver protection circuit
- Uniform directivity control to 500 Hz
- All models have same dimensions for uniform-looking arrays
- Integral 4-point hanging hardware in polyester-powder-coated steel

Large-format MH-horns

MH large-format horns feature Manifold® technology, high “Q,” and uniform directivity control. MH horns maintain beamwidth to 250 Hz, reducing bass “spillover” and increasing intelligibility. The HF section contains an appropriate medium-format HP horn that accepts EV two-inch-exit single or dual drivers of the designer´s choice, extending response to 20 kHz. The large horn size also provides frequency response to 100 Hz, typically eliminating the need for supplemental low-frequency systems. The mid-bass section features the Aperiodic Enhancer™ phase plug. The main horn bell is a one-piece black polyester and fibreglass with fibreglass rib reinforcement and an integral grille-protection screen built into the manifold chamber.

MH4020AC (40° x 20°)
MH6040AC (60° x 40°)
MH9040AC (90° x 40°)

- Two-way, extraordinary output CD horn system
- Coaxial horn-loaded
- Highest sensitivity
- Full-range down to 100 Hz (-10 dB)
- Mid-bass features Aperiodic Enhancer™ and Manifold® Technology
- Water-resistant Kevlar® epoxy cone
- HF-horn with 2-inch throat diameter (Designer chooses driver)
- Excellent uniform directivity control down to low frequencies
- Same front dimensions for uniform appearance when used in arrays
- Integral 18-point hanging hardware in powder-coated steel

Specifications	MH640C/P	MH660C/P	MH940C/P	MH4020AC	MH6040AC	MH9040AC
Frequency range (-3 dB)	150 Hz–20 kHz	150 Hz–20 kHz	150 Hz–20 kHz	100 Hz–20 kHz	100 Hz–20 kHz	100 Hz–20 kHz
Recommended high-pass frequency	160 Hz (24 dB/Oct.)	160 Hz (24 dB/Oct.)	160 Hz (24 dB/Oct.)	130 Hz (24 dB/Oct.)	130 Hz (24 dB/Oct.)	130 Hz (24 dB/Oct.)
Sensitivity (SPL 1 W/1 m)	107/111 dB; 107 dB	107/111 dB; 107 dB	107/111 dB; 107 dB	109 dB	107 dB	105 dB
Max. SPL/1m (calc.)	138 dB	138 dB	138 dB	146 dB	141 dB	139 dB
Long-term power handling	300 W/60 W; 300 W	300 W/60 W; 300 W	300 W/60 W; 300 W	1,200 W	600 W	600 W
Short-term power handling	1,200 W/240 W; 1,200 W	1,200 W/240 W; 1,200 W	1,200 W/240 W; 1,200 W	4,800 W	2,400 W	2,400 W
Coverage (H° x V°)	60° x 40° (CD Horn)	60° x 60° (CD Horn)	90° x 40° (CD Horn)	40° x 20° (CD Horn)	60° x 40° (CD Horn)	90° x 40° (CD Horn)
Directivity Index (500 Hz–20 kHz)	13.7 dB (+1.6/-2.8 dB)	13.7 dB (+1.6/-2.8 dB)	12.6 dB (+3.8/-4.0 dB)	18.0 dB (—/—)	13.8 dB (+0.9/-1.1 dB)	10.2 dB (+0.9/-1.1 dB)
LF driver	10" (DL10X)	10" (DL10X)	10" (DL10X)	4 x 10" (DL10X)	2 x 10" (DL10X)	2 x 10" (DL10X)
HF driver	2"	2"	2"	2"	2"	2"
Crossover frequencies (slope in biamp mode)	1,600 Hz (24 dB/Oct.)	1,600 Hz (24 dB/Oct.)	1,600 Hz (24 dB/Oct.)	1,600 Hz (24 dB/Oct.)	1,250 Hz (24 dB/Oct.)	1,250 Hz (24 dB/Oct.)
Nominal impedance	16 Ω/8 Ω; 8 Ω	16 Ω/8 Ω; 8 Ω	16 Ω/8 Ω; 8 Ω	2 x 8 Ω	8 Ω	8 Ω
Input connections	Dual barrier strips	Dual barrier strips	Dual barrier strips	Heavy-duty copper cable	Heavy-duty copper cable	Heavy-duty copper cable
Dimensions (H x W at front x D)	27" x 27" x 28" 686 x 686 x 711 mm	27" x 27" x 28" 686 x 686 x 711 mm	27" x 27" x 28" 686 x 686 x 711 mm	59" x 39" x 73.9" 1500 x 991 x 1880 mm	59" x 39" x 73.9" 1500 x 991 x 1873 mm	59" x 39" x 60.4" 1500 x 991 x 1534 mm
Net weight (Large format: without HF driver)	60 lbs (27.2 kg)	60 lbs (27.2 kg)	60 lbs (27.2 kg)	237 lbs (108 kg)	165 lbs (75 kg)	165 lbs (75 kg)

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Cinema Systems

Cinema. For a medium generally thought of as visual, the quality of a cinema´s sound system often determines the “cinema experience” for the paying customer. For years Electro-Voice® has supplied loudspeaker systems to the cinema industry which meet or exceed standards set by THX® and Dolby® Laboratories. Every summer, with the release of the latest blockbuster action film, new benchmarks for acoustic performance are set, and EV continues to meet these demands with new innovations. In short, products that meet the demands of digital sound on film.

At Electro-Voice we offer the engineering knowledge and expertise to design and manufacture products “from the ground up”. EV loudspeakers are conceived from the component level and integrated into high-performance screen channel, surround and subwoofer systems. We are committed to developing new technologies and achieving new levels of performance for cinema loudspeaker systems.

Variplex™ Systems

The Variplex™ three-way screen system incorporates our patended Vari Intense® (variable intensity) technology to establish a new level of audio performance. The VI horn provides 10 dB more output on the long throw axis to the back of the cinema resulting in unprecedented even coverage, as shown below. We have also added Ring-Mode Decoupling (RMD™) to the system, increasing the intelligibility and clarity in the vocal range. The Variplex™ is one example of the many EV systems which are THX® approved. They join the large, diverse family of Electro-Voice cinema products developed for cinemas both large and small. This wide range of products and time-proven acoustic excellence means that you can design systems that “fit” any room, and more importantly, that the “cinema experience” will be the best your customers have ever heard. And take note: The THX®-approved, high-quality CPS Series amplifiers (see page 45) are part of this formula for success.

Specifications	Variplex™	Variplex™-B	Variplex™ XL
Frequency range	45 Hz–20 kHz	45 Hz–20 kHz	45 Hz–20 kHz
Sensitivity, 1 W/1 m: Triamp (LF/MB/HF)	100/105.8/112 dB	100/105.8/112 dB	104/109/112 dB
Sensitivity, 1 W/1 m: Biamp (LF/MB/HF)	N/A	100/105.8 dB	—
Max. SPL/1m (calc.) (average/peak)	129 dB/135 dB	128 dB/135 dB	131 dB/138 dB
Crossover frequencies (LF/MF)	330 Hz/1,560 Hz	330 Hz (LF/MF)	300 Hz/1,560 Hz
Long-term power handling (LF/MB/HF)	800 W/400 W/60 W	800 W/400 W/60 W	1,600W/600 W/75 W
Short-term power handling (LF/MB/HF)	3,200 W/1,200 W/240 W	3,200 W/1,200 W/240 W	6,400 W/2,400 W/300 W
Coverage: Horizontal (long axis/short axis)	60°/90°	60°/90°	60°/90°
Coverage: Vertical (up/down)	5°/50°	5°/50°	5°/50°
HF driver	DH2T	DH2T	ND5-16
MB driver	2 x 8MD	2 x 8MD	DL10XVP
LF driver	2 x DL15ST	2 x DL15ST	4 x DL15ST
Nominal impedance (LF/MB/HF)	4/4/8 Ω	4/4/8 Ω	2 x 6/4/16 Ω
Input connections	screw terminals	screw terminals	screw terminals
Dimensions (H x W at front x D)	82.3" x 23.5" x 18.37" 2,090 x 597 x 467 mm	82.3" x 23.5" x 18.37" 2,090 x 597 x 467 mm	82.3" x 45.3" x 20.13" 2,090 x 1,150 x 511.3 mm
Net weight	172.5 lbs (73.7 kg)	172.5 lbs (73.7 kg)	305 lbs (138.35 kg)

Cinema Systems

Two-Way Systems

Electro-Voice® two-way screen systems offer flexibility in size and high-quality sound output for a variety of cinema applications. The TS9040D-LX and the TS550D-LX, both large-format systems, feature very high efficiency and are THX®-compatible. The medium-format TS940D is includes a passive crossover, and the small-format TS992E's innovative flat-cabinet design saves considerable space behind the screen. For efficiency, wide-ranging application solutions, and incredible sound quality, nothing beats EV screen systems.

TS9040D-LX

- Large-format, two-way screen system
- Provides excellent acoustical performance in large or small rooms.
- THX® approved
- Digital Dynamics Capable™
- Wide, smooth frequency response

TS940D

- Medium-format, two-way screen system
- HP940T horn/ND6 driver
- XEQ-504 crossover for single-channel operation
- Smooth, accurate sound
- Passive crossover for single-channel operation

TS992E

- Small-format, two-way screen system
- DH2T HF driver with HP99C horn
- TL15-1ESX LF system
- 10" depth: low-profile system

Specifications	TS9040D-LX	TS940D	TS992E
Frequency range	32 Hz–20 kHz	32 Hz–20 kHz	30 Hz–20 kHz
Max. SPL/1m (calc.)	111 dB/100 dB	111 dB/100 dB	110 dB/98 dB
Crossover frequency	500 Hz	500 Hz	1,150 Hz
Long-term power handling (LF/HF)	800 W/50 W	800 W/50 W	600 W/60 W
Short-term power handling (LF/HF)	3,200 W/200 W	3,200 W/200 W	2,400 W/240 W
Coverage (H x V)	90°/40°	90°/40°	90°/90°
HF driver	ND6	ND6	DH2T
HF horn	HP9040T	HP940T	HP99C
LF driver	2 x DL15ST	2 x DL15ST	DL15ST
Nominal impedance	8 Ω	8 Ω	8 Ω
Input connections	screw terminals	screw terminals	screw terminals
Dimensions (H x W at front x D)	71.5" x 26.8" x 37.3" 1,816 x 681 x 947 mm	71.5" x 26.8" x 16.1" 1,816 x 681 x 414 mm	51" x 26.75" x 10" 1,295 x 680 x 254 mm
Net weight	165 lbs (74.8 kg)	165 lbs (74.8 kg)	101 lbs (46 kg)

Cinema Systems

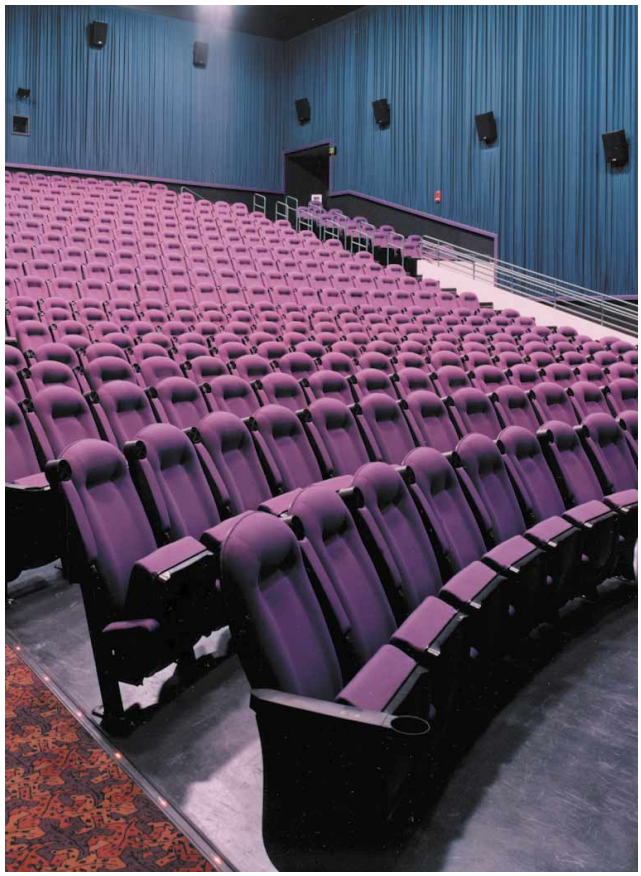
Low-Frequency Systems

TL606DMT

- Low-frequency loudspeaker system featuring DL15MT woofers
- High efficiency and low distortion
- Increased longevity under extreme power conditions
- Digital Dynamics Capable™

TL550D

- Low-frequency loudspeaker system featuring high-output EVX150A woofers
- High output and low distortion
- Increased longevity under extreme power conditions



Surround Loudspeakers

SL12-2V and SL10-2V

- High-output, two-way surround loudspeaker
- Versatile suspension and safety options
- 15° slanted cabinet
- Exceptionally wide and smooth frequency response
- SL10-2V model has 10" woofer
- THX® compatible
- Digital Dynamics Capable™

Specifications	TL606DMT	TS550D	SL12-2V	SL10-2V
Frequency range	40 Hz–3,500 Hz	40 Hz–2,000 Hz	70 Hz–20 kHz	60 Hz–20 kHz
Max. SPL/1 m (calc.)	100-800 Hz: 100 dB 40-125 Hz: 96 dB	100-800 Hz: 100 dB 50-125 Hz: 95 dB	93 dB	93 dB
Crossover frequency	—	—	1,600 Hz	1,600 Hz
Long-term power handling	800 W	1,200 W	200 W	100 W
Short-term power handling	3,200 W	4,800 W	800 W	400 W
Coverage (H x V)	omnidirectional	omnidirectional	110°/95°	100°/100°
HF driver	—	—	DH2010A	1" compression driver
LF driver	2 x DL15ST	2 x EVX-150A	12" woofer	10" woofer
Nominal impedance	4 Ω	4 Ω	8 Ω	8 Ω
Input connections	screw terminals	screw terminals	screw terminals	screw terminals
Dimensions (H x W at front x D)	39.5" x 22.5" x 17.6" 1,003 x 572 x 447 mm	39.5" x 22.5" x 21.8" 1,003 x 572 x 554 mm	21.07" x 18.75" x 13.2" 5,35 x 476 x 335 mm	18.75" x 12.5" x 10.81" 476 x 318 x 275 mm
Net weight	108 lbs (49 kg)	130 lbs (59.1 kg)	47 lbs (21.4 kg)	23.1 lbs (10.5 kg)

Cinema Systems

Subwoofers

Subwoofers offer a variety of low-frequency solutions for general fixed installation or additional LF supplementation in existing installations. Low-frequency systems have f3s (the point at which response is -3 dB down) as low as 40 Hz. In general, response below 40 Hz is required for theatrical effects, full reproduction of pipe organs, and some special effects in contemporary music such as synthesizers and down-tuned bass guitars. The TL 880D is especially suited for this special type of application. Some TL subwoofers are THX® approved for cinema usage.

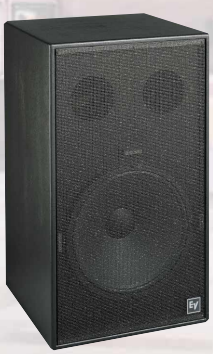
Note: TL subwoofers have unprotected fronts and woofers, and should be used only in inaccessible areas.

TL880D

- Very-low-frequency subwoofer
- Direct radiating vented design
- High acoustic output to below 20 Hz (-10 dB) allows real low end effects
- THX® approved

TL440

- Very-low-frequency subwoofer
- Direct radiating vented design
- High acoustic output featuring single EVX180B woofer
- THX® approved



TL3512

- Very-low-frequency subwoofer
- Direct radiating vented design
- THX® approved

TL18-1ES

- Low-frequency subwoofer
- Direct radiating vented design
- 38 Hz low end for rich bass
- Ultrathin depth

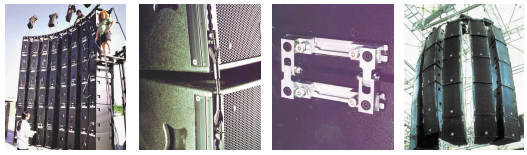
Specifications	TL880D	TL440	TL3512	TL18-1ES
Frequency range	23 Hz–1,800 Hz	33 Hz–3,200 Hz	38 Hz–3,200 Hz	38 Hz–2,000 Hz
Sensitivity, 1 W/1 m	96 dB	95 dB	99 dB	96 dB
Max. SPL/1m (calc.)	50-125 Hz: 96 dB 100-800 Hz: 98 dB	33-125 Hz: 95 dB 100-800 Hz: 98 dB	38–125 Hz: 95 dB 100-800 Hz: 99 dB	128dB
Long-term power handling	1,200 W	600 W	400 W	400 W
Short-term power handling	2,000 W	2,400 W	1,600 W	1,600 W
Coverage (<125 Hz)	omnidirectional	omnidirectional	omnidirectional	omnidirectional
LF driver	2 x EVX180A	EVX180A	DL18MT	DL18MT
Nominal impedance	4 Ω	8 Ω	8 Ω	8 Ω
Input connections (in vertical position)	barrier strip (side)	barrier strip (side)	barrier strip (side)	barrier strip (top)
Dimensions (H x W at front x D)	47.5" x 30" x 23.8" 1,210 x 762 x 605 mm	39.5" x 22.5" x 22" 1,003 x 572 x 559 mm	39.5" x 22.5" x 22" 1,003 x 572 x 559 mm	47" x 26.75" x 10" 1,193 x 680 x 254 mm
Net weight	160 lbs (72.6 kg)	108 lbs (49 kg)	108 lbs (49 kg)	95 lbs (43.09 kg)

X-Array™

X-Array™ X-Series™ speaker systems provide world-class performance and flexibility for the ultimate in concert touring systems. It incorporates unique “one-man” rigging and versatility 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 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. Special speaker dollies are available for easier handling. X-Array™ has unprecedented acoustic output and excellent directivity control.

Rigging for big hangs: efficient rear-hinge rigging for fast, easy and secure rigging. A 64-box hang goes up or down in 30 minutes. Front rigging cables control vertical aiming; rear fixed hinge makes tilting easy. Mating positioning recesses on cabinet tops and bottoms help to assemble and disassemble an array on the ground, a layer at a time. Detailed flying instructions and structural ratings are available.
The X-Array™ one-person rigging hardware is TÜV approved.



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 ND5-16 compression driver increases output in the upper octaves. The ND5-16 driver features a 3.5-inch titanium diaphragm.

Amps and controller: X-Array™ X-Series™ is powered by EV´s world-famous Precision Series™ power amplifiers and controlled by the Klark Teknik® DN9848 digital controller or the Electro-Voice® Dx38 for flexible and easy configurations. Flying amp racks are available.

X-Array™ cabinets are made of 13-ply birch plywood finished in black textured paint and protected by a powder-coated, foam-backed steel front grille for a professional appearance.

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

Xn

- Three-way, 18-inch, medium-throw full-range system
- Horn-loaded mid-bass section
- Coaxial HF section is asymmetrically placed (RMD™ technique)

Xb

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

Note: Xf, Xn, and Xb look identical.

Xcn

- Compact two-way, 12-inch, medium-throw MB/HF system
- The MB/HF section of the Xn
- Use for downfill at the bottom of the hang, or for smaller venues
- Two-thirds-height X-Array enclosure shell

Xcb

- 18-inch low-frequency system
- Use for more modest LF requirements, or for smaller venues
- Two-thirds-height X-Array enclosure shell

Xw12/Xw15

- Two-way, high-output floor monitors for X-Array
- For pictures and specifications, please see p. 18.

Note: Xcn and Xcb look identical.

X-Array™

Xds

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

Specifications	Xf	Xn	Xcn
Frequency range (-3 dB)	140 Hz–20 kHz	48 Hz–20 kHz	125 Hz–20 kHz
Recommended high-pass frequency	125 Hz	50 Hz	125 Hz
Sensitivity (SPL 1 W/1 m) (LF/HF)	112 dB/116 dB	95 dB/110 dB (MB)/112 dB	110 dB/112 dB
Max. SPL/1m (calc.) (LF/HF)	146 dB/144 dB	123 dB/135 dB (MB)/131 dB	135 dB/131 dB
Long-term power handling (LF/HF)	600 W/150 W	600 W/300 W (MB)/75 W	300 W/75 W
Short-term power handling (LF/HF)	2,400 W/600 W	2,400 W/1,200 W (MB)/300 W	1,200 W/300 W
Coverage (H° x V°)	40° x 20° (CD Horn)	60° x 40° (CD Horn)	60° x 40° (CD Horn)
Directivity Index	17.2 dB (+2.0 dB/-2.7 dB) 800 Hz–16 kHz	13.7 dB (+1.4 dB/-1.4 dB) 800 Hz–16 kHz	13.4 dB (+2.0 dB/-1.8 dB) 800 Hz–16 kHz
LF driver	—	18" (EVX-180B)	—
MB driver	2 x 12" (ND12A)	12" (ND12A)	12" (ND12A)
HF driver	2 x 1.4" (ND5-16)	1.4" (ND5-16)	1.4" (ND5-16)
Crossover frequencies	125 Hz	125 Hz	1760 Hz
Nominal impedance	8 Ω/8 Ω	8 Ω/16 Ω/16 Ω	16 Ω/16 Ω
Input connections	2 Neutrik® NL8	2 Neutrik® NL8	2 Neutrik® NL8
Dimensions (H x W at front x D)	36" x 23" x 29.8" 1,067 x 584 x 759 mm	36" x 23" x 29.8" 1,067 x 584 x 759 mm	23.46" x 23" x 29.8" 596 x 584 x 759 mm
Net weight	192 lbs (87.1 kg)	192 lbs (87.1 kg)	134 lbs (60.8 kg)

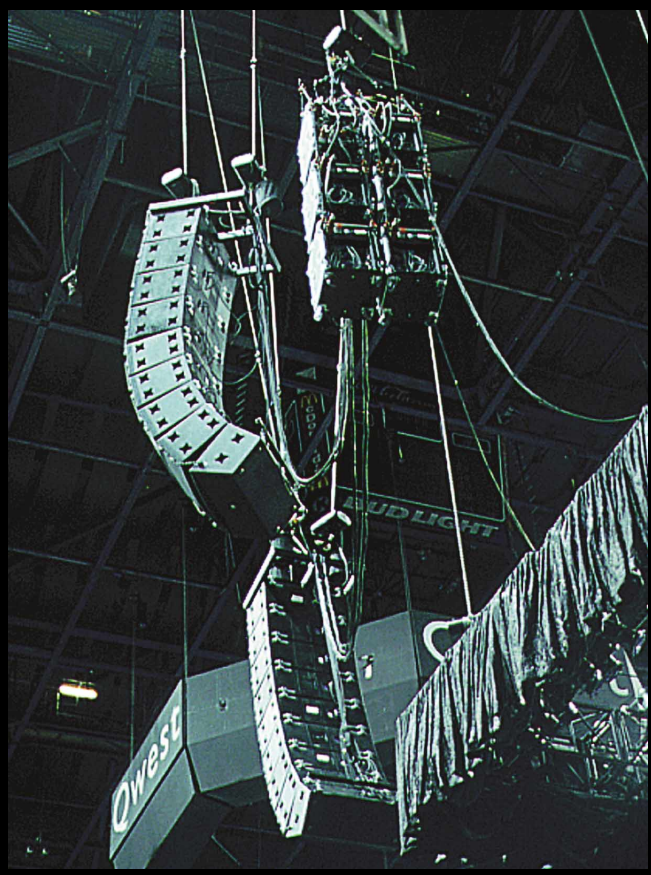
	Xb	Xcb	Xds
Frequency range (-3 dB)	37 Hz–200 Hz	37 Hz–200 Hz	32 Hz–200 Hz
Recommended high-pass frequency	40 Hz	40 Hz	33 Hz
Sensitivity (SPL 1 W/1 m)	98.5 dB	95 dB	100 dB
Max. SPL/1m (calc.)	129 dB	123 dB	131 dB
Long-term power handling	1,200 W	600 W	1,200 W
Short-term power handling	4,800 W	2,400 W	4,800 W
Coverage (H° x V°)	240° x 300° (63–200 Hz)	300° x 270° (63–200 Hz)	180° x 200° (63–200 Hz)
Directivity Index	3.4 dB (+1.4 dB/-0.9 dB) 63 Hz–200 Hz	2.7 dB (+1.0 dB/-0.6 dB) 63 Hz–200 Hz	4.8 dB (+2.1 dB/-1.7 dB) 63 Hz–200 Hz
LF driver	2 x 18" (EVX-180B)	18" (EVX-180B)	2 x 18" (EVX-180B)
MB driver	—	—	—
HF driver	—	—	—
Crossover frequencies	125 Hz	125 Hz	80 Hz
Nominal impedance	2 x 8 Ω	8 Ω	2 x 8 Ω
Input connections	2 Neutrik® NL8	2 Neutrik® NL8	2 Neutrik® NL8
Dimensions (H x W at front x D)	36" x 23" x 29.8" 1,067 x 584 x 759 mm	23.46" x 23" x 29.8" 596 x 584 x 759 mm	36" x 28.9" x 29.8" 914 x 1,166 x 759 mm
Net weight	184 lbs (83.5 kg)	123 lbs (55.8 kg)	267 lbs (121 kg)

X-Line™

Development of the new EV® X-Line™ system was driven by the need for a high-level concert touring enclosure that combines the sonic impact and vocal intelligibility of the renowned X-Array™ system with the uniform, predictable coverage that only a line-array configuration can deliver. The EV engineering team set out to develop the next generation of line-array systems, combining their years of experience in the development of X-Array™ with the absolute latest state-of-the-art technologies. As a matter of course, X-Line™ features the essential acoustical advantage of RMD™.

The X-Line™ system was designed to provide wide horizontal dispersion (90 degrees) from a single vertical line array while providing exceptionally coherent wavefront summing in the vertical plane. At the heart of X-Line™ is a newly developed high-frequency wavefront alignment and summation device—the Hydra™—that provides planar and time-coherent signal addition. The broad bandwidth vertical planar summing provides uniform sound field distribution throughout the listening area.

Stereo imaging is improved by the X-Line™´s full-bandwidth mid-bass loading. Extended low-frequency polar control produces more uniform power response, further enhancing overall system intelligibility. The overall power response of the X-Line™ is very uniform across a wide frequency spectrum, thus enabling the system´s very musical sonic character.



If every performance space conformed to the same acoustic ideal, any linear loudspeaker array would suffice. But every arena, concert hall, and stadium is a unique space, and the one-box, one-dimensional design of most linear arrays just can´t adapt. X-Line™ is different. X-Line™ combines the power and vocal clarity of the X-Array™ with a versatile, fully configurable linear array design, plus the efficiency of one-person rigging.

X-Line™ lets you stack Xvls enclosures at the top of an array for long throw with a 90° horizontal included angle, followed by Xvlt enclosures for the shorter throw and 120° horizontal coverage needed at the J-curve of the array. Beneath the array, Xfil enclosures provide downfill coverage that maintains the vertical integrity of the array. Completing the X-Line™ system are Xsub subwoofers that can be flown next to the main array or ground stacked.

X-Line™ is made of 13-ply birch plywood with structural aluminum reinforcement and is finished with a rugged foam-backed steel grille to protect the drivers. A user guide with detailed specifications is available on request. Electro-Voice recommends using the Klark Teknik DN9848 as the system controller, along with EV® P3000 power amplifiers, for amplification.

X-Line™

Xvls

New product

- High-output, three-way line-array system
- Rectangular cabinet designed for upper section of linear array
- 90° horizontal coverage pattern ideal for long-throw applications
- New EV® Hydra™ time-synchronized HF vertical plane-wave generator provides excellent far-field summing
- Ring Mode Decoupling® (RMD®) provides level-independent fidelity, greater midbass clarity, and high frequency accuracy
- Proprietary rigging allows for rapid venue load-in and load-out (linking hardware included)

Xvlt

New product

- High-output, three-way line-array system
- Five-degree trapezoidal cabinet design for lower "J" section of linear array
- 120° horizontal coverage typical for medium-throw assignment
- New EV Hydra™ time-synchronized HF vertical plane wave generator provides excellent far-field summing
- Ring Mode Decoupling® (RMD®) provides level-independent fidelity, greater midbass clarity, and high frequency accuracy
- Proprietary rigging allows for rapid venue load-in and load-out (linking hardware included).

Note: Some speakers shown without grilles

Xfil1/Xfil2

New product

- High-output, two-way line-array system
- Downfill system designed to complement a line array of Xvls and Xvlt systems for near-field assignment with 120º horizontal coverage
- Wide 40° vertical coverage with voicing similar to other X-Line™ models for smooth transition from near-field to mid-field
- Ring Mode Decoupling® (RMD®) provides level-independent fidelity, greater midbass clarity, and high-frequency accuracy
- Proprietary rigging allows for rapid venue load-in and load-out (linking hardware included)
- Mirror-imaged Xfil1 and Xfil2 models for left and right sides.

Xsub/f

New product

- High-output, line-array subwoofer system
- Rectangular cabinet with footprint identical to other X-Line systems
- Can be flown or ground-stacked with non-flying version
- Ring Mode Decoupling® (RMD®) provides level-independent fidelity
- Proprietary rigging allows for rapid venue load-in and load-out (linking hardware included)

Specifications	Xvls	Xvlt	Xfil1/Xfil2	Xsub/f
Frequency range (-3 dB)	40 Hz–16 kHz	40 Hz–16 kHz	40 Hz–16 kHz	33–400 Hz
Recommended high-pass frequency	50 Hz	50 Hz	50 Hz	33 Hz
Sensitivity (SPL 1 W/1 m) (LF/MB/HF)	101 dB/111 dB/118 dB	101 dB/111 dB/117 dB	101 dB/107 dB/112 dB	103 dB
Max. SPL/1m (calc.) (LF/MB/HF)	132 dB/139 dB/142 dB	132 dB/139 dB/141 dB	132 dB/135 dB/134 dB	134 dB
Long-term power handling (LF/MB/HF)	1,200 W/600 W/225 W	1,200 W/600 W/225 W	1,200 W/600 W/150 W	1,200 W
Short-term power handling (LF/MB/HF)	4,800 W/2,400 W/900 W	4,800 W/2,400 W/900 W	4,800 W/2,400 W/600 W	4,800 W
Coverage (H° x V°)	90° x 5°	120° x 9°	120° x 40°	200° x 325°
LF driver	2 x EVX-155 Plate	2 x EVX-155 Plate	2 x EVX-155 Plate	2 x EVX-180B
MB driver	2 x ND8A	2 x ND8A	2 x ND8A	—
HF driver	3 x ND5A	3 x ND5A	2 x ND5A	—
Crossover frequencies	220 Hz/1,250 Hz	220 Hz/1,250 Hz	220 Hz/1,250 Hz	80 Hz
Nominal impedance	2 x 8 Ω/8 Ω/5.3 Ω	2 x 8 Ω/8 Ω/5.3 Ω	2 x 8 Ω/8 Ω/8 Ω	2 x 8 Ω
Input connections	2 Neutrik® NL8	2 Neutrik® NL8	2 Neutrik® NL8	2 Neutrik® NL8
Dimensions (H [front/rear] x W x D)	19.46"/19.46" x 49" x 29.15" 494.3/494.3 x 1244.6 x 740.4 mm	19.46"/16.92" x 49" x 29.15" 494.3/429.7 x 1244.6 x 740.4 mm	19.46"/16.92" x 49" x 29.15" 494.3/429.7 x 1244.6 x 740.4 mm	19.46"/19.46" x 49" x 29.15" 494.3/494.3 x 1244.6 x 740.4 mm
Net weight	257 lbs (117 kg)	253 lbs (115 kg)	253 lbs (115 kg)	202 lbs (92 kg)

Components

In the late 1960s and early 1970s, two Australians—A.N. Thiele and R.H. Small—developed the parameters by which the performance of loudspeaker components could be accurately predicted before manufacture. With the Thiele-Small Parameters, engineers could design loudspeakers on paper instead of by expensive trial and error. In 1972, EV became the first U.S. manufacturer to design and produce components according to these parameters. EV's cutting-edge components today are part of that legacy of technological excellence.

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 woofers feature proprietary heat-transfer systems for unmatched power capacity and reliability. Kevlar®-fiber-composite cones are used to provide structural strength to resist collapse during explosive dynamic peaks and to provide internal mechanical damping to minimize resonances that can change the character of the sound at high levels. DL and EVX woofers are made of cast aluminium frames with push terminals, and all feature Ring-Mode Decoupling™ (RMD™) except for the DL18MT and the EVX180B.

DL10X

- 10" loudspeaker ideal for high-power mid-bass applications or 2-way systems for voice reinforcement
- 300 W EIA power rating
- Good choice for direct-radiating or horn-loading
- RMD™ technology ensures level-independent vocal-range fidelity

DL12BFH

- 12" loudspeaker ideal for high-power 2-way systems
- 300 W EIA power rating
- Good choice for direct-radiating
- RMD™ technology ensures level-independent vocal-range fidelity

DL12ST

- 12" loudspeaker ideal for high-power 2-way systems or mid-bass
- 300 W EIA power rating with maximum SPL output
- Good choice for direct-radiating
- RMD™ technology ensures level-independent vocal-range fidelity

DL15BFH

- 15" loudspeaker ideal for high-power bass boxes or 2-way systems
- 350 W EIA power rating
- Good choice for direct-radiating
- RMD™ technology provides smooth vocal performance with low-frequency impact

DL15ST

- 15" loudspeaker ideal for high-power bass boxes or 2-way systems
- 400 W EIA power rating with maximum SPL output
- Good choice for direct-radiating or horn-loading
- RMD™ technology provides smooth vocal performance with low-frequency impact

DL18MT

- 18" loudspeaker ideal for high-power subwoofer systems
- 400 W EIA power rating
- Good choice for direct-radiating or horn-loading

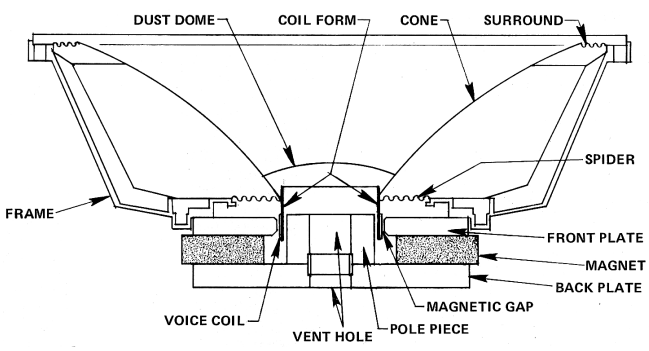
EVX155

- 15" loudspeaker ideal for high-power bass boxes or 2-way systems
- 600 W EIA and 1,000 W program power ratings
- EV's highest-performance 15" woofer with maximum excursion and SPL capability
- Good choice for direct-radiating or horn-loading
- RMD™ technology provides smooth vocal performance with low-frequency impact

EVX180B

- 18" loudspeaker ideal for high-power subwoofer systems
- 600 W EIA and 1,000 W program power ratings
- EV's highest-performance 18" woofer
- Very high excursion capability produces very high acoustic power
- Good choice for direct-radiating or horn-loading

Speaker Parts



Components

Woofer Specifications	DL10X	DL12BFH	DL12ST	DL15BFH	DL15ST
Cone diameter	10" (254 mm)	12" (305 mm)	12" (305 mm)	15" (381 mm)	15" (381 mm)
Coil diameter	2.5" (63.5 mm)	2.5" (63.5 mm)	2.5" (63.5 mm)	2.5" (63.5 mm)	2.5" (63.5 mm)
Impedance	8 Ω	8 Ω	8 Ω	8 Ω	8 Ω
Frequency range	100–2,000 Hz	60–2,500 Hz	60–2,000 Hz	45–2,000 Hz	45–2,000 Hz
Long-term power rating (EIA)	300 W	300 W	300 W	350 W	400 W
Short-term power rating	1,200 W	1,200 W	1,200 W	1,400 W	1,600 W
Sensitivity (1 W @ 1 m)	97 dB	96 dB	98 dB	96 dB	95 dB
Maximum SPL	121.8 dB	120.8 dB	122.8 dB	121.4 dB	121.0 dB
Efficiency	4.21%	3.69%	5.60%	3.93%	2.66%
Frame front diameter	10.22" (259.5 mm)	12.19" (309.6 mm)	12.19" (309.6 mm)	15.16" (305.0 mm)	15.16" (305.0 mm)
Magnet diameter	7.50" (190.5 mm)	6.13" (155.6 mm)	7.50" (190.5 mm)	6.13" (155.6 mm)	7.50" (190.5 mm)
Overall depth	4.50" (114.3 mm)	5.25" (133.4 mm)	5.25" (133.4 mm)	6.00" (152.4 mm)	6.25" (158.8 mm)
Mounting bolt circle diameter	9.625" (244.5 mm)	11.563" (293.7 mm)	11.563" (293.7 mm)	14.563" (369.9 mm)	14.563" (369.9 mm)
Baffle cutout diameter	9.063" (230.2 mm)	11.063" (281.0 mm)	11.063" (281.0 mm)	14.063" (357.2 mm)	14.063" (357.2 mm)
Net weight	14.3 lbs (6.5 kg)	11.1 lbs (5.0 kg)	14.7 lbs (6.7 kg)	12.0 lbs (5.4 kg)	15.2 lbs (6.9 kg)

Woofer Specifications	DL18MT	EVX155	EVX180B
Cone diameter	18" (457 mm)	15" (381 mm)	18" (457 mm)
Coil diameter	2.5" (63.5 mm)	4" (101.6 mm)	4" (101.6 mm)
Impedance	8 Ω	8 Ω	8 Ω
Frequency range	35–800 Hz	40–2,000 Hz	30–800 Hz
Long-term power rating (EIA)	400 W	600 W	600 W
Short-term power rating	1,600 W	2,400 W	2,400 W
Sensitivity (1 W @ 1 m)	94 dB	95 dB	95 dB
Maximum SPL	120.0 dB	122.8 dB	122.8 dB
Efficiency	4.00%	2.49%	2.25%
Frame front diameter	18.13" (460.5 mm)	15.16" (385.0 mm)	18.13" (460.5 mm)
Magnet diameter	7.50" (190.5 mm)	8.25" (209.6 mm)	8.25" (209.6 mm)
Overall depth	7.00" (177.8 mm)	7.25" (184.2 mm)	8.00" (203.2 mm)
Mounting bolt circle diameter	17.375" (441.3 mm)	14.563" (369.9 mm)	17.375" (441.3 mm)
Baffle cutout diameter	16.750" (425.5 mm)	14.063" (357.2 mm)	16.750" (425.5 mm)
Net weight	15.8 lbs (7.2 kg)	22.8 lbs (10.3 kg)	23.4 lbs (10.6 kg)

Compression drivers

Electro-Voice is one of a handful of professional audio companies that can design high-performance compression drivers. Compression drivers are the most difficult audio transducers to design. Their unique requirements call for ultraprecise tolerances, state-of-the-art modeling routines, and exceptionally talented engineering expertise. Manufacturing techniques are frequently pushed to process limits, and materials are formed and stabilized with cutting-edge systems and controls. Each EV compression driver's parameters are tightly controlled to ensure world-class performance, thus putting the drivers at the top of their class in every respect.

DH7-8/DH7-16

- Large-format ceramic compression driver
- 300-watt power rating
- 3" titanium diaphragm
- 1.4" or 2" exit diameter for use on almost any high-performance horn
- Excellent for use with direct-radiator or horn-loaded LF and MB sections

ND6-8/ND6-16

- Large-format neodymium compression driver
- 300-watt power rating
- 3" titanium diaphragm
- 1.4" or 2" exit diameter for use on almost any HP horn
- EV's highest-performance compression driver gives world-class performance in any application

DH2T

- One-inch exit screw-on, medium-format compression driver
- 40-watt power rating
- 2" titanium diaphragm
- High performance on a wide variety of thread-on horn designs

DH3/DH2010A

- One-inch exit screw-on, small-format compression driver
- 20-watt power rating
- 1.25" titanium diaphragm
- Excellent extended-bandwidth HF driver for multi-way loudspeaker systems

Driver Specifications	DH7-8/DH7-16	ND6-8/ND6-16	DH2T	DH3/DH2010A
Frequency response	1,000 Hz–20 kHz	1,000 Hz–20 kHz	1,200 Hz–20 kHz	1,500 Hz–20 kHz
Crossover frequency (minimum)	1,000 Hz	1,000 Hz	1,200 Hz	1,500 Hz
Midband sensitivity*	111 dB	112 dB	112 dB	111 dB
Long-term power rating (AES)	75 W	75 W	40 W	40 W
Short-term power rating	300 W	300 W	120 W	20 W
Throat diameter	1.4"/2.0"adaptor (35 mm)	1.4"/2.0"adaptor (35 mm)	1.0" (25 mm)	1.0" (25 mm)
Diaphragm diameter	3.0" (76 mm)	3.0" (76 mm)	2.0" (50 mm)	1.25" (32 mm)
Overall diameter	6.5" (165 mm)	5.2" (132 mm)	5.2" (132 mm)	4.5" (107 mm)
Overall depth	2.7" (69 mm)	2.7" (69 mm)	3.5" (89 mm)	3.5" (89 mm)
Net weight	10.0 lbs (4.54 kg)	5.5 lbs (2.5 kg)	5.0 lbs (2.27 kg)	3.4 lbs (1.5 kg)
Shipping weight	11.0 lbs (5 kg)	6.0 lbs (2.72 kg)	5.5 lbs (2.5 kg)	3.8 lbs (1.73 kg)

*Average from 1,000 Hz–5 kHz on HP6040 horn (DH3 average from 1,500 Hz–5 kHz on HPT64 horn)

HP 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.

Note: Horns shown out of proportion to each other

HP6040

HP640

HPT64

HP64

HP4020
HP6040
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

HP420
HP640
HP940
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

HP64
HP66
HP94

- Small-format two-inch horns
- Use as primary HF horns in compact sound systems
- Beamwidth control to ~2,000 Hz

HPT64
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

Specifications	HP4020	HP6040	HP9040	HP420	HP640	HP940
Coverage (H° x V° nominal)	40° x 20°	60° x 40°	90° x 40°	40° x 20°	60° x 40°	90° x 40°
Directivity Factor (average)	45.1 (+12.7, -18.9) (500 Hz–20 kHz)	25.8 (+17.9, -5.9) (500 Hz–20 kHz)	12.1 (+4.6, -3.7) (500 Hz–20 kHz)	47.7 (+25.9, -23.5) (1,250 Hz–20 kHz)	20.6 (+11.3, -3.3) (1,250 Hz–20 kHz)	11.9 (+3.6, -3.0) (1,250 Hz–20 kHz)
Directivity Index (average)	16.4 dB (+1.2, -2.2) (500 Hz–20 kHz)	14.1 dB (+2.3, -1.1) (500 Hz–20 kHz)	10.8 dB (+1.4, -1.6) (500 Hz–20 kHz)	16.8 dB (+1.9, -3.0) (1,250 Hz–20 kHz)	13.1 dB (+1.9, -0.7) (1,250 Hz–20 kHz)	10.7 dB (+1.2, -1.2) (1,250 Hz–20 kHz)
Useable low-frequency limit	200 Hz	500 Hz	400 Hz	400 Hz	400 Hz	400 Hz
Throat entrance	2" bolt-on	2" bolt-on	2" bolt-on	2" bolt-on	2" bolt-on	2" bolt-on
Height	33.0" (838 mm)	32.0" (813 mm)	32.0" (813 mm)	14.4" (367 mm)	13.0" (330 mm)	13.0" (330 mm)
Width	32.0" (813 mm)	28.0" (711 mm)	26.75" (679 mm)	24.0" (610 mm)	28.0" (711 mm)	21.0" (533 mm)
Depth	49.3" (1,252 mm)	31.8" (808 mm)	31.8" (808 mm)	29.5" (749 mm)	17.2" (437 mm)	11.2" (285 mm)
Net weight	27.0 lbs (12.3 kg)	20.0 lbs (9.1 kg)	20.0 lbs (9.1 kg)	13.0 lbs (5.9 kg)	9.5 lbs (4.3 kg)	7.0 lbs (3.2 kg)

Specifications	HP1240	HP64	HP66	HP94	HPT64	HPT94
Coverage (H° x V° nominal)	120° x 40°	60° x 40°	60° x 60°	90° x 40°	60° x 40°	90° x 40°
Directivity Factor (average)	8.6 (+2.5, -2.1) (1,250 Hz–20 kHz)	18.1 (+4.1, -8.8) (1,600 Hz–20 kHz)	17.9 (+10.5, -9.3) (1,600 Hz–20 kHz)	10.1 (+5.8, -1.8) (1,600 Hz–20 kHz)	15.8 (+5.2, -4.9) (3,150 Hz–20 kHz)	11.6 (+5.0, -2.5) (3,150 Hz–20 kHz)
Directivity Index (average)	9.34 dB (+1.1, -1.2) (1,250 Hz–20 kHz)	12.6 dB (+0.9, -2.9) (1,600 Hz–20 kHz)	12.5 dB (+2.0, -3.0) (1,600 Hz–20 kHz)	10.0 dB (+2.0, -0.8) (1,600 Hz–20 kHz)	12.0 dB (+1.2, -1.6) (3,150 Hz–20 kHz)	10.6 dB (+1.6, -1.0) (3,150 Hz–20 kHz)
Useable low-frequency limit	400 Hz	650 Hz	650 Hz	800 Hz	1,600 Hz	1,600 Hz
Throat entrance	2" bolt-on	2" bolt-on	2" bolt-on	2" bolt-on	1" bolt-on	1" bolt-on
Height	13.0" (330 mm)	11.0" (279 mm)	11.0" (279 mm)	11.0" (279 mm)	5.25" (133 mm)	5.25" (133 mm)
Width	21.0" (533 mm)	8.8" (224 mm)	8.8" (224 mm)	8.75" (222 mm)	5.25" (133 mm)	5.25" (133 mm)
Depth	10.4" (265 mm)	8.7" (220 mm)	6.5" (165 mm)	8.7" (220 mm)	4.1" (104 mm)	4.0" (101 mm)
Net weight	7.0 lbs (3.2 kg)	4.5 lbs (2.5 kg)	4.8 lbs (2.2 kg)	4.5 lbs (2.5 kg)	0.8 lbs (0.4 kg)	0.8 lbs (0.4 kg)

Speaker Hardware/Accessories

EVID Series™

AB-32	180° array bracket kit for mounting two 3.2 speakers
AB-34	360° array bracket kit for mounting four 3.2 speakers
AB-62	180° array bracket kit for mounting two 4.2 or 6.2 speakers
AB-64	360° array bracket kit for mounting four 4.2 or 6.2 speakers
HS-3	Horizontal mount desk stand for 3.2/4.2 (sold only in pairs/priced per pair)
MA-3	Mic stand adapter mount kit for 3.2
TC-4B	Weatherized terminal cover for 4.2, black
TC-4W	Weatherized terminal cover for 4.2, white
TC-6B	Weatherized terminal cover for 6.2, black
TC-6W	Weatherized terminal cover for 6.2 series, white
VS-3	Vertical mount desk stand for 3.2 series (sold only in pairs)
VS-4	Vertical mount desk stand for 4.2 series (sold only in pairs)
VS-6	Vertical mount desk stand for 6.2 series (sold only in pairs)

S Series

S-40MBB	Wall/ceiling/stand U-bracket for S-40, black (pair)
S-40MBW	Wall/ceiling/stand U-bracket for S-40, white (pair)

Sx Series™

100BK	Speaker stand for EV systems with integral stand mount (or Sx80MB stand-mount adapter for Sx80) or any system up to 110 lb (1-3/8-inch shaft diameter), black
F200	Monitor feet for Sx100, Sx300 and Sx300a (pair)
G500	Full-face steel grille for Sx500, black (for indoor use only)
Mb200	Wall/ceiling U-bracket kit for Sb121, Sx100, Sx300 and Sx300a, black
Mb200W	Wall/ceiling U-bracket kit for Sb121, Sx100, Sx300 and Sx300a, white
Mb300	Horizontal array kit for side-by-side arraying of two Sb121, Sb121a, Sx100+, Sx300 or Sx300a (use a second Mb300 to array three systems; the Mb300 requires one Mb200 U-bracket kit per speaker system), black
Mb300W	Horizontal array kit for side-by-side arraying of two Sb121, Sb121a, Sx100+, Sx300 or Sx300a (use a second Mb300 to array three systems; the Mb300 requires one Mb200 U-bracket kit per speaker system), white
Mb500	Wall/ceiling U-bracket for Sx500+, black
Mb600	Horizontal array kit for side-by-side array of two Sx500+s (use more Mb600s to array up to six systems; the Mb600 requires one Mb500 U-bracket kit per speaker system), black
Mb700	Forged eyebolt attachment kit (set of three) for a single Sx500, black
PD500	Padded case for Sx500+
PDSx	Padded case for Sx100, Sb121, Sb121a, Sx300 and Sx300a
Sx80MBB	Wall/ceiling U-bracket for Sx80, black
Sx80MBW	Wall/ceiling U-bracket for Sx80, white
Sx80SM	Stand-mount adapter for Sx80
VPC500	Vinyl cover for Sx500+
VPCSx	Vinyl cover for Sx100, Sb121, Sb121a, Sx300 and Sx300a

Subwoofers

HSMT	Flying kit for MTL-1X

EVI Vari Intense®

EBK-1	Eyebolt kit of three 3/8-16 forged shoulder bolts
EVI-12MB-BLK	Mounting bracket for EVI-12, black
EVI-12MB-WH	Mounting bracket for EVI-12, white
EVI-15MB-BLK	Mounting bracket for EVI-15, black
EVI-15MB-WH	Mounting bracket for EVI-15, white
EVI-28MB-BLK	Wall/ceiling U-bracket for EVI-28, black
EVI-28MB-WH	Wall/ceiling U-bracket for EVI-28, white

X-Array™ X-Series™

Xrhg	Grid rigging hinge (attaches rear of top X-Array X-Series to the rear of a compatible grid)
Xrhl	Linking rigging hinge (attaches two X-Array X-Series systems at the rear)
Xrsl	Long rigging strap (used at front of two X-Array X-Series systems to adjust their relative vertical angle)
Xrhp	Pickup rigging hinge (creates custom assemblies to attach to the rear of the top X-Array X-Series system when an ATM Fly-Ware™ grid is not used)
Xrss	Short rigging strap (attach the rear of the top X-Array X-Series system to the ATM Fly-Ware grid)

X-Line™

Xdol/b	X-Line bottom dolly
Xdol/f	X-Line grille face dolly
Xlgd	X-Line grid (steel)
Xvhg	Rear grid rigging hinge (joins rear of top X-Line cabinet to compatible hanging grid; use in pairs)
Xvhl	Rear linking hinge (couples two X-Line cabinets at the rear; use in pairs)
Xvsg	Front grid rigging chain (joins top X-Line cabinet to compatible hanging grid; use in pairs)
Xvsl	Front linking chain (used to couple X-Line cabinets and adjust their relative vertical angle; use in pairs)

Amplifiers

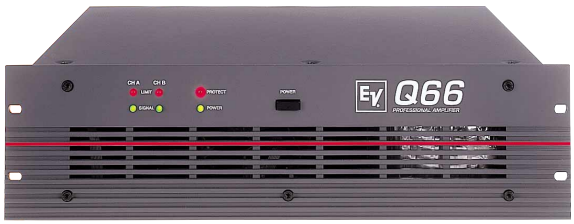
Much of EV's reputation in the audio community stems from EV's reliability and performance through time-tested rigors of the road, fixed-installation environments, studio use, and numerous other applications. EV amplifier products are designed and manufactured in Germany from this standpoint: high-quality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

Extensive common safety features

- Unique thermal protection
- Dynamic audio limiters
- Switchable limiter time constant
- Peak current limiters
- Inrush current limiters
- "Soft-start" turn-on delays
- Exceptional RF and back-EMF protection
- Protection against DC fault and shorted loads
- Low-noise, multi-stage fans with front-to-rear airflow
- Up to 30% headroom of power capability
- Generous power-supply construction
- Extraordinarily low product failure rate
- Eight-time testing before shipping
- Safe operation on 2Ω load

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 by building 30% headroom into all of our amplifier power supplies. In addition, German-engineered dynamic limiters handle these spontaneous musical peaks like none 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.



Q-Series amplifiers

Q-Series amplifiers are based on EV´s reference-standard P-Series. They guarantee the same high-quality construction and output, restricted only by the maximum power capability of 2 x 600 watts. Q-Series amps are designed for cost-limited mobile applications or smaller installations. They include rear-mounted, dB-scaled, level controls, and are packed into a three-rack-space, zinc-plated steel housing.

Top this if you can!

Since the first Q-Series amplifiers left the factory in 1998, only 0.03% have been returned for warranty service. That's a success rate of 99.97%. EV challenges any audio manufacturer to beat its unsurpassed quality!

Eliminator® i amplifier

New product

The Eliminator® i low-distortion amplifier—essentially a Q66 with signal processing—has substantial headroom and gets excellent performance from Eliminator® i systems. A built-in lo-cut filter and EV's new low-pass notch (LPN) module compensate for transient distortion, providing full, extended bass response. The Eliminator i® includes all safety features common to EV amplifiers (see above). **Please note: The Eliminator® i amplifier is available only in 120 V.**

Specifications	Q44	Q66	Eliminator® i (amp)
Continuous rated power (1k Hz; THD 1 %)			
2 Ω	650 W	850 W	850 W
4 Ω	450 W	600 W	600 W
8 Ω	280 W	380 W	380 W
Continous rated power (20 Hz–20 kHz; THD <0.2%)			
2 Ω	450 W	650 W	650 W
4 Ω	350 W	550 W	550 W
8 Ω	230 W	300 W	300 W
Maximum bridged output			
4 Ω	1,300 W	1,700 W	1,700 W
8 Ω	900 W	1,200 W	1,200 W
Slew rate	>25 V/µs	>30 V/µs	>30 V/µs
Total harmonic distortion	<0.05%	<0.05%	<0.05%
Intermodulation distortion (SMPTE)	<0.08%	<0.08%	<0.08%
DIM 30	<0.03%	<0.03%	<0.03%
Damping factor (100 Hz/1000 Hz)	>300/>200	>300/>200	>300/>200
Crosstalk (at 1,000 Hz)	<-80 dB	<-80 dB	<-80 dB
Signal-to-noise ratio (dB A-weighted)	>105 dB	>105 dB	>105 dB
Input impedance (balanced)	20 kΩ	20 kΩ	20 kΩ
Input sensitivity (0 dBu factory set)	0 dBu/+6 dBu	0 dBu/+6 dBu	0 dBu/+6 dBu
Input connectors (parallel out)	XLR in/out	XLR in/out	XLR in/out
Output connectors	Neutrik® NL4MP Speakon	Neutrik® NL4MP Speakon	Neutrik® NL4MP Speakon
Dimensions (H x W x D)	5.25" x 19" x 15.17" 133 x 483 x 386 mm	5.25" x 19" x 15.17" 133 x 483 x 386 mm	5.25" x 19" x 15.17" 133 x 483 x 386 mm
Net weight	35.2 lbs (15 kg)	35.2 lbs (15 kg)	35.2 lbs (15 kg)

Amplifiers

Precision Series™ amplifiers

The Precision Series™ is EV's top line of power amplifiers. Their extreme reliability, high-level sound, and durable design make them the worldwide amp of choice for professional touring and rental companies alike. The P2000 and P3000 use a generous dual power supply for highest performance and operation safely. Both the P2000 and the P3000 are THX® approved for cinema applications (THX® is a registered trademark of Lucasfilm Ltd.). Rear rack mount kits are available to help stabilize the rack frame for safe transportation.

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

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
- Dual power supply
- Three rack spaces high

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
- Dual power supply
- Three rack spaces high

7100

- Two-channel power amplifier
- Space-saving, single-rack-space chassis (1.75" 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

NOTE: The EV 7100 does not include the extensive protection and limiter features of other EV amplifiers.

Specifications	P1200	P2000	P3000	7100
Continuous rated power (1k Hz; THD 1%)				
2 Ω	800 W	1,200 W	1,800 W	—
4 Ω	550 W	900 W	1,300 W	130 W
8 Ω	370 W	560 W	850 W	95 W
Continous rated power (20 Hz–20 kHz; THD <0.1%)				
2 Ω	600 W	1,000 W	1,500 W	—
4 Ω	500 W	800 W	1,200 W	100 W
8 Ω	370 W	500 W	750 W	95 W
Maximum bridged output				
4 Ω	1,600 W	2,400 W	3,600 W	—
8 Ω	1,100 W	1,800 W	2,600 W	260 W
16 Ω	—	—	—	180 W
Slew rate	>30 V/µs	>35 V/µs	>35 V/µs	>19 V/µs (dual mode)
Total harmonic distortion	<0.05%	<0.05%	<0.05%	<0.1%
Intermodulation distortion (SMPTE)	<0.01%	<0.01%	<0.01%	<0.1%
DIM 30	<0.01%	<0.01%	<0.01%	—
Damping factor 100 Hz/1000 Hz	>400/>300	>400/>300	>400/>300	—/>100
Crosstalk (at 1,000 Hz)	<-70 dB	<-70 dB	<-70 dB	<-70 dB
Signal-to-noise ratio (dB A-weighted)	>105 dB	>105 dB	>105 dB	>100 dB
Input impedance (20 Hz–20 kHz; balanced)	20 kΩ	20 kΩ	20 kΩ	30 kΩ
Input sensitivity (0 dBu factory set)	0 dBu/+6 dBu/+26 dB	0 dBu/+6 dBu/+26 dB	0 dBu/+6 dBu/+26 dB	0 dBu/+0.5 dBu
Input connectors (parallel out)	XLR in/out	XLR in/out	XLR in/out	XLR in/out
Output connectors	Neutrik® NL4MP Speakon	Neutrik® NL4MP Speakon	Neutrik® NL4MP Speakon	Neutrik® NL4MP Speakon
Dimensions (H x W x D)	3.5" x 19" x 16.8" 88.1 x 483 x 426 mm	5.2" x 19" x 16.8" 133 x 483 x 426 mm	5.2" x 19" x 16.8" 133 x 483 x 426 mm	1.75" x 19" x 12.8" 44.5 x 483 x 325 mm
Net weight	35.2 lbs (15 kg)	57.3 lbs (26 kg)	61.7 lbs (28 kg)	18.2 lbs (8.16 kg)

Amplifiers

Precision Series™ modular amplifiers

New product

EV's "modular P-Series" amplifiers guarantee the same quality and performance standards as its "linear P-Series" amplifiers, with the further benefit of being designed for specific EV systems such as the QRx Series™. They include the highest-quality signal control, maximum speaker and operation safety, and extreme reliability typical of Precision Series™ amplifiers. All this adds up to maximum flexibilty and an economical alternative to digitally controlled amp racks.

P1202

- Dual channel
- Optional input transformer (NRS 90208)
- Useable without controller cards as linear amp with fixed +6 dBu input sensitivity

P1201

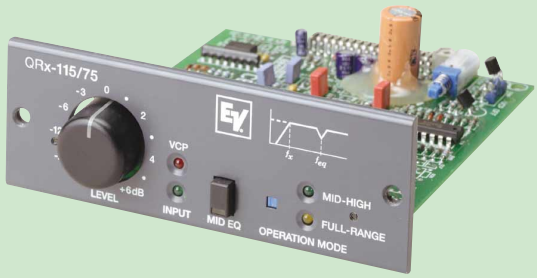
- Single channel
- Optional input transformer (NRS 90208)
- Useable without controller cards as linear amp with fixed +6 dBu input sensitivity

Note: Amps at left are shown with optional input modules.

Specifications	P1201	P1202
Continuous rated power (1 kHz, THD 1%)		
2 Ω	1600 W	850 W
4 Ω	1200 W	600 W
8 Ω	750 W	380 W
Continuous rated power (20 Hz–20 kHz, THD <0.2%)		
2 Ω	1300 W	650 W
4 Ω	1000 W	500 W
8 Ω	500 W	300 W
Slew rate	>40 V/µs	>30 V/µs
Total harmonic distortion	<0.05%	<0.05%
Intermodulation distortion (SMPTE)	<0.08%	<0.08%
DIM 30	<0.03%	<0.03%
Damping factor 100 Hz/1,000 Hz	>300/>200	>300/>200
Crosstalk (at 1,000 Hz)	—	—
Signal-to-noise ratio (dB A-weighted)	>106 dB	>106 dB
Input impedance (20 Hz–20 kHz, balanced)	20 kΩ	20 kΩ
Input sensitivity (without module)	6 dBu (fixed)	6 dBu (fixed)
Input connectors (parallel out)	XLR in/out	XLR in/out
Output connectors	Neutrik® NL4MP Speakon	Neutrik® NL4MP Speakon
Dimensions (H x W x D)	5.2" x 19" x 16.8"	5.2" x 19" x 16.8"
	133 x 483 x 390 mm	133 x 483 x 390 mm
Net weight (without modules)	37.5 lbs (17 kg)	37.5 lbs (17 kg)

P1201/P1202 control modules

These controller cards provide customized system equalization, crossover design, and EV´s unique voice-coil protection circuit (VCP) for use with EV loudspeakers (modules for QRx speakers are currently available). Cards for full-range systems feature a switchable 3,000 Hz (Q = 1, -3 dB) DIP-EQ and a flush-mounted operation mode switch. Each module also includes a "1-in-2" switch on the PCB board, allowing it to drive both channels of a P1202 independently while using only one controller card. Note that when a module is used, the amplifier's input sensitivity changes to 0 dBu.



Module specifications	M-112	M-115	M-212	M-118S	M-218S
QRx-Series™ model	QRx-112/75	QRx-115/75	QRx-212/75	QRx-118S	QRx-218S
Operation	Full-range/mid-high	Full-range/mid-high	Full-range/mid-high	Subwoofer	Subwoofer
Frequency response (-6 dB) (full-range mode)	27 Hz–50 kHz	25 Hz–50 kHz	27 Hz–50 kHz	25 Hz–90 kHz	25 Hz–90 kHz
Frequency response (-6 dB) (mid-high mode)	75 Hz–50 kHz	75 Hz–50 kHz	75 Hz–50 kHz	—	—
Adjustable gain-range	-85 dB to +6 dB	-85 dB to +6 dB	-85 dB to + 6 dB	-85 dB to +6 dB	-85 dB to +6 dB
Signal-to-noise ratio	<105 dB	<105 dB	<105 dB	<108 dB	<108 dB
THD + N	<0.05%	<0.05%	<0.05%	<0.05%	<0.05%

Amplifiers

Contractor Precision Series (CPS) amplifiers

New product

The CPS Series are high-performance amplifiers with unmatched dynamic range capability that exceeds the unique usage demands for fixed-installation applications. The CPS series ensures the most reliable operation favored by sound contractors in all sound reinforcement applications.

Superior dynamic range. Given the multitude of building configurations and sound reinforcement challenges, EV has taken the uncertainty out of performance and reliability with the new CPS Series of power amplifiers. The CPS Series achieves its outstanding dynamic range through the use of our unique Nonlinear Signal monitor. This feature limits amplifier distortion to less than 1 percent, eliminating the "hard-edged" clipping which can destroy most speaker systems. The amplifier's power supply is specifically designed to deliver high peak signals. Since live music and voice signals usually contain very high peak transients compared to the average signal level, the CPS Series amplifiers have a burst signal output capability headroom more than 30% over their average continuous rating.

CPS 1

- Rear-mounted, dB-scaled level controls
- Retrofit kits available (crossover cards)
- THX® approved

CPS 2

- Rear-mounted, dB-scaled level controls
- Retrofit kits available (crossover cards)
- THX® approved

CPS 3

- Front-mounted, dB-scaled detented level controls
- Comes with cover knobs for control trims
- Dual power supply
- THX® approved

CPS 4

- Front-mounted, dB-scaled detented level controls
- Comes with cover knobs for control trims
- Dual power supply
- THX® approved

CPS2T

The CPS2T is a high-quality, high-Z output amplifier with the unique TSP protection circuit, which secures against low-freqeuency distortion by measuring the transformer saturation at each power level. It brings CPS quality and performance to 70-volt applications.

Specifications	CPS1	CPS2	CPS3	CPS4	CSP2T
Maximum power (1k Hz; THD <1%)					
2 Ω	650 W	850 W	1,200 W	1,800 W	850 W
4 Ω	450 W	600 W	900 W	1,300 W	600 W (70V: 500)
8 Ω	280 W	350 W	560 W	850 W	380 W
Rated power (20 Hz–20 kHz; THD <0.2%)					
2 Ω	450 W	650 W	1,000 W	1,500	650 W
4 Ω	350 W	500 W	800 W	1,200 W	500 W (70V: 580)
8 Ω	230 W	300 W	500 W	750 W	33 W
Maximum bridged output (1,000 Hz; <1% THD)					
4 Ω	1,300 W	1,700 W	2,400 W	3,600 W	1,700 W
8 Ω	900 W	1,200 W	1,800 W	2,600 W	1,200 W (70V: 1,160)
Slew rate	25 V/µs	30 V/µs	35 V/µs	40 V/µs	30 V/µs
Total harmonic distortion	<0.05%	<0.05%	<0.05%	<0.05%	<0.05% (70V: <0.2%)
Intermodulation distortion (SMPTE)	<0.08%	<0.08%	<0.01%	<0.01%	<0.08% (70V: <0.3%)
Crosstalk (at 1,000 Hz)	<-80 dB	<-80 dB	<-70 dB	<-80 dB	<-80 dB
Input impedance (balanced)	20 kΩ	20 kΩ	20 kΩ	20 kΩ	20 kΩ
Signal-to-noise ratio (dB A-weighted)	>105 dB	>105 dB	>105 dB	>105 dB	>105 dB
Dimensions (H x W x D)	5.2" x 19" x 15.2" 133 x 483 x 386 mm	5.2" x 19" x 15.2" 133 x 483 x 386 mm	5.2" x 19" x 15.4" 133 x 483 x 390 mm	5.2" x 19" x 15.4" 133 x 483 x 390 mm	5.2" x 19" x 15.2" 133 x 483 x 386 mm
Net weight	33.1 lbs (15 kg)	35.3 lbs (16 kg)	59.5 lbs (27 kg)	63.9 lbs (29 kg)	49.6 lbs (22.5 kg)

AC One Analog Controller

AC One analog audio controller

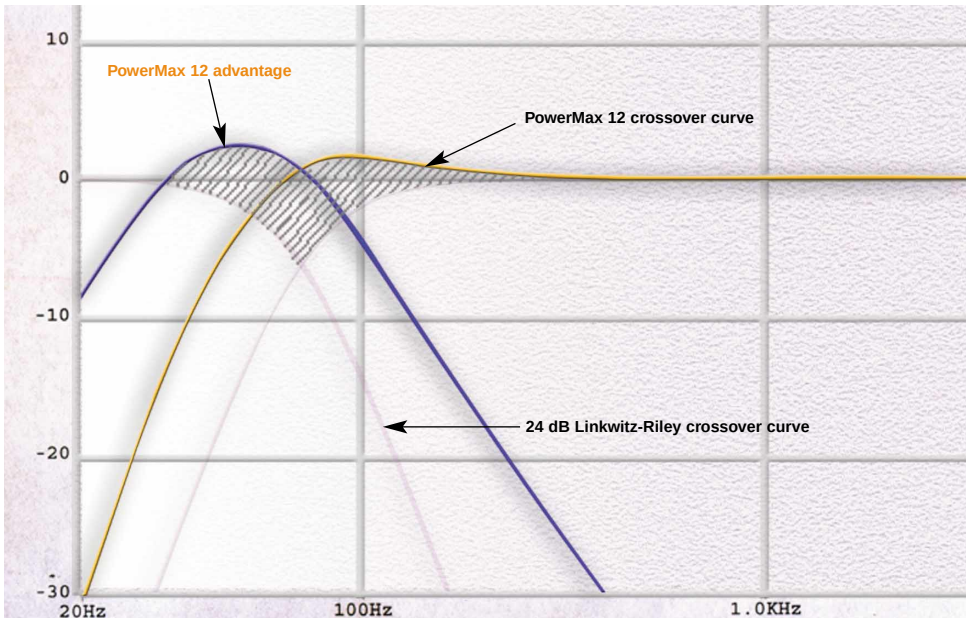
New product

The AC One analog audio controller has been designed to be used in high-performance applications that employ small- to medium-size full-range systems with subwoofers. Its excellent audio performance, dynamic range of 117 dB, extremely low noise level, and outstanding price-performance ratio make the AC One an advantageous alternative to conventional crossover and controller solutions. It is possible to meet the tough demands of modern audio applications—such as high sound pressure level, coverage, and sound quality—only by using a biamped loudspeaker system which can fully separate, amplify, and reproduce the audio signal´s frequency ranges. The PowerMax 12 crossover function brings the low-frequency performance of bigger systems to compact systems. The AC One guarantees highly economical system applications without loss of performance, and helps to save on application space.

Inputs and outputs are active balanced. The inputs can be fitted with optional high-quality input transformers (NRS 90208). The outputs feature output relays which protect against unwanted noise in case of power failure.

The PowerMax 12 advantage and its unique EQ section

The new PowerMax 12 crossover function (patents pending) makes the best possible use of amplifier output power and loudspeaker transmission capacities. Compared to other regular crossover designs on the market, PowerMax 12 delivers an extra 3 dB SPL at the crossover point, something which cannot be achieved by normal EQ´ing alone. In addition, speaker overload and amplifier clipping are dramatically reduced. The PowerMax 12 crossover function silences the oft-heard complaint: “It needs more punch and definition.” In addition, a 12-dB (Q: 1.0) lo-cut filter and a unique 3-band equalizer featuring the patented LPN filter allows for flexible, easy, and quick system adjustments.



AC One options and accessories

Part number	Option/accessory
PA 1	Clear acrylic cover
NRS 90208	Input transformer

Specifications	AC One
Crossover type	2-way stereo + sub mono
Crossover frequency (sweepable)	45–160 Hz
Crossover filter type	PowerMax 12
Filter options (adjustable)	Lo-cut / 3-band EQ
Frequency response (-3 dB @ 1 kHz)	16 Hz–150 kHz
Nominal gain	0 dB
Maximum gain	+12 dB
Dynamic range (+20 dBu, a-weighted)	117 dB
THD + N (20 Hz–20 kHz, +6 dBu)	<0.02%
THD + N (typical, +6 dBu)	0.003%
Crosstalk attenuation	>80 dB
Mute switch rejection	>90 dB
Level control attenuation	>80 dB
Input impedance	20 kΩ

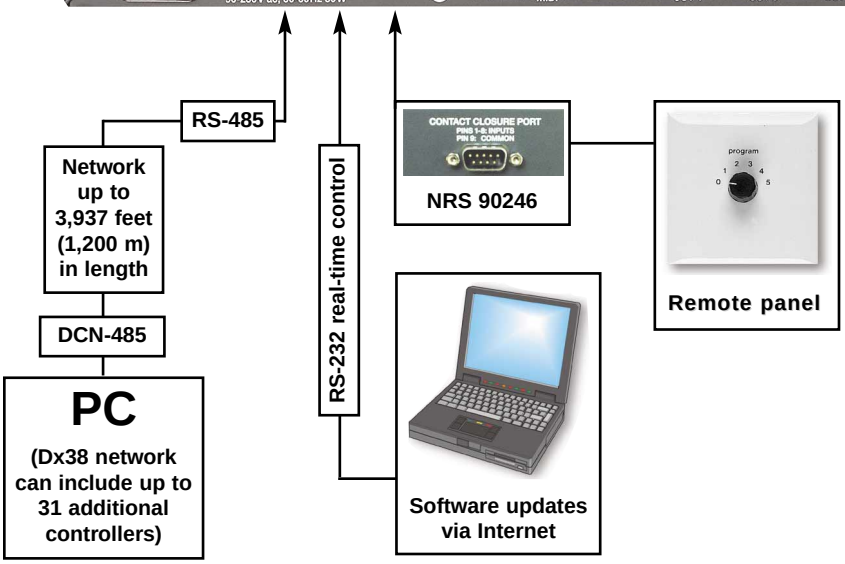
Specifications (continued)	AC One
Maximum level (Inputs: A, B)	+20 dBu
Rated level (inputs: A, B)	+6 dBu
Gain range (inputs: A, B)	-∞ to +6 dB
Output impedance (HI, LO, SUB)	75 Ω
Maximum level (outputs: HI, LO, SUB)	+20 dBu
Rated level (outputs: HI, LO, SUB)	+6 dBu
Gain range (outputs: HI, LO, SUB)	-∞ to +6 dB
Input/output connectors	XLR (active balanced)/ Inputs with parallel out
Power consumption	17 W
Power requirements 50-60 Hz (switchable)	100–120V/220–240V
Dimensions (H x W x D)	1.72" x 19" x 8.92" 43.6 x 483 x 226.5 mm (1 RU)
Net weight	7.07 lbs (3.2 kg)

Dx38 Digital Processor

Dx38 digital processor

The Dx38 sets new standards for digital loudspeaker controllers and processors, providing 48-bit filter algorithms, 24-bit AD/DA conversion and a dynamic range of more than 115 dB. Dx38 can be used in networks of up to 31 controllers with a maximum networking distance of 1,200 meters. Real-time controlling and configuration is either through the front panel or through a PC with a RS-232, MIDI, or RS-485 bus for networking. EV´s unique RACE 2.0 software (see next page) allows for complete control with a PC compatible with Windows 95/98/NT/ME/2000). The Dx38 is a 2 input/4 output controller with a virtual third input source. Its mono summation of both input channels maximizes flexibility. Two configuration modes allow clearer handling for different qualified users, and the Dx38 can handle up to 30 user memories and 50 factory presets for EV speaker systems.

The free RACE 2.0 software is a unique tool for designing preset configurations. The included files with measured frequencies and phase response for various EV speakers and amplifiers allow it to display the entire system's acoustical response in the free field without any room influence. RACE 2.0 is the first software for digital controllers that offer extensive filtering to make visible the processes that maximize system performance.



Dx38 options and accessories

- RS-232 network interface is factory installed)
- RS-485 network interface (see next page)
- DCN-485 PC converter
- Input transformer (NRS 90244)
- Contact closure interface (NRS 90246) for external user preset selection (8 contacts) (pin 1-8: activation; pin 9: common)
- PA 1 (clear acrylic cover)

Specifications	Dx38
Controller type	2 (+1) in / 4 out
Data format	24-bit linear AD/DA conversion 48-bit processing
A/D conversion	24-bit / sigma-delta (linear phase) 128 times oversampling
D/A conversion	24-bit / sigma-delta 128 times oversampling
Sampling rate	48 kHz
DSP type	2 x 24-bit Motorola®
Frequency response	20 Hz–20 kHz (-0.5 dB)
Dynamic range (typical)	>115 dB
THD (without input transformer)	<0.01%
THD (with input transformer)	<0.05%
Input connectors	2 XLR (balanced)/parallel out
Input voltage (nominal)	1.55V/+6 dBu
Maximum input voltage	24.5V/+30 dBu
Input impedance	20 kΩ
Common mode rejection	>40 dB
Output connectors	4 XLR (balanced)
Output voltage (nominal)	1.55V/+6 dBu
Maximum output voltage	8.7V/+21 dBu
Output impedance	<100 Ω
Minimum load impedance	600 Ω

Specifications (continued)	Dx38
Frequency crossovers (slopes)	6, 12, 18, 24 dB/oct.
Frequency crossovers (designs)	Butterworth/Bessel/Linkwitz-Riley
Filters (inputs and outputs)	26 (full) parametric equalizers low-shelving EQ (6/12 dB slope) LPN (low-pass notch) switchable hi-shelving EQ (6/12 dB slope) lo-cut filter (6 or 12 dB slope) B6 alignment hi-cut filter (6 or 12 dB slope) all-pass filter (1st or 2nd order) phase invert (180°)
Digital compressor	4 (1 per output) with graph
Digital limiter	4 (1 per output) with graph
Delay	3 master delays (2–900 ms) 4 channel delays (0–900 ms)
Delay increment	21 µs
MIDI in/out/thru	Data dump; master/slave operation; remote control
LCD readout (with light)	122 x 32 px
Locking function	key lock
Dimensions (H x W x D)	1.72" x 19" x 14.75" 43.6 x 483 x 374 mm (1 RU)
Net weight	11.03 lbs (5.0 kg)

RACE 2.0

New product

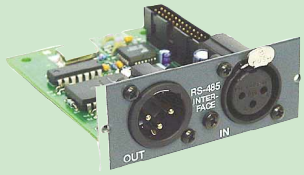
RACE 2.0 Software for Dx38

Together, RACE 2.0 software and the RS-485 remote interface offer unique user control for larger, more complex sound reinforcement systems. Up to 31 additional Dx38 digital processors can be controlled through the RS-485 over a network cable length of 1,200 meters—that's 3,937 feet, or 0.74 miles!—while all Dx38 functions remain available. Certain functional configurations within RACE 2.0 can be copied to other processors to save time and maintain accuracy while setting up more complex systems. Tthe RS-485 also enables simultaneous firmware updates for multiple units.

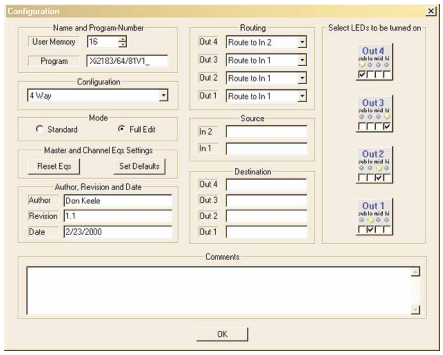
Each Dx38 to be controlled through the RS-485 requires the RS-485 to be installed in place of the factory-standard RS-232 interface. Each network also requires one DCN 485 PC converter to link the RS-485 to the RS-232 interfaces on the slave units. The DCN 485 includes a PS/2 slave for an external mouse, and connects through an XLR plug to the RS-485.

Note: For a multiway system, the output sum-up function display the real **acoustical** response of the entire system. In addition, the acoustical impact of any change in the parameters is shown in real time.

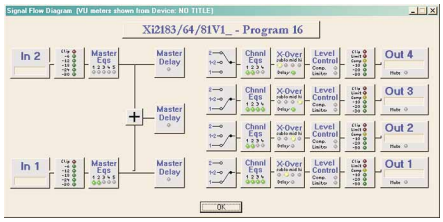
RS-485 remote interface for Dx38



DCN 485 PC converter (RS-485 to RS-232)

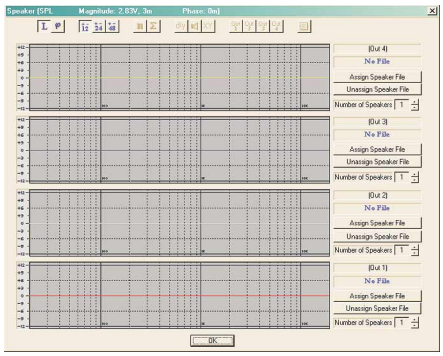


Configuration window: Input routing selection; notation of input sources, output destination, and program; operation mode (full edit, standard); 65,536 characters for taking application notes, LED selection for output use; front panel of Dx38 shows: LED selection, program name, and input/output notation.

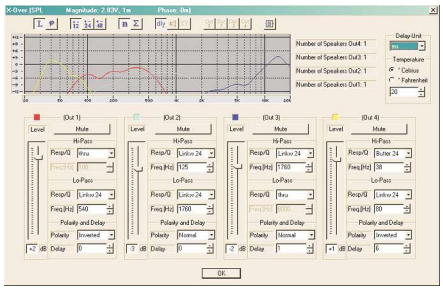


Signal Flow Diagram window: Input VU-meters: master EQ; master delay with independent mono-sum delay; input/output routing; channel EQ, crossover design; output delay; compressor/limiter. Output VU-meters: LED indication of activated filters etc.; mute indication; real-time display of all LED indications when connected to Dx38.

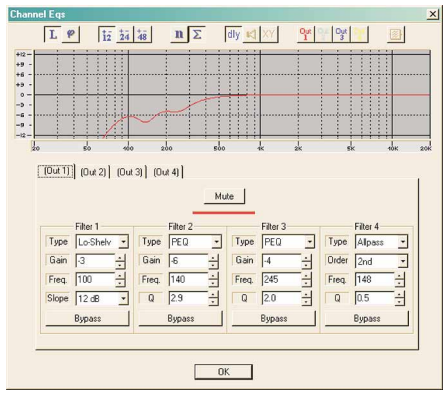
Amplifier window: Assign and unassign EV amp files for each output in magnitude and phase. Helps level adjustment in multi-way systems when used with different input sensitivities or amplifier gains. Assignment unnecessary with common amps.



Speaker window: Assign and unassign EV speaker files for each output in magnitude and phase. Possible views: +/-12 dB, +/-24 dB, or +/-48 dB. Essential for creating high-performing sound reinforcement systems.



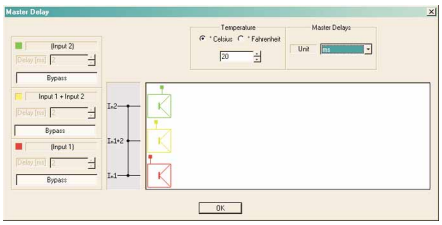
Crossover window: Individual outputs: level adjustment; Lo/Hi-pass design; sweepable crossover frequency; polarity; alignment delay; mute. Global features: delay unit selection; temperature in C or F; show filter function; resulting system response shown separated or summed-up in magnitude or phase include delays, components, and filters.



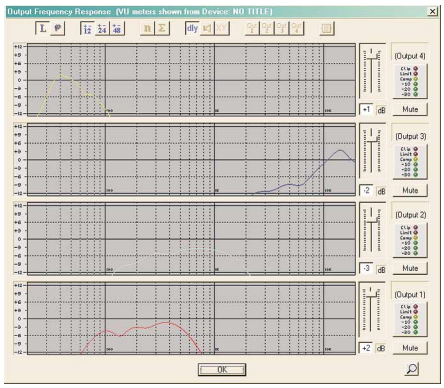
Channel EQ window: Access all outputs; bypass four filter sections per output; mute function; view magnitude or phase; show output result separately or summed-up (including components and delays). When EV speaker files are used, acoustical result displays in different color.

Download RACE 2.0 software for the Dx38 for free from www.electro-voice.de

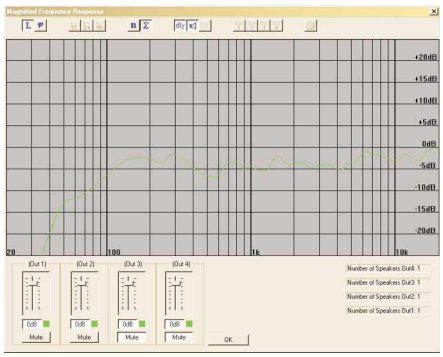
RACE 2.0



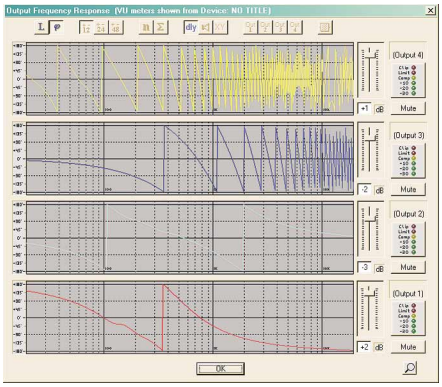
Master Delay window: Master delay unit selection; temperature in C or F; bypassable (input) delay adjustment of maximum 900 milliseconds; independent mono-sum delay; graphic display of boxes' positioning.



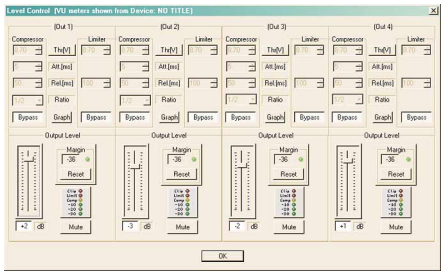
Output Frequency Response window: Level adjustment for each output; output responses shown separate in magnitude include delays and components; +/-12 dB, +/-24 dB, or +/-48 dB views; zoom function; output VU-meters display in real-time when connected to Dx38.



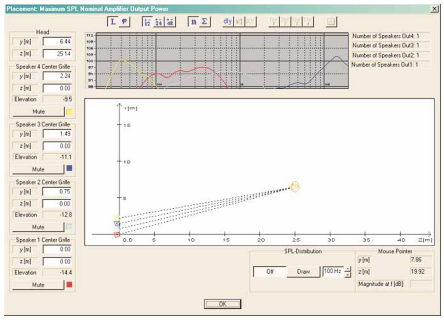
Summed Acoustic Output window: Displays the acoustic response of the entire system. the acoustical impact of any change in the parameters is shown in real time.



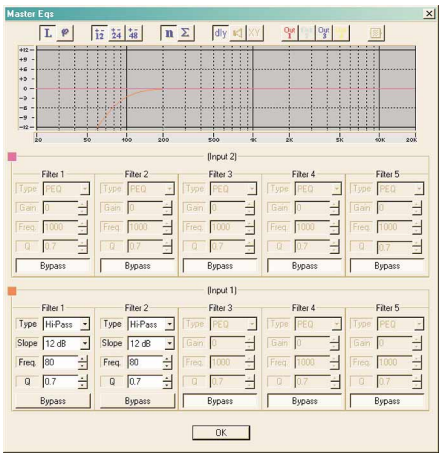
Output Phase Response window: Level adjustment for each output; output responses shown separate or summed-up in phase include delays and components; helps time-align system components; zoom; output VU-meters display in real-time when connected to Dx38.



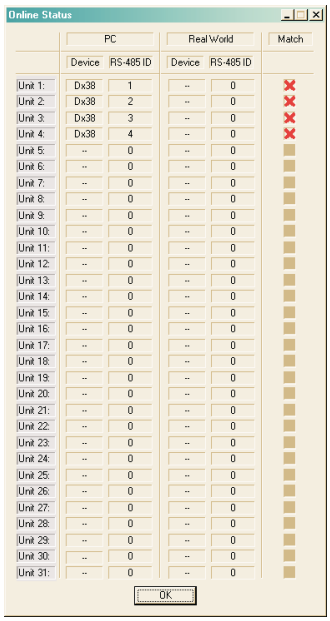
Level Control window: Level adjustment for each output; separate and bypassable compressor and limiter section with selectable threshold unit (dB/dBu/v) and graph; mute function; resettable margin indication counts amp clipping; output VU-meters display in real-time when connected to Dx38.



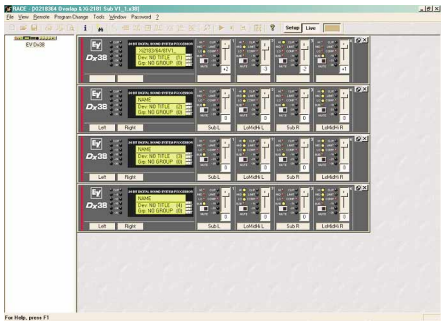
Placement window: Free speaker positioning (Y/Z axis); resulting output response shown separate or summed-up in magnitude or phase includes delays; acoustical result shown when using EV speaker files; +/-12/24/48 dB display options; display of sonic radiation at different frequencies (<150 Hz); calculated SPL; mutable output sections; different-colored outputs.



Master EQs window: Five bypassable filter sections per input; view of magnitude or phase; output results shown separated or summed-up including components, crossover, and delays. Acoustical result displays in different color when EV speaker files are used. +/-12 dB or +/-24 dB views possible.



Network Status window



Network window: Front-panel overview of selected Dx 38 controllers; all VU-meters display in real-time; free arrangement of Group ID and Device ID of designer's choice. Designable controller groups.

Documentation window: Six pages of information, including all settings, comments, and graphics, may be printed for project documentation.

Wired Microphones

New product

Cobalt™ Series

The Cobalt™ microphones are the newest offensive of EV to the audio market, making quality affordable. All microphones come with a stand adapter and a zippered vinyl carrying pouch. Use Co_4 for Instruments and the others for vocals, for which Co_7 is the "killer". A users manual helps beginners to handle their new Cobalt™ microphones the right way.

Specifications	Co4	Co5	Co7	Co9
Element	Dynamic	Dynamic	Dynamic	Dynamic
Polar pattern	Cardioid	Cardioid	Cardioid	Cardioid
Impedance, Low-Z balanced	600 ohms	600 ohms	600 ohms	600 ohms
Frequency Response (-3 dB)	50 - 18,000 Hz	50 - 18,000 Hz	50 - 18,000 Hz	50 - 18,000 Hz
Power Level (0 dB = 1mW/Pascal at 1,000 Hz)	—	—	—	—
Open Circuit Voltage (at 1,000 Hz)	2.2 mV/Pascal	2.8 mV/Pascal	3.2 mV/Pascal	3.2 mV/Pascal
Equivalent Noise (0 dB=20 micropascal) A-weighted	—	—	—	—
Maximum SPL (1% distortion, 1,000 Hz)	—	—	—	—
Power requirement (Phantom power)	N/A	N/A	N/A	N/A
Current Consumption	N/A	N/A	N/A	N/A
Magnetic Circuit	N/DYM®	N/DYM®	N/DYM®	N/DYM®
Specials	—	Low-noise On/off-Switch	—	—
Filters	—	—	—	—
Case Material	Die cast zinc	Die cast zinc	Die cast zinc	Die cast zinc
Finish	cobalt	cobalt	cobalt	cobalt
Included accessories	Stand adapter, zippered vinyl carrying pouch hard-shell case	Stand adapter, zippered vinyl carrying pouch hard-shell case	Stand adapter, zippered vinyl carrying pouch hard-shell case	Stand adapter, zippered vinyl carrying pouch hard-shell case
Optional accessories	—	—	—	—
Connector type (Details see page 73)	3-pin XLR	3-pin XLR	3-pin XLR	3-pin XLR
Dimension (Length x max. Diameter)	148 x 23 mm	170 x 53 mm	170 x 53 mm	170 x 53 mm
Weight net	340 g	306 g	332 g	335 g

Live Interview Mics

EV´s 635 and RE50 microphones are famous in broadcast, television, and radio OBs (outside broadcasts). These microphones set world standards especially for ENG (electronic news production) and EFP (electronic field production). They are extremely rugged, can withstand high humidity, temperature extremes and corrosive effects such as salt-air yet provide excellent sound performance.

Specifications	635A(B)	635N/D-B	RE50/B	RE50N/D-B
Element	Dynamic	Dynamic	Dynamic	Dynamic
Polar pattern	Omnidirectional	Omnidirectional	Omnidirectional	Omnidirectional
Impedance, Low-Z balanced	150 ohms	150 ohms	150 ohms	150 ohms
Frequency Response (-3 dB)	80 - 13,000 Hz	80 - 13,000 Hz	80 - 13,000 Hz	80 - 13,000 Hz
Power Level (0dB = 1 mW/Pascal) at 1,000 Hz	- 55 dB	- 51 dB	- 55 dB	- 51 dB
Open Circuit Voltage (at 1,000 Hz)	—	2.0 mV/Pascal	—	2.0 mV/Pascal
Equivalent Noise (0 dB=20 micropascal) A-weighted	—	—	—	—
Maximum SPL (1% distortion, 1.000 Hz)	—	—	—	—
Power requirement (Phantom power)	N/A	N/A	N/A	N/A
Current Consumption	N/A	N/A	N/A	N/A
Magnetic Circuit	Alnico	N/DYM®	Alnico	N/DYM®
Specials	—	Acoustalloy®	Dyna-Damp	Dyna-Damp™ Memraflex
Filters	—	—	—	—
Case Material	Steel	Steel	Aluminum	Aluminum
Finish	Fawn beige (A) Semi-gloss black (A/B)	Semi-gloss camera black	Semi-gloss camera black	Semi-gloss camera black
Included accessories	Stand adapter	Stand adapter	Stand adapter zippered vinyl carrying pouch hard-shell case	Stand adapter zippered vinyl carrying pouch hard-shell case
Optional accessories	see page 59	see page 59		
Connector type (Details see page 73)	3-pin XLR	3-pin XLR		
Dimension (Length x max. Diameter)	151 x 36 mm	148 x 36 mm		
Weight net	170 g	170 g		

RE50/B, RE50 N/D

(N/DYM® version)

- N/DYM® for greater output (RE50 N/D)
- No muddy lows when used near lips
- Dyna-Damp™ for extremely effective handling noise isolation
- On-camera use with 422 A desk stand
- Acoustalloy® diaphragm material for very smooth response over a wide frequency range
- Withstands high humidity; temperature extremes, corrosive salt air
- Integrated four-stage pop-filter
- Integral windscreen and blast filter
- Comes with accessories

635A (beige)
635A/B (black)

- Linear frequency response
- Completely pop-free performance
- Four-stage pop and dust filter
- Internal effective shock absorber
- Comes with accessories

635N/D-B

- Uniform 80 - 13.000 Hz frequency response
- N/DYM® magnetic for greater output
- Acoustalloy® diaphragm material for very smooth response over a wide frequency range
- Integral windscreen and blast filter
- Comes with accessories

Wired Microphones

EV is famous throughout the industry for high quality and robust microphones as used in studios, on stage, TV and broadcasting. Cardiline®, RE-Series, Variable-D® are all well-known industry terms. Most of EV´s microphones are low-impedance enabling long cable runs without RFI problems. By the way, it was an EV mic which amplified Neil Armstrong's famous words on his arrival on the moon's surface in 1969.

N/DYM® Series

N/DYM® Series is different to other microphones. For the first time, the quality, reliability and ruggedness of a concert sound microphone is affordable without compromise. Excellent and clear sound, comfortable and safe handling, N/DYM® magnetic structure, EV's unique VOB™ technology and studio sound performance mark EV´s N/DYM® Series. As part of a fixed installation, in studios, or on the road, EV N/DYM® microphones outperform any other microphone in their class. Each microphone comes with a helpful manual about handling and use.

N/D167

- Vocal and speech microphone
- Entry into the world of high-performance mics
- Includes accessories

N/D267 a(s)

- Vocal microphone
- On/off-Switch (as version)
- Includes accessories

N/D478

- Universal microphone
- Ideal to mic drums, percussion or guitars, also as vocal "spare" mic
- Smooth response
- Includes accessories

N/D468

- Instrument microphone
- Unique "moving head"
- Extreme low self-noise
- Accurate response, even in high SPLs
- Includes accessories

N/D767 a

- Top-class vocal microphone
- Multi-stage shock mount for unmatched low-handling noise
- Condenser mic performance
- Includes accessories

N/D868

- Designed specifically for kickdrums
- RE20 capsule type
- Extended "lows" to tighten mixes
- Frequency response typically eliminating the need of an EQ
- Extreme low self-noise
- Includes accessories

N/DYM®-Series features:

N/DYM®: The neodymium based magnet structure provides greater sensitivity, better signal-to-noise ratio and extended frequency range with clear "highs". In 1985, EV was the first to use neodymium based magnets, since then it has become an industry standard. Note: Other Neodymium mics are not similar to N/DYM®-mics as it´s the quantity and quality of the Neodymium used that matters. Therefore N/DYM® mics are unique.

VOB™: This unique EV technology provides tailored bass response for controlled "proximity", exceptional vocal clarity and reduced boominess, sibilance and P-popping. Furthermore, VOB™ provides clear, consistent sound without low-end distortion over greater working distances. Details about VOB™ (Vocal-Optimized-Bass) see page 62.

Warm Grip™: EV´s uniquely designed handle provides a more comfortable and "better" feeling mic with low handling noise.

Memraflex™: A deformed screen risks capsule malfunction and changes the polar pattern dramatically. In many cases, "omnidirectional" sensitivity is the result, which reduces gain-before-feedback close to speakers. Therefore a Memraflex™ screen secures maximum protection and good appearance.

Specifications	N/D167	N/D267 a(s)	N/D468	N/D478	N/D767 a	N/D868
Element	Dynamic	Dynamic	Dynamic	Dynamic	Dynamic	Dynamic
Polar pattern	Cardioid	Cardioid	Supercardioid	Cardioid	Supercardioid	Cardioid variant
Impedance, Low-Z balanced	600 ohms	300 ohms	150 ohms	300 ohms	300 ohms	150 ohms
Frequency Response (-3 dB), close response	50 - 12,000 Hz	45 - 15,000 Hz	30 - 22,000 Hz	45 - 15,000 Hz	35 - 22,000 Hz	20 - 10,000 Hz
Frequency Response (-3 dB), far response	100 - 12,000 Hz	100 - 15,000 Hz	60 - 22,000 Hz	100 - 15,000 Hz	70 - 22,000 Hz	—
Output Level(0dB = 1 m W/Pascal) at 1.000 Hz	- 57 dB	- 52 dB	- 51 dB	- 52 dB	- 51 dB	- 52 dB
Open Circuit Voltage (at 1.000 Hz)	2.3 mV/Pascal	2.9 mV/Pascal	3.1 mV/Pascal	2.9 mV/Pascal	3.1 mV/Pascal	1.0 mV/Pascal
Equivalent Noise (0 dB=20 micropascal) A-weighted	—	—	< 14 dB SPL	—	—	< 17 dB SPL
Magnetic Circuit	N/DYM®	N/DYM®	N/DYM®	N/DYM®	N/DYM®	N/DYM®
Specials	see features above	see features above, On/off-Switch (as version)	see features above	see features above	see features above	see features above
Case Material	Metal	Metal	Metal	Metal	Metal	Metal
Finish	Nonreflecting black	Nonreflecting black	Nonreflecting black	Nonreflecting black	Nonreflecting black	Nonreflecting black
Included accessories	Stand adapter, soft zippered carrying pouch	Stand adapter, soft zippered carrying pouch	Stand adapter, soft zippered carrying pouch	Stand adapter, soft zippered carrying pouch	Stand adapter, soft zippered carrying pouch	Stand adapter, soft zippered carrying pouch
Optional accessories	see page 59	see page 59	see page 59	see page 59	see page 59	see page 59
Connector type (Details see page 73)	3-pin XLR	3-pin XLR	3-pin XLR	3-pin XLR	3-pin XLR	3-pin XLR
Dimension (Length x max. Diameter)	181 x 52 mm	181 x 52 mm	115 x 52 mm	181 x 52 mm	181 x 52 mm	133 x 60 mm
Weight net	238 g	238 g	190 g	247 g	260 g	295 g

Wired Microphones

RE Series

RE Series is the first choice of microphones for smooth and accurate reproduction. Its´ unique and famous sound performance makes it a favourite in the broadcast, studio and touring business. EV´s Variable-D® design used in the RE20 and RE27 N/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 or professional concert sound jobs, RE20 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. For more details about Variable-D® see page 73.

Studio reference microphones

New product

RE20

- Variable-D® for minimal proximity effect
- True cardioid with no coloration at 180° off-axis
- Ultra-flate frequency response
- Studio condenser response
- Large diaphragm
- Hum-bucking coil
- Integral wind and blast filter
- Switchable EQ (-4.5 dB, 400-100 Hz)
- Comes with accessories

RE27 N/D

- Variable-D® for minimal proximity effect
- N/DYM magnetic circuit brings 6 dB more sensitivity
- Ultra-flat frequency response
- Studio condenser performance
- Large diaphragm
- 3 selectable filters: -6 dB, 250-100 Hz / gentle roll-off 12 dB, 1000-100 Hz and a -3 dB high frequency roll-off
- Integral wind and blast filter
- Comes with accessories

RE200

- High-end transducer based on world standard studio microphone RE2000
- Very low self-noise
- AcoustiDYM™ shock-mount system
- Ultralow-mass, gold-laminated diaphragm
- Transformerless output device
- Rear response 15 dB below the front axis at 1,000 Hz
- Comes with accessories

RE510

- Professional self-biased condenser vocal microphone
- Selectable low-end roll-off
- Supercardioid pattern
- Excellent off-axis rejection
- Wide dynamic range
- New for Spring 2002!

RE1000

- High-end studio true condenser microphone
- Very low self-noise (< 14 dB SPL, A weighted)
- Extremely linear frequency response
- Low-mass, gold-laminated large diaphragm
- Tighter polar pattern and transient response of a smaller diaphragm
- Output electronics provide no voltage gain to ensure low self-noise
- Transformerless output device
- Integrated two-stage pop-filter
- Switchable Roll-off filter (130 Hz/12 dB)
- Comes with accessories

Specifications	RE20	RE27	RE510	RE200	RE1000
Element	Dynamic	Dynamic	Condenser (self-biased)	True condenser	True condenser
Polar pattern	Cardioid	Cardioid	Supercardioid	Cardioid	Supercardioid
Impedance, Low-Z balanced	150 ohms	150 ohms	150 ohms	200 ohms	250 ohms
Frequency Response (-3 dB)	45 - 18,000 Hz	45 - 20,000 Hz	50 - 20,000 Hz	50 - 18,000 Hz	70 - 18,000 Hz
Power Level (0dB = 1 m W/Pascal) at 1.000 Hz	- 57 dB	- 51 dB	-41 dB	- 39 dB	- 39 dB
Open Circuit Voltage (at 1,000 Hz)	1.5 mV/Pascal	3.1 mV/Pascal	5.6 mV/Pascal	10 mV/Pascal	11 mV/Pascal
Equivalent Noise (0 dB=20 micropascal) A-weighted	—	—	18 dB SPL	21 dB SPL	< 14 dB SPL
Maximum SPL (1% distortion, 1,000 Hz)	—	—	140 dB SPL	130 dB	130 dB
Power requirement (Phantom power)	N/A	N/A	12 - 52 VDC	12 - 52 VDC	12 - 48 VDC
Current Consumption	N/A	N/A	N/A	3.5 mA	—
Magnetic Circuit	—	N/DYM®	N/A	N/A	N/A
Specials	Variable-D®	Variable-D®	transformerless output device	AcousticDYM, transformerless output device	transformerless output device
Filters	Tilt-down EQ	3 selectable EQs	switchable low-freq roll-off	—	switchable roll-off
Case Material	Steel	Steel	Metal	Metal	Metal
Finish	Fawn beige	Satin nickel	Warm-Grip black handle	Semi-gloss camera black	low-gloss black texture
Included accessories	Stand adapter, zippered vinyl carrying pouch, hard-shell case	Stand adapter, zippered vinyl carrying pouch, hard-shell case	Stand adapter, zippered vinyl carrying pouch	Stand adapter, windscreen	Stand adapter, hard-shell case
Connector type (Details see page 73)	3-pin XLR	3-pin XLR	3-pin XLR	3-pin XLR	3-pin XLR
Dimension (Length x max. Diameter)	217 x 54 mm	217 x 54 mm	180 x 50 mm	137 x 28 mm	205 x 62 x 43 mm
Weight net	737 g	709 g	215 g	185 g	400 g

Wired Microphones

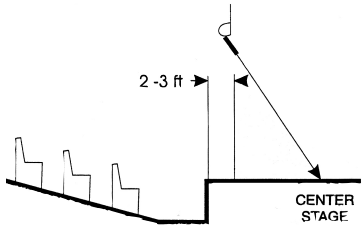
Installation microphones

The RE90 series brings the famous sound performance of EV´s legendary RE series to fixed installations. EV´s RE90 microphones are the most natural-sounding microphones on the market for public speaking, etc. and as a matter of course for professional theatrical productions. Compact, yet austere, EV RE90 series is inconspicuous – an important consideration in many cases. Ergonomically and architecturally designed, EV has married functionality with aesthetics making RE series the traditional favorite among sound contractors, architects and sound engineers.

RE90 microphones are designed for the highest-quality applications with linear frequency response and excellent, high gain-before-feedback. The cardioid types have a typical rear response 15 dB below the front response. All microphones guarantee a uniform polar pattern across the range, high sensitivity, low self-noise and provide a transformerless output device. The high-quality pre-amps are highly-resistant to electrical noise and radio frequency interference (RFI). RE90 L and RE90 H have a external pre-amp housing into the XLR connector. Gooseneck microphones have an all metal construction to substantially reduce noise from stray magnetic fields and RFI. The unique and patented multi-polar PolarChoice™ sets standards in sound and flexibility.

RE90 H (Black)
RE90 HW (White)

- Hanging microphone
- External Pre-amp
- Very uniform polar pattern
- Includes an installation guide
- Comes with accessories

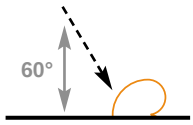


RE90 L

Authentic size

- Lavalier microphone
- Sub-miniature capsule design
- Capsule provides superior EMI/RFI shielding
- Very light-weight yet extremely reliable
- External pre-amp with very low current consumption
- Comes with accessories

RE90 B (Black)
RE90 BW (White)



- Boundary layer
- Ultra-thin profile (16 mm) housing with rubber nonslip bottom pad and strong steel screen
- Internal terminal block for disconnecting cable to insert thru holes
- Integrated pop filter
- Ideal working angle 60° off-axis
- Comes with accessories

PolarChoice™ 12 (299 mm)
PolarChoice™ 18 (461 mm)

- Gooseneck podium microphone
- Dual capsule design (multipolar)
- Four selectable polar pattern
- Consistent on-axis response
- Strutted (yet flexible) ultra-thin gooseneck
- Comes with CPSM shock mount; details/picutre see page 59 below
- Comes with accessories

RE90 P-12 (281 mm)
RE90 P-18 (443 mm)

- Gooseneck podium microphone
- Also perfect for instruments on-stage i.e. acoustic guitar or choir
- Uniform frequency response and polar pattern
- Strutted (yet flexible) ultra-thin gooseneck
- Integrated two-stage pop-filter
- Comes with accessories

Specifications	RE90 B	RE90 H	RE90 L	RE90 P	PolarChoice™
Element	Back electret condenser	Back electret condenser	Back electret condenser	Back electret condenser	Back electret condenser
Polar pattern	(Half-) Cardioid	Cardioid	Omnidirectional	Cardioid	Omni, Super-, Hyper, Cardioid
Impedance, Low-Z balanced	200 ohms	200 ohms	100 ohms	200 ohms	200 ohms
Frequency Response (-3 dB)	80 - 15,000 Hz	75 - 15,000 Hz	50 - 18,000 Hz	70 - 15,000 Hz	75 - 15,000 Hz
Power Level (0dB = 1 m W/Pascal) at 1,000 Hz	- 33 dB	- 30 dB	- 34 dB	- 43 dB	- 44 dB
Open Circuit Voltage (at 1,000 Hz)	25 mV/Pascal	27 mV/Pascal	12.6 mV/Pascal	4.5 mV/Pascal	5.6 mV/Pascal
Equivalent Noise (0 dB=20 micropascal) A-weighted	< 25 dB SPL	< 25 dB SPL	< 29 dB SPL	< 28 dB SPL	< 28 dB SPL
Maximum SPL (1% distortion, 1,000 Hz)	127 dB	120 dB	130 dB	130 dB	130 dB
Power requirement (Phantom power)	9 - 52 VDC	9 - 52 VDC	9 - 52 VDC	9 - 52 VDC	9 - 52 VDC
Current Consumption	2.5 mA	2.0 mA	1.0 mA	2.5 mA	2.8 mA
Magnetic Circuit	N/A	N/A	N/A	N/A	N/A
Specials	transformerless output device	external pre-amp	external pre-amp	transformerless output device	transformerless output device
Filters	—	—	—	—	—
Case Material	Heavy-duty zinc diecast	Steel	Polycarbonate resin	Steel	Steel
Finish	Nonreflecting black or white	Low-gloss black or white	Nonreflecting black	Nonreflecting black	Nonreflecting black
Included accessories	180 cm thin and flexible cable	760 cm braided cable	Gig bag tape	Windscreen, double-sided shock mount CPSM-Kit	Windscreen, two-piece
Optional accessories	—	—	—	see page 59	see page 59
Connector type (Details see page 73)	3-pin XLR	3-pin XLR	3-pin XLR	3-pin XLR	3-pin XLR
Dimension	128 L x 94 W x 16 H mm	37 L x 13 D mm	6 L x 5 D mm	P-12: 281 x 6.4 mm P-18: 443 x 6.4 mm (goosenecki)	PC-12: 299 x 6.4 mm PC-18: 461 x 6.4 mm (goosenecki)
Weight net	358 g	157 g	34 g	400 g (P-18: 528 g)	411 g (PC-18: 539 g)

New product

Wireless Microphones

Cobalt® Handheld Transmitters

Cobalt handheld systems combine EV's classically styled, ergonomically contoured transmitter with famous EV microphone transducers. Separate on/off and mute switches give you operational flexibility and eliminate popping common in single switch transmitters. The R100 and R200 systems feature the Co_7 dynamic and Co_{11} condenser microphones.

Cobalt® Bodypack Transmitters

Cobalt bodypacks have options to fit virtually any wireless application. Each system features an oversized switch for easy, silent muting and a separate on/off switch. R100 systems offer hardwired lavalier (lapel) condenser microphones and a 1/4-inch instrument plug. R100 headworn and all R200 bodypacks come with TA4 connectors to allow easy interchangeability of mics. There is a collection of lavalier and headworn microphones for R200 systems to perfectly meet any requirement.

Cobalt® Instrument Systems

Most wireless guitar systems are just a microphone bodypack with a 1/4-inch connector. The Cobalt instrument systems are designed specifically to bring out the transient detail and wide dynamics of a guitar. The companding circuit provides wide dynamic range and accurately captures the "plugged in" essence of the instrument's sound.

R200 XTU Universal Plug-On UHF Transmitter

With EV's XTU UHF transmitter, you can turn most any dynamic or electret microphone into a wireless by simply plugging it into the XLR connector. The XTU has a gain adjustment control with wide range to allow optimum level matching to your microphone.

VHF Cobalt® Wireless Systems

The R100 VHF systems operate in the frequency band between 174.100 and 185.350 MHz (channels 7-8 in the TV band). With the R100 Series, having EV wireless freedom has never been more affordable, cost-effective or practical. The R100's rock-solid RF performance is the result of superior design and state-of-the-art manufacturing. The R100 receiver can also be rack mounted with the optional RMR accessory kit.

UHF Cobalt® Wireless Systems

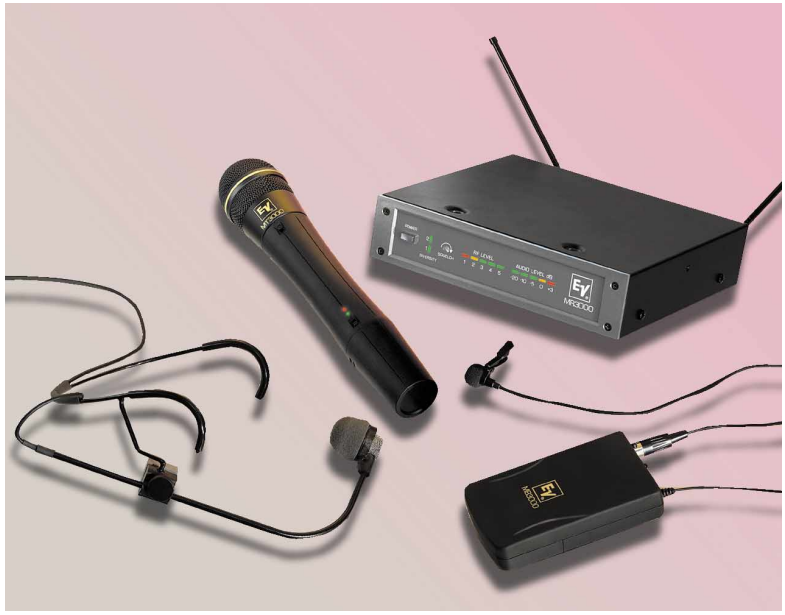
The R200 UHF systems operate in the 710.000-721.350 MHz band (channels 54-55 in the TV band). The chief advantage of the UHF band is that there are far fewer chances of interference problems since the frequency range is less crowded. With the R200U systems, there is a wider selection of premium high-performance microphones for better audio performance plus the receivers have 1/4-inch unbalanced and balanced mic-level 3-pin XLR-type output connectors. The R200 receiver can also be rack mounted with the optional RMR accessory kit.

Specifications	R100	R200
RF Frequency Range:	174.100-185.350 MHz (8 stock frequencies)	710.100-721.350 MHz (8 stock frequencies)
Audio Frequency Response:	20 Hz-15 kHz +/- 2 dB	20-15 kHz +/- 2 dB
Harmonic Distortion:	<0.5%	<0.5%
Radiated RF Output:	35-45 mW typical, 50 mW maximum	35-45 mW typical, 50 mW maximum
Audio Output Level:	.775 V rms into 100 kΩ load	.775 V rms into 100 kΩ load
Battery Life:	8-12 hours typical	8-12 hours typical
Available Systems:	R100VHC7 Electro-Voice Co7 Handheld Dynamic R100VHC11 Electro-Voice Co11 Handheld Condenser R100VL Electro-Voice OLM10 Lavalier Condenser R100VE Electro-Voice HM2 Headworn Condenser R100VG Electro-Voice Guitar System	R200UHC7 Electro-Voice Co7 Handheld Dynamic R200UHC11 Electro-Voice Co11 Handheld Condenser R200UL Electro-Voice ULM20 Lavalier Condenser R200UE Electro-Voice HM2 Headworn Condenser R200UG Electro-Voice Guitar System R200UT Electro-Voice Plug-On System

Wireless Microphones

MS3000 UHF DIVERSITY Wireless System

Professionals in every facet of the audio business trust Electro-Voice products to deliver incredible sound quality, uncompromising reliability and long useful life. From this dedication to innovation and craftsmanship comes the MS3000 UHF wireless system. The EV MS3000 is the fourth generation of a product line designed to deliver pristine sound with genuine “hardwired” audio quality. By combining UHF frequencies with EV’s advanced technology and solid construction, the MS3000 offers unsurpassed performance and reliability. When everything has to be just right, you can count on the MS3000. The MS3000 is available in 30 custom-tuned UHF frequencies. With UHF frequencies, interference is less likely because there are significantly fewer sources in use. The higher power and wider signal deviations permitted with UHF wireless mean that sound quality and useful range are better, plus more systems can be used simultaneously.



MR3000 RECEIVER

Frequency Range:	690 - 725 MHz
RF Stability:	0.005% or better
Modulation Type:	FM, 40 kHz nominal
Type:	Double Conversion, 65.75 MHz and10.7 MHz I.F.
IF Bandwidth:	230 kHz at -3 dB points
Image Rejection:	65 dB or better
Squelch:	Amplitude adjustable
Audio Outputs:	
Mic Level:	-20 dBV at 600 ohms
Line Level:	0.775 V rms at 100 kΩ (max)
Signal-to-Noise Ratio:	104 dB
Receiver Sensitivity:	Less than 0.8 µV for 12 dB SINAD
FCC Compliance:	Notification, Part 15
FCC Identification:	B5DR307
Diversity:	Continuous Secure-Phase™ Diversity to maximize signal strength
Supplied Accessories:	Two 1/4-wave antennas; two antenna adapters and extension cables; rack mount adapters (1 short, 1 mid, 1 long); adjustment screwdriver; AC power supply; owner’s manual.
Size (HxWxD):	1.75 in x 7.5 in x 7.75 in without antennas (44.5 x 190.5 x 196.85 mm)
Weight:	2.06 lb / 1.06 kg

MT3000 Handheld Transmitter

Power Output:	10-mW terminated, 50-mW maximum
Antenna:	Internal
Modulation:	FM, ±40 kHz deviation w/50 us pre-emphasis
Frequency Response:	50 Hz to 15,000 Hz
Transducer:	Electro-Voice N/D767 Supercardioid (MSHN7) Electro-Voice N/D267 Cardioid (MSHN2)
Supplied Accessory:	Deluxe stand adapter
Battery:	9 volt alkaline
Approvals:	FCC, Part 74H Industry Canada RSS123
FCC Identification:	B5DH211
Size:	10.75 in. long (27.3 cm) x 2 in. (5.08 cm) max.
Weight	284 g (10 oz) without battery

MB3000 Bodypack Transmitter

Power Output:	10-mW terminated, 50-mW maximum
Antenna:	Permanently attached
Modulation:	FM, ±40 kHz Deviation w/50 us pre-emphasis
TA4F Connector:	Pin 1: Ground; Pin 2: Mic Input; Pin 3: +5 volt bias; Pin 4: +5 volt bias fed through a 3 K ohm resistor for 2-wire electrets
Frequency Response:	50 Hz to 15,000 Hz
Microphone Input Sensitivity:	7.8 mV for full deviation
DC Power:	9 volt alkaline battery
Approvals:	FCC, Part 74H Industry Canada RSS123
FCC Identification:	B5DB108A
Size (HxWxD):	4.5 in x 2.6 in x 1.25 in (no antenna) (114.3 cm x 66 cm x 31.75 cm)
Weight:	3.4 oz (9.6 grams) without battery

MR3000 Receiver Secure-Phase™ Diversity

An important facet of the MS3000’s sound quality and reliability is its Secure-Phase™ Diversity circuitry. Most “true diversity” wireless systems use two low-quality RF receivers that are monitored for signal strength and switched in/out. The Secure-Phase™ design utilizes a single high-performance, high-quality RF receiver and combines the signal from both antennas at all times to maximize signal strength. As the signal changes, a sophisticated circuit adjusts the phase angle between the two antennas to minimize potential dropouts from signal cancellations. The combination of the high-quality receiver and Secure-Phase™ circuitry produces the strongest signal possible with the best sound quality. Even in difficult RF environments, the MS3000 performs.

MT3000 Handheld Transmitter

EV’s handheld transmitter design not only eliminates the antenna “pig tail,” it also delivers the highest effective radiated output power of any unit in its product class which can make a big difference in difficult RF situations. The MT3000 features EV’s classically styled contoured chassis that is covered in a rubber-like finish, making it comfortable and secure to hold. There are on/off and toggle-type mute switches for convenient operation and status lights to indicate when the system is on and the condition of the battery. Choose either the premium EV N/D767a N/DYM® dynamic or the N/D267 vocal microphone, each of which is precisely mounted to minimize handling noise. EV’s famous Memraflex™ dent-resistant grille keeps the mic looking new.

MB3000 Bodypack Transmitter

The MS3000’s bodypack transmitter features a TA4 4-pin input connector to accommodate a wide range of available lavaliere and headworn microphones. There are on/off and a toggle-type mute switches that allow the bodypack to be easily controlled without undue fumbling. A low-battery indicator is located on the control panel. The MB3000 also has a wide-range gain control to maximize S/N ratio and prevent front end overload.

featuring

ClearScan™

Auto Channel Select

ClearScan™ is the latest in wireless technical innovations from EV. With the simple touch of a button, ClearScan automatically scans the airwaves and quickly selects the best of 10 UHF channels.

Handheld Systems

With N/DYM® microphone elements, all models feature unparalleled, cutting-edge, wireless vocal technology, including an internal, high-efficiency antenna.

NRU-**N7**

- Supercardioid
- Multi-shock mount
- EV's unique VOB™ technology

NRU-**N2**

- Cardioid pattern
- EV's unique VOB™ technology

NRU-**N1**

- Cardioid pattern
- EV's unique VOB™ technology

Bodypack Systems

All models feature ultra-compact, flexible, ergonomically designed style and function.

NRU-**L10**

Features OLM-10 omnidirectional lavalier microphone

NRU-**L20**

Features ULM-20 cardioid lavalier microphone

NRU-**H1**

Features HM-2 headworn microphone

NGU **Guitar System**

Features circuitry specifically designed to handle a guitar signal.

Wireless Microphones

N/DYM® Series

The N/DYM® Series UHF Wireless is a 10-channel frequency-agile system that provides professional quality performance at a price working musicians can afford! N/DYM wireless also features the latest in wireless technical innovations — ClearScan™ auto channel select. ClearScan greatly simplifies system set-up by automatically scanning and selecting a clear channel for trouble-free operation. The handheld systems feature EV's famous N/DYM elements for great sound and performance. The N/DYM Series UHF Wireless from EV sets the newstandard for wireless systems.

10 Channel UHF Freuency Ability

The ability of EV's N/DYM® Series UHF Wireless to transmit and receive on one of ten selectable channels — combined with EV's unique ClearScan™ technology — make it the most preeminent wireless series available. EV's built-in frequency agility gives the EV N/DYM Series UHF Wireless the capability to adapt to any wireless environment. In response to interference from other wireless mics or transmissions, the user can simply change channels with the help of EV's unique, one-of-a-kind ClearScan technology.

Transmitters

N/DYM® wireless transmitters feature adjustable audio gain control, on/off and mute switches, up to ten hours of battery life on a single 9-volt battery, rotary channel-select switch and low-battery indicator. Bodypack transmitters feature a flexible 1/4-wave whip antenna, while the handheld transmitters contain an internal high efficiency antenna.

Receiver

The N/DYM® wireless receiver is housed in a half-rack-wide metal housing and features Secure-Phase™ diversity for clear, drop-out-free audio. Fixed, front-mount antennas for quick system set-up; balanced, mic-level XLR output; level adjustable, unbalanced, 1/4" output; a seven-segment, LED channel display; adjustable squelch control; Transmit and Diversity LED indicators and channel-change lockout. Single or double rack-mount kits are also available (RM-S and RM-D).

Wireless Receiver	
Operating Frequencies	A Band: 710-722 MHz (UHF channels 54 & 55)
Channel 54 (Switch Pos./Freq., MHz)	0/710.500, 1/712.300, 2/713.450, 9/714.250, 3/715.450
Channel 55 (Switch Pos./Freq., MHz)	5/716.550, 6/718.050, 7/719.300, 4/720.150, 8/721.400
	B Band: 722-734 MHz (UHF channels 56 & 57)
Channel 56 (Switch Pos./Freq., MHz)	0/722.550, 1/724.350, 2/725.500, 3/727.500, 4/732.200
Channel 57 (Switch Pos./Freq., MHz)	5/728.550, 6/730.050, 7/731.300, 8/733.300, 9/726.350
Number of Selectable Channels	10
Diversity	True diversity with Secure-Phase™
RF Sensitivity	<0.8 µV for 12 dB SINAD
FCC Data	Approved under part 15
Audio	
Frequency Response	50-15,000 Hz ±2 dB
Audio Output, Balanced (XLR)	–20 dBV (600-ohm load)
Distortion	Less than 0.5%
Signal/Noise Ratio	94 dB
Dynamic Range	100 dB
Simultaneous System Operation	7 with 5 B band and 2 A band, 5 - within one frequency band
Receiver: NRU	
Controls	
Front Panel	Channel-set button: increments channel setting by one; also used to activate ClearScan™ and channel-change lockout
Rear Panel	Squelch adjust
Antennas	1/4 -wave, fixed front mount
Displays/Indicators	Channel set: seven-segment LCD
Diversity LED's:	A or B lights to indicate when diversity circuitry switches from one antenna to the other.
Tx On LED:	lights when carrier signal is present.
RF Signal Strength:	4 segment LED lights to show strength of received RF signal.
Audio Signal Strength:	4 segment LED lights to show audio signal amplitude
Receiver Type	Synthesized PLL
Size (receiver housing)	190 mm (7.5 in.) x 145 mm (5.75 in.) x 43 mm (1.7 in.)
UHF Transmitters: NBPU, NHTU-N7, NHTU-N2, NHTU-N1	
Radiated RF Output	10-15 mW typical
Adjustments and Controls	On/off switch, Audio mute switch Audio gain pot with 40-dB adjustment range, Rotary channel switch
Displays/Indicators	Power on/low battery LED (red LED flashes upon turn on;) LED stays lit when low-battery voltage impacts system performance.
Battery Life	8-10 hours with 9-Volt alkaline
Bodypack Antenna	Flexible external 1/4 -wave
Handheld Microphone Antenna	Internal1/2 -wave
TA4 Connector Wiring	Pin 1: ground; Pin 2: mic input; Pin 3: +5-Volt bias;
(on bodypack only)	Pin 4: +5-Volt bias fed through a 3,000-ohm resistor for two-wire electret mics
Size (handheld transmitter)	273 mm (10.75 in.) long
Size (bodypack transmitter) (hwd)	114 mm (4.5 in.) x 66 mm (2.6 in.) x 32 mm (1.25 in.) (no antenna)
Handheld Transmitter Microphone Elements:	
NHTU-N7	N/D 767a dynamic cardioid
NHTU-N2	N/D 267a dynamic cardioid
NHTU-N1	N/D 167 dynamic cardioid
Bodypack Transmitter Microphone Elements: Can be used with any compatible microphone elements. See above for TA4F Pin-out wiring.	

Wireless Microphones

Key Features and Benefits

- 10 channel UHF frequency agility for professional quality performance in any situation.

ClearScan™

- ClearScan™ Auto Channel Select, which automatically scans and selects a clear channel for effective and quick system set-up and operation.
- Detachable rear mount antennas
- Rack mount hardware included
- RF and Audio level metering
- Rugged and durable metal receiver housing
- Secure-Phase™ diversity for clear and drop-out free system performance.
- SCU Receiver works with all N/DYM transmitters. Handheld transmitters offer a choice of EV's famous N/DYM elements: the 767a, 267a or the 167.

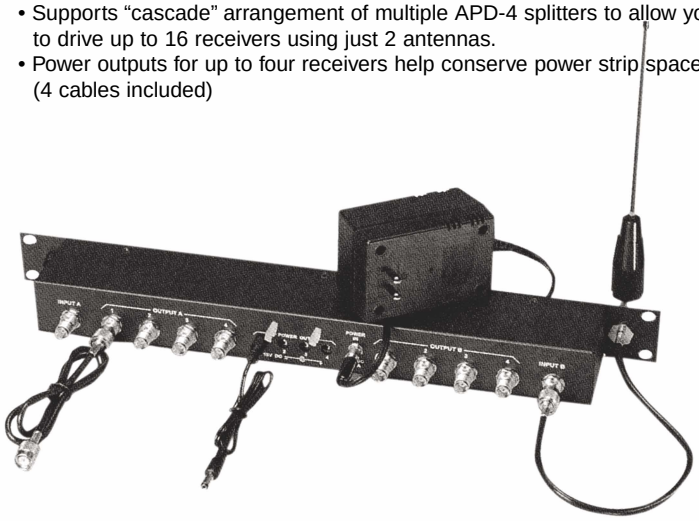
Wireless Receiver	
Operating Frequencies	A Band: 710-722 MHz (UHF channels 54 & 55)
Channel 54 (Switch Pos./Freq., MHz)	0/710.500, 1/712.300, 2/713.450, 9/714.250, 3/715.450
Channel 55 (Switch Pos./Freq., MHz)	5/716.550, 6/718.050, 7/719.300, 4/720.150, 8/721.400
	B Band: 722-734 MHz (UHF channels 56 & 57)
Channel 56 (Switch Pos./Freq., MHz)	0/722.550, 1/724.350, 2/725.500, 3/727.500, 4/732.200
Channel 57 (Switch Pos./Freq., MHz)	5/728.550, 6/730.050, 7/731.300, 8/733.300, 9/726.350
Number of Selectable Channels	10
Diversity	True diversity with Secure-Phase™
RF Sensitivity	<0.8 µV for 12 dB SINAD
FCC Data	Approved under part 15
Audio	
Frequency Response	50-15,000 Hz ±2 dB
Audio Output, Balanced (XLR)	–20 dBV (600-ohm load)
Distortion	Less than 0.5%
Signal/Noise Ratio	94 dB
Dynamic Range	100 dB
Simultaneous System Operation	7 with 5 B band and 2 A band, 5 - within one frequency band
Receiver: NRSCU	
Controls	
Front Panel	Channel-set button: increments channel setting by one; also used to activate ClearScan™ and channel-change lockout
Rear Panel	Squelch adjust
Antennas	1/4 -wave, detachable on rear panel. Note: (remote antennas and antenna splitters can be used with this product)
Displays/Indicators	Channel set: seven-segment LCD
Diversity LED's:	A or B lights to indicate when diversity circuitry switches from one antenna to the other.
Tx On LED:	lights when carrier signal is present.
RF Signal Strength:	4 segment LED lights to show strength of received RF signal.
Audio Signal Strength:	4 segment LED lights to show audio signal amplitude
Receiver Type	Synthesized PLL
Size (receiver housing)	190 mm (7.5 in.) x 145 mm (5.75 in.) x 43 mm (1.7 in.)
UHF Transmitters: NBPU, NHTU-N7, NHTU-N2, NHTU-N1	
Radiated RF Output	10-15 mW typical
Adjustments and Controls	On/off switch, Audio mute switch Audio gain pot with 40-dB adjustment range, Rotary channel switch
Displays/Indicators	Power on/low battery LED (red LED flashes upon turn on;) LED stays lit when low-battery voltage impacts system performance.
Battery Life	8-10 hours with 9-Volt alkaline
Bodypack Antenna	Flexible external 1/4 -wave
Handheld Microphone Antenna	Internal 1/2 -wave
TA4 Connector Wiring	Pin 1: ground; Pin 2: mic input; Pin 3: +5-Volt bias;
(on bodypack only)	Pin 4: +5-Volt bias fed through a 3,000-ohm resistor for two-wire electret mics
Size (handheld transmitter)	273 mm (10.75 in.) long
Size (bodypack transmitter) (hwd)	114 mm (4.5 in.) x 66 mm (2.6 in.) x 32 mm (1.25 in.) (no antenna)
Handheld Transmitter Microphone Elements:	
NHTU-N7	N/D 767a dynamic cardioid
NHTU-N2	N/D 267a dynamic cardioid
NHTU-N1	N/D 167 dynamic cardioid
Bodypack Transmitter Microphone Elements: Can be used with any compatible microphone elements. See above for TA4F Pin-out wiring.	

N/DYM® SCU System

The N/DYM SCU is a 10-channel frequency agile wireless system which provides professional-quality performance at a truly amazing price. N/DYM wireless also 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 SCU Receiver features detachable rear-panel mount antennas, front panel RF and Audio level displays, an all metal case, and rack mount hardware is included.

APD-4 Antenna Distribution System

- Drives up to four NRSCU or MS3000 diversity receivers using a single pair of antennas to conserve rack space and eliminate the "antenna farm." (8 TNC output and 2 front mount TNC cables included, 1/2 wave antennas sold separately.)
- Supports "cascade" arrangement of multiple APD-4 splitters to allow you to drive up to 16 receivers using just 2 antennas.
- Power outputs for up to four receivers help conserve power strip space. (4 cables included)



Wireless Microphones

Professional Microphone System

RE 1 WIRELESS™

New product

APD-4 Antenna Distribution System

- Drives up to four RE-1 diversity receivers using a single pair of antennas to conserve rack space and eliminate the “antenna farm”. (8 TNC output and 2 front mount TNC cables included, 1/2 wave antennas sold separately.)
- Supports “cascade” arrangement of multiple APD-4 splitters to allow you to drive up to 16 receivers using just 2 antennas.
- Power outputs for up to four receivers help conserve power strip space. (4 cables included)

Receiver Features and Benefits

- Optimized channel groups allow up to 16 systems to operate simultaneously in one frequency band. For groups larger than 16, EV can help with the coordination and custom groups are easily programmed.
- Programmable in 25 kHz steps across 24 MHz operating bandwidth, there are over 950 possible channels so you can always find a clear channel.
- Advanced ClearScan™, automatic group and channel selections, allows quick, simple setup.
- Backlit LCD Display shows the Sound Engineer the Group/Channel, transmitter battery status, diversity operation, RF and Audio level meters, and space for a custom label.
- Specially designed “Sound Check” mode provides the ability for one person to walk test the microphone in the performance space with tangible results.
- Patented DSP Posi-Phase™ Diversity System for maximum range and audio quality.
- Balanced XLR microphone output and 1/4 inch unbalanced adjustable line level output to match the application.
- Rackmount hardware included.
- Three Year Limited Warranty.

ADVANCED ClearScan™

Transmitter Features and Benefits

All Transmitters

- Unique “smart” battery circuit in the transmitters means there is no way to put the battery in wrong.
- LCD display and same four control buttons as receiver make channel or frequency programming quick and easy.
- Low battery LED lights when battery needs changing and you can check the battery level every time you turn on the transmitter.
- One on/off switch also acts as a mute. Great for pauses in presentations and worship services.
- On/off button can be disabled to prevent accidental turnoffs during performance.
- Normal and High power transmit uses low power for the application, maximizing number of simultaneous systems and limiting RF spillover into adjacent buildings/theaters.

Handheld Transmitter

- Interchangeable microphone head allows choice of elements to fit vocalist’s style and environment.
- N/DYM® 767a premium dynamic vocal mic with VOB™ (Vocal-Optimized Bass), excellent gain before feedback for high SPL stages.
- The new RE510 premium condenser vocal microphone for experienced vocalists, spoken word and quieter stages.
- Internal 1/2 wave antenna: excellent range; stays out of harm’s way
- Over-molded Warm-Grip™ handle reduces handling noise and encourages proper microphone technique for better performances.

Bodypack Features

- Cast magnesium housing weighs only ounces but is durable enough to take the pounding on tour.
- Detachable 1/4 wave antenna allows for easy replacement or using different antenna options.
- Cell phone style beltclip included for quick and easy attachment. Optional pouches also available for wearing under costumes or for more vigorous applications.
- EV has a wide selection of lapel and headworn microphones and microphone accessories to go with the RE-1 bodypack transmitter.

Unique Guitar Bodypack Features

- Dual band compander circuit provides the audio bandwidth required to cover the lows of a bass guitar to the highs of a solid body.
- Mic/Instrument switch adds a 20 dB pad in the transmit path so the standard bodypack can be used for microphone and guitars.
- Guitar patch cord featuring George L’s® cable with right angle and straight plugs included to fit your guitar.

CSR-1000 Receiver

Controls	
Front Panel:	On/Off, Menu, Set, Up, Down Buttons
Rear Panel:	1/4 inch output level
Indicators LCD	Group, Channel, Diversity, Label, Set-up
Backlit Display:	Transmitter Battery Level, Audio Signal Amplitude and RF Signal Strength, Squelch
Connectors	
Back Panel:	1/4 inch unbalanced adjustable line level output XLR balanced mic level output USB programming port
Antennas:	Detachable 1/4 wave
RF Specifications	A Band 680 – 704 MHz (TV Channels 49-52)
Frequency Range:	B Band 722 – 746 MHz (TV Channels 56-59)
Number of Channels:	950 possible (programmable in 25 kHz steps)
Diversity:	DSP SecurePhase True Diversity
Receiver Type:	Synthesized PLL Agile UHF
RF Sensitivity:	<0.8uV for 12 dB SINAD
FCC Type Acceptance:	Approved under Part 15
Audio Specifications	100 – 15 kHz +/- 2 dB Microphone
Frequency Response:	30 – 15 kHz +/- 2 dB Instrument
Audio Output Level:	
Line Level	8 mV - 0.775V RMS @ 100 k ohm load
Balanced	-20 dBV max (@40 kHz deviation)
Distortion:	Less that 0.5% (@1 kHz, 40 kHz deviation)
Signal to Noise Ratio:	> 94 dB
Dynamic Range:	>100 dB
General Specifications	
Power Supply:	External 12 VAC 750mA in-line with cord
Size:	1.72 in. H x 7.50 in. W x 8.38 in. D 43.69 mm H x 190.50 mm W x 212.85 mm D

CSB-1000 Bodypack Transmitter

Controls:	Power on/off switch, Audio Gain Adjustment with 40 dB range, Transmit Power Switch, Microphone/Instrument Switch (0,-20 dB), Menu, Set, Up, Down Buttons
Indicators:	Red LED Low Battery Indicator, LCD displays one of the following: Channel/Group, Frequency, or Battery Level
Battery Life:	8 hours with 9V alkaline typical
Antenna:	External 1/4 wave detachable
Connector:	TA4 input for microphone Pin 1 ground, Pin 2 Mic input Pin 3 +5V Bias, Pin 4 +5V through 3 kΩ
RF Output:	Normal: 5 mW typical High: 50 mW typical
Case Material:	Cast Magnesium
Size:	4.4 in. H x 2.6 in. W x .9 in. D 111 mm H x 66 mm W x 23 mm D

CSH-1000 Handheld Transmitter

Controls:	Power on/off, Audio Gain Adjustment with 26 dB range Transmit Power Switch, Menu, Set, Up, Down Buttons
Displays:	Red LED Low Battery Indicator, LCD displays one of the following: Channel/Group, Frequency, or Battery Level
Battery Life:	8 hours with 9V alkaline typical
Antenna:	Internal 1/2 wave
Microphone Elements:	EV N/D 767a Dynamic or RE 510 Condenser
RF Output:	Normal: 5 mW typical High: 50 mW typical
Size:	10.5 in. (26.8 cm) long

Microphone Accessories

Wired microphone accessories

309A	Supension shock mount for RE20, RE27N/D, black
311	Stand clamp for all EV 3/4-inch diameter microphones (635A, RE16, RE200, N/D468), black
313	Shock-mount for stand clamp for EV 3/4-inch diameter microphones (635A, RE16, RE200)
320	Stand clamp for the RE20, RE27N/D, black
368	Mic clip for N/D468
422A	Desk stand with rubber shock mount that accepts microphone stand clamps, black
CPSM	Shock mount for RE90P-12, RE90P-18, PolarChoice™12, PolarChoice™18
FMK	Flange mount for RE90P-12, RE90P-18, PolarChoice™12, PolarChoice™18
MSA-COI	Stand clamp for Cobalt Co4 instrument microphone
MSA-COV	Stand clamp for Cobalt vocal microphones (Co5, Co7 and Co9)
MSA-NDV	Stand clamp for 1-inch diameter microphones (BK-1, RE50) and tapered microphones (N/DYM series vocal mics), gray
314E	Windscreen for 635A, gray
376	Windscreen pop filter for MC series, RE16, RE50, N/D167B, N/D267, N/D367, N/D767
379-1	Black windscreen pop filter for MC series, RE16, RE50, N/D167B, N/D267, N/D367, N/D767
379-2	Red windscreen pop filter for MC series, RE16, RE50, N/D167B, N/D267, N/D367, N/D767
MBS-CO5	Replacement ball screen for Cobalt Co5
MBS-CO7	Replacement ball screen for Cobalt Co7
MBS-CO9	Replacement ball screen for Cobalt Co9

Wireless microphone accessories

OLM10	Omnidirectional lavalier condenser mic with TA4F wired for R200, N/DYM and MS3000 wireless
ULM20	Unidirectional lavalier condenser mic with TA4F wired for R200, N/DYM and MS3000 wireless
RE90TX	MicroMiniTM omnidirectional condenser lavalier mic with TA4F wired for R200, N/DYM, MS3000, and RE-1 wireless
CS200TEX	Cardioid condenser lavalier mic with TA4F wired for R200, N/DYM and MS3000 wireless
HM2	Headworn condenser cardioid mic with TA4F wired for R200, N/DYM and MS3000 wireless
HM7	Headworn condenser cardioid mic with TA4F wired for R200, N/DYM, MS3000, and RE-1 wireless
HM311	Crown® model CM-311 touring level headworn condenser cardioid mic with TA4F for R200, N/DYM, MS3000, and RE-1 wireless
RC767a	RC767a dynamic microphone cartridge for the RE-1 series CSH-1000 handheld
RC510	RC510 electret condenser microphone cartridge for the RE-1 series CSH-1000 handheld
MAC-2	XLR to TA4F adapter cord
MAC-G	3-feet guitar cord, TA4F to 1/4-inch N/DYM NBPU-G
MAC-G2	George L™ guitar cable for the RE-1 bodypack transmitter
WP-1000	Leather pouch for RE-1 bodypack transmitter
RCSA	Stand adapter for handheld transmitter models N/DYM, MS-3000, R100, and R200 Series
MSSA	Deluxe stand adapter for handheld transmitters
MSA-1000	Mic stand adapter for the RE-1 series CSH-1000 handheld
BC-1000	Beltclip with tab and screw for the WT-1000
AN-Flex A	1/4 wave RE-1 bodypack transmitter antenna - 'A' band
AN-Flex B	1/4 wave RE-1 bodypack transmitter antenna - 'B' band
AN-Sflex A	1/4 wave RE-1 bodypack transmit antenna super flex - 'A' band
AN-Sflex B	1/4 wave RE-1 bodypack transmit antenna super flex - 'B' band
APD4	Antenna/power distribution system (supplies 4 units) for use with NRSCU, MS3000, and RE-1 wireless
TP-2	TNC 50 ohm termination plug for APD4
TNC	TNC connector for Antenna Cable Connections
CLA-5	1/2-wave antenna (680-730 MHz)
CLA-6	1/2-wave antenna (720-760 MHz)
AB-2	Universal mounting bracket for 1/2 wave antenna with 10' coax cable for MS3000 wireless
LPA500	Log periodic antenna with hardware
CXU-25	25-foot volt-loss cable with TNC connector
CXU-50	50-foot (15.24m) volt-loss coax cable with TNC connector
CXU-75	75-foot volt-loss cable with TNC connector
CXU-100	100-foot (30.4m) volt-loss coax cable with TNC connector
RM-D	Rack-mount kit - double (works with N/DYM, RTM-1, and MS3000 receivers)
RM-S	Rack-mount kit - single (works with N/DYM, RTM-1 and MS3000 receivers)
RMR	Rack-mount adapter kit for R100 and R200 receiver

Speaker Technologies

Ring Mode Decoupling® (RMD®)

Electro-Voice pioneered Ring Mode Decoupling (RMD®) as a result of experience gained through years of high-level concert system design. The acclaimed EV X-Array™ was the "test bed" for RMD® research. Just as automotive companies use Formula 1 racing to develop new technologies, Electro-Voice uses its work in the concert sound and touring industries to develop new technologies. The goal of that basic research is to bring those new technologies into all aspects of the sound reinforcement industry.

All loudspeaker components display unwanted vibrational modes—or resonances—that produce both frequency and time-domain distortions. A time-domain distortion is most often described by loudspeaker users as a "ringing" in the system. This ringing is usually most audible through the vocal fundamental range, and users commonly attempt to "cure" the ringing mode through equalization. Unfortunately such attempts remove not only the time-domain distortion, or ringing, but also parts of the musical signal as well. The net result is that musical information is lost.

RMD® is a series of techniques developed by Electro-Voice engineers to deal with the time-domain distortion at its source. The basic problem is mechanical in nature. As a result, the only really effective solution is also mechanical. When acoustic resonances are encountered, the only effective solution is an acoustic remedy. The same applies to electrical resonances: The solution must be electrical.

RMD® treatment produces an acoustic signal that is much freer of mechanical and acoustical ringing modes. The result is a level of fidelity—particularly through the critical vocal range—that is more coherent and "in your face." Another benefit of RMD® technology is a much higher degree of level independence. Many front-of-house engineers have noted that system equalization needs to change with system output levels. The louder the system is driven, the more EQ changes become necessary to maintain system voicing (that is, the system sounds different at higher power levels). RMD® greatly minimizes the changes in system voicing that occur with level changes. Systems with RMD®, therefore, display a high degree of level-independent fidelity and a very audible improvement in vocal clarity as well.

Power handling ratings

Accurately specifying power handling ratings presents a challenge with odds typically worse than those in a game of chance. Each manufacturer rates its components in its own particular way. While responsible manufacturers always qualify their testing methods, this offers little help to users not familiar with the different test methods.

Electro-Voice has used an EIA-based rating for many years. It offers a reasonably good combination of mechanical (excursion) and thermal (heat) stress measurements. The ratings supplied with EV components are very conservative, and require a full eight-hour test cycle to generate.

However, Electro-Voice does not limit its power testing to EIA methods. Long term continuous musical testing of rated program limits is typically performed for 200-hour durations. EV engineers also perform mixed-signal testing, a combination of continuous noise (EIA- or AES-based shaped spectrum signals) and low-frequency impulsive signals (such as kick drums). Mixed signal tests often represent typical program material, and the resulting measurements relate better to real-world conditions.

The most useful power handling rating is that of the program material specification. This rating relates well to "in the field" situations for most musical programs. It should always be remembered that no test method or rating spec will universally describe every situation. Extreme power levels can produce either mechanical or thermal failures with any manufacturer's components.

Manifold Technology®

In 1986, Electro-Voice revolutionized concert sound reinforcement by introducing Manifold Technology®. In each of the four bandpasses covering the entire frequency range, the output of four loudspeakers was flawlessly combined—or "manifolded"—into a single horn (such as a large-format MH horn) or low-frequency enclosure. The result was a physical package, a fraction of the size of conventional concert rigs but with four times the acoustic output. This eliminated the drastically uneven coverage that occurs when multiple acoustic sources are stacked to gain more output. Manifold Technology® came into its own particularly in smaller-sized locations or installations, where low-frequency output was limited by the space available.

Speaker Technologies

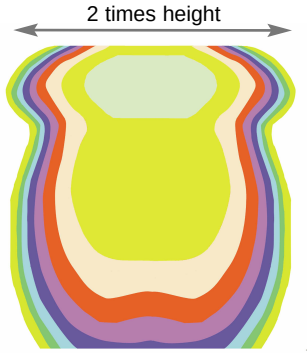
Dipole and Tripole™ Technology

Tripole configuration allows speakers to act effectively as a two- or three-element line array, with attendent improvements in directivity. Tripole configuration of dual-woofer, three-way Xi-Series™ systems provides the best directivity improvement. This is achieved by vertically spacing the low-frequency sources which flank the mid-bass horn (operating alone at low frequencies), and by correspondingly overlapping the LF and MB sources in the mid bass (125 Hz to 540 Hz). Single-woofer, three-way systems may be dipole-configured by overlapping the (single) woofer and mid-bass sources in the appropriate frequency ranges. Such physical orientation of three sources, together with appropriate amplitude shading and filter combinations, produces vertical directivity control to below 125 Hz. Interferences resulting from normal overlapping of speakers are minimized.

The sonic advantages of such configurations are significant. Precisely controlled radiation patterns at low frequencies prevent reverberant energy in the 125–600 Hz range from degrading vocal fundamentals. The pattern control achieved by this three-source, single-enclosure “line array” prevents the critical distance from moving forward (toward the source) as pattern control is lost because wavelengths become significant in size with respect to the radiation device. The other primary advantage is that down to 125 Hz, acoustic output under the enclosure is a full 12 dB or more below on-axis levels. This results in greatly improved gain-before-feedback levels on stage, especially in theaters where lavalier microphones are traditionally used under center speakers. In conventional systems where “under-enclosure” levels are comparable to on-axis levels, system intelligibility is even compromised at the source (microphone) because of poor loudspeaker directivity control and subsequent sonic “spillover” (see page 28).

Vari Intense®

Electro-Voice´s unique Vari Intense® (VI) technology provides an effectively rectangular coverage pattern. It provides many advantages for most applications in oblong rooms. The unique, patented throat and flare structure of the VI horn delivers a 6-10 dB signal boost to the rear of the room. The resultingly even front-to-back SPL eliminates ear-strain at the back of the sitting area and painful levels at the front. One VI horn can replace two standard systems, thus reducing costs and eliminating the destructive interference which occurs between long- and short-throw horns or multi-sourced horizontal arrays. Aimed downward, the VI horn delivers sound only to the audience area, providing uniform direct-field SPL and significantly reducing the amount of sound reverberating off the ceiling. This provides an increase in mid- to high-frequency intelligibility of 6 dB in most applications.



Coverage pattern of a VI horn

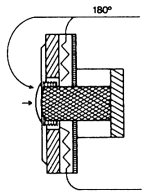
Planning with Vari Intense® systems is easy. The height of the room defines the area of the floor to be covered by one speaker. Coverage width is two times the height of the ceiling; coverage depth (or throw) is three times the height of the ceiling. Thus, a Vari Intense® speaker mounted centrally, parallel to the floor, at a height of nine feet would provide even SPL coverage in a room eighteen feet wide by twenty-seven feet long. Aiming the speaker down 15 degrees at the same twelve-foot height will produce an even coverage pattern that is nine feet wide by eighteen feet long. Tilting it back 15 degrees at the same height produces an even coverage pattern eighteen feet wide by forty-five feet long. Normally, the loudspeaker is mounted approximately 0.6 to 0.8 times the height back from the first row and has a nominal angle of the top of the enclosure parallel to the floor or slightly (2 to 3 degrees) tilted back.

Microphone Technologies

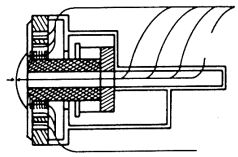
In 1934, Electro-Voice invented the hum-bucking coil for microphones, still an industry standard almost 70 years later. The invention was the beginning of EV's success in building microphones, but not the end. Electro-Voice continues to set new standards for microphone design today. Electro-Voice was the first manufacturer to use neodymium-based magnet structures (N/DYM®) in its microphones, thus achieving higher output and condenser-like qualities such as crystal clarity and reliable performance. Electro-Voice's goals in developing microphone technologies have always been the same: providing highest sound quality, achieving better and more comfortable handling for the user, and continuing the company's tradition of legendary reliability and warranty support. Its long list of patents attests to its success in meeting these goals.

Variable-D®

Normal microphones generate increased bottom end when used close up. This is typically called the "proximity effect." While some lead vocalists like this effect and use it to enhance their performance, it is attainable only in closeup situations. When the distance between the microphone and the source is extended, the sound quality changes dramatically. Electro-Voice's patented Variable-D® eliminates this disadvantage. On the rear side of the diaphragm there is a perforated pipe (interference duct) with precise sonic slots at set distances. The duct provides maximum damping which is completely uncoloured and undistorted at 180-degree off-axis, ensuring the same frequency response as if the source was nearly on-axis.



Normal mic



Variable-D® mic

Variable-D® designed microphones can be used very close to other sound sources with no loss in clarity or definition. This makes them the preferred choice for tight vocals and challenging instruments such as brass. Variable-D® microphones like the RE20 and RE27 are favorites with broadcast show hosts, vocal booths, voice-over studios, and professional touring or rental companies.

VOB™

Electro-Voice's unique VOB™ technology (Vocal-Optimized Bass) reduces low-frequency distortion in the microphone's output. Critical damping of the low-frequency resonant peak results 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." VOB™ counteracts proximity effect, sibilance, and P-popping, thus assuring maximum vocal intelligibility and musical clarity.

——— with VOB™
- - - - - without VOB™

Product feature symbols

Weather-resistant

Also available in white

Available with high-quality 70/100 volt transformer

Speaker can be flown. See product features and Speaker Hardware/Accessories (pages 41-43).

Mounting hardware available or included. See product features and Speaker Hardware/ Accessories (pages 41-43).

Passive or biamped operation.

Designed for multi-way active operation using EV® Dx38 digital controller (page 49).

Rotatable constant-directivity horn or identical horizontal/vertical directivity control (i.e. 65° x 65°).

Ring Mode Decoupling (RMD™) ensures high performance and vocal clarity at any SPL. See pages 62-64.

Microphone polarities

Cardioid

Supercardioid

Hypercardioid

Omnidirectional

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