

EV **Electro-Voice**

Pro Sound

Speakers and Electronics





Electro-Voice

mics • dsp • amps • speakers

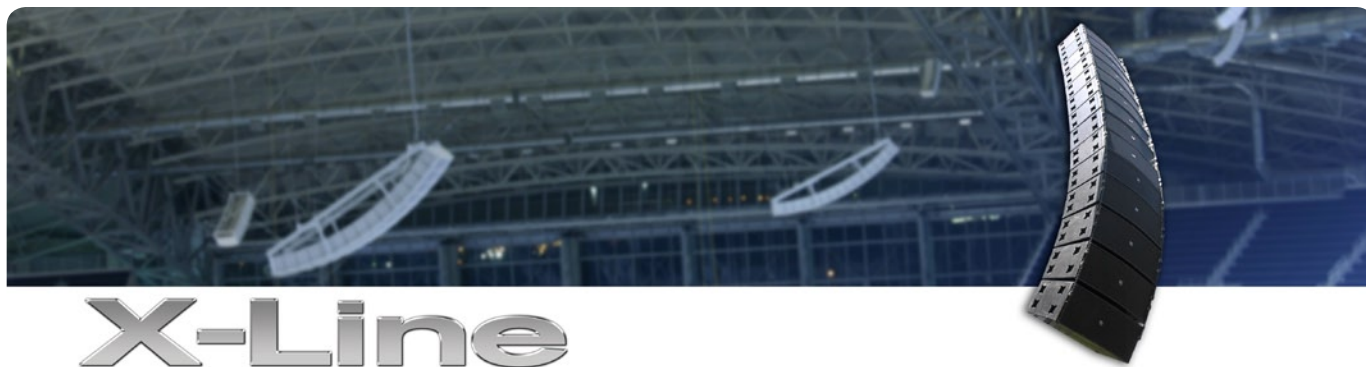
LIVE FOR SOUND





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X-Line system development was driven by the need for a high-level concert touring system that combined 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 X-Line system

provides wide horizontal dispersion from a single, vertical line-array with exceptional coherent wavefront summation in the vertical plane. Extended low-frequency polar control produces more uniform power response, further enhancing overall intelligibility.

Xvls

Cabinet



- High-output, three-way line-array system
- Rectangular cabinet designed
- 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

Xvlt

Cabinet



- 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

Xsub(F)

X-Line Two x 18" Subwoofer



- 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
- Proprietary rigging allows for rapid venue load-in and load-out



	Xvls	Xvlt	Xsub/f
Frequency range (-3 dB)	40 Hz–16 kHz	40 Hz–16 kHz	33–400 Hz
Recommended high-pass frequency	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	100/106 dB*
Max. SPL/1 m (calc.) (LF/MB/HF)	138 dB/139 dB/142 dB	138 dB/139 dB/141 dB	131/137 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
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
Coverage (H° x V°)	90° x 5°	120° x 9°	200° x 325°
LF driver	2 x EVX-155 Plate	2 x EVX-155 Plate	2 x EVX-180B
MB driver	2 x ND08	2 x ND08	—
HF driver	3 x ND6	3 x ND6	—
Crossover frequencies	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
Input connections	2 Neutrik® NL8	2 Neutrik® NL8	2 Neutrik® NL8
Dimensions (H [front/rear] x W x D)	494.3/494.3 x 1244.6 x 740.4 mm 19.46"/19.46" 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"	494.3/494.3 x 1244.6 x 740.4 mm 19.46"/19.46" x 49" x 29.15"
Net weight	117 kg (257 lbs.)	115 kg (253 lbs.)	92 kg (202 lbs.)



When a line array with limited size and weight is required, XLVC is the choice of professionals around the world. XLVC very compact line arrays combine reliability,

intelligibility and sonic horsepower in a package that is easy to configure and suspend.

XLD281 Very Compact 120° H Dual 8" Line Array System



- Full Bandwidth 3-way Element (60Hz-20kHz)
- Very Compact, Lightweight
- CCT™ (Coverage Control Technology)
- 120° Horizontal Coverage to 250 Hz
- Simple, Quick Integrated Rigging
- Versatile Subwoofer Integration
- Bi-Amp or Tri-Amp Operation
- Neodymium Transducers
- LAPS Aiming and Flying Software

XLD291 Very Compact 90° H Dual 8" Line Array System



- Very compact, lightweight
- CCT™ (Coverage Control Technology)
- Simple, quick integrated rigging
- 90° horizontal coverage to 200 Hz
- Versatile subwoofer integration
- Bi-amp or tri-amp operation
- Neodymium transducers
- LAPS aiming and flying software

XCS312 Triple 12" Cardioid Very Compact Line-array Bass Element



- Three DVX3120 12" low-frequency transducers
- 1500 W continuous, 6000 W peak
- Versatile integration in main arrays
- Self-contained rigging hardware
- LAPS aiming and prediction software compatible

XLE181 & XLE191 Very Compact 120° or 90° H Single 8" Line Array System



- XLE181: 120°h x 10°v
- XLE191: 90°h x 10°v
- Full Bandwidth 2-Way Element (75Hz-20kHz)
- Most Compact, Very Lightweight
- Simple, Quick Integrated Rigging
- Bi-Amp or Fullrange Operation
- Neodymium Transducers
- LAPS Aiming and Flying Software



	XLD281	XLD291	XLE181 & XLE191	XCS312
Frequency Range (-3dB)	75 Hz - 18 kHz	75 - 18 kHz	90 Hz - 18 kHz	45 - 100 Hz
Max SPL (Calc.) Peak	149 dB *	150 dB	149 dB*	136 dB
Horizontal Coverage:	120 °	90 °	120 ° (181) : 90°(191)	200°
Power Handling cont.	200/200/80W	200/200/80W	200/80W	1500 W
Power Handling Peak	800/800/320W	800/800/320W	800/320W	6000 W
LF Transducer	2 x DVN2080	2 x DVN2080	DVN2080	3 x EV DVX3120
HF Transducer	2 x ND2-8	2 x EV ND2s	2 x ND2-8	
Nominal Impedance	16/16/16 Ω	16/16/16 Ω	16/16 Ω	4/8 Ω
Dimensions	726 x 251 x 369mm 28.58" x 9.9" x 14.52"	726 x 251 x 369mm 28.58" x 9.9" x 14.52"	516 x 251 x 369 mm 20.3" x 9.9" x 14.52"	726 x 508 x 677 mm 28.58" x 20" x 26.65"
Weight	21.8 kg (48 lbs)	21.8 kg (48 lbs)	17.2 kg (38 lbs)	67.1 kg (148 lbs)



XLC

Whether at a medium-sized festival, in a large concert hall or house of worship, or as a supplementary system used with X-Line, XLC compact line arrays have a proven record

of performance and reliability. It is no wonder why XLC is one of the most popular line array systems in the world.

Three-Way, High-Output **Xlc127DVX** Compact Line-array Element



- Accurate vertical control & coverage
- Compact & lightweight
- Fast, simple integrated rigging
- Tri-amp or optional bi-amp operation
- True three-way design
- LAPS aiming software
- 120° horizontal full-range line-array
- Quik-Rig™ or fixed installation rigging

Three-Way, High-Output **Xlc 907DVX** Compact Line-array Element



- Accurate vertical control & coverage
- Compact & lightweight
- Tri-amp or optional bi-amp operation
- True three-way design
- LAPS aiming software
- 90° horizontal full-range line-array
- Quik-Rig™ or fixed installation rigging

Xlc215 High-Output Dual 15" Subwoofer Line-array Element



- Compact & lightweight, 139 dB SPL
- Fast, simple integrated rigging
- Footprint identical to XLC-127DVX
- Optional adapter grid for use with XLD281
- 2 x DVX3151 transducers
- Quik-Rig™ or fixed installation rigging

	Xlc 127DVX	Xlc 907DVX	Xlc 215
Horizontal Coverage	120°	90 °	300°
LF Power Handling	500 W cont./2000 W peak	500 Watts	1000W/4800W
MB Power Handling	300 W cont./1200 W peak	300 Watts	—
HF Power Handling	150 W cont./600 W peak	150 Watts	—
Sensitivity (LF/MB/HF)	95 dB/101 dB/110 dB		103 dB*
Max. SPL (calc.)	126/130/138 dB	145 dB	139 dB
LF Transducer	1 x 12" DVX3121	EV DVX3121	2xDVX3151
MB Transducer	2x DVN 2065	2 x DVN2065	—
HF Transducer	2 x ND6-16	2 x ND6-16	—
Connectors	2 Neutrik® NL8	2 Neutrik® NL8	2 Neutrik® NL8
Enclosure Material	EV®-coated plywood	EV®-coated plywood	EV®-coated plywood
Grille	Powder-coated steel	Powder-coated steel	Powder-coated steel
Environmental Specs	IEC 529 IP24	IEC 529 IP24	IEC 529 IP24
	MIL STD 810	MIL STD 810	MIL STD 810
Dimensions (H x W x D)	362 x 991 x 572 mm	362 x 990 x 572 mm	546 x 991 x 572 mm
	14.25" x 39 " x 22.5"	14.25" x 39 " x 22.5"	21.5" x 39" x 22.5"
Net Weight	50,4 kg (111 lbs)	48.1 kg	54.5 kg (120 lbs)



XLCi



XLCi is the dedicated installation version of the popular XLC compact line-array featuring visually appealing rigging that doesn't distract from building architecture.

Three-Way, High-Output Xlci 127DVX Compact Line-array Element



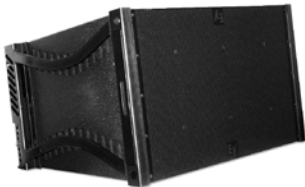
- Accurate vertical control & coverage
- Compact & lightweight
- Tri-amp or optional bi-amp operation
- True three-way design
- LAPS aiming software
- 120° horizontal full-range line-array
- Fixed installation rigging

Three-Way, High-Output Xlci 907DVX Compact Line-array Element



- Accurate vertical control & coverage
- Compact & lightweight
- Tri-amp or optional bi-amp operation
- True three-way design
- LAPS aiming software
- 90° horizontal full-range line-array
- Fixed installation rigging

Xlci 215 High-Output Dual 15" Subwoofer Line-array Element



- Compact & lightweight, 139 dB SPL
- Fast, simple integrated rigging
- Footprint identical to XLC-127DVX
- Optional adapter grid for use with XLD281
- 2 x DVX3151 transducers
- Fixed installation rigging

	Xlci 127DVX	Xlci 907DVX	Xlci 215
Horizontal Coverage	120°	90 °	300°
LF Power Handling	500 W cont./2000 W peak	500 Watts	1000W/4800W
MB Power Handling	300 W cont./1200 W peak	300 Watts	—
HF Power Handling	150 W cont./600 W peak	150 Watts	—
Sensitivity (LF/MB/HF)	95 dB/101 dB/110 dB		103 dB*
Max. SPL (calc.)	126/130/138 dB	145 dB	139 dB
LF Transducer	1 x 12" DVX3121	EV DVX3121	2xDVX3151
MB Transducer	2x DVN 2065	2 x DVN2065	—
HF Transducer	2 x ND6-16	2 x ND6-16	—
Connectors	2 Neutrik® NL8	2 Neutrik® NL8	2 Neutrik® NL8
Enclosure Material	EV®-coated plywood	EV®-coated plywood	EV®-coated plywood
Grille	Powder-coated steel	Powder-coated steel	Powder-coated steel
Environmental Specs	IEC 529 IP24	IEC 529 IP24	IEC 529 IP24
	MIL STD 810	MIL STD 810	MIL STD 810
Dimensions (H x W x D)	362 x 991 x 572 mm	362 x 990 x 572 mm	546 x 991 x 572 mm
	14.25" x 39 " x 22.5"	14.25" x 39 " x 22.5"	21.5" x 39" x 22.5"
Net Weight	50,4 kg (111 lbs)	48.1 kg	54.5 kg (120 lbs)



X-Array

X-Array traditional horizontal array systems provide world class performance and flexibility for the ultimate in concert touring reinforcement.

Xw12A

Floor-Monitor



- 2-way high-output Floor monitor
- Vented LF enclosure
- 3" voice coil (titanium diaphragm) for low distortion
- Two symmetrical 55° angles

Xw15A

Floor-Monitor



- 2-way high-output Floor monitor
- Vented LF enclosure
- 3" voice coil (titanium diaphragm) for low distortion
- Two symmetrical 55° angles

	Xw12A	Xw15A
Frequency Range (-3 dB)	65 Hz - 16 KHz	55 Hz - 18 KHz
Recommended High-Pass Frequency	Systemcontroller	Systemcontroller
Axial Sensitivity SPL 1W/1m	98/110 dB	99/110 dB
Max. SPL / 1m (calc.); full space	129/135 dB	133/135 dB
Long-Term Power Handling	300/75 W	600/75 W
Short-Term Power Handling (Peak)	1.200/300 W	2.400/300 W
Coverage (nominal -6 dB) H° x V°	55° x 80° (CD Horn)	55° x 80° (CD Horn)
Directivity Index	11.6 dB (+2.3/-2.1dB)	11.6 dB (+3.0/-3.6dB)
	1,200 Hz - 16 KHz	1,200 Hz - 16 KHz
LF woofer (transducer)	12" (DL12ST)	15" (EVX-155)
MB woofer (transducer)	---	---
HF throat diameter (transducer)	1.4" (ND6-16)	1.4" (ND6-16)
Crossover Frequencies	Factory preset	Factory preset
Nominal Impedance	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 four-pin Speakon	2 four-pin Speakon
Dimensions (H x W at front x D)	534 x 449 x 313 mm 23" x 17.2" x 12.2" (in floor position)	644 x 452 x 340 mm 25.4" x 18" x 13.4" (in floor position)
Net Weight	21.9 kg (48 lbs.)	28.4 kg (62.5 lbs.)



Xi-Series



The Electro-Voice Xi-Series brings premium, tour-quality sound to installation. Inspired by the features of EV's acclaimed X-Array touring systems, the Xi-Series incorporates a potent combination of high-output and ultra-linear short, medium, and long-throw systems in two-way, three-way, and four-way configurations. Xi-Series loudspeakers incorporate the acoustic advantage of EV's Ring-Mode Decoupling (RMD™), and features HP horns to secure excellent directivity control and even coverage. The three-way systems can be operated in a Vertical Beam Shaping (VBS) configuration using EV digital signal processors or EV DSP-equipped amplifiers. This unique approach extends the vertical coverage angle control as low as 125Hz - well below that permitted by the mid-bass horn alone (about 800Hz). These can be thought of as

two and three-element, low-frequency line arrays. This extraordinary low-frequency control is achieved through optimized woofer placement in conjunction with presets that overlap individual components (using All Pass Filters). To achieve sound performance without compromises, Xi-Series is designed for multi-way active operation, except the Xi-1082, which contains a passive crossover network. Xi-Series is made of 18 mm, 13-ply birch plywood finished in black, textured paint and full-face protected by a powder-coated, steel front-grille backed with foam. These horn-loaded systems, except Xi-1123A/106F and Xi-2123A/106F, have an identical footprint for a uniform look. All systems, except the Xi-1082, have integrated handles and two L-Tracks on the top and bottom. A detailed "Flying manual" is available.

Xi-1082



- 2-Way Full-range
- Vented LF enclosure
- 1.25" voice coil (titanium diaphragm)
- Typical under-balcony slant also perfect
- for front-stage and near-field use
- 2 x 3/8"-16 mounting bracket inserts

Xi-1122A/85F



- 2-Way Full-range
- Vented LF enclosure
- 3" voice coil (titanium diaphragm) HF
- Integrated 35 mm stand mount
- Trapezoidal (15° per side)

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



- 2-Way Full-range
- Solid bass down to 50 Hz (-3 dB)
- Vented LF enclosure
- 3" voice coil (titanium diaphragm) HF
- Integrated 35 mm stand mount
- Trapezoidal (15° per side)

Xi-1123A/106F Xi-2123A/106F



- 3-Way High-Output Full-range
- Vented slot load designed LF enclosure
- Horn-loaded MB/HF section fully rotatable
- 3" voice coil (titanium diaphragm) HF
- Bypassable MB/HF passive crossover
- VBS mode brings vertical directivity control down to 250 Hz
- Excellent directivity 500 Hz – 16 kHz
- Trapezoidal (9° per side)



Xi-Series

Xi-1191A Xi-2181A



- 1 x 18" Subwoofer 1191 (F)
- 2 x 18" Subwoofer 2181 (F)
- Vented design
- Superior linear excursion capability
- Accurate transient detail trapezoidal (9° per side)

Xi-1122MHA/64F

- 60° x 40° for near and mid field
- MB/HF section horn-loaded
- Excellent directivity control
- Trapezoidal (9° per side)
- 3" voice coil (titanium diaphragm) HF

Xi-1183A/64F Xi-1153A/64F



- 3-Way High-Output Full-range
- Vented slot load designed LF enclosure
- Coaxial horn-loaded MB/HF section fully rotatable
- 3" voice coil (titanium diaphragm) HF

- VBS for vertical directivity control down to 300 Hz
- Excellent directivity control
- Trapezoidal (9° per side)

Xi-2122MHA

- 2-Way output Far-field
- MB/HF section horn-loaded
- Excellent directivity control

- Trapezoidal (9° per side)
- 3" voice coil (titanium diaphragm) HF

Xi-2153A/64F



- 3-Way High-Output Full-range
- Vented slot load designed LF enclosure
- Coaxial horn-loaded MB/HF section fully rotatable
- 3" voice coil (titanium diaphragm) HF

- VBS mode brings vertical directivity control down to 150 Hz
- Excellent directivity control
- Trapezoidal (9° per side)



	Xi-1082	Xi-1122A/85F	Xi-1152A/64F	Xi-1152A/94F	
Frequency Range (-3 dB)	50 Hz - 20 kHz	58 Hz - 17 kHz	50 Hz - 16 kHz	50 Hz - 16 kHz	
Recommended High-Pass Frequency	60-80 Hz (12 dB/Oct.)	Dx46 preset	Dx46 preset	Dx46 preset	
Axial Sensitivity SPL 1W/1m	90 dB	99/110 dB	98/113 dB	98/112 dB	
Max. SPL / 1m (calc.); full space	118 dB	130/135 dB	132/138 dB	132/137 dB	
Long-Term Power Handling	175 W	300/75 W	600/75 W	600/75 W	
Short-Term Power Handling (Peak)	700 W	1,200/300 W	2,400/300 W	2,400/300 W	
Coverage (nominal -6 dB) H° x V°	90° x 40° (CD Horn)	80° x 55° (CD Horn)	60° x 40° (CD Horn)	90° x 40° (CD Horn)	
Directivity Index	11.2 dB (+1.8/-2.7 dB) 2,000 - 20,000 Hz	10.9 dB (+1.2/-2.9 dB) 1,200 - 16,000 Hz	13.4 dB (+1.3/-2.3 dB) 1,200 - 16,000 Hz	12.3 dB (+0.7/-1.5 dB) 1,200 - 16,000 Hz	
LF woofer (transducer)	8" (---)	12" (DL-type)	15" (EVX-155)	15" (EVX-155)	
HF throat diameter (transducer)	1" (DH3)	1.4" (ND6-16)	1.4" (ND6-16)	1.4" (ND6-16)	
Crossover Frequencies	3,500 Hz (passive)	Dx46 preset	Dx46 preset	Dx46 preset	
Nominal Impedance	8 Ω	8 Ω/16 Ω	8 Ω/16 Ω	8 Ω/16 Ω	
Minimum Impedance	5.8 Ω	8.5 Ω/13.4 Ω	6.3 Ω/14.0 Ω	6.3 Ω/12.2 Ω	
Input Connections	barrier strip	2 four-pin Speakon	2 four-pin Speakon	2 four-pin Speakon	
Dimensions (H x W at front x D)	235 x 488 x 285 mm 9.25" x 11.21" x 11.22"	584 x 375 x 356 mm 22.99" x 14.76" x 14.01"	759 x 450 x 413 mm 29.88" x 17.72" x 16.26"	759 x 450 x 413 mm 29.88" x 17.72" x 16.26"	
Net Weight	13.3 kg (29.3 lbs.)	31.3 kg (69 lbs.)	40.8 kg (89.9 lbs.)	40.8 kg (89.9 lbs.)	
	Xi-1123A/106F	Xi-2123A/106F	Xi-1183A/64F	Xi-1153A/64F	Xi-1122MH64
Frequency Range (-3 dB)	75 Hz - 17 kHz	62 Hz - 18 kHz	66 Hz - 17 kHz	48 Hz - 17 kHz	125 Hz - 20 kHz
Recommended High-Pass Frequency	Dx46 preset	Dx46 preset	Dx46 preset	Dx46 preset	Dx46 preset
Axial Sensitivity SPL 1W/1m	96/107/112 dB	100/107/112 dB	96/107/112 dB	91.5/107/112 dB	110/112 dB
Max. SPL / 1m (calc.); full space	129/140/137 dB	135/140/137 dB	128/138/137 dB	125/138/137 dB	141/137 dB
Long-Term Power Handling	300/300/75 W	600/300/75 W	600/300/75 W	600/300/75 W	300/75 W
Short-Term Power Handling (Peak)	1,200/1,200/300 W	2,400/1,200/300 W	2,400/1,200/300 W	2,400/1,200/300 W	1,200/300 W
Coverage (nominal -6 dB) H° x V°	100° x 60° (CD Horn)	100° x 60° (CD Horn)	60° x 40° (CD Horn)	60° x 40° (CD Horn)	60° x 40° (CD Horn)
Directivity Index	10.3 dB (+1.4/-1.2 dB) 500 - 16,000 Hz	10.1 dB (+1.6/-3.5 dB) 160 - 16,000 Hz	13.3 dB (+1.4/-1.1 dB) 800 - 16,000 Hz	13.3 dB (+1.4/-1.1 dB) 800 - 16,000 Hz	13.4 dB (+2.0/-1.8 dB) 800 - 16,000 Hz
LF woofer (transducer)	12" (DL-type)	2 x 12" (DL-type)	18" (EVX-180B)	15" (EVX-155)	---
MB woofer (transducer)	10" (DL-type)	10" (DL-type)	12" (ND-12)	12" (DL12ST)	12" (ND-12)
HF throat diameter (transducer)	1.4 (ND6-16)	1.4 (ND6-16)	1.4" (ND6-16)	1.4" (ND6-16)	1.4" (ND6-16)
Crossover Frequencies	Dx46 preset	Dx46 preset	Dx46 preset	Dx46 preset	Dx46 preset
Nominal Impedance	16 Ω/12 Ω/16Ω	8 Ω/12 Ω/16Ω	8 Ω/12 Ω/16Ω	8 Ω/12 Ω/16	16 Ω/16
Minimum Impedance	9.2 Ω/8.5 Ω/14.6 Ω	4.6 Ω/8.5 Ω/14.6 Ω	7.1 Ω/8.7 Ω/14.6 Ω	7.4 Ω/8.7 Ω/14.6	9.9 Ω/12.9
Input Connections	2 eight-pin Speakon	2 eight-pin Speakon	2 eight-pin Speakon.	2 eight-pin Speakon.	2 eight-pin Speakon
Dimensions (H x W at front x D)	801 x 456 x 473 mm 31.54" x 17.95" x 18.62"	1007 x 456 x 473 mm 39.65" x 17.95" x 18.62"	914 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"	596 x 584 x 759 mm 23.47" x 22.99" x 29.88"
Net Weight	52.2 kg (115 lbs.)	68.0 kg (149.9 lbs.)	93.0 kg (205 lbs.)	93.0 kg (205 lbs.)	61 kg (136 lbs.)
	Xi-2153A/64 F	Xi-1191 A	Xi-2181 A (F)	Xi-2122MHA/42F	
Frequency Range (-3 dB)	55 Hz - 18 kHz	37 Hz - 160 Hz	38 Hz - 160 Hz	120 Hz - 16 kHz	
Recommended High-Pass Frequency	Dx46 preset	Dx46 preset	Dx46 preset	Dx46 preset	
Axial Sensitivity SPL 1W/1m	100/107/112 dB	94 dB	99 dB	112/116 dB	
Max. SPL / 1m (calc.); full space	133/138/137 dB	128 dB	136 dB	146/144 dB	
Long-Term Power Handling	1,200/300/75 W	600 W	1,200 W	600/150 W	
Short-Term Power Handling (Peak)	4,800/1,200/300 W	2,400 W	4,800 W	2,400/600 W	
Coverage (nominal -6 dB) H° x V°	60° x 40° (CD Horn)	essentially omni	essentially omni	40° x 20°(CD Horn)	
Directivity Index	13.4 dB (+1.4/-1.2 dB) 800 - 16,000 Hz	2.7 dB (+1.0/-0.6dB) 63 - 100 Hz	3.4 dB (+1.4/-0.9dB) 63 - 200 Hz	17.2 dB (+2.0/-2.7 dB) 800 - 16,000 Hz	
LF woofer (transducer)	2 x 15" (EVX-155)	18" (EVX-180B)	2 x 18" (EVX-180B)	---	
MB woofer (transducer)	12" (DL12ST))	---	---	2 x 12" (ND12)	
HF throat diameter (transducer)	1.4" (ND6-16)	---	---	2 X 1.4" (ND6-16)	
Crossover Frequencies	Dx46 preset	Dx46 preset	Dx46 preset	Dx46 preset	
Nominal Impedance	4 Ω/12 Ω/16Ω	8 Ω	2 x 8 Ω	6 Ω/8Ω	
Minimum Impedance	3.8 Ω/8.7 Ω/14.6 Ω	6.7 Ω	2 x 6.0 Ω	4.9 /7.3	
Input Connections	2 eight-pin Speakon	2 eight-pin Speakon	2 eight-pin Speakon	2 eight-pin Speakon	
Dimensions (H x W at front x D)	1,233 x 586 x 759 mm 48.54" x 23.07" x 29.88"	914 x 586 x 759 mm 35.98" x 23.07" x 29.88"	914 x 586 x 759 mm 35.98" x 23.07" x 29.88"	914 x 584 x 759 mm 35.98" x 22.99" x 29.88"	
Net Weight	109 kg (240 lbs.)	68.0 kg (149.9 lbs.)	83.5 kg (184 lbs)	86.3 kg (190 lbs.)	



EVA

The EVA series (Expandable Vertical Array) is an elegantly simple solution for installed sound applications. EVA offers true line-array performance from the patented Hydra plane wave generator. The sophisticated internal crossover

allows up to eight EVA boxes to be powered by a single amplifier channel with no additional DSP required. The internal hidden rigging not only looks great, but also makes EVA incredibly easy to install.

EVA-2082S 1220 Full-Range Dual Element Line Array Module



- True line-array performance
- 120° horizontal coverage pattern
- 20° vertical coverage pattern
- 104 dB sensitivity
- Hidden suspension hardware (included)
- architecturally pleasing
- Three finishes available – indoor, PI and fiberglass
- EVADA (EVA Design Assistant) software tool
- Single amplifier channel drive configuration for entire array
- Advanced sixth-order crossover network with HF protection

EVA-2082S 126 Full-Range Dual Element Line Array Module



- True line array performance
- 120° horizontal coverage pattern
- 6° vertical coverage pattern
- 104 dB sensitivity
- Hidden suspension hardware (included) – architecturally pleasing
- Three finishes available – indoor, PI and fiberglass
- EVADA (EVA Design Assistant) software tool
- Single amplifier channel drive configuration for entire array
- Advanced sixth-order crossover network with HF protection

EVA-2082S 906 Full-Range Dual Element Line Array Module



- True line-array performance
- 90° horizontal coverage pattern
- 6° vertical coverage pattern
- 104 dB sensitivity
- Hidden suspension hardware (included) – architecturally pleasing
- Three finishes available – indoor, PI and fiberglass
- EVADA (EVA Design Assistant) software tool
- Single amplifier channel drive configuration for entire array
- # Advanced sixth-order crossover network with HF protection

EVA-2082S 920 -Range Dual Element Line Array Module



- True line-array performance
- 90° horizontal coverage pattern
- 2° vertical coverage pattern
- 104 dB sensitivity
- Hidden suspension hardware (included) – architecturally pleasing
- Three finishes available – indoor, PI and fiberglass
- EVADA (EVA Design Assistant) software tool
- Single amplifier channel drive configuration for entire array
- Advanced sixth-order crossover network with HF protection

**EVA-1151D**

Single 15-inch subwoofer



- DVX3151A 15" (381 mm) LF transducer with fully symmetric drive
- System rating: 500 W continuous, 2000 W peak
- Easily configures to cardioid directional pattern for low-frequency control and feedback reduction
- Hidden suspension hardware (included)
- architecturally pleasing
- Three finishes available – indoor, PI and fiberglass
- EVADA (EVA Design Assistant) software tool
- Single amplifier channel drive configuration for entire array
- Advanced sixth-order crossover network with HF protection

EVA-2151D

Dual 15-inch subwoofer



- Dual DVX3151A 15" (381 mm) LF transducers with fully symmetric drive
- System rating: 500 W continuous, 2000 W peak
- Easily configures to cardioid directional pattern for low-frequency control and feedback reduction
- Hidden suspension hardware (included)
- architecturally pleasing
- Three finishes available – indoor, PI and fiberglass
- EVADA (EVA Design Assistant) software tool
- Single amplifier channel drive configuration for entire array
- Advanced sixth-order crossover network with HF protection

EVA has an internal, nearly invisible rigging system. Modules are connected to one another with an internal top-to-bottom metal structure that is hidden by the cover panels. This gives an EVA cluster great aesthetic appeal—more an architectural element than a loudspeaker system. The rigging system is designed to carry an array of up to eight modules with a safety factor of >8:1.

EVA-SG (Standard Grid)

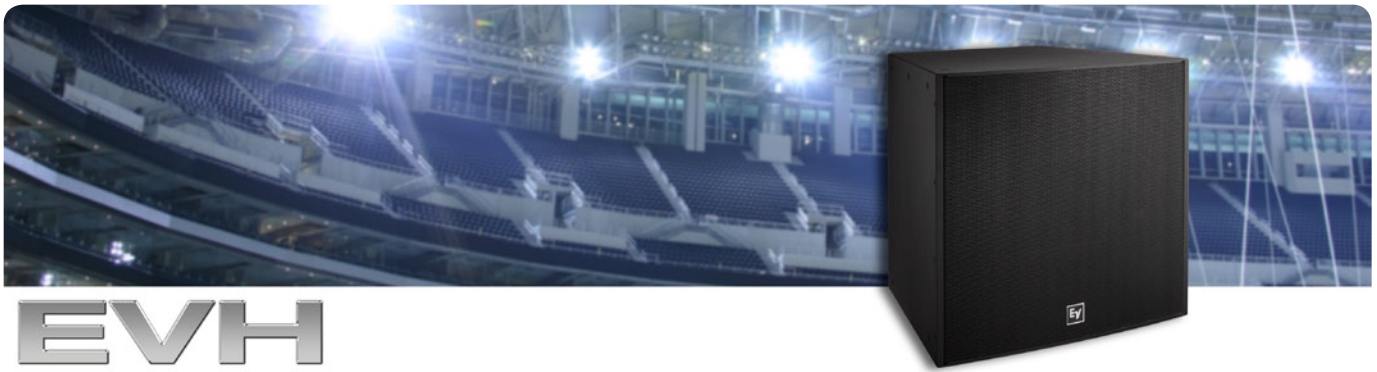
For typical tilt angles in 3 and 4 module arrays and pull-up applications in large arrays when extreme angles are required. Includes one spreader bar.

EVA-EG (Extended Grid)

For typical tilt angles in arrays taller than four modules, or extreme angles in arrays of four modules or less. Includes one spreader bar.



	EVA-2082S 1220	EVA-2082S 126	EVA-2082S 906	EVA-2082S 920	EVA-1151D	EVA-2151D
Frequency Response (-3 dB)	60 - 19000 Hz				50 - 160	45 - 160
Recommended High-Pass Frequency	50 Hz				35 Hz	35 Hz
Sensitivity 1 W/1 m	104 dB 3 module array				94 dB (Whole Space)	97 dB (Whole Space)
Max. SPL/1m (calc)	135 dB				127 (Whole Space)	133 (Whole Space)
System Power Handling (Continuous/Program/Peak)	350 Watts				500 Watts	1000 Watts
Nominal Impedance (Passive)	16 Ω				8 Ω	4 Ω
Input Connections	Phoenix/Euroblock style screw terminals				Phoenix Euroblock	Phoenix Euroblock
Frequency Response (-10 dB)	45 - 20000 Hz				39 - 160	33 - 160
Coverage(Nominal -6 dB) H°	120 °	120 °	90 °	90 °	Omnidirectional	Omnidirectional
Coverage(Nominal -6 dB) V°	20 °	6 °	6 °	20 °	Omnidirectional	Omnidirectional
LF Transducer	(2) EVS2008, 8 in (203mm) Driver				DVX3159A	DVX3159A (X2)
HF Transducer	(4) DH2005, 1.25 in (32mm) Diaphragm Compression Driver				None	None
Crossover Frequency	1740 Hz				100 Hz Active	100 Hz Active
Minimum Impedance	12 Ω				6 Ω	3 Ω
Enclosure Material	Birch and Pine Plywood				Birch Plywood	Birch Plywood
Grill	16 GA Galvanneal, Powder-coated (PI Version - Stainless Steel with Hydrophobic Cloth					
Suspension	EVA Grid (Sold Separately)					
Height	20.17 in (512.2 mm)	20.25 in (514.4 mm)	20.25 in (514.4 mm)	20.17 in (512.2 mm)	23.5" (596.9mm)	31.0" (787.4mm)
Width	23.5 in (596.9 mm)	23.5 in (596.9 mm)	23.5 in (596.9 mm)	23.5 in (596.9 mm)	23.5" (596.9mm)	23.5" (596.9mm)
Depth	14.53 in (369.1 mm)	14.1 in (358.2 mm)	14.1 in (358.2 mm)	14.53 in (369.1 mm)	18.16" (461.3mm)	31.32" (795.5mm)
Weight Net	76.19 lbs (34.513.23 lbs (6 kg))	79.06 lbs (35.813.23 lbs (6 kg))	79.06 lbs (35.813.23 lbs (6 kg))	76.19 lbs (34.513.23 lbs (6 kg))	100 Lbs	172 Lbs



The global success of the FRX and FRX+ series affirms Electro-Voice's approach to coaxial horn-loaded loudspeakers for venues of all sizes. The EVH series condenses all this experience into a new, dedicated solution for installed sound applications. EVH represents a unique design concept: maintain directivity control all the way down to 500 Hz in a mid-sized, 15-inch two-way, coaxial horn-loaded configuration that offers exceptional value, while providing an unusually high degree of rigging flexibility and six available coverage patterns (ranging from 60 x 40 to 90 x 90).

EVH loudspeakers are available with a choice of two woofer/compression driver combinations. The EVH-1152S is equipped with an SMX2151 15-inch 400-W woofer and one ND2B medium-format, 2-inch diaphragm, 40-W high-frequency compression driver on a 12-inch-square waveguide. The EVH-1152D features the same woofer and the new DH7N large-format compression driver with a 3-inch diaphragm and neodymium magnetic structure.

This premium component provides improved dynamic performance, including reduced distortion and power compression.

EVH series features include

- All-new high performance components in choice of two configurations ("S" & "D")
- Six available coverage patterns on rotatable Constant Directivity™ waveguides
- Advanced fourth-order crossover network with HF protection
- (28) M10 threaded suspension points
- PI (indirect weather exposure) version available, with gland nut and stainless-steel grille
- Unique input panel – designed from installer's perspective with a range of innovative, user-friendly features
- Wide range of available rigging options and accessories

EVH-1152S

Two-Way Coaxial Full-Range High-Efficiency Loudspeaker System



- ND2B 2" (51 mm) diaphragm 1.4.(36 mm)-exit pure titanium compression driver
- SMX2151 15" (381 mm) LF transducer with fully symmetric drive
- Advanced fourth-order crossover network with HF protection
- Various coverage patterns: Constant Directivity rotatable waveguides
- 106 dB sensitivity, 139 dB maximum SPL
- System rating: 500 W continuous, 2000 W peak
- Active rating: LF 400 W / HF 40 W continuous (1600 W / 160 W peak)
- (28) M10 threaded suspension points
- PI and FG version available with gland nut and stainless steel grille

EVH-1152D

Two-Way Coaxial Full-Range High-Efficiency Loudspeaker System



- DH7N 3" (76 mm) diaphragm 1.4.(36 mm)-exit pure titanium compression driver
- SMX2151 15" (381 mm) LF transducer with fully symmetric drive
- Advanced fourth-order crossover network with HF protection
- Various coverage patterns: Constant Directivity rotatable waveguides
- 106 dB sensitivity, 139 dB maximum SPL
- System rating: 500 W continuous, 2000 W peak
- Active rating: LF 400 W / HF 75 W continuous (1600 W / 300 W peak)
- M10 threaded suspension points
- PI and FG version available with gland nut and stainless steel grille



	EVH-1152S/43	EVH-1152S/64	EVH-1152S/66	EVH-1152S/94	EVH-1152S/96	EVH-1152S/99
Frequency Response (-3 dB)	60 - 15000 Hz					
Frequency Response (-10 dB)	50 - 16000 Hz					
Recommended High-Pass Frequency	60 Hz					
Sensitivity 1 W/1 m	106 dB	105 dB				104 dB
Max. SPL/1m (calc)	139 dB	138 dB				137 dB
System Power Handling (Continuous/Program/Peak)	500 Watts / 1000 Watts / 2000 Watts					
Nominal Impedance (Passive)	8 Ω					
Minimum Impedance	6 Ω					
Input Connections	Phoenix/Euroblock style screw terminals					
Coverage(Nominal -6 dB) H°	40°	60 °	60 °	90 °	90 °	90 °
Coverage(Nominal -6 dB) V°	30°	40 °	60 °	40 °	60 °	90 °
LF Transducer	SMX2151, 15 in (381mm), 2000W Peak					
HF Transducer	ND2B, 2 in (51 mm) Diaphragm Compression Driver					
Crossover Frequency	1300 Hz					
Enclosure Material	13 Ply Weather Resistant Birch					
Grill	16 GA Galvanneal, Powdercoat, with Rotatable Logo					
Suspension	(28) M10 Threaded Points					
Height Width Depth	30.26 in (768.6 mm) 30.26 in (768.6 mm) 26.78 in (680.1 mm)					
Weight Net	143.08 lbs (64.9 kg)					

	EVH-1152D/43	EVH-1152D/64	EVH-1152D/66	EVH-1152D/94	EVH-1152D/96	EVH-1152D/99
Frequency Response (-3 dB)	60 - 17000 Hz					
Frequency Response (-10 dB)	50 - 20000 Hz					
Recommended High-Pass Frequency	60 Hz					
Sensitivity 1 W/1 m	106 dB	105 dB				104 dB
Max. SPL/1m (calc)	139 dB	138 dB				137 dB
System Power Handling (Continuous/Program/Peak)	500 Watts / 1000 Watts / 2000 Watts					
Nominal Impedance (Passive)	8 Ω					
Minimum Impedance	6.1 Ω					
Input Connections	Phoenix/Euroblock style screw terminals					
Coverage(Nominal -6 dB) H°	40°	60 °	60 °	90 °	90 °	90 °
Coverage(Nominal -6 dB) V°	30°	40 °	60 °	40 °	60 °	90 °
LF Transducer	SMX2151, 15 in (381mm), 2000W Peak					
HF Transducer	DH7N, 3 in (76 mm) Diaphragm Compression Driver					
Crossover Frequency	1300 Hz					
Enclosure Material	13 Ply Weather Resistant Birch					
Grill	16 GA Galvanneal, Powdercoat, with Rotatable Logo					
Suspension	(28) M10 Threaded Points					
Height Width Depth	30.26 in (768.6 mm) 30.26 in (768.6 mm) 26.78 in (680.1 mm)					
Weight Net	145.5 lbs (66.1 kg)					



EVF

EVF is the most comprehensive series of front-loaded loudspeaker systems ever offered for installed sound. Available in 12- or 15-inch two way configurations with a range of coverage patterns, and enhanced with dedicated low-frequency systems, EVF loudspeakers match exceptional audio performance, efficiency, ease-of-use, and aesthetics with unprecedented value. EVF systems employ the latest Electro-Voice components to ensure years of reliable use and consistently excellent sound. "S"-designated systems are equipped with SMX series woofers and ND2B 2-inch compression drivers; "D"-designated systems are equipped with the highest-performance DVX series woofers and the new DH7N 3-inch compression driver.

EVF series features include:

- Seven available coverage patterns aid the design process
- High maximum SPL output capability with extremely low distortion
- All 12- and 15-inch enclosures and the 18-inch subwoofer have the same height, promoting attractive clusters
- Biampable, but sophisticated internal crossover/EQ networks make cost-saving passive operation very attractive
- Available in black or white in one of three versions: EVCoat™ (interior use), PI (indirect weather exposure), and FG (fiberglass – direct exposure)
- Unique input panel – designed from installer's perspective with a range of innovative, user-friendly features
- Wide range of available rigging options and accessories

	EVF-1122S 64	EVF-1122S 66	EVF-1122S 94	EVF-1122S 96	EVF-1122S 99	EVF-1122S 126
Frequency Response (-3 dB)	58 - 16000 Hz	58 - 16000 Hz	58 - 16000 Hz	58 - 16000 Hz	58 - 16000 Hz	58 - 16000 Hz
Frequency Response (-10 dB)	49 - 19000 Hz	49 - 19000 Hz	49 - 19000 Hz	49 - 19000 Hz	49 - 19000 Hz	49 - 19000 Hz
Recommended High-Pass Frequency	65 Hz	65 Hz	65 Hz	65 Hz	65 Hz	65 Hz
Sensitivity 1 W/1 m	98 dB	98 dB	98 dB	98 dB	98 dB	98 dB
Max. SPL/1m (calc)	131 dB	131 dB	131 dB	131 dB	131 dB	131 dB
System Power Handling (Continuous/Program/Peak)	500 W	500 W	500 W	500 W	500 W	500 W
Nominal Impedance (Passive)	8 Ω					
Minimum Impedance	6 Ω					
Input Connections	Phoenix/Euroblock style screw terminals					
Coverage(Nominal -6 dB) H°	60 °	60 °	90 °	90 °	90 °	120 °
Coverage(Nominal -6 dB) V°	40 °	60 °	40 °	60 °	90 °	60 °
LF Transducer	SMX2121, 12 in (305mm) Driver	SMX2121, 12 in (305mm) Driver	SMX2121, 12 in (305mm) Driver	SMX2121, 12 in (305mm) Driver	SMX2121, 12 in (305mm) Driver	SMX2121, 12 in (305mm) Driver
HF Transducer	ND2B, 2 in (51 mm) Diaphragm Compression Driver					
Crossover Frequency	1450 Hz	1450 Hz	1450 Hz	1450 Hz	1450 Hz	1450 Hz
Enclosure Material	13 Ply Weather Resistant Birch					
Grill	16 GA Galvanneal, Powdercoat, with Rotatable Logo					
Suspension	(22) M10 Threaded Points					
Internal Crossover	Yes					
Max. SPL/1m (calc); half space	135 dB					
LF Nominal Impedance	8 Ω					
Height Width Depth	30.26 in (768.6 mm) 16 in (406.3 mm) 16.27 in (413.3 mm)					
Weight Net	63.05 lbs (28.6 kg)	63.05 lbs (28.6 kg)	63.05 lbs (28.6 kg)	63.05 lbs (28.6 kg)	63.05 lbs (28.6 kg)	63.05 lbs (28.6 kg)

**EVF-1122S**

Two-Way Full-Range Loudspeaker System



- ND2B 2" (51 mm) diaphragm, 1.4" (36 mm)-exit pure titanium compression driver
- SMX2121 12" (305 mm) LF transducer with fully symmetric drive
- Advanced fourth-order crossover network with HF protection
- Coverage pattern: 120° x 60° Constant Directivity™ 12" rotatable waveguide
- 98 dB sensitivity, 131 dB maximum SPL
- System rating: 500 W continuous, (2000 W peak)
- Active rating: LF 400 W / HF 40 W continuous (1600 W / 160 W peak)
- # (22) M10 threaded suspension points
- # PI version available with gland nut and stainless steel grille

EVF-1152S

Two-Way Full-Range Loudspeaker System



- ND2B 2" (51 mm) diaphragm 1.4" (36 mm)-exit pure titanium compression driver
- SMX2151 15" (381 mm) LF transducer with fully symmetric drive
- Advanced fourth-order crossover network with HF protection
- Coverage pattern: 40° x 30° Constant Directivity™ 12" rotatable waveguide
- 101 dB sensitivity, 134 dB maximum SPL
- System rating: 500 W continuous, (2000 W peak)
- Active rating: LF 400 W / HF 40 W continuous (1600 W / 160 W peak)
- (22) M10 threaded suspension points
- PI version available with gland nut and stainless steel grille

	EVF-1152S 43	EVF-1152S 64	EVF-1152S 66	EVF-1152S 94	EVF-1152S 96	EVF-1152S 99
Frequency Response (-3 dB)	70 - 14000 Hz					
Frequency Response (-10 dB)	41 - 18000 Hz					
Recommended High-Pass Frequency	45 Hz					
Sensitivity 1 W/1 m	101 dB					
Max. SPL/1m (calc)	134 dB					
System Power Handling (Continuous/Program/Peak)	500 W					
Nominal Impedance (Passive)	8 Ω					
Minimum Impedance	6 Ω					
Input Connections	Phoenix/Euroblock style screw terminals					
Coverage(Nominal -6 dB) H°	40 °	60 °	60 °	90 °	90 °	90 °
Coverage(Nominal -6 dB) V°	30 °	40 °	60 °	40 °	60 °	90 °
LF Transducer	SMX2151, 15 in (381mm) Driver					
HF Transducer	ND2B, 2 in (51 mm) Diaphragm Compression Driver					
Crossover Frequency	1450 Hz					
Enclosure Material	13 Ply Weather Resistant Birch					
Grill	16 GA Galvanneal, Powdercoat, with Rotatable Logo					
Suspension	(22) M10 Threaded Points					
Internal Crossover	Yes					
Max. SPL/1m (calc); half space	135 dB					
LF Nominal Impedance						
Height	30.26 in (768.6 mm)					
Width	18.5 in (469.8 mm)					
Depth	18.37 in (466.6 mm)					
Weight Net	70.77 lbs (32.1 kg)					



EVF

EVF-1122D

EVF-1122D



- ND2B 2" (51 mm) diaphragm, 1.4" (36 mm)-exit pure titanium compression driver
- SMX2121 12" (305 mm) LF transducer with fully symmetric drive
- Advanced fourth-order crossover network with HF protection
- Coverage pattern: 120° x 60° Constant Directivity™ 12" rotatable waveguide
- 98 dB sensitivity, 131 dB maximum SPL
- System rating: 500 W continuous, (2000 W peak)
- Active rating: LF 400 W / HF 40 W continuous (1600 W / 160 W peak)
- # (22) M10 threaded suspension points
- # PI version available with gland nut and stainless steel grille

EVF-1152D

Two-Way Full-Range Loudspeaker System



- ND2B 2" (51 mm) diaphragm 1.4" (36 mm)-exit pure titanium compression driver
- SMX2151 15" (381 mm) LF transducer with fully symmetric drive
- Advanced fourth-order crossover network with HF protection
- Coverage pattern: 40° x 30° Constant Directivity™ 12" rotatable waveguide
- 101 dB sensitivity, 134 dB maximum SPL
- System rating: 500 W continuous, (2000 W peak)
- Active rating: LF 400 W / HF 40 W continuous (1600 W / 160 W peak)
- (22) M10 threaded suspension points
- PI version available with gland nut and stainless steel grille

	EVF-1122S 126	EVF-1122S 64	EVF-1122S 66	EVF-1122S 94	EVF-1122S 96	EVF-1122S 99	EVF-1152S 43	EVF-1152S 64	EVF-1152S 66	EVF-1152S 94	EVF-1152S 96	EVF-1152S 99
Frequency Response (-3 dB)	58 - 16000 Hz						70 - 14000 Hz					
Recommended High-Pass Frequency	65 Hz	65 Hz	65 Hz	65 Hz	65 Hz	65 Hz	45 Hz	45 Hz	45 Hz	45 Hz	45 Hz	45 Hz
Sensitivity 1 W/1 m	98 dB	98 dB	98 dB	98 dB	98 dB	98 dB	101 dB					
Max. SPL/1m (calc)	131 dB						134 dB					
System Power Handling (Continuous/Program/Peak)	500 W	500 W	500 W	500 W	500 W	500 W	500 W	500 W	500 W	500 W	500 W	500 W
Nominal Impedance (Passive)	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	Phoenix/Euroblock style screw terminals											
Frequency Response (-10 dB)	49 - 19000 Hz						41 - 18000 Hz					
Coverage(Nominal -6 dB) H°	120 °	60 °	60 °	90 °	90 °	90 °	40 °	60 °	60 °	90 °	90 °	90 °
Coverage(Nominal -6 dB) V°	60 °	40 °	60 °	40 °	60 °	90 °	30 °	40 °	60 °	40 °	60 °	90 °
LF Transducer	SMX2121, 12 in (305mm) Driver						SMX2151, 15 in (381mm) Driver					
HF Transducer	ND2B, 2 in (51 mm) Diaphragm Compression Driver											
Crossover Frequency	1450 Hz											
Minimum Impedance	6 Ω											
Enclosure Material	13 Ply Weather Resistant Birch											
Grill	16 GA Galvanneal, Powdercoat, with Rotatable Logo											
Suspension	(22) M10 Threaded Points											
Internal Crossover	Yes											
Max. SPL/1m (calc); half space	135 dB											
LF Nominal Impedance	8 Ω											
Height x Width x Depth	30.26 in (768.6 mm) x 16 in (406.3 mm) x 16.27 in (413.3 mm)						30.26 in (768.6 mm) x 18.5 in (469.8 mm) x 18.37 in (466.6 mm)					
Weight Net	63.05 lbs (28.6 kg)						70.77 lbs (32.1 kg)					



EVF Subs



EVF-1121S Front-Loaded Bass Element



- EVS12SB 12" (305 mm) LF transducer
- 103 dB sensitivity, 135 dB maximum SPL
- System rating: 400 W continuous, 1600 W peak
- (22) M10 threaded suspension points
- Passive network included

EVF-1181S Front-Loaded Subwoofer



- EVS18SB 18" (457 mm) LF Transducer
- 99 dB sensitivity, 131 dB maximum SPL
- System rating: 400 W continuous, 1600 W peak
- (28) M10 threaded suspension points

EVF-1151S Front-Loaded Bass Element



- EVS15SB 15" (381 mm) LF transducer
- 103 dB sensitivity, 135 dB maximum SPL
- System rating: 400 W continuous, (1600 W peak)
- (22) M10 threaded suspension points

EVF-2151D Front-Loaded Subwoofer



- Dual DVX3159A (381mm) LF Transducers
- 101 dB sensitivity, 137 dB maximum SPL
- System rating: 1000 W continuous, 4000 W peak
- (28) M10 threaded suspension points

	EVF-1121S	EVF-1151S	EVF-1181S	EVF-2151D
Frequency Response (-3 dB)	70 - 98 Hz	67 - 95 Hz	35 - 100 Hz	40 Hz - 2.6 kHz
Frequency Response (-10 dB)	48 - 120 Hz	46 - 124 Hz	28 - 650 Hz	30 Hz - 3.2 kHz
Recommended High-Pass Frequency	50 Hz	35 Hz	33 Hz	35 Hz
Sensitivity 1 W/1 m	103 dB	103 dB	99 dB	101 dB
Max. SPL/1m (calc)	135 dB	135 dB	131 dB	137 dB
System Power Handling (Continuous/Program/Peak)	400 W	400 W	400 W	1000 W
Nominal Impedance (Passive)	4 Ω passive / 8 Ω bi-amp	4 Ω passive / 8 Ω bi-amp	8 Ω	4 Ω
Minimum Impedance			6 Ω	2.7 Ω
Input Connections	Phoenix/Euroblock style screw terminals			
LF Transducer	EVS12SB, 12 in (305mm) Driver	EVS15SB, 15 in (381mm) Driver	EVS18SB, 18 in (457mm) Driver	Dual DVX3159A, 15" (381 mm) drivers
Crossover Frequency				
Enclosure Material	13 Ply Weather Resistant Birch			
Grill	16 GA Galvanneal, Powdercoat, with Rotatable Logo			
Suspension	(22) M10 Threaded Points		(28) M10 Threaded Points	
Internal Crossover	Yes		No	
Max. SPL/1m (calc); half space	135 dB		131 dB	
Height	30.26 in (768.6 mm)	30.26 in (768.6 mm)	30.26 in (768.6 mm)	30.26 in (768.6 mm)
Width	18 in (406.3 mm)	18.5 in (469.8 mm)	18.5 in (469.8 mm)	28.60 in (675.6 mm)
Depth	16.27 in (413.3 mm)	18.37 in (466.6 mm)	28.6 in (726.4 mm)	28.60 in (726.4 mm)
Weight Net	57.76 lbs (26.2 kg)	62.61 lbs (28.4 kg)	101.2 lbs (46 kg)	130.5 lb (59.3 kg)



FRi/FRi+

The FRi+ Series brings premium Electro-Voice® components, including the DH7 compression driver and DL series woofers, to a new level of affordability. The FRi+ Series provides exceptional value for permanent

installations that require flexibility and performance. Numerous threaded mounting points help make suspension easy, and allow for installation in any situation.

FRi+ 122/64

12" Two-Way Full-Range Passive or Active Speaker System



- 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 eye bolts
- Twelve 3/8"-16 suspension points

FRi+ 122/66

- 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 eye bolts
- Twelve 3/8"-16 suspension points

FRi+ 122/94

- 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 eye bolts
- Twelve 3/8"-16 suspension points

FRi+ 181 S

FRi+ Series Speaker System



- Subwoofer
- Vented slot load design
- Built-in low-pass filter (switchable for biamp operation)
- Trapezoidal (7.5° per side)
- Comes with 4 eyebolts
- 16 x 3/8"-16 suspension points

**FRi+152/64** 15" Two-Way Full-Range Passive or Active Speaker System

- Two-way, full-range loud speaker
- Solid bass to 42 Hz (-10 dB) allows pure full-range performance
- Switchable between fullrange and biamp
- Vented LF enclosure
- 3" voice coil (titanium diaphragm) HF
- Trapezoidal cabinet (15° per side)
- Comes with four eyebolts
- Twelve 3/8"-16 suspension Points

FRi+152/66

- Two-way, full-range loud speaker
- Solid bass to 42 Hz (-10 dB) allows pure full-range performance
- Switchable between fullrange and biamp
- Vented LF enclosure
- 3" voice coil (titanium diaphragm) HF
- Trapezoidal cabinet (15° per side)
- Comes with four eyebolts
- Twelve 3/8"-16 suspension Points

FRi+152/94

- Two-way, full-range loud speaker
- Solid bass to 42 Hz (-10 dB) allows pure full-range performance
- Switchable between fullrange and biamp
- Vented LF enclosure
- 3" voice coil (titanium diaphragm) HF
- Trapezoidal cabinet (15° per side)
- Comes with four eyebolts
- Twelve 3/8"-16 suspension Points

FRi-2082/28LPM FRi Series Speaker System

- 2-Way Full-range
- Vented LF enclosure
- 1" voice coil
- Low-profile slanted design
- 45° angle allows under-balcony, on-wall and stage monitoring applications
- Only FRi-2082 comes with mounting bracket!
- 2 x 3/8"-16 suspension points

	FRi-2082	FRi+122/64/66/94	FRi+152/64/66/94	FRi+181S
Frequency Range (-10 dB)	55 Hz - 18 kHz	50 Hz - 16 kHz	42 Hz - 15 kHz	36 - 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.)
Axial Sensitivity SPL 1W/1m	93 dB	97 dB	98 dB	97 dB
(Biamp mode)		(97/112 dB)	(98/112 dB)	
Max. SPL /1 m (calc.); full space	122 dB	128 dB	129.5 dB	129 dB
Continuous Power Handling (Biamp op.)	200 W	300 W (300 W/60 W)	350 W (350 W/60 W)	400 W
Peak Power Handling (Peak)	800 W	1,200 W	1,400 W	1,600 W
Coverage (nominal -6 dB) (H° x V°)	100° x 100° (CD Horn)	60° x 40°/60° x 60°/90° x 40°	60° x 40°/60° x 60°/90° x 40°	300° x 270°
LF woofer (transducer)	50mm x 203 mm (2" x 8")	304mm (12") (DL12BFH)	1391 mm (5") (DL15BFH)	457 mm (18") (DL18MT)
HF throat diameter (transducer)	25 mm (1") (compr. driver)	76 mm (3") (DH7)/1.4" Exit	76 mm (3") (DH7)/1.4" Exit	---
Crossover Frequencies	2,800 Hz	1,600 Hz	1,600 Hz	130 Hz
Nominal Impedance (Biamp)	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)	222 x 620 x 356 mm 8.75" x 24.5" x 14"	711 x 401 x 445 mm 28" x 15.9" x 17.6"	711 x 483 x 589 mm 28" x 19" x 23.2"	711 x 597 x 762 mm 28" x 23.5" x 30"
Net Weight	18.2 kg (40 lbs.)	27.3 kg (60 lbs.)/29.5 kg (65 lbs.)	31.8 kg (70 lbs.)/34 kg (75 lbs.)	45.5 kg (100 lbs.)



EVI

EVI 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 the distance to the front row, resulting in a substantial loss of level and intelligibility

towards the back. The Variable Intensity horn delivers six to eight dB more SPL to the back of the room, overcoming level loss without resorting to the expense and complexity of additional systems or components.

EVI-12

EVI Series Speaker Systems



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

EVI-15

EVI Series Speaker Systems



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

EVI-28

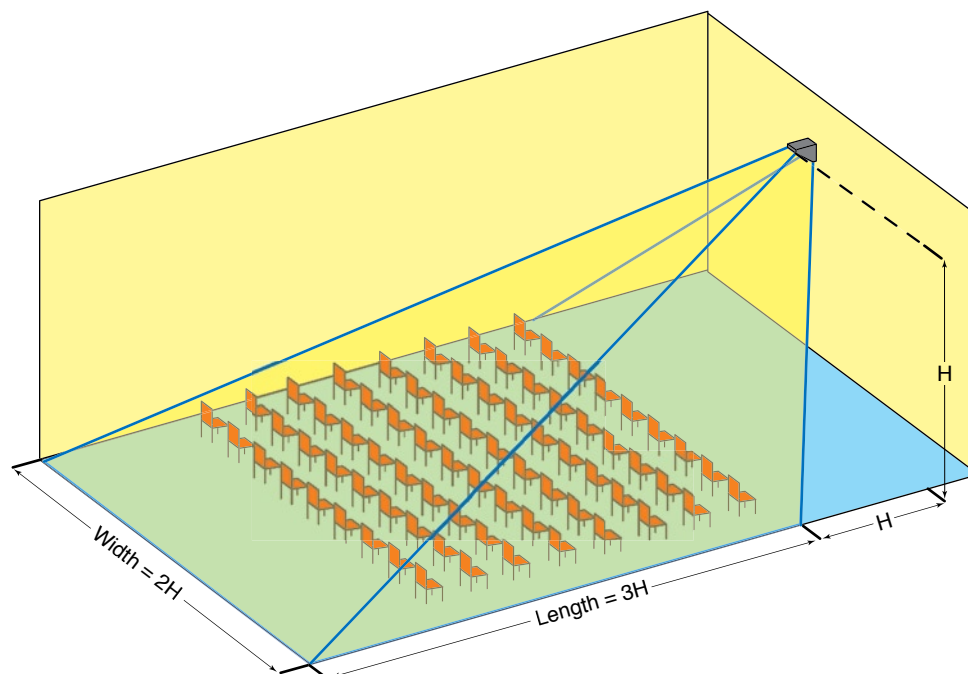
EVI Series Speaker Systems



- Two-way, full-range loudspeaker
- Vented LF enclosure
- 1.25" voice coil (titanium diaphragm) HF
- 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
- Three 3/8"- hanging points

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

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



	EVI-12	EVI-15	EVI-28
Frequency range (-3 dB)	50 Hz–20 kHz	50 Hz–20 kHz	60 Hz–20 kHz
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°)	LT-60° x 70°, ST= 110° x 90°	60° x 65°	65° x 65°
LF driver	12"	15"	2 x 8"
HF driver (exit)	1" (DH2010A)	1" (DH2010A)	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	screw terminal
Dimensions (H x W at front x D)	554 x 356 x 699 mm 21.8" x 14" x 27.5"	584 x 429 x 766 mm 23" x 16.9" x 30.2"	353 x 496 x 523 mm 13.9" x 19.5" x 20.6"
Net weight	21.8 kg (48 lbs)	24.0 kg (53 lbs)	16.3 kg (36 lbs)



EVID

EVID speakers beautify not only the sound of a room, but also the looks. Designed to have best in class sonic characteristics and stunning high fidelity, EVID is typically

at home in retail environments, boardrooms, restaurants, and bars.

EVID 3.2 EVID Series Premium Surface-Mount Speaker System



- 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

EVID 4.2 EVID Series Premium Surface-Mount Speaker System



- 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 EVID Twin 6" Surface-Mount Speaker System



- 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 EVID Series Premium Surface-Mount Subwoofer



- 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
- Powered version (120v only) available

EVID FM 4.2 EVID Series InWall Speaker System



- 4" woofer, 4" passive radiator, and a 1" tweeter provide high quality sound
- Fully sealed enclosures provides superior sound isolation from adjacent rooms.
- Tuned passive radiator design ensures consistently superior performance in any installation.
- Either 70v/100v or 8 ohm operation is standard on both models. No need to buy or stock special versions.
- Shallow profile allows installation virtually anywhere.
- Secure phoenix style pass through connectors for easy wiring and installation.
- Four point "quick mounting" tabs provide fast easy installation in anywall cavity.
- The transformer is mounted on the rear can surface to further enhance stiffness.
- Specially designed ribbed back can is designed to eliminate flexing.

EVID FM 6.2 EVID Series InWall Speaker System



- 6" woofer coupled with a 6" passive radiator for extended bass response
- Fully sealed enclosures provides superior sound isolation from adjacent rooms.
- Tuned passive radiator design ensures consistently superior performance in any installation.
- Either 70v/100v or 8 ohm operation is standard on both models. No need to buy or stock special versions.
- Shallow profile allows installation virtually anywhere.
- Secure phoenix style pass through connectors for easy wiring and installation.
- Four point "quick mounting" tabs provide fast easy installation in anywall cavity.
- The transformer is mounted on the rear can surface to further enhance stiffness.
- Specially designed ribbed back can is designed to eliminate flexing.

	EVID 3.2/T	EVID 4.2/T	EVID 6.2/T	EVID 12.1	EVID FM 4.2	EVID FM 6.2
Frequency response (-10 dB)	85 Hz–20 kHz	65 Hz–20 kHz	62 Hz–20 kHz	40 Hz–140 Hz	52 - 20000 Hz	52 - 20000 Hz
Sensitivity (SPL 1 W/1 m)	87 dB	89 dB	94 dB	100 dB	87 dB	90 dB
Max. SPL/1m (calc.)	112 dB	115 dB	122 dB	128 dB		
Long-term power handling	75 W	100 W	150 W	175/175 W		
Short-term power handling	300 W	400 W	600 W	700/700 W		
Transformer taps	70V: 5 W	70V: 3.75 W	70V: 7.5 W	—	1.75, 3.75, 7.5, 15, 30 at 70 v	7.5, 15, 30, 60 w at 70 v
(transformer version only)	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"	2" x 4"	2" x 6"	12"	4 inch with 4 inch passive radiator	6 inch with 6 inch passive radiator
HF driver	0.75"	1"	1"	—	1 inch Titanium dome tweeter	1 inch Titanium dome tweeter
Nominal impedance (non-transformer version)	8	8	8	8	8 Ω	8 Ω
Minimum impedance (non-transformer version)	6	6	6	6		
Input connections	spring terminal	spring terminal	spring terminal	spring terminal		
Dimensions (H x W at front x D)	234 x 127 x 165 mm 9.2" x 5.1" x 6.5"	310 x 175 x 216 mm 12.2" x 6.9" x 8.5"	419 x 228 x 298 mm 16.5" x 9" x 11.75"	412 x 584 (at front) x 305 mm 16.25" x 23" x 12"	13.78 in (350 mm) 7.41 in (188.3 mm) 3.76 in (95.6 mm)	18.31 in (465 mm) 10.08 in (256 mm) 3.95 in (100.3 mm)
Net weight (incl. mounting bracket)	1.5 kg (3.3 lbs)	3.9 kg (8.5 lbs)	5.3 kg (12 lbs)	18.1 kg (40 lbs)	6.39 lbs (2.9 kg)	12.79 lbs (5.8 kg)



EVID

No matter what an installation calls for, EVID ceiling speakers can fill the need. Each model is unique and designed to meet the toughest "problem" job specifications. Sonically superior and aesthetically pleasing, the EVID ceiling speakers have no match. From the compact, powerful C4.2 to the exclusive

waveguide-coupled design of the C8.2HC for high-ceiling environments; the EVID ceiling line will solve any installation requirement. The EVID ceiling speaker line was designed with the contractor and listener in mind. Great sound, simple installation, and exceptional value are part of every model.

EVID C4.2 EVID Series 4" Two-Way Ceiling System



- For use in air-handling spaces
- 4" woofer
- Wave-guide coupled titanium-coated dome tweeter
- Three-point mounting system for easy installation
- Mounting support ring and tile rails included
- No additional accessories needed for most installations
- Also available in black

EVID C8.2/C8.2LP EVID Series 8" Two-Way Ceiling System



- For use where a flush-mount design is desired but demand for high-quality audio exists
- Specially tuned enclosure
- 8" woofer
- 1. waveguide-coupled tweeter for coverage up to 18 kHz
- Four-point mounting system
- Mounting support ring and tile rails included
- No additional accessories needed for most installations
- Also available in black
- Low profile back can (3. shorter in depth) for tight fitting ceiling spaces (C8.2LP)

EVID C8.2HC EVID 8" Two-Way Pattern Control Ceiling System



- For use in high-ceiling, reverberant "problem" rooms
- Exclusive ported, wave-guide coupled 8" driver
- Four-point mounting system
- Mounting support ring and tile rails included
- No additional accessories needed for most installations
- Patent-pending design

**EVID C10.1** EVID Series Compact and Powerful Ceiling Subwoofer

- 10" subwoofer in tuned high performance enclosure
- Low-frequency performance down to 45 Hz
- Flexible installation
- Four-point mounting system
- Mounting support ring and tile installations included
- No additional accessories needed for most installations

EVID C12.2 High-Performance Ceiling Speaker System

- For use in large venues including high-ceiling applications
- Features EVID 920-8B transducer
- 12" coaxial with high power handling and 100 dB sensitivity
- Integrated 64 W transformer allows for use in 70 V/100 V applications
- Automatic saturation compensation for distortion-free performance at high sound levels
- Transformer tap selection via a convenient switch on the front of baffle
- Rear enclosure is constructed from heavy-gauge steel
- Durable black powder-coat
- Tile bridge included for safe suspension in a drop ceiling that uses mineral wool or other fiber-based ceiling tiles
- Can also be suspended by an integrated 3/8" rigging point for use with threaded rod
- Can be mounted using the three pendant mount tabs on the rear enclosure
- Rear cover includes provisions for a junction box fitting providing access to a four-pin, phoenix-type connector that allows direct connection to the speaker with 12-gauge wire

	EVID C4.2	EVID C8.2LP EVID C8.2	EVID C8.2HC	EVID C10.1	EVID C.12.2
LF Transducer	4"	8"	8"	10"	12"
	Polypropylene cone	Polypropylene cone	Polypropylene cone +Waveguide	Polypropylene cone	Polypropylene cone
HF Transducer	19 mm (0.75")	25 mm (1")	25 mm (1")		25 mm (1")
	Ti Mylar Laminate Dome	Ti Mylar Laminate Dome	Ti Mylar Laminate Dome		
Frequency Response (-10 dB)	65 Hz - 20 kHz	50 Hz - 20 kHz	50 Hz - 20 kHz	45 - 180 Hz	65 Hz - 20 kHz
Power Handling(8 Ω)	80 W (overload protected)	100 W (overload protected)	100 W (overload protected)	150 W	100W
Coverage Pattern	130° conical	110° conical	75° conical (@ >1 kHz)	180°	90° average
Sensitivity (1W/1m)	86 dB	91 dB	93 dB	94 dB	100 dB
Input Configuration	8 Ω, 70 V, 100 V	8 Ω, 70 V, 100 V	8 Ω, 70 V, 100 V	8 Ω, 70 V, 100 V	8 Ω / 70V / 100V
Transformer Power Taps (W)	(1.88*), 3.75, 7.5, 15, 30	(1.88*), 3.75, 7.5, 15, 30	(7.5*), 15, 30, 60	(7.5*), 15, 30, 60	(4*), 8, 16, 32, 64 ASC protected
Dimensions (H x Dia.)	176 x 181 mm	178 x 270 mm/255 x 270 mm	303 x 320 mm	303 x 320 mm	333 x 414 mm
	6.93" x 7.13"	7.01" x 10.65"/10.04" x 10.63"	11.99" x 12.60"	11.99" x 12.60"	
Weight	2.7 kg (6.0 lbs.)	5.0 kg (11.0 lbs.)	6.0 kg (13.2 lbs.)	7.0 kg (15.4 lbs.)	12.3 kg
Acoustic Design	Ported cabinet, internally damped Two-Way, inc. passive crossover			Dual ported cabinet, internally damped	Ported cabinet, internally damped Two-Way inc. passive crossover
Cabinet Construction	Steel enclosure and UL94V-0 rated baffle and bezel				
Mounting System	Integrated 3-point toggle anchors				
Grille Construction	Powder-coated steel				
Available Colors	White (paintable surface)				

70 V only



S-Series

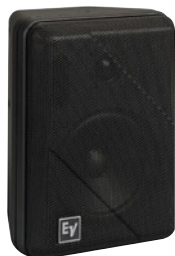


A 5.25-inch, 160W, two-way monitor loudspeaker system. Ideal for distributed sound applications that require high-quality sound reproduction. The low-frequency section is a 5.25-inch direct-radiating woofer with a polypropylene cone installed in an

optimally vented, high-impact polystyrene enclosure. The high-frequency section is a one-inch, direct-radiating, soft-dome tweeter. The system's circuits automatically reduce power delivery to drivers if threshold is exceeded, reducing the possibility of driver failure.

S-40

S Series Speaker Systems



- 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

	S-40
Frequency range	85 Hz–20 kHz (+/- 3dB)
Sensitivity (SPL 1W/1m)	85 dB
Max. SPL/1m (calc.)	113 dB
Long-term power handling	160 W
Short-term power handling	640 W
Coverage (H° x V°)	100° x 100°
Directivity Index	9.8 dB (+3.8/-3.6 dB) 2 kHz–20 kHz
LF driver	5.25"
HF driver	1" Softdome
Crossover frequencies	3,500 Hz
Nominal impedance (low Z version)	4 Ω
Minimum impedance (low Z version)	3.7 Ω
Input connections	spring terminal
Dimensions (H x W at front x D)	249 x 178 x 150 mm (9.8" x 7" x 5.9")
Net weight (including mounting bracket)	2.6 kg (5.7 lbs.)



The Advanced Generation of Versatile, High-Performance, Lightweight Speakers. Building upon decades of experience manufacturing lightweight, molded enclosures with high-end components, ZX loudspeakers comprise a new family that takes audio technology to the next level.

New, high-power woofers and drivers, contemporary styling, and innovative mechanical solutions for all permanent installation and mobile stage applications make ZX the new standard in lightweight sound.

ZX1

Composite 8" two-way



- EV8L high performance 8" woofer
- Exclusive port design for extended LF response
- 200W cont., 400W program power handling,
- Integrated overload protection
- DH2005 true compression driver (1,25 voice coil)
- Rotatable 90 x 50 HF horn
- Integrated monitor angle
- Integrated pole-mount adapter and handle
- 4 metric inserts for additional mounting options
- 2 Neutik NL4 connectors
- Available in black and white

ZX1i

Composite indoor/outdoor 8" two-way



- EV8L weatherized woofer
- DH2005 true compression driver
- 100 x 100 and 90 x 50 coverage pattern
- Weatherized for indoor and outdoor use
- "Clickn' Mount" Quick SAM mounting system for
- wide range of motion included
- 4-pin detachable Phoenix-style connector
- Dedicated transformer models with wide range of selectable tabs

ZXA1

Compact Powered Loudspeaker



- Integrated 800 watt power amplifier
- Bi-amplified design with transducer protection
- EV8L 8" high-output LF transducer
- DH2005 1.5" true compression driver
- 90° x 50° coverage pattern
- Rotatable horn design
- 123 dB maximum SPL
- Selectable high-pass filter for use with subwoofers
- Line and microphone inputs
- Integral monitor angle on enclosure
- Built-in pole mount
- Lightweight (< 20 lbs) with integral handle for easy carrying



ZX3

Composite 12" two-way



- ND2 2" voice coil, 1" exit neodymium compression driver
- 600 W cont. 2400 peak
- 90° x 50° and 60° x 60° horn patterns
- Seven M8 rigging points, two single stud fittings
- NL4 or two conductor SJO cable and gland nut (weatherized versions)
- Available in two finishes: indoor or weatherized
- Black or white

ZX4

Composite 15" two-way



- 15" 2-Way with EVS15SF woofer
- DH3 1.25" titanium HF driver
- 400 Watt cont. 1600W Peak
- High sensitivity (100dB)
- Adjustable monitor angles 45° and 55°
- Large Format 90° x 50° EV horn

ZX5

Composite 15" two-way



- DVX-3150 : New high-power 15" woofer
- ND2 : New 2" voicecoil Neodymium compression driver
- New asymmetrically molded polypropylene enclosure
- Internal passive crossover (switchable to biamp)
- 10 x metric inserts (M8)
- 3 Ancra single-stud fittings (5 attachment points)
- Integrated pole-mount adapter
- Powder-coated full-face steel grille backed with foam
- Standard floor monitor angle 45°, adjustable to 55° with integrated monitor feet

ZXA5



- Integrated Amplifier with 1000W LF, 250W HF
- Selectable 100 Hz High Pass
- XLR and 1/4" TRS Input Connector
- XLR Output Connector
- PowerCon Connector with Slave Through
- DVX3150 15" LF Transducer with Forced Air Cooling
- ND2 2" Voice Coil, 1" Exit Neodymium Compression Driver
- Two Models: 60° x 60° or 90° x 50°
- Coverage Patterns
- High Sensitivity, 133 dB Maximum SPL
- Adjustable Monitor Angle (45° or 55°)
- 3 Anchor Plates for Single Stud Fittings and
- 10 Integral Suspension Points



	ZX1	ZX1i	ZX3	ZX4	ZX5	ZXA1	ZXA5
Frequency Response (-3 dB)	60 - 20000 Hz	60 - 20000 Hz	58 - 15000 Hz	60 - 20000 Hz	58 - 18000 Hz	60 Hz - 20 kHz Hz Full Range Mode	58 - 18000 Hz
Recommended High-Pass Frequency	40 Hz	40 Hz	50 Hz	42 Hz	36 Hz	36 Hz	100 Hz User Selectable
Sensitivity 1 W/1 m	94 dB	94 dB	97 dB	100 dB	98 dB		
Max. SPL/1m (calc)	123 dB	123 dB	131 dB	132 dB	132 dB	123 dB	
System Power Handling (Continuous/Program/Peak)	200 Watts	200 Watts	600 Watts	400 Watts	600 Watts		
Nominal Impedance (Passive)	8 Ω	8 Ω	8 Ω	8 Ω	8 Ω	—	—
Speaker Type	Fullrange, Mid-High, Two-Way, Wedges	Fullrange, Mid-High, Two-Way	Fullrange	Fullrange, Mid-High, Two-Way, Wedges	Fullrange, Mid-High, Two-Way, Wedges	Fullrange, Powered Monitors, Powered Speakers, Two-Way, Wedges	
Input Connections	Parallel Neutrik® NL4		2 conductor SJO cable and gland nut			XLR and TRS Combo; XLR with Independent Gain	XLR
Frequency Response (-10 dB)	48 - 20000 Hz	48 - 20000 Hz	48 - 20000 Hz	42 - 20000 Hz	39 - 20000 Hz	48 Hz - 20 kHz Hz Full Range Mode	50 - 20000 Hz
Coverage(Nominal -6 dB) H°	90 °	90 °	90 °	60 °	90 °	90°, 100°	90°
Coverage(Nominal -6 dB) V°	50 °	50 °	50 °	60 °	50 °	50°, 100°	50°
LF Transducer	EV8L	EV8L	DVX3121	EVS15SF	DVX3150	EV8L, 203mm (8 in) Driver	DVX3150
HF Transducer	DH2005	DH2005	ND2	DH3	ND2	DH2005, 25mm (1 in) Exit Compression Driver	ND2
Crossover Frequency	1.7 kHz	1.7 kHz	2 kHz	1500 Hz	1500 Hz	1800 Hz	1500 Hz
Minimum Impedance	6 Ω	6 Ω	6.2 Ω	6.5 Ω	6.5 Ω		
Enclosure Material	High Impact Polystyrene						
Grill	Polyester Powder Coated, 18GA Galvanized Steel						
Internal Crossover	Yes	Yes		Yes	No, Yes		
Chassis Size	8 in (203.2 mm)	8 in (203.2 mm)	12 in (304.8 mm)	15 in (381 mm)	15 in (381 mm)	8 in (203.2 mm)	15 in (381 mm)
Flying	No	Yes	Yes	Yes	Yes	No	Yes
Outdoor	No	Yes	Yes	No	Yes	No	No
Color	Black	Black, White	Black, White	Black	Black, White	Black	Black, White
Rotatable Horn	Yes	Yes	no				
Power Handling (Continuous/Program/Peak)	200 W/400 W/800 W	200 W/400 W/800 W	600 W / 2400 W	400 W / 1600 W	600 W / 2400 W		
Amplifier Power (RMS)						800 W	1250 W
Power Requirement						120V: 95V - 132V, 50 - 60 Hz, 0.6A; 230V:190V - 264V, 50 - 60 Hz, 0.4A	
Height	17.76 in (451 mm)	17.76 in (451 mm)		27.01 in (686 mm)	27.24 in (692 mm)	17.99 in (457 mm)	27.24 in (692 mm)
Width	11.1 in (282 mm)	11.1 in (282 mm)		17.52 in (445 mm)	17.56 in (446 mm)	11.1 in (282 mm)	17.56 in (446 mm)
Depth	10.35 in (263 mm)	10.35 in (263 mm)		15.98 in (406 mm)	16.18 in (411 mm)	10.39 in (264 mm)	16.18 in (411 mm)
Weight Net	18.52 lbs (8.4 kg)	18.52 lbs (8.4 kg)	43.65 lbs (19.8 kg)	44.53 lbs (20.2 kg)	22.11.02 lbs (5 kg)	19 lbs (8.62 kg)	50.49 lbs (22.9 kg)



SX/SXA

As a manufacturer of tour proven loudspeakers and amplifiers, it only makes sense to pair the two together within the most popular loudspeaker design in history. SXA

offers the convenience of powered loudspeakers with the performance and reliability for which EV is known.

Sx80BE



- 2-Way Full-range
- Vented LF enclosure
- 1" voicecoil (titanium diaphragm)
- PRO™ Driver protection
- HF-horn features Varipath™
- Trapezoidal
- Compact dimensions
- 7 x M6 and 4 x M5 inserts

Sx80TB



- 2-Way Full-range
- Vented LF enclosure
- 1" voicecoil (titanium diaphragm)
- PRO™ Driver protection
- HF-horn features Varipath™
- Trapezoidal
- Compact dimensions
- 7 x M6 and 4 x M5 inserts

	Sx 80	Sx 100 +	Sx 250
Frequency Range (-10 dB)	51 Hz - 20 kHz	60 Hz - 20 kHz	50 Hz - 20 kHz
Recommended High-Pass Frequency	---	---	45 Hz (12 dB/Oct.)
Axial Sensitivity SPL 1W/1m (Biamp mode)	92 dB	98 dB	99 dB
Max. SPL / 1m (calc.); full space	121 dB (100V: 110 dB)	127 dB	130 dB
Long-Term Power Handling (low Z)	175 W	200 W	350 W
(100V resp. Biamp)	(60 W/100V)		
Short-Term Power Handling (Peak), low Z	700 W	800 W	1,400 W
Coverage (nominal -6 dB) H° x V°	90° x 60° (CD Horn)	65° x 65° (CD Horn)	80° x 55°
Directivity Index (800 - 16,000 Hz)	9.2 dB (+2.3/-3.9 dB)	11.1 dB (+2.4/-4.1 dB)	11.6 dB (+3.0/-6.9 dB)
LF woofer (transducer)	8" (---)	12" (---)	15" (DL15BFH)
HF throat diameter (transducer)	1" (DH2005)	1" (DH2010A)	1" (DH2010A)
Crossover Frequencies	2,200 Hz	1,500 Hz	1,600 Hz
Nominal Impedance (non-transformer)	8 Ω	8 Ω	8 Ω
Minimum Impedance (non-transformer)	7.2 Ω	5.6 Ω	5.2 Ω
Input Connections	see above	see above	2 four-pin Speakon
Dimensions (H x W at front x D)	400 x 292 x 222 mm 15.75" x 11.5" x 8.75"	586 x 429 x 312 mm 23.07" x 16.89" x 12.28"	625 x 431 x 330 mm 24.6" x 16.97" x 12.99"
Net Weight	8.2 kg (T/PIX: 9.3 kg) 18.1 lbs. (T/PIX: 20.5 lbs.)	14.5 kg 32 lbs	18.1 kg 39.9 lbs.

	SxA100+	SxA250
Frequency Response (-10dB)	55Hz to 20kHz	55Hz to 20kHz
Rated Output Power		
long term	LF150/HF 50Watts	LF150/HF 50Watts
10ms burst	LF350W/HF 80W	LF350W/HF 80W
Max. Sound Pressure Level	124 dB	126 dB
HF Coverage (nominal)	65° x 65°	80° x 55°
Components LF	12" woofer	DL15BFH
HF	DH 2010A	DH 2010A
Inputs	Microphone Input (XLR) Line Level Input (XLR/1/4") XLR out (slave)	Microphone Input (XLR) Line Level Input (XLR/1/4") XLR out (slave)
Level Controls	Mic Level (-35 dBu to 0 dBu Master Level (- infinity to 0 dB)	Mic Level (-35dBu to 0dBu Master Level (- infinity to 0dB)
2-Band EQ	LF: +/- 6dB HF: +/- 4dB	LF: +/- 6dB HF: +/- 4dB
Power Requirement	120V or 220-240V 50/60Hz	120V or 220-240V 50/60Hz
Dimensions	586 x 429 x 312 mm	625 x 437 x 333 mm
(heights x width x depth)	23.07" x 16.89" x 12.28"	24.60" x 17.20" x 13.11"
Weight (net)	19.5 kg (43 lbs.)	22.2 kg (48.94 lbs.)

**Sx80PI**

- 2-Way Full-range
- Vented LF enclosure
- 1" voicecoil (titanium diaphragm)
- PRO™ Driver protection
- HF-horn features Varipath™
- Trapezoidal
- Compact dimensions
- 7 x M6 and 4 x M5 inserts

Sx80PIX

- 2-Way Full-range
- Vented LF enclosure
- 1" voicecoil (titanium diaphragm)
- PRO™ Driver protection
- HF-horn features Varipath™
- Trapezoidal
- Compact dimensions
- 7 x M6 and 4 x M5 inserts

Sx100+

Composite 12" two-way



- 2-Way Full-range
- Vented LF enclosure
- 1.25" voice coil (titanium diaphragm)
- PRO™ Driver protection circuit
- HF-horn features Varipath™
- Trapezoidal (25° per side)
- Physical characteristics of
- Sx 300 with slightly lower sensitivity
- 4 x M8x1.25 attachment inserts

SxA100+

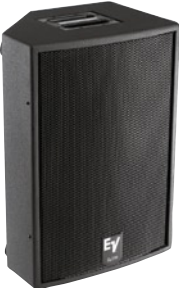
Powered composite 12" two-way



- Very compact, lightweight, robust polypropylene enclosure
- Real fullrange 55 Hz – 20k Hz for front-of house or monitor (with F200 monitor adapter)
- Biamped with 350 W plus 80 W peak power for a very dynamic musical response
- Mixable microphone and line inputs with a 2-band EQ
- 65° x 65° CD horn from the famous Sx 300 for an outstanding acoustic performance
- Fully compatible with Sx mounting hardware and accessories
- Pole-mount adapter

Sx250

15" two-way



- 2-Way Full-range
- Extended bass response
- 15" DL-Woofer 1.25" titanium diaphragm
- 80 x 55 degree horn pattern
- 18mm plywood enclosure
- Rugged FUTURATM finish
- Five sided, multi-angle cabinet
- Built-in stand mount
- Suspendable using optional SK-1 kit

SxA250

Powered 15" two-way



- 7-ply plywood enclosure with EV Coat cover; extremely scratch resistant
- 5-side enclosure with 45° monitor angle
- True fullrange (55Hz – 20kHz) for front-of-house or monitor applications
- Biamped at 350W plus 80W peak power for a very dynamic musical response
- Mixable microphone and line inputs and a 2-band EQ
- EV DL15 woofer with cast aluminium frame
- DH2010A 1.25" driver with 80° x 55° CD horn
- Pole-mount adapter



Sx300E

Composite 12" two-way



- 2-Way Full-range
- High Sensitivity
- Ultra-linear frequency response
- Vented LF enclosure
- 1.25" voice coil (titanium diaphragm)
- PRO™ Driver protection circuit
- HF-horn features Varipath™
- Trapezoidal (25° per side)
- 4 x M8x1.25 attachment inserts
- Overview of variants see right spread sheet
- Sx300 PI outdoor version
- Sx300 PIX for 70V/100V

Sx300PI

Composite weatherized 12" two-way



- 2-Way Full-range
- High Sensitivity
- Ultra-linear frequency response
- Vented LF enclosure
- 1.25" voice coil (titanium diaphragm)
- PRO™ Driver protection circuit
- HF-horn features Varipath™
- Trapezoidal (25° per side)
- 4 x M8x1.25 attachment inserts
- Overview of variants see right spread sheet
- Sx300 PI outdoor version
- Sx300 PIX for 70V/100V

Sx300PIX

Composite weatherized 70/100v 12" two-way



- 2-Way Full-range
- High Sensitivity
- Ultra-linear frequency response
- Vented LF enclosure
- 1.25" voice coil (titanium diaphragm)
- PRO™ Driver protection circuit
- HF-horn features Varipath™
- Trapezoidal (25° per side)
- 4 x M8x1.25 attachment inserts
- Overview of variants see right spread sheet
- Sx300 PI outdoor version
- Sx300 PIX for 70V/100V

**Sx600PI**

High output composite dual 12" two-way



- Two-element vertical line array
- For highest output outdoors
- Very high sensitivity (105 dB/1W/1m)
- High intelligibility
- Two 12" woofers
- DH2T driver on 65° x 65° Varipath horn
- All-weather cabinet
- SuperSAM mounting, 60° x 180° adjustable
- Waterproof connection
- by SJO cable with gland nut
- Internal 600 W transformer available (SX600PIX)

Sb122

Composite 12" subwoofer



- Subwoofer
- Direct radiating vented design
- Trapezoidal (25° per side)
- Lo-Pass Filter
- 4 x M8x1.25 attachment points
- Sb122PI outdoor version
- Sb122PIX fro 70V/100V

	Sx 300	Sx600PI	Sb 122
Frequency Range (-10 dB)	50 Hz - 20 kHz	70 Hz - 18 kHz	45 - 600 Hz
Recommended High-Pass Frequency	---	90 Hz	48 Hz (12 dB/Oct.)
Axial Sensitivity SPL 1W/1m (Biamp mode)	99 dB	105 dB	99 dB*
Max. SPL / 1m (calc.); full space	131 dB (100V; 123 dB)	138 dB	131 dB*
Long-Term Power Handling (low Z)	300 W	600 W	400 W
(100V resp. Biamp)	(200 W/100V)		
Short-Term Power Handling (Peak), low Z	1,200 W	2,400 W	1,600 W
Coverage (nominal -6 dB) H° x V°	65° x 65° (CD Horn)	65° x 65°	essentially omni
Directivity Index (800 - 16,000 Hz)	11.1 dB (+2.4/-4.1 dB)	11.3 dB	---
LF woofer (transducer)	12" (DL12BFH)	2 x 12" (ND12,DL12BFH)	12" (EVS12)
HF throat diameter (transducer)	1" (DH2010A)	1" (DH2T)	
Crossover Frequencies	1,500 Hz	1,800 Hz	160 Hz
Nominal Impedance (non-transformer)	8 Ω	4 Ω	8 Ω
Minimum Impedance (non-transformer)	6.0 Ω	3.5 Ω	6.0 Ω
Input Connections	2 four-pin Speakon	SJO cable/gland nut	2 four-pin Speakon
Dimensions (H x W at front x D)	586 x 429 x 312 mm 23.07" x 16.89" x 12.28"	1163 x 429 x 312 mm 45.79" x 16.89" x 12.28"	586 x 429 x 312 mm 23.07" x 16.89" x 12.28"
Net Weight	14.5 kg (PIX: 17.7 kg) 30 lbs. (PIX: 49.0 lbs.)	36.3 kg 80 lbs.	14.6 kg 32.2 lbs.

Phoenix



Phoenix represents the rebirth of Manifold Technology. Designed for tremendous SPL and sonic headroom, as well as ease of transport and set-up, Phoenix fills the needs of the live sound PA professional who finds that X-Array is just too much and QRx is not enough. The high-output performance of Phoenix has been optimized

to reproduce rock, pop, and dance music. Using dual, ND2, neodymium compression drivers on a manifold horn and state-of-the-art DVX woofers, Phoenix loudspeakers can perform louder and longer with less stress on system components.

PX2122 High output dual 12" two-way



- Dual ND2 2" Voice Coil, 1" Exit Neodymium Compression Drivers
- Dual DVX3121 12.LF Transducers with Forced Air Cooling
- Long-Throw 30° x 45° Rotatable Coverage Pattern
- 1000W Continuous (4000W Peak) Power Handling
- Biamp Operation
- Very High Sensitivity, 138 dB max. SPL
- Integral Rigging Points for Eyebolts or Optional Rigging Kit
- Designed for horizontal arrays of two or three cabinets

PX2152 High output dual 15" two-way



- Dual ND2 2" Voice Coil, 1" Exit Neodymium Compression Drivers
- Dual DVX3150 15.LF Transducers with Forced Air Cooling
- High Sensitivity, 136 dB maximum SPL
- 60° x 45° Rotatable Coverage Pattern
- 1200W Continuous (4800W Peak) Power Handling
- Passive/Biamp Selectable
- Integral Points for eyebolts or optional Rigging Kit
- Arrayable

PX2181 High output dual 18" subwoofer



- Dual Horn-Loaded DVX3180 18" LF Transducers with Forced Air Cooling
- 1000W Continuous (4000W Peak) Power Handling
- High-Efficiency Sub-Scoop™ Design
- Dual/Parallel Mode Selectable
- Very High Sensitivity, 141 dB max. SPL
- Integral Mounting Points on Rear Panel for Optional Wheel/Caster Kit
- Enclosure is Stackable in Both Horizontal and Vertical Orientations

PX1122M High output 12" two-way monitor



- Dual ND2 2" Voice Coil, 1" Exit Neodymium Compression Drivers
- VX3121 12.LF Transducer with Forced Air Cooling
- Very High Sensitivity, 132 dB(PX1122M) / 134 dB(PX1152M) max. SPL
- Ultra-Compact, Low Profile, Multipurpose Design
- 90° x 45° Coverage Pattern
- 600W Cont. (2400W Peak) Power Handling
- Passive/Biamp Selectable
- Integral Rigging Point for PX-SAM Strong Arm & Pole
- Mount for Tripod Use

PX1152M High output 15" two-way monitor



- Dual ND2 2" Voice Coil, 1" Exit Neodymium Compression Drivers
- VX3151 15.LF Transducer with Forced Air Cooling
- Very High Sensitivity, 132 dB(PX1122M) / 134 dB(PX1152M) max. SPL
- Ultra-Compact, Low Profile, Multipurpose Design
- 90° x 45° Coverage Pattern
- 600W Cont. (2400W Peak) Power Handling
- Passive/Biamp Selectable
- Integral Rigging Point for PX-SAM Strong Arm & Pole
- Mount for Tripod Use

	PX2122	PX2152	PX2181	PX1122M	PX1152M
Frequency Range (-10 dB)	60 Hz - 19 kHz	50 Hz - 18 kHz	40 Hz - 180 Hz	55 Hz - 19 kHz	50 Hz - 19 kHz
Recommended High-Pass Frequency	80 Hz (12 dB/Oct.)	40 Hz (12 dB/Oct.)	32 Hz (12 dB/Oct.)	50 Hz (12 dB/Oct.)	45 Hz (12 dB/Oct.)
Axial Sensitivity SPL 1 W/1 m	102 dB	99 dB	105 dB	98 dB	100 dB
Max. SPL /1 m (calc.); full space	138 dB	136 dB	141 dB	132 dB	134 dB
LF Power Handling (Passive)	—	1200 W Cont. / 4,800 W Peak	—	600 W Cont. / 2,400 W Peak	600 W Cont. / 2,400 W Peak
LF Power Handling (Biamp)	1000 W Cont. / 4,000 W Peak	1000 W Cont. / 4,000 W Peak	1000 W Cont. / 4,000 W Peak	500 W Cont. / 2,000 W Peak	Peak 500 W Cont. / 2,000 W Peak
HF Power Handling (Biamp)	80 W Cont. / 320 W Peak	80 W Cont. / 320 W Peak	—	80 W Cont. / 320 W Peak	80 W Cont. / 320 W Peak
Coverage (nominal -6 dB) H° x V°	30° (or 45°) x 45° (or 30°)	60° (or 45°) x 45° (or 60°)	Omnidirectional	90° x 45°	90° x 45°
LF transducer	2 x 12" DVX3121	2 x 15" DVX3150	2 x 18" DVX3180	1 x 12" DVX3121	1 x 12" DVX3151
HF transducer	2 x 2" ND2-16	2 x 2" ND2-16	—	2 x 2" ND2-16	2 x 2" ND2-16
Crossover Frequencies	1600 Hz	1,600 Hz	80 Hz - 125 Hz	80 Hz - 125 Hz	1,600 Hz 80 Hz - 125 Hz
LF Impedance	4 Ω Nominal	4 Ω Nominal	4 Ω Nominal	8 Ω Nominal	8 Ω Nominal
HF Impedance	8 Ω Nominal	8 Ω Nominal	—	8 Ω Nominal	8 Ω Nominal
Input Connections	Neutrik Speakon NL4's	Neutrik Speakon NL4's	Neutrik Speakon NL4's	Neutrik Speakon NL4's	Neutrik Speakon NL4's
Enclosure Material	18 mm Plywood with EVCoat™	18 mm Plywood with EVCoat™	18 mm Plywood with EVCoat™	18 mm Plywood with EVCoat™	18 mm Plywood with EVCoat
Dimensions (H x W x D)	1219 x 457 x 445 mm (48" x 18" x 17.5")	1219 x 457 x 445 mm 48" x 18" x 17.5"	1219 x 569 x 758 mm 48.0" x 22.42" x 29.85"	546 x 366 x 305 mm	610 x 366 x 305 mm 24.00" x 17.42" x 12.97"
Net Weight	50.1 kg (110.3 lbs.)	45.6 kg (100.5 lbs.)	86.5 kg (190.5 lbs.)	23.1 kg (51 lbs.)	25.1 kg (55.3 lbs.)



QRx

QRx Series has become the standard for regional sound companies, rental professionals, and contractors who want compact high-performance loudspeakers with concert-grade EV components. Covered with rugged EVCOAT, QRx looks great stacked, on poles, as monitors, or flown with simple, integrated, L-track rigging points on top and bottom. Their unique, asymmetrical, fully rotatable horns with 15 degree downward bias ensures high-frequency

coverage without having to tilt the enclosure toward the audience. Our powerhouse, the DH7 large-format driver (three-inch voice-coil, 1.4-inch exit) provides the high-frequency engine, while a selection of DL and EVX woofers anchor the low and sub frequencies. The combination of high-level components, unique design, and versatility make QRx Series one of the best values in the industry.

QRx 112/75 Compact 12" two-way



- 2-Way High-Output Full-range
- High Sensitivity
- Ultra-linear frequency response
- Solid bass down to 52 Hz (-10 dB)
- Vented LF enclosure
- Asymmetric CD-horn aimed downward by 10°
- 3" voice coil (titanium diaphragm)
- Protection circuits for HF-driver and LF-woofer
- Easy external operation mode selection
- 5-side multi-angled housing with monitor slant

QRx 115/75 Compact 15" two-way



- 2-Way High-Output Full-range
- High Sensitivity
- Ultra-linear frequency response
- Solid bass down to 50 Hz (-10 dB)
- Vented LF enclosure
- Asymmetric CD-horn aimed downward by 10°
- 3" voice coil (titanium diaphragm)
- Protection circuits for HF-driver and LF-woofer
- Easy external operation mode selection
- 5-side multi-angled housing with monitor slant
- Same front width as Rx 118 S

QRx 118S Compact 18" subwoofer



- Subwoofer
- Direct radiating vented design
- High Sensitivity
- Solid bass down to 30 Hz (-10 dB)
- Rectangular
- Equipped with shown features below

QRx 153/75 Compact 15" three-way



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

QRx 212/75 Compact dual 12" two-way



- 2-Way Highest-Output Full-range
- High Sensitivity
- Ultra-linear frequency response
- Extended bass response down to 50 Hz (-10 dB)
- Vented LF enclosure
- Asymmetric CD-horn aimed downward by 10°
- 3" voice coil (titanium diaphragm)
- Protection circuits for HF-driver and LF-woofers
- Easy external operation mode selection
- Trapezoidal (10° per side)

QRx 218S Compact dual 18" subwoofer



- Subwoofer
- Direct radiating vented design
- High Sensitivity
- Solid bass down to 31 Hz (-10 dB)
- Rectangular
- Also perfect in combination with large HP and MH horns
- Equipped with shown features below
- Flyable version available

	QRx112/75	QRx115/75	QRx153	QRx(H) 212/75	QRx118	QRx218S
Frequency Range (-10 dB)	52 Hz - 18 kHz	45 Hz - 15 kHz	42 Hz - 20 kHz	50 Hz - 15 kHz	38/40Hz - 250 Hz	40 - 250 Hz
Frequency Range (-3 dB) with controller amp	46 Hz - 18 kHz	48 Hz - 18 kHz	50 Hz - 16 kHz	43 Hz - 18 kHz	36/38Hz - 125 Hz	38 - 125 Hz
Recommended High-pass frequency	45 Hz (12 dB/Oct.)	45 Hz (12 dB/Oct.)	—	45 Hz (12 dB/Oct.)	36 Hz (12 dB/Oct.)	35 Hz (12 dB/Oct.)
Axial Sensitivity SPL 1W/1m (Biamp operation)	100 dB (100/112 dB)	100 dB (101/112 dB)	98/105 dB	102 dB (102/112 dB)	98 dB	100 dB
Max. SPL / 1m (calc.)	131 dB	133 dB	130 dB	136 dB	132/133 dB	135 dB
Continuous Power Handling	350 W (300 W/75 W)	450 W (400 W/75 W)	400 W/150 W/150 W	650 W (600 W/75 W)	600/800 W	800 W
Peak Power Handling (Biamp)	1,400 W (1,200/300 W)	1,800 W (1,600/300 W)	1,600 W/600 W/600 W	2,600 W (2,400/300 W)	2,400/3,200 W	1,600W
Coverage (nominal -6 dB) H° x V°	75° x 50° (asym. CD horn)	75° x 50° (asym. CD horn)	75° x 50° (asym. CD horn)	75° x 50° (asym. CD horn)	essentially omni	essentially omni
LF woofer (transducer)	12" (DL12BFH)	15" (DL15X)	15" (DL15ST)	2 x 12" (DL12BFH)	1x18"(EVX) / 2x15"(DL15)	2 x 18" (DL18MT)
VC diameter	3" (DH7)	3" (DH7)	8" MF8 MF/ 3" DH7 HF	3" (DH7)	---	---
Crossover Frequencies (slope in Biamp mode)	1,500 Hz (24 dB/Oct.)	1,500 Hz (24 dB/Oct.)	1,200 Hz	1,500 Hz (24 dB/Oct.)	100 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/12 Ω/12 Ω	4 Ω (4 Ω/8 Ω)	8/4 Ω	4 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)	675 x 390 x 372 mm 26.6" x 15.36" x 16"	759 x 450 x 407 mm 29.9" x 17.72" x 16.02"	1,240 x 467 x 485 mm 41.5" x 18.4" x 19.12"	990 x 390 x 375 mm 38.98" x 15.47" x 14.77"	900 x 450 x 600 mm 35.5" x 17.7" x 23.6"	990 x 560 x 600 mm 39" x 22.05" x 23.6"
Net Weight (subs without wheel kit)	26.0 kg (58 lbs.)	32.0 kg. (71 lbs.)	47 kg (97 lbs.)	36.5 kg. (80 lbs.)	47.5/48.5 kg (100/102 lbs.)	59.5 kg (131 lbs.)



Tour X

Tour X embodies the same engineering excellence and aesthetic design found in every world-class EV tour system. Its form is seamlessly integrated into practical, functional elements that make a bold statement about the

multi-application purpose and breakthrough performance. A host of innovative features and patent-pending designs make Tour X the most exciting portable loudspeaker series available.

TX1122

12" two-way



- DH3 1.25" (32 mm) Diaphragm, 1" (25 mm)-exit pure titanium compression driver
- SMX2120 12"(305 mm) LF transducer with fully symmetric drive
- Advanced fourth-order crossover with HF protection
- 90° x 50° coverage pattern
- 97 dB sensitivity, 130 dB maximum SPL
- 500 W continuous, 2000 W peak power handling
- Pole mount for tripod use
- Six 3/8" threaded points for suspension

TX1152

15" two-way



- DH3 1.25" (32 mm) Diaphragm, 1" (25 mm)-exit pure titanium compression driver
- SMX2151 15" (381 mm) LF transducer with fully symmetric drive
- Advanced fourth-order crossover with HF protection
- 60° x 40° rotatable coverage pattern
- 100 dB sensitivity, 133 dB maximum SPL
- 500 W continuous, 2000 W peak power handling
- Pole mount for tripod use
- Six 3/8" threaded points for suspension

TX2152

Dual 15" Two-way Full-range



- ND2-8 2" (51 mm) diaphragm, 1" (25.4 mm)-exit neodymium compression driver
- Dual SMX2151 15" (381 mm) LF transducers with fully symmetric drive
- Advanced sixth-order crossover with HF protection
- 60° x 40° rotatable coverage pattern
- 103 dB sensitivity, 139 dB maximum SPL
- 1000 W continuous, 4000 W peak power handling
- Six 3/8" threaded points for suspension

**TX1181**

18" subwoofer



- EVS-18S 18" (457 mm) LF transducer
- 100 dB sensitivity, 132 dB maximum SPL
- Integrated low pass filter with 6 dB / octave slope
- 500 W continuous, 2000 W peak power handling
- Pole mount to elevate a two-way loudspeaker
- Mounting points to attach optional TX-W1 wheel kit

TX2181

Dual 18" subwoofer



- Dual EVS-18S 18" (457 mm) LF transducers
- 103 dB sensitivity, 138 dB maximum SPL
- 1000 W continuous, 4000 W peak power handling
- Four integrated handles for easy portability
- Mounting points to attach optional TX-W1 wheel kit

TX1122FM

12" two-way dedicated floor monitor



- 55° compact vertical floor monitor with Signal Synchronized Transducers™
- 99 dB sensitivity, 132 dB maximum SPL
- DH3 1.25" (32 mm) diaphragm, 1.(25 mm)-exit pure titanium compression driver
- SMX2121 12" (305 mm) LF transducer

- with fully symmetric drive
- Integrated crossover with steep 24 dB / octave slopes and HF protection
- 90° x 50° coverage pattern
- 500 W continuous, 2000 W peak power handling

TX1152FM

15" two-way dedicated floor monitor



- 55° vertical floor monitor with Signal Synchronized Transducers™
- 100 dB sensitivity, 133 dB maximum SPL
- DH3 1.25" (32 mm) diaphragm, 1.(25 mm)-exit pure titanium compression driver
- SMX2151 15" (381 mm) LF transducer with fully symmetric drive

- Integrated crossover with steep 24 dB / octave slopes and HF protection
- 90° x 50° coverage pattern
- 500 W continuous, 2000 W peak power handling

	TX1122	TX1152	TX2152	TX1181	TX2181	TX1122FM	TX1152FM
Frequency Response (-3 dB)	60 - 20000 Hz	55 - 20000 Hz	55 - 13000 Hz	50 - 160 Hz	50 - 160 Hz	70 - 20000 Hz	65 - 20000 Hz
Sensitivity 1 W/1 m	97 dB	100 dB	103 dB	100 dB	103 dB	99 dB	100 dB
Max. SPL/1m (calc)	130 dB	133 dB	139 dB	132 dB	138 dB	132 dB	133 dB
System Power Handling (Continuous/Program/Peak)	500 Watts	500 Watts	1000 Watts	500 Watts	1000 Watts	500 Watts	500 Watts
Nominal Impedance (Passive)	8 Ω	8 Ω	4 Ω	8 Ω	4 Ω	8 Ω	8 Ω
Speaker Type	Fullrange	Fullrange	Fullrange	Subs	Subs	Fullrange	Fullrange
Input Connections	Parallel Neutrik® NL4	Parallel Neutrik® NL4	Parallel Neutrik® NL4	Parallel Neutrik® NL4	Parallel Neutrik® NL4	Parallel Neutrik® NL4	Parallel Neutrik® NL4
Frequency Response (-10 dB)	45 - 20000 Hz	40 - 20000 Hz	50 - 18000 Hz	45 - 700 Hz	40 - 1500 Hz	55 - 20000 Hz	45 - 20000 Hz
Coverage(Nominal -6 dB) H°	90 °	60 °	60 °			90 °	90 °
Coverage(Nominal -6 dB) V°	50 °	40 °	40 °			50 °	50 °
LF Transducer	SMX2120	SMX2151	(2) SMX2151	EVS18S	(2) EVS18S	SMX2121	SMX2151
HF Transducer	DH3	DH3	ND2			DH3	DH3
Crossover Frequency	1750 Hz	1650 Hz	1750 Hz			1800 Hz	1750 Hz
Minimum Impedance	5.4 Ω	5.6 Ω	3.1 Ω	7.5 Ω	2.9 Ω	6.4 Ω	6.2 Ω
Enclosure Material	Plywood and MDF with EVCOAT	Plywood and MDF with EVCOAT	Plywood and MDF with EVCOAT	Plywood and MDF with EVCOAT	Plywood and MDF with EVCOAT	Plywood and MDF with EVCOAT	Plywood and MDF with EVCOAT
Suspension	(6) 3/8-inch threaded inserts	(6) 3/8-inch threaded inserts	(6) 3/8-inch threaded inserts				
Internal Crossover	Yes	Yes	Yes	Yes	No	Yes	Yes
Flying	Yes	Yes	Yes	No	No	No	No
Rotatable Horn	No	Yes	Yes			No	No
Height	24.25 in (616 mm)	30.55 in (776 mm)	45.43 in (1154 mm)	30.28 in (769 mm)	45.43 in (1154 mm)	17.32 in (440 mm)	18.7 in (475 mm)
Width	15.04 in (382 mm)	17.56 in (446 mm)	20 in (508 mm)	17.28 in (439 mm)	20 in (508 mm)	14.33 in (364 mm)	17.28 in (439 mm)
Depth	14.96 in (380 mm)	17.56 in (446 mm)	18.54 in (471 mm)	23.27 in (591 mm)	27.2 in (691 mm)	22.56 in (573 mm)	25.79 in (655 mm)
Weight Net	44.53 lbs (20.2 kg)	61.29 lbs (27.8 kg)	94.36 lbs (42.8 kg)	74.52 lbs (33.8 kg)	123.68 lbs (56.1 kg)	43.65 lbs (19.8 kg)	23.11.02 lbs (5 kg)



Force i



Force i is built for the professional on a budget and boasts great sound, portability, and outstanding value. Each Force i system is easy to transport and simple to set up, making it perfect for performers, traveling DJs, school functions, and

youth groups. Force i tops and subs are designed to work together as a system, efficiently using a single amplifier channel to drive both.

Force i 15" two-way

Mobile Audio



- RoadWood™ trapezoidal enclosure
- Compact size - 25.2" tall
- Lightweight - 46 lbs (20.9 kg)
- RMD™ (Ring-Mode Decoupling)
- 1" pure titanium compression driver
- 80° x 55° true constant-directivity horn
- High-power crossover network
- PTP™ (Power Tracking Protection)
- Built-in metal stand mount

Force i Monitor 12" two-way monitor



- RoadWood™ trapezoidal enclosure
- Super-low-profile
- Lightweight - only 28 lbs (12.7 kg)
- RMD™ (Ring-Mode Decoupling)
- 1" pure titanium compression driver
- 80° x 55° true constant-directivity horn
- High-power crossover network
- PTP™ (Power Tracking Protection)
- Built-in metal stand mount

Force i25 Dual 15" Two-way



- Two-element shaded array
- RMD™ (Ring-Mode Decoupling)
- 1" pure titanium compression driver
- 80° x 55° true constant-directivity horn
- High-power crossover network
- Built-in wheels for easy transport

**Force i Sub** 18" subwoofer

- 18" cast-frame driver with 350 W continuous / 700 W program / 1,400 W peak power handling
- Built-in input filter for single-amp drive capability – no bi-amp required
- Comes with 34.pole for elevating two-way systems
- Comes with wheels and removable expandable handle for easy transport
- Enclosure is strong and light – 88 lb (40.0 kg)
- Same height (25.5") as Force i two-way for more efficient packing

	Force i	Force i Monitor	Force i Sub	Force i25
Frequency Response (-3 dB)	60 - 20000 Hz	85 - 17000 Hz	36 - 210 Hz	46 - 18000 Hz
Sensitivity 1 W/1 m	100 dB	99 dB	100 dB	
Max. SPL/1m (calc)	130 dB	128 dB	131 dB	100 dB
System Power Handling (Continuous/ Program/Peak)	250 Watts	250 Watts	350 Watts	600 Watts
Nominal Impedance (Passive)	8 Ω	8 Ω	8 Ω	4 Ω
Speaker Type	Fullrange, Mid-High, Two-Way	Fullrange, Two-Way, Wedges	Subs	Fullrange, Mid-High, Two-Way
Input Connections	Parallel Neutrik® NL4	Parallel Neutrik® NL4	Parallel Neutrik® NL4	Parallel Neutrik® NL4
Frequency Response (-10 dB)	40 - 20000 Hz			35 - 20000 Hz
Coverage(Nominal -6 dB) H°	80 °	55 °	omni	80 °
Coverage(Nominal -6 dB) V°	55 °	80 °	omni	50 °
Internal Crossover	Yes	Yes	Yes	Yes
Chassis Size	15 in (381 mm)	12 in (304.8 mm)	18 in (457.2 mm)	15 in (381 mm)
Flying	No	No	No	No
Outdoor	No	No	No	No
Color	Black	Black	Black	Black
Height	25.51 in (648 mm)	21.5 in (546 mm)	25.51 in (648 mm)	45.98 in (1168 mm)
Width	18.31 in (465 mm)	14.21 in (361 mm)	20.39 in (518 mm)	17.91 in (455 mm)
Depth	15.2 in (386 mm)	9.69 in (246 mm)	23.5 in (597 mm)	20.24 in (514 mm)
Weight Net	53.13 lbs (24.1 kg)	28.44 lbs (12.9 kg)	87.74 lbs (39.8 kg)	114.64 lbs (52 kg)



Variplex II

The Variplex II is one example of the many THX-approved Electro-Voice systems. They join the large, diverse family of EV cinema products developed for both large and small cinemas. EV's wide range of products and time-proven acoustic excellence ensures that any system can be

designed to 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 are part of this formula for success.

Variplex II®;



- Three-way stage system
- Vari-Intense® technology provides uniform front-to-back coverage
- Ring-Mode Decoupling™ improves vocal clarity and intelligibility
- Variplex™ B model features passive MB/HF crossover for biamping
- THX® approved
- Digital Dynamics Capable™

Variplex II®; XL



- Three-way, high-output stage system
- High-output MB and HF drivers
- Vari-Intense® technology provides uniform front-to-back coverage
- Ring-Mode Decoupling™ improves vocal clarity and intelligibility
- THX® approved
- Digital Dynamics Capable™

Variplex Matinee Three-Way Screen Channel Speaker



- Three-way design for intelligibility and clarity
- Asymmetric Directed Coverage™ technology for even coverage from simple installation
- Very uniform frequency response
- Digital Dynamic Capable™, wide dynamic range
- Compact and fully assembled
- Passive or bi-amp operation



TL-Series

TL Series low-frequency systems offer a variety of low-frequency solution for general fixed installation or low-frequency supplementation in existing installations. Low-frequency systems have f3s as low as 40 Hz. Response below 30 Hz is generally required for theatrical effects,

reproduction of pipe organs, and some special effects in contemporary music, such as synthesizers and down-tuned bass guitars. The TL 880D is specially suited for this special type of application.

TL440



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

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

	Variplex II XL	Variplex II	Variplex M	TL440	TL880D
Frequency Range	34 Hz - 16 kHz	34 Hz - 16 kHz	45 Hz - 18 kHz	33 Hz* - 3.2 kHz	23 Hz - 1.8 kHz
Sensitivity, 1W/1m (LF/MF/HF)	104/109/112 dB	101/109/112 dB	104 dB	96 / 102 dB	99 / 105 dB
Max.SPL/1m (calc.) (ave./peak)	130 / 136 dB	130 / 136 dB	127 / 133 dB	130 / 136 dB	136 / 162 dB
Crossover Frequency	500Hz / 1300 Hz	500Hz / 1300 Hz	500 Hz		
Long-term Power Handling (LF/MF/HF)	1600/400/75 W	800/400/75 W	500 / 300 W	600 W	1.200 W
Short-term Power Handling (LF/MF/HF)	6400/1600/300 W	3200/1600/300 W	2000 / 1200 W	2.400 W	4.800 W
Coverage Horizontal (long axis/short axis)	90°	90°	90°	omnidirectional(< 125 Hz)	omnidirectional
Coverage Vertical (up/down)	20°/30°	20°/30°	20°/30°		
HF driver	ND 6-8	ND6-8	DH2T		
MF driver	2 x EV8DH	2 x EV8DH	2 x EV8D		
LF driver	4 x DL15ST	2 x DL15ST	2 x EV15G	1 x EVX 180B	2 x EVX180B
Nominal Impedance	2 x 4 / 4 / 8 Ω	4 / 4 / 8 Ω	4 / 4 Ω	8 Ω	4 Ω
Dimensions (Height/Width/Depth)	1924 x 1296 x 396 mm	1924 x 648 x 396 mm	1924 x 648 x 396 mm	1003 / 572 / 559	1210 / 762 / 605
	75.8" x 51" x 15.6"	75.8" x 25.5" x 15.6"	75.8" x 25.5" x 15.6"	39.5"x22.5"x22"	47.5"x30"x23.8"
Weight (net)	139 kg (306.4 lbs.)	74 kg (163.1 lbs.)	72,6 kg (160.1 lbs.)	49 kg (108 lbs)	72,6kg (160 lbs)



SL-Series



Proven in thousands of installations and live applications around the world including the Olympics, the FIFA World Cup, Live 8, and Live Earth, EV delivers truly state-of-the-art DSP for today's applications. EV's flagship digital sound system processor, the Dx46, sets the standard for

digital loudspeaker controllers and processors, providing 48-bit filter algorithms, 24-bit AD/DA conversion, and a dynamic range of 115 dB. The EV DC-One is a two-in, six-out digital signal processor for loudspeaker management and optimization.

SL10-2V SL12-2V SL Series Cinema Speaker Systems



- 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
- SL10-2V includes wall mounting brackets
- THX® compatible
- Digital Dynamics Capable™

SL8.2



- Full-Bandwidth overload protection
- Strong-Arm-Mount™ for easy, flexible aiming
- Lightweight, unobtrusive plastic enclosure
- Easy-access input terminals
- 8-2way with 1,25" compression driver

	SL12-2V	SL10-2V	SL8.2
Frequency Range	70Hz - 20 kHz	60Hz - 20kHz	60 - 20kHz
Sensitivity, 1W/1m	93 dB	93 dB	
Max.SPL/1m (calc.) (ave./peak)	116 / 121 dB	113 / 119 dB	115/121 dB
Long-term Power Handling	200W	100 W	200 W
Short-term Power Handling	800 W	400 W	800 W
Coverage (H x V)	100° x 90°	100° x 100°	100° x 100°
LF driver	12" woofer	10" woofer	EV8L
HF driver	DH2010A	1" compression driver	DH2005
Nominal Impedance	8 Ω	8 Ω	8 Ω
Dimensions (Height/Width/Depth) in mm	535 x 476 x 335	476 x 318 x 275	451 x 282 x 263
	21" x 18.7" x 13"	18.75" x 12.5" x 10.8"	17.75" x 11.12" x 10.35"
Weight (net)	21,4 kg (47 lbs.)	10,5 kg (23.1 lbs.)	8.4 kg (18.5 lbs)



EV compression driver requirements call for ultra-precise tolerances, state-of-the-art modeling routines, and exceptional 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, putting these drivers at the top of the class in every respect.

DH2T-8/DH2T-16 2" Driver



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

DH3/2010A 1.25" Driver



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

DH7-8/DH7-16 High-Value 3" Driver



- 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 directradiator or horn-loaded LF and MB sections

ND6-8/ND6-16 High-Value 3" Driver



- Large-format neodymium compression driver
- 300 W 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

ND6x-8/ND6-16 High-Performance High-Value 3" 500 Hz Driver

- Large-format neodymium compression driver
- 300 W power rating
- 3" titanium diaphragm with 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
- ND6X from > 500 Hz

	DH7-8/DH7-16	ND6-8/ND6-16	DH2T	DH3/DH2010A
Frequency response	1,000 Hz–20 kHz	1,000 Hz–20 kHz / 500Hz–16kHz (ND6X)	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	20 W
Short-term power rating	300 W	300 W	160 W	80 W
Impedance	8/16 Ω	8/16 Ω	8 Ω	8 Ω
Throat diameter	35 mm adapter (1.4"/2.0")	35 mm adapter (1.4"/2.0")	25 mm (1)	1.0" (25 mm)
Diaphragm diameter	76 mm (3.0")	76 mm (3.0")	50 mm (2.0")	32 mm (1.25")
Overall diameter	165 mm (6.5")	132 mm (5.2")	132 mm (5.2")	107 mm (4.5")
Overall depth	69 mm (2.7")	69 mm (2.7")	89 mm (3.5")	89 mm (3.5")
Net weight	4.54 kg (10.0 lbs)	2.5 kg (5.5 lbs)	2.27 kg (5.0 lbs)	1.5 kg (3.4 lbs)
*Average from 1,000 Hz–5 kHz on HP6040 horn (DH3 average from 1,500 Hz–5 kHz on HPT64 horn)				



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.

DL12BFH Chassis



- 12" woofer
- Cast Aluminium frame
- 300 watt Cont. 1200 watt peak
- 100 dB Sensitivity
- RMD

EVX155 Chassis



- 15" woofer
- Cast Aluminium frame
- 600 watt cont. 2400 watt peak
- 98 dB Sensitivity
- RMD
- Touring grade performance
- 4" Edge Wound Voice Coil

EVX180B Chassis



- 18" woofer
- Cast Aluminium frame
- 600 watt cont. 2400 watt peak
- 99 dB sensitivity
- Touring grade performance
- 4" Edge Wound Voice Coil



EVM12L

EVM12L BlackLabel Zakk Wylde signature guitar speaker



- the OFFICIAL guitar loudspeaker of Zakk Wylde and Black Label Society
- improved power handling, improved magnet design, better venting
- 300W
- Frequency Response 80Hz - 7kHz
- Sensitivity 100dB

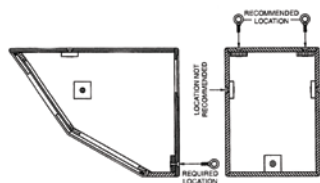
EVM12L Classic The Classic EVM12L guitar speaker



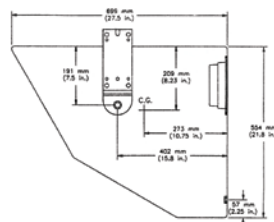
- 200W Power handling
- Frequency response: 80Hz – 7kHz (at -10 dB down)
- Heavy-duty cast frame reduces the low-frequency flex inherent in stamped frame designs.
- Large 16lbs (7.3kg) magnet allows for higher efficiency, better cooling and maximum output
- Manufactured in the USA

	DL12BFH	EVX155	EVX180B	EVM12L Black Label	EVM12L Classic
Cone diameter	12" (305 mm)	15" (381 mm)	18" (457 mm)	12" (305mm)	12" (305mm)
Coil diameter	2.5" (63.5 mm)	4" (101.6 mm)	4" (101.6 mm)	2.5" (63.5 mm)	2.5" (63.5 mm)
Impedance	8 Ω	8 Ω	8 Ω	8 or 16 Ω	8 or 16 Ω
Frequency range	60–2,500 Hz	40–2,000 Hz	30–800 Hz	80Hz–7kHz	80Hz–7kHz
Long-term power rating (EIA)	300 W	600 W	600 W	300 W	200 W
Short-term power rating	1,200 W	2,400 W	2,400 W	1200 W	1000 W
Sensitivity (1 W @ 1 m)	96 dB	98 dB	98 dB	100 dB	100 dB
Maximum SPL	120.8 dB	125.8 dB	125.8 dB	125 dB	125 dB
Efficiency	3.69%	4.32%	3.4%	5.9%	5.9%
Frame front diameter	309.6 mm (12.19")	385.0 mm (15.16")	460.5 mm (18.13")	309.6 mm (12.19")	309.6 mm (12.19")
Magnet diameter	155.6 mm (6.13")	209.6 mm (8.25")	8.25" (209.6 mm)	190.5 mm (7.5")	190.5 mm (7.5")
Overall depth	133.4 mm (5.25")	184.2 mm (7.25")	203.2 mm (8.00")	133.4 mm (5.25")	133.4 mm (5.25")
Mounting bolt circle diameter	293.7 mm (11.563")	369.9 mm (14.563")	441.3 mm (17.375")	293.7 mm (11.563")	293.7 mm (11.563")
Baffle cutout diameter	281.0 mm (11.063")	357.2 mm (14.063")	425.5 mm (16.750")	281.0 mm (11.063")	281.0 mm (11.063")
Net weight	5.0 kg (11.1 lbs.)	10.3 kg (22.8 lbs.)	10.6 kg (23.4 lbs.)	8.6 kg (19 lbs.)	8.6 kg (19 lbs.)

EVI 12/15/28 EBK-1 (Eyebolt-Kit)



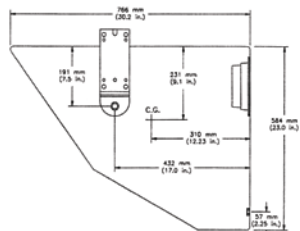
EVI-12 Ceiling mount



EVI-12MBB
EVI-12MBW

black
white

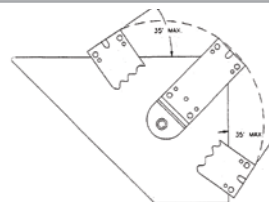
EVI-15 Ceiling mount



EVI-15MBB
EVI-15MBW

black
white

EVI-28 Wall or ceiling mount

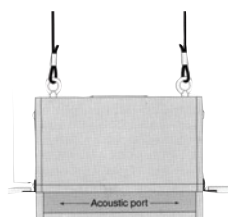


EVI-28MBB
EVI-28MBW

black
white

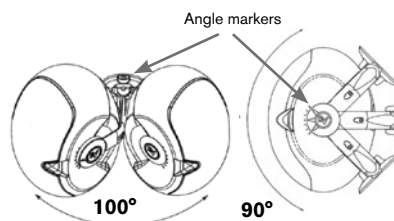
The radius of action is 140°.

EVID 12.1 1 Eyebolt is included.



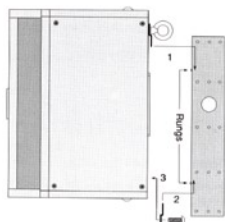
Note: One 3/8"-16-thread forged steel eyebolt is included. A second is necessary!

EVID 3.2 / 4.2 / 6.2



SAM™ comes with each EVID™ system and includes a hex-key-tool. SAM™ has angle markers to make installation easier.

EVID 12.1



Bracket passes EIA 636 at a safety factor of 8:1.

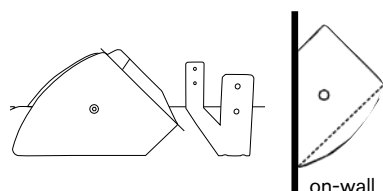
The bracket for on-wall or corner mounting and a safety eyebolt comes with EVID 12.1.

FRi+ 4 Eyebolts included (imperial)

EVF Series / EVH Series

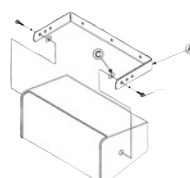
4 M10 metric eyebolts included

FRi-2082 Under balcony/on-wall mount



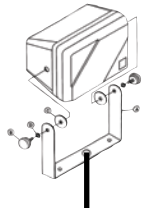
The 100° x 100° dispersion angle allows one to install FRi-2082 vertically on the wall as well. Mounting bracket comes with FRi-2082.

Xi- 1082 Under balcony or on-wall mount



MB-1082: black

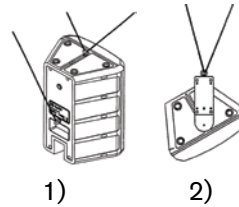
S-40 Wall, ceiling or stand mount



Note: The throat diameter can be reduced with a standard 5/8-inch screw adapter for different mic stands.

S-40 MB/B: black
S-40 MB/W: white

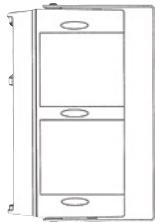
Sx 100/300, Sb 122



- 1) MB 100
- 2) MB 100 + MB 200

Security advice:
When flown by 90° (figure 2) don't use eyebolts only!

Sx 80 Wall or ceiling mount



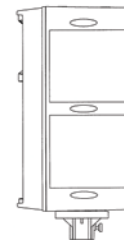
For cost effective installation.

Sx 80 MBB black
Sx 80 MBW white

Sx 250/SxA250 Sk-1 Rigging Kit



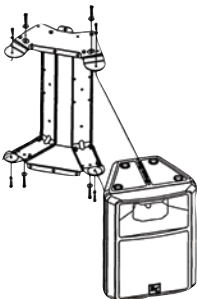
Stand mount



For speakers stands with 35 mm diameter.

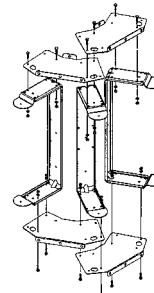
Sx 80 SM black

Sx 100 / Sx 300 / Sb 122



Horizontal Cluster 120° (2 systems)

2 x MB 200 + 1 x MB 300 necessary



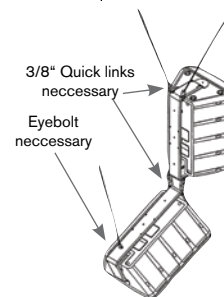
Horizontal Cluster 180° (3 systems)

3 x MB 200 + 2 x MB 300 necessary



Wall or ceiling-mount

1 x MB 200 necessary



Vertical Cluster

2 x MB 200 necessary

Sx-Series™ hardware-overview:

Sx 80

Sx 80 SM	Stand mount	black
Sx 80 MBB	U-bracket	black
Sx 80 MBW	U-bracket	white

Sx 100+

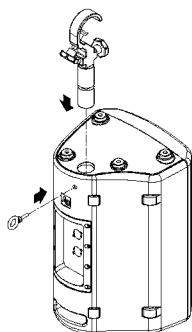
MB 200 B	U-bracket	black
MB 200 W	U-bracket	white

Sx 300

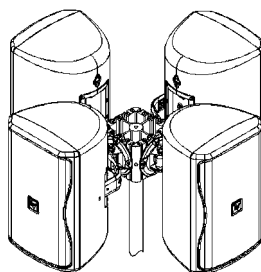
MB 300 B	Array-kit (2 plates)	black
Sb 122		
MB 300 W	Array-kit (2 plates)	white

ZX1

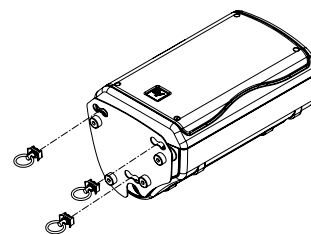
ZX1-90 + TCA-ZX1



ZX1i + AB-ZE



ZX1 - 90 + MP1 -B

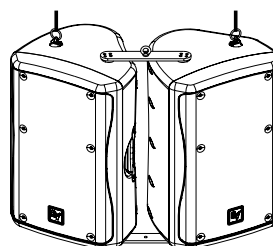


ZX3 / ZX5

MB-3/MB-5 Wall/Ceiling mounting bracket



CB5 cluster bracket kit



VSA-1 using HA3



EBK-3 M8 eyebolt kit



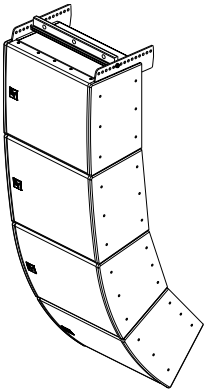
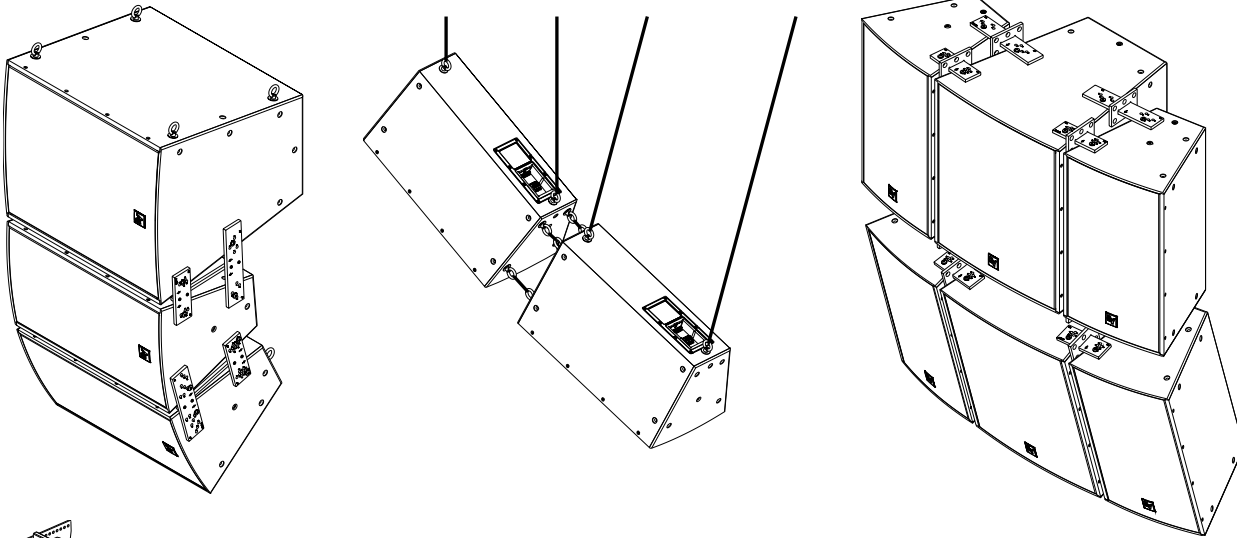
SSK-1



**HA-3 or HA-5 handel adapter
to be used with VSA-1**

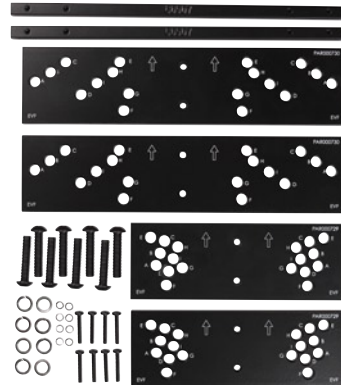


EV Innovation

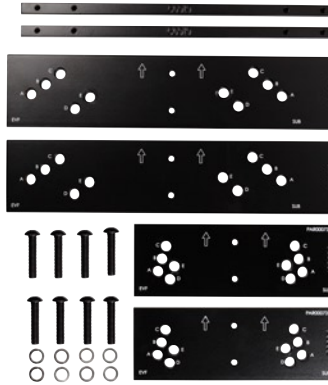


EVF / EVH Series

VRK-1



VRK-2



HRK and VRK
rigging kits

(HRK not shown)

EVA / EVF / EVH Series gland nut cover plates



CDG

Dual gland nut cover plate



CDNL4

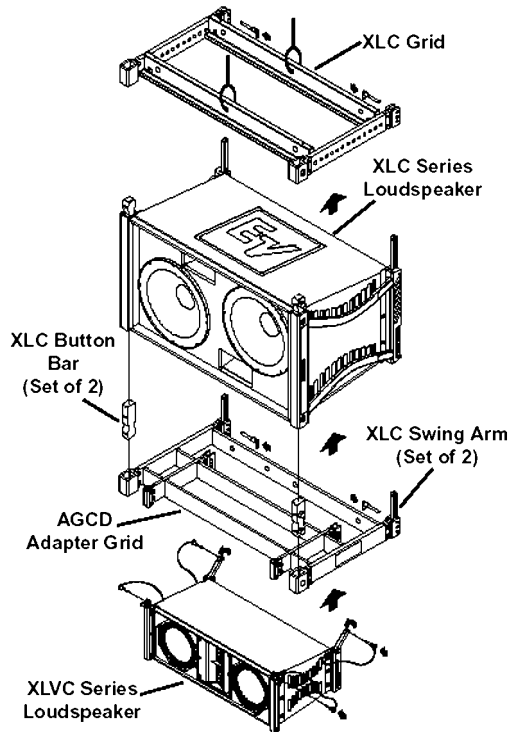
Dual NL4 cover plate



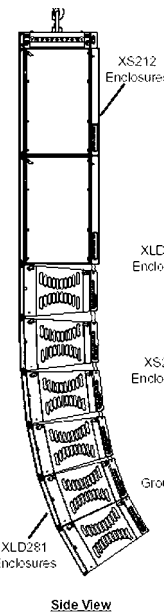
CSG

Single Gland Nut cover plate

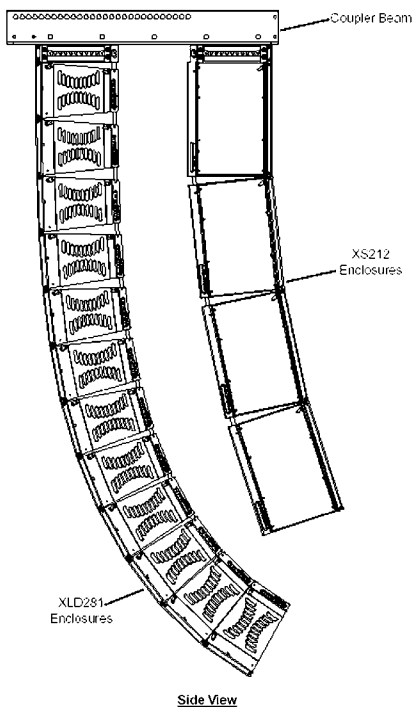
XLD281 + XLC215 + AGCD



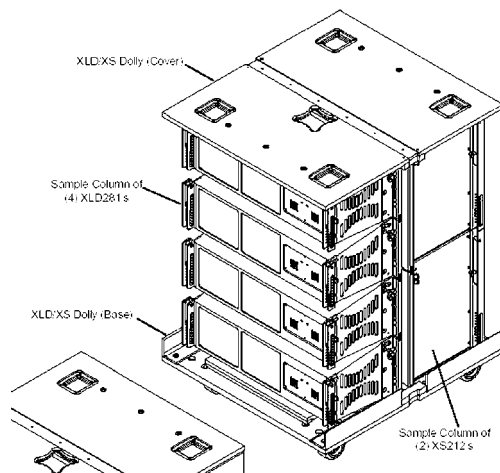
XLD281 + XS 212



XLD281 + XS212 + CBeam

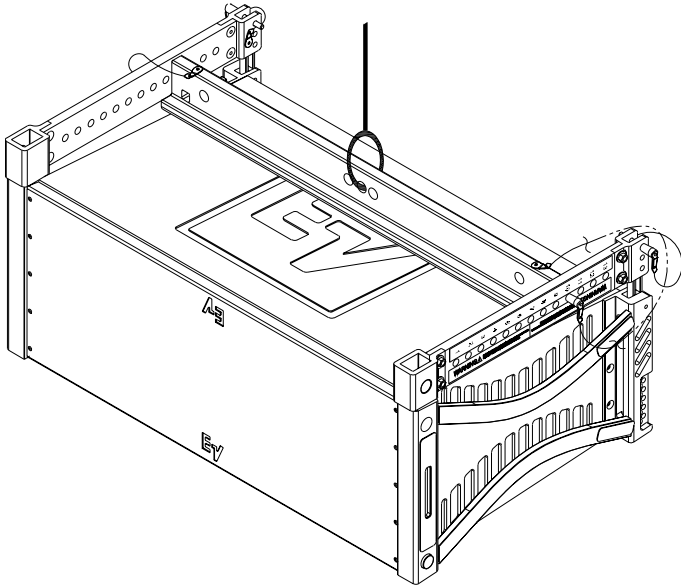


XLD281 + XS212 + Dolly



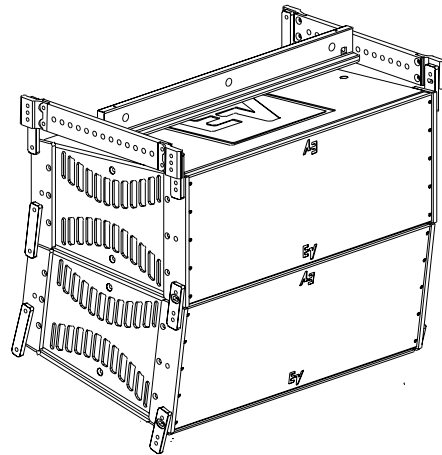


XLC concert/portable Rigging



B-1 Grid for XLC
(other rigging hardware included with speaker)

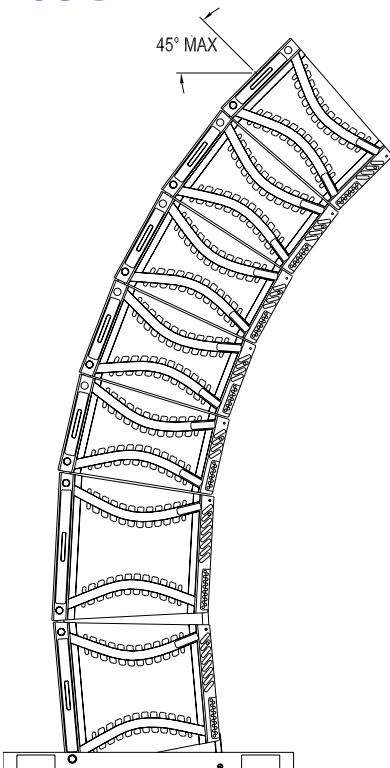
XLCi install rigging



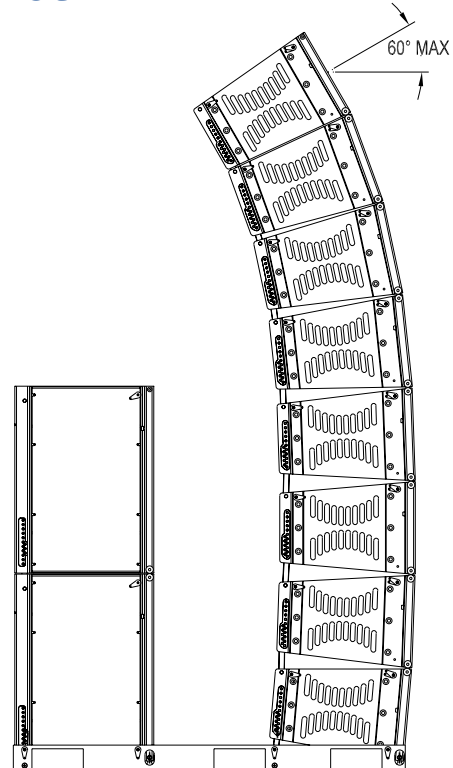
B-2 Grid for XLCi
(other rigging hardware included with speaker)

XLC and XLVC ground stack kits

XGS-3



XGS-4





Tour Grade

Tour Grade amplifiers are designed for most demanding audio applications in touring sound and fixed installation. Based on Grounded Bridge Class-H topology, they offer a unique combination of high output power, sonic excellence and High-efficiency in a compact lightweight format. Their integrated switch-mode power supply provides

sufficient headroom to ensure high dynamic outputs and reliable operation on extreme low loads. Optional IRIS-Net™ Module RCM-26 opens up a whole world of state-of-the-art DSP including FIR-Drive, remote control, networking and unique system supervision – down to an individual loudspeaker component.

TG5

Tour Grade Amplifier



- Up to 2 x 1900 W into 2 Ω
- Grounded Bridge Class-H design
- Switch-mode power supply
- Microprocessor-controlled
- Front LCD panel for operation mode set-up and monitoring
- Slot for optional RCM-26 IRIS-Net-compatible DSP and control module
- 11-level protection package
- Only 31.4 lbs (14.2 kg)

TG7

Tour Grade Amplifier



- Up to 2 x 3500 W into 2 Ω
- Grounded Bridge Class-H design
- Switch mode power supply
- Microprocessor-controlled
- Front LCD panel for operation mode set-up and monitoring
- Slot for optional RCM-26 IRIS-Net-compatible DSP and control module
- 11-level protection package
- Only 32 lbs (14.5 kg)



UCC1

Remote Control Interface



- USB-CAN converter for IRIS-Net enabled devices
- Supports up to 100 CAN devices
- Parallel CAN connections on RJ-45 Ethercons
- USB-powered
- XLR jack for audio bus monitoring
- 19" rackmount panel included
- Status LED shows CAN activity and device status

RCM-26

IRIS-Net Remote Control Module for Tour Grade Amplifiers



- Extensive DSP Functionality including FIR-Drive technology
- High precision load impedance supervision
- Two GPI and two GPO ports
- One-button system check allows a complete diagnostic test of all connected cables and loudspeaker components in a matter of minutes
- Pilot tone detection for cable supervision
- Six recallable DSP/configuration presets
- Parallel RJ-45 CAN bus connectors

	RCM-26	TG5			TG7		
		2 Ω	4 Ω	8 Ω	2 Ω	4 Ω	8 Ω
Continuous Output Power(1 kHz, THD 1%)		2000 W	1450 W	850 W	3500 W	2500 W	1500 W
Continuous Output Power(20-20 kHz, THD<0,2%)			1200 W	600 W		2100 W	1050 W
Maximum Bridged Output			3800 W	2900 W		7000 W	5000 W
Amplifier Gain		39 dB, 35 dB 32 dB (switchable)			41.5 dB, 35 dB, 32 dB (switchable)		
Analog Inputs	2 audio inputs on internal slot connector, pre-/post fader selectable						
CAN Bus Interface	10 - 500 kbaud, 2x RJ-45 (IRIS-Net Control)	Optional with RCM-26			Optional with RCM-26		
DIM 30		0.02 %			0.02 %		
Input Impedance (Balanced)		20 k Ω			20 k Ω		
Input Sensitivity		0 dBu/+6dBu/+7dBu (switchable)			0 dBu / 4 dBu / 9 dBu (switchable)		
Intermodulation Distortion (SMPTE)		0.05 %			0.05 %		
Network Control (IRIS-Net)	Yes	Optional			Optional		
Slew Rate		30 V/ μ s			35 V/ μ s		
Total Harmonic Distortion		0.05 %			0.05 %		
A/D Conversion	24 Bit linear, Sigma-Delta, 128 times oversampling						
Data Format	24 Bit linear A/D and D/A conversion, 48 Bit processing						
Internal Processing	2 DSPs (150 MHz, 300 MIPS)						
Signal-to-Noise Ratio (A-weighted)	116 dB	109 dB			111 dB		
THD+N	< 0.005%						
D/A Conversion	24 Bit, Sigma-Delta, 128 times over-sampling						
Sample Rate	48 kHz						
Digital Inputs	AES3 (AES/EBU) format, XLR In/Thru connectors	Optional with RCM-26			Optional with RCM-26		
Sample Rate Conversion (SRC)	32 kHz - 192 kHz, internal Sample-Rate- Converter						
FIR-Drive	Yes	Optional with RCM-26			Optional with RCM-26		
GPIO Control Port	1 x 6-pole Euro block 2 Control Inputs 2 Control Outputs 2 Reference Outputs (+5 V, 200 mA / GND)	Optional with RCM-26			Optional with RCM-26		
Power Consumption 1/8 max. output power @4 Ω		1000 W			1450 W		
Power Supply		100-240 V, 50-60 Hz			100-240 V, 50-60 Hz		
Control Protocol	CAN Bus	CAN-Bus (with RCM 26 module)			CAN-Bus (with RCM 26 module)		
Height X Width X Depth	3.33 in (84.7 mm) x 3.17 in (80.4 mm) x 9.06 in (230.3 mm)	3.47 in (88.1 mm) X 19 in (482.6 mm) X 20.16 in (512 mm)					
Weight Net	.53 lbs (240 g)	31.31 lbs (14.2 kg)			32.0 lbs (14.5 kg)		



Remote Control

Proven among critical installations and the highest profile tours, the DSP-Controlled P-Series amplifiers combine legendary performance with uncompromised remote-control and system-supervision capability with the.

IRIS-Net. software. Using state-of-the-art technologies from our signal processor developments, Electro-Voice offers amplifiers that provide superior audio performance, guaranteed.

P1200RL Precision Series DSP Remote Amplifiers



- Up to 2 x 850 W into 2 Ω
- Class-AB design
- Remote control and monitoring of all parameters via IRIS-Net software
- Full input and output DSP processing with RCM-24 DSP and control module
- Two GPI and two GPO ports
- One-button system check allows a complete diagnostic test of all connected cables and loudspeaker components in a matter of minutes
- Pilot tone detection for cable supervision
- Eight recallable DSP/configuration presets
- Parallel RJ-45 CAN bus connectors

P1200RT Precision Series DSP Remote Amplifiers



- Up to 2 x 590 W into 70/100 V line
- Class-AB design
- Remote control and monitoring of all parameters via IRIS-Net software
- Full input and output DSP processing with RCM-24 DSP and control module
- Two GPI and two GPO ports
- One-button system check allows a complete diagnostic test of all connected cables and loudspeaker components in a matter of minutes
- Pilot tone detection for cable supervision
- Eight recallable DSP/configuration presets
- Parallel RJ-45 CAN bus connectors

P3000RL Precision Series DSP Remote Amplifiers



- Up to 2 x 1800 W into 2 Ω
- Class-AB design
- Remote control and monitoring of all parameters via IRIS-Net software
- Full input and output DSP processing with RCM-24 DSP and control module
- Two GPI and two GPO ports
- One-button system check allows a complete diagnostic test of all connected cables and loudspeaker components in a matter of minutes
- Pilot tone detection for cable supervision
- Eight recallable DSP/configuration presets
- Parallel RJ-45 CAN bus connectors



	P1200 RL			P3000 RL			P1200 RT	
	8Ω	4Ω	2Ω	8Ω	4Ω	2Ω	100V	70 V
Continuous Output Power (1 kHz, THD 1%)	380 W	600 W	850 W	850 W	1300 W	1800 W	590 W	580 W
Rated Output Power (20 Hz-20 kHz, THD <0,2%)	300 W	500 W	-	750 W	1200 W	-	500 W	500 W
Maximum Bridged Output (1 kHz, THD 1%)	1200 w	1700 W	-	2600 W	3600 W	-	-	-
THD @ Rated Output Power	< 0.05%						<0.1%	<0.2%
DIM 30	<0.03%			<0.01%			<0.2%	<0.3%
Intermodulation (SMPTE)	<0.08%			<0.001%			<0.1%	<0.3%
Signal-to-Noise Ratio	> 105 dB						>100 dB	
Frequency Response (-1 dB)	20 Hz - 20 kHz						45 Hz - 20 kHz	
Dynamic Audio Limiter	THD </= 1% (Inputsignal </= + 20 dBu							
Protections	Hi-Temperature, DC, HF, Back EMF, Peak Current Limiter, Inrush Current Liminter, Power On Delay							
Cooling	3(4)-stage fan, front-to-rear cooling							
Input Sensivity and Impedance	1.55 V (+6dBu), 20 kOhm, XLR Input							
Maximum Input Level	8.7 V (+21 dBu)							
Serial Interface	Network: CAN, 2 RJ45 (CAT-5 Cabling), RS-232 for media control systems							
Control Logic In and Outputs	2 x 0V 5V free configurable, Easy-Remote							
Loudspeaker Connectors	Barrier Strip			Speakon NL4			Barrier Strip	
Dimensions (Width x Height x Depth)	483 x 132.5 x 390 mm (52" x 19" x 15.4") (3 U)							
Net Weight	17 kg (37.5 lbs.)			30 kg (66.2 lbs.)			25 kg (55.1 lbs.)	

The EV Linear Precision Series is a very-high-quality power amplifier design to elicit maximum performance from any speaker system. Its ultralow distortion and powerful amplifiers ensure that program

material will be amplified very accurately. Complete protection is provided for high temperature, audio limiters, power-up delay, and peak current limiters.

P3000

Precision Series Power Amplifiers



- Classic EV flagship performance amplifier
- Up to 2 x 1800 W into 2 Ω
- Extremely high sonic performance and quality
- Class-AB design
- Dual power supply
- Three-stage front-to-rear fans
- Complete protection package
- Classic EV amplifier dynamic headroom for real-world music and applications
- Built-in dynamic limiters

	P3000		
	2 Ω	4 Ω	8 Ω
Continuous Rated Power(1 kHz, THD 1%) 2Ω	1800 Watts	1300 Watts	850 Watts
Continuous Rated Power(20-20 kHz, THD<0.2%)		1200 Watts	750 Watts
Maximum Bridged Output		3600 Watts	2600 Watts
DIM 30	0.01 %		
Input Impedance (Balanced)	20 kΩ		
Input Sensitivity	0 dBu / +6 dBu / +26 dB		
Intermodulation Distortion (SMPTE)	0.01 %		
Network Control (IRIS-Net)	No		
Slew Rate	40 V/μs		
Total Harmonic Distortion	0.05 %		
Signal-to-Noise Ratio (A-weighted)	105 dB		
Height Width Depth	11.3 in (33 mm) 19 in (482.6 mm) 15.35 in (390 mm)		
Weight Net	63.93 lbs (29 kg)		



Q Series

As direct descendants of the legendary P3000, Q Series amplifiers take Electro-Voice's unique amplifier design to a new level. With Q Series efficient Class-H design, the permanent voltage rail is designed to cover the average music signal, rather than supplying the voltage for maximum output power. If dynamic peaks require a

higher output voltage, the voltage rail is switched to the maximum. This process saves up to 50% of the power consumption found in conventional amplifier designs. Q Series combines sonic excellence all in a compact and affordable package.

Q44 Electro-Voice Q Series Power Amplifier



- Up to 2 x 650 W into 2 Ω
- XLR pass-through input connections
- The NL4 connection on output A also carries output B on pins +/- 2 to allow easy connection to bi-amped loudspeakers
- Switchable LPN filter extra tonal fundamentals and "kick" with a protective low-cut for 12" or 15" loudspeakers without additional subwoofers
- Class-AB design
- Three-stage front-to-rear fans
- Complete protection package
- Classic EV amplifier dynamic headroom for real-world music and applications
- Built-in dynamic limiters

Q66 Electro-Voice Q Series Amplifier



- Up to 2 x 900W into 2 Ω
- XLR pass-through input connections
- The NL4 connection on output A also carries output B on pins +/- 2 to allow easy connection to bi-amped loudspeakers
- Switchable LPN filter extra tonal fundamentals and "kick" with a protective low-cut for 12" or 15" loudspeakers without additional subwoofers
- Class-AB design
- Three-stage front-to-rear-fans
- Complete protection package
- Classic EV amplifier dynamic headroom for real-world music and applications
- Built-in dynamic limiters

Q99 Electro-Voice Q Series Power Amplifier



- Up to 2 x 1250 W into 2 Ω
- XLR pass-through input connections
- The NL4 connection on output A also carries output B on pins +/- 2 to allow easy connection to bi-amped loudspeakers
- Switchable LPN filter extra tonal fundamentals and "kick" with a protective low-cut for 12" or 15" loudspeakers without additional subwoofers
- Class-H design
- Three-stage front-to-rear fans
- Complete protection package
- Classic EV amplifier dynamic headroom for real-world music and applications
- Built-in dynamic limiters

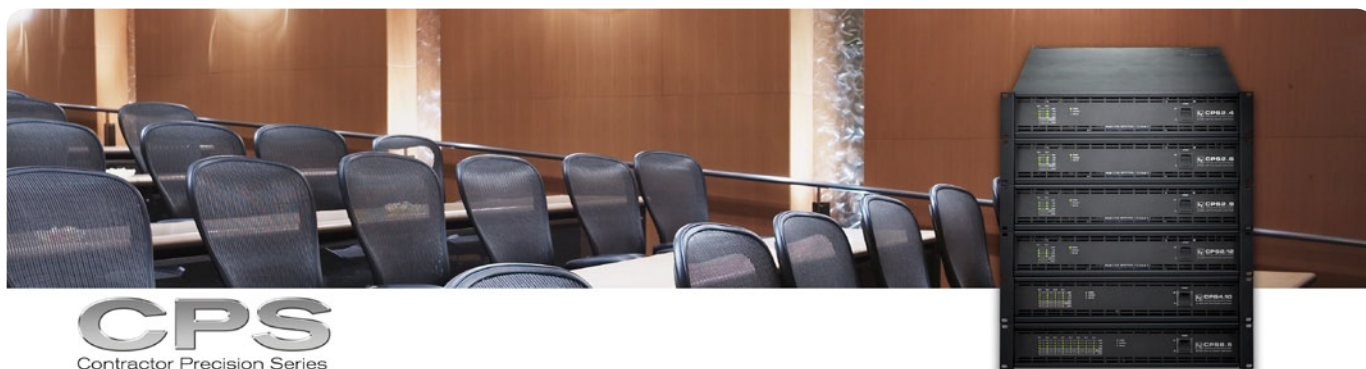


Q1212 Electro-Voice Q Series Power Amplifier



- Up to 2 x 1800 W into 2 Ω
- XLR pass-through input connections
- The NL4 connection on output A also carries output B on pins +/- 2 to allow easy connection to bi-amped loudspeakers
- Switchable LPN filter extra tonal fundamentals and "kick" with a protective low-cut for 12" or 15" loudspeakers without additional subwoofers
- Class-H design
- Three-stage front-to-rear fans
- Complete protection package
- Classic EV amplifier dynamic headroom for real-world music and applications
- Built-in dynamic limiters

	Q44			Q66			Q99			Q1212		
	2 Ω	4 Ω	8 Ω	2 Ω	4 Ω	8 Ω	2 Ω	4 Ω	8 Ω	2 Ω	4 Ω	8 Ω
Continuous Output Power(1 kHz, THD 1%)	650 Watts	450 Watts	270 Watts	900 Watts	600 Watts	380 Watts	1250 Watts	900 Watts	550 Watts	1800 Watts	1200 Watts	750 Watts
Continuous Output Power(20-20 kHz, THD<0,2%)		400 Watts	200 Watts		500 Watts	250 Watts		800 Watts	400 Watts		1100 Watts	550 Watts
Maximum Bridged Output		1300 W	900 W		1700 Watts	1200 Watts		2800 Watts	1800 Watts		3600 Watts	2400 Watts
Cooling	Front-to-Rear, 3-stage fans											
DIM 30	0.05 %											
Input Impedance (Balanced)	20 kΩ											
Input Sensitivity	+2.2 dBu			+3.1 dBu			+5.1 dBu			+6.6 dBu		
Amplifier Gain	32 dB											
Intermodulation Distortion (SMPTE)	0.1 %											
Maximum Input Voltage	+21 dBu (8.69 Vrms)											
Network Control (IRIS-Net)	No											
Slew Rate	25 V/μs			26 V/μs			27 V/μs			30 V/μs		
Total Harmonic Distortion	0.03 %											
Frequency Response	10 Hz - 40 kHz											
Signal-to-Noise Ratio (A-weighted)	106 dB			107 dB			109 dB			110 dB		
Height Width Depth	3.47 in (88.1 mm) 19 in (482.6 mm) 16.63 in (422.5 mm)			3.47 in (88.1 mm) 19 in (482.6 mm) 16.59 in (421.5 mm)			3.47 in (88.1 mm) 19 in (482.6 mm) 16.59 in (421.5 mm)			3.47 in (88.1 mm) 19 in (482.6 mm) 16.59 in (421.5 mm)		
Weight Net	2778 lbs (12.6 kg)			32.63 lbs (14.8 kg)			35.94 lbs (16.3 kg)			39.02 lbs (17.7 kg)		



CPS
Contractor Precision Series

The CPS Series are high-performance amplifiers with unmatched dynamic range capability, ensuring the most reliable operation. Designed for the contractor, the CPS Series feature 2-RU chassis, Phoenix-type connectors for inputs and outputs, pre-programmable power-on delay, easy power-on via remote contact closures, rear panel

attenuators, and a switchable 50 Hz high-pass filter (HPF). Features include the same protection circuits typical of EV amplifiers. Complete protection is provided for high temperature, audio limiters, power-up delay, and peak current limiters.

CPS 2.4

Contractor Precision Series Class-H Power Amplifier



- Up to 2 x 650 W into 2 Ω
- Phoenix-type input and output connections
- Remote power-on/off contact
- Rear-mounted attenuators
- Programmable time for custom power-on delay settings
- Module slot for optional RCM-810 card, allowing IRIS-Net control and monitoring
- Switchable 50 Hz high-pass filter
- Three-stage front-to-rear fans
- Class-AB design
- Complete protection package

CPS 2.6

Contractor Precision Series Class-H Power Amplifier



- Up to 2 x 900 W into 2 Ω
- Phoenix-type input and output connections
- Remote power-on/off contact
- Rear-mounted attenuators
- Programmable time for custom power-on delay settings
- Module slot for optional RCM-810 card, allowing IRIS-Net control and monitoring
- Switchable 50 Hz high-pass filter
- Three-stage front-to-rear fans
- Class-AB design
- Complete protection package

CPS 2.9

Contractor Precision Series Class-H Power Amplifier



- Up to 2 x 1250 W into 2 Ω
- Phoenix-type input and output connections
- Remote power-on/off contact
- Rear-mounted attenuators
- Programmable time for custom power-on delay settings
- Module slot for optional RCM-810 card, allowing IRIS-Net control and monitoring
- Switchable 50 Hz high-pass filter
- Three-stage front-to-rear fans
- Class-H design
- Complete protection package

**CPS 2.12****Contractor Precision Series Class-H Power Amplifier**

- Up to 2 x 1800 W into 2 Ω
- Phoenix-type input and output connections
- Remote power-on/off contact
- Rear-mounted attenuators
- Programmable time for custom power-on delay settings
- Module slot for optional RCM-810 card, allowing IRIS-Net control and monitoring
- Switchable 50 Hz high-pass filter
- Three-stage front-to-rear fans
- Class-H design
- Complete protection package

CPS 8.5**Contractor Precision Series 8-ch. Amplifier**

- Eight amplifier channels, each can be run as either low or high impedance, delivering up to 500 W per channel
- Phoenix-type input and output connections
- Remote power-on/off contact
- Rear-mounted attenuators
- Module slot for optional RCM-810 card, allowing IRIS-Net control and monitoring
- Optional RCM-810 card allows for VLD configuration in IRIS-Net, allowing configuration of each output channel's power to match any load from 2-10 Ω in 0.1 ohm steps
- 50 Hz high-pass filter when operating in Hi-Z mode
- Class-D design for optimum efficiency
- Complete protection package

CPS 4.5**Contractor Precision Series 4-ch. Amplifier**

- Four amplifier channels, each can be run as either low or high impedance, delivering up to 500 W per channel
- Phoenix-type input and output connections
- Remote power-on/off contact
- Rear-mounted attenuators
- Module slot for optional RCM-810 card, allowing IRIS-Net control and monitoring
- Optional RCM-810 card allows for VLD configuration in IRIS-Net, allowing configuration of each output channel's power to match any load from 2-10 Ω in 0.1 ohm steps
- 50 Hz high-pass filter when operating in Hi-Z mode
- Class-D design for optimum efficiency
- Complete protection package

CPS 4.10**Contractor Precision Series 4-ch. Amplifier**

- Four amplifier channels, each can be run as either low or high impedance, delivering up to 1000 W per channel
- Phoenix-type input and output connections
- Remote power-on/off contact
- Rear-mounted attenuators
- Module slot for optional RCM-810 card, allowing IRIS-Net control and monitoring
- Optional RCM-810 card allows for VLD configuration in IRIS-Net, allowing configuration of each output channel's power to match any load from 2-10 Ω in 0.1 ohm steps
- 50 Hz high-pass filter when operating in Hi-Z mode
- Class-D design for optimum efficiency
- Complete protection package

RCM-810

- IRIS-Net remote control module for CPS series amplifiers
- Complete status control and supervision for two-, four- and eight-channel models
- Load-monitoring function
- Variable Load Drive on four- and eight-channel CPS models for maximum rated power into all loads ranging from 2 Ω to 10 Ω , in steps of 0.1 ohm, controlled via IRIS-Net

	CPS 2.4			CPS 2.6			CPS 2.9			CPS 2.12		
	2Ω	4Ω	8Ω	2Ω	4Ω	8Ω	2Ω	4Ω	8Ω	2Ω	4Ω	8Ω
Continuous Output Power(1 kHz, THD 1%)	650 W	450 W	270 W	900 W	600 W	380 W	1250 W	900 W	550 W	1800 W	1200 W	750 W
Continuous Output Power(20-20 kHz, THD<0.2%)		400 W	200 W		500 W	250 W		800 W	400 W		1100 W	550 W
Maximum Bridged Output		1300 W	900 W		1800 W	1200 W		2800 W	1800 W		3600 W	2400 W
Amplifier Gain	32 dB											
Analog Inputs	2, electronically balanced, Phoenix-type											
CAN Bus Interface	Yes (With Optional RCM-810 Card)											
Cooling	Front-to-Rear, 3-stage-fans											
Crossover Type	Optional Modules			Optional Modules			Modular			Modular		
DIM 30	0.05 %			0.02 %			0.05 %			0.05 %		
Input Impedance (Balanced)	20 kΩ											
Input Sensitivity	2.2 dBu (1.0V)			+3.1 dBu (1.1Vrms)			+5.1 dBu (1.39 Vrms)			+6.6 dBu (1.66 Vrms)		
Intermodulation Distortion (SMPTE)	0.1 %			0.05 %			0.1 %			0.1 %		
Maximum Input Voltage	+21 dBu (8.69 Vrms)			+21 dBu (8.69 Vrms)			+21 dBu (8.69 Vrms)			+21 dBu (8.69 Vrms)		
Network Control (IRIS-Net)	Optional			Optional			Optional			Optional		
Slew Rate	25 V/μs			26 V/μs			27 V/μs			30 V/μs		
Total Harmonic Distortion	0.03 %											
Variable Load Drive (VLD)	No											
Frequency Response	10 Hz - 40 kHz (±1 dB)											
Height Width Depth	3.47 in (88.1 mm) 19 in (482.6 mm) 16.59 in (421.5 mm)											
Weight Net	2778 lbs (12.13.23 lbs (6 kg))			32.63 lbs (14.8 kg)			35.94 lbs (16.3 kg)			39.02 lbs (17.15.43 lbs (7 kg))		

	CPS 4.10			CPS 4.5			CPS 8.5		
	2Ω	4Ω	8Ω	2Ω	4Ω	8Ω	2Ω	4Ω	8Ω
Continuous Rated Power(1 kHz, THD 1%)	1000 W	1000 W	500 W	500 W	500 W	250 W	500 W	500 W	250 W
Continuous Rated Power(20-20 kHz, THD<0.2%)		900 W	450 W		450 W	225 W		450 W	225 W
Maximum Bridged Output		2000 W	2000 W		1000 W	1000 W		1000 W	1000 W
Amplifier Gain	32 dB (Lo-Z), 33 dB (70V), 36 dB (100V)			32 dB (Lo-Z), 33 dB (70V), 36 dB (100V)			32 dB (Lo-Z), 33 dB (70V), 36 dB (100V)		
Analog Inputs	4, electronically balanced, Phoenix-type			4, electronically balanced, Phoenix-type			8, electronically balanced, Phoenix-type		
CAN Bus Interface	Yes (With Optional RCM-810 Card)			Yes (With Optional RCM-810 Card)			Yes (With Optional RCM-810 Card)		
Cooling	Front-to-Rear, continuously variable fans								
DIM 30	0.02 %			0.02 %			0.02 %		
Input Impedance (Balanced)	20 kΩ								
Input Sensitivity	0 dBu (775V)-2 Ω, +3 dBu (1.1V)-4/8 Ω, +6 dBu (1.55) 70V/100V			0 dBu (775V)-2 Ω, +3 dBu (1.1V)-4/8 Ω, +6 dBu (1.55) 70V/100V			0 dBu (775V)-2 Ω, +3 dBu (1.1V)-4/8 Ω, +6 dBu (1.55) 70V/100V		
Intermodulation Distortion (SMPTE)	0.05 %			0.05 %					
Maximum Input Voltage	+22 (9.76 Vrms)								
Network Control (IRIS-Net)	Optional			Optional			Optional		
Slew Rate	28 V/μs								
Total Harmonic Distortion	0.05 %								
Variable Load Drive (VLD)	Yes								
Frequency Response	15 Hz-30 kHz								
Continuous Rated Power(1 kHz, THD 1%) 100v	1000 W			500 W			500 W		
Continuous Rated Power(1 kHz, THD 1%) 70v	1000 W			500 W			500 W		
Continuous Rated Power(20-20 kHz, THD<0.2%) 100v	900 W			450 W			500 W		
Continuous Rated Power(20-20 kHz, THD<0.2%) 70v	900 W			450 W			450 W		
Height Width Depth	3.47 in (88.1 mm) 19 in (482.6 mm) 16.59 in (421.5 mm)								
Weight Net	24.47 lbs (11.1 kg)			24.47 lbs (11.1 kg)			30.8 lbs (13.9 kg)		



The CP Series are high-performance amplifiers with unmatched dynamic range capability, ensuring the most reliable operation favored by users in all sound reinforcement applications. The amplifiers' power supply is specifically designed to deliver high peak signals, which provide 30 percent more burst signal output headroom

over their average continuous rating. Features include the same comprehensive protection circuits typical of EV amplifiers. Complete protection is provided for high temperature, audio limiters, power-up delay, and peak current limiters.

CP3000S Compact Precision Series Class-H Power Amplifier



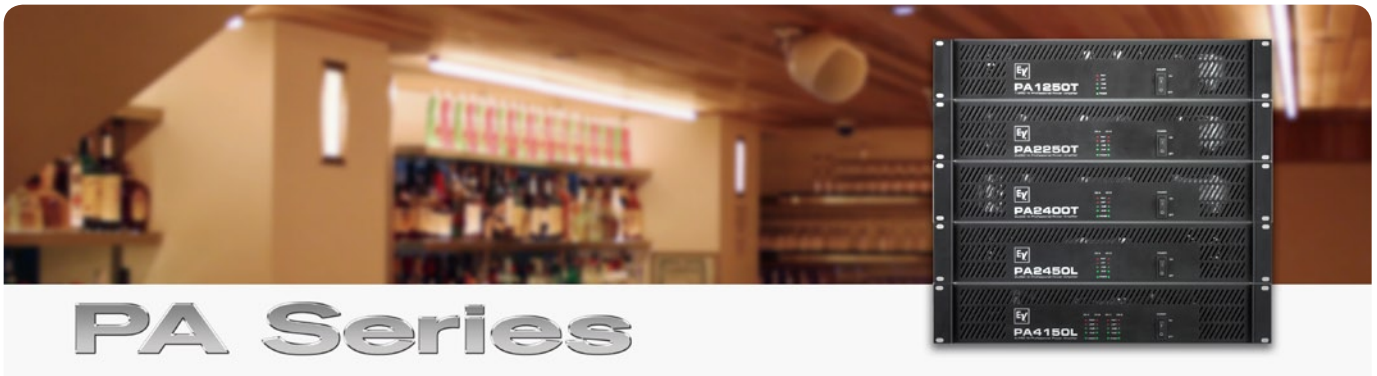
- Up to 2 x 1600 W into 2 Ω
- XLR pass-through input connections
- The NL4 connection on output A also carries output B on pins +/- 2 to allow easy connection to bi-amped loudspeakers
- Extremely lightweight and highly efficient
- Class-H design
- Switch mode power supply
- Three-stage front-to-rear fans
- Complete protection package
- Classic EV amplifier dynamic headroom for real-world music and applications
- Built-in dynamic limiters

CP4000S Compact Precision Series Class-H Power Amplifier



- Up to 2 x 2100 W into 2 Ω
- XLR pass-through input connections
- The NL4 connection on output A also carries output B on pins +/- 2 to allow easy connection to bi-amped loudspeakers
- Extremely lightweight and highly efficient
- Class-H design
- Switch mode power supply
- Three-stage front-to-rear fans
- Complete protection package
- Classic EV amplifier dynamic headroom for real-world music and applications
- Built-in dynamic limiters

	CP3000S			CP4000S		
	2 Ω	4 Ω	8 Ω	2 Ω	4 Ω	8 Ω
Maximum power (1k Hz; THD < 1%)	1600 W	1100 W	600 W	2100 W	1500 W	900 W
Rated power (20 Hz–20 kHz; THD < 0.2%)		900 W	450 W		1200 W	600 W
Maximum bridged output (1,000 Hz; < 1% THD)		3200 W	2200 W		4200 W	3000 W
Slew rate	35 V/ μ s			35 V/ μ s		
Total harmonic distortion	< 0.05%			< 0.05%		
Intermodulation distortion (SMPTE)	< 0.02%			< 0.02%		
Crosstalk (at 1,000 Hz)	< -80 dB			< -80 dB		
Input impedance (balanced)	20 k Ω			20 k Ω		
Signal-to-noise ratio (dB A-weighted)	107 dB			108 dB		
Dimensions (W x H x D)	483 x 88.1 x 368.8 mm 19" x 3.5" x 15.22"			483 x 88.1 x 384 mm 19" x 3.5" x 15.5"		
Net weight	8.15 kg (17.96 lbs.)			8.70 kg (19.2 lbs)		



PA Series

EV Commercial Power amplifiers are designed to operate under a variety of adverse conditions without fail. Several configurations, power levels, and features are available to suit nearly any commercial application. Features include many of the same comprehensive protection circuits

typical of EV amplifiers. Complete protection is provided for high temperature, audio limiters, power-up delay, and peak current limiters. Phoenix-type connectors for inputs and outputs allow for easy rack wiring.

PA1250T 1x250-Watt Single Channel Power Amplifier



- Up to 1 x 270 W into 70/100 V lines
- 2RU design
- Stepped rear attenuators
- Selectable 50 Hz or 300 Hz high-pass filter
- Phoenix-type inputs and outputs
- High-efficiency circuitry design
- Three-stage front-to-rear fans
- Complete protection package

PA2250T 2x250-Watt Dual Channel Power Amplifier



- Up to 2 x 270 W into 70/100 V or 4-ohm lines
- Bridged mode provides 1 x 540 W into 8-ohm load
- 2RU design
- Stepped rear attenuators
- Selectable 50 Hz or 300 Hz high-pass filter
- Phoenix-type inputs and outputs
- High-efficiency circuitry design
- Three-stage front-to-rear fans
- Complete protection package

PA2400T 2x400-Watt Dual Channel Power Amplifier



- Up to 2 x 430 W into 70/100 V or 4-ohm lines
- Bridged mode provides 1 x 860 W into 8-ohm load
- 2RU design
- Stepped rear attenuators
- Selectable 50 Hz or 300 Hz high-pass filter
- Phoenix-type inputs and outputs
- High-efficiency circuitry design
- Three-stage front-to-rear fans
- Complete protection package

**PA2450L** 2x450-Watt Dual Channel Power Amplifier

- Up to 2 x 450 W into 4 Ω
- Bridged mode provides 1 x 900 W into 8-ohm load
- 2RU design
- Stepped rear attenuators
- Selectable 50 Hz or 300 Hz high-pass filter
- Phoenix-type inputs and outputs
- High-efficiency circuitry design
- Three-stage front-to-rear fans
- Complete protection package

PA4150L 4x150-Watt Four-Channel Power Amplifier

- Up to 4 x 160 W into 4 Ω
- Bridged mode provides 2 x 315 W into 8-ohm load
- 2RU design
- Stepped rear attenuators
- Selectable 50 Hz or 300 Hz high-pass filter
- Phoenix-type inputs and outputs
- High-efficiency circuitry design
- Three-stage front-to-rear fans
- Complete protection package

	PA2450L	PA4150L	PA2400T	PA2250T	PA1250T	7100
Number of Channels	2	4	2	2	1	2
Load Impedance	8/4 Ω	8/4 Ω	8/4 Ω /100V/70V	8/4 Ω /100V/70V	100V/70V	8/4 Ω
Rated output power (*rated load) THD<1%, 1kHz	220W/450W	100W/160W	215W/430W/430W/430W	135W/270W/270W/270W	270W/270W	100 W /145 W
Rated output power (*rated load) THD<0.2%, 20Hz – 20kHz	200W/400W	75W/150W	200W/400W/400W/400W	125W/250W/250W/250W	250W/250W	75 W/100 W
Slew rate at 1kHz V/ μ s	28	16	25/25/65/46	18/18/61/41	61/41	19 V / μ S
Frequency response -1dB, ref. 1kHz	<10Hz -40kHz	<10Hz -40kHz	65Hz -40kHz/65Hz -20kHz	65Hz -40kHz/65Hz -20kHz	65Hz -20kHz	20 Hz - 20 kHz
Input impedance 20Hz – 20kHz,	>20kohm	>20kohm	>20kohm	>20kohm	>20kohm balanced	30 kOhm balanced
Input sensitivity @ rated output power or voltage, 1kHz	0dBu (775mV)	0dBu (775mV)	0dBu (775mV)	0dBu (775mV)	0dBu (775mV)	0 dBu (775 mV)
THD @ rated output power MBW=80kHz, 1kHz	<0.1%	<0.1%	<0.1%	<0.1%	<0.1%	< 0.1 %
IMD-SMPTE 60Hz, 7kHz	<0.1%	<0.1%	<0.1%	<0.1%	<0.1%	< 0.1 %
DIM30 3.15kHz, 15kHz	<0.1%	<0.1%	<0.1%	<0.1%	<0.1%	
Crosstalk ref. 1kHz, @ 10% rated output power	<-75dB	<-75dB	<-75dB	<-75dB	<-75dB	
Dimensions (W x H x D)	483mm x 88mm x 406mm (19" x 3.5" x 16")	483mm x 88mm x 406mm (19" x 3.5" x 16")	483mm x 88mm x 406mm (19" x 3.5" x 16")	483mm x 88mm x 406mm (19" x 3.5" x 16")	483mm x 88mm x 406mm (19" x 3.5" x 16")	483 x 44.4 x 304 mm (19" x 1.75" x 12")
Weight	16.5kg (36.34lbs)	18kg(39.65lbs)	26kg(57.27lbs)	23.5kg(51.76lbs)	16.5kg(36.34lbs)	8.16 kg (18.2 lb)



The EV NetMax N8000 is an all-purpose digital audio system controller with outstanding performance features. NetMax is highly flexible due to the modular hardware design, which renders many other applications possible. Four slots with 8-channel audio modules at the rear of the

device offer up to 32 local audio channels. Each slot can be equipped either with an audio input module or an audio output module. The modular signal processing in the N8000 is implemented on powerful audio signal processors.

N8000-1500 NetMax 1500 MIPS Digital Matrix Controller



- 1500 MIPS internal processing
- Up to 1900 MIPS of processing power available per unit
- Cobranet and Dante audio networking options
- Supports Ethernet, RS-232, USB and CAN Communications Protocols
- Extensive range of DSP functions
- Modular hardware chassis
- Integrated supervision, scheduling and auto-compiling DSP
- Fully-programmable analog and digital GPIO support

N8000 NetMax 300 MIPS Digital Matrix Controller



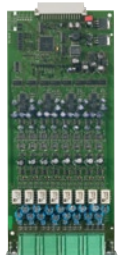
- Full IRIS-Net software support
- 32-channel digital matrix bus
- 114 dB dynamic range
- Cobranet and Dante audio networking options
- Supports Ethernet, RS-232, USB and CAN communications protocols
- Up to 1000 MIPS of processing power available per unit
- Extensive range of DSP functions
- Modular hardware chassis
- Integrated supervision, scheduling and auto-compiling DSP
- Fully-programmable analog and digital GPIO support

AI-1 NetMax Analog Input Card



- Eight line-level inputs on Euroblock connectors
- Electronically balanced inputs
- 20 kΩ input impedance
- 117 dB dynamic range provides superior sonic quality
- Automatic configuration-Indication of installation and removal in IRIS-Net
- DSP (100 MIPS) on board

MI-1 NetMax Analog Mic/Line Input Card



- Eight mic/line-level inputs on Euroblock connectors
- Electronically balanced inputs
- Selectable mic/line pad via IRIS-Net
- 48 V phantom power
- Gain and level adjustable via IRIS-Net
- Automatic configuration-Indication of installation and removal in IRIS-Net
- DSP (100 MIPS) on board

PWS-4, 6, C Programmable Wall Stations



- Up to three front units in a wallstation – easy daisy chaining of any combination PWS 4/6 modules using included connection wire
- Easy labeling of buttons – label field protected by a transparent cover
- Configuration via IRIS-Net – Buttons and LEDs can be used for various functions
- Customizable button behavior- Buttons can be configured as momentary, latching, or radio groups, and all have status LEDs to indicate current state.

TPI-8/TPI-12 Touch Panel Interfaces



- Custom design of the control surface – individual configuration via IRIS-Net™, functionality and graphical representation for all kinds of applications.
- Long life span and noiseless operation – no fan, no hard disk.
- Reliable server technology – Win XP Embedded™ operating system, industry approved product quality.

DM-1 NetMax Dante Audio Network Module



- Gigabit primary and secondary Ethernet interfaces
- Typical latency: 1 mS
- Dante Zen device discovery
- Compatible with Dante Virtual Soundcard

AO-1 NetMax 8 Channel Analog Output Card



- Eight line-level outputs on Euroblock connectors
- Electronically balanced outputs
- 100Ω output impedance
- 118 dB dynamic range provides superior sonic quality
- Automatic configuration-Indication of installation and removal in IRIS-Net
- DSP (100 MIPS) on board

DI-1 NetMax 8 Channel Digital Input Card



- Four inputs for eight channels of AES/ EBU or S/PDIF digital audio input
- Euroblock or TOSLINK optical input connectors
- Accepts sample rates of 32-192 kHz
- Independent sample rate converters allow inputs of different sample rates on each DI-1 input
- Lock indication LED
- DSP (100 MIPS) on board

DO-1 NetMax 8 Channel Digital Output Card



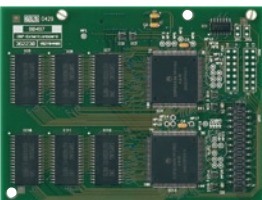
- Four outputs for eight channels of AES/EBU digital audio output
- 48 kHz sampling rate
- +21 dBu maximum output level
- Automatic configuration-Indication of installation and removal in IRIS-Net
- DSP (100 MIPS) on board

CM-1 NetMax CobraNet Audio Network Module



- 100BASE-TX ethernet interface; 100Mbit/s full-duplex Ethernet interface; IEEE 802.3u compatible.
- Secondary 100BASE-TX Ethernet interface. Second Ethernet interface for the connection of a redundant network to establish fault tolerant systems. Internal audio output interface for the transmission of 32 digital audio channels with 48 kHz sample rate and 16, 20, or 24-bit word length
- Internal audio input interface for receiving 32 digital audio channels with 48 kHz sample rate and 16, 20, or 24-bit word length.
- Control, monitoring, configuration, and firmware updates via Ethernet protocol.
- Status LEDs. Link, activity, fault, and CobraNet conductor status indication via Ethernet connectors.

DSP-1 N8000 Microprocessor Expansion Module



- 300 MIPS computing capacity - doubles the DSP power of a NetMax System Controller
- Two RAM banks (512k x 24 Bit) - allow for additional delay lines up to 21.8 seconds
- 48-bit signal processing.
- Double precision DSP algorithms.
- Automatic configuration - signals whether a new module has been inserted, or if one has been removed.



Signal Processing

Proven in thousands of installations and live applications around the world including the Olympics, the FIFA World Cup, Live 8, and Live Earth, EV delivers truly state-of-the-art DSP for today's applications. EV's flagship digital sound system processor, the Dx46, sets the standard for

digital loudspeaker controllers and processors, providing 48-bit filter algorithms, 24-bit AD/DA conversion, and a dynamic range of 115 dB. The EV DC-One is a two-in, six-out digital signal processor for loudspeaker management and optimization.

Dx46

FIR Drive Sound System Processor



- 2x6 FIR-Drive Loudspeaker Processor
- Analog and AES/EBU Inputs
- Full IRIS-Net Control and Configuration
- Ethernet and USB Data Interfaces
- Full Loudspeaker Protection Package, Including PA Limiters and TEMP Limiters
- Dedicated Array EQ and Delay Sections For Advanced Applications
- -6 dB Switchable Analog Pad Inserted Before A/D Converters On Inputs
- 4 Separate Delay Sections
- 5 Contact Closure Inputs
- 60 Factory Presets
- 30 User Presets
- Unique Edit/Compare mode for audible parameter adjustment

DC-One

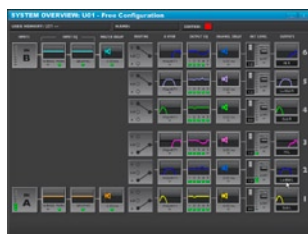
Two-In-Six-Out Loudspeaker Processor



- USB connection for DC-One Editor Software Control
- Analog or AES/EBU Inputs
- 6 dB analog pad placed before A/D converter for system protection
- Highly customizable security settings
- Contact closure interface for remote Preset recall
- 20 User Presets
- 60 Factory Presets
- Unique Edit/Compare Mode for comparing edited Presets and settings
- 6 predefined Operation Configurations, including Free Edit



DC-One Editor Software DC-One PC Control Software



- PC editor for DC-One configuration
- Provides detailed, real-time control and monitoring of DC-One hardware
- Unique security and lock-out functions are available and highly customizable through the DC-One editor software
- State-of-the-art graphics provide a highly detailed, easy to use over view of a complete system
- Intuitive navigation and block diagrams provide easy access to all DC-One functions and DSP sections
- Easy connection to DC-One hardware via USB

Dx38 Two-In-Four-Out Loudspeaker Processor



- Real-time control with IRIS-Net or RACE software
- RS-232 or optional RS-485 serial connection
- 30 user presets
- 50 factory presets
- Function LEDs for each output
- Six predefined operating configurations, including Free Edit
- 115 dB dynamic range

	Dx46	DC-One	Dx38
Analog Inputs	2 XLR (Electronically Balanced), 2 XLR THRU OUT (Electronically Balanced)	2 XLR (Electronically Balanced), 2 XLR THRU OUT (Electronically Balanced)	2 XLR (Electronically Balanced), 2 XLR THRU OUT (Electronically Balanced)
Analog Outputs	6 XLR (Electronically Balanced)	6 XLR (Electronically Balanced)	4 XLR (elec. balanced)
Digital Inputs	1 XLR AES/EBU (2 Ch)	1 XLR AES/EBU (2 Ch)	No
Maximum Input Voltage	8.7 V / +21 dBu (Without -6 dB Analog Pad Engaged)	8.7 V / +21 dBu (Without -6 dB Analog Pad Engaged)	24.5V/+30 dBu
Nominal Input Voltage	1.55V/+ 6 dBu	1.23 V / +4 dBu	1.55V/+ 6 dBu
Input Impedance (Balanced)	10 kΩ	10 kΩ	20 kΩ
Maximum Output Voltage	8.7 V / +21 dBu	8.7 V / +21 dBu	8.7V/+ 21 dBu
Nominal Output Voltage	1.55 V (+6 dBu)	1.23 V / +4 dBu	
Output Impedance (Balanced)	50 Ω	50 Ω	< 100 Ω
Frequency Response	20 Hz - 40 kHz	10 Hz - 22 kHz (±0.5 dB)	20 - 20 kHz (- 0.5 dB)
Dynamic Range	116 dB (A-weighted)	111 dB (unweighted, band limited 22 Hz - 22 kHz)	115 dB
THD+N	<0.002% (band limited 20 Hz to 20 kHz)	< 0.01% (band limited 22 Hz - 22 kHz)	< 0.01%
A/D Conversion	24-Bit Delta Sigma	24-bit/sigma-delta (linear phase) 128 times oversampling	24-bit/sigma-delta (linear phase) 128 times oversampling
D/A Conversion	24-Bit Delta Sigma	24-bit/sigma-delta 128 times oversampling	24-bit/sigma-delta 128 times oversampling
Data Format	24-Bit	24-Bit	24-Bit
Internal Processing	48-Bit Double Precision	32-Bit Floating Point	48-Bit
Sample Rate	48 kHz	48 kHz	48 kHz
Control Protocol	USB, Ethernet	Front Panel USB Connector	RS232, MIDI, RS485 (optional)
Height X Width X Depth	1.74 in (44.25 mm) X 19 in (482.6 mm) X 14 in (355.6 mm)	1.75 in (44.45 mm) X 19 in (482.6 mm) X 14 in (355.6 mm)	1.72 in (43.6 mm) X 19 in (482.6 mm) X 14.72 in (374 mm)
Weight Net	10.14 lbs (4.6 kg)	10.14 lbs (4.6 kg)	11.02 lbs (5 kg)



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Live For Sound
www.electrovoice.com



EV **Electro-Voice**

Pro Sound

Microphones





Born and bred in the American heartland, Electro-Voice lays claim to over 80 years of unmatched innovation in microphone design and manufacturing. Back in 1927, company founders Al Kahn and Lou Burroughs started out as true pioneers, establishing the industry standard for audio engineering excellence and reliability while continuously upping the ante with breakthrough technologies like the Humbucking coil for noise cancellation, Variable-D™ and VOB™.

Eight decades on, Electro-Voice microphones continue to deliver the sound of history's most significant events. We've helped the world hear everything from the very first radio broadcasts to John Glenn's first orbit of the Earth; from Elvis and the Beatles to the largest world tours with today's biggest artists; from Knut Rockne using his "Electric Voice" at Notre Dame to the state-of-the-art wireless microphone systems at this year's Superbowl; from Presidential inaugurations to tonight's evening news; from Dr. Martin Luther King's "I Have A Dream" speech to the Next Big Thing rehearsing in the garage next door...

Electro-Voice stays true to its roots as a great American brand while advancing to new heights in the 21st century. We were the first to offer N/DYM™ neodymium technology in microphones and created ClearScan™ for quick, automatic wireless microphone channel coordination. And that's just the beginning—our engineers are constantly working on new ways to keep your tone intact.

From soundcheck to encore, Electro-Voice microphones offer great sound, durability, ergonomics and style, whether you're outfitting a world tour, a house of worship, a professional studio or a neighborhood block party. We believe the equipment you use should withstand both the rigors of performance and the scrutiny of your listeners. At Electro-Voice, innovating new products to make you sound your best is job number one—our name says it all.

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Artist Relationships

We're proud to be the brand of choice of professional artists and engineers from around the world, from all corners of the music and pro audio industry. From local broadcast studios, rehearsal spaces and nightclubs to the largest concert tours, our microphones and wireless systems are trusted tools that help forge careers.

Our ongoing relationships include:

ARTISTS

Al Green
Albert Lee
Alexx Calise
Alison Hinds
Angelo Kelly (Kelly Family)
Annie Minogue Band
Avishai Cohen
Big Bang Theory
Black Label Society
Blackbird McKnight (Parliament)
Blackhawk
Blasko (Ozzy Osbourne)
Bobby Bare Jr.
Bootsy Collins
Carina
Cesaria Evora
Charlie Lustman
CLÃ (Portugal)
Clem Burke (Blondie)
Courtney Pine
Crash Anthem
dada
Damon Johnson
Danny B. Harvey
Dave Wolfe
David Fonseca
David Frizzell
David Pack
Davie Kimm
Deke Dickerson
Delaney Jackson
Derick Sebastian
DevilDriver
Devo
Dick Dale
Dino Cezares
DJ Ashba (Guns 'N' Roses)
Dr. Dog

DRIVE
Dropkick Murphys
Echo and the Bunnymen
Ed "Mr. Improv" Hull
Elliott and the Untouchables
Eric Gales
Eric Tavares
Fishbone
Garrett Mason
Geezer Butler (Black Sabbath)
George Clinton (Parliament)
Gregg Rolie Band
Gregory Brock
GWAR
Hatebreed
Heaven Davis
Helen Cornelius
Henry Murphy and the
Seahawks
Herman Li (Dragonforce)
Honeydogs
Hoven Drogen
Jack Frost
James LoMenzo (Megadeth)
Jerry Montano
Jim Vilandre
Jimmy Clark
Jimmy Keegan (Spock's Beard)
Joe Bonamassa
Joe Fraulob
John Berry
Johnny Hawthorn Band
Johnny Kelly (Type-O-Negative)
Johnny Young
Joshua Craig Podolsky
K&Neo
Karl Denson's Tiny Universe
Karnes McCarrick
Keegan McClellan

Keith Capsuto
Keith Frank
Kenny Olson (Kid Rock)
Kenny Wayne Shepherd
Keri Noble
Kerry King (Slayer)
Kreg Viesselman
Larry Russell
Lee Scratch Perry
Leroy Van Dyke
Let's Get It
Levon Helm
LMT Connection
Lonesome Spurs
Los Lobos
Maki Ohguro
Maktub
Malford Milligan
Marcello Mello
Marcia Ball
Marcus Miller
Mark Chestnutt
Marthia Sides
Maze Meusel
Megadeth
Meldrum
Michael H. Sweet (Boston)
Michel Montano
Mitch Gordon
Moe Bandy
Mogwai
Neal McCoy
Nick Catanese
Niki Barr
No Other Name
Patrice Pike
Pete Anderson
Phil Bloch





Presidents of the United
States of America

Purple Reign

Real Groove Band

Reamonn

Reverse Cowgirl

Richard Buckner

Rick Ward

Rob Powers (Broadcaster)

Rockie Lynne

Rogue Wave

Ronnie McDowell

Rupee

Saint Lu

Sambomaster

Saxon

Secret Agent Bill

Shinya

Skerik

Southern Culture on the Skids

Sparklehorse

Staind

Static-X

Steve Brown

Steve Vai

T.M. Stevens

Takako Afuso

Takida

TAT

Terri Nunn

Terri Walker

Terry Evans

The Baseballs

The Buzzcocks

The Honeydogs

The Joe Taylor Group

The Lads

The Legendary Shack
Shakers

The Monks

The Roots

Theresa Andersson

Three Days Grace

ThundHERstruck

Tim Burlingame/Kathrin Shorr

Tim Leopard

Tommy Bolan

Tommy Victor (Prong)

Tony Campos

Travis Larson Band

Twisted Sister

Versa Emerge

Vibro Champs

Wolf Simon

XNO

Yellow Hands

Yngwie Malmsteen

Zakk Wylde

ENGINEERS

Al Davis

Bill Racine

Bradley Johnson

Brian Garcia

Brian Herb

Bruce Reiter

Craig Schumacher

Dan Lance

Dave Fridmann

Deanne Franklin

Doug Short

Duane Dungey

Jeremy Smith

Jim Baker

Johnny K

Mark Robertson

Mark Vanderwall

Rafael Alkins

Rocky Holman

Sean Peel

Steve "Sonny" B. Taylor





Wired Microphones

Live Performance Microphones

Electro-Voice is a proven leader in the design and manufacture of live sound microphones. Preferred by performers the world over since the company was founded in 1927, Electro-Voice microphones have long been the choice of the music industry's greatest artists. Why have so many top-name performers chosen Electro-Voice microphones over the years?

Trusted by both the artists and their skilled engineers and technicians, our legendary capsule designs are engineered to deliver the highest quality tone and clarity in any performance situation.

Rugged design and construction ensures that the capsule (the heart of a microphone's performance) remains unaffected by treatment that would destroy other brands' microphones.

Reliable and predictable polar pattern performance allows superior control in the mains and monitors.

Performances as sonically spectacular for the artist as they are for the audience – the Electro-Voice sound is synonymous with the highest quality and musicality.

Broadcast Microphones

Benchmarked by the legendary RE20 and RE27N/D Variable-D® vocal microphones, Electro-Voice broadcast studio and field production microphones confidently uphold their reputations as Industry Standards. These number-one choices for radio and television voiceover and interview work define the sound and reliability broadcast professionals around the world have come to demand.

Unquestionable reliability and spot-on sonic performance are prime requirements in broadcast field production work. Electro-Voice field production mics have been the go-to industry workhorses for decades. You've seen Electro-Voice live interview microphones in the hands of reporters and news correspondents around the world – from interviews with the President of the United States to the family next door – EV's RE50 and 635A mics are famous in broadcast, television, and radio in-the-field broadcasts. These microphones set world standards for ENG (electronic news gathering) and EFP (electronic field production). They are extremely rugged and withstand high humidity, temperature extremes and corrosive effects such as salt-air – all while providing excellent sound performance and that legendary "Buchanan Hammer" durability.

Installed Sound Microphones

Electro-Voice remains on the cutting edge of installed sound technology through innovative adaptation of our legendary RE and PolarChoice condenser capsules. These premium-grade elements are world-renowned for their superb sonic performance.

Electro-Voice's breakthrough PolarChoice technology sets new standards in Installed Sound convenience, reliability and performance. Shortening the long list of products, polar pattern selections and margin for error, each PolarChoice model incorporates four switchable polar patterns strategically designed for these specific applications. Selection and deployment is as easy as choosing the best physical design for the installation, and setting the polar pattern switch for the best coverage performance. Should installation conditions change, the polar pattern can always be changed to meet the new requirements.



The PL Series is a comprehensive family of vocal and instrument microphones for the professional live sound and studio community. Featuring seven vocal models and three instrument models, the PL Series' exceptional durability, sonic performance and contemporary styling meet the needs of today's sound system professional.

PL24

Entry-level Dynamic Vocal Microphone



The PL24 is a professional-grade supercardioid dynamic vocal microphone designed for live sound applications. With its balanced frequency response, the PL24's sonic performance is robust and articulate, delivering all-around vocal clarity in any live sound situation.

Also available: PL24S with on/off switch.

- **Balanced blend of controlled lows, palatable mid-range, and smooth high frequency content**
- **Powerful neodymium magnet structure**
- **Tight-mesh Memraflex™ grille**
- **Supercardioid polar pattern**
- **Dynamic element**

PL44

Mid-level Dynamic Vocal Microphone



The PL44 is a professional-grade supercardioid dynamic microphone designed for plug-and-play placement of vocals in any mix. Its high-mid frequency content design precisely lifts vocals in the mix to where they need to be, resulting in fast and effective vocal placement.

- **Voice-contoured for transparency and high-mid lift**
- **Powerful neodymium magnet structure**
- **Tight-mesh Memraflex™ grille**
- **Supercardioid polar pattern**
- **Dynamic element**

PL80a

Premium Dynamic Vocal Microphone



The PL80a is a premium-grade supercardioid dynamic microphone designed to elegantly capture the character of vocals in live sound applications. Its EQ-friendly sonic contour adapts well to any vocal texture, allowing vocals to sit nicely in the mix without sounding harsh.

Also available: PL80c with the classic beige PL finish.

- **Incredible vocal power and clarity**
- **Robust, forgiving and EQ-friendly performance**
- **Superior off-axis rejection**
- **Ultra-low handling noise**
- **Exceptionally cooperative tonal characteristics**

PL84

Premium Condenser Vocal Microphone



The PL84 is a professional-grade cardioid condenser vocal microphone designed to enhance a professional vocalist's creative expression. With its warm lows, musical mid-range and smooth high-frequency response, the PL84 captures all of the intimate detail expressive vocalists require.

Also available: PL84S with on/off switch.

- **Carefully voiced for intimate detail and presence**
- **Condenser element for fast transient response**
- **Tight-mesh Memraflex™ grille**
- **Cardioid polar pattern**

Dynamic Kick Drum & Instrument Microphone

PL33

- Voiced specifically for kick drums and low-frequency instruments
- Powerful neodymium magnet structure
- Tight-mesh Memraflex™ grille
- Supercardioid polar pattern
- Dynamic element

The PL33 is a supercardioid dynamic microphone designed to deliver the power, punctuation and snap of kick drums in sound reinforcement systems or recording studios of any size. Its frequency response is strategically crafted to deliver great kick drum sound with little, if any, additional EQ'ing.



Wired

Dynamic Tom, Snare & Instrument Microphone

PL35

- Voiced specifically for snare drums and tom-toms
- Powerful neodymium magnet structure
- Complete with DRC-1 drum rim clamp
- Supercardioid polar pattern
- Excellent isolation from surrounding drums

The PL35 is a professional-grade supercardioid dynamic microphone designed to deliver the power, punctuation and natural tones of tom and snare drums in sound reinforcement systems or recording studios of any size. Delivery includes the unique DRC-1 drum rim clamp.



Live

Condenser Overhead & Instrument Microphone

PL37

- Small diaphragm condenser
- Voiced for overhead drums, hi-hats and acoustic stringed instruments
- Tight-mesh Memraflex™ grille
- Tight cardioid polar pattern

The PL37 is a tight-cardioid condenser microphone designed to deliver all the crisp detail of cymbals, high-hats and percussion instruments on stage or in the studio. The PL37 delivers all the dialed-in tone and percussive transient response detail that professional drummers and sound system engineers require.



Pre-pack Drum Kits **PL Drum Kits**

PL DK models and contents:

- PL DK4 (for a 4-piece drum kit): Three PL35's and one PL33
- PL DK4 Plus (for a four-piece drum kit): Three PL35's, one PL33 and one PL37
- PL DK5 (for a five-piece drum kit): Four PL35's and one PL33
- PL DK7 (for a five-piece drum kit): Four PL35's, one PL33 and two PL37's

PL Series drum mics are also available in pre-pack assortments of our most requested drum set configurations. The DK's come ready for the gig in a heavy-duty firm shell gig bag (with shoulder strap), which can hold up to six PL35's, three PL37's and one PL33 should you wish to expand your PL Series drum mic tool kit.



Specification

	PL24 & PL24S	PL44	PL80a & PL80c	PL84 & PL84S	PL33	PL35	PL37
Element	Dynamic	Dynamic	Dynamic	Condenser (self-biased)	Dynamic	Dynamic	Condenser (self-biased)
Polar Pattern	Supercardioid	Supercardioid	Supercardioid	Cardioid	Supercardioid	Supercardioid	Cardioid
Frequency Response	80 - 16,000 Hz	80 - 18,000 Hz	80 - 16,000 Hz	50 - 20,000 Hz	20 - 10,000 Hz	50 - 16,000 Hz	50 - 16,000 Hz
Impedance	600 Ω	600 Ω	600 Ω	200 Ω	150 Ω	600 Ω	200 Ω
Open Circuit Voltage	2.2 mV/Pascal	2.2 mV/Pascal	2.2 mV/Pascal	3.5 mV/Pascal	0.63 mV/Pascal	2.2 mV/Pascal	6 mV/Pascal
Power Requirements	Passive	Passive	Passive	11 to 52 VDC	Passive	Passive	11 to 52 VDC
Connector Type	Three-Pin XLR	Three-Pin XLR	Three-Pin XLR	Three-Pin XLR	Three-Pin XLR	Three-Pin XLR	Three-Pin XLR
Mic Type	Handheld	Handheld	Handheld	Handheld	Instrument	Instrument	Instrument
Case Material	Die-Cast Zinc	Die-Cast Zinc	Die-Cast Zinc	Die-Cast Zinc	Die-Cast Zinc	Die-Cast Zinc	Die-Cast Zinc
Finish	Textured Satin Black	Textured Satin Black	Textured Satin Black	Textured Satin Black	Textured Satin Black	Textured Satin Black	Textured Satin Black



Excellent, clear sound; comfortable, safe handling; powerful neodymium magnetic structures and EV's unique VOB™ technology ... all set the N/DYM Series microphones apart from other microphones on the market. Designed to deliver exceptional power and clarity in live performance applications, N/DYM microphones outperform any other microphone in their class.

N/D267a Versatile Dynamic Vocal Microphone



The N/D267a incorporates EV's unique VOB™ (Vocally-Optimized Bass™) technology to provide the performer with reduced resonant distortion at low frequencies. Critical damping of the low frequency resonant peak has resulted in a microphone with increased finesse and vocal clarity; ensuring a clean, clear, consistent sound that "punches through the mix."

Available with on/off switch (N/D267as)

- VOB™ technology
- Cardioid polar pattern
- Tight-mesh Memraflex™ grille
- Dynamic, high-sensitivity neodymium element
- Warm Grip™ handle for more comfortable feel and low handling noise

N/D367s High-performance Dynamic Vocal Microphone



Classic N/DYM sound. The N/D367s has proven very popular with female vocalists across a variety of musical genres, thanks to its smooth, controlled frequency response and exceptional N/DYM sensitivity. The N/D367 also provides great sound for podium use.

- Cardioid polar pattern
- Dynamic, high-sensitivity neodymium element
- Classic N/DYM sound
- Tight-mesh Memraflex™ grille
- Smooth, controlled frequency response
- Superior multistage shock mount for unmatched low handling noise
- On/off switch

N/D767a Premium Dynamic Vocal Microphone



The N/D767a is the singer and engineer's first choice for outstanding vocal clarity in live performance applications. With low handling noise, VOB™ technology, and excellent clarity through all frequencies, the N/D767a is the top choice dynamic mic in its class.

- Top-class vocal microphone
- Multi-stage shock mount
- Dynamic, high-sensitivity neodymium element
- Tight-mesh Memraflex™ grille
- Condenser-like performance
- VOB™ technology
- Supercardioid polar pattern

N/D967 Premium High SPL Dynamic Vocal Microphone



The N/D967 is the highest gain-before-feedback performance vocal microphone on the market, making it a perfect choice for louder stage environments. Comes with a superior multistage shock mount for unmatched low handling noise.

- Highest gain-before-feedback microphone
- Optimized response for live performance
- Vocal personality switch shapes sound
- Dynamic, high-sensitivity neodymium element
- Tight-mesh Memraflex™ grille
- Unique removable front grille assembly and pop filter for easy, hygienic cleaning

N/DYM Series Instrument Group

Pulling double-duty on stage or in the studio, N/DYM Series instrument mics deliver outstanding performance in virtually any application. Highly acclaimed for their superior transient response and powerful tonal detail, these mics are the right choice when settling for good enough isn't an option.

Dynamic Supercardioid Instrument Microphone

N/D468

- Designed specifically for instruments
- Supercardioid pattern
- Dynamic, high-sensitivity neodymium element
- Unique pivoting head ensures perfect placement for use on drums, horns, acoustic and electric guitar
- Accurate response, even in high sound pressure levels (SPL)
- Rugged steel construction

Designed specifically for horns, drums, acoustical and electric guitars, the N/D468's large-diameter voice coil (up to 50% larger than other mics) provides a powerful, articulate yet natural sound. Its unique pivoting-head design ensures perfect mic placement, while the supercardioid pattern provides superior off-axis rejection and acoustic isolation in any application.



Dynamic Cardioid Instrument & Amplifier Microphone

N/D478

- Outstanding choice for electric guitar/bass guitar amplifier, toms, snare, cymbals, hi-hat, brass and acoustic guitar
- Dynamic, high-sensitivity neodymium element
- Cardioid pattern for superior feedback rejection and acoustic isolation
- VOB™ technology provides tailored bass response for controlled "proximity effect"

More durable and natural sounding than the other "industry standard" instrument mic, the N/D478 is ideal for miking drums, percussion or guitar amplifiers. Its integrated VOB™ technology reduces resonant distortion at low frequencies. The N/D478 also does a great job as a vocal microphone.



Dynamic Cardioid Kick Drum Microphone

N/D868

- Designed specifically for kick drum
- A go-to mic for live or studio environments
- Optimized sensitivity for the high sound pressure levels found in bass drum miking
- Excellent on bass guitar, floor toms and electric guitar cabinets
- Extended low-frequency response
- Frequency response tailored for instant kick drum sound

The N/D868 is truly a top performer in any application, thanks to its ability to handle incredibly high sound pressure levels without distortion. With a frequency response specifically designed as the perfect kick drum sound, the N/D868 has been applauded by drummers and engineers the world over.



Specification

	N/D267a	N/D367s	N/D767a	N/D967	N/D468	N/D478	N/D868
Element	Dynamic	Dynamic	Dynamic	Dynamic	Dynamic	Dynamic	Dynamic
Polar Pattern	Cardioid	Supercardioid	Supercardioid	Supercardioid	Supercardioid	Cardioid	Cardioid
Frequency Response	45 - 15,000 Hz	25 - 20,000 Hz	35 - 22,000 Hz	50 - 13,000 Hz	20 - 22,000 Hz	45 - 15,000 Hz	20 - 10,000 Hz
Impedance	300 Ω	300 Ω	300 Ω	150 Ω	150 Ω	300 Ω	150 Ω
Open Circuit Voltage	2.9 mV/Pascal	3 mV/Pascal	3.1 mV/Pascal	4 mV/Pascal	3.1 mV/Pascal	2.9 mV/Pascal	1 mV/Pascal
Power Requirements	Passive	Passive	Passive	Passive	Passive	Passive	Passive
Connector Type	Three-Pin XLR	Three-Pin XLR	Three-Pin XLR	Three-Pin XLR	Three-Pin XLR	Three-Pin XLR	Three-Pin XLR
Mic Type	Handheld	Handheld	Handheld	Handheld	Instrument	Instrument	Instrument
Case Material	Metal	Metal	Metal	Metal	Metal	Metal	Metal
Finish	Non-Reflective Black	Non-Reflective Black	Non-Reflective Black	Non-Reflective Black	Non-Reflective Black	Non-Reflective Black	Non-Reflective Black



With sonic quality and versatility proven at the highest levels, the performance group from EV's RE Series have become trusted industry standards for both stage and studio use. Although these premium grade handheld and stand mount condensers turn a good-sounding stage into a GREAT one, they will also deliver the professional depth, personality and sheen your recordings require.

RE200

True Condenser Cardioid Microphone



The RE200 is a cardioid condenser instrument microphone designed for the exacting acoustic reproduction of choirs, strings, percussion, acoustic guitar and brass instruments in live performance and studio recordings.

- True condenser design
- Continuous presence rise enhances sound quality
- Transformerless output
- Cardioid pattern
- Small, unobtrusive profile

RE410

Premium Condenser Cardioid Vocal Microphone



Engineered for professional club and concert sound or studio recording applications, the cardioid condenser RE410 provides crisp, clear top-end and sweet mid-range, pulling the voice front-and-center in any mixing situation. The RE410 delivers the critical details other mics leave behind.

- Premium-grade handheld condenser
- Cardioid pattern for excellent feedback rejection and acoustic isolation
- Ideal for both vocals and spoken word use
- High-compliance shock mount effectively eliminates handling noise
- Tight-mesh Memraflex™ grille
- Multistage pop filter

RE510

Premium Condenser Supercardioid Vocal Microphone w/HPF



The RE510's 5/8" diameter, self-biased, condenser capsule offers the warmth of a larger capsule design without sacrificing off-axis performance or transient response. Its supercardioid polar pattern enhances acoustic isolation and off-axis rejection. Low-frequency roll-off switch tailors low-frequency response to meet application requirements.

- Premium-grade handheld condenser
- Supercardioid pattern for excellent feedback rejection and acoustic isolation
- Wide dynamic range
- High-compliance shock mount effectively eliminates handling noise
- Tight-mesh Memraflex™ grille
- Multistage pop filter

RE920

Premium Condenser Instrument Microphone



A cardioid condenser mic designed for use with musical instruments via its specially designed instrument-mount clip assembly. The RE920 is a premium-grade condenser solution when clipped to drum rims, brass, woodwinds and stringed instruments. Although terminated in a TA4F connector for use with EV and Telex bodypack transmitters, it can be made hard-wired with the additional TXA XLR preamp.

- Unidirectional horn/drum mic
- Back electret condenser element
- Cardioid polar pattern
- TA4F connector for wireless bodypacks
- A wired solution when coupled with a TXA
- High SPL handling
- Custom clip for securely mounting on a variety of instruments



Cardinal/Raven

The Cardinal and Raven microphones combine gorgeous, streamlined modern design with the latest audio engineering technology to offer sonic detail and clarity unparalleled in the industry. While both mics excel at capturing vocals and instruments in studio and on stage, they have been designed to be two birds of a different feather. The Cardinal is a Class-A cardioid condenser with smooth and detailed performance, while the Raven is a stylish dynamic that holds up even under the toughest conditions.

Condenser Vocal & Instrument Microphone

Cardinal

- Pressure gradient condenser
- Very musical cardioid polar pattern
- Class-A discrete ultra-low noise circuitry
- Unique double swivel-mounted design for ideal positioning
- Innovative visual design with cherry finish
- Great for voice or instruments
- Outstanding performance on tom-toms and overhead drums

The Cardinal is a cardioid condenser microphone designed to capture vocal and instrumental details in live sound or studio applications. Employing Class-A discrete amplifier circuitry, the Cardinal's smooth and detailed performance is sure to please even the most discerning artists and engineers. Although initially designed for vocals, the Cardinal has become a go-to favorite for miking tom-toms and overhead drums because of its unique tonal and transient response characteristics.



Dynamic Vocal & Instrument Microphone

Raven

- Dynamic microphone with studio detail and clarity
- Cardioid pattern with excellent off-axis rejection
- Unique double swivel-mounted design for ideal positioning
- Great for voice or instrument
- Chosen as the preferred electric guitar cabinet mic by hundreds of live and studio engineers.
- Stylish retro design

The Raven is a stylish dynamic microphone designed to capture the character of live and studio vocals. It is also the perfect microphone for live and studio instruments, and has been chosen as the preferred electric guitar cabinet microphone by hundreds of live and studio engineers. The Raven incorporates collaborative designs from top industry microphone engineers to provide unparalleled performance in a stunning package.



Specification

	RE200	RE410	RE510	RE920	Cardinal	Raven
Element	True Condenser	Condenser (self-biased)	Condenser (self-biased)	Condenser (back electret)	Condenser (self-biased)	Dynamic
Polar Pattern	Cardioid	Cardioid	Supercardioid	Cardioid	Cardioid	Cardioid
Frequency Response	50 - 18,000 Hz	50 - 20,000 Hz	50 - 20,000 Hz	80 - 18,000 Hz	35 - 20,000 Hz	45 - 16,000 Hz
Impedance	200 Ω	250 Ω	150 Ω	1000 Ω	50 Ω	335 Ω
Open Circuit Voltage	10 mV/Pascal	3.2 mV/Pascal	2.5 mV/Pascal	1.3 mV/Pascal	10.6 mV/Pascal	2.51 mV/Pascal
Power Requirements	12 - 52 VDC Phantom	24 - 48 VDC Phantom	12 - 52 VDC Phantom	5 VDC (via optional bodypack)	24 - 48 VDC Phantom	Passive
Connector Type	Three-Pin XLR	Three-Pin XLR	Three-Pin XLR	TA4F	Three-Pin XLR	Three-Pin XLR
Mic Type	Instrument	Handheld	Handheld	Instrument	Vocal / Instrument	Vocal / Instrument
Case Material	Metal	Metal	Metal	Metal	Metal/wood	Metal
Finish	Semi-Gloss Camera Black	Non-Reflective Black	Non-Reflective Black	Non-Reflective Black	Cherry Wood	Non-Reflective Black



Benchmarked by the legendary RE20 and RE27N/D Variable-D® vocal microphones, Electro-Voice broadcast studio and field production microphones confidently uphold their reputations as Industry Standards. These number-one choices for radio and television voice-over and interview work define the sound and reliability broadcast professionals around the world have come to demand.

RE20



Broadcast Announcers Microphone w/ Variable-D

The RE20 Variable-D® dynamic cardioid microphone is truly an industry standard, a firm favorite among broadcasters and sound engineers worldwide. Its popularity also extends into music production as a premium grade instrument microphone. Its Variable-D® design and heavy-duty internal P-pop filter reduce proximity effect, while an internal element shock-mount reduces vibration-induced noise.

- Variable-D® for minimal proximity effect
- True cardioid with no coloration at 180-degrees off-axis
- Voice tailored frequency response
- Studio condenser-like performance
- Large diaphragm
- Humbucking coil
- Bass roll-off switch

RE27N/D



Broadcast Announcers Microphone w/ Variable-D & N/DYM Cap

The RE27N/D is a high-performance, neodymium-equipped industry-standard broadcast microphone. Superb resolution and depth for vocals and instruments have also made the versatile RE27N/D a favorite of recording studios and live sound engineers around the world.

- Variable-D® for minimal proximity effect
- Neodymium element design brings 6 dB more sensitivity
- Ultra-flat frequency response
- Studio condenser-like performance
- Three selectable filters: -6 dB from 250-100 Hz, -12 dB from 1000-100 Hz and -3 dB high frequency roll-off
- Integral wind and blast filters

Specification

	RE20	RE27N/D	RE16	RE50-B	RE50 N/D-B	635A	635N/D-B
Element	Dynamic	Dynamic	Dynamic	Dynamic	Dynamic	Dynamic	Dynamic
Polar Pattern	Cardioid	Cardioid	Supercardioid	Omni	Omni	Omni	Omni
Frequency Response	45 - 18,000 Hz	45 - 20,000 Hz	80 - 15,000 Hz	80 - 13,000 Hz	80 - 13,000 Hz	80 - 13,000 Hz	80 - 13,000 Hz
Impedance	150 Ω	150 Ω	150 Ω	150 Ω	150 Ω	150 Ω	150 Ω
Open Circuit Voltage	1.5 mV/Pascal	3.1 mV/Pascal	1.4 mV/Pascal	2.0 mv/Pascal	2.0 mV/Pascal	1.4 mV/Pascal	2.8 mV/Pascal
Power Requirements	Passive	Passive	Passive	Passive	Passive	Passive	Passive
Connector Type	Three-Pin XLR	Three-Pin XLR	Three-Pin XLR	Three-Pin XLR	Three-Pin XLR	Three-Pin XLR	Three-Pin XLR
Mic Type	Vocal / Instrument	Vocal / Instrument	Handheld	Handheld	Handheld	Handheld	Handheld
Case Material	Steel	Steel	Steel	Aluminum	Aluminum	Steel	Steel
Finish	Fawn Beige	Satin Nickel	Fawn Beige	Semi-Gloss Camera black	Semi-Gloss Camera Black	Fawn Beige	Non-Reflective Black



Field Production Group

EV's legendary RE50B and model 635 microphones are classics in broadcast television and radio. These microphones set world standards, especially for ENG (Electronic News Production) and EFP (Electronic Field Production). They are extremely rugged and can withstand high humidity, temperature extremes and corrosive effects such as salt-air, yet still provide the excellent sound performance broadcast professionals demand.

Wired

Dynamic Supercardioid Handheld w/ Variable-D

RE16

- Variable-D® dynamic microphone,
- Supercardioid polar pattern
- Great for podium or handheld use
- Unique blast filter makes close-up use possible without popping
- Uniform response independent of angle
- Humbucking coil reduces electromagnetic hum pickup

A Variable-D® dynamic supercardioid microphone designed for the most exacting professional use, employing an integral blast filter to permit handheld and outdoor use without "P-popping" or excessive wind noise. EV's Variable-D® design allows its directional characteristic to be independent of frequency.



Handheld Interview Microphone

RE50B

- Omnidirectional polar pattern
- Dynamic element
- Extremely low handling noise via Dyna-Damp™ "mic in-a-mic" shock mount system
- Impervious to wind noise and p-pops via its four-stage pop filter
- Withstands high humidity, temperature extremes, and corrosive salt air

The RE50B is the industry standard in broadcast television production handheld interview mics, seen and heard in the hands of reporters and news correspondents around the world – from interviews with the President of the United States to the family next door.



Handheld Interview Microphone w/ N/DYM Capsule

RE50N/D-B

- Omnidirectional / Dynamic
- Higher output model with neodymium magnet structure
- Extremely low handling noise
- Impervious to wind noise and p-pops via its four-stage pop filter
- Withstands high humidity, temperature extremes, and corrosive salt air

The RE50N/D-B delivers all of the outstanding performance of the industry standard RE50B with the added benefit of its high-output neodymium capsule magnet. An industry standard in broadcast television production where the additional gain of the neodymium capsule is well-suited for particular camera or recording device inputs.



Classic Handheld Interview Microphone

635A

- Omnidirectional polar pattern
- Dynamic element
- Incredibly robust and durable
- Linear frequency response
- Completely pop-free
- Four-stage pop and dust filter
- Internal effective shock absorber

The classic 635A live interview wired microphone is the most popular (ENG) electronic news gathering mic in the world. It delivers great sound and is known as "The Buchanan Hammer" for its rugged durability – a nod to EV's ancestral home in Michigan. Also available in black (model: 635A/B).



Classic Handheld Interview Microphone w N/DYM Capsule

635N/D-B

- Omnidirectional / Dynamic
- Neodymium element design delivers higher output
- Acoustalloy® diaphragm material for very smooth response over a wide frequency range
- Integral windscreen and blast filter
- Black semi-gloss finish

The 635N/D-B has the same "hammer-like" toughness and classic performance and reputation as the 635A(B) with the added benefit of increased output from its neodymium magnet structure.



Broadcast



EV's PolarChoice installation microphones feature user-selectable polar patterns in a variety of boundary, podium and desktop models. Users can select between omnidirectional, cardioid, supercardioid and hypercardioid (figure "8" on the PC Boundary), all in one mic! No matter the pattern selected, PC mics have a consistent voicing optimized for speech, equating to excellent clarity and speech intelligibility with outstanding feedback rejection.

PC Boundary Multi-pattern Boundary Layer Microphone



The PC Boundary is a very low-profile area microphone that can be used on any surface and with virtually any mic mixer. With one omni-directional and three directional polar patterns on board, it is ideal for virtually any installation where premium-grade area coverage is required.

- Selectable polar pattern to easily adapt to different acoustic environments.
- Switchable omni, cardioid, supercardioid or figure "8" polar patterns
- Easy-to-use mute switch. Can be programmed to operate as either latching on/off or momentary
- Consistent microphone voicing across all four patterns

PC Desktop Multi-pattern Desktop Microphone



The PC Desktop is a free-standing, dual gooseneck section tabletop microphone firmly anchored by its elegant base. Selecting one of four polar patterns - omni, cardioid, supercardioid or hypercardioid - via an easy-to-access switch simplifies choosing the right microphone for changing conditions.

Available in 5", 12" and 18" gooseneck length versions.

- Switchable omni, cardioid, supercardioid or hypercardioid polar patterns
- Mute switch with LED can be programmed as either push on/off or push-to-mute
- Smooth and uniform frequency response, no matter what pattern is selected
- Extended low-frequency response and switchable high-pass filter
- Sturdy steel base

PC Plus Multi-pattern Podium Microphone



The PC Plus is the first dual gooseneck section podium microphone with the flexibility to be installed into any environment. Delivering four switchable PC polar patterns, it can be mounted via a standard three-pin XLR connector or permanently flush-mounted to a podium or tabletop.

Available in 5", 12" and 18" gooseneck length versions.

- Switchable omni, cardioid, supercardioid or hypercardioid polar patterns
- Mute switch with LED can be programmed as either push on/off, or push-to-mute
- Smooth and uniform frequency response, no matter what pattern is selected
- Extended low frequency response and switchable high-pass filter
- Sturdy steel base

PC/XLR Multi-pattern Gooseneck Microphone w/ XLR



PC/XLR models are dual gooseneck section podium microphones designed to be installed where mating to a three-pin XLR-F adaptation exists. Delivering four switchable PC polar patterns, it can be mounted into flush-mount, recessed, or standard three-pin XLR-F connectors on a podium or tabletop.

Available in 12" and 18" gooseneck length versions.

- Switchable omni, cardioid, supercardioid or hypercardioid polar patterns
- Smooth and uniform frequency response, no matter what pattern is selected
- The most natural-sounding podium mic on the market
- Sturdy steel base
- Mates well with the CPSM recessed shock mount accessory



Multi-pattern Gooseneck Microphone w/ Flange Mount

PC/FL

- Switchable omni, cardioid, supercardioid or hypercardioid polar patterns
- Smooth and uniform frequency response, no matter what pattern is selected
- The most natural-sounding podium mic on the market
- Installs via an included flange mount kit with knurled brass threaded housing

PC/FL models are the flange-mount equivalent of the PC / XLR models described above. The four switchable PC polar patterns are accessed at the cable mounted XLR-M sized preamp module at the end of its 20' low-noise cable.

Available in 12" and 18" gooseneck length versions.



Wired

PolarChoice Wireless Conversions

When the contracted job includes a \$50,000 conference table with an installation rider stipulating "not to be marred or modified," or the sheer ease of secure storage and deployment lends itself to logical portability – a wireless solution is the **ONLY** option. The PolarChoice Satellite models deliver all of the features of their wired versions combined with the portability and ease-of-use of wireless adaptation. Coupled with an Electro-Voice or Telex brand wireless bodypack system, these Satellite models become a key component of a logical wireless solution.

Multi-pattern Boundary Layer Microphone **PC Boundary Satellite**

- Accepts Electro-Voice REV, RE2, RE2PRO and Telex FMR or SAFE1000 model bodypack transmitters
- Selectable polar pattern to easily adapt to different acoustic environments.
- Switchable omni, cardioid, supercardioid or figure "8" polar patterns
- Easy-to-use mute switch. Can be programmed to operate as either latching on/off or momentary

The PC Boundary Satellite is a low-profile area microphone that can be used on any surface with the additional convenience of adapting to any Electro-Voice or Telex brand wireless bodypack transmitter. Delivering the identical polar pattern, filter and mute switch functionality as its wired counterpart, it is ideal for virtually any installation where a wireless solution to premium grade area coverage is required.



Install

Multi-pattern Desktop Microphone **PC Desktop Satellite**

- Accepts Electro-Voice REV, RE2, RE2PRO and Telex FMR or SAFE1000 model bodypack transmitters
- Switchable omni, cardioid, supercardioid or hypercardioid polar patterns
- Mute switch with LED can be programmed as either push on/off, or push-to-mute
- An extended low frequency response and switchable high-pass filter

The PC Desktop Satellite is a dual gooseneck section tabletop microphone and base, with the additional convenience of adapting to any Electro-Voice or Telex brand wireless bodypack transmitter. Delivering the identical polar pattern, filter and mute switch functionality as its wired counterpart, it is ideal for virtually any installation where a wireless solution to premium grade tabletop goosenecks is required.

Available in 5", 12" and 18" gooseneck length versions.



Specification

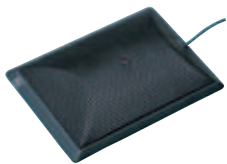
	PC Boundary	PC Desktop	PC Plus	PC/XLR	PC/FL	PC Boundary SAT	PC Desktop SAT
Element	Dual Condenser (back electret)	Dual Condenser (back electret)	Dual Condenser (back electret)	Dual Condenser (back electret)	Dual Condenser (back electret)	Dual Condenser (back electret)	Dual Condenser (back electret)
Polar Pattern	Omni Cardioid S-cardioid Figure 8	Omni Cardioid S-cardioid H-cardioid	Omni Cardioid S-cardioid H-cardioid	Omni Cardioid S-cardioid H-cardioid	Omni Cardioid S-cardioid H-cardioid	Omni Cardioid S-cardioid Figure 8	Omni Cardioid S-cardioid H-cardioid
Frequency Response	50 to 20,000 Hz	50 to 20,000 Hz	50 to 20,000 Hz	50 to 20,000 Hz	50 to 20,000 Hz	50 to 20,000 Hz	50 to 20,000 Hz
Impedance	200 Ω	200 Ω	200 Ω	200 Ω	200 Ω	1000 Ω	200 Ω
Open Circuit Voltage	31.5 mV/Pascal	5.6 mV/Pascal	5.6 mV/Pascal	5.6 mV/Pascal	5.6 mV/Pascal	17.8 mV/Pascal	5.6 mV/Pascal
Power Requirements	12 - 52 VDC	12 - 52 VDC	12 - 52 VDC	12 - 52 VDC	12 - 52 VDC	5 VDC (via optional bodypack)	5 VDC (via optional bodypack)
Connector Type	Three-pin XLR	Three-pin XLR	Three-pin XLR	Three-Pin XLR	Three-Pin XLR	TA4F	TA4F
Mic Type	Boundary	Gooseneck	Gooseneck	Gooseneck	Gooseneck	Boundary	Gooseneck
Case Material	Steel	Steel	Steel	Steel	Steel	Steel	Steel
Finish	Non-Reflective Camera Black	Non-Reflective Camera Black	Non-Reflective Camera Black	Non-Reflective Camera Black	Non-Reflective Camera Black	Non-Reflective Camera Black	Non-Reflective Camera Black



The RE Installed Sound Series microphones give the installed sound professional sonically superior solutions at a very affordable price. Featuring EV's premium performance condenser capsules, these microphones deliver all of the great sound and reliability professional sound contractors demand.

RE90B

Half-cardioid Pattern Boundary Layer Microphone



Boundary microphone with "half-cardioid" pick-up pattern and built-in equalization. Ideal for video and teleconferencing systems, boardrooms, classrooms or houses-of-worship. Delivers every word fully and naturally.

Also available in white (RE90BW).

- Half-cardioid polar pattern
- Boundary layer
- Ultra-thin profile (16 mm) housing
- Rubber non-slip bottom pad and strong steel screen
- Integrated pop filter

RE90P

Cardioid Pattern Gooseneck Microphone



The RE90P dual gooseneck section podium microphone achieves sonically superior performance at a very affordable price. Featuring EV's premium performance RE90 capsules and in-line preamps, these goosenecks deliver all the great sound and reliability professional sound contractors demand.

Available in 12" and 18" versions.

- Dual gooseneck section podium microphone
- Uniform frequency response and polar pattern
- Struted, yet flexible, ultra-thin gooseneck

RE90H

Cardioid Pattern Hanging Microphone



Compact hanging-style condenser microphone. Ideal for choral, instrumental, vocal groups and live theater. Controlled cardioid polar response for distant sound pick-up without feedback. 25' braided and shielded cable with built-in preamp.

Also available in white (RE90HW).

- Hanging installation microphone
- Internal preamp
- Very uniform polar pattern
- Integrated 25' shielded low-noise cable

RE90L

Cardioid Pattern Lavalier Microphone



Omnidirectional lavalier microphone with mic pre-amp and XLR termination. One of the world's most compact and lightweight high-performance microphones. Smooth frequency response for excellent sound quality. Perfect for television production, house of worship and business applications.

- Ultra-miniature condenser element
- Internal preamp and XLR termination
- Omnidirectional polar pattern
- Perfect for television, business and house of worship applications
- Complete assortment of clips



RE92 Series

Meeting the sonic performance needs of today's installed sound professional requires precision tools. Electro-Voice engineers have risen to the challenge, developing the RE92 premium-grade condenser capsule to deliver the highest grade of acoustical performance. Choosing an RE92 Installation Series product insures superior sonic integrity and maximum durability.

Cardioid Pattern Hanging Microphone w/ HPF

RE92H

- Hanging installation microphone
- Wide, smooth frequency response
- Cardioid polar pattern
- In-line electronics module
- 12 dB/octave switchable high pass filter
- Transformerless differential output to drive long cables

Designed specifically for applications where the condenser microphone needs to be suspended from above the sound source. The RE92H is ideal for theater, house of worship or any application where a small, high-quality mic needs to be "heard but not seen."

Also available in white (RE92HW).



Cardioid Pattern Lavalier Microphone

RE92L

- Wide, smooth frequency response
- Tight cardioid polar pattern
- Super-low noise condenser capsule
- 4' cable terminates at in-line preamp with 12 dB/octave switchable HPF and XLR output

The RE92L is a professional-quality miniature cardioid electret condenser lavalier microphone. Its excellent sound quality and small size make it the perfect choice for miking speech in house of worship, broadcast, presentation and theater applications. Terminated with three-pin XLR.



Specification

	RE90B	RE90P	RE90H	RE90L	RE92H	RE92L
Element	Condenser (back electret)	Condenser (back electret)	Condenser (back electret)	Condenser (back electret)	Condenser (back electret)	Condenser (back electret)
Polar Pattern	Cardioid	Cardioid	Cardioid	Omni	Cardioid	Cardioid
Frequency Response	80 to 15,000 Hz	70 to 15,000 Hz	75 to 15,000 Hz	50 to 18,000 Hz	40 to 20,000 Hz	40 to 20,000 Hz
Impedance	200 Ω	200 Ω	200 Ω	100 Ω	250 Ω	250 Ω
Open Circuit Voltage	25 mV/Pascal	4.5 mV/Pascal	27 mV/Pascal	12.6 mV/Pascal	5.6 mV/Pascal	5.6 mV/Pascal
Power Requirements	9 - 52 VDC	9 - 52 VDC	9 - 52 VDC	9 - 52 VDC	24 - 52 VDC	24 - 52 VDC
Connector Type	Three-pin XLR	Three-pin XLR	Three-pin XLR	Three-pin XLR	Three-pin XLR	Three-pin XLR
Mic Type	Boundary	Gooseneck	Hanging	Lavalier	Hanging	Lavalier
Case Material	Die cast zinc	Steel	Steel	Metal	Metal	Metal
Finish	Non-Reflective Black or White	Non-Reflective Black	Non-Reflective Black or White	Non-Reflective Black	Non-Reflective Black or White	Non-Reflective Black

649B**Dynamic Lavalier Microphone**

This popular omnidirectional dynamic lavalier microphone has been an industry standard for many years. Its frequency response is tailored for balanced performance in the lavalier chest position. The turned aluminum case and nested mechanical parts assure rugged durability.

- Dynamic element.
- Omnidirectional polar pattern
- Rugged aluminum body
- Robust mechanical and electrical design

785 Group**Gooseneck Paging Microphone**

A low-impedance gooseneck microphone for single zone paging. Designed for applications where ruggedness, dependability and durability are the main requirements. Microphone housing is constructed of die-cast zinc alloy to stand up to the toughest abuse and conditions. Features a recessed aluminum grille with a windscreen and durable satin-chrome finish.

- All units include a heavy duty, three-hole mounting flange and an extra-strength 16" flex arm of steel tubing.
- SR785LN/O includes a push button switch with normally "open" switching
- SR785L is the same as SR785LN/O except without normally "open" switching
- 785L is the same as SR785LN/O except without a switch

US690**Gooseneck Microphone**

US690 12" flexible gooseneck microphone's neodymium magnet structure provides up to 6 dB more sensitivity than conventional designs. The US690 terminates with an XLR-type connector and plug-in mount. Its rugged design and mic element make the US690 ideal for the most demanding applications where superb sound is required.

- 12" gooseneck
- Dynamic element
- Cardioid polar pattern
- Powerful neodymium magnet structure
- XLR termination

US600EL & US602FL PTT Hand Microphone

US600EL is built to withstand rough usage and atmospheric extremes. A hand microphone designed for maximum noise rejection in high ambient areas and effective use without "close talking" techniques. An excellent choice for critical communication applications.

US602FL – A hand microphone featuring clear speech transmission in high ambient noise level environments, convenient grip-to-talk activation and noise-canceling dynamic design. Perfect for police, marine and mobile paging applications.

NC450D & 450D PTT Hand Microphone

NC450D dynamic noise-canceling paging hand microphone with push-to-talk switch is particularly effective for use in noisy locations. Its excellent voice response characteristics also make it an excellent choice in quiet areas. 200 ohm impedance matches low impedance inputs.

450D – Same as NC450D except without noise-cancellation. Molded Cyclocac® housing in pebble-grain black finish and unterminated black neoprene coil cord relieved at the housing by spring-type strain relief.

WP300**Wall Plate Microphone**

WP300S is dynamic, omnidirectional wall plate microphone that is ideal for security monitoring, fast-food and retail outlets, warehouses and public usage applications. Mounts onto a standard single-gang electrical box. Brushed satin-chrome finish front plate includes double-pole, double-throw switch for push-to-talk and line-shorting capabilities.

WP300 is the same as WP300S except without the double-pole, double-throw switch.

Wired Microphone Accessories

Direct replacement of standard equipment or optional accessories for Electro-Voice wired microphones.

Shock mount adapters

TXA	422A	DRC-1	309A	CPSM	SAPL-3
					
The TXA is designed to enable the use of lavalier, head-worn and other TA4F-terminated Electro-Voice professional microphones in a wired configuration. Using standard phantom power through the TXA ensures the same high-quality audio performance that you expect using Electro-Voice microphones over wireless systems.	Desk stand with rubber shock mount. Accepts all EV mic stand clamps.	Designed for PL35 (stock replacement). Also works well with N/D468.	RE20	RE90P	PL37 (stock replacement)
			RE27N/D	PC-12/XLR	RE200 (optional)
			(Replacement elastic bands, PART # 71220X)	PC-18/XLR	

Stand adapters

311	320	323S	326	SAPL-1	SAPL-2
					
635A & 635AB	RE20	RE50-B	All N/Dym Handhelds	All PL Series Handhelds	PL33
RE16	RE27N/D	RE50N/D-B			RE20
RE200	N/D868	BK-1			RE27N/D
N/D468					N/D868

(black foam unless otherwise indicated) Windscreens

314E	376 (grey) 379-1 (black) 379-2 (red)	WSPL-1	WSPL-2	WSPL-3	WSPL-4
635A	General Purpose	PL Series (vocal)	PL33	PL35	PL37
635AB	Fits most vocal	RE410	RE20		RE200
	N/Dym Series	RE510	RE27N/D		
	Cobalt Series	RE50B	N/D868		
	RE Series vocal	RE50N/D-B			

Eight Decades of Engineering Excellence.

In 1934, just six years into its existence as a pioneer in electro-acoustical solutions, Electro-Voice invented the hum-bucking coil for microphones – still an industry standard almost 80 years later. This invention marked the start of EV's success in building microphones, and the company continued to drive audio technology ahead, rising to the challenges of rapidly changing times. During World War Two, EV worked with the U.S. Military on the development of the T-45 noise-cancelling microphone, a helmet-attached device that raised the success rate of combat communications from 20% to 90%, saving many lives in the process. With reliability and performance proven in the most critical environments, EV microphones later accompanied U.S. astronauts on the earliest space missions and many thereafter. And all this, of course, occurred while EV mics were performing at the highest level

on live stages around the world, during the heyday of Jazz and the birth of Rock 'N' Roll.

EV continues to set new standards for microphone design today, adding to this long list of historic achievements in audio design. We were the first manufacturer to use neodymium-based magnet structures (N/DYM®) in microphones, thus achieving higher output and condenser-like qualities such as substantially-faster transient response, crystal clarity and reliable performance. Our goals in developing microphone technologies have always been the same: providing the highest sound quality, achieving better and more comfortable handling for the user and extending our tradition of legendary reliability and warranty support. A host of patented technologies attest to EV's success in meeting these goals, including the following:

Variable-D

A fundamental principal of acoustical behavior is that the volume and perceived frequency content of a sound is influenced by the distance between source and point of perception. As this distance varies, there is a non-linear adjustment of this perceived balance. Very near, a sound source will sound full with rich low-frequencies, defined mid-range, and articulate high end. But as this distance increases, the perceived sound will thin-out with a dramatically reduced low-frequency content. Because microphones serve as the point of perception at the front-end of the audio signal chain, this phenomenon greatly influences how microphones are used and perform.

Normal directional microphones (cardioid, supercardioid and hypercardioid) generate increased bottom-end when used close-up. This is typically called the "proximity effect." While some vocalists like this effect and use it to enhance their performance, it is attainable only in close-up situations where the microphone capsule is within a couple of inches of the performer's mouth. When the distance between the microphone and the source is extended, the sound quality changes dramatically, losing a substantial amount of the low-frequency content – thus changing the tone of the performance drastically.

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 that is completely uncolored and undistorted at 180° off-axis, ensuring the same frequency response as if the source was nearly on-axis. This characteristic is particularly beneficial when the performer (announcer, vocalist or instrumentalist) moves around while addressing the microphone. And this same attribute is why radio announcers and DJ's have chosen Electro-Voice Variable-D® microphones for decades.

Low-frequency content comes in a variety of characters. An added benefit of the Variable-D® technology's low-frequency stabilization is the resulting personality of the low-frequency content. Variable-D® microphones produce a tight low-end that is unmatched by any other microphone technology, and this is why models such as the RE20 and RE27N/D are revered not only as the #1 announcers mic, but also the go-to mic for capturing kick drums, low-frequency instruments and guitar amplifiers.

For decades, the RE16, RE20 and RE27N/D Variable-D® microphones have been the chosen industry standard for broadcast show hosts, vocal booths, voice-over studios and professional touring or rental companies, trusted for their unparalleled acoustical performance and robust durability.

VOB

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

General microphone use guidelines

1. Always point the microphone at the desired source and away from sources of unwanted sound.
2. The microphone should be located close to the sound source to minimize interference from other potential sound sources.
3. Use the three-to-one rule when using multiple microphones: place each microphone three times farther away from other microphones as it is from the desired sound source. (If the microphone is 1' away from a sound source, it should be 3' away from the next closest microphone).
4. Minimize over-handling of the microphone to reduce unwanted mechanical noise.
5. Positioning the microphone close to the sound source will increase gain-before-feedback and will also increase the bass tone of the signal.

Microphone techniques for musical instruments

Miking techniques are a matter of personal preference. Choosing the right microphone for your application is a good place to start, and the suggested mic notes in each application below indicate EV mics that are either designed for the application or have been recommended by experienced professionals for their performance as described. These are merely guidelines to assist in the choice and placement of the microphone to achieve optimal performance

Usage	Best Mic placement	Suggested EV Mic
Kick Drum	Due to the unique nature of kick drums and placement, choosing a mic that is designed for kick drum and low-frequency instruments is recommended. Miking from the front of the drum (opposite the batter head) is preferred. Front heads with hole: Place the mic inside the hole so that the capsule (mesh grille area) is just inside the interior of the drum. Aim the capsule at an angle toward the spot on the batter head where the beater makes contact for desired snap (attack of the sound). Front heads without a hole: Aiming the capsule directly on-axis to the front head and within 1" of the head, choosing a spot that is between 2" and 8" towards the center from the rim. The center of the head has the floppiest tone, and the edge will have the tightest. Kick drum with no front head: This allows the widest variety of placement options, but increases off-axis bleed and eliminates the tonal advantage of the front (resonance) head. Avoid placing the mic dead-center aiming directly into the beater because of possible wind velocity distortion. Choose a spot inside the drum between 2" and 8" from the outer shell, aiming the capsule at an angle toward where the beater strikes the batter head. Placing the mic deeper or shallower inside the drum will offer tone and attack variations.	PL33, N/D868, RE20 and RE27N/D
Snare Drum	Place mic 1-3" above the batter head, 0-2" in from the rim depending on the desired tone. Aim each mic at the top head angled down 45 degrees. If the drum rings, tape deadening material to the head or use damping rings. For more "snare" sound, place a second mic under the drum (aimed up at the bottom head) and reverse the phase on its input channel.	PL35, N/D468 and N/D478
Electric Guitar	Place microphone approximately 1-2' from and at a 0° angle to the speaker cone. To reduce boominess, position the microphone off-axis to the cone at 45°, or move the mic toward the center of the cone. You can expect a brighter tone at the voice coil (speaker center) and a darker tone the farther out from center you go.	PL33, PL35, N/D467, N/D478, N/D868, RE20, RE27N/D and Raven
Tom-Toms	On double-headed toms, place mic 1-3" over the top of the drum head at a 45° angle to the drum surface and 1/2" from the drum edge. On single headed toms, use above method or place mic inside tom from underneath at a 90° angle from the center of head, 3-5" away.	PL35, N/D468; for floor tom – RE20, N/D868
Cymbals	Place microphone 1-2' above the top of the cymbals. If using a stereo pair technique, increase the overhead distance of the drum set to 2-3', and use the three-to-one rule as a separation concept.	PL37, RE200 and Cardinal
High-Hat	Place 5" above outside edge at a 45° down-angle toward the top cymbal.	PL37 and RE200
Brass	Place microphone 6-24" away, on axis with the bell of the instrument.	PL80a, N/D468, RE20, RE27N/D and Raven
Acoustic Guitar	Place microphone 6-12" from where fingerboard joins the body and aim toward sound hole.	PL37, N/D468, N/D478, RE200, RE20 and Cardinal

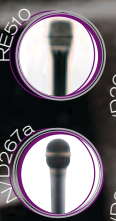


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mics • dsp • amps • speakers

	HM 2	HM 7	OLM 10	ULM 21	RE20	RE27	RE16	RE50B	RE50N/D-B	635A (635A/B)	635N/D-B	RE90B	RE90 H	RE90P	RE90 L	RE92 H	RE92 L	RE92 TX	RE97 TX	RE97-2 TX	RE97L TX	RE200
Dynamic					X	X	X	X	X	X												
Condenser	X	X	X	X								X	X	X	X	X	X	X	X	X	X	X
Cardioid	X			X	X	X						X	X	X		X	X	X				X
Supercardioid		X					X					X	X	X								
Hypercardioid																						
Figure 8																						
Omni			X					X	X	X	X			X					X	X	X	
Variable-D					X	X	X															
On/Off Switch																						
Stage																						
Lead Vocal, Female																						
Lead Vocal, Male																						
Backing Vocal																						
Speech																						
Kick Drum					X	X																
Snare																						
Toms					X	X																
HiHat / Overhead																						X
Percussion					X	X																X
Guitar Amp					X	X																
Bass Amp					X	X																
Acoustic Guitar					X	X																X
Upright Bass					X	X																X
Strings																						X
Piano																						X
Accordion					X	X																X
Woodwinds					X	X	X															X
Brass					X	X	X															X
Studio																						
Vocals					X	X																
Kick Drum					X	X																
Snare																						X
Toms					X	X																X
HiHat / Overhead																						X
Percussion					X	X																X
Guitar Amp					X	X																
Bass Amp					X	X																
Acoustic Guitar					X		X															X
Upright Bass					X	X																
Strings																						X
Piano																						X
Accordion					X	X																X
Woodwinds					X	X																X
Brass					X	X																X
Broadcast																						
Speech / Announcers					X	X	X											X	X	X	X	
Interview / ENG					X	X	X	X	X	X	X											
Lavalier															X		X	X			X	
Headworn		X																	X	X		
Install / Contracting																						
Boardrooms / Podiums													X									
Boundary												X										
Hanging															X							
Lavalier			X	X											X		X	X			X	
Headworn	X	X																	X	X		



[illegible]



Wireless Microphones

Key Strengths

- Designed and supported in the USA
- Electro-Voice microphones, DSP, amplifiers and loudspeakers & Telex intercom systems are part of the Bosch Communications family of pro audio brands
- ClearScan™ -- The original and best scanning technology on the planet
- Patented Posi-Phase® true diversity for dropout-free audio with the best range in the business
- Complete range of models and accessories to fit applications and installations of all shapes and sizes
- Designed and built for maximum professional performance
- Superior design, construction and warranty

Why Choose EV Wireless?

All EV wireless systems are designed to exacting standards in our Lincoln, Nebraska facility and built in state-of-the-art Bosch production facilities around the world. Advanced techniques are employed in the design of each wireless product, from initial computer simulation and circuit design all the way through the manufacturing line and automated testing. The individual components in every EV system are tested prior to a complete system test, ensuring reliable field performance. EV wireless microphone products are supported from the factory in Lincoln, Nebraska as well as authorized centers in Canada, Germany and Singapore. EV has been in the business of providing quality wireless communications for demanding professional events for over thirty years – we have the hands-on experience and engineering know-how to address all your wireless needs. Whether designing a one-channel system or a large, multiple-wireless deployment, you can trust EV to provide the product, frequency coordination and system accessories for a turnkey installation.



Whether you're performing at the local rock club, lecturing at a corporate seminar, or speaking in a house of worship, the Electro-Voice RE-2 brings ease-of-use, clear sound, and clean channels to wireless.

RE-2 Bodypack BPU-2 Bodypack Transmitter



The BPU-2 is a compact bodypack transmitter for the RE-2 wireless system made of high-impact ABS plastic. The single on/off switch also functions as mute, and the TA4 microphone connector is compatible with any EV lavalier or headworn mic.

- Unique "smart" battery with low battery LED
- LCD Displays Group and Channel, Frequency, or Battery Level
- One On/Off button that also acts as a mute
- On/Off button can be disabled
- Cell phone style beltclip
- Optional pouches and fixed clip available
- A wide selection of lapel and headworn microphone accessories available

RE-2 Handheld HTU2 Handheld Transmitter



The HTU2 handheld transmitter is a rugged, high-impact, ABS plastic handheld available with EV N/D267a, N/D767a, RE410, or RE510 microphone elements. One-button on/off/mute, coupled with the smart battery feature, makes the HTU2 easy to use, and easy to maintain.

- Available with four different microphone elements
- N/DYM 267a Dynamic element
- N/DYM® 767a Dynamic premium vocal microphone
- RE410 cardioid condenser
- RE510 supercardioid condenser
- On/Off acts as mute and can be disabled.
- Internal 1/2-wave antenna

RE-2 Receiver UHF Wireless Microphone



The RE-2 is a completely programmable, frequency-agile system with one-touch Auto-ClearScan. It operates over 28MHz (six TV channels), XLR mic, line level output, and many other features.

- One touch Auto-ClearScan™
- Programmable in 25kHz steps across 28 MHz operating bandwidth
- Backlit LCD displays the Group, Channel, Frequency, transmitter battery level, diversity operation, and RF and Audio signal level meters
- Balanced XLR audio output for Microphone or Line level signals and a 1/4-inch line level jack
- Fourth generation Posi-phase™ diversity and advanced audio circuits
- Unique "Guitar" setting
- Detachable 1/4-wave antennas

CONSUMER ALERT

Most users do not need a license to operate this wireless microphone system. Nevertheless, operating this microphone system without a license is subject to certain restrictions: the system may not cause harmful interference; it must operate at a low power level (not in excess of 50 milliwatts); and it has no protection from interference received from any other device. Purchasers should also be aware that the FCC is currently evaluating use of wireless microphone systems, and these rules are subject to change. For more information, call the FCC at 1-888-CALL-FCC (TTY: 1-888-TELL-FCC) or visit the FCC's wireless microphone website at www.fcc.gov/cgb/wirelessmicrophones

Specification

Audio Parameters	
Frequency Response	50-15 kHz +/- 2 dB
Balanced Output (max @ 40 kHz deviation) Mic position Line position	-10 dBV Adjustable 10 mV - 2V RMS
Unbalanced Output	Adjustable 10 mV - 1V RMS
Distortion	< 1.0%, 0.5% typical (ref 1 kHz, 40 kHz deviat)
Signal-to-Noise Ratio	> 100 dB A weighted
Dynamic Range	> 100 dB

RE-2 Receiver	
Receiver Type	Synthesized PLL
Frequency Response (RF)	A Band 648-676MHz (TV Channels 43-48) G Band 614-642 MHz (TV Channels 38-42)
Number of Channels	1112 possible channels, Programmable in 25 kHz steps
Modulation	+/- 40 kHz
Diversity	Digital Posi-Phase True Diversity
RF Sensitivity	< 1.0 uV for 12 dB SINAD
Image Rejection	> 60 dB
Squelch	Tone Code plus Amplitude
Ultimate Quieting	> 100 dB
FCC Certification	Approved under Part 15
Power Requirements	12 V AC/DC 300 mA
Antennas	Detachable 1/4 wave
Dimensions	H x W x D 1.72" x 7.5" x 5.9" 43.69 cm x 190.5 mm x 150 mm

Microphone Head Options	
767a	N/D767a Supercardioid N/DYM Dynamic
267a	N/D267a Versatile Cardioid Dynamic
RE410	RE410 Classic Cardioid Condenser
RE510	RE510 Classic Supercardioid Condenser

Transmitters, Bodypack (BPU-2) and Handheld (HTU-2)	
Radiated Ouput	30 mW typical
TA4 Connector Wiring	Pin 1: Ground; Pin 2 Mic Input; Pin 3: +5 V bias; Pin 4: +5 V bias through a 3 kW resistor
Audio Gain Adjustment	40 dB (handheld 26 dB)
Power Requirements	9 Volt Alkaline Battery
Battery Life (typical)	> 8 hours with 9 Volt Alkaline Typical
Bodypack Antenna	Flexible external 1/4 wave
Handheld Antenna	Internal 1/2 wave
Dimensions (Handheld)	9.4" (240 cm) Long
Dimensions (Bodypack)	H x W x D 3.8" x 2.6" x 0.92" 96.5 mm x 66 mm x 23.4 mm

RE-2 Systems

RE-2 UHF systems provide groups of up to 10 simultaneous, harmonized channels per frequency bands. Besides individual components, following complete sets, including transmitter and receiver are available:

RE2-N2	Receiver + N/D267a handheld transmitter
RE2-N7	Receiver + N/D767a handheld transmitter
RE2-410	Receiver + RE410 handheld transmitter
RE2-510	Receiver + RE510 handheld transmitter
RE2-G	Receiver + bodypack transmitter + MAC-G3 guitar cord
RE2-BP	Receiver + bodypack transmitter
RE2-L10	Receiver + bodypack transmitter + OLM10 lavalier mic
RE2-L21	Receiver + bodypack transmitter + ULM21 lavalier mic
RE2-E	Receiver + bodypack transmitter + RE97 headworn mic (beige or brown)
RE2 COMBO	Receiver + N/D267a handheld + bodypack transmitter + ULM21 lavalier mic



When applications like rentals, small tours, referee systems or tough environments call for a wireless microphone with a mix of REV and RE-2 features, the answer is RE-2 PRO.

RE-2 PRO Bodypack WTU-2 Bodypack Transmitter



The WTU-2 is a compact metal bodypack solution for the RE-2 system. Automatically compatible with the Telex RSB-2 mute switch for football applications. Selectable RF output power and rechargeable AA battery operation with optional BH-200 charger.

- Cast magnesium construction
- Flat steel beltclip
- Two AA batteries w/ NiMH rechargeable option
- Exclusive EV Guitar optimization mode
- 5mW or 50mW transmit power
- Compatible with RSB-2 referee mute switch
- TA4 connector for all EV mic options
- "Blackberry Proof"

RE-2 PRO Handheld PHTU2 Handheld Transmitter



The PHTU-2 offers a high-impact, ABS plastic handle, and interchangeable RC2 microphone heads. Available with N/D767a, PL80a, N/D967, RE410, and RE510 microphone elements, the PHTU-2 delivers the best sound for any application.

- ABS Resin body with interchangeable microphone heads
- User accessible on/off/mute switch
- Defeatable on/off switch
- 8 hour operation on one 9V battery
- Shure microphone compatibility
- PL80a and N/D967 microphones not available on HTU-2

RE-2 PRO Receiver RE-2 Professional Receiver w/ rack mount hardware



The RE-2 is a completely programmable, frequency-agile system with one-touch Auto-ClearScan. It operates over 28MHz, XLR mic, line level output, and many other features. The RE-2 PRO receiver includes all of the rack-mount hardware needed.

- Rack Mounting hardware with front mount antenna cables
- One touch Auto-ClearScan
- Programmable in 25kHz steps across 28 MHz operating bandwidth
- Backlit LCD displays the Group, Channel, Frequency, transmitter battery level, diversity operation, and RF and Audio signal level meters
- Balanced XLR audio output for Microphone or Line level signals and a 1/4-inch line level jack
- Fourth generation Posi-phase™ diversity and advanced audio circuits
- Unique "Guitar" setting
- Detachable 1/4-wave antennas

CONSUMER ALERT

Most users do not need a license to operate this wireless microphone system. Nevertheless, operating this microphone system without a license is subject to certain restrictions: the system may not cause harmful interference; it must operate at a low power level (not in excess of 50 milliwatts); and it has no protection from interference received from any other device. Purchasers should also be aware that the FCC is currently evaluating use of wireless microphone systems, and these rules are subject to change. For more information, call the FCC at 1-888-CALL-FCC (TTY: 1-888-TELL-FCC) or visit the FCC's wireless microphone website at www.fcc.gov/cgb/wirelessmicrophones

Specification

Audio Parameters	
Frequency Response	50-15 kHz +/- 2 dB
Balanced Output (max @ 40 kHz deviation) Mic position Line position	-10 dBV Adjustable 10 mV - 2V RMS
Unbalanced Output	Adjustable 10 mV - 1V RMS
Distortion	< 1.0%, 0.5% typical (ref 1 kHz, 40 kHz deviat)
Signal-to-Noise Ratio	> 100 dB A weighted
Dynamic Range	> 100 dB

Microphone Head Options	
767a	N/D767a Supercardioid N/DYM Dynamic
967	N/D967 Versatile Supercardioid Dynamic
PL80a	PL80a Supercardioid Dynamic
RE410	RE410 Classic Cardioid Condenser
RE510	RE510 Classic Supercardioid Condenser

RE-2 PRO Receiver	
Receiver Type	Synthesized PLL
Frequency Response (RF)	A Band 648-676MHz (TV Channels 43-48) G Band 614-642 MHz (TV Channels 38-42)
Number of Channels	1112 possible channels, Programmable in 25 kHz steps
Modulation	+/- 40 kHz
Diversity	Digital Posi-Phase True Diversity
RF Sensitivity	< 1.0 uV for 12 dB SINAD
Image Rejection	> 60 dB
Squelch	Tone Code plus Amplitude
Ultimate Quieting	> 100 dB
FCC Certification	Approved under Part 15
Power Requirements	12 V AC/DC 300 mA
Antennas	Detachable 1/4 wave
Dimensions	H x W x D 1.72" x 7.5" x 5.9" 43.69 cm x 190.5 mm x 150 mm

Bodypack (WTU-2)	
Controls	Power, Menu Set, Up and Down
Indicators	Red LED low battery indicator
Backlit LCD Display	Battery level, Channel / Group, or Frequency
Battery Life	8 hours w/ two AA alkaline typical
Battery Recharge	Optional BH-200 w/ NiMH AA
Antenna	External 1/4 wave detachable
Connector	TA4F input for microphone, Pin 1: ground, Pin 2: Mic input, Pin 3: +5 Bias, Pin 4: +5V through 3k ohm
RF Output Selectable	5 mW or 50 mW typical
Case Material	Cast Magnesium
Dimensions	H x W x D 3.37" x 2.6" x 0.75" 85 mm x 66 mm x 19 mm

Handheld (PHTU-2)	
Controls	Power on/off, Set, Up and Down
LCD Display	Battery level, Channel / Group, or Frequency
Battery Life	8 hours w/ 9V alkaline typical
Antenna	Internal 1/2 wave
RF Output	30 mW typical
Case Material	High Impact ABS & Aluminum
Dimensions	Length x Diameter 9.75" x 2.04" 24.8 cm x 52 mm

Two Bay Battery Charger

BH-200

- LED indicator show charging status
- Two drop in bays for REV-WT or WTU-2 transmitters
- 10 hour recharge time and transmitters can be left in charger indefinitely
- Use standard NiMH AA batteries
- Safeguards against wrong or improperly inserted batteries

The BH-200 recharges Nickel Metal Hydride (NiMH) AA batteries in REV-WT and WTU-2 bodypack transmitters. 2500 mAh batteries will last over 10 hours and recharge in 10 hours. The BH-200 helps to reduce waste and the cost of running wireless microphones all day, everyday.





The REV UHF System is the best-sounding, most roadworthy professional wireless in the industry to date. REV's optimized, analog audio path was developed to provide the truest representation of a wired microphone sound in a wireless system. REV offers two handheld options: a stylish, metal, compact handle for concert and broadcast, and the user-friendly presentation handheld for rental house, and other applications. In addition, EV's IRIS-Net PC software enables remote monitoring, control, and programming over a CAN bus connection through an EV UCC-1 converter.

REV-H

REV Concert Handheld Transmitter



The REV-H is a metal transmitter with interchangeable mic heads and a back-lit LCD display. All controls are inside the battery compartment, out of harm's way. With the EV 767a, 967, PL80a, RE410, or RE510, the REV-H is a world-class vocal microphone.

- Aluminum Construction
- Back lit LCD display
- 10 hour operation on two AA Batteries
- N/D 767, N/D 967, PL80a, RE410, RE510 Heads
- Shure mic head compatibility
- 5mW or 50mW transmit power

REV-PH

REV Presentation Handheld Transmitter



The REV-PH presentation handheld combines the compact RC2 interchangeable microphone elements, and a rugged handle with a user-accessible on/off/mute switch. The REV-PH is perfect for applications that require the user to mute or turn it on or off.

- ABS Resin body with interchangeable microphone heads
- User accessible on/off/mute switch
- 8 hour operation on one 9V battery
- Shure microphone compatibility
- 5mW or 50mW transmit power

REV-WT

REV Bodypack Transmitter



REV-WT is a cast magnesium bodypack transmitter that uses two AA batteries, and can be used with the optional BH-200 charger. Unique features include programmable on/off switch, RSB-2 referee mute switch compatibility, and exclusive REV Guitar mode.

- Cast magnesium construction
- Flat steel beltclip
- Two AA batteries w/ NiMH rechargeable option
- Exclusive EV Guitar optimization mode
- 5mW or 50mW transmit power
- Compatible with RSB-2 referee mute switch
- TA4 connector for all EV mic options
- "Blackberry Proof"

REV Receivers

REV-S Single and REV-D Dual Receivers



The REV-S is a full-rack width chassis with a universal power supply, headphone monitoring, CAN Bus connections, and full front-panel controls. Designed for one channel applications, or larger installations that require an odd number of receivers.

The REV-Dual receiver includes two world class UHF receiving channels with the most "wired" sounding audio in the market. CAN bus connection on the back for use with IRIS-Net PC software for monitor and control.

- Full 19" rack width with integrated rack mounting
- Ground independent 1/2 wave antennas
- Antenna pass-through connections to drive 6 channels (3 REV-D) with just two antennas
- IEC connection universal switching power supply
- Headphone jack for direct monitoring
- PC monitor and control with Iris-Net
- CAN bus pass-through connectors
- No adjustments or switches on back panel

Specification

REV-H and REV-PH Concert Handheld	
Controls	Buttons for Power on/off, set, up and down
Displays	Backlit LCD display showing: battery level, channel/group or frequency
Battery Life (REV-H) (REV-PH)	10 hours w/ 2 AA alkaline typical 8 hours w/ 9V alkaline typical
Antenna (REV-H) (REV-PH)	Internal proprietary Internal 1/2 wave
Microphone Elements	EV N/D767a or N/D967 Dynamic EV RE510 or RE410 Condenser PL80a Supercardioid
Case Material (REV-H) (REV-PH)	Machined Aluminum High Impact ABS
RF Output	Normal: 5 mW typical High: 50 mW typical
Dimensions	Length x Max Diameter 9.75" x 2.04" 24.8 cm x 52 mm

REV-WT Bodypack Transmitter	
Controls	Buttons for Power on/off, menu set, up and down
Indicators	Red LED low battery indicator
Backlit LCD Display	Battery level, channel/group or frequency
Battery Life	8 hours w/ 2 AA alkaline typical
Battery Recharge	Optional BH-200 w/ NiMH AA
Antenna	External 1/4 wave detachable
Connector	TA4F input for microphone, Pin 1: ground, Pin 2: Mic input, Pin 3: +5 bias, Pin 4: +5 V through 3k ohm
RF Output Selectable	5 mW or 50 mW typical
Case Material	Cast Magnesium
Dimensions	H x W x D 3.37" x 2.6" x 0.75" 85 mm x 66 mm x 19 mm

REV-S Single and REV-D Dual Receivers	
Front Panel Controls	Buttons for On/Off, menu, set, up and down 1/4" headset jack with selector and volume
Indicators LCD	Group, channel, diversity, label, and set-up
Backlit Display	Menu-driven dot matrix
Back Panel Connectors	1/4" unbalanced adjustable line level output XLR balanced Mic / Line level output RJ-45 CAN interface (x2, parallel)
Antennas	Detachable 1/2 wave
RF Specifications	C1 Band 614-638 MHz (TV Channels 37-41) C2 Band 650-674 MHz (TV Channels 44-47) C3 Band 674-698 MHz (TV Channels 48-51)
Number of Channels	950 possible (programmable in 25 kHz steps)
Diversity	DSP PosePhase True Diversity
Squelch	Tone code plus adjustable amplitude
Receiver Type	Synthesized PLL agile UHF
RF Sensitivity	< 0.8 uV for 12 dB SINAD
Audio Specifications	100-15 kHz +/- 2 dB microphone 30-15 kHz +/- 2 dB Instrument
Audio Output Level	Balanced line level 10 mV - 1 V RMS adjustable
Unbalanced Output Adjustable	8 mV to 0.755 V RMS (100 k ohm load)
Distortion	Less than 0.5% (@ 1 kHz, 40 kHz deviation)
Signal to Noise Ratio	> 110 dB (A)
Dynamic Range	> 100 dB
REV-D Antenna Output	TNC
Powered Antenna Output	12 Vdc, 15 mA
Internal Switching Power Supply	Universal cord, 90-240 VAC, 50-60 Hz
CAN Bus Monitoring & Control	IRIS Net
Dimensions	H x W x D 1.72" x 16" x 12" 43.7 mm x 406.4 mm x 304.8 mm

REV Accessories and Parts

Model #	Description
RE90TX	Omnidirectional MicroMini lapel mic
RE92TX	Unidirectional MicroMini lapel mic
RE97TX	Lightweight omni headworn mic
HM7	Headworn cardioid condenser mic
FA-XX	1/2 wave Rx antenna
AB-2	1/2 wave antenna bracket
UAA-500	UHF antenna amplifier (520-806 MHz)
APD4+	Antenna / Pwr distribution (600-780 MHz)
TP-2	Termination plug for APD4+
LPA-500	Directional Rx antenna (450-900 MHz)

Model #	Description
CXU-XXX	Low loss coaxial antenna cable 25-100 ft
WP-WT	Bodypack pouch for REV-WT
MAC-G2	Guitar cord
RC2-767	767a dynamic head
RC2-967	967 dynamic head
RC2-PL80a	PL80a dynamic head
RC2-410	RE410 condenser head
RC2-510	RE510 condenser head
MSA-REV	Mic stand adapter

CONSUMER ALERT

Most users do not need a license to operate this wireless microphone system. Nevertheless, operating this microphone system without a license is subject to certain restrictions: the system may not cause harmful interference; it must operate at a low power level (not in excess of 50 milliwatts); and it has no protection from interference received from any other device. Purchasers should also be aware that the FCC is currently evaluating use of wireless microphone systems, and these rules are subject to change. For more information, call the FCC at 1-888-CALL-FCC (TTY: 1-888-TELL-FCC) or visit the FCC's wireless microphone website at www.fcc.gov/cgb/wirelessmicrophones

Wireless Antenna Accessories

Accessories needed for wireless microphone antenna systems. Included are products for remote mounting, amplifying, distributing and combining antenna signals.

APD4+

UHF Antenna / Power Distribution System

UHF Antenna/Power Distribution System

The APD4+ is a UHF antenna/power distribution system (provides power and RF signals for 4 units) for use with RE-2 and REV receivers.

- Provides diversity antenna distribution to four single receivers
- Provides power distribution for four RE-2 receivers
- Universal power supply with IEC power cord
- Phantom power on antenna inputs for UAA-500 amplifier
- Can be cascaded to provide antennas for up to 16 receivers (requires 5 APD4+)



LPA-500

Directional Log Periodic Antenna

The LPA-500 is a passive directional log periodic antenna with mounting hardware and 10-foot coax cable. LPA antennas are used to extend the range of coverage in certain direction.

- 5dB gain on axis compared to an omni-directional antenna
- Mounting hardware for microphone stands, truss, walls, and other surfaces
- Includes 10 foot coax cable for remote mounting
- Standard EV TNC connector for use with CXU-XX cables



FA-XX

Flexible 1/2 Wave UHF Antenna

The FA-XX is a family of ground independent 1/2 wave omni-directional antennas. These antennas can be remote mounted using the AB-2 bracket or attached directly to the receiver or APD4+.

- 1/2 wave omni-directional antenna for excellent coverage
- Can be remote mounted using the AB-2 bracket
- Frequency tuned for best reception:
FA-GW, Green/White, Freq.: 610-710 MHz
FA-BW, Blue/White, Freq.: 710-880 MHz



UAA-500

Antenna Signal Amplifier

The UAA-500 is a broadband UHF amplifier with selectable 3dB and 10dB amplification settings. Antenna signal amplifiers are used to make up for losses in the cable run, they do not extend the operating range of the wireless microphone.

- 3 or 10dB selectable gain
- Green LED to indicate power
- Requires phantom power from APD4+ or REV receiver
- Wideband 500 – 900 MHz operating range
- Cast aluminum case with mounting tabs



APS-1

Passive Antenna Splitter / Combiner

The APS-1 is a passive device that splits one transmit signal into two, or combines two receive signals into one. A combiner can be used to locate antennas in multiple rooms for increased coverage.

- Combines two antenna signals into one
- Operating range 100MHz to 900MHz
- Low signal loss of -3.4dB
- High signal isolation of 23dB
- EV standard TNC connections



Low-Loss Coaxial Cable

CXU-XXX

- Less than 3.5 dB loss per 100 feet at UHF frequencies
- Terminated on both ends with TNC connectors
- Pre cut in 25, 50, 75 and 100 foot lengths.
- Easily connected with AB-2 bracket for other lengths

The CXU is a family of low-loss coaxial cables are for longer antenna cable runs. XX designates length, 25 ft (8m), 50 ft (16m), 75 ft (23m) and 100 ft (30.6m).



Universal Mounting Bracket

AB-2

- Mounts antenna on wall or other structure
- Can be used to mount a 1/2 wave antenna on microphone stand
- Includes a 10ft coax cable
- Includes male to male TNC adapter for use with CXU-X or other longer coax cables

The AB-2 is a universal mounting bracket for 1/2-wave antennas, with 10-foot coax cable. For use with FA-XX and CLA-X ground independent half wave antennas.



1/4 Wave Flex Bodypack Antenna

BPA

- Flexible for durability but stands out from the body for efficient radiation
- Replacement for standard antenna that ships with bodypacks
- Frequency tuned for efficient radiation
- Threaded connector for REV-WT, WTU-2 bodypacks

The BPA is a direct replacement 1/4 wave flex antenna for the antenna that is included with the REV-WT, WTU-2, and older CSB-1000, WT-1000, REV-BP bodypacks.



1/4 Wave Super Flex Bodypack Antenna

AN-Sflex

- Extreme flexibility for use under costumes
- Smaller than BPA for discrete mounting
- Frequency tuned for efficient radiation
- Threaded connector for REV-WT, WTU-2 bodypacks

1/4 wave super flex antenna for REV-WT, WTU-2, and older CSB-1000, WT-1000, REV-BP bodypacks.



50 Ohm TNC Termination Plug

TP-2

- TNC threaded connection
- 50 Ohm termination for APD4+

50 Ohm TNC termination plug for use with APD4+ antenna distributor. All unused outputs of the APD4+ must be terminated to prevent reflections and range problems.



Microphones

Electro-Voice has a wide range of lavalier and headworn microphones for use with any EV wireless bodypack transmitter. Any of these microphones can be used with the TXA adapter on page XX in XLR wired applications.

OLM10

Omni-Directional Lavalier Microphone



The OLM10 is a rugged lavalier microphone that picks up sound from all directions. The small size and wide pick up pattern make this an ideal microphone for beginners and soft speakers.

- Back Electret omni-directional microphone
- Clothing clip included for easy mounting
- 6 foot (180cm) permanently attached cord
- TA4F connector compatible with all EV bodypack transmitters
- Use with TXA for wired XLR applications

ULM21

Cardioid Lavalier Microphone



The ULM21 is a rugged lavalier microphone with a directional pick up pattern. The small size and pick up pattern helps reduce feedback and improve sound quality.

- Back Electret cardioid microphone
- Clothing clip attaches at microphone body to maintain cardioid pattern
- 6 foot (180cm) permanently attached cord
- TA4F connector compatible with all EV bodypack transmitters
- Use with TXA for wired XLR applications

RE90Tx

Omni-Directional Lavalier Microphone



The RE90Tx is a lightweight high-performance omni-directional lavalier microphone. It is terminated with a TA4F connector for any EV wireless system, perfect for broadcast, house of worship, and business applications.

- Ultra-miniature lavalier (Diameter 0.2")
- Back electret condenser element
- Omnidirectional polar pattern
- 6 foot (180cm) permanently attached cord
- TA4F connector compatible with all EV bodypack transmitters
- Use with TXA for wired XLR applications

RE92Tx

Directional Lavalier Microphone



The RE92Tx is a professional-quality, miniature cardioid, electret condenser, lavalier microphone. Designed for picking up speech, it is an excellent choice for use in any presentation, house-of-worship, broadcast, or theater application.

- Back electret condenser element
- Cardioid polar pattern
- 6 foot (180cm) permanently attached cord
- TA4F connector compatible with all EV bodypack transmitters
- Use with TXA for wired XLR applications

RE920Tx

Horn and Instrument Microphone



The RE920Tx is a cardioid condenser microphone designed for wireless use with musical instruments via its specially designed instrument-mount clip assembly. Although terminated in a TA4F connector for use with EV and Telex bodypack transmitters, it can be made hard-wired with the additional TXA XLR preamp.

- Unidirectional horn/drum mic
- Back electret condenser element
- Wired with TA4F connector
- Smooth audio response and high SPL handling
- Custom clip for securely mounting on a variety of instruments
- Use with TXA preamp for XLR wired applications

Micro-Headworn Condenser Microphone

RE97Tx

- Ultra-Low Profile for Inconspicuous Use
- Lightweight, Durable
- Interchangeable for Left or Right Ear
- Omni-directional Polar Pattern Provides Clean Sound and Uniform Response
- Use with TXA preamp for XLR wired applications

The RE97Tx is an ultra-low profile, omnidirectional, back-electret condenser, headworn microphone designed for use with standard EV and Telex belt packs. The RE97Tx is intended for spoken-word use such as houses-of-worship, corporate AV, theaters, fixed install, and other applications where a full-range, natural, well-balanced sound is required. The RE97Tx microphone is available in beige, brown, and black.



Two Sided Micro-Headworn Condenser Microphone

RE97-2Tx

- Two ear wearing style for stability
- Lightweight, durable
- Interchangeable for left or right side microphone boom
- Omni-directional polar pattern for clean sound
- Moisture resistant
- TA4F connector compatible with all EV bodypack transmitters
- Use with TXA for wired XLR applications

The RE97-2Tx is an Ultra-low profile, omnidirectional, back-electret condenser headworn microphone ideal for applications where a full - range, natural, well balanced sound is required. The RE97 microphone element provides a clean and accurate sonic quality and uniform output. This has a two ear hook design with a band behind the head for comfort and stability. The band is fully adjustable and the hooks fold flat for storage and the boom can be on the left of right side.



Micro-Lavalier Condenser Microphone

RE97LTx

- Ultra-Miniature Size for Inconspicuous Use
- Omni-directional Polar Pattern to Provide Clean Sound and Uniform Response
- Available in black and beige
- Superior Sound Quality
- TA4F connector compatible with all EV bodypack transmitters
- Use with TXA for wired XLR applications

The RE97LTx is a micro-lavalier (black and beige) omnidirectional, condenser microphone designed for applications that demand a high quality microphone element that is practically invisible when worn by the speaker or performer. The RE97LTx is intended for spoken-word use in theatrical performance, fixed installations, corporate AV presentations, houses of worship, or any venue.



Headworn Condenser Microphone

HM2

- Lightweight – 0.9 ounces (25 grams), less cable
- Behind-the-head headband is comfortable and stays in place
- Cardioid pickup pattern ensures good gain before feedback
- Frequency response and proximity effect similar to handheld vocal mics
- TA4F connector compatible with all EV bodypack transmitters

The Electro-Voice HM2 headworn microphone is the ideal microphone for anyone who requires high-quality vocals in a hands-free application. The HM2 is perfect for use by lead vocalists, singing instrumentalists, dancers, aerobic instructors and other presenters.



Headworn Condenser Microphone

HM7

- Supercardioid pickup pattern ensures good gain before feedback
- Behind-the-head headband is comfortable and stays in place
- Frequency response and proximity effect similar to premium handheld vocal mics
- TA4F connector compatible with all EV bodypack transmitters
- Use with TXA for wired XLR applications

The HM7 headworn microphone is the ideal microphone for singers and entertainers that really need to move during a performance. The HM7 has a supercardioid microphone that offers concert vocal performance and stage noise rejection. The rugged headband makes for a comfortable fit and the flexible boom ensures precise microphone placement.



Microphone Heads for REV-H, REV-PH and PHTU-2

RC2-XXX

- RC2-767 – Supercardioid dynamic N/D767a
- RC2-967 – Supercardioid dynamic N/D967
- RC2-PL80a – Supercardioid dynamic PL80a
- RC2-410 – Cardioid condenser RE410
- RC2-510 – Supercardioid Condenser RE510

The RC2 line of interchangeable heads includes the top dynamic and condenser EV vocal microphones for the REV and RE-2PRO wireless systems. Dynamic vocal microphones available are the N/D767a, N/D967 and the PL80a. And the premium concert condenser microphones RE410 and RE510 complete the RC2 series.



Cables, Clips and other accessories

These mounting brackets, cables and other accessories can be used to complete or complement any Electro-Voice wireless microphone system.

RM-D

Dual Rackmount Kit

Dual Rackmount kit - (for two receivers) works with RE-2, FMR-500, SAFE-1000 and other older 1/2 rack receivers. Includes all screws and hardware required.

- Mounts two RE-2 receivers side by side in one 19" rack space
- Includes knock outs for FMCK front mount antenna cables
- Includes screws, hardware and instructions for installation
- Powder coated steel construction



RM-S

Single Rackmount Kit

Single Rackmount kit - works with RE-2, FMR-500, SAFE-1000 and other older 1/2 rack receivers. Includes all screws and hardware required.

- Mounts one RE-2 receiver in one 19" rack space
- Includes knock outs for front mount antenna cables, (RMS-TNC includes cables)
- Includes screws, hardware and instructions for installation
- Powder coated steel construction



FMCK

Front Mount Antenna Kit

The FMCK includes 4 front mount antenna cables with female TNC connectors on one end and a bulkhead male TNC on the other end. The male connectors mount in the provided knockouts in the RM-S and RM-D rack mount kits. The four cables included are enough for two receivers.

- Female TNC end connects to any EV/Telex receiver
- Male TNC connector mounts in the rack mount knockouts
- Four cables included in each kit, enough for two receivers



RSB-2

Referee Mute Switch

Referee Mute Switch
The RSB-2 toggle mute switch is the football standard for referee wireless systems. The RSB-2 plugs in between the lavalier or headworn microphone and the bodypack transmitter to provide a noiseless mute. The REV-WT and WTU-2 bodypacks automatically recognize the RSB-2 but older transmitters require a special referee version.

- TA4 in and out connectors for any EV/Telex lavalier microphone and bodypack transmitter
- The belt clip can be flipped for right or left side wearing
- Positive toggle switch is large and easy to use without looking
- Noiseless mute, no clicks or pops



WP-WT

Leather Pouch for REV-WT

The WP-WT is a leather pouch for REV-WT and WTU-2 bodypack transmitter. A clear window in the front allows the LCD screen to show through and the snapping top strap secures the bodypack. An integrated leather covered metal beltclip on the back of the WP-WT secures the unit to a belt, costume, or guitar strap.

- Elastic top band for a snug, secure fit
- Clear window over LCD screen
- Top strap snaps to secure bodypack
- Leather covered integrated belt clip for belt, costume or guitar strap mounting





XLR to TA4 Adapter Cord

MAC-2

- TA4 connector for any EV or Telex Bodypack
- 4 ft cord to XLR
- Works with dynamic microphones only

The MAC-2 cord allows any dynamic handheld microphone be used with any EV or Telex wireless bodypack transmitter.



George L Guitar Cable

MAC-G2

- George L no-solder, low noise cable and connectors for great sound and easy repairs
- Includes right angle and straight in 1/4 inch connector
- TA4 connector for any EV or Telex bodypack transmitter

No-solder George L™ guitar cable for the REV-WT, WTU-2, CSB-1000, WT-1000, and REV-BP. The MAC-G2 includes a straight in and a right angle 1/4 inch connector so you can use whichever is best for your guitar.



RE-2 Guitar Cord featuring George L's Cable

MAC-G3

- George L low noise cable for great sound
- Built in signal pad to work with BPU-2/WT-500 bodypack transmitters
- TA4 connector for any EV or Telex bodypack transmitter

The MAC-G3 uses low noise George L guitar cord for the BPU-2 and WT-500 bodypack transmitters. Using the MAC-G3 with the EV RE-2 exclusive Guitar Optimization gives you one of the most "wired" sounding wireless rigs of all time.



Leather Pouch for BPU-2

WP-1000

- Fits BPU-2, WT-500, REV-BP, CSB-1000 and WT-1000 Bodypacks
- Elastic sides for a snug, secure fit
- Clear window over LCD screen
- Top strap snaps to secure bodypack and it covers the on/off switch
- Leather covered integrated belt clip for belt, costume or guitar strap mounting

The WP-1000 is a leather pouch for CSB-1000, BPU-2, WT-500, WT-1000, and REV-BP bodypack transmitter. A clear window in the front allows the LCD screen to show through and the snapping top strap covers and protects the on/off button. An integrated leather covered metal beltclip on the back of the WP-1000 secures the unit to a belt, costume, or guitar strap.



BC-1000
Beltclip w/ Tab & Screw



The BC-1000 is a cell phone style swiveling beltclip with tab and screw for the REV-WT, WTU-2, CSB-1000, WT-1000, or the REV-BP transmitter. The mounting tab also allows these transmitters to work with the PC and Boundary Satellite wireless accessory microphones.

BP2-Clip-Swivel
Beltclip w/ Tab & Screw



The BP2-Clip-Swivel is a cell phone style swiveling beltclip with tab and screw for the BPU-2, and the WT-500 transmitter. The mounting tab also allows these transmitters to work with the PC and Boundary Satellite wireless accessory microphones.

BP2-Clip
Flat Beltclip for BPU-2

The BP2-Clip is a flat beltclip for the BPU-2, and the WT-500 transmitter. The BP2-Clip offers an alternative mounting style to the standard swivel clip.

MSSA
Custom Stand Adapter



The MSSA is a custom fit stand adapter for the RE-2/FMR-500, PHTU-2 and REV-PH handheld transmitters.

MSA-REV
Custom Stand Adapter



The MSA-REV is a custom fit stand adapter for the RE-H handheld transmitters.

HHCK
Handheld Color Kit



The HHCK includes 6 different color caps for the HTU-2, HT-500, PHTU-2 and REV-PH handheld transmitters. The color caps help the sound engineering identify which channel is in use from a distance.

Choose the wireless system wisely!

It's important to note that all wireless systems are not created equal. Only a very few of the products on the market today are actually designed and built by the people selling them. Many of the most popular systems are built by microphone companies that only recently began to manufacture wireless devices. EV is unique in the world of wireless. Electro-Voice has been leading the way in microphone technology for 80 years and Telex practically invented professional wireless microphones 30 years ago. In the late 1990's when Telex and Electro-Voice came together, these two great heritages combined into a one of a kind microphone company. All EV wireless products are the result of this vast experience and technological

know-how. As more and more wireless products get into the market, more problems in installation and performance are being encountered. Often times these problems are unique to the situation and require a trained professional with considerable RF experience to solve. EV maintains a staff of highly trained RF engineers and designers to help our dealers and customers get systems to work in the most critical and demanding applications. Wherever possible, we build features into our new products to take care of problems before they start. The key for the selling dealer is that they have a large company with plenty of experience and talent backing-up their wireless installations.

Important Wireless Terminology

Like any other technical business, the wireless world is filled with technical jargon and concepts all its own. It is very important that you understand the basics of this language, or overzealous marketing materials can easily mislead you.

A wireless system at its most basic includes a transmitter,

handheld or bodypack, and a receiver. There are many ways to get the signal from point A to point B and it is important to dispel any myths or preconceived notions that may have been picked up from various marketing materials. We will go through the more common technical terms and try to give you an objective outlook.

What is Diversity?

Diversity reception is a method of minimizing the effects of multi-path delays that create drop outs of the radio signal. This is done by combining or selecting two or more antenna sources for the same signal in order to produce a constantly usable signal. This always requires more than one antenna in different physical locations but not necessarily multiple receivers.

There are many diversity circuits used in wireless microphones on the market today, including twin receiver "switching" diversity, antenna diversity, switching antenna diversity, and the EV patented Posi-Phase auto diversity. Each of these methods may be effective, depending on the particular implementation of the circuitry by the manufacturer, provided other critical areas of the receiver circuitry are not compromised.

The term "diversity" is derived from the word "diverse", which according to the American Heritage Dictionary means varied or unlike. In the RF world, this translates to two or more unlike sources of received signal energy at the receiver. As long as the two sources of signal are unlike or varied from each other, they are diverse, hence the term 'diversity'. These days you hear a lot of hype about some systems that claim to be "true" diversity. If it were true, there would also have to be a "false" diversity. But, by definition, any receiver using two or more varied signal inputs has diversity, so the only 'false' diversity would be single antenna non-diversity. Major manufacturers may differ in their particular implementation of the diversity circuitry, but all diversity systems use different sources of received energy from two or more antennas. The term 'true diversity' is meaningless from an engineering standpoint.

What is patented Posi-Phase Diversity?

Posi-Phase diversity uses two antennas spaced apart, connected to a single high quality receiver. The antenna signals are connected internally to microprocessor circuits that monitor the phase relationship between the two antennas. Both antennas are active at all times which greatly increases the signal strength under normal conditions. In the event of a signal interruption from a partial phase cancellation (multipath) or total phase cancellation (dropout) the logic circuitry adjusts the phase of the secondary antenna to a positive condition relative to the primary antenna. This process occurs in a fraction of a second and continually adjusts the phase of the second antenna for the optimum signal. A similar patented technique is used in cellular telephones to insure their reliable operation. Telex Posi-Phase diversity is more effective and less costly to produce

than switching diversity because only one high quality receiver is required. Since only one receiver is needed, we are able to concentrate on the overall receiver design on more important aspects of the receiver design such as filtering, IF circuitry, squelch and audio circuitry. Concentrating on these critical areas of a receiver design yields superior performance over switching diversity.

The superior performance is easily verified by a simple shoot-out with range and audio quality tests. Generally, under the same environment EV systems will go nearly twice as far as competitive models in a similar price range.

What is Phase Cancellation?

Phase cancellation or multipath dropout is a phenomenon where a direct radio signal and a reflected radio signal combine in the receiver. The two signals are slightly out of phase from each other due to the delay in the reflected signal. The phase difference causes the two signals to interfere with each other and cause deterioration in the quality of signal at the receiver. When the distance and geometry are just right, the signals are 180 degrees out of phase and can cancel each other completely, often referred to as a dropout.

A very common example of phase cancellation or multipath dropout has occurred to most people at one time or another. If you have ever driven your car listening to your favorite FM radio station and pulled up to a stop light and noticed your radio station become fuzzy and faded away as you pull slowly forward, you have experienced phase cancellation. Did you notice that when you pulled your car up just a few feet the station came back to perfect reception?

Because multipath problems are related to the geometry of the set up, it is possible to walk test the transmitters and correct potential dropouts using tools like the Sound Check Screen in the REV and adjusting your antenna placements. But be wary, each time you change the scenery, arena, or even add people in the performance area, the mix changes.

What is Squelch Circuit?

Good receiver design begins with the RF and IF filtering, but another important part of the receiver circuitry is the squelch system, or RF detection circuitry. This circuitry is the "gate" that allows the audio to turn on or off based on the RF signals entering the receiver. Simple gate squelch circuits that are commonly used in most competitive wireless receivers have a detector circuit that opens the audio path as soon as a preset level of RF energy is reached. When the signal is below the preset level, the audio path is "closed" or grounded to be very quiet. The obvious problem with a simple gate squelch is that any RF energy including distortion, hiss, harmonics from such sources as lighting dimmers, CD or DVD players, computers, digital effects and electric motors are indistinguishable from the desired signal. This extraneous RF energy will open the squelch gate just as easily as the intended transmitter. So, often times the user must "crank" up the squelch level all the way up to limit the sensitivity to noise, which reduces range and performance of the system.

What is Combination Squelch Circuit?

Advanced products like the FMR-1000, RE-1 and ENG-100 use a combination of tone-code and amplitude squelch to provide maximum protection against errant signals. In this case, the tone squelch works as described in the previous section and when the tone is present the amplitude squelch remains active. If, in the unlikely event, random noise fools the tone detector, the signal at the intended frequency still needs to be high enough to register on the amplitude squelch. The back up amplitude squelch further reduces the chances that an errant signal will cause audio noise while the transmitter is turned off.

Wireless “Gain Settings”

Almost every wireless microphone system has an adjustment on the transmitter that is called a “Gain” adjustment, which often confuses users. This setting should really be called a “Deviation Control”, but that would more than likely confuse users even more. The problem with calling it a gain setting, however, is that the end user attempts to use it to set their overall audio level – not what the control is designed to do. After all, wired microphones do not have a gain control and the mixing board or amplifier must be used to control the audio levels.

The gain setting is unique to wireless microphones and is used to maximize the signal-to-noise ratio and dynamic range whether it is used as a podium microphone, close

talking vocal mic, lapel, headworn, or even guitar or instrument. Frequency Modulated (FM) radios transmit audio information as changes in the carrier frequency. So, in the operation of a wireless microphone system, the greater the changes in frequency (deviation), the better the signal-to-noise ratio will be. So, if the system’s maximum deviation is +/-40KHz, we want the loudest level input into the microphone to generate 40KHz deviation. With the gain set above that, we would be clipping or distorting the maximum input and if it is set too low, we are not getting the clearest possible signal.

How to properly set the Wireless “Gain”

- 1) Before the audio connections are even made or with the PA system muted, simply sing or scream into the microphone as loudly as it will ever be used in performance in this application. (For guitar systems, turn the gains on the guitar to maximum and hit the hardest note that will be used in concert)
- 2) Then adjust the gain on the transmitter until the audio meter peaks in the usable range.
- 3) Make the audio connections and use the mixing board or amplifier to set the appropriate audio levels for the PA. For a guitar/instrument wireless system, use the receiver output level adjustment to match the “wired” instrument output level.

What other considerations should I think about?

When selecting a wireless system, consider the long-term use for the system and always purchase a complete solution. That is, if you eventually intend to add more systems, make sure you select a system that will allow for the total number of future systems. Also, don’t forget to look at accessories such as antenna combiners, antenna amplifiers, antennas, low loss coaxial cable, and microphone choices.

Electro-Voice has a complete line of wireless accessories for UHF systems. These accessories allow the system to be tailored for the individual application and allow the user to get the most from their investment.

Wireless Microphone Antenna Guide

ANTENNA TYPES

Most products ship with 1/4-inch wave antennas to be mounted directly on the receiver or the rack mount hardware.

These 1/4-inch wave antennas are not ground independent, meaning that they cannot be mounted remotely at the end of a run of coaxial cable. For remote mounting, use 1/4-inch wave or directional Log Periodic antennas such as the FA-GW, CLA series or the LPA500.

REMOTE MOUNTING

Antennas should be mounted with a direct line-of-sight to the performance area. Whenever possible, that also means above the cast and crew, so mounting antennas ten feet in the air at the side of the stage is one of the best places for them. All coaxial cable has signal loss, so keep the cable runs to minimum and use low loss cables to keep the maximum performance range. The CXU cables from EV use very low loss cables that will help maintain range.

ANTENNA DISTRIBUTION

When racking multiple receivers together, it is best to use an antenna distribution system like the APD4+. The APD4+ provides power and antenna connectors for 4 1/2 rack receivers and can be cascaded to run antennas for up to 16 systems from 2 antennas (using 5 APD4+ units). With the REV-D receiver’s antenna pass through feature, one APD4+ can supply antennas for 24 channels of REV wireless. One important thing to keep in mind is to connect the input of each additional splitter to the output of the original APD4+ (the one connected directly to the antennas) to prevent a loss of range.





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