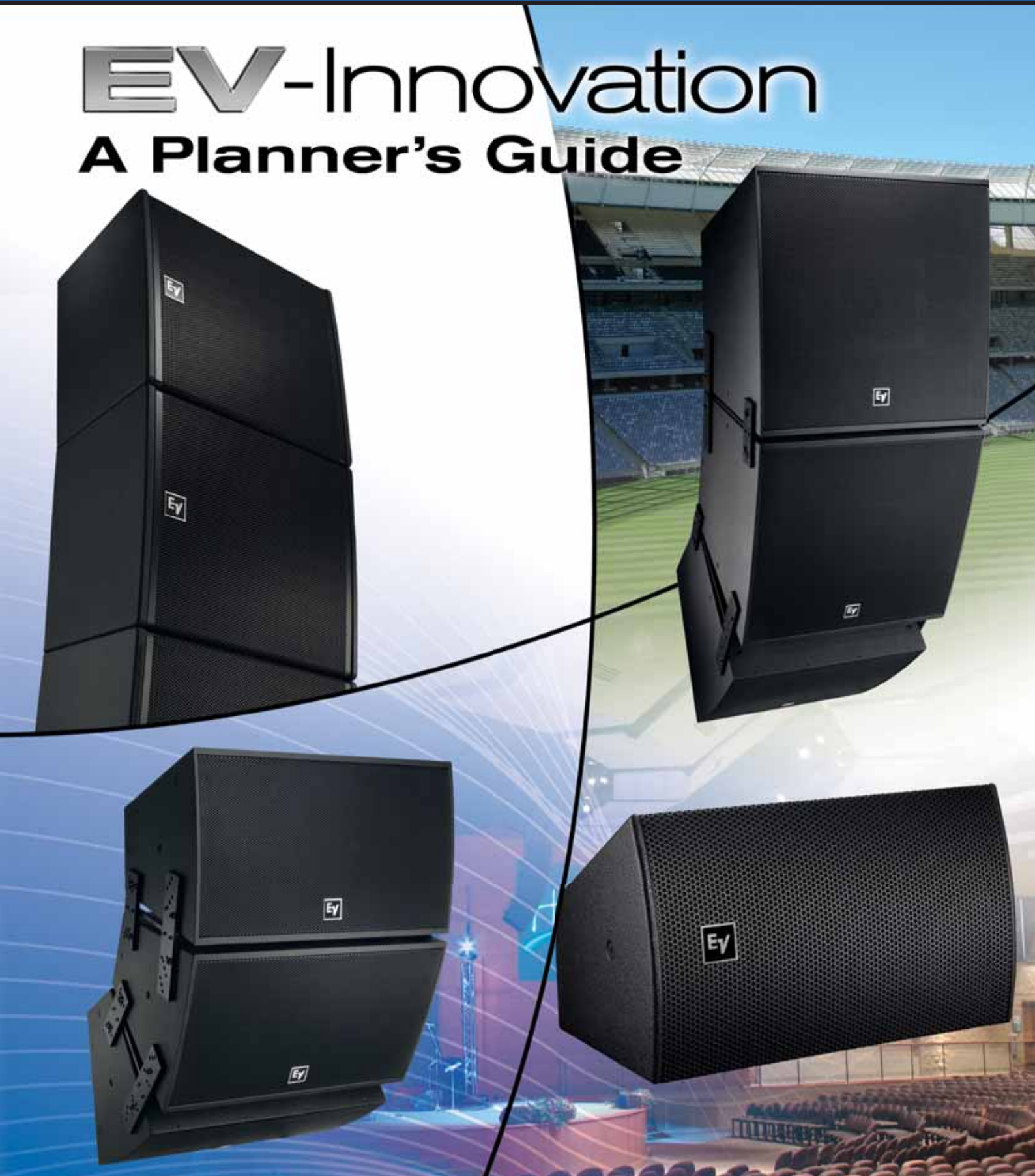
Electro-Voice

EV-Innovation

A Planner's Guide



-Innovation

The EV-Innovation family of loudspeakers was specifically designed to meet the diverse requirements of installed sound systems. EV-Innovation currently consists of four distinct product lines that provide system designers with complementary building blocks to address the needs of a wide range of venues and acoustical challenges.

EV-Innovation is the result of the largest development program in the history of Electro-Voice. Building upon an 80-year heritage of audio design excellence proven in thousands of installations around the world, EV-Innovation systems offer an unprecedented combination of audio performance, versatility, ease of use, and aesthetics.

At the heart of the EV-Innovation family are brand-new and highly refined transducers, designed by EV engineers – the most knowledgeable and passionate in the industry – using the very latest developmental and diagnostic tools exclusive to Electro-Voice R&D.

EVA

EVA is designed to provide full-bandwidth, well-defined coverage from easily created line arrays using four different preconfigured two-way modules.

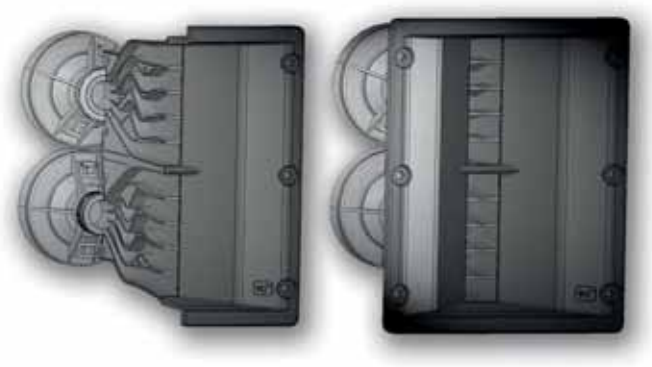
EVA delivers the advantages of high-performance line arrays in an install-friendly product. Each enclosure contains two line array elements. Up to six modules can be hung vertically for a total of twelve line array elements that can be driven passively from a single amplifier channel. Internal rigging hidden behind cosmetic panels gives EVA a clean look that fits in almost any setting. EV's Hydra™ plane wave generator, ensures effortless mid- and high-frequency reproduction at high output levels. EVA Design Assistant (EVADA) software facilitates fast, straight-forward system design.

- **True line array performance with EV's patented Hydra™ plane wave generator**
- **Easy and quick to configure and install**
- **Aesthetically pleasing with internal hidden rigging**
- **Two vertical and two horizontal patterns for flexible designs**
- **Very high maximum SPL output capability with extremely low distortion level**
- **Sophisticated internal passive network system designed for single amp channel drive**
- **Available in black or white in one of three versions: EVCoat™ (interior use), PI (indirect weather exposure), and FG (fiberglass - direct exposure).**

The acoustic relation of one module to another is controlled by complex and sophisticated passive EQ/crossover networks, eliminating the need for loudspeaker DSP and multiple amplifier channels. Six EVA modules can be operated in parallel from a single amplifier channel capable of driving a 2.7-ohm nominal impedance (e.g. CPS 2.12). Flexible frequency-shading and module-attenuation options enable uniform front-to-back coverage. Array design and "tweaking" for a particular room are done with EVADA (EVA Design Assistant) software, downloadable at www.electrovoice.com.

EVA-2082S 126

The Hydra™ – EV's plane wave generator



The Hydra™

The most critical information in any music signal is found in the mid and high frequencies. The number of HF devices used is one measure of whether the size of a sound system is adequate. Line arrays require a sufficient number of compression drivers to balance the coherent energy of the cone array elements.

In a vertical array of multiple sound sources, it is vital to maintain minimal distance between HF elements relative to the radiated wavelength — a challenge with frequencies above 3 kHz (wavelength about 11 cm / 4"). A key component of the outstanding performance and success of EV line arrays is our unique Hydra™ plane wave generator, through which the output of one HF driver is divided into discrete adjacent paths that arrive with the same amplitude and phase at the waveguide.

EVA's unique, multi-driver Hydras use two compression drivers to feed each waveguide, providing both SPL and dynamic range for any application and array size.

Mounting/Rigging System

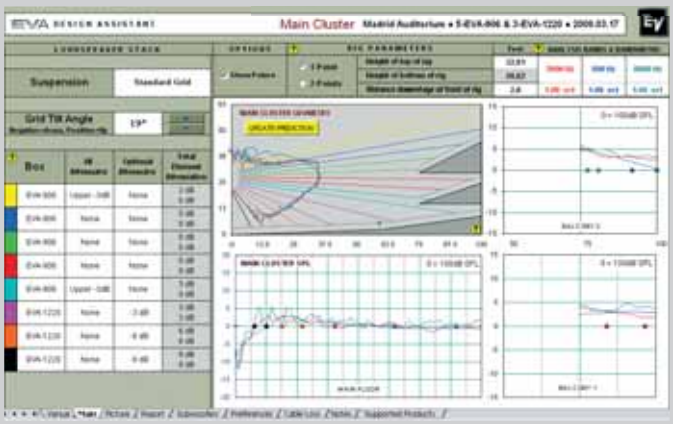
EVA has an internal, nearly invisible rigging system. Modules are connected to one another with an internal top-to-bottom metal structure that is hidden by the cover panels. This gives an EVA cluster great aesthetic appeal — more an architectural element than a loudspeaker system. The rigging system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

EVA-2082 1220

EVA Design Assistant: EVADA

EVADA helps users quickly determine the type and quantity of modules required to achieve optimal coverage for any given venue.

For more demanding documentation, EASE data is provided on the EV website: www.electrovoice.com.



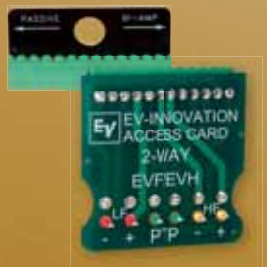
EVH

EVH coaxial, horn-loaded loudspeaker systems provide pattern control as low as 500 Hz. This makes EVH a particularly effective choice for environments in which reverberation time (RT60) exceeds 2.5 seconds. EV's Constant Directivity Horn technology directs more sound at the sound-absorbing audience and less at reflective room surfaces. The results are increased voice intelligibility and musical clarity, as well as even coverage over the listening area.

- **500-Hz control translates to less "spill" on stage, reducing the chance of feedback under a loudspeaker cluster**
- **High maximum SPL output capability with extremely low distortion**
- **Biampable, but sophisticated internal crossover and EQ networks make cost-saving passive operation very attractive**
- **15" horn-loaded woofer, rotatable high- and mid-frequency horns**
- **Pairs with EVF subwoofers**
- **Available with six rotatable Constant Directivity Horn patterns (40° x 30° / 60° x 40° / 60° x 60° / 90° x 40° / 90° x 60° / 90° x 90°)**

Input Panel EVH/EVF

This new input panel was designed from the installer's perspective and has a range of innovative, user-friendly features:



- **Easy-access passive/biamp switch card.**
- **The same interface for the passive/biamp card can be used as an access point to test woofers and drivers without the need to dismantle the enclosure.**
- **Four-pin Phoenix/Euroblock screw-terminal connectors, which accept up to 10-gauge wire (AWG).**
- **Panel accepts three optional covers: the CDNL4, equipped with dual Neutrik Speakon® NL4 chassis connectors for quick-disconnect applications, the CSG, equipped with a gland nut for weather-protection of the connection points, and the CDG, equipped with dual gland nuts.**
- **The CDG dual gland-nut cover is included with PI and FG models.**
- **An internal landing pad for the optional TK-150 70/100-V transformer is on the rear of the input panel. Simply install the transformer on the input panel and attach the wire harness to the PC board, then reinstall the panel, attaching the included label around the Phoenix terminal block—the input block is now the power-tap selector.**

EVH-1152S

EVH-1152S Series Acousitic Performance

Each EVH-1152S loudspeaker is a mid-sized, 15-inch two-way coaxial horn-loaded system. Each loudspeaker contains 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. Six waveguide patterns are available, from long throw to short throw and some with extended, 60° or 90° vertical coverage: 40° x 30°, 60° x 40°, 60° x 60°, 90°x 40°, 90° x 60°, and 90° x 90°. This broad selection makes it much easier to create a cluster that precisely addresses your space.

The horn-loaded woofer is the basis of the EVH series' very high sensitivity, on the order of 6 dB higher than a typical front-loaded system. While EVH systems can be biamped, highly sophisticated internal EQ/crossover networks provide superb passive performance and eliminate the need for digital signal processing and multiple amplifier channels.

D-Versions

The EVF and EVH series include two distinct versions: "S" and "D". Each version has its own identity and functionality tailored to meet the specific needs of the permanently installed audio market.

The "S" versions of both the EVF front-loaded and EVH horn-loaded systems feature SMX series woofers with high-power-handling 2.5-inch voice coils and fully symmetric drive for linear performance. They are equipped with the compact, high-SPL ND2B compression driver, which features a medium-format two-inch voice coil and a pure titanium dome in a neodymium magnetic structure. Together they deliver clean, high SPL for many permanently installed audio applications.

The "D" versions of EVF front-loaded systems feature the proven DVX series woofers, which offer higher power handling and lower power compression with a 3-inch voice coil and forced air cooling. The new DH7N compression driver features a large-format 3-inch voice coil and a pure titanium dome in a neodymium magnetic structure, offering more linear and extended performance with higher power handling and lower distortion. This combination provides high-definition audio for the most demanding venues and critical listening environments where absolutely pristine reproduction of music and voice is required.

The improved performance of the EVH "D" versions is achieved through the use of a DH7N compression driver teamed with an SMX-series woofer to provide a winning combination of high SPL and vocal clarity in compact, coaxial horn-loaded package.

These "S" and "D" versions of EV-Innovation family are each engineered to deliver precise audio in their respective designs and applications. No matter what the venue requirements are, EV-Innovation has a solution built to excel in terms of both performance and value for the permanent install market.

EVH-1152S

Mid-Frequency Waveguide

Mid-frequency waveguide contours can be removed and rotated to match the coverage pattern of the rotatable high-frequency waveguide

EVF

EVF loudspeakers are compact, front-loaded systems with 12- and 15-inch woofers. The line includes both full-range systems and subwoofers in configurations that provide an attractive combination of high performance and modest size in a cost-effective package. Although EVF systems can be biamped, highly sophisticated internal fourth-order EQ/crossover networks provide superb passive performance. EVF is the successor to Electro-Voice's popular FRi and FRi+ series. EVF expands on the capabilities of those lines by adding supplementary low-frequency systems and more coverage patterns.

- **Seven 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).**

EVF-1181S 18-Inch
EVF-2151D Dual-15-Inch
Subwoofers

EVF-1121S, EVF-1151S and EVF-2121S
12- and 15-Inch Low-Frequency Systems

Rigging Kits for Horizontal Cluster Arrays

HRK-1 Horizontal Rigging Kit

For typical horizontal clusters using EVF full-range enclosures, with or without EVF low-frequency systems, one HRK-1 kit allows the attachment of two such enclosures side by side. Two rigging kits are required to assemble a three-box cluster. Additional HRK-1 kits can be used to assemble two-over-two and three-over-three clusters (within certain weight and height limitations as outlined in the user manual).

EVF Horzontal Cluster

HRK-2 Horizontal Rigging Kit

One HRK-2 kit allows the attachment of an EVF full-range or low-frequency enclosure to an EVF subwoofer or EVH full-range system. Another HRK-2 can be used to attach an EVF full-range or low-frequency system to the other side of an EVF subwoofer or EVH full-range system.

HRK-3 Horizontal Rigging Kit

One HRK-3 kit allows the attachment of one EVF subwoofer to an EVH full-range system.

EVF-1151S

Rigging Kits for Vertical Cluster Arrays

VRK-1 Vertical Rigging Kit

For typical vertical clusters using EVF full-range enclosures, with or without EVF low-frequency systems, one VRK-1 kit allows the attachment of two such enclosures in a vertical configuration. Two rigging kits are required to assemble a three-box cluster. Additional kits can be used to vertically cluster up to five systems, depending on weight and height limitations noted in the user manual.

VRK-2 Vertical Rigging Kit

One VRK-2 kit allows the attachment of one EVF full-range or low-frequency system to one EVF subwoofer or EVH full-range enclosure. Additional kits can be used to vertically cluster up to five systems, depending on weight and height limitations noted in the user manual.

VRK-3 Vertical Rigging Kit

One VRK-3 kit allows the attachment of one EVF subwoofer to an EVH full-range system.

EVU

EVU ultracompact systems bring sound to areas that larger systems don't reach. They complement other members of the EV-Innovation family as delay systems, under-balcony speakers, front fills, or in distributed audio systems. Available in versions with single or dual 6½- or 8-inch woofers, each system features a rotatable, 90° x 50° Constant Directivity Horn and a small-format compression driver.

- **6.5- and 8-inch woofers allow ultracompact enclosures for**
  - **Delay systems**
  - **Under-balcony applications**
  - **Front-fill applications**
  - **Wall-mount applications**
  - **Distributed audio systems**
  - **Asymmetrical enclosure shape provides an appropriate vertical aiming angle for both under-balcony and stage-lip applications**
  - **Sophisticated, 18-dB-octave passive crossover/EQ networks**
  - **Supplied U-bracket**
  - **Rear mounting points accept OmniMount brackets**
  - **Available in black or white (interior use)**

Optional Accessories

The input panel accepts the optional EVU-TK60 60-W 70.7/100-V input transformer, with taps at 60, 30, 15, and 7.5 W (70.7 V), 60, 30, and 15 W (100 V), and an 8-ohm pass through. The input panel also accepts the optional EVU-CDNL4 cover, equipped with dual Neutrik Speakon® NL4 chassis connectors for quick-disconnect applications such as front fill.

EVU-TK60

EVU-CDNL-4

Input Panel

Rear-mounted input panels are equipped with a four-pin Phoenix Euroblock screw-terminal connector, which accepts up to 10-gauge wire (AWG) and allows convenient daisy chaining of multiple systems.

EVU Series
Mechanical Aspects and Rigging

Each EVU loudspeaker has six M8 threaded suspension points. One point on each end is used with the supplied U-bracket. The bracket allows full, unobstructed rotation of the system (330° if the optional EVU-TK60 70.7/100-V transformer kit is installed). Four points located on the back of each system accept OmniMount 30.0 series brackets (single-woofer systems) and 60.0 series brackets (dual-woofer systems). The OmniMount brackets offer very flexible vertical tilt and horizontal pan around a single point at the rear of the loudspeaker.

EVU2062

EVU2082

EV-Innovation Application Guide

This application guide features a selection of typical projects designed with products from the EV-Innovation family. Due to the amount of information that accompanies each example, comprehensive descriptions and related files may be found on the attached DVD. We hope you will find this guide a useful resource, giving you many ideas on how to apply these products in your own projects.

EVA Projects

City and multipurpose hall without a balcony

Capacity 575 (seated) – 1000 (unseated). Two EVA hangs of four per side, all powered with a single amplifier. A very cost-effective solution for a standard city hall hosting cultural events.

Theater/opera hall with balcony

Classic drama application with the most demanding audio requirements. Up to 1800 visitors should be able to catch even smallest details with the highest possible quality. This solution features two EVA arrays of five, with a processor and two multichannel amplifiers.

Large sports and multipurpose hall

Hosts a variety of indoor sports and events, including basketball, boxing, handball, and concerts. Audience is placed on ranks around the playing field. 12 EVA arrays of five are flown around the audience area, which includes a VIP level. The entire system is networked with NetMax N8000 system controllers running IRIS-Net and driven by CPS4.10 multichannel amplifiers.

Medium-sized stadium

Capacity of up to 32,000 people in two tiers. EVA hangs of six elements hung in 30-m increments around the tiers provide the very high SPL required. Processed via the NetMax N8000 and powered via CPS4.10 multichannel amplifiers.

Images shown are not of actual venues – please refer to DVD for details.

EVH Projects

Medium-sized sports hall

This indoor sports hall has high ambient noise levels as well as many hard reflecting surfaces. This must be overcome with high SPL combined with high intelligibility. Three clusters of two EVH provide the solution, with processing and three CPS4.10 multichannel amps.

Medium-sized stadium

Capacity 32,000 (in two tiers). A cluster of two EVH provides even coverage for both stands. Clusters are flown at a height of 23 m, with a distance of 16 m between the clusters. The system is networked with a fiber-optic double ring structure.

Large stadium

Capacity 45,000 (in two tiers). Entire calculated volume 613,210 m3. Critical reverberation times, lots of masking effects, and safety requirements were the main challenges of this project. the system includes clusters of two EVH, with EVU 2062 as under balcony speakers. The system is based upon a fiber-optic network, with a NetMax N8000 system controller and CPS4.10 amps providing high SPL and intelligibility.

EVF projects

Large round sports hall

Capacity 7,000 seats. A basketball premier league venue requiring an updated audio system. EVF was chosen because of its light weight and the direct SPL that it can focus on the main and extended stands, as well as the field itself. Although driven in passive full range, a NetMax N8000 allows superior control of the entire system, which is driven with CPS4.10 multichannel amplifiers.

Large exhibition hall

A very large exhibition hall requiring straight-downward-aiming coverage from the ceiling. The constantly changing construction inside the space makes side/horizontal coverage redundant in this application. The system features 40 EVF1122 elements driven by two CPS4.5 in 100-V direct drive.

Medium-sized stadium

Capacity 32,000. The front-loaded EVF series is also suitable for medium-sized stadium applications with shorter distances between loudspeakers and audience. Its compact format and light weight – in combination with the multiple available coverage patterns available and full-range response of the 15" two-way cabinets – make them the ideal tool for sound reinforcement in small- to medium-sized stadiums

Images shown are not of actual venues – please refer to DVD for details.

EVA Specifications

	EVA-2082S/906	EVA-2082S/920	EVA-2082S/126	EVA-2082S/1220
Freq. Response* (-3 dB)	60 Hz - 19 kHz	60 Hz - 19 kHz	60 Hz - 19 kHz	60 Hz - 19 kHz
Freq. Range* (-10 dB)	45 Hz - 20 kHz	45 Hz - 20 kHz	45 Hz - 20 kHz	45 Hz - 20 kHz
Rec. Hi-Pass Frequency	50 Hz	50 Hz	50 Hz	50 Hz
Axial Sensitivity**:	104 dB (1 W / 1 m)	104 dB (1 W / 1 m)	104 dB (1 W / 1 m)	104 dB (1 W / 1 m)
Max. Calculated SPL**:	129 dB continuous, 135 dB peak	129 dB continuous, 135 dB peak	129 dB continuous, 135 dB peak	129 dB continuous, 135 dB peak
Horizontal Coverage:	90°	90°	120°	120°
Vertical Coverage:	6°	20°	6°	20°
Power Handling:	350 W continuous, 1400 W peak	350 W continuous, 1400 W peak	350 W continuous, 1400 W peak	350 W continuous, 1400 W peak
LF Transducer:	2 x EVS2008 8" (203 mm) driver	2 x EVS2008 8" (203 mm) driver	2 x EVS2008 8" (203 mm) driver	2 x EVS2008 8" (203 mm) driver
HF Transducer:	4 x DH2005 1.25" (32 mm) diaphragm compression driver	4 x DH2005 1.25" (32 mm) diaphragm compression driver	4 x DH2005 1.25" (32 mm) diaphragm compression driver	4 x DH2005 1.25" (32 mm) diaphragm compression driver
Crossover Frequency:	1740 Hz	1740 Hz	1740 Hz	1740 Hz
Nominal Impedance:	16 ohms	16 ohms	16 ohms	16 ohms
Minimum Impedance:	12 ohms	12 ohms	12 ohms	12 ohms
Connectors:	2 x four-contact 10 AWG Phoenix/euro block style screw terminals	2 x four-contact 10 AWG Phoenix/euro block style screw terminals	2 x four-contact 10 AWG Phoenix/euro block style screw terminals	2 x four-contact 10 AWG Phoenix/euro block style screw terminals
	PI & FG versions include dual gland nut input panel cover	PI & FG versions include dual gland nut input panel cove	PI & FG versions include dual gland nut input panel cove	PI & FG versions include dual gland nut input panel cove
Enclosure Material:	Plywood with EVCoat™	Plywood with EVCoat™	Plywood with EVCoat™	Plywood with EVCoat™
Grille:	16 ga. galvanneal, powder coated and screened	16 ga. galvanneal, powder coated and screened	16 ga. galvanneal, powder coated and screened	16 ga. galvanneal, powder coated and screened
	PI & FG versions - stainless steel with hydrophobic cloth	PI & FG versions - stainless steel with hydrophobic cloth	PI & FG versions - stainless steel with hydrophobic cloth	PI & FG versions - stainless steel with hydrophobic cloth
Suspension:	EVA grid (sold separately)	EVA grid (sold separately)	EVA grid (sold separately)	EVA grid (sold seperately)
Dimensions (H x W x D):	514.4 mm x 596.9 mm x 358.2 mm (20.25" x 23.50" x 14.10")	512.2 mm x 596.9 mm x 369.1 mm (20.17" x 23.50" x 14.53")	514.4 mm x 596.9 mm x 358.2 mm (20.25" x 23.50" x 14.10")	512.2 mm x 596.9 mm x 369.1 mm (20.17" x 23.50" x 14.53")
Net Weight:	37.1 kg (81.8 lbs)	36.8 kg (81.0 lbs)	37.1 kg (81.8 lbs)	36.8 kg (81.0 lbs)
Shipping Weight:	40.45 kg (89 lbs)	40 kg (88 lbs)	40.45 kg (89 lbs)	40 kg (88 lbs)

* Full space measurement.
** Full space measurement of three elements. SPL adjusted for one meter distance.

EVA Subwoofer Specifications

The technical data of the EVA Subwoofer will be found on the attached CD-ROM.

EVH Specifications

	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[1]					
Frequency Response (-10 dB)	50 – 16000 Hz[1]					
Recommended High-Pass Frequency	60 Hz					
Sensitivity 1 W/1 m	106 dB	105 dB				104 dB
Max. SPL/1 m (Calculated) Peak	139 dB	138 dB				137 dB
System Power Handling (Continuous[2]/Program/Peak)	500 W / 1000 W / 2000 W					
Nominal Impedance (Passive)	8 Ω					
Minimum Impedance	6 Ω					
Input Connections	Phoenix/Euroblock style screw terminals PI and FG versions include dual-gland-nut input-panel cover					
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 (381 mm) Driver					
HF Transducer	ND2B, 2-in (51 mm) Diaphragm Compression Driver					
Internal Passive Crossover Frequency	1300 Hz					
Enclosure Material	13-ply Weather-Resistant Birch					
Grille	Standard versions: 16-ga Galvanneal, Powdercoat, with screen behind PI and FG versions: 18-ga Stainless, Powdercoat, with hydrophobic cloth behind					
Environmental	Standard versions: IEC 60529 IP33 PI and FG versions: IEC 60529 IP55					
Suspension	(28) M10 Threaded Points (one EBK-M10-EVI kit of four forged eyebolts included)					
Height Width Depth	30.26 in (768.6 mm) 30.26 in (768.6 mm) 26.77 in (680.1 mm)					
Net Weight	143 lb (64.9 kg)					

1 Half-space measurement in passive mode
2 EIA RS-426A (eight hours)

	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[1]					
Frequency Response (-10 dB)	50 – 20000 Hz[1]					
Recommended High-Pass Frequency	60 Hz					
Sensitivity 1 W/1 m	106 dB	105 dB				104 dB
Max. SPL/1 m (Calculated) Peak	139 dB	138 dB				137 dB
System Power Handling (Continuous[2]/Program/Peak)	500 W / 1000 W / 2000 W					
Nominal Impedance (Passive)	8 Ω					
Minimum Impedance	6 Ω					
Input Connections	Phoenix/Euroblock style screw terminals PI and FG versions include dual-gland-nut input-panel cover					
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 (381 mm) Driver					
HF Transducer	DH7N, 3-in (76 mm) Diaphragm Compression Driver					
Internal Passive Crossover Frequency	1300 Hz					
Enclosure Material	13-ply Weather-Resistant Birch					
Grille	Standard versions: 16-ga Galvanneal, Powdercoat, with screen behind PI and FG versions: 18-ga Stainless, Powdercoat, with hydrophobic cloth behind					
Environmental	Standard versions: IEC 60529 IP33 PI and FG versions: IEC 60529 IP55					
Suspension	(28) M10 Threaded Points (one EBK-M10-EVI kit of four forged eyebolts included)					
Height Width Depth	30.26 in (768.6 mm) 30.26 in (768.6 mm) 26.77 in (680.1 mm)					
Net Weight	145.5 lb (66.1 kg)					

1 Half-space measurement in passive mode
2 EIA RS-426A (eight hours)

EVF Specifications

	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[1,2]					
Frequency Response (-10 dB)	49 – 19000 Hz[1,2]					
Recommended High-Pass Frequency	65 Hz					
Sensitivity 1 W/1 m	98 dB					
Max. SPL/1 m (Calculated) Peak	131 dB					
System Power Handling (Continuous[3]/Program/Peak)	500 W / 1000 W / 2000 W					
Nominal Impedance (Passive)	8 Ω					
Minimum Impedance	6 Ω					
Input Connections	Phoenix/Euroblock style screw terminals PI and FG versions include dual-gland-nut input-panel cover					
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 (305 mm) Driver					
HF Transducer	ND2B, 2-in (51 mm) Diaphragm Compression Driver					
Internal Passive Crossover Frequency	1450 Hz					
Enclosure Material	13-ply Weather-Resistant Birch					
Grille	Standard versions: 16-ga Galvanneal, Powdercoat, with screen behind PI and FG versions: 18-ga Stainless, Powdercoat, with hydrophobic cloth behind					
Environmental	Standard versions: IEC 60529 IP44 PI and FG versions: IEC 60529 IP55					
Suspension	(22) M10 Threaded Points (one EBK-M10-EVI kit of four forged eyebolts included)					
Height Width Depth	30.26 in (768.6 mm) 16 in (406.3 mm) 16.27 in (413.3 mm)					
Net Weight	63.1 lb (28.6 kg)					

1 Half-space measurement in passive mode
2 FG (full outdoors) versions have no enclosure vents, somewhat reducing their low frequency response
3 EIA RS-426A (eight hours)

	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[1,2]					
Frequency Response (-10 dB)	41 – 18000 Hz[1,2]					
Recommended High-Pass Frequency	45 Hz					
Sensitivity 1 W/1 m	101 dB					
Max. SPL/1 m (Calculated) Peak	134 dB					
System Power Handling (Continuous[3]/Program/Peak)	500 W / 1000 W / 2000 W					
Nominal Impedance (Passive)	8 Ω					
Minimum Impedance	6 Ω					
Input Connections	Phoenix/Euroblock style screw terminals PI and FG versions include dual-gland-nut input-panel cover					
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 (381 mm) Driver					
HF Transducer	ND2B, 2-in (51 mm) Diaphragm Compression Driver					
Internal Passive Crossover Frequency	1450 Hz					
Enclosure Material	13-ply Weather-Resistant Birch					
Grille	Standard versions: 16-ga Galvanneal, Powdercoat, with screen behind PI and FG versions: 18-ga Stainless, Powdercoat, with hydrophobic cloth behind					
Environmental	Standard versions: IEC 60529 IP44 PI and FG versions: IEC 60529 IP55					
Suspension	(22) M10 Threaded Points (one EBK-M10-EVI kit of four forged eyebolts included)					
Height Width Depth	30.26 in (768.6 mm) 18.5 in (469.8 mm) 18.37 in (466.6 mm)					
Net Weight	70.9 lb (32.1 kg)					

1 Half-space measurement in passive mode
2 FG (full outdoors) versions have no enclosure vents, somewhat reducing their low frequency response
3 EIA RS-426A (eight hours)

EVF Specifications

	EVF-1122D/64	EVF-1122D/66	EVF-1122D/94	EVF-1122D/96	EVF-1122D/99	EVF-1122D/126
Frequency Response (-3 dB)	57 – 18000 Hz[1,2]					
Frequency Response (-10 dB)	49 – 21000 Hz[1,2]					
Recommended High-Pass Frequency	65 Hz					
Sensitivity1 1 W/1 m	97 dB					
Max. SPL/1 m (Calculated)[1]	131 dB					
System Power Handling (Continuous[3]/Program/Peak)	600 W / 1200 W / 2400 W					
Nominal Impedance (Passive)	8 Ω					
Minimum Impedance	6 Ω					
Input Connections	Phoenix/Euroblock style screw terminals PI and FG versions include dual-gland-nut input-panel cover					
Coverage (Nominal -6 dB) H°	60 °	60 °	90 °	90 °	90 °	120 °
Coverage (Nominal -6 dB) V°	40 °	60 °	40 °	60 °	90 °	60 °
LF Transducer	DVX3121A, 12-in (305 mm) Woofer					
HF Transducer	DH7N, 3-in (76 mm) Diaphragm Compression Driver					
Internal Passive Crossover Frequency	1300 Hz					
Enclosure Material	13-ply Weather-Resistant Birch					
Grille	Standard versions: 16-ga Galvanneal, Powdercoat, with screen behind PI and FG versions: 18-ga Stainless, Powdercoat, with hydrophobic cloth behind					
Environmental	Standard versions: IEC 60529 IP44 PI and FG versions: IEC 60529 IP55					
Suspension	(22) M10 Threaded Points (one EBK-M10-EVI kit of four forged eyebolts included)					
Height Width Depth	30.26 in (768.6 mm) 16 in (406.3 mm) 16.27 in (413.3 mm)					
Net Weight	65.5 lb (29.7 kg)					

1 Half-space measurement in passive mode
2 FG (full outdoors) versions have no enclosure vents, somewhat reducing their low frequency response
3 EIA RS-426A (eight hours)

	EVF-1152D/43	EVF-1152D/64	EVF-1152D/66	EVF-1152D/94	EVF-1152D/96	EVF-1152D/99
Frequency Response (-3 dB)	70 – 18000 Hz[1,2]					
Frequency Response (-10 dB)	40 – 21000 Hz[1,2]					
Recommended High-Pass Frequency	45 Hz					
Sensitivity1 1 W/1 m	100 dB					
Max. SPL/1 m (Calculated)[1]	134 dB					
System Power Handling (Continuous[3]/Program/Peak)	600 W / 1200 W / 2400 W					
Nominal Impedance (Passive)	8 Ω					
Minimum Impedance	6 Ω					
Input Connections	Phoenix/Euroblock style screw terminals PI and FG versions include dual-gland-nut input-panel cover					
Coverage (Nominal -6 dB) H°	40 °	60 °	60 °	90 °	90 °	90 °
Coverage (Nominal -6 dB) V°	30 °	40 °	60 °	40 °	60 °	90 °
LF Transducer	DVX3151A, 15-in (381 mm) Woofer					
HF Transducer	DH7N, 3-in (76 mm) Diaphragm Compression Driver					
Internal Passive Crossover Frequency	1300 Hz					
Enclosure Material	13-ply Weather-Resistant Birch					
Grille	Standard versions: 16-ga Galvanneal, Powdercoat, with screen behind PI and FG versions: 18-ga Stainless, Powdercoat, with hydrophobic cloth behind					
Environmental	Standard versions: IEC 60529 IP44 PI and FG versions: IEC 60529 IP55					
Suspension	(22) M10 Threaded Points (one EBK-M10-EVI kit of four forged eyebolts included)					
Height Width Depth	30.26 in (768.6 mm) 18.5 in (496.8 mm) 18.37 in (466.6 mm)					
Net Weight	75.7 lb (34.4 kg)					

1 Half-space measurement in passive mode
2 FG (full outdoors) versions have no enclosure vents, somewhat reducing their low frequency response
3 EIA RS-426A (eight hours)

EVF Specifications

	EVF-1121S	EVF-1151S	EVF-2121S	EVF-1181S	EVF-2151D
Frequency Response (-3 dB)	70 – 98 Hz[1,2]	67 – 95 Hz[1,2]	54 – 145 Hz[1,2]	35 – 100 Hz[1,2]	40 – 2600 Hz[1,2]
Frequency Response (-10 dB)	48 – 120 Hz[1,2]	46 – 124 Hz[1,2]	41 – 330 Hz[1,2]	28 – 650 Hz[1,2]	30 – 3200 Hz[1,2]
Recommended High-Pass Frequency	50 Hz	35 Hz	45 Hz	33 Hz	35 Hz
Internal Passive Low-Pass Filter	100 Hz, 12 dB per octave		none	none	none
Sensitivity 1 W/1 m	103 dB		100 dB	99 dB	101 dB
Max. SPL/1 m (Calculated) Peak	135 dB		135 dB	131 dB	137 dB
System Power Handling (Continuous[3]/Program/Peak)	400 W / 800 W / 1600 W		800 W / 1600 W / 3200 W	400 W / 800 W / 1600 W	1000 W / 2000 W / 4000 W
Nominal Impedance	Passive: 4 Ω Biamp: 8 Ω		Passive: N/A Biamp: 4 Ω	Passive: N/A Biamp: 8 Ω	Passive: N/A Biamp: 4 Ω
Minimum Impedance	Passive: 3.4 Ω		Passive: N/A Biamp: 2.8 Ω	Passive: N/A Biamp: 6 Ω	Passive: N/A Biamp: 2.7 Ω
	Biamp: 5.5 Ω	Biamp: 6.4 Ω			
Input Connections	Phoenix/Euroblock style screw terminals · PI and FG versions include dual-gland-nut input-panel cover				
Coverage (Nominal -6 dB) H°	Omnidirectional in normal operating range				
Coverage (Nominal -6 dB) V°	Omnidirectional in normal operating range				
Transducer	EVS12SB, 12-in (305 mm) Driver	EVS15SB, 15-in (381 mm) Driver	Two EVS12SB, 12-in (305 mm) Driver	EVS18SB, 18-in (457 mm) Driver	Two DVX3159A, 15-in (381 mm) Drivers
Enclosure Material	13-ply Weather-Resistant Birch				
Grille	Standard versions: 16-ga Galvanneal, Powdercoat, with screen behind · PI and FG versions: 18-ga Stainless, Powdercoat, with hydrophobic cloth behind				
Environmental	Standard versions: IEC 60529 IP44 · PI and FG versions: IEC 60529 IP55				
Suspension	(22) M10 Threaded Points (one EBK-M10-EVI kit of four forged eyebolts included)			(28) M10 Threaded Points (one EBK-M10-EVI kit of four forged eyebolts included)	(28) M10 Threaded Points (one EBK-M10-EVI kit of four forged eyebolts included)
Height Width Depth	30.26 in (768.6 mm) 16.0 in (406 mm) 16.27 in (413.3 mm)	30.26 in (768.6 mm) 18.5 in (470 mm) 18.4 in (467 mm)	30.26 in (768.6 mm) 18.5 in (470 mm) 18.4 in (467 mm)	30.26 in (768.6 mm) 26.6 in (675.6 mm) 28.6 in (726.4 mm)	30.26 in (768.6 mm) 26.6 in (675.6 mm) 28.6 in (726.4 mm)
Net Weight	57.7 lb (26.2 kg)	62.6 lb (28.4 kg)	82.4 lb (37.4 kg)	101.2 lb (45.9 kg)	117 lb (53.1 kg)

1 Half-space measurement in passive mode
2 FG (full outdoors) versions have no enclosure vents, somewhat reducing their low frequency response
3 EIA RS-426A (eight hours)

EVU Specifications

	EVU-1062/95	EVU-2062/95	EVU-1082/95	EVU-2082/95
Frequency Response (–3 dB):	110-16,000 Hz[1]	100-16,000 Hz[1]	110-16,000 Hz[1]	100-16,000 Hz[1]
Frequency Response (–10 dB):	65-20,000 Hz[1]	70-20,000 Hz[1]	65-20,000 Hz[1]	60-20,000 Hz[1]
Recommended High-Pass Frequency:	90 Hz	90 Hz	90 Hz	90 Hz
Axial Sensitivity (1W/1m)	92 dB	94 dB	95 dB	95 dB
Maximum SPL (continuous/peak, calculated):	114/120 dB	119/125 dB	117/123 dB	120/126 dB
Waveguide:	6 in. x 6 in., rotatable	6 in. x 6 in., rotatable	6 in. x 6 in., rotatable	6 in. x 6 in., rotatable
Horizontal Coverage:	90°	90°	90°	90°
Vertical Coverage:	50°	50°	50°	50°
Power Handling (continuous/peak):	160/640 W[2]	300/1,200 W[2]	175/700 W[2]	350/1,400 W[2]
LF Transducer:	One ICT-6.5-8 165-mm (6.5 in.) woofer	Two ICT-6.5-8 165-mm (6.5 in.) woofers	One ICT-8-8 203-mm (8 in.) woofer	Two ICT-8-8 203-mm (8 in.) woofers
HF Transducer:	One ICT-1-8 compression driver with 33-mm (1.3 in.) diaphragm			
Nominal Impedance:	8 ohms	8 ohms	8 ohms	8 ohms
Minimum Impedance:	6 ohms	6 ohms	6 ohms	6 ohms
Connectors:	4-pin Phoenix/Euroblock screw terminals accepting up to 10-gauge wire (AWG)			
Enclosure Finish:	Textured paint	Textured paint	Textured paint	Textured paint
Color:	Black or white	Black or white	Black or white	Black or white
Grille, Standard Versions:	18-gauge steel with cloth behind	18-gauge steel with cloth behind	18-gauge steel with cloth behind	18-gauge steel with cloth behind
Suspension	Six M8 threaded points	Six M8 threaded points	Six M8 threaded points	
Dimensions (hwd):	209 mm x 533 mm x 207 mm (8.21 in. x 21.0 in. x 8.14 in.)	247 mm x 409 mm x 237 mm (9.73 in. x 16.1 in. x 9.34 in.)	247 mm x 615 mm x 237 mm (9.73 in. x 24.2 in. x 9.34 in.)	247 mm x 615 mm x 237 mm (9.73 in. x 24.2 in. x 9.34 in.)
Net Weight:	6.53 kg (14.4 lb)	11.3 kg (25.0 lb)	7.40 kg (16.3 lb)	12.8 kg (28.3 lb)
Shipping Weight:	9.12 kg (20.1 lb)	14.2 kg (31.2 lb)	10.3 kg (22.6 lb)	16.0 kg (35.2 lb)

1 Half-space measurement in passive mode
2 EIA RS-426A (eight hours).

Your **EV-**Innovation Specifications

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