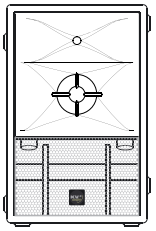
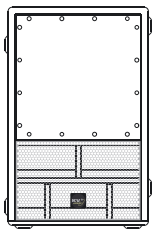
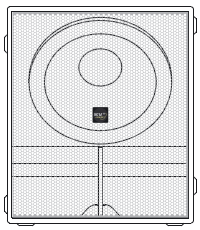
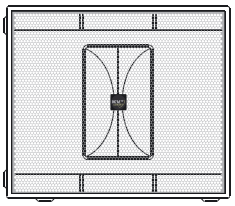
User Guide

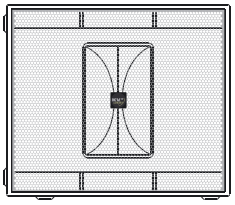
- **ES1.0**
- **ES1.5**
- **ES1.8**
- **ES2.5**
- **ES2.6**











The future of sound. Made perfectly clear.

At KV2 Audio our vision is to constantly develop technologies that eliminate distortion and loss of information providing a true dynamic representation of the source.

Our aim is to create audio products that absorb you, place you within the performance and deliver a listening experience beyond expectation.

ES1.0 Mid/High Module

ES1.5 Compact Bass Module

ES1.8 Bass Module

ES2.5, ES2.6 Bass Module

Warranty
Your ES System is Warrantied against defects in material and workmanship. Please refer to your supplier for more warranty details.

Service
WARNING! Electronic components, risk of SHOCK!

In the unlikely event that your product requires service, it must be returned to an authorised KV2 Audio distributor, service centre or shipped directly to the factory.
All warranty and service repairs must be undertaken by qualified technical personnel.
If the unit/s need to be shipped back to the factory, we advise using the original packing to reduce the risk of damage in transit.

Please contact your nearest KV2 Audio centre for service details.

ES™ 1.0 MID/HIGH MODULE

Compact Active-driven Mid/High Module

ES1.0 part number: *KVV 987 002*

Description

The ES1.0 is a dedicated Mid/Hi loudspeaker of small dimensions, weight and footprint.
Incorporating Patent Pending-Proprietory components, specifically matched to bespoke electronics, the unit presents flexible adaptability and scaleability in varied applications, with extreme output and high quality performance when accompanied by a range of compact subwoofers as a system.

ES1.0 Applications

Live performance and recorded playback for venues up to 2000 persons
(depending on program material and number of bass modules used):

- Church sanctuaries
- Auditoriums
- Band PA
- Dance clubs
- Mobile DJ
- Corporate events

ES Modular Sound System Benefits

Total flexibility
Choose the active driven subwoofer combination you need for each application and venue. Rotate the ES1.0 horn to operate the system in either a horizontal or vertical stack.

Lightest-weight compact active SR system yet
All the benefits of active sound reinforcement technology but with the
electronics in a separate module.

Superb sound
Greater dynamic range than any current active design.

Easy set-up
Ergonomic weight-balanced design with four handles, eight suspension points and "integrating feet" for easy positioning on stage. Plug-and-play connection to EPAK™ amp/processor module.

Requires EPAK unit for control electronics and amplification.

part name	part num.
EPAK 2500-115V	*KVV 987 001*
EPAK 2500-230V	*KVV 987 000*
EPAK 2500-250V	*KVV 987 134*

EPAK 2500R-115V	*KVV 987 062*
EPAK 2500R-230V	*KVV 987 061*
EPAK 2500R-250V	*KVV 987 112*

For full range systems, use one, or a combination of, the following Bass Modules:

ES1.5 - *part num. KVV 987 003*
Single fifteen-inch compact Bass Module

ES1.8 - *part num. KVV 987 004*
Single eighteen-inch high-output Bass Module

ES2.5 - *part num. KVV 987 005*
Double fifteen-inch, 4Ω high-output Bass Mo dule

ES2.6 - *part num. KVV 987 150*
Double fifteen-inch, 8Ω high-output Bass Module

Features

- High-output, compact, lightweight Mid/High Module
- 131dB sustained output
- Wide dispersion, rotatable, integrated Mid/High horn design provides optimized transducer loading and controlled dispersion
- New Patent-Pending 1.75" (44mm) diaphragm titanium compression driver with complex geometry phase plug for higher output and lower distortion performance and neodymium
- Six-inch midrange driver with 1.75" (44mm) neodymium magnetic motor structure for increased control and output and decreased distortion and weight
- Proprietary midrange heat dissipation system controls voice coil temperature, ensures high dynamics and extends transducer lifespan
- Horn-loaded, twelve-inch mid-bass driver with 3.00" (76mm) voice coil assembly and neodymium magnetic motor structure
- Professional, exterior-grade Baltic birch construction with wear-resistant polymer coating Proprietary corner and side handle designs for simplified handling and carrying
- Acetal copolymer high impact, low friction feet are asymmetrically located on three sides allowing vertical or horizontal system set up, lock-in and easy cabinet movement
- Four internal corner and one back brace with nine M10 suspension points.
A total of 27 suspension points are available for custom installation applications
- Requires EPAK2500/R unit for control electronics and amplification

The **ES1.0** is a 3-way high output, active-driven, compact mid/high Loudspeaker module. It is designed as part of a sound reinforcement speaker system that includes the EPAK™ system control and amplification system plus a compliment of application specific Bass modules.

The ES1.0 Loudspeaker system benefits from being designed exclusively to operate above 130 Hz. By optimizing the ideal operating band pass of each system component, the ES1.0 can achieve extremely high output levels consistently and safely.

Active-driven by the EPAK2500/R™ unit

Power, electronic crossovers, phase alignment, equalization, time correction and speaker protection are provided within the EPAK unit. This "one plug in, one-plug-out" system ensures fast, easy set up and complete control. It gives you the benefits of active sound reinforcement technology, yet locates the electronics in an easy-access "stand alone" or Rackmount module.

Together, the ES1.0 and EPAK2500/R units deliver the highest dynamic range of any system currently available, providing new levels of clarity, depth and resolution.

Advanced compression driver

KV2 Audio's transducer partner, 18 Sound in Cavriago, Italy, manufactures and co-develops all ES1.0 components. The compression driver is a 1.75-inch titanium diaphragm design, featuring a complex geometry phase plug that dramatically lowers distortion, eliminates ring modes and provides clearer, ripple free performance.

Exclusive KV2 rotatable horn design for maximum flexibility

The ES1.0 features a mid/high integrated horn design with a number of unique features. First, the horn can be rotated 90˚, allowing for complete flexibility in selection of vertical, horizontal and left / right system set up. The horn design is based on constant-directivity geometry with an emphasis on maintaining low transducer compression ratios, high output and wide dispersion (90 x 40). The midrange speaker is fixed to a large aluminum heat sink which is attached to a precisely designed midrange "chamber". The combination provides optimal cone loading and heat dissipation. Further loading and dispersion is controlled through a 2.28" (58mm) precision phase plug.

Heat-resistant midrange

Midrange requencies between 500Hz and 2.5kHz are reproduced by a new six-inch midrange speaker that provides 106 dB of sensitivity (1 watt / 1 meter) when coupled with the integrated horn. The magnetic motor assembly features a high temperature 1.75" (44mm) diameter voice coil assembly and extensive use of neodymium. Because of the limited linear movement of most midrange transducers - usually 2-3mm - ventilation of the voice coil assembly and magnetic structure is poor and failure rate from heat fatigue is high. The ES1.0 midrange dissipates heat passively through the use of a massive aluminum heat sink. When combined with the EPAK unit control electronics, the system provides high output levels safely and consistently over infinite periods of time and dramatically reducing heat associated transducer problems such as power compression and decreased dynamics.

Neodymium mid-bass transducer

The ES1.0 features a twelve-inch neodymium mid-bass speaker mounted on a slot-loaded horn design. It is important to note that neodymium is not a transducer panacea, as it cannot safely operate at the same typical operating temperatures ferrite does. Using neodymium requires a profound understanding of material science and finite element analysis to properly design a stable, high force magnetic structure that functions correctly. 18 Sound and KV2 e engineering jointly designed the twelve-inch mid bass driver for the ES1.0

The ES1.0 mid-bass transducer reproduces frequencies from 130Hz to 500Hz. The horn mouth is designed for optimal coupling with the mid/high horn assembly in either the vertical or horizontal position. The horn design is responsible for the mid-bass speaker's resulting high sensitivity and output. The high efficiency neodymium motor provides an extraordinary amount of force that delivers complete control of the cone mass and a high overall weight loss.

Easy to move and set up

The ES1.0 is a very compact enclosure featuring a number of ergonomically designed components that make it a light, small, and easy speaker to set up and use.

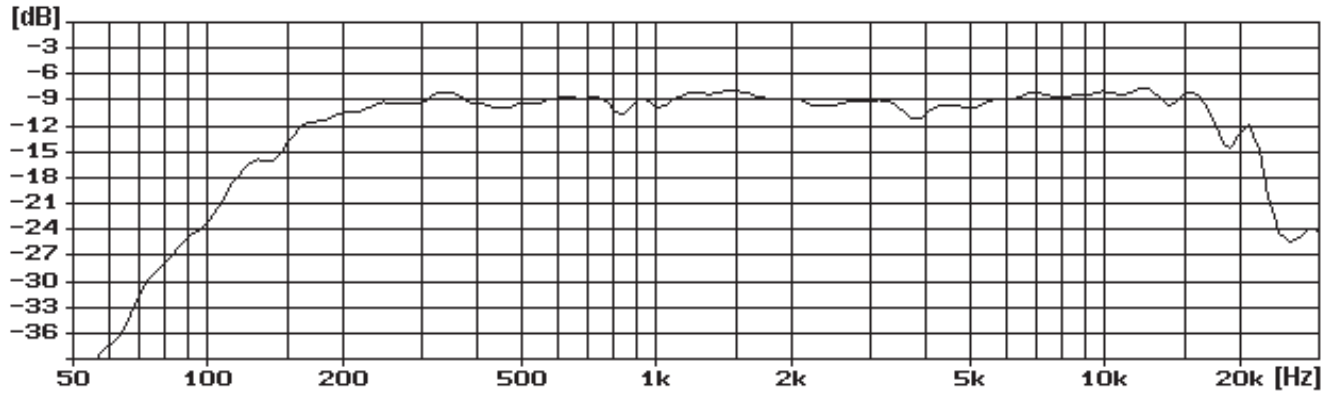
KV2 designed and tooled new cabinet handles for use in their products. The two side handles make it easy to pick up and reposition the ES1.0 in a natural, instinctive manner.

There are four industrial grade, internal braces placed at each corner and one internal brace on the back. Corner braces are held in places by four M6 and two M10 bolts, the back brace is held by two M6 and one M10, providing a wide range of installation and suspension flexibility.

ES1.0 rear panel (cable connection to EPAK unit Amplifier/Controller)

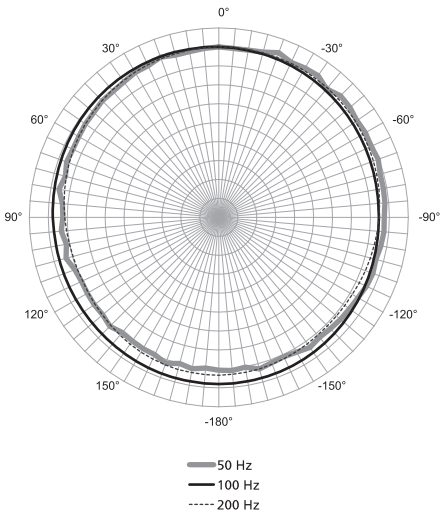
System Acoustic	
–3dB response	*130Hz -20kHz*
–10dB response	*85Hz - 28kHz*
Max SPL long-term	*131dB*
Max SPL Peak	*134dB*
Crossover Points	*130Hz, 500Hz, 2.5kHz*
Speaker Input	
Panel Connector Type	*Amphenol AP-6 Male*
General Horn Specs	
Type	*Integrated High / Mid - Rotatable*
HF Compression Driver	
Number of Drivers / Throat Exit Diameter	*1 / 1.0 " (24.5mm)*
Diaphragm Size	*1.75 " (44mm)*
Frequency Range	*2,5kHz to 28kHz*
Sensitivity	*109dB 1W/1m*
Diaphragm Material	*Nitride Titanium*
Magnet Type	*Neodymium*
HF Section	
Horizontal Coverage	*90° 1kHz to 16kHz avg.*
Vertical Coverage	*40° 1kHz to 16kHz avg.*
Type	*Horn, Constant Directivity*
Midrange Speaker	
Number of Drivers / Size	*1 / 6.00" (152.4mm)*
Frequency Range	*500Hz to 2.5kHz*
Sensitivity	*106dB 1W/1m*
Cone Material	*Epoxy Reinforced Cellulose*
Magnet Type / Cooling	*Neodymium / Integrated aluminum heatsink*
Midrange Section	
Horizontal Coverage	*90° 500Hz to 2.5kHz avg.*
Vertical Coverage	*40° 500Hz to 2.5kHz avg.*
Type	*Horn, Constant Directivity*
Mid Bass Section	
Number of Drivers / Woofer Size	*1 / 12.00"(300mm)*
Acoustic Design	*Horn-loaded*
Frequency Range	*130Hz to 500Hz*
Sensitivity	*106dB 1W/1m*
Magnet Type	*Neodymium*
Construction Features	
Material	*15mm Exterior Grade Baltic Birch*
Finish	*Ultra wear-resistant black polymer coating*
Hardware	*Two (2) Side Handles* *Ten (10) M10 suspension points* *Top hat for pole mounting appliacations*
Physical	
Height	*700mm (27.55")*
Width	*450mm (17.71")*
Depth	*450mm (17.71")*
Weight	*34kg (74.8lbs.)*

Frequency response

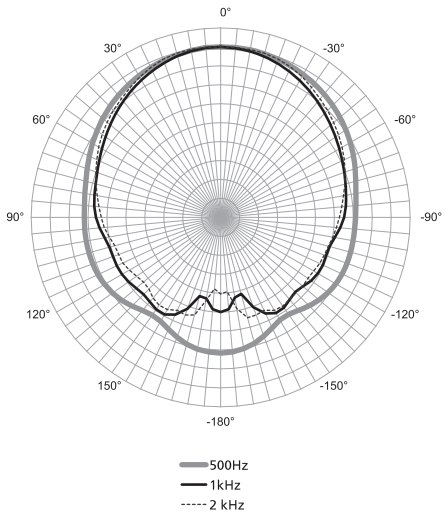


Horizontal Polarplots

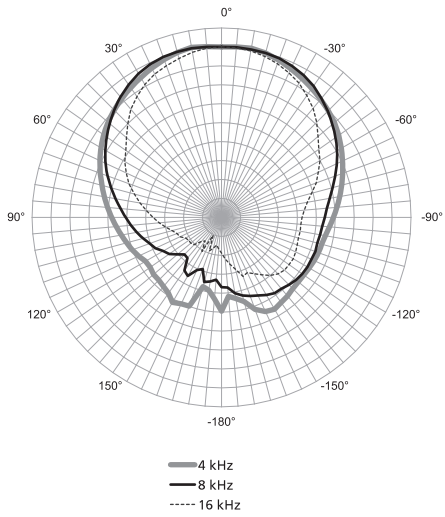
50 Hz - 200 Hz, 6 dB/div



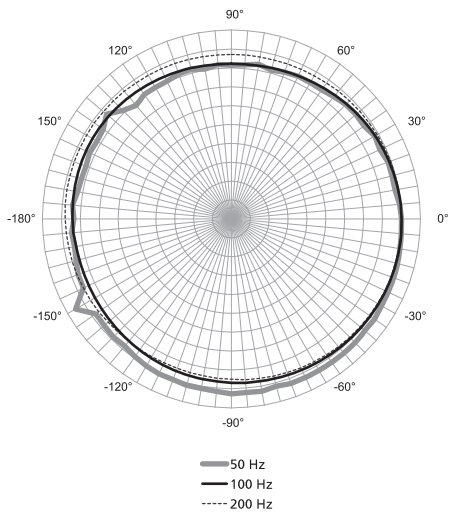
500 Hz - 2 kHz, 6 dB/div

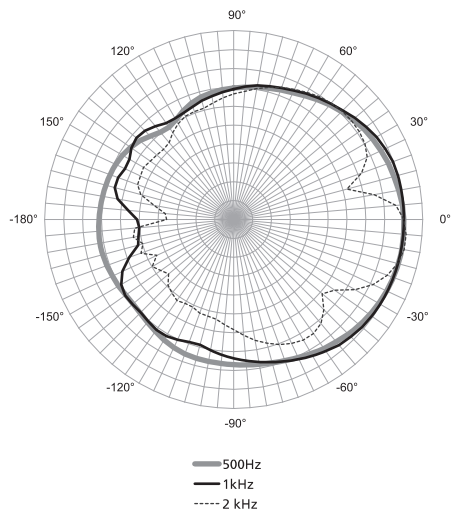


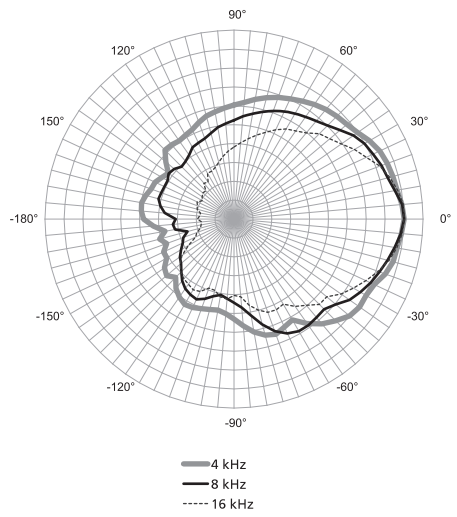
4 kHz - 16 kHz, 6 dB/div

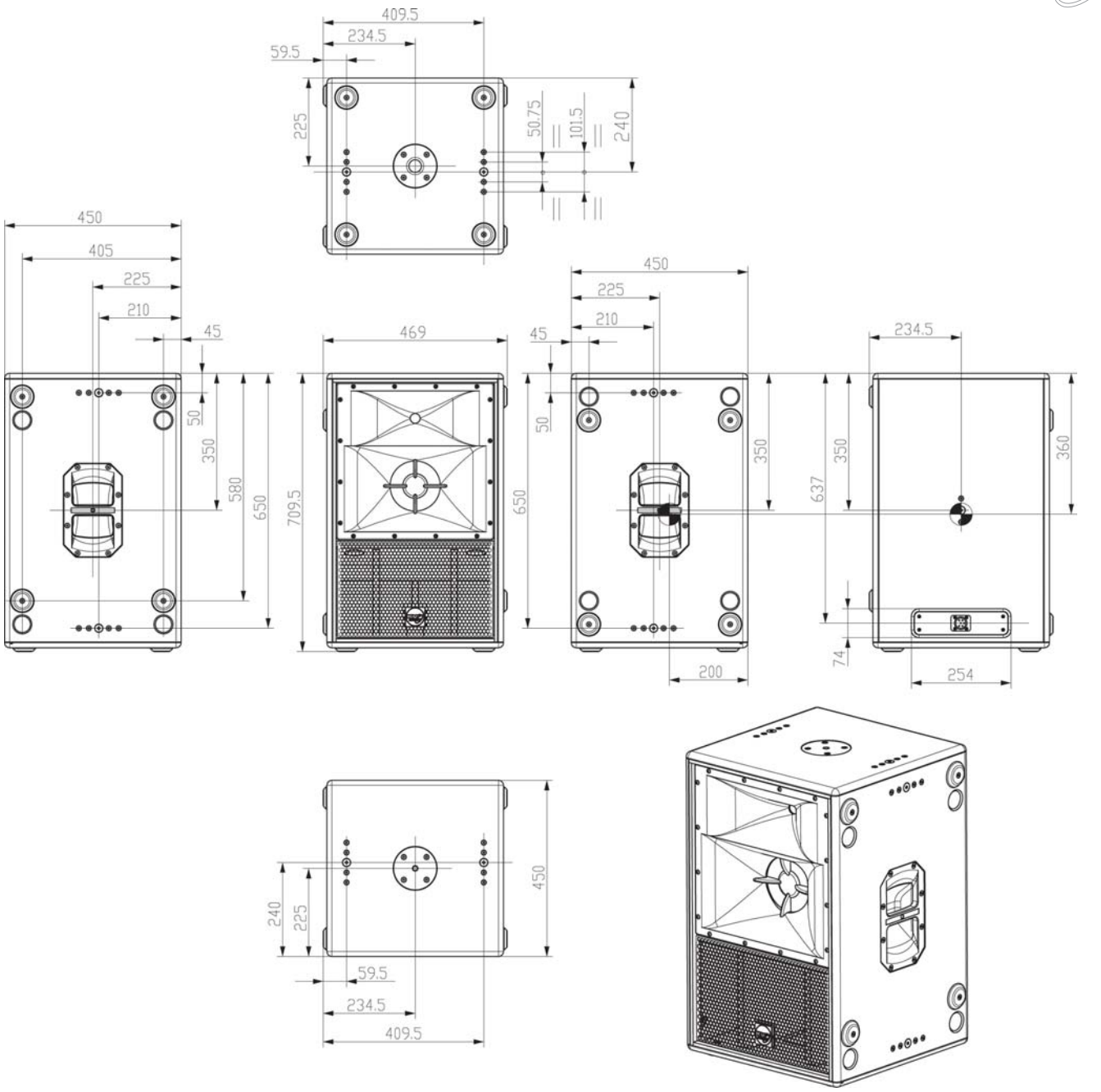


Vertical Polarplots









ES1.0 Architects and Engineer's Specifications

The three-way, mid / high loudspeaker system shall incorporate one 12-inch mid-bass (MB) transducer a 6-inch mid range (MR) speaker and a 1-inch exit compression driver high frequency (HF) transducer. The LF driver shall be mounted onto a slot-loaded horn located inside a compact wood enclosure tuned for optimum mid-bass response. The HF and MR transducers shall be loaded on a rotatable, integrated, constant directivity mid /high horn assembly.

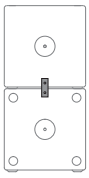
The system has a nominal coverage pattern of 90° (horizontal) x 40° (vertical). The loudspeaker enclosure shall have a rectangular shape and shall incorporate, two side handles with integrated M10 suspension points, four integrated internal braces with eight M10 suspension points, one M10 suspension point on the back and top hat for pole mounting application. The speaker cabinet shall be finished with an ultra wear resistant black polymer coating and fitted with a weather resistant perforated steel grill. The system shall receive power from a separate Amplifer.

Controller module consisting of separate power amplifiers for high, midrange and midbass transducers as well as signal processing including electronic band pass crossover filters, phase alignment, time correction, equalization and speaker protection. The speaker system shall connect to the Amplifier/Controller Module via proprietary cables terminated in Amphenol AP-6 connectors. The three-way mid / high loudspeaker system shall be the KV2 Audio ES1.0.

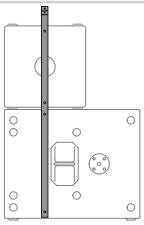
Heavy duty cover for ES1.0
part name: COVER ES1.0
part number: KVV 987 119

Heavy duty telescopic speaker pole for ES/EX series
part name: KV2-H
part number: KVV 987 130

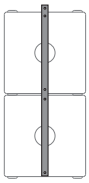
Short Join Bracket for joining two ES Series cabinets
part name: BRCKT-001
part number: KVV 987 027
- 4 pcs in pack



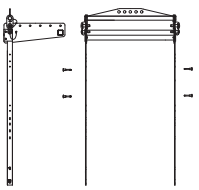
Extended Joining Bracket for ES1.0 or ES1.5 + ES1.8 or ES2.5 or ES2.6
part name: BRCKT-02
part number: KVV 987 046
- 4 pcs in pack



Extended Joining Bracket for 2 pcs ES1.0 or ES1.5
part name: LONG JOINING BRACKET
part number: KVV 987 026
- 4 pcs in pack



Fly Bar and Bracket for ES systems
part name: FLY BAR - 0002
part number: KVV 987 191
- 8 pcs M10 screws
- 8 pcs Quick-lock-pins 6mm included
- 4 pcs Quick-lock-pins 12,6mm included



ES Mid/Hi speaker cable MH15, AP6 connectors - 1,5m
part name: MH15
part number: KVV 987 147
- 1,5m (5ft), Mid/Hi Module hook-up

ES Mid/Hi speaker cable MH60, AP6 connectors - 6m
part name: MH60
part number: KVV 987 125
- 6m (20ft), Mid/Hi Module hook-up

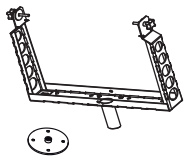
ES Mid/Hi speaker cable MH120, AP6 connectors - 12m
part name: MH120
part number: KVV 987 126
- 12m (40ft), Mid/Hi Module hook-up

ES Mid/Hi speaker cable MH180, AP6 connectors - 18m
part name: MH180
part number: KVV 987 127
- 18m (60ft), Mid/Hi Module hook-up

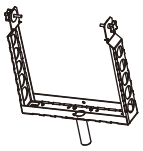
Cart for 2 pcs ES1.0 or ES1.5
part name: CRT- 0001
part number: KVV 987 030
- wheels not included

Cart Wheels with bolts nuts kit
part name: CRT - WHL
part number: KVV 987 031
- 4 pcs in pack, (rotating), (blue)

Horizontal bracket for ES1.0 or ES1.5
part name: ES1.0 Horizontal Bracket
part number: KVV 987 035
- including top hat cover adaptor plate and two connection bolts

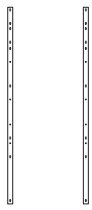


Vertical bracket for ES1.0
part name: ES1.0 Vertical Bracket
part number: KVV 987 032
- including two connection bolts



Optional full grille for ES1.0
part name: FULL GRILL ES1.0
part number: KVV 987 131

Aditional arms for FB-0002
part name: ARMS OF FB - 0002
part number: KVV 987 192
- 2 pcs ARMS OF FB-0002
- 8 pcs M10 screws
- 8 pcs Quick-lock-pins 6mm included



ES Cable kit
part name: CABLE-KIT
part number: KVV 987 047
The ES Cable Pack consist of four high-quality Amphenol AP cable assemblies designed for use with ES Series.
- 2 pcs LF15
- 1pc LF40
- 1pc MH60

Amphenol AP6 cable-mount female connector
part name: AP-6-11
part number: KVV 987 050

Amphenol AP6 cable-mount male connector
part name: AP-6-12
part number: KVV 987 051

ES™ 1.5 BASS MODULE

Compact Active-driven Bass Module

ES1.5 part number: *KVV 987 003*

Description

The ES1.5 is a high output, compact lightweight Bass Module of small dimensions, weight and footprint. Designed to accompany the ES1.0 Mid/High Module as a system, the extreme output and high quality performance present flexible adaptability and scaleability for varied applications.

ES1.0 Applications
Live and playback

- Church sanctuaries
- Auditoriums
- Band PA
- Dance clubs
- Mobile DJ
- Corporate events

ES Modular Sound System Benefits

Total flexibility
Use one unit with the ES1.0 Mid/High enclosure, for small systems, or scale up to a maximum of three units for larger applications.
Operate in either a horizontal or vertical stack with same dimensions and footprint as ES1.0.

Lightest-weight compact active SR system yet
All the benefits of active sound reinforcement technology but with the electronics in a seperate module.

Superb sound
Greater dynamic range than any previous active design.

Easy set-up
Ergonomic weight-balanced design with four handles, eight suspension points and "integarating feet" for easy positioning on stage. Plug-and-play connection to EPAK™ amp/-processor module.

Requires EPAK unit for control electronics and amplification.

part name	part num.
EPAK 2500-115V	*KVV 987 001*
EPAK 2500-230V	*KVV 987 000*
EPAK 2500-250V	*KVV 987 134*

EPAK 2500R-115V	*KVV 987 062*
EPAK 2500R-230V	*KVV 987 061*
EPAK 2500R-250V	*KVV 987 112*

For full range systems, use with the ES1.0 Three-way Mid/High Module

ES1.0 - *part num. KVV 987 002*
Compact Active-driven Mid/Hi Module

ES 1.5 can also be combined with this other ES Series Bass module:

ES1.8 - *part num. KVV 987 004*
Single eighteen-inch high-output Bass Module

Features

- High-output, compact, lightweight Bass Module
- 126dB output (per unit), 133dB (when using 3 units)
- Acoustic loading via twin asymmetrical chambers
- Fifteen-inch mid-bass driver with 3.00" (76mm) voice coil assembly and neodymium magnetic motorstructure
- Professional, exterior grade Baltic birch construction with highly resistant polymer coating
- Proprietary side handle designs for simplified handling and carrying
- Acetal copolymer high impact, low friction feet are asymmetrically located on three sides allowing vertical or horizontal system set up, lock-in and easy cabinet movement
- Four internal corner and one back brace with nine M10 suspension points.
A total of 27 suspension points are available for custom installation applications
- Requires EPAK unit for control electronics and amplification
- For full range systems, use with the ES1.0 Three-way Mid / High Module

The **ES1.5** is an extremely compact yet high output bass module designed as part of an ES Series sound reinforcement speaker system.

The ES1.5 speaker system benefits from being designed exclusively to operate below 150Hz. By optimizing the ideal operating band pass of each system component; the ES 1.5 can achieve high output levels consistently and safely.

Power for the system is provided by the EPAK unit Amplifier/-Controller ensuring fast, easy set up and complete control. Together with the ES1.0 and EPAK 2500/R, they deliver the highest dynamic range of any system currently available providing new levels of clarity, depth and resolution.

Advanced 15-inch driver

KV2 Audio's transducer partner, 18 Sound in Cavriago, Italy, manufactures the low frequency transducer inside the ES1.5. Frequencies between 40Hz and 150Hz are reproduced by a new fi fteen-inch woofer that provides 99dB of sensitivity (1watt / 1 meter). Loading of the woofer is done through two, asymmetrical chambers with horn-profiled exits.

The high efficiency neodymium motor provides an extraordinary amount of force that delivers complete control of the cone mass and a high overall weight loss. Neodymium is not a transducer panacea, as it cannot safely operate at the same typical operating temperatures of ferrite. Using neodymium requires a very profound understanding of material science and finite element analysis.

Our years of acoustic design experience enable us to properly design a stable, high force magnetic structure using neodymium

Easy-to-handle enclosure

The ES1.5 is a very lightweight yet resonance-free enclosure featuring a number of ergonomically designed parts that make it compact and easy to set up and use.

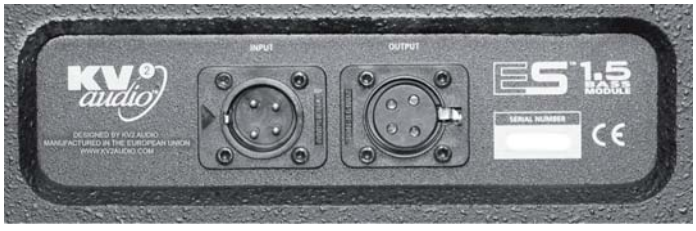
KV2 designed and tooled new cabinet handles for use in their products. The two side handles make it easy to pick up and reposition on the ES1.5 in a natural, instinctive manner.

Perfections in the details

One longstanding problem with standard cabinets is their rubber feet, which prevent you from moving or sliding the enclosure easily into a desired position. They're also easily damaged since they protrude from the box. KV2 has addressed this issue by molding our own feet using acetal copolymer material. This material has two very essential properties that make it ideal for use in this application, high density and a very low coefficient of friction. The enclosure has twelve of these feet placed on three sides of the cabinet. Their asymmetrical placement allows easy setup, alignment and construction of a number of different system configurations.

Easy to fly

There are six industrial-grade internal braces placed at each corner. Each brace is held in place by four M6 and two M10 bolts providing a wide range of installation and suspension flexibility.



ES1.5 rear panel (cable connection to EPAK unit Amplifier/Controller)

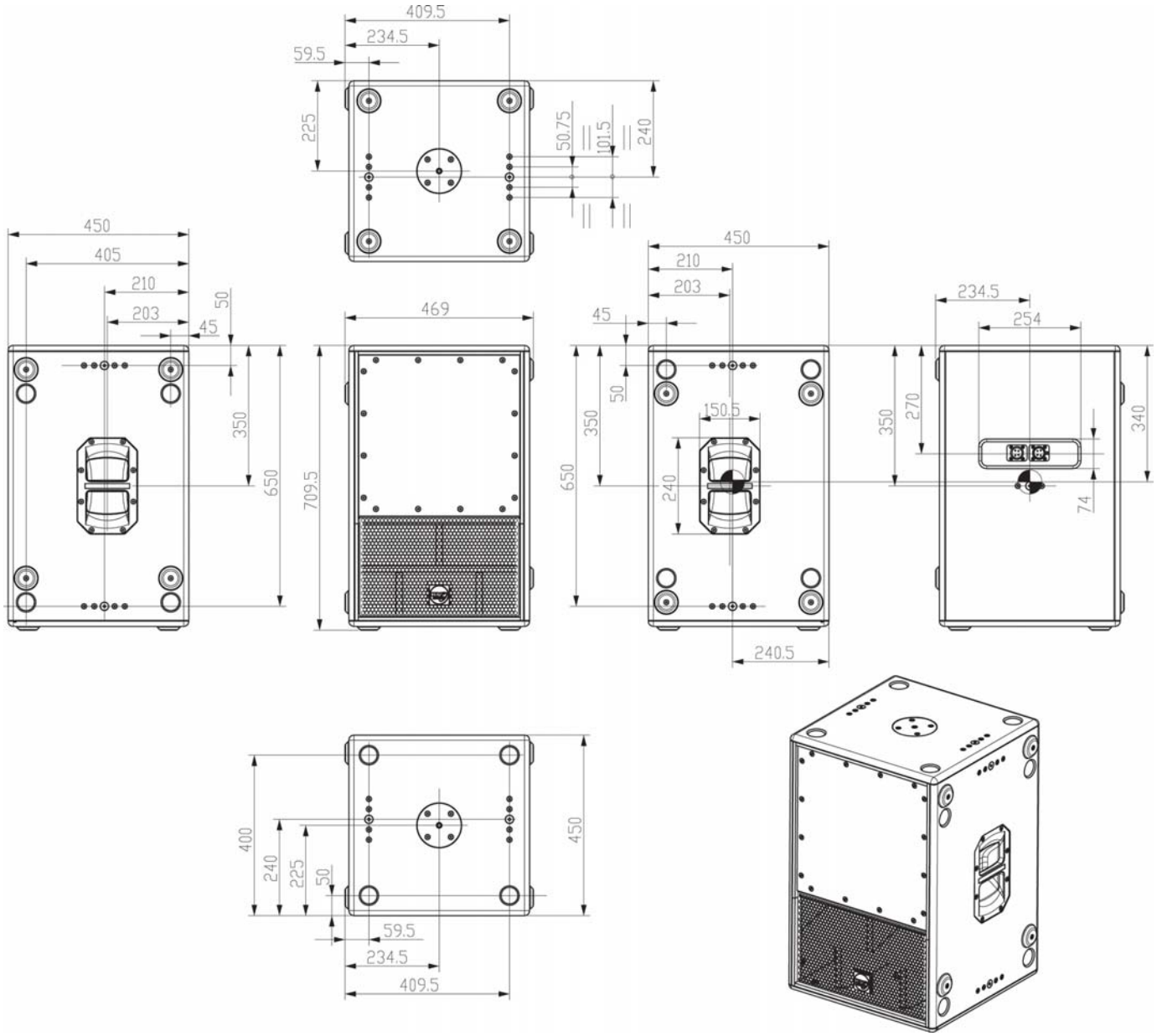
System Acoustic	
Acoustic Performance (One ES1.5)	
-3dB response	*40Hz - 130Hz*
-10dB response	*36Hz - 130Hz*
Max SPL long-term	*126dB*
Max SPL Peak	*129dB*
Acoustic Performance (Two ES1.5)	
Max SPL long-term	*129dB*
Max SPL Peak	*132dB*
Acoustic Performance (Three ES1.5)	
Max SPL long-term	*133dB*
Max SPL Peak	*136dB*
Crossover Point	*130Hz*
Subwoofer Amplifier Requirement	*500W per ES1.5 from EPAK 2500/R*
Impedance	*8Ω*

Speaker Input	
Panel Connector Type	*Amphenol AP-4 Male*
Loop-Through Output Type	*Amphenol AP-4 Female*

Mid Bass Section	
Number of Drivers	*1*
Woofer Size	*15.00"(381mm)*
Acoustic Design	*Acoustic loading via twin asymmetrical chambers*
Diaphragm Material	*Epoxy-reinforced cellulose*
Magnet Type	*Neodymium*

Construction Features	
Material	*15mm Exterior Grade Baltic Birch*
Finish	*Ultra wear-resistant black polymer coating*
Hardware	*Two (2) Side Handles* *Eleven (11) M10 suspension points*
Feet	*Twelve (12) 2.36" (60mm) diameter. Constructed from acetal copolymer, mounted in an asymmetrical pattern for flexible vertical or horizontal system set-up*
Grill	*Acoustically transparent perforated metal with weather-resistant polymer coating*

Physical	
Height	*700mm (27.55")*
Width	*450mm (17.71")*
Depth	*450mm (17.71")*
Weight	*28kg (61.6lbs.)*



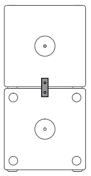
ES1.5 Architects and Engineer's Specifications

The bass module loudspeaker system shall incorporate one 15-inch low frequency (LF) transducer with neodymium motor. The LF driver shall be mounted inside a compact wood enclosure in between twin asymmetrical acoustic chambers with horn shaped exits tuned for optimum bass response. The loudspeaker enclosure shall have a rectangular shape and shall incorporate, two side handles with integrated M10 points, one top and bottom M10 suspension point and integrated internal braces with eight M10 suspension points, one M10 suspension point on the back.

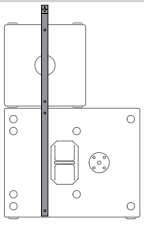
The speaker cabinet shall be finished with an ultra wear resistant black polymer coating and fitted with a weather resistant perforated steel grill. The system shall receive power from a separate Amplifier Controller module consisting of separate power amplifiers for high, midrange and midbass transducers as well as signal processing including electronic band pass crossover filters,phase alignment, time correction, equalization and speaker protection. The speaker system shall connect to the Amplifier/Controller Module via proprietary cables terminated in Amphenol AP-4 connectors. The bass module shall be the KV2 Audio ES1.5.

Heavy duty cover for ES1.5
part name: COVER ES1.5
part number: KVV 987 120

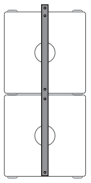
Short Join Bracket for joining two ES Series cabinets
part name: BRCKT-001
part number: KVV 987 027
- 4 pcs in pack



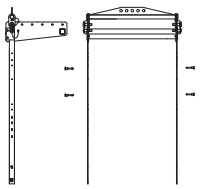
Extended Joining Bracket for ES1.0 or ES1.5 + ES1.8 or ES2.5 or ES2.6
part name: BRCKT-02
part number: KVV 987 046
- 4 pcs in pack



Extended Joining Bracket for 2 pcs ES1.0 or ES1.5
BRCKT 003 - KVV 987 026
- 4 pcs in pack



Fly Bar and Bracket for ES systems
part name: FLY BAR - 0002
part number: KVV 987 191
- 8 pcs M10 screws
- 8 pcs Quick-lock-pins 6mm included
- 4 pcs Quick-lock-pins 12,6mm included



ES Bass speaker cable LF15, AP4 connectors - 1,5m
part name: LF15
part number: KVV 987 121
- 1,5m (5ft)
- for ES Bass Module daisy-chaining

ES Bass speaker cable LF40, AP4 connectors - 4m
part name: LF40
part number: KVV 987 122
- 4m (13ft)
- for ES Bass Module hook-up

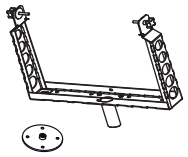
ES Bass speaker cable LF100, AP4 connectors - 10m
part name: LF100
part number: KVV 987 123
- 10m (33ft)
- for ES Bass Module hook-up

ES Bass speaker cable LF200, AP4 connectors - 20m
part name: LF200
part number: KVV 987 124
- 20m (66ft)
- for ES Bass Module hook-up

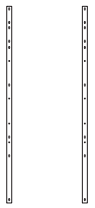
Cart for 2 pcs ES1.0 or ES1.5
part name: CRT- 0001
part number: KVV 987 030
- wheels not included

Cart Wheels with bolts nuts kit
part name: CRT - WHL
part number: KVV 987 031
- 4 pcs in pack, (rotating), (blue)

Horizontal bracket for ES1.0 or ES1.5
part name: ES1.0 Horizontal Bracket
part number: KVV 987 035
- including top hat cover adaptor plate and two connection bolts



Aditional arms for FB-0002
part name: ARMS OF FB - 0002
part number: KVV 987 192
- 2 pcs ARMS OF FB-0002
- 8 pcs M10 screws
- 8 pcs Quick-lock-pins 6mm included



ES Cable kit
part name: CABLE-KIT
part number: KVV 987 047
The ES Cable Pack consist of four high-quality Amphenol AP cable assemblies designed for use with ES Series.
- 2 pcs LF15
- 1pc LF40
- 1pc MH60

Amphenol AP4 cable-mount female connector
part name: AP-4-11
part number: KVV 987 048

Amphenol AP4 cable-mount male connector
part name: AP-4-12
part number: KVV 987 049

ES™ 1.8 BASS MODULE

High-Output Active-driven Bass Module

ES1.8 part number: *KVV 987 004*

Description

The ES1.8 is a high output, single 18" Bass Module of medium dimensions, weight and footprint. Designed to accompany the ES1.0 Mid/High Module as a system, the extreme output and high quality performance present flexible adaptability and scaleability for varied applications.

ES1.8 Applications
Live performance and recorded playback for venues up to 2000 persons
(depending on program material and number of bass modules used):

- Church sanctuaries
- Auditoriums
- Band PA
- Dance clubs
- Mobile DJ
- Corporate events

ES Modular Sound System Benefits

Total flexibility
Use two units coupled horizontally or vertically with single ES1.0 Mid /High Module.

Lightest-weight compact active SR system yet
All the benefi ts of active sound reinforcement technology but with the electronics in a separate module.

Superb sound
Greater dynamic range than any previous active design.

Easy set-up
Ergonomic weight-balanced design with four handles, eight suspension points and "Integrating feet" for easy positioning on stage. Plug-and-play connection to EPAK™ amp/processor module.

Requires EPAK unit for control electronics and amplification.

part name	part num.
EPAK 2500-115V	*KVV 987 001*
EPAK 2500-230V	*KVV 987 000*
EPAK 2500-250V	*KVV 987 134*

EPAK 2500R-115V	*KVV 987 062*
EPAK 2500R-230V	*KVV 987 061*
EPAK 2500R-250V	*KVV 987 112*

For full range systems, use with the ES1.0 Three-way Mid/High Module

ES1.0 - *part num. KVV 987 002*
Compact Active-driven Mid/Hi Module

ES1.8 can also be combined with this other ES Series Bass module:

ES1.5 - *part num. KVV 987 003*
Single fifteen-inch compact Bass Module

ES2.5 - *part num. KVV 987 005*
Double fifteen-inch high-output Bass Module

Features

- High-output, single 18-inch, Bass Module
- 129dB output (per unit) , 134dB (when using 2 units)
- Acoustic loading via large-format, low-distortion reflex port
- Eighteen-inch Low Frequency driver with 4.00" (100mm) polymide, high temperature voice coil asembly and carbon fiber reinforced cone assembly
- Professional, exterior grade Baltic birch construction with highly resistant polymer coating
- Proprietary side handle designs for simplified handling and carrying
- Acetal copolymer high impact, low friction feet are asymmetrically located on three sides allowing vertical or horizontal system set up, lock-in and easy cabinet movement
- Six internal corner braces with twelve M10 suspension points. A total of 36 suspension points are available for custom installation applications
- Requires EPAK unit for control electronics and amplification
- For full range systems, use with the ES1.0 Three-way Mid / High Module

The **ES1.8** is a high-output, front-loaded single eighteen-inch bass module designed as a part of an ES Series sound reinforcement speaker system.

The ES1.8 was designed to provide tight, up-front, low frequency reinforcement.

The front-loaded configuration along with the use of large-format porting, provides improved attack and defi nition for the large format 18-inch woofer. By optimizing the ideal operating band pass of each system component, the ES1.8 can achieve high output levels consistently and safely.

Power for the system is provided by the EPAK unit Amplifier/-Controller ensuring fast, easy set up and complete control. Together with the ES1.0 and EPAK/R unit, they deliver the highest dynamic range of any system currently available providing new levels of clarity, depth and resolution.

Advanced 18-inch driver

KV2 Audio's transducer development and manufacturing partner, 18 Sound in Cavriago, Italy, manufactures the woofer for the ES1.8. The device is the result of their state-of-the-art R&D facility and advanced production capabilities. The transducer features a double silicone spider, polymide voice coil assembly that undergoes multiple baking and curing processes as well as an advanced magnetic structure with advanced cooling system.

Easy-to-handle enclosure

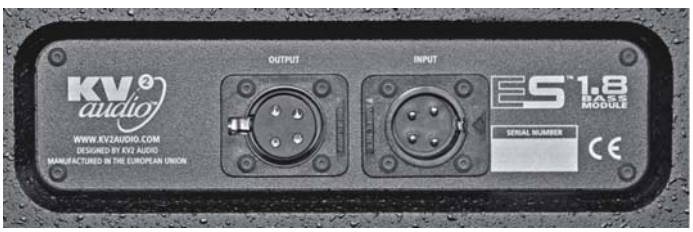
The ES1.8 is a very compact, lightweight enclosure featuring a number of ergonomically designed parts that make it an easy speaker to set up and use.
There are 4 side handles that make it easy to pick up and reposition the ES1.8 in a natural instinctive manner.

Perfections in the details

One longstanding problem with standard cabinets is their rubber feet, which prevent you from moving or sliding the enclosure easily into a desired position. They're also easily damaged since they protrude from the box.
KV2 has addressed this issue by molding our own feet using acetal copolymer material. This material has two very essential properties that make it ideal for use in this application, high density and a very low coefficient of friction. The enclosure has twelve of these feet placed on three sides of the cabinet. Their asymmetrical placement allows easy setup, alignment and construction of a number of different system configurations.

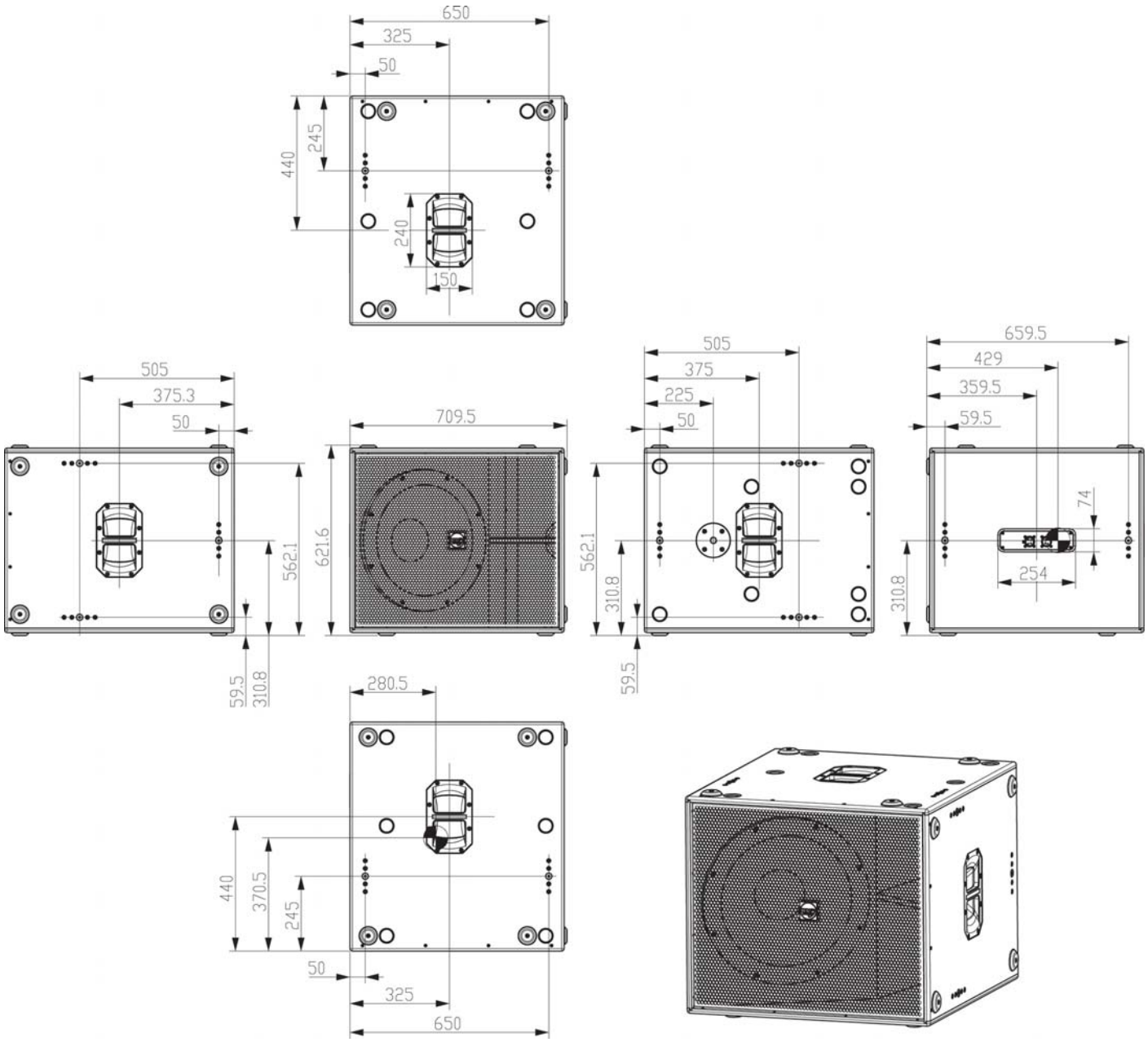
Easy to fly

There are six industrial-grade internal braces placed at each corner and one brace on the back. Each brace is held in place by four M6 and two M10 bolts providing a wide range of installation and suspension flexibility.



ES1.8 rear panel (cable connection to EPAK unit Amplifier/Controller)

System Acoustic	
Acoustic Performance (One ES1.8)	
-3dB response	*37Hz - 130Hz*
-10dB response	*33Hz - 130Hz*
Max SPL long-term	*129dB*
Max SPL Peak	*132dB*
Acoustic Performance (Two ES1.8)	
Max SPL long-term	*134dB*
Max SPL Peak	*137dB*
Crossover Point	*130Hz*
Subwoofer Amplifier Requirement	*800W per ES1.8 from EPAK 2500/R*
Impedance	*8Ω*
Speaker Input	
Panel Connector Type	*Amphenol AP-4 Male*
Loop-Through Output Type	*Amphenol AP-4 Female*
Mid Bass Section	
Number of Drivers	*1*
Woofer Size	*18.00"(457mm)*
Acoustic Design	*Horn reflex loaded*
Cone Material	*Epoxy reinforced cellulose*
Magnet Type	*Advanced ventilated ferrite*
Construction Features	
Basic Geometric Design	*Rectangular*
Material	*15mm Exterior Grade Baltic Birch*
Finish	*Ultra wear-resistant black polymer coating*
Hardware	*Four (4) Side Handles* *Twelve (12) M10 suspension points* *One (1) M20 top hat for pole mounting application*
Feet	*Twelve (12) 2.36" (60mm) diameter. Constructed from acetal copolymer, mounted in an asymmetrical pattern for flexible vertical or horizontal system set-up*
Grill	*Acoustically transparent perforated metal with weather-resistant polymer coating*
Physical	
Height	*600mm (23.62")*
Width	*700mm (27.55")*
Depth	*750mm (29.52")*
Weight	*52kg (114.4lbs.)*



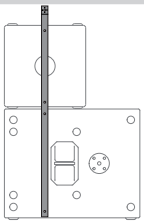
ES1.8 Architects and Engineer's Specifications

The bass module loudspeaker system shall incorporate one 18-inch low frequency (LF) transducer with ferrite motor and 4-inch polymide, high-termperature voice coil. The LF driver shall be mounted inside a compact wood enclosure with large-format low-distortion reflex ports. The loudspeaker enclosure shall have a rectangular shape and shall incorporate, four side handles and integrated internal braces with twelve M10 suspension points. The speaker cabinet shall be finished with an ultra wear resistant black polymer coating and fitted with a weather resistant perforated steel grill. The system shall receive power from a separate Amplifer/Controller module consisting of separate power amplifiers for high, midrange and midbass transducers as well as signal control including electronic band pass crossover fi lters, phase alignment, time corrections, equalization and speaker protection. The speaker system shall connect to the Amplifier/Controller Module via proprietary cables terminated in Amphenol AP-4 connectors. The bass module shall be the KV2 Audio ES1.8.

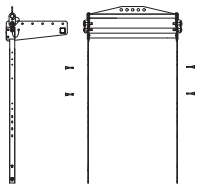
Heavy duty cover for ES1.8 used without cart
part name: COVER ES1.8 WITHOUT CART
part number: KVV 987 115

Heavy duty cover for ES1.8 used with cart CRT - 0009
part name: COVER ES1.8 WITH CART
part number: KVV 987 116

Extended Joining Bracket for ES1.0 or ES1.5 + ES1.8 or ES2.5 or ES2.6
part name: BRCKT-02
part number: KVV 987 046
- 4 pcs in pack



Fly Bar and Bracket for ES systems
part name: FLY BAR - 0002
part number: KVV 987 191
- 8 pcs M10 screws
- 8 pcs Quick-lock-pins 6mm included
- 4 pcs Quick-lock-pins 12,6mm included



ES Bass speaker cable LF15, AP4 connectors - 1,5m
part name: LF15
part number: KVV 987 121
- 1,5m (5ft)
- for ES Bass Module daisy-chaining

ES Bass speaker cable LF40, AP4 connectors - 4m
part name: LF40
part number: KVV 987 122
- 4m (13ft)
- for ES Bass Module hook-up

ES Bass speaker cable LF100, AP4 connectors - 10m
part name: LF100
part number: KVV 987 123
- 10m (33ft)
- for ES Bass Module hook-up

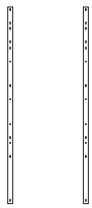
ES Bass speaker cable LF200, AP4 connectors - 20m
part name: LF200
part number: KVV 987 124
- 20m (66ft)
- for ES Bass Module hook-up

Front mount magnetic cart for ES1.8, ES2.5, ES2.6, EX2.5 MkII
part name: CRT - 0009
part number: KVV 987 114
- wheels not included

Cart Wheels with bolts nuts kit
part name: CRT 0009 - WHL KIT
part number: WHL - KVV 987 128
- 4 pcs in pack (rotating), (blue)

Heavy duty telescopic speaker pole for ES/EX series
part name: KV2-H
part number: KVV 987 130

Aditional arms for FB-0002
part name: ARMS OF FB - 0002
part number: KVV 987 192
- 2 pcs ARMS OF FB-0002
- 8 pcs M10 screws
- 8 pcs Quick-lock-pins 6mm included



ES Cable kit
part name: CABLE-KIT
part number: KVV 987 047
The ES Cable Pack consist of four high-quality Amphenol AP cable assemblies designed for use with ES Series.
- 2 pcs LF15
- 1pc LF40
- 1pc MH60

Amphenol AP4 cable-mount female connector
part name: AP-4-11
part number: KVV 987 048

Amphenol AP4 cable-mount male connector
part name: AP-4-12
part number: KVV 987 049

ES 2.5 BASS MODULE

ES™ 2.6 BASS MODULE

High-Output Active-driven Bass Module

ES2.5 part number: *KVV 987 005*
ES2.6 part number: *KVV 987 150*

Description

The ES2.5 & 2.6 is a high output,- double 15"' Bass Module of medium dimensions, weight and footprint. Designed to accompany the ES1.0 Mid/High Module as a system, the extreme output and high quality performance present flexible adaptability and scaleability for varied applications.

ES2.5, 2.6 Applications
Live performance and recorded playback for venues up to 2000 persons
(depending on program material and number of bass modules used):

- Church sanctuaries
- Auditoriums
- Band PA
- Dance clubs
- Mobile DJ
- Corporate events

ES Modular Sound System Benefits

Total flexibility
Use one ES2.5 module or two ES2.6 modules to accompany a single ES1.0 Mid/High module.
These can be placed vertically or horizontally

Lightest-weight compact active SR system yet
All the benefits of active sound reinforcement technology but with the electronics in a seperate module.

Superb sound
Greater dynamic range than any previous active design.

Easy set-up
Ergonomic weight-balanced design with four handles, eight suspension points and "Integrating feet" for easy positioning on stage. Plug-and-play connection to EPAK™ amp/processor module.

Requires EPAK unit for control electronics and amplification.

part name	part num.
EPAK 2500-115V	*KVV 987 001*
EPAK 2500-230V	*KVV 987 000*
EPAK 2500-250V	*KVV 987 134*

EPAK 2500R-115V	*KVV 987 062*
EPAK 2500R-230V	*KVV 987 061*
EPAK 2500R-250V	*KVV 987 112*

For full range systems, use with the ES1.0 Three-way Mid/High Module

ES 1.0 - *part num. KVV 987 002*
Compact Active-driven Mid/Hi Module

ES1.8 can also be combined with this other ES Series Bass module:

ES1.5 - *part num. KVV 987 003*
Single fifteen-inch compact Bass Module

ES 1.8 - *part num. KVV 987 004*
Single eighteen-inch high-output Bass Module

Features

ES2.5

- 134dB output (per unit) , 139dB (when using 2 units)
- Impedance 4Ω
- Compact system, uses 1600W of EPAK unit power per ES2.5

ES2.6

- 132dB output (per unit) , 137dB (when using 2 units)
- Impedance 8Ω
- High output, high quality bass sound, uses 800W of EPAK unit power per ES 2.6 (two cabinets for 1600W)

ES2.5, ES2.6

- High-output, double 15-inch, Bass Module
- High acoustic loading via twin asymmetrical chambers
- Fifteen-inch low frequency drivers with 4.00" (100mm) polymide, high temperature voice coil assembly and carbon fiber reinforced cone assemblies
- Professional, exterior grade Baltic birch construction with highly resistant polymer coating
- Four proprietary side handle designs for simplified handling and carrying
- Acetal copolymer high impact, low friction feet are asymmetrically located on three sides allowing vertical or horizontal system set up, lock-in and easy cabinet movement
- Six internal corner braces with M10 suspension points.
A total of 36 suspension points are available for custom installation applications
- M20 top hat for pole mounting applications
- Requires EPAK unit for control electronics and amplification
- For full range systems, use with the ES1.0 Three-way Mid / High Module

The **ES2.5** and **ES2.6** are a compact, high output bass module designed as a component of an ES Series sound reinforcement speaker system.

The ES2.5 and ES2.6 were designed using new concepts in twin asymmetrical acoustic chambers that deliver very high speaker loading and output from a relatively small cabinet footprint. It is ideal for use in live applications that require reproduction of low frequencies with very high transient content.

Part of the matched, modular EPAK™ System

Power for the system is provided by the EPAK amplification and control system from KV2 Audio ensuring fast, easy set up and complete control. Together with an ES Series Mid/High module and an EPAK system, they deliver the highest dynamic range of any system currently available providing new levels of clarity, depth and resolution.

Durable, high-output low frequency transducers

KV2 Audio's transducer development and manufacturing partner, 18 Sound in Cavriago, Italy, manufactures the woofer for the ES2.5 and ES2.6. The device is the result of their state-of-theart R&D facility and advanced production capabilities.

The transducer features a double silicone spider, polymide voice coil assembly that undergoes multiple baking and curing processes as well as an advanced magnetic structure with advanced cooling system.

Built with load-in and load-out in mind

The ES2.5 and ES2.6 are a very compact, lightweight enclosure featuring a number of ergonomically designed parts that make it an easy speaker to set up and use.

KV2 designed and tooled new cabinet handles for use in their products. The four side handles make it easy to pick up and reposition on the ES 2.5 and ES 2.6 in a natural, instinctive manner.

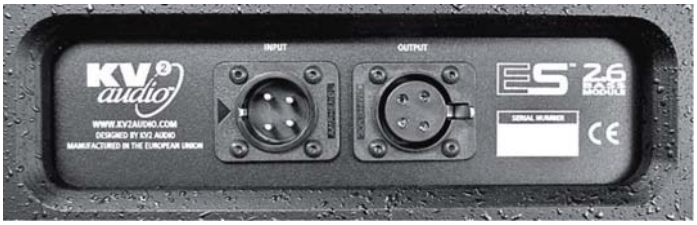
Perfections in the details

One longstanding problem eith standard cabinets is their rubber feet, which prevent you from moving or sliding the enclosure easily into a desired position. They're also easily damaged since they protrude from the box. KV2 has addressed this issue by molding our own feet using acetal copolymer material. This material has two very essential properties that make it ideal for use in this application, high density and a very low coefficient of friction. The enclosure has eight of these feet placed on two sides of the cabinet. Their asymmetrical placement allows easy setup, alignment and construction of a number of different system configurations.

Easy to fly

There are six industrial grade, internal braces placed at each corner. Each brace is held in place by four M6 and two M10 bolts providing a wide range of installation and suspension flexibility.

ES2.5 rear panel (cable connection to EPAK unit Amplifier/Controller)



ES2.6 rear panel (cable connection to EPAK unit Amplifier/Controller)

System Acoustic	
Acoustic Performance (One ES2.5)	
-3dB response	*38Hz - 130Hz*
-10dB response	*34Hz - 130Hz*
Max SPL long-term	*134dB*
Max SPL Peak	*137dB*
Acoustic Performance (Two ES2.5)	
Max SPL long-term	*139dB*
Max SPL Peak	*142dB*
Crossover Point	*130Hz*
Subwoofer Amplifier Requirement	*1600W per ES2.5 from EPAK 2500/R*
Impedance	*4Ω*

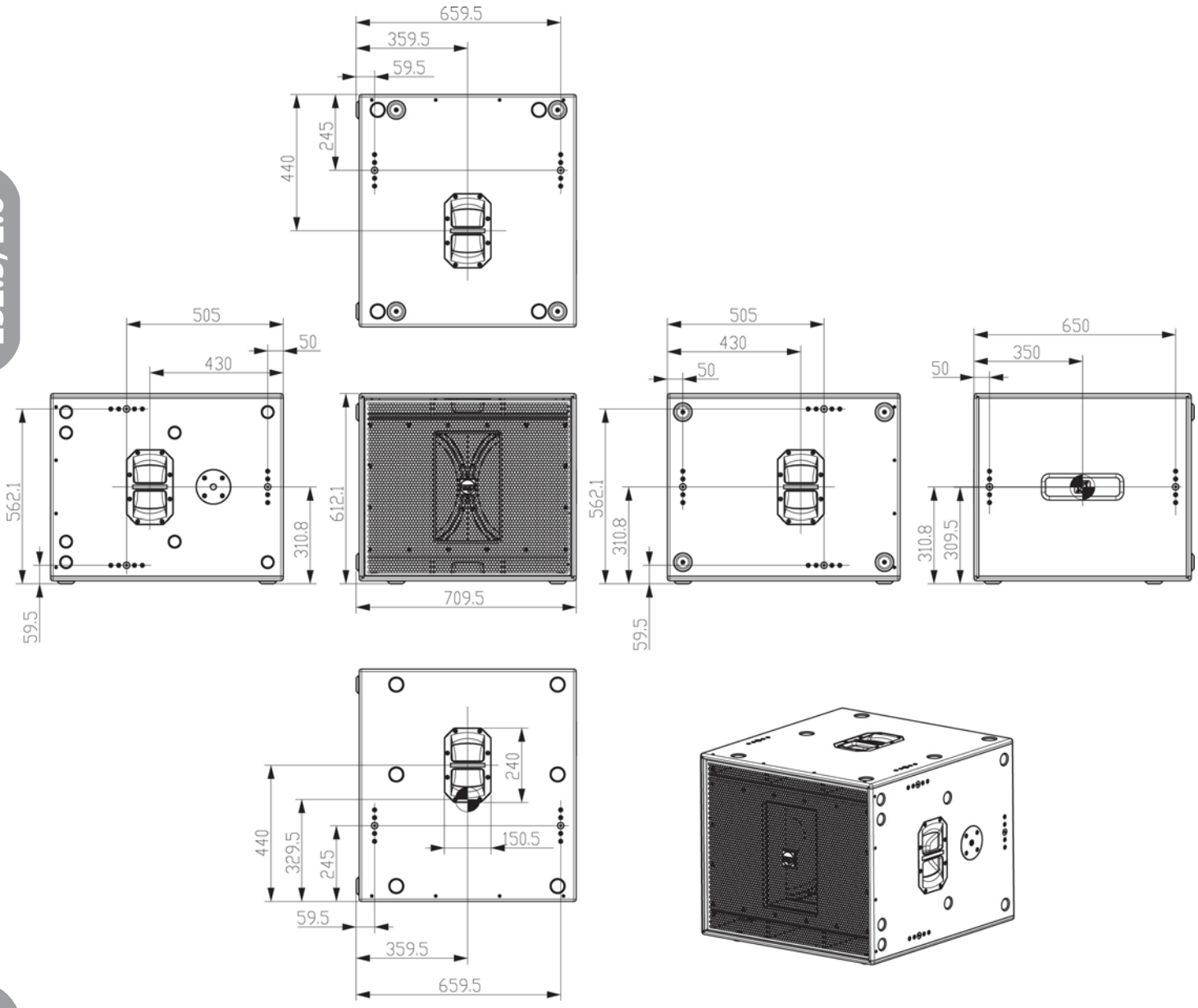
Speaker Input	
Panel Connector Type	*Amphenol AP-4 Male*
Loop-Through Output Type	*None*

Low Frequency Section	
Number of Drivers	*2*
Woofer Size	*15.00" (457mm)*
Acoustic Design	*Acoustic loading via twin asymmetrical chambers*
Cone Material	*Epoxy reinforced cellulose*
Magnet Type	*Advanced ventilated ferrite*

Construction Features	
Basic Geometric Design	*Rectangular*
Material	*15mm Exterior Grade Baltic Birch*
Finish	*Ultra wear-resistant black polymer coating*
Hardware	*Four (4) Side Handles* *Twelve (12) M10 suspension points* *One (1) M20 top hat for pole mounting application*
Feet	*Eight (8) 2.36" (60mm) diameter. Constructed from acetal copolymer, mounted in an asymmetrical pattern for flexible vertical or horizontal system set-up*
Grill	*Acoustically transparent perforated metal with weather-resistant polymer coating*

Physical	
Height	*600mm (23.62")*
Width	*700mm (27.55")*
Depth	*740mm (29.13")*
Weight	*69kg (151.8lbs.)*

System Acoustic	
Acoustic Performance (One ES2.6)	
-3dB response	*38Hz - 130Hz*
-10dB response	*34Hz - 130Hz*
Max SPL long-term	*132dB*
Max SPL Peak	*135dB*
Acoustic Performance (Two ES2.6)	
Max SPL long-term	*137dB*
Max SPL Peak	*140dB*
Crossover Point	*130Hz*
Subwoofer Amplifier Requirement	*800W per ES2.6 from EPAK 2500/R*
Impedance	*8Ω*
Speaker Input	
Panel Connector Type	*Amphenol AP-4 Male*
Loop-Through Output Type	*Amphenol AP-4 Female*
Low Frequency Section	
Number of Drivers	*2*
Woofer Size	*15.00" (457mm)*
Acoustic Design	*Acoustic loading via twin asymmetrical chambers*
Cone Material	*Epoxy reinforced cellulose*
Magnet Type	*Advanced ventilated ferrite*
Construction Features	
Basic Geometric Design	*Rectangular*
Material	*15mm Exterior Grade Baltic Birch*
Finish	*Ultra wear-resistant black polymer coating*
Hardware	*Four (4) Side Handles* *Twelve (12) M10 suspension points* *One (1) M20 top hat for pole mounting application*
Feet	*Eight (8) 2.36" (60mm) diameter. Constructed from acetal copolymer, mounted in an asymmetrical pattern for flexible vertical or horizontal system set-up*
Grill	*Acoustically transparent perforated metal with weather-resistant polymer coating*
Physical	
Height	*600mm (23.62")*
Width	*700mm (27.55")*
Depth	*740mm (29.13")*
Weight	*69kg (151.8lbs.)*



ES2.5 and ES2.6 Architects and Engineer's Specifications

The bass module loudspeaker system shall incorporate two 15-inch low frequency (LF) transducer with ferrite motors and 4-inch polymide, high-temperature voice coils. The LF driver shall be mounted inside a compact wood enclosure with twin asymmetrical chambers. The loudspeaker enclosure shall have a rectangular shape and shall incorporate, four side handles and integrated internal braces with twelve M10 suspension points.

The speaker cabinet shall be finished with an ultra wear resistant black polymer coating and fitted with a weather resistant perforated steel grill. The system shall receive power from a separate Amplifer/Controller Module consisting of separate power amplifiers for high, midrange and midbass transducers as well as signal processing including electronic and pass crossover filters, phase alignment, time corrections, equalization and speaker protection.

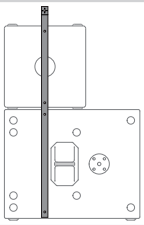
The speaker system shall connect to the Amplifier/Controller Module via proprietary cables terminated in Amphenol AP-4 connectors. The bass module shall be the KV2 Audio ES2.5 or ES2.6.

Heavy duty cover for ES2.5 used without cart
part name: COVER ES2.5 WITHOUT CART
part number: KVV 987 117

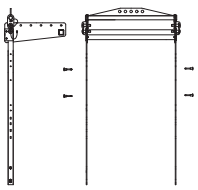
Heavy duty cover for ES2.5 used with cart CRT - 0009
part name: COVER ES2.5 WITH CART
part number: KVV 987 118

Front mount magnetic cart for ES1.8, ES2.5, ES2.6, EX2.5 MkII
part name: CRT - 0009
part number: KVV 987 114
- wheels not included

Extended Joining Bracket for ES1.0 or ES1.5 + ES1.8 or ES2.5 or ES2.6
part name: BRCKT-02
part number: KVV 987 046
- 4 pcs in pack



Fly Bar and Bracket for ES systems
part name: FLY BAR - 0002
part number: KVV 987 191
- 8 pcs M10 screws
- 8 pcs Quick-lock-pins 6mm included
- 4 pcs Quick-lock-pins 1/2" included



ES Bass speaker cable LF15, AP4 connectors - 1,5m
part name: LF15
part number: KVV 987 121
- 1,5m (5ft)
- for ES Bass Module daisy-chaining

ES Bass speaker cable LF40, AP4 connectors - 4m
part name: LF40
part number: KVV 987 122
- 4m (13ft)
- for ES Bass Module hook-up

ES Bass speaker cable LF100, AP4 connectors - 10m
part name: LF100
part number: KVV 987 123
- 10m (33ft)
- for ES Bass Module hook-up

ES Bass speaker cable LF200, AP4 connectors - 20m
part name: LF200
part number: KVV 987 124
- 20m (66ft)
- for ES Bass Module hook-up

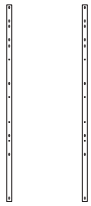
Heavy duty cover for ES2.6 used without cart
part name: COVER ES2.6 WITHOUT CART
part number: KVV 987 153

Heavy duty cover for ES2.6 used with cart CRT0009
part name: COVER ES2.6 WITH CART
part number: KVV 987 154

Cart Wheels with bolts nuts kit
part name: CRT 0009 - WHL KIT
part number: WHL - KVV 987 128
- 4 pcs in pack (rotating), (blue)

Heavy duty telescopic speaker pole for ES/EX series
part name: KV2-H
part number: KVV 987 130

Aditional arms for FB-0002
part name: ARMS OF FB - 0002
part number: KVV 987 192
- 2 pcs ARMS OF FB-0002
- 8 pcs M10 screws
- 8 pcs Quick-lock-pins 6mm included



ES Cable kit
part name: CABLE-KIT
part number: KVV 987 047
The ES Cable Pack consist of four high-quality Amphenol AP cable assemblies designed for use with ES Series.
- 2 pcs LF15
- 1pc LF40
- 1pc MH60

Amphenol AP4 cable-mount female connector
part name: AP-4-11
part number: KVV 987 048

Amphenol AP4 cable-mount male connector
part name: AP-4-12
part number: KVV 987 049

The future of sound.
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At KV2 Audio our vision is to constantly develop technologies that eliminate distortion and loss of information providing a true dynamic representation of the source.

Our aim is to create audio products that absorb you, place you within the performance and deliver a listening experience beyond expectation.

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