

ES1.0 Technical Data Sheet

Product code: KVV 987 002

Introduction

The ES1.0 is a 3-way, very high output, active-driven, mid-high / mid-bass module designed as part of a complete ES system, driven by the EPAK2500/R control and amplification unit. The ES1.0 is compact, lightweight and can be combined with a variety of ES series subwoofers. As a single system it offers one of the highest quality portable sound reinforcement solutions on the market today. When coupled with another ES1.0 (running two horizontally per side) it becomes an even more powerful tool, providing peak SPL of 139dB and a throw of up to 40 metres for applications of up to 3000 people.

Features

- Professional Baltic birch construction with wear resistant polymer coating
- 131dB sustained output, 137dB peak
- Controlled wide dispersion 90° x 40°, rotatable mid-high horn for mounting in vertical or horizontal orientation
- 1.75" (44 mm) Titanium diaphragm compression driver with complex geometry phase plug and neodymium magnetic structure for higher output, incredibly low distortion and extended frequency response
- 6" mid-range driver with a 1.75" (44 mm) voice coil and neodymium magnet for increased control and output with reduced distortion and weight
- Horn loaded, 12" mid-bass driver with a 3" (76 mm) inside/outside, epoxy baked, high temperature voice coil assembly and neodymium magnetic structure
- Three way active requirement – 900W from the EPAK2500/R providing 600W for the 12" low mid, 200W for the 6" midrange and 100W for the high frequency driver
- Proprietary side handle design for simplified handling and carrying
- High impact low friction feet, asymmetrically located on three sides allowing vertical or horizontal system set up, lock-in and easy cabinet movement
- Four internal corner braces tied to eight M10 suspension points.
A total of 24 suspension points are available for custom installation applications
- Top hat for pole mounting applications
- Weather proofing option and special paint finishes available on request



Application

Specifically designed as an extreme high output, compact mid-high enclosure as part of ES systems

- For live performance and music playback
- Small to large live concerts
- Small to medium nightclubs
- Houses of worship
- Portable PA
- Scalable into larger multi-tasking projects and systems

System Acoustic Performance	
Max SPL Long-term	131dB
Max SPL Peak	137dB
-3dB Response	130Hz to 20kHz
-10dB Response	85Hz to 28kHz
Impedance	Low 16Ω Mid 8Ω High 8Ω
Crossover Point	130Hz, 500Hz, 2.5kHz

High Frequency Section	
High Horn Coverage Horizontal / Vertical	90° x 40° rotatable
High Frequency Amplifier Requirement	100W from EPAK 2500/R
Throat Exit Diameter / Diaphragm Size	1" / 1.75"
Diaphragm Material	Titanium
Magnet Type	Neodymium

Mid Range Section	
Acoustic Design	Horn Loaded
Mid Horn Coverage Horizontal / Vertical	90° x 40° rotatable
Midrange Amplifier Requirement	200W from EPAK 2500/R
Woofer Size / Voice Coil Diameter	6" / 1.75"
Diaphragm Material	Epoxy Reinforced Cellulose
Magnet Type	Neodymium

Mid-Bass Section	
Acoustic Design	Horn Loaded
Mid-bass Amplifier Requirement	600W from EPAK 2500/R
Woofer Size / Voice Coil Diameter / Design	12" / 3" / Inside Outside
Diaphragm Material	Epoxy Reinforced Cellulose
Magnet Type	Neodymium

Speaker Input	
Speaker Input	AP6

Cabinet	
Cabinet Material	Baltic birch
Handles	2
Pole Mount	35 mm
Color	"Orange peeled" Matt Black or any RAL

Physical Dimensions	
Height	700 mm (27.55")
Width	450 mm (17.71")
Depth	450 mm (17.71")
Weight	34 kg (74.8lbs)

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Architectural 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 Amplifier and Control Module consisting of separate power amplifiers for high, mid-range and mid-bass 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 and Control Module via proprietary cables terminated in Amphenol AP-6 connectors. The three-way mid / high loudspeaker system shall be the KV2 Audio ES1.0.

Dimensional Drawings

