ESD15 Technical Data Sheet

Introduction

The new ESD15 incorporates a unique coaxial 15" transducer with a 1.75" Nitride Titanium Neodymium Compression Driver on a wide dispersion 80 x 60 degree horn. Whilst most coaxial speakers will try to cover the full frequency response, the ESD15's coaxial driver only covers bass and highs leaving the all important mid-range to a 6" neodymium speaker mounted on a large 80 x 60 degree horn. This resolves the issue of the 15" driver trying and failing to reproduce mid-range, a common problem with conventional coaxial designs. The ESD15's unique design provides extremely flat, full range reproduction from a compact yet powerful package that out performs speakers twice its size, weight and price.

Features

- Professional, Baltic birch construction with wear resistant polymer coating
- 126dB full range sustained output with very high dynamic range
- Compact cabinet design, 3-way design in the typical dimension of a 2-way
- Wide dispersion 80° H x 60° V horn
- Revolutionary passive 3-way design, featuring built-in crossover and delay line
- State of the art 15" coaxial woofer with neodymium magnetic motor structure
- 1" throat exit (1.75" compression driver) Nitride Titanium diaphragm compression driver with complex geometry phase plug and neodymium magnetic structure for higher output, exceptionally low distortion and extended frequency response
- 6" horn loaded midrange with 80° H x 60° V dispersion
- Proprietary top handle design for simplified handling and carrying and two side handles integrates one M10 suspension point, Omnimount™ bracket point and four M6 points
- Additional side and bottom M10 points for flexible rigging and installation options
- "Top-hat" for pole mounting applications

Application

Specifically designed as a true full-range, passive loudspeaker for high quality, high output portable music playback and live performance in small areas

- High quality fixed installations without subwoofer
- Small live performances
- Church installations
- Conferences
- Video/film presentation

System Acoustic Perfomance	
Max SPL Long-term	126dB
Max SPL Peak	129dB
-3dB Response	48Hz to 18kHz
-10dB Response	45Hz to 28kHz
Recommended Power	500W
Sensitivity	97dB
Impedance	4Ω
Crossover Point	500Hz, 2.5kHz

High Frequency Section	
Acoustic Design	Horn Loaded
High Horn Coverage Horizontal / Vertical	80° x 60°
Throat Exit Diameter / Diaphragm Size	1" / 1.75"
Diaphragm Material	Nitride Titanium
Magnet Type	Neodymium
Protection	Electronic RMS and Peak Limiter

Mid Range Section	
Acoustic Design	Horn Loaded
Mid Horn Coverage Horizontal / Vertical	80° x 60°
Woofer Size / Voice Coil Diameter	6" / 1.5"
Diaphragm Material	Epoxy Reinforced Cellulose
Magnet Type	Neodymium
Protection	RMS Limiter

Low Frequency Section	
Acoustic Design	Front Loaded, Bass Reflex
Woofer Size / Voice Coil Diameter	15" / 4"
Diaphragm Material	Epoxy Reinforced Cellulose
Magnet Type	Neodymium
Protection	RMS Limiter

Speaker Input	
Speaker Input	2x Neutrik Speakon®, Terminal Block

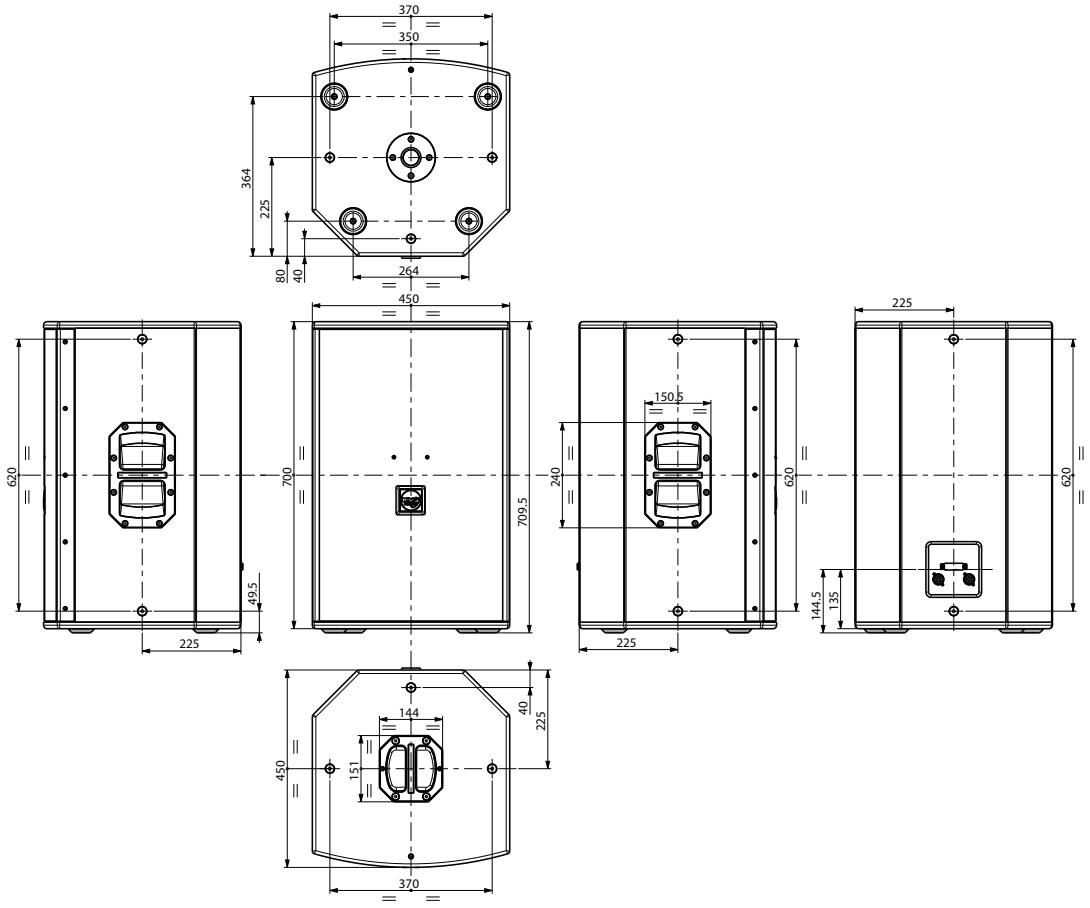
Cabinet	
Handles	3
Pole Mount	35 mm

Physical Dimensions	
Height	700 mm (27.55")
Width	450 mm (17.71")
Depth	450 mm (17.71")
Weight	35 kg (77.2lbs)

Architectural Specifications

The Loudspeaker shall be a 3-way design using SLA Technology (Super Live Audio) and shall be driven and controlled by a dedicated matched Amplifier (ESP2000, ESP4000 or alternatively with a third party amplifier of the users choice).
The Loudspeaker enclosure shall consist of one 15" Neodymium magnet structure Bass driver, one 6" Neodymium magnet structure Mid driver and one 1" Neodymium Titanium Compression driver mounted to a low compression horn assembly.
The cabinet enclosure shall be made from re-enforced Baltic Birch Ply, with toughened impact and wear resistant paint finish.
The Loudspeaker components shall be protected by an acoustically transparent rigid metal grill supported by absorbent rubber seals.
The enclosure shall incorporate one ergonomically designed recessed handle on the top panel, which will incorporate four M6 points to facilitate Omnimount ™ attachment.
The enclosure shall incorporate one ergonomically designed recessed handle on each side panel to facilitate ESD15 bracket fixing and a single Top Hat Pole mount will be fitted to the base panel.
The enclosure shall incorporate a recessed connection panel and will be fitted with a double input/output Speakon locking connector.
A 4 pole barrier strip will be incorporated in the connection panel to allow bare wire connection.
The Loudspeaker shall have a maximum long term pressure level of 126dB, a total peak power handling capacity of 500W with a nominal Horizontal dispersion of 80° and a Vertical dispersion of 60° and a have a measured on axis frequency response of 48Hz to18KHz (-3dB)
The Enclosure dimensions shall be: 700 mm /27.55" x 450 mm /17.71" x 450 mm /17.71"
The Enclosure shall not exceed a weight of 35 kg /77.2lbs.
The Loudspeaker shall be the KV2 Audio ESD15.
The dedicated Amplifier shall be the KV2 Audio ESP2000/4000 – (Or alternative third party amplifier).
The dedicated fly ware shall be the ESD15 Vertical and Horizontal bracket.

Dimensional Drawings



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