



# ESD Series

## User Guide

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### ESD312 – 3-Way Passive Speaker



## Important Safety Instructions

Before using your ESD Series, be sure to carefully read the applicable items of these operating instructions and the safety suggestions.

1. Read all product instructions.
2. Keep printed instructions, do not throw away.
3. Respect and review all warnings.
4. Follow all instructions.
5. Do not use this unit near water, in unprotected out door areas or in rain or wet conditions.
6. Clean only with dry cloth.
7. Do not block any ventilation openings.
8. Install in accordance with KV2 Audio's recommended installation instructions.
9. Do not install near any heat sources such as heat radiators, heat registers, stoves or other apparatus that produce heat.
10. Only use accessories specified by KV2 Audio.
11. Install the product only with rigging specified by KV2 Audio, or sold with the loudspeaker.
12. Unplug this loudspeaker during lightning storms or when unused for long periods of time.
13. Refer all servicing to qualified service personnel. Servicing is required when the loudspeaker has been damaged in any way, such as when the power-supply cord or plug has been damaged; liquid has been spilled or objects have fallen into the loudspeaker; rain or moisture has entered the loudspeaker; the loudspeaker has been dropped; or when for undetermined reasons the loudspeaker does not operate normally.
14. Do not remove front or back panels. Removal of the panel will expose hazardous voltages. There are no user serviceable parts inside and removable may void the warranty.
15. An experienced user shall always supervise this professional audio equipment.

**CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE THE PANELS.  
NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED PERSONNEL.**

**WARNING:** To prevent fire or electric shock, do not expose this equipment to rain or moisture.

### SAFETY SUMMARY

To reduce the risk of electric shock, disconnect the loudspeaker from the AC mains before installing audio cable. Reconnect the power cord only after making all signal connections. Connect the loudspeaker to a twopole, three- wire grounding mains receptacle. The receptacle must be connected to a fuse or circuit breaker. Connection to any other type of receptacle poses a shock hazard and may violate local electrical codes. Do not allow water or any foreign object to get inside the loudspeaker. Do not put objects containing liquid on or near the unit. To reduce the risk of overheating the loudspeaker, avoid exposing it to direct sunlight. Do not install the unit near heat-emitting appliances, such as a room heater or stove. This loudspeaker contains potentially hazardous voltages. Do not attempt to disassemble the unit. The unit contains no user serviceable parts, repairs should be performed only by factory trained service personnel.

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# ESD312

## 3-Way Passive Speaker

ESD312 - part number KVV 987 544



### Application

Specifically designed as an extremely high power passive 3-way solution

- Live performance
- Dj booth monitoring
- Portable PA and fill
- Fixed Installations

### Introduction

The ESD312 is a very high output full-range 3-way, passive solution with two bass reflex loaded 12" woofers, a single horn loaded 6" mid range and a 1" compression driver. Housed in a professional robust Baltic Birch cabinet, with a protective polymer paint coating and heavy-duty grille, the ESD312 can be a dedicated close-field DJ Monitor system when used in conjunction with the VHD2.18J Subwoofer and monitor bracket. It can also be applied as a PA system, as an individual full range speaker or as a fill speaker to accompany larger format VHD systems. For added versatility in installation, the ESD312 is supported by dedicated accessories including a vertical bracket enabling a wide range of mounting and deployment options for hanging.

### Connection

The ESD312 features both Speakon (NL4) connectors and a terminal block. The connectors are interconnected in parallel to allow the "daisy chaining" of additional ESD312.

### Features

- Professional, Baltic Birch construction with wear resistant polymer paint coating
- 133dB sustained output, 139dB peak
- Very high dynamic range
- Compact, slim design cabinet
- Requires one single amplifier channel
- Revolutionary passive delay line technology
- 90° H x 40° V horn
- State of the art 1" compression driver with complex geometry phase plug and neodymium magnetic structure for higher output, exceptionally low distortion and extended frequency response
- 2x12" neodymium woofers providing low distortion and very high output
- Gradual RMS speaker protection

## Specifications

### System Acoustic Performance

Max SPL Long-term	133dB
Max SPL Peak	139dB
-3dB Response	57Hz to 20kHz
-10dB Response	40Hz to 20kHz
Recommended Power	1000W
Sensitivity	100dB
Impedance	4Ω
Crossover Point	400Hz; 2kHz

### High Frequency Section

Acoustic Design	Horn Loaded
Horn Coverage Horizontal / Vertical	90° x 40°
Throat Exit Diameter / Diaphragm Size	1" / 1,75"
Diaphragm Material	Titanium
Magnet Type	Neodymium
Protection	RMS limiter

### Mid Range Section

Acoustic Design	Horn Loaded
Horn Coverage Horizontal / Vertical	90° x 40°
Woofer Size / Voice Coil Diameter	6" / 1,75"
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	12" / 3"
Magnet Type	Neodymium
Diaphragm Material	Epoxy Reinforced Cellulose
Protection	RMS Limiter

### Speaker Input

Speaker Input	2x Neutrik Speakon® 2x Terminal Block
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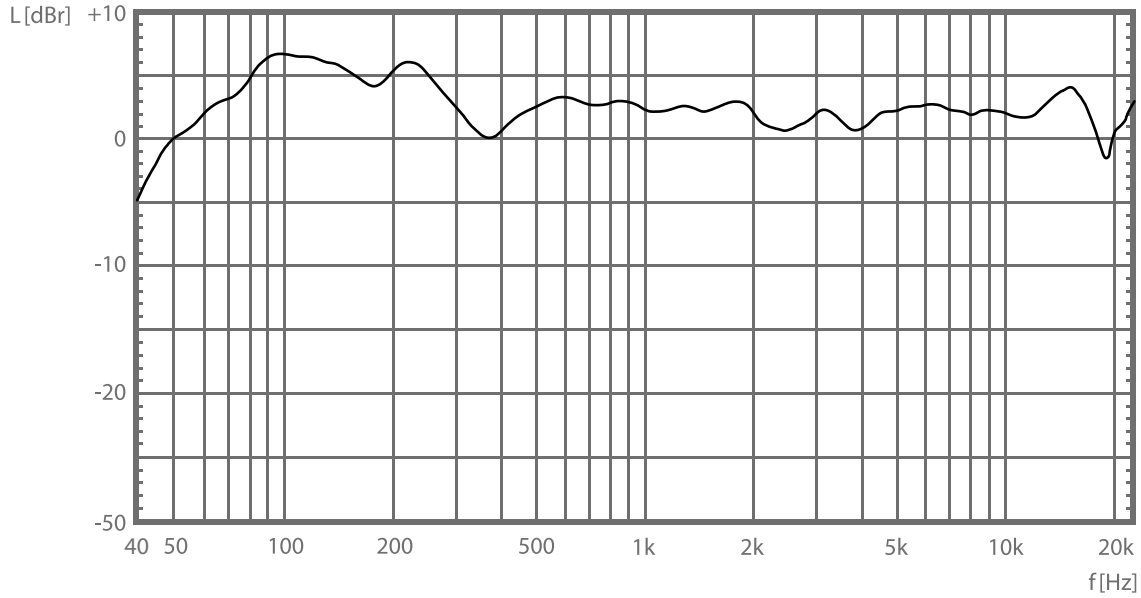
### Cabinet

Cabinet Material	Baltic birch
Handles	2
Color	Polymer paint coating

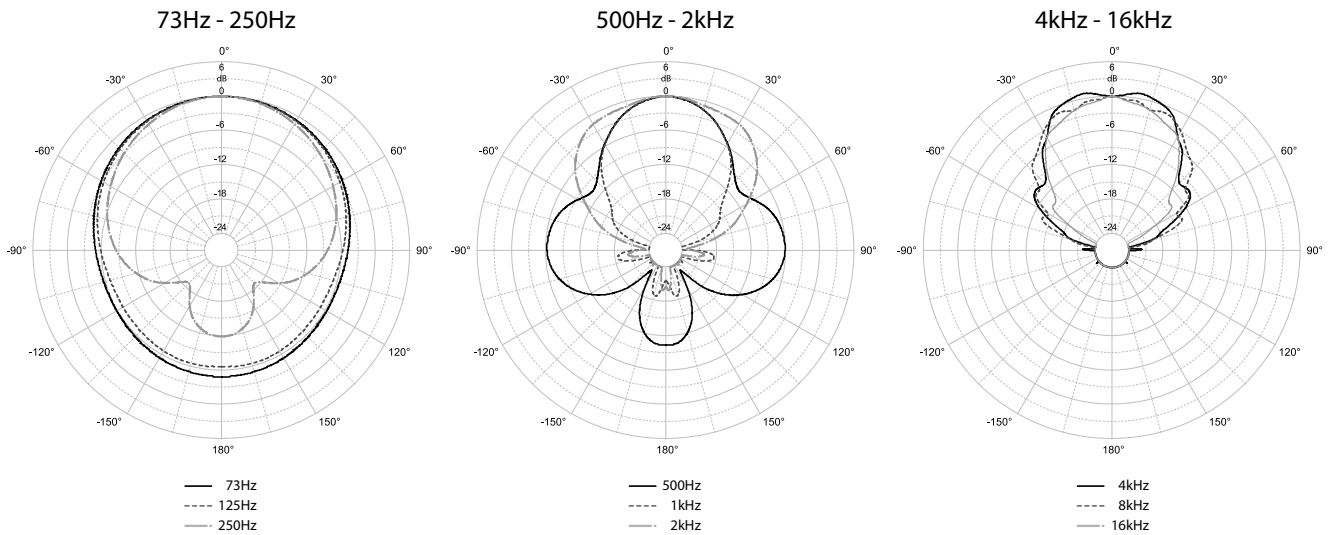
### Physical Dimensions

Height	779 mm / 30.67"
Width	700 mm / 27.56"
Depth	394 mm / 15.51"
Weight	44 kg (97 lbs)

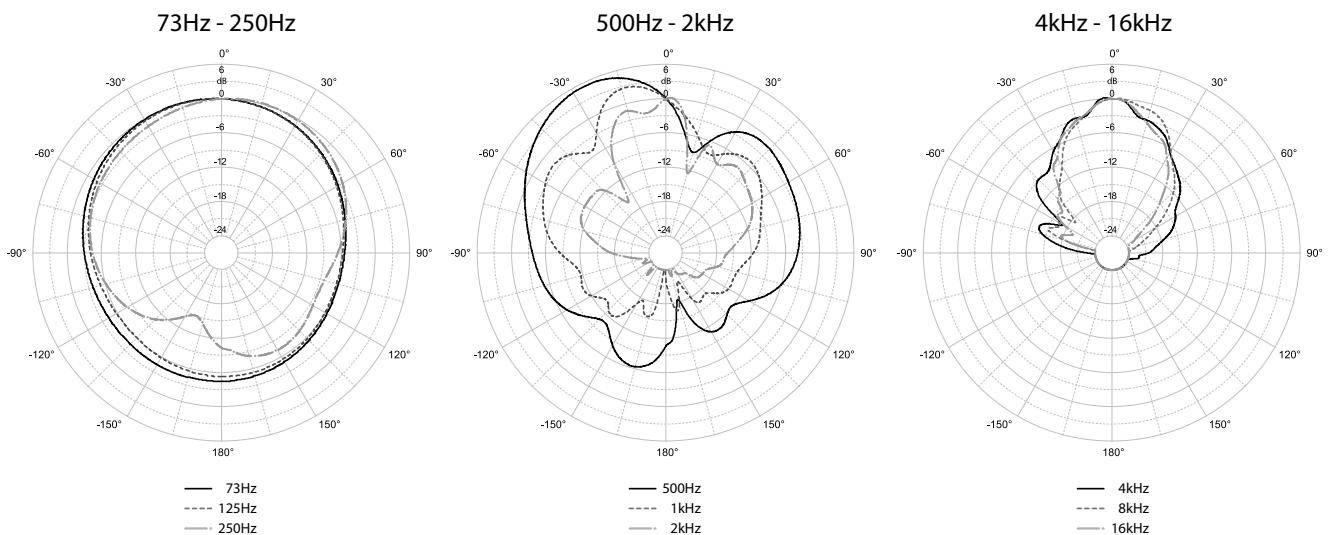
## Frequency response



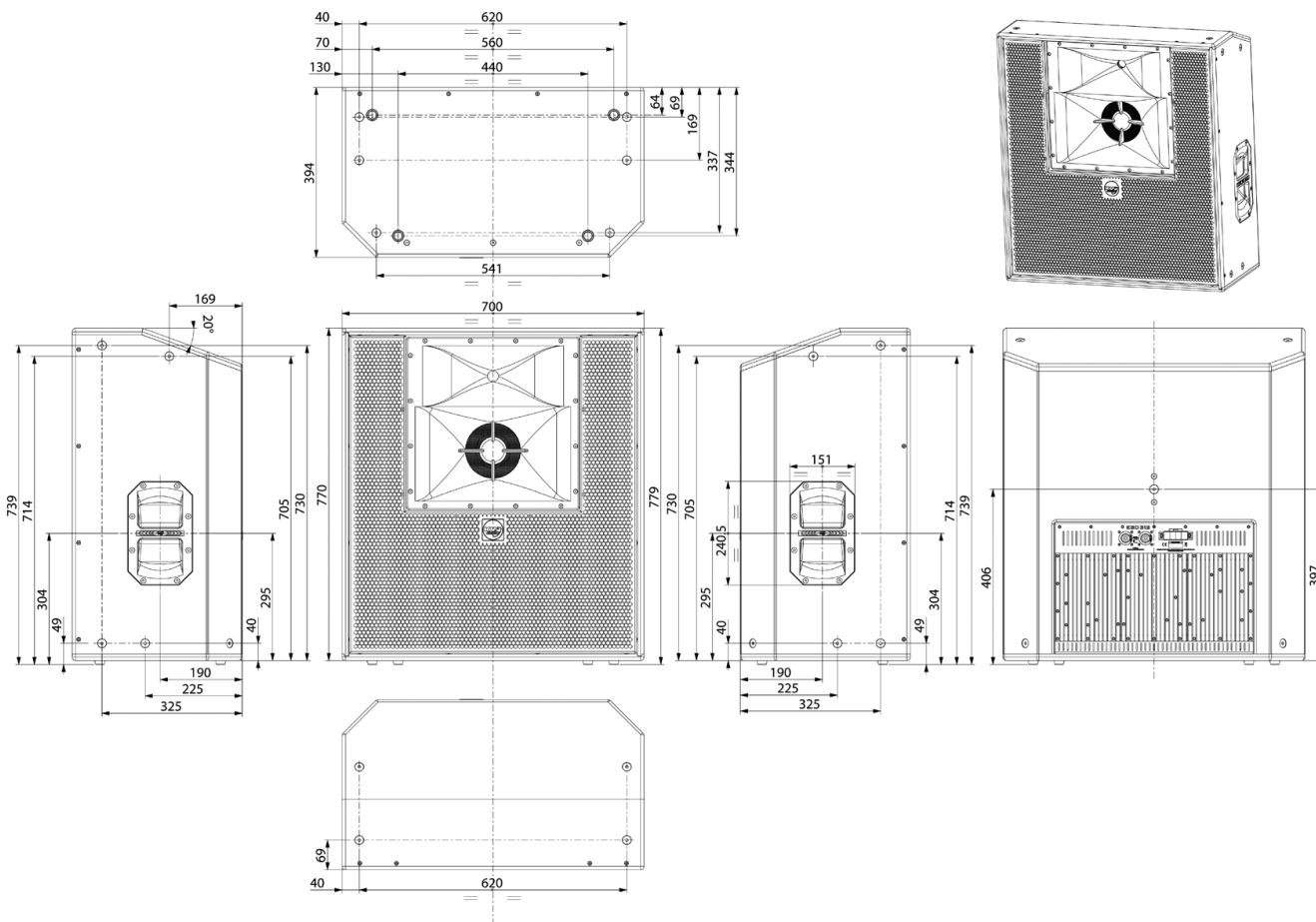
## Horizontal Polarplots



## Vertical Polarplots



## Drawing



## ESD312 Architects and Engineer's Specifications

The Loudspeaker shall be a 3-way design, using SLA Technology (Super Live Audio) and shall be driven and controlled by a full range. Amplifier, (ESP Series or alternatively with a third party amplifier of the users choice).

The Loudspeaker enclosure shall consist of two front bass reflex loaded 12" Neodymium magnet structure Bass woofers, one horn loaded 6" mid range and one 1" Compression driver mounted to a low compression horn assembly.

The cabinet enclosure shall be made from reinforced Baltic Birch Ply, with toughened impact and wear resistant polymer paint finish.

The Loudspeaker components shall be protected by an acoustically transparent rigid metal grille.

The enclosure shall have one ergonomically designed recessed handle on each side panel.

A double input/output Speakon locking connector will be on the rear panel.

The enclosure shall incorporate two M10 fixing points on each top side panel to accommodate the ESD312 Vertical Bracket (KVV 987 556), one additional M10 fixing points on each bottom side panel to allow use of the ESD312 Monitor Bracket (KVV 987 559) for mounting on the VHD2.18J subwoofer (KVV 987 373).

The enclosure shall also incorporate one additional M10 fixing point on bottom side panel, one M10 fixing point on each side sloping and one on the back side for alternative bracket solutions.

The enclosure will be fitted with four rubber feet.

The Loudspeaker shall have a maximum long term pressure level of 133dB, a continuous power handling value of 1000W and 4000W Peak, with a nominal Horizontal dispersion of 90 deg and a Vertical of 40 deg and have a measured on axis frequency response of 57Hz to 20KHz (-3dB). The Enclosure dimensions shall be: 779 mm / 30.67" H x 700 mm / 27.56" W x 394 mm / 15.51" D.

The Enclosure shall not exceed a weight of 44 kg / 97 lbs.

The Loudspeaker shall be the KV2 Audio ESD312.

The dedicated Amplifier shall be the KV2 Audio ESP Series/ - (Or alternative third party amplifier).

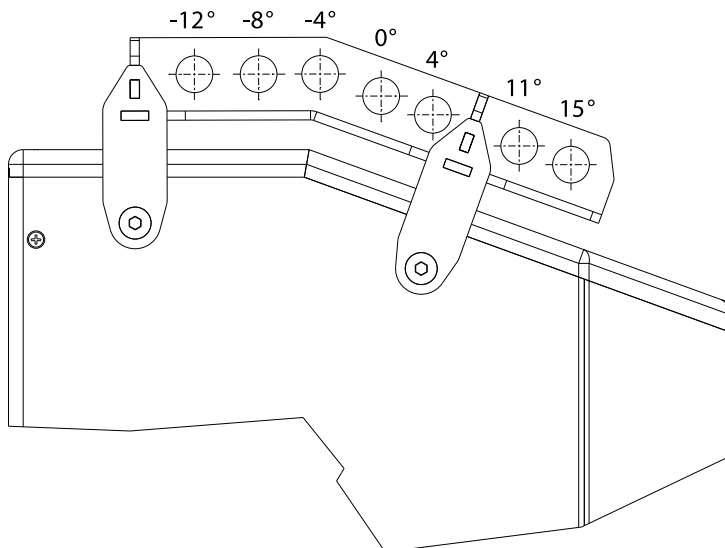
# ESD312 · Vertical Bracket



Part name: ESD312 Vertical Bracket  
Part number: KVV 987 556



## Angle options





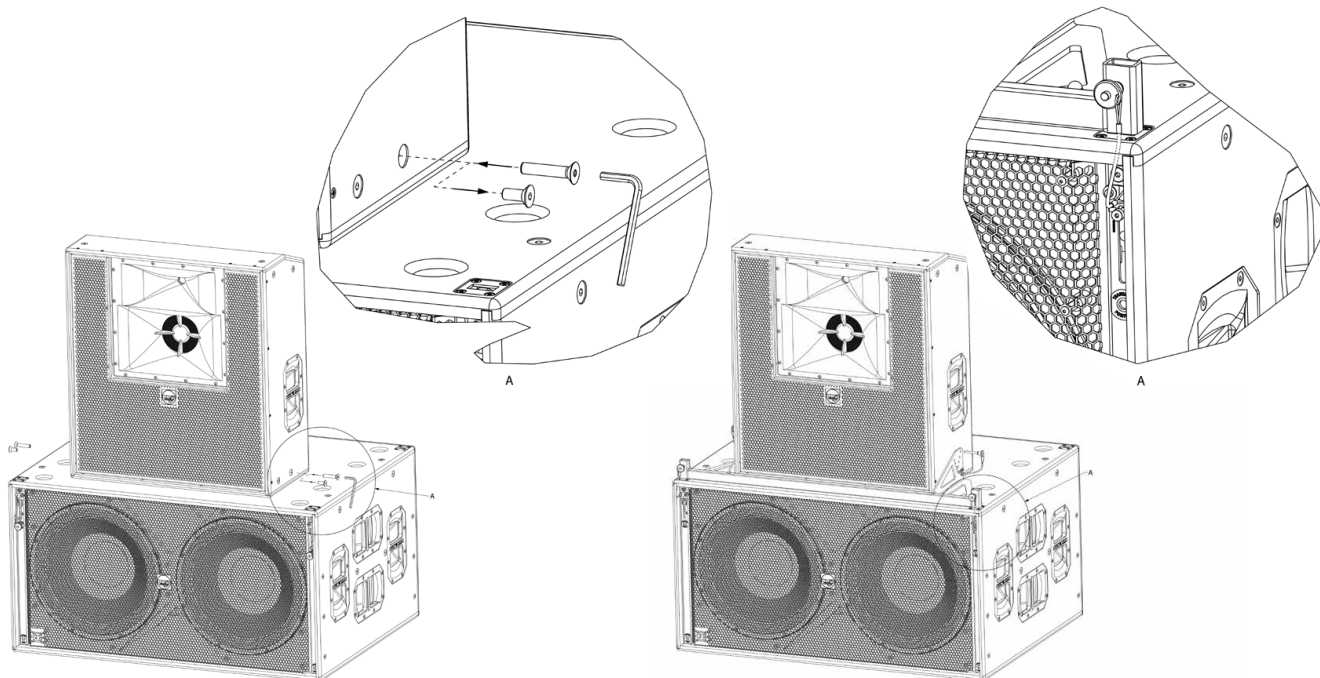
# ESD312 · Monitor Bracket (for VHD2.18J)



Part name: ESD312 Monitor Bracket (for VHD2.18J)

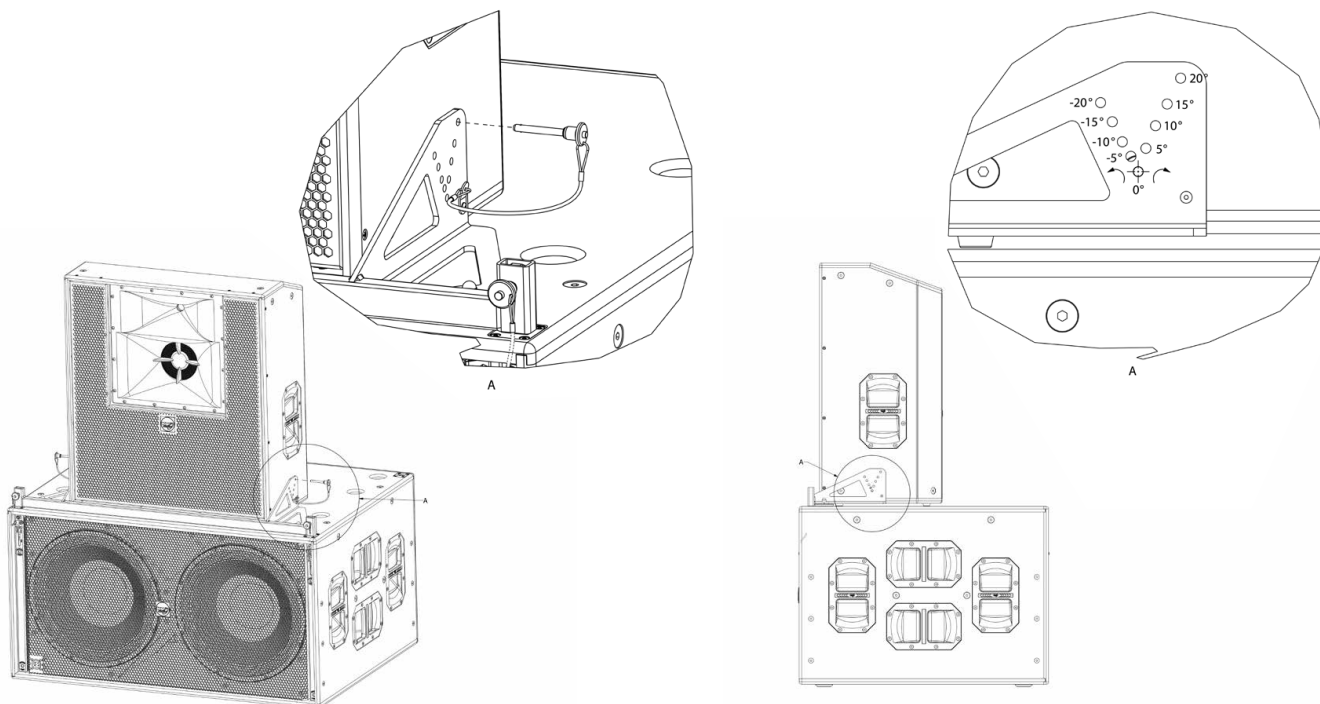
Part number: KVV 987 559

The ESD312 can be used as a dedicated close-field DJ Monitor system when used in conjunction with the VHD 2.18J Subwoofer and monitor bracket.



1. replacement of screws

2. securing the bracket on the subwoofer



3. ESD312 locking to the required angle

4. Selection of the required angle

## ESD312 Vertical Bracket

part name:  
ESD312 Vertical Bracket

part number:  
**KVV 987 556**

**description:**

- 4x button head socket screw, M10x40, ISO 7380
- 1x allen key



## ESD312 Monitor Bracket (for VHD2.18J)

part name:  
**ESD312 Monitor Bracket (for VHD2.18J)**

part number:  
**KVV 987 559**

**description:**

- 2x M10x50 bolt assembly for quickpin
- 1x allen key



## Warranty

Your ESD Series is covered against defects in material and workmanship.

Refer to your supplier for more details.

## Service

In the unlikely event that your ESD Series develops a problem, it must be returned to an authorized distributor, service centre or shipped directly to the KV2 Audio factory. Because of the complexity of the design and the risk of electrical shock, all repairs must be attempted only by qualified technical personnel.

If the unit needs to be shipped back to the factory, it must be sent in its original carton. If improperly packed, the unit may be damaged.

To obtain service, contact your nearest KV2 Audio Service Centre, Distributor or Dealer.







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KVV120166-00-01-0