



ESM Series

User Guide

• ESM26 • ESM12 • ESM312



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 expectations.

ESM Series · Important Safety Instructions

Important Safety Instructions

Before using your ESM 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. Clean only with dry cloth.
6. Do not block any ventilation openings.
7. Install in accordance with KV2 Audio's recommended installation instructions.
8. Only use accessories specified by KV2 Audio.
9. Install the product only with rigging specified by KV2 Audio, or sold with the loudspeaker.
10. Unplug this loudspeaker during lightning storms or when unused for long periods of time.
11. Refer all servicing to qualified service personnel. Servicing is required when the loudspeaker has been damaged in any way, such as when the 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.
12. 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.
13. 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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ESM26

The Ultimate compact Passive Monitor

ESM26 - part number KVV 987 263



Application

Specifically designed as an extremely compact-low profile passive-vocal floor monitor

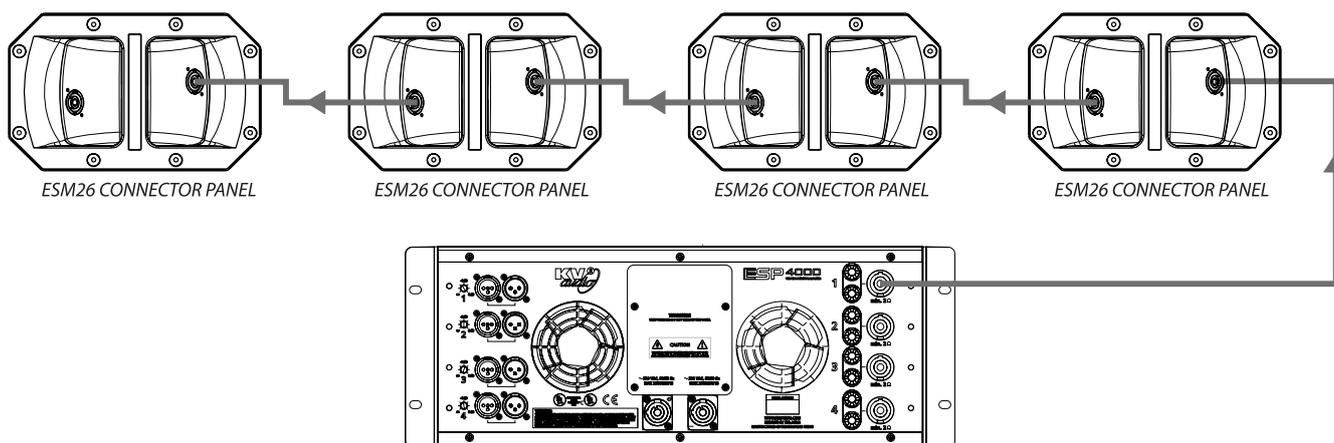
- Live performance
- Concert venues
- Portable PA
- Fixed installations

Introduction

The ESM26 is a purpose built stage monitor with incredible clarity and presence, especially in the all important vocal range. Incorporating two high quality 6" drivers and a 1.75" compression driver on a 100 x 100 degree horn flare. The ESM26 utilises KV2's revolutionary delay line technology for optimum output and feedback rejection. A full width bass port along the bottom of the cabinet couples with the floor to deliver bass response comparable to monitors twice its size. Under 400mm wide this small monitor takes up minimal room on stage and is ideal for visually critical applications like TV and theatre.

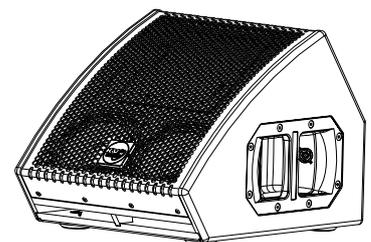
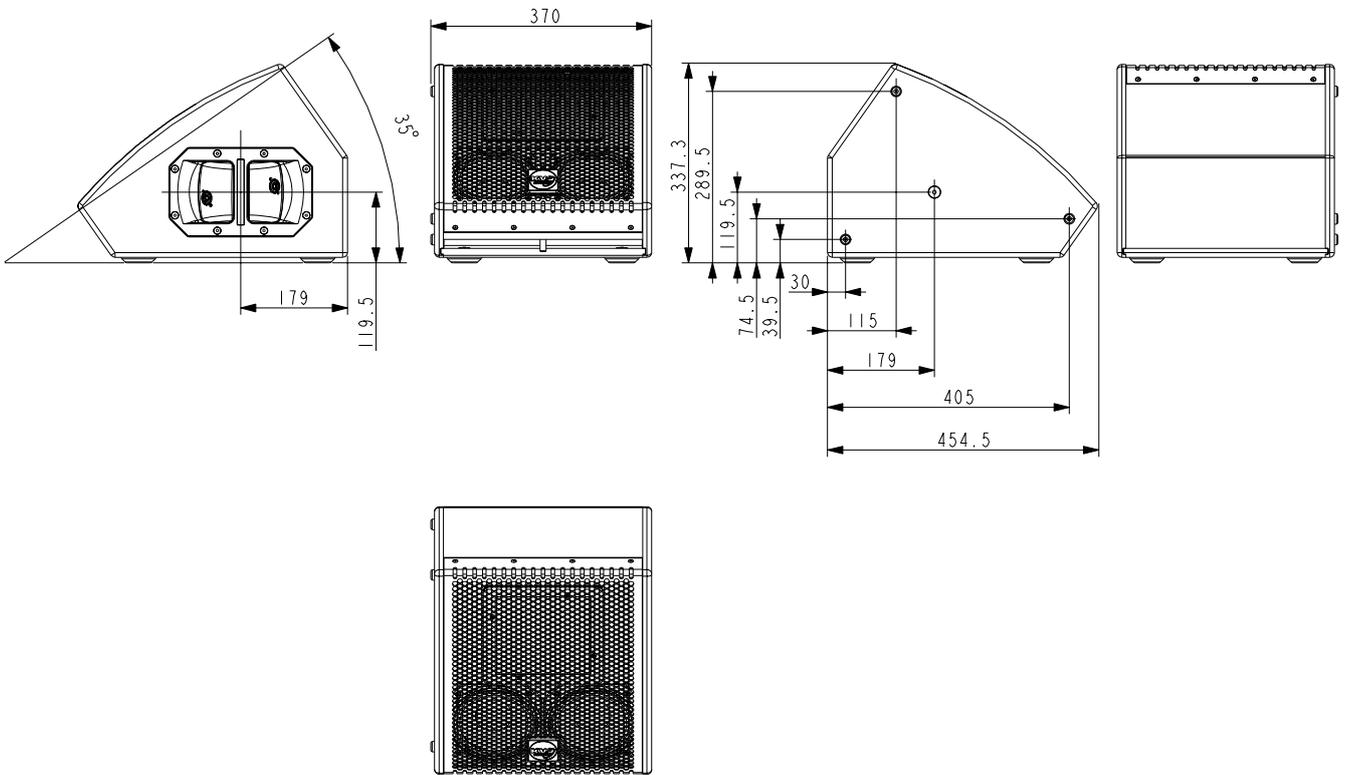
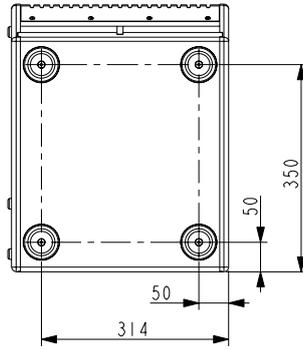
Connection

The ESM26 features two Speakon (NL4) connectors. The connectors are interconnected in parallel to allow the "daisy chaining" of additional ESM26's.



PARALLEL CONNECTION OF THE ESM26 (8Ω) - TOTAL IMPEDANCE 2Ω

Drawings



Specifications

System Acoustic Performance

Max SPL Long-term	123dB
Max SPL Peak	129dB
-3dB Response	70Hz to 16kHz
-10dB Response	54Hz to 28kHz (half space)
Recommended Power	275W
Sensitivity	98dB
Impedance	8Ω
Crossover Point	2.5kHz

High Frequency Section

Acoustic Design	Horn Loaded
High Horn Coverage Horizontal / Vertical	100° x 100°
Throat Exit Diameter / Diaphragm Size	1" / 1.75"
Diaphragm Material	Nitride Titanium
Magnet Type	Neodymium

Low Frequency Section

Acoustic Design	Front Loaded, Bass Reflex
Number of Drivers	2
Woofer Size / Voice Coil Diameter	6" / 1.75"
Magnet Type	Neodymium
Diaphragm Material	Epoxy Reinforced Cellulose

Speaker Input

Speaker Input	2x Neutrik Speakon®
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Features

RMS Limiter	autoreset
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Cabinet

Cabinet Material	Baltic birch
Handles	1
Color	"Orange peeled" Matt Black or any RAL

Physical Dimensions

Height	337.3 mm /13.28"
Width	370 mm /14.57"
Depth	454.5 mm /17.89"
Weight	15 kg (33.8lbs)

ESM 12

The Ultimate Passive Monitor

ESM12L - part number KVV 987 216

ESM12R - part number KVV 987 218



Application

Specifically designed as an extremely high output, full range-low profile passive vocal and music floor monitor

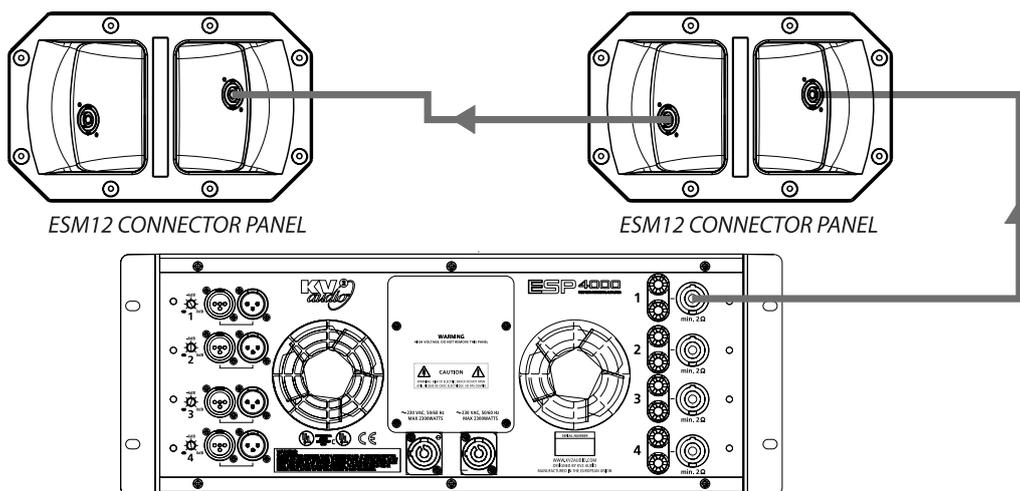
- Live performance
- Concert venues
- Portable PA
- Fixed installations

Introduction

The ESM12 is a full-range low profile 2-way, passive monitoring solution with a 12" trans-coil neo woofer and the same 3" NVPD large format compression driver found in our flagship VHD products. The ESM12 also features our revolutionary passive delay line, which dramatically reduces feedback. Housed in a professional Baltic Birch cabinet, with a protective Polymer coating and heavy-duty grill, the ESM12 can be utilized for FOH applications with the inclusion of a pole mount. Truly one of the most impressive monitoring solutions on the market today, the ESM12 is available in left and right configurations.

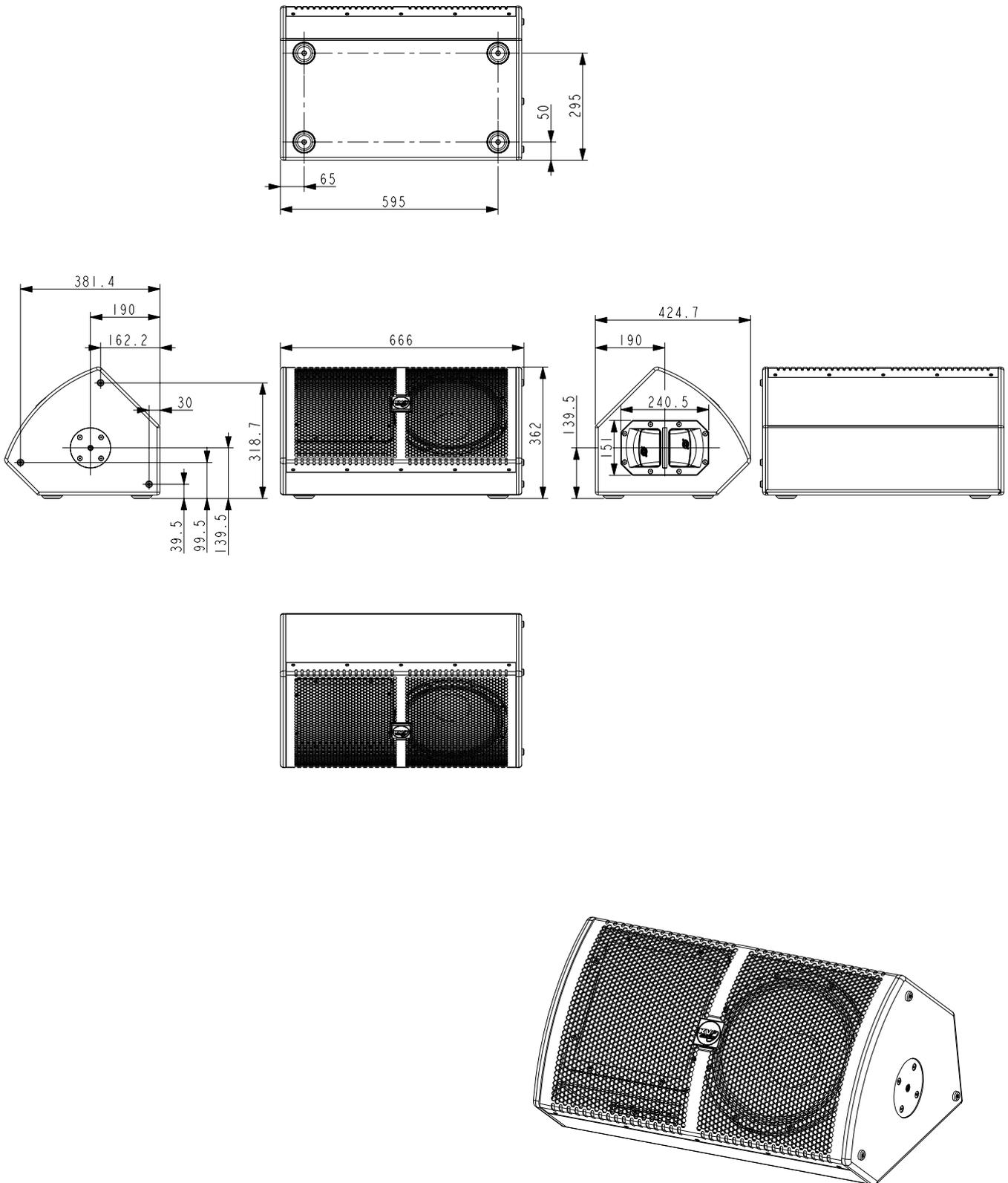
Connection

The ESM12 features Speakon (NL4) connectors. The connectors are interconnected in parallel to allow the "daisy chaining" of additional ESM12's.

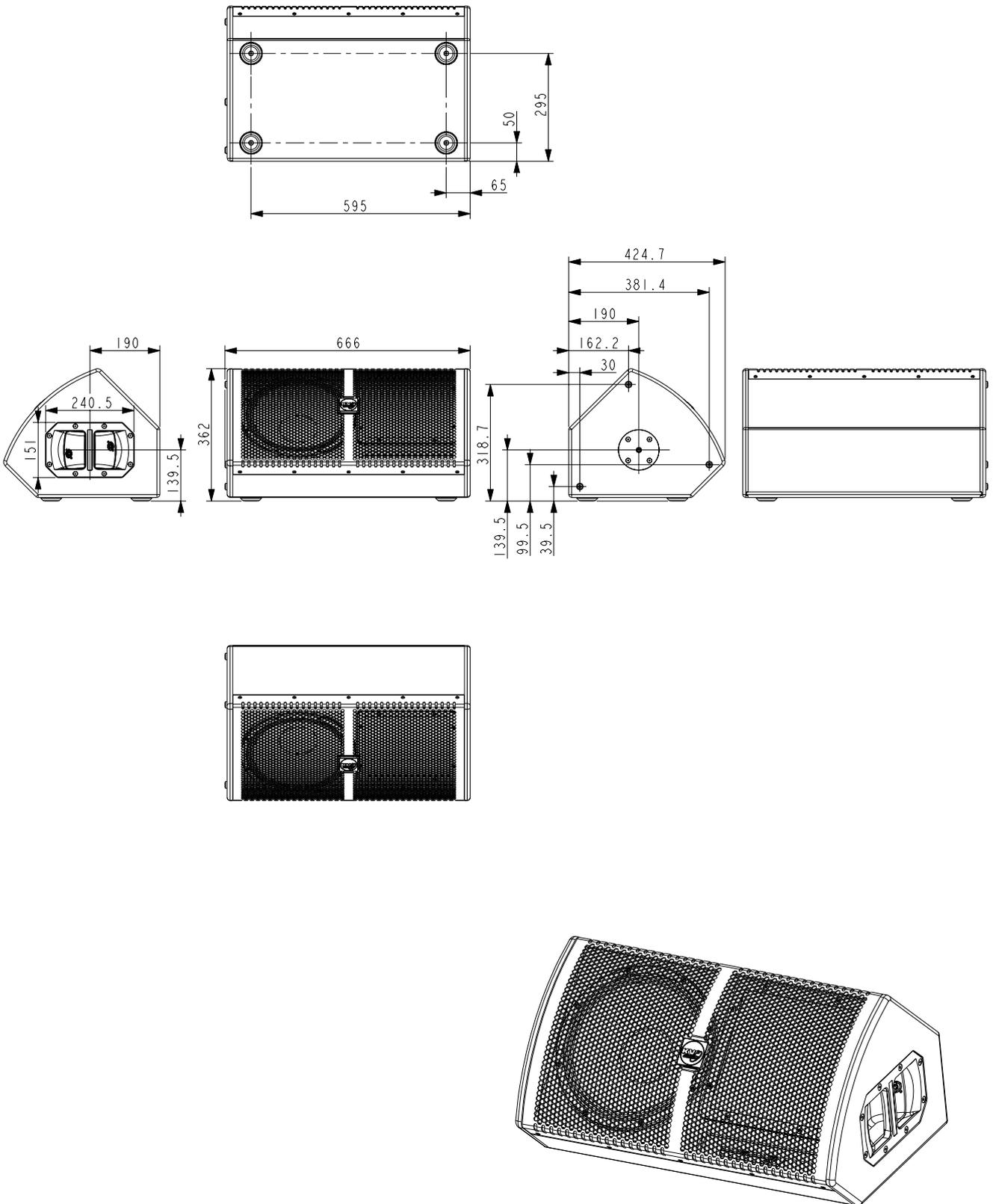


PARALLEL CONNECTION OF THE ESM12s (4Ω) - TOTAL IMPEDANCE 2Ω

Drawings



Drawings



Specifications

System Acoustic Performance

Max SPL Long-term	127dB
Max SPL Peak	133dB
-3dB Response	55Hz to 22kHz
-10dB Response	41Hz to 30kHz (half space)
Recommended Power	500W
Sensitivity	98dB
Impedance	4Ω
Crossover Point	1.2kHz

High Frequency Section

Acoustic Design	Horn Loaded
High Horn Coverage Horizontal / Vertical	40° x 80°
Rotatable Horn	YES
Throat Exit Diameter / Diaphragm Size	1.4" / 3"
Diaphragm Material	Nitride Titanium
Magnet Type	Neodymium
Protection	RMS Limiter

Low Frequency Section

Acoustic Design	Front Loaded, Bass Reflex
Woofer Size / Voice Coil Diameter / Design	12" / 2.5" / Trans Coil
Magnet Type	Neodymium
Diaphragm Material	Epoxy Reinforced Cellulose
Protection	Thermal breaker - autoreset

Speaker Input

Speaker Input	2x Neutrik Speakon®
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Cabinet

Cabinet Material	Baltic birch
Handles	1
Pole Mount	35 mm
Color	"Orange peeled" Matt Black or any RAL

Physical Dimensions

Height	368 mm (14.48")
Width	606 mm (23.86")
Depth	368 mm (14.48")
Weight	23 kg (50.7lbs)

ESM312

STAGE MONITOR

4 Ohms / 1000 Watts

High Output Full-range 3-Way Monitor

ESM312 - part number KVV 987 467



Application

Specifically designed as an extremely compact-low profile passive-vocal floor monitor

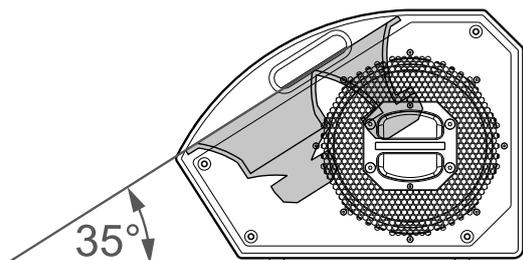
- Live performance
- Concert venues
- Portable PA
- Fixed installations

Introduction

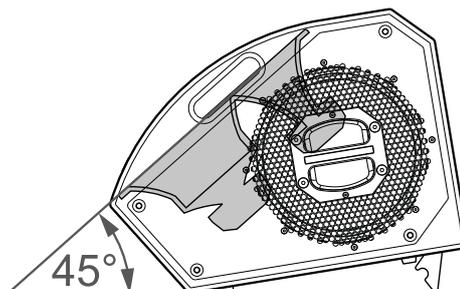
The ESM312 is a very high output full-range low profile 3-way, passive monitoring solution with two bass reflex loaded 12" neo woofers, a single horn loaded 6" mid range woofer and a 1" compression driver. Housed in a professional robust Baltic Birch cabinet, with a protective Polymer paint coating and heavy-duty grille, the ESM312 can be utilized for all large scale stage monitoring applications, where quick and easy set up is required. The ESM312 is truly one of the most impressive monitoring solutions on the market today.

ESM312 Angles options

ESM312
35°

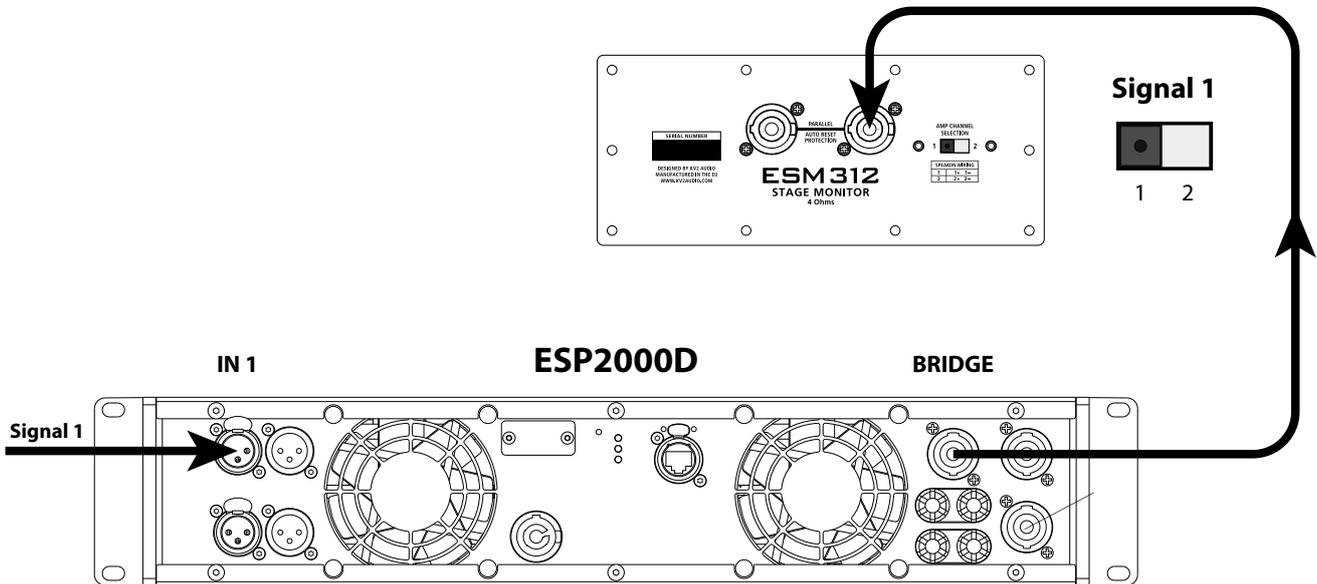


ESM312
45°

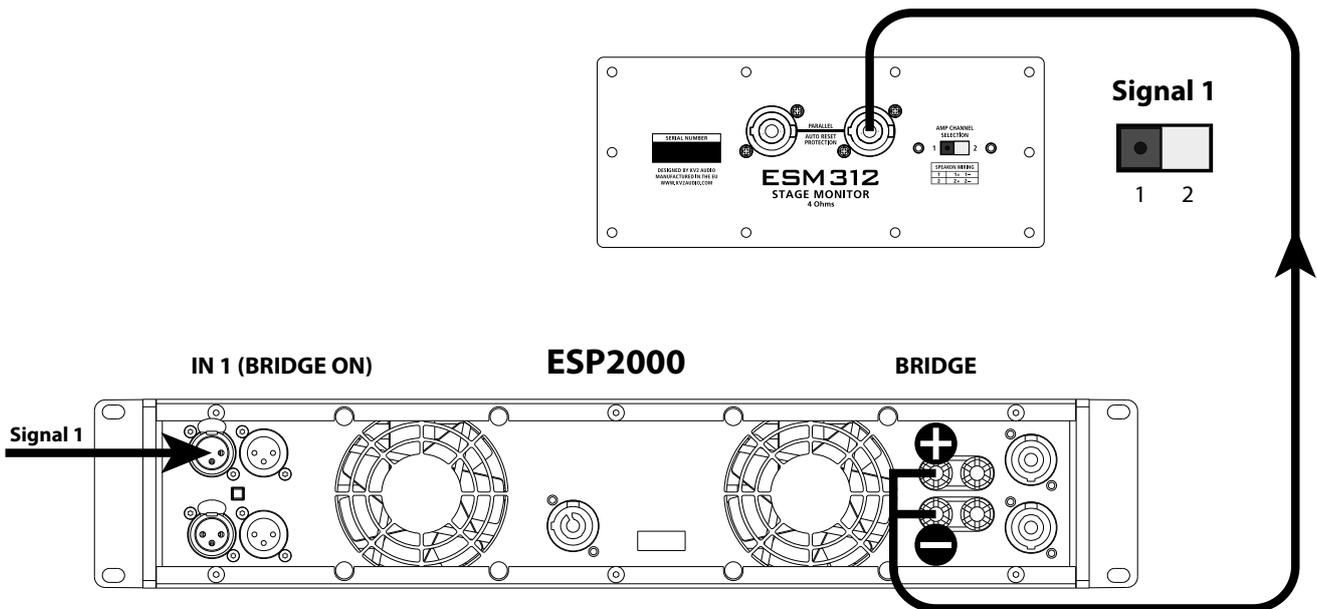


Connection

ESM312 + ESP2000D



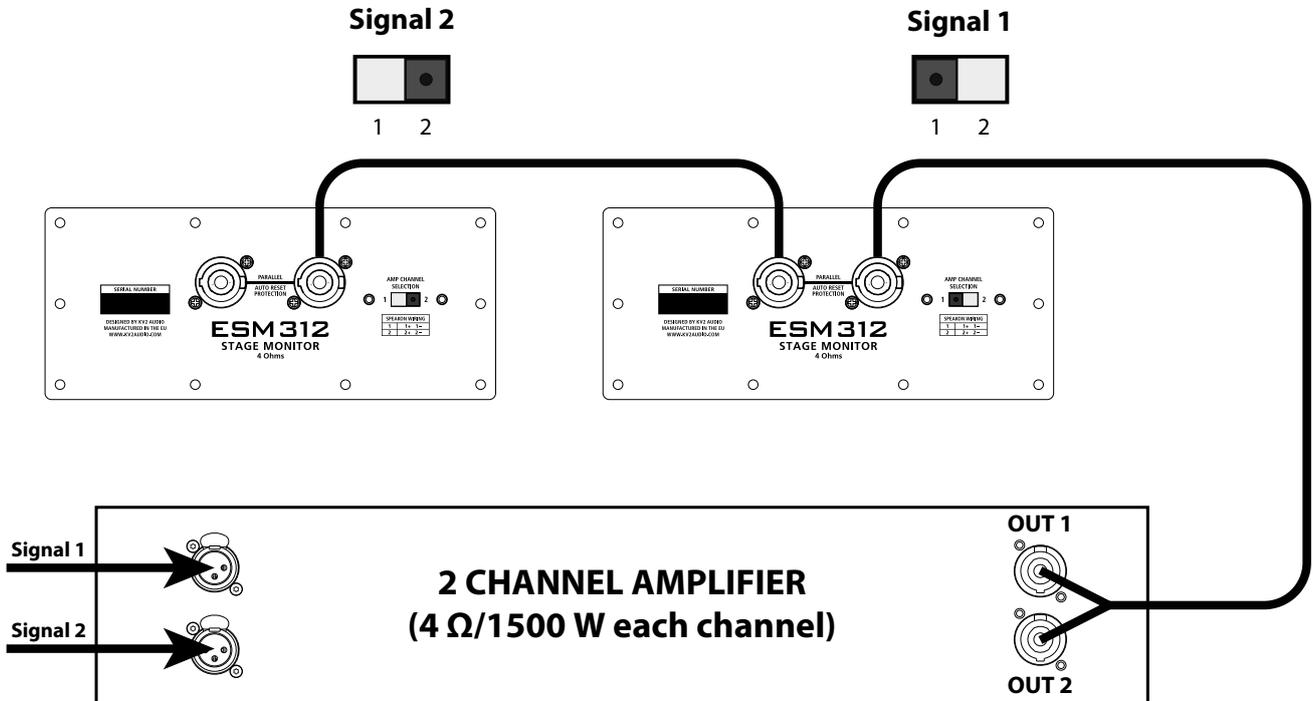
ESM312 + ESP2000



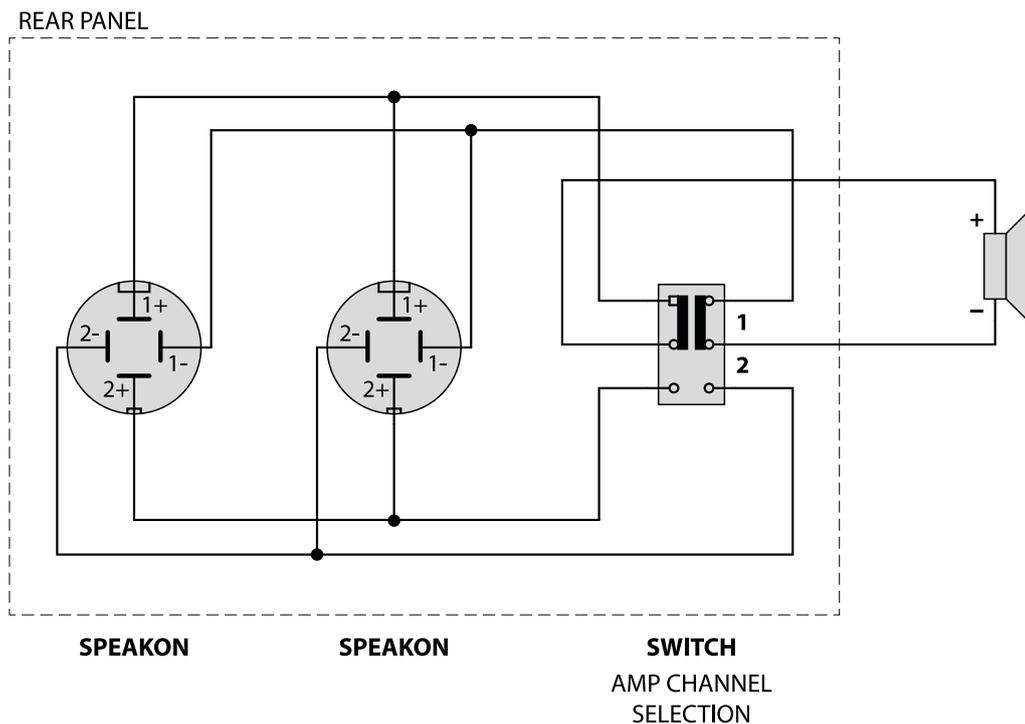
ESM312 · Connection

Connection

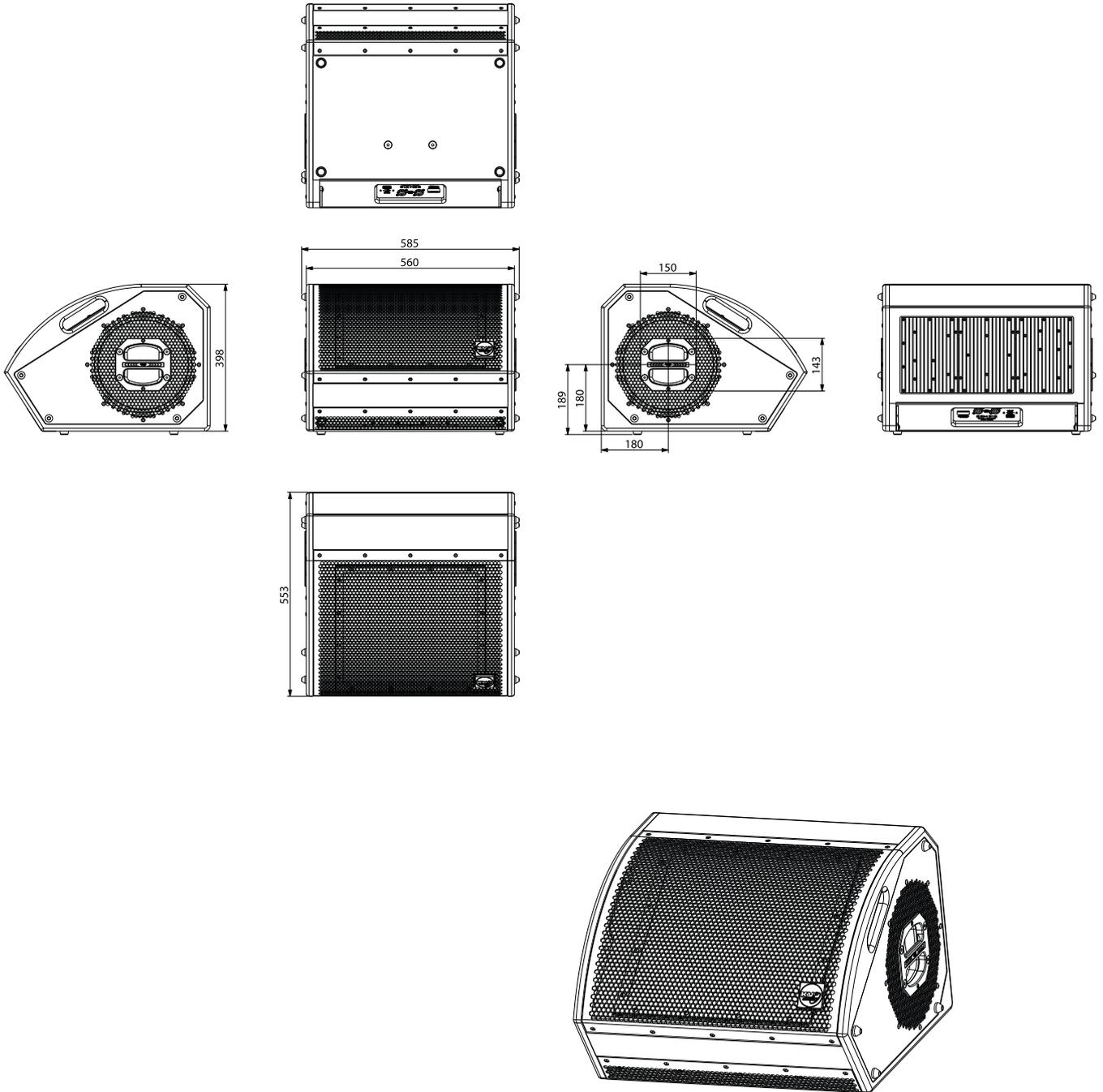
2x ESM312 + any amplifier according to the specifications



ESM312 Wiring



Drawings



Specifications

System Acoustic Performance

Max SPL Long-term	133dB
Max SPL Peak	139dB
-3dB Response	40Hz to 20kHz
-10dB Response	35Hz to 20kHz (half space)
Power Handling	1000W continuous / 4000W peak
Sensitivity	100dB
Impedance	4Ω
Crossover Point	400Hz; 2kHz

High Frequency Section

Acoustic Design	Horn Loaded
High Horn Coverage Horizontal / Vertical	90° x 40°
Rotatable Horn	NO
Throat Exit Diameter / Diaphragm Size	1" / 1,75"
Diaphragm Material	Titanium
Magnet Type	Neodymium
Protection	RMS excursion limit

Mid Range Section

Acoustic Design	Horn Loaded
High Horn Coverage Horizontal / Vertical	90° x 40°
Rotatable Horn	NO
Woofers 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
Woofers Size / Voice Coil Diameter	12" / 3"
Magnet Type	Neodymium
Diaphragm Material	Epoxy Reinforced Cellulose
Protection	RMS Limiter

Speaker Input

Speaker Input	2x Neutrik Speakon®
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Cabinet

Cabinet Material	Baltic birch
Handles	2 + 2
Color	Polymer paint coating

Physical Dimensions

Height	398 mm (15.669")
Width	585 mm (23.032")
Depth	553 mm (21.76")
Weight	42 kg (92.59lbs)

Covers

Cover for ESM26

part name:
COVER ESM26
 part number:
KVV 987 281
description:
 - heavy duty
 - padded



Cover for ESM12-Left

part name:
COVER ESM12L
 part number:
KVV 987 262
description:
 - heavy duty
 - padded



Cover for ESM12-Right

part name:
COVER ESM12R
 part number:
KVV 987 261
description:
 - heavy duty
 - padded



Bass speaker cables

Bass speaker cable Speakon 4.40

part name:
Cable Speakon 4.40
 part number:
KVV 987 327
description:
 - 4 wire speaker cable
 - Speakon NL4 connectors
 - 4m (13ft)
 - for K-RIG Bass Module hook-up



Bass speaker cable Speakon 4.15

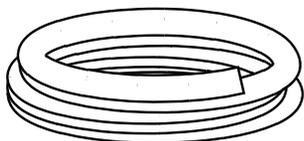
part name:
Cable Speakon 4.15
 part number:
KVV 987 326
description:
 - 4 wire speaker cable
 - Speakon NL4 connectors
 - 1,5m (5ft)
 - for K-RIG Bass Module hook-up



Speaker cables

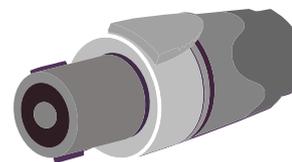
Speaker cable 2 x 1,5mm

part name:
1m - round flexible speaker cable,
cross section 2 x 1.5mm
 part number:
WX 002



Speakon NL4

part name:
SPEAKON NL4
 part number:
KA 027



Speaker cable 4 x 2,5mm

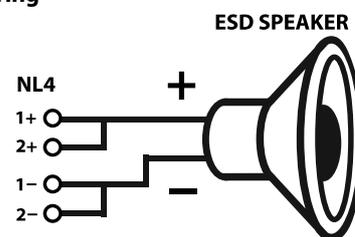
part name:
1m - round flexible speaker cable,
cross section 4 x 2.5mm
 part number:
WX 003



part name:
ESM, Speakon NL4 wiring

positive pin
 (1 +, 2 + parallel)

negative pin
 (1 -, 2 - parallel)



Recommended speaker cable lengths

MINIMUM CROSS SECTION [mm ²]	LENGTH [m], impedance 4Ω	LENGTH [m], impedance 8Ω	LENGTH [m], impedance 16Ω
1.5	8	15	30
2.5	15	30	60
2 x 2.5	20	40	90
4	25	50	100

Warranty

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

Refer to your supplier for more details.

Service

In the unlikely event that your ESM Series develops a problem, it must be returned to an authorised distributor, service centre or shipped directly to our 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.



The Future of Sound.
Made Perfectly Clear.

KV2 Audio International

Nádražní 936, 399 01 Milevsko
Czech Republic

Tel.: +420 383 809 320

Email: info@kv2audio.com

www.kv2audio.com

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