

## **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.

### 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 rewiew 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.



### Content

ESM26 - The Ultimate compact Passive Monitor	4
Overview	4
Drawing	5
Specifications	6
ESM12 - The Ultimate Passive Monitor	7
Overview	7
Drawing - ESM12L	8
Drawing - ESM12R	9
Specifications	10
ESM312 - High Output Full-range 3-Way Monitor	11
Overview	11
Connection · ESM312 Wiring	12
Drawing	13
Specifications	14
Accessories	15 - 16
Warranty · Service	17

## ESM26 · Overview



## ESM 26 The Ultimate compact Passive Monitor

#### ESM26 - part number KVV 987 263



### Application

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

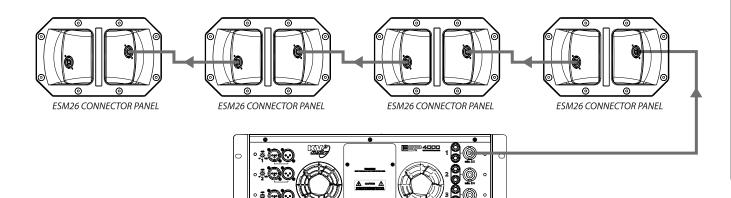
- Live performance
- Concert venues
- Portable PA
- Fixed installations

### 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

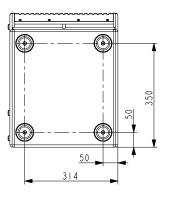
The ESM26 features two Speakon (NL4) connectors. The connectors are interconnected in parallel to allow the "daisy chaining" of additional ESM26's.

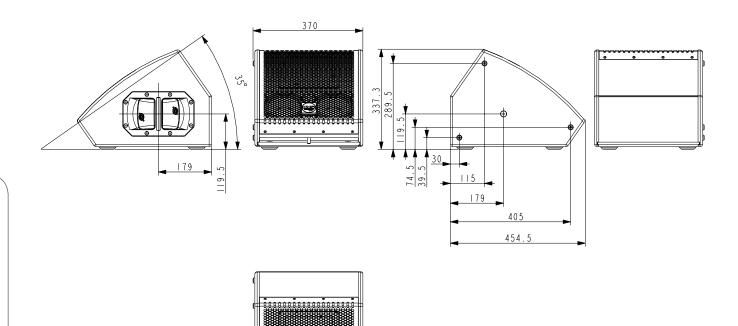


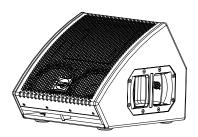
PARALLEL CONNECTION OF THE ESM26 (8 $\Omega$ ) - TOTAL IMPEDANCE 2 $\Omega$ 

## ESM26 · Drawings











### Specifications

#### System Acoustic Perfomance

System Acoustier en ontance		
Max SPL Long-term	123dB	
Max SPL Peak	126dB	
-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®	
Features		
RMS Limiter	autoreset	
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)	

## ESM12 · Overview



## 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

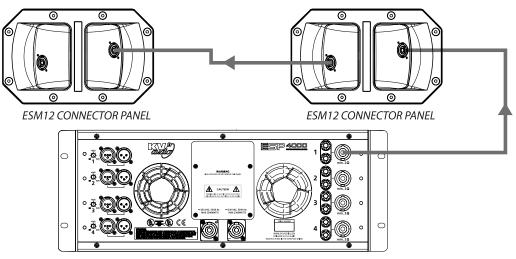
- Live performance
- Concert venues
- Portable PA
- Fixed installations

### 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

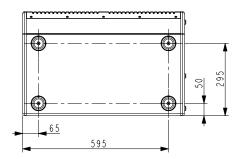
The ESM12 features Speakon (NL4) connectors. The connectors are interconnected in parallel to allow the "daisy chaining" of additional ESM12's.

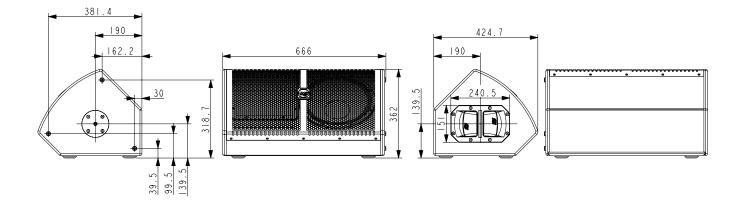


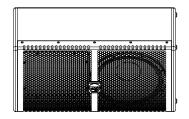
PARALLEL CONNECTION OF THE ESM12s (4 $\Omega$ ) - TOTAL IMPEDANCE 2 $\Omega$ 

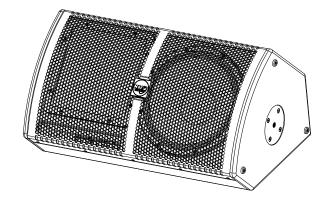
## ESM12L · Drawings





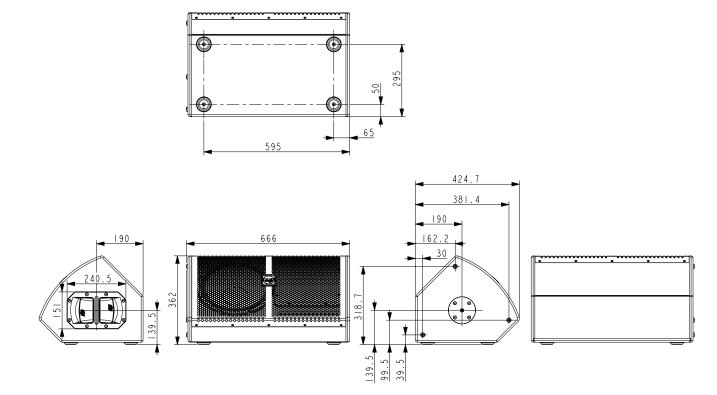


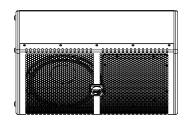


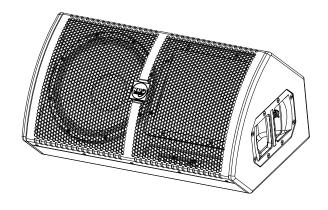


## ESM12R · Drawings











### Specifications

#### System Acoustic Perfomance

Max SPL Long-term	127dB
Max SPL Peak	130dB
-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®	
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 · Overview



#### ESM312 - part number KVV 987 467

## ESM312 STAGE MONITOR 4 Ohms / 1000 Watts

High Output Full-range 3-Way Monitor



### Application

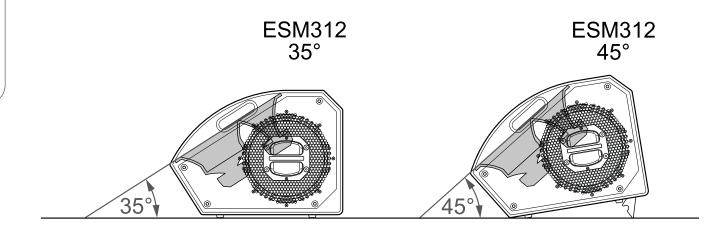
Specifically designed as an extremely compact-low profile passive-vocal floor monitor

- 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.

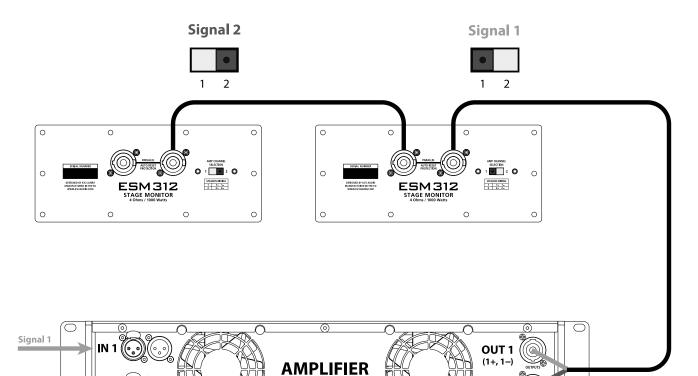
### ESM312 Angles options



## ESM312 · Connection · ESM312 Wiring



### Connection



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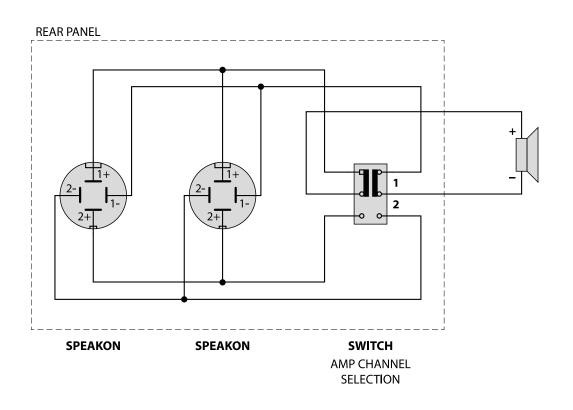
OUT 2 (2+, 2–)

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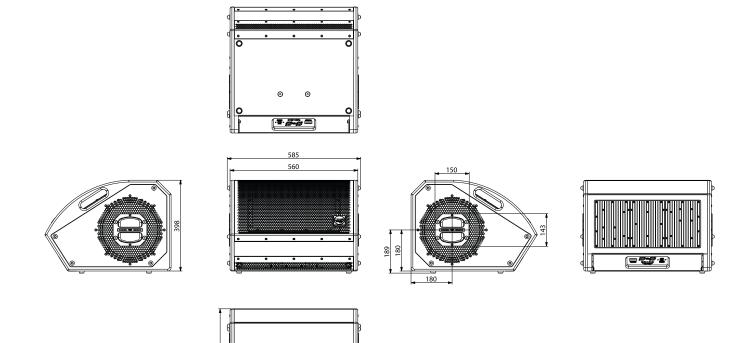
Signal 2

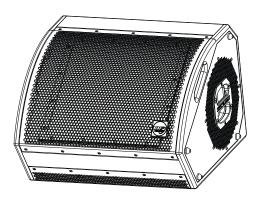


## ESM312 · Drawings

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### Specifications

#### System Acoustic Perfomance

System Acoustic Perfomance		
Max SPL Long-term	133dB	
Max SPL Peak	136dB	
-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° × 40°	
Rotatable Horn	NO	
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®	
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)	

## ESM Series · Accessories



### Covers

#### Cover for ESM26

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





#### 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:



- 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:

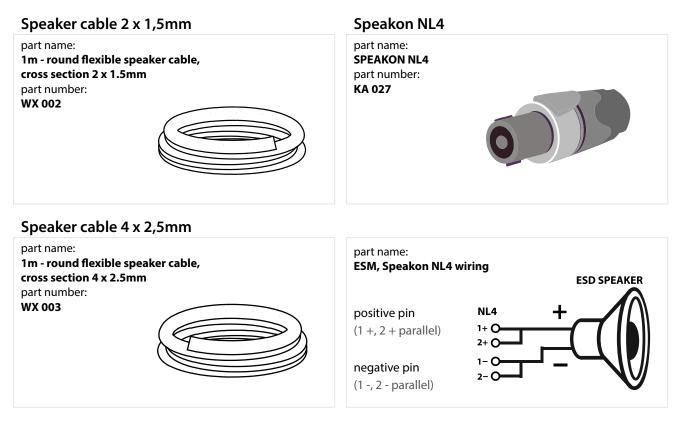
- 4 wire speaker cable
- Speakon NL4 connectors
- 1,5m (5ft)
- for K-RIG Bass Module hook-up



## ESM Series · Accessories



### Speaker cables



### Recommended speaker cable lenghts

MINIMUM CROSS SECTION [mm <sup>2</sup> ]	LENGTH [m], impedance $4\Omega$	LENGTH [m], impedance $8\Omega$	LENGTH [m], impedance 16 $\Omega$
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.

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