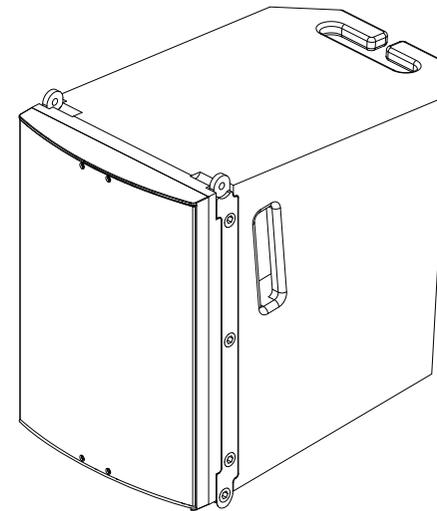




[www.se-audiotechnik.com](http://www.se-audiotechnik.com)



# USER'S MANUAL



# M-F3A

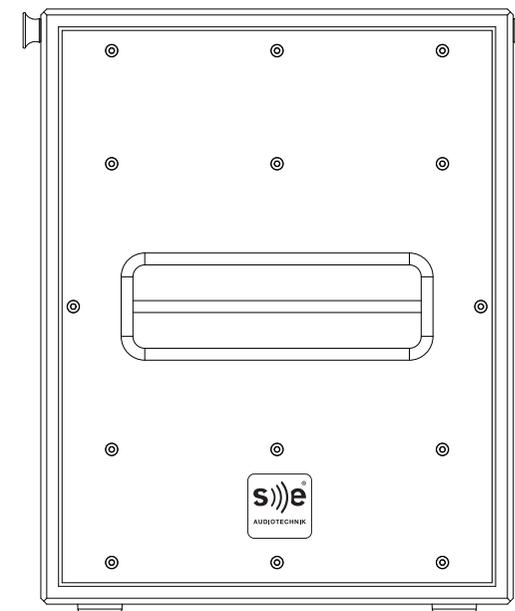
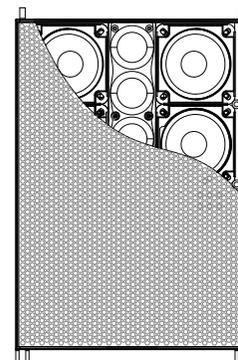
## SMALL SIZE, HIGH SPL ACTIVE ARRAY SYSTEM

Thank you for choosing s)))e AUDIOTECHNIK !

We have designed this product to operate reliably over many years. Nearly two decades of experience as a speaker manufacturer and strict German quality standards guarantee that these are not merely empty words but our promise to you.

Please, take a few moments to read these instructions carefully, as we want you to enjoy your new s)))e products quickly and to the fullest.

For more information about s)))e please check out our website at [www.se-audiotechnik.com](http://www.se-audiotechnik.com).



## PREVENTIVE MEASURES:

1. Please read the attached safety instructions as well as the following instructions carefully.
2. Please keep all the instructions.
3. Please use the device only as intended.
4. Please respect the valid waste management rules. Please deliver the packaging divided into plastic and paper / cardboard to the recycling management.
5. Please refer all servicing to qualified personnel only if the device is damaged, exposed to liquid / rain or if it does not operate normally.
6. Please do not expose the product to any kind of heat such as ovens, radiators, or any other devices (incl. amplifiers). Please also make sure that there is enough distance between amplifiers and walls, racks, etc. to prevent overheating.
7. After connection please check the wiring to prevent any kind of accident or damage.  
Please never use any kind of damaged cable and wiring.
8. Only use approved and stable stands, brackets, shelves, tables etc.. for installations. Please check for adequate stability to avoid a collapse.
9. Appearance of interferences when using wireless systems.  
The simultaneous use of wireless microphones and mobile phones (if both devices are not very far away from each other) can cause interferences in the microphone signal which can be heard in the PA system.



### CAUTION:

To reduce the risk of electric shock, do not remove cover (or back). No user serviceable parts inside. Refer servicing to qualified personnel.



The lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk to persons.



The exclamation mark within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

### CAUTION! HIGH VOLUME!

You will operate this transmission system for professional use. Therefore the commercial use of this equipment is liable to the rules and regulations of the Accident Prevention & Insurance Association of your industry sector. s)ie as a manufacturer is bound to inform you formally about the existence of eventual sanitary risks.

This system is able to induce an acoustic pressure of 80 dB. 85 dB is by law the maximum audio pressure level which your ear can be exposed to during a work day. It was set according to the technical expertise of the occupational medicine as a basis for the noise rating level. Higher sound levels or longer exposition times could damage your ear. The time of exposition by higher sound pressure levels should be shortened in order to prevent from ear damages. Here are a few reliable warning signals which show that you have exposed yourself for a too long period to excessive sound pressure levels:

- You hear bell- or whistling sounds!
- You have the impression that you can't hear high tones anymore!

## FEATURES & GETTING STARTED:

### INTRODUCTION

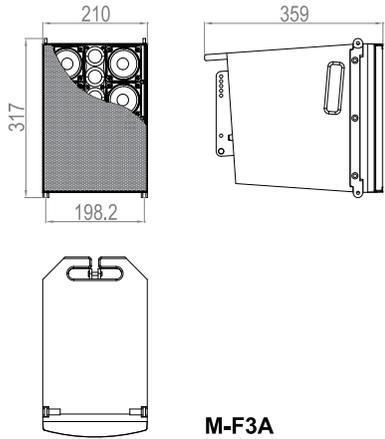
M-F3A is a compact and scaleable active array system of small size and light weight.

Each M-F3A contains 8 pieces of high-efficiency 2.8" full range speakers and 7 pieces of 1" direct radiate tweeter w/o horn, all vertically aligned to form a line array. Combining these components on the area of an A4 paper and weighing only 8 kg, each speaker box can produce an impressive 123 dB SPL continuously and 128 dB peak SPL. Built-in high class SMPS technology and two-channel class-D amplifiers, together with proprietary DSP- filtering and limiting, ensure a reliable and steady performance at all times.

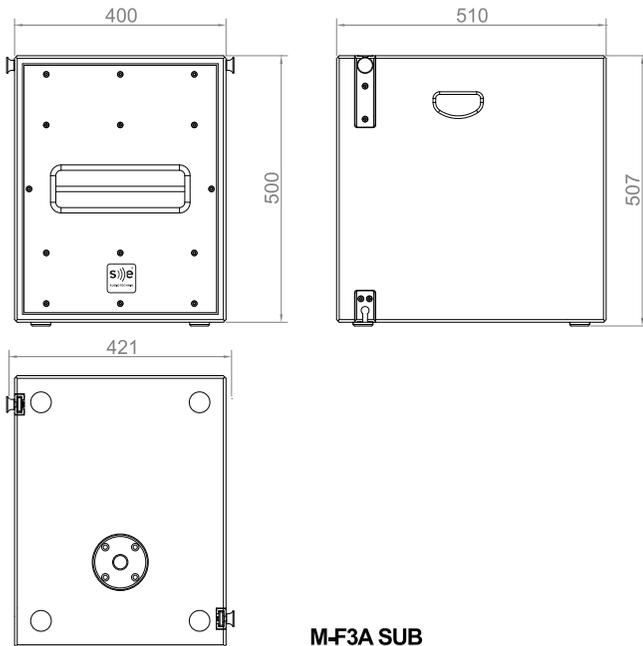
The M-F3A SUB is a V-shaped double 10" bandpass subwoofer, also powered by a built-in 400 Watt class-D amplifier and equipped with switching mode power supply. Its compact and efficient design allows the subwoofer to perform great in all kinds of environments and its size guarantees very flexible subwoofer placement. All products have Powercon in and outputs as well as signal in-out for convenient daisy chain wiring to allow an individual adjustment of the system according to the application demands. In case a unit goes into protection mode, a built-in relais assures the continuous forwarding of power and signal.

Great out-of-the box sound tuning, compact design, convenient wiring, easy scaleability and many other features of this system save a lot of space, time and money for speaker transportation and setup!

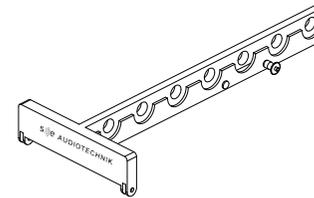
**STRUCTURAL DIAGRAM:**



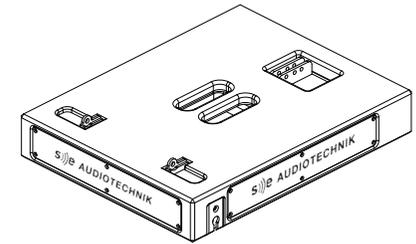
**M-F3A**



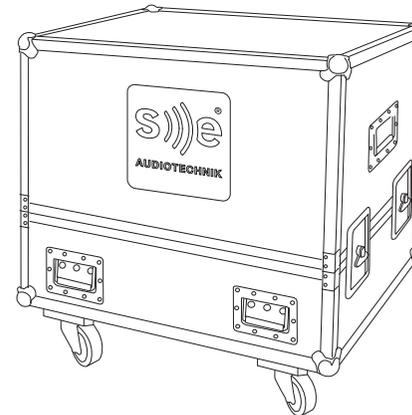
**M-F3A SUB**



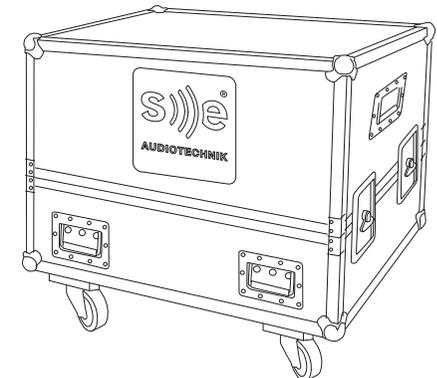
**M-F3A BF**  
M-F3A Bumper frame



**M-F3A SFi**  
M-F3A Ground stack frame



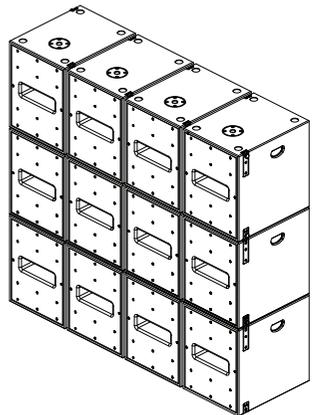
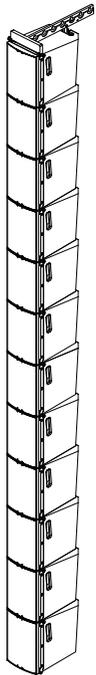
**M-F3A SUB FC**  
M-F3A SUB Flightcase(M-F3A SUB 2pcs)



**M-F3A FC**  
M-F3A Flightcase(M-F3A 4pcs)

**OPERATION OPTIONS:**

Flying operation:

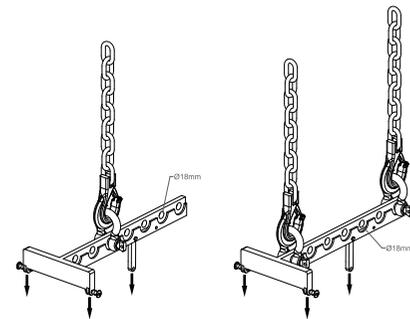


- M-F3A BF** 1 PC
- M-F3A** 12 PCS
- M-F3A SUB** 12 PCS
- M-F3A line array system with M-F3A BF

**OPERATION OPTIONS:**

Flying operation:

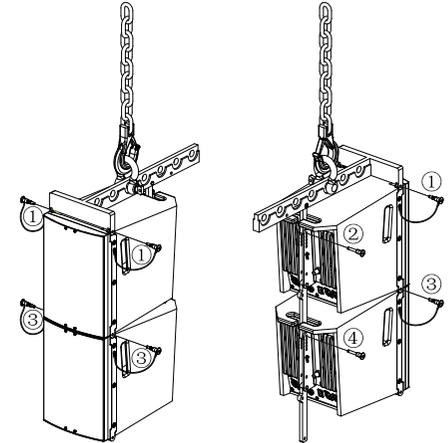
**flying bracket**



single point flying

double points flying

**Instruction for Plug, sequence diagram**

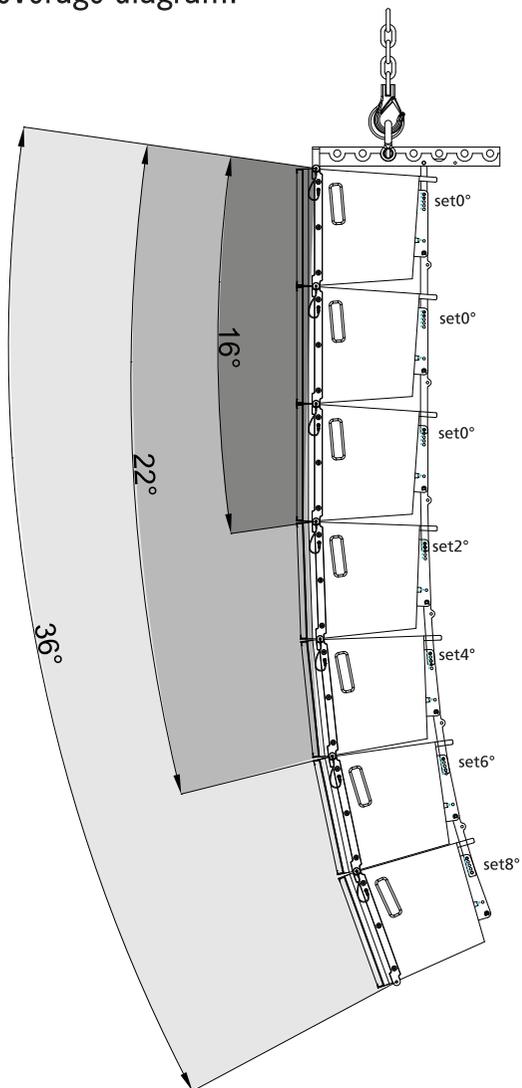


Safety coefficient	Safety coefficient / quantity	Ten times of safety coefficient/ quantity	Twelve times of safety coefficient/ quantity
Flying Method			
Working load (single point)	342 kg / 37 pcs	240 kg / 26 pcs	200 kg / 21 pcs
Working load (double points)	414 kg / 45 pcs	290 kg / 31 pcs	241 kg / 26 pcs

Part	M-F3A	M-F3A BF
Weight (kg)	8	3.8

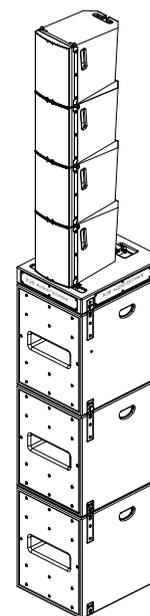
**OPERATION OPTIONS:**

Sound field coverage diagram:



**OPERATION OPTIONS:**

Ground stacking operation:



**M-F3A** 4 PCS

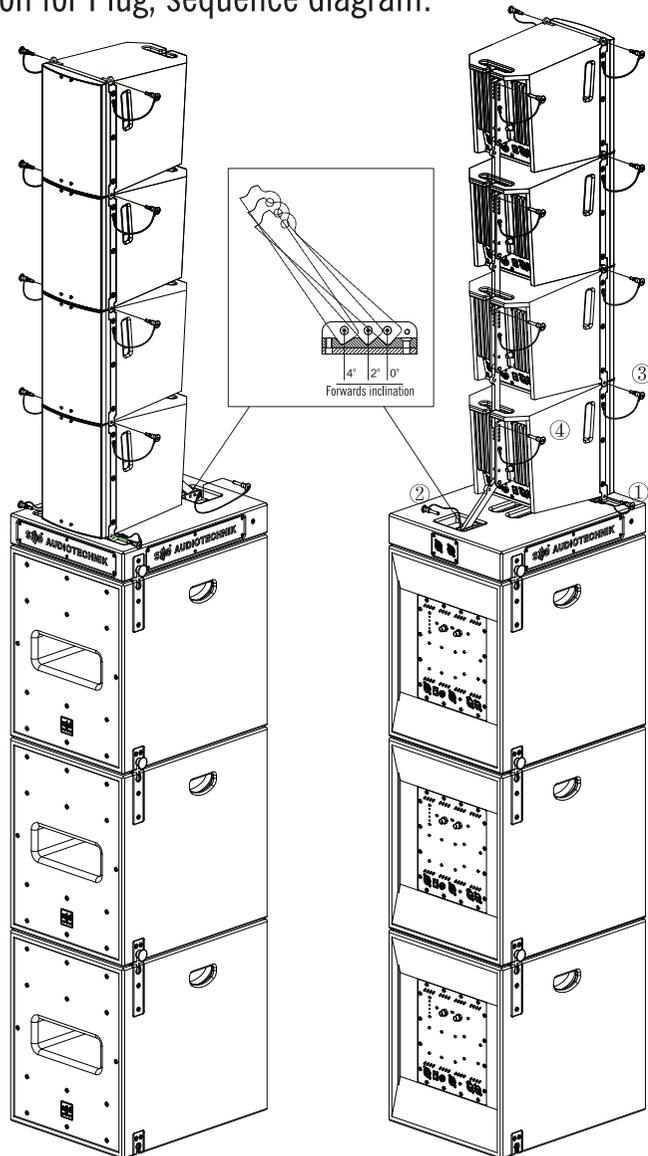
**M-F3A SUB** 3 PCS

**M-F3A SFi** 1 PC

Ground stacking of M-F3A and M-F3A SUB with M-F3A SFi

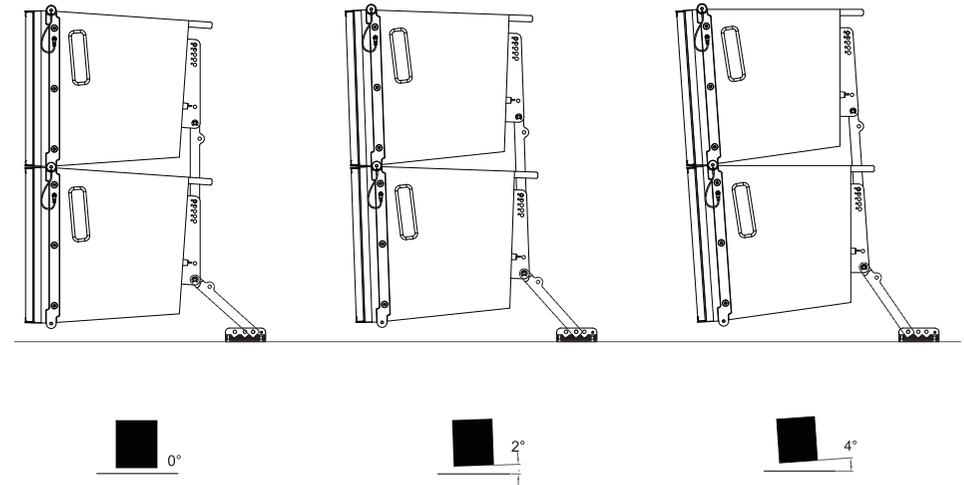
**OPERATION OPTIONS:**

Instruction for Plug, sequence diagram:



**OPERATION OPTIONS:**

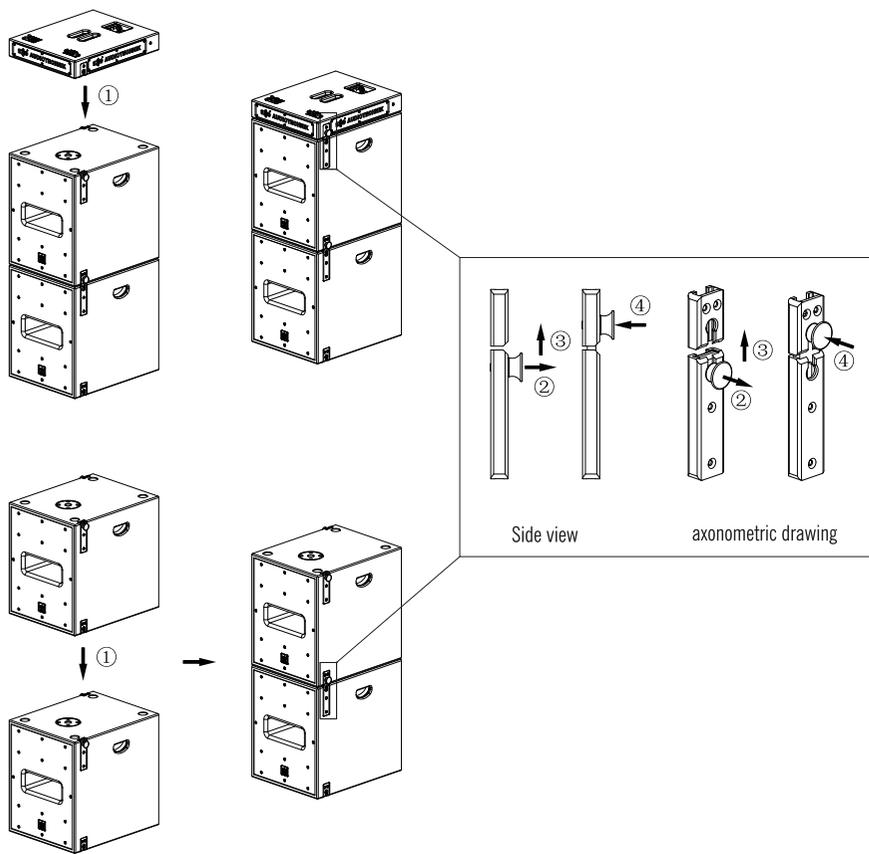
Ground stacking operation:



## OPERATION OPTIONS:

### Operation instruction for stacked woofer

①、 Stack two pieces of M-F3ASUB together according to the arrow direction. This operation is for M-F3ASUB.	
②、 Pull the Connection hand shank towards the arrow direction for certain distance.	This operation is for right front and rear (across corners) connecting device
③、 Slide the hand shank up.	
④、 Loose the hand shank until it's in place then put it into the connecting hole.	

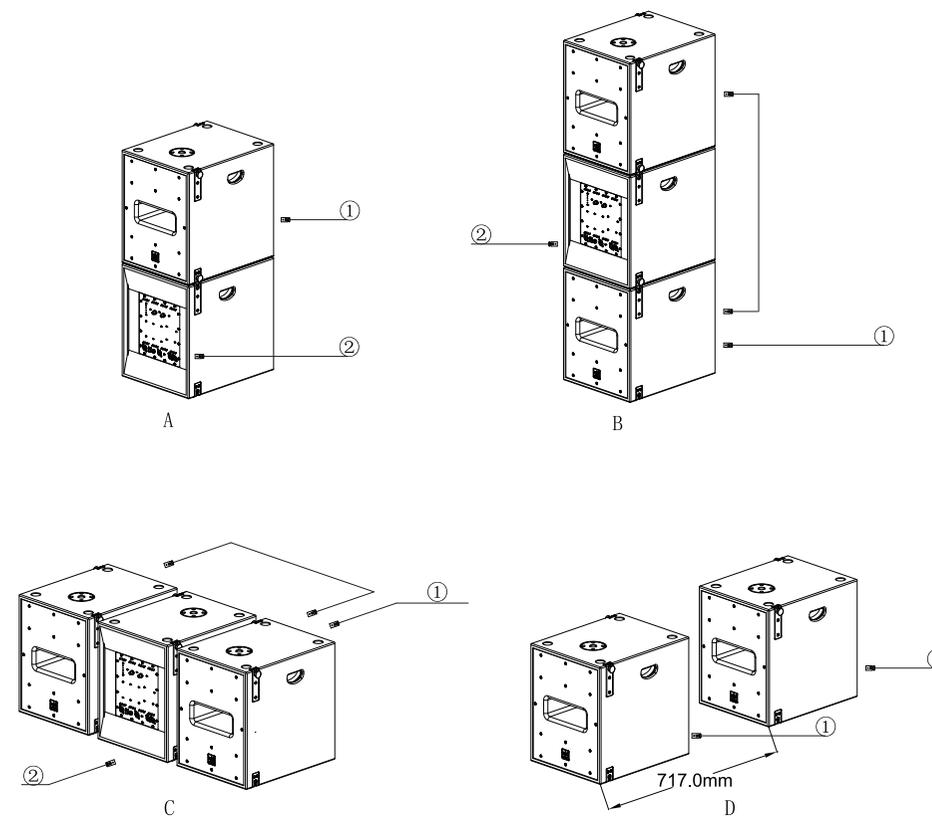


## OPERATION OPTIONS:

### Woofer array:

#### ♥ Cardioid pattern woofer layout

Signal delay of A/B/C ①: 1.5ms  
Signal delay of D ①: 2.1ms



## CONNECTIONS, CONTROLS AND INDICATORS:

### 1 INDICATOR LEDS

**PROTECT:** Lights up if the amplifier is short-circuited or overheated. The amplifiers are muted automatically. Upon reaching normal operating conditions, the device reverts to normal operating mode after a few seconds.

**LIMIT:** Lights up when the limiter starts working. If the limiter LED lights up permanently or for longer periods, reduce the volume level. Failure to do so may result in a distorted sound and damage to the speaker system.

**SIGNAL:** Lights up as soon as an audio signal is present. The signal acquisition is performed before the MAIN LEVEL controller.

**POWER:** Lights up once the system is properly connected to the power mains and switched on.

### 2 MAIN LEVEL

Volume controller for the M-F3A.

### 3 HIGH SHELF KNOB

This control gives up to 6 dB boost above 5 kHz.

### 4 IEC POWER INLET

An appropriate mains cord is included in the package. The M-F3A system is intended for 2 operating voltage ranges (100 - 120 V AC and 200 - 240 V AC). The conversion is done automatically.

Neutrik PowerCon (Max: 15 A)(Series can be at most 6 pcs)(220 V: 6 pcs)

The cross-section of the power con to connect 2 pcs M-F3A should be more than 2.5mm<sup>2</sup>.

### 5 POWER SWITCH

Position - : Connects the amplifier's current feed. (green LED on).

Position 0 : Disconnects the power.

Before switching the active speaker on or off, always adjust the volume to zero (MAIN LEVEL all the way to the left).

### 6 LINE INPUT

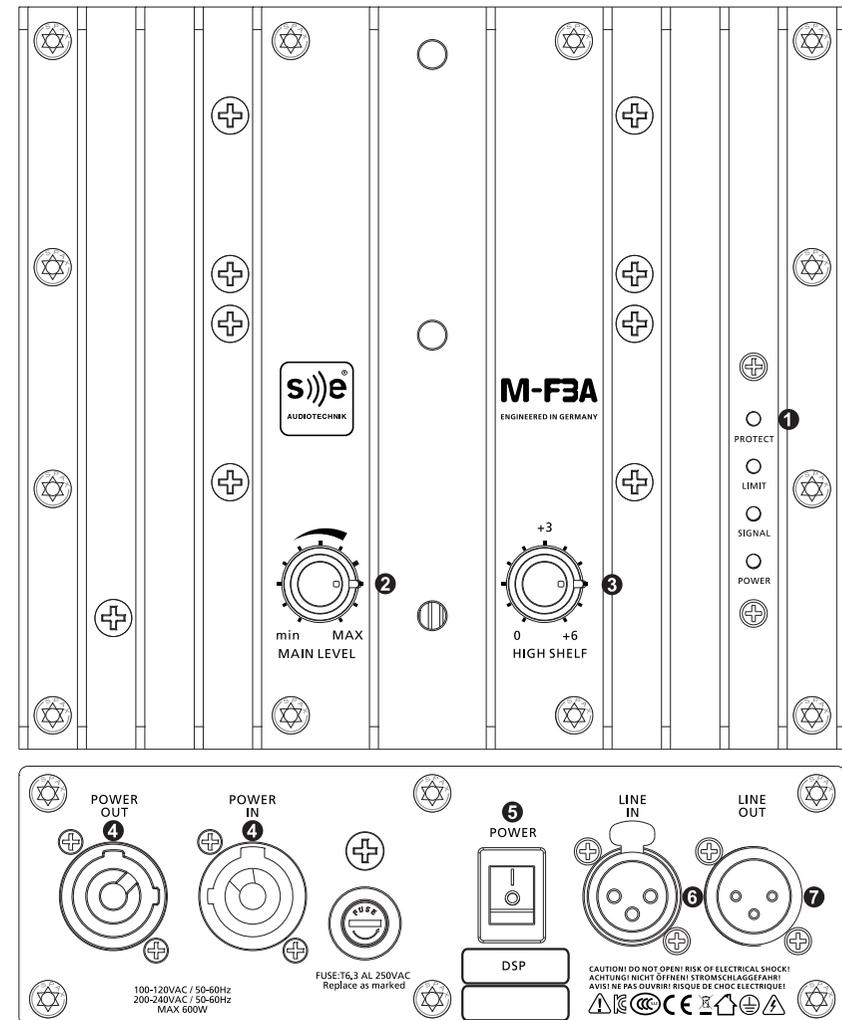
The balanced line input with female Neutrik XLR connector to connect a playback device (e.g.mixer).

### 7 LINE OUTPUT

The balanced line output with male Neutrik XLR connector can be used to control other active speakers or amplifiers. The output signal is driven through a built-in router circuitry, which ensures signal run through the whole path without any loss.

## CONNECTIONS, CONTROLS AND INDICATORS:

### M-F3A AMP



## CONNECTIONS, CONTROLS AND INDICATORS:

### 1 INDICATOR LEDS

**ON:** Lights up once the system is properly connected to the power mains and switched on.

**SIGNAL:** Lights up as soon as an audio signal is present. The signal acquisition is performed before the MAIN LEVEL controller.

**LIMIT:** Lights up when the limiter starts working. If the limiter LED lights up permanently or for longer periods, reduce the volume level. Failure to do so may result in a distorted sound and damage to the speaker system.

**PROTECT:** Lights up if the amplifier is short-circuited or overheated. The amplifiers are muted automatically. Upon reaching normal operating conditions, the device reverts to normal operating mode after a few seconds.

### 2 SUB FREQ

Setting the low pass frequency of the subwoofer between 80 Hz and 250 Hz.

### 3 SUBPHASE 0° / 180°

The phase reverse switch for the subwoofer (0°, 180°) is factory set to 0°. This setting is suitable for the majority of applications. In unfavourable acoustic conditions, the setting of 180° may have a positive effect on the bass and low mid performance.

### 4 MAIN LEVEL

Volume controller for the M-F3A.

### 5 IEC POWER INLET

An appropriate mains cord is included in the package. The M-F3A system is intended for 2 operating voltage ranges (100 - 120 V AC and 200 - 240 V AC). The conversion is done automatically.

Neutrik PowerCon (Max: 15 A)(Series can be at most 6 pcs)(220 V: 6 pcs)

The cross-section of the power con to connect 2 pcs M-F3A should be more than 2.5mm<sup>2</sup>.

### 6 POWER SWITCH

Position - : Connects the amplifier's current feed. (green LED on).

Position 0 : Disconnects the power.

Before switching the active speaker on or off, always adjust the volume to zero (MAIN LEVEL all the way to the left).

### 7 LINE INPUT

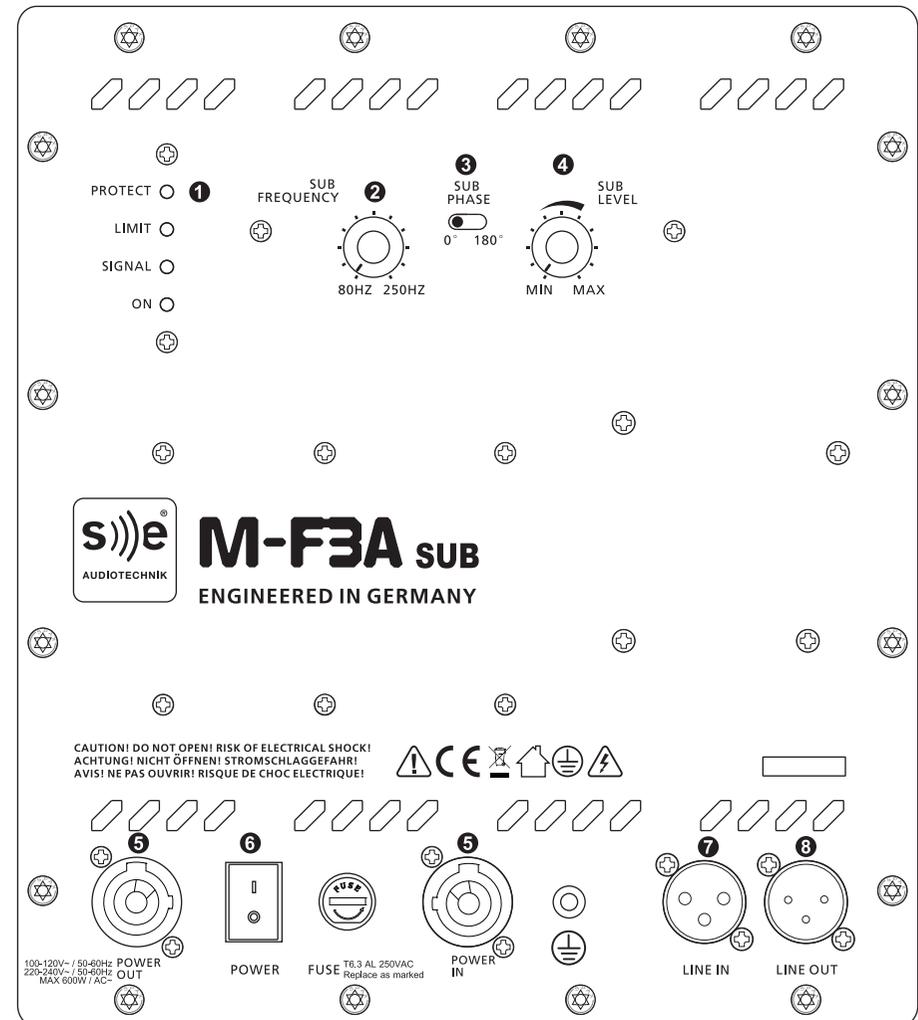
The balanced line input with female Neutrik XLR connector to connect a playback device (e.g.mixer).

### 8 LINE OUTPUT

The balanced line output with male Neutrik XLR connector can be used to control other active speakers or amplifiers. The output signal is driven through a built-in router circuitry, which ensures signal run through the whole path without any loss.

## CONNECTIONS, CONTROLS AND INDICATORS:

### M-F3A SUB AMP



## SPECIFICATIONS:

M-F3A TOP	
Type:	2.8" bassreflex
Frequency Response (-6dB):	120 Hz-20 kHz
Power Output	200 W + 200 W
Max. SPL (1m):	128 dB
Max. Qty of rigging (12: 1 Safety Factor, using s)))e original accessories):	18pcs
Dispersion (H × V):	120° × 16°
Transducer MF:	8 × 2.8", Neodymium Magnet with cooling module, 0.75" Voice Coil
Transducer HF:	7 × 1", Neodymium Magnet with cooling module, 1" Voice Coil
Power Amplifier Type:	Class D amplifier, SMPS
Input Sensitivity:	- 4 dBv
Signal Processing:	DSP, 48 kHz, 24 bits
Protection:	Multiple limiter, short circuit, overheating
Controls:	On / Off switch, Main level, High shelf knob
Indicators:	On, signal, limit, protect
Line Input / Output:	Input XLR / Router-output XLR
Power Input / Output:	Neutrik PowerCon (Max 15A)
Cabinet / Coating:	12 mm plywood, polyurea coating
Dimensions (W × H × D):	210 × 317 × 359 mm
Weight:	8 kg

## SPECIFICATIONS:

M-F3A SUB	
Type:	10" V construction, bandpass
Frequency Response (-6dB):	40 Hz - 250 Hz
Power Output(RMS):	400 W
Max. SPL (1m):	129 dB
Transducer LF:	2 × 10", Ferrite, magnet 2" Voice Coil
Power Amplifier Type:	Class D amplifier, SMPS
Input Sensitivity:	-18dBv
Signal Processing:	DSP, 48 kHz, 24 bits
Protection:	Multiple limiter, short circuit, overheating
Controls:	On / Off switch, sub level, Low pass frequency knob, 0° - 180° phase switch
Indicators:	On, signal, limit, protect
Line Input / Output:	Input Neutrik XLR / Router-output Neutrik XLR
Power Input / Output:	Neutrik PowerCon (Max 15A)
Cabinet / Coating:	15 mm plywood, polyurea coating
Dimensions (W × H × D):	421 × 507 × 510 mm
Weight:	28 kg

## MANUFACTURER 'S DECLARATIONS:

### LIMITED WARRANTY

This limited warranty applies to the Sennheiser Audiotechnik branded products.

The statutory warranty rights towards the seller are not affected by this guarantee. In fact, it justifies additional independent warranty claims towards Sennheiser.

Sennheiser warrants that the Sennheiser product you have purchased from Sennheiser or from an Sennheiser authorized reseller is free from defects in materials or workmanship under normal use for a period of 2 years from the date of purchase.

The limited warranty period starts on the date of purchase. In order to receive warranty services, you are required to provide proof of the purchase date. Your dated sales or delivery receipt, showing the date of purchase, is your proof of the purchase date. Should products of the brands named above be in need of repair within the limited warranty period, you are entitled to warranty services according to the terms and conditions stated in this document.

This limited warranty extends only to the original purchaser of this Sennheiser branded product and is not transferable to anyone who obtains ownership of the Sennheiser branded product from the original purchaser. During the limited warranty period, Sennheiser will repair or replace the defective component parts or the product. All component parts or hardware products removed under this limited warranty become the property of Sennheiser.

In the unlikely event that your Sennheiser product has a recurring failure, Sennheiser, at its discretion, may elect to provide you with a replacement unit of Sennheiser's choice that is at least equivalent to your Sennheiser branded product in hardware performance.

Sennheiser does not warrant that the operation of this product will be uninterrupted or error-free. Sennheiser is not responsible for damage that occurs as a result of your failure to follow the instructions included with the Sennheiser branded product.

This limited warranty does not apply,

- to wear parts (e.g. accumulator)
- to any product from which the serial number has been removed or that has been damaged or rendered defective as the result of an accident
- in case of, misuse, abuse, or other external causes
- by operation outside the usage parameters stated in the user's documentation shipped with the product
- by use of spare parts not manufactured or sold by Sennheiser
- by modification or service by anyone other than Sennheiser

These terms and conditions constitute the complete and exclusive warranty agreement between you and Sennheiser regarding the Sennheiser branded product you have purchased.

## MANUFACTURER 'S DECLARATIONS:

### LIMITATION OF LIABILITY

If your Sennheiser branded hardware product fails to work as warranted above, your sole and exclusive remedy shall be repair or replacement. Sennheiser's maximum liability under this limited warranty is explicitly limited to the lesser of the price you have paid for the product or the cost of repair or replacement of any hardware components that malfunction in conditions of normal use.

Sennheiser is not liable for any damages caused by the product or the failure of the product, including any lost profits or savings or special, incidental or consequential damages. Sennheiser is not liable for any claim made by a third party or made by you for a third party.

This limitation of liability applies whether damages are sought, or claims are made, under this limited warranty or as a tort claim (including negligence and strict product liability), a contract claim, or any other claim. This limitation of liability cannot be waived or amended by any person. This limitation of liability will be effective even if you have advised Sennheiser of an authorized representative of Sennheiser of the possibility of any such damages. This limitation of liability however, will not apply to claims for personal injury.

This limited warranty gives you specific legal rights. You may also have other rights that may vary from state to state or from country to country. You are advised to consult applicable state or country laws for a full determination of your rights.

### REQUESTING WARRANTY-SERVICE

To request warranty service for the product, contact Sennheiser or the Sennheiser authorized reseller from which you purchased the product.

### EC DECLARATION OF CONFORMITY

These devices meet the essential requirements and further relevant specifications of Directives 2004/108/EC (EMC) and 2006/95/EC. For more information, see [www.se-audiotechnik.com](http://www.se-audiotechnik.com).

### CORRECT DISPOSAL OF THIS PRODUCT (ELECTRICAL WASTE)

(Applicable in the European Union and other European countries with separate collection systems)



This marking, shown on the product or its literature, indicates that it should not be disposed with other household wastes at the end of its working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this from other types of wastes and recycle it responsibly to promote the sustainable reuse of material resources.

Household users should contact either the retailer where they purchased this product, or their local government office, for details on where and how they can recycle this item in an environmentally friendly manner.

Business users should contact their supplier and check the terms and conditions of the purchase contract. This product should not be mixed with other commercial wastes for disposal.

## MANUFACTURER 'S DECLARATIONS:

### WEEE-DECLARATION



Your s)))e-systems product was developed and manufactured with high quality materials and components which can be recycled and / or reused. This symbol indicates that electrical and electronic equipment must be disposed of separately from normal waste at the end of its operational lifetime.

Please dispose of this product by bringing it to your local collection point or recycling centre for such equipment. This will help to protect the environment in which we all live.

### BATTERIES AND ACCUMULATORS



The supplied batteries or rechargeable batteries can be recycled. Please dispose of them as special waste or return them to your specialist dealer. In order to protect the environment, only dispose exhausted batteries.

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