



# **SUB 8003-AS MK3**

# **SUB 905-AS MK3**

PROFESSIONAL ACTIVE SUBWOOFER

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# 1. SAFETY PRECAUTIONS AND GENERAL INFORMATION

The symbols used in this document give notice of important operating instructions and warnings which must be strictly followed.

	<b>CAUTION</b>	Important operating instructions: explains hazards that could damage a product, including data loss
	<b>WARNING</b>	Important advice concerning the use of dangerous voltages and the potential risk of electric shock, personal injury or death.
	<b>IMPORTANT NOTES</b>	Helpful and relevant information about the topic
	<b>SUPPORTS, TROLLEYS AND CARTS</b>	Information about the use of supports, trolleys and carts. Reminds to move with extreme caution and never tilt.
	<b>WASTE DISPOSAL</b>	This symbol indicates that this product should not be disposed with your household waste, according to the WEEE directive (2012/19/EU) and your national law.

## IMPORTANT NOTES

This manual contains important information about the correct and safe use of the device. Before connecting and using this product, please read this instruction manual carefully and keep it on hand for future reference. The manual is to be considered an integral part of this product and must accompany it when it changes ownership as a reference for correct installation and use as well as for the safety precautions. RCF S.p.A. will not assume any responsibility for the incorrect installation and / or use of this product.

## SAFETY PRECAUTIONS

1. All the precautions, in particular the safety ones, must be read with special attention, as they provide important information.

### 2. Power supply from mains

- The mains voltage is sufficiently high to involve a risk of electrocution; install and connect this product before plugging it in.
- Before powering up, make sure that all the connections have been made correctly and the voltage of your mains corresponds to the voltage shown on the rating plate on the unit, if not, please contact your RCF dealer.
- The metallic parts of the unit are earthed through the power cable. An apparatus with CLASS I construction shall be connected to a mains socket outlet with a protective earthing connection.
- Protect the power cable from damage; make sure it is positioned in a way that it cannot be stepped on or crushed by objects.
- To prevent the risk of electric shock, never open this product: there are no parts inside that the user needs to access.
- Be careful: in the case of a product supplied by manufacturer only with POWERCON connectors and without a power cord, jointly to POWERCON connectors type NAC3FCA (power-in) and NAC3FCB (power-out), the following power cords compliant to national standard shall be used:
  - EU: cord type H05VV-F 3G 3x2.5 mm<sup>2</sup> - Standard IEC 60227-1
  - JP: cord type VCTF 3x2 mm<sup>2</sup>; 15Amp/120V~ - Standard JIS C3306
  - US: cord type SJT/SJTO 3x14 AWG; 15Amp/125V~ - Standard ANSI/UL 62

3. Make sure that no objects or liquids can get into this product, as this may cause a short circuit. This apparatus shall not be exposed to dripping or splashing. No objects filled with liquid, such as vases, shall be placed on this apparatus. No naked sources (such as lighted candles) should be placed on this apparatus.

4. Never attempt to carry out any operations, modifications or repairs that are not expressly described in this manual. Contact your authorized service centre or qualified personnel should any of the following occur:

- **The product does not function (or functions in an anomalous way).**
- **The power cable has been damaged.**

- **Objects or liquids have got in the unit.**
- **The product has been subject to a heavy impact.**

5. If this product is not used for a long period, disconnect the power cable.

6. If this product begins emitting any strange odours or smoke, switch it off immediately and disconnect the power cable.

7. Do not connect this product to any equipment or accessories not foreseen.

For suspended installation, only use the dedicated anchoring points and do not try to hang this product by using elements that are unsuitable or not specific for this purpose. Also check the suitability of the support surface to which the product is anchored (wall, ceiling, structure, etc.), and the components used for attachment (screw anchors, screws, brackets not supplied by RCF etc.), which must guarantee the security of the system / installation over time, also considering, for example, the mechanical vibrations normally generated by transducers.

To prevent the risk of falling equipment, do not stack multiple units of this product unless this possibility is specified in the user manual.

**8. RCF S.p.A. strongly recommends this product is only installed by professional qualified installers (or specialised firms) who can ensure correct installation and certify it according to the regulations in force. The entire audio system must comply with the current standards and regulations regarding electrical systems.**

9. Supports, trolleys and carts.



The equipment should be only used on supports, trolleys and carts, where necessary, that are recommended by the manufacturer. The equipment / support / trolley / cart assembly must be moved with extreme caution. Sudden stops, excessive pushing force and uneven floors may cause the assembly to overturn. Never tilt the assembly.

10. There are numerous mechanical and electrical factors to be considered when installing a professional audio system (in addition to those which are strictly acoustic, such as sound pressure, angles of coverage, frequency response, etc.).

11. Hearing loss.

Exposure to high sound levels can cause permanent hearing loss. The acoustic pressure level that leads to hearing loss is different from person to person and depends on the duration of exposure. To prevent potentially dangerous exposure to high levels of acoustic pressure, anyone who is exposed to these levels should use adequate protection devices. When a transducer capable of producing high sound levels is being used, it is therefore necessary to wear ear plugs or protective earphones. See the manual technical specifications to know the maximum sound pressure level.

## OPERATING PRECAUTIONS

- Place this product far from any heat sources and always ensure an adequate air circulation around it.
- Do not overload this product for a long time.
- Never force the control elements (keys, knobs, etc.).
- Do not use solvents, alcohol, benzene or other volatile substances for cleaning the external parts of this product.

## IMPORTANT NOTES

To prevent the occurrence of noise on line signal cables, use screened cables only and avoid putting them close to:

- **Equipment that produces high-intensity electromagnetic fields**
- **Power cables**
- **Loudspeaker lines**



**WARNING! CAUTION!** To prevent the risk of fire or electric shock, never expose this product to rain or humidity.

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**WARNING!** To prevent electric shock hazard, do not connect to mains power supply while grille is removed

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**WARNING!** to reduce the risk of electric shock, do not disassemble this product unless you are qualified. Refer servicing to qualified service personnel.

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## CORRECT DISPOSAL OF THIS PRODUCT



This product should be handed over to an authorized collection site for recycling waste electrical and electronic equipment (EEE). Improper handling of this type of waste could have a possible negative impact on the environment and human health due to potentially hazardous substances that are generally associated with EEE. At the same time, your cooperation in the correct disposal of this product will contribute to the effective usage of natural resources. For more information about where you can drop off your waste equipment for recycling, please contact your local city office, waste authority or your household waste disposal service.

## CARE AND MAINTENANCE

To ensure a long-life service, this product should be used following these advices:

- If the product is intended to be set up outdoors, be sure it is under cover and protected to rain and moisture.
- If the product needs to be used in a cold environment, slowly warm up the voice coils by sending a low-level signal for about 15 minutes before sending high-power signals.
- Always use a dry cloth to clean the exterior surfaces of the speaker and always do it when the power is turned off.

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**CAUTION:** to avoid damaging the exterior finishes do not use cleaning solvents or abrasives.

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**WARNING! CAUTION!** For powered speakers, do cleaning only when the power is turned off.

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RCF S.p.A. reserves the right to make changes without prior notice to rectify any errors and / or omissions.

Always refer to the latest version of the manual on [www.rcf.it](http://www.rcf.it).

## FCC NOTES

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

**Modifications:** Any modifications made to this device that are not approved by RCF may void the authority granted to the user by the FCC to operate this equipment.

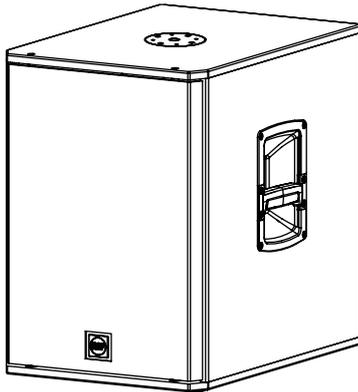
## SUB 8003-AS MK3 | SUB 905-AS MK3 | PROFESSIONAL ACTIVE SUBWOOFERS

SUB 8003-AS MK3 and SUB 905-AS MK3 are high power, high output active subwoofer systems that set a new standard in professional sound reinforcement. Each transducer has been specifically designed for the application. The woofer provides large excursion and very lightweight.

RCF always has the performer's needs at the forefront of the design in order to create new lines of speakers with renewed features, improved sound clarity and definition and even lighter weight systems. Every detail of the Sub Series has been carefully studied in order to offer musicians and professionals the perfect tool to amplify their performance, night after night. High quality materials, precise manufacturing, careful assembly and extensive quality control procedures complete the groundbreaking design work of the RCF R&D team.

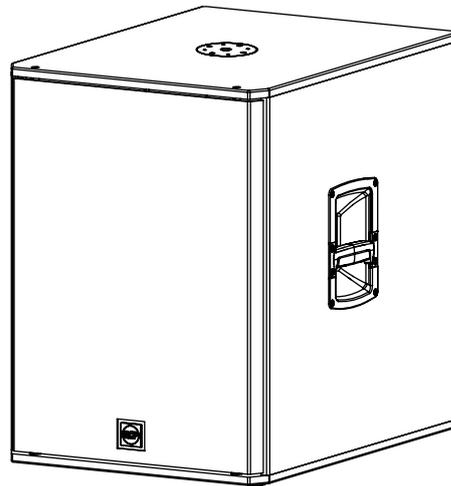
All transducers are precision built taking advantage of RCF's superior moulding, assembly technologies and a wealth of professional knowledge and experience dedicated to achieving extremely high standards. All the transducers in Sub Series speakers feature high power magnets in order to guarantee the best performance and power handling. Sub Series Subwoofers are equipped with a new generation of Class-D Amplifiers. The result of this is very high output, extremely low distortion and an incredible natural sound.

The amplifier features a solid mechanical aluminium structure which not only stabilize the amplifier during transportation but also assist in the heat dissipation. The new loudspeaker design looks aggressive whilst retaining perfect ergonomics and is the result of extensive combined functional and acoustic research. The Sub Series Subwoofer cabinets are built in polyurea coated birch plywood and are designed to dampen down vibrations even at maximum volume settings. The reflex porting has been resized to offer a better efficiency. The cabinets are equipped with ergonomically designed forged aluminium handles with rubber handgrip. Rugged steel pole mount has been installed in all models.



### SUB 905-AS MK3

2200 Watt  
15" Woofer  
26 Kg (57,32 lbs)

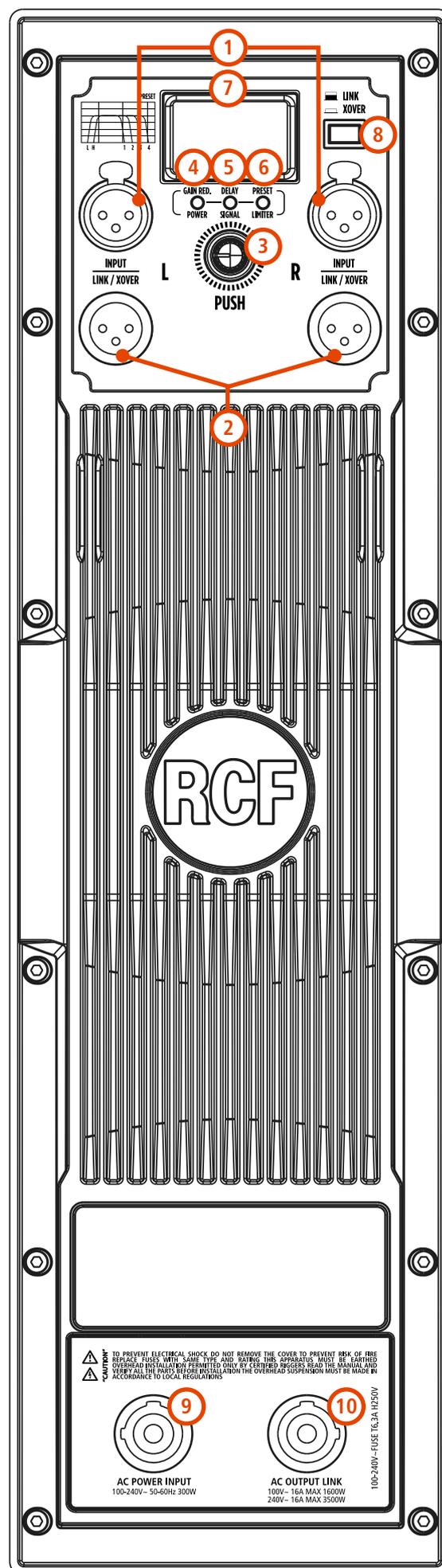


### SUB 8003-AS MK3

2200 Watt  
18" Woofer  
37,6 Kg (82,89 lbs)

### 3. REAR PANEL FEATURES AND CONTROLS

- 1 **FEMALE XLR INPUTS L and R** The system accepts XLR input connectors.
- 2 **MALE XLR SIGNAL OUTPUTS** The output XLR connectors provide a loop through for speakers daisy chaining. The balanced connectors are connected in parallel, and can be used to send the audio signal to other amplified speakers or supplementary amplifiers.
- 3 **SYSTEM SET UP ENCODER**
- 4 **GAIN REDUCTION / POWER LED**
  - **POWER LED** This green LED lights up when the speaker is connected to the main power supply.
  - **GAIN REDUCTION LED** Pushing the encoder once, the gain reduction indicator lights up green. Then, rotating the encoder, the gain level can be set to the right level.
- 5 **DELAY / SIGNAL LED**
  - **DELAY LED** Pushing the encoder twice, the delay indicator lights up green. Then, rotate the encoder to delay the speaker. The delay is expressed in meters.
  - **SIGNAL LED** This indicator lights up green if there is an audio signal on the main.
- 6 **PRESET / LIMITER LED**
  - **PRESET LED** Pushing the encoder three times, the preset indicator lights up green. Then rotate the encoder to load the right preset to the speaker.
  - **LIMITER LED** The amplifier has a built-in limiter circuit to prevent any amplifier clipping or transducers overdrive. When the soft clipping circuit is active, the LED blinks RED. It is okay if the limiter LED blinks occasionally. If the LED lights continuously, turn down the signal level.
- 7 **SYSTEM SET UP DISPLAY** It displays the system setting values.
- 8 **LINK/XOVER SELECTOR** When the selector is set to LINK position, the input signal is sent directly to the output signal. When the selector is set in XOVER position, a crossovered signal will be applied to the outputs to optimize the signal sent to any speaker connected.
- 9 **AC POWER INPUT** Powercon locking 3-pole AC mains.
- 10 **AC OUTPUT LINK** Sends the AC power to another speaker.  
Power link: 100-120V~16 A MAX 1600W | 200-240V~16 A MAX 3500W.



 **WARNING! CAUTION!** Loudspeaker connections should be only made by qualified and experienced personnel having the technical know-how or enough specific instructions (to ensure that connections are made correctly) in order to prevent any electrical danger.

To prevent any risk of electric shock, do not connect loudspeakers when the amplifier is switched on.

Before turning the system on, check all connections and make sure there are no accidental short circuits.

The entire sound system shall be designed and installed in compliance with the current local laws and regulations regarding electrical systems.

## 4. SET-UP

Pushing the rear encoder, it is possible to select the following three functions:

### INPUT GAIN REDUCTION

### SPEAKER DELAY SETTING

### SELECTION OF A SPEAKER PRESET

Pushing once the rear encoder the GAIN REDUCTION LED will light up. Now rotating the encoder counter clockwise, it will be possible to reduce the input gain. The gain reduction will be in steps of 0,1 dB for the first 10 dB and then in 1 dB steps. The maximum reduction is 99 dB.

Pushing a second time the rear encoder the DELAY LED will light up. Now rotating the encoder clockwise it will be possible to delay the signal output of the speaker. The delay is expressed in meter. The delay will be in steps of 0,1 m for the first 10 m and then in 1 m steps. The maximum delay will be 20 meter.

Pushing a third time the rear encoder the PRESET LED will light up. Now rotating the encoder clockwise it will be possible to select a preset:

PRESET		HIGH PASS	LOW PASS
L 1	EXT LOW	30 Hz	60 Hz
L 2	EXT LOW	30 Hz	80 Hz
L 3	EXT LOW	30 Hz	100 Hz
L 4	EXT LOW	30 Hz	125 Hz
H 1	HARD	40 Hz	60 Hz
H 2	HARD	40 Hz	80 Hz
H 3	HARD	40 Hz	100 Hz
H 4	HARD	40 Hz	125 Hz
C 1 - C 2 - C 3 - C 4	CARDIOID FOR L PRESET		

**SERIAL NUMBER**

**MADE IN ITALY**

RF S.p.A. VIA RAFFAELLO SANZIO, 13  
47124 REGGIO EMILIA - ITALY

CE UK CA

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: 1. This device may not cause harmful interference. 2. This device must accept any interference received, including interference that may cause undesired operation. This Class A digital apparatus complies with Canadian ICES-003. Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

**EXTENDED LOW PRESETS** (more extended and linear frequency response):

L1	30 Hz – 60 Hz	L2	30 Hz – 80 Hz
L3	30 Hz – 100 Hz	L4	30 Hz – 125 Hz

**HARD PRESETS** (less extended frequency response, more pressure at 50-60 Hz):

H1	40 Hz – 60 Hz	H2	40 Hz – 80 Hz
H3	40 Hz – 100 Hz	H4	40 Hz – 125 Hz

**CARDIOID PRESETS** (in combination with L presets)

C1	30 Hz – 60 Hz	C2	30 Hz – 80 Hz
C3	30 Hz – 100 Hz	C4	30 Hz – 125 Hz

## SAVING A SPEAKER PRESET

After the parameter settings the two digits display will flash one time. This represent saving all the preset values in the speaker memory. Once saved, all the speaker settings are permanent. It is possible to turn off and turn on; the speaker will remember the last settings.

## CARDIOID SET-UP

It is possible to create subwoofer cardioid systems using groups of two or three modules.

A group of two modules shall be made as follow:

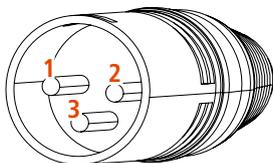
- Only use one of the L presets (30 Hz High Pass filter)
- 1 modules pointing in forward direction
- 1 module pointing in backward direction, correspondent cardioid preset
- The modules shall have the same settings (system delay, sensitivity, preset)

A group of three modules shall be made as follow:

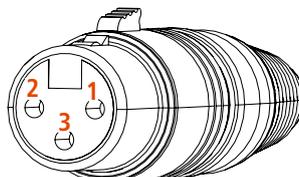
- Only use one of the L presets (30 Hz High Pass filter)
- 2 modules pointing in forward direction
- 1 module pointing in backward direction, correspondent cardioid preset
- The modules shall have the same settings (system delay, preset)
- The 2 front modules shall have -1.5 dB gain less than the rear module.

The connectors must be wired according to the standards specified by the AES (Audio Engineering Society).

### MALE XLR CONNECTOR Balanced wiring



### FEMALE XLR CONNECTOR Balanced wiring



**PIN 1** = GROUND (SHIELD)  
**PIN 2** = HOT (+)  
**PIN 3** = COLD (-)

## BEFORE CONNECTING THE SPEAKER

On the rear panel you will find all the controls, signal and power inputs. At first verify the voltage label applied to the rear panel (115 Volt or 230 Volt). The label indicates the right voltage. If you read a wrong voltage on the label or if you can't find the label at all, please call your vendor or authorized RCF SERVICE CENTRE before connecting the speaker. This fast check will avoid any damage.

In case of need of changing the voltage please call your vendor or authorized RCF SERVICE CENTRE. This operation requires the replacement of the fuse value and is reserved to an RCF SERVICE CENTRE.

## BEFORE TURNING ON THE SPEAKER

You can now connect the power supply cable and the signal cable. Before turning on the speaker make sure the volume control is at the minimum level (even on the mixer output). It is important that the mixer is already ON before turning on the speaker. This will avoid damages to the speaker and noisy "bumps" due to turning on parts on the audio chain. It is a good practice to always turn on the speakers at last and turning them off immediately after their use. You can now turn ON the speaker and adjust the volume control to a proper level.

## PROTECTIONS

These RCF active speakers are equipped with a complete system of protection circuits. The circuit is acting very gently on audio signal, controlling level and maintaining distortion at acceptable level.

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### VOLTAGE SETUP (RESERVED TO THE RCF SERVICE CENTRE)

220-240 Volt, 50 Hz SETUP: FUSE VALUE T6,30 A - 250V

110-120 Volt, 60 Hz SETUP: FUSE VALUE T6,30 A - 250V

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## 6. TROUBLESHOOTING

### **THE SPEAKER DOESN'T TURN ON**

Make sure the speaker is switched on and connected to an active AC power

### **THE SPEAKER IS CONNECTED TO AN ACTIVE AC POWER BUT DOESN'T TURN ON**

Make sure the power cable is intact and connected correctly.

### **THE SPEAKER IS ON BUT DOESN'T MAKE ANY SOUND**

Check if the signal source is sending correctly and if the signal cables are not damaged.

### **THE SOUND IS DISTORTED AND THE OVERLOAD LED BLINKS FREQUENTLY**

Turn down the output level of the mixer.

### **THE SOUND IS VERY LOW AND HISSING**

The source gain or the output level of the mixer might be too low.

### **THE SOUND IS HISSING EVEN AT PROPER GAIN AND VOLUME**

The source might send a low quality or noisy signal

### **HUMMING OR BUZZING NOISE**

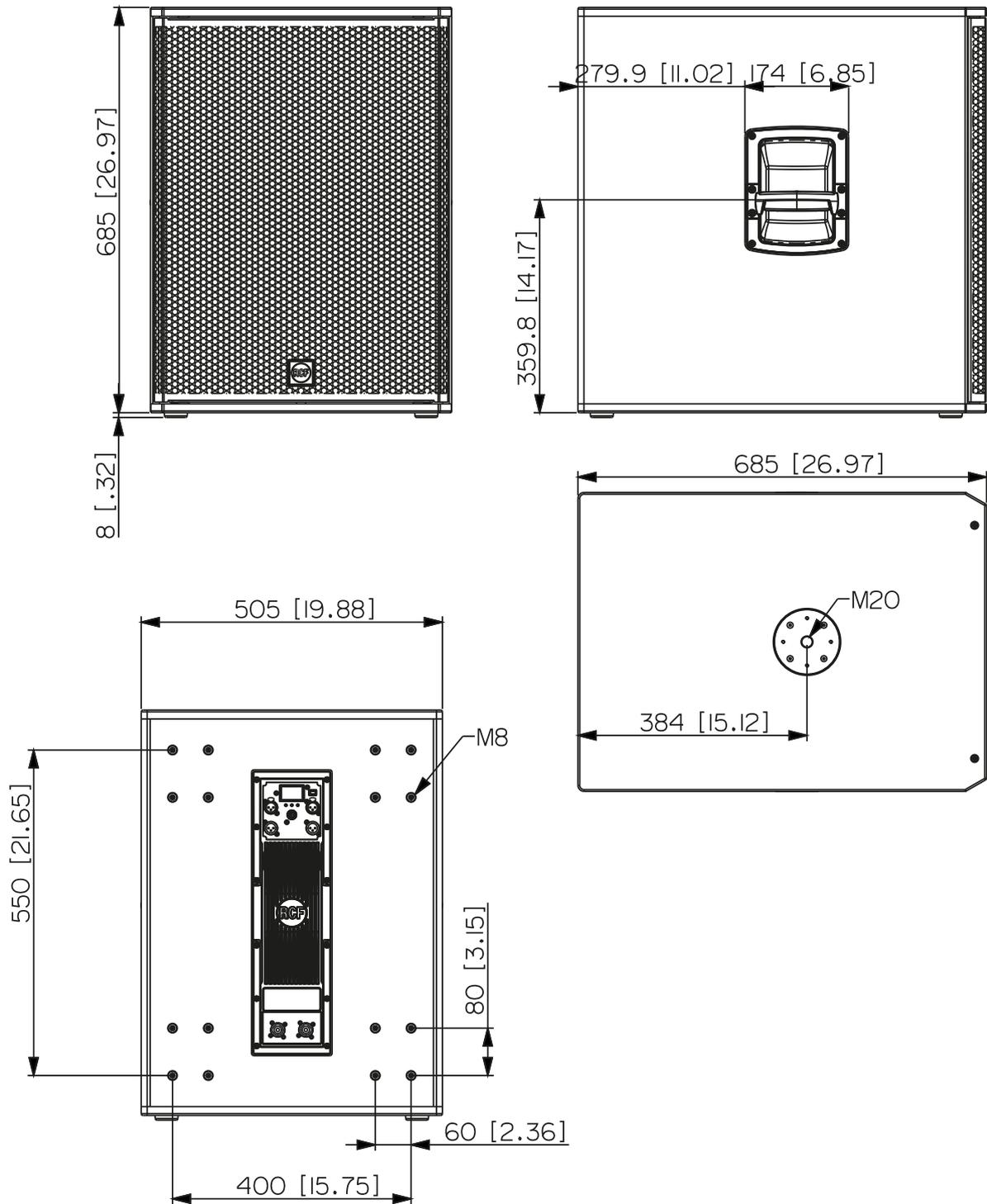
Check out the AC grounding and all the equipments connected to the mixer input including cables and connectors.



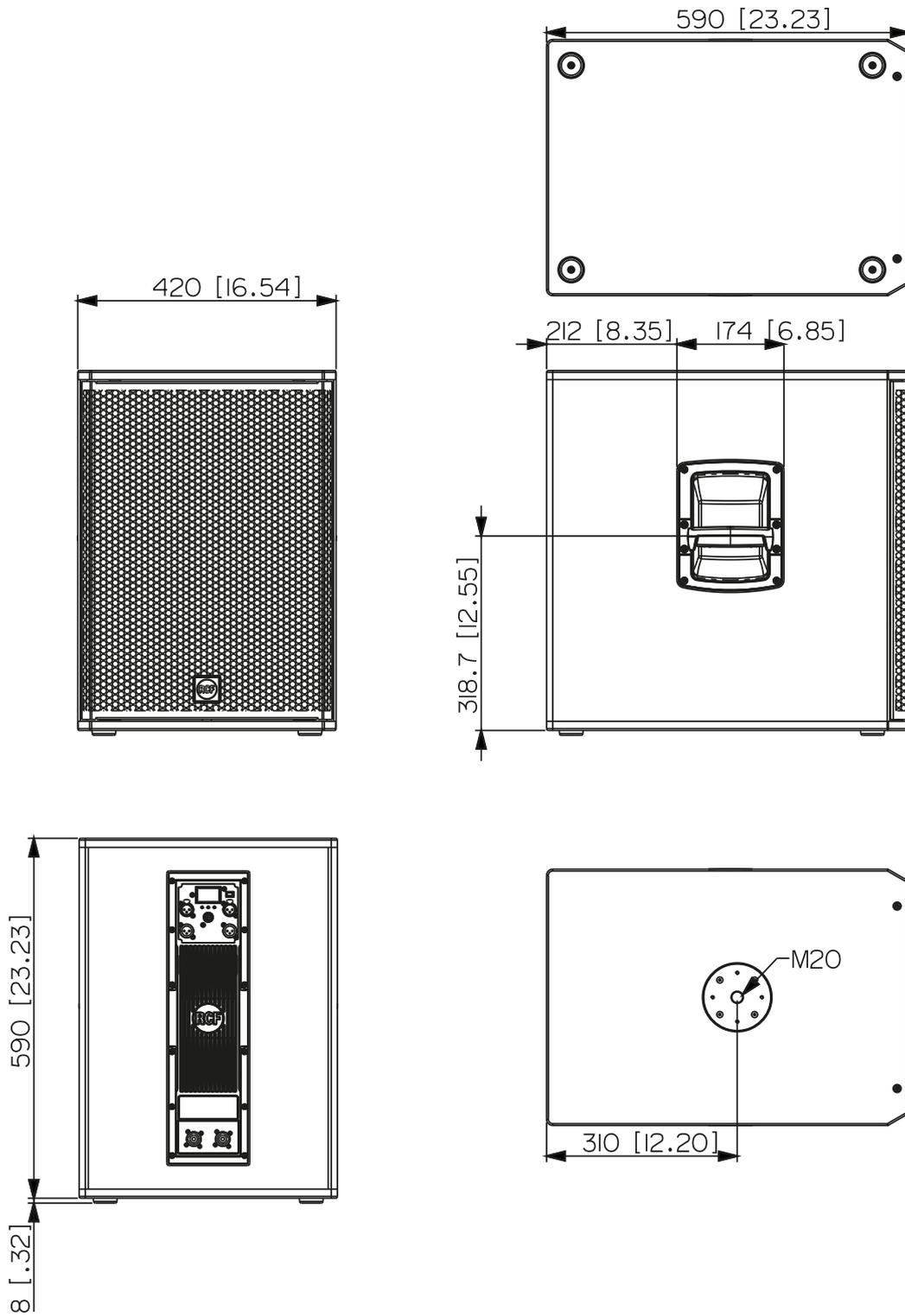
**WARNING!** to reduce the risk of electric shock, do not disassemble this product unless you are qualified. Refer servicing to qualified service personnel.

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# DIMENSIONS - SUB 8003-AS MK3



# DIMENSIONS - SUB 905-AS MK3



# SPECIFICATIONS

TECHNICAL SPECIFICATIONS		SUB 8003-AS MK3	SUB 905-AS MK3
<b>Acoustical specifications</b>	Frequency Response:	35 Hz ÷ 120 Hz	40 Hz ÷ 120 Hz
	Max SPL @ 1m:	135 dB	133 dB
<b>Transducers</b>	Woofers:	18", 4.0" v.c	15", 3.0" v.c
<b>Input/Output section</b>	Input signal:	bal/unbal	bal/unbal
	Input connectors:	XLR	XLR Stereo
	Output connectors:	XLR	XLR Stereo
	Input sensitivity:	-2 dBu/+4 dBu	-2 dBu/+4 dBu
<b>Processor section</b>	Crossover Frequencies:	Selectable	Selectable
	Protections:	Thermal, RMS	Thermal, RMS
	Limiter:	Soft Limiter	Soft Limiter
	Controls:	Gain, EQ, Phase, Xover, Delay, Cardioid	Gain, EQ, Phase, Xover, Delay, Cardioid
<b>Power section</b>	Total Power:	2200 W Peak	2200 W Peak, 1100 W RMS
	Cooling:	Convection	Convection
	Connections:	Powercon IN/OUT	Powercon IN/OUT
<b>Standard compliance</b>	Safety agency:	CE compliant	CE compliant
<b>Physical specifications</b>	Cabinet/Case Material:	Plywood	Plywood
	Handles:	One handle each side	One handle each side
	Grille:	Steel with clothing	Steel with clothing
	Color:	Black	Black
<b>Size</b>	Height:	693 mm / 27.28 inches	590 mm / 23.23 inches
	Width:	505 mm / 19.88 inches	420 mm / 16.54 inches
	Depth:	685 mm / 26.97 inches	590 mm / 23.23 inches
	Weight:	37.6 kg / 82.89 lbs	26 kg / 57.32 lbs